



KONICA MINOLTA

## SERVICE MANUAL

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# **bizhub** **C4000i/C3300i**

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## Revision List

No.	Title	Description of revision	Date
1	Issue of the first edition	-	2019/01/30

## A SAFETY AND IMPORTANT WARNING ITEMS

Read carefully the safety and important warning items described below to understand them before doing service work.

# 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.

 <b>DANGER</b>	: Action having a high possibility of suffering death or serious injury
 <b>WARNING</b>	: Action having a possibility of suffering death or serious injury
 <b>CAUTION</b>	: 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

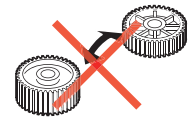
## WARNING



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



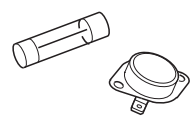
- Do not use any part not specified by KM.



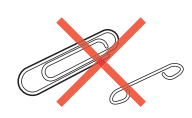
- Do not use any power cord or power plug not specified by KM.



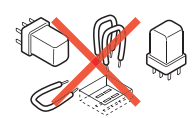
- Use only the protective fuses specified by KM. Use of any type of fuse or related part not specified by KM makes safety devices inoperative which may result in a fire from high heat.



- 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.

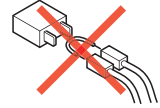


# WARNING



- 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.



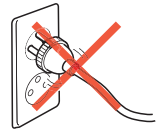
The shapes of the power plug and the wall outlet are set according to the voltage and allowable current. Use of a conversion plug adapter could result in an abnormal voltage or insufficient current capacity, leading to a fire. It may also result in an electric shock due to a grounding failure.

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

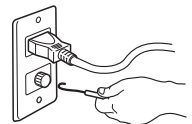
# WARNING

- 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

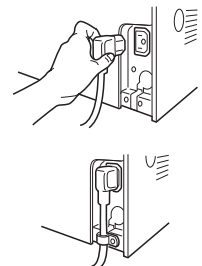
- Make sure of correct ground connection.  
If the grounding wire is connected to an inappropriate part, there is a risk of explosion or electric shock. Do not connect the grounding wire to any of the following parts:
  - a. Gas pipe: Gas explosion or fire may result.
  - b. Lightning rod: Risk of electric 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.


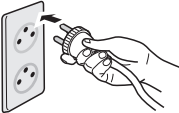
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- 
  - Check whether the power cord is damaged. Check whether the sheath is damaged.  
If the power plug, cord, or sheath is damaged, replace with a new power cord (with plug and connector on each end) specified by KM. Using the damaged power cord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

---


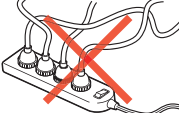
- 
  - Do not insert the power plug into the wall outlet with a wet hand.  
The risk of electric shock exists.

---

- 
  - 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.

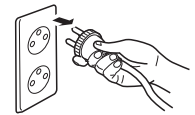


Do not make any adjustment not described in the documentation.

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).

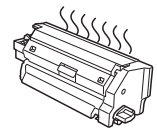


When the power plug is inserted into the wall outlet, some units are still powered even if the POWER switch is turned OFF. A risk of electric shock exists.

## 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.

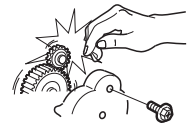


## (2) Work Performed with the Product Powered On

# 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



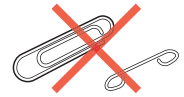
- Check the external covers and frame for possible sharp edges, burrs, and damage. They can be a cause of injury during use or servicing.



- 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.



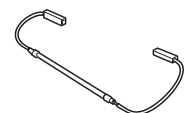
- Do not disassemble or adjust the write unit (PH unit) incorporating a laser. The laser light can enter your eye, leading to a risk of loss of eyesight.



- 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.

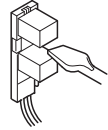


# WARNING



- 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 Used Batteries Precautions

### 3.4.1 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.

### 3.4.2 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.

### 3.4.3 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.

### 3.4.4 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.

### 3.4.5 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.

### 3.4.6 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.

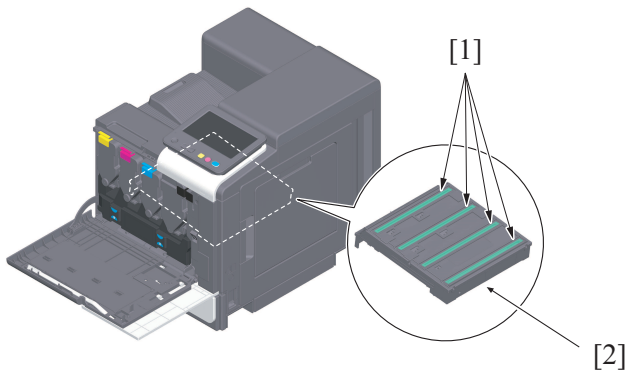
### 3.5 Laser Safety

#### 3.5.1 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.

#### 3.5.2 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.




[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.3.5.3 Laser Safety Label](#)” indicates compliance with the CDRH regulations and must be attached to laser products marketed in the United States.



# WARNING



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	25 mW
Wavelength	770 to 800 nm

## (2) All Areas

# ⚠ WARNING



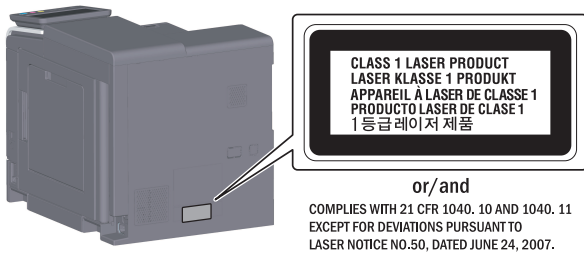
Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

semiconductor laser

Maximum power of the laser diode	25 mW
Wavelength	770 to 800 nm

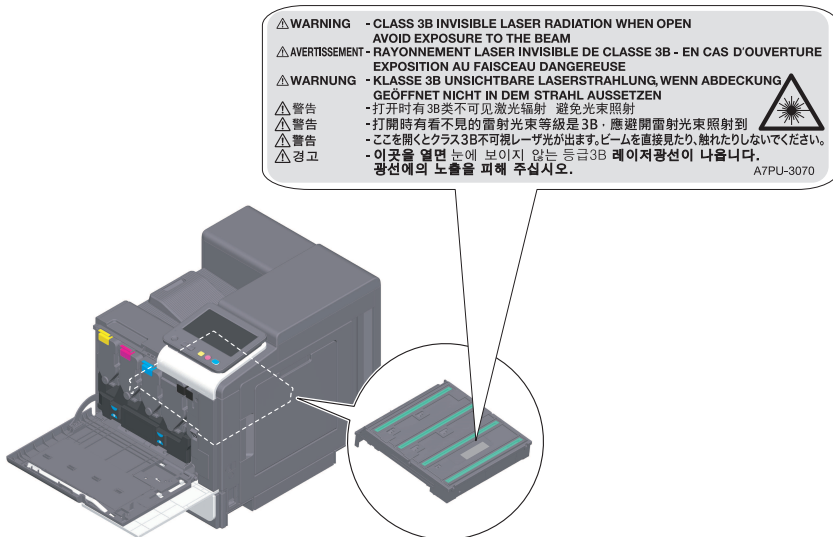
### 3.5.3 Laser Safety Label

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



### 3.5.4 Laser Warning Label

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



### 3.5.5 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.

**CAUTION**  
The Fusing Unit is too hot. It may cause a burn injury; therefore, leave the Fusing Unit out for 20 minutes or more until it reaches room temperature after turning the power off. Then, replace the Fusing Unit.

**CAUTION**  
The area around the fusing unit is extremely hot. Touching any part other than those indicated may result in burns.

**WARNING**  
Do not throw a container that contains toner into an open flame. The hot toner may scatter and cause burns or other damage.

**WARNING**  
Do not throw a container that contains toner into an open flame. The hot toner may scatter and cause burns or other damage.

**CAUTION**  
Do not position the used waste-toner box so that it is standing on end or tilted, otherwise toner may spill.

**CAUTION**  
Do not touch the electrical contacts of the units (e.g., toner cartridge and developing unit), as an electrostatic discharge may damage the product.

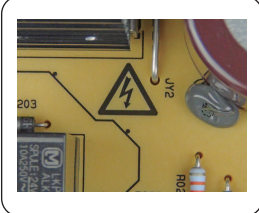
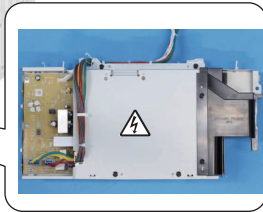
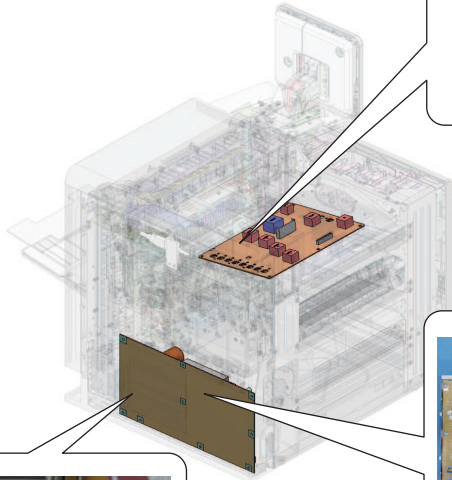
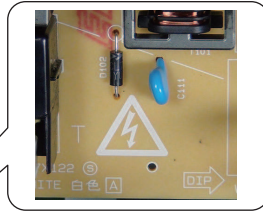
**WARNING**  
Do not alter or remove any covers or panels attached to this machine. Some products have a high-voltage part or a laser beam source inside that could cause an electrical shock or blindness.



## 4.2 Warning indications on the boards

### 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.



### 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 C4000i/C3300i	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**

- KONICA MINOLTA, KONICA MINOLTA logo, and bizhub are the registered trademarks of KONICA MINOLTA, INC.
- © 2019 KONICA MINOLTA, INC.

## 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
A5	Long edge feeding	A5
	Short edge feeding	A5S
A4	Short edge feeding	A4

## 5. Note for the Specifications

- These specifications are subject to change without notice.
- Some models within the product series listed in this manual may not be available in some countries and regions.

## C PRODUCT OUTLINE

### 1. PRODUCT SPECIFICATIONS

#### 1.1 bizhub C4000i/C3300i

##### 1.1.1 Basic specifications

Items	Specifications	
Type	Desktop	
Control panel	7-inch TFT color LCD WSVGA (resistive touch panel)	
Printing process	Semiconductor laser and electrostatic dry-powdered image transfer to plain paper	
Photoconductor	OPC drum	
Developing system	Dry 2 components developing method, HMT developing system	
Charging system	DC roller charging system	
Discharge Method	Eraseless	
Image transfer system	1st: Belt transfer system, 2nd: Roller transfer system	
Paper separating system	Curvature separation system	
Fusing system	Upper 2-axis pad pressure fusing	
Heating system	Halogen lamp	
Exposure system	1 beam LD exposure system x 4 and 1 polygon mirror scan exposure system	
Exposure resolution	Main scan direction: 600 dpi, Sub scan direction: 600 dpi Main scan direction: 1200 dpi, Sub scan direction: 1200 dpi (Half speed)	
Image loss	PC print	Leading edge: 4.2 mm (3/16 inches) ± 2.0 Trailing edge: 4.2 mm (3/16 inches) ± 2.0 Rear edge: 4.2 mm (3/16 inches) ± 2.0 Front edge: 4.2 mm (3/16 inches) ± 2.0
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.)	Color: 15 sec. or less Black: 13 sec. or less	
First print time (A4 or 8 1/2 x 11, plain paper, tray 1, full size)	bizhub C4000i	Color: 8.7 sec. or less Black: 8.0 sec. or less
	bizhub C3300i	Color: 9.6 sec. or less Black: 8.7 sec. or less
Consecutive print	bizhub C4000i	(A4, plain paper, tray 1, full size) Color: 40 sheets/min. (1-sided), 40 sheets/min. (2-sided) Black: 40 sheets/min. (1-sided), 40 sheets/min. (2-sided)
		(8 1/2 x 11, plain paper, tray 1, full size) Color: 42 sheets/min. (1-sided), 42 sheets/min. (2-sided) Black: 42 sheets/min. (1-sided), 42 sheets/min. (2-sided)
	bizhub C3300i	(A4, plain paper, tray 1, full size) Color: 33 sheets/min. (1-sided), 33 sheets/min. (2-sided) Black: 33 sheets/min. (1-sided), 33 sheets/min. (2-sided)
		(8 1/2 x 11, plain paper, tray 1, full size) Color: 35 sheets/min. (1-sided), 35 sheets/min. (2-sided) Black: 35 sheets/min. (1-sided), 35 sheets/min. (2-sided)
Process speed	bizhub C4000i	243.0 mm/s: Plain paper, Plain paper+, Recycled paper 121.5 mm/s: Thick 1, Thick 1+, Thick 2, Envelope, Postcard, Label, Coated paper, 1200 dpi (gloss mode)
	bizhub C3300i	200.0 mm/s: Plain paper, Plain paper+, Recycled paper 100.0 mm/s: Thick 1, Thick 1+, Thick 2, Envelope, Postcard, Label, Coated paper, 1200 dpi (gloss mode)
Paper feeding separation system	Manual	FR separation system with pick-up mechanism
	Tray 1	Roller separation system with pick-up mechanism
Copy exit tray capacity	Plain paper	250 sheets
	Special paper	10 sheets
	Envelope	1 sheet
Memory capacity	bizhub C4000i	Main memory: 4GB Standard storage (microSD): 8GB



Items	Specifications	
	bizhub C3300i	Main memory: 3GB Standard storage (microSD): 8GB
External memory function	Supported external memory devices	USB flash memory compatible with the USB (2.0/3.0) interface FAT32-formatted memory device Not including security features (Possible to turn OFF security features) Memory capacity of 32GB or less recommended. A USB flash memory that appears as multiple drives on a computer cannot be used.
Material	Toner cartridge, Imaging unit, Waste toner bottle, Transfer belt unit, Fusing unit For details, refer to PERIODICAL MAINTENANCE.	

### 1.1.2 Paper

Type/Size	Tray 1	Manual bypass tray	
Plain paper (60 to 90 g/m <sup>2</sup> (15 15/16 to 23 15/16 lb)) (*)	500 sheets	100 sheets	
Recycled paper (60 to 90 g/m <sup>2</sup> (15 15/16 to 23 15/16 lb))			
1-sided special paper			
Plain paper+ (91 to 105 g/m <sup>2</sup> (24 3/16 lb to 27 15/16 lb))	20 sheets	20 sheets	
Thick 1 (106 to 120 g/m <sup>2</sup> (28 3/16 lb to 31 15/16 lb))			
Thick 1+ (121 to 157 g/m <sup>2</sup> (32 3/16 to 41 3/4 lb))			
Thick 2 (158 to 210 g/m <sup>2</sup> (42 to 55 5/8 lb))			
Coated paper 1 (100 to 120 g/m <sup>2</sup> (26 5/8 to 31 15/16 lb))			
Coated paper 1+ (121 to 157 g/m <sup>2</sup> (32 3/16 to 41 3/4 lb))			
Coated paper 2 (158 to 210 g/m <sup>2</sup> (42 to 55 5/8 lb))			
Label			
Letterhead (60 to 90 g/m <sup>2</sup> (15 15/16 to 23 15/16 lb))			
Postcard			
Envelope			30 sheets
Regular paper size	A4S to A6S, Postcard (100 x 148 mm, 3 15/16 x 5 13/16 inches), B5, B6, 16K, 4 x 6, 5 1/2 x 8 1/2S to 11 x 8 1/2S	A4S to A6S, A5S, Postcard (100 x 148 mm), B5, B6, 6K, 8K 8 1/2 x 14 to 5 1/2 x 8 1/2S, 5 1/2 x 8 1/2S, 4 x 6S, 8 x 13	
Custom paper size	Width	100 to 216 mm (3 15/16 to 8 1/2 inches)	90 to 216 mm (3 9/16 to 8 1/2 inches)
	Length	148 to 297 mm (5 13/16 to 11 11/16 inches)	148 to 356 mm (5 13/16 to 14 inches)

- \*: The paper weight can be selected from the panel, either 60 to 90 g/m<sup>2</sup> (15 15/16 to 23 15/16 lb) or 60 to 70 g/m<sup>2</sup> (15 15/16 to 18 5/8 lb).

#### NOTE

- 1-sided special paper, coated paper, postcard, envelope, label, and letterhead cannot be fed for duplex printing.

### 1.1.3 Print volume

bizhub C4000i

Items		Japan	North America	Europe
Average print volume (prints/month)	Color	288	510	578
	Black	912	990	1,122
Maximum print volume (prints/month)	Color	24,000		
	Black	96,000		

bizhub C3300i

Items		Japan	North America	Europe
Average print volume (prints/month)	Color	-	306	374
	Black	-	594	726
Maximum print volume (prints/month)	Color	20,000		

Items	Japan	North America	Europe
Black	76,000		

### 1.1.4 Machine specification

Items	Specifications			
Power requirement	Voltage	AC 100 V	AC110 V to 127 V	AC 220 V to 240 V
	Current	14.5 A	12 A	7.5 A
	Frequency	50/60 Hz	60 Hz	50/60 Hz
Max. power consumption	1,450 W or less			
Power consumption in each mode	Standby	150 W or less *3		
	Low power mode	150 W or less *3		
	Sleep mode *1	0.5 W *3		
	Sub power OFF mode *2	0.5 W *3		
	ErP auto power off mode	0.5 W *3		
Plug-in power consumption	0.4 W			
Dimension	420 mm (W) *4 x 528 mm (D) x 473 mm (H) (16 9/16 inches (W) *4 x 20 13/16 inches (D) x 18 5/8 inches (H))			
Space requirements	855 mm (W) x 901 mm (D) x 473 mm (H) *5 (33 11/16 inches (W) x 35 1/2 inches (D) x 18 5/8 inches (H) *5)			
Weight	bizhub C4000i	Approx. 32.6 kg (73 3/16 lbs.) (including imaging unit, toner cartridge, waste toner bottle)		
	bizhub C3300i	Approx. 31.4 kg (73 3/16 lbs.) (including imaging unit, toner cartridge, waste toner bottle)		
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% or less per hour)		
	Levelness	Difference between front and back, right and left should be 1 degree or under.		

\*1: [Utility] -> [Maintenance] -> [Timer Setting] -> [Power Settings] -> [Power Consumption in Sleep Mode]

\*2: Even in sub power off mode, [Disable], [Enabled] and [High] are selectable in [Utility] -> [Maintenance] -> [Timer Setting] -> [Power 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 and paper exit tray are closed.

\*5: Manual bypass tray, paper feed tray and paper exit tray are pulled out.

### 1.1.5 Print function

Items	Specifications		
First print time (A4 or 8 1/2 x 11, plain paper, tray 1, full size)	bizhub C4000i	Color: 8.7 sec. or less Black: 8.0 sec. or less	
	bizhub C3300i	Color: 9.6 sec. or less Black: 8.7 sec. or less	
Printing speed for multi-print cycle	bizhub C4000i	(A4, plain paper, tray 1, full size)	Color: 40 sheets/min. (1-sided), 40 sheets/min. (2-sided) Black: 40 sheets/min. (1-sided), 40 sheets/min. (2-sided)
		(8 1/2 x 11, plain paper, tray 1, full size)	Color: 42 sheets/min. (1-sided), 42 sheets/min. (2-sided) Black: 42 sheets/min. (1-sided), 42 sheets/min. (2-sided)
	bizhub C3300i	(A4, plain paper, tray 1, full size)	Color: 33 sheets/min. (1-sided), 33 sheets/min. (2-sided) Black: 33 sheets/min. (1-sided), 33 sheets/min. (2-sided)
		(8 1/2 x 11, plain paper, tray 1, full size)	Color: 35 sheets/min. (1-sided), 35 sheets/min. (2-sided) Black: 35 sheets/min. (1-sided), 35 sheets/min. (2-sided)
Print resolution	Multi-valued: 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	PCL 5e/c Emulation PCL 6 (XL Version 3.0) Emulation PostScript 3 (3016) Emulation XPS ver.1.0		
Printer driver (PCL/XPS)	Server Windows Server 2008 (x86/x64) Windows Server 2008 R2		

Items	Specifications	
		Windows Server 2012 Windows Server 2012 R2 Windows Server 2016
	Client	Windows 7 (x86/x64) Windows 8.1 (x86/x64) Windows 10 (x86/x64)
Printer driver (PS3) (PS)	Server	Windows Server 2008 (x86/x64) Windows Server 2008 R2 Windows Server 2012 Windows Server 2012 R2 Windows Server 2016
	Client	Windows 7 (x86/x64) Windows 8.1 (x86/x64) Windows 10 (x86/x64) Mac OS (10.9, 10.10, 10.11, 10.12, 10.13) Red Hat Enterprise Linux
Work memory	bizhub C4000i	Main memory: 4GB
	bizhub C3300i	Main memory: 3GB
Host interface	Ethernet 10Base-T, 100Base-TX, 1000Base-T USB 3.0/2.0/1.1 USB_Host	
Built-in fonts (PCL)	European	80 fonts
	Japanese	HGMinchoL, HGPMinchoL, HGGothicB, HGPGothicB
Built-in fonts (PostScript 3 Emulation)	European	Type1 font 137 fonts
	Japanese	HGMinchoL, HGGothicB

## 1.2 PF-P20/PF-P21

### Type

Items	Specifications
Name	500-sheet paper feed cassette
Type	Front loading type
Installation	Desk type
Paper feeding system	Paper separation by roller with pick-up mechanism
Document alignment	Center

### Paper

Items	Type	Size	Capacity
PF-P20	Plain paper (60 to 90 g/m <sup>2</sup> (15 15/16 to 23 15/16 lb))	A4, B5, 8 <sup>1</sup> / <sub>2</sub> x 11, 7 <sup>1</sup> / <sub>4</sub> x 10 <sup>1</sup> / <sub>2</sub>	500 sheets
	Recycled paper (60 to 90 g/m <sup>2</sup> (15 15/16 to 23 15/16 lb))		
	1-sided special paper (60 to 90 g/m <sup>2</sup> (15 15/16 to 23 15/16 lb))		
PF-P21	Plain paper (60 to 90 g/m <sup>2</sup> (15 15/16 to 23 15/16 lb))	A4, B5, 8 <sup>1</sup> / <sub>2</sub> x 11, 7 <sup>1</sup> / <sub>4</sub> x 10 <sup>1</sup> / <sub>2</sub> , 8 x 13, 8 <sup>1</sup> / <sub>2</sub> x 14, 210 x 330	500 sheets
	Recycled paper (60 to 90 g/m <sup>2</sup> (15 15/16 to 23 15/16 lb))		
	1-sided special paper (60 to 90 g/m <sup>2</sup> (15 15/16 to 23 15/16 lb))		

### Machine specification

Items	Specifications	
Power requirement	Supplied from the main body	
Max. power consumption	15 W or less	
Dimension	PF-P20	420 mm (W) x 528 mm (D) x 145 mm (H) (16 9/16 inches (W) x 20 13/16 inches (D) x 5 11/16 inches (H))
	PF-P21	450 mm (W) x 528 mm (D) x 145 mm (H) (17 11/16 inches (W) x 20 13/16 inches (D) x 5 11/16 inches (H))
Weight	PF-P20	Approx. 7.8 kg (17 3/16)
	PF-P21	Approx. 8.4 kg (18 1/2 lb)

**Operating environment**

- Conforms to the operating environment of the main body.

**1.3 FS-P04****Type**

Items	Specifications
Name	Finisher FS-P04
Type	Off-line type stapler

**Paper**

Items	Specifications
Paper type	Weight: 52 to 90 g/m <sup>2</sup> Thickness: 2.2 mm or less
Staple capacity	2 sheets (Thick paper 52 g/m <sup>2</sup> ) 20 sheets (Plane paper 90 g/m <sup>2</sup> )
Continuous stapling interval	Once 3 sec.

**Machine specification**

Items	Specifications
Power requirement	DC 24 V ± 10% (supplied from the main body)
Dimension	101 mm (W) x 115.3 mm (D) x 74.5 mm (H) (3 inches (W) x 4 9/16 inches (D) x 2 15/16 inches (H))
Weight	Approx. 1.3 kg (2 7/8 lb)

**Operating environment**

- Conforms to the operating environment of the main body.

**1.4 CU-202****Type**

Items	Specifications
Name	Clean unit
Type	Exhaust scrubber
Suction system	Dual parallel fan
UFP trapping system	UFP filter
UFP collection efficiency	UFP filter collection capacity: More than 90 %
Maximum suction air volume	0.7m <sup>3</sup> /min (Avg. flow velocity: 0.1 m/sec)
Exhaust direction	Exhaust downflow

**Machine specification**

Items	Specifications
Power requirement	DC 24 V (supplied from the main body)
Dimension	285 mm (W) x 111 mm (D) x 228 mm (H) 11 1/4 inches (W) x 4 3/8 inches (D) x 9 inches (H)
Weight	Approx. 2.7 kg (6 lb)

**Operating environment**

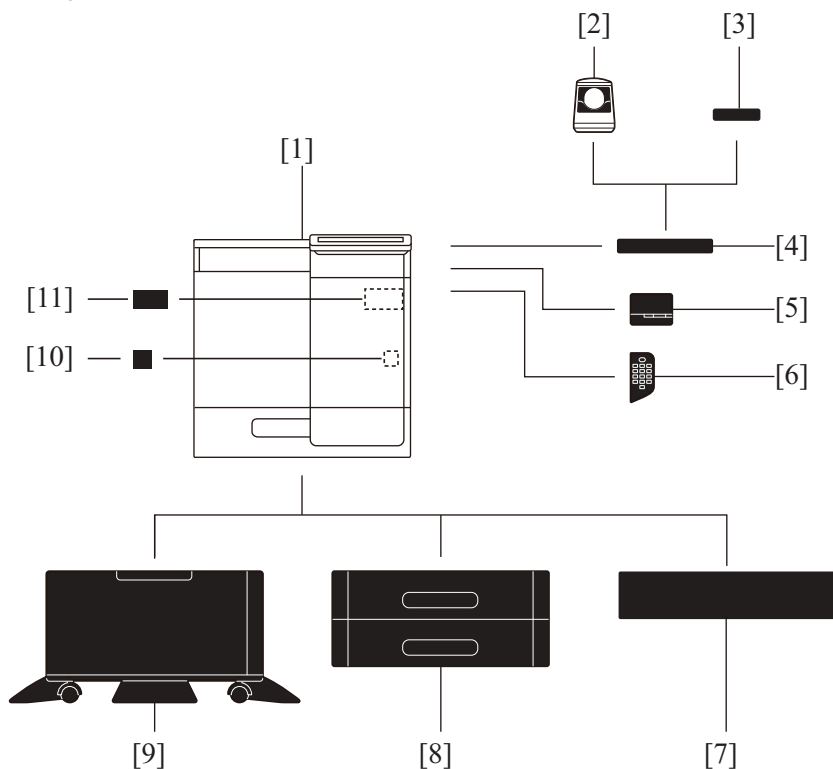
- Conforms to the operating environment of the main body.

## 2. OVERALL COMPOSITION

### 2.1 SYSTEM CONFIGURATION

#### 2.1.1 System configuration

##### (1) System front view



[1]	bizhub C4000i/C3300i	[2]	Authentication Unit AU-102
[3]	Authentication Unit AU-201S	[4]	Working Table WT-P03
[5]	Finisher FS-P04	[6]	Keypad KP-P03
[7]	Paper Feed Unit PF-P22/PF-P25	[8]	Paper Feed Unit PF-P20/PF-P21
[9]	Desk DK-P04/DK-P05	[10]	Local Interface Kit EK-P10
[11]	Upgrade Kit UK-221	-	-

#### 2.1.2 Optional configuration

##### (1) Combination configuration of main body and paper feed options

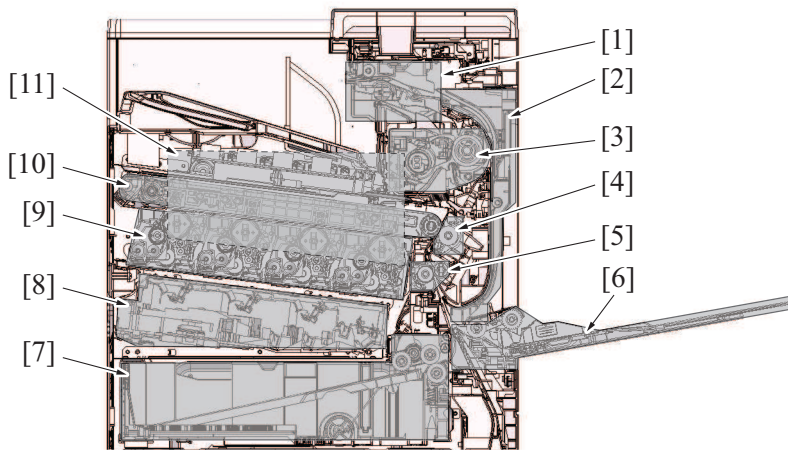
1	Main body	PF-P20/PF-P21	
2	Main body	DK-P04/DK-P05	
3	Main body	PF-P20	PF-P20
		PF-P21	PF-P21
4	Main body	PF-P20	PF-P22
		PF-P21	PF-P25
5	Main body	PF-P22	PF-P22
		PF-P25	PF-P25

##### (2) Combination configuration of main body and post-processing options

1	Main body	FS-P04
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##### (3) Combination of main body and fax kit

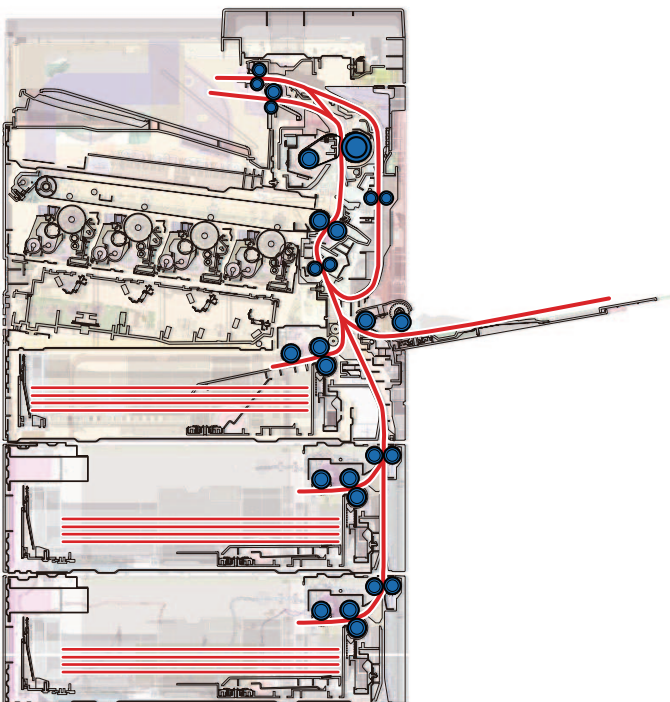
## 2.2 Section configuration



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

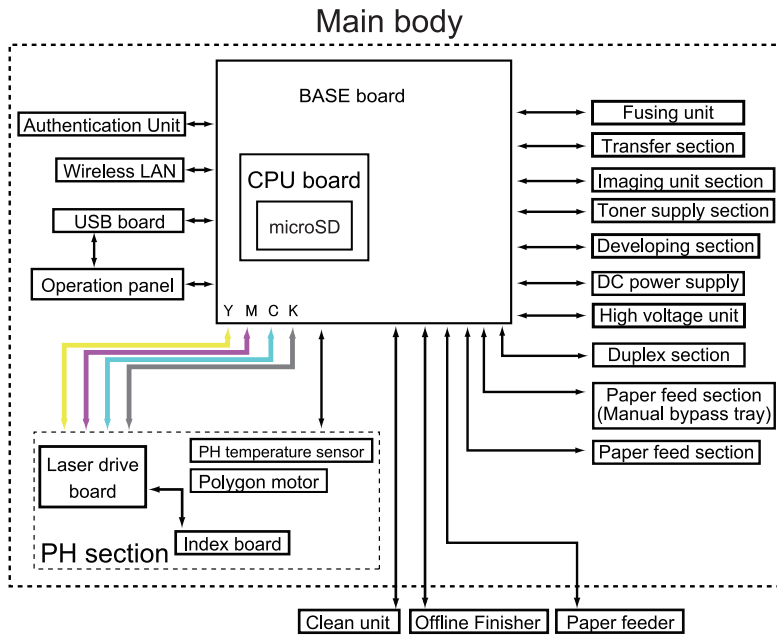
## 2.3 Paper path

Main body + PF-P20 + PF-P20 / Main body + PF-P21 + PF-P21

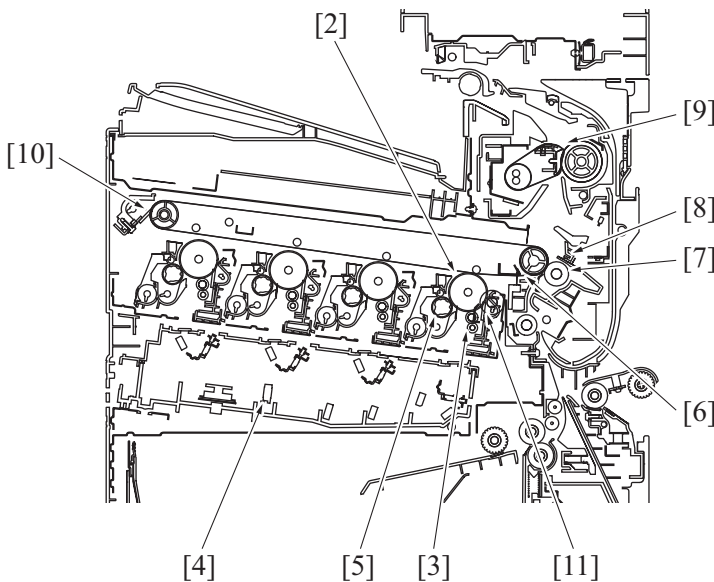


- [List of drive rollers and sensors in the paper path](#)

2.4 CONTROL BLOCK DIAGRAM

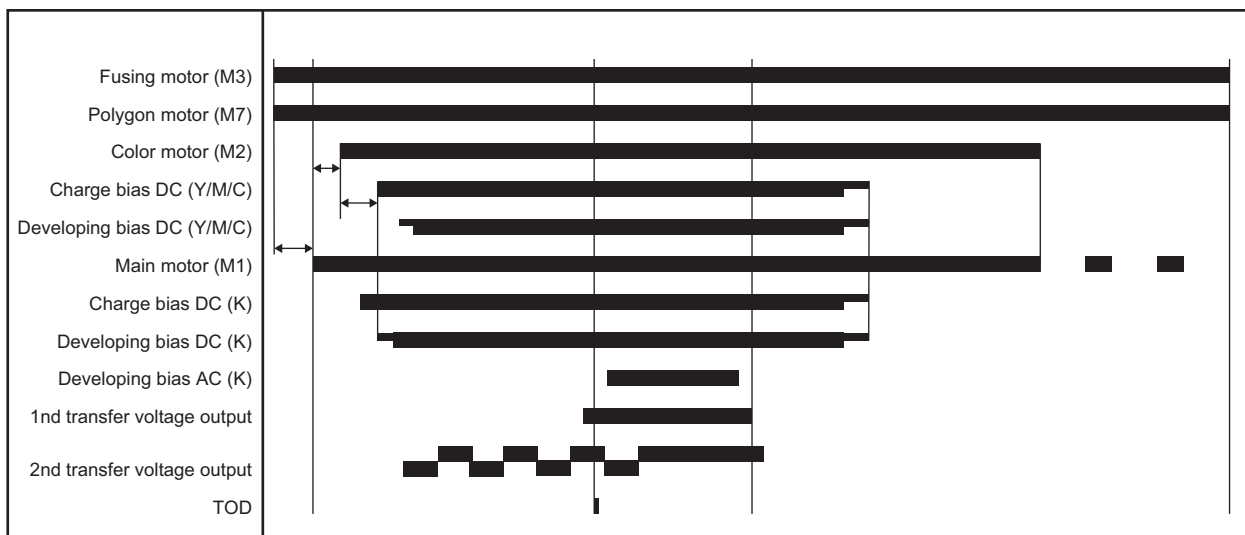


2.5 IMAGE CREATION PROCESS



[1]	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.
[2]	Photoconductor	The image of the original projected onto the surface of the photoconductor is changed to a corresponding electrostatic latent image.
[3]	Photoconductor charging	Supply DC (-) charge on the photoconductor.
[4]	Laser exposure	Expose photoconductor to a laser beam to develop electrostatic latent image.
[5]	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 photoconductor. It is thereby changed to a visible, developed image.
[6]	1st 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 photoconductors (Y, M, C, and K) to be transferred onto the transfer belt.
[7]	2nd 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.
[8]	Separation	The paper, which has undergone the 2nd transfer process, is neutralized so that it can be properly separated from the transfer belt by the paper separator claws.
[9]	Transfer belt cleaning	Residual toner on the surface of the transfer belt is collected for cleaning by cleaning blade.
[10]	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.
[11]	Photoconductor cleaning	The residual toner left on the surface of the photoconductor is scraped off.

### 2.6 IMAGE FORMING CONTROL



### 2.7 Process speed

Paper Type/Mode	bizhub C4000i	bizhub C3300i
<ul style="list-style-type: none"> <li>• Plain paper</li> <li>• Plain paper+</li> <li>• Recycled paper</li> </ul>	243 mm/sec	200 mm/sec
<ul style="list-style-type: none"> <li>• Thick 1</li> <li>• Thick 1+</li> <li>• Thick 2</li> </ul>	121.5 mm/sec	100 mm/sec
<ul style="list-style-type: none"> <li>• Special Paper*</li> <li>• Gloss mode 1200 dpi</li> </ul>	121.5 mm/sec	100 mm/sec

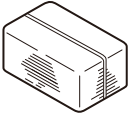

\*: Special paper (postcard, envelope, label, coated paper)



## D SERVICE TOOL

### 1. bizhub C4000i/3300i

#### Service material list

Name	Shape	Parts No.	Remarks
Cleaning pad (30 pcs)		A5AWP001##	30pcs/1 pack
Hydro-wipe		65AA-9920	10pcs/1pack

## E MAINTENANCE

### 1. Concept of maintenance

#### 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].

#### Concept of consumable/part replacement time

- 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 or 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	
Imaging unit/K	bizhub C4000i	Japan	163,000 sheets	9373M	9965M
		North America	153,000 sheets		
		Europe	161,000 sheets		
	bizhub C3300i	North America	140,000 sheets	11388M	11958M
		Europe	154,000 sheets		
Imaging unit/Y,M,C	bizhub C4000i	Japan	55,000 sheets	4687M	4921M
		North America	56,000 sheets		
		Europe	55,000 sheets		
	bizhub C3300i		56,000 sheets	5694M	5979M
Transfer belt unit	bizhub C4000i	Japan	163,000 sheets	8619M	9050M
		North America	153,000 sheets		
		Europe	161,000 sheets		
	bizhub C3300i	North America	140,000 sheets	10472M	10996M
		Europe	154,000 sheets		
Transfer roller	bizhub C4000i	Japan	163,000 sheets	8619M	9050M
		North America	153,000 sheets		
		Europe	161,000 sheets		
	bizhub C3300i	North America	140,000 sheets	10472M	10996M
		Europe	154,000 sheets		
Fusing unit	bizhub C4000i/ C3300i		400,000 sheets	400,000 counts	420,000 counts
Toner filter	bizhub C4000i/ C3300i		-	200,000 counts	-

- \*1: For details of specified conditions of field standard yield, see the following tables.

\*2: The replacement time changes depending on the setting of the replacement timing intelligent control. For details, see [J.2.10 Engine FW DipSW](#).

#### Specified conditions of field standard yield

##### Japan

Items		bizhub C4000i	
Printing	Color	4 P/J	
	Black	4 P/J	
Paper size	A4S		
Coverage	Each color 5%		
Average print volume/month	288 prints/month		

##### North America

Items		bizhub C4000i	bizhub C3300i
Printing	Color	4 P/J	3 P/J
	Black	4 P/J	3 P/J
Paper size	Letter S		
Coverage	Each color 5%		
Average print volume/month	510 prints/month		306 prints/month

## Europe

Items		bizhub C4000i	bizhub C3300i
Printing	Color	4 P/J	3 P/J
	Black	4 P/J	3 P/J
Paper size		A4S	
Coverage		Each color 5%	
Average print volume/month		578 prints/month	374 prints/month

## 2. Periodical replacement parts list

### 2.1 bizhub C4000i/C3300i

Classification	Parts name		Parts No.	Qt.	Replacing cycle		Descriptions	Ref. page
Paper feed section	Tray 1 feed roller		A64J 5641 ##	1	200,000		*2 *4	E.3.1.1 Replacing the tray 1 pick-up roller, tray 1 feed roller
	Tray 1 pick-up roller		A64J 5642 ##	1	200,000			
	Tray 1 separation roller		A00J 5636 ##	1	200,000			
	Manual bypass tray feed roller		A93E 5975 ##	1	200,000		*2 *4	E.3.1.2 Replacing the tray 1 separation roller
	Manual bypass tray pick-up roller		A5C1 5622 ##	1	200,000			E.3.1.3 Replacing the manual bypass tray feed roller
	Manual bypass tray separation pad		AAJR R722 ##	1	200,000			E.3.1.4 Replacing the manual bypass tray pick-up roller
Processing section	Toner cartridge/Y,M,C		-	1	9,000		*1 *3	E.3.1.5 Replacing the manual bypass tray separation pad
	Toner cartridge/K		-	1	13,000			
	Imaging unit/Y,M,C	bizhub C4000i	-	1	Japan	55,000	*1 *3	E.3.1.6 Replacing the toner cartridge
					North America	56,000		
					Europe	55,000		
	bizhub C3300i		-	1	56,000			
	Imaging unit/K	bizhub C4000i/C3300i	-	1	Japan	163,000	*1 *3	E.3.1.7 Replacing the Imaging unit
					North America	153,000		
					Europe	161,000		
	bizhub C3300i		-	1	North America	140,000		
					Europe	154,000		
	Toner filter		A92E1581	1	200,000		*2	E.3.1.8 Replacing the toner filter
Waster toner bottle	bizhub C4000i	ACDN 001	1	Japan	29,500	*1 *3 *5	E.3.1.9 Replacing the waster toner bottle	
				North America	26,800			
				Europe	26,800			
	bizhub C3300i	ACDN 0Y1	1	North America	26,800			
				Europe	26,800			
Image transfer section	Transfer belt unit	bizhub C4000i	AAJR R701	1	Japan	163,000	*3	E.3.1.10 Replacing the transfer belt unit
					North America	153,000		
					Europe	161,000		
	bizhub C3300i	AAJR R701	1	North America	140,000			
				Europe	154,000			
				Transfer roller	bizhub C4000i	AAJR R705	1	Japan

Classification	Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
				North America	153,000	
				Europe	161,000	
	bizhub C3300i	AAJR R705	1	North America	140,000	
				Europe	154,000	
Fusing section	Fusing unit	AAJR R702 ## (100 V)	1	400,000	*3	<a href="#">E.3.1.12 Replacing the fusing unit</a>
		AAJR R703 ## (120V)				
		AAJR R704 ## (220-240 V)				

\*1: The parts can be replaced either by user or service engineer.

\*2: Life counter value

\*3: Field standard yield

\*4: Replace these parts at the same time.

\*5: A waste toner full condition is detected with detecting the actual waste toner emissions.

## 2.2 PF-P20/PF-P21

Part name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Pick-up roller	A64J 5642 ##	1	200,000	*1	<a href="#">E.3.2.1 Replacing the tray 2/3 pick-up roller, feed roller</a>
Feed roller	A64J 5641 ##	1	200,000	*2	
Separation roller	A00J 5636 ##	1	200,000		<a href="#">E.3.2.2 Replacing the tray 2/3 separation roller</a>

\*1: Life counter value

\*2: Replace these parts at the same time.

### 3. Periodical replacement procedure

#### NOTE

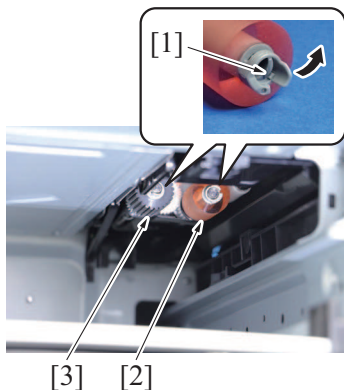
- The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.

#### 3.1 bizhub C4000i/C3300i

##### 3.1.1 Replacing the tray 1 pick-up roller, tray 1 feed roller

1. Remove the tray 1.

F.4.1.7 Tray1



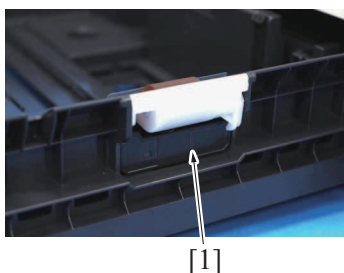
2. Release the tab [1] of each roller, and remove the tray 1 feed roller [2] and tray 1 pick-up roller [3].

3. To reinstall, reverse the order of removal.

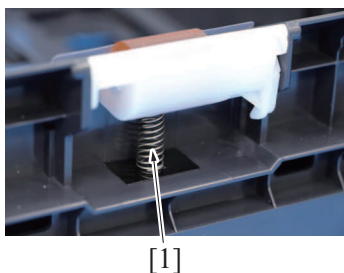
4. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [1st Feed Count].

##### 3.1.2 Replacing the tray 1 separation roller

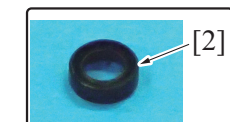
1. Slide out the tray 1.



2. Remove the cover [1].



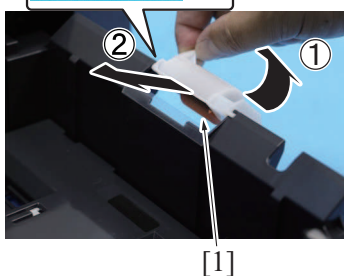
3. Remove the spring [1].

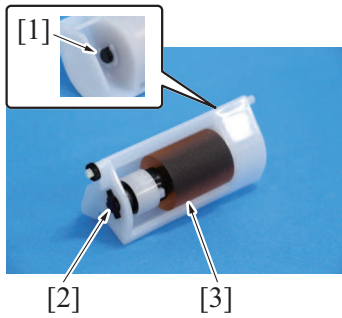


4. Remove the tray 1 separation roller assy [1].

#### NOTE

- Make sure not to lose the collar [2] when removing the tray 1 separation roller assy.





- Remove the C-clip [1], pull out the shaft [2], and remove the tray 1 separation roller assy [3].

- To reinstall, reverse the order of removal.
- Select [Service Mode] -> [Counter] -> [Life] and clear the count of [1st Feed Count].

### 3.1.3 Replacing the manual bypass tray feed roller

- Open the right door.
- Remove the manual bypass tray unit.  
[F.4.2.1 Manual bypass tray unit](#)
- Remove the bypass tray paper feed clutch.  
[F.4.5.1 Bypass tray paper feed clutch \(CL2\)](#)
- Remove the manual bypass tray roller unit.  
[F.4.2.5 Manual bypass tray roller unit](#)

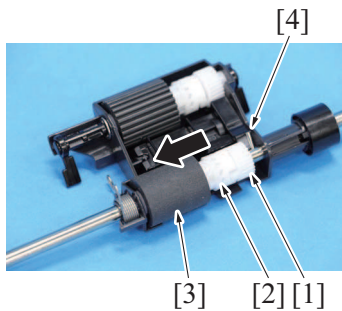
- Remove the C-clip [1].



- Slide the gear [1], gear [2] and feed roller [3], and remove the pin [4].

**NOTE**

- Be careful not to lose the pin.

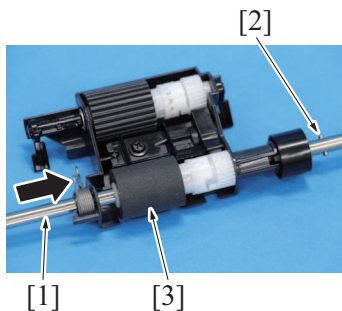


- Slide the shaft [1], and remove the pin [2].

**NOTE**

- Be careful not to lose the pin.

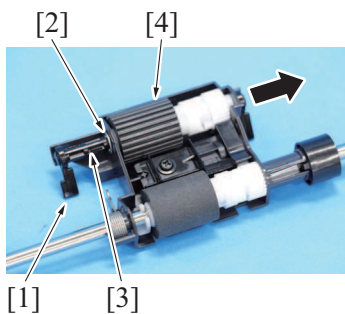
- Pull out the shaft [1], and remove the feed roller [3].



- To reinstall, reverse the order of removal.
- Select [Service Mode] -> [Counter] -> [Life] and clear the count of [Manual Tray Feed Count].

### 3.1.4 Replacing the manual bypass tray pick-up roller

- Open the right door.
- Remove the manual bypass tray unit.  
[F.4.2.1 Manual bypass tray unit](#)
- Remove the bypass tray paper feed clutch.  
[F.4.5.1 Bypass tray paper feed clutch \(CL2\)](#)
- Remove the manual bypass tray roller unit.  
[F.4.2.5 Manual bypass tray roller unit](#)

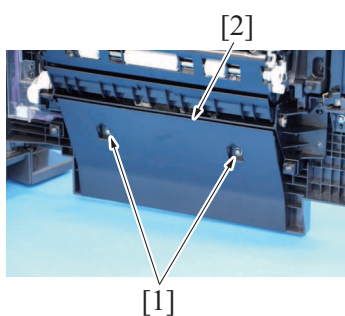


5. Remove the lever [1] and the E-ring [2].
6. Pull out the shaft [3], and remove the manual bypass tray pick-up roller [4].

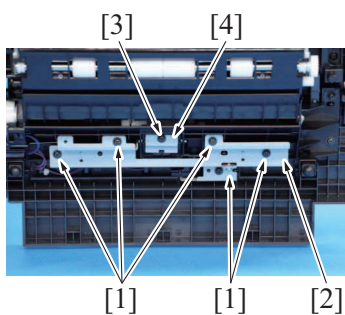
7. To reinstall, reverse the order of removal.
8. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [Manual Tray Feed Count].

### 3.1.5 Replacing the manual bypass tray separation pad

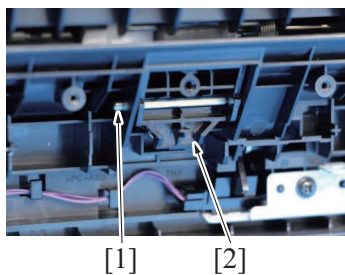
1. Open the right door.



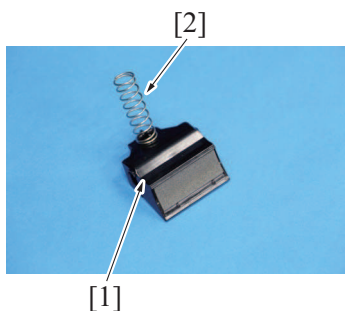
2. Remove two screws [1], and remove the cover [2].



3. Remove five screws [1] and the plate [2].
4. Remove the screw [3] and the plate [4].



5. Slide the shaft [1], and remove the separation pad assy [2].



6. Remove the spring [2] from the separation pad [1].

7. To reinstall, reverse the order of removal.
8. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [Manual Tray Feed Count].



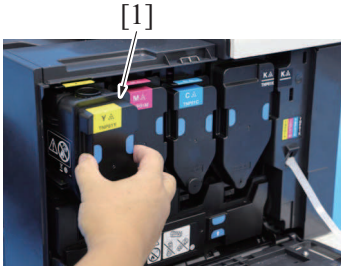
### 3.1.6 Replacing the toner cartridge

#### (1) Removal procedure

**NOTE**

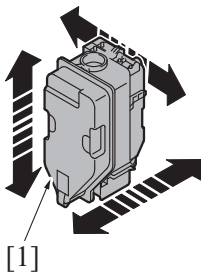
- Although the procedure shown below is for the replacement of the toner cartridge/Y, use the same procedure to replace other colors of toner cartridges.

1. Open the front door.



2. Remove the toner cartridge [1].

#### (2) Reinstall procedure



1. Remove the new toner cartridge [1] from its packaging, hold it with both hands and shake it several times.

**NOTE**

- Shake the toner cartridge well.  
If shaking is not enough, that may cause trouble.

2. To reinstall, reverse the order of removal.

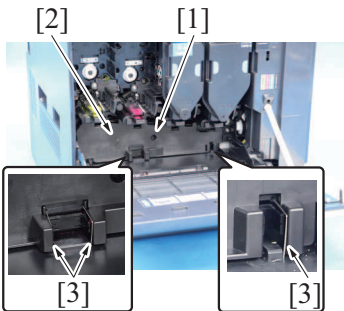
### 3.1.7 Replacing the Imaging unit

1. Remove the toner cartridge of the same color as the imaging unit to be removed, and remove the right neighbor toner cartridge.

[E.3.1.6 Replacing the toner cartridge](#)

2. Remove the waste toner bottle.

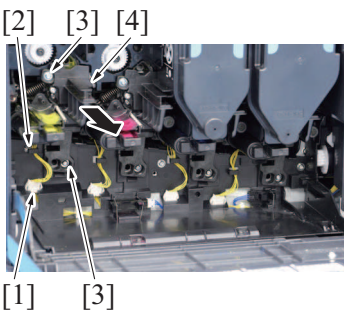
[E.3.1.9 Replacing the waster toner bottle](#)



3. Remove the screw [1], and remove the cover [2].

**NOTE**

- Make sure not to deform or loss the tension spring [3] when removing or installing the cover.
- Make sure not to hide the tension spring [3] inside the cover when installing the cover.

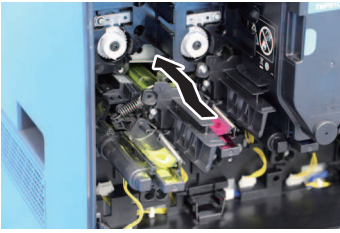


4. Disconnect the connector [1], and remove the harness from the harness guide [2].

5. Remove two screws [3], and remove the imaging unit [4].

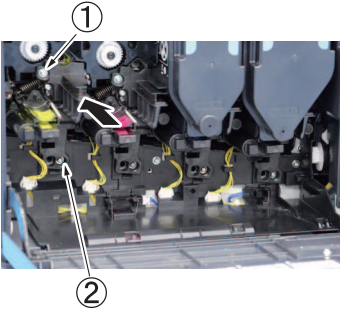
6. NOTE

- When installing the imaging unit, completely push it in.



7. NOTE

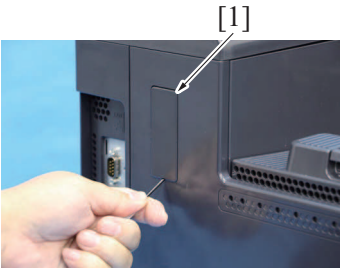
- When installing the imaging unit, be sure to tighten the screws from (1) to (2) in that order.
- Otherwise, it may cause a color shift or magnification shift in the main scanning direction.



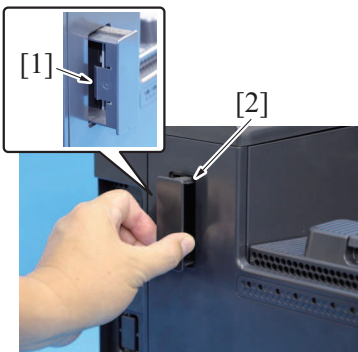
8. To reinstall, reverse the order of removal.
9. Select [Service Mode] -> [Machine] -> [Color Registration Adjustment] to adjust the value for correcting the color shift to 0.
10. Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and perform the function.
11. Select [Service Mode] -> [Machine] -> [Main Scanning Direction Zoom] to adjust the zoom in main scanning direction.
12. Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and perform the function.
13. Repeat the step 10 and 11 until the Main Scanning Direction Zoom Adjustment is met.
14. Select [Service Mode] -> [Machine] -> [Color Registration Adjustment] and perform the adjustment for correcting the color shift.
15. Select [Service Mode] -> [Machine] -> [Printer Area] -> [Printer Image Centering Side 1] to adjust the side of print position for each paper source.
16. Select [Service Mode] -> [Machine] -> [Printer Area] -> [Prt. Image Center. Side 2 (Dup)] to adjust the side of 2-sided print position for each paper source.

3.1.8 Replacing the toner filter

1. Pull out the toner filter [1].



2. Unhook the tab [1], and remove the toner filter [2].

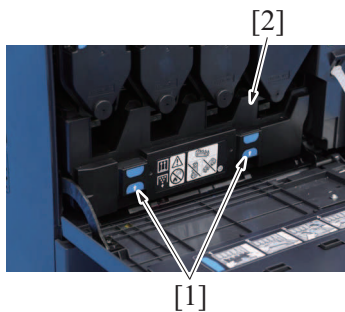


3. To reinstall, reverse the order of removal.
4. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [Toner Filter].

3.1.9 Replacing the waster toner bottle

1. Open the front door.

2. Hold the both handles [1], and remove the waste toner bottle [2].



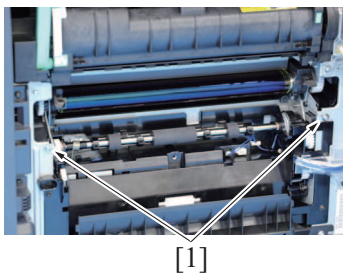
3. Clean the surface around the waste toner collecting port.  
[E.5.1.9 Cleaning of the area around the waste toner collecting port](#)
4. Reinstall the above parts following the removal steps in reverse.

### 3.1.10 Replacing the transfer belt unit

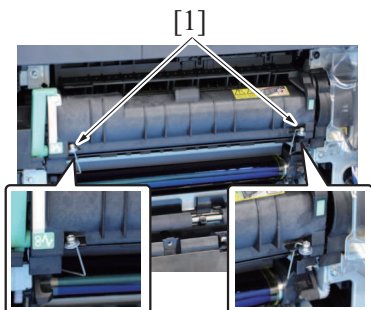
#### (1) Removal procedure

1. Remove the toner cartridge.  
[E.3.1.6 Replacing the toner cartridge](#)
2. Remove the waste toner bottle.  
[E.3.1.9 Replacing the waster toner bottle](#)
3. Remove the imaging unit.  
[E.3.1.7 Replacing the Imaging unit](#)
4. Remove the IDC sensor assy.  
[F.4.7.1 IDC sensor \(IDCS1\)](#)

5. Remove two screws [1].



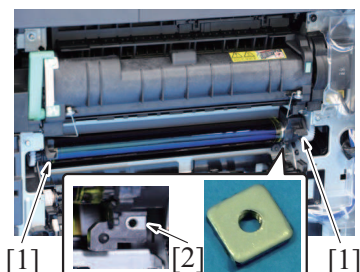
6. Hook two transfer unit pressers [1] on the fusing unit.

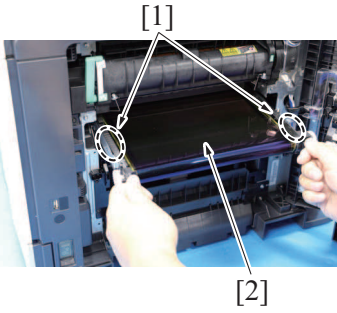


7. Hold the handle [1] of the transfer belt unit, and pull it out.

**NOTE**

- **Make sure not to drop or lose the plate nut [2].**



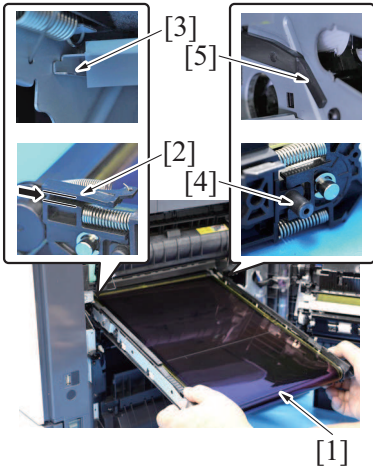


8. Hold the position [1] and remove the transfer belt unit [2].

**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.

**(2) Reinstall procedure**

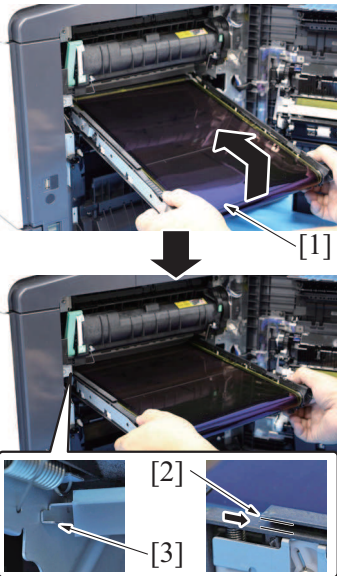


1. Insert the transfer belt unit [1] so that the left groove [2] in the tip is along the rail [3], and the right shaft [4] on the tip is along the rail [5].

**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.
- 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. Hold up the transfer belt [1], and insert the transfer belt unit so that the groove [2] is along the rail [3].

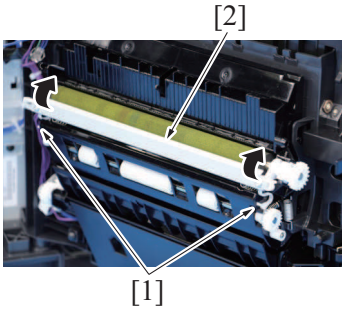


3. To reinstall, reverse the order of removal.
4. Carry out the [Service Mode] -> [Counter] -> [Life] -> [New Release].
5. Select [Service Mode] -> [Machine] -> [Color Registration Adjustment] to adjust the value for correcting the color shift to 0.
6. Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and perform the function.
7. Select [Service Mode] -> [Machine] -> [Main Scanning Direction Zoom] to adjust the zoom in main scanning direction.
8. Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and perform the function.
9. Repeat the step 6 and 7 until the Main Scanning Direction Zoom Adjustment is met.
10. Select [Service Mode] -> [Machine] -> [Color Registration Adjustment] and perform the adjustment for correcting the color shift.

**3.1.11 Replacing the transfer roller unit**

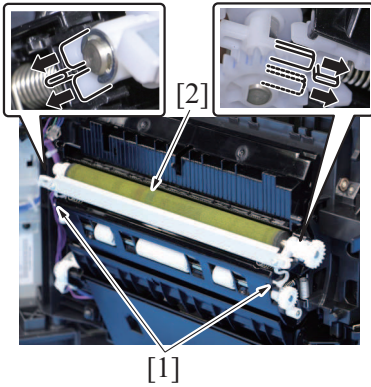
**(1) Removal procedure**

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].

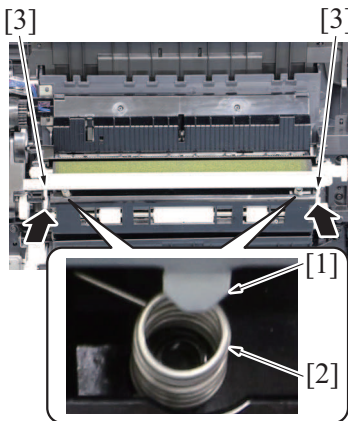
(2) Reinstall procedure



1. Holding onto the lock levers [1] (at two places), mount the new transfer roller unit [2].

NOTE

- The transfer roller unit must be engaged in the transfer roller unit supporter.



2. Insert two protrusions [1] of the transfer roller unit into the center of the pressure spring [2].
3. Lock the lock levers [3] (at two places).

NOTE

- Make sure that the levers are locked in position both at front and rear.

4. Close the right door.
5. Carry out the [Service Mode] -> [Counter] -> [Life] -> [New Release].

3.1.12 Replacing the fusing unit

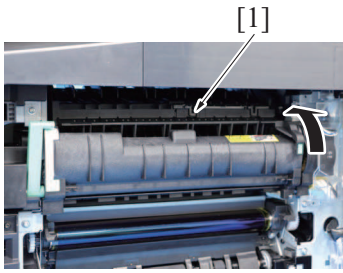
# ! CAUTION

- The temperature gets high in the vicinity of the fusing unit. You may get burned when you come into contact with the area.

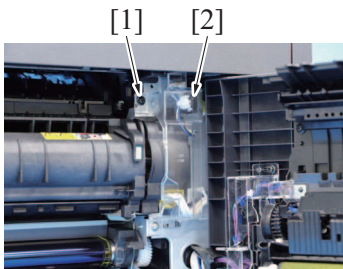


Before replacement operations, make sure that more than 20 minutes have elapsed since the main power switch was turned off.

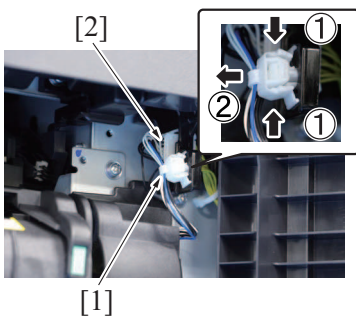
1. Open the right door.



2. Open the separation guide [1].

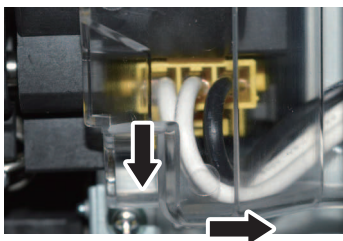


3. Remove the screw [1], and remove the cover [2].



4. Remove the cable tie [1] from the main body, and disconnect the connector [2].

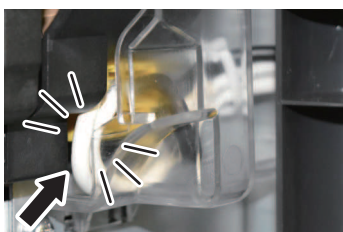
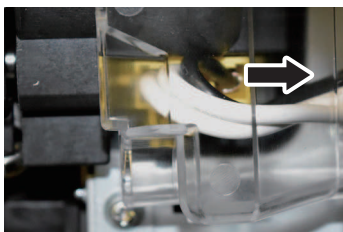
<OK>



5. **NOTE**

- When installing the cover, make sure that the harness is once routed downward, then in the horizontal direction.
- Make sure not to pinch the harness by the cover when installing the cover.

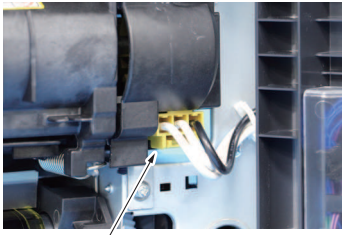
<NG>



- 6. Disconnect the connector [1].

**NOTE**

- When removing the connector [1], press the claw to release the lock, then remove it.

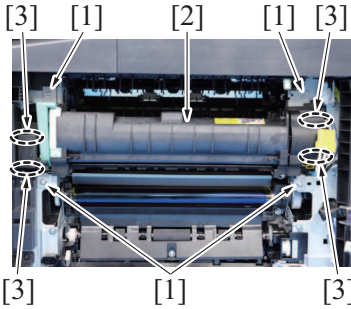


[1]

- 7. Remove four screws [1], and remove the fusing unit [2].

**NOTE**

- When removing the fusing unit, hold the parts [3] shown in the illustration. Make sure to hold it firmly so that it would not fall due to its weight.



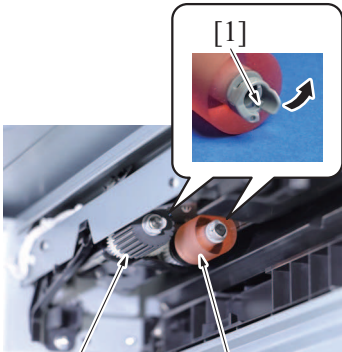
- 8. To reinstall, reverse the order of removal.
- 9. Carry out the [Service Mode] -> [Counter] -> [Life] -> [New Release].

**3.2 PF-P20/PF-P21**

**3.2.1 Replacing the tray 2/3 pick-up roller, feed roller**

- 1. Remove the tray 2 or tray 3.  
F.5.3 Tray 2, tray 3 (PF-P20/PF-P21)

- 2. Unhook the tab [1], and remove the feed roller [2] and pick-up roller [3].

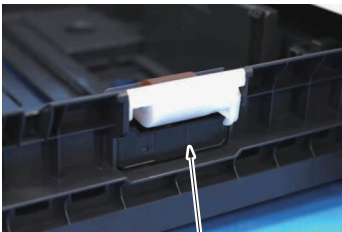


[3] [2]

- 3. To reinstall, reverse the order of removal.
- 4. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [2nd Feed Count] or [3rd Feed Count].

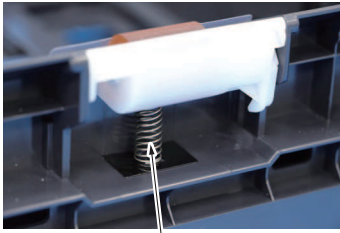
**3.2.2 Replacing the tray 2/3 separation roller**

- 1. Slide out the tray 2 or tray 3.
- 2. Remove the cover [1].

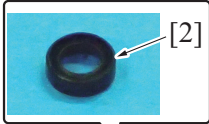


[1]

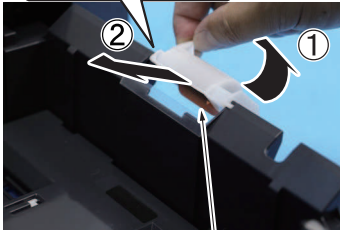
3. Remove the spring [1].



[1]



[2]

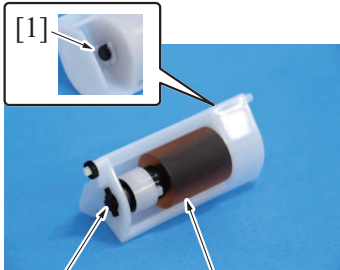


[1]

4. Remove the separation roller assy [1].

**NOTE**

- Make sure not to lose the collar [2] when removing the separation roller assy.



[1]

[2]

[3]

5. Remove the C-clip [1], pull out the shaft [2], and remove the separation roller assy [3].

6. To reinstall, reverse the order of removal.

7. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [2nd Feed Count] or [3rd Feed Count].



## 4. Cleaning parts list

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

### 4.1 bizhub C4000i/C3300i

Classification	Part name	Cleaning cycle	Ref. page
Tray 1	Tray 1 feed roller	At paper feeding jam	E.5.1.1 Cleaning tray 1 pick-up roller, tray 1 feed roller
	Tray 1 pick-up roller	At paper feeding jam	
	Tray 1 separation roller	At paper feeding jam	E.5.1.2 Cleaning tray 1 separation roller
Manual bypass tray	Manual bypass tray feed roller	At paper feeding jam	E.5.1.4 Cleaning the manual bypass tray feed roller
	Manual bypass tray pick-up roller	At paper feeding jam	E.5.1.3 Cleaning manual bypass tray pick-up roller
	Manual bypass tray separation pad	At paper feeding jam	E.5.1.5 Cleaning the manual bypass tray separation pad
Processing section	Transfer belt unit	At abnormal image occurring	E.5.1.6 Cleaning the transfer belt unit
	PH window	At abnormal image occurring	E.5.1.7 Cleaning the PH window
Transport section	Registration roller	60,000	E.5.1.8 Cleaning of the registration roller
Image transfer section	Around waste toner collecting port	60,000	E.5.1.9 Cleaning of the area around the waste toner collecting port
	2nd image transfer entrance guide	200,000 or When transfer belt unit is replaced	E.5.1.10 Cleaning of the 2nd image transfer entrance guide
	IDC sensor window	200,000 or When transfer belt unit is replaced	E.5.1.11 Cleaning of the IDC sensor window
Duplex section	Duplex transport roller	60,000	E.5.1.12 Cleaning of the duplex transport rollers

### 4.2 PF-P20/ PF-P21

Part name	Cleaning cycle	Ref. page
Pick-up roller	At paper feeding jam	E.5.2.1 Cleaning the tray 2/3 pick-up roller, feed roller
Feed roller	At paper feeding jam	E.5.2.2 Cleaning the tray 2/3 separation roller
Separation roller	At paper feeding jam	

## 5. Cleaning/Lubrication procedure

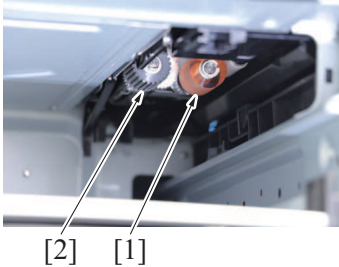
### NOTE

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

### 5.1 bizhub C4000i/C3300i

#### 5.1.1 Cleaning tray 1 pick-up roller, tray 1 feed roller

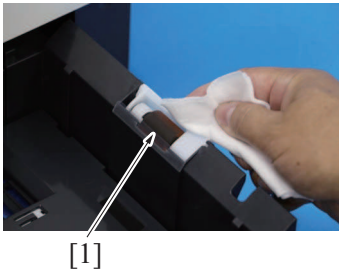
1. Remove the tray 1.  
[F.4.1.7 Tray1](#)



2. Using a cleaning pad dampened with alcohol, wipe the tray 1 feed roller [1] and tray 1 pick-up roller [2] clean of dirt.

#### 5.1.2 Cleaning tray 1 separation roller

1. Slide out the tray 1.



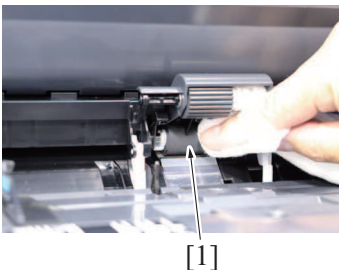
2. Using a cleaning pad dampened with alcohol, wipe the tray 1 separation roller [1] clean of dirt.

#### 5.1.3 Cleaning manual bypass tray pick-up roller



1. Using a cleaning pad dampened with alcohol, wipe the manual bypass tray pick-up roller [1].

#### 5.1.4 Cleaning the manual bypass tray feed roller

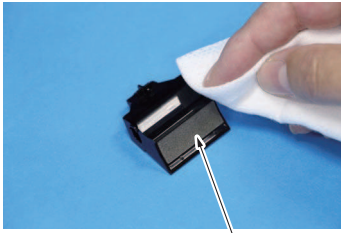


1. Using a cleaning pad dampened with alcohol, wipe the manual bypass tray feed roller [1] clean of dirt.

#### 5.1.5 Cleaning the manual bypass tray separation pad

1. Open the right door.
2. Remove the manual bypass tray separation pad.  
[E.3.1.5 Replacing the manual bypass tray separation pad](#)

- Using a cleaning pad dampened with alcohol, wipe the manual bypass tray separation pad [1].



[1]

### 5.1.6 Cleaning the transfer belt unit

- Remove the transfer belt.  
[E.3.1.10 Replacing the transfer belt unit](#)



[1]

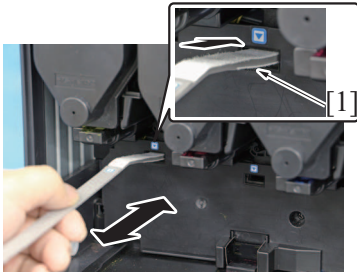
- Using a hydro-wipe (65AA-99#), wipe the transfer belt [1].

#### NOTE

- Do not wipe out with water.
- Do not wipe out with any solvents.

### 5.1.7 Cleaning the PH window

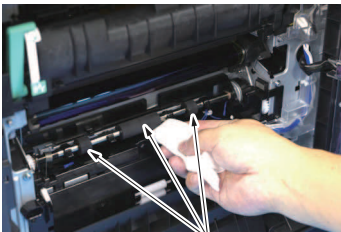
- Open the front door.
- Remove the waste toner bottle.  
[E.3.1.9 Replacing the waster toner bottle](#)



- Clean the PH window by putting the PH window cleaning jig [1] back and forth a couple times.

### 5.1.8 Cleaning of the registration roller

- Open the right door.
- Remove the IDC sensor assy.  
[F.4.7.1 IDC sensor \(IDCS1\)](#)



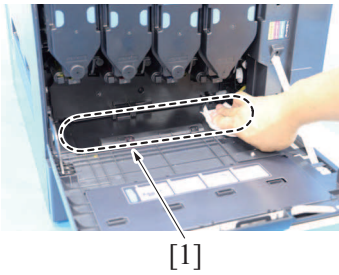
[1]

- Using a cleaning pad with alcohol, wipe the registration roller [1] clean of dirt.

### 5.1.9 Cleaning of the area around the waste toner collecting port

- Remove the waste toner bottle.  
[E.3.1.9 Replacing the waster toner bottle](#)

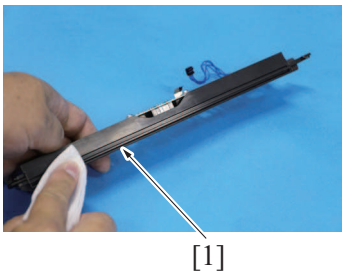
2. Wipe the areas [1] around the waste toner collecting port clean of spilled toner and dirt.



**5.1.10 Cleaning of the 2nd image transfer entrance guide**

1. Open the right door.
2. Remove the IDC sensor assy.  
[F.4.7.1 IDC sensor \(IDCS1\)](#)

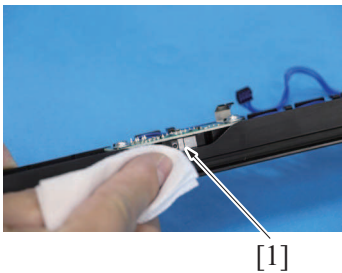
3. Wipe the 2nd transfer entrance guide [1] clean of dirt.



**5.1.11 Cleaning of the IDC sensor window**

1. Open the right door.
2. Remove the IDC sensor assy.  
[F.4.7.1 IDC sensor \(IDCS1\)](#)

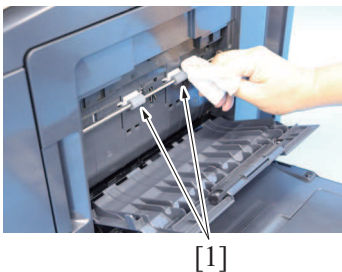
3. Wipe the IDC sensor window [1] clean of dirt.



**5.1.12 Cleaning of the duplex transport rollers**

1. Open the duplex unit transport cover.

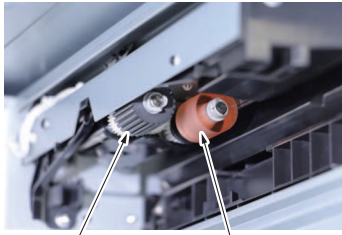
2. Using a cleaning pad dampened with alcohol, wipe the duplex unit transport roller [1] clean of dirt.



**5.2 PF-P20/PF-P21**

**5.2.1 Cleaning the tray 2/3 pick-up roller, feed roller**

1. Remove the tray 2 or tray 3.



2. Using a cleaning pad dampened with alcohol, wipe the feed roller [1] and pick-up roller [2] clean of dirt.

3. To reinstall, reverse the order of removal.

### 5.2.2 Cleaning the tray 2/3 separation roller

1. Slide out the tray 2 or tray 3.



2. Using a cleaning pad dampened with alcohol, wipe the separation roller [1] clean of dirt.

3. To reinstall, reverse the order of removal.

## F 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 PH unit

#### 2.1.1 Reason for prohibition

- The laser runs inside the PH unit. Opening the cover may cause dust to enter and interrupt the laser. Do not remove any screw which may disassemble the PH unit.

### 2.2 Fusing unit

#### 2.2.1 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

## WARNING



- When performing disassembly, be sure to unplug the power cord from the power outlet.

When the power cord is inserted into the power outlet, some units are still powered even if the POWER switch is turned OFF. A risk of electric shock exists.

## WARNING



- To prevent electric shock, do not touch the **hazards area on DC power supply unit** with the lid opening for 12 hours after unplugging the power cord.

The voltage may take time to drop after unplugging the power cord if the device is experiencing a malfunction.

## CAUTION

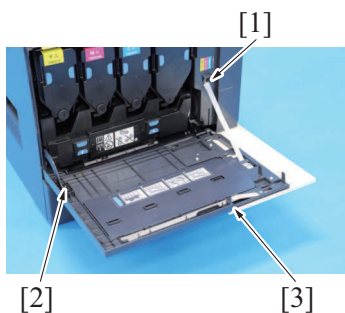


- When removing or installing a circuit board or other electrical component, refer to “Handling of PWBs” and follow the corresponding removal or installing procedures.
- The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.
- Where it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.

## 4. bizhub C4000i/C3300i

### 4.1 Exterior parts

#### 4.1.1 Front door

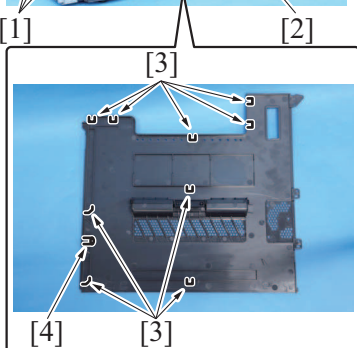
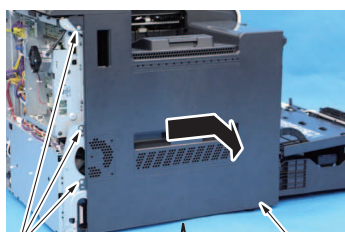


1. By twisting the ends of the stopper [1], remove it from the main body.
2. Remove the screw [2], and remove the front door [3].

3. To reinstall, reverse the order of removal.

#### 4.1.2 Left cover

1. Remove the toner filter Assy.  
[E.3.1.8 Replacing the toner filter](#)
2. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
3. Slide out the tray 1.
4. Open the front door.



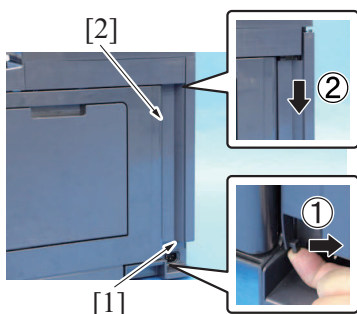
5. Remove three screws [1], and remove the left cover [2].

**NOTE**

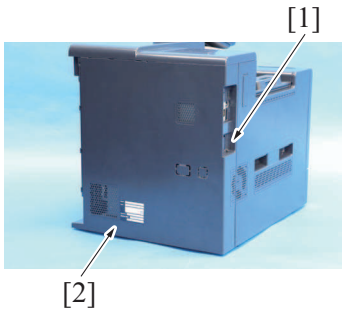
- When mounting the left cover, make sure nine claws [3] and a boss [4] are attached to the main body.

6. To reinstall, reverse the order of removal.

#### 4.1.3 Rear cover



1. Remove the screw [1], and remove the cover [2].



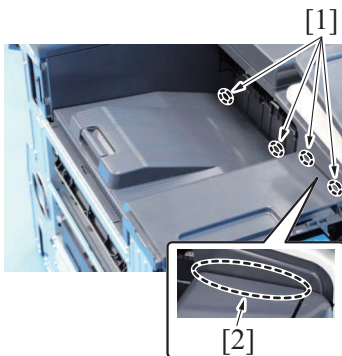
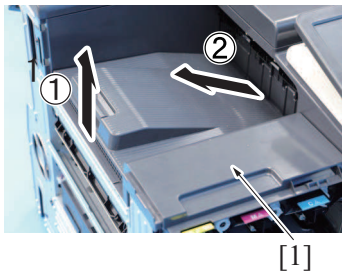
2. Remove the screw [1], and remove the rear cover [2].

3. To reinstall, reverse the order of removal.

#### 4.1.4 Exit cover

1. Remove the toner filter Assy.  
[E.3.1.8 Replacing the toner filter](#)
2. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
3. Remove the left cover.  
[F.4.1.2 Left cover](#)

4. Remove the exit cover [1].

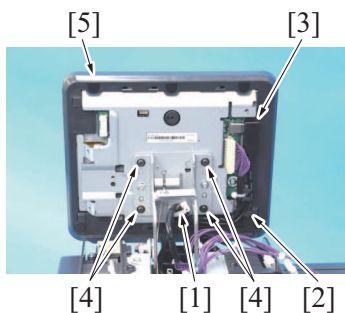
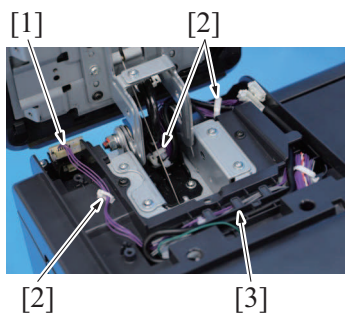
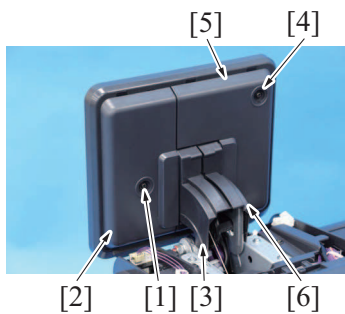
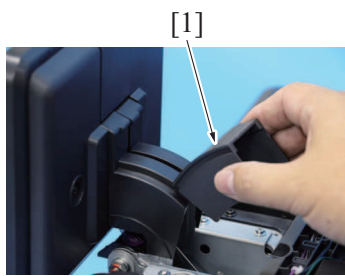


5. **NOTE**
- When mounting the exit cover, make sure that four tabs [1] are hooked firmly.
  - If the clearance [2] is wide, the tabs may not be hooked. Check the state of the tabs.

6. To reinstall, reverse the order of removal.

#### 4.1.5 Control panel unit

1. Remove the control panel cover.  
[F.4.1.6 Control panel cover](#)



2. Hold up the cover [1].
3. Remove the stopper [2] from the groove [3], and remove the cover [1].

4. Remove the screw [1], and remove the cover [2] and cover [3].
5. Remove the screw [4], and remove the cover [5] and cover [6].

6. Disconnect the connector [1], and remove the harness from three wire saddles [2] and harness guide [3].

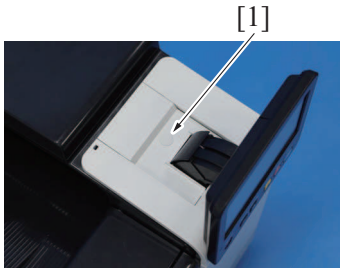
7. Remove the USB cable from the wire saddle [1].
8. Remove the USB cable from the harness guide [2], and disconnect the connector [3].
9. Remove four screws [4], and remove the control panel unit [5].

**NOTE**

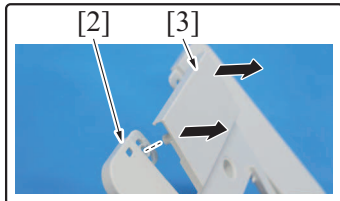
- Pay attention not to drop the control panel unit.

10. To reinstall, reverse the order of removal.

#### 4.1.6 Control panel cover



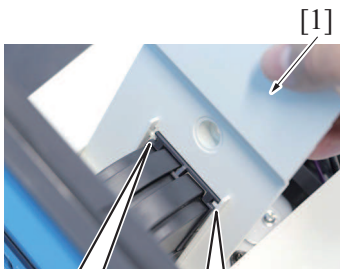
1. Remove the cap [1].



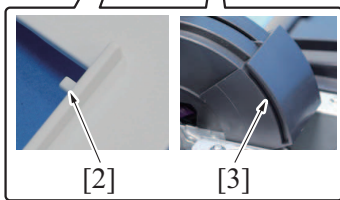
2. Remove the screw [1].  
3. Remove the cover [3] from the control panel cover [2].



[1]



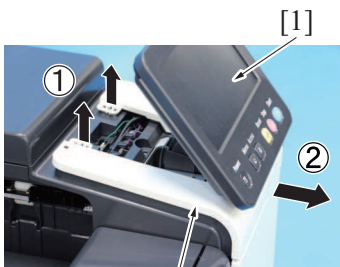
[1]



[2]

[3]

4. Raise the protrusion [2] of the cover [1] along the groove [3], and remove the cover [1].



[1]

①

②

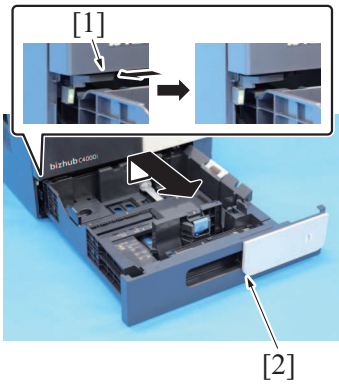
[2]

5. Incline the control panel [1] to about 45 degrees.  
6. Remove the control panel cover [2].

7. To reinstall, reverse the order of removal.

#### 4.1.7 Tray1

1. Slide out the tray 1 and unload paper from it.



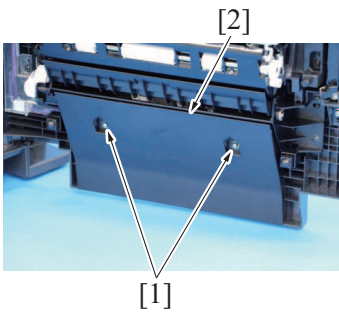
2. Slide the stopper [1].
3. Hold up the tray 1 [2] to remove it.

4. To reinstall, reverse the order of removal.

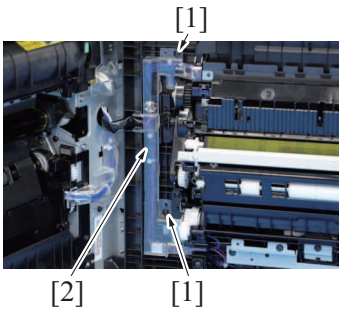
## 4.2 Units

### 4.2.1 Manual bypass tray unit

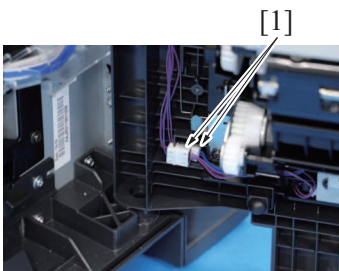
1. Open the right door.



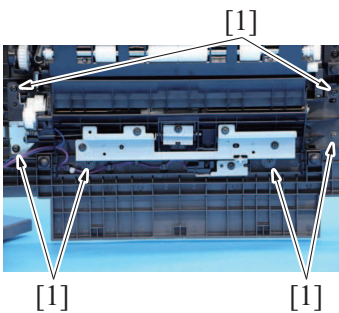
2. Remove two screws [1], and remove the cover [2].



3. Remove two screws [1], and remove the cover [2].

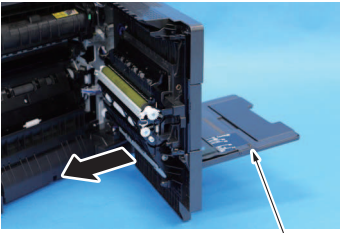


4. Disconnect two connectors [1].



5. Remove six screws [1].

6. Open the manual bypass tray unit [1] and remove it.



[1]

7. To reinstall, reverse the order of removal.

4.2.2 PH unit

# CAUTION



- Do not replace the printer head unit with the power cord being connected.

Laser beam generated during the above mentioned activity may cause blindness.

# CAUTION

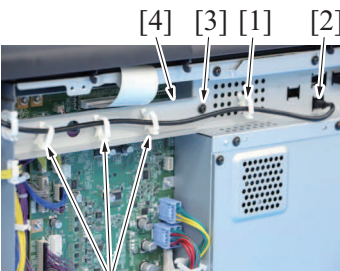


- Do not disassemble or adjust the printer head unit.

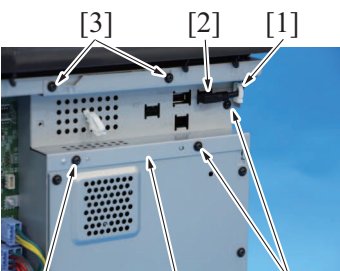
Laser beam generated during the above mentioned activity may cause blindness.

1. Remove the toner filter assy.  
[E.3.1.8 Replacing the toner filter](#)
2. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
3. Remove the left cover.  
[F.4.1.2 Left cover](#)

4. Remove the cable from four wire saddles [1], and disconnect the connector [2].
5. Remove the screw [3], and remove the plate [4].



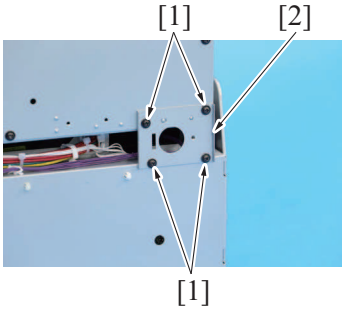
[1]



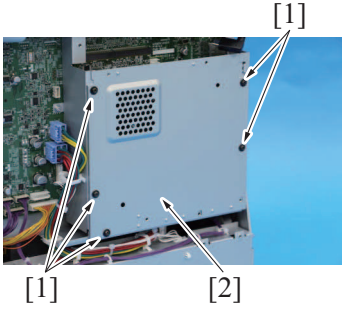
[3] [4] [3]

6. Remove the cable from the edge cover [1], and disconnect the connector [2].
7. Remove five screws [3], and remove the plate [4].

8. Remove four screws [1], and remove the plate [2].



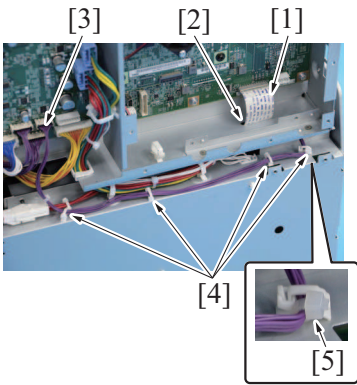
9. Remove five screws [1], and remove the plate [2].



10. Disconnect the flat cable [1], and pass it through the hole [2].  
 11. Disconnect the connector [3], and remove the harness from four wire saddles [4].

**NOTE**

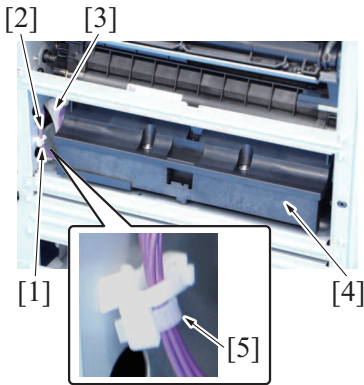
- When routing the harness through the wire saddle, make sure that the cable tie [5] is located in the position (in front of the wire saddle) shown in the illustration.



12. Remove the harness from the wire saddle [1].  
 13. Slide out the harness [2] and the flat cable [3] to remove the PH unit [4].

**NOTE**

- When routing the harness through the wire saddle, make sure that the cable tie [5] is located in the position (under the wire saddle) shown in the illustration.

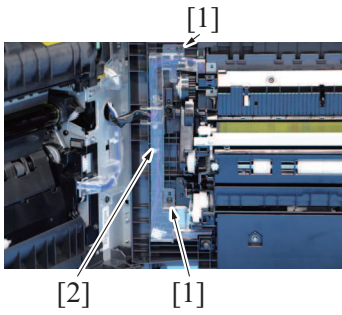


14. To reinstall, reverse the order of removal.
15. Turn ON the main power switch.
16. Select [Service Mode] -> [Machine] -> [Color Registration Adjustment] to adjust the value for correcting the color shift to 0.
17. Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and perform the function.
18. Select [Service Mode] -> [Machine] -> [Main Scanning Direction Zoom] to adjust the zoom in main scanning direction.
19. Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and perform the function.
20. Repeat the step 17 and 18 until the Main Scanning Direction Zoom Adjustment is met.
21. Select [Service Mode] -> [Machine] -> [Color Registration Adjustment] and perform the adjustment for correcting the color shift.
22. Select [Service Mode] -> [Machine] -> [Printer Area] -> [Printer Image Centering Side 1] to adjust the side of print position for each paper source.
23. Select [Service Mode] -> [Machine] -> [Printer Area] -> [Prt. Image Center. Side 2 (Dup)] to adjust the side of 2-sided print position for each paper source.

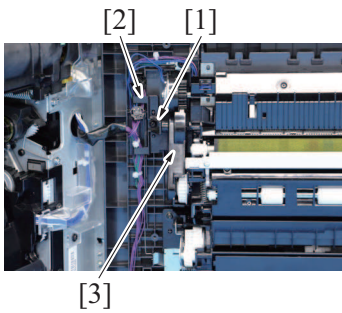
**4.2.3 2nd transfer pressure unit**

1. Open the right door.

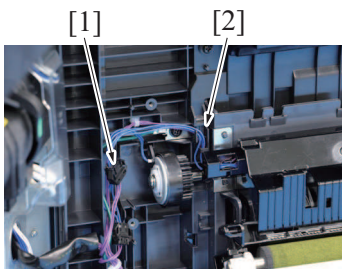




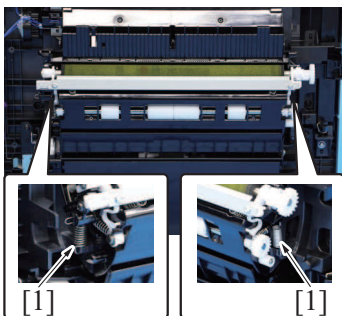
- Remove two screws [1], and remove the cover [2].



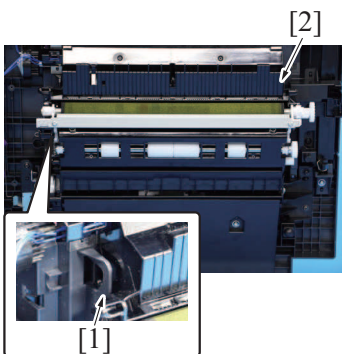
- Remove the screw [1], and remove the harness guide [2] and the gear assy [3].



- Disconnect the connector [1], and remove the harness from the harness guide [2].



- Remove two springs [1].



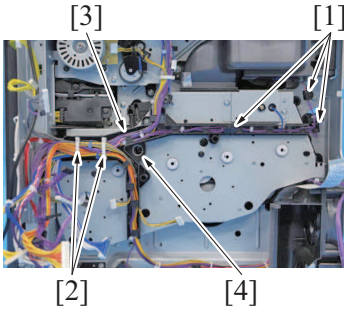
- Unhook the hook [1], and remove the 2nd transfer pressure unit [2].

- To reinstall, reverse the order of removal.

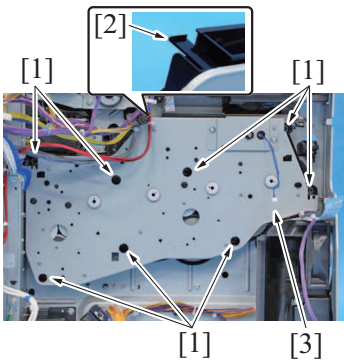
#### 4.2.4 Main drive unit

- Remove the toner cartridge/Y,M,C,K.  
[E.3.1.6 Replacing the toner cartridge](#)
- Remove the waste toner bottle.  
[E.3.1.9 Replacing the waster toner bottle](#)
- Remove the imaging unit/Y,M,C,K.

- E.3.1.7 Replacing the Imaging unit
- 4. Remove the transfer belt unit.  
E.3.1.10 Replacing the transfer belt unit
- 5. Remove the toner filter assy.  
E.3.1.8 Replacing the toner filter
- 6. Remove the rear cover.  
F.4.1.3 Rear cover
- 7. Remove the left cover.  
F.4.1.2 Left cover
- 8. Remove the PWB box.  
F.4.2.7 PWB box
- 9. Remove the DC power supply.  
F.4.3.3 DC power supply (DCPS)
- 10. Remove the main motor.  
F.4.4.1 Main motor (M1)
- 11. Remove the color motor.  
F.4.4.2 Color motor (M2)

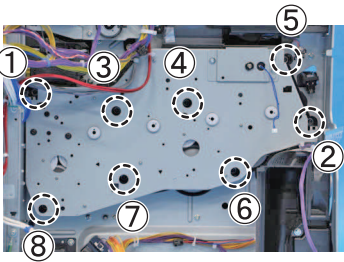


- 12. Disconnect three connectors [1].
- 13. Remove the harness from the two wire saddles [2] and the harness guide [3].
- 14. Remove the screw [4], and remove the harness guide [3].



- 15. Remove eight screws [1].
- 16. Remove the tab [2], and remove the main drive unit [3].

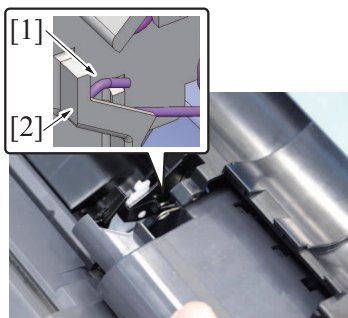
17. To reinstall, reverse the order of removal.



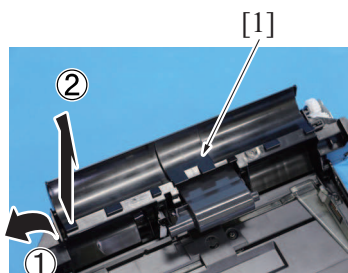
- 18. **NOTE**
  - When installing the main drive unit, be sure to tighten the screws from (1) to (8) in that order.

**4.2.5 Manual bypass tray roller unit**

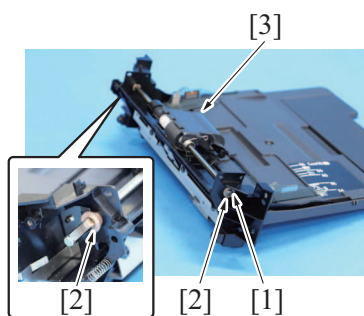
- 1. Open the right door.
- 2. Remove the manual bypass tray unit.  
F.4.2.1 Manual bypass tray unit
- 3. Remove the bypass tray paper feed clutch.  
F.4.5.1 Bypass tray paper feed clutch (CL2)



4. Remove the spring [1] from the spring holder [2].



5. Remove the cover [1].

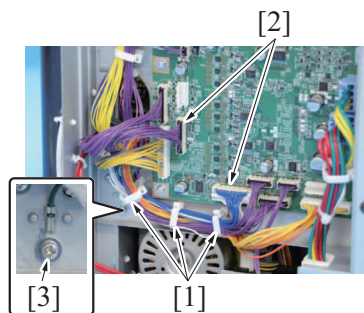


6. Remove the E-ring [1] and two bushings [2].  
7. Remove the manual bypass tray roller unit [3].

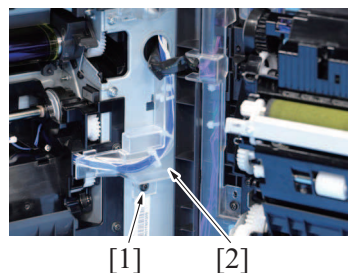
8. To reinstall, reverse the order of removal.

**4.2.6 Paper feed unit**

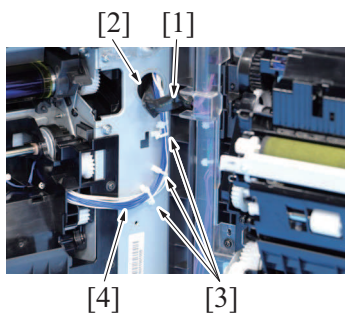
1. Slide out the tray 1.
2. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
3. Open the right door.
4. Remove the IDC sensor assy.  
[F.4.7.1 IDC sensor \(IDCS1\)](#)



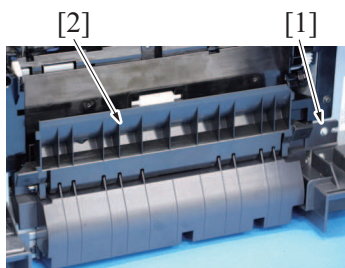
5. Remove the harness from three wire saddles [1], and disconnect two connectors [2].  
6. Remove the screw [3].



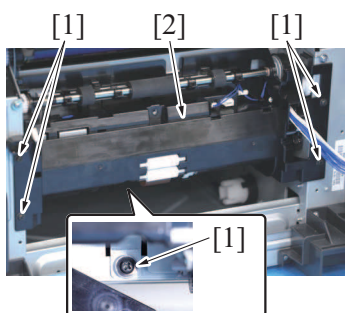
7. Remove the screw [1], and remove the cover [2].



- 8. Pull the harness [1] out of the hole [2].
- 9. Remove the harness from three wire saddles [3].
- 10. Pull the harness [4] out of the hole [2].



- 11. Remove the screw [1], and remove the guide [2].

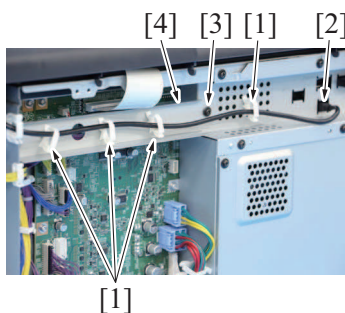


- 12. Remove five screws [1], and remove the paper feed unit [2].

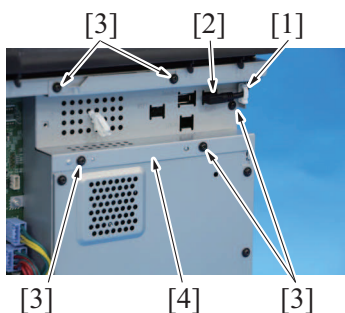
13. To reinstall, reverse the order of removal.

**4.2.7 PWB box**

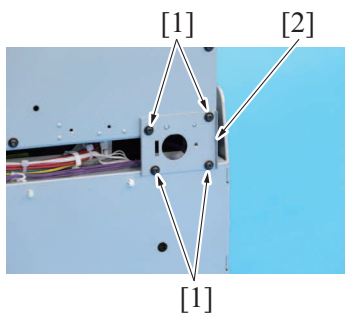
- 1. Remove the toner filter assy.  
[E.3.1.8 Replacing the toner filter](#)
- 2. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
- 3. Remove the left cover.  
[F.4.1.2 Left cover](#)



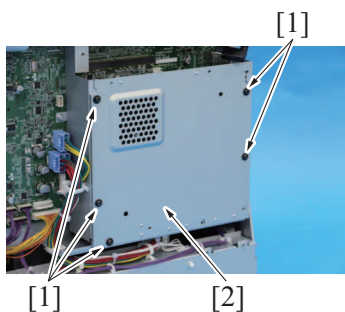
- 4. Remove the cable from four wire saddles [1], and disconnect the connector [2].
- 5. Remove the screw [3], and remove the plate [4].



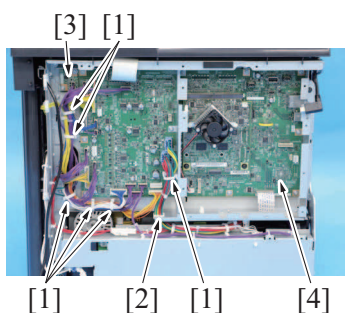
- 6. Remove the cable from the edge cover [1], and disconnect the connector [2].
- 7. Remove five screws [3], and remove the plate [4].



8. Remove four screws [1], and remove the plate [2].

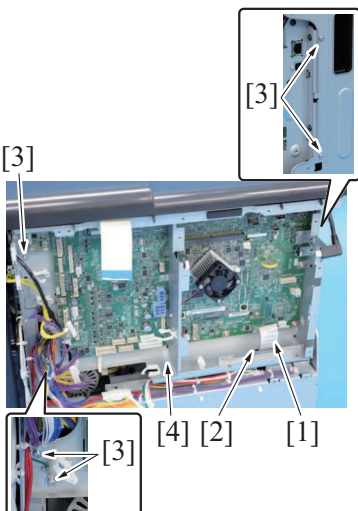


9. Remove five screws [1], and remove the plate [2].



10. Remove the harness from six wire saddles [1] and the edge cover [2].

11. Remove all connectors and flat cables on the backup board [3] and the base board [4].



12. Pass the flat cable [1] through the hole [2].

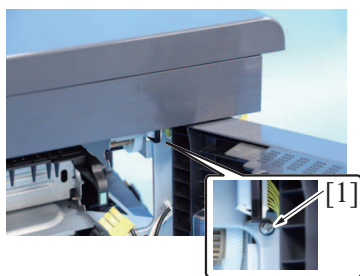
13. Remove five screws [3], and remove the PWB box [4].

14. To reinstall, reverse the order of removal.

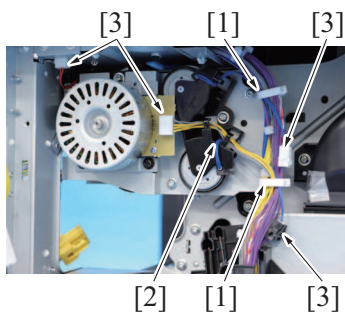
#### 4.2.8 Fusing drive unit

1. Remove the fusing unit.  
[E.3.1.12 Replacing the fusing unit](#)
2. Remove the toner filter Assy.  
[E.3.1.8 Replacing the toner filter](#)
3. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
4. Remove the left cover.  
[F.4.1.2 Left cover](#)
5. Remove the PWB box.  
[F.4.2.7 PWB box](#)

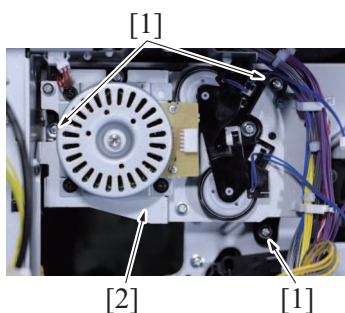
6. Remove the screw [1].



7. Remove the harness from the two wire saddles [1] and the harness guide [2].  
8. Disconnect four connectors [3].

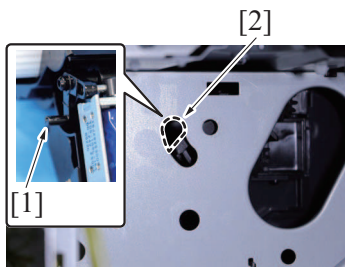


9. Remove three screws [1], and remove the fusing drive unit [2].



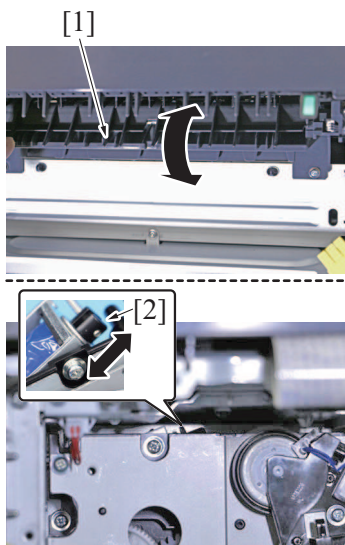
**10. NOTE**

- When installing the fusing drive unit, make sure insert the tip of the exit path switch solenoid lever [1] to the position [2] as shown in the illustration (placing state the edge of lever [1] on the guide in the back of the plate).



**11. NOTE**

- After installing the fusing drive unit, check that the edge of the exit path switch solenoid [2] operates together, moving the switchback guide [1] up and down.

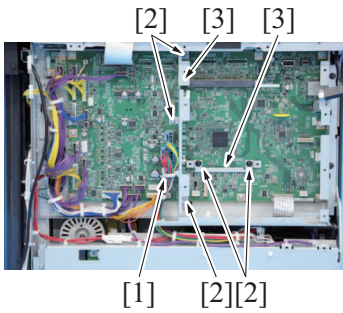


12. To reinstall, reverse the order of removal.

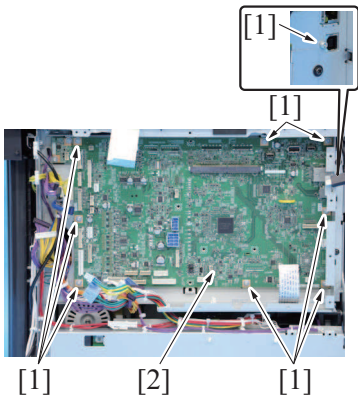
### 4.3 Boards

#### 4.3.1 Base board (BASEB)

1. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
2. Remove the CPU board.  
[F.4.3.2 CPU board \(CPUB\)](#)



3. Remove the harness from the wire saddle [1].
4. Remove all connectors and flat cables.
5. Remove five screws [2], and remove the two plates [3].



6. Remove nine screws [1], and remove the base board [2].

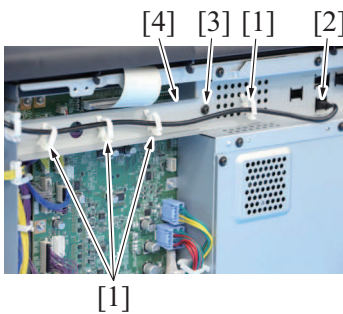
7. To reinstall, reverse the order of removal.

#### 4.3.2 CPU board (CPUB)

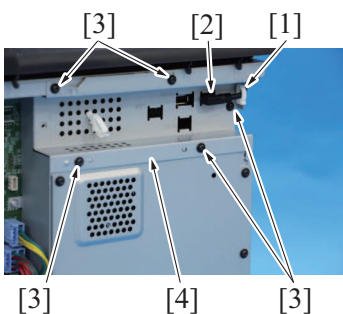
##### NOTE

- Never use the combination of the used CPU board removed from another machine and the microSD card. This combination causes corruption of stored data. Note that the combination of the original CPU board and the used microSD card removed from another machine also causes the same problem.
- Do not replace the CPU board and the microSD card with new ones at the same time.

1. Remove the rear cover.  
[F.4.1.3 Rear cover](#)

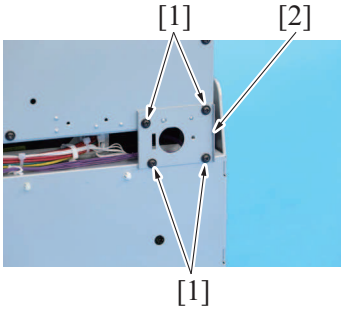


2. Remove the cable from four wire saddles [1], and disconnect the connector [2].
3. Remove the screw [3], and remove the plate [4].

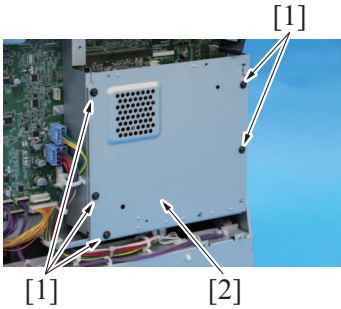


4. Remove the cable from the edge cover [1], and disconnect the connector [2].
5. Remove five screws [3], and remove the plate [4].

6. Remove four screws [1], and remove the plate [2].



7. Remove five screws [1], and remove the plate [2].

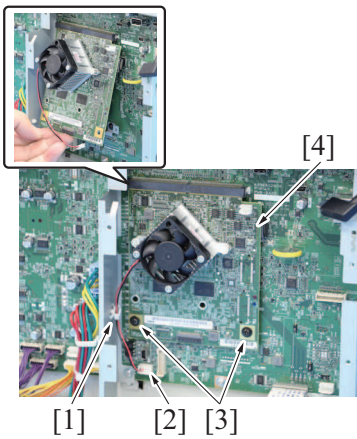


8. Remove the harness from the wire saddle [1], and disconnect the connector [2].

9. Remove two screws [3], and remove the CPU board [4].

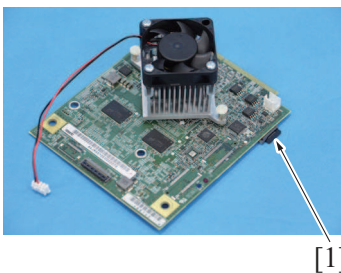
**NOTE**

- When mounting the CPU board, insert it obliquely.



10. **NOTE**

- When replacing the CPU board, remove the microSD card [1], and mount it onto the new CPU board.



11. To reinstall, reverse the order of removal.
12. Enter the model information after replacing the CPU board.  
[F.4.3.2 \(1\) Entering the machine type information](#)

**Actions after replacement of the board**

1. Turn ON the main power switch.
2. The machine will reboot two times by itself. Wait until the trouble code (C-D3C0) screen appears.
3. [Recover Data] appears on the trouble code screen, touch [Recover Data] to start the recovery of data.
4. Check the firmware version of the Power Control CPU 2 and MFP Controller BOOT Program.  
 Firmware Version
5. If the firmware version of the Power Control CPU 2 and MFP Controller BOOT Program is not the latest, upgrade the firmware.  
 FIRMWARE

**(1) Entering the machine type information**

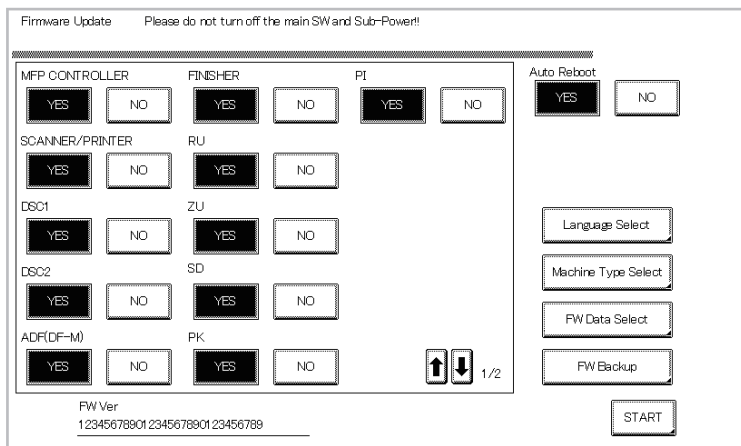
- When CPU board is replaced, it is necessary to enter the machine type information.
- Refer to the following procedures to enter the machine type information.

**(a) Procedure**

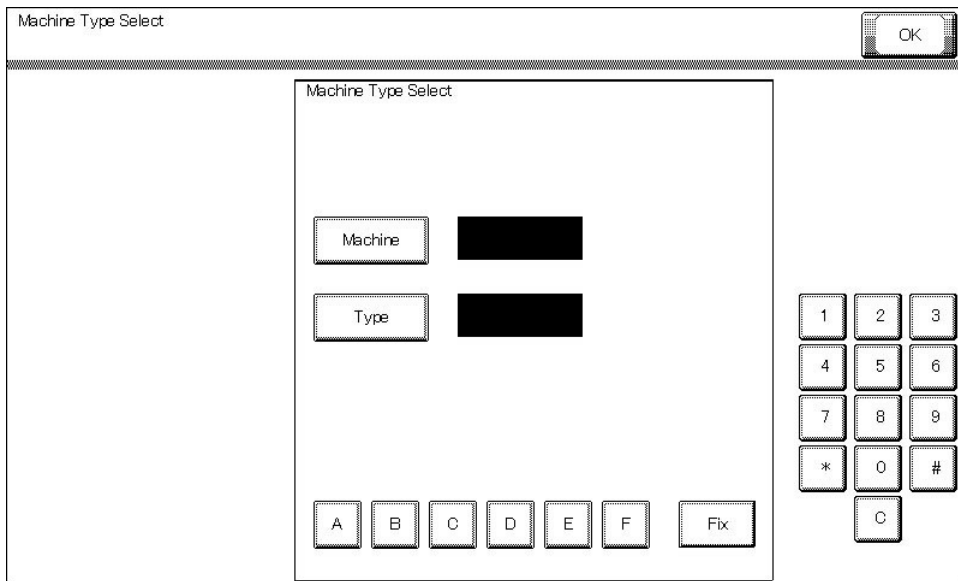
1. Insert the USB memory with the firmware into the USB port.



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

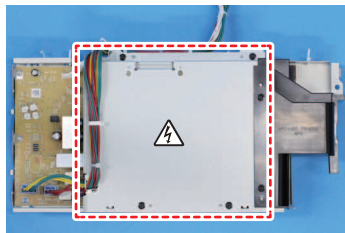
First four digits of the serial number	AAJR	AAJT
[Machine]	11	11
[Type]	B1	B2

### 4.3.3 DC power supply (DCPS)

## WARNING

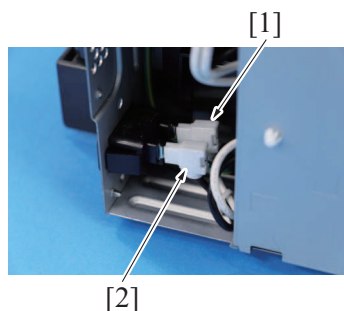
- To prevent electric shock, do not touch the hazards area on DC power supply unit with the lid opening for 12 hours after unplugging the power cord.

The voltage may take time to drop after unplugging the power cord if the device is experiencing a malfunction.



## CAUTION

- When reconnecting the AC inlet, make sure that the white harness [1] is connected to the rear part and the black harness [2] is connected to the front part of the AC inlet.

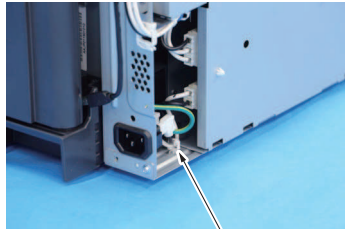


# ⚠ CAUTION

- Make sure that the harness is routed inside the main body.
- Make sure that the harness is routed through the wire saddle [1].



<OK>



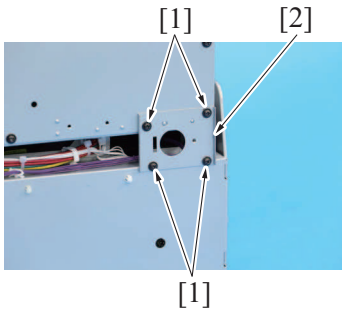
[1]

<NG>

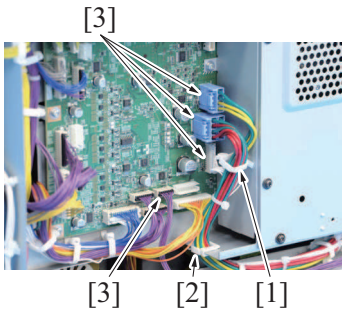


1. Remove the rear cover.

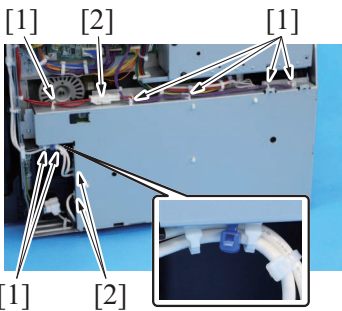
F.4.1.3 Rear cover



2. Remove four screws [1], and remove the plate [2].



3. Remove the harness from the wire saddle [1] and the edge cover [2], and disconnect four connectors [3].

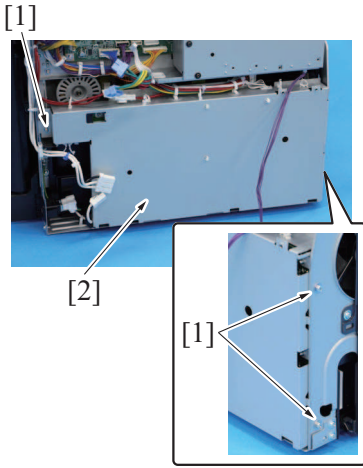


4. Remove the harness from seven wire saddles [1], and disconnect three connectors [2].

**NOTE**

- When installing the DC power supply, make sure the position of the tie band.

5. Remove three screws [1], and remove the DC power supply [2].

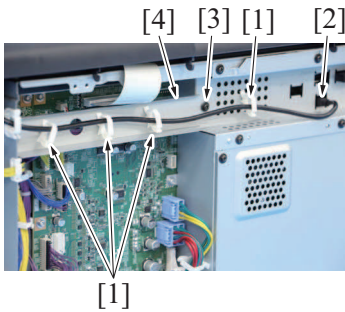


6. To reinstall, reverse the order of removal.

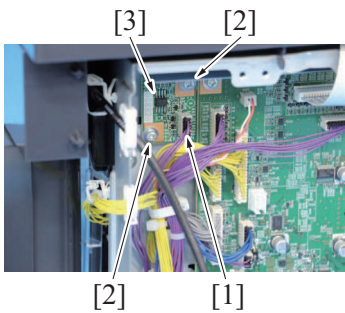
### 4.3.4 Backup board (ERB)

1. Remove the rear cover.

#### F.4.1.3 Rear cover



- 2. Remove the cable from four wire saddles [1], and disconnect the connector [2].
- 3. Remove the screw [3], and remove the plate [4].



- 4. Disconnect the connector [1].
- 5. Remove the two screws [2], and remove the backup board [3].

6. To reinstall, reverse the order of removal.

#### 7. NOTE

- Since the counter will be cleared when the backup board is replaced with a new one, replace the following parts with new ones.
- When the transfer belt unit, transfer roller and the fusing unit have been replaced with new ones, perform [New Release] in the service mode.
- Imaging unit/Y,M,C,K
- Transfer belt unit
- Fusing unit
- Transfer roller
- Feed roller, pick-up roller, separation roller (including options)
- Separation pad
- Toner filter

#### NOTE

- When the new backup board is installed, the error message: "License management error occurred." is displayed. Conduct the i-Option recovery operation.

8. Open the front door and turn on the main power switch.

9. Enter the Service Mode. Make individual adjustments shown in [F Table 1: Readjustment items](#) 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.

#### 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 backup board.

10. Turn OFF the main power switch.

11. Turn ON the main power switch and close the front door. Check to see that warm-up and image stabilization operations are completed normally.
12. Enter the Service Mode again. Make individual adjustments shown in [F Table 2: Readjustment items](#) 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.
13. Select [Service Mode] -> [EnhancedSecurity] -> [Engine FW DipSW] and set the keys of [F Table 3: Valid switch No.](#) to ON (highlight).

Table 1: Readjustment items

Adjustment items	Service mode readjustment items		Ref. Page
1	Machine	Printer Area	<a href="#">I.6.3.1 Leading Edge Adjustment</a>
2			<a href="#">I.6.3.2 Printer Image Centering Side 1</a>
3			<a href="#">I.6.3.3 Leading Edge Adj. Side 2 (Duplex)</a>
4			<a href="#">I.6.3.4 Prt. Image Center. Side 2 (Dup)</a>
5	System 2	Unit Change      Near Empty Display Timing	<a href="#">I.10.3.2 Warning display</a>

Table 2: Readjustment items

Adjustment items	Service mode readjustment items		Ref. Page
1	Machine	Main Scanning Direction Zoom	<a href="#">I.6.5 Main Scanning Direction Zoom</a>

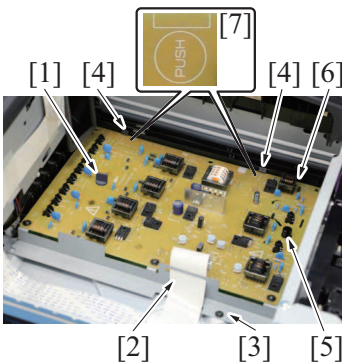
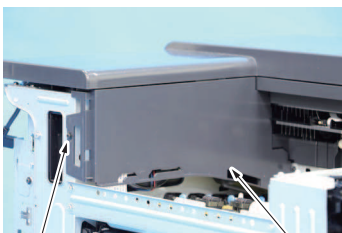
Table 3: Valid switch No.

Region	Valid switch No.
Japan	[14], [48], [50]
North America	[14], [25], [48], [50]
Europe	[14], [46], [48], [50]
Other than the above	[14], [48], [50]

**4.3.5 High voltage unit (HVPS)**

1. Remove the toner filter Assy.  
[E.3.1.8 Replacing the toner filter](#)
2. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
3. Remove the left cover.  
[F.4.1.2 Left cover](#)
4. Remove the exit cover.  
[F.4.1.4 Exit cover](#)

5. Remove the screw [1], and remove the cover [2].

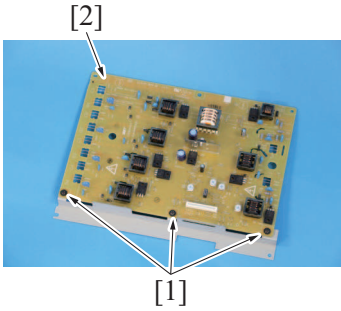


6. Remove the stopper [1].
7. Disconnect the flat cable [2], and remove the screw [3].
8. Unhook two tabs [4] and the tab [5], and remove the high voltage unit Assy [6].

**NOTE**

- Pay attention not to damage the flat cable when removing high voltage unit Assy.
- When installing the high voltage unit Assy, be careful not to touch the electronic parts around the stopper [1] and the tab [5] to prevent those parts from being damaged.
- When installing the high voltage unit Assy, push the press part [7] and make sure that the tab is locked.
- When installing the high voltage unit Assy, make sure to hook the tab [5].

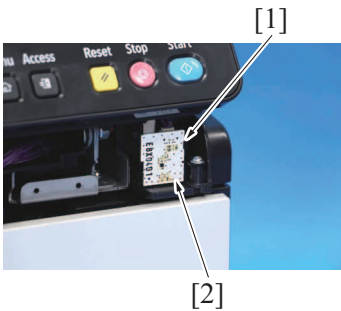
9. Remove three screws [1], and remove the high voltage unit [2].



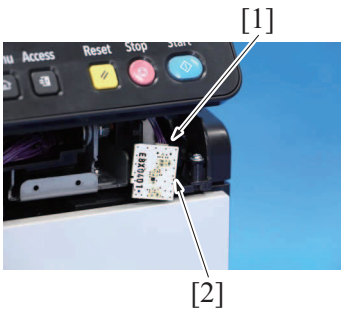
10. To reinstall, reverse the order of removal.

### 4.3.6 Machine condition monitor board/Fr (MCMB/Fr)

1. Remove the control panel cover.  
[F.4.1.6 Control panel cover](#)



2. Unhook the tab [1], and pulled the machine condition monitor board/Fr [2].



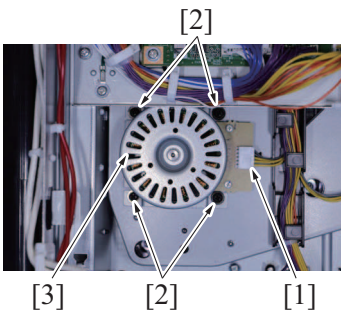
3. Disconnect the connector [1], and remove the machine condition monitor board/Fr [2].

4. To reinstall, reverse the order of removal.

## 4.4 Motors

### 4.4.1 Main motor (M1)

1. Remove the rear cover.  
[F.4.1.3 Rear cover](#)  
2. Remove the DC power supply.  
[F.4.3.3 DC power supply \(DCPS\)](#)



3. Disconnect the connector [1].  
4. Remove four screws [2] and remove the main motor [3].

**NOTE**

- When installing the motor, try to insert it straight, and take care not to damage the gears.
- When removing or installing the motor, do not hold the rotor but hold the plate of the motor or the board.
- When installing the motor, use care not to mistake in the kind of the mounting screws (M3x5 mm).

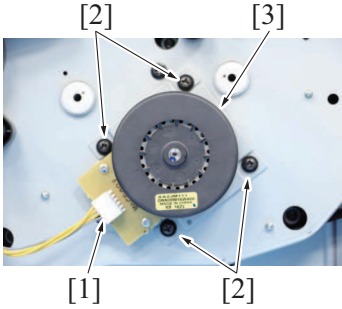
5. To reinstall, reverse the order of removal.

### 4.4.2 Color motor (M2)

1. Remove the toner filter assy.  
[E.3.1.8 Replacing the toner filter](#)  
2. Remove the rear cover.  
[F.4.1.3 Rear cover](#)  
3. Remove the left cover.  
[F.4.1.2 Left cover](#)  
4. Remove the PWB box.

F.4.2.7 PWB box

- 5. Remove the DC power supply.  
F.4.3.3 DC power supply (DCPS)



- 6. Disconnect the connector [1].
- 7. Remove four screws [2], and remove the color motor [3].

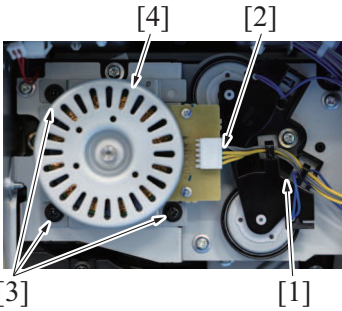
NOTE

- When installing the motor, try to insert it straight, and take care not to damage the gears.
- When removing or installing the motor, do not hold the rotor but hold the plate of the motor or the board.
- When installing the motor, use care not to mistake in the kind of the mounting screws (M3x5 mm).

8. To reinstall, reverse the order of removal.

4.4.3 Fusing motor (M3)

- 1. Remove the toner filter assy.  
E.3.1.8 Replacing the toner filter
- 2. Remove the rear cover.  
F.4.1.3 Rear cover
- 3. Remove the left cover.  
F.4.1.2 Left cover
- 4. Remove the PWB box.  
F.4.2.7 PWB box



- 5. Remove the harness from the harness guide [1].
- 6. Disconnect the connector [2].
- 7. Remove three screws [3] and remove the fusing motor [4].

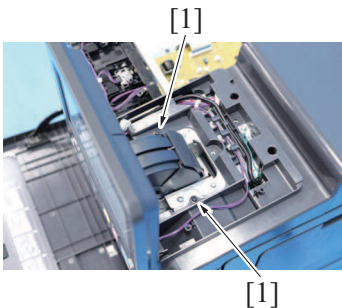
NOTE

- When installing the motor, try to insert it straight, and take care not to damage the gears.
- When removing or installing the motor, do not hold the rotor but hold the plate of the motor or the board.
- When installing the motor, use care not to mistake in the kind of the mounting screws (M3x5 mm).

8. To reinstall, reverse the order of removal.

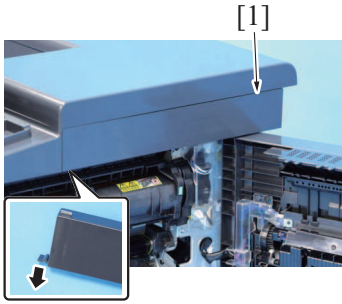
4.4.4 Toner supply motor/YM (M4), Toner supply motor/CK (M5)

- 1. Remove the waste toner bottle.  
E.3.1.9 Replacing the waster toner bottle
- 2. Remove the toner cartridge.  
E.3.1.6 Replacing the toner cartridge
- 3. Remove the imaging unit.  
E.3.1.7 Replacing the Imaging unit
- 4. Remove the control panel cover.  
F.4.1.6 Control panel cover
- 5. Remove the exit cover.  
F.4.1.4 Exit cover

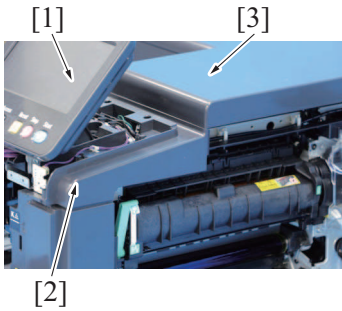


- 6. Remove two screws [1].

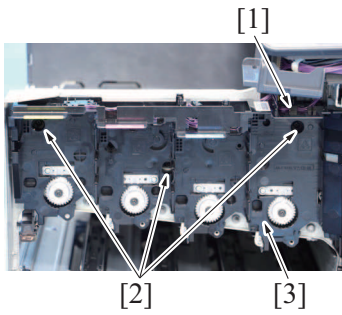
7. Open the right door.



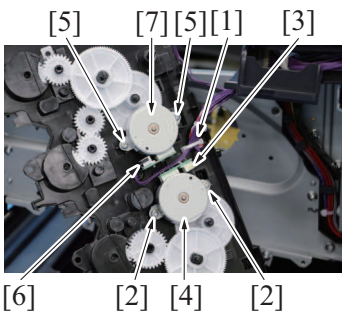
8. Remove the cover [1].



9. Incline the control panel [1] to about 45 degrees.  
10. Pull out the cover [2] from under the cover [3].



11. Remove the harness from the harness guide [1].  
12. Remove three screws [2], and remove the toner supply unit [3].

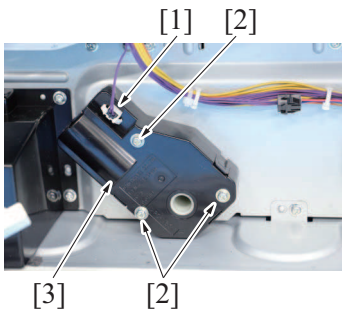


13. Remove the harness from the wire saddle [1].  
14. Remove the two screws [2] and the connector [3], and remove the toner supply motor/YM [4].  
15. Remove the two screws [5] and the connector [6], and remove the toner supply motor/CK [7].

16. To reinstall, reverse the order of removal.

**4.4.5 Tray 1 lift-up motor (M6)**

1. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
2. Remove the DC power supply.  
[F.4.3.3 DC power supply \(DCPS\)](#)



3. Disconnect the connector [1].
4. Remove three screws [2], and remove the tray 1 lift-up motor [3].

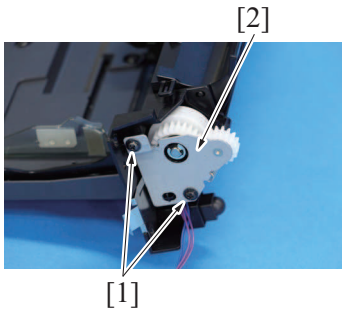
5. To reinstall, reverse the order of removal.



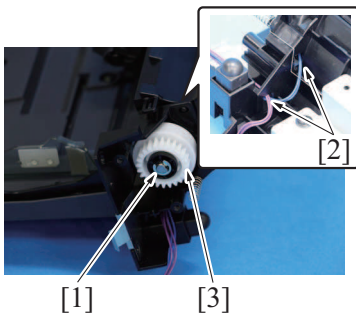
## 4.5 Clutches

### 4.5.1 Bypass tray paper feed clutch (CL2)

1. Open the right door.
2. Remove the manual bypass tray unit.  
[F.4.2.1 Manual bypass tray unit](#)



3. Remove two screws [1], and remove the plate [2].

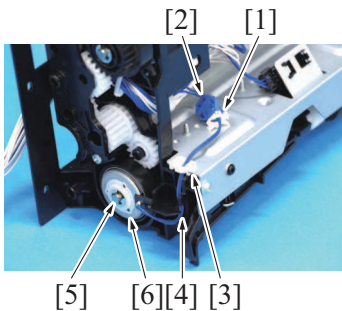


4. Remove the E-ring [1].
5. Disconnect the harness from the two holes [2], and remove the bypass tray paper feed clutch [3].

6. To reinstall, reverse the order of removal.

### 4.5.2 Tray 1 paper feed clutch (CL3)

1. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
2. Open the right door.
3. Remove the IDC sensor assy.  
[F.4.7.1 IDC sensor \(IDCS1\)](#)
4. Remove the paper feed unit.  
[F.4.2.6 Paper feed unit](#)

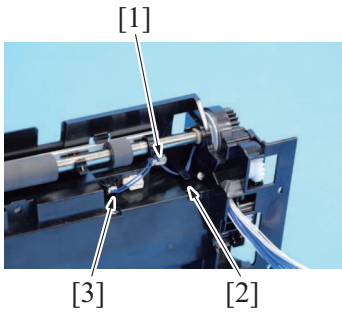


5. Remove the harness from the wire saddle [1], and disconnect the connector [2].
6. Remove the harness from the edge cover [3] and the harness guide [4].
7. Remove the E-ring [5], and remove the tray 1 paper feed clutch [6].

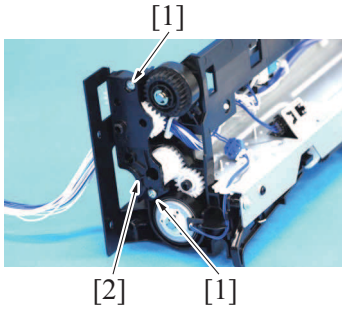
8. To reinstall, reverse the order of removal.

### 4.5.3 Registration clutch (CL4)

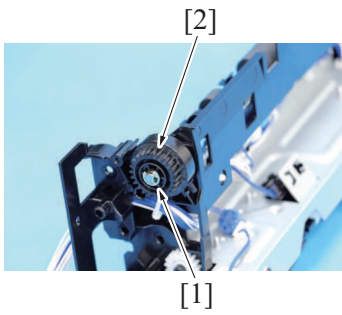
1. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
2. Open the right door.
3. Remove the IDC sensor assy.  
[F.4.7.1 IDC sensor \(IDCS1\)](#)
4. Remove the paper feed unit.  
[F.4.2.6 Paper feed unit](#)



5. Remove the harness from the wire saddle [1] and the harness guide [2], and disconnect the connector [3].



6. Remove two screws [1] and remove the gear assy [2].

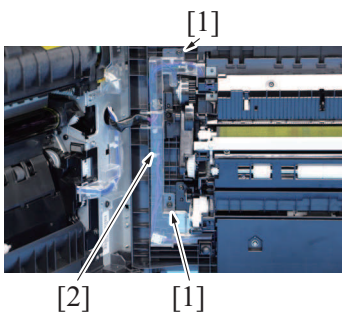


7. Remove the E-ring [1], and remove the registration clutch [2].

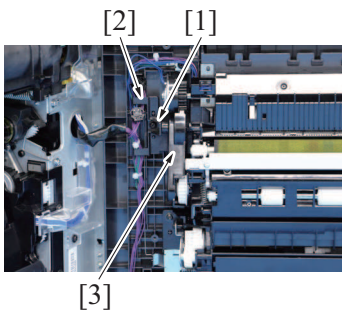
8. To reinstall, reverse the order of removal.

#### 4.5.4 ADU transport clutch (CL5)

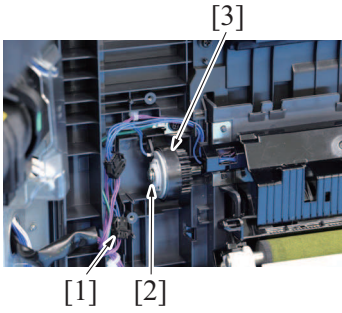
1. Open the right door.



2. Remove two screws [1], and remove the cover [2].



3. Remove the screw [1], and remove the harness guide [2] and the gear assy [3].

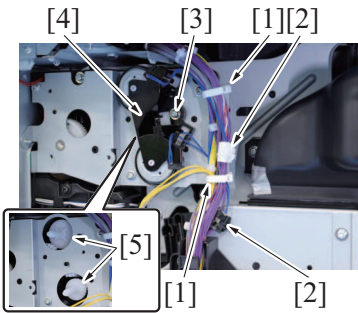


4. Disconnect the connector [1].
5. Remove the E-ring [2] and remove the ADU transport clutch [3].

6. To reinstall, reverse the order of removal.

#### 4.5.5 ADU feed clutch (CL6)/ADU reversal clutch (CL7)

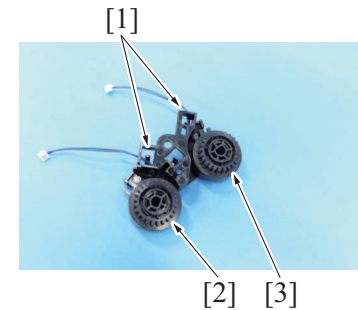
1. Remove the toner filter assy.  
[E.3.1.8 Replacing the toner filter](#)
2. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
3. Remove the left cover.  
[F.4.1.2 Left cover](#)
4. Remove the PWB box.  
[F.4.2.7 PWB box](#)
5. Remove the fusing motor.  
[F.4.4.3 Fusing motor \(M3\)](#)



6. Remove the harness from two wire saddles [1], and disconnect two connectors [2].
7. Remove the screw [3], and remove the ADU clutch assy [4].

**NOTE**

- Make sure not to drop the two gears [5].



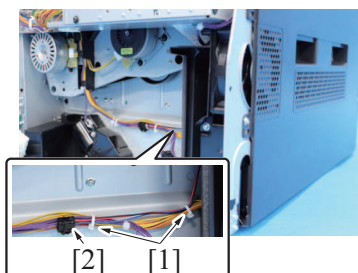
8. Remove the harness from the harness guide [1], and remove the ADU forward rotation clutch [2] or the ADU reverse rotation clutch [3].

9. To reinstall, reverse the order of removal.

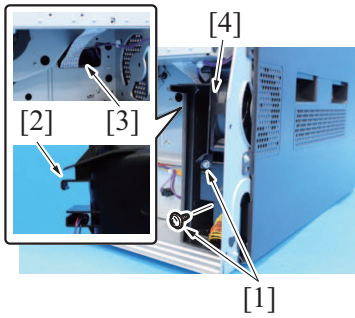
#### 4.6 Fan motor

##### 4.6.1 Machine cooling fan (FM1)

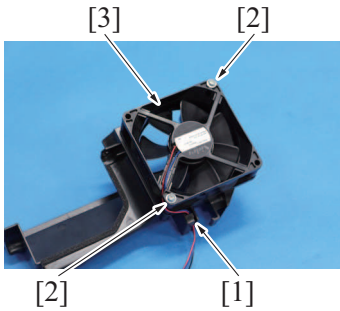
1. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
2. Remove the DC power supply.  
[F.4.3.3 DC power supply \(DCPS\)](#)



3. Remove the harness from two wire saddles [1], and disconnect the connector [2].



4. Remove two screws [1].
5. Remove the claw [2] from the hole [3] in the main body, and remove the machine cooling fan assy [4].

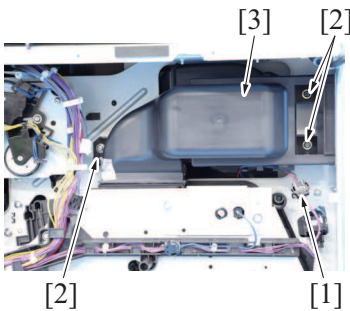


6. Remove the harness from the harness guide [1].
7. Remove two screws [2], and remove the machine cooling fan [3].

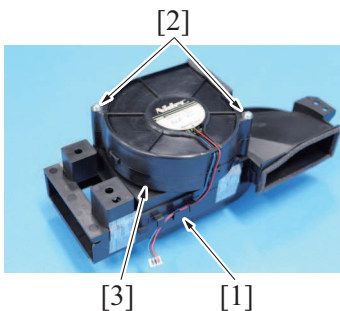
8. To reinstall, reverse the order of removal.

#### 4.6.2 Toner suction fan (FM2)

1. Remove the toner filter assy.  
[E.3.1.8 Replacing the toner filter](#)
2. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
3. Remove the left cover.  
[F.4.1.2 Left cover](#)
4. Remove the PWB box.  
[F.4.2.7 PWB box](#)



5. Disconnect the connector [1].
6. Remove three screws [2], and remove the toner suction fan assy [3].



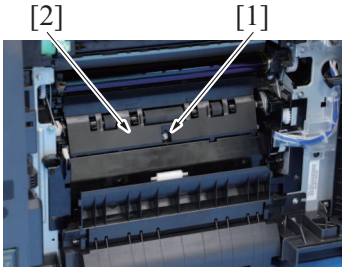
7. Remove the harness from the harness guide [1].
8. Remove two screws [2], and remove the toner suction fan [3].

9. To reinstall, reverse the order of removal.

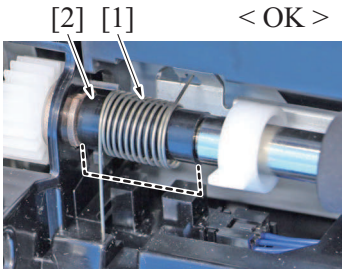
#### 4.7 Others

##### 4.7.1 IDC sensor (IDCS1)

1. Open the right door.

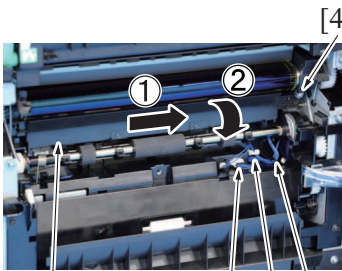
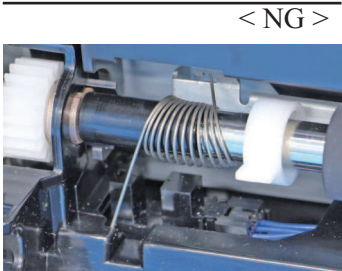


2. Remove the screw [1], and remove the cover [2].



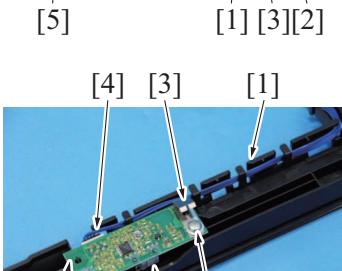
3. **NOTE**

- When mounting the cover, make sure the spring [1] locates within the spring supporting [2].



1. Disconnect connector [1], and remove the harness from the harness guide [2] and the wire saddle [3].

2. Remove the screw [4], and remove the IDC sensor assy [5].



3. Remove the harness from the harness guide [1].

4. Remove the two screws [2], and remove the earth plate [3].

5. Disconnect the connector [4], and remove the IDC sensor [5].

**NOTE**

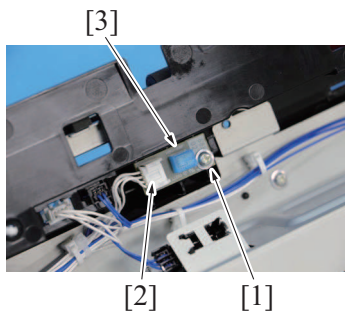
- Be careful not to break the sensor head [6] of the IDC sensor.



6. To reinstall, reverse the order of removal.

**4.7.2 Temperature/humidity sensor (TEM/HUMS1)**

1. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
2. Open the right door.
3. Remove the IDC sensor assy.  
[F.4.7.1 IDC sensor \(IDCS1\)](#)
4. Remove the paper feed unit.  
[F.4.2.6 Paper feed unit](#)

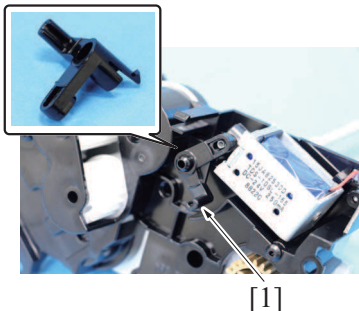


- 5. Remove the screw [1].
- 6. Disconnect the connector [2], and remove the temperature/humidity sensor [3].

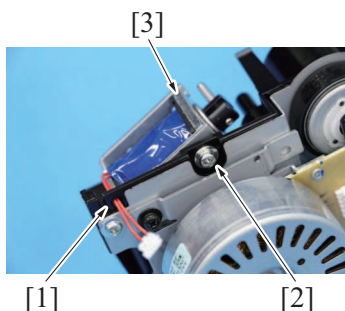
7. To reinstall, reverse the order of removal.

### 4.7.3 Exit path switch solenoid (SD1)

- 1. Remove the fusing unit.  
[E.3.1.12 Replacing the fusing unit](#)
- 2. Remove the toner filter assy.  
[E.3.1.8 Replacing the toner filter](#)
- 3. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
- 4. Remove the left cover.  
[F.4.1.2 Left cover](#)
- 5. Remove the PWB box.  
[F.4.2.7 PWB box](#)
- 6. Remove the fusing drive unit.  
[F.4.2.8 Fusing drive unit](#)



- 7. Remove the Lever [1].



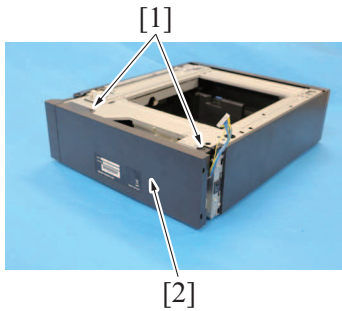
- 8. Remove the harness from the harness guide [1].
- 9. Remove the screw [2] and remove the exit path switch solenoid [3].

10. To reinstall, reverse the order of removal.

## 5. PF-P20/PF-P21

### 5.1 Rear cover (PF-P20)

1. Remove the paper feed unit from the main body.  
[F.5.4 Paper Feed Unit \(PF-P20\)](#)

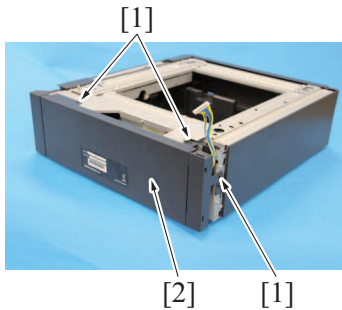


2. Remove two screws [1], and remove the rear over [2].

3. To reinstall, reverse the order of removal.

### 5.2 Rear cover (PF-P21)

1. Remove the paper feed unit from the main body.  
[F.5.5 Paper Feed Unit \(PF-P21\)](#)



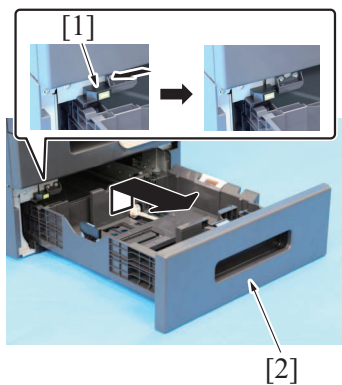
2. Remove three screws [1], and remove the rear over [2].

3. To reinstall, reverse the order of removal.

### 5.3 Tray 2, tray 3 (PF-P20/PF-P21)

#### NOTE

- **The tray 2 and the tray 3 have same mechanism. This procedure shows the steps taken for the tray 2.**
1. Slide out the tray 2 and unload paper from it.



2. Slide the stopper [1].
3. Hold up the tray 2 [2] to remove it.

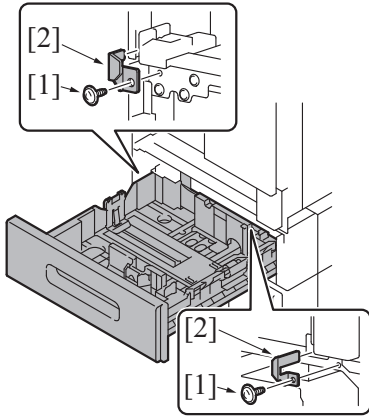
4. To reinstall, reverse the order of removal.

### 5.4 Paper Feed Unit (PF-P20)

#### NOTE

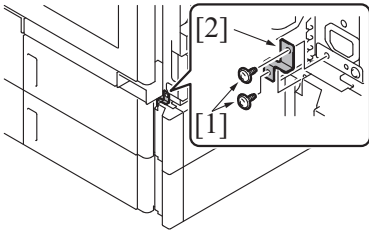
- **Assign an appropriate number of persons for moving the machine.**
  - **Whenever removing or reinstalling the paper feed unit, be sure first to unplug the power cord of the printer from the power outlet.**
1. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
  2. Remove the tray 1.  
[F.4.1.7 Tray1](#)
  3. Slide out the tray 2.

4. Remove two screws [1], and remove the two plates [2].

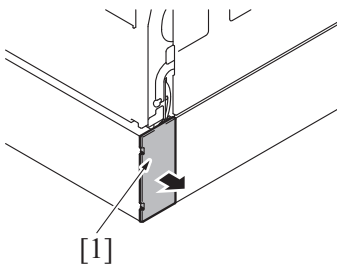


5. Slide the tray 2 back in.  
6. Install the tray 1.

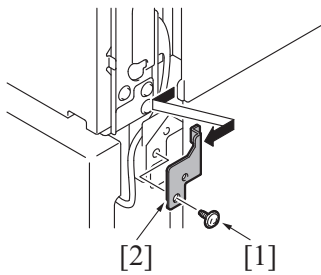
7. Remove two screws [1], and remove the plate [2].



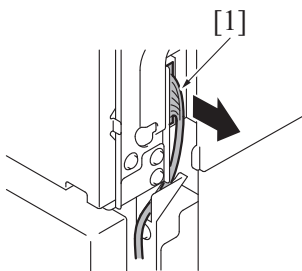
8. Remove the cover [1].



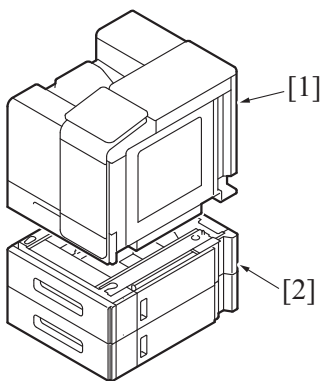
9. Remove the screw [1], and remove the plate [2].



10. Disconnect the connector [1].







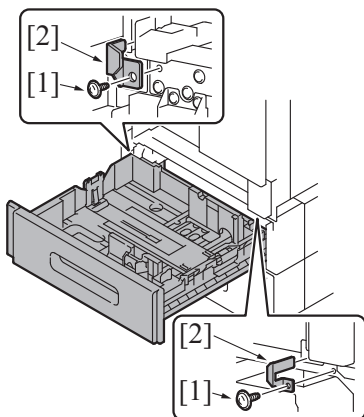
11. Lift the main body [1] and then remove the paper feed unit [2] from the main body.

### 5.5 Paper Feed Unit (PF-P21)

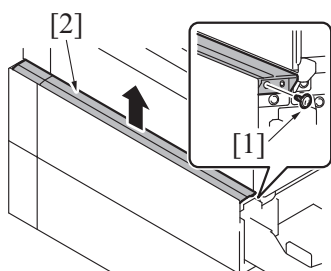
**NOTE**

- Assign an appropriate number of persons for moving the machine.
- Whenever removing or reinstalling the paper feed unit, be sure first to unplug the power cord of the printer from the power outlet.

1. Remove the rear cover.  
[F.4.1.3 Rear cover](#)
2. Remove the tray 1.  
[F.4.1.7 Tray1](#)
3. Slide out the tray 2.



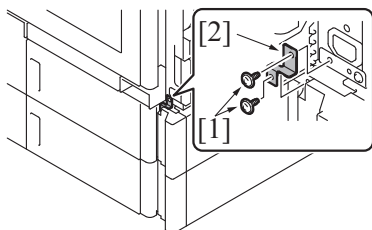
4. Remove two screws [1], and remove the two plates [2].



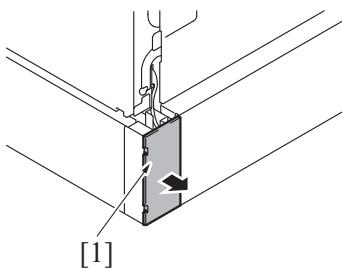
5. Remove the screw [1], and remove the cover [2].

6. Slide the tray 2 back in.
7. Install the tray 1.

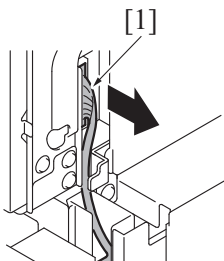
8. Remove two screws [1], and remove the plate [2].



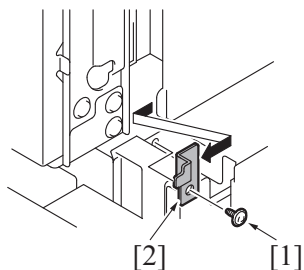
9. Remove the cover [1].



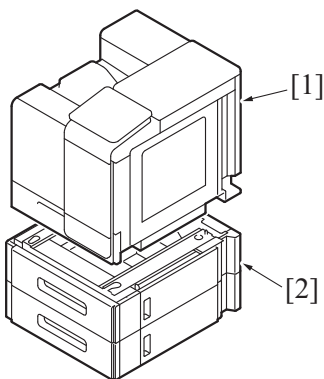
10. Disconnect the connector [1].



11. Remove the screw [1], and remove the plate [2].



12. Lift the main body [1] and then remove the paper feed unit [2] from the main body.



### 5.6 PC control board (PCCB) (PF-P20/PF-P21)

1. Remove the rear cover.

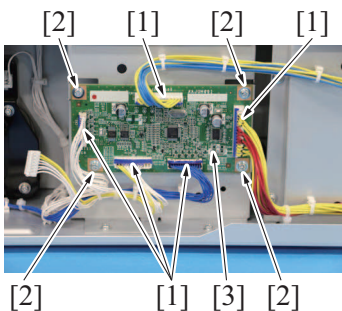
[F.5.1 Rear cover \(PF-P20\)](#)

[F.5.2 Rear cover \(PF-P21\)](#)

2. Remove the drive motor.

3. Disconnect five connectors [1] from the PC control board.

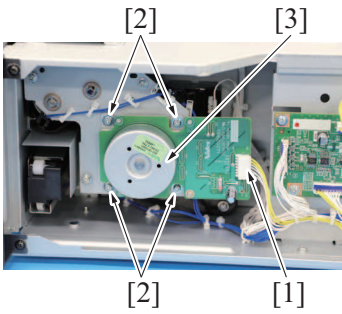
4. Remove four screws [2], and remove the PC control board [3].



5. To reinstall, reverse the order of removal.

### 5.7 Drive motor (M1) (PF-P20/PF-P21)

1. Remove the rear cover.  
[F.5.1 Rear cover \(PF-P20\)](#)  
[F.5.2 Rear cover \(PF-P21\)](#)



2. Disconnect the connector [1].
3. Remove four screws [2] and remove the drive motor [3].

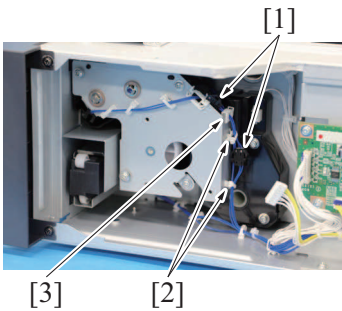
**NOTE**

- When removing or installing the motor, do not hold the rotor but hold the plate of the motor or the board.

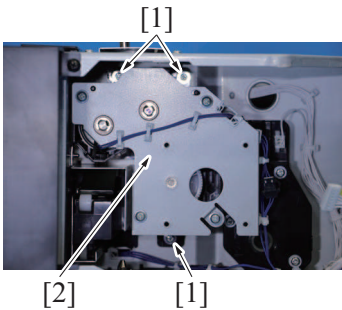
4. To reinstall, reverse the order of removal.

### 5.8 Drive assy (PF-P20/PF-P21)

1. Remove the rear cover.  
[F.5.1 Rear cover \(PF-P20\)](#)  
[F.5.2 Rear cover \(PF-P21\)](#)
2. Remove the drive motor.  
[F.5.7 Drive motor \(M1\) \(PF-P20/PF-P21\)](#)



3. Disconnect two connectors [1], and remove the harness from two wire saddles [2] and the edge cover [3].

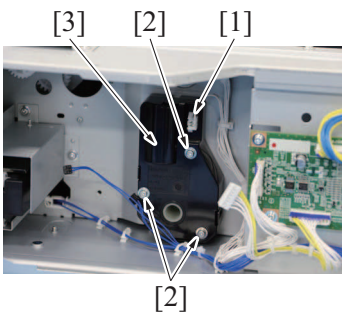


4. Remove three screws [1], and remove the drive assy [2].

5. To reinstall, reverse the order of removal.

### 5.9 Lift-up motor (M2) (PF-P20/PF-P21)

1. Remove the rear cover.  
[F.5.1 Rear cover \(PF-P20\)](#)  
[F.5.2 Rear cover \(PF-P21\)](#)
2. Remove the drive motor.  
[F.5.7 Drive motor \(M1\) \(PF-P20/PF-P21\)](#)
3. Remove the drive assy.  
[F.5.8 Drive assy \(PF-P20/PF-P21\)](#)

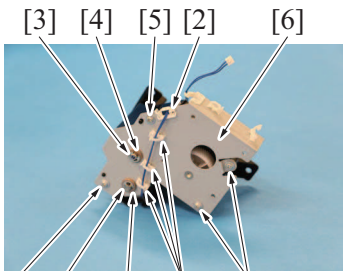


4. Disconnect the connector [1].
5. Remove three screws [2], and remove the lift-up motor [3].

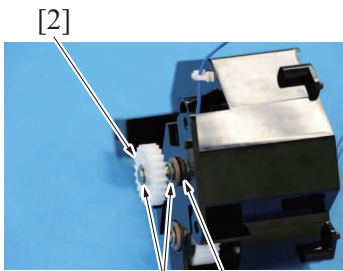
6. To reinstall, reverse the order of removal.

**5.10 Paper feed clutch (CL1) (PF-P20/PF-P21)**

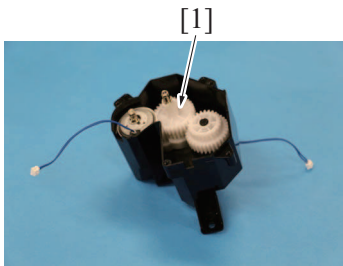
- 1. Remove the rear cover.  
[F.5.1 Rear cover \(PF-P20\)](#)  
[F.5.2 Rear cover \(PF-P21\)](#)
- 2. Remove the drive motor.  
[F.5.7 Drive motor \(M1\) \(PF-P20/PF-P21\)](#)
- 3. Remove the drive assy.  
[F.5.8 Drive assy \(PF-P20/PF-P21\)](#)



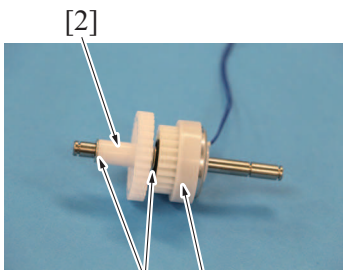
[5] [3] [4] [1] [5]



[1] [3]



[1]



[1] [3]

- 4. Remove the harness from three wire saddles [1] and the edge cover [2].
- 5. Remove two E-rings [3], two bushings [4] and four screws [5], and remove the drive plate [6].

- 6. Remove two E-rings [1], the gear [2] and the bushing [3].

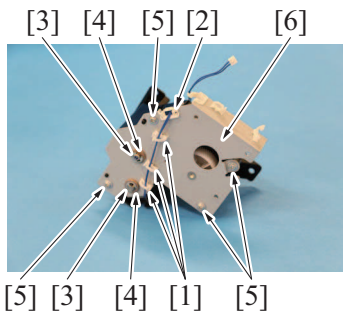
- 7. Remove the paper feed clutch assy [1].

- 8. Remove two E-rings [1] and the gear [2], and remove the paper feed clutch [3].

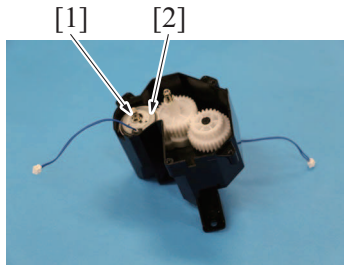
- 9. To reinstall, reverse the order of removal.

**5.11 Transport clutch (CL2) (PF-P20/PF-P21)**

- 1. Remove the rear cover.  
[F.5.1 Rear cover \(PF-P20\)](#)  
[F.5.2 Rear cover \(PF-P21\)](#)
- 2. Remove the drive motor.  
[F.5.7 Drive motor \(M1\) \(PF-P20/PF-P21\)](#)
- 3. Remove the drive assy.  
[F.5.8 Drive assy \(PF-P20/PF-P21\)](#)



[5] [3] [4] [1] [5]



4. Remove the harness from three wire saddles [1] and the edge cover [2].
5. Remove two E-rings [3], two bushings [4] and four screws [5], and remove the drive plate [6].

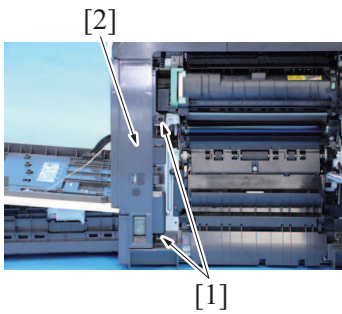
6. Remove the E-ring [1] and remove the transport clutch [2].

7. To reinstall, reverse the order of removal.

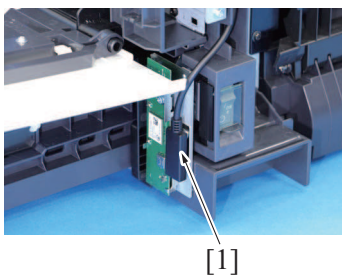
## 6. UK-221

### 6.1 Wireless LAN board (UK-221)

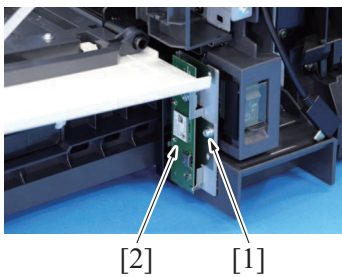
1. Slide out the tray 1.
2. Open the front door.
3. Open the right door.



4. Remove two screws [1], and remove the front right cover/1 [2].



5. Disconnect the USB cable [1].



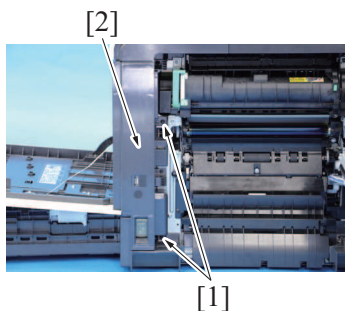
6. Remove the screw [1], and remove the wireless LAN board [2].

7. To reinstall, reverse the order of removal.

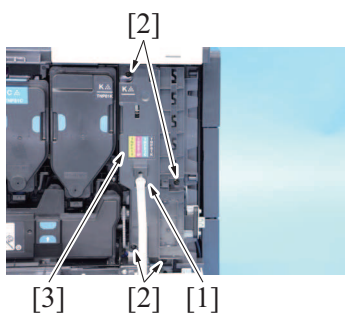
## 7. EK-P08/EK-P09

### 7.1 USB hub board (EK-P08/EK-P09)

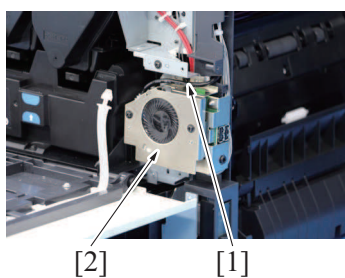
1. Slide out the tray 1.
2. Open the front door.
3. Open the right door.



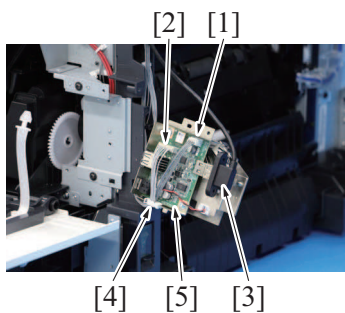
4. Remove two screws [1], and remove the front right cover/1 [2].



5. By twisting the ends of the stopper [1], remove it from the main body.
6. Remove four screws [2] and remove the right front cover/2 [3].



7. Remove the screw [1], and remove the USB hub board [2].



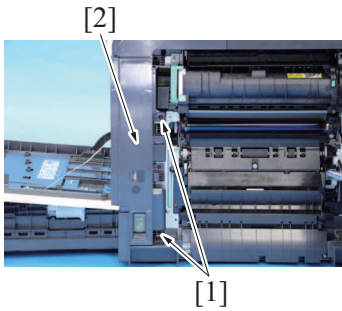
8. Disconnect the connector [1], the connector [2] (EK-P09 only) and the USB cable [3], and remove the harness from the edge cover [4].
9. Remove the USB hub board [5].

10. To reinstall, reverse the order of removal.

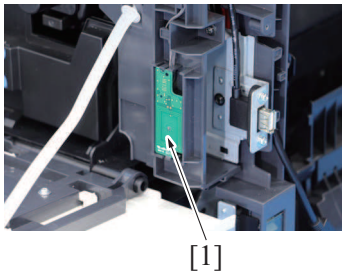
## 8. EK-P10

### 8.1 NFC board (EK-P10)

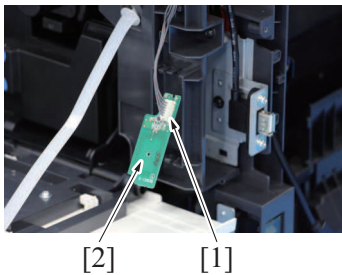
1. Slide out the tray 1.
2. Open the front door.
3. Open the right door.



4. Remove two screws [1], and remove the front right cover/1 [2].



5. Slide out the NFC board [1].



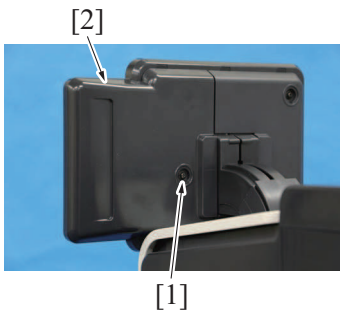
6. Disconnect the connector [1], and remove the NFC board [2].

7. To reinstall, reverse the order of removal.

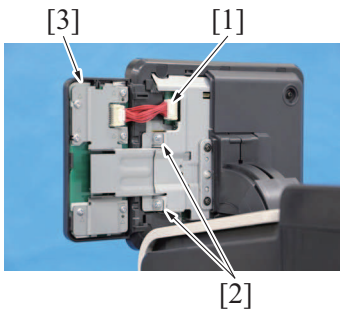


## 9. KP-P03

### 9.1 Keypad (KP-P03)



1. Remove the screw [1], and remove the cover [2].

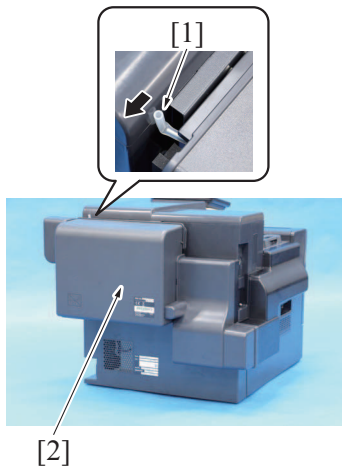


2. Disconnect the connector [1].
3. Remove two screws [2], and remove the keypad [3].

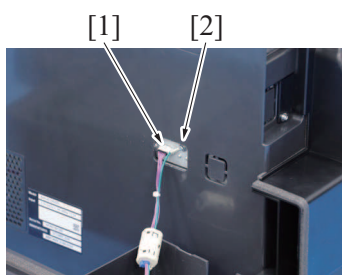
4. To reinstall, reverse the order of removal.

## 10. CU-202 (Only for Europe)

### 10.1 Clean unit (CU-202)



1. Push the lock shaft [1] to the left, and remove the clean unit [2].

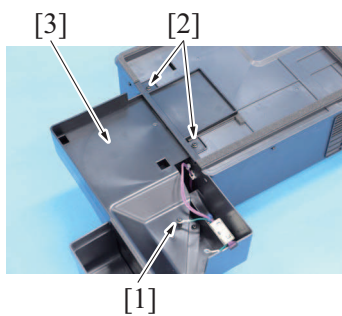


2. Disconnect the connector [1].
3. Remove the screw [2], and remove the earth cable.

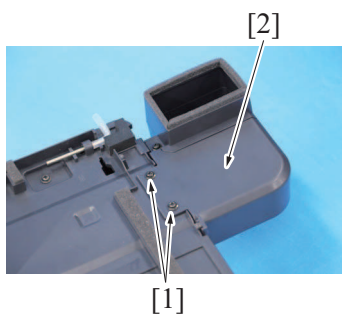
4. To reinstall, reverse the order of removal.

### 10.2 UFP filter

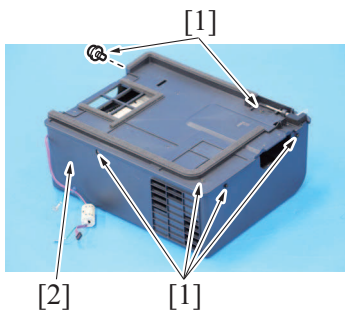
1. Remove the clean unit.  
[F.10.1 Clean unit \(CU-202\)](#)



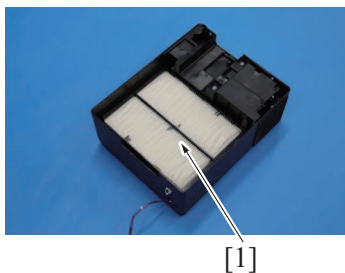
2. Remove the screw [1], and remove the earth cable.
3. Remove two screws [2], and remove the duct [3].



4. Remove two screws [1], and remove the duct [2].



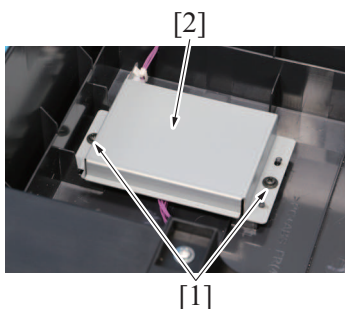
5. Remove six screws [1], remove the clean unit cover assy [2].



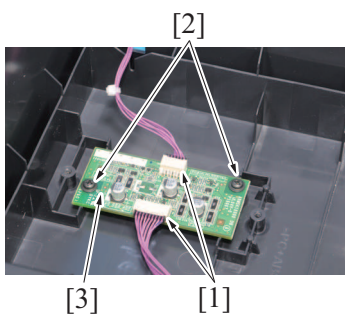
6. Remove the UFP filter [1].

### 10.3 Clean unit drive board (CUDB)

1. Remove the clean unit.  
[F.10.1 Clean unit \(CU-202\)](#)
2. Remove the UFP filter.  
[F.10.2 UFP filter](#)



3. Remove two screws [1], and remove the cover [2].

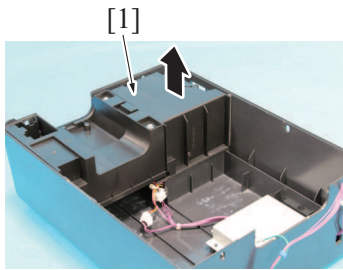


4. Disconnect two connectors [1], and remove two screws [2].
5. Remove the clean unit drive board [3].

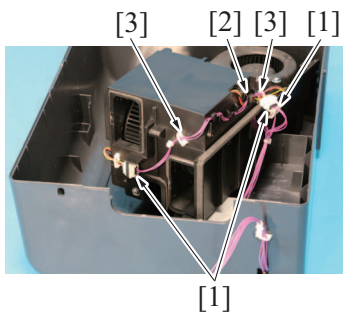
6. To reinstall, reverse the order of removal.

### 10.4 Exhaust fan/1 (FM1)

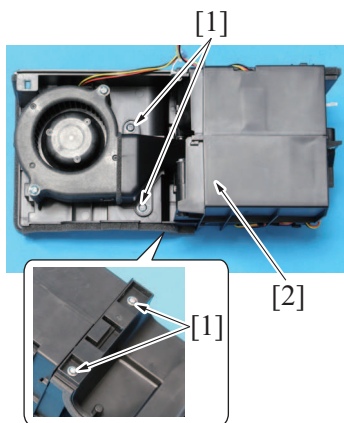
1. Remove the clean unit.  
[F.10.1 Clean unit \(CU-202\)](#)
2. Remove the UFP filter.  
[F.10.2 UFP filter](#)



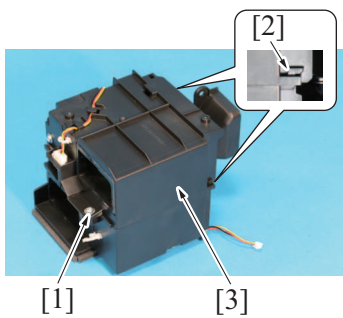
3. Remove the exhaust fan assy [1].



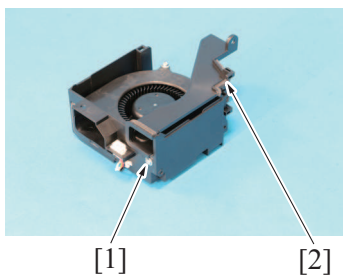
4. Disconnect three connectors [1], and remove the harness from the harness guide [2] and two wire saddles [3].



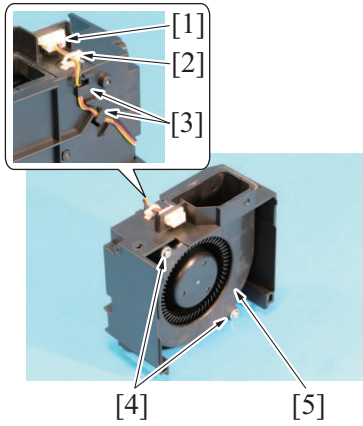
5. Remove four screws [1], and remove the exhaust fan/1/2 assy [2]



6. Remove the screw [1], and unlock two tabs [2].  
7. Remove the exhaust fan/1 assy [3].



8. Remove the screw [1], remove the duct [2].

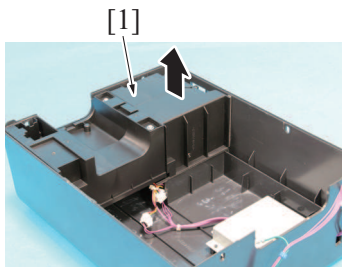


- 9. Disconnect the connector [1], and remove the harness from the wire saddle [2] and two harness guides [3].
- 10. Remove two screws [4], and remove the exhaust fan/1 [5].

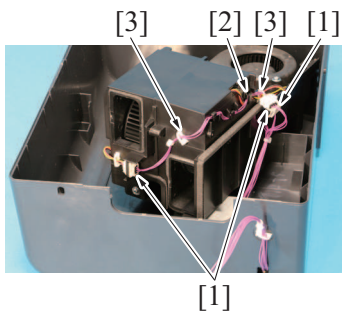
11. To reinstall, reverse the order of removal.

### 10.5 Exhaust fan/2 (FM2)

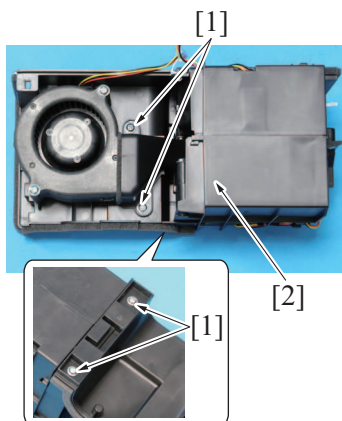
- 1. Remove the clean unit.  
[F.10.1 Clean unit \(CU-202\)](#)
- 2. Remove the UFP filter.  
[F.10.2 UFP filter](#)



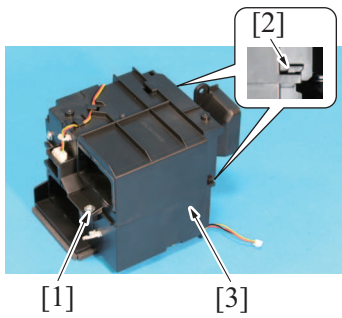
- 3. Remove the exhaust fan assy [1].



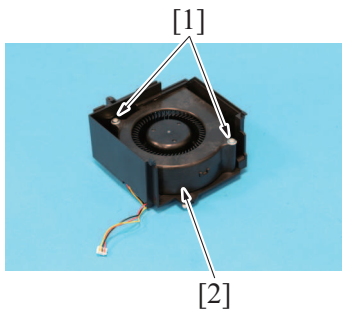
- 4. Disconnect three connectors [1], and remove the harness from the harness guide [2] and two wire saddles [3].



- 5. Remove four screws [1], and remove the exhaust fan/1/2 assy [2]



6. Remove the screw [1], and unlock two tabs [2].
7. Remove the exhaust fan/2 assy [3].

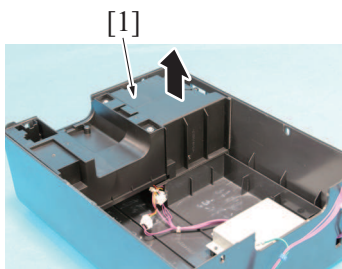


8. Remove two screws [1], and remove the exhaust fan/2 [2].

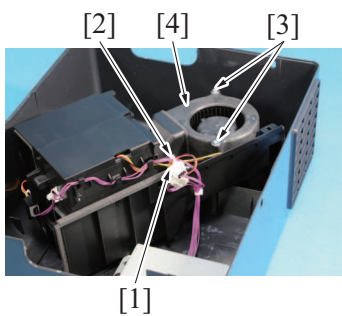
9. To reinstall, reverse the order of removal.

### 10.6 Exhaust fan/3 (FM3)

1. Remove the clean unit.  
[F.10.1 Clean unit \(CU-202\)](#)
2. Remove the UFP filter.  
[F.10.2 UFP filter](#)



3. Remove the exhaust fan assy [1].



4. Disconnect the connector [1], and remove the harness from the wire saddle [2].
5. Remove two screws [3], and remove the exhaust fan/3 [4].

6. To reinstall, reverse the order of removal.

## G MECHANICAL ADJUSTMENT

### 1. bizhub C4000i/C3300i

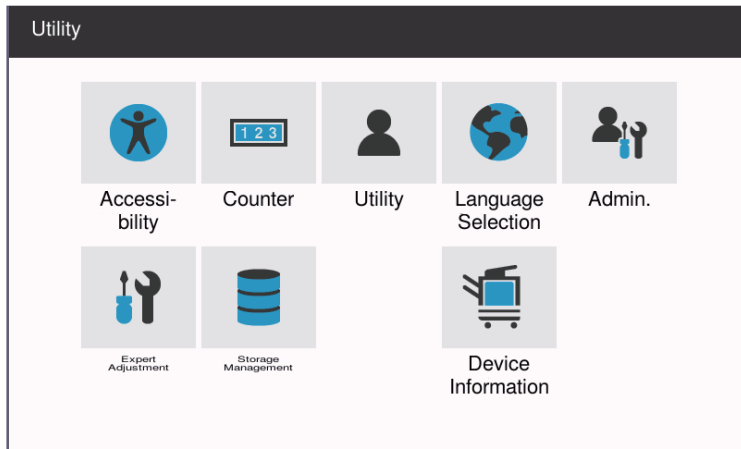
- No adjustment items are required for this machine.

# H UTILITY MODE

## 1. Outline

### NOTE

- Keys displayed on screens are different depending on the setting.
- For details of the utility functions, refer to "User's Guide."



### Starting procedure

1. Touch [Utility] on the Home screen.
2. The Utility Mode screen will appear.

### Exiting procedure

1. Touch the Home key.



## 2. Accessibility

Key name	Function/Precondition
Touch Panel Adjustment	-
Brightness Adjustment	-
Key Repeat Start/Interval Time	-
System Auto Reset Confirmation	-
Auto Reset Confirmation	-
Enlarge Display Mode Confirmation	-
Message Display Time	-
Color Reversal Screen Display Setting	-
Sound Setting	-
Double tap setting	-

### 3. Counter

Key name	Function/Precondition
Print	
Other	
Eco Info	[Power Consumption] and [CO2 Emission] will not be displayed when [Service Mode] -> [System 2] -> [Display Eco Index] -> [Power Savings Display Level] is set to "OFF."

## 4. Utility

### 4.1 Information

Key name	Function/Precondition	
Device Information	-	
Change User Password	<ul style="list-style-type: none"> <li>When conducting user authentication (MFP only), it will be displayed when the authentication is complete.</li> <li>When conducting user authentication or account track input, it will be displayed when login is authenticated as user box administrator.</li> <li>When [Password Rules] which can be displayed by [Administrator] -&gt; [Security] -&gt; [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.</li> <li>When [Administrator] -&gt; [Security] -&gt; [Enhanced Security Mode] is set to "ON," entering the incorrect password three times will cause access lock.</li> </ul>	
Synchronize User Auth. and Account Track	<ul style="list-style-type: none"> <li>When conducting user authentication (ON (MFP), External Server Authentication, or Main + External Server), it will be displayed only when the authentication is complete.</li> <li>It will be displayed when [Administrator] -&gt; [User Authentication/Account Track] -&gt; [Authentication Type] -&gt; [Synchronize User Authentication / Account Track] is set to "Synchronize by User."</li> </ul>	
Function Permission Information	When conducting user authentication (ON (MFP), External Server Authentication, or Main + External Server), it will be displayed only when the authentication is complete.	
Network Setting Information	-	
Print Setting Information	Set as Default	-
	Font Information	-
	Macro List	-
	ICC Profile List	-
	PCL Setting	-
	PS Setting	-
	TIFF Setting	-
	Security Setting	-
	OOXML Print Settings	-
	Page Layout Settings	-
Print Information	-	
Change E-Mail Address	<ul style="list-style-type: none"> <li>When conducting user authentication (MFP only), it will be displayed when the authentication is complete.</li> <li>It will be displayed when [Administrator] -&gt; [Security] -&gt; [Administrator Security Levels] is set to "Level 2."</li> </ul>	
Change PIN Code	It will be displayed when a user PIN code is set in [Administrator] -> [User Auth/Account Track] -> [User Authentication Setting] -> [User Registration].	

### 4.2 System Settings

Key name	Function/Precondition	
Measurement Unit Setting	-	
Auto Tray Selection Settings	-	
Paper Tray Setting	Auto Tray Switch ON/OFF	-
	No Matching Paper in Tray Setting	-
Print Lists	<ul style="list-style-type: none"> <li>It will not be displayed when [Service Mode] -&gt; [Billing Setting] shows that [Authentication Device2] is mounted.</li> <li>It will not be displayed when [Service Mode] -&gt; [Billing Setting] -&gt; [Management Function Choice] is set to "Vendor 2." (It will be displayed when the key counter is mounted.)</li> </ul>	
Auto Color Level Adjustment	-	
Power Settings	Low Power Mode Setting	<ul style="list-style-type: none"> <li>It will be displayed when setting other than "Restrict" is selected in [Admin.] -&gt; [Security] -&gt; [Administrator Security Levels].</li> <li>It will not be displayed when [Service Mode] -&gt; [Billing Setting] -&gt; [Management Function Choice] is set to "Vendor 2."</li> <li>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] -&gt; [System 2] -&gt; [Software Switch Setting].</li> </ul>
	Sleep Mode Setting	
bizhub Remote Access Setting	IME Auto Display	-
AE Level Adjustment	<ul style="list-style-type: none"> <li>It will be displayed when [Admin.] -&gt; [Security] -&gt; [Administrator Security Levels] is set to "Level 2."</li> <li>It will not be displayed when [Service Mode] -&gt; [Billing Setting] -&gt; [Management Function Choice] is set to "Vendor 2."</li> </ul>	
Blank Page Print Settings	<ul style="list-style-type: none"> <li>It will be displayed when [Admin.] -&gt; [Security] -&gt; [Administrator Security Levels] is set to "Level 2."</li> </ul>	

Key name	Function/Precondition
	<ul style="list-style-type: none"> <li>It will not be displayed when [Service Mode] -&gt; [Billing Setting] -&gt; [Management Function Choice] is set to "Vendor 2."</li> </ul>
Page Number Print Position	It will be displayed when [Admin.] -> [Security] -> [Administrator Security Levels] is set to "Level 2."
Select Keyboard	The type of keyboard to be displayed when [Local Keyboard] is selected depends on the language selected in [Utility] -> [Language Selection].

### 4.3 Printer Settings

Key name	Function/Precondition		
Basic Setting	PDL Setting	-	
	Image Quality Setting	-	
	Edge Definition	-	
	Paper Tray	-	
	2-Sided Print	-	
	Binding Position	-	
	Number of Sets	-	
	Paper Size	-	
	Paper Type	-	
	Original Direction	-	
	Spool Print Jobs in HDD before RIP	-	
	Banner Sheet Setting	-	
	Banner Sheet Paper Tray	-	
	A4/A3 <--> LTR/LGR Auto Switch	-	
	Binding Direction Adjustment	-	
	Line Width Adjustment (600 dpi)	-	
	Line Width Adjustment (1200 dpi)	-	
	Gray Background Text Correction	-	
	Minimal Print	-	
	OOXML Print Mode	-	
Gloss Mode	-		
Toner Save	-		
Print/Fax Output	Print	<ul style="list-style-type: none"> <li>It will be displayed when setting other than "Restrict" is selected in [Admin.] -&gt; [Security] -&gt; [Administrator Security Levels].</li> <li>It will not be displayed when [Service Mode] -&gt; [Billing Setting] -&gt; [Management Function Choice] is set to "Vendor 2."</li> </ul>	
PCL Setting	Select Color	-	
	Symbol Set	-	
	Font Settings	-	
	Font Size	-	
	Line/Page	Default setting value differs depending on the values set in [Utility] -> [Utility] -> [Printer Settings] -> [Basic Setting] -> [Original Direction] and [Paper Size].	
	CR/LF Mapping	-	
	Thin Line	-	
	Auto Trapping	-	
PS Setting	Select Color	-	
	PS Error Print	-	
	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	-		

Key name	Function/Precondition	
	Black Overprint	-
TIFF Setting	Auto Paper Select	When "Auto" is selected and paper larger than the image size is not in the paper trays, paper size error occurs.
Security Setting	Verify XPS/OOXML Digital Signature	-
OOXML Print Settings	Sheet/Book Print	-
	Paper Size	The paper size selected in [Service Mode] -> [System 1] -> [Foolscap Size Setting] is displayed.
	Paper Type	-
Page Layout Settings	-	

#### 4.4 Customize

Key name	Function/Precondition	
Active screen setting	Animation Settings	-
	Accessibility Settings	-

## 5. Language Selection

Key name	Function/Precondition
Language Selection Display	The language as a default depend on the marketing area set in [Marketing Area] available from [System 1] under Service Mode.
Panel Keyboard Language Selection	
External Keyboard Language Selection	

## 6. Administrator

### 6.1 Outline

#### 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] -> [Security] -> [Enhanced Security Mode] is enabled, 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].

### 6.2 Maintenance

Key name	Function/Precondition		
Meter Count	-		
ROM Version	-		
Status Notification Setting	-		
Total Counter Notification Setting	-		
Date/Time Setting	Manual Setting	-	
	Time Adjustment Setting	When this setting is enabled, touch [Data Entry] and modify the time.	
Daylight Saving Time	When this setting is enabled, set the time difference to move up. <ul style="list-style-type: none"> <li>• Default setting: 60 min.</li> <li>• Setting range: 1 to 150</li> </ul>		
Timer Setting	Power Settings	Low Power Mode Setting	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].
		Sleep Mode Setting	<ul style="list-style-type: none"> <li>• When [Service Mode] -&gt; [System 1] -&gt; [Sleep ON/OFF Choice Setting] is set to "Permit", the setting to turn sleep on and off displays and becomes selectable.</li> <li>• The sleep mode will begin in 48 hours even if it sets it to "OFF."</li> <li>• 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] -&gt; [System 2] -&gt; [Software Switch Setting].</li> </ul>
		Power Consumption in Sleep Mode	It will not be displayed when image controller is mounted.
		Power Save Settings	-
		Enter Power Save Mode	-
		Power Key Setting	<ul style="list-style-type: none"> <li>• It will not be displayed when image controller is mounted.</li> <li>• In ErP auto power OFF mode, this machine cannot receive data, and also it cannot print an original.</li> </ul>
	Weekly Timer Settings	Use Weekly Timer	-
		Use Power Save	When "Yes" is selected, using the 10-key pad, input the Power Save Start Time and Power Save End Time.
		Use Overtime Password	When the setting is enabled, enter the password (eight digits).
		Enable Tracking Function	-
Network Error Code Display Setting	-		
Reset	Network Setting Clear	-	
	Reset	-	
	Clear All Address At Once	-	
License Settings	Get Request Code	-	
	Install License	<ul style="list-style-type: none"> <li>• By making settings in [Service Mode] -&gt; [Billing Setting], CE can also activate functions provided by i-Option.</li> </ul>	

Key name	Function/Precondition	
		<ul style="list-style-type: none"> <li>When activating i-Option, MFP accesses to KM license server via WebDAV connection. Set the proxy server setting in [Administrator] -&gt; [Network] -&gt; [WebDAV Settings] -&gt; [Proxy Setting for Remote Access] as occasion demands.</li> <li>For accessing to KM license server, it is necessary to select [Fixed Address] in [Service Mode] -&gt; [Billing Setting] -&gt; [WebDAV Server Setting].</li> <li>For details of the functions, refer to "<a href="#">H.12.1.1 License Settings.</a>"</li> </ul>
Authorization function Setting	Install License	-
	Authorization function list display	This appears if there are authorized functions.
Backup Setting Information	Server Backup	-
	Restore from Server	-
PING TX Address	-	
External Memory Backup	Import	<ul style="list-style-type: none"> <li>It will be displayed when [Service Mode] -&gt; [System 2] -&gt; [Software Switch Setting] shows that switch No.72 is set to [00000100] at Bit assignment/[04] at HEX assignment.</li> <li>For details of the functions, refer to "<a href="#">H.12.1.2 External Memory Backup.</a>"</li> </ul>
	Export	
Remote Access Setting	Import/Export User Data	<ul style="list-style-type: none"> <li>This displays when using the CS Remote Care system.</li> <li>For details of the functions, refer to "<a href="#">H.12.1.3 Remote Access Setting.</a>"</li> </ul>

## 6.3 System Settings

### 6.3.1 Machine Setting

Key name	Function/Precondition	
Device Location	-	
Administrator Registration	-	
Input Machine Address	-	

### 6.3.2 Register Support Information

Key name	Function/Precondition	
Register Support Information	-	

### 6.3.3 Reset Settings

Key name	Function/Precondition	
Job Reset	When Account is changed	It will not be displayed when [Service Mode] -> [Billing Setting] shows that [Authentication Device2] is mounted.
	Next Job	-
System auto reset	<ul style="list-style-type: none"> <li>[System Auto Reset Time] will not be displayed when [Low Power Mode Setting] or [Sleep Mode Setting] is set to "1 Minute."</li> <li>The screen saver function displays when the screen saver application is registered.</li> </ul>	
Auto Reset	-	

### 6.3.4 Standard Size Setting

Key name	Function/Precondition	
Foolscap Size Setting	-	

### 6.3.5 Stamp Settings

Key name	Function/Precondition	
Header/Footer Registration	-	

### 6.3.6 Blank Page Print Settings

Key name	Function/Precondition	
Blank Page Print Settings	-	

### 6.3.7 Job Priority Operation Settings

Key name	Function/Precondition	
Skip Job (Copy, Print)	-	

### 6.3.8 System Connection Setting

Key name	Function/Precondition	
System Connection Setting	OpenAPI Settings	-



Key name	Function/Precondition		
Mobile Connection Settings	Simple Connection Setting	QR Code Display Setting	-
		Enable NFC	This setting is synchronized with [Admin.] - [User Auth/Account Track] -> [Authentication Type] -> [Enable NFC].
		Enable Bluetooth LE	<ul style="list-style-type: none"> <li>It will be displayed when the optional local interface kit (voice guidance/Bluetooth LE enabled) is mounted.</li> <li>This setting is synchronized with [Administrator Settings] - [User Authentication/Account Track] -&gt; [General Settings] -&gt; [Enable Bluetooth LE].</li> </ul>
	Wireless Connection Setting	When [Admin.] -> [Network] -> [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 Connection Link Application Settings	-	

### 6.3.9 Set Paper Name by User

Key name	Function/Precondition
Set Paper Name by User	-
Edit Paper Name	It will be displayed when Set Paper Name by User is enabled.

### 6.3.10 List/Counter

Key name	Function/Precondition
Meter Count and Device Confirmation Tx Settings	<ul style="list-style-type: none"> <li>The counter information is collected via CS Remote Care.</li> <li>Though this setting is enabled, the information is not sent if [Service Mode] -&gt; [System 2] -&gt; [Acquiring Settings] is set to "OFF."</li> </ul>
Management List	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] is set to "Vendor 2." (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	-

### 6.3.11 Temporary Change Language

Key name	Function/Precondition
Temporary Change Language	<p>The temporarily enabled language is returned to the language configured in [User Settings] after any of the following operations.</p> <ul style="list-style-type: none"> <li>Main power switch OFF</li> <li>Power key OFF</li> <li>Sleep mode</li> <li>Low power mode</li> <li>System Auto Reset</li> <li>Logout</li> </ul>

### 6.3.12 Main Menu Default (Basic Style)

Key name	Function/Precondition
Main Menu Default (Basic Style)List	-

### 6.3.13 Bypass Tray Overwrite Settings for Print PC

Key name	Function/Precondition
Bypass Tray Overwrite Settings for Print PC	-

### 6.3.14 Network Selection Settings

Key name	Function/Precondition	
Network Selection Settings	Default Network Settings	It will be displayed when [Administrator] -> [Network] -> [VLAN Settings] is enabled.
	Network Name Change	

### 6.3.15 Paper Size/Type Settings Screen Display

Key name	Function/Precondition
Paper Size/Type Settings Screen Display	-

**6.3.16 Default Bypass Paper Type Setting**

Key name	Function/Precondition
Default Bypass Paper Type Setting	-

**6.3.17 Page Number Print Position**

Key name	Function/Precondition
Page Number Print Position	-

**6.4 Security**

Key name	Function/Precondition																								
Certificate Verification Settings	-																								
Restrict User Access	<table border="1"> <tr> <td>Biometric/IC Card Information Registration</td> <td rowspan="4"> <ul style="list-style-type: none"> <li>It will not be displayed when [Service Mode] -&gt; [Billing Setting] -&gt; [Management Function Choice] is set to "Vendor 2."</li> <li>If [Administrator] -&gt; [Security] -&gt; [Enhanced Security Mode] is set to "ON," selecting [Allow] for [Registering and Changing Addresses] cancels enhanced security mode.</li> <li>The [Biometric/IC Card Information Registration] key displays if [Authentication Device2] is mounted via [Service Mode] -&gt; [Billing Setting], and [Administrator] -&gt; [User Auth/Account Track] -&gt; [Authentication Type] -&gt; [User Authentication] is set to "ON (MFP)."</li> <li>The [Synchronize User Authentication / Account Track By User] key displays when [Administrator] -&gt; [User Auth/Account Track] -&gt; [Authentication Type] -&gt; [Synchronize User Authentication / Account Track] is set to "Synchronize by User."</li> </ul> </td> </tr> <tr> <td>Synchronize User Authentication / Account Track By User</td> </tr> <tr> <td>Changing Job Priority</td> </tr> <tr> <td>Delete Other User Jobs</td> </tr> </table>	Biometric/IC Card Information Registration	<ul style="list-style-type: none"> <li>It will not be displayed when [Service Mode] -&gt; [Billing Setting] -&gt; [Management Function Choice] is set to "Vendor 2."</li> <li>If [Administrator] -&gt; [Security] -&gt; [Enhanced Security Mode] is set to "ON," selecting [Allow] for [Registering and Changing Addresses] cancels enhanced security mode.</li> <li>The [Biometric/IC Card Information Registration] key displays if [Authentication Device2] is mounted via [Service Mode] -&gt; [Billing Setting], and [Administrator] -&gt; [User Auth/Account Track] -&gt; [Authentication Type] -&gt; [User Authentication] is set to "ON (MFP)."</li> <li>The [Synchronize User Authentication / Account Track By User] key displays when [Administrator] -&gt; [User Auth/Account Track] -&gt; [Authentication Type] -&gt; [Synchronize User Authentication / Account Track] is set to "Synchronize by User."</li> </ul>	Synchronize User Authentication / Account Track By User	Changing Job Priority	Delete Other User Jobs																			
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Synchronize User Authentication / Account Track By User																									
Changing Job Priority																									
Delete Other User Jobs																									
Auto Logout	-																								
Administrator Password Setting	When [Administrator] -> [Security] -> [Security Details] -> [Password Rules] is enabled, 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] is set to "Vendor 2."																								
Security Details	<table border="1"> <tr> <td>Password Rules</td> <td> <ul style="list-style-type: none"> <li>This setting cannot be enabled when [Service Mode] -&gt; [Enhanced Security] -&gt; [CE Authentication] is set to "OFF." "OFF" cannot be set for [CE Authentication] when [Password Rules] is enabled.</li> <li>If [Administrator] -&gt; [Security] -&gt; [Enhanced Security Mode] is set to "ON," disabling this setting cancels enhanced security mode.</li> <li>When the password rule is enabled, the password cannot be changed or registered unless it follows the above conditions.</li> </ul> </td> </tr> <tr> <td>ProhibitFunctions</td> <td> <ul style="list-style-type: none"> <li>If [Administrator] -&gt; [Security] -&gt; [Enhanced Security Mode] is set to "ON," selecting "Mode1" in this setting cancels enhanced security mode. Only the number of times for trials up to the access lock can be changed.</li> <li>For details of the functions, refer to "<a href="#">H.12.2.1 ProhibitFunctions</a>."</li> </ul> </td> </tr> <tr> <td>Print Data Capture</td> <td> <ul style="list-style-type: none"> <li>To be used when carrying out [Service Mode] -&gt; [System 2] -&gt; [Data Capture].</li> <li>If [Administrator] -&gt; [Security] -&gt; [Enhanced Security Mode] is set to "ON," enabling this setting cancels enhanced security mode.</li> </ul> </td> </tr> <tr> <td>Personal Data Security Settings</td> <td>-</td> </tr> <tr> <td>Initialize</td> <td>-</td> </tr> <tr> <td>Web browser contents access</td> <td>-</td> </tr> <tr> <td>Remote Service setting</td> <td>When "Allow" is selected, [Administrator] -&gt; [Network] -&gt; [Machine Update Settings] -&gt; [Machine Auto Update Settings] -&gt; [Auto Update Settings for This Machine] will not be displayed.</td> </tr> <tr> <td>Web browser setting change</td> <td>-</td> </tr> <tr> <td>Maintenance Mode Access</td> <td>To "Allow" Maintenance Mode Access, set [Service Mode] -&gt; [System 2] -&gt; [Maintenance Mode] to "Effective."</td> </tr> <tr> <td>Write the Configuration from USB</td> <td>-</td> </tr> <tr> <td>Storage data backup</td> <td> <ul style="list-style-type: none"> <li>To set whether to permit our service representative to back up or restore the storage on this machine.</li> <li>For details of the functions, refer to [Service Mode] -&gt; [Enhanced Security] -&gt; [HDD Data Backup].</li> </ul> </td> </tr> <tr> <td>Hide Personal Information (MIB)</td> <td>If [Administrator] -&gt; [Security] -&gt; [Enhanced Security Mode] is set to "ON," disabling this setting cancels enhanced security mode.</td> </tr> </table>	Password Rules	<ul style="list-style-type: none"> <li>This setting cannot be enabled when [Service Mode] -&gt; [Enhanced Security] -&gt; [CE Authentication] is set to "OFF." "OFF" cannot be set for [CE Authentication] when [Password Rules] is enabled.</li> <li>If [Administrator] -&gt; [Security] -&gt; [Enhanced Security Mode] is set to "ON," disabling this setting cancels enhanced security mode.</li> <li>When the password rule is enabled, the password cannot be changed or registered unless it follows the above conditions.</li> </ul>	ProhibitFunctions	<ul style="list-style-type: none"> <li>If [Administrator] -&gt; [Security] -&gt; [Enhanced Security Mode] is set to "ON," selecting "Mode1" in this setting cancels enhanced security mode. Only the number of times for trials up to the access lock can be changed.</li> <li>For details of the functions, refer to "<a href="#">H.12.2.1 ProhibitFunctions</a>."</li> </ul>	Print Data Capture	<ul style="list-style-type: none"> <li>To be used when carrying out [Service Mode] -&gt; [System 2] -&gt; [Data Capture].</li> <li>If [Administrator] -&gt; [Security] -&gt; [Enhanced Security Mode] is set to "ON," enabling this setting cancels enhanced security mode.</li> </ul>	Personal Data Security Settings	-	Initialize	-	Web browser contents access	-	Remote Service setting	When "Allow" is selected, [Administrator] -> [Network] -> [Machine Update Settings] -> [Machine Auto Update Settings] -> [Auto Update Settings for This Machine] will not be displayed.	Web browser setting change	-	Maintenance Mode Access	To "Allow" Maintenance Mode Access, set [Service Mode] -> [System 2] -> [Maintenance Mode] to "Effective."	Write the Configuration from USB	-	Storage data backup	<ul style="list-style-type: none"> <li>To set whether to permit our service representative to back up or restore the storage on this machine.</li> <li>For details of the functions, refer to [Service Mode] -&gt; [Enhanced Security] -&gt; [HDD Data Backup].</li> </ul>	Hide Personal Information (MIB)	If [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "ON," disabling this setting cancels enhanced security mode.
Password Rules	<ul style="list-style-type: none"> <li>This setting cannot be enabled when [Service Mode] -&gt; [Enhanced Security] -&gt; [CE Authentication] is set to "OFF." "OFF" cannot be set for [CE Authentication] when [Password Rules] is enabled.</li> <li>If [Administrator] -&gt; [Security] -&gt; [Enhanced Security Mode] is set to "ON," disabling this setting cancels enhanced security mode.</li> <li>When the password rule is enabled, the password cannot be changed or registered unless it follows the above conditions.</li> </ul>																								
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Hide Personal Information (MIB)	If [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "ON," disabling this setting cancels enhanced security mode.																								
Quick Security Setting	For details of the functions, refer to " <a href="#">H.12.2.4 Quick Security Setting</a> ."																								

Key name	Function/Precondition	
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 [ON]. Also, USB memory is not available for the following functions. <ul style="list-style-type: none"> <li>[TX Operation Log Output], [Main Menu Display Settings], [License Settings], [Authorization function Setting], [External Memory Backup - Export], [BootUp Screen]</li> </ul>	
Enhanced Security Mode	Enhanced Security Mode	For details of the functions, refer to " <a href="#">H.12.2.2 Enhanced Security Mode.</a> "
Function Management Settings	-	
Stamp Settings	Delete Registered Stamp	-
	Apply Stamps	-
FW Update (USB) Permission Setting	-	
Driver Password Encryption Setting	For details of the functions, refer to " <a href="#">H.12.2.3 Driver Password Encryption Setting.</a> "	
FIPS Settings	-	
OpenAPI Certification Management Setting	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.	
Firmware Updat.Verification Set.	-	
FW Update (Network) Perm. Sett.	-	
Secure Boot Function Set.	-	

### 6.5 User Auth/Account Track

**NOTE**

- It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the "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.

Key name	Function/Precondition		
Authentication Type	User Authentication	If [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "ON," selecting "OFF" cancels enhanced security mode.	
	Default Authentication Method	<ul style="list-style-type: none"> <li>[ON (External Server)] cannot be selected when external servers are not registered in [Administrator] -&gt; [User Auth/Account Track] -&gt; [External Server Settings].</li> <li>[ON (External Server)] cannot be selected when [Service Mode] -&gt; [Billing Setting] -&gt; [Management Function Choice] is set to "Management Device 2."</li> </ul>	
	Public User Access	<ul style="list-style-type: none"> <li>This setting is not available without user authentication.</li> <li>If [Administrator] -&gt; [Security] -&gt; [Enhanced Security Mode] is set to "ON," selecting "ON" cancels enhanced security mode.</li> </ul>	
	Ticket Hold Time Setting (Active Directory)	This setting takes effect only when the authentication server type is set to active directory.	
	Account Track	-	
	Account Track Input Method	<ul style="list-style-type: none"> <li>This setting is not available without the account track.</li> <li>"Password Only" cannot be set when using both user authentication and account track.</li> </ul>	
	Synchronize User Authentication / Account Track	The setting is available only when carrying out the user authentication and account track.	
	Number of Counters Assigned	<ul style="list-style-type: none"> <li>It will not be displayed when [Service Mode] -&gt; [Billing Setting] -&gt; [Management Function Choice] shows that "Management Device 2" is mounted.</li> <li>The setting is available only when carrying out the user authentication and account track.</li> </ul>	
	When Number of Jobs Reach Maximum	-	
	Enable NFC	This setting is synchronized with [Administrator] -> [System Settings] -> [System Connection Setting] -> [Mobile Connection Settings] -> [Simple Connection Setting] -> [Enable NFC].	
	External Server DN Cache	-	
	Extended User DB	-	
	External Authentication server setting	Temporarily Save Authentication Information	-
		Overwrite User Info	<ul style="list-style-type: none"> <li>When the external server authentication is used, authenticated user information is also managed on this machine. If the number of users who</li> </ul>

Key name	Function/Precondition		
		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. <ul style="list-style-type: none"> <li>If [Enhanced Server Authentication] or [Main + Enhanced Server] is selected with [Authentication Method], "Allow" is specified forcibly.</li> </ul>	
User Authentication Setting	User Registration	<ul style="list-style-type: none"> <li>It cannot be entered when conducting authentication by external server.</li> <li>[Register Auth. Info.] does not appear when [Service Mode] -&gt; [Billing Setting] shows that [Authentication Device2] is mounted.</li> <li>[Custom Function Profile by User] does not appear when [Administrator] -&gt; [System Settings] -&gt; [Custom Function Profile User/Account] is set to "OFF."</li> <li>[Synchronize Account Track] does not appear when [Administrator] -&gt; [User Auth/Account Track] -&gt; [Authentication Type] -&gt; [Synchronize User Authentication / Account Track] is unset to "Synchronize by User."</li> </ul>	
	Default Function Permission	This setting is not available without user authentication.	
	Administrative Setting	ID & Print Settings	This setting is not available without user authentication.
		Change to Basic Screen after ID & Print	<ul style="list-style-type: none"> <li>This setting is not available without user authentication.</li> <li>It will be displayed when [Service Mode] -&gt; [Billing Setting] shows [Authentication Device2] is mounted.</li> </ul>
		Auth. Operation Setting when print Documents are Stored	-
		Login Allowed with Administrative Rights	-
User Name List	<ul style="list-style-type: none"> <li>This setting is not available without user authentication.</li> <li>If [Administrator] -&gt; [Security] -&gt; [Enhanced Security Mode] is set to "ON," selecting "ON" cancels enhanced security mode.</li> </ul>		
User Counter	-		
Account Track Settings	Account Track Registration	<ul style="list-style-type: none"> <li>When the "Password Only" is selected for [Account Track Input Method], [Account Name] does not appear.</li> <li>When the "Account Name &amp; Password" is selected for [Account Track Input Method], [Name] does not appear.</li> <li>[Custom Function Profile by Account] does not appear when [Administrator] -&gt; [System Settings] -&gt; [Custom Function Profile User/Account] is unset to "ON."</li> </ul>	
	Account Track Counter	-	
Prohibited Function Login Setting	-		
Print without Authentication	If [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "ON," selecting "allow" cancels enhanced security mode.		
Simple Authentication setting	-		
Print Counter List	<ul style="list-style-type: none"> <li>The setting is available only when carrying out the user authentication or account track.</li> <li>It will not be displayed when [Service Mode] -&gt; [Billing Setting] -&gt; [Management Function Choice] shows that "Key Counter Only," "Vendor 2" or "Management Device 2" is mounted.</li> </ul>		
External Server Settings	-		
Authentication Device Settings	<ul style="list-style-type: none"> <li>It will be displayed when [Service Mode] -&gt; [Billing Setting] shows [Authentication Device2] is mounted.</li> <li>It will be displayed when [Administrator] -&gt; [Network] -&gt; [IWS Settings] is set to "ON."</li> <li>For details of the functions, refer to "<a href="#">H.12.3.1 Authentication Device Settings.</a>"</li> </ul>		
User/Account Common Setting	Logout Confirmation Screen Display Setting	-	
	Single Color > 2 Color Output Management	-	
	Counter Remote Control	-	
Authentication Server Connection status	External Server Authentication	When [Administrator] -> [User Auth/Account Track] -> [Authentication Type] -> [User Authentication] is set to "ON (External Server)", this function is available.	
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] -> [Network] -> [Single Sign-On Setting] -> [Domain Login Setting] is changed to "OFF."		

## 6.6 Network

Key name		Function/Precondition	
VLAN Settings	VLAN ID Settings	-	
TCP/IP Setting	TCP/IP Setting1	Wired Setting (*1)	-
		Wireless Setting (*1)	-
	TCP/IP Setting2	-	
	Filtering Type	-	
	IP Address Filtering	Setting will be available when [Administrator] -> [Network] -> [TCP/IP Setting] -> [Filtering Type] is set to "IP Address Filtering."	
	Quick IP Filtering	Setting will be available when [Administrator] -> [Network] -> [TCP/IP Setting] -> [Filtering Type] is set to "Quick IP Filtering."	
	Packet Filtering	Setting will be available when [Administrator] -> [Network] -> [TCP/IP Setting] -> [Filtering Type] is set to "Packet Filtering."	
	IPsec	-	
E-mail Setting	E-mail RX (POP)	<ul style="list-style-type: none"> <li>It will not be displayed when [Service Mode] -&gt; [Billing Setting] shows that [Authentication Device2] is mounted.</li> </ul>	
	E-mail TX (SMTP)	<ul style="list-style-type: none"> <li>It will not be displayed when [Service Mode] -&gt; [Billing Setting] shows that [Authentication Device2] is mounted.</li> <li>When [SMTP Authentication] is set to "ON," enter the [User ID], [Password], [Domain Name], [Authentication Setting], and [SMTP Authentication Method].</li> </ul>	
	S/MIME Communication Settings	It will not be displayed when [Service Mode] -> [Billing Setting] shows that [Authentication Device2] is mounted.	
	E-mail RX Print	<ul style="list-style-type: none"> <li>It will not be displayed when [Service Mode] -&gt; [Billing Setting] shows that [Authentication Device2] is mounted.</li> <li>[E-Mail Body Print] displays only when Switch No. "152" is set to "01" in HEX Assignment in [Service Mode] -&gt; [System 2] -&gt; [Software Switch Setting].</li> </ul>	
FTP Setting	FTP TX Setting	-	
SNMP Setting	<ul style="list-style-type: none"> <li>It will not be displayed when [Service Mode] -&gt; [Billing Setting] shows that [Authentication Device2] is mounted.</li> <li>If [Administrator] -&gt; [Security] -&gt; [Enhanced Security Mode] is set to "ON," enabling [SNMP v1/v2 Setting] cancels enhanced security mode.</li> <li>If [Administrator] -&gt; [Security] -&gt; [Enhanced Security Mode] is set to "ON," setting [Security Level] to "OFF" cancels enhanced security mode.</li> </ul>		
SMB Setting	WINS/NetBIOS Settings	It will not be displayed when [Service Mode] -> [Billing Setting] shows that [Authentication Device2] is mounted.	
	Client Settings	<ul style="list-style-type: none"> <li>It will not be displayed when [Service Mode] -&gt; [Billing Setting] shows that [Authentication Device2] is mounted.</li> <li>Select "ON" for [DFS Setting] when using SMB transmission under an environment that uses a distributed file system (DFS).</li> </ul>	
	SMB Server Settings	It will not be displayed when [Service Mode] -> [Billing Setting] shows that [Authentication Device2] is mounted.	
	SMB Browsing setting	It will not be displayed when [Service Mode] -> [Billing Setting] shows that [Authentication Device2] is mounted.	
DPWS Settings	-		
Bonjour Setting	-		
WebDAV Settings	WebDAV Client Settings	-	
	WebDAV Server Settings	<ul style="list-style-type: none"> <li>If [Administrator] -&gt; [Security] -&gt; [Enhanced Security Mode] is set to "ON," setting [SSL Setting] to "SSL Only" cancels enhanced security mode.</li> <li>Press [Initial Password] under [Access Rights Settings] to initialize the password. (Default password: sysadm)</li> </ul>	
	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] -> [License Settings] -> [Install License] (WebDAV connection) or [Service Mode] -> [Billing Setting] to activate i-Option function.	
OpenAPI Setting	[Specified Application Start Setting] will be displayed when [Service Mode] -> [System 2] -> [Application Change Setting] is set to "Permit."		
TCP Socket Setting	-		
IEEE802.1X Authentication Setting	IEEE802.1X Authentication Setting	IEEE802.1X authentication settings are made with Web Connection.	
	IEEE802.1x Settings	It will be displayed when [Administrator] -> [Network] -> [Network I/F Configuration] is set to "Wireless Only."	
	IEEE802.1x Authentication Trial	-	
LLTD Setting	-		

Key name	Function/Precondition		
BMLinkS Settings (Only for Japan)	-		
SSDP Settings	-		
Web Browser Setting	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.		
Single Sign-On Setting	When [Administrator] -> [User Auth/Account Track] -> [Authentication Type] -> [User Authentication] is set to [ON (External Server)] or [ON (MFP + External Server)], this function is available.		
IWS Settings	For details of the functions, refer to "IWS Settings."		
Machine Update Settings	Internet ISW Settings	FTP Server Setting	<ul style="list-style-type: none"> <li>This is displayed when [Function Setting] is set to "ON" in [Service Mode] -&gt; [Machine Update Setting] -&gt; [Internet ISW] -&gt; [Internet ISW Set].</li> <li>This is displayed when [FTP data acquisition setting] is set to "ON" in [Service Mode] -&gt; [Machine Update Setting] -&gt; [Internet ISW] -&gt; [FTP Setting].</li> <li>For details of the functions, refer to "<a href="#">H.12.5.1 Internet ISW Settings.</a>"</li> </ul>
		Update Firmware at Specified Time	<ul style="list-style-type: none"> <li>This is displayed when [Function Setting] is set to "ON" in [Service Mode] -&gt; [Machine Update Setting] -&gt; [Internet ISW] -&gt; [Internet ISW Set].</li> <li>This is displayed when [Open Mode Settings] is set to "Set" in [Service Mode] -&gt; [Machine Update Setting] -&gt; [Internet ISW] -&gt; [Internet ISW Set].</li> <li>For details of the functions, refer to "<a href="#">H.12.5.1 Internet ISW Settings.</a>"</li> </ul>
		Firmware Update Parameters	<ul style="list-style-type: none"> <li>This is displayed when [Function Setting] is set to "ON" in [Service Mode] -&gt; [Machine Update Setting] -&gt; [Internet ISW] -&gt; [Internet ISW Set].</li> <li>This is displayed when [Open Mode Settings] is set to "Set" in [Service Mode] -&gt; [Machine Update Setting] -&gt; [Internet ISW] -&gt; [Internet ISW Set].</li> <li>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] -&gt; [Machine Update Setting] -&gt; [Internet ISW] -&gt; [HTTP Setting], [FTP Setting], and [Forwarding Access Setting].</li> <li>For details of the functions, refer to "<a href="#">H.12.5.1 Internet ISW Settings.</a>"</li> </ul>
	Machine Auto Update Settings	<ul style="list-style-type: none"> <li>This is displayed when [Function Setting] is set to "ON" in [Service Mode] -&gt; [Machine Update Setting] -&gt; [Internet ISW] -&gt; [Internet ISW Set].</li> <li>This function is same as that of the service mode, but it will not be used together with the function of the service mode.</li> <li>For details of the functions, refer to "<a href="#">H.12.5.2 Machine Auto Update Settings.</a>"</li> </ul>	
	HTTP Proxy Settings	For details of the functions, refer to " <a href="#">H.12.5.3 HTTP Proxy Settings.</a> "	
Remote Panel Settings	<ul style="list-style-type: none"> <li>This is not displayed when [Service Mode] -&gt; [Enhanced Security] -&gt; [CE Authentication] is set to "OFF."</li> <li>For details of the functions, refer to "<a href="#">H.12.4.1 Remote Panel Settings.</a>"</li> </ul>		
bizhub Remote Access Setting	<ul style="list-style-type: none"> <li>To remote-control the Control Panel of this machine using an Android/iOS terminal, you need to install Remote Access on the Android/iOS terminal. Also, [TCP Socket] must be set to "ON" for [Administrator] -&gt; [Network] -&gt; [TCP Socket Setting].</li> <li>To connect the device to this machine through bizhub Remote Access using NFC, configure a setting to enable NFC on this machine in advance.</li> <li>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.</li> </ul>		
Network I/F Configuration (*1)	For details of the functions, refer to " <a href="#">H.12.4.2 Network I/F Configuration.</a> "		
Wireless Network Setting (*1)	For details of the functions, refer to " <a href="#">H.12.4.3 Wireless Network Setting.</a> "		
Domain Send Operation Restriction Setting	-		
HTTP Server Settings	<ul style="list-style-type: none"> <li>It will not be displayed when [Service Mode] -&gt; [Billing Setting] shows that [Authentication Device2] is mounted.</li> <li>To use the 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 Web Connection is not displayed properly even if the above settings have been conducted, delete the cache of the Web browser.</li> </ul>		
MAC Address	-		
Network Settings List	-		
Awake from ErP	-		

- \*1: It will be displayed when optional wireless LAN devices are mounted.

**6.7 Printer Settings**

Key name	Function/Precondition	
Basic Setting	Print/Fax Output	-
PCL Setting	Brightness	-
	Contrast	-
	Saturation	-
	Color Balance	-
PS Setting	Brightness	-
	Contrast	-
	Saturation	-
	Color Balance	-
Security Setting	Print XPS/OOXML Errors	-
Interface Setting	Network Timeout	-
	USB Timeout	-
Assign Account to Acquire Device Info	-	-

## 7. 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 or [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 "Key Counter Only" is 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." <ul style="list-style-type: none"> <li>The adjusted values from [Erase Leading Edge] are also updated to the service mode as the "Lead Edge Erase Adjustment" function in service mode is opened to administrators.</li> <li>The adjusted values from [Vertical Adjustment] are also updated to the service mode as the "Paper Feed Direction Adj." function in service mode is opened to administrators.</li> </ul>
	Vertical Adjustment	
Media Adjustment	This function is provided to open "Transfer Voltage Fine Adj" of Service Mode up to administrator and the fine-adjusted value is reflected in the Service Mode setting.	
Image Stabilization	Image Stabilization Only	-
	Image Stabilization Setting	-
Paper Separation Adjustment	-	
Color Registration Adjust	Color Registration Adjust (Yellow)	This menu is unavailable when the key counter is not inserted while "Key Counter Only" is set by [Service Mode] -> [Billing Setting] -> [Management Function Choice].
	Color Registration Adjust (Magenta)	
	Color Registration Adjust (Cyan)	
Gradation Adjustment	Stabilization Only	<ul style="list-style-type: none"> <li>This menu is unavailable when the key counter is not inserted while "Key Counter Only" is set by [Service Mode] -&gt; [Billing Setting] -&gt; [Management Function Choice].</li> <li>Before executing Gradation adjust, be sure to perform Image Stabilization.</li> </ul>
	Printer (600dpi)	
	Printer (1200dpi)	
	Copy	
User Paper Settings	<ul style="list-style-type: none"> <li>It will be displayed when [Service Mode] -&gt; [Enhanced Security] -&gt; [Administrator Feature Level] is set to "Level 2."</li> <li>The feature available from [Service Mode] -&gt; [System 2] -&gt; [User Paper Settings] is extended to Administrator. However, the fusing temperature setting is not possible in Administrator Settings.</li> </ul>	
PS Designer Settings	-	
Main Scanning Direction Zoom	-	
Trouble isolation	-	



## 8. Storage Management

Function Name	Function/Precondition
Check Capacity	-
Overwrite All Data + Format	-
Overwrite All Data - Report Settings	-
Encryption setting	Don't forget the Encryption.
Format	<ul style="list-style-type: none"> <li>• It is subject to logical formatting here, therefore if starting with physical formatting, follow as [Service Mode] -&gt; [State Confirmation] -&gt; [Memory/Storage Adjustment] -&gt; [Format].</li> <li>• Make sure to configure the following settings after formatting the storage. <ul style="list-style-type: none"> <li>• Installing the firmware. <ul style="list-style-type: none"> <li>• Reinstall movie data, voice data, OCR dictionary data, and PDF/A fonts from [Service Mode] -&gt; [System 2] -&gt; [Install Data].</li> </ul> </li> </ul> </li> <li>• Make sure to install the firmware after the format. Otherwise a trouble code "C-D012 Mount error due to storage being unformatted" will appear.</li> </ul>

## 9. Device Information

Function Name	Function/Precondition
Function Version	
IPv4 Address	
IPv6 Address	
Serial Number	
Contact Telephone Number	
Auth. function list display	
QR Code Display Setting	It will be displayed when [Administrator] -> [System Settings] -> [System Connection Setting] -> [Mobile Connection Settings] -> [QR Code Display Setting] is set to "ON."
Contact Fax Number	
Version Information	

## 10. Remote Panel

Function Name	Function/Precondition
Remote Panel Operation	It will be displayed when [Administrator] -> [Network] -> [Remote Panel Settings] -> [Remote Panel Client Settings] is set to "ON."

## 11. Card Authentication

Function Name	Function/Precondition
IC Card type setting	It will be displayed when [Service Mode] -> [Billing Setting] -> [Authentication Device2] is set to "Card."
Operation Settings	
Authentication Card ID Number	

## 12. Supplementary explanation of utility mode

### 12.1 MAINTENANCE

#### 12.1.1 License Settings

##### Get Request Code

- To display and print a request code and serial number used to activate i-Option.

<Procedure>

- Touch [Get Request Code], and [OK].
- A serial number and request code are issued.
- By touching [Print], the serial number and request code are printable.

##### Install License

- 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] -> [Network] -> [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.
- If an internal error "MAI001" is displayed, repair repair license management information through [Service Mode] -> [Billing Setting].

<Procedure (Function/License Code)>

- Touch [Install License].
- Touch [Function/License Code].
- Touch [Function Code].
- Enter the Function Code.
- Touch [OK].
- Touch [License Code].
- Enter the license code that was issued in the license management server using the key board on the control panel, and touch [OK].
- Touch [Install].
- Confirm the message, select [Yes], and touch [OK].
- Turn OFF and ON the main power switch.

<Procedure (Token Code)>

- Touch [Token Code].
- Touch one of the Token Codes 1 to 10.
- Enter the Token Code.
- Touch [OK].
- Touch [Install].
- Confirm the message, select [Yes], and touch [OK].
- Turn OFF and ON the main power switch.

##### List of Enabled Functions

- To display currently activated functions.

#### 12.1.2 External Memory Backup

##### NOTE

- 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.
- In the following conditions, data export into the external memory is prohibited.
  - [Administrator] -> [Security] -> [USB Connection Permission setting] is set to "Restrict."
  - [Administrator] -> [Security] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory(Service)] is set to "Restrict."
  - [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "ON".

##### Import

- To import various types of setting information from other machine via the USB memory.
- Types of data that can be imported:
  - Address Book, Authentication Data, Network Settings, Remote Access Setting, User Setting, Administrator Setting, Custom Display Settings, Cloud Connection Setting, External Certificate, Accessibility, Custom Auth. Setting

##### NOTE

- The size of the importable file is 700 KByte or less. However, the size of a Custom Auth. Setting data is 1 MByte or less.

<Procedure>

- Connect the external memory to the machine.
- Touch [Import].
- Touch [Password], enter the password previously set for the import data, and touch [OK].
- Touch [Start].
- 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.

##### Export

- To export various types of setting information to an external memory (USB memory).

- Types of data that can be exported:
  - Address Book, Authentication Data, Network Settings, User Setting, Administrator Setting, Custom Display Settings, Cloud Connection Setting, External Certificate, Accessibility

<Procedure>

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.

### 12.1.3 Remote Access Setting

#### Import/Export User Data

- To set whether to remotely rewrite (import or export) user data such as address information using the CS Remote Care.

Setting item	Default setting
Allow	
Restrict	○

## 12.2 Security

### 12.2.1 ProhibitFunctions

- 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, secure print authentication, user box authentication, SNMP authentication, WebDAV Server authentication, Remote Panel authentication

Setting item	Contents	Default setting
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.	

#### NOTE

- If [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "ON", selecting "Mode 1" in this setting cancels enhanced security mode.

<Procedure>

1. Select a mode.
2. Touch [Release Time Settings] and set a period of time that elapses before access lock is released.
3. When [Mode 2] is selected, set the number of times where checks are made before access is locked.

#### Procedure for releasing an access lock

Authentication item	How to release
User+Accounts authentication	Touch keys in the following order. [Administrator] -> [Security] -> [Security Details] -> [ProhibitFunctions]. Then touch [Release].
SNMP authentication	
Security 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	<ol style="list-style-type: none"> <li>1. Main power switch is turned OFF and ON.</li> <li>2. Touch Menu -&gt; [Counter] -&gt; [Print List].</li> <li>3. Touch [Display Keypad], displaying 10-key pad.</li> <li>4. The lock release timer starts to operate by input the Stop -&gt; 0 -&gt; 9 -&gt; 3 -&gt; 1 -&gt; 7</li> <li>5. When the timer reaches the time specified in this setting, the access lock is released.</li> </ol>

### 12.2.2 Enhanced Security Mode

- 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)], [ON (External Server)], or [ON (MFP + External Server)].
  - SSL Certificate: Register self-certificate for SSL communication from the Web Connection.
  - CE Password: Change it with the one which meets password rules.
  - CE Authentication: Set to [ON].
  - Management Function Choice: Set to "Unset."

Setting item	Default setting
OFF	○
ON	

**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”)**
  - **Rewriting instructions of firmware from CS Remote Care, 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	Contents	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)
ProhibitFunctions	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 Security document access.	Mode 1	Mode 2 (not to be changed) * In association with ProhibitFunctions, the method is changed from “Security using Secure Document ID and password (Mode 1)” to that using the password with the “Secure Document first narrowed down by Security 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)
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 display enable setting	To set whether or not to enable the Scan to URL function.	ON	OFF (not to be changed)
Print 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 load reduction transmission 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	<ul style="list-style-type: none"> <li>• The security level can be selected from among [auth-password] and [auth/priv-password].</li> <li>• An 8-digit-or-more auth-password and priv-password can both be set.</li> </ul>
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 Web Connection.	Enabled	Restrict

Function Name	Contents	Default setting	When Enhanced Security mode is set to "ON"
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)
Security 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.	OFF	OFF (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)
IWS Settings	Set the operating environment of IWS (Internal Web Server) function.	OFF	OFF (not to be changed)
Report File Attachment	Report File Attachment	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 terminal.	QR Code Display Setting: OFF	OFF (not to be changed)
		Enable NFC: OFF	OFF (not to be changed)
		Enable Bluetooth LE: OFF	OFF (not to be changed)
SSL Settings (WebDAV Server Settings)	Specify whether to use the SSL for communication or not.	Non-SSL Only	SSL Only (not to be changed)
SSL Setting (OpenAPI Settings)	Specify whether to use the SSL for communication or not.	Non-SSL Only	SSL Only (not to be changed)
Web Browser Setting	Select whether to enable a Web Browser.	OFF	OFF
Remote Panel Settings	Configure settings for remotely controlling the Control Panel of this machine from another computer.	Client Settings: OFF	OFF
		Server Setting: OFF	OFF
Hide Personal Information (MIB)	Specify whether or not to display the file name, destination, and User Box name and number of the MIB information.	ON	ON
Import/Export User Data	Specify whether to allow importing/exporting of the destinations registered on this machine (one-touch destinations, groups, and programs), authentication information from the remote diagnosis system.	Restrict	Restrict
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)



Function Name	Contents	Default setting	When Enhanced Security mode is set to "ON"
External Memory Function Settings	Specify whether to allow users to print and read files from a USB memory device and to save files to a USB memory device.	Save Document: Restrict	Restrict (not to be changed)
		Print Document: Allow	Restrict (not to be changed)
		External Memory Document Scan: Restrict	Restrict (not to be changed)

### 12.2.3 Driver Password Encryption Setting

- 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.

Setting item	Contents	Default setting
User-Defined	To set the encrypting passphrase. Enter an encryption word of 20 letters.	
Use Factory default settings	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.

### 12.2.4 Quick Security Setting

#### Administrator Password

- To set and change the administrator password.

#### NOTE

- When "Enable" is selected in [Admin.] -> [Security] -> [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].

<Procedure>

- Enter the current administrator password
- Password: Enter the new administrator password to be used
- Password Confirmation: Re-enter the new administrator password

#### USB Enable Settings

- Specify whether to permit a function that requires the USB Port.

Setting item	Contents	Setting value	Default setting
Print Document (*1)	Select whether to allow users to print files from USB memory.	Allow	○
		Restrict	
Print (*2)	Select whether to enable to print files from a USB-connected computer.	Allow	○
		Restrict	

- \*1: This function is available when [ON] is selected in [Admin.] -> [Security] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory (User)].
- \*2: This function is available when [ON] is selected in [Admin.] -> [Security] -> [USB Connection Permission setting] -> [Detail Setting] -> [PC Connection].

#### 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, Security 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.

Setting item	Contents	Default setting
Enable	To apply the password rules.	
Disable	Do not apply the password rules. 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)	○

**NOTE**

- If [Admin.] -> [Security] -> [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.” [CE Authentication] cannot be set to “OFF” when [Password Rules] is set to “Enable.”

**Quick IP Filtering**

- 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.

Setting item	Default setting
Synchronize IP Address	<input type="radio"/> (Except for North America and Europe)
Synchronize Subnet Mask	
No Filtering	<input type="radio"/> (North America and Europe)

**NOTE**

- **Quick IP Filtering activates automatically.**

<Synchronize IP Address>

- IPv4 address: Only reception by an IP address with the upper 3 bits 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

<Synchronize Subnet Mask>

- 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 [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.

<No Filtering>

- For both IPv4 address and IPv6 address, no filtering is performed.

**Web Connection Setting**

- To set whether to use the Web Connection.

**NOTE**

- To use the Web Connection, enable “JavaScript” and “Cookie” of the Web browser.
- If the MFP is connected to the internet via a proxy server, register the Proxy Settings of the Web browser as “Exceptions.”
- When the Web Connection is not displayed properly even if the above settings have been conducted, delete the cache of the Web browser.

Setting item	Default setting
ON	<input type="radio"/>
OFF	

**Security Warning Display Setting**

- 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.

Setting item	Default setting
ON	<input type="radio"/> (Except for North America and Europe)
OFF	<input type="radio"/> (North America and Europe)

**12.3 User Authentication/Account Track**

**12.3.1 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] -> [Network] -> [IWS Settings] is set to “ON.”

**Authentication Type**

- Specifies a device used for user authentication.

Card Authentication	IC Card type setting	Select the type of the required IC card. <ul style="list-style-type: none"> <li>• 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.</li> <li>• To use the Type A card, select [Type A].</li> </ul>
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		<ul style="list-style-type: none"> <li>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.</li> <li>To use NFC, select [NFC(HCE)].</li> <li>To use the Type A card with NFC, select [TypeA+NFC(HCE)].</li> <li>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.</li> </ul>
	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. <ul style="list-style-type: none"> <li>A driver other than the AU-201S loadable driver is installed.</li> </ul>
	IC Card Type	The type of the IC card which has been set will be displayed. <ul style="list-style-type: none"> <li>This is displayed when the loadable driver used for the YSoft card reader has been installed.</li> </ul>
	Operation Settings	Set how to log in to this machine. <ul style="list-style-type: none"> <li>"Card Authentication": Pass the IC card or NFC-compatible Android device over the authentication unit to log in.</li> <li>"Card Authentication + Password": Pass the IC card or NFC-compatible Android device over the authentication unit, and enter the password to log in.</li> <li>"Card Authentication" is specified by default.</li> </ul>
	Authentication Card ID Number	<ul style="list-style-type: none"> <li>Specify whether to notify the counter, which collects the use status of this machine, of the authentication card ID.</li> <li>"Ignore" is specified by default.</li> </ul>
Bio Authentication	Beep Sound	<ul style="list-style-type: none"> <li>Set whether to give a "blip" sound when the finger vein pattern is scanned successfully.</li> <li>"ON" is specified by default.</li> </ul>
	Operation Settings	Set how to log in to this machine. <ul style="list-style-type: none"> <li>"1-to-many authentication": A user simply needs to place his or her finger to log in.</li> <li>"1-to-1 authentication": A user needs to enter the user name and place his or her finger to log in.</li> <li>"1-to-many authentication" is specified by default.</li> </ul>

- \*: Vendor ID and Product ID are identification information to specify USB devices.

#### <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].
- When using SSFC (Shared Security Formats Cooperation) for IC card authentication, 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	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.

#### Logoff Settings

- Select whether or not the user is logged off after a scan or fax is sent or after the copy document is scanned.

Setting item	Default setting
Do not log off	<input type="radio"/>
Log off	<input type="radio"/>

## 12.4 Network

### 12.4.1 Remote Panel Settings

#### Outline

- This is not 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 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.

Methods of the Remote panel

Operating method	Contents
Using the dedicated software	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul>
Accessing the machine directly	<ul style="list-style-type: none"> <li>• This method accesses this machine directly from another computer on the network, and operates the control panel of the machine using a Web browser.</li> <li>• A dedicated remote control software program is not required, but the computer used for the remote control must be able to access this machine.</li> </ul>

**Server Settings**

- To access this machine directly and control the control panel of the machine remotely, select [ON].

Setting item	Default setting
ON	
OFF	○

<Procedure>

- If [ON] is selected, configure the following settings.

Setting item	Contents
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).
IP Filtering (Permit Access)	Select [Enable] to specify IP addresses allowed to access. Also enter the range of IP addresses allowed to access.
Port No.	To set the port number.
Connection Timeout	To set the time-out time.

**NOTE**

- **Starting the remote operations**
  - **Access the machine web server (URL: [https://IP\\_address\\_of\\_MFP:Port\\_Number/panel/top.html](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.**

**Client Settings**

- To control the control panel of this machine remotely using the dedicated software, select [ON].

Setting item	Default setting
ON	
OFF	○

<Procedure>

- If [ON] is selected, configure the following settings.

Setting item	Contents	
Port No.	To set the port number.	
Connection Timeout	To set the time-out time.	
Server Address	Enter the address of the server where the dedicated software was installed.	
Certificate Verification Level Settings	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.
Synchronize WebDAV Client Setting	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.	
Launch Remote Panel from vCare	To set whether or not to allow the remote panel to be started from the remote diagnosis system.	

**12.4.2 Network I/F Configuration**

- It will be displayed when optional wireless LAN devices are mounted.
- To add a network interface to this machine, set a network interface configuration.

Setting item	Contents	Default setting
Wired Only	Select this option to use this machine only in the wired LAN environment.	○

Setting item	Contents	Default setting
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)	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.	

### 12.4.3 Wireless Network Setting

- Configure settings to use this machine as a wireless LAN access point or wireless LAN adapter.
- It will be displayed when optional wireless LAN devices are mounted.

#### Wireless Only or Wired+Wireless (Secondary Mode)

- "Wireless Only" or "Wired + Wireless (Secondary Mode)" is selected in [Administrator] -> [Network] -> [Network I/F Configuration]

Awake from ErP	Select the method to return the machine from the ErP Auto Power Off mode. <ul style="list-style-type: none"> <li>• "OFF": The machine is not returned from the ErP Auto Power Off mode.</li> <li>• "Awake with Magic Packet": The machine returns from the ErP Auto Power Off mode when receiving a magic packet.</li> <li>• "Awake with ARP + Unicast Communication": The machine returns from the ErP Auto Power Off mode when receiving a unicast communication packet.</li> </ul> "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. <ul style="list-style-type: none"> <li>• [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.</li> <li>• [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.</li> </ul>
Manual Setting	Manually configure settings items such as SSID and the encryption scheme that are required for a connection. <ul style="list-style-type: none"> <li>• [SSID]: Enter the SSID of the wireless LAN access point connected to the machine (using up to 32 characters).</li> <li>• [Authentication/Encryption Algorithm]: Select the algorithm used for authentication or encryption. <ul style="list-style-type: none"> <li>• 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].</li> <li>• If an algorithm other than WEP is selected, specify [Key Input Method] and [Passphrase].</li> </ul> </li> </ul>
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.

#### Wired + Wireless (Simple AP Mode)

- "Wired + Wireless (Primary Mode)" is selected in [Administrator] -> [Network] -> [Network I/F Configuration]

Awake from ErP	Select the method to return the machine from the ErP Auto Power Off mode. <ul style="list-style-type: none"> <li>• "OFF": The machine is not returned from the ErP Auto Power Off mode.</li> <li>• "Awake with Magic Packet": The machine returns from the ErP Auto Power Off mode when receiving a magic packet.</li> <li>• "Awake with ARP + Unicast Communication": The machine returns from the ErP Auto Power Off mode when receiving a unicast communication packet.</li> </ul> "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. <ul style="list-style-type: none"> <li>• [SSID]: Enter the SSID to use this machine as a wireless LAN access point (using up to 32 bytes).</li> <li>• [Authentication/Encryption Algorithm]: The algorithm for authentication or encryption is fixed to [WPA2-PSK(AES)].</li> </ul>
Wireless Channel Setting	Specify the frequency band and channel required for wireless LAN connection. <ul style="list-style-type: none"> <li>• [Frequency Band]: Select the frequency band required for wireless LAN connection.</li> <li>• [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.</li> <li>• [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.</li> </ul>
DHCP Server Settings	Configure a setting to use the DHCP server function. <ul style="list-style-type: none"> <li>• [Enable Settings]: Select whether to enable the DHCP server function. "Disabled" is specified by default.</li> <li>• [IPv4 lease address]: Specify the range of IPv4 addresses to be leased from the DHCP server when enabling the DHCP server function.</li> <li>• [Subnet Mask]: Specify the subnet mask of the IPv4 address to be leased from the DHCP server when enabling the DHCP server function.</li> <li>• [Lease Period]: Specify the lease period of the IPv4 address to be leased from the DHCP server when enabling the DHCP server function.</li> </ul>
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. <ul style="list-style-type: none"> <li>[Key Input Method]: Select the method to enter the passphrase.</li> <li>[Passphrase]: Enter the passphrase.</li> </ul>

## 12.5 Machine Update Settings

### 12.5.1 Internet ISW Settings

- This is displayed when [Function Setting] is set to "ON" in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set].

#### FTP Server Settings

- To set whether to connect via a proxy server to access the FTP server.
- To configure the settings of the server related to connection via a proxy server.
- This is displayed when [FTP data acquisition setting] is set to "ON" in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [FTP Setting].

Setting item	Default setting
ON	
OFF	<input type="radio"/>

<Procedure>

- If [ON] is selected, configure the following settings.
  - Touch [Host Address] in [Proxy Server Address] to set the host address of the proxy server.
  - Set the port number used to access the proxy server in [Proxy Server Port Number].

#### Update Firmware at Specified Time

- To update the downloaded firmware at the specified time.
- This is displayed when [Open Mode Settings] is set to "Set" in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set].

Setting item	Default setting
Yes	
No	<input type="radio"/>

<Procedure>

- If [Yes] is selected, set the time to update the firmware.

#### Firmware Update Parameters

- 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].
- This is displayed when [Open Mode Settings] is set to "Set" in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set].

<Procedure>

- Touch [Firmware Download] in [Administrator] -> [Network] -> [Machine Update Settings] -> [Internet ISW Settings] -> [Firmware Update Parameters].
- Select [Yes] in the confirmation screen and touch [OK].
- The firmware download starts.
- The message to show the status will be displayed on the screen while connecting and transferring data.
- Select [Firmware Upgrade] or [Firmware Delete].
  - Touching [Upgrade] starts updating using the downloaded firmware data. Select [Yes] in the confirmation screen and touch [OK].
  - Touching [Firmware Delete] will delete the downloaded firmware data. Select [Yes] in the confirmation screen and touch [OK].
- 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 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].

### 12.5.2 Machine Auto Update Settings

- 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 service mode, but it will not be used together with the function of the service mode.
- Refer to [I.16.2.1 Auto Update setting](#) for how to create an update file.

#### (1) Auto Update Settings for This Machine

- To obtain the update file from the specified location, and configure settings to update the machine at the specified time.

Setting item	Default setting
ON	
OFF	<input type="radio"/>

<Procedure>

- If [ON] is selected, configure the following settings.

**NOTE**

- If the machine relay server is used as a server on the data providing side, the SMB protocol will not be used.

When configuring the settings for SMB with the download protocol

Setting item	Contents
Host Name	Set the host name for the SMB server.
File Path	Set the file path used in the SMB server communication. <ul style="list-style-type: none"> <li>• Specify the folder in which C_UpdateList.ini is stored. For details, see “ I.16.2.1 Auto Update setting.”</li> </ul>
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 Settings	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

Setting item	Contents
URL	Set the address of the http server. <ul style="list-style-type: none"> <li>• Specify the folder in which C_UpdateList.ini is stored. For details, see “ I.16.2.1 Auto Update setting.”</li> </ul>
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 to use the proxy server. <ul style="list-style-type: none"> <li>• If [ON] is selected, set the proxy with [Administrator] -&gt; [Network] -&gt; [Machine Update Settings] -&gt; [HTTP Proxy Settings].</li> </ul>
Connection Timeout	Set the timeout period for connecting to the server.
Update Time	Touch Clear to set the time to update the machine.
Polling Settings	Set the polling period for obtaining the update list.
Retry Interval	Set the period for retrying when failed to obtain.

**(2) Relay Server Function Settings**

- Obtain an update relay data, and configure settings for the relay server function which enables the file to be shared with the other machine.

**Update File Download Settings**

- Set a relay server to obtain the update relay data from file storage server.

Setting item	Default setting
ON	
OFF	<input type="radio"/>

<Procedure>

- If [Confirm] is selected, configure the following settings.

Setting item	Contents
URL	Set the address of the file storage server. <ul style="list-style-type: none"> <li>• Specify the folder in which S_UpdateList.csv is stored. For details, see “ I.16.2.2 Relay server setting.”</li> </ul>
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. <ul style="list-style-type: none"> <li>• If [ON] is selected, set the proxy with [Administrator] -&gt; [Network] -&gt; [Machine Update Settings] -&gt; [HTTP Proxy Settings].</li> </ul>
Polling Settings	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.

**Authentication Setting**

- Configure the authentication settings of access management works as an update relay data sharing server.

Setting item	Default setting
ON	
OFF	<input type="radio"/>

<Procedure>

- If [ON] is selected, configure the following settings.
- DO NOT use the SMB setting

For HTTP Setting

Setting item	Contents
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 “[1.16.2.2 \(6\) Auto update by relay server](#)” for the file path of relayed data.

**(3) Log TX settings****Update File Download/Update Log**

- Save the update file download log for auto update of the machine, and send it to the specified location.

Setting item	Default setting
ON	
OFF	○

&lt;Procedure&gt;

- When [ON] is selected, configure the settings for transmission protocol.

For SMB

Setting item	Contents
Host Name	Set the host name for the SMB server.
File Path	Set the file path used in the 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

Setting item	Contents
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. <ul style="list-style-type: none"> <li>If [ON] is selected, set the proxy with [Administrator] -&gt; [Network] -&gt; [Machine Update Settings] -&gt; [HTTP Proxy Settings].</li> </ul>

**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.

Setting item	Default setting
ON	
OFF	○

&lt;Procedure&gt;

- When [ON] is selected, configure the settings for transmission protocol.

For SMB

Setting item	Contents
Host Name	Set the host name for the SMB server.
File Path	Set the file path used in the 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

Setting item	Contents
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. <ul style="list-style-type: none"> <li>If [ON] is selected, set the proxy with [Administrator] -&gt; [Network] -&gt; [Machine Update Settings] -&gt; [HTTP Proxy Settings].</li> </ul>

**(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**

- To conduct Machine Auto Update manually.
- It will be displayed if all of the following settings are met.
  - [Administrator] -> [Network] -> [Machine Update Settings] -> [Machine Auto Update setting] -> [Auto Update Settings for This Machine] is set to “ON.”
  - This is displayed when the update file for auto update settings has been downloaded in MFP storage.

&lt;Procedure&gt;

- 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**

- To set a password used to decrypt the configuration file(s) of the machine.

## &lt;Procedure&gt;

- Enter the decryption password using the on-screen keyboard.

Setting item	Contents
Current Password	Enter the currently used decryption password (only when the decryption password has been set).
New Machine Update Password	Enter the new decryption password.
Confirm Machine Update Password	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 “[I.16.2.1 Auto Update setting](#)” for how to make the configuration file(s).

**12.5.3 HTTP Proxy Settings**

- 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.

Setting item	Default setting
ON	
OFF	○

## &lt;Procedure&gt;

- 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.

**12.6 Storage Management****12.6.1 Debug Log Encryption Settings**

- To set a password used to encrypt debug data when storing it into the HDD.
  - Default setting: 01234567890123456789

## &lt;Procedure&gt;

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.

## I SERVICE MODE

### 1. 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, document 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. Outline

### NOTE

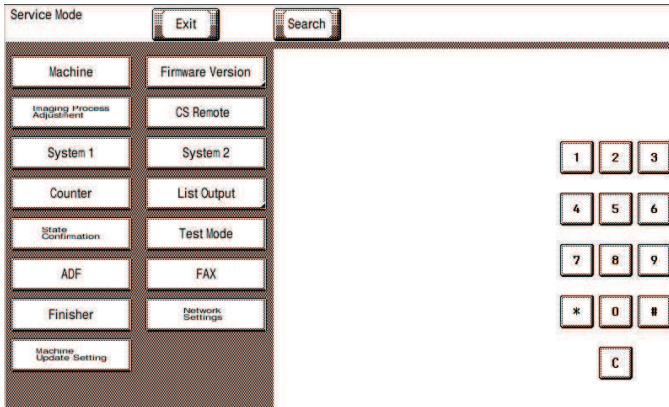
- Ensure appropriate security for Service Mode function setting procedures. They should NEVER be shown to any unauthorized person not involved with service jobs.

### Starting procedure

1. Touch [Utility] on the Home screen.
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] -> [Security] -> [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] -> [Security] -> [Security Details] -> [ProhibitFunctions] 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 [Utility] -> [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 [Enhanced Security] -> [CE Password].
- NEVER forget the CE password.

### 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.
2. Press the key for the item that you would like to change the setting for. Setting screens will appear for each item.
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. Wait 10 seconds or longer, then turn ON the main power switch again.

### 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.

### Exiting procedure

1. Call the initial screen of Service Mode.
2. Touch [Exit] on the Service Mode screen.
3. Turn OFF the main power switch. Wait 10 seconds or longer, then turn ON the main power switch again.

### 3. SETUP WIZARD

- 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.**

#### Starting procedure

1. Call the initial screen of Service Mode.
2. Press the following keys in this order.
  - Stop -> 3
3. Touch the [Prev.] key or [Next] key to select the mode.

e.g.

The screenshot shows the 'Setup Wizard' screen with the following elements:

- Page Header:** 'Setup Wizard' on the left, '1/5' in the center, and 'Prev.', 'Next', and 'Service' buttons on the right.
- Time Zone Setting:** A digital display shows '+00 : 00' with '-12:00 - +13:00' below it. Below the display are buttons for '-1hour', '-30Min.', '+30Min.', and '+1hour', along with an 'Entry' button.
- Date & Time Setting:** A digital display shows '2018 8 29 2 21' with 'Year Month Date Hour Min.' below it. An 'Entry' button is located below the display.
- Date/Time:** A digital display shows '2018 8 29 2 21 33' with 'Year Month Date Hour Min. Sec.' below it.
- Time Zone Options:** A grid of buttons for time zone offsets: '-08:00', '-06:00', '-05:00', '+00:00', '+01:00', '+08:00', and '+09:00'.
- Navigation:** A numeric keypad (1-9, \*, 0, #) and a 'C' (Clear) button are located on the right side of the screen.
- Apply:** An 'Apply' button is located at the bottom center of the screen.

#### 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.

### 4. Time Zone/Date & Time Input mode

- 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.

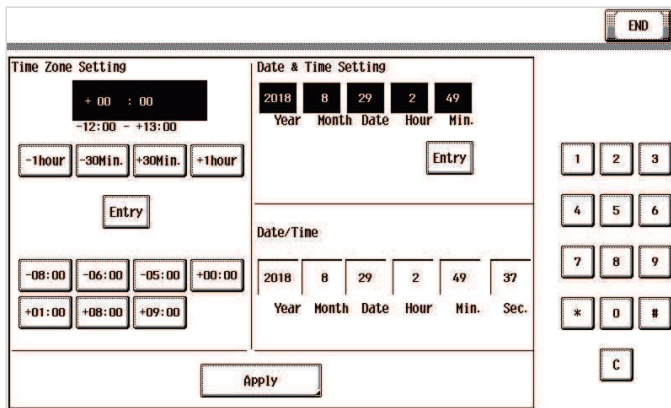
Time Zone Setting	Set the time zone applicable to the area. After the setting, touch [Entry] and then [Apply] to validate the time. The following lists settings of time zones of different areas. -08:00: U.S.: Pacific Standard Time -06:00: U.S.: Central Standard Time -05:00: U.S.: Eastern Standard Time -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].

<Procedure>

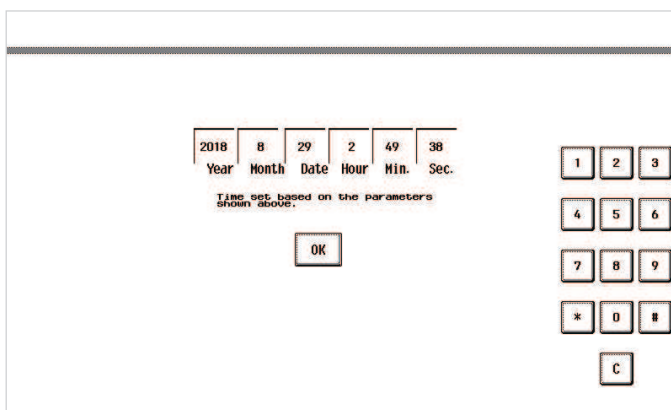
1. Call the initial screen of Service Mode.
2. Press the following keys in this order.
  - Stop -> 1 -> 1 -> 4 -> 4 -> Clear
3. Enter time zone year, month, day, hour, and minute, in that order, from 10-key pad.

**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. Search

- Searches parameters that include the entered keyword.
- You can display the function screen from the search results.

<Procedure>

1. Touch [Search] at the initial screen of Service Mode.



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.

## 6. Machine

### 6.1 Fusing Temperature

- 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.

Setting item	Setting range	Default setting
Plain paper	- 20 °C to +10°C (step: 5°C)	0°C
Plain paper+		
Thick paper		
Thick 1		
Thick 1+		
Thick 2		
Thick 2+		
Post.		
Enve.		
Recycled		
Glossy Paper 1		
Glossy Paper 1+		
Glossy Paper 2		
Letterhead		

<Procedure>

1. Select a setting item.
2. 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.
3. Touch [END].
4. Return to the basic screen.
5. Output two or three test patterns and check to see whether the image has any problem.
6. Make the adjustment for each type of paper.

### 6.2 Fusing Transport Speed

- 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.

Setting item	Supported paper	Setting range	Default setting
Full speed paper type	Plain paper, Plain paper+, Recycled paper, Letterhead	-2.0 to +2.0 (Step: 1)	0
Half speed paper type	Thick 1, Thick 1+, Thick 2, Thick 2+, Postcard, Envelope, Glossy Paper 1, Glossy Paper 1+, Glossy Paper 2, Labels		

<Procedure>

1. Select a processing speed for the mode where a brush effect or a blurred image occurred.
2. 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.
3. Touch [END].
4. Return to the basic screen.
5. Check the print image for any image problem.

### 6.3 Printer Area

#### 6.3.1 Leading Edge Adjustment

- To vary the print start position in the sub scan direction for each of different paper types. (to adjust the timing starting from the roller connection up to start of transfer output).
- 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 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 each paper type.

Target	Setting range	Supported paper	Default setting
4.2 ± 2.0 mm	-3.0 mm to +3.0 mm (in 0.2 mm increments)	Other than Enve.	0.0 mm
	-3.0 mm to +6.0 mm (in 0.2 mm increments)	Enve.	

<Procedure>

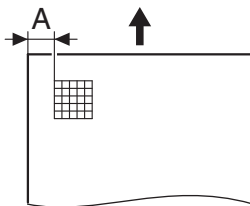
### 6.3.2 Printer Image Centering Side 1

- 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.

Target	Setting range	Default setting
4.2 ± 2.0 mm	-5.0 mm to +5.0 mm (in 0.2 mm increments)	0.0 mm

<Procedure>

1. Load paper to the paper source to be adjusted.
- NOTE**
- Use A4 or 8 1/2 x 11 plain paper for the manual bypass tray.
2. Select a test pattern.
  3. Select a paper source.
  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].

### 6.3.3 Leading Edge Adj. Side 2 (Duplex)

- 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 starting from the roller connection up to start of transfer output).
- 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 setting can be made independently for each paper type.

Target	Setting range	Default setting
4.2 ± 2.0 mm	-3.0 mm to +3.0 mm (in 0.2 mm increments)	0.0 mm

<Procedure>

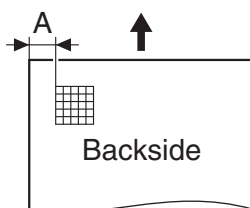
### 6.3.4 Prt. Image Center. Side 2 (Dup)

- 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.

Target	Setting range	Default setting
4.2 ± 2.0 mm	-3.0 mm to +3.0 mm (in 0.2 mm increments)	0.0 mm

<Procedure>

1. Load paper to the paper source to be adjusted.
- NOTE**
- Use A4 or 8 1/2 x 11 plain paper for the manual bypass tray.
2. Select a test pattern.
  3. Select a paper source.
  4. Press the Start key to let the machine produce a test pattern.
  5. Check the dimension of width A on the test pattern. For measurement, use the image produced on the backside of 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].

### 6.3.5 Paper Feed Direction Adj.

- 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 each paper type.

Check Item	Target	Setting range	Default setting
Width A: equivalent to one grid	5.4 ± 0.2 mm	-7 to +7	0
Width B: equivalent to 48 grids	270.9 ± 2.0 mm	-7 to +7	0

<Procedure>

### 6.3.6 Tray Printing Position: Tip

- 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.)
- Adjustment is made for plain paper.

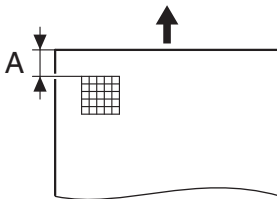
**NOTE**

- [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 does not fall in the setting range, the figure should be rounded to the minimum or maximum value.

Target	Setting range	Default setting
4.2 ± 2.0 mm	-3.0 mm to +3.0 mm (in 0.2 mm increments)	0.0 mm

<Procedure>

1. Set the targeted tray with plain paper, and select the feed tray.
2. Press the Start key to let the machine produce a test pattern.
3. Check the dimension of width A on the test pattern.



4. 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.
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 is outside the target, change the setting again and make a check again.
8. If width A falls within the target, touch [END].

### 6.4 Color Registration Adjustment

- 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 each paper type.

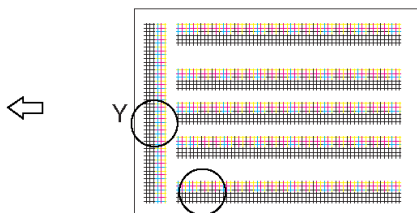
Setting item		Setting range	
Paper type	Color selection		
Plain Paper/Plain Paper+, Thick Paper	Cyan, Magenta, Yellow	X	-6 to +6 dot (step: 1 dot)
		Y	-6 to +6 dot (step: 1 dot)

<Procedure>

1. Load manual bypass tray with A4.
2. Press the Start key.
3. On the test pattern produced, check for deviation between the black line and the line of each color at positions X and Y.
4. Select the paper type and color to be adjusted.
5. 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, decrease the setting.
  - If the cross deviates in the direction of B, increase the setting.
6. Produce another test pattern and make sure that there is no deviation.

Check Procedure

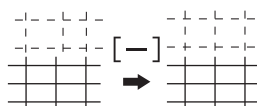
Check point X, Y



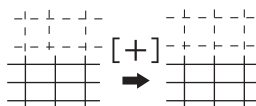
Adjustment for X direction:  
Check point X

If the cross deviates in the direction of A,  
decrease the setting.  
If the cross deviates in the direction of B,  
increase the setting.

Direction of A



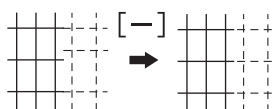
Direction of B



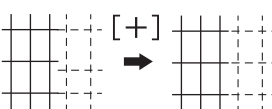
Adjustment for Y direction:  
Check point Y

If the cross deviates in the direction of A,  
decrease the setting.  
If the cross deviates in the direction of B,  
increase the setting.

Direction of A



Direction of B



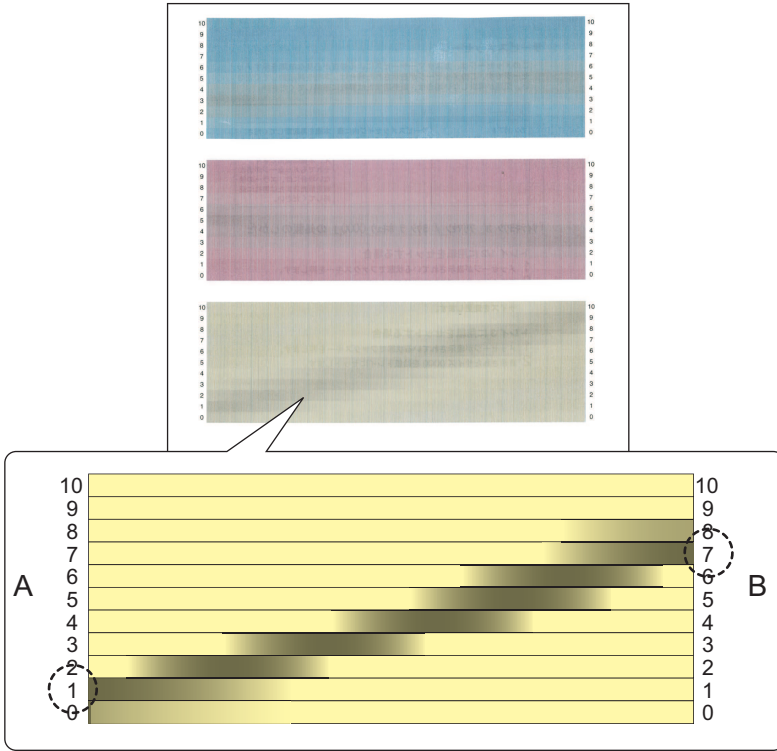
6.5 Main Scanning Direction Zoom

- To make the zoom adjustment in the main scanning direction.
- Use the function when the PH unit has been replaced with a new one.
- This adjustment is necessary when the adjustment value is cleared, such as when the backup board is replaced with a new one.

Target	Setting range	Default setting
Yellow	-42 to 42 (step: 1)	0
Magenta		
Cyan		

<Procedure>

1. Load manual bypass tray with A4 or 8 1/2 x 11 plain paper.
2. Touch [Start] key to let the machine produce a test pattern.



3. Using the produced test pattern, adjust so that the gray line on each color pattern extends in parallel with the main scanning direction. Follow the steps given below to calculate the setting value of each of cyan, magenta, and yellow:
  1. On the ends on side A and side B on each color pattern, identify the numeral at which the darkest gray line is located. (For the sample yellow pattern, the numerals are "1" on side A and "7" on side B.)
  2. The setting value is the numeral on side B subtracted from the numeral on side A. (For the sample yellow pattern, 1 - 7 = 6 and the setting value is "-6".)
4. Touch the key of the color to be adjusted.
5. Enter the setting value calculated in step 4 and touch [END].
6. Touch [Start] key, produce a test pattern again and check the result of the adjustment.
  - Specifications: The positions at which the darkest gray lines are located on the ends on side A and side B should fall within two steps.

### 6.6 LD adjustment

#### 6.6.1 LD Light Width Adjustment

- 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.

Setting range	Default setting
0 to +6 (Step: 1)	+6

<Procedure>

1. Enter the new setting from the [+] / [-] keys.
  - Increase the adjust value: Light-emitting time will be lengthened.
  - Decrease the value: Light-emitting time will be shortened.

### 6.7 Lead Edge Erase Adjustment

- 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 and Second Side.

Setting item	Setting value	Default setting
First Side/Second Side (*1)	4 mm	○
	5 mm	
	7 mm	

\*1: 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.

## 7. Imaging Process Adjustment

### 7.1 Stabilizer

- Use if an image problem persists even after gradation adjustment has been executed.

Mode	Item
Initialize+Image Stabilization	To carry out an image stabilization sequence after the historical data of image stabilization control has been initialized. 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.
Stabilization Only	The image stabilization sequence is carried out without clearing the historical data of image stabilization control. When [Max Image Density Adj] and [Image Background Adj] of Service Mode are changed.

<Procedure>

- Select an execution mode.
- Touch the Start key to start Stabilizer. The Start key turns orange and stays lit up orange during the Stabilizer sequence.
- Stabilizer is completed when the Start key turns blue.

### 7.2 Max Image Density Adj

- 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.

Setting item		Setting value	Default setting
Printer	Cyan, Magenta, Yellow, Black	-10 to +10 (Step: 1) • 1 step corresponds to 0.03 in density difference.	0

- \* The Copy key cannot be used.

<Procedure>

- Select a setting item.
- Enter the new setting from the 10-Key pad and [+/-] key.
  - To increase the maximum amount of toner sticking, increase the setting value.
  - To decrease the maximum amount of toner sticking, decrease the setting value.
- Touch [END].

#### NOTE

- If the setting value has been changed, be sure to perform [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only].

### 7.3 Image Background Adj

- To adjust the highlight portion (fog level) to the target reproduction level by making an auxiliary manual fine-adjustment of  $\gamma$  of each color after gradation adjust.
- Use when a foggy background occurs due to a printer problem.

Setting item	Setting value	Default setting
Cyan, Magenta, Yellow, Black	-5 to +5 (step: 1) • 1 step corresponds to 10V.	0

<Procedure>

- Select a setting item.
- 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.
- Touch [END].

#### NOTE

- If the setting value has been changed, be sure to perform [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only].

### 7.4 Paper Separation Adjustment

- 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 in hot and humid conditions.

Setting item	Setting value	Default setting
First Side/Second Side	-10 mm to +10 mm (step: 0.1 mm)	0.0 mm

<Procedure>

- Select a setting item.
- Enter the new setting from the [+] / [-] keys.
  - Priority on paper separation performance: Increase the setting value
  - Priority on image transfer performance: Decrease the setting value
- Touch [END] to validate the setting value.
- Check the print image for any image problem.

## 7.5 TCR Level Setting

- 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.

Setting item	Setting value	Default setting
Cyan, Magenta, Yellow, Black	-3 to +3 (Step: 1) <ul style="list-style-type: none"> <li>• 1 step is equivalent to 0.5%.</li> <li>• Center value 0 corresponds to T/C ratio: 6.5%</li> </ul>	0

<Procedure>

1. Select a setting item.
2. 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.
3. Touch [END] to validate the adjustment value.
4. Open and close the front door.
5. Check the print image for any image problem.

## 7.6 Transfer Voltage Fine Adj

### 7.6.1 Primary transfer adj.

- Adjust the output value for the 1st image transfer voltage.
- To use when white spots appeared.

Color selection	Setting range	Default setting
Black	-8 to +7 (step: 1) <ul style="list-style-type: none"> <li>• 1 step is equivalent to 1<math>\mu</math>A.</li> </ul>	0

<Procedure>

1. Select [Service Mode] -> [Test Mode] -> [Halftone Pattern] to output the test pattern.
2. When the test pattern image has white spots, adjust with the following procedure.
3. Select [Service Mode] -> [Imaging Process Adjustment] -> [Transfer Voltage Fine Adj] -> [Primary transfer adj.].
4. Enter the new setting from the [+] / [-] keys.
  - 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.
5. Touch [END] to validate the setting value.
  - Gradually increase the setting value to the acceptable white spots level while checking the test pattern.

#### NOTE

- Photoconductor 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 test chart when adjusting.

### 7.6.2 2nd Transfer Adj.

- 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.
- Setting current control to [ON] 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.

Image side	Setting item	Setting value	Default setting	
First Side	Current control	ON	○	
		OFF		
	Paper Type	Plain - Color, Normal Paper - Black, Plain paper+ - color, Plain paper+ - black, Thick1 - Color, Thick Paper1 - Black, Thick1+ - Color, Thick1+ - Black, Thick2 - Color, Thick2 - Black, Glossy Paper1 - Color, Glossy Paper1 - Black, Glossy Paper1+ - Color, Glossy Paper1+ - Black, Glossy Paper2 - Color, Glossy Paper2 - Black, Postcard - Color, Postcard - Black, Envelope - Color, Envelope - Black, Labels - Color, Labels - Black, Recycled Paper - Color, Recycled Paper - Black, Special Paper - Color, Special Paper - Black, Colored Paper - Color, Colored Paper - Black, Single Side Only - Color, Single Side Only - Black, Letterhead - Color, Letterhead - Black	-8 to +7 (Step: 1) 1 step is equivalent to 100 V.	0
Second Side	Current control	ON	○	
		OFF		
	Paper Type	Plain - Color, Normal Paper - Black, Plain paper+ - color, Plain paper+ - black, Thick1 - Color, Thick1 - Black, Thick1+ - Color, Thick1+ - Black, Thick2 - Color, Thick2 - Black, Recycled Paper - Color, Recycled Paper - Black, Special Paper - Color, Special Paper - Black, Colored Paper - Color, Colored Paper - Black	-8 to +7 (Step: 1) 1 step is equivalent to 100 V.	0

## &lt;Procedure&gt;

1. Select [2nd Transfer Adj].
2. Select the Image side paper type with the transfer failure.
3. Enter the new setting from the [+] / [-] keys. To automatically control the 2nd image transfer output without using the 2nd image transfer voltage fine adj value, press [Auto].
  - 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.
4. Touch [END] to validate the setting value.
5. Check the print image for any image problem.

**7.7 Charging voltage adjustment**

- The heat dissipating effect inside the unit is reduced due to the effects of low atmospheric pressure in locations of high altitude. For this reason, since the temperature of parts and units is increased, make a charging voltage adjustment to lower the ambient temperature.
- Change the setting in accordance with your altitude.

Setting	Altitude	Default setting
0	0	0
1	500	
2	1000	
3	1500	
4	2000	
5	2500	
6	3000	
7	3500	
8	4000	
9	4500	
10	5000	

**7.8 Thick Paper Density Adjustment**

- To fine-adjust density of printed images for thick paper.
- To change the density of the printed image for each color with thick paper.

Setting item		Setting Value	Default setting
Paper Type	Setting color		
Thick paper	Cyan, Magenta, Yellow, Black	-5 to +5 (step: 1)	0

## &lt;Procedure&gt;

1. Select a setting item.
2. Touch the Lighter or Darker key to correct the image density.
  - Light color: Touch the Darker key.
  - Dark color: Touch the Lighter key.
3. Touch [END] to validate the setting value.

**7.9 Grad/Dev AC Bias V Selection**

- 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 fine white spots occur on the entire image in the environment of low atmospheric pressure, such as a highland.
- Also used when void areas occur on a yellow halftone pattern image or a solid pattern image.

Setting value	Default setting
ON	
OFF	○

**7.10 Manual Toner Add****Manual Toner Add**

- 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.

## &lt;Procedure&gt;

1. Touch [Manual Toner Add].
2. Select the color, for which supply of toner is to be replenished.
3. 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. Then a developer agitation sequence are run.
4. 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.

## 8. CS Remote

### 8.1 Remote Care

#### 8.1.1 Outline

- 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

#### 8.1.2 Setting up

- Setup procedures for using CS Remote Care are shown below.
- Settings differ by each type of system used on CS Remote Care, and should be made according to the procedures.
  - System type: Telephone line, Fax line, E-mail (Bilateral communication), E-mail (Unilateral communication), http (Bilateral communication), http (Unilateral communication)

#### 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.
- 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] -> [Network] -> [WebDAV Settings] -> [Proxy Setting for Remote Access].

#### NOTICE

- CS Remote Care can be set also from Web Connection.
- Enter the following address, then enter the CE password and touch [OK].
  - [http://\(IP address\)/csrc\\_index.html](http://(IP address)/csrc_index.html)

#### Setting procedure

1. 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. Connect or disconnect the telephone line modem depending on which system is to be used.
  - For telephone line: 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. For connecting the modular cable, see the manual for the modem.
  - For fax line, E-mail (Bilateral/Unilateral communication), http (Bilateral/Unilateral communication): Disconnect the telephone line modem.
3. Touch [Maintenance /Default Settings] -> [ID Code] to input the seven digits ID of the service person. If the ID of the service person is already registered, it will be displayed.
4. Touch [Maintenance/Default Settings] -> [System Setting] to select the system to be used on CS Remote Care.
  - For telephone line: Select [Modem].
  - For fax line: Select [Fax].
  - For E-mail (Bilateral communication): Select [E-Mail1].
  - For E-mail (Unilateral communication): Select [E-Mail2].
  - For http (Bilateral communication): Select [http1].
  - For http (Unilateral communication): Select [http2].
5. Touch [Maintenance/Default Settings] -> [Detail Setting].
6. Touch [Date&Time Setting] to set the date and time for CS Remote Care.
7. Set the center ID, and confirm the Device ID.
  - For telephone line, fax line, http (Bilateral/Unilateral communication): Select [Basic Setting] -> [Center/Device ID].
  - For E-mail (Bilateral/Unilateral communication): Select [Basic Setting] -> [Center Setting].

#### NOTE

- [Device ID] displays the serial number that is entered in [Service Mode] -> [System 1] -> [Serial Number].

8. Set the center telephone number and device telephone number.
  - For telephone line, fax line: Select [Basic Setting].
9. Input the AT command for initializing the modem.
  - For telephone line: Select [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.**

10. Set the center E-mail address.
  - For E-mail (Bilateral/Unilateral communication): Select [Basic Setting] -> [Center Setting] -> [E-Mail Address].
11. Make encryption setting (select either Yes or No).
  - For E-mail (Bilateral/Unilateral communication): Select [Basic Setting] -> [Center Setting] -> [Encryption].
  - For http (Bilateral/Unilateral communication): Select [Basic Setting] -> [Client Settings] -> [Encryption].
12. Set the schedule and items of notification to the center.
  - For E-mail (Unilateral communication): Select [Basic Setting] -> [Schedule] / [Center Notifi. Item].
  - For http (Unilateral communication): Select [Notification Setting] -> [Schedule] / [Center Notifi. Item].
13. Set the timeout until the response arrives from the center during e-mail communication.
  - For E-mail (Bilateral/Unilateral communication): Select [Response Time Out].

#### NOTE

- **Under normal conditions, there is no need to change the default setting.**

14. To make Heart Beat related settings.
  - For http (Bilateral communication): Select [Basic Setting] -> [Heart Beat].

**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.**

15. To set the polling time in http communication.

- For http (Bilateral communication): Select [Basic Setting] -> [Polling Interval].

16. Touch [Software Switch Setting] to make software SW setting for CS Remote Care.

**NOTE**

- **This setting is not normally necessary. Take this step only when necessary in a specific connecting condition.**

17. Touch [END].

18. Touch [Maintenance/Default Settings] -> [Server Setting] to make server settings.

- For E-mail (Bilateral/Unilateral communication): Select [Server for RX] / [Receive] / [Send].
- For http (Bilateral/Unilateral communication): Select [HTTP Server Settings] / [SSL Settings].

19. Touch [Maintenance/Default Settings] -> [Detail Setting] -> [Basic Setting] -> [Initial Transmission].

20. 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 all of the following items have been input.**

- For telephone line, fax line: Center ID, Device ID, Center Telephone Number, Device Telephone Number

- For E-mail (Bilateral/Unilateral communication): Center ID, Device ID, E-Mail Address

- For http (Bilateral/Unilateral communication): Center ID, Device ID, URL Address

- **However, if an invalid value is input as the device ID, the initial transmission key is not displayed.**

21. 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.

22. For E-mail (Bilateral/Unilateral communication): 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].**

**8.1.3 Setup confirmation**

- Follow the steps below to make sure that CS Remote Care has been properly set up.

<Procedure>

1. Touch [CS Remote Care].
2. Check to make sure that only selected item is displayed.

**8.1.4 Calling the maintenance**

- 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.**

**When starting the maintenance**

1. Touch [CS Remote Care].
2. Touch [Maintenance Start].
3. Input the ID code using the 10-key pad.
4. 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].
5. 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.**

**When finishing the maintenance**

1. Touch [CS Remote Care].
2. Touch [Maintenance Complete].

**8.1.5 Calling the center from the administrator**

- 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.**

<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.**



### 8.1.6 Checking the transmission log

- The transmission log list will be output to be checked.

<Procedure>

- Touch [CS Remove Care] -> [Maintenance/Default Settings] -> [Detail Setting].
- Touch [Communication Log Print].
- Load tray 1 or bypass tray with A4S paper.
- Press the Start key to output transmission log.

### 8.1.7 Maintenance/Default Settings

#### (1) System Selection

- To select the system type for remote diagnosis.
- Use to newly build or change the system.

Setting value	Contents	Default setting
E-Mail1	Use E-mail Bilateral communication.	<input type="radio"/>
E-Mail2	Use E-mail Unilateral communication.	
http1	Use http Bilateral communication.	
http2	Use http Unilateral communication.	
Modem	Use modem communication	
Fax	Use fax communication Fax is available only when the optional fax kit is being installed.	

#### (2) ID Code

To register the service ID.

<Procedure>

- Touch [ID code] and enter the service ID.
  - Enter a 7-digit code from the 10-key pad. (0000001 to 9999999)
- Touch [ID code] to register the ID.
- The [Detail Setting] will appear when the ID has been registered.

#### (3) Detail Setting

##### (a) Basic Settings

- Execute the primary setting.
- Use to register the machine to the CS Remote Care center.

##### Center Setting

- It will be displayed when "E-Mail1" or "E-Mail2" is selected in System Setting.

Setting item	Contents	Setting value	Default setting
Center ID	Set the center ID. When all setup procedures are completed, the center ID is displayed.	5-digit alphanumeric characters	00000
Device ID	Display the device ID. It can only be displayed but not be changed.	13-digit alphanumeric characters	-
E-mail Address	Set the center E-mail address. When all setup procedures are completed, the center E-mail address is displayed.	Alphanumeric characters and symbols (up to 129 characters)	-
Encryption	Set whether or not to encrypt E-mail. When all setup procedures are completed, the details of setting is displayed.	Yes	
		No	<input type="radio"/>

##### Schedule

- It will be displayed when or "E-Mail2" is selected in System Setting.
- To set the schedule of notification to the center.
- Up to three different notification schedules can be registered.

<Procedure>

- 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

- It will be displayed when or "E-Mail2" is selected in System Setting.
- To set whether or not to report to the Center.
- To report to the center, select the notification item to the center.

Setting item	Contents
No Notification	Select it to disable the report to the center.
[1]	Sales count data

Setting item	Contents
[2]	Error count data
[3]	Service count data
[4]	Life count data, Life cycle data
[5]	CSRC-System data, Device config data
[6]	History data
[7]	EKC data
[8]	Adjustment data
[9]	Coverage data
[10]	Not used
[11]	Not used
[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.

**Center/Device ID**

- It will be displayed when or "http1," "http2," "Modem" or "Fax" is selected in System Setting.

Setting item	Contents	Setting value	Default setting
Center ID	Set the center ID. When all setup procedures are completed, the center ID is displayed.	5-digit alphanumeric characters	00000
Device ID	Display the device ID. It can only be displayed but not be changed.	13-digit alphanumeric characters	-

**Client Settings**

- It will be displayed when "http1" or "http2" is selected in System Setting.
- To set whether or not to encrypt communication.
- When all setup procedures are completed, the details of setting is displayed.

Setting value	Default setting
Yes	<input type="radio"/>
No	

**Heart Beat**

- It will be displayed when "http1" is selected in System Setting.
- 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.

Setting item	Contents	Setting value	Default setting
Communication	To set whether or not to enable Heart Beat communication.	Yes	<input type="radio"/>
		No	
Comm. Interval	Set the communication interval to enable Heart Beat communication.	1 to 256 (minutes)	30 (minutes)
Specified Transmission	To set whether or not to enable Heart Beat transmission at a specified interval.	Yes	<input type="radio"/>
		No	

**Polling Interval**

- It will be displayed when "http1" is selected in System Setting.
- To set the polling time in http communication.

Setting range	Default setting
1 to 256 (minutes)	5 (minutes)

**Center Telephone Number, Device Telephone Number**

- It will be displayed when "Modem" or "Fax" is selected in System Setting.
- Set the telephone number of the Center.
- Set the telephone number of the Device.

**NOTE**

- When entering the telephone number, 10-key and keys on the screen have following meanings.

Keys	Contents
[_] Pause	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

**Initial Transmission**

- Touching the Initial Transmission key will sent the information to the CS Remote Care center to register the machine.

**(b) Date & Time Setting**

- To set the data and time-of-day.

<Procedure>

1. Touch [Date & Time Setting].
2. Enter the date (month, day and year), time-of-day, and the time zone from the 10-key pad.
3. Touch [SET] to start the clock.

**(c) RAM Clear**

- 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.**

Setting value	Default setting
Set	
Unset	○

**(d) Communication Log Print**

- To print out the communication log.
- It will be displayed when “Fax” is selected in System Setting.

<Procedure>

1. Touch [Communication Log Print].
2. Load a paper tray with A4S/A4 or 81/2 x 11S/81/2 x 11 paper.
3. Select [1-Sided] or [2-Sided].
4. Press Start key to print out the communication log.

**(e) Software Switch Setting**

- To change the CS Remote Care settings.

**NOTE**

- **Software SW bits data are written into the MFP storage 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.**

<Procedure>

1. Touch [Software Switch Setting].
2. Touch [Switch No.], and input the software switch number (two digits) using the 10-key pad.
3. Touch [Bit Assignment], and select software 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.)
  - Refer to “Software SW setting for CS Remote Care” for the setting items.
4. Touch [Fix].

**(f) Response Time Out**

- Set the timeout until the response arrives from the center during e-mail communication.
- This setting is available only when “E-Mail1” or “E-Mail2” is selected in [System Setting].

Setting range	Default setting
10 to 1440	60 minutes

**(g) AT Command**

- To set the command to be issued at the time of modem initialization.
  - Enter the command and touch [SET] to register.
- This setting is available only when [Modem] is selected in [System Setting].

**(h) Notification Setting**

- 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].

**Schedule**

- Set the schedule of notification to the center.
- Up to three different notification schedules can be registered.

<Procedure>

1. Select the key of the registration number, and then touch [Enable].
2. 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.
3. Touch [SET] to register the schedule.

**Center Notifi. Item**

- To set whether or not to notify the Center.

- To notify the Center, select the notification item to the Center.

Setting item	Contents
No Notification	Select it to disable the report to the center.
[1]	Sales count data
[2]	Error count data
[3]	Service count data
[4]	Life count data, Life cycle data
[5]	CSRC-System data, Device config data
[6]	History data
[7]	EKC data
[8]	Adjustment data
[9]	Coverage data
[10]	Not used
[11]	Not used
[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.

**8.1.8 Server Setting****(1) E-Mail1 or E-mail2 is selected****Server for RX**

Setting item	Contents	Setting value	Default setting
POP3 Server	To set the POP3 server address used for the CS Remote Care. It can be set by the IP address or the domain name. <ul style="list-style-type: none"> <li>Input IP Address: Input in version 4 format.</li> <li>FQDN input: Enter the domain name.</li> </ul>	Input IP Address [0 to 255].[0 to 255]. [0 to 255].[0 to 255]	-
		FQDN input Alphanumeric characters and symbols (up to 63 characters)	-
POP3 Login Name	To set the login name for the POP3 server used for the CS Remote Care.	Alphanumeric characters and symbols (up to 64 characters)	-
POP3 password	To set the logon password for the POP3 server used for the CS Remote Care.	Alphanumeric characters and symbols (up to 15 characters)	-
POP3 Port Number	To set the POP3 port number used for the CS Remote Care.	1 to 65535	110

**Receive**

Setting item	Contents	Setting value	Default setting
E-Mail Address	To set the e-mail address used for the CS Remote Care.	Alphanumeric characters and symbols (up to 129 characters)	-
Mail Check	To set whether or not to use mail check and the time interval for the POP server used for the CS Remote Care.	No	<input type="radio"/>
		1 to 120 min	
Connection Time-out	To set the timeout period for connection during reception.	30 to 300 Sec	60 Sec
APOP Authentication	To set whether or not to authenticate the APOP during reception.	Yes	
		No	<input type="radio"/>

**Send**

Setting item	Contents	Setting value	Default setting
SMTP Server	To set the SMTP sever address for transmission used for the CS Remote Care. It can be set by the IP address or the domain name. <ul style="list-style-type: none"> <li>Input IP Address: Input in version 4 format.</li> <li>FQDN input: Enter the domain name.</li> </ul>	Input IP Address [0 to 255].[0 to 255]. [0 to 255].[0 to 255]	-
		FQDN input Alphanumeric characters and symbols (up to 63 characters)	-
SMTP port Number	To set the SMTP port number for transmission used for the CS Remote Care.	1 to 65535	25

Setting item	Contents	Setting value	Default setting
Connection Time-out	To set the timeout period for transmission.	30 to 300 Sec	60 Sec
Authentication Setting	To set whether or not to authenticate during transmission via SMTP server. To use when authenticating during transmission.	OFF	○
		POP Before SMTP	
		SMTP Authentication	

## &lt;Making Authentication Setting&gt;

- If "POP Before SMTP" is set in "Authentication Setting", set the time for POP Before SMTP.

Setting range	Default setting
0 to "60 Sec"	60 Sec

- If "SMTP Authentication" is set in "Authentication Setting", touch the "Setting Check" key for authentication.

Setting item	Contents	Setting value
User ID	Enter the user ID for SMTP authentication.	Alphanumeric characters and symbols (up to 255 characters)
Password	Enter the password for SMTP authentication.	Alphanumeric characters and symbols (up to 128 characters)
Domain Name	Enter the domain name for SMTP authentication.	Alphanumeric characters and symbols (up to 253 characters)

**TX/RX Test**

- To determine the correct transmission and reception using CS Remote Care.

## &lt;Procedure&gt;

- Press the Start key to let the machine start the transmission and reception test.
- The test procedure and result will be displayed on the screen.

**Data Initialization**

- To initialize the contents for the sever setting.

Setting value	Default setting
Yes	
No	○

**(2) http1 or http2 is selected****HTTP Server Settings**

Setting item	Contents	Setting value	Default setting
URL	To set an address of the http server that is used in CS Remote Care. It can be set by the IP address or the domain name. <ul style="list-style-type: none"> <li>Input IP Address: Input in version 4 format.</li> <li>FQDN input: Enter the domain name.</li> </ul>	Input IP Address [0 to 255].[0 to 255].[0 to 255].[0 to 255]	-
		FQDN input Alphanumeric characters and symbols (up to 253 characters)	-
account	To set an account that is used to access the http server used in CS Remote Care.	Alphanumeric characters and symbols (up to 63 characters)	-
Password	To set a password that is used to access the http server used in CS Remote Care.	Alphanumeric characters and symbols (up to 63 characters)	-
Port Number	To set a port number that is used to access the http server used in CS Remote Care.	1 to 65535	80

**SSL Settings**

- To make SSL settings of the http server at the other end that is used in CS Remote Care.

Setting value	Contents	Default setting
Yes	To set to use SSL communication.	
No	To set not to use SSL communication.	○

**Data Initialization**

- To initialize the contents for the sever setting.

Setting value	Default setting
Yes	
No	○

### 8.1.9 Product Auth. Settings

#### Product Authentication

- 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.

Setting value	Default setting
Yes	
No	<input type="radio"/>

#### WebDAV

- To set a WebDAV server for the product authentication.

Setting item	Contents
URL	Set the address of the WebDAV server.
account	To set an account that is 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.

#### Register Manually

- To install the certificate to be used in product authentication.

<Procedure (LMS)>

- Touch [Register Manually] -> [LMS].
- Touch [Start] to communicate with LMS (License Management System) and install the certificate.
- Check that the "Install OK" message appears.

<Procedure (USB)>

#### NOTE

- In the following conditions, installation of the certificate from a USB memory is prohibited.
  - [Administrator] -> [Security] -> [USB Connection Permission setting] is set to [Restrict].
  - [Administrator] -> [Security] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory(Service)] is set to [Restrict].
  - [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "ON".
- Connect the USB flash drive where the certificate obtained from LMS (License Management System) is stored to the USB port of MFP.
- Touch [Register Manually] -> [USB].
- Touch [Start] to install the certificate.
- Check that the "Install OK" message appears.

### 8.1.10 Import/Export Settings

#### WebDAV Setting

- To configure WebDAV server settings used to remotely export or import MFP data (address book data, authentication setting data).

Setting item	Contents
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	Set the password that is used to access the WebDAV server.

#### Port Number

- To set a port number that is used to access the WebDAV server.
  - Enter the port number using the 10-key pad.

#### SSL Settings

- To configure the WebDAV server's SSL settings.

Setting value	Default setting
Yes	
No	<input type="radio"/>

#### Data Initialization

- To initialize the settings on the server.

Setting value	Default setting
Yes	
No	<input type="radio"/>

### 8.1.11 Auto Initial Dial Setting

- 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.

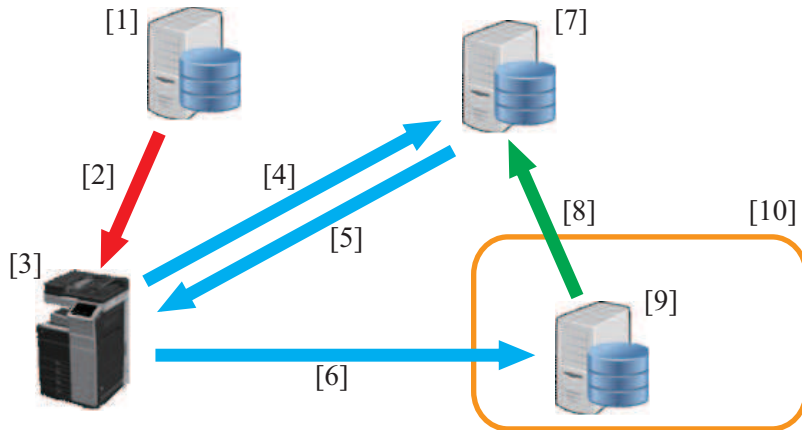
- At the first time that the main power is turned ON (reboot) after importing the CSRC server information under [Service Mode] -> [Machine Update Settings] -> [Machine Auto Update Setting] -> [Machine Import Setting].

Setting value	Default setting
Set	
Unset	○

## 8.2 Remote Analysis

### 8.2.1 Outline

- CSRA (CS Remote Analysis) is a system which analyzes the data retrieved from the MFP for parts replacement prediction, and trouble diagnosis/prediction.
- Make settings to have the MFP send CSRA analysis data.



[1]	Command server	[2]	Conducting CSRA settings/setting change remotely
[3]	MFP	[4]	Request for notification of data destination information
[5]	Notification of data destination information	[6]	Sending analysis data
[7]	Pre-check server	[8]	Sending load condition of data destination server
[9]	Data destination server	[10]	CSRA

#### <Conducting CSRA settings>

- The command server notifies the MFP of information related to pre-check server settings and schedule, and conducts CSRA settings remotely. Alternately, inputs setting details through the control panel.
- Connection with the pre-check server is checked from [Function Setting] -> [Check Connection].

#### <Communication flow of analysis data>

- Following the set schedule, the MFP request the notification of the data destination server information from the pre-check server.
- The pre-check server checks the data destination server condition, then notifies the MFP of the data destination server, storage location and data sending timing.
- According to the information notified from the pre-check server, the MFP sends the analysis data to the data destination server.

### 8.2.2 Function Setting

#### Function Setting

- To set whether to enable or disable CSRA connection functions.
- Each setting such as Server Settings will be valid by setting this to "ON."

Setting value	Contents	Default setting
ON	To enable CSRA connection functions.	
Disable	To disable CSRA connection functions.	○

#### Server Settings

- To make settings for the pre-check server.

Setting item	Contents	Setting value	Default setting
URL	To set the address of the server.	Input IP Address • IPv4 format	-
		FQDN input • Alphanumeric characters and symbols (up to 253 characters)	-
account	To set an account that is used to access the server.	Alphanumeric characters and symbols (up to 63 characters)	-
Password	To set the password that is used to access the server.	Alphanumeric characters and symbols (up to 63 characters)	-
Port Number	To set the port number.	1 to 65535	80

**Company Code**

Setting item	Contents	Setting range	Default setting
Company Code	To set the company code.	001 - 999	-

**Check Connection**

- To check the connection with the pre-check server.
- To display the connection server.
- To notify of communication status during connecting.
- To notify of details when an error occurs.

**8.2.3 Send****Upd. Schedule**

- To set whether or not to permit overwriting from server.

Setting item	Setting value	Default setting
Overwrite from Server	Permit	<input type="radio"/>
	Prohibit	

**Schedule Set.**

- To set the frequency of data sending.

Setting item	Setting value	Default setting
Day Frequency	1 - 6	1
Select Day of the Week	Sun, Mon, Tue, Wed, Thu, Fri, Sat	Sun
Select Day	1 - 28	1

**Time Setting**

- To set the time of data sending.

Setting item	Setting value	Default setting		
Time Zone	00:00 - 03:59	Permit		
		Prohibit	<input type="radio"/>	
	04:00 - 07:59	Permit		
		Prohibit	<input type="radio"/>	
	08:00 - 11:59	Permit	<input type="radio"/>	
		Prohibit		
	12:00 - 15:59	Permit	<input type="radio"/>	
		Prohibit		
	16:00 - 19:59	Permit	<input type="radio"/>	
		Prohibit		
	20:00 - 23:59	Permit		
		Prohibit	<input type="radio"/>	
	Time	Time	00 - 23	00
		Minute	00 - 59	00

**Timeout Settings**

Setting item	Contents	Setting range	Default setting
Timeout Settings	To set the timeout of data sending.	5 - 120 Sec.	30 Sec.

**8.2.4 History Output**

- To output the CSRA communication history in the CSV file format into an external memory.
  - Communication history with pre-check server
  - Communication history with destination WebDAV server

**NOTE**

- In the following conditions, export of MFP setting data is prohibited.
  - [Administrator] -> [Security] -> [USB Connection Permission setting] is set to [Restrict].
  - [Administrator] -> [Security] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory(Service)] is set to [Restrict].
  - [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "ON".

<Procedure>

1. Insert the USB memory to the MFP.
2. Touch [USB save] in "CSV Output" to start forwarding data to the USB memory.
3. Confirm that "OK" is displayed as the result of data saving.

**8.2.5 CS Remote Analysis Error Code List**

Error code	Contents	Solution
0000	Communication finished normally (both TX and RX)	-



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. <ul style="list-style-type: none"> <li>• Authentication setting for address of the destination where the server is connected</li> <li>• Location indicated for a folder</li> <li>• Connection ID</li> <li>• Password</li> </ul>
1030	Machine ID mismatching <ul style="list-style-type: none"> <li>• Received file which tells that machine ID mismatches.</li> </ul>	<ul style="list-style-type: none"> <li>• Check the machine ID setting.</li> <li>• Check the machine ID setting on host side.</li> </ul>
1050	Grammar error <ul style="list-style-type: none"> <li>• Received file did not define the CS Remote Care command (2 digits).</li> <li>• The Type of Subject and the command of file are not consistent.</li> </ul>	Check file content.
1061	Modifying not allowed <ul style="list-style-type: none"> <li>• The host sent a command file that asked modifying data of item where setting change is not allowed.</li> </ul>	Ask the host to send another instruction file for modifying.
1062	Modifying not available due to the copy job currently performing <ul style="list-style-type: none"> <li>• When informing the host that it cannot be modified due to the copy job currently performing.</li> </ul>	Ask the host to send another instruction file for modifying.
1080	Data length problem <ul style="list-style-type: none"> <li>• LEN value of TEXT data and actual data length are not consistent.</li> </ul>	Ask the host to send another instruction file for modifying.
1081	Frame No. error <ul style="list-style-type: none"> <li>• The last frame has not been received.</li> <li>• There are missing frame No.</li> </ul>	Check the status of the machine registration on host side.
1082	Subject Type problem <ul style="list-style-type: none"> <li>• Received code did not define the Type of Subject.</li> </ul>	Ask the host to send another instruction file for modifying.
1084	Date expired <ul style="list-style-type: none"> <li>• Expiration date for data modification command has passed.</li> </ul>	Ask the host to send another instruction file for modifying.
1091	Oversized command <ul style="list-style-type: none"> <li>• Received file exceeds the machine's receive buffer size.</li> </ul>	Ask the host to send another instruction file for modifying.
1099	Illegal request <ul style="list-style-type: none"> <li>• Status not predicted in design is detected.</li> </ul>	Contact KM and inform the error code.
2001	http request result problem <ul style="list-style-type: none"> <li>• Internal status error</li> </ul>	Check the user's http server system settings. <ul style="list-style-type: none"> <li>• Authentication setting for address of the destination where the server is connected</li> <li>• Location indicated for a folder</li> <li>• Connection ID</li> <li>• Password</li> </ul>
2002	http request result problem <ul style="list-style-type: none"> <li>• File list acquisition result problem</li> </ul>	
2003	http request result problem <ul style="list-style-type: none"> <li>• Request header transmission failure</li> </ul>	
2004	http request result problem <ul style="list-style-type: none"> <li>• Request body transmission failure</li> </ul>	
2005	http request result problem <ul style="list-style-type: none"> <li>• Response header receive response failure</li> </ul>	
2006	http request result problem <ul style="list-style-type: none"> <li>• Response body receive response failure</li> </ul>	
2007	http request result problem <ul style="list-style-type: none"> <li>• Session ID inconsistent</li> </ul>	
3002	http request result problem <ul style="list-style-type: none"> <li>• Unopened client ID was specified</li> </ul>	
3003	http request result problem <ul style="list-style-type: none"> <li>• Receive time out occurred</li> </ul>	Check the user's http server system settings. <ul style="list-style-type: none"> <li>• Authentication setting for address of the destination where the server is connected</li> <li>• Location indicated for a folder</li> <li>• Connection ID</li> <li>• Password</li> </ul>
3004	http request result problem <ul style="list-style-type: none"> <li>• Receive error occurred. Or wrong request URL was specified.</li> </ul>	
3005	http request result problem <ul style="list-style-type: none"> <li>• Content-Length or receive size exceeded the specified max. transfer size. Message body size was too large.</li> </ul>	
3006	http request result problem <ul style="list-style-type: none"> <li>• Due to reset, process was stopped. Or message body size exceeded the specified max. transfer size.</li> </ul>	
3007	http request result problem <ul style="list-style-type: none"> <li>• Internal error occurred. Or due to internal reset, process was stopped.</li> </ul>	
3008	http request result problem <ul style="list-style-type: none"> <li>• Connection to WebDAV server failed.</li> </ul>	
3009	http request result problem <ul style="list-style-type: none"> <li>• Error occurred during transmission to the WebDAV server.</li> </ul>	
3010	http request result problem <ul style="list-style-type: none"> <li>• Time out occurred during transmission to the WebDAV server.</li> </ul>	

Error code	Contents	Solution
3011	http request result problem <ul style="list-style-type: none"> <li>• Connection to the proxy server failed.</li> </ul>	
3012	http request result problem <ul style="list-style-type: none"> <li>• The proxy server refused CONNECT request.</li> </ul>	
3013	http request result problem <ul style="list-style-type: none"> <li>• The proxy server was set to enabled, but the proxy server host was not set.</li> </ul>	
3014	http request result problem <ul style="list-style-type: none"> <li>• Proxy server authentication failed.</li> </ul>	
3015	http request result problem <ul style="list-style-type: none"> <li>• Other error was returned from the proxy server.</li> </ul>	
3016	http request result problem <ul style="list-style-type: none"> <li>• Internal error occurred.</li> </ul>	
3017	http request result problem <ul style="list-style-type: none"> <li>• As the device application specified MIO_REQBODY_ERROR, process was stopped.</li> </ul>	
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.
5###	MIO detects error when sending an attached file.	Check the SMTP server and POP3 server on user side.
6###	MIO detects error during a sending sequence.	Check the SMTP server and POP3 server on user side.
7000	Failure occurs when a certificate for product authentication is acquired from a USB device.	Acquire a new certificate (within 6 days after the issue).

## 9. System 1

### 9.1 Marketing Area

- To make the various settings (language, paper size, fixed zoom ratios, etc.) according to the applicable marketing area.
- Upon setup.

#### Marketing Area

- Set the applicable marketing area.

Setting item
Japan, US, Europe, Others1, Others2, Others3, Others4, Others5

<Procedure>

- Select the applicable marketing area.
- Touch [END].

#### Wireless LAN Destination

- Set the wireless LAN destination.

#### NOTE

- This setting is available only when optional wireless LAN devices are mounted.**

Setting item
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

<Procedure>

- Touch the [Wireless LAN Destination].
- Select the applicable marketing area using [+] / [-] key.
- Touch [decision].

#### Fax Target

- Set the applicable fax destination.

Setting item
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

<Procedure>

- Touch the [Fax Target].
- Select the applicable marketing area using [+] / [-] key.
- Touch [END].

#### 9.1.1 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	Japan	US	Europe	Others1	Others2	Others3	Others4	Others5
Setting item								
Language Selection (Default)	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 Spanish Japanese Traditional Chinese Hangul	Traditional Chinese English French Italian German Spanish Japanese Simplified Chinese Chinese Hangul	English French Italian German Spanish Simplified Chinese Traditional Chinese Hangul
Foolscap Size Setting	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
Unit	Metric	Inch	Metric	Metric	Metric	Metric	Metric	Metric
Total counter mode	Mode1	Mode2	Mode2	Mode2	Mode2	Mode2	Mode2	Mode2
Size counter	No count	8 1/2 x 14	8 1/2 x 14	8 1/2 x 14	8 1/2 x 14	8 1/2 x 14	8 1/2 x 14	8 1/2 x 14
Unit Change	Japan	US	Europe	Europe	Europe	Europe	Europe	Europe

#### NOTE

- The language used in the service mode depends on the language selected from [Utility] -> [Language Selection], and changes to the language as following table.**

Setting item in Language Selection	Language used in the service mode
Japanese	Japanese
Simplified Chinese	Simplified Chinese
Traditional Chinese	Traditional Chinese
Hangul	Hangul
Other than the above	English

## 9.2 Serial Number

- To register the serial numbers of the machine and options.
  - Printer, Output Option, Duplex, Vendor
- 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 number was not entered, the message to require entering the serial number 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: [Utility] -> [Counter].

## 9.3 Sleep ON/OFF Choice Setting

- To display the option of "No" for the [Sleep Mode Setting] screen available from [Administrator] -> [Maintenance] -> [Timer Setting] -> [Power Settings].

Setting item	Contents	Default setting
Permit	To display "OFF" in the sleep mode setting screen.	
Prohibit	No to display "OFF" in the sleep mode setting screen.	○

## 9.4 Foolscap Size Setting

- To set the size for foolscap paper.
- Upon setup.

Setting item	Default setting
8 <sup>1</sup> / <sub>2</sub> x 13 <sup>1</sup> / <sub>2</sub>	
8 <sup>1</sup> / <sub>2</sub> x 13	
8 <sup>1</sup> / <sub>4</sub> x 13	
8 <sup>1</sup> / <sub>8</sub> x 13 <sup>1</sup> / <sub>4</sub>	
8 x 13	○

### NOTE

- "8<sup>1</sup>/<sub>8</sub> x 13<sup>1</sup>/<sub>4</sub>" and "8<sup>1</sup>/<sub>2</sub> x 13<sup>1</sup>/<sub>2</sub>" setting is corresponding to paper fed from the manual bypass tray only.

## 9.5 Install Date

- 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.

<Procedure>

- Touch Clear.
- Enter the date from the 10-key pad. (Year 4 digit -> Month 2 digit -> date 2 digit)
- Touch [Entry] to set the date of installation.

## 9.6 Problem Unit Isolation Set.

- When a problem occurs, this function enables the use of the units or options that are not affected by separately controlling them and isolating other units or options that have a problem.

### NOTE

- The malfunction detection mechanism is not applied to units and options that are being isolated.

Setting item	Setting value	Contents	Default setting
Tray 1 Tray 2 Tray 3	Set	To normally isolate the units. <ul style="list-style-type: none"> <li>This status will continue even after turning OFF and ON the main power switch.</li> </ul>	
	Unset	No to isolate the units. <ul style="list-style-type: none"> <li>When corresponding troubles occur, pressing the [Continue] key on the warning screen, the user can isolate the problem units temporarily. (*)</li> <li>This status will not continue after turning OFF and ON the power switch.</li> </ul>	○

- \* For corresponding troubles, see "TROUBLE CODE."

<Procedure>

- Select the units or options to be set.
- Specify [Set] or [Unset].

### NOTE

- "Set" and "Unset" can be specified separately for each unit or option.

- Touch [Apply].
- The new setting becomes effective by turning the main power switch OFF and ON again.

## 9.7 Warm-up

### 9.7.1 Change Warm Up Time

- 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.

Setting item	Contents	Default setting
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 for both black and color will be as specified value.	
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.	

### Fusing operation mode

- Warm-up related control can be changed by using [Warm Up] setting and [\[Choice of high humidity circumstance\] setting in Engine FW DipSW](#).  
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.

## 9.8 Burn Prevention Settings

- 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.

Setting item	Default setting
Enable	○
Disable	

## 10. System 2

### 10.1 Storage Installed Setting

- To set the installation status of the MFP storage.

#### NOTE

- [Installed] is normally selected for the MFP.**
- For putting the following order [System 1] -> [initialization] into practice, the set becomes [Not Installed], causing an error. Required to set [Installed] again.**

Setting value	Default setting
Installed	<input type="radio"/>
Not Installed	

### 10.2 Consumable Life Reminder

- To select whether or not to give the display of PM parts lifetime

#### NOTICE

- 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:
  - Drum Unit, Fusing Unit, Transfer Roller Unit, Image Transfer Belt Unit, Toner Filter

Setting value	Contents	Default setting
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.	<input type="radio"/>

### 10.3 Unit Change

#### 10.3.1 Unit Change

- 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.

Setting item	Setting Value	Default setting		
		Japan	US	Europe
Toner Cartridge	User	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Service			
Imaging Unit	User		<input type="radio"/>	<input type="radio"/>
	Service	<input type="radio"/>		
Waste Toner Box	User	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Service			

#### 10.3.2 Warning display

##### Toner Near Empty

- To set whether to display a toner near empty warning.

Setting value	Default setting
Yes	<input type="radio"/>
No	

##### Near Empty Display Time

- 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 specify the timing for displaying toner near empty warning at a percentage against 100% of a full toner cartridge state.

#### NOTE

- The Near Empty Display Time will be displayed when "Bit Assignment 0000010 / HEX Assignment 02" is set for the Switch No. "151" through the following settings. [Service Mode] -> [System 2] -> [Software Switch Setting].**
- The toner cartridge is not provided with a mechanism that detects the amount of residual toner in the 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.**
- When [0] is specified, and the toner near empty warning display is specified to [No], no toner near empty warning will be displayed but a toner empty stop warning will appear.**

Setting item	Setting Value	Default setting
CMY	0 to +25 (step: 1)	0
K	0 to +28 (step: 1)	15

### Near Life Display Settings

- 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 normally sent to the center regardless of this setting.

#### NOTE

- The settings of software Dip switch No.227 (bit7) and switch No. 230 (bit3) have priority.

Setting item	Setting value	Default setting
Individual consumables	Display	○
	Do Not Display	

## 10.4 Software Switch Setting

- To set the operating characteristic of each function from software switch depending on what types of printing are normally made.

<Procedure>

- Touch [Switch No.] and enter the intended switch number with the 10-key pad.
- Touch [Bit Assignment].
- Use [-] or [=] to select a bit. To set the bit, enter 0 or 1 with the 10-key pad.
- To set the bit in hex, touch [HEX Assignment] and use the 16key pad and [A] to [F] keys to enter numbers and characters.
- Touch [Fix].

### 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].

#### NOTE

- For switches not mentioned in the list below, use them in the default value unless indicated otherwise.

#### 10.4.1 SW No.012

- Addition of the authentication device

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Standard	00000000 / 00
00000010	02	PKI (NIPRNet) [Card3] choice is added in Service Mode.	
00000100	04	PKI (SIPRNet) [Card3] choice is added in Service Mode.	

Reference

- [Service Mode] -> [Billing Settings] -> [Authentication Device 2]

#### 10.4.2 SW No.033

- Renders some functions, which were available when both administrator authentication and key counter were provided with when using the vendor, available only with administrator authentication.

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Available with the combination of administrator authentication and key counter.	00000000 / 00
00000001	01	Available only with administrator authentication.	

Reference

- [Utility] -> [Expert Adjustment]
- [Administrator] -> [System Settings] -> List [list/Counter]

#### 10.4.3 SW No.049

##### HEX 00 - HEX0A

- The upper limit of copies that can be input through the control panel of this machine is set.

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
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	

##### HEX 80

- Scan setting only when Sort is selected for a copy cycle to be run with originals placed on the original glass.

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
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)	

#### 10.4.4 SW No.051

##### HEX 00 - HEX80

- Settings for the life warning/replace display of the units

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Normal display	00000000 / 00
00010000	10	Does not show the life warning/replace display of the imaging unit/Y,M,C. Does not show the life warning/replace display of the drum unit/K.	
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 belt unit.	
10000000	80	Does not show the life warning/replace display of the fusing unit.	

##### Reference

- [Service Mode] -> [Counter] -> [Life]

#### 10.4.5 SW No.069

- When printing using the manual bypass tray in a custom size, allows for printing only with a printer driver settings.

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	After setting a paper in the manual bypass tray, touch [complete] key to start printing.	00000001 / 01
00000001	01	Start printing with the paper settings specified by the printer driver as the manual bypass tray paper settings without giving a warning.	

#### 10.4.6 SW No.070

- Setting for alarm sound and screen display for communication errors occurring due to CSRC causes.

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Communication error sound/screen display enabled.	00000000 / 00
00010000	10	Communication error sound/screen display disabled.	

#### 10.4.7 SW No.072

- Import/export function of the address book through the USB memory

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Import/export function is disabled.	00000000 / 00
00000100	04	Import/export function is enabled.	

##### Reference

- [Administrator] -> [Maintenance] -> [External Memory Backup] - [Import]
- [Administrator] -> [Maintenance] -> [External Memory Backup] - [Export]

#### 10.4.8 SW No.135

- Setting for ID length of the HID Prox card

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
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.	

#### 10.4.9 SW No.143

- Expansion setting of the touch panel sensitive area when the web browser function is used

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	26 dots: 26 dots from the perimeter of the touch panel is a nonsensitive area.	00000000 / 00
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.	



**NOTE**

- 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.

**10.4.10 SW No.145****HEX 01**

- Switching to Auto detection for paper size in manual bypass tray

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Enable	00000000 / 00
00000001	01	Disable	

**HEX 02**

- Switching paper feed mode if the size of paper fed from the manual bypass tray is mismatched

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Stop immediately	00000010 / 02
00000010	02	Stop accordingly Stop immediately in the following cases as an exception. <ul style="list-style-type: none"> <li>"1" is set at bit4 for the Switch No.145</li> <li>For jobs where center stapling, half-folding, tri-folding and Z-folding are set with a finisher equipped</li> </ul>	

**HEX 04**

- Displaying message when the paper size in manual bypass tray is mismatched with the paper size specified on the control panel

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Enable	00000000 / 00
00000100	04	Disable	

**HEX 08**

- 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.)

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Enable	00000000 / 00
00001000	08	Disable	

**HEX 10**

- 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

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Allow (billing on one side of the paper)	00000000 / 00
00010000	10	Prohibit	

**10.4.11 SW No.146****HEX 04**

- Setting for enabling use of Non-Image Area Erase, Centering, and Original Size when the book original is used in the fax/scanner mode

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
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.	

**HEX 10**

- Setting for allowing/prohibiting billing on exited paper when a paper size error occurred at the time of duplex printing

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Stops	00010000 / 10
00010000	10	Outputs paper.	

**10.4.12 SW No.147**

- Set whether allow or prohibit use of Archive Paper Enable.

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Not to use Archive Paper.	00000000 / 00
00001000	08	Use Archive Paper.	

**10.4.13 SW No.151**

- Setting for displaying/hiding the Near Empty Display Time

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Hide	00000010 / 02
00000010	02	Display	

## Reference

- [Service Mode] -> [System 2] -> [Unit Change]

**10.4.14 SW No.152**

- The E-mail body print settings of E-Mail RX Print

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Disables the E-mail body print settings.	00000000 / 00
00000001	01	Allows the E-mail body print settings.	

- This function supports the following languages.
  - Japanese, English, French, Italian, Germany, Spanish

**10.4.15 SW No.155**

- Validation/invalidation of the debug setting of the log.

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Debug setting is disabled.	00000000 / 00
00000001	01	Debug setting is enabled.	

## Reference

- [Service Mode] -> [Debug Settings] -> [Basic mode]

**10.4.16 SW No.157**

- Change the upper limit of the time for switching to power save mode.

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Do not change the upper limit.	00000000 / 00
00000010	02	Change the upper limit to 240 minutes.	

## Reference

- [Administrator] -> [Maintenance] -> [Timer Setting] -> [Power Settings] -> [Low Setting]

**10.4.17 SW No.163**

- Setting for the auto execution of Self-diag.(Full)

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
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.	

**10.4.18 SW No.188**

- Operation setting for print status LED

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000001	00	Blinking	00000001 / 01
00000010	02	Unlit	

**10.4.19 SW No.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.

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Log-in not authorized.	00000000 / 00
00000100	04	Log-in authorized.	

**10.4.20 SW No.206**

- Setting whether to enable Coverage Counter

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Disable	00000000 / 00
00000001	01	Enable	

## Reference

- [Service Mode] -> [Billing Setting] -> [Coverage Rate Clear], [Print Counter Clear], [Coverage Counter Detail]

**10.4.21 SW No.227**

- Setting for the display of consumable level and warning. (Control panel, Web Connection, Fiery)

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Display	10000000 / 80 (Japan/North America/ Europe) 00000000 / 00 (Others)
10000000	80	Do not display	

**10.4.22 SW No.230**

**HEX 08**

- Setting for the display of consumable level and warning. (PSES, MIB, Printfleet, SiteAudit)

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Display	00001000 / 08 (Japan/North America/ Europe) 00000000 / 00 (Others)
00001000	08	Do not display	

**HEX 40**

- Setting for allowing/prohibiting use of functions for preventing a unintentional sending to a wrong destination

Bit Assignment	HEX Assignment	Details	Default value (Bit/HEX)
00000000	00	Do not use the functions.	01000000 / 40
01000000	40	Use the functions.	

**10.5 Data Capture**

- 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.

**NOTE**

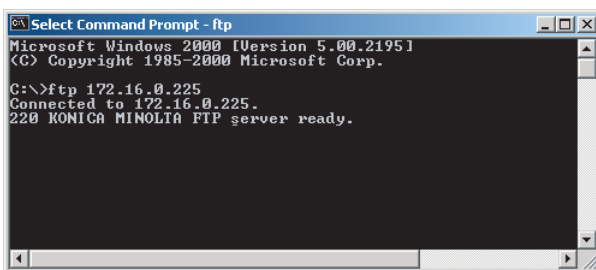
- The following conditions are necessary for this function.
  - “Allow” must be set when selecting [Administrator] -> [Security] -> [Security Details] -> [Print Data Capture].
  - The MFP storage must be installed.
  - “ON” must be set when selecting [Administrator] -> [Network] -> [FTP Settings] -> [FTP Server Setting].
  - This function also allows print job data stored in the MFP storage to be obtained from [Debug Settings] -> [Debug Log Output]. For more details, see “Debug Log Output.”

<Procedure>

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 Main body storage disk.)

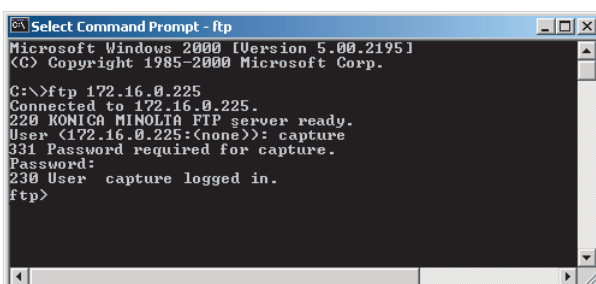
**NOTE**

- 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.

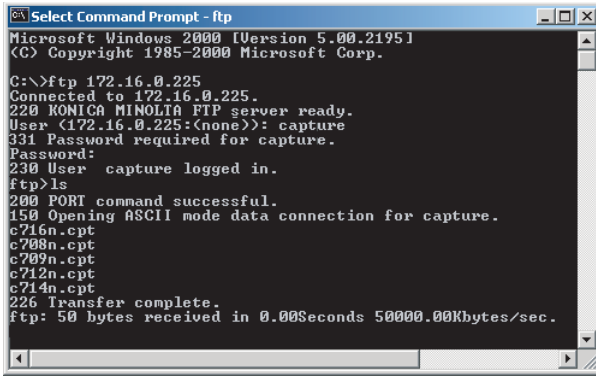


5. Input the user name and the password.

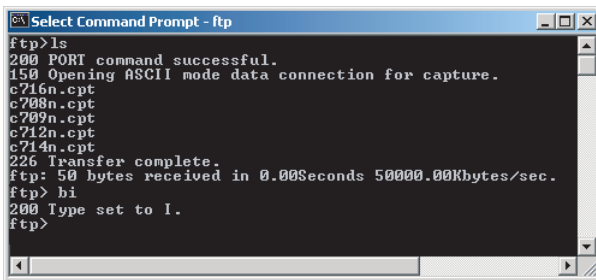
- User name: capture
- Password: sysadm



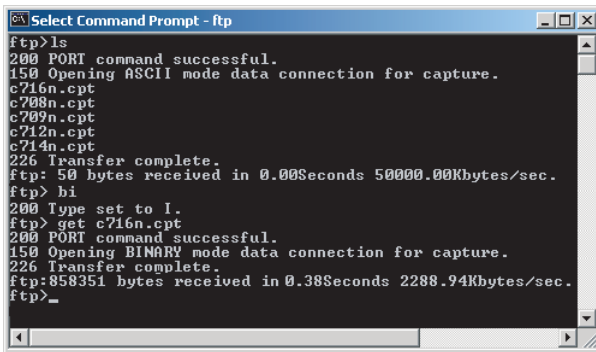
6. Using the “ls” command, display the list of the file available for capture.



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] -> [Security] -> [Security Details] -> [Print Data Capture], and select [Restrict] for the print data capture setting in order to delete the job data stored in the MFP storage.
- When Storage Format or Overwrite Temporary Data is performed, job data is deleted.

**10.6 Image Stabilization Setting**

- 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.

Setting value	Target user	Contents	Default setting
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.	

## 10.7 User Paper Settings

- 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 [Utility] -> [Expert Adjustment].
- To register a paper type that is suitable for individual customer's intended use and use environment.

Registered Key	Paper Type	Basic weight	Fusing Temperature		2nd Transfer Adj.	
		Setting range	Setting item	Setting range	Setting item	Setting range
User Paper 1	Plain paper	60 to 90 g/m <sup>2</sup> (Step: 1)	600 dpi	- 20 °C to +10°C (step: 5°C)	Front - Color Front - Black Back - Color Back - Black	-8 to +7 (Step: 1)
User Paper 2	Plain paper+	91 to 105 g/m <sup>2</sup> (Step: 1)				
User Paper 3	Thick 1	106 to 120 g/m <sup>2</sup> (Step: 1)				
User Paper 4	Thick 1+	121 to 157 g/m <sup>2</sup> (Step: 1)				
User Paper 5	Thick 2	158 to 209 g/m <sup>2</sup> (Step: 1)				

<Procedure>

- Select the desired key from [User Paper 1] to [User Paper 5] to register user paper.
- Select [Basic Weight] and enter a value with the [+] / [-] key.
- Select a target item of Fusing Temperature and enter a fusing temperature with the [+] / [-] key.
- Select a target item of 2nd Transfer Adj., and enter a 2nd image transfer fine adjustment value with the [+] / [-] key.
- Load the manual bypass tray with paper.
  - Paper Size: A4S, 81/2 x 11S
- Select [1Side] (only front side) or [Front Side] (only back side) and press the Start key.
- Check the image of the output test pattern.
  - If the image is not acceptable, adjust the settings and output the test pattern again.

### 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.

## 10.8 Coverage Rate Screen

- 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].

Setting value	Default setting
Display	
Do Not Display	○

## 10.9 JAM Code Display Setting

- To set whether or not to add a jam code to a jam warning display on the control panel when a jam occurs.

Setting value	Default setting
Display	
Do Not Display	○

## 10.10 Import Config. Data

### 10.10.1 BootUp Screen

- To customize the BootUp Screen displayed upon machine start-up.
- Use this feature when changing the Konica Minolta logo displayed on the control panel upon start-up for client's intended use of the machine.

#### NOTE

- In the following conditions, import of BootUp Screen data is prohibited.
  - [Administrator] -> [Security] -> [USB Connection Permission setting] is set to [Restrict].
  - [Administrator] -> [Security] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory(Service)] is set to [Restrict].
  - [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "ON".

### Preparation of registrable image data

Specifications of registrable image data

Items	Contents
Image format	PNG format
File extension	".bin" or ".zip"
FileName	BootUpScreen*.bin or BootUpScreen*.zip (* represents user-defined text)
Image size	800 x 480 dots

Items	Contents
Color	256 colors (Palette that the machine specifies is used.)

<Procedure>

- Using the dedicated image creation tool to create the image data satisfying the specifications mentioned above.
- To create a 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.

**NOTE**

- Character type usable in version information is limited to ASCII (7-bit ASCII). Text strings of up to 21 characters can be used.

- Save the created data in the root directory of the USB memory.

**NOTE**

- Be careful that the machine is unable to recognize data saved in any directories other than the root directory.

### Procedure of data import

- Connect the USB memory to the USB port of the machine.
- Touch [Import Config. Data] -> [BootUp Screen].
- Touch [Set].

**NOTE**

- 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 registrable image data does not conform to the above specifications, "File NG" message is displayed and the data cannot be registered.

- 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 make sure that "OK" appears.

### 10.10.2 Machine Image

- 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.
- Check the version of the installed exterior view data. (When the USB memory is not connected)

**NOTE**

- In the following conditions, import of BootUp Screen data is prohibited.
  - [Administrator] -> [Security] -> [USB Connection Permission setting] is set to [Restrict].
  - [Administrator] -> [Security] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory(Service)] is set to [Restrict].
  - [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "ON".

<Procedure>

- Save the exterior view data in the root directory of the USB memory.

**NOTE**

- Be careful that the machine is unable to recognize data saved in any directories other than the root directory.

- Connect the USB memory to the USB port of the machine.
- Touch [Import Config. Data] -> [Machine Image].
- Touch [Set].
- Check result "OK" is displayed.
- 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.

### 10.10.3 Custom Auth. Setting

- To install the authentication customize data used to customize the authentication process.

**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] -> [Security] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory(Service)] -> [Storage data backup] is set to [ON].
  - [Administrator] -> [Security] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory(Service)] -> [Firmware Update Parameters] is set to [Allow].
  - [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "OFF."

<Procedure>

- Save the authentication customization data in 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.

- Connect the USB memory to the USB port of the machine.
- Touch [Import Config. Data] -> [Custom Auth. Setting].
- Touch [Set].
- Check result "OK" is displayed.
- Turn OFF and ON the main power switch.

**NOTE**

- The new data will overwrite any existing authentication customization data.
- To delete registered data, touch [Delete] and make sure that "OK" appears.

### 10.11 Install Data

- To install voice data into MFP.
- Selection of [OEM] makes customization of driver name, etc. possible by writing the OEM extended character string in the firmware package and downloading it.

**NOTE**

- **In the following conditions, import of data is prohibited.**
  - [Administrator] -> [Security] -> [USB Connection Permission setting] is set to [Restrict].
  - [Administrator] -> [Security] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory(Service)] is set to [Restrict].
  - [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "ON."
- To install the voice guidance, check if [Administrator] -> [System Settings] -> [Voice Guidance Settings] -> [Voice Guidance] is set to "Yes".

<Procedure>

1. Save installation data (\*.tar) into the root directory of a USB memory device.
2. Connect the USB memory device to the machine USB port.
3. Touch [Install Data].
4. Select the type of the data to be installed.
  - You can select multiple types of data at a time and install them.
5. Touch [Set].
6. Press the Start key to install the data.
7. 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.**

### 10.12 Local Interface Kit Setting

- To set whether to enable or disable the Bluetooth function.
- Use this setting upon set-up of the optional local interface kit.

Setting value	Default setting
Set	
Unset	○

### 10.13 Display Eco Index

- To set whether or not to display [Power Consumption] and [CO2 Emission] in [Utility] -> [Counter] -> [Eco Info].

**NOTE**

- **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 emission.

**NOTE**

- **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.**

Setting item	Setting	Default setting
Power Savings Display Level	ON	
	OFF	○
Output Coefficient Settings	0.0001 - 0.9999	0.4166

<Procedure>

1. Explain to users that [Power Consumption] and [CO2 Emission] displayed on MFP are estimated values, and obtain their consent.
2. Select [ON] in [Power Savings Display Level].
3. Depending on the user's MFP use environment, configure [Output Coefficient Settings] using the 10-key pad.
4. Touch [END].

### 10.14 Internal Error. Auto Cancel

- To set whether or not to automatically reset trouble when a trouble code classified as rank B or C occurs.

Setting item	Setting value	Default setting
Rank B	Yes	○
	No	
Rank C	Yes	○
	No	

<Operation when set to "Yes">

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.)

### 10.15 Acquiring Settings

- 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] -> [System Settings] -> [List/Counter] -> [Meter Count and Device Confirmation Tx Settings] must be set to "Allow."

Setting value	Default setting
ON	<input type="radio"/>
OFF	

### 10.16 Driver Install

- To install/uninstall the loadable device driver.
- Used when the authentication device that needs the loadable device driver is attached.

**NOTE**

- Only when one of the following conditions is met, the driver can be installed/uninstalled.
  - [Administrator] -> [Security] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory(Service)] -> [Storage data backup] is set to [ON].
  - [Administrator] -> [Security] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory(Service)] -> [Firmware Update Parameters] is set to [Allow].
  - [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "OFF."

<Installation procedure>

1. Prepare a USB memory where only the loadable device driver directory 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. Please do not save any other data in the USB memory.
2. Connect the USB memory to the USB port of the MFP.
3. Touch [Driver Install] -> [Install].
4. Touch [Loadable Driver] and touch [Start] to install the data.
5. Check that data is normally installed from the message that appears on the control panel.
6. Touch [Reboot].
7. Remove the USB memory.

<Uninstallation procedure>

1. Touch [Driver Install] -> [Uninstall].
2. Select a driver to be uninstalled.
3. Touch [Start] to uninstall the data.
4. Check that data is normally uninstalled from the message that appears on the control panel.
5. Touch [Reboot].

### 10.17 Application Change Setting

- To set whether to allow a change of the settings for the specified application start.
- If "Permit" is set, [Specified Application Start Setting] of [Administrator] -> [Network] -> [OpenAPI Setting] can be configured.

Setting value	Default setting
Permit	<input type="radio"/>
Prohibit	

### 10.18 Custom Pattern

- 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.

**NOTE**

- In the following conditions, installation of the custom pattern is prohibited.
  - [Administrator] -> [Security] -> [USB Connection Permission setting] is set to [Restrict].
  - [Administrator] -> [Security] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory(Service)] is set to [Restrict].
  - [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "ON."

#### Preparing setting file (CPD file)

- When making the setting file (CPD file), use the "Panel Customization Tool."

Operation Environment of Panel Customization Tool

Items	Contents
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	<ul style="list-style-type: none"> <li>• Windows 7 Professional (SP1 or later)</li> <li>• 32-bit (x86) and 64-bit (x64) editions of Windows are supported.</li> </ul>

<Create a new setting 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...].
- <Edit an existing setting 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...].

**Importing setting file (CPD file)**

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. Touch [Custom Pattern].
4. Select [Custom Pattern 1], [Custom Pattern 2] or [Custom Pattern 3].
5. Touch [Import] to select the data to be imported.
6. Press Start Key to import the data.
7. Select the registered custom pattern in [Administrator] -> [System Settings] -> [Custom Function Pattern Selection].

**NOTE**

- To delete registered data, select the target Custom Display Pattern from the [Administrator] -> [System Settings] -> [Custom Function Pattern Selection], touch [Delete] -> [Fix] and check that the result "OK" appears.

**10.19 Maintenance Mode**

- 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.
  - 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)
  - Import/export setting can be displayed even without the setting made for switch number "72" of the Software Switch Setting.
- A bar appears in the upper row of the control panel in the Maintenance Mode.

**NOTE**

- To enable the maintenance mode, set [Administrator] -> [Security] -> [Security Details] -> [Maintenance Mode Access] -> to [Allow].

Setting item	Contents	Setting value	Default setting
Maintenance Mode	Set whether to enable or disable the Maintenance Mode.	Invalid	<input type="radio"/>
		Effective	
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 enter the Maintenance Mode.	Not Set	<input type="radio"/>
		Display language	
Job History Clear Upon Job Completion	Set whether to erase the past job history and the job history during the Maintenance Mode.	Set	<input type="radio"/>
		Unset	

<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] from the confirmation screen.

**10.20 Smart Fusing Control**

- Specifies whether or not to apply low power fusing control.

Setting value	Contents	Default setting
Permit	Applies low power fusing control by lowering the target temperature as much as possible in response to the single sheet data. In this way, the power consumption (TEC value) is controlled.	<input type="radio"/>
Prohibit	Controls the adjustment of the specified fusing temperature.	

**10.21 Cleaning Unit Setting**

- Use this feature upon the optional clean unit set-up.

Setting value	Default setting
Installed	
Not Installed	<input type="radio"/>

**10.22 Fuser roll deform**

- Rotates the fusing belt to prevent the same fusing belt surface from being left alone for long periods of time in order to prevent deformation.
- Prevents unevenness in gloss caused by fusing belt deformation.

Setting value	Detail	Default setting
OFF	-	<input type="radio"/>

Setting value	Detail	Default setting
Mode 1 *	<ul style="list-style-type: none"> <li>Rotates the fusing roller for a certain distance when the machine has been in standby mode for over 6 hours.</li> <li>Rotates the fusing roller for a certain distance when the machine has been in energy save mode for over 13 days.</li> <li>(Energy save mode in this case does not include sub power OFF mode and ErP Auto Power OFF mode.)</li> </ul>	
Mode 2 *	<ul style="list-style-type: none"> <li>Rotates the fusing roller for a certain distance when the machine has been in standby mode for over 6 hours.</li> <li>Rotates the fusing roller for a certain distance when the machine has been in energy save mode for over 13 days.</li> <li>(Energy save mode in this case does not include sub power OFF mode and ErP Auto Power OFF mode.)</li> <li>Rotates the belt for 30 seconds while warming the fusing unit up to a certain temperature during the warmup process or when starting to print in order to prevent belt deformation.</li> </ul>	

\*: Perform the following steps when selecting this setting to an option other than [OFF].

- When setting the [Weekly Timer ON/OFF Settings] found under [Administrator Settings] -> [System Settings] -> [Weekly Timer Settings] to [ON], select the energy save mode when the weekly timer is turned off to [Sleep].
- Select [Power Save] in the [Power Key Setting] found under [Administrator Settings] -> [System Settings] -> [Power Supply/Power Save Settings].
- Do not turn off the main power switch.
- Do not turn off the sub power switch. (Do not long-press the power key.)

# 11. Counter

## 11.1 Outline

- The counter displays the counts of various counters to allow the technical representative to check or set as necessary.
- <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], [Jam], and [Detail code history] counters cannot be selected.)

## 11.2 Life

- 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.

<Count method of each life counter>

Counter item	Counting method
Fusing unit press times (Total)	Counts the number of press time.
Fusing unit drive time (Press)	Counts the total driving distance when pressuring.
Fusing unit drive mileage (Light press)	Counts the total driving distance when lightly pressuring.
Fusing unit drive time (Press)	Counts the total driving time when pressuring.
Fusing unit drive time (Light press)	Count the total driving time when lightly pressuring.
Fusing unit edge predetermined tmp.	Counts the total printing time when the fusing unit edge reaches the predetermined temperature.
Fusing unit edge predetermined tmp. accumul. time(In standby)	Counts the total stand-by time when the fusing unit edge reaches the predetermined temperature.
Fusing unit center predetermined tmp. accumul. time(In printing)	Counts the total printing time when the fusing unit center reaches the predetermined temperature.
Fusing unit center predetermined tmp. accumul. time(In standby)	Counts the total stand-by time when the fusing unit center reaches the predetermined temperature.
Fusing unit CD width of max. mileage	Counts the total paper feeding distance by each paper width, and shows paper width with the longest total paper feeding distance.
Fusing unit max. mileage from each CD width.	Counts the total paper feeding distance by each paper width, and shows the longest total paper feeding distance.
Fusing Unit Page Count	Counts how many sheets have been ejected. The counter of paper length increases by 1 per every 216 mm and shows the total count. For the paper with the paper length less than 216 mm, 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 of paper length increases by 1 per every 216 mm and shows the total count. For the paper with the paper length less than 216 mm, the counter uses 216 mm as the paper length.
Transfer Roller Unit	Counts how many sheets have been printed. The counter of paper length increases by 1 per every 216 mm and shows the total count. For the paper with the paper length less than 216 mm, the counter uses 216 mm as the paper length.
Transfer Roller Unit Rotation Time	Counts how many hours the transfer roller unit has turned.
Toner filter	Not used
Imaging unit(C) Rotation Time	Counts how many hours PC drum has turned.
Imaging unit(M) Rotation Time	
Imaging unit(Y) Rotation Time	
Imaging unit(K) Rotation Time	
Imaging unit(C) Page Count	Counts how many sheets have been printed. The counter of paper length increases by 1 per every 216 mm and shows the total count. For the paper with the paper length less than 216 mm, the counter uses 216 mm as the paper length.
Imaging unit(M) Page Count	
Imaging unit(Y) Page Count	
Imaging unit(K) Page 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.
Manual Tray Feed Count	Number of sheets of paper fed from the manual bypass tray.

Counter item	Counting method
1st Feed Retry Count	Count the frequency of paper feed retry of tray 1.
2nd 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.
Manual Tray Feed retry Count	Count the frequency of paper feed retry of manual bypass tray.

### 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.

### New Release

- After replacing a fusing unit or transfer belt unit, perform New Release to clear its life counter.

<Procedure>

- Touch [New Release].
- Open the front door or the lower front door.
- Select a unit where New Release is made.
- Press the Start key and perform New Release.

### 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, developing unit
- See the "Notes when using the New Release Disable mode" for the method of enabling the New Release Disable mode.

## 11.3 Service Call

- 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.

## 11.4 Section Service Call

- 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.

## 11.5 Warning

- To count and display how many times malfunction code has been detected on a malfunction code type basis.
- To clear of count value.
- To check the number of warning conditions detected according to the warning type.

<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.

## 11.6 Maintenance

- To set a count value for maintenance of any given part.
- When any given part is replaced.

<Procedure (Maint.-Set)>

- Enter the maintenance counter value from the 10-key pad.

<Procedure (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.

## 11.7 Service Total

- To check the total number of printed pages including the ones printed by the Service Mode.
  - Total number of printed pages: No. of pages printed by user mode and Service Mode.
- To display the count value for the service total counter.
- To display the count value for service total counter of each paper size.

Display item	
Total	Service Total, Service Total(Duplex)
Paper Size 1	A4, A5, A6, B5, B6, Postcard, 8 <sup>1</sup> / <sub>2</sub> ×14, 8 <sup>1</sup> / <sub>2</sub> ×11, 7 <sup>1</sup> / <sub>4</sub> ×10 <sup>1</sup> / <sub>2</sub> , 5 <sup>1</sup> / <sub>2</sub> ×8 <sup>1</sup> / <sub>2</sub> , 4×6, Foolscap
Paper Size 2	16K, Others

### 11.8 Service Call History (Data)

- To display the trouble history in chronological order.
- Display the latest 50 trouble codes.

### 11.9 Paper Jam History

- 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.”

### 11.10 Jam

- To count and display how many times jam has been detected on a jam location basis.

### 11.11 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].

### 11.12 Instantaneous Power Failure

- To display the latest 10 power shutdown events during operation of this machine in time axis.
- To reset the counter, use [Counter Reset].

### 11.13 Detail code history

- 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”.

## 12. List Output

### 12.1 Individual list print output

- Output the selected list data on the paper.
- You can select multiple lists. However, only items displayed on the same screen can be selected at a time.
- To be used at the end of setup or when a trouble occurs.
- The output time, day and date will also be printed.

List item	Contents
Machine Management List	To produce an output of a list of setting values, adjustment values, total counter values, and others. To produce an output of a list of Software Switch Setting.
Adjustments List	To output the adjustment list for machine adjustment, process adjustment, etc. in Service Mode.
Parameter List	Output a nonvolatile parameter list.

#### NOTICE

- When performing Machine Management 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".

#### <Procedure>

1. Load the A4S/A4 or 8 1/2 x 11S/8 1/2 x 11 plain paper to a paper source.
2. Select the List item to be output.
3. Select [1-Sided] or [2-Sided].
4. Press the Start key, which will let the machine produce the list.

#### NOTE

- If no item is selected, the Start key has no response.

## 13. State Confirmation

### 13.1 Sensor Check

- 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.
- 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.

#### NOTE

- Depending on options mounted in the MFP, the sensor check screens to be displayed may vary.

<Procedure>

1. Select the sensor check screen contains target electrical parts.
2. Change the state of the electrical parts.
3. Check the sensor check screen display.

#### 13.1.1 bizhub C4000i/C3300i

Sensor Monitor 1

Panel display		Part/signal name	Symbol	Operation characteristics/panel display	
				1	0
Paper feed tray 1	Tray 1 Set Sensor	-	-	Set	Out of position
	Paper empty	Tray 1 paper empty sensor	PS1	Paper not present	Paper present
	Paper feed	Tray 1 paper feed sensor	PS3	Paper present	Paper not present
	Upper Limit of Lift-up	Tray 1 upper limit sensor	PS2	Upper position	Other than upper position
Paper feed tray 2	Tray 2 Set Sensor	-	-	Set	Out of position
	Paper empty	Tray 2 paper empty sensor	PS1/2	Paper not present	Paper present
	Vertical transport	Tray 2 transport sensor	PS6/2	Paper present	Paper not present
	Paper feed	Tray 2 paper feed sensor	PS3/2	Paper present	Paper not present
	Upper Limit of Lift-up	Tray 2 upper limit sensor	PS2/2	Upper position	Other than upper position
Paper feed tray 3	Tray 3 Set Sensor	-	-	Set	Out of position
	Paper empty	Tray 3 paper empty sensor	PS1/3	Paper not present	Paper present
	Vertical transport	Tray 3 transport sensor	PS6/3	Paper present	Paper not present
	Paper feed	Tray 3 paper feed sensor	PS3/3	Paper present	Paper not present
	Upper Limit of Lift-up	Tray 3 upper limit sensor	PS2/3	Upper position	Other than upper position
Manual	Paper empty	Bypass tray paper empty sensor	PS4	Paper not present	Paper present
Paper passage transportation	Registration sensor	Registration sensor	PS9	Paper present	Paper not present
	Paper Sensor	Fusing loop sensor	PS10	Paper present	Paper not present
	Duplex Sensor	ADU transport sensor	PS2	Loop present	Loop not present
	Exit Sensor	Paper exit sensor	PS13	Paper present	Paper not present

Sensor Monitor 2

Panel display		Part/signal name	Symbol	Operation characteristics/panel display	
				1	0
Transfer belt	Retraction	1st transfer pressure sensor	PS39	Not released	Released
Waste Toner	Waste Toner Box Set	Waste toner bottle set sensor	PS6	Set	Out of position
	Waste Toner full	Waste toner near full sensor	PS15	Blocked	Unblocked
Fusing	Roller Retraction				

### 13.2 Table Number

#### Vdc-C/ Vg-C

- When IDC is detected, for plain paper, Thick, and Black, the machine independently displays each Vg or 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.
- Used for troubleshooting of image problems.
  - If the value is high: In IDC detection, the image density is judged as low, thus the Vg/Vdc value is to be adjust higher.
  - If the value is Low: In IDC detection, the image density is judged as high, thus the Vg/Vdc value is to be adjust lower.

Display item	Reference value
Vdc	Around -0 V to -800 V.
Vg	Around 0 V to -1600 V.

#### LD Light Value

- Shows the LD light value of toner during print image formation.

### Charging DC Output Value

- Shows the DC current value applied to the charging roller of toner during print image formation.

### Charging AC Output Value 1

- Shows the AC voltage value applied to the charging roller of toner during print image formation.

### Charging AC Output Value 2

- Shows the current value applied to the charging roller of toner during print image formation.

## 13.3 Level History 1

- To display TCR (T/C ratio), IDC/registration sensor output values, and fusing temperature.
- Used for troubleshooting of image problems.

Display item	Contents
TCR-C/-M/-Y/-K	Shows the T/C output reading taken last. (*)
IDC	Shows the latest IDC data.
Middle heat temperature	Displays the latest detected temperature of the heating temperature sensor.
Medium Heating Temperature	Displays the latest detected temperature of the heating roller thermistor/Ctr.
Heat edge temperature	Displays the latest detected temperature of the heating roller thermistor/Edg.

- \*: "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.

## 13.4 Level History 2

- IDC Sensor (Transfer belt bare surface level) as adjusted through the image stabilization sequence and ATVC value.
- Used for troubleshooting of image problems.

Display item	Contents
IDC Sensor Adjust 1	Shows the intensity adjustment value of the IDC sensor. (0 to 1023)
1st Transfer Output Value	Shows the first image transfer nearest output value. (0 to 2700)
2nd Transfer Output Value	Shows the second image transfer nearest output value. (-500 to 4500 V)

## 13.5 Memory/Storage Status

- To display the condition and amount of the memory and MFP storage.

## 13.6 Color Regist

- To check when there is a color shift.
- 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) is displayed.
- Individual color shifts of C, M, and Y are based on K and their amounts are displayed. (Display unit: dots)
- The data is updated after a color shift correction has been made or color shift adjustment has been completed.

## 13.7 Load Check

- 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.**

<Procedure>

- Open the front door, lower front door or the right door.
- Touch [Start Load Check].
- Close the door opened on step 1.
- Referring to the load check list, enter a check code.
- Referring to the load check list, enter a multi code.
- Press the Start key.
  - When pressing the Start key, the specified load is activated. The Start key blinks in orange.
- Check the load operation and output of signals.
- 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.**
- To check another load or signal output, repeat steps 4 to 8.
  - 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.

**13.7.1 Load check list**

Check code	Multi code	Symbol	Load name	Operation outline	Note
20	1	CL3	Tray 1 paper feed clutch	Drives the specified clutch.	-
	2	CL3/2	Tray 2 paper feed clutch		
	3	CL3/3	Tray 2 paper feed clutch		
	4	CL2	Bypass tray paper feed clutch		
21	1	CL2/2	Tray 2 transport clutch	Drives the specified clutch.	-
	2	CL2/3	Tray 3 transport clutch		
	2	CL4	Registration clutch		
23	4	M6	Tray 1 lift-up motor	Starts the lift-up operation.	The motor stops when the upper limit sensor or lower limit is detected.
	5	M6/2	Tray 2 lift-up motor		
	6	M6/3	Tray 3 lift-up motor		
24	1	CL1	1st transfer pressure clutch	Starts the pressure/release operation of the 1st transfer belt. <b>NOTE</b> Be sure to perform the release operation whenever the pressure/release operation has been performed. *1	-
28	11	M1/2	Tray 2 drive motor high speed	Drives the motor at the specified speed.	-
	14		Tray 2 drive motor low speed		
	16	M2/2	Tray 3 drive motor high speed		
	19		Tray 3 drive motor low speed		
32	1	M7	Polygon motor high speed	Drives the motor at the specified speed.	-
	2		Polygon motor low speed		
40	1	M1	Main motor high speed	Drives the motor at the specified speed. <b>NOTE</b> Perform with the transfer belt removed.	-
	4		Main motor low speed		
41	1	M2	Color motor high speed	Drives the motor at the specified speed. <b>NOTE</b> Perform with the transfer belt removed.	-
	4		Color motor low speed		
42	1	FM1	Power supply cooling fan full speed	Drives the specified fan.	-
	2		Power supply cooling fan half speed		
	3	FM2	Machine cooling fan full speed		
	9	FM4	Clean ventilation fan full speed		
	10		Clean ventilation fan half speed		
45	1	M3	Fusing motor high speed	Drives the motor at the specified speed.	-
	2		Fusing motor low speed		
	3		Fusing motor minimum speed		
55	1	M5	Toner supply motor/K	Drives the motor at the specified speed.	-
	2		Toner supply motor/C		
	3	M6	Toner supply motor/M		
	4		Toner supply motor/Y		
80	1	CL6	ADU forward rotation clutch	Drives the specified clutch.	-
	2	CL7	ADU reverse rotation clutch		
81	1	CL5	ADU transport clutch	Drives the specified clutch.	-
83	0	SD1	Exit path switch solenoid	Turns ON the solenoid.	The solenoid will stop after a lapse of predetermined time.

**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.

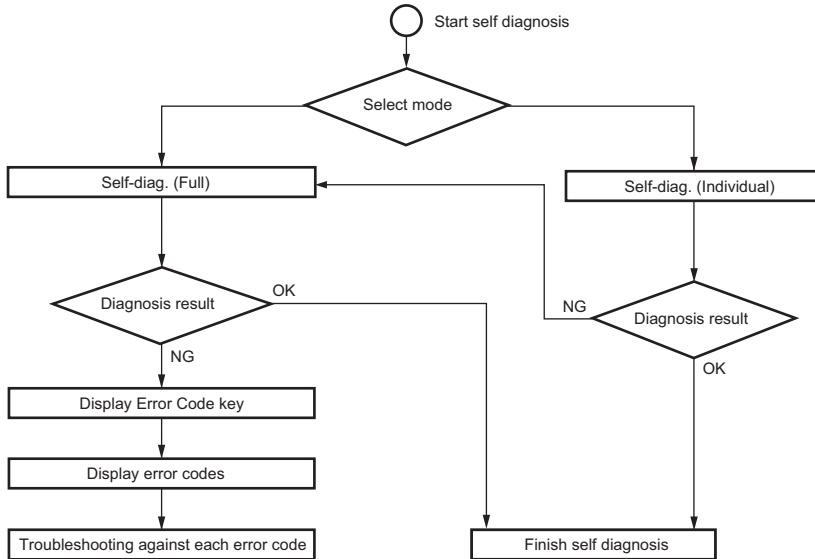
**13.8 Adjustment Data List**

- To display the adjustment and setting value set in the main body.

### 13.9 Self-diag. (Full/Individual)

#### 13.9.1 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 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].



Self-diagnostic item

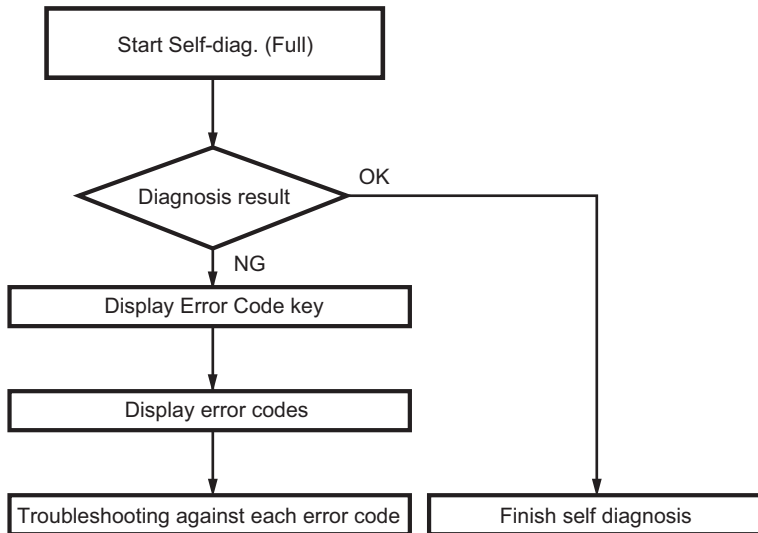
Check item	
MicroSD Check	Device recognition
	R/W Check
	S.M.A.R.T diag.
	MFP FW checksum
	Partition check
I2C Check	PS-CPU
I2S Check (*)	AUDIO (Voice)
Sys/Image mem check	WORK0 (Main Memory ch.A)
	WORK0 (Main Memory ch.B)
Various USB Check	USB Device
	Keyboard (*)
	USB Memory (*)
CIS Board Check	I/P Image Bus Check
	Line RAM comparison
CPU Board Check	LAN-IF Ping Test (*)
PCIe Check	PCIe device check

- \*: The item can be diagnosed with Self-diag. (Individual) only.

#### 13.9.2 Self-diag. (Full)

- 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

**NOTE**

- Only displays the detected error codes.

**Diagnosis procedure**

1. Display the [Self-diag. (Full)] screen.
  - Display by selecting [Service Mode] -> [State Confirmation] -> [Self-diag. (Full)].
  - Turn the main power switch on while pressing the power key. After a short beep sound is made once, release the power key and wait to display the Self-diag. (Full) screen.
2. Press the Start key to start the check procedure.
3. The result of the diagnosis is displayed for every item. (OK/NG)

**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).
4. 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 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.
    - The "Self-diagnosis result report." can be printed out after completing the Self-diag. (Full). (Printable even if NG is displayed)
  5. If [OK] is displayed for all diagnosis items, finish the Self-diag. (Full).
    - If starts from the Service Mode, touch [END].
    - If starts by turning ON the main power switch, turn OFF the main power switch.
  6. If [NG] is displayed, carry out procedure "Troubleshooting when NG is detected."

**NOTE**

- It takes approx. 200 seconds for check if all items are OK.
- When the trouble code (C6###, C91##, CE301, CE304) is displayed, the self-diag. (Full) may not complete. In that case, finish the Self-diag. (Full), and perform the troubleshooting against each trouble code.
- 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.
- If Self-diag. (Full) is started by turning ON the main power switch, it cannot move to Normal Mode or Service Mode. To change the mode, turn OFF the main power switch, and turn it ON again after 10 seconds.

**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.
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, carry out "Procedure (when NG is detected)."

**When NG is detected**

1. If [NG] is displayed, the [Error Code] key appears to the self 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 [TROUBLESHOOTING/Error code list], and preform the troubleshooting against each error code.

### 13.9.3 Self-diag. (Individual)

#### (1) MicroSD Check

- To check each item of NVMeSSD individually.

Diagnosis item	Relevant electrical parts
Device recognition	MicroSD (MicroSD), CPU board (CPUB)
R/W Check	MicroSD (MicroSD)
S.M.A.R.T diag.	MicroSD (MicroSD)
MFP FW checksum	-
Partition check	MicroSD (MicroSD)

<Procedure>

- Select the desired diagnosis key. (Two or more keys can be selected.)
- Press the Start key to start the check procedure.
- The check result will be displayed. (OK/NG)
- If [OK] is displayed, touch [END].
- If [NG] is displayed, execute the Self-diag. (Full).

#### (2) I2C Check

- To check each item of the I2C individually.

Diagnosis item	Relevant electrical parts
TPM	TPM board (TPMB), CPU board (CPUB), Base board (BASEB)
AUDIO (Control)	CPU board (CPUB), Base board (BASEB)
PS-CPU	CPU board (CPUB), Base board (BASEB)

<Procedure>

- Select the desired diagnosis key. (Two or more keys can be selected.)
- Press the Start key to start the check procedure.
- The check result will be displayed. (OK/NG)
- If [OK] is displayed, touch [END].
- If [NG] is displayed, execute the Self-diag. (Full).

#### (3) Sys/Image mem check

- To check each item of system memory and image memory.

Diagnosis item	Relevant electrical parts
WORK0 (Main Memory ch.A)	CPU board (CPUB)
WORK0 (Main Memory ch.B)	CPU board (CPUB)

<Procedure>

- Press the Start key to start the check procedure.
- 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.

- If [OK] is displayed, touch [END].
- If [NG] is displayed, execute the Self-diag. (Full).

##### NOTE

- NG will also be displayed if no DIMM is mounted. If an additional DIMM is not used, no error occurs even if NG is displayed, and no troubleshooting is required.

#### (4) Various USB Check

- To check each item of the USB Device individually.

Diagnosis item	Relevant electrical parts
USB Device	CPU board (CPUB), Base board (BASEB), USB hub board (USBHB), Wireless LAN board (WLANB), Authentication unit
Keyboard	USB keyboard
USB memory	USB memory

<Procedure>

- Select the desired diagnosis key. (Two or more keys can be selected.)
- Press the Start key to start the check procedure.
- The check result will be displayed. (OK/NG)

##### NOTE

- When checking [Keyboard] or [USB Memory], [NG] will be displayed if no device is connected.

- If [OK] is displayed, touch [END].
- 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 "TROUBLESHOOTING/ Troubleshooting when NG is detected on keyboard."
  - If [NG] is displayed for [USB Memory], perform the "TROUBLESHOOTING/ when NG is detected on USB memory."

**(5) CPU Board Check**

- To check each item of the CPU board individually.

Diagnosis item	Relevant electrical parts
S800 Compress/ Decompression check	CPU board (CPUB)
S800 Output image path check	CPU board (CPUB)
LAN-IF Ping Test	CPU board (CPUB), Base board (BASEB)

<Procedure (S800 Compress/ Decompression check / S800 Output image path check)>

- Select the desired diagnosis key. (Two or more keys can be selected.)
- Press the Start key to start the check procedure.
- The check result will be displayed. (OK/NG)
- If [OK] is displayed, touch [END].
- If [NG] is displayed, execute the Self-diag. (Full).

<Procedure (LAN-IF Ping Test)>

- Touch the [LAN-IF Ping Test] key.
- Select the input method according to the IP address of the destination.
- [Input IPv4 Address] / [Input IPv6 Address]
- Input IP address of destination with the numeric keypad or the alphabet key.
- Press the Start key to start the check procedure.
- When the self diagnosis procedure is completed, the result will be displayed. (OK/NG)
- If [OK] is displayed, touch [END].
- If [NG] is displayed, execute "TROUBLESHOOTING/ Troubleshooting when NG is displayed for Ping Test."

**(6) PCIe Check**

- To check each item of the PCIe Device individually.

Diagnosis item	Relevant electrical parts
PCIe device check	CPU board (CPUB)

<Procedure>

- Select the desired diagnosis key.
- Press the Start key to start the check procedure.
- The check result will be displayed. (OK/NG)
- If [OK] is displayed, touch [END].
- If [NG] is displayed, execute the Self-diag. (Full).

## 14. Test Mode

### 14.1 Test Pattern

- Output the test pattern to check the image on the printer side.
- 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.

<Input procedure>

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.

## 15. Network Settings

### 15.1 2nd Network Setting

#### NOTE

- Before making settings, note the network environment of the customer and make the settings to suit the environment.

#### 2nd network card settings

- To be configured when an optional Upgrade Kit (wireless LAN) has been installed in this machine.

#### NOTICE

- To perform a remote control from an Android tablet terminal or iOS terminal, bizhub Remote Access are required.

Setting item	Contents	Default setting
Set	To be selected to install optional wireless LAN devices.	
Unset	To be selected not to install optional wireless LAN devices.	○

#### NOTE

- When [Set] is selected, configure the Change point.

#### Network interface structure

- 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) or Wired+Wireless (Wi-Fi Direct) is selected)

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 body 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 body is connected to both a LAN environment and a wireless LAN environment. To execute a job received from a client via the LAN. A job is received from the client via the wireless LAN access point and executed.
Wired+Wireless (Primary Mode)	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. When starting up the MFP main body, perform wireless LAN communication between the MFP main body and the mobile device (Android device, iOS device, or devices supporting Wi-Fi) without via wireless LAN access point.
Wired+Wireless (Wi-Fi Direct)	Use when the MFP main body 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.

### 15.2 Remote Service Setting

#### 15.2.1 Function Setting

##### Enable Settings

- 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.

Setting item	Default setting
ON	
Disable	○

##### Server Settings

- To set URL, ID and password of the server to be used on remote service communication.

Setting item	Setting
URL	(Address or host name): port number <ul style="list-style-type: none"> <li>Address: IPv4 or IPv6 address</li> <li>Host name: Alphanumeric characters and symbols up to 253 characters</li> </ul>
ID	Alphanumeric characters and symbols: 1-64 characters
Password	Alphanumeric characters and symbols: 0-64 characters

#### 15.2.2 Proxy Server Setting

##### Enable Settings

- To set whether to use the proxy server.
- When [ON] is set, the [WebDAV Synchronize] and [Proxy Server] settings can be configured.

Setting item	Default setting
ON	
Disable	○

**WebDAV Synchronize**

- 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.

Setting item	Default setting
Synchronize	
Do not Synchronize	<input type="radio"/>

**Proxy Server**

- To configure the proxy server settings.

**NOTE**

- It will be not displayed when [WebDAV Synchronize] is set to [Synchronize].

Setting item	Setting
Host Name	Address or host name <ul style="list-style-type: none"> <li>Address: IPv4 or IPv6 address</li> <li>Host name: Alphanumeric characters and symbols up to 253 characters</li> </ul>
User Name	Alphanumeric characters and symbols: 0 to 63 characters
Password	Alphanumeric characters and symbols: 0 to 63 characters
Port Number	1 to 65535

**15.2.3 Maintenance Setting****Identification Code**

- To enter the identification code used to organize and manage multiple MFPs on a per-customer basis.

Setting range	Description
0 to 99999999 (8-digit number)	Note the hierarchical order: First 2 digits represent the region code and the last 6 digits represent the management code.

**Operator Name**

- To enter the keywords used by maintenance personnel to easily search for corresponding MFPs on the remote service server UI screen.

Setting range	Description
Alphanumeric characters/symbols/space (up to 64 characters)	Specify the operator name.

**Setup**

- To connect to the remote service server manually.
- Touch Start to send the identification code and operator name to the remote service server.

**15.2.4 XMPP Settings****Function setting**

- 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.

Setting item	Default setting
ON	<input type="radio"/>
Disable	

**Connection Setting**

Setting item	Description	Setting	Default setting
Repeat Interval	To set the repeat interval used when communication with the XMPP server fails.	1 to 5 Minutes	1 Minute
Connection Time-out	To set the timeout used for communication with the XMPP server.	5 to 300 Sec	60 sec.
SSL	To set whether to use the SSL when communicating with the XMPP server.	ON	<input type="radio"/>
		OFF	
BOSH	To set whether to use the BOSH connection when communicating with the XMPP server.	ON	<input type="radio"/>
		OFF	

**Connection server info**

- To confirm the URL, ID, domain name, port number and connection status.

**15.2.5 Always Connection Setting****Maintenance Time**

- Specify the maintenance time.

Setting item	Description	Default setting
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.	<input type="radio"/>



**Existence Notice Interval**

- To set the time interval used to send existence notice packets for existence notice from the MFP to the XMPP server.

Setting range	Default setting
1 to 3600 sec.	55 sec.

**Learning Function**

- 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.

Setting item	Description	Setting	Default setting
Learning Function	To set whether to enable the learning function. <ul style="list-style-type: none"> <li>When [Enable] is set, the adjust value and lower limit must be configured.</li> </ul>	Enable	
		Disable	○
Adjust Value	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.	1 to 3600 sec.	30 sec.
Lower Limit	To make sure not to set the packet transmission interval shorter than the "lower limit".	1 to 3600 sec.	30 sec.

**15.3 Port Settings**

- To set the threshold value for determining the load state of the Raw port.

Setting range	Default setting
1 to 60 minutes	3 minutes

**15.4 MTU Param. set.**

- Set the maximum value (MTU) of data that can be transmitted at once.
- Set operations of Path MTU Discovery.

**NOTICE**

- Path MTU Discovery detects the minimum MTU on the communication path and uses it to automatically set the MTU size.

**Path MTU Discovery Settings**

- Set whether to enable Path MTU Discovery.

Setting	Description	Default setting
0	To enable Path MTU Discovery.	○
1	To disable Path MTU Discovery.	

**Minimum MTU Size Setting**

- This setting is available when Path MTU Discovery is enabled.

Setting range	Description	Default setting
68 byte to 1500 byte	The setting value is used as the minimum MTU size of the packet to be sent.	552 byte

**Fixed MTU Size Setting**

- This setting is available when Path MTU Discovery is disabled.

Setting range	Description	Default setting
1280 byte to 1500 byte	The setting value is used as the fixed MTU size of the packet to be sent.	1500 byte

## 16. Machine Update Setting

### 16.1 Internet ISW

#### 16.1.1 Internet ISW Set

- 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] -> [Security] -> [Enhanced Security Mode] is set to "ON", this setting will automatically be set to "OFF" and cannot be changed.

Setting item	Description	Setting	Default setting
Function setting	To set whether or not to enable each setting for Internet ISW.	ON	
		OFF	○
Open Mode Settings	This setting is available when Function Setting is set to "Set." When "Set" is set, download and update of firmware by Internet ISW is enable by administrator settings.	Set	
		Unset	○

#### 16.1.2 HTTP Setting

To use when accessing the server using the HTTP protocol.

Setting item	Description	Setting	Default setting
HTTP data acquisition setting	To set whether or not to enable downloading using the HTTP protocol. When "ON" is set, set Connection Time-out.	ON	
		OFF	○
Connection Time-out	To set the time for the timeout for accessing the server.	30 to 300 sec.	60 sec.

#### 16.1.3 FTP Settings

To use when accessing the server with FTP protocol.

Setting item	Description	Setting	Default setting	
FTP data acquisition setting	To set whether or not to enable downloading using FTP protocol.	ON	○	
		OFF		
Connection Setting	Port Number	To set the port number.	1 to 65535	21
	Connection Timeout	To set the timeout time.	1 to 60 (Minute)	1 (Minute)
	PASV Mode:	To set whether to enable or disable connection by the PASV (passive) mode (FTP server side will inform the connection port before connecting).	ON	
		OFF	○	

#### 16.1.4 Forwarding Access Setting

Setting item	Description	Setting
User ID	To register the user ID for accessing the program server where firmware is to be stored.	Alphanumeric characters and symbols (up to 64 characters)
Password	To register the password for accessing the program server where firmware is to be stored.	Alphanumeric characters and symbols (up to 64 characters)
URL	To register the user ID for accessing the program server where firmware is to be stored. <ul style="list-style-type: none"> <li>When connecting to http "http:// (Host name or IP address)/ directory name" or "https:// (Host name or IP address)/directory name".</li> <li>When connecting to ftp "ftp:// (Host name or IP address)/directory name".</li> </ul>	Alphanumeric characters and symbols (up to 256 characters)
FileName	To register the file name of the firmware data to be downloaded.	Alphanumeric characters and symbols (up to 63 characters)

<Procedure>

- Select a setting item.
- Enter information using the on-screen keyboard.

#### 16.1.5 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 settings of the proxy used in Internet ISW communications is configured in [Administrator] -> [Network] -> [Machine Update Settings] -> [Internet ISW Settings] -> [FTP Server Setting] or [Administrator] -> [Network] -> [Machine Update Settings] -> [HTTP Proxy Settings].
- 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 "[L.6 ERROR CODE FOR THE INTERNET ISW](#)" for the error codes.

#### Download/Update

- 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.

<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.
4. When the firmware is normally upgraded, the main body will automatically be restarted to complete the Internet ISW.

### Download

- 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 exists in the MFP storage, the data is overwritten and replaced by the new data.

<Procedure>

1. Select [Download].
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. In the middle of downloading, the task can be cancelled by touching [Cancel].
4. When the firmware download is successfully completed, the result "OK" appears.

### Update

- 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.

<Procedure>

1. Touch [Update].
2. Check the firmware file version in HDD.
3. Touch [Start] to update the firmware.
4. When the firmware is normally upgraded, the main body will automatically be restarted to complete the Internet ISW.

### Delete

- To delete the firmware file saved in the HDD.
- This button is not appeared if there is no firmware in the HDD.

<Procedure>

1. Touch [Delete].
2. Touch [Start] to delete the firmware.

### 16.1.6 Update Start Time Settings

- To set the start time in order to automatically update the downloaded firmware.

#### 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.**

<Procedure>

1. Select [Set] for [Update Firmware at Specified Time].
2. Touch [Hour] and [Min.] and set the firmware update start time.

## 16.2 Machine Auto Update Settings

### 16.2.1 Auto Update setting

#### (1) Outline

- "Auto Update" is the function, which makes the main body access the program server periodically through the network to obtain a new firmware data, then rewrites it automatically.
- To use the Auto Update function, the MFP main body must be 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
  - [Administrator] -> [Security] -> [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.

#### (2) 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.

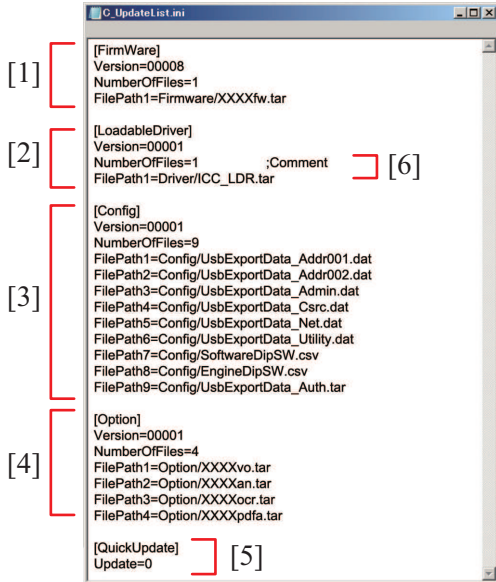
#### Creating the program update information file (C\_UpdateList.ini)

- Specify the firmware, loadable driver, configuration files as shown below.

#### NOTE

- **[FirmWare], Version, FilePath, [LoadableDriver], NumberOfFiles, [Config], [Option], [QuickUpdate] and Update must be specified by using the capital letters and small letters properly.**

A sample of C\_UpdateList.ini



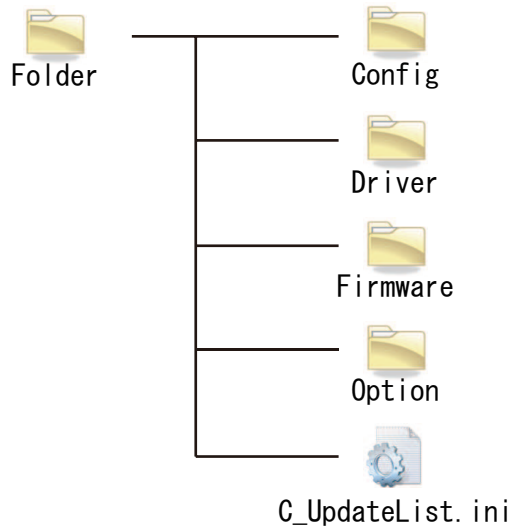
	Setting item	Description	Parameter list
[1]	[FirmWare]	Firmware updating information	Version, NumberOfFiles, FilePath
[2]	[LoadableDriver]	Loadable driver updating information	Version, NumberOfFiles, FilePath
[3]	[Config]	Configuration files updating information	Version, NumberOfFiles, FilePath
[4]	[Option]	Options updating information <ul style="list-style-type: none"> <li>Voice guidance data, movie help data, OCR data, PDF/A font, OEM name customize data, authentication customize data are to be updated.</li> </ul>	Version, NumberOfFiles, FilePath
[5]	[QuickUpdate]	Timing for updating data	Update
[6]	-	Comment	A comment can be inserted between "#" or ";" and the line break code.

Parameter list

Parameter	Description
Version	Specify the version information of update data using a number including up to five digits.
NumberOfFiles	Specify the number of update data to up to three digits. Specify "NumberOfFiles=0" not to include the data to update.
FilePath	Specify a location to store the update data. A relative path should be specified from the program update information. If there are multiple files, give sequence numbers like "FilePath1," "FilePath2." Even if there is only one file, "1" must be given as "FilePath1."
Update	Specify the data update timing. "Update=0": Rewrite in accordance with the update time settings. "Update=1": Rewrite soon after downloading.

**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.

**NOTE**

- 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].

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.

**Create the Software switch setting/Engine FW DipSW setting file**

- Create CSV files for the data with the required switch number as SoftwareDipSW.csv and EngineDipSW.csv.
- 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			

Example	Description
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		

Example	Description
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.

**(3) Auto Update setting**

- Obtain the MFP update file from the program server, and configure settings to update the machine at the specified time.
- This function is same as that of the [Administrator] -> [Network], but it will not be used together with the function of the service mode.

**NOTE**

- It will not be displayed when [Service Mode] -> [Network Settings] -> [Remote Service Setting] -> [Function Settings] -> [Enable Settings] is set to "ON." [Machine Auto Update setting] in "Administrator" is not applicable.
- When the SMB protocol used, the MFP uses static IP addresses.

**Server 1 Settings**

Setting item		Description	Setting	Default setting
Auto Update		To set whether or not to use the auto update setting. • When [ON] is selected, configure the settings for Acquisition protocol.	ON	○
			OFF	
Server Name		To set an arbitrary server name to identify the connection destination.	Alphanumeric characters (up to 20 characters)	Server1
Download Protocol		To set the protocol for acquiring an update data. • If the MFP relay server is used as a server on the data providing side, select [HTTP].	SMB	○
			HTTP	
SMB Setting	Host Name	Set the host name for the SMB server.	Alphanumeric characters and symbols (up to 253 characters)	-
	File Path	Set the file path used for SMB server communication. • Specify the folder in which C_UpdateList.ini is stored.	Up to 255 characters	-
	User Name	Set the user name used to access the SMB server.	Up to 64 characters	-
	Password	Set the password used to access the SMB server.	Alphanumeric characters and symbols (up to 64 characters)	-
	Number of retries	Set the number of times to retry when failed to obtain.	0 to 10 count	3 times
HTTP Setting	URL	Set the address of the http server. • Specify the folder in which C_UpdateList.ini is stored.	Alphanumeric characters and symbols (up to 253 characters)	-
	User Name	Set the user name used to access the relay server by http protocol.	Up to 64 characters	-
	Password	Set a password used to access the http server.	Alphanumeric characters and symbols (up to 64 characters)	-
	Proxy	To set whether or not to use the proxy server. • If [ON] is selected, set the proxy with [Administrator] -> [Network] -> [Machine Update Settings] -> [HTTP Proxy Settings].	ON OFF	○
	Connection Time-out	To set the time for the timeout for accessing the server.	30 - 300	60 Sec.

**Server 2 settings**

Setting item		Description	Setting	Default setting
Auto Update		To set whether or not to use the auto update setting. • When [ON] is selected, configure the settings for Acquisition protocol.	ON	○
			OFF	
Server Name		To set an arbitrary server name to identify the connection destination.	Alphanumeric characters (up to 20 characters)	Server2
HTTP Setting	URL	To set the address of the http server. • Specify the folder in which C_UpdateList.ini is stored.	Alphanumeric characters and symbols (up to 253 characters)	-
	User Name	Set the user name used to access the relay server by http protocol.	Up to 64 characters	-
	Password	Set a password used to access the http server.	Alphanumeric characters and symbols (up to 64 characters)	-
	Proxy	To set whether or not to use the proxy server. • If [ON] is selected, set the proxy with [Administrator] -> [Network] -> [Machine Update Settings] -> [HTTP Proxy Settings].	ON OFF	○
	Connection Time-out	To set the time for the timeout for accessing the server.	30 - 300	60 Sec.

**Common Settings**

- Configure the common settings for [Server 1 settings] and [Server 2 settings].

Setting item	Description	Setting	
Update Time	Touch Clear to set the time to update the machine.	Time	00 to 23 o'clock
		Minute	00 to 59 Minutes
Polling Settings	To set the polling period or day of the week and clock for obtaining the update list.	Set Interval.	1 to 240 Minutes
		Select Day of the Week	To set the day of the week and clock.
Repeat Interval	Set the period for retrying when failed to obtain.	• 1 to 240 Minutes	

#### (4) Data Update

##### Download the update data

- 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.

##### Data auto update

- If the MFP power is set to ON at the time set with [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.

##### Data update from 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.**
  - Touch [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.

#### (5) 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 SMB protocol

Error code	Cause of error	Solution
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	Solution
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	Solution
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		

Error code	Cause of error	Solution
T10001	<ul style="list-style-type: none"> <li>The C_UpdateList. data has not been properly downloaded</li> <li>The C_UpdateList. data is corrupted</li> </ul>	<ul style="list-style-type: none"> <li>Download the file again.</li> <li>Check to see if the file on the server is correct.</li> </ul>
T10010 T10020	<ul style="list-style-type: none"> <li>Descriptions in C_UpdateList.ini are not correct</li> </ul>	<ul style="list-style-type: none"> <li>Set the descriptions in C_UpdateList.ini correctly.</li> </ul>

### 16.2.2 Relay server setting

#### (1) Outline

- The "Relay Server Function" is possible to share the update data obtained from the network with other MFP, and operate the MFP as a program server for the "Auto Update function."
- To use the Relay Server function, the MFP main body must be 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 OFF mode (power key is orange) or ErP auto power OFF mode (power key flashes orange) enabled
  - [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "ON".

#### NOTE

- This function is disabled when the Marketing Area of the service mode is set to US or Others5.

#### (2) 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.
- Create a data update information file (S\_UpdateList.csv) and store it in the program server for managing the relay data saved on one relay server machine.

#### Creating the data update information file (S\_UpdateList.csv)

- Create a CSV file by specifying the model name, data update date and time, and path for accessing the Data update folder used to the Auto Update function.
- Specify up to four (four types) folders of relay data set.

#### NOTE

- Information of five or more folders (five types) will be invalid.

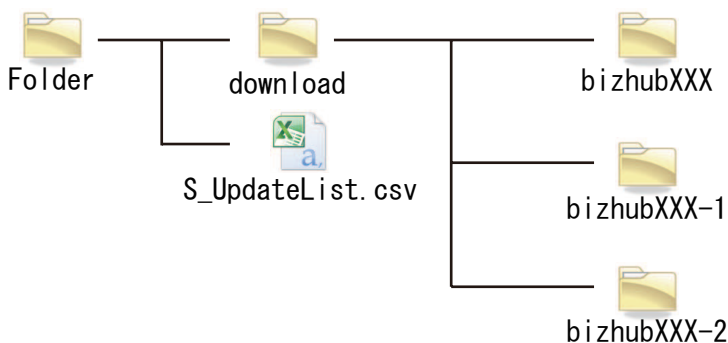
A sample of S\_UpdateList.csv

	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

#### How to store data in program server

- The folder configuration of the sample data of S\_UpdateList.csv is as shown below.



#### (3) Relay server setting

- Configure settings to use the relay server to obtain the update relay data.
- This function is same as that of the [Administrator] -> [Network], but it will not be used together with the function of the service mode.



Setting item		Description
Update File Download		Access the program server periodically, and set whether or not to use the function to obtain the latest update file.
Obtain Setting File	URL	Set the address of the file storage server. • Specify the folder in which S_UpdateList.csv is stored.
	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. • If [ON] is selected, set the proxy with [Administrator] -> [Network] -> [Machine Update Settings] -> [HTTP Proxy Settings].
	Connection Time-out	To set the time for the timeout for accessing the server.
Polling Settings		Set the polling period or day of the week and clock for obtaining the update list. • Set Interval: Specify in range of 1 to 240 minutes. • Select Day of the Week: Select Day of the Week To set the day of the week and clock.
Repeat Interval		Set the period for retrying when failed to obtain. • Specify in range of 1 to 240 minutes.
SMB Authentication		Do not use SMB Authentication.
Distribution Server (HTTP)	Distribution Server (HTTP)	Set whether or not to use the Distribution Server (HTTP) function for the update file.
	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.

**NOTE**

- \*: **Be sure not to forget the password used to access the http server. It is required for reset.**

**(4) Acquiring update data**

1. The MFP confirms the data update information file in the program server with an interval set at [Polling Interval].
2. 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.
3. The downloaded relay data is stored in the MFP storage.

**(5) 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.

**(6) Auto update by relay server**

- Configure the following settings on the MFP where auto update function due to relay server update data is used.
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 [HTTP] in [Download Protocol].
  5. Specify the folder including C\_UpdateList.ini in [HTTP Setting] -> [URL].  
in the case of the sample of S\_UpdateList.csv
    - http://IP address or host name of MFP to become the relay server/DAV/Service/download/bizhubXXX
    - File paths are case sensitive, so enter the portion after "DAV/Service/" exactly as 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/".
  6. Set the item in [HTTP Setting] -> [User Name] and [Password] that has been set in [Relay server setting] -> [Distribution Server (HTTP)].
  7. Touch [OK].
  8. Make settings in [Common Settings].

**16.2.3 Transmission log Update**

- Save the log related to machine auto update, and send it to the specified location.
- The log file saves up to 100 records.

Setting item	Description	Setting	Default setting
Update log transmission.	To set whether or not to use Transmission log Update. When [ON] is selected, configure the settings for transmission protocol and server.	ON	
		OFF	○
Transmission protocol	Configure settings for the transmission protocol.	SMB	○
		WebDAV	

Setting item		Description	Setting	Default setting
SMB Setting	Host Name	Set the host name for the SMB server.	Alphanumeric characters and symbols (up to 253 characters)	-
	File Path	Set the file path used for SMB server communication.	Up to 255 characters	-
	User Name	Set the user name used to access the SMB server.	Up to 64 characters	-
	Password	Set the password used to access the SMB server.	Alphanumeric characters and symbols (up to 64 characters)	-
WebDAV Setting	URL	To set the address of the WebDAV server.	Alphanumeric characters and symbols (up to 253 characters)	-
	User Name	Set the user name used to access the WebDAV server.	Up to 64 characters	-
	Password	Set the password used to access the WebDAV server.	Alphanumeric characters and symbols (up to 64 characters)	-
	Proxy	Set whether or not to use the proxy server. • If [ON] is selected, set the proxy with [Administrator] -> [Network] -> [Machine Update Settings] -> [HTTP Proxy Settings].	ON OFF	- -

#### 16.2.4 Transmission Server Log

- Save the log related to the update relay data download at relay server, and send it to the specified location.
- The log file saves up to 100 records.

Setting item		Description	Setting	Default setting
Transmission Server Log		To set whether or not to use Transmission Server Log. When [ON] is selected, configure the settings for transmission protocol and server.	ON	
			Disable	<input type="radio"/>
Transmission protocol		Configure settings for the transmission protocol.	SMB	<input type="radio"/>
			WebDAV	
SMB Settings	Host Name	Set the host name for the SMB server.	Alphanumeric characters and symbols (up to 253 characters)	-
	File Path	Set the file path used for SMB server communication.	Up to 255 characters	-
	User Name	Set the user name used to access the SMB server.	64 characters maximum	-
	Password	Set the password used to access the SMB server.	Alphanumeric characters and symbols (up to 64 characters)	-
WebDAV Setting	URL	To set the address of the WebDAV server.	Alphanumeric characters and symbols (up to 253 characters)	-
	User Name	Set the user name used to access the WebDAV server.	64 characters maximum	-
	Password	Set the password that is used to access the WebDAV server.	Alphanumeric characters and symbols (up to 64 characters)	-
	Proxy	To set whether or not to use the proxy server. • If [ON] is selected, set the proxy with [Administrator] -> [Network] -> [Machine Update Settings] -> [HTTP Proxy Settings].	ON Disable	- -

#### 16.2.5 Update Log Display

- To check the log related to the file download of the machine auto update.
- The latest five logs can be checked.

#### 16.2.6 Relay Server Log Confirmation

To check the log related to the file download of the relay server.

The latest five logs can be checked.

### 16.2.7 Manually 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.
- To execute update manually by using the downloaded file.
- Touch [Start] to start update.

**NOTE**

- Do not set the power to OFF under the following state.
  - Touch [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.

### 16.2.8 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].
- To import all importable files those are saved in the root folder of the USB memory.

**NOTE**

- In the following conditions, export of MFP setting data is prohibited.
  - [Administrator] -> [Security] -> [USB Connection Permission setting] is set to [Restrict].
  - [Administrator] -> [Security] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory(Service)] is set to [Restrict].
  - [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "ON."

Importable setting file	FileName
Authentication Data (*1)	UsbExportData_Auth.dat
Network Settings (*1)	UsbExportData_Net.dat
Remote Access Setting	UsbExportData_Csrc.dat
User Settings	UsbExportData_Utility.dat
Administrator Setting (*1)	UsbExportData_Admin.dat
Service Settings	UsbExportData_Service.dat
Cloud Connection	UsbExportData_Cloud.dat
Display Custom Settings (*1)	UsbExportData_Topmenu.dat, TopMenuGadget.tar
External Cert (*1)	UsbExportData_ExtCertificates.tar
Custom Settings (*1) (*2)	UsbExportData.dat
Accessibility (*1)	UsbExportData_Universal.dat
Authentication customize data (*2)	AuthCustomMaster_***.xml

- \*1: It will be displayed when [Service Mode] -> [System 2] -> [Maintenance Mode] is set to [Effective], and [Admin.] -> [Security] -> [Maintenance Mode Access] is set to [Allow].
- \*2: This file can be imported without inputting password, because it is not encrypted.

<Procedure>

1. Insert a USB memory into the USB port.
2. Enter a password.
3. 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.

4. 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.

### 16.2.9 Machine Export setting

- Output the main unit configuration in XML format to a USB memory device or the SMB folder in the main unit.

**NOTE**

- In the following conditions, export of MFP setting data is prohibited.
  - [Administrator] -> [Security] -> [USB Connection Permission setting] is set to [Restrict].
  - [Administrator] -> [Security] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory(Service)] is set to [Restrict].
  - [Administrator] -> [Security] -> [Enhanced Security Mode] is set to "ON."

Data to be exported
Authentication Data (*)
Network Settings (*)
Remote Access Setting
User Settings
Administrator Setting (*)
Service Settings (Excluding the setting of Software Switch and Engine FW DipSW)
Cloud connection (*)
Display Custom Settings (*)

Data to be exported
External Cert (which is retained) (*)
Accessibility (*)
Authentication customize data

- \*: It will be displayed when [Service Mode] -> [System 2] -> [Maintenance Mode] is set to [Effective], and [Admin.] -> [Security] -> [Maintenance Mode Access] is set to [Allow].

<Procedure>

1. Select the item to be output.
2. Select either [USB] or [SMB] as the [Export Destination].

**NOTE**

[SMB] displays when the following settings are made.

- [Administrator] -> [Network] -> [SMB Setting] -> [SMB Server Settings] -> [Share SMB File Setting] -> [ON]

If you select [USB], connect a USB memory device to a USB port.

3. Enter a password.

**NOTE**

- 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].

4. Touch [Start].
5. [Result: OK] will be displayed.
6. Complete the data export.

**NOTE**

- When [SMB] is selected, the data is exported to the SMB folder of this machine.
  - Check of the SMB folder: \\(IP address)\FWDData\_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

### 16.2.10 Machine Update Password

- To set a password used to decrypt the update file of the machine.

<Procedure>

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-input Password: Enter the new decryption password again.

**NOTE**

- Be sure not to forget the decryption password. It is required for reset.

### 16.3 Firmware Update Parameters

- If [Administrator] -> [Security] -> [Firmware Updat.Verification Set.] is enabled, perform the firmware signature.
- Use when update firmware performing the signature.

**NOTE**

- The digital signature should be installed with [Service Mode] -> [EnhancedSecurity] -> [FWCert. Setting].

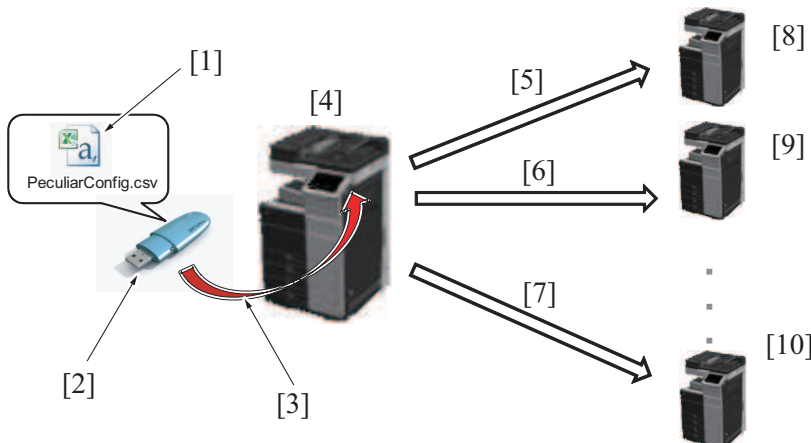
<Procedure>

1. Create "XXfw.tar" file from the firmware. For details about the procedure, see "K.3.2.1 Making the firmware data."
2. Get the signature file "XX.sig".
3. Store the firmware "XXfw.tar" file and the signature file "XX.sig" file in a USB memory.
4. Connect a USB memory to the USB port.
5. Touch [Start] to update the firmware.

### 16.4 Copy Network Settings

#### 16.4.1 Outline

- To deliver the network-related information saved in the USB memory to, and set 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.1X)	[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)

### 16.4.2 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.

#### Setting the originating MFP

- Check that the originating MFP and the recipient MFPs are connected to the same network (segment).
- Set a fixed IP address in the originating MFP.
- Set [Administrator] -> [Network] -> [OpenAPI Setting] -> [Access Setting] to "ON".
- Set [Administrator] -> [Network] -> [OpenAPI Setting] -> [External Application Connection] to "ON".

#### 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] -> [System Connection] -> [OpenAPI Setting] to the default values.

#### 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
  - Formatted to the FAT32 file system
  - Not including security features (Possible to turn OFF security features)
  - 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.

#### 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>

- Enter the serial number and the IP address v4 validation method.
- 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.
- 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.**

### 16.4.3 Deliver/setting procedure

- Prepare a CSV file (PeculiarConfig.csv) that describes the setting values to be delivered into the root directory under the USB memory, and connect the USB memory to the originating MFP
- Set the time-out time in [Copy Network Settings] -> [Connection Timeout].
  - Setting range: 1 to 300 sec.
  - Default value: 30 sec.
- Touch [Copy Network Settings] -> [Copy Setting] -> [Check Connection] -> [Start].
- Check the number of MFPs displayed at "Result" against the number of MFPs displayed "OK".
- 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.**
- 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.
  - The CSV file (PeculiarConfig\_Result.csv) that contains the delivery result is stored in the USB memory inserted in the originating MFP.
  - 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 list

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 (*)	"OFF" is set in [OpenAPI Setting] -> [Access Setting].
E00007 (*)	"ON" is set in [OpenAPI Setting] -> [Authentication].
E00008 (*)	"SSL Only" or "SSL/Non-SSL" is set in [OpenAPI Setting] -> [SSL/Port Settings].
E00009 (*)	Any data other than "50001" is set in [OpenAPI Setting] -> [SSL/Port Settings].
E00010 (*)	"No" is set in [OpenAPI Setting] -> [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.

# J BILLING SETTING/ENHANCED SECURITY/DEBUG SETTINGS

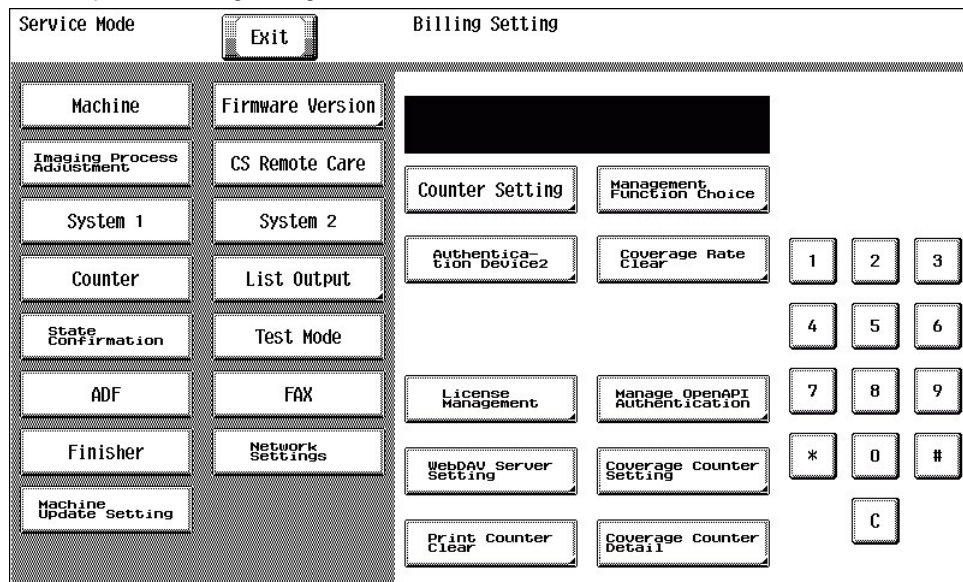
## 1. BILLING SETTING

### 1.1 Outline

#### Starting procedure

1. Call the initial screen of Service Mode.
2. Press the following keys in this order.
  - Stop -> 9
3. Call the Billing Setting screen.

An example of the Billing Setting screen



#### Exiting procedure

1. Touch [Exit].
2. Turn OFF the main power switch. Wait 10 seconds, then turn ON the main power switch again.

## 1.2 Counter Setting

### 1.2.1 Total Counter Mode

- To set the counting method for the total counter.

Setting item	Contents	Default setting
Mode 1	1 count per copy cycle	○
Mode 2	Large size is double counts	

Count-up table

Total Counter mode	Print mode	Paper size	Total	Large size	2-Sided Total
Mode 1	1-Sided	Except for large size	1 count	0 count	0 count
		Large size	1 count	1 count	0 count
	2-Sided	Except for large size	2 count	0 count	1 count
		Large size	2 counts	2 counts	1 count
Mode 2	1-Sided	Except for large size	1 count	0 count	0 count
		Large size	2 counts	1 count	0 count
	2-Sided	Except for large size	2 counts	0 count	1 count
		Large size	4 counts	2 counts	1 count

### 1.2.2 Large Size Counter Mode\_A4

- To set the size regarded as the large size.

Setting item	Contents	Default setting
No count	No count the large size counter.	○
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.	
/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.)	

### 1.2.3 Count by the combination of each setting

- The count method depends on the combination of the Counter Setting.
- The following shows count methods that are the combination of each setting.

Total Counter	Large Size Counter Mode	Paper size	Count
Mode 1	No count	-	1 count
	Other than No count	Except for large size	1 count
		Large size	1 counts
Mode 2	No count	-	1 count
	Other than No count	Except for large size	1 count
		Large size	2 counts

### 1.3 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] -> [Security] -> [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] -> [Security] -> [Function Management Settings] -> [Network Function Settings] will be set to "OFF".

#### 1.3.1 Vendor 2

- To set whether or not the vendor 2 is installed.

##### (1) Vendor

#### Message

- Select message of vendor.

Setting item	Contents
Type 1	Message for coin vendor
Type 2	Message for card keeper
Type 3	Message for both coin and card

### 1.4 Authentication Device 2

- To set whether or not the authentication device 2 is installed.
- Set when the authentication unit (biometric type or card type) is mounted.

Setting item	Contents
Card	Uses IC card authentication system (AU-201S/OMNIKEY 5427CK (AU-205H)/YSoft card reader/USB keyboard emulation card reader). A response timeout interval is displayed. (The interval is unchangeable.)
Body	Uses biometrics (finger vein) authentication system (AU-102) Set a film timeout interval, capture trial time and authentication trial time.
Card 3	Uses IC card authentication device for PKI card system It 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).

#### 1.4.1 Installation procedures of authentication unit

##### (1) 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 in advanced combination with the firmware version.

Authentication device	Compatible IC cards
AU-102	Body

##### (2) AU-201S

1. Install the loadable driver (ICC\_LDR.tar) to the main unit. (\*1)(\*2)(\*3)
2. Install the 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 in advanced combination with the firmware version.

Authentication device	Loadable driver name (KM standard setting)	Compatible IC cards
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:
  - Using the Auth Device Tool Advanced for AU-201S, prepare a combination of the loadable driver and the IC card information setting file and export it as a loadable driver.  
IC card information setting file preparation tool
  - Using the Auth Device Tool Advanced for AU-201S, prepare the IC card information setting file only and install the loadable driver in the MFP. Then, using the Data Administrator, write the IC card information setting file in the MFP.  
IC card information setting procedures

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.

**(3) USB keyboard emulation card readers**

- Install the loadable driver (ICC\_LDR.tar) to the main unit. 1
- Select [Card] in [Service Mode] -> [Billing Settings] -> [Authentication Device 2].
- Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
- Set Vendor ID and Product ID of the card reader in [Administrator] -> [User Auth/Account Track] -> [Authentication Device Settings] -> [Card Authentication] -> [USB Device identification information]. 2
- Turn OFF the main power switch.
- Install the USB keyboard emulation card readers to the main unit.
- Turn ON the main power switch.
- Register the authentication card data.

**NOTE**

- 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 \*1**

- Use the loadable driver in advanced combination with the firmware version.

Authentication device	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 \*2**

- 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."

**(4) Miscellaneous card readers**

- The same setting method as that for AU-201S applies for other card readers.
- The following loadable drivers are necessary.
- Use the loadable driver in advanced combination with the firmware version.

Authentication device	Loadable driver name (KM standard setting)	Compatible IC cards
SCL-010	SCL-010 loadable driver (Default: TypeA) (*1)(*2)	TypeA, FeliCa IDm, Mifare
OMNIKEY 5427CK (AU-205H)	5427CK (AU-205H) loadable driver (*2)	HID Prox, HID iCLASS, TypeA, FeliCa IDm (*4)
KM USB Reader v2 MultiReader HF	Loadable driver for YSoft card reader (Default: HID Prox) (*3)	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

Authentication device	Loadable driver name (KM standard setting)	Compatible IC cards
KM USB Reader v2 HID iCLASS		HID iCLASS

**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**

- If cards of 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:
  - Using the 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.
  - Using the 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 Data Administrator, write the IC card information setting file in the MFP.
  - Reference "IC card information setting procedures"

**Note \*3**

- If a YSoft card reader is used, all types of card will be reported as HID Prox card to the authentication program.
- 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) (*3-3,*3-5)	IC Card Information Setting (card type to be reported) (*3-4)
KM USB Reader v2 MultiReader HF	Mifare	HID Prox	TypeA (1) (*3-1,*3-2)
KM USB Reader v2 Legic Advant	LEGIC	HID Prox	TypeA (1) (*3-1,*3-2)
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) (*3-2)
KM USB Reader v2 HID iCLASS	HID iCLASS	HID Prox	HID iCLASS (1) (*3-2)

- \*3-1 The content (ID) to be read from the type A card setting differs from which to be read by using AU-201S.
- \*3-2 When add the YSoft card reader to the authentication network composed of the present AU-201S, 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.
- \*3-3 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.
- \*3-4 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.
- \*3-5 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.
  - 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)
  - 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] -> [User Auth/Account Track] -> [Authentication Device Settings] -> [Card Authentication] -> [IC Card type].
  - Although [Use Card Reader Settings] is also selectable at [Administrator] -> [User Auth/Account Track] -> [Authentication Device Settings] -> [Card] -> [IC Card type], "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.

## 1.5 Coverage Rate Clear

To clear the coverage rate.

Setting value	Contents	Default setting
Set	Select [Set] and [END] key will clear the coverage rate.	
Unset	Not cleared	<input type="radio"/>

## 1.6 License Management

### 1.6.1 Activation

- To activate i-Option functions.
- 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.

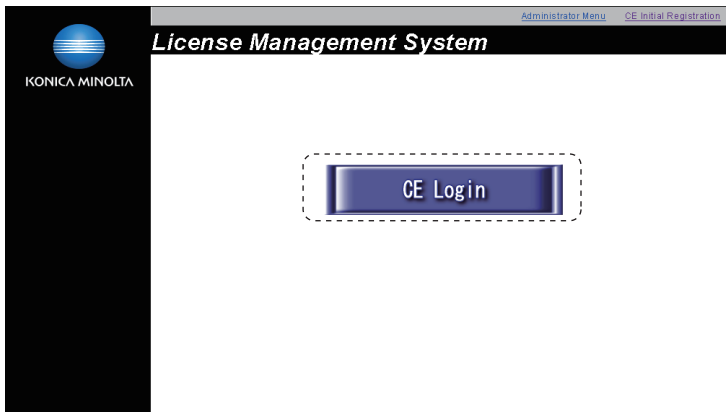
**NOTE**

- 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.

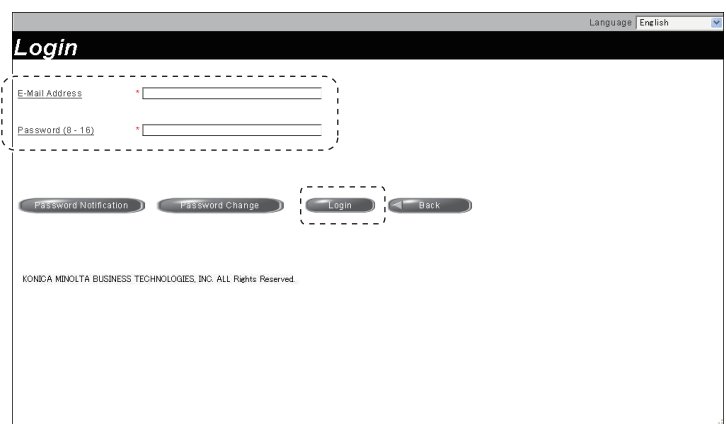
<Procedure>

- Prepare "token certification."

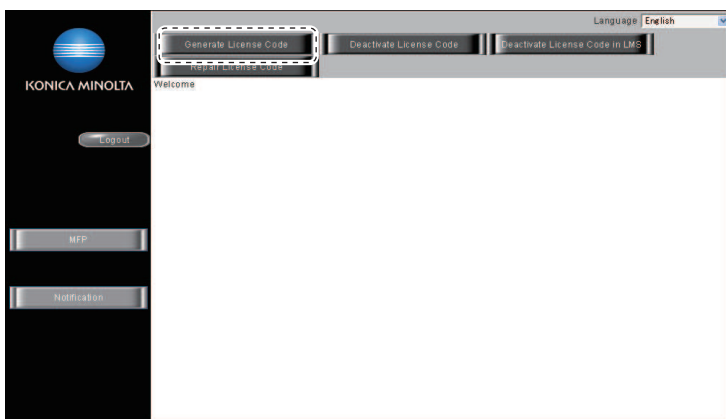
2. Access the following URL using the PC connected to the Internet.  
<https://lms.konicaminolta.com/license/KM/support.aspx>
3. Click [CE Login].



4. Enter [E-Mail Address] and [Password], and click [Login].



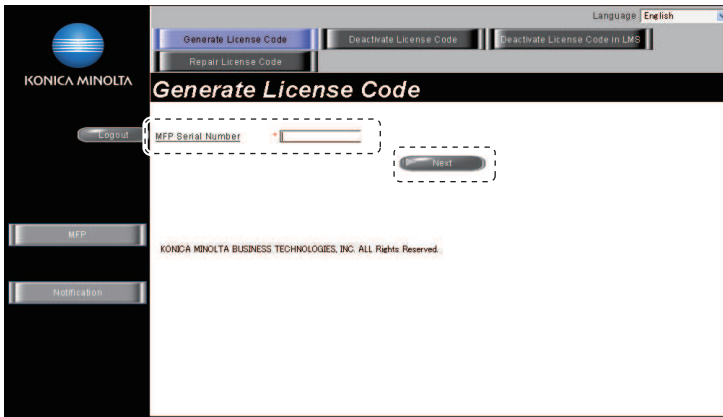
5. Click [Generate License Code].



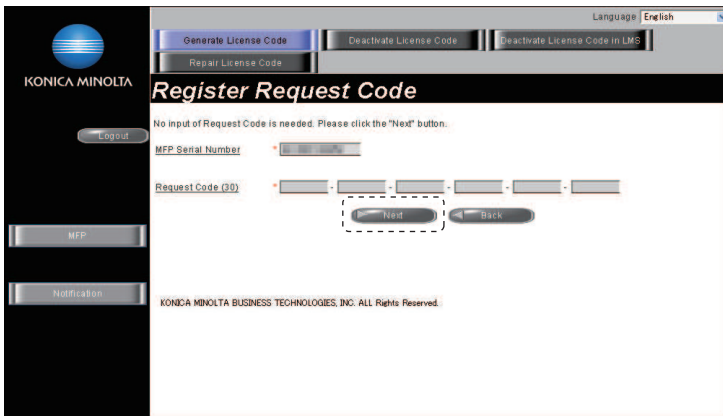
6. Enter the serial number of the target MFP, and click [Next].

**NOTE**

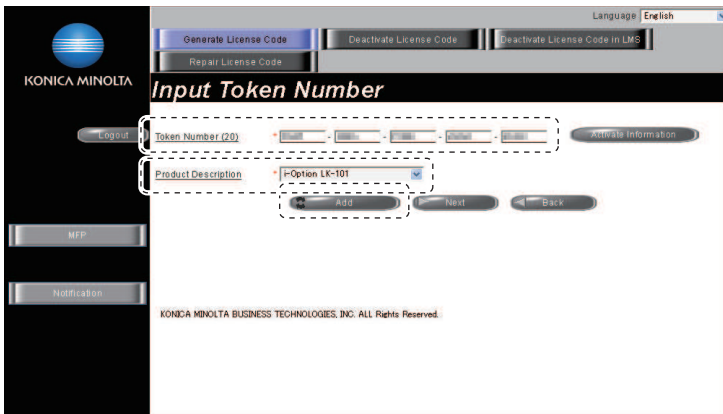
- Make sure to enter alphabet letters of the serial number in all capital letters.



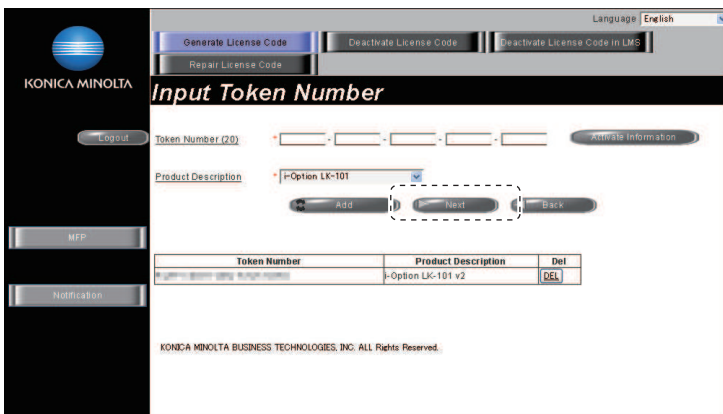
7. Click [Next].



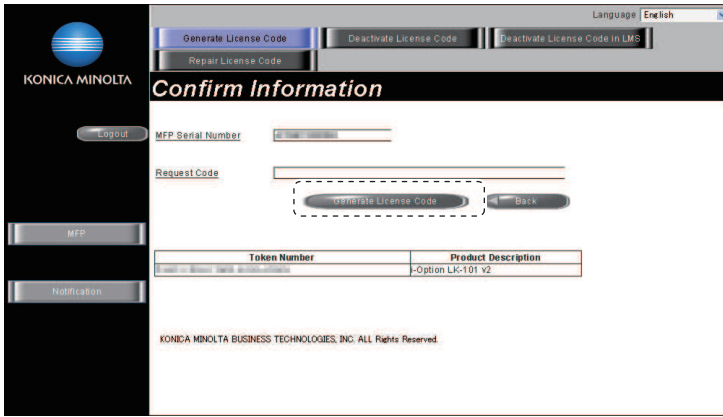
8. Enter the token number written in the token certification, and select the product description.  
9. Click [Add].



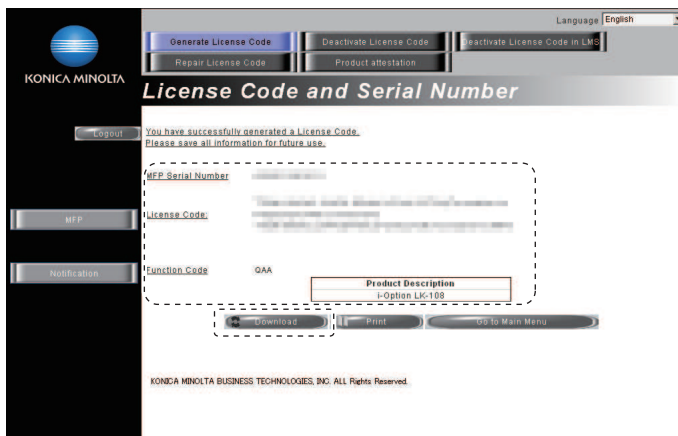
10. Confirm the registered items, and click [Next].



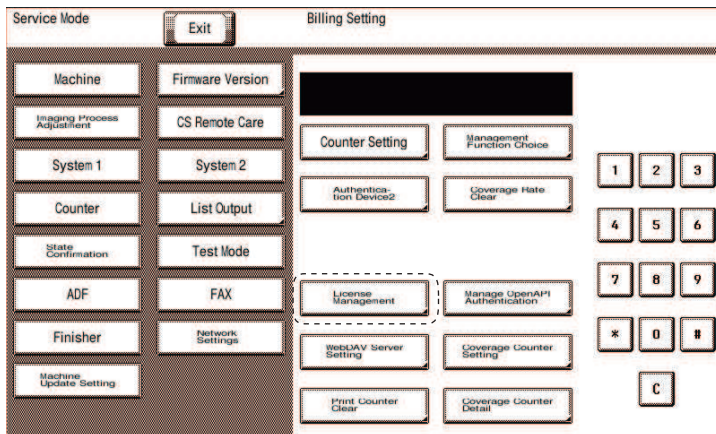
11. Click [Generate License Code].



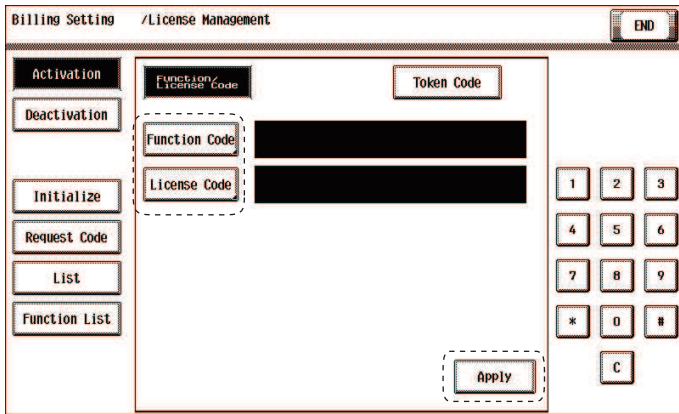
- 12. LMS issues license code and function code.
- 13. Write down the serial number, license code and function code.  
 <When activating with an USB memory>  
 Click [Download], and save a "\*\*\*\*.fek" file to the root directory of the USB memory.



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 message 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.

### 1.6.2 Deactivation

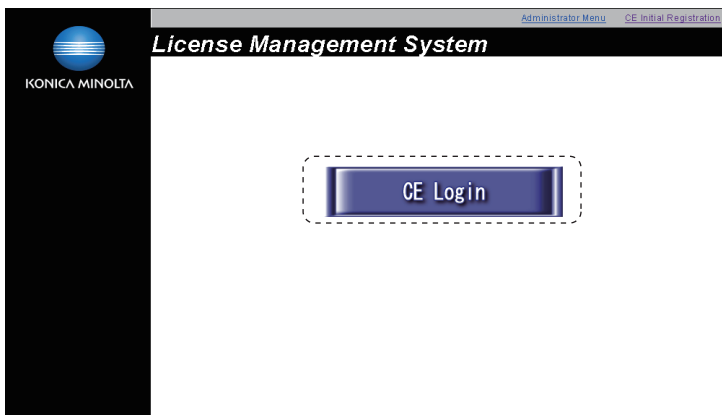
- To deactivate i-Option functions.
- To deactivate i-Option functions due to registration error, expiration of lease term, change to other MFP or etc.
- The functions can be deactivated by selecting the desired function and enter the appropriate deactivation code.

#### NOTE

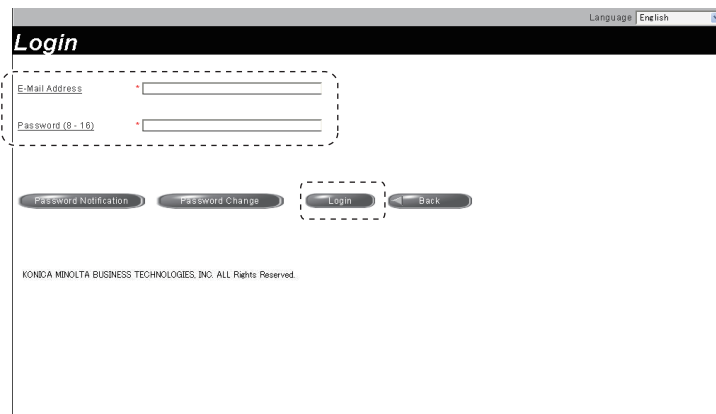
- You need to access License Management System (LMS) to implement each function setting.
- Before accessing the LMS, CE are required to register the E-mail address and the password in the LMS. To register, click [CE Initial Registration] that is located in the upper right of CE Login screen.

<Procedure>

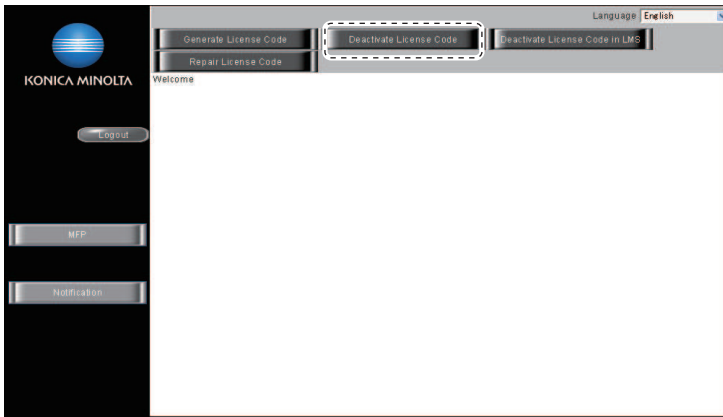
1. Check the serial number of the target MFP.
2. Access the following URL using the PC connected to the Internet.  
<https://lms.konicaminolta.com/license/KM/support.aspx>
3. Click [CE Login].



4. Enter [E-Mail Address] and [Password], and click [Login].



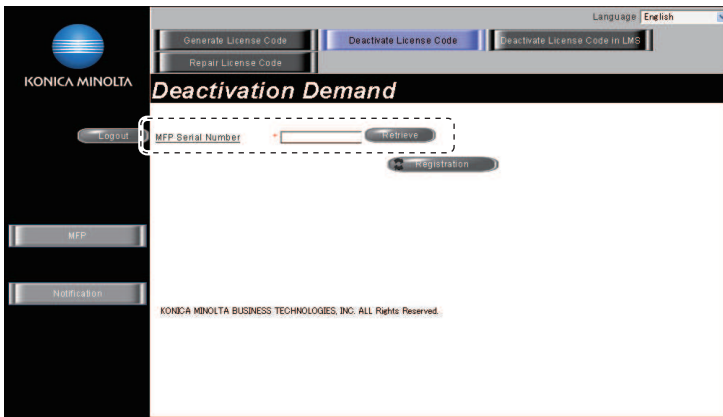
5. Click [Deactivate License Code].



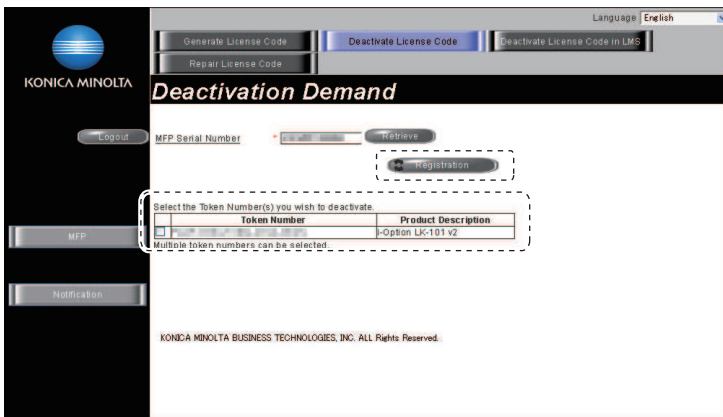
6. Enter the serial number of the target MFP, and click [Retrieve].

**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].

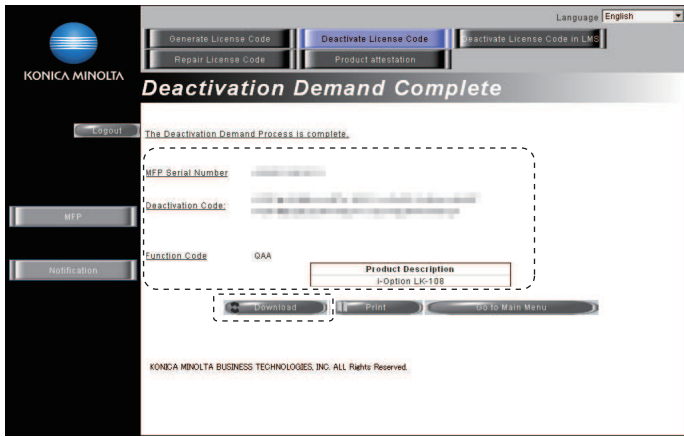


8. LMS issues deactivation code and function code.

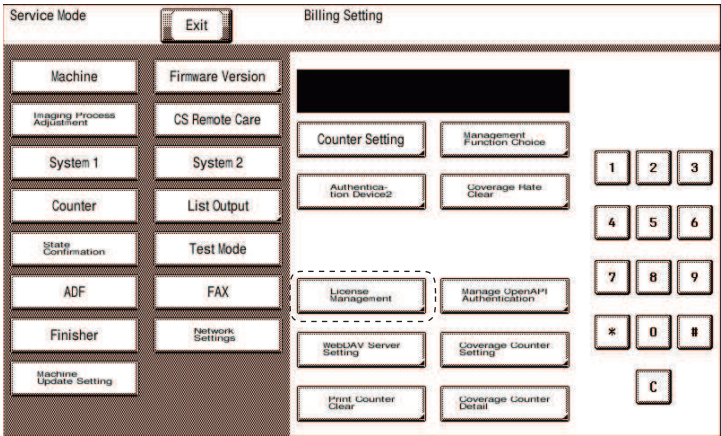
9. Write down the serial number, deactivation code and function code.

<When deactivating with an USB memory>

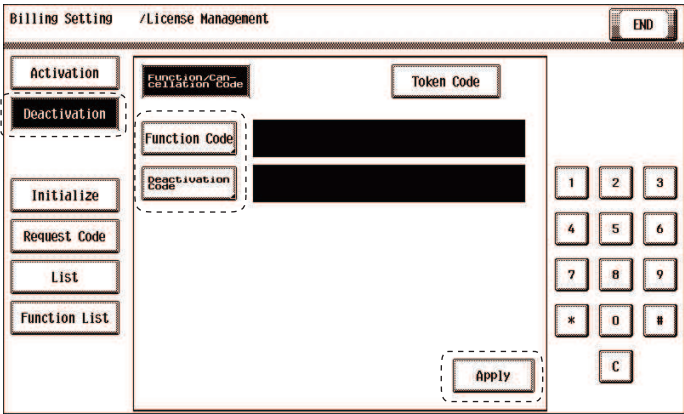
Click [Download], and save a "\*\*\*\*.fek" file to the root directory of the USB memory.



10. Select [Service Mode] -> [Billing Setting] -> [License Management].

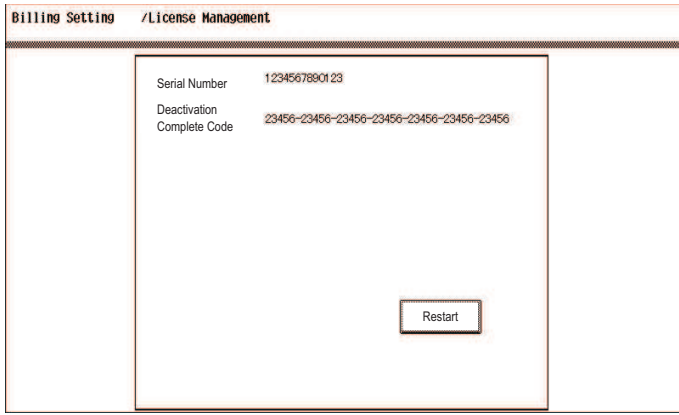


- 11. Select [Deactivation] -> [Function Code] or [Deactivation Code], and enter the function code and the deactivation code confirmed at Step9.  
 <When deactivating with an USB memory>  
 Connect the USB memory to the USB port on the side of the control panel, and select [Deactivation] -> [USB].
- 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].

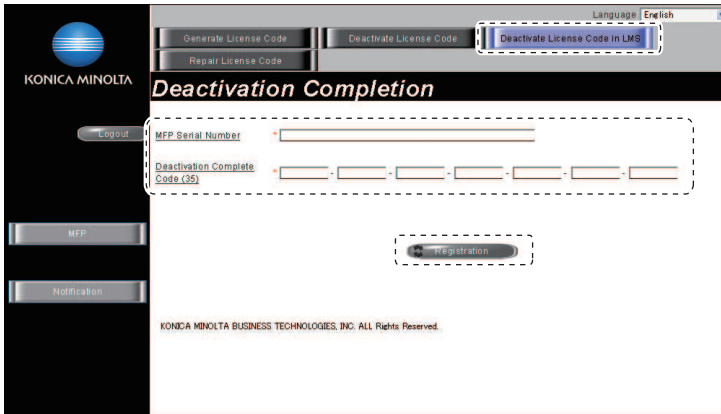




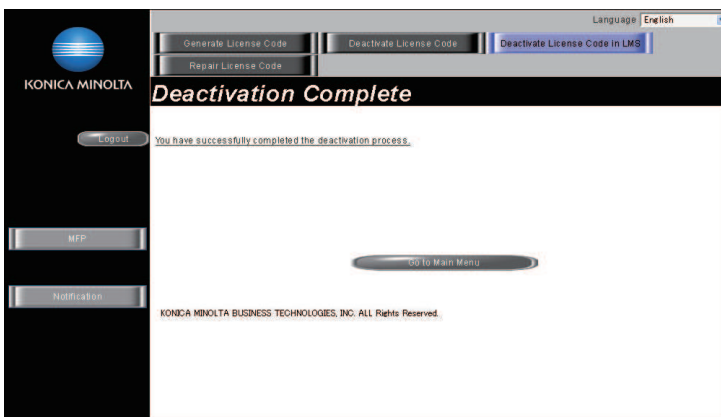
14. Touch [Restart].  
 <When deactivating with a USB memory>  
 This step is unnecessary. Proceed to the next step.
15. Access to the LMS and login again.  
 For detail of the login method, refer to step 2 to step 4.
16. Click [Deactivate License Code in LMS].
17. Enter the serial number and the deactivation complete code confirmed at step 13.

**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.

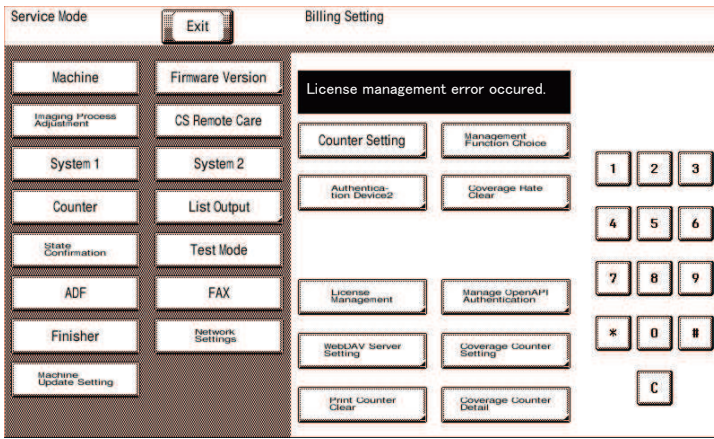


**1.6.3 Repair**

- To repair license management information.
- To be used when license management information is lost due to replacement of CPU board or the storage board, or some other trouble.
- License management information can be repaired by acquiring repair code with repair request code, and entering the repair code.

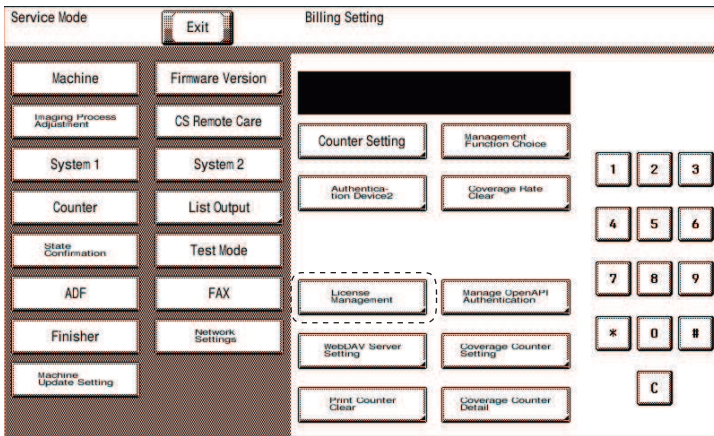
**NOTE**

- 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.

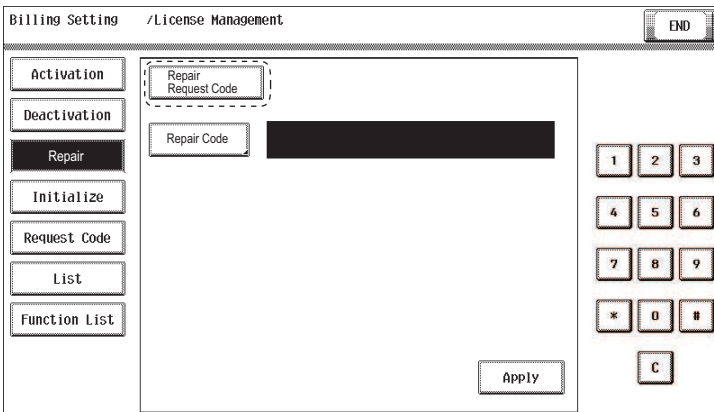


<Procedure>

1. Select [Service Mode] -> [Billing Setting] -> [License Management].



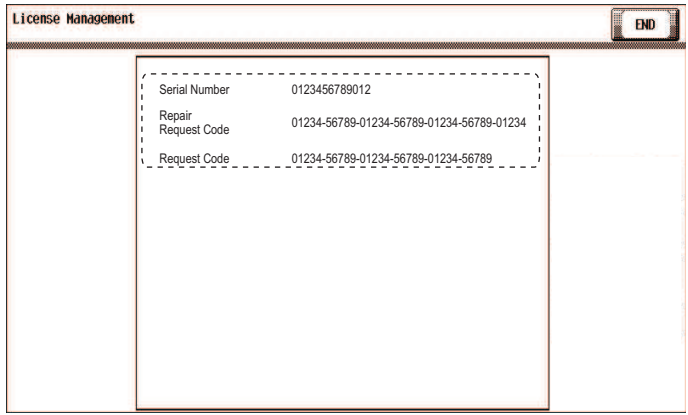
2. Select [Repair] -> [Repair Request Code].



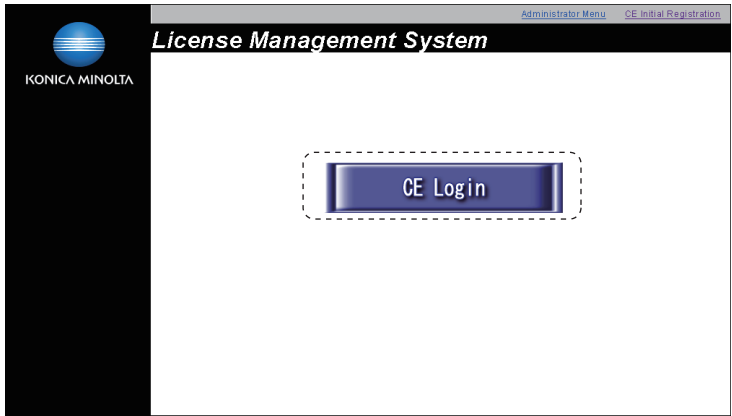
3. Write down or print out the serial number, repair request code and request code.

**NOTE**

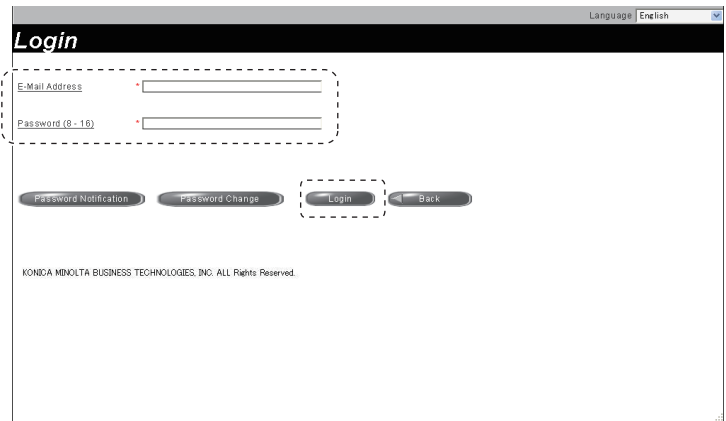
- When A4S or 8 1/2 x 11S is set to the paper feed tray, the above-mentioned serial number and repair request code can be printed out by pressing the start key.



- 4. Access the following URL using the PC connected to the Internet.
  - <https://lms.konicaminolta.com/license/KM/support.aspx>
- 5. Click [CE Login].



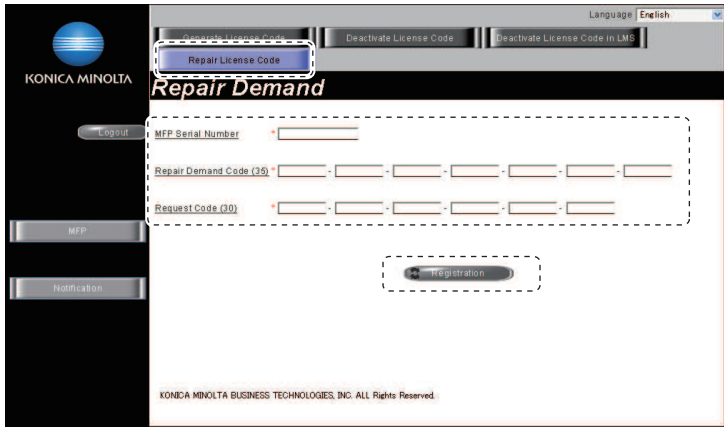
- 6. Enter [E-Mail Address] and [Password], and click [Login].



- 7. Click [Repair License Code].
- 8. Enter the serial number, repair request code and request code confirmed at step3, and click [Registration].

**NOTE**

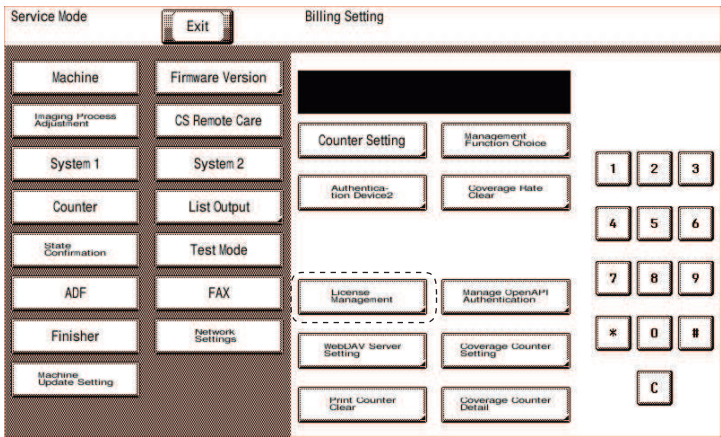
- Make sure to enter alphabet letters of the serial number in all capital letters.



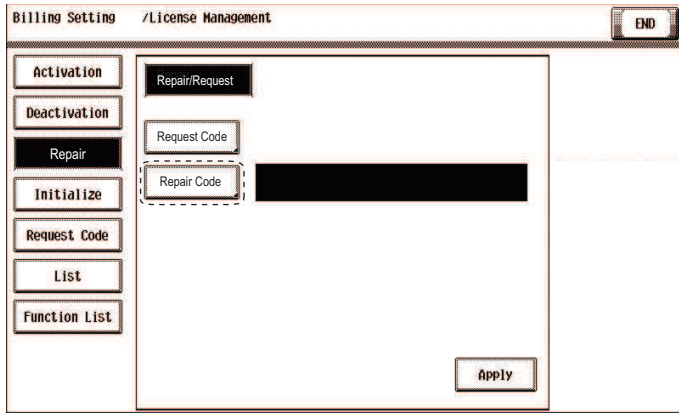
- 9. LMS issues repair permission code.
- 10. Write down the serial number and repair permission code.



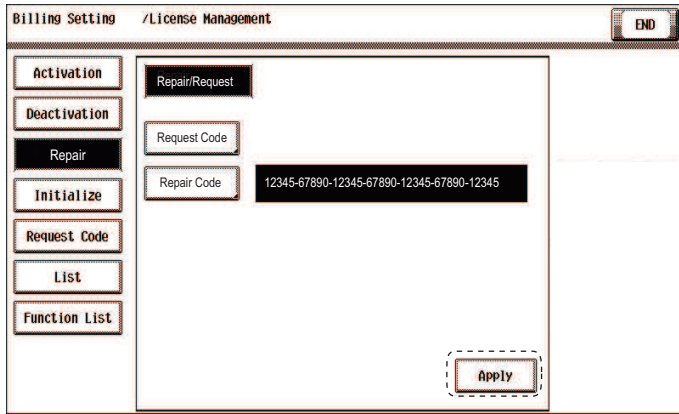
- 11. Select [Service Mode] -> [Billing Setting] -> [License Management].



- 12. Select [Repair] -> [Repair Code], and enter the repair code confirmed at step 10.



13. Touch [Apply].



14. After repair is completed, the machine restarts automatically.

### 1.6.4 Initialize

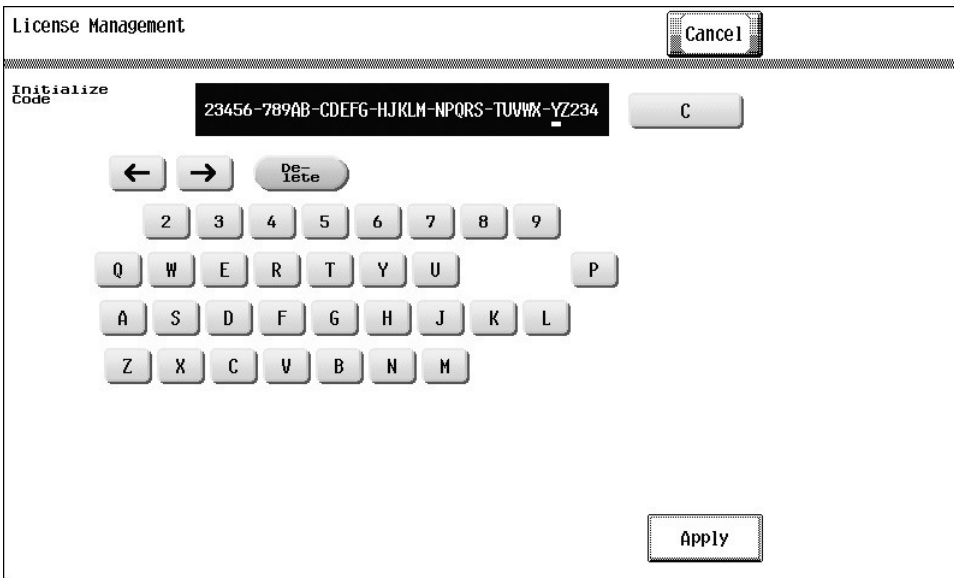
- To initialize license management information.
- To be used when license management information cannot be repaired.
- License management information should be initialized when the machine fails to generate request code or repair request code due to any trouble and the information cannot be repaired.

#### 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.

<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.

### 1.6.5 Request Code

- To display and print request code and serial number.
- To check the request code and serial number.

#### NOTE

- **When the license management error is occurred, it will not be displayed until the repair code is input.**

<Procedure>

1. Set A4S or 8 1/2 x 11S paper to the tray.
2. Press start key at request code screen to print.

### 1.6.6 List

- To display and print deactivation complete code and serial number.
- To check deactivation complete code and serial number.

<Procedure>

1. Set A4S or 8 1/2 x 11S paper to the tray.
2. Press start key at deactivation complete code screen to print.

### 1.6.7 Function List

- To display currently activated functions.
- To display activated functions.

## 1.7 Manage OpenAPI Authentication

### Restriction Code

- 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.

### Region Code

- 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.

## 1.8 WebDAV Server Setting

### Select Address

- 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.

Setting item	Contents	Default setting
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.	

### Server Setting

- To configure the settings on the WebDAV server that communicates with MFP when selecting [Specify Address] in [Select Address].

Setting item	Contents	Setting value	Default setting
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.	1 to 65535	80

### Polling

- To set the number of times and interval at which MFP polls the WebDAV server.

Setting item	Contents	Setting value	Default setting
Polling Count	Set the number of times that MFP polls the WebDAV server.	10 to 30 times	30 times
Polling Interval	Set the interval at which MFP polls the WebDAV server.	20 to 30 sec.	20 sec.

#### NOTE

- **When MFP accesses to WebDAV server via proxy server, set the proxy setting in [Administrator] -> [Network] -> [WebDAV Settings] -> [Proxy Setting for Remote Access].**

## 2. ENHANCED SECURITY

### 2.1 Outline

#### Starting procedure

1. Call the initial screen of Service Mode.
2. Press the following keys in this order.
  - Stop -> 0 -> Clear
3. Call the Enhanced Security screen.

#### Exiting procedure

1. Touch [Exit].
2. Turn OFF the main power switch. Wait 10 seconds, then turn ON the main power switch again.

### 2.2 CE Password

- To set and change the CE password.
- The CE password needs to be 8 to 64 one-byte alphanumeric characters and symbols.
  - Default setting: 9272927292729272

<Procedure>

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 Password Rules of [Administrator] -> [Security] -> [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.**

### 2.3 Administrator Password

- 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 alphanumeric characters and symbols.
  - Default setting: 1234567812345678

<Procedure>

1. New Password: Enter the new administrator password.
2. Re-input Password: Enter the new administrator password again.

#### NOTE

- **When Password Rules of [Administrator] -> [Security] -> [Security Details] is set to "ON," new passwords cannot contain the same string of characters nor can be previous passwords be used.**

### 2.4 Administrator Feature Level

- 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.

Setting item	Contents	Default setting
Level1	Extend the administrator function Level 1.	
Level2	Extend the administrator function Level 2.	
Prohibit	Prohibit the administrator feature extend.	○

Administrator feature level extension item

Administrator settings function			Level 1	Level 2	
System Settings	Expert Adjustment	Printer Adjustment	Erase Leading Edge	-	○
			Vertical Adjustment	-	○
		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	-	○

### 2.5 CE Authentication

- To determine whether or not to authenticate CE password as entering Service Mode.

**NOTE**

- If [Administrator] -> [Security] -> [Security Details] -> [Password Rules] is "Enable", "OFF" in the setting item is not displayed.
- It will not be displayed when [Administrator] -> [Network] -> [Remote Panel Settings] -> [Client Settings] is set to "ON."

Setting item	Default setting
ON	<input type="radio"/>
OFF	

**2.6 Life Stop Setting**

**Life stop**

- To select whether or not to stop a print cycle when the applicable units reach its service life.

**NOTE**

- The settings of software Dip switch No.227 (bit7) and switch No. 230 (bit3) have priority.

Setting item	Setting value	Default setting
Imaging Unit, Transfer belt, Fusing Unit	Enable	<input type="radio"/> (For others)
	Off	<input type="radio"/> (For Japan, North America and Europe)

**Life Cycle Display Warning**

- 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 [OFF] even if each warning status is enabled.

**NOTE**

- The settings of software Dip switch No.227 (bit7) and switch No. 230 (bit3) have priority.

Setting item	Setting value	Default setting
Imaging Unit, Transfer belt, Fusing Unit	Enable	<input type="radio"/> (For others)
	Off	<input type="radio"/> (For Japan, North America and Europe)

**2.7 Memory Data Backup**

- To backup the data stored in the memory region on board to the flash memory.
- To backup current data in order to prevent data in the memory region on the 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.

<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.

**2.8 operation Ban release time**

- To set the period of time to be elapsed before the access lock state is released in CE password authentication.

Setting range	Default setting
1 to 60 (minutes)	5 (minutes)

**NOTE**

- When Enhanced Security Mode is set to ON in [Administrator] -> [Security] -> [Enhanced Security Mode], the period of time that can be set in this setting is 5 minutes or more.

**Releasing the an access lock**

- After the CE password authentication, if the access lock is activated, the lock release timer starts to operate the following procedures.

<Procedure>

1. Main power switch is turned OFF and ON.
2. [Utility] -> [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.
  - 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.
5. When the timer reaches the time specified in this setting, the access lock is released.

**2.9 Administrator unlocking**

- 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.

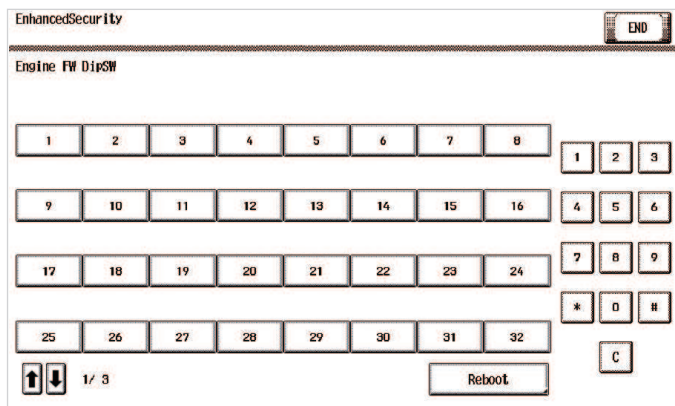
<Procedure>

1. Touch [Administrator unlocking].
2. Touch [Unlocking] to release an access lock.
3. When [OK] is displayed, touch [END].



## 2.10 Engine FW DipSW

- To make printer engine settings.



<Procedure>

- Touch [Engine FW DipSW].
- 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.
- Touch [END].

Normal: OFF state



Reverse: ON state



### Engine FW DipSW setting list

- 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 full-speed print prohibited condition detected
5	Enabling high humidity WUP
6	Choice of toner empty recovery mode
7	Not used
8	Not used
9	Not used
10	Not used
11	Choice of fusing rotation while waiting
12	Choice not to conduct image stabilization
13	Choice of securing fusibility
14	Choice of unit simultaneous replacement promotion OFF
15	Not used
16	Not used
17	Not used
18	Not used
19	Not used
20	Not used
21	Not used
22	Choice of main scan direction white line correction
23	Choice of roll belt free rotation
24	Not used
25	Choice of ACS parameter
26	Not used
27	Not used
28	Choice of destination detection disable mode
29	Not used
30	Not used
31	Choice of AT1VC high frequency

Switch No.	Function
32	Choice of changing AT1VC condition
33	Choice 1 of extending PU life
34	Choice of extending PU life
35	Choice of improving fusibility strength
36	Choice of increasing stabilization frequency, choice of 300-sheets stabilization
37	Choice of silent mode
38	Not used
39	Choice of disabling engine log via CTL
40	Not used
41	Not used
42	Choice of increasing registration frequency
43	Choice of HH memory upper limit voltage
44	Not used
45	Not used
46	Choice of UFP behavior mode
47	Not used
48	Replacement timing Intelligent Control of Transfer Roller Unit, Choice of changing 2nd transfer roller life detection condition
49	Not used
50	Replacement timing Intelligent Control of Drum unit, Choice of changing photoconductor life detection condition
51	Not used
52	Not used
53	Not used
54	Not used
55	15 A breaker PPM down control, Choice of following-up properties in early morning
56	Choice of disabling duplex tacking PPM

**2.10.1 Details of Each Function**

**(1) 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, developing unit
- 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.

Switch No. 3	Contents	Default
OFF	Disables New Release Disable mode.	○
ON	Enables New Release Disable mode.	

<Procedure>

- Open the front door.
- Call the [Service Mode] -> [Enhanced Security] to the screen.
- Set [Engine FW DipSW] -> [3] to ON.
- Close the front door.  
By closing the front door, the New Release Disable mode takes effect.

**Notes when using the New Release Disable mode**

<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 part replacement time or that are near life 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.

<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.)

<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 have 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.

**(2) Choice of high humidity circumstance**

- 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.

Switch No. 5	Contents	Default
OFF	<ul style="list-style-type: none"> <li>• Run "High-humidity Mode" in high-humidity environments.</li> <li>• Longer warm-up time, but no occurrence of curl even under high humidity environment</li> </ul>	○
ON	<ul style="list-style-type: none"> <li>• Unable to run "High-humidity Mode" even in high-humidity environments.</li> <li>• Shortens the warm-up time in high humidity environments, but there is a risk of paper curl occurring.</li> </ul>	

**(3) Choice of full-speed print prohibited condition detected**

- To set low-speed printing in order to prevent line image problems in the main scanning direction under low temperature environment.

Switch No.4	Contents	Default
OFF	Full-speed print prohibited condition not detected.	○
ON	Full-speed print prohibited condition detected.	

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].

**NOTE**

- **To reflect the adjustment value after change, make sure to exit from the Service Mode.**
- **The adjustment value is not reflected when turning off the power without exiting from the Service Mode.**

**(4) Choice of toner empty recovery mode**

- To perform the auxiliary toner replenishing sequence when the old toner cartridge is replaced after a toner-empty condition.

Switch No.6	Contents	Default
OFF	Not performed	○
ON	Performed	

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].

**NOTE**

- **To reflect the adjustment value after change, make sure to exit from the Service Mode.**
- **The adjustment value is not reflected when turning off the power without exiting from the Service Mode.**

**(5) Choice of fusing rotation while waiting**

- To choose steadiness or fusibility due to rotation of the fusing motor.

Switch No.11	Contents	Default
OFF	The fusing motor stops after 5 seconds in rotation waiting condition. (Priority on steadiness)	○
ON	The fusing motor stops after 30 minutes in rotation waiting condition. (Priority on fusibility)	

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].

**NOTE**

- To reflect the adjustment value after change, make sure to exit from the Service Mode.
- The adjustment value is not reflected when turning off the power without exiting from the Service Mode.

**(6) Choice not to conduct image stabilization**

- It sets whether or not to conduct image stabilization.

Switch No.12	Contents	Default
OFF	To conduct image stabilization.	○
ON	Not to conduct image stabilization.	

## Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [2] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

**NOTE**

- To reflect the adjustment value after change, make sure to exit from the Service Mode.
- The adjustment value is not reflected when turning off the power without exiting from the Service Mode.

**(7) Choice of securing fusibility**

- Sets whether or not to conduct printing wait for ensuring fusibility in low-temperature/low-humidity environments.

Switch No. 13	Contents	Default
OFF	Without printing wait	○
ON	With printing wait	

**(8) 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 [27] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

**NOTE**

- To reflect the adjustment value after change, make sure to exit from the Service Mode.
- The adjustment value is not reflected when turning off the power without exiting from the Service Mode.

**(9) Transfer belt free rotation option**

- Rotates the transfer belt under predetermined conditions to prevent whiteouts and black lines that develop when the machine has not been used for long time.

Switch No.23	Contents	Default
OFF	Does nothing.	○
ON	When the conditions are satisfied, rotates the transfer belt when the machine is first powered on or while recovering from sleep mode.	

## 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].

**NOTE**

- To reflect the adjustment value after change, make sure to exit from the Service Mode.
- The adjustment value is not reflected when turning off the power without exiting from the Service Mode.

**(10) Choice of ACS parameter**

- 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, print productivity has the priority and printing is conducted with all press (the transfer belt being pressed onto the color photoconductors) even when the specified quantity of black printing is included. In that case, the color photoconductors rotate unnecessarily. The color photoconductors deteriorate by the amount of rotation.
- When this setting is ON, black printing quantity threshold until switching to K press (release of color photoconductors) becomes smaller.
- This setting is to be used when the degradation control of the color photoconductors should have priority over printing productivity.

Switch No. 25	Contents	Default
OFF	Print productivity priority	○
ON	Degradation control of the color photoconductors	

**(11) Choice of changing AT1VC conditions**

- Choice to change the conditions for conducting AT1VC

Switch No.32	Contents	Default
OFF	Condition 1	○
ON	Condition 2	

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [32] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

**NOTE**

- To reflect the adjustment value after change, make sure to exit from the Service Mode.
- The adjustment value is not reflected when turning off the power without exiting from the Service Mode.

**(12) Choice 1 of extending PU life**

To change the imaging unit life threshold.

Switch No.33	Contents	Default
OFF	To use the default threshold.	○
ON	To use the threshold 1.25 times the normal one.	

**(13) Choice 2 of extending PU life**

To change the imaging unit life threshold.

Switch No.34	Contents	Default
OFF	To use the default threshold.	○
ON	To use the threshold 1.5 times the normal one.	

**(14) Choice of increasing registration stabilization frequency**

Choice of increasing registration stabilization frequency by PH temperature change

Switch No.42	Contents	Default
OFF	Disable	○
ON	Enable	

**(15) Choice of disabling engine log via CTL**

- Choice to disable an engine log via CTL

"OFF"	To enable an engine log via CNT. (Default)
"ON"	To disable an engine log via CNT. (Terminal 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 [39] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

**NOTE**

- To reflect the adjustment value after change, make sure to exit from the Service Mode.
- The adjustment value is not reflected when turning off the power without exiting from the Service Mode.

**(16) Choice of UFP behavior mode**

- Choice to conduct a control to restrict the occurrence of UFP

"OFF"	Not to conduct a control to restrict the occurrence of UFP. (Except for Europe: default)
"ON"	To conduct a control to restrict the occurrence of UFP. (Europe only: 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 [46] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

**NOTE**

- To reflect the adjustment value after change, make sure to exit from the Service Mode.
- The adjustment value is not reflected when turning off the power without exiting from the Service Mode.

**(17) Choice of changing 2nd transfer roller life detection condition**

- Choice to change the conditions for detecting 2nd transfer roller life

Switch No.49	Contents	Default
OFF	To work out consumption ratio from prints count or drive distance, and set the life information for the higher ratio.	○
ON	To work out the consumption ratio from prints count or drive distance, and set the life information for the higher ratio. Also, using the consumption ratio worked out from the AT2VC detected voltage to set the final life information.	

**(18) Choice of changing photoconductor life detection condition**

- Choice to change the conditions for detecting photoconductor life

Switch No.50	Contents	Default
OFF	To work out consumption ratio from prints count or PU drive distance, and set the life information for the higher ratio.	○
ON	To work out the consumption ratio from prints count or PU drive distance, and set the life information for the higher ratio. Also, using the consumption ratio worked out from the photoconductor/K charging current detected value to set the final life information.	

**(19) Choice of following-up properties in early morning**

Degrade the productivity by using thick plain paper to enhance the following-up properties in the early morning.

Switch No.55	Contents	Default
OFF	Plain paper 3 is used for PPM12.	○
ON	Plain paper 2 and 3 is used for PPM12.	

**(20) Choice of disabling duplex tacking PPM**

- To widen the interval between print jobs for preventing paper stacking from occurring in the paper exit tray during consecutive 2-sided printing.

Switch No.56	Contents	Default
OFF	OFF	○
ON	ON	

**NOTE**

- Not available to 1-sided printing.
- Not available to 2-sided printing on paper other than plain paper, plain paper+ and recycled paper.

**(21) Choice of AT1VC high frequency**

- Choice to switch to mode for conducting AT1VC frequently

Switch No.31	Contents	Default
OFF	Normal mode	○
ON	High frequency mode	

## Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [31] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

**NOTE**

- To reflect the adjustment value after change, make sure to exit from the Service Mode.
- The adjustment value is not reflected when turning off the power without exiting from the Service Mode.

**2.11 Storage Data Backup**

- Backup the settings of the machine and the image data in the box to the HDD connected with a USB.
- Restore the backup data to the HDD connected with a USB.

Setting item	Contents
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. 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.

Setting item	Contents
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 if the storage is enough.
Restore	Execute restore the backup data in the HDD.

**Target data**

- 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 to compose a box (setting data exclusive for box)

**Conditions required to backup/restore**

- 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.

**Procedure of backup/restore**

**NOTE**

- **Set [Administrator] -> [Security] -> [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.**

<Backup procedure>

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 [Storage 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.

<Restore procedure>

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 [Storage 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.

**2.12 Data Backup**

**2.12.1 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.

**(1) Server Backup**

**Select Backup**

- Select the backup method.

Setting item	Contents
Disable	Select not to use the backup.
Server Backup	Select to make backup to the server as backup. Set "Setting when selecting backup to the server".
Server Backup 2	Select to make backup to the server as backup 2. Set "Setting when selecting backup 2 to the server".

**Setting when selecting backup to the server**

<Backup setting>

- Set the backup setting.

**NOTE**

- This function cannot be enabled when Transmission protocol, SMB Setting or HTTP Setting, Backup target and Encryption Password have not been set.

Setting item		Contents	Setting value	Default setting
Function Setting		To set whether to back up data to a server. • When [ON] is selected, configure settings required for backup.	ON Disable	 ○
Transmission protocol		To select a Transmission protocol.	SMB HTTP	 ○
SMB Setting	Host Name	To be set when "SMB" is selected for Transmission protocol.	Alphanumeric characters and symbols up to 253 characters	-
	File Path		255 characters maximum	
	User Name		64 characters maximum	
	Password		64 characters maximum	
HTTP Setting	URL	To be set when "HTTP" is selected for Transmission protocol.	Alphanumeric characters and symbols up to 253 characters	-
	User Name		64 characters maximum	
	Password		64 characters maximum	
	Proxy		ON/Disable	
Backup target		To select a target to back up. Items of (*) are displayed only when selected [Enable] in [Service Mode] -> [System 2] -> [Maintenance Mode], and [Allow] in [Administrator] -> [Security] -> [Security details] -> [Maintenance Mode Access].	Remote Access Setting User Settings Service setting Address Book (*) Authentication Data (*) Network Settings (*) Accessibility (*) Administrator Setting (*) Cloud connection (*) Display Custom Settings (*) External Cert (*)	-
Encryption Password		Enter the encryption password.	1 to 32 characters	-

<Auto backup>

- Set the auto backup setting.

**NOTE**

- It is displayed when Backup Settings is enabled.

Setting item		Contents	Setting value	Default setting
Auto backup		To set whether to execute auto backup. • When "Yes" is selected, configure the following settings.	Set Unset	 ○
Backup period	Interval of day(s)	Select the backup as Interval of day(s).	1 to 30 days	-
	Weekly frequency	Select the backup as Weekly frequency.	Sun, Mon, Tue, Wed, Thu, Fri, Sat	
Backup time		To setting a time to back up.	Hour: 00 - 23 Minute: 00 - 59	-

<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.
  - N\*\*\*\*\*: Error related to network.
  - S\*\*\*\*\*: Error other than that related to network.

<Backup result>

- 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.

**Setting when selecting backup to the server 2**

<Format>

- To select a format to backup.

Setting item	Contents
Generic format	Select to backup of box documents by generic format.



Setting item	Contents
KM format	Select to backup of box documents by KM format.

**NOTE**

- **Select the format and touch [Fix].**

<Backup settings>

- Set the backup setting.

**NOTE**

- **This function cannot be enabled when WebDAV Settings, Encryption Password or Data hold period have not been set.**

Setting item	Contents	Setting value	Default setting	
Function Setting	Function Setting	To set whether to back up data to a server. • When [ON] is selected, configure settings required for backup.	ON Disable	<input type="radio"/>
	User Box Document	To set whether to target box documents.	Target Not in target	<input type="radio"/>
WebDAV Settings	URL	Set the WebDAV Settings.	Alphanumeric characters and symbols up to 253 characters	-
	User Name		64 characters maximum	
	Password		64 characters maximum	
	Proxy		ON/Disable	
Encryption Password	Enter the encryption password.	1 to 32 characters	-	
Data Hold Period	To select data hold period.	1 to 180 days	60 days	

<Auto backup>

- Set the auto backup setting.

**NOTE**

- **It is displayed when Backup Settings is enabled.**

Setting item	Contents	Setting value	Default setting
Enable Settings	To set whether to execute auto backup. • When "Yes" is selected, configure the following settings.	ON Disable	<input type="radio"/>
Full Backup	Interval of day(s)	Select the backup as Interval of day(s).	1 to 30 days
	Weekly frequency	Select the backup as Weekly frequency.	Sun, Mon, Tue, Wed, Thu, Fri, Sat
	Backup time	To setting a time to back up.	Hour: 00 - 23 Minute: 00 - 59
Diff. Backup	Disable	Select not to backup Diff. backup.	-
	Time Setting	Select the backup period by time setting.	1 to 48 hours
	Time Setting	Select the backup period by time setting.	Hour: 00 - 23 Minute: 00 - 59

<Backup reservation>

- To select the backup reservation.

Setting item	Contents
Full Backup	Select to make backup Full backup.
Diff. Backup	Select to make backup Diff. backup.

**NOTE**

**To select the backup reservation and touch [Fix].**

<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.

**(2) Restore from Server**

**Restore Mode Select**

- Select the restore method.

Setting item	Contents
Restore from Server	Select to make restore from the server. Set "Setting when selecting restore from the server".
Restore from Server 2	Select to make restore from the server as restore 2. Set "Setting when selecting restore from the server 2".

**Setting when selecting restore from the server**

<Restore setting>

- To specify a location from where restore data is to be downloaded.
- Select a server and press "Start" to start restoring.

Setting item	Contents	Default setting
Acquire from backup	Execute restore from a location other than the server specified in Backup Settings.	○
Edit Restore path	Execute restore other than from a location other than the server specified in Backup Settings. <ul style="list-style-type: none"> <li>When Edit Restore path is selected, enter WebDAV setting and Encryption Password.</li> </ul>	

<Restore result>

- To display the final date of restore.

### Setting when selecting restore from the server 2

<Restore setting>

- To specify a location from where restore data is to be downloaded.
- Select machine, restore data and restore target from [Restore Data Select] and press "Start" to start restoring.

Setting item	Contents	Default setting
Acquire from Backup	Execute restore from a location other than the server specified in Backup Settings.	○
Edit Restore path	Execute restore other than from a location other than the server specified in Backup Settings. <ul style="list-style-type: none"> <li>When Edit Restore path is selected, enter Download Protocol and SMB setting, or HTTP Setting and Encryption Password.</li> </ul>	

<Restore history>

- Restore history is displayed.
- Insert USB memory, touch the start key and save the restore result details in the USB memory.

## 2.12.2 Server Function

- Use MFP as backup server (WebDAV server).

### (1) Backup Server Setting

- Set the backup server settings.

Setting item	Contents	Setting value	Default setting
Function Setting	To set whether to use MFP as backup server (WebDAV server). <ul style="list-style-type: none"> <li>When [ON] is selected, configure [Server settings].</li> </ul>	ON	○
		Disable	
Server Settings	User Name	Set the User name.	64 characters maximum
	Password	Set the password.	64 characters maximum

## 2.13 Customer Type

- To make each settings for customer type.

Setting item	Contents	Setting value	Default setting
Function Setting	To set whether to configure setting of customer type. <ul style="list-style-type: none"> <li>When [Yes] is selected, configure setting of the [Business Type] and [Employee Number].</li> </ul>	Yes	○
		No	
Business Type	Select the Business type.	Manufacturing	-
		Financial/Securities/Insurance	
		Business Distr/Services	
		IT Related Industry	
		Government Office	
		Other	
Employee Number	Select the employee number	10 or less	-
		11 or more to 100 or less	
		101 or more to 500 or less	
		501 or more to 1000 or less	
		1001 or more to 5000 or less	
		5001 or more	

## 2.14 FWCert. Settings

- If [Administrator] -> [Security] -> [Firmware Updat.Verification Set.] is enabled, perform the firmware signature.
- To be used when installing a digital signature to the MFP for signature verification.

<Procedure>

- Obtain a digital signature.
- Store the obtained signature in a USB memory.
- Connect the USB memory to the USB port.
- Touch the [Start] key.
- Check the result, and turn the main power switch OFF and ON.

### 3. DEBUG SETTINGS

#### 3.1 Outline

- To configure the settings on log information acquisition performed to analyze the MFP controller's internal operation.

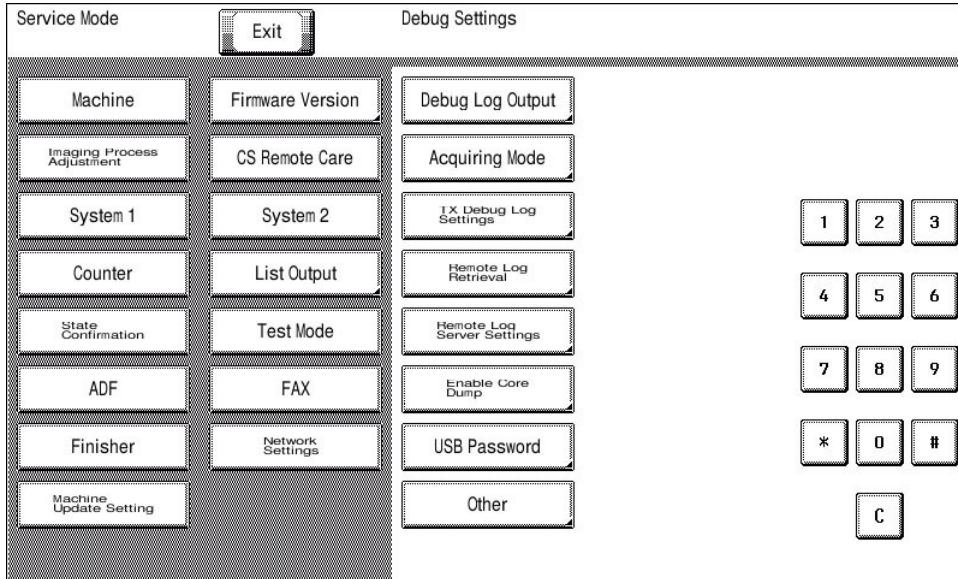
**NOTE**

- 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].

**Starting procedure**

- Call the initial screen of Service Mode.
- Press the following keys in this order.
  - Stop -> 6 -> 1 -> 8
- Call the Debug Setting screen.

Example of the Debug Setting screen



**Exiting procedure**

- Touch [Exit] on the Service Mode screen.
- Turn OFF the main power switch. Wait 10 seconds, then turn ON the main power switch again.

#### 3.2 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."

**Select TX Method**

- To select a method used to send via the network.

Setting item	Contents	Default setting
OFF	Select OFF as transmission method of debug information.	○
SMB	Select SMB as transmission method of debug information.	
FTP	Select FTP as transmission method of debug information.	
WebDAV	Select WebDAV transmission as transmission method of debug information.	

**SMB Setting**

- To configure settings used in SMB transmission.

Setting item	Contents	Setting value
Host Name	Set the host name for the SMB server.	Alphanumeric characters and symbols up to 253 characters
File Path	Set the file path used in the SMB server communication.	255 characters maximum
User Name	Set the user name used to access the SMB server.	64 characters maximum
Password	Set the password used to access the SMB server.	64 characters maximum

**FTP Settings**

- To configure settings used in FTP transmission.

Setting item	Contents	Setting value	Default setting
Host Name	Set the host name of the FTP server.	Alphanumeric characters and symbols up to 253 characters	-
File Path	Set the file path used in the FTP server communication.	127 characters maximum	-

Setting item	Contents	Setting value	Default setting
User Name	Set the user name used to access the FTP server.	64 characters maximum	-
Password	Set the password used to access the FTP server.	64 characters maximum	-
Port Number	Set the port number that is used to access the FTP server.	1 - 65535	21
PASV	Set PASV mode to ON or OFF	ON	<input type="radio"/>
		OFF	<input type="radio"/>
Proxy	Set whether or not to connect to a proxy server.	ON	<input type="radio"/>
		OFF	<input type="radio"/>

**WebDAV Setting**

- To configure settings used in WebDAV transmission.

Setting item	Contents	Setting value	Default setting
Host Name	Set the host name of the WebDAV server.	Alphanumeric characters and symbols up to 253 characters	-
File Path	Set the file path used in the WebDAV server communication.	142 characters maximum	-
User Name	Set the user name used to access the WebDAV server.	64 characters maximum	-
Password	Set the password that is used to access the WebDAV server.	64 characters maximum	-
Port Number	Set the port number that is used to access the WebDAV server.	1 - 65535	80
Proxy	Set whether or not to connect to a proxy server.	ON	<input type="radio"/>
		OFF	<input type="radio"/>
SSL Settings	Select to use SSL communication.	ON	<input type="radio"/>
		OFF	<input type="radio"/>

**3.3 Remote Log Retrieval**

- 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].

Setting value	Default setting
ON	<input type="radio"/>
OFF	<input type="radio"/>

**Time Setting**

- Downloads the command set at the specified time and retrieves/saves the logs and settings data.
- This item will be displayed only when [ON] is set to Remote Log settings.

Setting value	Default setting
ON	<input type="radio"/>
OFF	<input type="radio"/>

- \*: When [Yes] selected, configure the time settings.

**Polling**

- Downloads the command set at each specified time and retrieves/saves the logs and settings data.
- This item will be displayed only when [ON] is set to Remote Log settings.

Setting value	Default setting
ON (*)	<input type="radio"/>
OFF	<input type="radio"/>

- \*: When [ON] selected, configure the polling interval settings.

**Retrieve Log Information**

- Immediately downloads the command set and retrieves/saves the logs and settings data.

**NOTE**

- This is displayed only when [Administrator] -> [Security] -> [Security Details] -> [Export Debug Log] is set to "Allow."

**3.4 Remote Log Server Settings**

**Command Set Acquisition Pt.**

- 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].

Setting item	Contents	Setting value	Default setting
Host Name	Set the host name of the WebDAV server.	Alphanumeric characters and symbols up to 253 characters	-
File Path	Set the file path used in the WebDAV server communication.	142 characters maximum	-
User Name	Set the user name used to access the WebDAV server.	64 characters maximum	-
Password	Set the password that is used to access the WebDAV server.	64 characters maximum	-
Port Number	Set the port number that is used to access the WebDAV server.	1 - 65535	80
Proxy	Set whether or not to connect to a proxy server.	ON	
		OFF	○
SSL Settings	Select to use SSL communication.	ON	
		OFF	○

**Log Save Destination**

- 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.].

Setting item	Contents	Setting value	Default setting
Host Name	Set the host name of the WebDAV server.	Alphanumeric characters and symbols up to 253 characters	-
File Path	Set the file path used in the WebDAV server communication.	142 characters maximum	-
User Name	Set the user name used to access the WebDAV server.	64 characters maximum	-
Password	Set the password that is used to access the WebDAV server.	64 characters maximum	-
Port Number	Set the port number that is used to access the WebDAV server.	1 - 65535	80
Proxy	Set whether or not to connect to a proxy server.	ON	
		OFF	○
SSL Settings	Select to use SSL communication.	ON	
		OFF	○

**3.5 Enable Core Dump**

To set whether to acquire a log of Core Dump.

Setting item	Default setting
Enable	USB memory
	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].

**3.6 USB Password**

- To set a password used to store debug information into a USB flash drive.
  - Default setting: 01234567890123456789
- CE informs the KM contact person of this password and the debug information data separately.

**NOTE**

- **NEVER forget the USB password.**

<Procedure>

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.

**3.7 Other**

**3.7.1 Screen Capture**

- The screen displayed on the control panel can be captured and saved in a USB memory as a file.

**NOTE**

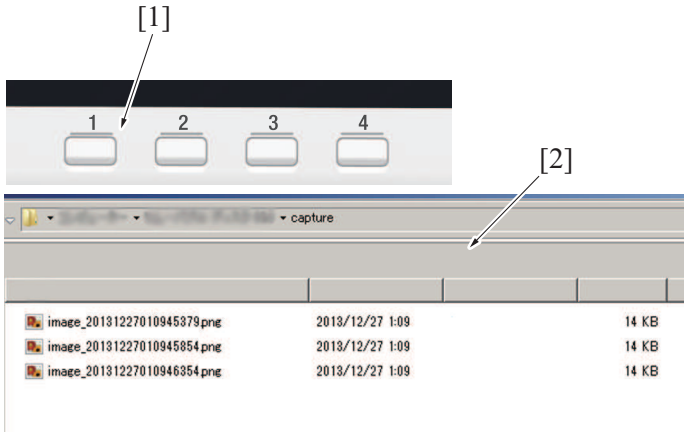
- **Use a USB memory having no security functions.**

**Preparations**

1. Touch [Other].
2. Touch [Screen Capture] and then [END].
3. Insert the USB memory.

**Capturing individually procedure**

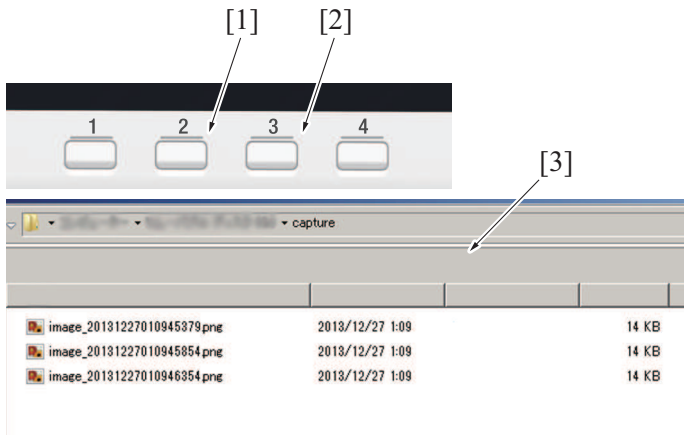
1. Call the screen to be captured to the control panel.
2. Touch [Reset] on the control panel. This saves the screen in memory.  
A "Capture" folder is automatically created and a file in the PNG format is saved in the folder.



[1]	[1] key	[2]	In USB memory
-----	---------	-----	---------------

**Continuous capturing procedure**

1. Call the screen to be captured to the control panel.
2. Touch [Stop] on the control panel.
3. Start the screen operations.
4. When the operations are completed, touch [Stop] again.
5. A "Capture" folder is automatically created and a file in the PNG format is saved in the folder.



[1]	[2] key	[2]	[3] key
[3]	In USB memory	-	-

**3.7.2 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.

**Preparations**

1. Touch [Other].
2. Touch [Panel Operation Playback] and then [END].

**Procedure**

1. Call the auto playback starting screen to the control panel.
2. Touch [Stop] on the control panel.
3. Start the screen operations to store a series of screens.
4. When the operations are completed, touch [Stop] again.
5. Go back to the first screen and touch [Reset] on the control panel.

# K FIRMWARE

## 1. Overview

### Rewriting of Firmware

- Methods for rewriting the firmware are shown below.

#### NOTE

- **The settings in the "Utility" mode and the "Service Mode" will not be changed, when the firmware is rewritten.**

#### <How to use a USB memory>

- Save the firmware data to a USB memory. Connect the USB to the main body directly and update the firmware.

#### <How to use an Internet ISW>

- "Internet ISW" is a system, which obtains firmware from the program server via the Internet to update the firmware.
- It is executed when a firmware update instruction is issued or at a predetermined time.

#### <How to use an Auto Update setting>

- "Auto Update" is the function, which makes the main body access the program server periodically through the network to obtain a new firmware data, then rewrites it automatically.
- It is also possible to share the update data obtained from the network with other MFP, and operate the MFP as a program server for "the Auto Update function." For details, see "[I.16.2.2 Relay server setting.](#)"

### Other data

- Activate all data such as the voice data, and the loadable device driver as required in accordance with the rewriting firmware or user's environment.

Data	How to install
All data	[Service Mode] -> [System 2] -> [Install Data]
Loadable device driver	[Service Mode] -> [System 2] -> [Driver Install]

### Confirming the firmware version

- After conducting firmware rewriting, check the firmware version No. and confirm that the firmware has been normally updated.

#### <Procedure>

1. Select [Service Mode] -> [Firmware Version].
2. To check the firmware version.

## 2. USB memory

### 2.1 Preparation

#### 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.

#### NOTE

- Possible to be non-operational products.

#### USB memory used to update firmware

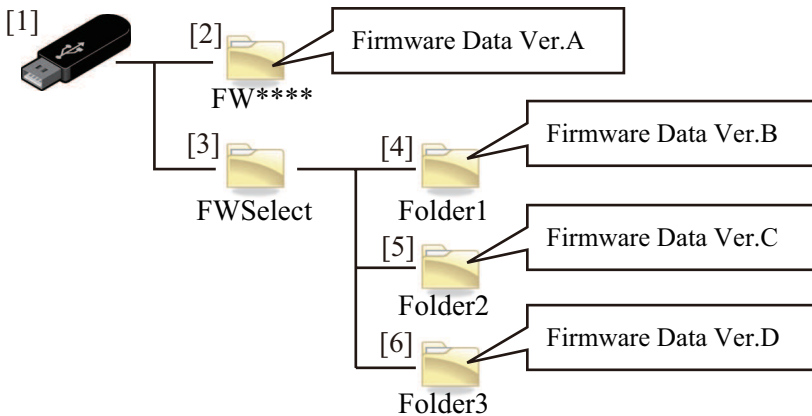
1. Uncompress the firmware file.
2. Connect the USB memory to the computer.
3. Copy the extracted update data folder into the root directory of the USB memory.

Product name	Rewriting data folder name
bizhub C4000i/C3300i	FW0023

#### 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) under "FWSelect" folder, and store the firmware data to the folder.

#### Directory configuration of USB memory



[1]	USB memory	[2]	Rewriting data folder (Required) *1
[3]	Storage folder for a plurality of data (Folder name: FWSelect (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.

### 2.2 Rewriting of Firmware

#### Starting the update screen

#### NOTE

- When [Administrator] -> [Security] -> [USB Connection Permission setting] -> [External Memory (Service)] -> [FW Update] is set to "Restrict", firmware update cannot be executed by using a USB memory.
  - When the main power switch is turned on, a message "It is limited by the administrator." will appear.
- When [Administrator] -> [Security] -> [FW Update (USB) Perm. Sett.] is set to "Password Priority", it requires to input a password after confirming with the administrator.
- USB memory must be connected with the main power switch off.

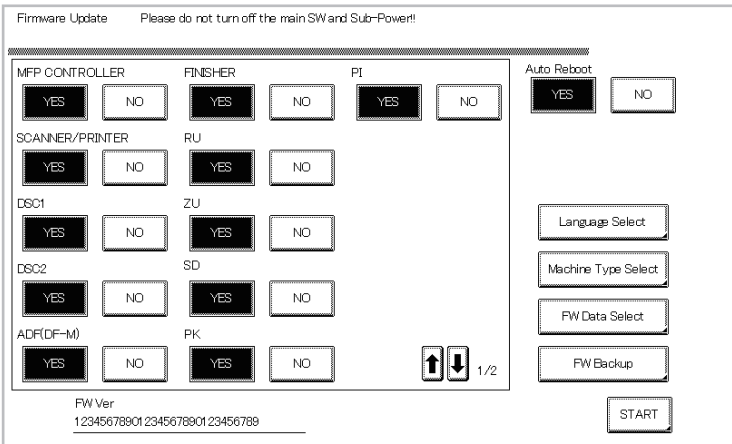
#### <Procedure>

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.





- 3. Turn the main power switch ON while pressing the Stop key.
- 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.

**Selecting the firmware data**

- When multiple set of firmware data is stored in the USB memory, a set of data can be selected.
- The firmware data in the update data folder "FW0023" copied to the root directory of the USB memory is selected as the default data.

<Procedure>

1. Touch [FW Data Select] on the firmware update selection screen.
2. After the data in the USB memory is checked, a list of the available firmware data is displayed.
  - The default data is indicated by an asterisk (\*).
3. Select the firmware, and touch [OK].

**Language Selection**

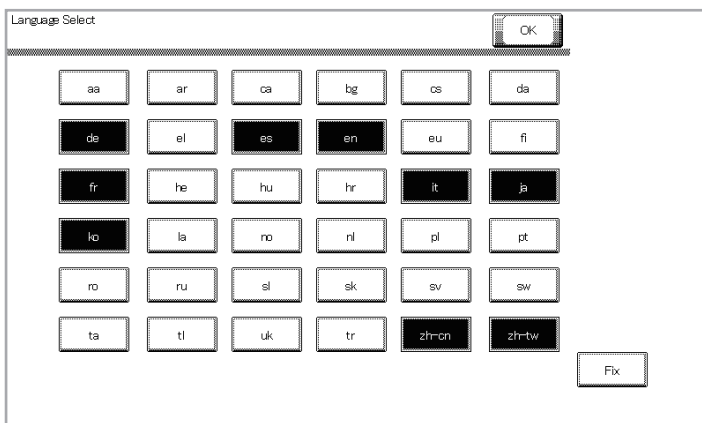
- Select the language data displayed on the Language Selection screen of Utility.
- Select languages as required according to, for example, the use environment of the user.

**NOTE**

- Up to 9 languages are selectable. However, Japanese and English are essential options.

<Procedure>

1. Touch [Language Select] on the firmware update selection screen.
2. On the Language Select screen, select a language to be displayed on the LCD area of the control panel, then touch [Fix].



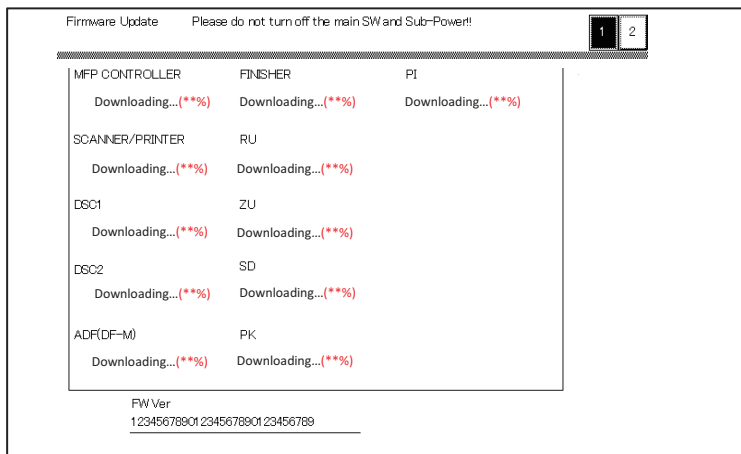
3. Touch [OK].

### Updating the firmware

1. Select the target 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.
2. 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.**



3. 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...).**

4. Turn OFF the main power switch.
5. Remove the USB memory.
6. Turn ON the main power switch.
7. Check the firmware version in Service Mode.

### 2.3 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	Storage board (STRGB)	-
PRINTER	CPU board (CPUB)	-

### 3. Internet ISW

#### 3.1 Service environment

- To use the "Internet ISW", the MFP must be 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 is enabled.
  - [Administrator] -> [Security] -> [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.

#### 3.2 Preparation

##### 3.2.1 Making the firmware data

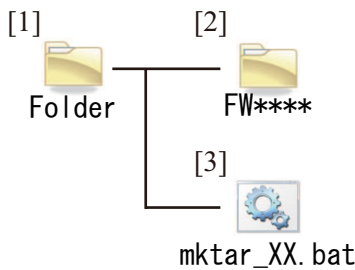
- It is necessary to convert the firmware data and save it in the target directory of the Internet ISW server for upgrading the firmware via Internet ISW.

<Procedure>

1. Uncompress the firmware file.
2. Drag and Drop the firmware folder "FW\*\*\*\*" [2] which is in the uncompressed folder [1] into the batch file "mktar\_A7PU.bat" [3] which is in the same folder.

**NOTE**

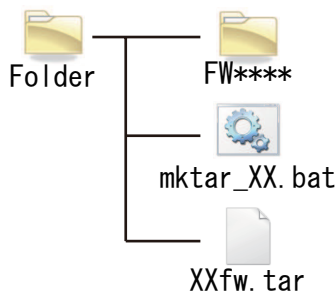
- For the folder name of the folder [2] and the file name of the file [3], refer to "Table: Folder name, File name."



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 C4000i/C3300i	FW0023	mktar_AAJP.bat	AAJPfw.tar

##### 3.2.2 Internet ISW Set

- Enable Internet ISW function in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set].
- In [Service Mode] -> [Machine Update Setting] -> [Internet ISW], configure the settings related to Internet ISW functions, including the protocol to use and access settings to the program server.
- For detailed settings, refer to "1.16.1 Internet ISW."

#### 3.3 Rewriting of Firmware

**NOTE**

- When performing the Internet ISW, ask the administrator for permission beforehand.
- DO NOT turn OFF the main power switch while downloading.

**Update instruction**

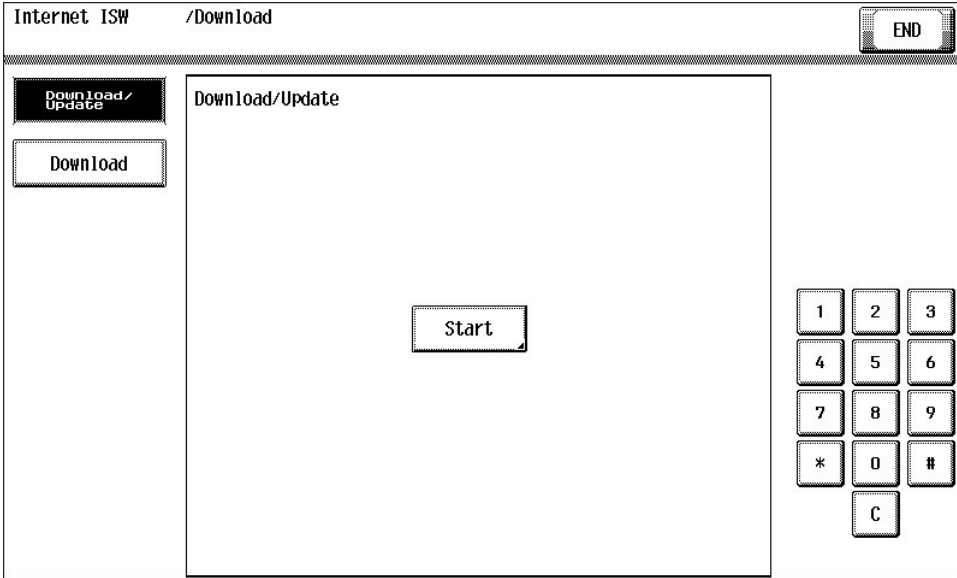
- The firmware update instruction by Internet ISW can be issued from the control panel, CS Remote Care, and Web Connection.

**NOTE**

- **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 Web Connection remotely.**
- **Updates cannot be performed via the [Download/Update] button when connected over Wi-Fi. Use [Download] button in such case.**

<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. MFP accesses the program 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.**

<CS Remote Care>

- Issue an update instruction from CS Remote Care center.
- For details, refer to the CS Remote Care Center manual.

**NOTE**

- **For detailed error information relating to CS Remote Care, refer to "1.8.1 Remote Care."**

<Web Connection>

1. Access the Web Connection of the MFP.
2. In the administrator mode, use [Internet ISW Set] -> [Firmware Update Parameters] to issue the update instruction.

**During updating**

1. After pressing [Start], the MFP main body connects to the program server and starts the download.
2. The message to indicate the status will be displayed on the screen while connecting or transferring data.

**Completing update**

<Firmware updated normally>

1. When the Firmware is normally updated, restart the MFP in auto or manual mode to display the outcome, and touch [OK] to return to the main screen.

<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 MFP 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 [Internet ISW error codes](#), and try updating again.

<Failure to update firmware after starting the update process>

1. Once firmware updating has started, the ROM in the MFP will be deleted. When it failed right after updating has started, restart the MFP, 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. Auto Update setting

### 4.1 Service environment

- To use the "Auto Update setting", the MFP must be connected to such a network environment that the firmware data can be downloaded on the network using the SMB or http protocol.
- The Auto Update function will not operate when the MFP 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
  - [Administrator] -> [Security] -> [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.

### 4.2 Preparation

- For using this Auto Update setting effectively, before executing the following procedures contact with the administrator to obtain an agreement.
- Convert the obtained firmware data to an appropriate format. Refer to "[K.3.2.1 Making the firmware data.](#)"
- Create the program update information file (C\_UpdateList.ini).
- Upload the firmware data and program update information file to the program server.
- Configure the settings related to the automatic update function in [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Auto Update setting].
- For details, see "[I.16.2.1 Auto Update setting.](#)"

### 4.3 Rewriting of Firmware

#### Download

- The program server is accessed at the configured polling interval to check the program update information file.
- Compare the program update information file in the program server with that in the MFP, and starts downloading the firmware data with a changed Version number.

#### Auto Update of firmware

- If the MFP power is set to ON at the scheduled update time, rewriting is executed automatically. If the power is set to OFF, no rewriting will be executed.

## 5. How to install the i-Option data

### 5.1 Available function for i-Option

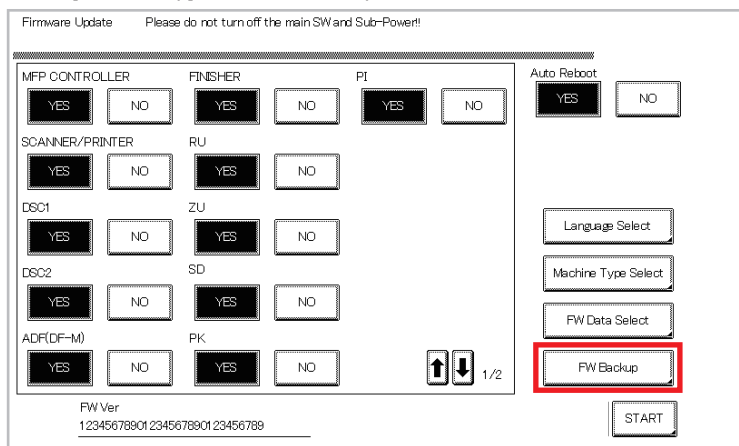
i-Option	Functions	Data location	How to install data when formatting the MFP storage
LK-114	Ubiquitous Printing	In the Standard firmware	n/a

## 6. Creating back up files when updating firmware

- By enabling backup, the old firmware data is backed up to the storage of the main body when the firmware is updated.
- If backup data exists in the storage of the main body, the old backup data is deleted and new firmware data is backed up.
- This enables you to restore the backed up firmware (rollback) if an error occurs when updating the firmware.
- To roll back the firmware, select [Service Mode] -> [Machine Update Settings] -> [Firmware Rollback].

<Procedure>

1. The firmware update selection screen is displayed when updating the firmware.
2. Touch [FW Backup] on the firmware update selection screen.



3. Select [USB FW BACKUP] and [OTHER FW BACKUP] in the firmware backup 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.
4. Touch [OK].
5. Update the firmware.

### NOTE

- The update process takes a few more minutes when creating a backup than when not creating a backup.

# L TROUBLESHOOTING

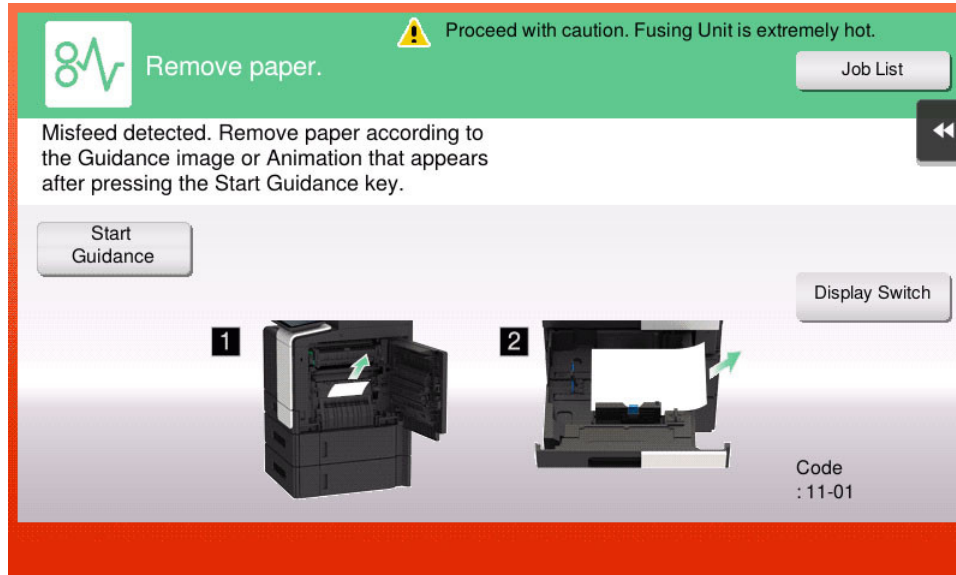
## 1. JAM CODE

### 1.1 JAM display

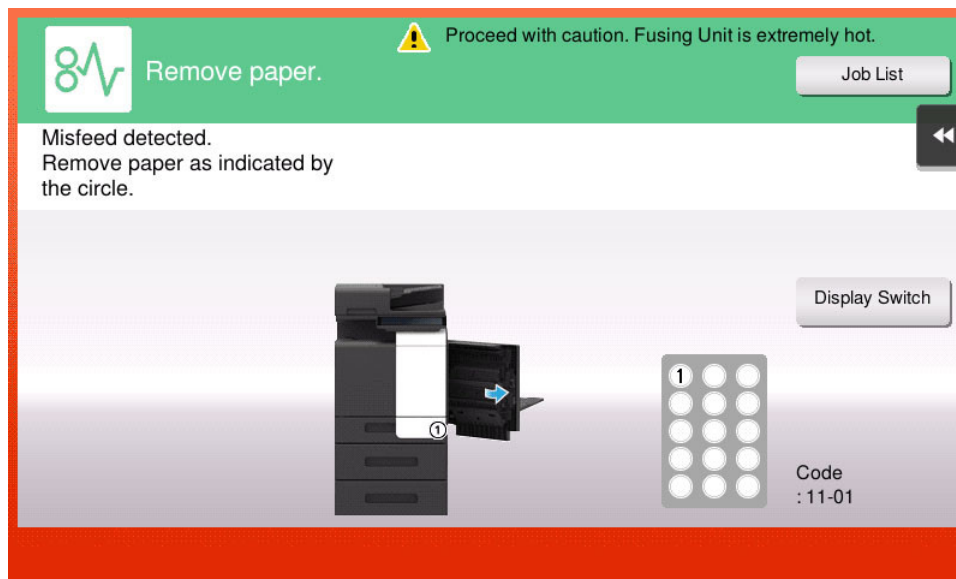
#### Display procedure

- 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

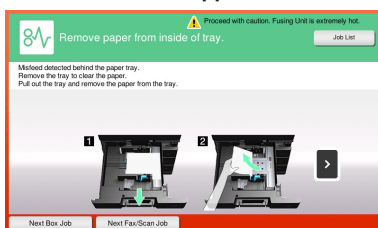


Screen showing the jam occurring position



#### 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 [Paper jam release procedure display settings] on the [Utility] -> [Utility] -> [Customize] -> [Active screen setting] 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.**





- **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.**

### Resetting procedures

1. Open the corresponding door, clear the sheet of paper misfeed, and close the door.
2. Touch "OK" displayed on the touch panel.

### 1.2 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.

### 1.3 List of the JAM code

JAM code	JAM type
10-01	Misfeed at manual bypass paper feed section
10-02	
10-40	
11-01	Misfeed at tray 1 paper feed section
11-02	
11-40	
12-01	Misfeed at tray 2 paper feed section (When PF-P20 or PF-P21 is installed)
12-40	
13-01	Misfeed at tray 3 paper feed section (When PF-P20 or PF-P21 is installed)
13-40	
20-02	Misfeed at vertical transport section (When PF-P20 or PF-P21 is installed)
20-10	
20-11	
20-12	
20-21	
20-26	
30-01	Misfeed at 2nd transfer section
30-03	
32-05	Misfeed at paper exit section
32-06	
32-31	
92-01	Misfeed at duplex pre-registration section
92-02	
92-03	
92-04	
93-03	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)

### 1.4 JAM that do not display the JAM code

JAM type	JAM detection timing	Ref. page
Misfeed at manual bypass paper feed section	Paper jam of a sheet of paper left at the manual bypass paper 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.	<a href="#">L.1.5.1 10-01, 10-02, 10-40</a>
Misfeed at tray 1 paper feed section	Paper jam of a sheet of paper left at the tray 1 paper 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.	<a href="#">L.1.5.2 11-01, 11-02, 11-40</a>
Misfeed at tray 2 paper feed section (When PF-P20 or PF-P21 is installed)	Paper jam of a sheet of paper left at the tray 2 paper feed section results, if the tray 2 transport sensor (PS6/2) 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.	<a href="#">L.1.5.3 12-01, 12-40</a>
	Paper jam of a sheet of paper left at the tray 2 paper 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 paper feed section (When PF-P20 or PF-P21 is installed)	Paper jam of a sheet of paper left at the tray 3 paper feed section results, if the tray 3 transport sensor (PS6/3) 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.	<a href="#">L.1.5.4 13-01, 13-40</a>
	Paper jam of a sheet of paper left at the tray 3 paper 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.	

JAM type	JAM detection timing	Ref. page
Misfeed at vertical transport section (When PF-P20 or PF-P21 is installed)	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.	L.1.6.1 20-02, 20-10, 20-11, 20-12, 20-21, 20-26
Misfeed at 2nd transfer section	Paper jam of a sheet of paper left at the 2nd transfer section results, if the registration sensor (PS9) 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.	L.1.7.1 30-01, 30-03
	Paper jam of a sheet of paper left at the 2nd transfer section results, if the fusing loop sensor (PS10) 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 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 paper exit section	Paper jam of a sheet of paper left at the paper exit section results, if the paper exit sensor (PS13) 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.	L.1.7.2 32-05, 32-06, 32-31
	Paper jam of a sheet of paper left at the paper 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 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.	L.1.8.1 92-01, 92-02, 92-03, 92-04
Misfeed at duplex transport section	Paper jam of a sheet of paper left at the duplex transport section results, if the ADU transport sensor (PS11) 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.	L.1.8.2 93-03
	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 1#-##

### 1.5.1 10-01, 10-02, 10-40

#### Contents

JAM type	Misfeed at manual bypass paper 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 (blocked) the registration sensor (PS9) 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.
	-	Paper jam of a sheet of paper left at the manual bypass paper 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	
Relevant parts	<ul style="list-style-type: none"> <li>• Main motor (M1)</li> <li>• Bypass tray paper feed clutch (CL2)</li> <li>• Registration clutch (CL4)</li> <li>• Registration sensor (PS9)</li> <li>• Base board (BASEB)</li> </ul>	

#### Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS9 I/O check, sensor check	BASEB CN22EA-13 (ON)	13-C
3	CL2 load check <ul style="list-style-type: none"> <li>• Check code: 20</li> <li>• Multi code: 4</li> </ul>	BASEB CN23E-10 (ON)	9-K
4	CL4 load check	BASEB CN22EA-3 (ON)	12-C

Step	Action	Control signal	Location of electrical component
	<ul style="list-style-type: none"> <li>• Check code: 21</li> <li>• Multi code: 3</li> </ul>		
5	M1 load check <ul style="list-style-type: none"> <li>• Check code: 40</li> <li>• Multi code: 1, 2</li> </ul>	BASEB CN17E-1 to 5	1-C
6	<a href="#">Replace BASEB.</a>	-	-

### 1.5.2 11-01, 11-02, 11-40

#### Contents

JAM type	Misfeed at tray 1 paper 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 (blocked) the registration sensor (PS9) 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, 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.	
	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.	
	-	Paper jam of a sheet of paper left at the tray 1 paper 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	<ul style="list-style-type: none"> <li>• Right door</li> <li>• Tray 1</li> </ul>		
Relevant parts	<ul style="list-style-type: none"> <li>• Main motor (M1)</li> <li>• Tray 1 paper feed clutch (CL3)</li> <li>• Registration clutch (CL4)</li> <li>• Registration sensor (PS9)</li> <li>• Base board (BASEB)</li> </ul>		

#### Procedure

Step	Action	Control signal	Location of electrical component
1	<a href="#">Initial check items</a>	-	-
2	PS9 I/O check, sensor check	BASEB CN22EA-13 (ON)	13-C
3	CL3 load check <ul style="list-style-type: none"> <li>• Check code: 20</li> <li>• Multi code: 1</li> </ul>	BASEB CN22EA-1 (ON)	12-C
4	CL4 load check <ul style="list-style-type: none"> <li>• Check code: 21</li> <li>• Multi code: 3</li> </ul>	BASEB CN22EA-3 (ON)	12-C
5	M1 load check <ul style="list-style-type: none"> <li>• Check code: 40</li> <li>• Multi code: 1, 2</li> </ul>	BASEB CN17E-1 to 5	1-C
6	<a href="#">Replace BASEB.</a>	-	-

### 1.5.3 12-01, 12-40

#### Contents

JAM type	Misfeed at tray 2 paper feed section (When PF-P20 or PF-P21 is installed)		
JAM code	12-01, 12-40		
JAM detection timing	12-01	The leading edge of the paper is not turned ON (unblocked) the tray 2 transport sensor (PS6/2) 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 paper feed section results, if the tray 2 transport sensor (PS6/2) 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 tray 2 paper 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	<ul style="list-style-type: none"> <li>• Right door</li> <li>• Tray 2</li> </ul>		
Relevant parts	<ul style="list-style-type: none"> <li>• Tray 2 drive motor (M1/2)</li> <li>• Tray 2 paper feed clutch (CL1/2)</li> <li>• Tray 2 transport clutch (CL2/2)</li> <li>• Tray 2 transport sensor (PS6/2)</li> <li>• Tray 2 PC control board (PCCB/2)</li> </ul>		

- Base board (BASEB)

### Procedure

Step	Action	Control signal	Location of electrical component
1	<a href="#">Initial check items</a>	-	-
2	PS6/2 I/O check, sensor check	PCCB/2 CN3-3 (ON)	17-X
3	CL1/2 load check <ul style="list-style-type: none"> <li>• Check code: 20</li> <li>• Multi code: 2</li> </ul>	PCCB/2 CN5-3 (ON)	16-P
4	CL2/2 load check <ul style="list-style-type: none"> <li>• Check code: 21</li> <li>• Multi code: 1</li> </ul>	PCCB/2 CN5-1 (ON)	15-P
5	M1/2 load check <ul style="list-style-type: none"> <li>• Check code: 28</li> <li>• Multi code: 1, 2</li> </ul>	PCCB/2 CN4-1 to 7	18-P
6	<a href="#">Replace PCCB/2.</a>	-	-
7	<a href="#">Replace BASEB.</a>	-	-

### 1.5.4 13-01, 13-40

#### Contents

JAM type	Misfeed at tray 3 paper feed section (When PF-P20 or PF-P21 is installed) (bizhub C4000i only)	
JAM code	13-01, 13-40	
JAM detection timing	13-01	The leading edge of the paper is not turned ON (unblocked) the tray 3 transport sensor (PS6/3) 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 paper feed section results, if the tray 3 transport sensor (PS6/3) 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 tray 3 paper 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	<ul style="list-style-type: none"> <li>• Right door</li> <li>• Tray 3</li> </ul>	
Relevant parts	<ul style="list-style-type: none"> <li>• Tray 3 drive motor (M1/3)</li> <li>• Tray 3 paper feed clutch (CL1/3)</li> <li>• Tray 3 transport clutch (CL2/3)</li> <li>• Tray 3 transport sensor (PS6/3)</li> <li>• Tray 3 PC control board (PCCB/3)</li> </ul>	

### Procedure

Step	Action	Control signal	Location of electrical component
1	<a href="#">Initial check items</a>	-	-
2	PS6/3 I/O check, sensor check	PCCB/3 CN3-3 (ON)	17-X
3	CL1/3 load check <ul style="list-style-type: none"> <li>• Check code: 20</li> <li>• Multi code: 3</li> </ul>	PCCB/3 CN5-3 (ON)	16-P
4	CL2/3 load check <ul style="list-style-type: none"> <li>• Check code: 21</li> <li>• Multi code: 2</li> </ul>	PCCB/3 CN5-1 (ON)	15-P
5	M1/3 load check <ul style="list-style-type: none"> <li>• Check code: 28</li> <li>• Multi code: 3, 4</li> </ul>	PCCB/3 CN4-1 to 7	18-P
6	<a href="#">Replace PCCB/3.</a>	-	-

### 1.6 2#-##

#### 1.6.1 20-02, 20-10, 20-11, 20-12, 20-21, 20-26

#### Contents

JAM type	Misfeed at vertical transport section (When PF-P20 or PF-P21 is installed)	
JAM code	20-02, 20-10, 20-11, 20-12, 20-21, 20-26	
JAM detection timing	20-02	For paper fed from the tray 2/3, 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.
	20-10	The leading edge of the paper is not turned OFF (blocked) the tray 2 transport sensor (PS6/2) even after the lapse of a given period of time after the tray 2 starts to feed paper.

	20-11	The leading edge of the paper is not turned OFF (blocked) the tray 3 transport sensor (PS6/3) even after the lapse of a given period of time after the tray 3 starts to feed paper. (bizhub C4000i only)
	20-12	The leading edge of the paper is not turned OFF (blocked) the tray 2 transport sensor (PS6/2) even after the lapse of a given period of time after the tray 3 starts to feed paper. (bizhub C4000i only)
	20-21	The leading edge of the paper is not turned ON (unblocked) the tray 2 transport sensor (PS6/2) even after the lapse of a given period of time after the tray 3 starts to feed paper. (bizhub C4000i only)
	20-26	The leading edge of the paper is not turned ON (blocked) the registration sensor (PS9) even after the lapse of a given period of time after the tray 2/3 starts to feed 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	<ul style="list-style-type: none"> <li>• Right door</li> <li>• Tray 2 right door</li> <li>• Tray 3 right door</li> </ul>	
Relevant parts	<ul style="list-style-type: none"> <li>• Main motor (M1)</li> <li>• Tray 2 drive motor (M1/2)</li> <li>• Tray 3 drive motor (M1/3)</li> <li>• Registration clutch (CL4)</li> <li>• Tray 2 transport clutch (CL2/2)</li> <li>• Tray 3 transport clutch (CL2/3)</li> <li>• Registration sensor (PS9)</li> <li>• Tray 2 transport sensor (PS6/2)</li> <li>• Tray 3 transport sensor (PS6/3)</li> <li>• Base board (BASEB)</li> <li>• Tray 2 PC control board (PCCB/2)</li> <li>• Tray 3 PC control board (PCCB/3)</li> </ul>	

## Procedure

Step	Action	Control signal	Location of electrical component
1	<a href="#">Initial check items</a>	-	-
2	PS9 I/O check, sensor check	BASEB CN22EA-13 (ON)	13-C
3	PS6/2, PS6/3 I/O check, sensor check	PCCB/2 CN3-3 (ON) PCCB/3 CN3-3 (ON)	17-X
4	CL4 load check <ul style="list-style-type: none"> <li>• Check code: 21</li> <li>• Multi code: 3</li> </ul>	BASEB CN22EA-3 (ON)	12-C
5	CL2/2, CL2/3 load check <ul style="list-style-type: none"> <li>• Check code: 21</li> <li>• Multi code: 1, 2</li> </ul>	PCCB/2 CN5-1 (ON) PCCB/3 CN5-1 (ON)	15-P
6	M1 load check (Main body) <ul style="list-style-type: none"> <li>• Check code: 40</li> <li>• Multi code: 1, 2</li> </ul>	BASEB CN17E-1 to 5	1-C
7	M1/2, M1/3 load check <ul style="list-style-type: none"> <li>• Check code: 28</li> <li>• Multi code: 1, 2, 3, 4</li> </ul>	PCCB/2 CN4-1 to 7 PCCB/3 CN4-1 to 7	18-P
8	<a href="#">Replace PCCB/2 or PCCB/3.</a>	-	-
9	<a href="#">Replace BASEB.</a>	-	-

## 1.7 3#-##

### 1.7.1 30-01, 30-03

#### Contents

JAM type	Misfeed at 2nd transfer section	
JAM code	30-01, 30-03	
JAM detection timing	30-01	The registration sensor (PS9) is not turned OFF (unblocked) even after the lapse of a given period of time after the leading edge of the paper has turned ON (blocked) PS9.
	30-03	The leading edge of the paper is not turned ON (unblocked) the paper exit sensor (PS13) even after the lapse of a given period of time after a paper feed starts to feed paper.
	-	Paper jam of a sheet of paper left at the 2nd transfer section results, if the registration sensor (PS9) 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 2nd transfer section results, if the fusing loop sensor (PS10) 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 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	<ul style="list-style-type: none"> <li>• Main motor (M1)</li> <li>• Fusing motor (M3)</li> <li>• Registration clutch (CL4)</li> <li>• Registration sensor (PS9)</li> <li>• Fusing loop sensor (PS10)</li> <li>• Paper exit sensor (PS13)</li> <li>• Base board (BASEB)</li> </ul>

### Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS9 I/O check, sensor check	BASEB CN22EA-13 (ON)	13-C
3	PS10 I/O check, sensor check	BASEB CN23E-9 (ON)	9-K
4	PS13 I/O check, sensor check	BASEB CN16E-3 (ON)	11-K
5	CL4 load check <ul style="list-style-type: none"> <li>• Check code: 21</li> <li>• Multi code: 3</li> </ul>	BASEB CN22EA-3 (ON)	12-C
6	M1 load check <ul style="list-style-type: none"> <li>• Check code: 40</li> <li>• Multi code: 1, 2</li> </ul>	BASEB CN17E-1 to 5	1-C
7	M3 load check <ul style="list-style-type: none"> <li>• Check code: 45</li> <li>• Multi code: 1, 2, 3</li> </ul>	BASEB CN17E-6 to 10	1-C
8	<a href="#">Replace BASEB.</a>	-	-

### 1.7.2 32-05, 32-06, 32-31

#### Contents

JAM type	Misfeed at paper exit section	
JAM code	32-05, 32-06, 32-31	
JAM detection timing	32-05	The paper exit sensor (PS13) is not turned OFF (blocked) even after the lapse of a given period of time after the leading edge of the paper has turned ON (unblocked) PS13.
	32-06	The fusing loop sensor (PS10) is not turned OFF (unblocked) even after the lapse of a given period of time after the leading edge of the paper has turned ON (blocked) PS10.
	32-31	The paper exit sensor (PS13) is turned OFF (blocked) before the trailing edge of the paper moves past the fusing pad.
	-	Paper jam of a sheet of paper left at the paper exit section results, if the paper exit sensor (PS13) 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 paper 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	<ul style="list-style-type: none"> <li>• Fusing motor (M3)</li> <li>• Fusing loop sensor (PS10)</li> <li>• Paper exit sensor (PS13)</li> <li>• Base board (BASEB)</li> </ul>	

### Procedure

Step	Action	Control signal	Location of electrical component
1	<a href="#">Initial check items</a>	-	-
2	PS10 I/O check, sensor check	BASEB CN23E-9 (ON)	9-K
3	PS13 I/O check, sensor check	BASEB CN16E-3 (ON)	11-K
4	M3 load check <ul style="list-style-type: none"> <li>• Check code: 45</li> <li>• Multi code: 1, 2, 3</li> </ul>	BASEB CN17E-6 to 10	1-C
5	<a href="#">Replace BASEB.</a>	-	-

### 1.8 9#-##

#### 1.8.1 92-01, 92-02, 92-03, 92-04

#### Contents

JAM type	Misfeed at duplex pre-registration section
JAM code	92-01, 92-02, 92-03, 92-04

JAM detection timing	92-01	The leading edge of the paper is not turned ON (blocked) the registration sensor (PS9) even after the lapse of a given period of time after a duplex paper feed sequence has been started.
	92-02	After the start of 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.
	92-03	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.
	92-04	The leading edge of the paper is not turned OFF (blocked) the ADU transport sensor (PS11) even after the lapse of a given period of time after a duplex paper feed sequence has been started.
	-	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	<ul style="list-style-type: none"> <li>• Main motor (M1)</li> <li>• Registration clutch (CL4)</li> <li>• ADU transport clutch (CL5)</li> <li>• Registration sensor (PS9)</li> <li>• ADU transport sensor (PS11)</li> <li>• Base board (BASEB)</li> </ul>	

### Procedure

Step	Action	Control signal	Location of electrical component
1	<a href="#">Initial check items</a>	-	-
2	PS9 I/O check, sensor check	BASEB CN22EA-13 (ON)	13-C
3	PS11 I/O check, sensor check	BASEB CN23E-6 (ON)	9-K
4	CL4 load check <ul style="list-style-type: none"> <li>• Check code: 21</li> <li>• Multi code: 3</li> </ul>	BASEB CN22EA-3 (ON)	12-C
5	CL5 load check <ul style="list-style-type: none"> <li>• Check code: 81</li> <li>• Multi code: 1</li> </ul>	BASEB CN23E-12 (ON)	9-K
6	M1 load check <ul style="list-style-type: none"> <li>• Check code: 40</li> <li>• Multi code: 1, 2</li> </ul>	BASEB CN17E-1 to 5	1-C
7	<a href="#">Replace BASEB.</a>	-	-

### 1.8.2 93-03

#### Contents

JAM type	Misfeed at duplex transport section	
JAM code	93-03	
JAM detection timing	93-03	The leading edge of the paper is not turned ON (unblocked) the ADU transport sensor (PS11) even after the lapse of a given period of time after the paper has turned OFF (blocked) the paper exit sensor (PS13).
	-	Paper jam of a sheet of paper left at the duplex transport section results, if the ADU transport sensor (PS11) 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 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	<ul style="list-style-type: none"> <li>• Main motor (M1)</li> <li>• Fusing motor (M3)</li> <li>• ADU transport clutch (CL5)</li> <li>• ADU forward rotation clutch (CL6)</li> <li>• ADU reverse rotation clutch (CL7)</li> <li>• ADU transport sensor (PS11)</li> <li>• Paper exit sensor (PS13)</li> <li>• Base board (BASEB)</li> </ul>	

### Procedure

Step	Action	Control signal	Location of electrical component
1	<a href="#">Initial check items</a>	-	-
2	PS11 I/O check, sensor check	BASEB CN23E-6 (ON)	9-K
3	PS13 I/O check, sensor check	BASEB CN16E-3 (ON)	11-K



Step	Action	Control signal	Location of electrical component
4	CL5 load check <ul style="list-style-type: none"> <li>Check code: 81</li> <li>Multi code: 1</li> </ul>	BASEB CN23E-12 (ON)	9-K
5	CL6 load check <ul style="list-style-type: none"> <li>Check code: 80</li> <li>Multi code: 1</li> </ul>	BASEB CN18E-6 (ON)	2-C
6	CL7 load check <ul style="list-style-type: none"> <li>Check code: 80</li> <li>Multi code: 2</li> </ul>	BASEB CN18E-8 (ON)	3-C
7	M1 load check <ul style="list-style-type: none"> <li>Check code: 40</li> <li>Multi code: 1, 2</li> </ul>	BASEB CN17E-1 to 5	1-C
8	M3 load check <ul style="list-style-type: none"> <li>Check code: 45</li> <li>Multi code: 1, 2, 3</li> </ul>	BASEB CN17E-6 to 10	1-C
9	Replace BASEB.	-	-

### 1.8.3 99-01

#### Contents

JAM type	Controller JAM (paper size error)		
JAM code	99-01		
JAM detection timing	99-01	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	
Misfeed processing location	-		
Relevant parts	-		

#### Procedure

Step	Action	Control signal	Location of electrical component
1	<a href="#">Initial check items</a>	-	-
2	Open and close the front door of the main body.	-	-

### 1.8.4 99-02

#### 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	-		

#### Procedure

Step	Action	Control signal	Location of electrical component
1	<a href="#">Initial check items</a>	-	-
2	Open and close the front door of the main body.	-	-

### 1.8.5 99-03

#### 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	-		

#### Procedure

Step	Action	Control signal	Location of electrical component
1	<a href="#">Initial check items</a>	-	-
2	Open and close the front door of the main body.	-	-

**1.8.6 99-04****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	-	

**Procedure**

Step	Action	Control signal	Location of electrical component
1	<a href="#">Initial check items</a>	-	-
2	Open and close the front door of the main body.	-	-

**1.8.7 99-05****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	-	

**Procedure**

Step	Action	Control signal	Location of electrical component
1	<a href="#">Initial check items</a>	-	-
2	Open and close the front door of the main body.	-	-

**1.8.8 99-06****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	-	

**Procedure**

Step	Action	Control signal	Location of electrical component
1	<a href="#">Initial check items</a>	-	-
2	Open and close the front door of the main body.	-	-

**1.8.9 99-07****Contents**

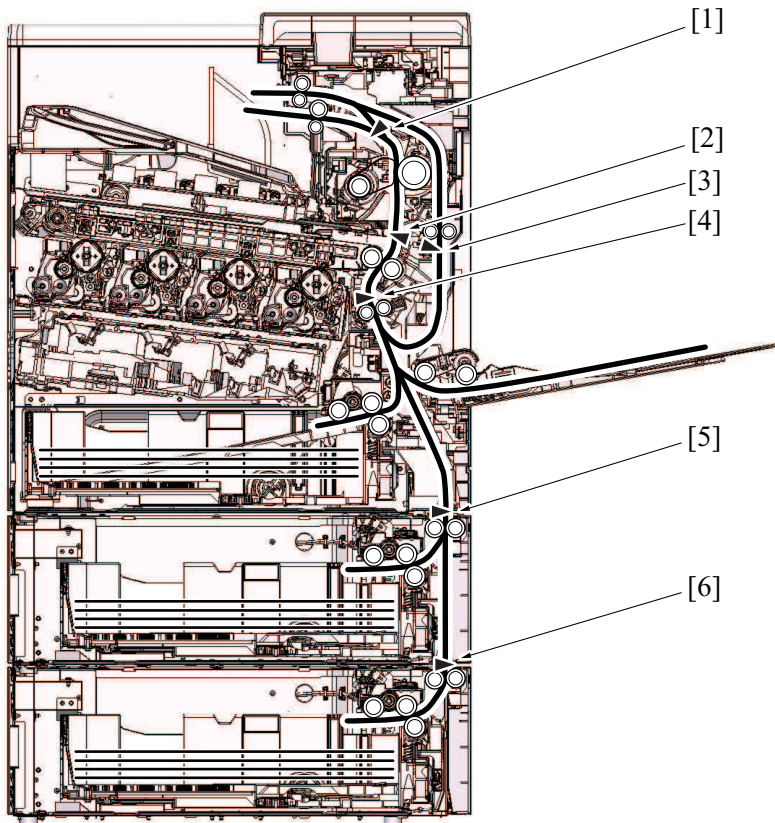
JAM type	Controller JAM (main body not completing a job)	
JAM code	99-07	
JAM detection timing	99-07	The engine does not stop after a lapse of a given time after that a print has finished.
Misfeed processing location	-	
Relevant parts	-	

**Procedure**

Step	Action	Control signal	Location of electrical component
1	<a href="#">Initial check items</a>	-	-
2	Open and close the front door of the main body.	-	-

## 1.9 Sensor layout

### 1.9.1 bizhub C4000i/C3300i



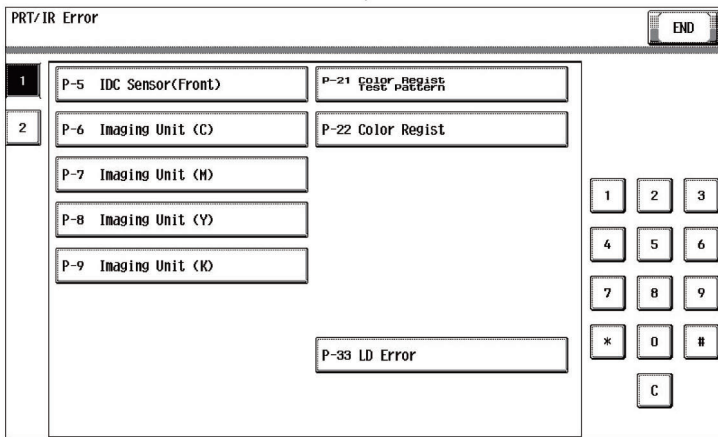
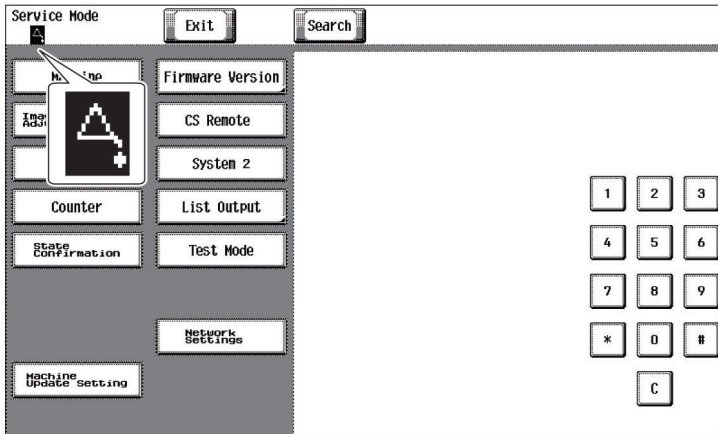
[1]	Paper exit sensor (PS13)	[2]	Fusing loop sensor (PS10)
[3]	ADU transport sensor (PS11)	[4]	Registration sensor (PS9)
[5]	Tray 2 transport sensor (PS6/2) *	[6]	Tray 3 transport sensor (PS6/3) *

- \*: Only when PF-P20 or PF-P21 is installed

## 2. MALFUNCTION CODE

### 2.1 Display procedure

- The machine's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code and maintenance call mark on the control panel.
- Touching the maintenance call mark will display the corresponding malfunction code on the state confirm screen.



### 2.2 List of the malfunction code

- If an image stabilization fault occurs, the corresponding malfunction code appears.

Malfunction code	Contents
P-5	IDC sensor failure
P-6	Imaging unit (C) failure
P-7	Imaging unit (M) failure
P-8	Imaging unit (Y) failure
P-9	Imaging unit (K) failure
P-21	Color regist test pattern failure
P-22	Color regist adjust failure
P-33	LD malfunction

### 2.3 P-5

#### Contents

Malfunction type	IDC sensor failure
Malfunction code	P-5
Malfunction detection timing	<ul style="list-style-type: none"> <li>• During IDC sensor light intensity correction, IDC sensor output is uncompleted.</li> <li>• During IDC base surface detective control, sensor output voltage detected is under 0.7 V or over 3.35V.</li> <li>• 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).</li> </ul>
Relevant parts	<ul style="list-style-type: none"> <li>• Transfer belt unit</li> <li>• IDC sensor (IDCS1)</li> <li>• High voltage unit (HVPS)</li> <li>• Base board (BASEB)</li> </ul>

**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.
3. Reinstall or reconnect IDCS1, connectors connecting between IDCS1-relay CN70-BASEB CN22E, if any of the foregoing parts is installed or connected improperly.
4. Clean IDCS1, if it is dirty.
5. Check the connector between HVPS CN1-BASEB CN4E for proper connection.
6. Open/close the front door, run an image stabilization sequence, and select [Service Mode] -> [State Confirmation] -> [Level History 1] to check the IDC value.  
IDC1: IDCS1  
If the value is 1.0 V or less, replace IDCS1.
7. [Replace BASEB.](#)

**2.4 P-6, P-7, P-8, P-9****Contents**

Malfunction type	Imaging unit (C) failure, Imaging unit (M) failure, Imaging unit (Y) failure, Imaging 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 <sup>2</sup> (IDC sensor photo receiver output) or less during max. density adjustment (Vg/Vdc adjustment).
Relevant parts	<ul style="list-style-type: none"> <li>• Imaging unit/Y,M,C,K</li> <li>• Transfer belt unit</li> <li>• IDC sensor (IDCS1)</li> <li>• Base board (BASEB)</li> <li>• High voltage unit (HVPS)</li> </ul>

**Procedure**

1. Check the setting value in [Max Image Density Adj] of [Service Mode] -> [Imaging Process Adjustment] and, if it is negative, readjust.
2. Check the drive transmission portion of the imaging unit and correct as necessary.
3. Clean IDCS1 window if dirty.
4. Clean the contact of the imaging unit connector if dirty.
5. Check the connector between HVPS CN1-BASEB CN4E for proper connection.
6. [Replace the imaging unit.](#)
7. [Replace the transfer belt unit.](#)
8. [Replace HVPS.](#)
9. [Replace BASEB.](#)

**2.5 P-21****Contents**

Malfunction type	Color regist test pattern failure
Malfunction code	P-21
Malfunction detection timing	<ul style="list-style-type: none"> <li>• During pre-pattern detection, pre-pattern edge (start/ end point of effective area) is not detected within the pre-pattern search area.</li> <li>• 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.</li> </ul>
Relevant parts	<ul style="list-style-type: none"> <li>• Transfer belt unit</li> <li>• PH unit</li> <li>• Base board (BASEB)</li> </ul>

**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.
3. [Replace the PH unit.](#)
4. [Replace BASEB.](#)

**2.6 P-22****Contents**

Malfunction type	Color regist adjust failure
Malfunction code	P-22
Malfunction detection timing	<ul style="list-style-type: none"> <li>• The gap between maximum and minimum value of deviations among each color (the values before averaging) is over the predetermined value.</li> <li>• Average deviation exceeds the predetermined value.</li> <li>• 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.</li> </ul>
Relevant parts	<ul style="list-style-type: none"> <li>• IDC sensor (IDCS1)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Slide out the imaging unit and reinstall it in position.
2. Reinstall or reconnect IDCS1, connectors connecting between IDCS1-relay CN70-BASEB CN22E, if any of the foregoing parts is installed or connected improperly.

3. Check the vertical transport guide for installed position and correct as necessary.
4. [Replace BASEB.](#)

## 2.7 P-33

### 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	<ul style="list-style-type: none"><li>• PH unit</li><li>• Laser diode/Y (LD/Y)</li><li>• Laser diode/M (LD/M)</li><li>• Laser diode/C (LD/C)</li><li>• Laser diode/K (LD/K)</li><li>• LD drive board (LASDB)</li><li>• Base board (BASEB)</li></ul>

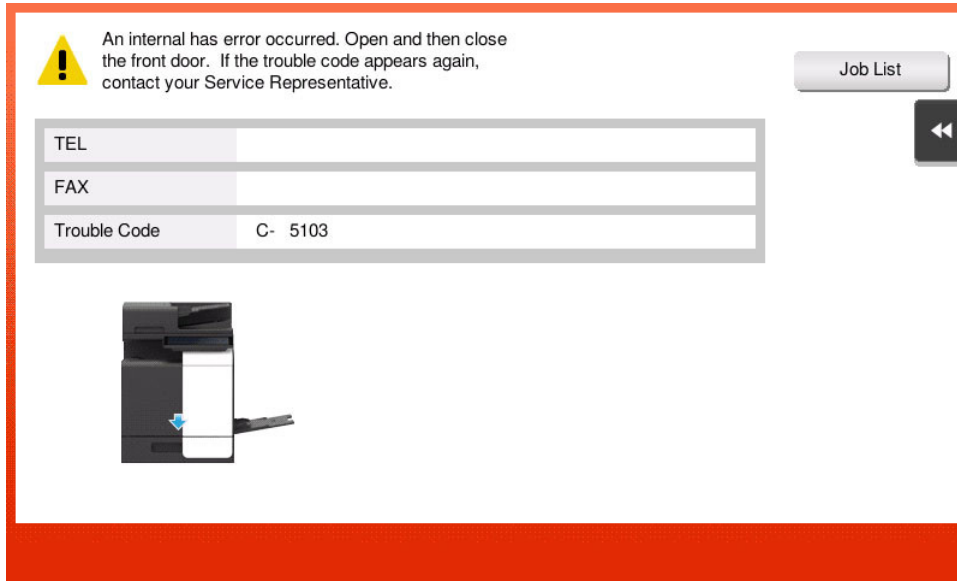
### Procedure

1. [Replace the PH unit.](#)
2. [Replace BASEB.](#)

### 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 trouble code on the control panel.



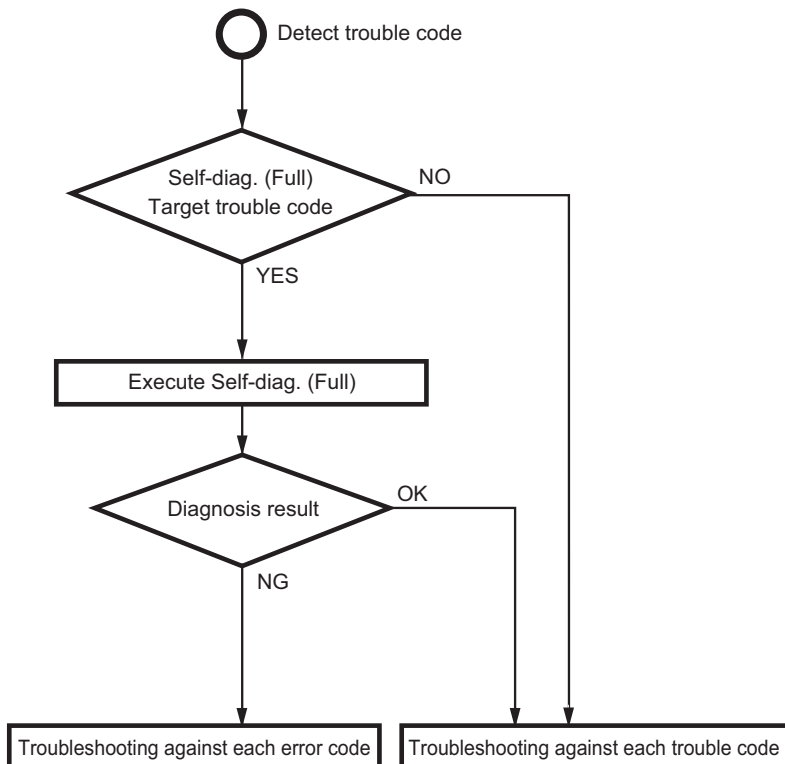
#### 3.2 Overview of troubleshooting procedure

- 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 procedures at once.
  - At "Troubleshooting against each error code" and "Troubleshooting against each trouble code", if the parts to be replaced are the same (ex. base 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 been 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 key: Refer to the <a href="#">Trouble resetting procedure by Trouble Reset key</a> .
Rank B	<ul style="list-style-type: none"> <li>• Opening/closing the front door</li> <li>• Trouble reset key:</li> <li>• When the [Internal Error. Auto Cancel] for rank B is set to "Yes", after the set period of time, trouble is automatically cleared.</li> </ul>
Rank C	<ul style="list-style-type: none"> <li>• Turning main power switch OFF/ON</li> <li>• When the [Internal Error. Auto Cancel] for rank C is set to "Yes", after the set period of time, trouble is restarted and cleared.</li> </ul>

#### 3.3.1 Trouble resetting procedure by Trouble Reset key

**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.

**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.
6. When the machine fails to start even after perform step 1 through 5, turn OFF the main power switch and unplug the power cord.
7. Insert the power cord after 15 sec. or more, turn ON the main power switch and check if the machine starts correctly.

#### 3.3.2 Trouble resetting procedure by the auto cancel function

**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.

**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

**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.

Application	Trouble code rank	Rank A	Rank B	Rank C
Web Connection		Cannot be cleared	Can be cleared	Can be cleared
OpenAPI (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

**Procedure**

**< Web Connection >**

1. Access the 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.

**< OpenAPI (Enterprise Suite) >**

1. Access 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.

**< 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, options, and functions where the trouble isolation function can be applied when trouble occurs. This allows you to continue using the other units or functions 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
  - Expansion Fun. (Storage)
- 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 or functions.  
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

Trouble Code	Contents	Rank	Self-diag. (Full)
C0103	Tray 2 drive motor malfunction (When PF-P20 or PF-P21 is installed)	B	-
C0104	Tray 3 drive motor malfunction (When PF-P20 or PF-P21 is installed) (bizhub C4000i only)	B	-
C0202	Tray 1 feeder up/down abnormality	B	-
C0204	Tray 2 feeder up/down abnormality (When PF-P20 or PF-P21 is installed)	B	-
C0206	Tray 3 feeder up/down abnormality (When PF-P20 or PF-P21 is installed) (bizhub C4000i only)	B	-
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	Color motor failure to turn	B	-
C2254	Color motor turning at abnormal timing	B	-
C2350	Toner suction fan failure to turn	B	-
C2411	Imaging unit/C new article release	B	-
C2412	Imaging unit/M new article release	B	-
C2413	Imaging unit/Y new article release	B	-
C2414	Imaging 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	-
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	-
C3201	Fusing motor failure to turn	B	-
C3202	Fusing motor turning at abnormal timing	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	-
C392B	Fusing sensor wire breaks detection (difference of temperature)	A	-
C4091	Engine communication error	C	-
C40A2	Mechanical controller PF communication data error	C	-

Trouble Code	Contents	Rank	Self-diag. (Full)
C40A3	Mechanical controller PF transmission timeout	C	-
C40A4	Mechanical controller PF communication pulse error	C	-
C40A5	QSPI communication clock switching error	C	-
C40A6	Mechanical controller ASIC communication error	C	-
C40C3	CTL PF transmission timeout 1	C	-
C40C5	CTL PF transmission timeout 2	C	-
C4101	Polygon motor rotation trouble	B	-
C4501	Laser malfunction	B	-
C5102	Main motor failure to turn	B	-
C5103	Main motor turning at abnormal timing	B	-
C5357	Machine cooling fan failure to turn	B	-
C5360	Clean unit fan failure to turn (When CU-202 is installed) (Europe models only)	B	-
C5372	MFP control board CPU temperature failure	C	Target
C5501	AC signal abnormality	C	-
C5601	Engine control malfunction	C	-
C5605	Engine communication data error	C	-
C5606	Engine transmission timeout	C	-
C5610	PH LD drive communication error	C	-
C5620	Mechanical controller WDT error	C	-
C5701	Power supply malfunction	C	-
C7111	Tray 1 lift-up motor failure	C	-
C7131	Toner supply motor/CK failure	C	-
C7133	Toner supply motor/YM failure	C	-
C7201	Tray 1 paper feed clutch failure	C	-
C7206	Bypass tray paper feed clutch failure	C	-
C720A	Registration clutch failure	C	-
C720B	1st transfer pressure clutch failure	C	-
C720D	ADU transport clutch failure	C	-
C720E	ADU forward rotation clutch failure	C	-
C720F	ADU reverse rotation clutch failure	C	-
C7243	Exit path switch solenoid failure	C	-
C7311	Machine cooling fan failure	C	-
C7312	Toner suction fan failure	C	-
C7502	Tray 1 upper limit sensor failure	C	-
C7601	Power line A1 error	C	-
C7602	Power line A2 error	C	-
C7604	Power line A4 error	C	-
C7605	Power line A5 error	C	-
C7607	Power line A7 error	C	-
C760A	Power line A10 error	C	-
C760F	Power line A15 error	C	-
C7613	Power line A19 error	C	-
C7615	Power line A20 error	C	-
C7616	Power line A21 error	C	-
C7631	Supply power line 1 error	C	-
C7632	Supply power line 2 error	C	-
C7633	Supply power line 3 error	C	-
CA051	Standard controller configuration failure	C	-
CA052	Controller hardware error	C	-
CA053	Controller start failure	C	-
CC002	Vendor internal error	C	Target
CC151	ROM contents error upon startup (MSC)	C	Target
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

Trouble Code	Contents	Rank	Self-diag. (Full)
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
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	-
CD002	JOB RAM save error	C	Target
CD004	Storage access error (connection failure)	C	Target
CD00F	Storage data transfer error	C	Target
CD010	Storage unformat	C	Target
CD011	Storage out of specifications mounted	C	Target
CD012	Mount error due to storage being unformatted	C	Target
CD030	Storage management information reading error	C	Target
CD041	Storage command execution error	C	Target
CD042		C	Target
CD043		C	Target
CD044		C	Target
CD045		C	Target
CD046		C	Target
CD047	Storage SCSI library error	C	Target
CD048		C	Target
CD049		C	Target
CD04A		C	Target
CD04B		C	Target
CD050	Storage 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
CD261	USB hub board failure	C	Target
CD262	Extension network adapter installation error	C	Target
CD3##	Nonvolatile 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 (Storage)	-	Target
CD392	Nonvolatile data save error (EEPROM)	C	Target
CD3B1	DB server startup failure	C	Target
CD3B3	DB access failure	C	Target

Trouble Code	Contents	Rank	Self-diag. (Full)
CD3B4	No DB definition file	C	Target
CD3B5	DB definition file error	C	Target
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
CD701	Mechanical controller flash ROM writing error	C	-
CD702	Mechanical controller flash ROM device error	C	-
CD703	FW download communication fault	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	-	-
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
CE011	Config. file access error at startup of FW	C	Target
CE101	Browser finish detected	C	Target
CE201	Transmission operation log storage fault	C	Target
CE202	PDL interpreter error	C	Target
CE203	Unrecoverable error	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 storage in the enhanced server authentication state.	C	Target
CEEE1	CPU board (MSC) malfunction	C	Target
CEEE3	Base board (ENG) malfunction	A	Target
CF###	Trouble code (CF###) is referred to as abort code. For details of abort code, refer to "ABORT CODE".	C	-

### 3.6 C0###

#### 3.6.1 C0103

##### Contents

Trouble type	C0103: Tray 2 drive motor malfunction (When PF-P20 or PF-P21 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.	
Trouble isolation	Tray 2	
Relevant electrical parts	<When PF-P20 or PF-P21 is installed>	<ul style="list-style-type: none"> <li>• Tray 2 drive motor (M1/2)</li> <li>• Tray 2 PC control board (PCCB/2)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

##### Procedure

1. Check the connector between M1/2-PCCB/2 CN4 for proper connection and correct as necessary.

2. Check the connector between PCCB/2 CN1-relay CN24-BASEB CN21E for proper connection and correct as necessary.
3. Check the connector of M1/2 for proper drive coupling and correct as necessary.
4. Check CPUB for proper installation and correct as necessary.
5. M1/2 load check
  - Check code: 28
  - Multi code: 1, 2
  - Control signal: PCCB/2 CN4-1 to 7
  - Location of electrical component: 18-P
6. [Replace M1/2.](#)
7. PCCB/2 F1 conduction check
8. [Replace PCCB/2.](#)
9. [Replace CPUB.](#)
10. [Replace BASEB.](#)

### 3.6.2 C0104

#### Contents

Trouble type	C0104: Tray 3 drive motor malfunction (When PF-P20 or PF-P21 is installed) (bizhub C4000i only)	
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	Tray 3	
Relevant electrical parts	<When PF-P20 or PF-P21 is installed>	<ul style="list-style-type: none"> <li>• Tray 3 drive motor (M1/3)</li> <li>• Tray 3 PC control board (PCCB/3)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Check the connector between M1/3-PCCB/3 CN4 for proper connection and correct as necessary.
2. Check the connector between PCCB/3 CN1-relay CN2PC-PCCB/2 CN2 for proper connection and correct as necessary.
3. Check the connector between PCCB/2 CN1-relay CN24-BASEB CN21E for proper connection and correct as necessary.
4. Check the connector of M1/3 for proper drive coupling and correct as necessary.
5. Check CPUB for proper installation and correct as necessary.
6. M1/3 load check
  - Check code: 28
  - Multi code: 3, 4
  - Control signal: PCCB/3 CN4-1 to 7
  - Location of electrical component: 18-P
7. [Replace M1/3.](#)
8. PCCB/3 F1 and F2 conduction check
9. [Replace PCCB/3.](#)
10. [Replace CPUB.](#)
11. [Replace BASEB.](#)

### 3.6.3 C0202

#### Contents

Trouble type	C0202: Tray 1 feeder up/down abnormality	
Rank	B	
Trouble detection condition	The tray 1 upper limit sensor (PS7) 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	<ul style="list-style-type: none"> <li>• Tray 1 lift-up motor (M6)</li> <li>• Tray 1 upper limit sensor (PS7)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>	

#### 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 M6-BASEB CN19E for proper connection and correct as necessary.
3. Check the connector of M6 for proper drive coupling and correct as necessary.
4. Check the connector between PS7-BASEB CN22E for proper connection and correct as necessary.
5. Check CPUB for proper installation and correct as necessary.
6. PS7 I/O check, sensor check
  - Control signal: BASEB CN22EA-7 (ON)
  - Location of electrical component: 12-C
7. M6 load check
  - Check code: 23
  - Multi code: 4
  - Control signal: BASEB CN19E-7 to 8
  - Location of electrical component: 10-C
8. [Replace M6.](#)
9. [Replace CPUB.](#)
10. BASEB F11E conduction check
11. [Replace BASEB.](#)

### 3.6.4 C0204

#### Contents

Trouble type	C0204: Tray 2 feeder up/down abnormality (When PF-P20 or PF-P21 is installed)
Rank	B
Trouble detection condition	The tray 2 upper limit sensor (PS2/2) 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	<ul style="list-style-type: none"> <li>• Tray 2 lift-up motor (M2/2)</li> <li>• Tray 2 upper limit sensor (PS2/2)</li> <li>• Tray 2 PC control board (PCCB/2)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### 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 M2/2-PCCB/2 CN4 for proper connection and correct as necessary.
3. Check the connector of M2/2 for proper drive coupling and correct as necessary.
4. Check the connector between PS2/2-PCCB/2 CN3 for proper connection and correct as necessary.
5. Check the connector between PCCB/2 CN1-relay CN24-BASEB CN21E for proper connection and correct as necessary.
6. Check CPUB for proper installation and correct as necessary.
7. PS2/2 I/O check, sensor check
  - Control signal: PCCB/2 CN3-9 (ON)
  - Location of electrical component: 18-X
8. M2/2 load check
  - Check code: 23
  - Multi code: 5
  - Control signal: PCCB/2 CN4-8 to 9
  - Location of electrical component: 18-P
9. [Replace M2/2](#).
10. [Replace PCCB/2](#).
11. [Replace CPUB](#).
12. [Replace BASEB](#).

### 3.6.5 C0206

#### Contents

Trouble type	C0206: Tray 3 feeder up/down abnormality (When PF-P20 or PF-P21 is installed) (bizhub C4000i only)
Rank	B
Trouble detection condition	The tray 3 upper limit sensor (PS2/3) 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	<ul style="list-style-type: none"> <li>• Tray 3 lift-up motor (M2/3)</li> <li>• Tray 3 upper limit sensor (PS2/3)</li> <li>• Tray 3 PC control board (PCCB/3)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### 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 M2/3-PCCB/3 CN4 for proper connection and correct as necessary.
3. Check the connector of M2/3 for proper drive coupling and correct as necessary.
4. Check the connector between PS2/3-PCCB/3 CN3 for proper connection and correct as necessary.
5. Check the connector between PCCB/3 CN1-relay CN2PC-PCCB/2 CN2 for proper connection and correct as necessary.
6. Check the connector between PCCB/2 CN1-relay CN24-BASEB CN21E for proper connection and correct as necessary.
7. Check CPUB for proper installation and correct as necessary.
8. PS2/3 I/O check, sensor check
  - Control signal: PCCB/3 CN3-9 (ON)
  - Location of electrical component: 18-X
9. M2/3 load check
  - Check code: 23
  - Multi code: 6
  - Control signal: PCCB/3 CN4-8 to 9
  - Location of electrical component: 18-P
10. [Replace M2/3](#).
11. PCCB/3 F2 conduction check
12. [Replace PCCB/3](#).
13. [Replace CPUB](#).
14. [Replace BASEB](#).

### 3.7 C2###

#### 3.7.1 C2152, C2153, C2154, C2155, C2156

##### Contents

Trouble type	<ul style="list-style-type: none"> <li>• C2152: Transfer belt fault at initial position return</li> <li>• C2153: Transfer belt spacing fault at K pressure switching</li> <li>• C2154: Transfer belt contact fault at all pressure switching</li> <li>• C2155: Transfer belt contact fault after K pressure established</li> <li>• C2156: Transfer belt spacing fault after all pressure established</li> </ul>
Rank	B
Trouble detection condition	<ul style="list-style-type: none"> <li>• C2152: The 1st transfer pressure switch (SW4) 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 (CL1) has started engagement during an initial position return.</li> <li>• C2153: The 1st transfer pressure switch (SW4) is not turned ON even after the lapse of a given period of time after the retraction operation started.</li> <li>• C2154: The 1st transfer pressure switch (SW4) is not turned OFF even after the lapse of a given period of time after the pressure operation started.</li> <li>• C2155: The 1st transfer pressure sensor (SW4) is turned OFF after the lapse of given time after the retraction operation is finished.</li> <li>• C2156: The 1st transfer pressure sensor (SW4) is turned ON after the lapse of given time after the pressure operation is finished.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Color motor (M2)</li> <li>• 1st transfer pressure clutch (CL1)</li> <li>• 1st transfer pressure switch (SW4)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

##### Procedure

1. Check the connector between M2-BASEB CN17E 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 SW4-BASEB CN18E for proper connection and correct as necessary.
4. Check the connector between CL1-relay CN13-BASEB CN18E for proper connection and correct as necessary.
5. Check CPUB for proper installation and correct as necessary.
6. SW4 I/O check, sensor check
  - Control signal: BASEB CN18E-3 (ON)
  - Location of electrical component: 2-C
7. CL1 load check
  - Check code: 24
  - Multi code: 1
  - Control signal: BASEB CN18E-4 (ON)
  - Location of electrical component: 2-C
8. M2 load check
  - Check code: 41
  - Multi code: 1, 2
  - Control signal: BASEB CN17E-11 to 15
  - Location of electrical component: 1-C
9. [Replace M2.](#)
10. [Replace CPUB.](#)
11. [Replace BASEB.](#)

#### 3.7.2 C2253, C2254

##### Contents

Trouble type	<ul style="list-style-type: none"> <li>• C2253: Color motor failure to turn</li> <li>• C2254: Color motor turning at abnormal timing</li> </ul>
Rank	B
Trouble detection condition	<ul style="list-style-type: none"> <li>• C2253: The control circuit detects motor failure to turn while the motor is turning.</li> <li>• C2254: The control circuit detects motor turning while the motor remains stationary.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Color motor (M2)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

##### Procedure

1. Check the connector between M2-BASEB CN17E for proper connection and correct as necessary.
2. Check the connector of M2 for proper drive coupling and correct as necessary.
3. Check CPUB for proper installation and correct as necessary.
4. M2 load check
  - Check code: 41
  - Multi code: 1, 2
  - Control signal: BASEB CN17E-11 to 15
  - Location of electrical component: 1-C
5. [Replace M2.](#)



6. [Replace CPUB.](#)
7. BASEB F20E conduction check
8. [Replace BASEB.](#)

### 3.7.3 C2350

#### Contents

Trouble type	C2350: Toner suction 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	<ul style="list-style-type: none"> <li>• Toner suction fan (FM2)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Check the connector between FM2-relay CN10-BASEB CN18E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. Check CPUB for proper installation and correct as necessary.
4. FM2 load check
  - Check code: 42
  - Multi code: 3
  - Control signal: BASEB CN18E-12 (REM), BASEB CN18E-14 (LOCK)
  - Location of electrical component: 3-C
5. [Replace FM2.](#)
6. [Replace CPUB.](#)
7. [Replace BASEB.](#)

### 3.7.4 C2411, C2412, C2413, C2414

#### Contents

Trouble type	<ul style="list-style-type: none"> <li>• C2411: Imaging unit/C new article release</li> <li>• C2412: Imaging unit/M new article release</li> <li>• C2413: Imaging unit/Y new article release</li> <li>• C2414: Imaging unit/K new article release</li> </ul>
Rank	B
Trouble detection condition	The status with the new unit is not cleared after the new imaging unit is set.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Imaging unit/C,M,Y,K</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Reinstall the imaging unit.
2. Check the connector between the imaging unit/C-relay CN5-BASEB CN14E for proper connection and correct as necessary. (C2411)
3. Check the connector between the imaging unit/M-relay CN8-BASEB CN14E for proper connection and correct as necessary. (C2412)
4. Check the connector between the imaging unit/Y-relay CN7-BASEB CN14E for proper connection and correct as necessary. (C2413)
5. Check the connector between the imaging unit/K-relay CN6-BASEB CN14E for proper connection and correct as necessary. (C2414)
6. Check CPUB for proper installation and correct as necessary.
7. [Replace the corresponding imaging unit.](#)
8. [Replace CPUB.](#)
9. [Replace BASEB.](#)

### 3.7.5 C2551, C2553, C2555, C2557

#### Contents

Trouble type	<ul style="list-style-type: none"> <li>• C2551: Abnormally low toner density detected cyan TCR sensor</li> <li>• C2553: Abnormally low toner density detected magenta TCR sensor</li> <li>• C2555: Abnormally low toner density detected yellow TCR sensor</li> <li>• C2557: Abnormally low toner density detected black TCR sensor</li> </ul>
Rank	B
Trouble detection condition	When sampling data is determined in TC ratio calculation control, TCR sensor output is lower than a predetermined value for a predetermined number of times in a row even though there is toner in the toner cartridge.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Imaging unit/C,M,Y,K</li> <li>• Toner supply motor/YM (M4)</li> <li>• Toner supply motor/CK (M5)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Perform image troubleshooting procedure if image density is low.

2. Reinstall the imaging unit.
3. Check the connector between the imaging unit/C-relay CN5-BASEB CN14E for proper connection and correct as necessary. (C2551)
4. Check the connector between the imaging unit/M-relay CN8-BASEB CN14E for proper connection and correct as necessary. (C2553)
5. Check the connector between the imaging unit/Y-relay CN7-BASEB CN14E for proper connection and correct as necessary. (C2555)
6. Check the connector between the imaging unit/K-relay CN6-BASEB CN14E for proper connection and correct as necessary. (C2557)
7. Check the connector between M4-BASEB CN13E for proper connection and correct as necessary.
8. Check the connector between M5-BASEB CN13E for proper connection and correct as necessary.
9. Check CPUB for proper installation and correct as necessary.
10. M4, M5 operation check
  - Control signal: BASEB CN13E-1 to 4 (M4), BASEB CN13E-5 to 8 (M5)
  - Location of electrical component: 4-C
11. [Replace the corresponding imaging unit.](#)
12. [Replace CPUB.](#)
13. [Replace BASEB.](#)

### 3.7.6 C2552, C2554, C2556, C2558

#### Contents

Trouble type	<ul style="list-style-type: none"> <li>• C2552: Abnormally high toner density detected cyan TCR sensor</li> <li>• C2554: Abnormally high toner density detected magenta TCR sensor</li> <li>• C2556: Abnormally high toner density detected yellow TCR sensor</li> <li>• C2558: Abnormally high toner density detected black TCR sensor</li> </ul>
Rank	B
Trouble detection condition	TC ratio in the imaging unit, which is determined by toner replenishing amount control mechanism, is a predetermined value or more for a given number of times consecutively.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Imaging unit/C,M,Y,K</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Reinstall the imaging unit.
2. Check the connector between the imaging unit/C-relay CN5-EXCB CN14E for proper connection and correct as necessary. (C2552)
3. Check the connector between the imaging unit/M-relay CN8-EXCB CN14E for proper connection and correct as necessary. (C2554)
4. Check the connector between the imaging unit/Y-relay CN7-EXCB CN14E for proper connection and correct as necessary. (C2556)
5. Check the connector between the imaging unit/K-relay CN6-EXCB CN14E for proper connection and correct as necessary. (C2558)
6. Check CPUB for proper installation and correct as necessary.
7. [Replace the corresponding imaging unit.](#)
8. [Replace CPUB.](#)
9. [Replace BASEB.](#)

### 3.7.7 C2559, C255A, C255B, C255C

#### Contents

Trouble type	<ul style="list-style-type: none"> <li>• C2559: Cyan TCR sensor adjustment failure</li> <li>• C255A: Magenta TCR sensor adjustment failure</li> <li>• C255B: Yellow TCR sensor adjustment failure</li> <li>• C255C: Black TCR sensor adjustment failure</li> </ul>
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	<ul style="list-style-type: none"> <li>• Imaging unit/C,M,Y,K</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Reinstall the imaging unit.
2. Check the connector between the imaging unit/C-relay CN5-BASEB CN14E for proper connection and correct as necessary. (C2559)
3. Check the connector between the imaging unit/M-relay CN8-BASEB CN14E for proper connection and correct as necessary. (C255A)
4. Check the connector between the imaging unit/Y-relay CN7-BASEB CN14E for proper connection and correct as necessary. (C255B)
5. Check the connector between the imaging unit/K-relay CN6-BASEB CN14E for proper connection and correct as necessary. (C255C)
6. Check CPUB for proper installation and correct as necessary.
7. [Replace the corresponding imaging unit.](#)
8. [Replace CPUB.](#)
9. [Replace BASEB.](#)

### 3.7.8 C2561, C2562, C2563, C2564

#### Contents

Trouble type	<ul style="list-style-type: none"> <li>• C2561: Cyan TCR sensor failure</li> <li>• C2562: Magenta TCR sensor failure</li> <li>• C2563: Yellow TCR sensor failure</li> <li>• C2564: Black TCR sensor failure</li> </ul>
Rank	B

Trouble detection condition	<ul style="list-style-type: none"> <li>Alarm signals for each TCR sensor is detected more than the predetermined number of times.</li> <li>This detection is used for detecting disconnection of TCR sensor connector.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>Imaging unit/C,M,Y,K</li> <li>CPU board (CPUB)</li> <li>Base board (BASEB)</li> </ul>

### Procedure

1. Reinstall the imaging unit.
2. Check the connector between the imaging unit/C-relay CN5-BASEB CN14E for proper connection and correct as necessary. (C2561)
3. Check the connector between the imaging unit/M-relay CN8-BASEB CN14E for proper connection and correct as necessary. (C2562)
4. Check the connector between the imaging unit/Y-relay CN7-BASEB CN14E for proper connection and correct as necessary. (C2563)
5. Check the connector between the imaging unit/K-relay CN6-BASEB CN14E for proper connection and correct as necessary. (C2564)
6. Check CPUB for proper installation and correct as necessary.
7. [Replace the corresponding imaging unit.](#)
8. [Replace CPUB.](#)
9. [Replace BASEB.](#)

### 3.7.9 C2650

#### Contents

Trouble type	C2650: Main backup media access error
Rank	C
Trouble detection condition	<ul style="list-style-type: none"> <li>The error was found when reading out the data.</li> <li>The re-written data, which has been read out, checked and founded as error, is read out again and found as error.</li> <li>The error was found when reading out the counter value.</li> <li>The main body detects that the backup board is not mounted.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>Backup board (ERB)</li> <li>CPU board (CPUB)</li> <li>Base board (BASEB)</li> </ul>

### Procedure

1. Check the connector between ERB CN1-BASEB CN20E for proper connection and correct as necessary.
2. Check CPUB for proper installation and correct as necessary.
3. [Replace CPUB.](#)
4. [Replace BASEB.](#)
5. [Replace ERB.](#)
  1. Replace the current ERB with a new one.
  2. Replace the following components with new ones.  
When the transfer belt unit, transfer roller and the fusing unit have been replaced with new ones, perform [Service Mode] -> [Counter] -> [Life] -> [New Release].
    - Imaging unit
    - Transfer belt unit
    - Fusing unit
    - Transfer roller
    - Feed roller, pick-up roller, separation roller (including options)
    - Separation pad
    - Toner filter
  3. Turn ON the main power switch and check to see that warm-up is started.  
Make sure that trouble 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.

### 3.7.10 C2A21, C2A22, C2A23, C2A24

#### Contents

Trouble type	<ul style="list-style-type: none"> <li>C2A21: Toner cartridge/C new release failure</li> <li>C2A22: Toner cartridge/M new release failure</li> <li>C2A23: Toner cartridge/Y new release failure</li> <li>C2A24: Toner cartridge/K new release failure</li> </ul>
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	<ul style="list-style-type: none"> <li>Toner cartridge/C,M,Y,K</li> <li>CPU board (CPUB)</li> <li>Base board (BASEB)</li> </ul>

### Procedure

1. Reinstall the toner cartridge.
2. Clean the connection between the toner cartridge and the main body if dirty.
3. Check the connector between the toner cartridge/C-relay CN102-BASEB CN11E for proper connection and correct as necessary. (C2A21)
4. Check the connector between the toner cartridge/M-relay CN101-BASEB CN11E for proper connection and correct as necessary. (C2A22)

5. Check the connector between the toner cartridge/Y-relay CN100-BASEB CN11E for proper connection and correct as necessary. (C2A23)
6. Check the connector between the toner cartridge/K-relay CN103-BASEB CN11E for proper connection and correct as necessary. (C2A24)
7. Check CPUB for proper installation and correct as necessary.
8. [Replace the corresponding toner cartridge.](#)
9. [Replace CPUB.](#)
10. [Replace BASEB.](#)

### 3.8 C3###

#### 3.8.1 C3201, C3202

##### Contents

Trouble type	<ul style="list-style-type: none"> <li>• C3201: Fusing motor failure to turn</li> <li>• C3202: Fusing motor turning at abnormal timing</li> </ul>
Rank	B
Trouble detection condition	<ul style="list-style-type: none"> <li>• C3201: The control circuit detects motor failure to turn while the motor is turning.</li> <li>• C3202: The control circuit detects motor turning while the motor remains stationary.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Fusing motor (M3)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

##### Procedure

1. Check the connector between M3-BASEB CN17E for proper connection and correct as necessary.
2. Check the loading status of the fusing unit drive, and correct the error as necessary.
3. Check CPUB for proper installation and correct as necessary.
4. M3 load check
  - Check code: 45
  - Multi code: 1, 2, 3
  - Control signal: BASEB CN17E-6 to 10
  - Location of electrical component: 1-C
5. [Replace M3.](#)
6. [Replace CPUB.](#)
7. BASEB F19E conduction check
8. [Replace BASEB.](#)

#### 3.8.2 C3425

##### Contents

Trouble type	C3425: Fusing warm-up trouble
Rank	A
Trouble detection condition	<ul style="list-style-type: none"> <li>• 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.</li> <li>• The temperature detected by the heating roller temperature sensor (TEMS) does not shift from the pre-standby state even after the lapse of a predetermined period of time after the completion of warm-up.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Fusing unit</li> <li>• Heating roller temperature sensor (TEMS)</li> <li>• DC power supply (DCPS)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

##### 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 connector between the fusing unit-relay CN3-BASEB CN10E for proper connection and correct as necessary.
4. Check the connector between the fusing unit-relay CN2-DCPS CN2 for proper connection and correct as necessary.
5. Check CPUB for proper installation and correct as necessary.
6. [Replace the fusing unit.](#)
7. [Replace CPUB.](#)
8. [Replace BASEB.](#)
9. DCPS F102 or FU181 conduction check.
10. [Replace DCPS.](#)

#### 3.8.3 C3722, C3725, C3726

##### Contents

Trouble type	<ul style="list-style-type: none"> <li>• C3722: Fusing abnormally high temperature detection (Edge of the heating roller)</li> <li>• C3725: Fusing abnormally high temperature detection (Main of the heating roller)</li> <li>• C3726: Fusing abnormally high temperature detection (Center of the heating roller)</li> </ul>
Rank	A
Trouble detection condition	<ul style="list-style-type: none"> <li>• C3722: Detected temperature of the heating roller thermistor/Edg (TH1) goes beyond a given temperature for a given period of time consecutively.</li> </ul>

	<ul style="list-style-type: none"> <li>• C3725: Detected temperature of the heating roller temperature sensor (TEMS) goes beyond a given temperature for a given period of time consecutively.</li> <li>• C3726: Detected temperature of the heating roller thermistor/Ctr (TH2) goes beyond a given temperature for a given period of time consecutively.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Fusing unit</li> <li>• C3722: Heating roller thermistor/Edg (TH1)</li> <li>• C3725: Heating roller temperature sensor (TEMS)</li> <li>• C3726: Heating roller thermistor/Ctr (TH2)</li> <li>• DC power supply (DCPS)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**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 connector between the fusing unit-relay CN3-BASEB CN10E for proper connection and correct as necessary.
4. Check the connector between the fusing unit-relay CN2-DCPS CN2 for proper connection and correct as necessary.
5. Check CPUB for proper installation and correct as necessary.
6. [Replace the fusing unit.](#)
7. [Replace CPUB.](#)
8. [Replace BASEB.](#)
9. [Replace DCPS.](#)

**3.8.4 C3731****Contents**

Trouble type	C3731: Fusing abnormally high temperature detection (hard protector)
Rank	A
Trouble detection condition	The hard protector signal malfunction is detected for a predetermined continuous period of time or more.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Fusing unit</li> <li>• Heating roller thermistor/Edg (TH1)</li> <li>• Heating roller temperature sensor (TEMS)</li> <li>• Heating roller thermistor/Ctr (TH2)</li> <li>• DC power supply (DCPS)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**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 connector between the fusing unit-relay CN3-BASEB CN10E for proper connection and correct as necessary.
4. Check the connector between the fusing unit-relay CN2-DCPS CN2 for proper connection and correct as necessary.
5. Check CPUB for proper installation and correct as necessary.
6. [Replace the fusing unit.](#)
7. [Replace CPUB.](#)
8. [Replace BASEB.](#)
9. [Replace DCPS.](#)

**3.8.5 C3825, C3826****Contents**

Trouble type	<ul style="list-style-type: none"> <li>• C3825: Fusing abnormally low temperature detection (Main of the heating roller)</li> <li>• C3826: Fusing abnormally low temperature detection (Center of the heating roller)</li> </ul>
Rank	A
Trouble detection condition	<ul style="list-style-type: none"> <li>• C3825: The heating roller temperature sensor (TEMS) continues to detect a temperature lower than a predetermined one for a predetermined period of time.</li> <li>• C3826: The heating roller thermistor/Ctr (TH2) continues to detect a temperature lower than a predetermined one for a predetermined period of time.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Fusing unit</li> <li>• C3825: Heating roller temperature sensor (TEMS)</li> <li>• C3826: Heating roller thermistor/Ctr (TH2)</li> <li>• DC power supply (DCPS)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**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 connector between the fusing unit-relay CN3-BASEB CN10E for proper connection and correct as necessary.
4. Check the connector between the fusing unit-relay CN2-DCPS CN2 for proper connection and correct as necessary.
5. Check CPUB for proper installation and correct as necessary.

6. [Replace the fusing unit.](#)
7. [Replace CPUB.](#)
8. [Replace BASEB.](#)
9. DCPS F102 or FU181 conduction check.
10. [Replace DCPS.](#)

### 3.8.6 C3922, C3925, C3926

#### Contents

Trouble type	<ul style="list-style-type: none"> <li>• C3922: Fusing sensor wire breaks detection (Edge of the heating roller)</li> <li>• C3925: Fusing sensor wire breaks detection (Main of the heating roller)</li> <li>• C3926: Fusing sensor wire breaks detection (Center of the heating roller)</li> </ul>
Rank	A
Trouble detection condition	<ul style="list-style-type: none"> <li>• C3922: The maximum value and minimum value of detected temperature of the heating roller thermistor/Edg (TH1) is compared after a lapse of given time from starting of warm up and the gap between the value of maximum and minimum is below or above given temperatures.</li> <li>• C3925: The maximum value and minimum value of detected temperature of the heating roller temperature sensor (TEMS2) is compared after a lapse of given time from starting of warm up and the gap between the value of maximum and minimum is below or above given temperatures.</li> <li>• C3926: The maximum value and minimum value of detected temperature of the heating roller thermistor/Ctr (TH2) is compared after a lapse of given time from starting of warm up and the gap between the value of maximum and minimum is below or above given temperatures.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Fusing unit</li> <li>• C3922: Heating roller thermistor/Edg (TH1)</li> <li>• C3925: Heating roller temperature sensor (TEMS)</li> <li>• C3926: Heating roller thermistor/Ctr (TH2)</li> <li>• DC power supply (DCPS)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### 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 connector between the fusing unit-relay CN3-BASEB CN10E for proper connection and correct as necessary.
4. Check the connector between the fusing unit-relay CN2-DCPS CN2 for proper connection and correct as necessary.
5. Check CPUB for proper installation and correct as necessary.
6. [Replace the fusing unit.](#)
7. [Replace CPUB.](#)
8. [Replace BASEB.](#)
9. DCPS F102 or FU181 conduction check.
10. [Replace DCPS.](#)

### 3.8.7 C392B

#### 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/Edg (TH1) and the temperature detected by the heating roller thermistor/Ctr (TH2) exceeds a predetermined value.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Fusing unit</li> <li>• Heating roller thermistor/Edg (TH1)</li> <li>• Heating roller thermistor/Ctr (TH2)</li> <li>• DC power supply (DCPS)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### 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 connector between the fusing unit-relay CN3-BASEB CN10E for proper connection and correct as necessary.
4. Check the connector between the fusing unit-relay CN2-DCPS CN2 for proper connection and correct as necessary.
5. Check CPUB for proper installation and correct as necessary.
6. [Replace the fusing unit.](#)
7. [Replace CPUB.](#)
8. [Replace BASEB.](#)
9. DCPS F102 or FU181 conduction check.
10. [Replace DCPS.](#)

### 3.9 C4###

#### 3.9.1 C4091

##### Contents

Trouble type	C4091: Engine communication error
Rank	C
Trouble detection condition	Communication with the CTL is interrupted for one min. or longer during a stabilization sequence.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

##### Procedure

1. Reboot the machine.
2. [Replace CPUB.](#)
3. [Replace BASEB.](#)

#### 3.9.2 C40A2, C40A3, C40A4, C40A5, C40A6, C40C3, C40C5

##### Contents

Trouble type	<ul style="list-style-type: none"> <li>• C40A2: Mechanical controller PF communication data error</li> <li>• C40A3: Mechanical controller PF transmission timeout</li> <li>• C40A4: Mechanical controller PF communication pulse error</li> <li>• C40A5: QSPI communication clock switching error</li> <li>• C40A6: Mechanical controller ASIC communication error</li> <li>• C40C3: CTL PF transmission timeout 1</li> <li>• C40C5: CTL PF transmission timeout 2</li> </ul>
Rank	C
Trouble detection condition	A CPU communication error is detected.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

##### Procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Check CPUB for proper installation and correct as necessary.
3. Rewrite the firmware.
4. [Replace CPUB.](#)
5. BASEB F15E and PTC2E conduction check
6. [Replace BASEB.](#)

#### 3.9.3 C4101

##### Contents

Trouble type	C4101: Polygon motor rotation trouble
Rank	B
Trouble detection condition	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Motor lock signal detects HIGH for a given period time consecutively during the polygon motor is rotating.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• PH unit</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

##### Procedure

1. Check the connector between the PH unit-BASEB CN5E for proper connection and correct as necessary.
2. Check CPUB for proper installation and correct as necessary.
3. Polygon motor load check
  - Check code: 32
  - Multi code: 1, 3
4. [Replace the PH unit.](#)
5. [Replace CPUB.](#)
6. [Replace BASEB.](#)

#### 3.9.4 C4501

##### Contents

Trouble type	C4501: Laser malfunction
Rank	B
Trouble detection condition	<ul style="list-style-type: none"> <li>• SOS signal is not detected even after the lapse of a given period of time after starting the laser output.</li> <li>• SOS signal is not detected for a given period of time during printing or IDC sensor adjustment.</li> </ul>

Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• PH unit</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the connector between the PH unit-BASEB CN13 for proper connection and correct as necessary.
2. Check CPUB for proper installation and correct as necessary.
3. [Replace the PH unit.](#)
4. [Replace CPUB.](#)
5. [Replace BASEB.](#)

**3.10 C5###****3.10.1 C5102, C5103****Contents**

Trouble type	<ul style="list-style-type: none"> <li>• C5102: Main motor failure to turn</li> <li>• C5103: Main motor turning at abnormal timing</li> </ul>
Rank	B
Trouble detection condition	<ul style="list-style-type: none"> <li>• C5102: The control circuit detects motor failure to turn while the motor is turning.</li> <li>• C5103: The control circuit detects motor turning while the motor remains stationary.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Main motor (M1)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the connector between M1-BASEB CN17E for proper connection and correct as necessary.
2. Check the loading status of the main drive, and correct the error as necessary.
3. Check CPUB for proper installation and correct as necessary.
4. M1 load check
  - Check code: 40
  - Multi code: 1, 2
  - Control signal: BASEB CN17E-1 to 5
  - Location of electrical component: 1-C
5. [Replace M1.](#)
6. [Replace CPUB.](#)
7. BASEB F18E conduction check
8. [Replace BASEB.](#)

**3.10.2 C5357****Contents**

Trouble type	C5357: Machine 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	<ul style="list-style-type: none"> <li>• Machine cooling fan (FM1)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the connector between FM1-relay CN23-BASEB CN19E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. Check CPUB for proper installation and correct as necessary.
4. FM1 load check
  - Check code: 42
  - Multi code: 1, 2
  - Control signal: BASEB CN19E-4 (REM), BASEB CN19E-6 (LOCK)
  - Location of electrical component: 9-C
5. [Replace FM1.](#)
6. [Replace CPUB.](#)
7. [Replace BASEB.](#)

**3.10.3 C5360****Contents**

Trouble type	C5360: Clean unit fan failure to turn (When CU-202 is installed) (Europe models only)
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	<ul style="list-style-type: none"> <li>• Exhaust fan/1 (FM1)</li> </ul>



- Exhaust fan/2 (FM2)
- Exhaust fan/3 (FM3)
- Clean unit drive board (CUDB)
- CPU board (CPUB)
- Base board (BASEB)

### Procedure

1. Check the connector between CUDB CN1-relay CN35-BASEB CN25E for proper connection and correct as necessary.
2. Check the connector between FM1-relay CN101-CUDB CN2 for proper connection and correct as necessary.
3. Check the connector between FM2-relay CN102-CUDB CN2 for proper connection and correct as necessary.
4. Check the connector between FM3-relay CN103-CUDB CN2 for proper connection and correct as necessary.
5. Check the fan for possible overload and correct as necessary.
6. Check CPUB for proper installation and correct as necessary.
7. FM1 load check
  - Check code: 42
  - Multi code: 9, 10
  - Control signal: CUDB CN2-1 (REM), CUDB CN2-3 (LOCK)
  - Location of electrical component: 27-L
8. FM2 load check
  - Check code: 42
  - Multi code: 9, 10
  - Control signal: CUDB CN2-4 (REM), CUDB CN2-6 (LOCK)
  - Location of electrical component: 28-L
9. FM3 load check
  - Check code: 42
  - Multi code: 9, 10
  - Control signal: CUDB CN2-7 (REM), CUDB CN2-9 (LOCK)
  - Location of electrical component: 28-L
10. Replace the defective fan. ([FM1](#) / [FM2](#) / [FM3](#))
11. [Replace CUDB.](#)
12. [Replace CPUB.](#)
13. [Replace BASEB.](#)

### 3.10.4 C5372

#### Contents

Trouble type	C5372: MFP control board CPU temperature failure
Rank	C
Trouble detection condition	Temperature failure of CPU on the CPU board was detected.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU cooling fan (FM3)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

### Procedure

1. Check the connector between FM3-BASEB CN17 for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. Check CPUB for proper installation and correct as necessary.
4. FM3 operation check
  - Control signal: BASEB CN17-1 to 2
  - Location of electrical component: 21-I
5. [Replace CPUB.](#)
6. BASEB ICP1 conduction check
7. [Replace BASEB.](#)

### 3.10.5 C5501

#### Contents

Trouble type	C5501: AC signal abnormality
Rank	C
Trouble detection condition	The zero cross signal is not input.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Fusing unit</li> <li>• DC power supply (DCPS)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

### Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the connector between DCPS CN6-BASEB CN1E for proper connection and correct as necessary.
3. Check the connector between the fusing unit-relay CN2-DCPS CN2 for proper connection and correct as necessary.
4. Check CPUB for proper installation and correct as necessary.
5. [Replace the fusing unit.](#)
6. [Replace CPUB.](#)

7. [Replace BASEB.](#)
8. [Replace DCPS.](#)

### 3.10.6 C5601

#### 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	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Check the connectors on BASEB for proper connection and correct as necessary.
2. Rewrite the firmware.
3. [Replace CPUB.](#)
4. [Replace BASEB.](#)

### 3.10.7 C5605, C5606

#### Contents

Trouble type	<ul style="list-style-type: none"> <li>• C5605: Engine communication data error</li> <li>• C5606: Engine transmission timeout</li> </ul>
Rank	C
Trouble detection condition	A communication error is detected between CPUs.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Check CPUB for proper installation and correct as necessary.
3. Rewrite the firmware.
4. [Replace CPUB.](#)
5. [Replace BASEB.](#)

### 3.10.8 C5610

#### Contents

Trouble type	C5610: PH LD drive communication error
Rank	C
Trouble detection condition	<ul style="list-style-type: none"> <li>• LD drive write data and read data disagree with each other a predetermined number of consecutive times.</li> <li>• Different PH unit is installed.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• PH unit</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Reboot the machine.
2. Check the connector between the PH unit-BASEB CN13 for proper connection and correct as necessary.
3. Check CPUB for proper installation and correct as necessary.
4. [Replace the PH unit.](#)
5. [Replace CPUB.](#)
6. [Replace BASEB.](#)

### 3.10.9 C5620

#### Contents

Trouble type	C5620: Mechanical controller WDT error
Rank	C
Trouble detection condition	Communication error is detected in mechanical controller ASIC.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.

2. Check CPUB for proper installation and correct as necessary.
3. Rewrite the firmware.
4. [Replace CPUB.](#)
5. [Replace BASEB.](#)

### 3.10.10 C5701

#### Contents

Trouble type	C5701: Power supply malfunction
Rank	C
Trouble detection condition	A condition is detected in which no power is being supplied to the base board (BASEB).
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Front door sensor (PS1)</li> <li>• Right door sensor (PS2)</li> <li>• Front door switch (SW2)</li> <li>• Right door switch (SW5)</li> <li>• DC power supply (DCPS)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Check the connector between PS1, PS2-BASEB CN16E for proper connection and correct as necessary.
2. Check the connector between SW2, SW5-relay CN36-DCPS CN3 for proper connection and correct as necessary.
3. Check the connector between DCPS CN4-BASEB CN3E for proper connection and correct as necessary.
4. Check the connector between DCPS CN6-BASEB CN1E for proper connection and correct as necessary.
5. Check CPUB for proper installation and correct as necessary.
6. [Replace CPUB.](#)
7. BASEB F5E conduction check
8. [Replace BASEB.](#)
9. [Replace DCPS.](#)

### 3.11 C7###

#### 3.11.1 C7111

#### Contents

Trouble type	C7111: Tray 1 lift-up motor failure
Rank	C
Trouble detection condition	After starting the motor, an error is detected for the malfunction detection signal.
Trouble isolation	Tray 1
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Tray 1 lift-up motor (M6)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Check the connector between M6-BASEB CN19E for proper connection and correct as necessary.
2. Check the connector of M6 for proper drive coupling and correct as necessary.
3. M6 conduction check
  - Control signal: BASEB CN19E-7 to 8
  - Location of electrical component: 10-C
4. [Replace M6.](#)
5. [Replace BASEB.](#)

#### 3.11.2 C7131

#### Contents

Trouble type	C7131: Toner supply motor/CK failure
Rank	C
Trouble detection condition	After starting the motor, an error is detected for the malfunction detection signal.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Toner supply motor/CK (M5)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Check the connector between M5-BASEB CN13E for proper connection and correct as necessary.
2. Check the connector of M5 for proper drive coupling and correct as necessary.
3. M5 conduction check
  - Control signal: BASEB CN13E-5 to 8
  - Location of electrical component: 4-C
4. [Replace M5.](#)
5. [Replace BASEB.](#)

**3.11.3 C7133****Contents**

Trouble type	C7133: Toner supply motor/YM failure
Rank	C
Trouble detection condition	After starting the motor, an error is detected for the malfunction detection signal.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Toner supply motor/YM (M4)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the connector between M4-BASEB CN13E for proper connection and correct as necessary.
2. Check the connector of M4 for proper drive coupling and correct as necessary.
3. M4 conduction check
  - Control signal: BASEB CN13E-1 to 4
  - Location of electrical component: 4-C
4. [Replace M4.](#)
5. [Replace BASEB.](#)

**3.11.4 C7201****Contents**

Trouble type	C7201: Tray 1 paper feed clutch failure
Rank	C
Trouble detection condition	After starting the clutch, an error is detected for the malfunction detection signal.
Trouble isolation	Tray 1
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Tray 1 paper feed clutch (CL3)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the connector between CL3-relay CN44-BASEB CN22E for proper connection and correct as necessary.
2. Check the connector of CL3 for proper drive coupling and correct as necessary.
3. CL3 conduction check
  - Control signal: BASEB CN22EA-1 (ON)
  - Location of electrical component: 12-C
4. [Replace CL3.](#)
5. [Replace BASEB.](#)

**3.11.5 C7206****Contents**

Trouble type	C7206: Bypass tray paper feed clutch failure
Rank	C
Trouble detection condition	After starting the clutch, an error is detected for the malfunction detection signal.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Bypass tray paper feed clutch (CL2)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the connector between CL2-relay CN46-BASEB CN23E for proper connection and correct as necessary.
2. Check the connector of CL2 for proper drive coupling and correct as necessary.
3. CL2 conduction check
  - Control signal: BASEB CN23E-10 (ON)
  - Location of electrical component: 9-K
4. [Replace CL2.](#)
5. [Replace BASEB.](#)

**3.11.6 C720A****Contents**

Trouble type	C720A: Registration clutch failure
Rank	C
Trouble detection condition	After starting the clutch, an error is detected for the malfunction detection signal.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Registration clutch (CL4)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the connector between CL4-relay CN45-BASEB CN22E for proper connection and correct as necessary.
2. Check the connector of CL4 for proper drive coupling and correct as necessary.
3. CL4 conduction check

- Control signal: BASEB CN22EA-3 (ON)
  - Location of electrical component: 12-C
4. [Replace CL4.](#)
  5. [Replace BASEB.](#)

### 3.11.7 C720B

#### Contents

Trouble type	C720B: 1st transfer pressure clutch failure
Rank	C
Trouble detection condition	After starting the clutch, an error is detected for the malfunction detection signal.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• 1st transfer pressure clutch (CL1)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Check the connector between CL1-relay CN13-BASEB CN18E for proper connection and correct as necessary.
2. Check the connector of CL1 for proper drive coupling and correct as necessary.
3. CL1 conduction check
  - Control signal: BASEB CN18E-4 (ON)
  - Location of electrical component: 2-C
4. [Replace the main drive unit.](#)
5. [Replace BASEB.](#)

### 3.11.8 C720D

#### Contents

Trouble type	C720D: ADU transport clutch failure
Rank	C
Trouble detection condition	After starting the clutch, an error is detected for the malfunction detection signal.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• ADU transport clutch (CL5)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Check the connector between CL5-relay CN47-BASEB CN23E for proper connection and correct as necessary.
2. Check the connector of CL5 for proper drive coupling and correct as necessary.
3. CL5 conduction check
  - Control signal: BASEB CN23E-12 (ON)
  - Location of electrical component: 9-K
4. [Replace CL5.](#)
5. [Replace BASEB.](#)

### 3.11.9 C720E

#### Contents

Trouble type	C720E: ADU forward rotation clutch failure
Rank	C
Trouble detection condition	After starting the clutch, an error is detected for the malfunction detection signal.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• ADU forward rotation clutch (CL6)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Check the connector between CL6-relay CN11-BASEB CN18E for proper connection and correct as necessary.
2. Check the connector of CL6 for proper drive coupling and correct as necessary.
3. CL6 conduction check
  - Control signal: BASEB CN18E-6 (ON)
  - Location of electrical component: 2-C
4. [Replace CL6.](#)
5. [Replace BASEB.](#)

### 3.11.10 C720F

#### Contents

Trouble type	C720F: ADU reverse rotation clutch failure
Rank	C
Trouble detection condition	After starting the clutch, an error is detected for the malfunction detection signal.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• ADU reverse rotation clutch (CL7)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the connector between CL7-relay CN39-BASEB CN18E for proper connection and correct as necessary.
2. Check the connector of CL7 for proper drive coupling and correct as necessary.
3. CL7 conduction check
  - Control signal: BASEB CN18E-8 (ON)
  - Location of electrical component: 3-C
4. [Replace CL7.](#)
5. [Replace BASEB.](#)

**3.11.11 C7243****Contents**

Trouble type	C7243: Exit path switch solenoid failure
Rank	C
Trouble detection condition	After starting the solenoid, an error is detected for the malfunction detection signal.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Exit path switch solenoid (SD1)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the connector between SD1-relay CN12-BASEB CN18E for proper connection and correct as necessary.
2. Check the connector of SD1 for proper drive coupling and correct as necessary.
3. SD1 conduction check
  - Control signal: BASEB CN18E-10 (ON)
  - Location of electrical component: 3-C
4. [Replace SD1.](#)
5. [Replace BASEB.](#)

**3.11.12 C7311****Contents**

Trouble type	C7311: Machine cooling fan failure
Rank	C
Trouble detection condition	After starting the fan, an error is detected for the malfunction detection signal.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Machine cooling fan (FM1)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the connector between FM1-relay CN23-BASEB CN19E for proper connection and correct as necessary.
2. Check the connector of FM1 for proper drive coupling and correct as necessary.
3. FM1 conduction check
  - Control signal: BASEB CN19E-4 (REM), BASEB CN19E-6 (LOCK)
  - Location of electrical component: 9-C
4. [Replace FM1.](#)
5. [Replace BASEB.](#)

**3.11.13 C7312****Contents**

Trouble type	C7312: Toner suction fan failure
Rank	C
Trouble detection condition	After starting the fan, an error is detected for the malfunction detection signal.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Toner suction fan (FM2)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the connector between FM2-relay CN10-BASEB CN18E for proper connection and correct as necessary.
2. Check the connector of FM2 for proper drive coupling and correct as necessary.
3. FM2 conduction check
  - Control signal: BASEB CN18E-12 (REM), BASEB CN18E-14 (LOCK)
  - Location of electrical component: 3-C
4. [Replace FM2.](#)
5. [Replace BASEB.](#)

**3.11.14 C7502****Contents**

Trouble type	C7502: Tray 1 upper limit sensor failure
Rank	C

Trouble detection condition	The tray 1 upper limit sensor (PS7) does not change even after the lapse of a predetermined period of time after tray 1 is opened and closed, after C0202 (Tray 1 feeder up/down abnormality) is detected.
Trouble isolation	Tray 1
Relevant electrical parts	<ul style="list-style-type: none"> <li>Tray 1 upper limit sensor (PS7)</li> <li>Base board (BASEB)</li> </ul>

**Procedure**

1. Check the connector between PS7-BASEB CN22E for proper connection and correct as necessary.
2. Replace PS7.
3. [Replace BASEB.](#)

**3.11.15 C7601****Contents**

Trouble type	C7601: Power line A1 error
Rank	C
Trouble detection condition	The fuse detection unit detected an error for a predetermined time.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>Main motor (M1)</li> <li>Base board (BASEB)</li> </ul>

**Procedure**

1. BASEB F18E conduction check
2. Check the connector between M1-BASEB CN17E for proper connection and correct as necessary.
3. M1 load check
  - Check code: 40
  - Multi code: 1, 2
  - Control signal: BASEB CN17E-1 to 5
  - Location of electrical component: 1-C
4. [Replace M1.](#)
5. [Replace BASEB.](#)

**3.11.16 C7602****Contents**

Trouble type	C7602: Power line A2 error
Rank	C
Trouble detection condition	The fuse detection unit detected an error for a predetermined time.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>Color motor (M2)</li> <li>Base board (BASEB)</li> </ul>

**Procedure**

1. BASEB F20E conduction check
2. Check the connector between M2-BASEB CN17E for proper connection and correct as necessary.
3. M2 load check
  - Check code: 41
  - Multi code: 1, 2
  - Control signal: BASEB CN17E-11 to 15
  - Location of electrical component: 1-C
4. [Replace M2.](#)
5. [Replace BASEB.](#)

**3.11.17 C7604****Contents**

Trouble type	C7604: Power line A4 error
Rank	C
Trouble detection condition	The fuse detection unit detected an error for a predetermined time.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>Fusing motor (M3)</li> <li>Base board (BASEB)</li> </ul>

**Procedure**

1. BASEB F19E conduction check
2. Check the connector between M3-BASEB CN17E for proper connection and correct as necessary.
3. M3 load check
  - Check code: 45
  - Multi code: 1, 2, 3
  - Control signal: BASEB CN17E-6 to 10
  - Location of electrical component: 1-C
4. [Replace M3.](#)

5. [Replace BASEB.](#)**3.11.18 C7605****Contents**

Trouble type	C7605: Power line A5 error
Rank	C
Trouble detection condition	The fuse detection unit detected an error for a predetermined time.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• High voltage unit (HVPS)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. BASEB F6E conduction check
2. Check the connector between HVPS-BASEB CN4E for proper connection and correct as necessary.
3. [Replace HVPS.](#)
4. [Replace BASEB.](#)

**3.11.19 C7607****Contents**

Trouble type	C7607: Power line A7 error
Rank	C
Trouble detection condition	The fuse detection unit detected an error for a predetermined time.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• 1st transfer pressure clutch (CL1)</li> <li>• Bypass tray paper feed clutch (CL2)</li> <li>• Tray 1 paper feed clutch (CL3)</li> <li>• Registration clutch (CL4)</li> <li>• ADU transport clutch (CL5)</li> <li>• ADU forward rotation clutch (CL6)</li> <li>• ADU reverse rotation clutch (CL7)</li> <li>• Exit path switch solenoid (SD1)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. BASEB F4E conduction check
2. Check the connector between CL1-relay CN13-BASEB CN18E for proper connection and correct as necessary.
3. Check the connector between CL2-relay CN46-BASEB CN23E for proper connection and correct as necessary.
4. Check the connector between CL3-relay CN44-BASEB CN22E for proper connection and correct as necessary.
5. Check the connector between CL4-relay CN45-BASEB CN22E for proper connection and correct as necessary.
6. Check the connector between CL5-relay CN47-BASEB CN23E for proper connection and correct as necessary.
7. Check the connector between CL6-relay CN11-BASEB CN18E for proper connection and correct as necessary.
8. Check the connector between CL7-relay CN39-BASEB CN18E for proper connection and correct as necessary.
9. Check the connector between SD1-relay CN12-BASEB CN18E for proper connection and correct as necessary.
10. CL1 conduction check
  - Control signal: BASEB CN18E-4 (ON)
  - Location of electrical component: 2-C
11. CL2 conduction check
  - Control signal: BASEB CN23E-10 (ON)
  - Location of electrical component: 9-K
12. CL3 conduction check
  - Control signal: BASEB CN22E<A>-1 (ON)
  - Location of electrical component: 12-C
13. CL4 conduction check
  - Control signal: BASEB CN22E<A>-3 (ON)
  - Location of electrical component: 12-C
14. CL5 conduction check
  - Control signal: BASEB CN23E-12 (ON)
  - Location of electrical component: 9-K
15. CL6 conduction check
  - Control signal: BASEB CN18E-6 (ON)
  - Location of electrical component: 2-C
16. CL7 conduction check
  - Control signal: BASEB CN18E-8 (ON)
  - Location of electrical component: 3-C
17. SD1 conduction check
  - Control signal: BASEB CN18E-10 (ON)
  - Location of electrical component: 3-C
18. [Replace the main drive unit.](#) (CL1)
19. [Replace CL2.](#)
20. [Replace CL3.](#)
21. [Replace CL4.](#)
22. [Replace CL5.](#)



23. [Replace CL6.](#)
24. [Replace CL7.](#)
25. [Replace SD1.](#)
26. [Replace BASEB.](#)

### 3.11.20 C760A

#### Contents

Trouble type	C760A: Power line A10 error
Rank	C
Trouble detection condition	The fuse detection unit detected an error for a predetermined time.
Trouble isolation	<ul style="list-style-type: none"> <li>• Tray 2</li> <li>• Tray 3</li> </ul>
Relevant electrical parts	<ul style="list-style-type: none"> <li>• PC control board (PCCB)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. BASEB F8E conduction check
2. Check the connector between PCCB CN1-relay CN24-BASEB CN21E for proper connection and correct as necessary.
3. [Replace PCCB.](#)
4. [Replace BASEB.](#)

### 3.11.21 C760F

#### Contents

Trouble type	C760F: Power line A15 error
Rank	C
Trouble detection condition	The fuse detection unit detected an error for a predetermined time.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Clean unit drive board (CUDB)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. BASEB F11E conduction check
2. Check the connector between CUDB CN1-relay CN35-BASEB CN25E for proper connection and correct as necessary.
3. [Replace CUDB.](#)
4. [Replace BASEB.](#)

### 3.11.22 C7613

#### Contents

Trouble type	C7613: Power line A19 error
Rank	C
Trouble detection condition	The fuse detection unit detected an error for a predetermined time.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Machine cooling fan (FM1)</li> <li>• Toner suction fan (FM2)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. BASEB F2E conduction check
2. Check the connector between FM1-relay CN23-BASEB CN19E for proper connection and correct as necessary.
3. Check the connector between FM2-relay CN10-BASEB CN18E for proper connection and correct as necessary.
4. [Replace FM1.](#)
5. [Replace FM2.](#)
6. [Replace BASEB.](#)

### 3.11.23 C7615

#### Contents

Trouble type	C7615: Power line A20 error
Rank	C
Trouble detection condition	The fuse detection unit detected an error for a predetermined time.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• PH unit</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. BASEB F3E conduction check
2. Check the connector between the PH unit-BASEB CN5E for proper connection and correct as necessary.
3. [Replace the PH unit.](#)

4. [Replace BASEB.](#)**3.11.24 C7616****Contents**

Trouble type	C7616: Power line A21 error
Rank	C
Trouble detection condition	The fuse detection unit detected an error for a predetermined time.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Toner supply motor/YM (M4)</li> <li>• Toner supply motor/CK (M5)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. BASEB F5E conduction check
2. Check the connector between M4-BASEB CN13E for proper connection and correct as necessary.
3. Check the connector between M5-BASEB CN13E for proper connection and correct as necessary.
4. [Replace M4.](#)
5. [Replace M5.](#)
6. [Replace BASEB.](#)

**3.11.25 C7631****Contents**

Trouble type	C7631: Supply power line 1 error
Rank	C
Trouble detection condition	All of the fuse detection units of the same supply power line (24V10) detected an error for a predetermined time.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• DC power supply (DCPS)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. BASEB F1E, F2E, F3E, F4E conduction check
2. Check the connector between DCPS CN4-BASEB CN3E for proper connection and correct as necessary.
3. Check the connector between DCPS CN6-BASEB CN1E for proper connection and correct as necessary.
4. [Replace DCPS.](#)
5. [Replace BASEB.](#)

**3.11.26 C7632****Contents**

Trouble type	C7632: Supply power line 2 error
Rank	C
Trouble detection condition	All of the fuse detection units of the same supply power line (24V21) detected an error for a predetermined time.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• DC power supply (DCPS)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. BASEB F5E, F6E, F20E conduction check
2. Check the connector between DCPS CN4-BASEB CN3E for proper connection and correct as necessary.
3. Check the connector between DCPS CN6-BASEB CN1E for proper connection and correct as necessary.
4. Check the connector between SW2, SW5-relay CN36-DCPS CN3 for proper connection and correct as necessary.
5. [Replace DCPS.](#)
6. [Replace BASEB.](#)

**3.11.27 C7633****Contents**

Trouble type	C7633: Supply power line 3 error
Rank	C
Trouble detection condition	All of the fuse detection units of the same supply power line (24V20) detected an error for a predetermined time.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• DC power supply (DCPS)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. BASEB F8E, F11E, F18E, F19E conduction check
2. Check the connector between DCPS CN4-BASEB CN3E for proper connection and correct as necessary.
3. Check the connector between DCPS CN6-BASEB CN1E for proper connection and correct as necessary.
4. Check the connector between SW2, SW5-relay CN36-DCPS CN3 for proper connection and correct as necessary.

5. [Replace DCPS.](#)
6. [Replace BASEB.](#)

### 3.12 CA###

#### 3.12.1 CA051, CA052, CA053

##### Contents

Trouble type	<ul style="list-style-type: none"> <li>• CA051: Standard controller configuration failure</li> <li>• CA052: Controller hardware error</li> <li>• CA053: Controller start failure</li> </ul>
Rank	C
Trouble detection condition	<ul style="list-style-type: none"> <li>• CA051: The controller of the CPU board (CPUB) is faulty.</li> <li>• CA052: A controller hardware error is detected in the network interface.</li> <li>• CA053: A controller start failure is detected in the controller interface.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

##### Procedure

1. Check the connectors on BASEB for proper connection and correct as necessary.
2. [Replace CPUB.](#)
3. [Replace BASEB.](#)

### 3.13 CC###

#### 3.13.1 CC002

##### Contents

Trouble type	CC002: Vendor internal error
Rank	C
Trouble detection condition	Error occurs inside the vendor.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Vendor</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

##### Procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Check the connector between the vendor-BASEB CN30E for proper connection and correct as necessary.
3. Check CPUB for proper installation and correct as necessary.
4. [Replace CPUB.](#)
5. [Replace BASEB.](#)
6. Replace the vendor.

#### 3.13.2 CC151

##### Contents

Trouble type	CC151: ROM contents error upon startup (MSC)
Rank	C
Trouble detection condition	A fault is detected in a sequence of ROM contents check of the CPU board (CPUB) during starting.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Backup board (ERB)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

##### Procedure

1. Check the ROM version.
2. Rewrite the firmware.
3. Check the connector between ERB CN1-BASEB CN20E for proper connection and correct as necessary.
4. Check CPUB for proper installation and correct as necessary.
5. [Replace ERB.](#)
  1. Replace the current ERB with a new one.
  2. Replace the following components with new ones.  
When the transfer belt unit, transfer roller and the fusing unit have been replaced with new ones, perform [Service Mode] -> [Counter] -> [Life] -> [New Release].
    - Imaging unit
    - Transfer belt unit
    - Fusing unit
    - Transfer roller
    - Feed roller, pick-up roller, separation roller (including options)
    - Separation pad
    - Toner filter

3. Turn ON the main power switch and check to see that warm-up is started.  
Make sure that trouble codes other than C2650 or improper IU/TC placement is not detected.
4. Make the specified readjustments.
6. [Replace CPUB.](#)
7. [Replace BASEB.](#)

### 3.13.3 CC163

#### 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	<ul style="list-style-type: none"> <li>• Backup board (ERB)</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Rewrite the firmware.
2. Replace CPUB.

#### NOTE

- **When taking the above steps, check whether CPUB is defective or not without replacing the ERB.**

1. Turn OFF the main power switch and replace the current CPUB 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 CPUB to the original board.
3. [Replace BASEB.](#)
4. If the above actions do not solve the problem, contact KM.

### 3.13.4 CC164

#### Contents

Trouble type	CC164: ROM contents error (MSC)
Rank	C
Trouble detection condition	<ul style="list-style-type: none"> <li>• The wrong model of firmware is detected in the CPU board when the main power switch is turned ON.</li> <li>• The machine type information (Machine, Type) registered to the machine differs from the actual machine type.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• microSD</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### 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".
3. Rewrite the firmware.
4. [Replace CPUB.](#)
5. Replace the microSD.
6. [Replace BASEB.](#)
7. If the above actions do not solve the problem, contact KM.

### 3.13.5 CC170, CC171, CC172, CC173, CC174, CC180, CC181, CC182, CC183, CC184, CC185, CC186

#### Contents

Trouble type	<ul style="list-style-type: none"> <li>• CC170: Dynamic link error during starting (AP0)</li> <li>• CC171: Dynamic link error during starting (AP1)</li> <li>• CC172: Dynamic link error during starting (AP2)</li> <li>• CC173: Dynamic link error during starting (AP3)</li> <li>• CC174: Dynamic link error during starting (AP4)</li> <li>• CC180: Dynamic link error during starting (LDR)</li> <li>• CC181: Dynamic link error during starting (IBR)</li> <li>• CC182: Dynamic link error during starting (IID)</li> <li>• CC183: Dynamic link error during starting (IPF)</li> <li>• CC184: Dynamic link error during starting (IMY)</li> <li>• CC185: Dynamic link error during starting (SPF)</li> <li>• CC186: Dynamic link error during starting (OAP)</li> </ul>
Rank	C
Trouble detection condition	A dynamic link error occurs in the program on the CPU 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	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. If the trouble 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](#).
2. Check CPUB for proper installation and correct as necessary.
3. [Replace CPUB](#).
4. [Replace BASEB](#).
5. If the above actions do not solve the problem, contact KM.

**3.13.6 CC190****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	<ul style="list-style-type: none"> <li>• microSD</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the microSD for proper installation and correct as necessary.
2. Check CPUB for proper installation and correct as necessary.
3. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] and perform the function.
4. Replace the microSD.
5. [Replace CPUB](#).
6. [Replace BASEB](#).

**3.13.7 CC191****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. <ul style="list-style-type: none"> <li>• RAM disk file creation failed.</li> <li>• Reading from the flash ROM failed.</li> <li>• An error occurred in API of the authentication module.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
2. Check CPUB for proper installation and correct as necessary.
3. [Reinstall the loadable device driver](#).
4. Rewrite the firmware.
5. [Replace CPUB](#).
6. [Replace BASEB](#).

**3.13.8 CC211****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	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> <li>• Authentication unit</li> </ul>

**Procedure**

1. Check the USB cable for proper connection. Reconnect the USB cable as necessary.
2. Check CPUB for proper installation and correct as necessary.
3. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.

**3.13.9 CC212****Contents**

Trouble type	CC212: User validation error
Rank	C
Trouble detection condition	<ul style="list-style-type: none"> <li>• An error occurred while validating the user authentication information.</li> <li>• The loadable device driver is not successfully installed.</li> </ul>

Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> <li>• Authentication unit</li> </ul>

**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. Check CPUB for proper installation and correct as necessary.
4. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.
5. Re-register the user authentication information.
6. Replace the authentication unit.

**3.13.10 CC213****Contents**

Trouble type	CC213: User registration error/Card information setting error
Rank	C
Trouble detection condition	<ul style="list-style-type: none"> <li>• IC card advanced settings data is not correct when starting-up the authentication device.</li> <li>• Authentication information data is not correct when starting-up the authentication device.</li> <li>• IC card advanced settings data is not correct when setting the IC card advanced settings.</li> <li>• Authentication information data is not correct when setting the IC card advanced settings.</li> <li>• IC card advanced settings data is not correct when registering the authentication information.</li> <li>• Authentication information data is not correct when registering the authentication information.</li> <li>• IC card advanced settings data is not correct when editing the authentication information.</li> <li>• Authentication information data is not correct when editing the authentication information.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> <li>• Authentication unit</li> </ul>

**Procedure**

1. Check the USB cable for proper connection. Reconnect the USB cable as necessary.
2. Check CPUB for proper installation and correct as necessary.
3. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.
4. Reset the authentication settings. (card type, IC card advanced settings, and etc.)
5. Re-register the user authentication information.

**3.13.11 CC214****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	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> <li>• Authentication unit</li> </ul>

**Procedure**

1. Check the USB cable for proper connection. Reconnect the USB cable as necessary.
2. Check CPUB for proper installation and correct as necessary.
3. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.

**3.13.12 CC216****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	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> <li>• Authentication unit</li> </ul>

**Procedure**

1. Check the USB cable for proper connection. Reconnect the USB cable as necessary.
2. Check CPUB for proper installation and correct as necessary.
3. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.
4. Reset the number of authentication trials.

**3.13.13 CC301****Contents**

Trouble type	CC301: Authentication customize data error
Rank	B
Trouble detection condition	<ul style="list-style-type: none"> <li>The master authentication customize data is corrupted upon startup.</li> <li>Registration of authentication customize data in the main body has failed upon startup.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>CPU board (CPUB)</li> <li>Base board (BASEB)</li> <li>Authentication unit</li> </ul>

**Procedure**

1. Check CPUB for proper installation and correct as necessary.
2. [Reinstall the authentication customize data.](#)
3. Rewrite the firmware.
4. [Replace CPUB.](#)
5. [Replace BASEB.](#)

**3.13.14 CC302****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	<ul style="list-style-type: none"> <li>CPU board (CPUB)</li> <li>Base board (BASEB)</li> <li>Authentication unit</li> </ul>

**Procedure**

1. Check CPUB for proper installation and correct as necessary.
2. Rewrite the main body firmware with the latest one and [reinstall the authentication customize data.](#)
3. [Replace CPUB.](#)
4. [Replace BASEB.](#)

**3.13.15 CCC00****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	<ul style="list-style-type: none"> <li>microSD</li> <li>CPU board (CPUB)</li> <li>Base board (BASEB)</li> </ul>

**Procedure**

1. Replace the microSD.
2. [Replace CPUB.](#)
3. [Replace BASEB.](#)

**3.14 CD###****3.14.1 CD002****Contents**

Trouble type	CD002: JOB RAM save error
Rank	C
Trouble detection condition	The error in save of job data to the memory / storage and its read error are detected.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>microSD</li> <li>CPU board (CPUB)</li> <li>Base board (BASEB)</li> </ul>

**Procedure**

1. Check the microSD for proper installation and correct as necessary.
2. Check CPUB for proper installation and correct as necessary.
3. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] -> [Logical Format] and perform the function.
4. Replace the microSD.
5. [Replace CPUB.](#)

6. [Replace BASEB.](#)**3.14.2 CD004, CD00F****Contents**

Trouble type	<ul style="list-style-type: none"> <li>• CD004: Storage access error (connection failure)</li> <li>• CD00F: Storage data transfer error</li> </ul>
Rank	C
Trouble detection condition	<ul style="list-style-type: none"> <li>• CD004: Unable to communicate between the storage and CPU board (CPUB).</li> <li>• CD00F: Data transfer from the storage is faulty.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• microSD</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the microSD for proper installation and correct as necessary.
2. Check CPUB for proper installation and correct as necessary.
3. Replace the microSD.
4. [Replace CPUB.](#)
5. [Replace BASEB.](#)

**3.14.3 CD010****Contents**

Trouble type	CD010: Storage unformat
Rank	C
Trouble detection condition	Unformatted storage is connected.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• microSD</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the microSD for proper installation and correct as necessary.
2. Check CPUB for proper installation and correct as necessary.
3. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] and perform the function.
4. Replace the microSD.
5. [Replace CPUB.](#)
6. [Replace BASEB.](#)

**3.14.4 CD011****Contents**

Trouble type	CD011: Storage out of specifications mounted
Rank	C
Trouble detection condition	A storage that falls outside the specifications is connected.
Trouble isolation	-
Relevant electrical parts	microSD

**Procedure**

1. Check the storage specifications.
2. Replace the microSD.

**3.14.5 CD012****Contents**

Trouble type	CD012: Mount error due to storage being unformatted
Rank	C
Trouble detection condition	<ul style="list-style-type: none"> <li>• The storage is not logically formatted after the whole data in the storage has been deleted by overwriting.</li> <li>• The storage that has replaced an old one is not logically formatted.</li> </ul>
Trouble isolation	-
Relevant electrical parts	microSD

**Procedure**

1. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] -> [Logical Format] and perform the function. Then, rewrite the firmware.
2. Replace the microSD.



**3.14.6 CD030****Contents**

Trouble type	CD030: Storage management information reading error
Rank	C
Trouble detection condition	The machine fails to read administrative information data saved in the storage.
Trouble isolation	-
Relevant electrical parts	microSD

**Procedure**

1. Check the microSD for proper installation and correct as necessary.
2. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] -> [Logical Format] and perform the function.
3. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] -> [Physical Format] and perform the function.
4. Replace the microSD.

**3.14.7 CD041, CD042, CD043, CD044, CD045, CD046****Contents**

Trouble type	CD041, CD042, CD043, CD044, CD045, CD046: Storage command execution error
Rank	C
Trouble detection condition	The error occurred inside the storage.
Trouble isolation	-
Relevant electrical parts	microSD

**Procedure**

1. Check the storage specifications.
2. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] and perform the function.
3. Replace the microSD.

**3.14.8 CD047, CD048, CD049, CD04A, CD04B****Contents**

Trouble type	CD047, CD048, CD049, CD04A, CD04B: Storage SCSI library error
Rank	C
Trouble detection condition	The error occurred inside the storage.
Trouble isolation	-
Relevant electrical parts	microSD

**Procedure**

1. Check the storage specifications.
2. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] and perform the function.
3. Replace the microSD.

**3.14.9 CD050****Contents**

Trouble type	CD050: Storage recovery timeout
Rank	C
Trouble detection condition	The storage fails to recover from the power save mode within the predetermined period of time.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• microSD</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the microSD for proper installation and correct as necessary.
2. Check CPUB for proper installation and correct as necessary.
3. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] and perform the function.
4. Replace the microSD.

**3.14.10 CD110****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-221).
Trouble isolation	-
Relevant electrical parts	-

**Procedure**

1. Check the UK-221 connector for proper connection and correct as necessary.
2. Rewrite the firmware.
3. Replace UK-221.

**3.14.11 CD201, CD202, CD203****Contents**

Trouble type	<ul style="list-style-type: none"> <li>• CD201: File memory mounting error</li> <li>• CD202: Memory capacity discrepancy</li> <li>• CD203: Memory capacity discrepancy 2</li> </ul>
Rank	C
Trouble detection condition	CD201: <ul style="list-style-type: none"> <li>• The file memory is not mounted.</li> <li>• The file has any abnormality.</li> </ul> CD202: <ul style="list-style-type: none"> <li>• File memory capacity on the CPU board (CPUB) is not enough.</li> <li>• File memory capacity necessary for duplex printing is not enough.</li> </ul> CD203: File memory capacity on the CPU board (CPUB) is not enough.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check CPUB for proper installation and correct as necessary.
2. [Replace CPUB.](#)
3. [Replace BASEB.](#)

**3.14.12 CD211, CD212****Contents**

Trouble type	<ul style="list-style-type: none"> <li>• CD211: PCI-SDRAM DMA operation failure</li> <li>• CD212: Compression/extraction timeout detection</li> </ul>
Rank	C
Trouble detection condition	<ul style="list-style-type: none"> <li>• CD211: Hardware related to the transfer of memory image of the CPU board (CPUB) fails to respond.</li> <li>• CD212: Hardware related to the BTC compression function of the CPU board (CPUB) fails to respond.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check CPUB for proper installation and correct as necessary.
2. [Replace CPUB.](#)
3. [Replace BASEB.](#)

**3.14.13 CD241, CD242****Contents**

Trouble type	<ul style="list-style-type: none"> <li>• CD241: Encryption ASIC setting error</li> <li>• CD242: Encryption ASIC mounting error</li> </ul>
Rank	C
Trouble detection condition	<ul style="list-style-type: none"> <li>• CD241: Initialization error of the encrypted ASIC is detected during the machine is starting.</li> <li>• CD242: The faulty of the installation of encrypted ASIC is detected during the machine is starting.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check CPUB for proper installation and correct as necessary.
2. Check BASEB connector for proper connection and correct as necessary.
3. [Replace CPUB.](#)
4. [Replace BASEB.](#)

**3.14.14 CD261****Contents**

Trouble type	CD261: USB hub board failure
Rank	C
Trouble detection condition	<ul style="list-style-type: none"> <li>• When a failure is detected in USB hub board included in the local interface kit.</li> <li>• Non-standard USB device is connected.</li> </ul>

Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> <li>• USB hub board (USBHB: EK-P08 or EK-P09)</li> </ul>

**Procedure**

1. Check the operation with another USB device.
2. Check USBHB for proper connection and correct as necessary.
3. Replace USBHB.
4. [Replace CPUB.](#)
5. [Replace BASEB.](#)

**3.14.15 CD262****Contents**

Trouble type	CD262: Extension network adapter installation error
Rank	C
Trouble detection condition	<ul style="list-style-type: none"> <li>• When the 2nd network card settings is set to "Set" but the upgrade kit (UK-221) is not installed.</li> <li>• Upgrade Kit (UK-221) is faulty.</li> </ul>
Trouble isolation	-
Relevant electrical parts	-

**Procedure**

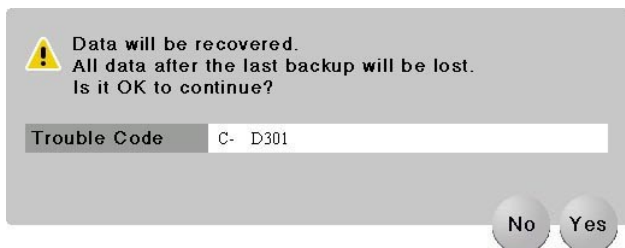
1. Check the settings of [Service Mode] -> [Network Settings] -> [2nd Network Setting] -> [2nd network card settings].
2. Check the UK-221 connector for proper connection and correct as necessary.
3. Rewrite the firmware.
4. Replace UK-221.

**3.14.16 CD3##****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	-

**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]

**3.14.17 CD38E****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	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Rewrite the firmware.
2. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.

**3.14.18 CD390****Contents**

Trouble type	CD390: Nonvolatile data checksum error
Rank	C
Trouble detection condition	C-D390 code is normally shown when the CPU board (CPUB) is replaced with a new one.
Trouble isolation	-
Relevant electrical parts	-

**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.

**3.14.19 CD391****Contents**

Trouble type	CD391: Nonvolatile data save error (Storage)
Rank	-
Trouble detection condition	-
Trouble isolation	-
Relevant electrical parts	-

**Procedure****NOTE**

- Contact the responsible people of KM before taking some countermeasures.

**3.14.20 CD392****Contents**

Trouble type	CD392: Nonvolatile data save error (EEPROM)
Rank	C
Trouble detection condition	The backup board (ERB) is replaced with a new one.
Trouble isolation	-
Relevant electrical parts	Backup board (ERB)

**Procedure**

1. Replace the following components with new ones.  
Configure [New Release] in Service Mode before replacing the image transfer belt unit, transfer roller and the fusing unit.
  - Imaging unit
  - Transfer belt unit
  - Fusing unit
  - Transfer roller
  - Feed roller, pick-up roller, separation roller (including options)
  - Separation pad
  - Toner filter
2. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
3. Set the various setting values in the service mode again.
4. If the above actions do not solve the problem, contact KM.

**3.14.21 CD3B1, CD3B3, CD3B4, CD3B5****Contents**

Trouble type	<ul style="list-style-type: none"> <li>• CD3B1: DB server startup failure</li> <li>• CD3B3: DB access failure</li> <li>• CD3B4: No DB definition file</li> <li>• CD3B5: DB definition file error</li> </ul>
Rank	C
Trouble detection condition	<ul style="list-style-type: none"> <li>• CD3B1: When starting the MFP, PostgreSQL server startup has not been successful.</li> <li>• CD3B3: When starting the MFP, SQL DB access fails in PostgreSQL server startup processing.</li> <li>• CD3B4: When starting the MFP, SQL DB definition file does not exist in PostgreSQL server startup processing.</li> <li>• CD3B5: When starting the MFP, there is an error in SQL DB definition file in PostgreSQL server startup processing.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> </ul>

	<ul style="list-style-type: none"> <li>• Base board (BASEB)</li> </ul>
--	--

**Procedure**

1. Check CPUB for proper installation and correct as necessary.
2. Rewrite the firmware.
3. [Replace CPUB.](#)
4. [Replace BASEB.](#)

**3.14.22 CD3C0****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	-

**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.

**3.14.23 CD401, CD402, CD403, CD404, CD405, CD406, CD407, CD411, CD412, CD413****Contents**

Trouble type	<ul style="list-style-type: none"> <li>• CD401: NACK command incorrect</li> <li>• CD402: ACK command incorrect</li> <li>• CD403: Checksum error</li> <li>• CD404: Receiving packet incorrect</li> <li>• CD405: Receiving packet analysis error</li> <li>• CD406: ACK receiving timeout</li> <li>• CD407: Retransmission timeout</li> <li>• CD411: Touch panel board error</li> <li>• CD412: Touch panel type mismatch</li> <li>• CD413: Electrostatic touch panel operation mode error</li> </ul>
Rank	C
Trouble detection condition	When abnormality is found in the communication of controller.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Control panel</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check whether there is a strong electromagnetic noise source near the main body.
2. Check the connector between the control panel-BASEB CN7 for proper connection and correct as necessary.
3. Check CPUB for proper installation and correct as necessary.
4. [Replace CPUB.](#)
5. [Replace BASEB.](#)

**3.14.24 CD701, CD702, CD703****Contents**

Trouble type	<ul style="list-style-type: none"> <li>• CD701: Mechanical controller flash ROM writing error</li> <li>• CD702: Mechanical controller flash ROM device error</li> <li>• CD703: FW download communication fault</li> </ul>
Rank	C
Trouble detection condition	<p>CD701: A mechanical controller flash ROM writing sequence is interrupted in its mid-operation due to, for example, power being shut off.</p> <p>CD702: An erase error or other device fault occurs during mechanical controller flash ROM writing.</p> <p>CD703: Irregular data is received during FW downloading.</p> <ul style="list-style-type: none"> <li>• Places are changed in the order of write completion pulses.</li> <li>• A write completion pulse is received for a memory for which binary writing is not permitted.</li> <li>• Final checksum mismatch in FW download</li> <li>• Two-minute timeout (no response from CTL, the number of transfer data items less than the specified)</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Check CPUB for proper installation and correct as necessary.

3. Rewrite the firmware.
4. [Replace CPUB.](#)
5. [Replace BASEB.](#)

### 3.14.25 CD705, CD706

#### Contents

Trouble type	<ul style="list-style-type: none"> <li>• CD705: Mechanical controller sub-CPU flash ROM device error</li> <li>• CD706: Mechanical controller sub-CPU flash ROM error</li> </ul>
Rank	C
Trouble detection condition	<ul style="list-style-type: none"> <li>• CD705: An erase error or other device fault occurs during mechanical controller sub-CPU flash ROM writing.</li> <li>• CD706: A data error is determined to exist in the mechanical controller sub-CPU flash ROM during starting.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Check CPUB for proper installation and correct as necessary.
3. Rewrite the firmware.
4. [Replace CPUB.](#)
5. [Replace BASEB.](#)

### 3.14.26 CDC##

#### Contents

Trouble type	CDC##: Trouble related to security
Rank	-
Trouble detection condition	-
Trouble isolation	-

#### Procedure

##### NOTE

- Contact the responsible people of KM before taking some countermeasures.

### 3.15 CE###

#### 3.15.1 CE001, CE003, CE004, CE005, CE006, CE007, CE009, CE011

#### Contents

Trouble type	<ul style="list-style-type: none"> <li>• CE001: Abnormal message queue</li> <li>• CE003: Task error</li> <li>• CE004: Event error</li> <li>• CE005: Memory access error</li> <li>• CE006: Header access error</li> <li>• CE007: DIMM initialize error</li> <li>• CE009: Memory resource shortage error</li> <li>• CE011: Config. file access error at startup of FW</li> </ul>
Rank	C
Trouble detection condition	CPU board (CPUB) is faulty.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

#### Procedure

1. Check the connectors on BASEB for proper connection and correct as necessary.
2. [Replace CPUB.](#)
3. [Replace BASEB.](#)

#### 3.15.2 CE002

#### Contents

Trouble type	CE002: Message and method parameter failure
Rank	C
Trouble detection condition	CPU board (CPUB) is faulty.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• microSD</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**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. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] and perform the function.
3. Replace the microSD.
4. [Replace CPUB.](#)
5. [Replace BASEB.](#)

**3.15.3 CE101****Contents**

Trouble type	CE101: Browser finish detected
Rank	C
Trouble detection condition	<ul style="list-style-type: none"> <li>• The browser is automatically recovered (restarted) after the main body detected that the browser (separate process) has stopped with fault.</li> <li>• When the “Malfunction finish is detected over predetermined number of times” or “the browser task process is except in idle (printing, etc.)”.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the connectors on BASEB for proper connection and correct as necessary.
2. [Replace CPUB.](#)
3. [Replace BASEB.](#)

**3.15.4 CE201****Contents**

Trouble type	CE201: Transmission operation log storage fault
Rank	C
Trouble detection condition	When the transmission log storage failed, it repeats retrieval until transmission operation log is stored. The trouble is detected when the retrieval failed for predetermined number of times.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the connectors on BASEB for proper connection and correct as necessary.
2. [Replace CPUB.](#)
3. [Replace BASEB.](#)

**3.15.5 CE202****Contents**

Trouble type	CE202: PDL interpreter error
Rank	C
Trouble detection condition	An error inside the CPU board (CPUB) is detected during converting the PDL information.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] -> [Logical Format] and perform the function.
3. Select [System 1] -> [Initialization] -> [Clear All Data] and perform the function.
4. [Replace CPUB.](#)
5. [Replace BASEB.](#)

**3.15.6 CE203****Contents**

Trouble type	CE203: Unrecoverable error
Rank	C
Trouble detection condition	An error does not recover even after an auto recovery.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] -> [Logical Format] and perform the function.
3. Select [System 1] -> [Initialization] -> [Clear All Data] and perform the function.
4. Update the firmware.
5. Perform the self-diagnostic function.
6. [Replace CPUB.](#)
7. [Replace BASEB.](#)

**3.15.7 CE301, CE302, CE303, CE304, CE305****Contents**

Trouble type	<ul style="list-style-type: none"> <li>• CE301: Referring incorrect memory</li> <li>• CE302: Incorrect command</li> <li>• CE303: Finished due to error inside Qt library</li> <li>• CE304: Finished due to error outside Qt library</li> <li>• CE305: Program forced to stop</li> </ul>
Rank	C
Trouble detection condition	Error occurred with the process inside the MFP controller.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the connectors on BASEB for proper connection and correct as necessary.
2. [Replace CPUB.](#)
3. [Replace BASEB.](#)
4. Acquire the debug logs in [Service Mode] -> [Debug Settings] and analyze them.

**3.15.8 CED01****Contents**

Trouble type	CED01: The authentication application information does not exist in the storage 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 storage.
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• microSD</li> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Turn OFF and ON the main power switch.
2. Check the microSD for proper installation and correct as necessary.
3. Check CPUB for proper installation and correct as necessary.
4. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] -> [Logical Format] and perform the function.
5. Replace the microSD.
6. If the above actions do not solve the problem, contact KM.

**3.15.9 CEEE1, CEEE3****Contents**

Trouble type	<ul style="list-style-type: none"> <li>• CEEE1: CPU board (MSC) malfunction</li> <li>• CEEE3: Base board (ENG) malfunction</li> </ul>
Rank	<ul style="list-style-type: none"> <li>• CEEE1: C</li> <li>• CEEE3: A</li> </ul>
Trouble detection condition	<ul style="list-style-type: none"> <li>• CEEE1: CPU board is faulty.</li> <li>• CEEE3: Base board is faulty.</li> </ul>
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• Base board (BASEB)</li> </ul>

**Procedure**

1. Check the connectors on BASEB for proper connection and correct as necessary.
2. [Replace CPUB.](#)
3. [Replace BASEB.](#)

**3.16 CF### (Abort code)**

- 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.

### 3.16.1 CFA1#

#### Contents

Trouble type	CFA1#: Abort code	
Rank	C	
Trouble detection condition	-	
Trouble isolation	-	
Relevant electrical parts	CFA14, CFA17	<ul style="list-style-type: none"> <li>• CPU board (CPUB)</li> <li>• microSD</li> </ul>

#### Procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Check the microSD for proper installation and correct as necessary.
3. Check CPUB for proper installation and correct as necessary.
4. Rewrite the firmware.
5. Execute [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Check] -> [Rough Check], and check that no abnormalities. When "NG" is displayed, replace the appropriate memory or PWB.
  - WORK0: CPU board (CPUB) LPDDR4 main memory ChA
  - WORK1: CPU board (CPUB) LPDDR4 main memory ChB
6. Execute [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Storage R/W Check], and check that no abnormalities. When "NG" is displayed, replace the microSD.
7. [Replace CPUB.](#)

### 3.16.2 CFB0# - CFB3#

#### Contents

Trouble type	CFB0# - CFB3#: Abort code	
Rank	C	
Trouble detection condition	-	
Trouble isolation	-	
Relevant electrical parts	CPU board (CPUB)	

#### Procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Check CPUB for proper installation and correct as necessary.
3. Rewrite the firmware.
4. Execute [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Check] -> [Rough Check], and check that no abnormalities. When "NG" is displayed, replace the appropriate memory or PWB.
  - WORK0: CPU board (CPUB) LPDDR4 main memory ChA
  - WORK1: CPU board (CPUB) LPDDR4 main memory ChB
5. [Replace CPUB.](#)

### 3.16.3 CFBC# - CFC2#

#### Contents

Trouble type	CFBC# - CFC2#: Abort code	
Rank	C	
Trouble detection condition	-	
Trouble isolation	-	
Relevant electrical parts	CPU board (CPUB)	

#### Procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Check CPUB for proper installation and correct as necessary.
3. Rewrite the firmware.
4. Execute [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Check] -> [Rough Check], and check that no abnormalities. When "NG" is displayed, replace the appropriate memory or PWB.
  - WORK0: CPU board (CPUB) LPDDR4 main memory ChA
  - WORK1: CPU board (CPUB) LPDDR4 main memory ChB
5. [Replace CPUB.](#)

### 3.16.4 CFD7# - CFDA#

#### Contents

Trouble type	CFD7# - CFDA#: Abort code	
Rank	C	

Trouble detection condition	-
Trouble isolation	-
Relevant electrical parts	CPU board (CPUB)

**Procedure**

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Check CPUB for proper installation and correct as necessary.
3. Rewrite the firmware.
4. Execute [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Check] -> [Rough Check], and check that no abnormalities. When "NG" is displayed, replace the appropriate memory or PWB.
  - WORK0: CPU board (CPUB) LPDDR4 main memory ChA
  - WORK1: CPU board (CPUB) LPDDR4 main memory ChB
5. [Replace CPUB.](#)

**3.16.5 CFE3# - CFE6#****Contents**

Trouble type	CFE3# - CFE6#: Abort code
Rank	C
Trouble detection condition	-
Trouble isolation	-
Relevant electrical parts	CPU board (CPUB)

**Procedure**

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Check CPUB for proper installation and correct as necessary.
3. Rewrite the firmware.
4. Execute [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Check] -> [Rough Check], and check that no abnormalities. When "NG" is displayed, replace the appropriate memory or PWB.
  - WORK0: CPU board (CPUB) LPDDR4 main memory ChA
  - WORK1: CPU board (CPUB) LPDDR4 main memory ChB
5. [Replace CPUB.](#)

**3.16.6 CFEF# - CFF2#****Contents**

Trouble type	CFEF# - CFF2#: Abort code
Rank	C
Trouble detection condition	-
Trouble isolation	-
Relevant electrical parts	CPU board (CPUB)

**Procedure**

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Check CPUB for proper installation and correct as necessary.
3. Rewrite the firmware.
4. Execute [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Check] -> [Rough Check], and check that no abnormalities. When "NG" is displayed, replace the appropriate memory or PWB.
  - WORK0: CPU board (CPUB) LPDDR4 main memory ChA
  - WORK1: CPU board (CPUB) LPDDR4 main memory ChB
5. [Replace CPUB.](#)

## 4. TROUBLESHOOTING USING SELF-DIAG. (FULL)

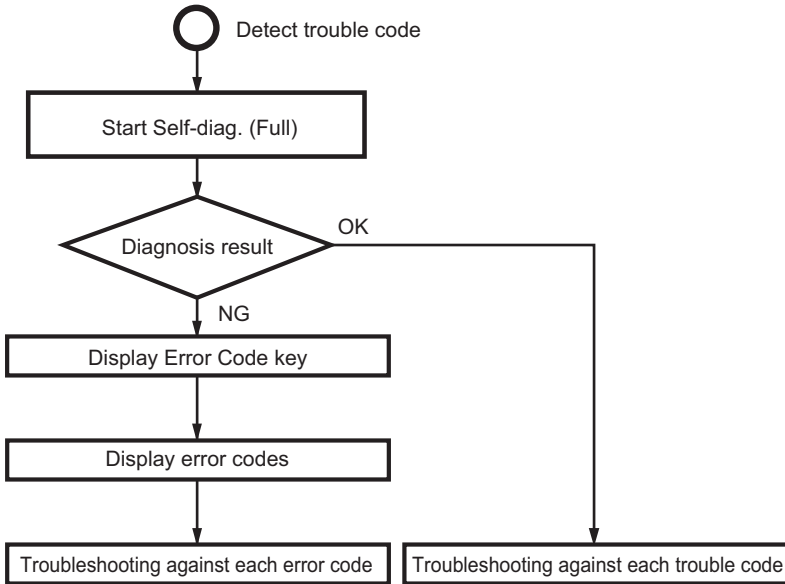
### 4.1 Overview of Self-diag. (Full) function

- 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 base 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 [1.13.9.2 Self-diag. \(Full\)](#).
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 a "trouble code" occurred. Refer to [Service Mode] -> [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 electrical parts
E2-1	microSD	Device recognition	Engagement failure Mounting failure	microSD CPU board (CPUB)
E2-2		R/W check	microSD error (data failure)	microSD
E2-3		S.M.A.R.T diag.	microSD error (data failure)	microSD
E2-4		MFP FW checksum	microSD error (data failure)	MFP firmware
E2-5		Partition check	microSD error (data failure)	microSD
E3-3	I2C	PS-CPU	Connection failure Parts defect	CPU board (CPUB) Base board (BASEB)
E4-1	System/image memory	WORK0 (Main memory ch.A)	Engagement failure Mounting failure DRAM failure	CPU board (CPUB)
E4-2		WORK1 (Main memory ch.B)	Engagement failure Mounting failure DRAM failure	CPU board (CPUB)
E5-1	Various USB devices	IRIS0	Connection failure Parts defect	CPU board (CPUB)
E5-2		USB3.0-HUB chip (base board)	Connection failure Parts defect	CPU board (CPUB) Base board (BASEB)
E5-3		USB2.0-HUB chip (base board)	Connection failure Parts defect	Base board (BASEB)
E5-4		USB device HUB chip (USB hub board)	Connection failure Parts defect	USB hub board (USBHB) Base board (BASEB)
E5-5		DAC-IC	Connection failure Parts defect	USB hub board (USBHB)
E5-11		Upgrade kit (UK-221)	Connection failure Parts defect	Wireless LAN board (WLANB) Base board (BASEB)
E5-12		Authentication unit	Connection failure Parts defect	Authentication unit Base board (BASEB)
E12-1		PCIe	PCIe device check IRIS(0)	PCIe device error
E12-2	PCIe device check IRIS(1)		CPU board (CPUB)	

#### Troubleshooting against multiple error codes

Error code	Action
E5-1, E12-1	Execute <a href="#">E12-1</a> .

### 4.4 E2-1

#### Contents

Error code	E2-1
Target device	microSD
Diagnosis item	Device recognition
Reason of error	Engagement failure Mounting failure
Relevant electrical parts	microSD CPU board (CPUB)

#### Corrective action procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Correct the mounting of microSD if faulty.
3. Correct the mounting of CPUB if faulty.
4. Replace microSD.
5. [Replace CPUB](#).

### 4.5 E2-2

#### Contents

Error code	E2-2
Target device	microSD
Diagnosis item	R/W check
Reason of error	microSD error (data failure)
Relevant electrical parts	microSD

**Corrective action procedure**

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Correct the mounting of microSD if faulty.
3. Replace microSD.

**4.6 E2-3****Contents**

Error code	E2-3
Target device	microSD
Diagnosis item	S.M.A.R.T diag.
Reason of error	microSD error (data failure)
Relevant electrical parts	microSD

**Corrective action procedure**

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Correct the mounting of microSD if faulty.
3. Replace microSD.

**4.7 E2-4****Contents**

Error code	E2-4
Target device	microSD
Diagnosis item	MFP FW checksum
Reason of error	microSD error (data failure)
Relevant electrical parts	MFP firmware

**Corrective action procedure**

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Perform re-installation of the firmware.

**4.8 E2-5****Contents**

Error code	E2-5
Target device	microSD
Diagnosis item	Partition check
Reason of error	microSD error (data failure)
Relevant electrical parts	microSD

**Corrective action procedure**

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Correct the mounting of microSD if faulty.
3. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] -> [Logical Format] and perform the function.
4. Replace microSD.

**4.9 E3-3****Contents**

Error code	E3-3
Target device	I2C
Diagnosis item	PS-CPU
Reason of error	Connection failure Parts defect
Relevant electrical parts	CPU board (CPUB) Base board (BASEB)

**Corrective action procedure**

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Correct the mounting of CPUB if faulty.
3. Correct the mounting of BASEB or the connection of connectors if faulty.
4. [Replace CPUB.](#)
5. [Replace BASEB.](#)

## 4.10 E4-1, E4-2

### 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 each trouble code.
- Turning OFF the main power switch will finish the Self-diag. (Full) forcibly.

### Contents

Error code	E4-1, E4-2	
Target device	System/image memory	
Diagnosis item	E4-1	WORK0 (Main memory ch.A)
	E4-2	WORK1 (Main memory ch.B)
Reason of error	Engagement failure Mounting failure DRAM failure	
Relevant electrical parts	CPU board (CPUB)	

### Corrective action procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Correct the mounting of CPUB if faulty.
3. [Replace CPUB.](#)

## 4.11 E5-1

### Contents

Error code	E5-1	
Target device	Various USB devices	
Diagnosis item	IRIS0	
Reason of error	Connection failure Parts defect	
Relevant electrical parts	CPU board (CPUB)	

### Corrective action procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Correct the mounting of CPUB if faulty.
3. [Replace CPUB.](#)

## 4.12 E5-2

### Contents

Error code	E5-2	
Target device	Various USB devices	
Diagnosis item	USB3.0-HUB chip (base board)	
Reason of error	Connection failure Parts defect	
Relevant electrical parts	CPU board (CPUB) Base board (BASEB)	

### Corrective action procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Correct the mounting of CPUB if faulty.
3. Correct the mounting of BASEB or the connection of connectors if faulty.
4. [Replace CPUB.](#)
5. [Replace BASEB.](#)

## 4.13 E5-3

### Contents

Error code	E5-3	
Target device	Various USB devices	
Diagnosis item	USB2.0-HUB chip (base board)	
Reason of error	Connection failure Parts defect	
Relevant electrical parts	Base board (BASEB)	

### Corrective action procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.

2. Correct the mounting of BASEB or the connection of connectors if faulty.
3. [Replace BASEB.](#)

#### 4.14 E5-4

##### Contents

Error code	E5-4
Target device	Various USB devices
Diagnosis item	USB device HUB chip (USB hub board)
Reason of error	Connection failure Parts defect
Relevant electrical parts	USB hub board (USBHB) Base board (BASEB)

##### Corrective action procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Correct the mounting of USBHB or the connection of connectors if faulty.
3. Correct the mounting of BASEB or the connection of connectors if faulty.
4. Replace USBHB.
5. [Replace BASEB.](#)

#### 4.15 E5-5

##### Contents

Error code	E5-5
Target device	Various USB devices
Diagnosis item	DAC-IC
Reason of error	Connection failure Parts defect
Relevant electrical parts	USB hub board (USBHB)

##### Corrective action procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Correct the mounting of USBHB or the connection of connectors if faulty.
3. Replace USBHB.

#### 4.16 E5-11

##### Contents

Error code	E5-11
Target device	Various USB devices
Diagnosis item	Upgrade kit (UK-221)
Reason of error	Connection failure Parts defect
Relevant electrical parts	Wireless LAN board (WLANB) Base board (BASEB)

##### Corrective action procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Correct the mounting of the upgrade kit (UK-221) or the connection of connectors if faulty.
3. Correct the mounting of BASEB or the connection of connectors if faulty.
4. Replace WLANB.
5. [Replace BASEB.](#)

#### 4.17 E5-12

##### Contents

Error code	E5-12
Target device	Various USB devices
Diagnosis item	Authentication unit
Reason of error	Connection failure Parts defect
Relevant electrical parts	Authentication unit Base board (BASEB)

##### Corrective action procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.

2. Correct the mounting and connection of the authentication unit if faulty.
3. Correct the mounting of BASEB or the connection of connectors if faulty.
4. Replace the authentication unit.
5. [Replace BASEB.](#)

#### 4.18 E12-1, E12-2

##### Contents

Error code	E12-1, E12-2	
Target device	PCIe	
Diagnosis item	E12-1	PCIe device check IRIS(0)
	E12-2	PCIe device check IRIS(1)
Reason of error	PCIe device error	
Relevant electrical parts	E12-1, E12-2	CPU board (CPUB)

##### Corrective action procedure

1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.
2. Correct the mounting of CPUB if faulty.
3. [Replace CPUB.](#)



## 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 hub board if faulty.
4. Replace the keyboard.
5. [Replace the USB hub 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 hub board if faulty.
4. Replace the USB memory.
5. [Replace the USB hub board.](#)

### 5.2 CPU board check

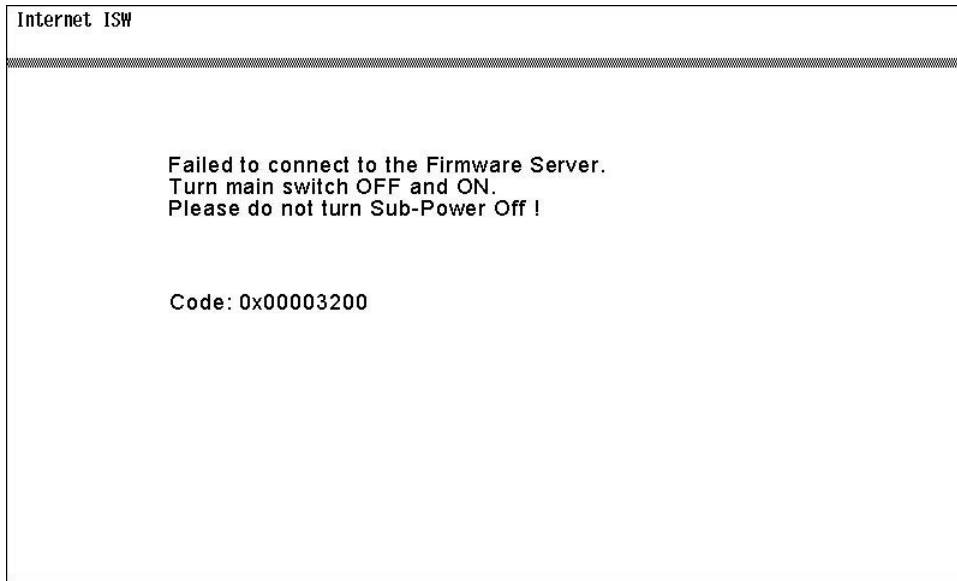
#### 5.2.1 Troubleshooting when NG is displayed for Ping Test

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 CPU board if faulty.
4. Correct the mounting of the base board or the connection of connectors if faulty.
5. [Replace the CPU board.](#)
6. [Replace the base board.](#)

## 6. ERROR CODE FOR THE INTERNET ISW

### 6.1 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.

### 6.2 0x0#

Error code	Description	Countermeasure
0x00000001	Illegal error on the control	<ul style="list-style-type: none"> <li>Check if [Service Mode] -&gt; [Machine Update Setting] -&gt; [Internet ISW] -&gt; [Internet ISW Set] is set to "ON".</li> <li>Check the status of [Service Mode] -&gt; [Machine Update Setting] -&gt; [Internet ISW] -&gt; [Forwarding Access Setting].</li> <li>If the above process does not solve the problem, inform the corresponding error code to the KONICA MINOLTA.</li> </ul>
0x00000010	Parameter error	<ul style="list-style-type: none"> <li>Check if [Service Mode] -&gt; [Machine Update Setting] -&gt; [Internet ISW] -&gt; [Internet ISW Set] is set to "ON".</li> <li>If the above process does not solve the problem, inform the corresponding error code to the KONICA MINOLTA.</li> </ul>
0x00111000	Error concerning the network <ul style="list-style-type: none"> <li>Connection has been completed.</li> </ul>	<ul style="list-style-type: none"> <li>Check the User's network environment. (LAN cable's connection)</li> <li>Check the status of [Service Mode] -&gt; [Machine Update Setting] -&gt; [Internet ISW] -&gt; [Forwarding Access Setting].</li> <li>Check to see if the FTP server operates normally.</li> </ul>
0x00111001	Error concerning the network <ul style="list-style-type: none"> <li>It cannot be connected to the server.</li> </ul>	<ul style="list-style-type: none"> <li>Check the User's network environment.</li> <li>Check to see if the FTP server operates normally.</li> </ul>
0x00111100	Error concerning the network <ul style="list-style-type: none"> <li>Communication timeout.</li> </ul>	<ul style="list-style-type: none"> <li>Check whether the URL of the data transfer server includes http://, ftp://, or the like to specify a protocol in [Service Mode] -&gt; [Machine Update Setting] -&gt; [Internet ISW] -&gt; [Forwarding Access Setting].</li> </ul>
0x00111101	Error concerning the network <ul style="list-style-type: none"> <li>Disconnection occurred.</li> </ul>	<ul style="list-style-type: none"> <li>Check the User's network environment.</li> <li>Check to see if the FTP server operates normally.</li> </ul>
0x00111110	Error concerning the network <ul style="list-style-type: none"> <li>The network is not connected.</li> </ul>	
0x00110010	Error concerning the network <ul style="list-style-type: none"> <li>Others</li> </ul>	
0x00001###	FTP error <ul style="list-style-type: none"> <li>Reply code when it failed to be connected.</li> </ul>	<ul style="list-style-type: none"> <li>Check to see if the FTP server operates normally.</li> <li>Check the IP address, user's name, etc.</li> </ul>
0x00002###	FTP error <ul style="list-style-type: none"> <li>Error reply code for the user command or pass command.</li> </ul>	Check to see if the FTP server operates normally.
0x00003###	FTP error <ul style="list-style-type: none"> <li>Error reply code for the CWD command.</li> </ul>	
0x00004###	FTP error <ul style="list-style-type: none"> <li>Error reply code for the TYPE command.</li> </ul>	Check to see if the FTP server operates normally.
0x00005###	FTP error	

Error code	Description	Countermeasure
	<ul style="list-style-type: none"> <li>Error reply code for the PORT command.</li> </ul>	
0x00006###	FTP error <ul style="list-style-type: none"> <li>Error reply code for the PASV command.</li> </ul>	<ul style="list-style-type: none"> <li>Check to see if the FTP server operates normally.</li> <li>Set the PASV mode to "OFF", and try it again.</li> </ul>
0x00007###	FTP error <ul style="list-style-type: none"> <li>Error reply code for the RETR command.</li> </ul>	<ul style="list-style-type: none"> <li>Check to see if the FTP server operates normally.</li> <li>Wait for about 30 minutes and try it again.</li> </ul>

### 6.3 0x1#

Error code	Description	Countermeasure
0x10000100	<ul style="list-style-type: none"> <li>It cannot be accepted because of the job currently being executed.</li> <li>ISW being executed by other method.</li> </ul>	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.	<ul style="list-style-type: none"> <li>Check if [Service Mode] -&gt; [Machine Update Setting] -&gt; [Internet ISW] -&gt; [Internet ISW Set] is set to "ON".</li> <li>If the above process does not solve the problem, inform the corresponding error code to the KONICA MINOLTA.</li> </ul>
0x10000104	There is no space for firmware data to be downloaded.	
0x10000106	Check sum error	
0x10000107	File access error <ul style="list-style-type: none"> <li>The file downloaded has an error.</li> <li>The header of the file which has been read has an error.</li> <li>The size of the file to be downloaded is too large.</li> <li>When it is identified to be the different type of firmware.</li> </ul>	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.

### 6.4 0x2#

Error code	Description	Countermeasure
0x20000000	The temporary error when running the subset <ul style="list-style-type: none"> <li>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.</li> </ul>	Wait until ISW is automatically executed on MFP side.

## 7. CS Remote Care ERROR CODE

### 7.1 Troubleshooting for CS Remote Care

If communication is not done properly, check the condition by following the procedures shown below.

- Shift the screen in the order of [Service Mode] -> [CS Remote] -> [Remote Care].

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	How to correct
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.	<ul style="list-style-type: none"> <li>Check if the power of modem is ON.</li> <li>Check if there is any problem in connection between the modem and the main body.</li> </ul>
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.	<ul style="list-style-type: none"> <li>Communicate with the center again.</li> <li>Check the communication environment of the center side.</li> </ul>

### 7.2 CS Remote Care Operation under Enhanced Security Mode

CS Remote Care can be used even when "ON" is selected in [Administrator] -> [Security] -> [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

### 7.3 List of the CS Remote Care error code

#### 7.3.1 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 <ul style="list-style-type: none"> <li>Busy detection</li> </ul>	Transmit again manually.
0002	Failure of the Modem default setting at transmitting <ul style="list-style-type: none"> <li>When the transmission completes with modem initial setting failed</li> </ul>	<ul style="list-style-type: none"> <li>Check if the power of the modem is ON.</li> <li>Check the connecting condition between the modem and the main body.</li> </ul>
0003	Timeout of CONNECT at transmitting <ul style="list-style-type: none"> <li>No response to ATD</li> </ul>	<ul style="list-style-type: none"> <li>Transmit again manually.</li> <li>Check if the power of the modem is ON.</li> <li>Check the connecting condition between the modem and the main body.</li> </ul>
0004	Timeout of response to receiving request <ul style="list-style-type: none"> <li>No response to receiving (start) request MSG</li> </ul>	<ul style="list-style-type: none"> <li>Check if the power of the modem is ON.</li> <li>Check the connecting condition between the modem and the main body.</li> </ul>
0005	Timeout of CONNECT at receiving <ul style="list-style-type: none"> <li>No response to ATA</li> </ul>	<ul style="list-style-type: none"> <li>Check if the power of the modem is ON.</li> <li>Check the connecting condition between the modem and the main body.</li> </ul>
0006	Shut down of the data modem line (Host) <ul style="list-style-type: none"> <li>Carrier OFF is detected</li> </ul>	No solution, because the line is shut down at the host side.
0007	Forced line disconnection of data modem (main body) <ul style="list-style-type: none"> <li>The line is forcibly disconnected from the event</li> </ul>	<ul style="list-style-type: none"> <li>Check if the power of the modem is ON.</li> <li>Check the connecting condition between the modem and the main body.</li> </ul>
0008	Timeout of start request telegram delivery <ul style="list-style-type: none"> <li>Start request telegram is not delivered after line connection</li> </ul>	Transmit again manually.
0009	Timeout of finish request telegram delivery <ul style="list-style-type: none"> <li>Finish request telegram is not delivered (Start of shut down)</li> </ul>	Transmit again manually.
000A	Receiving rejection <ul style="list-style-type: none"> <li>Receiving is made when the main body is set to reject receiving.</li> </ul>	<ul style="list-style-type: none"> <li>Check the setting condition of the host side.</li> <li>Check the setting condition of the main body side.</li> </ul>

Error code	Contents	Solution
000E	Receiving ring buffer full <ul style="list-style-type: none"> <li>When receiving ring buffer is full</li> </ul>	If the same error is detected several times, turn the modem power OFF and ON.
000F	Transmission ring buffer full <ul style="list-style-type: none"> <li>When transmission ring buffer is full</li> </ul>	If the same error is detected several times, turn the modem power OFF and ON.
0014	Incorrect transmission data length <ul style="list-style-type: none"> <li>When transmission of a data with the length longer than the transmission ring buffer size is requested</li> </ul>	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 <ul style="list-style-type: none"> <li>Center ID of the host is not identical with the one of start request telegram.</li> </ul>	<ul style="list-style-type: none"> <li>Check center ID setting of the main body side.</li> <li>Check the setting condition of the host side.</li> </ul>
001A	Device ID inconsistency <ul style="list-style-type: none"> <li>Device ID of the host is not identical with the one of start request telegram.</li> </ul>	<ul style="list-style-type: none"> <li>Check device ID setting of the main body side.</li> <li>Check the setting condition of the host side.</li> </ul>
001B	Device ID unregistered <ul style="list-style-type: none"> <li>Request telegram 2 (Constant data transmitting, emergency call) comes from the main body that has not registered device ID yet.</li> </ul>	<ul style="list-style-type: none"> <li>Check device ID setting of the main body side.</li> <li>Check the setting condition of the host side.</li> </ul>
001C	Grammar error <ul style="list-style-type: none"> <li>The specified format is not used in the received reply telegram.</li> </ul>	Check the settings for CSRC application.
001D	Change unavailable (Item where change is prohibited) <ul style="list-style-type: none"> <li>Host inquires change of the setting of the item not allowed to be changed.</li> </ul>	Check the settings for CSRC application.
001E	Impossible to change (during printing) <ul style="list-style-type: none"> <li>Setting cannot be changed because the setting change is made during the machine is printing or starts printing.</li> </ul>	Try again when the machine is not printing.
001F	Change unavailable (Item where change is prohibited) <ul style="list-style-type: none"> <li>Host attempts to write data to the item of which current value has not been read.</li> </ul>	Check the settings for CSRC application.
0020	Timeout of telegram delivery <ul style="list-style-type: none"> <li>At waiting mode of telegram delivery the machine fails to receive the telegram in a given time.</li> </ul>	Try communication again.
0021	Telegram longer than the specified length. <ul style="list-style-type: none"> <li>A telegram longer than the specified length is received.</li> </ul>	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 inconsistency is detected	Try communication again.
0027	Transmission / receiving collision <ul style="list-style-type: none"> <li>Receiving is detecting during transmitting processing</li> </ul>	Try communication again.

### 7.3.2 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. <ul style="list-style-type: none"> <li>Authentication setting</li> <li>Authentication ID</li> <li>Authentication password</li> <li>Address of the destination where the server is connected</li> </ul>

#### (2) 1###

Error code	Contents	Solution
1030	Machine ID mismatching <ul style="list-style-type: none"> <li>Received an e-mail which tells that machine ID mismatches.</li> </ul>	<ul style="list-style-type: none"> <li>Check the machine ID setting.</li> <li>Check the machine ID setting on host side.</li> </ul>
1050	Grammar error <ul style="list-style-type: none"> <li>Received mail did not define the CS Remote Care command (2 digits).</li> <li>The Type of Subject and the command of attached file are not consistent.</li> </ul>	Ask the host to send another mail.

Error code	Contents	Solution
1061	Modifying not allowed <ul style="list-style-type: none"> <li>The host sent a command mail that asked modifying data of item where setting change is not allowed.</li> </ul>	Ask the host to send another instruction mail for modifying.
1062	Modifying not available due to the copy job currently performing <ul style="list-style-type: none"> <li>When informing the host that it cannot be modified due to the copy job currently performing.</li> </ul>	Ask the host to send another instruction mail for modifying.
1080	Data length problem <ul style="list-style-type: none"> <li>LEN value of TEXT data and actual data length are not consistent.</li> </ul>	Ask the host to send another instruction mail for modifying.
1081	Frame No. error <ul style="list-style-type: none"> <li>The last frame has not been received.</li> <li>There are missing frame No.</li> </ul>	Check the status of the machine registration on host side, and perform initial transmission as necessary.
1082	Subject Type problem <ul style="list-style-type: none"> <li>Received code did not define the Type of Subject.</li> </ul>	Ask the host to send another instruction mail for modifying.
1084	Date expired <ul style="list-style-type: none"> <li>Expiration date for data modification command has passed.</li> </ul>	Ask the host to send another instruction mail for modifying.
1091	Oversized command <ul style="list-style-type: none"> <li>Received attached file exceeds the machine's receive buffer size.</li> </ul>	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 <ul style="list-style-type: none"> <li>Status not predicted in design is detected.</li> </ul>	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 <ul style="list-style-type: none"> <li>LAN cable on main body side is detached.</li> </ul>	<ul style="list-style-type: none"> <li>Check the connection between main body on the user's side and the network connector.</li> <li>Check the network environment on the user's side.</li> </ul>
206B	Communication from an MFP to the server is disabled due to problems on the server side <ul style="list-style-type: none"> <li>LAN cable on the copier side is detached.</li> </ul>	<ul style="list-style-type: none"> <li>Check the connection between main body on the user's side and the network connector.</li> <li>Check the network environment on the user's side.</li> </ul>
203E	Connection timeout	Check timeout setting.

**(4) 3###**

Error code	Contents	Solution
3001	POP3_AUTHORIZATION_ERR	Check the user's POP3 server system settings. <ul style="list-style-type: none"> <li>Authentication setting</li> <li>Connection ID</li> <li>Password</li> <li>Address of the destination where the server is connected</li> </ul>
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 <ul style="list-style-type: none"> <li>In the CS Remote Care's internal sequence, message transfer failed.</li> </ul>	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
	<ul style="list-style-type: none"> <li>MIO response timed out.</li> </ul>	
41FB	Control error <ul style="list-style-type: none"> <li>As the file descriptor of the e-mail that MFP receives from MIO is invalid, MFP cannot receive the e-mail.</li> </ul>	Turn the main power switch OFF and then ON.
41FC	Control error <ul style="list-style-type: none"> <li>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.</li> </ul>	Turn the main power switch OFF and then ON.
41FD	Control error <ul style="list-style-type: none"> <li>During e-mail reception, the parameter sent from MIO to the CS Remote Care is invalid and MFP cannot receive the e-mail.</li> </ul>	Turn the main power switch OFF and then ON.
41FE	Control error <ul style="list-style-type: none"> <li>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.</li> </ul>	Turn the main power switch OFF and then ON.
41FF	Control error <ul style="list-style-type: none"> <li>During e-mail reception, MIO became inactive.</li> </ul>	Turn the main power switch OFF and then ON.
4210	Control error <ul style="list-style-type: none"> <li>E-mail sent from MIO could not be properly handled in the CS Remote Care.</li> </ul>	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.

**7.3.3 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. <ul style="list-style-type: none"> <li>Authentication setting for address of the destination where the server is connected</li> <li>Location indicated for a folder</li> <li>Connection ID</li> <li>Password</li> </ul>

**(2) 1###**

Error code	Contents	How to correct
1030	Machine ID mismatching <ul style="list-style-type: none"> <li>Received file which tells that machine ID mismatches.</li> </ul>	<ul style="list-style-type: none"> <li>Check the machine ID setting.</li> <li>Check the machine ID setting on host side.</li> </ul>
1050	Grammar error <ul style="list-style-type: none"> <li>Received file did not define the CS Remote Care command (2 digits).</li> <li>The Type of Subject and the command of file are not consistent.</li> </ul>	Check file content.
1061	Modifying not allowed <ul style="list-style-type: none"> <li>The host sent a command file that asked modifying data of item where setting change is not allowed.</li> </ul>	Ask the host to send another instruction file for modifying.
1062	Modifying not available due to the copy job currently performing <ul style="list-style-type: none"> <li>When informing the host that it cannot be modified due to the copy job currently performing.</li> </ul>	Ask the host to send another instruction file for modifying.
1080	Data length problem <ul style="list-style-type: none"> <li>LEN value of TEXT data and actual data length are not consistent.</li> </ul>	Ask the host to send another instruction file for modifying.
1081	Frame No. error <ul style="list-style-type: none"> <li>The last frame has not been received.</li> <li>There are missing frame No.</li> </ul>	Check the status of the machine registration on host side.

Error code	Contents	How to correct
1082	Subject Type problem <ul style="list-style-type: none"> <li>Received code did not define the Type of Subject.</li> </ul>	Ask the host to send another instruction file for modifying.
1084	Date expired <ul style="list-style-type: none"> <li>Expiration date for data modification command has passed.</li> </ul>	Ask the host to send another instruction file for modifying.
1091	Oversized command <ul style="list-style-type: none"> <li>Received file exceeds the machine's receive buffer size.</li> </ul>	Ask the host to send another instruction file for modifying.
1099	Illegal request <ul style="list-style-type: none"> <li>Status not predicted in design is detected.</li> </ul>	Contact KM and inform the error code

**(3) 2###**

Error code	Contents	Solution
2001	http request result problem <ul style="list-style-type: none"> <li>Internal status error</li> </ul>	Check the user's http server system settings. <ul style="list-style-type: none"> <li>Authentication setting for address of the destination where the server is connected</li> <li>Location indicated for a folder</li> <li>Connection ID</li> <li>Password</li> </ul>
2002	http request result problem <ul style="list-style-type: none"> <li>File list acquisition result problem</li> </ul>	
2003	http request result problem <ul style="list-style-type: none"> <li>Request header transmission failure</li> </ul>	
2004	http request result problem <ul style="list-style-type: none"> <li>Request body transmission failure</li> </ul>	
2005	http request result problem <ul style="list-style-type: none"> <li>Response header receive response failure</li> </ul>	
2006	http request result problem <ul style="list-style-type: none"> <li>Response body receive response failure</li> </ul>	
2007	http request result problem <ul style="list-style-type: none"> <li>Session ID inconsistent</li> </ul>	

**(4) 3###**

Error code	Contents	Solution
3002	http request result problem <ul style="list-style-type: none"> <li>Unopened client ID was specified</li> </ul>	Check the user's http server system settings. <ul style="list-style-type: none"> <li>Authentication setting for address of the destination where the server is connected</li> <li>Location indicated for a folder</li> <li>Connection ID</li> <li>Password</li> </ul>
3003	http request result problem <ul style="list-style-type: none"> <li>Receive time out occurred</li> </ul>	
3004	http request result problem <ul style="list-style-type: none"> <li>Receive error occurred. Or wrong request URL was specified.</li> </ul>	
3005	http request result problem <ul style="list-style-type: none"> <li>Content-Length or receive size exceeded the specified max. transfer size. Message body size was too large.</li> </ul>	
3006	http request result problem <ul style="list-style-type: none"> <li>Due to reset, process was stopped. Or message body size exceeded the specified max. transfer size.</li> </ul>	
3007	http request result problem <ul style="list-style-type: none"> <li>Internal error occurred. Or due to internal reset, process was stopped.</li> </ul>	
3008	http request result problem <ul style="list-style-type: none"> <li>Connection to WebDAV server failed.</li> </ul>	
3009	http request result problem <ul style="list-style-type: none"> <li>Error occurred during transmission to the WebDAV server.</li> </ul>	
3010	http request result problem <ul style="list-style-type: none"> <li>Time out occurred during transmission to the WebDAV server.</li> </ul>	
3011	http request result problem <ul style="list-style-type: none"> <li>Connection to the proxy server failed.</li> </ul>	
3012	http request result problem <ul style="list-style-type: none"> <li>The proxy server refused CONNECT request.</li> </ul>	
3013	http request result problem <ul style="list-style-type: none"> <li>The proxy server was set to enabled, but the proxy server host was not set.</li> </ul>	
3014	http request result problem <ul style="list-style-type: none"> <li>Proxy server authentication failed.</li> </ul>	
3015	http request result problem <ul style="list-style-type: none"> <li>Other errors were sent from the proxy server.</li> </ul>	
3016	http request result problem <ul style="list-style-type: none"> <li>Internal error occurred.</li> </ul>	
3017	http request result problem <ul style="list-style-type: none"> <li>As the device application specified MIO_REQBODY_ERROR, process was stopped.</li> </ul>	



**(5) 4###**

Error code	Contents	How to correct
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 <ul style="list-style-type: none"> <li>MIO response timed out.</li> </ul>	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. CS Remote Analysis ERROR CODE

### 8.1 When connecting by SOAP

**NOTE**

- When a code other than the ones listed below is displayed, contact KM and inform the error code.

#### 8.1.1 1###

Error code	Contents	How to correct
1001	Communication timeout. <ul style="list-style-type: none"> <li>Reception time out occurred.</li> </ul>	[MFP side] Check the user's SOAP server system settings. <ul style="list-style-type: none"> <li>Authentication setting for address of the destination where the server is connected</li> <li>Location indicated for a folder</li> <li>Connection ID</li> <li>Password</li> </ul> Check the network environment (whether LAN is disconnected or etc).
		[Server side] Check whether the server has started up or etc.
1002	Command error	Contact KM and inform the error code

#### 8.1.2 2###

Error code	Contents	How to correct
2001	SOAP request result problem <ul style="list-style-type: none"> <li>An error occurred.</li> </ul>	Check the user's SOAP server system settings. <ul style="list-style-type: none"> <li>Authentication setting for address of the destination where the server is connected</li> <li>Location indicated for a folder</li> <li>Connection ID</li> <li>Password</li> </ul>
2002	SOAP request result problem <ul style="list-style-type: none"> <li>Proxy server authentication failed.</li> </ul>	
2003	SOAP request result problem <ul style="list-style-type: none"> <li>There isn't support of http version.</li> </ul>	
2004	SOAP request result problem <ul style="list-style-type: none"> <li>Failed to connect.</li> </ul>	
2005	SOAP request result problem <ul style="list-style-type: none"> <li>An error occurred while sending.</li> </ul>	
2006	SOAP request result problem <ul style="list-style-type: none"> <li>Time out occurred while sending.</li> </ul>	
2007	SOAP request result problem <ul style="list-style-type: none"> <li>An invalid request URL is specified.</li> </ul>	
2008	SOAP request result problem <ul style="list-style-type: none"> <li>Content-Length or receive size exceeded the specified max. transfer size.</li> </ul>	
2009	SOAP request result problem <ul style="list-style-type: none"> <li>The size of the message body is too large.</li> </ul>	
200A	SOAP request result problem <ul style="list-style-type: none"> <li>The proxy server was set to enabled, but the proxy server host was not set.</li> </ul>	
200B	SOAP request result problem <ul style="list-style-type: none"> <li>The proxy server refused CONNECT request.</li> </ul>	
200C	SOAP request result problem <ul style="list-style-type: none"> <li>Other errors were sent from the proxy server.</li> </ul>	
200D	SOAP request result problem <ul style="list-style-type: none"> <li>Connection to the proxy server failed.</li> </ul>	
200E	SOAP request result problem <ul style="list-style-type: none"> <li>The process is cancelled by an internal reset.</li> </ul>	
200F	SOAP request result problem <ul style="list-style-type: none"> <li>Other internal error occurred.</li> </ul>	
2010	SOAP request result problem <ul style="list-style-type: none"> <li>Internal error occurred. (Task start)</li> </ul>	
2011	SOAP request result problem <ul style="list-style-type: none"> <li>Internal error occurred. (MSG)</li> </ul>	
2012	SOAP request result problem <ul style="list-style-type: none"> <li>Internal error occurred.</li> </ul>	
2013	SOAP request result problem <ul style="list-style-type: none"> <li>As the device application specified MIO_REQBODY_ERROR, process was stopped.</li> </ul>	

**8.1.3 3###**

Error code	Contents	How to correct
3001 to 3053	SOAP request result problem (MFP side error)	Contact KM and inform the error code
3054 to 30FE	SOAP request result problem (Server side error)	Contact KM and inform the error code

**8.1.4 4###**

Error code	Contents	How to correct
4000	Control error	Turn the main power switch OFF and then ON.

**8.2 When connecting by http****NOTE**

- When a code other than the ones listed below is displayed, contact KM and inform the error code.

**8.2.1 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. <ul style="list-style-type: none"> <li>Authentication setting for address of the destination where the server is connected</li> <li>Location indicated for a folder</li> <li>Connection ID</li> <li>Password</li> </ul>

**8.2.2 1###**

Error code	Contents	How to correct
1030	Machine ID mismatching <ul style="list-style-type: none"> <li>Received file which tells that machine ID mismatches.</li> </ul>	<ul style="list-style-type: none"> <li>Check the machine ID setting.</li> <li>Check the machine ID setting on host side.</li> </ul>
1050	Grammar error <ul style="list-style-type: none"> <li>Received file did not define the CS Remote Care command (2 digits).</li> <li>The Type of Subject and the command of file are not consistent.</li> </ul>	Check file content.
1061	Modifying not allowed <ul style="list-style-type: none"> <li>The host sent a command file that asked modifying data of item where setting change is not allowed.</li> </ul>	Ask the host to send another instruction file for modifying.
1062	Modifying not available due to the copy job currently performing <ul style="list-style-type: none"> <li>When informing the host that it cannot be modified due to the copy job currently performing.</li> </ul>	Ask the host to send another instruction file for modifying.
1080	Data length problem <ul style="list-style-type: none"> <li>LEN value of TEXT data and actual data length are not consistent.</li> </ul>	Ask the host to send another instruction file for modifying.
1081	Frame No. error <ul style="list-style-type: none"> <li>The last frame has not been received.</li> <li>There are missing frame No.</li> </ul>	Check the status of the machine registration on host side.
1082	Subject Type problem <ul style="list-style-type: none"> <li>Received code did not define the Type of Subject.</li> </ul>	Ask the host to send another instruction file for modifying.
1084	Date expired <ul style="list-style-type: none"> <li>Expiration date for data modification command has passed.</li> </ul>	Ask the host to send another instruction file for modifying.
1091	Oversized command <ul style="list-style-type: none"> <li>Received file exceeds the machine's receive buffer size.</li> </ul>	Ask the host to send another instruction file for modifying.
1099	Illegal request <ul style="list-style-type: none"> <li>Status not predicted in design is detected.</li> </ul>	Contact KM and inform the error code

**8.2.3 2###**

Error code	Contents	Solution
2001	http request result problem <ul style="list-style-type: none"> <li>Internal status error</li> </ul>	Check the user's http server system settings. <ul style="list-style-type: none"> <li>Authentication setting for address of the destination where the server is connected</li> <li>Location indicated for a folder</li> <li>Connection ID</li> <li>Password</li> </ul>
2002	http request result problem <ul style="list-style-type: none"> <li>File list acquisition result problem</li> </ul>	
2003	http request result problem <ul style="list-style-type: none"> <li>Request header transmission failure</li> </ul>	
2004	http request result problem <ul style="list-style-type: none"> <li>Request body transmission failure</li> </ul>	
2005	http request result problem <ul style="list-style-type: none"> <li>Response header receive response failure</li> </ul>	
2006	http request result problem <ul style="list-style-type: none"> <li>Response body receive response failure</li> </ul>	
2007	http request result problem	

Error code	Contents	Solution
	<ul style="list-style-type: none"> <li>Session ID inconsistent</li> </ul>	

**8.2.4 3###**

Error code	Contents	Solution
3002	http request result problem <ul style="list-style-type: none"> <li>Unopened client ID was specified</li> </ul>	Check the user's http server system settings. <ul style="list-style-type: none"> <li>Authentication setting for address of the destination where the server is connected</li> <li>Location indicated for a folder</li> <li>Connection ID</li> <li>Password</li> </ul>
3003	http request result problem <ul style="list-style-type: none"> <li>Receive time out occurred</li> </ul>	
3004	http request result problem <ul style="list-style-type: none"> <li>Receive error occurred. Or wrong request URL was specified.</li> </ul>	
3005	http request result problem <ul style="list-style-type: none"> <li>Content-Length or receive size exceeded the specified max. transfer size. Message body size was too large.</li> </ul>	
3006	http request result problem <ul style="list-style-type: none"> <li>Due to reset, process was stopped. Or message body size exceeded the specified max. transfer size.</li> </ul>	
3007	http request result problem <ul style="list-style-type: none"> <li>Internal error occurred. Or due to internal reset, process was stopped.</li> </ul>	
3008	http request result problem <ul style="list-style-type: none"> <li>Connection to WebDAV server failed.</li> </ul>	
3009	http request result problem <ul style="list-style-type: none"> <li>Error occurred during transmission to the WebDAV server.</li> </ul>	
3010	http request result problem <ul style="list-style-type: none"> <li>Time out occurred during transmission to the WebDAV server.</li> </ul>	
3011	http request result problem <ul style="list-style-type: none"> <li>Connection to the proxy server failed.</li> </ul>	
3012	http request result problem <ul style="list-style-type: none"> <li>The proxy server refused CONNECT request.</li> </ul>	
3013	http request result problem <ul style="list-style-type: none"> <li>The proxy server was set to enabled, but the proxy server host was not set.</li> </ul>	
3014	http request result problem <ul style="list-style-type: none"> <li>Proxy server authentication failed.</li> </ul>	
3015	http request result problem <ul style="list-style-type: none"> <li>Other errors were sent from the proxy server.</li> </ul>	
3016	http request result problem <ul style="list-style-type: none"> <li>Internal error occurred.</li> </ul>	
3017	http request result problem <ul style="list-style-type: none"> <li>As the device application specified MIO_REQBODY_ERROR, process was stopped.</li> </ul>	

**8.2.5 4###**

Error code	Contents	How to correct
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 <ul style="list-style-type: none"> <li>MIO response timed out.</li> </ul>	Turn the main power switch OFF and then ON.

**8.2.6 5###**

Error code	Contents	Solution
5###	MIO detects error at file sending.	Check the http server environment.

**8.2.7 6###**

Error code	Contents	Solution
6###	MIO detects error during a sending sequence.	Check the http server environment.

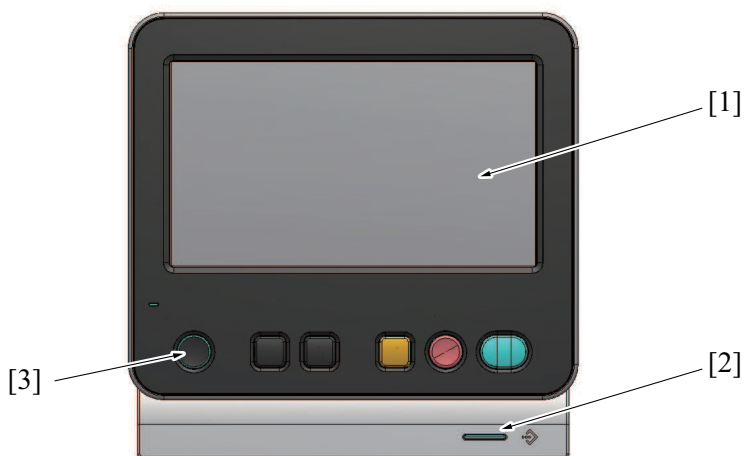
**8.2.8 7###**

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).

## 9. PANEL BLACKOUT TROUBLE (BOOT DIAGNOSIS FUNCTION)

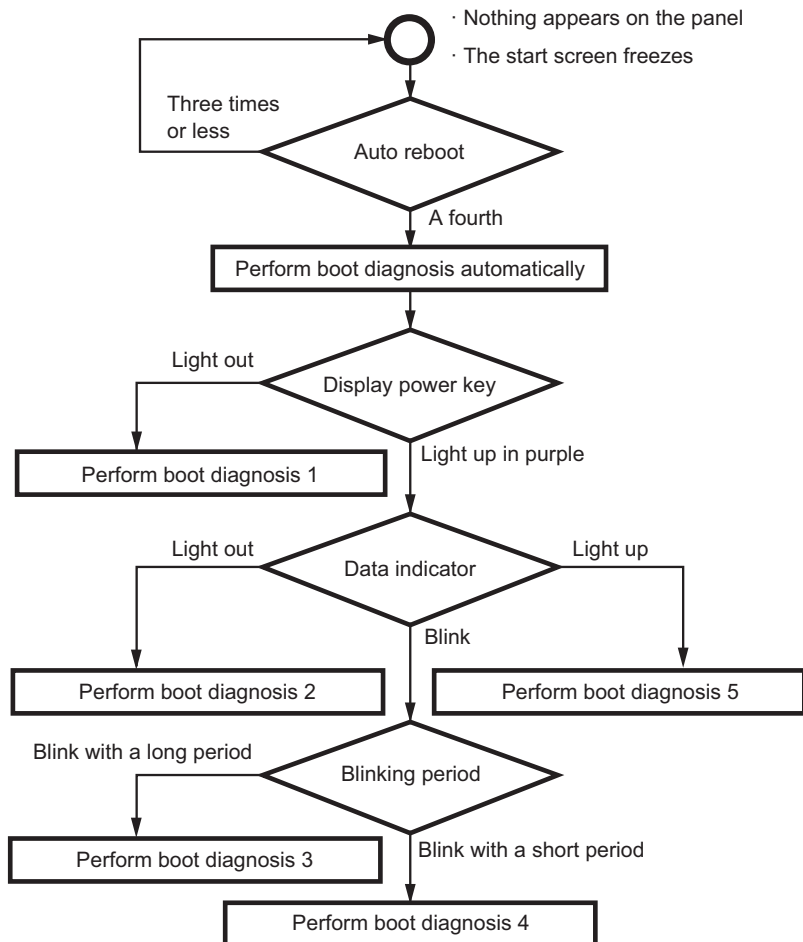
### 9.1 Boot diagnosis function

- The boot diagnosis is performed when the start screen on the touch panel of the machine freezes or blacks out for some faulty condition.
- The boot diagnosis can be performed automatically to identify a cause of a problem when the machine fails to start properly. (The boot diagnosis can also be performed manually.)
- The result of the boot diagnosis is determined on the basis of the light conditions of "data indicator" and "power key".



[1]	Touch panel	[2]	Data indicator
[3]	Power key	-	-

Boot diagnosis flowchart



### 9.1.1 Boot diagnosis sequence

1. A fault is detected when the machine is started. (Start screen freezes or blacks out)
2. Auto reboot is performed. (a maximum of three times)
3. The boot diagnosis is performed automatically.
4. After the boot diagnosis is completed, the machine stops in any of the state described in the Boot diagnosis result list.

### 9.1.2 Manual boot diagnosis procedure

1. Turn OFF the main power switch under the condition in which the start screen freezes or blacks out during the startup sequence.
2. Turn the main power switch on while pressing the power key.
3. After a short beep sound is made once, release the power key and close the front lower door or the front door.
4. The combination of "power key" and "data indicator" displays the result of the boot diagnosis.
5. Check the display combination and turn OFF the main power switch.
6. Perform the procedure according to the result of the boot diagnosis.

### 9.1.3 Boot diagnosis result list

No.	Power key	Data indicator	Target device	Reason of error	Corrective action procedure
1	Light out	Light out	Control panel unit	<ul style="list-style-type: none"> <li>• Control panel unit engagement /mounting failure</li> <li>• Control panel unit failure</li> </ul>	<ol style="list-style-type: none"> <li>1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.</li> <li>2. Check the control panel unit for proper installation. Correct the mounting of control panel unit if faulty.</li> <li>3. Reinstall the control panel unit.</li> <li>4. Replace the cable for the control panel unit.</li> <li>5. Replace the control panel unit.</li> </ol>
2	Light up in purple	Light out	Unable to determine	<ul style="list-style-type: none"> <li>• Cable breakage</li> <li>• Firmware abnormality</li> </ul>	<ol style="list-style-type: none"> <li>1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.</li> <li>2. Check the base board for proper installation. Correct the mounting of control panel unit if faulty.</li> <li>3. Check the CPU board for proper installation. Correct the mounting of control panel unit if faulty.</li> <li>4. Replace the cable for the base board.</li> <li>5. Replace the CPU board.</li> <li>6. Replace the base board.</li> </ol>
3	Light up in purple	Blink (long period)	Memory	On-board memory failure	<ol style="list-style-type: none"> <li>1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.</li> <li>2. Replace the CPU board.</li> <li>3. Replace the base board.</li> </ol>
4	Light up in purple	Blink (short period)	microSD	<ul style="list-style-type: none"> <li>• microSD engagement /mounting failure</li> <li>• microSD failure</li> </ul>	<ol style="list-style-type: none"> <li>1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.</li> <li>2. Reinstall the microSD.</li> <li>3. Replace microSD.</li> <li>4. Replace the CPU board.</li> <li>5. Replace the base board.</li> </ol>
5	Light up in purple	Light up	Software	Software trouble	<ol style="list-style-type: none"> <li>1. Turn OFF the main power switch and unplug the power cord. Connect the power cord after 15 sec. or more, and turn ON the main power switch.</li> <li>2. Reinstall the firmware.</li> <li>3. Reinstall the microSD.</li> <li>4. Replace microSD. After that, reinstall the firmware.</li> <li>5. Replace the CPU board.</li> <li>6. Replace the base board.</li> </ol>

#### 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.

### 9.1.4 How to reset the boot diagnosis result

1. Turn OFF the main power switch. Wait for 10 sec. or more, and turn ON the main power switch. Reboot the machine.

#### NOTE

- The freeze state is reproduced if the cause of the fault has not been eliminated.

## 10. TROUBLES THAT DO NOT DISPLAY THE TROUBLE CODE

### 10.1 Machine is not energized at all (DCPS operation check)

#### Contents

Trouble type	Machine is not energized at all
Rank	-
Trouble detection condition	-
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Base board (BASEB)</li> <li>• DC power supply (DCPS)</li> </ul>

#### Procedure

Step	Check item	Location of electrical component	Result	Action
1	Is a power voltage supplied across CN1-1 and 2 on DCPS?	7-V	NO	Check the wiring from power outlet to DCPS CN1.
2	Are the fuses on DCPS conducting?	-	NO	<a href="#">Replace DCPS.</a>
3	Is DC5 V being output to CN5-1, 2 on DCPS?	7-S	NO	<a href="#">Replace DCPS.</a>
4	Is DC24 V being output to CN4-3 on DCPS?	9-S	NO	<ul style="list-style-type: none"> <li>• Check the wiring from the wall BASEB to DCPS.</li> <li>• <a href="#">Replace DCPS.</a></li> <li>• <a href="#">Replace BASEB.</a></li> </ul>
5	The LED on BASEB is blinking?	-	NO	<a href="#">Replace BASEB.</a>
6	Is DC24 V being output to CN4-6 on DCPS?	9-S	NO	<a href="#">Replace DCPS.</a>

### 10.2 Fusing heaters do not operate

#### Contents

Trouble type	Fusing heaters do not operate
Rank	-
Trouble detection condition	-
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• Right door switch (SW5)</li> <li>• DC power supply (DCPS)</li> <li>• Base board (BASEB)</li> <li>• Fusing unit</li> </ul>

#### Procedure

Step	Check item	Location of electrical component	Result	Action
1	Is a power voltage supplied across CN1-1 and 2 on DCPS? During this time, the right door should be closed.	7-V	NO	Check the wiring from power outlet to DCPS to SW5.
2	Is the power source voltage applied across DCPS CN6?	8-T	YES	<a href="#">Replace the fusing unit.</a>
			NO	<ul style="list-style-type: none"> <li>• Check the wiring from DCPS CN6 to BASEB CN1E.</li> <li>• <a href="#">Replace DCPS.</a></li> <li>• <a href="#">Replace BASEB.</a></li> </ul>

### 10.3 Power is not supplied to option

#### 10.3.1 PF-P20/PF-P21

#### Contents

Trouble type	Power is not supplied to PF-P20/PF-P21.
Rank	-
Trouble detection condition	-
Trouble isolation	-
Relevant electrical parts	<ul style="list-style-type: none"> <li>• DC power supply (DCPS)</li> <li>• PF-P20/PF-P21</li> </ul>

#### Procedure

Step	Check item	Location of electrical component	Result	Action
1	Is DC24 V being output to CN1-3, 4 on PCCB?	18-S	NO	Malfunction in paper feed unit.

Step	Check item	Location of electrical component	Result	Action
2	Is DC24 V being output to CN4-5 on DCPS?	9-S	NO	Check the wiring from the wall DCPS to BASEB to PCCB.
3	Are the fuses on DCPS conducting?	-	YES	<a href="#">Replace DCPS.</a>
			NO	Malfunction in paper feed unit.



## 11. OTHER TROUBLE

### 11.1 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.

#### 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.

### 11.2 Storage lock password error warning

#### Detection timing

- Warning message: Reset Storage Lock Password.
- There is a mismatch between the password registered in the storage and that registered in the main body.
- Wrong machine type information is input.

#### Action

##### < Checking the machine type information >

##### NOTE

- Perform the following steps, if this malfunction occurs when the CPU 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

- [K.2 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 "[F.4.3.2 \(1\) Entering the machine type information](#)".

##### < Re-registering the correct Storage Lock Password >

1. Touch Menu.
2. Touch [Utility].
3. Touch [Storage Management].
4. Enter the administrator password and touch [OK].
5. Touch [Storage Lock Password].
6. Enter the currently set Storage Lock Password twice.
7. Touch [OK].
8. When the screen that indicates the completion of setting of the Storage Lock Password appears, turn OFF and ON the main power switch.

##### < Performing Storage 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.

## 12. IMAGE QUALITY PROBLEM

### 12.1 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.

Service Mode Exit State Confirmation

Machine	Firmware Version	Sensor Check	Table Number
Imaging Process Adjustment	CS Remote	Level History1	Level History2
System 1	System 2	Temp. & Humidity	
Counter	List Output	Memory/Storage Adjustment	Memory/Storage Status
State Confirmation	Test Mode	Color Regist.	1 2 3
	Network Settings	Load Check	4 5 6
Machine Update Setting		Self-diag. (Full)	7 8 9
		Self-diag. (Individual)	* 0 #
			C

#### 12.1.1 Table Number

State Confirmation END

1	Table No.			
2	Plain Paper/	Thick Paper		
	Vdc-C	-294	-	1 2 3
↑	Vdc-M	-291	-	4 5 6
	Vdc-Y	-275	-	7 8 9
	Vdc-K	-308	-	* 0 #
↓	-----			C
	Vg-C	-977	-977	
	Vg-M	-974	-974	
	Vg-Y	-979	-979	
	Vg-K	-1050	-1050	

State Confirmation END

2	Table No.				
2	LD Light value	Charging DC Current value	Charging AC Output Value1	Charging AC Output Value2	
	C 1930	39	Vpp-C1 0	Vpp-C2 0	1 2 3
↑	M 1950		Vpp-M1 0	Vpp-M2 0	4 5 6
	Y 1890		Vpp-Y1 0	Vpp-Y2 0	7 8 9
↓	K 2760		Vpp-K1 0	Vpp-K2 0	* 0 #
					C

Vdc-C Vdc-M Vdc-Y Vdc-K	<ul style="list-style-type: none"> <li>Shows the developing bias value of each color of toner during print image formation.</li> <li>Standard values: around -800 to 0</li> <li>The specific numeric values vary with different imaging units. (The values incorporate corrections to match the proper density after image stabilization.)</li> <li>* As a guide, the image density tends to be higher with large numeric values and lower with small numeric values.</li> <li>Relevant components: Imaging unit, high voltage unit (HVPS)</li> </ul>
Vg-C Vg-M Vg-Y Vg-K	<ul style="list-style-type: none"> <li>Shows the grid voltage value of each color of toner during print image formation.</li> <li>Standard values: around -1600 to 0</li> <li>The specific numeric values vary with different imaging units. (The values incorporate corrections to match the proper density after image stabilization.)</li> <li>* As a guide, the image density tends to be higher with large numeric values and lower with small numeric values.</li> <li>Relevant components: Imaging unit, high voltage unit (HVPS)</li> </ul>
LD Light Value (C, M, Y, K)	<ul style="list-style-type: none"> <li>Shows the LD light value of each color of toner during print image formation.</li> <li>Standard values: around 1750 to 3500</li> <li>* 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.</li> <li>Relevant components: PH unit, imaging unit</li> </ul>
Charging DC current valve	<ul style="list-style-type: none"> <li>Shows the DC current value applied to the charging roller of each color of toner during print image formation.</li> <li>Standard values: around 0 to 150</li> <li>Relevant components: Imaging unit, high voltage unit (HVPS)</li> </ul>
Charging AC Output Value 1 Vpp-C1 Vpp-M1 Vpp-Y1 Vpp-K1	<ul style="list-style-type: none"> <li>Shows the AC voltage value applied to the charging roller of each color of toner during print image formation.</li> <li>Standard values: 0 (fixed)</li> <li>Relevant components: Imaging unit, high voltage unit (HVPS)</li> </ul>
Charging AC Output Value 2 Vpp-C2 Vpp-M2 Vpp-Y2 Vpp-K2	<ul style="list-style-type: none"> <li>Shows the current value applied to the charging roller of each color of toner during print image formation.</li> <li>Standard values: 0 (fixed)</li> <li>Relevant components: Imaging unit, high voltage unit (HVPS)</li> </ul>

12.1.2 Level History 1

State Confirmation END

---

Level History 1

TCR-C	..	5.32 %	IDC	..	2.96 V
TCR-M	..	5.54 %			
TCR-Y	..	6.10 %	Middle heat temperature	..	168 t
TCR-K	..	5.67 %	Medium Heating Temperature	..	164 t
			Heat edge temperature	..	129 t

1	2	3
4	5	6
7	8	9
*	0	#
C		

TCR-C TCR-M TCR-Y TCR-K	<ul style="list-style-type: none"> <li>Shows the T/C ratio. (in 0.01 % increments)</li> <li>Standard value: 5 to 8 %</li> <li>For your information, foggy background tends to occur at higher values and low image densities tend to occur at lower values.</li> <li>Relevant components: TCR sensor</li> </ul>
IDC	<ul style="list-style-type: none"> <li>Shows the IDC bare surface output value. (in 0.01 V increments)</li> <li>It should normally be around 3.0 V.</li> <li>The output range is 0 V to 3.4 V.</li> <li>Relevant components: IDC sensor, transfer belt unit</li> </ul>
Middle heat temperature Medium Heating Temperature Heat edge temperature	<ul style="list-style-type: none"> <li>Shows the temperature of the fusing unit. (in 1 °C increments)</li> <li>Relevant components: Fusing unit</li> </ul>

12.1.3 Level History 2

State Confirmation

END

Level History 2

IDC Sensor Adjust 1 - 317

1st Transfer Output Value - 1500

2nd Transfer Output Value - 1000

1	2	3
4	5	6
7	8	9
*	0	#
C		

IDC Sensor Adjust 1	<ul style="list-style-type: none"> <li>Shows the IDC intensity adjustment value.</li> <li>The proper range is 100 to 500.</li> <li>The value becomes greater as the transfer belt unit has been used more.</li> <li>Relevant components: IDC sensor, transfer belt unit</li> </ul>
1st Transfer Output Value	<ul style="list-style-type: none"> <li>Shows the latest 1st transfer output value.</li> <li>The proper range is 800 to 2600.</li> <li>Relevant components: Transfer belt unit, High voltage unit (HVPS)</li> </ul>
2nd Transfer Output Value	<ul style="list-style-type: none"> <li>Shows the latest 2nd transfer output value.</li> <li>The proper range is 330 to 4500.</li> <li>Relevant components: Transfer belt unit, High voltage unit (HVPS), 2nd transfer roller</li> </ul>

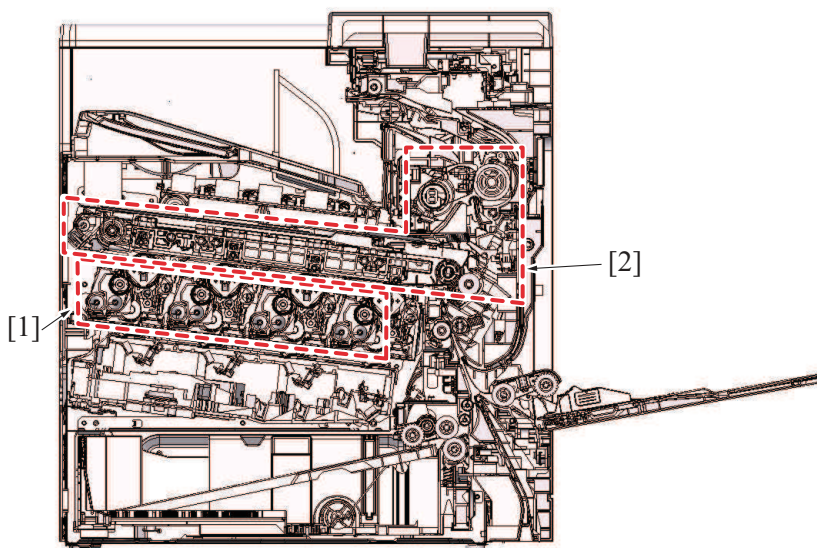
12.2 Troubleshooting procedure overview

12.2.1 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 (Error diffusion) to determine whether an image trouble is evident and determining which color of toner, Y, M, C, or K, has the trouble.

(1) 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.



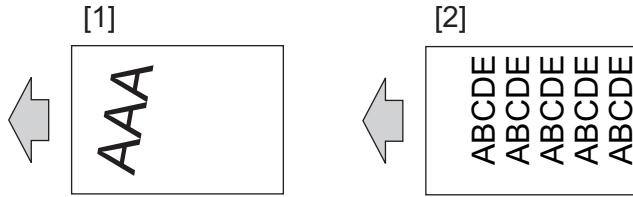
[1] Faulty spot responsible for an image trouble of the single-to-three-color system	[2] Faulty spot responsible for an image trouble of the four-color system
--	---

### 12.3 Corrective action procedure

#### 12.3.1 Skewed image/Image deviation

##### (1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.

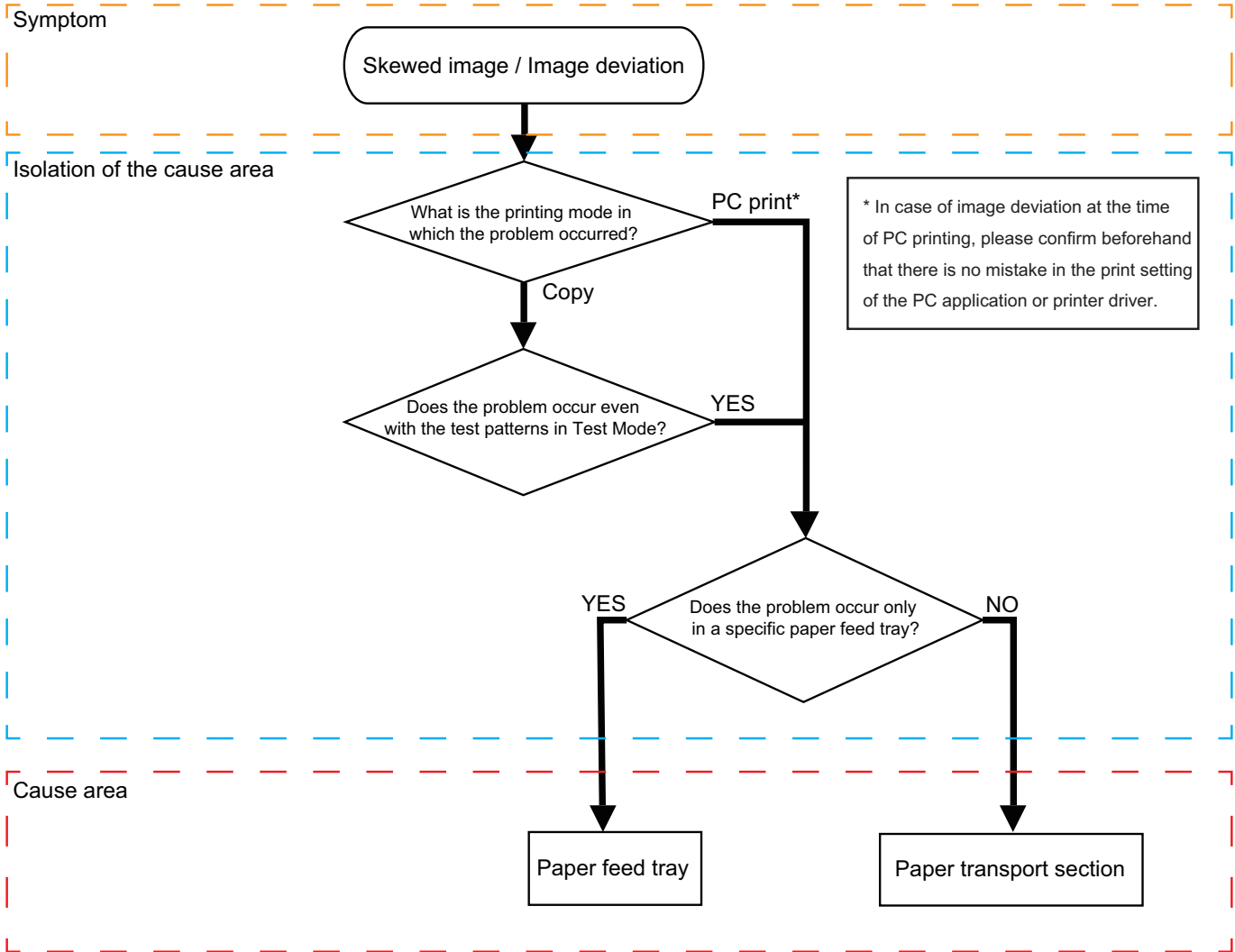


[1] Skewed image	[2] Image deviation
------------------	---------------------

##### (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 (two 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.

##### < Paper feed tray >

##### (1) First steps of troubleshooting

Step	Contents
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.

Step	Contents
	* 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

Image deviation	<a href="#">I.6.3 Printer Area</a>
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**NOTE**

- If the trouble can not be solved by the above adjustment, check the Paper transport section.

**< Paper transport section >**

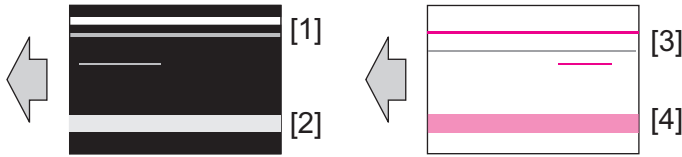
(1) First steps of troubleshooting

Step	Contents
1	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.
2	Check the paper path, transport rollers, and registration section, and remove any paper pieces / foreign matters / paper dust.
3	Perform test printing to check whether the problem has been resolved. If it can not be resolved, confirm "(2) individual adjustment items".

**12.3.2 White line 1, White band 1, Color line 1, Color band 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

**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	<ul style="list-style-type: none"> <li>• Select [Service Mode] -&gt; [Test Mode] -&gt; [Halftone Pattern]. Select "SINGLE", "HYPER", "Error diffusion", "1-Sided", "CMYK", and "Full Bleed", enter "64" for Density, and load tray 2 with A4 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order.</li> <li>• Check the image after printing to determine which color causes the abnormal image.</li> </ul>	1 to 3 colors	Go to the 1-color troubleshooting procedure.
			4 colors	Go to the 4-color troubleshooting procedure.

**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. <ul style="list-style-type: none"> <li>• Developing bias: Vdc-C, Vdc-M, Vdc-Y, Vdc-K: close to the standard value of -800 to 0</li> <li>• Grid voltage: Vg-C, Vg-M, Vg-Y, Vg-K: close to the standard value of -1600 to 0</li> </ul>	NO	<ul style="list-style-type: none"> <li>• Check the high voltage unit and the imaging unit for wiring and connection.</li> <li>• <a href="#">Replace the high voltage unit.</a></li> </ul>

Step	Section	Check item for the faulty color	Result	Action for the faulty color
2	Write section	Sharp white line or colored line is blurry.	YES	Clean the PH window.
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	Photoconductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals (Y: C4, M: C3, C: C2, K: C1).	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	Photoconductor section	Scratches on photoconductor.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the imaging unit.</li> </ul>
7	Photoconductor section	Toner line or dirt on photoconductor. (improper cleaning)	YES	Replace the imaging unit.
8	Photoconductor section	Faint lines evident on the entire surface as if the surface were brushed off.	YES	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Counter] -&gt; [Life] and check the counter value of the Imaging Unit.</li> <li>Replace the imaging unit having the greatest counter value with a new one. (Not the imaging unit of the color that has developed the lines, but the imaging unit having the greatest counter value)</li> </ul>
9	1st transfer section	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (T1).	NO	Clean or correct the terminal.
10	1st transfer section	Scratches or dirt on 1st transfer roller.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the transfer belt unit.</li> </ul>
11	Developing section	Toner bristles not even on the developing roller, resulting in a line or band.	YES	Replace the imaging unit.
			NO	Replace the PH unit.

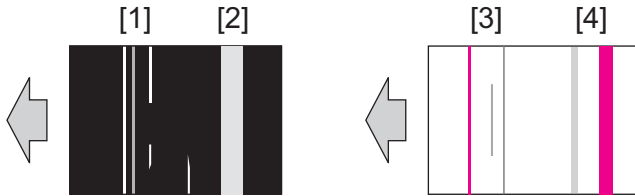
#### 4-color troubleshooting procedure

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	<ul style="list-style-type: none"> <li>Check or clean the cleaning blade.</li> <li>Replace the transfer belt unit.</li> </ul>
3	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the transfer belt unit.</li> </ul>
4	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (T1).	NO	Clean or correct the terminal.
5	2nd transfer section	Dirt or foreign matter on the 2nd transfer roller.	YES	<ul style="list-style-type: none"> <li>Remove the foreign matter.</li> <li>Replace the transfer roller unit.</li> </ul>
6	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2) 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 roller, pad, and belt in fusing unit.	YES	Replace the fusing unit.
			NO	<ul style="list-style-type: none"> <li>Replace the high voltage unit.</li> <li>Replace the base board.</li> </ul>

#### 12.3.3 White line 2, White band 2, Color line 2, Color band 2

##### 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

### 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	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [Halftone Pattern]. Select "SINGLE", "HYPER", "Error diffusion", "1-Sided", "CMYK", and "Full Bleed", enter "64" for Density, and load tray 2 with A4 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order.</li> <li>Check the image after printing to determine which color causes the abnormal image.</li> </ul>	1 to 3 colors	Go to the 1-color troubleshooting procedure.
			4 colors	Go to the 4-color troubleshooting procedure.

### 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. <ul style="list-style-type: none"> <li>Developing bias: Vdc-C, Vdc-M, Vdc-Y, Vdc-K: close to the standard value of -800 to 0</li> <li>Grid voltage: Vg-C, Vg-M, Vg-Y, Vg-K: close to the standard value of -1600 to 0</li> </ul>	NO	<ul style="list-style-type: none"> <li>Check the high voltage unit and the imaging unit for wiring and connection.</li> <li><a href="#">Replace the high voltage unit.</a></li> </ul>
2	Write section	Sharp white line or colored line is blurry.	YES	Clean the PH window.
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	Photoconductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals (Y: C4, M: C3, C: C2, K: C1).	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	Photoconductor section	Scratches on photoconductor.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li><a href="#">Replace the imaging unit.</a></li> </ul>
7	Photoconductor section	Toner line or dirt on photoconductor. (improper cleaning)	YES	<a href="#">Replace the imaging unit.</a>
8	1st transfer section	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (T1).	NO	Clean or correct the terminal.
9	1st transfer section	Scratches or dirt on 1st transfer roller.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li><a href="#">Replace the transfer belt unit.</a></li> </ul>
10	Developing section	Toner bristles not even on the developing roller, resulting in a line or band.	YES	<a href="#">Replace the imaging unit.</a>
			NO	<a href="#">Replace the PH unit.</a>

### 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.

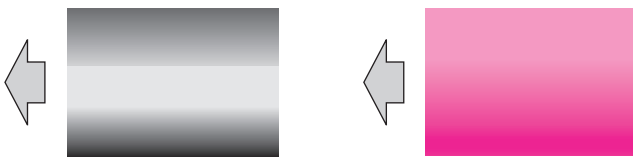


Step	Section	Check item	Result	Action
2	Transfer belt unit	Lines that can be removed by cleaning are evident on the transfer belt. (improper cleaning)	YES	<ul style="list-style-type: none"> <li>Check or clean the cleaning blade.</li> <li>Replace the transfer belt unit.</li> </ul>
3	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the transfer belt unit.</li> </ul>
4	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (T1).	NO	Clean or correct the terminal.
5	2nd transfer section	Dirt or foreign matter on the 2nd transfer roller.	YES	<ul style="list-style-type: none"> <li>Remove the foreign matter.</li> <li>Replace the transfer roller unit.</li> </ul>
6	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2) 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 roller, pad, and belt in fusing unit.	YES	Replace the fusing unit.
			NO	<ul style="list-style-type: none"> <li>Replace the high voltage unit.</li> <li>Replace the base board.</li> </ul>

### 12.3.4 Uneven density 1

#### Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



#### 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.	YES	Clean.
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	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [Halftone Pattern]. Select "SINGLE", "HYPER", "Error diffusion", "1-Sided", "CMYK", and "Full Bleed", enter "64" for Density, and load tray 2 with A4 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order.</li> <li>Check the image after printing and the abnormal image occurs only with one color.</li> </ul>	YES	Go to the 1-color troubleshooting procedure.
			NO	Go to the 4-color troubleshooting procedure.

#### 1-color troubleshooting procedure

Step	Section	Check item for the faulty color	Result	Action for the faulty color
1	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.
2	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the PH window.
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	Photoconductor section	Dirt, scratches, or foreign matter on the photoconductor.	YES	<ul style="list-style-type: none"> <li>Clean.</li> </ul>

Step	Section	Check item for the faulty color	Result	Action for the faulty color
				<ul style="list-style-type: none"> <li>Replace the imaging unit.</li> </ul>
5	1st transfer section	Dirt, scratches, or foreign matter on the 1st transfer roller.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the transfer belt unit.</li> </ul>
6	1st transfer section	Faulty pressure/retraction operation of the 1st transfer roller.	YES	<ul style="list-style-type: none"> <li>Correct or replace the drive system.</li> <li>Replace the transfer belt unit.</li> </ul>
7	Developing section	Toner bristles not even on the developing roller, resulting in a line or band.	YES	Replace the imaging unit.
			NO	<ul style="list-style-type: none"> <li>Replace the PH unit.</li> <li>Replace the high voltage unit.</li> </ul>

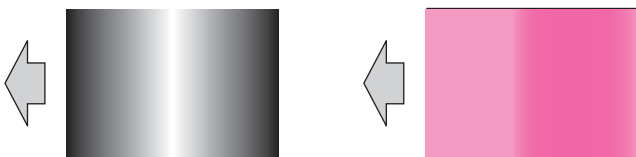
**4-color troubleshooting procedure**

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	<ul style="list-style-type: none"> <li>Check and clean the cleaning blade.</li> <li>Replace the transfer belt unit.</li> </ul>
3	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the transfer belt unit.</li> </ul>
4	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (T1).	NO	Clean or correct the terminal.
5	Transfer belt unit	Transfer belt rotates faultily.	YES	Replace the transfer belt unit.
6	2nd transfer section	Dirt or foreign matter on the 2nd transfer roller.	YES	<ul style="list-style-type: none"> <li>Remove the foreign matter.</li> <li>Replace the transfer roller unit.</li> </ul>
7	2nd transfer section	Faulty pressure/retraction operation of the 2nd transfer roller.	YES	<ul style="list-style-type: none"> <li>Correct.</li> <li>Replace the transfer roller unit.</li> </ul>
8	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2) 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	<ul style="list-style-type: none"> <li>Replace the fusing unit.</li> <li>Replace the high voltage unit.</li> <li>Replace the base board.</li> </ul>

**12.3.5 Uneven density 2**

**Typical faulty images**

The arrow in the exemplary image troubles indicates the paper feeding direction.



**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.	YES	Clean.
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	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [Halftone Pattern].</li> <li>Select "SINGLE", "HYPER", "Error diffusion", "1-</li> </ul>	YES	Go to the 1-color troubleshooting procedure.

Step	Section	Check item	Result	Action
		Sided", "CMYK", and "Full Bleed", enter "64" for Density, and load tray 2 with A4 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order. <ul style="list-style-type: none"> <li>Check the image after printing and the abnormal image occurs only with one color.</li> </ul>	NO	Go to the 4-color troubleshooting procedure.

**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.
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	Photoconductor section	Dirt, scratches, or foreign matter on the photoconductor.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the imaging unit.</li> </ul>
4	Photoconductor section	Photoconductor drives faultily.	YES	<ul style="list-style-type: none"> <li>Correct.</li> <li>Replace the imaging unit.</li> </ul>
5	1st transfer section	Scratches or dirt on 1st transfer roller.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the transfer belt unit.</li> </ul>
6	Developing section	Toner bristles not even on the developing roller, resulting in a line or band.	YES	Replace the imaging unit.
			NO	<ul style="list-style-type: none"> <li>Replace the PH unit.</li> <li>Replace the high voltage unit.</li> </ul>

**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	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the transfer belt unit.</li> </ul>
3	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (T1).	NO	Clean or correct the terminal.
4	Transfer belt unit	Transfer belt rotates faultily.	YES	<ul style="list-style-type: none"> <li>Correct.</li> <li>Replace the transfer belt unit.</li> </ul>
5	2nd transfer section	Dirt or foreign matter on the 2nd transfer roller.	YES	<ul style="list-style-type: none"> <li>Remove the foreign matter.</li> <li>Replace the transfer roller unit.</li> </ul>
6	2nd transfer section	Faulty pressure/retraction operation of the 2nd transfer roller.	YES	<ul style="list-style-type: none"> <li>Correct.</li> <li>Replace the transfer roller unit.</li> </ul>
7	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2) 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	<ul style="list-style-type: none"> <li>Replace the fusing unit.</li> <li>Replace the high voltage unit.</li> <li>Replace the base board.</li> </ul>

**12.3.6 Faint image, low image density (ID lowering)**

**Typical faulty images**

The arrow in the exemplary image troubles indicates the paper feeding direction.



**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.	YES	Clean.
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	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [Gradation Pattern]. Select "SINGLE", "HYPER", "Error diffusion", "1-Sided", "4 Color", "Full Bleed", and "12 gradations", and load tray 2 with A4 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order.</li> <li>Check the image after printing to determine which color causes the abnormal image.</li> </ul>	1 to 3 colors	Go to the 1-color troubleshooting procedure.
			4 colors	Go to the 4-color troubleshooting procedure.

**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.
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. <ul style="list-style-type: none"> <li>Developing bias: Vdc-C, Vdc-M, Vdc-Y, Vdc-K: close to the standard value of -800 to 0</li> <li>Grid voltage: Vg-C, Vg-M, Vg-Y, Vg-K: close to the standard value of -1600 to 0</li> </ul>	NO	<ul style="list-style-type: none"> <li>Check the high voltage unit and the imaging unit for wiring and connection.</li> <li>Replace the high voltage unit.</li> </ul>
4	Photoconductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals (Y: C4, M: C3, C: C2, K: C1).	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	Toner supply section	Faulty connector connection between the toner supply motor (M4, M5) and base board (CN13E).	YES	Reconnect the connector.
7	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.
8	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.
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	<ul style="list-style-type: none"> <li>Replace the imaging unit.</li> <li>Replace the PH unit.</li> <li>Replace the high voltage unit.</li> <li>Replace the base board.</li> </ul>

**4-color troubleshooting procedure**

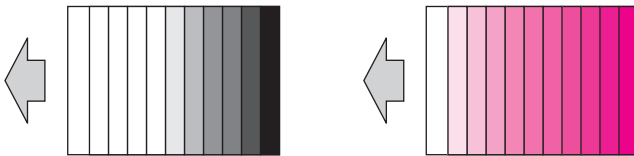
Step	Section	Check item	Result	Action
1	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (T1).	NO	Clean or correct the terminal.

Step	Section	Check item	Result	Action
2	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2) 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	<ul style="list-style-type: none"> <li>Replace the transfer belt unit.</li> <li>Replace the high voltage unit.</li> <li>Replace the base board.</li> </ul>

### 12.3.7 Gradation reproduction failure

#### Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



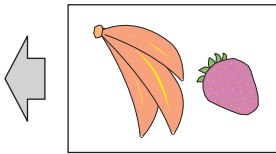
#### Troubleshooting procedure

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	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [Gradation Pattern]. Select "SINGLE", "HYPER", "Error diffusion", "1-Sided", "CMYK", "Full Bleed", and "12 gradations", and load tray 2 with A4 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order.</li> <li>Check the image after printing to determine which color causes the abnormal image.</li> </ul>	-	Go to the next step.
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.
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.	YES	Clean.
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	<ul style="list-style-type: none"> <li>Replace the imaging unit that is responsible for the abnormal image.</li> <li>Replace the PH unit.</li> <li>Replace the high voltage unit.</li> <li>Replace the base board.</li> </ul>

### 12.3.8 Color reproducibility error

#### Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



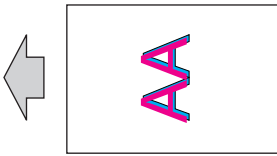
#### Troubleshooting procedure

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	Expert Adjustment -> PS Designer Settings	Select [Utility] -> [Expert Adjustment] -> [PS Designer Settings] and change the setting, and the image trouble is eliminated.	NO	Go to the next step.
4	Image check	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [8 Color Solid Pattern]. Select "SINGLE", "HYPER", "Error diffusion", and "1-Sided", enter "64" for Density, and load tray 2 with A4 paper. This runs a print cycle of 8 colors on one sheet of paper.</li> <li>Check the image after printing and the abnormal image is evident.</li> </ul>	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.
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 (T1).	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) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
9	IDC sensor	IDC sensor is dirty.	YES	Clean.
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) and base board (CN4E).	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	<ul style="list-style-type: none"> <li>Replace the transfer belt unit.</li> <li>Replace the high voltage unit.</li> <li>Replace the base board.</li> </ul>

### 12.3.9 Incorrect color image registration

#### Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



**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	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [8 Color Solid Pattern]. Select "SINGLE", "HYPER", "Error diffusion", and "1-Sided", enter "64" for Density, and load tray 2 with A4 paper. This runs a print cycle of 8 colors on one sheet of paper.</li> <li>Check the image after printing and the abnormal image is evident.</li> </ul>	YES	Go to engine troubleshooting procedure.

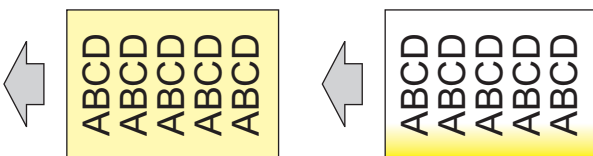
**Engine troubleshooting procedure**

Step	Section	Check item	Result	Action
1	Connector connection	Faulty connector connection the PH unit and base board (CN13).	YES	Reconnect the connector.
2	Service Mode -> Color Registration Adjustment	Select [Service Mode] -> [Machine] -> [Color Registration Adjustment] and the image trouble is eliminated.	NO	Go to the next step.
3	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	<ul style="list-style-type: none"> <li>Replace the PH unit.</li> <li>Replace the base board.</li> </ul>

**12.3.10 Foggy background**

**Typical faulty images**

The arrow in the exemplary image troubles indicates the paper feeding direction.



**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.	YES	Clean.
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.

Step	Section	Check item	Result	Action
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 Voltage 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 Voltage 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	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [Lattice Pattern]. Select "SINGLE", "HYPER", "Error diffusion", "1-Sided", "CMYK", "600dpi", and "Normal", enter "20" for CD width, "20" for FD width, and "255" for Density, and load tray 2 with A4 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order.</li> <li>Check the image after printing to determine which color causes the abnormal image.</li> </ul>	1 to 3 colors	Go to the 1-color troubleshooting procedure.
			4 colors	Go to the 4-color troubleshooting procedure.

### 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.
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	Photoconductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals (Y: C4, M: C3, C: C2, K: C1).	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	Faulty connector connection the high voltage unit (CN1) and base board (CN4E).	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	<ul style="list-style-type: none"> <li>Replace the imaging unit.</li> <li>Replace the PH unit.</li> <li>Replace the high voltage unit.</li> </ul>

### 4-color troubleshooting procedure

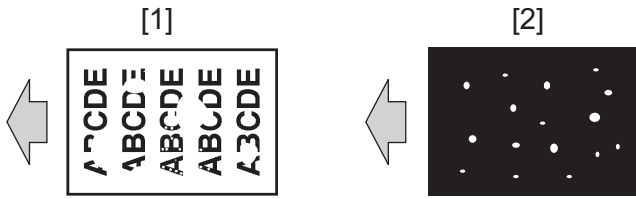
Step	Section	Check item	Result	Action
1	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (T1).	NO	Clean or correct the terminal.
2	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2) 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	<ul style="list-style-type: none"> <li>Replace the transfer belt unit.</li> <li>Replace the high voltage unit.</li> <li>Replace the base board.</li> </ul>



12.3.11 Void areas, White spots

Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1] Void areas	[2] White spots
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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.	YES	Clean.
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 Voltage Adjustment	The white spots is eliminated when [Service Mode] -> [Imaging Process Adjustment] -> [Charge Voltage Adjustment] are selected and the setting value is increased.	NO	Return the setting value to the original one and go to the next step.
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	Service Mode -> TCR Level Setting	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.
10	Image check	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [Halftone Pattern]. Select "SINGLE", "HYPER", "Error diffusion", "1-Sided", "CMYK", and "Full Bleed", enter "64" for Density, and load tray 2 with A4 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order.</li> <li>If the abnormal image does not recur, change Density to "255" and make a print check.</li> <li>Check the image after printing and the abnormal image occurs only with one color.</li> </ul>	YES	Go to the 1-color troubleshooting procedure.
			NO	Go to the 4-color troubleshooting procedure.

**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.
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	Photoconductor section	Dirt, scratches, or foreign matter on the photoconductor.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the imaging unit.</li> </ul>
4	Photoconductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals (Y: C4, M: C3, C: C2, K: C1).	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 imaging unit.
6	1st transfer section	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (T1).	NO	Clean or correct the terminal.
7	Connector connection	Faulty connector connection the high voltage unit (CN1) and base board (CN4E).	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	<ul style="list-style-type: none"> <li>Replace the imaging unit.</li> <li>Replace the PH unit.</li> <li>Replace the high voltage unit.</li> </ul>

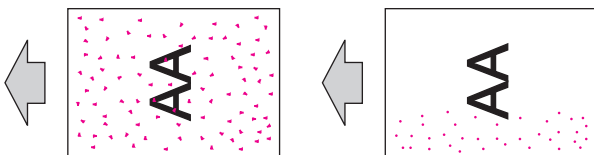
**4-color troubleshooting procedure**

Step	Section	Check item	Result	Action
1	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the transfer belt unit.</li> </ul>
2	2nd transfer section	Dirt or foreign matter on the 2nd transfer roller.	YES	<ul style="list-style-type: none"> <li>Remove the foreign matter.</li> <li>Replace the transfer roller unit.</li> </ul>
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	Faulty connector connection the high voltage unit (CN1) and base board (CN4E).	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.

**12.3.12 Color spot**

**Typical faulty images**

The arrow in the exemplary image troubles indicates the paper feeding direction.



**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.	YES	Clean.
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	Service Mode -> Charge Voltage 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.	NO	Return the setting value to the original one and go to the next step.

Step	Section	Check item	Result	Action
		The color spots are reduced when [Service Mode] -> [Imaging Process Adjustment] -> [Charge Voltage Adjustment] are selected and the setting value is increased.		
6	Service Mode -> Transfer Voltage Fine 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	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [Solid Pattern]. Select "SINGLE", "HYPER", "Error diffusion", and "1-Sided", enter "64" for Density, and load tray 2 with A4 paper. This runs a print cycle of 4 colors on one sheet of paper.</li> <li>Check the image after printing to determine which color causes the abnormal image.</li> </ul>	1 to 3 colors	Go to the 1-color troubleshooting procedure.
			4 colors	Go to the 4-color troubleshooting procedure.

**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.
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	Photoconductor section	Dirt, scratches, or foreign matter on the photoconductor.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the imaging unit.</li> </ul>
4	Photoconductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals (Y: C4, M: C3, C: C2, K: C1).	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	Faulty connector connection the high voltage unit (CN1) and base board (CN4E).	YES	Reconnect the connector.
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	<ul style="list-style-type: none"> <li>Replace the imaging unit.</li> <li>Replace the PH unit.</li> <li>Replace the high voltage unit.</li> </ul>

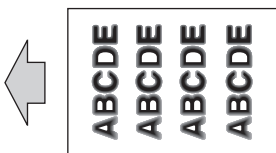
**4-color troubleshooting procedure**

Step	Section	Check item	Result	Action
1	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the transfer belt unit.</li> </ul>
2	2nd transfer section	Dirt or foreign matter on the 2nd transfer roller.	YES	<ul style="list-style-type: none"> <li>Remove the foreign matter.</li> <li>Replace the transfer roller unit.</li> </ul>
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) and base board (CN4E).	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.

**12.3.13 Blurred image**

**Typical faulty images**

The arrow in the exemplary image troubles indicates the paper feeding direction.



**Initial troubleshooting procedure**

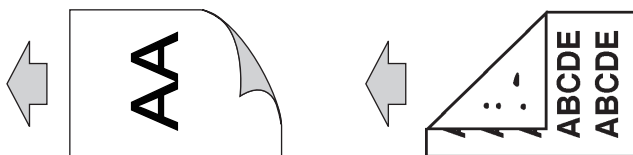
Step	Section	Check item	Result	Action
1	Damp paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
2	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
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.
5	Image check	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [Lattice Pattern]. Select "SINGLE", "HYPER", "Error diffusion", "1-Sided", "CMYK", "600dpi", and "Normal", enter "10" for CD width, "10" for FD width, and "255" for Density, and load tray 2 with A4 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order.</li> <li>Check the image after printing and the abnormal image is evident.</li> </ul>	YES	Go to engine troubleshooting procedure.

**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.
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	Photoconductor section	Dirt or foreign matter on the photoconductor of the PH of the color which is responsible for the abnormal image.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the imaging unit.</li> </ul>
			NO	Replace the PH unit.

**12.3.14 Back marking****Typical faulty images**

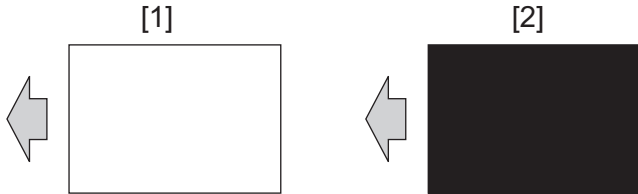
The arrow in the exemplary image troubles indicates the paper feeding direction.

**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	<ul style="list-style-type: none"> <li>Remove the foreign matter.</li> <li>Replace the transfer roller unit.</li> </ul>
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.
			NO	Replace the high voltage unit.

**12.3.15 Blank copy, Black copy****Typical faulty images**

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1] Blank copy	[2] Black copy
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**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	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [Solid Pattern]. Select "SINGLE", "HYPER", "Error diffusion", and "1-Sided", enter "120" for Density, and load tray 2 with A4 paper. This runs a print cycle of 4 colors on one sheet of paper.</li> <li>Check the image after printing and the abnormal image is evident.</li> </ul>	YES	Go to engine troubleshooting procedure.

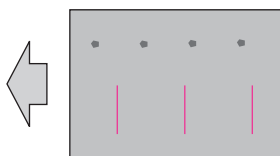
**Engine troubleshooting procedure**

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) 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 (T1).	NO	Clean or correct the terminal.
3	Photoconductor section	The imaging unit of the color of toner responsible for the abnormal image is installed properly.	NO	Reinstall.
4	Photoconductor 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 (Y: C4, M: C3, C: C2, K: C1).	NO	Clean or correct the terminal.
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	Faulty connector connection the high voltage unit (CN1) and base board (CN4E).	YES	Reconnect the connector.
7	Write section	Faulty connector connection the PH unit and base board (CN13).	YES	Reconnect the connector.
8	Service Mode -> Self-diagnostic	Select [Service Mode] -> [State Confirmation] -> [Self-diag.(Full)] and perform the function. Then, "NG" appears.	YES	Take relevant action corresponding to the check item in which "NG" has appeared.
			NO	<ul style="list-style-type: none"> <li>Replace the high voltage unit.</li> <li>Replace the PH unit.</li> <li>Replace the base board.</li> </ul>

**12.3.16 Uneven pitch**

**Typical faulty images**

The arrow in the exemplary image troubles indicates the paper feeding direction.



**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	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [Halftone Pattern]. Select "SINGLE", "HYPER", "Error diffusion", "1-Sided", "CMYK", and "Full Bleed", enter "64" for Density, and load tray 2 with A4 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order.</li> <li>Check the image after printing and the abnormal image occurs only with one color.</li> </ul>	YES	Go to the 1-color troubleshooting procedure.
			NO	Go to the 4-color troubleshooting procedure.

**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 photoconductor.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li><a href="#">Replace the imaging unit.</a></li> </ul>
2	Uneven pitch at 50 mm interval	Dirt, scratches, or foreign matter on the developing roller.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li><a href="#">Replace the imaging unit.</a></li> </ul>
3	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the PH window.
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	Faulty connector connection the high voltage unit (CN1) and base board (CN4E).	YES	Reconnect the connector.
			NO	<ul style="list-style-type: none"> <li><a href="#">Replace the high voltage unit.</a></li> <li><a href="#">Replace the base board.</a></li> </ul>

**4-color troubleshooting procedure**

Step	Section	Check item	Result	Action
1	Uneven pitch	Dirt, scratches, or foreign matter on the transfer belt.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li><a href="#">Replace the transfer belt unit.</a></li> </ul>
2	Uneven pitch at 59 mm interval	Dirt or foreign matter on the 2nd transfer roller.	YES	<ul style="list-style-type: none"> <li>Remove the foreign matter.</li> <li><a href="#">Replace the transfer roller unit.</a></li> </ul>
3	Uneven pitch at 259 mm interval	Dirt, scratches, or foreign matter on the fusing belt.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li><a href="#">Replace the fusing unit.</a></li> </ul>
4	Uneven pitch at 100 mm interval	Dirt, scratches, or foreign matter on the fusing pressure roller.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li><a href="#">Replace the fusing unit.</a></li> </ul>
5	Paper path	There is dirty or foreign matter on paper path.	YES	Check or clean the paper path including the duplex section.
			NO	<ul style="list-style-type: none"> <li><a href="#">Replace the transfer belt unit.</a></li> <li><a href="#">Replace the high voltage unit.</a></li> <li><a href="#">Replace the base board.</a></li> </ul>

**12.3.17 Uneven gloss, Rough gloss****Typical faulty images**

The arrow in the exemplary image troubles indicates the paper feeding direction.



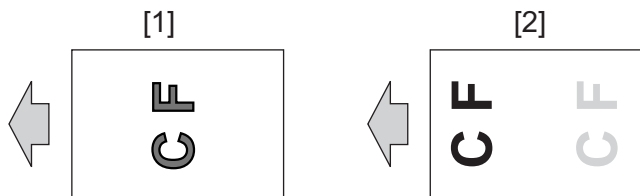
**Troubleshooting procedure**

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	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [Halftone Pattern]. Select "SINGLE", "HYPER", "Error diffusion", "1-Sided", "Black(1PC)", and "Full Bleed", enter "255" for Density, and load tray 2 with A4 paper. Press the start key. This runs a print cycle.</li> <li>Check the image after printing and the abnormal image is evident. (rough gloss)</li> </ul>	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	Paper exit roller	Faulty pressure operation of the paper 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 roller, pad, and belt in fusing unit.	YES	<a href="#">Replace the fusing unit.</a>
			NO	Replace the power supply of fusing.

**12.3.18 Poor fusing performance, Offset**

**Typical faulty images**

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1] Poor fusing performance	[2] Offset
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**Troubleshooting procedure**

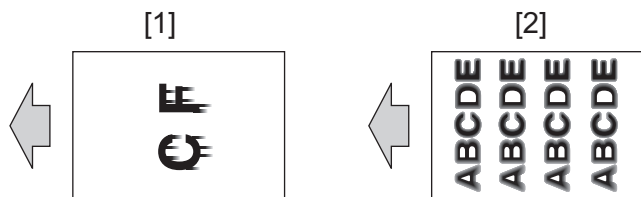
Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Image check: Poor fusing performance	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [Halftone Pattern]. Select "SINGLE", "HYPER", "Error diffusion", "1-Sided", "Black(1PC)", and "Full Bleed", enter "64" for Density, and load tray 2 with A4 paper. Press the start key. This runs a print cycle.</li> <li>Check the image after printing and the abnormal image is evident.</li> </ul>	YES	Go to the next step.
3	Image check: Poor fusing performance	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [System 2] -&gt; [Smart Fusing Control] and select [Prohibit].</li> <li>Check the image after printing and the abnormal image is evident.</li> </ul>	YES	Return the setting to the original one and go to the next step.
4	Image check: Offset	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [Gradation Pattern]. Select "SINGLE", "HYPER", "Error diffusion", "1-Sided", "8 Color", "Front Half", and "12 gradations", and load tray 2 with A4 paper. Press the start key. This runs a print cycle.</li> <li>Check the image after printing and the abnormal image is evident.</li> </ul>	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.)
7	Fusing unit	Scratches on roller, pad, and belt in fusing unit.	YES	<a href="#">Replace the fusing unit.</a>

Step	Section	Check item	Result	Action
			NO	Replace the power supply of fusing.

**12.3.19 Brush effect, Image bleeding**

**Typical faulty images**

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1]	Brush effect	[2]	Image bleeding
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**Troubleshooting procedure**

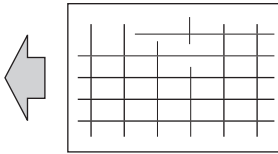
Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Damp paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
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	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [Lattice Pattern]. Select "SINGLE", "HYPER", "Error diffusion", "1-Sided", "CMYK", "600dpi", and "Normal", enter "10" for CD width, "10" for FD width, and "255" for Density, and load tray 2 with A4 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order.</li> <li>Check the image after printing and the abnormal image is evident.</li> </ul>	YES	Go to the next step.
6	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the transfer belt unit.</li> </ul>
7	2nd transfer section	Dirt or foreign matter on the 2nd transfer roller.	YES	<ul style="list-style-type: none"> <li>Remove the foreign matter.</li> <li>Replace the transfer roller unit.</li> </ul>
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 roller, pad, and belt in fusing unit.	YES	Replace the fusing unit.
			NO	Replace the power supply of fusing.

**12.3.20 Blurred fine lines**

**Typical faulty images**

The arrow in the exemplary image troubles indicates the paper feeding direction.





**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] 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	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [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 A4 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order.</li> <li>Check the image after printing and the abnormal image is evident.</li> </ul>	YES	Go to engine troubleshooting procedure.

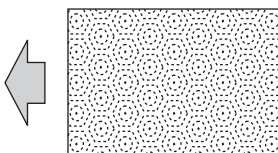
**Engine troubleshooting procedure**

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.
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	Photoconductor section	Dirt or foreign matter on the photoconductor of the PH of the color which is responsible for the abnormal image.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the imaging unit.</li> </ul>
4	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	<ul style="list-style-type: none"> <li>Clean.</li> <li>Replace the transfer belt unit.</li> </ul>
			NO	Replace the PH unit.

**12.3.21 Moire**

**Typical faulty images**

The arrow in the exemplary image troubles indicates the paper feeding direction.



**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	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
3	Image check	<ul style="list-style-type: none"> <li>Select [Service Mode] -&gt; [Test Mode] -&gt; [Halftone Pattern].</li> <li>Select "SINGLE", "HYPER", "Error diffusion", "1-Sided", "CMYK", and "Full Bleed", enter "64" for Density, and load tray 2 with A4 paper. Press the start key. This runs a print cycle for C, M, Y, and K in that order.</li> <li>Check the image after printing and the abnormal image is evident.</li> </ul>	YES	Go to engine troubleshooting procedure.

### 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	<ul style="list-style-type: none"> <li>Replace the PH unit.</li> <li>Replace the base board.</li> </ul>

## 13. IC PROTECTOR

### 13.1 Outline

- To increase product safety, this MFP has an IC protector 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 IC is provided with an over current protective function which works when the current exceeds the specified value to protect the IC from over current.  
For an IC that is provided with an over current protective function and being protected, if the problem is solved, the MFP will recover after turning OFF/ON the main power switch without replacing the board.
- The following list contains IC protector installed in each board, related devices, and symptoms when an over current occurs.

### 13.2 IC protector list

#### 13.2.1 bizhub C4000i/C3300i

##### (1) Base board

##### (a) ICP

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1E	FSDB	FS drive board	No operation	-
F2E	FM1	Machine cooling fan	Power line A19 error	C7613
	FM2	Toner suction fan		
F3E	M7	Polygon motor	Power line A20 error	C7615
F4E	CL1	1st transfer pressure clutch	Power line A7 error	C7607
	CL2	Bypass tray paper feed clutch		
	CL3	Tray 1 paper feed clutch		
	CL4	Registration clutch		
	CL5	ADU transport clutch		
	CL6	ADU forward rotation clutch		
	CL7	ADU reverse rotation clutch		
	SD1	Exit path switch solenoid		
F5E	M4	Toner supply motor/YM	Power supply malfunction	C5701
	M5	Toner supply motor/CK		
F6E	HVPS	High voltage unit	Power line A5 error	C7605
F8E	PCCB	PC control board	Power line A10 error	C760A
F10E	PS1	Front door sensor	Front door open display	-
F11E	M6	Tray 1 lift-up motor	Tray 1 feeder up/down abnormality	C0202
	CUDB	Clean unit drive board	Power line A15 error	C760F
F15E	-	3.3 V DC/DC converter in mechanical controller of base board	Mechanical controller ASIC communication error	C40A6
F18E	M1	Main motor	Main motor failure to turn	C5102
F19E	M3	Fusing motor	Fusing motor failure to turn	C3201
F20E	M2	Color motor	Color motor failure to turn	C2253
PTC1E	TBSB/Y	Toner cartridge set board/Y	Toner Cartridge Installation Error	-
	TBSB/M	Toner cartridge set board/M		-
	TBSB/C	Toner cartridge set board/C		-
	TBSB/K	Toner cartridge set board/K		-
	TCRS/Y	TCR sensor/Y	Imaging Unit Installation Error	-
	TCRS/M	TCR sensor/M		-
	TCRS/C	TCR sensor/C		-
	TCRS/K	TCR sensor/K		-
PTC2E	-	3.3 V DC/DC converter in mechanical controller of base board	Mechanical controller ASIC communication error	C40A6
ICP1	FM3	CPU cooling fan	MFP control board CPU temperature failure	C5372

##### (b) IC with over current protective function

ICP No.	Symbol	Target part name	When over current protective function works	
			Symptom in each load	Trouble code and others
IC12	USBHB	USB hub board	No operation	-
IC13	-	Authentication unit	Unable to detect authentication unit	-

ICP No.	Symbol	Target part name	When over current protective function works	
			Symptom in each load	Trouble code and others
			"Cannot find the connection with authentication unit. Turn OFF/ON the main power switch after the connection is found." display	
IC73	WLANB	Wireless LAN board	Extension network adapter installation error	CD262
IC77	-	Control panel	Control panel power not turned ON	-
IC79	-	Vendor	Unable to detect vendor "Turn ON the power of the vendor" display	-
IC1E	USBHB	USB hub board	Unable to detect USB memory	-

**(2) DC power supply****(a) ICP**

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F101	-	DC power supply circuit	No operation	-
FU101				
F102	-	Heater circuit	The heater does not light up	C3425 C3825 C3826 C3922 C3925 C3926 C392B
FU181				

**(3) High voltage unit****(a) ICP**

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F101	-	<ul style="list-style-type: none"> <li>• Charging and developing DC circuit</li> <li>• Developing AC circuit</li> <li>• Transfer circuit</li> </ul>	Faulty image	-

**13.2.2 PF-P20/PF-P21****(1) PC control board****(a) ICP**

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1	M1	Drive motor	Tray 2 drive motor malfunction	C0103
			Tray 3 drive motor malfunction	C0104
F2	PCCB	PC control board	Tray 3 drive motor malfunction	C0104
			Tray 3 feeder up/down abnormality	C0206

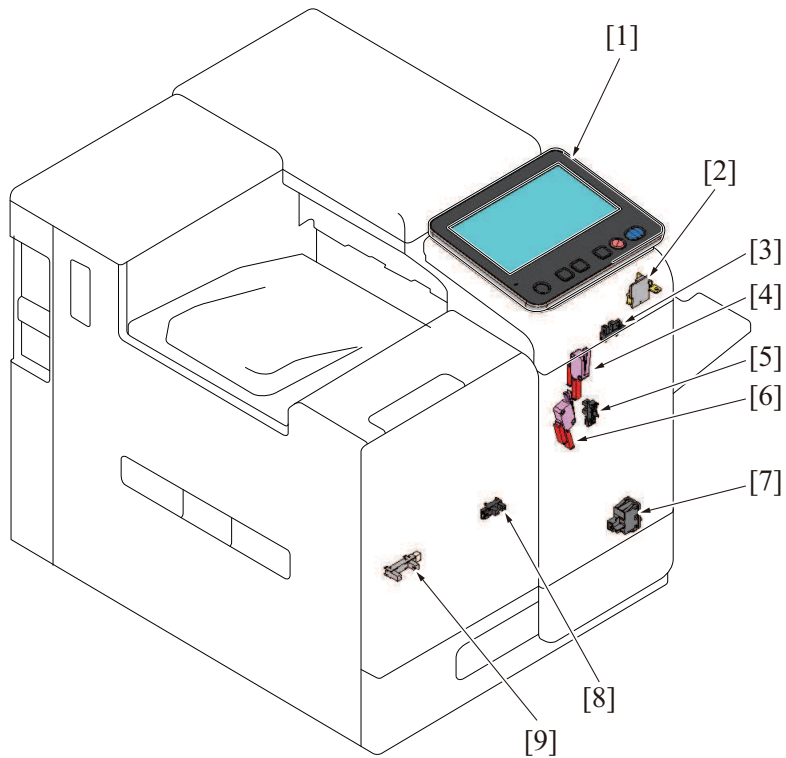
# M PARTS/CONNECTOR LAYOUT DRAWING

## 1. PARTS LAYOUT DRAWING

### 1.1 bizhub C4000i/C3300i

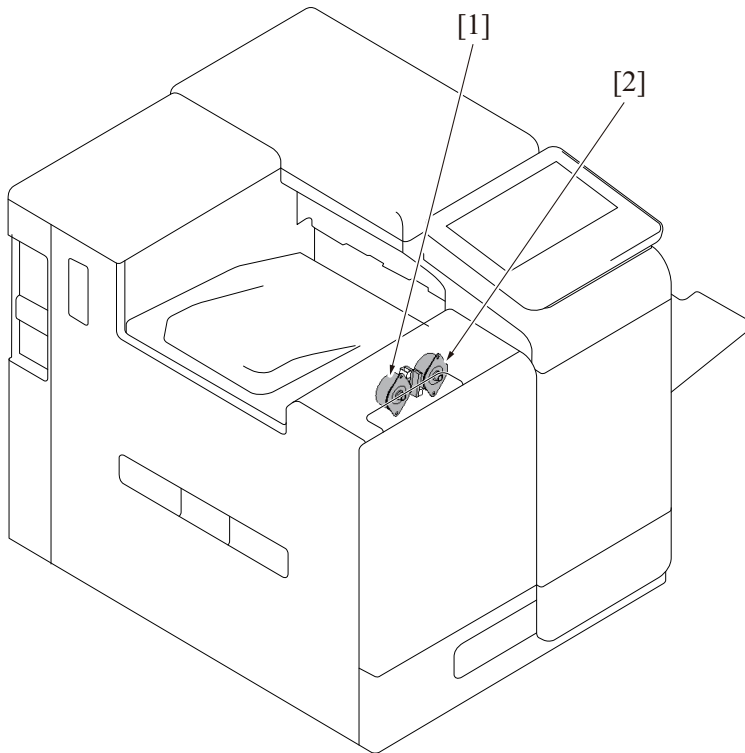
#### 1.1.1 Front side section

##### (1) Board/switch/sensor/others



[1]	Control panel unit	[2]	Machine condition monitor board/Fr (MCMB/Fr)
[3]	Front door sensor (PS1)	[4]	Front door switch (SW2)
[5]	Right door sensor (PS2)	[6]	Right door switch (SW5)
[7]	Main power switch (SW1)	[8]	Waste toner bottle set sensor (PS6)
[9]	Waste toner near full sensor (PS15)	-	-

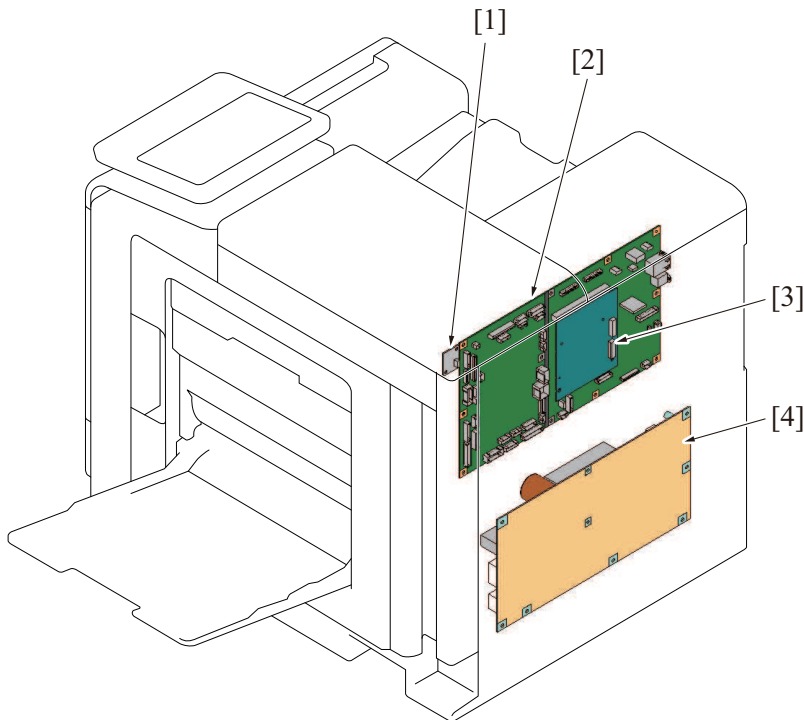
**(2) Load**



[1] Toner supply motor/YM (M4)	[2] Toner supply motor/CK (M5)
--------------------------------	--------------------------------

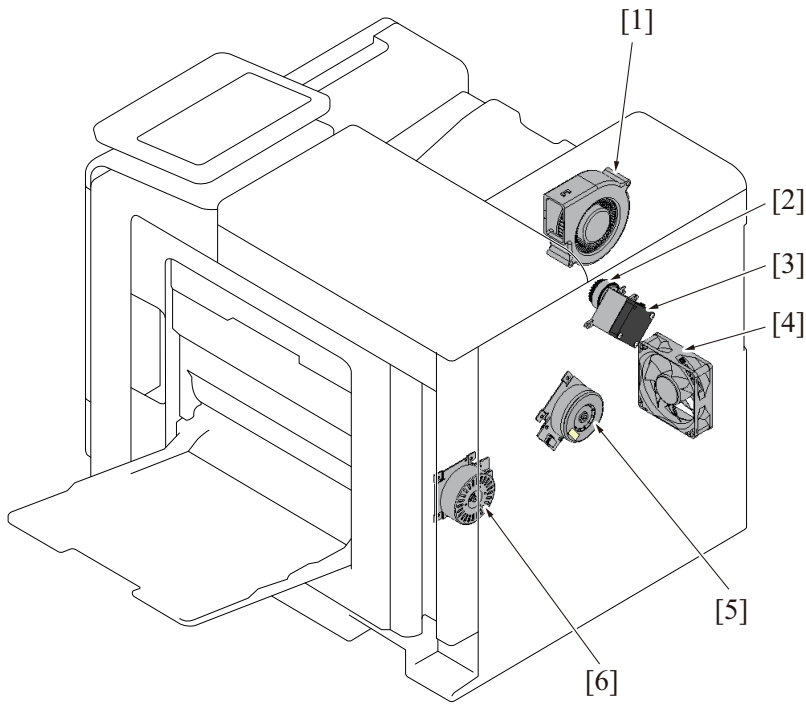
**1.1.2 Back side**

**(1) Boards**



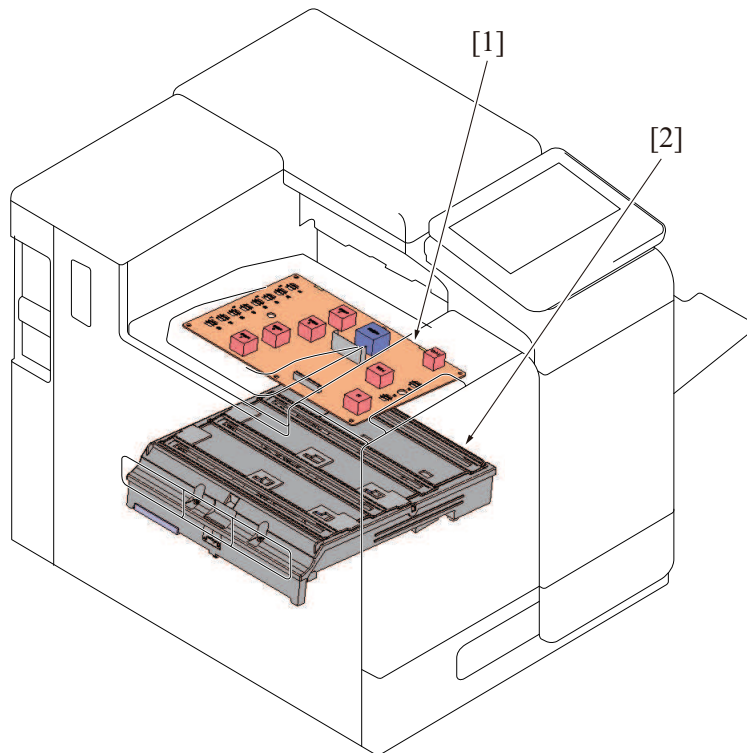
[1] Backup board (ERB)	[2] Base board (BASEB)
[3] CPU board (CPUB)	[4] DC power supply (DCPS)

**(2) Load**



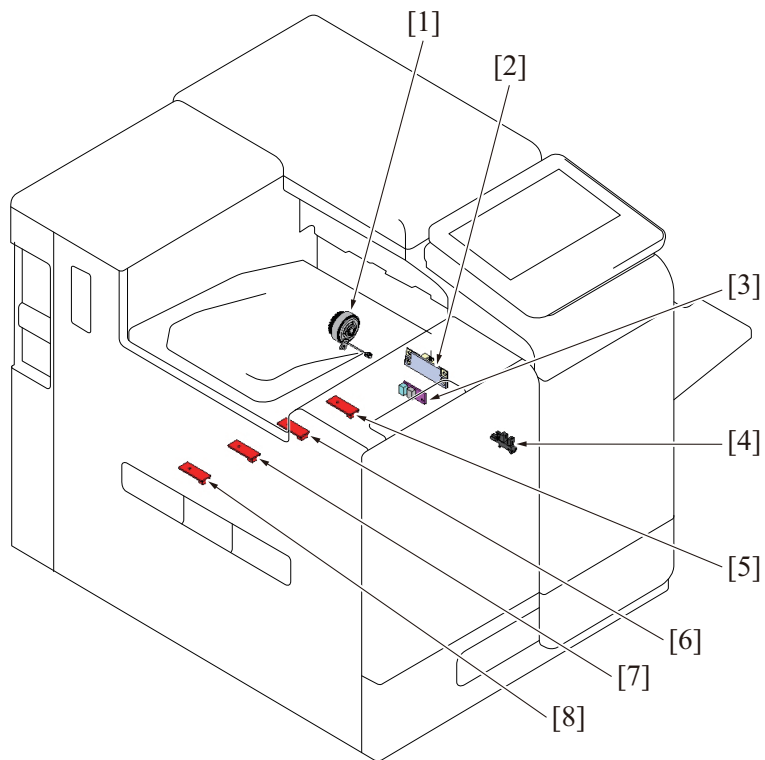
[1]	Toner suction fan (FM2)	[2]	1st transfer pressure clutch (CL1)
[3]	CPU cooling fan (FM3)	[4]	Machine cooling fan (FM1)
[5]	Color motor (M2)	[6]	Main motor (M1)

**1.1.3 Left side**



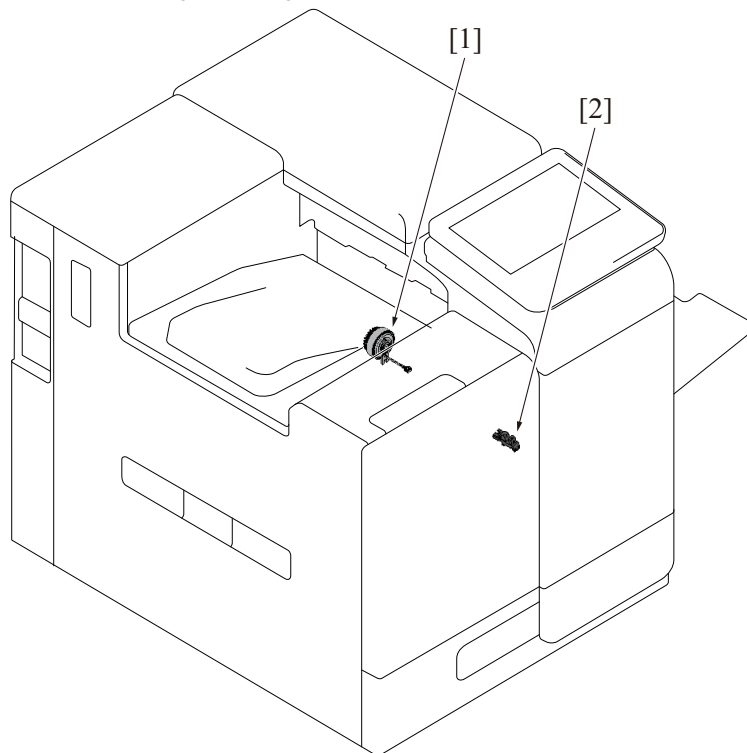
[1]	High voltage unit (HVPS)	[2]	PH unit
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**1.1.4 Right side**



[1]	Registration clutch (CL4)	[2]	IDC sensor (IDCS1)
[3]	Temperature/humidity sensor (TEM/HUMS1)	[4]	Registration sensor (PS9)
[5]	TCR sensor/K (TCRS/K)	[6]	TCR sensor/C (TCRS/C)
[7]	TCR sensor/M (TCRS/M)	[8]	TCR sensor/Y (TCRS/Y)

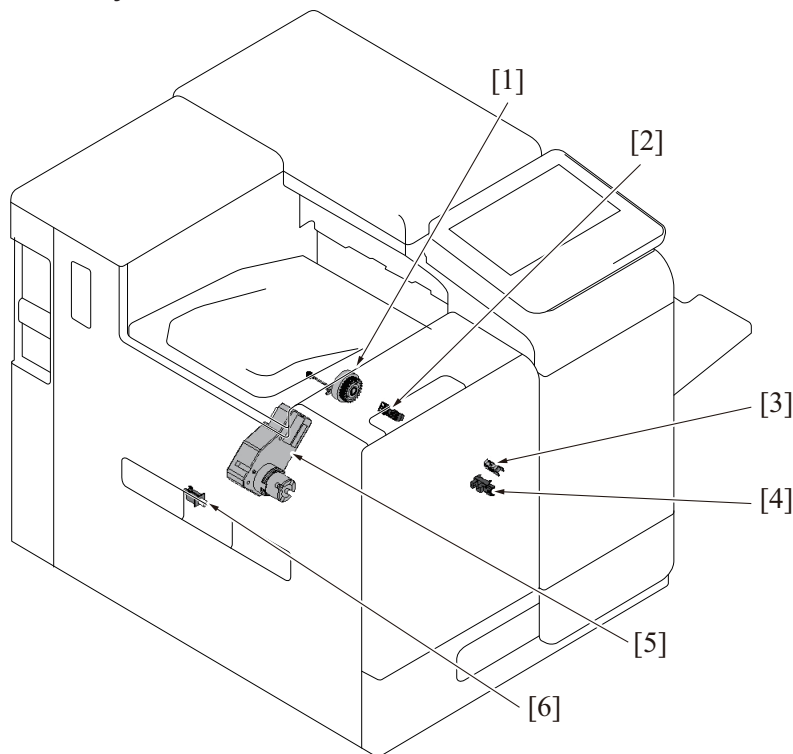
**1.1.5 Manual bypass tray**



[1]	Bypass tray paper feed clutch (CL2)	[2]	Bypass tray paper empty sensor (PS4)
-----	-------------------------------------	-----	--------------------------------------

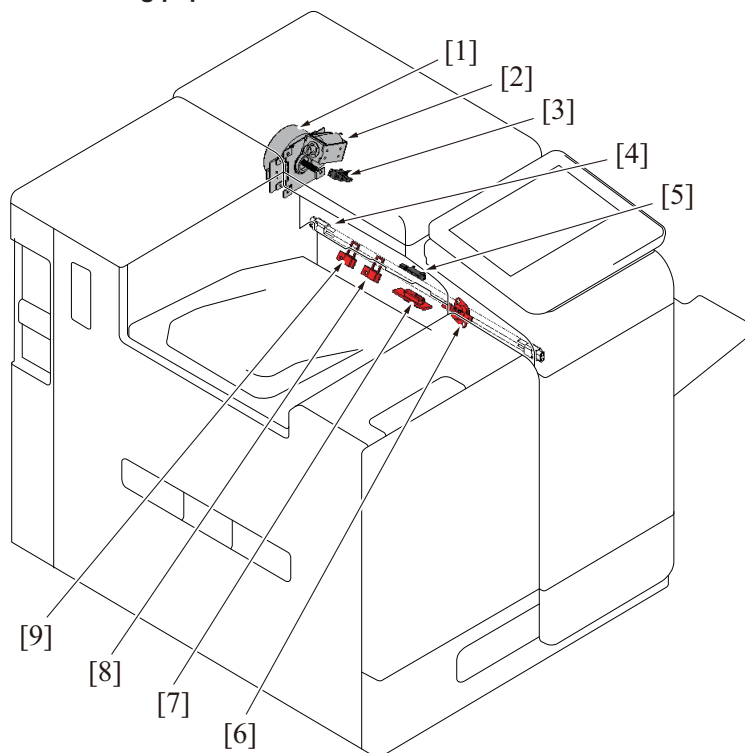


**1.1.6 Tray 1**



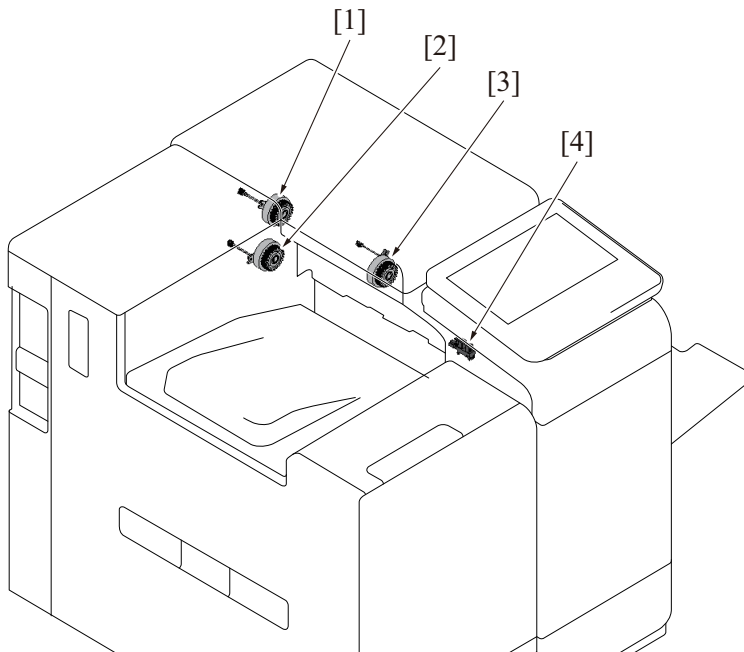
[1]	Tray 1 paper feed clutch (CL3)	[2]	Tray 1 upper limit sensor (PS7)
[3]	Tray 1 paper feed sensor (PS8)	[4]	Tray 1 paper empty sensor (PS5)
[5]	Tray 1 lift-up motor (M6)	[6]	Tray 1 set switch (SW3)

**1.1.7 Fusing/paper exit section**



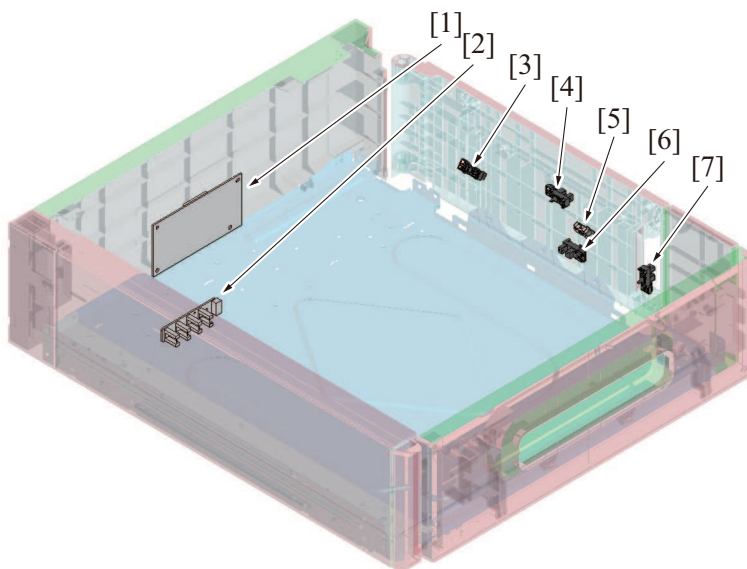
[1]	Fusing motor (M3)	[2]	Exit path switch solenoid (SD1)
[3]	Paper exit sensor (PS13)	[4]	Fusing heater lamp (HL1)
[5]	Fusing loop sensor (PS10)	[6]	Heating roller thermostat (TS1)
[7]	Heating roller temperature sensor (TEMS)	[8]	Heating roller thermistor/Ctr (TH2)
[9]	Heating roller thermistor/Edg (TH1)	-	-

**1.1.8 Duplex Section**

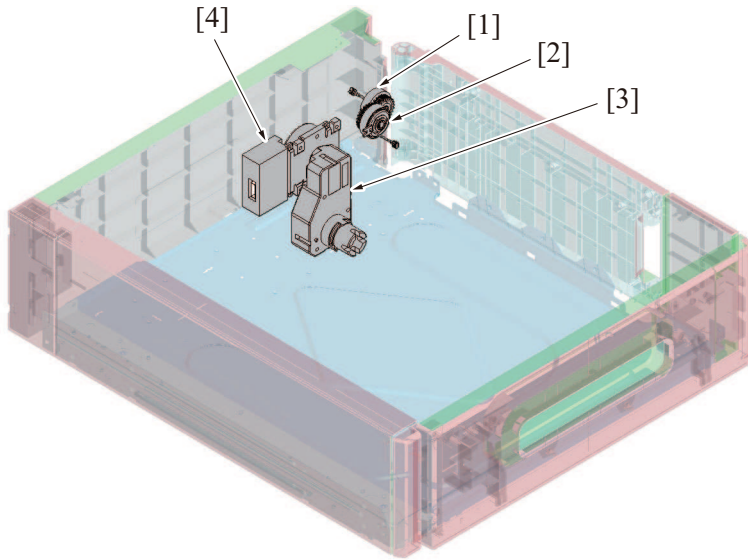


[1]	ADU reverse rotation clutch (CL7)	[2]	ADU forward rotation clutch (CL6)
[3]	ADU transport clutch (CL5)	[4]	ADU transport sensor (PS11)

**1.2 PF-P20/PF-P21**

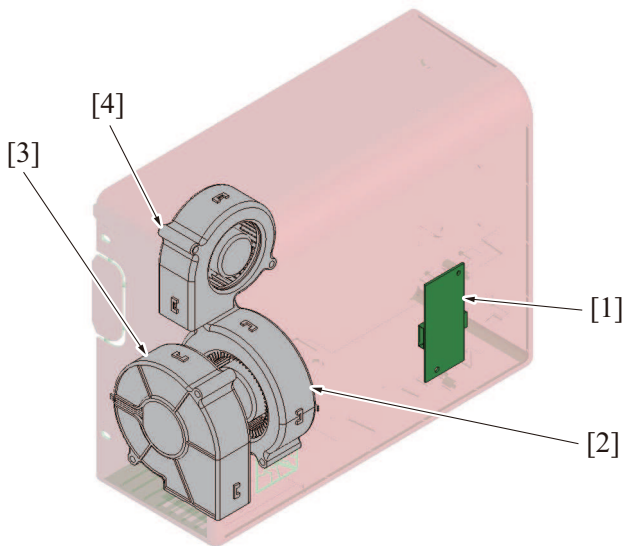


[1]	PC control board assy (PCCB)	[2]	Paper size sensor (PS5)
[3]	Upper limit sensor (PS2)	[4]	Transport sensor (PS6)
[5]	Paper feed sensor (PS3)	[6]	Paper empty sensor (PS1)
[7]	Door sensor (PS4)	-	-



[1]	Transport clutch (CL2)	[2]	Paper feed clutch (CL1)
[3]	Lift-up motor (M2)	[4]	Drive motor (M1)

**1.3 CU-202**



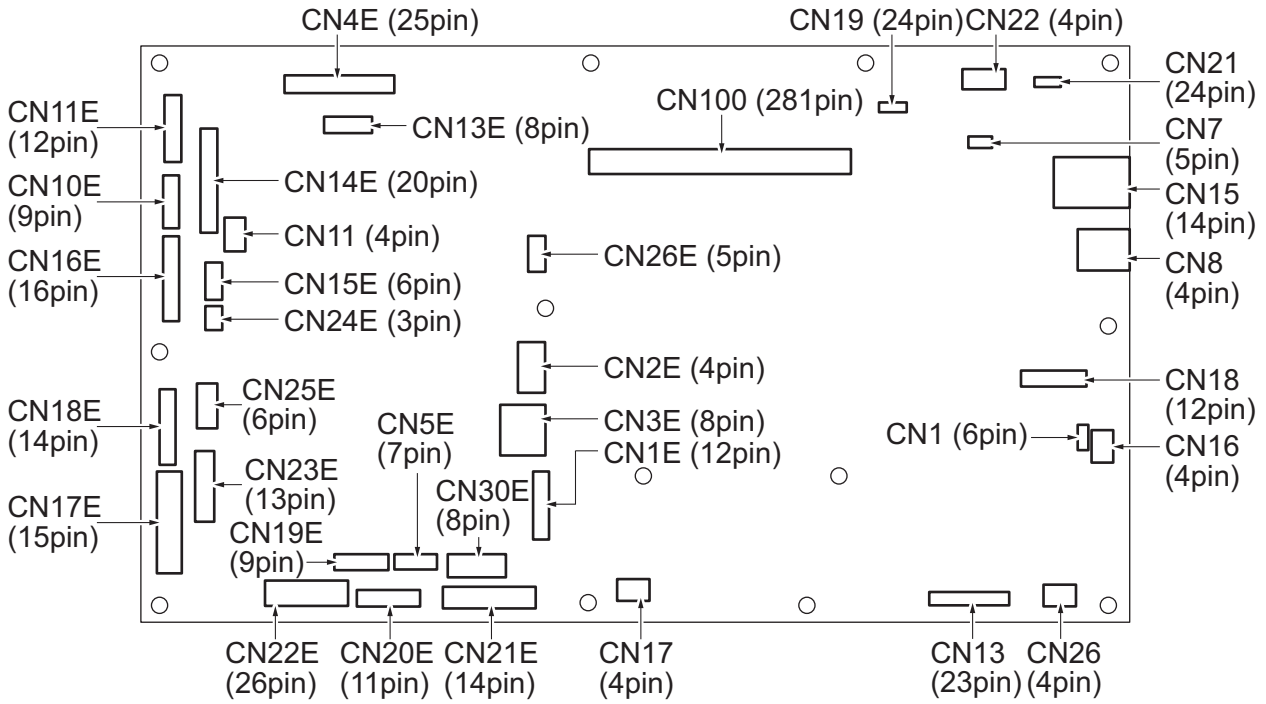
[1]	Clean unit drive board (CUDB)	[2]	Exhaust fan/2 (FM2)
[3]	Exhaust fan/1 (FM1)	[4]	Exhaust fan/3 (FM3)

## 2. CONNECTOR LAYOUT DRAWING

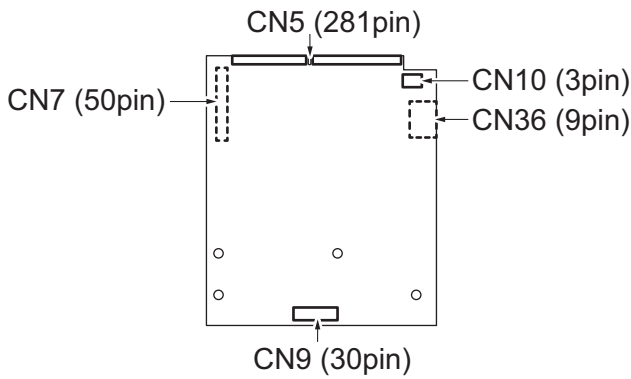
### 2.1 BOARD CONNECTOR LAYOUT DRAWING

#### 2.1.1 bizhub C4000i/C3300i

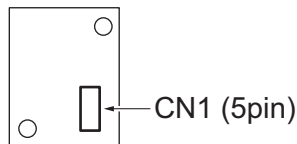
##### (1) Base board (BASEB)



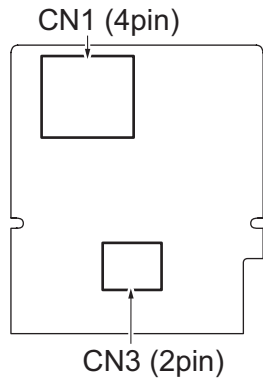
##### (2) CPU board (CPUB)



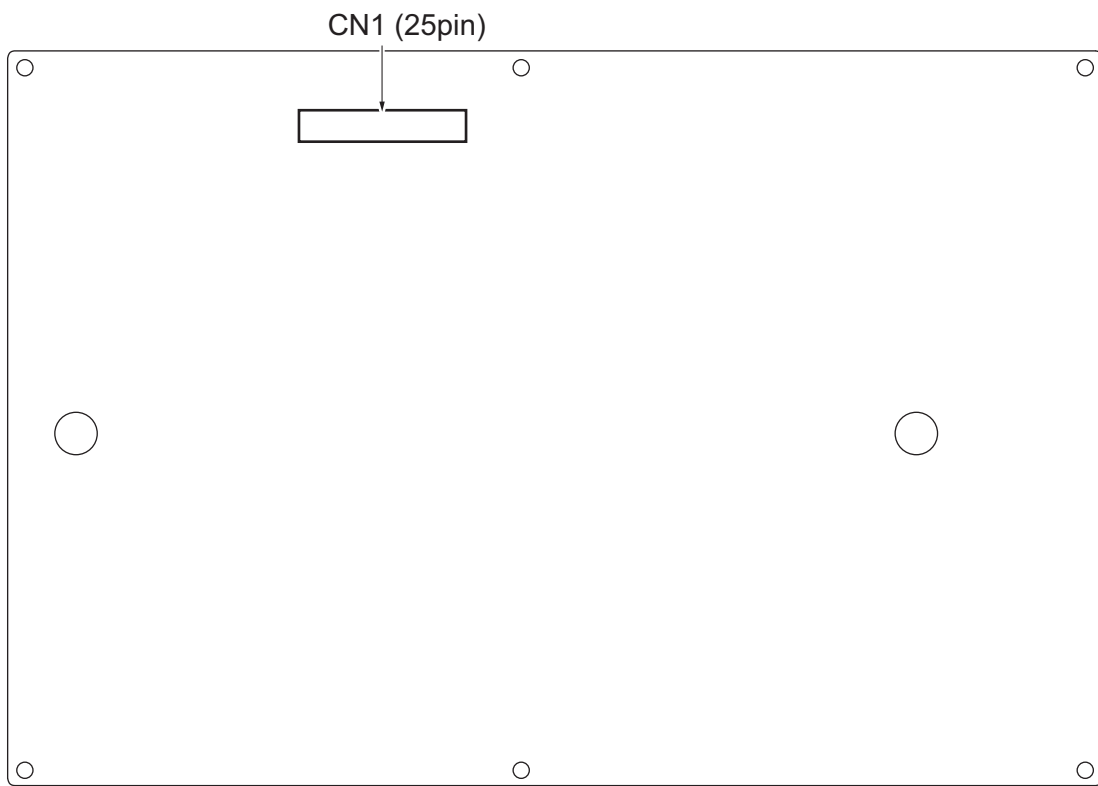
##### (3) Backup board (ERB)



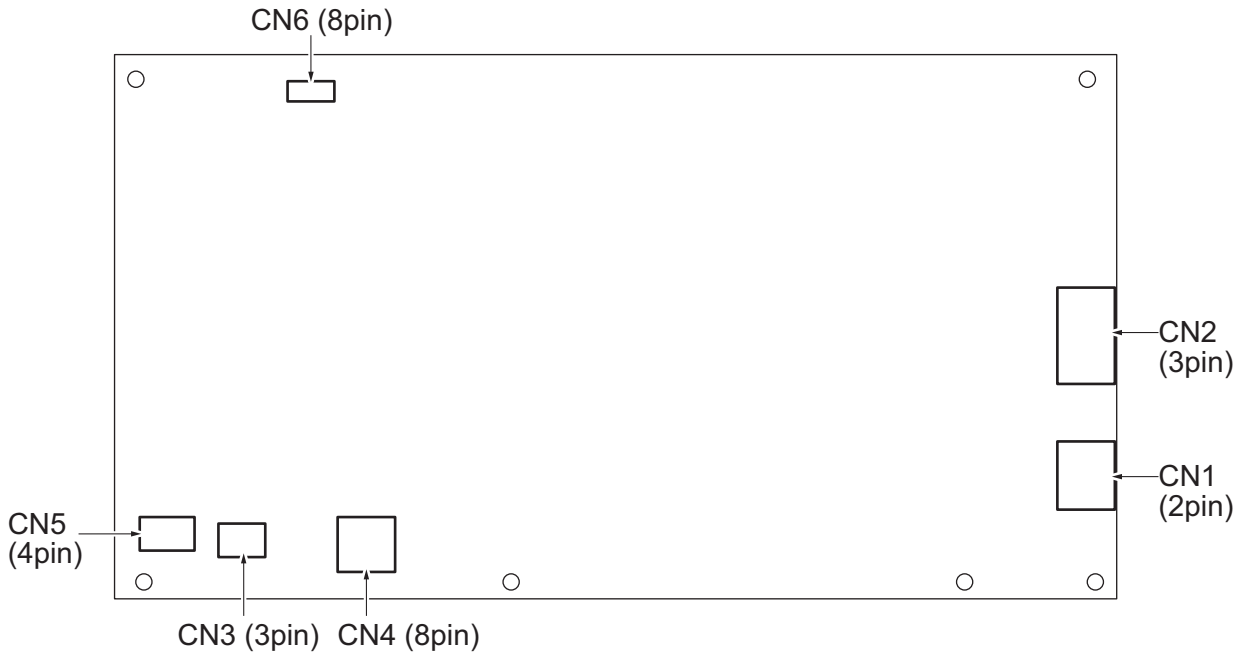
**(4) Machine condition monitor board/Fr (MCMB/Fr)**



**(5) High voltage unit (HVPS)**

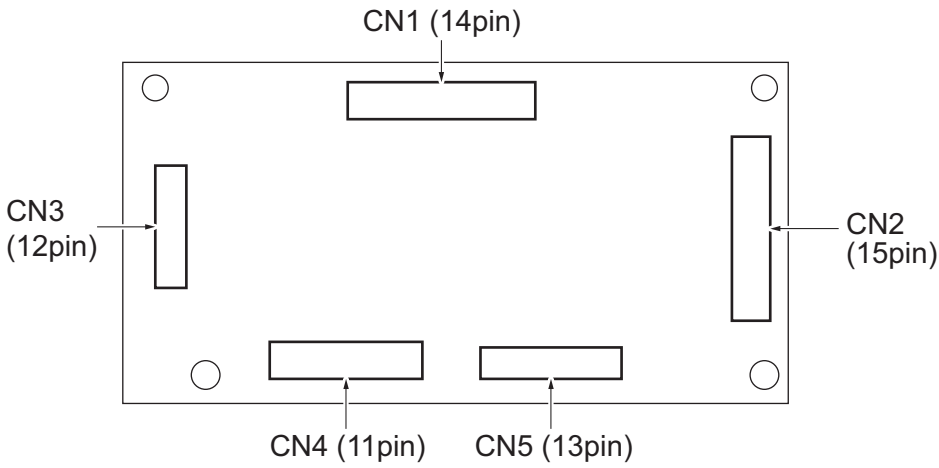


**(6) DC power supply (DCPS)**



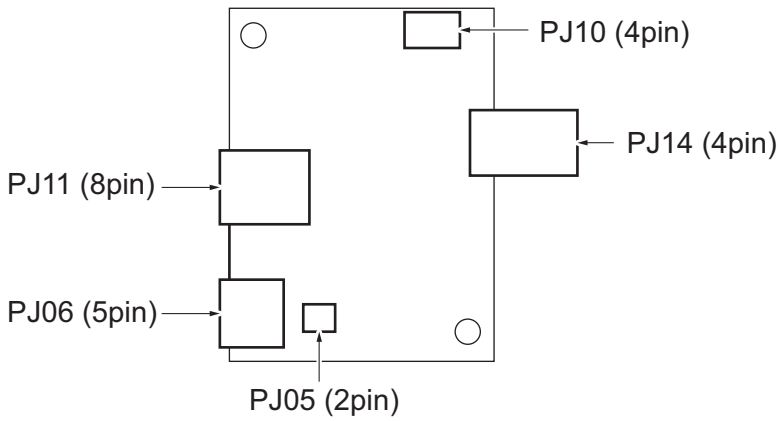
**2.1.2 PF-P20/PF-P21**

**PC control board (PCCB)**



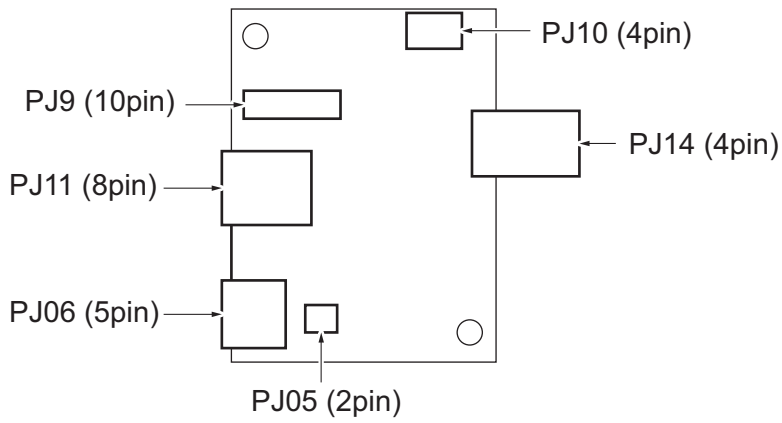
**2.1.3 EK-P08**

**USB hub board (USBHB)**



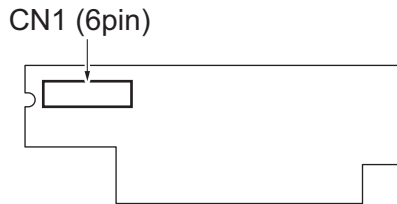
**2.1.4 EK-P09**

**USB hub board (USBHB)**



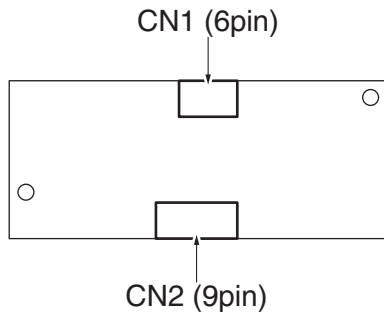
**2.1.5 EK-P10**

**NFC board (NFCB)**



**2.1.6 CU-202**

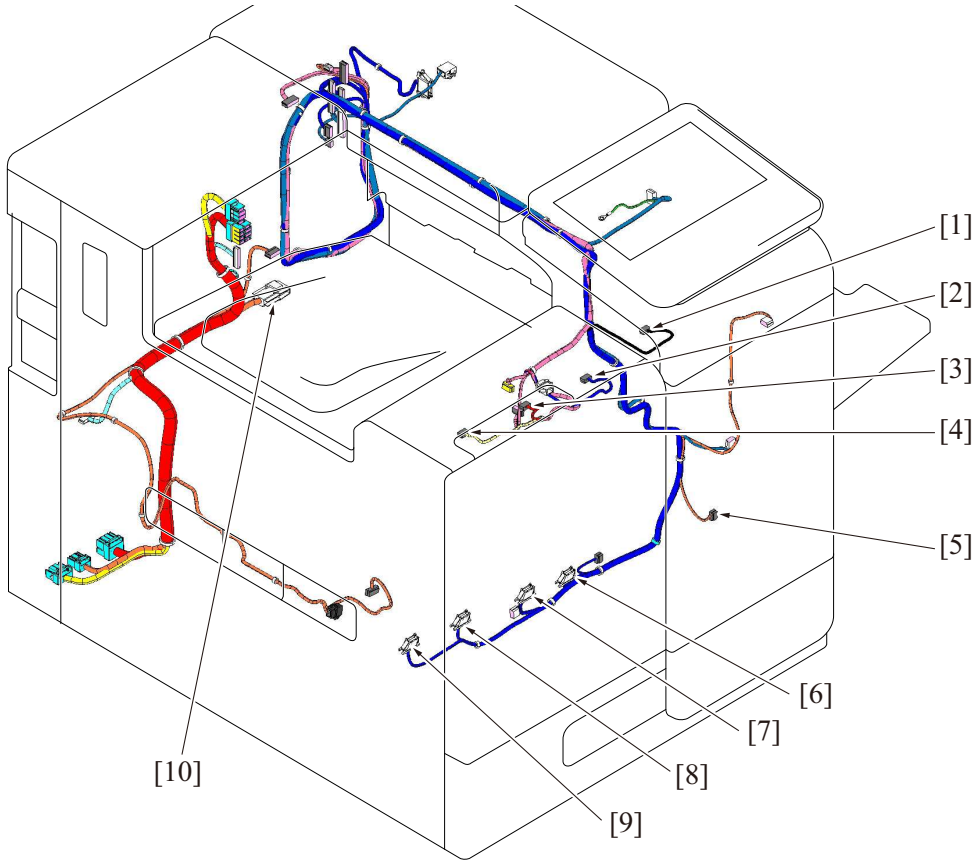
**Clean unit drive board (CUDB)**



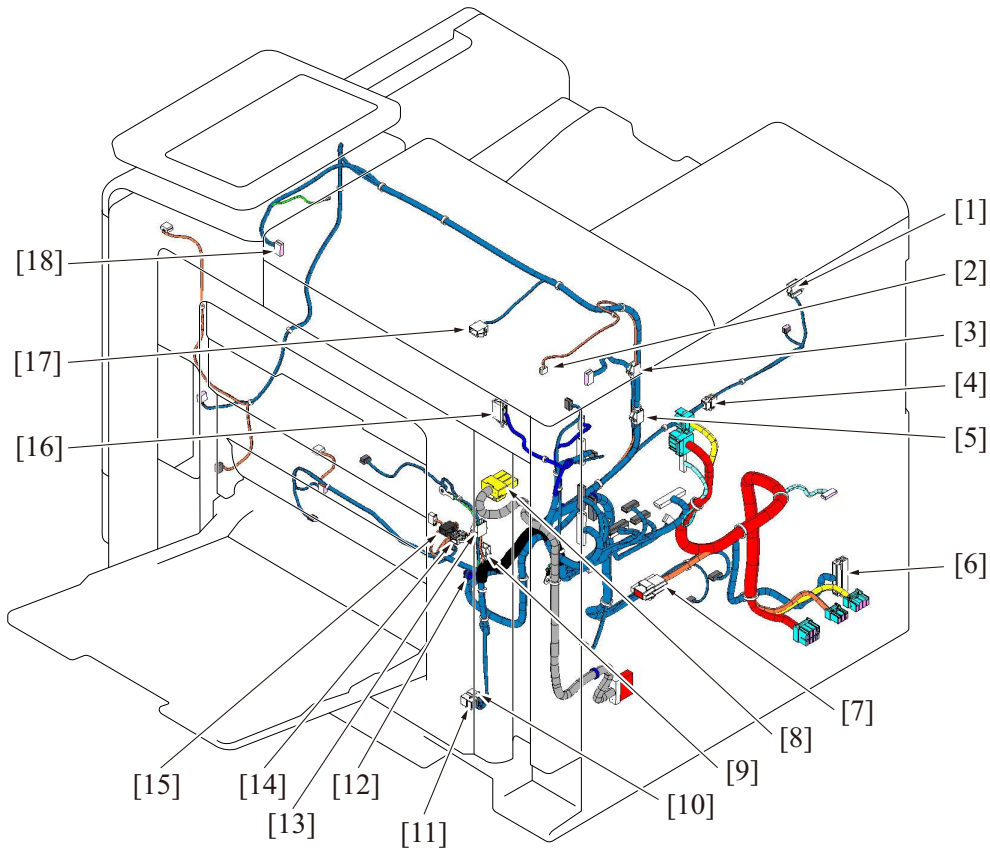
**2.2 RELAY CONNECTOR LAYOUT DRAWING**

**2.2.1 bizhub C4000i/C3300i**

**(1) Main body**



No.	CN No.	Pin	Location	No.	CN No.	Pin	Location
[1]	CN103	3 Pin	11-J	[2]	CN102	3 Pin	10-J
[3]	CN101	3 Pin	10-J	[4]	CN100	3 Pin	10-J
[5]	CN37	3 Pin	11-D	[6]	CN6	5 Pin	7-J
[7]	CN5	5 Pin	7-J	[8]	CN8	5 Pin	8-J
[9]	CN7	5 Pin	8-J	[10]	CN36	2 Pin	9-R



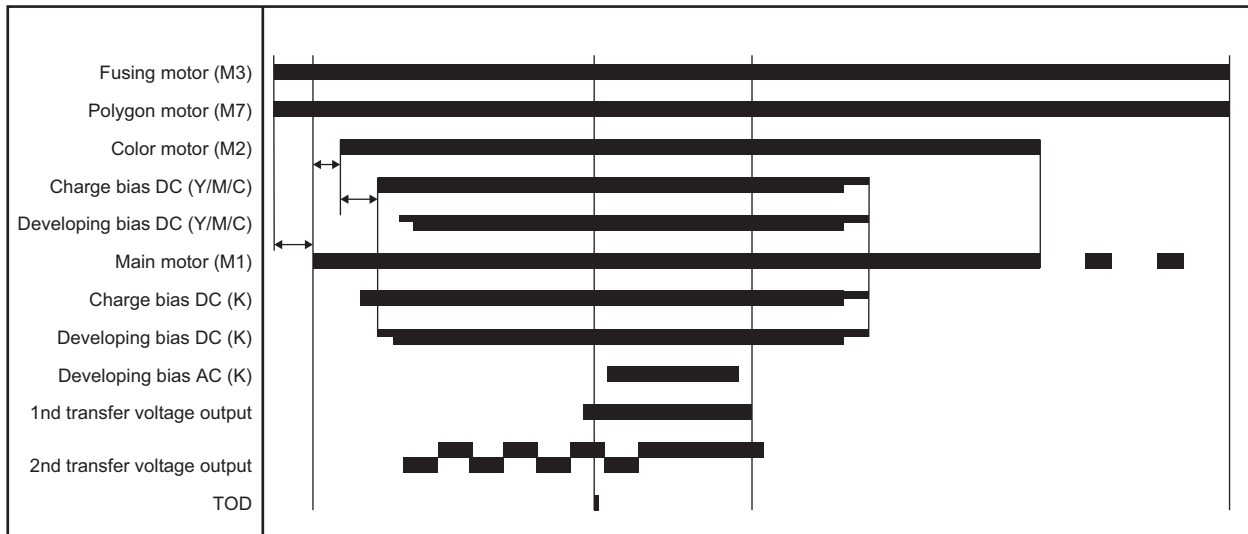


No.	CN No.	Pin	Location	No.	CN No.	Pin	Location
[1]	CN10	3 Pin	3-D	[2]	CN12	2 Pin	3-D
[3]	CN39	2 Pin	3-D	[4]	CN13	2 Pin	2-D
[5]	CN11	2 Pin	2-D	[6]	CN24	14 Pin	13-J
[7]	CN23	3 Pin	9-D	[8]	CN2	3 Pin	5-D
[9]	CN47	2 Pin	9-J	[10]	CN71	3 Pin	8-J
[11]	CN46	2 Pin	9-J	[12]	CN44	2 Pin	12-D
[13]	CN76	3 Pin	9-J	[14]	CN70	4 Pin	14-D
[15]	CN45	2 Pin	12-D	[16]	CN3	9 Pin	5-D
[17]	CN72	3 Pin	11-J	[18]	CN26	5 Pin	12-J

# N TIMING CHART

## 1. bizhub C368/C308/C258

### 1.1 Timing chart when the main power switch is turned ON

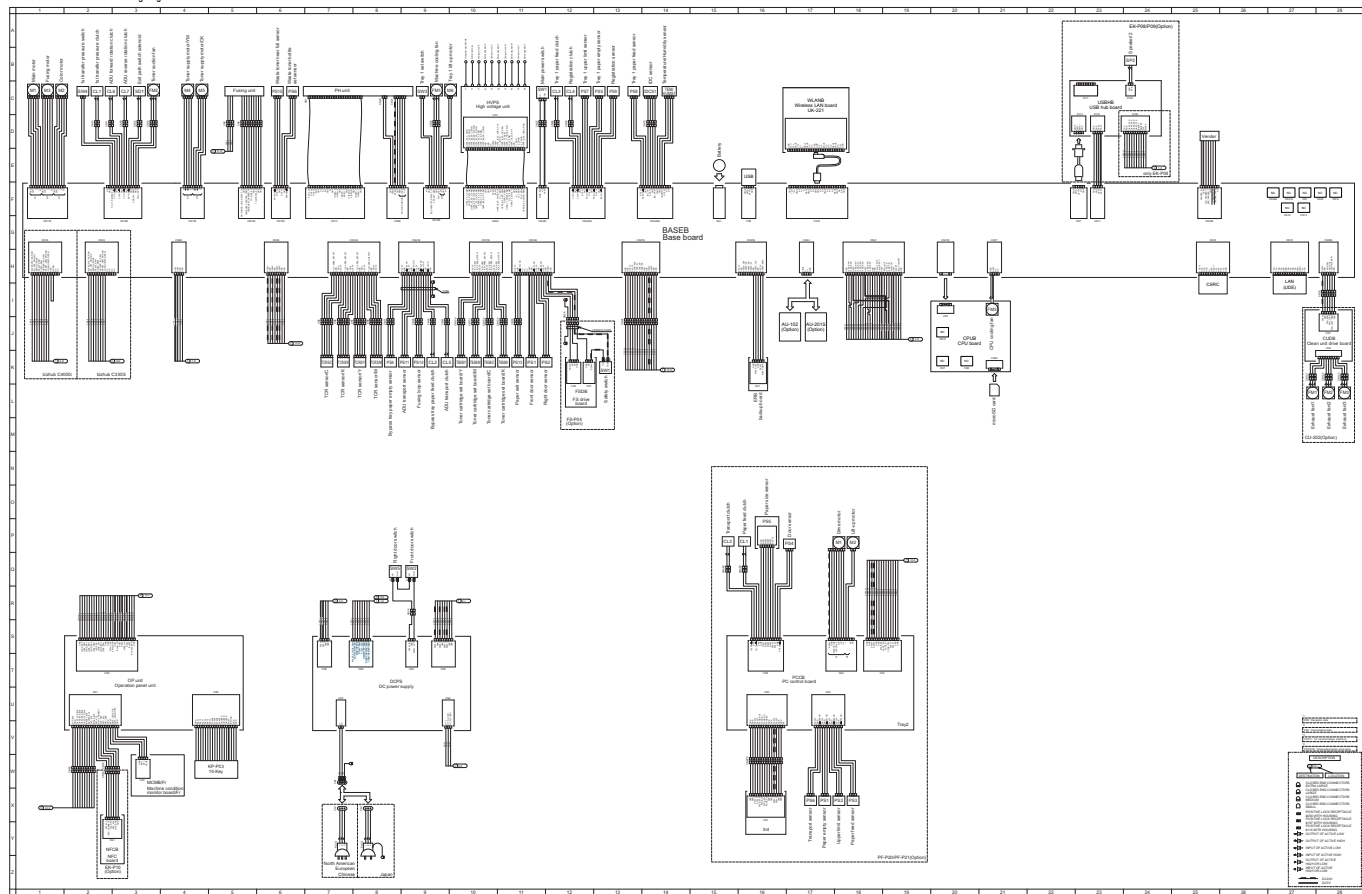


# O WIRING DIAGRAM

## 1. bizhub C4000i/C3300i

### 1.1 Main body

bizhub C4000i/C3300i Overall wiring diagram



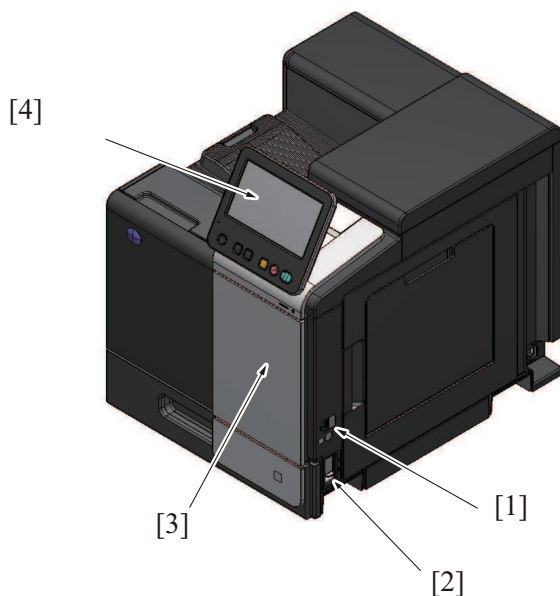
- [bizhub C4000i/C3300i Wiring diagram \(aajm0oc810da.pdf 2.05 MB\)](#)
- [bizhub C4000i/C3300i Wiring diagram A3 size \(1/4\) \(aajm0oc811da.pdf 1.37 MB\)](#)
- [bizhub C4000i/C3300i Wiring diagram A3 size \(2/4\) \(aajm0oc812da.pdf 1.02 MB\)](#)
- [bizhub C4000i/C3300i Wiring diagram A3 size \(3/4\) \(aajm0oc813da.pdf 999 KB\)](#)
- [bizhub C4000i/C3300i Wiring diagram A3 size \(4/4\) \(aajm0oc814da.pdf 972 KB\)](#)

## P THEORY OF OPERATION

### 1. bizhub C4000i/C3300i

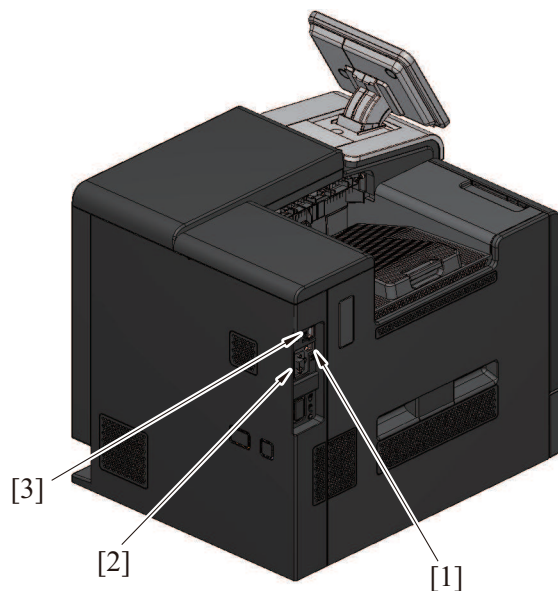
#### 1.1 INTERFACE SECTION

##### 1.1.1 Front side / Right side



[1]	USB port (Type A)	[2]	Main power switch
[3]	Authentication unit (built-in)	[4]	Control Panel (7-inch TFT color LCD WVGA: resistive touch panel)

##### 1.1.2 Rear side / left side

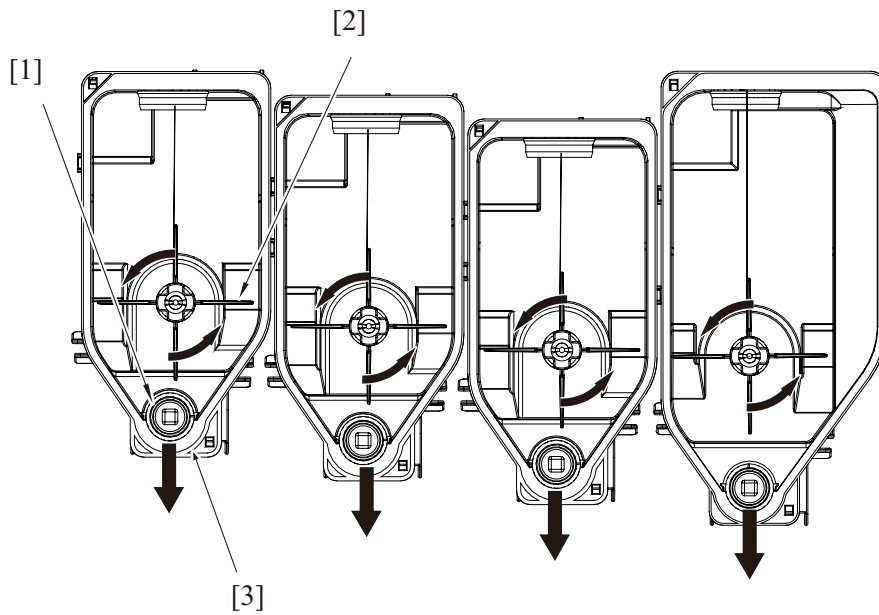


[1]	USB port (Type B)	[2]	CS Remote Care connector for modem connection (RS-232C) *1
[3]	Network port (10 Base-T/100 Base-TX/1000 Base-T)	-	

- \*1: When local interface kit (EK-P11) is mounted.

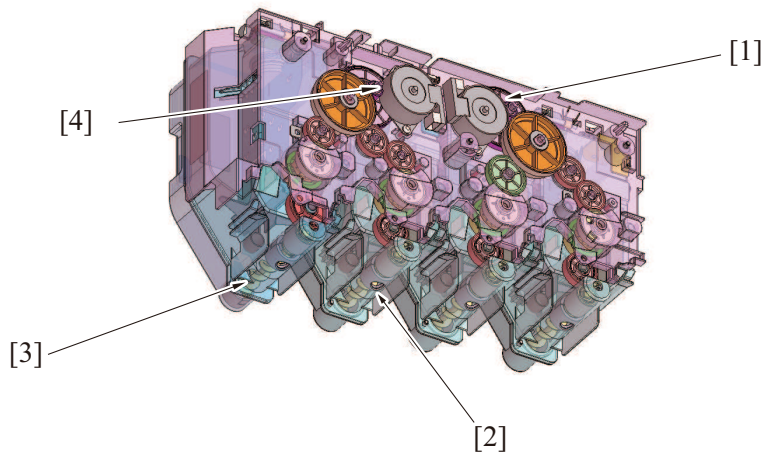
## 1.2 TONER SUPPLY SECTION

### 1.2.1 Configuration



[1]	Toner supply screw	[2]	Toner agitating blade
[3]	Toner replenishing port	-	-

### 1.2.2 Drive

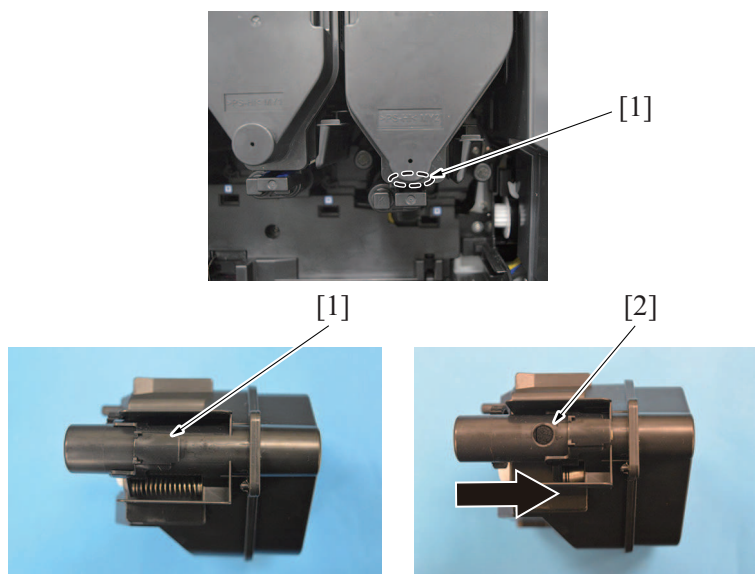


[1]	Toner supply motor/YM (M4)	[2]	Toner replenishing port
[3]	Toner supply screw	[4]	Toner supply motor/CK (M5)

### 1.2.3 Operation

#### (1) Toner replenishing port shutter mechanism

- The toner replenishing port is provided with a shutter that prevents toner from being spilled out when the toner cartridge is removed from the main body.
- The shutter is opened and closed in conjunction with the operation of the toner cartridge when being removed and reinstalled.

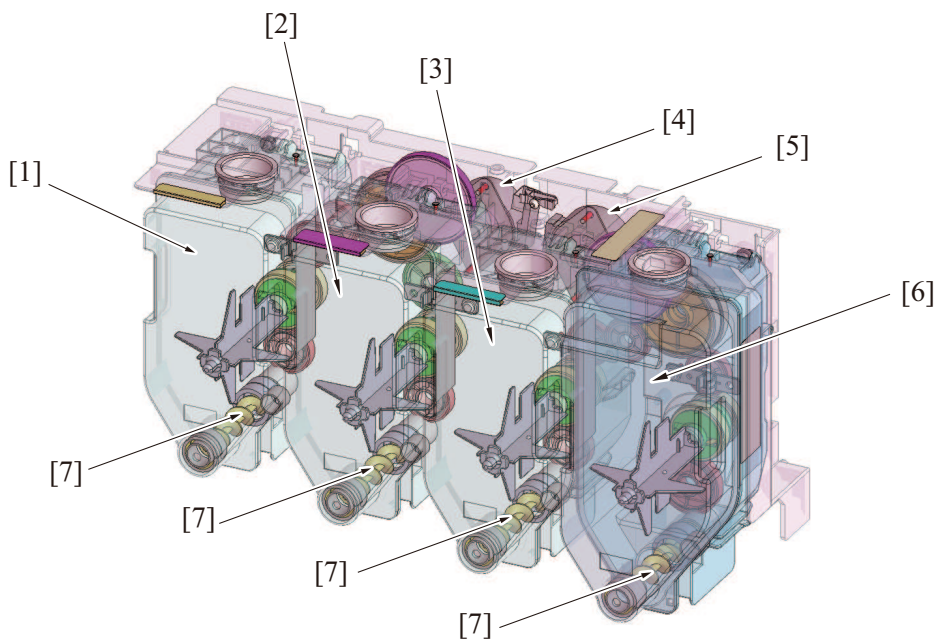


[1] Shutter	[2] Toner replenishing port
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**(2) Toner replenishing mechanism**

- The toner is supplied from the toner cartridge to the imaging unit by rotating the toner supply motor.
- The toner supply motor has two types available for YM toner and CK toner, and the motor rotating direction is controlled to switch the type of toner to be supplied to the imaging unit.

Motor rotatory direction	Toner supply motor/YM	Toner supply motor/CK
Counterclockwise rotation	Toner Y is supplied	Toner C is supplied
Clockwise rotation	Toner M is supplied	Toner K is supplied

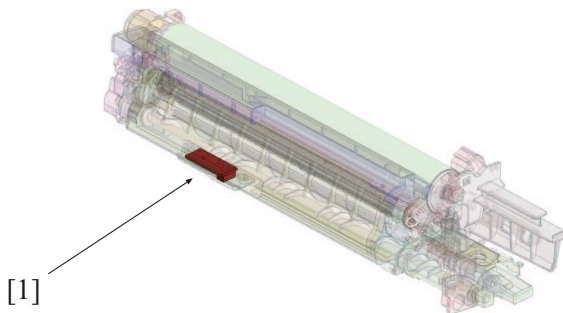


[1] Toner cartridge/Y	[2] Toner cartridge/M
[3] Toner cartridge/C	[4] Toner supply motor/YM (M4)
[5] Toner supply motor/CK (M5)	[6] Toner cartridge/K

[7]	Toner supply screw	-	-
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**(3) Toner replenishing control**

- The toner replenishing time (the amount of toner supplied) during the toner replenishing control is determined based on the TC ratio detected by the TCR sensor (noncontact magnetic type) disposed at the developing section of the imaging 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 Toner density control.



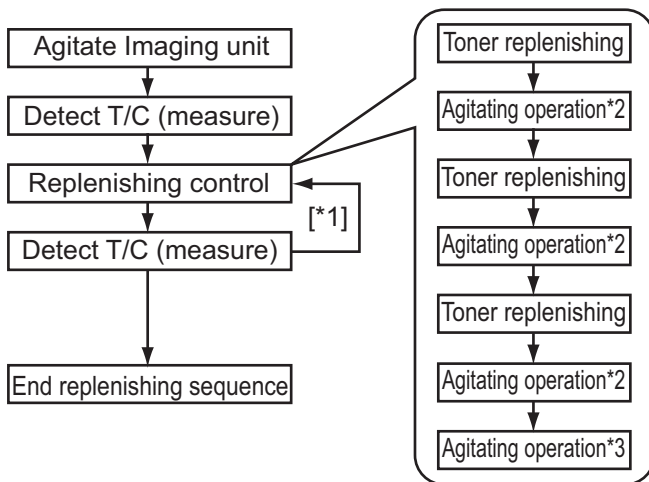
[1]	TCR sensor	
-----	------------	--

**(4) Auxiliary toner replenishing control**

- 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 imaging unit is replenished with toner from the toner cartridge until the T/C value reaches the predetermined value.
- The auxiliary toner replenishing control for imaging unit is terminated as soon as the predetermined T/C ratio is recovered. It is also terminated if the auxiliary toner replenishing control for imaging unit is repeated four sets.

**(a) Operation flow**

- When the auxiliary toner replenishing control is performed, the developing section is agitated, the T/C ratio is calculated by the TCR sensor for each color of toner, and toner is replenished from the toner cartridge.



- \*1: If a predetermined T/C is not reached, return to replenishing control (a maximum of 5 times).
- \*2: Agitate imaging unit during replenishing
- \*3: Agitate imaging unit after replenishing

**(5) Toner cartridge detection**

- Each toner cartridge contains the toner cartridge set board to detect the toner cartridge set status.

- Accessing the toner cartridge set board with the front door closed or main power on judges that if the toner cartridge is installed or not installed.
- After the toner cartridge has been detected, the main body then determines whether the cartridge is new or not.

**NOTE**

- **If the toner cartridge is replaced with a used one, the toner remaining amount may not be displayed correctly. Make sure to replace the toner cartridge with a new one.**

**(6) Toner near-empty condition detection****(a) Toner near empty detection timing**

- Get hold of the remaining amount in the toner cartridge based on the toner supply motor rotating time (accumulated amount of toner supplied) and the T/C ratio detected by the TCR sensor, and judge it as near-empty condition when the toner remaining amount is lower than the toner remaining amount threshold value.

**(b) Toner near-empty display**

- The warning screen to be displayed when a toner near-empty is detected can be enabled or disabled in the “System 2/ Unit Change” in the Service Mode.
- When the warning screen display is set to “Yes”, the message notifying the user that the toner cartridge needs replacing soon is displayed. (Toner is low. Replace when indicated) Printing can be continued even after the message appears.
- When the warning screen display is set to “No”, the message notifying the user that the toner cartridge needs replacing soon is not displayed. Printing can be continued without having the message displayed.

**(c) Resetting the toner near empty conditions**

- The toner near-empty condition is reset when a new toner cartridge is detected.
- The toner near-empty condition is reset when it reached toner empty condition.

**(d) Toner empty condition resetting timing**

- “The main power switch is turned ON”
- “Release in sub power off mode”
- “The front door or the like is opened and closed”
- “When a new toner cartridge is detected”

**(7) Toner empty condition detection**

- The toner empty condition is determined based on T/C ratio detected by the TCR sensor installed in each color of imaging unit.

**(a) Toner empty detection timing**

- The machine determines a toner empty condition when the following conditions is detected after a toner near empty condition has been detected. It then gives the message “Toner has been depleted. (snip)” on the operation panel.
  1. The TCR sensor detects a TC ratio that is lower than a predetermined value.

**(b) Toner empty display**

- The screen mode to be displayed when a toner empty is detected can be selected by specifying the person who replaces the unit in the “System 2/ Unit Change” in the Service Mode.
- When User is selected as the person, the message requesting toner cartridge replacement by user is displayed when a toner empty condition is detected. (Toner has been depleted. Replace the Toner Cartridge according to the instructions.)
- When Service is selected as the person, the message prompting service engineer to replace the toner cartridge is displayed. (Out of toner. Contact your service representative.)

**(c) Resetting the toner empty conditions**

- The toner empty condition is reset when a new toner cartridge is detected.
- The toner empty condition is reset when “Auxiliary toner replenishing control” is conducted after detecting the toner empty condition and the completed normally.

**NOTE**

- **“Auxiliary toner replenishing control” is available when Engine FW DipSW “6” is set to “ON.”**

**(d) Toner empty condition resetting timing**

- The “auxiliary toner replenishing control” is executed under any of the following conditions after a toner empty condition has been detected:
  - “When a new toner cartridge is detected,” “When Engine FW DipSW ‘6’ is set to ‘ON’.”

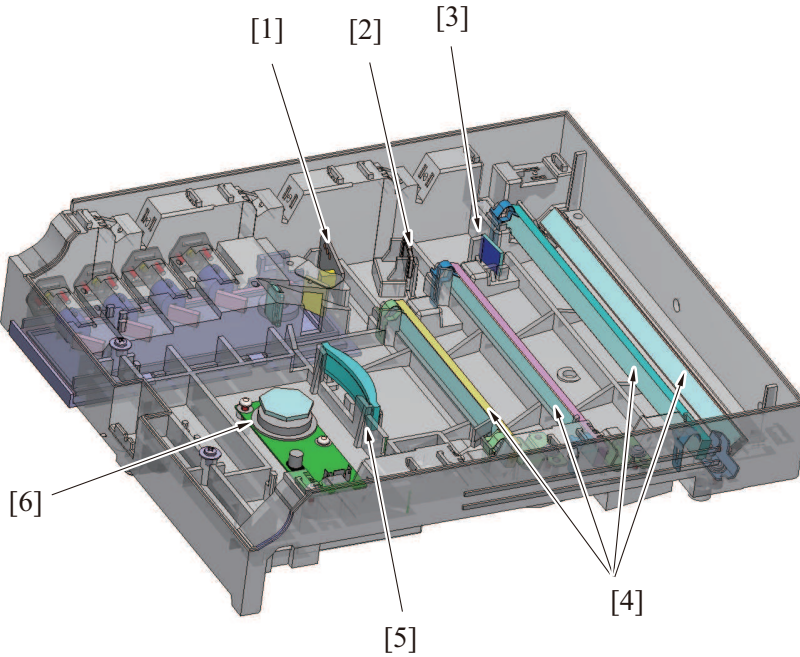
**(8) Monochrome prints**

- The color print is disabled when any of the C, M, and Y toner cartridges is empty. Monochrome print only is, however, enabled if the K toner cartridge is not empty.
- The monochrome print is also controlled by the ordinary near-empty and empty condition detection methods.



### 1.3 WRITE SECTION

#### 1.3.1 Configuration



[1]	SOS sensor	[2]	SOS lens
[3]	SOS mirrors	[4]	Return mirror
[5]	G1 lens	[6]	Polygon motor (M7)

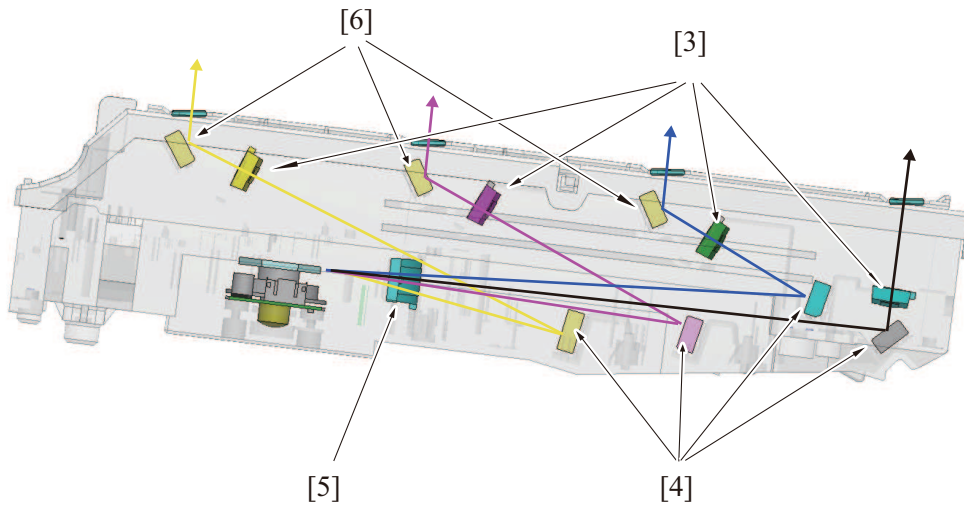
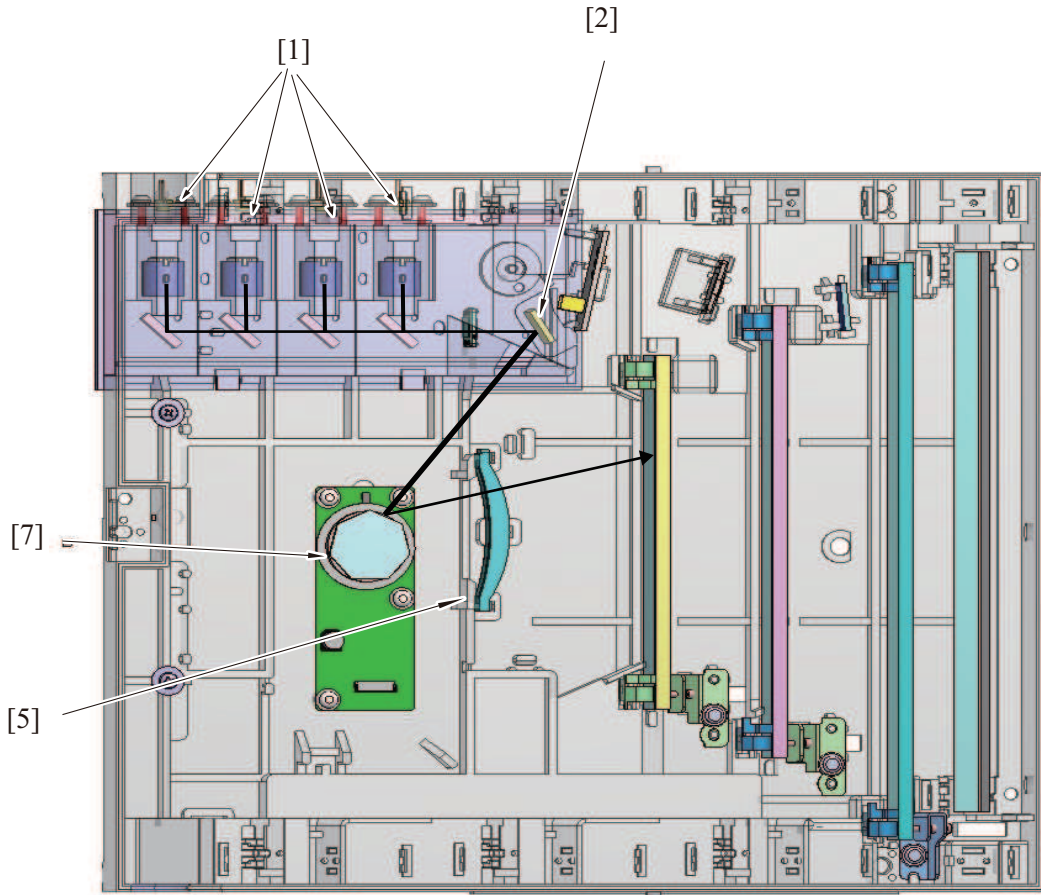
#### 1.3.2 Operation

##### (1) Overview

- A semiconductor laser is provided for each of four different colors. A single polygon motor is used to make a scan.
- Each photoconductor is irradiated with a laser light so that an electrostatic latent image is formed on it.
- All the four colors of photoconductors are irradiated with each laser light simultaneously, which removes minus electric charge remaining on the surface of photoconductors.

##### (2) Laser exposure process

1. The laser light of each color enters the cylindrical lens via the synthetic mirror and return mirror.
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 photoconductor surface via the G2 lens and return mirror/1. The Y laser light is condensed on the photoconductor surface via the return mirror/1, G2 lens, and return mirror/2. The M laser light is condensed on the photoconductor surface via the return mirror/1, G2 lens, and return mirror/2. The C laser light is condensed on the photoconductor surface via the return mirror/1, G2 lens, return mirror2, and return mirror/3.



[1]	Laser diode	[2]	Return mirror
[3]	G2 lens	[4]	Return mirror/1
[5]	G1 lens	[6]	Return mirror/2
[7]	Polygon motor (M7)	[ ]	

**(3) Laser emission timing**

- When a ready signal is detected after the lapse of a given period of time after the print cycle has been started, a laser ON signal is output from the base board.
- The laser ON signal triggers the firing of each laser light, which illuminates the index board via the polygon mirror, G1 lens, index mirror (K), and Index lens. This 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.

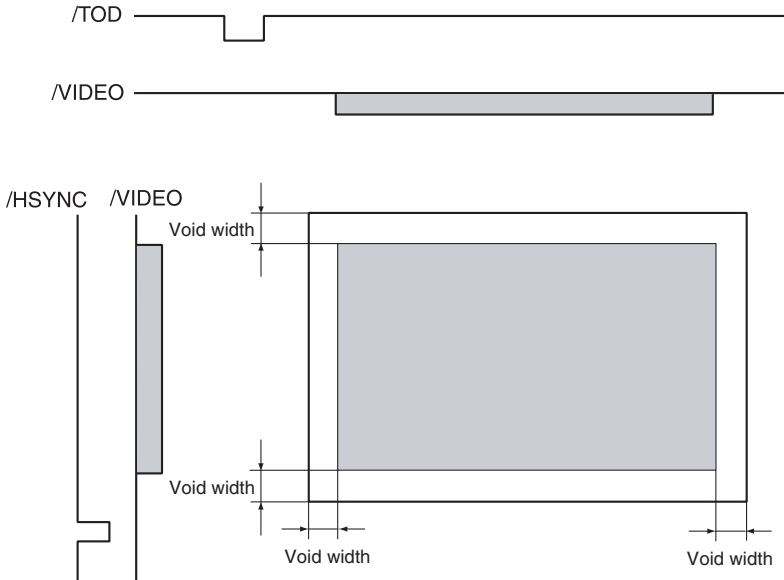
**(4) Laser emission area**

**(a) Main scan direction (FD)**

- The print start position in the FD direction is determined by the FD print start signal (/HSYNC) that is output from the base board and the width of the paper.
- The laser emission area is determined by the paper size. However, there is a 4.0 mm (copy) /4.2 mm (PC print) wide void area on both the both edges of the paper.

**(b) Sub scan direction (CD)**

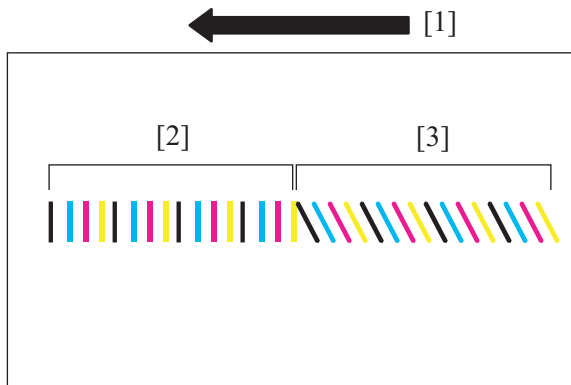
- The print start position in the CD direction is determined by the CD print start signal (/TOD) that is output from the base board and the length of the paper.
- The laser emission area is determined by the paper size. However, there is a 4.0 mm (copy) /4.2 mm (PC print) wide void area on both the both edges of the paper.



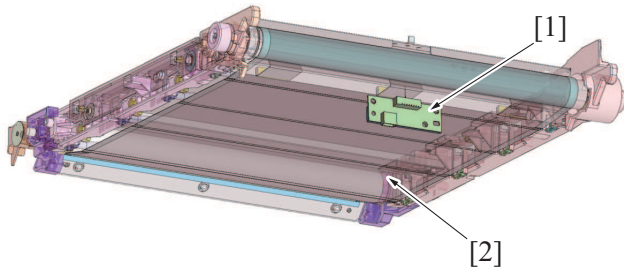
**(5) Color registration control (color shift correction) system**

**(a) Overview of the registration control**

- In a tandem engine, each four different color has an independent image reproduction process. Color shift may occur due to accuracy differences of parts in the print head unit. The color registration control system automatically detects color shift and correct color shift in the main and sub scanning directions.
- 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).
- The color shift detection sequence proceeds as follows. A pattern is produced on the transfer belt. The IDC sensor 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.
- 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]	Movement direction of the transfer belt	[2]	Detection area for sub scanning direction
[3]	Detection area for main scanning direction	-	-

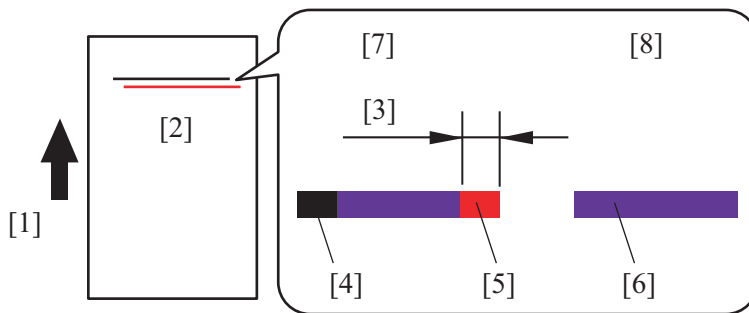


[1] IDC sensor (IDCS)	[2] Transfer belt
-----------------------	-------------------

**(b) 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)

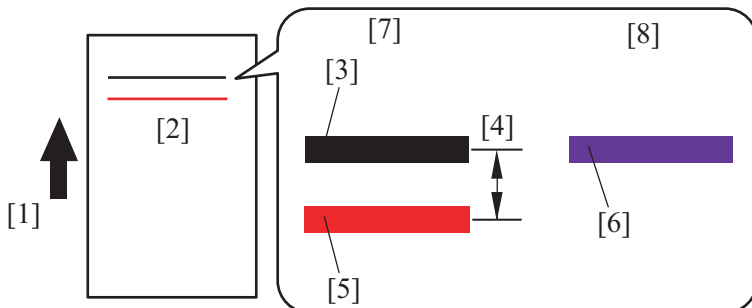


[1] Rotational direction of the transfer belt	[2] Transfer belt
[3] Color shift	[4] Black (K)
[5] Magenta (M)	[6] No color shift
[7] Before correction	[8] After correction

**(c) 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] Black (K)	[4] Color shift
[5] Magenta (M)	[6] No color shift
[7] Before correction	[8] After correction

**(6) Main scan magnification adjustment**

- The main body is mounted with only one IDC sensor and therefore unable to make the main scan magnification adjustment or calculate the skew amount automatically. The main scan magnification adjustment is therefore manually made using the menu on the operation panel.
- The adjustment is necessary when the adjustment value is cleared, such as when the PH unit or the backup board is replaced with a new one.

**(7) 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.

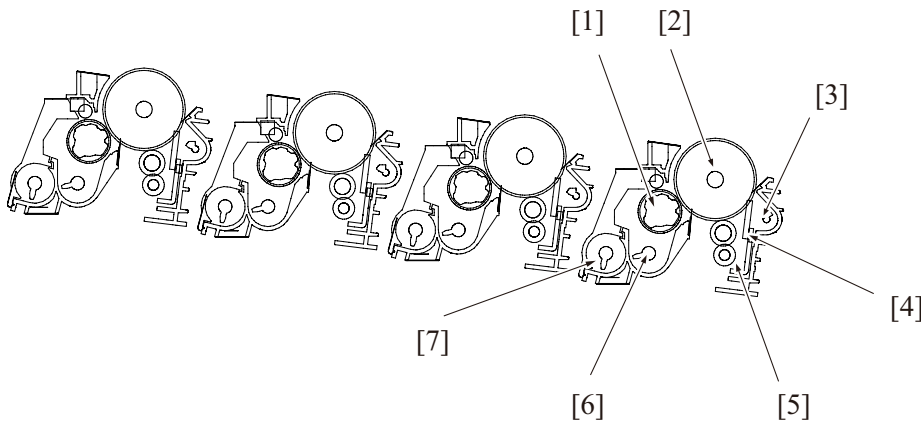
**(8) Image processing**

- The following image stabilization functions are available as they relate to the write section. For more details, see "Image stabilization control".
- Laser light intensity correction control
- Color registration correction control (main scan/sub-scan)
- Gamma correction

**1.4 IMAGING UNIT**

**1.4.1 Imaging unit (overall configuration)**

**(1) Configuration**

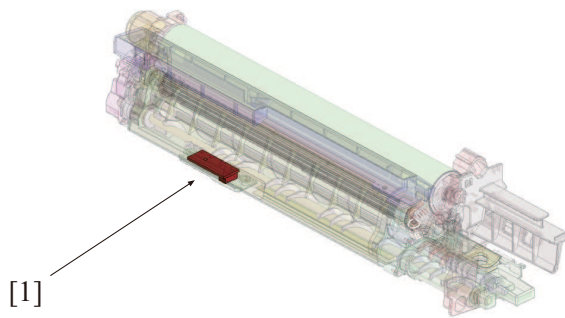


[1]	Developing roller	[2]	Photoconductor
[3]	Waste toner collecting screw	[4]	Cleaning blade
[5]	Charging roller	[6]	Toner supply screw 2
[7]	Toner supply screw 1	-	

**(2) Operation**

**(a) Imaging unit detection**

- The imaging unit of each color of toner is provided with a TCR sensor. The sensor detects different states of the corresponding imaging unit.



[1]	TCR sensor	-	-
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**NOTE**

- **Be sure to replace the imaging unit with a new one that has not been used. A TCR sensor error (trouble code: 25##) may occur if a used imaging unit is installed.**

**Unit mounting detection**

- The TCR sensor detects the mounting condition of the imaging unit.
- When imaging unit is detected in the mounted condition, control now proceeds to the “new article detection control”.

**Detection timing**

- The unit mounting detection control is performed under any of the following conditions:  
 “The main 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 main power switch in ON position”

**Operation when it is detected that no units are mounted**

- The message “Imaging Unit Installation Error” appears on the operation panel and the machine prohibits initiation of any new print cycle. The message “Imaging Unit Installation Error” disappears as soon as a imaging unit is mounted.

**New article detection**

- The TCR sensor detects whether the imaging unit is new or not.

**Detection timing**

- The new article detection control is performed if it is determined through the “unit mounting detection” control that the imaging unit is correctly mounted in place.

**Operation when the imaging unit is determined not to be new**

- The new article detection control is terminated.

**Operation when the imaging 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 imaging 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 backup board of the main body.
- The life counter is available for the imaging unit of each color. The counter value is recorded in the backup board of the main body.

**New release disable mode**

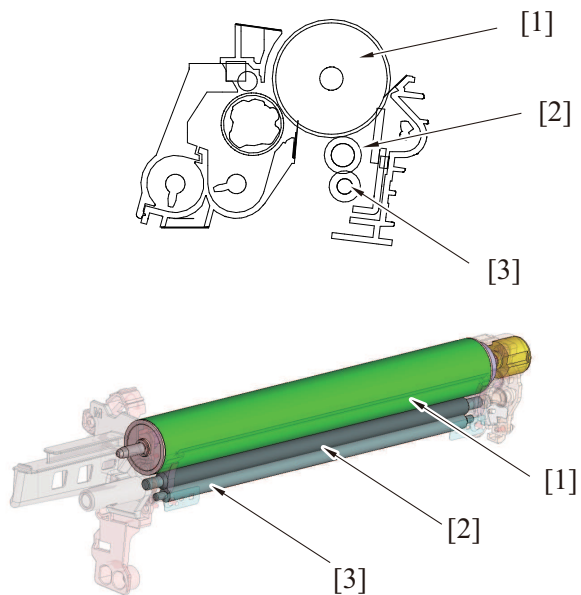
- The new release disable mode is used when a new imaging unit is temporarily used for performing troubleshooting procedures of a machine.
- No new article detection control is performed for the imaging unit when the new release disable mode is used.
- The new release disable mode should be used only for troubleshooting purposes.

**NOTE**

- **See “ New Release Disable mode ” for more detailed operating precautions.**

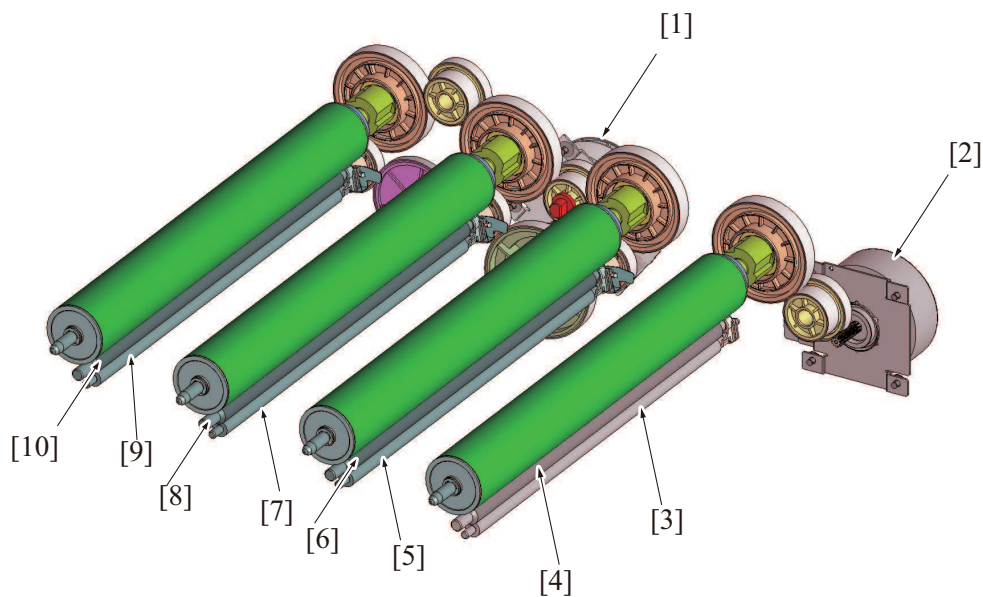
1.4.2 Imaging unit (charge corona)

(1) Configuration



[1]	Photoconductor	[2]	Charging roller
[3]	Cleaning roller	-	

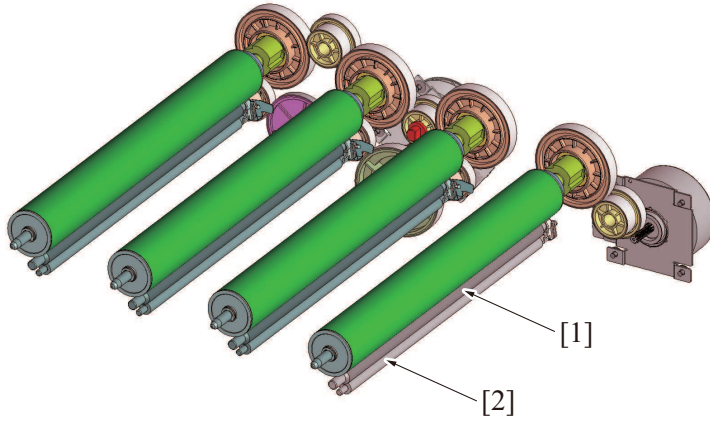
(2) Drive



[1]	Color motor (M2)	[2]	Main motor (M1)
[3]	Cleaning roller/K	[4]	Charging roller/K
[5]	Cleaning roller/C	[6]	Charging roller/C
[7]	Cleaning roller/M	[8]	Charging roller/M
[9]	Cleaning roller/Y	[10]	Charging roller/Y

(3) Operation

(a) Charge mechanism



[1] Charging roller	[2] Cleaning roller
---------------------	---------------------

**Charge roller**

- Charge rollers are used for charging the photoconductor.
- As compared with the charge wire, the charge roller applies a lower voltage and thus produces a smaller amount of ozone. The main body is not therefore mounted with any ozone filter.
- The charge roller is driven to follow the movement of the photoconductor.

**Cleaning roller**

- The cleaning roller removes toner stick to the charge roller.
- The cleaning roller is driven to follow the movement of the charge roller.

(b) Charge corona control

- High voltage DC negative charge is applied to the charge roller. Charge discharged the surface of the photoconductor to become uniformly charged via the charge roller.
- The charge corona voltage supplied from the high voltage unit is applied to the terminal of the charge roller of each color.

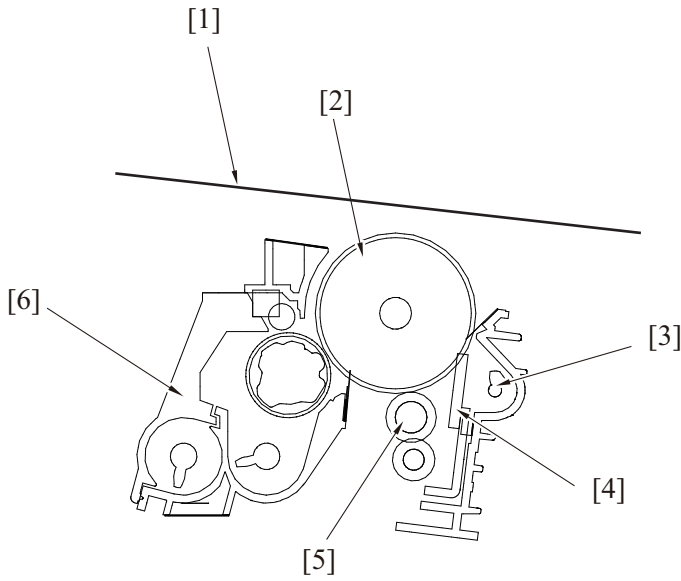


[1] Photoconductor	[2] Electrostatic charger application terminal
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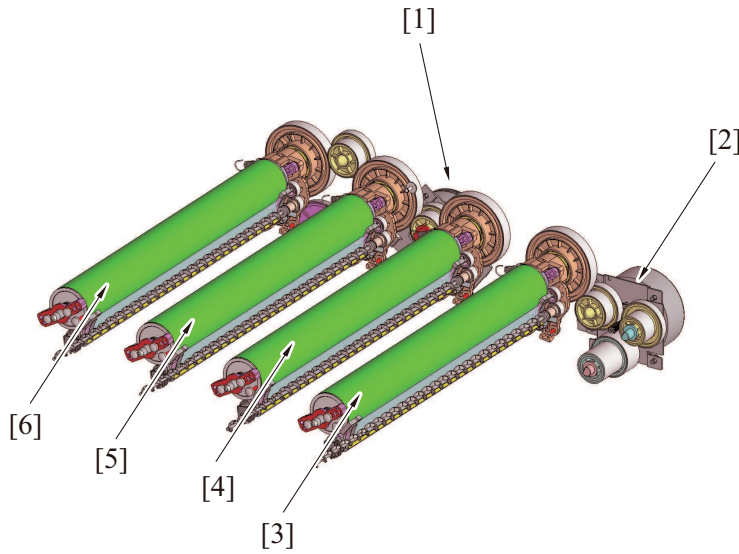
**1.4.3 Imaging unit (photoconductor)**

**(1) Configuration**



[1]	Transfer belt	[2]	Photoconductor
[3]	Toner collecting screw	[4]	Cleaning blade
[5]	Charging roller	[6]	Developing section

**(2) Drive**



[1]	Color PC motor (M2)	[2]	Main motor (M1)
[3]	Photoconductor/K	[4]	Photoconductor/C
[5]	Photoconductor/M	[6]	Photoconductor/Y

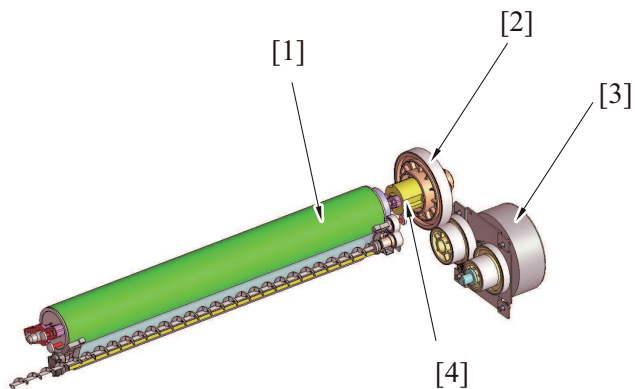
**(3) Operation**

**(a) Photoconductor drive mechanism**

- Two independent photoconductor motors (for color and black) are used for the drive mechanism to suppress incorrect color registration and uneven pitch.

**Photoconductor/K drive mechanism**

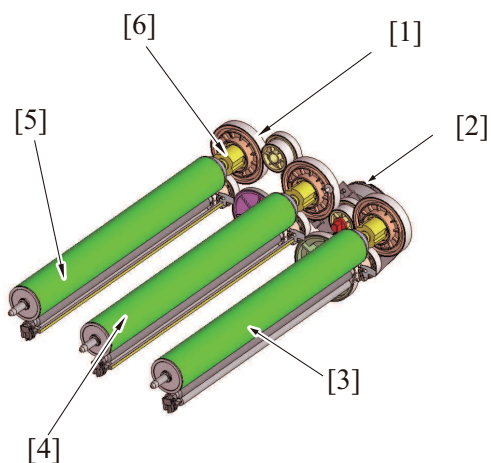
- The main motor drives the photoconductor/K.
- The main motor is the common source that provides drive to manual bypass feed, tray feed, registration roller, transfer belt, and others.
- Drive is transmitted to the photoconductor when the triangular-prism-shaped shaft is engaged with the mating coupling part.



[1]	Photoconductor K	[2]	Photoconductor drive gear/K
[3]	Main motor (M1)	[4]	Coupling

**Photoconductor/Y, M, C drive mechanism**

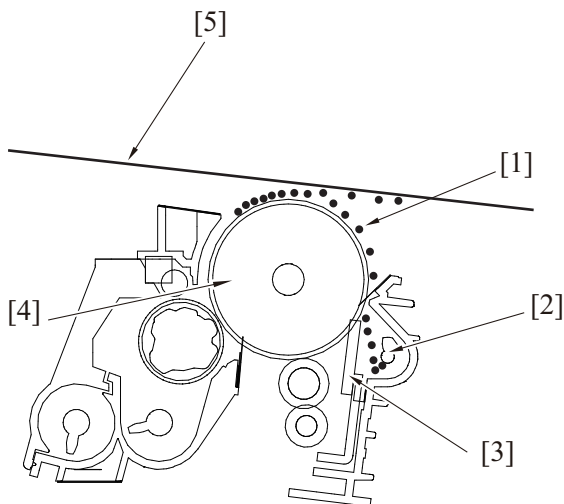
- The photoconductors/Y, M, C are driven by the color PC motor.
- Drive is transmitted to each of the photoconductors when the triangular-prism-shaped shaft is engaged with the mating coupling part.



[1]	Color photoconductor gear/Y	[2]	Color PC motor (M2)
[3]	Photoconductor/C	[4]	Photoconductor/M
[5]	Photoconductor/Y	[6]	Coupling

**(b) Photoconductor cleaning**

- The toner image on the photoconductor is transferred to the transfer belt. (1st transfer) Part of the toner image that is not transferred is left on the surface of the photoconductor. The residual toner is scraped off by the cleaning blade.
- Toner, which has been scraped off the surface of the photoconductor, is conveyed by the toner collecting screw toward to the front of the machine. It is discharged in the waste toner bottle.



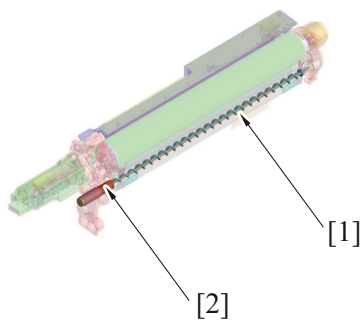
[1]	Waste toner	[2]	Toner collecting screw
[3]	Cleaning blade	[4]	Photoconductor
[5]	Transfer belt		

**Cleaning blade**

- The cleaning blade is pressed up against the surface of the photoconductor at all times. No cleaning blade retraction mechanism is provided.
- The cleaning blade scrapes residual toner off the surface of the photoconductor as the photoconductor is rotated.
- The toner collecting screw conveys the toner scraped off the surface of the photoconductor.

**Toner conveyance/collection mechanism**

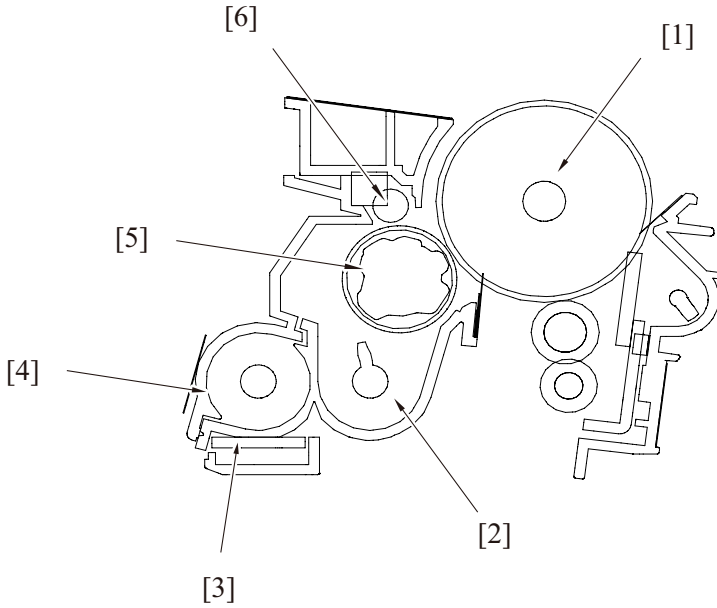
- The toner collecting screw is rotated by the driving force transmitted from the photoconductor. (The toner collecting screw rotates in time with the rotation of the photoconductor.)
- Rotation of the toner collecting screw conveys toner scraped off the surface of the photoconductor toward the front of the machine.
- The toner conveyed to the front of the machine is discharged via the toner collecting port into the waste toner bottle.
- The toner collecting port is provided with a shutter mechanism. Mounting the waste toner bottle pushes the shutter at the toner collecting port, opening the toner collecting port. The shutter is closed by the waste toner bottle removal and prevents the toner spilling from the toner collecting port.



[1]	Toner collecting screw	[2]	Toner collecting port
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**1.4.4 Imaging unit (developing)**

**(1) Configuration**

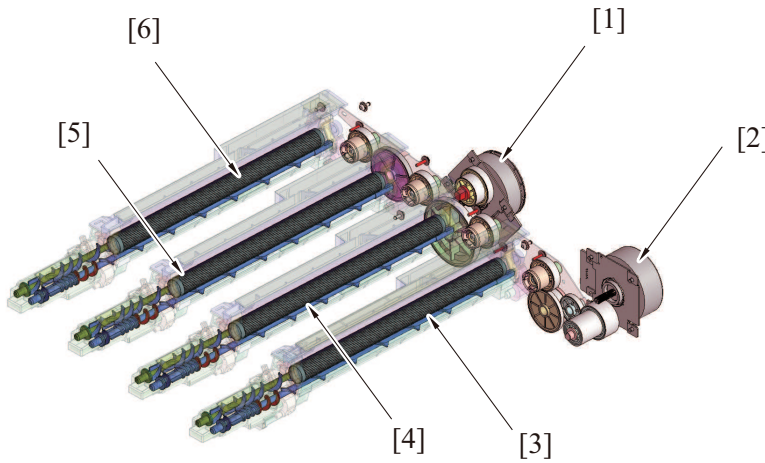


[1]	Photoconductor	[2]	Toner supply screw 2
[3]	TCR sensor	[4]	Toner supply screw 1
[5]	Developing roller	[6]	Doctor shaft regulator

**(2) Drive**

**(a) Developing section/Y, M, C, K drive mechanism**

- Rotation of the main motor transmits drive to the developing drive gear, which drives the developing roller/K.
- Rotation of the color PC motor transmits drive to each developing drive gear, which drives the developing rollers/Y/M/C.



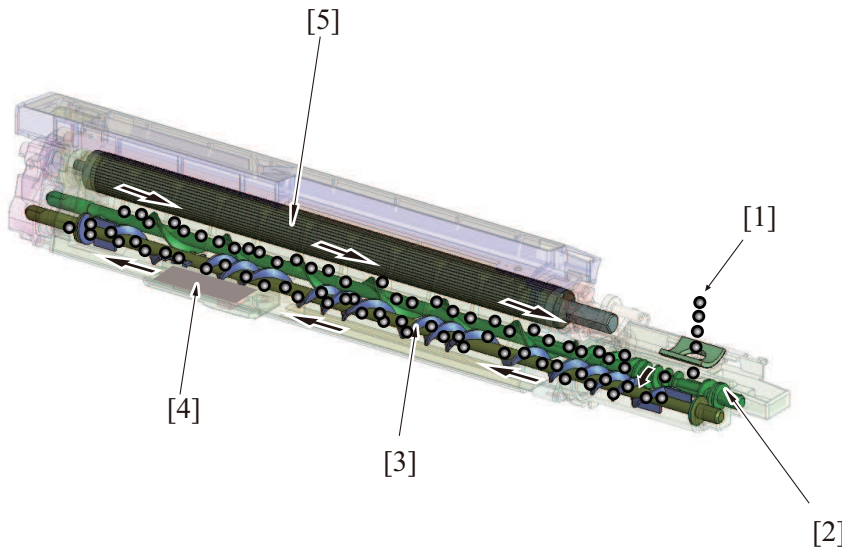
[1]	Color motor (M2)	[2]	Main motor (M1)
[3]	Developing roller/K	[4]	Developing roller/C
[5]	Developing roller/M	[6]	Developing roller/Y

**(3) Operation**

**(a) Developer flow**

1. Toner replenished via the toner replenishing port located at the front side of the machine 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 installed on the underside of the imaging 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.

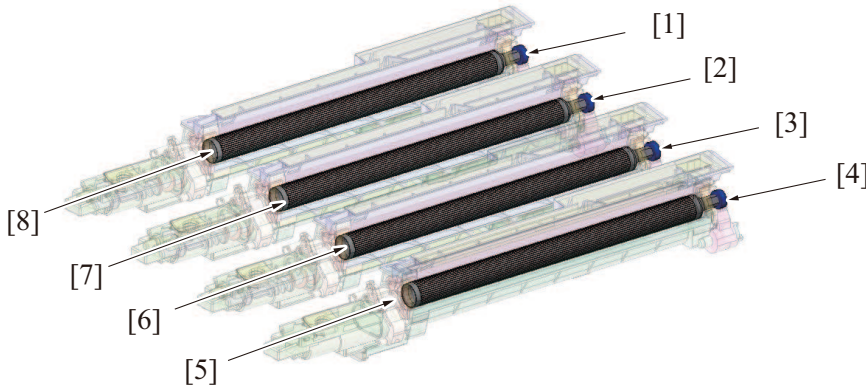
- Only the toner contained in the developer sticks to the electrostatic latent image on the surface of the photoconductor. The developer that is left on the developing roller is returned to the toner supply screw 2 by the magnetic pole positioning of the developing roller.



[1]	Toner replenishing port	[2]	Toner supply screw 1
[3]	Toner supply screw 2	[4]	TCR sensor
[5]	Developing roller	-	

**(b) 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 photoconductor.
- 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 photoconductor. 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 conductive bearing.



[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

**Service Mode**

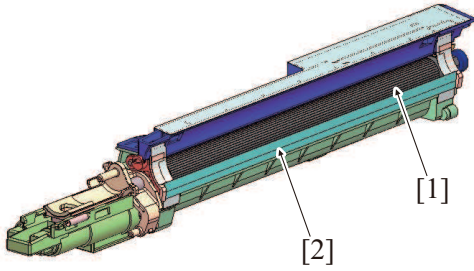
**(a) Grad/Dev AC Bias V Selection**

- 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 “Grad/Dev AC Bias V Selection”.

**(c) Toner scattering prevention**

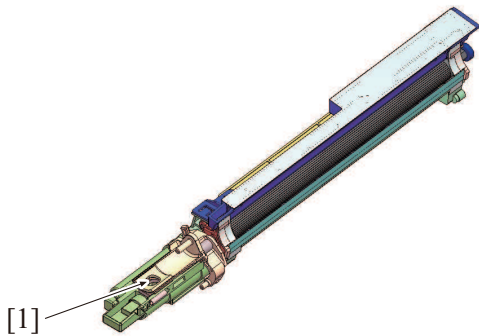
- The toner scattering prevention sheet is installed in an area around the developing roller, functioning to prevent toner from scattering.



[1]	Developing roller	[2]	Toner scattering prevention sheet
-----	-------------------	-----	-----------------------------------

**(d) Toner replenishing port shutter mechanism**

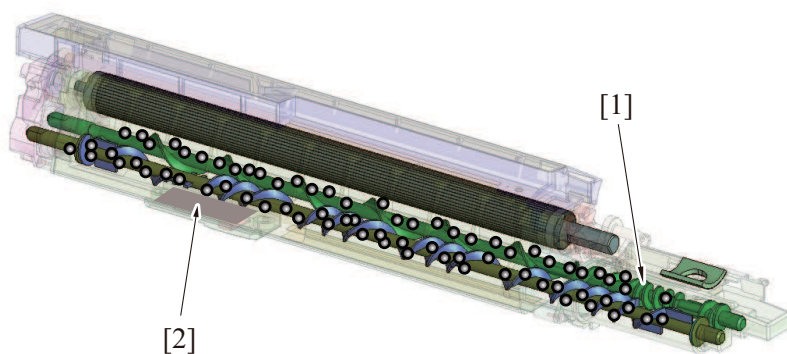
- The toner replenishing port is equipped with a shutter that prevents toner from being spilled out when the imaging unit is removed from the main body.
- The shutter of the toner replenishing port is opened and closed in conjunction with the operation of the toner cartridge when being removed and reinstalled.



[1]	Toner replenishing port	-
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**(e) 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 (T/C) of the developer. The reading is used for determining the amount of toner supplied.
- Only when a new Imaging 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 T/C ratio is  $6.5 \pm 1.5\%$ .
- The magnetic permeability (powder density) of the carrier in the developer is measured to determine the T/C.
- The TCR sensor is integrated with the imaging unit. When the TCR sensor is to be replaced with a new one, the entire imaging unit must be replaced.
- For replenishment of toner to the imaging unit, see Toner replenishing control.

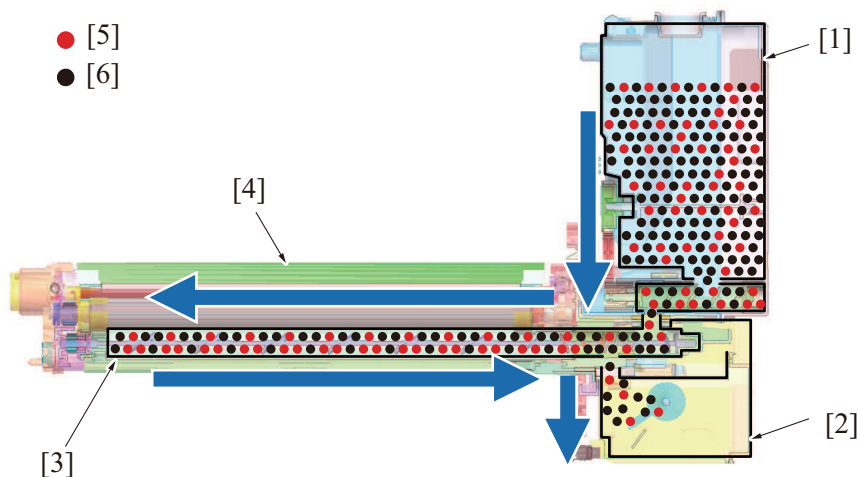


[1] Toner supply screw 1	[2] TCR sensor
--------------------------	----------------

**(f) Auto refining developing system**

- Replacement of the developer maintains the stabilized image quality for a long period of time.

- [5] (Red dot)
- [6] (Black dot)



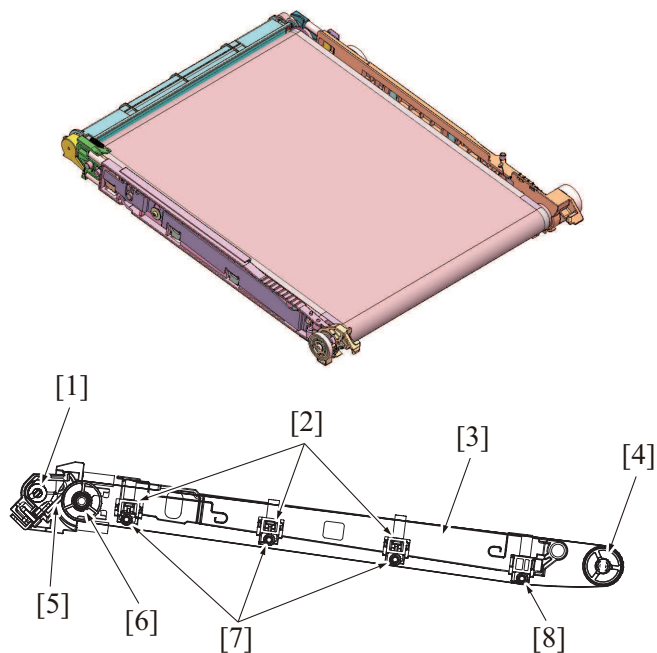
[1] Toner cartridge/K (Toner + New carrier)	[2] Waste toner box (discharging the developer)
[3] Developing chamber (circulates and agitates developer)	[4] Photoconductor
[5] Carrier	[6] Toner

**Description**

- The toner cartridge is filled with the toner and a small percentage of carrier.
- The fresh carrier is supplied together with the toner to the developing unit.
- When the developer (toner + carrier) circulates in the developing chamber, excessive developer in the developing unit is discharged to the waste toner bottle.
- Replacement of the developer prevents degradation of developer and maintains stabilized image quality for a long period of time.

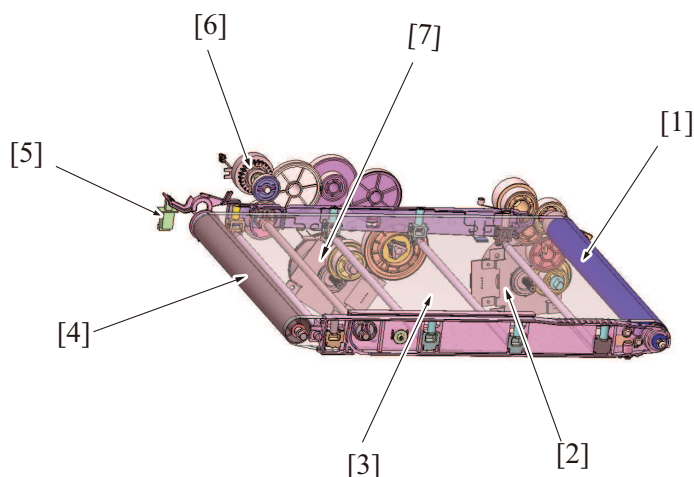
**1.5 1ST TRANSFER SECTION**

**1.5.1 Configuration**



[1]	Toner collecting screw	[2]	1st transfer roller drive arm Y/M/C
[3]	Slide plate	[4]	Transfer belt drive roller
[5]	Cleaning blade	[6]	Driven roller
[7]	1st transfer roller Y/M/C	[8]	1st transfer roller K

**1.5.2 Drive**



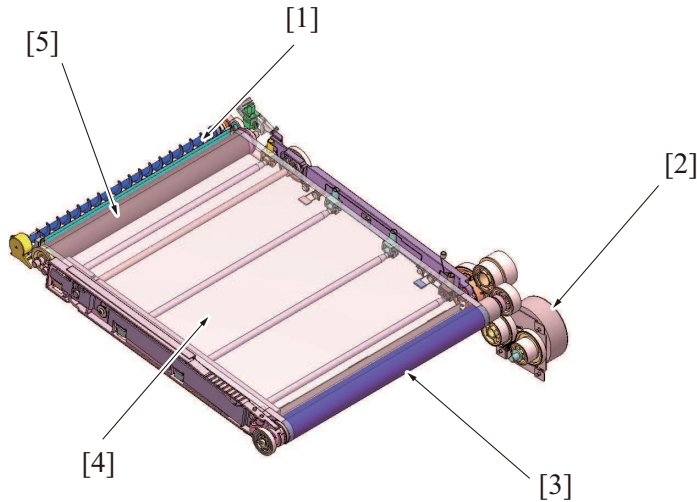
[1]	Transfer belt drive roller	[2]	Main motor (M1)
[3]	Transfer belt	[4]	Driven roller
[5]	1st transfer pressure switch (SW4)	[6]	1st transfer pressure clutch
[7]	Color motor (M2)	-	

**1.5.3 Operation**

**(1) Transfer belt drive**

- The transfer belt drive roller is rotated by the driving force of the main 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 collecting screw of the cleaning mechanism.





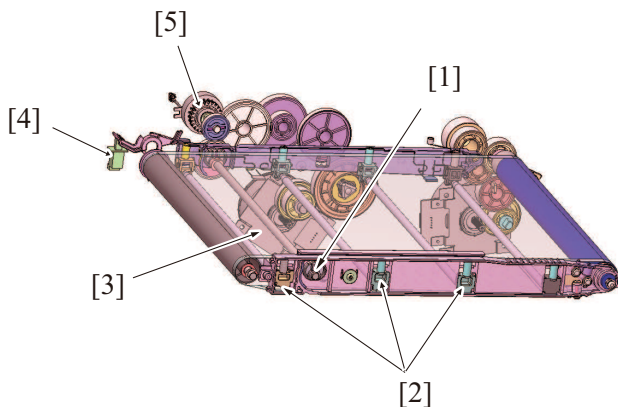
[1]	Waste toner collecting screw	[2]	Main motor (M1)
[3]	Transfer belt drive roller	[4]	Transfer belt
[5]	Transfer belt driven roller		-

**(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).

**(a) 1st transfer roller pressure**

- Rotation of the color motor is transmitted to the pressure cam via the 1st transfer pressure clutch.
- Rotation of the pressure cam moves up and down the slide plate.
- The up/down 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 photoconductor.
- When the slide plate moves to the pressure position, the pressure/release detection lever rotates to turn OFF the 1st transfer pressure switch.
- The cam will stop rotating and the sliding plate will stop.
- The 1st transfer roller (Y, M, C) will stay being pressed.



[1]	Pressure cam	[2]	1st transfer roller drive arm Y/M/C
[3]	Color motor (M2)	[4]	1st transfer pressure switch (SW4)
[5]	1st transfer pressure clutch (CL1)		-

**(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 color imaging unit are stopped.
- The 1st transfer roller/K is pressed against the PC drum at all times in both black and color modes.

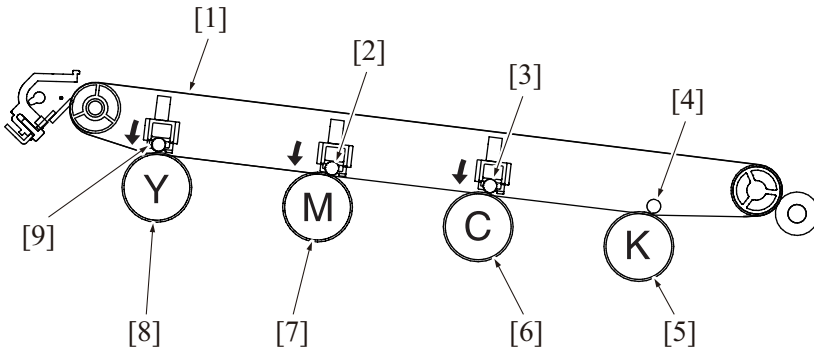
**(a) Color mode**

- In the color mode, the transfer roller is where the photoconductor is pressed against the transfer belt for all four colors of toner

**(b) Black mode**

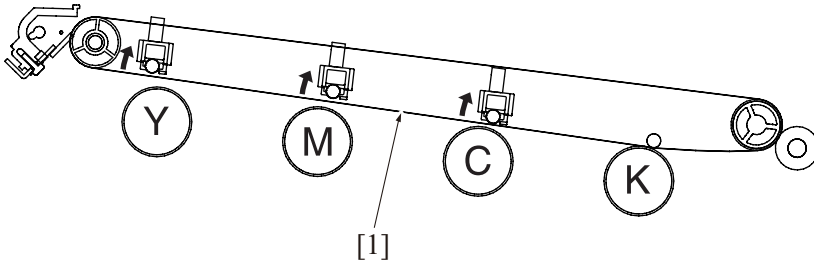
- In the black mode, the transfer roller /Y, M, C is where the photoconductor/Y, M, C leaves the transfer belt, while the transfer roller /K is where the photoconductor/K is pressed against the transfer belt. This allows the photoconductor/Y, M, C to stop rotating in this mode.

Color mode



[1]	Transfer belt	[2]	1st transfer roller/M
[3]	1st transfer roller/C	[4]	1st transfer roller/K
[5]	Photoconductor/K	[6]	Photoconductor/C
[7]	Photoconductor/M	[8]	Photoconductor/Y
[9]	1st transfer roller/Y	-	

Black mode



[1]	Transfer belt (retraction position)	-	
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(c) ACS mode

ACS mode overview

- When executing a print job, any desired mode can be selected from the printer driver. (Default setting: Auto Color Selection) The auto color mode is called the ACS (Auto Color Selection) mode.
- In ACS mode, the machine analyzes the image data of the original 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.

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 operation 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"

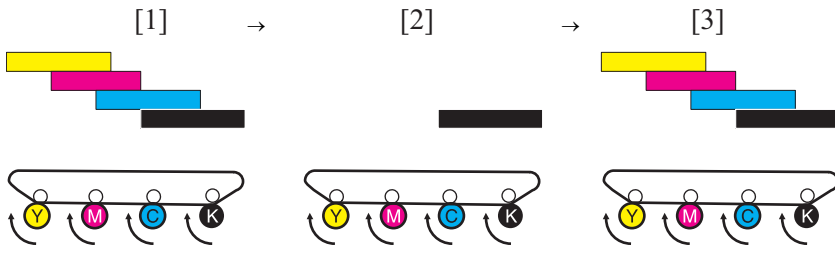
When the number of multi-copies is as specified or under

- 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 color imaging 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 of the 1st transfer roller/Y, M, C is that the loss time produced as a result of retraction of the 1st transfer roller can be reduced relative to print productivity.

When the number of multi-copies is as specified or over

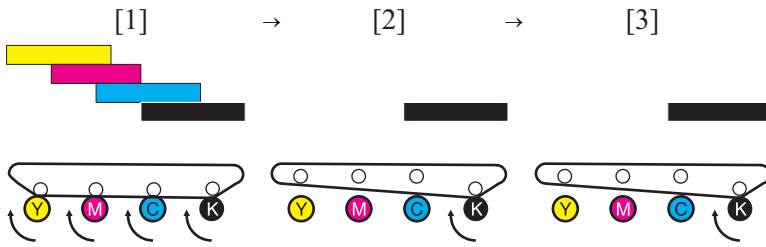
- The black printing will start when the color mode is complete and the 1st transfer roller /Y/M/C is retracted to be switched to the black mode. An advantage during retraction of the 1st transfer roller is that chance of the color imaging unit (Y, M, C) being worn as a result of wasteful rotation can 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



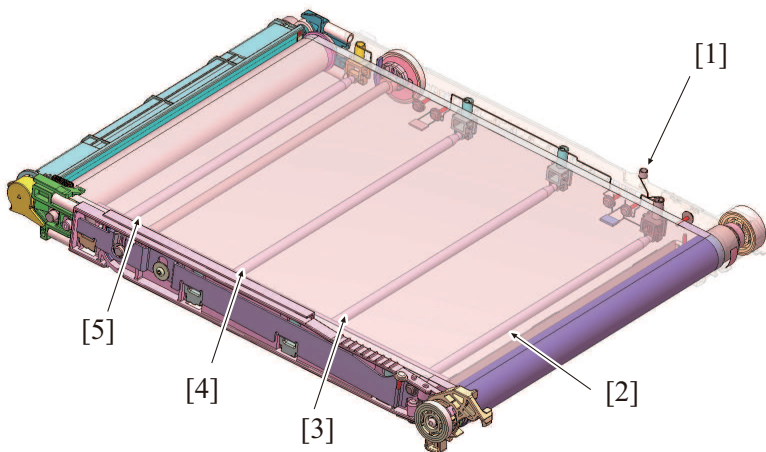
[1]	Color mode	[2]	Black mode
[3]	Black mode	-	-

**(d) ACS mode control change with the Engine FW dip SW**

- By changing the engine FW dip SW setting, you can change the pressure control of the 1st transfer rollers in ACS mode.
- When the Engine FW Dip SW "25" is set to "1", the 1st transfer roller's default position is changed to the "black mode (retracted position)." (When the setting is "0", the default position of the 1st transfer roller/Y, M, C is at the color mode (pressed position).)
- For users who mainly produce black prints, when "1" is selected, the 1st transfer roller/Y, M, C can be at the retracted position more frequently, which helps to reduce the wearing out of photoconductors caused by unnecessary rotation of color imaging units. The disadvantage of the setting is that the first copy time becomes longer for color print as the 1st transfer roller/Y, M, C is moved from the color mode to the black mode. Reduced productivity of the multi-print cycle could result depending on the condition.

**(4) 1st transfer control**

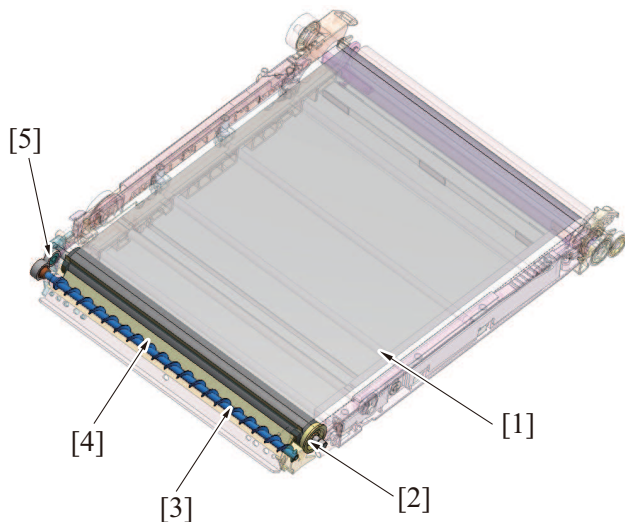
- To transfer the toner image formed on the surface of the photoconductor onto the transfer belt, the transfer current supplied from the high voltage unit is applied to the 1st transfer roller of each color.



[1]	1st transfer voltage application terminal	[2]	1st transfer roller/K
[3]	1st transfer roller/C	[4]	1st transfer roller/M
[5]	1st transfer roller/Y	-	-

**(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]	Transfer belt	[2]	Transfer belt driven roller
[3]	Waste toner collecting screw	[4]	Cleaning blade
[5]	Drive transmission gear		

**(a) Cleaning blade**

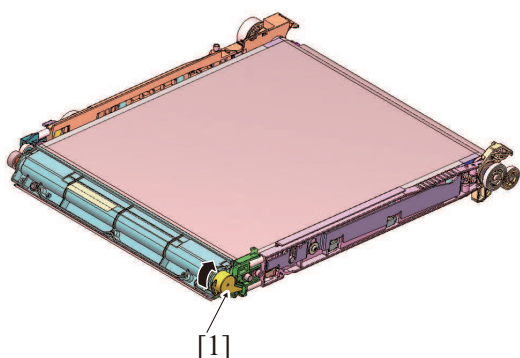
- The cleaning blade, of a fixed blade type, is pressed up against the surface of the transfer belt at all times. No cleaning blade retraction mechanism is provided.
- The waste toner on the surface of the transfer belt is scraped off as the transfer belt is rotated.

**(b) 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 section.
- The waste toner is discharged through the toner collecting port into the waste toner bottle.
- The waste toner is disposed of when a waste toner bottle which is detected to be full of waste toner is replaced with a new one and the used waste toner bottle is discarded.

**(6) Toner discharge port shutter mechanism**

- A shutter mechanism is provided to prevent waste toner from being spilled from the waste toner discharge port when the transfer belt unit is removed and reinstalled.
- The shutter is fitted to the transfer belt unit. When the transfer belt unit is removed, the waste toner discharge port is automatically closed.



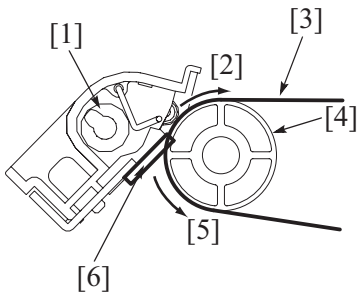
[1]	Shutter	-
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**(7) Cleaning blade foreign matter removal control**

- 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.

**(a) Operation timing**

- The backward rotation control is provided at the completion of every print job.



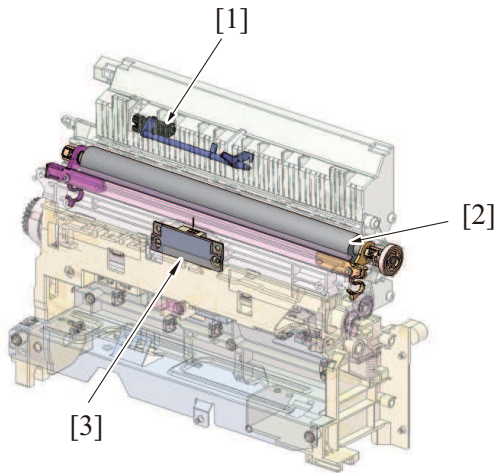
[1]	Toner collecting screw	[2]	Backward rotation
[3]	Transfer belt	[4]	Transfer belt driven roller
[5]	Forward rotation	[6]	Cleaning blade

**(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 "New Release".

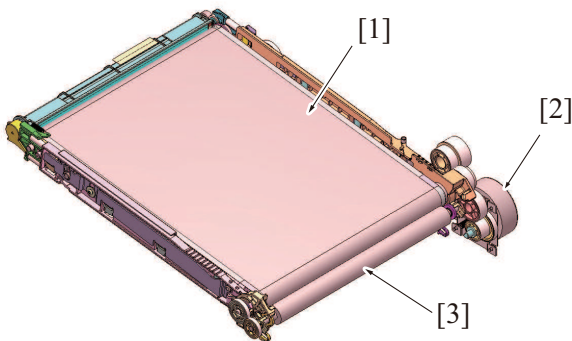
**1.6 2ND TRANSFER SECTION**

**1.6.1 Configuration**



[1]	Fusing loop sensor (PS10)	[2]	2nd transfer roller
[3]	IDC sensor (IDCS)		

**1.6.2 Drive**



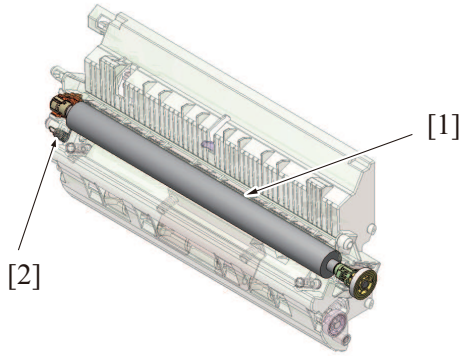
[1]	Transfer belt	[2]	Main motor (M1)
[3]	2nd transfer roller	-	-

**1.6.3 Operation**

**(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 application terminal
-------------------------	---

**(a) 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."

**(b) 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.

**(2) Control of toner application to 2nd transfer roller**

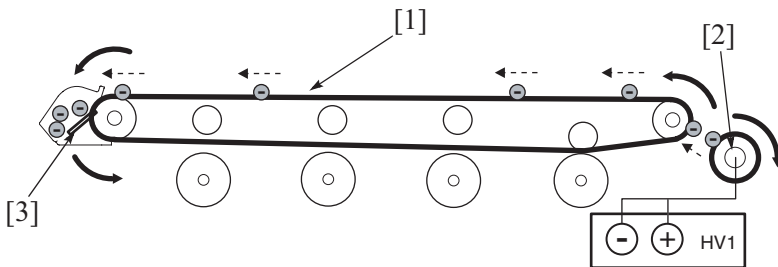
- In this machine, the 2nd transfer roller does not have a retraction mechanism, so that the transfer belt and 2nd transfer roller are pressed up against each other at all times.
- If a new 2nd transfer roller that has replaced an old one is left to stand idle for a long period of time, a substance contained 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.

**(a) Execution timing**

- The control is executed when the life counter of the 2nd transfer roller in the service mode is reset to zero.

**(3) 2nd transfer roller cleaning**

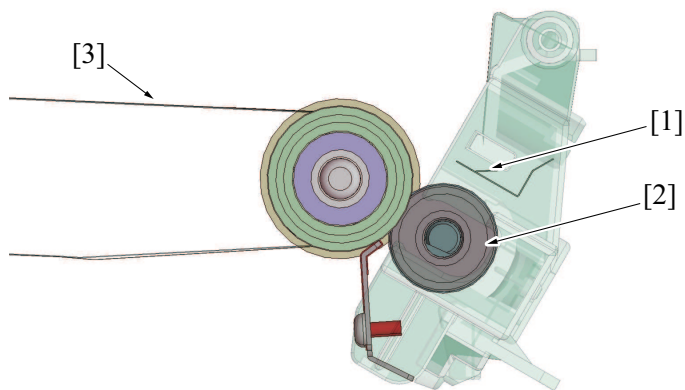
- In order to remove the remaining toner on the 2nd transfer roller, -/+ (DC) charge is applied alternately to transfer the remaining toner on the 2nd transfer roller to the transfer belt. (The number of times that electrical charge is applied to the 2nd transfer roller is different depending on each 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	- -

**(4) Paper separation control**

- 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.



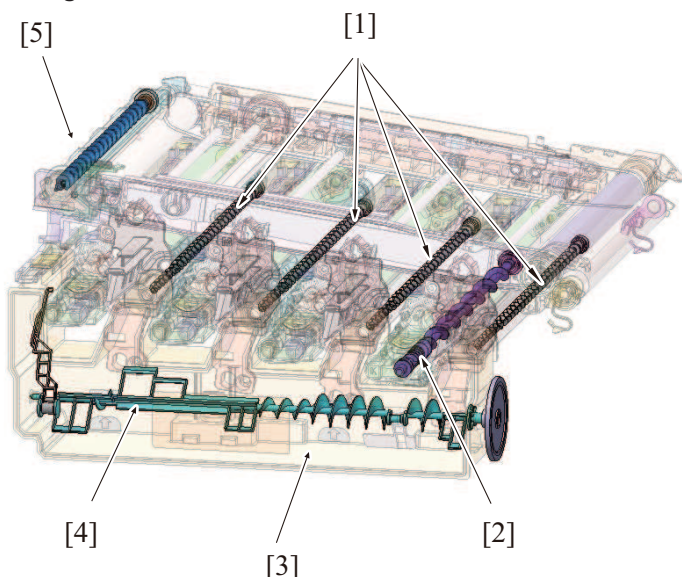
[1]	Charge neutralizing needle	[2]	2nd transfer roller
[3]	Transfer belt	-	-

**(5) 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 Roller Unit” in “Counter/ Life” of the Service Mode.

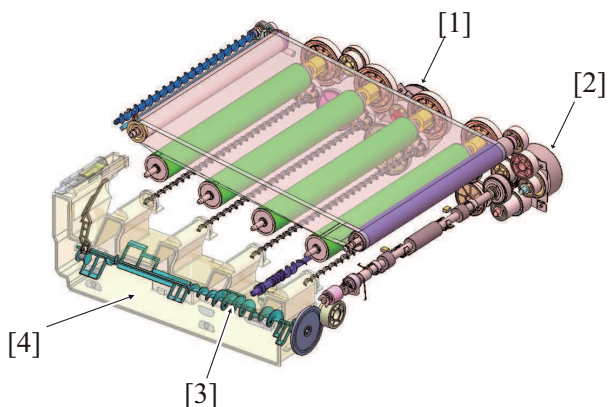
**1.7 TONER COLLECTING SECTION**

**1.7.1 Configuration**



[1]	Waste toner collecting screw (Imaging unit/ Y,M,C,K)	[2]	Waste toner supply screw (Imaging unit/ K)
[3]	Waster toner bottle	[4]	Waste toner agitating blade
[5]	Waste toner collecting screw (Transfer belt)	-	-

**1.7.2 Drive**

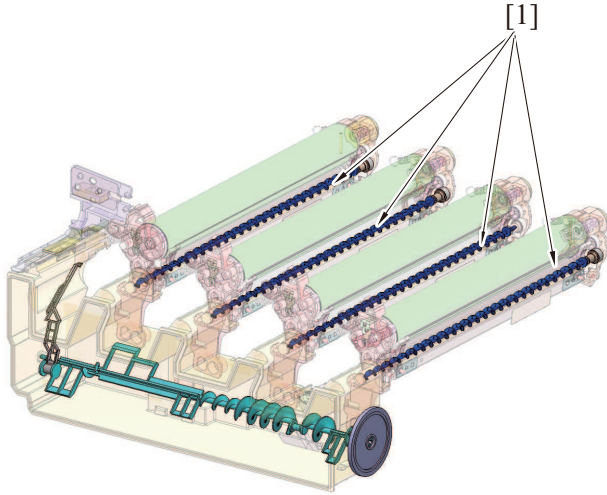


[1]	Color motor (M2)	[2]	Main motor (M1)
[3]	Waste toner agitating blade	[4]	Waster toner bottle

**1.7.3 Operation**

**(1) Waste toner flow at the imaging unit section**

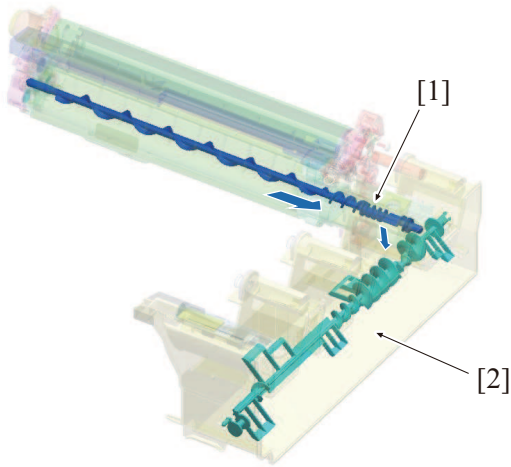
1. Toner scraped off by the cleaning blade in the imaging unit is conveyed to the waste toner discharge port by Waste toner collecting screw.
2. The toner conveyed is stored in the waste toner bottle.



[1]	Waste toner collecting screw	-
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**(2) Waste developer collecting path from the imaging unit/K (developing section)**

- The waste developer that is collected from the imaging unit/K (developing section) is conveyed to the waste toner bottle via the waste toner supply screw. (For details, see “Auto refining developing system”.)

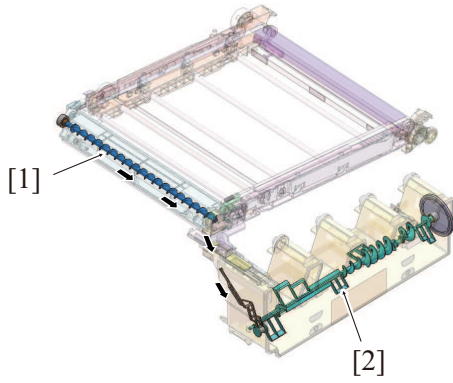


[1]	Waste toner supply screw (developing unit)	[2]	Waste toner agitating blade
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**(3) Waste toner flow at transfer belt unit section/2nd transfer section**

1. Toner scraped off by the cleaning blade provided in the transfer belt unit is collected onto the toner discharge port of the transfer belt unit by the waste toner collecting screw.
2. The waste toner collected is conveyed to the waste toner bottle by the waste toner agitating blade from the toner collecting port that is provided in the middle of the transfer belt unit.

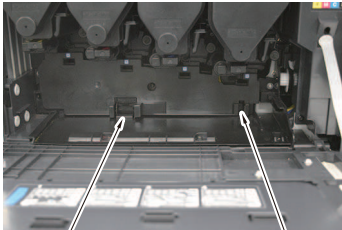




[1] Waste toner collecting screw	[2] Waste toner agitating blade
----------------------------------	---------------------------------

**(4) Waste toner bottle-in-position detection mechanism**

- The waste toner bottle set sensor detects mounting condition of the waste toner bottle. It prevents the machine from being operated with the waste toner bottle yet to be mounted in place.
- When the waste toner bottle is removed, the waste toner bottle set sensor is unblocked, which causes the machine to determine that the waste toner bottle is yet to be mounted.
- The machine, on determining that the waste toner bottle is yet to be mounted in place, prohibits initiation of a new print cycle.
- When the waste toner bottle is mounted, the waste toner bottle set sensor is blocked, which causes the machine to determine that the waste toner bottle is mounted in place.
- The machine, on determining that the waste toner bottle is mounted in place, resets the waste toner bottle yet-to-be-mounted display, enabling initiation of a new print cycle.



[1] Waste toner bottle set sensor (PS6)	[2] Waste toner near full sensor (PS15)
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**(5) Waste toner bottle full detection**

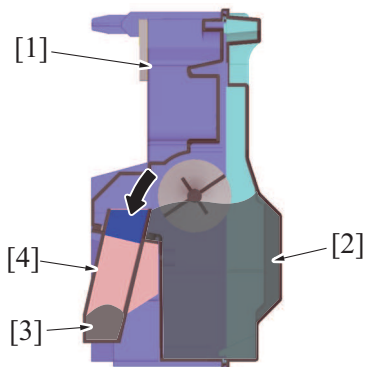
- The waste toner near full sensor provided on the front side is used to determine the amount of waste toner accumulated in the waste toner bottle.

**(a) Waste toner near-full**

- The toner collecting screw provided in the waste toner bottle conveys waste toner in the bottle onto the central portion of the bottle.
- There is the detection window for detecting a waste toner near-full condition provided at the central portion of the waste toner bottle. When the waste toner conveyed onto the central portion of the bottle exceeds a predetermined height, waste toner spills over the waste toner near-full condition detection section.
- The waste toner near-full condition is determined when the waste toner accumulated in the waste toner full condition detection section blocks the waste toner full sensor for a predetermined time or longer and a predetermined number of paper are printed.

**Execution timing**

- The waste toner bottle near-full detection control is performed under any of the following conditions:
  - “The waste toner bottle set sensor determines that the waste toner box is mounted.”
  - “During a print cycle”
  - “During execution of image stabilization control”



[1] Waster toner bottle	[2] Waste toner
[3] Waste toner	[4] Waste toner near-full condition detection window

**(b) 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.

**Execution timing**

- The waste toner bottle full detection control is performed under any of the following conditions:

“The waste toner near full sensor detects a waste toner bottle near-full condition.”

“During a print cycle”

“During execution of image stabilization control”

**(c) The number of prints after waste toner near-full detection**

Color	Approx. 831 pages
Monochrome	Approx. 2,236 pages

**NOTE**

- **The number of printed pages represents a value calculated from the toner consumption recorded when the machine is used in the standard job mode. It varies depending on how the user uses the machine.**

**(6) Waste toner bottle new article detection**

- The waste toner bottle is not provided with any new article detection mechanism. Detection made by the waste toner near full sensor is used for detecting a new waste toner box.
- When the waste toner full display appears, the existing waste toner bottle is replaced with a new one. When the waste toner near 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.

**(a) Timing at which to reset the waste toner full display**

- The waste toner bottle full detection control is performed under any of the following conditions:

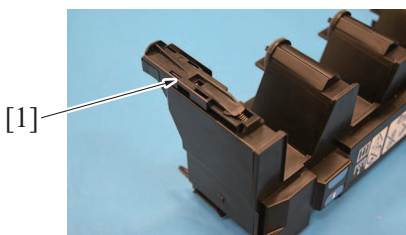
“The waste toner near full sensor detects a waste toner bottle near-full condition.”

“The main power switch is turned ON”

“The front door is closed”

**(7) Waste toner spillage prevention shutter**

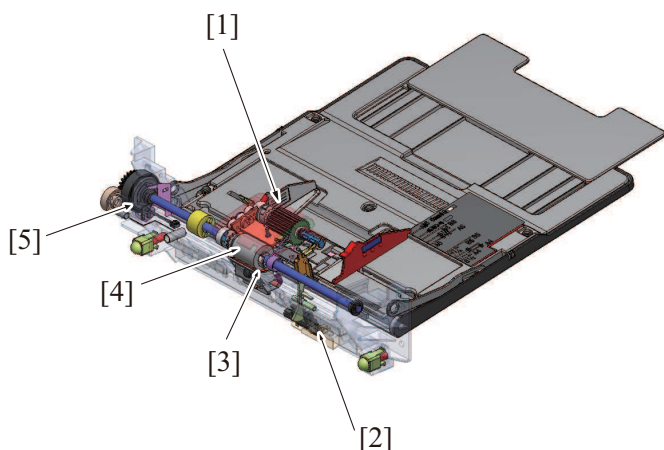
- The toner collecting port for the transfer belt unit is provided with a waste toner spillage prevention shutter that prevents waste toner that is transported from the transfer belt from spilling during removal or reinstallation of the waste toner bottle.
- Inserting the waste toner bottle into its mounting position pushes the shutter at toner collecting port of the waste toner bottle, thus opening the toner collecting port.
- Removing the waste toner bottle allows the shutter spring to close the shutter at the toner collecting port.



[1] Toner collecting port	-	-
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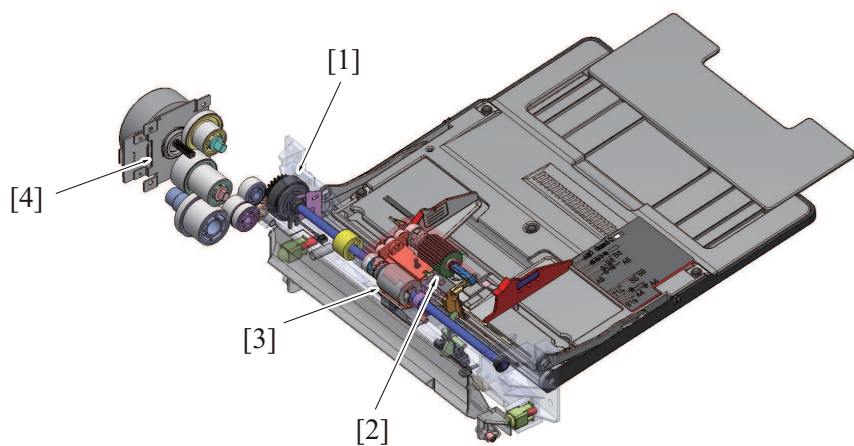
## 1.8 PAPER FEED SECTION (Manual bypass tray)

### 1.8.1 Configuration



[1]	Bypass pick-up roller	[2]	Bypass tray paper empty sensor (PS4)
[3]	Manual separation pad	[4]	Manual bypass tray feed roller
[5]	Manual paper feed clutch (CL2)	-	

### 1.8.2 Drive

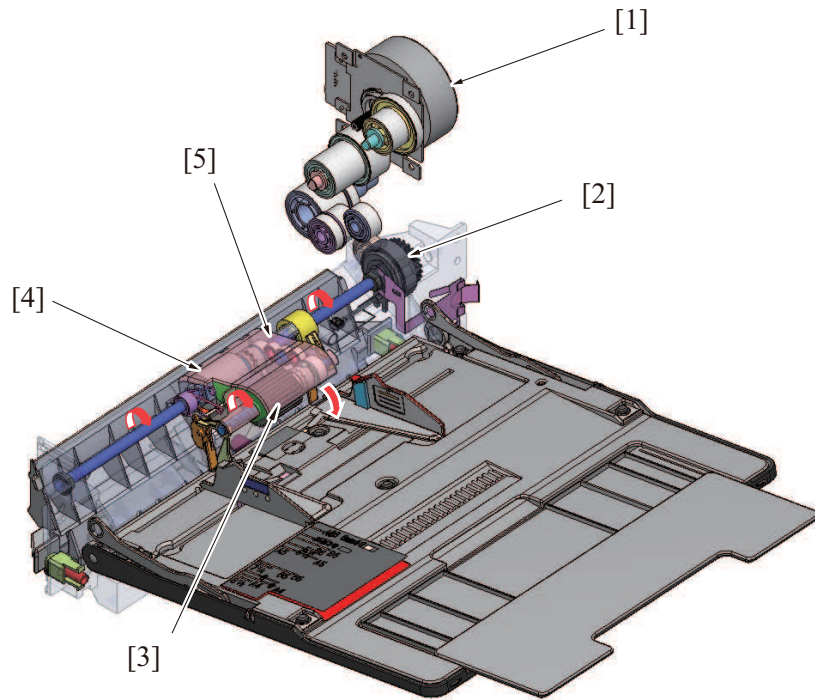


[1]	Manual paper feed clutch (CL2)	[2]	Bypass pick-up roller
[3]	Manual bypass tray feed roller	[4]	Main motor (M1)

### 1.8.3 Operation

#### (1) Paper feed control

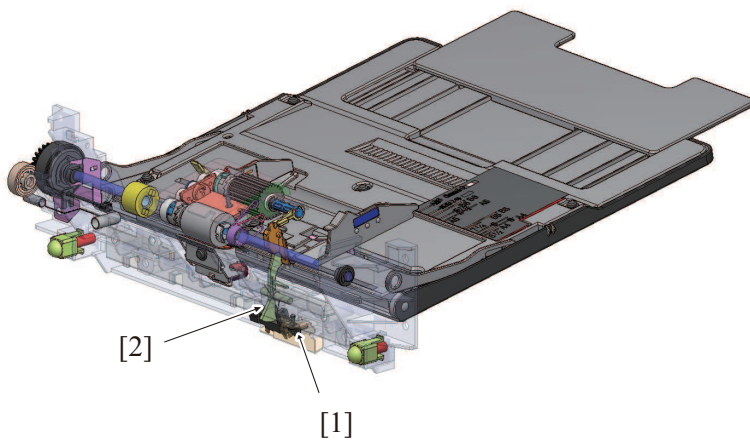
- Rotation of the main motor is transmitted to the manual bypass tray feed roller via the manual paper feed clutch to rotate the roller.
- The rotation shaft of the swing arm mounted on the same shaft as the manual bypass tray feed roller is rotated, so that the bypass pick-up roller is lowered to the feed position.
- The bypass pick-up roller is rotated by a drive gear to thereby feed paper onto the manual bypass tray feed roller.



[1]	Main motor (M1)	[2]	Manual paper feed clutch (CL2)
[3]	Bypass pick-up roller	[4]	Manual bypass tray feed roller
[5]	Swing arm	-	

**(2) Paper empty condition detection control**

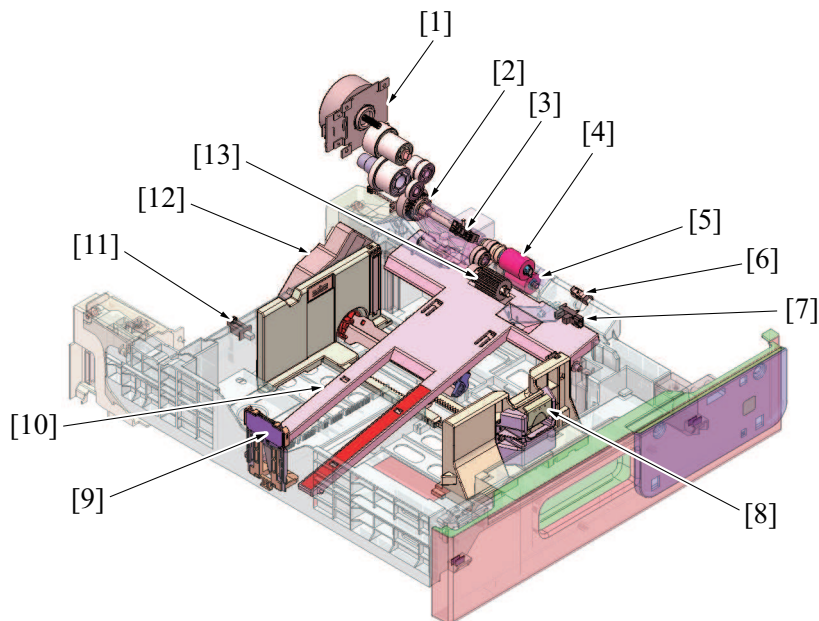
- A paper empty condition is detected when the empty sensor actuator blocks the paper empty sensor.
- No mechanism is provided for detecting a paper near-empty condition.



[1]	Bypass tray paper empty sensor (PS4)	[2]	Actuator
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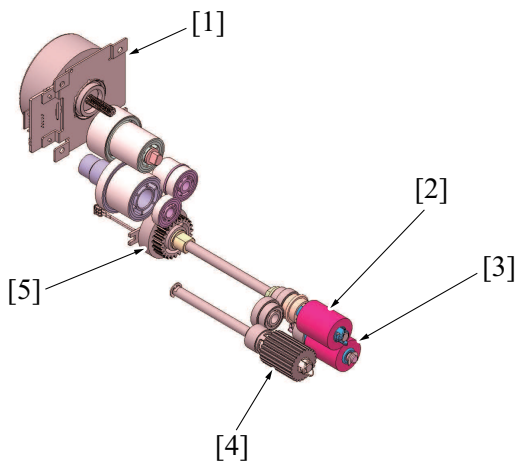
### 1.9 PAPER FEED SECTION (Tray 1)

#### 1.9.1 Configuration



[1]	Main motor (M1)	[2]	Tray 1 paper feed clutch (CL3)
[3]	Tray 1 upper limit sensor (PS7)	[4]	Feed roller
[5]	Separation roller	[6]	Tray 1 paper feed sensor (PS8)
[7]	Tray 1 paper empty sensor (PS5)	[8]	Edge guide plate
[9]	Trailing edge guide plate	[10]	Paper lift plate
[11]	Tray 1 set switch (SW3)	[12]	Tray 1 lift-up motor (M6)
[13]	Pick-up roller	-	-

#### 1.9.2 Drive



[1]	Main motor (M1)	[2]	Feed roller
[3]	Separation roller	[4]	Pick-up roller
[5]	Tray 1 paper feed clutch (CL3)	-	-

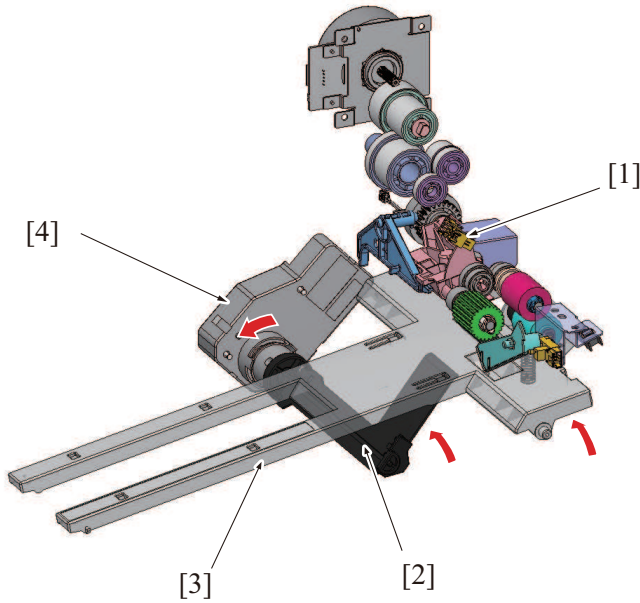
#### 1.9.3 Operation

##### (1) Up/down control

- Tray 1 and tray 2 are controlled in the same control procedure.

**(a) Up operation**

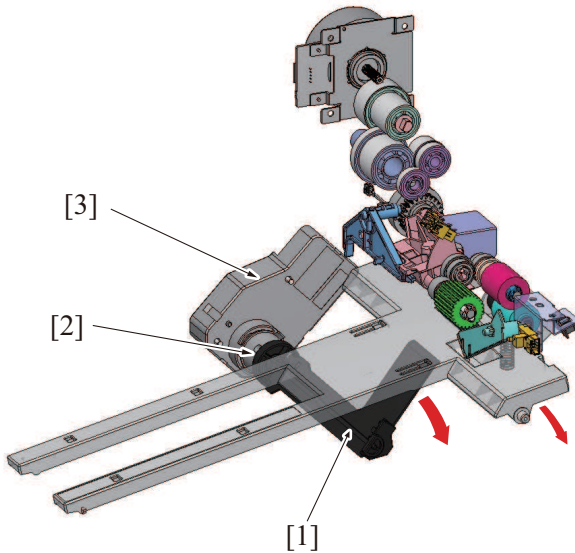
- The paper lift-up lever is located under the paper lift-up plate.
- The drive shaft of the tray 1 lift-up motor is connected to the paper lift-up lever.
- When the drive shaft of the tray 1 lift-up motor rotates, the paper lift-up lever rotates to raise the paper lift-up plate.



[1]	Tray 1 upper limit sensor (PS7)	[2]	Paper lift-up lever
[3]	Paper lift-up plate	[4]	Tray 1 lift-up motor (M6)

**(b) Down operation**

- When the tray is slid out of the machine, the coupling of the tray 1 lift-up motor and the lift-up plate drive shaft are disconnected from each other.
- When the driving force of the tray 1 lift-up motor is released from the lift-up plate drive shaft, the paper lift-up plate starts lowering by its own weight.



[1]	Paper lift-up lever	[2]	Coupling
[3]	Tray 1 lift-up motor (M6)	[ ]	

**(c) Operation timing**

**When the tray is slid in**

- When the tray is slid into the machine, the tray 1 set switch 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 upper limit sensor is unblocked.
- Determining after tray insertion that the tray 1 upper limit sensor is unblocked, the machine lets the tray 1 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 paper lift-up plate up operation starts, the tray 1 upper limit sensor is blocked.

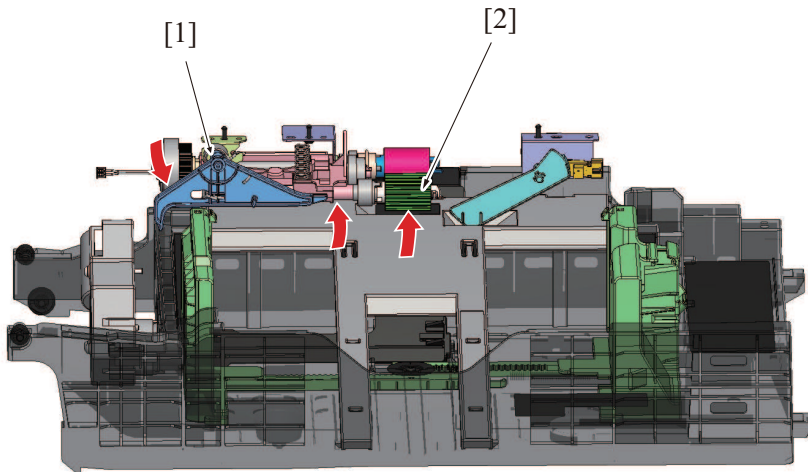
- Determining that the tray 1 upper limit sensor is blocked, the machine stops the tray 1 lift-up motor to complete the up operation of the paper lift-up plate.
- Control is provided to make sure that only one tray performs the up operation at one time.
- If the tray is slid out during the up operation of the paper lift-up plate and accordingly the tray 1 set switch is unblocked, the up operation of the paper lift-up plate is terminated.

**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 upper limit sensor. The tray 1 lift-up motor will rotate again to lift up the paper lift-up plate.
- When the tray 1 upper limit sensor is blocked, the tray 1 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.

**(2) Pick-up roller retract mechanism**

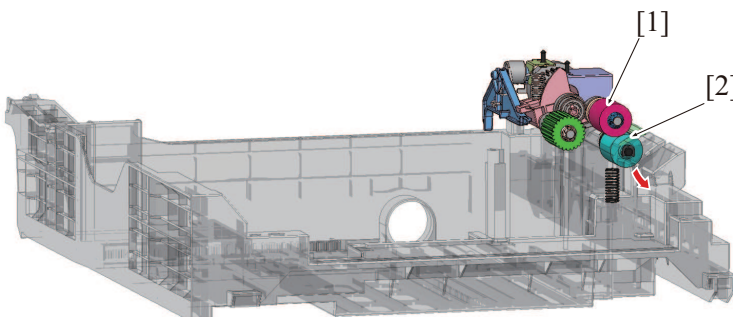
- A mechanism to retract the pick-up roller is provided, in order to avoid damaging stacked paper when the paper feed tray is inserted.
- When the paper feed tray is open, the retraction lever in the back of the machine presses the pick-up roller up to the retract position.
- When the pick-up roller is in the retract position, paper cannot be damaged as the pick-up roller does not make contact with the stacked paper.
- Closing the paper feed tray presses the retraction lever to move the pick-up roller to the a position such that it can supply paper.



[1] Retraction lever	[2] Pick-up roller
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**(3) 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 retracting position. It releases the paper from the rollers even if it is jammed between the rollers.



[1] Feed roller	[2] Separation roller
-----------------	-----------------------

**(4) Paper feed control**

- Rotation of the main motor is transmitted through the paper feed clutch to drive the feed roller to take up and feed the paper.
- The paper taken up and fed in is conveyed onto the registration roller.

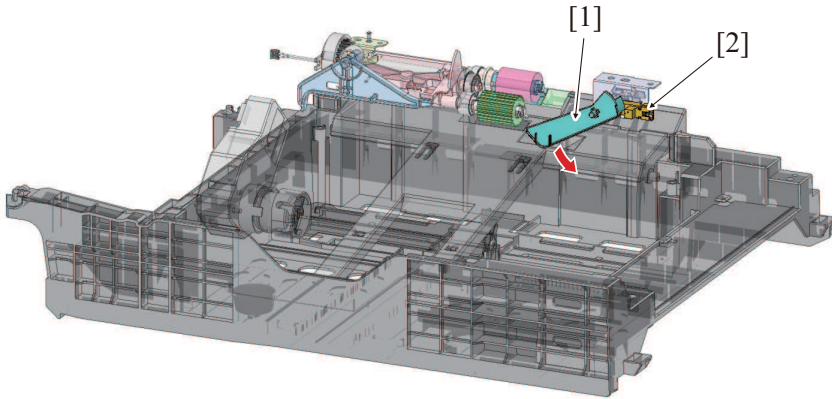
- The paper is pressed against the stationary registration roller so that a loop is formed in the paper. The feed roller is then stopped. The loop thus formed in the paper corrects any mechanical skew in the paper.
- As the trailing edge of the paper reaches a point immediately before the feed roller, the feed roller is stopped.

**(5) Paper size detection control**

- The main body has no system or mechanism for detecting the paper size. The paper size is therefore specified from the operation panel after the paper is loaded in the main body.  
The length of the paper is detected using the period of time that begins when the registration sensor is activated and ends when it is deactivated, and if it differs from the paper length specified using the operation panel, it will be judged as a size error.

**(6) Paper empty condition detection control**

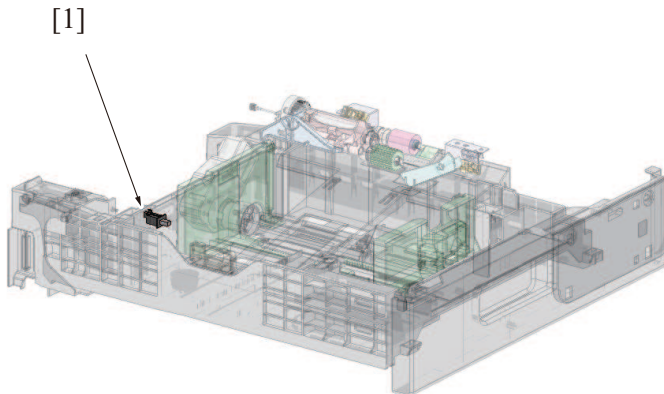
- At time that the paper empty sensor is unblocked, a paper empty condition is detected.
- No mechanism is provided for detecting a paper near-empty condition.



[1] Empty sensor actuator	[2] Tray 1 paper empty sensor (PS5)
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**(7) Tray open/close detection control**

- The tray 1 set sensor detects a tray in the open or closed position.



[1] Tray 1 set switch (SW3)	-
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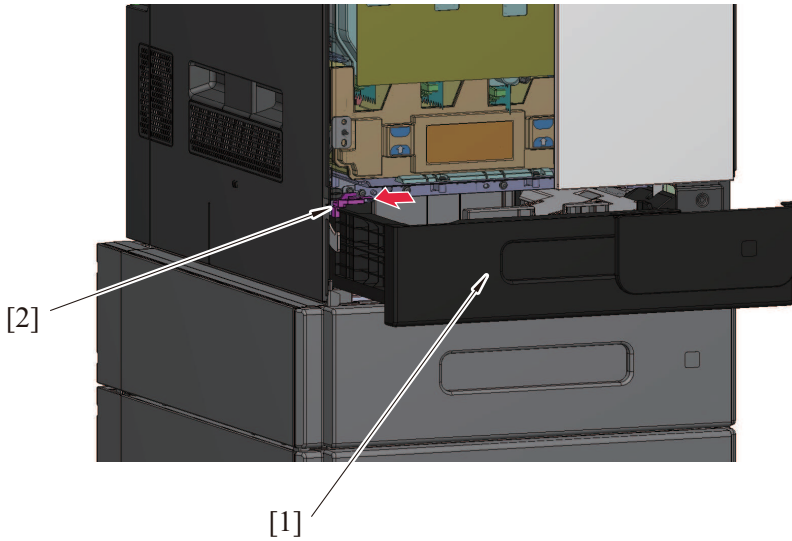
**(8) Paper misfeed detection control**

- If the registration sensor is not activated within a predetermined period of time after a paper feed sequence has been started, the main body determines that there is a paper misfeed. It then gives the message "PAPER EMPTY TRAY 1" on the panel.
- The paper misfeed display can be reset by opening and closing any of the doors.
- Paper refeeding (retry control) is not performed from tray 1 even when a paper jam is resolved.



**(9) 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.



[1]	Tray 1	[2]	Tray 1 stopper
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**(a) Releasing the paper tray stopper**

- Press the stopper on its left side, the stopper lock will be released.

**(b) Locking the paper tray stopper**

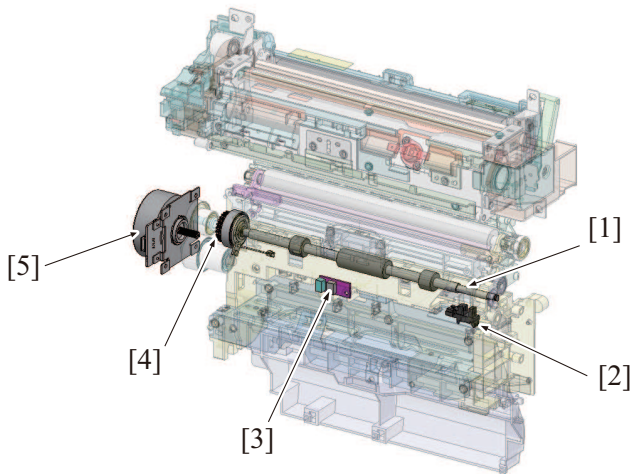
- Press the stopper on its right side, the stopper lock will be locked.

**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)

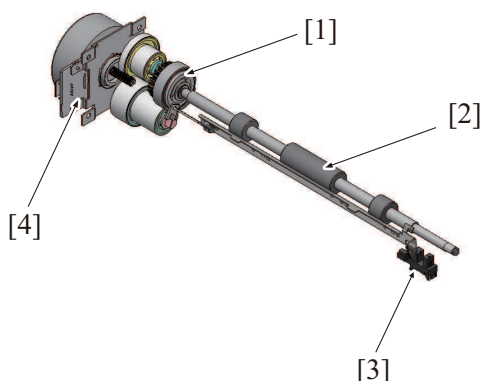
**1.10 REGISTRATION SECTION**

**1.10.1 Configuration**



[1]	Registration roller	[2]	Registration sensor (PS9)
[3]	Temperature/humidity sensor (TEM/HUMS)	[4]	Registration clutch (CL4)
[5]	Main motor (M1)	-	-

**1.10.2 Drive**

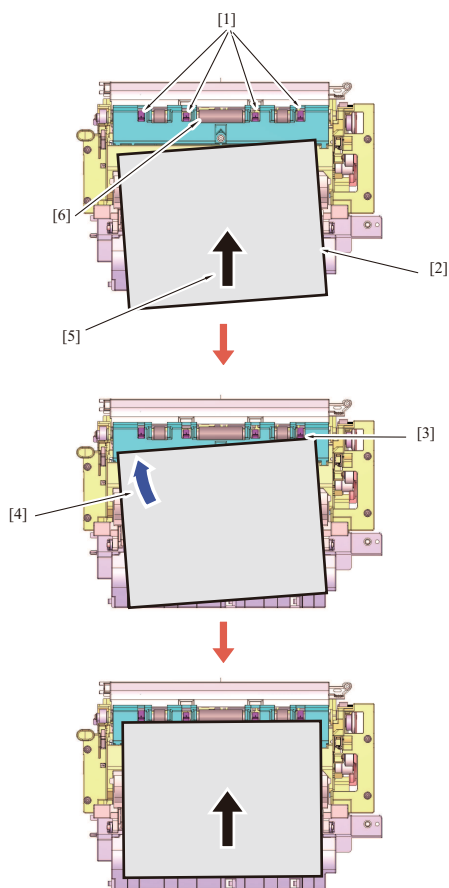


[1]	Registration clutch (CL4)	[2]	Registration roller
[3]	Registration sensor (PS9)	[4]	Main motor (M1)

**1.10.3 Operation**

**(1) Gate registration control**

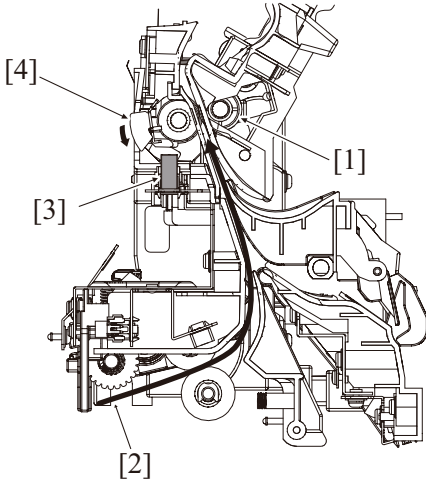
- The paper that is transported from the feed roller contacts the registration gate on the registration roller shaft.
- Pressing the paper against the gate makes the paper level and realizes the skew correction.
- The paper fed in is synchronized with the image before paper conveyance is restarted.



[1]	Registration gate	[2]	Paper
[3]	Point where paper contacting registration gate	[4]	Paper rotating operation
[5]	Paper feed direction	[6]	Registration roller

**(a) Paper detection control**

- When the paper fed from the feed roller pushes up the actuator of the registration sensor, the sensor is unblocked. The main body then determines that the paper has reached the registration roller.



[1]	Registration roller	[2]	Paper tray (tray 1)
[3]	Registration sensor (PS9)	[4]	Actuator

**(2) Paper size error detection control**

- To prevent incorrect printed pages, the size of the paper being conveyed is detected using the registration sensor or the PC transport sensor of the optional paper feed unit.
- The length of the paper is detected based on the value calculated using the period of time that begins when the sensor is activated and ends when it is deactivated for each paper source.
- For the paper feed unit, even if the PC transport sensor does not detect a paper size error, the downstream registration sensor makes an error check again.

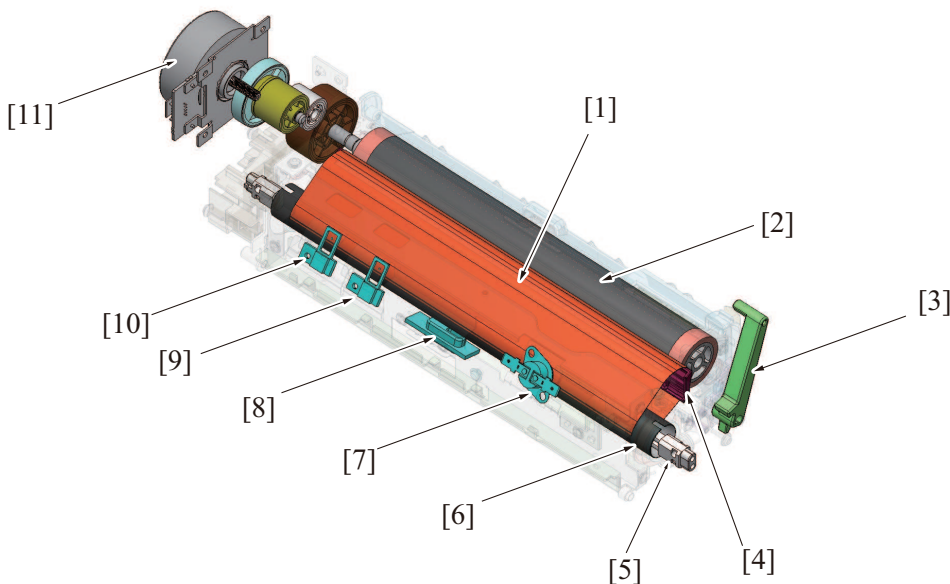
Paper source	Paper length detection sensor	Starting point	Ending point
Manual bypass tray	Registration sensor (PS9)	Registration clutch (CL4): ON	Registration sensor (PS9): OFF
Tray 1	Registration sensor (PS9)	Registration clutch (CL4): ON	Registration sensor (PS9): OFF
Tray 2/3 (PF-P20/P21)	Tray 2 transport sensor (PS6/2) Tray 3 transport sensor (PS6/3)	Tray 2 transport sensor (PS6/2): ON Tray 3 transport sensor (PS6/3): ON	Tray 2 transport sensor (PS6/2): OFF Tray 3 transport sensor (PS6/3): OFF
	Registration sensor (PS9)	Registration clutch (CL4): ON	Tray 2 transport sensor (PS6/2): OFF Tray 3 transport sensor (PS6/3): OFF

**(3) Temperature/humidity sensor**

- The temperature/humidity sensor detects temperature and humidity inside the main body.
- The detected data are used for image stabilization control, ATVC control, and transfer output control.

**1.11 FUSING SECTION**

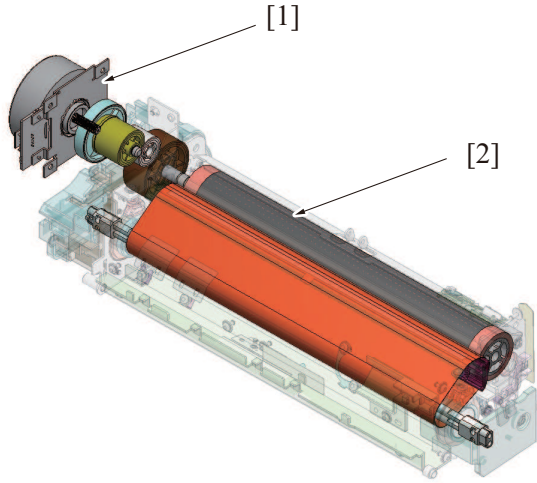
**1.11.1 Configuration**



[1]	Fusing belt	[2]	Pressure roller
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[3]	Fusing lever	[4]	Fusing pad
[5]	Fusing heater lamp (HL1)	[6]	Heating roller
[7]	Heating roller thermostat (TS1)	[8]	Pressure roller temperature sensor (TWMS)
[9]	Pressure roller thermistor/Ctr (TH2)	[10]	Pressure roller thermistor/Edg (TH1)
[11]	Fusing motor (M3)	-	

**1.11.2 Drive**



[1]	Fusing motor (M3)	[2]	Pressure roller
-----	-------------------	-----	-----------------

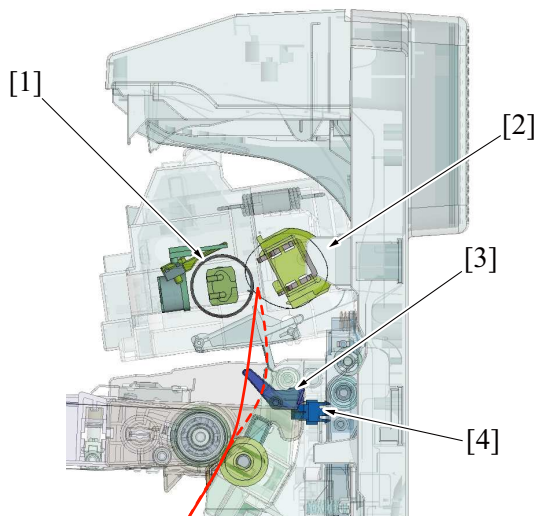
**1.11.3 Operation**

**(1) Fusing speed correction**

**(a) 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	Fusing speed
Blocking	Large	Speed-up
Unblocking	Small	Slowdown



[1]	Fusing roller	[2]	Fusing belt
[3]	Actuator	[4]	Fusing loop sensor (PS10)

**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].

**(2) Fusing belt deformation prevention control**

- The fusing belt is rotated to prevent the fusing belt from remaining placed on the same side for long periods of time, preventing deformation.
- Prevents uneven gloss due to fusing belt deformation.

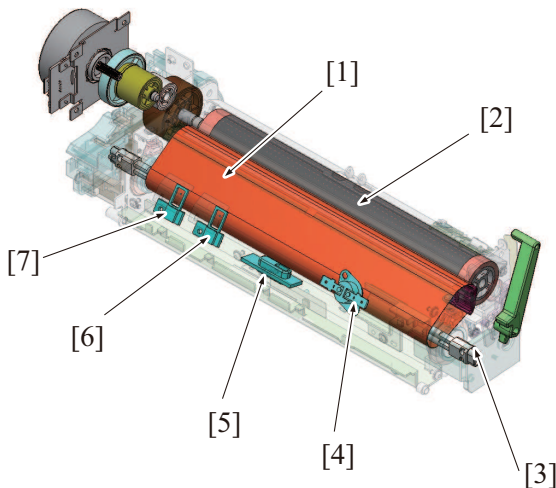
**(a) Specific controls**

- Select Mode 2 in the Service Mode settings to enable the fusing belt deformation prevention control.
- Configured from [Service Mode] -> [System 2] -> [Fuser roll deform].

Mode	Specific controls
OFF	No control
Mode 1	<ul style="list-style-type: none"> <li>• When the main body has been in standby mode for 6 hours, the fusing roller is rotated for a specified distance.</li> <li>• When the main body has been in power save mode for 13 days, the fusing roller is rotated for a specified distance. Afterwards, the main body returns to the power save mode.</li> </ul>
Mode 2	<ul style="list-style-type: none"> <li>• Disable</li> </ul>

**(3) Fusing temperature control**

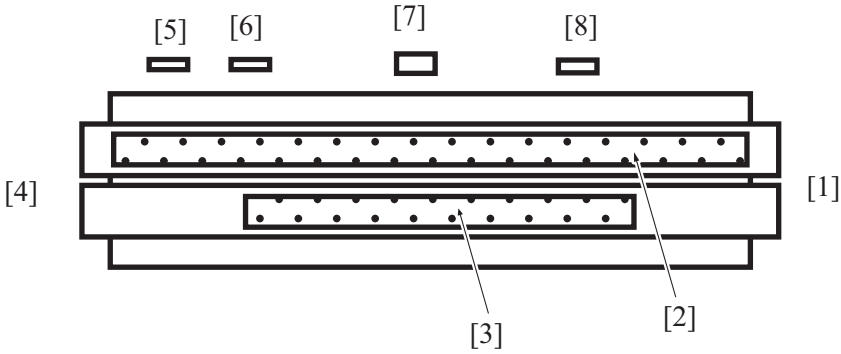
- The fusing temperature control detects the surface temperature of the fusing roller using the fusing temperature sensor and turns the fusing heater lamp ON/OFF.  
When the fusing heater lamp is turned ON, the fusing roller is heated at the specified temperature.



[1]	Fusing belt	[2]	Pressure roller
[3]	Fusing heater lamp (HL1)	[4]	Heating roller thermostat (TS1)
[5]	Heating roller temperature sensor (TEMS)	[6]	Heating roller thermistor/Ctr (TH2)
[7]	Heating roller thermistor/Edg (TH1)		-

**(a) Fusing heater lamp**

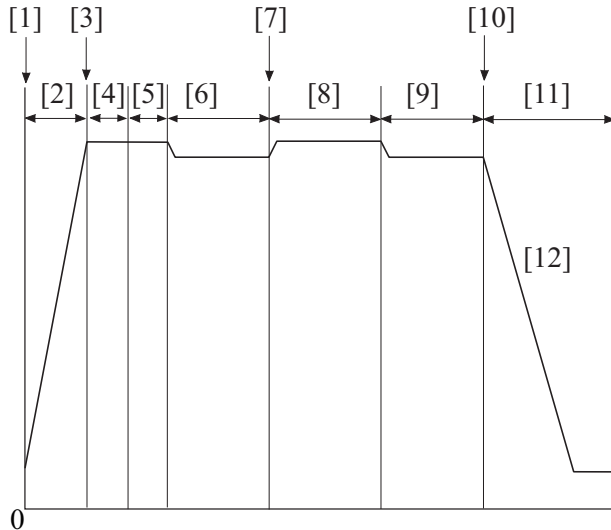
- The heating roller contains a fusing heater lamp assy in it. The fusing heater lamp turns ON to generate heat, which heats the heating roller and fusing belt.
- The fusing heater lamp assy consists of two heaters, each having a unique heating range different from each other.
  - The fusing heater lamp/1 uniformly heats the entire area of the fusing roller.
  - The fusing heater lamp/2 heats only the central portion of the fusing 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 148 mm or less, the fusing heater lamp/2 is used to heat the central portion.
  - For a paper width exceeding 148 mm, the surface temperature of the fusing belt is measured and the fusing heater lamp/1 and the fusing heater lamp/2 are alternately turned ON.



[1]	Front of machine	[2]	Fusing heater lamp/1
[3]	Fusing heater lamp/2	[4]	Back of machine
[5]	Heating roller thermistor/Edg (TH1)	[6]	Heating roller thermistor/Ctr (TH2)
[7]	Heating roller temperature sensor (TEMS)	[8]	Heating roller thermostat (TS1)

**(b) Temperature control chart**

\*An example when a machine is warmed up under a normal ambient condition



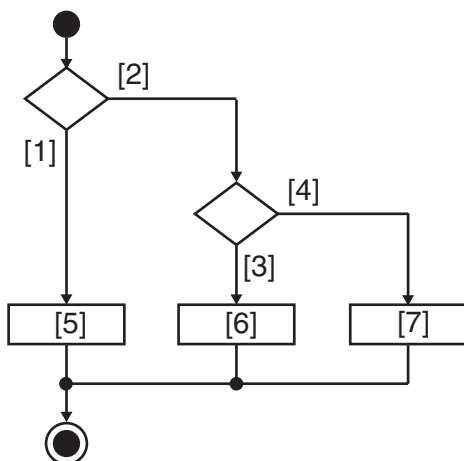
[1]	Main power switch ON	[2]	Warm-up control
[3]	Warm-up completed	[4]	Post-warm-up control
[5]	Pre-standby control	[6]	Standby control (including a countermeasure against overshoot)
[7]	Print request	[8]	Print control
[9]	Standby	[10]	Entry in sleep mode
[11]	In sleep state	[12]	Fusing belt temperature

**(c) 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	Less than 18 degrees	Not judged by absolute humidity
Warm-up at ordinary temperatures	18 degrees or more to 32 degrees or less	Less than a predetermined value
Warm-up under high humidity condition	More than 32 degrees	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 less than 18 °C	[2]	Machine interior temperature 18 °C or more
[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	-	-

**(d) 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.

**(e) 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.
- After standby starts, the fusing motor rotates (low speed) and stops after 5 seconds.  
The rotation time of the fusing motor after standby starts can be changed with EngineDipSW.

**(f) Temperature control during the print cycle**

**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.

**Service Mode**

- The machine has a fusing temperature adjustment function in order to prevent image fixability from being degraded depending on the type of paper and reduce such phenomena as paper curl, uneven wax, and offset.
- The fusing temperature can be varied using the setting made in "Machine/ Fusing Temperature" of the Service Mode.

Setting item	Setting range	Default setting
Plain paper	- 20 °C to +10 °C (step: 5 °C)	0 °C
Plain paper+		
Thick paper		
Thick 1		
Thick 1+		
Thick 2		
Thick 2+		
Postcard		
Envelope		
Recycled paper		
Coated paper 1		
Coated paper 1+		
Coated paper 2		

Setting item	Setting range	Default setting
Label		
Letterhead		

### (g) Energy save mode

- The machine enters the energy save mode from any standby state to thereby reduce power consumption (TEC value).
- 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.
- The energy save mode may be either the low power mode or sleep mode, whichever is enabled depending on the set conditions.

### 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.

## (4) Protection from abnormal temperatures

### (a) 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 thermistor/1 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 thermistor/2 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.

### (b) 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 fusing temperature sensor/2 (TEM2) detects an abnormal temperature, the heater relay of the DC power supply is turned OFF through the printer control board. Power supply to the fusing heater lamp is then shut down.
- When the hardware circuit in the DC power unit detects the heater relay being OFF, the temperature is judged to be abnormally high. Trouble code C3725: Fusing abnormally high temperature detection (TEM1:center) 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.

### (c) 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.

## (5) Fusing PPM control

### (a) 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 less than 18 degrees	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 60% 5 0%
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% 70% 50%: default
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% 50%: default



Heating roller end temperature rise suppression mode	<ul style="list-style-type: none"> <li>Print request is received for paper with a paper width of 209 mm or less</li> <li>Temperature of the heating roller ends becomes a predetermined value or more</li> </ul>	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.	100%: default value 70% 50%
Recycled paper correspondence mode	"100%" is selected for "PPM Control Choice" of the service mode	To increase the print productivity of recycled paper. * Paper curling can increase if 100% is selected.	Paper-to-paper distance is narrowed to thereby increase productivity.	100% 70%: default value *3

- \*1: Exemplary calculation of print speed: If 28 ppm can be achieved at a print productivity of 100 % on A4 plain paper, a change in print productivity to 90% results in 25.2 ppm.
- \*2: Execution of the control for the high humidity environment mode can be prohibited by turning ON "No. 5 PPM control (high humidity environment mode) prohibited" of Engine FW DIP switch of Enhanced Security of the service mode.
- \*3: For recycled paper, the print productivity will be set to 70% when "Mode 3" is selected for warm-up choice.

**(6) Fusing unit detection**

**(a) Unit mounting detection**

- The machine detects the mounting condition of the fusing unit.
- When fusing unit is detected in the mounted condition, the machine begins the initial operation.

**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 machine exits the sleep mode"
  - "The front door or right door is opened and closed with the power switch in ON position"

**Operation when it is detected that no units are mounted**

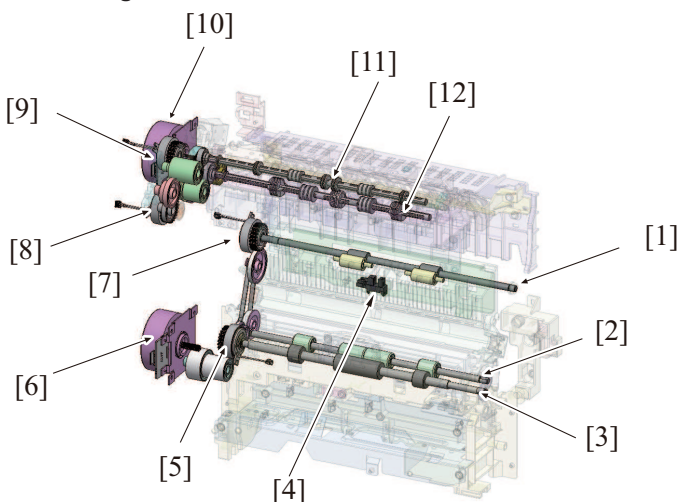
- The message "Fusing Unit Installation Error" appears on the operation panel, and the machine prohibits initial operation and any new print cycle.  
The message "Fusing Unit Installation Error" disappears as soon as a fusing unit is mounted.

**(b) 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.

**1.12 DUPLEX SECTION**

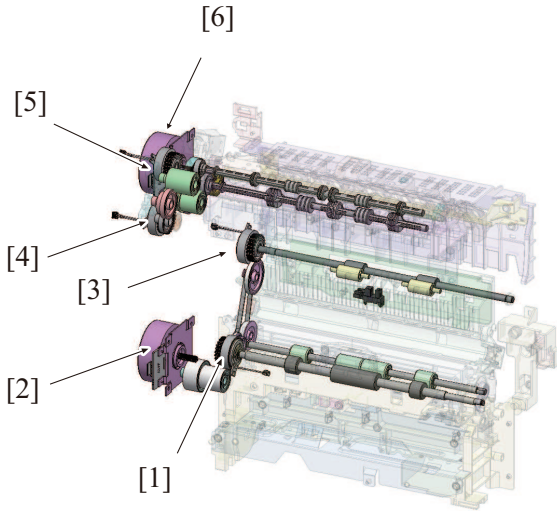
**1.12.1 Configuration**



[1] ADU transport roller	[2] Driven roller
[3] Registration roller	[4] ADU transport sensor (PS11)
[5] Registration clutch (CL4)	[6] Main motor (M1)

[7]	ADU transport clutch (CL5)	[8]	ADU forward rotation clutch (CL6)
[9]	ADU reverse rotation clutch (CL7)	[10]	Fusing motor (M3)
[11]	Reverse roller	[12]	Paper exit roller

**1.12.2 Drive**



[1]	Registration clutch (CL4)	[2]	Main motor (M1)
[3]	ADU transport clutch (CL5)	[4]	ADU forward rotation clutch (CL6)
[5]	ADU reverse rotation clutch (CL7)	[6]	Fusing motor (M3)

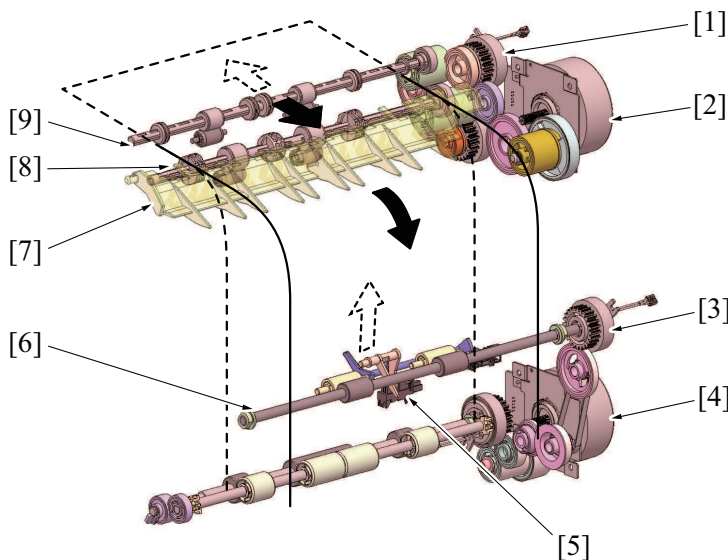
**1.12.3 Operation**

**(1) Paper transport control**

1. Paper transport

- The fusing motor and ADU reverse rotation clutch provides drive for paper transport onto the duplex section.
- The duplex transport clutch controls the main motor to rotate, to drive the ADU transport roller.
- The ADU transport roller transports paper from the duplex section to re-feeding position.
- The duplex transport sensor is located at the re-feeding position in the duplex section, serving to control the timing at which paper is moved and detect paper misfeed or paper left in the duplex section.

- [1] ADU reverse rotation clutch (CL7)
- [2] Fusing motor (M3)
- [3] ADU transport clutch (CL5)
- [4] Main motor (M1)
- [5] ADU transport sensor (PS11)
- [6] ADU transport roller
- [7] Switchback guide
- [8] Paper exit roller
- [9] Reverse roller



2. Loop formation

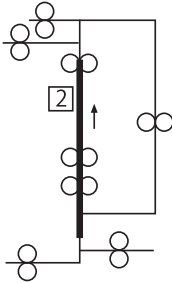
- To correct skew in the paper transported to the duplex section, a loop is formed in the paper at the duplex section before the paper is transported onto the main body.

- The registration roller functions to control formation of the loop. The registration roller is brought to a stop after the lapse of a predetermined period of time after the paper has moved past the duplex transport sensor. A loop is thereby formed in the paper at the duplex section.
- After the loop being formed, start transporting paper with the loop being held exactly by turning on the duplex transport clutch before turning on the registration clutch.
- When the paper end passed through the registration sensor, turn off the duplex transport clutch and stop the duplex transport roller 1/2.

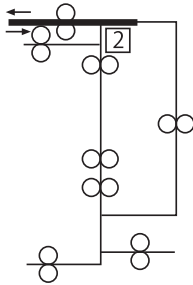
**(2) Duplex circulation control**

**(a) 1 sheet operation**

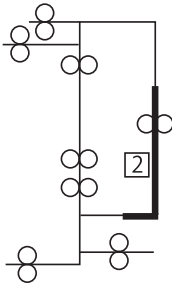
1. A sheet of paper is taken up and fed in and the image of the second page of the original is printed.



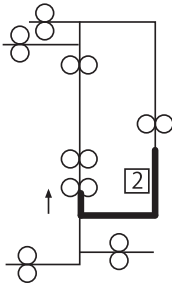
2. The switchback guide operates so as to transport the paper to the reverse section. Immediately before the paper leaves the paper exit roller, the direction of rotation of the reverse roller is reversed and the paper is transported toward and into the duplex section.



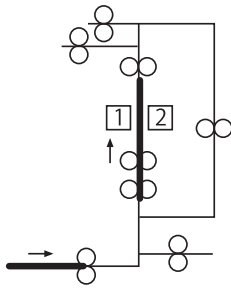
3. While passing through the duplex section, the paper stops temporarily at the re-feeding position.



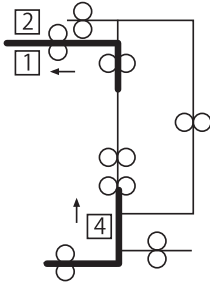
4. The paper is subject to skew correction at the registration roller section before being re-fed.



5. The image of the first page of the original is printed on the paper re-fed from the duplex section.



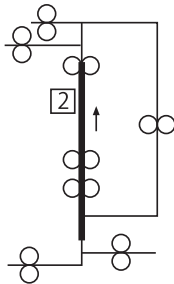
6. While the first sheet of paper is fed out, the second sheet of paper is taken up and fed in and the image of the fourth page of the original is printed.



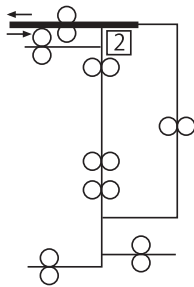
- Steps 2 to 5 are repeated hereafter.

**(b) 2 sheet operation**

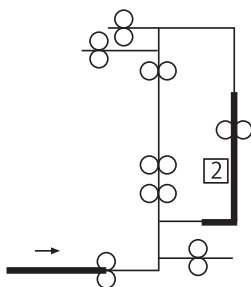
1. A sheet of paper is taken up and fed in and the image of the second page of the original is printed.



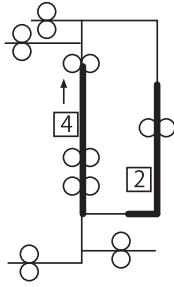
2. The switchback guide operates so as to transport the paper to the reverse section. Immediately before the paper leaves the paper reverse roller, the direction of rotation of the reverse roller is reversed and the paper is transported toward and into the duplex section.



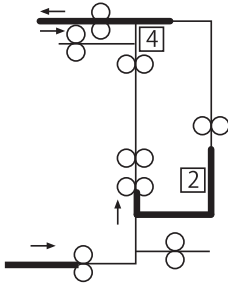
3. While passing through the duplex section, the paper stops temporarily at the re-feeding position. At the same time, the second sheet of paper is taken up and fed in.



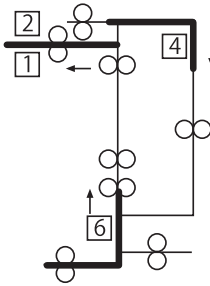
- The second sheet of paper is taken up and fed in and the image of the fourth page of the original is printed. The first sheet of paper stops temporarily at the re-feeding position.



- The first sheet of paper is subject to skew correction at the registration roller section before being re-fed. The second sheet of paper is transported into the duplex section by the reverse roller. At the same time, the third sheet of paper is taken up and fed in.



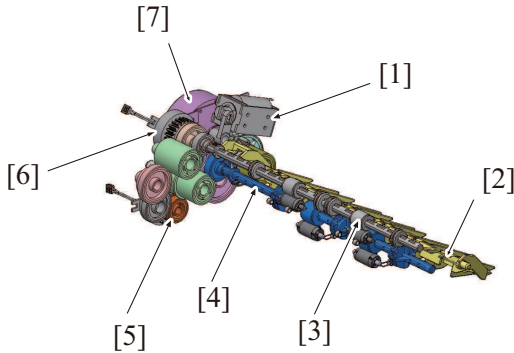
- The image of the first page of the original is printed on the paper re-fed from the duplex section.
- While the first sheet of paper is fed out, the third sheet of paper is taken up and fed in and the image of the sixth page of the original is printed. The second sheet of paper being transported through the duplex section is brought to a temporary stop at the re-feeding position.



• Steps 4 to 7 are repeated hereafter.

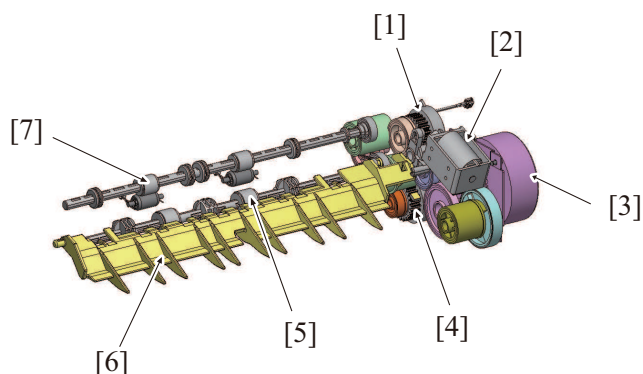
### 1.13 PAPER EXIT / REVERSE SECTION

#### 1.13.1 Configuration



[1]	Exit path switch solenoid (SD1)	[2]	Exit path switchback guide
[3]	Reverse roller	[4]	Paper exit roller
[5]	ADU forward rotation clutch (CL6)	[6]	ADU reverse rotation clutch (CL7)
[7]	Fusing motor (M3)	[ ]	

1.13.2 Drive



[1]	ADU reverse rotation clutch (CL7)	[2]	Exit path switch solenoid (SD1)
[3]	Fusing motor (M3)	[4]	ADU forward rotation clutch (CL6)
[5]	Paper exit roller	[6]	Exit path switchback guide
[7]	Reverse roller	-	

1.13.3 Operation

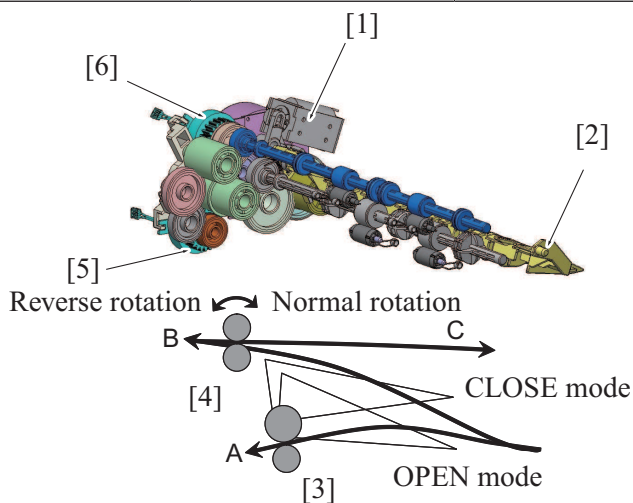
(1) Transport control

(a) Paper exit switching mechanism

- The paper transport path is switched between one in the exit direction and one toward the reverse roller.
- Paper exit switching is controlled by switching the exit path switch solenoid ON/OFF.

1. Switchback guide operation

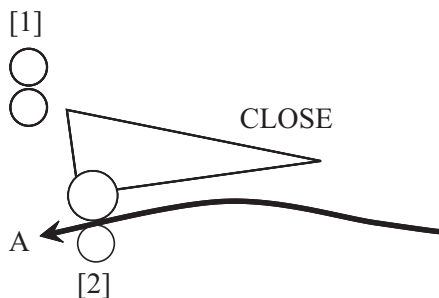
Transport route	Normal rotation roller	Exit/reverse roller	Exit path switch solenoid	Switchback guide
A	Normal rotation	Stopping	OFF	CLOSE
B	Stopping	Reverse rotation	ON	OPEN
C	Stopping	Normal rotation	OFF	CLOSE



[1]	Exit path switch solenoid (SD1)	[2]	Switchback guide
[3]	Paper exit roller	[4]	Reverse roller
[5]	ADU forward rotation clutch (CL6)	[6]	ADU reverse rotation clutch (CL7)

(b) <Single-side printing>

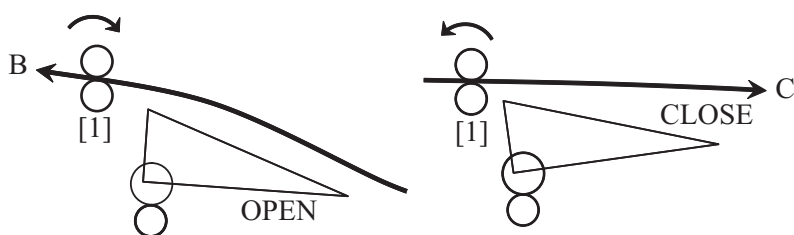
- Paper exits outside the machine with the switchback guide in CLOSE mode.
- The reverse roller is stopping.



[1] Reverse roller	[2] Paper exit roller
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**(c) <Duplex printing>**

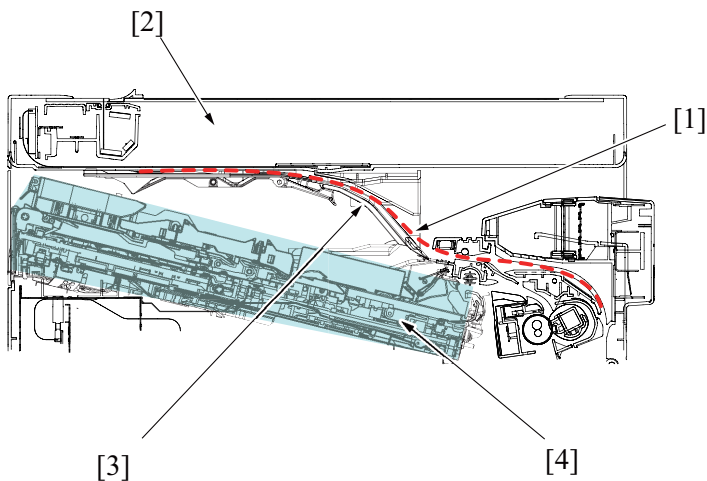
1. The switchback guide turns to the OPEN mode and the paper is transported to the direction of the reverse roller.
2. The reverse roller rotates forward.
3. The switchback guide becomes CLOSE mode after the back end of the paper passes through the reverse roller, and the reverse roller starts rotating backward to send the paper to the duplex unit direction.

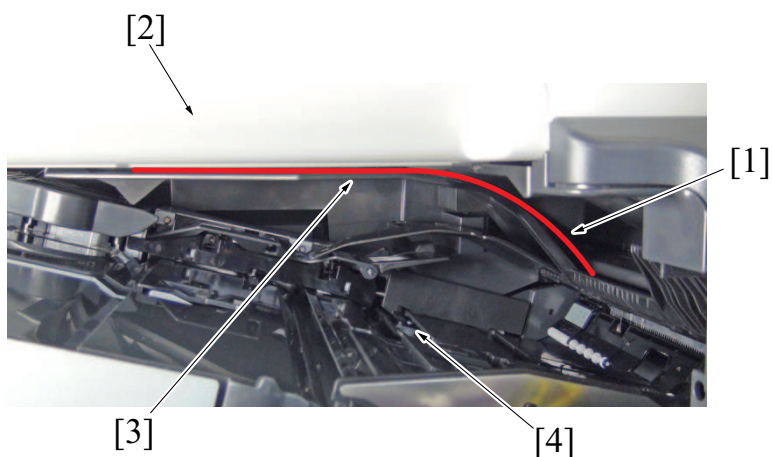


[1] Reverse roller	-
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**(2) Duplex guide (bizhub 3851FS)**

- The model equipped with a finisher is provided with a duplex guide mounted in a clearance between the scanner section and the finisher section.
- In the duplex print mode, the paper is conveyed by the switching guide and the switchback roller to the duplex guide, to thereby ensure that paper is properly conveyed in the finisher section.

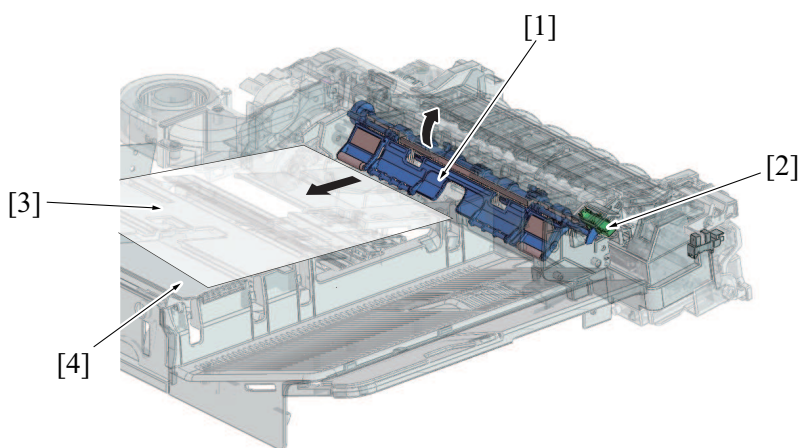




[1]	Paper conveying path during switch back	[2]	Scanner section
[3]	Duplex guide	[4]	Finisher section

**(3) Finisher paper conveyance detection (bizhub C3851FS)**

- The model equipped with a finisher is provided with a finisher entrance sensor in place of the paper exit full sensor.
- When the paper holding plate is in its lowered position, the leading end of the paper holding plate blocks the finisher entrance sensor.
- When the paper or the alignment tray pushes up the paper holding plate, the finisher entrance sensor will be unblocked.
- The finisher entrance sensor detects the following status.
  - The alignment tray raises up and the finisher section is in a pre-stack state.
  - Paper remained the on the finisher entrance pushes up the paper holding plate.



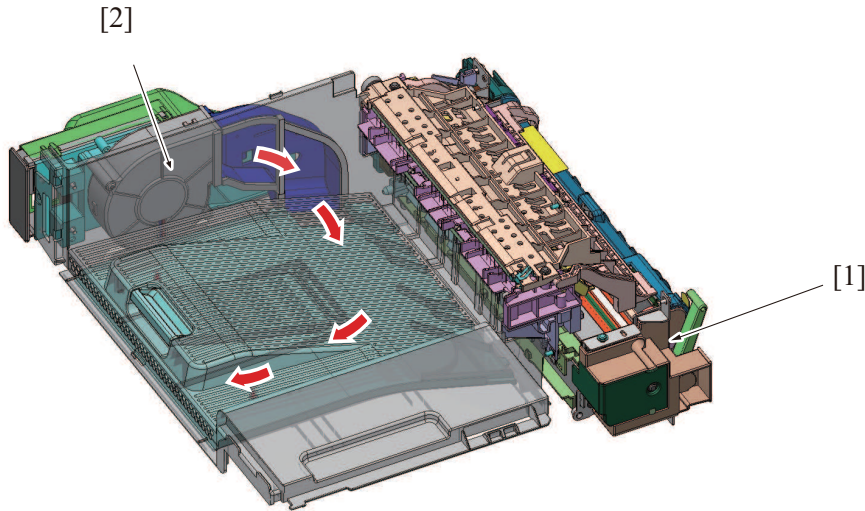
[1]	Paper holding plate	[2]	Finisher entrance sensor (PS13)
[3]	Paper	[4]	Finisher section

**(4) Exit paper cooling mechanism**

**(a) Paper exit/reverse section cooling**

- The machine cooling fan motor cools the paper after fusing.
- The machine cooling fan motor blows air around the paper exit section to cool the paper after the fusing process.





[1] Fusing section	[2] Machine cooling fan motor (FM2)
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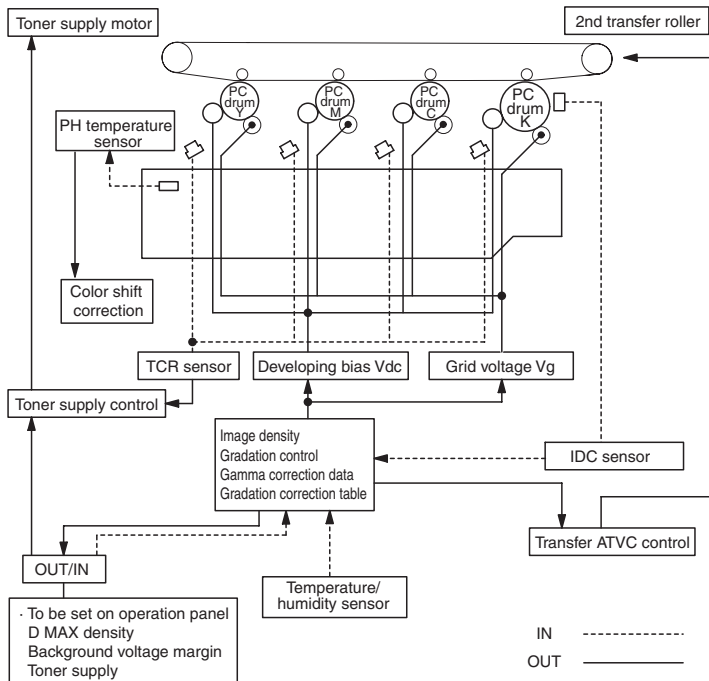
### 1.14 IMAGE STABILIZATION CONTROL

#### 1.14.1 Overview

- The machine provides the following image stabilization control to ensure stabilized print image.

Purpose	Control	Control means
To stabilize image density To stabilize gradation	<ul style="list-style-type: none"> <li>IDC sensor adjustment control</li> <li>Max. density adjustment control</li> <li>LD intensity adjustment control</li> <li>Registration control (color shift correction) *</li> <li>Gamma correction control</li> </ul>	<ul style="list-style-type: none"> <li>IDC sensor</li> <li>Temperature/humidity sensor</li> <li>PH temperature sensor</li> </ul>
To stabilize toner density	TCR control (Y,M,C,K) *	TCR sensor
To stabilize image transfer	<ul style="list-style-type: none"> <li>Transfer output control *</li> <li>2nd transfer ATVC</li> </ul>	Temperature/humidity sensor

- \*: Refer to descriptions concerning control of each section.



#### 1.14.2 Description of control

##### (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).

**(2) Dmax 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 photoconductor, 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.

**(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 photoconductor, 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.

**(4) Color registration control (color shift correction)**

- In a tandem engine, each four different color has an independent image reproduction process. Color shift may occur due to accuracy differences of parts in the print head unit. The color registration control system automatically detects color shift and correct color shift in the main and sub scanning directions.
- 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).
- The color shift is detected as follows. The IDC sensors read the pattern that is produced at each of front and rear ends of the transfer belt. It calculates and stores color shift amounts in the sub scanning and main scanning directions.
- The amount of color shift in the sub scanning direction is read from the pattern falling within the sub 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.

**(5) Gamma correction control**

- The intensity of LD in all gradation levels is adjusted to correct changes in gradation characteristics to a linear one. The changes in gradation characteristics are caused by variations in the photoconductor sensitivity and developing characteristics and changes with time and in environment.
- It produces gradation patterns on the transfer belt and calculates gradation characteristics output by the current engine with the IDC sensor.
- The gamma correction data is calculated using the density measurements of different gradation levels. The optimum LD intensity is set for each of the different gradation levels.

**1.14.3 Control contents**

**(1) Image stabilization type (mode)**

- Eight 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	Description
Mode 1 (initialization and image stabilization)	Executed when "Initialize + Image Stabilization" is selected from the control panel.
Mode 1 (long image stabilization)	Executed for all stabilization controls.
Mode 2 (short image stabilization)	Simply executed for all stabilization controls.
Mode 3 (gamma correction + registration control)	Executed only for color registration control and gamma correction.
Mode 4 (monochrome, long image stabilization)	A mode exclusive for monochrome, executed for all stabilization controls during monochrome printing.
Mode 5 (registration control)	Executed only for registration control. Executed when internal temperature of machine changes.
Mode 6 (monochrome, gamma correction)	A mode exclusive for monochrome, executed only for gamma correction.
Mode 7 (gamma correction)	Executed only for gamma correction.
Mode 8 (monochrome, short image stabilization)	A mode exclusive for monochrome, simply executed for all stabilization controls during monochrome printing.

**(2) Image stabilization execution flow**

**(a) Determination of stabilization type**

- During predrive, standby, printing, or when stabilization completed, judge the stabilization status and determine stabilization type as well as start timing depending on factors of stabilization and priority of these factors. If the toner empty condition is detected, stabilization judgment will not be executed.

**(b) Execution of image stabilization**

- When stabilization type and start timing are determined through stabilization judgment, image stabilization will be executed.
- Displays the message "Calibrating" on the operation panel while executing the image stabilization.
- Opening the front door/right door during image stabilization, occurrence of troubles or failure in adjustment for each sequence may stop image stabilization.

**(c) Stabilization start timing**

Types of stabilization start timing are shown below.

Level 0*	Executed immediately.
Level 1*	Executed at any of the following timing. Start of color printing/End of color printing/Before switching to color mode/Sorting by number of copies.
Level 2	Executed at any of the following timing. Start of color printing/End of color printing/Before switching to color mode.
Level 3	Executed at start of color printing or before switching to color mode.

- \*If there are less than 10 sheets of paper remained to be printed, stabilization will be executed after completing the job.

**(d) Completing image stabilization**

For the type of image stabilization which has been executed on the following modes, stabilization adjustment will be executed again after completing the stabilization. Stabilization start timing will turn to level 3 regardless of stabilization type.

- Mode 3 (gamma correction + color registration control)
- Mode 4 (monochrome, long image stabilization)
- Mode 5 (color registration control)
- Mode 6 (monochrome, gamma correction)
- Mode 8 (monochrome, short image stabilization)

**(3) 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 (initialization and image stabilization)/ (long image stabilization)	Mode 2 (short image stabilization)	Mode 3 (gamma correction + color registration control)	Mode 4 (monochrome, long image stabilization) *4	Mode 5 (color registration control)	Mode 6 (monochrome, gamma correction)	Mode 7 (gamma correction)	Mode 8 (monochrome, short image stabilization)
1	IDC sensor adjustment	IDC sensor detection *1	IDC sensor detection *1	IDC sensor adjustment	IDC sensor detection*1	IDC sensor detection*1	IDC sensor detection*1	IDC sensor detection*1
2	Dmax density adjustment	Dmax density adjustment	Color registration adjustment *2	Dmax density adjustment	Color registration adjustment *2	Gamma correction *3	Gamma correction *3	Dmax density adjustment
3	LD light intensity adjustment	Color registration adjustment *2	Gamma correction *3	LD light intensity adjustment	-	-	-	LD light intensity adjustment
4	Color registration adjustment	Gamma correction *3	-	Dmax density adjustment	-	-	-	Gamma correction *3
5	Dmax density adjustment	-	-	LD light intensity adjustment	-	-	-	-
6	LD light intensity adjustment	-	-	Gamma correction *3	-	-	-	-
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: To be executed twice when an imaging unit or a transfer belt unit is replaced, or when the machine recovers from a toner empty condition.

**(4) 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	Image stabilization mode	Operation condition	Image stabilization setting
Mode 1	Initialization and image stabilization	<ul style="list-style-type: none"> <li>A new imaging unit/Y,M,C is detected.</li> <li>A new transfer belt unit is detected</li> <li>The machine recovers from a toner empty condition.</li> <li>While a warning code is being displayed.</li> </ul>	Not specified
	Long image stabilization	<ul style="list-style-type: none"> <li>In the last image stabilization, the value of IDC sensor detection was out of the specified range.</li> <li>A change in environment is detected (a change in environment exceeding the threshold value is detected since the last image stabilization sequence).</li> </ul>	Standard or Color priority selection

Mode	Image stabilization mode	Operation condition	Image stabilization setting
		<ul style="list-style-type: none"> <li>The number of paper printed after the last LD adjustment exceeds a predetermined value.</li> </ul>	
Mode 2	Short image stabilization	<ul style="list-style-type: none"> <li>A Dmax adjustment request is received as a result of the last gamma correction.</li> <li>The number of paper printed after the gamma correction exceeds a predetermined value.</li> <li>Information is provided indicating that the last stabilization control was discontinued.</li> <li>There is a change in temperature after the lapse of a predetermined period of time after a developing drive stop.</li> </ul>	Standard or Color priority selection
		The stabilization is executed when the main power switch is turned ON even without the operating condition	Only Color priority selection
Mode 3	Gamma correction + color registration control	<ul style="list-style-type: none"> <li>The number of paper printed after the gamma correction exceeds a predetermined value.</li> <li>There is a change of a predetermined value or more in temperature after the color registration adjustment (when exiting from the sleep mode).</li> </ul>	Standard or Color priority selection
Mode 4	Monochrome, long image stabilization	<ul style="list-style-type: none"> <li>A new imaging unit/K is detected.</li> <li>In the last image stabilization, the value of IDC sensor detection was out of the specified range.</li> <li>A change in environment is detected (a change in environment exceeding the threshold value is detected since the last image stabilization sequence).</li> <li>The number of paper printed after the last LD adjustment exceeds a predetermined value.</li> <li>A predetermined period of time or more elapses after a developing drive stop.</li> </ul>	Only Black priority selection
Mode 5	Color registration control	<ul style="list-style-type: none"> <li>There is a change of a predetermined value or more in temperature after the color registration adjustment (when exiting from the sleep mode).</li> </ul>	Standard or Color priority selection
Mode 6	Monochrome, gamma correction	<ul style="list-style-type: none"> <li>A Dmax adjustment request is received as a result of the last gamma correction.</li> <li>The number of paper printed after the gamma correction exceeds a predetermined value..</li> <li>Information is provided indicating that the last stabilization control was discontinued.</li> </ul>	Only Black priority selection
Mode 7	Gamma correction	<ul style="list-style-type: none"> <li>The number of paper printed after the last LD adjustment exceeds a predetermined value.</li> </ul>	Standard or Color priority selection
Mode 8	Monochrome, short image stabilization	<ul style="list-style-type: none"> <li>The number of paper printed after the last LD adjustment exceeds a predetermined value.</li> <li>Information is provided indicating that the last stabilization control was discontinued.</li> <li>A predetermined period of time or more elapses after a developing drive stop.</li> </ul>	Only Black priority selection

#### (a) 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.
  - 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
  - To shorten time between when the machine is turned ON and when it is ready for printing
  - 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	<ul style="list-style-type: none"> <li>Color stabilization is executed if image adjustments are necessary for color print or black print during predrive.</li> <li>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.</li> </ul>
Black priority	<ul style="list-style-type: none"> <li>Black stabilization is executed if image adjustments are necessary for black print during predrive.</li> <li>Color stabilization is executed before color print if image adjustments are necessary for color print.</li> </ul>

#### (5) Service Mode

- Types (modes) of image stabilization to be executed with the menu of the service mode will be described.

Menu of service mode	Type (mode) of image stabilization to be executed
Gradation Adjust ([Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust])	Mode 2

Menu of service mode	Type (mode) of image stabilization to be executed	
Stabilizer ([Service Mode] -> [Imaging Process Adjustment] -> [Stabilization])	Initialize + Image Stabilization	Mode 1
	Stabilization Only	Mode 2

**(6) Expert Adjustment**

- Types (modes) of image stabilization to be executed with the menu of the expert mode will be described.

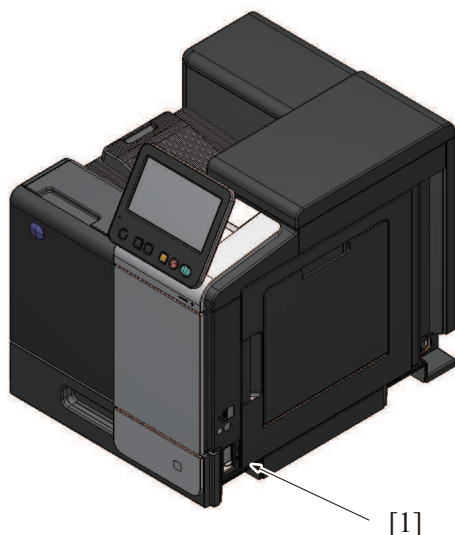
Menu of expert mode	Type (mode) of image stabilization to be executed	
Gradation Adjustment ([Utility] -> [Expert Adjustment] -> [Gradation Adjustment])	Mode 2	
Image Stabilization ([Utility] -> [Expert Adjustment] -> [Image Stabilization])	Initialize+Image Stabilization	Mode 1
	Stabilization Only	Mode 2

**(7) Stabilization time**

Mode	bizhub C3851FS/C3851	bizhub C3351
Mode 1	Approx. 40 sec.	Approx. 45 sec.
Mode 2	Approx. 20 sec.	Approx. 22 sec.
Other than the above	Approx. 20 sec. or less	Approx. 20 sec. or less

**1.15 POWER SUPPLY SECTION**

**1.15.1 Main power switch**



[1]	Main power switch	-	-
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**NOTE**

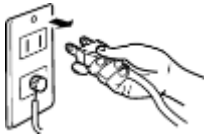
- To turn OFF and ON the main power switch, first turn OFF the main power switch and wait for 10 sec. or more before turning it ON again. If a setting value or values in the service mode are changed, it takes 10 sec. or more to incorporate the setting changes properly in the machine.

(1) Power supply

# ⚠ WARNING

When the power cord is unplugged after turning OFF the main power switch, partial power switches will remain powered for monitoring the operation of the main power switch.

Therefore, at the time of disassembly and reassembly, be sure to turn OFF the main power switch and unplug the power cord from the power outlet.



When replacing a unit or board with the power cord being connected to the power outlet, a risk of electric shock or damaging the unit or board exists.

- When the main power switch is turned OFF but the power cord is still connected to the power outlet, only the following power switches are powered.

5.1V	<ul style="list-style-type: none"> <li>• Base board (BASEB)</li> <li>• DC power supply unit (DCPU)</li> </ul>
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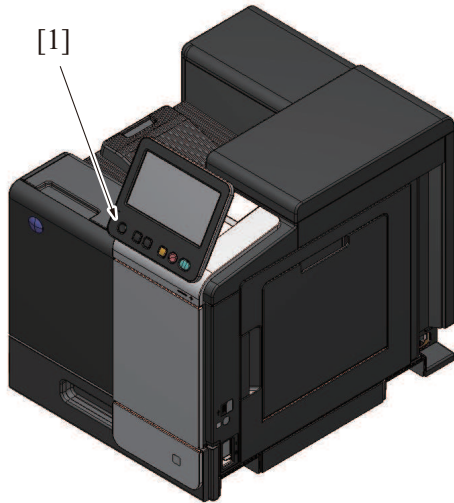
(2) Quick start up function

- This function shortens the start up time (\*).
- A "Quick start up data" is generated, the CPU operating power is powered between a certain time after the main power switch is turned OFF to maintain the On Board Memory in the storage board.
- After the "Quick start up data" has been saved, the CPU operating power turns OFF. However, partial power switches will remain powered for monitoring the operation of the main power switch.
- At next time, the saved "Quick start up data" will be used to start up the machine.

NOTE

- \*: Start up time indicates "Panel accessible time", "BOX screen accessible time" and "Network accessible time".
- After the main power switch is turned OFF, turn on the main power switch before the "Quick start up data" is saved to start up the machine at normal speed.
- Also, when the power cord is unplugged before the "Quick start up data" is saved after the main power switch is turned OFF, the machine will start up at normal speed.

**1.15.2 Power key**



[1]	Power key	-	-
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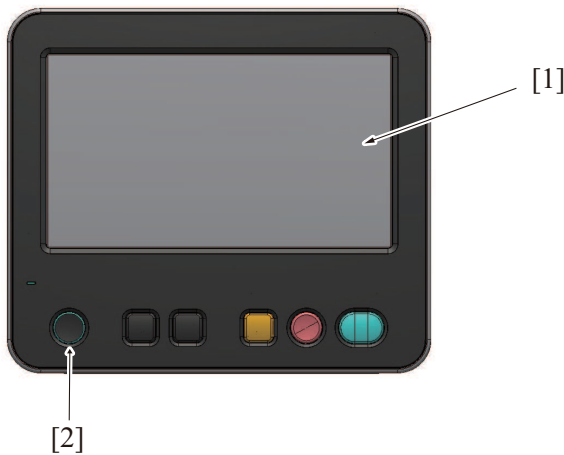
**(1) Power key functions**

- 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: [Administrator] -> [Maintenance] -> [Timer Setting] -> [Power 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: [Administrator] -> [Maintenance] -> [Timer Setting] -> [Power Settings] -> [Power Key Setting]
- \*2: [Administrator] -> [Maintenance] -> [Timer Setting] -> [Power Settings] -> [Power Save Settings]

**(2) Status in each mode**



[1] Control panel		[2] Power key
Mode	State	Power key LED
Standby	All functions are ready to accept and ready to perform jobs.	Lit up blue
Power save mode	Low power mode	Blinking in blue
	Sleep mode (*2) (Not reduce)	
	Sleep mode (*2)	Blinking in blue
	• 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.	
	• Power consumption is reduced in low power mode. • Sensors that are used internally are operating.	
	• Power is supplied only to a portion of the base board required for receiving a job.	

Mode		State	Power key LED
	(Reduce)	<ul style="list-style-type: none"> <li>When an original is placed on the scanner, a job is received, or the machine is operated, the system wakes up.</li> </ul>	
	Sleep mode (*2) (High)	<ul style="list-style-type: none"> <li>Power is supplied only to a portion of the base board required for receiving a job.</li> <li>Reset when a job is received or the machine is operated.</li> </ul>	
Sub power OFF mode	Sleep mode (*3) (Not reduce)	<ul style="list-style-type: none"> <li>Power consumption is reduced in low power mode.</li> <li>Sensors that are used internally are operating.</li> <li>Wake-up time is shorter than when "Enabled or High" is selected.</li> <li>The system wakes up when the sub power is turned on.</li> </ul>	Lit up orange
	Sleep mode (*3) (Reduce)	<ul style="list-style-type: none"> <li>Power is supplied only to a portion of the base board required for receiving a job.</li> <li>A job can be received, but printing is performed when power is turned ON.</li> <li>Wake-up time is longer than when "Disabled" is selected.</li> </ul>	
	Sleep mode (*3) (High)	<ul style="list-style-type: none"> <li>Power is supplied only to the base board.</li> <li>A job can be received, but printing is performed when power is turned ON.</li> <li>Wake-up time is longer than when "Disabled" is selected.</li> <li>Power is reduced when "Enabled" is selected.</li> </ul>	
ErP auto power off mode		<ul style="list-style-type: none"> <li>Power consumption to the lowest level.</li> <li>Reset only by the power key or the weekly timer setting.</li> <li>No jobs can be received. (*1)</li> <li>The system can also wake up when this machine is equipped with the optional wireless LAN kit.</li> </ul>	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: [Disable], [Enabled] and [High] are selectable in [Administrator] -> [Maintenance] -> [Timer Setting] -> [Power Settings] -> [Power Consumption in Sleep Mode].
- \*3: Even in sub power off mode, [Disable], [Enabled] and [High] are selectable in [Administrator] -> [Maintenance] -> [Timer Setting] -> [Power Supply/Power Save Settings] -> [Power Consumption in Sleep Mode].

**(3) Power supply**

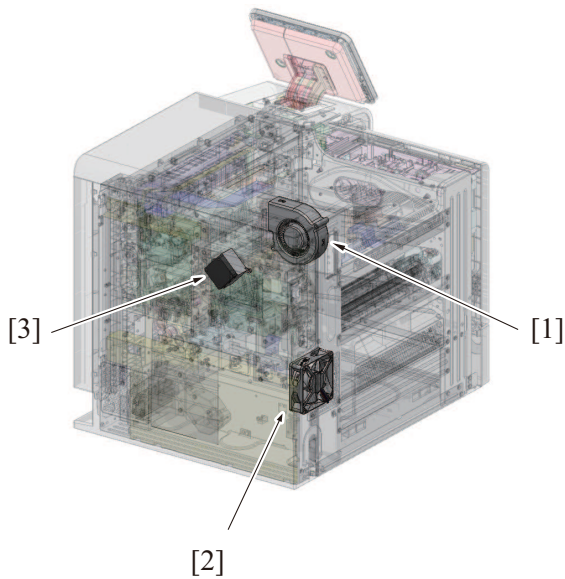
Power is supplied only to the following portions in the sleep mode and the sub power OFF mode.

5.1V	<ul style="list-style-type: none"> <li>MFP controller</li> <li>Main body storage (*1)</li> <li>USB board</li> </ul>
	<ul style="list-style-type: none"> <li>Control panel key</li> </ul>

- \*1: When [Enabled] and [High] are selected in [Administrator] -> [Maintenance] -> [Timer Setting] -> [Power Settings] -> [Power Consumption in Sleep Mode], the power is not supplied.
- \*2: When [High] is selected in [Administrator] -> [Maintenance] -> [Timer Setting] -> [Power Settings] -> [Power Consumption in Sleep Mode], the power is not supplied.

**1.16 FAN CONTROL**

**1.16.1 Configuration**



[1]	Toner suction fan (FM2)	[2]	Machine cooling fan (FM1)
[3]	CPU cooling fan (FM3)	[ ]	



**1.16.2 Operation**

**(1) Function**

Motor name	Function (purpose)
Machine cooling fan (FM1)	<ul style="list-style-type: none"> <li>Discharges heat generated from the DC power supply, or base board section to prevent the internal temperature of the machine from rising.</li> </ul>
Toner suction fan (FM2)	<ul style="list-style-type: none"> <li>Sucks in and recovers the floating toner to prevent the toner from staining the internal machine.</li> <li>Blows air in the duct between the HV board and paper exit tray. Thus, temperature around the HV board can be prevented from increasing due to heat from the discharged paper.</li> <li>Blows air on the paper exit tray to cool the paper.</li> </ul>
CPU cooling fan (FM3)	<ul style="list-style-type: none"> <li>Blows air onto the CPU board to provide cooling.</li> </ul>

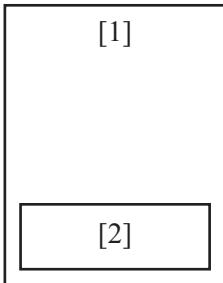
**(2) Fan control**

Control conditions	Motor name		
	Machine cooling fan (FM1)	Toner suction fan (FM2)	CPU cooling fan (FM3)
<ul style="list-style-type: none"> <li>When controlling the IU temperature decreasing weight</li> </ul>	Full speed	Full speed	Full speed
<ul style="list-style-type: none"> <li>When the door is opened</li> <li>In sleep state</li> </ul>	Half speed	Stop	Stop
<ul style="list-style-type: none"> <li>When trouble occurs</li> <li>In standby state*1</li> </ul>	Half speed	Stop	Stop
<ul style="list-style-type: none"> <li>Pre-drive operation</li> <li>During image stabilization</li> <li>During operation checking*1</li> </ul>	Full speed	Full speed	Full speed
<ul style="list-style-type: none"> <li>During a 1-sided print cycle</li> </ul>	Full speed	Full speed	Full speed
<ul style="list-style-type: none"> <li>During a 2-sided print cycle</li> </ul>	Full speed	Full speed	Full speed
<ul style="list-style-type: none"> <li>During a firmware upgrading</li> </ul>	Full speed	Stop	Stop

\*1: If the machine enters the "standby" state, the fan motor turns at full speed for predetermined time before stopping.

**1.17 COUNTER CONTROL**

**1.17.1 Configuration**



[1] Base board (BASEB)	[2] Electronic counter
------------------------	------------------------

**1.17.2 Operation**

Name	Function/system
Electronic counter	<ul style="list-style-type: none"> <li>Number of total in copy/print/fax/scan mode will be displayed on the screen as described below.</li> <li>Black, full color, mono color, and 2 color</li> <li>Total counter, large size counter, color total (copy + printer), scan counter, fax TX counter, fax RX counter, original counter, paper counter, total duplex counter, number of total pages output</li> <li>Counts one when an exit signal is applied to it.</li> </ul>

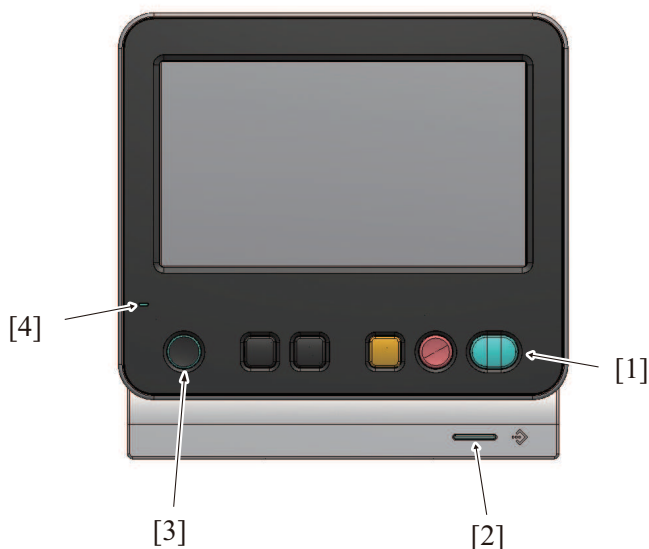
**NOTE**

The counting modes can be selected at [Billing Setting] of Service Mode. For details, see Counter Setting.

**1.18 INDICATOR FUNCTION**

**1.18.1 Configuration**

**(1) Operation panel section**



[1]	Start key	[2]	Data indicator
[3]	Power key	[4]	Warning indicator

**1.18.2 Control**

- The lighting control for the LED on each indicator section is described below.

**(1) Power key and Start key indicator section**

Status	Power key indicator section	Start key indicator section
During warm-up	Lit up blue	Lit up orange
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

**(2) Warning status indicator section**

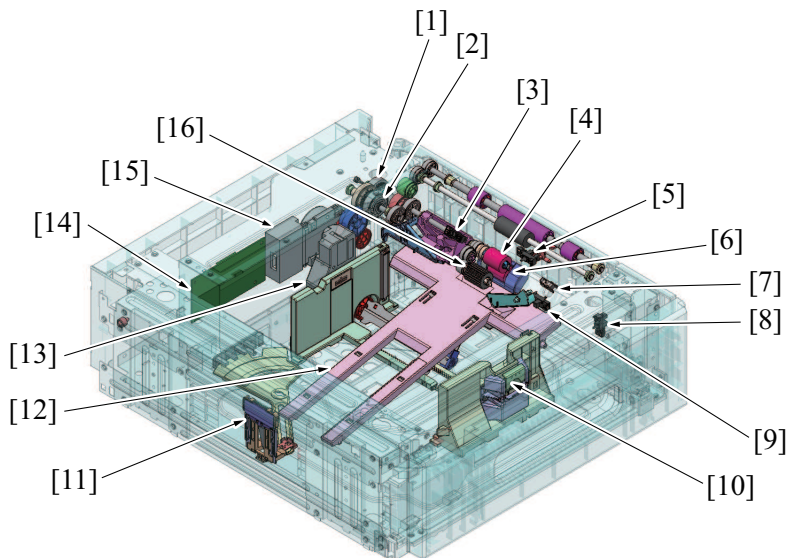
Status	Warning status indicator section
When machine stops	Lit up orange
When warning occurs	Blinking in orange
Other status	Unlit

**(3) Data indicator section**

Status	Operation status indicator section
Job is currently	Lit up blue
Receiving a job	Blinking in blue
Other status	Unlit

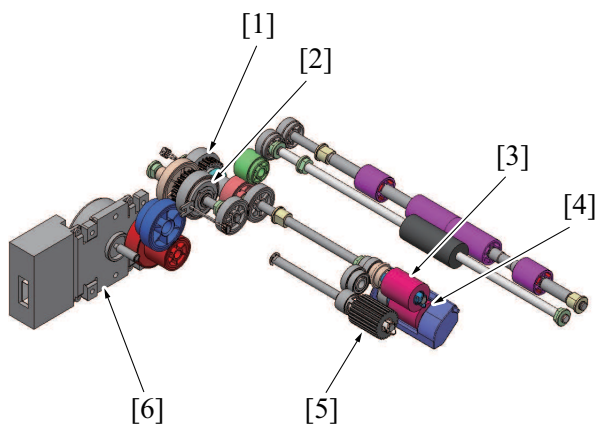
## 2. PF-P20/PF-P21

### 2.1 Configuration



[1]	Tray 2 paper feed clutch (CL1/2)	[2]	Tray 2 transport clutch (CL2/2)
[3]	Tray 2 upper limit sensor (PS2/2)	[4]	Feed roller
[5]	Tray 2 transport sensor (PS6/2)	[6]	Separation roller
[7]	Tray 2 paper feed sensor (PS3/2)	[8]	Tray 2 door sensor (PS4/2)
[9]	Tray 2 paper empty sensor (PS1/2)	[10]	Edge guide plate
[11]	Trailing edge guide plate	[12]	Paper lift-up plate
[13]	Tray 2 lift-up motor (M2/2)	[14]	Tray 2 PC control board (PCCB/2)
[15]	Tray 2 drive motor (M1/2)	[16]	Pick-up roller

### 2.2 Drive



[1]	Tray 2 paper feed clutch (CL1/2)	[2]	Tray 2 transport clutch (CL2/2)
[3]	Feed roller	[4]	Separation roller
[5]	Pick-up roller	[6]	Tray 2 drive motor (M1/2)

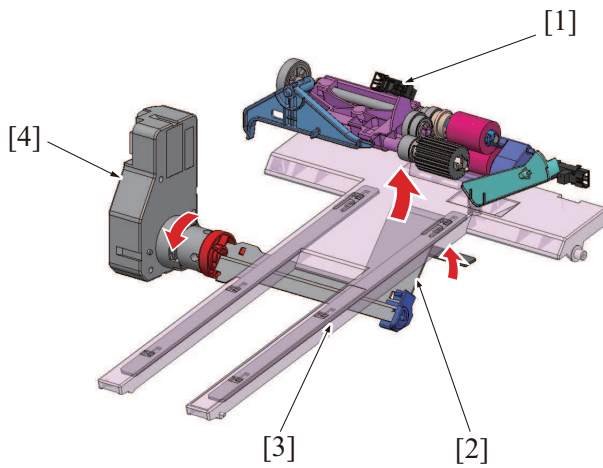
### 2.3 Operation

#### 2.3.1 Up/down control

- Tray 2 and tray 3 are controlled in the same control procedure.

##### (1) Up operation

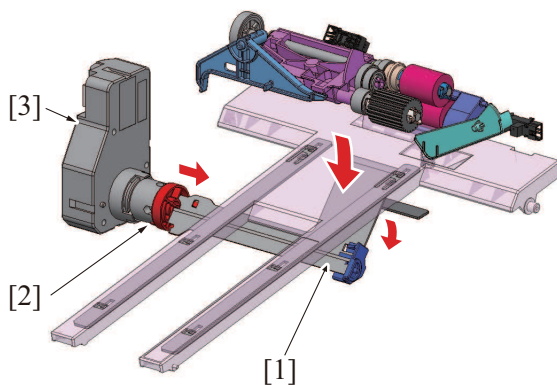
- The paper lift-up lever is located under the paper lift-up plate.
- The drive shaft of the tray 2 lift-up motor is connected to the paper lift-up lever.
- When the drive shaft of the tray 2 lift-up motor rotates, the paper lift-up lever rotates to raise the paper lift-up plate.



[1]	Tray 2 upper limit sensor (PS2/2)	[2]	Paper lift-up lever
[3]	Paper lift-up plate	[4]	Tray 2 lift-up motor (M2/2)

**(2) Down operation**

- When the tray is slid out of the machine, the coupling of the tray 2 lift-up motor and the lift-up plate drive shaft are disconnected from each other.
- When the driving force of the tray 2 lift-up motor is released from the lift-up plate drive shaft, the paper lift-up plate starts lowering by its own weight.



[1]	Paper lift-up lever	[2]	Coupling
[3]	Tray 2 lift-up motor (M2/2)	-	-

**(3) Operation timing**

**(a) When the tray is slid in**

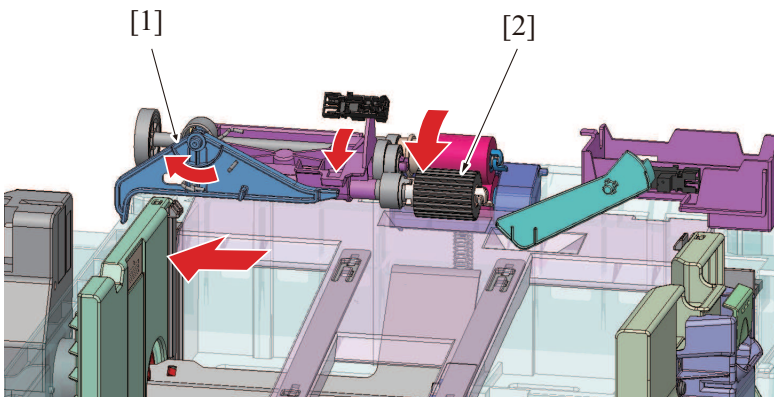
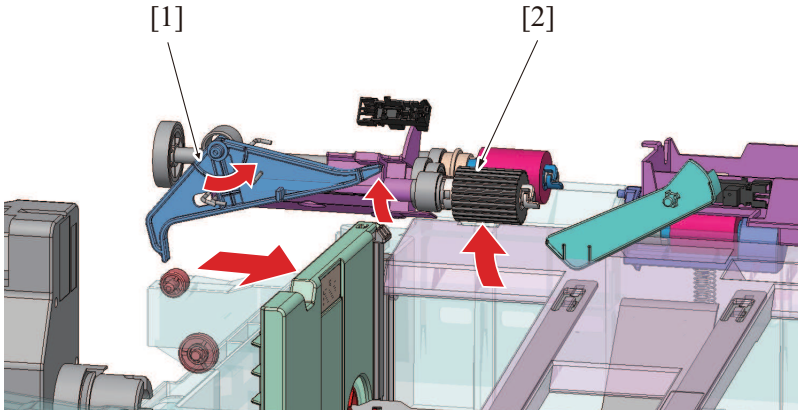
- When the tray is slid into the machine, the tray 2 door sensor is blocked. The machine then determines that the tray is slid into position.
- The paper lift-up plate is lowering when the tray is slid out, so that the tray 2 upper limit sensor is unblocked.
- Determining after tray insertion that the tray 2 upper limit sensor is unblocked, the machine lets the tray 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 paper lift-up plate up operation starts, the tray 2 upper limit sensor is blocked.
- Determining that the tray 2 upper limit sensor is blocked, the machine stops the tray 2 lift-up motor to complete the up operation of the paper lift-up plate.
- Control is provided to make sure that the up operation of the tray 2 is not performed together with another trays.
- If the tray 2 is slid out during the up operation of the paper lift-up plate and accordingly the tray 2 door sensor 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 2 upper limit sensor. The tray 2 lift-up motor will rotate again to lift up the paper lift-up plate.
- When the tray 2 upper limit sensor is blocked, the tray 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.

**2.3.2 Pick-up roller retract mechanism**

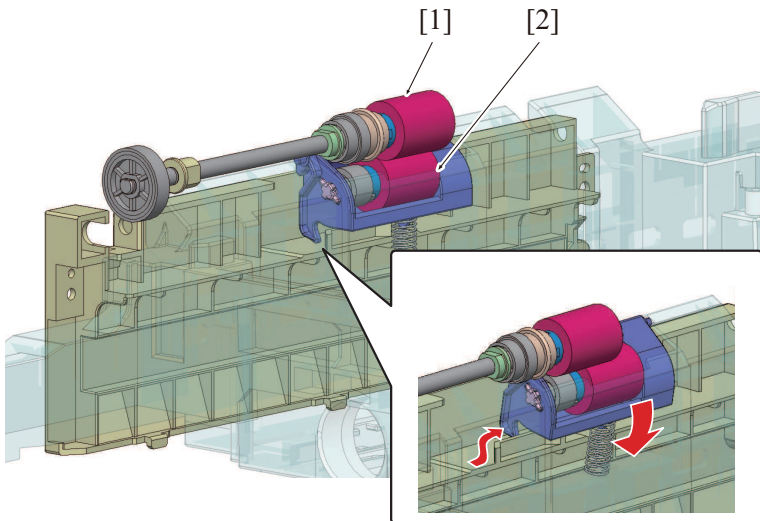
- A mechanism to retract the pick-up roller is provided, in order to avoid damaging stacked paper when the paper feed tray is inserted.
- When the tray 2 is open, the retraction lever in the back of the machine presses the pick-up roller up to the retract position.
- When the pick-up roller is in the retract position, paper cannot be damaged as the pick-up roller does not make contact with the stacked paper.
- Closing the tray 2 presses the retraction lever to move the pick-up roller to the a position such that it can supply paper.



[1] Retraction lever	[2] Pick-up roller
----------------------	--------------------

**2.3.3 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 retracting position. It releases the paper from the rollers even if it is jammed between the rollers.



[1] Feed roller	[2] Separation roller
-----------------	-----------------------

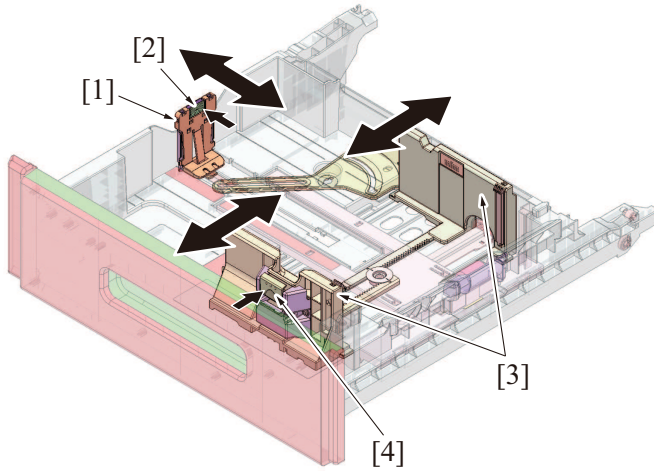
**2.3.4 Paper feed control**

- Rotation of the tray 2 drive motor is transmitted through the tray 2 paper feed clutch to drive the feed roller to take up and feed the paper.

- The paper taken up and fed in is conveyed onto the registration roller.
- The paper is pressed against the stationary registration roller so that a loop is formed in the paper. The feed roller is then stopped. The loop thus formed in the paper corrects any mechanical skew in the paper.
- As the trailing edge of the paper reaches a point immediately before the feed roller, the feed roller is stopped.

**2.3.5 Paper guide plate**

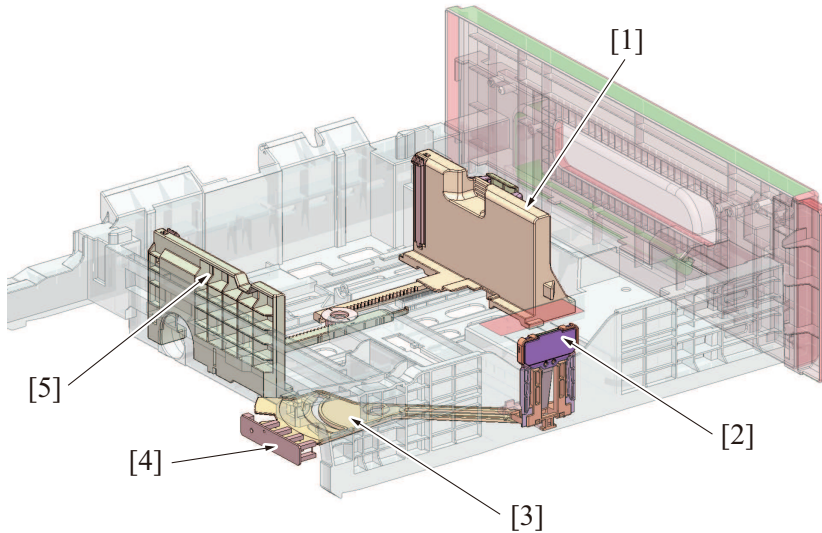
- The trailing edge guide plate can be slid to the exact size in the length direction of the paper to be loaded.
- When the trailing edge guide plate lock release button is being pressed, slide the trailing edge guide plate to the left and right.
- The edge guide plate can be slid to the exact size in the width direction of the paper to be loaded.
- When the edge guide plate lock release lever is being held, slide the edge guide plate to the front and back.



[1]	Trailing edge guide plate	[2]	Trailing edge guide plate lock release button
[3]	Edge guide plate	[4]	Edge guide plate lock release lever

**2.3.6 Paper size detection**

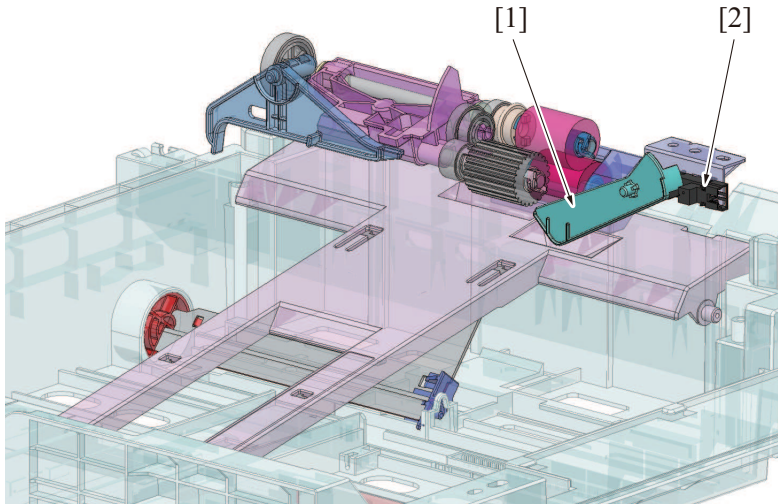
- When the paper length guide of the drawer is moved, the circular paper length detection plate located on the bottom of the drawer turns.
- The paper length is detected by the lever that operates in conjunction with the paper length detection plate, and four paper length detection sensors on the FD paper size board.
- Four paper length detection sensors determine the size of the paper loaded in the drawer.
- The sensor on the FD paper size board detects whether the drawer is open or not.



[1]	Paper width guide (front)	[2]	Paper length guide
[3]	Paper length detection plate	[4]	Tray 2 paper size sensor (PS5/2)
[5]	Paper width guide (rear)	-	-

**2.3.7 Paper empty condition detection control**

- At time that the tray 2 paper empty sensor is unblocked, a paper empty condition is detected.
- No mechanism is provided for detecting a paper near-empty condition.

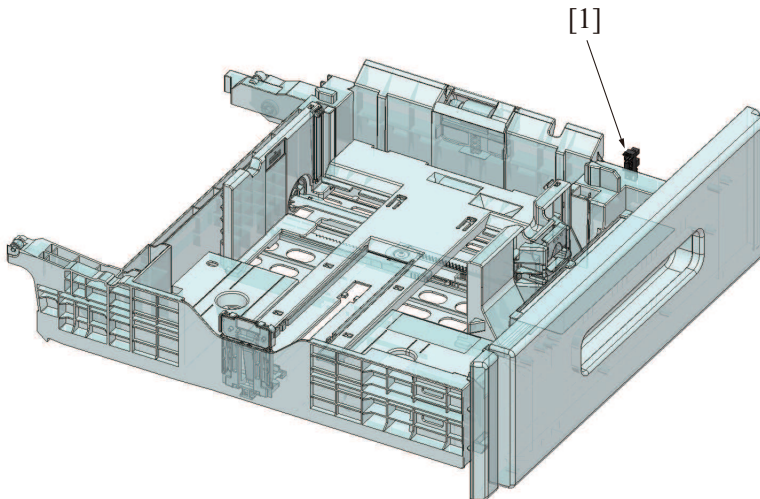


[1]	Empty sensor actuator
-----	-----------------------

[2]	Tray 2 paper empty sensor (PS1/2)
-----	-----------------------------------

### 2.3.8 Tray open/close detection control

- The tray 1 set sensor detects a tray in the open or closed position.



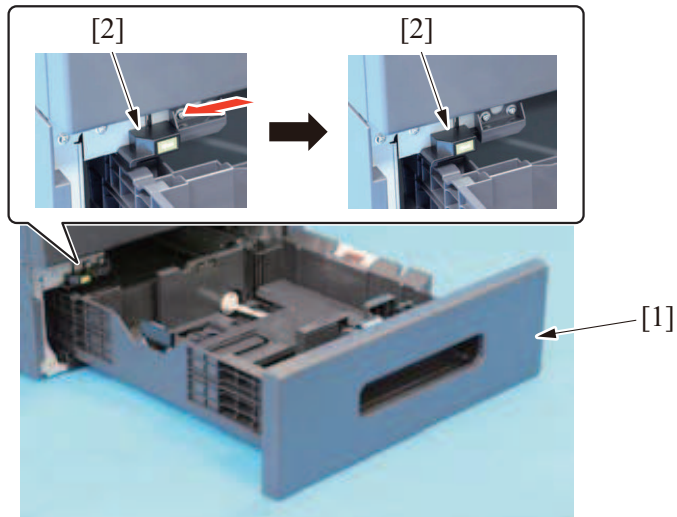
[1]	Tray 2 door sensor (PS4/2)	-	-
-----	----------------------------	---	---

### 2.3.9 Paper misfeed detection control

- If the registration sensor is not activated within a predetermined period of time after a paper feed sequence has been started, the main body determines that there is a paper misfeed. It then gives the message "PAPER EMPTY TRAY 2" on the panel.
- The paper misfeed display can be reset by opening and closing any of the doors.
- Paper refeeding (retry control) is not performed from tray 2 even when a paper jam is resolved.

### 2.3.10 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 slid 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 2	[2] Tray 2 stopper
------------	--------------------

**(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**

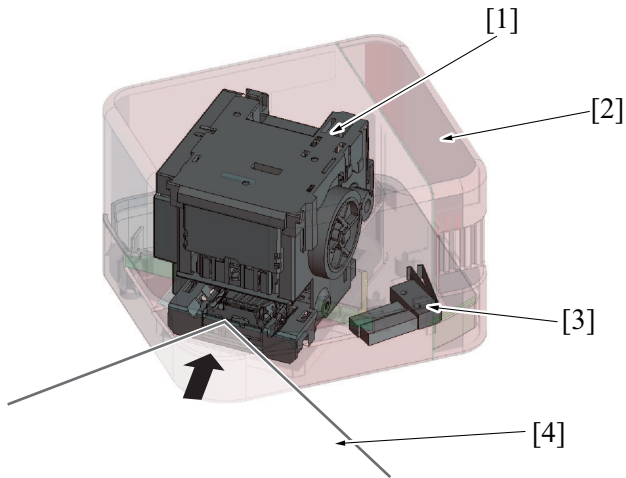
- A mechanism is provided to push and lock the stopper through closing the paper tray to its home position even if you forget to lock it. (Mechanism to prevent forgetting lock)



### 3. FS-P04

#### 3.1 Configuration

- A finisher (FS-P04) is composed of a clincher, a staple cartridge and a safety switch, and the power supply is provided from the MFP main body.



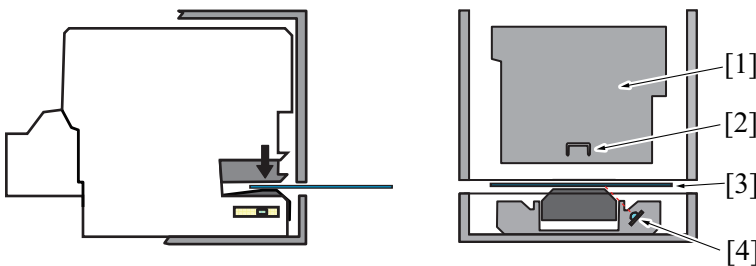
[1]	Clincher	[2]	Cover
[3]	Safety switch	[4]	Paper

#### 3.2 Paper detection

- The reflective sensor installed in the clincher detects the end of paper and execute stapling.

**NOTE**

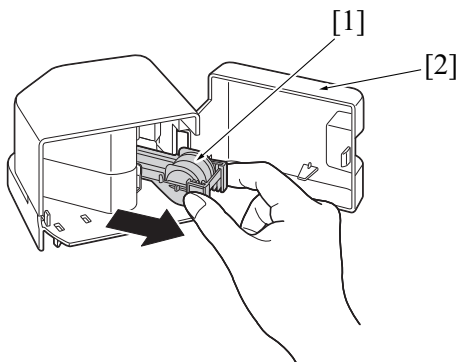
- Since the reflective sensor cannot detect the end of the paper with solid black image on the back side, or the paper without border, stapling may not be executed.



[1]	Clincher	[2]	Staple
[3]	Paper	[4]	Reflective sensor

#### 3.3 Safety switch

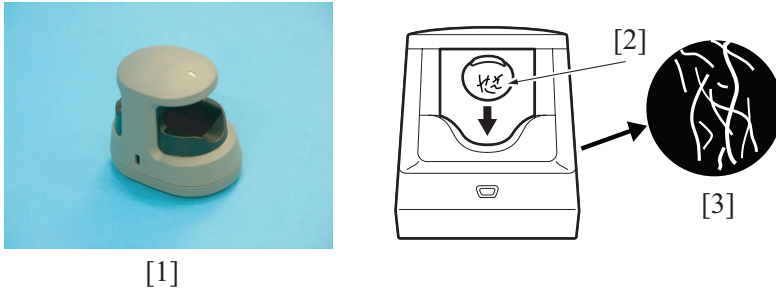
- When opening the finisher cover, the safety switch turns off to shut off the power supply from the main body. For safety reasons, the clincher is designed not to operate when replacing a staple cartridge or getting rid of a jam of staples.



[1]	Staple cartridge	[2]	Cover
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## 4. AU-102

### 4.1 Configuration



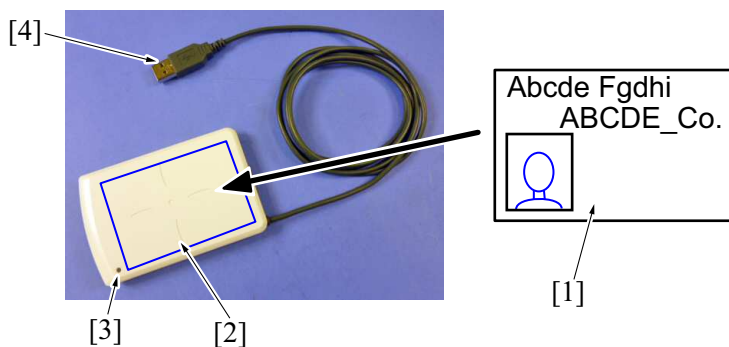
[1]	Authentication unit (AU-102)	[2]	Finger
[3]	Vein image	-	-

### 4.2 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.

## 5. AU-201S

### 5.1 Configuration



[1]	Non-contact IC card	[2]	Read-write area
[3]	Status LED	[4]	USB connector (Type-A)

### 5.2 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.

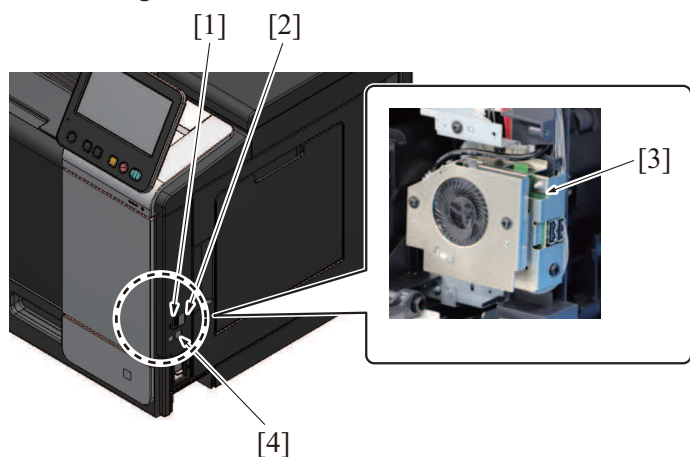
### 5.3 Specifications

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	<ul style="list-style-type: none"> <li>• Non-contact IC cards compliant with ISO14443 Type A</li> <li>• Non-contact IC cards compliant with TN2 (SEE55R)</li> </ul>	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)		

## 6. EK-P08/EK-P09

### 6.1 EK-P08

#### 6.1.1 Configuration



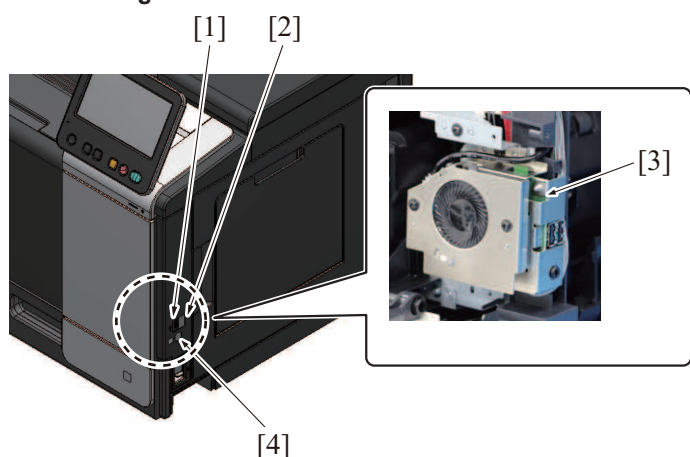
[1]	USB terminal (extension)	[2]	USB terminal (standard)
[3]	Local Interface Kit EK-P08	[4]	Voice guidance output terminal

#### 6.1.2 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.

### 6.2 EK-P09

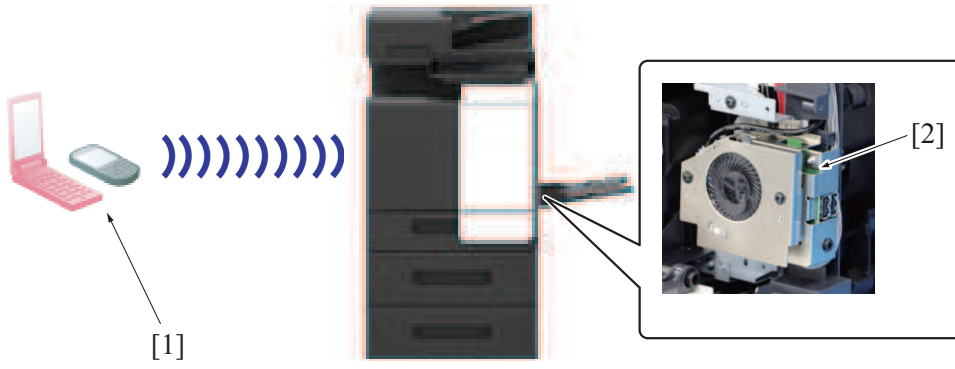
#### 6.2.1 Configuration



[1]	USB terminal (extension)	[2]	USB terminal (standard)
[3]	Local Interface Kit EK-P09	[4]	Voice guidance output terminal

#### 6.2.2 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 (Personal Digital Assistant), compatible with Bluetooth, are to be used. It has a built-in speaker and Bluetooth communication receiver.

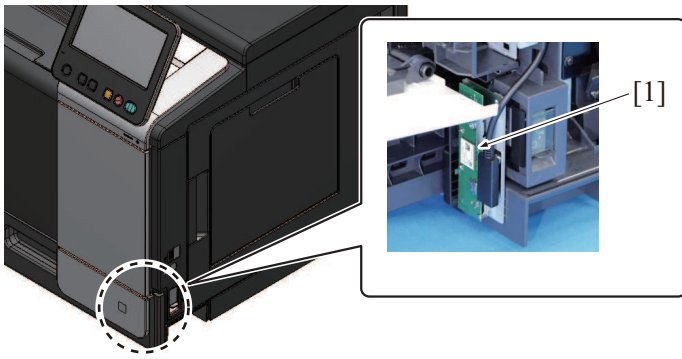


[1] Portable phone, PDA	[2] Local Interface Kit EK-P09
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## 7. UK-221

### 7.1 CONFIGURATION

#### 7.1.1 Mounting position



[1]	Upgrade kit (UK-221)	-	-
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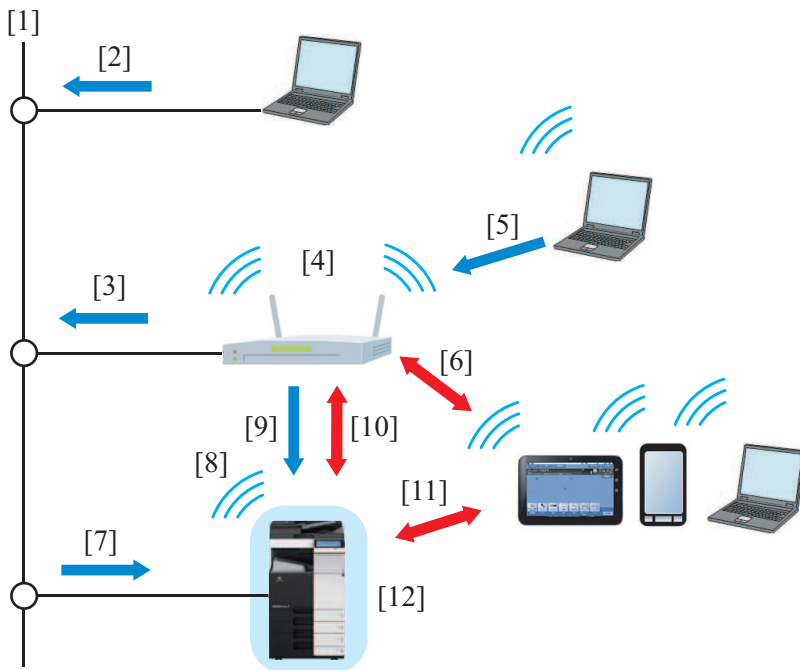
### 7.2 OPERATION

#### 7.2.1 Outline

When the upgrade kit is installed, the following functions can be added.

- By connecting the MFP main body as a wireless LAN adapter to a wireless LAN access point connected to the LAN environment, a job can be executed. The MFP main body 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 body 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 body is on standby state in "ErP Auto Power Off mode", the MFP main body can be started from a client 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 body via the LAN	[8]	<ul style="list-style-type: none"> <li>• Communication with the wireless LAN access point (Wireless Only, Wired+Wireless (Secondary Mode))</li> <li>• Enabled communication with a mobile device (Wired + Wireless (Primary Mode), Wired + Wireless (Wi-Fi Direct))</li> </ul>
[9]	Job received from the MFP main body 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] MFP main body (on startup)
---	---------------------------------

**NOTE**

- To use the upgrade kit, 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 MFP main body.  
[Service Mode] -> [Network Settings] -> [2nd Network Setting]-> [Network Interface Settings]

No.	Network Interface Settings	Connection environment of MFP main body
1	Wired Only	Use when the MFP main body is connected only to a LAN environment.
2	Wireless Only	Use when the MFP main body is connected only to a wireless LAN environment.
3	Wired+Wireless (Secondary Mode)	Use when the MFP main body is connected to both a LAN environment and a wireless LAN environment.
4	Wired+Wireless (Primary Mode)	<ul style="list-style-type: none"> <li>Use when the MFP main body is connected to both a LAN environment and a wireless LAN environment.</li> <li>The MFP main body is used as a wireless LAN access point (Primary Mode).</li> </ul>
5	Wired+Wireless (Wi-Fi Direct)	<ul style="list-style-type: none"> <li>Use when the MFP main body is connected to both a LAN environment and a wireless LAN environment.</li> <li>The MFP main body is used as a wireless LAN access point.</li> <li>With this mode, a mobile device (excluding iOS) can be connected to Wi-Fi Direct authentication devices easily.</li> </ul>

**7.2.2 2nd network interface structure**

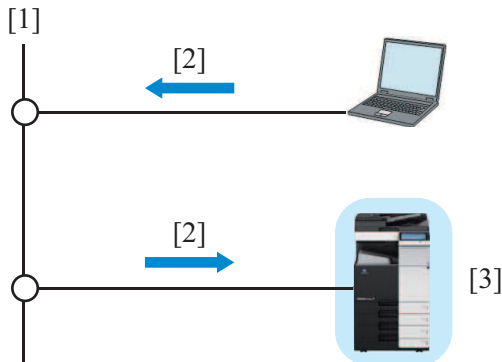
**(1) Wired Only**

- Use when the machine is connected only to a LAN environment. (Initial setting)
- The LAN line is the main line.

**(a) 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) Wireless Only**

- Use when the machine is connected only to a wireless LAN environment.
- The wireless LAN line is the main line.

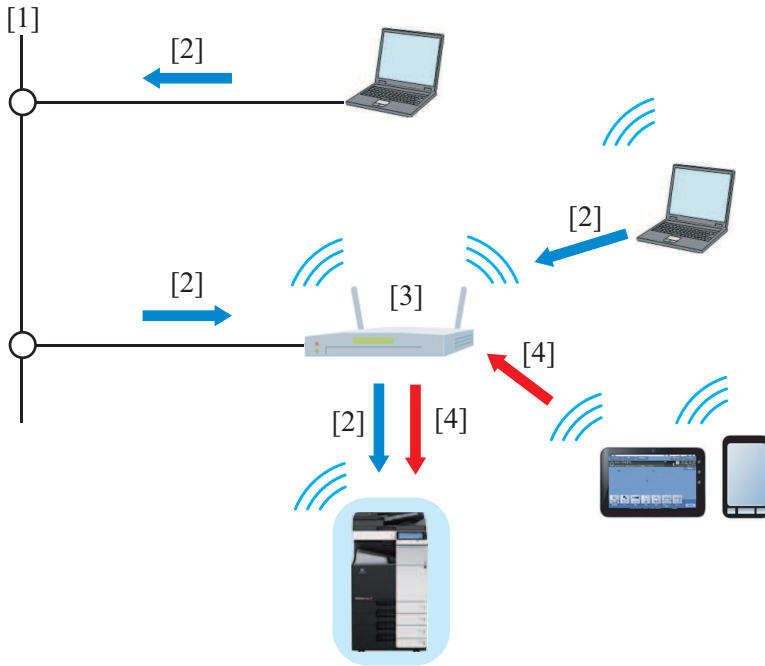
**(a) Operation**

- 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

**(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.

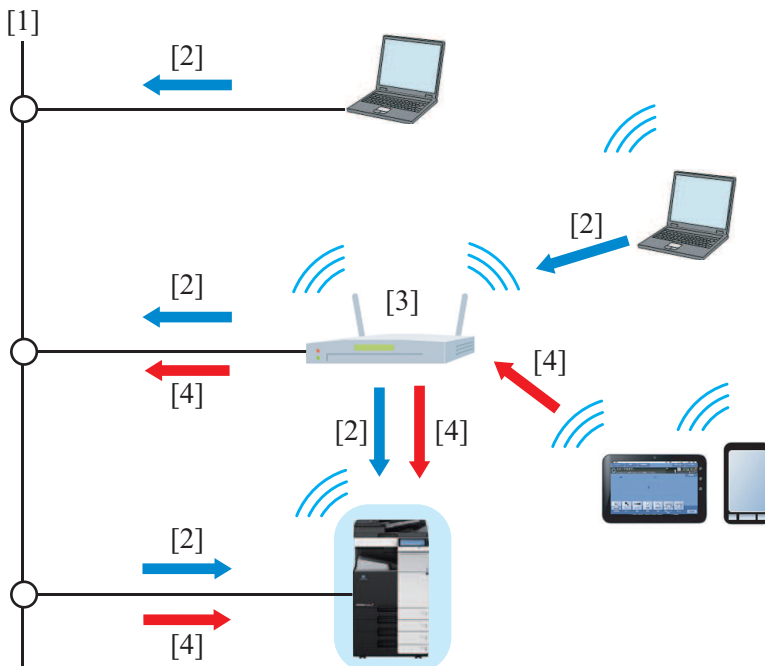
**(a) Operation**

- 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
-------------------------------	---------------------------------------

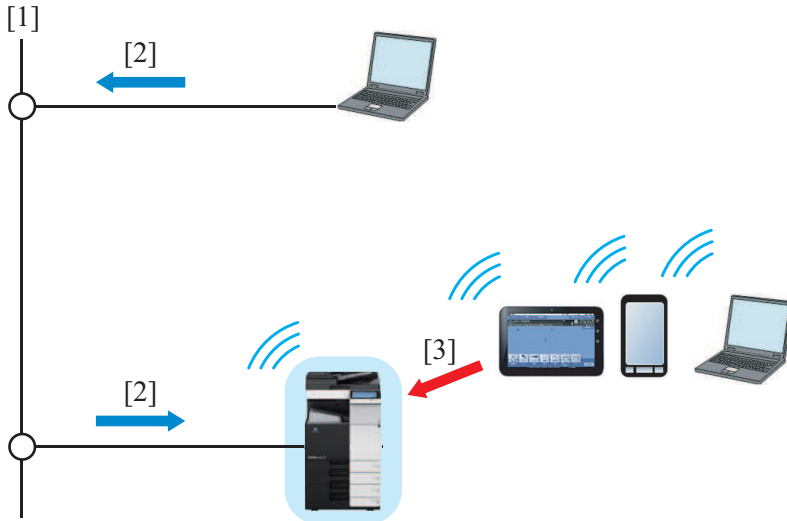
**(4) Wired+Wireless (Primary Mode)**

- 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.

**(a) 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	- -

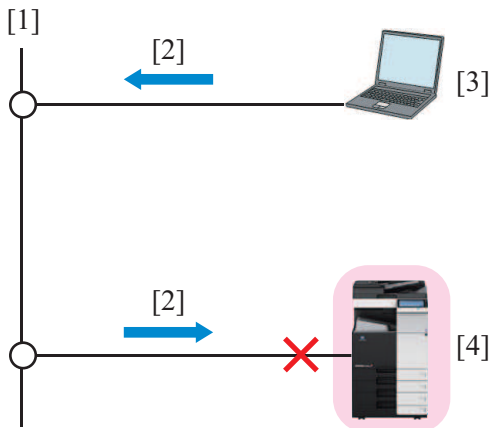
**(5) Wired+Wireless (Wi-Fi Direct)**

- 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.

**7.2.3 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 body.
- When the MFP main unit on which the upgrade kit is not installed, is switched to ErP Auto Power Off mode, the operations such as receiving data, receiving fax, reading original, printing and so on cannot be executed.
- When the upgrade kit is installed, ErP Auto Power Off mode can be released remotely (by starting up the MFP main body).  
[Administrator] -> [Network] -> [Wireless Network Setting]

Diagram of standby state in "ErP Auto Off mode" of the MFP main body



[1] LAN environment	[2] Print job
[3] Client (PC)	[4] MFP main body (on standby in ErP Auto Power Off mode)

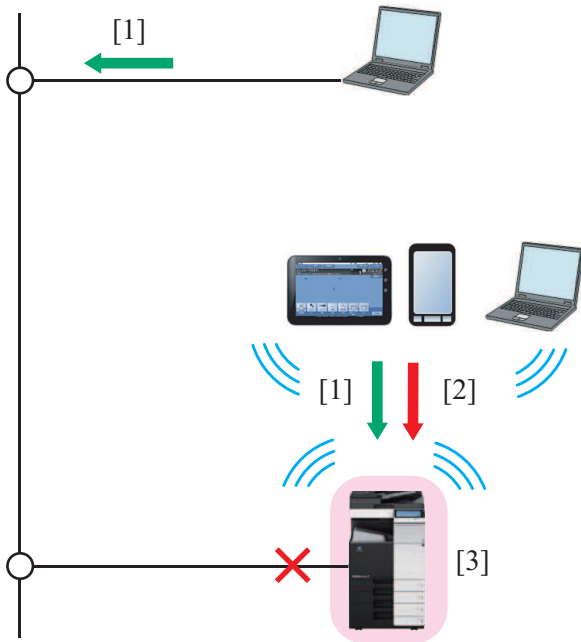
**(1) Wired+Wireless (Secondary Mode)**

**NOTE**

To awake from the ErP Auto Power Off mode, select [Awake with ARP + Unicast Communication].

- The machine waits for a startup indication that is sent via the wireless LAN communication.
- 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

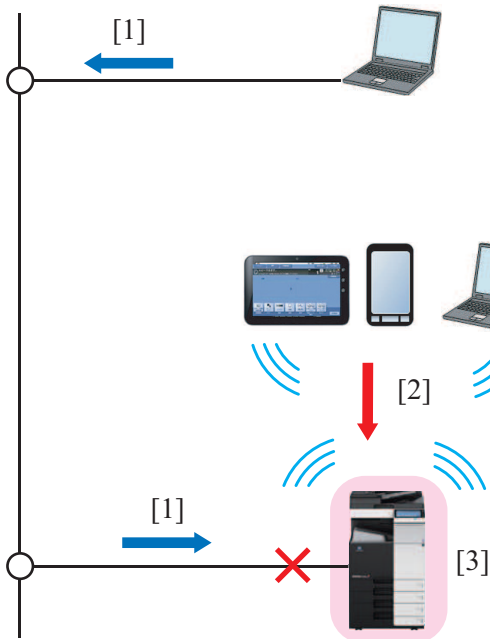
[2] Job received from a mobile device

[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.

- 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) Wired+Wireless (Primary Mode), Wired+Wireless (Wi-Fi Direct)**

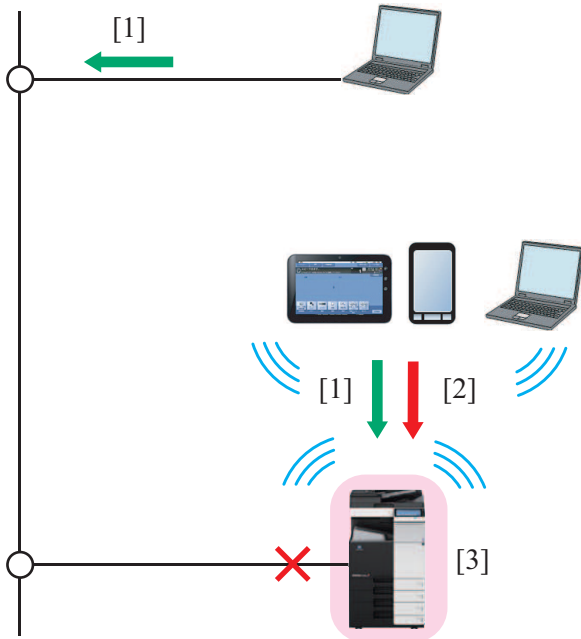
**NOTE**

To awake from the ErP Auto Power Off mode, select [Awake with ARP + Unicast Communication].

- The MFP main body waits for a startup indication sent via the wireless LAN communication.

- 2. Receiving a startup indication from a client via the wireless LAN communication without via the wireless LAN access point to start up the MFP main body.
  - Receiving a startup indication from a PC to start up the MFP main body.
  - Receiving a communication from a mobile device to start up the MFP main body.

Diagram of startup operation



[1] Startup indication (\*1)

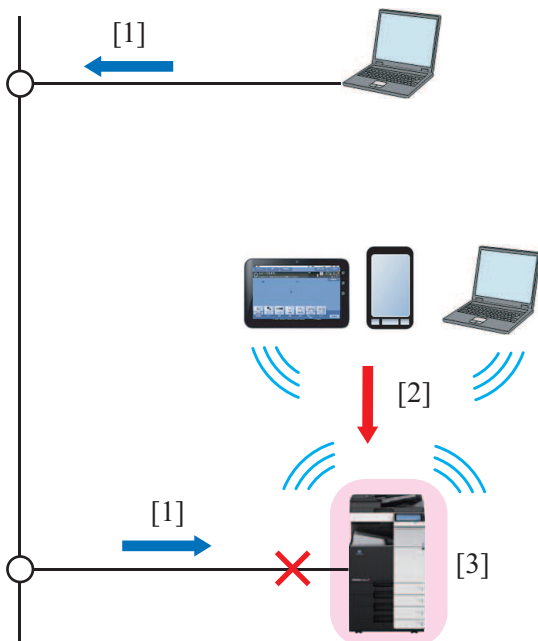
[2] Job received from a mobile device

[3] MFP main body (on startup)

• \*1: To execute a print job, [Wake-On-Lan Settings] is required to be configured at [Settings] of a printer driver.

- 3. After starting up the MFP main body, execute a job 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 body



[1] Job received from a PC

[2] Job received from a mobile device

[3] MFP main body (on startup)

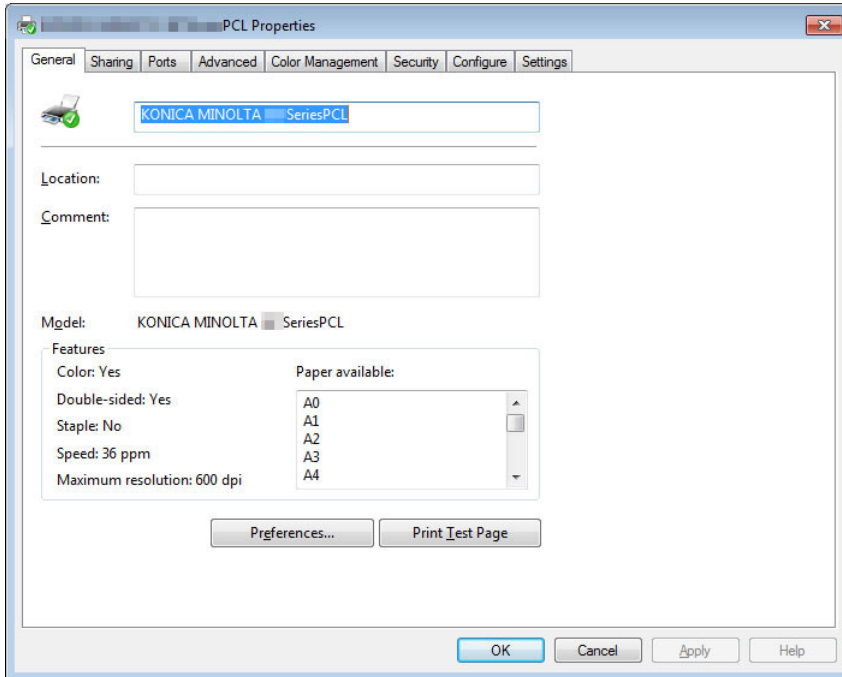
• After starting up the MFP main body, the wireless LAN communication between the MFP main body and the wireless LAN access point will be completed.

**(3) Setting for printer driver**

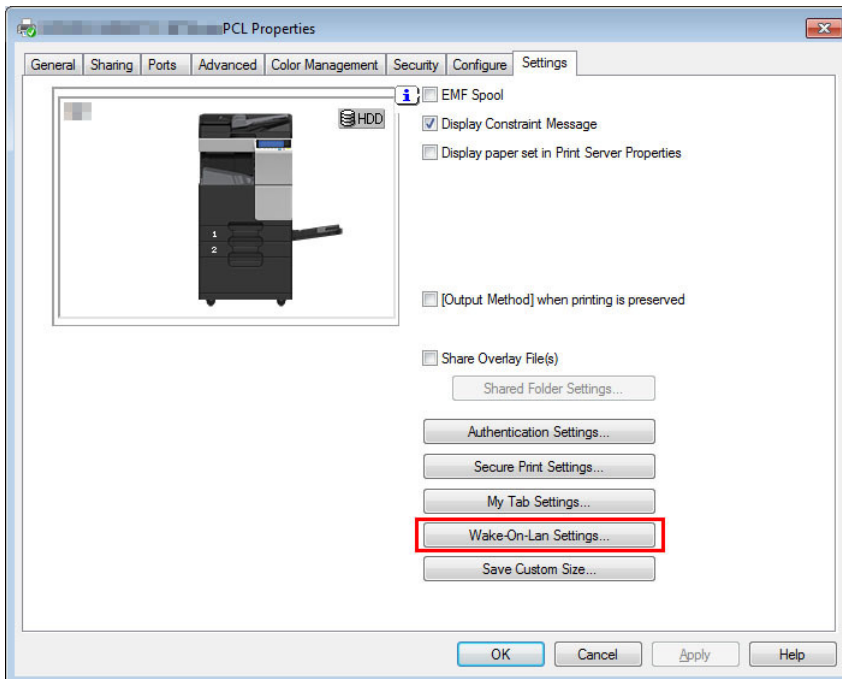
- To execute a print job, property settings are required for the printer driver to start up the MFP main unit from ErP Auto Power Off mode.

**(a) Setting procedure**

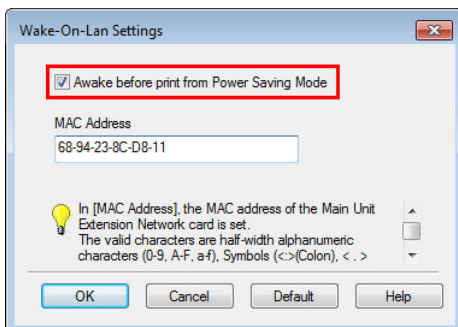
1. Open the property window of the printer.



2. Select the [Initial settings] tab, and select [Wake-On-Lan setting].



3. Select the [Awake before print from Power Saving Mode] check box.

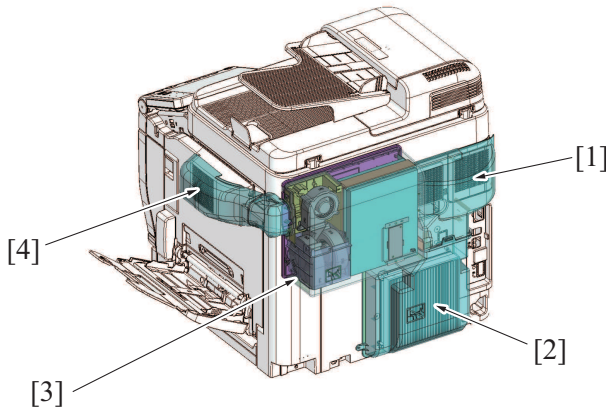


## 8. CU-202

### 8.1 CONFIGURATION

#### 8.1.1 Configuration

- The exhaust port is mounted to cover each suction duct. Thus, the clean unit can maximally collect UFP that is exhausted from the main body.



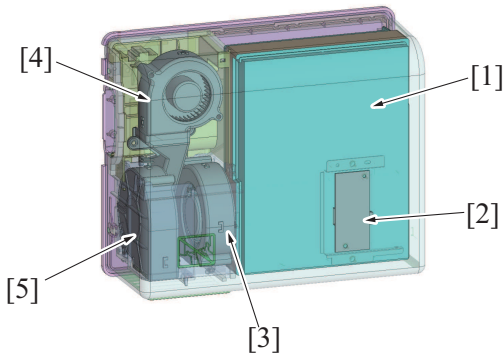
[1]	Suction port (paper exit / developing / power supply section)	[2]	Suction port (cooling section)
[3]	Clean unit	[4]	Suction port (fusing section)

**NOTE**

- When the clean unit has been mounted, be sure to configure related settings in service mode. [Service Mode] -> [System 2] -> [Cleaning Unit Setting]

#### 8.1.2 Unit internal configuration

- The clean unit consists of three exhaust fans, a UFP filter, and a drive board.



[1]	UFP filter	[2]	Clean unit drive board (CUDB)
[3]	Exhaust fan/2 (FM2)	[4]	Exhaust fan/3 (FM3)
[5]	Exhaust fan/1 (FM1)	-	-

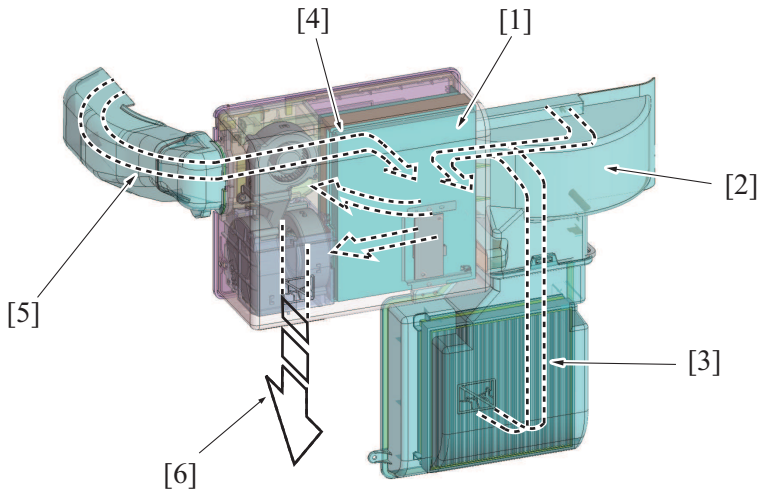
## 8.2 OPERATION

### 8.2.1 Airflow

- Air is exhausted from the fusing section, paper exit section, and power supply section of the main body, and inside of the machine. The clean unit takes the exhausted air into the clean unit via each duct.
- The UFP filter collects the air UFP (Ultrafine Particle) that is exhausted from the main body.
- Air passing through the UFP filter is exhausted out of the machine through the exhaust fans 1/2/3 in the clean unit.

**NOTE**

- The UFP filter does not require a periodic replacement.



[1]	UFP filter	[2]	Exhausted air from the power supply section/paper exit section of the main body
[3]	Exhausted air from the machine	[4]	Air flow inside the clean unit
[5]	Exhausted air from the fusing section of the main body	[6]	Exhausted air from the clean unit

**8.2.2 Fan control**

**(1) Control conditions**

- The clean unit drive board drives three exhaust fans 1/2/3.
- Three exhaust fans control the rotation in a same way.

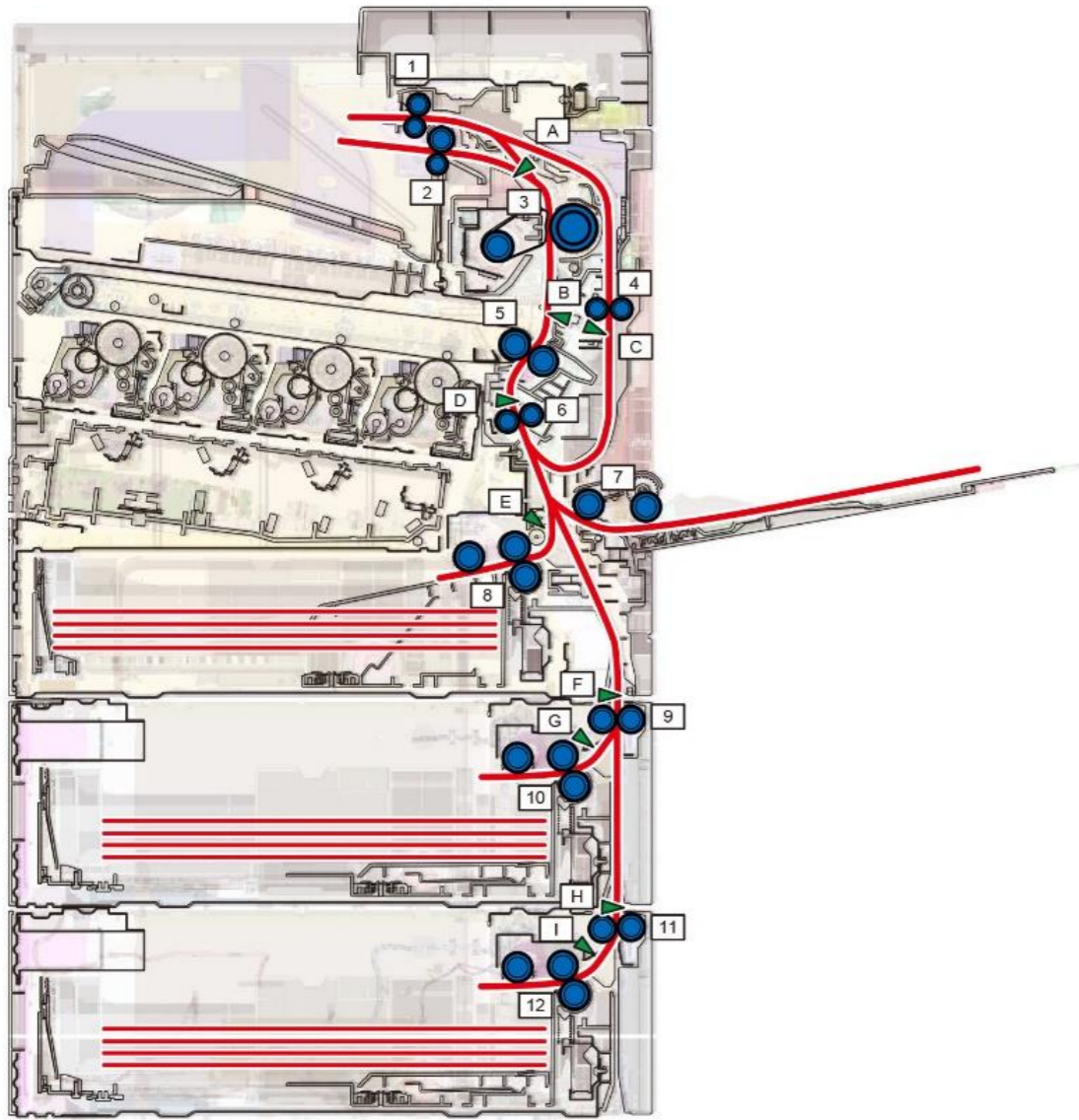
Control conditions	Exhaust fan/1 (FM1)	Exhaust fan/2 (FM2)	Exhaust fan/3 (FM3)
<ul style="list-style-type: none"> <li>• When the door is open</li> <li>• In sleep</li> <li>• Rewriting firmware</li> <li>• In standby</li> <li>• In trouble</li> </ul>	Stop	Stop	Stop
<ul style="list-style-type: none"> <li>• Initial operation</li> <li>• During image stabilization</li> <li>• At operation check function (when the load check)</li> <li>• When printing (1-Sided / 2-Sided)</li> <li>• During IU temperature lowering wait control</li> </ul>	Full speed	Full speed	Full speed

**(2) Lock detection**

- The clean unit drive board detects the lock status of the exhaust fans.
- Even when one of the exhaust fans in the clean unit is locked, the clean unit drive board sends a lock signal to the main body. Then a clean unit fan's failure to turn (C5360) will appear on the operation panel.

Exhaust fan/1 (FM1)	Exhaust fan/2 (FM2)	Exhaust fan/3 (FM3)	Lock signal (LOCK)	Status
Rotation	Rotation	Rotation	L	Normal
Lock status	Rotation	Rotation	H	Clean unit fan's failure to turn (C5360)
Rotation	Lock status	Rotation		
Rotation	Rotation	Lock status		

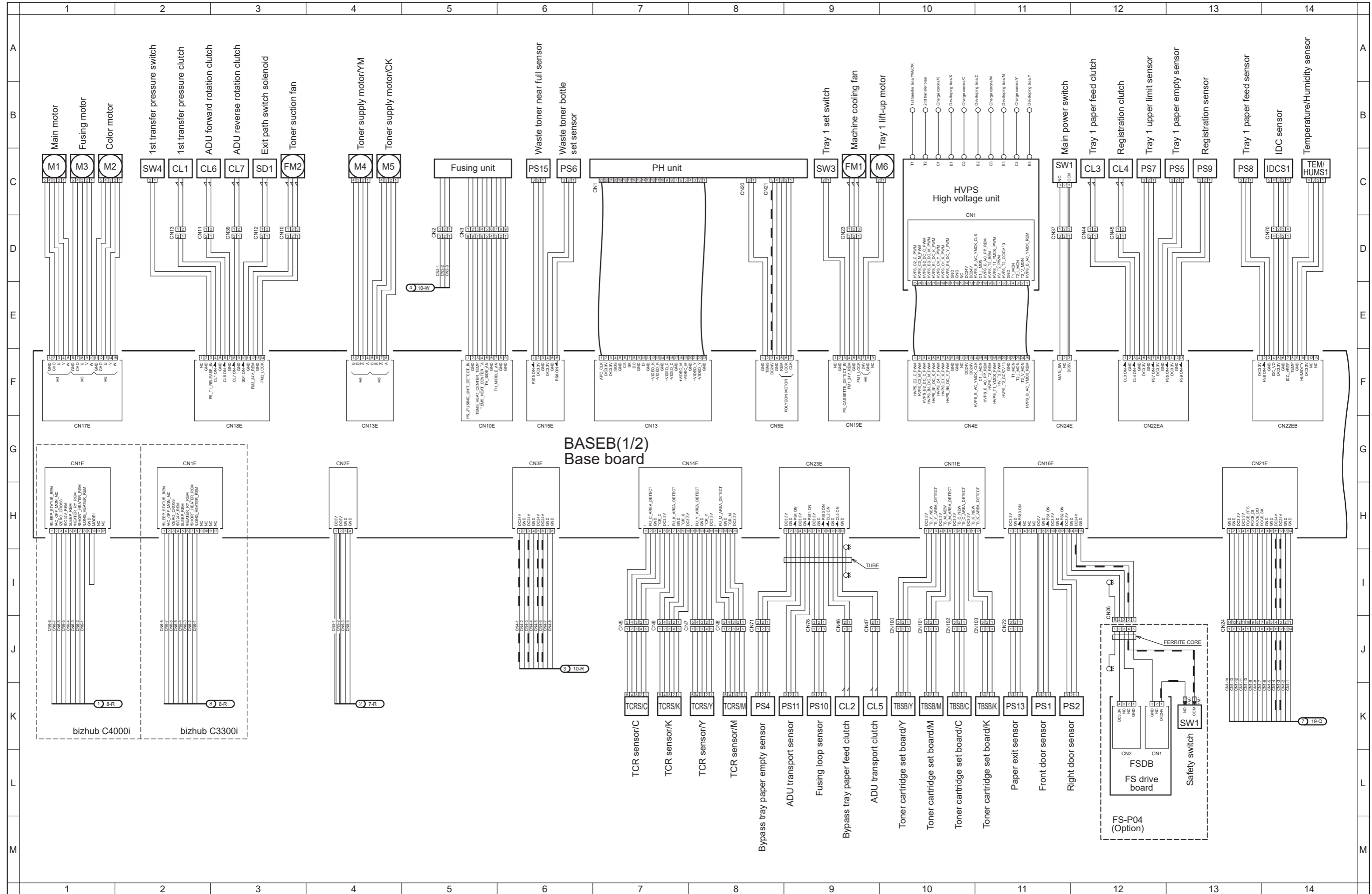
List of drive rollers and sensors (paper path)



No.	Section	Roller name	Drive power source
1	Main body	Reverse roller, roll	Fusing motor (M3), ADU reverse rotation clutch (CL7), ADU forward rotation clutch (CL6)
2		Paper exit roller, roll	Fusing motor (M3), ADU forward rotation clutch (CL6)
3		Fusing pad, Fusing belt, Pressure roller	Fusing motor (M3)
4		ADU transport roller, roll	Main motor (M1), ADU transport clutch (CL5)
5		2nd transfer roller	Main motor (M1)
6		Registration roller, roll	Main motor (M1)
7	PF	Manual bypass tray pick-up roller, Manual bypass tray paper feed roller, Manual bypass tray separation roller	Main motor (M1), Bypass tray paper feed clutch (CL2)
8		Tray1 pick-up roller, Tray1 paper feed roller, Tray1 separation roller	Main motor (M1), Tray1 paper feed clutch (CL3)
9		Tray2 pick-up roller, Tray2 paper feed roller, Tray2 separation roller	Tray2 drive motor (M1/2), Tray2 paper feed clutch (CL1/2)
10		Tray2 vertical transport roller, roll	Tray2 drive motor (M1/2), Tray2 transport clutch (CL2/2)
11		Tray3 pick-up roller, Tray3 paper feed roller, Tray3 separation roller	Tray3 drive motor (M1/3), Tray3 paper feed clutch (CL1/3)
12		Tray3 vertical transport roller, roll	Tray3 drive motor (M1/3), Tray3 transport clutch (CL2/3)

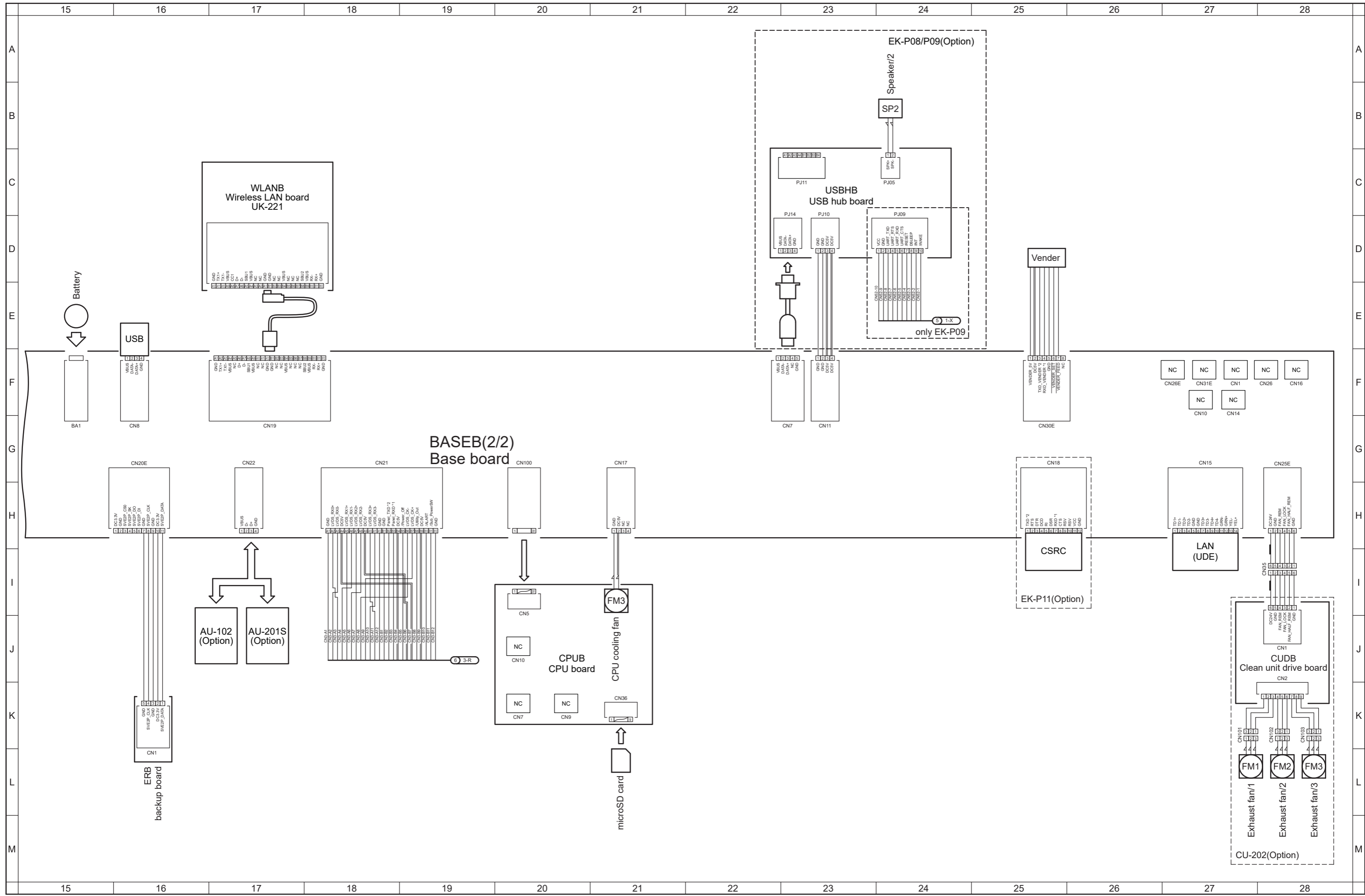
Code	Section	Sensor name	Code	Section	Sensor name
A	Main body	Paper exit sensor (PS13)	F	PF	Tray2 transport sensor (PS6/2)
B		Fusing loop sensor (PS10)	G		Tray2 paper feed sensor (PS3/2)
C		ADU transport sensor (PS11)	H		Tray3 transport sensor (PS6/3)
D		Registration sensor (PS9)	I		Tray3 paper feed sensor (PS3/3)
E		Tray1 paper feed sensor (PS8)			

# bizhub C4000i/C3300i Overall wiring diagram 1/4

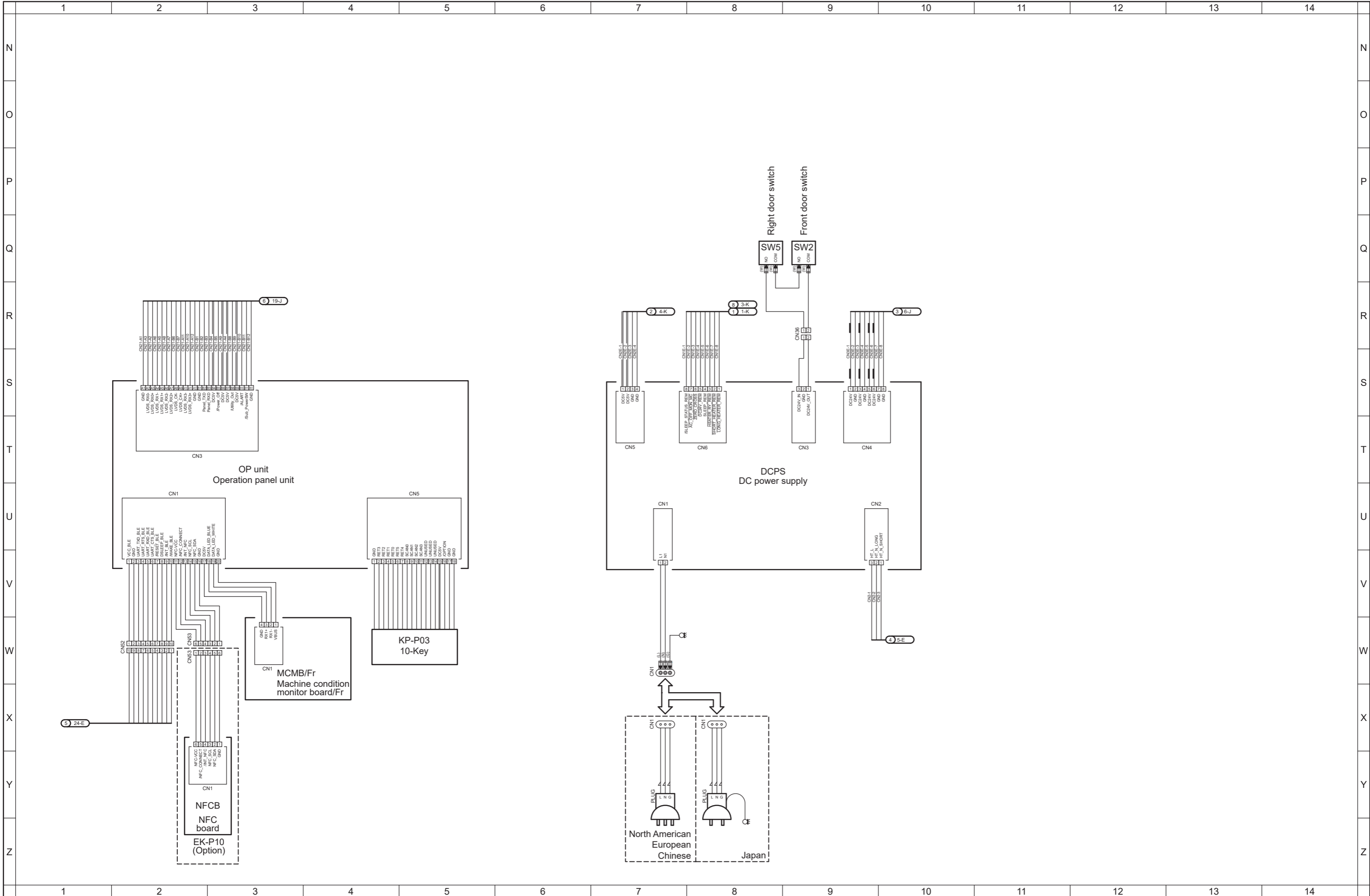




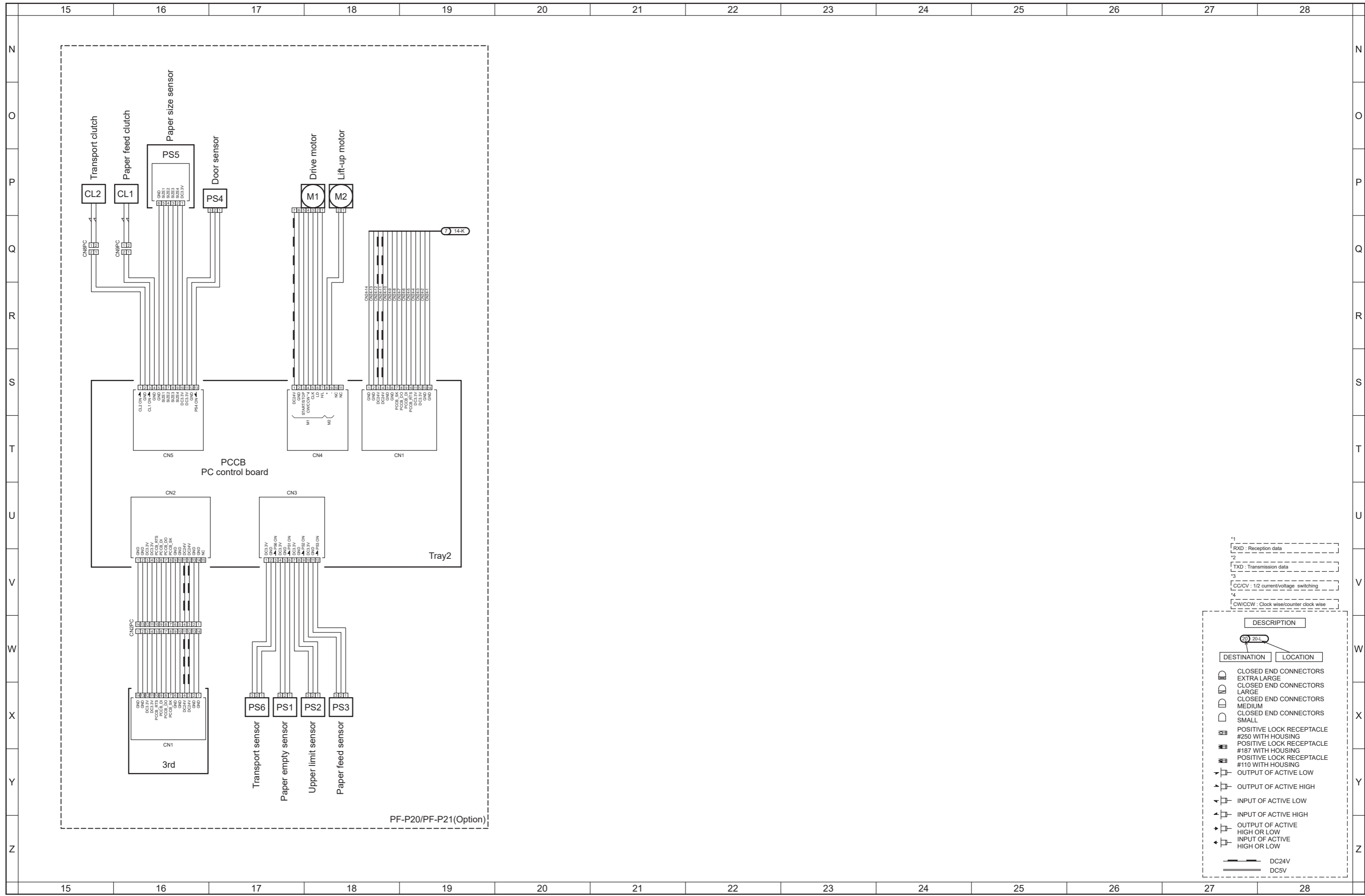
# bizhub C4000i/C3300i Overall wiring diagram 2/4



bizhub C4000i/C3300i Overall wiring diagram 3/4



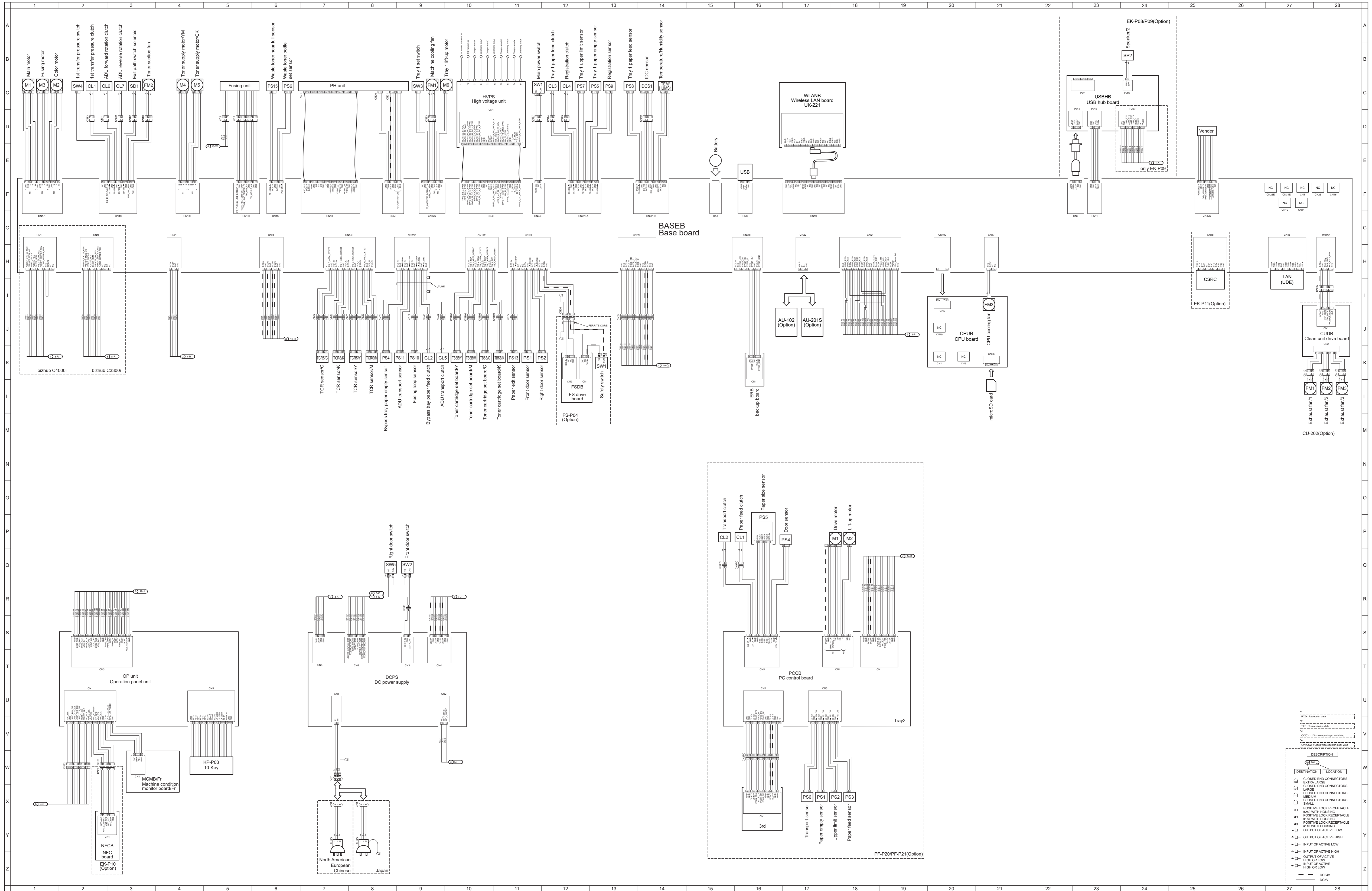
# bizhub C4000i/C3300i Overall wiring diagram 4/4



1 RXD : Reception data  
 2 TXD : Transmission data  
 3  
 4 CC/CV : 1/2 current/voltage switching  
 CW/CW : Clock wise/counter clock wise

DESCRIPTION	
DESTINATION	LOCATION
	CLOSED END CONNECTORS
	EXTRA LARGE
	LARGE
	MEDIUM
	SMALL
	POSITIVE LOCK RECEPTACLE #250 WITH HOUSING
	POSITIVE LOCK RECEPTACLE #187 WITH HOUSING
	POSITIVE LOCK RECEPTACLE #110 WITH HOUSING
	OUTPUT OF ACTIVE LOW
	OUTPUT OF ACTIVE HIGH
	INPUT OF ACTIVE LOW
	INPUT OF ACTIVE HIGH
	HIGH OR LOW
	INPUT OF ACTIVE HIGH OR LOW
	DC24V
	DC5V

**bizhub C4000i/C3300i Overall wiring diagram**





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