imageCLASS LBP214dw

SERVICE MANUAL

Canon

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Rev. 1

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Introduction

Important Notices

Application

This manual has been issued by Canon Inc. for qualified persons to learn technical theory, installation, maintenance, and repair of products.
This manual covers all localities where the products are sold. For this reason, there may be information in this manual that does not apply to your locality.

Corrections

This manual may contain technical inaccuracies or typographical errors due to improvements or changes in products.
When changes occur in applicable products or in the contents of this manual, Canon will release technical information as the need arises. In the event of major changes in the contents of this manual over a long or short period, Canon will issue a new edition of this manual.

The following paragraph does not apply to any countries where such provisions are inconsistent with local law.

Trademarks

The product names and company names used in this manual are the registered trademarks of the individual companies.

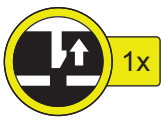
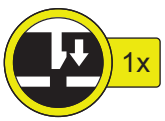
Copyright

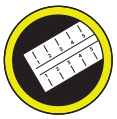
Caution

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

Explanation of Symbols

The following symbols are used throughout this Service Manual.

Symbols	Explanation	Symbols	Explanation
	Check.		Remove the claw.
	Check visually.		Insert the claw.
	Check a sound.		Push the part.

Symbols	Explanation	Symbols	Explanation
	Disconnect the connector.		Connect the power cable.
	Connect the connector.		Disconnect the power cable.
	Remove the cable/wire from the cable guide or wire saddle.		Turn on the power.
	Install the cable/wire to the cable guide or wire saddle.		Turn off the power.
	Remove the screw.		Loosen the screw.
	Install the screw.		Tighten the screw.
	Cleaning is needed.		Measurement is needed.

The following rules apply throughout this Service Manual:

1. Each chapter contains sections explaining the purpose of specific functions and the relationship between electrical and mechanical systems with reference to the timing of operation.
   In the diagrams, represents the path of mechanical drive; where a signal name accompanies the symbol, the arrow indicates the direction of the electric signal.
   The expression "turn on the power" means flipping on the power switch, closing the front door, and closing the delivery unit door, which results in supplying the machine with power.
2. In the digital circuits, '1' is used to indicate that the voltage level of a given signal is "High", while '0' is used to indicate "Low". (The voltage value, however, differs from circuit to circuit.) In addition, the asterisk (*) as in "DRMD*" indicates that the DRMD signal goes on when '0'.
   In practically all cases, the internal mechanisms of a microprocessor cannot be checked in the field. Therefore, the operations of the microprocessors used in the machines are not discussed: they are explained in terms of from sensors to the input of the DC controller PCB and from the output of the DC controller PCB to the loads.

The descriptions in this Service Manual are subject to change without notice for product improvement or other purposes, and major changes will be communicated in the form of Service Information bulletins.

All service persons are expected to have a good understanding of the contents of this Service Manual and all relevant Service Information bulletins and be able to identify and isolate faults in the machine.

Contents

Safety Precautions

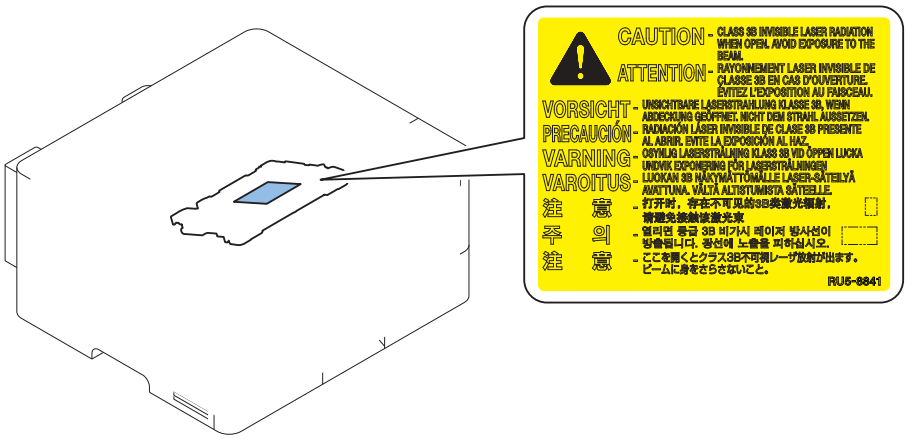
Laser Safety

Since radiation emitted inside this machine is completely confined with protective housings and external covers, the laser beam cannot escape from the machine during any phase of normal use by users.
Therefore, this machine is classified as a Class 1 laser product under the international standard IEC60825-1 that is regarded as safe during normal use.

How to Handle the Laser Scanner Unit

This machine is classified as a Class 1 laser product.
However, the laser scanner unit contains source of Class 3B laser beam and exposure to the beam may cause eye injuries.
Therefore, be sure not to disassemble the laser scanner unit. No adjustment can be made to the laser scanner unit in the machine in the field.
The label shown in the following figure is affixed on the laser scanner unit.

Dieses Gerät ist der Klasse 1 der Laserprodukte zugeordnet.
Allerdings enthält die Laserscannereinheit eine Laserstrahlquelle der Klasse 3B, die Augenschäden verursachen kann, wenn man in diesen Strahl blickt.
Deshalb darf die Laserscannereinheit nicht zerlegt werden. An der Laserscannereinheit kann keine Justage vor Ort vorgenommen werden.
Der in folgendem Bild dargestellte Aufkleber ist auf der Laserscannereinheit angebracht.



Power Supply

- As a general rule, do not use extension cords.
  If an extension cord must be used, however, use one for local rated voltage and over, untie the cord binding, and insert the power plug completely into the extension cord outlet to ensure a firm connection between the power cord and the extension cord.

⚠ CAUTION:
Do not plug multiple cords together to an extension cord. It may cause a fire or electrical shock.

- The socket-outlet shall be installed near the equipment and shall be easily accessible.

Toner Safety

About Toner

Toner is a nontoxic matter composed of plastic, iron and a trace of pigments.

⚠ CAUTION:
Never throw toner in flames to avoid explosion.

Handling Adhered Toner

- Use dry tissue paper to wipe off toner adhered to skin or clothes and wash in water.
- Never use warm water for cleaning up toner to prevent toner particles from being gelated to soak into fibers permanently.
- Toner particles are reactive with vinyl polymers. Avoid contacting these materials.

Notes When Handling a Lithium Battery

Dispose of used batteries according to the instructions.

⚠ CAUTION:
Risk of explosion if battery is replaced by an incorrect type.

The following warnings are given to comply with Safety Principles (EN60950-1).

⚠ CAUTION:
Wenn mit dem falschen Typ ausgewechselt, besteht Explosionsgefahr.
Gebrauchte Batterien gemäß der Anleitung beseitigen.

警告

如果更換不正確之電池型式會有爆炸的風險

請依製造商說明書處理用過之電池

Notes Before it Works Serving

- At servicing, be sure to turn OFF the power source according to the specified steps and disconnect the power plug.
- Be sure to disconnect the power plug on a regular basis and remove dust and dirt accumulated around the outlet with dry cloth.

⚠ CAUTION:
Leaving the power plug connected for a long time in an environment having a lot of dust, moisture, or oily smoke will cause a fire. (Because dust accumulated in the surrounding area will absorb moisture and cause an insulation failure)

Points to Note at Cleaning

When performing cleaning using organic solvent such as alcohol, be sure to check that the component of solvent is vaporized completely before assembling.

Notes on Assembly/Disassembly

Follow the items below to assemble/disassemble the device.

1. Disconnect the power plug to avoid any potential dangers during assembling/disassembling works.
2. If not specially instructed, reverse the order of disassembly to reinstall.
3. Ensure to use the right screw type (length, diameter, etc.) at the right position when assembling.
4. To keep electric conduction, binding screws with washers are used to attach the grounding wire and the varistor. Ensure to use the right screw type when assembling.
5. Unless it is specially needed, do not operate the device with some parts removed.
6. Never remove the paint-locked screws when disassembling.

Product Overview

Product Lineup

Host Machine

LBP214/213/212/211

	LBP214	LBP213	LBP212	LBP211
Print Speed	38ppm	38ppm	33ppm	33ppm
Print	Yes	Yes	Yes	Yes
Fax	-	-	-	-
Remote UI	Yes	Yes	Yes	Yes
2-sided printing	Yes	Yes	Yes	Yes
Control Panel	5 lined LCD	5 lined LCD	5 lined LCD	5 lined LCD
NFC	Yes	Yes	Yes	Yes
Backup of counter	-	-	-	-
MEAP	-	-	-	-
Network	Yes	Yes	Yes	Yes
Wireless LAN	Yes	-	Yes	-

PDL

	LBP214/213/212/211
UFR2	Yes
PS	Yes
PCL	Yes

Option

	LBP214/213	LBP212/211
Cassette Feeding Module-AH1	yes	yes
BARCODE PRT KIT-E1	-	-
MiCARD Attachment Kit-B1	-	-

CAUTION:
Option settings differ depending on the region even among the same models.

Features

Low - Middle Class A4/LTR Color Laser SFP
1. Mobile print supported

Printing from smartphones, tablets and PCs via an application such as Apple AirPrint, proprietary application, Google Cloud Print and Mopria Print becomes available.
2. Wireless LAN supported (Not supported by some models)
Communication via mobile device and wireless LAN becomes available by connecting a wireless LAN router to the network to which this machine is connected.

Specifications

Specifications of Host Machine

Item	Specification / Function
Device Installation	Desktop
Photoreceptor	OPC drum (24 mm dia.)
Light exposure method	Laser beam exposure
Charging method	Roller charging
Developing method	Developing method
Transfer method	Transfer Roller method
Separation method	Curvature separation
Cassette paper feed	Simple separation retard
MP Tray paper feed	Pad separation method
Drum cleaning method	Cleaning blade
Fixing method	On-demand fixing
Paper delivery method	Face-down
Toner level sensor	Mounted
Toner type	One-component magnetic toner
Toner supply method	All-in-one cartridge (drum + toner)
Toner save mode	yes *1
Warm-up Time *2	14 seconds or less
Recovery Time *3	Approx. 4 seconds or less
Print resolution	600 x 600 dpi
First print time	Approx. 5.5 seconds
Print Speed *4	At 1-sided printing: • LBP213/214/215: 38 sheets/min. (A4), Approx. 40 sheets/min. (LTR) • LBP211/212: 33 sheets/min. (A4), Approx. 34.5 sheets/min. (LTR) At 2-sided printing: • LBP213/214/215: 30.3 sheets/min. (A4), Approx. 32 sheets/min. (LTR) • LBP211/212: 26.4 sheets/min. (A4), Approx. 27.6 sheets/min. (LTR)
Available paper type for cassette	Thin paper, Recycled paper, Color paper, Plain paper, Heavy paper, Coated paper, Label
Available paper type for Multi-purpose Tray	Thin paper, Recycled paper, Color paper, Plain paper, Heavy paper, Coated paper, Label, Envelope
Available paper size in cassette	A4, B5, A5, LGL, LTR, STMT, EXEC, OFFICIO, B-OFFICIO, M-OFFICIO, GLTR, GLGL, FLS, AFLS, indLGL, K16, FA4, Custom paper
Multi-purpose tray paper size	A4, B5, A5, LGL, LTR, STMT, EXEC, OFFICIO, B-OFFICIO, M-OFFICIO, GLTR, GLGL, FLS, AFLS, indLGL, K16, FA4, Envelope (COM10, Monarch, C5, DL), Custom paper
Cassette capacity	Cassette: 250 sheets (60 to 90 g/m^2) Option: 550 sheets (60 to 90 g/m^2)
Multi-purpose Tray capacity	100 sheets (60 to 90 g/m^2)
Delivery tray stacking capacity *5	150 sheets (75 g/m^2)
Automatic 2-sided	Yes
Memory capacity	1 GB
Sleep mode	Yes
Allowable environmental temperature	10 to 30 deg C
Allowable humidity	20 to 80% in relative humidity (no condensation)
Power rating	Rated input voltage: 120 V system: 115 V (60Hz) 200 V system: 220 to 240 V (50/60Hz)
Maximum power consumption	120V: 1300W or lower 230V: 1300W or lower

Item	Specification / Function
Average power at operation	120V:Approx. 600W 230V:Approx. 540W
Average power at standby	Print mode: 10W
Average power at sleep mode	Approx. 0.9W
Power consumption at Main Power Switch OFF	0.1 W or lower
Dimensions (W x D x H)	5 lined control panel model: 401×373×250mm 5-inch control panel model: 438×373×312mm
Weight (Excluding toner cartridges)	5 lined control panel model: Approx. 8.8kg 5-inch control panel model: Approx. 9.2kg

*1: Toner saving mode is a user mode setting, and it cannot be set in service mode.
*2: The time from when the power is turned ON to when the basic screen appears. This may vary depending on the usage conditions and environment of this machine.
*3: The time for recovery from sleep to standby
*4: The print speed may become lower depending on the settings such as output resolution, paper type, orientation, and number of sheets printed. In the case of 2-sided printing, 1 page on the front side and 1 page on the back side are output as 1 sheet.
*5: The actual stack capacity varies depending on the site environment and the type of paper used.

Paper type

(Yes: Pickup possible -: Pickup not possible)

Type of paper		Paper settings in this machine	Standard Cassette/ Cassette Feeding Module-AH1 (option)	Multi-purpose Tray	Auto 2-sided printing
Plain paper	60 to 74 g/m^2	Plain paper 1	yes	yes	yes
	75 to 89 g/m^2	Plain paper 2	yes	yes	yes
Thin paper	60 g/m^2	Thin paper 1	yes	yes	yes
	52 to 59 g/m^2	Thin paper 2	yes	yes	yes
Recycled	60 to 74 g/m^2	Recycled 1	yes	yes	yes
	75 to 89 g/m^2	Recycled 2	yes	yes	yes
Heavy paper	90 to 105 g/m^2	Heavy paper 1	yes	yes	yes
	106 to 120 g/m^2	Heavy paper 2	yes	yes	yes
	121 to 149 g/m^2	Heavy paper 3	-	yes	-
	150 to 163 g/m^2	Heavy paper 4	-	yes	-
Bond paper	60 to 74 g/m^2	Bond paper 1	yes	yes	yes
	75 to 104 g/m^2	Bond paper 2	yes	yes	yes
	105 to 120 g/m^2	Bond paper 3	yes	yes	yes
Label paper		Label paper	-	yes	-
Postcard/ Reply Postcard		Postcard	-	-	-
Envelope		Envelope	-	yes	-
		Envelope H	-	yes	-

Paper size

(Yes: Pickup possible, -: Pickup not possible)

Paper size		Standard Cassette/ Cassette Feeding Module-AH1 (option)	Multi-purpose Tray	Auto 2-sided printing
A4	210.0 mm x 297.0 mm	yes	yes	yes

Paper size		Standard Cassette/ Cassette Feeding Module-AH1 (option)	Multi-purpose Tray	Auto 2-sided printing
B5	182.0 mm x 257.0 mm	yes	yes	-
A5	148.0 mm x 210.0 mm	yes	yes	-
LGL	215.9 mm x 355.6 mm	yes	yes	yes
LTR	215.9 mm x 279.4 mm	yes	yes	yes
STMT	139.7 mm x 215.9 mm	yes	yes	-
EXEC	184.2 mm x 266.7 mm	yes	yes	-
OFFICIO	215.9 mm x 317.5 mm	yes	yes	yes
B-OFFICIO	216 mm x 355 mm	yes	yes	-
M-OFFICIO	216 mm x 341 mm	yes	yes	-
G-LTR	203.2 mm x 266.7 mm	yes	yes	-
G-LGL	203.2 mm x 330.2 mm	yes	yes	yes
FLSC	215.9 mm x 330.2 mm	yes	yes	-
AFLS	206 mm x 338 mm	yes	yes	-
Indian LGL	215.0 mm x 345.0 mm	yes	yes	yes
16K	195.0 mm x 270.0 mm	yes	yes	-
FA4	215.9 mm x 342.9 mm	yes	yes	yes
Envelope No.10 (COM10)	104.7 mm x 241.3 mm	-	yes	-
Envelope Monarch	98.4 mm x 190.5 mm	-	yes	-
Envelope C5	162.0 mm x 229.0 mm	-	yes	-
Envelope DL	110.0 mm x 220.0 mm	-	yes	-
Custom paper	-	yes *1	yes *2	yes *3

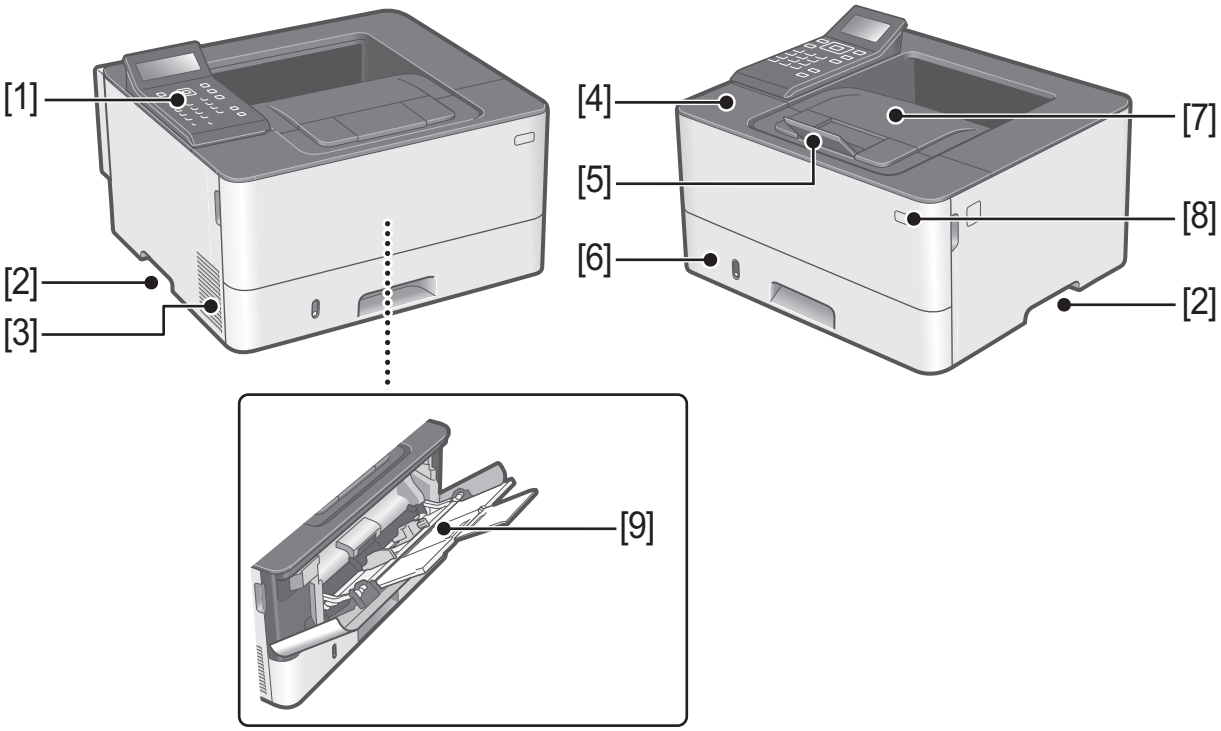
*1: 105 to 215.9 mm × 148.0 to 355.6 mm
*2: 76.2 to 215.9 mm × 127 to 355.6 mm
*3: 210 to 215.9 mm × 279.4 to 355.6 mm

Parts Name

External view

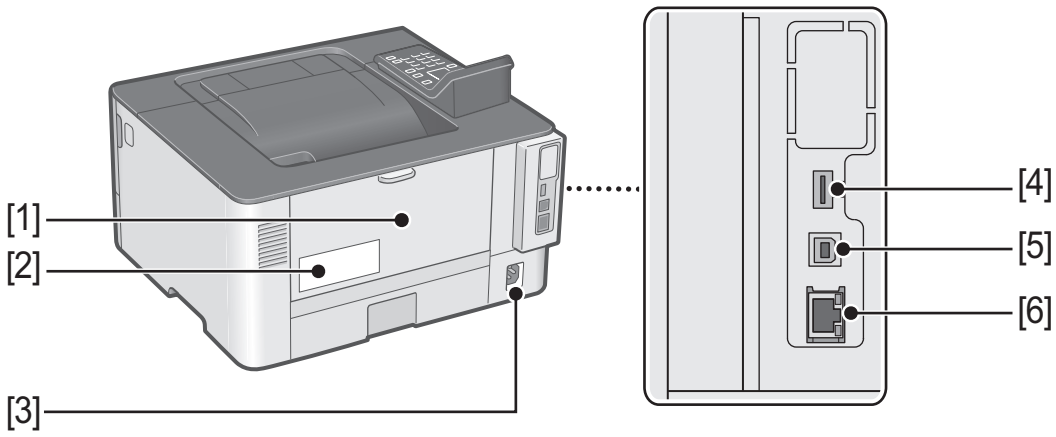
■ Front side of the machine

LBP211/212/213/214 Series



No.	Name	No.	Name
[1]	Control Panel	[6]	Pickup Cassette
[2]	Handle for carrying	[7]	Delivery Tray
[3]	Speaker	[8]	Power Switch
[4]	Cartridge Door	[9]	Multi-purpose Tray
[5]	Delivery Stopper		

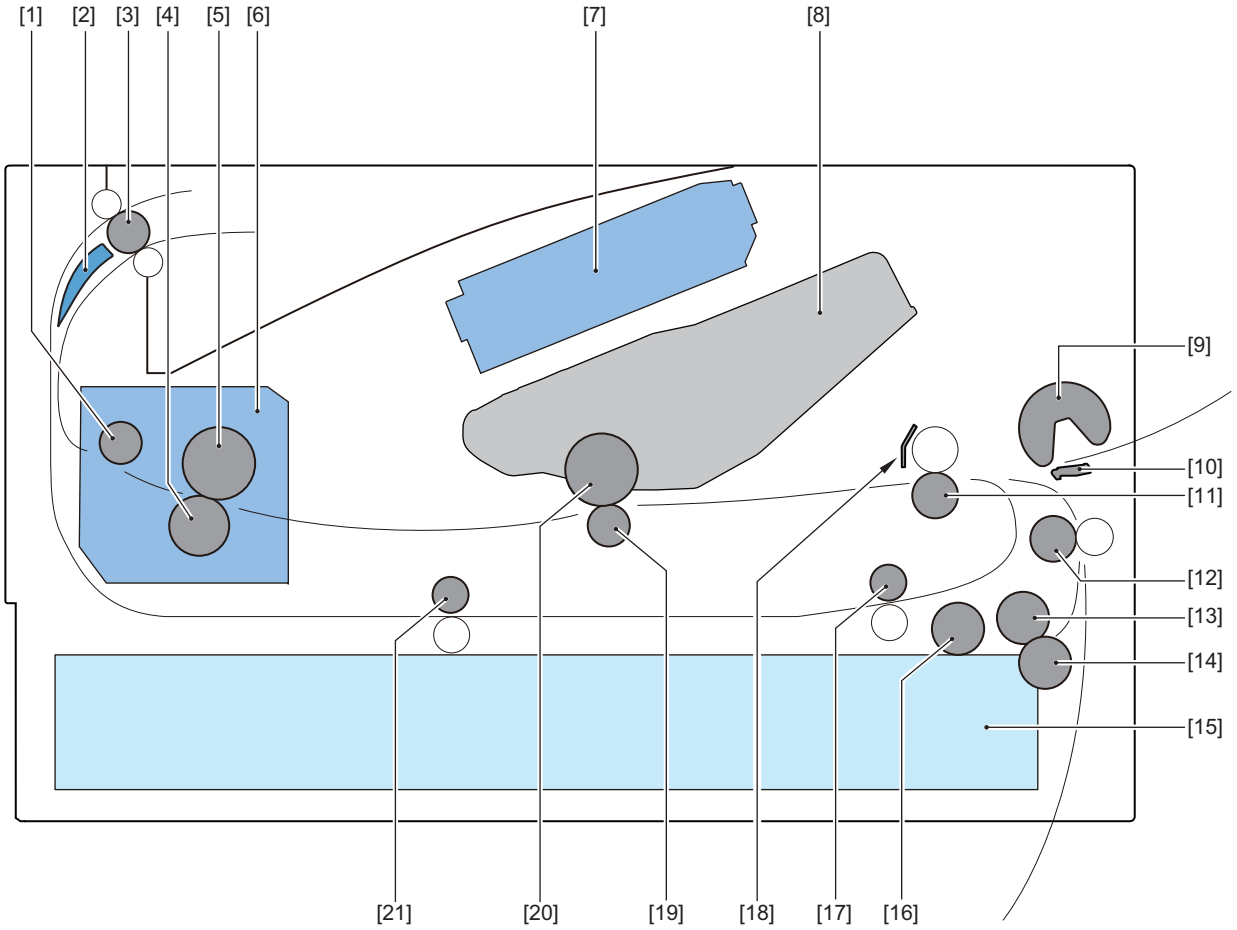
■ Rear side of the machine



No.	Name	No.	Name
[1]	Rear Cover	[4]	USB port (for USB device)
[2]	Rating name plate label	[5]	USB port (for PC)
[3]	Power Socket	[6]	LAN Port

Cross Section View

■ Host Machine

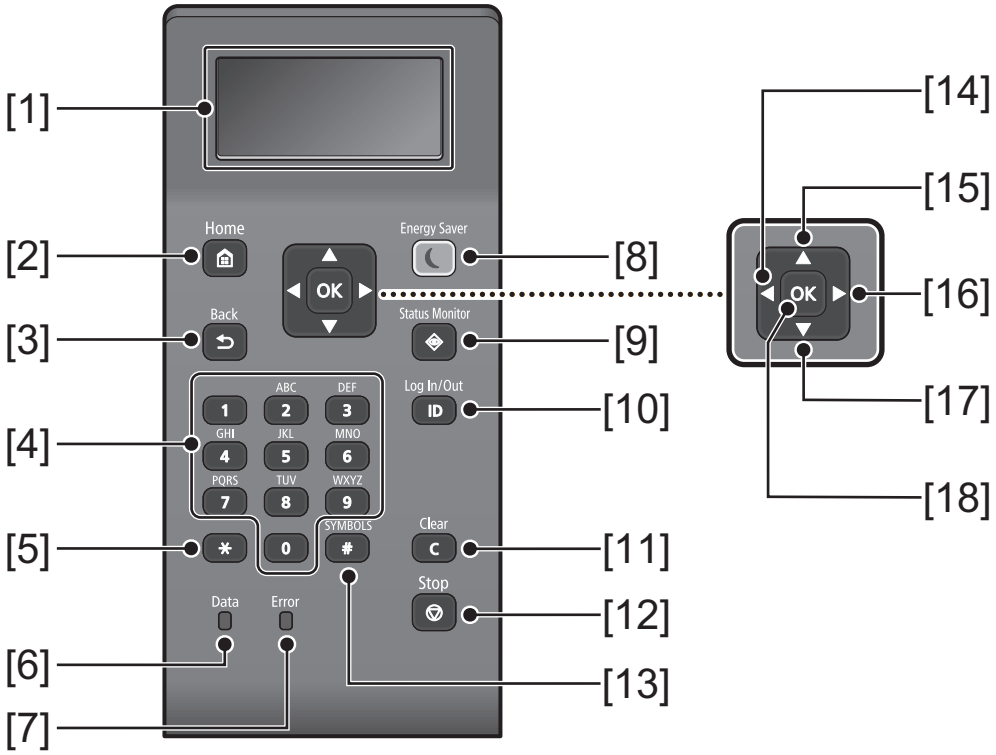


No.	Name	No.	Name
[1]	Fixing Delivery Roller	[12]	Delivery Roller

No.	Name	No.	Name
[2]	Duplex Flapper	[13]	Cassette Feed Roller
[3]	Delivery Roller	[14]	Cassette Separation Roller
[4]	Pressure Roller	[15]	Cassette
[5]	Fixing Film	[16]	Cassette Pickup Roller
[6]	Fixing Assembly	[17]	Duplex Re-pickup Roller
[7]	Laser Scanner Unit	[18]	Registration Shutter
[8]	Cartridge	[19]	Transfer Roller
[9]	MP Tray Pickup Roller	[20]	Photosensitive Drum
[10]	MP Tray Separation Pad	[21]	Duplex Feed Roller
[11]	Registration Roller		

Control Panel

LBP211/212/213/214 Series



No.	Name	No.	Name
[1]	Display	[10]	[Authentication] key
[2]	[Home] key	[11]	[Clear] key
[3]	[Back] key	[12]	[Stop] key
[4]	Numeric Keys ([0] to [9])	[13]	[Symbol] key
[5]	[Kana/Alphabetic/Numeric] key	[14]	[Utility] key / [<] key
[6]	[Data] Lamp	[15]	[Job] key / [∧] key
[7]	[Error] Lamp	[16]	[Setup] key / [>] key
[8]	[Energy Saver] key	[17]	[Reset] key/[V] key
[9]	[Status Monitor] key	[18]	[OK] key

2 Technical Explanation (Device)

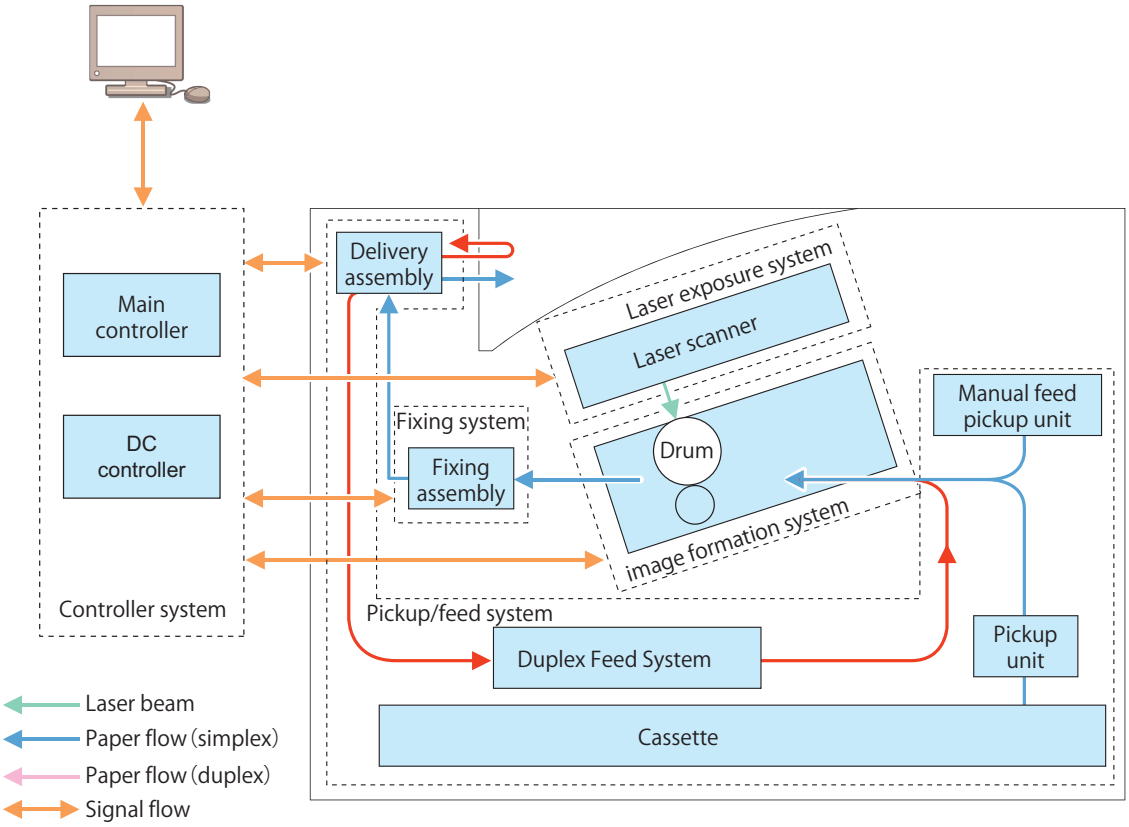
Basic Configuration

Functional Configuration

Description

This machine is roughly composed of the following five blocks.

- Laser Exposure System
- Controller System
- Image Formation System
- Pickup Feed System
- Fixing System

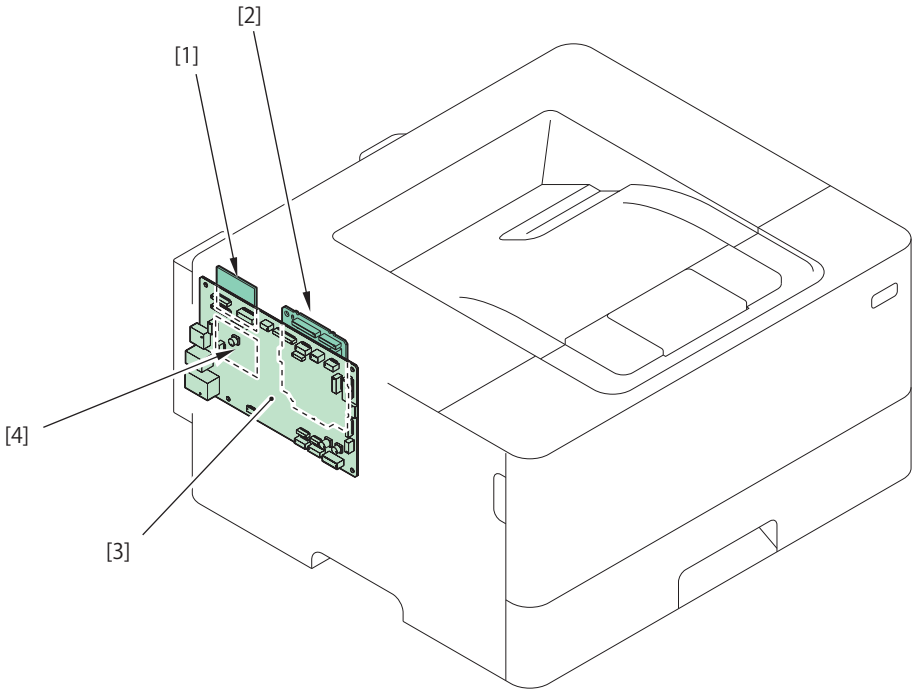


Controller System

Functional Configuration

Description

This machine is controlled by the Main Controller PCB and the DC Controller PCB.

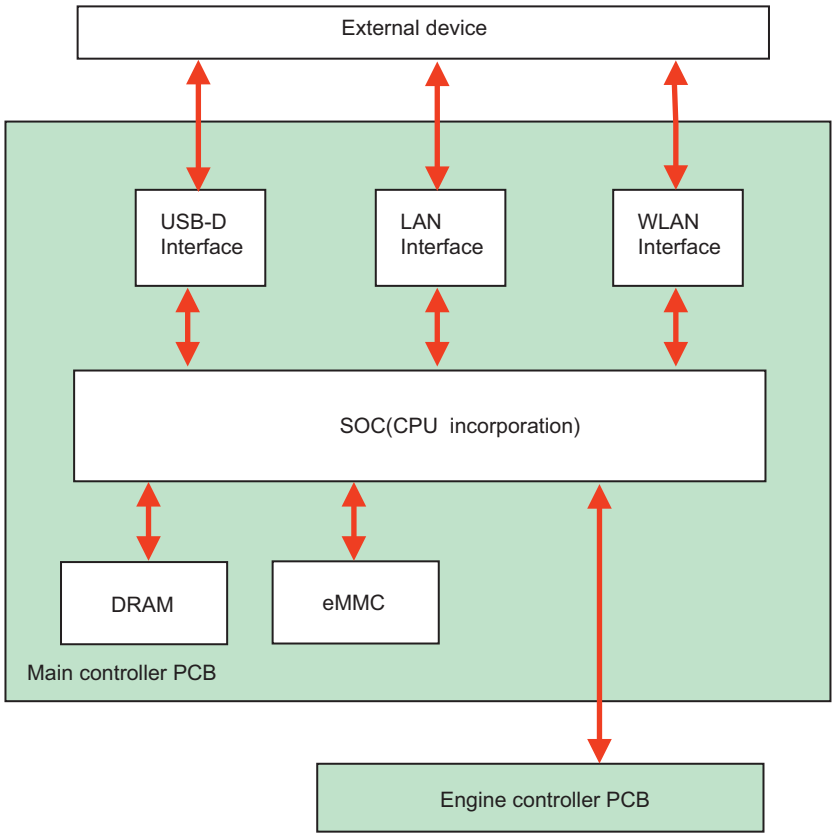


No.	Parts name	Role
[1]	Serial Number PCB	-
[2]	DC Controller PCB	Printer control, laser control, high voltage control, various I/O control, and retaining setting values
[3]	Main Controller PCB	System control, image processing control, network control, and retaining various setting values
[4]	Memory PCB	-

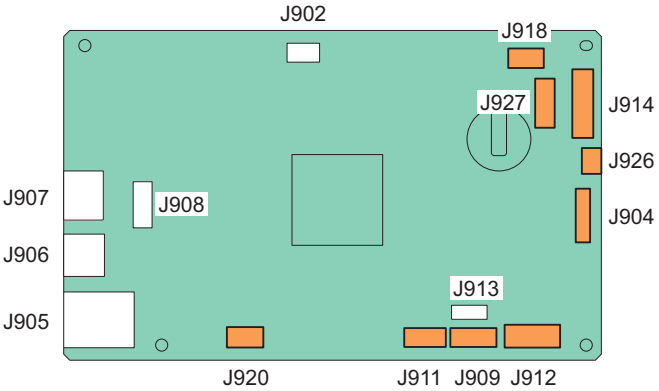
Main Controller PCB

Overview

The Main Controller receives print information from the external equipment (computer, etc.) via the interface cable.
There are 2 types of print information: CPCA command data to exchange the status or unique information of a printer and dot data for printing.
After dot data is sent to the Main Controller, video data is generated and is sent to the Engine Controller.
CPCA command data is the data sent to see the printer status from the external equipment via the interface cable.
When the machine receives the data, the Main Controller communicates with the Engine Controller and then returns the printer status to the external equipment.



Description



No.	Roles and Specifications	No.	Roles and Specifications
J904	For the Wireless LAN PCB	J918	For the USB PCB
J909	For the Serial Number PCB	J920	For the DC Controller PCB
J911	For the Memory PCB	J926	For the 5-inch Touch Panel
J912	For the Low Voltage Power Supply Unit	J927	For the 5-inch Touch Panel
J914	For the 5-line Control Panel PCB		

CAUTION:
In order to cover all models, the maximum number of connectors are shown.

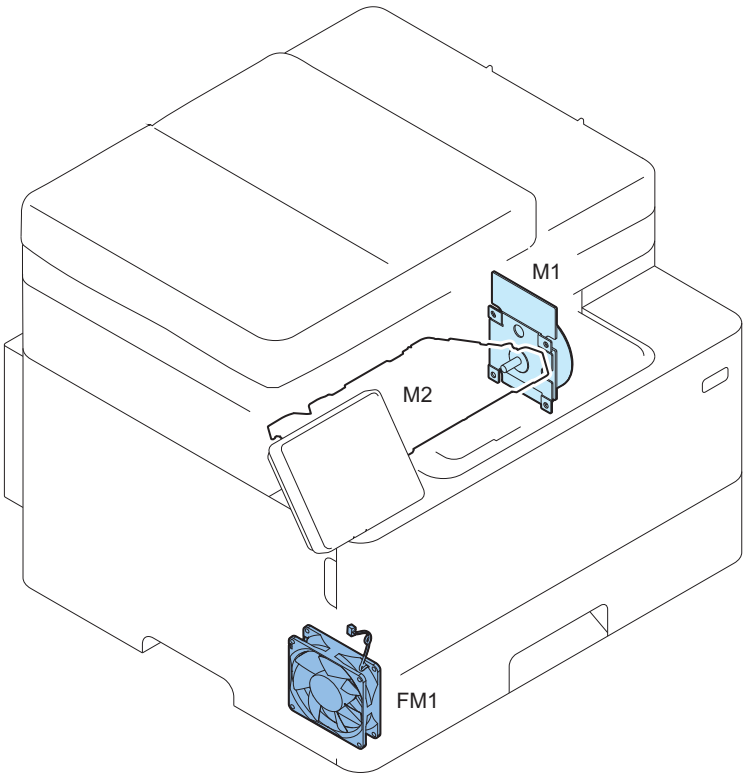
Error Code

Motor Control

Overview

This machine uses motors for paper feed and image formation.

Description



CAUTION:
Although illustration of a MFP model is used, motor positions are common to SFP model.

Sym-bol	Name	Drive parts	Failure Detection
M1	Fixing Motor	Photosensitive Drum, Transfer Roller, Pressure Roller, Fixing Film, Delivery Roller, Duplex Flapper, Duplex Feed Roller, Cassette Pickup Roller, Cassette Feed Roller, Feed Roller, Registration Roller, Multi-purpose Tray Pickup Roller	Yes
M2	Scanner Motor	Scanner Mirror	Yes

Fan Control

Overview

This machine uses a fan for preventing temperature rising inside the machine and for cooling the delivered paper.

Description

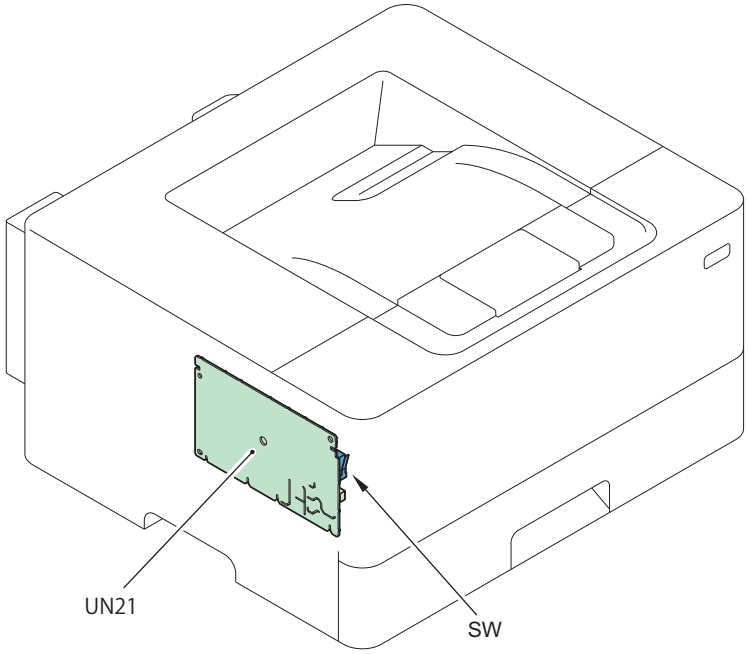
Symbol	Name	Cooling area	Type	Speed
FM1	Main Fan	Around the cartridge and low voltage power supply	Suction	Full speed

Door Open Detection

Overview

This machine uses the Interlock Switch of the High Voltage Power Supply PCB (UN21) to detect whether the Cartridge Door is opened or closed.

Description



Symbol	Name	Role	Remarks
(UN21)	Cartridge Door Switch	To detect whether the Cartridge Door is opened or closed.	When the switch has failed, the PCB needs to be replaced.

When door open is detected by this switch, the DC Controller stops drive of the motors and the solenoids.

Low Voltage Power Supply Control

Overview

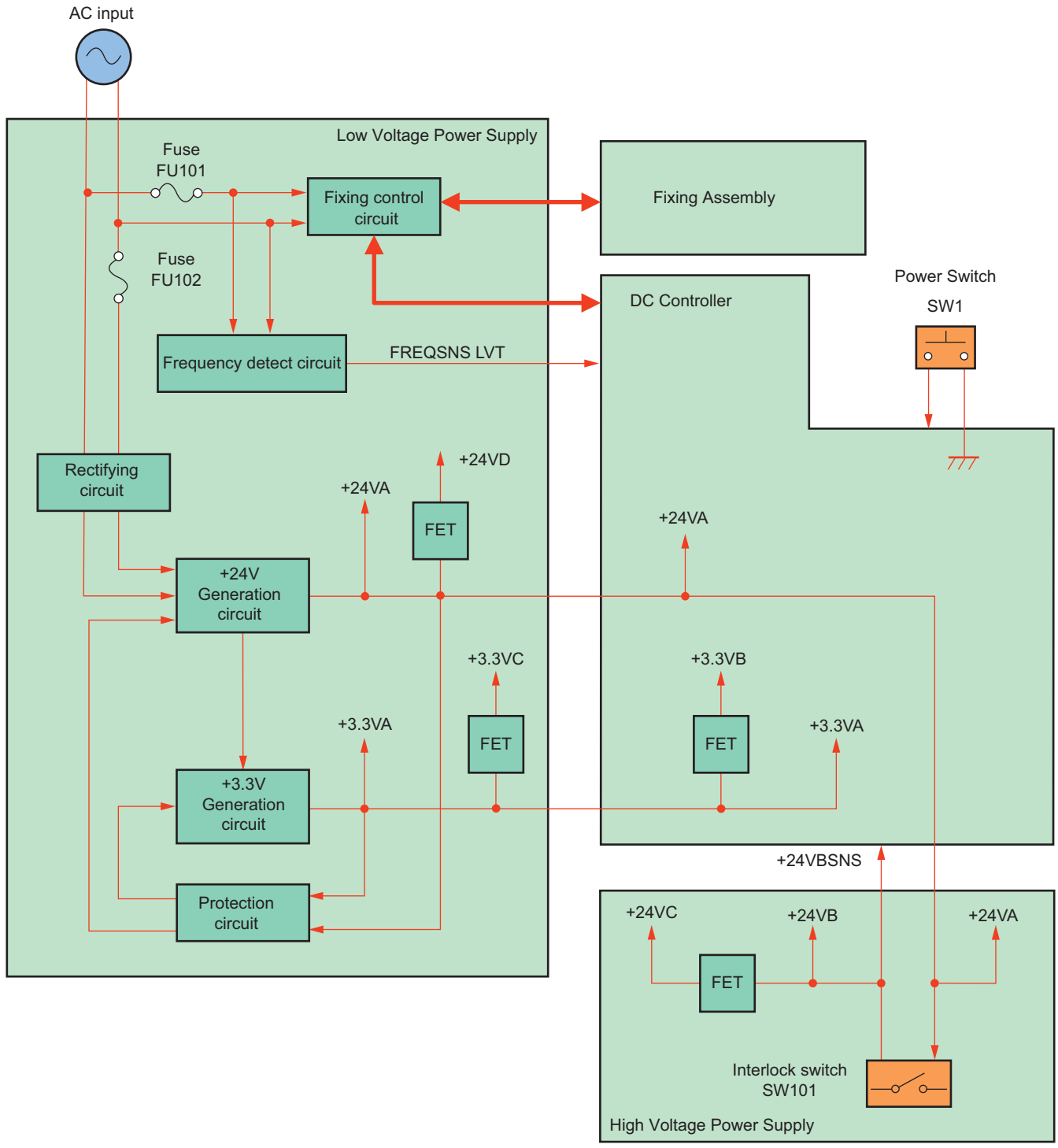
This circuit converts the AC voltage to DC power supply and provides it to each load.

Description

The following shows a block diagram of the low voltage power supply.

- Low voltage power supply: Generates the DC power supply needed inside the printer. It also controls the temperature of the Fixing Heater of the Fixing Assembly.

The low voltage power supply starts to operate when the AC power supply is connected to the inlet. The AC power supply is converted to +24 V, which is the DC power supply required by the printer, and +3.3 V.



Protection Function

Overview

This machine has a protection function against overcurrent and overvoltage.

Description

If overcurrent or abnormal voltage occurs due to a trouble, the DC voltage is automatically cut off to prevent damage to the Power Supply PCBs.
The Low Voltage Power Supply has a protection function to prevent damage to the Power Supply PCB caused by overcurrent and overvoltage.
When no DC voltage is output from the Low Voltage Power Supply Assembly, it is possible that the protection function has been activated. Therefore, turn OFF the Power Switch, disconnect the AC Power Supply Cord from the inlet, and then fix the trouble before turning ON the Power Switch again.

The machine has 2 power supply fuses (FU101 and FU102) inside the PCB as an additional protection function. If overcurrent occurs in the AC line, the power supply fuse blows and cuts off the power supply.

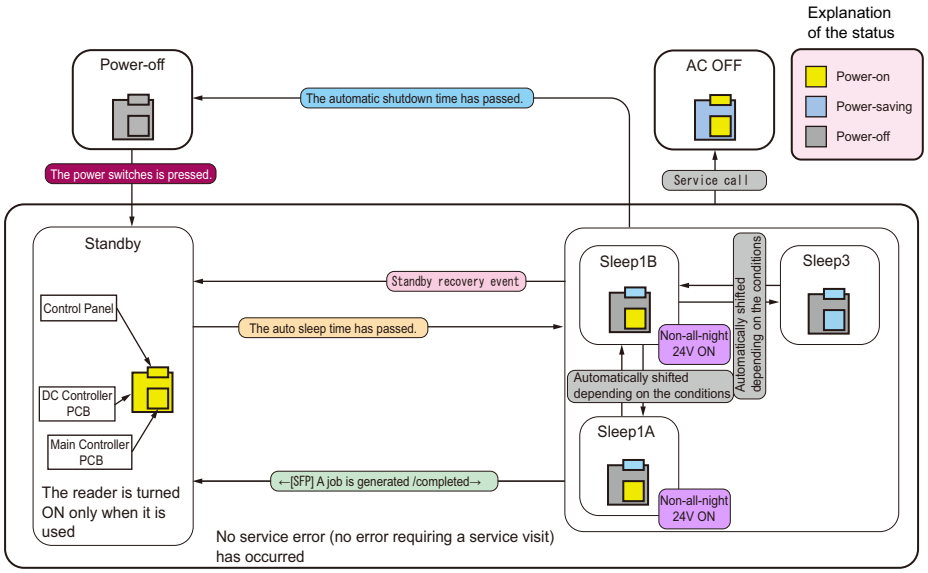
NOTE:
This machine has a function that stops supplying the +24VB and +24VC when the Cartridge Door Switch is turned OFF for the safety of users and service technicians.
As the power of this machine is turned ON/OFF by the remote switch control circuit, power is supplied to the AC line even when the Power Switch is turned OFF. Never disassemble the machine while the Power Supply Cord is connected to the inlet.

Power-saving Mode

Overview

Power-saving mode is a function that reduces the printer power consumption.

Description



	State	Description
Standby	The machine moves to a standby state by turning ON the main switch.	When introduction of jobs become possible, timers of the auto low power time and auto sleep time start counting.
Sleep 1A	The machine is in a state where the 24V non-all-night power is ON.	When the auto sleep time has elapsed, transition to sleep 1A occurs.
Sleep 1B	The machine is in a state where the 24V non-all-night power is OFF.	Sleep 1B is a state where CPU moves to an operation state from sleep 3 by a hardware interruption.
Sleep 3	The controller itself gets into a power-saving mode.	In this mode, CPU of the controller has stopped. (The most effective power saving state)
Service error	When an error requiring a service visit occurs, the machine moves to this state.	Power state of the printer remains in power-saving mode so that the machine can respond to request from service mode.
Sleep Mode Eco Exit		It is a function that saves power consumption and improves noise reduction by letting the machine gets into a standby state without turning ON the engine and reader when recovering from sleep.

Laser Exposure System

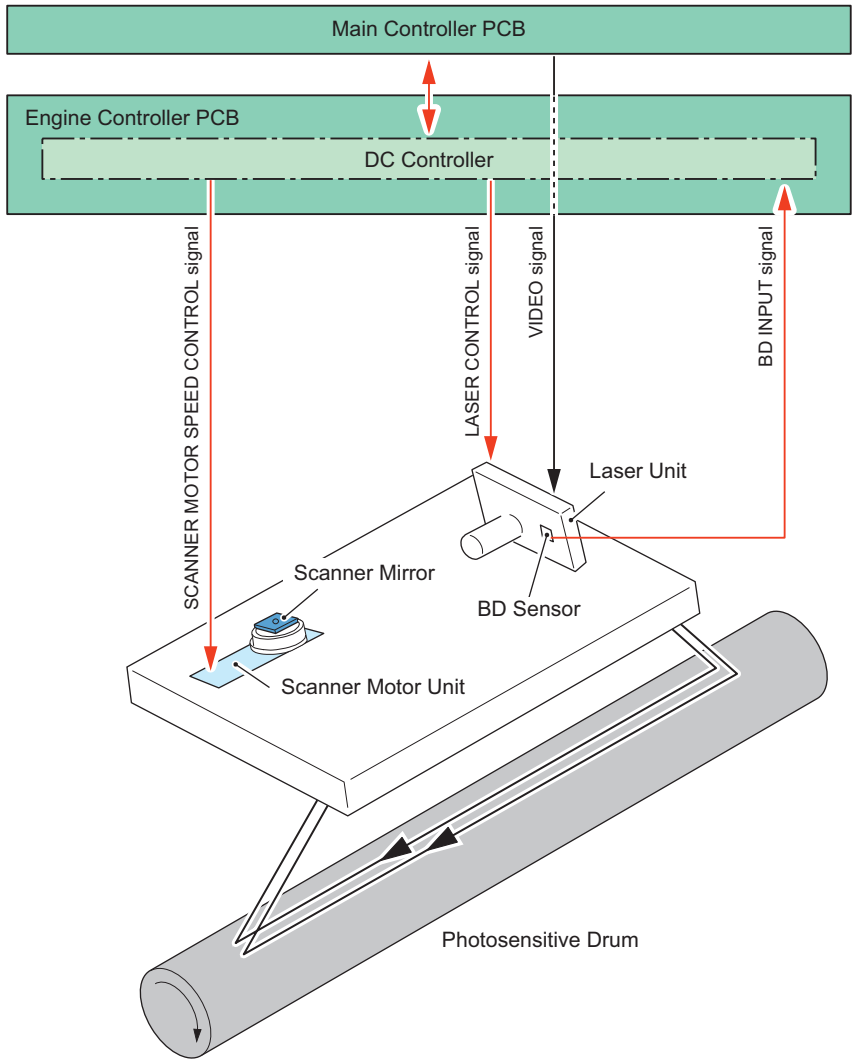
Functional Configuration

Overview

The laser exposure system forms a static latent image on the Photosensitive Drum by laser exposure.

Description

The Laser Scanner Unit consists of the Laser Unit and the Scanner Motor Unit, and is controlled by the signal input from the DC Controller.



Shutter Control

The Laser Scanner Unit of this machine has the laser shutter mechanism.
The Laser Shutter blocks laser path of the Laser Scanner Unit when the Cartridge Door is opened for the safety of users and service technicians.

Failure Detection

Overview

The DC Controller detects the following failures in the Laser Scanner Unit.

- Scanner area failure
- Scanner Motor failure

Description

Scanner area failure detection

If an error in any of the Scanner Motor, Laser Unit, or BD detection in the scanner area is detected, an error code is notified.

Scanner Motor failure detection

- When the BD cycle is out of the specified range, an error code is notified.
- If a motor error is detected while the Scanner Motor is being driven, an error code is notified.

Error Code

E100: Scanner area failure
- E100-0000: BD error

E110: Scanner Motor failure
- E110-0000: Scanner Motor startup error
- E110-0001: Scanner Motor rotation error

Image Formation System

Functional Configuration

Overview

The image formation system forms a toner image on the paper.

Description

The DC Controller controls the Laser Scanner Unit and High Voltage Power Supply to form the toner image on the Photosensitive Drum, and transfers and fixes this to the paper.

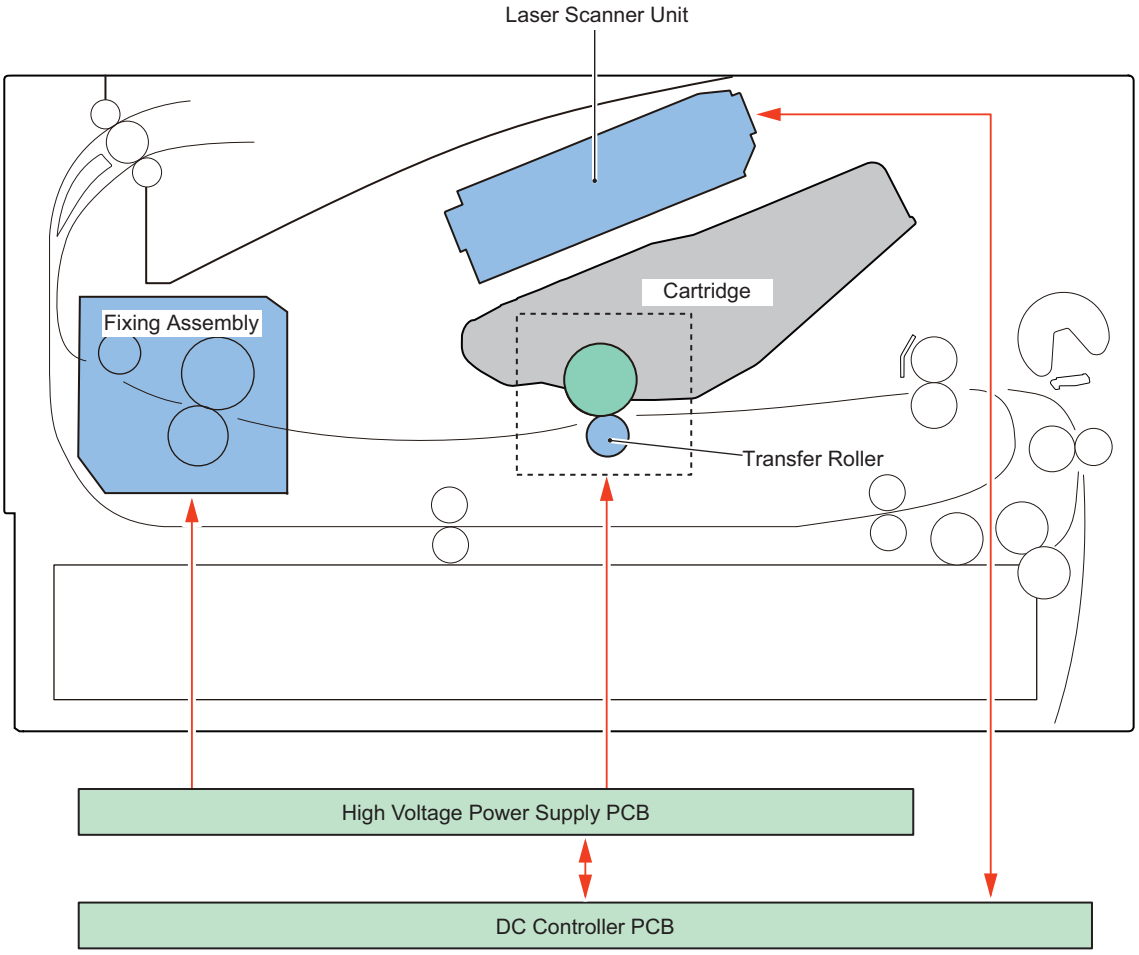
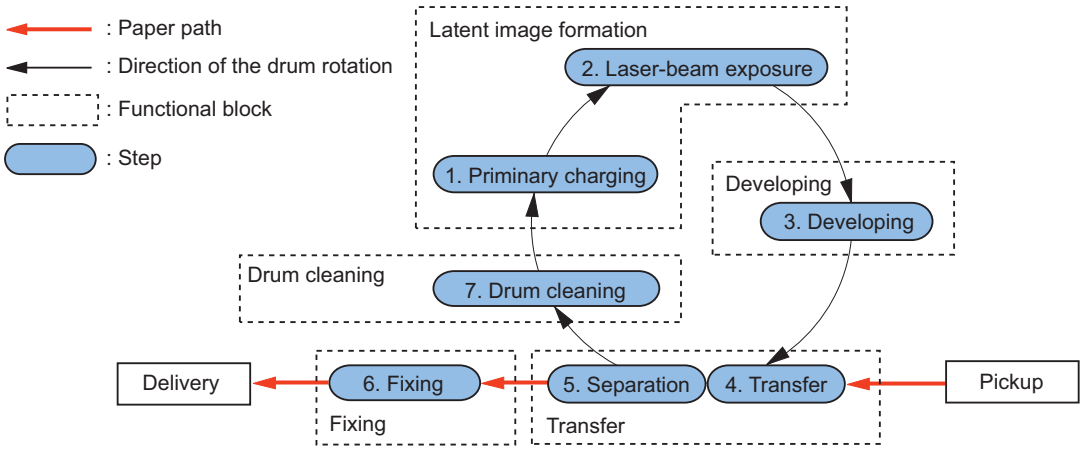


Image Formation Process

Description



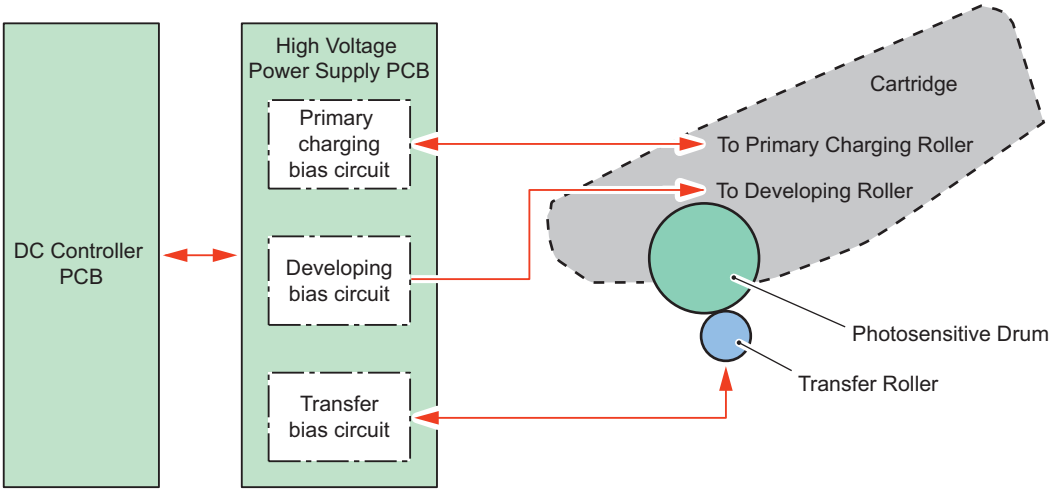
High Voltage Power Supply Control

Description

The High Voltage Power Supply applies high voltage biases to the following:

- Primary Charging Roller (inside the cartridge)
- Developing Roller (inside the cartridge)
- Transfer Roller

The high voltage biases are generated by the DC Controller controlling the High Voltage Power Supply.



Cartridge

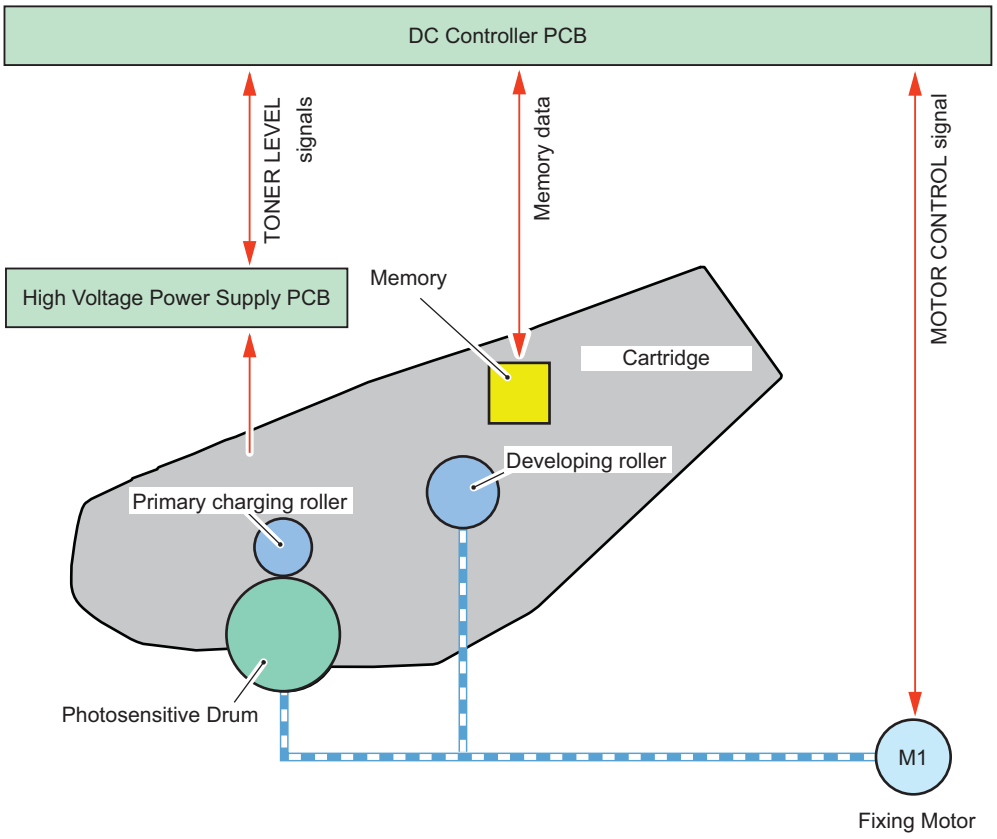
■ Overview

Overview

The cartridge has the function to form a visible image on the Photosensitive Drum with toner.

Description

The cartridge consists of the Photosensitive Drum, Developing Assembly, Primary Charging Roller, Memory, etc.
The DC Controller drives the Fixing Motor to rotate the Photosensitive Drum and Developing Roller. The Primary Charging Roller is driven and rotated by the Photosensitive Drum.
The DC Controller detects the toner level by monitoring the toner level detection signal.



■ Cartridge State Detection

Execution Condition/Timing

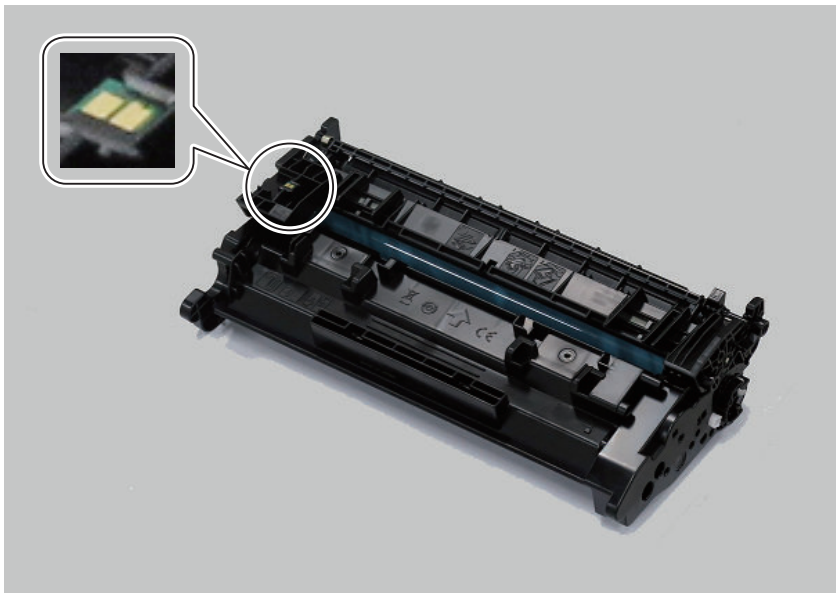
- At power-on
- When the Cartridge Door is closed
- At recovery from sleep mode
- When a job is completed and no jobs remain in the machine

NOTE:
Since a validity period of authentication has been set to reduce the number of authentication, authentication processing is not performed when the conditions are satisfied.

Description

The DC Controller detects/records the cartridge usage, etc. by reading/writing data stored in the memory.
When the memory cannot be detected or a non-genuine part is detected, it notifies the Main Controller and a message is displayed on the display.

Display:
Cartridge communication error| A counterfeit or non-Canon cartridge may be in use.



Memory Position

■ Cartridge Detection

Execution Condition/Timing

- At power-on
- When the Cartridge Door is closed

Description

The DC Controller detects whether a cartridge is installed according to the presence/absence of memory and the detected toner level.
If a cartridge is detected as absent, it is notified the Main Controller and a message is displayed on the display.

Display:
Insert the toner cartridge.

■ Cartridge Life Detection

Execution Condition/Timing

- At power-on
- When the engine operation is completed after the Cartridge Door is closed
- At completion of printing
- When the reference value of cartridge life is changed

Description

The DC Controller notifies the Main Controller when cartridge consumption reaches the specified value.
Upon receipt of the notification, the Main Controller displays a warning or a message that the cartridge has reached the end of its life on the display.

	Warning display*2	End of life display*4, *5
Toner level*1	Differs depending on the setting*3	0%
Detected to (location)	Memory	Memory
Message (machine operation)	Prepare the toner cartridge.	Cart. end of lifetime. Rplcmt. recommended.

*1: The remaining toner level can be checked on the Status Monitor.
Refer to "Checking remaining toner level" in "Settings/Registration Mode/Menu" shown below.
*2: Whether to display or hide warnings can be specified in the menu.
Refer to "Setting of whether to display or hide warnings" in "Settings/Registration Mode/Menu" shown below.
*3: The threshold value to display a warning can be specified in the menu.
Refer to "ON/OFF of display of the screen for setting the threshold value for preparation of the cartridge" in "Service Mode" shown below.

Refer to "Setting of the threshold value to display a warning" in "Settings/Registration Mode/Menu" shown below.

*4: The operation when the cartridge has reached the end of life can be specified in service mode.

Refer to "Setting of the behavior when the cartridge reaches the end of its estimated life" in "Service Mode" shown below.

*5: The reference value of cartridge life (Photosensitive Drum, Developing Assembly, and Waste Toner) can be specified in service mode.

Refer to "Setting of the reference values for replacement of the Photosensitive Drum, Developing Assembly, and Waste Toner (Bk)" in "Service Mode" shown below.

Service Mode

- Setting of the behavior when the cartridge reaches the end of its estimated life:
  COPIER > OPTION > FNC-SW > CRG-PROC
- Setting of the reference values for replacement of the Photosensitive Drum, Developing Assembly, and Waste Toner (Bk):
  COPIER > OPTION > FNC-SW > CRGLF-K
- ON/OFF of display of the screen for setting the threshold value for preparation of the cartridge:
  COPIER > OPTION > DSPLY-SW > CRGLW-LV

Additional Functions Mode/Menu

- Checking remaining toner level
  Status Monitor > Device Status > Cartridge Level
- Setting of whether to display or hide warnings:
  Menu > Preferences > Display Settings > Displ. Timing for Cartridge Prep. Notif.
- Setting of the threshold value to display a warning:
  Menu > Preferences > Display Settings > Displ. Timing for Cartridge Prep. Notif. > Custom

■ Developing Roller Engagement/Disengagement Control

Description

This machine does not control the Developing Roller inside the Toner Cartridge to be engaged/disengaged with the Photosensitive Drum according to the machine state.

Fixing System

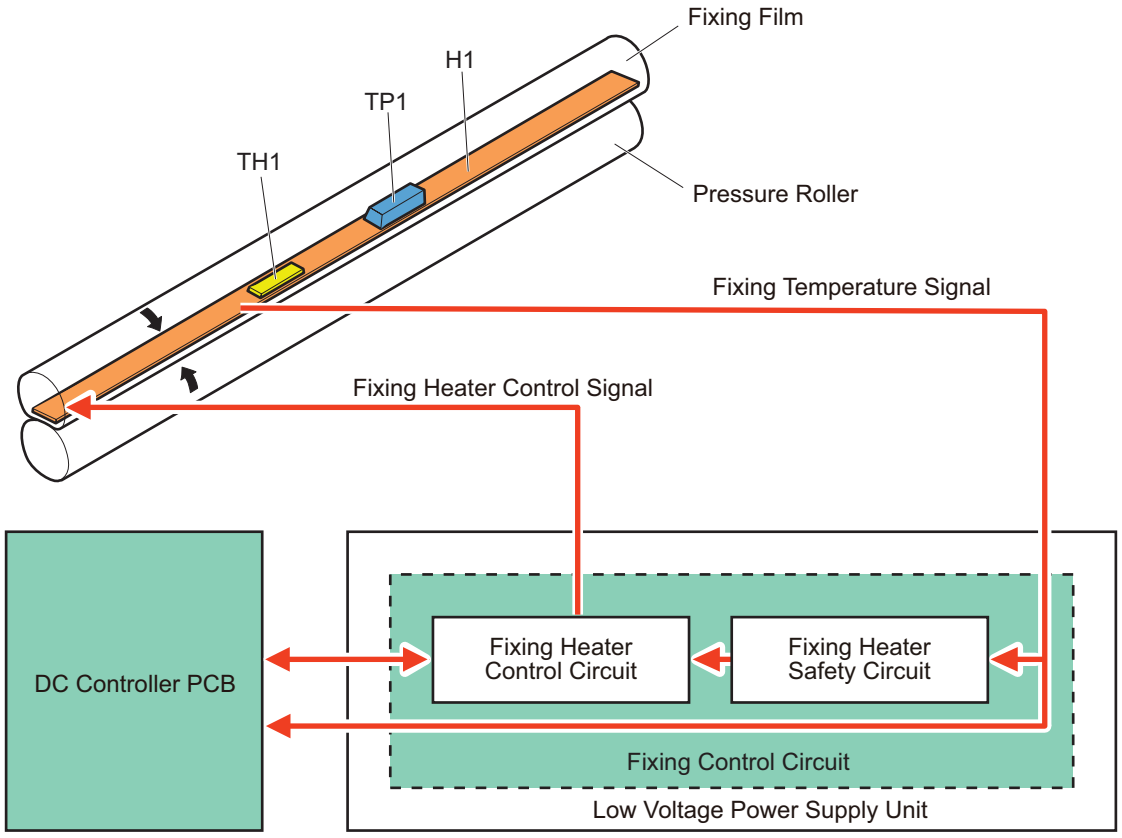
Functional Configuration

Overview

The fixing system forms a permanent image by melting the toner on the paper using pressure and heat.

Description

The fixing control circuit controls the temperature of the Fixing Assembly.
The Fixing Assembly of this machine uses the on-demand fixing method.



Symbol	Parts name
H1	Fixing Heater
TH1	Thermistor
TP1	Thermo Switch

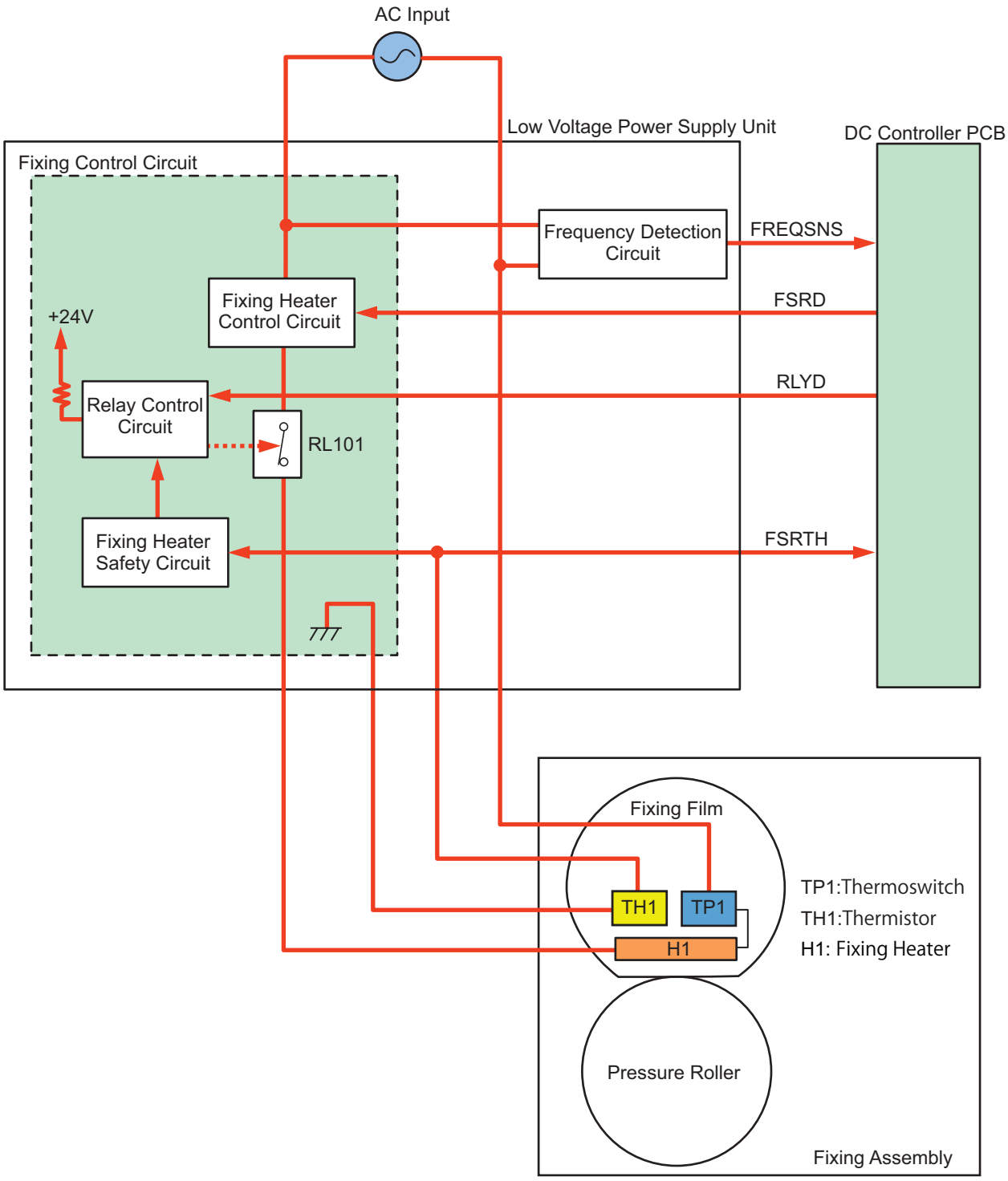
Fixing Temperature Control

Overview

Temperature control of the Fixing Assembly is performed by the Fixing Heater control circuit and Fixing Heater safety circuit according to the command of the DC Controller.

Description

The DC Controller PCB monitors the fixing temperature detection signal and outputs a fixing control signal according to the detected temperature. The fixing control circuit controls the Fixing Heater on the basis of this signal, and controls the temperature of the Fixing Heater to the target value.



Protection Function

Overview

This machine has a function to detect abnormal temperature rising in the Fixing Assembly and cut off the power supply to the Fixing Heater.

Description

This machine has the following four protection functions to prevent abnormal temperature rising in the Fixing Heater.

- DC Controller PCB
- Fixing Heater safety circuit
- Thermo Switch
- Down sequence control

The details are explained below.

DC Controller PCB

The DC Controller PCB monitors the thermistor temperature of the Fixing Heater (Center).
When it exceeds the specified temperature, it is judged that the temperature of the Fixing Assembly is abnormally high, and the fixing control signal (FSRD) output is stopped, the relay is turned OFF, and the power supply to the heater is turned OFF.

Fixing Heater safety circuit

The Fixing Heater safety circuit monitors the thermistor temperature of the Fixing Heater (Center).
When it exceeds the specified temperature, it is judged that the temperature of the Fixing Assembly is abnormally high, and the relay is turned OFF and the power supply to the heater is turned OFF.

Thermo Switch

If the temperature of the Fixing Heater rises abnormally and it exceeds the specified temperature, contact point of the Thermo Switch is opened and the power supply to the heater is turned OFF.

Down sequence control

During continuous printing, the throughput is changed to reduce heat buildup on parts not in contact with paper, to improve Fixing characteristics and reduce curling.

38 sheets of models Throughput Reduction Control

Mode	Paper type	Paper size	Cassette (sheet/min)	Multi-purpose Tray (sheet/min)	Remarks
1-sided	Plain paper, Thin paper	A4	38.0	35.2	
		B5	40.0 -> 14.0	37.0 -> 14.0	
		A5	40.0 -> 14.0	37.0 -> 14.0	
		A5R	63.1	58.5	
		A6	40.0 -> 14.0	37.0 -> 14.0	
		LTR	40.0	37.0	
		LGL	32.4	30.4	
		EXE	40.0 -> 14.0	37.0 -> 14.0	
	Heavy paper 1	A4	19.0	17.6	
		B5	17.0 -> 6.0	17.0 -> 6.0	Minimum in four phases
		A5	17.0 -> 6.0	17.0 -> 6.0	Minimum in four phases
		A5R	31.9	29.2	
		A6	22.0 -> 7.0	22.0 -> 7.0	Minimum in four phases
		LTR	20.0	18.5	
		LGL	16.2	15.2	
		EVE	17.0 -> 6.0	17.0 -> 6.0	Minimum in four phases
	Heavy paper 2	A4	-	17.6	
		B5	-	12.0 -> 4.0	Minimum in four phases
		A5	-	12.0 -> 4.0	Minimum in four phases
		A5R	-	18.5	
		A6	-	12.0 -> 4.0	Minimum in four phases
		LTR	-	18.5	
		LGL	-	15.2	
		EXE	-	12.0 -> 4.0	Minimum in four phases
	Envelope	(Nagagata 3)	-	17.0 -> 6.0	Minimum in four phases
2-sided	Plain paper, Thin paper	A4	30.3	28.1	
		LTR	32.0	29.6	
		LGL	15.9	15.9	
	Heavy paper 1	A4	15.1	14.0	
		LTR	16.0	14.8	

Mode	Paper type	Paper size	Cassette (sheet/min)	Multi-purpose Tray (sheet/min)	Remarks
2-sided	Heavy paper 1	LGL	8.3	8.3	
	Heavy paper 2	A4	-	14.0	
		LTR	-	14.8	
		LGL	-	8.3	

33 sheets of models Throughput Reduction Control

Mode	Paper type	Paper size	Cassette (sheet/min)	Multi-purpose Tray (sheet/min)	Remarks
1-sided	Plain paper, Thin paper	A4	33	33	
		B5	34.5 -> 14.0	34.5 -> 14.0	
		A5	34.5 -> 14.0	34.5 -> 14.0	
		A5R	52.5	52.5	
		A6	34.5 -> 14.0	34.5 -> 14.0	
		LTR	34.5	34.5	
		LGL	28.8	28.8	
		EXE	34.5 -> 14.0	34.5 -> 14.0	
	Heavy paper 1	A4	16.5	16.5	
		B5	17.0 -> 6.0	17.0 -> 6.0	Minimum in four phases
		A5	17.0 -> 6.0	17.0 -> 6.0	Minimum in four phases
		A5R	26.2	26.2	
		A6	22.0 -> 7.0	22.0 -> 7.0	Minimum in four phases
		LTR	17.3	17.3	
		LGL	14.4	14.4	
		EVE	17.0 -> 6.0	17.0 -> 6.0	Minimum in four phases
	Heavy paper 2	A4	-	16.5	
		B5	-	12.0 -> 4.0	Minimum in four phases
		A5	-	12.0 -> 4.0	Minimum in four phases
		A5R	-	18.5	
		A6	-	12.0 -> 4.0	Minimum in four phases
		LTR	-	17.3	
		LGL	-	14.4	
		EXE	-	12.0 -> 4.0	Minimum in four phases
	Envelope	(Nagagata 3)	-	17.0 -> 6.0	Minimum in four phases
2-sided	Plain paper, Thin paper	A4	26.4	26.4	
		LTR	27.6	27.6	
		LGL	15.9	15.9	
	Heavy paper 1	A4	13.2	13.2	
		LTR	13.8	13.8	
		LGL	8.2	8.2	
	Heavy paper 2	A4	-	13.2	
		LTR	-	13.8	
		LGL	-	8.2	

Fixing Assembly Failure Detection

Overview

When the machine is under the following conditions, the DC Controller shuts down the power supply to the Fixing Assembly and notifies an error.

- Startup failure
- Abnormal high temperature failure
- Abnormal low temperature failure
- Fixing control circuit failure

Description

Fixing Assembly startup failure

An error code is notified if the Fixing Assembly does not reach a certain temperature within a specified period of time.

Abnormal high temperature failure

An error code is notified if an abnormally high temperature is detected in the Fixing Assembly.

Abnormal low temperature failure

An error code is notified if an abnormally low temperature is detected in the Fixing Assembly.

Fixing control circuit failure

An error code is notified if a zero cross signal is not detected for the specified period of time or more.

Error Code

- E000-0000: Fixing Assembly startup failure
- E001-0000: Abnormal high temperature of Fixing Assembly
- E003-0000: Abnormal low temperature of Fixing Assembly
- E004-0000: Fixing control circuit failure

Pickup Feed System

Overview

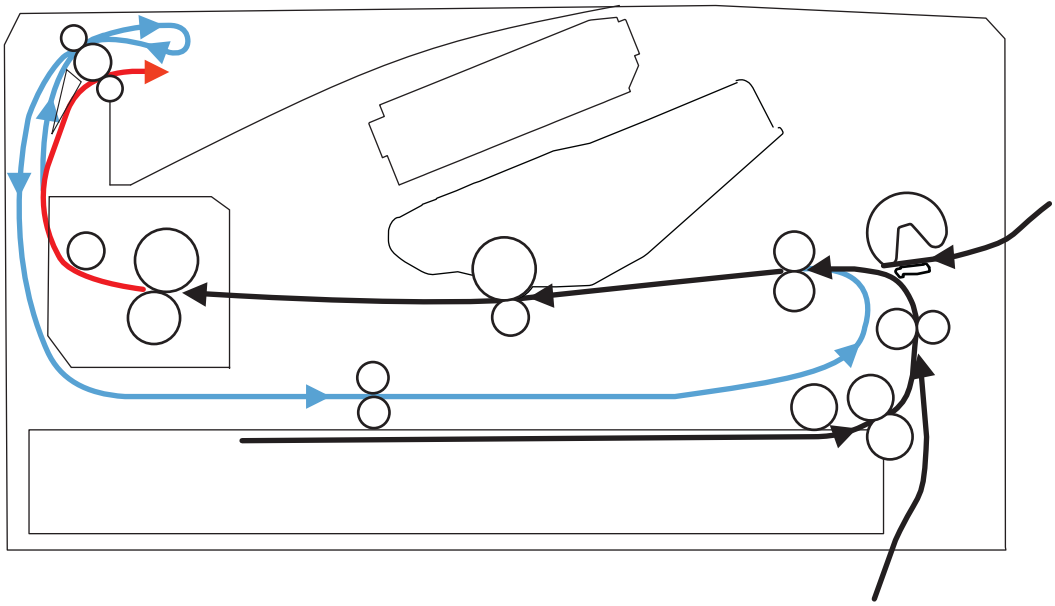
Overview

The pickup, feed, and delivery systems are controlled by the DC Controller.
The DC Controller controls the blocks in the pickup, feed, and delivery systems to pickup, feed, and deliver paper inside the machine.

Description

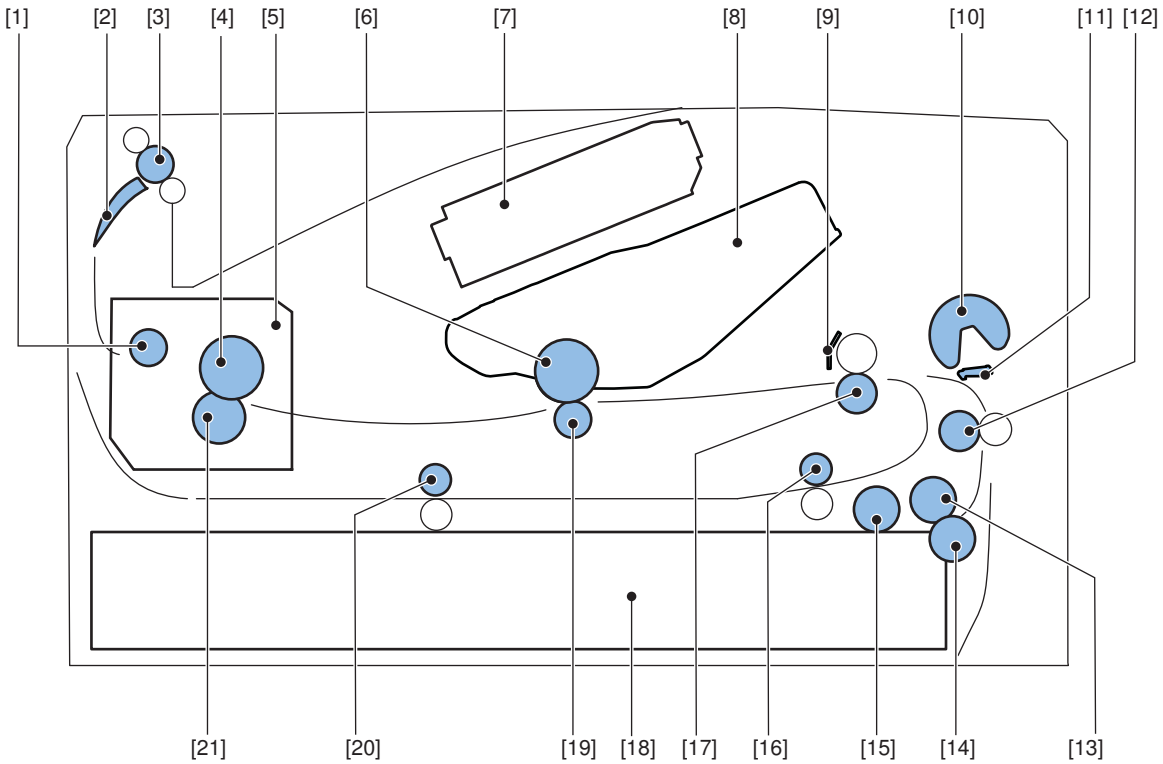
The pickup, feed, and delivery systems consist of the following three blocks.

- Pickup/Feed: From each pickup slot to the inlet of the Fixing Assembly (Black arrow)
- Fixing/Delivery: From the Fixing Assembly to the delivery outlet (Red arrow)
- Duplex: From the Duplex Reverse Assembly to the Duplex Re-pickup Assembly (Blue arrow)



Parts Configuration

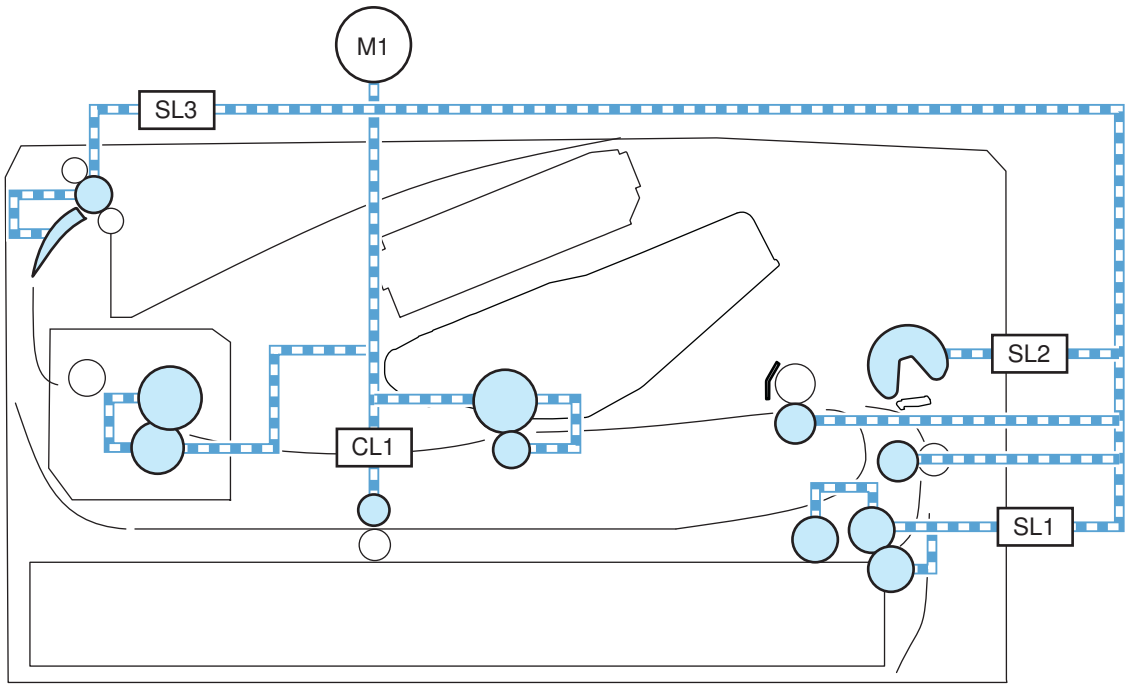
Description



No.	Name	No.	Name
[1]	Fixing Delivery Roller	[12]	Feed Roller
[2]	Duplex Flapper	[13]	Cassette Feed Roller
[3]	Delivery Roller	[14]	Cassette Separation Roller
[4]	Fixing Film	[15]	Cassette Pickup Roller
[5]	Fixing Assembly	[16]	Duplex Re-pickup Roller
[6]	Photosensitive Drum	[17]	Registration Roller
[7]	Laser Scanner Unit	[18]	Cassette
[8]	Cartridge	[19]	Transfer Roller
[9]	Registration Shutter	[20]	Duplex Feed Roller
[10]	MP Tray Pickup Roller	[21]	Pressure Roller
[11]	MP Tray Separation Pad		

Drive Configuration

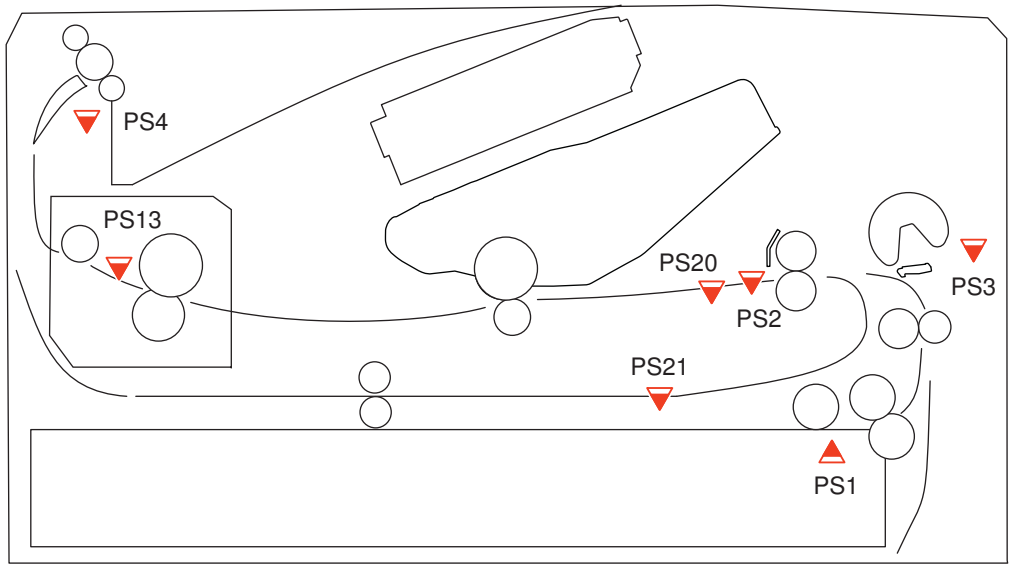
Description



Sym-bol	Name	Sym-bol	Name
M1	Fixing Motor	SL3	Duplex Reverse Solenoid
SL1	Cassette Pickup Solenoid	CL1	Duplex Re-pickup Clutch
SL2	MP Tray Pickup Solenoid		

Layout of Sensors

Description



Symbol	Name	Remarks	Symbol	Name	Remarks
PS1	Cassette Paper Sensor	UN5	PS13	Fixing Delivery Sensor	UN28
PS2	TOP Sensor	UN7	PS14	CIS HP Sensor	
PS3	MP Tray Paper Sensor	UN4	PS20	Paper Width Sensor	UN6

Symbol	Name	Remarks	Symbol	Name	Remarks
PS4	Delivery Tray Full Sensor	UN10	PS21	Duplex Feed Sensor	UN6

Cassette Detection

Description

Presence of the cassette is detected using the Cassette Paper Sensor (PS1).

Cassette Pickup Control

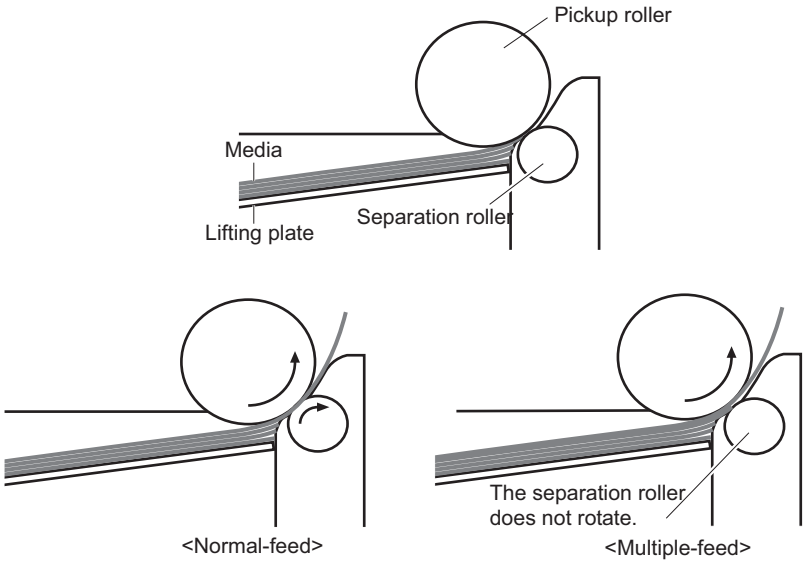
Description

The DC Controller rotates the Pickup Roller by rotating the Fixing Motor (M1).
The Pickup Arm is lifted and lowered to feed the paper by rotating the Pickup Cam with the Cassette Pickup Solenoid (SL1).

Double Feed Prevention Mechanism

This machine employs the Separation Roller method for double feed prevention.
The Separation Roller method of this machine is a method that prevents paper double feeds by using the Separation Roller without drive.
The Separation Roller is driven and rotated by the Pickup Roller.

- At normal time
  The Separation Roller is driven by the Pickup Roller drive via paper. This causes the Separation Roller to rotate in the feed direction.
- During Double Feed
  Since the friction force between sheets of paper becomes weaker when there are multiple sheets of paper, the Pickup Roller drive force transmitted to the Separation Roller becomes extremely weak. Since force suppressing rotation is applied to the Separation Roller of this machine, this mechanism does not allow rotation by the weak drive force transmitted from the Pickup Roller during double feed. The Separation Rollers therefore do not rotate and do not pickup double feed paper.



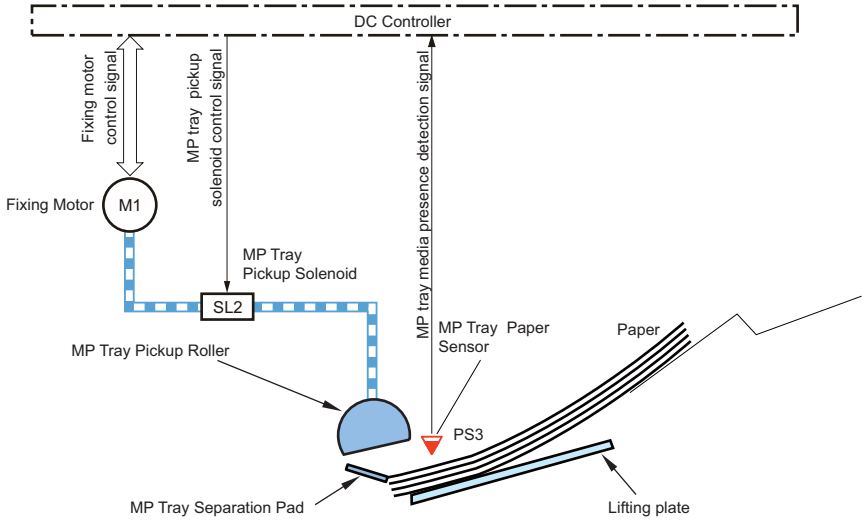
Multi-purpose Tray Pickup Control

Description

The Multi-purpose Tray pickup feeds paper from the Multi-purpose Tray one sheet at a time into the machine.
The following describes the operation of the Multi-purpose Tray pickup.

1. When a print command is input from the Main Controller, the DC Controller rotates the Fixing Motor (M1).
2. When the DC Controller turns ON the MP Tray Pickup Solenoid (SL2), the Multi-purpose Tray Pickup Roller rotates and paper is picked up.

3. After double feed paper is removed by the Multi-purpose Tray Separation Pad, paper is fed into the machine. Note that the presence of paper on the MP Tray is detected by the MP Tray Paper Sensor (PS3), and printing is not performed if there is no paper.

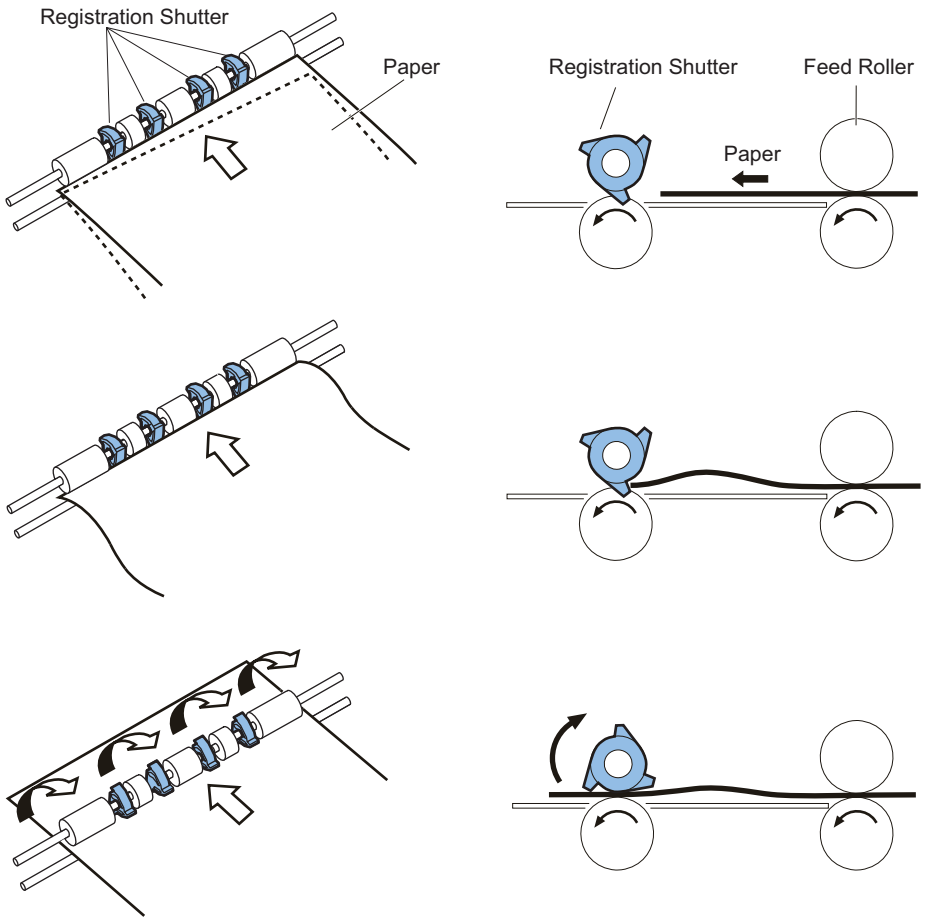


Skew Correction

Description

This machine can correct paper skew without lowering throughput.
Skew is corrected as follows.

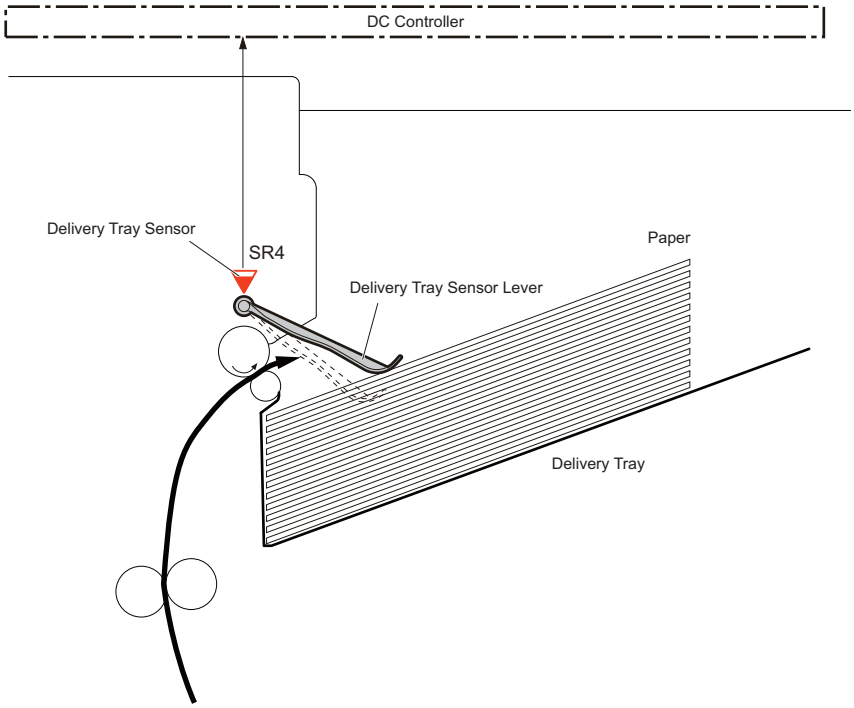
1. The paper leading edge pushes against the Registration Shutter to align the leading edge of the paper.
2. The trailing edge of the paper is fed and slack is generated at the leading edge of the paper.
3. When the trailing edge is fed even further, the paper leading edge for which slack was generated pushes up the Registration Shutter and then the paper is fed to the Registration Roller while the paper leading edge is aligned.



Delivery Tray Full Detection

Description

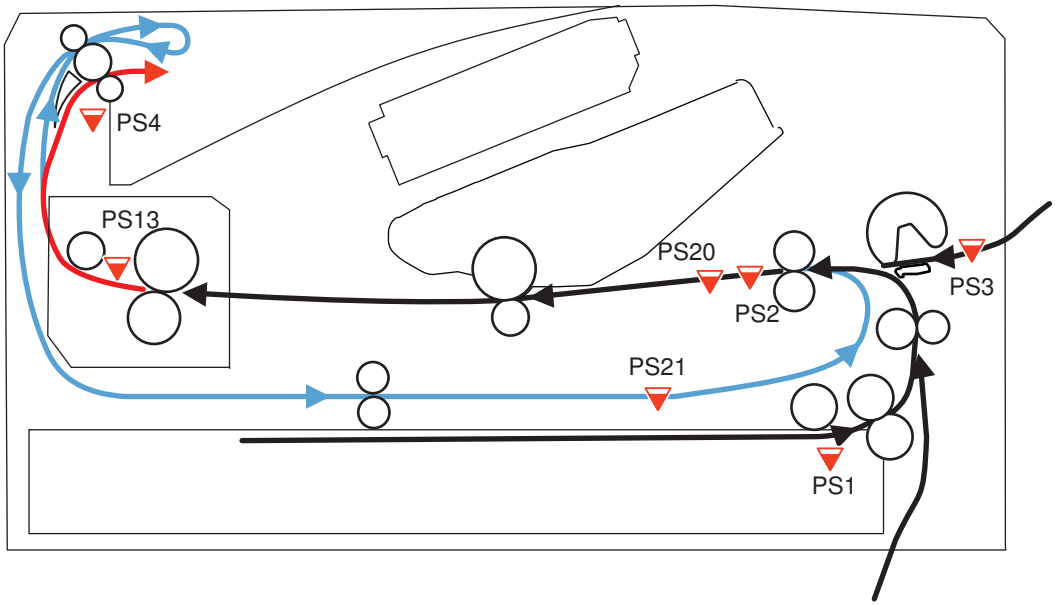
The DC Controller detects paper full in the Output Tray using the Delivery Tray Full Sensor (PS4).
The DC Controller judges that the Output Tray is full and notifies the Main Controller when the Delivery Tray Full Sensor detects paper for more than the specified period of time during printing.



Jam Detection

Description

The sensors are provided at the locations shown below to detect the presence of print paper and whether the print paper is being fed correctly.



This machine uses the following sensors and switches to detect the presence of print paper and whether the print paper is being fed correctly.

- TOP Sensor (PS2)
- Paper Width Sensor (PS20)

- Fixing Delivery Sensor (PS13)
- Duplex Feed Sensor (PS21)
- Delivery Tray Full Sensor (PS4)

Jam name	Details
Pickup delay jam	When the TOP Sensor (PS2) fails to detect the leading edge of paper within a specified period of time after the start of pickup from a cassette, pickup retry is performed twice. After that, if the TOP Sensor (PS2) fails to detect the leading edge of paper within a specified period of time again, it is judged as a pickup delay jam.
Pickup stationary jam	When the TOP Sensor (PS2) fails to detect the trailing edge of paper although a specified period of time has passed after it detects the leading edge of paper, it is judged as a pickup stationary jam.
Fixing delivery delay jam	When the Fixing Delivery Sensor (PS13) fails to detect the leading edge of paper although a specified period of time has passed after the TOP Sensor (PS2) detects the leading edge of paper, it is judged as a fixing delivery delay jam.
Fixing delivery stationary jam	When the Fixing Delivery Sensor (PS13) never detects absence of paper within a specified period of time after the TOP Sensor (PS2) detects the trailing edge of paper, it is judged as a fixing delivery stationary jam.
Internal stationary jam	When any of the TOP Sensor (PS2), Paper Width Sensor (PS20), Fixing Delivery Sensor (PS13) or Delivery Tray Full Sensor (PS4) detects presence of paper at the start of initial rotation, it is judged as an internal stationary jam.
Internal stationary jam 2	When residual paper is detected during printing, it is judged as an internal stationary jam 2.
Door Open Jam	When door open is detected during paper feed, it is judged as a door open jam.
Fixing paper wrapping jam	When the Fixing Delivery Sensor (PS13) detects absence of paper within a specified period of time from detection of the trailing edge of paper by the TOP Sensor (PS2) after the Fixing Delivery Sensor (PS13) detects the leading edge of paper, it is judged as a fixing paper wrapping jam.
Duplex Re-pickup Assembly jam	When the Duplex Feed Sensor (PS21) fails to detect paper although a specified period of time has passed after the start of duplex reversing, it is judged as a Duplex Re-pickup Assembly jam.

3 Technical Explanation (System)

Overview of System Management

This chapter describes information for service technicians on the system of this machine.
Although this chapter contains some information described in the User's Guide, for details on the functions for users, refer to the e-Manual.

Version Upgrade

Function Overview

The following firmware upgrade methods are available with this device.

Version upgrade using User Support Tool (UST).

Upgrade the firmware of the device using UST
Open the file for UST version upgrade on a PC connected with the device and upgrade the firmware.
Since the host machine and the PC are connected using a USB cable, version upgrades can be performed in an environment where a network is not available.

Version upgrade via Internet

Access the dedicated server, and download and upgrade the firmware.
Provided that Internet connection is available, the system automatically configures the connection destination setting and executes processing such as download and version upgrade.

Version upgrade using a USB flash drive (released only in special cases)

Upgrade the firmware of this machine using a USB flash drive.
Connect a USB flash drive where the firmware is stored to the device, and update the firmware in service mode.
Version upgrades can be performed in an environment where a PC or network is not available.

NOTE:
Firmware that can be used for version upgrade using a USB flash drive is released only in special cases such as a tender business, and is not normally released. As for the detailed version upgrade procedure, follow the instructions given at the time of release of the customized firmware for version upgrade using a USB flash drive.

Version upgrade by replacing the PCB

Version upgrade by replacing the existing PCB with a PCB where the latest firmware is installed

Version upgrade using Local CDS

Use iW EMC/iW MC and DFU plug-in to download firmware from Local CDS and upgrade the host machine.

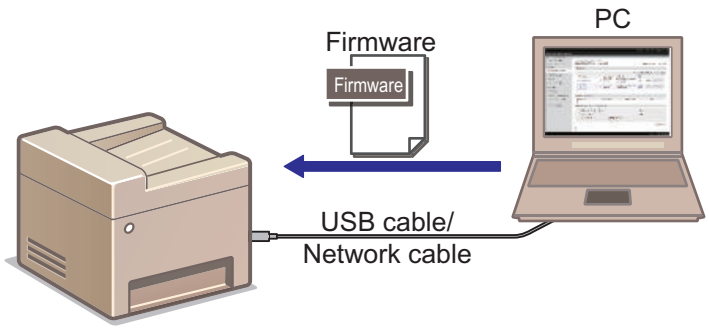
NOTE:
When using Local CDS to upgrade it, refer to the manual/material of iW EMC/iW MC DFU plug-in.

CAUTION:
A message appears when an attempt is made to upgrade a host machine to which specified firmware has been applied. This is a precaution not to use wrong firmware to upgrade a host machine to which specified firmware has been applied. See the following regarding the combination of whether the message will be displayed:

Type of firmware applied to the host machine	Firmware to upgrade	
	General firmware	Specified firmware
General firmware	No message	No message
Specified firmware	Message displayed	Message displayed

Version Upgrade Using UST

UST is included in the firmware for the machine that can be downloaded from the website of CINC. Firmware is downloaded as a zip file and a folder containing UST is extracted by decompressing the file.
When executing UST on the PC connected to the machine with a USB Cable, the firmware can be upgraded by downloading it from the PC to the machine. For the detailed procedure, refer to "User Support Tool Operation Guide" stored in the decompressed folder. "User Support Tool Operation Guide" is also available on the website of CINC.



Version Upgrade via Internet

Connect to the Internet using the network function of the device, and download and upgrade the latest firmware from the server. If the device is in an environment where Internet connection is available, firmware versions can be upgraded only by operation from the menu without using PC.

■ Prerequisite

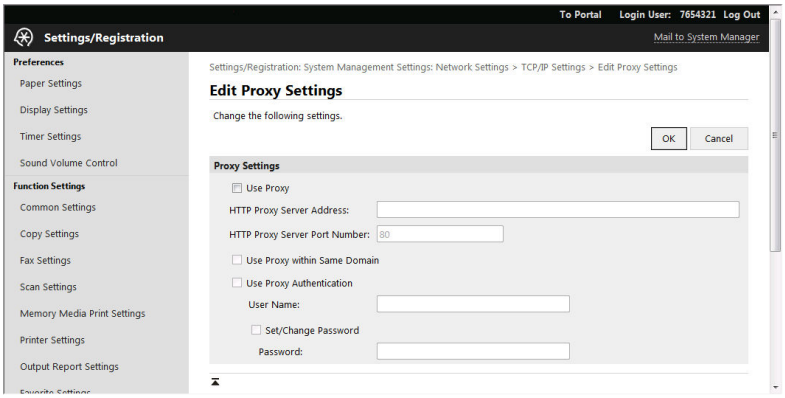
In order to perform version upgrade of the device via Internet, the following conditions must be met.

There should be no other jobs being executed.

Firmware cannot be upgraded while there is a job being executed. If there is a job being executed, wait for completion of the job and then perform the work.

The device should be able to be connected to the external network.

If connection is not available because, for example, there is a proxy server, follow the e-Manual to configure the proxy server settings and enable connection to the external network.



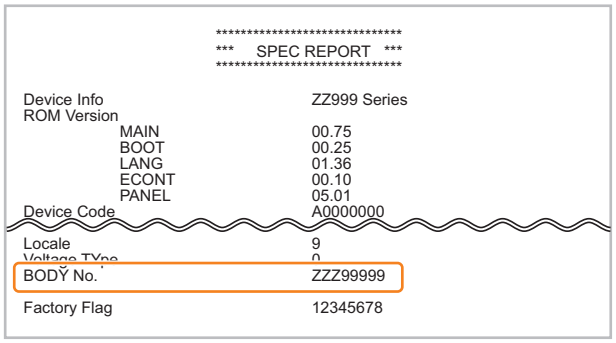
The serial number of the host machine should be shown on the Main Controller PCB.

Whether or not the serial number of the host machine is shown on the Main Controller PCB can be checked from the Control Panel or SPEC REPORT.

Procedure to check from SPEC REPORT

1. Execute the following service mode to print SPEC REPORT.
   - COPIER > FUNCTION > MISC-P> SPEC

2. Check if the serial number ("3 alphabetical characters + 5-digit number" or "1-digit number + 2 alphabetical characters + 5-digit number") is shown in [BODY No.] of the printed SPEC REPORT.



■ Procedure for Upgrading the Firmware via Internet

1. **Select the following menu to upgrade the firmware via Internet:**
   - [Management Settings] > [Remote UI Settings/Update Firmware] > [Update Firmware] > [Via Internet] > [Yes]

   When the upgrading of firmware is completed, the machine automatically restarts.
2. **Select the following menu, and check that the firmware has been correctly upgraded:**
   - [Management Settings] > [Remote UI Settings/Update Firmware] > [Update Firmware] > [Version Information]

CAUTION:
This function does not support the operations from remote UI. ([Update Firmware] does not exist in the [System Management Settings] menu of the remote UI.)

■ Messages

The message displayed on the device operation panel is as follows.

No.	Error message	The timing of occurrence	Remedy
1	Job in progress... Wait a moment, then try again.	If there is a job being executed:	1. Wait until the job is completed. 2. Cancel the job.
2	Cannot check the firmware version. (Server communication error.)	Network error	1. Check whether the device can be connected to the external network. 2. Check whether the proxy setting has been made (in case of access via a proxy server).
3	Cannot download the firmware. (Error during download.)		1. Check whether the device can be connected to the external network. 2. Check whether the proxy setting has been made (in case of access via a proxy server). 3. Check that the serial number of the host machine is shown on the Main Controller PCB.
4	***DOWNLOAD MODE*** NETWORK AVAILABLE IP ADRESS IP address of the machine PRESS STOP KEY TO EXIT	If update (writing) of the firmware has ended in failure:	1. Update the firmware again using UST.
5	***DOWNLOAD MODE*** FAILED TO UPDATE		
6	***DOWNLOAD MODE*** UPDATE IS COMPLETE	If the update of the firmware is successful	-

Version Upgrade Using a USB Flash Drive (Released Only in Special Cases)

Connect a USB flash drive where the firmware is stored to this machine, and update the firmware in service mode.

NOTE:
Firmware that can be used for version upgrade using a USB flash drive is released only in special cases such as a tender business, and is not normally released. As for the detailed version upgrade procedure, follow the instructions given at the time of release of the customized firmware for version upgrade using a USB flash drive.

■ Prerequisite

In order to perform version upgrade of the machine using a USB flash drive, the following conditions must be met.

There should be no other jobs being executed.

Firmware cannot be upgraded while there is a job being executed. If there is a job being executed, wait for completion of the job and then perform the work.

■ Procedure for Upgrading the Firmware Using a USB Flash Drive

1. **Connect a USB flash drive where the firmware is stored to this machine.**
2. **Execute one of the following service modes.**
   - COPIER > FUNCTION > SYSTEM > DOWNLOAD
   - COPIER > FUNCTION > SYSTEM > DOWNLOAD_FORCE

NOTE:
If you want to apply only firmware that is newer than the firmware currently applied in the machine, execute DOWNLOAD. If you want to apply all the firmware contained in the USB flash drive regardless of whether it is newer or older, execute DOWNLOAD_FORCE.

3. **The signature data of the downloaded file is verified, and download instruction information is written to the designated area of the flash memory only if the verification result is correct.**
4. **The machine is automatically restarted.**
5. **When the upgrading of firmware is completed, the machine automatically restarts.**

Setting Information Export/Import Function (DCM)

Overview

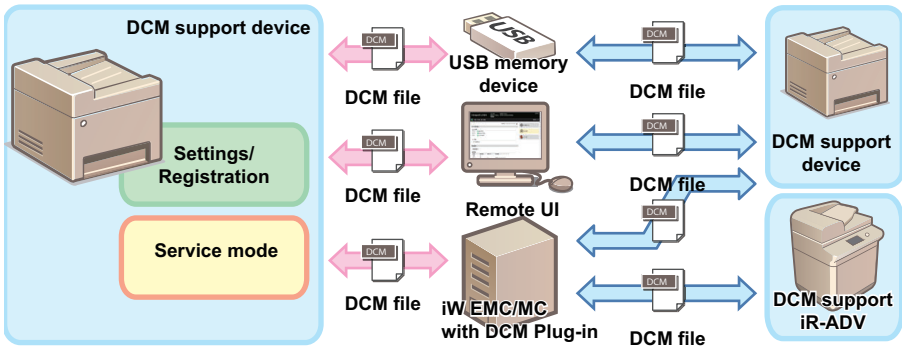
Various data is stored in the storage inside the device.
Depending on the works to be done such as replacing parts, this data needs to be backed up and restored.
There are some ways to back up and restore data, and the appropriate one should be used depending on the purpose and storage destination.
This section describes the procedure for backing up and restoring service mode setting values.
For the procedure for backing up and restoring other information, refer to the e-Manual.

■ Function Overview

This machine has a setting information export/import function (hereinafter referred to as DCM (Device Configuration Management) function) which exports/imports the machine's setting value information as a file. The file exported/imported using the DCM function is called a DCM file, and the target setting information is as follows:

- Setting information of the menu ([Settings/Registration] menu)
- Service mode setting information
- Address Book

The DCM file is exported to a USB flash drive or PC local disk from the Control Panel or remote UI.
The exported DCM file can be returned to the original device or imported to a different device.
When the file is returned to the original device, this can be used as a function to back up the settings, and when the file is imported to a different device, this can be used as a function to copy setting information.
Data can also be imported to or exported from an iR-ADV machine by using iW EMC/MC DCM Plug-in.
In the case of the setting value backup function before implementation of the DCM function, an exported file could be imported only to the same device, but the DCM function enables import of an exported file to a different device.



Conceptual diagram

NOTE:
In order to export or import setting information using DCM, it is necessary that the device supports DCM.

■ Backup/Restoration for Service Technicians

Backup and Restoration from the Menu ([Settings/Registration] Menu)

Setting information can be backed up and restored from the Control Panel of the device or from the menu ([Settings/Registration] menu) of remote UI.
Although the menu ([Settings/Registration] menu) is for users, the service mode settings information can be backed up and restored from the Import/Export function by changing the service mode setting.
The service mode settings information can be backed up and restored only by accessing from the remote UI [Settings/Registration] menu.

Backup/Restoration Using Service Mode

Some of the functions in service mode can be used to backup and restore data.
Setting value information and service counter (DC-CON) values can be backed up and restored.

■ Combination of Information Exported/Imported by DCM, Means, and Storage Locations

A DCM file is exported and imported using the Control Panel, remote UI, or the iW EMC server, depending on the situation of the site.
The information exported/imported differs depending on the means.
Combinations of them are shown in the following table.

Menu used	Operation	Information exported			Save destination
		Setting values of menu options	Address book*1	Service mode setting values	
[Settings/Registration] menu	Control panel	Yes (fixed)*2	Yes (fixed)*2	No	USB flash drive
	Remote UI	Yes	Yes	With conditions*3	PC local disk
Service mode	Control panel	No	No	Yes	USB flash drive / Storage in the host machine
	Remote UI	No	No	Yes	Storage in the host machine

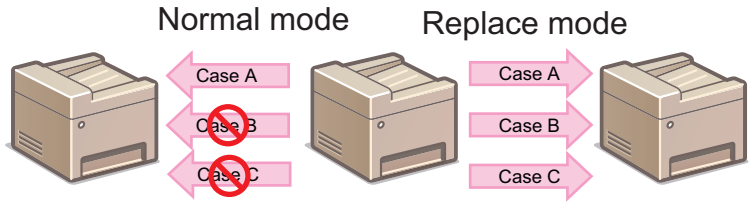
■ Compatibility of Data

The following table shows compatibility of data in the case where the device from which the data is exported and the device to which the data is imported differ in model and/or serial number.
For items that are imported in Cases A, B, and C, refer to “List of Items Which Can Be Imported” on page 174.

Model	Serial number	Import process
Same	Same	Items corresponding to Case A are imported.*4
Same	Different*5	Items corresponding to Case B are imported.*4
Different	Different*5	Items corresponding to Case C are imported.*6
Different	Same	The file is judged to be invalid, and the process ends with an error.

■ Replacement Mode

When this function is used for migrating the setting data upon replacement of a device, some of the data cannot be migrated depending on the model to which the data is migrated.
When this function is used in normal mode, data that is applicable to either Case B (of different serial number) or Case C (of different mode) cannot be imported.
When replacement mode of the device to which the data is imported is enabled, data can be forcibly migrated even to a device of a different serial number or even between different models.



1. Models without address books are excluded. In the case of a fax option model without SEND function, address books are exported only if a fax option is connected with the device.

*2. When the [Settings/ Registration] menu is used from the Control Panel, both the setting menu information and the address book are imported/exported. It is not possible to export/import only either of them.
Information which is not included in the data to be imported is not imported.

*3. Service mode is added to the data to be exported only when service mode COPIER > OPTION > USER > SMD-EXPT is set.
For information on items that are imported, refer to "List of Items Which Can Be Imported".

*4. If the firmware version at the time of import differs from that at the time of export, predetermined corrective processing may be performed.

*5. If a serial number is missing, the serial numbers are judged to be mismatched.

*6. Predetermined corrective processing may be performed.

The following shows the procedure to turn ON replacement mode of the device to which the data is imported:

1. **Set the following service mode setting value to "1":**
   - COPIER > OPTION > USER > RPL-IMP

NOTE:
Refer to “List of Items Which Can Be Imported” on page 174 for the target data of replacement mode.

CAUTION:
Since replacement mode is not lifted automatically, the setting value of the foregoing service mode needs to be changed back to "0" to return to normal mode.

Import/Export Procedure from [Settings/Registration] of Remote UI

This section describes the procedure for backing up and restoring service mode setting information by using the [Import/Export] function in the [Settings/Registration] menu of Remote UI.

CAUTION:
- The service mode setting information can be backed up and restored only from the [Settings/Registration] menu on Remote UI, and the operation cannot be performed from the [Settings/Registration] menu on the Control Panel.
- In the case of backing up and restoring only the setting information of the [Settings/Registration] menu or the address book, refer to the procedure described in the e-Manual.

■ Limitations

The following limitations exist when backing up and restoring the service mode settings information from the [Settings/Registrations] menu of remote UI.

A job must not be accepted during an import/export processing.

Except for the calibration requested by the engine, a job is not allowed to be accepted during a processing. In addition, import/export must not be performed during execution of a job.

Firmware must not be updated during an import/export processing.

Fax cannot be received while firmware is updated during a processing. In addition, import/export must not be performed also during firmware update.

Power must not be turned off during an import/export processing.

If power discontinuity occurs during an import processing, a rollback processing is not performed, therefore the settings imported up to that point are reflected while the rest of the settings remain as-is.
When power discontinuity occurs during an export processing, export is not executed.

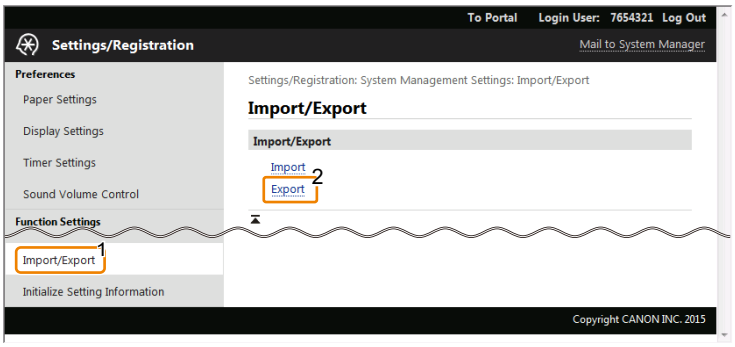
■ Procedure for Export from Remote UI ([System Management Settings] Menu)

Service mode setting information can be exported from the [System Management Settings] menu by setting the following service mode setting value to "1".

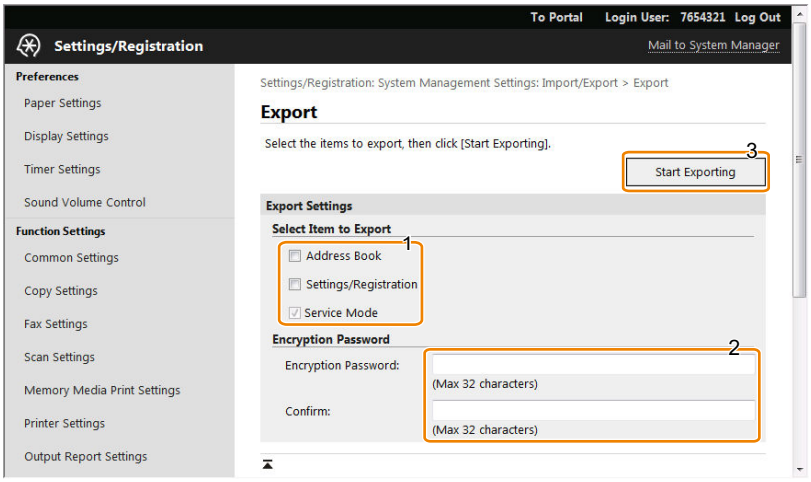
1. **Enter service mode, and set the following item to "1".**
   - COPIER > OPTION > USER > SMD-EXPT

NOTE:
The [SMD-EXPT] setting can be configured either from the Control Panel or from the remote UI.

2. **Exit service mode, start remote UI, log in as a system administrator, and then select the following item:**
   - [Settings/Registration] > [Import/Export] > [Export]



3. **After confirming that [Service Mode] is displayed/selected in [Select Item to Export], enter the password and click [Start Exporting].**



Address Book

Select the check box to export the address book data.

Settings/Registration

Select this check box to import the menu option data.

Encryption password

Enter 32 or less numeric characters set when the file was exported.

4. **The file download dialog box will appear. Save the file to any location.**
5. **Enter service mode, and set the following item to "0".**
   - COPIER > OPTION > USER > SMD-EXPT

CAUTION:
Since the screen of export function can also be accessed by the user, be sure to disable the [SMD-EXPT] setting (setting value: 0).

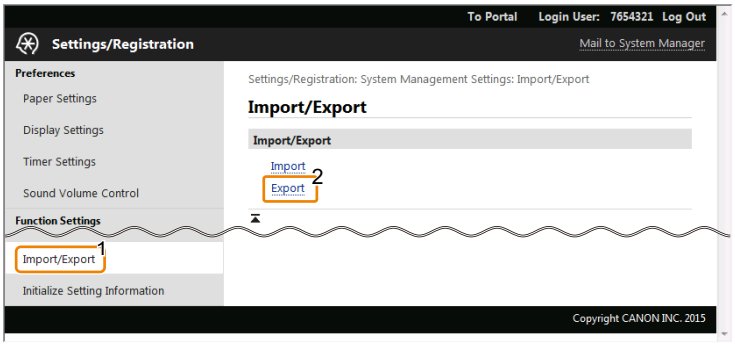
■ Procedure for Import from Remote UI ([System Management Settings] Menu)

Import the service mode setting information file that was exported in the previous procedure.

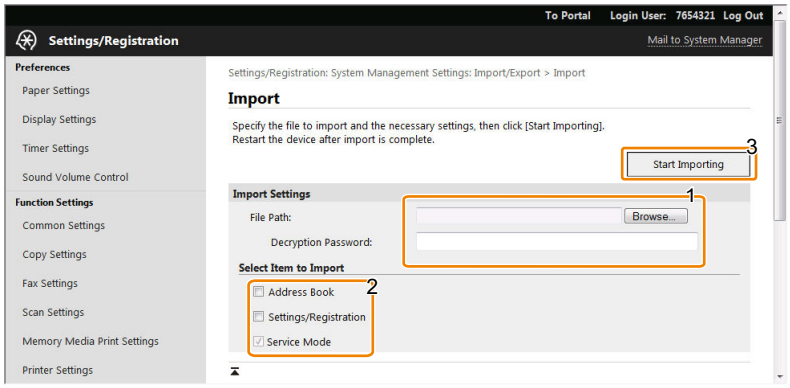
1. **Enter service mode, and set the following item to "1".**
   - COPIER > OPTION > USER > SMD-EXPT

NOTE:
The [SMD-EXPT] setting can be configured either from the Control Panel or from the remote UI.

2. **Exit service mode, start remote UI, log in as a system administrator, and then select the following item:**
   - [Settings/Registration] > [Import/Export] > [Import]



3. **Configure the import settings, and click [Start Importing].**
   Entering the password and clicking [Start Importing] imports the menu option data.



[Browse...] button

Click to select the file to import.

Decryption password

Enter 32 or less numeric characters set when the file was exported.

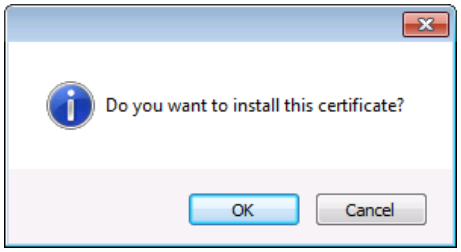
Address Book

Select the check box to import the address book data.

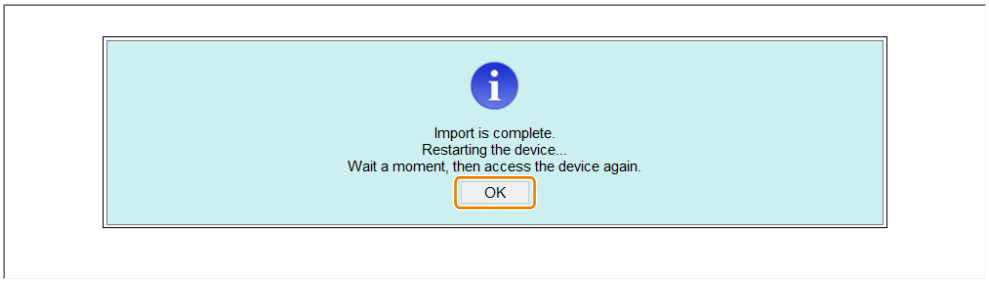
Settings/Registration

Select this check box to import the menu option data.

4. **Click [OK] when a dialog box confirming whether you want to execute the import process is displayed.**



5. **When a message indicating completion of the processing appears, click [OK].**



6. **Restart this machine, enter service mode, and confirm that the setting information is reflected. This completes the procedure for importing a setting information file.**
7. **Enter service mode, and set the following item to "0".**
   - COPIER > OPRION > USER > SMD-EXPT

CAUTION:
Since the screen of export function can also be accessed by the user, be sure to disable the [SMD-EXPT] setting (setting value: 0).

Procedure for Exporting/Importing Service Mode Setting Information

Service mode setting information can be backed up and restored by using service mode functions. The backup file can be saved to a USB flash drive or a storage in the machine.

Backup/restoration to a USB flash drive

COPIER > FUNCTION >SYSTEM > EXPORT
COPIER > FUNCTION >SYSTEM > IMPORT

Backup/restoration to a storage in the machine

COPIER > FUNCTION >SYSTEM > SAVE-SM
COPIER > FUNCTION >SYSTEM > RSTR-SM

	Backup/restoration to a USB flash drive	Backup/restoration to a storage in the machine
Storage destination	USB flash drive	Storage in the machine
Number of files saved	Depends on the capacity of the USB flash drive	One
Duplication of the setting values for other machines	Possible	Not possible

■ Procedure for Exporting to a USB Flash Drive

Use the service mode function to save the service mode setting information to a USB flash drive.
This operation can be performed both from the Control Panel and remote UI.
The following USB flash drives can be used for export/import.
- USB flash drive in FAT 16 format (storage capacity: 2 GB)
- USB flash drive in FAT 32 format (storage capacity: 32 GB)

Note that the descriptions in parenthesis in the procedure are the descriptions in the case of remote UI.

1. **Connect the USB flash drive to the USB Memory Port.**
2. **Enter service mode, and execute the following service mode.**
   - COPIER > FUNCTION > SYSTEM > EXPORT

CAUTION:
Even if the service mode is executed without connecting a USB flash drive, an error is not displayed.
It looks as if the process has been completed successfully, but the file has not been exported to anywhere.
For the reason shown above, be sure to check before execution that a USB flash drive is connected.

3. **The message displayed during the process will disappear. When the display has returned to the original state, remove the USB flash drive.**
4. **Check that a setting information file (service.dcm) exists in the directory directly under the root of the USB flash drive.**
   This completes the export of a setting information file.

■ Procedure for Import from USB Flash Drive

1. **Save the setting information file (service.dcm) to be imported to directly under the root of the USB flash drive.**
2. **Connect the USB flash drive to the USB Memory Port.**

3. **Enter service mode, and execute the following service mode.**
   - COPIER > FUNCTION > SYSTEM > IMPORT
4. **The message displayed during the process will disappear. When the display has returned to the original state, remove the USB flash drive.**
5. **Restart this machine, enter service mode, and confirm that the setting information is reflected.**
   This completes the the import of a setting information file.

■ Backup Procedure to the Storage in the Machine

Use the service mode function to back up the service mode setting information to the storage in the machine.
This operation can be performed both from the Control Panel and remote UI.
The setting information that can be saved in the machine's storage is only one.

1. **Enter service mode, and execute the following service mode.**
   - COPIER > FUNCTION > SYSTEM > SAVE-SM
2. **Backup process is complete after checking that the message displayed during the process disappears and the display returns to the original state.**

■ Procedure for Restoration from Internal Storage

Restore the service mode setting information that has been backed up to the storage in the machine in the previous procedure.

1. **Enter service mode, and execute the following service mode.**
   - COPIER > FUNCTION > SYSTEM > RSTR-SM
2. **Restoration process is complete after checking that the message displayed during the process disappears and the display returns to the original state.**

Monitoring Function (e-Maintenance/imageWARE Remote)

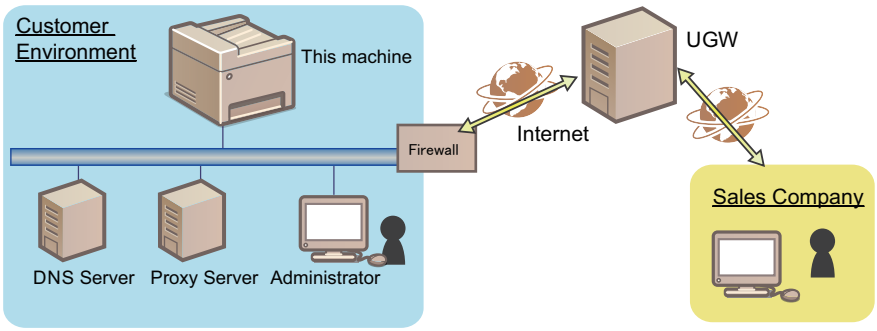
Overview of System

■ Function Overview

E-RDS (Embedded RDS) is a monitoring program that runs on the host machine. When the monitoring option is enabled by making the setting on this machine, information such as the status change of the machine, counter information, and failure information are collected. The collected device information is sent to a remote maintenance server called UGW (Universal Gateway Server) via Internet.
The information to be monitored is:

- Billing counter
- Parts counter
- ROM version
- Service call error log
- Jam log
- Alarm log
- Change of status (such as status of consumables)

Since the information shown above is customer information, HTTPS/ SOAP protocol is used for communication between the UGW server and the host machine to improve security.



■ Features

E-RDS is embedded in the network module of the device, and the front-end module of the e-Maintenance/ imageWARE Remote system is realized without requiring hardware besides the device.

■ Main Functions

Functional category	Sub category	Description
Communication Test	Test	By executing the following service mode, E-RDS communicates with UGW, retrieves schedule information, and establish communication. COPIER > FUNCTION > INSTALL > COM-TEST
Transmission of counters	Billing/all resources/parts/ mode-by-mode counters	E-RDS Periodically send billing/all resources/parts/mode-by-mode counters to the server.
Transmission of event logs	Service call/alarm/jam log	Each time a service call, alarm, or jam log occurs, the error log is sent to the server. Having alarm log or not is different by a model.
Data transmission	ROM version / Device configuration	E-RDS periodically sends the firmware information of the device to UGW. E-RDS sends the device configuration information only when there is any change in the configuration.
	E-RDS Debug log	Debug logs of E-RDS are stored in E-RDS, and they are sent to UGW only when they exceed a specific size.
	Sublog transmission	When E-RDS catches the sublog transmission of a message designation than UGW, send data such as device Sublogs and DCON logs to the server.
Operation instruction	Operation check	E-RDS contacts UGW to check if there is processing to be executed next, and receives the following instructions if any. • Linkage with CDS • Sublog transmission

Servicing Notes

- After clearing the Main Controller PCB, initialization of the E-RDS setting (ERDS-DAT) and a communication test (COM-TEST) need to be performed. If this work is omitted, an error may occur when counters are sent to UGW.
  After replacing the Main Controller PCB, all the settings need to be reconfigured.
- Do not change the values of the following service modes unless otherwise instructed.
  If they are changed, a communication error will occur with UGW.
  - Port number of UGW
    [COPIER] > [FUNCTION] > [INSTALL] > [RGW-PORT]
    Default: 443
- If the e-Maintenance/imageWARE Remote contract of the device becomes invalid, be sure to turn OFF the E-RDS setting (E-RDS: 0).

Setting Procedure

■ Preparation

Since this function communicates with the UGW server, it is necessary to connect to the external network.
Check the following items, and make the settings if not yet set.

- IP address settings
- DNS server settings
- Proxy server settings*1
- Installation of CA certificate (arbitrary *2)

CAUTION:
- Obtain the information on the network environment from the system administrator of the user.
- When having changed the network settings, turn OF and then ON the main power of the machine.

■ Procedure for Setting E-RDS

1. **In the following service mode, select the following service mode to initialize the E-RDS setting values:**
   - COPIER > FUNCTION > CLEAR > ERDS-DAT

NOTE:
This operation initializes the E-RDS settings to factory setting values.
For the setting values to be initialized, see the section of“Setting values and data to be initialized” on page 56 .

2. **Enable the E-RDS function in the following service mode, and perform a communication test.**
   1. Select the following item:
      - COPIER > FUNCTION > INSTALL > ERDS
   2. Enter [1] from the keyboard, and press [Apply].

CAUTION:
The following settings i.e. RGW-PORT in Service mode must not be change unless there are specific instructions to do so.
Changing these values will cause error in communication with UGW.

When the E-RDS function is enabled, the function to communicate with UGW is enabled.

1. If authentication is necessary, make the settings of the authentication information as well.

2. When using a certificate other than those pre-installed in the device

3. **Select [COM-TEST] and then touch [Yes].**
   If the communication is successful, "OK" is displayed. If "NG" is displayed, check the network settings and USW server address (URL).

CAUTION:
The communication results with UGW can be distinguished by referring to the COM-LOG. By performing the communication test with UGW, E-RDS acquires schedule information and starts monitoring and meter reads operation.

Maintenace

■ Initializing E-RDS settings

It is possible to clear the FLASH data of E-RDS and change the E-RDS setting back to the default value.

● Initialization procedure

Follow the procedure shown below to initialize E-RDS.

1. **Enter service mode as a system administrator user.**
2. **Select the following service mode, and press [OK] to execute.**
   - COPIER > Function > CLEAR > ERDS-DAT

● Setting values and data to be initialized

The following E-RDS settings, internal data, and Alarm filtering information are initialized.

- COPIER > FUNCTION > INSTALL > ERDS
- COPIER > FUNCTION > INSTALL > RGW-PORT
- COPIER > FUNCTION > INSTALL > COM-LOG

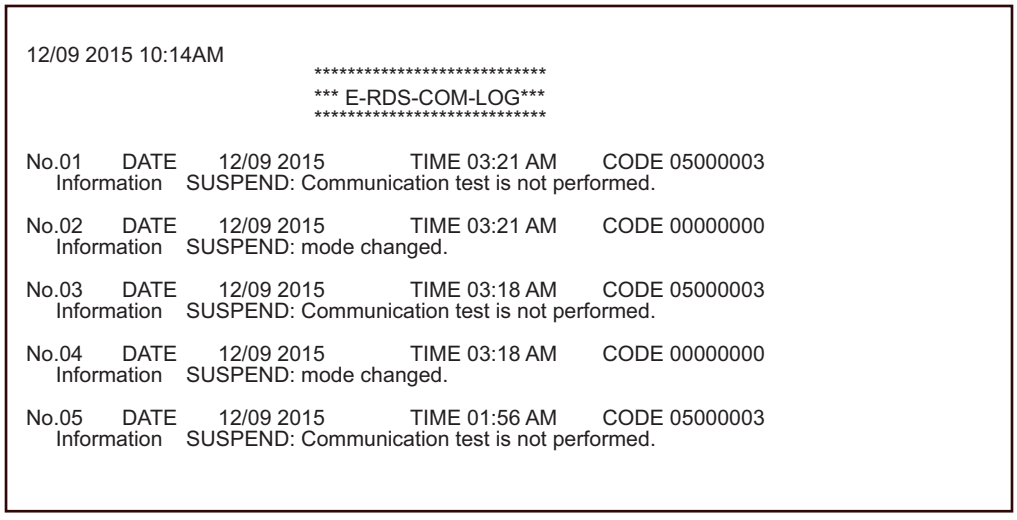
CAUTION:
If a certificate other than the CA certificate at the time of shipment has been installed, initializing the E-RDS setting will not change the settings back to those at the time of shipment. To change the certificate back to the CA certificate at the time of shipment, delete the certificate (install the CA certificate at the time of shipment) after initializing the E-RDS settings.

■ Report Output of Communication Error Log (COM-LOG)

A report of communication error log information on five affairs can be output.

● Report output procedure

1. **Select the following service mode, and press [Yes].**
   - COPIER > FUNCTION > MISC-P > ERDS-LOG



```
12/09 2015 10:14AM
                          ****************************
                          *** E-RDS-COM-LOG***
                          ****************************

No.01    DATE    12/09 2015        TIME 03:21 AM    CODE 05000003
   Information   SUSPEND: Communication test is not performed.

No.02    DATE    12/09 2015        TIME 03:21 AM    CODE 00000000
   Information   SUSPEND: mode changed.

No.03    DATE    12/09 2015        TIME 03:18 AM    CODE 05000003
   Information   SUSPEND: Communication test is not performed.

No.04    DATE    12/09 2015        TIME 03:18 AM    CODE 00000000
   Information   SUSPEND: mode changed.

No.05    DATE    12/09 2015        TIME 01:56 AM    CODE 05000003
   Information   SUSPEND: Communication test is not performed.
```

Output sample

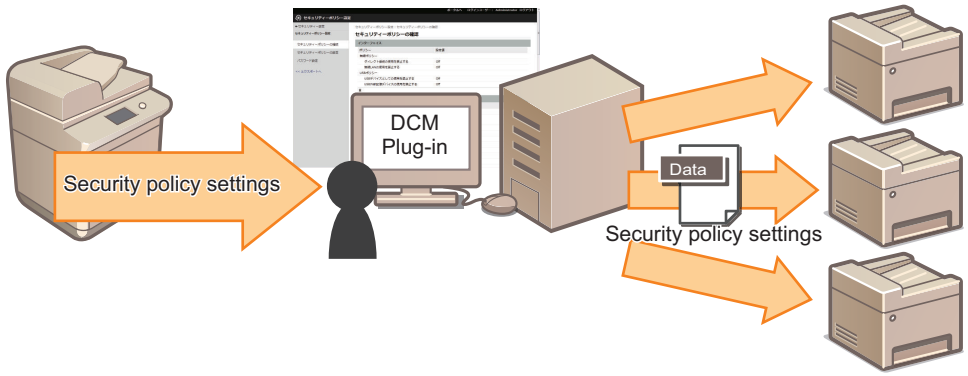
Security Functions

A technical description on the security-related functions implemented in this equipment and the works to be performed for servicing are shown below.

Security Policy Function

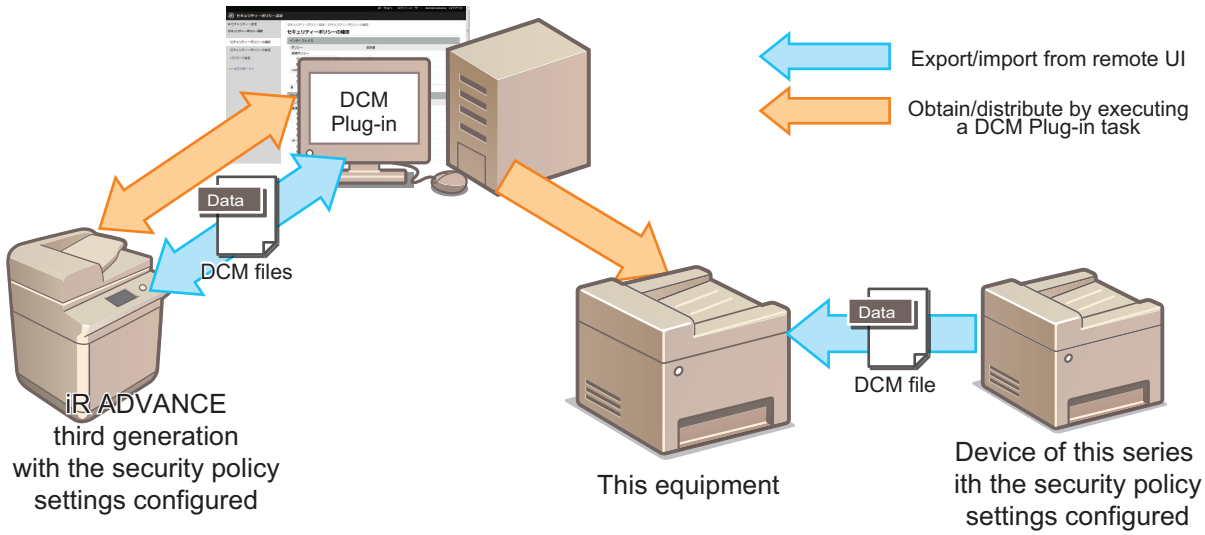
What is security policy function?

The security policy function is a function for collectively configuring the security-related settings on devices located at various places.
If the user has security policies such as information security basic policies and security standards, the settings can be collectively configured/managed in accordance with the security policies.



Perform either of the following works to configure the security policies on this equipment.

- Using iW EMC DCM Plug-in, distribute the security policy settings created by an iR ADVANCE third generation device.
- Import the DCM file exported from a device of the same series where the security policy settings have already been enabled.



NOTE:
Security policy settings can be configured on devices of this series only by distributing the settings using iW EMC DCM Plug-in.
A DCM file imported from a device of this series where the security policy settings have been configured can be used to configure the settings, but the original device where the settings have been configured can be created only by using iW EMC DCM Plug-in.
In iR ADVANCE series, the security policy function is implemented only in the third generation devices.

■ Security Administrator

● Differences between Security Administrator and System Manager

In the security policy setting function, there is an administrator called a "security administrator" in addition to the conventional "system manager".

The system manager can operate/set all the items in the [Settings/Registration] menu of the device.
However, if the security policy has been set by the security administrator described later, even the system manager cannot perform operation or change the settings against the security policy.
The security administrator is an administrator who creates, applies, edits, backs up, and restores the security policy.
The security administrator is a system manager and is a user who knows the password for the security policy settings.

	Account	[Settings/Registration] menu				Policy-related			
	Add/ delete	Settings (Administrator settings)	Settings (Other than the administrator settings)	Initialize (User mode)	Initialize (Service mode)	Introduce/ change	Browse	Back up/ restore	Disable the restrictions
Security administrator	✓	✓*1	✓*1	✓	-	✓	✓	✓	✓
System manager	✓	✓*1	✓*1	-	-	-	✓	✓	-
End user	-	-	✓*1	-	-	-	-	-	-
Service technician	✓	-	-	-	✓	-	-	-	✓

● Security Administrator Password

The security administrator password is a password that is set to protect the configured security policy. The password setting is not mandatory.

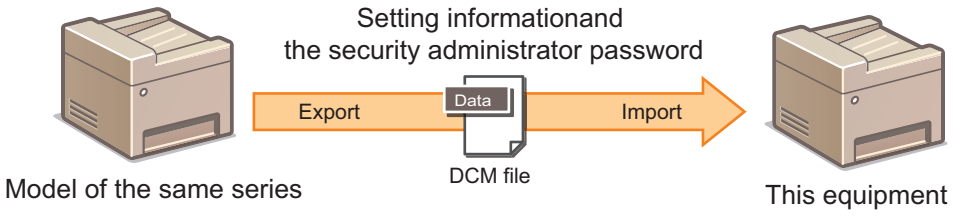
Behavior when the security administrator password has been set

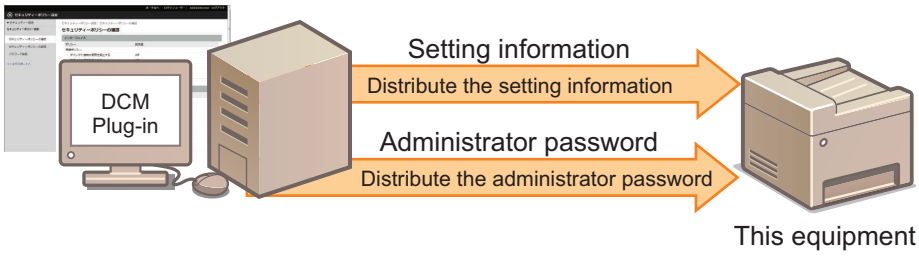
If the security administrator password has been set on this equipment, the security administrator password is required when [Initialize All Data/Settings] is executed. This is intended to prevent the device from being initialized without discretion and the configured security policy from being disabled.

NOTE:
Even if the security administrator password has not been set, as long as the security policy has been configured, [Management Settings] > [Data Management] > [Initialize Menu] is grayed out and cannot be used.

Importing the security administrator password

If a security policy setting file of iR ADVANCE series where the security administrator password has been set is imported via iW EMC DCM Plug-in, the security administrator password is not reflected.
In the case of importing the file via iW EMC DCM Plug-in, it is necessary to execute [Create Task to Change Security Policy Password] and distribute the security administrator password to set the security administrator password.





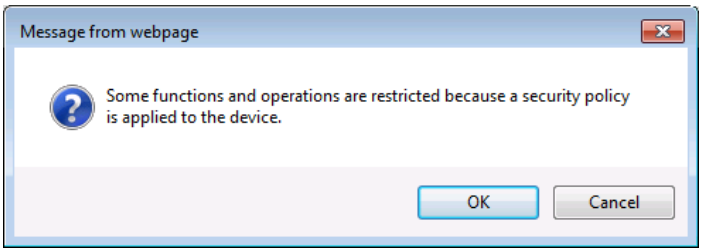
Initializing the security administrator password

In case the user has forgotten the security administrator password, there is a service mode setting for initializing the password.
Execute the service mode shown below to initialize the security administrator password set on this equipment.
Service mode > COPIER > Function > CLEAR > PLPW-CLR

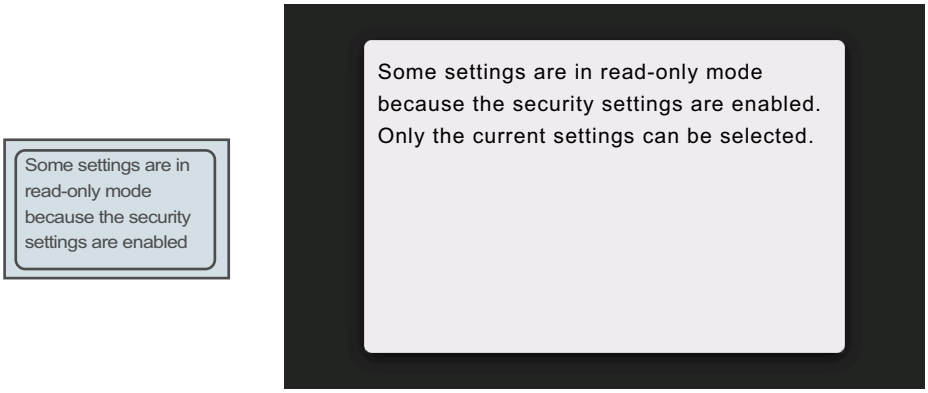
1. Restrained by the policy

■ Screen Displayed When Security Policy Is Applied

If the security policy is applied, the message shown below appears when you access the [Settings/Registration] screen.

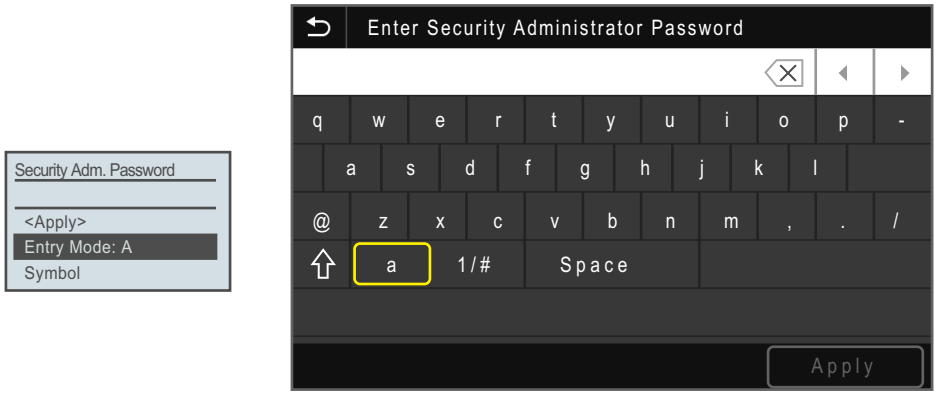


Example of the remote UI screen



Example of the Control Panel (Touch Panel) screen

If the security administrator password has been set, the security administrator password is required when [Initialize All Data/ Settings] is executed.



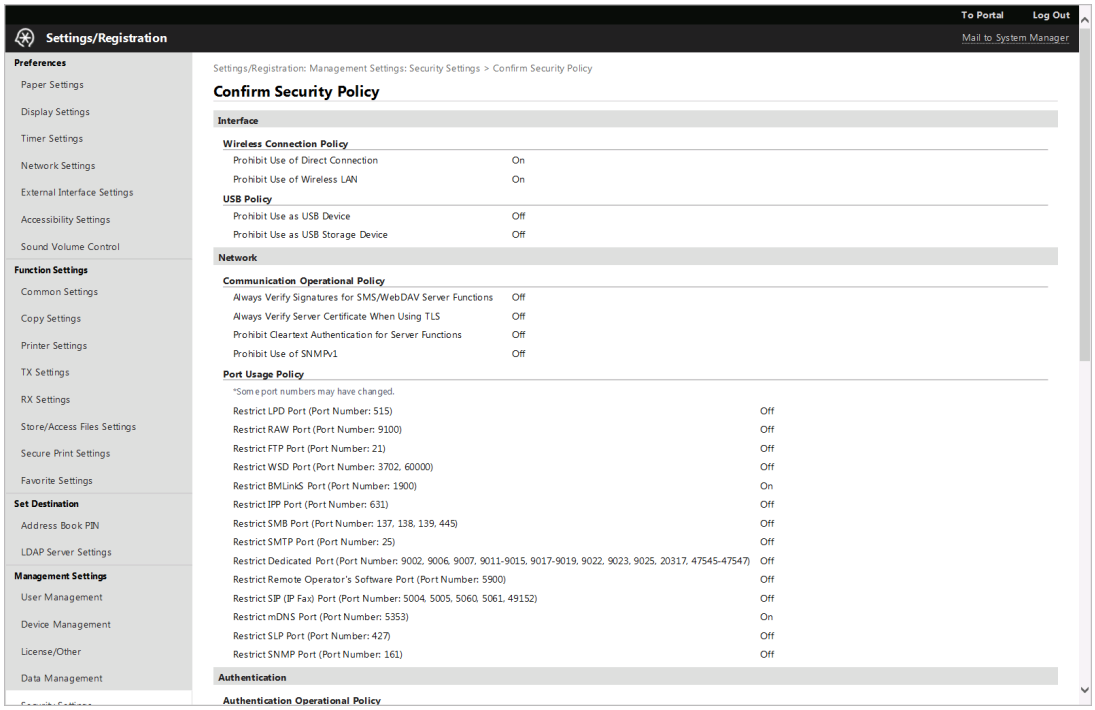
Security administrator password entry screen

■ Checking the Configured Settings

The policy settings that have been configured can be checked on the remote UI screen shown below.

1. **Start remote UI as a user having the administrator privileges.**

2. **Display the screen shown below.**
   - [Settings/Registration] > [Management Settings] > [Security Settings] > [Confirm Security Policy]



Screen example

NOTE:
On the [Confirm Security Policy] screen, all the settings related to security policies are displayed regardless of the model. Therefore, policy settings related to functions that are not implemented in the model are also displayed.
For example, the models of this series do not have the SMB server function, but [Restrict SMB Port] is displayed.

■ Export/Import of Setting Information

For the procedure for exporting/importing setting information, refer to the User's Guide of this equipment or the User's Guide of iW EMC DCM Plug-in.

4 Periodical Service

Periodically Replaced Parts

This machine does not have any periodically replaced parts.

Consumable Parts

This machine does not have any consumable parts.

Periodical Services

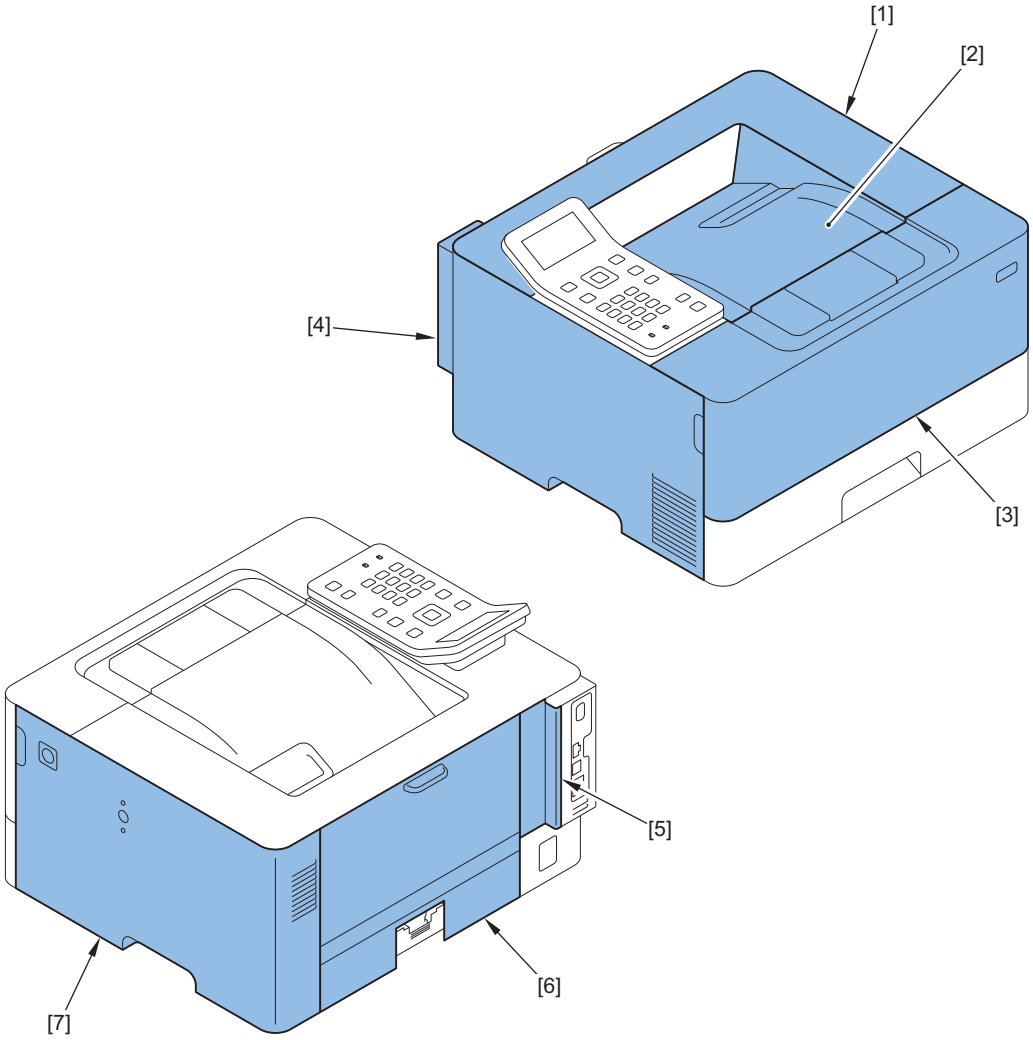
This machine does not require any periodical service.

5 Parts Replacement and Cleaning

List of Parts

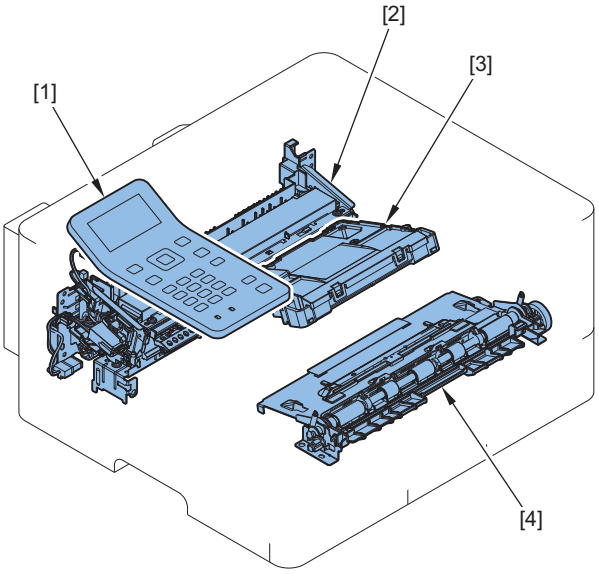
Major Units

■ External Cover



No.	Name
[1]	Upper Cover
[2]	Output Tray
[3]	Cartridge Door
[4]	Left Cover
[5]	Left Rear Cover
[6]	Rear Door
[7]	Right Cover

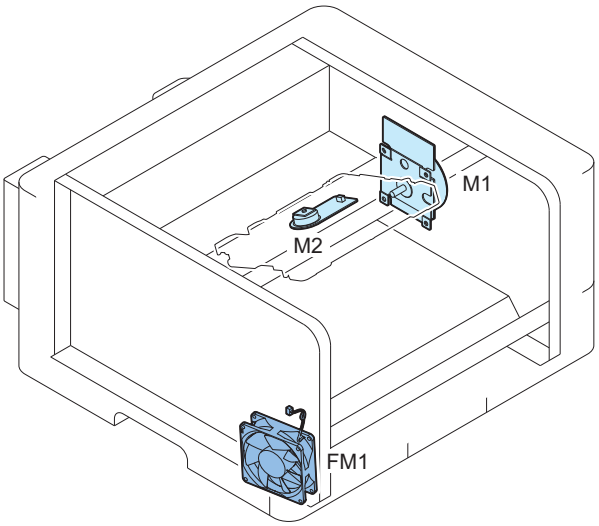
■ Host Machine



No.	Name
[1]	Control Panel Unit
[2]	Fixing Assembly
[3]	Laser Scanner Unit
[4]	Registration Unit

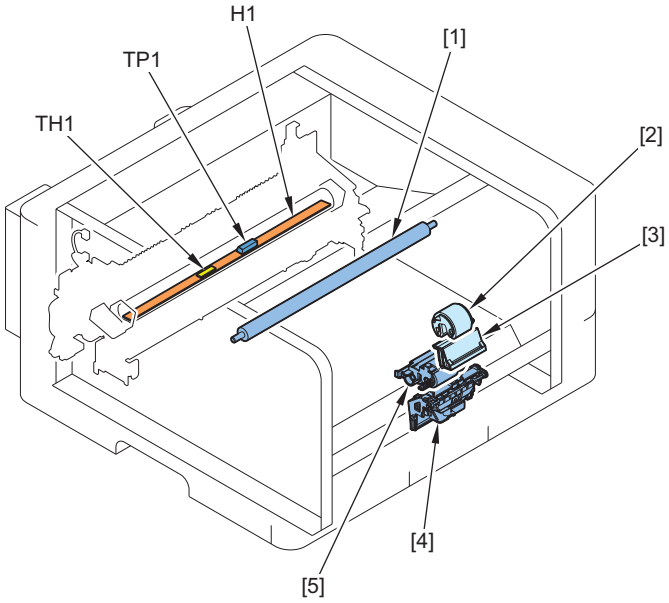
Layout Drawing of Electrical Components

■ Motor/Fan



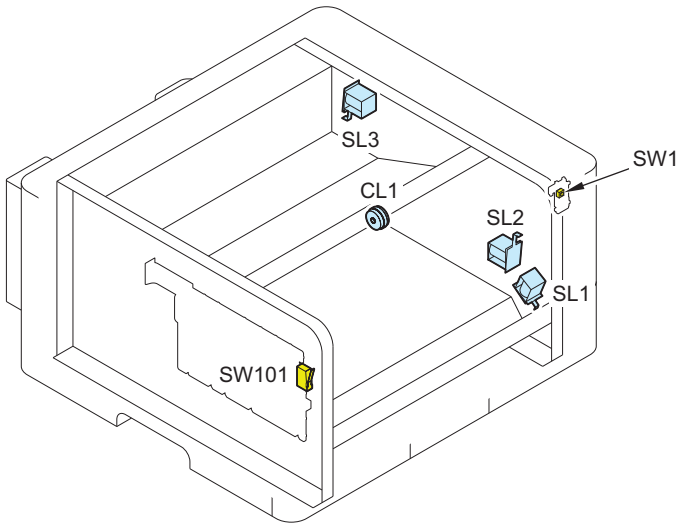
No.	Name
M1	Fixing Motor
M2	Laser Scanner Motor
FM1	Main Fan

■ Heater/Etc.



No.	Name
H1	Fixing Heater
TH1	Thermistor
TP1	Thermo switch
[1]	Transfer Roller
[2]	MP Tray Pickup Roller
[3]	MP Tray Separation Pad
[4]	Cassette Separation Roller Unit
[5]	Cassette Pickup Roller Unit

■ Switch/Clutch/Solenoid

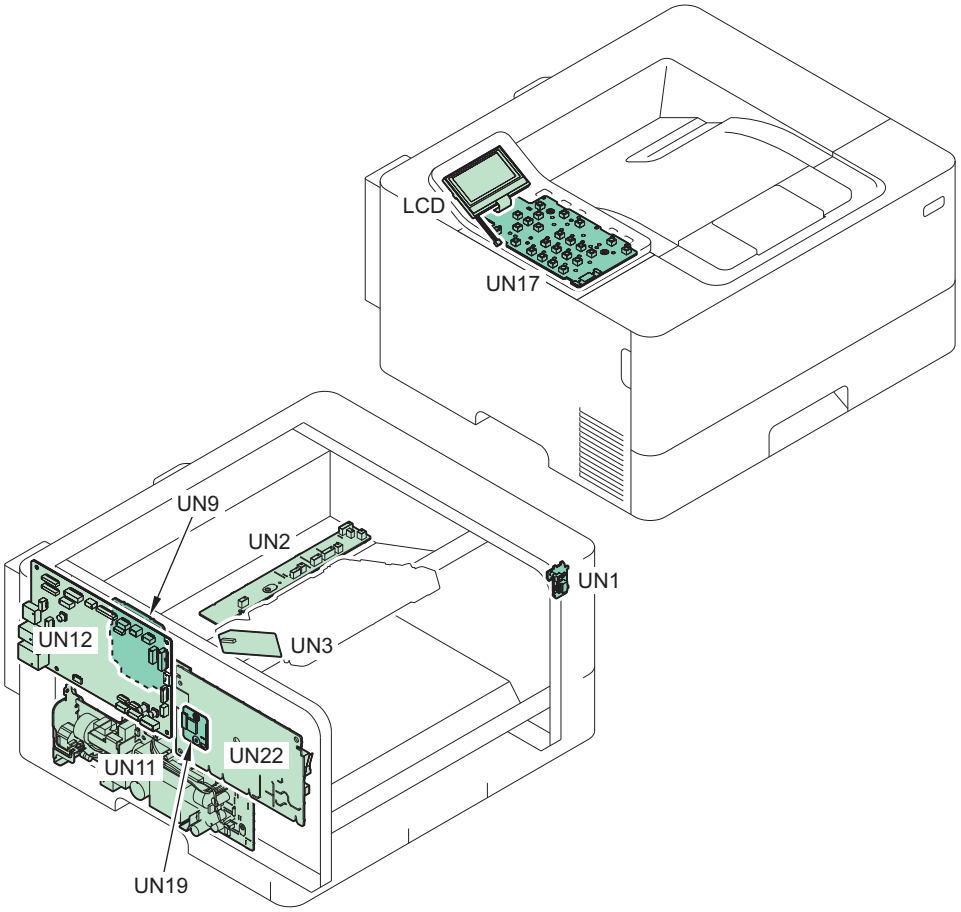


No.	Name
CL1	Duplex Re-pickup Clutch
SL1	Cassette Pickup Solenoid
SL2	MP Tray Pickup Solenoid
SL3	Duplex Reverse Solenoid
SW1	Power Switch
SW101	Cartridge Door Switch

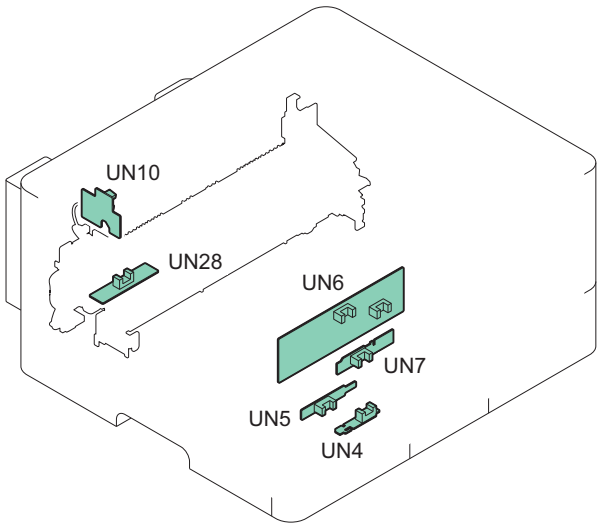
■ Sensor

No.	Name
PS1	Cassette Paper Sensor
PS2	TOP Sensor
PS3	MP Tray Paper Sensor
PS4	Delivery Tray Full Sensor
PS13	Fixing Delivery Sensor
PS20	Paper Width Sensor
PS21	Duplex Feed Sensor

■ PCB



No.	Name
UN1	Power Supply Switch PCB
UN2	Relay PCB
UN3	Laser Scanner Driver PCB
UN9	DC Controller PCB
UN11	Low Voltage Power Supply Unit
UN12	Main Controller PCB
UN17	Control Panel PCB
UN19	Wireless LAN PCB
UN22	High Voltage Power Supply PCB
LCD	LCD



No.	Name
UN4	MP Tray Paper Sensor PCB
UN5	Cassette Paper Sensor PCB
UN6	Paper Width/ Duplex Feed Sensor PCB
UN7	TOP Sensor PCB
UN10	Delivery Tray Full Sensor PCB
UN28	Fixing Delivery Sensor PCB

External Cover System

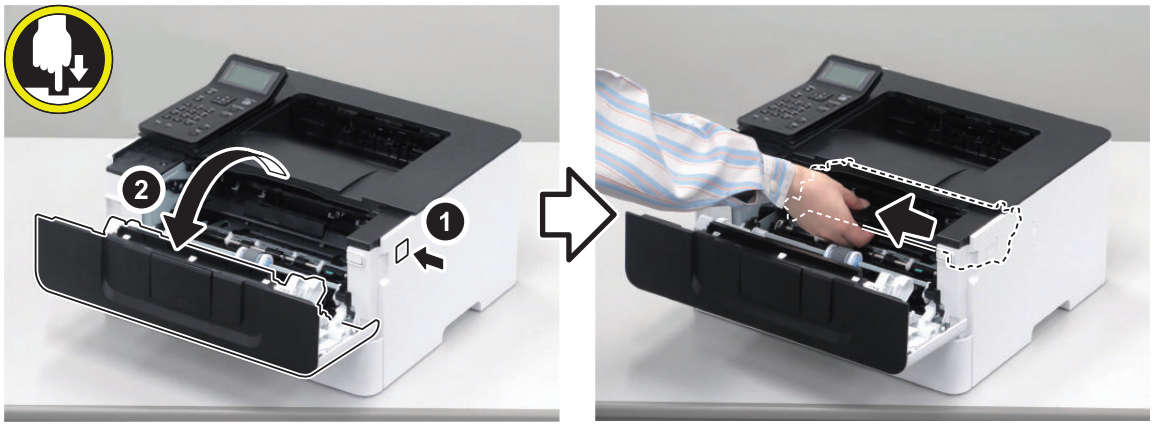
Removing the Cartridge

■ Procedure

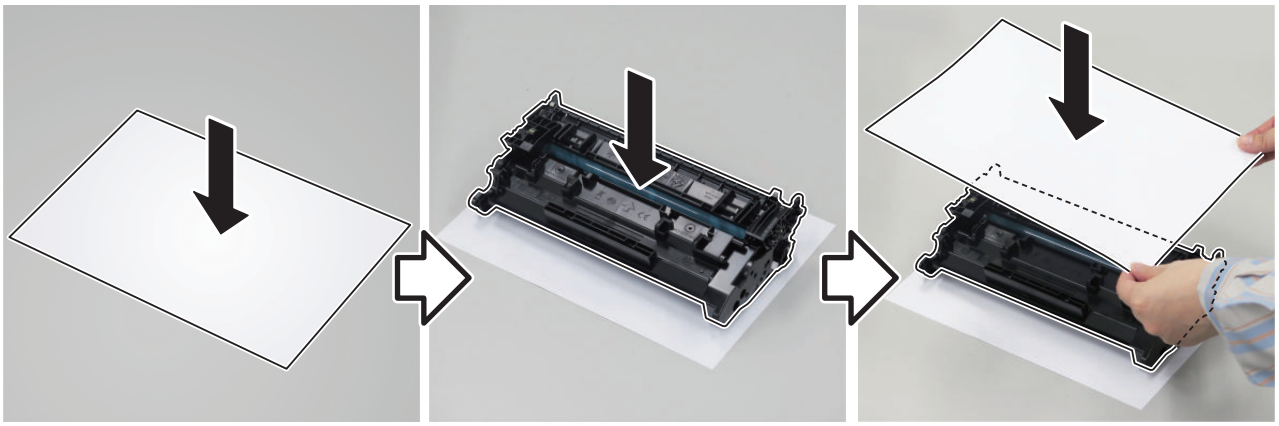
CAUTION:
When handling the cartridge, be sure to follow the CAUTION shown below.

- When removing the cartridge, be sure to block light to the Photosensitive Drum. Cover the removed drum with 5 or more sheets of paper to block light.

1.



2.



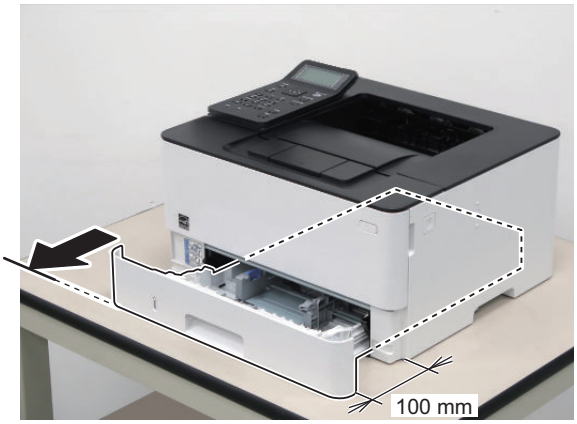
Removing the Right Cover

■ Preparation

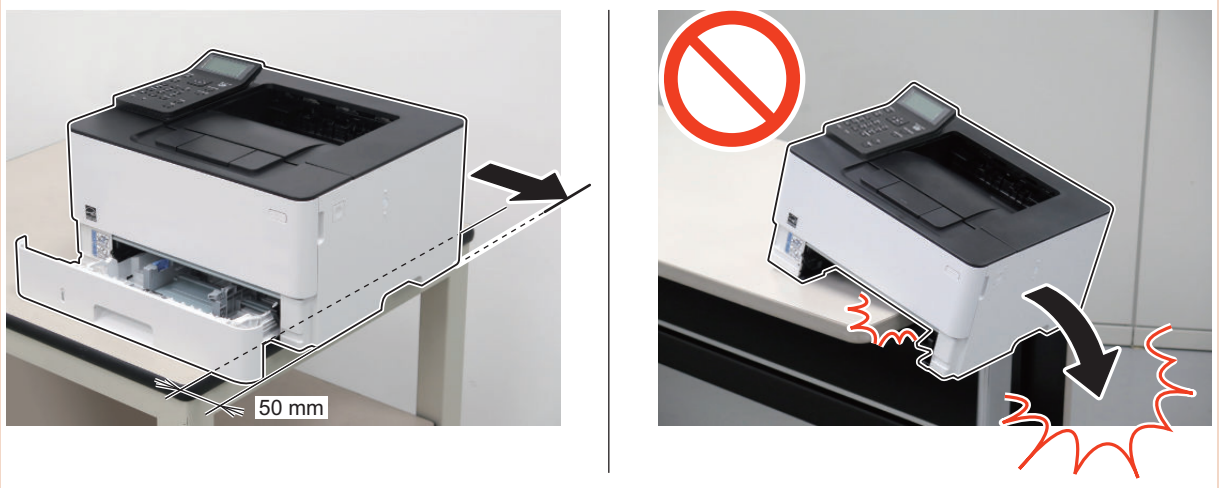
1. “Removing the Cartridge” on page 71

■ Procedure

1.

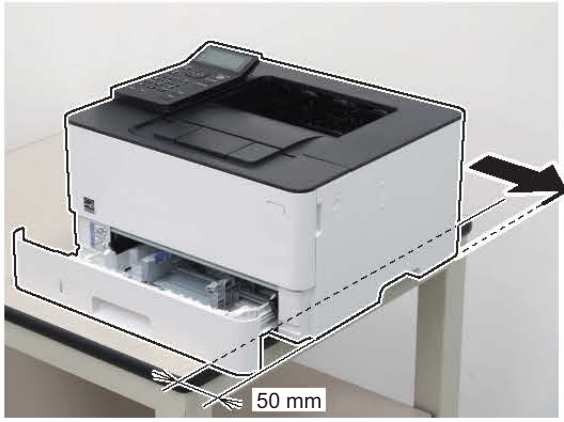


⚠ CAUTION:
When removing the cover, moving the product 50 mm or more while the cassette is pulled out will disturb the balance of the product and may cause it to fall down; therefore, do not completely pull out the cassette.

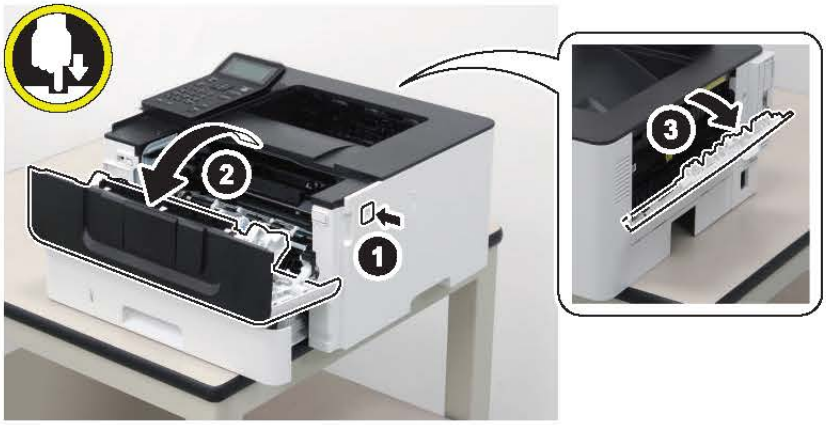


2.

CAUTION:
If it is moved too much when removing the Cover, pressure will be applied to the Cassette Rear Cover and the cover may be damaged.

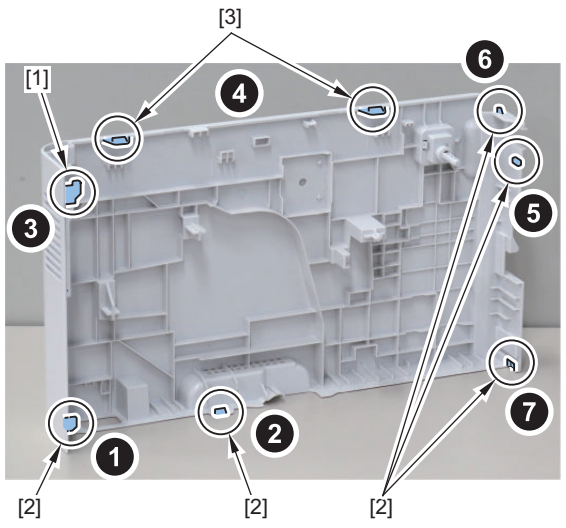


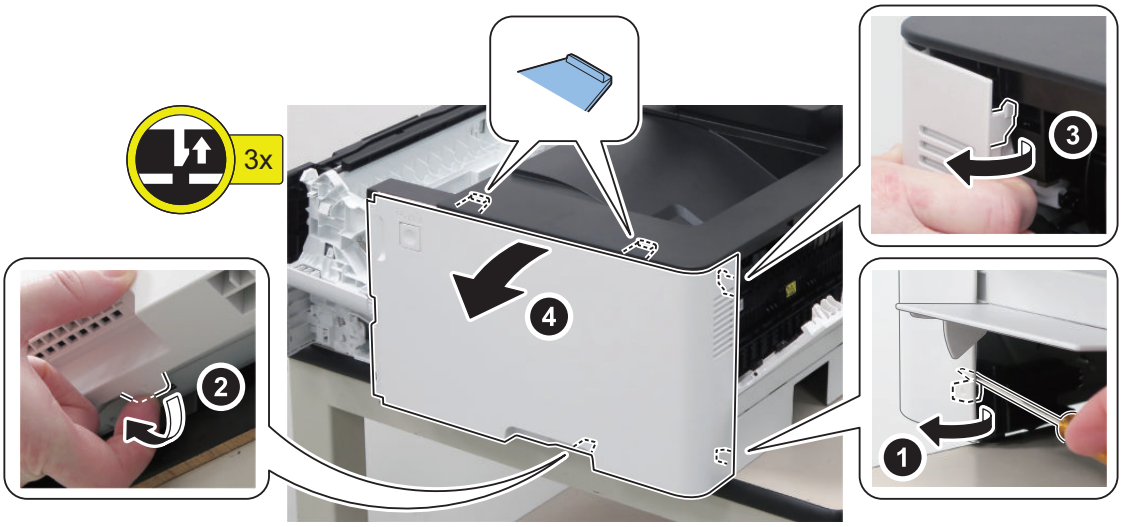
3.



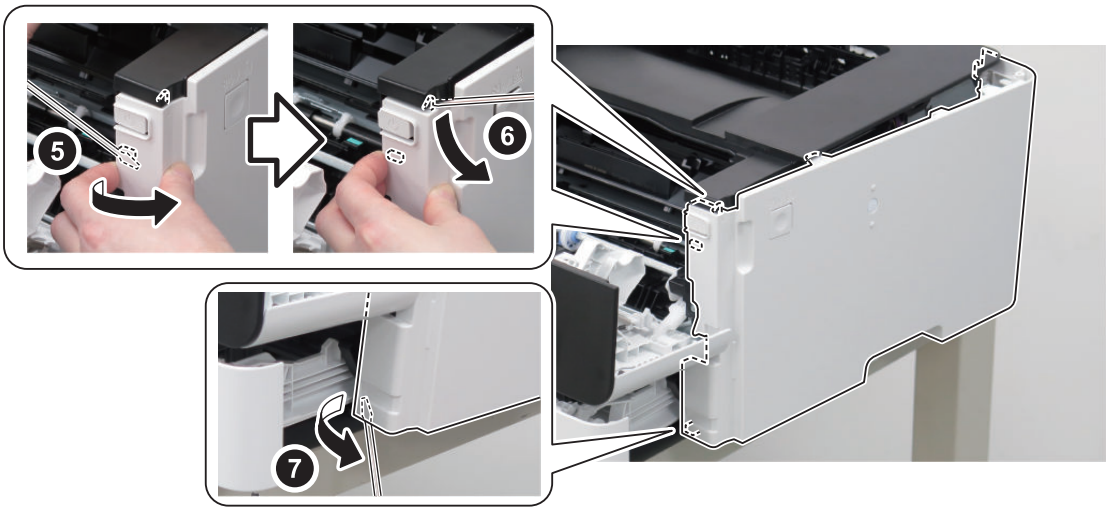
4.

NOTE:
The positions and removal order of the hook [1], protrusions [2] and claws[3] of the Right Cover are shown below.

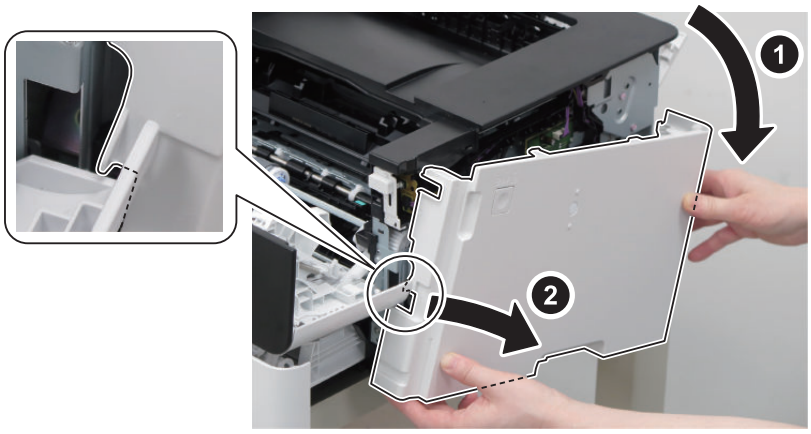




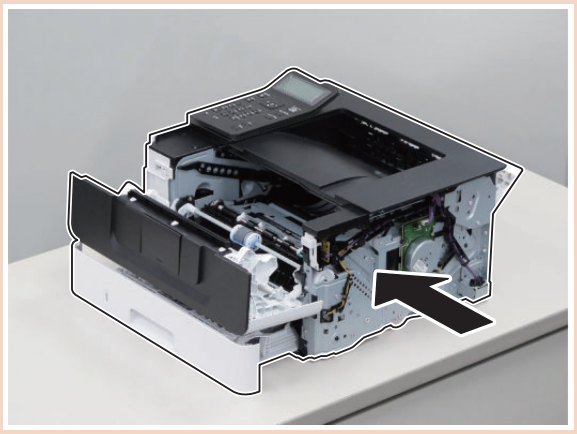
5.



6.



⚠ CAUTION:
Shift the host machine back to the center of the working table to prevent it from falling down.



NOTE:
When installing the Right Cover, be sure to push in the Cartridge Door Button if it is not installed properly.

Removing the Left Cover

■ Preparation

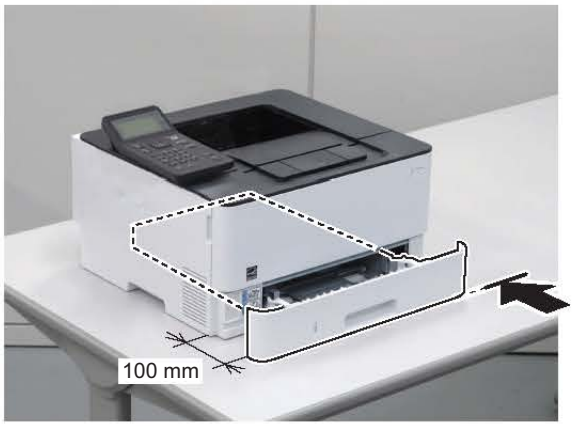
1. **“Removing the Cartridge” on page 71**

■ Procedure

1.

2.

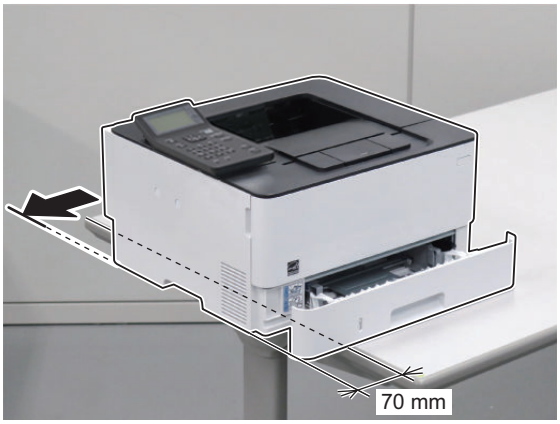
3.



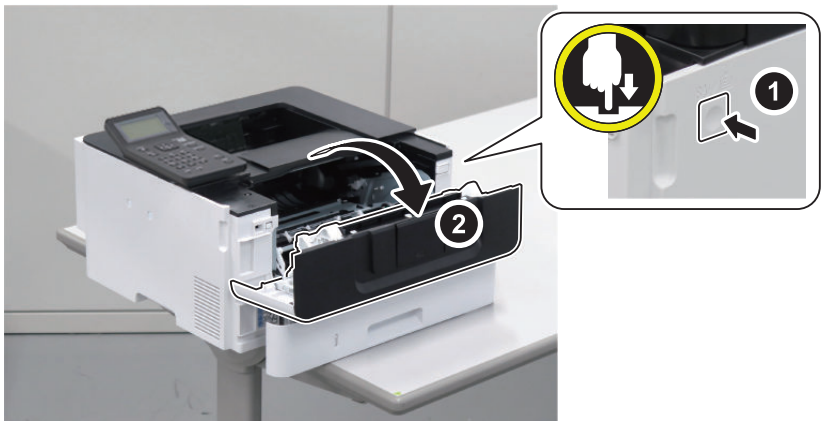
⚠ CAUTION:
When removing the cover, moving the product 70 mm or more while the cassette is pulled out will disturb the balance of the product and may cause it to fall down; therefore, do not completely pull out the cassette.

4.

CAUTION:
If it is moved too much, pressure will be applied to the Cassette Rear Cover and the cover may be damaged.

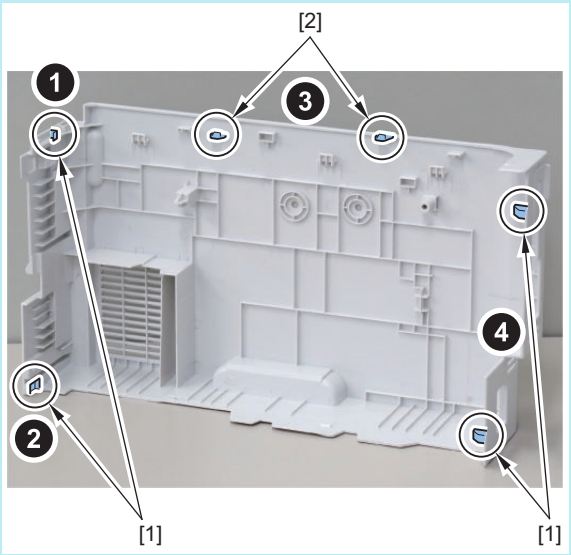


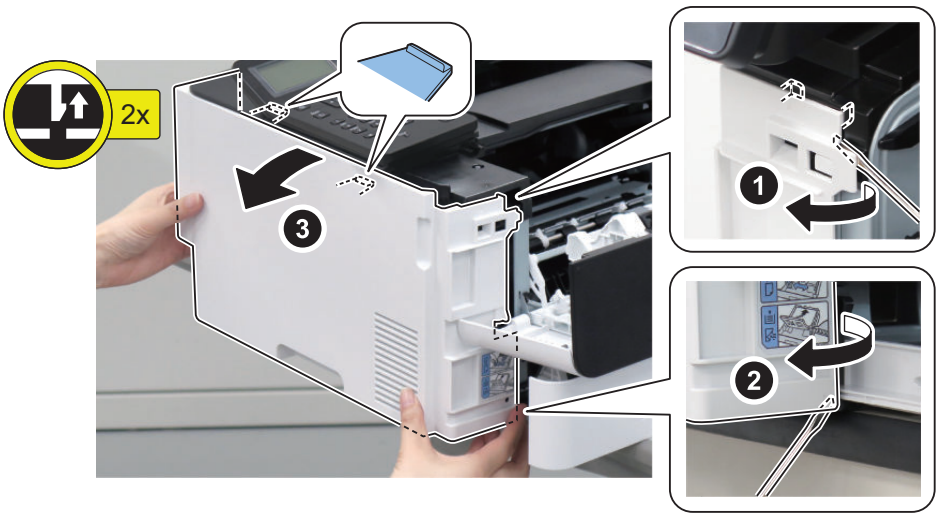
5.



6.

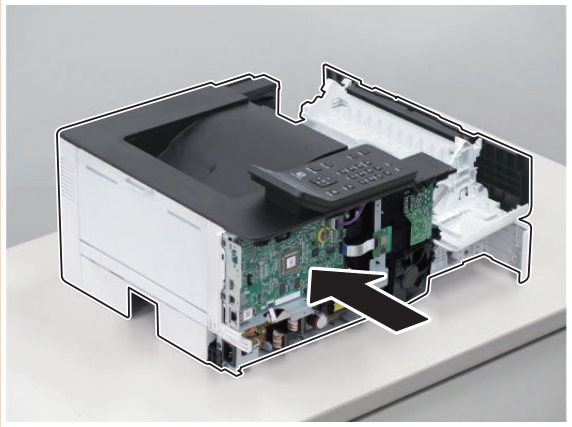
NOTE:
The positions and removal order of the protrusions [1] and claws[2] of the Left Cover are shown below.





7.

CAUTION:
Shift the host machine back to the center of the working table to prevent it from falling down.



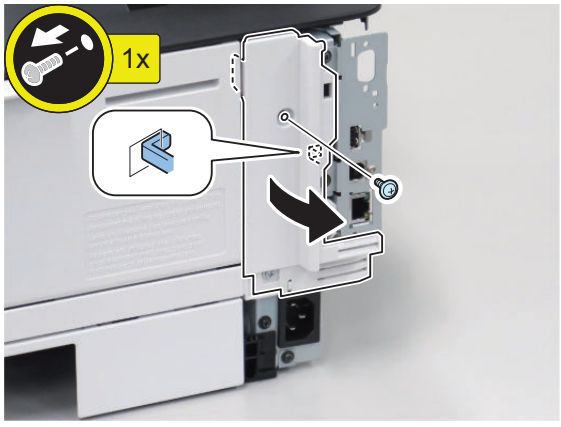
Removing the Left Rear Cover

■ Preparation

1. “Removing the Cartridge” on page 71
2. “Removing the Left Cover” on page 75

■ Procedure

1.



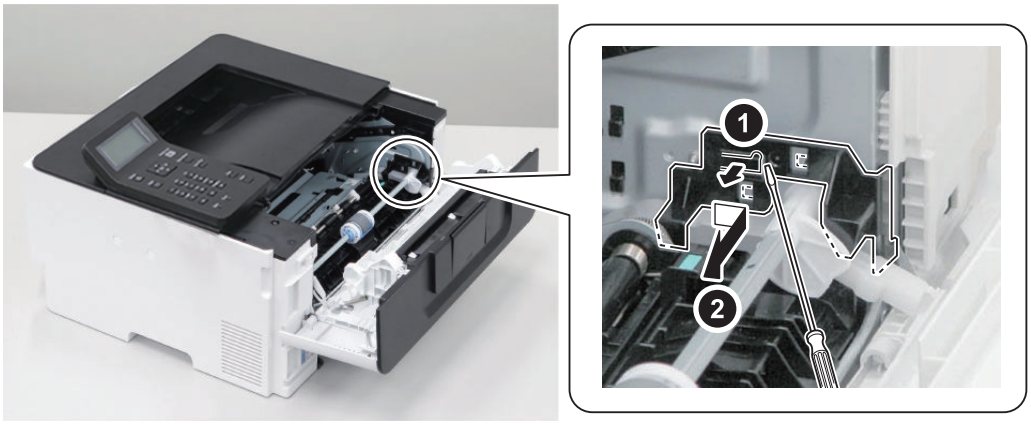
Removing the Cartridge Door

■ Preparation

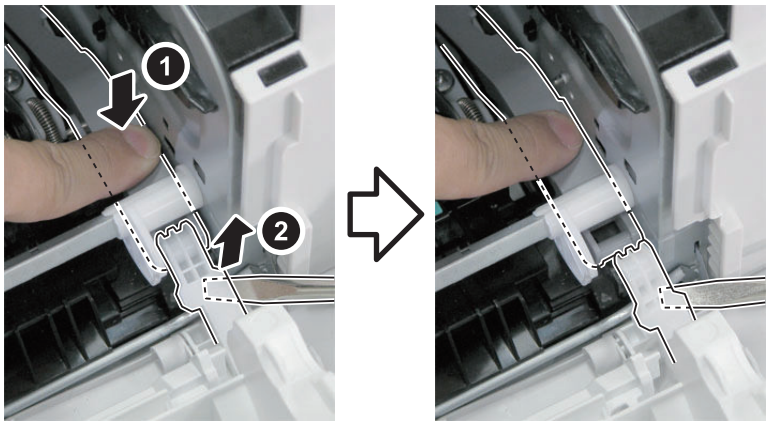
1. **Remove the cassette.**
2. **“Removing the Cartridge” on page 71**

■ Procedure

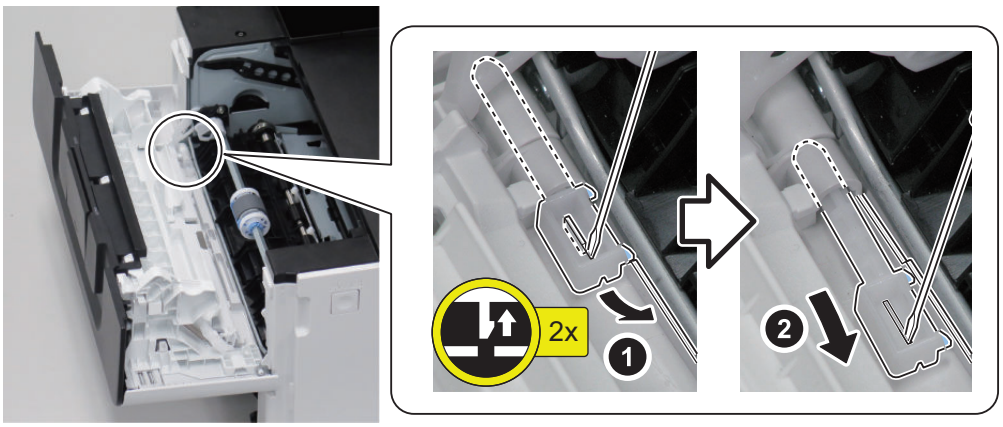
1.



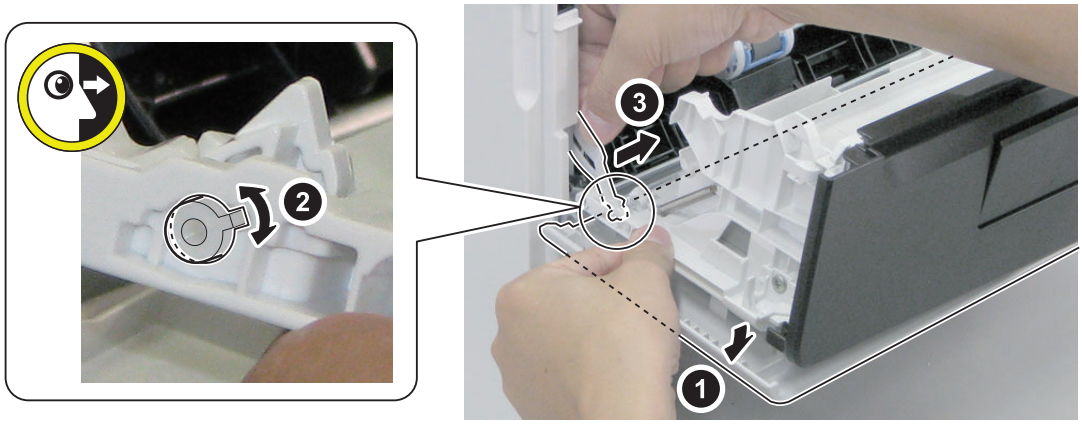
2.



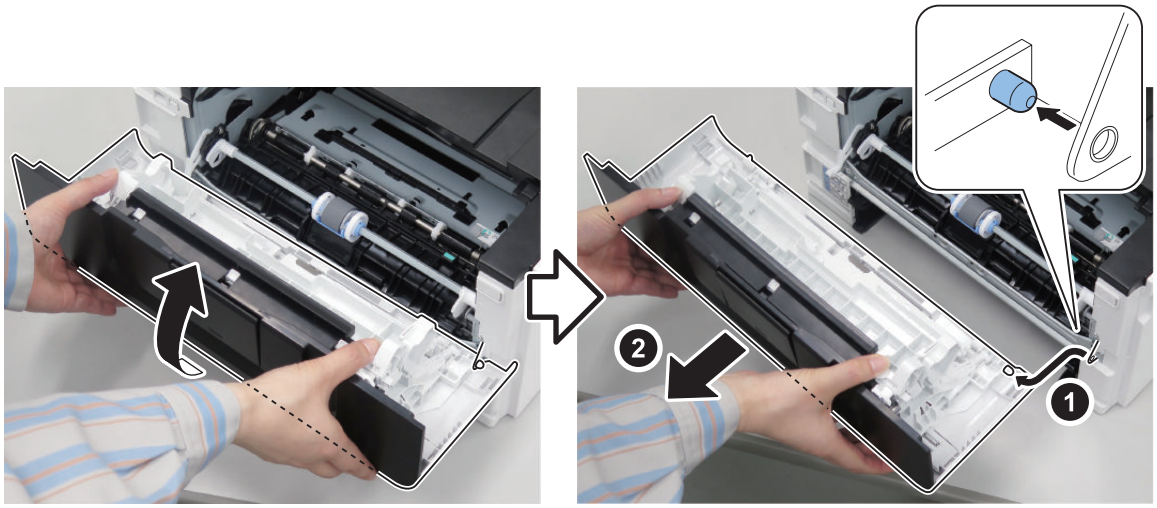
3.



4.



5.



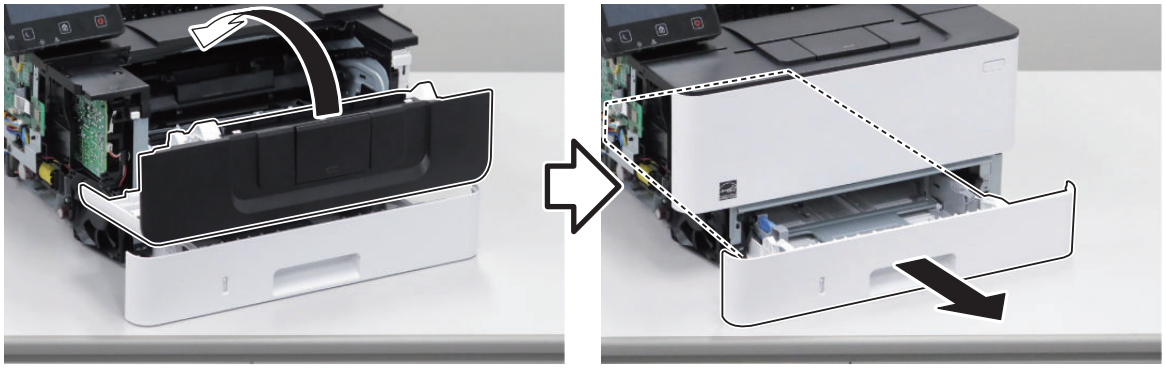
Removing the Rear Door

■ Preparation

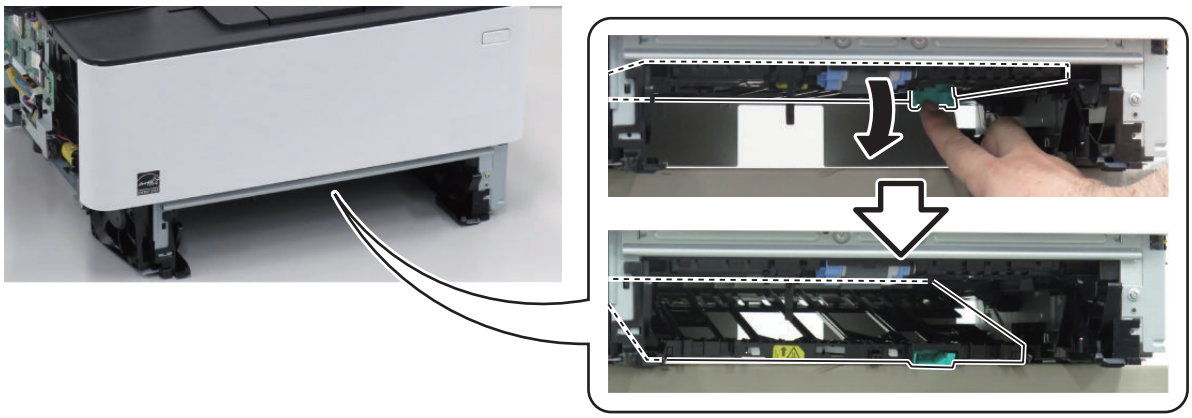
1. “Removing the Cartridge” on page 71
2. “Removing the Left Cover” on page 75
3. “Removing the Left Rear Cover” on page 79
4. “Removing the Right Cover” on page 71

■ Procedure

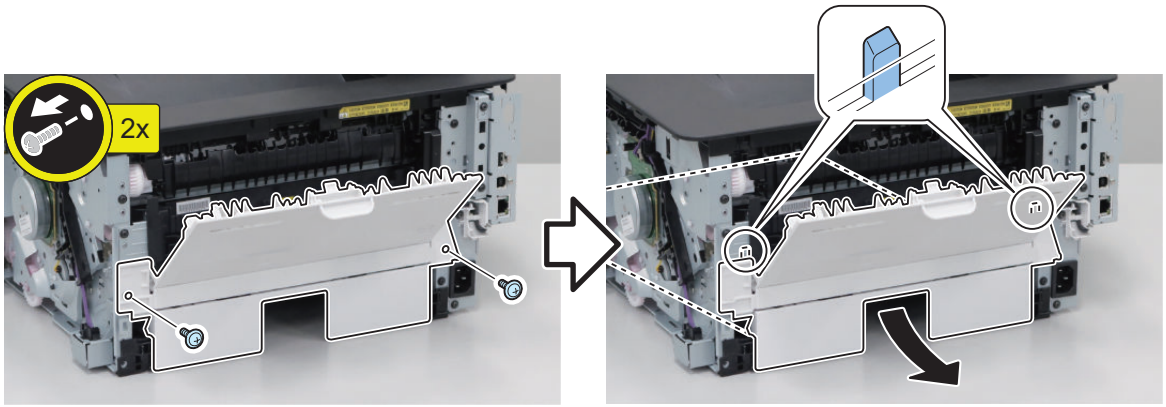
1.



2.



3.



4.

Removing the Upper Cover + Output Tray

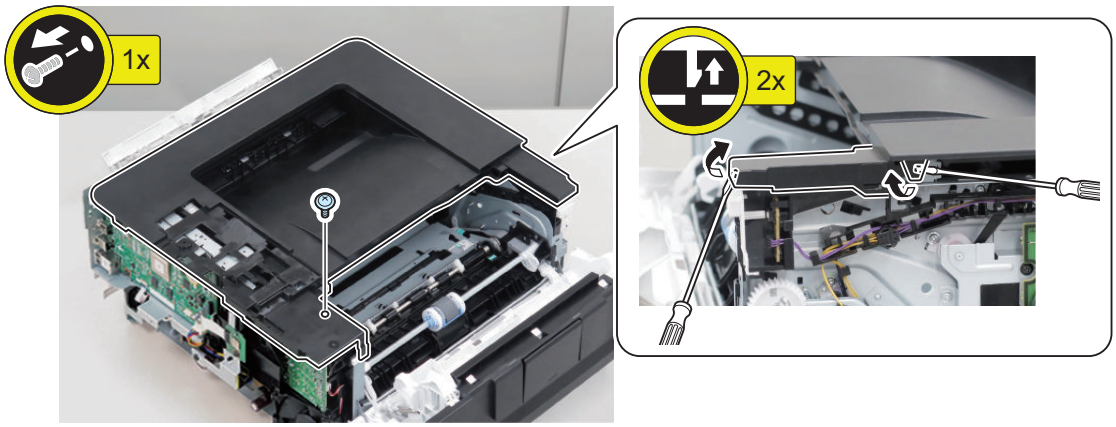
■ Preparation

1. “Removing the Cartridge” on page 71
2. “Removing the Left Cover” on page 75
3. “Removing the Left Rear Cover” on page 79
4. “Removing the Right Cover” on page 71

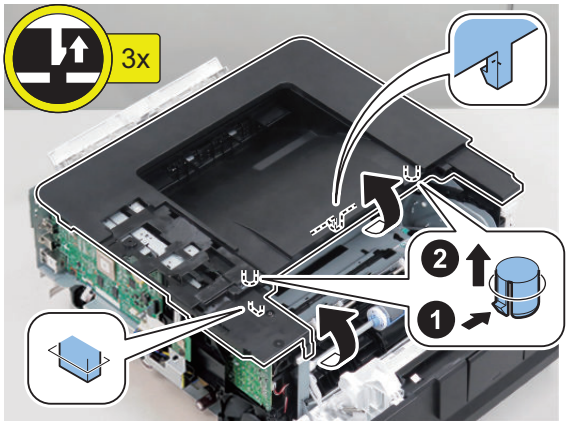
5. “Removing the Control Panel Unit ” on page 85

■ Procedure

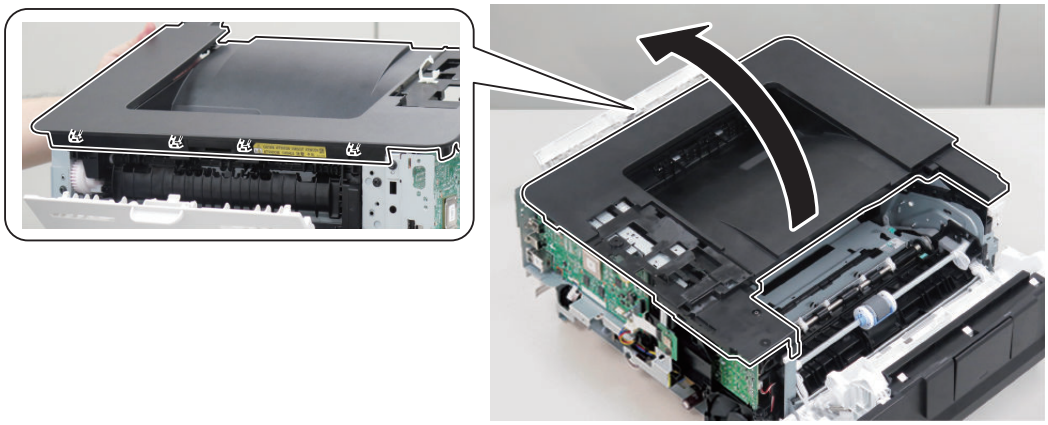
1.



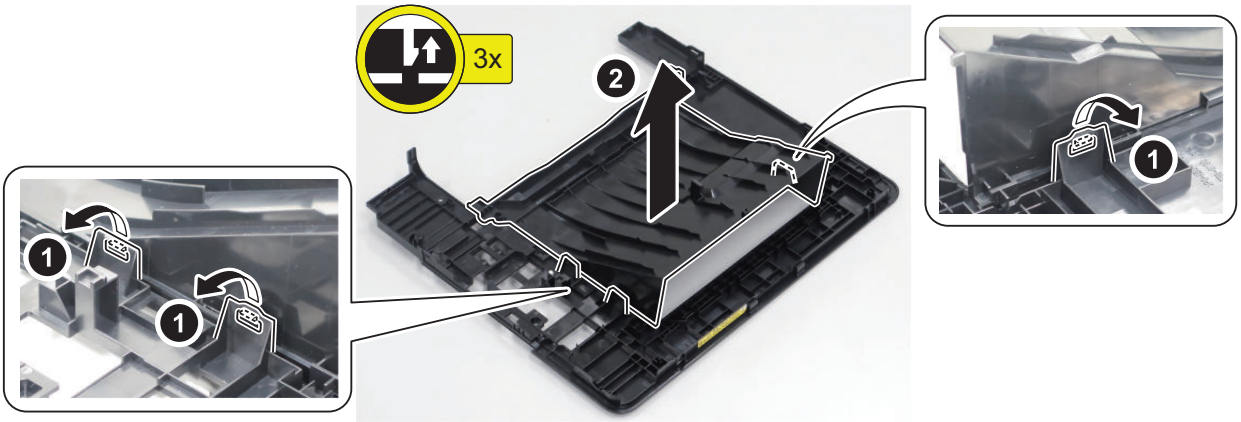
2.



3.



4.



Controller System

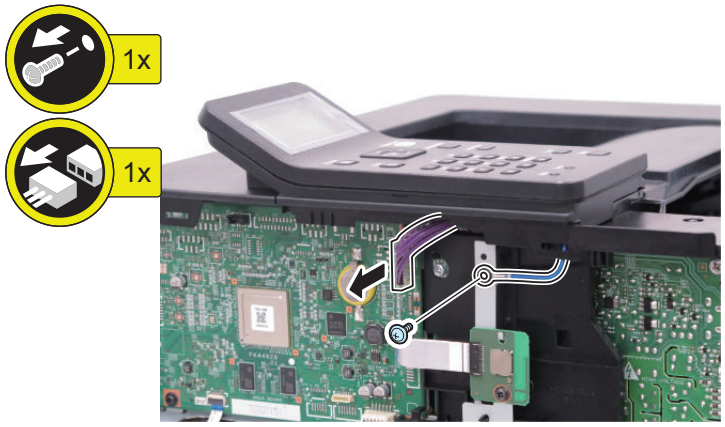
Removing the Control Panel Unit

■ Preparation

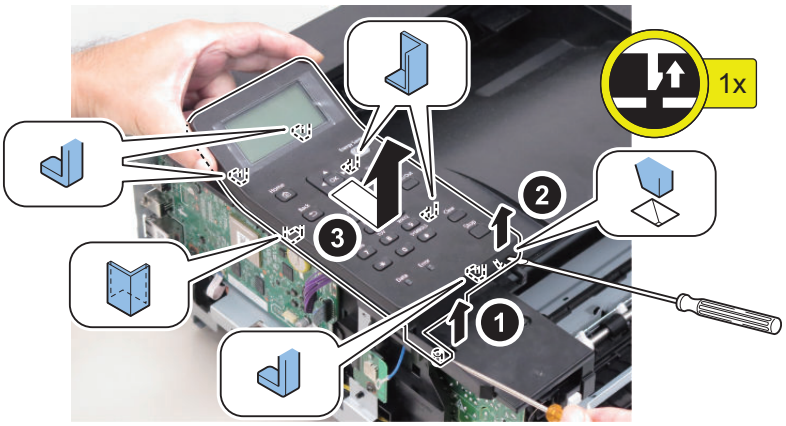
1. “Removing the Cartridge” on page 71
2. “Removing the Left Cover” on page 75

■ Procedure

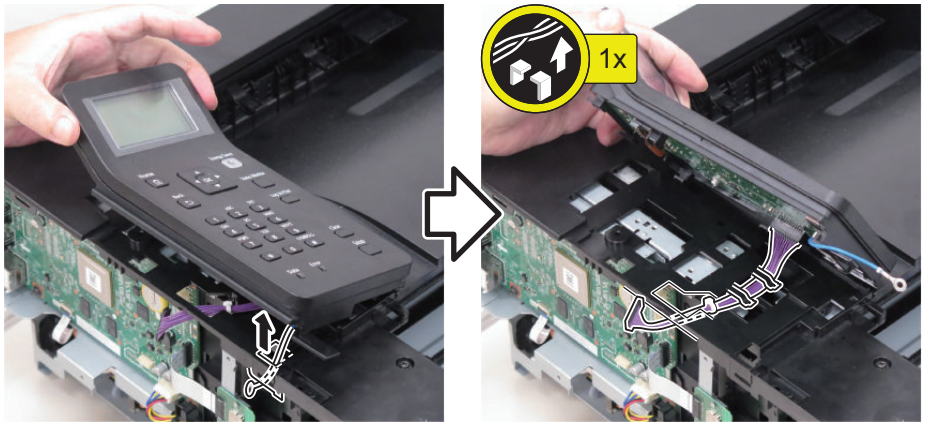
1.



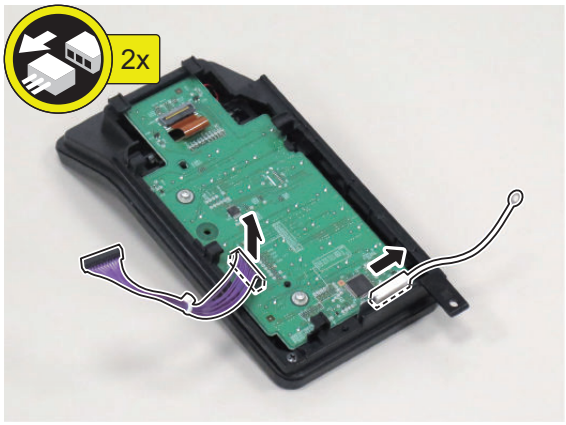
2.



3.



4.



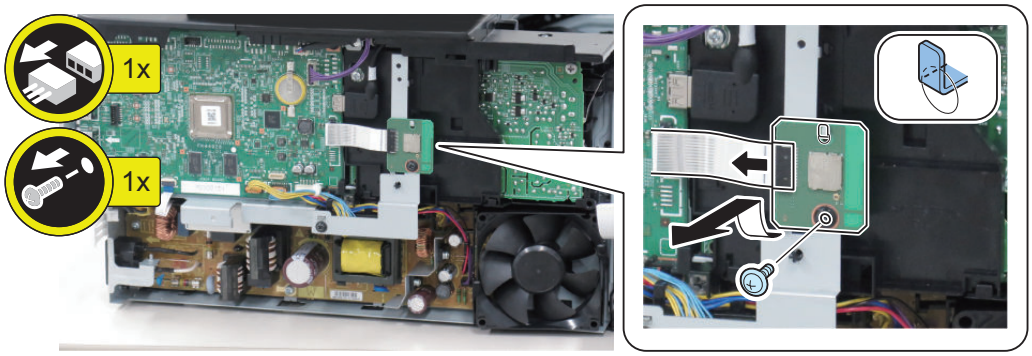
Removing the Wireless LAN PCB(Wi-Fi model only)

■ Preparation

1. “Removing the Cartridge” on page 71
2. “Removing the Left Cover” on page 75

■ Procedure

1.



NOTE:
When installing, turn over the gloss surface of the Flat Cable to the front side facing upward.

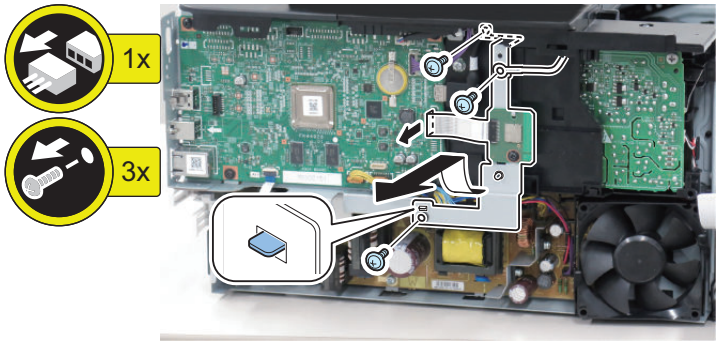
Removing the Wireless LAN Unit(Wi-Fi model only)

■ Preparation

1. “Removing the Cartridge” on page 71
2. “Removing the Left Cover” on page 75

■ Procedure

1.



NOTE:
When installing, turn over the gloss surface of the Flat Cable to the front side facing upward.

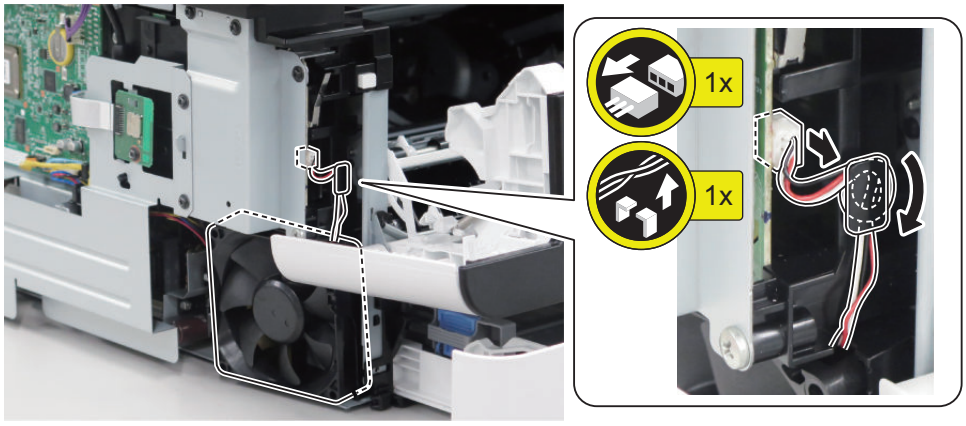
Removing the Main Fan

■ Preparation

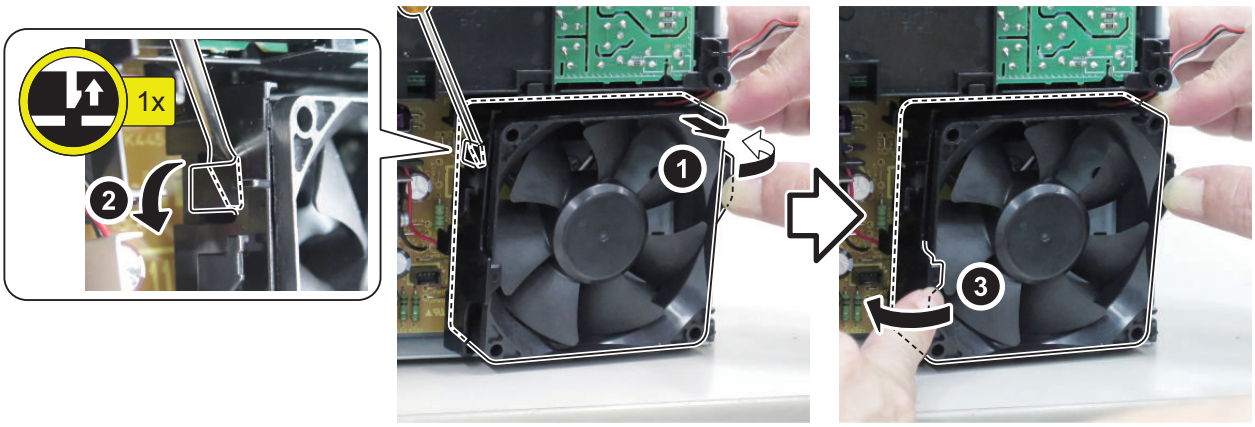
1. “Removing the Cartridge” on page 71
2. “Removing the Left Cover” on page 75

■ Procedure

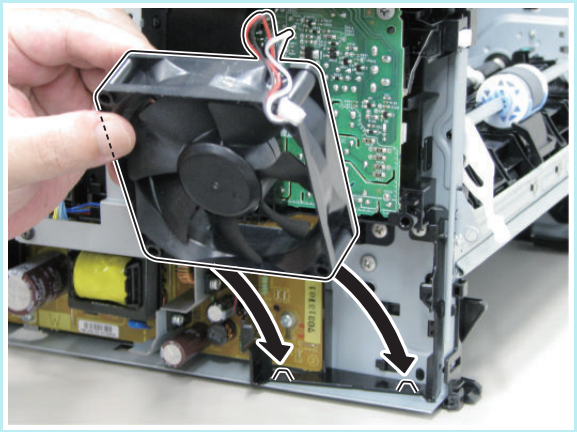
1.



2.



NOTE:
When installing, install to 2 hooks at the lower side.



Removing the Main Controller PCB

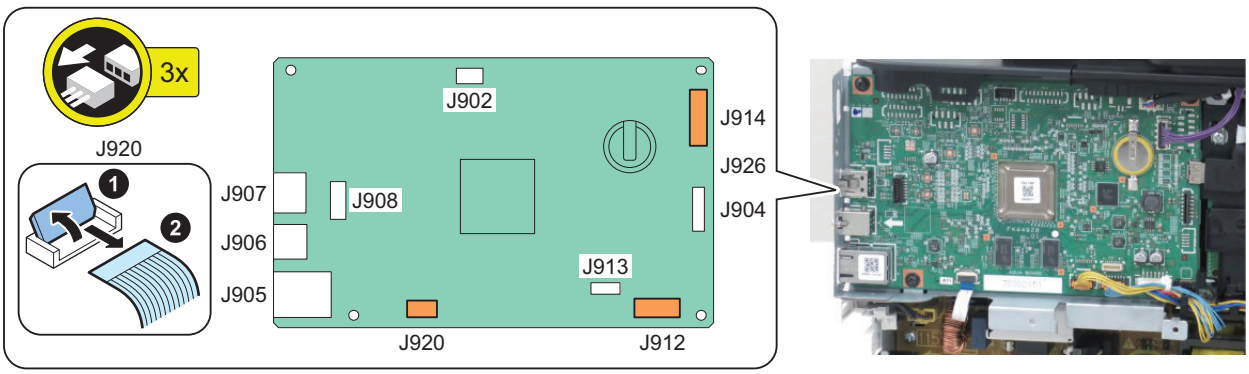
■ Preparation

CAUTION:
Make sure to perform"Before Replacing the Main Controller PCB" on page 109 before replacing the Main Controller PCB.

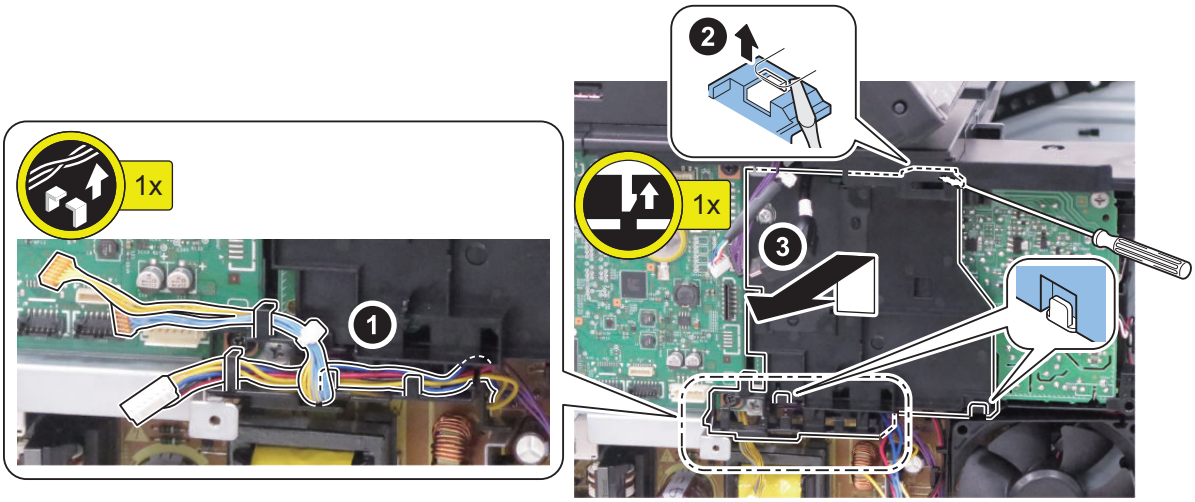
1. **"Removing the Cartridge" on page 71**
2. **"Removing the Left Cover" on page 75**
3. **"Removing the Wireless LAN Unit(Wi-Fi model only)" on page 86**

■ Procedure

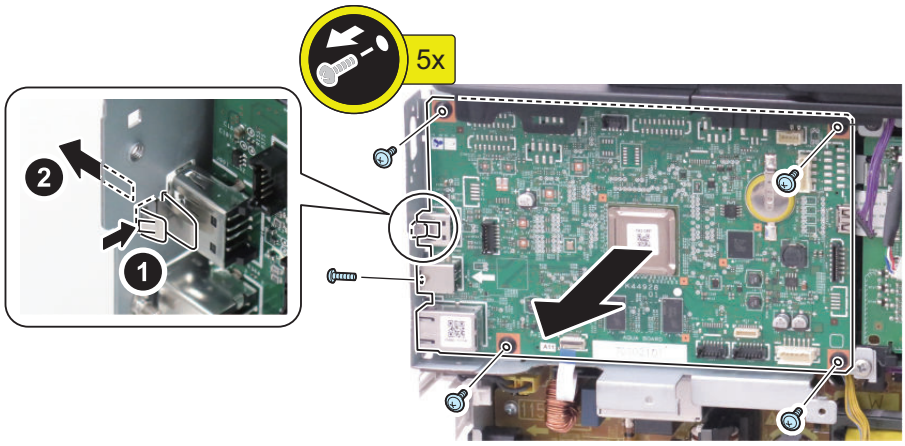
1.



2.



3.



4. **Actions after replacement:** **“After Replacing the Main Controller PCB” on page 109**

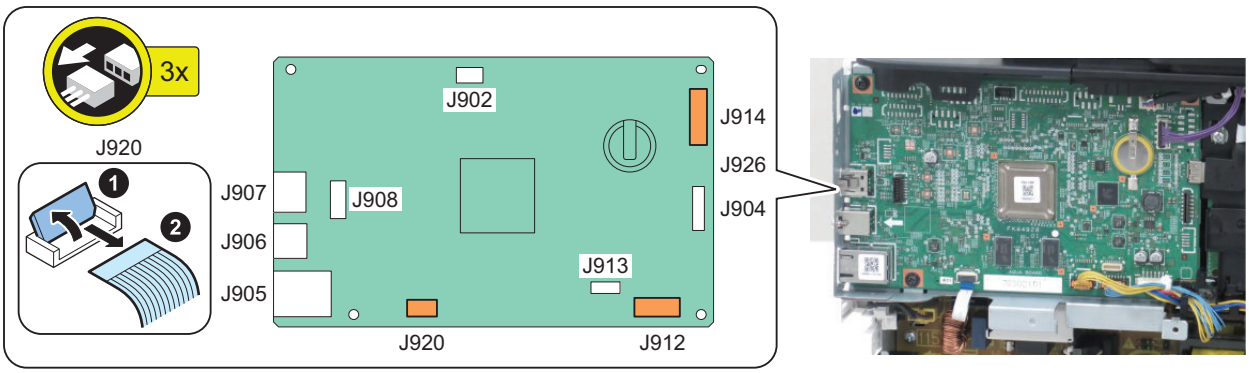
Removing the Main Controller Unit

■ Preparation

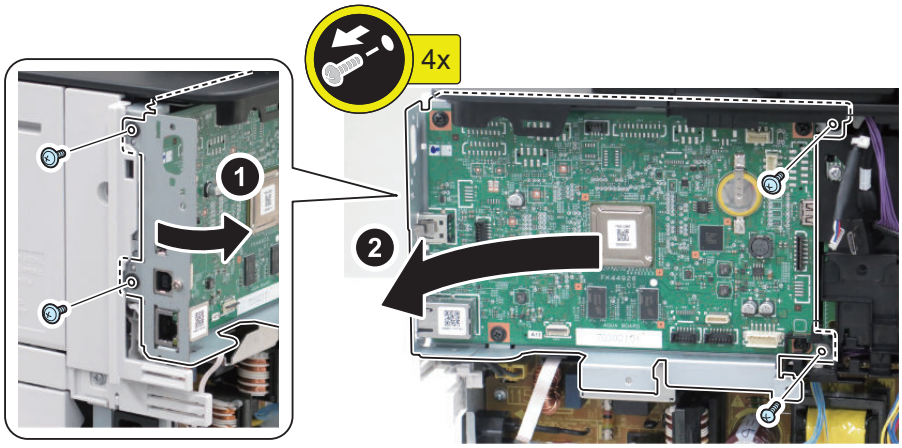
1. **“Removing the Cartridge” on page 71**
2. **“Removing the Left Cover” on page 75**
3. **“Removing the Wireless LAN Unit(Wi-Fi model only)” on page 86**

■ Procedure

1.



2.



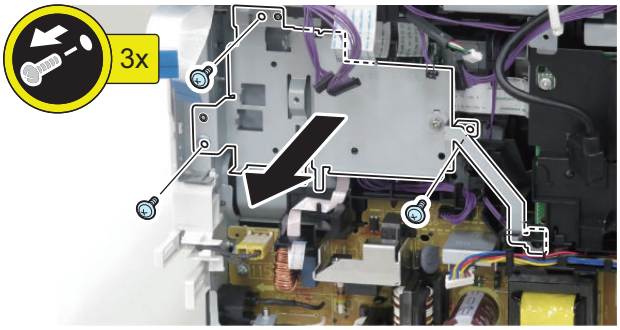
Removing the DC Controller PCB Cover

■ Preparation

1. “Removing the Cartridge” on page 71
2. “Removing the Left Cover” on page 75
3. “Removing the Wireless LAN Unit(Wi-Fi model only)” on page 86
4. “Removing the Main Controller Unit” on page 89

■ Procedure

1.



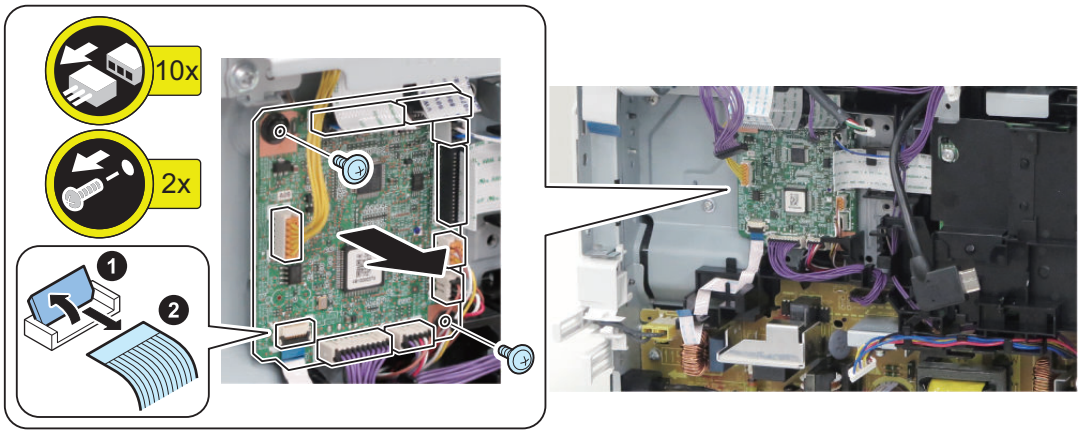
Remove the DC Controller PCB

■ Preparation

1. “Removing the Cartridge” on page 71
2. “Removing the Left Cover” on page 75
3. “Removing the Wireless LAN Unit(Wi-Fi model only)” on page 86
4. “Removing the Main Controller Unit” on page 89
5. “Removing the DC Controller PCB Cover” on page 90

■ Procedure

1.



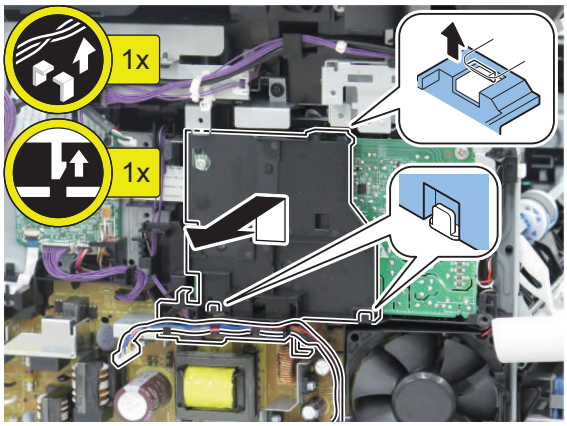
Removing the High Voltage Power Supply PCB

■ Preparation

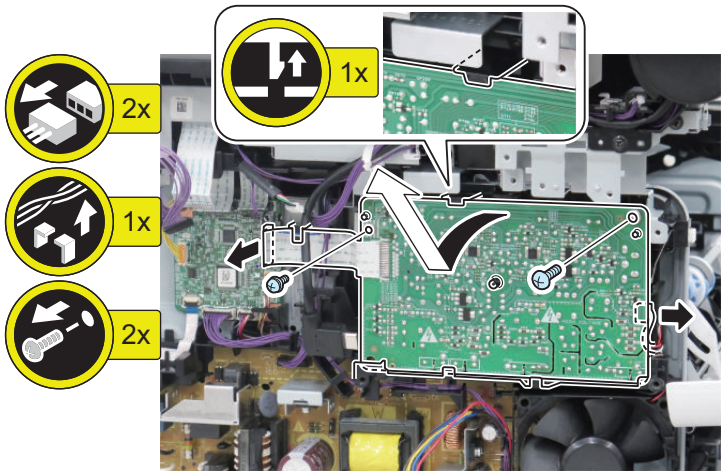
1. “Removing the Cartridge” on page 71
2. “Removing the Left Cover” on page 75
3. “Removing the Wireless LAN Unit(Wi-Fi model only)” on page 86
4. “Removing the Main Controller Unit” on page 89
5. “Removing the DC Controller PCB Cover” on page 90

■ Procedure

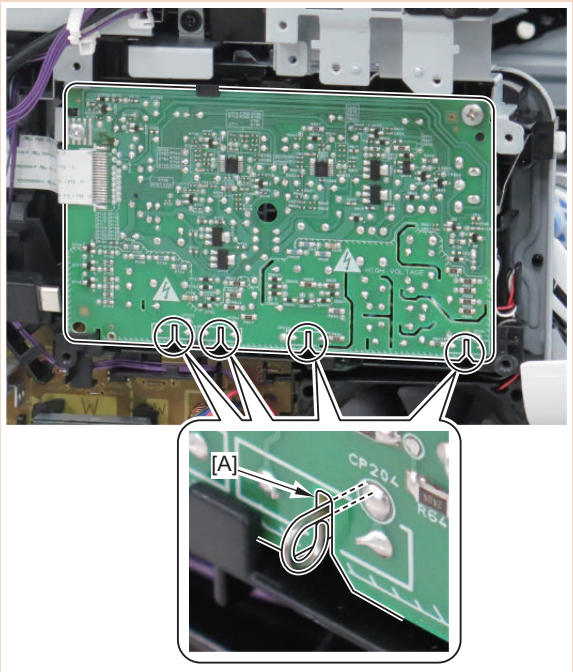
1.



2.



CAUTION:
When installing, make sure that the groove [A] of High Voltage Power Supply PCB and Contact Spring are in contact.



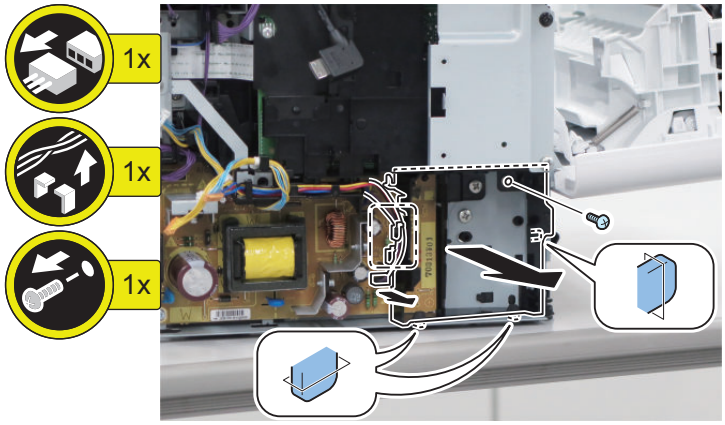
Removing the Low Voltage Power Supply Unit

■ Preparation

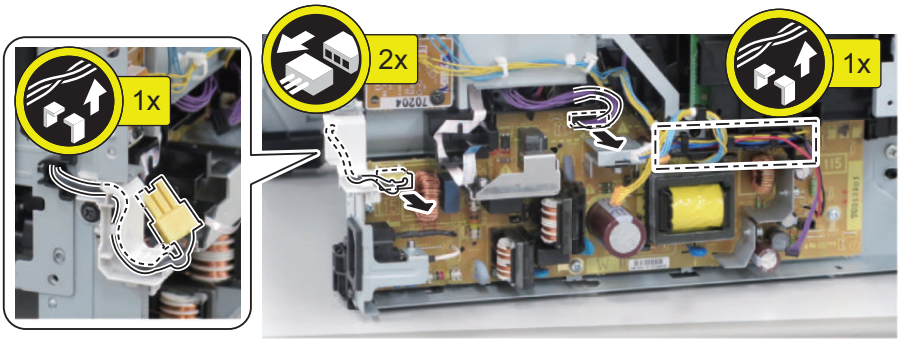
1. **“Removing the Cartridge” on page 71**
2. **“Removing the Left Cover” on page 75**
3. **“Removing the Left Rear Cover” on page 79**
4. **“Removing the Right Cover” on page 71**
5. **“Removing the Rear Door” on page 81**
6. **“Removing the Wireless LAN Unit(Wi-Fi model only)” on page 86**
7. **“Removing the Main Controller Unit” on page 89**
8. **“Removing the Main Fan” on page 87**

■ Procedure

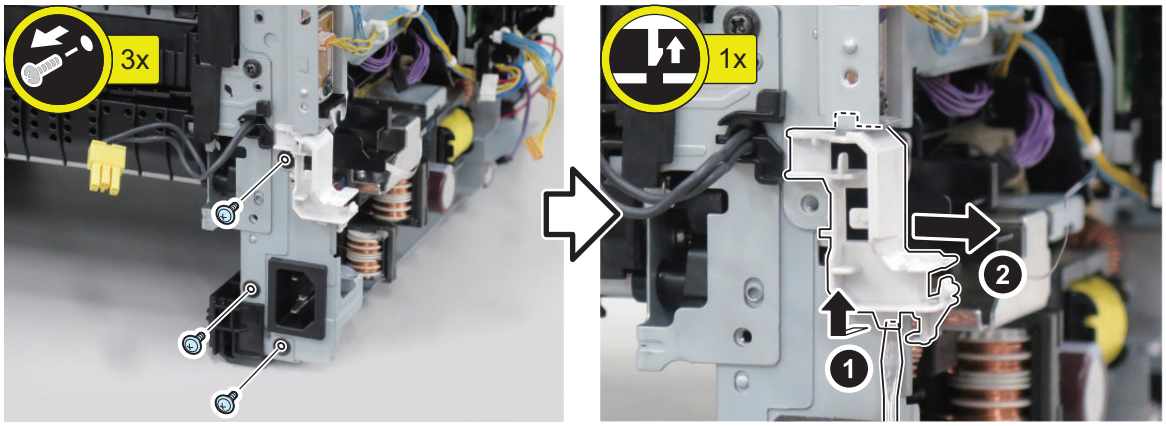
1.



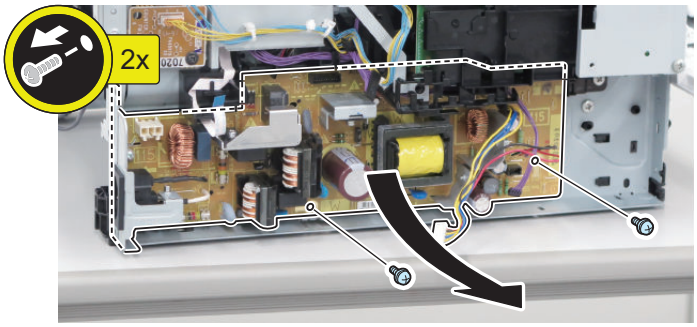
2.



3.



4.



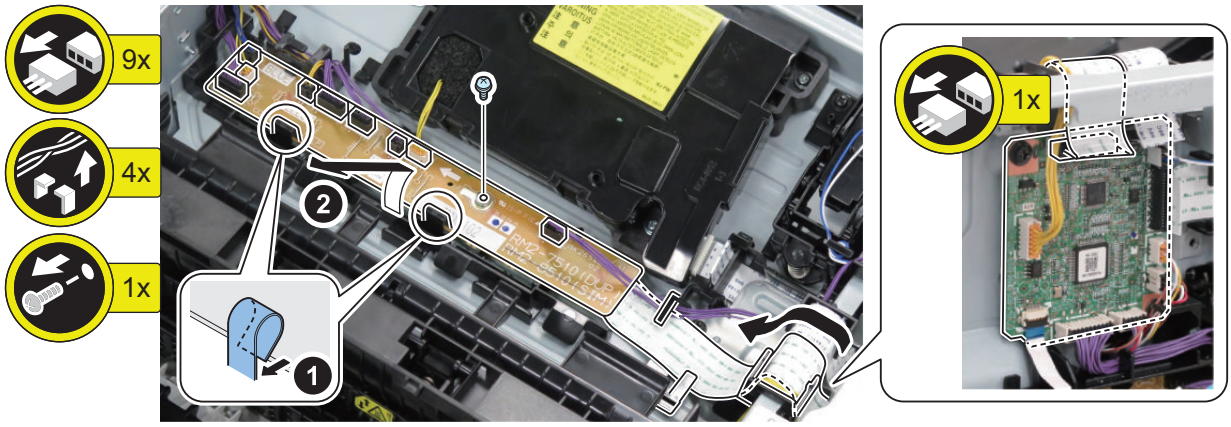
Removing the Relay PCB

■ Preparation

1. “Removing the Cartridge” on page 71
2. “Removing the Cartridge Door” on page 80
3. “Removing the Left Cover” on page 75
4. “Removing the Left Rear Cover” on page 79
5. “Removing the Right Cover” on page 71
6. “Removing the Control Panel Unit ” on page 85
7. “Removing the Upper Cover + Output Tray” on page 82
8. “Removing the Wireless LAN Unit(Wi-Fi model only)” on page 86
9. “Removing the Main Controller Unit” on page 89
10. “Removing the DC Controller PCB Cover” on page 90

■ Procedure

1.



Laser Exposure System

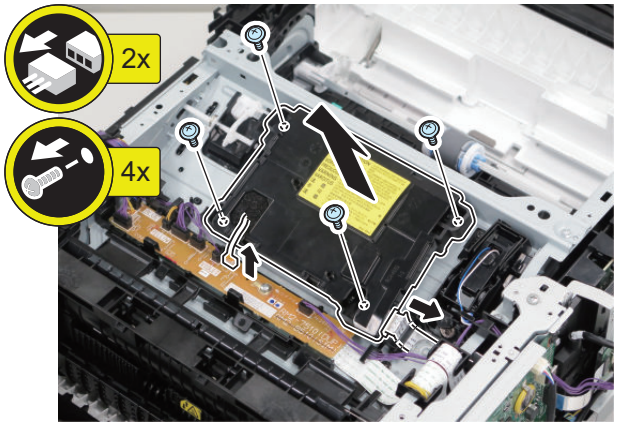
Removing the Laser Scanner Unit

■ Preparation

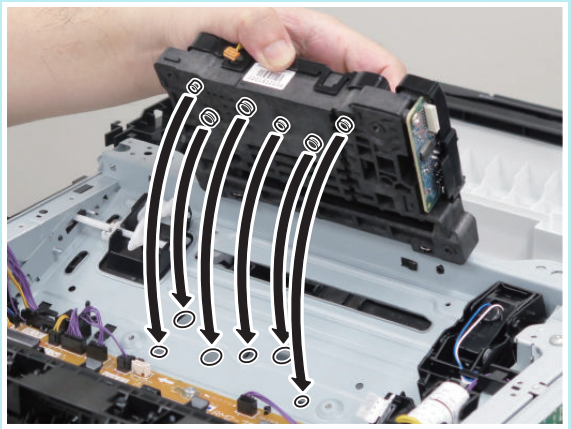
1. “Removing the Cartridge” on page 71
2. “Removing the Left Cover” on page 75
3. “Removing the Left Rear Cover” on page 79
4. “Removing the Right Cover” on page 71
5. “Removing the Control Panel Unit ” on page 85
6. “Removing the Upper Cover + Output Tray” on page 82

■ Procedure

1.



NOTE:
When installing, insert the bosses into the positioning holes, and check that the Laser Unit is correctly positioned.



NOTE:
When installing it, tighten the screws in the order of numbers in the illustration.

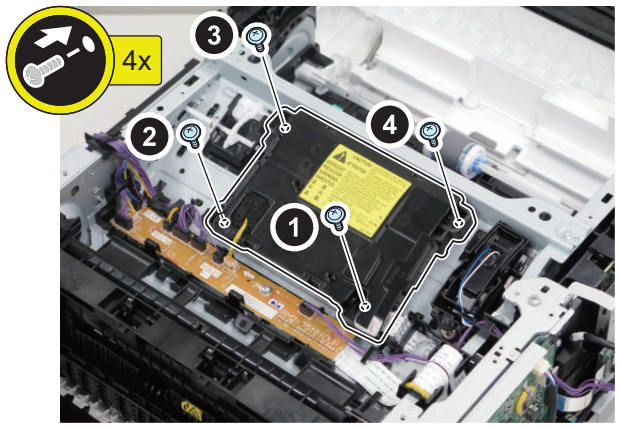


Image Formation System

Removing the Transfer Roller

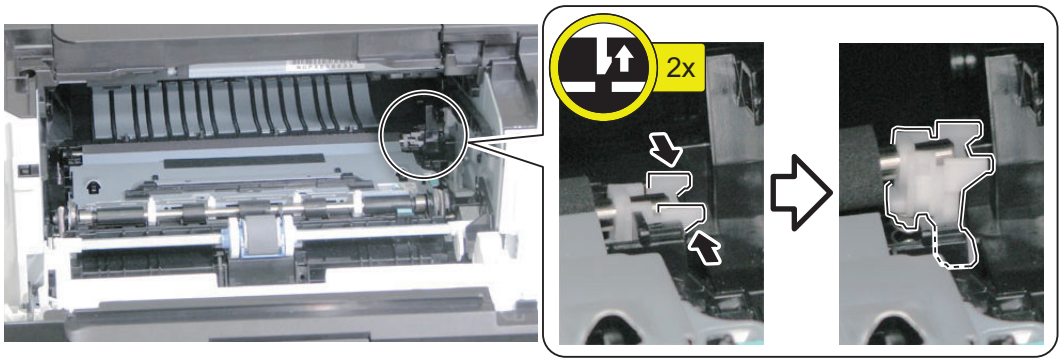
■ Preparation

1. “Removing the Cartridge” on page 71

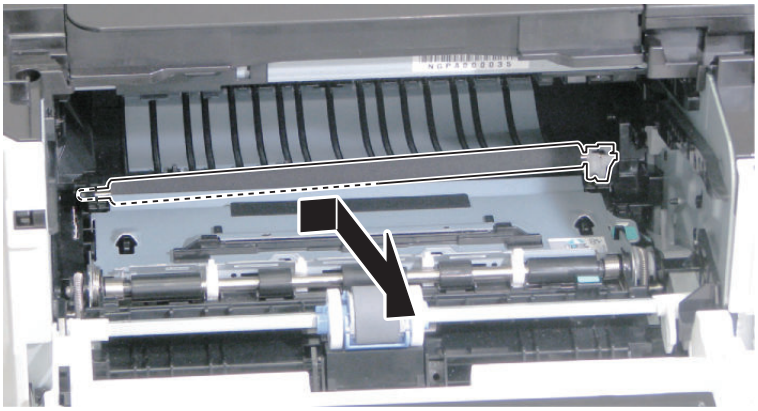
■ Procedure

CAUTION:
Do not touch the surface of the roller with bare hands, as doing so will attach skin oil on it and decrease feedability.

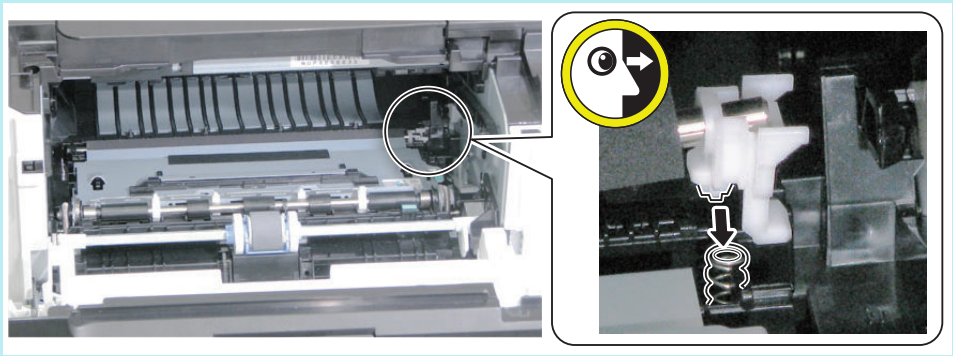
1.



2.



NOTE:
Procedure for Installing the Transfer Roller. Be sure to fit the boss of the bushing to the spring.



Fixing System

Removing the Fixing Assembly

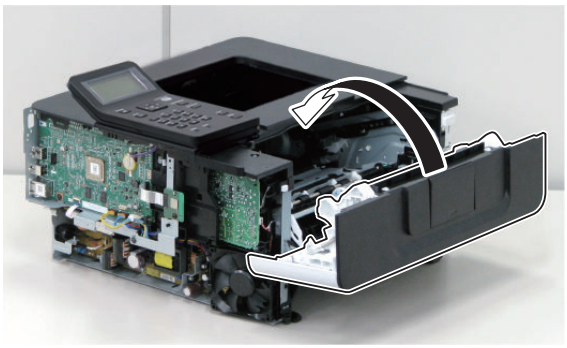
■ Preparation

1. “Removing the Cartridge” on page 71
2. “Removing the Left Cover” on page 75
3. “Removing the Left Rear Cover” on page 79
4. “Removing the Right Cover” on page 71
5. “Removing the Rear Door” on page 81

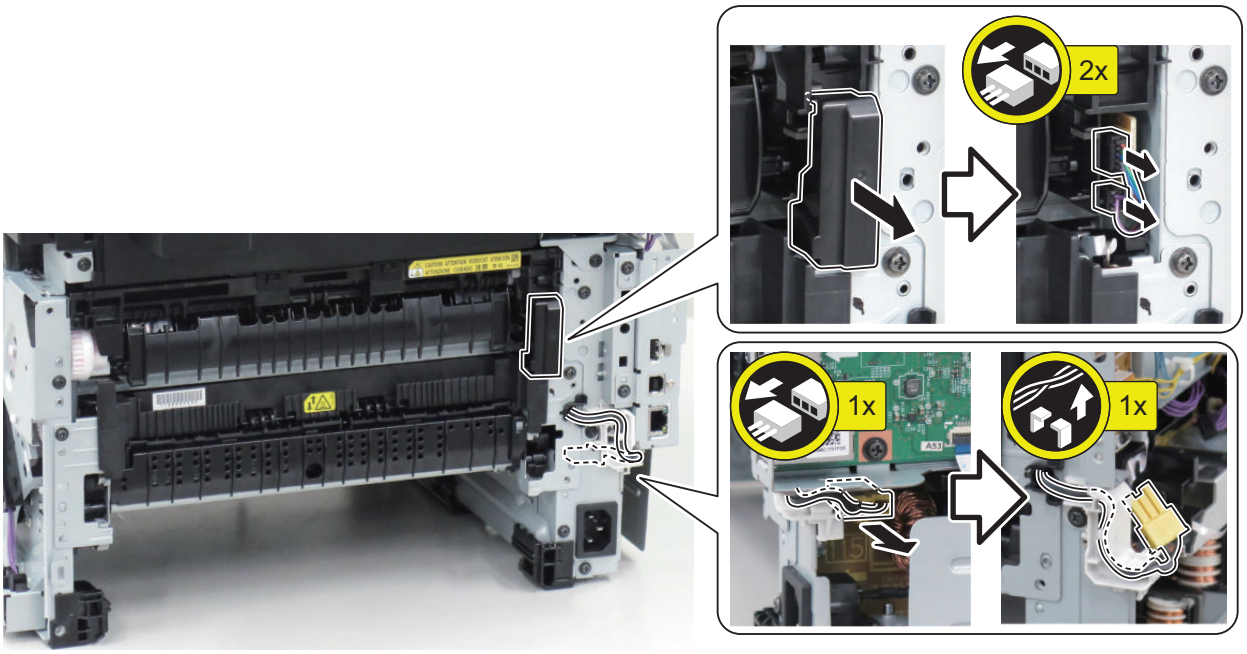
■ Procedure

⚠ CAUTION:
Since the Fixing Assembly is hot immediately after the power is turned OFF, give it time to cool down before removing it.

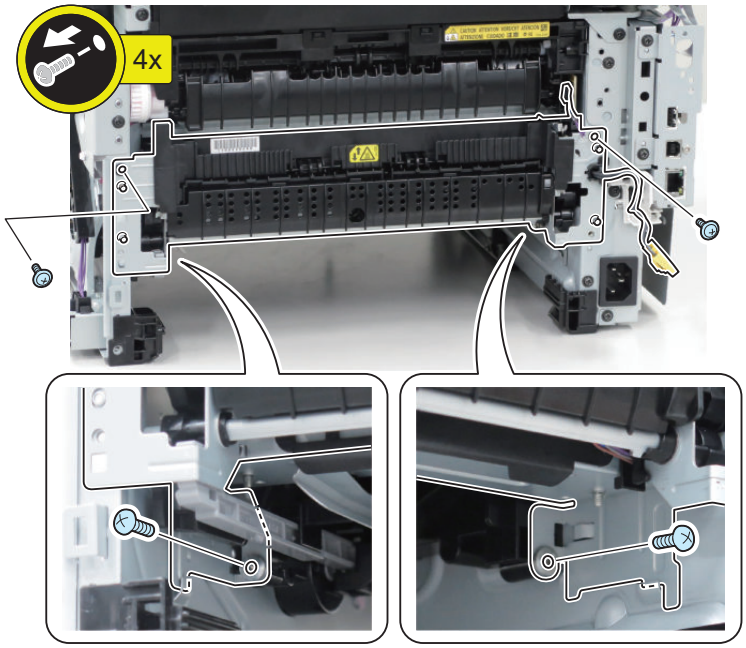
1.



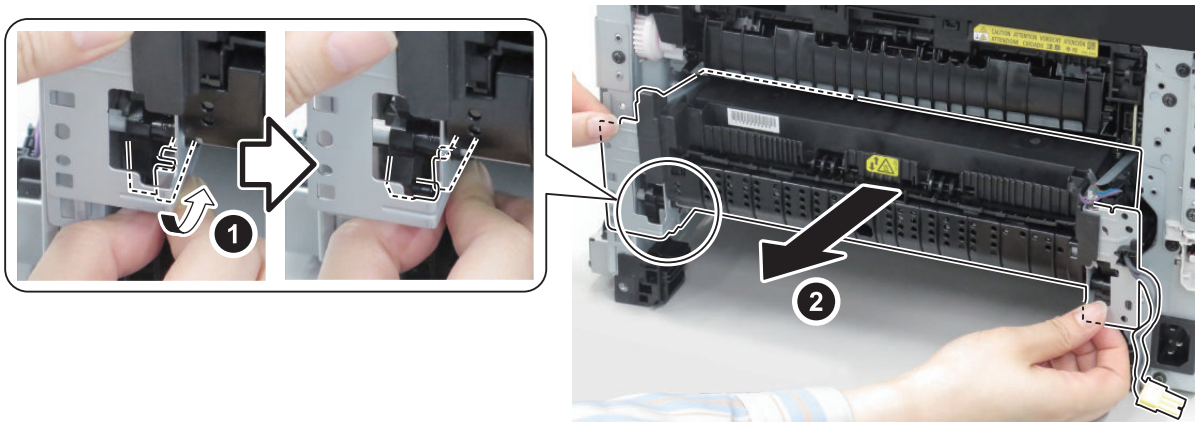
2.



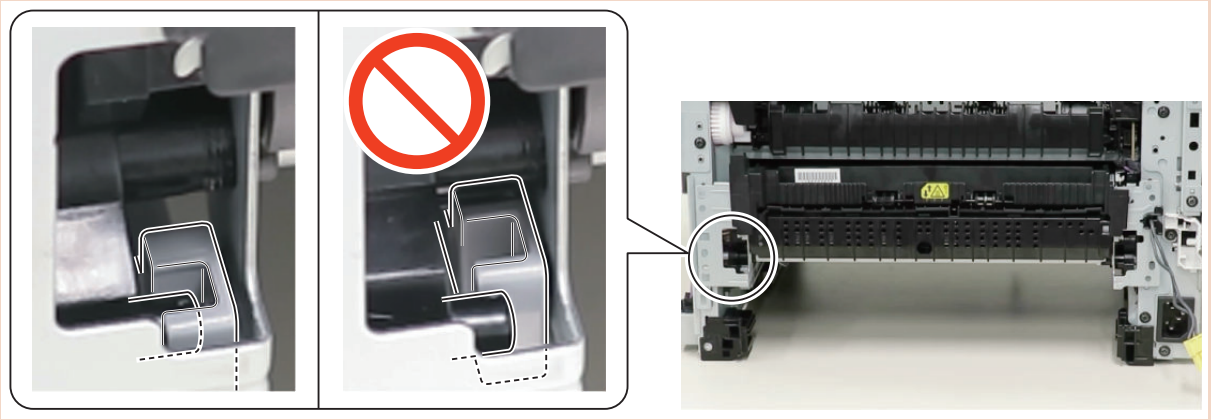
3.



4.



CAUTION:
Points to Note when Installing the Link Arm.
Be sure to check that the Link Arm is installed properly, otherwise the Cartridge Cover cannot be closed.



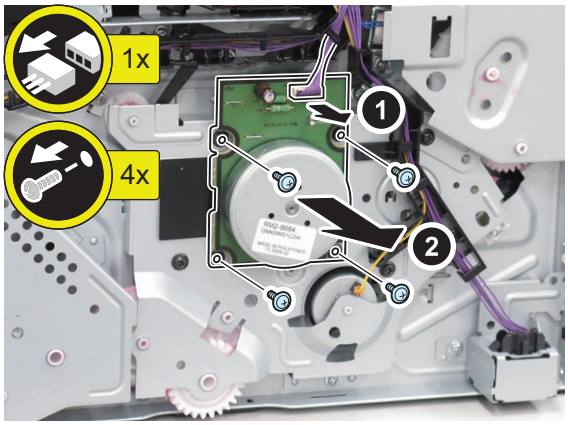
Removing the Fixing Motor

■ Preparation

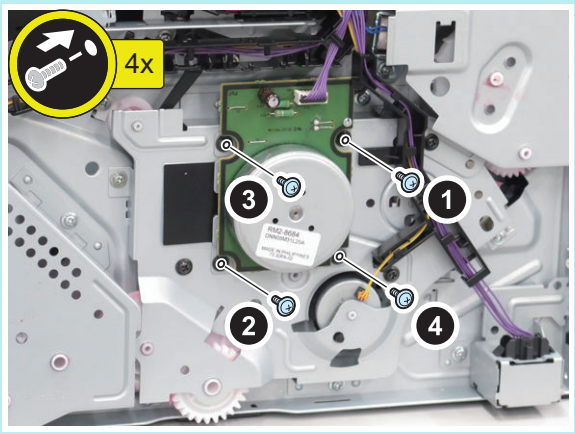
1. “Removing the Cartridge” on page 71
2. “Removing the Right Cover” on page 71

■ Procedure

1.



NOTE:
When installing it, tighten the screws in the order of numbers in the illustration.



Pickup Feed Delivery System

Removing the Cassette Pickup Roller Unit.

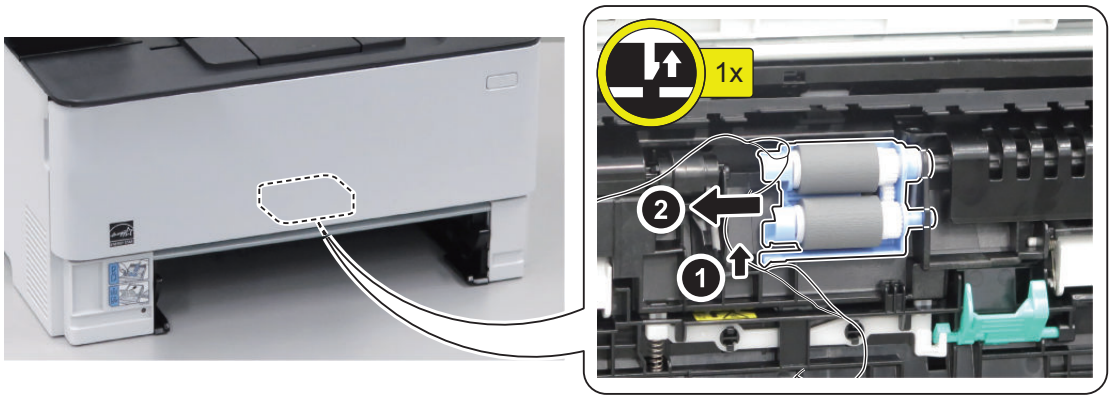
■ Preparation

1. **Remove the cassette.**

■ Procedure

CAUTION:
Do not touch the surface of the roller with bare hands, as doing so will attach skin oil on it and decrease feedability.

1.



Removing the Cassette Separation Roller Unit

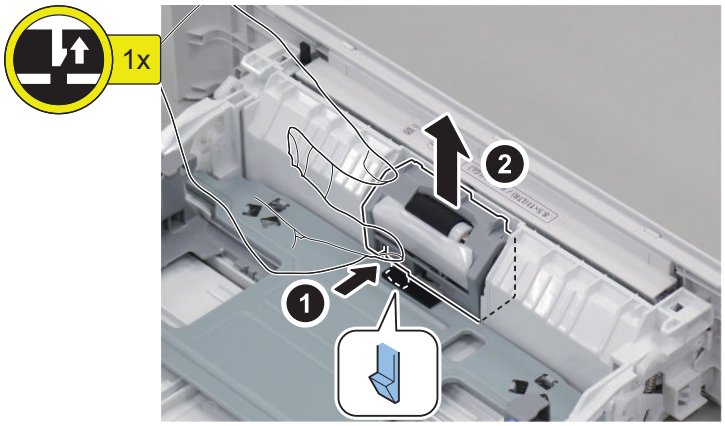
■ Preparation

1. **Remove the cassette.**

■ Procedure

CAUTION:
Do not touch the surface of the roller with bare hands, as doing so will attach skin oil on it and decrease feedability.

1.



Removing the MP Tray Pickup Roller Unit

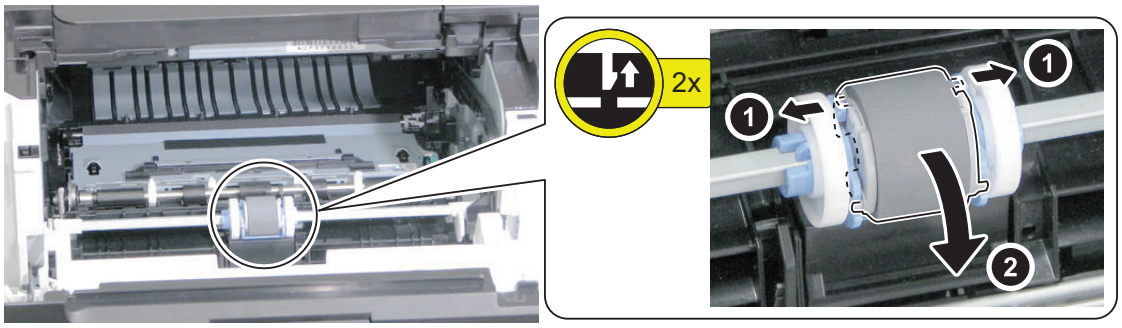
■ Preparation

1. **Remove the cassette.**
2. **"Removing the Cartridge" on page 71**

■ Procedure

CAUTION:
Do not touch the surface of the roller with bare hands, as doing so will attach skin oil on it and decrease feedability.

1.



Removing the MP Tray Separation Pad

■ Preparation

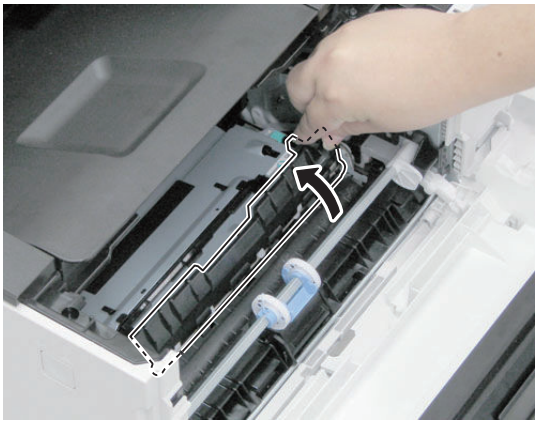
1. **Remove the cassette.**
2. **"Removing the Cartridge" on page 71**

3. “Removing the MP Tray Pickup Roller Unit” on page 102

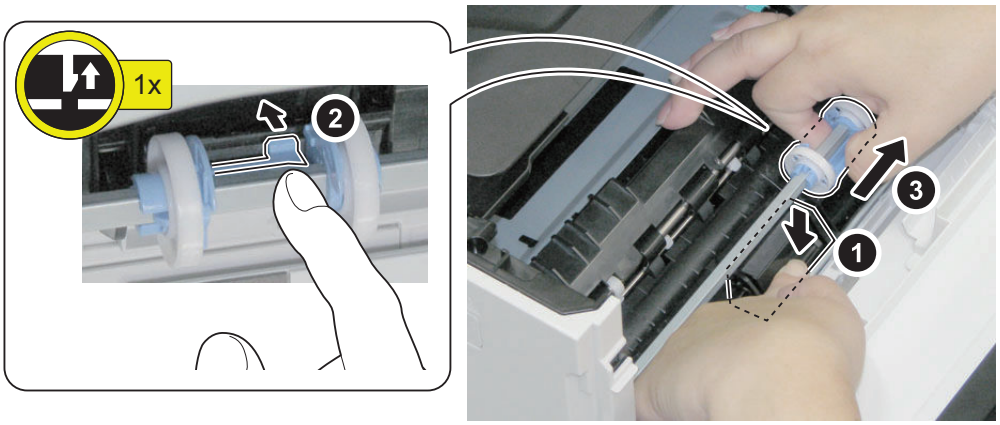
■ Procedure

CAUTION:
Do not touch the surface of the roller with bare hands, as doing so will attach skin oil on it and decrease feedability.

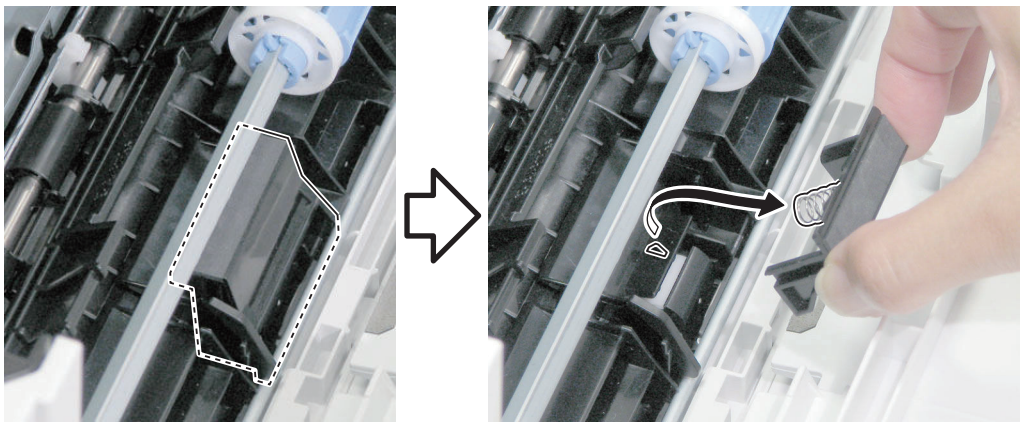
1.



2.



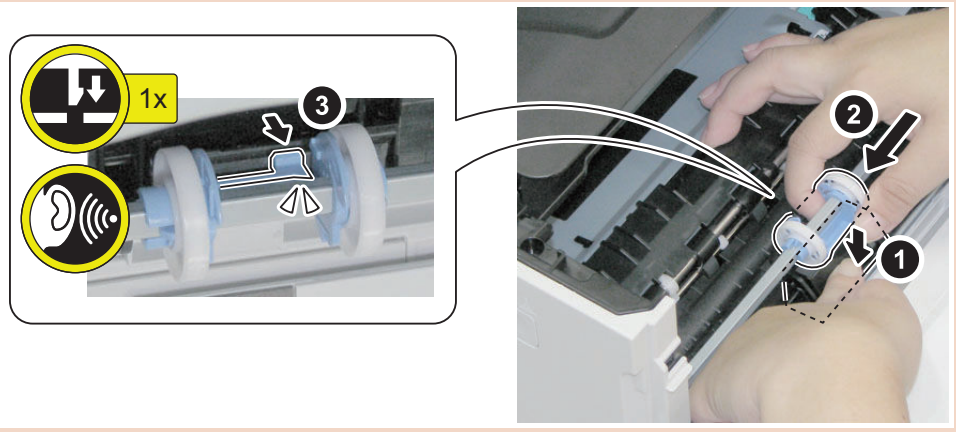
3.



CAUTION:
Points to Note at Installation

- When installing it, be sure that the grooves on the left and right and the spring are fitted correctly.

- Be sure to slide the MP Tray Roller Holder until it clicks.



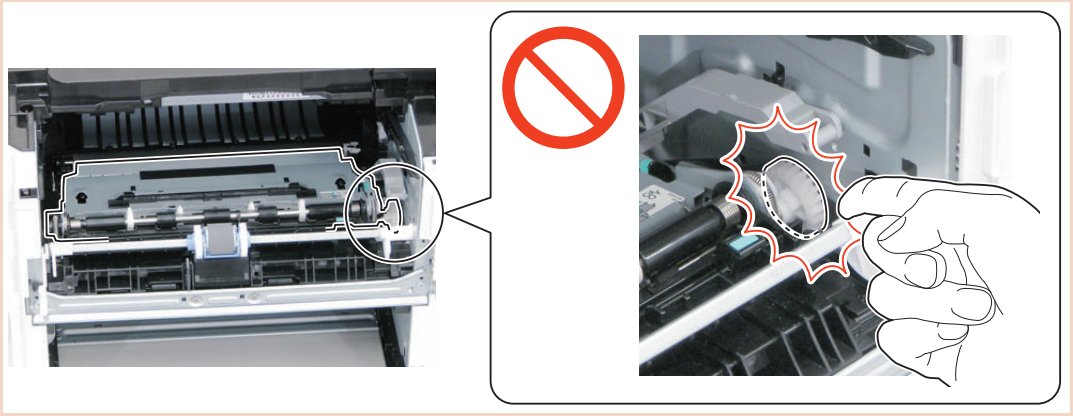
Removing the Registration Unit

■ Preparation

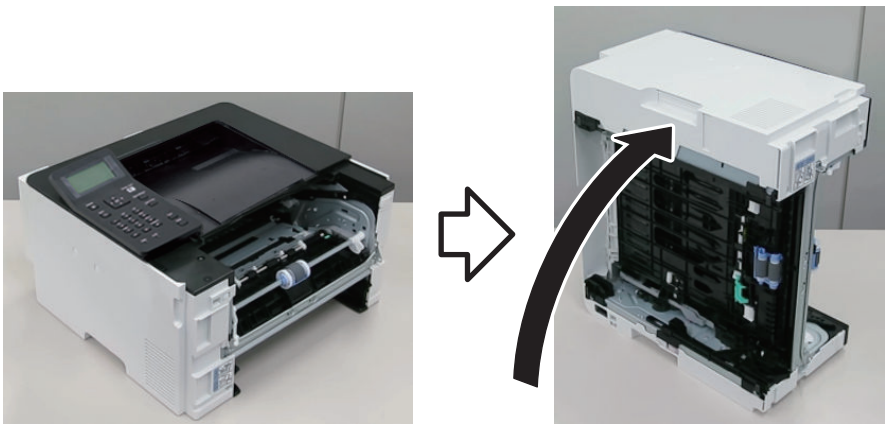
1. **Remove the cassette.**
2. **“Removing the Cartridge” on page 71**
3. **“Removing the Cartridge Door” on page 80**

■ Procedure

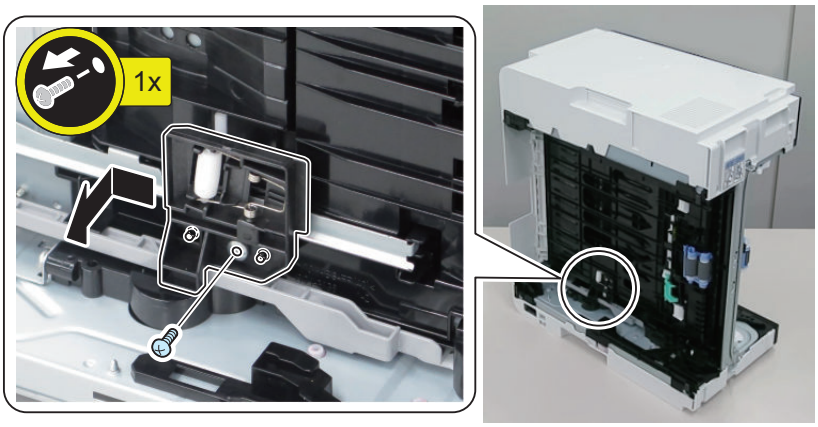
CAUTION:
Do not touch the Gear Unit of the Registration Unit.
Grease is applied on the Gear Unit. If you have accidentally touched grease, wipe with lint-free paper so as not to smear other parts with your greasy hand.



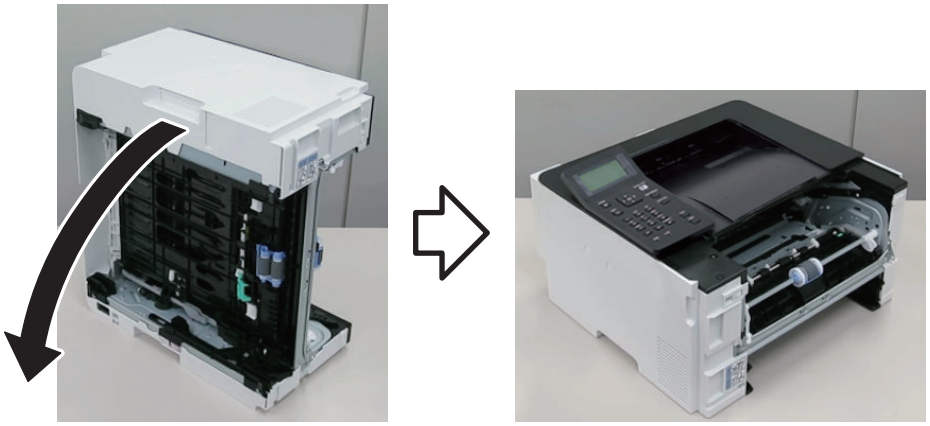
1.



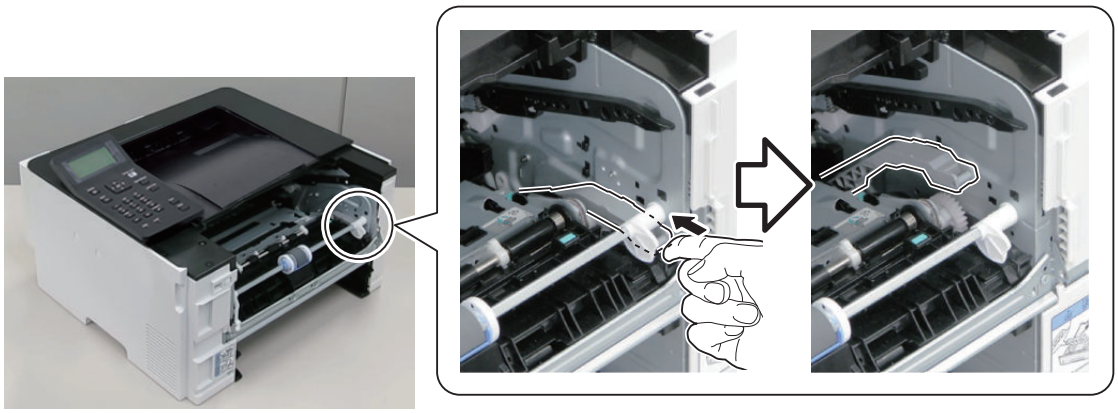
2.



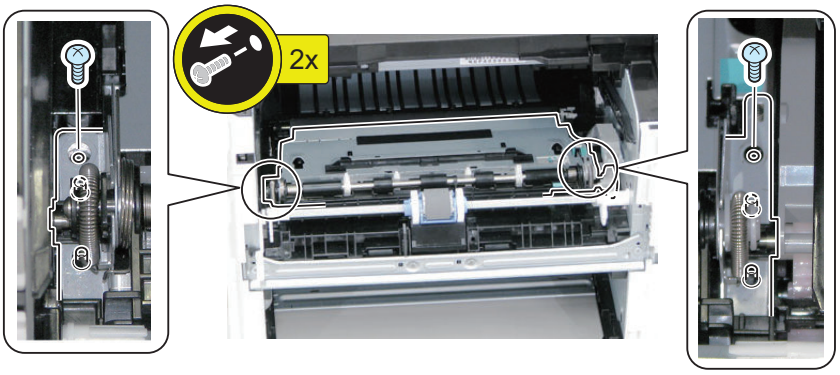
3.



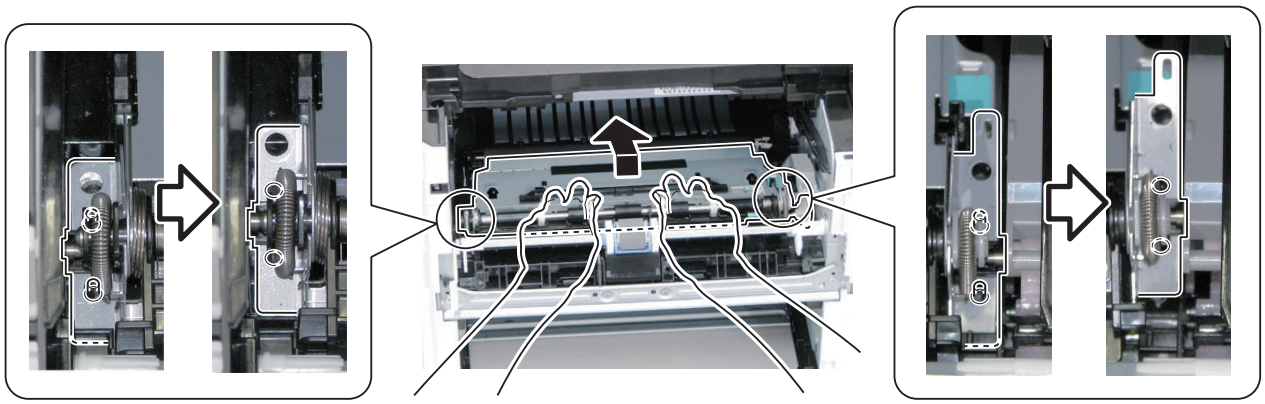
4.



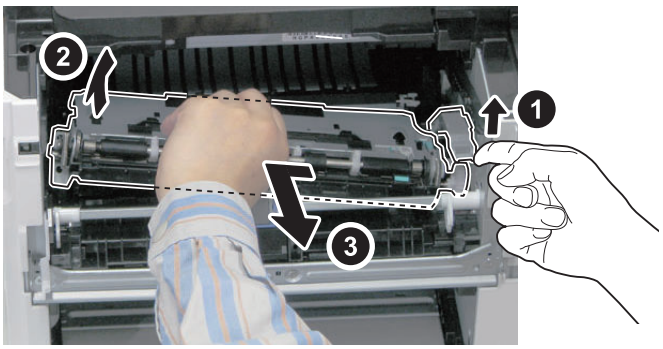
5.



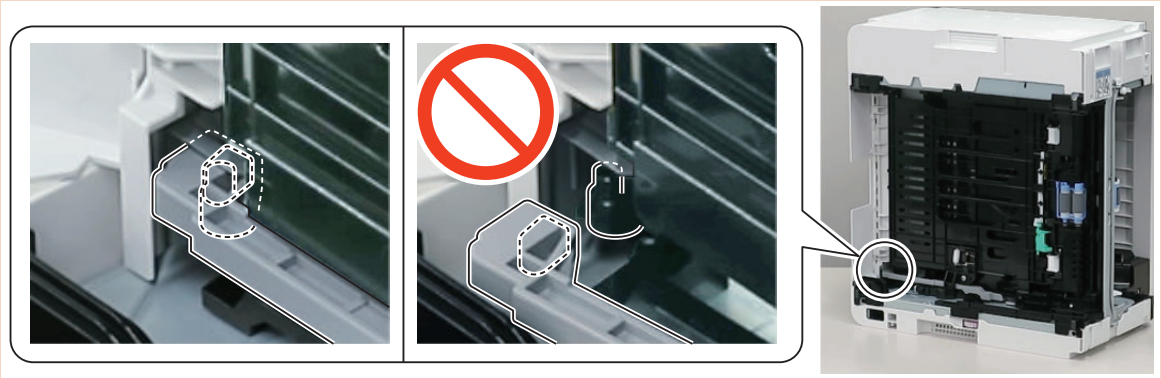
6.



7.



CAUTION:
Points to Note when Installing the Link Arm.
Be sure to check that the Link Arm is installed properly, otherwise the Cartridge Cover cannot be closed.



6 Adjustment

Adjustment at Parts Replacement

Before Replacing the Main Controller PCB

The following setting values are recorded in the Main Controller PCB. When the Main Controller PCB is replaced, these setting values are all returned to the default unless they are restored.

- User setting values
- Service mode setting values

These setting values can be restored by performing backup by any of the following methods:
Refer to the Backup List for the details of items that are backed up. “Backup Data List” on page 171

1. **Enter the service mode shown below, and change the setting value to [1].**
   - COPIER > OPTION > USER > SMD-EXPT

NOTE:
The setting [SMD-EXPT] can be configured either from the Control Panel or remote UI.

2. **These setting values can be restored by performing backup by any of the following methods:**
   - COPIER > FUNCTION > SYSTEM > EXPORT
   - Menu > Management Settings > Data Management > Import/Export > Export
   - RUI > Settings/Registration > Management Settings > Data Management > Import/Export > Export

CAUTION:
- Perform backup immediately before replacing the Main Controller PCB.
- When the Main Controller PCB is replaced, the user data, service data, and logs are initialized and the system manager ID and password are changed back to the default values (ID: 7654321 / PWD: 7654321).

3. **Be sure to output the Serial No./BODY No. and the data entered in [Location] and use them when configuring the settings after replacing the PCB.**

NOTE:
As for "Serial No./BODY No.", this number is referred to as "Serial No." in the user data list and the system manager data list, and is referred to as "BODY No." in the spec report.

   - Menu > Output Report > Print List > User Data List
   - Menu > Output Report > Print List > System Manager Data List
   - COPIER > FUNCTION > MISC-P > SPEC

NOTE:
The output data of [Location] can be found in the system manager data list and the LUI shown below.

   - Menu > Output Report > Print List > System Manager Data List
   - Menu > Management Settings > Device Management > Device Information Settings > Location

After Replacing the Main Controller PCB

CAUTION:
The language displayed changes to English immediately after the replacement of the Main Controller PCB. Be sure to perform the following steps 1 to 5 in order to reflect the language of the country and the country-specific settings that had been configured before the replacement of the Main Controller PCB.

1. **Turn ON the power of the host machine.**

2. **Enter service mode.**
   A Setup Guide screen (in English) for setting the time and date will appear. Forcibly open the service mode screen.
3. **Location information setting**
   [Setting value]
   1: Japan, 2: North America, 3: Korea, 4: China, 5: Taiwan, 6: Europe, 7: Asia, 8: Oceania, 9: Brazil, 10: Latin America
   - COPIER > OPTION > BODY > LOCALE
4. **Paper size configuration setting**
   [Setting value]
   1: AB configuration, 2: Inch configuration, 3: A configuration, 4: AB/Inch configuration
   - COPIER > OPTION > BODY > SIZE-LC
5. **Clear the setting information**
   - COPIER > FUNCTION > CLEAR > ALL

■ Executing Initial Adjustment

1. **To set the wireless LAN function, enter the service mode shown below and change the setting value to [1]. (In the case of the host machine having the wireless LAN function)**
   - COPIER > OPTION > ACC > WLAN
2. **Setup Guide will be activated by turning OFF and then ON the power of the host machine. Configure the settings according to the instruction on the screen.**

■ Transferring the Serial No./BODY No.

1. In the following LUI, enter the Serial No./BODY No. (10-digit alphanumeric number).

NOTE:
As for "Serial No./BODY No.", this number is referred to as "Serial No." in the user data list and the system manager data list, and is referred to as "BODY No." in the spec report.

   - Menu > Management Settings > Device Management > Device Information Settings > Location
2. **Execute the following service mode, and write down the Serial No./BODY No. on the Main Controller PCB.**
   - COPIER > OPTION > SERIAL > SN-MAIN
3. **Turn OFF and then ON the power of the host machine.**
4. **Output the reports from the following service mode and LUI menu, and check the reports.**
   - COPIER > FUNCTION > MISC-P > SPEC
   - Menu > Output Report > Print List > User Data List
   - Menu > Output Report > Print List > System Manager Data List

■ Migrating the User Data and Service Mode Setting Information

1. **Enter service mode, and set the following item to [1].**
   - COPIER > OPTION > USER > SMD-EXPT

NOTE:
The setting [SMD-EXPT] can be configured either from the Control Panel or remote UI.

2. **Restore the data in the same way as that of backup.**
   Refer to the Backup List for the details of items that are restored. “Backup Data List” on page 171
   - COPIER > FUNCTION > SYSTEM > IMPORT
   - Menu > Management Settings > Data Management > Import/Export > Import
   - RUI > Settings/Registration > Management Settings > Data Management > Import/Export > Import

CAUTION:
Be sure to restore the data after replacing the Main Controller PCB.

3. **Enter service mode, and set the following item to [0].**
   - COPIER > OPTION > USER > SMD-EXPT

NOTE:
The setting [SMD-EXPT] can be configured either from the Control Panel or remote UI.

■ Reinstalling the Drivers (Only When the MFNP Port Is Used)

NOTE:
- In the case of setting the print port in a TCP/IP environment, the drivers do not need to be reinstalled. Refer to "Setting Up the Network Environment" in the User's Guide, and set up the network environment again.
- The print port being used is shown in Control Panel > Hardware and Sound > Devices and Printers > "Printer Properties" of the printer used.

1. **Uninstall the following drivers on the user's PC.**
   - Printer driver
   - Fax driver
   - Scanner driver
   - MF Scan Utility
2. **Refer to the following items in Getting Started and install the drivers that were uninstalled.**
   - In case of network connection: "To connect via wired LAN"
   - In case of USB connection: "To connect via USB"

NOTE:
When the MFNP port is used, the MAC address information changes after replacement of the Main Controller PCB. Therefore, when the PC and the machine are connected by the network, the PC will not be able to recognize the machine on the network. When the PC and the machine are connected by USB, the PC will not be able to recognize the machine if the USB ID is changed. That is why the drivers need to be reinstalled.

7 Troubleshooting

Test Print

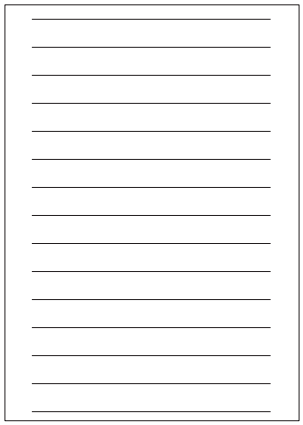
Engine Test Print

This machine has an engine test print function to check whether the printer engine is operating normally.

NOTE:
In the case of engine test print, a test print can be performed by using only the Engine Controller.

There are two types of engine test print: 1-sided print and 2-sided print.

1. **Load A4/LTR paper in the cassette.**
2. **While the machine is in the standby mode, open and close the Cartridge Door for the predetermined number of times in a row.**
   - In case of 1-sided print
     4 times
   - In case of 2-sided print
     5 times or more
3. **An engine test print is executed, and the test pattern as shown below is printed on one side or both sides of a sheet of paper.**



Controller test print

The following test print types are available with this machine, and you can check for failure of an image with a circle 'Yes' described in the image check items in the table below. When no failure is found in the test print in normal output mode, it can be caused in PDL input or Reader.
The image of the test print is generated by the Main Controller PCB.

PG-TYPE	TYPE Pattern	Image check items									
		Grada-tion	Fog-ging	Trans-fer fail-ure	Black line	White line	Uneven pitch	Uneven density	Right angle	Straigh t lines	Magni-fication ration
0	Grid Pattern								Yes	Yes	Yes
1	Halftone Pattern			Yes	Yes	Yes	Yes	Yes			
2	Black Pattern			Yes		Yes	Yes	Yes			
3	White Pattern		Yes		Yes						
4	Gradation 17 Pattern	Yes	Yes		Yes	Yes		Yes			
5	Thin Horizontal Line Pattern				Yes	Yes					
6	(For R&D use)										
7	(For R&D use)										

Follow the procedure shown below to output the test print.

1. **Select the following service mode.**
   TESTMODE > PRINT > PG-TYPE
2. **Enter the PG number using the numeric keypad, and press the [Apply] key.**

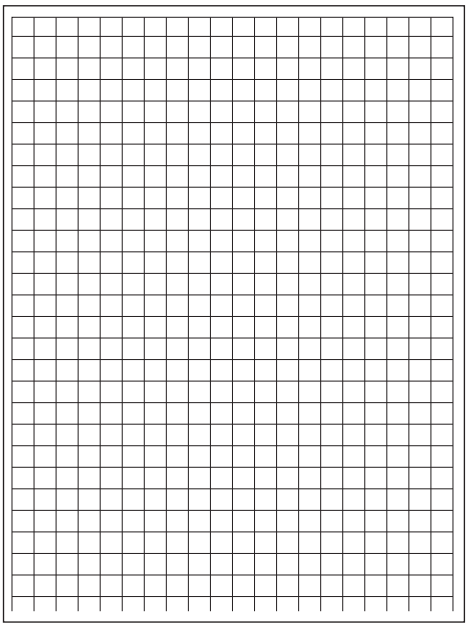
NOTE:
If necessary, change the settings for test print in the following service mode.
If the settings are not changed, a test print will be executed with the initial values of service mode settings.

- Setting of the number of output sheets:
  TESTMODE > PRINT > COUNT
- Setting of 1-sided/2-sided printing:
  TESTMODE > PRINT > PHASE
- Setting of the image formation method:
  TESTMODE > PRINT > MODE
- Setting of the image correction table:
  TESTMODE > PRINT > THRU
- Adjustment of test print density:
  TESTMODE > PRINT > DENS
- Setting of toner thinning process:
  TESTMODE > PRINT > MABK
- Setting of the paper source used when outputting a test print:
  TESTMODE > PRINT > FEED

3. **Execute the following service mode to output a test print.**
   TESTMODE > PRINT > START

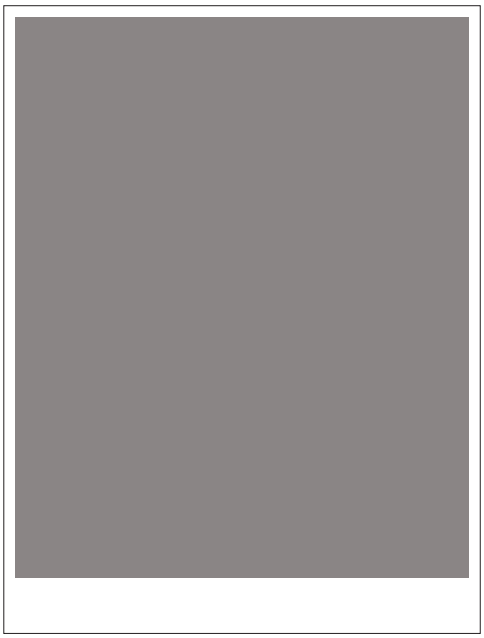
■ How to use the test print

● Grid Pattern (TYPE = 0)



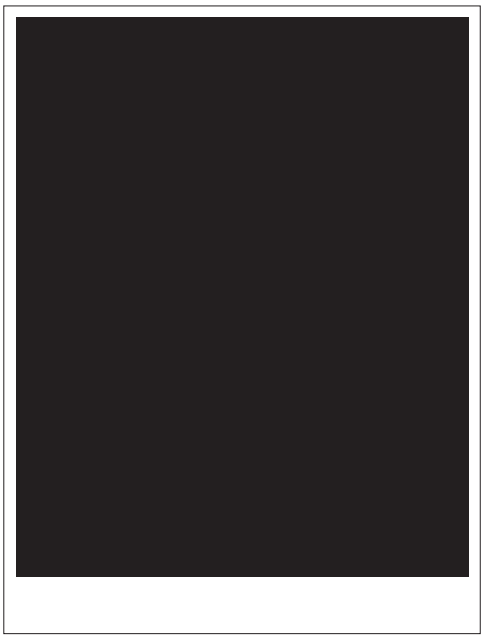
Check item	Checking method	Assumed cause
Right Angle/ Straight Lines	Check that lines in horizontal/vertical scanning directions are paralleled to the paper. Check that these lines are at right angle to one another.	Failure of feed system Failure of Laser Scanner Unit
Magnification Ration	Check that the grid is printed at 9.99 mm intervals. (Check the image on the second side at duplex printing.)	Failure of roller's feed system Failure of Photosensitive Drum Failure of Laser Scanner Unit

● Halftone Pattern (TYPE = 1)



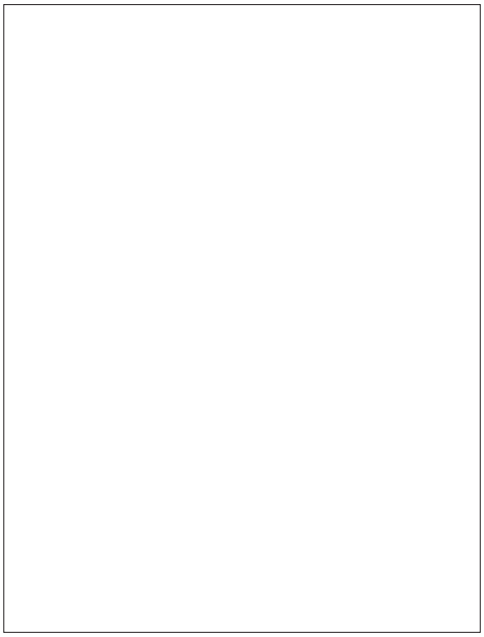
Check item	Checking method	Assumed cause
Transfer failure	Check the evenness of density.	Failure of transfer system Failure of Transfer Roller
Black line	Check that no black line appears on the image.	Failure of developing system Failure of cleaning (drum) Failure of Transfer Roller
White line	Check that no white line appears on the image.	Soiling on the laser light path Failure of developing system
Uneven Pitch	Check that no line appears in the horizontal scanning direction of the image.	Failure of Photosensitive Drum Failure of developing system Failure of laser exposure system Drive-related failure
Uneven Density	Check the evenness of density.	Failure of Photosensitive Drum Failure of developing system Failure of Transfer Roller

● Black Pattern (TYPE = 2)



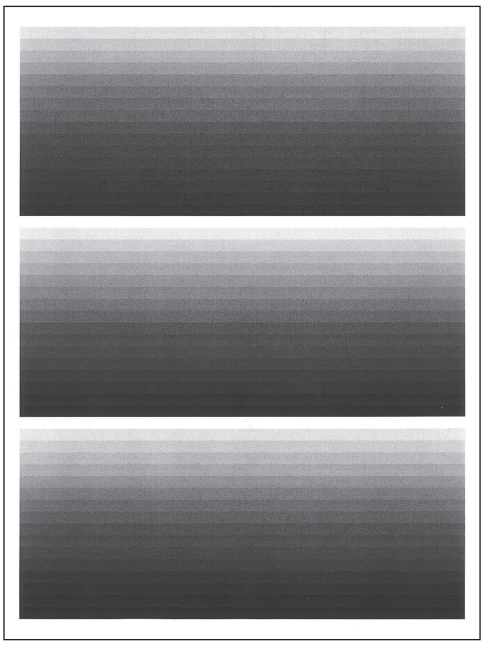
Check item	Checking method	Assumed cause
Transfer failure	Check the evenness of density.	Failure of transfer system Failure of Transfer Roller
White line	Check that no white line appears on the image.	Failure of developing system
Uneven Pitch	Check that no line appears in the horizontal scanning direction of the image.	Failure of Photosensitive Drum Failure of developing system Failure of laser exposure system Drive-related failure
Uneven Density	Check the evenness of density.	Failure of Photosensitive Drum Failure of developing system Failure of Transfer Roller

● White Pattern (TYPE = 3)



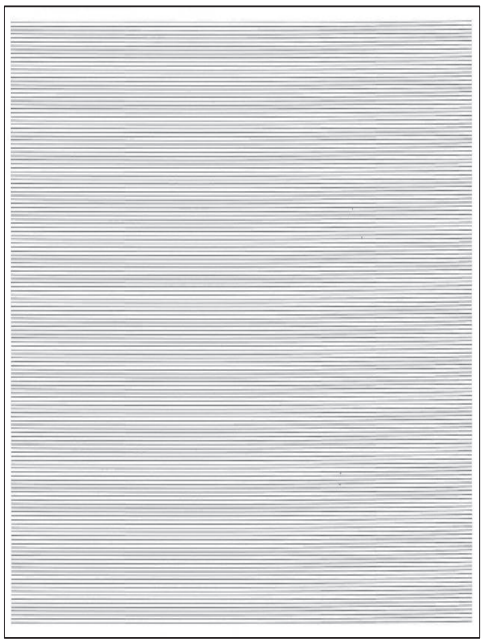
Check item	Checking method	Assumed cause
Black line	Check that no black line appears on the image.	Failure of developing system Failure of cleaning (drum) Failure of Transfer Roller
Fogging	Check that no fogging appears on the image.	Failure of Photosensitive Drum Failure of laser exposure system Failure of developing system

● Gradation 17 Pattern (TYPE = 4)



Check item	Checking method	Assumed cause
Gradation	Check that gradation in density is made appropriately.	Failure of Photosensitive Drum Failure of laser exposure system Failure of developing system
Fogging	Check that no fogging appears in the blank area.	Failure of Photosensitive Drum Failure of laser exposure system Failure of developing system
Black line	Check that no black line appears on the image.	Failure of developing system Failure of cleaning (drum) Failure of Transfer Roller
White line	Check that no white line appears on the image.	Soiling on the laser light path Failure of developing system
Uneven Density	Check that there is no density difference between the front and rear sides.	Failure of Photosensitive Drum Failure of developing system Failure of Transfer Roller

● Thin Horizontal Line Pattern (TYPE = 5)

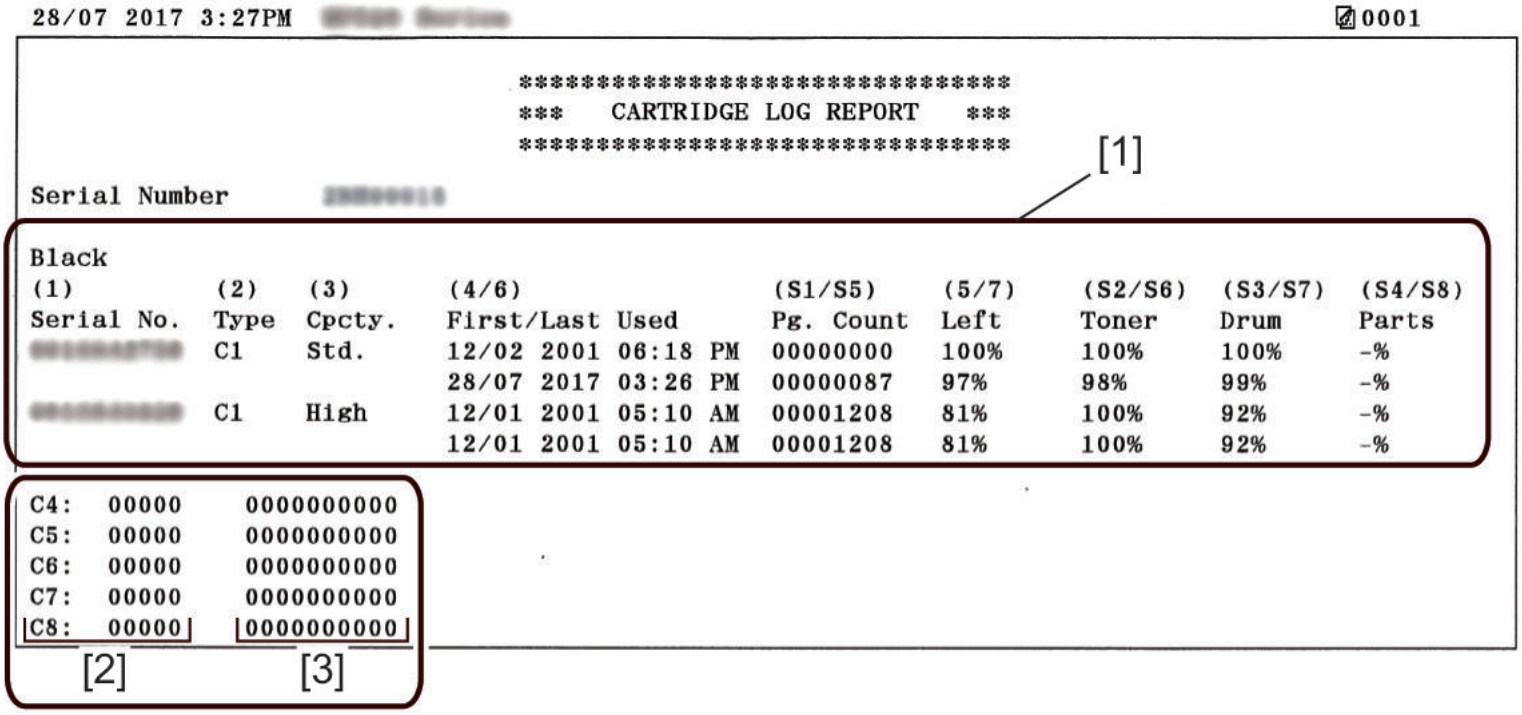


Check item	Checking method	Assumed cause
Black line	Check that no black line appears on the image.	Failure of developing system Failure of cleaning (drum) Failure of Transfer Roller
White line	Check that no white line appears on the image.	Soiling on the laser light path Failure of developing system

Cartridge Log Report

Logs such as history of cartridge replacement are output as a report.
There are two types of cartridge log reports; one for users and one for service technicians.

CAUTION:
Do not provide users with the cartridge log report for service technicians because it contains detailed information that is not disclosed to end users.



28/07 2017 3:27PM [redacted] 0001

****
*** CARTRIDGE LOG REPORT ***
****

[1]

Serial Number [redacted]

Black

(1) Serial No.	(2) Type	(3) Cpcty.	(4/6) First/Last Used	(S1/S5) Pg. Count	(5/7) Left	(S2/S6) Toner	(S3/S7) Drum	(S4/S8) Parts
[redacted]	C1	Std.	12/02 2001 06:18 PM	00000000	100%	100%	100%	-%
			28/07 2017 03:26 PM	00000087	97%	98%	99%	-%
[redacted]	C1	High	12/01 2001 05:10 AM	00001208	81%	100%	92%	-%
			12/01 2001 05:10 AM	00001208	81%	100%	92%	-%

	[2]	[3]
C4:	00000	0000000000
C5:	00000	0000000000
C6:	00000	0000000000
C7:	00000	0000000000
C8:	00000	0000000000

No.	Description
[1]	Replacement logs
[2]	Cartridge type: The number of times a non-genuine cartridge has been detected
[3]	Non-genuine cartridge page count

NOTE:
In addition to output as a report, cartridge logs can also be displayed on the remote UI service mode screen (for service technicians) or remote UI screen (for users).

- To display cartridge logs (for service technicians):
  SERVICE REPORT > CRG-LOG
- To display cartridge logs (for users)*:
  Status Monitor/Cancel > Cartridge Log

*: When not displaying the cartridge log to users, set the following service mode to "0" (OFF).

- ON/OFF of [Cartridge Log] display:
  COPIER > OPTION > DSPLY-SW > CRG-LOG

Output method

Execute the following service mode to output a cartridge log report for service technicians.

- To output a report on cartridge replacement history:
  COPIER > FUNCTION > MISC-P > CRG-LOG

NOTE:
- To output a cartridge log report (for users)*:
  Menu > Output Reports > Print List > Cartridge Log Report

*: When not allowing users to output the cartridge log report, set the following service mode to "0" (OFF).
- ON/OFF of [Cartridge Log Report] display:
  COPIER > OPTION > DSPLY-SW > CRG-LOG

Replacement logs

The record of replacement and usage of cartridges will be printed.

CAUTION:
Just after the cartridge has been replaced with a genuine cartridge or when a non-genuine cartridge is used, accurate information cannot be obtained and a random or approximate value may be printed. The remaining lives of some of the parts are not supported depending on the model.

Item	Description	Remarks
(1) Serial No.	Serial number of the cartridge	
(2) Type	Cartridge type	• C1: Genuine • C2 to C8: Non-genuine • C0: Unknown
(3) Cpcty.	Cartridge capacity	Displayed in accordance with the toner fill-up amount
(4/6) First/Last Used	The date and time it was installed/last used	
(S1/S5) Pg. Count *	Cartridge page count (when it was installed/last used)	00000000 to 99999999
(5/7) Left	The amount remaining in the cartridge (when it was installed/last used)	0 to 100% (New: 100%, Non-genuine: -)
(S2/S6) Toner *	The remaining life of the toner (when it was installed/last used)	-128 to 100 % (New: 100%, Indefinite: -%)
(S3/S7) Drum *	The remaining life of the drum (when it was installed/last used)	-128 to 100 % (New: 100%, Indefinite: -%)
(S4/S8) Parts *	The remaining life of the Developing Assembly (when it was installed/last used)	-128 to 100 % (New: 100%, Indefinite: -%)

*: S1 to S8 are printed only on reports for service technicians.

Number of detections of non-genuine cartridge / Page count of non-genuine cartridge

When a non-genuine cartridge is installed, it is classified as a cartridge type C2 to C8 according to the reason for judging it non-genuine, and the number of detections of each type and the number of pages printed with the cartridge installed are recorded.

Reason for judging it non-genuine	Cartridge type		Description
	Report for users*	Report for service	
OEM	C3	C5	The number of detections of an OEM cartridge, and the number of pages printed
Communication error	C2	C4	The number of detections of a cartridge without memory and the number of pages printed
Refill	C3	C6	The number of detections of a cartridge prepared by refilling toner into a genuine cartridge, and the number of pages printed
Copied memory	C3	C7	The number of detections of a cartridge prepared by refilling toner into a genuine cartridge and copying the contents of a normal memory, and the number of pages printed
Authentication failed	C2	C8	The number of detections of a cartridge that cannot be authenticated, and the number of pages printed

*: Only C2 and C3 are displayed. The total count of the values of the reasons for judging the cartridge non-genuine is displayed.

NOTE:
The number of detections of non-genuine cartridge and the page count of non-genuine cartridge can be reset.

- To clear the cartridge replacement log:
  COPIER > FUNCTION > CLEAR > CRGL-CNT

Troubleshooting Items

Remedy for Image Failure

When an image failure occurs, perform the remedy by referring to the following material.

- User's Guide > Top > Troubleshooting > When You Cannot Print Properly

NOTE:
URL of User's Guide -> http://canon.com/oip-manual

Recurring faulty image

Overview

Foreign matters or lines on rollers along the paper feed path may cause faulty images in the vertical scanning direction.

Field Remedy

See the roller pitches listed in the tables below to clean and/or replace the corresponding parts.

CAUTION:
Since the Primary Charging Roller, Photosensitive Drum, and Developing Roller are located inside the cartridge and they cannot be cleaned on a single part basis, replace the cartridge itself.

Roller pitch	Parts	Symptom			
		Soiling	White spots	Soiled back	Fixing failure
Approx. 50 mm	Cassette Pickup Roller	Occurs	-	-	-
Approx. 44 mm	Cassette Separation Roller	-	-	Occurs	-
Approx. 50 mm	Cassette Feed Roller	Occurs	-	-	-
Approx. 43 mm	Registration Roller	-	-	Occurs	-
Approx. 39 mm	Transfer Roller	-	Occurs	Occurs	-
Approx. 28 mm	Primary Charging Roller	-	Occurs	-	-
Approx. 75 mm	Photosensitive Drum	Occurs	Occurs	-	-
Approx. 31 mm	Developing Roller	-	Occurs	-	-
Approx. 57 mm	Fixing Film	Occurs	Occurs	-	Occurs
Approx. 63 mm	Pressure Roller	Occurs	-	Occurs	Occurs

Checking the Nip Width of the Fixing Assembly

Overview

Although the nip width of the Fixing Assembly cannot be adjusted with this machine, it can be checked.
By checking the nip width when fixing failure occurs, it is possible to judge whether there is a problem with the Fixing Assembly.

Field Remedy

Check the nip width of the Fixing Assembly by the following procedure.

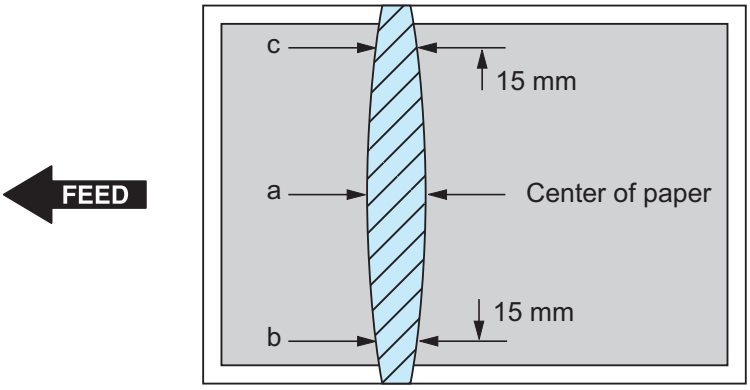
1. **In the following service mode, print solid black using A4/LTR size paper.**
   - TESTMODE > PRINT > PG-TYPE = 2
   - TESTMODE > PRINT > START
2. **Load the printed paper with the solid black side facing up in a cassette of the machine.**
3. **In the following service mode, print solid white.**
   - TESTMODE > PRINT > PG-TYPE = 3
   - TESTMODE > PRINT > START

4. **When the leading edge of the paper comes out to the Delivery Outlet, open the Front Cover to cause a door open jam and then close the Front Cover immediately.**

CAUTION:
Since pressure is released by opening the Front Cover, accurate fixing nip width cannot be measured while keeping the Front Cover opened.

5. **About 20 seconds afterwards, open the Front Cover and remove the jammed paper.**
6. **Measure the widths of the glossy part of the toner on the printed paper, and check that they are within the range as follows.**

   (Reference value)
   - Center (a): 7.1 +/- 1.0 mm
   - Edge (b) and (c): 6.7 +/- 1.0 mm



Debug Log

Function Overview

The debug log is a log that analyzes the program behavior of the machine to enable developers to identify problems.
This machine is embedded with a function that compiles the log of the behavior of each software module as debug log and outputs it as integrated log for analyzing problems.
Be sure to collect the debug log when the Support Dept. of sales company so instructs.
Note that there is no need for service technicians to check the content of collected debug log.

Cases in which collection of debug log is effective

Collection of debug log is effective in the following cases:

- Neither the Support Dept. of sales company nor CINC can reproduce the trouble that occurred at the customer site
- When the error frequency is low
- When the failure is suspected to be due to firmware rather than a mechanical/electrical failure.

CAUTION:
If the procedure for reproducing the failure is clear and the Support Dept. of sales company and CINC can reproduce it, collection of debug log is not necessary.

Conditions for collecting logs

Conditions for not being able to collect logs

In the following cases, the procedure for obtaining logs is not required because logs cannot be obtained.

- Service mode screen cannot be accessed
- The machine cannot recognize a USB flash drive
- No USB port is installed in the machine (when the model has only a copy function)

What is necessary to collect logs

A USB flash drive that satisfies the following conditions is required to obtain the debug logs of the machine:

- Formatted in FAT 16/FAT32
- There is a free space of approx. 100MB.
- Can be recognized by the machine

Collection procedure

The following shows the procedure for collecting the debug log from the Control Panel.

1. **Connect a USB flash drive to the machine. In the case of a model having a USB connector on a side of the Control Panel, be sure to connect the USB flash drive to the Control Panel. In the case of a model having a USB connector only on the rear side, connect the USB flash drive to the USB connector on the rear side.**

CAUTION:
In the case of a model having a USB connector on the Control Panel, if the USB flash drive is connected to the USB connector on the rear side, debug logs are not transferred to the USB flash drive.

2. **Execute the following service mode from the Control Panel or Remote UI.**
   - COPIER > FUNCTION > SYSTEM > LOGWRITE

   "Executing..." is displayed while log collection is executed. When it is completed, the screen shows the service mode screen again.
3. **Execute the following service mode from the Control Panel or Remote UI.**
   - COPIER > FUNCTION > SYSTEM > LOG2USB

   "Executing..." is displayed while log collection is executed. When it is completed, the screen shows the service mode screen again.

4. **Remove the USB flash drive by the correct procedure.**

   Connect the USB flash drive to the PC, and check that the log file shown below has been saved.

   - Output by LOGWRITE: SUBLOG.TXT
   - Output by LOG2USB: SUBLOG_yyyymmdd.HHMMSS_xxx.gz (the file may be divided into multiple files)

8 Error/Jam/Alarm

Outline

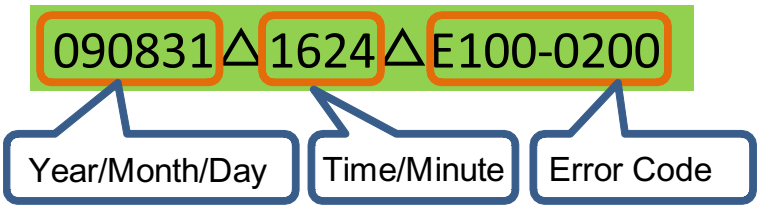
This chapter describes various codes which are displayed when a failure occurs on the product. These are classified into 3 codes as follows.

Code type	Explanation
Error code	This code is displayed when an error occurs on the machine.
Jam code	This code is displayed when a jam occurs inside the machine.
Alarm code	This code is displayed when a function of the machine is malfunctioned.

Error/Jam/Alarm Log indication

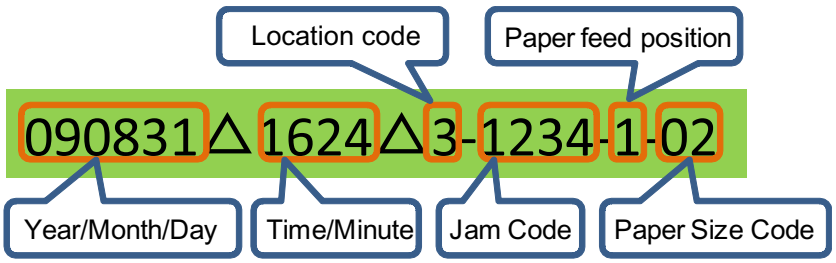
Error log

Service Mode > COPIER > DISPLAY > ERR



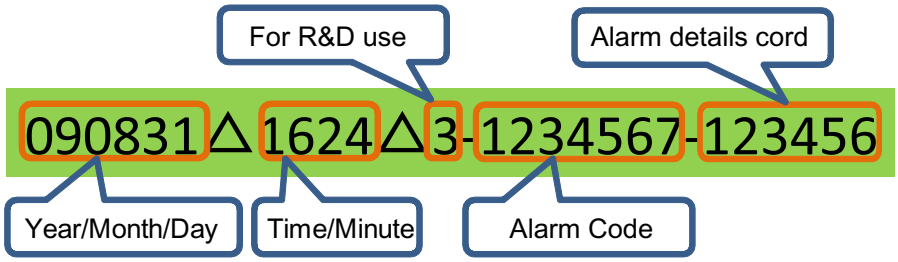
Jam log

Service Mode > COPIER > DISPLAY > JAM



Alarm log

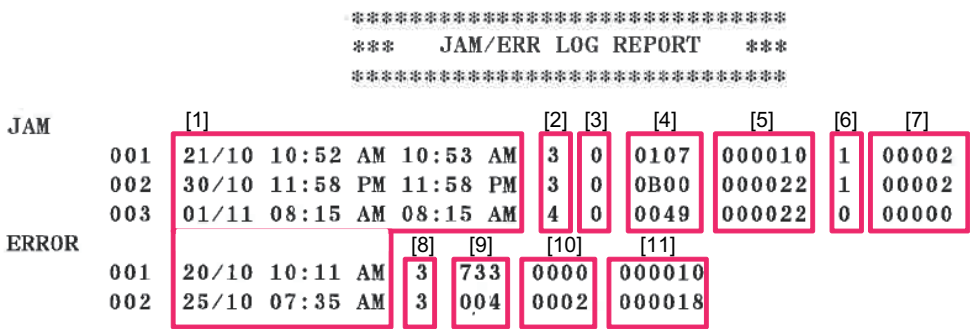
Service Mode > COPIER > DISPLAY > ALARM-2
Service Mode > COPIER > DISPLAY > ALARM-3



JAM/ERR LOG REPORT

Output procedure of the JAM/ERR LOG REPORT
Service Mode > COPIER> FUNCTION> MISC-P > ERR-LOG

The explanation of mention contents



No.	Item
1	Day/Month Time/Minute
2	Outbreak division
3	Not used
4	Jam code
5	Total counter
6	Paper feed position
7	Paper size
8	Location code
9	Error code
10	Error details code
11	Total counter

Location Code

The jam codes of this machine contain information on the location.
The location information is displayed in a single digit and has the meaning shown below:

Device	Location code
Host machine	0
ADF	1

Pickup Position Code

When a jam occurs, the pickup location is indicated with the following pickup position code.

Pickup position	Pickup position code
ADF	-
Pickup from Multi-purpose Tray	0
Cassette 1	1
Option cassette	2
At duplex printing	7

Error Code

Error Code Details

E000-0000---	**Error in temperature rising of the Fixing Assembly**
Detection Description	The temperature of the Fixing Assembly did not reach a certain temperature within the specified period of time.
Remedy	1. Check the harness/connector connection between the Fixing Assembly and the DC Controller PCB. 2. Replace the Fixing Assembly. 3. Replace the DC Controller PCB.
E001-0000---	**Abnormal high temperature of the Fixing Assembly**
Detection Description	It was detected that the temperature of the Fixing Assembly was abnormally high.
Remedy	1. Check the harness/connector connection between the Fixing Assembly and the DC Controller PCB. 2. Replace the Fixing Assembly. 3. Replace the DC Controller PCB.
E003-0000---	**Abnormal low temperature of the Fixing Assembly**
Detection Description	It was detected that the temperature of the Fixing Assembly was abnormally low.
Remedy	1. Check the harness/connector connection between the Fixing Assembly and the DC Controller PCB. 2. Replace the Fixing Assembly. 3. Replace the DC Controller PCB.
E004-0000---	**Drive circuit error**
Detection Description	The zero cross signal was not detected for the specified period of time or more.
Remedy	1. Check the harness/connector connection between the Fixing Assembly and the DC Controller PCB. 2. Replace the Fixing Assembly. 3. Replace the DC Controller PCB.
E014-0000---	**Error in startup of the Main Motor**
Detection Description	Revolution of the Main Motor did not reach the specified value.
Remedy	1. Check the harness/connector connection between the Main Motor and the DC Controller PCB. 2. Replace the Main Motor. 3. Replace the DC Controller PCB.
E014-0001---	**Error in startup of the Main Motor**
Detection Description	Revolution of the Main Motor was out of the specified range.
Remedy	1. Check the harness/connector connection between the Main Motor and the DC Controller PCB. 2. Replace the Main Motor. 3. Replace the DC Controller PCB.

E015-0002---	Cassette 2 lift-up error
Detection Description	After lift-up of the Lifting Plate of the Cassette 1 started, ON status of the Paper Surface Sensor of the Cassette 1 was not detected within the specified period of time.
Remedy	1. Turn ON the power with the cassette of the Cassette Unit removed, insert the cassette, and then check the operation sound of the Lifter Motor. When there is operation sound of the Lifter Motor, check if the Lifting Plate has been lifted up. <When the Lifting Plate has been lifted up> 1. Check the harness/connector connection between the Cassette Driver PCB and the Paper Surface Sensor of the Cassette Unit. 2. Check the harness/connector connection between the Cassette Driver PCB and the Cassette Pickup Solenoid of the Cassette Unit. 3. Replace the Cassette Driver PCB. 4. Replace the DC Controller PCB. <When the Lifting Plate has not been lifted up> 1. Check the condition of the gear of the Cassette Unit (missing teeth, swing). 2. Replace the Drive Unit of the Cassette Unit. <When there is no operation sound of the motor> 1. Check the harness/connector connection between the Cassette Driver PCB and the Lifter Motor of the Cassette Unit. 2. Replace the Drive Unit of the Cassette Unit. 3. Replace the Cassette Driver PCB. 4. Replace the DC Controller PCB 4. Replace the DC Controller.

E052-0000---	Duplex Feed Unit absent error
Detection Description	Connection of the Duplex Feed Unit was not correct.
Remedy	1. Replace the DC Controller PCB.

E066-0000---	Environment Sensor error
Detection Description	When the Environment Sensor is judged to be in error
Remedy	1. Check the harness/connector connection between the Power supply switch PCB (Environment Sensor) and the DC Controller PCB. 2. Replace the Power supply switch PCB (Environment Sensor). 3. Replace the DC Controller PCB.

E100-0000---	BD error
Detection Description	BD error
Remedy	1. Check the harness, Flat Cable, and connector connection between the Laser Scanner Unit and the DC Controller PCB. 2. Replace the Flat Cable. 3. Replace the Laser Scanner Unit. 4. Replace the DC Controller PCB.

E110-0000---	Error in startup of the Scanner Motor
Detection Description	Scanner area error (error in the initial operation of the Scanner Motor)
Remedy	1. Check the harness/connector connection between the DC Controller PCB and the Laser Scanner Unit. 2. Check the harness/connector connection between the Relay PCB and the Laser Scanner Unit. 3. Replace the Laser Scanner Unit.

E110-0001---	Scanner Motor rotation error
Detection Description	Scanner area error (Scanner Motor rotation error)
Remedy	1. Check the harness/connector connection between the DC Controller PCB and the Laser Scanner Unit. 2. Check the harness/connector connection between the Relay PCB and the Laser Scanner Unit. 3. Replace the Laser Scanner Unit.

E196-0000---	DC Controller error
Detection Description	Update of the DC Controller failed. (RFU mode right after the startup)
Remedy	1. Replace the DC Controller PCB.

E196-1000---	ROM writing/reading error (Main ROM 16MB)
Detection Description	Error in writing/reading of main program in the Main Controller PCB (Main ROM 16MB)
Remedy	1. Update the set of controller firmware. 2. Replace the Main Controller PCB.

E196-2000---	ROM writing/reading error (ROM (2MB) for storing setting values)
Detection Description	Error in writing/reading of the setting values storage area in the Main Controller PCB (ROM (2MB) for storing setting values)
Remedy	1. Update the set of controller firmware. 2. Replace the Main Controller PCB.

E196-3000---	ROM writing/reading error (eMMC)
Detection Description	Unable to read/write data from the eMMC. The eMMC failure occurred.
Remedy	1. Update the set of controller firmware. 2. Replace the Main Controller PCB.

E196-3001---	ROM-ID mismatch (eMMC)
Detection Description	The eMMC has been replaced wrongly. The eMMC failure occurred.
Remedy	1. Update the set of controller firmware. 2. Replace the Main Controller PCB.

E246-0000---	System error
Detection Description	System error
Remedy	Contact the sales company.

E247-0000---	System error
Detection Description	System error
Remedy	Contact the sales company.

E350-0000---	System error
Detection Description	System error
Remedy	Contact the sales company.

E351-0000---	Main Controller PCB error (Scanner system)
Detection Description	System error
Remedy	1. Update the set of controller firmware. 2. Replace the Main Controller PCB.

E354-0000---	System error
Detection Description	System error
Remedy	Contact the sales company.

E355-0000---	System error
Detection Description	System error
Remedy	Contact the sales company.

E355-0004---	System error
Detection Description	System error
Remedy	Contact the sales company.

E355-0005---	System error
Detection Description	System error
Remedy	Contact the sales company.

E744-0001---	Invalid combination of language file versions
Detection Description	Language file version was not matched with that of the main program.
Remedy	1. Update the set of controller firmware.

E744-0002---	Language file error
Detection Description	The size of the language file exceeded the allowed size.
Remedy	1. Update the set of controller firmware.

E744-1001---	Version mismatch between BOOTABLE and BOOTROM
Detection Description	Version of the main program and that of the start-up program were not matched.
Remedy	1. Update the set of controller firmware.

E744-4000---	Engine ID error
Detection Description	An invalid engine connection was detected.
Remedy	1. Check the version of D-CON. 2. Update the D-CON. 3. Update the set of controller firmware. 4. Check the model code. (E744-4000 occurs also when the model code and the engine code are mismatched.)

E744-5000---	Panel microcomputer error
Detection Description	Error in the Control Panel PCB (microcomputer).
Remedy	1. Check the harness/connector connection between the panel microcomputer and Main Controller PCB. 2. Update the set of panel microcomputer. 3. Update the set of controller firmware. 4. Replace the Main Controller PCB.

E744-6000---	Error in communication with the Wireless LAN Board
Detection Description	Unable to communicate with the Wireless LAN PCB.
Remedy	1. Check the connection of the wireless LAN slot (SD-IO). 2. Update the set of controller firmware. 3. Replace the Main Controller PCB.

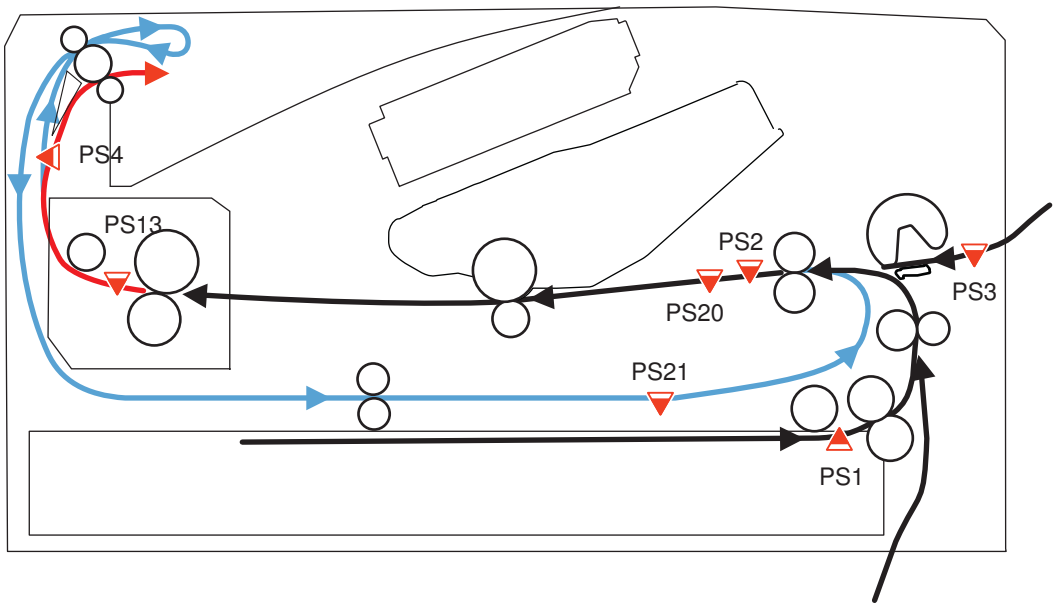
E744-7000---	Backup microcomputer error
Detection Description	An error in the microcomputer which retains fax job information of the Main Controller PCB.
Remedy	1. Check the version of backup microcomputer, and upgrade the version. 2. Update the set of backup microcomputer. 3. Update the set of controller firmware. 4. Replace the Main Controller PCB.

E746-0000---	Main Controller PCB error (others)
Detection Description	A communication error of the Main Controller PCB occurred (other than scan-related communication error).
Remedy	1. Update the set of controller firmware. 2. Replace the Main Controller PCB.

E766-9000---	Scanner power state error
Detection Description	Error in power state of the Laser Scanner Unit (firmware-dependent)
Remedy	1. Install the set of controller firmware. 2. Replace the Laser Scanner Unit.

E805-0001---	Fan Motor 1 error
Detection Description	The Main Fan fails to rotate at the specified rotation speed.
Remedy	1. Check the connection of the Main Fan. 2. Replace the Main Fan.

JAM Code



Host machine

Location Code	JAM Code	Type	Sensor Name/Detection contents	Sensor ID	Area
00	0801	Pickup Delay JAM 1	TOP Sensor Delay	PS2	Multi-purpose Tray
00	0802	Pickup Delay JAM 1	TOP Sensor Delay	PS2	Cassette 1
00	0803	Pickup Delay JAM 1	TOP Sensor Delay	PS2	Cassette 2
00	0807	Pickup Delay JAM 1	TOP Sensor Delay	PS2	Registration Area to Drum Area
00	0808	Pickup Delay JAM 1	Fixing Delivery Sensor Delay	PS13	Drum Area to Fixing Area
00	0809	Pickup Delay JAM 1	Delivery Tray Full Sensor Delay	PS4	Fixing Area to Delivery Area
00	080E	Pickup Delay JAM 1	Duplex Feed Sensor Delay	PS21	Duplex Pickup Area
00	0907	Pickup Delay JAM 2	TOP Sensor Delay	PS2	Registration Area to Drum Area
00	0908	Pickup Delay JAM 2	Fixing Delivery Sensor Delay	PS13	Drum Area to Fixing Area
00	0909	Pickup Delay JAM 2	Delivery Tray Full Sensor Delay	PS4	Fixing Area to Delivery Area
00	0A07	Pickup Delay JAM 2	TOP Sensor Delay	PS2	Registration Area to Drum Area
00	0A08	Pickup Delay JAM 3	Fixing Delivery Sensor Delay	PS13	Drum Area to Fixing Area
00	0A09	Pickup Delay JAM 3	Delivery Tray Full Sensor Delay	PS4	Fixing Area to Delivery Area
00	1007	Pickup Stationary JAM 1	TOP Sensor Stationary	PS2	Registration Area to Drum Area
00	1008	Pickup Stationary JAM 1	Fixing Delivery Sensor Stationary	PS13	Drum Area to Fixing Area
00	1009	Pickup Stationary JAM 1	Delivery Tray Full Sensor Stationary	PS4	Fixing Area to Delivery Area
00	1807	Fixing Delivery Delay JAM 1	TOP Sensor Delay	PS2	Registration Area to Drum Area
00	1808	Fixing Delivery Delay JAM 1	Fixing Delivery Sensor Delay	PS13	Drum Area to Fixing Area
00	1809	Fixing Delivery Delay JAM 1	Delivery Tray Full Sensor Delay	PS4	Fixing Area to Delivery Area
00	2007	Fixing Delivery Stationary JAM 1	TOP Sensor Stationary	PS2	Registration Area to Drum Area
00	2008	Fixing Delivery Stationary JAM 1	Fixing Delivery Sensor Stationary	PS13	Drum Area to Fixing Area
00	2009	Fixing Delivery Stationary JAM 1	Delivery Tray Full Sensor Stationary	PS4	Fixing Area to Delivery Area
00	2801	Power ON JAM 1 (*2)	TOP Sensor Residual	PS2	Multi-purpose Tray
00	2802	Power ON JAM 1 (*2)	TOP Sensor Residual	PS2	Cassette 1
00	2803	Power ON JAM 1 (*2)	TOP Sensor Residual	PS2	Cassette 2
00	2807	Power ON JAM 1 (*2)	TOP Sensor Residual	PS2	Registration Area to Drum Area
00	2808	Power ON JAM 1 (*2)	Fixing Delivery Sensor Residual	PS13	Drum Area to Fixing Area

Location Code	JAM Code	Type	Sensor Name/Detection contents	Sensor ID	Area
00	2809	Power ON JAM 1 (*2)	Delivery Tray Full Sensor Residual	PS4	Fixing Area to Delivery Area
00	280D	Power ON JAM 1 (*2)	Duplex Feed Sensor Residual	PS21	Duplex Feed Area
00	2901	Power ON JAM 2 (*2)	TOP Sensor Residual	PS2	Multi-purpose Tray
00	2902	Power ON JAM 2 (*2)	TOP Sensor Residual	PS2	Cassette 1
00	2903	Power ON JAM 2 (*2)	TOP Sensor Residual	PS2	Cassette 2
00	2907	Power ON JAM 2 (*2)	TOP Sensor Residual	PS2	Registration Area to Drum Area
00	2908	Power ON JAM 2 (*2)	Fixing Delivery Sensor Residual	PS13	Drum Area to Fixing Area
00	2909	Power ON JAM 2 (*2)	Delivery Tray Full Sensor Residual	PS4	Fixing Area to Delivery Area
00	290D	Power ON JAM 2 (*2)	Duplex Feed Sensor Residual	PS21	Duplex Feed Area
00	3001	Dooe Open JAM 1 (*1)	TOP Sensor Residual	PS2	Multi-purpose Tray
00	3002	Dooe Open JAM 1 (*1)	TOP Sensor Residual	PS2	Cassette 1
00	3003	Dooe Open JAM 1 (*1)	TOP Sensor Residual	PS2	Cassette 2
00	3007	Dooe Open JAM 1 (*1)	TOP Sensor Residual	PS2	Registration Area to Drum Area
00	3008	Dooe Open JAM 1 (*1)	Fixing Delivery Sensor Residual	PS13	Drum Area to Fixing Area
00	3009	Dooe Open JAM 1 (*1)	Delivery Tray Full Sensor Residual	PS4	Fixing Area to Delivery Area
00	300D	Dooe Open JAM 1 (*1)	Duplex Feed Sensor Residual	PS21	Duplex Feed Area
00	3807	Wrap JAM 1	TOP Sensor Stationary	PS2	Registration Area to Drum Area
00	3808	Wrap JAM 1	Fixing Delivery Sensor Stationary	PS13	Drum Area to Fixing Area
00	3809	Wrap JAM 1	Delivery Tray Full Sensor Stationary	PS4	Fixing Area to Delivery Area
00	4807	Duplex Re-pickup JAM 1	TOP Sensor Stationary	PS2	Registration Area to Drum Area
00	4808	Duplex Re-pickup JAM 1	Fixing Delivery Sensor Stationary	PS13	Drum Area to Fixing Area
00	4809	Duplex Re-pickup JAM 1	Delivery Tray Full Sensor Stationary	PS4	Fixing Area to Delivery Area
00	480C	Duplex Re-pickup JAM 1	Duplex Feed Sensor Stationary	PS21	Duplex Reversing Area
00	480D	Duplex Re-pickup JAM 1	Duplex Feed Sensor Stationary	PS21	Duplex Feed Area

*1:
It is a jam that appears when door open is detected during printing.
When the power is turned OFF and then ON while the door open jam is detected, it is displayed as an internal stationary jam instead of a door open jam.
*2:
It is a jam that appears when residual paper is detected in the machine at power-on.
When the power is turned OFF and then ON while the door open jam is detected, it is displayed as an internal stationary jam instead of a door open jam.

Alarm Code

Alarm Code	Area	Details	Cause	Remarks
10 - 0404	Developing Assembly, Host machine	Toner Bottle empty alarm	When the Toner Bottle empty was detected.	

9 Service Mode

Overview

Entering Service Mode

For information on how to enter service mode, contact the Support Dept. of the sales company.

Backing up Service Mode

Because setting values and management data of the host machine are stored in the eMMC of the Main Controller PCB, they need to be backed up before replacing the Main Controller PCB. (Do not remove the eMMC PCB form Main Controller PCB.) Also, restoration of the backup data is necessary after replacing the Main Controller PCB.

Backup: Connect a USB flash drive to the USB memory port.

COPIER > FUNCTION > SYSTEM > EXPORT

Restore: Restore backup data of the USB flash drive.

COPIER > FUNCTION > SYSTEM > IMPORT

NOTE:
As for the user data (the Settings/Registration data, etc.), be sure to back up the user data before replacing the Main Controller PCB and then restore it after replacement by either of the following methods:

Backup

- Menu > Management Settings > Data Management > Import/Export > Export
- Remote UI > Settings/Registration > Management Settings > Data Management > Import/Export > Export

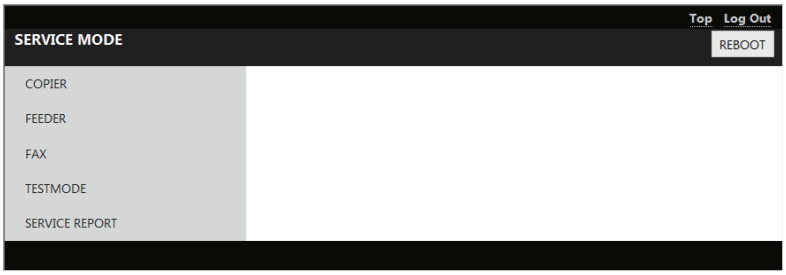
Restore

- Menu > Management Settings > Data Management > Import/Export > Import
- Remote UI > Settings/Registration > Management Settings > Data Management > Import/Export > Import

Remote UI Service Mode

■ Function Overview

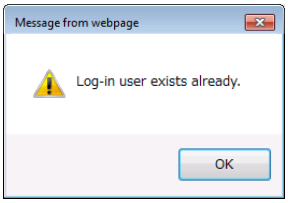
It is possible to display, configure, and execute various service mode modes as well as restart the host machine by using remote UI.



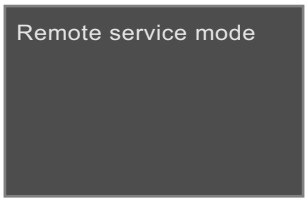
■ Operating conditions

In order to operate service mode using Remote UI, the following conditions must be met.

- Service mode is not used on the Control Panel.
  If service mode is accessed from the Control Panel of the host machine, "Log-in user exists already." is displayed when service mode is accessed from Remote UI.



- When Remote UI service mode (this function) is not being logged in by other users
  When service mode is being accessed from Remote UI, "Remote service mode" is displayed on the UI of the host machine.



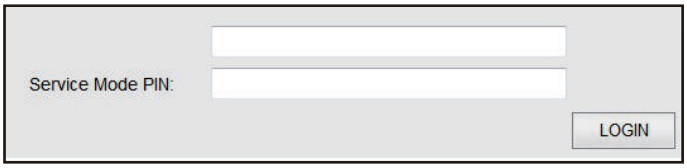
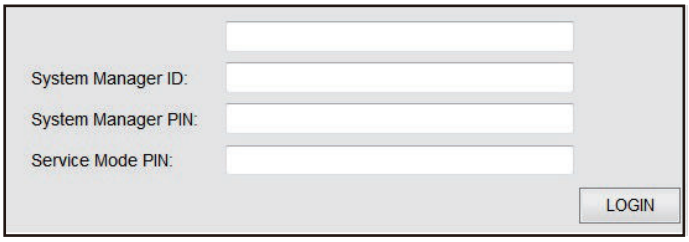
- When Remote UI is enabled in the setting on the Control Panel
  [Settings/Registration] > [System Settings] > [Remote UI Settings] > [Use Remote UI] > [ON]
- When the following setting (Remote UI service mode function) is enabled (setting value: 1) in service mode
  COPIER > OPTION > BODY > RMT-SW
  0:OFF(default), 1:ON

■ How to Use

1. **Activate the Web browser, and access the following URL:**
   http://<Host machine's IP address or host name>/servicemode.html

2. **Enter the password, and click [LOGIN].**
   Password required for authentication differs depending on the following service mode setting: `COPIER > OPTION > BODY > PSWD-SW`

Combinations of service mode settings and required passwords

PSWD-SW setting value	Password required for authentication	Authentication screen
0	• Password of remote UI service mode	
1	• Password of remote UI service mode • Service mode password	
2	• Password of RUI service mode • User's system administrator ID • Password of system administrator • Service mode password	

NOTE:
- If you do not know the password of remote UI service mode, contact the Support Dept. of the sales company.
- `Password of service mode can be changed in COPIER > OPTION > BODY > SM-PSWD.`

3. **If you do not know the password of remote UI service mode, contact the Support Dept. of the sales company. When finishing the operation, click [REBOOT] or [Log Out].**

NOTE:
If the user logged in and then closed the browser without logging out, connection status remains as "LOGIN". If the user attempts to log in to service mode under "LOGIN" status, exclusive control is executed so that the user cannot access service mode. In that case, wait for a fixed time (3 minutes) from the last access to let the user be automatically logged out, or turn OFF/ON the power of the machine to be forcibly logged out.

COPIER (Service mode for printer)

DISPLAY (State display mode)

■ VERSION

COPIER (Service mode for printer) > DISPLAY (State display mode) > VERSION

MAIN	**Display of Bootable version**
Detail	To display the firmware version of Main Controller PCB.
Use Case	When upgrading the firmware
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	00.00 to 99.99
BOOT	**Display of BootROM version**
Detail	To display the version of Boot ROM (BOOT program).
Use Case	When upgrading the firmware
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	00.00 to 99.99
LANG	**Display of language pack version**
Detail	To display the version of language pack.
Use Case	When upgrading the firmware
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	00.00 to 99.99
DEMODATA	**Display of demo print data version**
Detail	To display the version of demo print data. For the models not having demo print function, "FF.FF" is displayed.
Use Case	When upgrading the firmware
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	00.00 to 99.99
ECONT	**Display of DC Controller version**
Detail	To display the version of DC Controller PCB.
Use Case	When upgrading the firmware
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	00.00 to 99.99
PANEL	**Display of firmware version of panel**
Detail	To display the firmware version of Control Panel CPU PCB.
Use Case	When upgrading the firmware
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	00.00 to 99.99
Related Service Mode	COPIER> FUNCTION> SYSTEM> PANEL-UP
ECO	**For R&D**

ADJUST (Adjustment mode)

■ FEED-ADJ

COPIER (Service mode for printer) > ADJUST (Adjustment mode) > FEED-ADJ

ADJ-MFY	**Adjustment of write start position in feed direction at Multi-purpose Tray pickup (1-sided print/2nd side of 2-sided print)**
Detail	To adjust the image write start position in the feed direction at the time of pickup from the Multi-purpose Tray. As the value is changed by 1, the leading edge margin is changed by 0.001 mm. +: Leading edge margin becomes larger. (An image moves to the trailing edge side.) -: Leading edge margin becomes smaller. (An image moves to the leading edge side.) When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. The setting is applied to the 1st side at 1-sided print and the 2nd side at 2-sided print.
Use Case	When replacing the DC Controller PCB/clearing RAM data
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key) and press Apply key.
Caution	This setting is linked with the setting of [Adjust Print Position] in [Settings/Registration]. The setting value is not cleared even if COPIER> FUNCTION> CLEAR> SRVC-DAT is executed.
Display/Adj/Set Range	-5080 to 5080
Unit	0.001 mm
Default Value	0
Related Service Mode	COPIER> FUNCTION> CLEAR> SRVC-DAT
Additional Functions Mode	Adjustment/Maintenance> Adjust Image Quality> Adjust Print Position

ADJ-MFX	**Adjustment of write start position in horizontal scanning direction at Multi-purpose Tray pickup (1-sided print/2nd side of 2-sided print)**
Detail	To adjust the write start position in the horizontal scanning direction for the image on the 1st side at the time of pickup from the Multi-purpose Tray. As the value is changed by 1, the left margin is changed by 0.001 mm. +: Left margin becomes larger. (An image moves to the right.) -: Left margin becomes smaller. (An image moves to the left.) When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. The setting is applied to the 1st side at 1-sided print and the 2nd side at 2-sided print.
Use Case	When replacing the DC Controller PCB/clearing RAM data
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key) and press Apply key.
Caution	This setting is linked with the setting of [Adjust Print Position] in [Settings/Registration]. The setting value is not cleared even if COPIER> FUNCTION> CLEAR> SRVC-DAT is executed.
Display/Adj/Set Range	-5080 to 5080
Unit	0.001 mm
Default Value	0
Related Service Mode	COPIER> FUNCTION> CLEAR> SRVC-DAT
Additional Functions Mode	Adjustment/Maintenance> Adjust Image Quality> Adjust Print Position.

COPIER (Service mode for printer) > ADJUST (Adjustment mode) > FEED-ADJ

ADJ-MFYR	Adjustment of write start position in feed direction at Multi-purpose Tray pickup (1st side of 2-sided print)
Detail	To adjust the write start position in the feed direction for the image on the 2nd side at the time of pickup from the Multi-purpose Tray. As the value is changed by 1, the leading edge margin is changed by 0.001 mm. +: Leading edge margin becomes larger. (An image moves to the trailing edge side.) -: Leading edge margin becomes smaller. (An image moves to the leading edge side.) When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. The setting is applied to the 1st side at 2-sided print.
Use Case	When replacing the DC Controller PCB/clearing RAM data
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key) and press Apply key.
Caution	This setting is linked with the setting of [Adjust Print Position] in [Settings/Registration]. The setting value is not cleared even if COPIER> FUNCTION> CLEAR> SRVC-DAT is executed.
Display/Adj/Set Range	-5080 to 5080
Unit	0.001 mm
Default Value	0
Related Service Mode	COPIER> FUNCTION> CLEAR> SRVC-DAT
Additional Functions Mode	Adjustment/Maintenance> Adjust Image Quality> Adjust Print Position.

ADJ-MFXR	Adjustment of write start position in horizontal scanning direction at Multi-purpose Tray pickup (1st side of 2-sided print)
Detail	To adjust the write start position in the horizontal scanning direction for the image on the 2nd side at the time of pickup from the Multi-purpose Tray. As the value is changed by 1, the left margin is changed by 0.001 mm. +: Left margin becomes larger. (An image moves to the right.) -: Left margin becomes smaller. (An image moves to the left.) When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. The setting is applied to the 1st side at 2-sided print.
Use Case	When replacing the DC Controller PCB/clearing RAM data.
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key) and press Apply key.
Caution	This setting is linked with the setting of [Adjust Print Position] in [Settings/Registration]. The setting value is not cleared even if COPIER> FUNCTION> CLEAR> SRVC-DAT is executed.
Display/Adj/Set Range	-5080 to 5080
Unit	0.001 mm
Default Value	0
Related Service Mode	COPIER> FUNCTION> CLEAR> SRVC-DAT
Additional Functions Mode	Adjustment/Maintenance> Adjust Image Quality> Adjust Print Position.

COPIER (Service mode for printer) > ADJUST (Adjustment mode) > FEED-ADJ

ADJ-C1Y	Adjustment of write start position in feed direction at Cassette 1 pickup (1-sided print/2nd side of 2-sided print)
Detail	To adjust the image write start position in the feed direction at the time of pickup from the Cassette 1. As the value is changed by 1, the leading edge margin is changed by 0.001 mm. +: Leading edge margin becomes larger. (An image moves to the trailing edge side.) -: Leading edge margin becomes smaller. (An image moves to the leading edge side.) When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. The setting is applied to the 1st side at 1-sided print and the 2nd side at 2-sided print.
Use Case	When replacing the DC Controller PCB/clearing RAM data
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key) and press Apply key.
Caution	This setting is linked with the setting of [Adjust Print Position] in [Settings/Registration]. The setting value is not cleared even if COPIER> FUNCTION> CLEAR> SRVC-DAT is executed.
Display/Adj/Set Range	-5080 to 5080
Unit	0.001 mm
Default Value	0
Related Service Mode	COPIER> FUNCTION> CLEAR> SRVC-DAT
Additional Functions Mode	Adjustment/Maintenance> Adjust Image Quality> Adjust Print Position.

ADJ-C1X	Adjustment of write start position in horizontal scanning direction at Cassette 1 pickup (1-sided print/2nd side of 2-sided print)
Detail	To adjust the write start position in the horizontal scanning direction for the image on the 1st side at the time of pickup from the Cassette 1. As the value is changed by 1, the left margin is changed by 0.001 mm. +: Left margin becomes larger. (An image moves to the right.) -: Left margin becomes smaller. (An image moves to the left.) When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. The setting is applied to the 1st side at 1-sided print and the 2nd side at 2-sided print.
Use Case	When replacing the DC Controller PCB/clearing RAM data
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key) and press Apply key.
Caution	This setting is linked with the setting of [Adjust Print Position] in [Settings/Registration]. The setting value is not cleared even if COPIER> FUNCTION> CLEAR> SRVC-DAT is executed.
Display/Adj/Set Range	-5080 to 5080
Unit	0.001 mm
Default Value	0
Related Service Mode	COPIER> FUNCTION> CLEAR> SRVC-DAT
Additional Functions Mode	Adjustment/Maintenance> Adjust Image Quality> Adjust Print Position.

COPIER (Service mode for printer) > ADJUST (Adjustment mode) > FEED-ADJ

ADJ-C1YR	Adjustment of write start position in feed direction at Cassette 1 pickup (1st side of 2-sided print)
Detail	To adjust the write start position in the feed direction for the image on the 2nd side at the time of pickup from the Cassette 1. As the value is changed by 1, the leading edge margin is changed by 0.001 mm. +: Leading edge margin becomes larger. (An image moves to the trailing edge side.) -: Leading edge margin becomes smaller. (An image moves to the leading edge side.) When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. The setting is applied to the 1st side at 2-sided print.
Use Case	When replacing the DC Controller PCB/clearing RAM data
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key) and press Apply key.
Caution	This setting is linked with the setting of [Adjust Print Position] in [Settings/Registration]. The setting value is not cleared even if COPIER> FUNCTION> CLEAR> SRVC-DAT is executed.
Display/Adj/Set Range	-5080 to 5080
Unit	0.001 mm
Default Value	0
Related Service Mode	COPIER> FUNCTION> CLEAR> SRVC-DAT
Additional Functions Mode	Adjustment/Maintenance> Adjust Image Quality> Adjust Print Position.

ADJ-C1XR	Adjustment of write start position in horizontal scanning direction at Cassette 1 pickup (1st side of 2-sided print)
Detail	To adjust the write start position in the horizontal scanning direction for the image on the 2nd side at the time of pickup from the Cassette 1. As the value is changed by 1, the left margin is changed by 0.001 mm. +: Left margin becomes larger. (An image moves to the right.) -: Left margin becomes smaller. (An image moves to the left.) When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. The setting is applied to the 1st side at 2-sided print.
Use Case	When replacing the DC Controller PCB/clearing RAM data
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key) and press Apply key.
Caution	This setting is linked with the setting of [Adjust Print Position] in [Settings/Registration]. The setting value is not cleared even if COPIER> FUNCTION> CLEAR> SRVC-DAT is executed.
Display/Adj/Set Range	-5080 to 5080
Unit	0.001 mm
Default Value	0
Related Service Mode	COPIER> FUNCTION> CLEAR> SRVC-DAT
Additional Functions Mode	Adjustment/Maintenance> Adjust Image Quality> Adjust Print Position.

COPIER (Service mode for printer) > ADJUST (Adjustment mode) > FEED-ADJ

ADJ-C2Y	**Adjustment of write start position in feed direction at Cassette 2 pickup (1-sided print/2nd side of 2-sided print)**
Detail	To adjust the image write start position in the feed direction at the time of pickup from the Cassette 2. As the value is changed by 1, the leading edge margin is changed by 0.001 mm. +: Leading edge margin becomes larger. (An image moves to the trailing edge side.) -: Leading edge margin becomes smaller. (An image moves to the leading edge side.) When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. The setting is applied to the 1st side at 1-sided print and the 2nd side at 2-sided print.
Use Case	When replacing the DC Controller PCB/clearing RAM data
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key) and press Apply key.
Caution	This setting is linked with the setting of [Adjust Print Position] in [Settings/Registration]. The setting value is not cleared even if COPIER> FUNCTION> CLEAR> SRVC-DAT is executed.
Display/Adj/Set Range	-5080 to 5080
Unit	0.001 mm
Default Value	0
Related Service Mode	COPIER> FUNCTION> CLEAR> SRVC-DAT
Additional Functions Mode	Adjustment/Maintenance> Adjust Image Quality> Adjust Print Position.

ADJ-C2X	**Adjustment of write start position in horizontal scanning direction at Cassette 2 pickup (1-sided print/2nd side of 2-sided print)**
Detail	To adjust the write start position in the horizontal scanning direction for the image on the 1st side at the time of pickup from the Cassette 2. As the value is changed by 1, the left margin is changed by 0.001 mm. +: Left margin becomes larger. (An image moves to the right.) -: Left margin becomes smaller. (An image moves to the left.) When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. The setting is applied to the 1st side at 1-sided print and the 2nd side at 2-sided print.
Use Case	When replacing the DC Controller PCB/clearing RAM data
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key) and press Apply key.
Caution	This setting is linked with the setting of [Adjust Print Position] in [Settings/Registration]. The setting value is not cleared even if COPIER> FUNCTION> CLEAR> SRVC-DAT is executed.
Display/Adj/Set Range	-5080 to 5080
Unit	0.001 mm
Default Value	0
Related Service Mode	COPIER> FUNCTION> CLEAR> SRVC-DAT
Additional Functions Mode	Adjustment/Maintenance> Adjust Image Quality> Adjust Print Position.

COPIER (Service mode for printer) > ADJUST (Adjustment mode) > FEED-ADJ

ADJ-C2YR	**Adjustment of write start position in feed direction at Cassette 2 pickup (1st side of 2-sided print)**
Detail	To adjust the write start position in the feed direction for the image on the 2nd side at the time of pickup from the Cassette 2. As the value is changed by 1, the leading edge margin is changed by 0.001 mm. +: Leading edge margin becomes larger. (An image moves to the trailing edge side.) -: Leading edge margin becomes smaller. (An image moves to the leading edge side.) When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. The setting is applied to the 1st side at 2-sided print.
Use Case	When replacing the DC Controller PCB/clearing RAM data
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key) and press Apply key.
Caution	This setting is linked with the setting of [Adjust Print Position] in [Settings/Registration]. The setting value is not cleared even if COPIER> FUNCTION> CLEAR> SRVC-DAT is executed.
Display/Adj/Set Range	-5080 to 5080
Unit	0.001 mm
Default Value	0
Related Service Mode	COPIER> FUNCTION> CLEAR> SRVC-DAT
Additional Functions Mode	Adjustment/Maintenance> Adjust Image Quality> Adjust Print Position.

ADJ-C2XR	**Adjustment of write start position in horizontal scanning direction at Cassette 2 pickup (1st side of 2-sided print)**
Detail	To adjust the write start position in the horizontal scanning direction for the image on the 2nd side at the time of pickup from the Cassette 2. As the value is changed by 1, the left margin is changed by 0.001 mm. +: Left margin becomes larger. (An image moves to the right.) -: Left margin becomes smaller. (An image moves to the left.) When replacing the DC Controller PCB/clearing RAM data, enter the value of service label. The setting is applied to the 1st side at 2-sided print.
Use Case	When replacing the DC Controller PCB/clearing RAM data
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key) and press Apply key.
Caution	This setting is linked with the setting of [Adjust Print Position] in [Settings/Registration]. The setting value is not cleared even if COPIER> FUNCTION> CLEAR> SRVC-DAT is executed.
Display/Adj/Set Range	-5080 to 5080
Unit	0.001 mm
Default Value	0
Related Service Mode	COPIER> FUNCTION> CLEAR> SRVC-DAT
Additional Functions Mode	Adjustment/Maintenance> Adjust Image Quality> Adjust Print Position.

■ PANEL

■ VIFADJ

COPIER (Service mode for printer) > ADJUST (Adjustment mode) > VIFADJ

DEV-HV-K	**For R&D**
FU-TMP	**For R&D**
CRG-HV-K	**For R&D**
LS-PWR-K	**For R&D**
TR-HV	**For R&D**

FUNCTION (Operation / inspection mode)

■ INSTALL

COPIER (Service mode for printer) > FUNCTION (Operation / inspection mode) > INSTALL

ERDS	ON/OFF of Embedded-RDS
Detail	To set whether to use the Embedded-RDS function.
Use Case	When using Embedded-RDS
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Caution	Be sure to use ERDS, RGW-PORT, COM-TEST, COM-RSLT, and COM-LOG as a set.
Display/Adj/Set Range	0 to 1 0: OFF 1: ON
Default Value	It differs according to the location.
Related Service Mode	COPIER> FUNCTION> INSTALL> RGW-PORT, COM-TEST, COM-RSLT, COM-LOG
Supplement/Memo	Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to UGW via SOAP protocol UGW (Universal Gate Way): Remote monitoring service system

RGW-PORT	Setting of UGW port number when using Embedded-RDS
Detail	To set the port number of UGW to be used for Embedded-RDS.
Use Case	When using Embedded-RDS
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Caution	Be sure to use ERDS, RGW-PORT, COM-TEST, COM-RSLT, and COM-LOG as a set.
Display/Adj/Set Range	1 to 65535
Default Value	443
Related Service Mode	COPIER> FUNCTION> INSTALL> ERDS, COM-TEST, COM-RSLT, COM-LOG
Supplement/Memo	Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to the sales company's server via SOAP protocol

COM-TEST	Execution of Embedded-RDS communication test
Detail	To execute Embedded-RDS communication test. If the connection fails, the information is added to the communication error log.
Use Case	When using E-RDS
Adj/Set/Operate Method	Select the item, and then press Yes key.
Caution	Be sure to use ERDS, RGW-PORT, COM-TEST, COM-RSLT, and COM-LOG as a set.
Related Service Mode	COPIER> FUNCTION> INSTALL> ERDS, RGW-PORT, COM-RSLT, COM-LOG
Supplement/Memo	Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to UGW via SOAP protocol UGW (Universal Gate Way): Remote monitoring service system

COPIER (Service mode for printer) > FUNCTION (Operation / inspection mode) > INSTALL

COM-RSLT	Display of Embedded-RDS comctn test result
Detail	To display the Embedded-RDS communication test result.
Use Case	When using E-RDS
Adj/Set/Operate Method	N/A (Display only)
Caution	Be sure to use ERDS, RGW-PORT, COM-TEST, COM-RSLT, and COM-LOG as a set.
Display/Adj/Set Range	When not in execution: Unknown When connection is completed: OK When connection is failed: NG
Default Value	Unknown
Related Service Mode	COPIER> FUNCTION> INSTALL> ERDS, RGW-PORT, COM-TEST, COM-LOG
Supplement/Memo	Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to UGW via SOAP protocol UGW (Universal Gate Way): Remote monitoring service system

COM-LOG	Display of Embedded-RDS comctn error log
Detail	To display the Embedded-RDS communication error log. The dates, times, and error codes of the latest 5 errors that occurred are displayed. As for the error detail information, the report can be output by executing ERDS-LOG.
Use Case	When using Embedded-RDS
Adj/Set/Operate Method	N/A (Display only)
Caution	Be sure to use ERDS, RGW-PORT, COM-TEST, COM-RSLT, and COM-LOG as a set.
Display/Adj/Set Range	Date: 6 digits Time: 4 digits Error code: 8 digits
Related Service Mode	COPIER> FUNCTION> INSTALL> ERDS, RGW-PORT, COM-TEST, COM-RSLT COPIER> FUNCTION> MISC-P> ERDS-LOG
Supplement/Memo	Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to UGW via SOAP protocol UGW (Universal Gate Way): Remote monitoring service system

■ CLEAR

COPIER (Service mode for printer) > FUNCTION (Operation / inspection mode) > CLEAR

SRVC-DAT	Clearing of service mode setting values
Detail	To clear the service mode setting values. The user mode setting values are not cleared. The factory adjustment values of the Reader/ADF are not initialized.
Adj/Set/Operate Method	1) Select the item, and then press Yes key. 2) Turn OFF/ON the main power switch.

COUNTER	Clearing of service counter
Detail	To clear the counter by maintenance/part. The numerator printed on a system dump list becomes 0.
Adj/Set/Operate Method	1) Select the item, and then press Yes key. 2) Turn OFF/ON the main power switch.

HIST	Clearing of logs
Detail	To clear the communication management/print/jam/alarm/error log.
Use Case	When clearing logs
Adj/Set/Operate Method	1) Select the item, and then press Yes key. 2) Turn OFF/ON the main power switch.

COPIER (Service mode for printer) > FUNCTION (Operation / inspection mode) > CLEAR

ALL	Clearing of setting information
Detail	To clear/initialize the following setting information according to the location set in LOCALE and SIZE-LC. - User mode setting values - Service mode setting values (excluding the service counter) - ID and password of the system administrator - Communication management/print/jam/alarm/error log - E719 error (counter meter-installed models only) The following items are not cleared/initialized. - Service counter - Factory adjustment values of the Reader/ADF
Use Case	At installation
Adj/Set/Operate Method	1) Select the item, and then press Yes key. 2) Turn OFF/ON the main power switch.
Default Value	0
Related Service Mode	COPIER> OPTION> BODY> LOCALE, SIZE-LC COPIER> FUNCTION> CLEAR> E719-CLR

ERDS-DAT	Initialize of Embedded-RDS setting value
Detail	To initialize the Embedded-RDS setting values. ON/OFF of Embedded-RDS, UGW port number and communication error log set in ERDS, RGW-PORT, and COM-LOG are cleared.
Use Case	When upgrading the Bootable in the Embedded-RDS environment
Adj/Set/Operate Method	Select the item, and then press Yes key.
Caution	Use of the SRAM in Embedded-RDS differs depending on the Bootable version. Therefore, unless initialization is executed at the time of version upgrade, data inconsistency occurs.
Related Service Mode	COPIER> FUNCTION> INSTALL> ERDS, RGW-PORT, COM-LOG
Supplement/Memo	Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to UGW via SOAP protocol UGW (Universal Gate Way): Remote monitoring service system

PLPW-CLR	Clear security policy setting password
Detail	To clear the password of the security administrator set in the security policy settings.
Use Case	When clearing the password of the security administrator
Adj/Set/Operate Method	Select the item, and then press Yes key.

CRGL-CNT	Clearing of cartridge replacement log
Detail	To clear the cartridge replacement log.
Adj/Set/Operate Method	Select the item, and then press Yes key.
Caution	The number of detections of non-genuine cartridge and the page count of non-genuine cartridge can be reset. However, exchange Log is not reset.
Related Service Mode	COPIER> FUNCTION> MISC-P> CRG-LOG

■ MISC-P

COPIER (Service mode for printer) > FUNCTION (Operation / inspection mode) > MISC-P

SRVC-DAT	Output system data list/system dump list
Detail	To output the system data list and the system dump list in the form of a report. System data list: The service software switches and parameters used in FAX function System dump list: The number of sends/receives, the number of pages sent/received, the number of sheets printed/read, the number of errors, etc.
Adj/Set/Operate Method	Select the item, and then press Yes key.
Supplement/Memo	FAX model only

COPIER (Service mode for printer) > FUNCTION (Operation / inspection mode) > MISC-P

CNTR	**Output of counter report**
Detail	To output the counter values in the form of a report. The usage of functions (reading, recording, communication and copy) is output.
Adj/Set/Operate Method	Select the item, and then press Yes key.
ERR-LOG	**Output of error log report**
Detail	To output the error log in the form of a report.
Adj/Set/Operate Method	Select the item, and then press Yes key.
SPEC	**Output of spec report**
Detail	To output the specifications in the form of a report. The current device specifications such as the location, model information, and ROM version are output.
Adj/Set/Operate Method	Select the item, and then press Yes key.
ERDS-LOG	**Output of Embedded-RDS log report**
Detail	To output the log relating to Embedded-RDS in the form of a report. The date, time, and code (8 digits) of each error that occurred are output.
Use Case	When using Embedded-RDS
Adj/Set/Operate Method	Select the item, and then press Yes key.
Related Service Mode	COPIER> FUNCTION> INSTALL> COM-LOG
Supplement/Memo	Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to UGW via SOAP protocol UGW (Universal Gate Way): Remote monitoring service system
CRG-LOG	**Output cartridge replacement log report**
Detail	To output the cartridge replacement log in the form of a report.
Use Case	When checking the cartridge replacement log
Adj/Set/Operate Method	Select the item, and then press Yes key.

■ SYSTEM

COPIER (Service mode for printer) > FUNCTION (Operation / inspection mode) > SYSTEM

DOWNLOAD	**Upgrading of machine firmware:difference**
Detail	To upgrade the machine firmware using a USB flash drive. Compare the versions of firmware in the machine and the USB flash drive, and update the differences.
Use Case	At upgrade
Adj/Set/Operate Method	1) Connect the USB flash drive. 2) Select the item, and then press Yes key. The machine restarts in download mode.
Caution	Do not turn OFF/ON the power before "Executing..." disappears.
Related Service Mode	COPIER> FUNCTION> SYSTEM> DL-FORCE
PANEL-UP	**Upgrading of Control Panel CPU PCB firm**
Detail	To upgrade the firmware of the Control Panel CPU PCB using a USB flash drive. Upgrading is performed when PANEL exists in the root directory of the USB flash drive.
Use Case	At upgrade
Adj/Set/Operate Method	1. Connect the USB flash drive. 2. Select the item, and then press Yes. 3. Turn OFF/ON the main power.
Caution	Do not turn OFF/ON the power before "Executing..." disappears.
Related Service Mode	COPIER> DISPLAY> VERSION> PANEL

COPIER (Service mode for printer) > FUNCTION (Operation / inspection mode) > SYSTEM

LOGWRITE	**Writing sublog to USB flash drive**
Detail	To write sublog that includes the following information to the USB flash drive. - Job list (job names, user names, and destinations) - Communications log (destinations and user names) - Job log (user names and job names)
Use Case	When analyzing the cause of a problem
Adj/Set/Operate Method	1. Connect the USB flash drive. 2. Select the item, and then press Yes. 3. Turn OFF/ON the main power.
Caution	Do not turn OFF/ON the power before "Executing..." disappears.
Related Service Mode	COPIER> FUNCTION> SYSTEM> LOG2USB
IMPORT	**Read s-mode set VL from USB flash drive**
Detail	To read the service mode setting information (excluding those related to Reader/ADF) from the USB flash drive.
Use Case	When replacing the Main Controller PCB
Adj/Set/Operate Method	1. Connect the USB flash drive. 2. Select the item, and then press Yes. 3. Turn OFF/ON the main power.
Caution	Do not turn OFF/ON the power before "Executing..." disappears.
Related Service Mode	COPIER> FUNCTION> SYSTEM> EXPORT
EXPORT	**Writing of service mode setting value to USB memory**
Detail	To write the service mode setting information (excluding those related to Reader/ADF) to the USB flash drive.
Use Case	When replacing the Main Controller PCB
Adj/Set/Operate Method	1) Connect the USB flash drive. 2) Select the item, and then press Yes key. "Executing..." disappears when writing is completed.
Related Service Mode	COPIER> FUNCTION> SYSTEM> IMPORT
LOG2USB	**Writing of debug log to USB flash drive**
Detail	To write the debug log stored in the eMMC PCB to the USB flash drive.
Use Case	When analyzing the cause of a problem
Adj/Set/Operate Method	1) Connect the USB flash drive. 2) Select the item, and then press Yes key.
Related Service Mode	COPIER> FUNCTION> SYSTEM> LOGWRITE
LOG-DEL	**Deletion of debug log**
Detail	To delete the debug log stored in the eMMC PCB.
Use Case	When the debug log is no longer needed
Adj/Set/Operate Method	Select the item, and then press Yes key.
DL-FORCE	**Install machine firmware: overwriting**
Detail	To forcibly overwrite the machine firmware with the firmware stored in the USB flash drive.
Use Case	At upgrade/downgrade
Adj/Set/Operate Method	1) Connect the USB flash drive. 2) Select the item, and then press Yes key.
Caution	Do not turn OFF/ON the power before "Executing..." disappears.
Related Service Mode	COPIER> FUNCTION> SYSTEM> DOWNLOAD

■ SPLMAN

COPIER (Service mode for printer) > FUNCTION (Operation / inspection mode) > SPLMAN

SPL14159	ON/OFF of USB device ID fixing
Detail	To set whether to fix the USB device ID to "000000000000". A PC attempts to install the driver every time it is connected to a machine. However, by fixing the USB device ID, it recognizes that the same machine is connected so that it does not attempt to install the driver again.
Use Case	When saving the trouble of selecting a device used for printing from the candidate devices because the driver is installed every time a USB is connected
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	0 to 1 0: OFF, 1: ON
Default Value	0

SPL65677	Increase of paper leading edge margin
Detail	To increase the margin on the leading edge of paper. As the value is incremented by 1, the margin is increased by 0.1 mm. Actually, a value where the setting value of SPL68676 is subtracted from the setting value of this item is applied. The margin settings which are job-specific or based on the printable area are applied regardless of the setting of this item.
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	0 to 20
Unit	0.1 mm
Default Value	0
Related Service Mode	COPIER> FUNCTION> SPLMAN> SPL68676

SPL68676	Decrease of paper leading edge margin
Detail	To decrease the margin on the leading edge of paper. As the value is incremented by 1, the margin is decreased by 0.1 mm. Actually, a value where the setting value of this item is subtracted from the setting value of SPL65677 is applied. The margin settings which are job-specific or based on the printable area are applied regardless of the setting of this item.
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	0 to 20
Unit	0.1 mm
Default Value	0
Related Service Mode	COPIER> FUNCTION> SPLMAN> SPL65677

COPIER (Service mode for printer) > FUNCTION (Operation / inspection mode) > SPLMAN

SPL68677	Increase of the left edge margin of paper
Detail	To increase the margins on the left edge of paper. As the value is incremented by 1, the margin is increased by 0.1 mm. Actually, a value where the setting value of SPL25607 is subtracted from the setting value of this item is applied. The margin settings which are job-specific or based on the printable area are applied regardless of the setting of this item.
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	0 to 20
Unit	0.1 mm
Default Value	0
Related Service Mode	COPIER> FUNCTION> SPLMAN> SPL25607

SPL25607	Decrease of the left edge margin of paper
Detail	To decrease the margins on the left edge of paper. As the value is incremented by 1, the margin is decreased by 0.1 mm. Actually, a value where the setting value of this item is subtracted from the setting value of SPL68677 is applied. The margin settings which are job-specific or based on the printable area are applied regardless of the setting of this item.
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	0 to 20
Unit	0.1 mm
Default Value	0
Related Service Mode	COPIER> FUNCTION> SPLMAN> SPL68677

SPL93822	Setting of department ID count all clear
Detail	To set whether to disable clearing of all department ID counts.
Use Case	When prohibiting clearing of all department ID counts
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Caution	Be sure to perform this mode after consulting with the system administrator at user's site.
Display/Adj/Set Range	0 to 1 0: Disabled 1: Enabled
Default Value	0
Related Service Mode	COPIER> FUNCTION> SPLMAN> SPL78788

SPL78788	Setting of department ID count clear
Detail	To set whether to disable clearing of department ID count.
Use Case	When prohibiting clearing of department ID count
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Caution	Be sure to perform this mode after consulting with the system administrator at user's site.
Display/Adj/Set Range	0 to 1 0: Disabled 1: Enabled
Default Value	0
Related Service Mode	COPIER> FUNCTION> SPLMAN> SPL93822

COPIER (Service mode for printer) > FUNCTION (Operation / inspection mode) > SPLMAN

SPL71100	Setting of the duty of Off-hook PCB
Detail	This is the mode to make handsets of particular manufacturers to ring when fax reception mode is set to "Fax / Tel (Auto Switch)".
Use Case	When making the handsets of particular manufacturers to ring at the time of switching Fax/Tel
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	1 to 99
Default Value	50
Supplement/Memo	FAX model only

SPL00171	Set auto sleep shift time maximum value
Detail	To set the maximum auto sleep shift time displayed in [Auto Sleep Time] in [Settings/Registration]. When 0 is set, the time that can be set is 60 minutes maximum.
Use Case	When changing the setting time to shift to auto sleep mode
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	0 to 1 0: 60 minutes 1: Time specified for each model
Default Value	0 (Europe)/1 (Others)
Additional Functions Mode	Timer Settings> Auto Sleep Time

SPL27354	For R&D

SPL84194	ON/OFF of Embedded-RDS
Detail	To set ON/OFF of Embedded-RDS function.
Use Case	When using Embedded-RDS
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	0 to 1 0: ON, 1: OFF
Default Value	It differs according to the location.
Supplement/Memo	Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to UGW via SOAP protocol UGW (Universal Gate Way): Remote monitoring service system

SPL32620	ON/OFF of PC-less update function
Detail	To set whether to disable the PC-less update function.
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF / ON the main power switch.
Caution	When LCDSFLG is 1, the setting of this item is disabled (the PC-less update function is turned OFF).
Display/Adj/Set Range	0 to 1 0: OFF, 1: ON
Default Value	1
Related Service Mode	COPIER> OPTION> FNC-SW> LCDSFLG
Supplement/Memo	PC-less update: A function to directly download the firmware from the GDLS server and update it.

COPIER (Service mode for printer) > FUNCTION (Operation / inspection mode) > SPLMAN

SPL60061	**Dspl/hide cloud print connct dest URL chng scrn**
Detail	To set whether to display or hide the connection destination URL settings for Google Cloud Print on remote UI.
Use Case	When Google has changed the connection destination URL for cloud print
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF / ON the main power switch.
Display/Adj/Set Range	0 to 1 0: Display 1: Hide
SPL01734	**ON/OFF of remote UI service mode**
Detail	To set whether to allow using service mode on remote UI.
Use Case	When using service mode on remote UI
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Caution	The setting value is linked with that of RMT-SW.
Display/Adj/Set Range	0 to 1 0: OFF, 1: ON
Default Value	0
Related Service Mode	COPIER> OPTION> BODY> RMT-SW
SPL78148	**For R&D**
SPL39533	**ON/OFF of department ID management**
Detail	To set whether to disable the department ID management.
Use Case	When disabling the department ID management
Adj/Set/Operate Method	Select the item, and then press Yes key.
SPL43810	**Clear of system administrator settings**
Detail	To completely delete the following setting information. - System Manager ID - PIN After clearing of the information, it is necessary to set the system manager ID/PIN again.
Use Case	When the system manager ID/PIN has been forgotten
Adj/Set/Operate Method	Select the item, and then press Yes key.
Caution	Do not forget to set the system manager ID/PIN after clearing of the information.
SPL97097	**ON/OFF of user setting backup data clear**
Detail	To set whether to clear all the user setting data which has been backed up. When 1 is set, it is cleared at next startup.
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0 to 1 0: OFF, 1: ON
Default Value	1

OPTION (Specification setting mode)

■ BODY

COPIER (Service mode for printer) > OPTION (Specification setting mode) > BODY

LOCALE	Setting of location
Detail	To set the location. Set the location in this item and the paper size configuration in SIZE-LC, and then clear the setting information in ALL.
Use Case	- When replacing the Main Controller PCB - When changing the location information
Adj/Set/Operate Method	1) Enter the setting value in this item, and then press Apply key. 2) Set the paper size configuration in SIZE-LC. 3) Execute ALL. 4) Turn OFF/ON the main power switch.
Caution	The setting information such as user mode and service mode is initialized by executing ALL. The settings of this item and SIZE-LC are not initialized.
Display/Adj/Set Range	1 to 10 1: Japan 2: North America 3: Korea 4: China 5: Taiwan 6: Europe 7: Asia 8: Oceania 9: Brazil 10: Latin
Related Service Mode	COPIER> FUNCTION> CLEAR> ALL COPIER> OPTION> BODY> SIZE-LC

SIZE-LC	Setting of paper size configuration
Detail	To set the paper size configuration. When replacing the Main Controller PCB, set the location in LOCALE and the paper size configuration in this item, and then clear the setting information in ALL.
Use Case	- When replacing the Main Controller PCB - Upon user's request
Adj/Set/Operate Method	1) Set the location in LOCALE. 2) Enter the setting value in this item, and then press Apply key. 3) Execute ALL. 4) Turn OFF/ON the main power switch.
Caution	The setting information such as user mode and service mode is initialized by executing ALL. The settings of this item and LOCALE are not initialized.
Display/Adj/Set Range	1 to 4 1: AB configuration 2: Inch configuration 3: A configuration 4: AB/Inch configuration
Related Service Mode	COPIER> FUNCTION> CLEAR> ALL COPIER> OPTION> BODY> LOCALE

MIBCOUNT	For R&D

COPIER (Service mode for printer) > OPTION (Specification setting mode) > BODY

NS-CMD5	Limit CRAM-MD5 auth method: SMTP auth
Detail	To restrict use of CRAM-MD5 authentication method at the time of SMTP authentication.
Use Case	Upon user's request
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	0 to 1 0: SMTP server-dependent 1: Not used
Default Value	0
Supplement/Memo	SMTP authentication: Protocol in which user authentication function is added to SMTP, which is the protocol to be used for e-mail transmission. At the time of e-mail transmission, this protocol executes authentication of the user account and the password between the SMTP server and the user to approve e-mail transmission only when it's authenticated.

NS-PLN	Limit plaintext auth: SMTP auth, noencry
Detail	To restrict use of PLAIN/LOGIN authentication, which is plaintext, at the time of SMTP authentication under the environment where the communication packet is not encrypted.
Use Case	Upon user's request
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	0 to 1 0: SMTP server-dependent 1: Not used
Default Value	0
Supplement/Memo	SMTP authentication: Protocol in which user authentication function is added to SMTP, which is the protocol to be used for e-mail transmission. At the time of e-mail transmission, this protocol executes authentication of the user account and the password between the SMTP server and the user to approve e-mail transmission only when it's authenticated.

NS-LGN	Limit LOGIN authentication: SMTP auth
Detail	To restrict use of LOGIN authentication at the time of SMTP authentication.
Use Case	Upon user's request
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	0 to 1 0: SMTP server-dependent 1: Not used
Default Value	0
Supplement/Memo	SMTP authentication: Protocol in which user authentication function is added to SMTP, which is the protocol to be used for e-mail transmission. At the time of e-mail transmission, this protocol executes authentication of the user account and the password between the SMTP server and the user to approve e-mail transmission only when it's authenticated.

SLPMODE	Setting of shift to sleep mode
Detail	To restrict shift to sleep mode 1/sleep mode 3. When 1 is set, the machine does not shift to sleep mode.
Use Case	When sleep failure occurs
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	0 to 1 0 : Shift is available. 1 : Shift is not available.
Default Value	0

COPIER (Service mode for printer) > OPTION (Specification setting mode) > BODY

SDTM-DSP	ON/OFF of auto shutdown shift time dspl
Detail	To set whether to display [Auto Shutdown Time] in [Menu]. The setting is enabled only for the model with automatic shutdown function.
Use Case	When switching to display or hide the items related to auto shutdown
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Caution	For the model without automatic shutdown function, the setting is disabled even if it is configured.
Display/Adj/Set Range	0 to 1 0: OFF 1: ON
Default Value	It differs according to the location.
Additional Functions Mode	Preferences> Timer/Energy Settings> Auto Shutdown Time

RMT-SW	ON/OFF of remote UI service mode
Detail	To set whether to allow using service mode on remote UI.
Use Case	When using service mode on remote UI
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	0 to 1 0: OFF, 1: ON
Default Value	0

PSWD-SW	Set password type to enter service mode
Detail	To set the type of password that is required to enter when getting into service mode. 2 types are available: one for "service technician" and the other for "system administrator + service technician". When selecting the type for "system administrator + service technician", enter the password for service technician after the password entry by the user's system administrator.
Use Case	Upon request from the user who concerns security
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	0 to 2 0: No password 1: Service technician 2: System administrator + service technician
Default Value	0

SM-PSWD	Password setting for service technician
Detail	To set password for service technician that is used when getting into service mode.
Use Case	When password is required to get into service mode
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Caution	Be sure to select 1 or 2 with PSWD-SW in advance.
Display/Adj/Set Range	11111111 to 99999999
Default Value	11111111
Related Service Mode	COPIER> OPTION> BODY> PSWD-SW

■ FNC-SW

COPIER (Service mode for printer) > OPTION (Specification setting mode) > FNC-SW

LCDSFLG	Enabling of local CDS server
Detail	To set whether to use the local CDS server.
Use Case	When using the local CDS server
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0 to 1 0: Disabled 1: Enabled
Default Value	0
Related Service Mode	COPIER> FUNCTION> SPLMAN> SPL32620
Supplement/Memo	When local CDS is used, iW EMC/MC device firmware update plug-in is required.

CRG-PROC	Set oprtn at cartridge estd life reach
Detail	To set the operation of the machine when the parts counter of the cartridge reaches the estimated life value.
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0 to 2 0: Not stopped 1: Stopped once 2: Completely stopped
Default Value	0

CRGLF-K	Set replacement ref VL (Bk): drum, etc.
Detail	To set the reference values for judging replacement of the component other than toner (Photosensitive Drum, Developing Assembly, and waste toner) included in the life of Bk-color cartridge. These values are used as the basis for calculation of component other than toner when deriving the estimated life value of the cartridge.
Use Case	When toner consumption is low (when the life of the Photosensitive Drum or the Developing Assembly decreases faster than that of toner)
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	100 to 200
Unit	1%
Default Value	100

RPT2SIDE	Set of report 1-sided/2-sided output
Detail	To set whether to use 1-sided or 2-sided for report output of service mode.
Use Case	When making 1-sided report output
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0 to 1 0: 1-sided 1: 2-sided
Default Value	1

■ DSPLY-SW

COPIER (Service mode for printer) > OPTION (Specification setting mode) > DSPLY-SW

CRGLW-LV	ON/OFF ctrdg prep thrshld set scrn dspl
Detail	To set whether to display the screen to set the threshold value for the toner level to prompt preparation of a cartridge. When 1 is set, [Custom] is displayed in [Display Timing for Cartridge Prep. Notif.] so that the user can set the toner level (1 to 99%). When 0 is set, the item is not displayed, so the user cannot set the toner level.
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0 to 1 0: OFF, 1: ON
Default Value	1
Additional Functions Mode	Preferences > Display Settings > Display Timing for Cartridge Prep. Notif.

CRG-LOG	ON/OFF of [Cartridge Log Report] display
Detail	To set whether to display [Cartridge Log Report] in [Settings/Registration].
Use Case	When not allowing the user to output the cartridge log report
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0 to 1 0: OFF 1: ON
Default Value	1
Additional Functions Mode	Output Report> Print List> Cartridge Log Report

■ IMG-MCON

COPIER (Service mode for printer) > OPTION (Specification setting mode) > IMG-MCON

REGM-SEL	Adjustment of fine density correction
Detail	To adjust the fine line and text density at 1200 dpi. As the value is larger, the image gets darker.
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key) and press Apply key.
Display/Adj/Set Range	-1 to 1
Default Value	0

■ USER

COPIER (Service mode for printer) > OPTION (Specification setting mode) > USER

PS-MODE	Setting of compatible mode at PS usage
Detail	To set the image processing at PS print. Set 8 when line width differs depending on the drawing position although the same line width is set. Setting of a value other than the setting values means that multiple settings are combined. (Example: 12=4+8)
Use Case	Upon user's request
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	0 to 63 8: strokeadjustment is enabled Any value other than those mentioned above: Not used
Default Value	0

COPIER (Service mode for printer) > OPTION (Specification setting mode) > USER

SMD-EXPT	Set of service mode set VL export target
Detail	To set whether to export "service mode data" from remote UI. When 1 is set, "service mode data" is displayed as the target data of export on remote UI. When installing more than 1 machine at the same time, the same service mode data can be registered.
Use Case	When installing more than 1 machine at the same time
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	0 to 1 0: Not targeted 1: Targeted
Default Value	0
Supplement/Memo	If selecting "service mode data" as the target data of export on remote UI after setting SMD-EXPT to 1, service mode data can be exported.

RPL-IMP	ON/OFF of replacement mode
Detail	To set whether to import the setting information of a machine which has been exported to a different one of the same model using DCM function. When 0 is set, the setting information which has been exported can be imported only to the same machine. When 1 is set, the machine-specific setting information such as IPv4 address setting can be imported to a different machine.
Use Case	When migrating the setting of a machine to a different machine of the same series that has been replaced
Display/Adj/Set Range	0 to 1 0: OFF, 1: ON
Default Value	0
Supplement/Memo	DCM (Device Configuration Management): A function to export/import the machine's setting information as a file.

■ ACC

COPIER (Service mode for printer) > OPTION (Specification setting mode) > ACC

WLAN	Setting of wireless LAN function
Detail	To set whether to enable the wireless LAN function.
Use Case	Upon user's request
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Display/Adj/Set Range	0 to 1 0: Disabled 1: Enabled
Default Value	It differs according to the model.

■ LCNS-OF

COPIER (Service mode for printer) > OPTION (Specification setting mode) > LCNS-OF

ST-BRDIM	Not use

■ SERIAL

COPIER (Service mode for printer) > OPTION (Specification setting mode) > SERIAL

SN-MAIN	Registration of serial number
Detail	To write the serial number of this machine in the Main Controller PCB. When this item is executed, the 1-byte alphanumeric characters entered in [Location] in [Settings/Registration] are written in the Main Controller PCB. When replacing the Main Controller PCB, be sure to write the serial number in the new PBC to prepare for trouble since the serial number of the device is not succeeded.
Use Case	When replacing the Main Controller PCB
Adj/Set/Operate Method	1) Write down the current data in [Location]. 2) Turn OFF the main power switch. 3) Replace the Main Controller PCB. 4) Turn ON the main power switch. 5) Enter the serial number of the machine in [Location]. 6) Execute this item. 7) Turn OFF/ON the main power switch. After the serial number of this machine is written in the Main Controller PCB, data in [Location] is deleted. 8) Output the spec report by SPEC, and check that the entered serial number is registered. 9) Enter the data backed up in step 1 in [Location].
Caution	Since the above "Location" is only temporarily used to store data, back up the data before input and enter it again after writing is completed.
Related Service Mode	COPIER> FUNCTION> MISC-P> SPEC
Additional Functions Mode	System Settings> Device Information> Location

COUNTER (Counter mode)

■ TOTAL

COPIER (Service mode for printer) > COUNTER (Counter mode) > TOTAL

SERVICE1	Service-purposed total counter 1
Detail	To count up when the printout is delivered outside the machine. Large size: 1, Small size: 1 A blank sheet is not counted.
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 99999999
Unit	1 sheet
Default Value	0

SERVICE2	Service-purposed total counter 2
Detail	To count up when the printout is delivered outside the machine. Large size: 2, Small size: 1 A blank sheet is not counted.
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 99999999
Unit	1 sheet
Default Value	0

COPIER (Service mode for printer) > COUNTER (Counter mode) > TOTAL

TTL	Total counter
Detail	To display the total of counters of COPY, PDL-PRT, FAX-PRT, RPT-PRT, and MD-PRT.
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 99999999
Unit	1 sheet
Default Value	0
Related Service Mode	COPIER> COUNTER> TOTAL> COPY, PDL-PRT, FAX-PRT, RPT-PRT, MD-PRT

PDL-PRT	PDL print counter
Detail	To count up when the printout is delivered outside the machine/2-sided printout is stacked according to the charge counter at PDL print. Large size: 1, Small size: 1 A blank sheet is not counted.
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 99999999
Unit	1 sheet
Default Value	0

RPT-PRT	Report print counter
Detail	To count up when the report print is delivered outside the machine/2-sided printout is stacked. Large size: 1, Small size: 1 The counter is not advanced by blank paper or delivery in service mode.
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 99999999
Unit	1 sheet
Default Value	0
Related Service Mode	COPIER> COUNTER> TOTAL> TTL

MD-PRT	Media print counter
Detail	To count up when the media print is delivered outside the machine. Large size: 1, Small size: 1 The counter is not advanced by blank paper or delivery in service mode.
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 99999999
Unit	1 sheet
Default Value	0
Related Service Mode	COPIER> COUNTER> TOTAL> TTL

■ PICK-UP

COPIER (Service mode for printer) > COUNTER (Counter mode) > PICK-UP

C1	Cassette 1 pickup total counter
Detail	To count up the number of sheets picked up from the Cassette 1. Large size: 1, Small size: 1 The counter is advanced by printout in service mode.
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 99999999
Unit	1 sheet
Default Value	0

COPIER (Service mode for printer) > COUNTER (Counter mode) > PICK-UP

C2	Cassette 2 pickup total counter
Detail	To count up the number of sheets picked up from the Cassette 2. Large size: 1, Small size: 1 The counter is advanced by printout in service mode.
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 99999999
Unit	1 sheet
Default Value	0

MF	Multi-purpose Tray pickup total counter
Detail	To count up the number of sheets picked up from the Multi-purpose Tray Pickup Unit. Large size: 1, Small size: 1 The counter is advanced by printout in service mode.
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 99999999
Unit	1 sheet
Default Value	0

2-SIDE	2-sided pickup total counter
Detail	To count up the number of sheets picked up in duplex mode. Large size: 1, Small size: 1 The counter is advanced by printout in service mode.
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 99999999
Unit	1 sheet
Default Value	0

■ JAM

COPIER (Service mode for printer) > COUNTER (Counter mode) > JAM

TOTAL	Total jam counter
Detail	To count up the number of total jam occurrences.
Use Case	When checking the jam counter
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 99999999
Unit	1 time
Default Value	0

2-SIDE	Duplex Unit jam counter
Detail	To count up the number of jam occurrences in the Duplex Unit.
Use Case	When checking the jam counter
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 99999999
Unit	1 time
Default Value	0

COPIER (Service mode for printer) > COUNTER (Counter mode) > JAM

MF	Multi-purpose Tray jam counter
Detail	To count up the number of jam occurrences in the Multi-purpose Tray. The counter is advanced even in the case of paper size mismatch or misprint.
Use Case	When checking the jam counter
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 99999999
Unit	1 time
Default Value	0

C1	Cassette 1 jam counter
Detail	To count up the number of jam occurrences in the Cassette 1. The counter is advanced even in the case of paper size mismatch or misprint.
Use Case	When checking the jam counter
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 99999999
Unit	1 time
Default Value	0

C2	Cassette 2 jam counter
Detail	To count up the number of jam occurrences in the Cassette 2. The counter is advanced even in the case of paper size mismatch or misprint.
Use Case	When checking the jam counter
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 99999999
Unit	1 time
Default Value	0

TESTMODE (Service mode for test print, operation check, etc.)

PRINT (Print test mode)

TESTMODE (Service mode for test print, operation check, etc.) > PRINT (Print test mode)

PG-TYPE	Setting of PG number
Detail	To set the PG number of the test print.
Use Case	At trouble analysis
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0 to 7 0: Grid Pattern 1: Halftone Pattern 2: Black Pattern 3: White Pattern 4: Gradation17 Pattern 5: ThinHorizontalLine Pattern 6 to 7: For R&D use
Default Value	0

COUNT	Setting of PG output quantity
Detail	To set the number of sheets for PG output.
Use Case	At trouble analysis
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	1 to 99
Unit	1 sheet
Default Value	1

PHASE	Set 1-sided/2-sided print for PG output
Detail	To set 1-sided/2-sided print for PG output. Even if 1 is set for a machine supporting 1-sided print, the setting is disabled.
Use Case	At trouble analysis
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0 to 1 0: 1-sided 1: 2-sided
Default Value	0

MODE	Setting of test print image formation method
Detail	To set the image formation method for the test print. If PG-TYPE is 0 or 1, this setting is disabled because a specific image formation method is applied.
Use Case	At trouble analysis
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0 to 4 0: TBIC 1: Resolution Dither 2: Gradation Dither 3: Tone Dither 4: Hi Resolution Dither
Default Value	0
Related Service Mode	TESTMODE> PRINT> PG-TYPE

TESTMODE (Service mode for test print, operation check, etc.) > PRINT (Print test mode)

THRU	Setting of image correction table at test print
Detail	To set the image correction table that is used at the time of test print output. When 0 is set, normal gamma LUT is used so that the density characteristics by the density correction process can be checked. When 1 is set, linear gamma LUT is used so that the density characteristics of this machine can be checked.
Use Case	At trouble analysis
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0 to 1 0: Normal gamma LUT 1: Through (linear) gamma LUT
Default Value	0
Supplement/Memo	Gamma LUT: Density gradation characteristic table

DENS	Adjustment of test print density
Detail	To adjust the density of the test print. As the value is larger, the image gets darker.
Use Case	At trouble analysis
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key), and then press Apply key.
Display/Adj/Set Range	-4 to 4
Default Value	0

MABK	Setting of toner thinning process at test print
Detail	To set the toner thinning process at test print. As the value is larger, toner scattering is reduced.
Use Case	When toner scattering occurs at test print
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0 to 4 0: OFF, 1: Mode 1, 2: Mode 2, 3: Mode 3, 4: Mode 4
Default Value	0

FEED	Setting of paper source at test print
Detail	To set the paper source at the time of test print output. If this mode is set when there is no Cassette 2 (option Pickup Cassette), the output is made from Cassette 1 (standard Pickup Cassette).
Use Case	At trouble analysis
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Caution	In case of using the Multi-purpose Tray, be sure to place paper on the tray before executing this item.
Display/Adj/Set Range	0 to 4 0: Multi-purpose Tray 1: Cassette 1 2: Cassette 2 3: Cassette 3 4: Cassette 4
Default Value	1

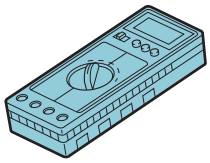
START	Output of test print
Detail	To output a test print with the PG pattern set in PG-TYPE, MODE, etc.
Use Case	At trouble analysis
Adj/Set/Operate Method	Select the item, and then press Yes key.
Related Service Mode	TESTMODE> PRINT

APPENDICES

Service Tools

Special Tools

In addition to the standard tools set, the following special tools are required when servicing the machine:

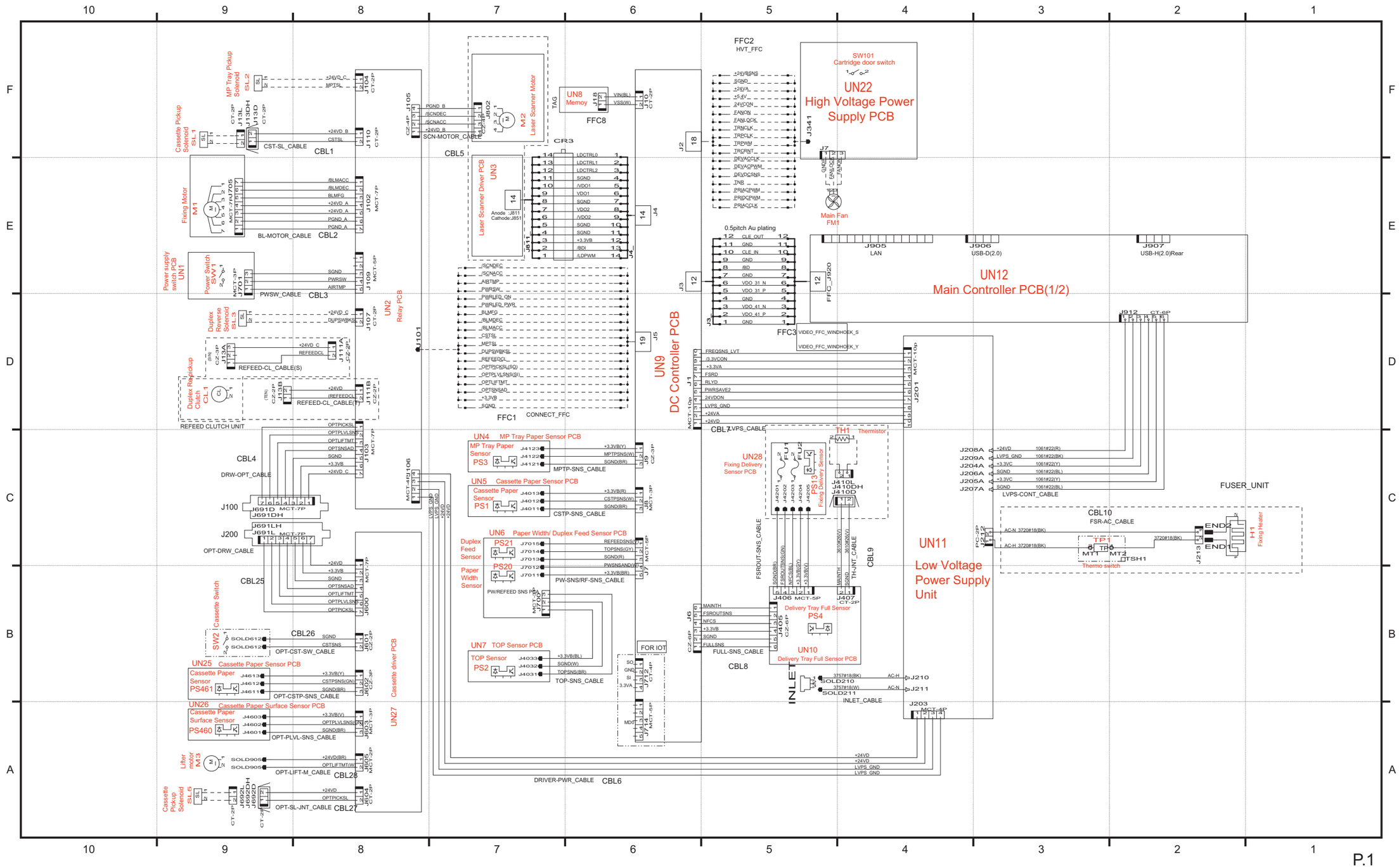
Name of Tool	Parts.No	Use
Digital Multimeter	FY9-2002	Used as a probe extension when making electrical checks. 

Solvents and Oil List

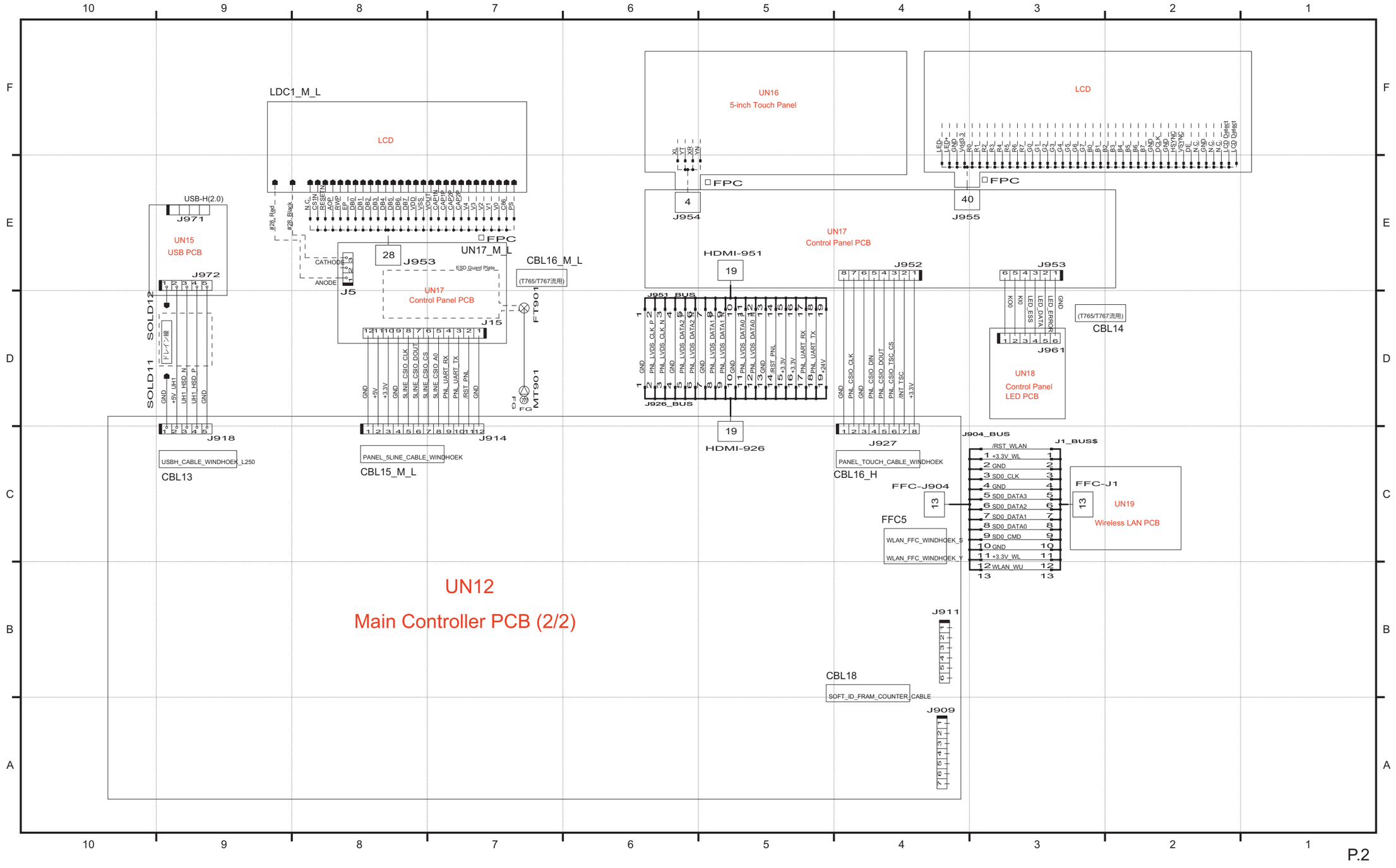
No.	Type	Purpose	Remark
1	Ethyl alcohol	• Cleaning: metal part, oil stains, toner stains	• Purchase locally • Keep away from flame

General Circuit Diagram

General Circuit Diagram(1/2)



General Circuit Diagram(2/2)



Backup Data List

Data	Location	Replace		Delete																Backup by User			Backup by Service		
				Menu > System Management Settings									Service Mode > COPIER > FUNCTION >												
							Menu Clear						CLEAR						SPLMAN						
		Engine Controller PCB	Main Controller PCB	Initialize All Data / Settings	Initializing Key and Certificate	Initializing Address Book	Preferences	Function Settings	Set Destination	Management Settings	Network Settings	Clear All	SRVC-DAT*1	COUNTER	HIST *2	ALL	PLPW-CLR	DC-CON	SPL43810	Yes/No	Method	Location to be stored	Yes/No	Method	Location to be stored
Address Book	Main Controller PCB	-	Clear	Clear	-	Clear	-	-	-	-		-	-	-	-	Clear	-	-	-	Yes	Remote UI *5 LUI *6	PC, USB memory	No	-	-
Settings Menu																									
Preferences	Main Controller PCB	-	Clear	Clear	-	-	Clear*8	-	-	-	Clear*9	Clear	-	-	-	Clear	-	-	-	Yes	Remote UI *5 LUI *6	PC, USB memory	No	-	-
Function Settings	Main Controller PCB	-	Clear	Clear	-	-	-	Clear	-	-	-	Clear	-	-	-	Clear	-	-	-	Yes	Remote UI *5 LUI *6	PC, USB memory	No	-	-
Set Destination	Main Controller PCB	-	Clear	Clear	-	-	-	-	Clear	-	-	Clear	-	-	-	Clear	-	-	-	Yes	Remote UI *5 LUI *6	PC, USB memory	No	-	-
Management Settings	Main Controller PCB	-	Clear	Clear	-	-	-	-	-	Clear	-	Clear	-	-	-	Clear	-	-	-	Yes	Remote UI *5 LUI *6	PC, USB memory	No	-	-
Status Monitor/Cancel																									
Job Log	Main Controller PCB	-	Clear	Clear	-	-	-	-	-	-	-	-	-	-	Clear	Clear	-	-	-	No	-	-	No	-	-
Counter																									
Page counter (Main Controller)	Main Controller PCB	-	Clear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No	-	-	No	-	-
Part counter (Main Controller)	Main Controller PCB	-	Clear	Clear	-	-	-	-	-	-	-	-	-	Clear	-	-	-	-	-	No	-	-	No	-	-
Part counter (DC Controller)	Engine Controller PCB	Clear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No	-	-	No	-	-
Other																									
Serial number	Main Controller PCB	-	Clear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No	-	-	No	-	-
Key and Certificate Settings	Main Controller PCB	-	Clear	Clear	Clear	-	-	-	-	-	-	-	-	-	-	Clear	-	-	-	No	-	-	No	-	-
Service mode																									
Service mode setting values (Main Controller)	Main Controller PCB	-	Clear	-	-	-	-	-	-	-	-	-	Clear	-	-	Clear	-	-	-	Yes	Remote UI *5 LUI *6	PC, USB memory	Yes	Service mode *4	USB memory

Data	Location	Replace		Delete																Backup by User			Backup by Service		
				Menu > System Management Settings									Service Mode > COPIER > FUNCTION >												
							Menu Clear						CLEAR						SPLMAN						
		Engine Controller PCB	Main Controller PCB	Initialize All Data / Settings	Initializing Key and Certificate	Initializing Address Book	Preferences	Function Settings	Set Destination	Management Settings	Network Settings	Clear All	SRVC-DAT*1	COUNTER	HIST *2	ALL	PLPW-CLR	DC-CON	SPL43810	Yes/No	Method	Location to be stored	Yes/No	Method	Location to be stored
Service mode setting values (DC Controller)	Engine Controller PCB	Clear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Clear	-	Yes	Remote UI *5 LUI *6	PC, USB memory	Yes	Service mode *4 *7	USB memory / Main Controller
Password																									
System Administrator password	Main Controller PCB	-	Clear*3	Clear*3	-	-	-	-	-	Clear*3	-	Clear*3	-	-	-	Clear*3	-	-	Clear*10	No	-	-	No	-	-
Security Policy Administrator password	Main Controller PCB	-	Clear	Clear	-	-	-	-	-	Clear	-	Clear	-	-	-	Clear	Clear	-	-	No	-	-	No	-	-
Service Mode password*11	Main Controller PCB	-	Clear	Clear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No	-	-	No	-	-

*1. Service data (Except "COPIER > COUNTER" and "COPIER > FEED-ADJ") are cleared. The factory adjustment values of the Reader and ADF are not initialized.
*2. Service data is cleared. User data is not cleared. The factory adjustment values of the Reader and ADF are not initialized.
*3. In except counter meter-installed model: The user data and service data and each history and the settings of the system administrator are cleared. (The system manager ID and password are changed back to the default values ID: 0/PWD: 0)
The factory adjustment values of the Reader and ADF are not initialized.
*4. COPIER > FUNCTION > SYSTEM > IMPORT / COPIER > FUNCTION > SYSTEM > EXPORT
*5. Settings/Registration >Management Settings >Data Management > Import/Export
*6. Settings Manu > Management Settings > Data Management > Import/Export
*7. COPIER > FUNCTION > VIFFNC > STOR-DCN
*8. Except "Preferences > Network Settings"
*9. Clear only an item of the "Preferences > Network Settings".
*10. Because the settings of the "System Manager ID and PIN" are cleared, set "System Manager ID and PIN" again.
*11. COPIER > OPTION > BODY > SM-PSWD(Setup password by SM-PSWD)

Soft counter specifications

The numbers entered for software counters are classified as follows:

No.	Counter Details
100 to 199	Total

100 to 199

No.	Counter Name
101	Total 1
102	Total 2
113	Total (Black & White/Small)
114	Total 1 (2-Sided)
194	Cartridge Replacement (Black)

List of Items Which Can Be Imported

The following shows the items to be imported for this model.
Note that the setting values are not imported in cases such as below:

- Items which are originally not included in a DCM file (e.g.:"Settings/Registration Basic Information" of a DCM file exported using service mode)
- Not included in the import coverage (Cases A to C)
- There are no options and functions related to setting values

The import coverage shown in the table below is as shown below. Those that are not described here cannot be imported.

Import coverage	Description
Case A: The same machine	Import to the same machine (for backup and restoration, etc.)
Case B: The same model	Import to a different machine of the same model (the same series)
Case C: Different model	Import to a different machine of a different model (a different series)

Service Mode Settings

Initial screen	Main item	Intermediate item	Sub item	Case A	Case B	Case C
COPIER	ADJUST	FEED-ADJ	ADJ-MFY	Yes	-	-
COPIER	ADJUST	FEED-ADJ	ADJ-MFX	Yes	-	-
COPIER	ADJUST	FEED-ADJ	ADJ-MFYR	Yes	-	-
COPIER	ADJUST	FEED-ADJ	ADJ-MFXR	Yes	-	-
COPIER	ADJUST	FEED-ADJ	ADJ-C1Y	Yes	-	-
COPIER	ADJUST	FEED-ADJ	ADJ-C1X	Yes	-	-
COPIER	ADJUST	FEED-ADJ	ADJ-C1YR	Yes	-	-
COPIER	ADJUST	FEED-ADJ	ADJ-C1XR	Yes	-	-
COPIER	ADJUST	FEED-ADJ	ADJ-C2Y	Yes	-	-
COPIER	ADJUST	FEED-ADJ	ADJ-C2X	Yes	-	-
COPIER	ADJUST	FEED-ADJ	ADJ-C2YR	Yes	-	-
COPIER	ADJUST	FEED-ADJ	ADJ-C2XR	Yes	-	-
COPIER	ADJUST	VIFADJ	DEV-HV-K	Yes	-	-
COPIER	ADJUST	VIFADJ	FU-TMP	Yes	-	-
COPIER	ADJUST	VIFADJ	CRG-HV-K	Yes	-	-
COPIER	ADJUST	VIFADJ	LS-PWR-K	Yes	-	-
COPIER	ADJUST	VIFADJ	TR-HV	Yes	-	-
COPIER	FUNCTION	SPLMAN	SPL14159	Yes	Yes	Yes
COPIER	FUNCTION	SPLMAN	SPL65677	Yes	-	-
COPIER	FUNCTION	SPLMAN	SPL68676	Yes	-	-
COPIER	FUNCTION	SPLMAN	SPL68677	Yes	-	-
COPIER	FUNCTION	SPLMAN	SPL25607	Yes	-	-
COPIER	FUNCTION	SPLMAN	SPL93822	Yes	Yes	Yes
COPIER	FUNCTION	SPLMAN	SPL78788	Yes	Yes	Yes
COPIER	FUNCTION	SPLMAN	SPL71100	Yes *1	-	-
COPIER	FUNCTION	SPLMAN	SPL00171	Yes	Yes	Yes
COPIER	FUNCTION	SPLMAN	SPL84194	Yes	Yes	Yes
COPIER	FUNCTION	SPLMAN	SPL78148	Yes	-	-
COPIER	FUNCTION	INSTALL	ERDS	Yes	Yes	Yes
COPIER	FUNCTION	INSTALL	RGW-PORT	Yes	Yes	Yes
COPIER	OPTION	BODY	MIBCOUNT	Yes	Yes	Yes
COPIER	OPTION	BODY	NS-CMD5	Yes	-	-
COPIER	OPTION	BODY	NS-PLN	Yes	-	-

1. FAX model only

Initial screen	Main item	Intermediate item	Sub item	Case A	Case B	Case C
COPIER	OPTION	BODY	NS-LGN	Yes	-	-
COPIER	OPTION	BODY	SLPMODE	Yes	Yes	Yes
COPIER	OPTION	BODY	SDTM-DSP	Yes	Yes	Yes
COPIER	OPTION	FNC-SW	LCDSFLG	Yes	Yes	Yes
COPIER	OPTION	FNC-SW	CRG-PROC	Yes	Yes	-
COPIER	OPTION	FNC-SW	CRGLF-K	Yes	Yes	-
COPIER	OPTION	FNC-SW	RPT2SIDE	Yes	Yes	Yes
COPIER	OPTION	DSPLY-SW	CRGLW-LV	Yes	Yes	Yes
COPIER	OPTION	DSPLY-SW	CRG-LOG	Yes	Yes	-
COPIER	OPTION	IMG-MCON	REGM-SEL	Yes	-	-
COPIER	OPTION	USER	CTCHKDSP	Yes	-	-
COPIER	OPTION	USER	SMD-EXPT	Yes	-	-
FAX	SSSW	SW01		Yes*1	-	-
FAX	SSSW	SW02		Yes *1	-	-
FAX	SSSW	SW03		Yes *1	-	-
FAX	SSSW	SW04		Yes *1	-	-
FAX	SSSW	SW05		Yes *1	-	-
FAX	SSSW	SW06		Yes *1	-	-
FAX	SSSW	SW07		Yes *1	-	-
FAX	SSSW	SW08		Yes *1	-	-
FAX	SSSW	SW09		Yes *1	-	-
FAX	SSSW	SW10		Yes *1	-	-
FAX	SSSW	SW11		Yes *1	-	-
FAX	SSSW	SW12		Yes *1	-	-
FAX	SSSW	SW13		Yes *1	-	-
FAX	SSSW	SW14		Yes *1	-	-
FAX	SSSW	SW15		Yes *1	-	-
FAX	SSSW	SW16		Yes *1	-	-
FAX	SSSW	SW17		Yes *1	-	-
FAX	SSSW	SW18		Yes *1	-	-
FAX	SSSW	SW19		Yes *1	-	-
FAX	SSSW	SW20		Yes *1	-	-
FAX	SSSW	SW21		Yes *1	-	-
FAX	SSSW	SW22		Yes *1	-	-
FAX	SSSW	SW23		Yes *1	-	-
FAX	SSSW	SW24		Yes *1	-	-
FAX	SSSW	SW25		Yes *1	-	-
FAX	SSSW	SW26		Yes *1	-	-
FAX	SSSW	SW27		Yes *1	-	-
FAX	SSSW	SW28		Yes *1	-	-
FAX	SSSW	SW29		Yes *1	-	-
FAX	SSSW	SW30		Yes *1	-	-
FAX	SSSW	SW31		Yes *1	-	-
FAX	SSSW	SW32		Yes *1	-	-
FAX	MENU	005		Yes *1	-	-
FAX	MENU	006		Yes *1	-	-
FAX	MENU	007		Yes *1	-	-
FAX	MENU	008		Yes *1	-	-

1. FAX model only

Initial screen	Main item	Intermediate item	Sub item	Case A	Case B	Case C
FAX	MENU	009		Yes *1	-	-
FAX	MENU	010		Yes *1	-	-
FAX	NUM	002		Yes *1	-	-
FAX	NUM	003		Yes *1	-	-
FAX	NUM	004		Yes *1	-	-
FAX	NUM	005		Yes *1	-	-
FAX	NUM	006		Yes *1	-	-
FAX	NUM	008		Yes *1	-	-
FAX	NUM	010		Yes *1	-	-
FAX	NUM	011		Yes *1	-	-
FAX	NUM	012		Yes *1	-	-
FAX	NUM	013		Yes *1	-	-
FAX	NUM	015		Yes *1	-	-
FAX	NUM	016		Yes *1	-	-
FAX	NUM	017		Yes *1	-	-
FAX	NUM	018		Yes *1	-	-
FAX	NUM	019		Yes *1	-	-
FAX	NUM	020		Yes *1	-	-
FAX	NUM	021		Yes *1	-	-
FAX	NUM	022		Yes *1	-	-
FAX	NUM	023		Yes *1	-	-
FAX	NUM	024		Yes *1	-	-
FAX	NUM	025		Yes *1	-	-
FAX	NUM	026		Yes *1	-	-
FAX	NUM	027		Yes *1	-	-
FAX	NUM	029		Yes *1	-	-
FAX	NUM	049		Yes *1	-	-
FAX	NUM	051		Yes *1	-	-
FAX	NUM	053		Yes *1	-	-
FAX	NUM	054		Yes *1	-	-
FAX	NCU	TONE	001	Yes *1	-	-
FAX	NCU	TONE	002	Yes *1	-	-
FAX	NCU	PULSE	FORM	Yes *1	-	-
FAX	NCU	PULSE	001	Yes *1	-	-
FAX	NCU	PULSE	002	Yes *1	-	-
FAX	NCU	PULSE	003	Yes *1	-	-
FAX	NCU	PULSE	004	Yes *1	-	-
FAX	NCU	DIALTONE	BIT	Yes *1	-	-
FAX	NCU	DIALTONE	001	Yes *1	-	-
FAX	NCU	DIALTONE	002	Yes *1	-	-
FAX	NCU	DIALTONE	003	Yes *1	-	-
FAX	NCU	DIALTONE	004	Yes *1	-	-
FAX	NCU	DIALTONE	005	Yes *1	-	-
FAX	NCU	DIALTONE	006	Yes *1	-	-
FAX	NCU	DIALTONE	007	Yes *1	-	-
FAX	NCU	DIALTONE	008	Yes *1	-	-
FAX	NCU	2ND DLTN	BIT	Yes *1	-	-

*1. FAX model only

Initial screen	Main item	Intermediate item	Sub item	Case A	Case B	Case C
FAX	NCU	2ND DLTN	001	Yes *1	-	-
FAX	NCU	2ND DLTN	002	Yes *1	-	-
FAX	NCU	2ND DLTN	003	Yes *1	-	-
FAX	NCU	2ND DLTN	004	Yes *1	-	-
FAX	NCU	2ND DLTN	005	Yes *1	-	-
FAX	NCU	2ND DLTN	006	Yes *1	-	-
FAX	NCU	2ND DLTN	007	Yes *1	-	-
FAX	NCU	2ND DLTN	008	Yes *1	-	-
FAX	NCU	BUSTONE0	BIT	Yes *1	-	-
FAX	NCU	BUSTONE0	001	Yes *1	-	-
FAX	NCU	BUSTONE0	002	Yes *1	-	-
FAX	NCU	BUSTONE0	003	Yes *1	-	-
FAX	NCU	BUSTONE0	004	Yes *1	-	-
FAX	NCU	BUSTONE0	005	Yes *1	-	-
FAX	NCU	BUSTONE0	006	Yes *1	-	-
FAX	NCU	BUSTONE0	007	Yes *1	-	-
FAX	NCU	BUSTONE0	008	Yes *1	-	-
FAX	NCU	BUSTONE1	BIT	Yes *1	-	-
FAX	NCU	BUSTONE1	001	Yes *1	-	-
FAX	NCU	BUSTONE1	002	Yes *1	-	-
FAX	NCU	BUSTONE1	003	Yes *1	-	-
FAX	NCU	BUSTONE1	004	Yes *1	-	-
FAX	NCU	BUSTONE1	005	Yes *1	-	-
FAX	NCU	BUSTONE1	006	Yes *1	-	-
FAX	NCU	BUSTONE1	007	Yes *1	-	-
FAX	NCU	BUSTONE1	008	Yes *1	-	-
FAX	NCU	REORDRTN	BIT	Yes *1	-	-
FAX	NCU	REORDRTN	001	Yes *1	-	-
FAX	NCU	REORDRTN	002	Yes *1	-	-
FAX	NCU	REORDRTN	003	Yes *1	-	-
FAX	NCU	REORDRTN	004	Yes *1	-	-
FAX	NCU	REORDRTN	005	Yes *1	-	-
FAX	NCU	REORDRTN	006	Yes *1	-	-
FAX	NCU	REORDRTN	007	Yes *1	-	-
FAX	NCU	REORDRTN	008	Yes *1	-	-
FAX	NCU	AUTO RX	001	Yes *1	-	-
FAX	NCU	AUTO RX	002	Yes *1	-	-
FAX	NCU	AUTO RX	003	Yes *1	-	-
FAX	NCU	AUTO RX	004	Yes *1	-	-
FAX	NCU	AUTO RX	005	Yes *1	-	-
FAX	NCU	AUTO RX	006	Yes *1	-	-
FAX	NCU	AUTO RX	007	Yes *1	-	-
FAX	NCU	AUTO RX	008	Yes *1	-	-
FAX	NCU	AUTO RX	009	Yes *1	-	-
FAX	NCU	CNGDTCT	001	Yes *1	-	-
FAX	NCU	CNGDTCT	002	Yes *1	-	-
FAX	NCU	CNGDTCT	006	Yes *1	-	-

*1. FAX model only

Initial screen	Main item	Intermediate item	Sub item	Case A	Case B	Case C
FAX	NCU	CNGDTCT	007	Yes *1	-	-
FAX	NCU	CNGDTCT	008	Yes *1	-	-
FAX	NCU	CNGDTCT	009	Yes *1	-	-
FAX	NCU	CNGDTCT	011	Yes *1	-	-
FAX	NCU	CNGDTCT	012	Yes *1	-	-
FAX	NCU	SPECIALB	SW01	Yes *1	-	-
FAX	NCU	SPECIALB	SW02	Yes *1	-	-
FAX	NCU	SPECIALB	SW03	Yes *1	-	-
FAX	NCU	SPECIALB	SW04	Yes *1	-	-
FAX	NCU	SPECIALB	SW05	Yes *1	-	-
FAX	NCU	SPECIALB	SW06	Yes *1	-	-
FAX	NCU	SPECIALB	SW07	Yes *1	-	-
FAX	NCU	SPECIALB	SW08	Yes *1	-	-
FAX	NCU	SPECIALB	SW09	Yes *1	-	-
FAX	NCU	SPECIALB	SW10	Yes *1	-	-
FAX	NCU	SPECIALB	SW11	Yes *1	-	-
FAX	NCU	SPECIALB	SW12	Yes *1	-	-
FAX	NCU	SPECIALB	SW13	Yes *1	-	-
FAX	NCU	SPECIALB	SW14	Yes *1	-	-
FAX	NCU	SPECIALB	SW15	Yes *1	-	-
FAX	NCU	SPECIALB	SW16	Yes *1	-	-
FAX	NCU	SPECIALB	SW17	Yes *1	-	-
FAX	NCU	SPECIALB	SW18	Yes *1	-	-
FAX	NCU	SPECIALB	SW19	Yes *1	-	-
FAX	NCU	SPECIALB	SW20	Yes *1	-	-
FAX	NCU	SPECIALB	SW21	Yes *1	-	-
FAX	NCU	SPECIALB	SW22	Yes *1	-	-
FAX	NCU	SPECIALB	SW23	Yes *1	-	-
FAX	NCU	SPECIALB	SW24	Yes *1	-	-
FAX	NCU	SPECIALB	SW25	Yes *1	-	-
FAX	NCU	SPECIALB	SW26	Yes *1	-	-
FAX	NCU	SPECIALB	SW27	Yes *1	-	-
FAX	NCU	SPECIALB	SW28	Yes *1	-	-
FAX	NCU	SPECIALB	SW29	Yes *1	-	-
FAX	NCU	SPECIALB	SW30	Yes *1	-	-
FAX	NCU	SPECIALN	004	Yes *1	-	-
FAX	NCU	SPECIALN	005	Yes *1	-	-
FAX	NCU	SPECIALN	006	Yes *1	-	-
FAX	NCU	SPECIALN	007	Yes *1	-	-
FAX	NCU	SPECIALN	008	Yes *1	-	-
FAX	NCU	SPECIALN	009	Yes *1	-	-
FAX	NCU	SPECIALN	011	Yes *1	-	-
FAX	NCU	SPECIALN	012	Yes *1	-	-
FAX	NCU	SPECIALN	013	Yes *1	-	-
FAX	NCU	SPECIALN	014	Yes *1	-	-
FAX	NCU	SPECIALN	015	Yes *1	-	-
FAX	NCU	SPECIALN	016	Yes *1	-	-

*1. FAX model only

Initial screen	Main item	Intermediate item	Sub item	Case A	Case B	Case C
FAX	NCU	SPECIALN	017	Yes *1	-	-
FAX	NCU	SPECIALN	019	Yes *1	-	-
FAX	NCU	SPECIALN	020	Yes *1	-	-
FAX	NCU	SPECIALN	024	Yes *1	-	-
FAX	NCU	SPECIALN	025	Yes *1	-	-
FAX	NCU	SPECIALN	026	Yes *1	-	-
FAX	NCU	SPECIALN	027	Yes *1	-	-
FAX	NCU	SPECIALN	030	Yes *1	-	-
FAX	NCU	SPECIALN	040	Yes *1	-	-
FAX	NCU	SPECIALN	041	Yes *1	-	-
FAX	NCU	SPECIALN	042	Yes *1	-	-
FAX	NCU	SPECIALN	044	Yes *1	-	-
FAX	NCU	SPECIALN	045	Yes *1	-	-
FAX	NCU	SPECIALN	046	Yes *1	-	-
FAX	NCU	SPECIALN	047	Yes *1	-	-
FAX	NCU	SPECIALN	048	Yes *1	-	-
FAX	NCU	SPECIALN	065	Yes *1	-	-
FAX	NCU	SPECIALN	066	Yes *1	-	-
FAX	NCU	RKEY	001	Yes *1	-	-
FAX	NCU	RKEY	002	Yes *1	-	-
FAX	NCU	PBXDIALT	BIT	Yes *1	-	-
FAX	NCU	PBXDIALT	001	Yes *1	-	-
FAX	NCU	PBXDIALT	002	Yes *1	-	-
FAX	NCU	PBXDIALT	003	Yes *1	-	-
FAX	NCU	PBXDIALT	004	Yes *1	-	-
FAX	NCU	PBXDIALT	005	Yes *1	-	-
FAX	NCU	PBXDIALT	006	Yes *1	-	-
FAX	NCU	PBXDIALT	007	Yes *1	-	-
FAX	NCU	PBXDIALT	008	Yes *1	-	-
FAX	NCU	PBXBUSYT	BIT	Yes *1	-	-
FAX	NCU	PBXBUSYT	001	Yes *1	-	-
FAX	NCU	PBXBUSYT	002	Yes *1	-	-
FAX	NCU	PBXBUSYT	003	Yes *1	-	-
FAX	NCU	PBXBUSYT	004	Yes *1	-	-
FAX	NCU	PBXBUSYT	005	Yes *1	-	-
FAX	NCU	PBXBUSYT	006	Yes *1	-	-
FAX	NCU	PBXBUSYT	007	Yes *1	-	-
FAX	NCU	PBXBUSYT	008	Yes *1	-	-

*1. FAX model only