imageCLASS X LBP1440

SERVICE MANUAL

Canon

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Rev. 1

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Important Notices

Application

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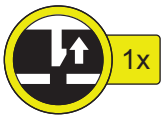
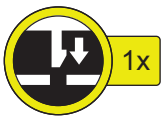
Explanation of Symbols

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.
	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.

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Contents

Safety Precautions

Laser

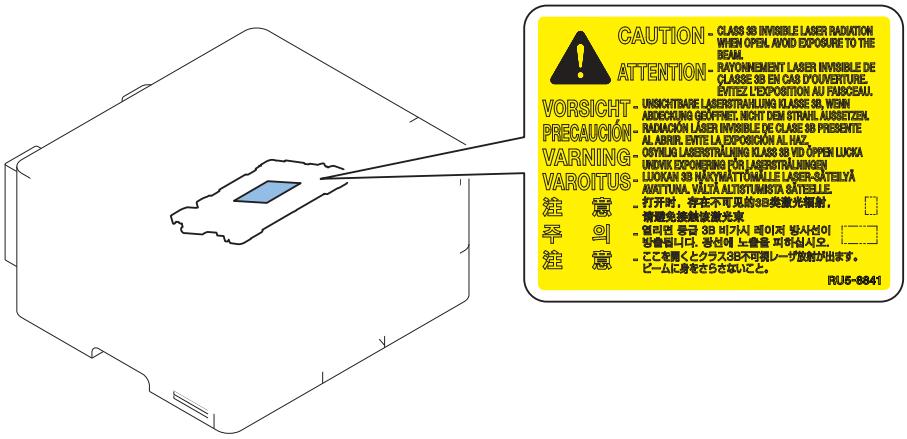
Laser Safety

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 mark or the warning 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.
Das in dem folgenden Bild dargestellte Kennzeichen bzw. der Warnaufkleber ist auf der Laserscannereinheit angebracht.



Power Supply / Lithium Battery

Power Supply Guidelines

- As a general rule, do not use extension cords.
  If an extension cord must be used, one that meets the rated voltage and current of the product must be used.
  When using, untie the bundle and plug the power cord into the root to ensure the connection between the power cord and extension cord.

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

- Use the power plug in an easily accessible location near the host machine.

Notes When Handling a Lithium Battery

⚠ CAUTION:

English

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

The following warnings are given to comply with Safety Principles for specific countries.

German

ACHTUNG
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

Toner Safety

About Toner

Toner is a non-toxic material composed of plastic and small amount of pigment.

⚠ 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 on works

Points to Note Before Servicing

- 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)

- Be careful not to be injured by burrs of edges, sharp corners or protrusions.

> ⚠ **CAUTION:**
> Hazardous area such as corners, edges, springs and other sharp sections may be remaining on products. Always be aware of the presence of hazardous area to avoid injury caused by contacting and/or striking those area, by not over-concentrating on service work.

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.

> ⚠ **CAUTION:**
>
> **English**
>
> CAUTION
> The fuse may be in the neutral, and that the mains shall be disconnected to de-energize the phase conductors.
>
> **German**
>
> ACHTUNG
> Die Sicherung kann sich im Nullleiter befinden und das Hauptnetz muss abgetrennt werden, um die Phasenleiter stromlos zu machen.

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Product Overview

Product Lineup

Host Machine

LBP1440/1440P

1440Pr

	LBP1440	1440P	1440Pr
Copy	-	-	-
Print	Yes	Yes	Yes
FAX	-	-	-
Remote UI	Yes	Yes	Yes
ADF	-	-	-
2-sided printing	Yes	Yes	Yes
Control Panel	5-inch Color Touch Panel	5-inch Color Touch Panel	5 lined LCD + Numeric keys
NFC	-	-	-
MEAP	-	-	-
Wired LAN	Yes	Yes	Yes
Wireless LAN	Yes	Yes	Yes

PDL

	LBP1440/1440P/1440Pr
UFR II	Yes
PS	Yes
PCL	Yes

Options

Name	Remark
Cassette Feeding Module-AH1	Up to 550 sheets of paper (80 g/m^2) can be set. Only one cassette can be connected to the host machine
Barcode Printing Kit-E1	
MiCARD Attachment Kit-B1	IC Card Reader (sales company's option) is required.

Features

Major Features

This machine is an A4/LTR black-and-white laser SFP in the Low to Mid class, which has improved productivity over LBP1238II/ 1238P II series.

<Productivity>

- Print speed up
  38 -> 40 ppm (A4) / 40 -> 42 ppm (LTR)
- Streamlined application (Application Library)

<Operability/Comfortability>

- Automatic shipment of consumables
- Improved WiFi setup

<Manageability equivalent to A3>

- Enhanced support for standard MIB (Supporting for Job Monitoring, WebJetAdmin)
- Security enhancements (IEEE802.1 x Wireless support, Enhanced boot-time tampering detection, TLS1.3)
- Device management (Remote monitoring, Automated delivery of consumables, FW update)

Specifications

Product Specifications

Item	Specification/Function
Installation method of Host Machine	Desktop
Photoreceptor	OPC Drum (24 mm dia.)
Exposure method	Laser beam exposure
Charging method	Roller charging
Developing method	Toner projection development
Transfer method	Roller transfer
Separation method	Curvature separation
Pickup method	Cassette: Simple retard method Multi-purpose Tray: Pad separation method
Fixing method	On-demand fixing
Delivery method	Face-down
Drum cleaning method	Cleaning Blade
Toner type	One-component magnetic toner
Toner supplying method	Replacement of all-in-one cartridge (drum + toner)
Toner level detection function	Available
Toner save mode	Available *1
Print resolution	600 x 600 dpi (Default)
Print speed*2	**At 1-sided printing:** • 40.0 ppm (A4), 42.0 ppm (LTR) **At 2-sided printing:** • 33.6 ppm (A4), 35.1 ppm (LTR)
Warm-up time*3	14 sec. or less
Recovery time*4	Approx. 4 sec. or less
First print time	**Multi-purpose Tray pickup:** Approx. 5.4 seconds (A4), Approx. 5.3 seconds (LTR) **Cassette pickup:** Approx. 5.5 seconds (A4), Approx. 5.4 seconds (LTR)
Paper type	(Reference: “Paper Type” on page 9)
Paper size	(Reference: “Paper Size” on page 9)
Maximum stacking capacity	Cassette: 250 sheets (80 g/m^2, 64 g/m^2) Multi-purpose Tray: 100 sheets (80 g/m^2, 64 g/m^2)
Delivery Tray Capacity*5	150 sheets (68 g/m^2)
Auto 2-sided printing	Available
Memory capacity	1 GB
Operating environment temperature range	10 to 30 deg C
Operating environment humidity range	20 to 80 % (Relative humidity; no condensation)
Rated power supply	120 V model: 110 to 127 V (60 Hz) 200 V model: 220 to 240 V (50/60 Hz)

Item	Specification/Function
Power consumption	**Maximum** 1320 W or less **At operation** 900 W or less **At standby** 17 W or less **During sleep mode** Approx. 1.0 W or less (USB connection) Approx. 1.0 W or less (Wired LAN) Approx. 1.0 W or less (Wireless LAN) **At power OFF** Approx. 0.1 W or less
Dimensions (W x D x H)	LBP1440/1440P: 438 mm x 373 mm x 312 mm 1440Pr: 401 mm x 373 mm x 249 mm
Weight (not including the Toner Cartridge)	LBP1440/1440P: Approx. 9.2 kg 1440Pr: Approx. 8.8 kg

*1: Toner saving mode is a user mode setting, and it cannot be set in service mode.
*2: The print speed may become lower depending on the settings such as output resolution, paper type / orientation, and number of sheets to print. 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.
*3: 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.
*4: The time for recovery from sleep to standby
*5: The actual stack capacity may vary depending on the site environment and the type of paper used.

Paper Type

Type of paper		Paper settings in this machine	Standard Cassette	Multi-purpose Tray	OP Cassette	Auto 2-sided printing
Thin paper	60 g/m^2	Thin paper	Yes	Yes	Yes	Yes
Plain paper	61 to 74 g/m^2	Plain 1	Yes	Yes	Yes	Yes
	75 to 89 g/m^2	Plain 2	Yes	Yes	Yes	Yes
	90 to 105 g/m^2	Plain 3	Yes	Yes	Yes	Yes
Color paper	61 to 70 g/m^2	Color paper	Yes	Yes	Yes	Yes
Recycled paper	61 to 74 g/m^2	Recycled 1	Yes	Yes	Yes	Yes
	75 to 89 g/m^2	Recycled 2	Yes	Yes	Yes	Yes
Heavy paper	106 to 120 g/m^2	Heavy 1	Yes	Yes	Yes	Yes
	121 to 149 g/m^2	Heavy 2	Yes	-	-	-
	150 to 163 g/m^2	Heavy 3	Yes	-	-	-
Bond paper	60 to 74 g/m^2	Bond 1	Yes	Yes	Yes	Yes
	75 to 104 g/m^2	Bond 2	Yes	Yes	Yes	Yes
	105 to 120 g/m^2	Bond 3	Yes	Yes	Yes	Yes
Label paper	-	Label paper	Yes	-	-	-
Post Card	-	Post Card	Yes	-	-	-
Envelope	-	Envelope 1	Yes	-	-	-
	-	Envelope 2	Yes	-	-	-

Paper Size

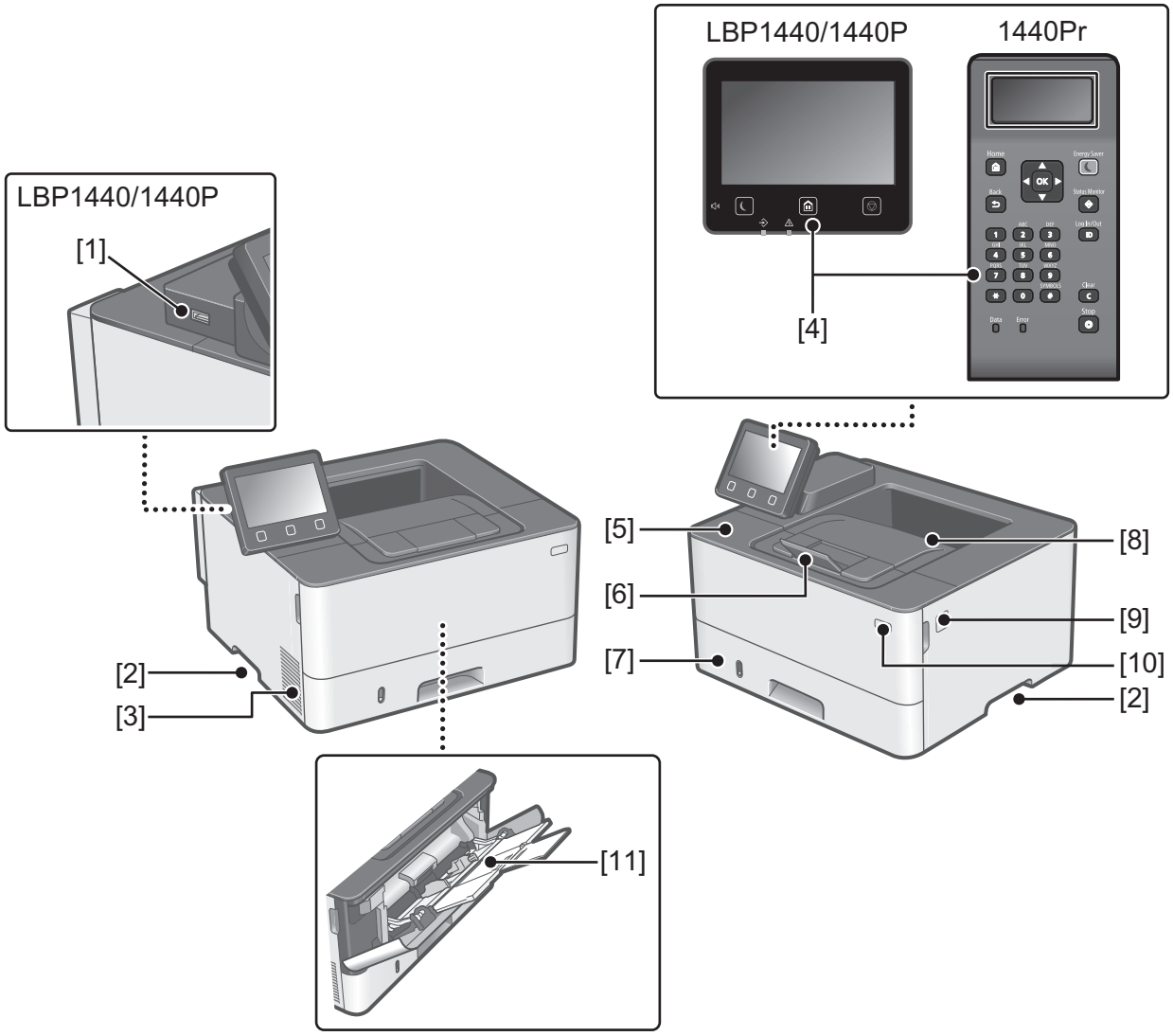
(Yes: Pickup possible - : Pickup not possible)

Paper size	Feeding direction (mm)	Width direction (mm)	Pickup position			
			Multi-purpose Tray	Standard Cassette	OP Cassette	Auto 2-sided printing
A4R	297.0	210.0	Yes	Yes	Yes	Yes
B5R	257.0	182.0	Yes	Yes	Yes	-
A5R	210.0	148.0	Yes	Yes	Yes	-
A5	148.0	210.0	Yes	Yes	Yes	-
A6R	148.0	105.0	Yes	Yes	Yes	-
LGL	355.6	215.9	Yes	Yes	Yes	Yes
LTRR	279.4	215.9	Yes	Yes	Yes	Yes
STMTR	215.9	139.7	Yes	Yes	Yes	-
E-ECR	266.7	184.1	Yes	Yes	Yes	-
OFICIO	317.5	215.9	Yes	Yes	Yes	Yes
B-OFICIO	355.0	215.9	Yes	Yes	Yes	Yes
M-OFICIO	341.0	215.9	Yes	Yes	Yes	Yes
G-LTRR	266.7	203.2	Yes	Yes	Yes	-
G-LGL	330.2	203.2	Yes	Yes	Yes	-
AFLS	337.0	206.0	Yes	Yes	Yes	-
FLS	330.2	215.9	Yes	Yes	Yes	Yes
Indian LGL	345.0	215.0	Yes	Yes	Yes	Yes
16KR	270.0	195.0	Yes	Yes	Yes	-
F4A	342.9	215.9	Yes	Yes	Yes	Yes
Post Card	148.0	100.0	Yes	-	-	-
Reply Postcard	200.0	148.0	Yes	-	-	-
4 on 1 Postcard	296.0	200.0	Yes	-	-	-
Index Card (3x5 inch)	127.0	76.2	Yes	-	-	-
COM10	241.3	104.7	Yes	-	-	-
Monarch	190.5	98.4	Yes	-	-	-
C5	229.0	162.0	Yes	-	-	-
DL	220.0	110.0	Yes	-	-	-
Nagagata 3	235.0	120.0	Yes	-	-	-
Yougatanaga 3	235.0	120.0	Yes	-	-	-
Custom	127.0 to 355.6	76.2 to 216.0	Yes	Yes	Yes	Yes

Parts Name

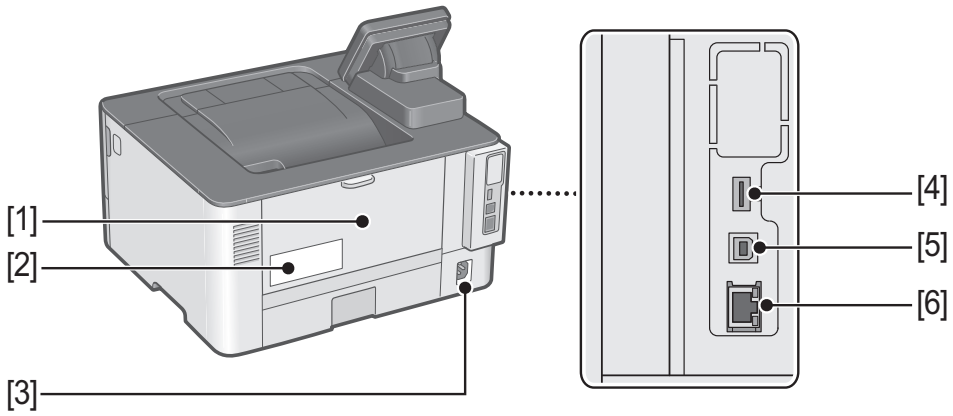
External Cover

■ Front Side of the Host Machine



No.	Name	No.	Name
[1]	USB port	[7]	Pickup Cassette
[2]	Handle for carrying	[8]	Delivery Tray
[3]	Ventilation hole	[9]	Front Cover Open Button
[4]	Control Panel	[10]	Power Switch
[5]	Front Cover	[11]	Multi-purpose Tray
[6]	Delivery Stopper		

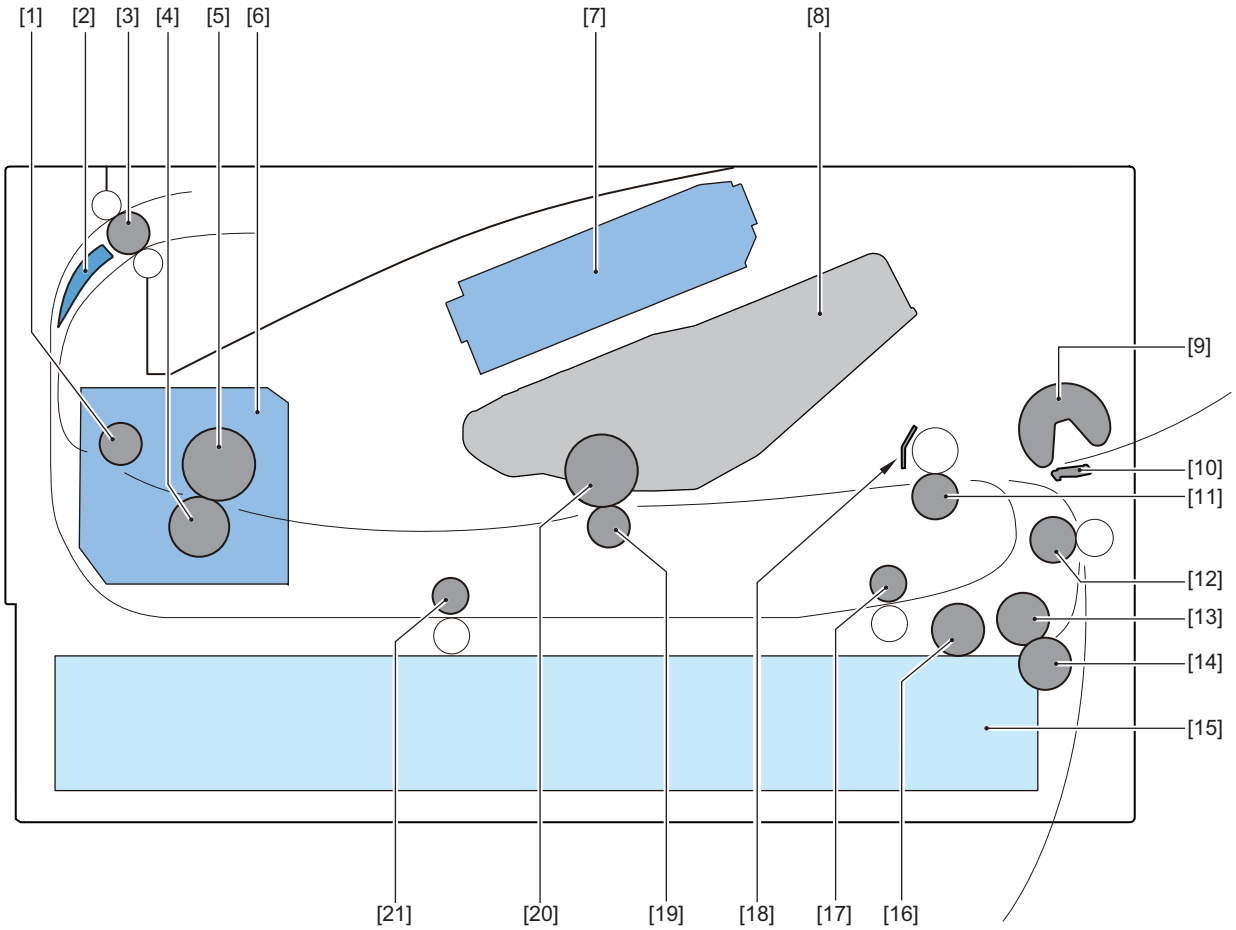
■ Rear Side of the Host Machine



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



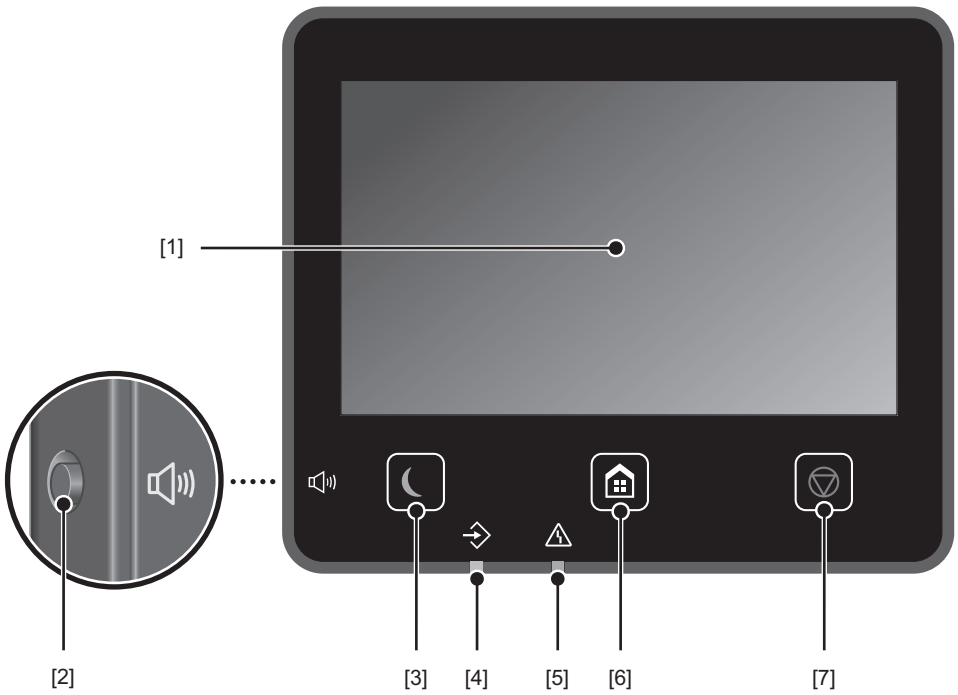
No.	Name	No.	Name
[1]	Fixing Delivery Roller	[12]	Delivery Roller
[2]	Duplex Flapper	[13]	Cassette Feed Roller
[3]	Delivery Roller	[14]	Cassette Separation Roller

No.	Name	No.	Name
[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

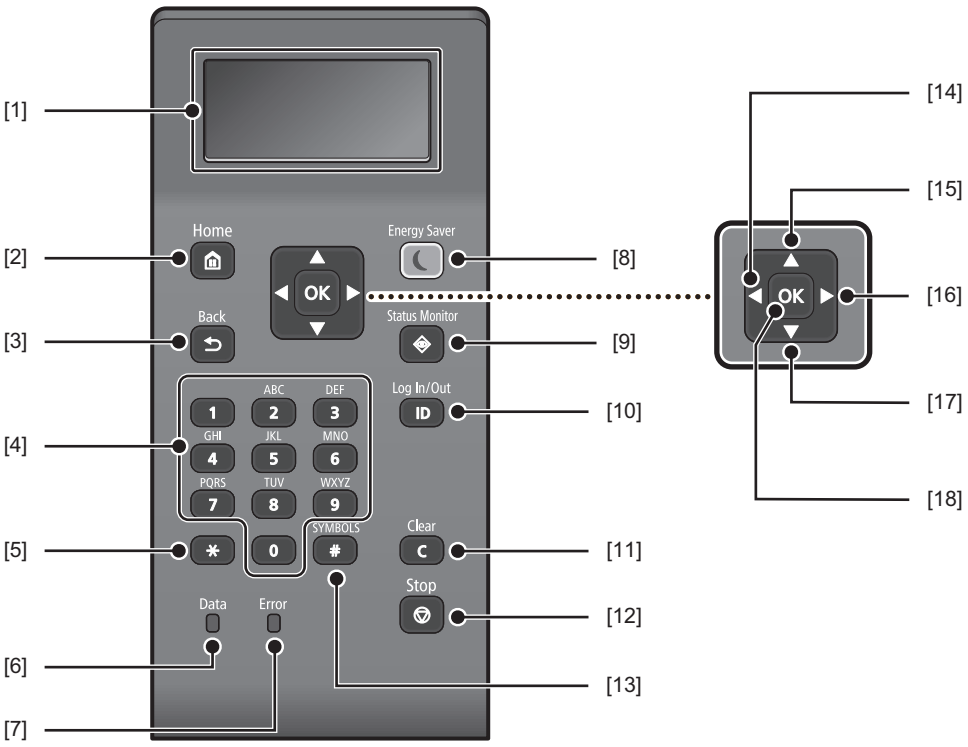
■ Control Panel

LBP1440/1440P



No.	Name	No.	Name
[1]	Display	[5]	Error Lamp
[2]	Volume key	[6]	Home key
[3]	Energy Saver Key	[7]	Stop key
[4]	Data Lamp		

1440Pr



No.	Name	No.	Name
[1]	Display	[10]	[ID] key
[2]	[Home] key	[11]	[Clear] key
[3]	[Back] key	[12]	[Stop] key
[4]	Numeric keys ([0] to [9])	[13]	[Symbol] key
[5]	[Uppercase/Lowercase/Numeric] key	[14]	[Utility] key / Left key
[6]	[Data] Lamp	[15]	[Job] key / Up key
[7]	[Error] Lamp	[16]	[Setup] key / Right key
[8]	[Energy Saver] key	[17]	[Reset] key / Down key
[9]	[Status Monitor] key	[18]	[OK] key

2 Technical Explanation (Device)

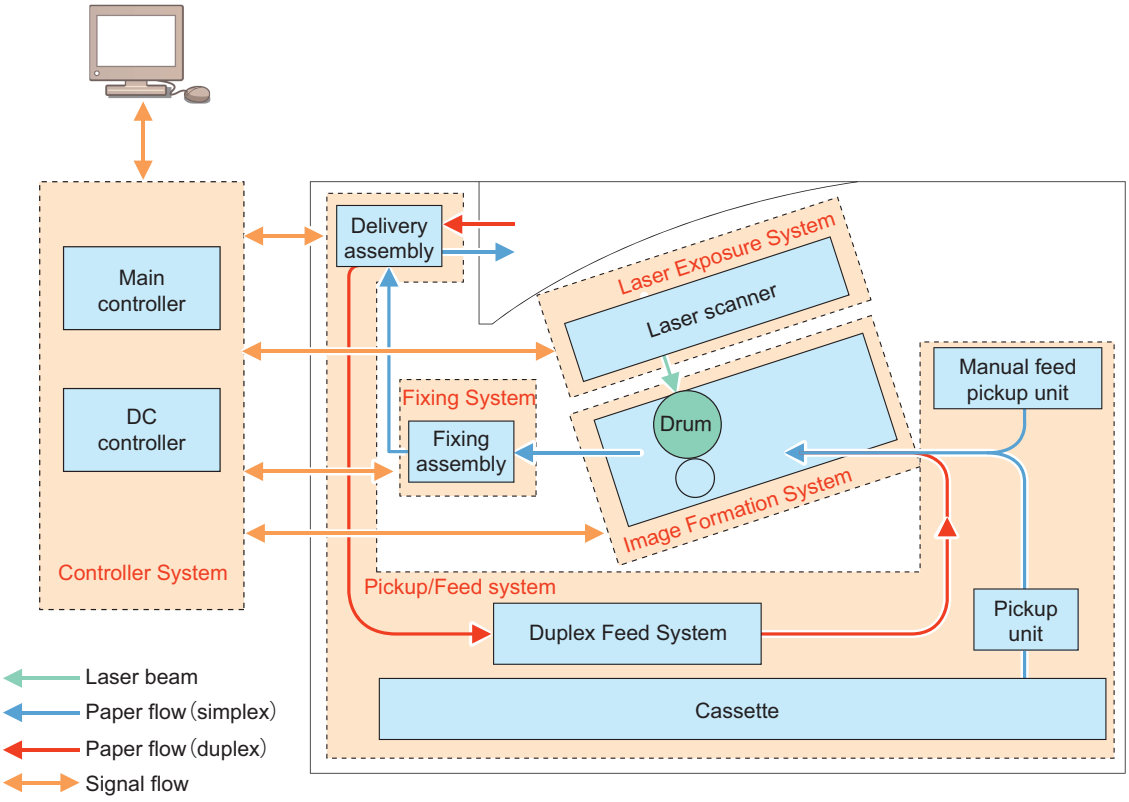
Basic Configuration

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



Laser Exposure System

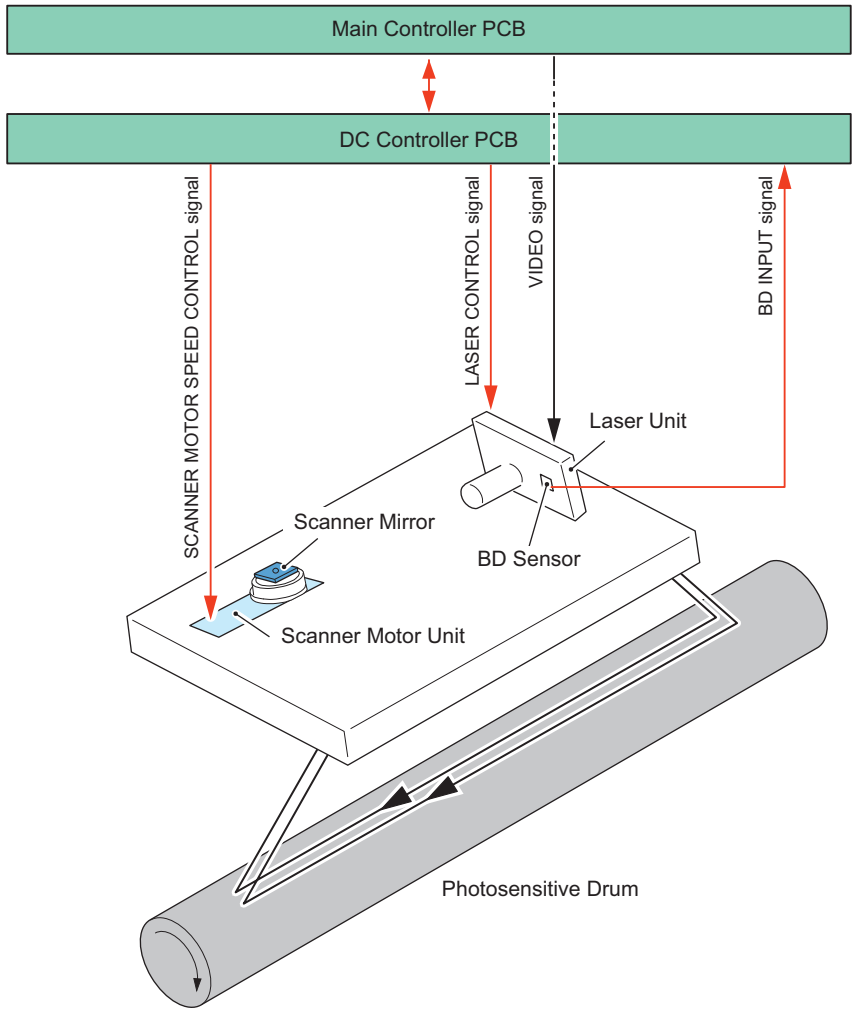
Functional Configuration

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 Front Cover 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, display induction message for Condensation remove mode.

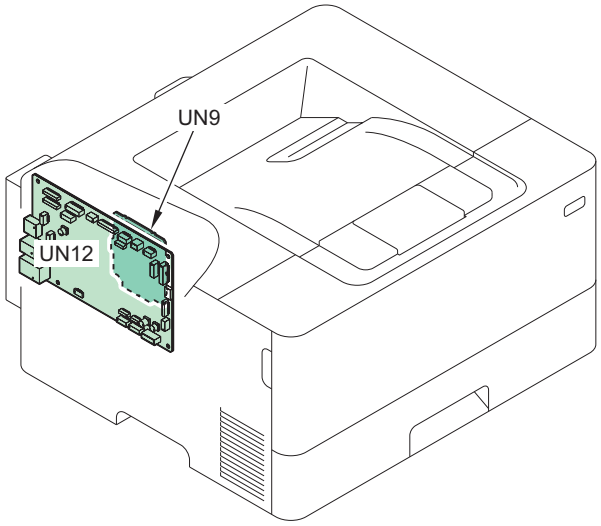
Scanner Motor failure detection

- When the BD cycle is out of the specified range, display induction message for Condensation remove mode.
- If a motor error is detected while the Scanner Motor is being driven, display induction message for Condensation remove mode.

Controller System

Configuration/Function

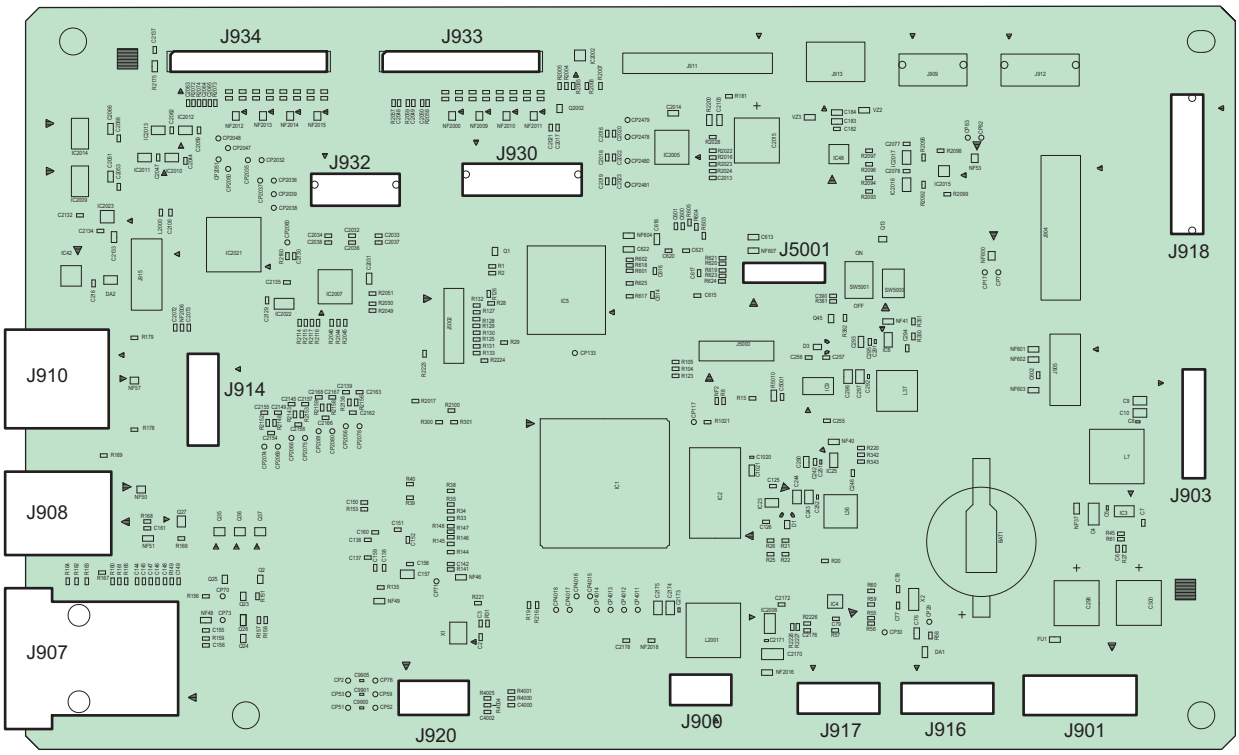
This product is mainly controlled by the main and Engine controllers



No.	Parts name	Function
UN9	DC Controller PCB	Provides controls on printer, laser, high-voltage PCBs, I/O, etc. and maintain setting values.
UN12	Main Controller PCB	Provides controls on the system, image processing and network and maintain various setting values.

Main Controller PCB

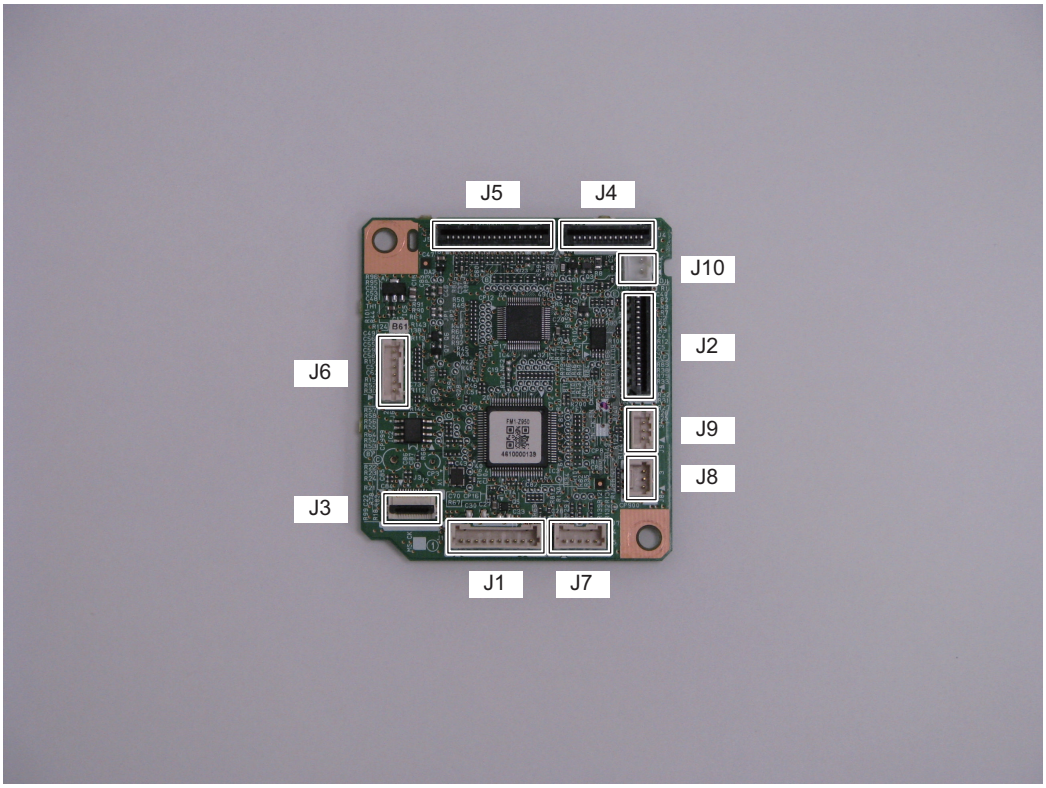
CAUTION:
The number of connectors varies depending on the model.



No.	Roles and Specifications	No.	Roles and Specifications
J900	DBG	J917	Memory PCB
J901	Low Voltage Power Supply Unit	J918	Control Panel PCB (5 lines)
J903	(Not used)	J920	DC Controller PCB
J907	LAN	J930	(Not used)
J908	USB TypeD	J932	(Not used)
J910	(Not used)	J933	(Not used)
J914	Options (CC-VI)	J934	(Not used)
J916	Serial No PCB	J5001	(Not used)

DC Controller PCB

Description



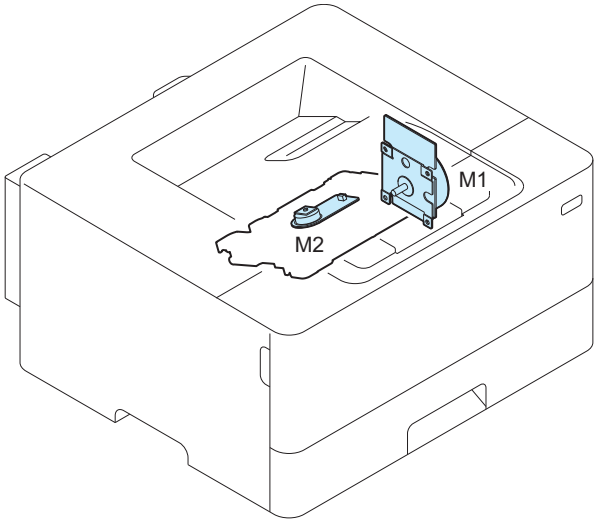
No.	Roles and Specifications	No.	Roles and Specifications
J1	Low Voltage Power Supply Unit	J6	Delivery Tray Full Sensor PCB
J2	High Voltage Power Supply PCB	J7	Paper Width/Duplex Feed Sensor PCB
J3	Main Controller PCB	J8	Cassette Paper Sensor PCB
J4	Laser Scanner Driver PCB	J9	Multi-purpose Tray Paper Sensor PCB
J5	Relay PCB	J10	Memory

Motor Control

Overview

This machine uses motors for paper feed and image formation.

Description



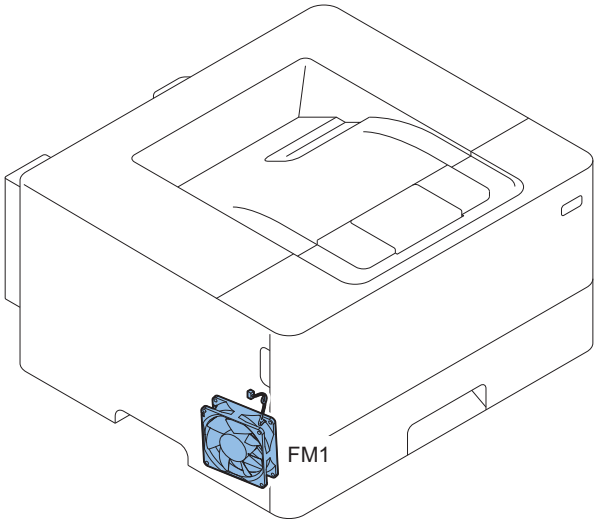
Sym-bol	Name	Drive parts	Failure Detection
M1	Main Motor	Photosensitive Drum, Transfer Roller, Pressure Roller, Fixing Film, Delivery Roller, Duplex Flapper, Duplex Feed Roller, Cassette Pickup Roller, Cassette Feed Roller, Feed Roller, Registration Roller, Multi-purpose Tray Pickup Roller	Yes
M2	Laser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

Fan Control

Overview

This machine uses a fan for preventing temperature rising inside the machine.

Description



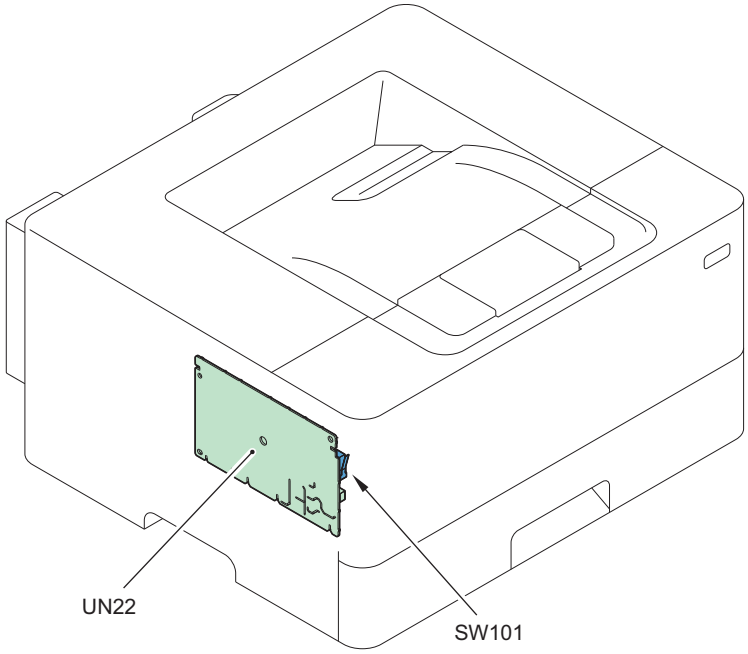
Symbol	Name	Cooling area	Type	Speed
FM1	Main Fan	Around the cartridge and low voltage power supply	Suction	Full speed

Door Open Detection

Overview

This machine uses the Front Cover Switch (SW101) of the High Voltage Power Supply PCB (UN22) to detect whether the Front Cover is opened or closed.

Description



Symbol	Name	Remarks
UN22	High Voltage Power Supply PCB	
SW101	Front Cover Switch	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

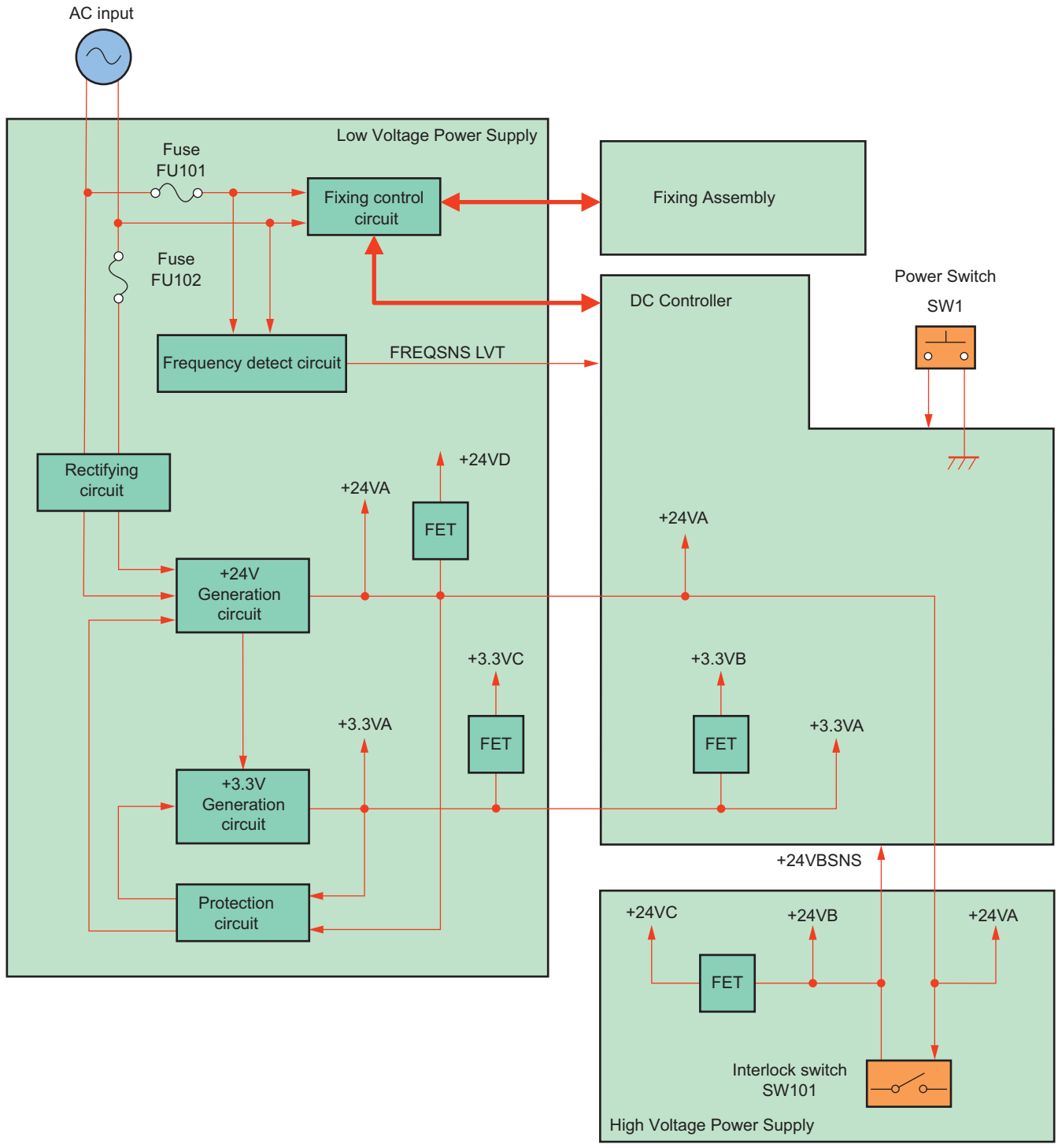
This circuit converts the AC voltage to DC power supply and provides it to each load.

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.

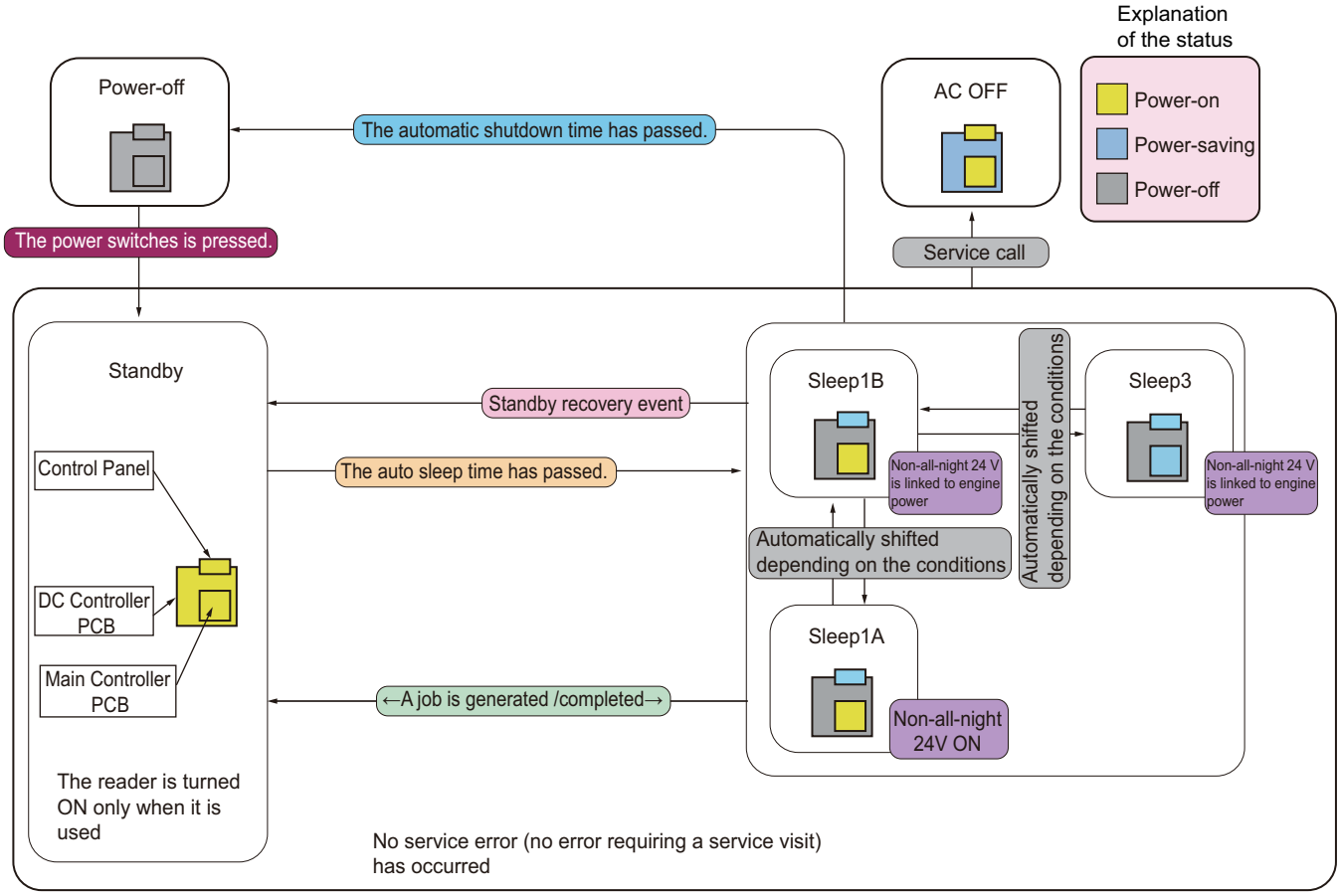
NOTE:
This machine has a function that stops supplying the +24VB and +24VC when the Cartridge Door Switch is turned OFF for the safety of users and service technicians.
As the power of this machine is turned ON/OFF by the remote switch control circuit, power is supplied to the AC line even when the Power 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



	Status	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.
Energy Saver	In a standby state, the machine moves to an energy saver state by pressing the Energy Saver key.	The Control Panel LCD, Function LED, Start Key LED and Paper Source LED are turned OFF. Moreover, the LED of energy saver is turned ON.
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 2	When change in on-hook/off-hook state is detected while the machine is in sleep 1A, sleep 1B, or sleep 3, it moves to sleep 2.	The Control Panel LCD display is turned ON, and the machine accepts key operations. When the auto sleep time has elapsed, the machine moves back to sleep 1.
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)

	Status	Description
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.
Power off	-	Manually power off and shut down in sleep state (Sleep 1A/1B, Sleep 3).
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.

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.

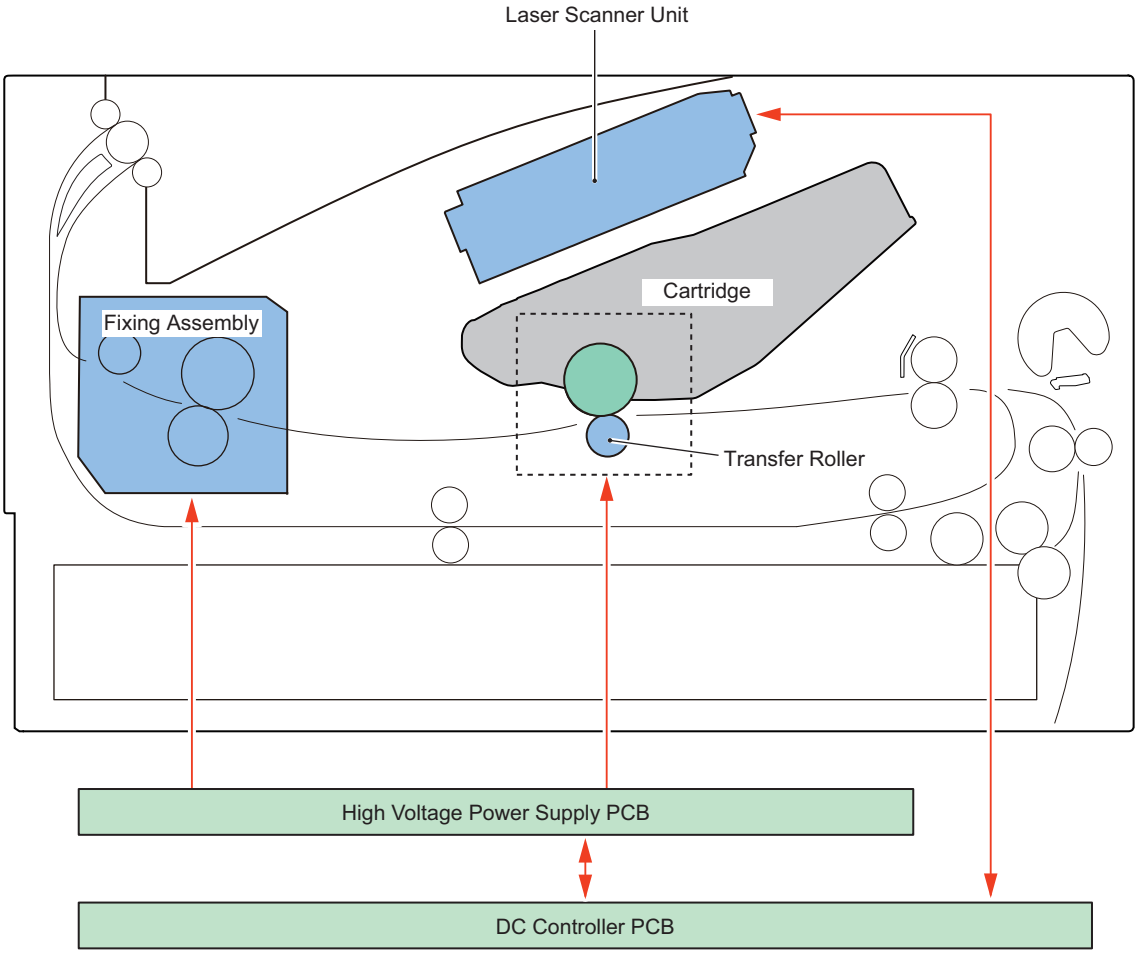
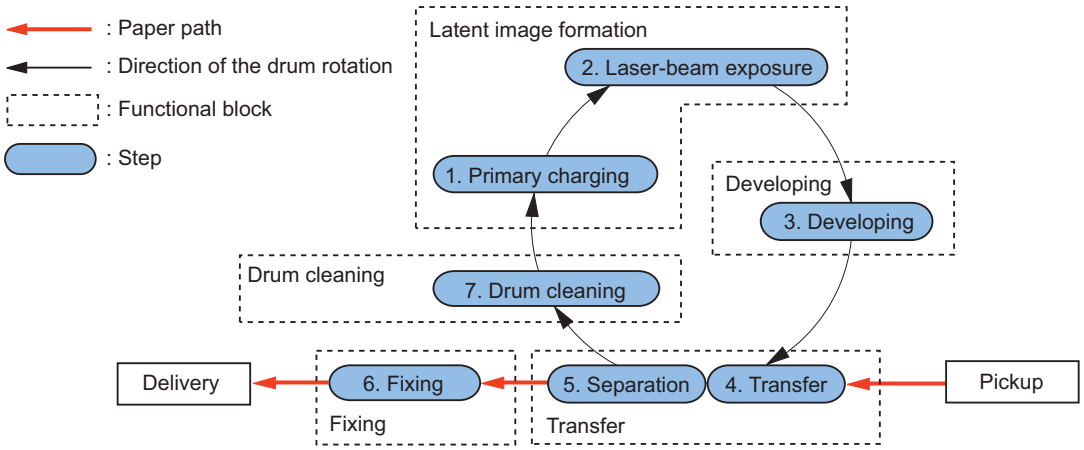


Image Formation Process

Description



Block	No.	Process	Description
Static latent image formation block	1	Primary charging	The surface of the Photosensitive Drum is uniformly charged with negative potential.
	2	Laser beam exposure	With irradiation of laser beam, a static latent image is formed on the surface of the Photosensitive Drum. (Image exposure: Area exposed by laser is the image area)
Developing block	3	Development	With the toner projection development method, toner that has been negatively charged by the Developing Cylinder is attached to the Photosensitive Drum.
Transfer block	4	Transfer	Toner on the surface of the Photosensitive Drum is transferred to a paper by applying positive charge to the Transfer Roller.
	5	Separation	With the curvature separation method, the paper is separated from the Photosensitive Drum. In the case of thin paper which has low elastic force, the Static Eliminator reduces potential on the back side of paper to make the thin paper to be separated easily.
Fixing block	6	Fixing	Toner on the paper is fixed on the paper using heat and pressure.
Drum cleaning block	7	Drum cleaning	The Cleaning Blade removes the residual toner attached on the Photosensitive Drum.

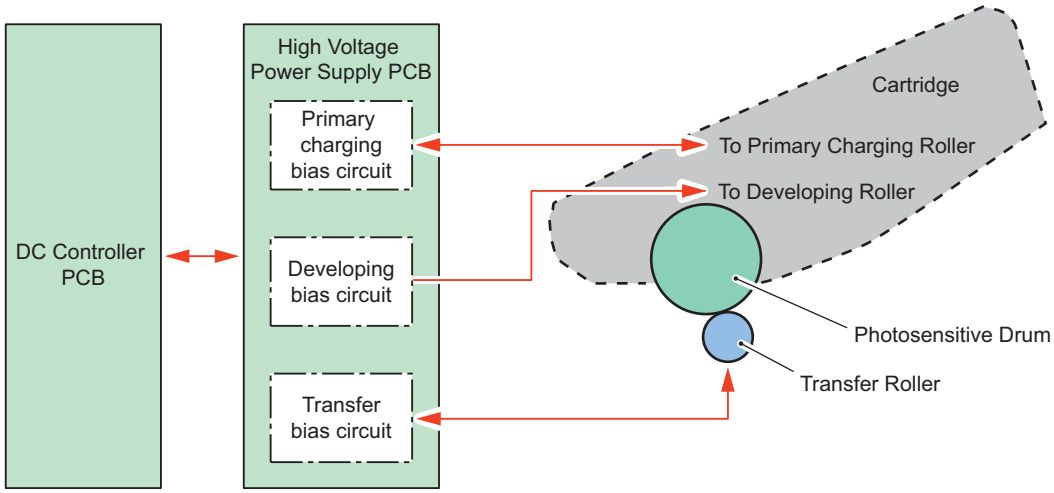
High Voltage Power Supply Control

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

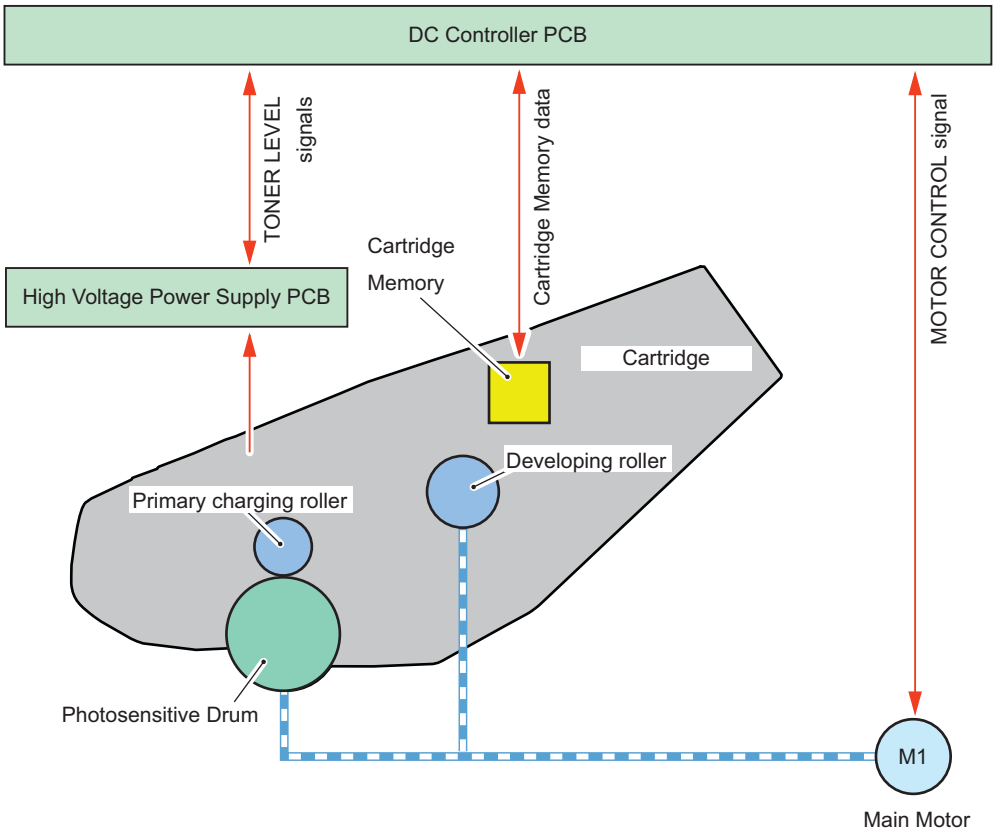
■ Overview

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, Cartridge Memory, etc.
The DC Controller drives the Main 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

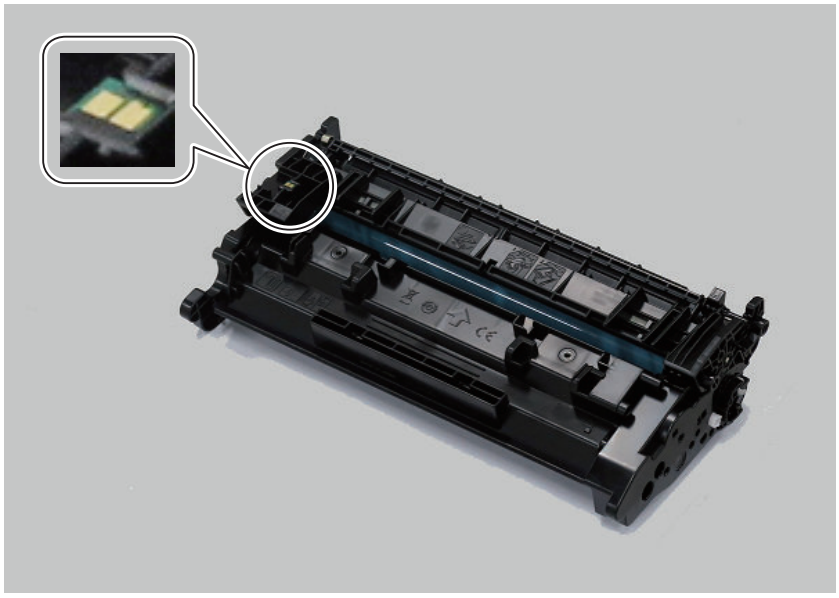
Execution Condition/Timing

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

Description

The DC Controller detects/records the cartridge usage, etc. by reading/writing data stored in the Cartridge Memory.
When the Cartridge 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.



Cartridge Memory Position

■ Cartridge Detection

Execution Condition/Timing

- At power-on
- When the Front Cover is closed

Description

The DC Controller detects whether a cartridge is installed according to the presence/absence of Cartridge 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:

■ Cartridge Life Detection

Execution Condition/Timing

- At power-on
- When the engine operation is completed after the Front Cover 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)	Cartridge Memory	Cartridge Memory
Message	Prepare the toner cartridge.	

*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:
- 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

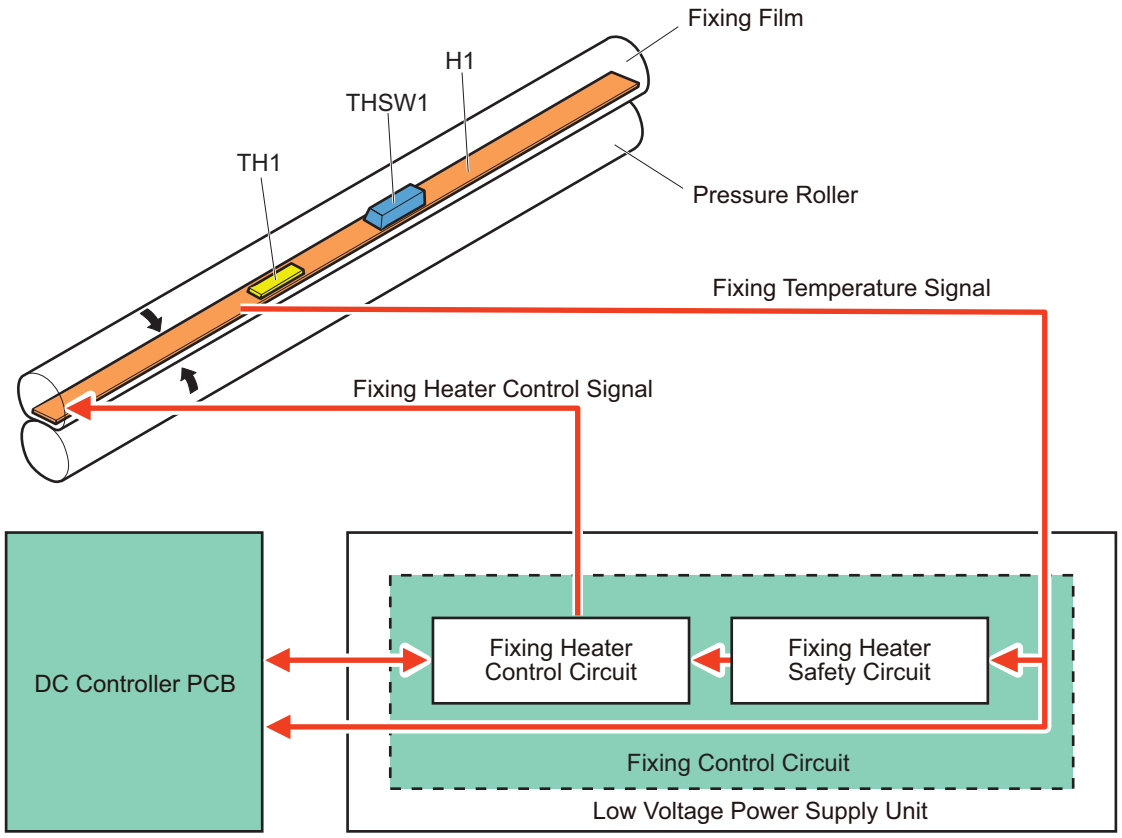
Description

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

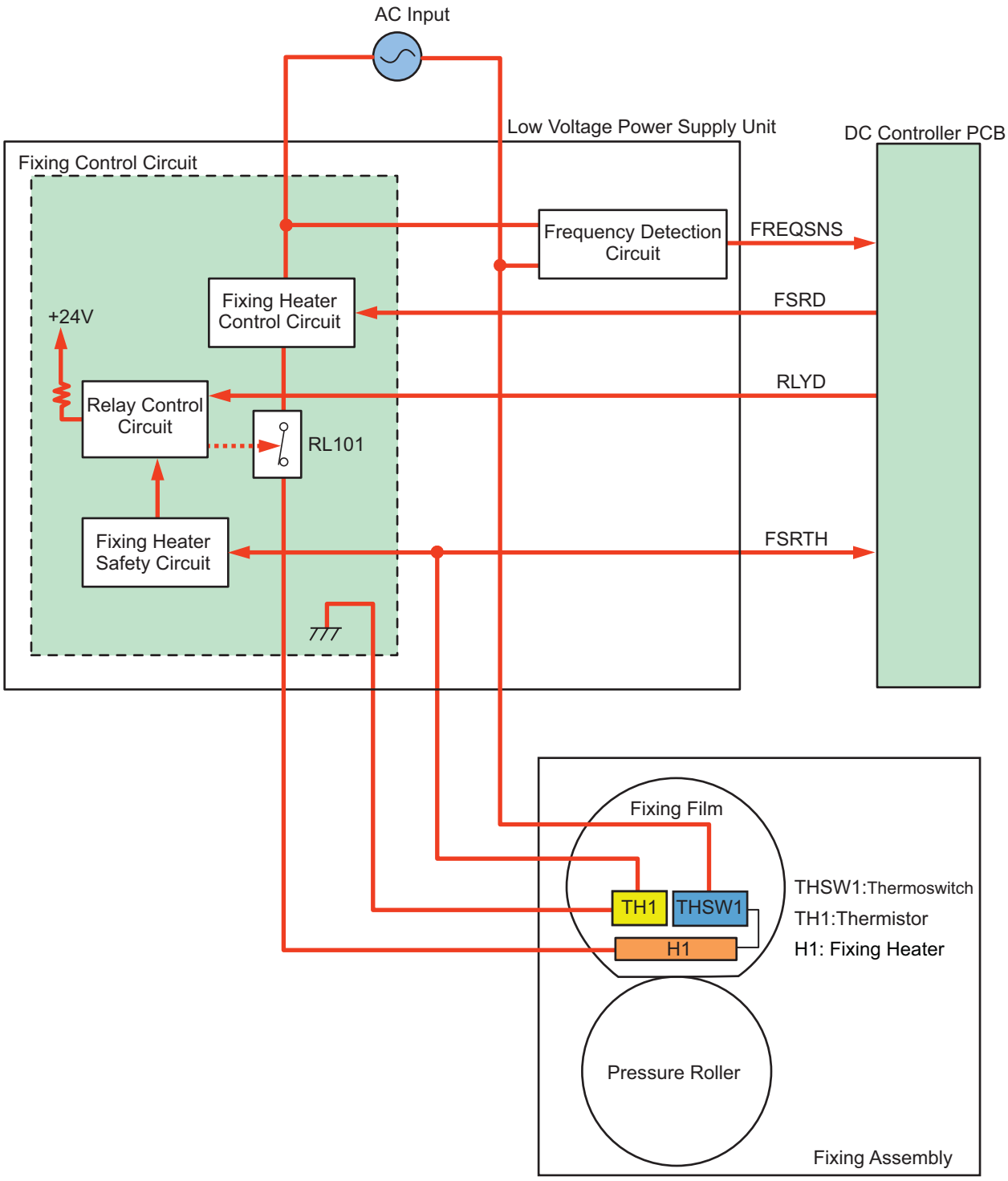
The fixing system forms a permanent image by melting the toner on the paper using pressure and heat.
The fixing control circuit controls the temperature of the Fixing Assembly.
The Fixing Assembly of this machine uses the on-demand fixing method.



Symbol	Parts Name
H1	Fixing Heater
TH1	Thermistor
THSW1	Thermo Switch

Fixing Temperature Control

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.
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	Envelope	-	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	

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

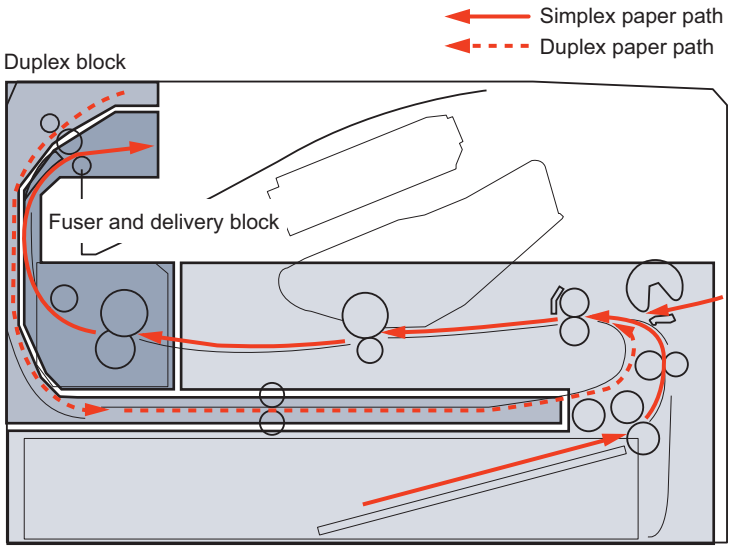
Overview

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.

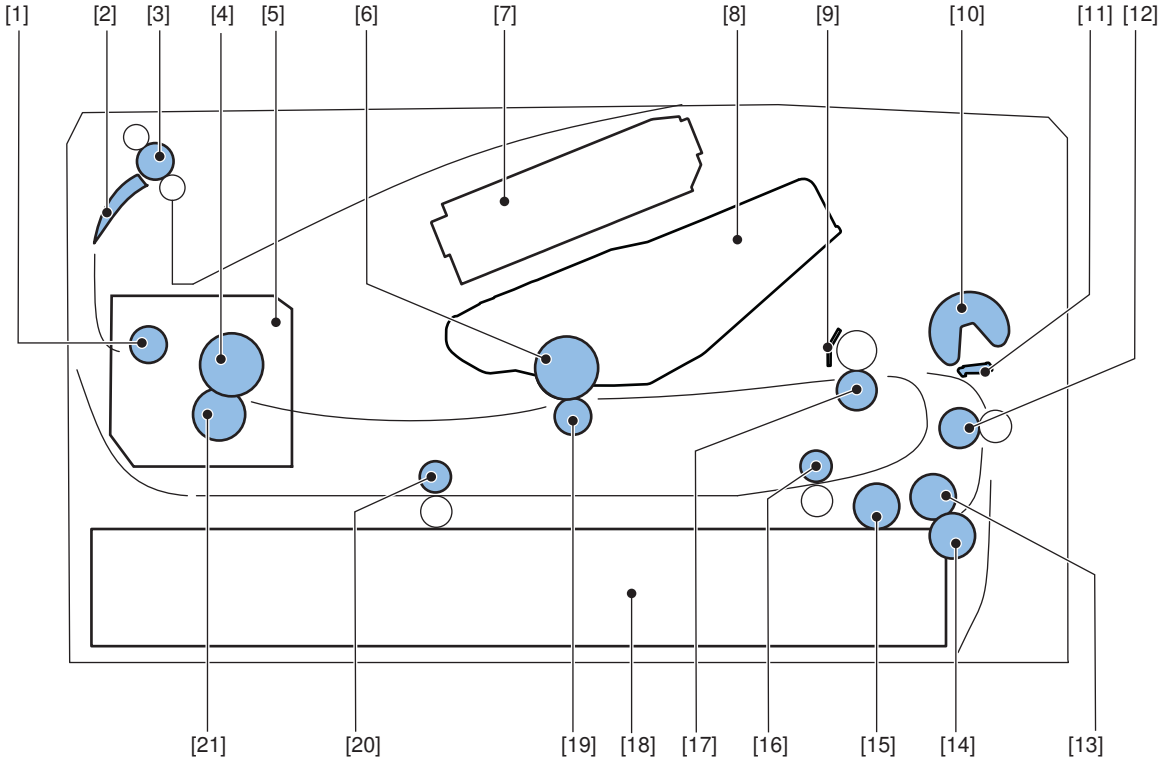
- Pickup/Feed: From each pickup slot to the inlet of the Fixing Assembly
- Fixing/Delivery: From the Fixing Assembly to the delivery outlet
- Duplex: From the Duplex Reverse Assembly to the Duplex Re-pickup Assembly



Pickup and Feed block

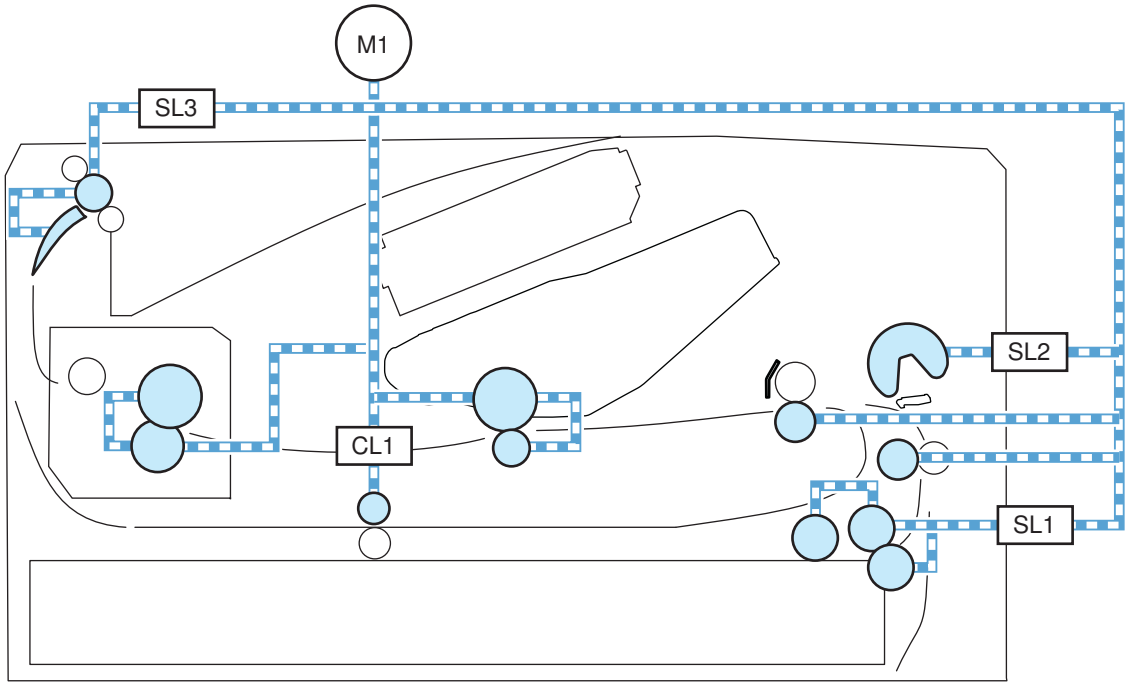
Parts Configuration

Description



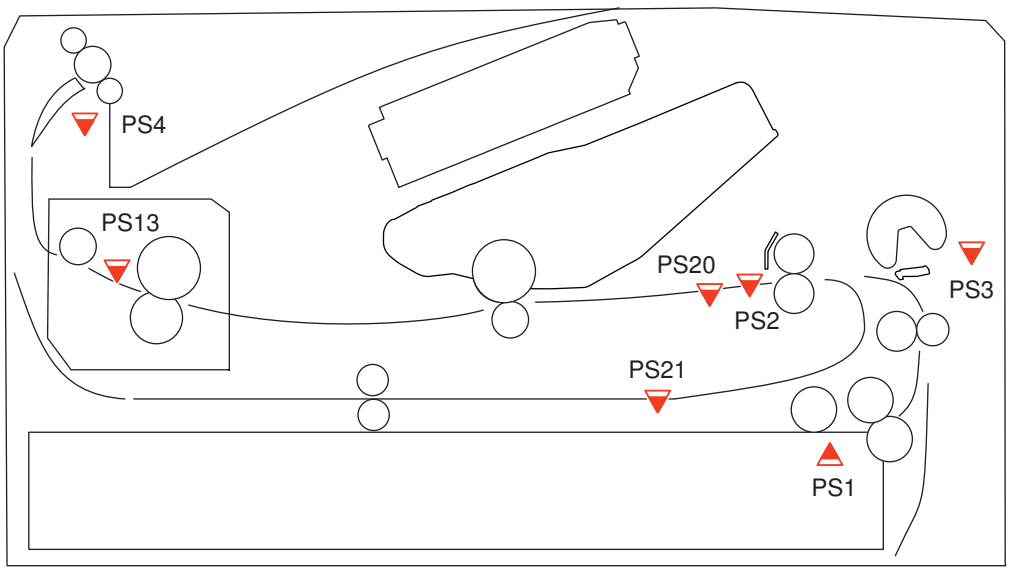
No.	Name	No.	Name
[1]	Fixing Delivery Roller	[12]	Feed Roller
[2]	Duplex Flapper	[13]	Cassette Feed Roller
[3]	Delivery Roller	[14]	Cassette Separation Roller
[4]	Fixing Film	[15]	Cassette Pickup Roller
[5]	Fixing Assembly	[16]	Duplex Re-pickup Roller
[6]	Photosensitive Drum	[17]	Registration Roller
[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



Sym-bol	Name	Sym-bol	Name
M1	Main Motor	SL3	Duplex Reverse Solenoid
SL1	Cassette Pickup Solenoid	CL1	Duplex Re-pickup Clutch
SL2	Multi-purpose Tray Pickup Solenoid		

Layout of Sensors

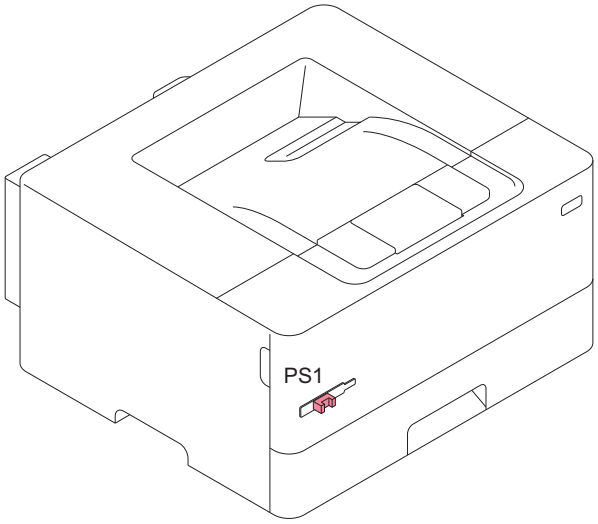


Symbol	Name	Symbol	Name
PS1	Cassette Paper Sensor	PS13	Fixing Delivery Sensor
PS2	TOP Sensor	PS20	Paper Width Sensor
PS3	Multi-purpose Tray Paper Sensor	PS21	Duplex Feed Sensor
PS4	Delivery Tray Full Sensor		

Cassette Detection

Description

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



Symbol	Name
PS1	Cassette Paper Sensor

Cassette Pickup Control

Description

The DC Controller rotates the Pickup Roller by rotating the Main 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

Overview

This equipment employs the retard separation method to prevent double feed.
The retard separation method is the method to prevent double feed of paper, using the Separation Roller that has no drive.
The Separation Roller rotates by following the Feed Roller.

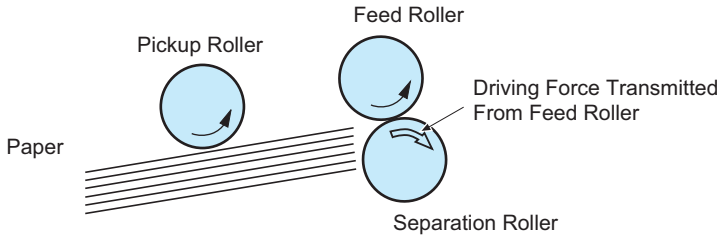
Description

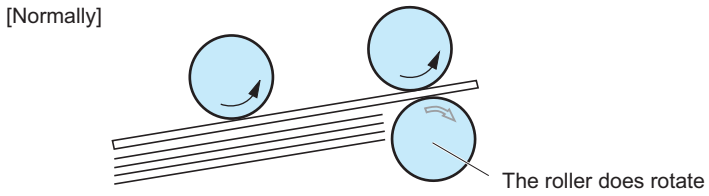
At normal state

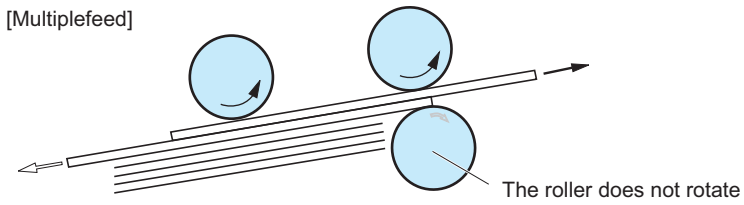
The Separation Roller is driven by the drive force of the Feed Roller transmitted through the paper. This rotates the Separation Roller in the feed direction.

During Double Feed

When there are multiple sheets of paper between the rollers, the friction force between those paper becomes weaker; thus the drive force of the Feed Roller transmitted to the Separation Roller becomes extremely weak.
This mechanism prevents the Separation Roller from being rotated by the weak drive force transmitted from the Feed Roller during double feed by applying a force to the Separation Roller to suppress its rotation.
This stops the rotation of the Separation Roller and prevents it from picking up double feed paper.





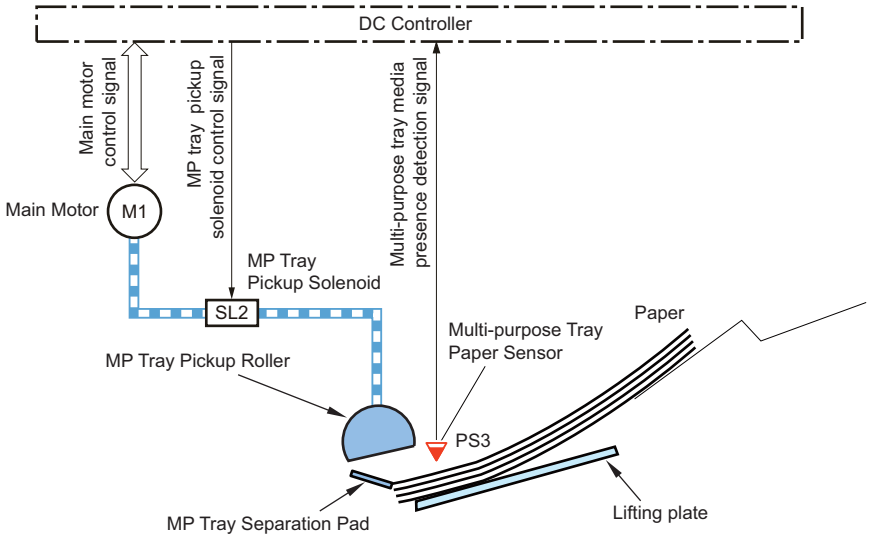


Multi-purpose Tray Pickup Control

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 Main Motor (M1).
2. When the DC Controller turns ON the Multi-purpose 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 Multi-purpose Tray Paper Sensor (PS3), and printing is not performed if there is no paper.

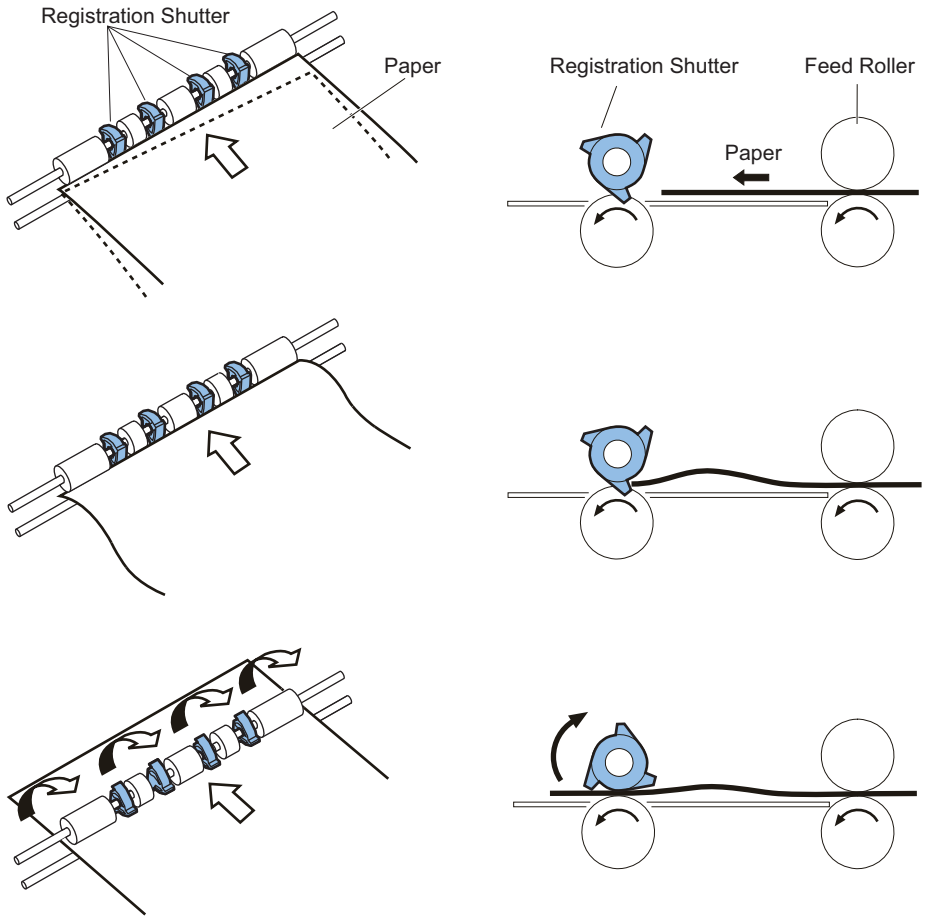


Skew Correction

Description

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

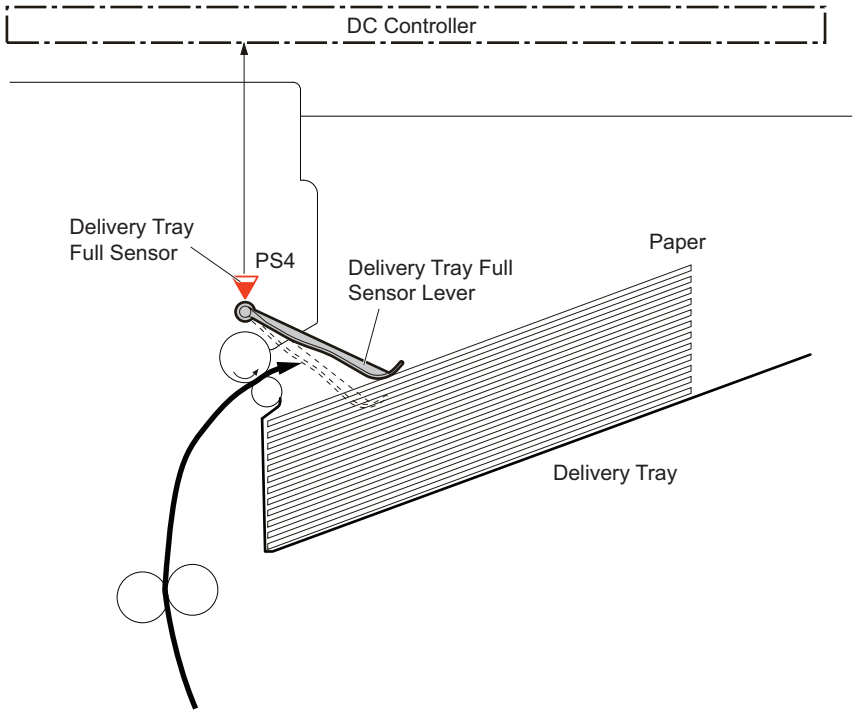
1. The paper leading edge pushes against the Registration Shutter to align the leading edge of the paper.
2. The trailing edge of the paper is fed and slack is generated at the leading edge of the paper.
3. When the trailing edge is fed even further, the paper leading edge for which slack was generated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

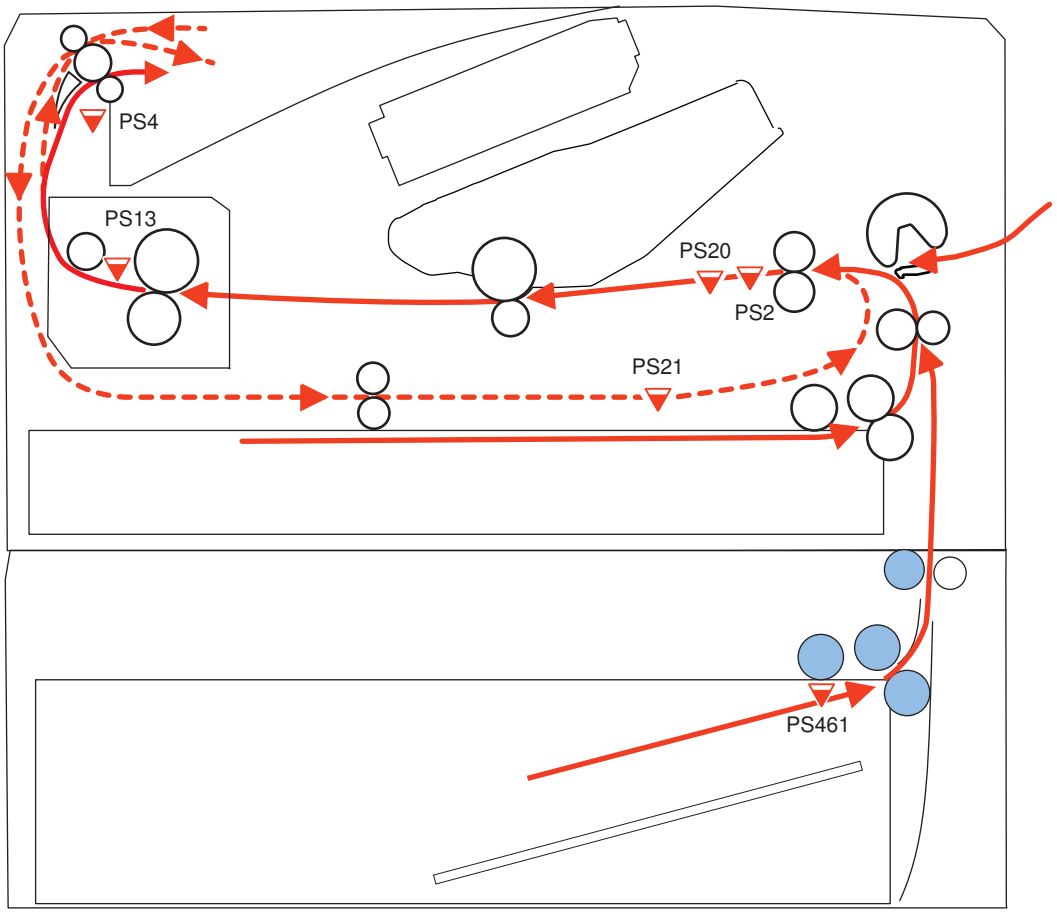
The DC Controller detects paper full in the Output Tray using the Delivery Tray Full Sensor (PS4).
The DC Controller judges that the Output Tray is full and notifies the Main Controller when the Delivery Tray Full Sensor detects paper for more than the specified period of time during printing.



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 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)
- Cassette Paper Sensor (PS461)

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.
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.
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.
Fixing delivery stationary jam	The Fixing Delivery Sensor (PS13) does not detect the paper trailing edge although a specified period of time has passed after the detection of the paper leading edge.
Duplex feed delay 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.
Duplex re-pickup delay jam	At 2nd sheet pickup, the TOP Sensor (PS2) does not detect the paper leading edge although a specified period of time has passed.
Wrapping jam	The Fixing Delivery Sensor (PS13) detected the paper trailing edge earlier than the specified period of time after it detected the leading edge.
Internal residual jam	One of the following sensors detected presence of paper at power-on, door close, or before/after print operation. • TOP Sensor (PS2) • Paper Width Sensor (PS20) • Fixing Delivery Sensor (PS13) • Duplex Feed Sensor (PS21) • Delivery Tray Full Sensor (PS4) • Cassette Paper Sensor (PS461)
Door Open Jam	The door open was detected during printing and feeding paper.

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 as well as a network 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

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.

Version upgrade by replacing the PCB

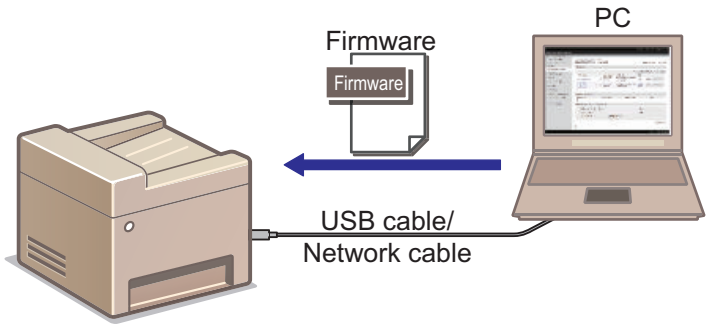
Version upgrade by replacing the existing PCB with a PCB where the latest firmware is installed

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 or Network 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

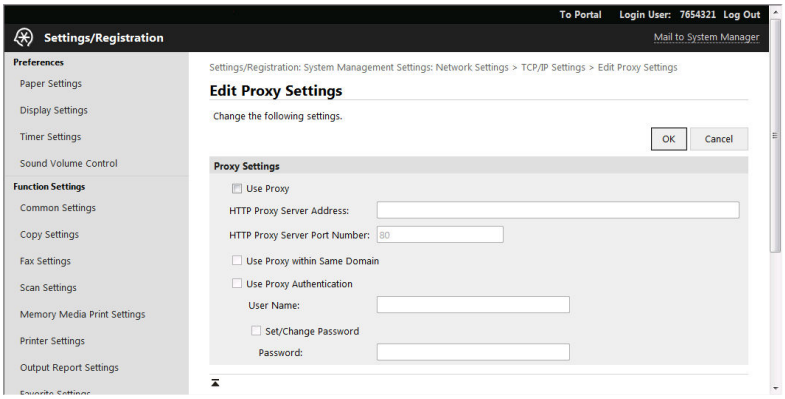
In order to perform version upgrade of the device via Internet, the following conditions must be met.

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.

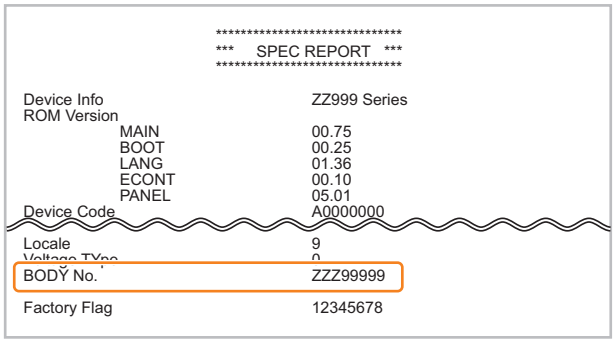


The serial number of the host machine should be shown on the Main Controller PCB.

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.
The procedure for checking the serial number using SPEC REPORT is shown below as reference information.

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 [MACHINE SERIAL NUMBER] of the printed SPEC REPORT.

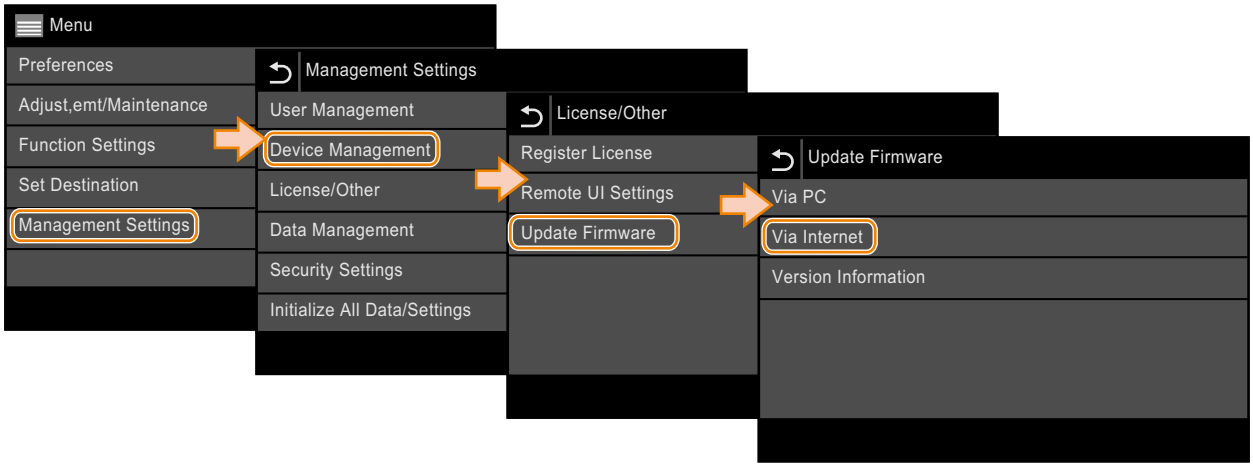


■ Procedure for Upgrading the Firmware via Internet

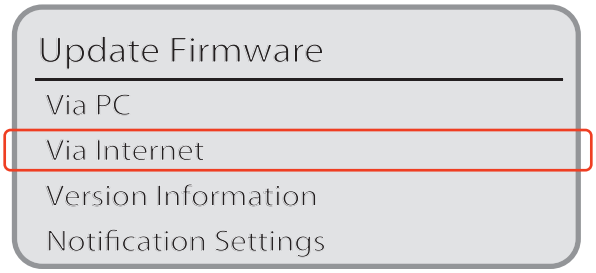
1. **Select the following menu to upgrade the firmware via Internet.**

NOTE:
The menu differs depending on the model.

- Touch Panel
  Menu > [Management Settings] > [License/Other] > [Update Firmware] > [Via Internet]

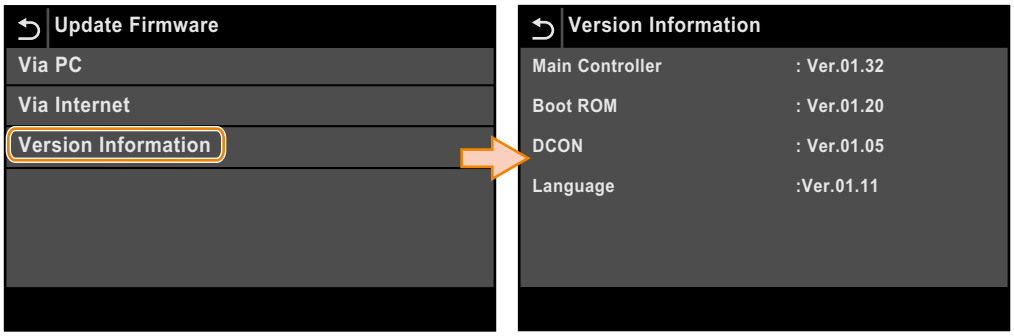


- 5 lines UI
  Menu > [Management Settings] > [Remote UI Settings/Update Firmware] > [Update Firmware] > [Via Internet]

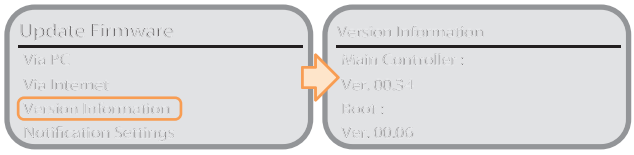


When the upgrading of firmware is completed, the machine automatically restarts.

2. **Select the following menu, and check that the firmware has been correctly upgraded.**
   - Touch Panel
     Menu > [Management Settings] > [License/Other] > [Update Firmware] > [Version Information]



   - 5 lines UI
     Menu >[Management Settings] > [Remote UI Settings/Update Firmware] > [Update Firmware] > [Version Information]



CAUTION:
This function does not support the operations from the remote UI. (The item [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

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

■ Prerequisite

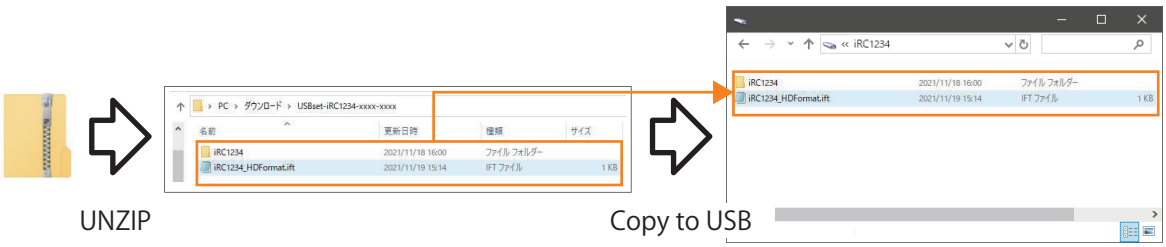
In order to perform version upgrade of the machine using a USB flash drive, the following conditions must be met.

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

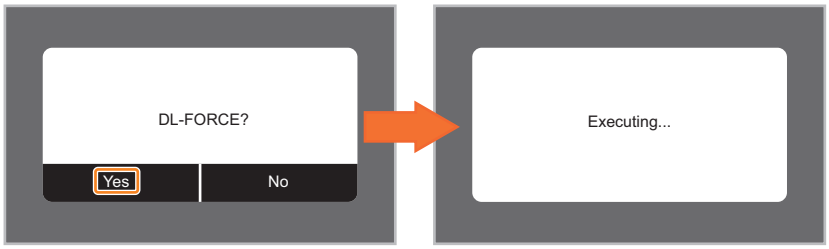
1. **Store the firmware on a USB flash drive.**
   1. Download and unzip the firmware of the target product.
   2. Store the unzipped firmware on the root directory of the USB flash drive.



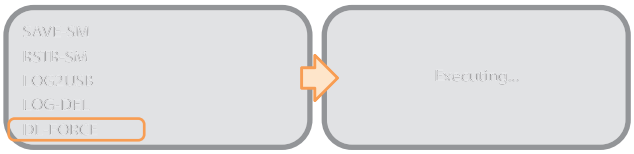
2. **Connect the USB flash drive where the firmware is stored to this machine.**
3. **Execute one of the following service modes.**
   - COPIER > FUNCTION > SYSTEM > DOWNLOAD
   - COPIER > FUNCTION > SYSTEM > DL_FORCE

NOTE:
If you want to apply only firmware that is newer than the firmware 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 DL_FORCE.

- Touch Panel



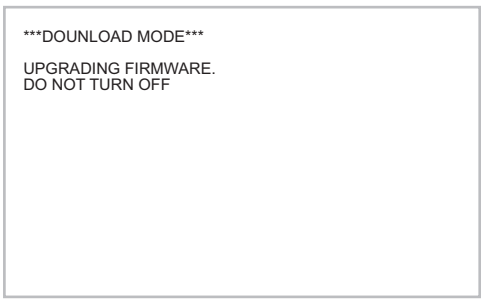
- 5 lines UI



CAUTION:
When the machine returns to the service mode screen without restarting after executing this service mode, one of the following had occurred so return to step 1 and check again.

- The folder name that the firmware is stored in is not correct
- The structure of folder that the firmware is stored in is not correct. (It is not located on the root directory of USB flash drive)
- The firmware for the different model as the target model is stored

4. The machine will automatically restart and the version upgrade process for firmware starts.



NOTE:
After transitioning to [DOWNLOAD MODE], the USB flash drive can be removed.

5. When the upgrading of firmware is completed, the machine automatically restarts again.

Setting Information Export/Import Function (DCM)

Overview

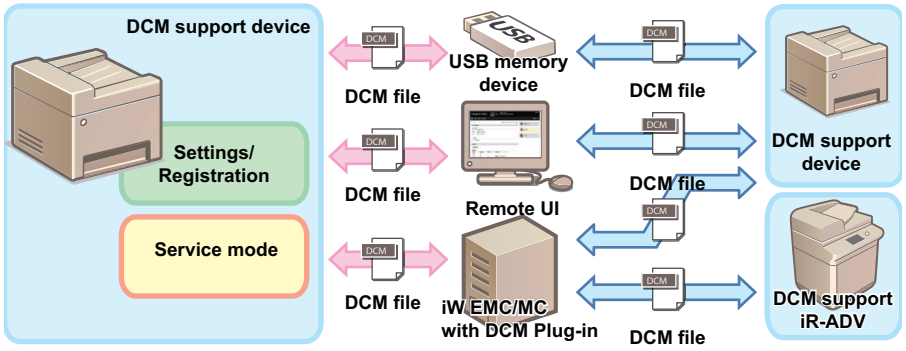
Various data is stored in the storage inside the device.
Depending on the works to be done such as replacing parts, this data needs to be backed up and restored.
There are some ways to back up and restore data, and the appropriate one should be used depending on the purpose and storage destination.
This 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 [Menu] ([Setting/ 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 [Menu] ([Setting/ Registration] menu)

Setting information can be backed up and restored from the Control Panel of the device or from [Menu] ([Setting/ Registration] menu) of remote UI.
Although [Menu] ([Setting/ 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.
DC-CON/R-CON 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

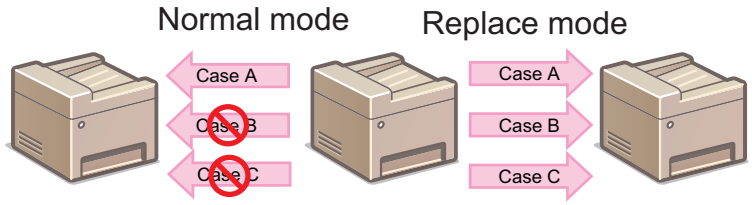
■ Compatibility of Data

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 60.

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 if the model to which the data is migrated is different.
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 model) cannot be imported.
When replacement mode is enabled on the device on the importing side, 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/OFF replacement mode of the device to which the migrating data is imported.

1. **Set the following service mode setting value to "1(ON)" or "0(OFF)".**
   - COPIER > OPTION > USER > RPL-IMP

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.

The targeted items of replacement mode are as follows.

List of Replacement Mode Targeted Items

User mode setting items	Settings (* indicates default values)	Remarks
System settings		
Device information settings		
Device name	32 characters	Model name is displayed as a default value.
Installation site	32 characters	
Network settings		
TCP/IP settings		
IPv4 settings		
IP address	0.0.0.0 *	
IPv6 settings		
Manual address settings		
Use manual address	OFF*/ON	
Manual address	IP address input screen	
Prefix length	(0 to *64 to 128)	
Default router address	Router address input screen	
DNS settings		
Use the same host/domain name as those of IPv4	OFF/ON*	
Host name	Enter the host name	
Domain name	Enter the domain name	
mDNS Settings		
mDNS Settings	OFF/ON*	
Use the same mDNS name as that of IPv4	OFF/ON*	
mDNS name	Enter the mDNS name	
SMB settings		
NetBIOS name	NetBIOS name for own machine (15 byte)	
Workgroup name	Belonging workgroup name (15 byte)	
AirPrint settings		
Installation site	32 characters	Setting values to be referred are the same as [Installation Site] in the [System Settings]

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.

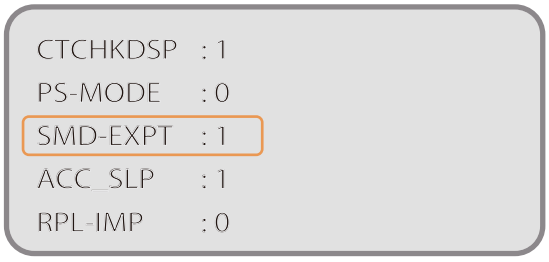
Power must not be turned off during an import/export processing.

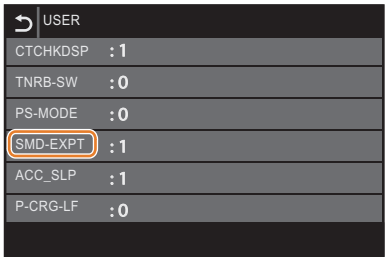
If power discontinuity occurs during an import processing, a rollback processing is not performed, therefore the settings imported up to that point are reflected while the rest of the settings remain as-is.
When power discontinuity occurs during an export processing, export is not executed.

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

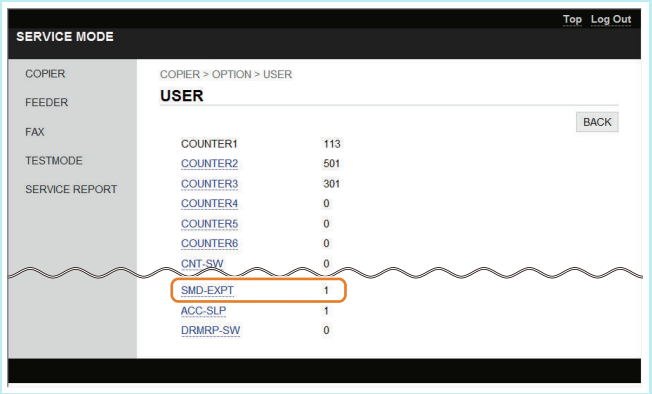
The service mode setting information can be exported from the [Management Settings] menu by setting the following service mode setting value to "1".

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

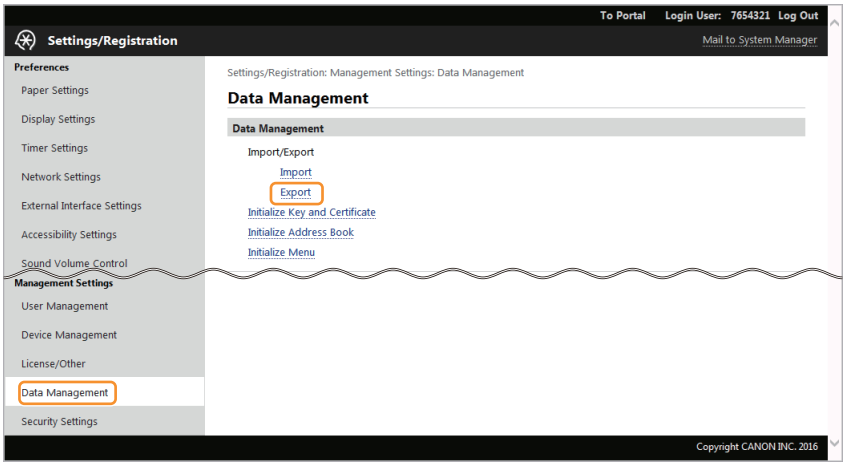




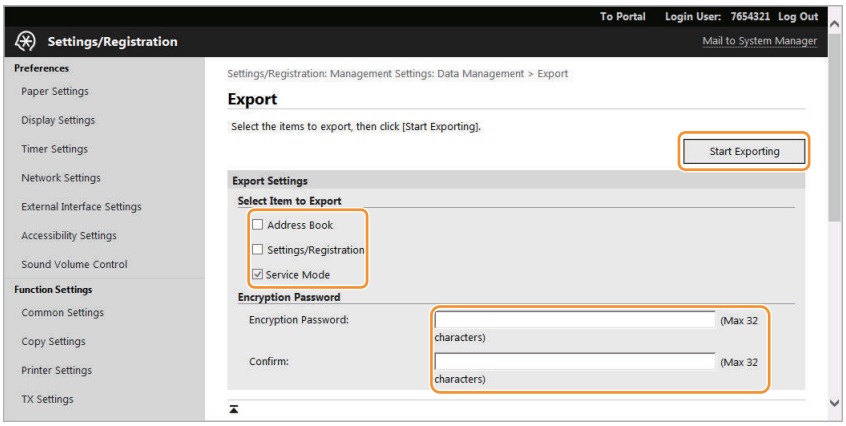
NOTE:
The [SMD-EXPT] settings can set up either from the Control Panel or from the remote UI.



2. **Exit service mode, start remote UI, login in system administrator mode, and then select the following items:**
   - [Settings/Registration] > [Management Settings] > [Data Management] > [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.

Encrypted password

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

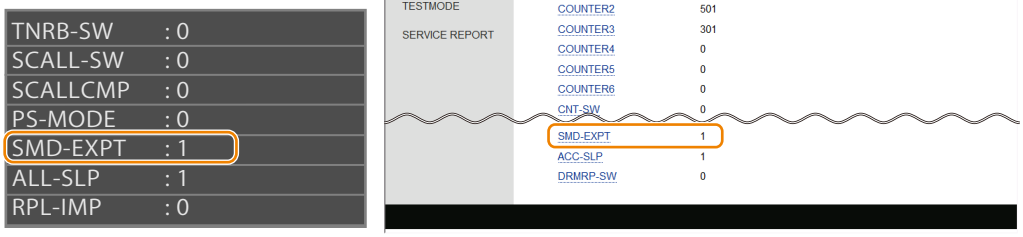
4. **The file download dialog box will appear. Save the file to any location.**
5. **Enter service mode, and set the following item to "0".**
   - COPIER > OPTION > USER > SMD-EXPT

CAUTION:
As the screen of export function can also be accessed by the user, make sure the [SMD-EXPT] setting is disabled (setting value: 0).

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

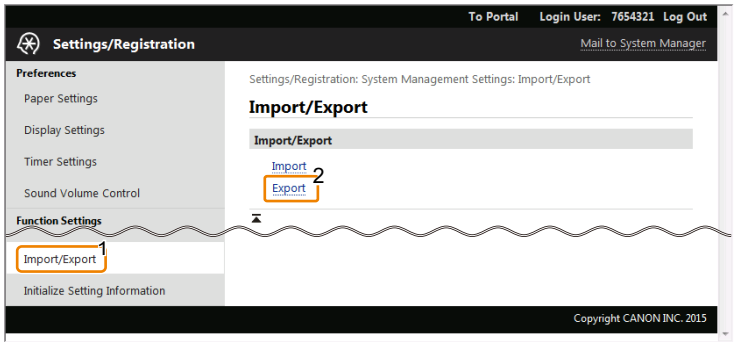
Import the service mode setting information file that was exported in the previous procedure.

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

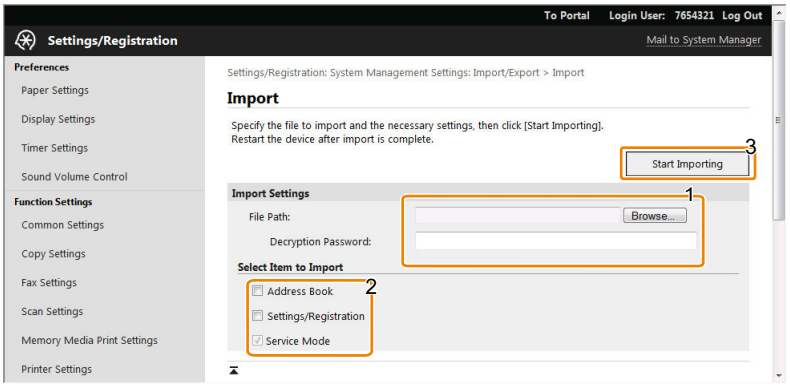


NOTE:
The [SMD-EXPT] setting can be configured either from the Control Panel or from the remote UI.

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



3. **Configure the import setting, and click [Start Importing].**
   Entering the encryption 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.

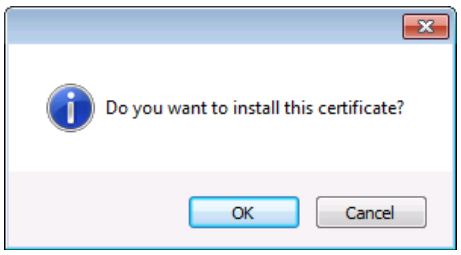
Address Book

Select the check box to import the address book data.

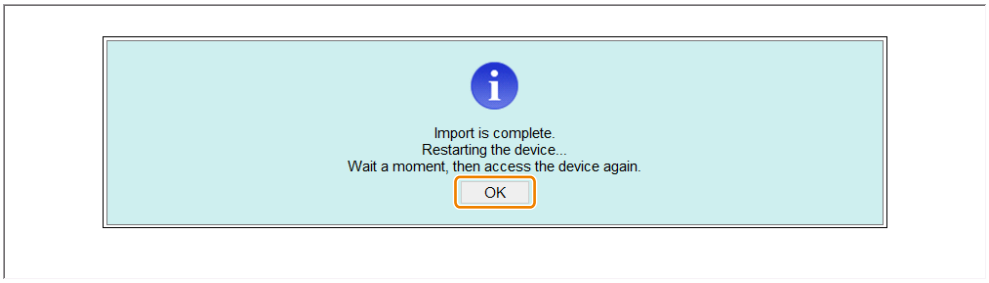
Settings/Registration

Select this check box to import the menu option data.

4. **A dialog box asking whether the user wants to execute import will appear. Click [OK].**



5. **A message will appear to indicate that the process has been completed. Click the [OK] button.**



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 > 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 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

■ Exporting Procedure to a USB Flash Drive.

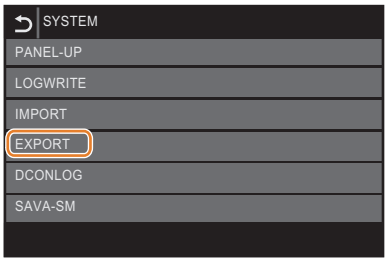
Use the service mode function to save the service mode setting information to a USB flash drive.
This operation can be performed both from the Control Panel and remote UI.
The following USB flash drives can be used for export/import.

- USB flash drive in FAT 16 format (storage capacity: 2 GB)
- USB flash drive in FAT 32 format (storage capacity: 32 GB)

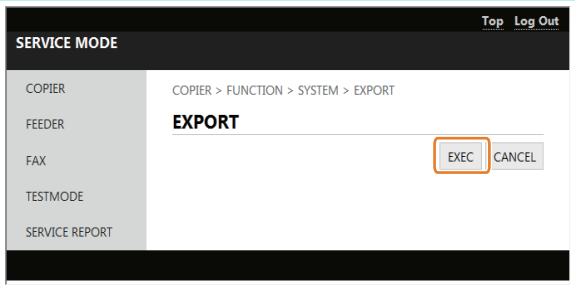
Note that the notation in parentheses in the procedure is the UI name of the remote UI.

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

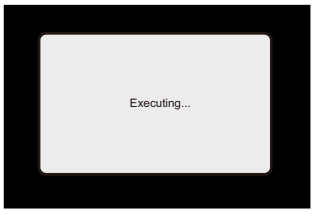


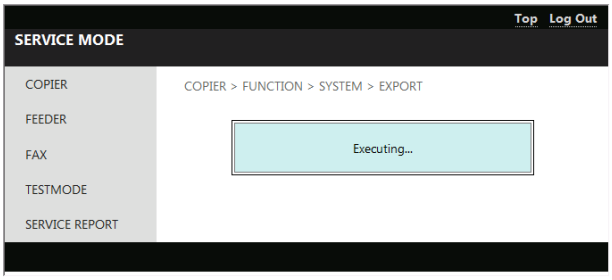
NOTE:
[EXPORT] can be executed either from the Control Panel or from the remote UI.



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, however the file has not been exported to anywhere.
For the above reason, make sure to check that the USB flash drive is connected before running.

3. **After checking the below message that displayed while processing, is disappeared and the display has returned to the original state, remove the USB flash drive.**





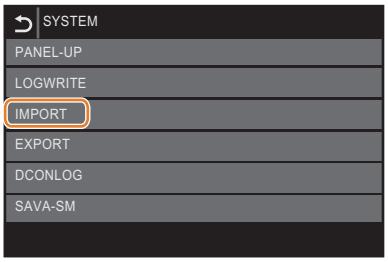
4. **Check that a setting information file (service.dcm) exists in the directory directly under the root of the USB flash drive.**
   This completes the procedure for exporting a setting information file.

CAUTION:
The file name is fixed, so if the same file name exists in USB, the data is overwritten.
When exporting multiple data, rename the file before exporting.

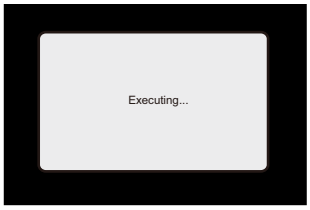
■ Import Procedure from USB Flash Drive

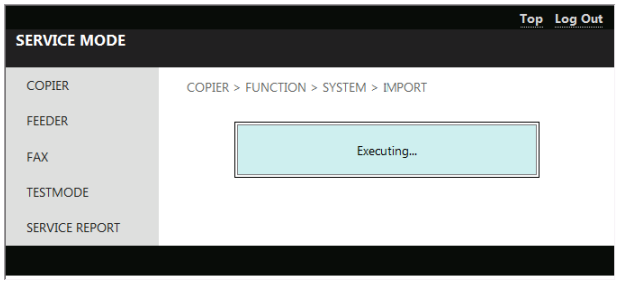
1. **Save the setting information file (service.dcm) to be imported to directly under the root of the USB flash drive.**
2. **Connect the USB flash drive to the USB memory port.**

3. **Enter the service mode, and execute the following service mode:**
   - COPIER > FUNCTION > SYSTEM > IMPORT



4. **After checking the below message that displayed while processing, is disappeared and the display has returned to the original state, remove the USB flash drive.**



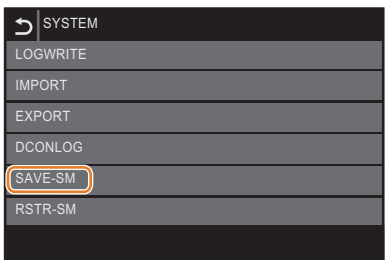


5. **Restart the host machine, enter the service mode, and confirm that the setting information is reflected.**
   This completes the procedure for importing a setting information file.

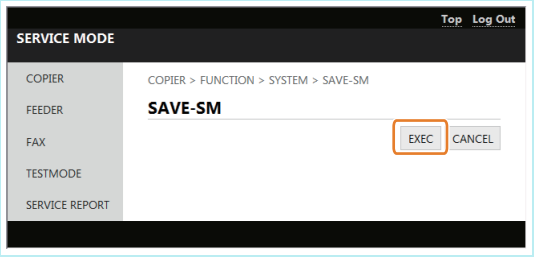
■ Backup Procedure to the Storage in the Machine

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.

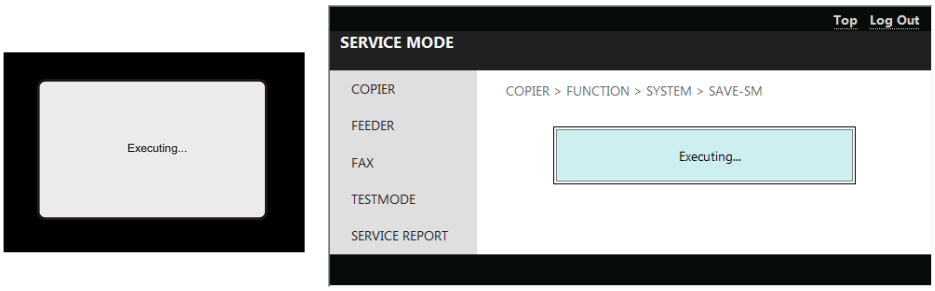
1. **Enter service mode, and execute the following service mode.**
   Access service mode, select COPIER > FUNCTION > SYSTEM > SAVE- SM, and click [OK (EXEC)].



NOTE:
[SAVE-SM] can be executed either from the Control Panel or from the remote UI.



2. **The following screen is displayed during the processing:**



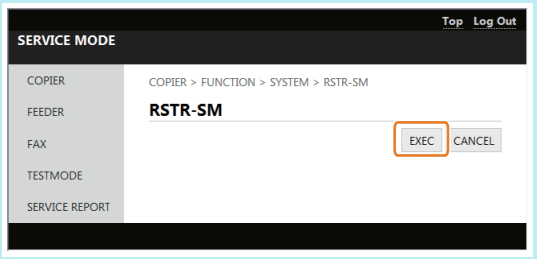
3. **Finish the operation after checking that the screen returns to the previous display.**

■ Procedure for Restoration from Internal Storage

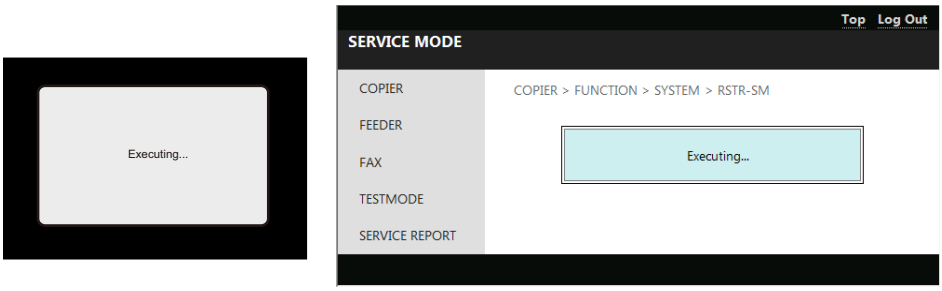
Restore the service mode setting information that has been backed up to the storage in the machine in the previous procedure.

1. **Enter service mode, and execute the following service mode.**
   - COPIER > FUNCTION > SYSTEM > RSTR-SM

NOTE:
[RSTR-SM] can be executed either from the Control Panel or from the remote UI.



2. **The following screen is displayed during the processing:**



3. **Finish the operation after checking that the screen returns to the previous display.**

List of Items Which Can Be Imported

The following shows items to be imported for this function.
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)

NOTE:
This list is the common list for this function.
Therefore, this list may contain some items that are not supported by this function.

■ Service Mode

No.	Initial screen	Large	Middle	Small	Case A	Case B	Case C
1	COPIER	ADJUST	FEED-ADJ	ADJ-MFY	Yes	-	-
2	COPIER	ADJUST	FEED-ADJ	ADJ-MFX	Yes	-	-
3	COPIER	ADJUST	FEED-ADJ	ADJ-MFYR	Yes	-	-
4	COPIER	ADJUST	FEED-ADJ	ADJ-MFXR	Yes	-	-
5	COPIER	ADJUST	FEED-ADJ	ADJ-C1Y	Yes	-	-
6	COPIER	ADJUST	FEED-ADJ	ADJ-C1X	Yes	-	-
7	COPIER	ADJUST	FEED-ADJ	ADJ-C1YR	Yes	-	-
8	COPIER	ADJUST	FEED-ADJ	ADJ-C1XR	Yes	-	-
9	COPIER	ADJUST	FEED-ADJ	ADJ-C2Y	Yes	-	-
10	COPIER	ADJUST	FEED-ADJ	ADJ-C2X	Yes	-	-
11	COPIER	ADJUST	FEED-ADJ	ADJ-C2YR	Yes	-	-
12	COPIER	ADJUST	FEED-ADJ	ADJ-C2XR	Yes	-	-
13	COPIER	ADJUST	VIFADJ	DEV-HV-K	Yes	-	-
14	COPIER	ADJUST	VIFADJ	FU-TMP	Yes	-	-
15	COPIER	ADJUST	VIFADJ	CRG-HV-K	Yes	-	-
16	COPIER	ADJUST	VIFADJ	LS-PWR-K	Yes	-	-
17	COPIER	ADJUST	VIFADJ	TR-HV	Yes	-	-
18	COPIER	FUNCTION	SPLMAN	SPL14159	Yes	Yes	Yes
19	COPIER	FUNCTION	SPLMAN	SPL65677	Yes	-	-
20	COPIER	FUNCTION	SPLMAN	SPL68676	Yes	-	-
21	COPIER	FUNCTION	SPLMAN	SPL68677	Yes	-	-
22	COPIER	FUNCTION	SPLMAN	SPL25607	Yes	-	-
23	COPIER	FUNCTION	SPLMAN	SPL93822	Yes	Yes	Yes
24	COPIER	FUNCTION	SPLMAN	SPL78788	Yes	Yes	Yes
25	COPIER	FUNCTION	SPLMAN	SPL00171	Yes	Yes	Yes
26	COPIER	FUNCTION	SPLMAN	SPL80100	Yes	Yes	Yes
27	COPIER	FUNCTION	SPLMAN	SPL78148	Yes	-	-
28	COPIER	FUNCTION	SPLMAN	SPL05378	Yes	Yes	-
29	COPIER	FUNCTION	SPLMAN	SPL81031	Yes	Yes	Yes
30	COPIER	FUNCTION	INSTALL	ERDS	Yes	Yes	Yes
31	COPIER	FUNCTION	INSTALL	RGW-PORT	Yes	Yes	Yes
32	COPIER	FUNCTION	INSTALL	RGW-ADSW	Yes	Yes	Yes
33	COPIER	FUNCTION	INSTALL	CDS-CTL	Yes	Yes	Yes
34	COPIER	FUNCTION	INSTALL	RMS-RGKY	Yes	Yes	Yes
35	COPIER	OPTION	BODY	MIBCOUNT	Yes	Yes	Yes
36	COPIER	OPTION	BODY	NS-CMD5	Yes	-	-
37	COPIER	OPTION	BODY	NS-PLN	Yes	-	-
38	COPIER	OPTION	BODY	NS-LGN	Yes	-	-
39	COPIER	OPTION	BODY	SLPMODE	Yes	Yes	Yes

No.	Initial screen	Large	Middle	Small	Case A	Case B	Case C
40	COPIER	OPTION	BODY	SDTM-DSP	Yes	Yes	Yes
41	COPIER	OPTION	FNC-SW	T-DLV-BK	Yes	Yes	-
42	COPIER	OPTION	FNC-SW	T-DLV3BK	Yes	Yes	-
43	COPIER	OPTION	FNC-SW	LCDSFLG	Yes	Yes	Yes
44	COPIER	OPTION	FNC-SW	CDS-UGW	Yes	Yes	Yes
45	COPIER	OPTION	FNC-SW	CDS-FIRM	Yes	Yes	Yes
46	COPIER	OPTION	FNC-SW	CDS-LVUP	Yes	Yes	Yes
47	COPIER	OPTION	FNC-SW	CRG-PROC	Yes	Yes	-
48	COPIER	OPTION	FNC-SW	CRGLF-K	Yes	Yes	-
49	COPIER	OPTION	FNC-SW	RPT2SIDE	Yes	Yes	Yes
50	COPIER	OPTION	DSPLY-SW	TNR-WARN	Yes	Yes	-
51	COPIER	OPTION	DSPLY-SW	CRGLW-LV	Yes	Yes	Yes
52	COPIER	OPTION	DSPLY-SW	CRG-LOG	Yes	Yes	-
53	COPIER	OPTION	DSPLY-SW	GEN-CRG	Yes	Yes	-
54	COPIER	OPTION	DSPLY-SW	RMT-CNCT	Yes	Yes	-
55	COPIER	OPTION	DSPLY-SW	UFOS-DSP	Yes	Yes	-
56	COPIER	OPTION	DSPLY-SW	RMS-SW	Yes	Yes	Yes
57	COPIER	OPTION	DSPLY-SW	RMS-BTN	Yes	Yes	Yes
58	COPIER	OPTION	DSPLY-SW	UI-VNC	Yes	Yes	Yes
59	COPIER	OPTION	IMG-MCON	REGM-SEL	Yes	-	-
60	COPIER	OPTION	USER	COUNTER1	Yes	-	-
61	COPIER	OPTION	USER	COUNTER2	Yes	-	-
62	COPIER	OPTION	USER	COUNTER3	Yes	-	-
63	COPIER	OPTION	USER	COUNTER4	Yes	-	-
64	COPIER	OPTION	USER	COUNTER5	Yes	-	-
65	COPIER	OPTION	USER	COUNTER6	Yes	-	-
66	COPIER	OPTION	USER	CNT-SW	Yes	-	-
67	COPIER	OPTION	USER	CONTROL	Yes	-	-
68	COPIER	OPTION	USER	CTCHKDSP	Yes	-	-
69	COPIER	OPTION	USER	TNRB-SW	Yes	-	-
70	COPIER	OPTION	USER	SMD-EXPT	Yes	-	-
71	COPIER	OPTION	USER	ACC_SLP	Yes	Yes	Yes
72	COPIER	OPTION	USER	TNRBEXGR	Yes	Yes	Yes
73	COPIER	OPTION	ACC	CARD-SW	Yes	-	-
74	COPIER	OPTION	ACC	CC-SPSW	Yes	-	-

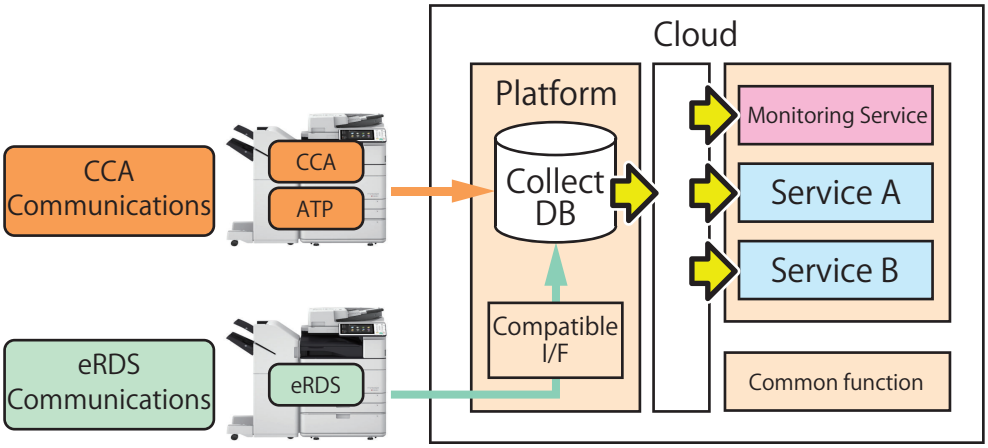
Monitoring Function

CCA Communication

■ System Overview

● Overview of Function

This machine supports "CCA Communication" which is a new communication method that replaces the conventional E-RDS (EMBEDDED-RDS).
(CCA : Cloud Connection Agent)



■ Setting Procedure

● Advance Preparation

Before setting up the CCA communication, the following settings are needed.

1. Connecting to the Internet and Cloud
2. Device time settings

Preparation for Connection to the Internet and Cloud

1. Ask in advance to change the firewall and proxy settings so that this machine can access the cloud.

> **NOTE:**
> The necessary setting changes differ from E-RDS.
> For more information, refer to a security white paper issued by CINC Business Group.

2. Perform the IP address, DNS, and proxy settings on the device itself so that the device can connect to the Internet.

Device Time Settings

If there is a time difference of more than 5 minutes between the device and the cloud, CCA communication from the machine to the cloud will not be possible, hence, set the time on the unit to the correct time during installation.
Set up the SNTP settings of this machine and operate with the correct time continuously.

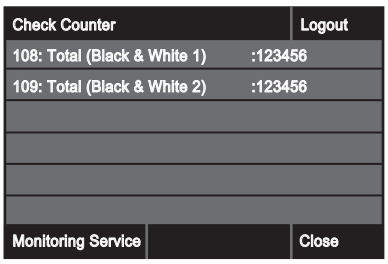
● CCA Communication Setting Procedure

Settings on the Touch Panel

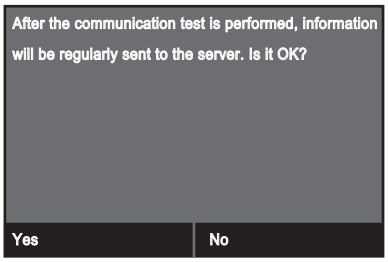
Settings from the Home Screen

1. Press [Check Counter] on the [Home] screen.

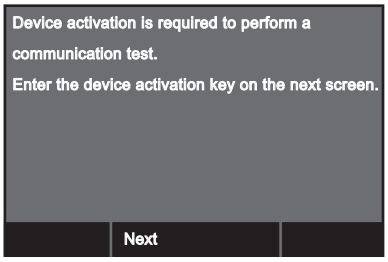
2. On [Check Counter] screen, press [Monitoring Service].



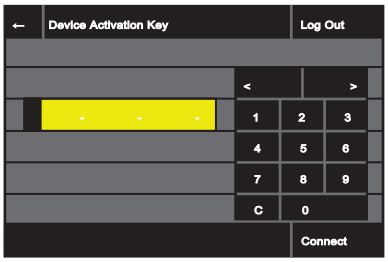
3. When the confirmation screen is appeared, press [Yes].



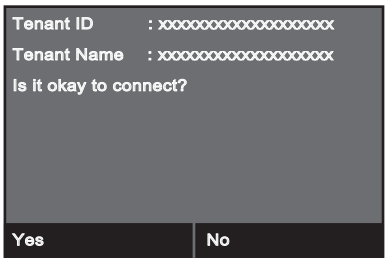
4. When a screen indicating entering a device activation key is appeared, press [Next].



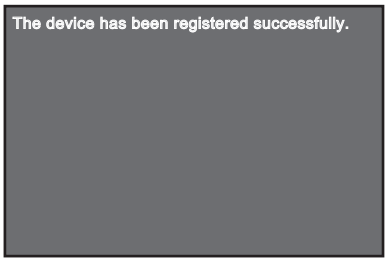
5. On the device activation key input screen, enter the 8-digit key and press [Register].



6. The tenant ID and tenant name of the connection destination are displayed, and if there are no mistakes, press [Yes].



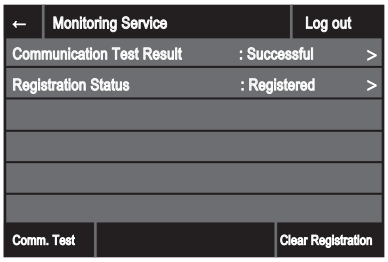
7. After a message indicating that communication is in progress is displayed, the connection results are displayed.



Communication Test

After connecting to the cloud, conduct a communication test using the following procedure.

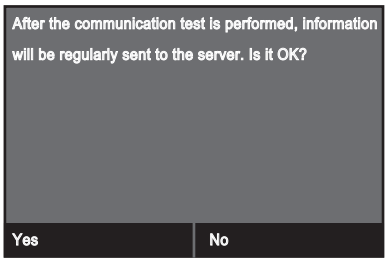
1. Press [Check Counter] on the [Home] screen.
2. Press [Communication Test] on the [Monitoring Service] screen.



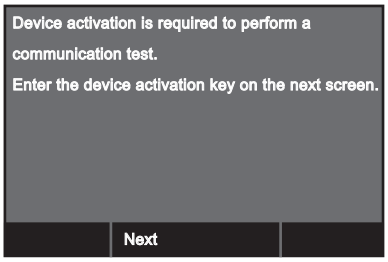
3. The communication test results will be displayed.

Settings form the Network Screen

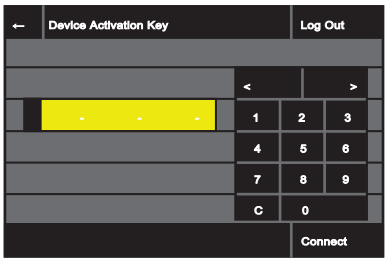
1. On [Home] screen, press [Menu] > [Preferences] > [Network].
2. On [Network] screen, press [Monitoring Service].
3. When the confirmation screen is appeared, press [Yes].



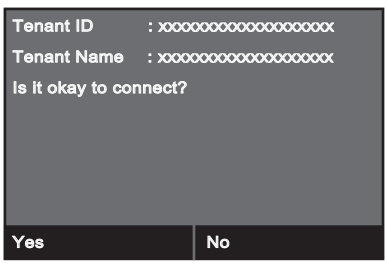
4. When a screen indicating entering a device activation key is appeared, press [Next].



5. On the device activation key input screen, enter the 8-digit key and press [Register].



6. The tenant ID and tenant name of the connection destination are displayed, and if there are no mistakes, press [Yes].

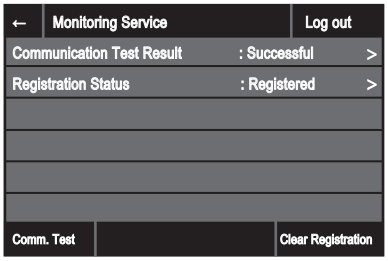


7. After a message indicating that communication is in progress is displayed, the connection results are displayed.

Communication Test

After connecting to the cloud, execute a communication test using the following procedure.

1. On [Home] screen, press [Menu] > [Preferences] > [Network].
2. On [Network] screen, press [Monitoring Service].
3. Press [Communication Test] on the [Monitoring Service] screen.

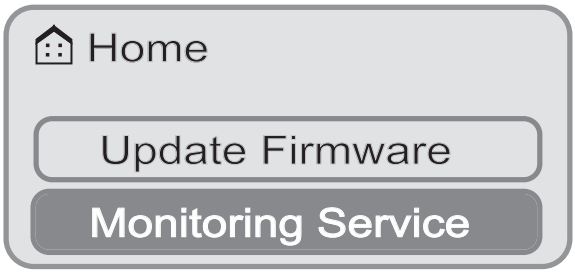


4. The communication test results will be displayed.

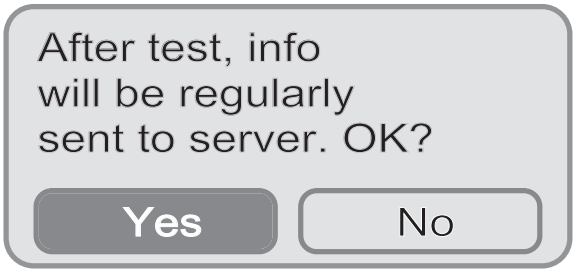
Settings in the 5 lines UI

Settings from the Home Screen

1. Select [Monitoring Service] from the home screen.

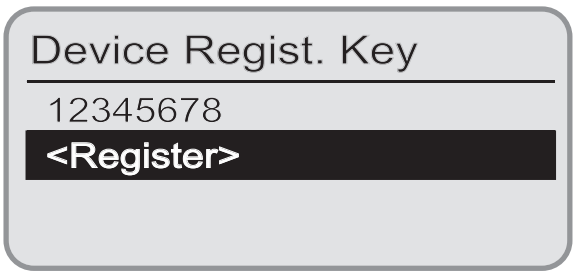


2. After displaying the confirmation screen, select [Yes].

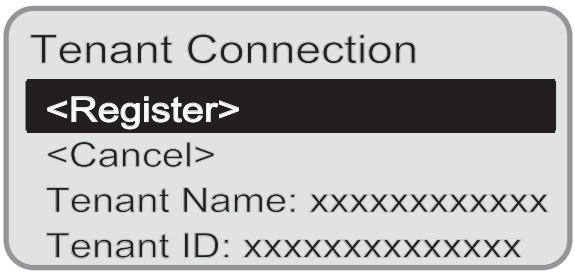


3. When a screen indicating entering a device activation key is appeared, press [Next].

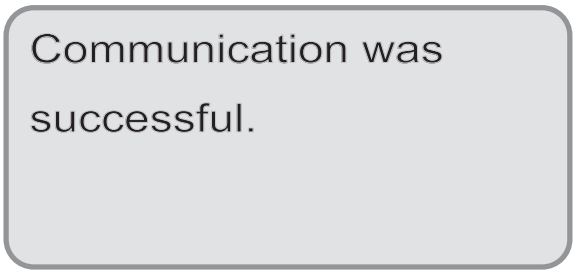
4. On the device activation key input screen, enter the 8 digit key and select [Register].



5. The tenant ID and tenant name of the connection destination are displayed, and if there are no mistakes, select [Connection].



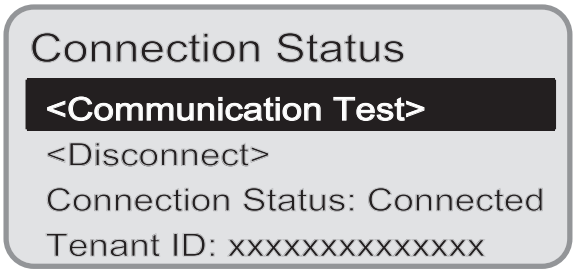
6. After a message indicating that communication is in progress is displayed, the connection results are displayed.



Communication Test

After connecting to the cloud, conduct a communication test using the following procedure.

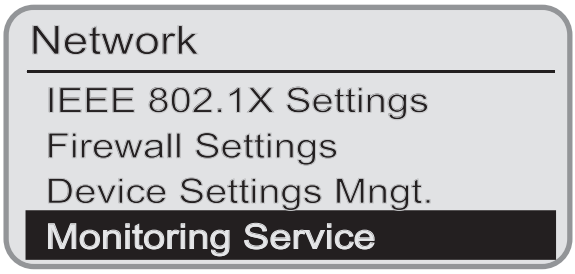
1. Select [Monitoring Service] from the home screen.
2. Select <Communication Test> from [Connection Status] screen.



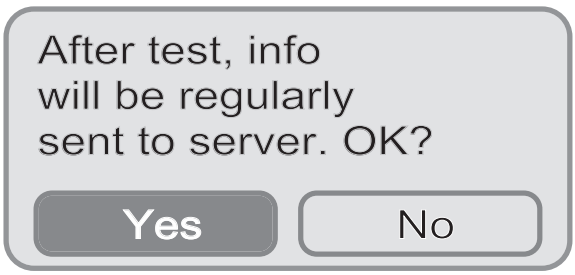
3. The communication test results will be displayed.

Settings from the Network Screen

1. Select [Menu] > [Preferences] > [Network] > [Monitoring Service] from the home screen.

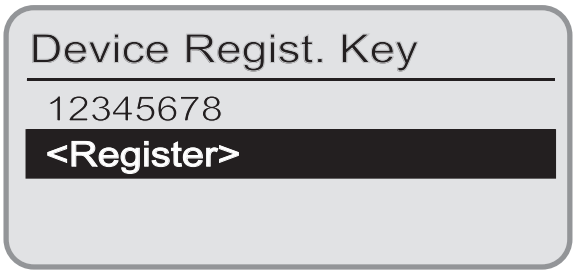


2. After displaying the confirmation screen, select [Yes].

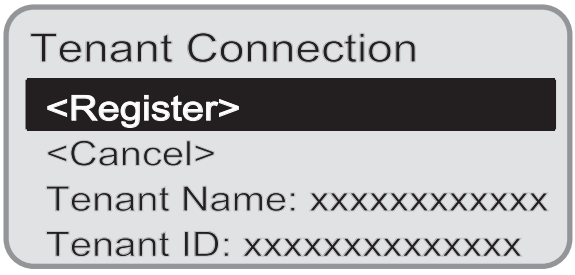


3. When a screen appears indicating that entering the device activation key is needed, press [Next].

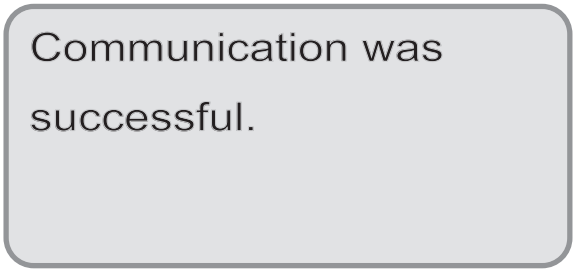
4. On the device activation key input screen, enter the 8 digit key and select [Register].



5. The tenant ID and tenant name of the connection destination are displayed, and if there are no mistakes, select [Connection].



6. After a message indicating that communication is in progress is displayed, the connection results are displayed.

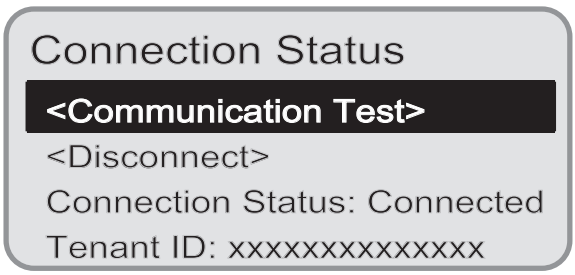


Communication Test

After connecting to the cloud, conduct a communication test using the following procedure.

1. Select [Menu] > [Preferences] > [Network] > [Monitoring Service].

2. Select <Communication Test> from the [Connection Status] screen.



3. The communication test results will be displayed.

● Cancellation procedure

With doing this procedure, it is possible to disconnect to the cloud of the device.

Settings on the Touch Panel

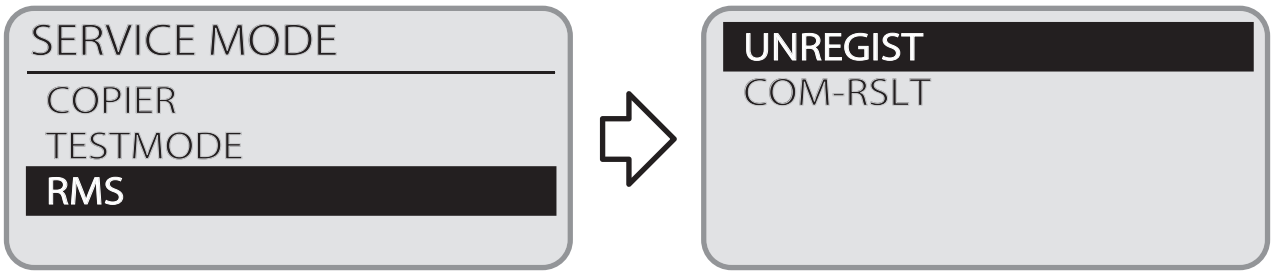
Service Mode

1. Enter the service mode.
2. Select [RMS] > [UNREGIST] and execute the disconnect.
3. A message "Executing ..." indicating that it is running is displayed, and the screen returns when the process is complete.
4. Select [RMS] > [COM-RSLT] and check the result of the disconnect.

Settings in the 5 lines UI

Service Mode

1. Enter service mode.
2. Select [RMS] > [UNREGIST] and execute the canceling the connection.



3. A message "Executing ..." indicating that it is running is displayed, and the screen returns when the process is complete.
4. Select [RMS] > [COM-RSLT] and check the result of the connection cancellation.

● Troubleshooting

Actions

When connecting to the cloud

1. If an error occurs while connecting after selecting [Monitoring Service], check the message and take actions.
2. After taking corrective actions, execute the communication test again.
3. If a recovery is not possible, collect the necessary information and escalate to the market support.

During operation

1. Perform a communication test.
2. If the communication test fails, check the content of the message and take an action.
3. After taking a corrective action, execute the communication test again.
4. If a recovery is not possible, collect the necessary information and escalate to the market support.

Debug.Log

In the event of trouble, the necessary information to escalate are as follows:

- Refer to SubLogs“Debug Log” on page 154

Error Messages

Error Codes	Message	Cause	Countermeasures
-	Registered. Check communication test result.	Device registration was successful, but one or more communication tests for various client applications failed.	Check the failed client and details of the cause from the communication test result screen and take appropriate actions accordingly.
-	-	The main screen was tried to open from the other mode while the [Monitoring Service] screen was open in either the user mode or service mode.	Close the screen in the other mode.
-	Communication error. Last Successful Comm.: {hours, minutes, seconds, date}	The screen of this application was opened with the status that the device was registered and the communication test result of the most recent CCA was failed.	Press the [OK] button to close the warning dialog box. Execute the communication test once again.
-	-	Even though the communication test failed, there was not a single detailed information from ATP was notified.	Wait for a while and run the communication test again.
01-0001	-	An internal error occurred.	It is unable to handle, so obtain a debug log and escalate to market support.
01-0002	Server connect. failed. Check network set.	Failed to obtain ATP service.	Review network and proxy settings. Check the connection of the network cable.
02-0001	An internal error occurred. Contact admin.	An internal error occurred.	It is unable to handle, so obtain a debug log and escalate to market support.
02-0002	Connect. failed. Wait a moment, then try again.	A timeout occurred while processing the ATP.	Try again after a while.
02-0003 02-0015 02-0017	Server connection failed. Check the network settings.	A network error occurred when the proxy was disabled while processing the ATP.	Review the network and proxy settings.
02-0004	An internal error occurred. Contact admin.	The ATP was busy and could not accept processing.	Try again after a while.
02-0005 02-0006 02-0007 02-0008 02-0009 02-0010 02-0011 02-0019 02-0021 02-0022 02-0023 02-0024 02-0999 02-1005	An internal error occurred. Contact admin.	An internal error occurred.	It is unable to handle, so obtain a debug log and escalate to market support.
02-0012	An internal error occurred. Contact admin.	It was in need of a reboot to show the CBIO browser's favorites button.	Review the network and proxy settings.
02-0013 02-0014 02-0016	Server connection failed. Check the network settings.	A network error occurred when the proxy was enabled while processing the ATP.	Review the network and proxy settings.
02-0018	Could not connect. Check DNS settings.	DNS name resolution failed during ATP processing.	Review DNS settings.
02-0020	No tenant is registered.	An error occurred during ATP processing as the tenant whose device was registered does not exist.	Check whether the operation is tried to perform (for example, canceling a device) on the assumption that a registered tenant exists.

Error Codes	Message	Cause	Countermeasures
02-1001 02-1002 02-1003 02-1004	Server error occurred. Call service rep.	An internal error occurred.	It is unable to handle, so obtain a debug log and escalate to market support.
02-1006	Device activation key is incorrect.	A registration was tried to perform with a device activation key that does not have an applicable tenant.	Enter the correct device activation key in the service mode or on the device activation key inputting screen.

E-RDS Communication

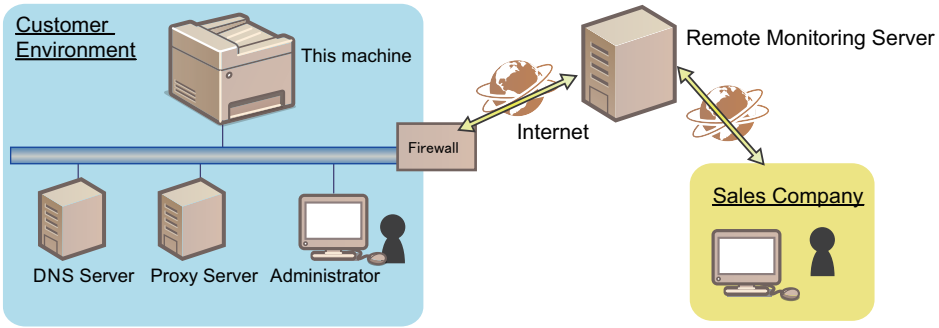
■ Overview of System

● 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 Monitoring 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 Remote Monitoring 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 Remote Monitoring Service 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 Remote Monitoring Server, 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 Remote Monitoring 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 Remote Monitoring 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 Remote Monitoring Server. E-RDS sends the device configuration information only when there is any change in the configuration.

Functional category	Sub category	Description
Data transmission	E-RDS Debug information	Debug information of E-RDS are stored in E-RDS, and they are sent to Remote Monitoring Server only when they exceed a specific size.
	Repair request	E-RDS sends error information (image failure, jams or others) according to the instruction of the user.
	Debug log transmission	When E-RDS catches the debug log transmission of a message designation than Remote Monitoring Server, send data such as device Debug logs and DCON logs to the Remote Monitoring Server.
Operation instruction	Operation check	E-RDS contacts Remote Monitoring Server to check if there is processing to be executed next, and receives the following instructions if any. • Linkage with CDS • Debug log 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 Remote Monitoring Server. 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, it will ends with a communication error with Remote Monitoring Server.
  - Port number of Remote Monitoring Server
    COPIER > FUNCTION > INSTALL > RGW-PORT
    Default: 443
- If the Remote Monitoring Service of the device becomes invalid, be sure to turn OFF the E-RDS setting (E-RDS: 0).
- When the E-RDS function is enabled, a communication test can be performed from [Check Counter] of the Control Panel of the host machine. *1
  When conducting a communication test from [Check Counter], pay attention to the following points:
  - During a communication test, do not take any actions such as pressing a key. Actions are not accepted until the communication test is completed (actions are ignored).
  - When a communication test is being conducted from service mode or from [Check Counter], do not conduct a communication test from the other. This operation is not guaranteed.

■ Setting Procedure

● Preparation

Since this function communicates with the Remote Monitoring 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 *2
- Installation of CA certificate (arbitrary *3)

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.

---

1. The user can perform a communication test or browse the result of communication test.

If the communication results in failure, an error code (hexadecimal number, 8 digit) is displayed on the Control Panel.

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

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

● 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 73 .

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 Remote Monitoring Server.

   When the E-RDS function is enabled, the function to communicate with Remote Monitoring Server is enabled.

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 Remote Monitoring Server address (URL).

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

■ Maintenance

● 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

■ Error Message List

Error information displayed on the communication error log detail screen is shown below.
(The "server" described here means Remote Monitoring Server.)

Code	Character strings	Cause	Remedy
0000 0000	SUSPEND: mode changed.	Operation mode mismatch	Execute initialization of the E-RDS settings (ERDS-DAT).
0500 0003	SUSPEND: Communication test is not performed.	E-RDS was enabled, but the main power of the device was turned OFF and then ON without performing a communication test.	Perform and complete a communication test (COM-TEST).
0xxx 0003	Server schedule is not exist	The schedule does not exist.	Perform and complete a communication test (COM-TEST).
0xxx 0003	Communication test is not performed	Communication test has not been completed.	Perform and complete a communication test (COM-TEST).
84xx 0003	E-RDS switch is setted OFF	E-RDS is not enabled.	Set the value of the E-RDS setting (E-RDS) to 1, and perform a communication test (COM-TEST).
8600 0002 8600 0003 8600 0101 8600 0201 8600 0305 8600 0306 8600 0401 8600 0403 8600 0414 8600 0415	Event Registration is Failed	Processing in the device (event processing) failed.	Turn OFF and then ON the power of the device. If the error occurs again after turning OFF and then ON the power, replace the system software of the device (version upgrade).
8700 0306	SRAM version unmatch!	An invalid value has been entered at the beginning of the NVMEM area of E-RDS (nonvolatile memory area).	Turn OFF and then ON the power of the device.

Code	Character strings	Cause	Remedy
8700 0306	SRAM AeRDS version unmatch!	An invalid value has been entered at the beginning of the NVMEM area of E-RDS (nonvolatile memory area).	Turn OFF and then ON the power of the device.
8xxx 0004	Operation is not supported	The user tried to execute a method which is not supported by E-RDS.	Collect Debug log and contact the Support Dept. of the sales company.
8xxx 0101	Server response error (NULL)	Remote Monitoring Server reply error: Processing of the Remote Monitoring Server error code failed.	Perform and complete a communication test (COM-TEST).
8xxx 0201 8xxx 0202 8xxx 0203 8xxx 0204 8xxx 0206	Server schedule is invalid	The schedule specified by Remote Monitoring Server is invalid.	Report the detailed information at the time of occurrence of the error to the Support Dept. Perform a remedy on the Remote Monitoring Server side, and then perform a communication test again.
8xxx 0207 8xxx 0208	Internal Schedule is broken	The internal schedule of E-RDS is invalid.	Perform and complete a communication test (COM-TEST).
8xxx 0221	Server specified list is too big	The information the Remote Monitoring Server instructed to send for the alert code/alarm code filter function is invalid.	There is a problem with the alarm filter set for Remote Monitoring Server. Contact the Support Dept. of the sales company.
8xxx 0222	Server specified list is wrong	The information the Remote Monitoring Server instructed to send for the alert code/alarm code filter function is invalid.	There is a problem with the alarm filter set for Remote Monitoring Server. Contact the Support Dept. of the sales company.
8xxx 0304	Device is busy, try later	A semaphore consumption error occurred during a communication test.	Wait for a while and then perform a communication test again.
8xxx 0709	Tracking ID is not match	When the firmware is updated, the tracking ID in the reply of Updater differs from that specified by Remote Monitoring Server.	Collect Debug log and send it to the Support Dept. of the sales company.
8xxx 2000	Unknown error	Other communication errors	Perform and complete a communication test (COM-TEST).
8xxx 2003	Network is not ready, try later	After the main power of the device is turned OFF and then ON, a communication test was performed with the network not ready.	Check the connection status of the network. Perform a communication test (COM-TEST) 60 seconds after turning ON the power of the device.
8xxx 2004	Server response error ([hexadecimal]) [detailed error information on the server side]	Remote Monitoring Server reply error: Communication to Remote Monitoring Server has succeeded, but an error occurred and Remote Monitoring Server returned an error.	Wait for a while and then try again. Check the error code (in hex notation) and the details of the error (detailed error information on the server side) from Remote Monitoring Server displayed after the message.
8xxx 200A	Server connection error	Remote Monitoring Server connection error: • TCP/IP communication failed. • The IP address of the device has not been set.	• Check the connection status of the network. • If proxy is used, configure the proxy settings and check the status of the proxy server.
8xxx 200B	Server address resolution error	Remote Monitoring Server address resolution error	• Check that Internet connection is available in the environment.
8xxx 2014	Proxy connection error	The address is invalid and connection to the proxy server fails.	Check the address/port of the proxy server, and configure the settings again.
8xxx 2015	Proxy address resolution error	Proxy address name resolution error	• Check the host name and the DNS settings of the proxy server. • Set the proxy server using the IP address.
8xxx 201E	Proxy authentication error	Proxy authentication error	Check the user name and password for logging in to the proxy, and configure the settings again.
8xxx 2028	Server certificate error	• The root certificate for the server has not been registered on the device. • The user has used another certificate and the correct certificate file has not been registered. • The date and time of the device is correct.	• Install the latest device system software (upgrade the version). • Set the correct date and time on the device. • Execute CLEAR > CA-KEY, and turn OFF and then ON the power of the device (automatic installation of the CA certificate at the time of shipment).

Code	Character strings	Cause	Remedy
8xxx 2046	Server certificate expired	• The root certificate registered on the device has expired. • The root certificate registered by the user at first is used and the correct certificate has not been registered. • The date of the device is outside the validity period.	Set the correct date and time on the device. If the date and time set on the device is correct, upgrade the version to the latest system.
8xxx 2047	Server response time out	Remote Monitoring Server reply time-out	If this occurs during a communication test, wait for a while and then perform a communication test (COM-TEST) again.
8xxx 2058	Unknown error	SOAP Client failed to obtain SOAPResponse. It may be caused by a problem on the server side or a temporary problem in network load, etc.	Perform and complete a communication test (COM-TEST).
8xxx 2063	SOAP Fault	SOAP error (SOAP Fault)	Check that the value of the port number of Remote Monitoring Server (RGW- PORT) is 443.
xxxx xxxx	Device internal error	Device internal error	Turn OFF and then ON the power of the device. Or, replace the system software of the device (version upgrade).
xxxx xxxx	SUSPEND: Initialize Failure!	Internal error at startup of E-RDS	Turn OFF and then ON the power of the device.

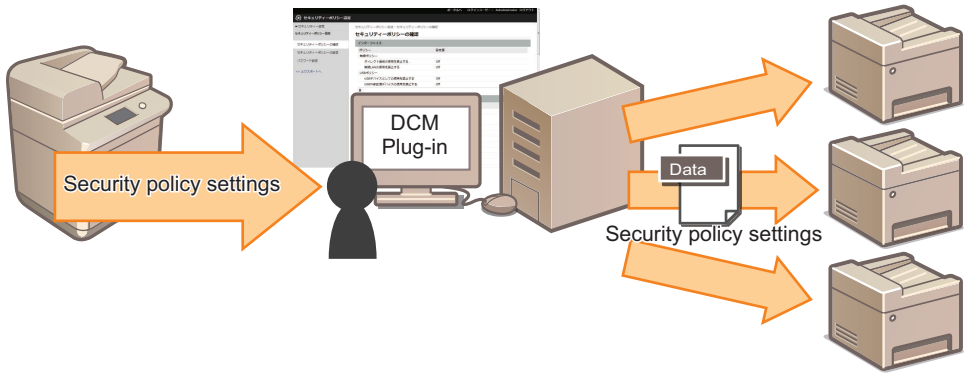
Security Functions

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

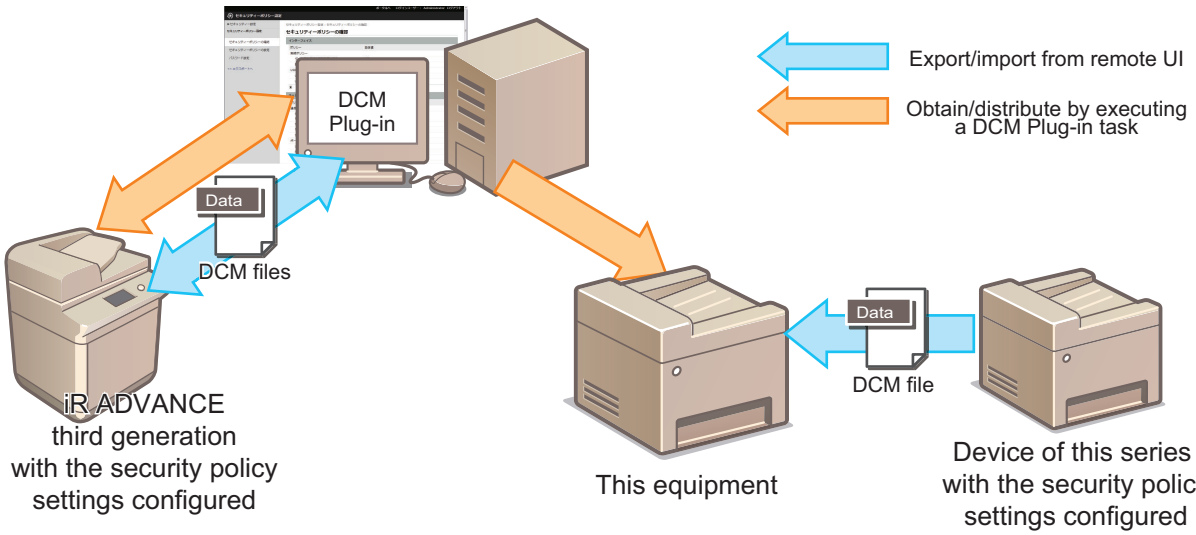
What is security policy function?

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.

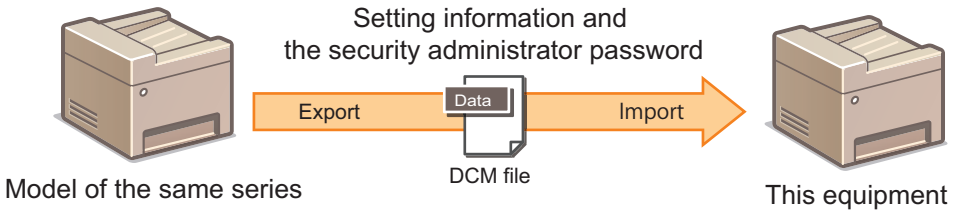
Behavior when the security administrator password has been set

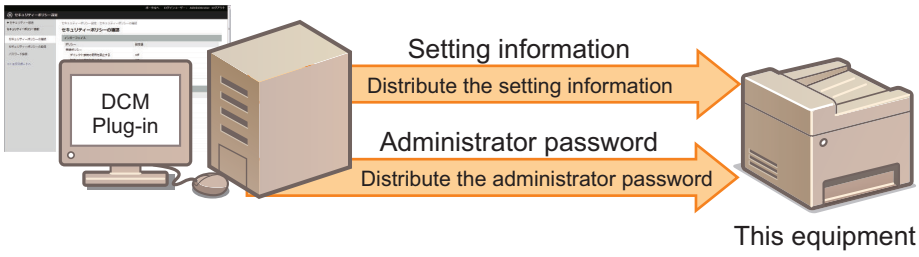
If the security administrator password has been set on this equipment, the security administrator password is required when [Initialize All Data/Settings] is executed. This is intended to prevent the device from being initialized without discretion and the configured security policy from being disabled.

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.





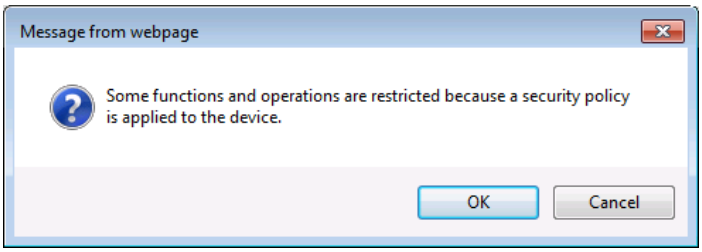
Initializing the security administrator password

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

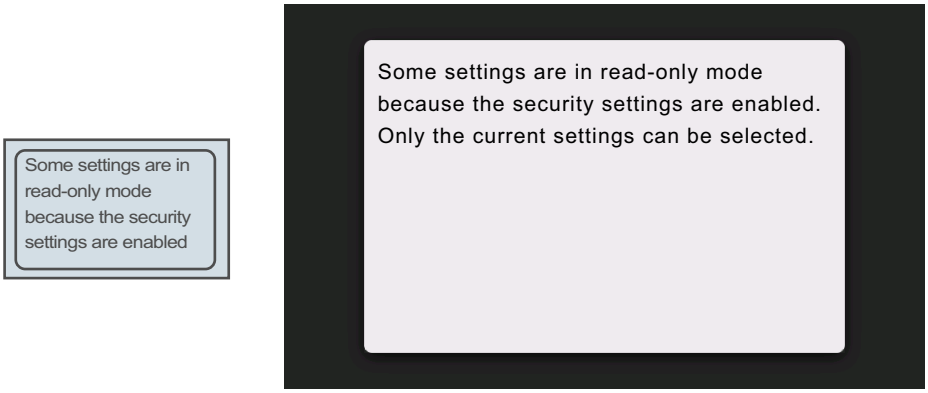
1. Restrained by the policy

■ 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.

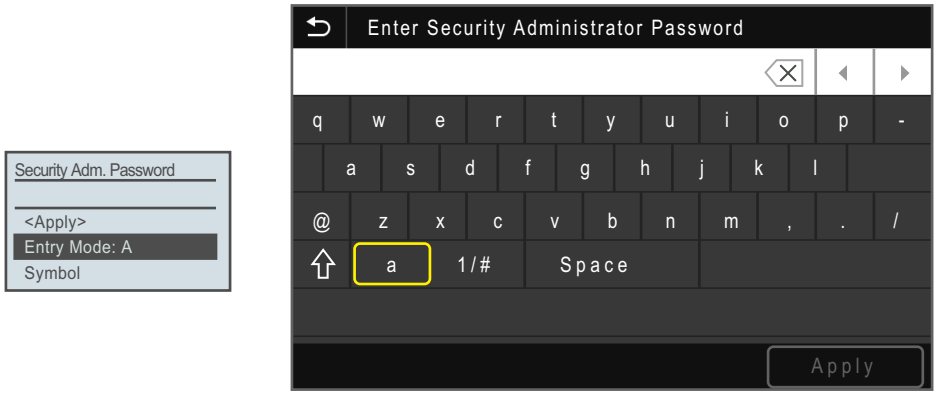


Example of the remote UI screen



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.



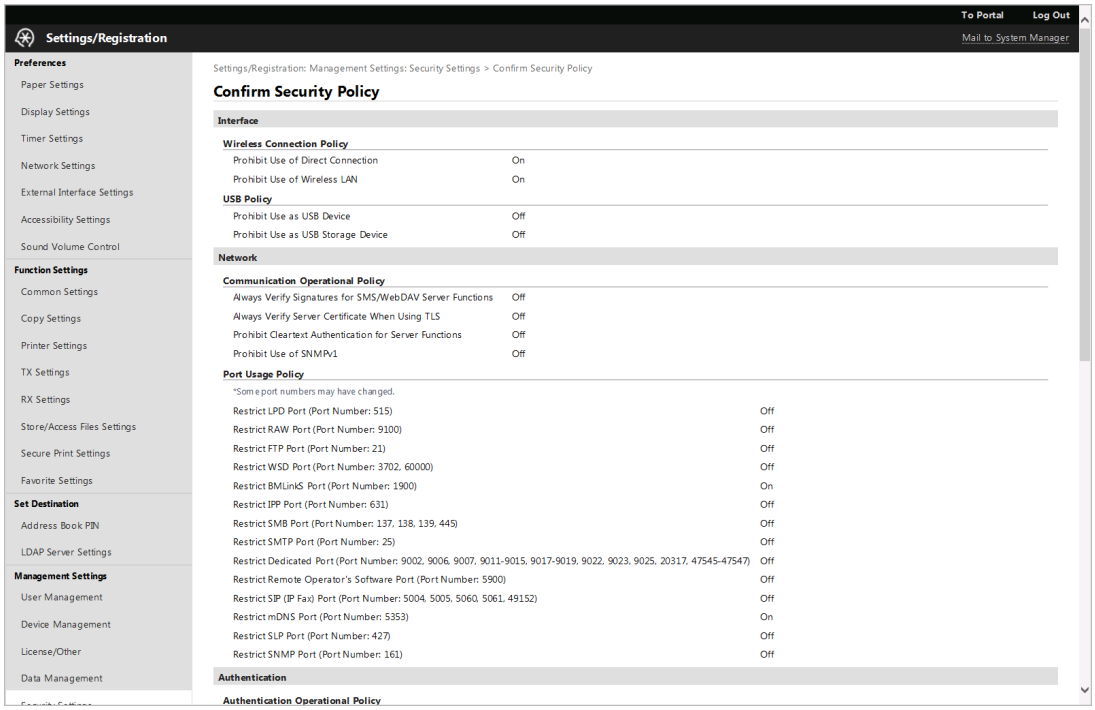
Security administrator password entry screen

■ 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

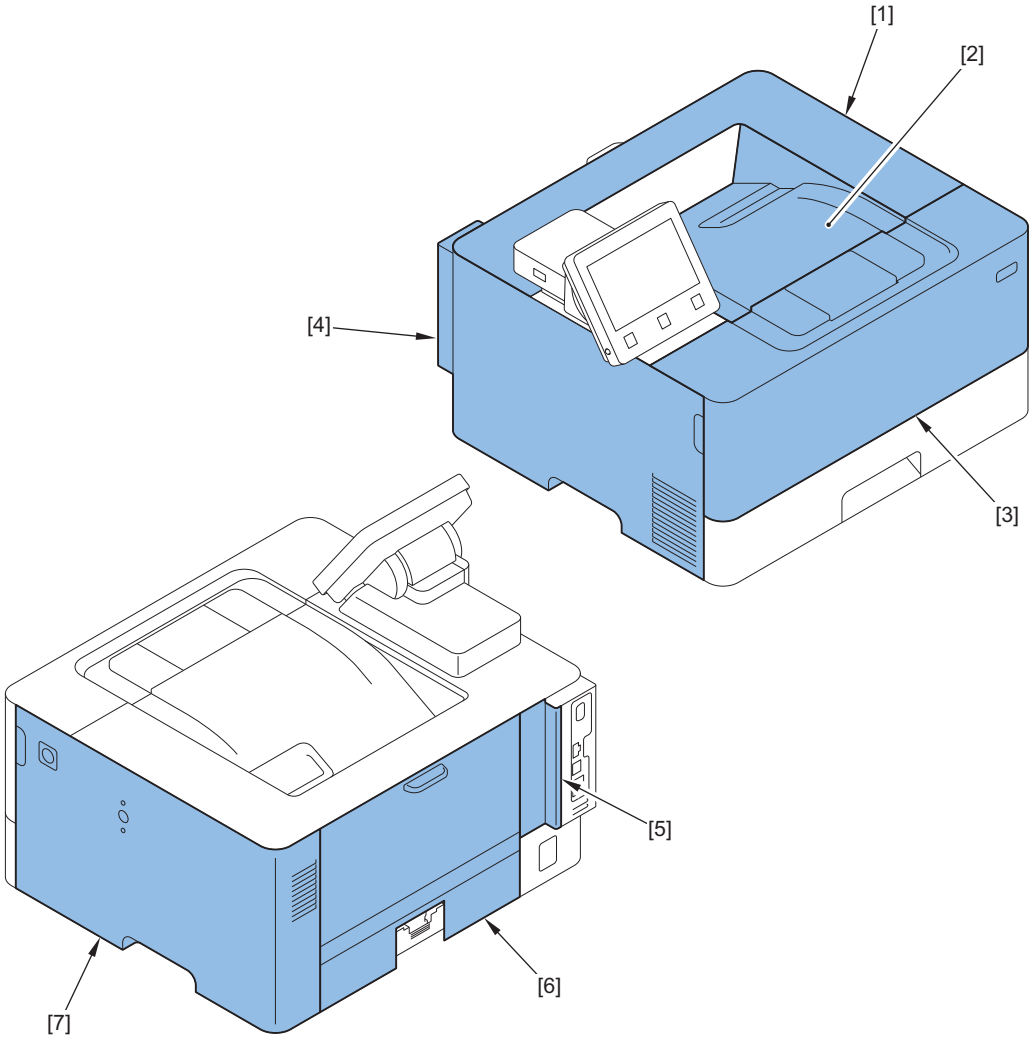
This machine does not require any periodical service.

5 Parts Replacement and Cleaning

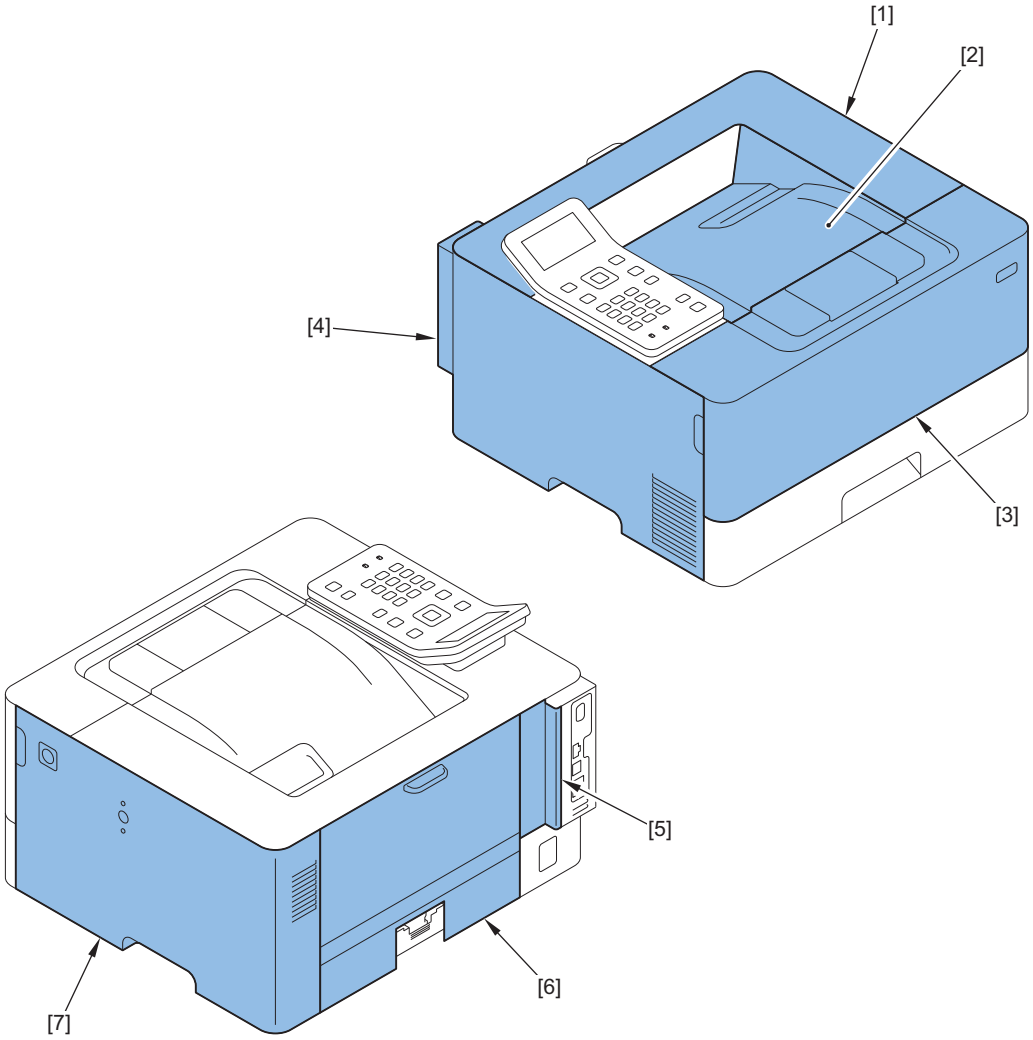
List of Parts

Major Units

■ External Cover

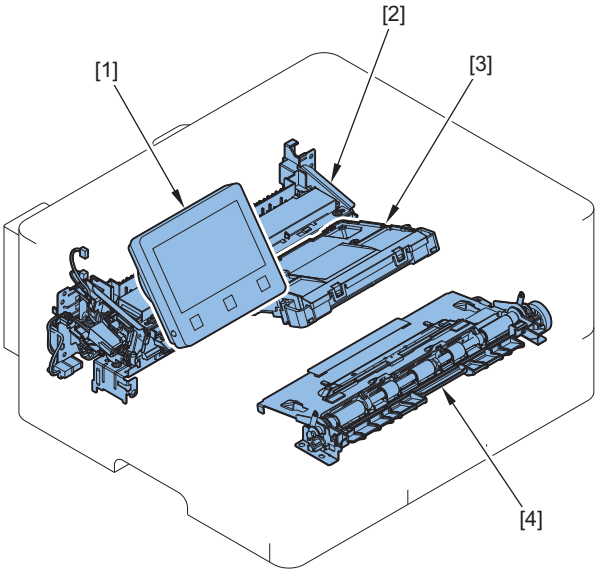


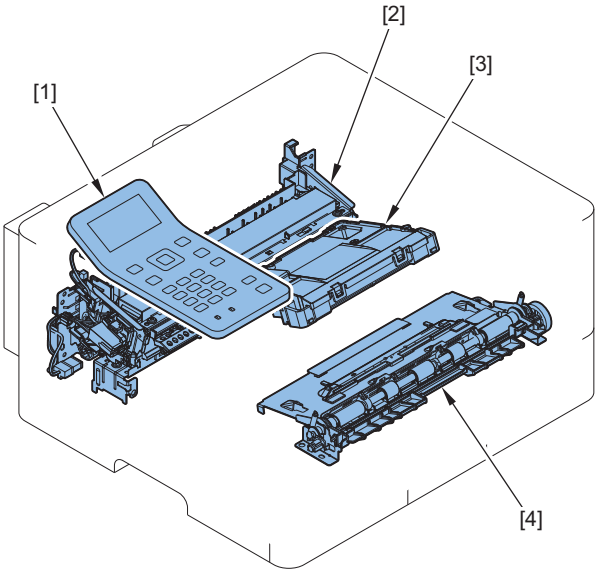
No.	Name
[1]	Upper Cover
[2]	Output Tray
[3]	Front Cover
[4]	Left Cover
[5]	Left Rear Cover
[6]	Rear Cover
[7]	Right Cover



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

■ Host Machine



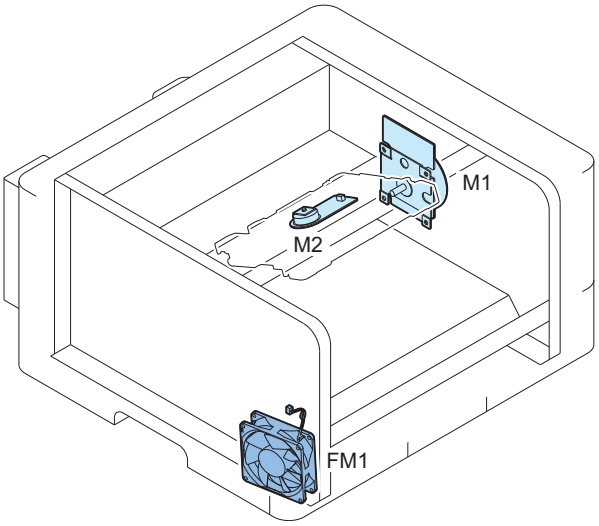


No.	Name
[1]	Control Panel Unit
[2]	Fixing Assembly
[3]	Laser Scanner Unit
[4]	Registration Unit

CAUTION:
Do not disassemble the Main Drive Assembly as it cannot be rebuilt after the disassembly.

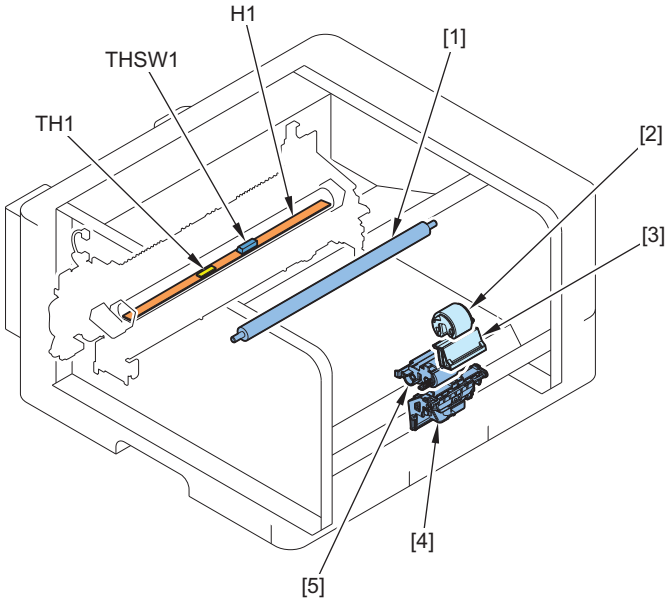
Layout Drawing of Electrical Components

■ Motor/Fan



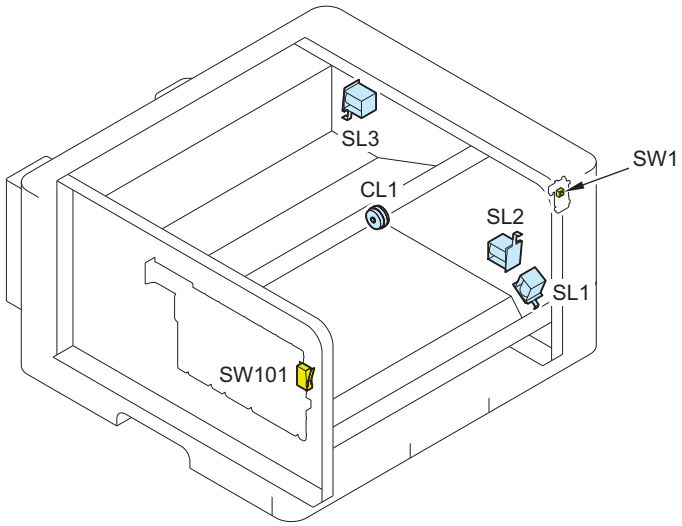
No.	Name
M1	Main Motor
M2	Laser Scanner Motor
FM1	Main Fan

■ Heater/Etc.



No.	Name
H1	Fixing Heater
TH1	Thermistor
THSW1	Thermo switch
[1]	Transfer Roller
[2]	Multi-purpose Tray Pickup Roller
[3]	Multi-purpose Tray Separation Pad
[4]	Cassette Separation Roller Unit
[5]	Cassette Pickup Roller Unit

■ Switch/Clutch/Solenoid

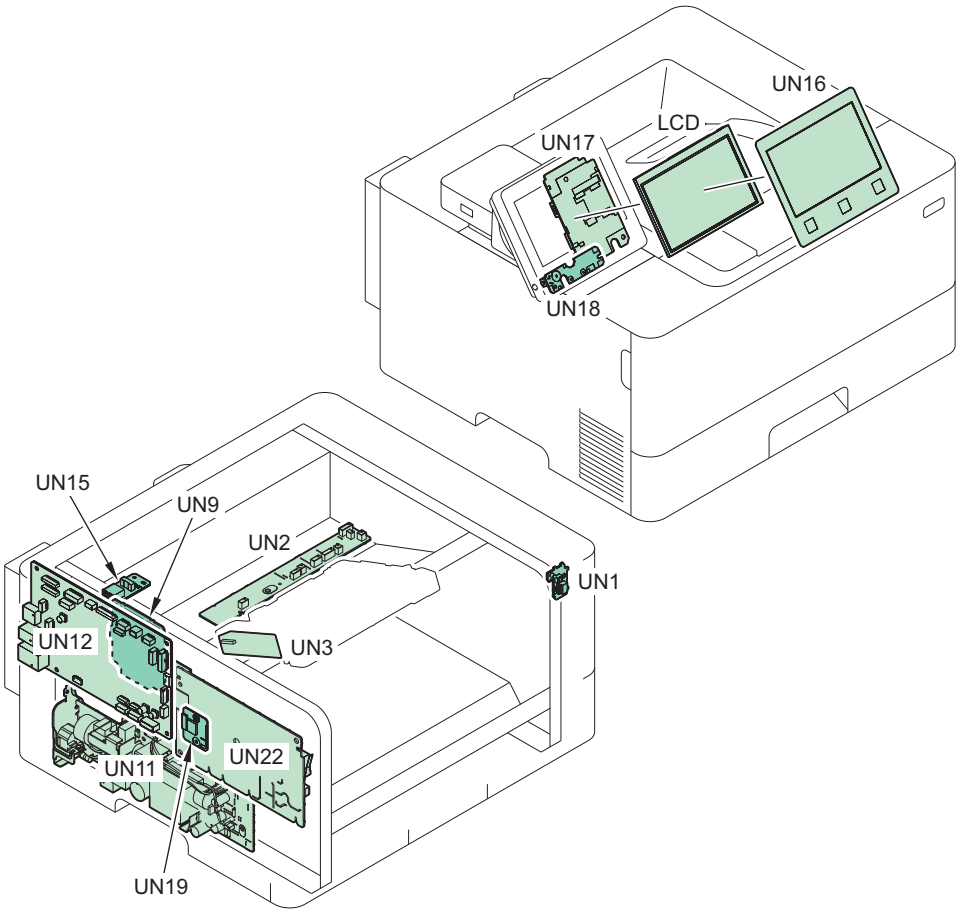


No.	Name
CL1	Duplex Re-pickup Clutch
SL1	Cassette Pickup Solenoid
SL2	Multi-purpose Tray Pickup Solenoid
SL3	Duplex Reverse Solenoid
SW1	Power Switch
SW101	Front Cover Switch

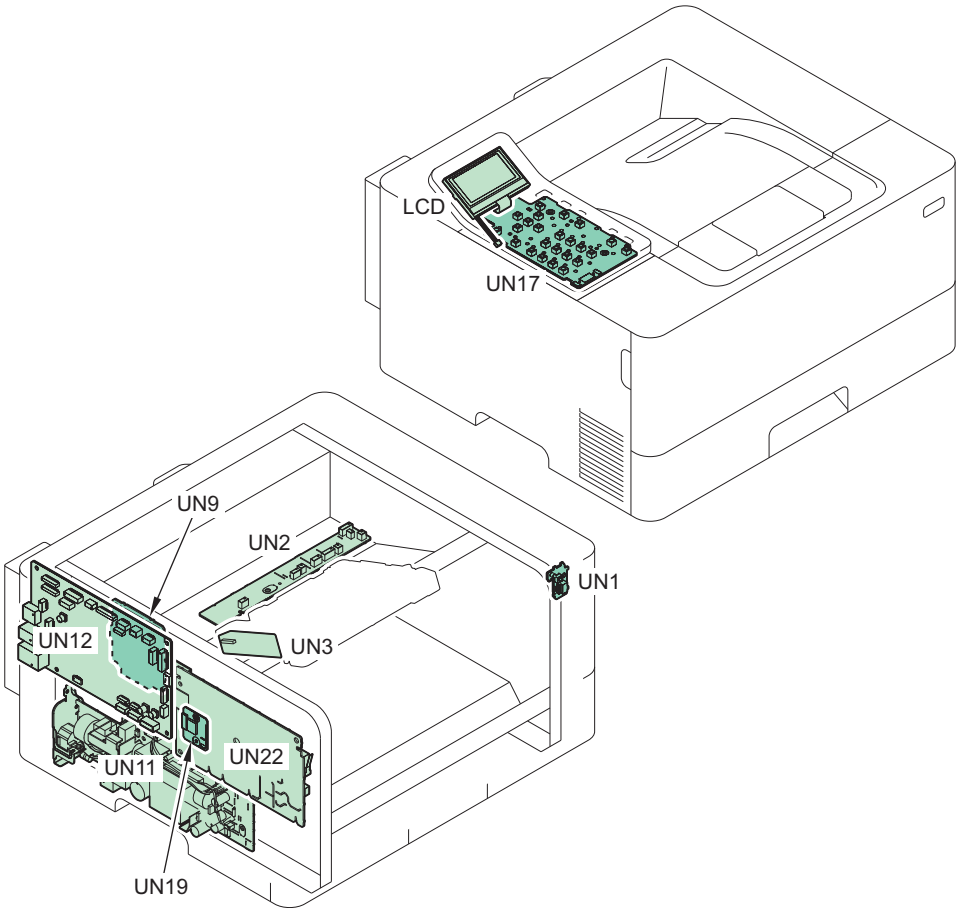
■ Sensor

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

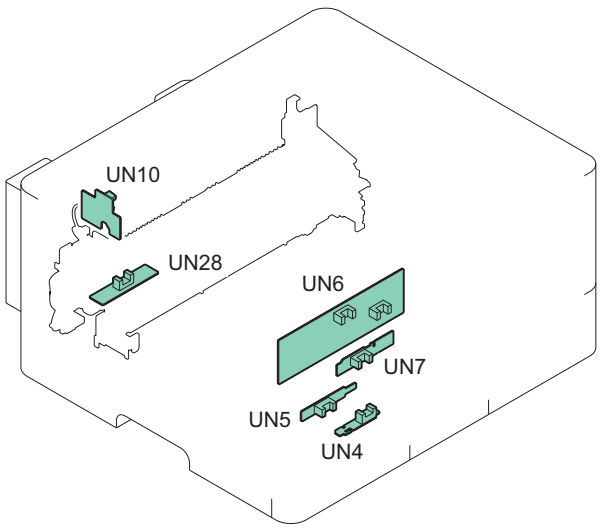
■ PCB



No.	Name
UN1	Power Switch PCB
UN2	Relay PCB
UN3	Laser Scanner Driver PCB
UN9	DC Controller PCB
UN11	Low Voltage Power Supply Unit
UN12	Main Controller PCB
UN15	USB PCB
UN16	Touch Panel
UN17	Control Panel PCB
UN18	Control Panel LED PCB
UN19	Wireless LAN PCB
UN22	High Voltage Power Supply PCB
LCD	LCD



No.	Name
UN1	Power 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	Multi-purpose 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

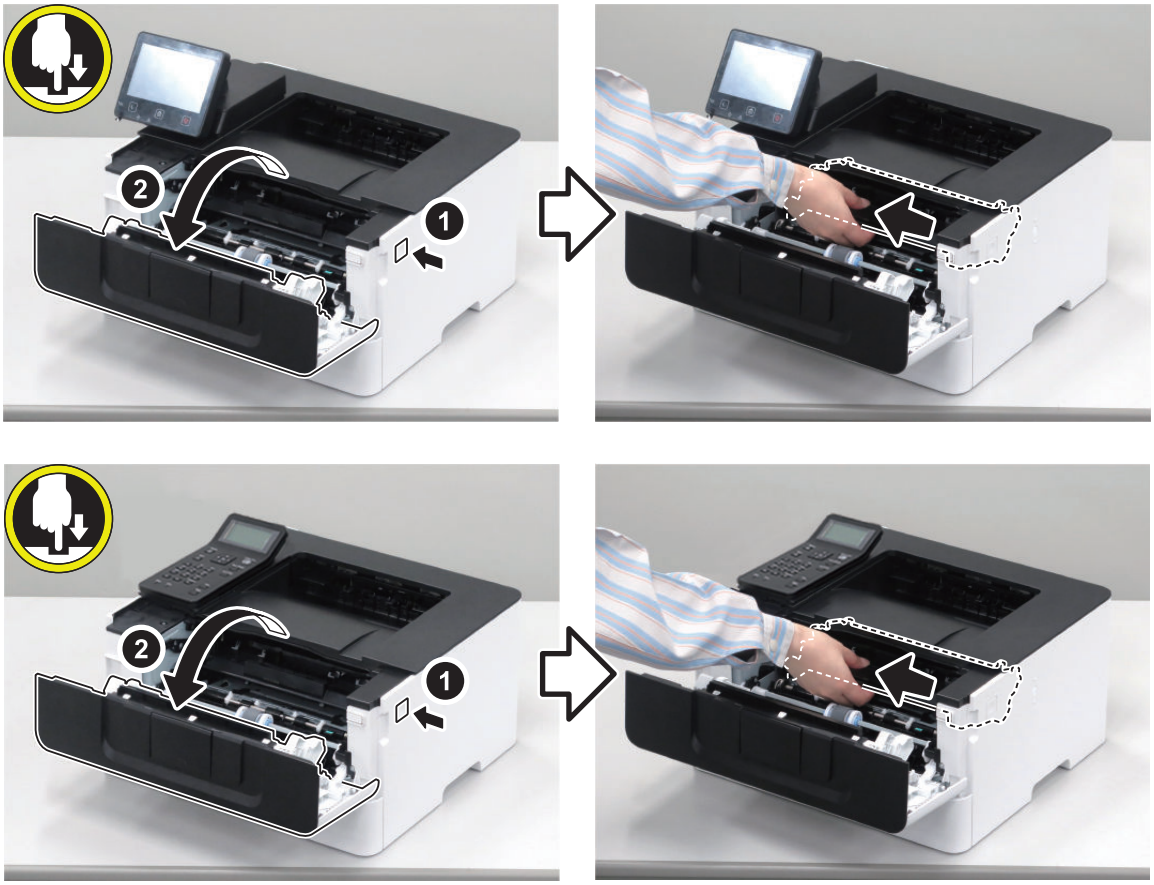
Removing the Cartridge

■ Procedure

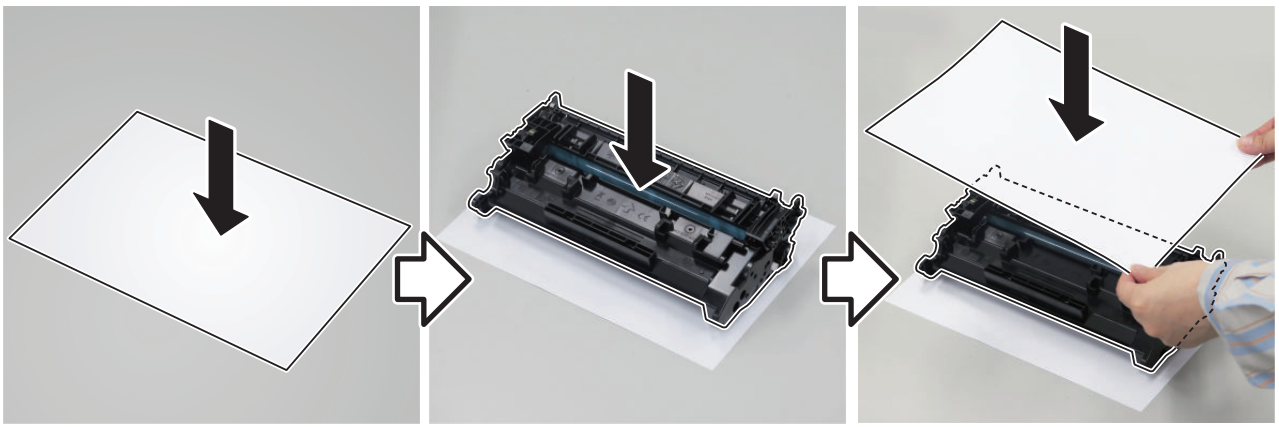
CAUTION:
When handling the cartridge, be sure to follow the CAUTION shown below.

- 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

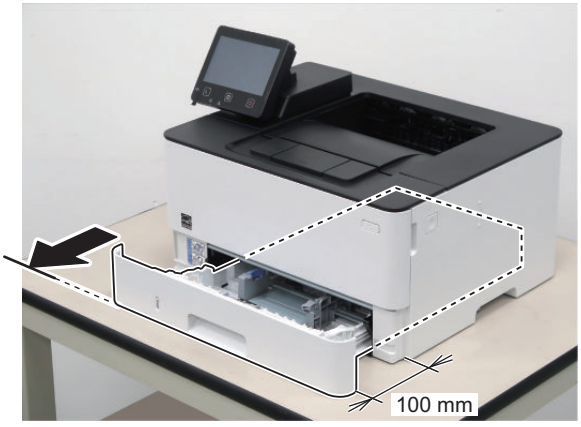
■ Preparation

1. “Removing the Cartridge” on page 94

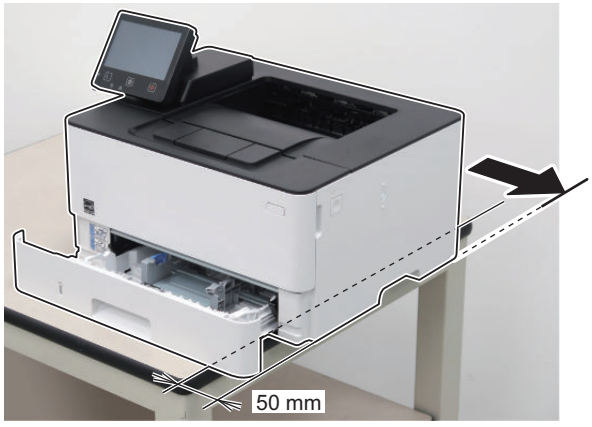
■ Procedure

NOTE:
This procedure is described using a touch panel model.
The work procedure is the same for 5 line panel models, so follow the contents of this procedure to work.

1.

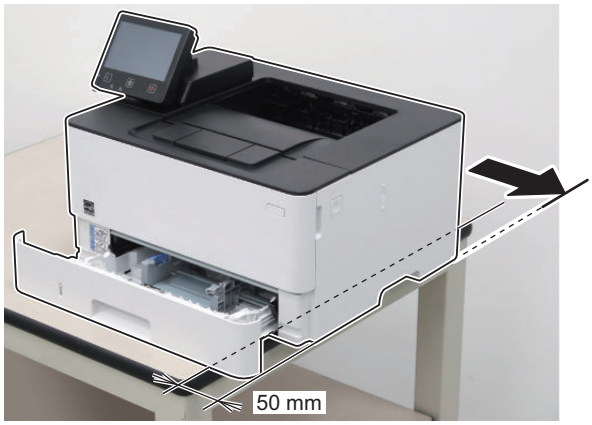


⚠ CAUTION:
When removing the cover, moving the product 50 mm or more while the cassette is pulled out will disturb the balance of the product and may cause it to fall down; therefore, do not completely pull out the cassette.

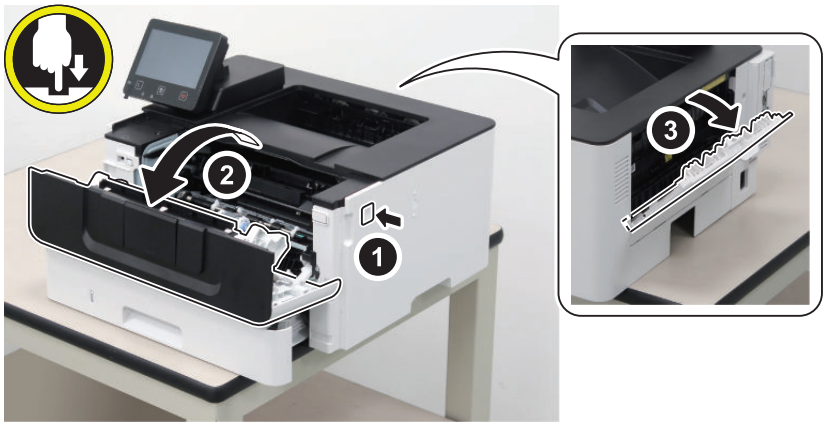


2.

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.

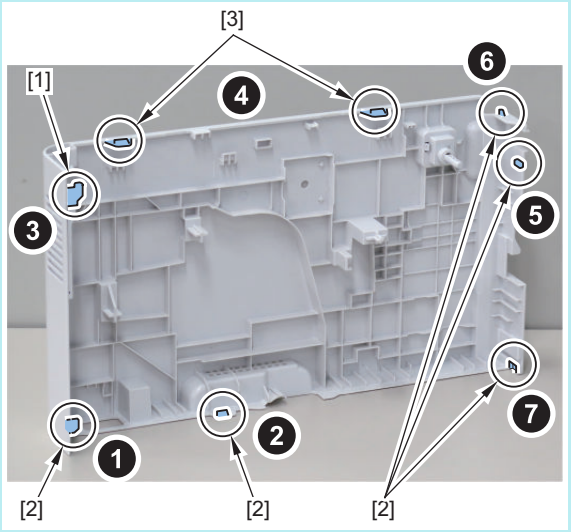


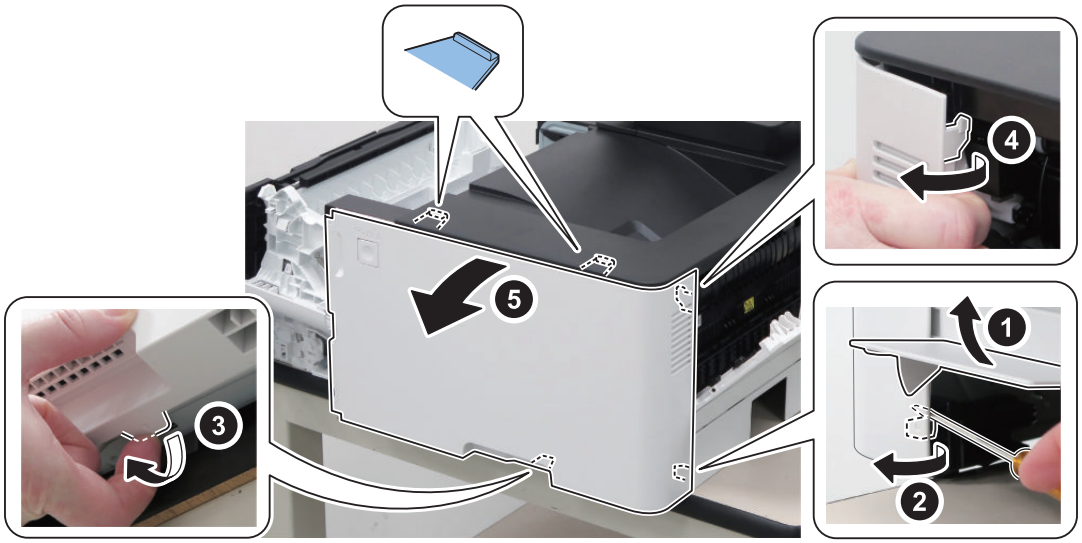
3.



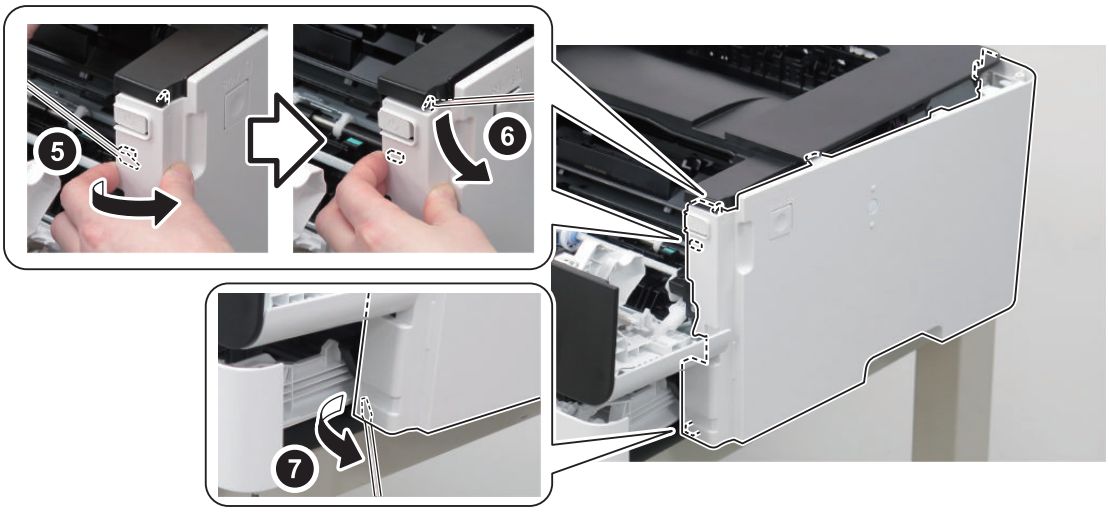
4.

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

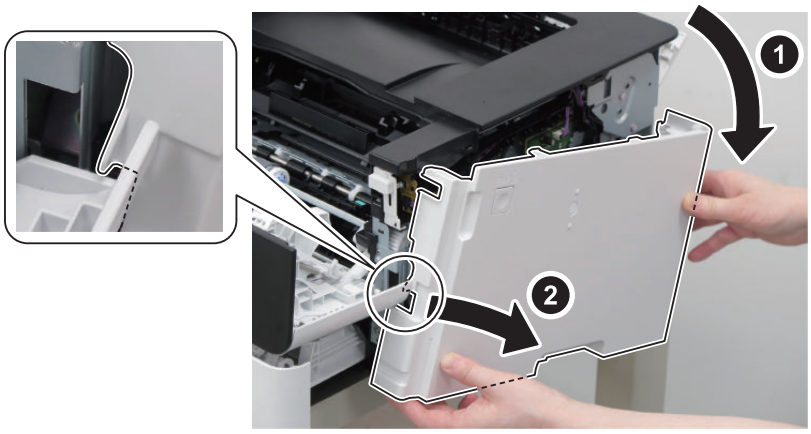




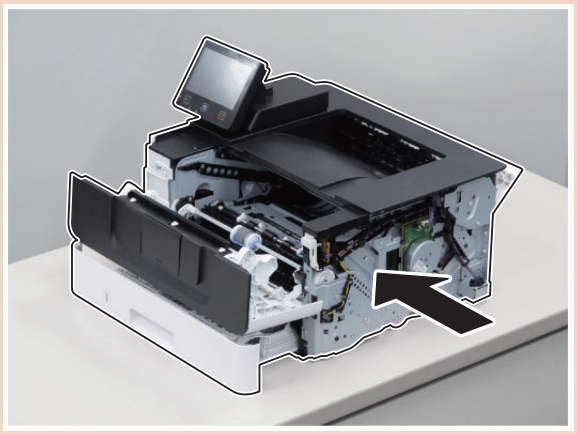
5.



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 94**

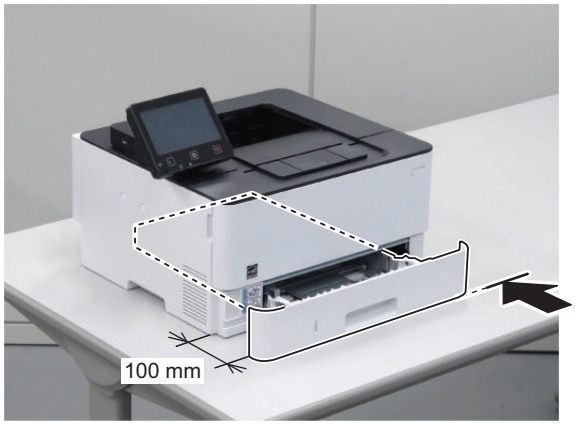
■ Procedure

NOTE:
This procedure is described using a touch panel model.
The work procedure is the same for 5 line panel models, so follow the contents of this procedure to work.

1.

2.

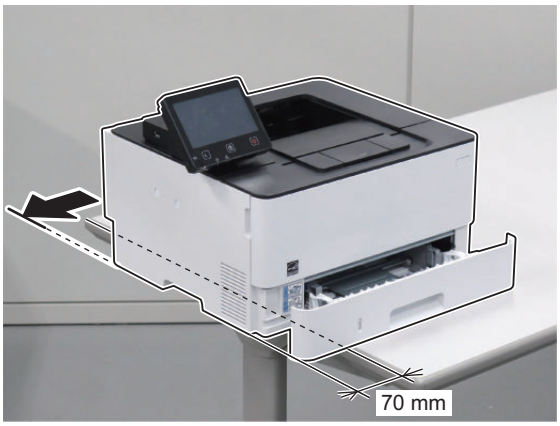
3.



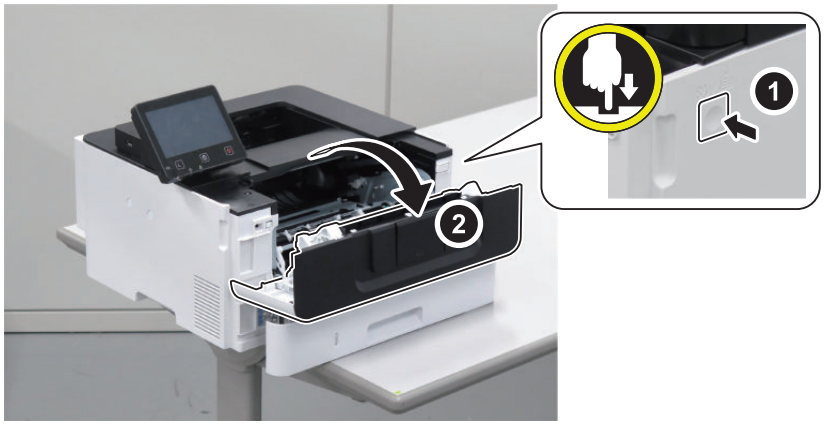
⚠ CAUTION:
When removing the cover, moving the product 70 mm or more while the cassette is pulled out will disturb the balance of the product and may cause it to fall down; therefore, do not completely pull out the cassette.

4.

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

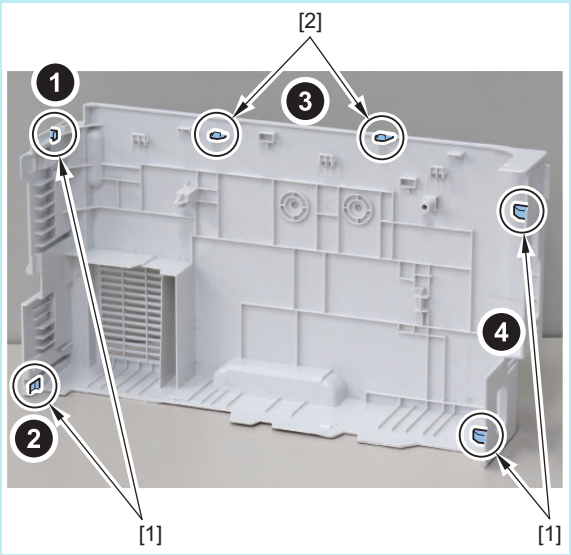


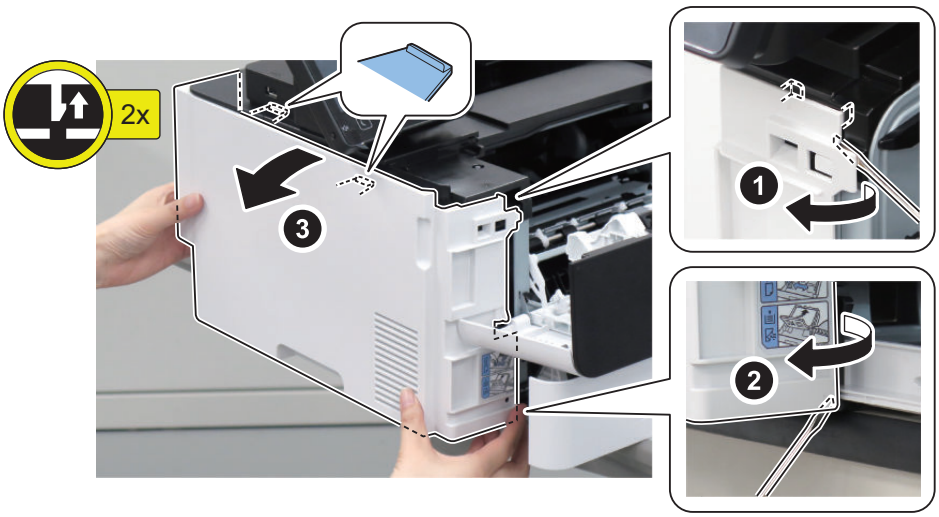
5.



6.

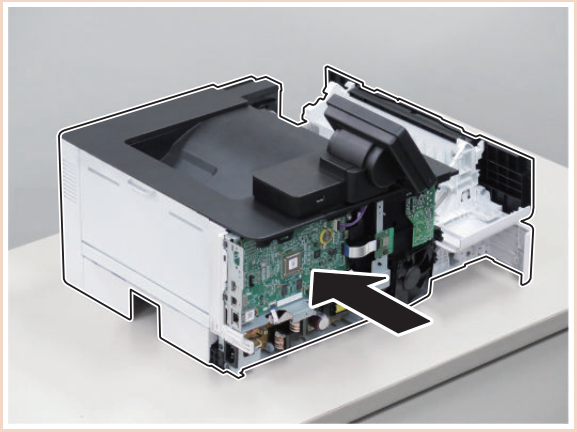
NOTE:
The positions and removal order of the protrusions [1] and claws[2] of the Left Cover are shown below.





7.

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



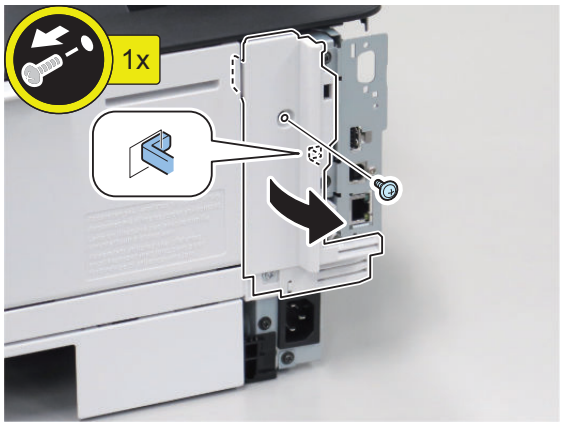
Removing the Left Rear Cover

■ Preparation

1. “Removing the Cartridge” on page 94
2. “Removing the Left Cover” on page 98

■ Procedure

1.



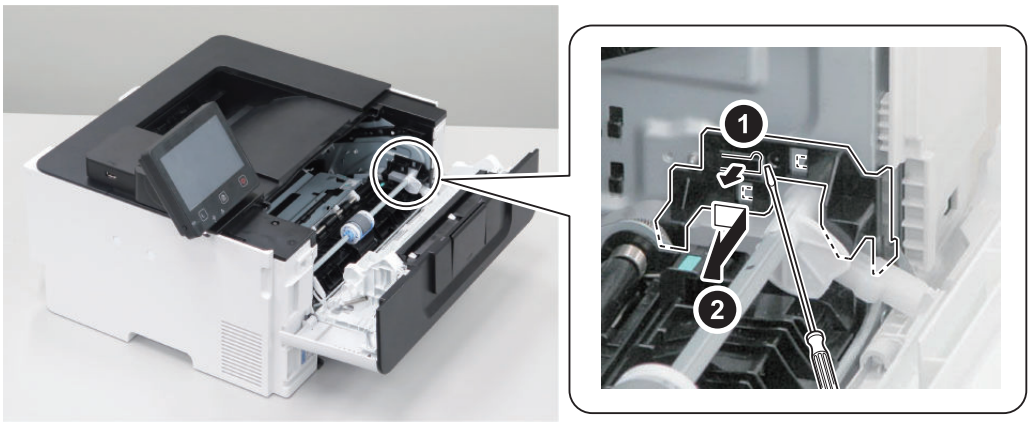
Removing the Front Cover

■ Preparation

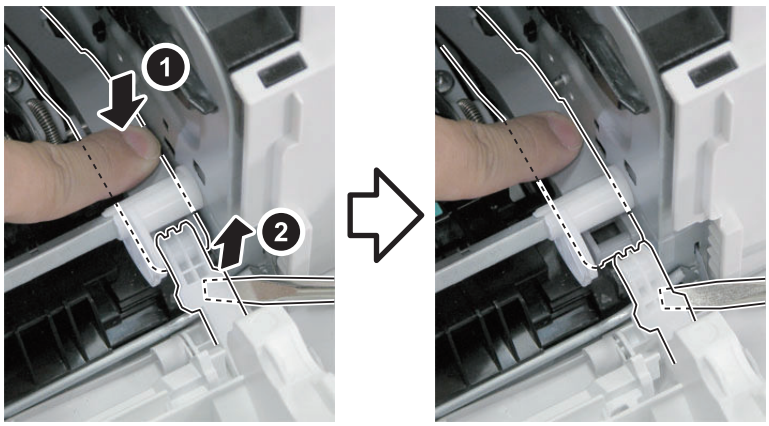
1. **Remove the cassette.**
2. **“Removing the Cartridge” on page 94**

■ Procedure

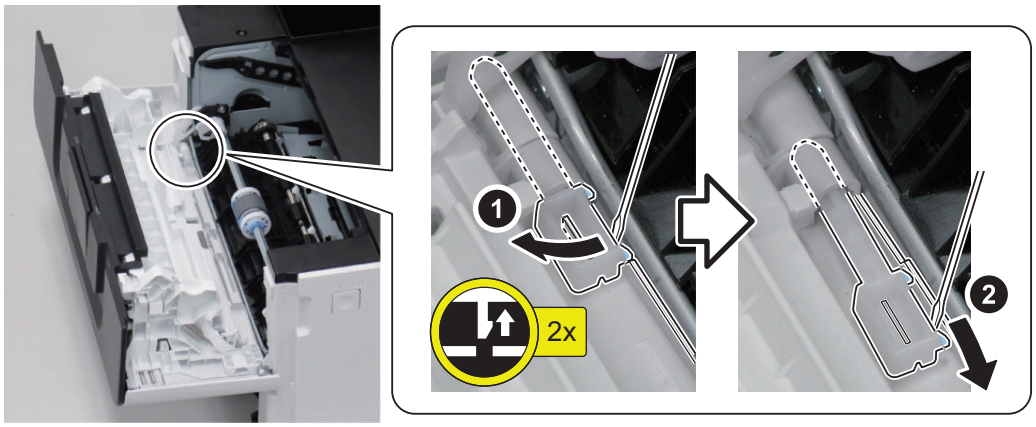
1.



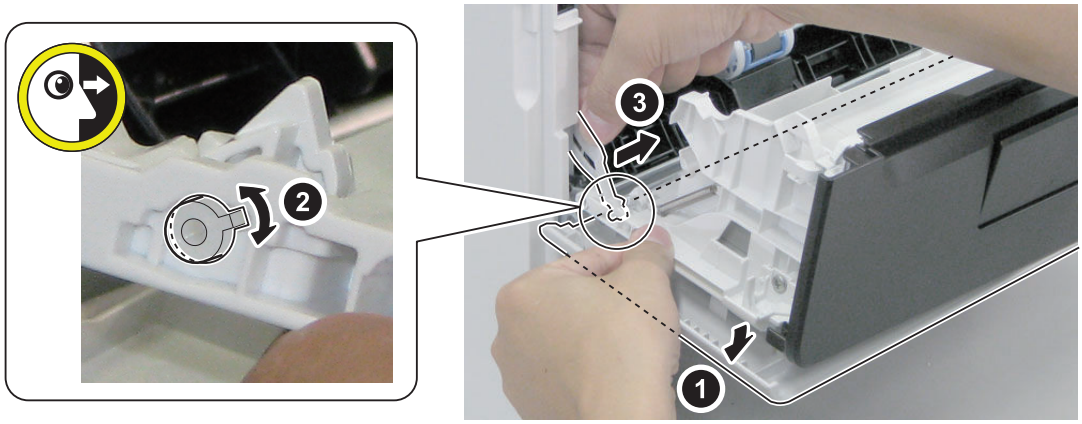
2.



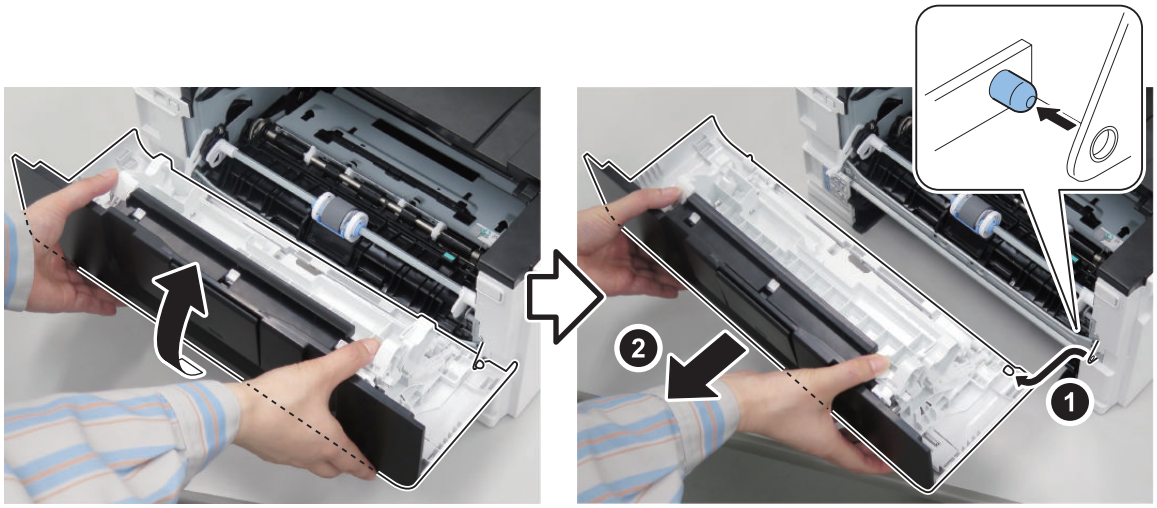
3.



4.



5.



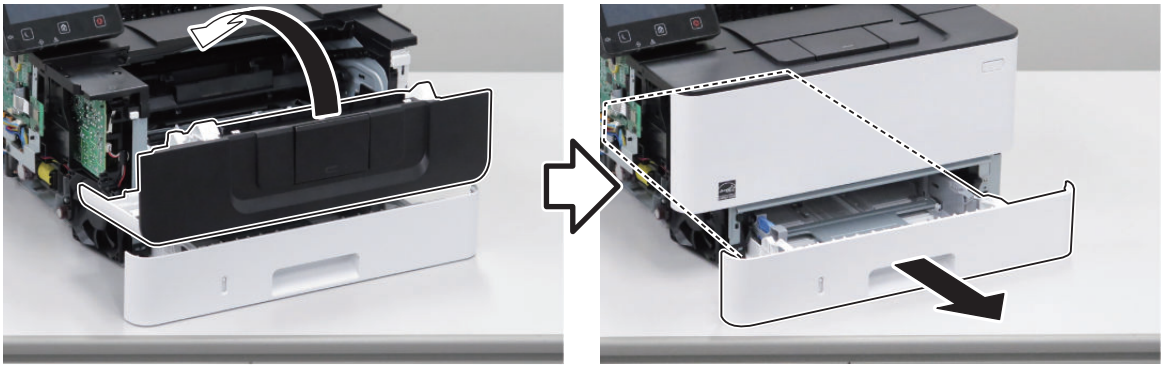
Removing the Rear Cover

■ Preparation

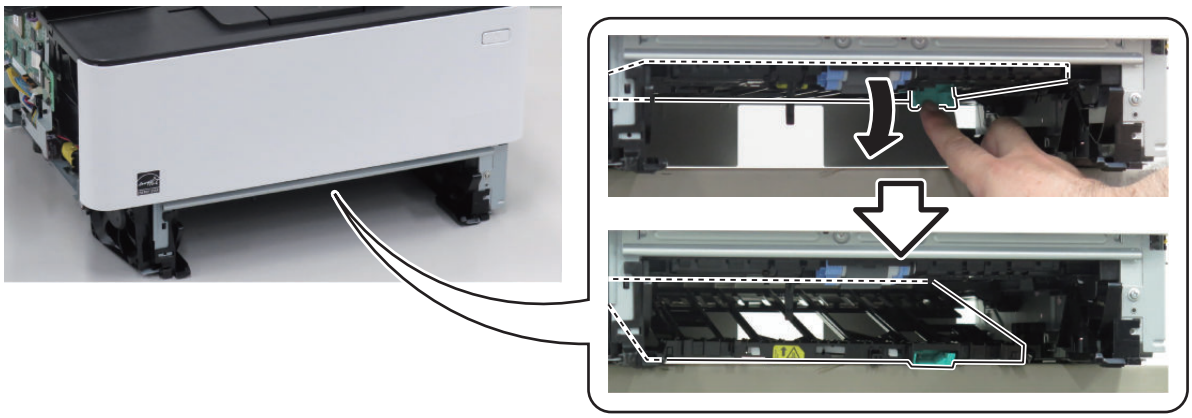
1. “Removing the Cartridge” on page 94
2. “Removing the Left Cover” on page 98
3. “Removing the Left Rear Cover” on page 102
4. “Removing the Right Cover” on page 95

■ Procedure

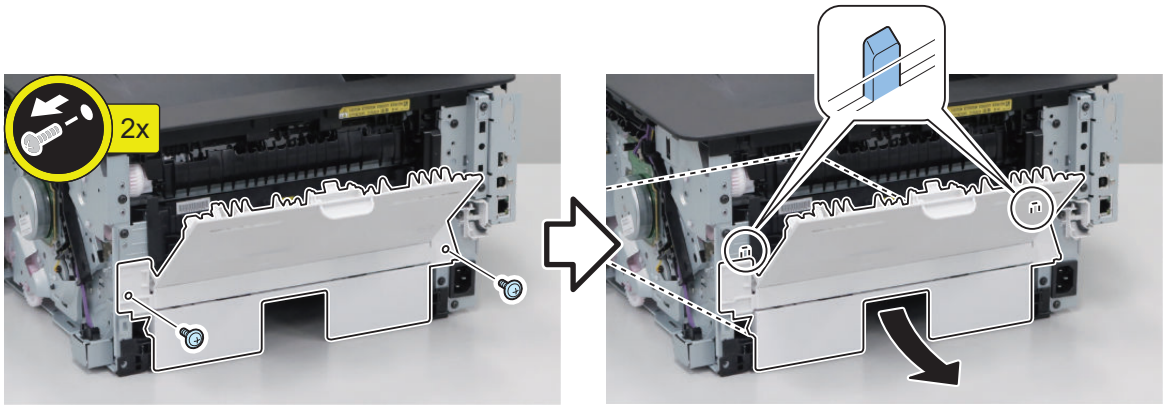
1.



2.



3.



4.

Removing the Upper Cover + Output Tray (Touch Panel Model)

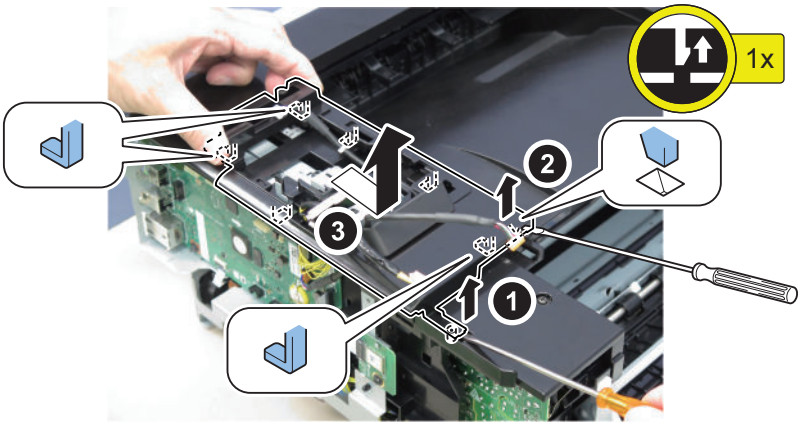
■ Preparation

1. “Removing the Cartridge” on page 94
2. “Removing the Left Cover” on page 98
3. “Removing the Left Rear Cover” on page 102
4. “Removing the Right Cover” on page 95

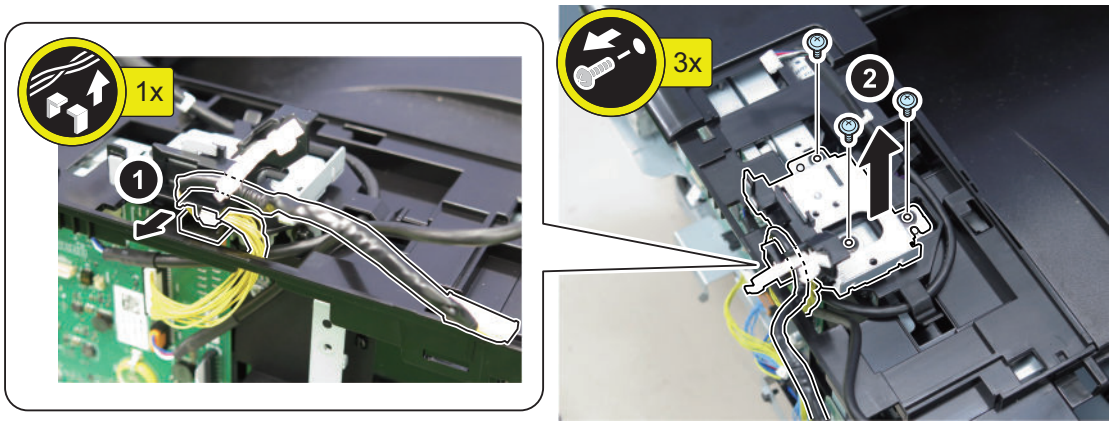
5. “Removing the Control Panel Unit” on page 111
6. “Removing the USB Unit” on page 115

■ Procedure

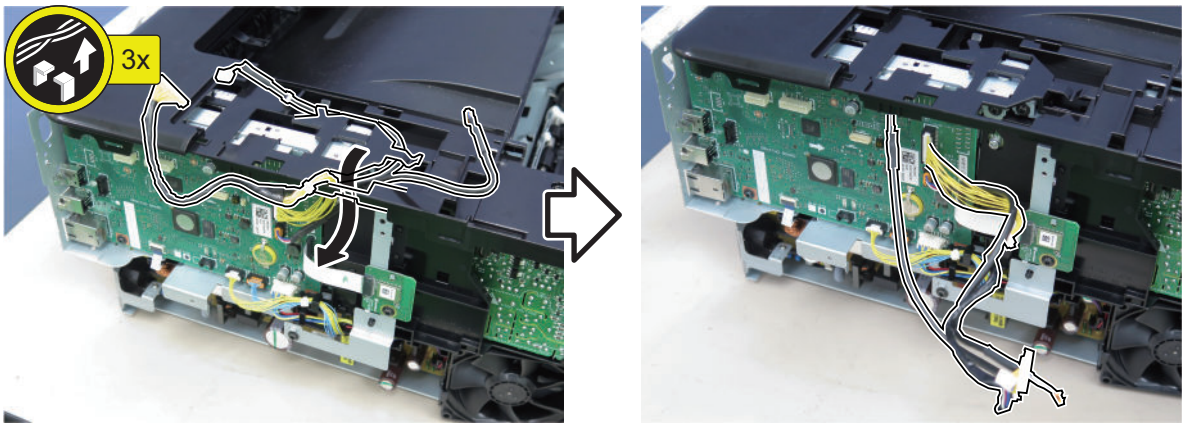
1.



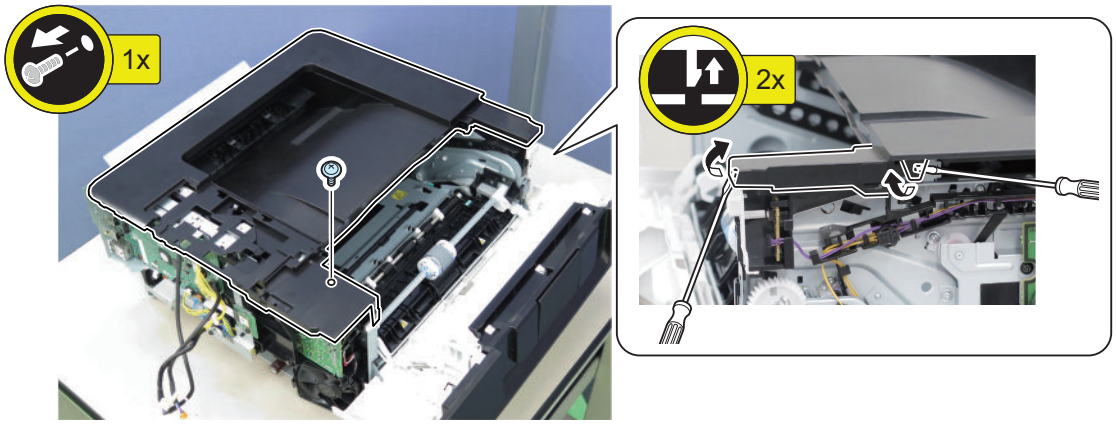
2.



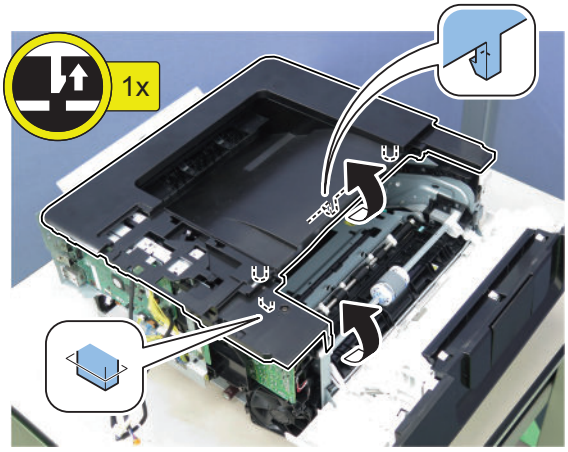
3.



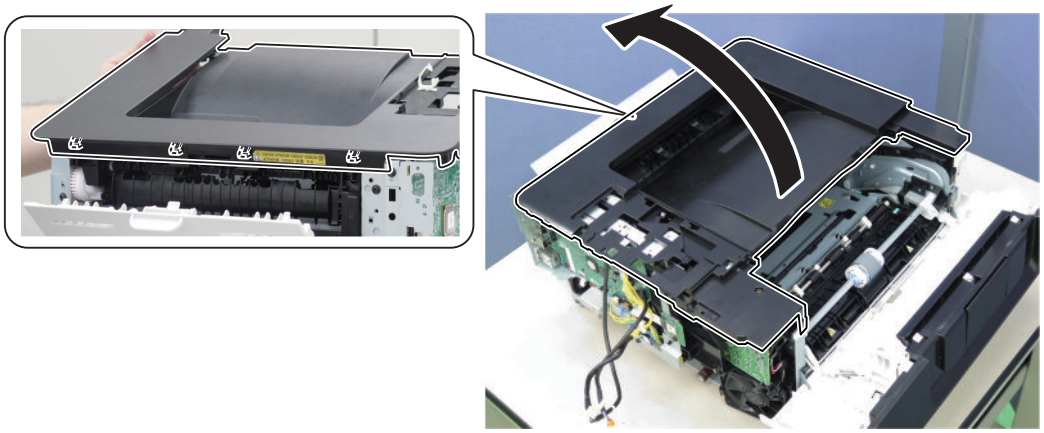
4.



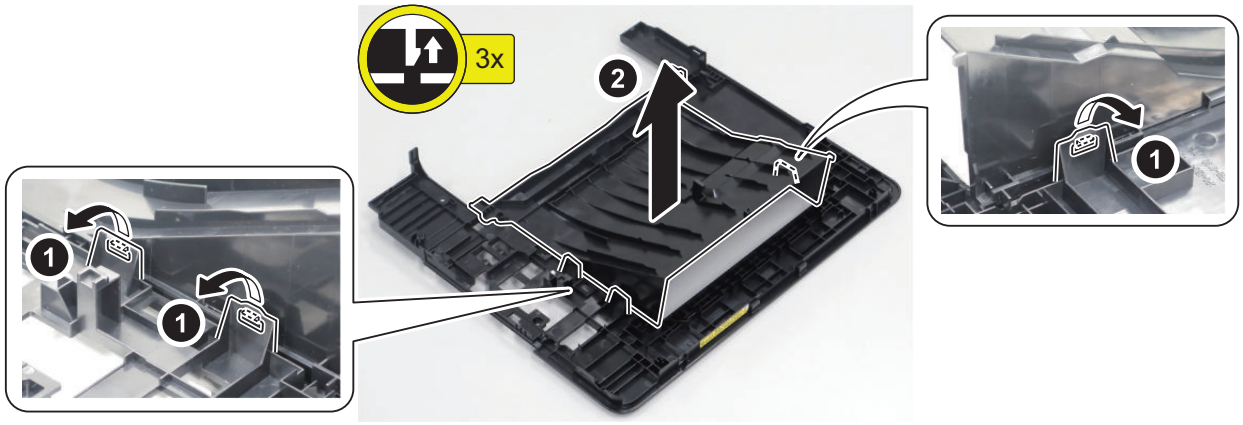
5.



6.



7.



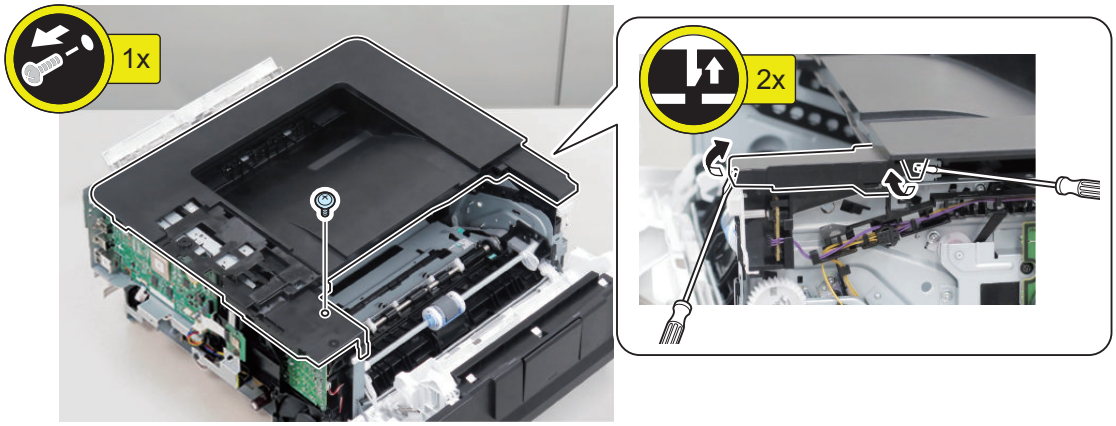
Removing the Upper Cover + Output Tray (5 Line Panel Model)

■ Preparation

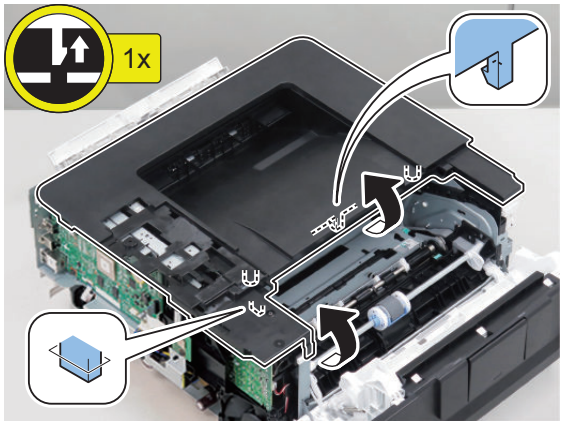
1. “Removing the Cartridge” on page 94
2. “Removing the Left Cover” on page 98
3. “Removing the Left Rear Cover” on page 102
4. “Removing the Right Cover” on page 95
5. “Removing the Control Panel Unit ” on page 110

■ Procedure

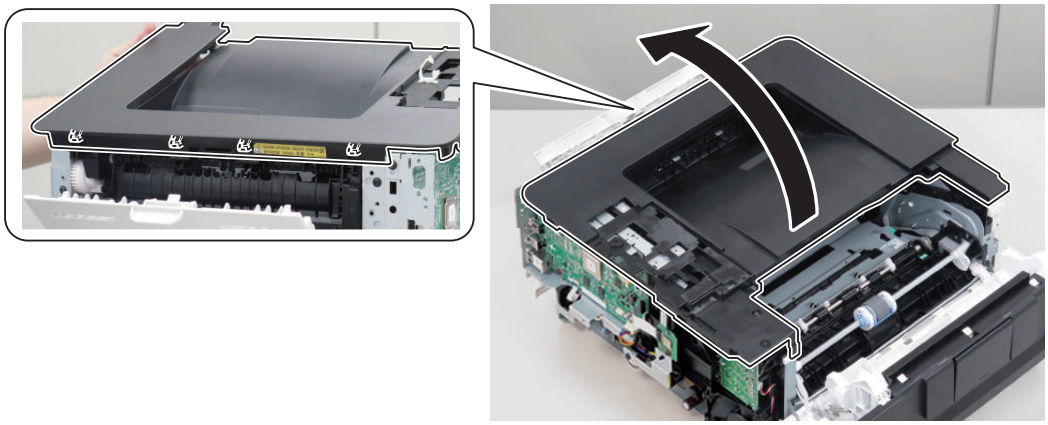
1.



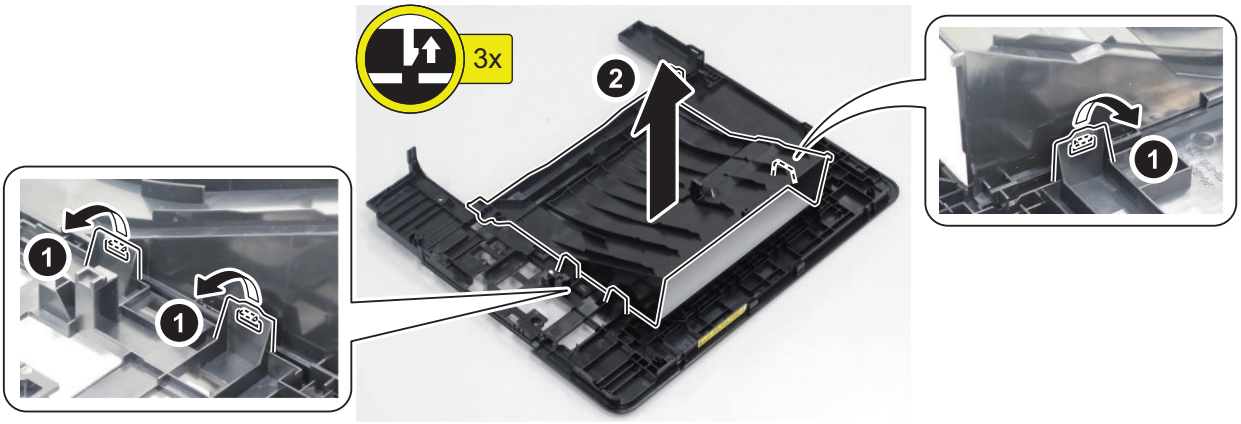
2.



3.



4.



Controller System

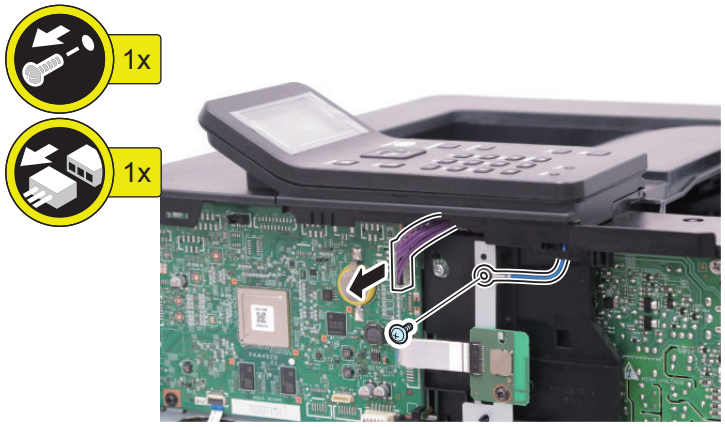
Removing the Control Panel Unit

■ Preparation

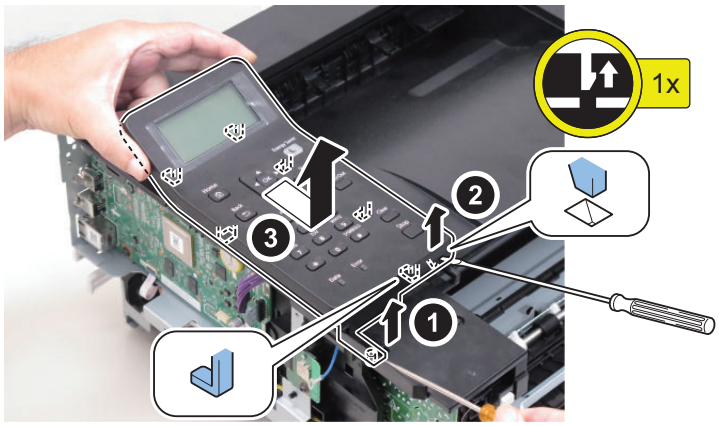
1. “Removing the Cartridge” on page 94
2. “Removing the Left Cover” on page 98

■ Procedure

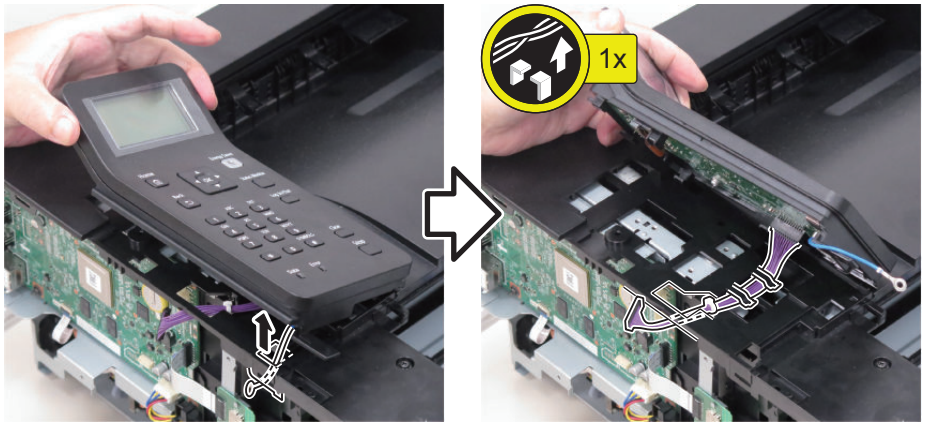
1.



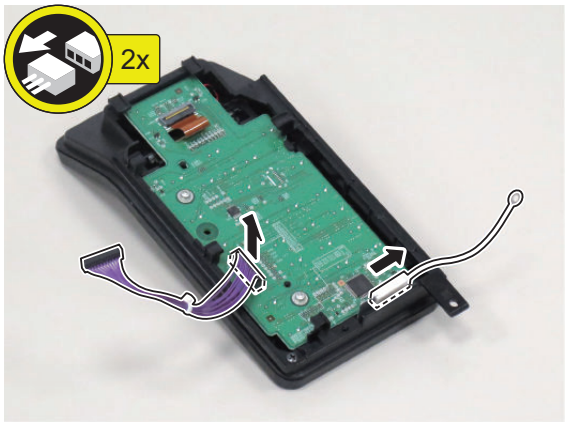
2.



3.



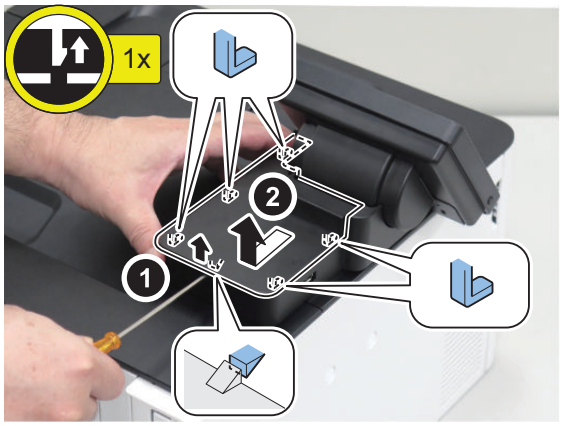
4.



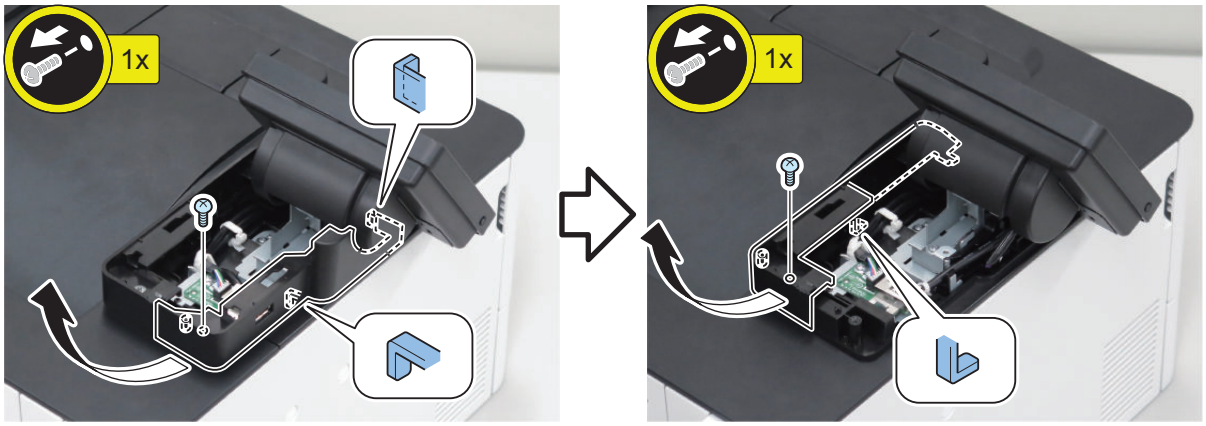
Removing the Control Panel Unit

■ Procedure

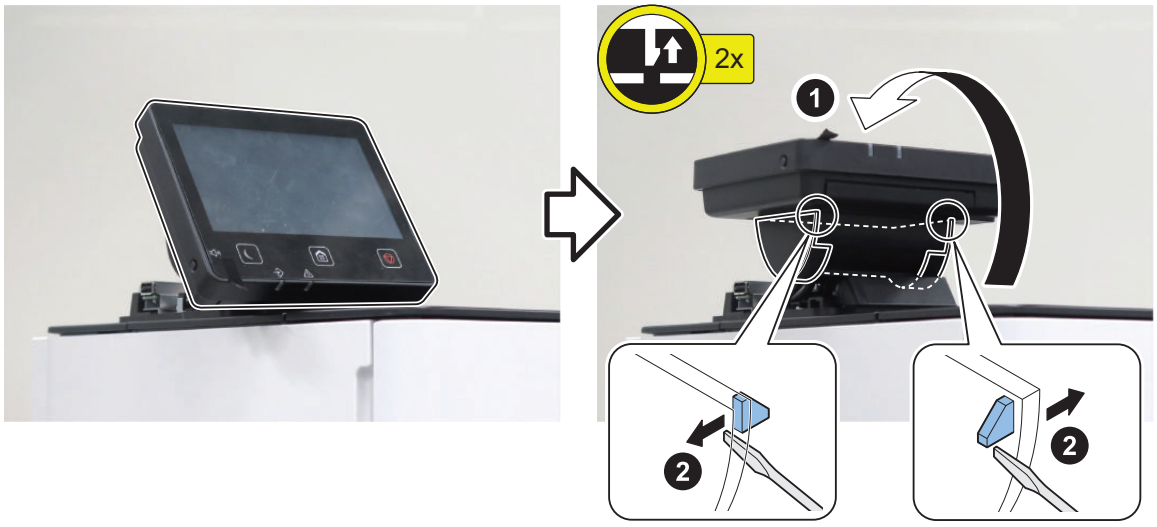
1.



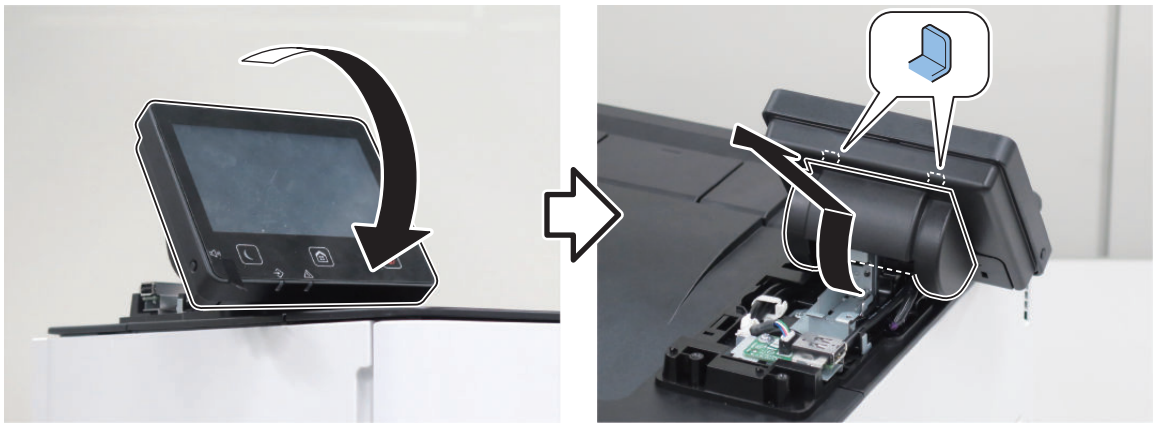
2.



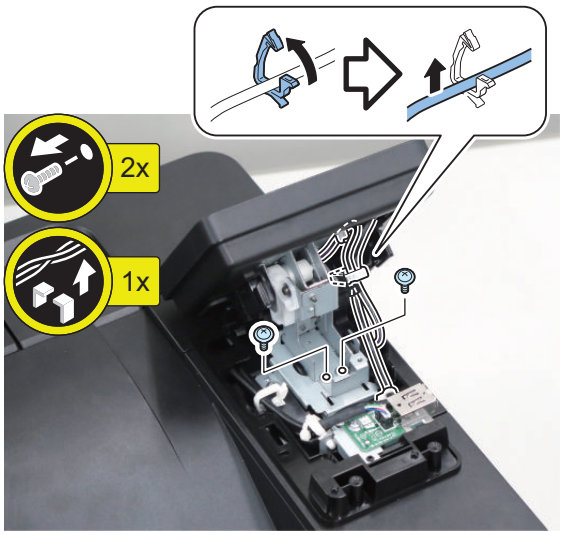
3.



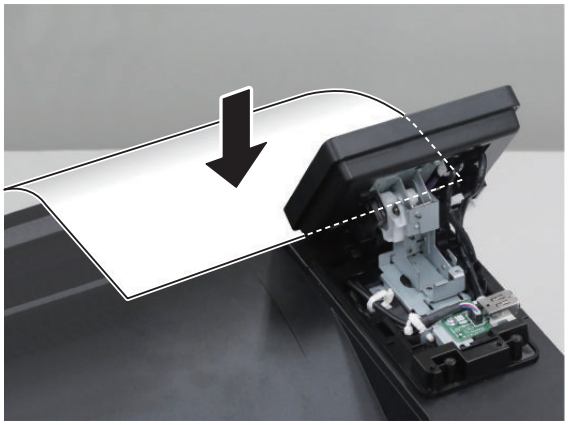
4.



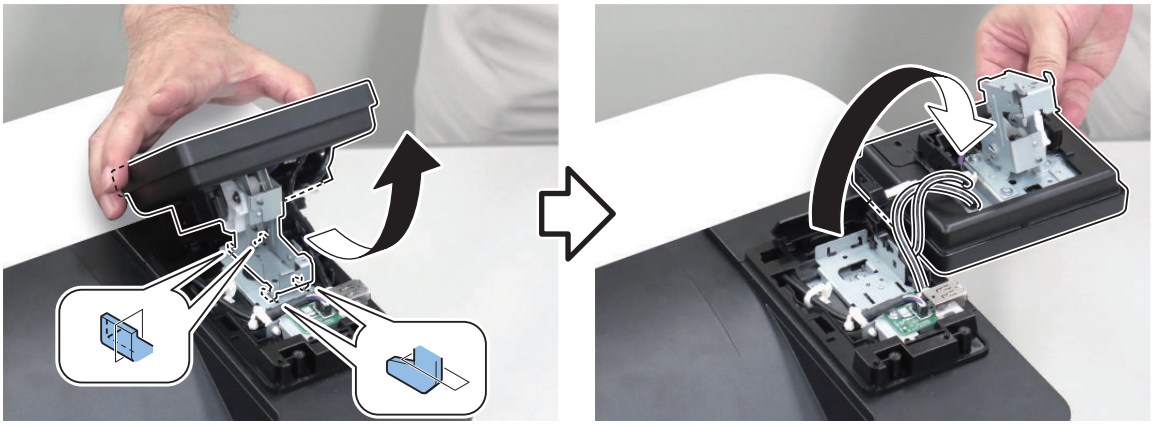
5.



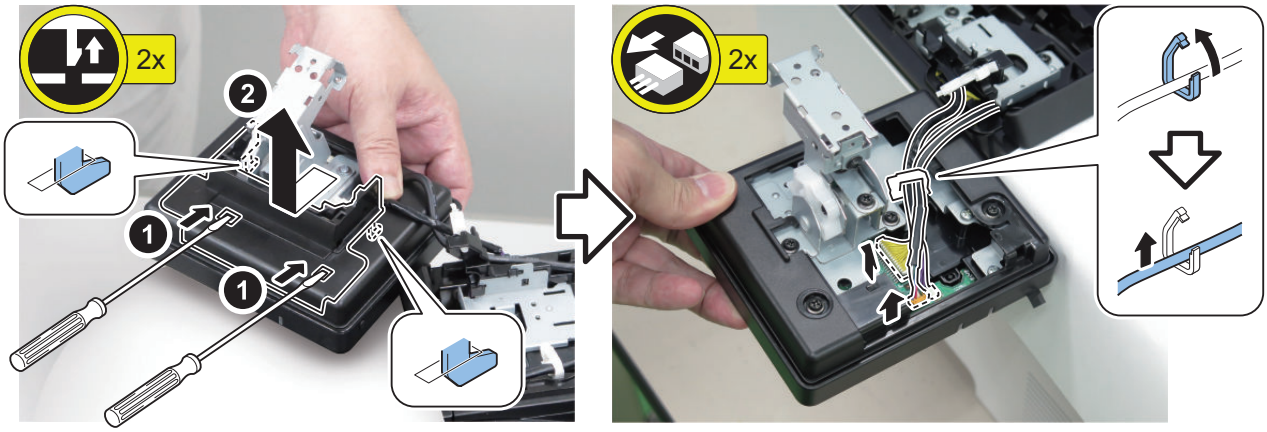
6.



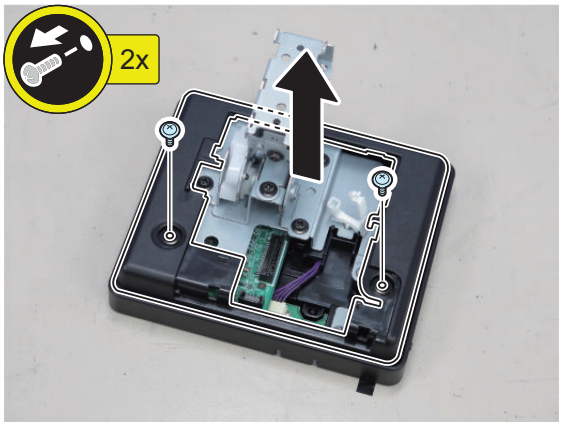
7.



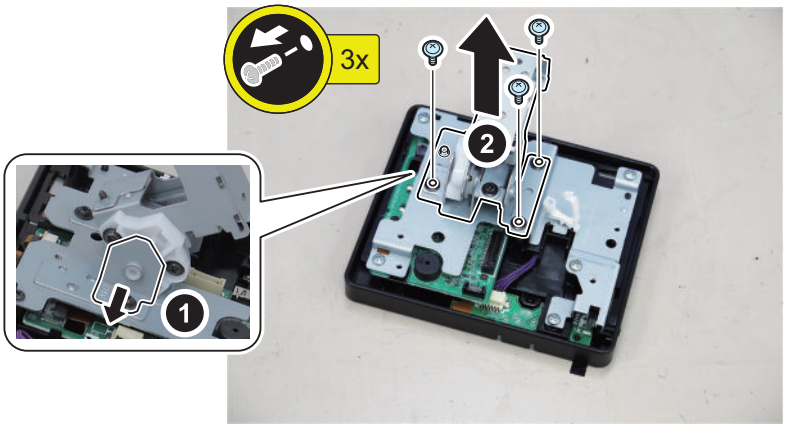
8.



9.



10.



11. Actions after replacement:“After Replacing the Control Panel” on page 139

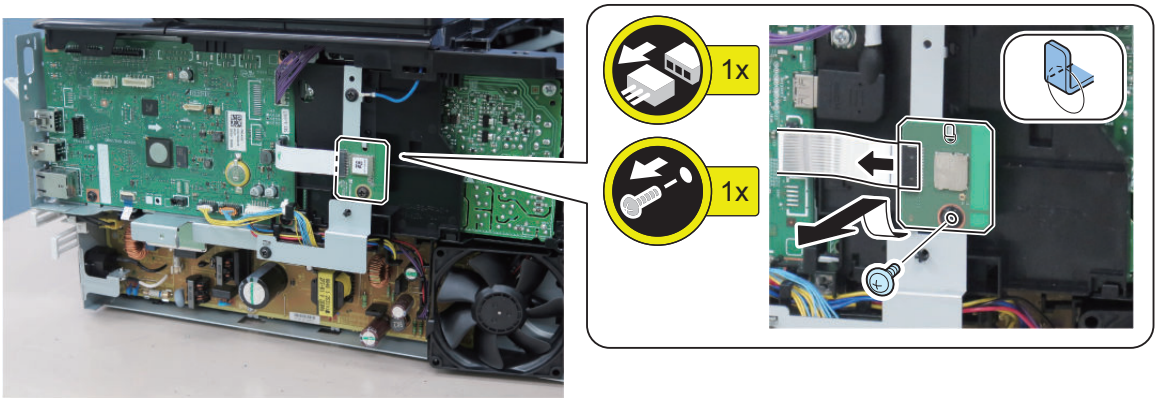
Removing the Wireless LAN PCB

■ Preparation

1. “Removing the Cartridge” on page 94
2. “Removing the Left Cover” on page 98

■ 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

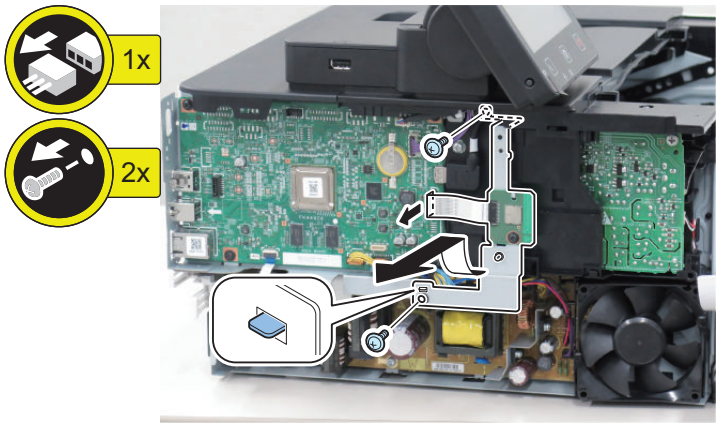
■ Preparation

1. “Removing the Cartridge” on page 94
2. “Removing the Left Cover” on page 98

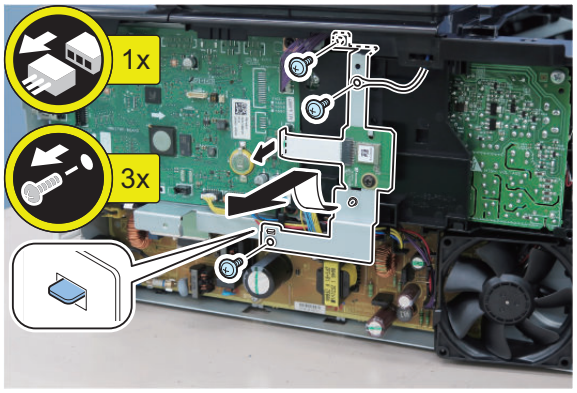
■ Procedure

1.

Touch Panel Model



5 Line Panel Model

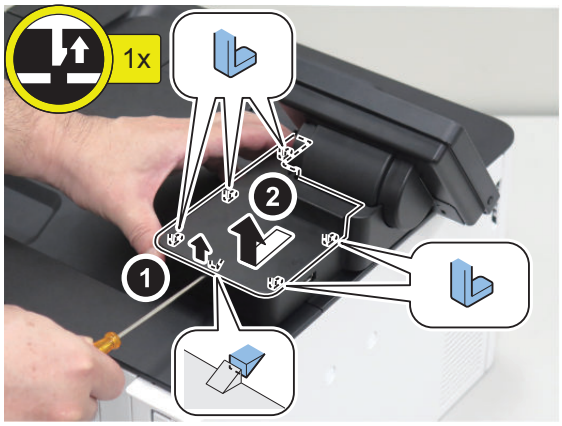


NOTE:
When installing, turn over the gloss surface of the Flat Cable to the front side facing upward.

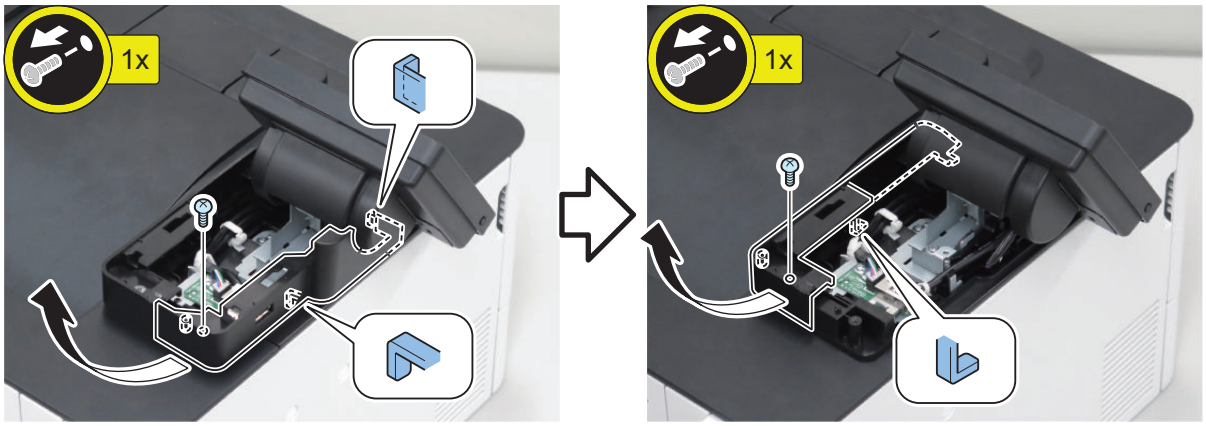
Removing the USB Unit

■ Procedure

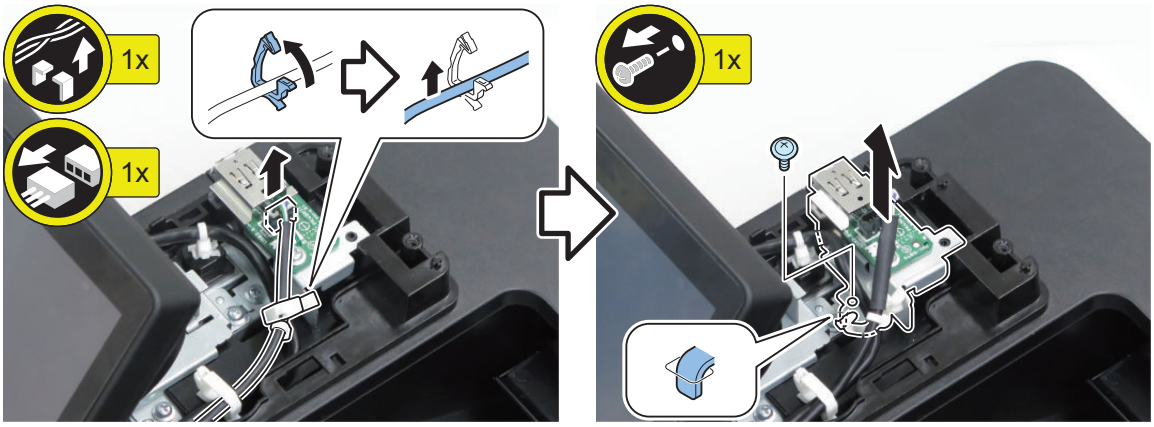
1.



2.



3.



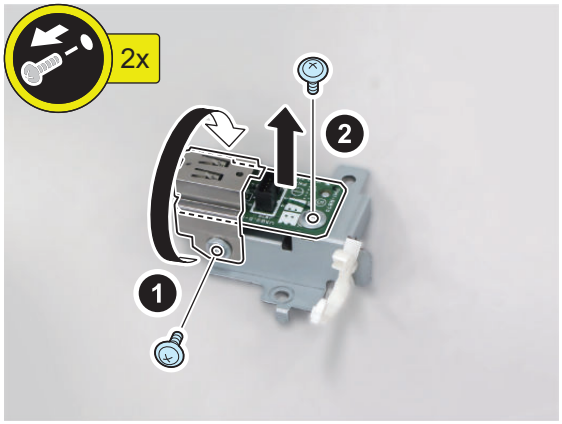
Removing the USB PCB

■ Preparation

1. “Removing the USB Unit” on page 115

■ Procedure

1.



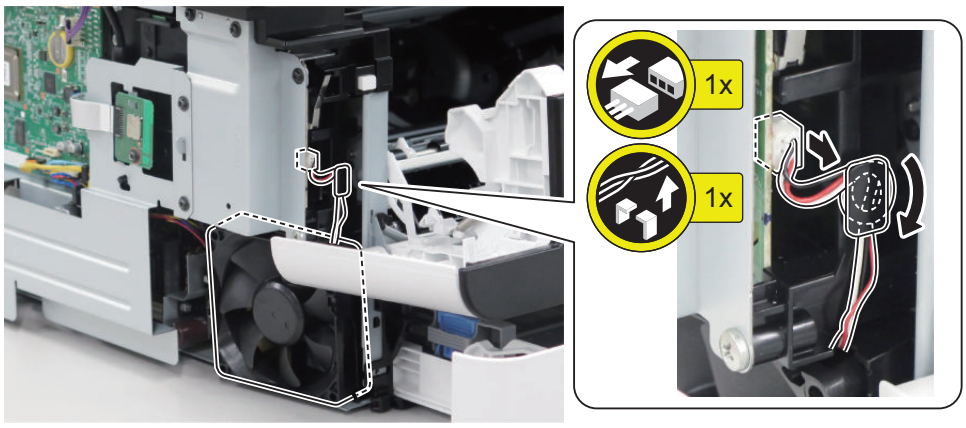
Removing the Main Fan

■ Preparation

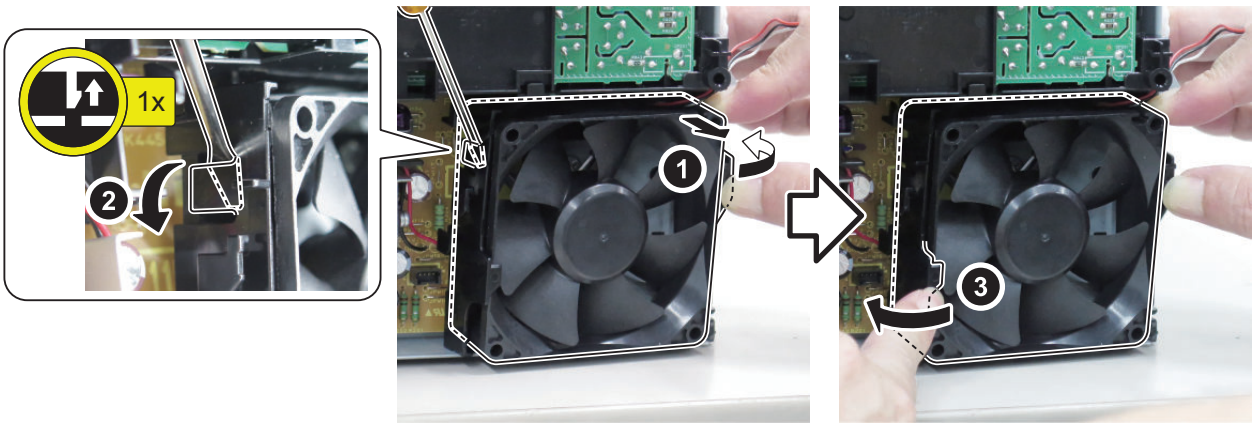
1. “Removing the Cartridge” on page 94
2. “Removing the Left Cover” on page 98

■ Procedure

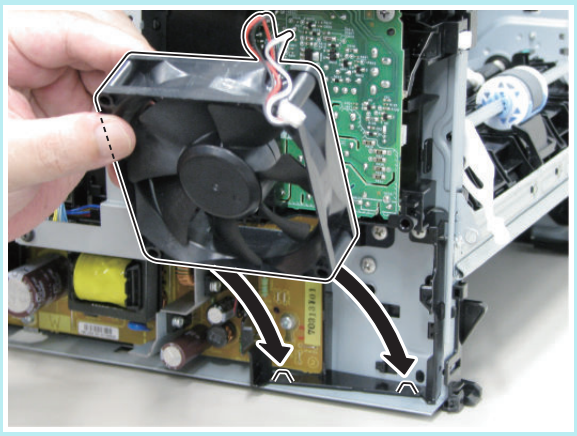
1.



2.



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



Removing the Main Controller PCB

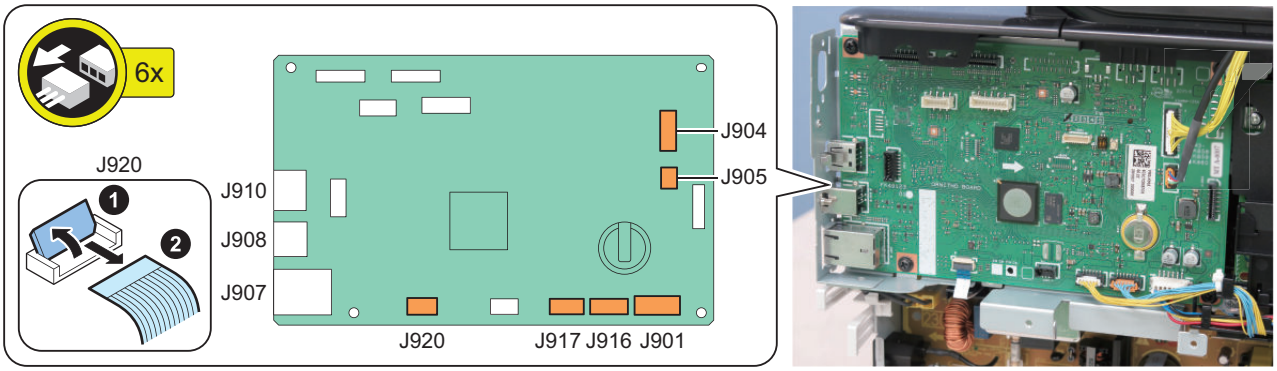
■ Preparation

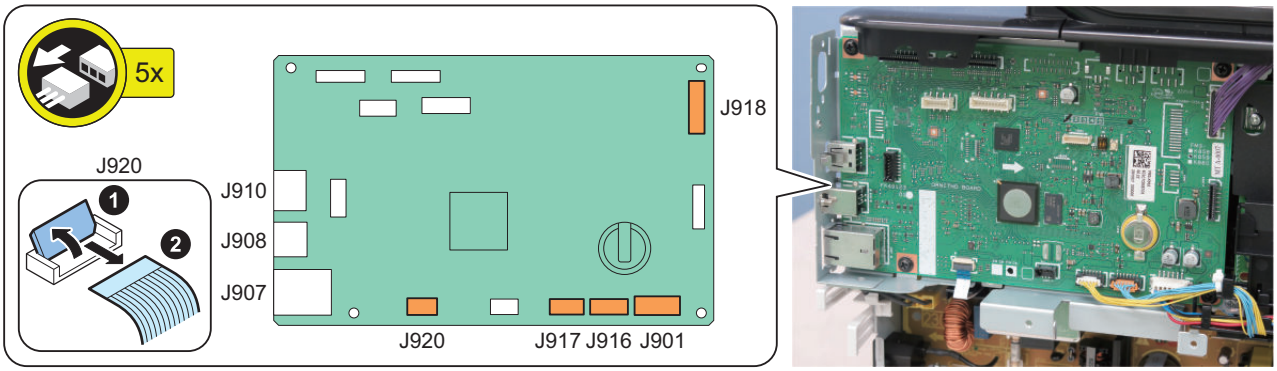
CAUTION:
Make sure to perform"Before Replacing the Main Controller PCB" on page 139before replacing the Main Controller PCB.

1. **"Removing the Cartridge" on page 94**
2. **"Removing the Left Cover" on page 98**
3. **"Removing the Wireless LAN Unit" on page 114**

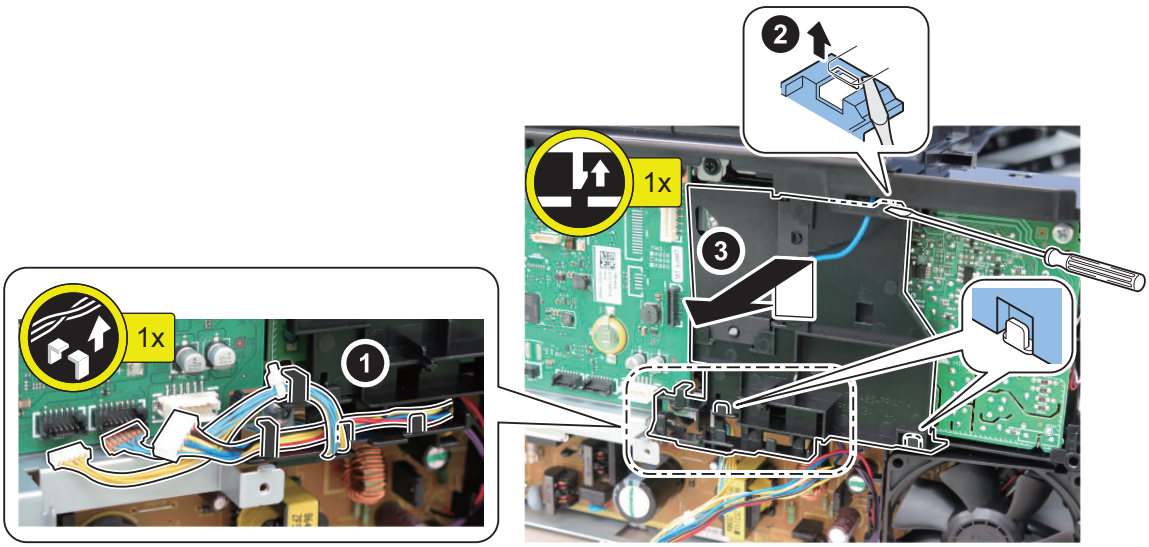
■ Procedure

1.

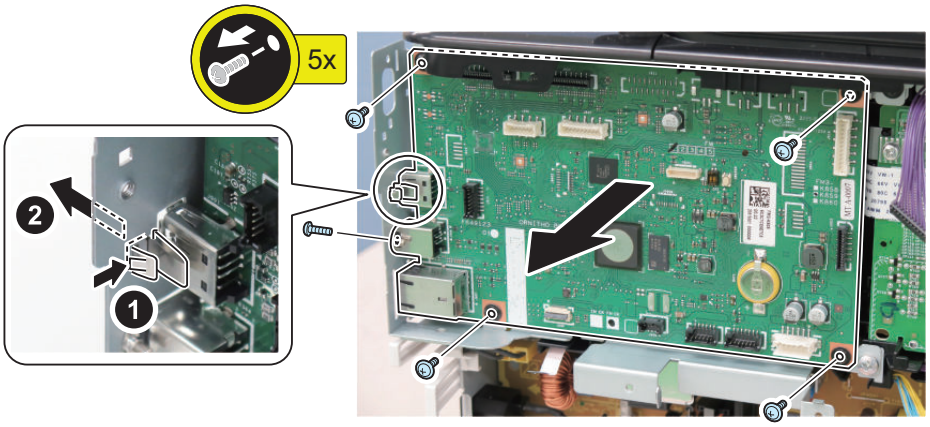




2.



3.



4. **Actions after replacement:** **"After Replacing the Main Controller PCB" on page 140**

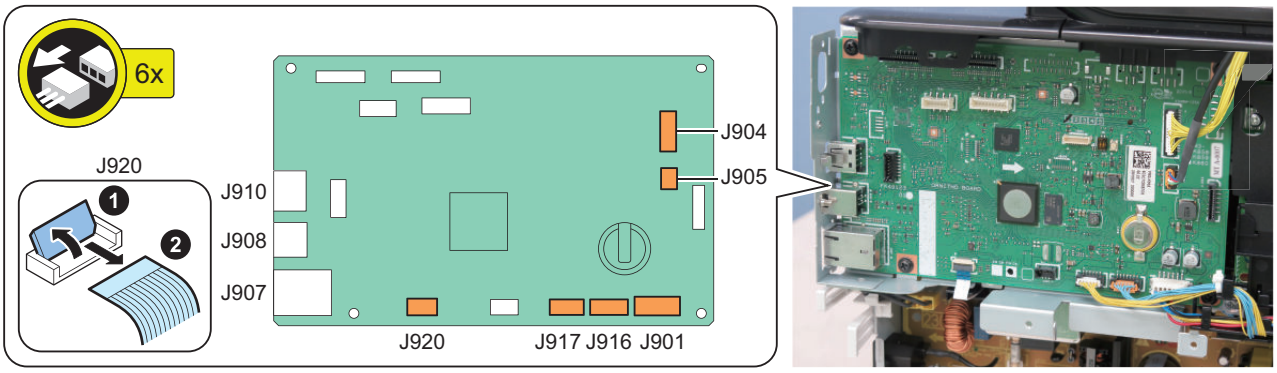
Removing the Main Controller Unit

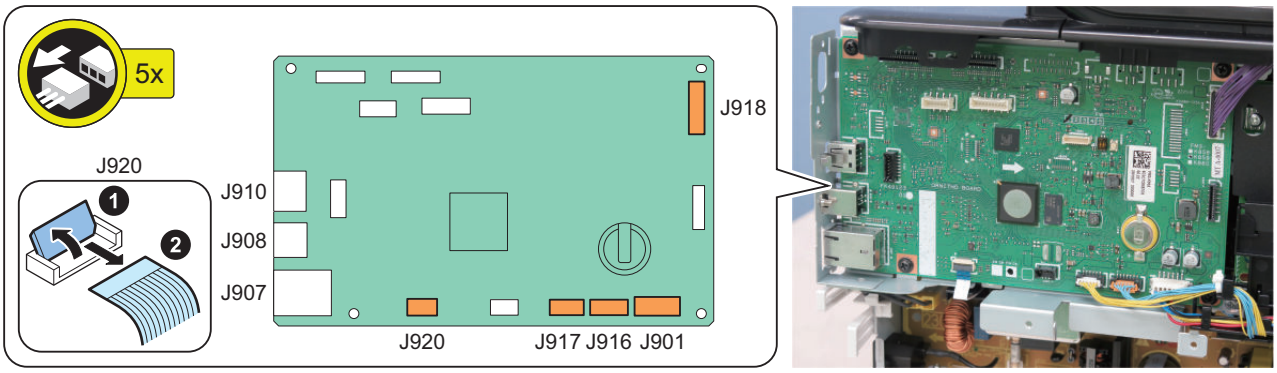
■ Preparation

1. **"Removing the Cartridge" on page 94**
2. **"Removing the Left Cover" on page 98**
3. **"Removing the Wireless LAN Unit" on page 114**

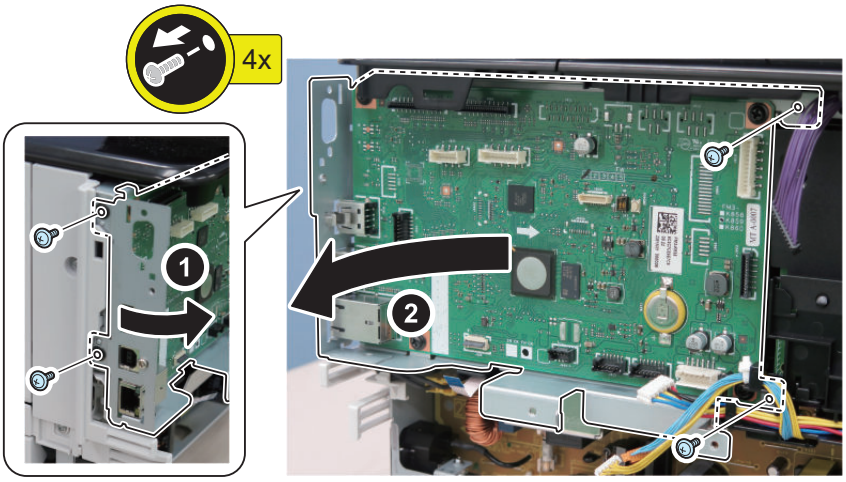
■ Procedure

1.





2.



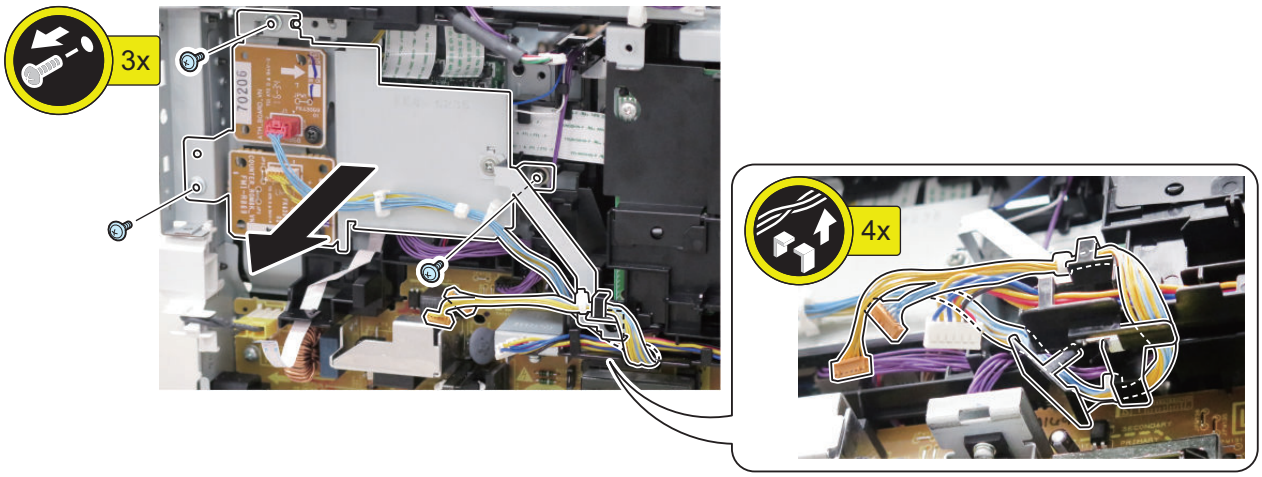
Removing the DC Controller PCB Cover

■ Preparation

1. “Removing the Cartridge” on page 94
2. “Removing the Left Cover” on page 98
3. “Removing the Wireless LAN Unit” on page 114
4. “Removing the Main Controller Unit” on page 119

■ Procedure

1.



Remove the DC Controller PCB

■ Preparation

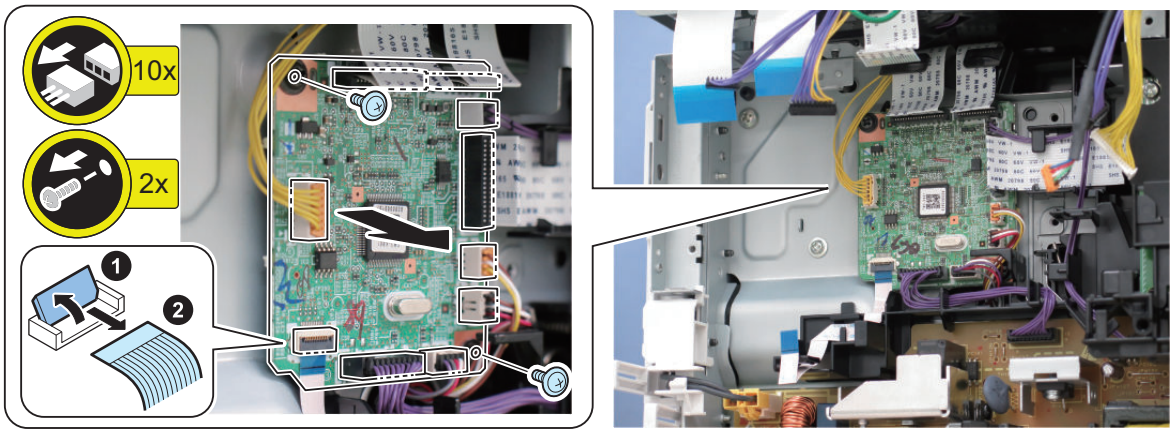
CAUTION:
Make sure to perform “Before Replacing the DC Controller PCB” on page 139 before replacing the DC Controller PCB.

1. “Removing the Cartridge” on page 94
2. “Removing the Left Cover” on page 98

3. “Removing the Wireless LAN Unit” on page 114
4. “Removing the Main Controller Unit” on page 119
5. “Removing the DC Controller PCB Cover” on page 120

■ Procedure

1.



2. Actions after replacement: “After Replacing the DC Controller PCB” on page 139

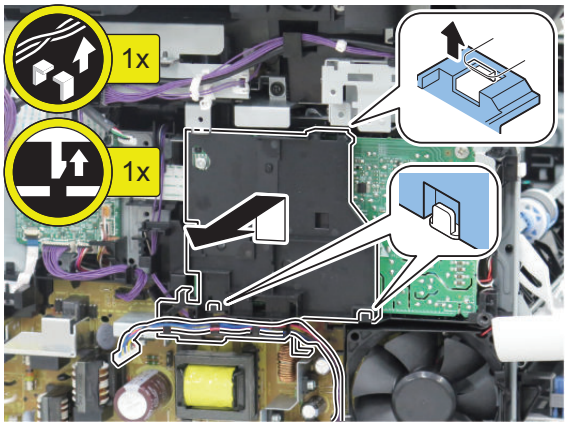
Removing the High Voltage Power Supply PCB

■ Preparation

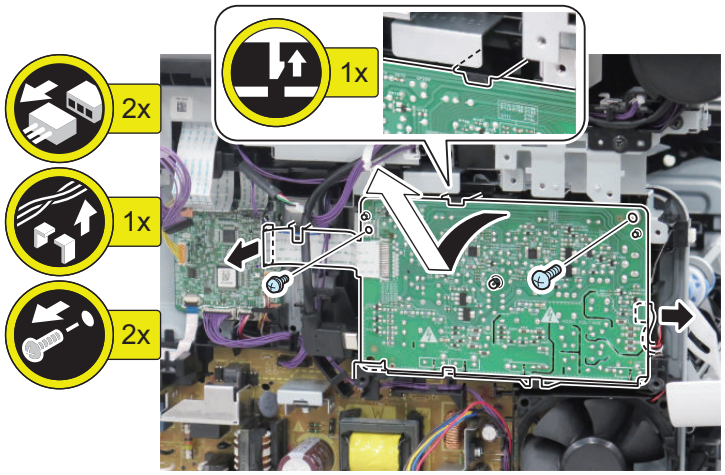
1. “Removing the Cartridge” on page 94
2. “Removing the Left Cover” on page 98
3. “Removing the Wireless LAN Unit” on page 114
4. “Removing the Main Controller Unit” on page 119
5. “Removing the DC Controller PCB Cover” on page 120

■ Procedure

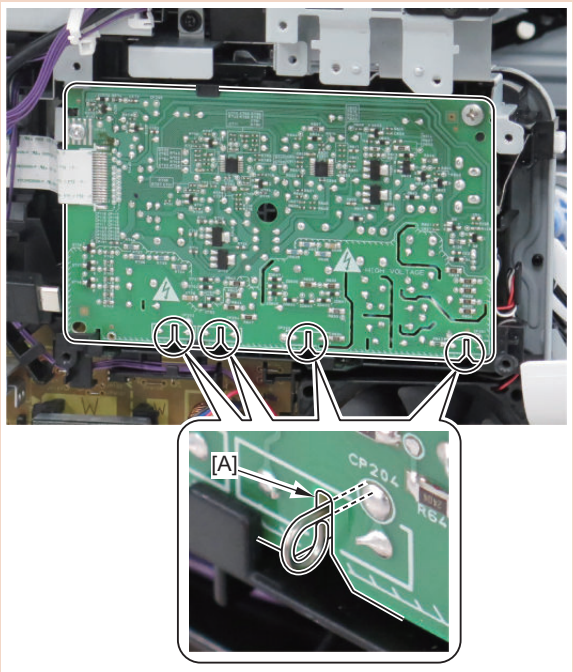
1.



2.



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



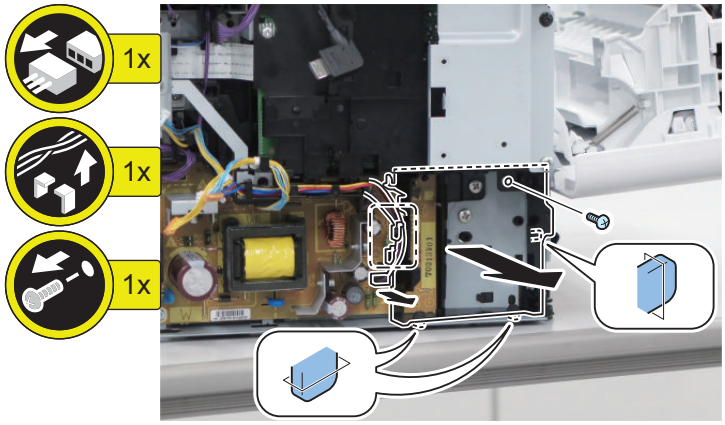
Removing the Low Voltage Power Supply Unit

■ Preparation

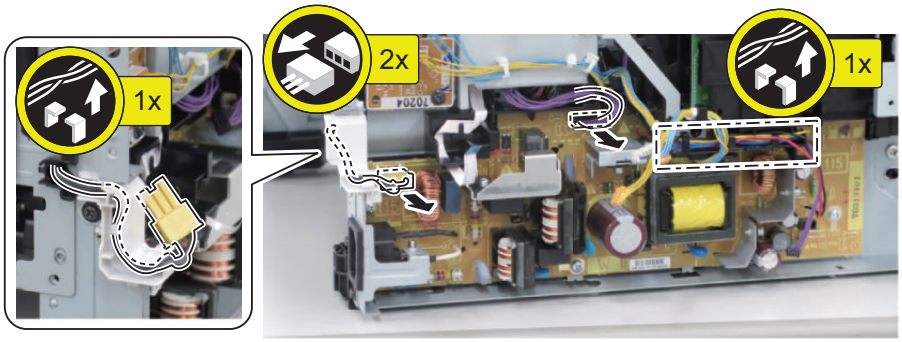
1. **“Removing the Cartridge” on page 94**
2. **“Removing the Left Cover” on page 98**
3. **“Removing the Left Rear Cover” on page 102**
4. **“Removing the Right Cover” on page 95**
5. **“Removing the Rear Cover” on page 104**
6. **“Removing the Wireless LAN Unit” on page 114**
7. **“Removing the Main Controller Unit” on page 119**
8. **“Removing the Main Fan” on page 117**

■ Procedure

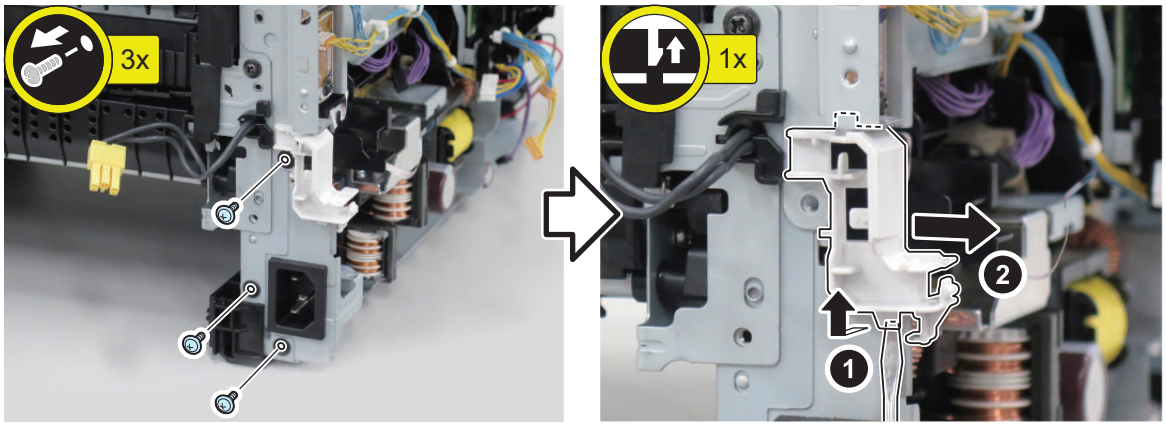
1.



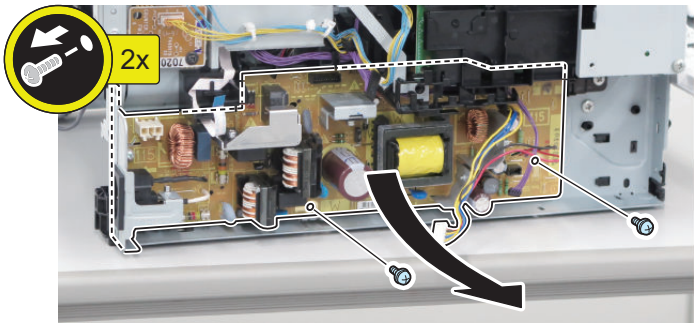
2.



3.



4.



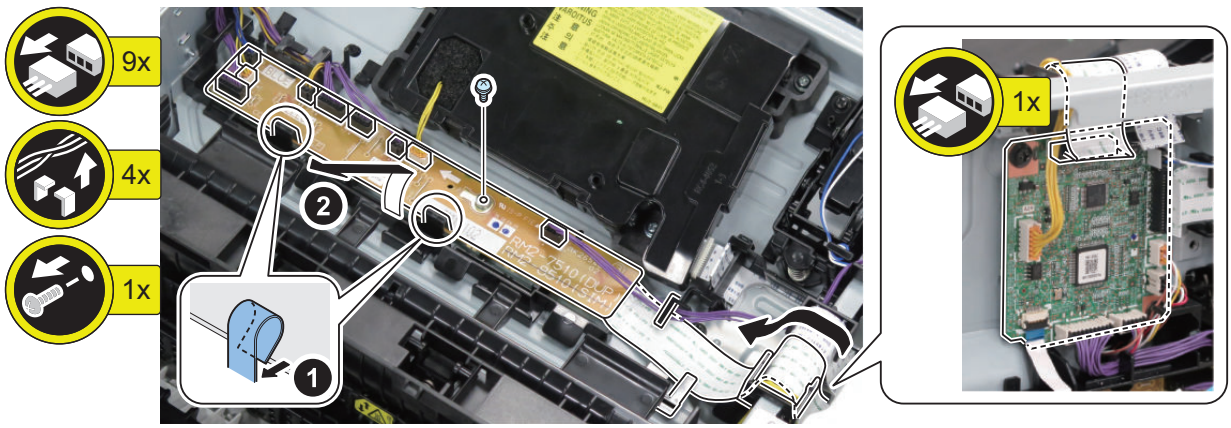
Removing the Relay PCB

■ Preparation

1. “Removing the Cartridge” on page 94
2. “Removing the Front Cover” on page 103
3. “Removing the Left Cover” on page 98
4. “Removing the Left Rear Cover” on page 102
5. “Removing the Right Cover” on page 95
6. “Removing the Control Panel Unit” on page 111 (touch panel model)
7. “Removing the Control Panel Unit ” on page 110 (5 line panel model)
8. “Removing the USB Unit” on page 115
9. “Removing the Upper Cover + Output Tray (Touch Panel Model)” on page 105 (touch panel model)
10. “Removing the Upper Cover + Output Tray (5 Line Panel Model)” on page 108(5 line panel model)
11. “Removing the Wireless LAN Unit” on page 114
12. “Removing the Main Controller Unit” on page 119
13. “Removing the DC Controller PCB Cover” on page 120

■ Procedure

1.



Laser Exposure System

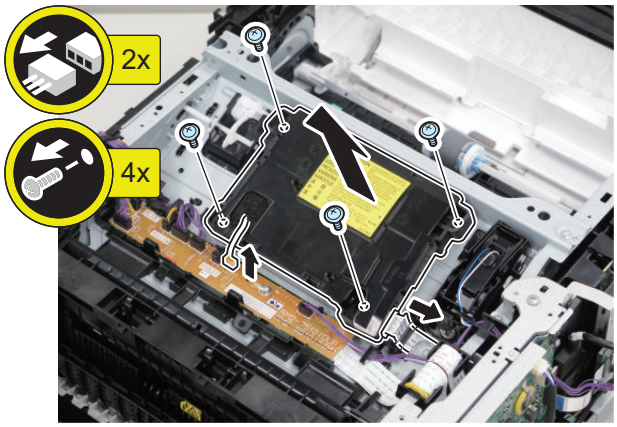
Removing the Laser Scanner Unit

■ Preparation

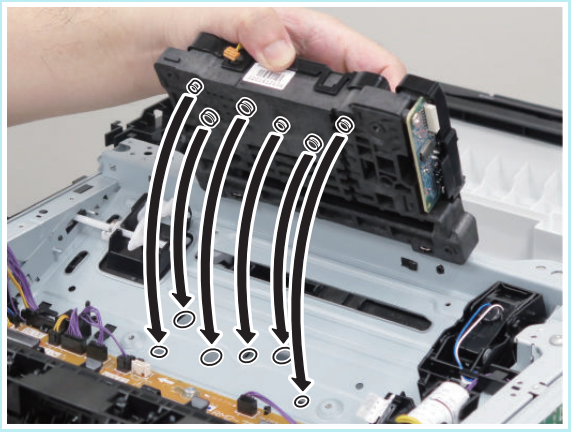
1. “Removing the Cartridge” on page 94
2. “Removing the Left Cover” on page 98
3. “Removing the Left Rear Cover” on page 102
4. “Removing the Right Cover” on page 95
5. “Removing the Control Panel Unit” on page 111 (touch panel model)
6. “Removing the Control Panel Unit ” on page 110 (5 line panel model)
7. “Removing the USB Unit” on page 115
8. “Removing the Upper Cover + Output Tray (Touch Panel Model)” on page 105 (touch panel model)
9. “Removing the Upper Cover + Output Tray (5 Line Panel Model)” on page 108(5 line panel model)

■ 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.

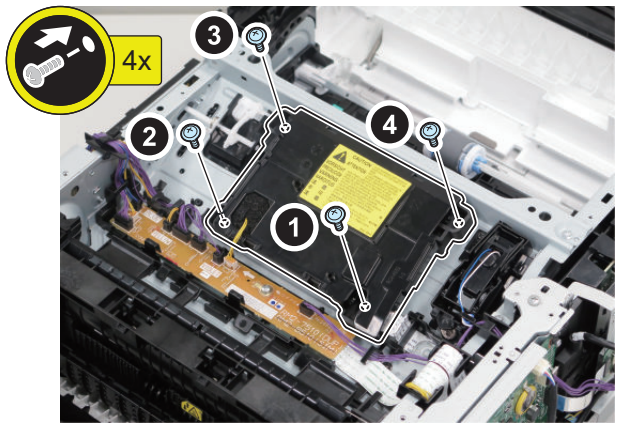


Image Formation System

Removing the Transfer Roller

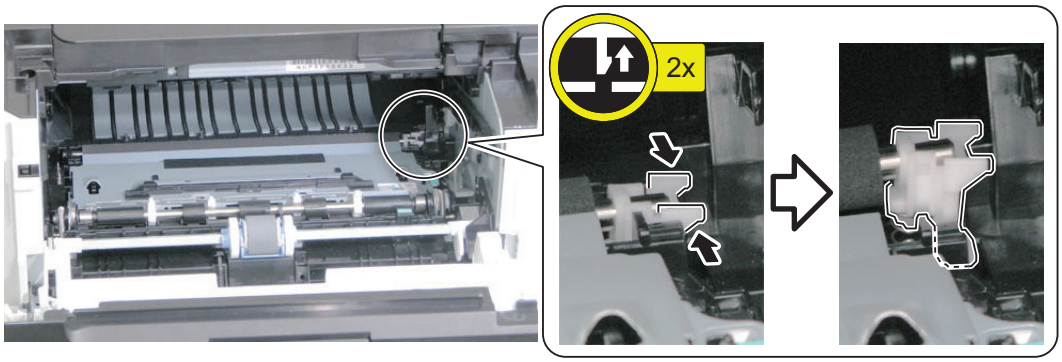
■ Preparation

1. “Removing the Cartridge” on page 94

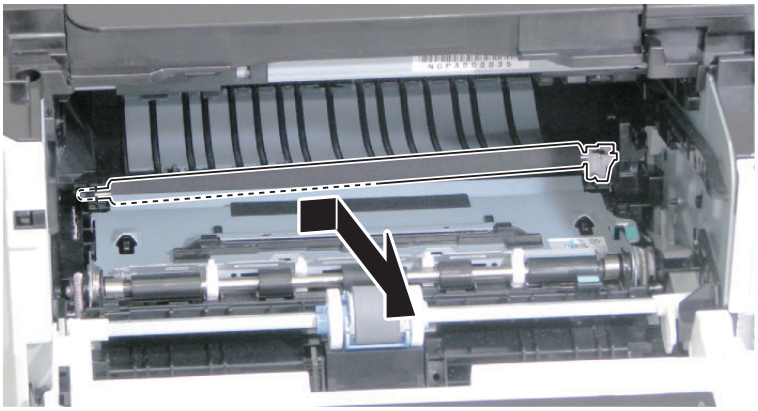
■ Procedure

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

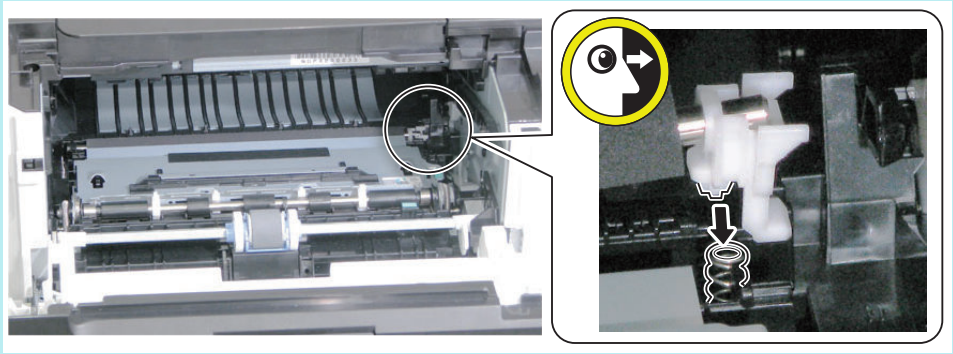
1.



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

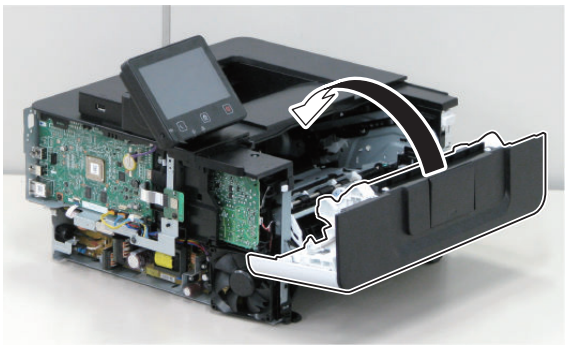
■ Procedure

1. “Removing the Cartridge” on page 94
2. “Removing the Left Cover” on page 98
3. “Removing the Left Rear Cover” on page 102
4. “Removing the Right Cover” on page 95
5. “Removing the Rear Cover” on page 104

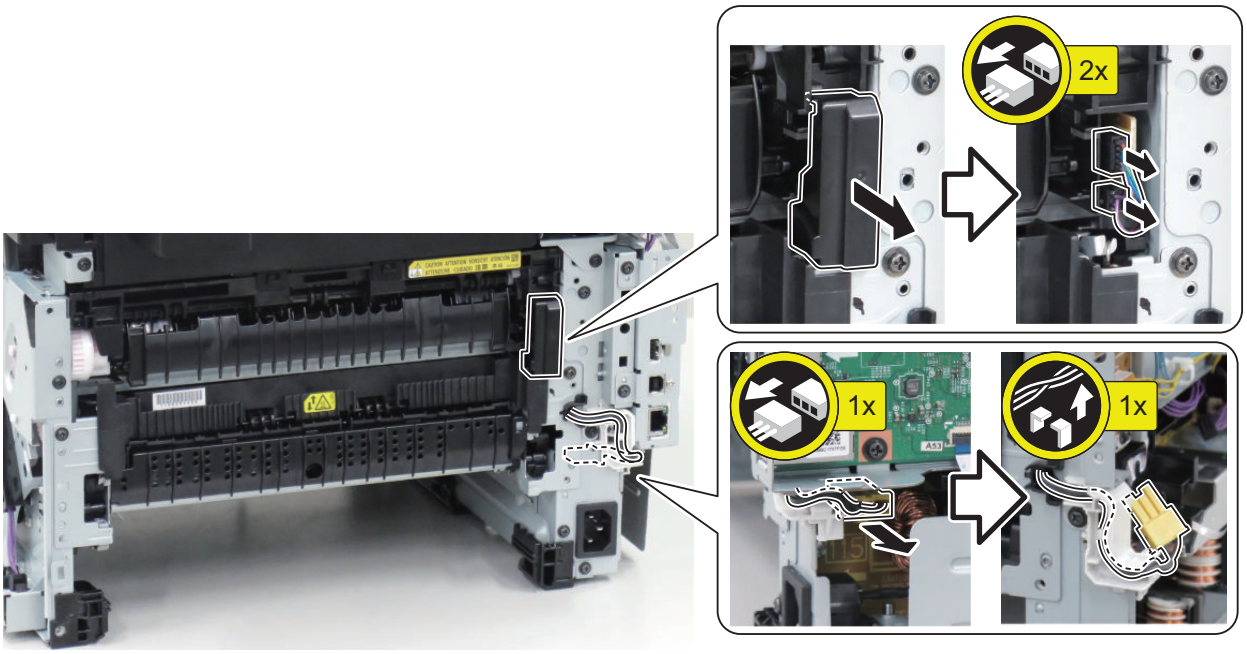
■ Procedure

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

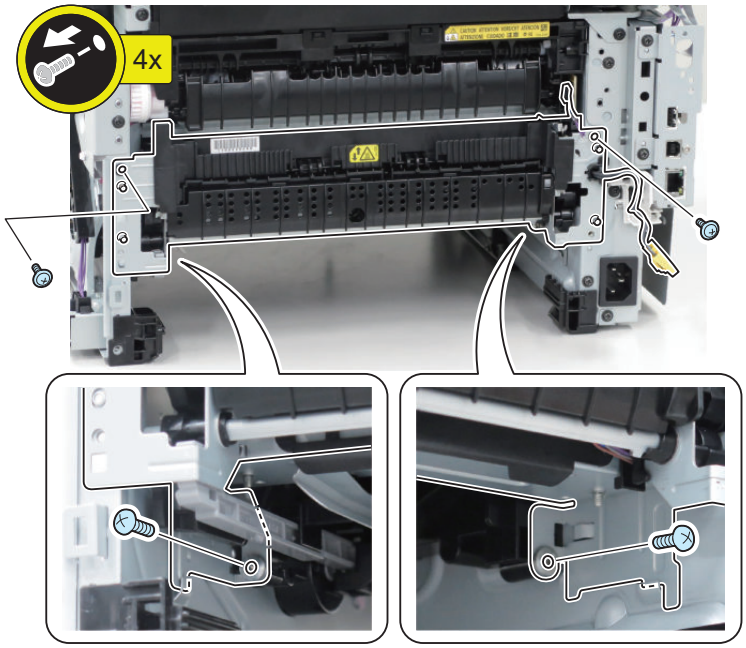
1.



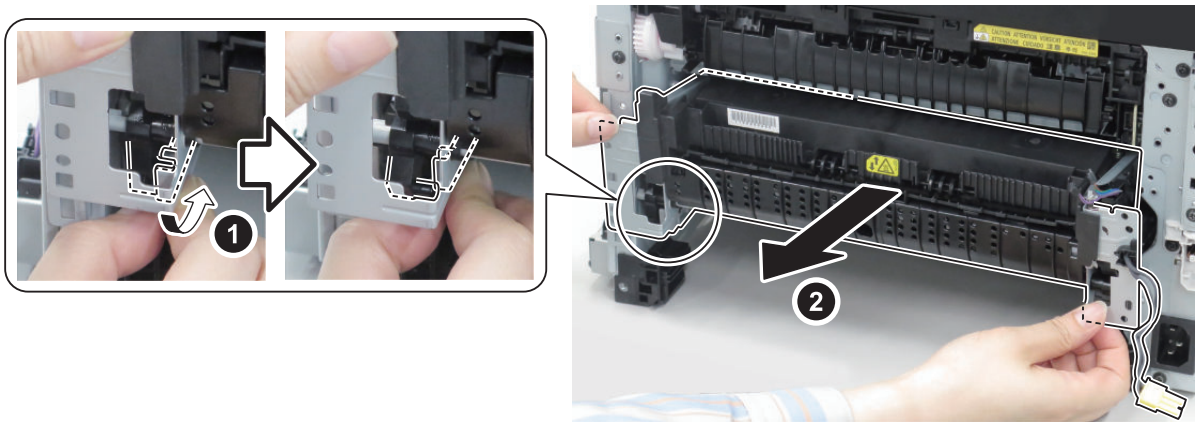
2.



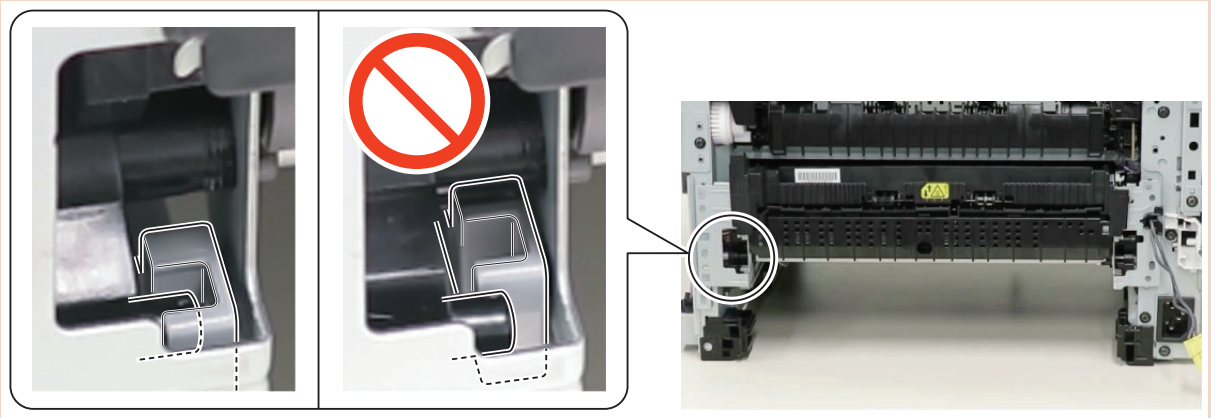
3.



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.



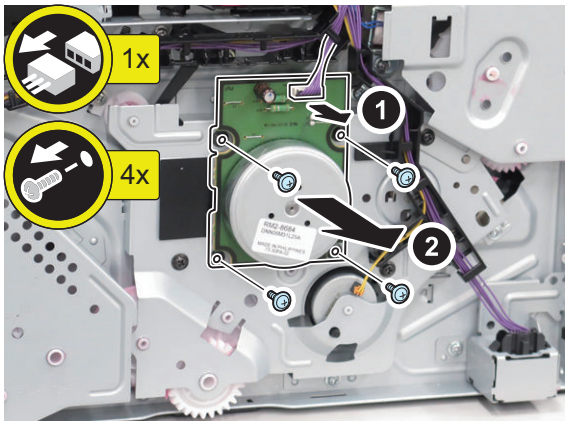
Removing the Fixing Motor

■ Preparation

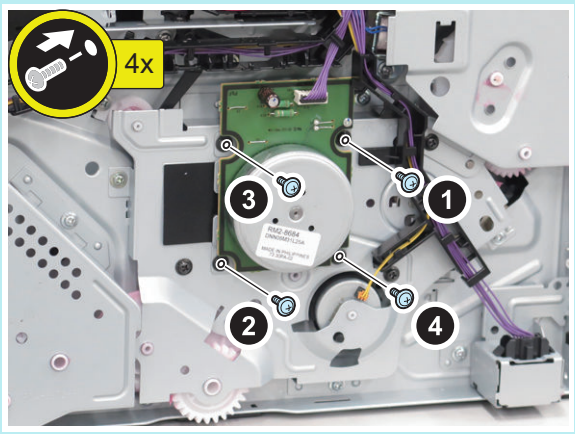
1. “Removing the Cartridge” on page 94
2. “Removing the Right Cover” on page 95

■ 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.

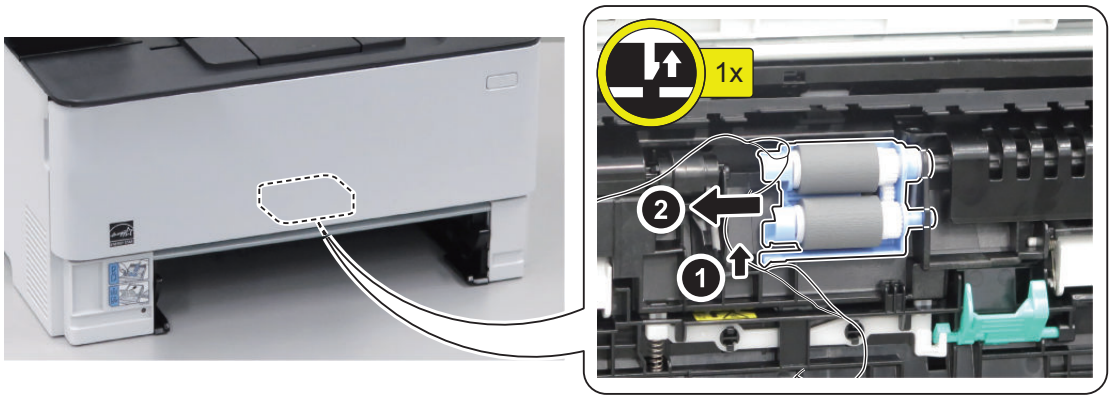
■ Preparation

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

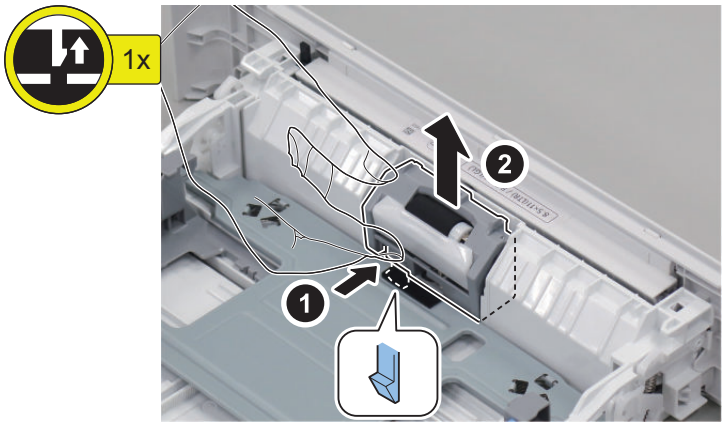
■ Preparation

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 Multi-purpose Tray Pickup Roller Unit

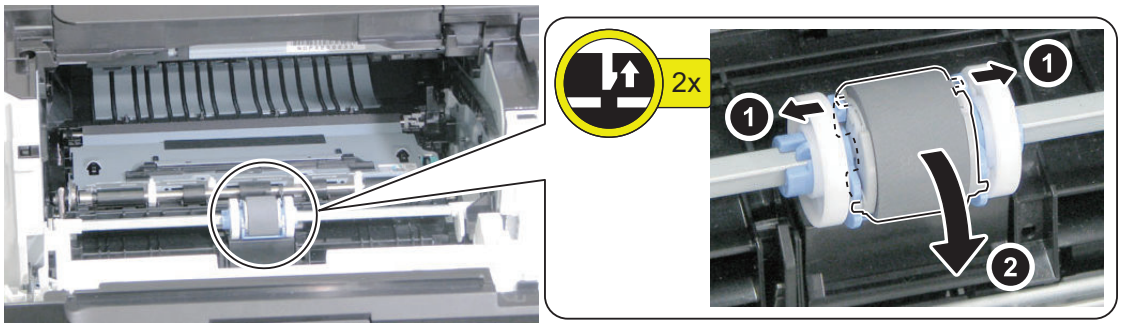
■ Preparation

1. **Remove the cassette.**
2. **"Removing the Cartridge" on page 94**

■ 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

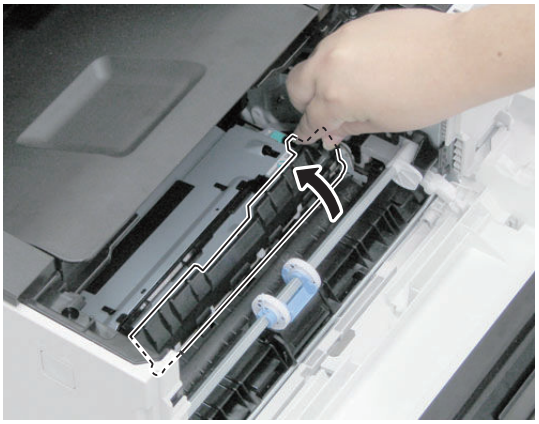
1. **Remove the cassette.**
2. **"Removing the Cartridge" on page 94**

3. “Removing the Multi-purpose Tray Pickup Roller Unit” on page 132

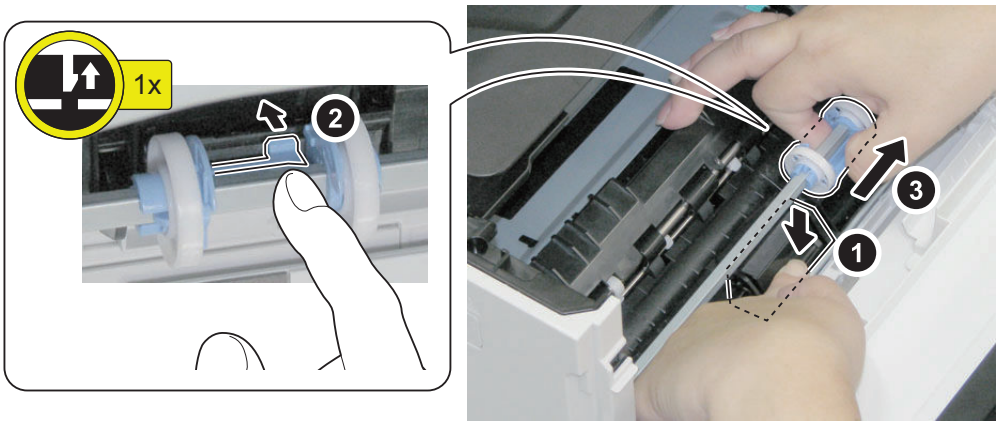
■ Procedure

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

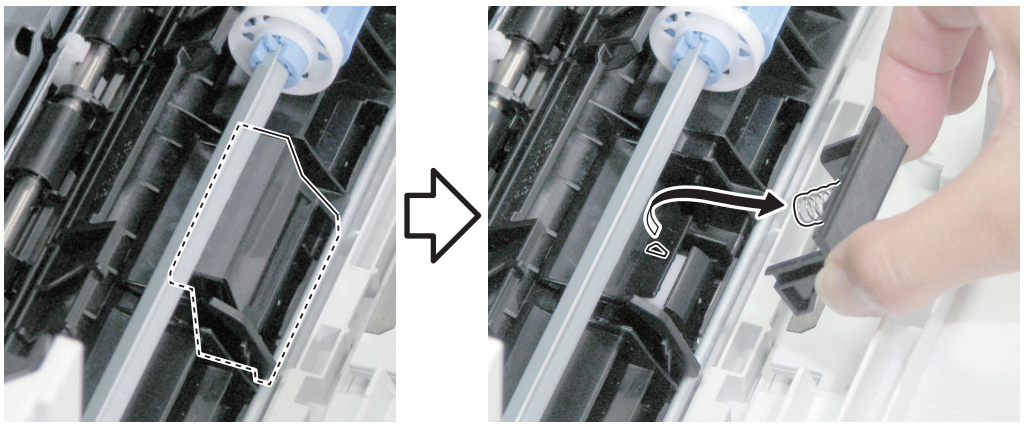
1.



2.



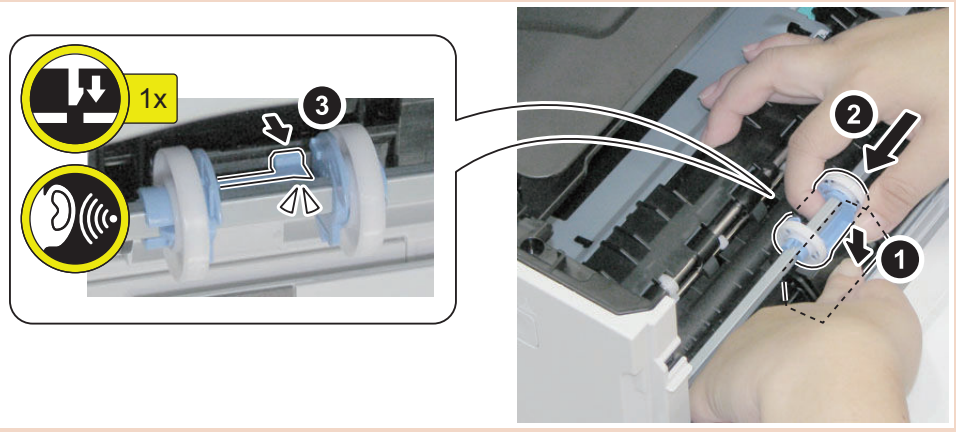
3.



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.



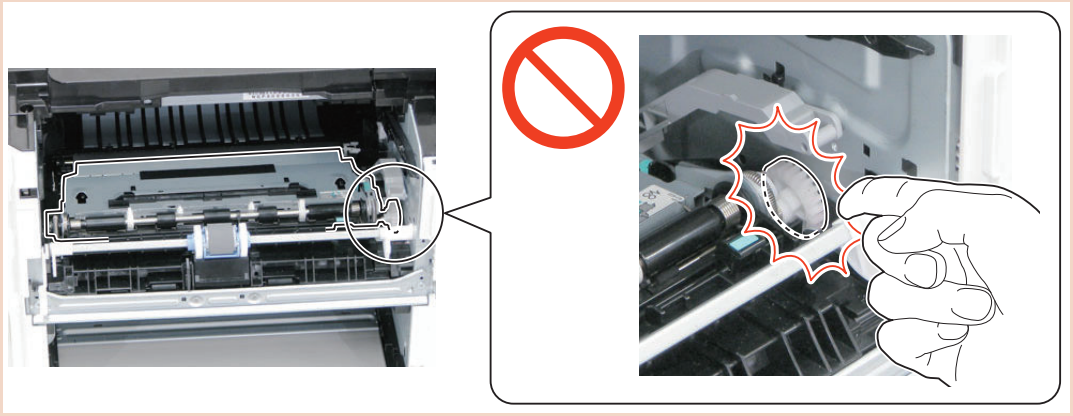
Removing the Registration Unit

■ Preparation

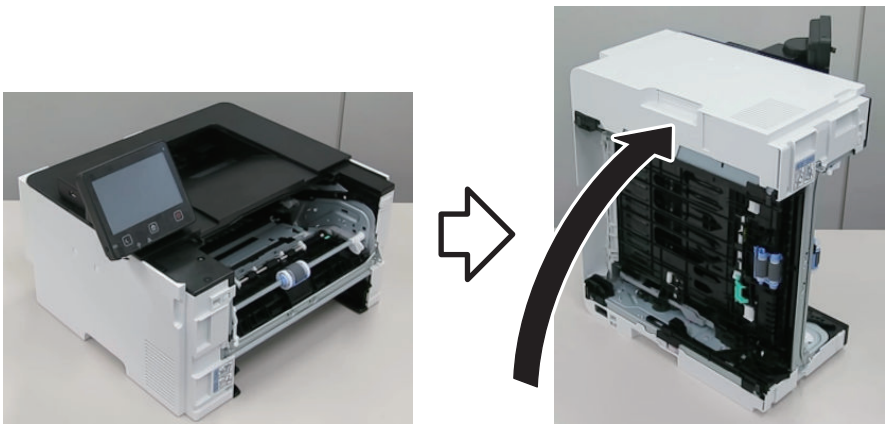
1. **Remove the cassette.**
2. **“Removing the Cartridge” on page 94**
3. **“Removing the Front Cover” on page 103**

■ Procedure

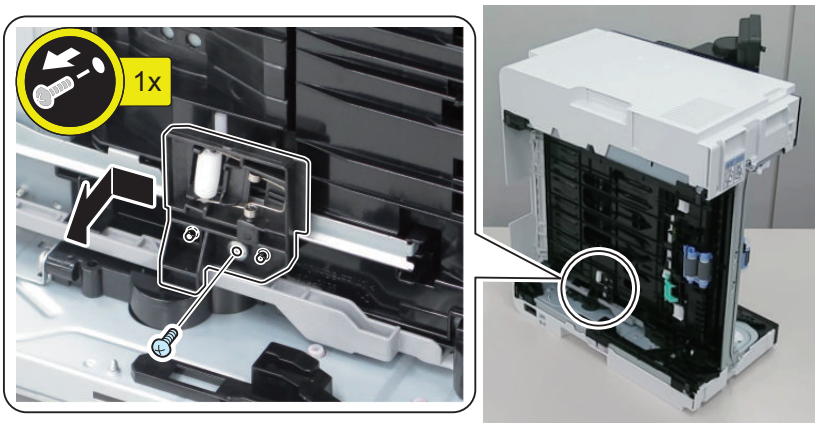
CAUTION:
Do not touch the Gear Unit of the Registration Unit.
Grease is applied on the Gear Unit. If you have accidentally touched grease, wipe with lint-free paper so as not to smear other parts with your greasy hand.



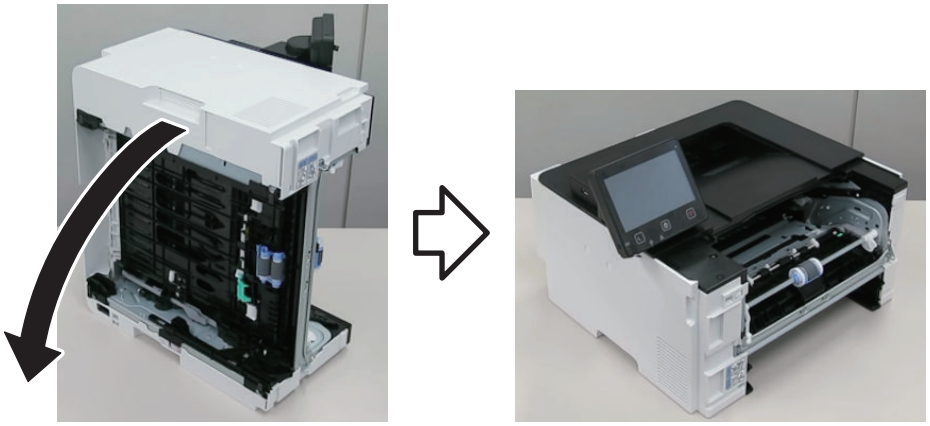
1.



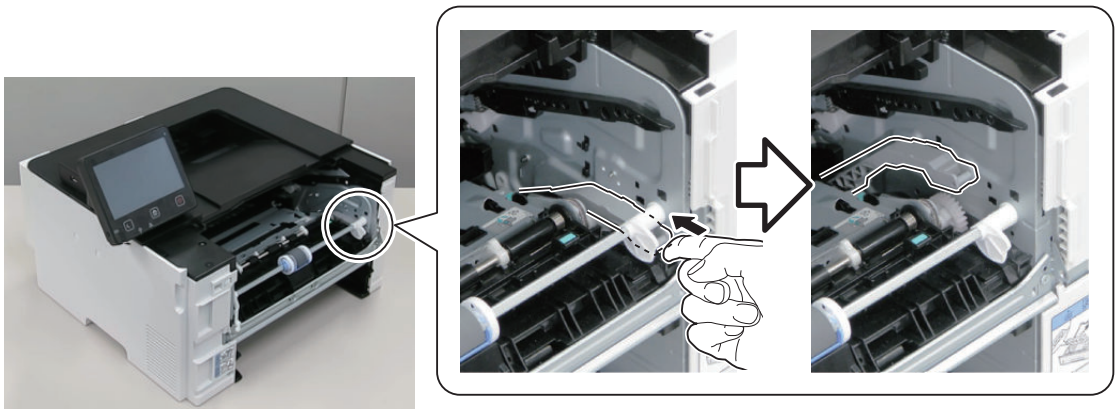
2.



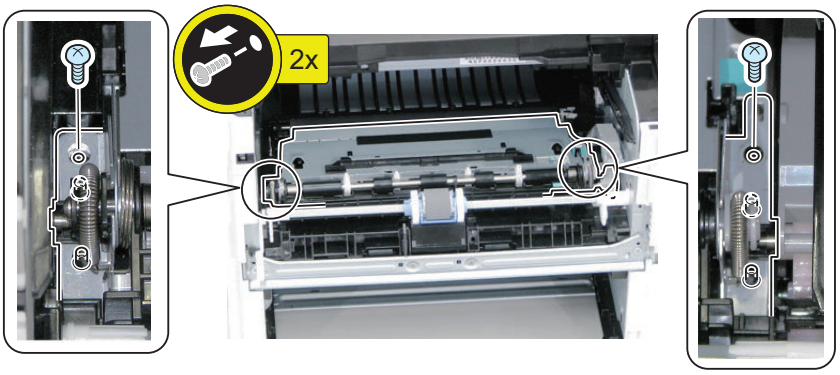
3.



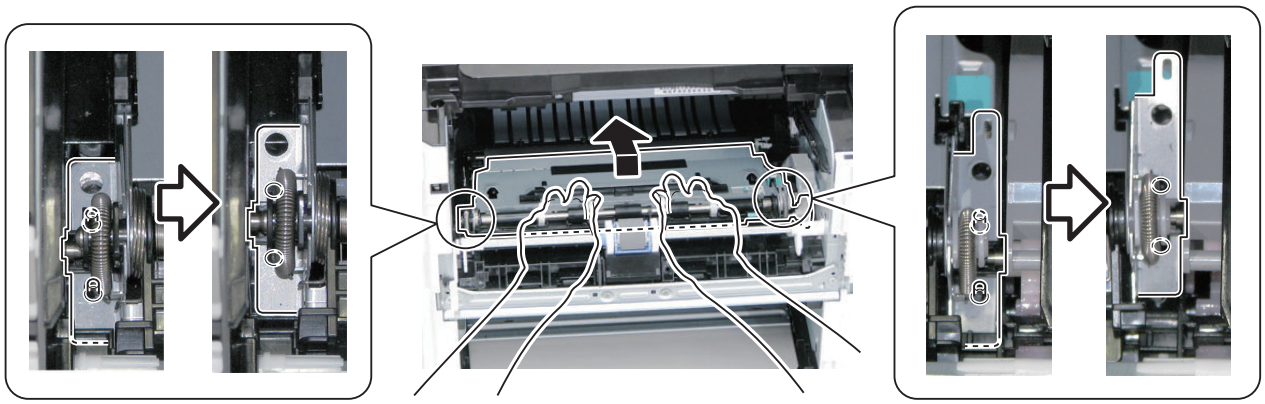
4.



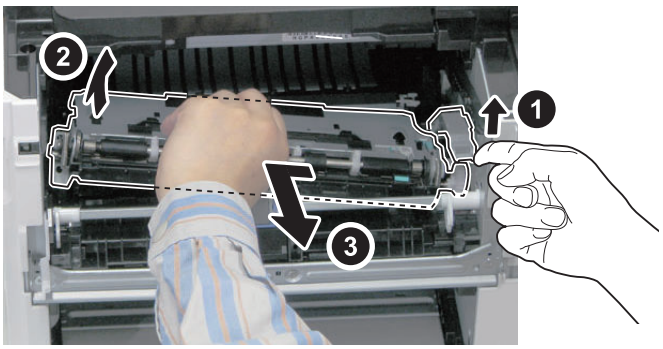
5.



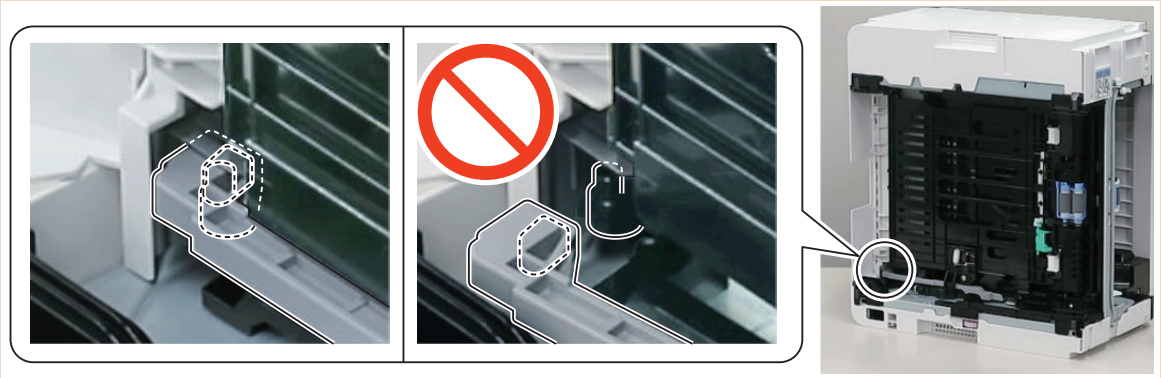
6.



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.



Adjustment

Actions at Parts Replacement

NOTE:
After replacing the Main Controller PCB or DC Controller PCB, upgrade the firmware as necessary. When upgrading the firmware, it has to be executed before restoring the data or entering the value of the service mode.

After Replacing the Control Panel

1. **Execute the following service modes and adjust the coordinate position of the Touch Panel.**
   - COPIER > ADJUST > PANEL > TOUCHCHK
2. **Check that the value of the following service mode is [1].**
   - COPIER > ADJUST > PANEL > TOUCH-R

CAUTION:
If the value has not changed to [1], perform the procedure from step 1 again.

Before Replacing the DC Controller PCB

The setting values stored in the DC Controller PCB NVRAM are stored as a backup in the Main Controller PCB NVRAM. Before replacing the DC Controller PCB, be sure to perform the steps shown below to back up the setting values.
- COPIER > FUNCTION > VIFFNC > STOR-DCN

Turn OFF and then ON the power.

CAUTION:
Perform backup immediately before replacing the DC Controller PCB.

After Replacing the DC Controller PCB

The setting values stored in the DC Controller PCB NVRAM are stored as a backup in the Main Controller PCB NVRAM. After replacing the DC Controller PCB, be sure to perform the steps shown below to restore the setting values.
- COPIER > FUNCTION > VIFFNC > RSTR-DCN

Turn OFF and then ON the power.

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 214

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).

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.**

■ 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 214
   - 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 Setup Guide 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

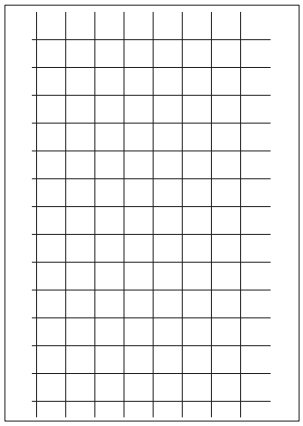
Engine Test Print

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

NOTE:
The engine test print can be performed by using only the DC Controller. Therefore it can be output even when the Main Controller is failed.

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.**

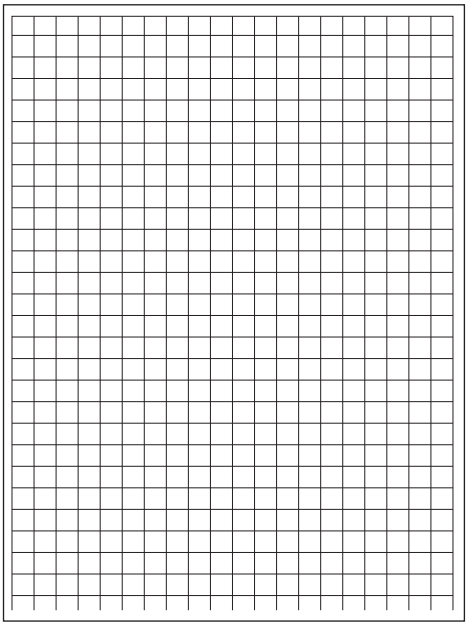
NOTE:
If necessary, change the settings for test print in the following service mode.
If the settings are not changed, a test print will be executed with the initial values of service mode settings.

- 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

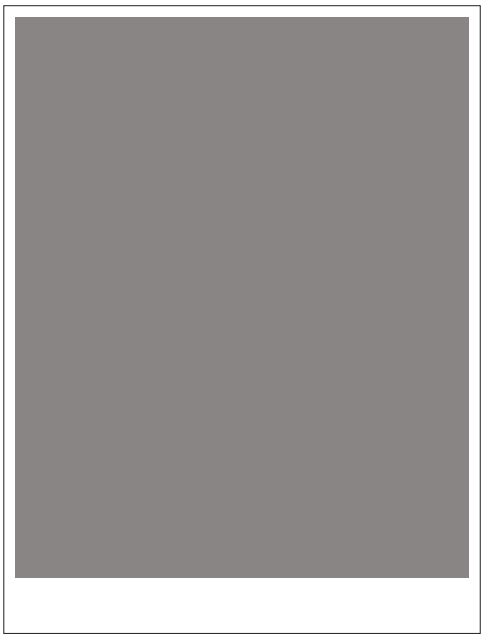
■ How to use the test print

● Grid Pattern (TYPE = 0)



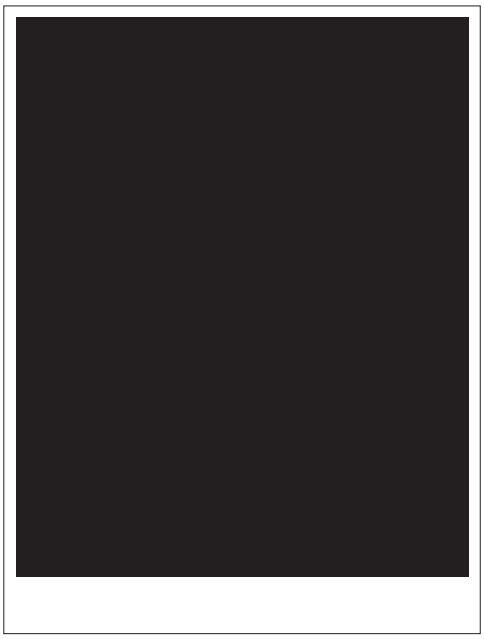
Check item	Checking method	Assumed cause
Right Angle/ Straight Lines	Check that lines in horizontal/vertical scanning directions are paralleled to the paper. Check that these lines are at right angle to one another.	Failure of feed system Failure of Laser Scanner Unit
Magnification Ration	Check that 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)



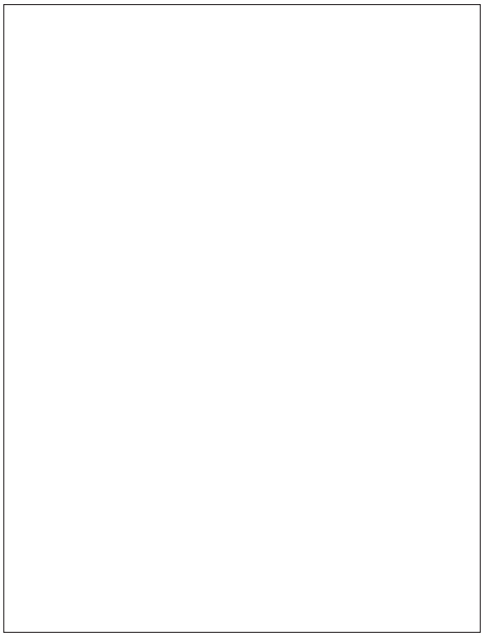
Check item	Checking method	Assumed cause
Transfer failure	Check the evenness of density.	Failure of transfer system Failure of Transfer Roller
Black line	Check that no black line appears on the image.	Failure of developing system Failure of cleaning (drum) Failure of Transfer Roller
White line	Check 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)



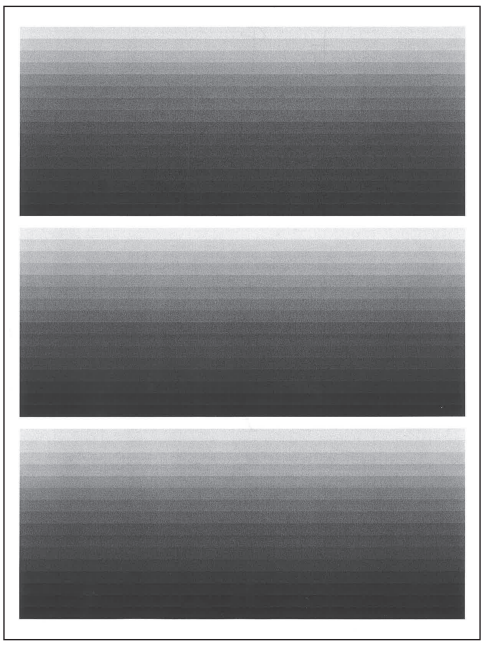
Check item	Checking method	Assumed cause
Transfer failure	Check the evenness of density.	Failure of transfer system Failure of Transfer Roller
White line	Check that no white line appears on the image.	Failure of developing system
Uneven Pitch	Check that no line appears in the horizontal scanning direction 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)



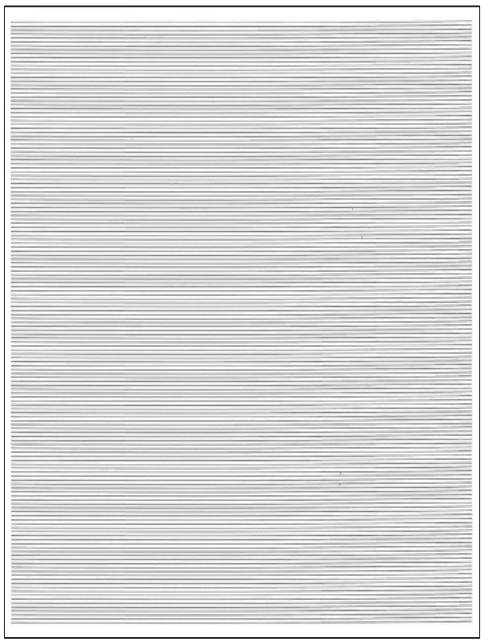
Check item	Checking method	Assumed cause
Black line	Check that no black line appears on the image.	Failure of developing system Failure of cleaning (drum) Failure of Transfer Roller
Fogging	Check that no fogging appears on the image.	Failure of Photosensitive Drum Failure of laser exposure system Failure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

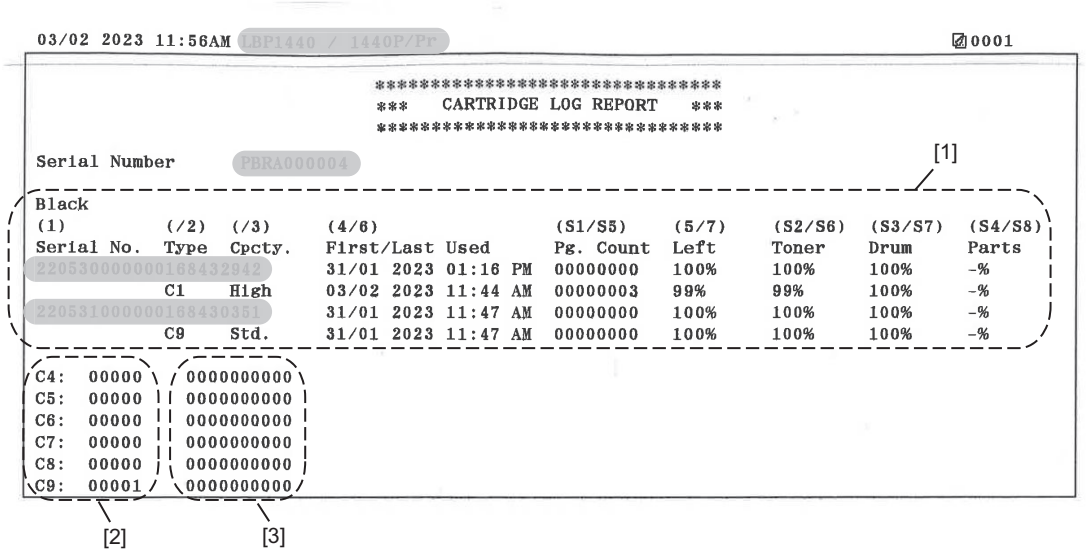


Check item	Checking method	Assumed cause
Black line	Check that no black line appears on the image.	Failure of developing system Failure of cleaning (drum) Failure of Transfer Roller
White line	Check that no white line appears on the image.	Soiling on the laser light path Failure of developing system

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.



Cartridge Log Report (For service technicians)

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.

Item	Description	Remarks
(1) Serial No.	Serial number of the cartridge	
(2) Type	Cartridge type	• C1: Genuine • C2 to C8: Non-genuine. • C9 : Incompatible • C0: Unknown
(3) Cpcty.	Cartridge capacity	Displayed in accordance with the toner fillup 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 *	Not used	

*: 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 C9 according to the reason for judging it nongenuine, 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
Incompatible	C9	C9	The number of detections of a incompatible cartridge that can be installed physically,and the number of pages printed

* : Only C2, C3 and C9 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

CAUTION:
URL of User's Guide ->
https://oip.manual.canon/

Image Failures Occur at Regular Intervals

Overview

Foreign matters or scratches on rollers may cause image failures of the regular intervals in the vertical scanning direction of the image.

Field Remedy

Clean or replace the corresponding parts according to the following table.

CAUTION:
Since the Primary Charging Roller and Developing Roller are located inside the cartridge and cannot be cleaned, replace the cartridge.

Cause of failure		Outer circumference (mm)	Symptom			
			Soiling	White spots	Soiled back	Fixing failure
Cassette Pickup Roller		Approx. 50 mm	Occurs	-	-	-
Cassette Separation Roller		Approx. 44 mm	-	-	Occurs	-
Cassette Feed Roller		Approx. 50 mm	Occurs	-	-	-
Registration Roller		Approx. 43 mm	-	-	Occurs	-
Transfer Roller		Approx. 39 mm	-	Occurs	Occurs	-
Toner Cartridge	Primary Charging Roller	Approx. 28 mm	-	Occurs	-	-
	Photosensitive Drum	Approx. 75 mm	Occurs	Occurs	-	-
	Developing Roller	Approx. 31 mm	-	Occurs	-	-
Fixing Unit	Fixing Film	Approx. 57 mm	Occurs	Occurs	-	Occurs
	Pressure Roller	Approx. 63 mm	Occurs	-	Occurs	Occurs

CAUTION:
The outer circumference may be different from the width of the image failure depending on the factors including processing speed and/or amount of image shrink/expansion.

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.

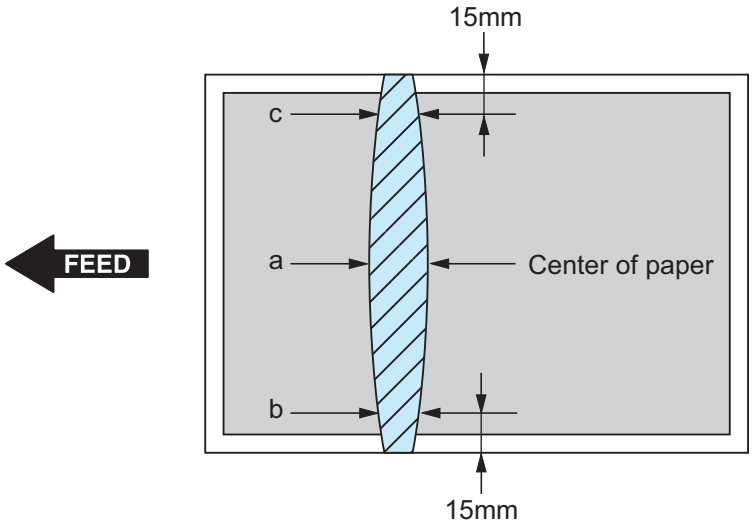
Field Remedy

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

■ 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. 256MB.
- Can be recognized by the machine

Collection procedure

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

1. **Connect the 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. **Execute the following service mode from the Control Panel or remote UI.**
   - COPIER > FUNCTION > SYSTEM > DCONLOG
5. **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.
   - When output by LOGWRITE: SUBLOG.TXT
   - When output by LOG2USB: SUBLOG_yyyymmdd.HHMMSS_xxx.gz (the file may be divided into multiple files)
   - When output by DCONLOG: DCONLOG.bin

Error/Jam/Alarm

Outline

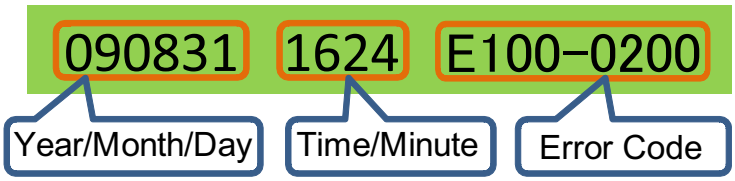
This chapter describes various codes which are displayed when a failure occurs on the product. These are classified into 3 codes as follows.

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

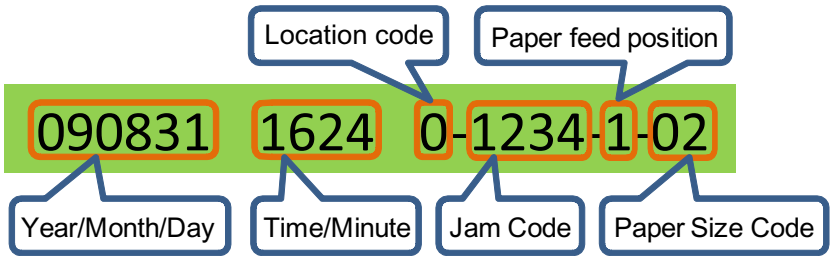
SERVICE MODE > COPIER > DISPLAY > ERR



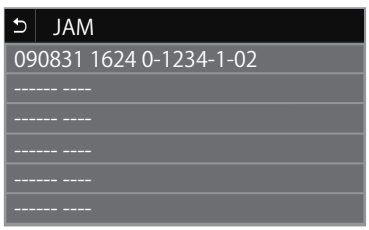
Indication example

Jam log

SERVICE MODE > COPIER > DISPLAY > JAM

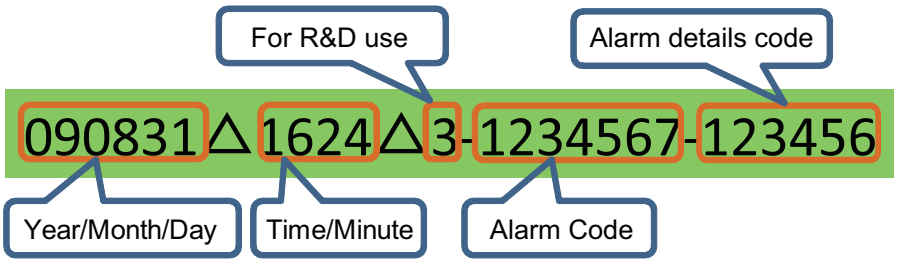


Indication example

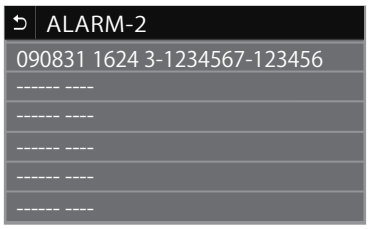


Alarm log

SERVICE MODE > COPIER > DISPLAY > ALARM-2
SERVICE MODE > COPIER > DISPLAY > ALARM-3



Indication example



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

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(UN9).
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(UN9).
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(UN9).
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(UN9).
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(M1). 3. Replace the DC Controller PCB(UN9).
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(M1). 3. Replace the DC Controller PCB(UN9).

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

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(UN9).

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(UN9).

E196-0001--	NVRAM access error warning
Detection Description	Inaccessible to NVRAM
Remedy	1. Replacement of Main Controller PCB (UN12)

E196-1000--	ROM writing/reading error (Main ROM)
Detection Description	Error in writing/reading of main program in the Main Controller PCB (Main ROM).
Remedy	1. Update the firmware. 2. Replace the Main Controller PCB(UN12).

E196-2000--	ROM writing/reading error (ROM for storing setting values)
Detection Description	Error in writing/reading of the setting values storage area in the Main Controller PCB (ROM for storing setting values).
Remedy	1. Update the firmware. 2. Replace the Main Controller PCB(UN12).

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 firmware. 2. Replace the Main Controller PCB(UN12).

E196-3001--	ROM-ID mismatch (eMMC)
Detection Description	The eMMC has been replaced wrongly. The eMMC failure occurred.
Remedy	1. Update the firmware. 2. Replace the Main Controller PCB(UN12).

E197-0002--	Firmware error
Detection Description	Unknown engine firmware error
Remedy	1. Turn OFF and then ON the power. 2. Update firmware. 3. Replace the DC Controller PCB(UN9).

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.

E351-0001--	Crypto hardware error
Detection Description	System error
Remedy	Replace the Main Controller PCB (UN12)

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.

E719-0000--	Error in communication with new Card Reader (serial communication)
Detection Description	Unable to communicate with the new Card Reader.
Remedy	1. Check the connection of the new Card Reader.

E733-0000--	Printer communication error
Detection Description	A communication error between the DC Controller PCB and the Main Controller PCB occurred.
Remedy	1. Check the harness/connector between the DC Controller PCB and the Main Controller PCB. 2. Install the set of controller firmware. 3. Replace the Main Controller PCB(UN12). 4. Replace the DC Controller PCB(UN9).

E733-0001--	Received message parity error
Detection Description	Communication error occurred after successful startup.
Remedy	1. Turn OFF and then ON the main power. 2. Replace the Main Controller PCB(UN12).

E733-0004--	Invalid message reception error
Detection Description	Communication error occurred after successful startup.
Remedy	1. Turn OFF and then ON the main power. 2. Replace the Main Controller PCB(UN12).

E733-0005--	Message timeout error
Detection Description	Communication error occurred between the DC Controller PCB and the Main Controller PCB.
Remedy	1. Check the harness/connector connection between the DC Controller PCB and the Main Controller PCB. 2. Install the set of the controller firmware. 3. Replace the Main Controller PCB(UN12). 4. Replace the DC Controller PCB(UN9).

E733-0006--	Unknown communication error
Detection Description	Communication error occurred between the DC Controller PCB and the Main Controller PCB.
Remedy	1. Install the set of the controller firmware. 2. Replace the Main Controller PCB(UN12). 3. Replace the DC Controller PCB(UN9).

E733-0007--	SC level error
Detection Description	Communication error occurred between the DC Controller PCB and the Main Controller PCB.
Remedy	1. Install the set of the controller firmware. 2. Replace the Main Controller PCB(UN12). 3. Replace the DC Controller PCB(UN9).

E743-0000--	DDI communication error
Detection Description	Software sequence error
Remedy	1. Turn OFF and then ON the power.

E744-0001--	Invalid combination of language file versions
Detection Description	The language file version did not match that of the main program.
Remedy	1. Update the firmware.

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

E744-1001--	Version mismatch between BOOTABLE and BOOTROM
Detection Description	A version mismatch between the main program and the start-up program.
Remedy	1. Update the firmware.

E744-4000--	Invalid engine connection error
Detection Description	It was detected that an invalid engine was connected.
Remedy	1. Check whether a proper DC Controller PCB is installed. 2. Update the firmware. 3. Replace the DC Controller PCB(UN9).

E744-5000--	Communication error between Control Panel PCB and Main Controller PCB
Detection Description	Communication with the Control Panel PCB could not be established.
Remedy	1. Check the harness/connector between the Panel PCB and the Main Controller PCB. 2. Replace the Control Panel (including the Panel PCB). 3. Replace the Main Controller PCB(UN9).

E744-6000--	Communication error with Wireless LAN PCB
Detection Description	Communication with the Wireless LAN PCB could not be established.
Remedy	1. Turn OFF and then ON the main power. 2. Check the harness/connector between the Wireless LAN PCB and the Main Controller PCB 3. Install the set of controller firmware. 4. Replace the Wireless LAN PCB(UN19). 5. Replace the Main Controller PCB(UN12).

E804-0004--	Control FAN error
Detection Description	
Remedy	1. Check the power supply to the Main Fan. 2. Replace the Main Fan(FM1).

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(FM1).

Alarm Code

Alarm Code Details

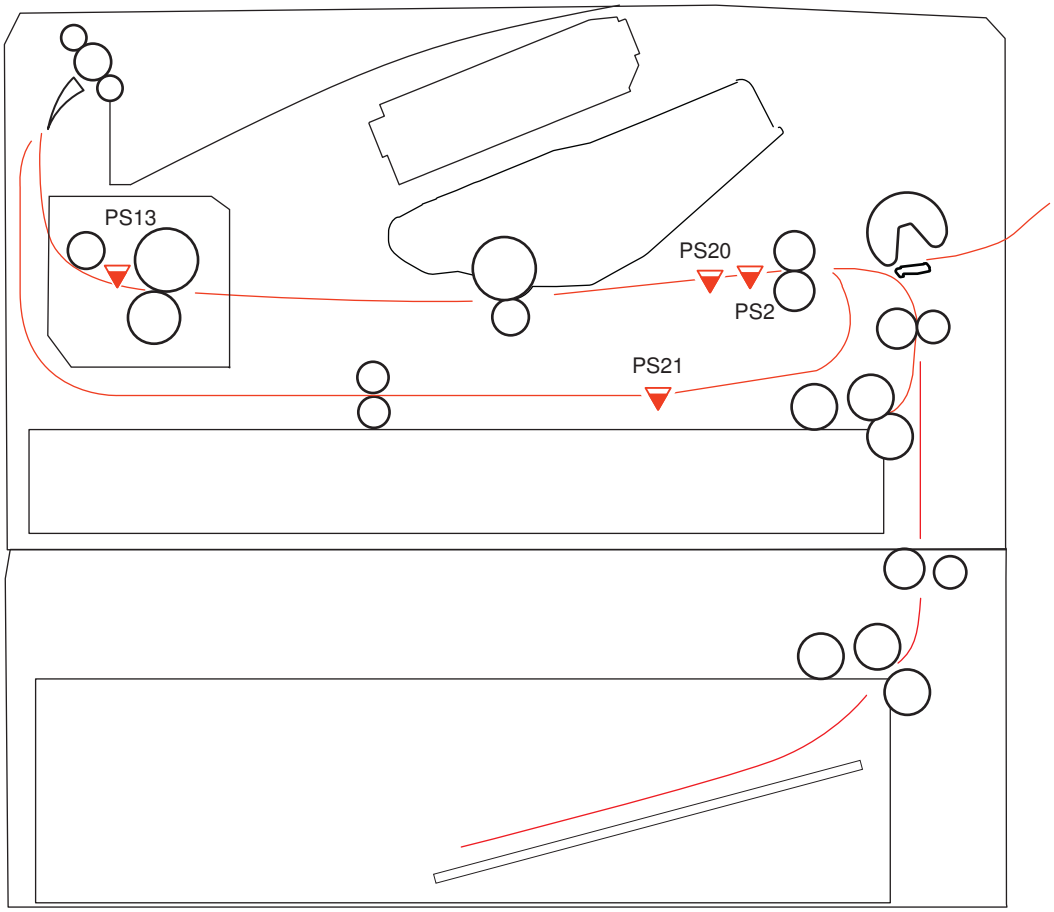
10-0020	**Toner prior notification alarm**
A. Operation / B. Cause / C. Remedy	The life value of a target part reached the number of days left as set in COPIER > OPTION > PM-DLV-D > TONER-K.
10-0094	**Toner memory detection error (Bk)**
A. Operation / B. Cause / C. Remedy	Communication error with the memory of toner cartridge (Bk) was detected.
10-0098	**Toner Cartridge (Bk) memory data error**
A. Operation / B. Cause / C. Remedy	Toner cartridge (Bk) memory data error was detected.
10-0100	**Toner Cartridge replacement notification alarm: BK**
A. Operation / B. Cause / C. Remedy	Detail Code: 0071 When the replacement with a genuine Toner Cartridge was detected.
10-0404	**Toner Cartridge empty alarm: Bk**
A. Operation / B. Cause / C. Remedy	Alarm to be generated once the Toner Cartridge becomes empty.
31-0060	**NVRAM access error**
A. Operation / B. Cause / C. Remedy	Communication with NVRAM was not available.
31-0061	**NVRAM data error**
A. Operation / B. Cause / C. Remedy	The NVRAM data was invalid or data writing to the NVRAM failed.

Alarm Codes Generated by Remote Monitoring Server

Alarm Codes generated by Remote Monitoring Server are not shown in the alarm log of the host machine.

Alarm Code	Detail Code	Description
010001	00000000	Counter reading irretrievable for a period of time
010002	FFFFFFFF	Post-error status notification (status retrieval error)
010002	0FFFFFFF	Post-error status notification (error occurring but code unknown)
010002	00000FFF	Post-error status notification (normal)
010002	00000xxx	Post-error status notification (XXX: code of error occurred)
010004	00000000	Notification of IP address change
040010	00000000	Jam left unsolved
100001	00000000	Toner level low (Bk)
100002	00000000	Toner level low (C)
100003	00000000	Toner level low (M)
100004	00000000	Toner level low (Y)

Jam Code



Location Code	Jam code	Jam Type	Jam Position/ Sensor Name	Sensor No.	Residual Paper Area
0	0101	Delay Jam	TOP Sensor	PS2	When the sensor does not turn ON within a specified period of time.
0	0102		Fixing Delivery Sensor	PS13	
0	0103		Duplex Feed Sensor	PS21	
0	0201	Stationary Jam	TOP Sensor	PS3	When the sensor does not turn OFF within a specified period of time.
0	0202		Fixing Delivery Sensor	PS13	
0	0702	Wrapped around the Fixing Unit	Fixing Delivery Sensor	PS13	When the sensor turns OFF within a specified period of time.
0	0A01	power-on Jam	Paper Width Sensor	PS20	When detecting presence of paper at power-on or door close.
0	0A02		Fixing Delivery Sensor	PS13	
0	0A03		Duplex Feed Sensor	PS21	
0	0B00	Door open Jam	Door open	-	When the door open was detected during printing and feeding paper.
0	0CF1	Retry error	Error avoidance	-	When the 1st error to be retried is detected.
0	0CE0	Unknown	Unknown Jam	-	When the jam code is not fixed.

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

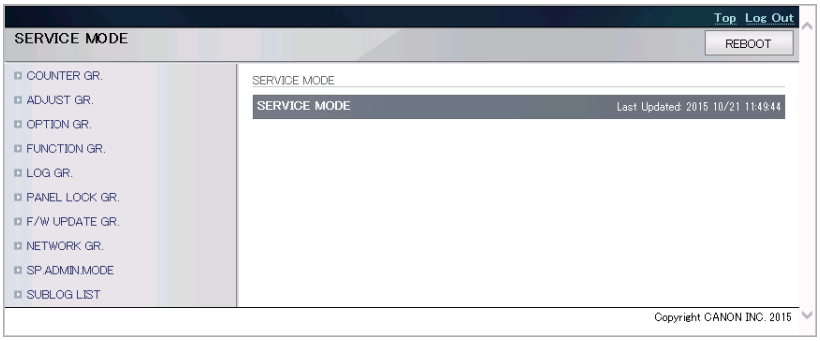
Restore

- 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

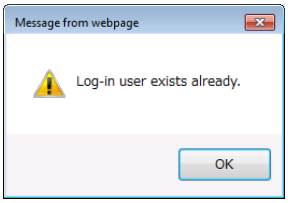
It is possible to display, configure, and execute various service mode modes as well as restart the host machine by using remote UI.



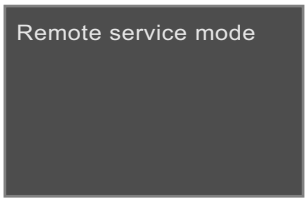
■ Operating conditions

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.



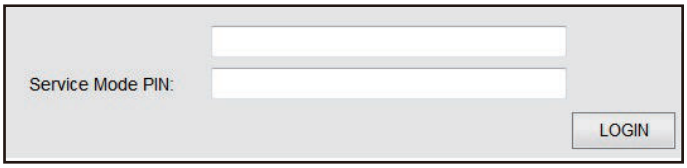
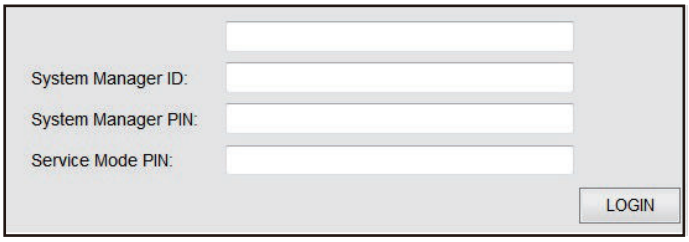
- When Remote UI is enabled in the setting on the Control Panel
  [Settings/Registration] > [System Settings] > [Remote UI Settings] > [Use Remote UI] > [ON]
- When the following setting (Remote UI service mode function) is enabled (setting value: 1) in service mode
  COPIER > OPTION > BODY > RMT-SW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

Service Mode Explanation

The detailed explanation of service mode is indicating the key operation (press the Apply key) for the 5-inch Touch Panel. Note that the key operation is (Press the OK key) for the 5-line LCD model that does not have the Apply key.

COPIER (Service mode for printer)

DISPLAY (State display mode)

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

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

■ USER

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

SPDTYPE	Display of engine speed type
Detail	To display the engine speed type (ppm) of this machine.
Use Case	When checking the engine speed type
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 99
Default Value	0

■ CCD

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

TARGETBW	Display of shading target value (B&W)
Detail	To display the shading target value at B&W jobs. Continuous display of 0 (minimum) or 2048 (maximum) is considered a failure of the Main Controller PCB.
Use Case	At scanned image failure
Adj/Set/Operate Method	N/A (Display only)
Display/Adj/Set Range	0 to 2048
Default Value	1072
Related Service Mode	COPIER > ADJUST > CCD > DFTAR-BW

ERR	Error code display screen
Detail	To display the error code and detail code of the system error.
Adj/Set/Operate Method	None (display only)
Supplement/Memo	Displays up to 20 items.

JAM	Jam code display screen
Detail	To display the location and type of jam.
Adj/Set/Operate Method	None (display only)
Supplement/Memo	Displays up to 20 items.

ALARM-2	Alarm code 2 display screen
Detail	To display the logs of ALARM-2.
Adj/Set/Operate Method	None (display only)
Supplement/Memo	Displays up to 20 items.

ALARM-3	Alarm code 3 display screen
Detail	To display the logs of ALARM-3
Adj/Set/Operate Method	None (display only)
Supplement/Memo	Displays up to 20 items.

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

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

TOUCHCHK	Adjustment of Touch Panel coordinate position
Detail	To adjust the coordinate position on the Touch Panel of the Control Panel. By making adjustment, the setting of TOUCH-R becomes 1.
Use Case	When replacing the LCD Panel
Adj/Set/Operate Method	1) Select the item, and then press Yes key. 2) Press the nine "+" keys in sequence.
Related Service Mode	COPIER > ADJUST > PANEL > TOUCH-R

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

TOUCH-R	Result of Touch Panel coordinate position adjustment
Detail	To set whether adjustment of the coordinate position on the Touch Panel of the Control Panel is completed. When adjustment with TOUCHCHK is completed, the setting of this item becomes 1.
Use Case	When replacing the LCD Panel
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0 to 1 0: Not completed 1: Completed
Default Value	0
Related Service Mode	COPIER > ADJUST > PANEL > TOUCHCHK

■ VIFADJ

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

DEV-HV-K	Adjustment of developing bias setting value (Bk)
Detail	To adjust the setting value of Bk-color developing bias.
Use Case	When an image failure occurs
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key), and then press Apply key.
Display/Adj/Set Range	-5 to 5
Default Value	0
Related Service Mode	COPIER > ADJUST > VIFADJ > DEV-HV-Y/M/C

FU-TMP	Adjustment of Fixing Film surface temperature setting value
Detail	To adjust the setting value of the surface temperature of the Fixing Film.
Use Case	When an image failure occurs
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key), and then press Apply key.
Display/Adj/Set Range	-2 to 2
Default Value	0

CRG-HV-K	Adjustment of primary charging bias setting value (Bk)
Detail	To adjust the setting value of Bk-color primary charging bias.
Use Case	When an image failure occurs
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key), and then press Apply key.
Display/Adj/Set Range	-5 to 5
Default Value	0

LS-PWR-K	Adjustment of laser light emission setting value (Bk)
Detail	To adjust the laser light emission setting value of Bk-color.
Use Case	When an image failure occurs
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

TR-HV	Adjustment of transfer bias setting value
Detail	To adjust the transfer bias setting value when ATVC control is executed.
Use Case	When an image failure occurs
Adj/Set/Operate Method	Enter the setting value (switch negative/positive by +/- key), and then press Apply key.
Display/Adj/Set Range	-5 to 5
Default Value	0

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
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 Remote Monitoring Server via SOAP protocol

RGW-PORT	Setting of Remote Monitoring Server port number when using Embedded-RDS
Detail	To set the port number of Remote Monitoring Server 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 Remote Monitoring Server via SOAP protocol

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 Remote Monitoring Server via SOAP protocol

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

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 Remote Monitoring Server via SOAP protocol

RGW-ADSW	Remote Monitoring Server connection destination settings for Embedded-RDS
Detail	To change the server URL that the Embedded-RDS uses.
Adj/Set/Operate Method	Enter the setting value, and then press OK key.
Caution	Com-TEST needs to be executed to reflect the settings.
Display/Adj/Set Range	1 to 2 1 : SHA2 2 : D1 Environment (for testing)
Default Value	1
Related Service Mode	COPIER > FUNCTION > INSTALL > COM-TEST
Supplement/Memo	Embedded-RDS: Function to send device information such as the device counter, failure, and consumables to Remote Monitoring Server via SOAP protocol

CDS-CTL	Set country/area when using CDS
Detail	To set country/area to enable CDS.
Use Case	When enabling CDS
Adj/Set/Operate Method	1) Select the item, and then press Apply key. 2) Turn OFF/ON the main power switch.
Caution	If the setting value is not configured to be the same as the country/region of the vice-company of sales, the necessary firmware may not be able to be downloaded.
Display/Adj/Set Range	0 to 9999 Japan: 392, USA: 840, Great Britain: 826, France: 250, Germany: 276, Italy: 380, Australia: 36, Singapore: 702, Netherlands: 528, Korea: 410, China: 156, Taiwan: 158, Spain: 724, Sweden: 752, Portugal: 620, Norway: 578, Denmark: 208, Finland: 246, Poland: 616, Hungary: 348, Czech Republic: 203, Slovenia: 705, Greece: 300, Estonia: 233, Russia: 643, Slovakia: 703, Romania: 642, Croatia: 191, Bulgaria: 100, Turkey: 792, Thailand: 764, Vietnam: 704, Argentina: 32, India: 356, Canada: 124, Hong Kong: 344, Ukraine: 804, Latin America: 1001
Default Value	It differs according to the location.
Supplement/Memo	If a country code that is not in the setting is input, it is set as a default destination.

CDS-CTLV	Display of input results of CDS-CTL
Detail	Display of input results of CDS-CTL
Adj/Set/Operate Method	Display only
Display/Adj/Set Range	JP: Japan, US: USA, GB: Great Britain, FR: France, DE: Germany, IT: Italy, AU: Australia, SG: Singapore, NL: Netherlands, KR: Korea, CN: China, TW: Taiwan, ES: Spain, SE: Sweden, PT: Portugal, NO: Norway, DK: Denmark, FI: Finland, PL: Poland, HU: Hungary, CZ: Czech Republic, SI: Slovenia, GR: Greece, EE: Estonia, RU: Russia, SK: Slovakia, RO: Romania, HR: Croatia, BG: Bulgaria, TR: Turkey, TH: Thailand, VN: Vietnam, AR: Argentina, IN: India, CA: Canada, LA: Latin America, HK: Hong Kong, UA: Ukraine
Default Value	It differs according to the location.

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

CDS-COMT	CDS communication test execution
Detail	To execute Content Delivery System communication test.
Use Case	When enabling CDS
Adj/Set/Operate Method	1) Select the item and then press Yes key. 2) Check the result from CDS-COM-RSLT.

CDS-COMR	COM-TEST execution result display
Detail	To display the execution result of CDS-COM-TEST by the simple display. The execution result is kept even when the main power is turned OFF/ON.
Use Case	When checking the execution result of Content Delivery System communication test
Adj/Set/Operate Method	Display only
Display/Adj/Set Range	OK, NG

RMS-RGKY	Setting the Device Registration Key
Detail	By setting this item in advance, the device registration key input screen can be skipped when selecting "Counter/Device Information > Monitoring Service".
Use Case	To reduce the number of UGW connection steps by entering the Device Registration Key for pre-installation.
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Caution	Dealer Tenant has a different Device Registration Key. If nothing is entered, the Device Registration Key entry screen is displayed.
Display/Adj/Set Range	Input character : 0 to 9 Number of input character : 8 or 16 digit number
Default Value	0
Supplement/Memo	Device Registration Key : 8 or 16 digit number

■ 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/DADF 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/DADF
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, Remote Monitoring Server 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 Remote Monitoring Server via SOAP protocol

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.
Related Service Mode	COPIER > FUNCTION > MISC-P > CRG-LOG

■ MISC-P

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.

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

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 Remote Monitoring Server via SOAP protocol

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

LOGWRITE	Writing debug log to USB flash drive
Detail	To write debuglog 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

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

IMPORT	**Read s-mode set VL from USB flash drive**
Detail	To read the service mode setting information (excluding those related to Reader/DADF) 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/DADF) 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
SAVE-SM	**Backup of service mode setting info**
Detail	To back up the service mode setting information (excluding those related to Reader/DADF, but including those related to Finisher) as a file to the USB flash drive using DCM function. The setting information which has been backed up can be restored with RSTR-SM.
Use Case	When saving the setting information before changing the service mode settings
Adj/Set/Operate Method	Select the item, and then press Yes key.
Related Service Mode	COPIER > FUNCTION > SYSTEM > RSTR-SM
Supplement/Memo	DCM (Device Configuration Management): A function to export/import the machine's setting information as a file.
RSTR-SM	**Restore of service mode setting info**
Detail	To restore the service mode setting information (excluding those related to Reader/DADF, but including those related to Finisher) which has been backed up with SAVE-SM from the USB flash drive using DCM function.
Use Case	When changing the service mode settings back to those before the change
Adj/Set/Operate Method	Select the item, and then press Yes key.
Caution	It is necessary to back up the setting information using SAVE-SM in order to restore the information with RSTR-SM.
Related Service Mode	COPIER > FUNCTION > SYSTEM > SAVE-SM
Supplement/Memo	DCM (Device Configuration Management): A function to export/import the machine's setting information as a file.
LOG2USB	**Writing of debug log to USB flash drive**
Detail	To write the debug log stored in the eMMC 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.
Use Case	When the debug log is no longer needed
Adj/Set/Operate Method	Select the item, and then press Yes key.

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

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

DWFHST-H	For R&D

DWFHST-L	For R&D

■ 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

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 2 0: 60 minutes 1: 240 minutes 2: 120 minutes
Default Value	0 (Europe model or machine of less than 30 ppm's print speed except for Europe model)/2 (Others)
Additional Functions Mode	Timer Settings> Auto Sleep Time

SPL27354	PC-less update/RMDS preferences
Detail	To set RMDS preferences of PC-less update.
Display/Adj/Set Range	0 to 5 0: Production environment/release environment 1: Product environment/staging environment 2: Maintenance environment 1/release environment 3: Maintenance environment 1/staging environment 4: Maintenance environment 2/release environment 5: Maintenance environment 2/staging environment
Default Value	0

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 Remote Monitoring Server via SOAP protocol

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

SPL37886	PC-less update: RMDS communication settings
Detail	Set whether to use HTTPS to communicate with the RMDS server. Communication with the GDLS server is not affected.
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: Do not use HTTPS. Use HTTP Communication. 1: Use HTTPS.
Default Value	1

SPL71700	Writing debug log to USB flash drive
Detail	To write the debug log stored in the eMMC to the USB flash drive.
Use Case	When analyzing the cause of a problem
Adj/Set/Operate Method	Select the item, and then press Yes key.

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	1
Related Service Mode	COPIER > OPTION > BODY > RMT-SW

SPL78148	ON/OFF of gradation characteristics compatible mode
Detail	To set whether to make the density gradation characteristics of halftone the same as those of conventional machines. When set to "0", respective characteristic changes as follows. Resolution Upward-convex Gradation Linier Color Tone Downward-convex
Use Case	When making the density gradation characteristics the same as those of conventional machines
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0 to 1 0: ON 1: OFF
Default Value	1

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.

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

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
SPL09876	**ON/OFF of Aladdin application debug log console function**
Detail	To set whether to enable the Aladdin application debug log console function.
Display/Adj/Set Range	0 to 9999
Default Value	0
SPL07041	**ON/OFF of remote shutdown with fax line**
Detail	To set whether to allow remote shut down when a FAX line is connected.
Display/Adj/Set Range	0/1 0: Do Not Allow 1: Allow
Default Value	1
Supplement/Memo	Supported by models with FAX only
SPL50444	**Select paper source for PCL5**
Detail	To select a paper source for PCL5..
Display/Adj/Set Range	0 to 3 0: HP compatible 1: Lexmark compatible 2: Zoran PCL compatible 3: Not used
Default Value	0
SPL98765	**Execution of disabling function of all Aladdin application**
Detail	To set whether to execute disabling function of all Aladdin applications.
Display/Adj/Set Range	0 to 99999999
Default Value	0
Supplement/Memo	Executed with entering the system administrator's password.
SPL05378	**Display/hide of uniFLOW Online Setup icon**
Detail	To set whether to display or hide the uniFLOW Online Setup icon
Display/Adj/Set Range	0 to 1 0: Hide 1: Display
Default Value	0 (except for Dealer model) 1 (Dealer model)
SPL81031	**ON/OFF of CDS update function**
Detail	To set whether to disable the CDS function.
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

■ VIFFNC

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

STOR-DCN	Backup of Engine Controller PCB NVRAM
Detail	To back up the setting information in NVRAM of the Engine Controller PCB to NVRAM of the Main Controller PCB.
Use Case	Before replacing the Engine Controller PCB
Adj/Set/Operate Method	Select the item, and then press OK key.
Caution	During operation, the setting information changes by manual or automatic adjustment. When backup data which has been left for a long period of time is restored, it is overwritten with the old setting information and the new information is deleted.
Related Service Mode	COPIER > FUNCTION > VIFFNC > RSTR-DCN

RSTR-DCN	Restoration of Engine Controller PCB NVRAM
Detail	To restore the setting information which has been backed up to NVRAM of the Main Controller PCB to the NVRAM of the Engine Controller PCB.
Use Case	After replacing the Engine Controller PCB
Adj/Set/Operate Method	1) Select the item, and then press OK key. 2) Turn OFF/ON the main power switch.
Caution	During operation, the setting information changes by manual or automatic adjustment. When backup data which has been left for a long period of time is restored, it is overwritten with the old setting information and the new information is deleted.
Related Service Mode	COPIER > FUNCTION > VIFFNC > STOR-DCN

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

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

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	Set of charge counter MIB scope range
Detail	To set the range of counter information that can be obtained as MIB (Management Information Base).
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: All charge counters are obtained 1: Only displayed counter* is obtained 2: All charge counters are not obtained * : Counter specified by COUNTER 1 to 6
Default Value	0
Related Service Mode	COPIER > OPTION > USER > COUNTER1 - 6
Supplement/Memo	Counter meter-installed models only

NS-CMD5	Restriction on use of CRAM-MD5 authentication method at SMTP authentication
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.

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

NS-PLN	**Restriction on use of plaintext authentication at SMTP authentication in unencrypted environment**
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	**Restriction on the use of LOGIN authentication at SMTP authentication**
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. 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.
Caution	When 1 is set, the shift to the sleep mode except the mode (that is the Energy saver mode) that the operation panel becomes off is prohibited. When the Auto Sleep time has passed, the mchine shift to the energy saver mode that the operation panel becomes off. The machine cannot prohibit the shift to the mode that the operation panel becomes off.
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 Time display
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
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.

CDS-UGW	Set to allow firmware update from Remote Monitoring Server
Detail	To set whether to permit update of the firmware from the Remote Monitoring Server. When "1: Enabled" is set, Updater accepts the operation from the Remote Monitoring Server in cooperation with CDS.
Use Case	When allowing update of the firmware from the Remote Monitoring Server
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 location.

CDS-FIRM	Set to allow firmware update by admin
Detail	To set whether to allow the user (administrator) to perform firmware update linked with CDS and collection of log files.
Use Case	When allowing the administrator to update the firmware
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Caution	Do not use it for purposes other than collecting log files. Be sure to return the value to 0 after use.
Display/Adj/Set Range	0 to 1 0: Disabled, 1: Enabled
Default Value	It differs according to the location.

CDS-LVUP	Set to allow CDS periodical update
Detail	To set whether to allow the user (administrator) to perform periodical update linked with CDS. When 1 is set, setting of periodical update can be made in via remote UI.
Use Case	When allowing the user/service technician to perform periodical update
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 periodical update 1: Enabled periodical update
Default Value	It differs according to the location.

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

CRG-PROC	**Setting of behavior at end of cartridge lifetime**
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 (B/W model) 1 (Color model) 2 (Dealer model)
CRGLF-K	**Setting of replacement reference values of Photosensitive Drum, Developing Assembly and Waste Toner (Bk)**
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	0.01
Default Value	100 Dealer model differs according to the model.
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	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: 1-sided 1: 2-sided
Default Value	1
EDB-ADSW	**Setting for using a test environment when constructing an automatic ordering system**
Detail	To set whether to use a test environment when constructing an automatic ordering system.
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 4 0: Field (product) environment 1: Environment to test external collaboration of the version before release 2: Environment to test collaboration of the same version as product environment 3: Environment to test collaboration of the same configuration and same version as product environment 4: Environment to test external collaboration of the data migration validation
Default Value	0
RMS-ADSW	**For R&D**

■ DSPLY-SW

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

CRGLW-LV	ON/OFF of cartridge preparation threshold value setting screen display
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	Output cartridge replacement log report
Detail	To output the cartridge replacement log in the form of a 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

GEN-CRG	ON/OFF of Canon Genuine Mode display
Detail	To set whether to display Canon Genuine Mode.
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0/1 0: Hide 1: Display
Default Value	1
Supplement/Memo	Enabled only for Cartridge model. Not supported by Dealer model.

RMT-CNCT	Sw mssg dspl on machine w/o Remote Monitoring Server connect
Detail	To set whether to display the message "Contact your service representative." to the customer who uses the machine without having Remote Monitoring Server connected.
Use Case	When switching to display or hide the message depending on whether Remote Monitoring Server is connected or not
Adj/Set/Operate Method	Enter the setting value, and then press OK key.
Caution	This applies only to the messages displayed in the event of a toner memory detection error. (Alarm code: 10-0091/-0092/-0093/-0094)
Display/Adj/Set Range	0/1 0: Hide 1: Display
Default Value	0

UFOS-DSP	Display/hide of uniFLOW Online Setup icon
Detail	To set whether to display or hide the uniFLOW Online Setup icon
Display/Adj/Set Range	0 to 1 0: Hide 1: Display
Default Value	0 (except for Dealer model) 1 (Dealer model)

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

TNR-WARN	Display/hide of toner warning
Detail	To set whether to display the toner warning on the Control Panel.
Display/Adj/Set Range	0/1 0: Hide 1: Display

RMS-SW	Display/Hide Monitoring Service Screen
Detail	Switch between screens to connect to the Monitoring Service (UGW).
Use Case	Switching connection method to UGW
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0 to 1 0: eRDS connection screen 1: Reserve
Default Value	0

RMS-BTN	Switching of whether or not to display Monitoring Service Button
Detail	Switching of whether or not to display Monitoring Service(UGW) Button on the Home screen
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0 to 1 0: Hide 1: Display
Default Value	It differs according to the model and location.

UI-VNC	ON/OFF of VNC (User Mode) screen display
Detail	Set whether to show or hide the VNC settings screen (user mode).
Display/Adj/Set Range	0 to 1 0: OFF 1: ON

■ IMG-MCON

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

REGM-SEL	Adjustment of fine density correction
Detail	To adjust density of fine lines and texts at 1200pdi. The larger the value, the darker the lines and texts become.
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

COUNTER1	Display of software counter 1
Detail	To display counter type for software counter 1 on the Counter Check screen.
Use Case	Upon user/dealer's request
Adj/Set/Operate Method	N/A (Display only)
Caution	Display only. No change is available.
Display/Adj/Set Range	0 to 999 0: No registration
Default Value	It differs according to the location.

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

COUNTER2	**Setting of software counter 2**
Detail	To set counter type for software counter 2 on the Counter Check screen.
Use Case	Upon user/dealer'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 999 0: No registration
Default Value	It differs according to the location.
COUNTER3	**Setting of software counter 3**
Detail	To set counter type for software counter 3 on the Counter Check screen.
Use Case	Upon user/dealer'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 999 0: No registration
Default Value	It differs according to the location.
COUNTER4	**Setting of software counter 4**
Detail	To set counter type for software counter 4 on the Counter Check screen.
Use Case	Upon user/dealer'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 999 0: No registration
Default Value	It differs according to the location.
COUNTER5	**Setting of software counter 5**
Detail	To set counter type for software counter 5 on the Counter Check screen.
Use Case	Upon user/dealer'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 999 0: No registration
Default Value	It differs according to the location.
COUNTER6	**Setting of software counter 6**
Detail	To set counter type for software counter 6 on the Counter Check screen.
Use Case	Upon user/dealer'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 999 0: No registration
Default Value	It differs according to the location.

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

CTCHKDSP	ON/OFF of charge counter list output
Detail	To set whether to print the charge counter in the system management data list.
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: ON, 1: OFF
Default Value	1
Additional Functions Mode	Output Report > Print List > System Manager Data List
Supplement/Memo	Counter meter-installed models only

TNRB-SW	ON/OFF of toner replacement counter display
Detail	To set whether to display the toner replacement counter on the Counter Check screen. When 1 is set, the user can check the toner replacement counter.
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 3 0: Hide 1: Display (Toner replacement counters in the 190s) 2 to 3: Not used
Default Value	0

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 4: Compatible with EFI at PS 2-sided delivery 8: strokeadjustment is enabled Any value other than those mentioned above: Not used
Default Value	0

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.

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

ACC-SLP	Set shift to sleep3: Card Reader connect
Detail	To set whether to shift to sleep mode 3 when the Card Reader is connected.
Adj/Set/Operate Method	Enter the setting value, and then press Apply key.
Display/Adj/Set Range	0 to 1 0: Not shifted 1: Shifted
Default Value	1

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.

TNRBEXGR	Toner mid-replacement warning screen switching.
Detail	To set whether to hold the operation when the Toner Container is prematurely replaced although it can still be used.
Use Case	When preventing from replacing the Toner Container prematurely
Adj/Set/Operate Method	1) Enter the setting value, and then press Apply key. 2) Turn OFF/ON the main power switch.
Caution	The message does not disappear unless the Toner Container is changed back to the one before the replacement. Be sure to get approval from the user by telling the above specifications before making the setting.
Display/Adj/Set Range	0/1 0: Hide 1: Display
Default Value	0

■ 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-TR

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

ST-BRDIM	Install state Display of BarDIMM function
Detail	To display installation state of Barcode Printing for PCL when disabling and then transferring the license.
Use Case	When checking whether Barcode Printing for PCL is installed
Adj/Set/Operate Method	1) Select ST-BRDIM. 2) Enter 0, and then press Apply key. When installation has been completed, the transfer license key is displayed under TR-BRDIM.
Default Value	According to the setting at shipment

TR-BRDIM	Transfer license key display of BarDIMM (outside Japan)
Detail	To display transfer license key to use Barcode Printing for PCL when disabling and then transferring the license.
Use Case	When replacing the device
Adj/Set/Operate Method	1) Select ST-BRDIM. 2) Enter 0, and then press Apply key. The transfer license key is displayed under TR-BRDIM.
Display/Adj/Set Range	24 digits

■ 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

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 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

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

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

2-SIDE	2-sided copy/print counter
Detail	To count up the number of 2-sided copies/prints when the copy/printout is delivered outside the machine/2-sided copy/printout is stacked. 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 time
Default Value	0

■ 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

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

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

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

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

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

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

PRINT (Print test mode)

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 1: Halftone 2: Solid black 3: Solid white 4: 17 gradations 5: Thin Horizontal Line Pattern 6: Pascal Correction Chart 7: Chart128
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 OK 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

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 engine F value
Detail	To adjust the test print engine F value. The larger the value, the darker the image becomes.
Use Case	At problem 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
Supplement/Memo	F value: Used as an index to indicate lens brightness.

MABK	Setting of toner thinning process
Detail	To set toner thinning process. The larger the value, the greater the toner thinning amount at test print becomes.
Use Case	When color displacement occurs during 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

PRINT (Print test mode)

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

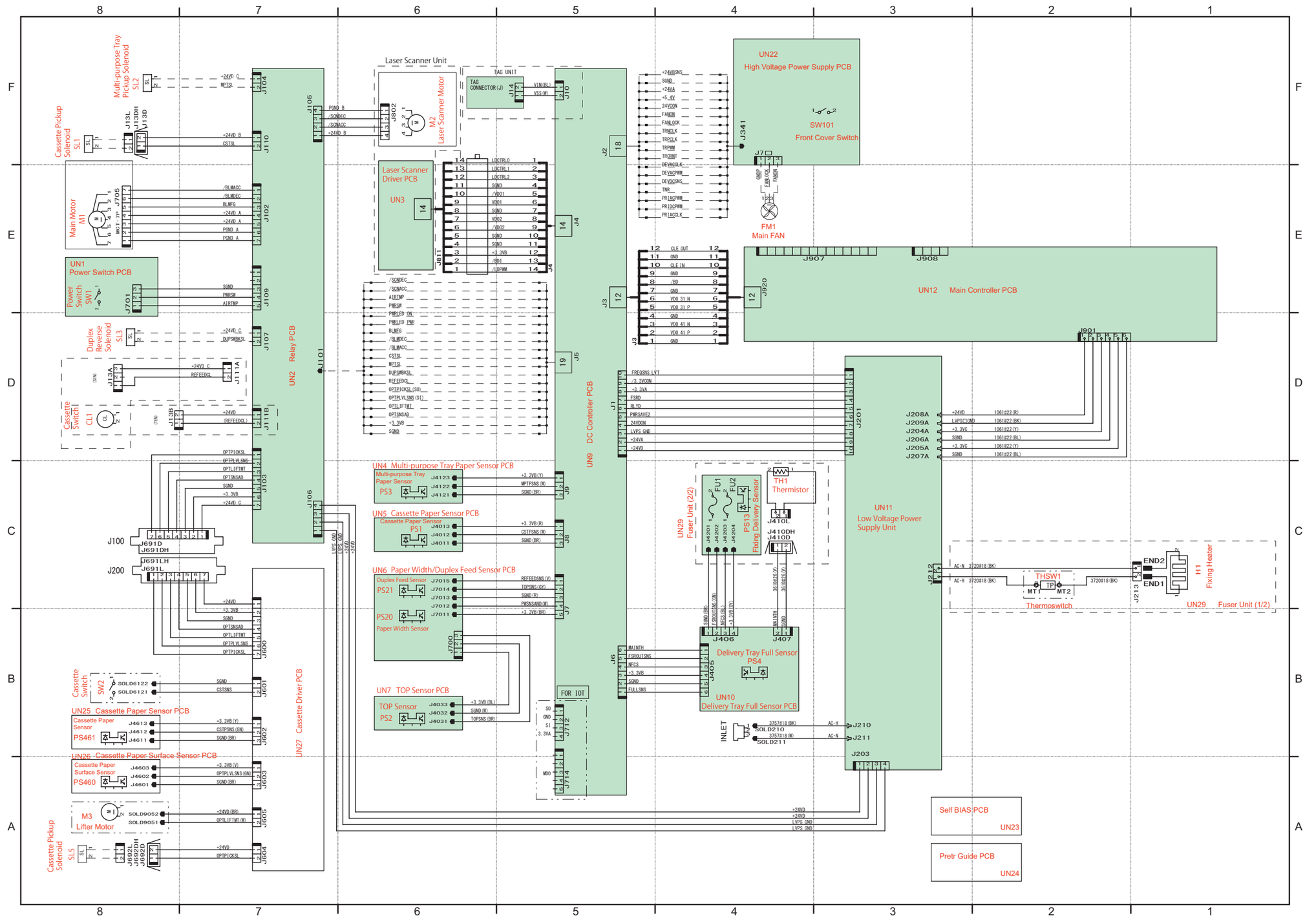
- No special tools are required when servicing the machine.

Solvents and Oil List

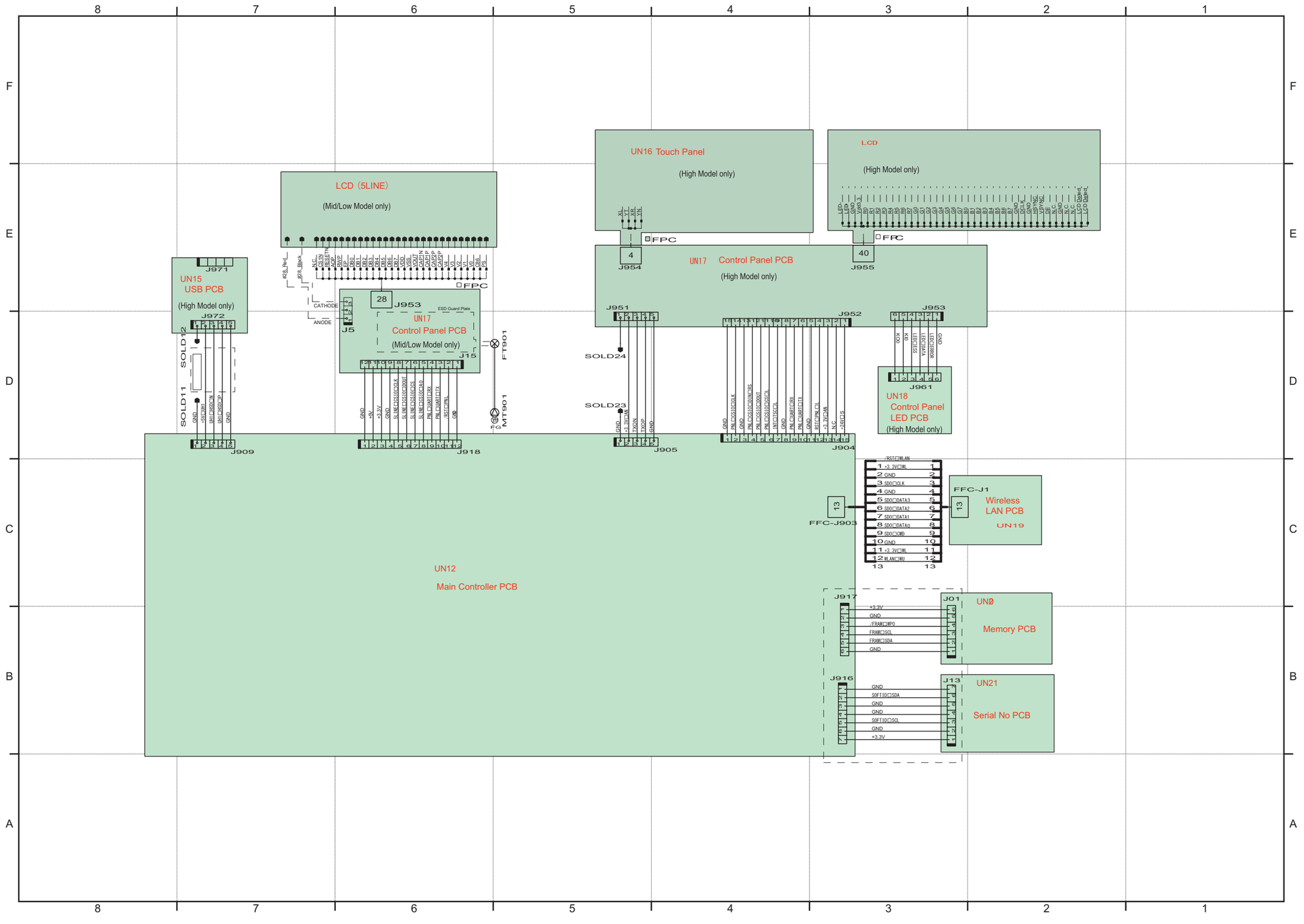
No.	Type	Purpose	Remark
1	Ethyl alcohol	• Cleaning: metal part, oil stains, toner stains	• Purchase locally • Keep away from flame

General Circuit Diagram

General Circuit Diagram (1/2)



General Circuit Diagram (2/2)



Backup Data List

Data	Location	Replace		Deletion															Backup by User			Backup by Service		
				Menu > Preferences	Menu > Management Settings					Service Mode														
					Network	Initialize All Data / Settings	Data Management			COPIER > FUNCTION > CLEAR								COPIER > FUNCTION > SPLMAN						
		DC Controller PCB	Main Controller PCB	Initialize Network Settings		Initialize Key and Certificate	Initialize Menu			SRVC-DAT*1	COUNTER	HIST *2	ALL	ERDS-DAT	PLPW-CLR	CRGL-CNT	SPL43810	Yes/No	Method	Location to be stored	Yes/No	Method	Location to be stored
							Preferences	Function Settings	Management Settings	Initialize All														
Menu																								
Preferences	Main Controller PCB	-	Clear	Clear*9	Clear	-	Clear*8	-	-	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	-	-
Management Settings	Main Controller PCB	-	Clear	-	Clear	-	-	-	Clear	Clear	-	-	-	Clear	-	-	-	-	Yes	Remote UI *5 LUI *6	PC, USB memory	No	-	-
Status Monitor																								
Job Log	Main Controller PCB	-	Clear	-	Clear	-	-	-	-	-	-	-	Clear	Clear	-	-	-	-	No	-	-	No	-	-
Counter																								
Part counter (Main Controller)	Main Controller PCB	-	Clear	-	Clear	Clear	-	-	-	-	-	Clear	-	-	-	-	-	-	No	-	-	No	-	-
Part counter (DC Controller)	DC Controller PCB	Clear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No	-	-	No	-	-
Replacement logs of non-genuine cartridge	Main Controller PCB	-	-	-	-	-	-	-	-	-	-	-	-	Clear	-	-	Clear	-	-	-	-	-	-	-
Other																								
Key and Certificate Settings	Main Controller PCB	-	Clear	-	Clear	-	-	-	-	-	-	-	-	Clear	-	-	-	-	No	-	-	No	-	-
E-RDS Settings*12	Main Controller PCB	-	-	-	-	-	-	-	-	-	-	-	-	Clear	Clear	-	-	-	-	-	-	-	-	-
Service mode																								

Data	Location	Replace		Deletion																Backup by User			Backup by Service		
				Menu > Preferences	Menu > Management Settings						Service Mode														
				Network	Initialize All Data / Settings	Data Management					COPIER > FUNCTION > CLEAR								COPIER > FUNCTION > SPLMAN						
		DC Controller PCB	Main Controller PCB	Initialize Network Settings		Initialize Key and Certificate	Initialize Menu				SRVC-DAT*1	COUNTER	HIST *2	ALL	ERDS-DAT	PLPW-CLR	CRGL-CNT	SPL43810	Yes/No	Method	Location to be stored	Yes/No	Method	Location to be stored
							Preferences	Function Settings	Management Settings	Initialize All														
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
Service mode setting values (DC Controller)	DC Controller PCB	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No	-	-	No	-	-

*1. Service data (Except "COPIER > COUNTER") is initialized.
*2. The logs(Communication management, Print, Jam, Error, Alarm) are cleared.
*4. COPIER > FUNCTION > SYSTEM > IMPORT / COPIER > FUNCTION > SYSTEM > EXPORT
*5. Settings/Registration >Management Settings >Data Management > Import/Export
*6. Settings Menu > 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)
*12. COPIER > FUNCTION > INSTALL > ERDS / COPIER > FUNCTION > INSTALL > RGW-PORT / COPIER > FUNCTION > INSTALL > COM-LOG

Soft counter specifications

The numbers entered for software counters are classified as follows:

No.	Counter Details	No.	Counter Details
100 to 199	Total	700 to 799	Receive Print
300 to 399	Print	800 to 899	Report Print
600 to 699	Memory Media Print		

100 to 199

No.	Counter Name	No.	Counter Name
101	Total 1	137	Total A (Black & White/Small)
102	Total 2	138	Total A1 (2-Sided)
104	Total (Small)	139	Total A2 (2-Sided)
108	Total (Black & White 1)	141	Small A (2-Sided)
109	Total (Black & White 2)	150	Total B1
113	Total (Black & White/Small)	151	Total B2
114	Total 1 (2-Sided)	153	Total B (Small)
115	Total 2 (2-Sided)	156	Total B (Black & White 1)
117	Small (2-Sided)	157	Total B (Black & White 2)
126	Total A1	161	Total B (Black & White/Small)
127	Total A2	162	Total B1 (2-Sided)
129	Total A (Small)	163	Total B2 (2-Sided)
132	Total A (Black & White 1)	165	Small B (2-Sided)
133	Total A (Black & White 2)	194	Cartridge Replacement (Black)

300 to 399

No.	Counter Name	No.	Counter Name
301	Print (Total 1)	330	Print (Black & White/Small/2-Sided)
302	Print (Total 2)	331	Printer Driver Print (Total 1)
304	Print (Small)	332	Printer Driver Print (Total 2)
305	Print A (Total 1)	334	Printer Driver Print (Small)
306	Print A (Total 2)	339	Printer Driver Print (Black & White 1)
308	Print A (Small)	340	Printer Driver Print (Black & White 2)
313	Print (Black & White 1)	346	Printer Driver Print (Black & White/Small)
314	Print (Black & White 2)	356	Printer Driver Print (Black & White/Small/2-Sided)
320	Print (Black & White/Small)		

600 to 699

No.	Counter Name	No.	Counter Name
631	Memory Media Print (Total 1)	640	Memory Media Print (Black & White 2)
632	Memory Media Print (Total 2)	646	Memory Media Print (Black & White/Small)
634	Memory Media Print (Small)	656	Memory Media Print (Black & White/Small/2-Sided)
639	Memory Media Print (Black & White 1)		

700 to 799

No.	Counter Name	No.	Counter Name
701	Receive Print (Total 1)	710	Receive Print (Black & White 2)
702	Receive Print (Total 2)	716	Receive Print (Black & White/Small)
704	Receive Print (Small)	726	Receive Print (Black & White/Small/2-Sided)
709	Receive Print (Black & White 1)		

800 to 899

No.	Counter Name	No.	Counter Name
801	Report Print (Total 1)	810	Report Print (Black & White 2)
802	Report Print (Total 2)	816	Report Print (Black & White/Small)
804	Report Print (Small)	826	Report Print (Black & White/Small/2-Sided)
809	Report Print (Black & White 1)		

List of Items Which Can Be Imported

The following shows items to be imported for this function.
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)

NOTE:
This list is the common list for this function.
Therefore, this list may contain some items that are not supported by this function.

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

1. FAX model only

Initial screen	Main item	Intermediate item	Sub item	Case A	Case B	Case C
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	-	-
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	-	-

*1. FAX model only

Initial screen	Main item	Intermediate item	Sub item	Case A	Case B	Case C
FAX	MENU	005		Yes *1	-	-
FAX	MENU	006		Yes *1	-	-
FAX	MENU	007		Yes *1	-	-
FAX	MENU	008		Yes *1	-	-
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	-	-

*1. FAX model only

Initial screen	Main item	Intermediate item	Sub item	Case A	Case B	Case C
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	-	-
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	-	-

*1. FAX model only

Initial screen	Main item	Intermediate item	Sub item	Case A	Case B	Case C
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	-	-
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	-	-

*1. FAX model only

Initial screen	Main item	Intermediate item	Sub item	Case A	Case B	Case C
FAX	NCU	SPECIALN	013	Yes *1	-	-
FAX	NCU	SPECIALN	014	Yes *1	-	-
FAX	NCU	SPECIALN	015	Yes *1	-	-
FAX	NCU	SPECIALN	016	Yes *1	-	-
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