

# Brother Color Laser Printer **SERVICE MANUAL**

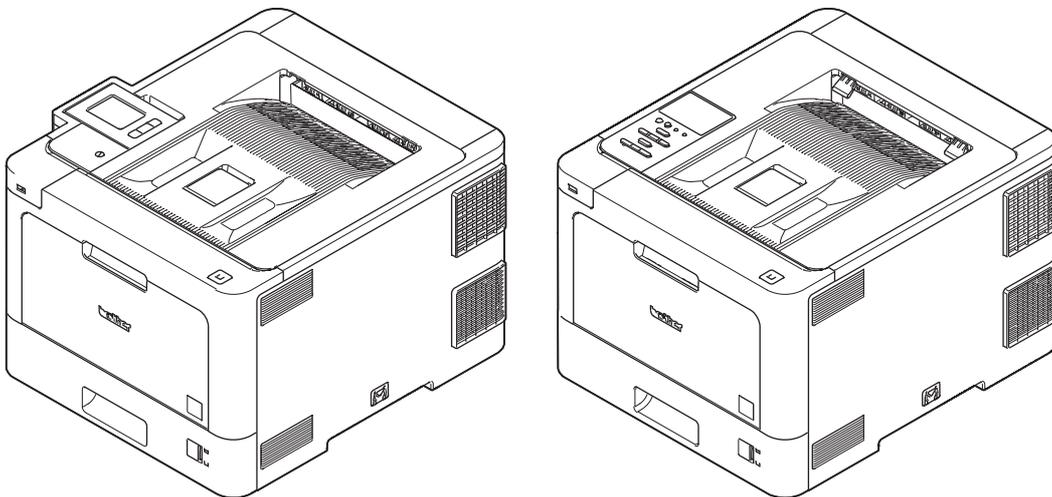
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## MODEL

**HL- L8260CDN/L8260CDW/  
L8360CDW/L8360CDWT/  
L9310CDW**

## OPTION

<b>LT : Lower Tray</b>	<b>LT-330CL/340CL</b>
<b>TC : Tower Tray Connector</b>	<b>TC-4000</b>
<b>TT : Tower Tray</b>	<b>TT-4000</b>



Read this manual thoroughly before maintenance work.  
Keep this manual in a convenient place for quick and easy reference at all times.

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**APPENDIX 1 SERIAL NUMBERING SYSTEM**

**APPENDIX 2 DELETING USER SETTING INFORMATION**

**APPENDIX 3 INSTALLING THE MAINTENANCE PRINTER DRIVER**

## SAFETY INFORMATION

### ■ Definitions of Warnings, Cautions, Notes and Memos

The following conventions are used in this manual:

#### **WARNING**

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injuries.

#### **CAUTION**

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injuries.

#### **IMPORTANT**

IMPORTANT indicates a potentially hazardous situation which, if not avoided, may result in damage to property or loss of product functionality.



Prohibition icons indicate actions that must not to be performed.



Electrical Hazard icons alert you to possible electrical shocks.



Fire hazard icons alert you to the possibility of a fire.



Hot Surface icons warn you not to touch product parts that are hot.

Note Specifies the operating environment, conditions for installation, or special conditions of use.

■ **To use the machine safely**

Please keep these instructions for later reference and read them before attempting any maintenance. If you do not follow these safety instructions, there is a possibility of a fire, electrical shock, burn or suffocation.

 **WARNING**

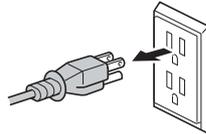
  **ELECTRICAL HAZARDS**

Failure to follow the warnings in this section may create the risk of an electrical shock. In addition, you could create an electrical short, which may create the risk of a fire.



There are high-voltage electrodes inside the product. Before you access the inside of the product, including for routine maintenance such as cleaning, make sure you have unplugged the power cord from the AC power outlet, as well as Ethernet/RJ-45 cables (Network models only) from the product.

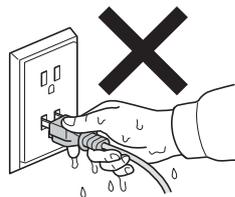
DO NOT push objects of any kind into this product through slots or openings in the product, as they may touch dangerous voltage points or short-out parts.



Unplug the power plug regularly to clean it. Use a dry cloth to clean the root of the plug blades and between the blades. If the power plug is plugged into the outlet over a long period, dust accumulates around the plug blades, which may cause a short circuit, resulting in a fire.



DO NOT handle the plug with wet hands. Doing this might cause an electrical shock.



Always make sure the plug is fully inserted. DO NOT use the product or handle the cord if the cord has become worn or frayed.



DO NOT allow this product to come into contact with water.



This product should be connected to an AC power source within the range indicated on the rating label. DO NOT connect it to a DC power source or inverter.



**Power Cord Safety:**

- This product is equipped with a 3-wire grounded plug. This plug will only fit into a grounded power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, call your electrician to replace your obsolete outlet. **DO NOT** attempt to defeat the purpose of the grounded plug.
- Only use the power cord supplied with this product.
- This product should be positioned so that nothing pinches or constricts the power cord.
- **DO NOT** allow anything to rest on the power cord.
- **DO NOT** place this product where people may step on the cord.
- **DO NOT** place this product in a position where the cord is stretched or strained, as it may become worn or frayed.
- Brother strongly recommends that you **DO NOT** use any type of extension cord.



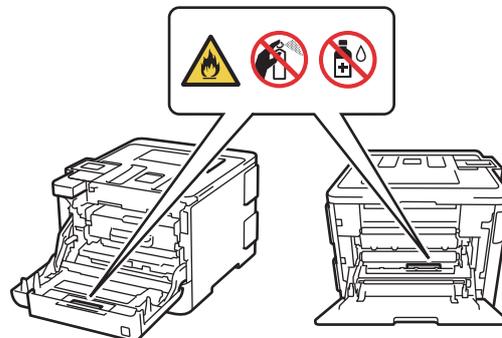
**DO NOT** use this product during a thunderstorm.



**DO NOT** put toner cartridges, a toner cartridge and drum unit assembly, or a waste toner box into a fire or places susceptible to fire. It could explode, resulting in injuries.



**DO NOT** use flammable substances, any type of spray, or an organic solvent/liquid containing alcohol or ammonia to clean the inside or outside of the product. Doing so could cause a fire or electrical shock. Instead, use only a dry, lint-free cloth.



**DO NOT** attempt to operate this product when a paper jam or stray pieces of paper are inside the product. Prolonged contact of the paper with the fuser unit could cause a fire.



DO NOT use a vacuum cleaner to clean up scattered toner. Doing this might cause the toner dust to ignite inside the vacuum cleaner, potentially starting a fire. Carefully clean the toner dust with a dry, lint-free soft cloth and dispose of it according to local regulations.



Unplug this product from the wall socket before cleaning the product and the scanner glass.  
DO NOT use liquid or aerosol cleaners. Use a dry, lint-free soft cloth for cleaning.

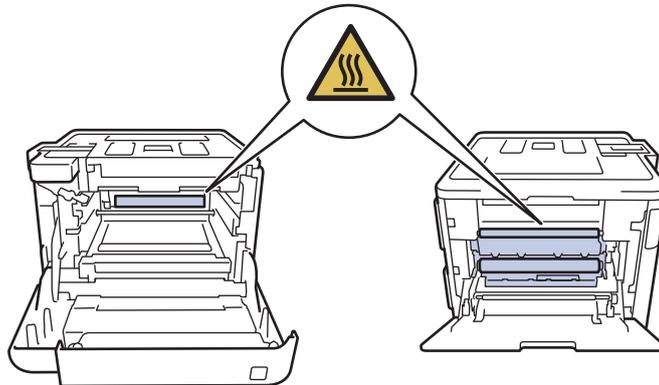


DO NOT place the following objects on the product.  
If these objects contact the electrical parts inside the product, it may cause a fire or electrical shock.

- Metal objects such as a clip or a staple
- Precious metals such as a necklace or a ring
- Containers holding water or liquid such as a glass, a flower vase, or a flower pot

### **HOT SURFACE**

Immediately after using the product, some internal parts of the product will be extremely hot.  
Wait at least 10 minutes for the product to cool down before you touch the internal parts of the product.



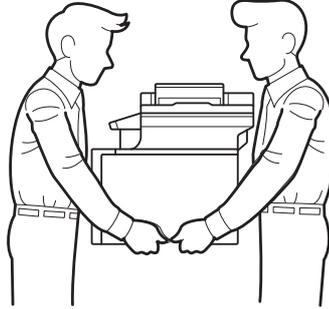
### **CAUTION**

**Machine weight: over 21 kg**  
**Tower tray weight: over 46 kg**

Be careful when carrying the machine or options for your safety.  
If the additional paper tray is used, carry it separately.

**CAUTION**

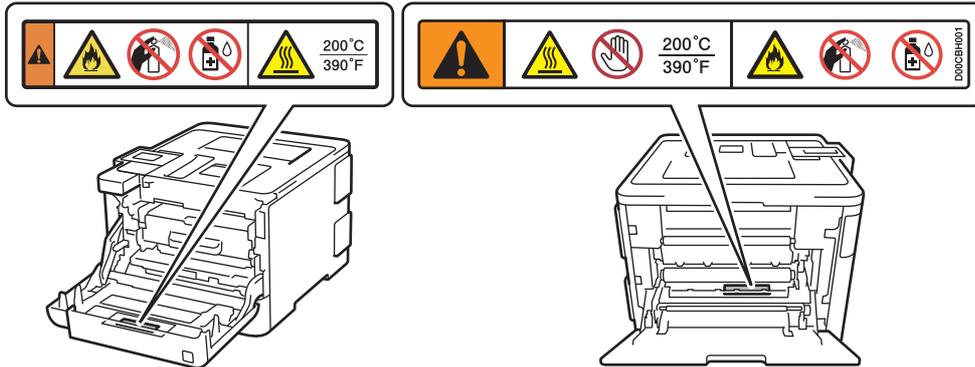
This product is heavy and weighs more than 47 lb. (21 kg) including paper. To prevent possible injuries at least two people should lift the product by holding it from the front and back.



If you use a Lower Tray, DO NOT carry the product with the Lower Tray, as you may be injured or cause damage to the product because it is not attached to the Lower Tray.

**IMPORTANT**

- DO NOT remove or damage any of the caution or warning labels inside the product.



- DO NOT put objects on top of the product. Doing so could increase the risk of overheating should the product malfunction.

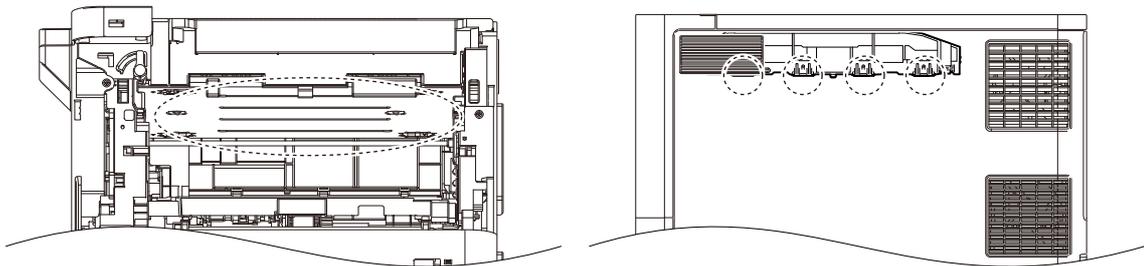
■ **Caution for Laser Product (WARNHINWEIS für Laser drucker)**

**CAUTION:** When the machine during servicing is operated with the cover open, the regulations of VBG 93 and the performance instructions for VBG 93 are valid.

**CAUTION:** In case of any trouble with the laser unit, replace the laser unit itself. To prevent direct exposure to the laser beam, do not try to open the enclosure of the laser unit.

**ACHTUNG:** Im Falle von Störungen der Lasereinheit muß diese ersetzt werden. Das Gehäuse der Lasereinheit darf nicht geöffnet werden, da sonst Laserstrahlen austreten können.

<Location of the laser beam window>



■ **Additional Information**

When servicing the optical system of the machine, be careful not to place a screwdriver or other reflective object in the path of the laser beam. Be sure to take off any personal accessories such as watches and rings before working on the machine. A reflected beam, though invisible, can permanently damage the eyes.

Since the beam is invisible, the following caution in print is attached on the laser unit.

In print



# CHAPTER 1 SUPPLEMENTAL SPECIFICATIONS

## 1. GENERAL

The function comparative table for models as described in this Service Manual are shown below.

Model	HL-L8260CDN	HL-L8260CDW	HL-L8360CDW	HL-L8360CDWT	HL-L9310CDW
Wired/ Wireless LAN	Wired	Wired/Wireless			
Duplex printing	✓				
LCD type	16 characters x 2 lines		Touch panel		
NFC	N/A		✓		
USB Host (front)	✓				
USB Host (rear)	N/A				✓
External IC Card Reader	N/A		✓		
Paper Input/ Standard Tray	250 sheets			250 sheets (T1) 520 sheets (T2)	250 sheets
LT Tray (Option)	250 sheets (LT-330CL) x 3 pcs or 500 sheets (LT-340CL) x 2 pcs or 250 sheets (LT-330CL) x 1 pcs + 500 sheets (LT-340CL) x 1 pcs (Max. 1,000 sheets) (except for China) 250 sheets (LT-330CL) x 3 pcs (Max. 750 sheets) (for China)	250 sheets (LT-330CL) x 3 pcs (Max. 750 sheets)	250 sheets (LT-330CL) x 3 pcs or 500 sheets (LT-340CL) x 2 pcs or 250 sheets (LT-330CL) x 1 pcs + 500 sheets (LT-340CL) x 1 pcs (Max. 1,000 sheets)	250 sheets (LT-330CL) x 1 pcs or 500 sheets (LT-340CL) x 1 pcs (Max. 500 sheets)	250 sheets (LT-330CL) x 3 pcs or 500 sheets (LT-340CL) x 2 pcs or 250 sheets (LT-330CL) x 1 pcs + 500 sheets (LT-340CL) x 1 pcs (Max. 1,000 sheets)
Option Tray - Tower Tray	N/A		✓		✓ (except for China) N/A (for China)

Specifications are subject to change without prior notice.

Model		HL-L8260CDN	HL-L8260CDW	HL-L8360CDW	HL-L8360CDWT	HL-L9310CDW
Warm-up time	From Sleep mode	Less than 29 sec. at 73.4F (23°C / 50%RH)				
	From Power OFF → ON	Less than 32 sec. at 73.4F (23°C / 50%RH)				
First print time	From Ready mode	Less than 15 secs (Mono/Color) at 73.4F (23°C)				
	From Sleep mode	Less than 35 secs (Mono/Color) at 73.4F (23°C)				
CPU		Main: 800MHz Sub: 133MHz				
Dimensions (W x D x H)	Carton size	617 x 533 x 521 mm (24.3 x 21.0 x 20.5 inch) (except for China)  642 x 603 x 578 mm (25.3 x 23.7 x 22.8 inch) (for China)	617 x 533 x 521 mm (24.3 x 21.0 x 20.5 inch)	617 x 558 x 521 mm (24.3 x 22.0 x 20.5 inch) (for the U.S.A. / Europe / Asia)  642 x 603 x 578 mm (25.3 x 23.7 x 22.8 inch) (for Latin America / Brazil / Gulf / Korea)	806 x 591 x 868 mm (31.7 x 23.3 x 34.2 inch)	642 x 603 x 578 mm (25.3 x 23.7 x 22.8 inch)
	Machine size	410 x 486 x 313 mm (16.1 x 19.1 x 12.3 inch)		441 x 486 x 313 mm (17.4 x 19.1 x 12.3 inch)	441 x 495 x 445 mm (17.4 x 19.5 x 17.5 inch)	441 x 486 x 313 mm (17.4 x 19.1 x 12.3 inch)
Weights	with Carton	25.8 kg / 56.9 lb (except for China) 26.5 kg / 58.3 lb (for China)	25.4 kg / 55.9 lb (except for Oceania) 25.4 kg / 56.0 lb (for Oceania)	25.9 kg / 57.1 lb (for Europe) 26.0 kg / 57.2 lb (for the U.S.A.) 26.3 kg / 58.1 lb (for Asia) 26.8 kg / 59.0 lb (for Brazil) 26.9 kg / 59.2 lb (for Latin America) 27.6 kg / 60.8 lb (for Gulf / Korea)	41.8 kg / 92.2 lb	26.8 kg / 59.0 lb (except for China) 26.6 kg / 58.5 lb (for China)
	without Carton with toner/drum	22.0 kg / 48.5 lb (except for China) 21.8 kg / 48.0 lb (for China)	21.7 kg / 47.9 lb (for the U.S.A.) 21.8 kg / 48.0 lb (except for the U.S.A.)	21.8 kg / 48.1 lb (for the U.S.A.) 21.9 kg / 48.2 lb (for the Europe) 22.1 kg / 48.7 lb (for Asia) 22.1 kg / 48.8 lb (for Brazil) 22.2 kg / 48.9 lb (for Latin America) 22.7 kg / 50.0 lb (for Gulf / Korea)	28.4 kg / 62.7 lb	22.2 kg / 48.9 lb (except for China) 21.9 kg / 48.2 lb (for China)
	without Carton and toner/drum	16.5 kg / 36.4 lb	16.5 kg / 36.4 lb	16.6 kg / 36.6 lb	23.2 kg / 51.1 lb	16.6 kg / 36.6 lb

Specifications are subject to change without prior notice.

■ **Option**

Model	LT		TC	TT
	LT-330CL (250 sheets)	LT-340CL (500 sheets)	TC-4000	TT-4000
Dimensions (W x D x H)	410 x 486 x 97 mm (16.1 x 19.1 x 3.8 inch)	410 x 486 x 133 mm (16.1 x 19.1 x 5.2 inch)	444 x 486 x 103 mm (17.5 x 19.1 x 4.1 inch)	660 x 660 x 717.4 mm (26.0 x 26.0 x 28.2 inch)
Weights	5.1 kg / 11.2 lb	6.6 kg / 14.6 lb	5.5 kg / 12.1 lb	46.6 kg / 102.7 lb 47.7 kg / 105.2 lb with AC cord

Specifications are subject to change without prior notice.

# 2. NETWORK CONNECTIVITY

Model		HL-L8260CDN	HL-L8260CDW	HL-L8360CDW	HL-L8360CDWT	HL-L9310CDW
Wired network	Network node type	NC-9200h				
Wireless network	Network node type	N/A	NC-8700w			

Specifications are subject to change without prior notice.

### 3. SERVICE INFORMATION

Model		HL-L8260CDN	HL-L8260CDW	HL-L8360CDW	HL-L8360CDWT	HL-L9310CDW
Machine life		200,000 pages (A4/LTR) or 5 years				
MTBF		4,000 hours				
MTTR		0.5 hours				
Maximum monthly volume		Up to 40,000 pages		Up to 60,000 pages		Up to 800,000 pages
Periodical maintenance parts <sup>*1</sup>	Fuser Unit	Up to 100,000 pages				
	Laser Unit	Up to 100,000 pages				
	PF kit 1	Up to 100,000 pages				
	PF kit 2	Up to 100,000 pages				
	PF kit 3	Up to 100,000 pages				
	PF kit 4	Up to 100,000 pages				
	PF kit 5	N/A		Up to 100,000 pages		Up to 100,000 pages (except for China)
						N/A (for China)
	PF kit MP	Up to 50,000 pages				

<sup>\*1</sup> As for replacement of the periodical maintenance parts, refer to "PERIODICAL MAINTENANCE" in Chapter 7.

Specifications are subject to change without prior notice.

## 4. SUPPLIES

Model		HL-L8260CDN	HL-L8260CDW	HL-L8360CDW	HL-L8360CDWT	HL-L9310CDW	
Toner cartridge	Starter Toner *1	Black	Approx. 3,000 pages	Approx. 3,000 pages	Approx. 3,000 pages (for the U.S.A. / Europe / Asia) Approx. 6,500 pages (for Latin America / Gulf / Korea)	Approx. 3,000 pages	Approx. 6,500 pages (except for China) Approx. 3,000 pages (for China)
		Cyan, Magenta, Yellow	Approx. 1,800 pages	Approx. 1,800 pages	Approx. 1,800 pages (except for Latin America) Approx. 6,500 pages (for Latin America)	Approx. 1,800 pages	Approx. 6,500 pages (except for China) Approx. 1,800 pages (for China)
Standard Toner	Black	Black	Approx. 3,000 pages	Approx. 3,000 pages	Approx. 3,000 pages	Approx. 3,000 pages	N/A (except for China) Approx. 3,000 pages (for China)
		Cyan, Magenta, Yellow	Approx. 1,800 pages	Approx. 1,800 pages	Approx. 1,800 pages	Approx. 1,800 pages	N/A (except for China) Approx. 1,800 pages (for China)
High Capacity Toner	Black	N/A	N/A	Approx. 4,500 pages (except for Europe) Approx. 6,500 pages (for Europe) N/A (for Asia)	Approx. 4,500 pages (for the U.S.A. / Latin America) Approx. 6,500 pages (for Europe) N/A (for Asia)	Approx. 4,500 pages	N/A
		Cyan, Magenta, Yellow	N/A	Approx. 4,000 pages	Approx. 4,000 pages (except for Asia) N/A (for Asia)	Approx. 4,000 pages	N/A
Super High Capacity Toner	Black	Black	Approx. 6,500 pages	N/A	Approx. 6,500 pages (except for Europe) Approx. 9,000 pages (for Europe)	Approx. 6,500 pages	Approx. 6,500 pages (except for Europe) N/A (for Europe)
		Cyan, Magenta, Yellow	Approx. 6,500 pages	N/A	Approx. 6,500 pages	Approx. 6,500 pages	Approx. 6,500 pages (except for Europe) N/A (for Europe)
Ultra High Capacity Toner	Black	Black	Approx. 9,000 pages (except for China) N/A (for China)	N/A	Approx. 9,000 pages (for Latin America / Asia) N/A (for the U.S.A. / Europe)	N/A	Approx. 9,000 pages (except for China) N/A (for China)
		Cyan, Magenta, Yellow	Approx. 9,000 pages (except for China) N/A (for China)	N/A	Approx. 9,000 pages (for Latin America / Asia) N/A (for the U.S.A. / Europe)	N/A	Approx. 9,000 pages (except for China) N/A (for China)
	Cyan, Magenta, Yellow	Black	Approx. 9,000 pages (except for China) N/A (for China)	N/A	Approx. 9,000 pages (for Latin America / Asia) N/A (for the U.S.A. / Europe)	N/A	Approx. 9,000 pages (except for China) N/A (for China)
		Cyan, Magenta, Yellow	Approx. 9,000 pages (except for China) N/A (for China)	N/A	Approx. 9,000 pages (for Latin America / Asia) N/A (for the U.S.A. / Europe)	N/A	Approx. 9,000 pages (except for China) N/A (for China)

Model	HL-L8260CDN	HL-L8260CDW	HL-L8360CDW	HL-L8360CDWT	HL-L9310CDW
When printing A4/Letter size one-sided pages in accordance with ISO/IEC 19798 Shelf life: 2 years without opening.					
Drum unit	Life expectancy: Approx. 30,000 pages (1 page/job) Approx. 50,000 pages (3 page/job) The life expectancy varies according to the use condition. Shelf life: 2 years				
The shelf life of toner cartridge and drum unit is guaranteed under the normal condition as below; (Temperature) Normal condition: 0 to 40°C * Storage condition at the temperature of 40 to 50°C: Up to 5 days * Storage condition at the temperature of -20 to 0°C: Up to 5 days (Humidity) Normal condition: 35 to 85%RH (without condensation) * Storage condition at the humidity of 85 to 95%RH: Up to 5 days (without condensation) * Storage condition at the humidity of 10 to 35%RH: Up to 5 days (without condensation)					
Belt unit	Approx. 50,000 pages (1 page/job) Approx. 130,000 pages (3 page/job) The life expectancy varies according to the use condition.				
Waste toner box	Approx. 50,000 pages				

\*1 Toner supplied with the machine.

Specifications are subject to change without prior notice.

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# CHAPTER 2 ERROR INDICATION AND TROUBLESHOOTING

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## 1. INTRODUCTION

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Troubleshooting is the countermeasure procedures that the service personnel should follow if an error or malfunction occurs with the machine. It is impossible to anticipate all of the possible troubles which may occur in future and determine the troubleshooting procedures, so this chapter covers some sample troubles. However, those samples will help the service personnel pinpoint and repair other defective elements.

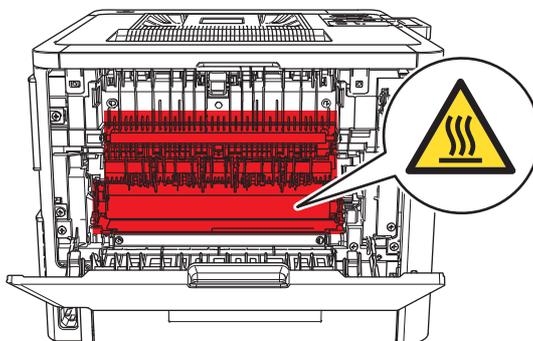
### 1.1 Precautions

Be sure to observe and follow all the precautions to prevent any secondary problems from happening during troubleshooting.

- (1) Always turn OFF the power and unplug the power cable before removing any covers or PCBs, adjusting the machine and so on. If you need to take voltage measurements with the power switched on, take the greatest of care not to receive an electric shock.
- (2) When connecting or disconnecting cable connectors, make sure that you hold the connector body and not the cables.
- (3) Static electricity charged in your body may damage electronic parts. Before handling the PCBs, touch a metal portion of the machine to discharge static electricity charged in your body. When transporting PCBs, be sure to wrap them in conductive sheets. When replacing the PCBs, put on a grounding wrist band and perform the job on a antistatic mat. Also take care not to touch the conductor sections on the flat cables.
- (4) Follow the warning by all means.

 **WARNING**

Hazard labels as shown below are attached to the machine. Fully understand the descriptions on the hazard labels and observe them during troubleshooting. Take extreme care not to remove or damage the hazard labels.



 **WARNING**

**DO NOT** use any flammable spray or flammable solvent such as alcohol, benzene, or thinner in or around the machine. Otherwise a fire or electric shock may result.



- (5) Check again that the portions and parts repaired or removed during the repair work function properly when the repair is completed.

A certain interface or function could be set to invalid to serve the needs of customers. Ask sales representative if this is the case before performing the check.

## 1.2 Checks before Commencing Troubleshooting

Check the following items before attempting to repair the machine.

### ■ Operating environment

- (1) The machine is placed on a flat, stable surface.
- (2) The machine is used in a clean environment where the temperature is between 10 °C (50 °F) and 32.5 °C (90.5 °F) and the relative humidity is maintained between 20 % and 80 %.
- (3) Ensure the machine is not exposed to direct sunlight, excessive heat, moisture, or dust.
- (4) Keep the machine horizontal when you carry it. To prevent injuries when moving or lifting this machine, make sure to use at least two people.

### ■ Power supply

- (1) The AC input power supply described on the rating plate of the machine should be within  $\pm 10$  % of the rated voltage.
- (2) The AC input power supply is within the regulated value.
- (3) The cables and harnesses are connected correctly.
- (4) The fuses are not blown.

### ■ Paper

- (1) A recommended type of paper is being used.
- (2) The paper is not damp.
- (3) The paper is not short-grained paper or acid paper.

### ■ Consumable parts

- (1) The drum unit (including the toner cartridge) is installed correctly.
- (2) The belt unit and waste toner box are installed correctly.

### ■ Others

- (1) Condensation

When the machine is moved from a cold place into a warm room, condensation may occur inside the machine, causing various problems as listed below.

- Condensation on the surface of optical devices such as the scanner windows, lens, reflecting mirror, and protection glass, etc., may cause light print image.
- If the exposure drum is cold, the electrical resistance of the photosensitive layer is increased, making it impossible to obtain the correct contrast when printing.
- Condensation on the charge unit may cause corona charge leakage.
- Condensation on the plate and separation pad may cause paper feed problems.

If condensation has occurred, leave the machine for at least two hours to allow it to reach room temperature.

- (2) Low temperature

The motor may not drive normally under the low temperature environment. This is due to there being too much load to drive each unit. In this case, increase the room temperature.

## ■ Cleaning

Use a soft dry lint-free cloth.



### **WARNING**

**DO NOT** use any flammable spray or flammable solvent such as alcohol, benzene, or thinner to clean the machine. **DO NOT** use these articles near the machine.



## 2. OVERVIEW

### 2.1 Cross-section Drawing

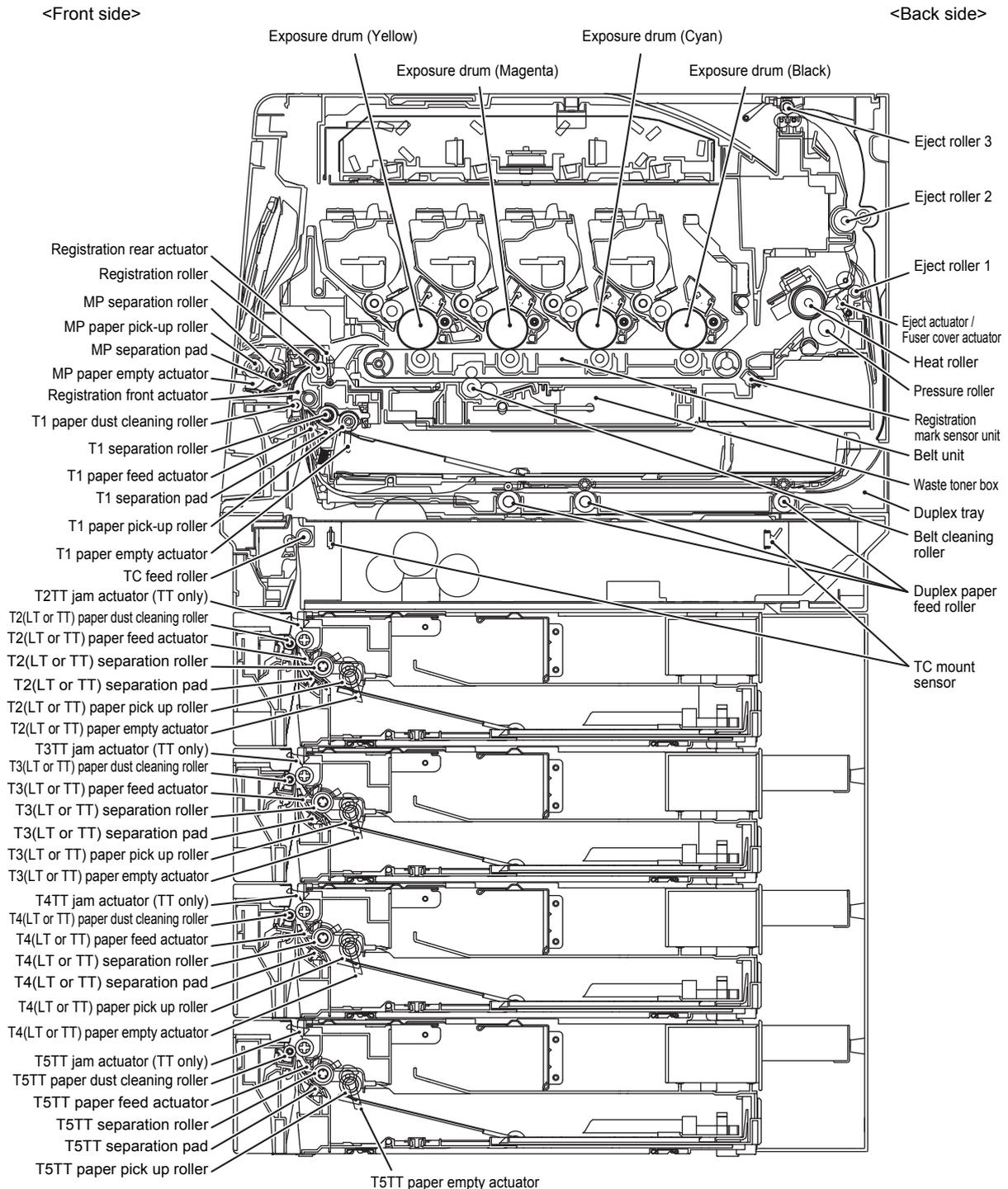


Fig. 2-1

# 2.2 Paper Feeding

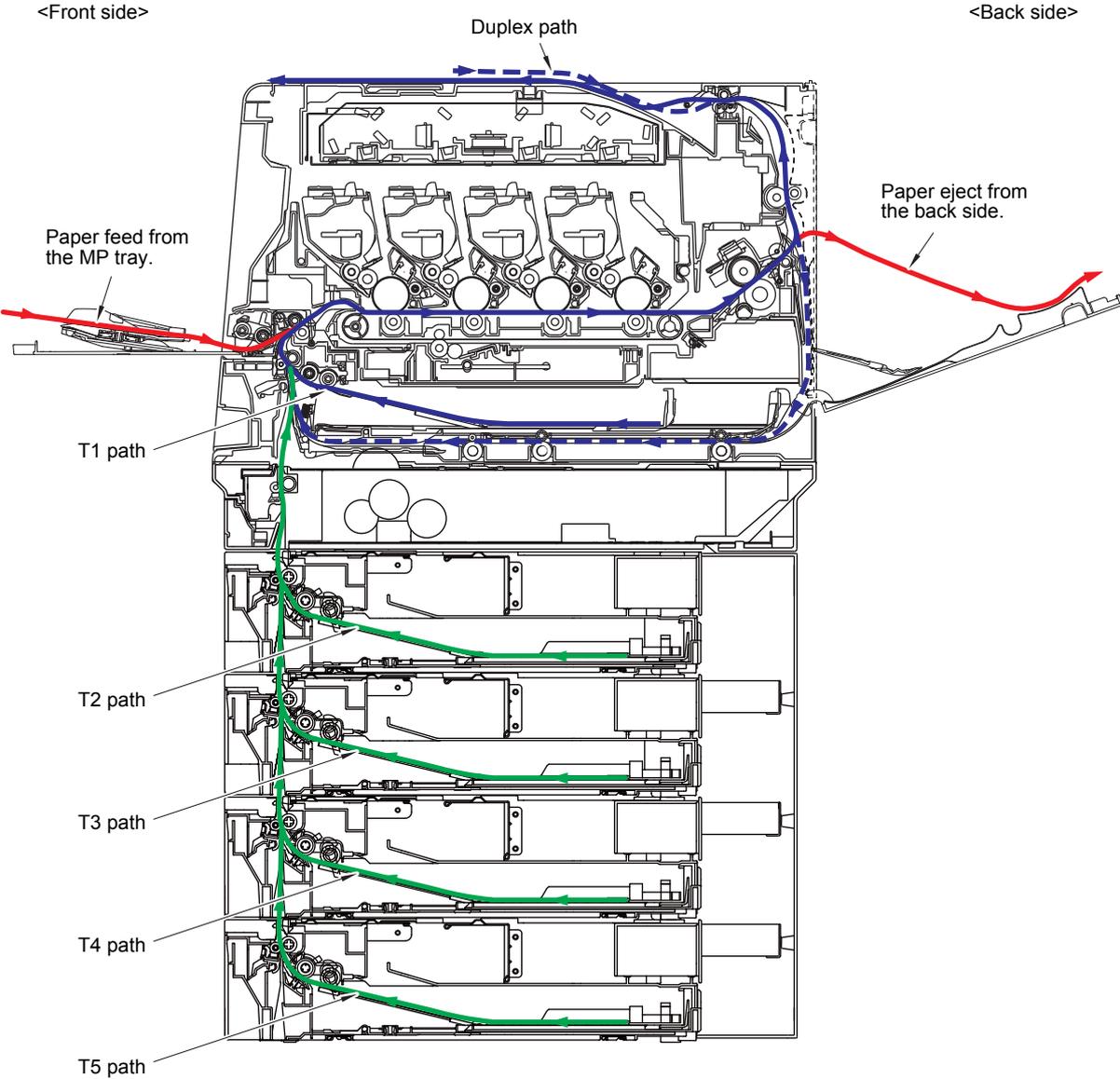


Fig. 2-2

## 2.3 Operation of Each Part and Location of Parts

Part name	Operation
Separation roller, Separation pad	Separates paper fed from the paper tray into single sheets.
Paper feed actuator (Paper feed sensor)	Detects paper trays (open / closed). Detects paper jams in paper trays. Determines whether paper is fed from the paper tray.
TT jam actuator (TT jam sensor)	Detects paper jams in the front section of the tray. (TT only)
TC mount sensor 1/2/3/4	Detects if the machine and the TC-4000 are mounted properly.
TT balance sensor L/R	The machine has the sensor but it does not operate.
Registration front actuator (Registration front sensor)	Detects the front edge of the paper to control the registration roller drive. Detects paper jams in the front section of the machine. Determines whether paper is fed from the paper tray.
Registration roller	Corrects the paper alignment when the paper makes contact with the stopped registration roller. After the correction, it rotates to feed the paper to the belt unit.
Registration rear actuator (Registration rear sensor)	Detects paper pass and adjusts the writing start position for the paper. Detects paper jams in the front or center section of the machine. Detects the rear edge of the paper to determine the paper size.
Belt unit	Feed the paper to the drum unit and transfer toner on the paper.
Heat roller, Pressure roller	Fuses the toner transferred to paper by heat and pressure, and feeds paper to the eject roller 1.
Eject actuator (Eject sensor)/ Fuser cover actuator (Fuser cover sensor)	Detect whether or not paper is ejected from the fuser unit. In the case of the 2-sided printing, detect the rear edge of paper and adjust the timing of the eject roller 2 and 3 switching. Detects paper jam in the rear section of the machine. Detects open fuser cover.
Eject roller 1	Feeds the paper ejected from the fuser unit to eject roller 2.
Eject roller 2	Feed the paper to the eject roller 3. In the case of the 2-sided printing, after the front of the sheet is printed and the paper is fed to the eject roller 3 up to a certain point, the eject roller 2 rotates conversely and feeds the paper fed from the eject roller 3 to the duplex tray.
Eject roller 3	Eject the paper to the face-down output tray. In the case of the 2-sided printing, after the front of the sheet is printed and the paper is fed up to a certain point, eject roller 3 rotates conversely, and the paper is fed to the eject roller 2.
Duplex paper feed roller	Feeds the paper passing through the duplex tray to the registration roller
Belt cleaning roller	Feeds the collected waste toner to the belt unit.
Front cover sensor	Detects open / closed front cover.
MP paper pick-up roller	Feeds paper from the MP tray to the MP separation roller.

Part name	Operation
MP separation roller, MP separation pad	Separates the paper fed from the MP tray into single sheets.
MP paper empty actuator (MP paper empty sensor)	Detects the paper in the MP tray. Detects paper jams in the MP tray.
MP registration front actuator (MP registration front sensor)	Detects paper jams in MP part.
Paper eject origin sensor	Detects the eject/reverse position state of the gear of the paper eject ASSY.
Back cover sensor	Detects open / closed back cover.
Registration mark sensor L/R	Check a phase of each color.
Develop release sensor	Detects the develop roller is separated from the exposure drum.
New toner sensor x4	When exchange to the new toner cartridge, detects the kinds of toner and add 1 to the reset of the developing bias and to the exchange count.
Toner sensor x4	Detects the toner cartridge is set.
Waste toner sensor	Detects a certain amount of waste toner in the Waste toner box.
External temperature/humidity sensor	Detects external temperature and humidity around the machine.
Pickup clutch	Drives the Pick up roller at the timing of paper feeding.
Registration clutch	Controls the activation of the Registration roller for the paper alignment adjustment.
Develop release clutch	Controls the disengagement of the Develop roller (all colors).
Develop release clutch K	Controls the rotation of the Develop roller.
MP solenoid	Presses the MP paper pick-up roller against the paper when feeding from the MP tray.
Switch back solenoid	Reverses the Eject roller 2/3 when duplex printing.
TC feed roller	Feeds paper in the TC-4000 from the TT to the machine by a driving force of the machine.
TC drive transmit clutch	Makes rotate the roller by transmitting the power from the machine to the TC feed roller while feeding paper. In other times, the power transmission is cut-off and the roller is freely rotatable so that the paper can be easily removed when a paper jam occurs.

## ■ Location of sensors and clutches

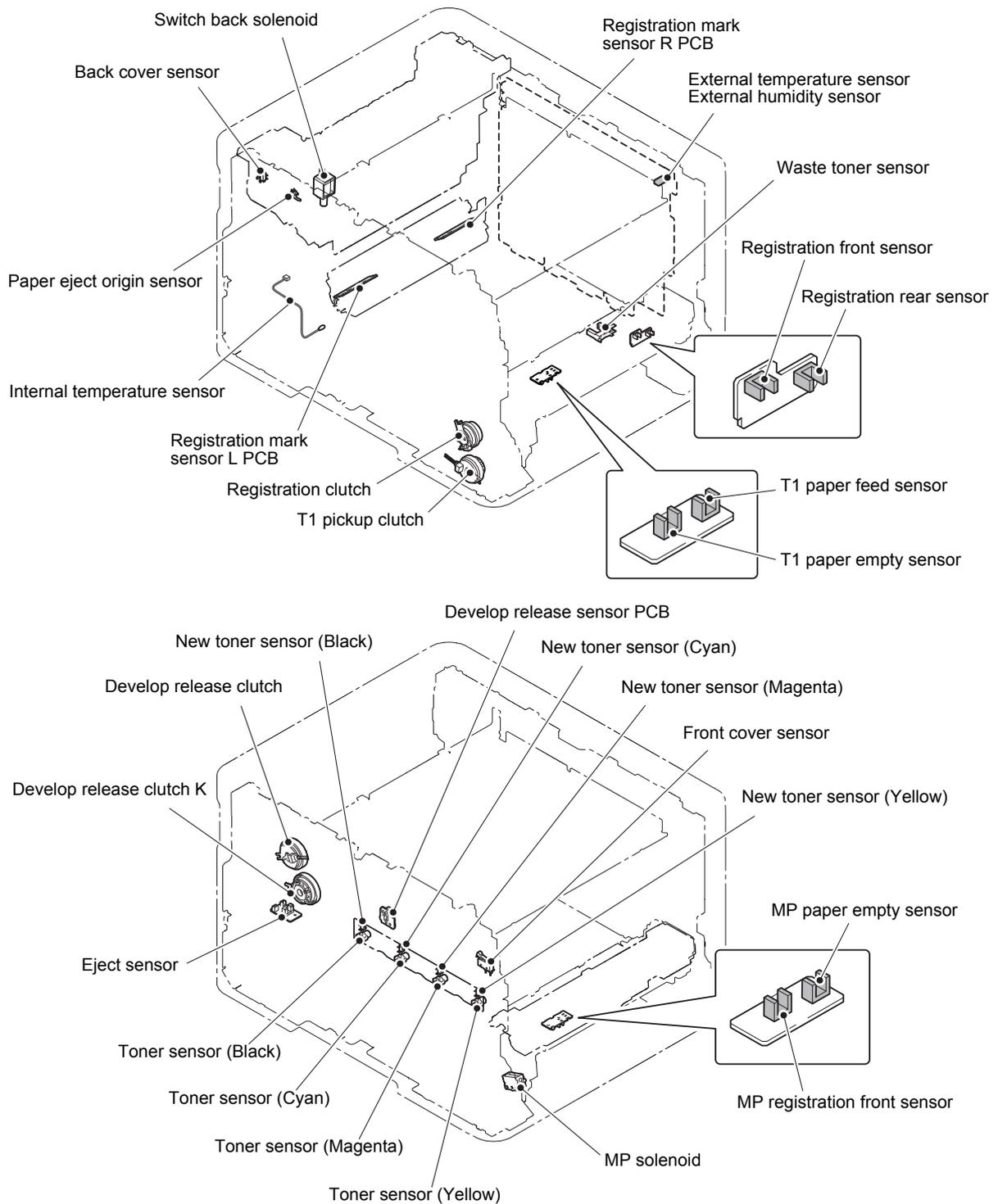
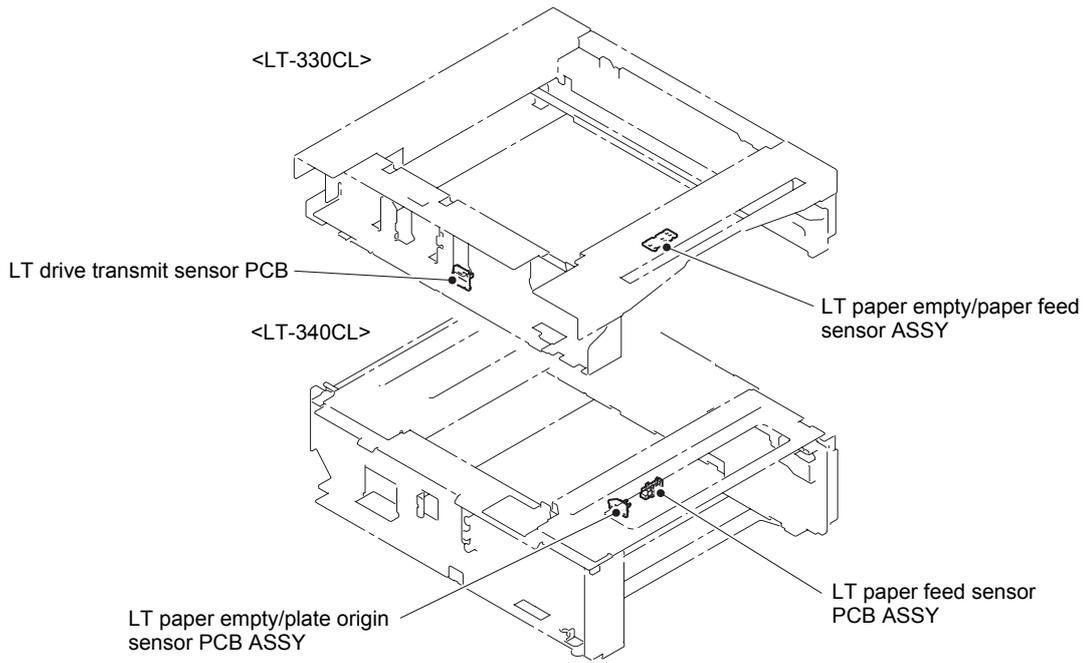
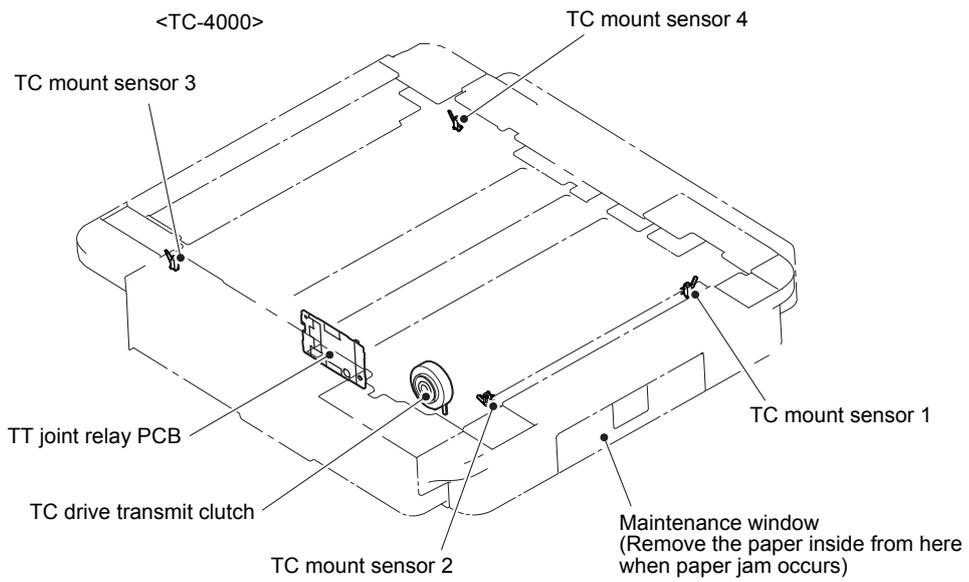


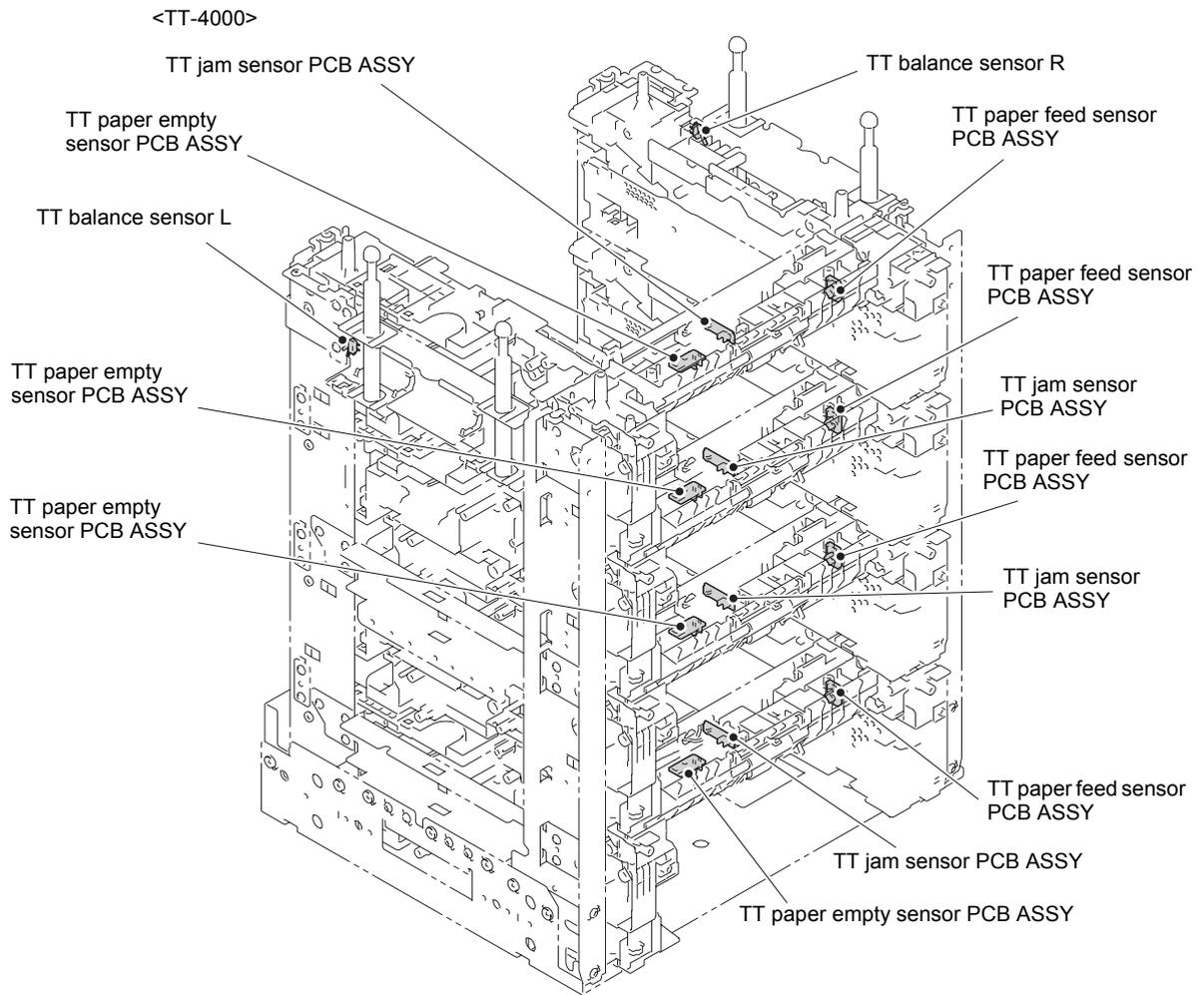
Fig. 2-3



**Fig. 2-4**



**Fig. 2-5**



**Fig. 2-6**

## 2.4 Block Diagram

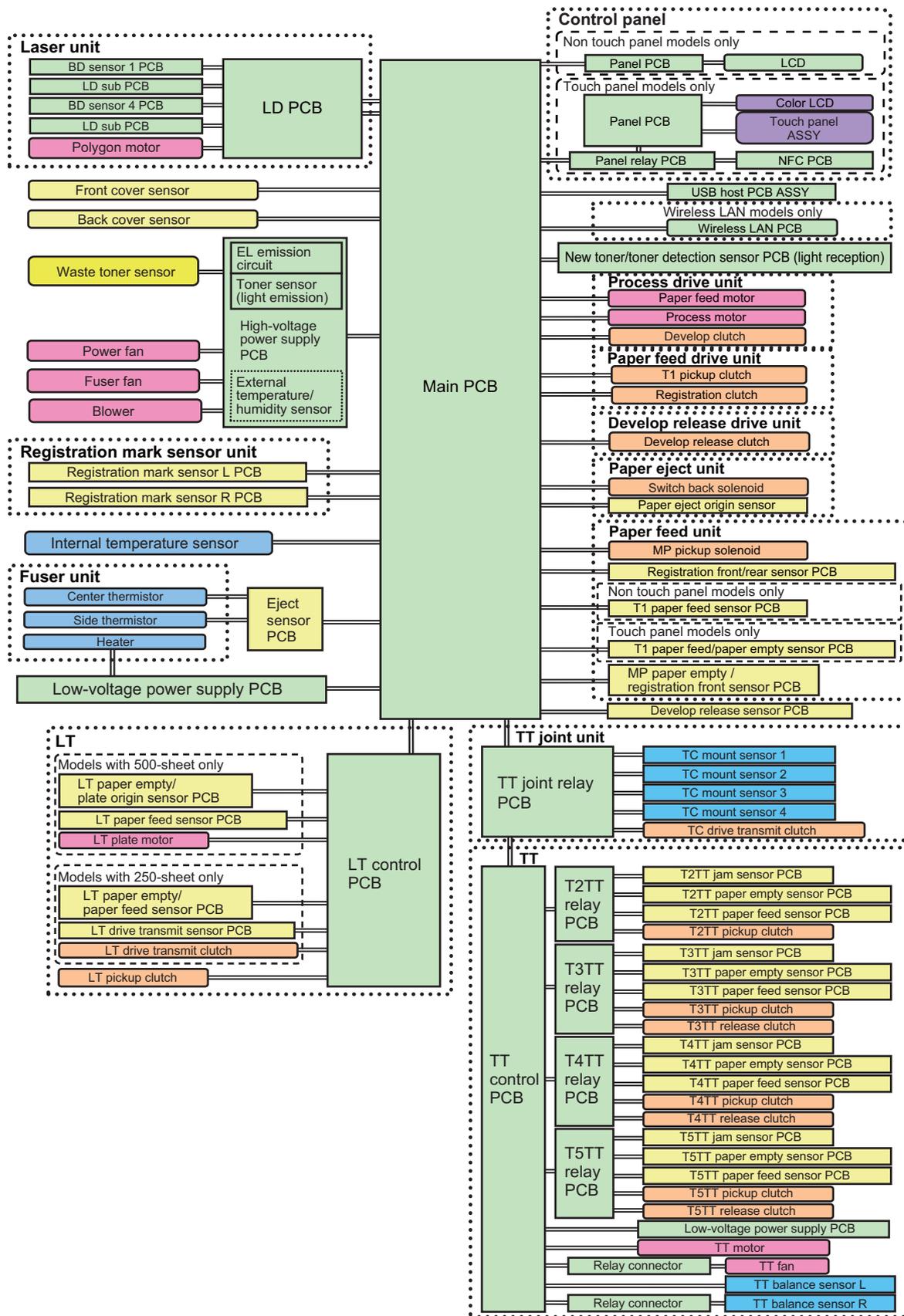


Fig. 2-7

## 2.5 Main Components

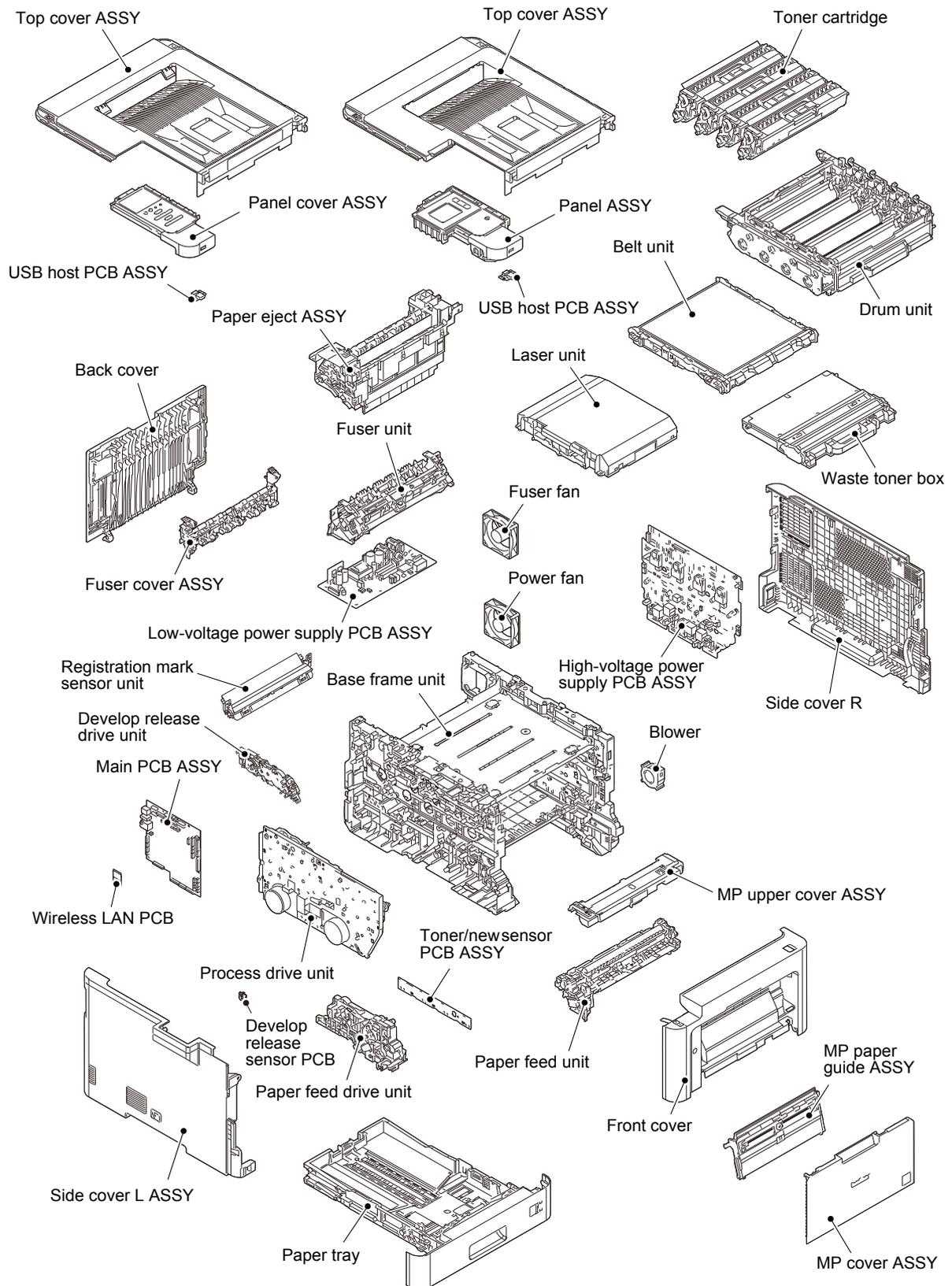


Fig. 2-8

## 3. ERROR INDICATIONS

This machine includes a self-diagnosis function. If the machine does not work normally it judges that an error has occurred, and indicates the corresponding error message on the LCD, which in turn helps the service personnel to quickly find out the problem.

### 3.1 Error Codes

The shaded errors hardly occur under normal use. They may be caused by noise around the installation site, variation in power supply voltage, or software failure.

Error Codes	Description	Refer to:	Error Codes	Description	Refer to:
0101	ASIC error or motor driver error occurred.	2-56	0504	After the heat unit was heated normally, the center thermistor of the fuser unit detected a temperature lower than the specified value.	2-58
0102	---		0505	The center thermistor of the fuser unit detected a temperature rise greater than the specified value within the specified time.	2-58
0201	Cannot detect the synchronized signal of the paper feed motor. The speed of the paper feed motor does not stabilize within the specified time.	2-56	0506	The center thermistor of the fuser unit detected a temperature fall greater than the specified value within the specified time.	2-58
0202	Cannot detect the synchronized signal of the process motor. The speed of the process motor does not stabilize within the specified time.	2-56	0508	---	
0203	---		050A	The hardware detected a temperature error through the center thermistor or the side thermistor of the fuser unit.	2-59
0300	Cannot detect the lock signal of the polygon motor for the laser unit.	2-57	050B	When the center thermistor of the fuser unit was lower than the idle temperature, the side thermistor detected a temperature higher than the specified temperature.	2-59
0305	---		050C	When the center thermistor of the fuser unit was higher than the idle temperature, the side thermistor detected a temperature lower than the specified temperature.	2-59
0401	BD sensor 1 failure	2-57	050D	---	
0402	BD sensor 4 failure	2-57	050F	---	
0405	---		0800	An error occurred in the internal temperature sensor.	2-59
0501	The center thermistor of the fuser unit has not reached the specified temperature within the specified time.	2-58	0900	Detected irregular power supply for more than 100 times.	2-60
0502	The center thermistor of the fuser unit has not reached the specified temperature within the specified time after it was heated normally to the certain level.	2-58	0A01	Detected a blower failure.	2-60
0503	The center thermistor of the fuser unit detected a temperature higher than the specified value.	2-58	0A02	Detected a fuser fan failure.	2-60
			0A03	Detected a power fan failure.	2-61

Error Codes	Description	Refer to:	Error Codes	Description	Refer to:
0B01	An error occurred in the high-voltage power supply PCB ASSY while operating.	2-61	2004	---	
0B02	An error occurred in the high-voltage power supply PCB ASSY when the machine was in the ready state.	2-61	2005	---	
0C00	An error occurred in the density sensor.	2-62	2006	---	
0D01	---		2101	---	
0D02	---		2102	---	
0D03	---		2103	---	
0D04	---		2104	---	
0E00	---		2105	---	
1003	The registration mark sensor R is dirty and cannot normally receive reflected light.	2-62	2201	---	
1004	The registration mark sensor L is dirty and cannot normally receive reflected light.	2-62	2202	---	
1100	---		2203	---	
1200	---		2204	---	
1300	---		2205	---	
1400	Condensation occurred in the machine.	2-63	2206	---	
1500	An error occurred in the paper eject origin sensor.	2-63	2207	---	
1701	Detected a TT fan failure.	2-63	2301	---	
1801	A communication error occurred between the main PCB and T2LT control PCB ASSY. (LT only)	2-64	2302	---	
1802	A communication error occurred between the main PCB and T3LT control PCB ASSY. (LT only)	2-64	2401	---	
1803	A communication error occurred between the main PCB and T4LT control PCB ASSY. (LT only)	2-64	2402	---	
1808	A communication error occurred between the main PCB and TT control PCB ASSY.	2-64	2403	---	
1901	Detected a TT motor failure.	2-64	2404	---	
1A01	---		2405	---	
1B01	---		2408	---	
1C00	Unable to detect scan signal of laser unit EEPROM.	2-65	2409	---	
1D01	---		2501	---	
1D02	---		2502	---	
1D03	---		2503	---	
1D04	---		2504	---	
1E01	---		2601	---	
1E02	---		2602	---	
1F00	---		2603	---	
1F02	TC mount sensor 1 to 4 detected that screw was not tighten surely when connecting TT.	2-65	2604	---	
2001	---		2605	---	
2002	---		2701	---	
2003	---		2702	---	

Error Codes	Description	Refer to:	Error Codes	Description	Refer to:
2703	---		2F08	---	
2801	---		2F0A	---	
2802	---		3001	---	
2803	---		3002	---	
2804	---		3003	---	
2805	---		3102	---	
2806	---		3202	---	
2901	---		3301	---	
2902	---		3302	---	
2903	---		3401	---	
2904	---		3402	---	
2905	---		3501	---	
2906	---		3601	---	
2A01	---		3701	---	
2A02	---		3702	---	
2A03	---		3703	---	
2B01	---		3801	A temperature error occurred in the external temperature/humidity sensor.	2-65
2B02	---		3802	---	
2C01	---		3900	---	
2C02	---		3A00	A communication error occurred between the controller and engine in main PCB.	2-65
2D01	---		3B01	T2 drive transmit sensor detected that the error occurred in connection of machine drive.	2-66
2E01	---		3B02	T3 drive transmit sensor detected that the error occurred in connection of machine drive.	2-66
2E02	---		3B03	T4 drive transmit sensor detected that the error occurred in connection of machine drive.	2-66
2E03	---		4000	Number of the drum unit rotations reaches the upper limit soon.	2-66
2E04	---		4001	---	
2E05	---		4002	---	
2E06	---		4003	---	
2E07	---		4004	---	
2E08	---		4200	Number of the drum unit rotations has reached the upper limit.	2-66
2E0A	---		4201	---	
2F01	---		4202	---	
2F02	---		4203	---	
2F03	---		4204	---	
2F04	---		4300	Number of pages printed with the belt unit will reach the upper limit soon. (90%)	2-66
2F05	---		4400	Number of pages printed with the belt unit has reached the upper limit.	2-66
2F06	---		4500	Number of used pages for the fuser unit has reached the upper limit.	2-67
2F07	---		4600	Number of pages printed with the laser unit has reached the upper limit.	2-67

Error Codes	Description	Refer to:	Error Codes	Description	Refer to:
4700	The waste toner sensor detected that the waste toner box is almost full.	2-67	5002	Number of used pages for the PF kit 1 has reached the upper limit.	2-69
4800	After the waste toner sensor detected that the waste toner box was almost full, pages more than the specified number have been printed.	2-67	5003	Number of used pages for the PF kit 2 has reached the upper limit.	2-70
4900	Belt cleaner detected that smaller voltage than the specified one and detected almost end of life of the waste toner box.	2-67	5004	Number of used pages for the PF kit 3 has reached the upper limit.	2-70
4A00	---		5005	Number of used pages for the PF kit 4 has reached the upper limit.	2-70
4B01	Dot counter of the toner cartridge (Black) or develop roller counter reaches the upper limit soon.	2-68	5006	Number of used pages for the PF kit 5 has reached the upper limit.	2-70
4B02	Dot counter of the toner cartridge (Yellow) or develop roller counter reaches the upper limit soon.	2-68	5100	---	
4B03	Dot counter of the toner cartridge (Magenta) or develop roller counter reaches the upper limit soon.	2-68	5200	---	
4B04	Dot counter of the toner cartridge (Cyan) or develop roller counter reaches the upper limit soon.	2-68	5301	---	
4C01	Dot counter of the toner cartridge (Black) or develop roller counter has reached the upper limit was detected.	2-68	5302	---	
4C02	Dot counter of the toner cartridge (Yellow) or develop roller counter has reached the upper limit was detected.	2-68	5401	---	
4C03	Dot counter of the toner cartridge (Magenta) or develop roller counter has reached the upper limit was detected.	2-68	5402	---	
4C04	Dot counter of the toner cartridge (Cyan) or develop roller counter has reached the upper limit was detected.	2-68	5406	---	
4C05	During printing, dot counter of color toner cartridge or develop roller counter has reached the upper limit was detected.	2-68	5502	---	
4D01	---		5602	---	
4E01	---		5702	---	
4F01	The new toner sensor of the toner cartridge (Black) could not detect a new cartridge properly.	2-69	5801	---	
4F02	The new toner sensor of the toner cartridge (Yellow) could not detect a new cartridge properly.	2-69	5802	---	
4F03	The new toner sensor of the toner cartridge (Magenta) could not detect a new cartridge properly.	2-69	5902	---	
4F04	The new toner sensor of the toner cartridge (Cyan) could not detect a new cartridge properly.	2-69	5A02	---	
5001	Number of used pages for the PF kit MP has reached the upper limit.	2-69	5B02	---	

Error Codes	Description	Refer to:	Error Codes	Description	Refer to:
5C02	---		6400	The registration mark sensor detected that no belt unit was set.	2-74
5D02	---		6602	---	
6001	The front cover sensor detected that the front cover was open.	2-71	6701	---	
6002	---		6801	The internal temperature sensor detected a temperature higher than the specified value.	2-74
6003	---		6802	---	
6004	The eject sensor detected that the fuser cover was open.	2-71	6901	Some fuser unit errors occurred at power-ON or upon recovery from sleep mode.	2-75
6007	---		6902	After the error was detected at the fuser unit, power was turned ON again and the error is being checked. (If power is turned OFF and ON after error code 6901 occurred, this code is displayed for about 15 minutes.)	2-75
6101	The toner amount detection sensor detected that no toner cartridge (Black) was set.	2-72	6A00	Electric discharge that may be caused by dirt on the corona wire of the drum unit was detected.	2-75
6102	The toner amount detection sensor detected that no toner cartridge (Yellow) was set.	2-72	6B01	Electric discharge was detected when the number of the drum unit rotations had become more than twice of the upper limit.	2-75
6103	The toner amount detection sensor detected that no toner cartridge (Magenta) was set.	2-72	6B02	---	
6104	The toner amount detection sensor detected that no toner cartridge (Cyan) was set.	2-72	6B03	---	
6200	The high-voltage output error of the corona charging terminal was detected and detected that the drum unit was not set.	2-72	6B04	---	
6201	---		6B0A	---	
6202	---		6C01	---	
6203	---		6C02	After the T2 is opened and closed or the power is turned ON, the T2 plate origin sensor detects that lift-up of the plate of the T2 is not completed within the specified period of time.	2-76
6204	---		6C03	After the T3 is opened and closed or the power is turned ON, the T3 plate origin sensor detects that lift-up of the plate of the T3 is not completed within the specified period of time.	2-76
6208	---		6C04	---	
6209	---		6D00	Detected more LTs than connectible limit, or the model unconnectable to TT connected to TT.	2-76
620A	---		6E00	The develop release sensor detected the develop roller disengagement or engagement failure.	2-77
6300	The waste toner sensor detected that no waste toner box was set.	2-74	6F00	Detected that supply power is unstable. (less than 100 times)	2-77

Error Codes	Description	Refer to:	Error Codes	Description	Refer to:
7000	After the registration rear sensor detects paper pass, the eject sensor does not detect paper pass.	2-77	7301	When printing from the T1, the T1 paper feed sensor does not detect paper pass within the specified time while the T1 paper empty sensor detects some paper set.	2-80
7001	---		7302	When printing from the T1, the registration front sensor does not detect paper pass within the specified time after the T1 paper feed sensor detected paper pass.	2-80
7002	---		7400	---	
7003	---		7401	When printing from the T2, the T2(LT or TT) paper feed sensor does not detect paper pass within the specified time while the T2(LT or TT) paper empty sensor detects some paper set.	2-81
7004	---		7402	When printing from T2, the registration front sensor does not detect paper pass within the specified time after the T2(LT or TT) paper feed sensor detected paper pass.	2-82
7100	After the registration rear sensor detects the end of paper pass and the specified period of time has passed, the eject sensor continues to detect paper pass.	2-78	7500	---	
7101	---		7501	When printing from the T3, the T3(LT or TT) paper feed sensor does not detect paper pass within the specified time while the T3(LT or TT) paper empty sensor detects some paper set.	2-83
7102	---		7502	When printing from T3, the registration front sensor does not detect paper pass within the specified time after the T3(LT or TT) paper feed sensor detected paper pass.	2-84
7103	---		7601	When printing from the T4, the T4(LT or TT) paper feed sensor does not detect paper pass within the specified time while the T4(LT or TT) paper empty sensor detects some paper set.	2-85
7104	---		7602	When printing from T4, the registration front sensor does not detect paper pass within the specified time after the T4(LT or TT) paper feed sensor detected paper pass.	2-86
7105	---		7701	When printing from the T5, the T5TT paper feed sensor does not detect paper pass within the specified time while the T5TT paper empty sensor detects some paper set.	2-87
7106	---		7702	When printing from T5, the registration front sensor does not detect paper pass within the specified time after the T5TT paper feed sensor detected paper pass.	2-88
7200	When the paper is fed from the MP tray, after the MP registration front sensor detects paper pass, the registration rear sensor does not detect paper pass after a set period of time.	2-79	7800	After the first side is printed in 2-sided printing mode, the registration front sensor does not detect paper pass after a set period of time.	2-89
7201	---		7801	---	
7300	---		7802	---	

Error Codes	Description	Refer to:	Error Codes	Description	Refer to:
7803	---		8601	---	
7804	---		8602	---	
7805	---		8603	---	
7900	---		8604	---	
7A01	---		8701	---	
7A02	---		8702	---	
7B01	---		8703	---	
7B02	---		8708	---	
7B03	---		8709	---	
7B04	---		870A	---	
7B05	---		870B	---	
7C00	---		870C	---	
7D00	---		870D	---	
7E00	---		870E	---	
7F00	---		870F	---	
8000	---		8801	---	
8100	---		8802	---	
8401	---		8808	---	
8402	---		8809	---	
8403	---		880A	---	
8501	The T1 paper feed sensor detected that the T1 is open when printing from T1, 2, 3, 4 or 5 (before the registration of printing in the engine).	2-90	8901	---	
			8902	---	
8502	The T2(LT or TT) paper feed sensor detected that the T2 is open when printing from T2, 3, 4 or 5 (before the registration of printing in the engine).	2-90	8903	The back cover sensor detected the open state when 2-sided printing is started (before the registration of printing in the engine).	2-91
8503	The T3(LT or TT) paper feed sensor detected that the T3 is open when printing from T3, 4 or 5 (before the registration of printing in the engine).	2-90	8904	The back cover sensor detected the open state during 2-sided printing (after the registration of printing in the engine).	2-91
8504	The T4(LT or TT) paper feed sensor detected that the T4 is open when printing from T4 or 5 (before the registration of printing in the engine).	2-90	8A01	The registration rear sensor detected that the fed paper was larger or smaller than the specified size in 2-sided printing.	2-92
8505	The T1 paper feed sensor detected that the T1 is open when printing from T1, 2, 3, 4 or 5 (after the registration of printing in the engine).	2-91	8A02	The registration rear sensor detected that the length of the paper is too long and it may hit within the machine in 2-sided printing.	2-92
8506	The T2(LT or TT) paper feed sensor detected that the T2 is open when printing from T2, 3, 4 or 5 (after the registration of printing in the engine).	2-91	8B01	Detected that the TT was not turned ON.	2-92
8507	The T3(LT or TT) paper feed sensor detected that the T3 is open when printing from T3, 4 or 5 (after the registration of printing in the engine).	2-91	8C00	---	
8508	The T4(LT or TT) paper feed sensor detected that the T4 is open when printing from T4 or 5 (after the registration of printing in the engine).	2-91	8D01	The registration rear sensor detected that the paper loaded in the paper tray was smaller than the specified size.	2-93

Error Codes	Description	Refer to:	Error Codes	Description	Refer to:
8D02	---		9204	When printing from the T3, paper type setting in the machine does not match the setting in the driver.	2-94
8E01	---		9205	When printing from the T4, paper type setting in the machine does not match the setting in the driver.	2-94
8E02	---		9206	When printing from the T5, paper type setting in the machine does not match the setting in the driver.	2-94
8F01	---		9301	When paper was fed from the MP tray, the MP paper empty sensor detected that no paper was in the MP tray.	2-94
8F02	---		9302	When paper was fed from the T1, the T1 paper empty sensor or T1 paper feed sensor detected that no paper was in the T1.	2-95
8F03	---		9303	When paper was fed from the T2, the T2(LT or TT) paper empty sensor detected that no paper was in the T2.	2-95
9001	The size of paper loaded in the MP tray and the one specified from the driver are not same when paper is fed from the MP tray.	2-93	9304	When paper was fed from the T3, the T3(LT or TT) paper empty sensor detected that no paper was in the T3.	2-95
9002	The size of paper loaded in the T1 and the one specified from the driver are not same when paper is fed from the T1.	2-93	9305	When paper was fed from the T4, the T4(LT or TT) paper empty sensor detected that no paper was in the T4.	2-95
9003	The size of paper loaded in the T2 and the one specified from the driver are not same when paper is fed from the T2.	2-93	9306	When paper was fed from the T5, the T5 paper empty sensor detected that no paper was in the T5.	2-95
9004	The size of paper loaded in the T3 and the one specified from the driver are not same when paper is fed from the T3.	2-93	9309	Detected that there was no paper set in all trays when TrayAuto was selected for printing.	2-96
9005	The size of paper loaded in the T4 and the one specified from the driver are not same when paper is fed from the T4.	2-93	930A	---	
9006	The size of paper loaded in the T5 and the one specified from the driver are not same when paper is fed from the T5.	2-93	9501	---	
9102	---		9502	---	
9103	---		9503	---	
9104	---		9504	---	
9105	---		9505	---	
9200	---		9601	---	
9201	When printing from the MP tray, paper type setting in the machine does not match the setting in the driver.	2-94	9608	---	
9202	When printing from the T1, paper type setting in the machine does not match the setting in the driver.	2-94	9701	For 2-sided printing, paper size setting of the printer driver that was not supported by 2-sided printing was selected.	2-97
9203	When printing from the T2, paper type setting in the machine does not match the setting in the driver.	2-94	9702	For printing by feeding paper from the T1, the size of paper specified from the driver set the size which was not supported by the T1.	2-97

Error Codes	Description	Refer to:	Error Codes	Description	Refer to:
9703	For printing by feeding paper from the T2, the size of paper specified from the driver set the size which was not supported by the T2.	2-97	9B06	---	
9704	For printing by feeding paper from the T3, the size of paper specified from the driver set the size which was not supported by the T3.	2-97	9C01	---	
9705	For printing by feeding paper from the T4, the size of paper specified from the driver set the size which was not supported by the T4.	2-97	9C02	---	
9706	For printing by feeding paper from the T5, the size of paper specified from the driver set the size which was not supported by the T5.	2-97	9C03	---	
9801	An error occurred with the value measured during color density adjustment performed from the control panel.	2-98	9C06	---	
9802	Dot counter or develop roller counter of color toner has reached the upper limit during color density adjustment performed from the control panel.	2-98	9C07	---	
9803	Density patch measurement ended unsuccessfully during color density adjustment performed from the control panel.	2-99	9D02	---	
9804	An error occurred with the value measured during density sensor sensitivity calibration.	2-99	9D03	---	
9901	An error occurred with the value measured during manual color registration performed from the control panel.	2-100	9D04	---	
9902	Dot counter or develop roller counter of color toner has reached the upper limit during auto color registration performed from the control panel.	2-100	9D05	---	
9903	An error occurred during patch data printing in manual color registration performed from the control panel.	2-101	A000	---	
9A01	An error occurred with the value measured during auto color registration performed from the control panel.	2-102	A200	---	
9A02	Dot counter or develop roller counter of color toner has reached the upper limit during auto color registration performed from the control panel.	2-102	A300	---	
9A03	An error occurred during patch data printing in auto color registration performed from the control panel.	2-103	A400	---	
9B01	---		A500	---	
9B02	---		A600	---	
9B03	---		A700	---	
9B04	---		A800	---	
9B05	---		A900	---	

Error Codes	Description	Refer to:	Error Codes	Description	Refer to:
AA00	---		E000	An error occurred in the ROM check sum.	2-105
AB00	---		E002	---	
AC00	---		E100	Program error	2-105
AD00	---		E500	An error occurred during access to the DRAM in the Main PCB ASSY.	2-105
AE00	---		E600	Write error in the EEPROM of the Main PCB ASSY	2-105
AF00	---		E701	System error in the flash ROM	2-105
B000	---		E702	Read error in the flash ROM	2-105
B700	---		E900	An error occurred while initializing the NFC.	2-106
B800	---		EC00	Overcurrent was caused because a USB device that did not meet the specifications was inserted into the USB port.	2-106
B900	---		ED00	---	
BB00	---		EE00	---	
BC00	---		F900	The spec code was not entered correctly.	2-106
BD00	---		FA01	---	
BF00	---		FA02	---	
C001	Timeout occurred with access request sent to server due to incorrect server address, network disconnection, or inactive server.	2-104	FA03	---	
C002	User authentication is unavailable due to incorrect user name, incorrect password, or asynchronous date and time between the machine and server.	2-104	FB01	---	
C003	Access to a file is unavailable due to incorrect directory name, no write permission on directory, file write lock, or no write permission on file.	2-104	FB02	---	
C004	Cannot acquire current time which is required for user authentication because the time has not been acquired.	2-104	FB03	---	
C100	---		FB04	---	
C700	The memory is insufficient to expand the data of PC-Print.	2-104	FB05	---	
C800	The memory used to store secure print data exceeded the memory size for secure print data.	2-104	FB06	---	
C900	---		FB07	---	
CA00	---		FB08	---	
D100	---		FB09	---	
D200	---		FB0A	---	
D800	An error occurred while initializing the touch panel.	2-105	FB0B	---	
D900	---		FB0C	---	
DA00	---		FB0D	---	
DB00	A communication error occurred between the main ASIC and the recording ASIC.	2-105	FB0E	---	

Error Codes	Description	Refer to:	Error Codes	Description	Refer to:
FB0F	---		FC03	---	
FC01	---		FC04	---	
FC02	---		FC05	---	

## 3.2 Error Message

The error messages displayed on the LCD of the machine and their description are shown in the table below.

### 3.2.1 Non touch panel models

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Belt End Soon</b>	-	Number of pages printed with the belt unit will reach the upper limit soon.	4300	2-66
<b>Calibrate</b>	<b>Calibration failed. Insufficient Toner for Calibration.</b>	Dot counter or develop roller counter of color toner has reached the upper limit during color density adjustment performed from the control panel.	9802	2-98
	<b>Calibration failed. Press Go, and try again.</b>	Density patch measurement ended unsuccessfully during color density adjustment performed from the control panel.	9803	2-99
		An error occurred with the value measured during density sensor sensitivity calibration.	9804	2-99
	<b>Calibration failed. Turn the power off and then back on again.</b>	An error occurred with the value measured during color density adjustment performed from the control panel.	9801	2-98
<b>Cartridge Error</b>	<b>Put the Black (BK) Toner Cartridge back in.</b>	The new toner sensor of the toner cartridge (Black) could not detect a new cartridge properly.	4F01	2-69
	<b>Put the Cyan (C) Toner Cartridge back in.</b>	The new toner sensor of the toner cartridge (Cyan) could not detect a new cartridge properly.	4F04	2-69
	<b>Put the Magenta (M) Toner Cartridge back in.</b>	The new toner sensor of the toner cartridge (Magenta) could not detect a new cartridge properly.	4F03	2-69
	<b>Put the Yellow (Y) Toner Cartridge back in.</b>	The new toner sensor of the toner cartridge (Yellow) could not detect a new cartridge properly.	4F02	2-69
<b>Condensation</b>	<b>Turn the power switch off and open the Front Cover. Wait 30 minutes, and then turn it on again.</b>	Condensation occurred in the machine. * Error message of second line is incorrect and "Turn the power switch off" is unnecessary. This will be corrected by Firmware version up later on.	1400	2-63

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Cooling Down</b>	<b>Wait for a while</b>	The internal temperature sensor or side thermistor of the fuser unit detected a temperature higher than the specified value.	6801	2-74
<b>Cover is Open</b>	<b>Close the Front Cover.</b>	The front cover sensor detected that the front cover was open.	6001	2-71
	<b>Close the Fuser Cover which can be found behind the Back Cover of the machine.</b>	The eject sensor detected that the fuser cover was open.	6004	2-71
<b>Drum !</b>	<b>Slide the Green tab on Drum Unit.</b>	Electric discharge that may be caused by dirt on the corona wire of the drum unit was detected.	6A00	2-75
<b>Drum End Soon</b>	-	Number of the drum unit rotations reaches the upper limit soon.	4000	2-66
<b>Drum Stop</b>	<b>Replace the Drum Unit.</b>	Electric discharge was detected when the number of the drum unit rotations had become more than twice of the upper limit.	6B01	2-75
<b>Ignore Data</b>	-	Detected undecodable data during printing. Received undecodable PS data.	---	4.11.1
<b>Jam 2-sided</b>	<b>Pull out the 2-sided Tray at the back of the machine and remove the jammed paper.</b>	After the first side is printed in 2-sided printing mode, the registration front sensor does not detect paper pass after a set period of time.	7800	2-89
<b>Jam Inside</b>	<b>Open the Front Cover, pull out the Drum Unit completely and remove the jammed paper.</b>	After the registration rear sensor detects paper pass, the eject sensor does not detect paper pass.	7000	2-77
<b>Jam MP Tray</b>	<b>Remove the jammed paper from MP Tray and press Go.</b>	When the paper is fed from the MP tray, after the MP registration front sensor detects paper pass, the registration rear sensor does not detect paper pass after a set period of time.	7200	2-79
<b>Jam Rear</b>	<b>Open the Back Cover and remove the jammed paper, then press Go.</b>	After the registration rear sensor detects the end of paper pass and the specified period of time has passed, the eject sensor continues to detect paper pass.	7100	2-78

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Jam Tray 1</b>	<b>Remove the jammed paper from Tray 1.</b>	When printing from the T1, the registration front sensor does not detect paper pass within the specified time after the T1 paper feed sensor detected paper pass.	7302	2-80
<b>Jam Tray 2</b>	<b>Remove the jammed paper from Tray 2.</b>	When printing from the T2, the registration front sensor does not detect paper pass within the specified time after the T2LT paper feed sensor detected paper pass.	7402	2-82
<b>Jam Tray 3</b>	<b>Remove the jammed paper from Tray 3.</b>	When printing from the T3, the registration front sensor does not detect paper pass within the specified time after the T3LT paper feed sensor detected paper pass.	7502	2-84
<b>Jam Tray 4</b>	<b>Remove the jammed paper from Tray 4.</b>	When printing from the T4, the registration front sensor does not detect paper pass within the specified time after the T4LT paper feed sensor detected paper pass.	7602	2-86
<b>Log Access Error</b>	<b>Authentication Error, contact your administrator.</b>	User authentication is unavailable due to incorrect user name, incorrect password, or asynchronous date and time between the machine and server.	C002	2-104
	<b>File Access Error, contact your administrator.</b>	Access to a file is unavailable due to incorrect directory name, no write permission on directory, file write lock, or no write permission on file.	C003	2-104
	<b>Server Timeout, contact your administrator.</b>	Timeout occurred with access request sent to server due to incorrect server address, network disconnection, or inactive server.	C001	2-104
	<b>Wrong Date&amp;Time, contact your administrator.</b>	Cannot acquire current time which is required for user authentication because the time has not been acquired.	C004	2-104
<b>Machine Error F9</b>	-	The spec code was not entered correctly.	F900	2-106

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Media Mismatch</b>	<b>Reload correct paper in MP Tray, then press Go.</b>	When printing from the MP tray, paper type setting in the machine does not match the setting in the driver.	9201	2-94
	<b>Reload correct paper in Tray 1, then press Go.</b>	When printing from the T1, paper type setting in the machine does not match the setting in the driver.	9202	2-94
	<b>Reload correct paper in Tray 2, then press Go.</b>	When printing from the T2, paper type setting in the machine does not match the setting in the driver.	9203	2-94
	<b>Reload correct paper in Tray 3, then press Go.</b>	When printing from the T3, paper type setting in the machine does not match the setting in the driver.	9204	2-94
	<b>Reload correct paper in Tray 4, then press Go.</b>	When printing from the T4, paper type setting in the machine does not match the setting in the driver.	9205	2-94
<b>No Belt Unit</b>	<b>Open the Front Cover, pull out the Drum Unit completely and install the Belt Unit.</b>	The registration mark sensor detected that no belt unit was set.	6400	2-74
<b>No Drum Unit</b>	<b>Open the Front Cover, then install the Drum Unit.</b>	The high-voltage output error of the corona charging terminal was detected and detected that the drum unit was not set.	6200	2-72
<b>No HUB Support</b>	-	USB host HUB connection error	---	4.11.2
<b>No Paper</b>	<b>Reload paper in Tray.</b>	Detected that there was no paper set in all trays when TrayAuto was selected for printing.	9309	2-96
<b>No Paper Fed T2</b>	<b>Reload paper in Tray 2, then press Go.</b>	When printing from the T2, the T2LT paper feed sensor does not detect paper pass within the specified time while the T2LT paper empty sensor detects some paper set.	7401	2-81

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>No Paper Fed T3</b>	<b>Reload paper in Tray 3, then press Go.</b>	When printing from the T3, the T3LT paper feed sensor does not detect paper pass within the specified time while the T3LT paper empty sensor detects some paper set.	7501	2-83
<b>No Paper Fed T4</b>	<b>Reload paper in Tray 4, then press Go.</b>	When printing from the T4, the T4LT paper feed sensor does not detect paper pass within the specified time while the T4LT paper empty sensor detects some paper set.	7601	2-85
<b>No Paper MP</b>	<b>Reload paper in MP Tray.</b>	When paper was fed from the MP tray, the MP paper empty sensor detected that no paper was in the MP tray.	9301	2-94
<b>No Paper T1</b>	<b>Reload paper in Tray 1.</b>	When paper was fed from the T1, the T1 paper empty sensor detected that no paper was in the T1.	9302	2-95
<b>No Paper T2</b>	<b>Reload paper in Tray 2.</b>	When paper was fed from the T2, the T2LT paper empty sensor detected that no paper was in the T2.	9303	2-95
<b>No Paper T3</b>	<b>Reload paper in Tray 3.</b>	When paper was fed from the T3, the T3LT paper empty sensor detected that no paper was in the T3.	9304	2-95
<b>No Paper T4</b>	<b>Reload paper in Tray 4.</b>	When paper was fed from the T4, the T4LT paper empty sensor detected that no paper was in the T4.	9305	2-95
<b>No Toner</b>	<b>Open the Front Cover, then install Toner Cartridge. Black(BK).</b>	The toner amount detection sensor detected that no toner cartridge (Black) was set.	6101	2-72
	<b>Open the Front Cover, then install Toner Cartridge. Yellow(Y).</b>	The toner amount detection sensor detected that no toner cartridge (Yellow) was set.	6102	2-72
	<b>Open the Front Cover, then install Toner Cartridge. Magenta(M).</b>	The toner amount detection sensor detected that no toner cartridge (Magenta) was set.	6103	2-72
	<b>Open the Front Cover, then install Toner Cartridge. Cyan(C).</b>	The toner amount detection sensor detected that no toner cartridge (Cyan) was set.	6104	2-72

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>No Tray T1</b>	<b>Reinstall Tray 1</b>	The T1 paper feed sensor detected that the T1 is open when printing from T1, 2, 3 or 4 (before the registration of printing in the engine).	8501	2-90
		The T1 paper feed sensor detected that the T1 is open when printing from T1, 2, 3 or 4 (after the registration of printing in the engine).	8505	2-91
<b>No Tray T2</b>	<b>Reinstall Tray 2</b>	The T2(LT) paper feed sensor detected that the T2 is open when printing from T2, 3 or 4 (before the registration of printing in the engine).	8502	2-90
		The T2(LT) paper feed sensor detected that the T2 is open when printing from T2, 3 or 4 (after the registration of printing in the engine).	8506	2-91
<b>No Tray T3</b>	<b>Reinstall Tray 3</b>	The T3(LT) paper feed sensor detected that the T3 is open when printing from T3 or 4 (before the registration of printing in the engine).	8503	2-90
		The T3(LT) paper feed sensor detected that the T3 is open when printing from T3 or 4 (after the registration of printing in the engine).	8507	2-91
<b>No Tray T4</b>	<b>Reinstall Tray 4</b>	The T4(LT) paper feed sensor detected that the T4 is open when printing from T4 (before the registration of printing in the engine).	8504	2-90
		The T4(LT) paper feed sensor detected that the T4 is open when printing from T4 (after the registration of printing in the engine).	8508	2-91
<b>No Waste Toner</b>	<b>Install the Waste Toner Box.</b>	The waste toner sensor detected that no waste toner box was set.	6300	2-74
<b>Out of Memory</b>	<b>Press Cancel</b>	The memory is insufficient to expand the data of PC-Print.	C700	2-104

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Print Data Full</b>	<b>Print Data is full. Press Cancel and delete the previously stored data.</b>	The memory used to store secure print data exceeded the memory size for secure print data.	C800	2-104
<b>Print Unable 01</b>	<b>Turn the power off and then back on again.</b>	ASIC error or motor driver error occurred.	0101	2-56
<b>Print Unable 02</b>	<b>Turn the power off and then back on again.</b>	Cannot detect the synchronized signal of the paper feed motor. The speed of the paper feed motor does not stabilize within the specified time.	0201	2-56
		Cannot detect the synchronized signal of the process motor. The speed of the process motor does not stabilize within the specified time.	0202	2-56
<b>Print Unable 03</b>	<b>Turn the power off and then back on again.</b>	Main PCB detected an error at the polygon motor in the laser unit.	0300	2-57
<b>Print Unable 04</b>	<b>Turn the power off and then back on again.</b>	Main PCB detected an error at the polygon motor in the laser unit.	0401	2-57
			0402	2-57
<b>Print Unable 05</b>	<b>Turn the power off and then back on again.</b>	Detected the fuser unit temperature error.	0501	2-58
			0502	2-58
			0503	2-58
			0504	2-58
			0505	2-58
			0506	2-58
			050A	2-59
050B	2-59			
050C	2-59			
<b>Print Unable 08</b>	<b>Turn the power off and then back on again.</b>	An error occurred in the internal temperature sensor.	0800	2-59
<b>Print Unable 09</b>	<b>Turn the power off and then back on again.</b>	Detected irregular power supply for more than 100 times.	0900	2-60

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Print Unable 0A</b>	<b>Turn the power off and then back on again.</b>	Main PCB detected the blower failure.	0A01	2-60
		Main PCB detected the fuser fan failure.	0A02	2-60
		Main PCB detected the power fan failure.	0A03	2-61
<b>Print Unable 0B</b>	<b>Turn the power off and then back on again.</b>	An error occurred in the high-voltage power supply PCB ASSY during the operation.	0B01	2-61
		An error occurred in the high-voltage power supply PCB ASSY when the machine was in the ready state.	0B02	2-61
<b>Print Unable 0C</b>	<b>Turn the power off and then back on again.</b>	An error occurred in the density sensor.	0C00	2-62
<b>Print Unable 10</b>	<b>Turn the power off and then back on again.</b>	The registration mark sensor R is dirty and cannot normally receive reflected light.	1003	2-62
		The registration mark sensor L is dirty and cannot normally receive reflected light.	1004	2-62
<b>Print Unable 15</b>	<b>Turn the power off and then back on again.</b>	An error occurred in the paper eject origin sensor.	1500	2-63
<b>Print Unable 18</b>	<b>Turn the power off and then back on again.</b>	A communication error occurred between the main PCB and T2LT control PCB ASSY.	1801	2-64
		A communication error occurred between the main PCB and T3LT control PCB ASSY.	1802	2-64
		A communication error occurred between the main PCB and T4LT control PCB ASSY.	1803	2-64
		A communication error occurred between the main PCB and TT control PCB ASSY.	1808	2-64
<b>Print Unable 19</b>	<b>Turn the power off and then back on again.</b>	Detected a TT motor failure.	1901	2-64
<b>Print Unable 1C</b>	<b>Turn the power off and then back on again.</b>	Unable to detect scan signal of laser unit EEPROM.	1C00	2-65
<b>Print Unable 38</b>	<b>Turn the power off and then back on again.</b>	A temperature error occurred in the external temperature/humidity sensor.	3801	2-65

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Print Unable 3A</b>	<b>Turn the power off and then back on again.</b>	A communication error occurred between the controller and engine in main PCB.	3A00	2-65
<b>Print Unable 3B</b>	<b>Turn the power off and then back on again.</b>	T2 drive transmit sensor detected that the error occurred in connection of machine drive.	3B01	2-66
		T3 drive transmit sensor detected that the error occurred in connection of machine drive.	3B02	2-66
		T4 drive transmit sensor detected that the error occurred in connection of machine drive.	3B03	2-66
<b>Print Unable DB</b>	<b>Turn the power off and then back on again.</b>	A communication error occurred between the main ASIC and the recording ASIC.	DB00	2-105
<b>Print Unable E0</b>	<b>Turn the power off and then back on again.</b>	An error occurred at the ROM check sum in the firmware.	E000	2-105
<b>Print Unable E1</b>	<b>Turn the power off and then back on again.</b>	Program error	E100	2-105
<b>Print Unable E5</b>	<b>Turn the power off and then back on again.</b>	Detected an error in main PCB.	E500	2-105
<b>Print Unable E6</b>	<b>Turn the power off and then back on again.</b>	Detected an error in main PCB.	E600	2-105
<b>Print Unable E7</b>	<b>Turn the power off and then back on again.</b>	Detected an error in main PCB.	E701	2-105
			E702	2-105
<b>Print Unable E9</b>	<b>Turn the power off and then back on again.</b>	An error occurred while initializing the NFC.	E900	2-106
<b>Print Unable ZC</b>	<b>Turn the power off and then back on again.</b>	Detected that supply power is unstable (less than 100 times).	6F00	2-77

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Registration</b>	<b>Registration failed. Insufficient Toner for Registration.</b>	Dot counter or develop roller counter of color toner has reached the upper limit during auto color registration performed from the control panel.	9A02	2-102
	<b>Registration failed. Press Go.</b>	Dot counter or develop roller counter of color toner has reached the upper limit during auto color registration performed from the control panel.	9902	2-100
		An error occurred during patch data printing in manual color registration performed from the control panel.	9903	2-101
		An error occurred during patch data printing in auto color registration performed from the control panel.	9A03	2-103
	<b>Registration failed. Turn the power off and then back on again.</b>	An error occurred with the value measured during auto color registration performed from the control panel.	9A01	2-102
		An error occurred with the value measured during manual color registration performed from the control panel.	9901	2-100
<b>Replace Belt</b>	-	Number of pages printed with the belt unit has reached the upper limit.	4400	2-66
<b>Replace Drum</b>	-	Number of the drum unit rotations has reached the upper limit.	4200	2-66
<b>Replace Fuser</b>	-	Number of used pages for the fuser unit has reached the upper limit.	4500	2-67
<b>Replace Laser</b>	-	Number of pages printed with the laser unit has reached the upper limit.	4600	2-67
<b>Replace PF Kit1</b>	-	Number of used pages for the PF kit 1 has reached the upper limit.	5002	2-69
<b>Replace PF Kit2</b>	-	Number of used pages for the PF kit 2 has reached the upper limit.	5003	2-70

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Replace PF Kit3</b>	-	Number of used pages for the PF kit 3 has reached the upper limit.	5004	2-70
<b>Replace PF Kit4</b>	-	Number of used pages for the PF kit 4 has reached the upper limit.	5005	2-70
<b>Replace PF KitMP</b>	-	Number of used pages for the PF kit MP has reached the upper limit.	5001	2-69
<b>Replace Toner</b>	<b>Open the Front Cover, replace Toner Cartridge. Black (BK).</b>	Dot counter of the toner cartridge (Black) or develop roller counter has reached the upper limit was detected.	4C01	2-68
	<b>Open the Front Cover, replace Toner Cartridge. Cyan (C).</b>	Dot counter of the toner cartridge (Cyan) or develop roller counter has reached the upper limit was detected.	4C04	2-68
	<b>Open the Front Cover, replace Toner Cartridge. Cyan (C)/ Magenta (M)/ Yellow (Y).</b>	During printing, dot counter of color toner cartridge or develop roller counter has reached the upper limit was detected.	4C05	2-68
	<b>Open the Front Cover, replace Toner Cartridge. Magenta (M).</b>	Dot counter of the toner cartridge (Magenta) or develop roller counter has reached the upper limit was detected.	4C03	2-68
	<b>Open the Front Cover, replace Toner Cartridge. Yellow (Y).</b>	Dot counter of the toner cartridge (Yellow) or develop roller counter has reached the upper limit was detected.	4C02	2-68
<b>Replace WT Box</b>	<b>Replace the Waste Toner Box inside the machine.</b>	After the waste toner sensor detected that the waste toner box was almost full, pages more than the specified number have been printed.	4800	2-67
<b>Self-Diagnostic</b>	<b>Turn the power off, then on again. Leave the machine for 15 min.</b>	Some fuser unit errors occurred at power-ON or upon recovery from sleep mode.	6901	2-75
	<b>Will Automatically Restart within 15 minutes.</b>	After the error was detected at the fuser unit, power was turned ON again and the error is being checked. (If power is turned OFF and ON after error code 6901 occurred, this code is displayed for about 15 minutes.)	6902	2-75

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Short paper</b>	<b>Open the Back Cover and then press Go.</b>	The registration rear sensor detected that the paper loaded in the paper tray was smaller than the specified size.	8D01	2-93
<b>Size Error</b>	<b>Specify the correct paper size for Tray 1.</b>	For printing by feeding paper from the T1, the size of paper specified from the driver set the size which was not supported by the T1.	9702	2-97
	<b>Specify the correct paper size for Tray 2.</b>	For printing by feeding paper from the T2, the size of paper specified from the driver set the size which was not supported by the T2.	9703	2-97
	<b>Specify the correct paper size for Tray 3.</b>	For printing by feeding paper from the T3, the size of paper specified from the driver set the size which was not supported by the T3.	9704	2-97
	<b>Specify the correct paper size for Tray 4.</b>	For printing by feeding paper from the T4, the size of paper specified from the driver set the size which was not supported by the T4.	9705	2-97
<b>Size Error DX</b>	<b>Press Cancel. Specify the correct paper and load the same size paper as the Printer driver setting.</b>	For 2-sided printing, paper size setting of the printer driver that was not supported by 2-sided printing was selected.	9701	2-97
	<b>Specify the correct paper and press Go.</b>	The registration rear sensor detected that the fed paper was larger or smaller than the specified size in 2-sided printing.	8A01	2-92

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Size mismatch</b>	<b>Load #S paper in #T and press Go.</b>	The size of paper loaded in the MP tray and the one specified from the driver are not same when paper is fed from the MP tray.	9001	2-93
		The size of paper loaded in the T1 and the one specified from the driver are not same when paper is fed from the T1.	9002	2-93
		The size of paper loaded in the T2 and the one specified from the driver are not same when paper is fed from the T2.	9003	2-93
		The size of paper loaded in the T3 and the one specified from the driver are not same when paper is fed from the T3.	9004	2-93
		The size of paper loaded in the T4 and the one specified from the driver are not same when paper is fed from the T4.	9005	2-93
<b>Toner Error</b>	<b>One or more Toner Cartridges are not detected. Pull out and reinsert all 4 Toner Cartridges.</b>	The develop release sensor detected the develop roller disengagement or engagement failure.	6E00	2-77
<b>Toner Low: BK</b>	-	Dot counter of the toner cartridge (Black) or develop roller counter reaches the upper limit soon.	4B01	2-68
<b>Toner Low: C</b>	-	Dot counter of the toner cartridge (Cyan) or develop roller counter reaches the upper limit soon.	4B04	2-68
<b>Toner Low: M</b>	-	Dot counter of the toner cartridge (Magenta) or develop roller counter reaches the upper limit soon.	4B03	2-68
<b>Toner Low: Y</b>	-	Dot counter of the toner cartridge (Yellow) or develop roller counter reaches the upper limit soon.	4B02	2-68
<b>Too Many Trays</b>	<b>Turn the power off and remove additional trays.</b>	Detected more LTs than connectible limit.	6D00	2-76

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Tray 2 Error</b>	<b>Take out Tray 2 and push it back in firmly.</b>	After the T2 is opened and closed or the power is turned ON, the T2 plate origin sensor detects that lift-up of the plate of the T2 is not completed within the specified period of time.	6C02	2-76
<b>Tray 3 Error</b>	<b>Take out Tray 3 and push it back in firmly.</b>	After the T3 is opened and closed or the power is turned ON, the T3 plate origin sensor detects that lift-up of the plate of the T3 is not completed within the specified period of time.	6C03	2-76
<b>Unusable Device</b>	<b>Remove the Device. Turn the power off and back on again</b>	Overcurrent was caused because a USB device that did not meet the specifications was inserted into the USB port.	EC00	2-106
	-	A USB device that did not meet the specifications was inserted into the USB port.	---	4.11.2
<b>WT Box End Soon</b>	-	The waste toner sensor detected that the waste toner box is almost full.	4700	2-67
			4900	2-67
<b>2-sided Disabled</b>	<b>Close the Back Cover of the machine.</b>	The back cover sensor detected the open state when 2-sided printing is started (before the registration of printing in the engine).	8903	2-91
		The back cover sensor detected the open state during 2-sided printing (after the registration of printing in the engine).	8904	2-91
	<b>Load #S paper and press Go.</b>	The registration rear sensor detected that the length of the paper is too long and it may hit within the machine in 2-sided printing.	8A02	2-92

### 3.2.2 Touch panel models

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Attachment Error</b>	<b>Connect the Tower Tray Connector with all four Screws.</b>	Detected that TT connector screw was not tightened when connecting TT.	1F02	2-65
<b>Calibration</b>	<b>Calibration failed. Insufficient Toner for Calibration.</b>	Dot counter or develop roller counter of color toner has reached the upper limit during color density adjustment performed from the control panel.	9802	2-98
	<b>Calibration failed. Press [OK]</b>	Density patch measurement ended unsuccessfully during color density adjustment performed from the control panel.	9803	2-99
		An error occurred with the value measured during density sensor sensitivity calibration.	9804	2-99
	<b>Calibration failed. Turn the power off and then back on again.</b>	An error occurred with the value measured during color density adjustment performed from the control panel.	9801	2-98
<b>Cartridge Error</b>	<b>Put the Black (BK) Toner Cartridge back in.</b>	The new toner sensor of the toner cartridge (Black) could not detect a new cartridge properly.	4F01	2-69
	<b>Put the Cyan (C) Toner Cartridge back in.</b>	The new toner sensor of the toner cartridge (Cyan) could not detect a new cartridge properly.	4F04	2-69
	<b>Put the Magenta (M) Toner Cartridge back in.</b>	The new toner sensor of the toner cartridge (Magenta) could not detect a new cartridge properly.	4F03	2-69
	<b>Put the Yellow (Y) Toner Cartridge back in.</b>	The new toner sensor of the toner cartridge (Yellow) could not detect a new cartridge properly.	4F02	2-69
<b>Condensation</b>	<b>Leave switched ON. Fully open the front cover. Wait 30 minutes, switch OFF and close cover, then switch ON.</b>	Condensation occurred in the machine.	1400	2-63

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Cooling Down</b>	<b>Wait for a while</b>	The internal temperature sensor or side thermistor of the fuser unit detected a temperature higher than the specified value.	6801	2-74
<b>Cover is Open</b>	-	The front cover sensor detected that the front cover was open.	6001	2-71
		The eject sensor detected that the fuser cover was open.	6004	2-71
<b>Drum !</b>	-	Electric discharge that may be caused by dirt on the corona wire of the drum unit was detected.	6A00	2-75
<b>Drum Stop</b>	<b>Replace the Drum Unit.</b>	Electric discharge was detected when the number of the drum unit rotations had become more than twice of the upper limit.	6B01	2-75
<b>Ignore Data</b>	<b>Ignore Data</b>	Detected undecodable data during printing. Received undecodable PS data.	---	4.11.1
	<b>Press Stop[x].</b>	Undecodable PS data is received.		
<b>Jam 2-sided</b>	-	After the first side is printed in 2-sided printing mode, the registration front sensor does not detect paper pass after a set period of time.	7800	2-89
<b>Jam Inside</b>	-	After the registration rear sensor detects paper pass, the eject sensor does not detect paper pass.	7000	2-77
<b>Jam MP Tray</b>	-	When the paper is fed from the MP tray, after the MP registration front sensor detects paper pass, the registration rear sensor does not detect paper pass after a set period of time.	7200	2-79
<b>Jam Rear</b>	-	After the registration rear sensor detects the end of paper pass and the specified period of time has passed, the eject sensor continues to detect paper pass.	7100	2-78
<b>Jam Tray 1</b>	-	When printing from the T1, the registration front sensor does not detect paper pass within the specified time after the T1 paper feed sensor detected paper pass.	7302	2-80

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Jam Tray 2</b>	-	When printing from the T2, the registration front sensor does not detect paper pass within the specified time after the T2(LT or TT) paper feed sensor detected paper pass.	7402	2-82
<b>Jam Tray 3</b>	-	When printing from the T3, the registration front sensor does not detect paper pass within the specified time after the T3(LT or TT) paper feed sensor detected paper pass.	7502	2-84
<b>Jam Tray 4</b>	-	When printing from the T4, the registration front sensor does not detect paper pass within the specified time after the T4(LT or TT) paper feed sensor detected paper pass.	7602	2-86
<b>Jam Tray5</b>	-	When printing from the T5, the registration front sensor does not detect paper pass within the specified time after the T5TT paper feed sensor detected paper pass.	7702	2-88
<b>Log Access Error</b>	<b>Authentication error, contact your administrator.</b>	User authentication is unavailable due to incorrect user name, incorrect password, or asynchronous date and time between the machine and server.	C002	2-104
		Access to a file is unavailable due to incorrect directory name, no write permission on directory, file write lock, or no write permission on file.	C003	2-104
	<b>Server Timeout, contact your administrator.</b>	Timeout occurred with access request sent to server due to incorrect server address, network disconnection, or inactive server.	C001	2-104
	<b>Wrong Date&amp;Time, contact your administrator.</b>	Cannot acquire current time which is required for user authentication because the time has not been acquired.	C004	2-104
<b>Machine Error F9</b>	-	The spec code was not entered correctly.	F900	2-106

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Maintenance</b>	<b>Replace Fuser</b>	Number of used pages for the fuser unit has reached the upper limit.	4500	2-67
	<b>Replace Laser</b>	Number of pages printed with the laser unit has reached the upper limit.	4600	2-67
	<b>Replace PF Kit 1</b>	Number of used pages for the PF kit 1 has reached the upper limit.	5002	2-69
	<b>Replace PF Kit 2</b>	Number of used pages for the PF kit 2 has reached the upper limit.	5003	2-70
	<b>Replace PF Kit 3</b>	Number of used pages for the PF kit 3 has reached the upper limit.	5004	2-70
	<b>Replace PF Kit 4</b>	Number of used pages for the PF kit 4 has reached the upper limit.	5005	2-70
	<b>Replace PF Kit 5</b>	Number of used pages for the PF kit 5 has reached the upper limit.	5006	2-70
	<b>Replace PF Kit MP</b>	Number of used pages for the PF kit MP has reached the upper limit.	5001	2-69
<b>Media Type Mismatch</b>	<b>Reload correct paper in MP Tray, then press [Retry].</b>	When printing from the MP tray, paper type setting in the machine does not match the setting in the driver.	9201	2-94
	<b>Reload correct paper in Tray1, then press [Retry].</b>	When printing from the T1, paper type setting in the machine does not match the setting in the driver.	9202	2-94
	<b>Reload correct paper in Tray2, then press [Retry].</b>	When printing from the T2, paper type setting in the machine does not match the setting in the driver.	9203	2-94
	<b>Reload correct paper in Tray3, then press [Retry].</b>	When printing from the T3, paper type setting in the machine does not match the setting in the driver.	9204	2-94
	<b>Reload correct paper in Tray4, then press [Retry].</b>	When printing from the T4, paper type setting in the machine does not match the setting in the driver.	9205	2-94
	<b>Reload correct paper in Tray5, then press [Retry].</b>	When printing from the T5, paper type setting in the machine does not match the setting in the driver.	9206	2-94

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>No Belt Unit</b>	<b>Open the Front Cover, pull out the Drum Unit completely and install the Belt Unit.</b>	The registration mark sensor detected that no belt unit was set.	6400	2-74
<b>No Drum Unit</b>	<b>Open the Front Cover, then install the Drum Unit.</b>	The high-voltage output error of the corona charging terminal was detected and detected that the drum unit was not set.	6200	2-72
<b>No HUB Support</b>	<b>No HUB Support.</b>	USB host HUB connection error	---	4.11.2
<b>No Paper</b>	-	Detected that there was no paper set in all trays when TrayAuto was selected for printing.	9309	2-96
	<b>No Paper T1</b>	Detected that there was no paper set in the T1 when printing from the T1.	---	4.2.1
	<b>No Paper T2</b>	Detected that there was no paper set in the T2 when printing from the T2.	---	4.2.1
	<b>No Paper T3</b>	Detected that there was no paper set in the T3 when printing from the T3.	---	4.2.1
	<b>No Paper T4</b>	Detected that there was no paper set in the T4 when printing from the T4.	---	4.2.1
	<b>No Paper T5</b>	Detected that there was no paper set in the T5 when printing from the T5.	---	4.2.1
<b>No Paper Fed Tray1</b>	<b>Reload paper in Tray1, then press [Retry].</b>	When printing from the T1, the T1 paper feed sensor does not detect paper pass within the specified time while the T1 paper empty sensor detects some paper set.	7301	2-80
<b>No Paper Fed Tray2</b>	<b>Reload paper in Tray2, then press [Retry].</b>	When printing from the T2, the T2(LT or TT) paper feed sensor does not detect paper pass within the specified time while the T2(LT or TT) paper empty sensor detects some paper set.	7401	2-81

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>No Paper Fed Tray3</b>	<b>Reload paper in Tray3, then press [Retry].</b>	When printing from the T3, the T3(LT or TT) paper feed sensor does not detect paper pass within the specified time while the T3(LT or TT) paper empty sensor detects some paper set.	7501	2-83
<b>No Paper Fed Tray4</b>	<b>Reload paper in Tray4, then press [Retry].</b>	When printing from the T4, the T4(LT or TT) paper feed sensor does not detect paper pass within the specified time while the T4(LT or TT) paper empty sensor detects some paper set.	7601	2-85
<b>No Paper Fed Tray5</b>	<b>Reload paper in Tray5, then press [Retry].</b>	When printing from the T5, the T5TT paper feed sensor does not detect paper pass within the specified time while the T5TT paper empty sensor detects some paper set.	7701	2-87
<b>No Paper MP</b>	-	When paper was fed from the MP tray, the MP paper empty sensor detected that no paper was in the MP tray.	9301	2-94
<b>No Paper Tray1</b>	-	When paper was fed from the T1, the T1 paper empty sensor detected that no paper was in the T1.	9302	2-95
<b>No Paper Tray2</b>	-	When paper was fed from the T2, the T2(LT or TT) paper empty sensor detected that no paper was in the T2.	9303	2-95
<b>No Paper Tray3</b>	-	When paper was fed from the T3, the T3(LT or TT) paper empty sensor detected that no paper was in the T3.	9304	2-95
<b>No Paper Tray4</b>	-	When paper was fed from the T4, the T4(LT or TT) paper empty sensor detected that no paper was in the T4.	9305	2-95
<b>No Paper Tray5</b>	-	When paper was fed from the T5, the T5 paper empty sensor detected that no paper was in the T5.	9306	2-95

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>No Toner</b>	<b>Open the Front Cover, then install Toner Cartridge. Black(BK).</b>	The toner amount detection sensor detected that no toner cartridge (Black) was set.	6101	2-72
	<b>Open the Front Cover, then install Toner Cartridge. Yellow(Y).</b>	The toner amount detection sensor detected that no toner cartridge (Yellow) was set.	6102	2-72
	<b>Open the Front Cover, then install Toner Cartridge. Magenta(M).</b>	The toner amount detection sensor detected that no toner cartridge (Magenta) was set.	6103	2-72
	<b>Open the Front Cover, then install Toner Cartridge. Cyan(C).</b>	The toner amount detection sensor detected that no toner cartridge (Cyan) was set.	6104	2-72
<b>No Tray T1</b>	-	The T1 paper feed sensor detected that the T1 is open when printing from T1, 2, 3, 4 or 5 (before the registration of printing in the engine).	8501	2-90
		The T1 paper feed sensor detected that the T1 is open when printing from T1, 2, 3, 4 or 5 (after the registration of printing in the engine).	8505	2-91
<b>No Tray T2</b>	-	The T2(LT or TT) paper feed sensor detected that the T2 is open when printing from T2, 3, 4 or 5 (before the registration of printing in the engine).	8502	2-90
		The T2(LT or TT) paper feed sensor detected that the T2 is open when printing from T2, 3, 4 or 5 (after the registration of printing in the engine).	8506	2-91
<b>No Tray T3</b>	-	The T3(LT or TT) paper feed sensor detected that the T3 is open when printing from T3, 4 or 5 (before the registration of printing in the engine).	8503	2-90
		The T3(LT or TT) paper feed sensor detected that the T3 is open when printing from T3, 4 or 5 (after the registration of printing in the engine).	8507	2-91

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>No Tray T4</b>	-	The T4(LT or TT) paper feed sensor detected that the T4 is open when printing from T4 or 5 (before the registration of printing in the engine).	8504	2-90
		The T4(LT or TT) paper feed sensor detected that the T4 is open when printing from T4 or 5 (after the registration of printing in the engine).	8508	2-91
<b>No Waste Toner</b>	<b>Install the Waste Toner Box.</b>	The waste toner sensor detected that no waste toner box was set.	6300	2-74
<b>Out of Memory</b>	<b>Press Stop[x].</b>	The memory is insufficient to expand the data of PC-Print.	C700	2-104
<b>Paper Low</b>	<b>Paper Low Tray 1</b>	Detected that the paper is running out when the paper feed motor drive and T1 paper empty sensor turned ON.	---	4.11.4
	<b>Paper Low Tray 2</b>	Detected that the paper is running out when the paper feed motor, TT motor drive and T2(LT or TT) paper empty sensor turned ON.	---	4.11.4
	<b>Paper Low Tray 3</b>	Detected that the paper is running out when the paper feed motor, TT motor drive and T3(LT or TT) paper empty sensor turned ON.	---	4.11.4
	<b>Paper Low Tray 4</b>	Detected that the paper is running out when the TT motor drive and T4TT paper empty sensor turned ON.	---	4.11.4
	<b>Paper Low Tray 5</b>	Detected that the paper is running out when the TT motor drive and T5TT paper empty sensor turned ON.	---	4.11.4
<b>Print Data Full</b>	<b>Secure Print Data is full. Press Stop[x] and delete the previously stored data.</b>	The memory used to store secure print data exceeded the memory size for secure print data.	C800	2-104
<b>Print Unable 01</b>	<b>Turn the power off and then back on again.</b>	ASIC error or motor driver error occurred.	0101	2-56

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Print Unable 02</b>	<b>Turn the power off and then back on again.</b>	Cannot detect the synchronized signal of the paper feed motor. The speed of the paper feed motor does not stabilize within the specified time.	0201	2-56
		Cannot detect the synchronized signal of the process motor. The speed of the process motor does not stabilize within the specified time.	0202	2-56
<b>Print Unable 03</b>	<b>Turn the power off and then back on again.</b>	Main PCB detected an error at the polygon motor in the laser unit.	0300	2-57
<b>Print Unable 04</b>	<b>Turn the power off and then back on again.</b>	Main PCB detected an error at the polygon motor in the laser unit.	0401	2-57
			0402	2-57
<b>Print Unable 05</b>	<b>Turn the power off and then back on again.</b>	Detected the fuser unit temperature error.	0501	2-58
			0502	2-58
			0503	2-58
			0504	2-58
			0505	2-58
			0506	2-58
			050A	2-59
			050B	2-59
050C	2-59			
<b>Print Unable 08</b>	<b>Turn the power off and then back on again.</b>	An error occurred in the internal temperature sensor.	0800	2-59
<b>Print Unable 09</b>	<b>Turn the power off and then back on again.</b>	Detected irregular power supply for more than 100 times.	0900	2-60
<b>Print Unable 0A</b>	<b>Turn the power off and then back on again.</b>	Main PCB detected the blower failure.	0A01	2-60
		Main PCB detected the fuser fan failure.	0A02	2-60
		Main PCB detected the power fan failure.	0A03	2-61
<b>Print Unable 0B</b>	<b>Turn the power off and then back on again.</b>	An error occurred in the high-voltage power supply PCB ASSY during the operation.	0B01	2-61
		An error occurred in the high-voltage power supply PCB ASSY when the machine was in the ready state.	0B02	2-61

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Print Unable 0C</b>	<b>Turn the power off and then back on again.</b>	An error occurred in the density sensor.	0C00	2-62
<b>Print Unable 10</b>	<b>Turn the power off and then back on again.</b>	The registration mark sensor R is dirty and cannot normally receive reflected light.	1003	2-62
		The registration mark sensor L is dirty and cannot normally receive reflected light.	1004	2-62
<b>Print Unable 15</b>	<b>Turn the power off and then back on again.</b>	An error occurred in the paper eject origin sensor.	1500	2-63
<b>Print Unable 17</b>	<b>Turn the power off and then back on again.</b>	Detected a TT fan failure.	1701	2-63
<b>Print Unable 18</b>	<b>Turn the power off and then back on again.</b>	A communication error occurred between the main PCB and T2LT control PCB ASSY.	1801	2-64
		A communication error occurred between the main PCB and T3LT control PCB ASSY.	1802	2-64
		A communication error occurred between the main PCB and T4LT control PCB ASSY.	1803	2-64
		A communication error occurred between the main PCB and TT control PCB ASSY.	1808	2-64
<b>Print Unable 19</b>	<b>Turn the power off and then back on again.</b>	Detected a TT motor failure.	1901	2-64
<b>Print Unable 1C</b>	<b>Turn the power off and then back on again.</b>	Unable to detect scan signal of laser unit EEPROM.	1C00	2-65
<b>Print Unable 38</b>	<b>Turn the power off and then back on again.</b>	A temperature error occurred in the external temperature/ humidity sensor.	3801	2-65
<b>Print Unable 3A</b>	<b>Turn the power off and then back on again.</b>	A communication error occurred between the controller and engine in main PCB.	3A00	2-65

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Print Unable 3B</b>	<b>Turn the power off and then back on again.</b>	T2 drive transmit sensor detected that the error occurred in connection of machine drive.	3B01	2-66
		T3 drive transmit sensor detected that the error occurred in connection of machine drive.	3B02	2-66
		T4 drive transmit sensor detected that the error occurred in connection of machine drive.	3B03	2-66
<b>Print Unable 8B</b>	<b>Turn the power off and then back on again.</b>	Detected that the TT was not turned ON.	8B01	2-92
<b>Print Unable DB</b>	<b>Turn the power off and then back on again.</b>	A communication error occurred between the main ASIC and the recording ASIC.	DB00	2-105
<b>Print Unable E0</b>	<b>Turn the power off and then back on again.</b>	An error occurred at the ROM check sum in the firmware.	E000	2-105
<b>Print Unable E1</b>	<b>Turn the power off and then back on again.</b>	Program error	E100	2-105
<b>Print Unable E5</b>	<b>Turn the power off and then back on again.</b>	Detected an error in main PCB.	E500	2-105
<b>Print Unable E6</b>	<b>Turn the power off and then back on again.</b>	Detected an error in main PCB.	E600	2-105
<b>Print Unable E7</b>	<b>Turn the power off and then back on again.</b>	Detected an error in main PCB.	E701	2-105
			E702	2-105
<b>Print Unable E9</b>	<b>Turn the power off and then back on again.</b>	An error occurred while initializing the NFC.	E900	2-106
<b>Print Unable ZC</b>	<b>Turn the power off and then back on again.</b>	Detected that supply power is unstable (less than 100 times).	6F00	2-77

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Registration</b>	<b>Registration failed. Press [OK].</b>	An error occurred during patch data printing in auto color registration performed from the control panel.	9A03	2-103
	<b>Registration failed. Insufficient Toner for Registration.</b>	Dot counter or develop roller counter of color toner has reached the upper limit during auto color registration performed from the control panel.	9A02	2-102
	<b>Registration failed. Press [OK]</b>	Dot counter or develop roller counter of color toner has reached the upper limit during auto color registration performed from the control panel.	9902	2-100
		An error occurred during patch data printing in manual color registration performed from the control panel.	9903	2-101
	<b>Registration failed. Turn the power off and then back on again.</b>	An error occurred with the value measured during manual color registration performed from the control panel.	9901	2-100
		An error occurred with the value measured during auto color registration performed from the control panel.	9A01	2-102
<b>Replace Toner</b>	-	Dot counter of the toner cartridge (Black) or develop roller counter has reached the upper limit was detected.	4C01	2-68
		Dot counter of the toner cartridge (Yellow) or develop roller counter has reached the upper limit was detected.	4C02	2-68
		Dot counter of the toner cartridge (Magenta) or develop roller counter has reached the upper limit was detected.	4C03	2-68
		Dot counter of the toner cartridge (Cyan) or develop roller counter has reached the upper limit was detected.	4C04	2-68
		During printing, dot counter of color toner cartridge or develop roller counter has reached the upper limit was detected.	4C05	2-68

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Replace WT Box</b>	<b>Replace the Waste Toner Box inside the machine.</b>	After the waste toner sensor detected that the waste toner box was almost full, pages more than the specified number have been printed.	4800	2-67
<b>Screen Init. Fail</b>	<b>Remove any material which is on the touchscreen.</b>	An error occurred while initializing the touch panel.	D800	2-105
<b>Self-Diagnostic</b>	<b>Will automatically restart within 15 minutes.</b>	Some fuser unit errors occurred at power-ON or upon recovery from sleep mode.	6901	2-75
		After the error was detected at the fuser unit, power was turned ON again and the error is being checked. (If power is turned OFF and ON after error code 6901 occurred, this code is displayed for about 15 minutes.)	6902	2-75
<b>Short paper</b>	<b>Open the Back Cover and then press [Retry].</b>	The registration rear sensor detected that the paper loaded in the paper tray was smaller than the specified size.	8D01	2-93
<b>Size Error</b>	<b>Specify the correct paper size for Tray 1.</b>	For printing by feeding paper from the T1, the size of paper specified from the driver set the size which was not supported by the T1.	9702	2-97
	<b>Specify the correct paper size for Tray 2.</b>	For printing by feeding paper from the T2, the size of paper specified from the driver set the size which was not supported by the T2.	9703	2-97
	<b>Specify the correct paper size for Tray 3.</b>	For printing by feeding paper from the T3, the size of paper specified from the driver set the size which was not supported by the T3.	9704	2-97
	<b>Specify the correct paper size for Tray 4.</b>	For printing by feeding paper from the T4, the size of paper specified from the driver set the size which was not supported by the T4.	9705	2-97
	<b>Specify the correct paper size for Tray 5.</b>	For printing by feeding paper from the T5, the size of paper specified from the driver set the size which was not supported by the T5.	9706	2-97

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Size Error 2-sided</b>	<b>Press Stop[x]. Specify the correct paper and load the same size paper as Printer driver setting.</b>	For 2-sided printing, paper size setting of the printer driver that was not supported by 2-sided printing was selected.	9701	2-97
	<b>Reload paper, then press [Retry].</b>	The registration rear sensor detected that the fed paper was larger or smaller than the specified size in 2-sided printing.	8A01	2-92
<b>Size mismatch</b>	<b>Reload correct paper in MP Tray, then press [Retry].</b>	The size of paper loaded in the MP tray and the one specified from the driver are not same when paper is fed from the MP tray.	9001	2-93
	<b>Reload correct paper in Tray1, then press [Retry].</b>	The size of paper loaded in the T1 and the one specified from the driver are not same when paper is fed from the T1.	9002	2-93
	<b>Reload correct paper in Tray2, then press [Retry].</b>	The size of paper loaded in the T2 and the one specified from the driver are not same when paper is fed from the T2.	9003	2-93
	<b>Reload correct paper in Tray3, then press [Retry].</b>	The size of paper loaded in the T3 and the one specified from the driver are not same when paper is fed from the T3.	9004	2-93
	<b>Reload correct paper in Tray4, then press [Retry].</b>	The size of paper loaded in the T4 and the one specified from the driver are not same when paper is fed from the T4.	9005	2-93
	<b>Reload correct paper in Tray5, then press [Retry].</b>	The size of paper loaded in the T5 and the one specified from the driver are not same when paper is fed from the T5.	9006	2-93

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Supplies</b>	<b>Belt End Soon</b>	Number of pages printed with the belt unit will reach the upper limit soon.	4300	2-66
	<b>Drum End Soon</b>	Number of the drum unit rotations reaches the upper limit soon.	4000	2-66
	<b>Replace Belt</b>	Number of pages printed with the belt unit has reached the upper limit.	4400	2-66
	<b>Replace Drum</b>	Number of the drum unit rotations has reached the upper limit.	4200	2-66
	<b>Toner Low: BK</b>	Dot counter of the toner cartridge (Black) or develop roller counter reaches the upper limit soon.	4B01	2-68
	<b>Toner Low: C</b>	Dot counter of the toner cartridge (Cyan) or develop roller counter reaches the upper limit soon.	4B04	2-68
	<b>Toner Low: M</b>	Dot counter of the toner cartridge (Magenta) or develop roller counter reaches the upper limit soon.	4B03	2-68
	<b>Toner Low: Y</b>	Dot counter of the toner cartridge (Yellow) or develop roller counter reaches the upper limit soon.	4B02	2-68
	<b>WT Box End Soon</b>	The waste toner sensor detected that the waste toner box is almost full.	4700	2-67
Belt cleaner detected that smaller voltage than the specified one and detected almost end of life of the waste toner box.		4900	2-67	
<b>Toner Error</b>	<b>One or more Toner Cartridges are not detected. Pull out and reinsert all 4 Toner Cartridges.</b>	The develop release sensor detected the develop roller disengagement or engagement failure.	6E00	2-77
<b>Too Many Trays</b>	<b>Turn the power off and remove additional trays.</b>	Detected more LTs than connectible limit, or the model unconnectable to TT connected to TT.	6D00	2-76

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Tray 2 Error</b>	<b>Take out Tray 2 and push it back in firmly.</b>	After the T2 is opened and closed or the power is turned ON, the T2 plate origin sensor detects that lift-up of the plate of the T2 is not completed within the specified period of time.	6C02	2-76
<b>Tray 3 Error</b>	<b>Take out Tray 3 and push it back in firmly.</b>	After the T3 is opened and closed or the power is turned ON, the T3 plate origin sensor detects that lift-up of the plate of the T3 is not completed within the specified period of time.	6C03	2-76
<b>Unable to Update:01</b>	<b>Check the firmware update file and try again.</b>	Unable to receive the system needed during the automatic firmware update with USB flash memory.	---	4.11.3
<b>Unable to Update:02</b>		There is no "FIRM" folder in the USB flash memory during the automatic firmware update with USB flash memory.		
<b>Unable to Update:03</b>		There is no target file in "FIRM" folder during the automatic firmware update with USB flash memory.		
<b>Unable to Update:04</b>		Unable to access to the USB flash memory during the automatic firmware update with USB flash memory.		
<b>Unable to Update:05</b>		Failed to analyze the firmware during the automatic firmware update with USB flash memory.		
<b>Unable to Update:06</b>		There is a file that contains more than 119 words in "FIRM" folder during the automatic firmware update with USB flash memory.		
<b>Unable to Update:07</b>		There is a firmware not for the machine model during the automatic firmware update with USB flash memory.		
<b>Unable to Update:08</b>		Unable to update the firmware because other function is working during the automatic firmware update with USB flash memory.		

Error message		Description	Error codes	Refer to:
First line	Second line			
<b>Unusable Device</b>	<b>Remove the Device. Turn the power off and back on again.</b>	Overcurrent was caused because a USB device that did not meet the specifications was inserted into the USB port.	EC00	2-106
		A USB device that did not meet the specifications was inserted into the USB port.	---	4.11.2
<b>2-sided Disabled</b>	-	The back cover sensor detected the open state when 2-sided printing is started (before the registration of printing in the engine).	8903	2-91
		The back cover sensor detected the open state during 2-sided printing (after the registration of printing in the engine).	8904	2-91
	<b>Reload paper, then press [Retry].</b>	The registration rear sensor detected that the length of the paper is too long and it may hit within the machine in 2-sided printing.	8A02	2-92

## 4. TROUBLESHOOTING

### 4.1 Error Cause and Remedy

#### ■ Error code 0101

ASIC error or motor driver error occurred.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

#### ■ Error code 0201

Cannot detect the synchronized signal of the paper feed motor. The speed of the paper feed motor does not stabilize within the specified time.

Step	Cause	Remedy
1	Connection failure of the paper feed motor harness	Reconnect the paper feed motor harness.
2	Connection failure of the low-voltage power supply PCB harness	Reconnect the low-voltage power supply PCB harness.
3	Damaged parts in paper feed drive unit	Replace the paper feed drive unit.
4	Damaged fuser unit	Replace the fuser unit.
5	Low-voltage power supply PCB failure	Replace the low-voltage power supply PCB ASSY.
6	Main PCB failure	Replace the main PCB ASSY.

#### ■ Error code 0202

Cannot detect the synchronized signal of the process motor. The speed of the process motor does not stabilize within the specified time.

Step	Cause	Remedy
1	Connection failure of the process motor harness	Reconnect the process motor harness.
2	Connection failure of the low-voltage power supply PCB harness	Reconnect the low-voltage power supply PCB harness.
3	Damaged parts in process drive unit	Replace the process drive unit.
4	Low-voltage power supply PCB failure	Replace the low-voltage power supply PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 0300**

Cannot detect the lock signal of the polygon motor for the laser unit.

Step	Cause	Remedy
1	Connection failure of the polygon motor harness	Reconnect the polygon motor harness.
2	Laser unit failure	Replace the laser unit.
3	Main PCB failure	Replace the main PCB ASSY.

**Error code 0401**

BD sensor 1 failure

**Error code 0402**

BD sensor 4 failure

<User Check>

- There is a possibility of condensation. Turn the power switch OFF and ON, then open the front cover and the back cover and leave the machine more than 30 minutes.

Step	Cause	Remedy
1	Connection failure of the LD PCB harness	Reconnect the LD PCB harness.
2	Laser unit failure	Replace the laser unit.
3	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 0501**

The center thermistor of the fuser unit has not reached the specified temperature within the specified time.

**Error code 0502**

The center thermistor of the fuser unit has not reached the specified temperature within the specified time after it was heated normally to the certain level.

**Error code 0503**

The center thermistor of the fuser unit detected a temperature higher than the specified value.

**Error code 0504**

After the heat unit was heated normally, the center thermistor of the fuser unit detected a temperature lower than the specified value.

**Error code 0505**

The center thermistor of the fuser unit detected a temperature rise greater than the specified value within the specified time.

**Error code 0506**

The center thermistor of the fuser unit detected a temperature fall greater than the specified value within the specified time.

**<User Check>**

- Turn OFF the power switch. After several seconds, turn ON the power again and check that this error is reset.

Step	Cause	Remedy
1	Connection failure of the center or side thermistor harness of the fuser unit	Reconnect the center or side thermistor harness of the fuser unit.
2	Connection failure of the fuser unit heater harness	Reconnect the fuser unit heater harness.
3	Connection failure of the eject sensor PCB harness	Reconnect the eject sensor PCB harness.
4	Connection failure of the low-voltage power supply PCB harness	Reconnect the low-voltage power supply PCB harness.
5	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
6	Fuser unit failure	Replace the fuser unit.
7	Low-voltage power supply PCB failure	Replace the low-voltage power supply PCB ASSY.
8	Main PCB failure	Replace the main PCB ASSY.

### ■ Error code 050A

The hardware detected a temperature error through the center thermistor or the side thermistor of the fuser unit.

### Error code 050B

When the center thermistor of the fuser unit was lower than the idle temperature, the side thermistor detected a temperature higher than the specified temperature.

### Error code 050C

When the center thermistor of the fuser unit was higher than the idle temperature, the side thermistor detected a temperature lower than the specified temperature.

### <User Check>

- Turn OFF the power switch. After several seconds, turn ON the power again and check that this error is reset.

Step	Cause	Remedy
1	Connection failure of the center or side thermistor harness of the fuser unit	Reconnect the center or side thermistor harness of the fuser unit.
2	Connection failure of the fuser unit heater harness	Reconnect the fuser unit heater harness.
3	Connection failure of the eject sensor PCB harness	Reconnect the eject sensor PCB harness.
4	Connection failure of the low-voltage power supply PCB harness	Reconnect the low-voltage power supply PCB harness.
5	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
6	Fuser unit failure	Replace the fuser unit.
7	Low-voltage power supply PCB failure	Replace the low-voltage power supply PCB ASSY.
8	Main PCB failure	Replace the main PCB ASSY.

### ■ Error code 0800

An error occurred in the internal temperature sensor.

Step	Cause	Remedy
1	Connection failure of the internal temperature sensor harness	Reconnect the internal temperature sensor harness.
2	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 0900**

Detected irregular power supply for more than 100 times.

Step	Cause	Remedy
1	Low-voltage power supply PCB failure	Replace the low-voltage power supply PCB ASSY. Refer to "1.3.28 Reset counters for consumable parts (Function code 88)" in Chapter 5 to reset the irregular power supply detection counter after the replacement.
2	Main PCB failure	Replace the main PCB ASSY.

**Note:**

The irregular power supply detection error (Error code 0900) of the low-voltage power supply PCB occurs when there is a large distortion in the power supply voltage supplied to the machine. In this case, if the same power supply is used, the same error might occur again even if the low-voltage power supply PCB ASSY is replaced. For this reason, be sure to ask the user to rearrange the installation environment.

■ **Error code 0A01**

Detected a blower failure.

Step	Cause	Remedy
1	Foreign object inside the blower	Remove the foreign object.
2	Connection failure of the blower harness	Reconnect the blower harness.
3	Connection failure of the high-voltage power supply PCB harness	Reconnect the high-voltage power supply PCB harness.
4	Blower failure	Replace the blower.
5	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
6	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 0A02**

Detected a fuser fan failure.

Step	Cause	Remedy
1	Connection failure of the fuser fan harness	Reconnect the fuser fan harness.
2	Connection failure of the high-voltage power supply PCB harness	Reconnect the high-voltage power supply PCB harness.
3	Fuser fan failure	Replace the fuser fan.
4	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 0A03**

Detected a power fan failure.

Step	Cause	Remedy
1	Connection failure of the power fan harness	Reconnect the power fan harness.
2	Connection failure of the high-voltage power supply PCB harness	Reconnect the high-voltage power supply PCB harness.
3	Power fan failure	Replace the power fan.
4	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 0B01**

An error occurred in the high-voltage power supply PCB ASSY while operating.

**Error code 0B02**

An error occurred in the high-voltage power supply PCB ASSY when the machine was in the ready state.

<User Check>

- Slide the green tab of the drum unit to left and right for two to three times to clean the corona wire for all the four colors.
- There is a possibility of condensation. Turn the power switch OFF and ON, then open the front cover and the back cover and leave the machine more than 30 minutes.
- Replace the drum unit.

Step	Cause	Remedy
1	Dirt on the machine, the drum unit, the belt unit and the waste toner box terminal.	Clean the machine, the drum unit, the belt unit and the waste toner box terminal. (Refer to Fig. 2-10 (P2-73), Fig. 2-11 (P2-73), Fig. 2-16 (P2-122) and Fig. 2-17 (P2-127).)
2	Connection failure of the high-voltage power supply PCB harness	Reconnect the high-voltage power supply PCB harness.
3	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

**■ Error code 0C00**

An error occurred in the density sensor.

Step	Cause	Remedy
1	Connection failure of the registration mark sensor L PCB harness	Reconnect the registration mark sensor L PCB harness.
2	Registration mark sensor L PCB failure	Replace the registration mark sensor unit.
3	Main PCB failure	Replace the main PCB ASSY.

**■ Error code 1003**

The registration mark sensor R is dirty and cannot normally receive reflected light.

**<User Check>**

- Clean the dirt on the belt unit or replace the belt unit.
- Replace the waste toner box.

Step	Cause	Remedy
1	Dirt on the registration mark sensor R	Clean the registration mark sensor R part of the registration mark sensor R PCB.
2	Dirt by toner inside the machine	Clean inside of the machine.
3	Registration mark sensor R PCB failure	Replace the registration mark sensor unit.
4	Main PCB failure	Replace the main PCB ASSY.

**■ Error code 1004**

The registration mark sensor L is dirty and cannot normally receive reflected light.

**<User Check>**

- Clean the dirt on the belt unit or replace the belt unit.
- Replace the waste toner box.

Step	Cause	Remedy
1	Dirt on the registration mark sensor L	Clean the registration mark sensor L part of the registration mark sensor L PCB.
2	Dirt by toner inside the machine	Clean inside of the machine.
3	Registration mark sensor L PCB failure	Replace the registration mark sensor unit.
4	Main PCB failure	Replace the main PCB ASSY.

**■ Error code 1400**

Condensation occurred in the machine.

**<User Check>**

- Open the front and back covers and leave them for 30 minutes or more with the power ON. After that, close the front and back covers and turn OFF and ON the power switch.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.
2	Laser unit failure	Replace the laser unit.

**■ Error code 1500**

An error occurred in the paper eject origin sensor.

Step	Cause	Remedy
1	Connection failure of the paper eject origin sensor harness	Reconnect the paper eject origin sensor harness.
2	Paper eject origin sensor failure	Replace the paper eject origin sensor.
3	Paper eject ASSY failure	Replace the paper eject ASSY.

**■ Error code 1701**

Detected a TT fan failure.

Step	Cause	Remedy
1	Malfunction of the TT control PCB	Install the latest main firmware.
2	Connection failure of the TT fan harness	Reconnect the TT fan harness.
3	LT/TT connector failure (machine side or TT side)	Replace the LT/TT connector of the machine side or TT side.
4	TT fan failure	Replace the TT fan.
5	TT control PCB failure	Replace the TT control PCB.
6	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 1801**

A communication error occurred between the main PCB and T2LT control PCB ASSY.  
(LT only)

■ **Error code 1802**

A communication error occurred between the main PCB and T3LT control PCB ASSY.  
(LT only)

■ **Error code 1803**

A communication error occurred between the main PCB and T4LT control PCB ASSY.  
(LT only)

Step	Cause	Remedy
1	Malfunction of the LT control PCB	Install the latest main firmware.
2	An LT/TT connector failure (machine side or LT side)	Replace the appropriate LT/TT connector of the machine side or LT side.
3	An LT control PCB failure	Replace the appropriate LT control PCB ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 1808**

A communication error occurred between the main PCB and TT control PCB ASSY.

Step	Cause	Remedy
1	Malfunction of the TT control PCB	Install the latest main firmware.
2	LT/TT connector failure (machine or LT/TT joint unit side)	Replace the LT/TT connector on the machine side or LT/TT joint unit side.
3	TT control PCB failure	Replace the TT control PCB.
4	TT joint relay PCB failure	Replace the TT joint unit.
5	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 1901**

Detected a TT motor failure.

Step	Cause	Remedy
1	Malfunction of the TT control PCB	Install the latest main firmware.
2	Connection failure of the TT motor harness	Reconnect the TT motor harness.
3	LT/TT connector failure (machine or LT/TT joint unit side)	Replace the LT/TT connector on the machine side or LT/TT joint unit side.
4	TT motor failure	Replace the TT motor.
5	TT control PCB failure	Replace the TT control PCB.
6	TT joint relay PCB failure	Replace the TT joint unit.
7	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 1C00**

Unable to detect scan signal of laser unit EEPROM.

Step	Cause	Remedy
1	Connection failure of the laser unit flat cable	Reconnect the laser unit flat cable.
2	Laser unit flat cable failure	Replace the laser unit flat cable.
3	Laser unit failure	Replace the laser unit.
4	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 1F02**

TC mount sensor 1 to 4 detected that screw was not tighten surely when connecting TT.

<User Check>

- Check that the four screws to attach the TC-4000 to the machine are tighten securely. (Refer to the figure below.)

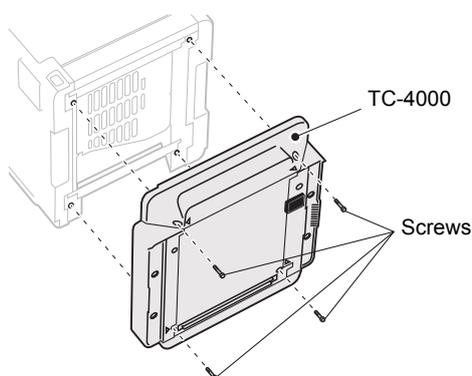


Fig. 2-9

Step	Cause	Remedy
1	Connection failure of the TC mount sensor 1 to 4 harness	Reconnect the TC mount sensor 1 to 4 harness.
2	Connection failure of the TT joint relay PCB harness	Reconnect the TT joint relay PCB harness.
3	TC mount sensor 1 to 4 attachment failure	Reattach the TC mount sensor 1 to 4.
4	LT/TT connector failure (machine or TT joint unit side)	Replace the LT/TT connector on the machine side or TT joint unit side.
5	TC mount sensor 1 to 4 failure	Replace the TT joint unit.
6	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 3801**

A temperature error occurred in the external temperature/humidity sensor.

Step	Cause	Remedy
1	Connection failure of the high-voltage power supply PCB harness	Reconnect the high-voltage power supply PCB harness.
2	External temperature/humidity sensor failure	Replace the high-voltage power supply PCB ASSY.
3	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 3A00**

A communication error occurred between the controller and engine in main PCB.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 3B01**

T2 drive transmit sensor detected that the error occurred in connection of machine drive.

**Error code 3B02**

T3 drive transmit sensor detected that the error occurred in connection of machine drive.

**Error code 3B03**

T4 drive transmit sensor detected that the error occurred in connection of machine drive.

Step	Cause	Remedy
1	Connection failure of the LT drive transmit sensor PCB harness	Reconnect the LT drive transmit sensor PCB harness.
2	Connection failure of the LT control PCB harness	Reconnect the LT control PCB harness.
3	LT control PCB failure	Replace the LT control PCB ASSY.
4	LT drive gear failure	Replace the LT unit.
5	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 4000**

Number of the drum unit rotations reaches the upper limit soon.

**Error code 4200**

Number of the drum unit rotations has reached the upper limit. (Printing does not stop.)

<User Check>

- Prepare a new drum unit.

Step	Cause	Remedy
1	Replace the drum unit with a new one and reset the drum counter. If the error display is not cleared, the main PCB is faulty.	Replace the main PCB ASSY.

■ **Error code 4300**

Number of pages printed with the belt unit will reach the upper limit soon. (90%)

**Error code 4400**

Number of pages printed with the belt unit has reached the upper limit. (Printing does not stop.)

<User Check>

- Prepare a new belt unit.

Step	Cause	Remedy
1	Replace the belt unit with a new one and reset the belt counter. If the error display is not cleared, the main PCB is faulty.	Replace the main PCB ASSY.

■ **Error code 4500**

Number of used pages for the fuser unit has reached the upper limit. (Printing does not stop.)

Step	Cause	Remedy
1	End of life of the fuser unit	Replace the fuser unit. Refer to "1.3.28 Reset counters for consumable parts (Function code 88)" in Chapter 5 to reset the fuser unit counter after the replacement.
2	Replace the fuser unit with a new one and reset the fuser unit counter. If the error display is not cleared, the main PCB is faulty.	Replace the main PCB ASSY.

■ **Error code 4600**

Number of pages printed with the laser unit has reached the upper limit.

Step	Cause	Remedy
1	End of life of the laser unit	Replace the laser unit. Refer to "1.3.28 Reset counters for consumable parts (Function code 88)" in Chapter 5 to reset the laser unit counter after the replacement.
2	Replace the laser unit with a new one and reset the laser unit counter. If the error display is not cleared, the main PCB is faulty.	Replace the main PCB ASSY.

■ **Error code 4700**

The waste toner sensor detected that the waste toner box is almost full.

**Error code 4800**

After the waste toner sensor detected that the waste toner box was almost full, pages more than the specified number have been printed.

**Error code 4900**

Belt cleaner detected that smaller voltage than the specified one and detected almost end of life of the waste toner box.

<User Check>

- Replace the waste toner box.

Step	Cause	Remedy
1	Connection failure of the waste toner sensor harness	Reconnect the waste toner sensor harness.
2	Connection failure of the high-voltage power supply PCB harness	Reconnect the high-voltage power supply PCB harness.
3	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 4B01**

Dot counter of the toner cartridge (Black) or develop roller counter reaches the upper limit soon.

**Error code 4B02**

Dot counter of the toner cartridge (Yellow) or develop roller counter reaches the upper limit soon.

**Error code 4B03**

Dot counter of the toner cartridge (Magenta) or develop roller counter reaches the upper limit soon.

**Error code 4B04**

Dot counter of the toner cartridge (Cyan) or develop roller counter reaches the upper limit soon.

**<User Check>**

- Prepare a new toner cartridge.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 4C01**

Dot counter of the toner cartridge (Black) or develop roller counter has reached the upper limit was detected.

**Error code 4C02**

Dot counter of the toner cartridge (Yellow) or develop roller counter has reached the upper limit was detected.

**Error code 4C03**

Dot counter of the toner cartridge (Magenta) or develop roller counter has reached the upper limit was detected.

**Error code 4C04**

Dot counter of the toner cartridge (Cyan) or develop roller counter has reached the upper limit was detected.

**Error code 4C05**

During printing, dot counter of color toner cartridge or develop roller counter has reached the upper limit was detected.

**<User Check>**

- Replace the toner cartridge whose counter reached the upper limit.

Step	Cause	Remedy
1	Replace the toner cartridge with a new one and reset the toner counter. If the error display is not cleared, the main PCB is faulty.	Replace the main PCB ASSY.

■ **Error code 4F01**

The new toner sensor of the toner cartridge (Black) could not detect a new cartridge properly.

**Error code 4F02**

The new toner sensor of the toner cartridge (Yellow) could not detect a new cartridge properly.

**Error code 4F03**

The new toner sensor of the toner cartridge (Magenta) could not detect a new cartridge properly.

**Error code 4F04**

The new toner sensor of the toner cartridge (Cyan) could not detect a new cartridge properly.

<User Check>

- Replace the toner cartridge with a new toner cartridge again.
- If the machine is on the uneven surface, place it on a level surface.

Step	Cause	Remedy
1	Connection failure of the toner/new sensor PCB harness	Reconnect the toner/new sensor PCB harness.
2	New toner actuator coming off or caught in some sections of the machine	Reattach the new toner actuator.
3	New toner sensor failure	Replace the toner/new sensor PCB ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 5001**

Number of used pages for the PF kit MP has reached the upper limit. (Printing does not stop.)

Step	Cause	Remedy
1	End of life of the PF kit MP	Replace the PF kit MP. Refer to "1.3.28 Reset counters for consumable parts (Function code 88)" in Chapter 5 to reset the PF kit MP counter after the replacement.
2	If the error display is not cleared after the PF kit MP counter has been reset, the main PCB is faulty.	Replace the main PCB ASSY.

■ **Error code 5002**

Number of used pages for the PF kit 1 has reached the upper limit. (Printing does not stop.)

Step	Cause	Remedy
1	End of life of the PF kit 1	Replace the PF kit 1. Refer to "1.3.28 Reset counters for consumable parts (Function code 88)" in Chapter 5 to reset the PF kit 1 counter after the replacement.
2	If the error display is not cleared after the PF kit 1 counter has been reset, the main PCB is faulty.	Replace the main PCB ASSY.

**■ Error code 5003**

Number of used pages for the PF kit 2 has reached the upper limit. (Printing does not stop.)

Step	Cause	Remedy
1	End of life of the PF kit 2	Replace the PF kit 2. Refer to "1.3.28 Reset counters for consumable parts (Function code 88)" in Chapter 5 to reset the PF kit 2 counter after the replacement.
2	If the error display is not cleared after the PF kit 2 counter has been reset, the main PCB is faulty.	Replace the main PCB ASSY.

**■ Error code 5004**

Number of used pages for the PF kit 3 has reached the upper limit. (Printing does not stop.)

Step	Cause	Remedy
1	End of life of the PF kit 3	Replace the PF kit 3. Refer to "1.3.28 Reset counters for consumable parts (Function code 88)" in Chapter 5 to reset the PF kit 3 counter after the replacement.
2	If the error display is not cleared after the PF kit 3 counter has been reset, the main PCB is faulty.	Replace the main PCB ASSY.

**■ Error code 5005**

Number of used pages for the PF kit 4 has reached the upper limit. (Printing does not stop.)

Step	Cause	Remedy
1	End of life of the PF kit 4	Replace the PF kit 4. Refer to "1.3.28 Reset counters for consumable parts (Function code 88)" in Chapter 5 to reset the PF kit 4 counter after the replacement.
2	If the error display is not cleared after the PF kit 4 counter has been reset, the main PCB is faulty.	Replace the main PCB ASSY.

**■ Error code 5006**

Number of used pages for the PF kit 5 has reached the upper limit. (Printing does not stop.)

Step	Cause	Remedy
1	End of life of the PF kit 5	Replace the PF kit 5. Refer to "1.3.28 Reset counters for consumable parts (Function code 88)" in Chapter 5 to reset the PF kit 5 counter after the replacement.
2	If the error display is not cleared after the PF kit 5 counter has been reset, the main PCB is faulty.	Replace the main PCB ASSY.

■ **Error code 6001**

The front cover sensor detected that the front cover was open.

**<User Check>**

- Close the front cover.

Step	Cause	Remedy
1	Connection failure of the front cover sensor harness	Reconnect the front cover sensor harness.
2	Front cover failure	Replace the front cover.
3	Front cover sensor failure	Replace the front cover sensor.
4	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 6004**

The eject sensor detected that the fuser cover was open.

**<User Check>**

- Close the fuser cover.

Step	Cause	Remedy
1	Eject actuator coming off or caught in some sections of the machine	Reattach the eject actuator.
2	Fuser cover attachment failure	Reattach the fuser cover.
3	Connection failure of the eject sensor PCB harness	Reconnect the eject sensor PCB harness.
4	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 6101**

The toner amount detection sensor detected that no toner cartridge (Black) was set.

**Error code 6102**

The toner amount detection sensor detected that no toner cartridge (Yellow) was set.

**Error code 6103**

The toner amount detection sensor detected that no toner cartridge (Magenta) was set.

**Error code 6104**

The toner amount detection sensor detected that no toner cartridge (Cyan) was set.

**<User Check>**

- Set the toner cartridge correctly.

Step	Cause	Remedy
1	Connection failure of the toner amount detection sensor PCB (light reception) harness	Reconnect the toner amount detection sensor PCB (light reception) harness.
2	Toner amount detection sensor PCB (light reception) failure	Replace the toner/new sensor PCB ASSY.
3	Toner sensor (light emission) failure	Replace the high-voltage power supply PCB ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 6200**

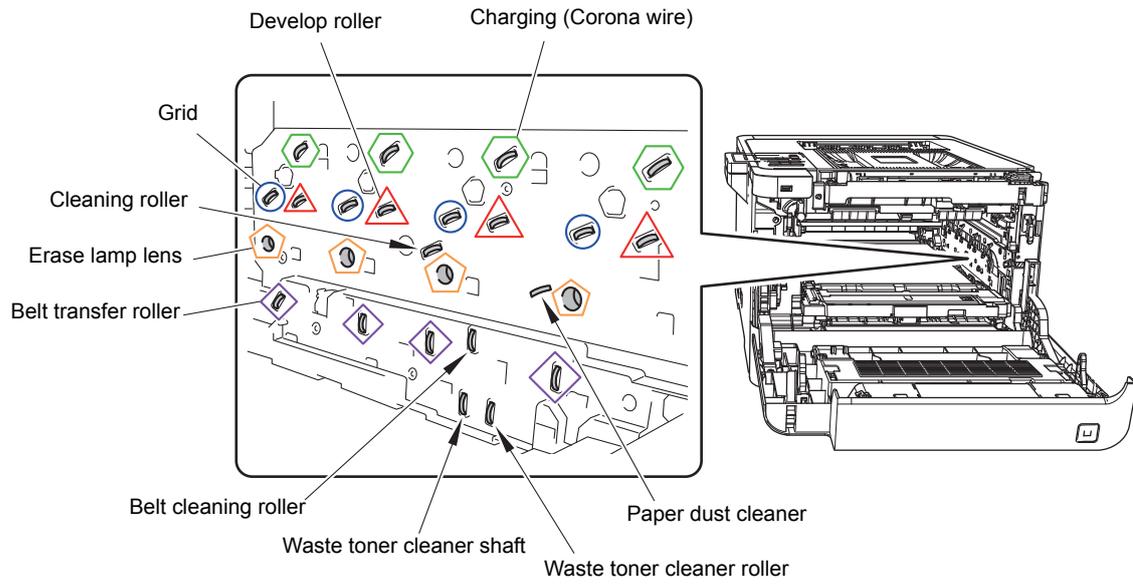
The high-voltage output error of the corona charging terminal was detected and detected that the drum unit was not set.

**<User Check>**

- Set the drum unit correctly.

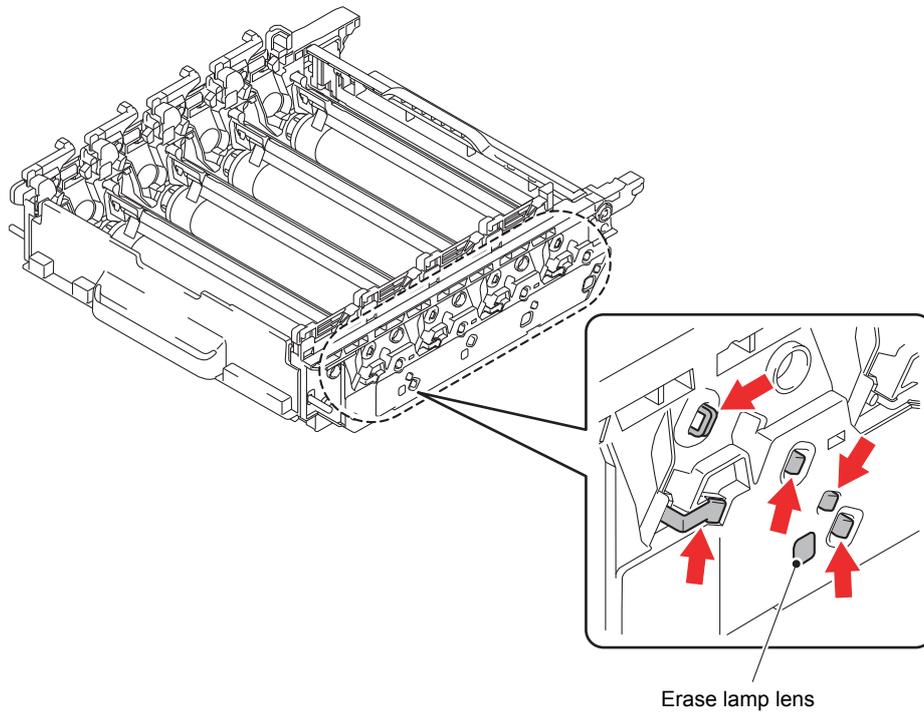
Step	Cause	Remedy
1	Dirt on the charge (corona wire) terminal of the drum unit and those of the machine	Clean the charge (corona wire) terminal of the drum unit and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-11 (P2-73).)
2	Dirt on the high-voltage power supply PCB terminal	Clean the high-voltage power supply PCB terminal.
3	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

■ **Electrodes location of main body**



**Fig. 2-10**

■ **Electrodes location of the drum unit**



**Fig. 2-11**

**■ Error code 6300**

The waste toner sensor detected that no waste toner box was set.

**<User Check>**

- Re-insert the waste toner box in the correct position.

Step	Cause	Remedy
1	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
2	Main PCB failure	Replace the main PCB ASSY.

**■ Error code 6400**

The registration mark sensor detected that no belt unit was set.

**<User Check>**

- Re-insert the belt unit.

Step	Cause	Remedy
1	Connection failure of the registration mark sensor L PCB harness	Reconnect the registration mark sensor L PCB harness.
2	Registration mark sensor L failure	Replace the registration mark sensor unit.
3	Main PCB failure	Replace the main PCB ASSY.

**■ Error code 6801**

The internal temperature sensor detected a temperature higher than the specified value.

**<User Check>**

- Lower the room temperature.
- Keep the machine away from heating appliances.
- Check that the fan is not clogged.

Step	Cause	Remedy
1	Connection failure of the internal temperature sensor harness	Reconnect the internal temperature sensor harness.
2	Fuser unit thermistor failure	Replace the fuser unit.
3	Main PCB failure	Replace the main PCB ASSY.

### ■ Error code 6901

Some fuser unit errors occurred at power-ON or upon recovery from sleep mode.

### Error code 6902

After the error was detected at the fuser unit, power was turned ON again and the error is being checked. (If power is turned OFF and ON after error code 6901 occurred, this code is displayed for about 15 minutes.)

Step	Cause	Remedy
1	Connection failure of a fuser unit harness	Reconnect the fuser unit harness.
2	Connection failure of the eject sensor PCB harness	Reconnect the eject sensor PCB harness.
3	Fuser unit failure	Replace the fuser unit.
4	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
5	Low-voltage power supply PCB failure	Replace the low-voltage power supply PCB ASSY.
6	Main PCB failure	Replace the main PCB ASSY.

#### Note:

- Turn OFF the power switch. After the fuser unit has cooled sufficiently, turn ON the power switch again and leave the machine for 15 minutes. This problem may then be cleared.
- To release the fuser unit error after taking appropriate measures, enter the maintenance mode once and quit it with the function code 99.

### ■ Error code 6A00

Electric discharge that may be caused by dirt on the corona wire of the drum unit was detected.

### Error code 6B01

Electric discharge was detected when the number of the drum unit rotations had become more than twice of the upper limit.

#### <User Check>

- Slide the green tab of the drum unit to left and right for two to three times to clean the corona wire of all 4 colors.
- Clean the electrode of the drum unit. (Refer to [Fig. 2-11 \(P2-73\)](#))
- Replace the drum unit.

Step	Cause	Remedy
1	Dirt on the GRID terminals of the machine	Clean the GRID terminals of the machine. (Refer to <a href="#">Fig. 2-10 (P2-73)</a> .)
2	Dirt on the high-voltage power supply PCB terminal	Clean the high-voltage power supply PCB terminal.
3	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 6C02**

After the T2 is opened and closed or the power is turned ON, the T2 plate origin sensor detects that lift-up of the plate of the T2 is not completed within the specified period of time.

**Error code 6C03**

After the T3 is opened and closed or the power is turned ON, the T3 plate origin sensor detects that lift-up of the plate of the T3 is not completed within the specified period of time.

**<User Check>**

- Open the T2 or T3 and close the T2 or T3 correctly.

Step	Cause	Remedy
1	Connection failure of the LT paper empty/plate origin sensor PCB harness	Reconnect the LT paper empty/plate origin sensor PCB harness.
2	Connection failure of the LT connector upper/lower harness	Reconnect the LT connector upper/lower harness.
3	LT control PCB failure	Replace the LT control PCB ASSY.
4	Plate origin sensor failure	Replace the LT paper empty/plate origin sensor PCB ASSY.
5	LT drive gear failure	Replace the LT unit.
6	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 6D00**

Detected more LTs than connectible limit, or the model unconnectable to TT connected to TT.

**<User Check>**

- Reduce LTs to acceptable numbers.
- Reconnect LTs.
- Remove the connected TT.

Step	Cause	Remedy
1	Dust around the LT/TT connector	Clean the LT/TT connector.
2	Malfunction of the LT control PCB or TT control PCB	Install the latest main firmware.
3	Machine or LT/TT connector failure	Replace the machine or LT/TT connector.
4	An LT control PCB failure	Replace an LT control PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 6E00**

The develop release sensor detected the develop roller disengagement or engagement failure.

Step	Cause	Remedy
1	Connection failure of the develop release sensor harness	Reconnect the develop release sensor harness.
2	Develop release sensor failure	Replace the develop release sensor PCB.
3	Develop release clutch failure	Replace the develop release drive unit.
4	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 6F00**

Detected that supply power is unstable. (less than 100 times)

<User Check>

- Turn the power switch OFF and then back ON again.
- Use a noise filter on the power supply.

Step	Cause	Remedy
1	The power supply waveform is incorrect	Install a voltage stabilizer in the power supply part.

■ **Error code 7000**

After the registration rear sensor detects paper pass, the eject sensor does not detect paper pass.

<User Check>

- Remove the jammed paper.

Step	Cause	Remedy
1	Foreign object inside the machine	Remove the foreign object.
2	Eject actuator coming off or caught in some sections of the machine	Reattach the eject actuator.
3	Fuser cover attachment failure	Reattach the fuser cover.
4	Connection failure of the eject sensor PCB harness	Reconnect the eject sensor PCB harness.
5	Damaged fuser drive gear Z25	Replace the fuser drive gear Z25.
6	Damaged gears in the process drive system	Replace the process drive unit.
7	Damaged gears in the paper feed drive unit	Replace the paper feed drive unit.
8	Eject sensor failure	Replace the eject sensor PCB ASSY.
9	Fuser unit failure	Replace the fuser unit.
10	Main PCB failure	Replace the main PCB ASSY.

## ■ Error code 7100

After the registration rear sensor detects the end of paper pass and the specified period of time has passed, the eject sensor continues to detect paper pass.

### <User Check>

- Remove the jammed paper.
- Check if the back cover is open during duplex printing.

Step	Cause	Remedy
1	Foreign object in the rear of the machine	Remove the foreign object.
2	Eject actuator caught in some sections of the machine	Reattach the eject actuator.
3	Fuser cover attachment failure	Reattach the fuser cover.
4	Back cover attachment failure	Reattach the back cover.
5	Eject sensor failure	Replace the eject sensor PCB ASSY.
6	Back cover failure	Replace the back cover.
7	Damaged fuser drive gear Z25	Replace the fuser drive gear Z25.
8	Paper eject ASSY failure	Replace the paper eject ASSY.
9	Damaged gears in the paper feed drive unit	Replace the paper feed drive unit.
10	Fuser unit failure	Replace the fuser unit.
11	Main PCB failure	Replace the main PCB ASSY.

## ■ Error code 7200

When the paper is fed from the MP tray, after the MP registration front sensor detects paper pass, the registration rear sensor does not detect paper pass after a set period of time.

### <User Check>

- Remove the jammed paper.
- Add the paper properly using the MP tray paper guide.
- Check if the papers loaded in the MP tray is not held down with your hand.
- Check if the double feed occurs in the MP tray.
- Close the front cover correctly.
- Check if the machine is used with the MP tray support and MP flap are in closed state.

Step	Cause	Remedy
1	Foreign object in the rear of the machine	Remove the foreign object.
2	Registration rear actuator coming off or caught in some sections of the machine	Reattach the registration rear actuator.
3	Connection failure of the registration front/rear sensor PCB harness	Reconnect the registration front/rear sensor PCB harness.
4	MP unit attachment failure	Reattach the MP unit.
5	MP separation pad worn out	Replace the PF kit MP.
6	Registration rear sensor failure	Replace the registration front/rear sensor PCB.
7	Damaged gears in the paper feed drive unit	Replace the paper feed drive unit.
8	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 7301**

When printing from the T1, the T1 paper feed sensor does not detect paper pass within the specified time while the T1 paper empty sensor detects some paper set.

**<User Check>**

- Remove the jammed paper.
- Add the paper properly using the T1 paper guide.

Step	Cause	Remedy
1	Foreign object in the front of the machine	Remove the foreign object.
2	T1 paper pick up roller holder attachment failure	Reattach the T1 paper pick up roller holder.
3	T1 paper feed actuator attachment failure	Reattach the T1 paper feed actuator.
4	Connection failure of the T1 pickup clutch harness	Reconnect the T1 pickup clutch harness.
5	Connection failure of the T1 paper empty/paper feed sensor harness	Reconnect the T1 paper empty/paper feed sensor harness.
6	PF kit 1 failure	Replace the PF kit 1.
7	T1 paper empty/paper feed sensor PCB failure	Replace the T1 paper empty/paper feed sensor PCB ASSY.
8	Damaged gears in the paper feed drive unit	Replace the paper feed drive unit.
9	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 7302**

When printing from the T1, the registration front sensor does not detect paper pass within the specified time after the T1 paper feed sensor detected paper pass.

**<User Check>**

- Remove the jammed paper.
- Add the paper properly using the T1 paper guide.

Step	Cause	Remedy
1	Foreign object in the front of the machine	Remove the foreign object.
2	Registration front actuator attachment failure	Reattach the registration front actuator.
3	Connection failure of the registration front/rear sensor harness	Reconnect the registration front/rear sensor harness.
4	Registration front/rear sensor PCB failure	Replace the registration front/rear sensor PCB ASSY.
5	Damaged gears in the paper feed drive unit	Replace the paper feed drive unit.
6	Main PCB failure	Replace the main PCB ASSY.

## ■ Error code 7401

When printing from the T2, the T2(LT or TT) paper feed sensor does not detect paper pass within the specified time while the T2(LT or TT) paper empty sensor detects some paper set.

### <User Check>

- Remove the jammed paper.
- Add the paper properly using the T2 paper guide.
- Install the latest main firmware.

Step	Cause	Remedy
1	Foreign object in the front of the machine	Remove the foreign object.
2	T2(LT or TT) paper feed actuator attachment failure	Reattach the T2(LT or TT) paper feed actuator.
3	T2(LT or TT) paper pick up roller holder attachment failure	Reattach the T2(LT or TT) paper pick up roller holder.
4	Connection failure of the T2TT paper feed sensor harness	Reconnect the T2TT paper feed sensor harness.
5	Connection failure of the LT paper feed sensor harness (Models with 500-sheet only)	Reconnect the LT paper feed sensor harness.
6	Connection failure of the LT paper empty/paper feed sensor harness (Models with 250-sheet only)	Reconnect the LT paper empty/paper feed sensor harness.
7	Connection failure of the TT control PCB harness	Reconnect the TT control PCB harness.
8	Connection failure of the T2LT control PCB harness	Reconnect the T2LT control PCB harness.
9	Connection failure of the T2(LT or TT) pickup clutch harness	Reconnect the T2(LT or TT) pickup clutch harness.
10	Connection failure of LT drive transmit sensor harness (Models with 250-sheet only)	Reconnect the LT drive transmit sensor harness.
11	Connection failure of the LT drive transmit clutch harness (Models with 250-sheet only)	Reconnect the LT drive transmit clutch harness.
12	T2TT paper feed sensor failure	Replace the T2TT paper feed sensor PCB ASSY.
13	LT paper feed sensor failure (Models with 250-sheet only)	Replace the LT paper empty/paper feed sensor PCB ASSY.
14	Damaged gears in the paper feed drive unit (LT only)	Replace the paper feed drive unit.
15	Damaged gears in the LT paper feeding system	Replace the LT.
16	Damaged gears in the TT paper feeding system	Replace the TT.
17	Main PCB failure	Replace the main PCB ASSY.

## ■ Error code 7402

When printing from T2, the registration front sensor does not detect paper pass within the specified time after the T2(LT or TT) paper feed sensor detected paper pass.

### <User Check>

- Remove the jammed paper.
- Add the paper properly using the T2 paper guide.
- Install the latest main firmware.

Step	Cause	Remedy
1	Foreign object in the front of the machine	Remove the foreign object.
2	Registration front actuator attachment failure	Reattach the registration front actuator.
3	T2TT jam sensor attachment failure	Reattach the T2TT jam sensor.
4	Connection failure of the registration front/rear sensor harness	Reconnect the registration front/rear sensor harness.
5	Connection failure of the T2TT jam sensor harness	Reconnect the T2TT jam sensor harness.
6	Connection failure of the TT control PCB harness	Reconnect the TT control PCB harness.
7	Connection failure of the T2LT control PCB harness	Reconnect the T2LT control PCB harness.
8	Registration front/rear sensor PCB failure	Replace the registration front/rear sensor PCB ASSY.
9	T2TT jam sensor PCB failure	Replace the T2TT jam sensor PCB ASSY.
10	TT control PCB failure	Replace the TT control PCB ASSY.
11	T2LT control PCB failure	Replace the T2LT control PCB ASSY.
12	Damaged gears in the paper feed drive unit	Replace the paper feed drive unit.
13	TT drive transmit clutch failure	Replace the TT joint unit.
14	Damaged gears in the LT paper feeding system	Replace the LT.
15	Damaged gears in the TT paper feeding system	Replace the TT.
16	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 7501**

When printing from the T3, the T3(LT or TT) paper feed sensor does not detect paper pass within the specified time while the T3(LT or TT) paper empty sensor detects some paper set.

**<User Check>**

- Remove the jammed paper.
- Add the paper properly using the T3 paper guide.

Step	Cause	Remedy
1	Foreign object in the front of the machine	Remove the foreign object.
2	T3(LT or TT) paper feed actuator attachment failure	Reattach the T3(LT or TT) paper feed actuator.
3	T3(LT or TT) paper pick up roller holder attachment failure	Reattach the T3(LT or TT) paper pick up roller holder.
4	Connection failure of the T3TT paper feed sensor harness	Reconnect the T3TT paper feed sensor harness.
5	Connection failure of the LT paper feed sensor harness (Models with 500-sheet only)	Reconnect the LT paper feed sensor harness.
6	Connection failure of the LT paper empty/paper feed sensor harness (Models with 250-sheet only)	Reconnect the LT paper empty/paper feed sensor harness.
7	Connection failure of the TT control PCB harness	Reconnect the TT control PCB harness.
8	Connection failure of the T3LT control PCB harness	Reconnect the T3LT control PCB harness.
9	Connection failure of the T3(LT or TT) pickup clutch harness	Reconnect the T3(LT or TT) pickup clutch harness.
10	Connection failure of LT drive transmit sensor harness (Models with 250-sheet only)	Reconnect the LT drive transmit sensor harness.
11	Connection failure of the LT drive transmit clutch harness (Models with 250-sheet only)	Reconnect the LT drive transmit clutch harness.
12	T3TT paper feed sensor failure	Replace the T3TT paper feed sensor PCB ASSY.
13	LT paper feed sensor failure (Models with 250-sheet only)	Replace the LT paper empty/paper feed sensor PCB ASSY.
14	Damaged gears in the paper feed drive unit (LT only)	Replace the paper feed drive unit.
15	Damaged gears in the LT paper feeding system	Replace the LT.
16	Damaged gears in the TT paper feeding system	Replace the TT.
17	Main PCB failure	Replace the main PCB ASSY.

## ■ Error code 7502

When printing from T3, the registration front sensor does not detect paper pass within the specified time after the T3(LT or TT) paper feed sensor detected paper pass.

### <User Check>

- Remove the jammed paper.
- Add the paper properly using the T3 paper guide.
- Install the latest main firmware.

Step	Cause	Remedy
1	Foreign object in the front of the machine	Remove the foreign object.
2	Registration front actuator attachment failure	Reattach the registration front actuator.
3	T2/T3TT jam sensor attachment failure	Reattach the T2/T3TT jam sensor.
4	Connection failure of the registration front/rear sensor harness	Reconnect the registration front/rear sensor harness.
5	Connection failure of the T2/T3TT jam sensor harness	Reconnect the T2/T3TT jam sensor harness.
6	Connection failure of the TT control PCB harness	Reconnect the TT control PCB harness.
7	Connection failure of the T2/T3LT control PCB harness	Reconnect the T2/T3LT control PCB harness.
8	Connection failure of the T3TT release clutch harness	Reconnect the T3TT release clutch harness.
9	T3TT release clutch failure	Replace the T3TT release clutch.
10	Registration front/rear sensor PCB failure	Replace the registration front/rear sensor PCB ASSY.
11	T2/T3TT jam sensor PCB failure	Replace the T2/T3TT jam sensor PCB ASSY.
12	TT control PCB failure	Replace the TT control PCB ASSY.
13	T2/T3LT control PCB failure	Replace the T2/T3LT control PCB ASSY.
14	Damaged gears in the paper feed drive unit	Replace the paper feed drive unit.
15	TT drive transmit clutch failure	Replace the TT joint unit.
16	Damaged gears in an LT paper feeding system	Replace the LT.
17	Damaged gears in the TT paper feeding system	Replace the TT.
18	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 7601**

When printing from the T4, the T4(LT or TT) paper feed sensor does not detect paper pass within the specified time while the T4(LT or TT) paper empty sensor detects some paper set.

**<User Check>**

- Remove the jammed paper.
- Add the paper properly using the T4 paper guide.

Step	Cause	Remedy
1	Foreign object in the front of the machine	Remove the foreign object.
2	T4(LT or TT) paper feed actuator attachment failure	Reattach the T4(LT or TT) paper feed actuator.
3	T4(LT or TT) paper pick up roller holder attachment failure	Reattach the T4(LT or TT) paper pick up roller holder.
4	Connection failure of the T4TT paper feed sensor harness	Reconnect the T4TT paper feed sensor harness.
5	Connection failure of the LT paper empty/paper feed sensor harness (Models with 250-sheet only)	Reconnect the LT paper empty/paper feed sensor harness.
6	Connection failure of the TT control PCB harness	Reconnect the TT control PCB harness.
7	Connection failure of the T4LT control PCB harness	Reconnect the T4LT control PCB harness.
8	Connection failure of the T4(LT or TT) pickup clutch harness	Reconnect the T4(LT or TT) pickup clutch harness.
9	Connection failure of LT drive transmit sensor harness (Models with 250-sheet only)	Reconnect the LT drive transmit sensor harness.
10	Connection failure of the LT drive transmit clutch harness (Models with 250-sheet only)	Reconnect the LT drive transmit clutch harness.
11	T4TT paper feed sensor failure	Replace the T4TT paper feed sensor PCB ASSY.
12	LT paper feed sensor failure (Models with 250-sheet only)	Replace the LT paper empty/paper feed sensor PCB ASSY.
13	Damaged gears in the paper feed drive unit (Models with 250-sheet only)	Replace the paper feed drive unit.
14	Damaged gears in the LT paper feeding system	Replace the LT.
15	Damaged gears in the TT paper feeding system	Replace the TT.
16	Main PCB failure	Replace the main PCB ASSY.

## ■ Error code 7602

When printing from T4, the registration front sensor does not detect paper pass within the specified time after the T4(LT or TT) paper feed sensor detected paper pass.

### <User Check>

- Remove the jammed paper.
- Add the paper properly using the T4 paper guide.
- Install the latest main firmware.

Step	Cause	Remedy
1	Foreign object in the front of the machine	Remove the foreign object.
2	Registration front actuator attachment failure	Reattach the registration front actuator.
3	T2/T3/T4TT jam sensor attachment failure	Reattach the T2/T3/T4TT jam sensor.
4	Connection failure of the registration front/rear sensor harness	Reconnect the registration front/rear sensor harness.
5	Connection failure of the T2/T3/T4TT jam sensor harness	Reconnect the T2/T3/T4TT jam sensor harness.
6	Connection failure of the TT control PCB harness	Reconnect the TT control PCB harness.
7	Connection failure of the T2/T3/T4LT control PCB harness	Reconnect the T2/T3/T4LT control PCB harness.
8	Connection failure of the T3/T4TT release clutch harness	Reconnect the T3/T4TT release clutch harness.
9	T3/T4TT release clutch failure	Replace the T3/T4TT release clutch.
10	Registration front/rear sensor PCB failure	Replace the registration front/rear sensor PCB ASSY.
11	T2/T3/T4TT jam sensor PCB failure	Replace the T2/T3/T4TT jam sensor PCB ASSY.
12	TT control PCB failure	Replace the TT control PCB ASSY.
13	T2/T3/T4LT control PCB failure	Replace the T2/T3/T4LT control PCB ASSY.
14	Damaged gears in the paper feed drive unit	Replace the paper feed drive unit.
15	TT drive transmit clutch failure	Replace the TT joint unit.
16	Damaged gears in an LT paper feeding system	Replace the LT.
17	Damaged gears in the TT paper feeding system	Replace the TT.
18	Main PCB failure	Replace the main PCB ASSY.

## ■ Error code 7701

When printing from the T5, the T5TT paper feed sensor does not detect paper pass within the specified time while the T5TT paper empty sensor detects some paper set.

### <User Check>

- Remove the jammed paper.
- Add the paper properly using the T5 paper guide.

Step	Cause	Remedy
1	Foreign object in the front of the machine	Remove the foreign object.
2	Malfunction of the TT control PCB	Install the latest main firmware.
3	T5TT paper pick up roller holder attachment failure	Reattach the T5TT paper pick up roller holder.
4	T5TT paper feed actuator attachment failure	Reattach the T5TT paper feed actuator.
5	Connection failure of the T5TT pickup clutch harness	Reconnect the T5TT pickup clutch harness.
6	Connection failure of the T5TT paper feed sensor harness	Reconnect the T5TT paper feed sensor harness.
7	PF kit 5 failure	Replace the PF kit 5.
8	T5TT pickup clutch failure	Replace the T5TT pickup clutch.
9	T5TT paper feed sensor PCB failure	Replace the T5TT paper feed sensor PCB ASSY.
10	T5TT paper empty sensor PCB failure	Replace the T5TT paper empty sensor PCB ASSY.
11	TT control PCB failure	Replace the TT control PCB ASSY.
12	TT drive transmit clutch failure	Replace the TT joint unit.
13	Main PCB failure	Replace the main PCB ASSY.

## ■ Error code 7702

When printing from T5, the registration front sensor does not detect paper pass within the specified time after the T5TT paper feed sensor detected paper pass.

### <User Check>

- Remove the jammed paper.
- Add the paper properly using the T5 paper guide.
- Install the latest main firmware.

Step	Cause	Remedy
1	Foreign object in the front of the machine	Remove the foreign object.
2	Registration front actuator attachment failure	Reattach the registration front actuator.
3	T2/T3/T4/T5TT jam sensor attachment failure	Reattach the T2/T3/T4/T5TT jam sensor.
4	Connection failure of the registration front/rear sensor harness	Reconnect the registration front/rear sensor harness.
5	Connection failure of the T2/T3/T4/T5TT jam sensor harness	Reconnect the T2/T3/T4/T5TT jam sensor harness.
6	Connection failure of the TT control PCB harness	Reconnect the TT control PCB harness.
7	Connection failure of the T3/T4/T5TT release clutch harness	Reconnect the T3/T4/T5TT release clutch harness.
8	T3/T4/T5TT release clutch failure	Replace the T3/T4/T5TT release clutch.
9	Registration front/rear sensor PCB failure	Replace the registration front/rear sensor PCB ASSY.
10	T2/T3/T4/T5TT jam sensor PCB failure	Replace the T2/T3/T4/T5TT jam sensor PCB ASSY.
11	TT control PCB failure	Replace the TT control PCB ASSY.
12	Damaged gears in the paper feed drive unit	Replace the paper feed drive unit.
13	TT drive transmit clutch failure	Replace the TT joint unit.
14	Damaged gears in the TT paper feeding system	Replace the TT.
15	Main PCB failure	Replace the main PCB ASSY.

### ■ Error code 7800

After the first side is printed in 2-sided printing mode, the registration front sensor does not detect paper pass after a set period of time.

#### <User Check>

- Remove the jammed paper.
- Close the back cover correctly.

Step	Cause	Remedy
1	Foreign object in the rear of the machine or duplex tray	Remove the foreign object.
2	Back flapper holder attachment failure	Reattach the back flapper holder.
3	Twisted TT frame	Loosen the nine screws shown in the figure below and tighten them again.
4	Connection failure of the switch back solenoid harness	Reconnect the switch back solenoid harness.
5	Paper eject roller failure	Replace the paper eject ASSY.
6	Main PCB failure	Replace the main PCB ASSY.

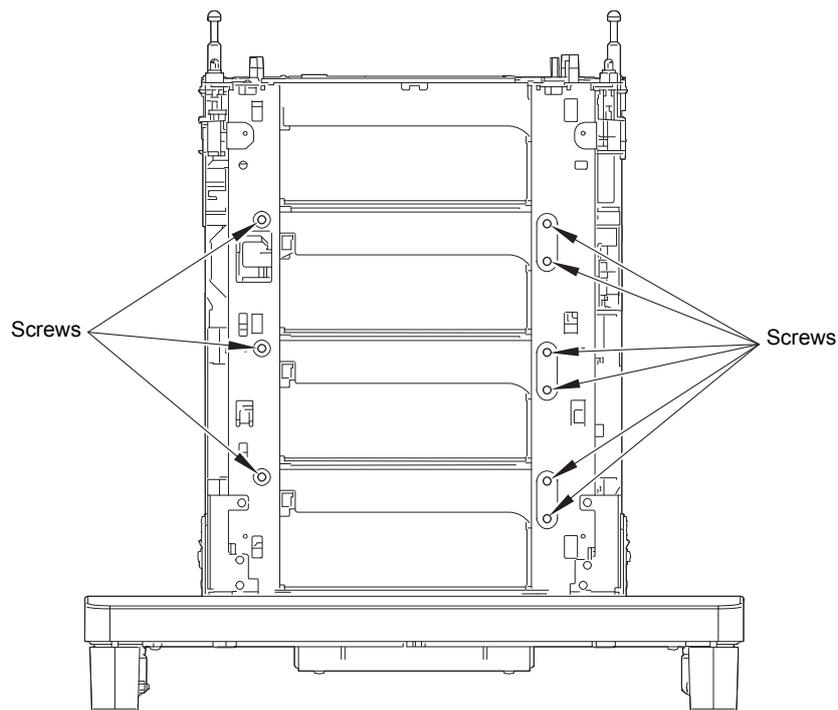


Fig. 2-12

■ **Error code 8501**

The T1 paper feed sensor detected that the T1 is open when printing from T1, 2, 3, 4 or 5 (before the registration of printing in the engine).

**Error code 8502**

The T2(LT or TT) paper feed sensor detected that the T2 is open when printing from T2, 3, 4 or 5 (before the registration of printing in the engine).

**Error code 8503**

The T3(LT or TT) paper feed sensor detected that the T3 is open when printing from T3, 4 or 5 (before the registration of printing in the engine).

**Error code 8504**

The T4(LT or TT) paper feed sensor detected that the T4 is open when printing from T4 or 5 (before the registration of printing in the engine).

**<User Check>**

- Close the appropriate paper tray correctly.

Step	Cause	Remedy
1	Malfunction of an LT control PCB or TT control PCB	Install the latest main firmware.
2	An LT/TT paper feed actuator coming off or caught in some sections of the machine	Reattach the appropriate LT/TT paper feed actuator.
3	An LT/TT paper feed sensor failure	Replace the appropriate LT paper empty/paper feed sensor PCB ASSY or TT paper feed sensor PCB ASSY.
4	An LT control PCB failure	Replace the appropriate LT control PCB ASSY.
5	TT relay PCB failure	Replace a TT relay PCB ASSY.
6	TT control PCB failure	Replace the TT control PCB ASSY.
7	Main PCB failure	Replace the main PCB ASSY.

**■ Error code 8505**

The T1 paper feed sensor detected that the T1 is open when printing from T1, 2, 3, 4 or 5 (after the registration of printing in the engine).

**Error code 8506**

The T2(LT or TT) paper feed sensor detected that the T2 is open when printing from T2, 3, 4 or 5 (after the registration of printing in the engine).

**Error code 8507**

The T3(LT or TT) paper feed sensor detected that the T3 is open when printing from T3, 4 or 5 (after the registration of printing in the engine).

**Error code 8508**

The T4(LT or TT) paper feed sensor detected that the T4 is open when printing from T4 or 5 (after the registration of printing in the engine).

**<User Check>**

- Close the appropriate paper tray correctly.

Step	Cause	Remedy
1	Malfunction of an LT control PCB or TT control PCB	Install the latest main firmware.
2	An LT/TT paper feed sensor failure	Replace the appropriate LT paper empty/paper feed sensor PCB ASSY or TT paper feed sensor PCB ASSY.
3	An LT control PCB failure	Replace the appropriate LT control PCB ASSY.
4	TT relay PCB failure	Replace a TT relay PCB ASSY.
5	TT control PCB failure	Replace the TT control PCB ASSY.
6	Main PCB failure	Replace the main PCB ASSY.

**■ Error code 8903**

The back cover sensor detected the open state when 2-sided printing is started (before the registration of printing in the engine).

**Error code 8904**

The back cover sensor detected the open state during 2-sided printing (after the registration of printing in the engine).

**<User Check>**

- Close the back cover correctly.

Step	Cause	Remedy
1	Connection failure of the back cover sensor harness	Reconnect the back cover sensor harness.
2	Back cover sensor attachment failure	Reattach the back cover sensor.
3	Breakage of boss that presses the back cover sensor	Replace the back cover.
4	Back cover sensor failure	Replace the back cover sensor.
5	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 8A01**

The registration rear sensor detected that the fed paper was larger or smaller than the specified size in 2-sided printing.

**Error code 8A02**

The registration rear sensor detected that the length of the paper is too long and it may hit within the machine in 2-sided printing.

**<User Check>**

- Use specified paper.

Step	Cause	Remedy
1	Registration rear actuator caught in some sections of the machine	Reattach the registration rear actuator.
2	Registration rear sensor failure	Replace the registration front/rear sensor PCB ASSY.
3	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 8B01**

Detected that the TT was not turned ON.

**<User Check>**

- Turn ON the TT.
- Reconnect the AC cord of the TT.

Step	Cause	Remedy
1	Malfunction of the TT control PCB	Install the latest main firmware.
2	Connection failure of the TT low-voltage power supply PCB harness	Reconnect the TT low-voltage power supply PCB harness.
3	TT AC cord breakage	Replace the AC cord.
4	LT/TT connector failure (machine or LT/TT joint unit side)	Replace the LT/TT connector on the machine side or LT/TT joint unit side.
5	TT low-voltage power supply PCB failure	Replace the TT low-voltage power supply PCB ASSY.
6	TT control PCB failure	Replace the TT control PCB ASSY.
7	TT joint relay PCB failure	Replace the TT joint unit.
8	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 8D01**

The registration rear sensor detected that the paper loaded in the paper tray was smaller than the specified size.

<User Check>

- Open the back cover and print using the straight paper path.
- Length of the paper is 114 mm or more.

Step	Cause	Remedy
1	Registration rear actuator caught in some sections of the machine	Reattach the registration rear actuator.
2	Registration rear sensor failure	Replace the registration front/rear sensor PCB ASSY.
3	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 9001**

The size of paper loaded in the MP tray and the one specified from the driver are not same when paper is fed from the MP tray.

**Error code 9002**

The size of paper loaded in the T1 and the one specified from the driver are not same when paper is fed from the T1.

**Error code 9003**

The size of paper loaded in the T2 and the one specified from the driver are not same when paper is fed from the T2.

**Error code 9004**

The size of paper loaded in the T3 and the one specified from the driver are not same when paper is fed from the T3.

**Error code 9005**

The size of paper loaded in the T4 and the one specified from the driver are not same when paper is fed from the T4.

**Error code 9006**

The size of paper loaded in the T5 and the one specified from the driver are not same when paper is fed from the T5.

<User Check>

- Change the driver setting to be matched with the size of the paper set in the paper tray.

Step	Cause	Remedy
1	Registration rear actuator caught in some sections of the machine	Reattach the registration rear actuator.
2	Registration rear sensor failure	Replace the registration front/rear sensor PCB ASSY.
3	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 9201**

When printing from the MP tray, paper type setting in the machine does not match the setting in the driver.

**Error code 9202**

When printing from the T1, paper type setting in the machine does not match the setting in the driver.

**Error code 9203**

When printing from the T2, paper type setting in the machine does not match the setting in the driver.

**Error code 9204**

When printing from the T3, paper type setting in the machine does not match the setting in the driver.

**Error code 9205**

When printing from the T4, paper type setting in the machine does not match the setting in the driver.

**Error code 9206**

When printing from the T5, paper type setting in the machine does not match the setting in the driver.

<User Check>

- Use the same paper type setting for the machine and driver.

Step	Cause	Remedy
1	Malfunction of the main PCB	Install the latest main firmware.
2	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 9301**

When paper was fed from the MP tray, the MP paper empty sensor detected that no paper was in the MP tray.

<User Check>

- Load paper to the MP tray.

Step	Cause	Remedy
1	MP paper empty actuator caught in some sections of the machine	Reattach the MP paper empty actuator.
2	Connection failure of the MP paper empty/registration front sensor PCB harness	Reconnect the MP paper empty/registration front sensor PCB harness.
3	MP paper empty sensor failure	Replace the MP paper empty/registration front sensor PCB ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 9302**

When paper was fed from the T1, the T1 paper empty sensor or T1 paper feed sensor detected that no paper was in the T1.

**Error code 9303**

When paper was fed from the T2, the T2(LT or TT) paper empty sensor detected that no paper was in the T2.

**Error code 9304**

When paper was fed from the T3, the T3(LT or TT) paper empty sensor detected that no paper was in the T3.

**Error code 9305**

When paper was fed from the T4, the T4(LT or TT) paper empty sensor detected that no paper was in the T4.

**Error code 9306**

When paper was fed from the T5, the T5 paper empty sensor detected that no paper was in the T5.

**<User Check>**

- Set paper in the appropriate paper tray.

Step	Cause	Remedy
1	Malfunction of an LT control PCB or TT control PCB	Install the latest main firmware.
2	Connection failure of an LT paper empty/plate origin sensor harness (Models with 500-sheet only)	Reconnect the appropriate LT paper empty/plate origin sensor harness.
3	Connection failure of an LT paper empty/paper feed sensor harness (Models with 250-sheet only)	Reconnect the appropriate LT paper empty/paper feed sensor harness.
4	Connection failure of a TT paper empty sensor harness	Reconnect the appropriate TT paper empty sensor harness.
5	Connection failure of the T1 paper feed sensor harness (non NFC models only)	Reconnect the T1 paper feed sensor harness.
6	Connection failure of the T1 paper empty/paper feed sensor harness (NFC models only)	Reconnect the T1 paper empty/paper feed sensor harness.
7	Connection failure of the T1 pickup clutch harness (non NFC models only)	Reconnect the T1 pickup clutch harness.
8	An LT/TT paper empty actuator caught in some sections of the machine	Reattach the appropriate LT/TT paper empty actuator.
9	T1 paper feed actuator caught in some sections of the machine (non NFC models only)	Reattach the T1 paper feed actuator.
10	T1 paper empty actuator caught in some sections of the machine (NFC models only)	Reattach the T1 paper empty actuator.
11	Abrasion of the PF kit 1 (non NFC models only)	Replace the PF kit 1.
12	A T1/LT/TT paper empty sensor PCB failure	Replace the appropriate T1 paper empty/paper feed sensor, LT paper empty/plate origin sensor (Models with 500-sheet only), LT paper empty/paper feed sensor (Models with 250-sheet only) or TT paper empty sensor PCB ASSY.
13	T1 paper feed sensor PCB failure (non NFC models only)	Replace the T1 paper feed sensor PCB ASSY.
14	An LT control PCB failure	Replace the appropriate LT control PCB ASSY.
15	TT relay PCB failure	Replace a TT relay PCB ASSY.
16	TT control PCB failure	Replace the TT control PCB ASSY.
17	Damaged gears in the paper feed drive unit	Replace the paper feed drive unit.
18	Paper feed motor failure	Replace the process drive unit.
19	Main PCB failure	Replace the main PCB ASSY.

## ■ Error code 9309

Detected that there was no paper set in all trays when TrayAuto was selected for printing.

### <User Check>

- Set paper in the paper tray.

Step	Cause	Remedy
1	Malfunction of an LT control PCB or TT control PCB	Install the latest main firmware.
2	Connection failure of an LT paper empty/plate origin sensor harness (Models with 500-sheet only)	Reconnect the appropriate LT paper empty/plate origin sensor harness.
3	Connection failure of an LT paper empty/paper feed sensor harness (Models with 250-sheet only)	Reconnect the appropriate LT paper empty/paper feed sensor harness.
4	Connection failure of a TT paper empty sensor harness	Reconnect the appropriate TT paper empty sensor harness.
5	Connection failure of the MP paper empty/registration front sensor PCB harness	Reconnect the MP paper empty/registration front sensor PCB harness.
6	Connection failure of the T1 paper feed sensor harness (non NFC models only)	Reconnect the T1 paper feed sensor harness.
7	Connection failure of the T1 paper empty/paper feed sensor harness (NFC models only)	Reconnect the T1 paper empty/paper feed sensor harness.
8	Connection failure of the T1 pickup clutch harness (non NFC models only)	Reconnect the T1 pickup clutch harness.
9	A T1/MP/LT/TT paper empty actuator caught in some sections of the machine	Reattach the appropriate T1/MP/LT/TT paper empty actuator.
10	T1 paper feed actuator caught in some sections of the machine (non NFC models only)	Reattach the T1 paper feed actuator.
11	Abrasion of the PF kit 1 (non NFC models only)	Replace the PF kit 1.
12	A T1/MP/LT/TT paper empty sensor PCB failure	Replace the appropriate T1 paper empty/paper feed sensor, MP paper empty/registration front sensor, LT paper empty/plate origin sensor (Models with 500-sheet only), LT paper empty/paper feed sensor (Models with 250-sheet only) or TT paper empty sensor PCB ASSY.
13	T1 paper feed sensor PCB failure (non NFC models only)	Replace the T1 paper feed sensor PCB ASSY.
14	An LT control PCB failure	Replace the appropriate LT control PCB ASSY.
15	TT relay PCB failure	Replace a TT relay PCB ASSY.
16	TT control PCB failure	Replace the TT control PCB ASSY.
17	Damaged gears in the paper feed drive unit	Replace the paper feed drive unit.
18	Paper feed motor failure	Replace the process drive unit.
19	Main PCB failure	Replace the main PCB ASSY.

■ **Error code 9701**

For 2-sided printing, paper size setting of the printer driver that was not supported by 2-sided printing was selected.

**Error code 9702**

For printing by feeding paper from the T1, the size of paper specified from the driver set the size which was not supported by the T1.

**Error code 9703**

For printing by feeding paper from the T2, the size of paper specified from the driver set the size which was not supported by the T2.

**Error code 9704**

For printing by feeding paper from the T3, the size of paper specified from the driver set the size which was not supported by the T3.

**Error code 9705**

For printing by feeding paper from the T4, the size of paper specified from the driver set the size which was not supported by the T4.

**Error code 9706**

For printing by feeding paper from the T5, the size of paper specified from the driver set the size which was not supported by the T5.

**<User Check>**

- Select the specified paper size in the driver and set paper with the same size to the specified paper tray.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

### ■ Error code 9801

An error occurred with the value measured during color density adjustment performed from the control panel.

#### <User Check>

- Check if the toner cartridges are set in the correct order of colors.
- Replace the toner cartridge.
- Replace the drum unit.
- If the belt unit has a scratch, replace it.
- If “WT Box End Soon” is displayed on the LCD and the belt unit has dirt, replace the waste toner box.

Step	Cause	Remedy
1	Dirt on the registration mark sensor L	Clean the registration mark sensor L.
2	Failure in printed measurement	If failure occurs when printing “2D3S YMCBWKW_A” in “Function code 71”, refer to “4.3 Troubleshooting for Image Defects” in this chapter and take a measure.
3	Connection failure of the registration mark sensor L PCB harness	Reconnect the registration mark sensor L PCB harness.
4	Density sensor failure	Replace the registration mark sensor unit.
5	Main PCB failure	Replace the main PCB ASSY.

### ■ Error code 9802

Dot counter or develop roller counter of color toner has reached the upper limit during color density adjustment performed from the control panel.

#### <User Check>

- Replace the corresponding toner cartridge.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

### ■ Error code 9803

Density patch measurement ended unsuccessfully during color density adjustment performed from the control panel.

### Error code 9804

An error occurred with the value measured during density sensor sensitivity calibration.

#### <User Check>

- Check if the toner cartridges are set in the correct order of colors.
- Replace the toner cartridge.
- Replace the drum unit.
- If the belt unit has a scratch, replace it.
- If “WT Box End Soon” is displayed on the LCD and the belt unit has dirt, replace the waste toner box.

Step	Cause	Remedy
1	Dirt on the registration mark sensor L	Clean the registration mark sensor L.
2	Failure in printed measurement	If failure occurs when printing “2D3S YMCBWKW_A” in “Function code 71”, refer to “4.3 Troubleshooting for Image Defects” in this chapter and take a measure.
3	Connection failure of the registration mark sensor L PCB harness	Reconnect the registration mark sensor L PCB harness.
4	Density sensor failure	Replace the registration mark sensor unit.
5	Main PCB failure	Replace the main PCB ASSY.

### ■ Error code 9901

An error occurred with the value measured during manual color registration performed from the control panel.

#### <User Check>

- Check if the toner cartridges are set in the correct order of colors.
- Replace the toner cartridge.
- Replace the drum unit.
- If the belt unit has a scratch, replace it.
- If “WT Box End Soon” is displayed on the LCD and the belt unit has dirt, replace the waste toner box.

Step	Cause	Remedy
1	Dirt on the registration mark sensor L / registration mark sensor R	Clean the registration mark sensor L / registration mark sensor R.
2	Connection failure of the registration mark sensor L PCB / registration mark sensor R PCB harness	Reconnect the registration mark sensor L PCB / registration mark sensor R PCB harness.
3	Failure in printed measurement	If failure occurs when printing “2D3S YM CBW KW_A” in “Function code 71”, refer to “4.3 Troubleshooting for Image Defects” in this chapter and take a measure.
4	Registration mark sensor L or registration mark sensor R failure	Replace the registration mark sensor unit.
5	Main PCB failure	Replace the main PCB ASSY.

### ■ Error code 9902

Dot counter or develop roller counter of color toner has reached the upper limit during auto color registration performed from the control panel.

#### <User Check>

- Replace the corresponding toner cartridge.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

## ■ Error code 9903

An error occurred during patch data printing in manual color registration performed from the control panel.

### <User Check>

- Check if the toner cartridges are set in the correct order of colors.
- Replace the toner cartridge.
- Replace the drum unit.
- If the belt unit has a scratch, replace it.
- If “WT Box End Soon” is displayed on the LCD and the belt unit has dirt, replace the waste toner box.

Step	Cause	Remedy
1	Dirt on the registration mark sensor L / registration mark sensor R	Clean the registration mark sensor L / registration mark sensor R.
2	Connection failure of the registration mark sensor L PCB / registration mark sensor R PCB harness	Reconnect the registration mark sensor L PCB / registration mark sensor R PCB harness.
3	Failure in printed measurement	If failure occurs when printing “2D3S YM CBW KW_A” in “Function code 71”, refer to “4.3 Troubleshooting for Image Defects” in this chapter and take a measure.
4	Registration mark sensor L or registration mark sensor R failure	Replace the registration mark sensor unit.
5	Main PCB failure	Replace the main PCB ASSY.

### ■ Error code 9A01

An error occurred with the value measured during auto color registration performed from the control panel.

#### <User Check>

- Check if the toner cartridges are set in the correct order of colors.
- Replace the toner cartridge.
- Replace the drum unit.
- If the belt unit has a scratch, replace it.
- If “WT Box End Soon” is displayed on the LCD and the belt unit has dirt, replace the waste toner box.

Step	Cause	Remedy
1	Dirt on the registration mark sensor L / registration mark sensor R	Clean the registration mark sensor L / registration mark sensor R.
2	Connection failure of the registration mark sensor L PCB / registration mark sensor R PCB harness	Reconnect the registration mark sensor L PCB / registration mark sensor R PCB harness.
3	Failure in printed measurement	If failure occurs when printing “2D3S YM CBW KW_A” in “Function code 71”, refer to “4.3 Troubleshooting for Image Defects” in this chapter and take a measure.
4	Registration mark sensor L or registration mark sensor R failure	Replace the registration mark sensor unit.
5	Main PCB failure	Replace the main PCB ASSY.

### ■ Error code 9A02

Dot counter or develop roller counter of color toner has reached the upper limit during auto color registration performed from the control panel.

#### <User Check>

- Replace the corresponding toner cartridge.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

## ■ Error code 9A03

An error occurred during patch data printing in auto color registration performed from the control panel.

### <User Check>

- Check if the toner cartridges are set in the correct order of colors.
- Replace the toner cartridge.
- Replace the drum unit.
- If the belt unit has a scratch, replace it.
- If “WT Box End Soon” is displayed on the LCD and the belt unit has dirt, replace the waste toner box.

Step	Cause	Remedy
1	Dirt on the registration mark sensor L / registration mark sensor R	Clean the registration mark sensor L / registration mark sensor R.
2	Connection failure of the registration mark sensor L PCB / registration mark sensor R PCB harness	Reconnect the registration mark sensor L PCB / registration mark sensor R PCB harness.
3	Failure in printed measurement	If failure occurs when printing “2D3S YM CBW KW_A” in “Function code 71”, refer to “4.3 Troubleshooting for Image Defects” in this chapter and take a measure.
4	Registration mark sensor L or registration mark sensor R failure	Replace the registration mark sensor unit.
5	Main PCB failure	Replace the main PCB ASSY.

■ **Error code C001**

Timeout occurred with access request sent to server due to incorrect server address, network disconnection, or inactive server.

**Error code C002**

User authentication is unavailable due to incorrect user name, incorrect password, or asynchronous date and time between the machine and server.

**Error code C003**

Access to a file is unavailable due to incorrect directory name, no write permission on directory, file write lock, or no write permission on file.

**Error code C004**

Cannot acquire current time which is required for user authentication because the time has not been acquired.

**<User Check>**

- Refer to the online User's Guide to set the network again.
- Check the LAN cable routing.
- Check the wireless LAN settings.

Step	Cause	Remedy
1	Connection failure of the wireless LAN PCB connector	Reconnect the wireless LAN PCB connector.
2	Wireless LAN PCB failure	Replace the wireless LAN PCB.
3	Main PCB failure	Replace the main PCB ASSY.

■ **Error code C700**

The memory is insufficient to expand the data of PC-Print.

**Error code C800**

The memory used to store secure print data exceeded the memory size for secure print data.

**<User Check>**

- Print the print data stored in the memory.
- Divide the print data and print them separately.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

■ **Error code D800**

An error occurred while initializing the touch panel.

Step	Cause	Remedy
1	Connection failure of the panel relay flat cable	Reconnect the panel relay flat cable.
2	Connection failure of the LCD flat cable	Reconnect the LCD flat cable.
3	Panel PCB failure	Replace the panel PCB ASSY.
4	LCD panel ASSY failure	Replace the LCD panel ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

■ **Error code DB00**

A communication error occurred between the main ASIC and the recording ASIC.

**Error code E000**

An error occurred in the ROM check sum.

**Error code E100**

Program error

<User Check>

- Install the latest main firmware.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

■ **Error code E500**

An error occurred during access to the DRAM in the Main PCB ASSY.

**Error code E600**

Write error in the EEPROM of the Main PCB ASSY

**Error code E701**

System error in the flash ROM

**Error code E702**

Read error in the flash ROM

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

■ **Error code E900**

An error occurred while initializing the NFC.

Step	Cause	Remedy
1	Connection failure of the panel relay flat cable	Reconnect the panel relay flat cable.
2	Connection failure of the NFC flat cable	Reconnect the NFC flat cable.
3	Panel relay PCB failure	Replace the panel relay PCB ASSY.
4	NFC PCB failure	Replace the NFC PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

■ **Error code EC00**

Overcurrent was caused because a USB device that did not meet the specifications was inserted into the USB port.

**<User Check>**

- Disconnect the USB device from the USB flash memory port and turn the machine OFF. Turn the machine ON again after a while.
- Replace the USB device with a different one.

Step	Cause	Remedy
1	USB host PCB failure	Replace the USB host PCB ASSY.
2	Main PCB failure	Replace the main PCB ASSY.

■ **Error code F900**

The spec code was not entered correctly.

Step	Cause	Remedy
1	The power was turned OFF while function code 74 was running.	Reenter the spec code. (Refer to "1.3.22 Configure for country/region and model (Function code 74)" in Chapter 5.)
2	Main PCB failure	Replace the main PCB ASSY.

## 4.2 Troubleshooting for Paper Feeding Problems

Problems related to paper feeding are end user recoverable if following the User Check items. If the same problem occurs again, follow each procedure in the order of the number described in the Step column in the tables below.

### 4.2.1 No paper feeding from T1

#### <User Check>

- Check that the paper is set in the paper tray correctly.
- Check that there is not too much paper set in the paper tray.
- Flip over the paper in the paper tray or rotate the paper 180°.
- Check that the thickness of the paper is 60 to 105 g/m<sup>2</sup>.
- Check that the MP tray, LT or TT is not set as the paper tray.
- Flip through the paper and reset it in the paper tray.
- Open the T2 and close the T2 correctly.
- Clean the paper pick up roller.

Step	Cause	Remedy
1	Dirt on the paper dust cleaning roller of the paper tray	Refer to the figure below to clean the paper dust cleaning roller and inside of the paper dust cleaning roller cover.
2	T1 roller holder ASSY attachment failure	Reattach the T1 roller holder ASSY correctly.
3	Connection failure of the paper feed motor harness	Reconnect the paper feed motor harness.
4	Connection failure of the T1 paper feed sensor harness (non NFC models only)	Reconnect the T1 paper feed sensor harness.
5	Connection failure of the T1 pickup clutch harness	Reconnect the T1 pickup clutch harness.
6	Connection failure of the T1 paper empty/paper feed sensor harness (NFC models only)	Reconnect the T1 paper empty/paper feed sensor harness.
7	T1 paper empty actuator coming off	Reattach the T1 paper empty actuator.
8	Abrasion of the paper pick up roller	Replace the PF kit 1.
9	T1 paper feed sensor failure (non NFC models only)	Replace the T1 paper feed sensor PCB ASSY.
10	T1 paper empty sensor failure (NFC models only)	Replace the T1 paper empty/paper feed sensor PCB ASSY.
11	Damaged gear/lift gear	Replace the gear/lift gear.
12	Damaged gears in the paper feed drive unit	Replace the paper feed drive unit.
13	Paper feed motor failure	Replace the process drive unit.
14	Paper feed unit failure	Replace the paper feed unit.
15	Damaged fuser unit	Replace the fuser unit.
16	Main PCB failure	Replace the main PCB ASSY.

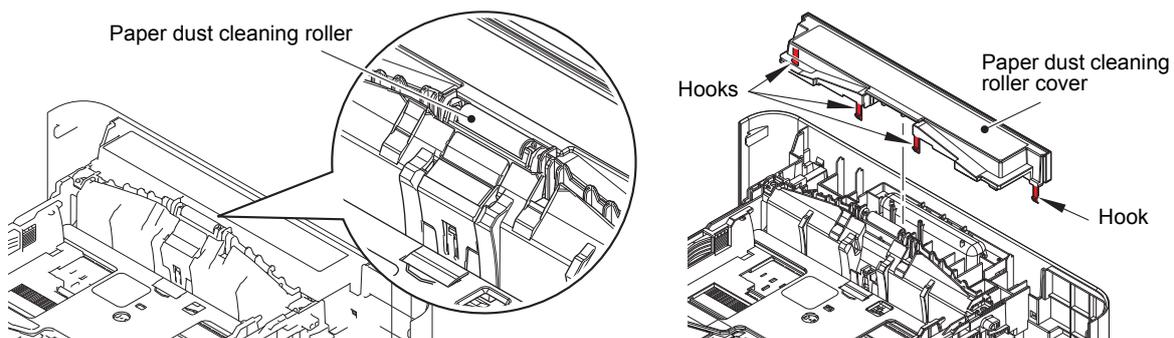


Fig. 2-13

## 4.2.2 No paper feeding from the LT

### <User Check>

- Check that the paper is set in the paper tray correctly.
- Check that there is not too much paper set in the paper tray.
- Flip over the paper in the paper tray or rotate the paper 180°.
- Check that the thickness of the paper is 60 to 105 g/m<sup>2</sup> (T2, 3 or 4).
- Check that the MP tray, T1 is not set as the paper tray.
- Flip through the paper and reset it in the paper tray.
- Clean the paper pick up roller.
- Check whether the T1 is closed correctly.

Step	Cause	Remedy
1	Dirt on a paper dust cleaning roller of the paper tray	Clean the appropriate paper dust cleaning roller. (Refer to <a href="#">Fig. 2-13 (P2-107)</a> .)
2	A roller holder ASSY attachment failure	Reattach the appropriate roller holder ASSY correctly.
3	Connection failure of the paper feed motor harness	Reconnect the paper feed motor harness.
4	Connection failure of an LT paper empty/plate origin sensor harness (Models with 500-sheet only)	Reconnect the appropriate LT paper empty/plate origin sensor harness.
5	Connection failure of an LT paper empty/paper feed sensor harness (Models with 250-sheet only)	Reconnect the appropriate LT paper empty/paper feed sensor harness.
6	Connection failure of an LT control PCB flat cable	Reconnect the appropriate LT control PCB flat cable.
7	Connection failure of an LT pickup clutch harness	Reconnect the appropriate LT pickup clutch harness.
8	An LT paper empty actuator coming off	Reattach the appropriate LT paper empty actuator.
9	Abrasion of a paper pick up roller	Replace the appropriate PF kit.
10	An LT paper empty sensor failure	Replace the appropriate T1 paper empty/paper feed sensor PCB ASSY or LT paper empty/plate origin sensor PCB ASSY.
11	Damaged fuser gear	Replace the fuser gear.
12	LT control PCB failure	Replace the appropriate LT control PCB ASSY.
13	Damaged gears in the paper feed drive unit	Replace the paper feed drive unit.
14	Paper feed motor failure	Replace the process drive unit.
15	Damaged fuser unit	Replace the fuser unit.
16	LT drive gear failure	Replace the LT unit.
17	Main PCB failure	Replace the main PCB ASSY.

## 4.2.3 No paper feeding from the TT

### <User Check>

- Check that the paper is set in the paper tray correctly.
- Check that there is not too much paper set in the paper tray.
- Flip over the paper in the paper tray or rotate the paper 180°.
- Check that the thickness of the paper is 60 to 105 g/m<sup>2</sup> (T2, 3, 4 or 5).
- Check that the MP tray, T1 is not set as the paper tray.
- Flip through the paper and reset it in the paper tray.
- Clean the paper pick up roller.
- Install the latest main firmware.
- Replace the relay AC cord.
- Turn the power switch of TT OFF and then back ON again.
- Check whether the each TT paper trays are closed correctly.

Step	Cause	Remedy
1	Dirt on a paper dust cleaning roller of the paper tray	Clean the appropriate paper dust cleaning roller. (Refer to Fig. 2-13 (P2-107).)
2	A roller holder ASSY attachment failure	Reattach the appropriate roller holder ASSY correctly.
3	Connection failure of the TT motor harness	Reconnect the TT motor harness.
4	Connection failure of a TT paper feed sensor harness	Reconnect the appropriate TT paper feed sensor harness.
5	Connection failure of a TT paper empty sensor harness	Reconnect the appropriate TT paper empty sensor harness.
6	Connection failure of a TT relay PCB harness	Reconnect the appropriate TT relay PCB harness.
7	Connection failure of the TT control PCB harness	Reconnect the TT control PCB harness.
8	Connection failure of the TT joint relay PCB harness	Reconnect the TT joint relay PCB harness.
9	Connection failure of the TT low-voltage power supply PCB harness	Reconnect the TT low-voltage power supply PCB harness.
10	Connection failure of a TT release clutch harness	Reconnect the appropriate TT release clutch harness.
11	Connection failure of a TT pickup clutch harness	Reconnect the appropriate TT pickup clutch harness.
12	Connection failure of the TT drive transmit clutch harness	Reconnect the TT drive transmit clutch harness.
13	Connection failure of a TT jam sensor harness	Reconnect the appropriate TT jam sensor harness.
14	A TT paper empty actuator coming off	Reattach the appropriate TT paper empty actuator.
15	Abrasion of a paper pick up roller	Replace the appropriate PF kit.
16	A TT release clutch failure	Replace the appropriate TT release clutch.
17	A TT pickup clutch failure	Replace the appropriate TT pickup clutch.
18	A TT paper feed sensor failure	Replace the appropriate TT paper feed sensor PCB ASSY.
19	A TT paper empty sensor failure	Replace the appropriate TT paper empty sensor PCB ASSY.
20	A TC mount sensor failure	Replace the appropriate TC mount sensor.
21	A TT jam sensor failure	Replace the appropriate TT jam sensor PCB ASSY.
22	Damaged a plate gear	Replace the appropriate plate gear.
23	Damaged an LT/TT connector	Replace the appropriate LT/TT connector.
24	TT motor failure	Replace the TT motor.
25	A TT relay PCB failure	Replace the appropriate TT relay PCB ASSY.
26	TT control PCB failure	Replace the TT control PCB ASSY.
27	TT low-voltage power supply PCB failure	Replace the TT low-voltage power supply PCB ASSY.
28	TT joint relay PCB failure	Replace the TT joint unit.
29	Main PCB failure	Replace the main PCB ASSY.

## 4.2.4 No paper feeding from MP tray

### <User Check>

- Check that the paper is set in the MP tray deeply.
- Check that too much paper is not loaded in the MP tray.
- Check if the machine is used with the MP tray support and MP flap are in closed state.
- Check that the thickness of the paper is 60 to 163 g/m<sup>2</sup>.
- Check that the T1, 2, 3, 4 or 5 is not set as the paper tray by the printer driver.
- Flip through the paper and reset it in the MP tray.
- Clean the MP paper pick-up roller.
- Check whether the paper tray is closed correctly.

Step	Cause	Remedy
1	MP roller holder ASSY attachment failure	Reattach the MP roller holder ASSY correctly.
2	Connection failure of the paper feed motor harness	Reconnect the paper feed motor harness.
3	Connection failure of the MP paper empty/registration front sensor PCB harness	Reconnect the MP paper empty/registration front sensor PCB harness.
4	Connection failure of the registration front/rear sensor harness	Reconnect the registration front/rear sensor harness.
5	Abrasion of the MP paper pick-up roller	Replace the PF kit MP.
6	Damaged gears in the paper feed drive unit	Replace the paper feed drive unit.
7	Paper feed motor failure	Replace the process drive unit.
8	Paper feed unit failure	Replace the paper feed unit.
9	Damaged fuser unit	Replace the fuser unit.
10	Main PCB failure	Replace the main PCB ASSY.

## 4.2.5 Multiple sheets of paper are fed

### <User Check>

- Check that there is not too much paper set in each paper tray.
- Check that the paper is set in each paper tray correctly.
- Flip over the paper in each paper tray or rotate the paper 180°.
- Check that the thickness of the paper is 60 to 105 g/m<sup>2</sup> for T1, 2, 3, 4 or 5, and 60 to 163 g/m<sup>2</sup> for the MP tray.
- Flip through the paper and reset it in the paper tray.

Step	Cause	Remedy
1	Abrasion of a separation pad	Replace the appropriate PF kit.

## 4.2.6 Paper becomes wrinkled

### <User Check>

- Check that the paper is set in each paper tray correctly.
- Flip over the paper in each paper tray or rotate the paper 180°.
- Adjust each paper guide according to each paper size.
- Check that the thickness of the paper is 60 to 105 g/m<sup>2</sup> for T1, 2, 3, 4 or 5, and 60 to 163 g/m<sup>2</sup> for the MP tray.
- Check that the paper is not damp.
- Check that there is no dust stuck to the fuser unit.
- Check that the type of paper is appropriate.

Step	Cause	Remedy
1	Paper eject ASSY failure	Replace the paper eject ASSY.
2	Fuser unit failure	Replace the fuser unit.

## 4.2.7 Paper is fed at an angle

### <User Check>

- Check that the paper is set in each paper tray correctly.
- Flip over the paper in each paper tray or rotate the paper 180°.
- Adjust each paper guide according to each paper size.
- Check that the thickness of the paper is 60 to 105 g/m<sup>2</sup> for T1, 2, 3, 4 or 5, and 60 to 163 g/m<sup>2</sup> for the MP tray.
- Check that there is not too much paper set in the paper tray.
- Check that the type of paper is appropriate.
- Clean each paper pick up roller.
- Check that the green envelope lever is not lowered on only one side.

Step	Cause	Remedy
1	One-side abrasion of the paper pick up rollers	Replace the appropriate PF kit.
2	Paper feed unit failure	Replace the paper feed unit.

## 4.2.8 Paper curls

### <User Check>

- Change the driver setting to be matched with the size of the paper set in the paper tray.
- Select "Reduce Paper Curl" in the driver.
- Check that the paper is set in each paper tray correctly.
- Open the back cover and try printing with straight paper ejection mode.

Step	Cause	Remedy
1	Fuser unit failure	Replace the fuser unit.
2	Main PCB failure	Replace the main PCB ASSY.

## 4.2.9 Unable to perform 2-sided printing

### <User Check>

- Close the back cover completely.
- Close the paper tray completely.
- Set the driver setting to duplex printing.
- Use A4 or Letter paper specified by the manufacturer.

Step	Cause	Remedy
1	Eject actuator coming off	Reattach the eject actuator.
2	Back cover failure	Replace the back cover.
3	Eject sensor failure	Replace the eject sensor PCB ASSY.
4	Paper eject origin sensor failure	Replace the paper eject origin sensor.
5	Paper eject ASSY failure	Replace the paper eject ASSY.
6	Main PCB failure	Replace the main PCB ASSY.

## 4.2.10 Paper jam

### ■ Paper jam at the T1

#### <User Check>

- Check that the paper is set in the paper tray correctly.
- Flip over the paper in the paper tray or rotate the paper 180°.
- Adjust each paper guide according to the paper size.
- Check that there is not too much paper set.
- Check that the thickness of the paper is 60 to 105 g/m<sup>2</sup> for T1.
- Flip through the paper and reset it in the paper tray.

Step	Cause	Remedy
1	Foreign object around the paper tray	Remove the foreign object.
2	Paper dust cleaning roller attachment failure	Reattach the paper dust cleaning roller.
3	Paper feed actuator coming off	Reattach the paper feed actuator.
4	Registration front actuator coming off	Reattach the registration front actuator.
5	Connection failure of the registration front/rear sensor harness	Reconnect the registration front/rear sensor harness.
6	Connection failure of the registration solenoid harness	Reconnect the registration solenoid harness.
7	Connection failure of the T1 paper empty/paper feed sensor harness (NFC models only)	Reconnect the T1 paper empty/paper feed sensor harness.
8	Connection failure of the T1 paper feed sensor harness (non NFC models only)	Reconnect the T1 paper feed sensor harness.
9	Registration front sensor failure	Replace the registration front/rear sensor PCB ASSY.
10	T1 paper empty/paper feed sensor failure (NFC models only)	Replace the T1 paper empty/paper feed sensor PCB ASSY.
11	Damaged gears in the paper feed drive unit	Replace the paper feed drive unit.
12	Paper feed motor failure	Replace the process drive unit.
13	Paper feed unit failure	Replace the paper feed unit.
14	Damaged fuser unit	Replace the fuser unit.
15	Main PCB failure	Replace the main PCB ASSY.

## ■ Paper jam at the LT

### <User Check>

- Check that the paper is set in each LT correctly.
- Flip over the paper in each LT or rotate the paper 180°.
- Adjust each paper guide according to the paper size.
- Check that there is not too much paper set.
- Check that the thickness of the paper is 60 to 105 g/m<sup>2</sup> for T2, 3 or 4.
- Flip through the paper and reset it in each LT.
- Install the latest main firmware.

Step	Cause	Remedy
1	Foreign object around an LT	Remove the foreign object.
2	A paper dust cleaning roller attachment failure	Reattach the appropriate paper dust cleaning roller.
3	An LT paper feed actuator coming off	Reattach the appropriate LT paper feed actuator.
4	Registration front actuator coming off	Reattach the registration front actuator.
5	Connection failure of an LT paper feed sensor harness (Models with 500-sheet only)	Reconnect the appropriate LT paper feed sensor harness.
6	Connection failure of an LT paper empty/paper feed sensor harness (Models with 250-sheet only)	Reconnect the appropriate LT paper empty/paper feed sensor harness.
7	Connection failure of an LT control PCB harness	Reconnect the appropriate LT control PCB harness.
8	An LT paper empty/paper feed sensor failure (Models with 250-sheet only)	Replace the appropriate LT paper empty/paper feed sensor.
9	Damaged gears in the paper feed drive unit	Replace the paper feed drive unit.
10	Paper feed motor failure	Replace the process drive unit.
11	Paper feed unit failure	Replace the paper feed unit.
12	Damaged fuser unit	Replace the fuser unit.
13	Main PCB failure	Replace the main PCB ASSY.

## ■ Paper jam at the TT

### <User Check>

- Check that the paper is set in each tray in the TT correctly.
- Flip over the paper or rotate the paper 180°.
- Adjust each paper guide according to each paper size.
- Check that there is not too much paper set.
- Check that the thickness of the paper is 60 to 105 g/m<sup>2</sup> for T2, 3, 4 or 5.
- Flip through the paper and reset it in the paper tray.
- Install the latest main firmware.
- Remove the jammed paper in each tray or inside the joint unit in the TT.

Step	Cause	Remedy
1	Foreign object in the TT paper feeding path	Remove the foreign object.
2	Twisted TT frame	Loosen the nine screws shown in Fig. 2-12 (P2-89) and tighten them again.
3	A paper dust cleaning roller attachment failure	Reattach the appropriate paper dust cleaning roller.
4	A TT paper feed actuator coming off	Reattach the appropriate TT paper feed actuator.
5	A TT jam actuator coming off	Reattach the appropriate TT jam actuator.
6	Connection failure of a TT jam sensor harness	Reconnect the appropriate TT jam sensor harness.
7	Connection failure of a TT paper feed sensor harness	Reconnect the appropriate TT paper feed sensor harness.
8	Connection failure of a TT release clutch harness	Reconnect the appropriate TT release clutch harness.
9	Connection failure of a TT relay PCB harness	Reconnect the appropriate TT relay PCB harness.
10	Connection failure of the TT control PCB harness	Reconnect the TT control PCB harness.
11	Connection failure of the TT drive transmit clutch harness	Reconnect the TT drive transmit clutch harness.
12	A TT paper feed sensor failure	Replace the appropriate TT paper feed sensor.
13	A TT release clutch failure	Replace the appropriate TT release clutch.
14	TT balance sensor L/R failure	Replace the TT balance sensor L/R.
15	A TT jam sensor failure	Replace the appropriate TT jam sensor PCB ASSY.
16	TT motor failure	Replace the TT motor.
17	TT relay PCB failure	Replace the appropriate TT relay PCB ASSY.
18	TT control PCB failure	Replace the TT control PCB ASSY.
19	TT drive transmit clutch failure	Replace the TT joint unit.
20	Main PCB failure	Replace the main PCB ASSY.

## ■ Paper jam at the MP tray

### <User Check>

- Check that the paper is set in the MP tray correctly.
- Flip over the paper in the MP tray or rotate the paper 180°.
- Adjust each paper guide according to each paper size.
- Check that there is not too much paper set.
- Check that the thickness of the paper is 60 to 163 g/m<sup>2</sup>.
- Flip through the paper and reset it in the MP tray.

Step	Cause	Remedy
1	Foreign object around the MP tray	Remove the foreign object.
2	Connection failure of the MP paper empty/registration front sensor harness	Reconnect the MP paper empty/registration front sensor harness.
3	MP registration front actuator coming off	Reattach the MP registration front actuator.
4	Connection failure of the registration solenoid harness	Reconnect the registration solenoid harness.
5	MP paper empty/registration front sensor failure	Replace the MP paper empty/registration front sensor.
6	Paper feed motor failure	Replace the process drive unit.
7	Paper feed unit failure	Replace the paper feed unit.
8	Damaged fuser unit	Replace the fuser unit.
9	Main PCB failure	Replace the main PCB ASSY.

## ■ Paper jam at the paper feeding section at the center of the machine

### <User Check>

- Check that the paper is set in each paper tray correctly.
- Flip over the paper in each paper tray or rotate the paper 180°.
- Adjust each paper guide according to the paper size.
- Check that there is not too much paper set in each paper tray.
- Check that the thickness of the paper is 60 to 105 g/m<sup>2</sup> for T1, 2, 3, 4 or 5, and 60 to 163 g/m<sup>2</sup> for the MP tray.
- Flip through the paper and reset it in the paper tray.
- Check that the belt unit is installed correctly.
- Replace the drum unit.
- Replace the belt unit.

Step	Cause	Remedy
1	Foreign object inside the machine	Remove the foreign object.
2	Eject actuator coming off	Reattach the eject actuator.
3	Connection failure of the eject sensor harness	Reconnect the eject sensor harness.
4	Fuser cover attachment failure	Reattach the fuser cover.
5	Damaged fuser drive gear	Replace the fuser drive gear.
6	Eject sensor failure	Replace the eject sensor PCB ASSY.
7	Registration rear sensor failure	Replace the registration front/rear sensor PCB ASSY.
8	Paper feed motor or process motor failure	Replace the process drive unit.
9	Damaged fuser unit	Replace the fuser unit.
10	Main PCB failure	Replace the main PCB ASSY.

## ■ Paper jam at the eject section

### <User Check>

- Check that the paper is set in each paper tray correctly.
- Flip over the paper in each paper tray or rotate the paper 180°.
- Adjust each paper guide according to the paper size.
- Check that there is not too much paper set in each paper tray.
- Check that the thickness of the paper is 60 to 105 g/m<sup>2</sup> for T1, 2, 3, 4 or 5, and 60 to 163 g/m<sup>2</sup> for the MP tray.
- Flip through the paper and reset it in the paper tray.

Step	Cause	Remedy
1	Foreign object in the rear of the machine	Remove the foreign object.
2	Eject actuator coming off	Reattach the eject actuator.
3	Connection failure of the eject sensor harness	Reconnect the eject sensor harness.
4	Fuser cover attachment failure	Reattach the fuser cover.
5	Eject sensor failure	Replace the eject sensor PCB ASSY.
6	Paper feed motor or process motor failure	Replace the process drive unit.
7	Paper eject unit failure	Replace the paper eject unit.
8	Damaged fuser unit	Replace the fuser unit.
9	Main PCB failure	Replace the main PCB ASSY.

## ■ Paper jam at the duplex tray

### <User Check>

- Flip over the paper in each paper tray or rotate the paper 180°.
- Check that the thickness of the paper is 60 to 105 g/m<sup>2</sup> for the duplex tray.
- Flip through the paper and reset it in the paper tray.
- Use A4 or Letter paper specified by the manufacturer.

Step	Cause	Remedy
1	Foreign object in the duplex paper feeding system	Remove the foreign object.
2	Fuser cover attachment failure	Reattach the fuser cover.
3	Back cover failure	Replace the back cover.
4	T1 duplex paper feeding system failure	Replace the T1.
5	Main PCB failure	Replace the main PCB ASSY.

## 4.3 Troubleshooting for Image Defects

### 4.3.1 Image defect examples

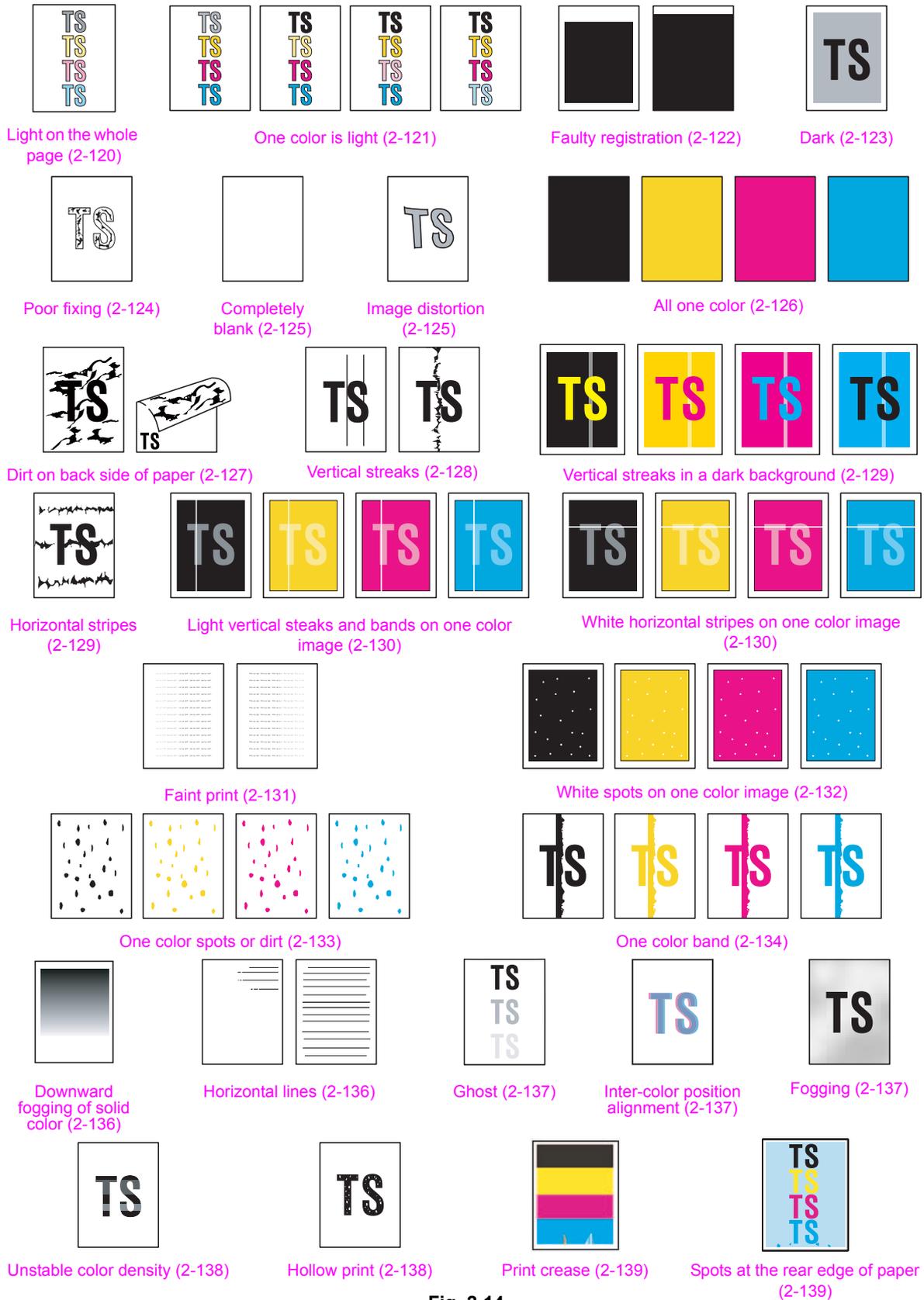
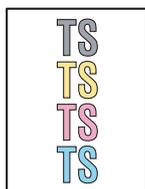


Fig. 2-14

### 4.3.2 Troubleshooting image defect

Image defect related problems are end user recoverable if following the User Check items. If the same problem occurs again, follow each procedure in the order of the number described in the Step column in the tables below.

#### ■ Light on the whole page

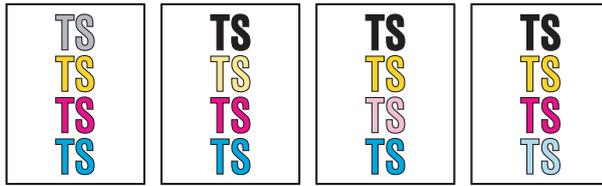


##### <User Check>

- Check the usage environment of the machine. Using the machine in hot-humid or cold-dry conditions can cause this problem.
- If the whole page is light, toner save mode may be ON. Turn OFF the toner save mode.
- Adjust the color calibration from the control panel.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Replace the belt unit with a new one.
- Wipe the scanner windows of the laser unit with a soft, lint-free cloth.
- Turn ON the power switch, and leave the machine for a while (condensation).
- Check if paper is not damp.
- Use specified paper.

Step	Cause	Remedy
1	Dirt on the electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine. (Refer to <a href="#">Fig. 2-10 (P2-73)</a> and <a href="#">Fig. 2-11 (P2-73)</a> .)
2	Dirt on the electrodes of the toner cartridge and those of the machine	Clean the electrodes of the toner cartridge and those of the machine. (Refer to <a href="#">Fig. 2-10 (P2-73)</a> and <a href="#">Fig. 2-15 (P2-121)</a> .)
3	Dirt on the electrodes of the high-voltage power supply PCB and those of the machine	Clean the electrodes of the high-voltage power supply PCB and those of the machine.
4	Dirt on the density sensor	Clean the registration mark sensor L.
5	Density sensor failure	Replace the registration mark sensor unit.
6	Fuser unit failure	Replace the fuser unit.
7	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
8	Main PCB failure	Replace the main PCB ASSY.

■ One color is light



<User Check>

- Check the usage environment of the machine. Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Adjust the color calibration from the control panel.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Wipe the scanner windows of the laser unit of the appropriate color with a soft, lint-free cloth.
- Use specified paper.

Step	Cause	Remedy
1	Dirt on the electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-11 (P2-73).)
2	Dirt on the electrodes of the toner cartridge and those of the machine	Clean the electrodes of the toner cartridge and those of the machine. (Refer to Fig. 2-10 (P2-73) and below.)
3	Dirt on the electrodes of the belt unit and those of the machine	Clean the electrodes of the belt unit and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-16 (P2-122).)
4	Dirt on the electrodes of the high-voltage power supply PCB	Clean the electrodes of the high-voltage power supply PCB.
5	Density sensor failure	Replace the registration mark sensor unit.
6	Fuser unit failure	Replace the fuser unit.
7	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
8	Main PCB failure	Replace the main PCB ASSY.

■ Electrodes location of the toner cartridge

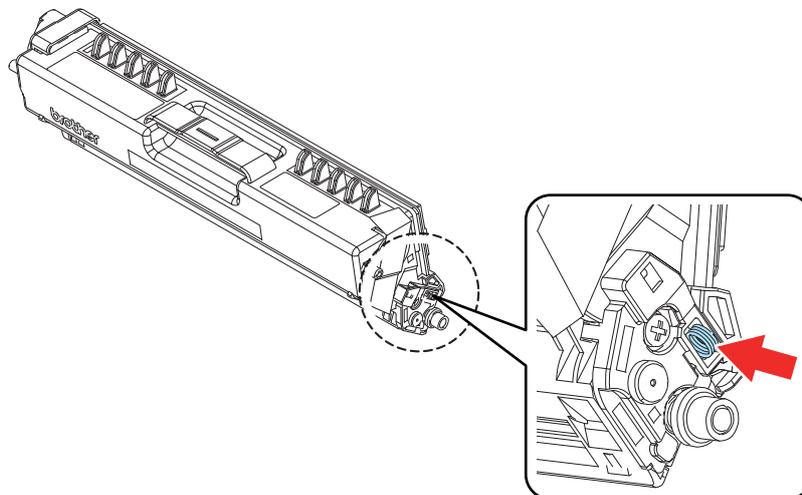


Fig. 2-15

■ Electrodes location of belt unit

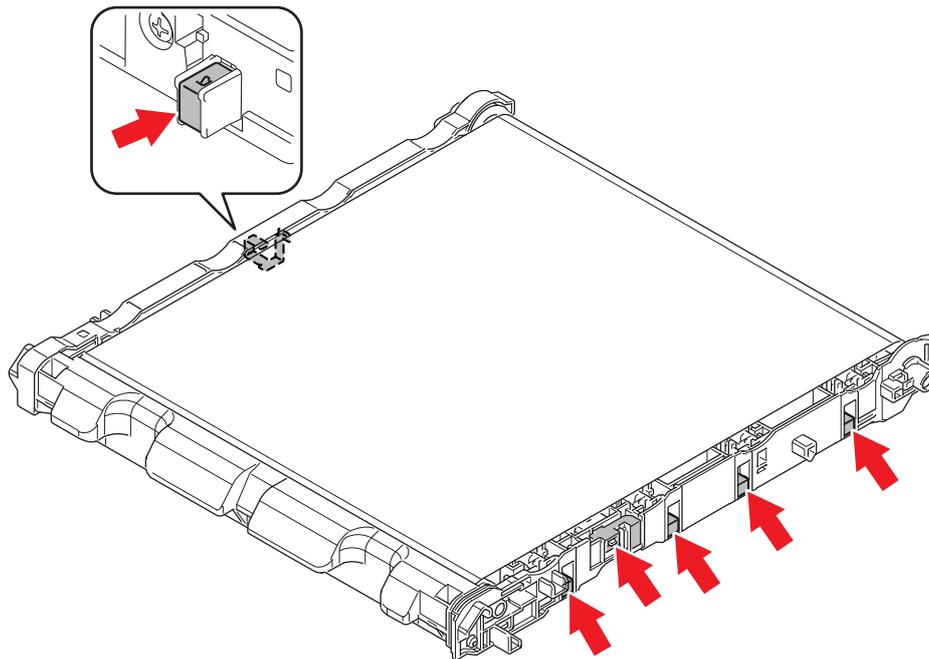
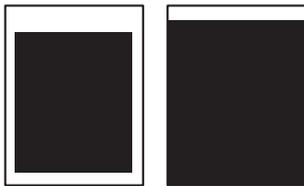


Fig. 2-16

■ Faulty registration



<User Check>

- Check whether appropriate paper type is selected on the driver.
- Install the latest main firmware.

Step	Cause	Remedy
1	Registration rear actuator coming off	Reattach the registration rear actuator.
2	Wrong adjusted value of TT entered	Refer to "1.3.11 Change USB No. return value / Switching Dither Pattern / Switching of ON/OFF of DirectPrint Color mode-Improve Gray Color / Switching of timing to execute Auto Registration / Adjust left-end print position / Adjust upper-end print position / Change of the transfer current setting / Change of ghost reduction setting (Function code 45)" in Chapter 5 to adjust the writing start position.
3	Distortion at TT assembly	Reattach the TT.
4	Laser unit failure	Replace the laser unit.
5	Main PCB failure	Replace the main PCB ASSY.

■ Dark

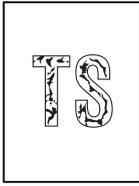


<User Check>

- Check the usage environment of the machine. Using the machine in hot-humid or cold-dry conditions can cause this problem.
- If a new toner cartridge has been detected, check that it was not replaced with another toner cartridge.
- Execute density adjustment from the control panel.
- Clean the corona wire of the drum unit.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Replace the belt unit with a new one.

Step	Cause	Remedy
1	Dirt on the electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-11 (P2-73).)
2	Dirt on the electrodes of the toner cartridge and those of the machine	Clean the electrodes of the toner cartridge and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-15 (P2-121).)
3	Dirt on the electrodes of the belt unit and those of the machine	Clean the electrodes of the belt unit and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-16 (P2-122).)
4	Dirt on the electrodes of the high-voltage power supply PCB	Clean the electrodes of the high-voltage power supply PCB.
5	Density sensor failure	Replace the registration mark sensor unit.
6	Fuser unit failure	Replace the fuser unit.
7	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
8	Laser unit failure	Replace the laser unit.
9	Main PCB failure	Replace the main PCB ASSY.

■ Poor fixing



<User Check>

- Check the usage environment of the machine. Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Clean the corona wire of the drum unit.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Replace the belt unit with a new one.
- Wipe the scanner windows of the laser unit with a soft, lint-free cloth.

Step	Cause	Remedy
1	Dirt on the electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-11 (P2-73).)
2	Dirt on the electrodes of the toner cartridge and those of the machine	Clean the electrodes of the toner cartridge and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-15 (P2-121).)
3	Dirt on the electrodes of the belt unit and those of the machine	Clean the electrodes of the belt unit and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-16 (P2-122).)
4	Fuser unit failure	Replace the fuser unit.
5	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
6	Low-voltage power supply PCB failure	Replace the low-voltage power supply PCB ASSY.
7	Laser unit failure	Replace the laser unit.
8	Main PCB failure	Replace the main PCB ASSY.

■ **Completely blank**

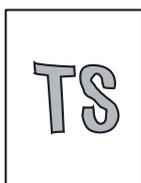


**<User Check>**

- Clean the corona wire of the drum unit.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Install the latest main firmware.

Step	Cause	Remedy
1	Dirt on the electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-11 (P2-73).)
2	Dirt on the electrodes of the toner cartridge and those of the machine	Clean the electrodes of the toner cartridge and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-15 (P2-121).)
3	Dirt on the electrodes of the belt unit and those of the machine	Clean the electrodes of the belt unit and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-16 (P2-122).)
4	Connection failure of the laser unit flat cable	Reconnect the laser unit flat cable.
5	Laser unit attachment failure	Reattach the laser unit.
6	Laser unit flat cable failure	Replace the laser unit flat cable.
7	Dirt on the electrodes of the high-voltage power supply PCB and those of the machine	Clean the electrodes of the high-voltage power supply PCB and those of the machine.
8	Laser unit failure	Replace the laser unit.
9	Main PCB failure	Replace the main PCB ASSY.

■ **Image distortion**

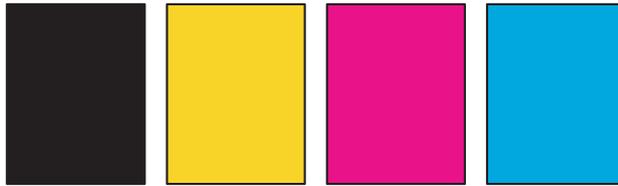


**<User Check>**

- Replace the belt unit with a new one.

Step	Cause	Remedy
1	Laser unit attachment failure	Reattach the laser unit.
2	Laser unit failure	Replace the laser unit.
3	Main PCB failure	Replace the main PCB ASSY.

■ All one color

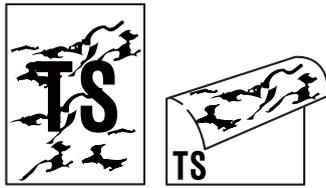


<User Check>

- Clean the corona wire of the drum unit.
- Replace the drum unit with a new one.

Step	Cause	Remedy
1	Dirt on the electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-11 (P2-73).)
2	Dirt on the electrodes of the belt unit and those of the machine	Clean the electrodes of the belt unit and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-16 (P2-122).)
3	Laser unit flat cable failure	Replace the laser unit flat cable.
4	Dirt on the electrodes of the high-voltage power supply PCB and those of the machine	Clean the electrodes of the high-voltage power supply PCB and those of the machine.
5	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
6	Laser unit failure	Replace the laser unit.
7	Main PCB failure	Replace the main PCB ASSY.

■ Dirt on back side of paper



<User Check>

- This problem may disappear after printing multiple sheets of paper.
- Replace the drum unit with a new one.
- Replace the belt unit.
- Replace the waste toner box

Step	Cause	Remedy
1	Dirt in the paper feed system	Wipe dirt off.
2	Dirt on the electrodes of the belt unit and those of the machine	Clean the electrodes of the belt unit and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-16 (P2-122).)
3	Dirt on the electrodes of the waste toner box and those of the machine	Clean the electrodes of the waste toner box and those of the machine. (Refer to Fig. 2-10 (P2-73) and below.)
4	Dirt on the cleaner pinch roller of the fuser cover	Replace the cleaner pinch roller S ASSY.
5	Dirt on the fuser unit	Replace the fuser unit.
6	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.

■ Electrodes location of waste toner box

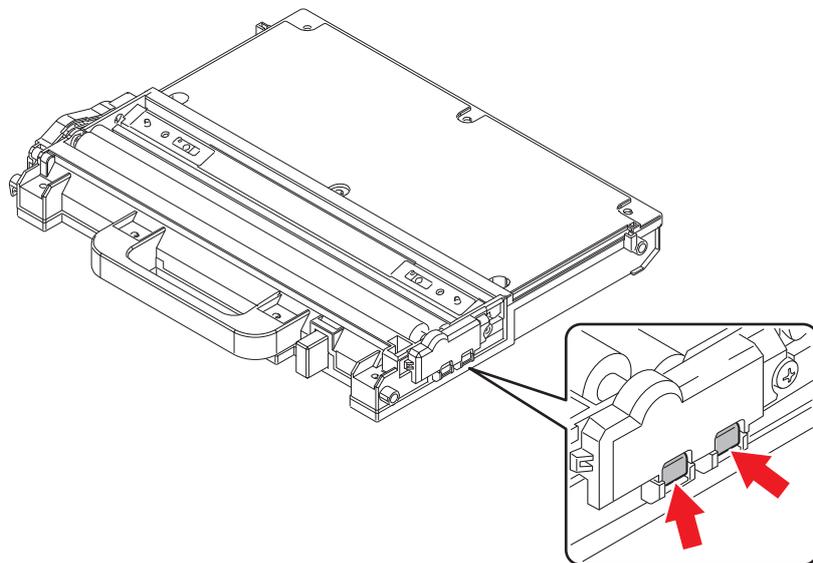


Fig. 2-17

## ■ Vertical streaks



### <User Check>

- Clean the corona wire of the drum unit.
- Return the corona wire cleaning tab to the “▲” position.
- This problem may disappear after printing multiple sheets of paper.
- Refer to <How to clean the drum unit> to remove the dirt from the exposure drum using a cotton applicator.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Wipe the scanner windows of the laser unit with a soft, lint-free cloth.

Step	Cause	Remedy
1	Dirt in the paper feed system	Wipe dirt off.
2	A ground wire or ground plate installation failure (Grounding is not performed correctly.)	Retighten the screws of each ground wire or ground plate. Repair the bend of the tray ground spring of the paper tray. (Refer to the figure below.)
3	Dirt on the exposure drum	Perform drum cleaning. (Refer to “2.1 Drum Cleaning” in Chapter 5.)
4	Dirt on the cleaner pinch roller of the fuser cover	Replace the cleaner pinch roller S ASSY.
5	Dirt on the fuser unit	Replace the fuser unit.
6	Laser unit failure	Replace the laser unit.

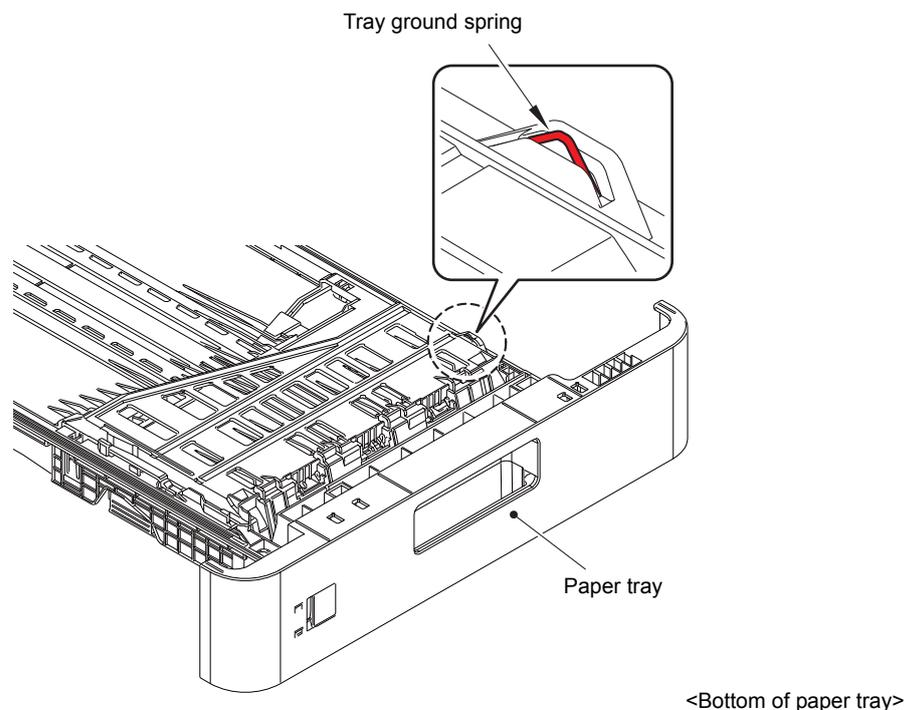
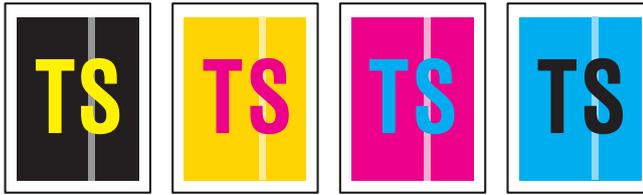


Fig. 2-18

■ **Vertical streaks in a dark background**

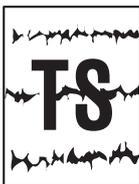


**<User Check>**

- Clean the corona wire of the drum unit.
- This problem may disappear after printing multiple sheets of paper.
- Refer to **<How to clean the drum unit>** to remove the dirt from the exposure drum using a cotton applicator.
- Turn ON the power switch, and leave the machine for a while.
- Wipe the scanner windows of the laser unit with a soft, lint-free cloth.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.

Step	Cause	Remedy
1	Dirty charge electrodes	Clean the electrodes of the drum unit and those of the machine. (Refer to <b>Fig. 2-10 (P2-73)</b> and <b>Fig. 2-11 (P2-73)</b> .)
2	Dirt on the exposure drum	Perform drum cleaning. (Refer to <b>"2.1 Drum Cleaning" in Chapter 5</b> .)
3	Laser unit failure	Replace the laser unit.

■ **Horizontal stripes**



**<User Check>**

- Clean the corona wire of the drum unit.
- This problem may disappear after printing multiple sheets of paper.
- Refer to **<How to clean the drum unit>** to remove the dirt from the exposure drum using a cotton applicator.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.

Step	Cause	Remedy
1	Dirty charge electrodes	Clean the electrodes of the drum unit and those of the machine. (Refer to <b>Fig. 2-10 (P2-73)</b> and <b>Fig. 2-11 (P2-73)</b> .)
2	Dirt on the exposure drum	Perform drum cleaning. (Refer to <b>"2.1 Drum Cleaning" in Chapter 5</b> .)
3	A ground wire or ground plate installation failure (Grounding is not performed correctly.)	Retighten the screws of each ground wire or ground plate. Repair the bend of the tray ground spring of the paper tray. (Refer to <b>Fig. 2-18 (P2-128)</b> .)
4	Scratch or dirt on the fuser unit	Replace the fuser unit.
5	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.

■ **Light vertical streaks and bands on one color image**

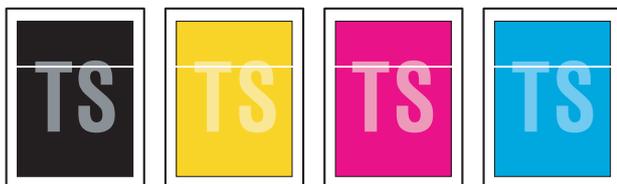


**<User Check>**

- Clean the corona wire of the drum unit.
- Check that there is no dust on the toner cartridge.
- Refer to [<How to clean the drum unit>](#) to remove the dirt from the exposure drum using a cotton applicator.
- Wipe the scanner windows of the laser unit with a soft, lint-free cloth.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.

Step	Cause	Remedy
1	Dirty charge electrodes	Clean the electrodes of the drum unit and those of the machine. (Refer to <a href="#">Fig. 2-10 (P2-73)</a> and <a href="#">Fig. 2-11 (P2-73)</a> .)
2	Dirt on the exposure drum	Perform drum cleaning. (Refer to <a href="#">“2.1 Drum Cleaning” in Chapter 5.</a> )
3	Laser unit failure	Replace the laser unit.

■ **White horizontal stripes on one color image**

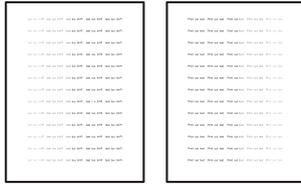


**<User Check>**

- This problem may disappear after printing multiple sheets of paper.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.

Step	Cause	Remedy
1	Dirty charge electrodes	Clean the electrodes of the drum unit and those of the machine. (Refer to <a href="#">Fig. 2-10 (P2-73)</a> and <a href="#">Fig. 2-11 (P2-73)</a> .)
2	Dirt on the exposure drum	Perform drum cleaning. (Refer to <a href="#">“2.1 Drum Cleaning” in Chapter 5.</a> )
3	Scratch or dirt on the fuser unit	Replace the fuser unit.
4	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.

■ **Faint print**

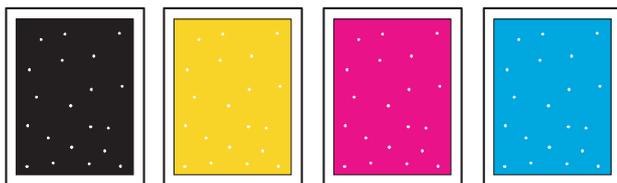


**<User Check>**

- Check that the machine is positioned on a level surface.
- Wipe the scanner windows of the laser unit with a soft, lint-free cloth.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.

Step	Cause	Remedy
1	Laser unit failure	Replace the laser unit.
2	Fuser unit failure	Replace the fuser unit.
3	Main PCB failure	Replace the main PCB ASSY.

■ White spots on one color image



<User Check>

- Check that the Fuser fan and Blower is not clogged.
- Refer to <How to clean the drum unit> to remove the dirt from the exposure drum using a cotton applicator.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Replace the belt unit with a new one.

Step	Cause	Remedy
1	Dirt on the paper dust cleaning roller of the paper tray	Refer to the Fig. 2-13 (P2-107) to clean the paper dust cleaning roller.
2	Dirt on the exposure drum	Perform drum cleaning. (Refer to "2.1 Drum Cleaning" in Chapter 5.)
3	Clogged filter	Clean the filter.
4	Scratch or dirt on the fuser unit	Replace the fuser unit.
5	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.

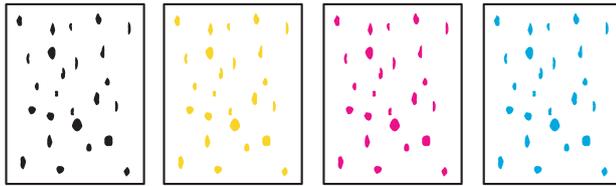
**Note:**

Image defects which appear periodically may be caused by failure of rollers. Refer to the table below and determine the cause based on the diameter of the rollers or the pitch at which defects appear on the image.

<itches on images caused by rollers>

Part name	The pitch which appears in the image
Develop roller	29 mm
Exposure drum	94.5 mm
Heat roller of the fuser unit	78.5 mm
Pressure roller of the fuser unit	78.5 mm

■ One color spots or dirt



<User Check>

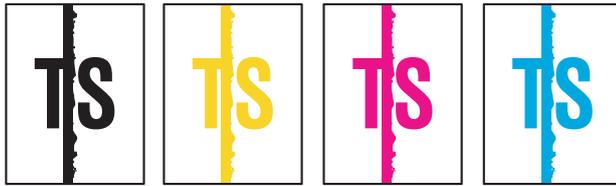
- Check if damp paper is used.
- Refer to <How to clean the drum unit> to remove the dirt from the exposure drum using a cotton applicator.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Replace the belt unit with a new one.

Step	Cause	Remedy
1	Dirt on the paper dust cleaning roller of the paper tray	Refer to the Fig. 2-13 (P2-107) to clean the paper dust cleaning roller.
2	Dirt on the exposure drum	Perform drum cleaning. (Refer to "2.1 Drum Cleaning" in Chapter 5.)
3	Clogged filter	Clean the filter.
4	Scratch or dirt on the fuser unit	Replace the fuser unit.
5	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.

**Note:**

Image defects which appear periodically may be caused by failure of rollers. Refer to <Pitches on images caused by rollers> and determine the cause based on the diameter of the rollers or the pitch at which defects appear on the image.

■ One color band



<User Check>

- Clean the corona wire of the drum unit.
- Clean the corona wire by sliding the green tab of the drum unit to the left end.
- This problem may disappear after printing multiple sheets of paper.
- Refer to <How to clean the drum unit> to remove the dirt from the exposure drum using a cotton applicator.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.

Step	Cause	Remedy
1	A ground wire or ground plate installation failure (Grounding is not performed correctly.)	Retighten the screws of each ground wire or ground plate. Repair the bend of the tray ground spring of the paper tray. (Refer to Fig. 2-18 (P2-128).)
2	Dirt on the exposure drum	Perform drum cleaning. (Refer to "2.1 Drum Cleaning" in Chapter 5.)
3	Laser unit failure	Replace the laser unit.

<How to clean the drum unit (the shape of the drum is different from the actual one)>

- (1) Remove the toner cartridge from the drum unit. Check where the image distortion occurs by placing the print sample in front of the drum unit.

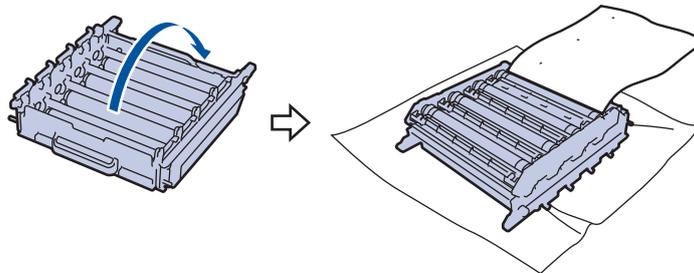
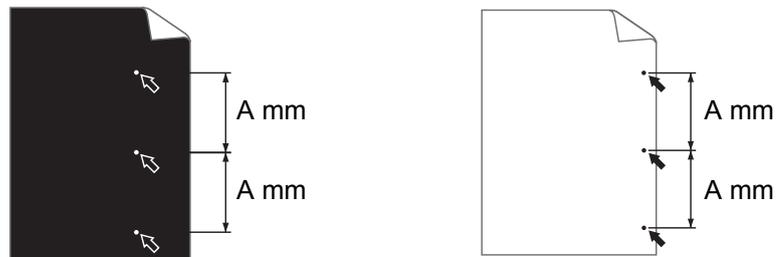


Fig. 2-19

< Examples of image distortion >



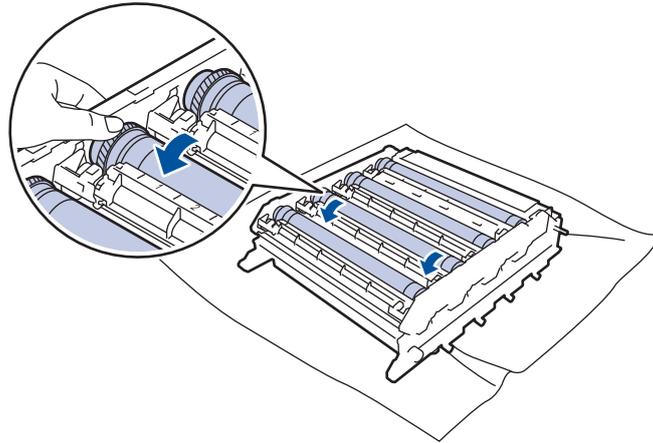
White dots repeat in A mm distance on the black page with printed images.

Black dots repeat in A mm distance on the page.

Fig. 2-20

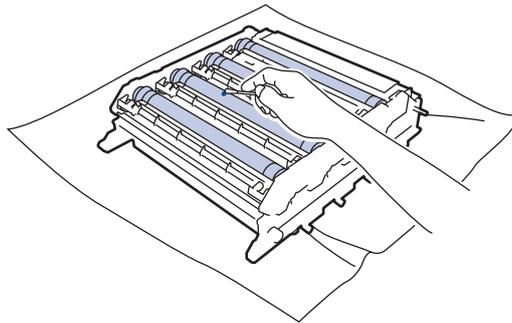
Refer to the table <Pitches on images caused by rollers> for what represents the value A.

- (2) Turn the drum unit gear by hand so that the glued exposure drum surface comes to the front.



**Fig. 2-21**

- (3) If the position of the dirt on the drum and the dots on the print sample matches, wipe the exposure drum surface with a cotton bud until the dirt and paper dust comes off.



**Fig. 2-22**

**Note:**

Do not clean the exposure drum surface with anything sharp like a ball pointed pen.

■ **Downward fogging of solid color**

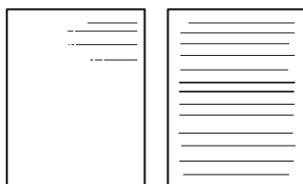


**<User Check>**

- Replace the toner cartridge with a new one.

Step	Cause	Remedy
1	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
2	Main PCB failure	Replace the main PCB ASSY.

■ **Horizontal lines**



**<User Check>**

- This problem may disappear after printing multiple sheets of paper.
- Refer to **<How to clean the drum unit>** to remove the dirt from the exposure drum using a cotton applicator.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.

Step	Cause	Remedy
1	Dirty charge electrodes	Clean the electrodes of the drum unit and those of the machine. (Refer to <b>Fig. 2-10 (P2-73)</b> and <b>Fig. 2-11 (P2-73)</b> .)
2	Dirt on the exposure drum	Perform drum cleaning. (Refer to <b>"2.1 Drum Cleaning"</b> in Chapter 5.)
3	Scratch or dirt on the fuser unit	Replace the fuser unit.
4	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.

## ■ Ghost

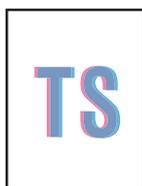


### <User Check>

- Check the usage environment of the machine. Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Check whether appropriate paper type is selected on the driver.
- Select "Improve Toner Fixing" in the driver.
- Make a print in the color mode.
- Replace the drum unit with a new one.
- Clean the Erase lamp lens of the Drum unit.

Step	Cause	Remedy
1	Scratch or dirt on the fuser unit	Replace the fuser unit.
2	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.

## ■ Inter-color position alignment

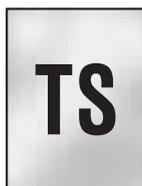


### <User Check>

- Implement the adjustment of color registration (adjustment of inter-color position alignment).
- Replace the belt unit with a new one.
- Replace the drum unit with a new one.
- Replace the waste toner box with a new one.

Step	Cause	Remedy
1	Registration mark sensor L or registration mark sensor R failure	Replace the registration mark sensor unit.
2	Main PCB failure	Replace the main PCB ASSY.

## ■ Fogging



### <User Check>

- Check the usage environment of the machine. Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Check if the acid paper is not used.
- This problem may disappear after printing multiple sheets of paper.
- Replace the toner cartridge with a new one.
- Replace the drum unit with a new one.

Step	Cause	Remedy
1	New toner/toner amount detection sensor PCB (light reception) failure	Replace the new toner/toner amount detection sensor PCB ASSY (light reception).
2	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
3	Main PCB failure	Replace the main PCB ASSY.

### Note:

This problem tends to occur when the life of the drum unit or toner cartridge is expiring.

## ■ Unstable color density

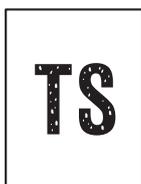


### <User Check>

- Make a print on a different type of paper.
- Replace the belt unit with a new one.
- Replace the waste toner box with a new one.
- Replace the toner cartridge with a new one.
- Replace the drum unit with a new one.

Step	Cause	Remedy
1	Dirt on the electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-11 (P2-73).)
2	Dirt on the electrodes of the toner cartridge and those of the machine	Clean the electrodes of the toner cartridge and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-15 (P2-121).)
3	Dirt on the electrodes of the belt unit and those of the machine	Clean the electrodes of the belt unit and those of the machine. (Refer to Fig. 2-10 (P2-73) and Fig. 2-16 (P2-122).)
4	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
5	Laser unit failure	Replace the laser unit.
6	Main PCB failure	Replace the main PCB ASSY.

## ■ Hollow print



### <User Check>

- Check the usage environment of the machine. Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Refer to <How to clean the drum unit> to remove the dirt from the exposure drum using a cotton applicator.
- Replace the toner cartridge with a new one.
- Replace the drum unit with a new one.

Step	Cause	Remedy
1	Dirt on the paper dust cleaning roller of the paper tray	Refer to the Fig. 2-13 (P2-107) to clean the paper dust cleaning roller.
2	Dirt on the exposure drum	Perform drum cleaning. (Refer to "2.1 Drum Cleaning" in Chapter 5.)
3	Scratch or dirt on the fuser unit	Replace the fuser unit.
4	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.

■ **Print crease**



**<User Check>**

- Check the usage environment of the machine. Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Change the paper to thick paper.
- Check if paper is not damp.
- Check if the thickness of the paper is properly set in the driver.
- Print with the envelope lever is lowered. (Refer to the figure below.)

Step	Cause	Remedy
1	Fuser unit failure	Replace the fuser unit.

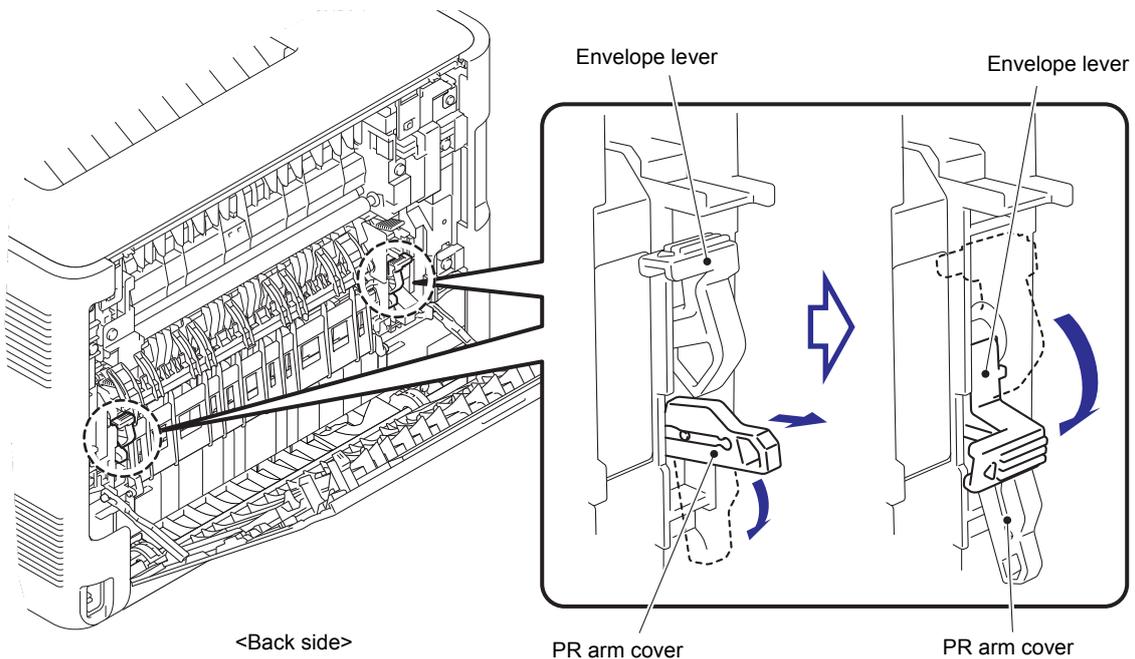


Fig. 2-23

■ **Spots at the rear edge of paper**



**<User Check>**

- Check the usage environment of the machine. Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Print with the envelope lever is lowered. (See the figure above.)

Step	Cause	Remedy
1	Fuser unit failure	Replace the fuser unit.

## 4.4 Troubleshooting for Software Problems

The end user can solve problems pertaining to software, for instance, print cannot be made from a computer although test print and printer setting print can be made from the machine, by following the User Check items. If the same problem occurs again, follow each procedure in the order of the number described in the Step column in the tables below.

### 4.4.1 Unable to receive data

#### <User Check>

- Check that the USB cable or LAN cable is not damaged.
- When using an interface switch, check that the correct machine is selected.
- Check the relevant section in the online User's Guide.
- Check the driver settings.
- Reset the machine to the default settings. (Refer to the online User's Guide.)

Step	Cause	Remedy
1	Machine connection	For Macintosh, check the Product ID*. When it is wrong, update the firmware.
2	Main PCB failure	Replace the main PCB ASSY.

\* Follow the procedures below to verify the product ID in Macintosh.

- (1) Select [About This Mac] from the [Apple] menu.
- (2) Click the [More Info...] button in the [About This Mac] dialog box.
- (3) Select [USB] under the [Hardware] in [Contents] on the left side.
- (4) Select the machine [HL-XXXX] from [USB Device Tree].
- (5) Check [Product ID] in [HL-XXXX].

#### ■ Product ID (Hexadecimal)

HL-L8260CDN : 0091h  
HL-L8260CDW : 0090h  
HL-L8360CDW(T): 008Fh  
HL-L9310CDW : 008Eh

## 4.5 Troubleshooting for Network Problems

### 4.5.1 Cannot make a print through network connection

#### <User Check>

- Check the relevant section in the Network Setting Guide.
- Check the network connection.
- Reset the network. (Refer to the online User's Guide.)
- Check the LAN cable.

Step	Cause	Remedy
1	Connection failure of the wireless LAN PCB connector	Reconnect the wireless LAN PCB connector.
2	Wireless LAN PCB failure	Replace the wireless LAN PCB.
3	LAN terminal pin deformation Main PCB failure	Replace the main PCB ASSY.

### 4.5.2 Cannot connect to access point

#### <User Check>

- Check the wireless LAN settings.
- Check the access point settings.
- Change the machine installation location.
- Set the access point manually.

Step	Cause	Remedy
1	Wireless LAN PCB failure	Replace the wireless LAN PCB.
2	Main PCB failure	Replace the main PCB ASSY.

## 4.6 Troubleshooting for Control Panel Problems

### 4.6.1 Nothing is displayed on the LCD

#### <User Check>

- Turn the power switch OFF and then back ON again.
- Unplug the AC cord and then plug it again.

Step	Cause	Remedy
1	Rubber key attachment failure (Non touch panel models only)	Reattach the rubber key.
2	Connection failure of the panel PCB harness (Non touch panel models only)	Reconnect the panel PCB harness.
3	Connection failure of the panel relay flat cable (Touch panel models only)	Reconnect the panel relay flat cable.
4	Connection failure of the low-voltage power supply PCB harness	Reconnect the low-voltage power supply PCB harness.
5	AC cord failure	Replace the AC cord.
6	Connection failure of the LCD relay flat cable (Touch panel models only)	Reconnect the LCD relay flat cable.
7	Panel PCB failure (Non touch panel models only)	Replace the panel PCB ASSY.
8	LCD failure (Non touch panel models only)	Replace the LCD.
9	Panel relay PCB failure (Touch panel models only)	Replace the panel relay PCB ASSY.
10	LCD failure (Touch panel models only)	Replace the LCD panel ASSY.
11	Low-voltage power supply PCB failure	Replace the low-voltage power supply PCB ASSY.
12	Main PCB failure	Replace the main PCB ASSY.

## 4.6.2 Nothing is displayed on the LED

### <User Check>

- Turn the power switch OFF and then back ON again.

Step	Cause	Remedy
1	Connection failure of the panel PCB harness (Non touch panel models only)	Reconnect the panel PCB harness.
2	Connection failure of the panel relay flat cable (Touch panel models only)	Reconnect the panel relay flat cable.
3	Connection failure of the LCD relay flat cable (Touch panel models only)	Reconnect the LCD relay flat cable.
4	Panel PCB failure (Non touch panel models only)	Replace the panel PCB ASSY.
5	Panel relay PCB failure (Touch panel models only)	Replace the panel relay PCB ASSY.
6	Main PCB failure	Replace the main PCB ASSY.

## 4.6.3 Unable to perform panel operation

### <User Check>

- Turn the power switch OFF and then back ON again.

Step	Cause	Remedy
1	Rubber key attachment failure (Non touch panel models only)	Reattach the rubber key.
2	Connection failure of the panel PCB harness (Non touch panel models only)	Reconnect the panel PCB harness.
3	Connection failure of the low-voltage power supply PCB harness	Reconnect the low-voltage power supply PCB harness.
4	Connection failure of the LCD relay flat cable (Touch panel models only)	Reconnect the LCD relay flat cable.
5	Panel PCB failure (Non touch panel models only)	Replace the panel PCB ASSY.
6	Panel relay PCB failure (Touch panel models only)	Replace the panel relay PCB ASSY.
7	Touch panel failure (Touch panel models only)	Replace the LCD panel ASSY.
8	Low-voltage power supply PCB failure	Replace the low-voltage power supply PCB ASSY.
9	Main PCB failure	Replace the main PCB ASSY.

## 4.7 Troubleshooting for Toner Cartridge and Drum Unit Problems

### 4.7.1 New toner not detected

#### <User Check>

- Check if the supplied toner cartridge is installed.
- Be sure to set a new toner cartridge.
- Check that the genuine toner cartridge is set.

Step	Cause	Remedy
1	New toner actuator coming off	Reattach the new toner actuator.
2	Connection failure of the new toner/toner amount detection sensor PCB harness (light reception)	Reconnect the new toner/toner amount detection sensor PCB harness (light reception).
3	New toner/toner amount detection sensor PCB (light reception) failure	Replace the new toner/toner amount detection sensor PCB ASSY (light reception).
4	Main PCB failure	Replace the main PCB ASSY.

### 4.7.2 Toner cartridge not detected

#### <User Check>

- Re-assemble the toner cartridge.
- Replace the toner cartridge with a new one.

Step	Cause	Remedy
1	Toner sensor (light emission) failure	Replace the high-voltage power supply PCB ASSY.
2	New toner/toner amount detection sensor PCB (light reception) failure	Replace the new toner/toner amount detection sensor PCB ASSY (light reception).
3	Main PCB failure	Replace the main PCB ASSY.

### 4.7.3 Toner replacement message displayed on LCD is not cleared

#### <User Check>

- Be sure to set a new toner cartridge.
- Check that the genuine toner cartridge is set.

Step	Cause	Remedy
1	New toner actuator coming off	Reattach the new toner actuator.
2	Connection failure of the new toner/toner amount detection sensor PCB harness (light reception)	Reconnect the new toner/toner amount detection sensor PCB harness (light reception).
3	New toner/toner amount detection sensor PCB (light reception) failure	Replace the new toner/toner amount detection sensor PCB ASSY (light reception).
4	Main PCB failure	Replace the main PCB ASSY.

### 4.7.4 Drum error

#### <User Check>

- Clean the corona wire of the drum unit.
- Replace the drum unit with a new one.

Step	Cause	Remedy
1	Dirt on the electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine. (Refer to <a href="#">Fig. 2-10 (P2-73)</a> and <a href="#">Fig. 2-11 (P2-73)</a> .)
2	Dirt on the electrodes of the high-voltage power supply PCB and those of the machine	Clean the electrodes of the high-voltage power supply PCB and those of the machine.
3	High-voltage power supply PCB failure	Replace the high-voltage power supply PCB ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

### 4.7.5 Drum replacement message displayed on LCD is not cleared

#### <User Check>

- Reset the drum counter according to the manual.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

## 4.8 Troubleshooting for Fuser Unit Problems

### 4.8.1 Fuser unit failure

Step	Cause	Remedy
1	Connection failure of the center thermistor harness	Reconnect the center thermistor harness.
2	Connection failure of the side thermistor harness	Reconnect the side thermistor harness.
3	Connection failure of the heater harness	Reconnect the heater harness.
4	Connection failure of the eject sensor PCB harness	Reconnect the eject sensor PCB harness.
5	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
6	Low-voltage power supply PCB failure	Replace the low-voltage power supply PCB ASSY.
7	Fuser unit failure	Replace the fuser unit.
8	Main PCB failure	Replace the main PCB ASSY.

**Note:**

- Turn the power switch OFF and then ON again. Leave the machine for 15 minutes. This problem may then be cleared.
- The machine may recover from the error, when the test printing of the maintenance mode for service personnel is started. However, conducting this operation while the heater has not yet cooled may cause the fuser unit to melt. Be careful.

## 4.9 Troubleshooting for Laser Unit Problems

### 4.9.1 Laser unit failure

**<User Check>**

- Turn ON the power switch, then open the front cover and the back cover. Leave the machine for a while to remove condensation.

Step	Cause	Remedy
1	Laser unit attachment failure	Reattach the laser unit.
2	Connection failure of the laser unit flat cable	Reconnect the laser unit flat cable.
3	Connection failure of the polygon motor harness	Reconnect the polygon motor harness.
4	Laser unit failure	Replace the laser unit.
5	Main PCB failure	Replace the main PCB ASSY.

## 4.10 Troubleshooting for PCB Problems

### 4.10.1 Main PCB failure

#### <User Check>

- Turn the power switch OFF and then back ON again.
- Install the latest main firmware.
- Check the print limit ID.
- Check that the print data is not damaged.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

### 4.10.2 Full memory

#### <User Check>

- Print the accumulated data.
- Reduce the amount or resolution of the data.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

## 4.11 Troubleshooting for Other Problems

### 4.11.1 Cannot make print

#### <User Check>

- Turn the power switch OFF and then back ON again.
- Check that the USB cable is connected to the host correctly.
- Check that the LAN cable is connected to the host correctly.
- Replace the USB cable.
- Replace the LAN cable.
- Check that the maximum printable page number has not been exceeded.
- Check that the PC Print is not forbidden.
- Check the print limit ID.
- Check the network connection.
- Check the relevant section in the Network Setting Guide.
- Check that the print data is not damaged.
- Install the latest main firmware.
- Match the document size with the one specified in the driver.

Step	Cause	Remedy
1	Connection failure of the wireless LAN connector	Reconnect the wireless LAN connector.
2	Wireless LAN PCB failure	Replace the wireless LAN PCB.
3	Main PCB failure	Replace the main PCB ASSY.

### 4.11.2 Problem of USB direct interface

#### <User Check>

- Wait for one minute while connecting the USB flash memory and check if it works normally.
- Connect the USB flash memory again.
- Replace the USB flash memory.
- Check that the extension of data in the USB flash memory is correct.
- Check that the USB device out of specification is not connected.
- Check that the multiple USB devices are not connected to the machine.

Step	Cause	Remedy
1	Connection failure of the USB host harness	Reconnect the USB host harness.
2	USB host PCB failure	Replace the USB host PCB ASSY.
3	Main PCB failure	Replace the main PCB ASSY.

### 4.11.3 Cannot update firmware

#### <User Check>

- Make sure that there is no other function running.
- Turn the power switch OFF and then back ON again.

Step	Cause	Remedy
1	Firmware version does not match	Reinstall the latest sub firmware and main firmware in this order.
2	In case of update failure by interruption, the firmware might not correctly written in the ROM	Update the firmware again by the following procedure.* 1) Turn OFF the machine. 2) <u>For non touch panel models</u> Turn ON the machine while pressing the [OK] key and [Back] key together. <u>For touch panel models</u> Turn ON the machine while pressing the  key. 3) Double-click the "Filedg32.exe" to start, and select "Brother Maintenance USB Printer". 4) Drag and drop the firmware (upd file) in the FILEDG32 screen. Update is started.
3	Main PCB failure	Replace the main PCB ASSY.

\* By the above update procedure, the other models firmware can be updated to the machine. (You can update touch panel models firmware to non touch panel models.) Check that the firmware is right and update correctly. If the other models firmware was updated by mistake, the machine may repeat power ON/OFF or not powered ON. In such case, replace the main PCB.

### 4.11.4 "Paper Low" message does not disappear

#### <User Check>

- Turn the power switch OFF and then back ON again.
- Refill the paper in the appropriate paper tray.

Step	Cause	Remedy
1	Damaged plate-up plate in the paper tray	Replace the paper tray.
2	Paper feed motor failure	Replace the process drive unit.
3	Damaged plate push-up mechanism in the machine	Replace the paper feed drive unit.
4	Main PCB failure	Replace the main PCB ASSY.

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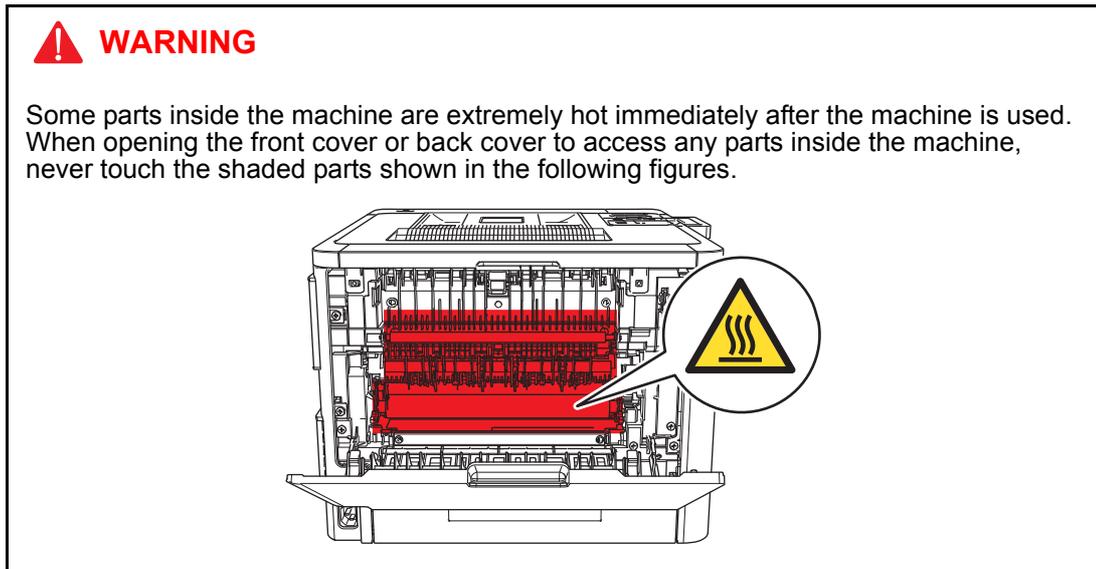
# CHAPTER 3 DISASSEMBLY AND ASSEMBLY

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## 1. SAFETY PRECAUTIONS

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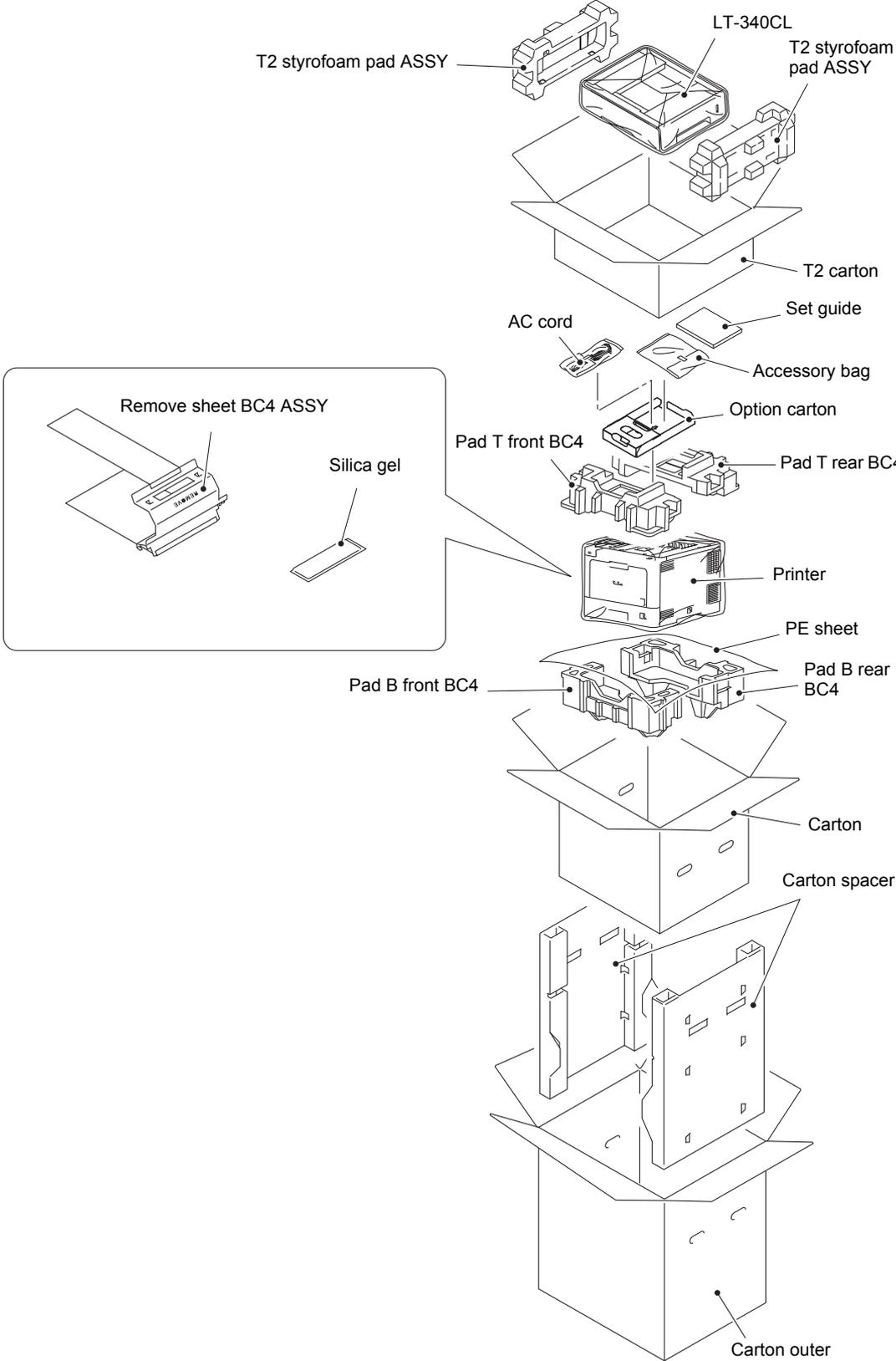
To avoid creating secondary problems by mishandling, follow the warnings and precautions below during maintenance work.



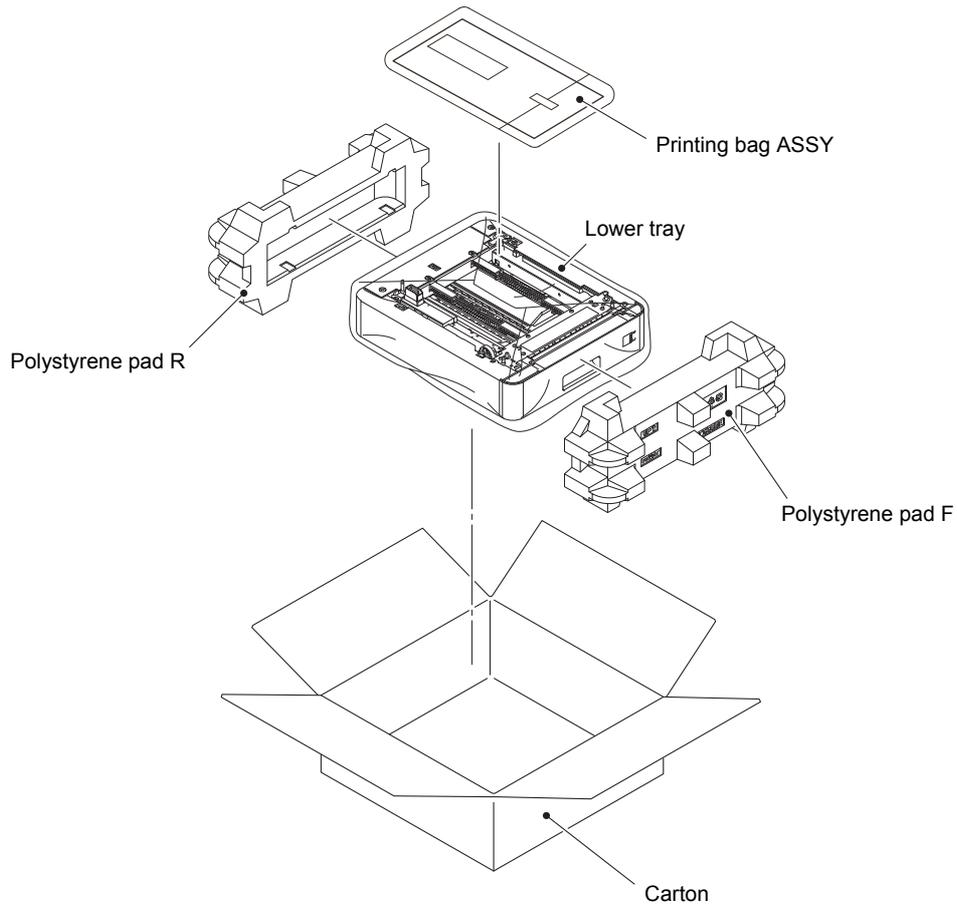
- Be careful not to lose screws, washers, or other parts removed.
- Be sure to apply grease to the gears and applicable positions specified in this chapter.
- When using soldering irons or other heat-generating tools, take care not to accidentally damage parts such as wires, PCBs and covers.
- Static electricity charged in your body may damage electronic parts. When transporting PCBs, be sure to wrap them in conductive sheets.
- When replacing the PCB and all the other related parts, put on a grounding wrist band and perform the job on a static mat. Also take care not to touch the conductor sections on the flat cables or on the wire harness.
- After disconnecting flat cables, check that each cable is not damaged at its end or short-circuited.
- When connecting flat cables, do not insert them at an angle. After insertion, check that the cables are not at an angle.
- When connecting or disconnecting harnesses, hold the connector body, not the cables. If the connector is locked, release it first.
- After a repair, check not only the repaired portion but also handling of harnesses. Also check that other related portions are functioning properly before operational checks.
- There must be no damage in the insulation sheet.
- After a repair, update the firmware to the latest version.
- Forcefully closing the front cover without mounting the toner cartridge and the drum unit can damage the machine.
- When replacing the PCB, clear the component side and solder side from foreign objects.

# 2. PACKING

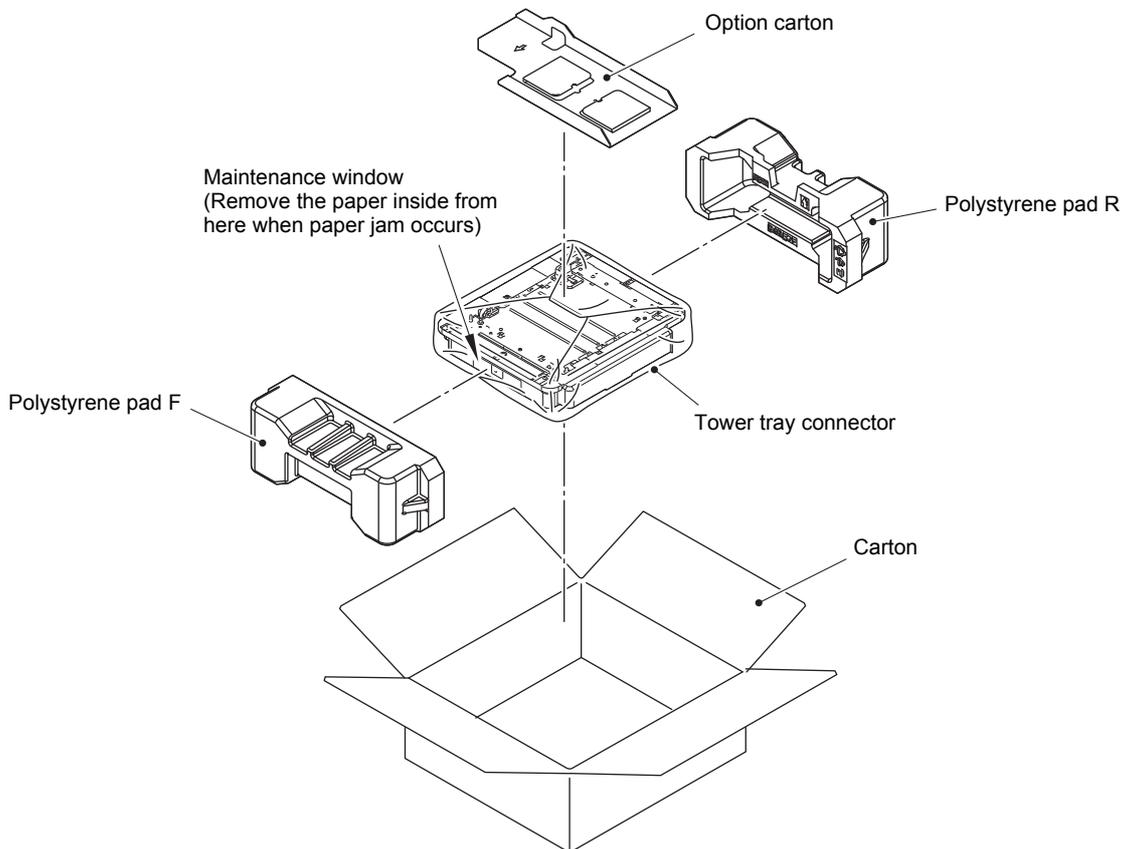
## Machine

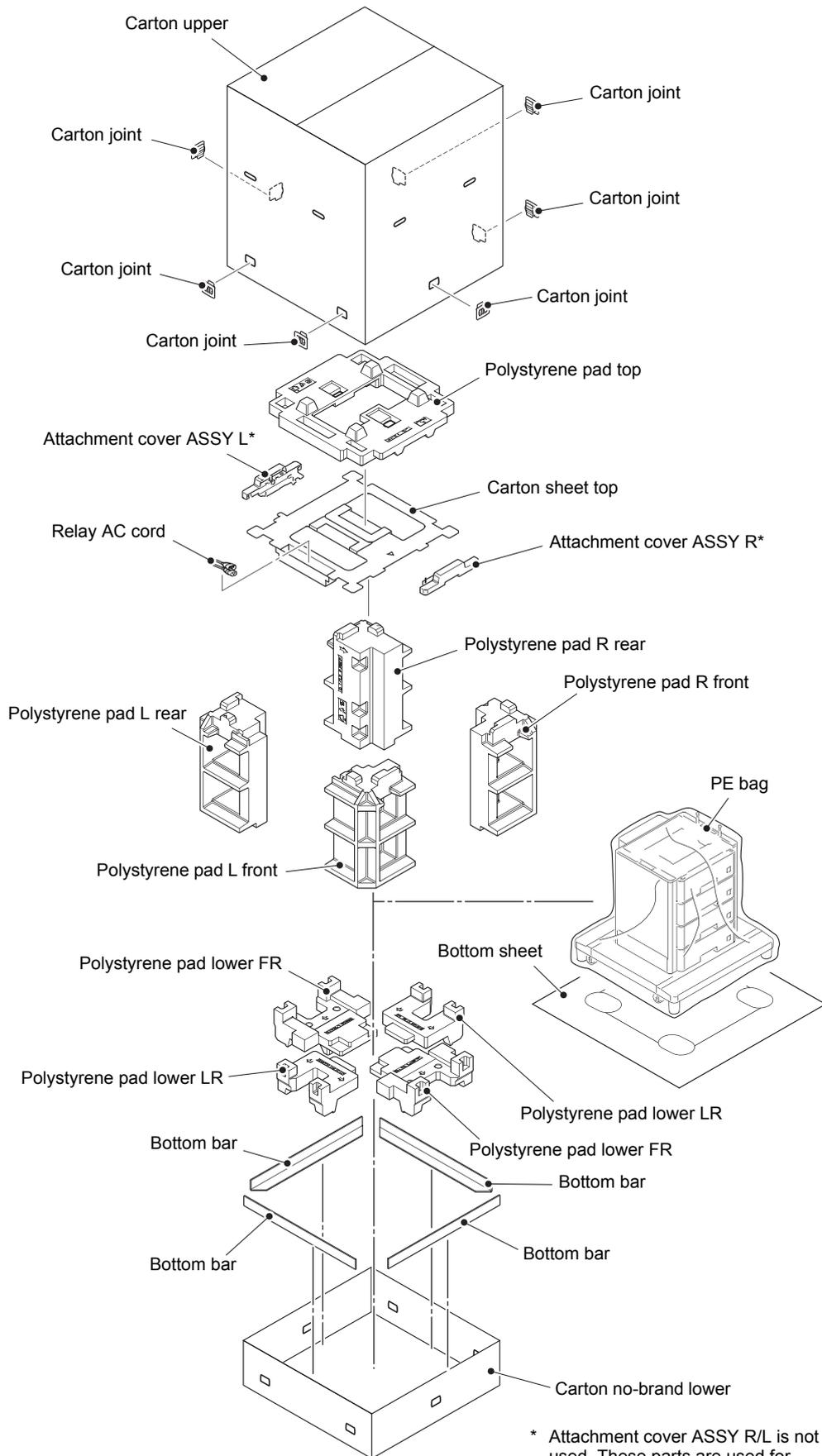


■ LT



■ TC





\* Attachment cover ASSY R/L is not used. These parts are used for other Laser product series.

### 3. SCREW CATALOGUE

#### Taptite bind B

Taptite bind B M3x8	
Taptite bind B M3x10	
Taptite bind B M4x10	
Taptite bind B M4x12	

#### Taptite pan B

Taptite pan B M3x8	
Taptite pan B M3x10	
Taptite pan B M4x14	

#### Taptite pan (washer)

Taptite pan (washer) B M4x12 DA	
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#### Taptite cup B

Taptite, cup B M3x8	
Taptite, cup B M3x10	
Taptite, cup B M3x12	

#### Screw, cup

Screw, cup M3x8	
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#### Taptite cup S

Taptite cup S M3x6 SR	
Taptite cup S M3x8 SR	

#### Taptite flat B

Taptite flat B M3x10	
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#### Screw pan (S/P washer)

Screw pan (S/P washer) M3.5x6	
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#### Shoulder screw

Shoulder screw M3	
Shoulder screw	
Shoulder screw (black)	

#### Screw bind

Screw bind M3x4	
Screw bind M5x8	

## 4. SCREW TORQUE LIST

Location of screw	Screw type	Q' ty	Tightening torque N·m (kgf·cm)
Fuser unit line cover L	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Fuser unit line cover R	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Fuser unit	Taptite pan B M4x14	2	0.8±0.1 (8±1)
Side cover L ASSY	Taptite cup B M3x8	1	0.5±0.1 (5±1)
	Taptite bind B M4x12	4	0.8±0.1 (8±1)
Side cover R	Taptite cup B M3x8	1	0.5±0.1 (5±1)
	Taptite bind B M4x12	3	0.8±0.1 (8±1)
High-voltage power supply PCB ASSY	Taptite pan B M3x10	2	0.5±0.1 (5±1)
Front cover	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Front cover arm L	Taptite pan B M4x14	1	0.8±0.1 (8±1)
Front cover arm R	Taptite pan B M4x14	1	0.8±0.1 (8±1)
Front cover damper spring	Taptite cup B M3x8	1	0.45±0.05 (4.5±0.5)
Main shield cover plate ASSY	Screw cup M3x8 (black)	4	0.5±0.05 (5±0.5)
USB host ground wire (Process drive unit side)	Taptite cup S M3x8 SR	1	0.8±0.1 (8±1)
Top cover ASSY	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Panel ASSY (Touch panel models)	Taptite bind B M4x12	3	0.8±0.1 (8±1)
	Taptite bind B M3x8	1	0.45±0.05 (4.5±0.5)
LCD panel ground wire (Touch panel models)	Taptite cup B M3x10	1	0.5±0.1 (5±1)
Panel cover lower (Touch panel models)	Taptite bind B M4x12	2	0.8±0.1 (8±1)
USB cover ASSY	Taptite cup B M3x10	1	0.5±0.1 (5±1)
USB host ground wire	Taptite bind B M4x12	1	0.8±0.1 (8±1)
Panel cover ASSY (Non touch panel models)	Taptite bind B M4x12	3	0.8±0.1 (8±1)
	Taptite bind B M3x8	1	0.5±0.1 (5±1)
Panel cover lower (Non touch panel models)	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Main PCB ASSY	Screw cup M3x8 (black)	2	0.5±0.05 (5±0.5)
Scanner cover plate	Taptite bind B M4x12	6	0.8±0.1 (8±1)
	Taptite cup S M3x6 SR	4	0.8±0.1 (8±1)
Scanner holder	Taptite cup S M3x6 SR	5	0.8±0.1 (8±1)
Side ground plate L	Taptite cup S M3x8 SR	1	0.8±0.1 (8±1)
Main PCB plate	Screw cup M3x8 (black)	2	0.5±0.05 (5±0.5)
PF cable rack	Taptite cup S M3x8 SR	1	0.8±0.1 (8±1)

Location of screw	Screw type	Q' ty	Tightening torque N·m (kgf·cm)
Under bar ground spring	Taptite cup S M3x8 SR	1	0.8±0.1 (8±1)
Process drive unit	Taptite bind B M4x12	5	0.8±0.1 (8±1)
	Taptite pan (washer) B M4x12 DA	1	0.8±0.1 (8±1)
	Screw pan (S/P washer) M3.5x6	1	0.5±0.05 (5±0.5)
Paper feed drive unit	Taptite bind B M4x12	4	0.8±0.1 (8±1)
Develop release drive unit	Taptite bind B M4x12	3	0.8±0.1 (8±1)
Paper eject ASSY	Taptite bind B M4x12	4	0.8±0.1 (8±1)
Registration mark sensor unit	Taptite bind B M3x10	2	0.5±0.1 (5±1)
Ground wire	Screw pan (S/P washer) M3.5x6	1	0.5±0.05 (5±0.5)
Inlet	Taptite flat B M3x10	1	0.5±0.05 (5±0.5)
Drive ground plate	Screw pan (S/P washer) M3.5x6	1	0.5±0.05 (5±0.5)
LVPS plate	Taptite cup S M3x8 SR	2	0.5±0.05 (5±0.5)
	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Low-voltage power supply PCB ASSY	Taptite cup S M3x6 SR	5	0.5±0.05 (5±0.5)
MP upper cover ASSY	Taptite bind B M3x10	2	0.4±0.1 (4±1)
MP paper empty/ registration front sensor PCB ASSY	Taptite bind B M3x8	1	0.4±0.1 (4±1)
Paper feed unit	Taptite cup B M3x12	1	0.4±0.1 (4±1)
	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Registration front/rear sensor PCB holder	Taptite bind B M3x10	1	0.5±0.1 (5±1)
MP drive frame	Taptite bind B M3x10	3	0.5±0.1 (5±1)

■ **Screw torque list (LT-330CL)**

Location of screw	Screw type	Q' ty	Tightening torque N·m (kgf·cm)
LT side cover L	Shoulder screw M3	2	0.8±0.1 (8±1)
	Taptite pan B M3x8	1	0.5±0.1 (5±1)
LT control PCB ASSY	Screw cup M3x8 (black)	1	0.8±0.1 (8±1)
LT side cover R	Shoulder screw M3	2	0.8±0.1 (8±1)
LT drive unit	Taptite cup S M3x8 SR	5	0.8±0.1 (8±1)
Handle	Taptite bind B M4x12	4	0.8±0.1 (8±1)
LT front cover	Shoulder screw M3	3	0.8±0.1 (8±1)
Top beam front plate	Taptite cup S M3x8 SR	8	0.8±0.1 (8±1)
	Taptite bind B M4x12	4	0.8±0.1 (8±1)

■ **Screw torque list (LT-340CL)**

Location of screw	Screw type	Q' ty	Tightening torque N·m (kgf·cm)
LT cover rear	Shoulder screw M3	1	0.8±0.1 (8±1)
LT cover left	Shoulder screw M3	2	0.8±0.1 (8±1)
LT control PCB ASSY	Taptite cup S M3x6 SR	1	0.8±0.1 (8±1)
LT cover right	Shoulder screw M3	2	0.8±0.1 (8±1)
Handle	Taptite bind B M4x12	4	0.8±0.1 (8±1)
LT beam F ASSY	Taptite cup S M3x6 SR	5	0.8±0.1 (8±1)
LT beam rear	Taptite cup S M3x6 SR	8	0.8±0.1 (8±1)
LT paper feed frame unit	Taptite bind B M4x10	1	0.8±0.1 (8±1)
Sensor PCB holder	Taptite bind B M3x8	1	0.5±0.1 (5±1)

■ **Screw torque list (TT)**

Location of screw	Screw type	Q' ty	Tightening torque N·m (kgf·cm)
Top cover TT	Shoulder screw	8	0.8±0.1 (8±1)
	Taptite bind B M4x10	2	0.8±0.1 (8±1)
Side cover L	Taptite bind B M4x10	7	0.8±0.1 (8±1)
Side cover R	Taptite bind B M4x10	7	0.8±0.1 (8±1)
Back cover	Shoulder screw (black)	6	0.8±0.1 (8±1)
PCB cover plate	Screw cup M3x8 (black)	3	0.5±0.1 (5±1)
TT control PCB ASSY	Screw cup M3x8 (black)	4	0.5±0.1 (5±1)
PCB shield plate	Screw cup M3x8 (black)	6	0.8±0.1 (8±1)
Attach sensor holder (L side)	Taptite cup S M3x8 SR	1	1.0±0.1 (10±1)
Attach sensor holder (R side)	Taptite cup S M3x8 SR	1	1.0±0.1 (10±1)
FG plate L	Taptite cup S M3x8 SR	4	1.0±0.1 (10±1)
Motor plate calking ASSY	Taptite bind B M4x10	4	0.8±0.1 (8±1)
TT motor	Screw bind M3x4	3	0.65±0.05 (6.5±0.5)
Reinforcing plate top L	Taptite cup S M3x8 SR	6	1.0±0.1 (10±1)
Air duct	Taptite bind B M4x10	1	0.8±0.1 (8±1)

Location of screw	Screw type	Q' ty	Tightening torque N·m (kgf·cm)
T2TT unit	Taptite cup S M3x8 SR	8	1.0±0.1 (10±1)
	Taptite bind B M4x10	2	0.8±0.1 (8±1)
	Screw cup M3x8 (black)	6	0.8±0.1 (8±1)
TT ground plate right	Screw pan (S/P washer) M3.5x6	1	0.5±0.1 (5±1)
	Screw cup M3x8 (black)	1	0.8±0.1 (8±1)
TT ground plate rear	Screw cup M3x8 (black) (Left)	1	0.8±0.1 (8±1)
	Screw cup M3x8 (black) (Right)	1	0.5±0.1 (5±1)
Positioning plate calking ASSY (Four parts)	Taptite cup S M3x8 SR	8	1.0±0.1 (10±1)
Reinforcing plate L (1/2)	Taptite cup S M3x8 SR	6	1.0±0.1 (10±1)
FG plate L	Taptite cup S M3x8 SR	4	1.0±0.1 (10±1)
Calking gear plate ASSY	Taptite bind B M4x12	4	0.8±0.1 (8±1)
T3TT unit	Taptite cup S M3x8 SR	3	0.8±0.1 (8±1)
	Taptite bind B M4x10	2	0.8±0.1 (8±1)
LV shield plate cover	Screw pan (S/P washer) M3.5x6	1	0.5±0.1 (5±1)
	Screw cup M3x8 (black)	2	0.5±0.1 (5±1)
Ground harness	Screw pan (S/P washer) M3.5x6	1	0.5±0.1 (5±1)
Inlet	Taptite flat B M3x10	2	0.5±0.1 (5±1)
Inlet cover	Taptite bind B M3x10	1	0.5±0.1 (5±1)
Low-voltage power supply PCB ASSY	Screw cup M3x8 (black)	2	0.5±0.1 (5±1)
Positioning plate calking ASSY (Four parts)	Taptite cup S M3x8 SR	8	1.0±0.1 (10±1)
Reinforcing plate L (2/2)	Taptite cup S M3x8 SR (Left)	3	0.8±0.1 (8±1)
	Taptite cup S M3x8 SR (Right)	3	1.0±0.1 (10±1)
	Screw bind M5x8	3	0.8±0.1 (8±1)
	Screw cup M3x8 (black)	4	0.8±0.1 (8±1)
Reinforcing plate R	Taptite cup S M3x8 SR	1	1.0±0.1 (10±1)
FG plate L	Taptite cup S M3x8 SR	4	1.0±0.1 (10±1)
Calking gear plate ASSY	Taptite bind B M4x12	4	0.8±0.1 (8±1)
T4TT unit	Taptite cup S M3x8 SR	3	1.0±0.1 (10±1)
	Taptite bind B M4x10	2	0.8±0.1 (8±1)
Positioning plate calking ASSY (Four parts)	Taptite cup S M3x8 SR	8	1.0±0.1 (10±1)
T5TT unit	Taptite cup S M3x8 SR	3	1.0±0.1 (10±1)
	Taptite bind B M4x10	2	0.8±0.1 (8±1)
TT ground plate	Taptite cup S M3x8 SR	2	0.8±0.1 (8±1)
Under bar (Front side)	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Under bar ground plate L	Taptite cup S M3x8 SR	1	0.8±0.1 (8±1)
Drive ASSY	Taptite bind B M4x12	3	0.8±0.1 (8±1)

Location of screw	Screw type	Q' ty	Tightening torque N·m (kgf·cm)
TT front cover	Taptite cup B M4x12	2	0.8±0.1 (8±1)
	Taptite cup S M3x8 SR	1	0.8±0.1 (8±1)
Under bar (Rear side)	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Frame L	Taptite cup S M3x8 SR	2	0.8±0.1 (8±1)
	Taptite bind B M4x12	1	0.8±0.1 (8±1)
UB earth plate R	Taptite cup S M3x8 SR	1	0.8±0.1 (8±1)
TT paper feed frame	Taptite cup S M3x8 SR	2	0.8±0.1 (8±1)
TT front beam	Taptite bind B M4x12	2	0.8±0.1 (8±1)
TT paper feed actuator holder ASSY	Taptite bind B M3x10	1	0.5±0.1 (5±1)
TT paper empty sensor PCB ASSY	Taptite bind B M3x10	1	0.5±0.1 (5±1)

## 5. LUBRICATION

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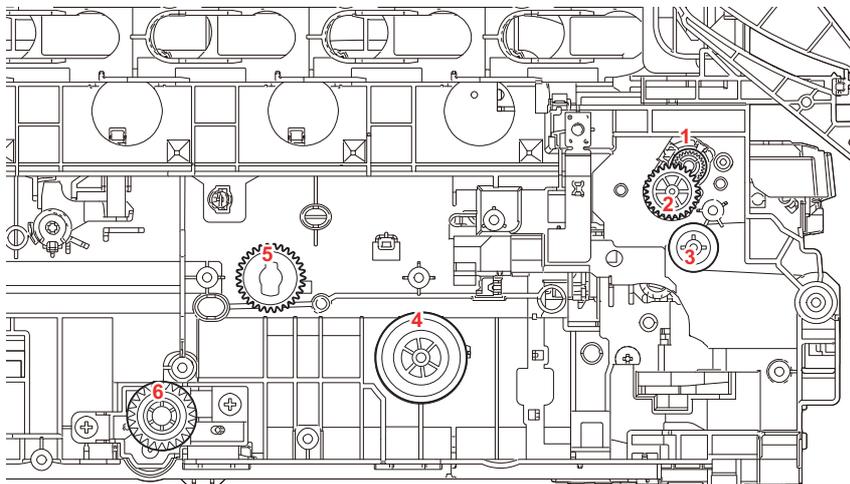
There are no applicable parts for lubrication.

## 6. OVERVIEW OF GEARS

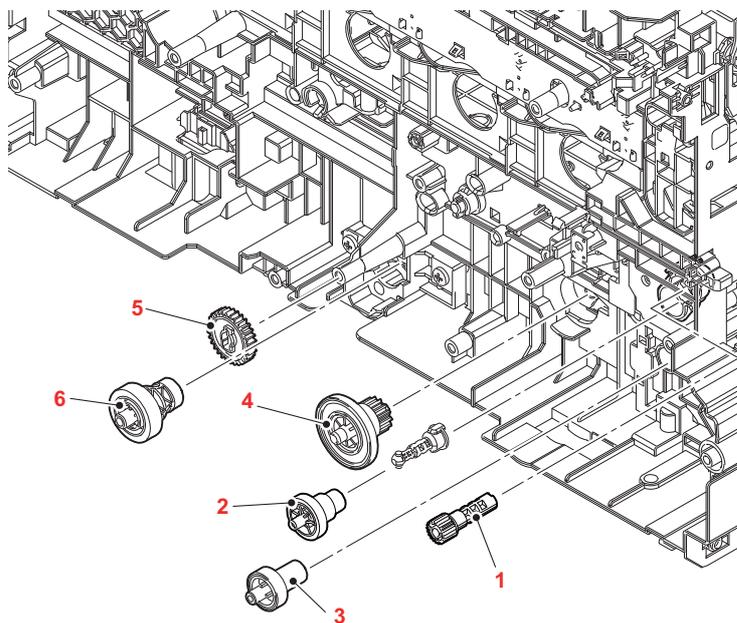
When ordering spare parts, please refer to Parts reference list.

### ■ Main frame L ASSY

<Layout view>



<Development view>



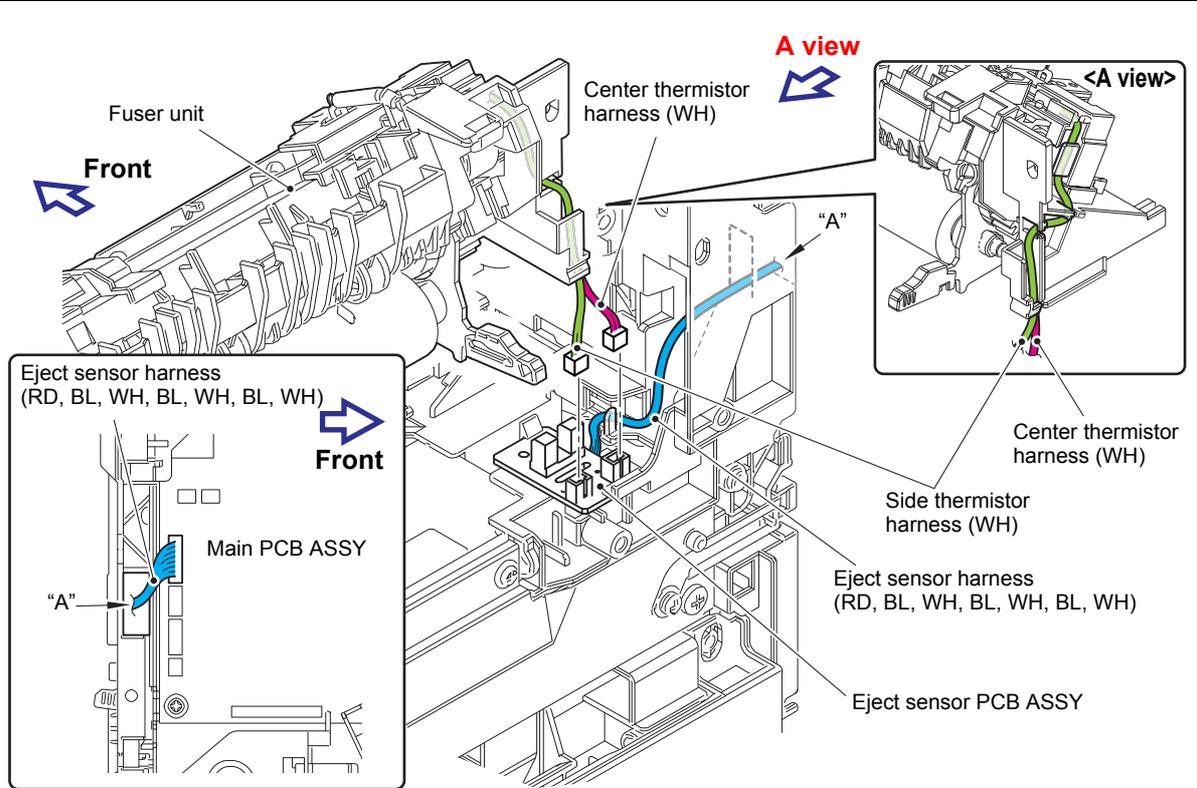
<Name of gears>

1	LY0299	Pinch roller drive gear Z21M05
2	D008NJ	REGI gear Z32-23
3	LY0164	PF drive gear 21
4	LY0166	PP gear 14 55
5	LY6128	Cleaner drive gear Z30
6	D008L2	DX drive gear Z15-23

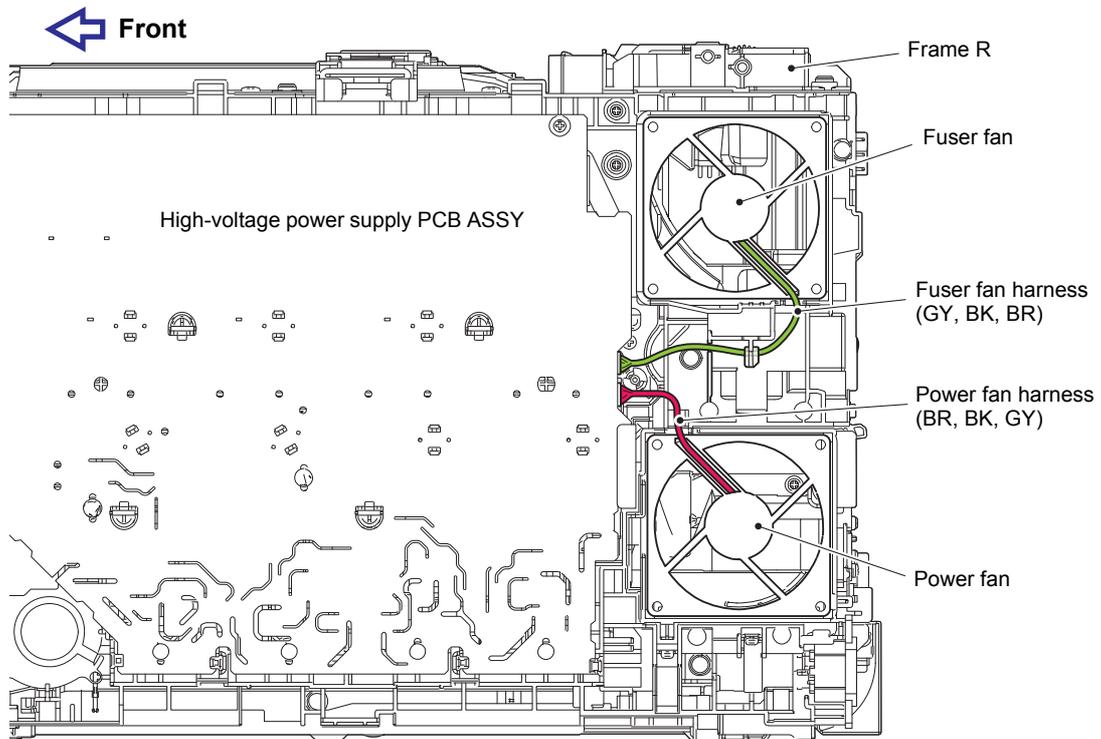
\* These parts are subject to change without notice.

# 7. HARNESS ROUTING

## 1 Fuser unit, Eject sensor PCB ASSY

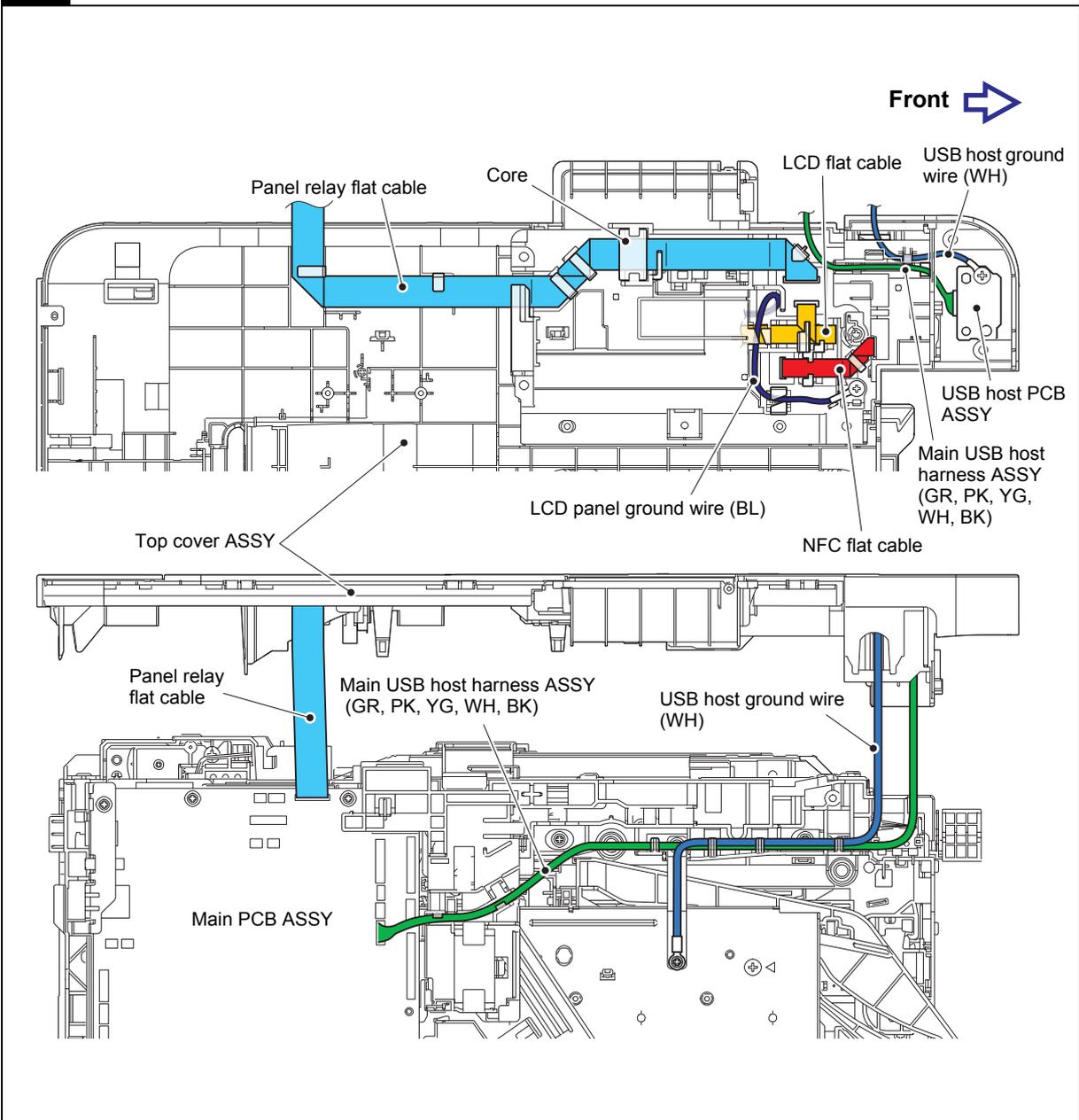


## 2 Fuser fan, Power fan



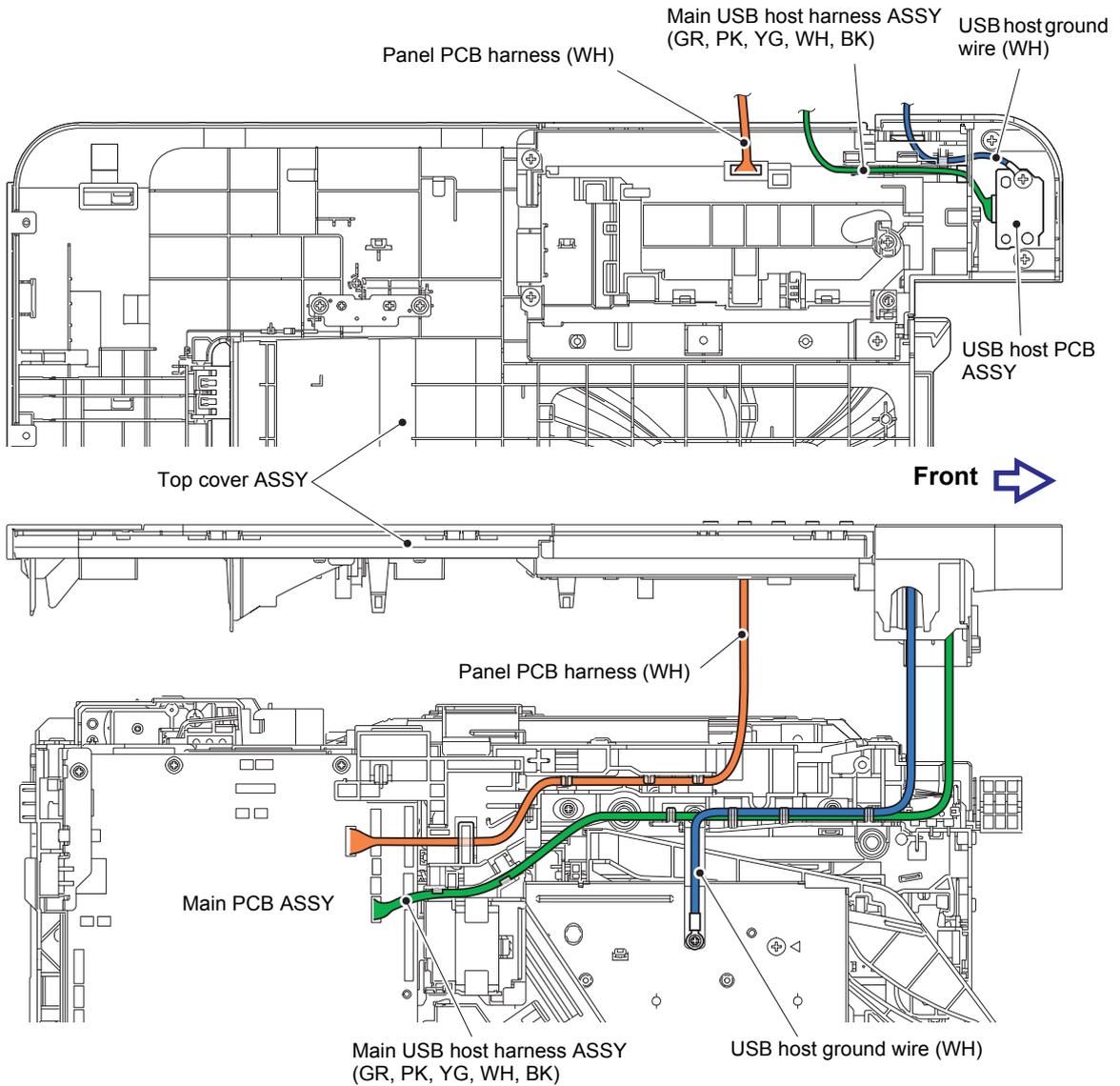
Harness colors may be changed for any reason.

**3** Top cover ASSY (Touch panel models)



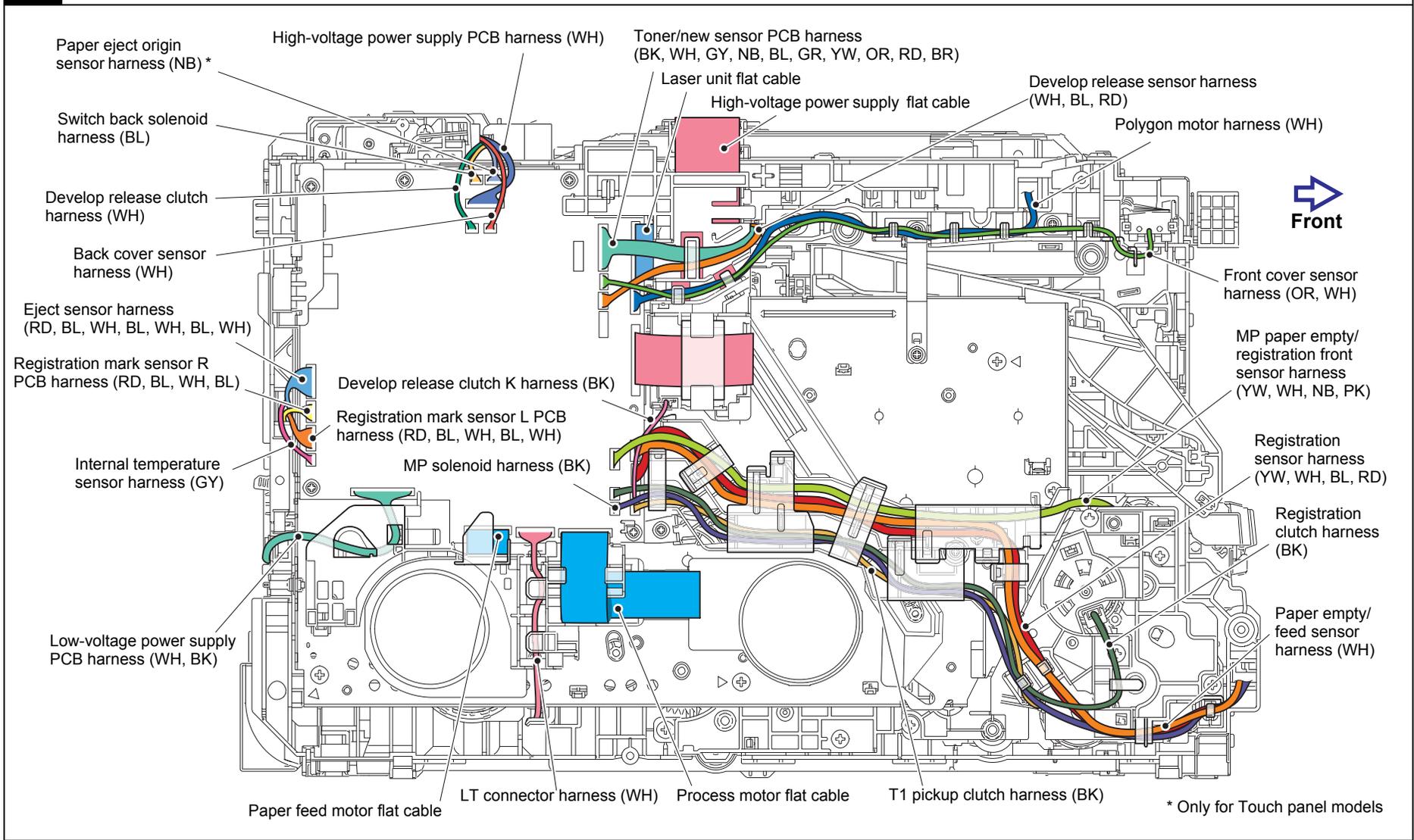
Harness colors may be changed for any reason.

**4** Top cover ASSY (Non touch panel models)



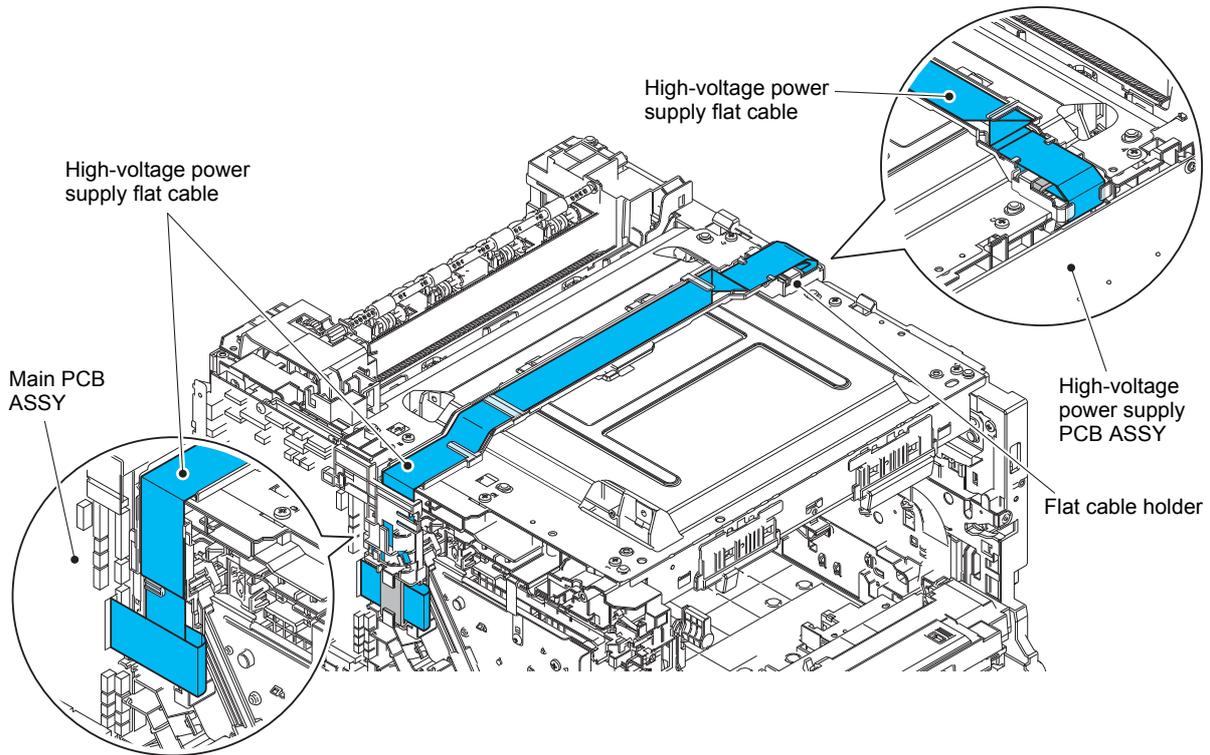
Harness colors may be changed for any reason.

**5** Main PCB ASSY

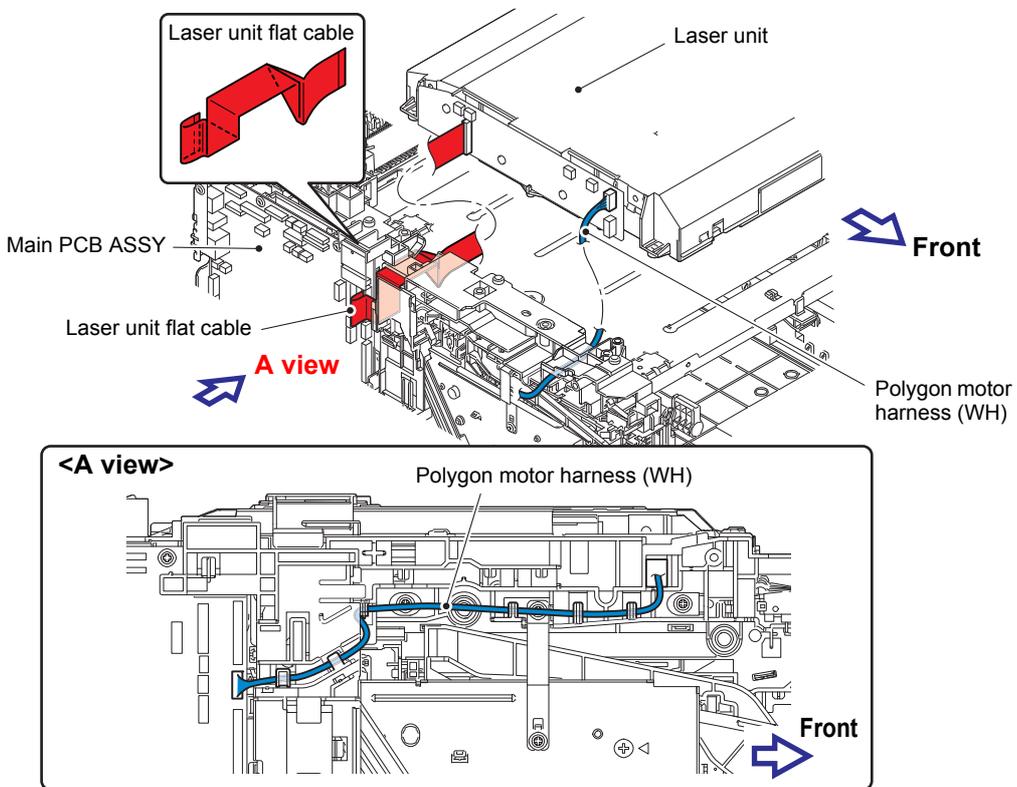


Harness colors may be changed for any reason.

**6** High-voltage power supply flat cable



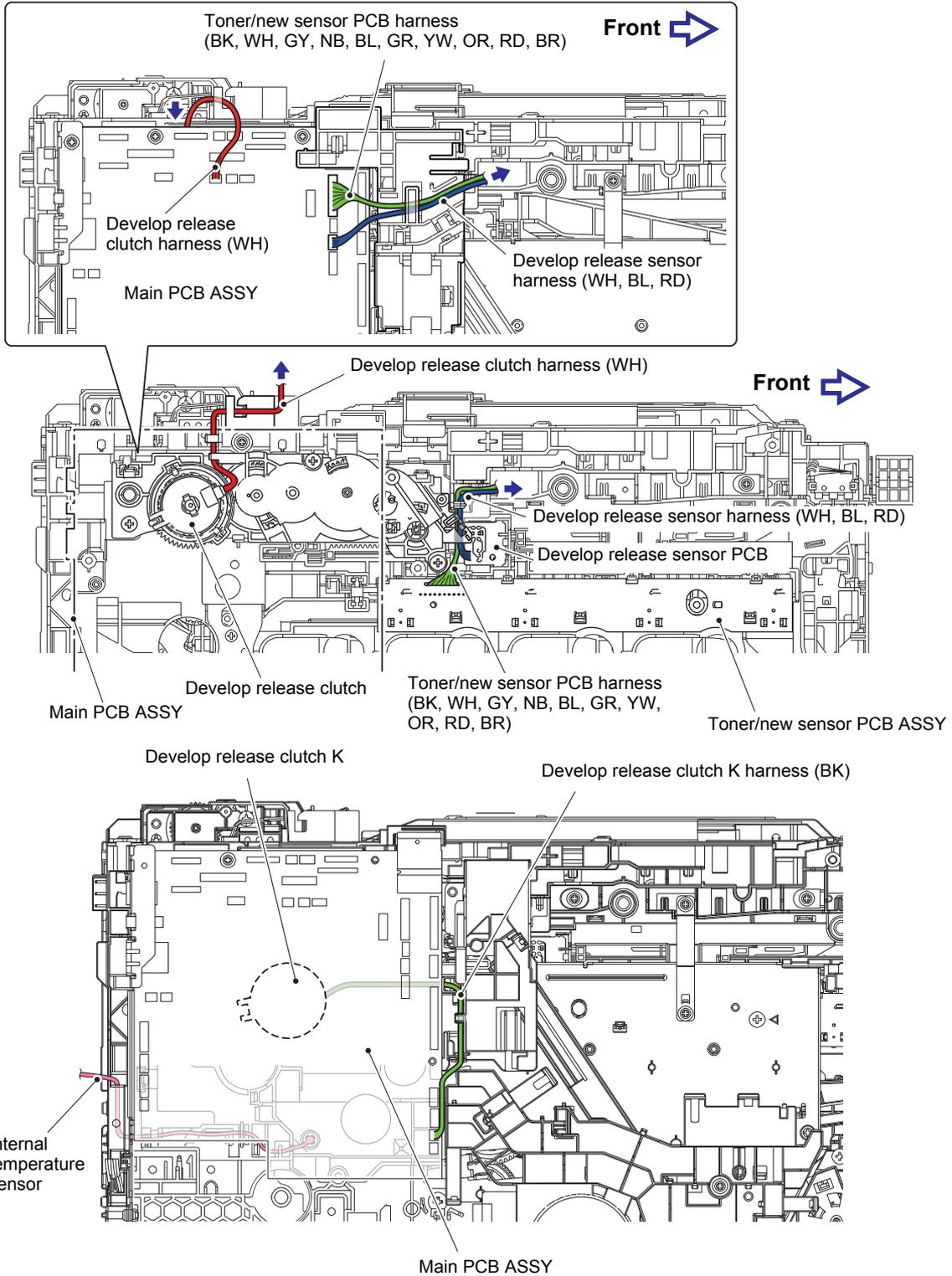
**7** Laser unit



Harness colors may be changed for any reason.

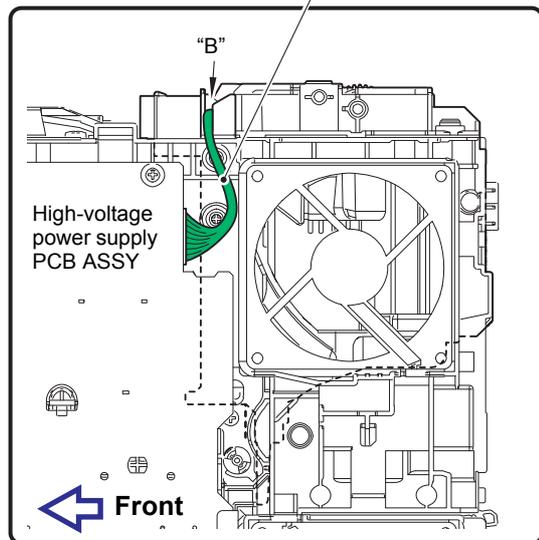
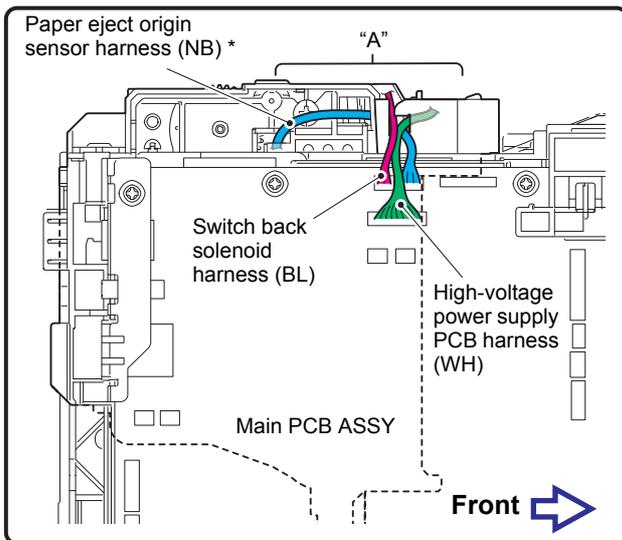
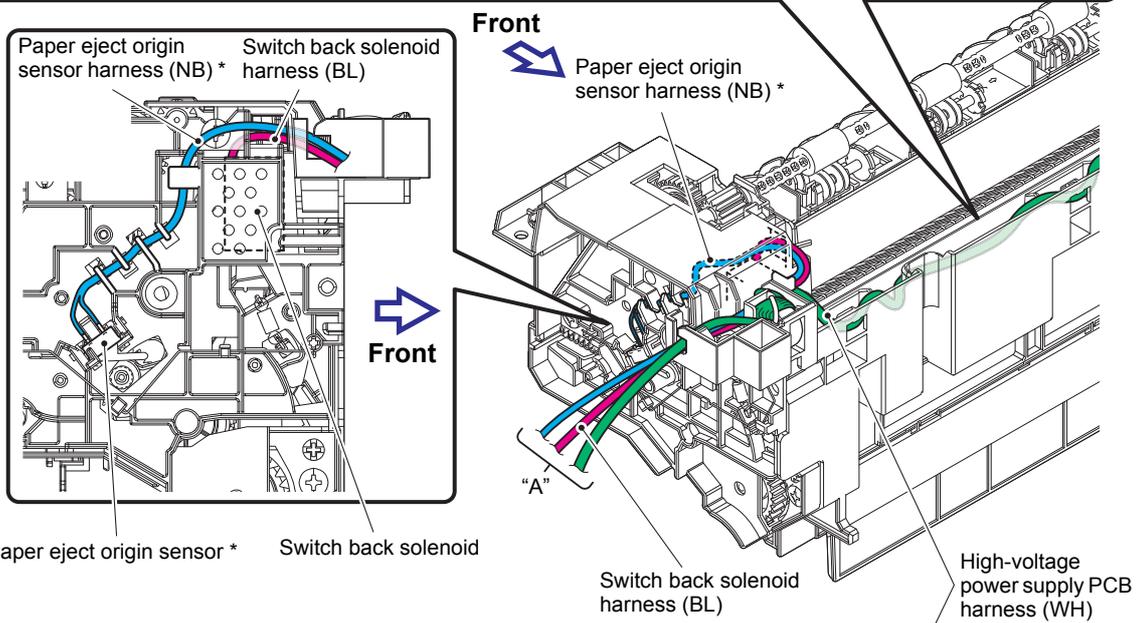
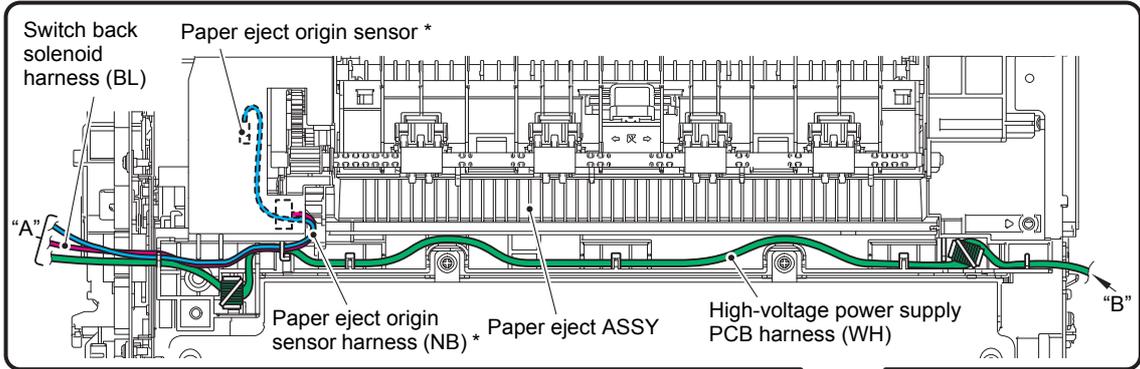
8

Develop release clutch, Develop release clutch K, Toner/new sensor PCB ASSY, Internal temperature sensor



Harness colors may be changed for any reason.

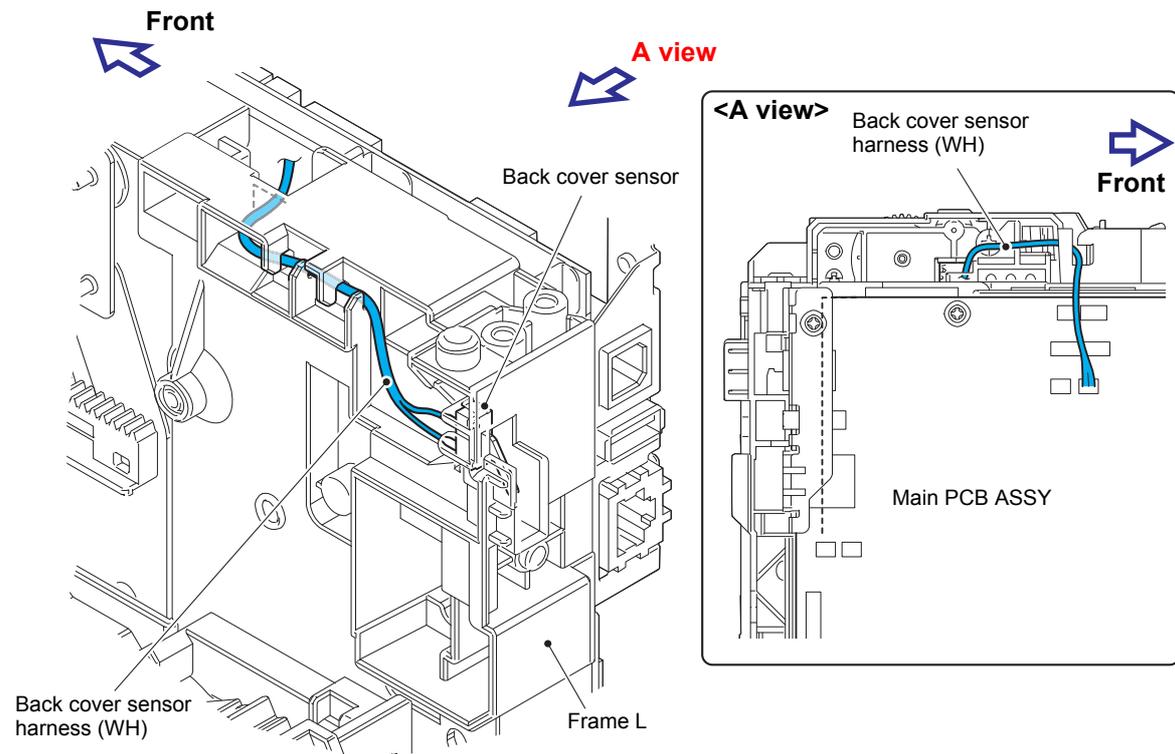
**9** Paper eject ASSY



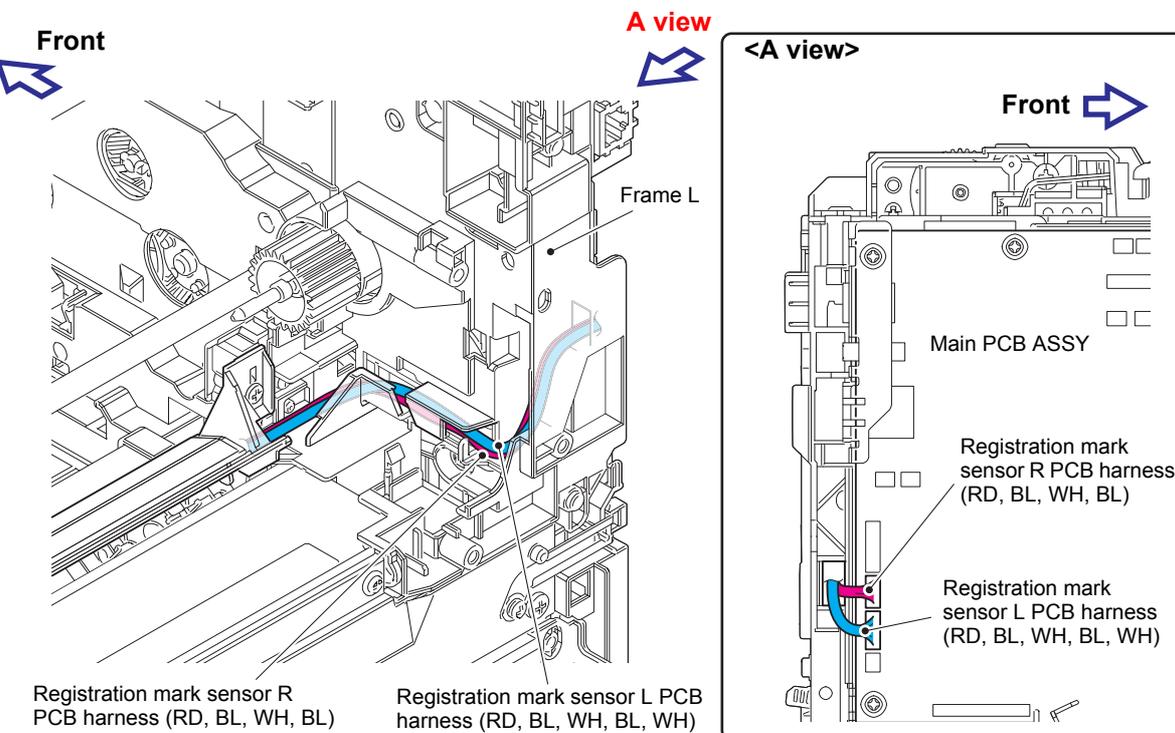
\* Only for Touch panel models

Harness colors may be changed for any reason.

**10** Back cover sensor

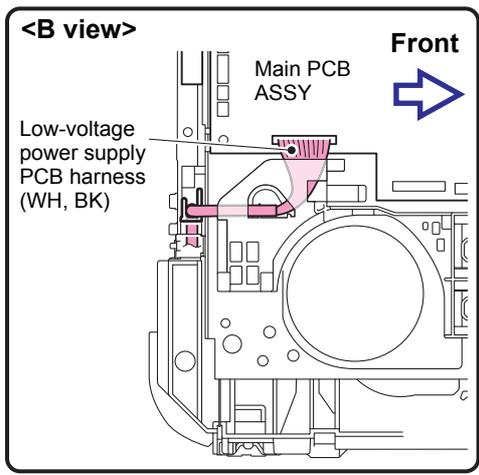
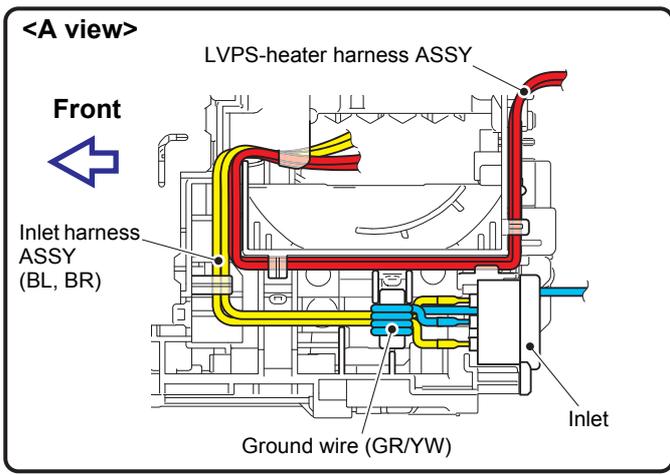
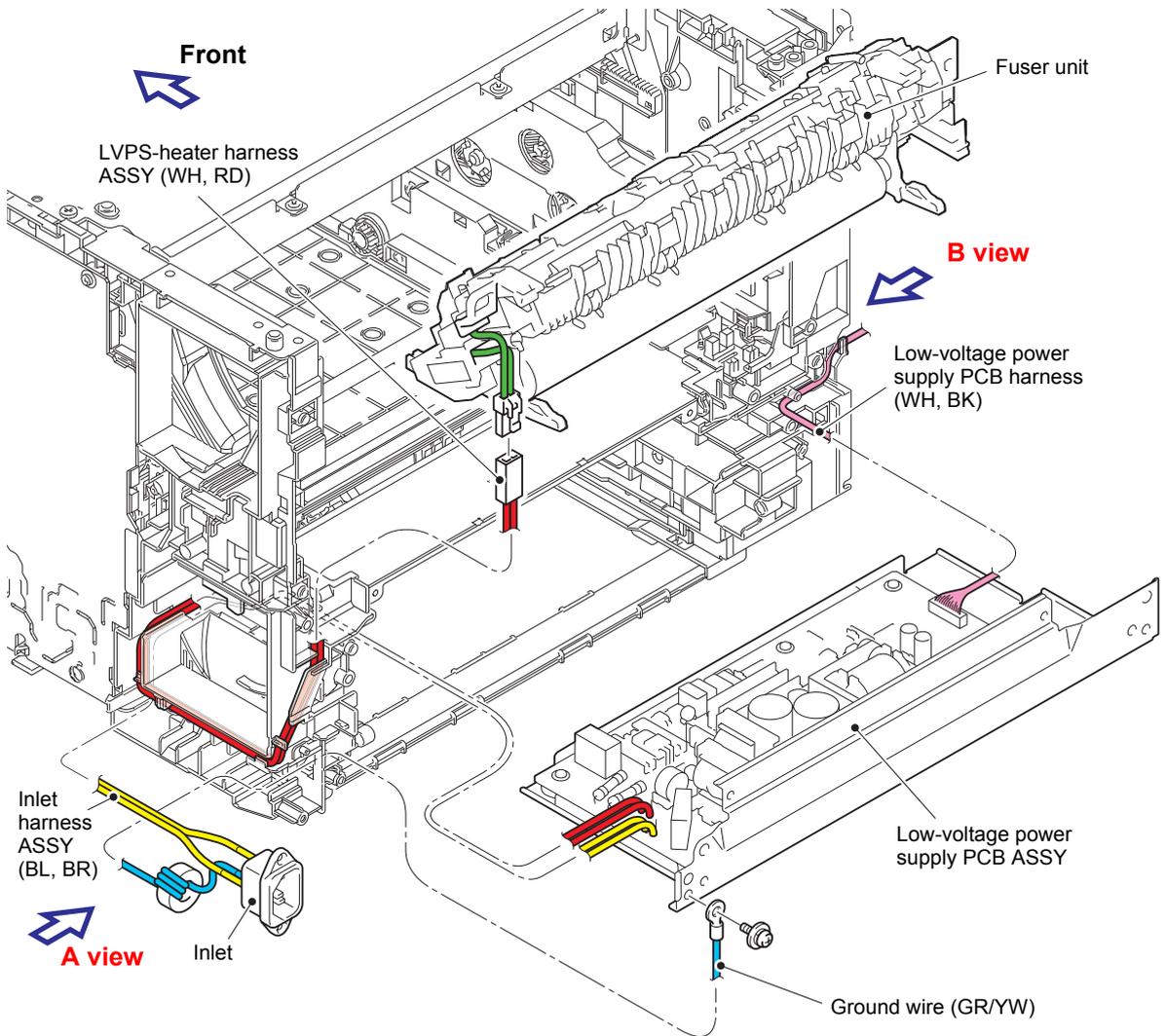


**11** Registration mark sensor unit



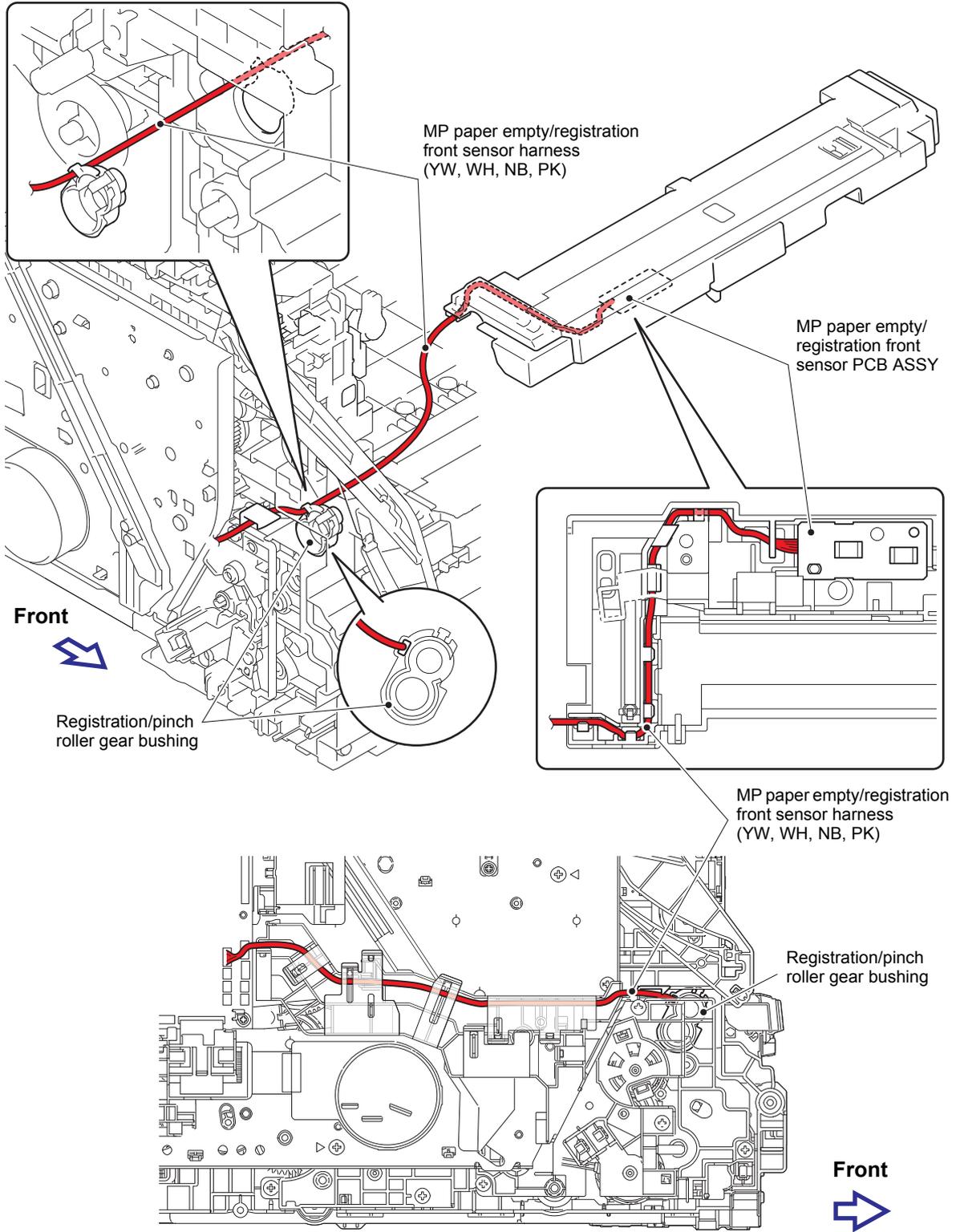
Harness colors may be changed for any reason.

**12** Low-voltage power supply PCB ASSY



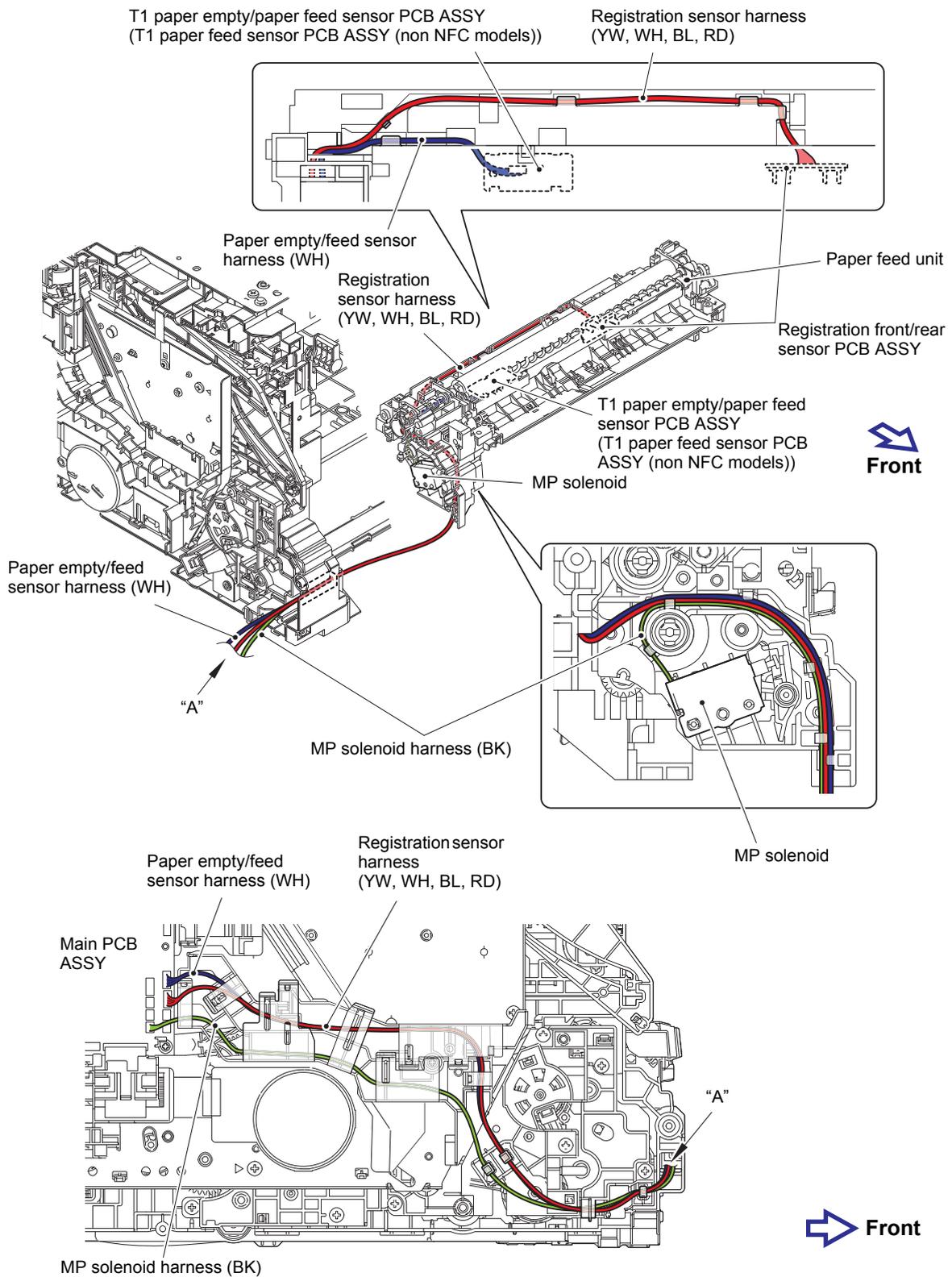
Harness colors may be changed for any reason.

**13** MP paper empty/registration front sensor PCB ASSY



Harness colors may be changed for any reason.

**14** Paper feed unit



Harness colors may be changed for any reason.

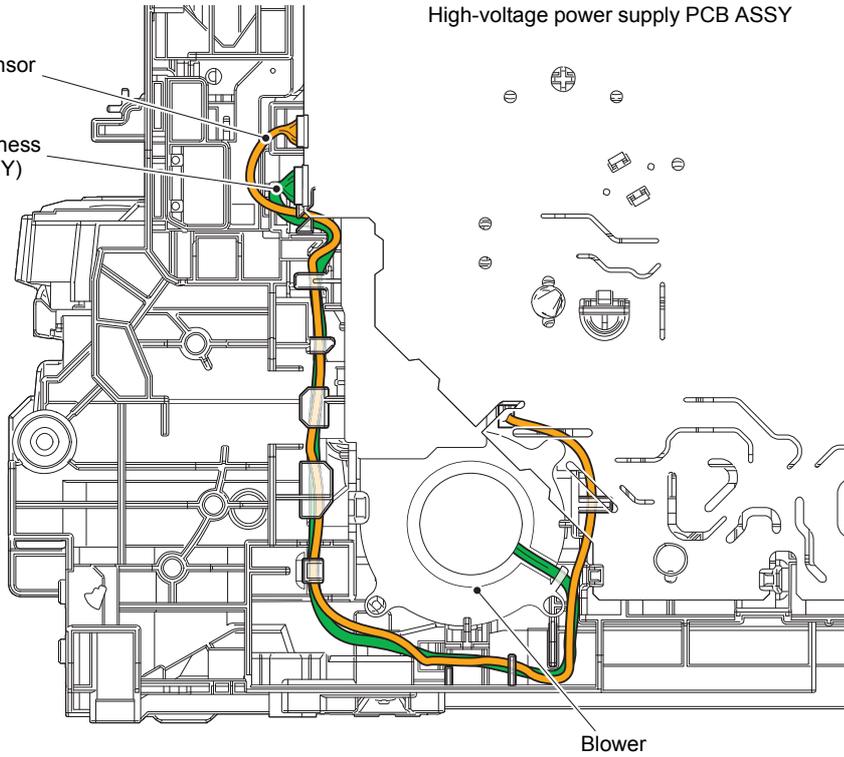
**15** Blower

← **Front**

Waste toner sensor harness (WH)

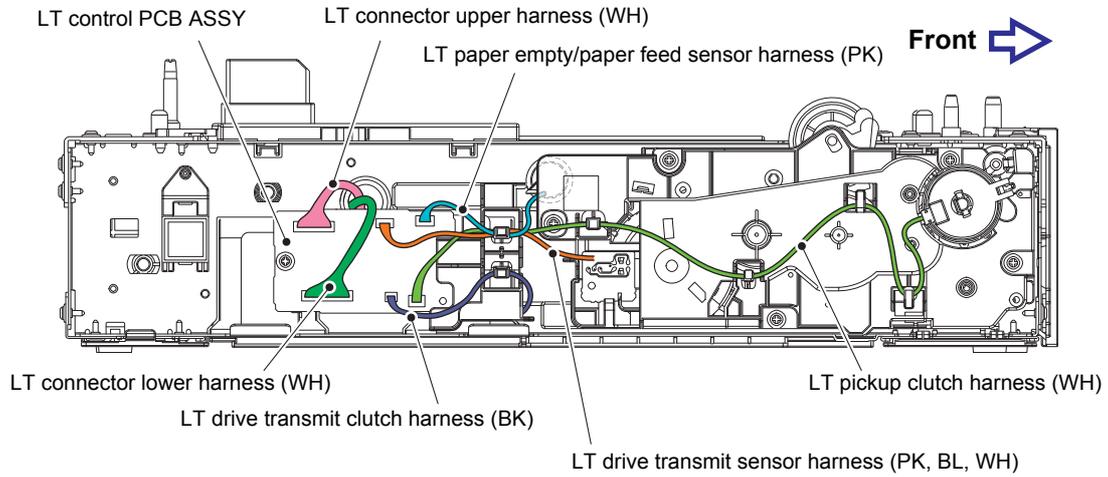
Blower harness (RD, BK, GY)

High-voltage power supply PCB ASSY

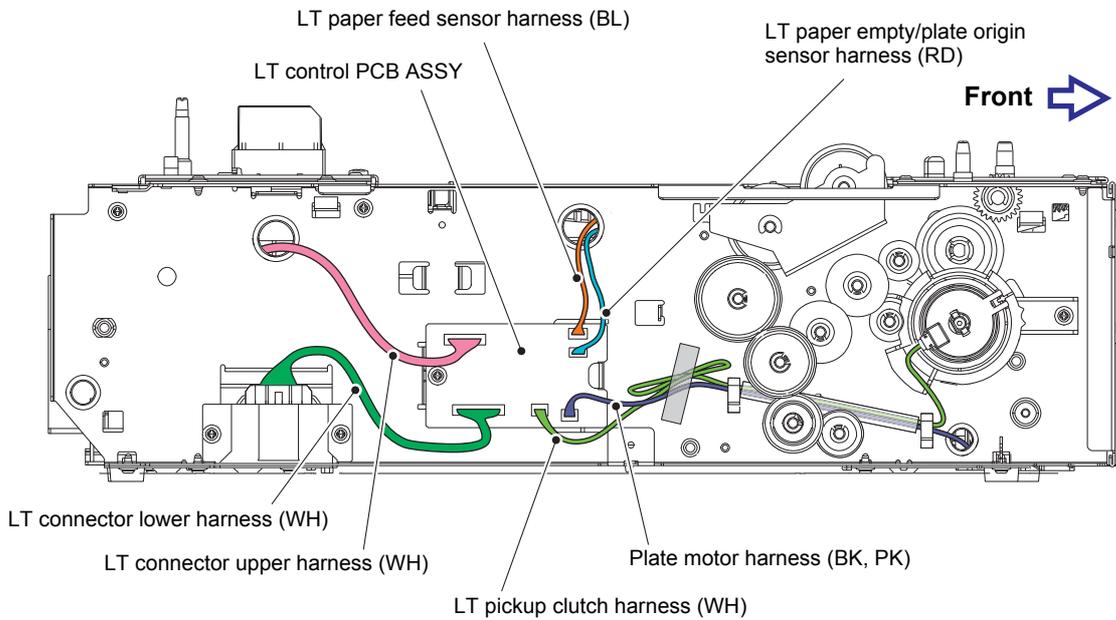


Harness colors may be changed for any reason.

**16** LT-330CL

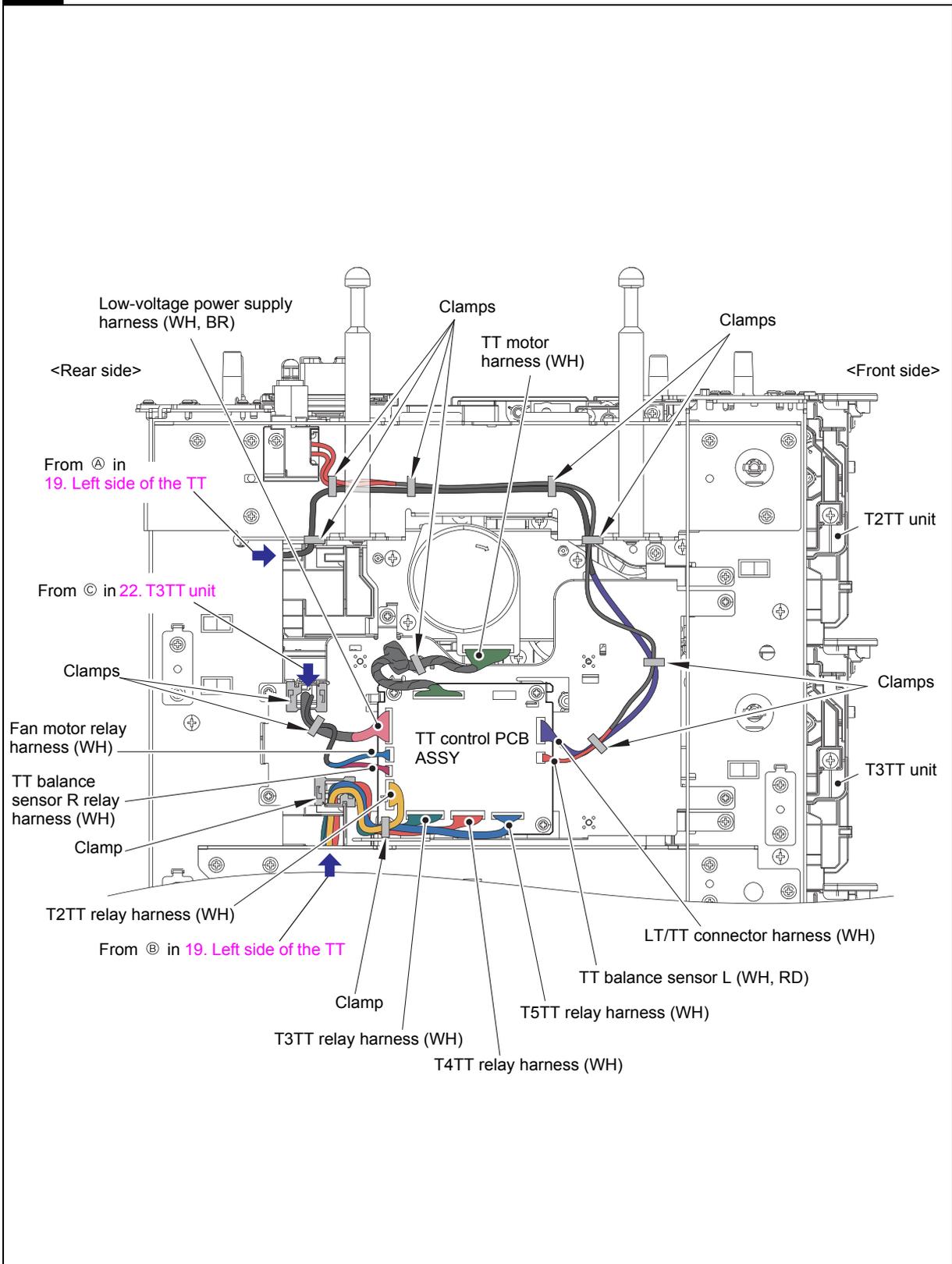


**17** LT-340CL



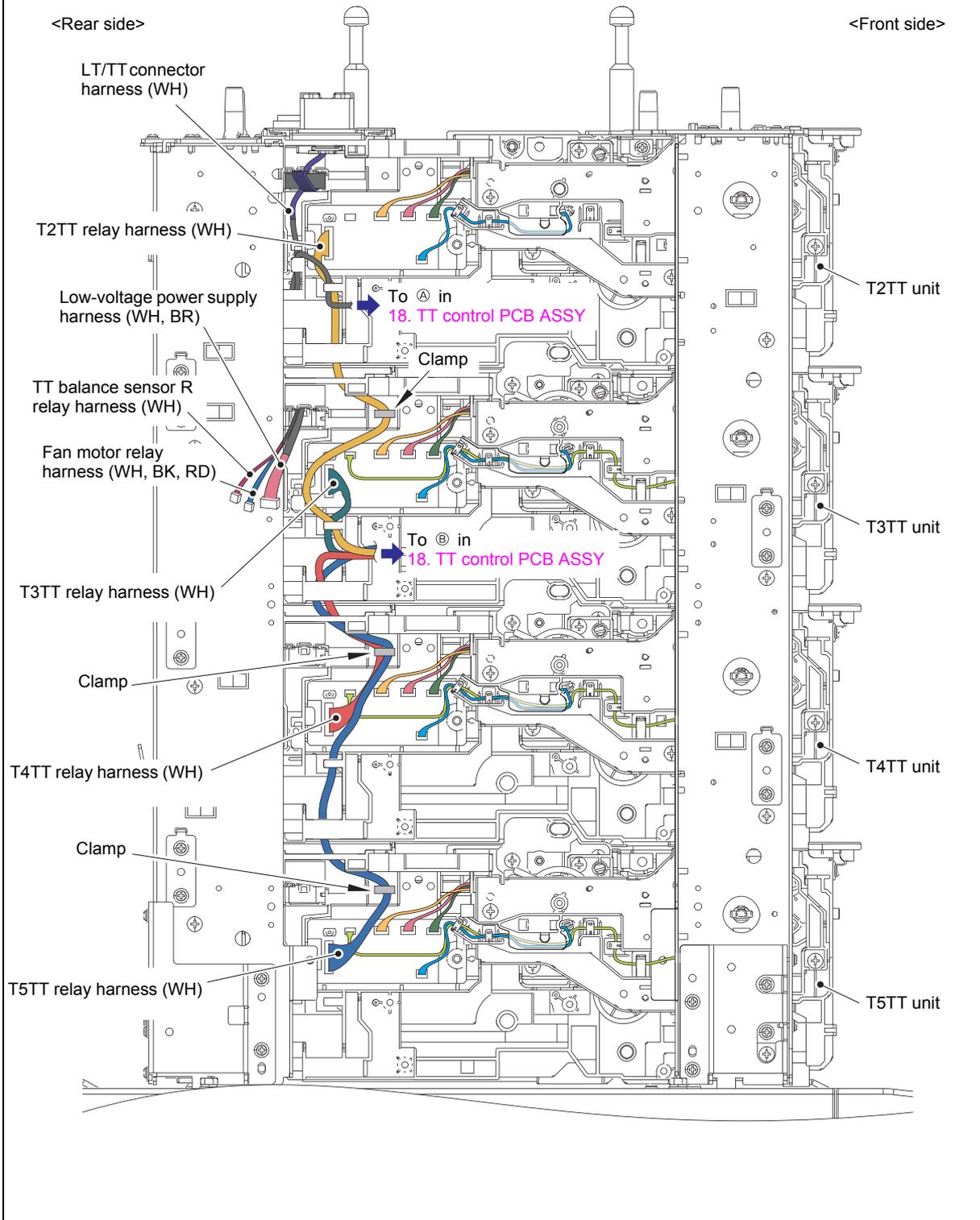
Harness colors may be changed for any reason.

**18** TT control PCB ASSY

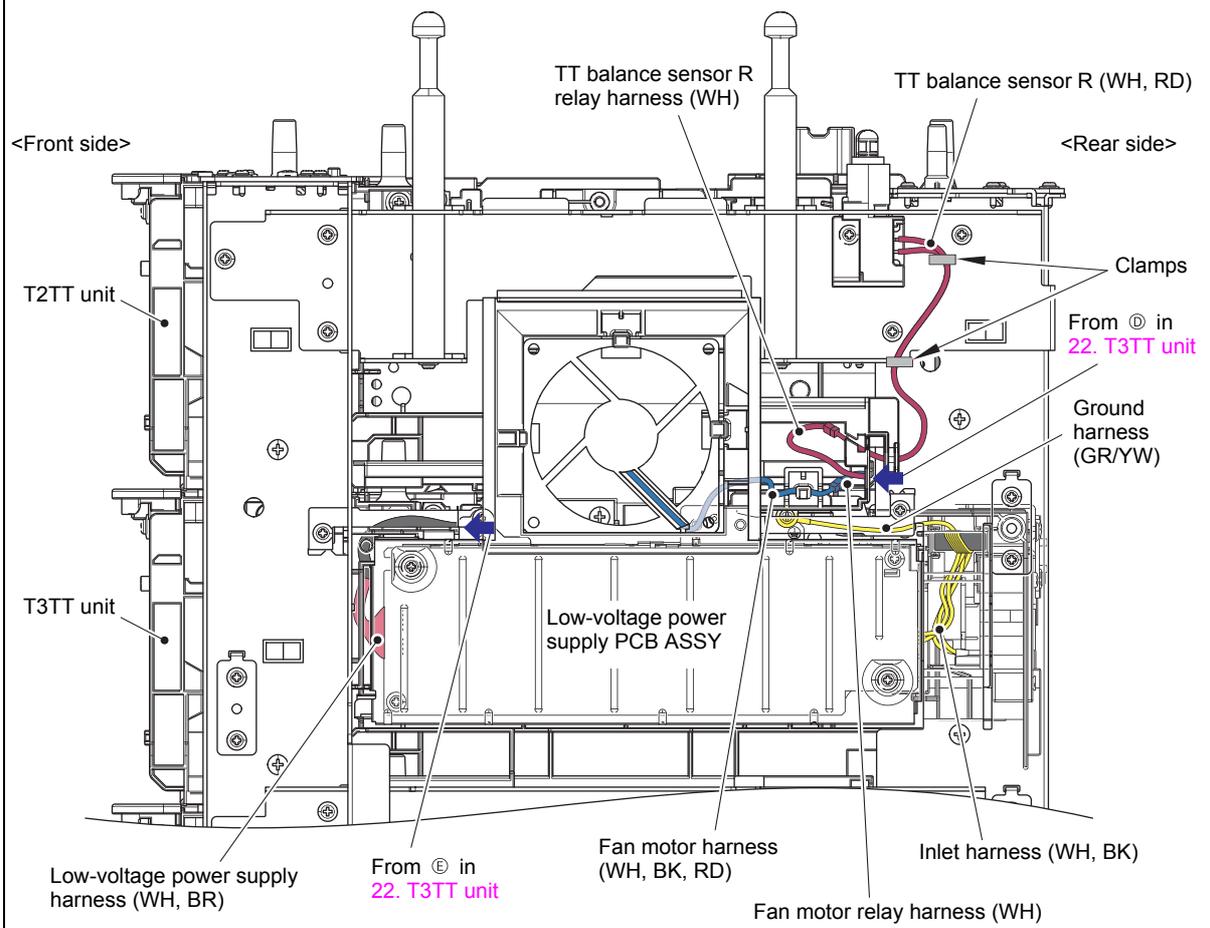


Harness colors may be changed for any reason.

## 19 Left side of the TT

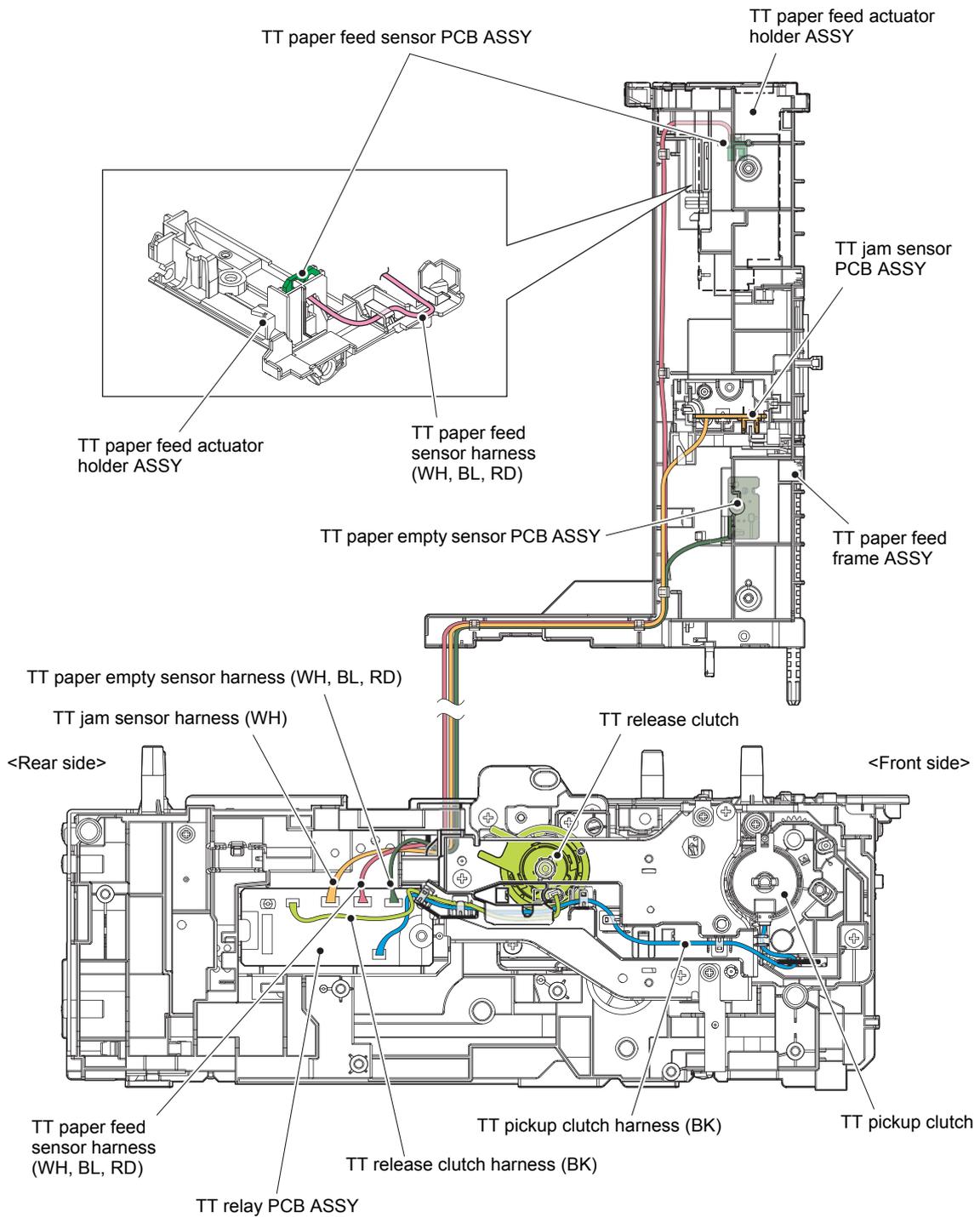


Harness colors may be changed for any reason.

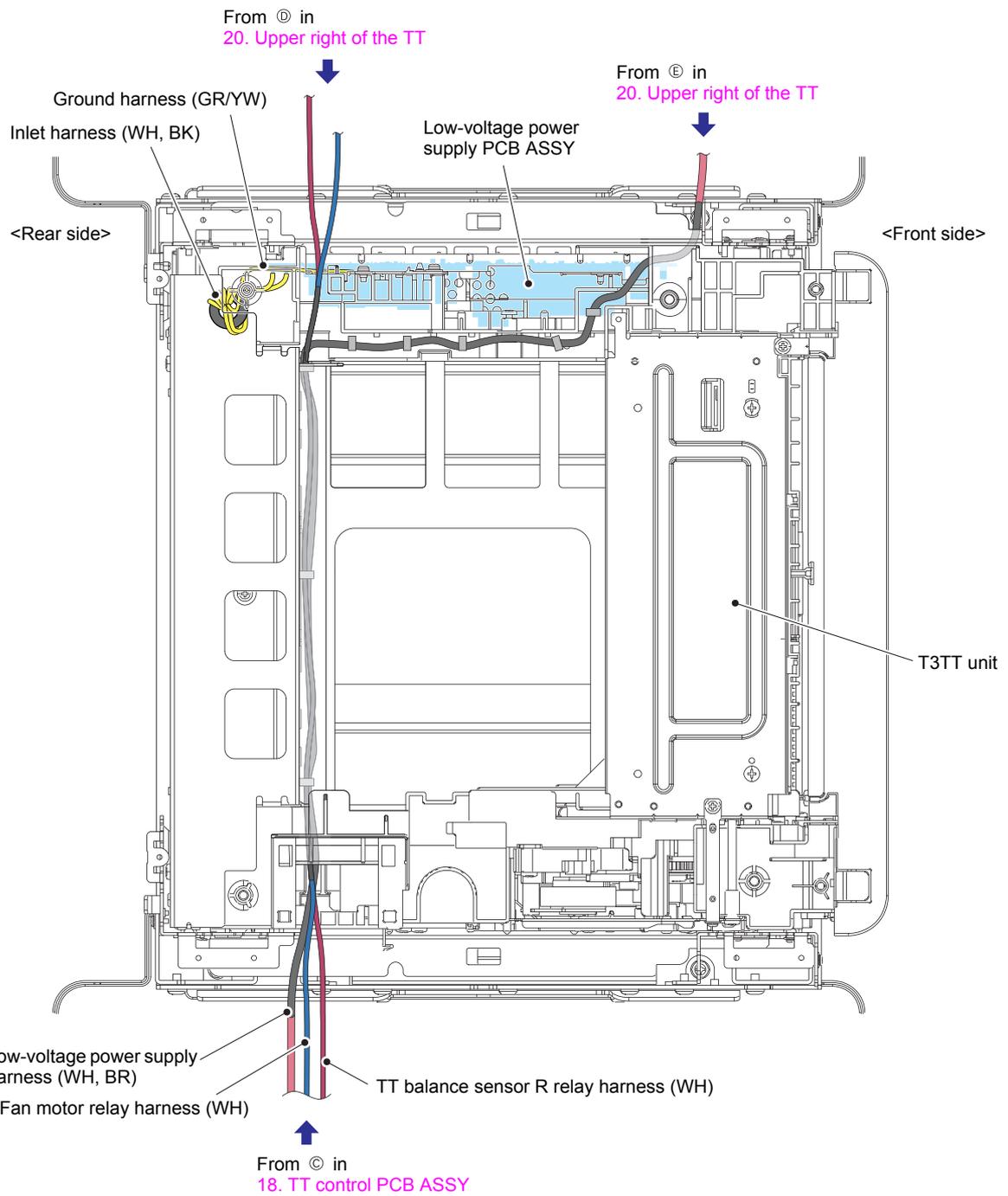


Harness colors may be changed for any reason.

**21** TT relay PCB ASSY (Each TT unit)



Harness colors may be changed for any reason.

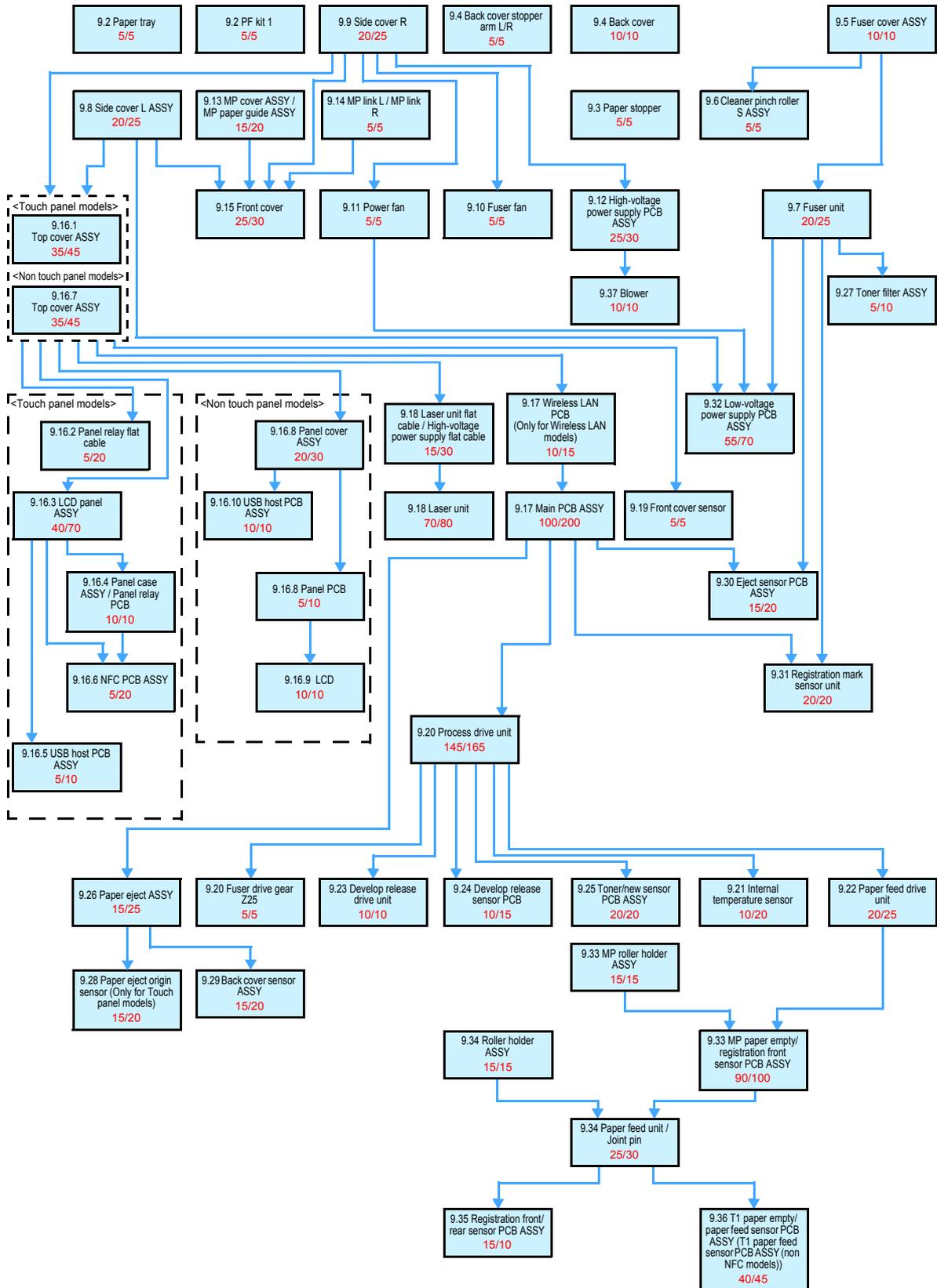


Harness colors may be changed for any reason.

# 8. DISASSEMBLY FLOW

## 8.1 Machine

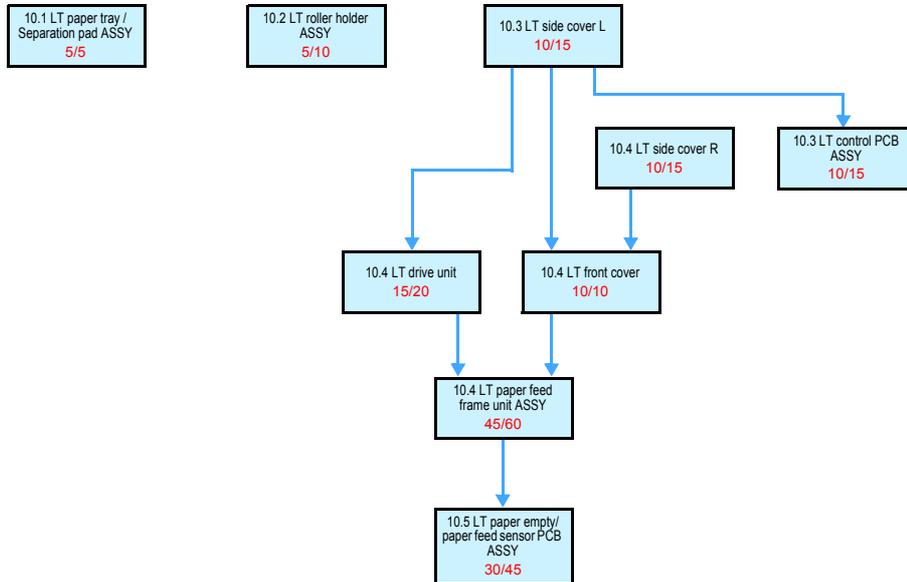
Disassembly / Re-Assembly (second)



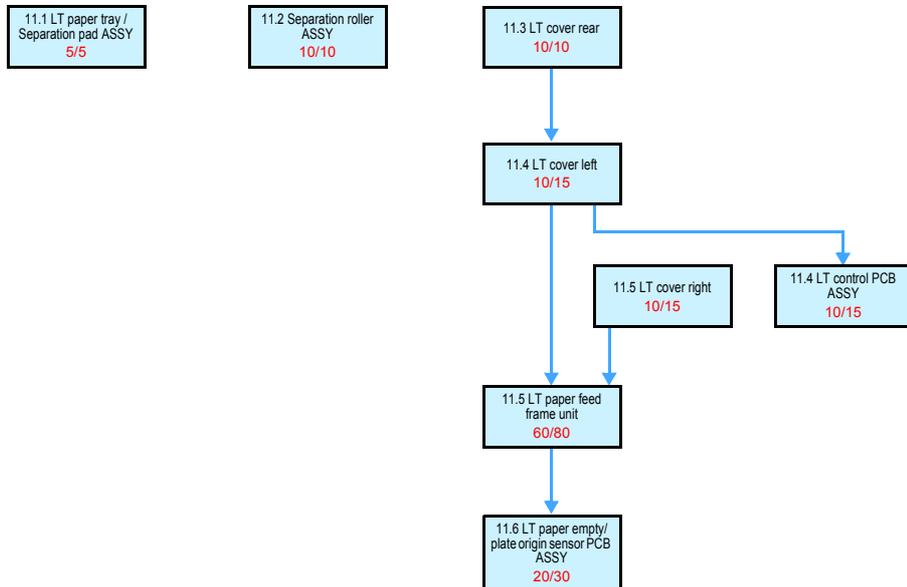
## 8.2 LT

### ■ LT-330CL

Disassembly / Re-Assembly (second)

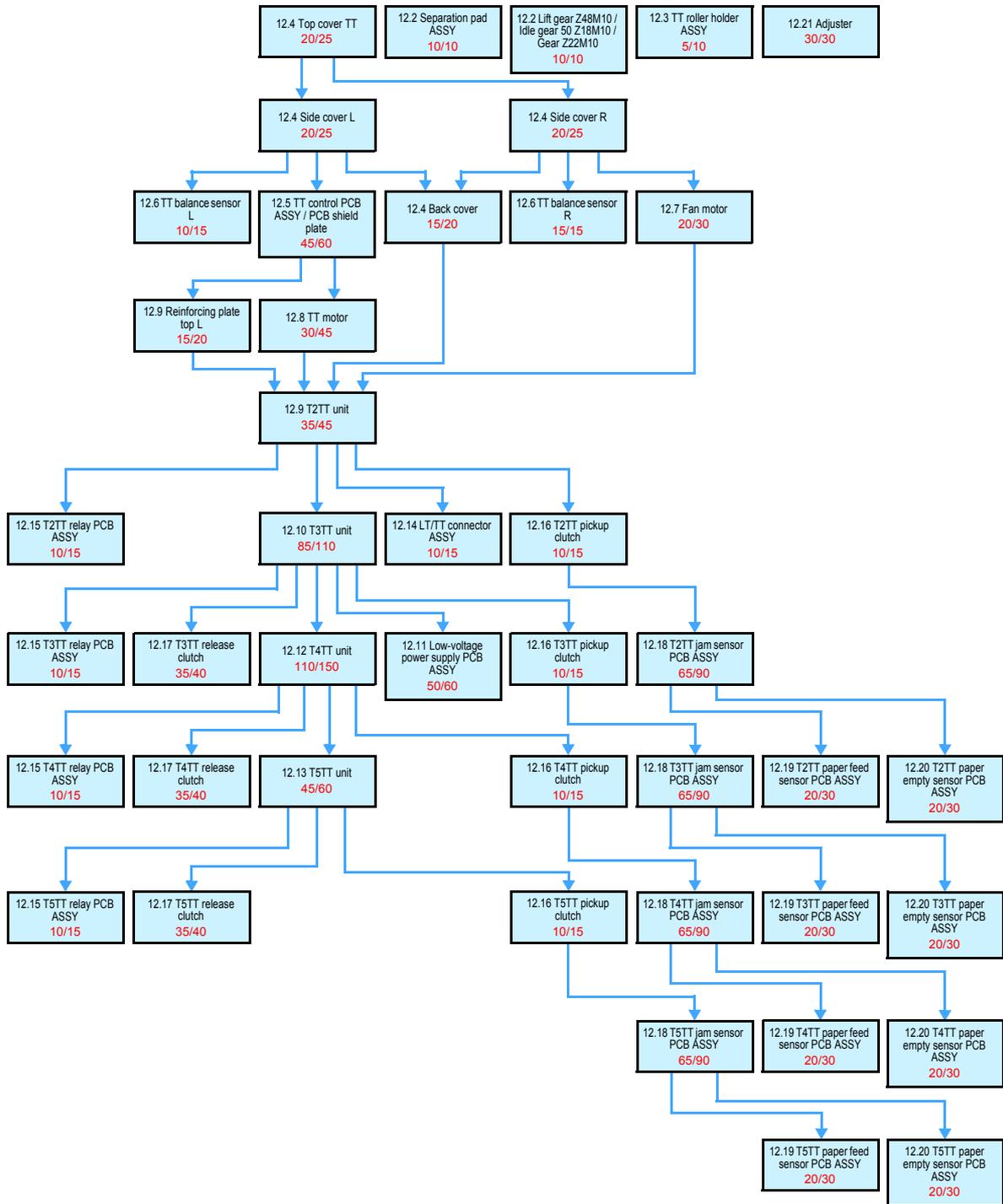


### ■ LT-340CL



# 8.3 TT

Disassembly / Re-Assembly (second)



# 9. DISASSEMBLY PROCEDURE

## 9.1 Preparation

### ■ Disconnecting cables and removing accessories

Prior to proceeding with the disassembly procedure,

- (1) Unplug
  - the AC cord,
  - the USB cable, if connected,
  - the LAN cable, if connected, and
  - USB flash memory drive, if connected.
- (2) Remove
  - the Toner cartridge,
  - the Drum unit,
  - the Belt unit,
  - the Waste toner box,
  - the Paper tray, and
  - LAN port cap.

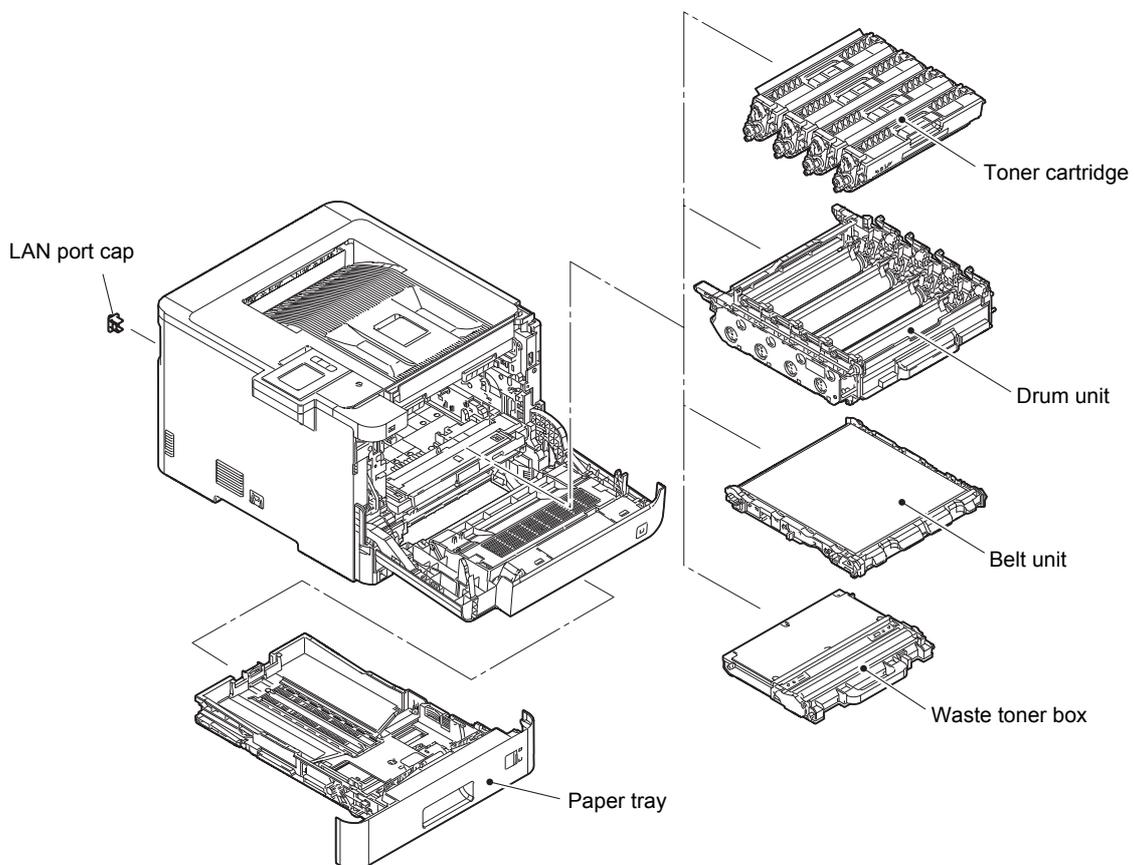


Fig. 3-1

## 9.2 Paper tray (PF kit 1)

- (1) Release the Hook and remove the Separation pad ASSY from the Paper tray.
- (2) Remove the Separation pad spring from the Paper tray.

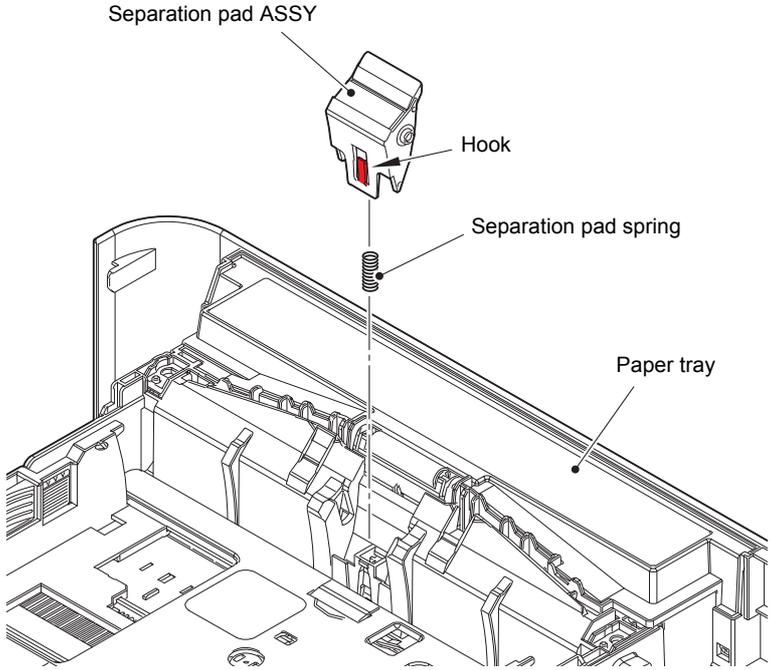


Fig. 3-2

# 9.3 Paper stopper

(1) Release each Boss and remove the Paper stopper from the Main body.

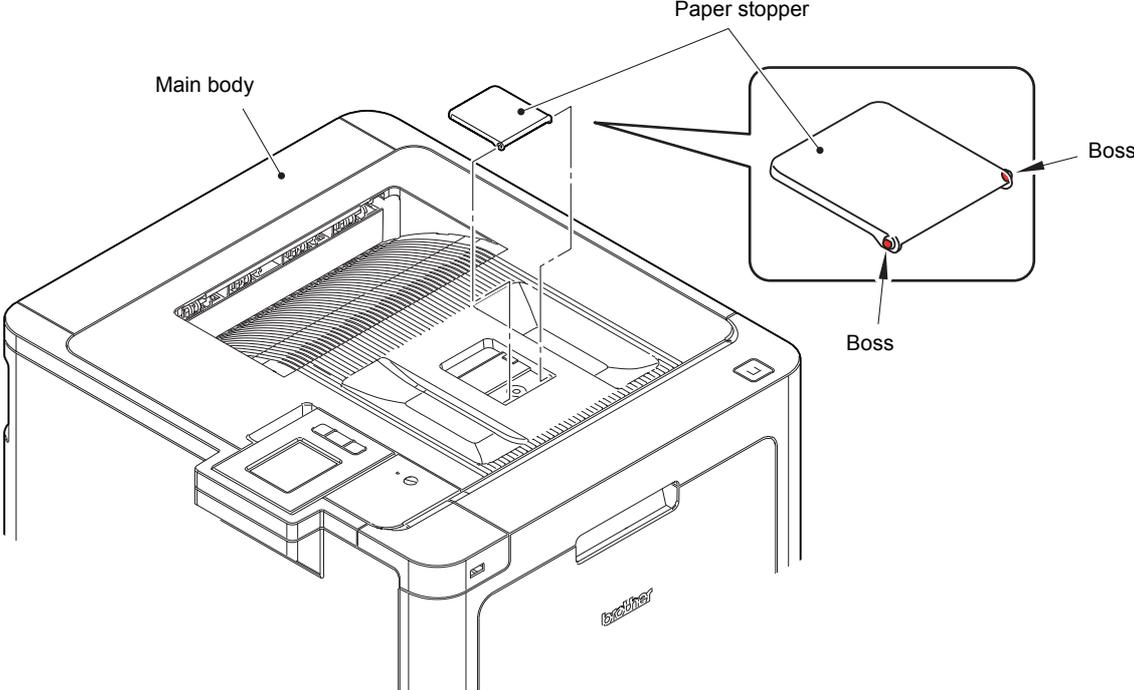


Fig. 3-3

# 9.4 Back cover / Back cover stopper arm L/R

(1) Open the Back cover.

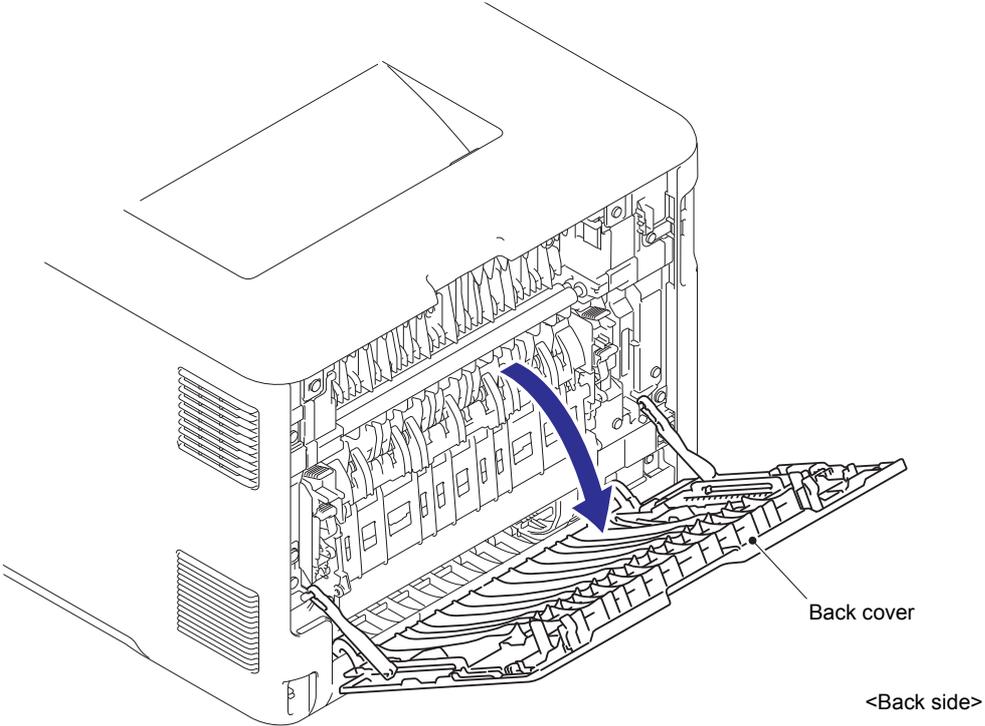


Fig. 3-4

(2) Remove the Back cover stopper arm L/R from the Boss.

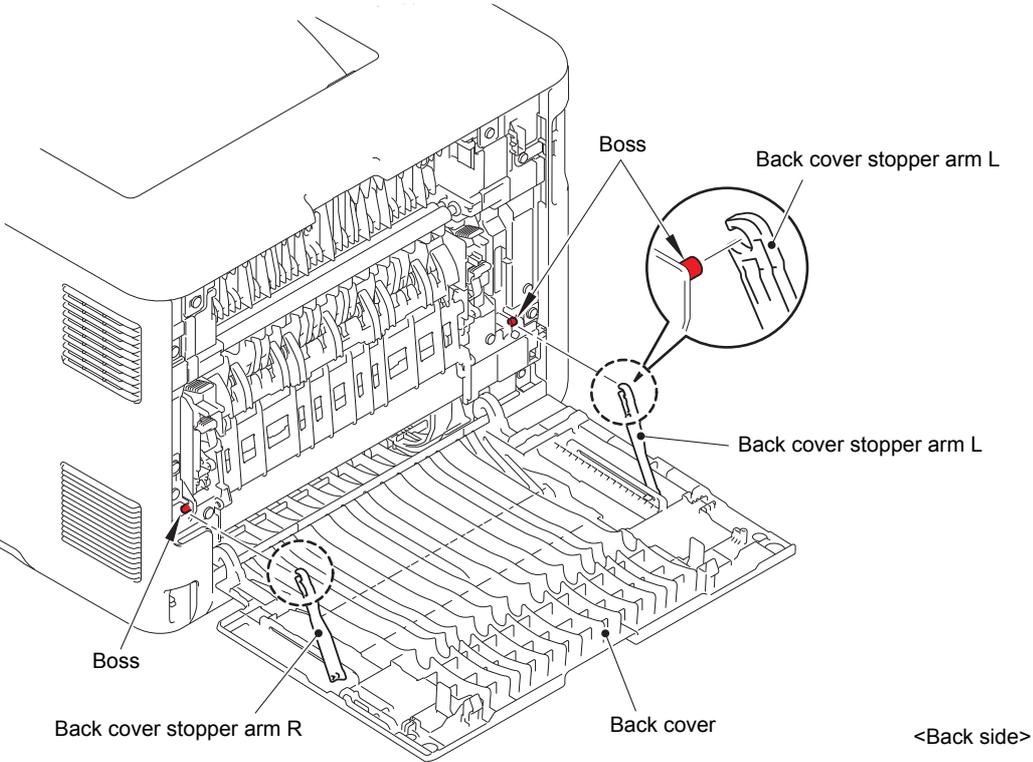


Fig. 3-5

(3) Remove the Boss of the Back cover from the Bush on the Frame R.

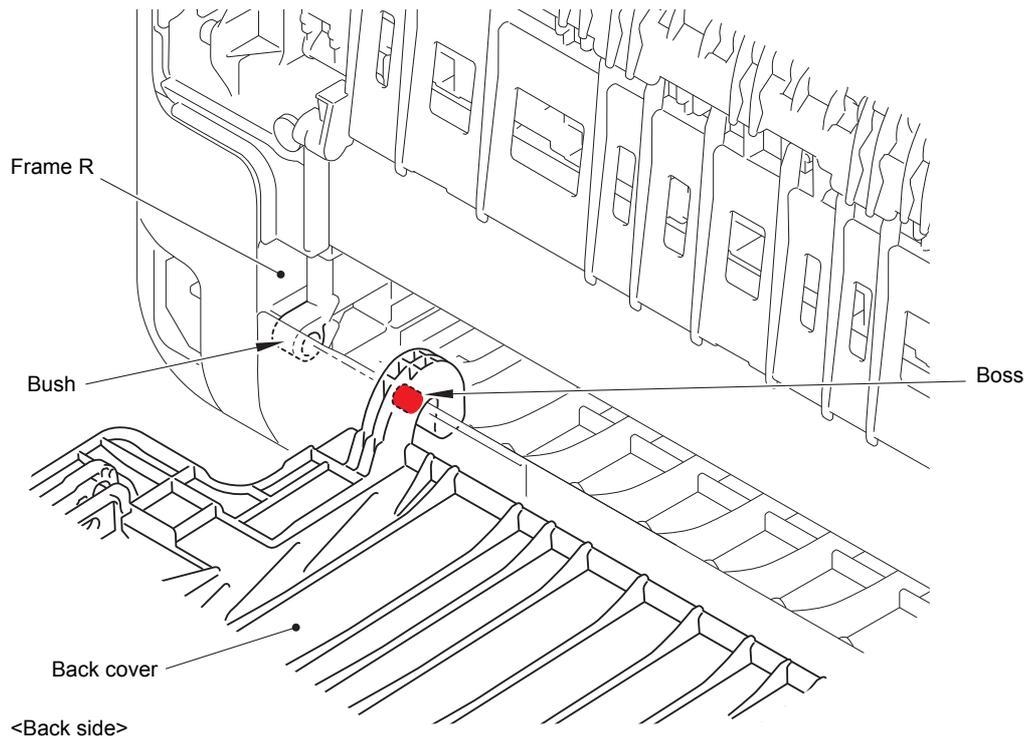


Fig. 3-6

(4) Remove the Back cover. (4a → 4b)

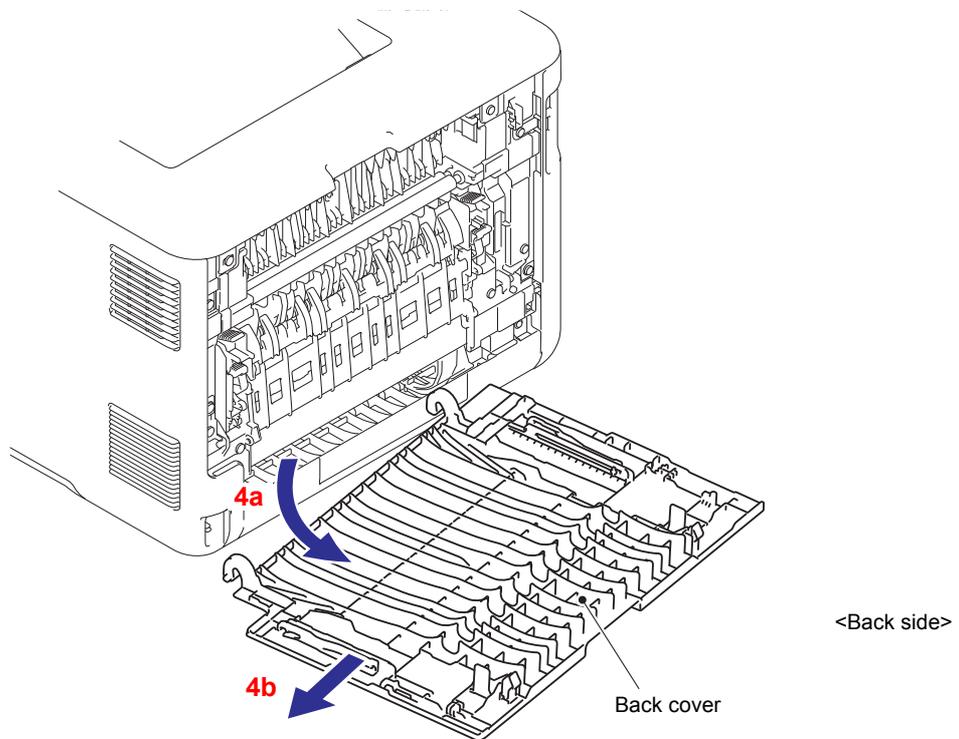
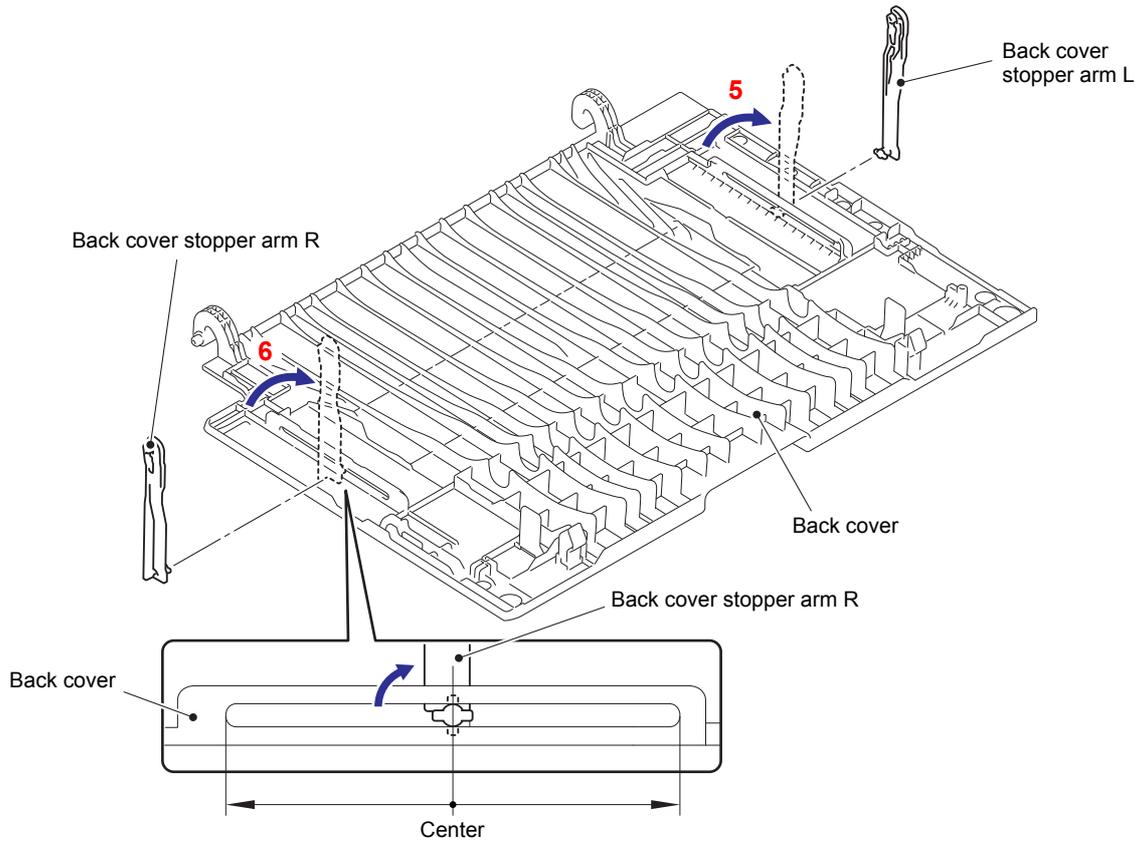


Fig. 3-7

- (5) Remove the Back cover stopper arm L from the Back cover.
- (6) Remove the Back cover stopper arm R from the Back cover.



**Fig. 3-8**

# 9.5 Fuser cover ASSY

(1) Open the Back flapper holder. Release each Boss and remove the Back flapper holder.

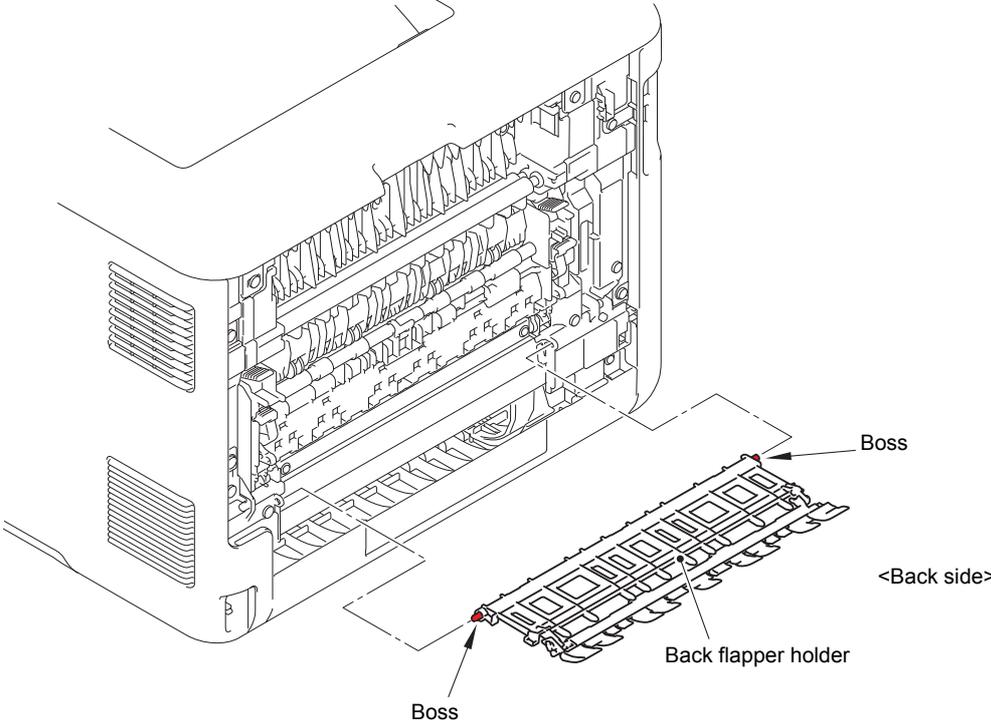


Fig. 3-9

- (2) Remove the two Taptite bind B M4x12 screws from the Fuser unit line cover L.
- (3) Release the Hook and Boss and remove the Fuser unit line cover L.

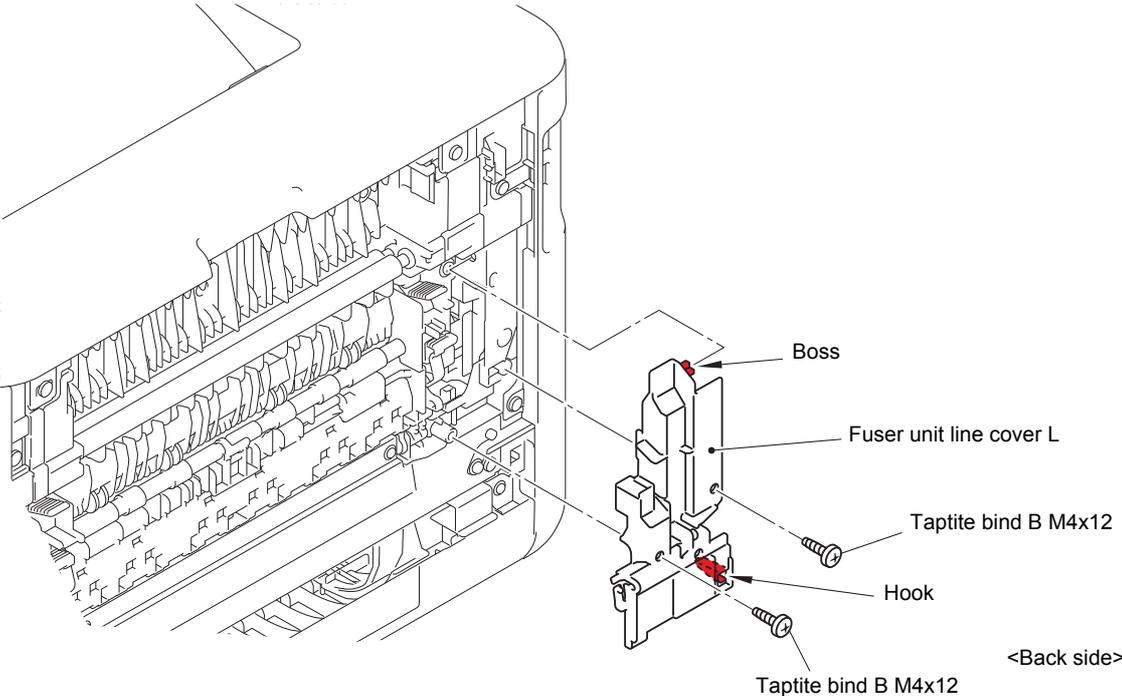
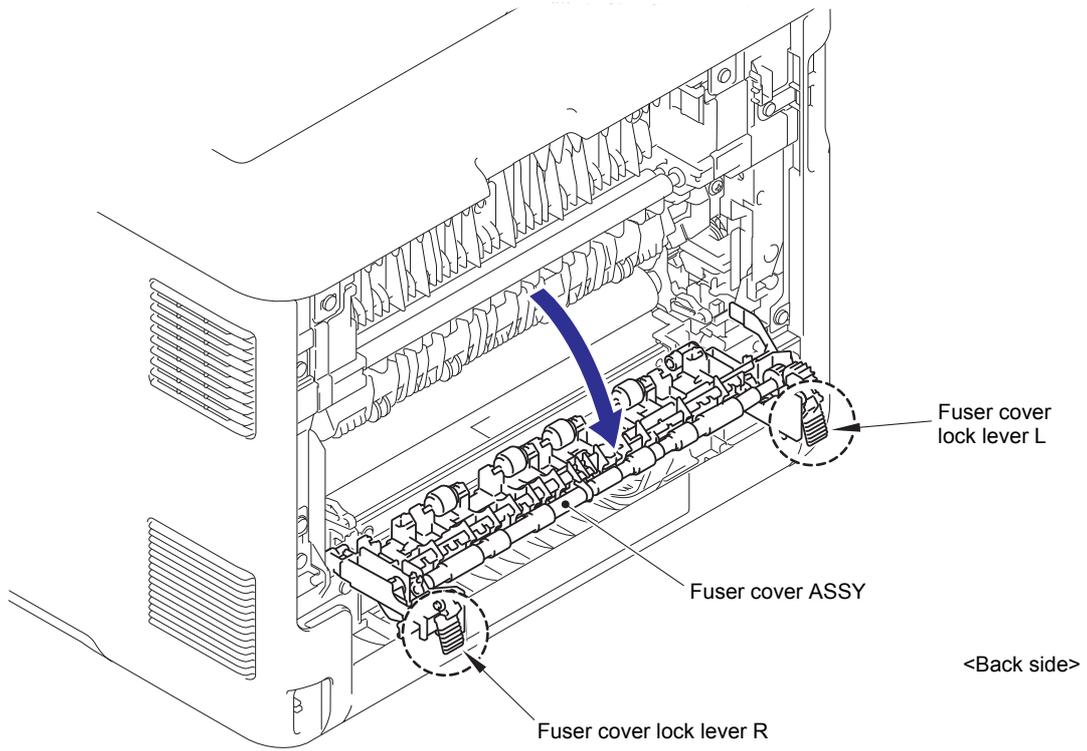


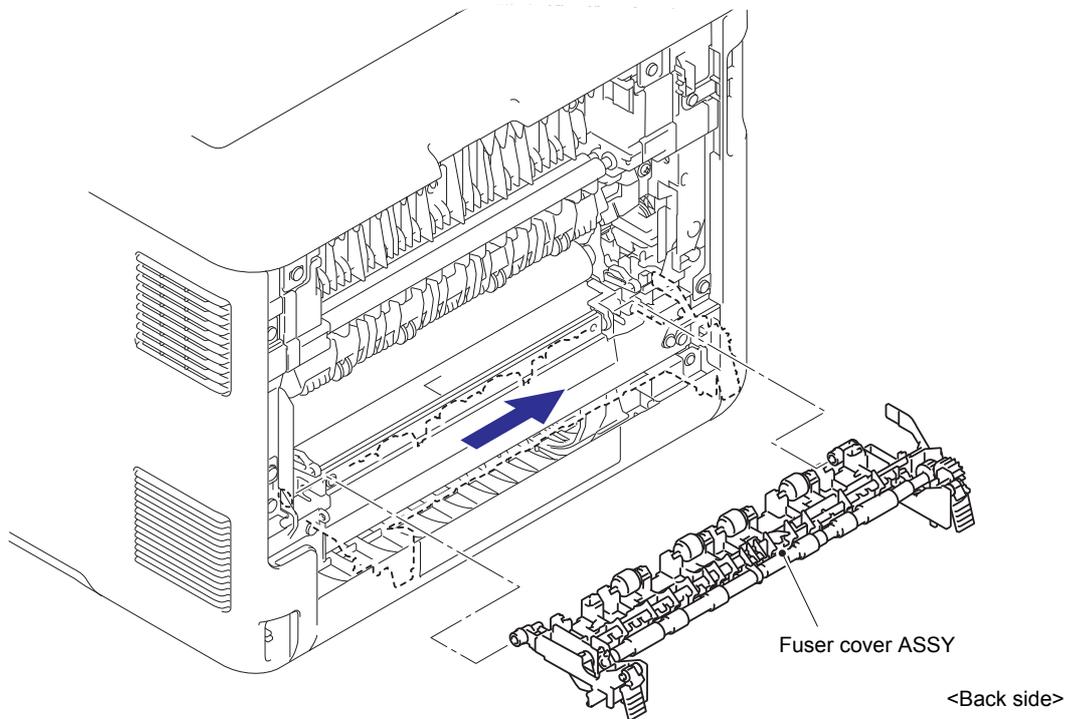
Fig. 3-10

- (4) Release the lock of the Fuser cover lock lever L/R to open the Fuser cover ASSY.



**Fig. 3-11**

- (5) Slide the Fuser cover ASSY in the direction of the arrow and remove it to the front.



**Fig. 3-12**

# 9.6 Cleaner pinch roller S ASSY

(1) Remove the Cleaner roller spring from the Hook of the Fuser cover ASSY.

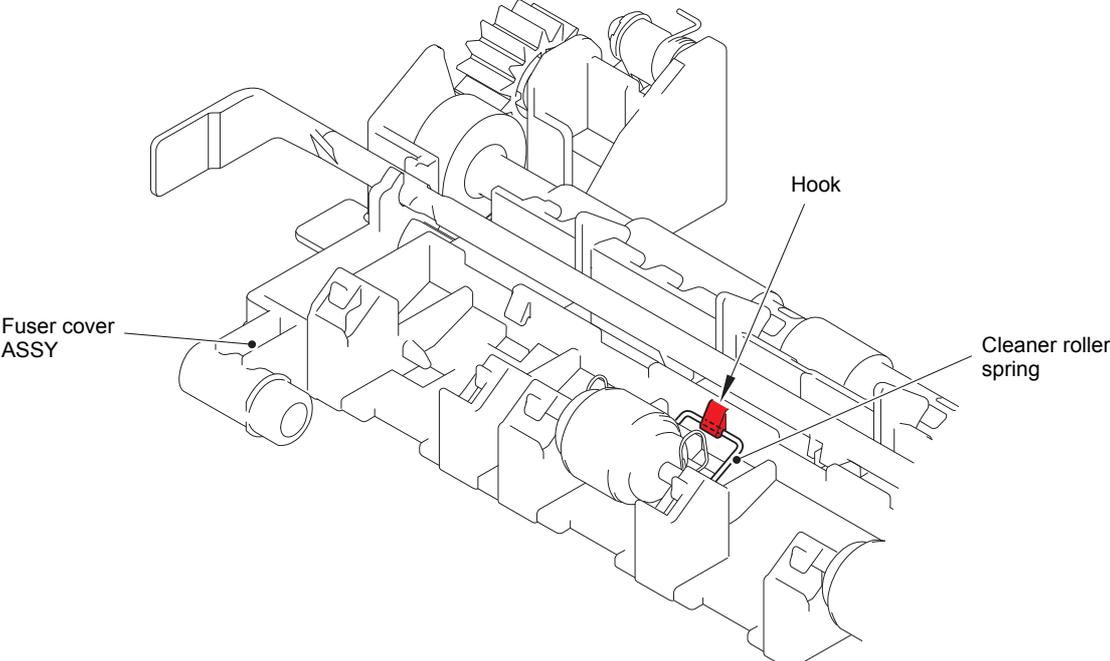


Fig. 3-13

(2) Remove the Cleaner roller spring from each Boss of the Fuser cover ASSY. Remove the Cleaner pinch roller S ASSY and Cleaner roller spring from the Fuser cover ASSY.

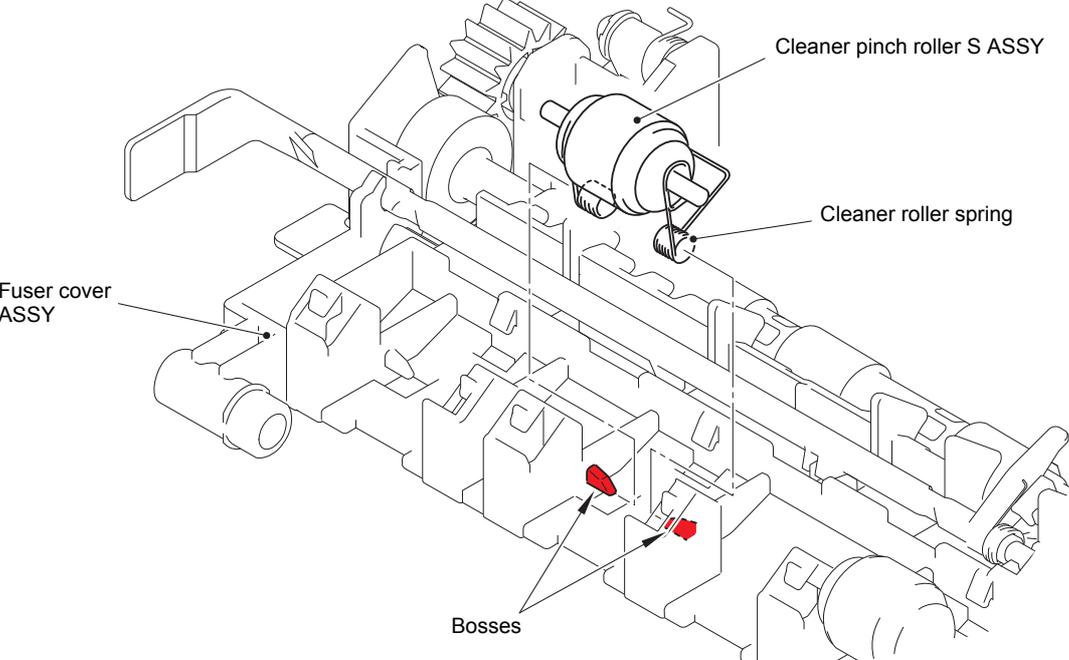
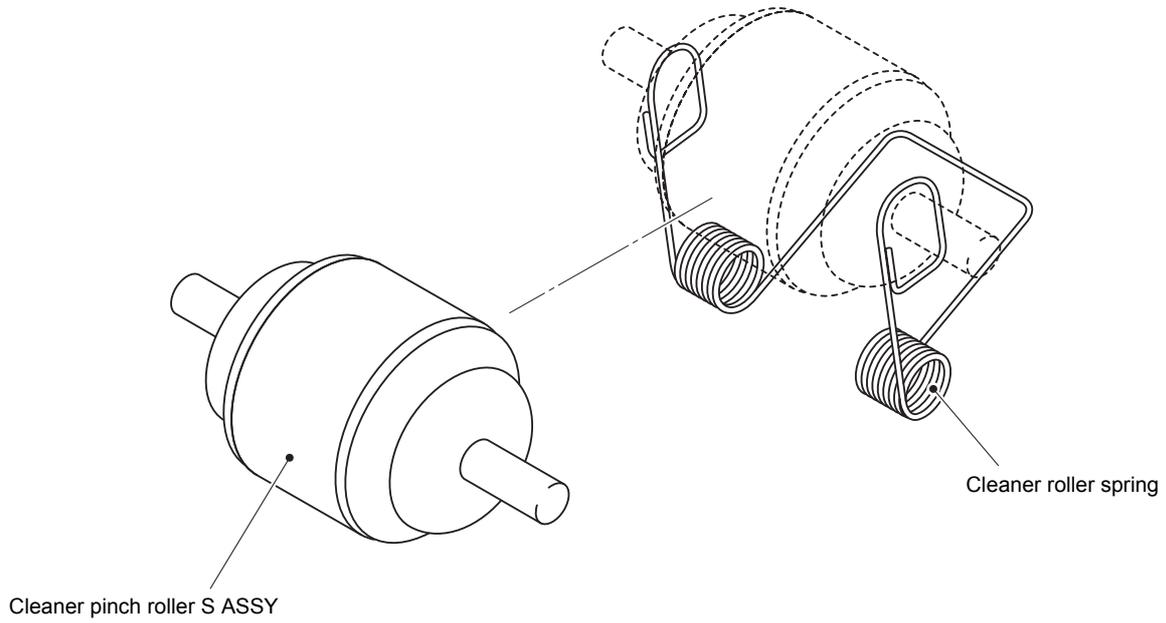


Fig. 3-14

(3) Remove the Cleaner pinch roller S ASSY from the Cleaner roller spring.



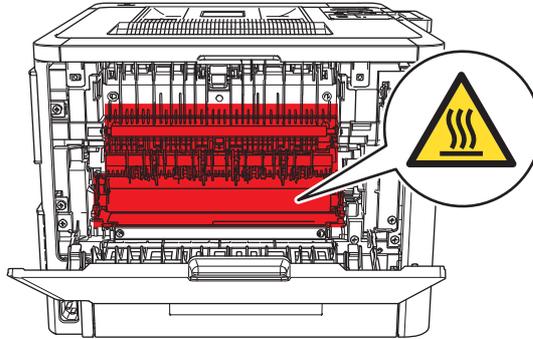
**Fig. 3-15**

(4) Remove the other three Cleaner pinch roller S ASSYs in the same way.

## 9.7 Fuser unit

### CAUTION

Some parts inside the machine are extremely hot immediately after the machine is used. When opening the Front cover or Back cover to access any parts inside the machine, never touch the shaded parts shown in the following figure.



- (1) Remove the two Taptite bind B M4x12 screws from the Fuser unit line cover R.
- (2) Release each Hook and remove the Fuser unit line cover R.

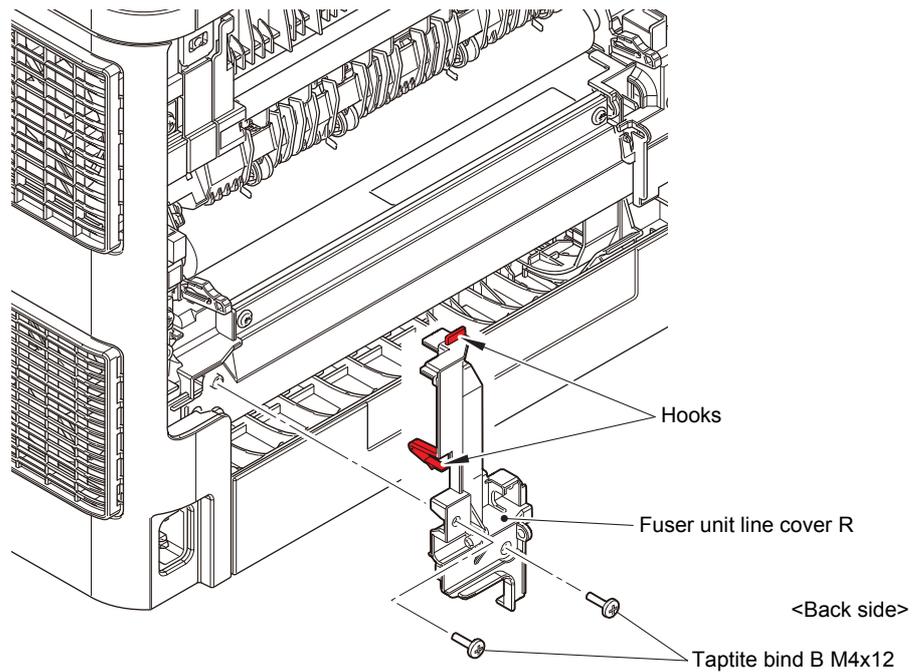


Fig. 3-16

- (3) Disconnect the Center thermistor harness and Side thermistor harness from the Eject sensor PCB ASSY.

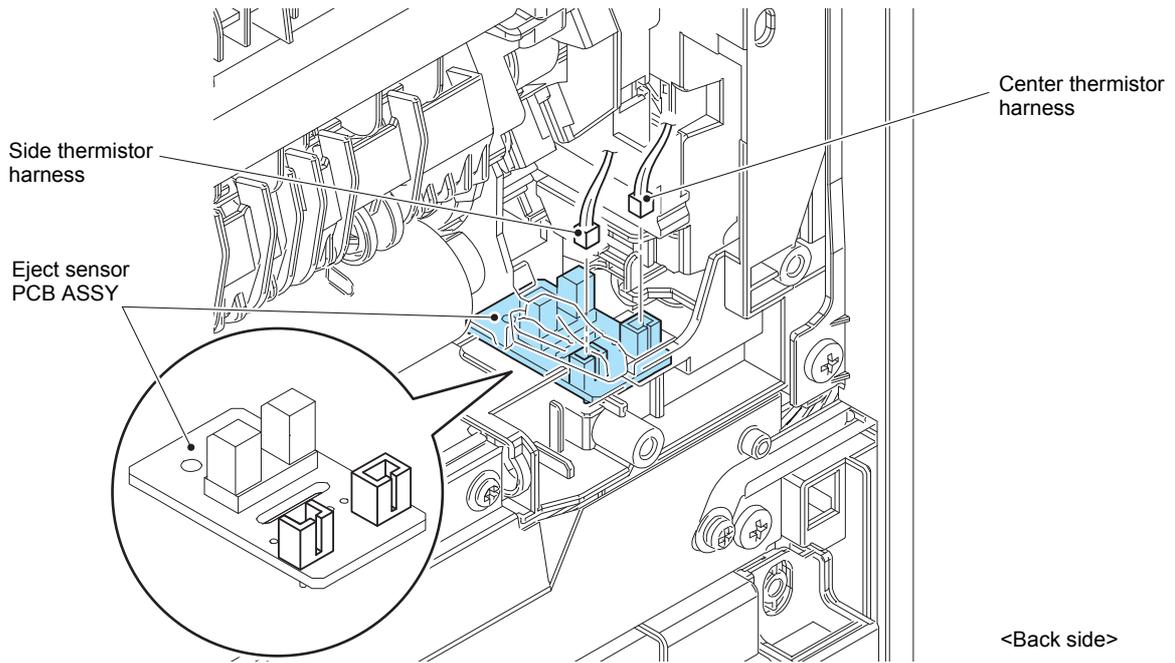


Fig. 3-17

- (4) Disconnect the Heater harness of the Fuser unit from the LVPS-heater harness ASSY.

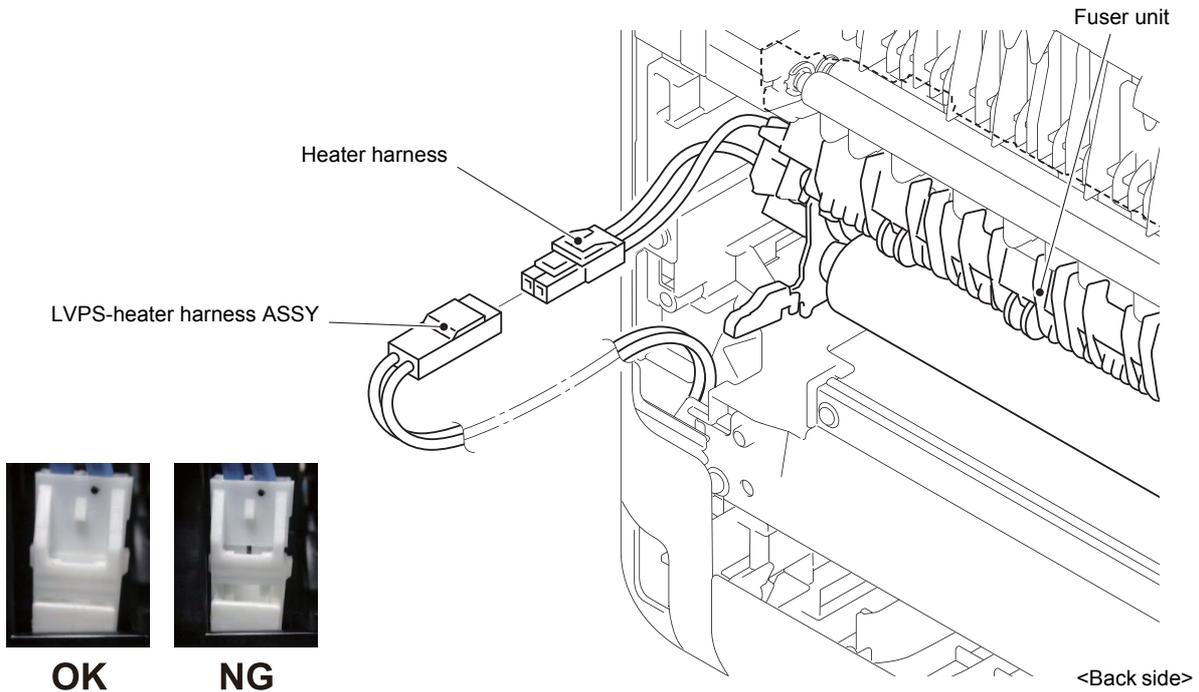


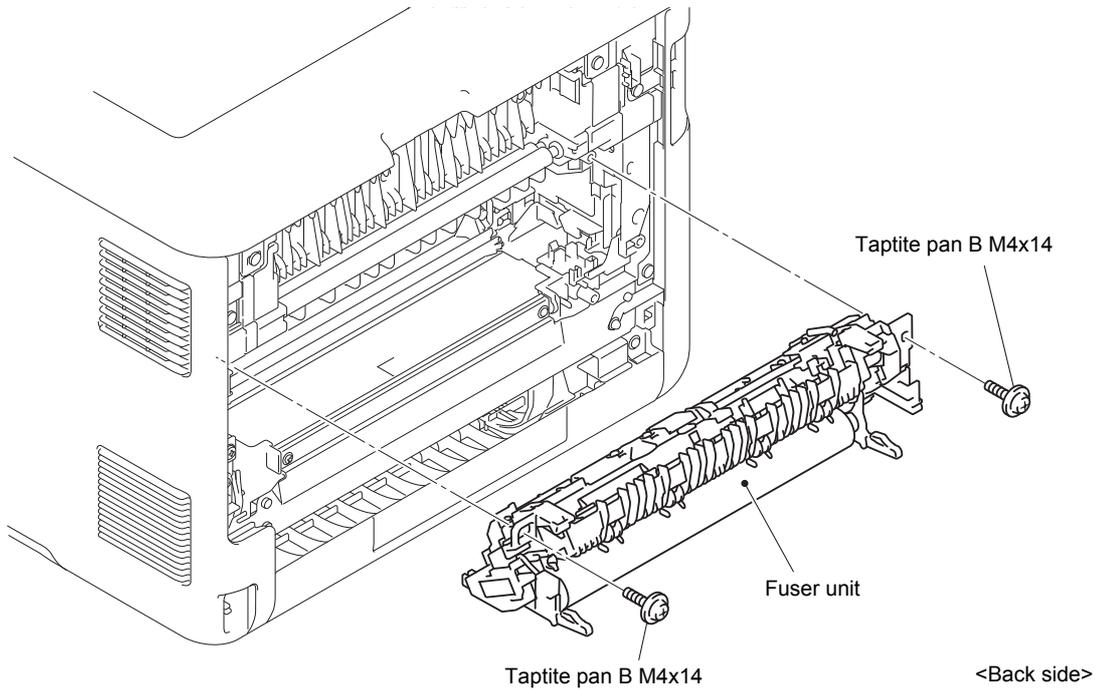
Fig. 3-18

Harness routing: Refer to "1. Fuser unit, Eject sensor PCB ASSY".

**Note:**

After connecting the Heater harness, pull the Connector on the Heater harness side while holding the Connector on the LVPS-heater harness ASSY side to make sure it is locked.

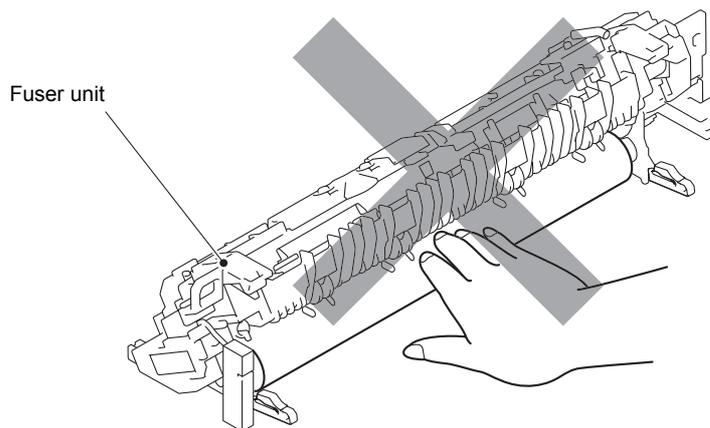
(5) Remove the two Taptite pan B M4x14 screws to remove the Fuser unit.



**Fig. 3-19**

**Note:**

- Do not apply a physical impact or vibration to the Fuser unit.
- Do not touch the roller as shown in the figure below to prevent breakage of the Fuser unit.



**Fig. 3-20**

## 9.8 Side cover L ASSY

- (1) Make the Front cover half open. (When fully opened, the Front cover arm will touch to the Side cover L ASSY and Side cover L ASSY cannot be removed.)
- (2) Remove the Taptite cup B M3x8 screw and the Taptite bind B M4x12 screw from the front of the Side cover L ASSY.
- (3) Remove the Taptite bind B M4x12 screw from the side of the Side cover L ASSY.

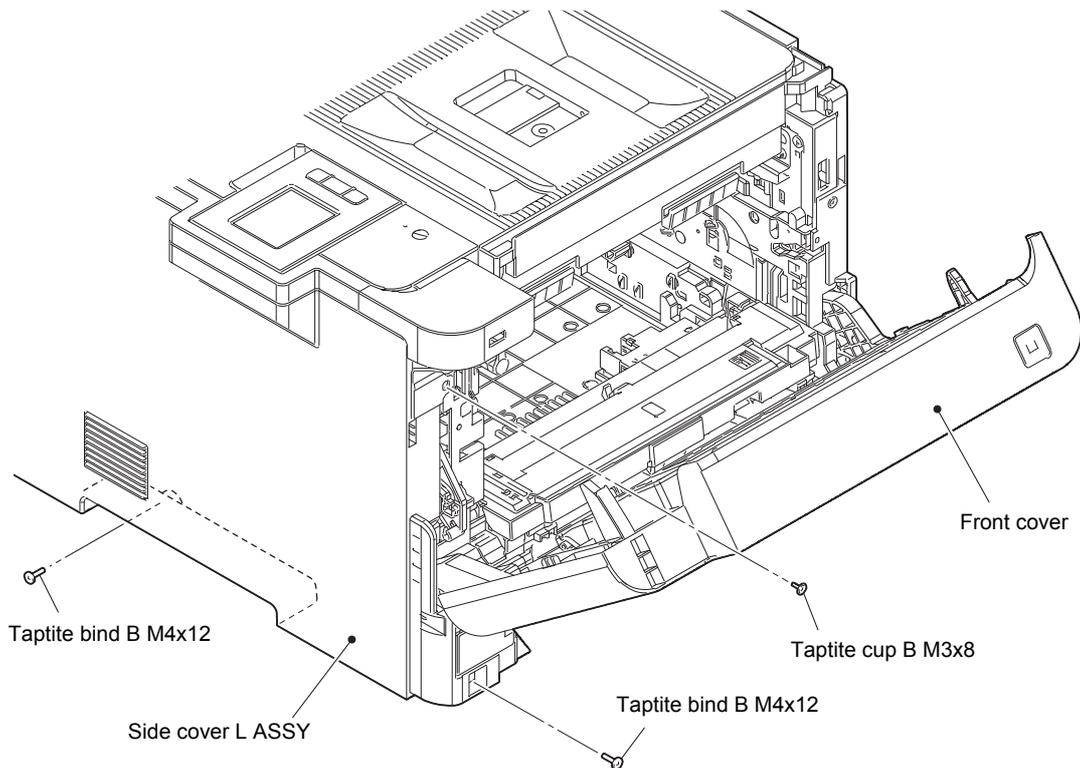


Fig. 3-21

- (4) Remove the two Taptite bind B M4x12 screws from the back of the Side cover L ASSY.

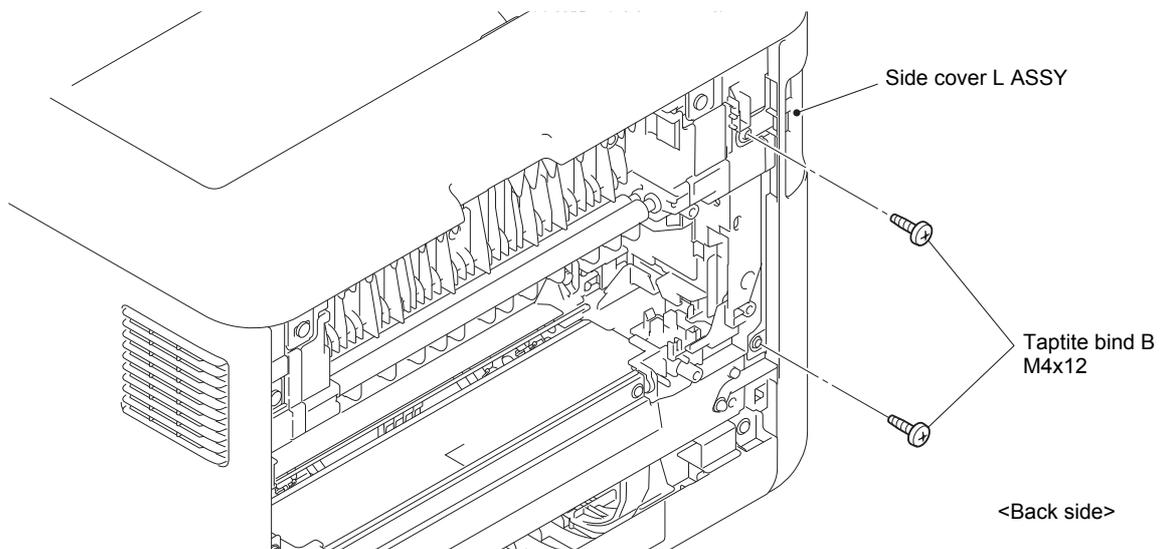


Fig. 3-22

- (5) Release the Hooks A, B and C in order of the arrow A, B and C, then remove the Side cover L ASSY upward.

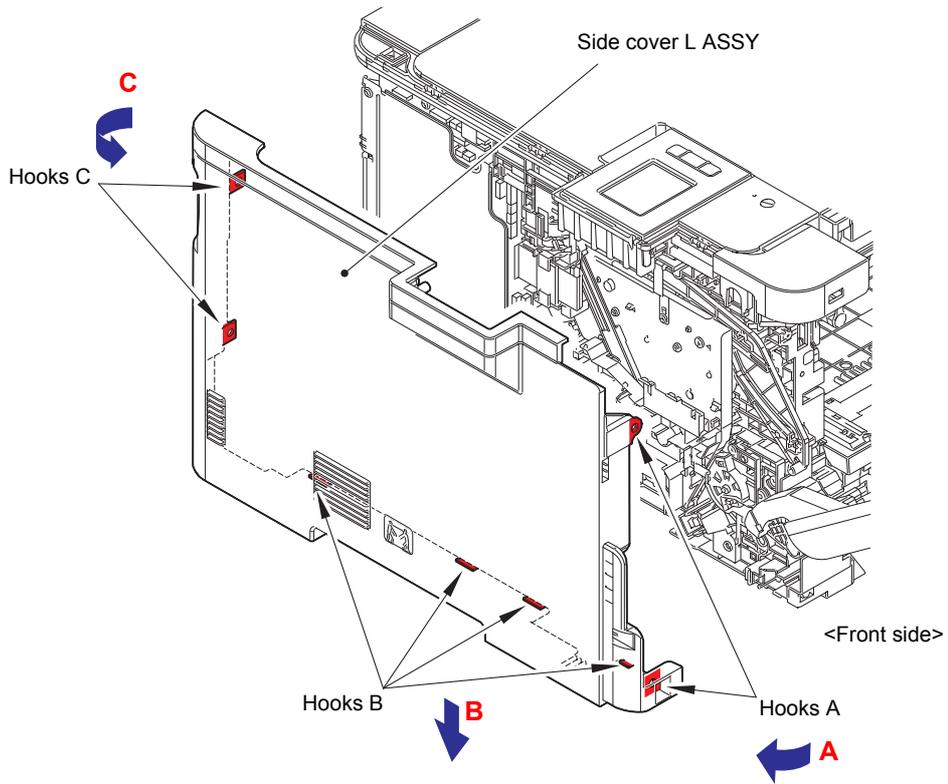


Fig. 3-23

\* Inside of Side cover L ASSY

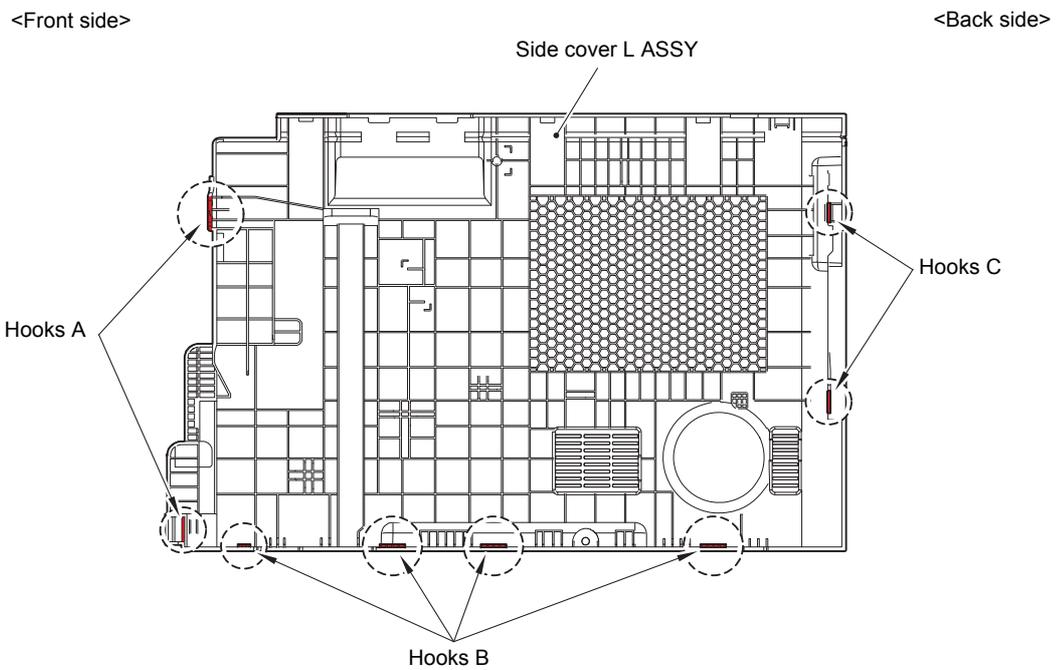


Fig. 3-24

# 9.9 Side cover R

- (1) Remove the Taptite cup B M3x8 screw and the Taptite bind B M4x12 screw from the front of the Side cover R.

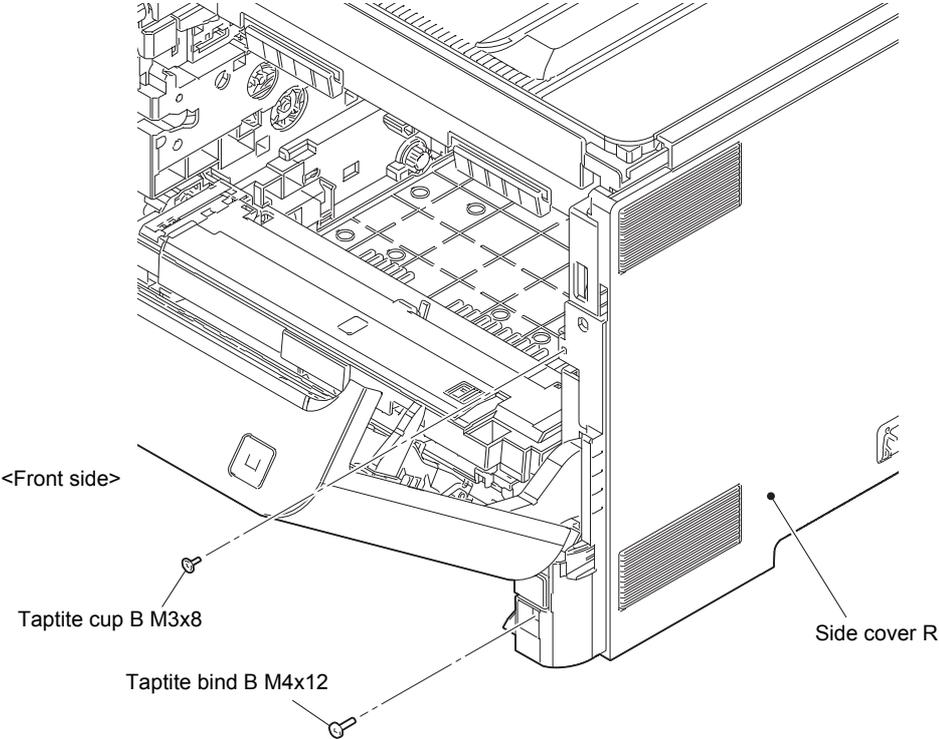


Fig. 3-25

- (2) Remove the two Taptite bind B M4x12 screws from the back of the Side cover R.

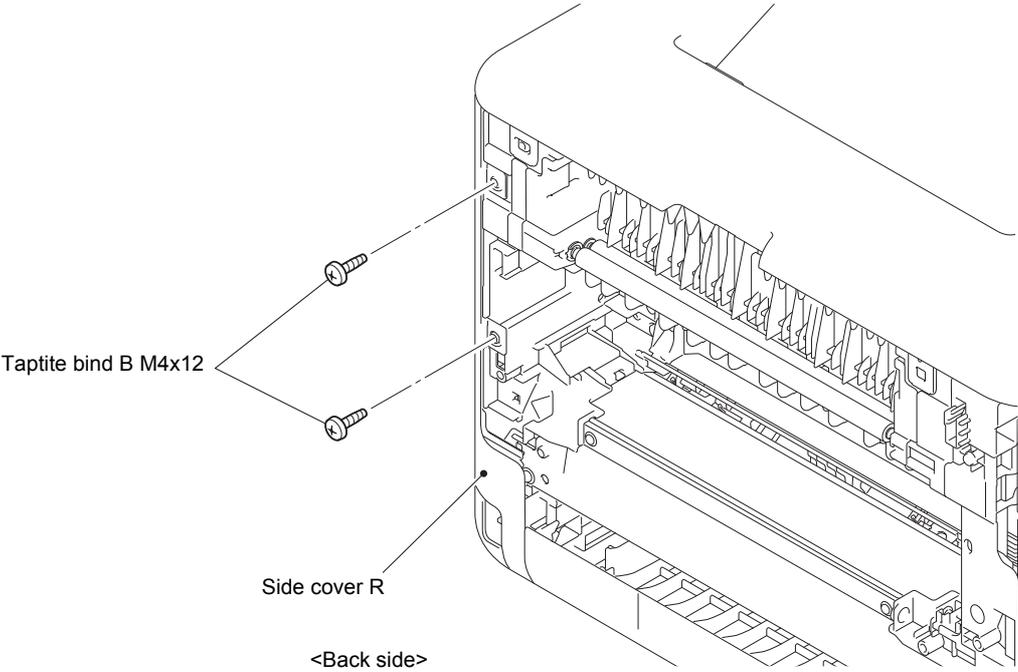


Fig. 3-26

- (3) Check that the Front cover is half opened. (When fully opened, the Front cover arm will touch to the Side cover R and Side cover R cannot be removed.) Release the Hooks A, B and C in order of the arrow A, B and C, then remove the Side cover R upward.

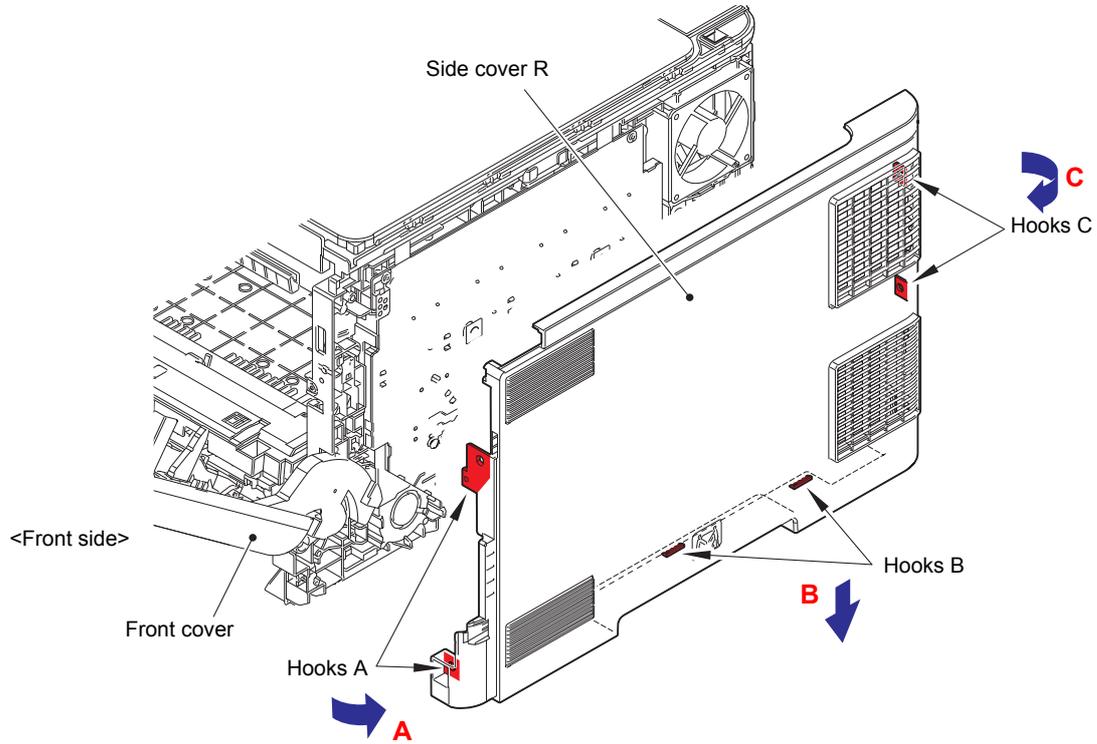


Fig. 3-27

\* Inside of Side cover R

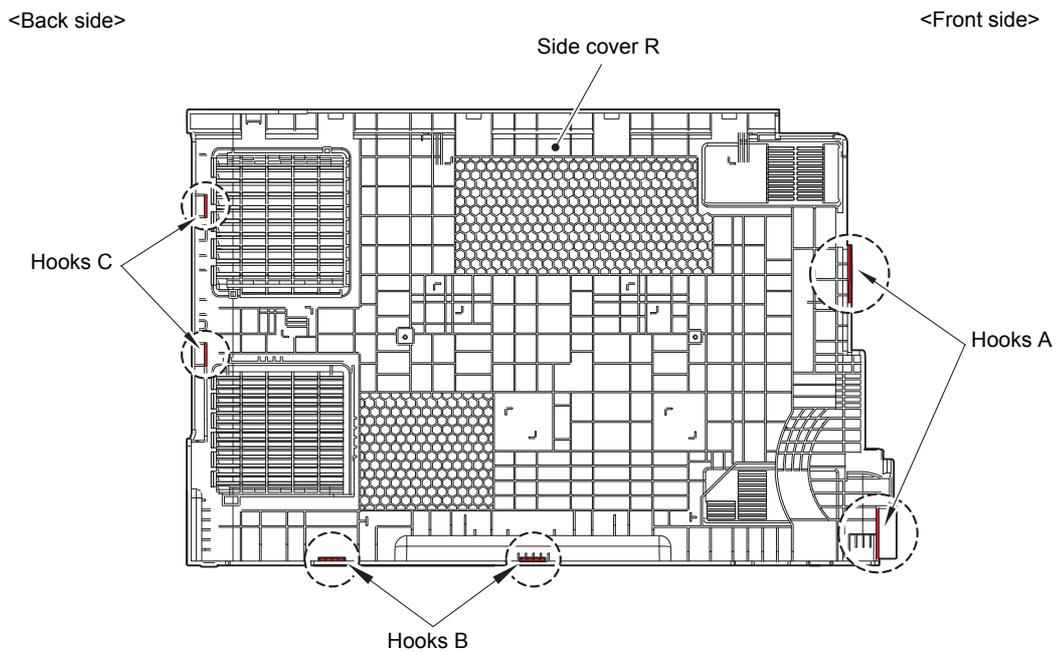
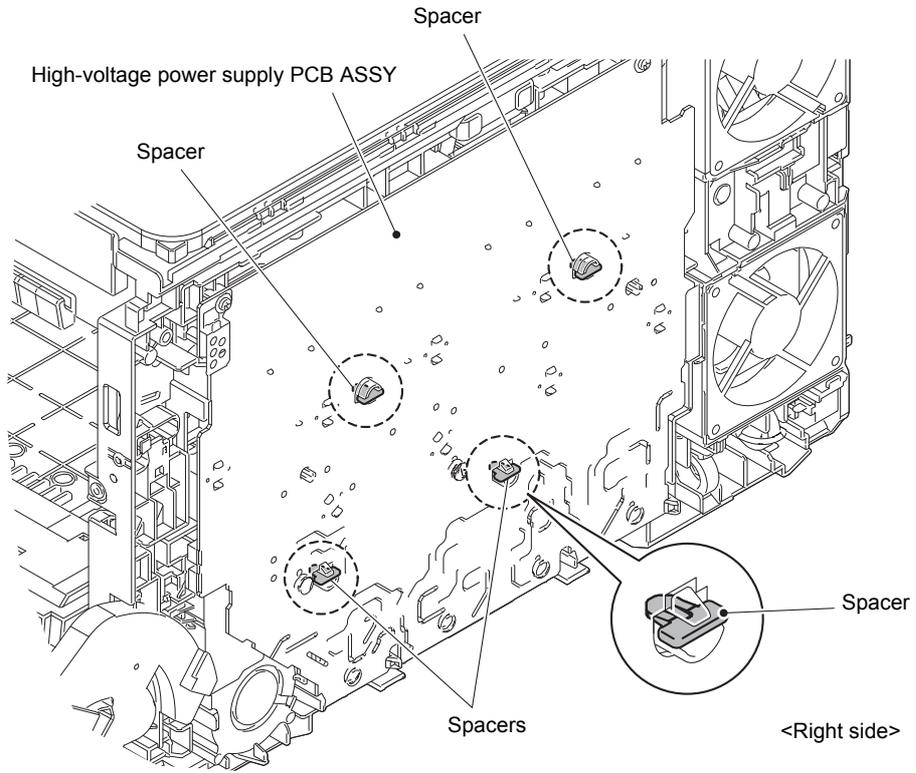


Fig. 3-28

**Note:**

As the Spacer tends to come off, be careful not to lose it.



**Fig. 3-29**

## 9.10 Fuser fan

- (1) Disconnect the Fuser fan harness from the High-voltage power supply PCB ASSY and release the wiring.
- (2) Remove the Fuser fan.

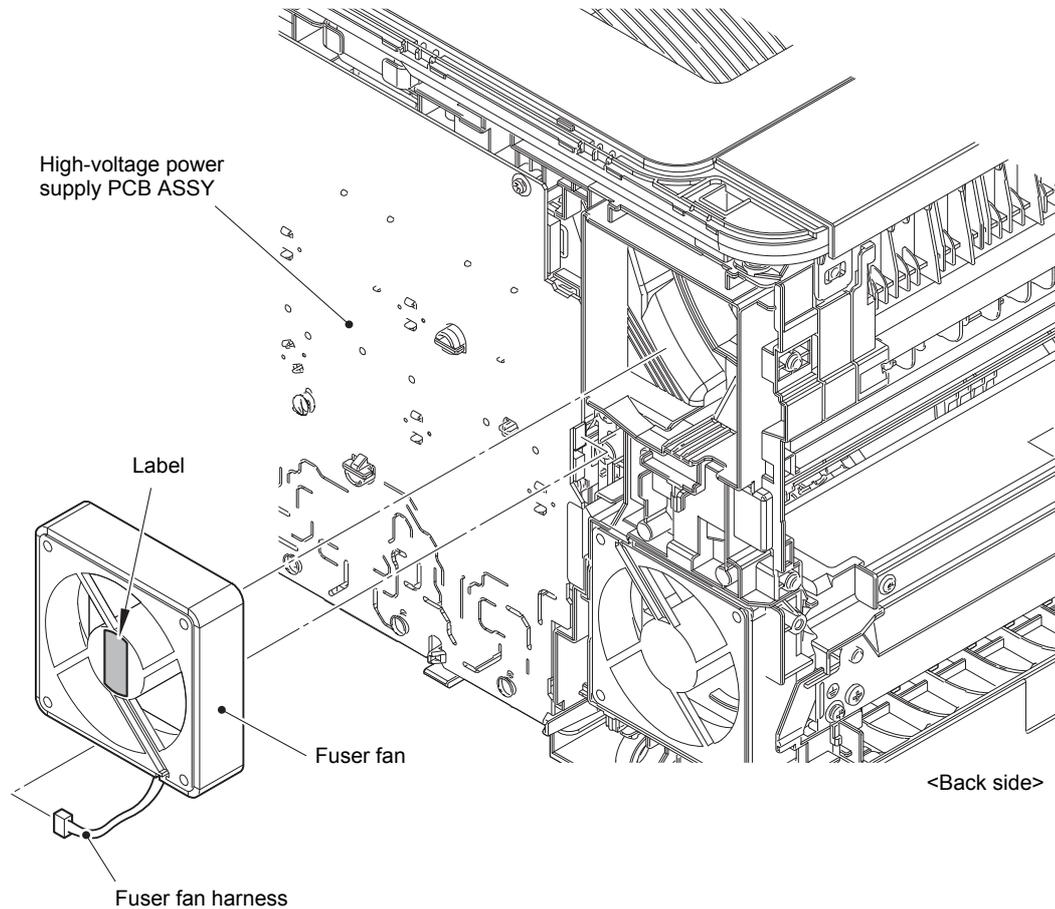


Fig. 3-30

### Assembling Note:

When assembling the Fuser fan, be sure to assemble it in a way that the Label side faces out.

Harness routing: Refer to "2. Fuser fan, Power fan".

## 9.11 Power fan

- (1) Disconnect the Power fan harness from the High-voltage power supply PCB ASSY.
- (2) Remove the Power fan.

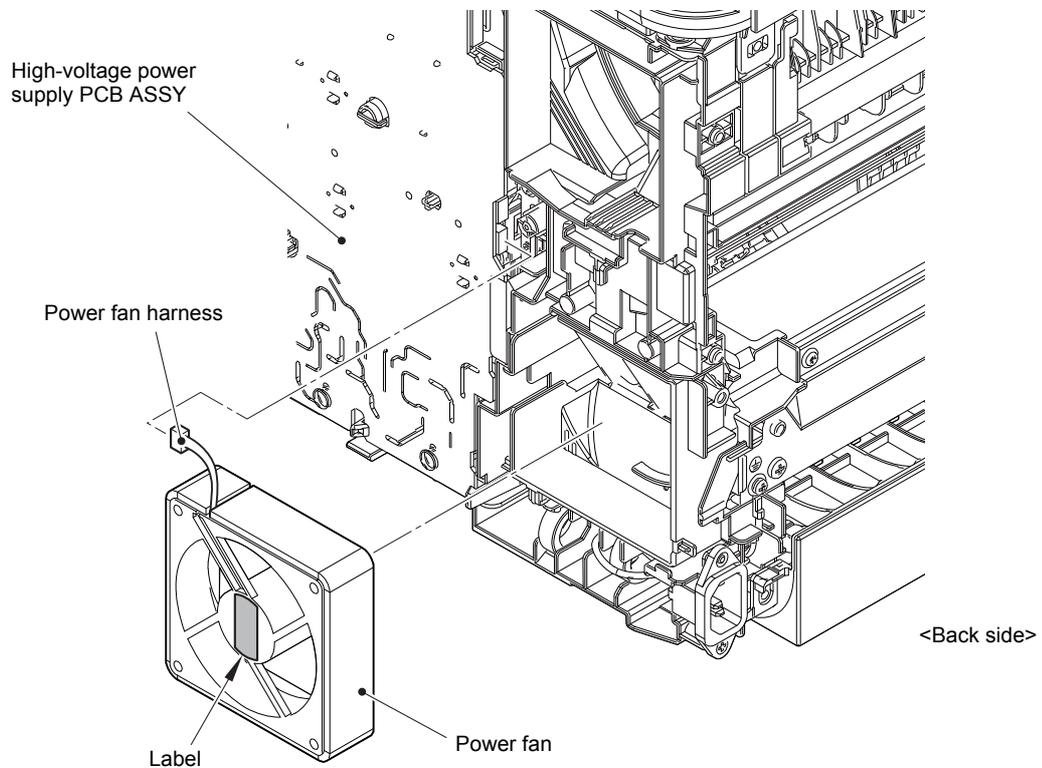


Fig. 3-31

**Assembling Note:**

When assembling the Power fan, be sure to assemble it in a way that the Label side faces out.

Harness routing: Refer to "2. Fuser fan, Power fan".

## 9.12 High-voltage power supply PCB ASSY

- (1) Remove the four Spacers from the Frame R.
- (2) Disconnect the Blower harness, Waste toner sensor harness and High-voltage power supply PCB harness from the High-voltage power supply PCB ASSY.
- (3) Remove the HVPS shading film from the Frame R.

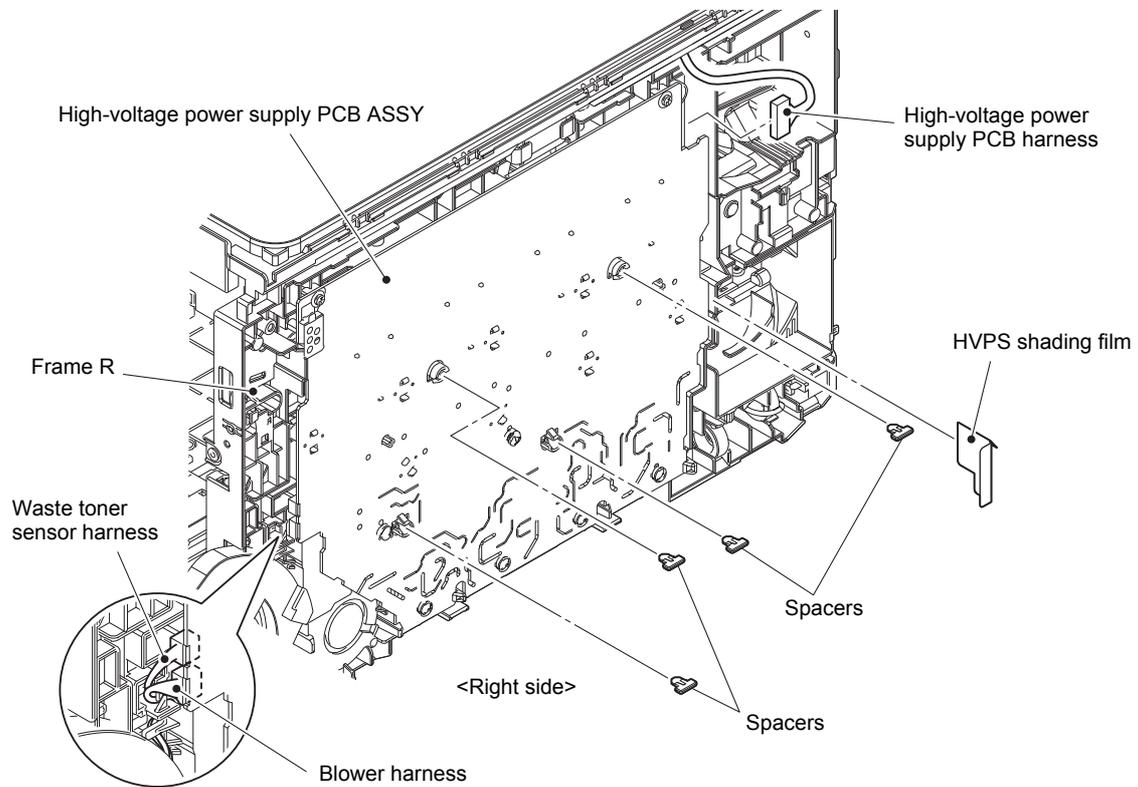
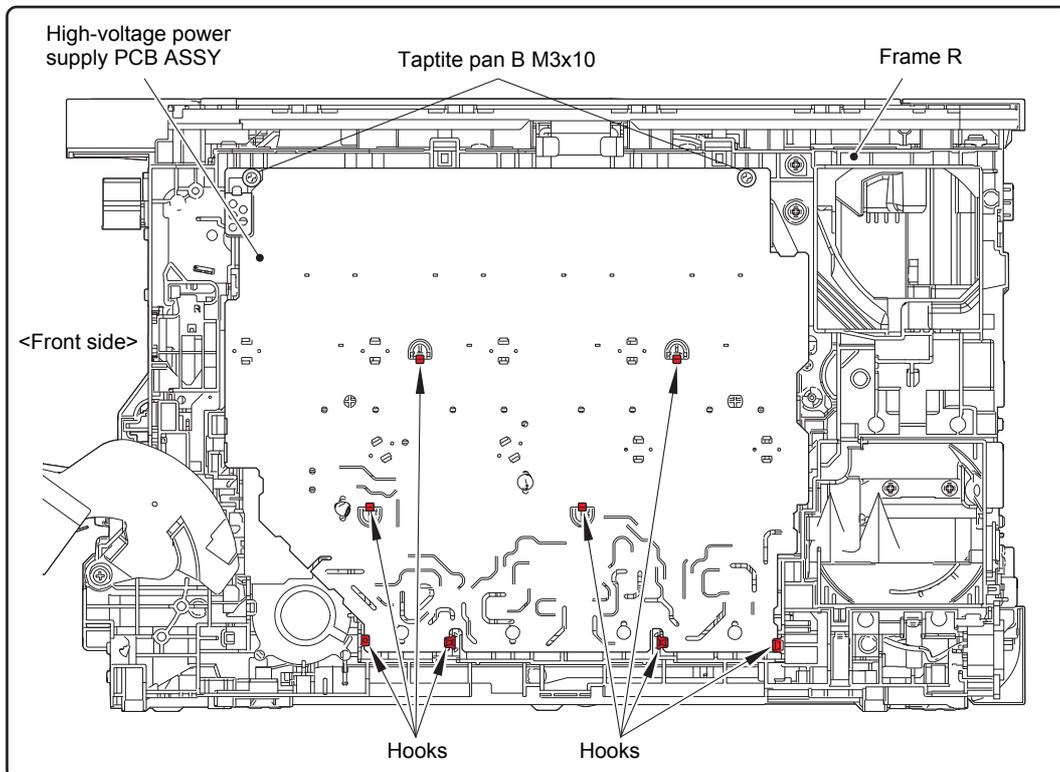
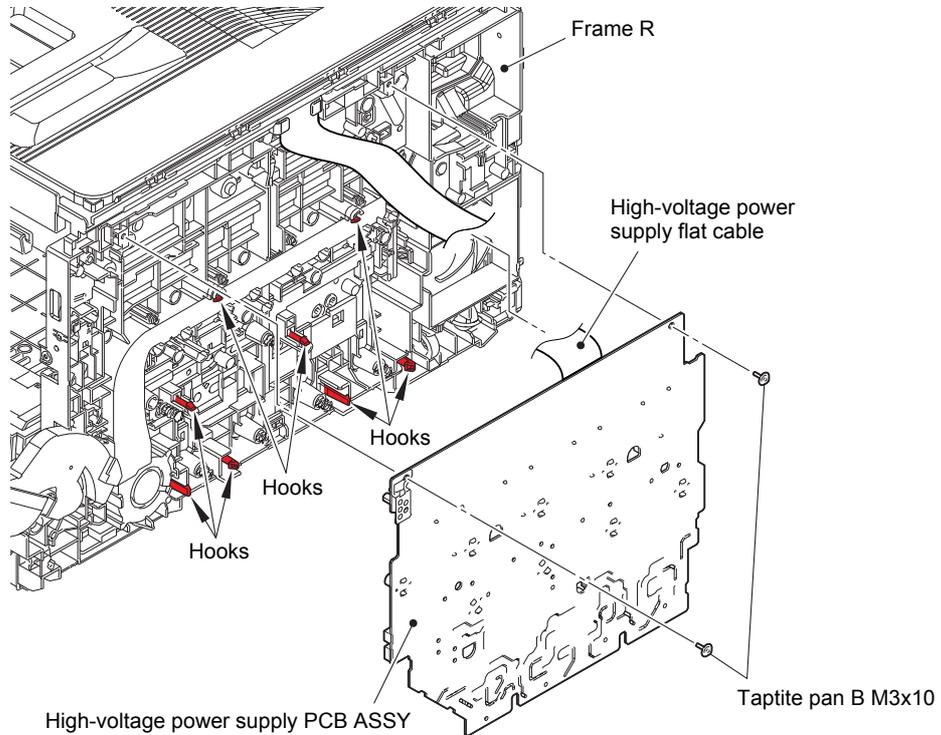


Fig. 3-32

- (4) Remove the two Taptite pan B M3x10 screws from the High-voltage power supply PCB ASSY. Release each Hook and remove the High-voltage power supply PCB ASSY from the Frame R.
- (5) Disconnect the High-voltage power supply flat cable from the High-voltage power supply PCB ASSY.



**Fig. 3-33**

Harness routing: Refer to "6. High-voltage power supply flat cable".

- (6) Release the Hook and remove the HVPS shield ASSY from the High-voltage power supply PCB ASSY.

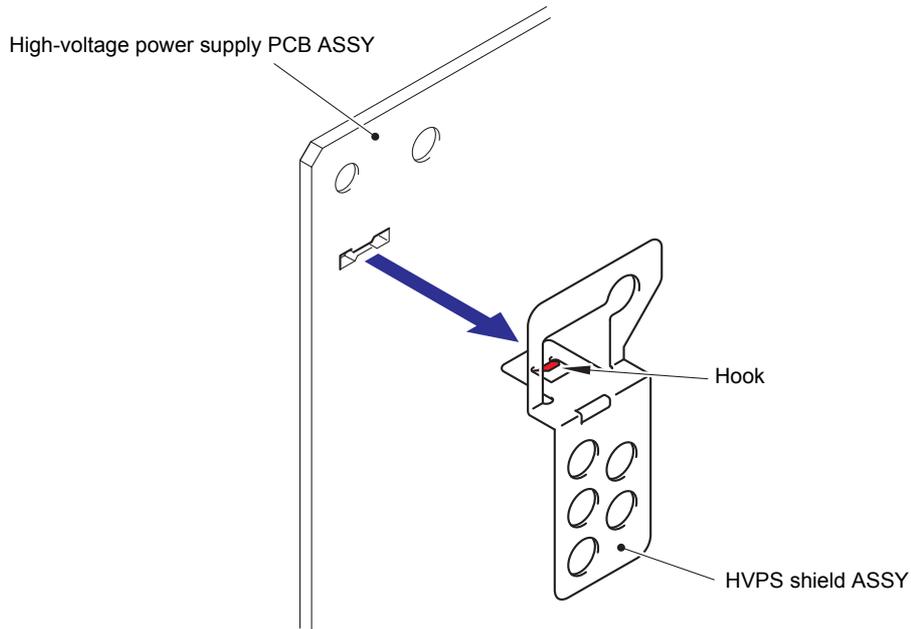


Fig. 3-34

**Assembling Note:**

After assembling the High-voltage power supply PCB ASSY, check that the Electrode inside the machine does not fall and that you do not feel that the Electrode gets caught when you press it.

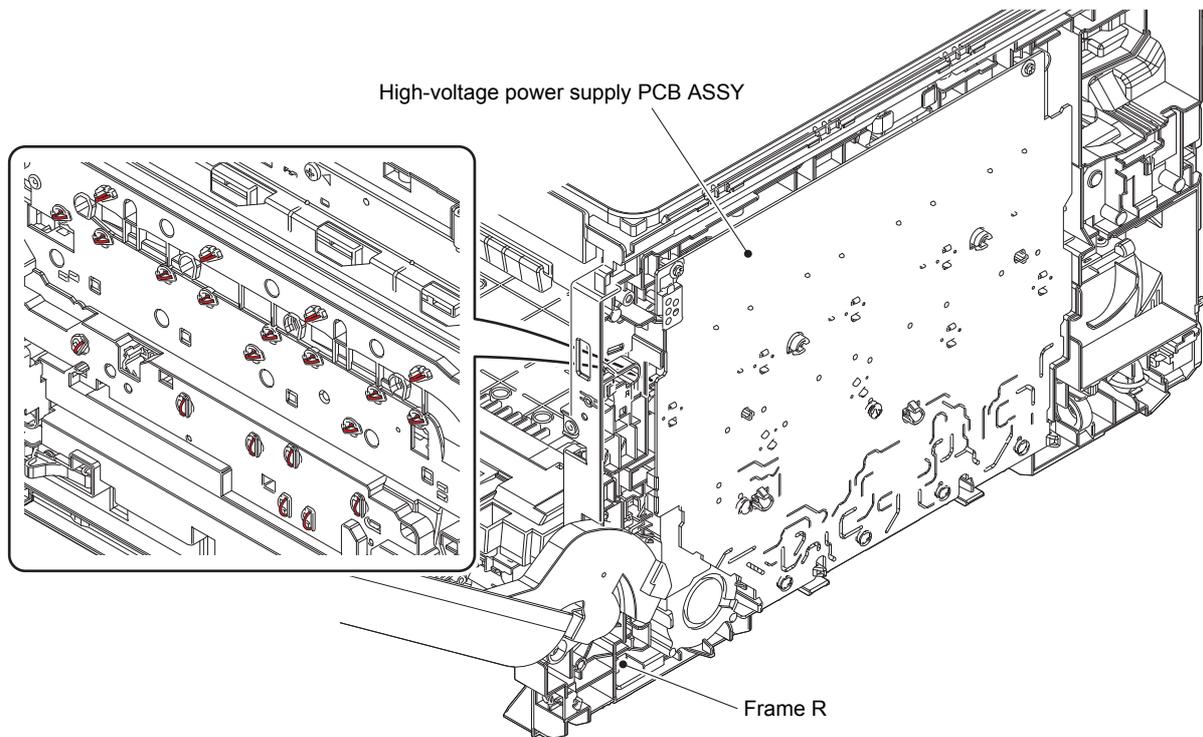


Fig. 3-35

## 9.13 MP cover ASSY / MP paper guide ASSY

- (1) Open the Front cover fully, release the Hook of the MP damper spring from the Front cover and fasten it to the Rib of MP cover ASSY.

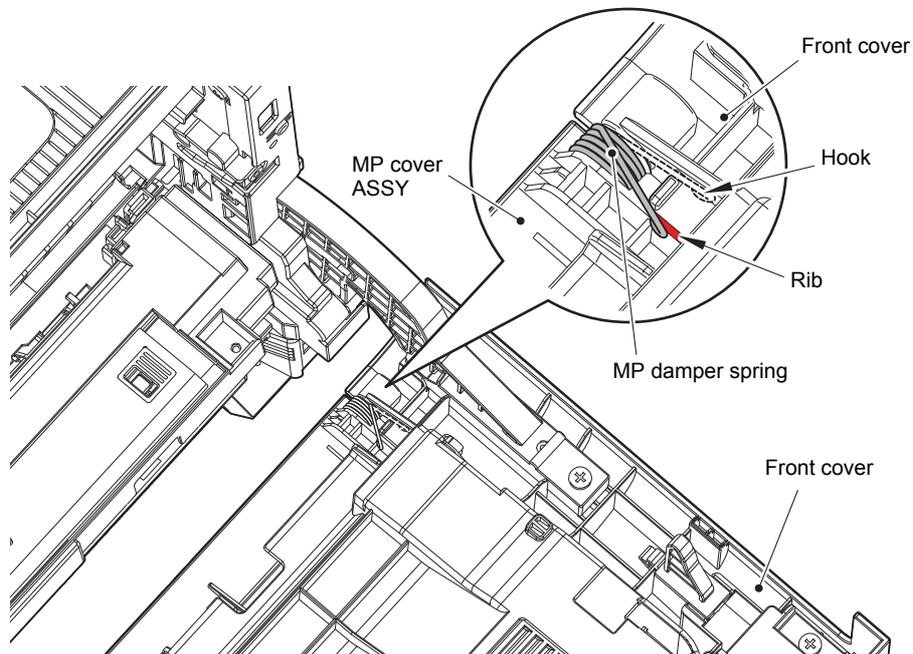


Fig. 3-36

- (2) Close the Front cover.
- (3) Open the MP cover ASSY.
- (4) Release the MP link L from the Boss of the MP paper guide ASSY.
- (5) Release the MP link R from the Boss of the MP paper guide ASSY.

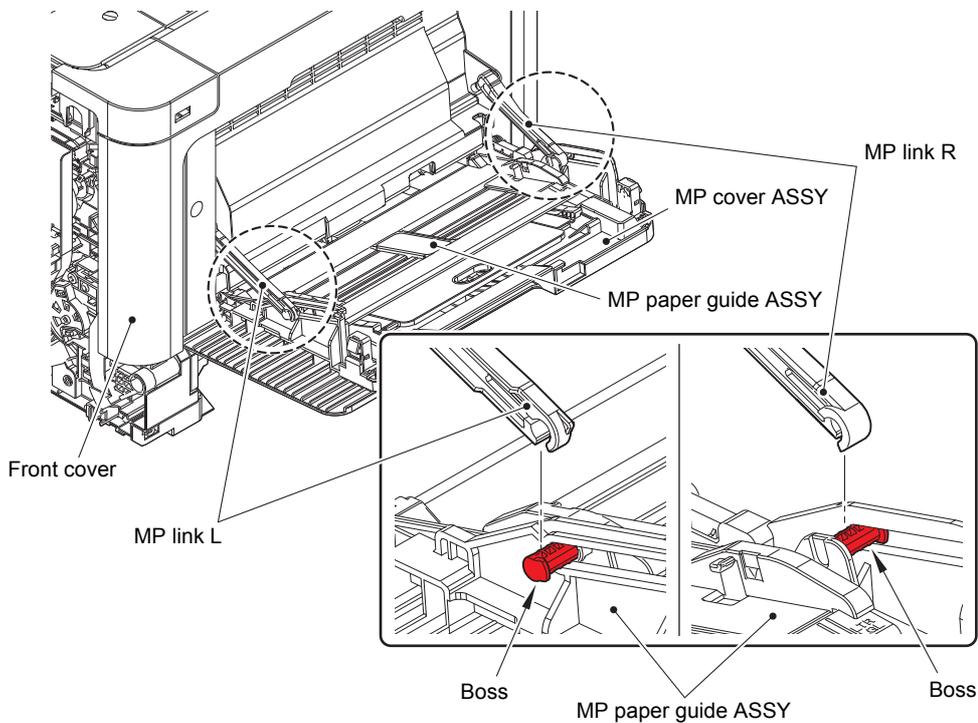
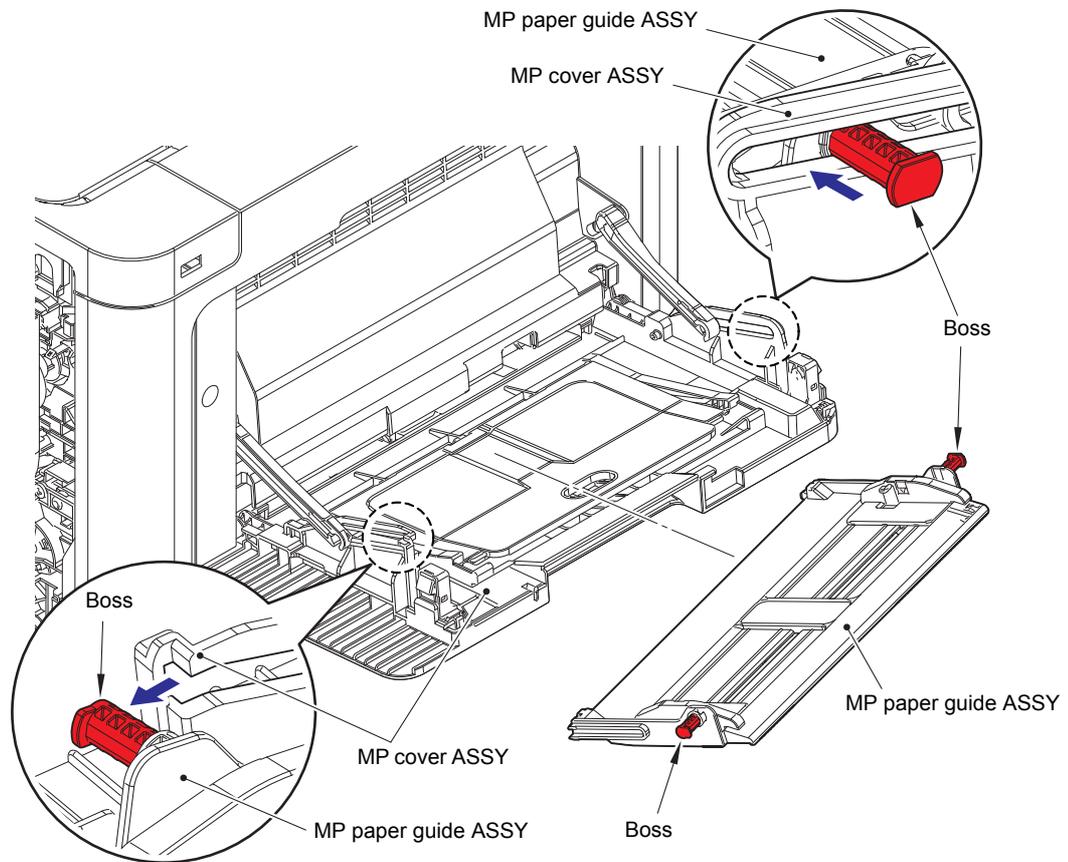


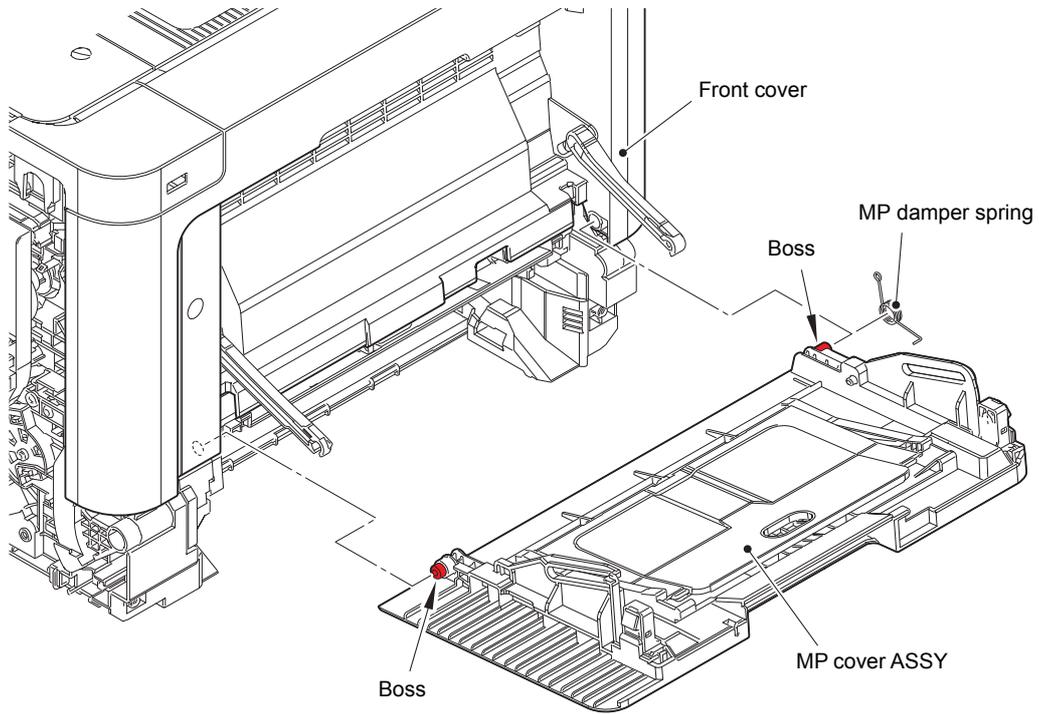
Fig. 3-37

- (6) Pull the MP paper guide ASSY to the front, tilt the left side slightly to the front and pull out the Boss of the left side from the MP cover ASSY. Then pull out the Boss of the right side from the MP cover ASSY and remove the MP guide ASSY.



**Fig. 3-38**

- (7) Release each Boss and remove the MP cover ASSY from the Front cover.
- (8) Remove the MP damper spring from the MP cover ASSY.



**Fig. 3-39**

# 9.14 MP link L / MP link R

- (1) Remove the MP link L from the Front cover.
- (2) Remove the MP link R from the Front cover.

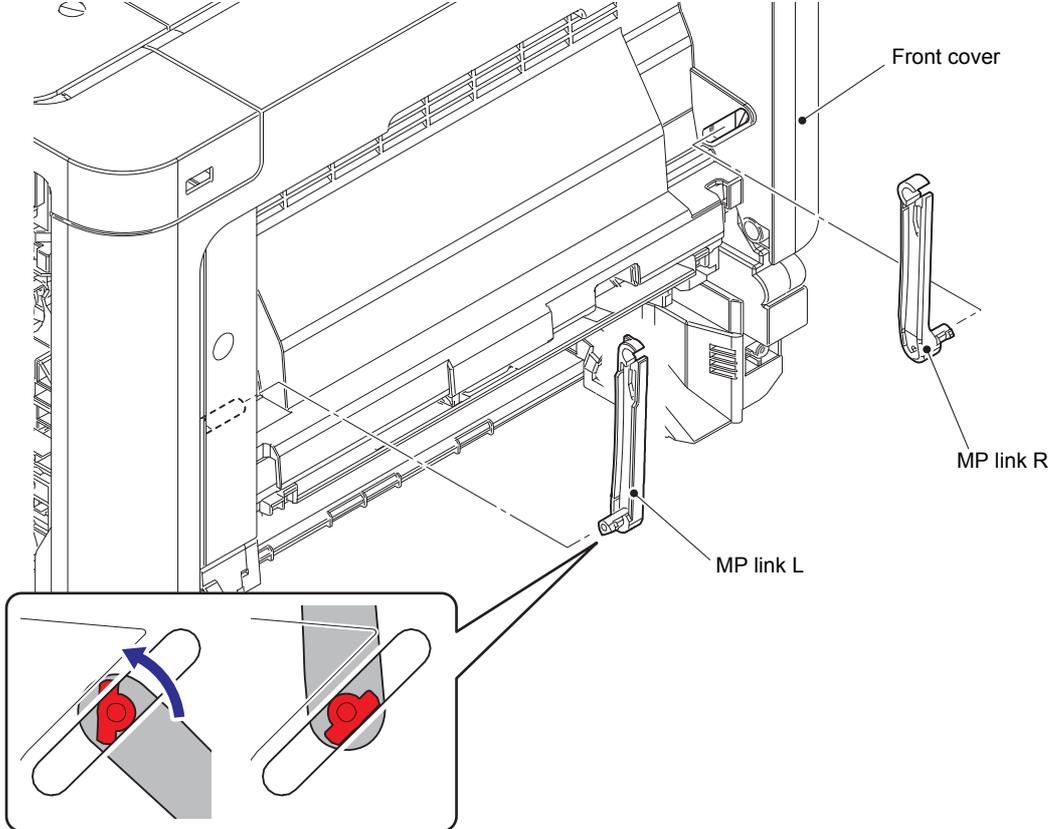


Fig. 3-40

# 9.15 Front cover

(1) Remove the Front cover damper spring from the Spring hook of the Frame R.

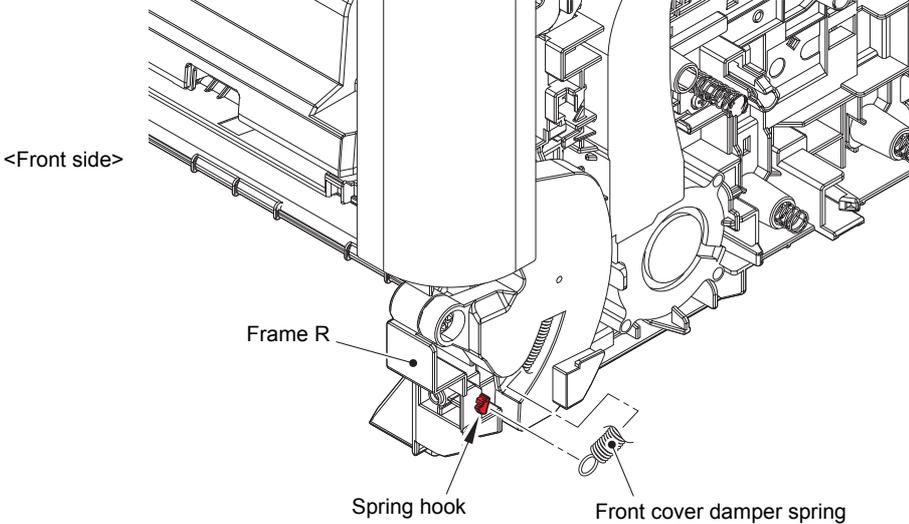


Fig. 3-41

- (2) Open the Front cover.
- (3) Release the Hook, pull the Forced develop release link to the direction of the arrow and remove it from the Front cover arm L.

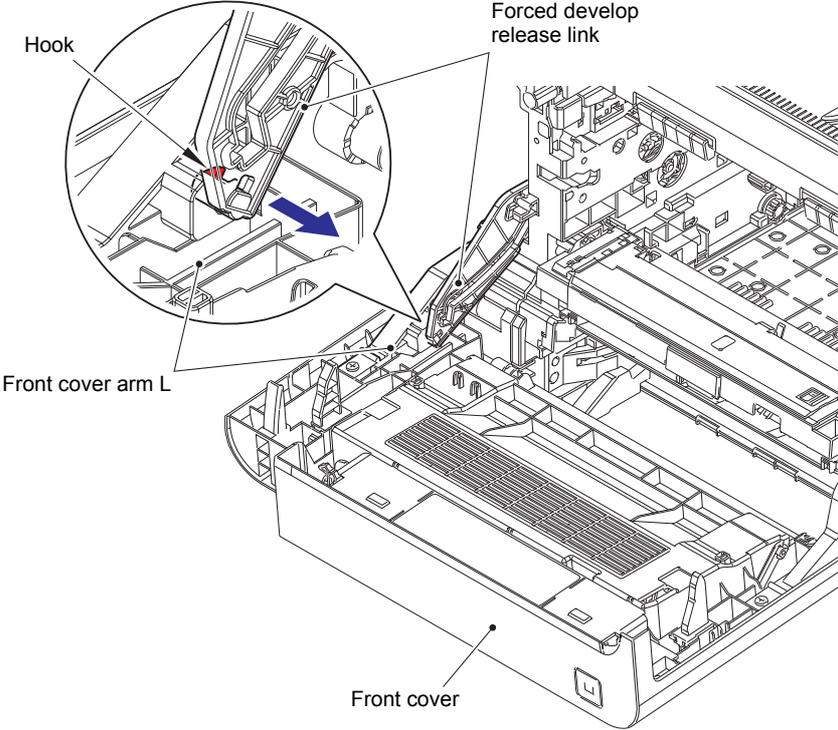
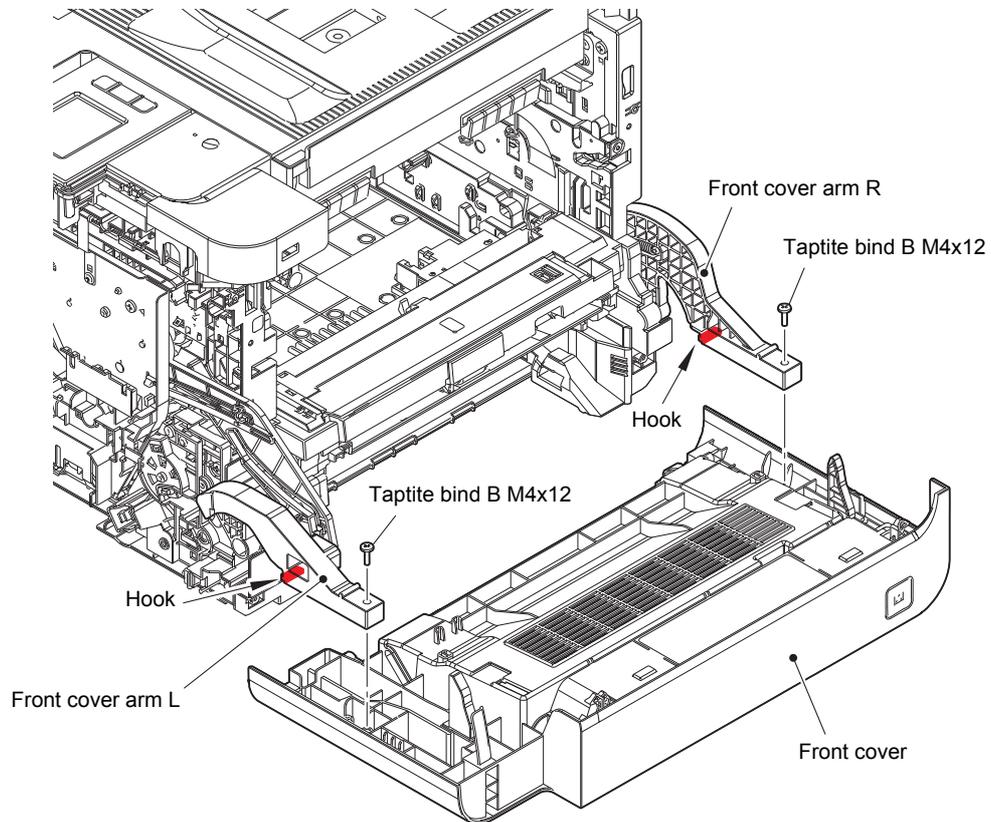


Fig. 3-42

- (4) Remove the two Taptite bind B M4x12 screws and remove the Front cover from the Front cover arm L/R.

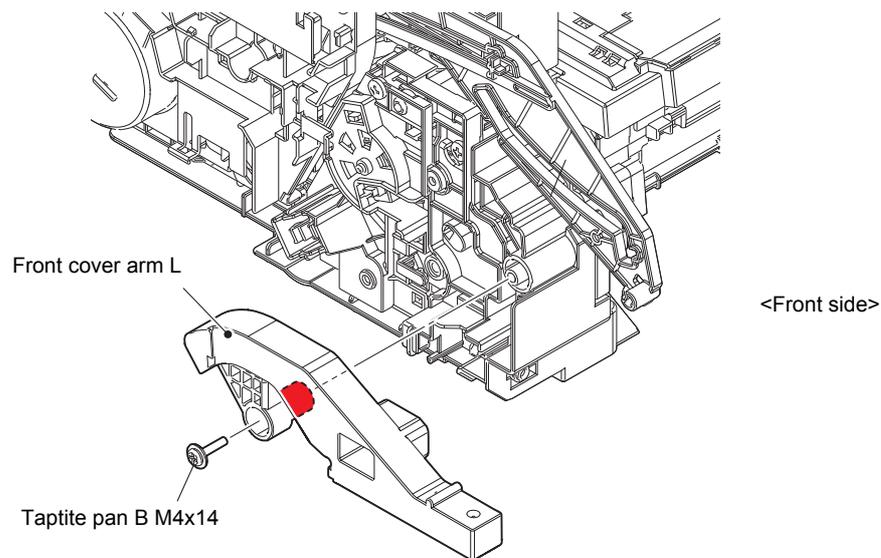
**Assembling Note:**

Screw up the Front cover after inlay the Hooks of the Front cover arm L/R to it. If each Hook are not inlayed correctly, the Front cover will come of when closing.



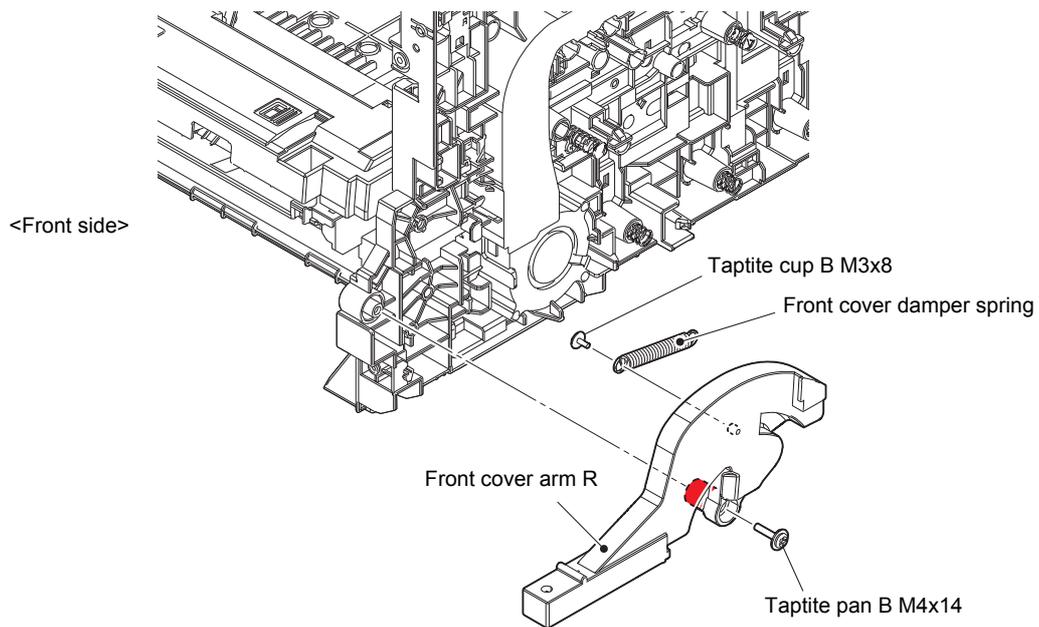
**Fig. 3-43**

- (5) Remove the Taptite pan B M4x14 screw and remove the Front cover arm L.



**Fig. 3-44**

- (6) Remove the Taptite pan B M4x14 screw and remove the Front cover arm R.  
(7) Remove the Taptite cup B M3x8 screw and remove the Front cover damper spring from the Front cover arm R.



**Fig. 3-45**

**Assembling Note:**

- Front cover spare part will be delivered with Front cover arm L/R connected.
- Before replacing the Front cover to the machine, make sure to remove the Front cover arm L/R.

## 9.16 Top cover ASSY

### ■ Touch panel models

#### 9.16.1 Top cover ASSY

- (1) Remove the four Screw cup M3x8 (black) screws and remove the Main shield cover plate ASSY from the Main body.
- (2) Remove the Taptite cup S M3x8 SR screw and release the USB host ground wire from the Process drive unit. Release the wiring of USB host ground wire.

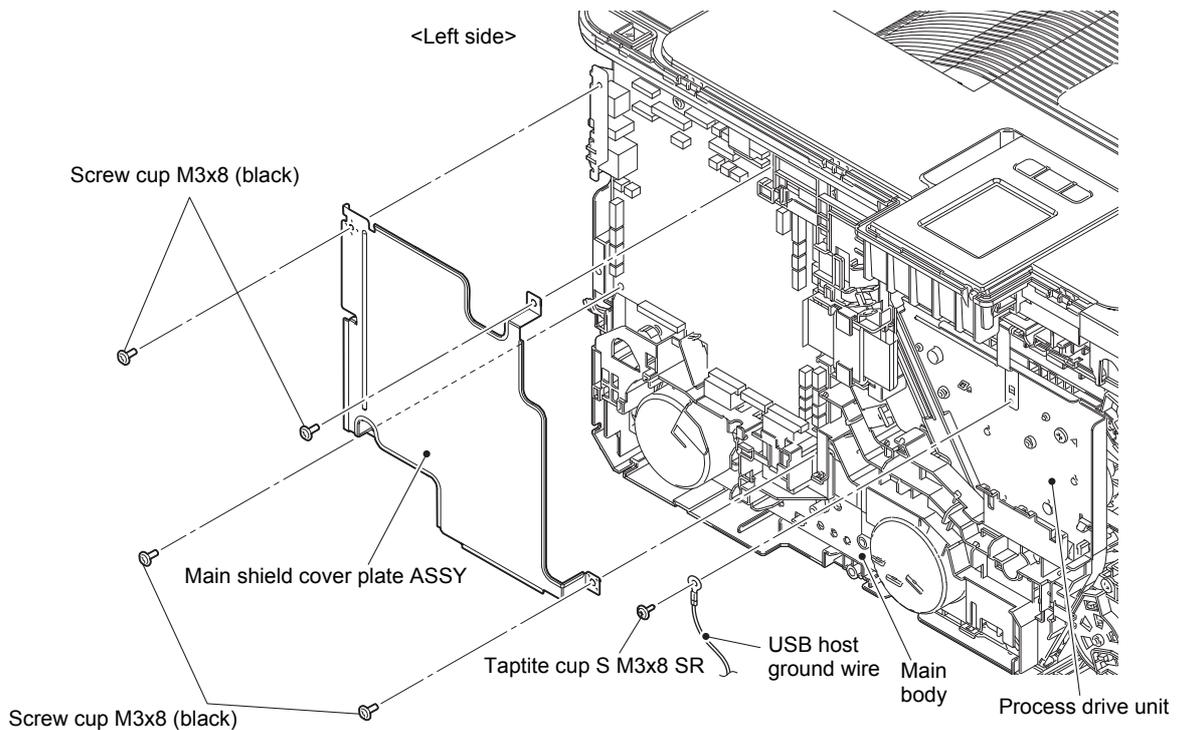


Fig. 3-46

- (3) Pull out the Panel relay flat cable and Main USB host harness ASSY from the Main PCB ASSY and release the wiring.

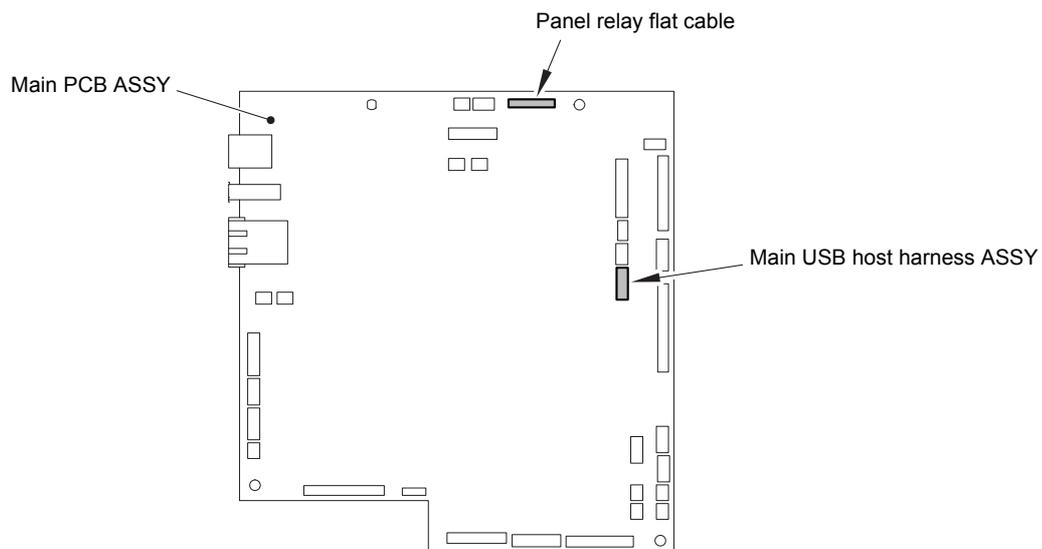
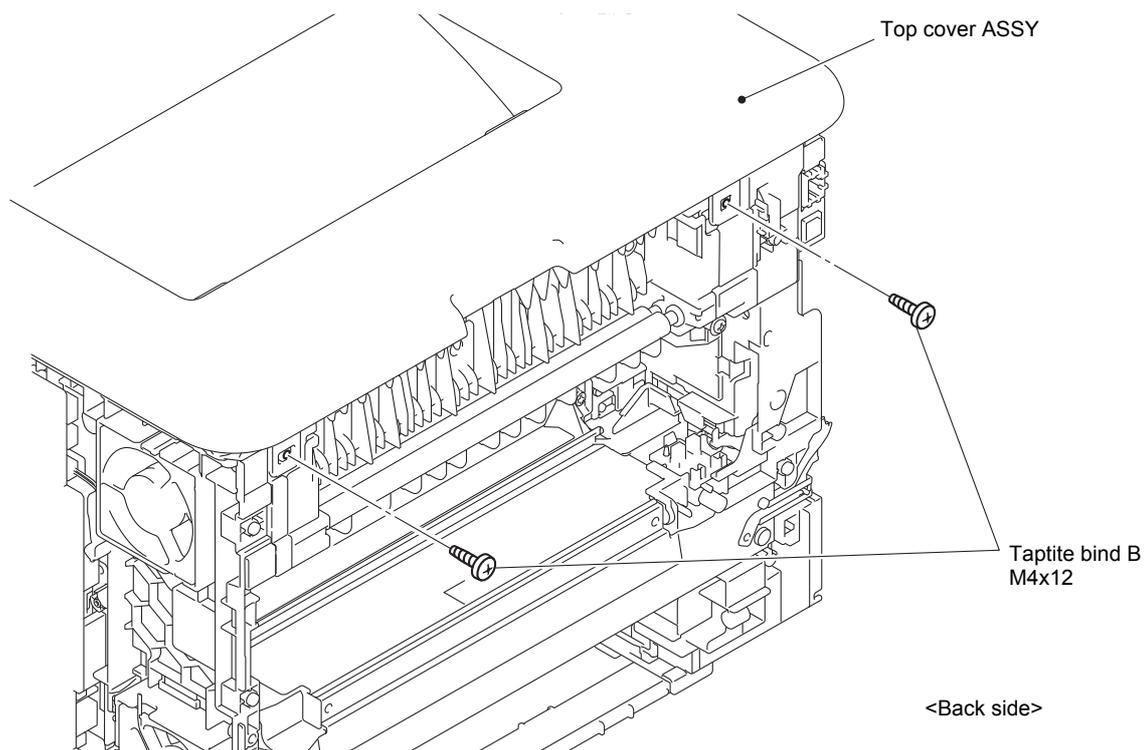


Fig. 3-47

Harness routing: Refer to "3. Top cover ASSY (Touch panel models)".

(4) Remove the two Taptite bind B M4x12 screws from the back of the Top cover ASSY.



**Fig. 3-48**

- (5) Release each Hook 1 and each Boss. Release other each Hook and remove the Top cover ASSY from the Main body.

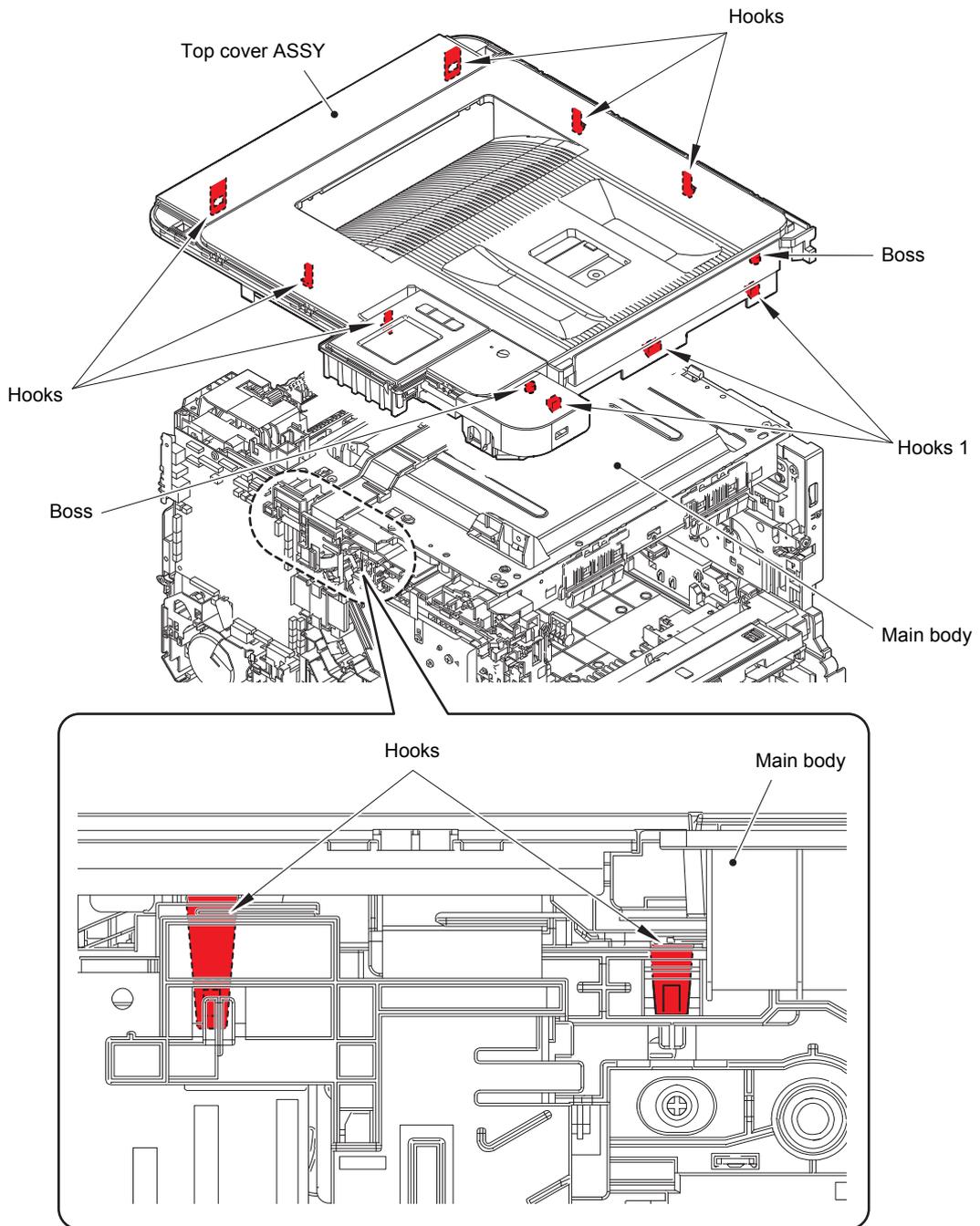
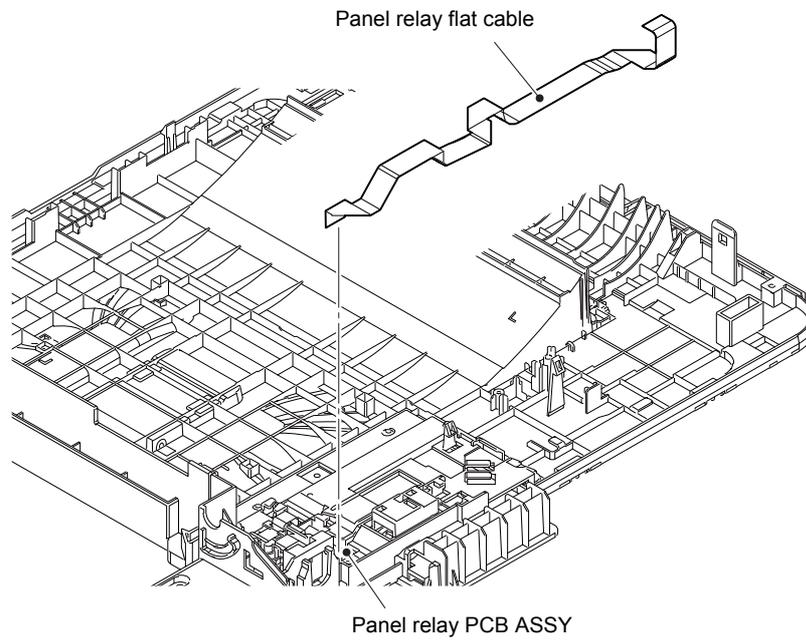


Fig. 3-49

### 9.16.2 Panel relay flat cable

- (1) Disconnect the Panel relay flat cable from the Panel relay PCB ASSY and release the wiring.



**Fig. 3-50**

Harness routing: Refer to "3. Top cover ASSY (Touch panel models)".

<How to fold the Panel relay flat cable>

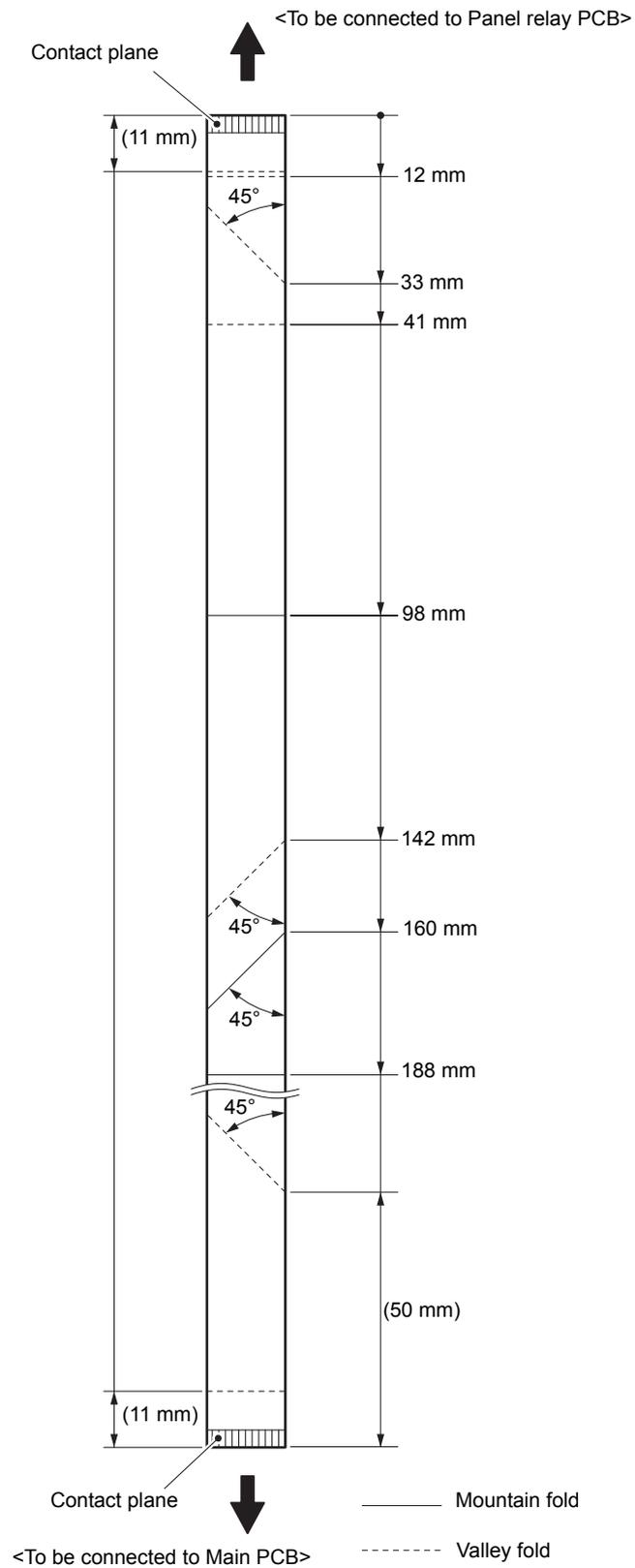


Fig. 3-51

### 9.16.3 LCD panel ASSY

- (1) Remove the three Taptite bind B M4x12 screws, one Taptite bind B M3x8 screw and remove the Panel ASSY from the Top cover ASSY.

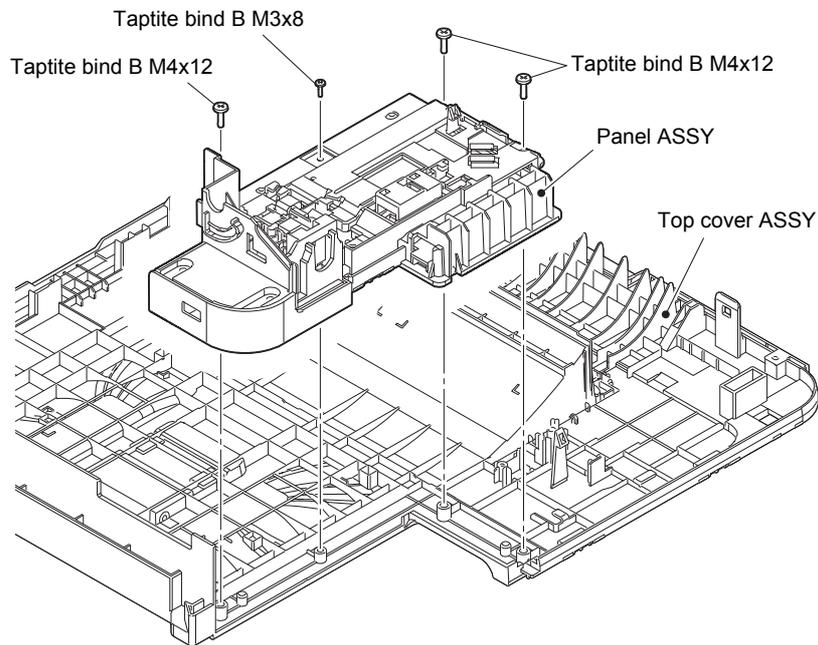
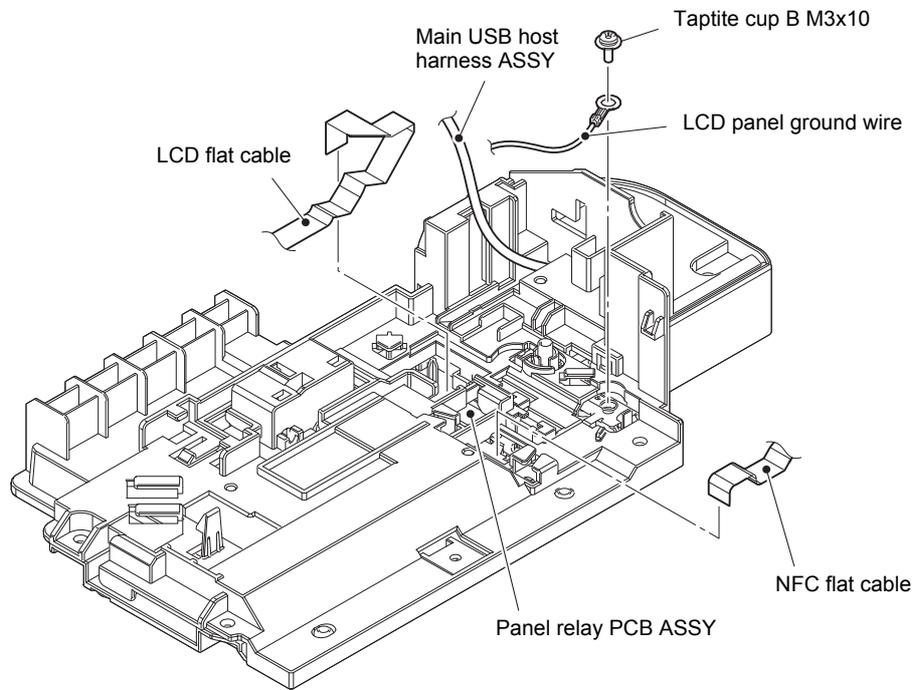


Fig. 3-52

- (2) Disconnect the LCD flat cable from the Panel relay PCB ASSY and release the wiring.
- (3) Disconnect the NFC flat cable from the Panel relay PCB ASSY and release the wiring.
- (4) Release the wiring of Main USB host harness ASSY.
- (5) Remove the Taptite cup B M3x10 screw, remove the LCD panel ground wire and release the wiring.



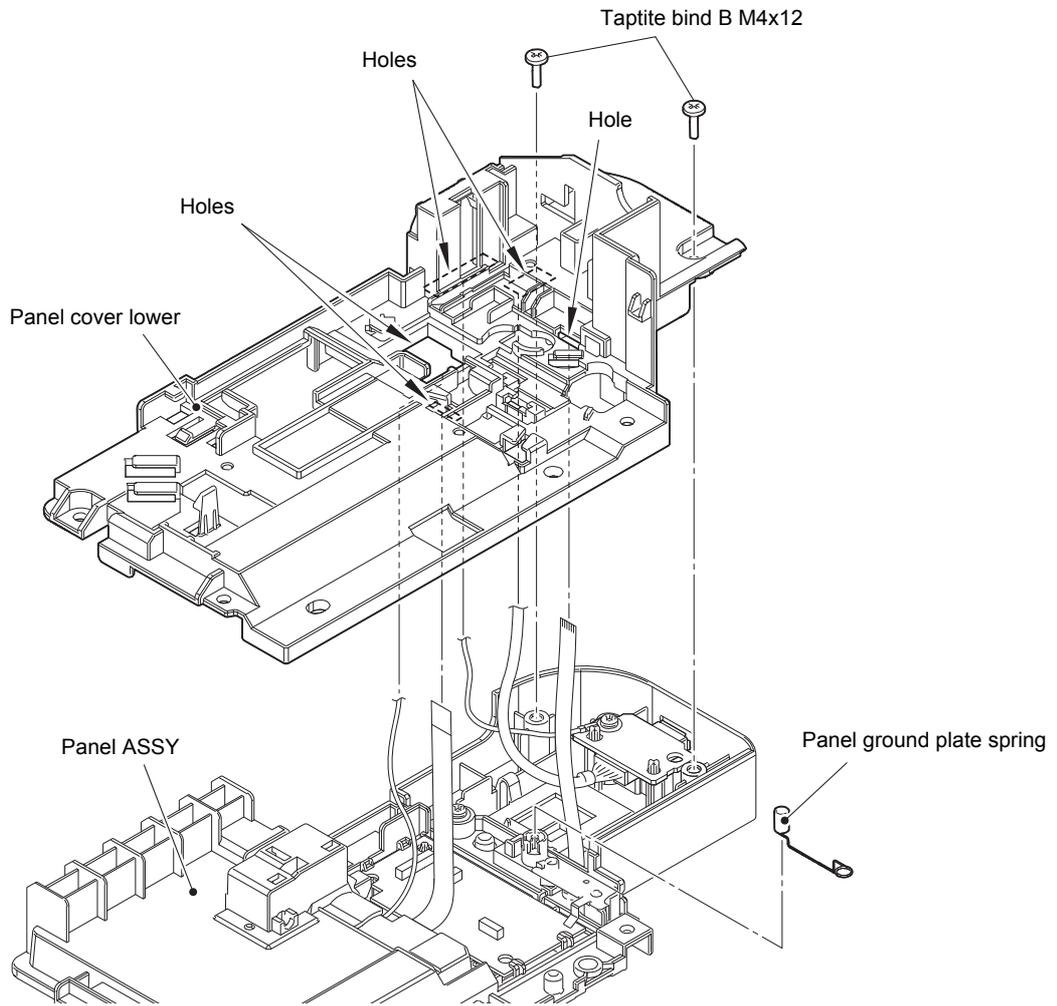
**Fig. 3-53**

Harness routing: Refer to [“3. Top cover ASSY \(Touch panel models\)”](#).

**Note:**

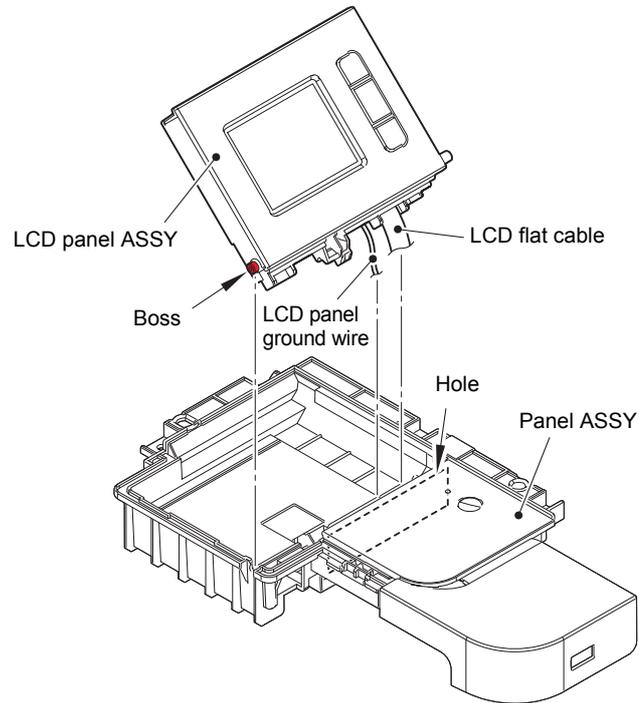
- After disconnecting flat cables, check that each cable is not damaged at its end or short-circuited.
- When connecting flat cables, do not insert them at an angle. After insertion, check that the cables are not at an angle.

- (6) Remove the two Taptite bind B M4x12 screws. Remove the Panel cover lower from the Panel ASSY and pull out each harness from each Hole.
- (7) Remove the Panel ground plate spring.



**Fig. 3-54**

- (8) Release the left side Boss of the LCD panel ASSY and remove it from the Panel ASSY. Pull out the LCD flat cable and LCD panel ground wire from the Hole of Panel ASSY.



**Fig. 3-55**

<How to fold the LCD flat cable>

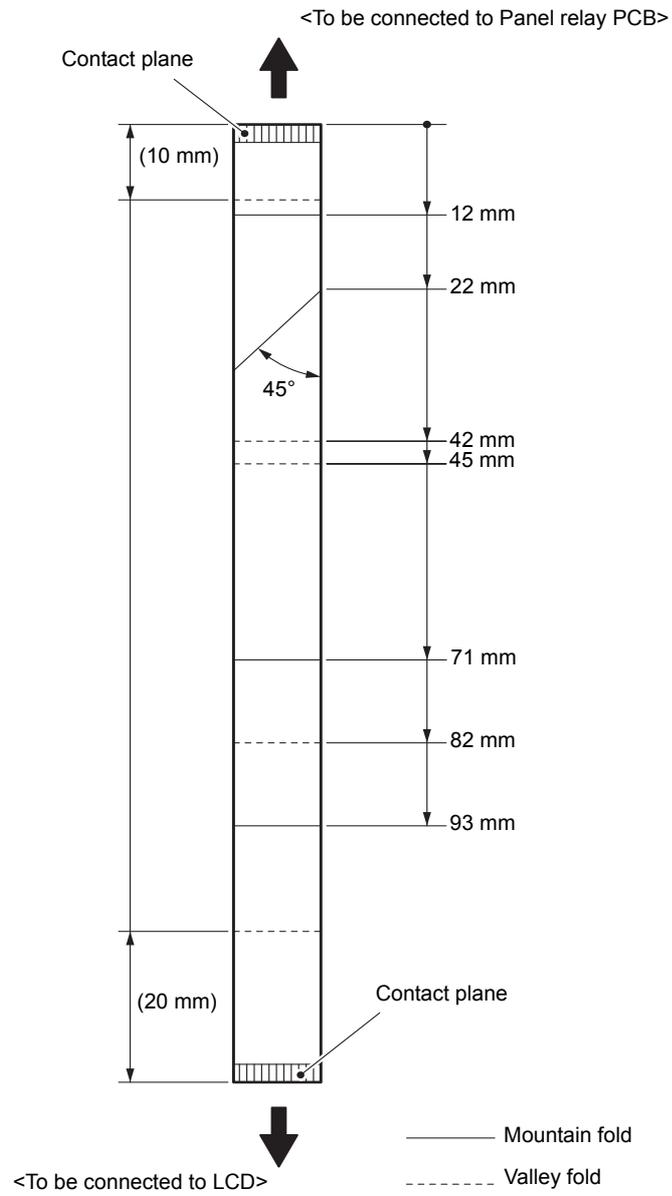
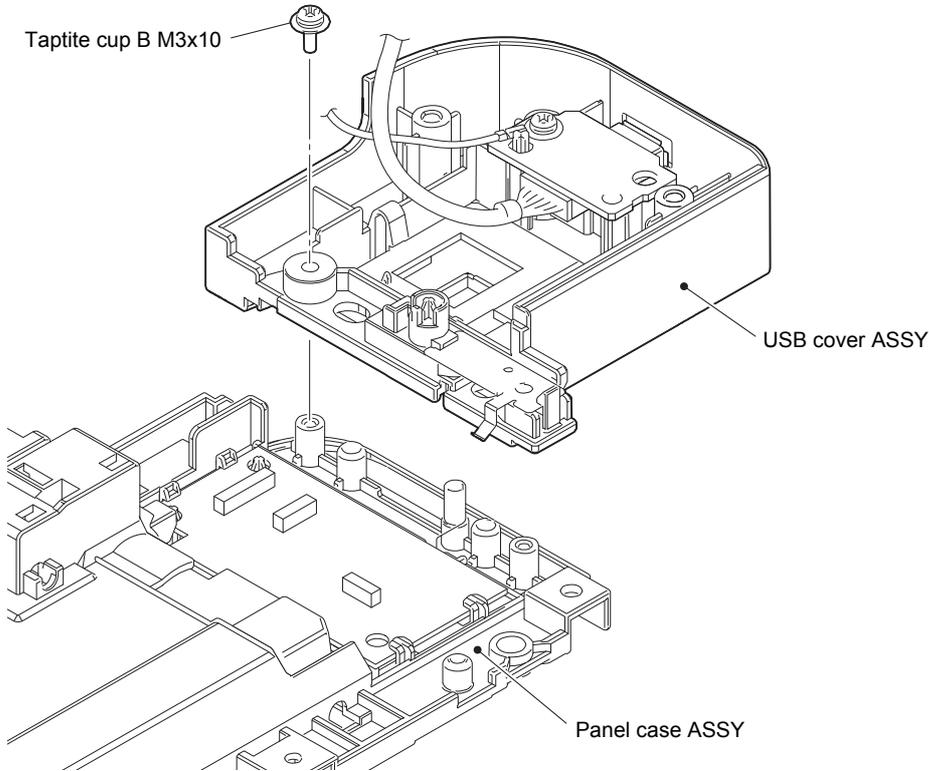


Fig. 3-56

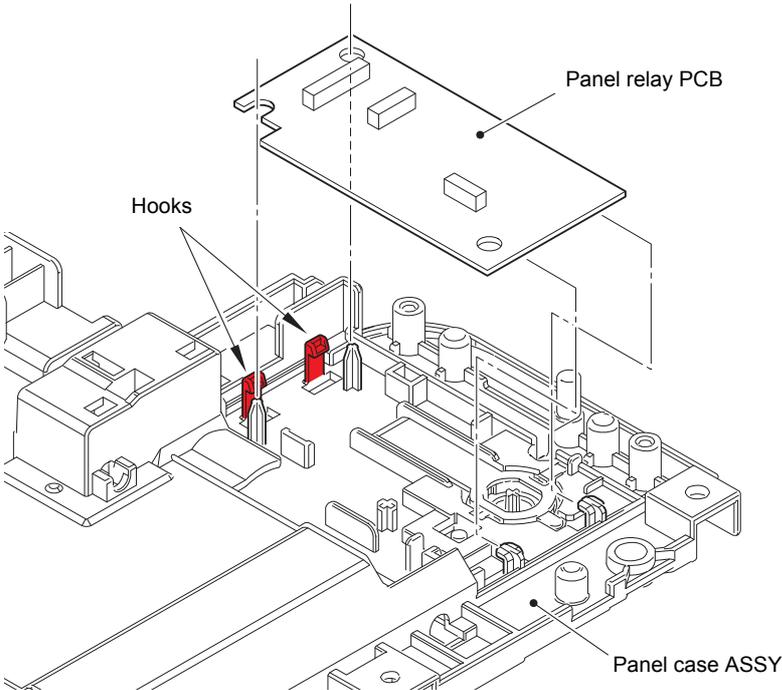
**9.16.4 Panel case ASSY / Panel relay PCB**

- (1) Remove the Taptite cup B M3x10 screw and remove the USB cover ASSY from the Panel case ASSY.



**Fig. 3-57**

- (2) Release each Hook and remove the Panel relay PCB from the Panel case ASSY.



**Fig. 3-58**

### 9.16.5 USB host PCB ASSY

- (1) Remove the Taptite bind B M4x12 screw and remove the USB host ground wire and USB host PCB ASSY from the USB cover ASSY.
- (2) Disconnect the Main USB host harness ASSY from the USB host PCB ASSY.

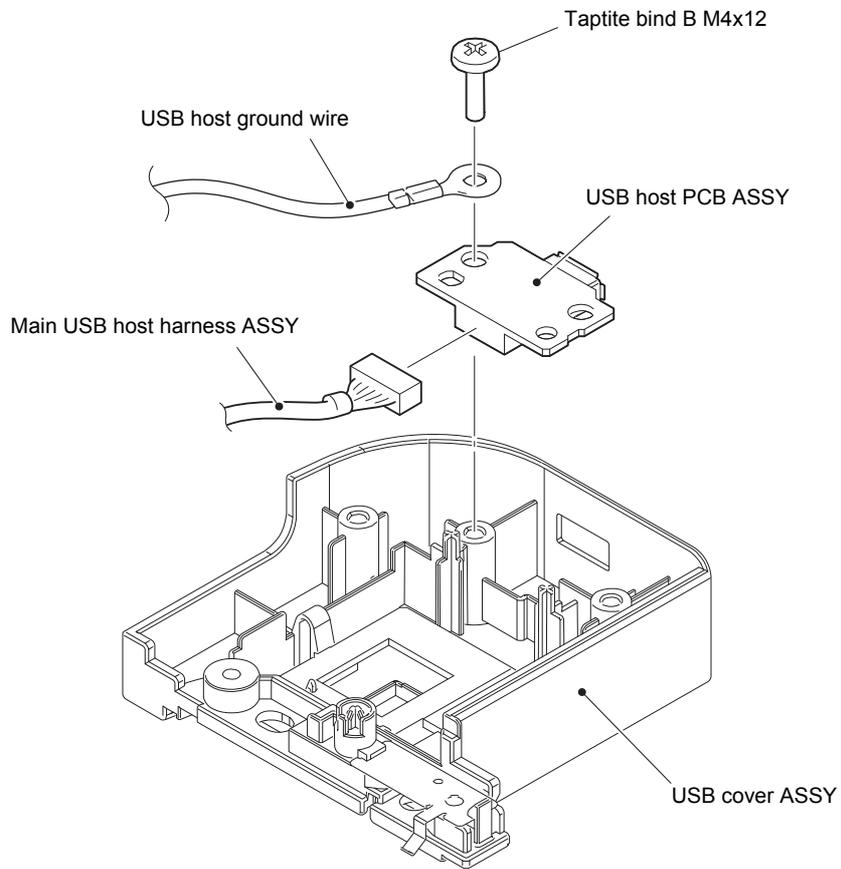
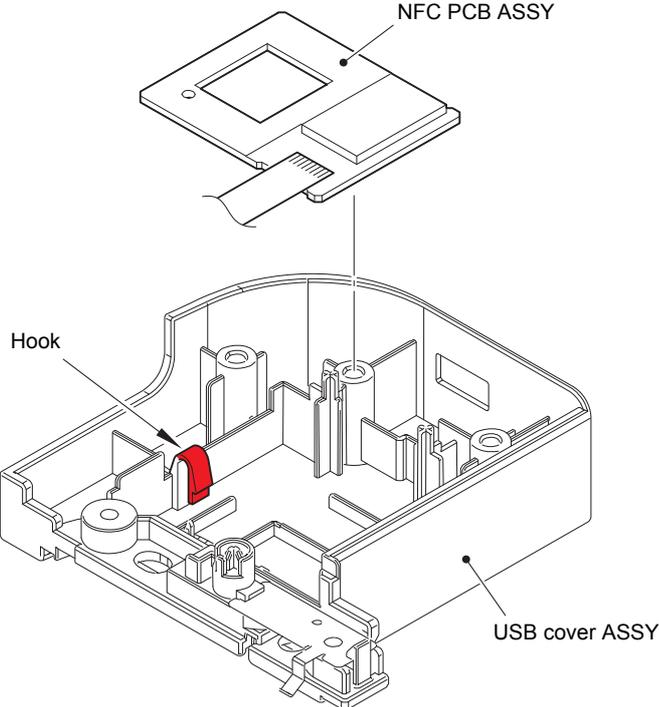


Fig. 3-59

**9.16.6 NFC PCB ASSY**

(1) Release the Hook and remove the NFC PCB ASSY from the USB cover ASSY.



**Fig. 3-60**

<How to fold the NFC flat cable>

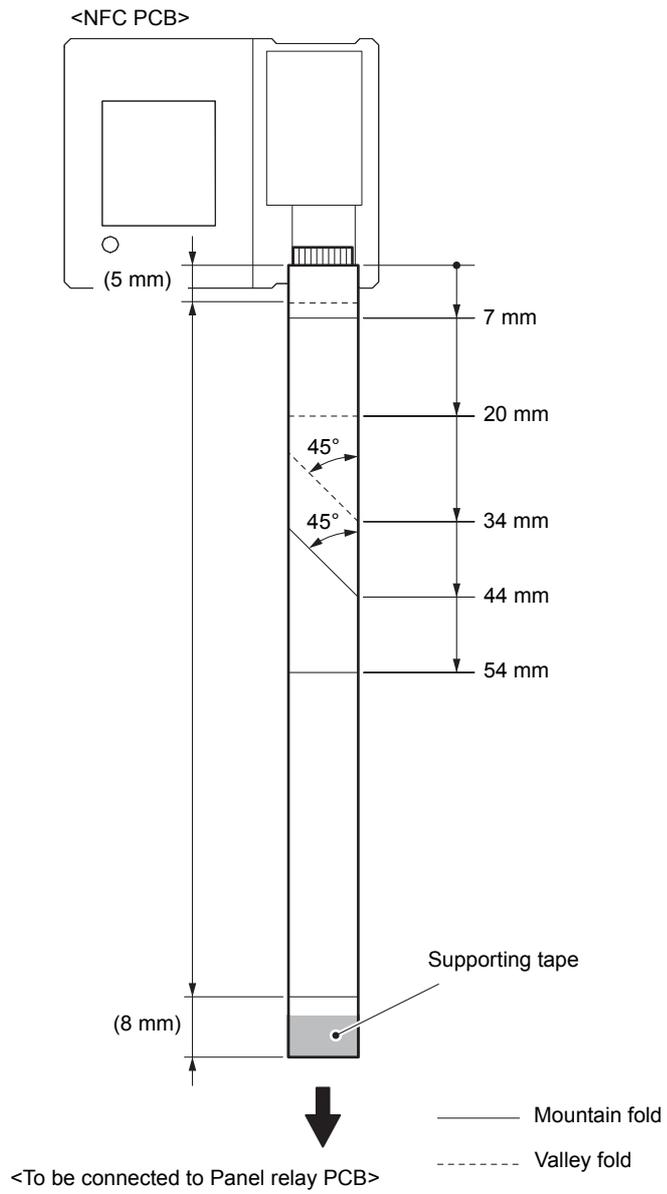


Fig. 3-61

## ■ Non touch panel models

### 9.16.7 Top cover ASSY

- (1) Remove the four Screw cup M3x8 (black) screws and remove the Main shield cover plate ASSY from the Main body.
- (2) Remove the Taptite cup S M3x8 SR screw and release the USB host ground wire from the Process drive unit. Release the wiring of USB host ground wire.

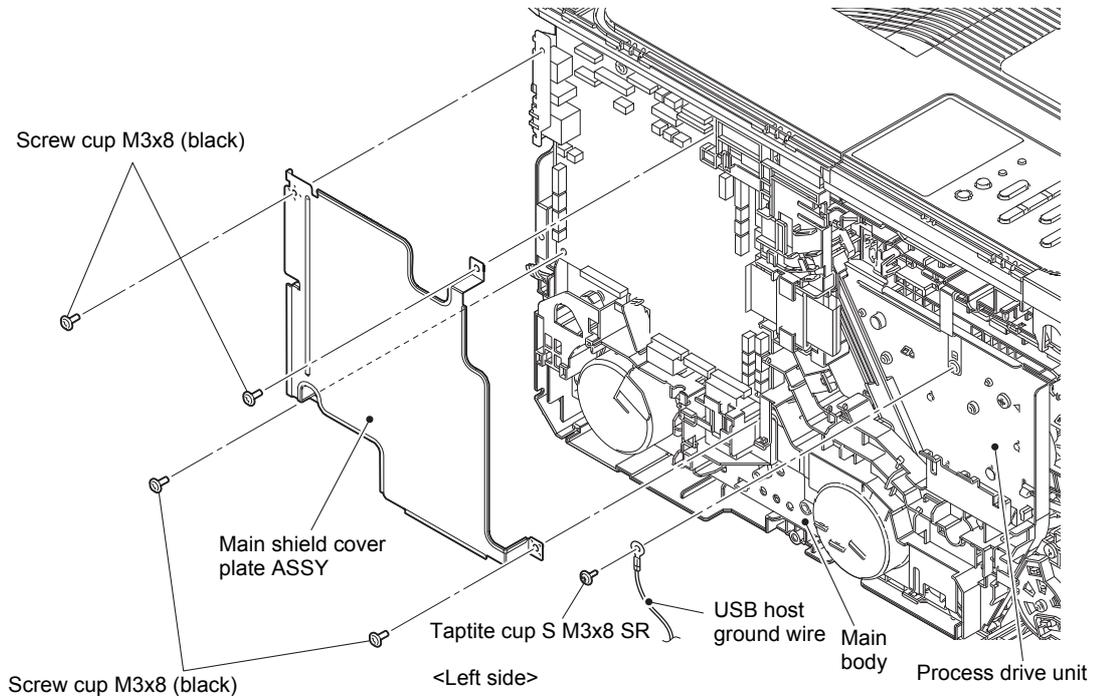


Fig. 3-62

- (3) Pull out the Panel PCB harness and Main USB host harness ASSY from the Main PCB ASSY and release the wiring.

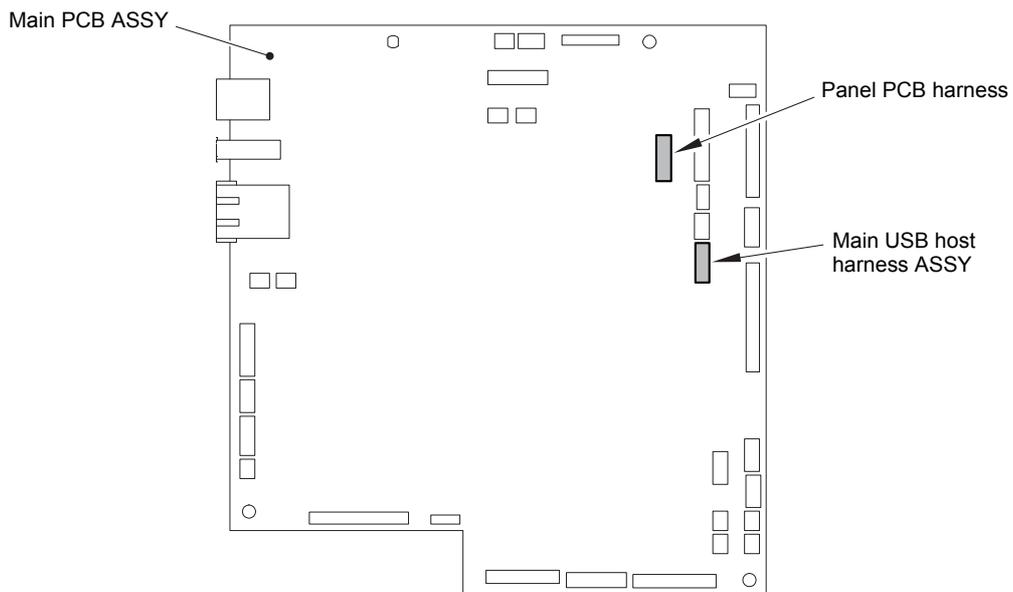
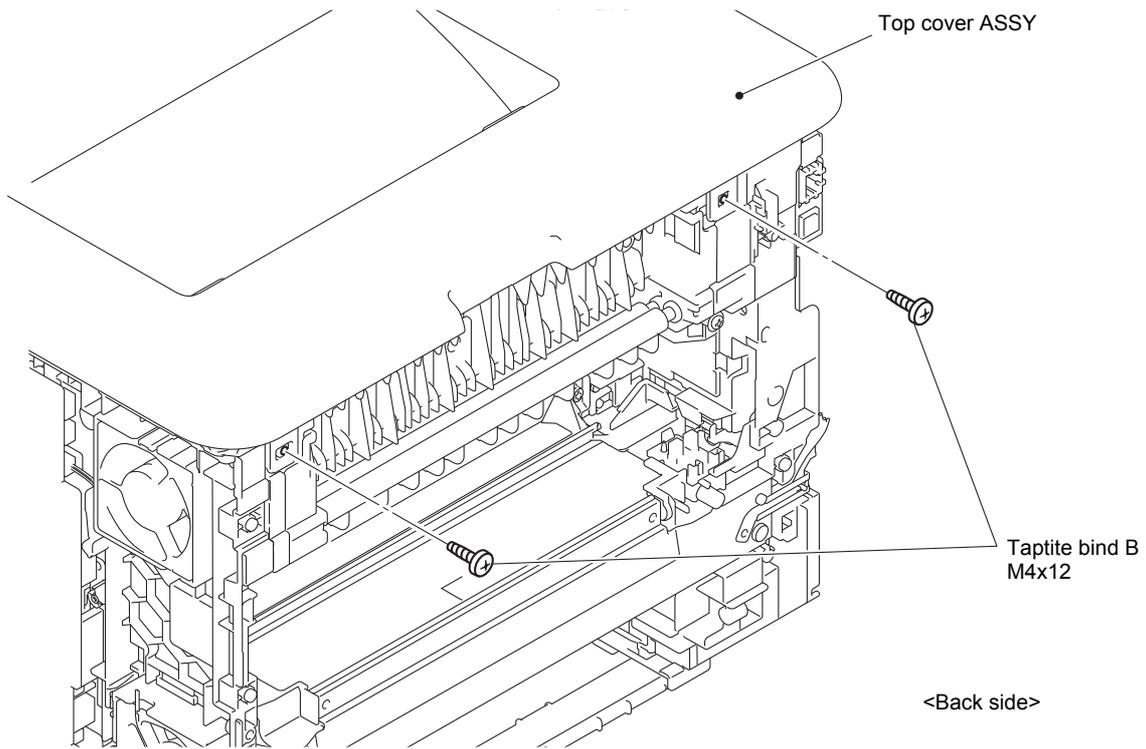


Fig. 3-63

Harness routing: Refer to "4. Top cover ASSY (Non touch panel models)".

(4) Remove the two Taptite bind B M4x12 screws from the back of the Top cover ASSY.



**Fig. 3-64**

- (5) Release each Hook 1 and each Boss. Release other each Hook and remove the Top cover ASSY from the Main body.

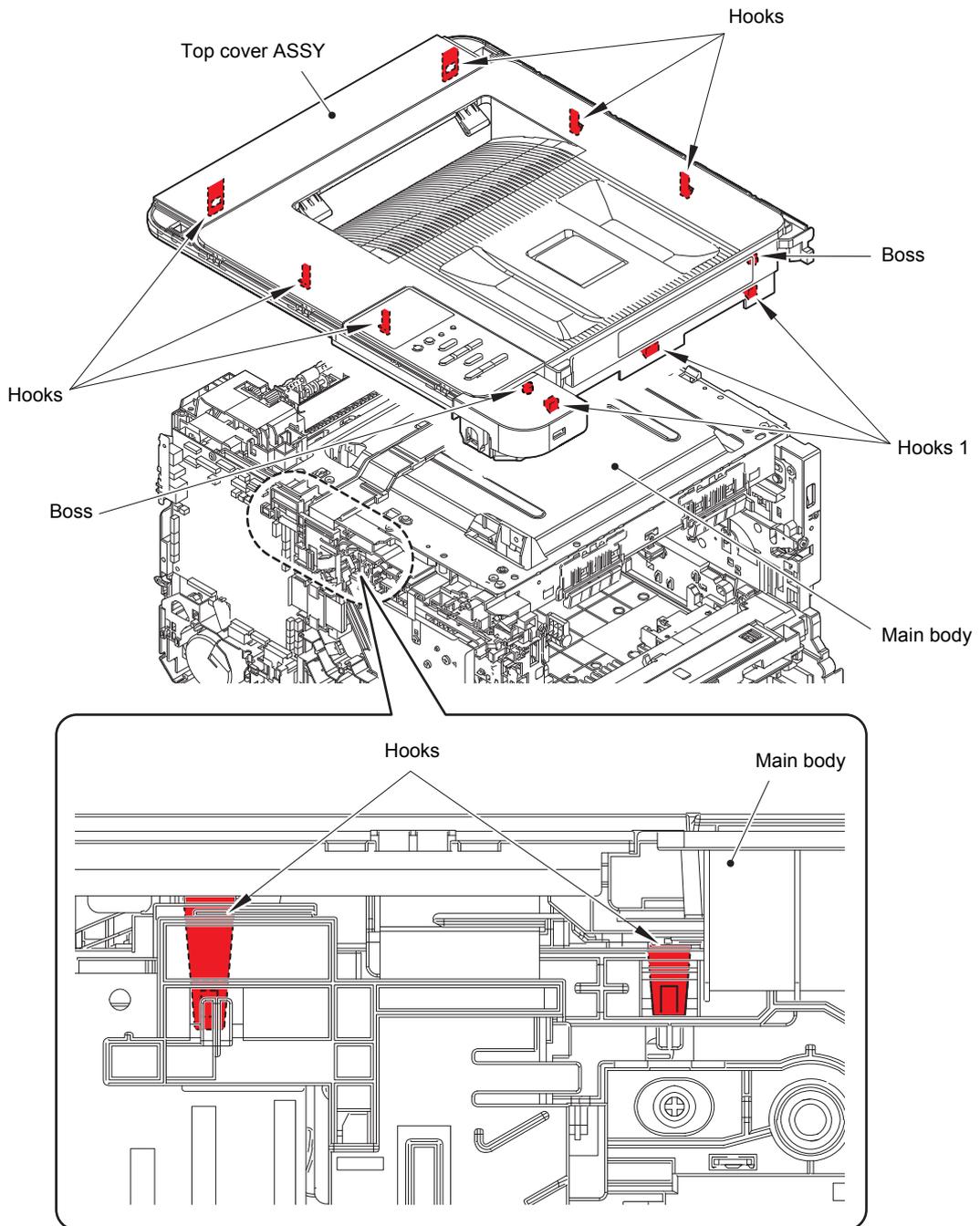
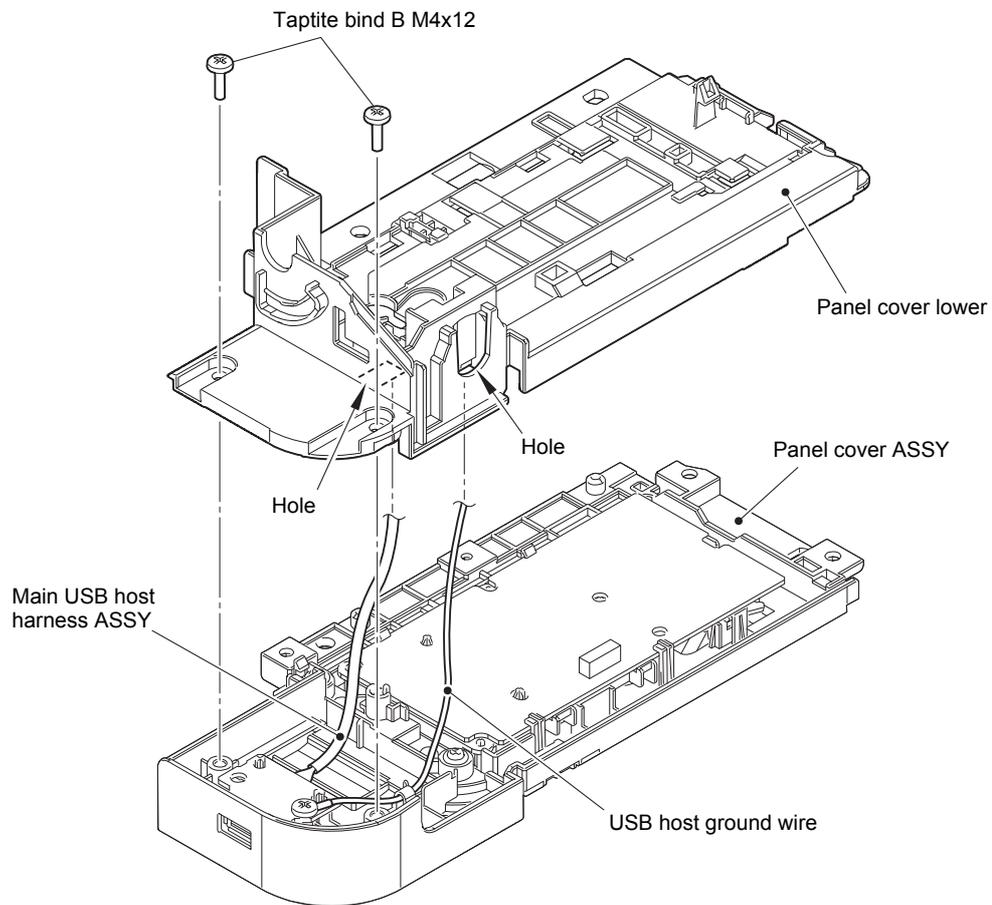


Fig. 3-65



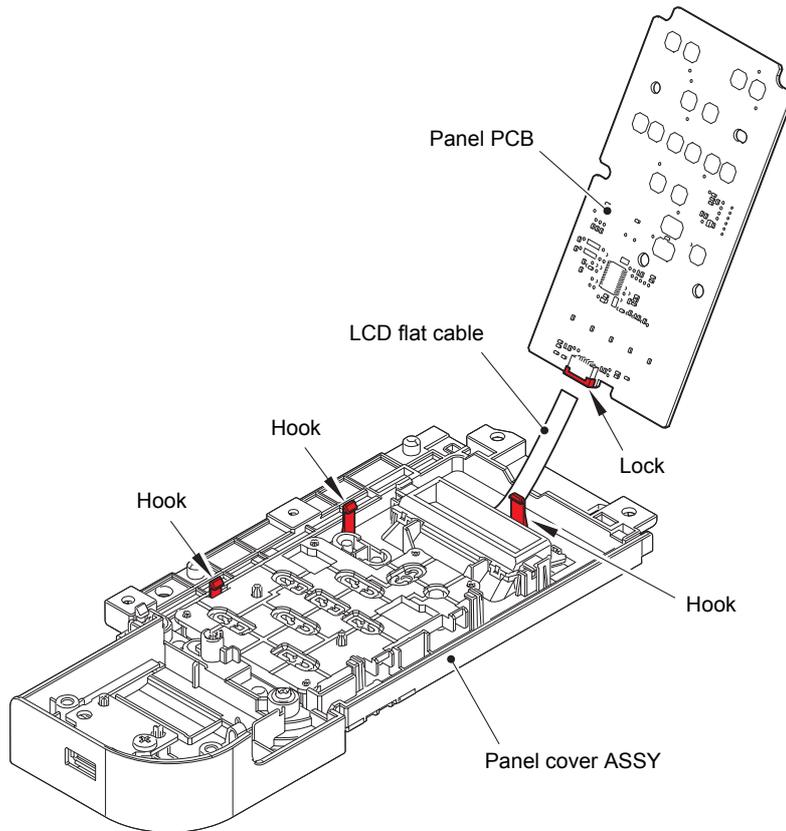
- (3) Release the wiring of Main USB host harness ASSY.
- (4) Remove the two Taptite bind B M4x12 screws. Remove the Panel cover lower from the Panel cover ASSY and pull out each harness from each Hole.



**Fig. 3-67**

Harness routing: Refer to "4. Top cover ASSY (Non touch panel models)".

- (5) Release each Hook and remove the Panel PCB from the Panel cover ASSY.
- (6) Release the Lock and disconnect the LCD flat cable from the Panel PCB.



**Fig. 3-68**

### 9.16.9 LCD

- (1) Release each Hook and remove the Backlight guide from the Panel cover ASSY.
- (2) Remove the Diffusion film from the LCD.
- (3) Remove the LCD from the Panel cover ASSY.

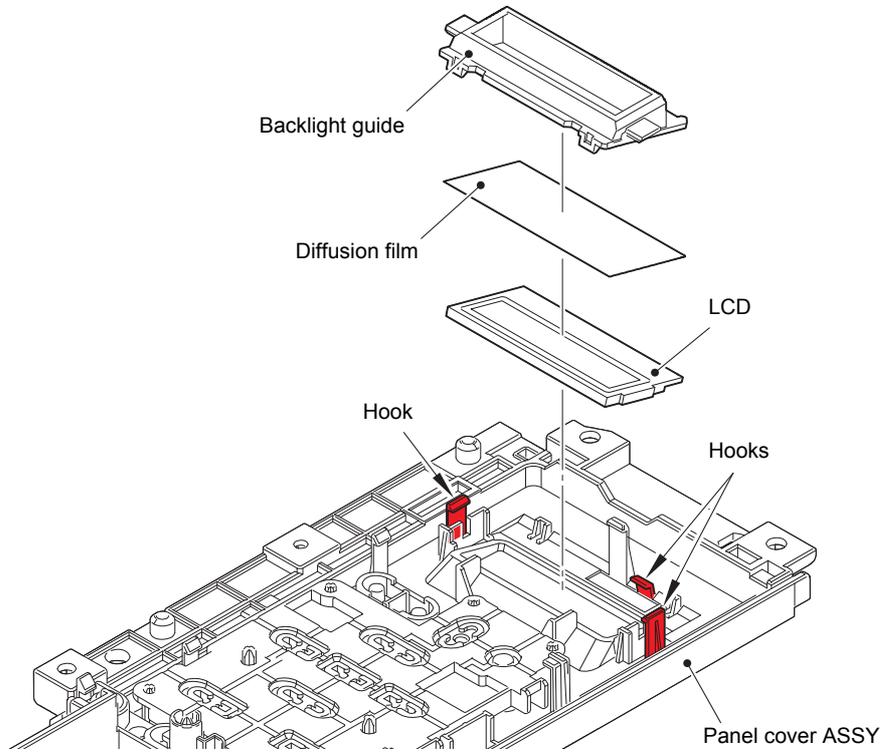


Fig. 3-69

### 9.16.10 USB host PCB ASSY

- (1) Remove the Taptite bind B M4x12 screw and remove the USB host ground wire and USB host PCB ASSY from the Panel cover ASSY.
- (2) Disconnect the Main USB host harness ASSY from the USB host PCB ASSY.

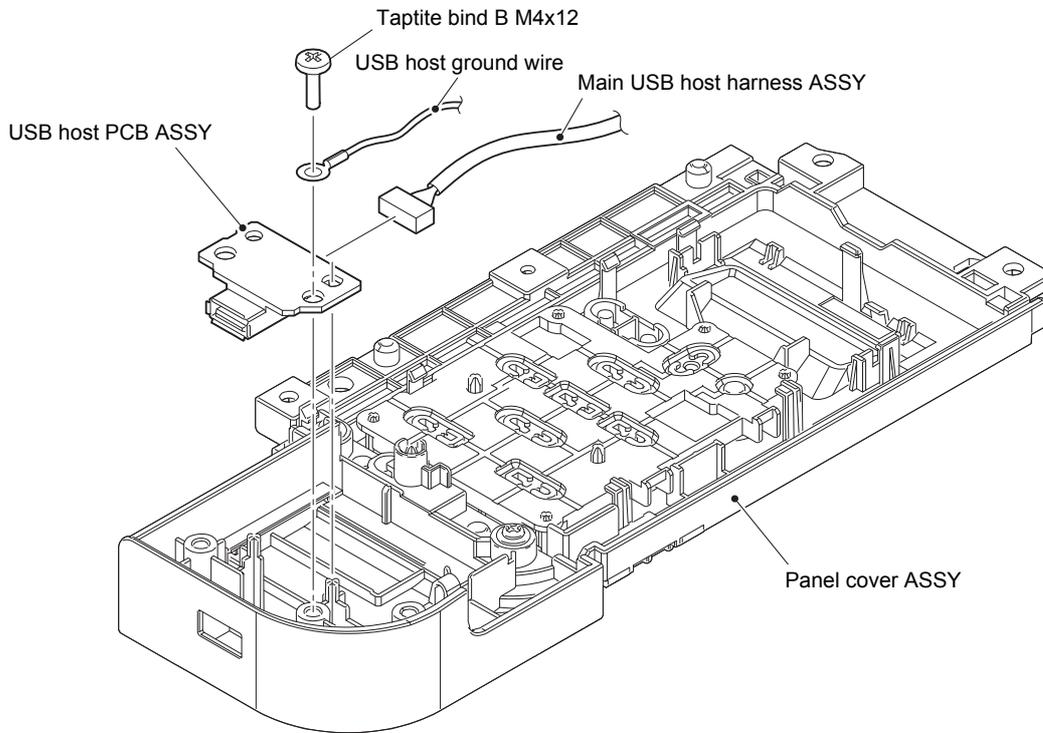


Fig. 3-70

## 9.17 Main PCB ASSY / Wireless LAN PCB (Only for Wireless LAN models)

- (1) Disconnect the Toner/new sensor PCB harness, Front cover sensor harness, Develop release sensor harness, Polygon motor harness and High-voltage power supply flat cable from the Main PCB ASSY and release the wiring.
- (2) Release the Hook and remove the WLAN cap from Upper cable holder.
- (3) Disconnect the Wireless LAN PCB from the Main PCB ASSY.

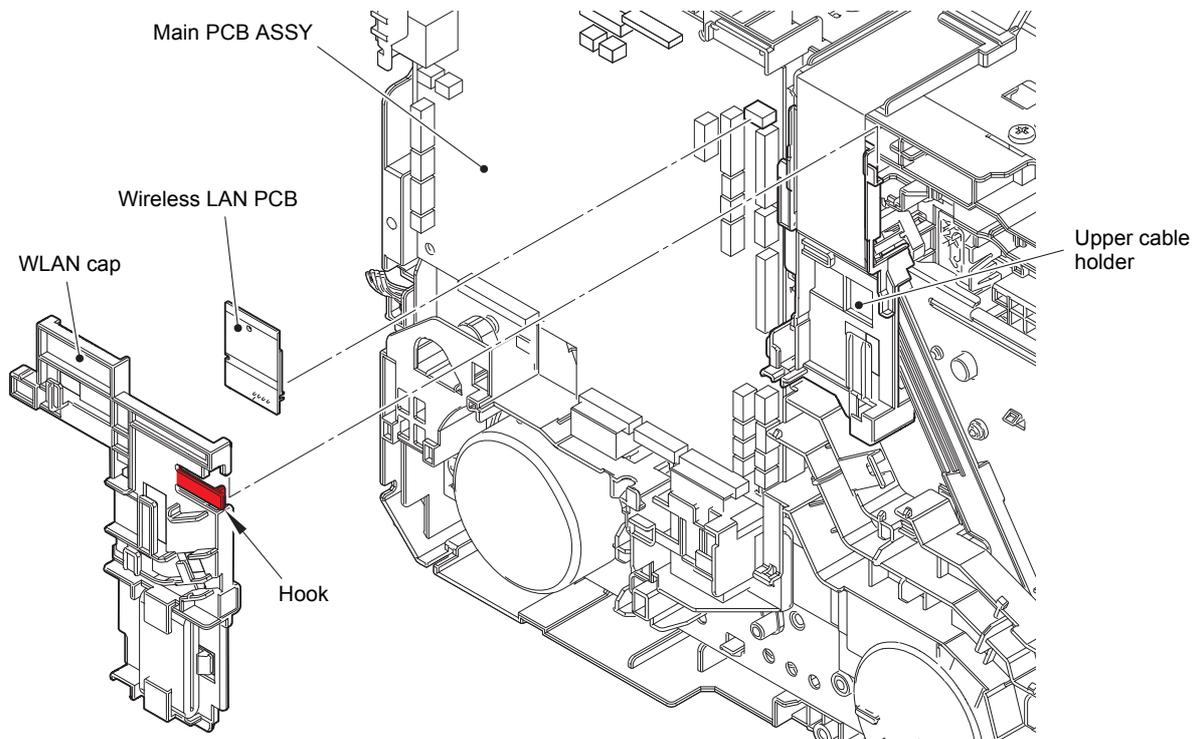


Fig. 3-71

### Note:

- After disconnecting flat cables, check that each cable is not damaged at its end or short-circuited.
- When connecting flat cables, do not insert them at an angle. After insertion, check that the cables are not at an angle.

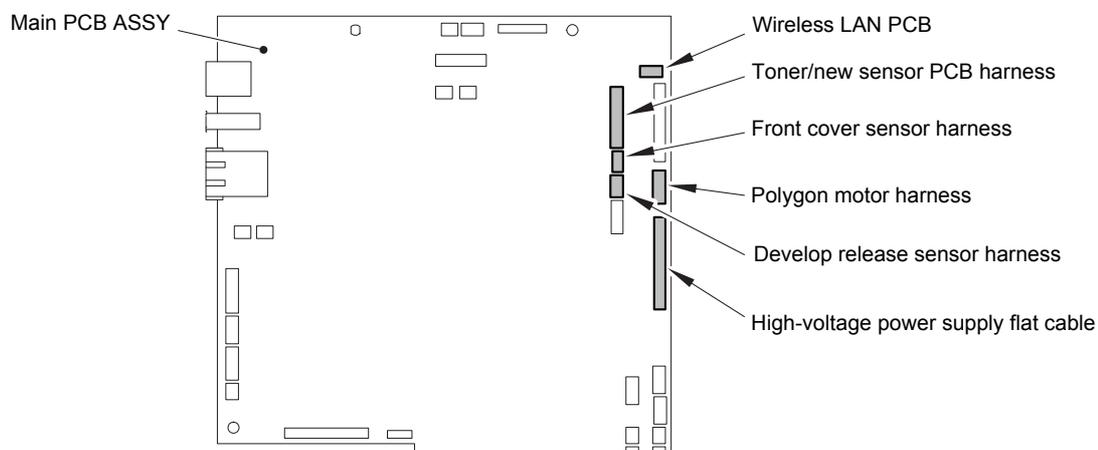
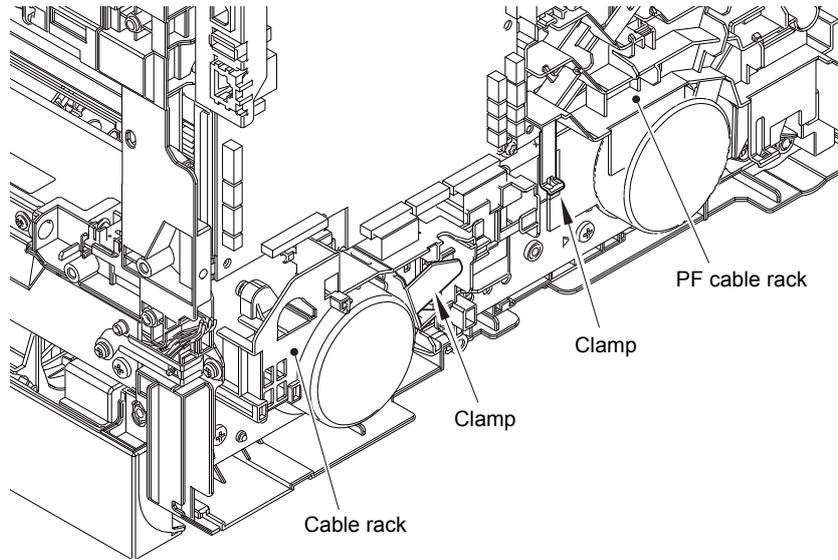


Fig. 3-72

Harness routing: Refer to "5. Main PCB ASSY".

- (4) Release the Clamp of the PF cable rack.
- (5) Release the Clamp of the Cable rack.

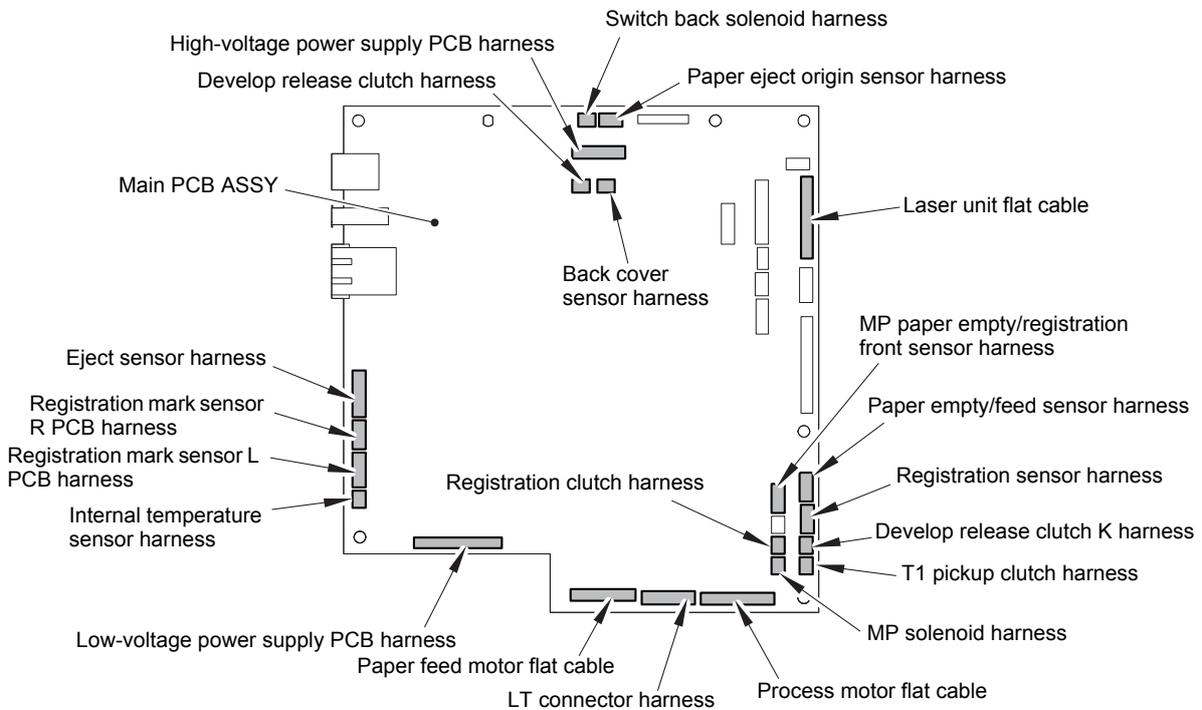


**Fig. 3-73**

- (6) Disconnect all harnesses and flat cables from the main PCB ASSY.

**Note:**

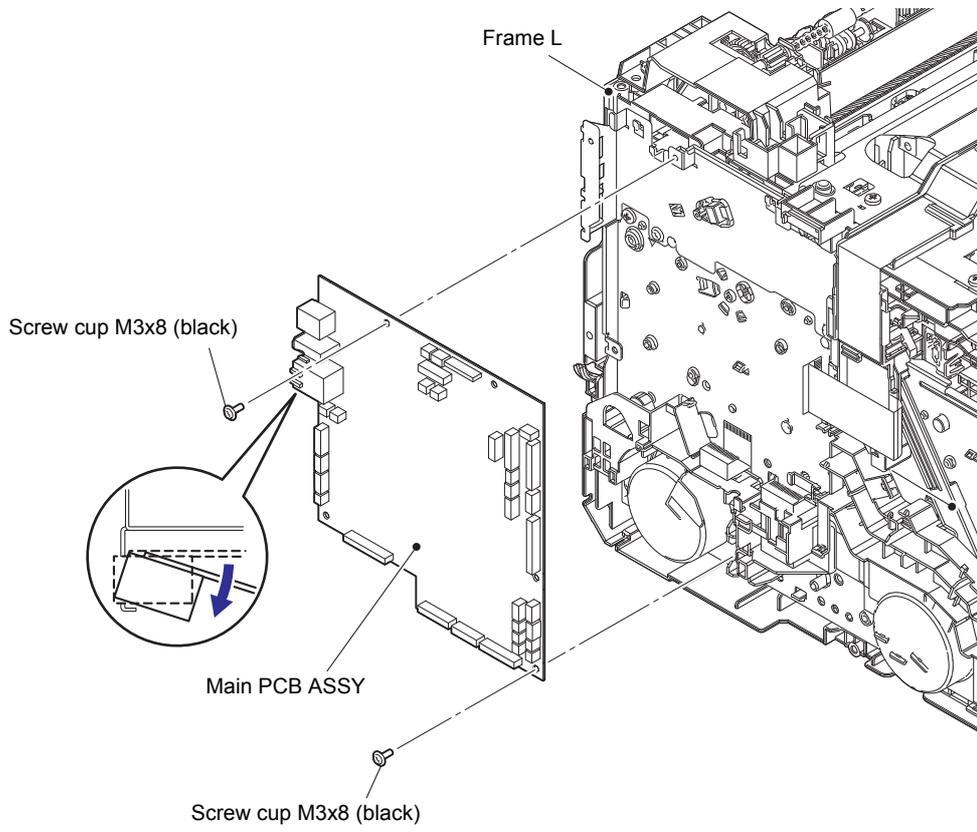
- After disconnecting flat cables, check that each cable is not damaged at its end or short-circuited.
- When connecting flat cables, do not insert them at an angle. After insertion, check that the cables are not at an angle.



**Fig. 3-74**

Harness routing: Refer to "5. Main PCB ASSY".

- (7) Remove the two Screw cup M3x8 (black) screws and remove the Main PCB ASSY from the Frame L.



**Fig. 3-75**

## 9.18 Laser unit flat cable / Laser unit / High-voltage power supply flat cable

- (1) Release the wiring of High-voltage power supply flat cable and remove the High-voltage power supply flat cable from the Flat cable holder.

### Assembling Note:

- After removed the High-voltage power supply flat cable from the Flat cable holder, be sure to replace with brand-new High-voltage power supply flat cable.
- For the positions of the Double-sided adhesive tape, refer to below figure and put on to the Flat cable holder.

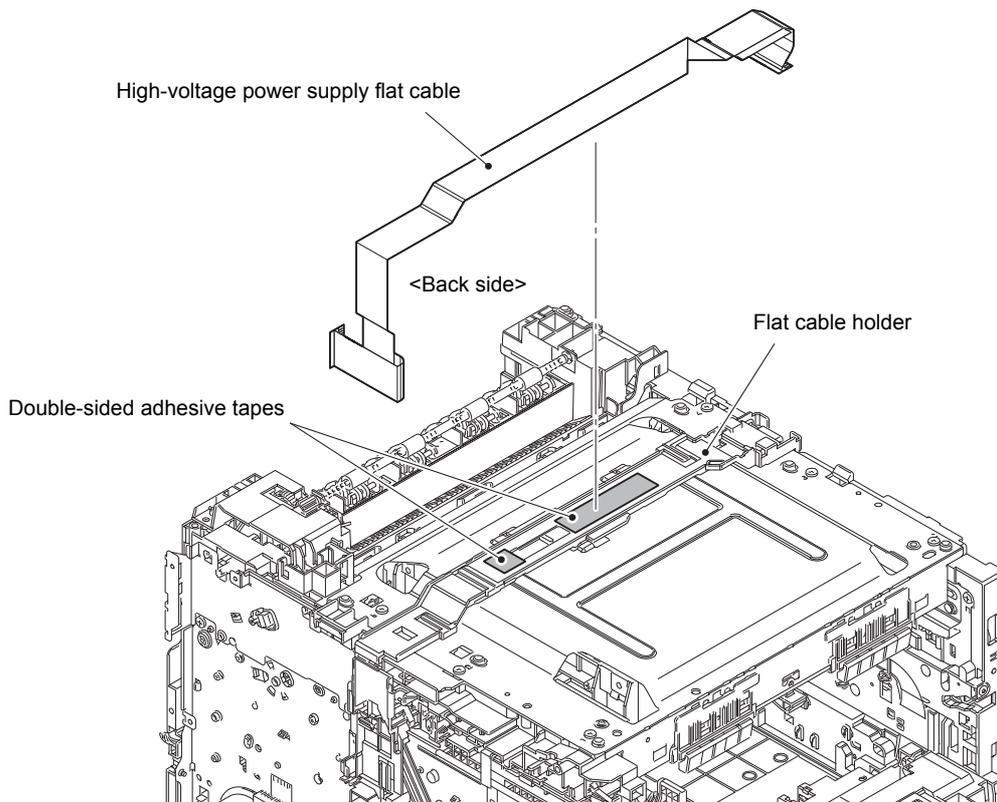


Fig. 3-76

Harness routing: Refer to "6. High-voltage power supply flat cable".

<How to fold the High-voltage power supply flat cable>

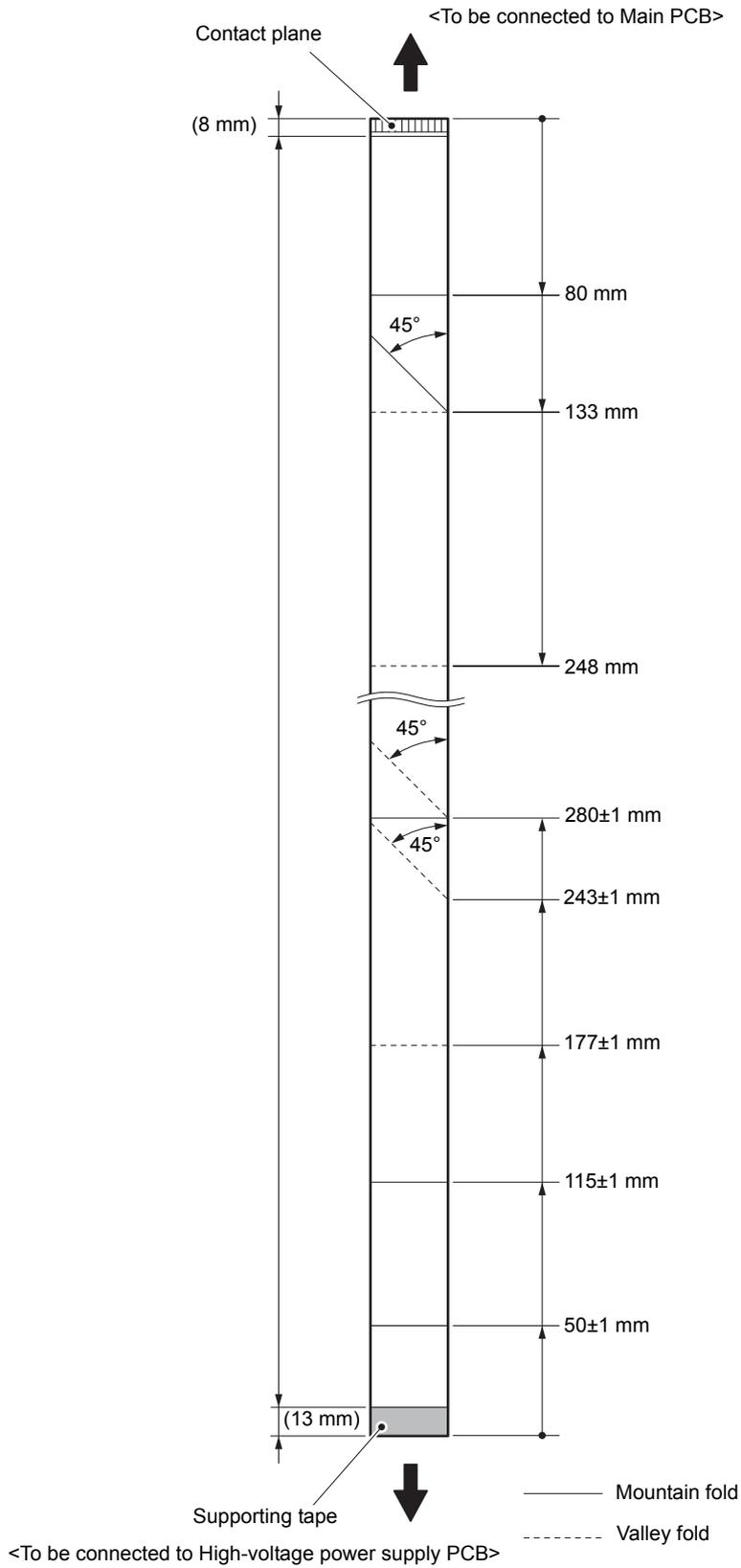
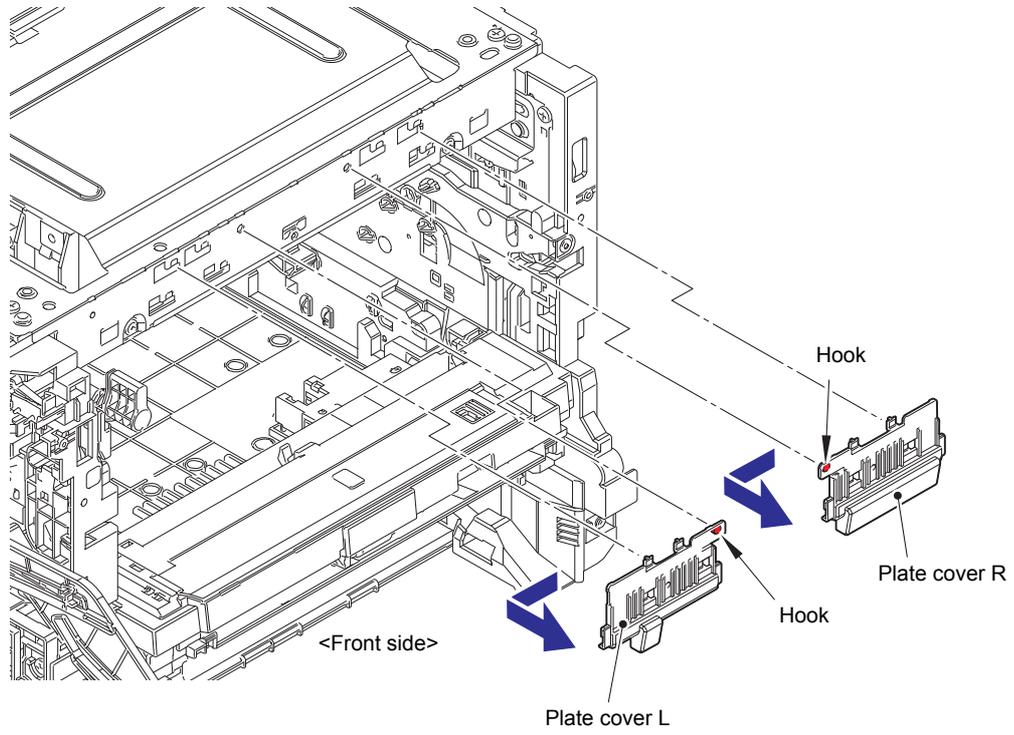


Fig. 3-77

- (2) Release the Hook of Plate cover L and slide to left side to remove. Release the Hook of Plate cover R and slide to left side to remove.

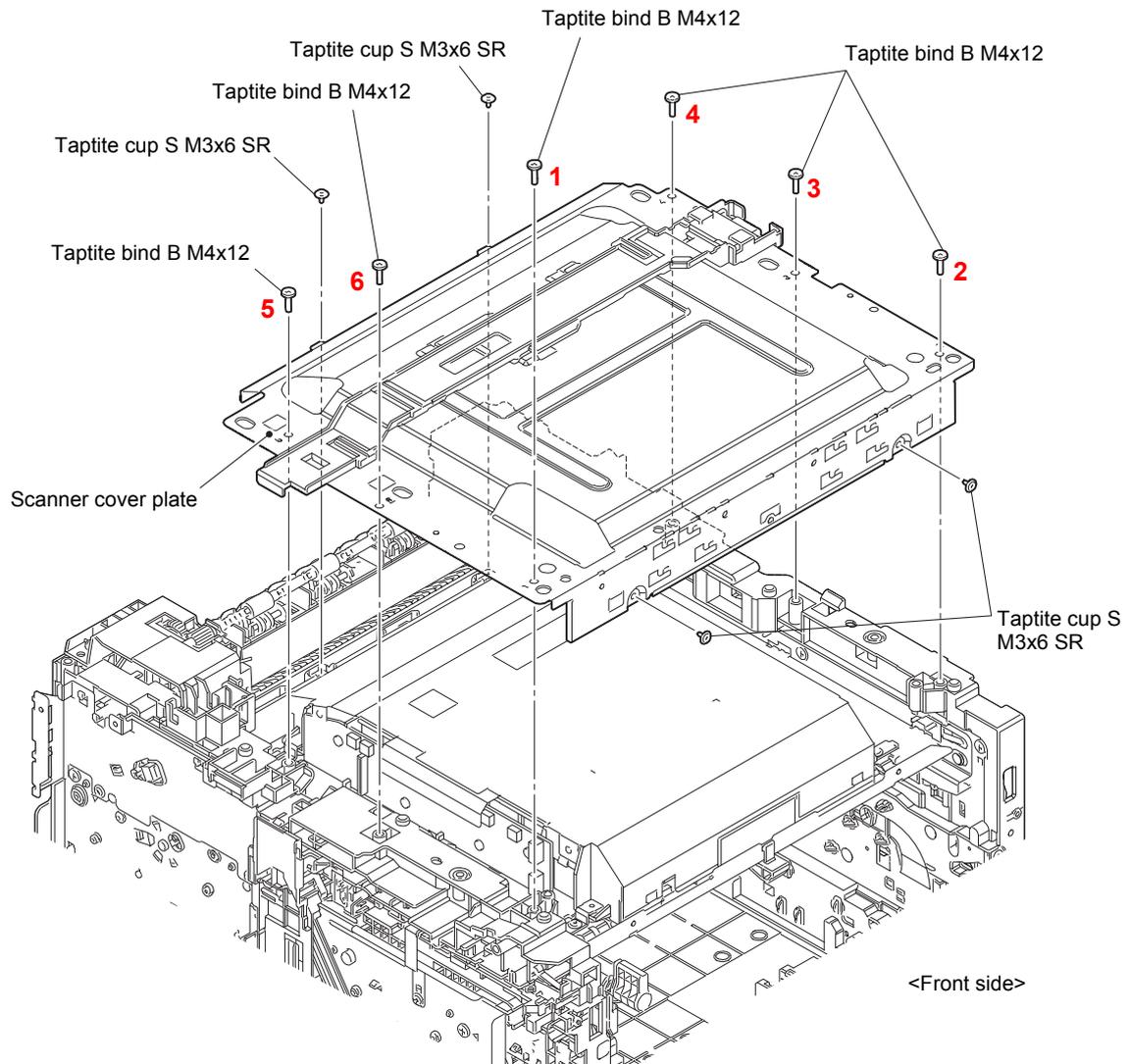


**Fig. 3-78**

- (3) Remove the six Taptite bind B M4x12 screws and four Taptite cup S M3x6 SR screws, and remove the Scanner cover plate.

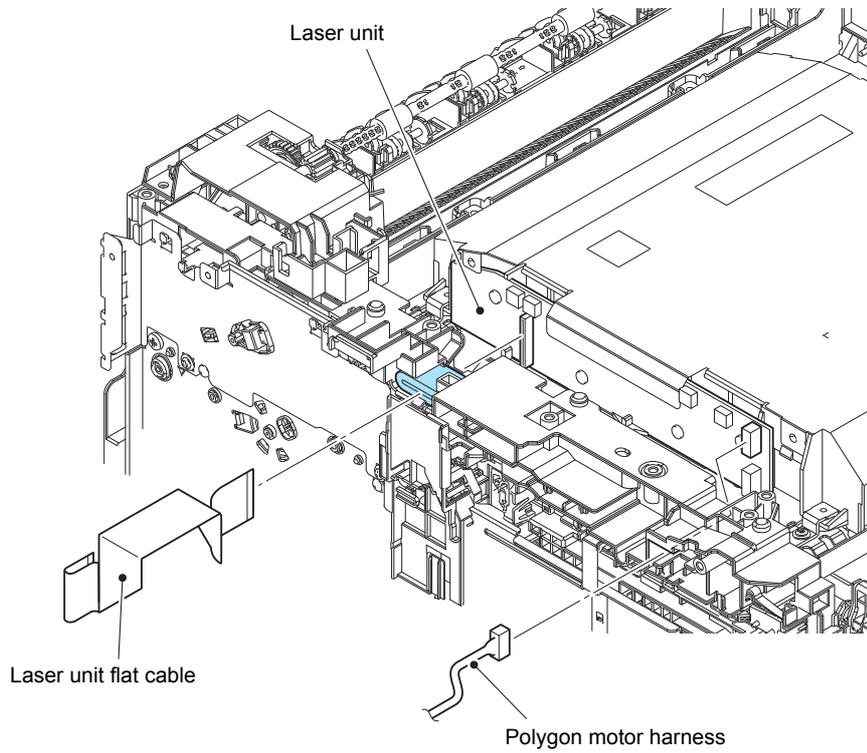
**Assembling Note:**

When assembling the six screws of the Taptite bind B M4x12, be sure to assemble them in the order shown in the figure.



**Fig. 3-79**

- (4) Disconnect the Laser unit flat cable from the Laser unit and release the wiring.
- (5) Disconnect the Polygon motor harness from the Laser unit.



**Fig. 3-80**

Harness routing: Refer to "7. Laser unit".

**Note:**

- After disconnecting flat cables, check that each cable is not damaged at its end or short-circuited.
- When connecting flat cables, do not insert them at an angle. After insertion, check that the cables are not at an angle.

<How to fold the Laser unit flat cable>

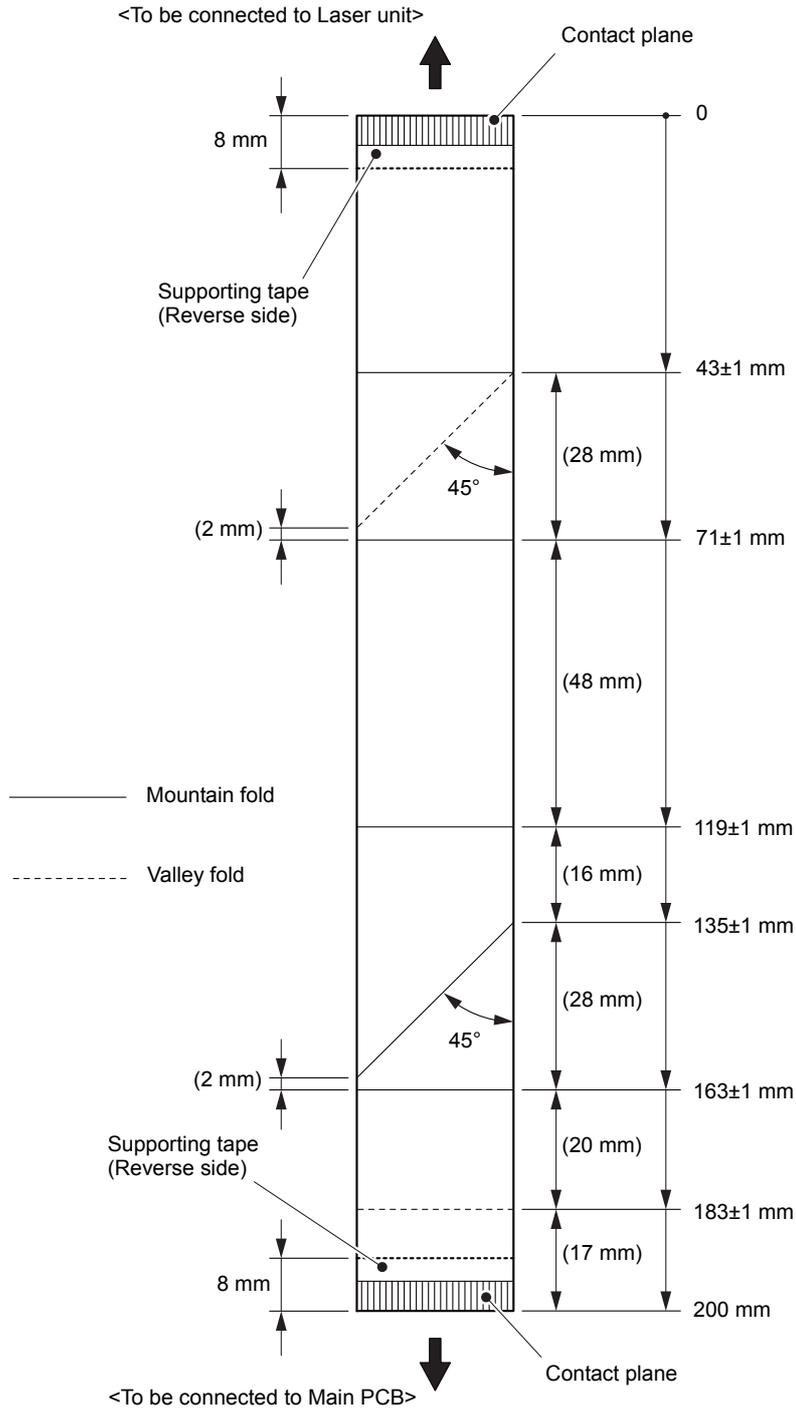


Fig. 3-81

- (6) Remove the five Taptite cup S M3x6 SR screws and remove the four Scanner holders from the Scanner plate.

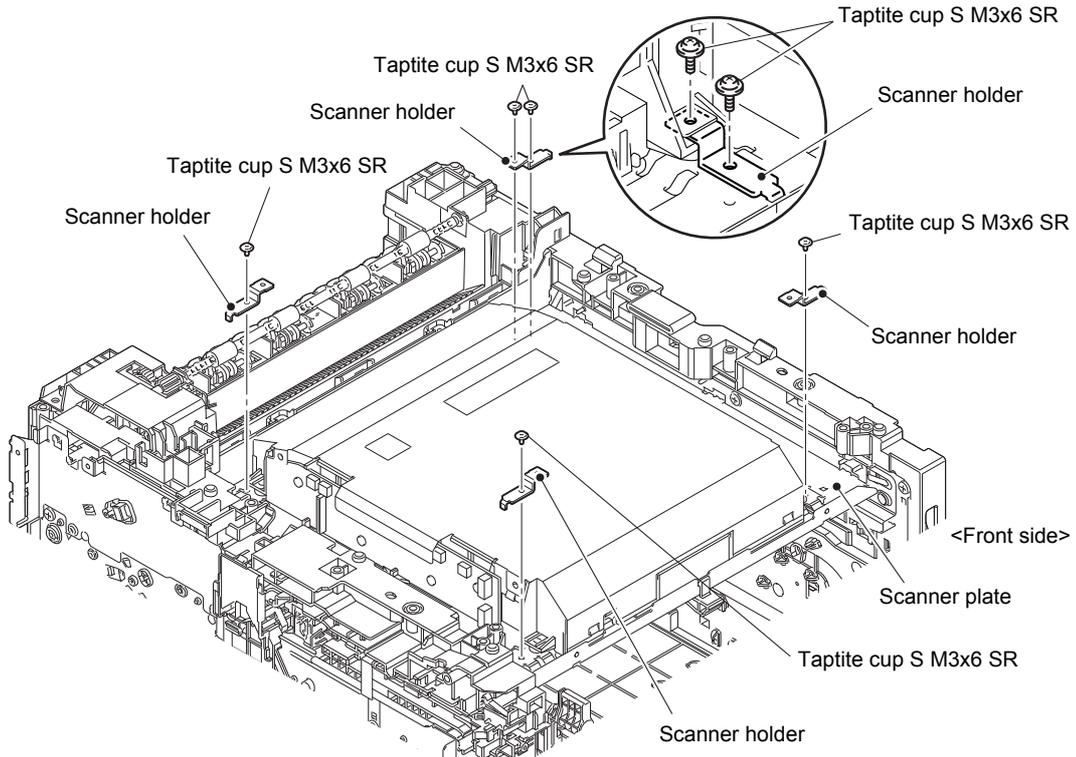


Fig. 3-82

**Assembling Note:**

- When assembling the Scanner holder to “A” of the Laser unit, be sure to use the Scanner holder of which “B” is a screw and not to use other Scanner holders.
- When assembling the Scanner holder to “A” of the Laser unit, be sure that the Scanner holder is placed as shown in the figure.

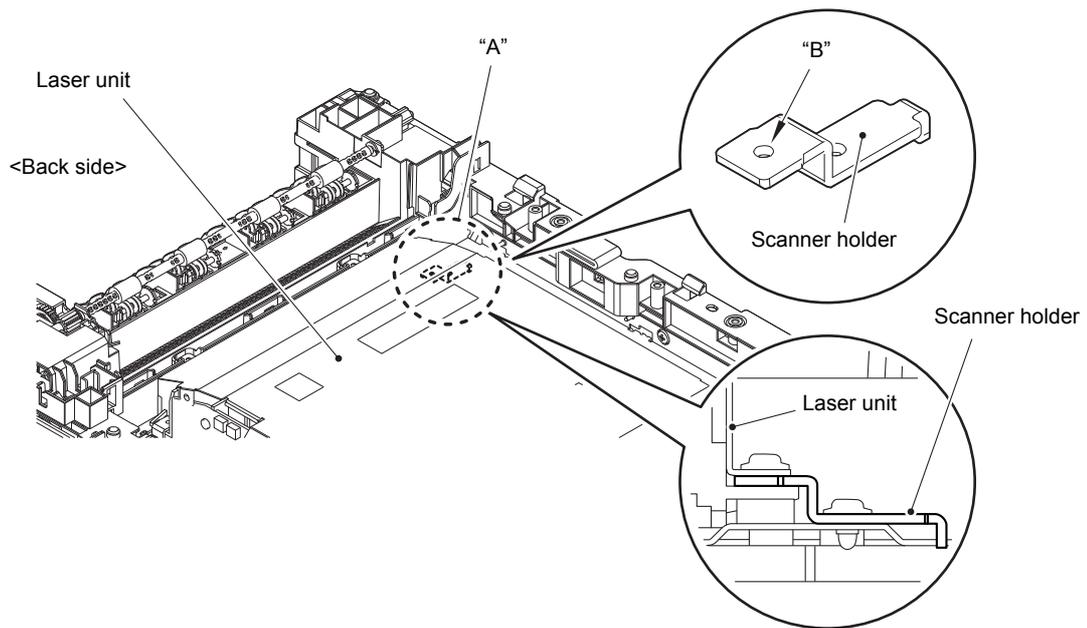
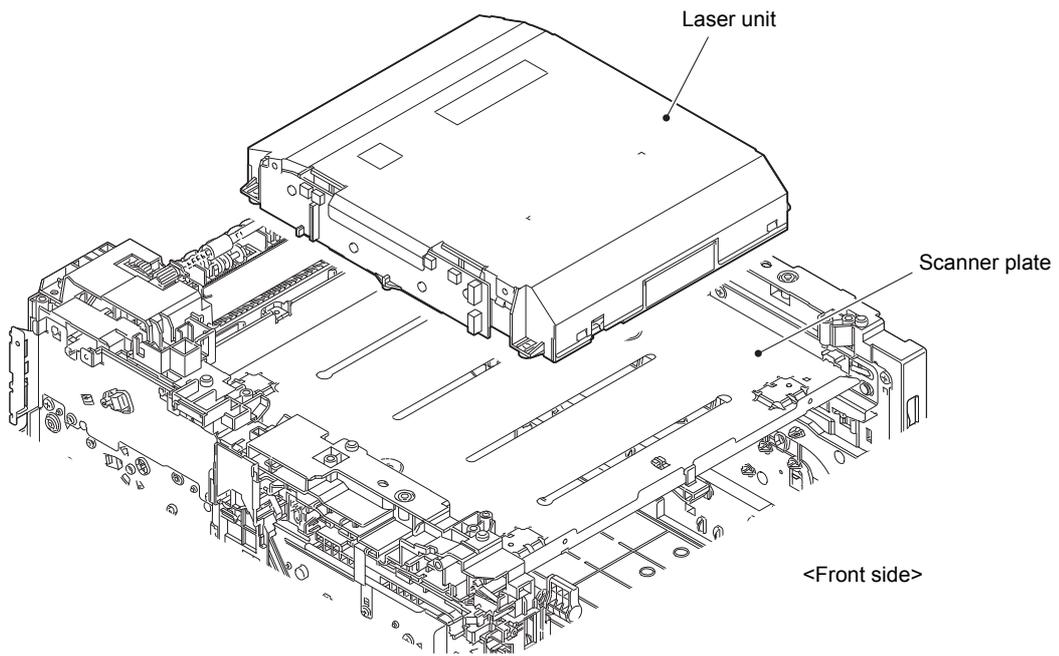


Fig. 3-83

(7) Remove the Laser unit from the Scanner plate.



**Fig. 3-84**

## 9.19 Front cover sensor

- (1) Release the wiring of Front cover sensor harness.
- (2) Release each Hook and remove the Front cover sensor from the Frame L.

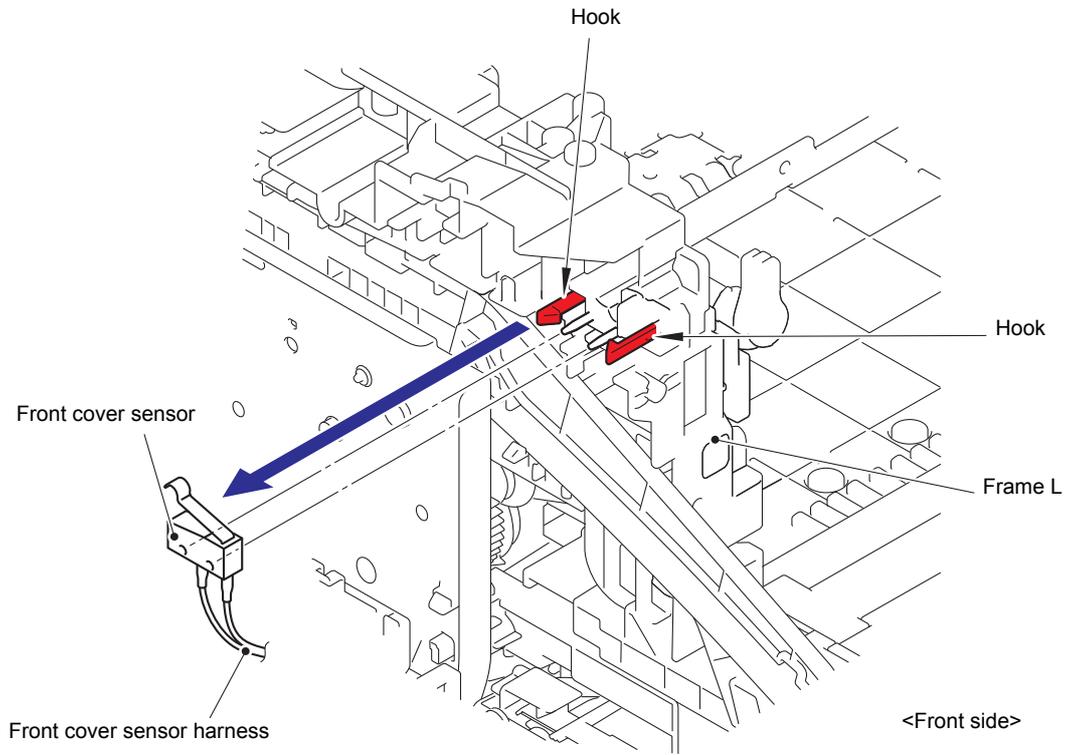


Fig. 3-85

Harness routing: Refer to "5. Main PCB ASSY".

## 9.20 Process drive unit / Fuser drive gear Z25

- (1) Release the wiring of Develop release clutch K harness.
- (2) Release each Hook and remove the Upper cable holder from the Frame L.

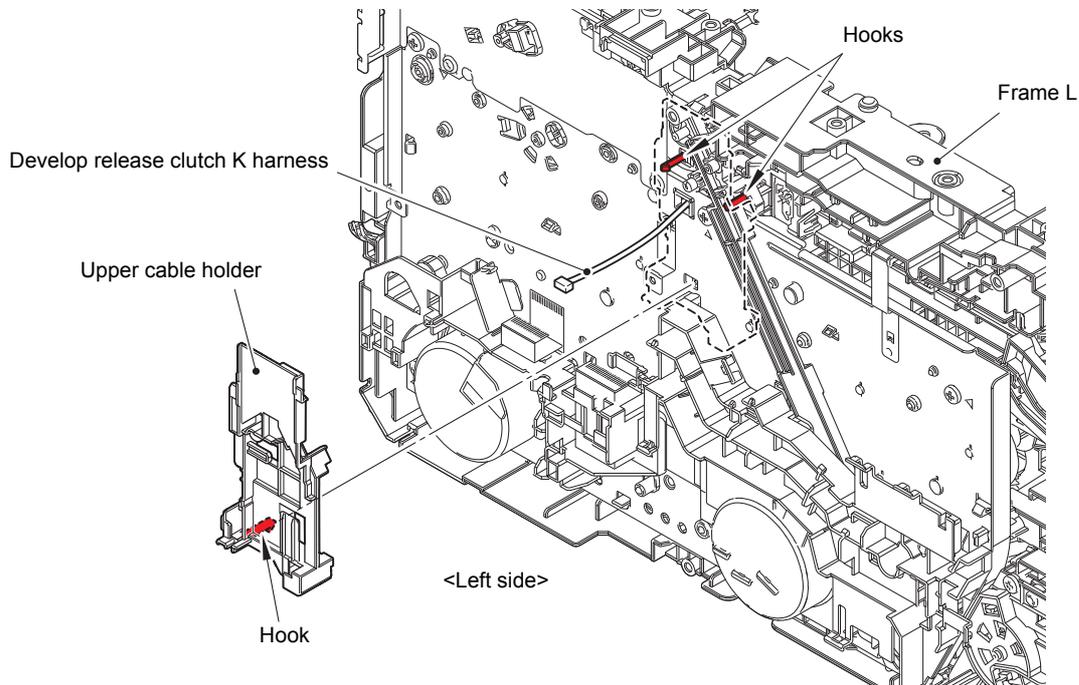


Fig. 3-86

Harness routing: Refer to "8. Develop release clutch, Develop release clutch K, Toner/new sensor PCB ASSY, Internal temperature sensor".

- (3) Remove the Taptite cup S M3x8 SR screw and remove the Side ground plate L from the Frame L.

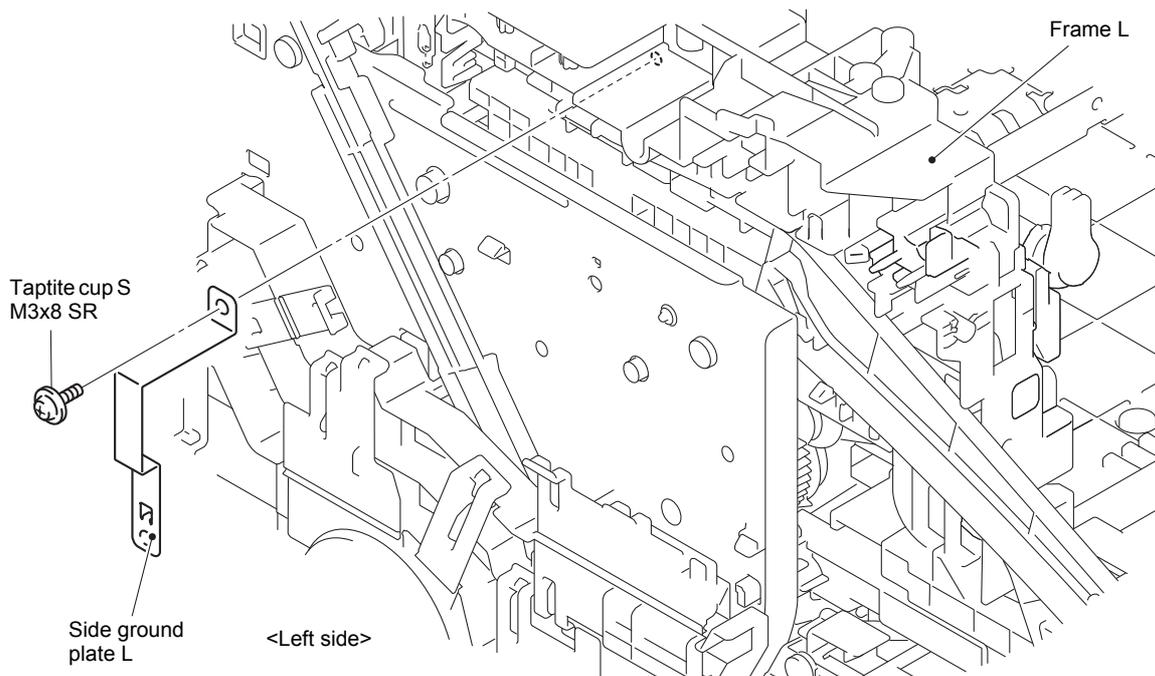
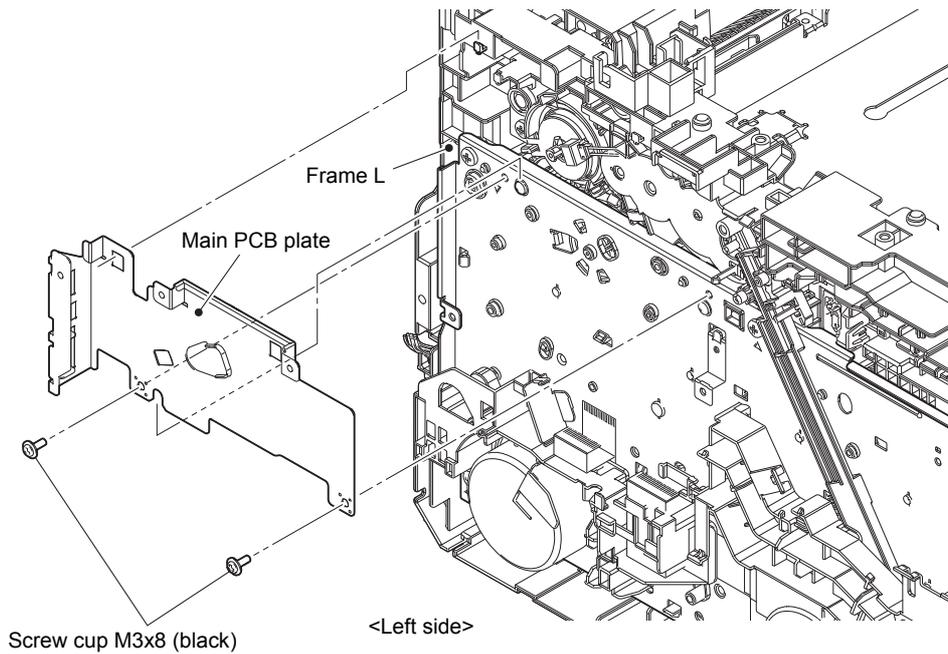


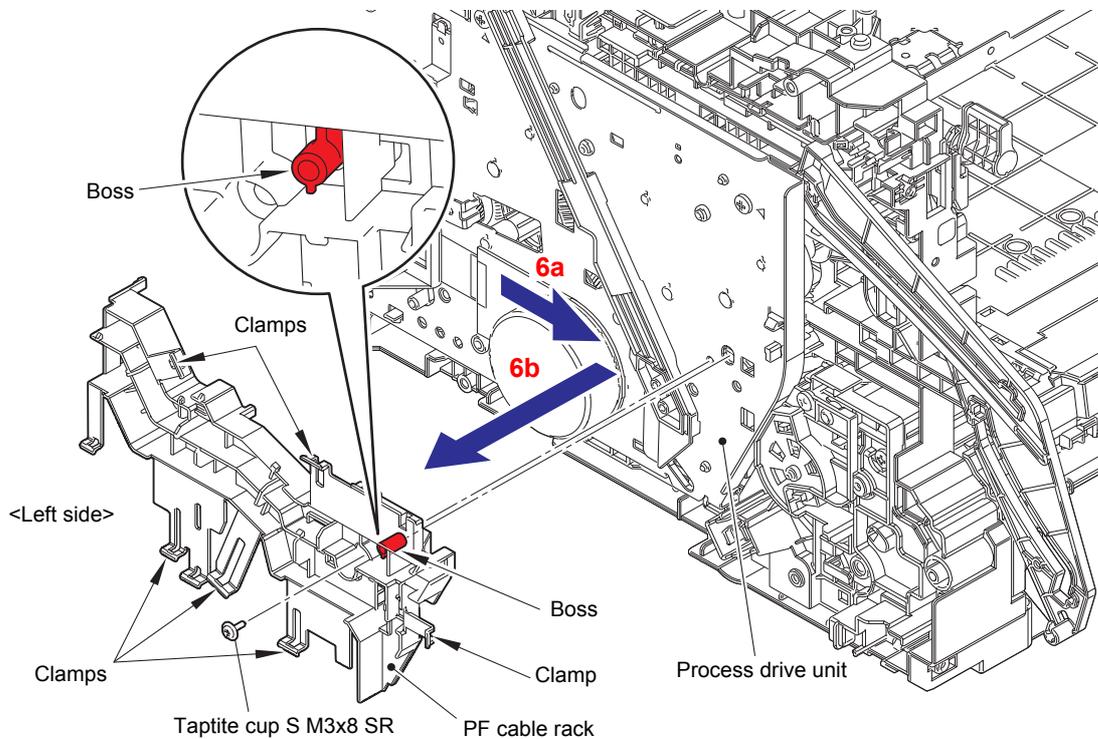
Fig. 3-87

- (4) Remove the two Screw cup M3x8 (black) screws and remove the Main PCB plate from the Frame L.



**Fig. 3-88**

- (5) Release all the Clamps and release all the harness wiring from the PF cable rack.
- (6) Remove the Taptite cup S M3x8 SR screw from the PF cable rack. Release the Boss and slide the PF cable rack in the direction of the arrow and remove it from the Process drive unit.



**Fig. 3-89**

Harness routing: Refer to "5. Main PCB ASSY".

(7) Remove the Mono color cam from the Frame L.

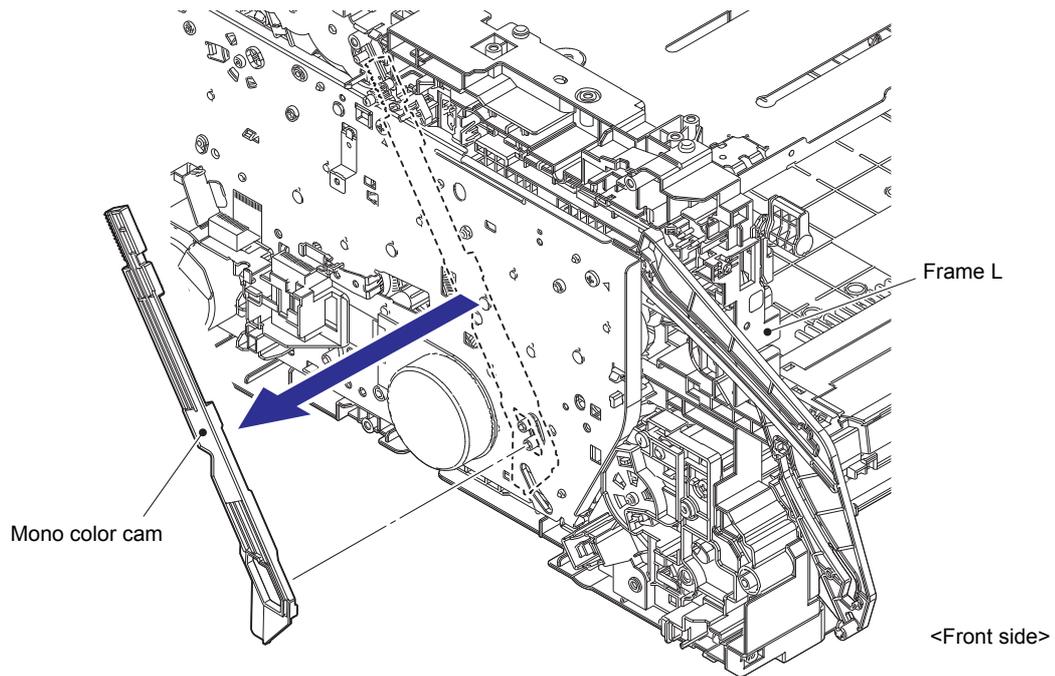


Fig. 3-90

**Assembling Note:**

When assembling the Mono color cam, be sure to check that the Forced develop release link is at "A" position. If you attach the Mono color cam as the Forced develop release link is at "B" position, the Mono color cam may be damaged.

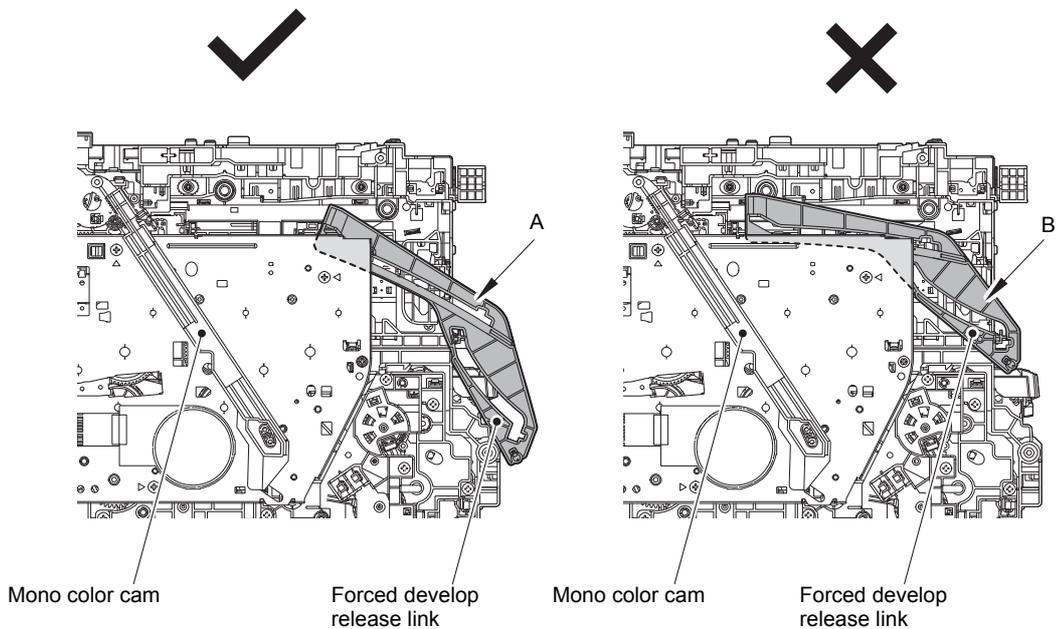
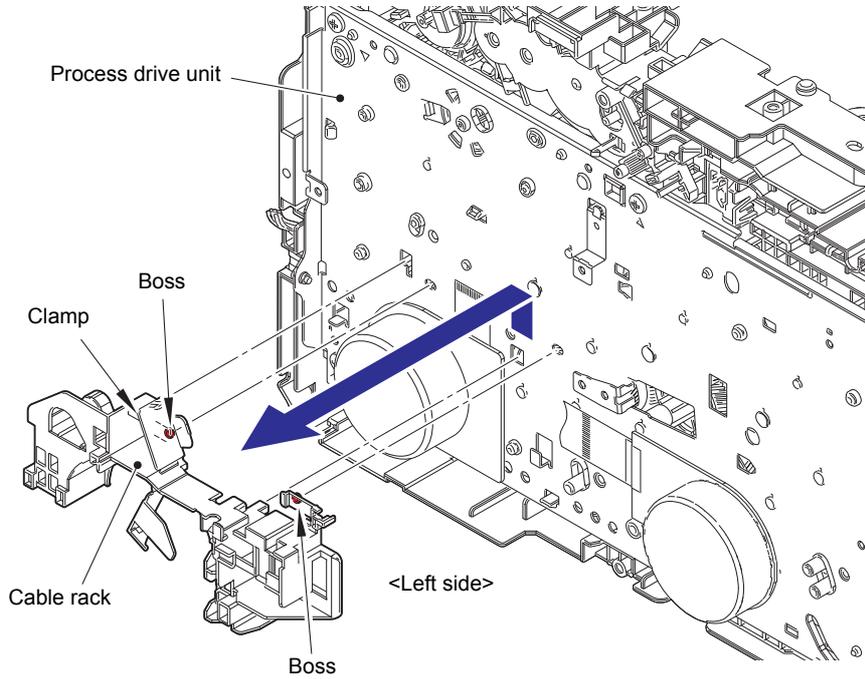


Fig. 3-91

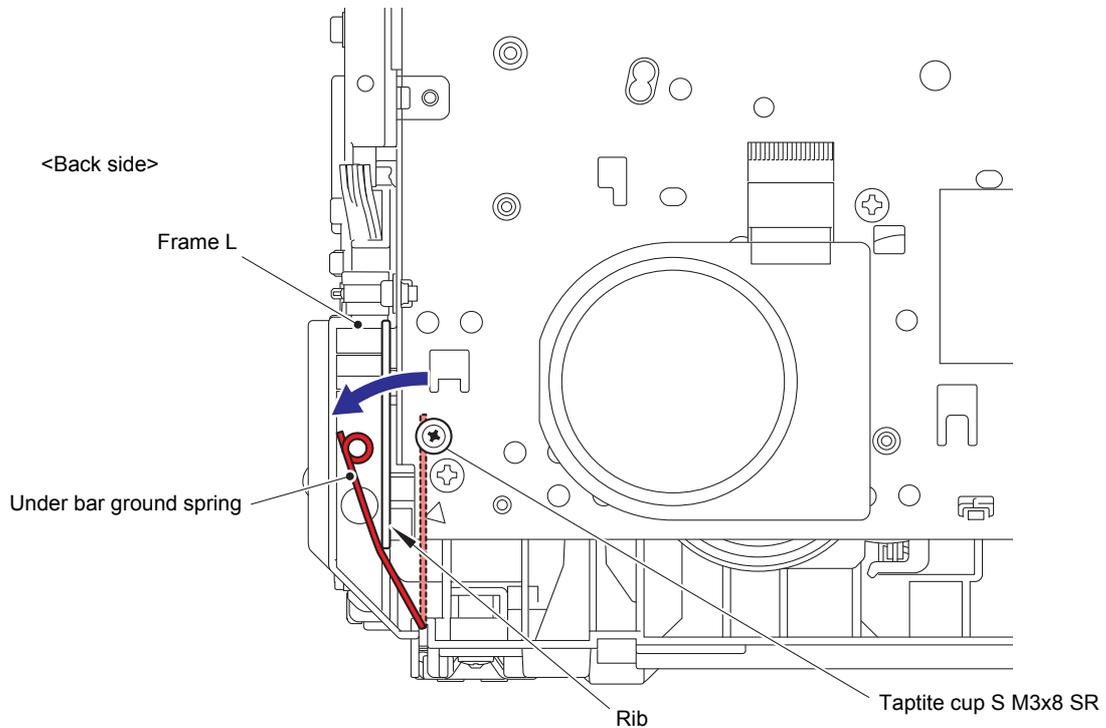
- (8) Release the Clamp and release all the harness wiring from the Cable rack.
- (9) Release each Boss, slide the Cable rack in the direction of the arrow and remove it from the Process drive unit.



**Fig. 3-92**

Harness routing: Refer to "5. Main PCB ASSY".

- (10) Remove the Taptite cup S M3x8 SR screw and fasten the Under bar ground spring to the Rib of the Frame L.



**Fig. 3-93**

- (11) Remove the five Taptite bind B M4x12 screws, one Taptite pan (washer) B M4x12 DA screw, and one Screw pan (S/P washer) M3.5x6 screw from the Process drive unit. Release each Hook and remove the Process drive unit from the Frame L.

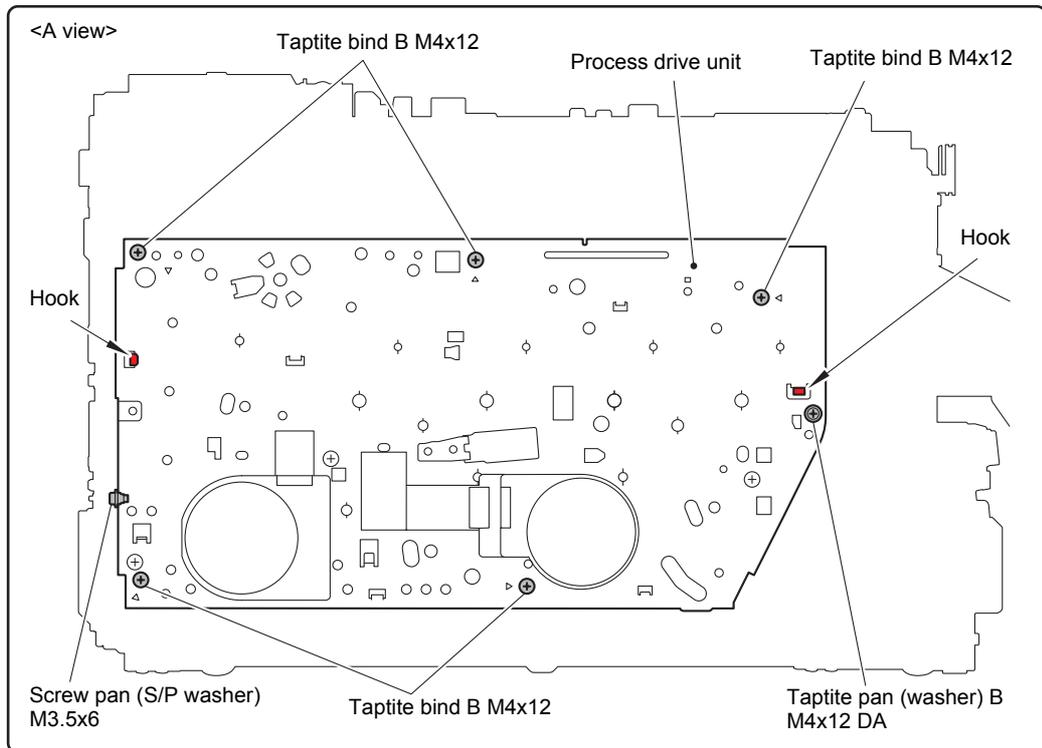
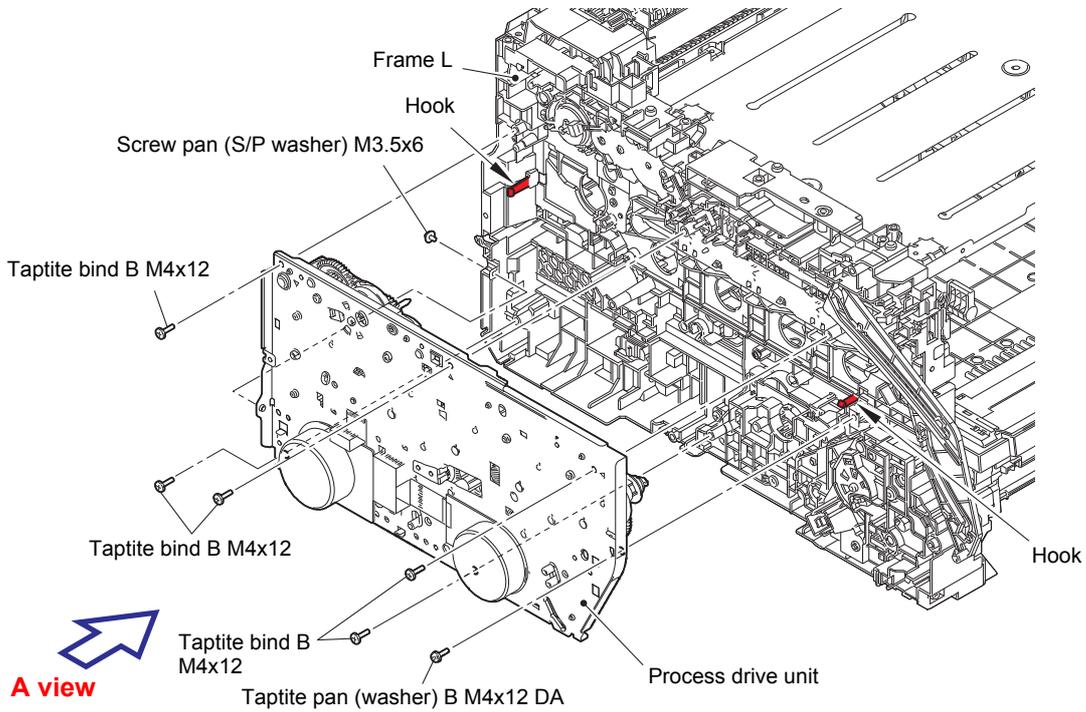
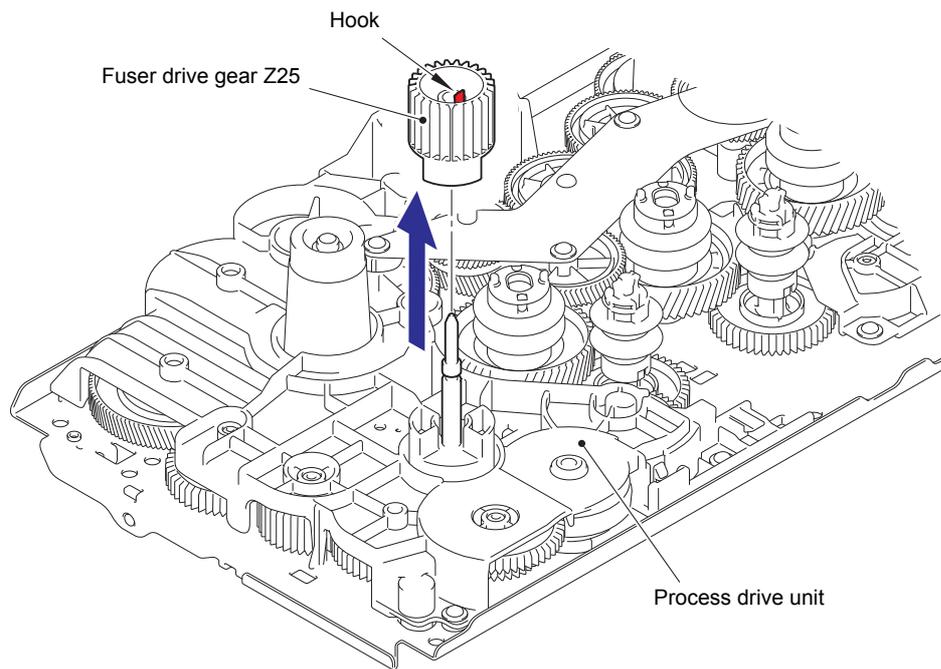


Fig. 3-94

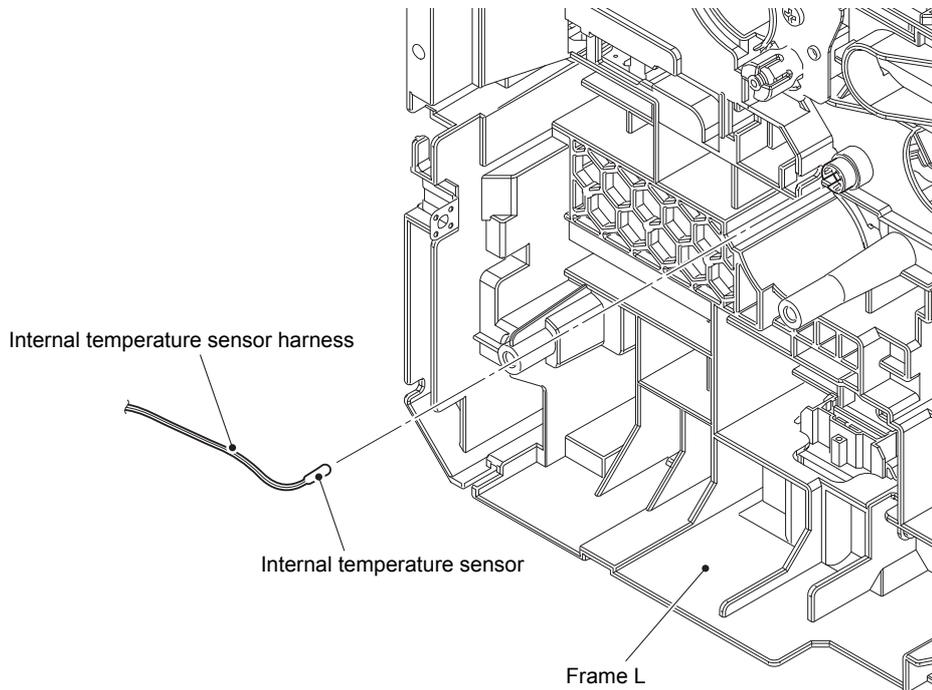
(12) Release the Hook and remove the Fuser gear Z25 from the Process drive unit.



**Fig. 3-95**

## 9.21 Internal temperature sensor

- (1) Release the wiring of Internal temperature sensor harness and remove the Internal temperature sensor from the Frame L.



**Fig. 3-96**

Harness routing: Refer to "8. Develop release clutch, Develop release clutch K, Toner/new sensor PCB ASSY, Internal temperature sensor".

## 9.22 Paper feed drive unit

- (1) Release all the harness wiring from the Paper feed drive unit.
- (2) Remove the four Taptite bind B M4x12 screws from the Paper feed drive unit. Release the Hook and remove the Paper feed drive unit from the Frame L.

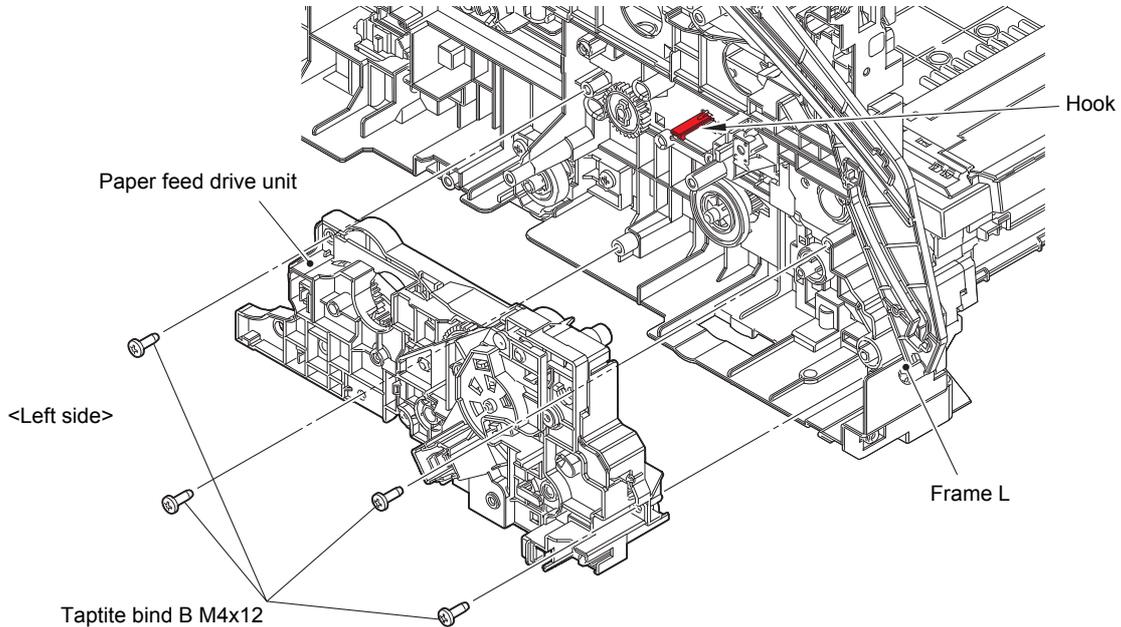


Fig. 3-97

**Note:**

As the DX drive gear Z15-23, Cleaner drive gear Z30, REGI gear Z32-23, PF drive gear 21, PF drive joint, Pinch roller drive gear Z21M05, Registration roller drive joint, and PP gear 14 55 tend to come off, be careful not to lose them.

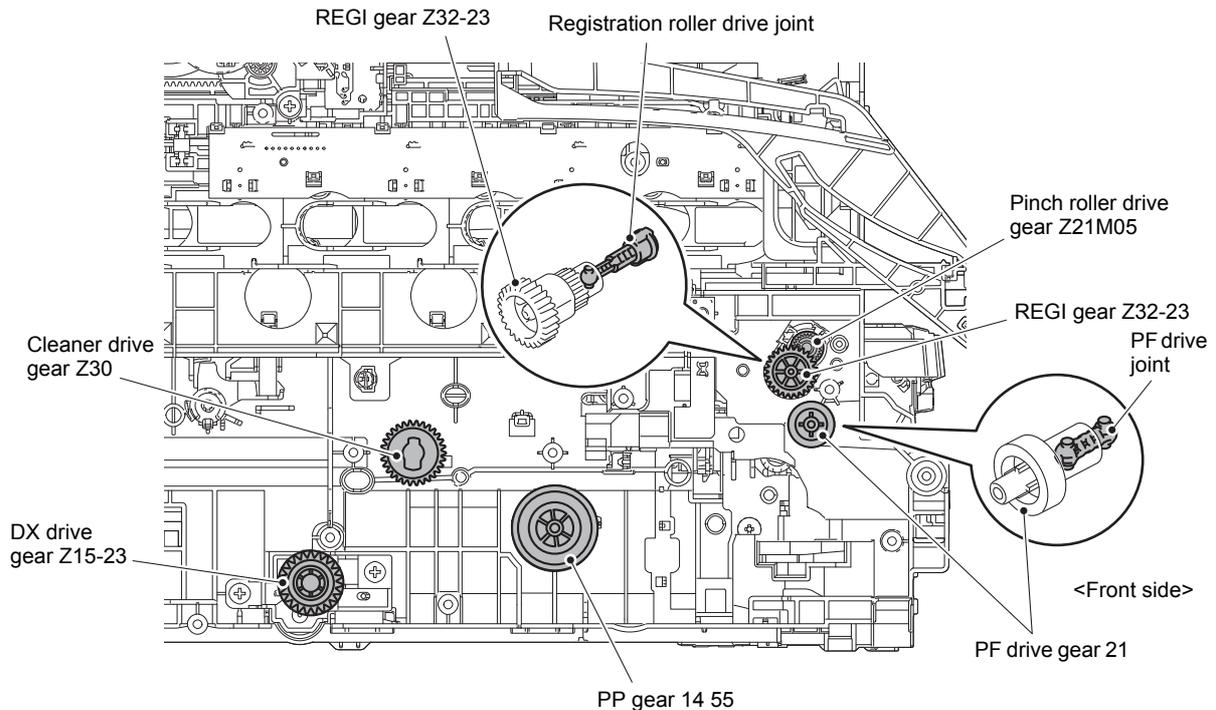


Fig. 3-98

Harness routing: Refer to "5. Main PCB ASSY".

## 9.23 Develop release drive unit

- (1) Release the wiring of Develop release clutch harness.
- (2) Remove the three Taptite bind B M4x12 screws from the Develop release drive unit. Release each Hook and remove the Develop release drive unit from the Frame L.

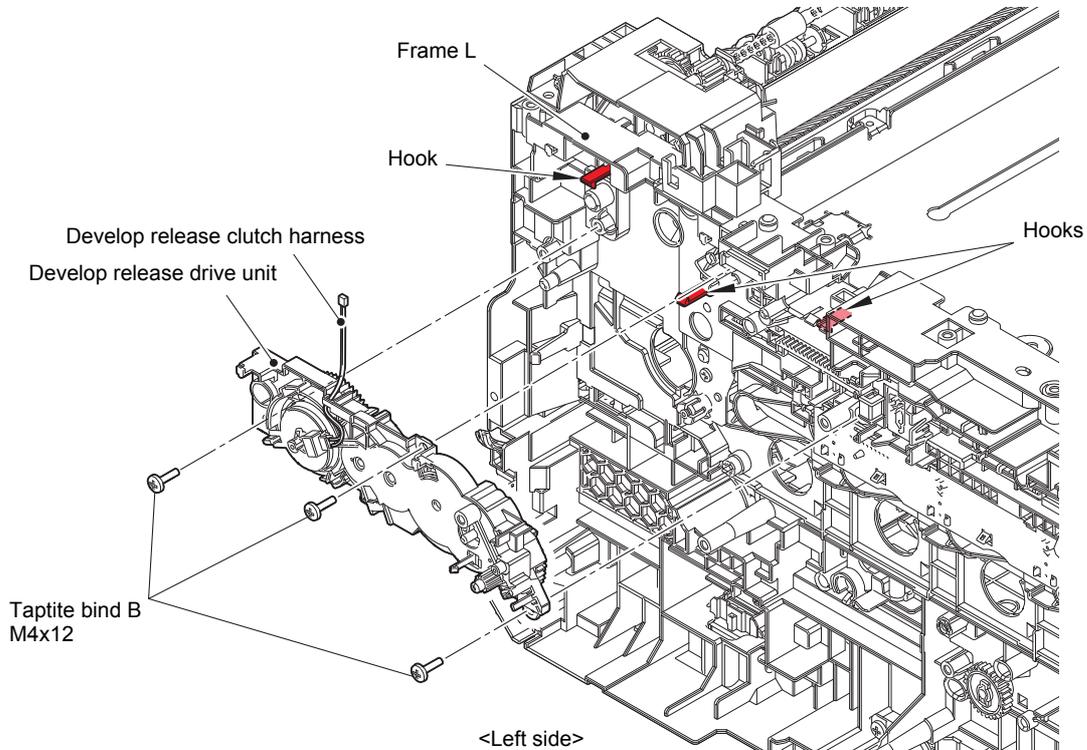
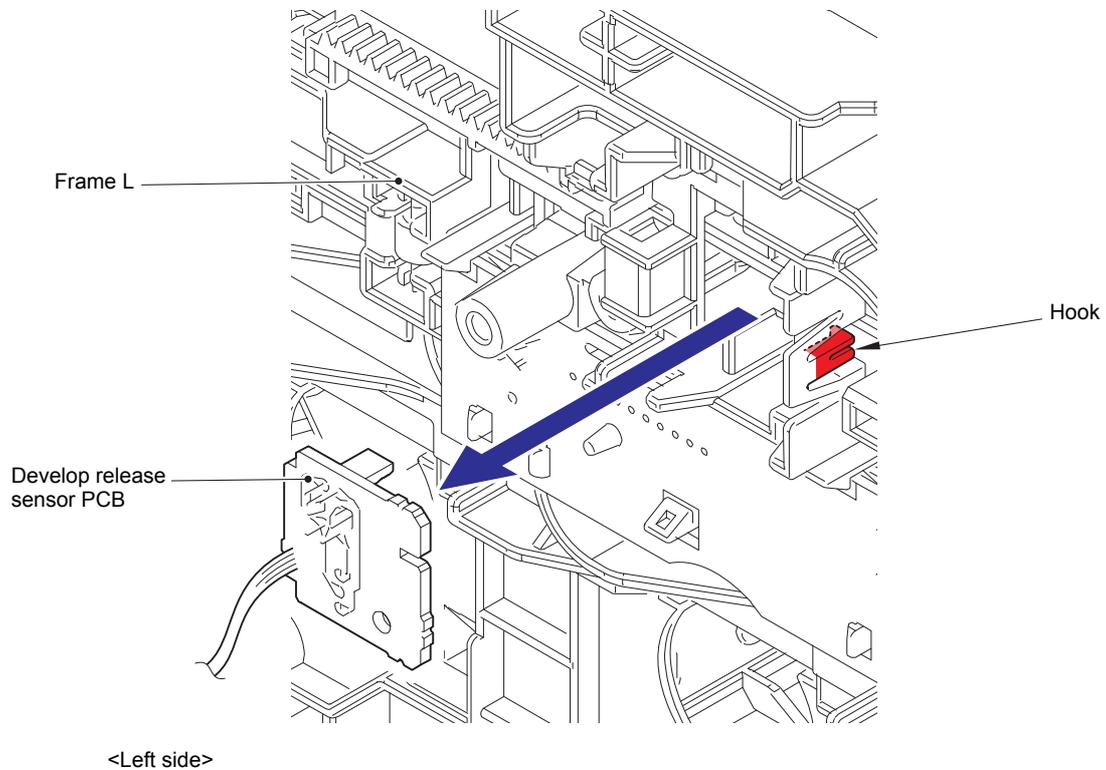


Fig. 3-99

Harness routing: Refer to “8. Develop release clutch, Develop release clutch K, Toner/new sensor PCB ASSY, Internal temperature sensor”.

## 9.24 Develop release sensor PCB

- (1) Release the wiring of Develop release sensor PCB harness. Release the Hook and remove the Develop release sensor PCB from the Frame L.



**Fig. 3-100**

Harness routing: Refer to "8. Develop release clutch, Develop release clutch K, Toner/new sensor PCB ASSY, Internal temperature sensor".

## 9.25 Toner/new sensor PCB ASSY

- (1) Release each Hook and remove the Forced develop release link from the Frame L.

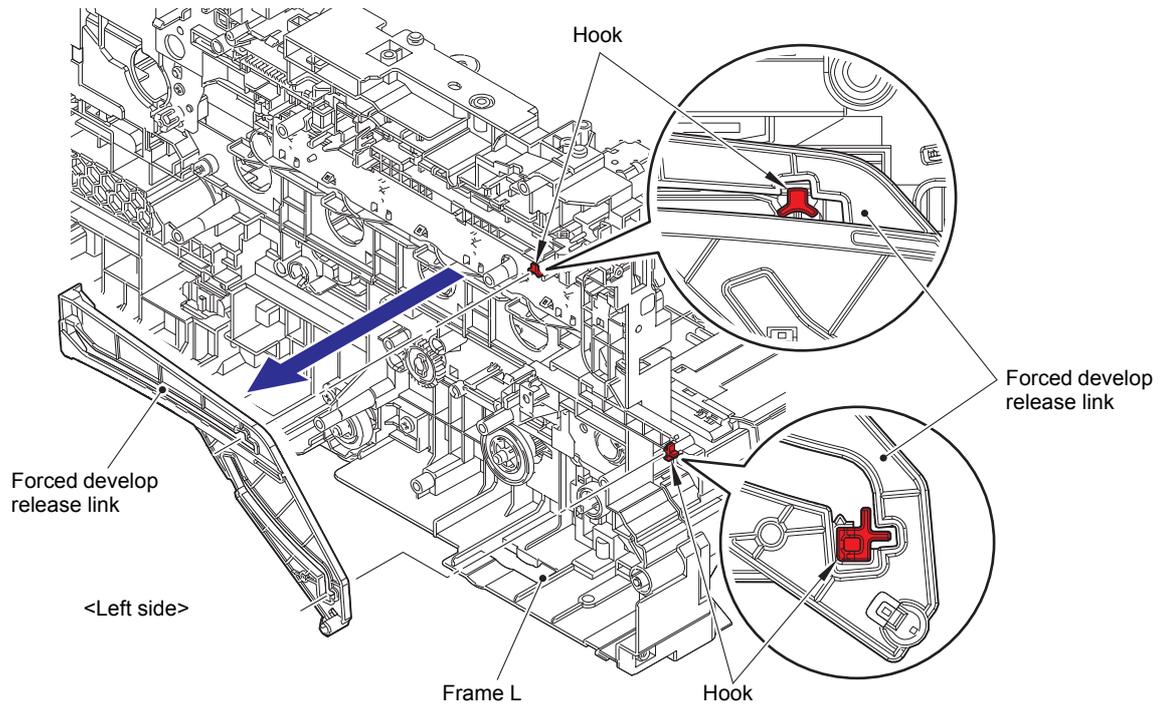


Fig. 3-101

- (2) Release the wiring of Toner/new sensor PCB harness. Release each Hook and remove the Toner/new sensor PCB ASSY from the Frame L.

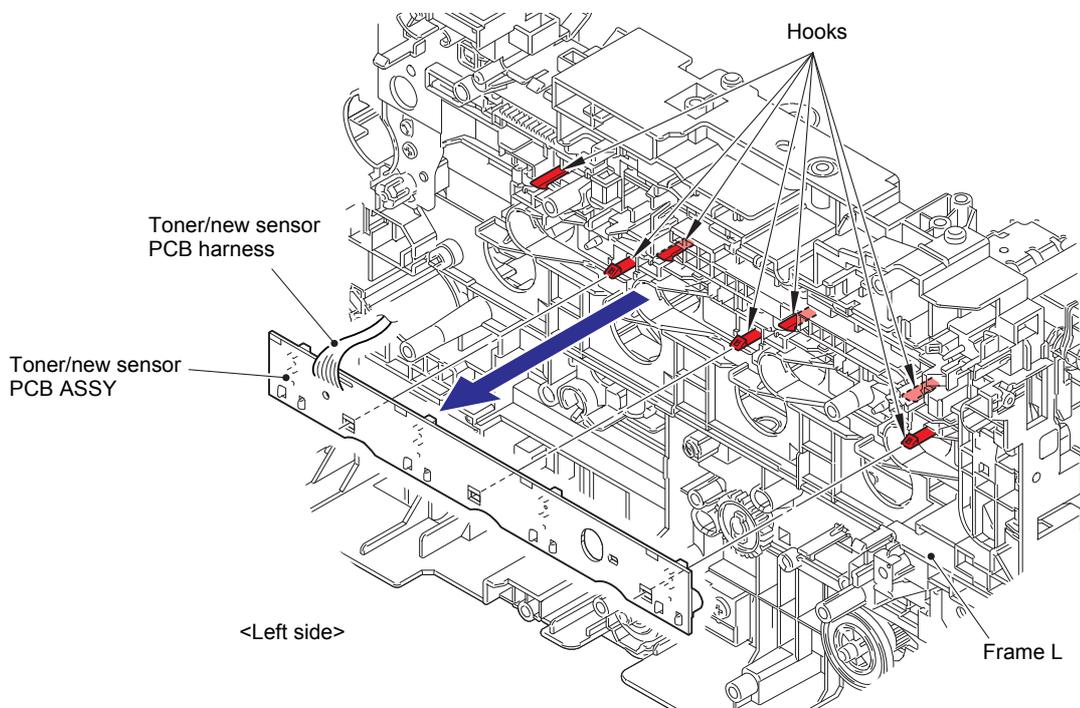


Fig. 3-102

Harness routing: Refer to "8. Develop release clutch, Develop release clutch K, Toner/new sensor PCB ASSY, Internal temperature sensor".

## 9.26 Paper eject ASSY

- (1) Release the wiring of Back cover sensor harness from the Paper eject ASSY.
- (2) Remove the four Taptite bind B M4x12 screws and High-voltage power supply PCB harness, and remove the Paper eject ASSY.

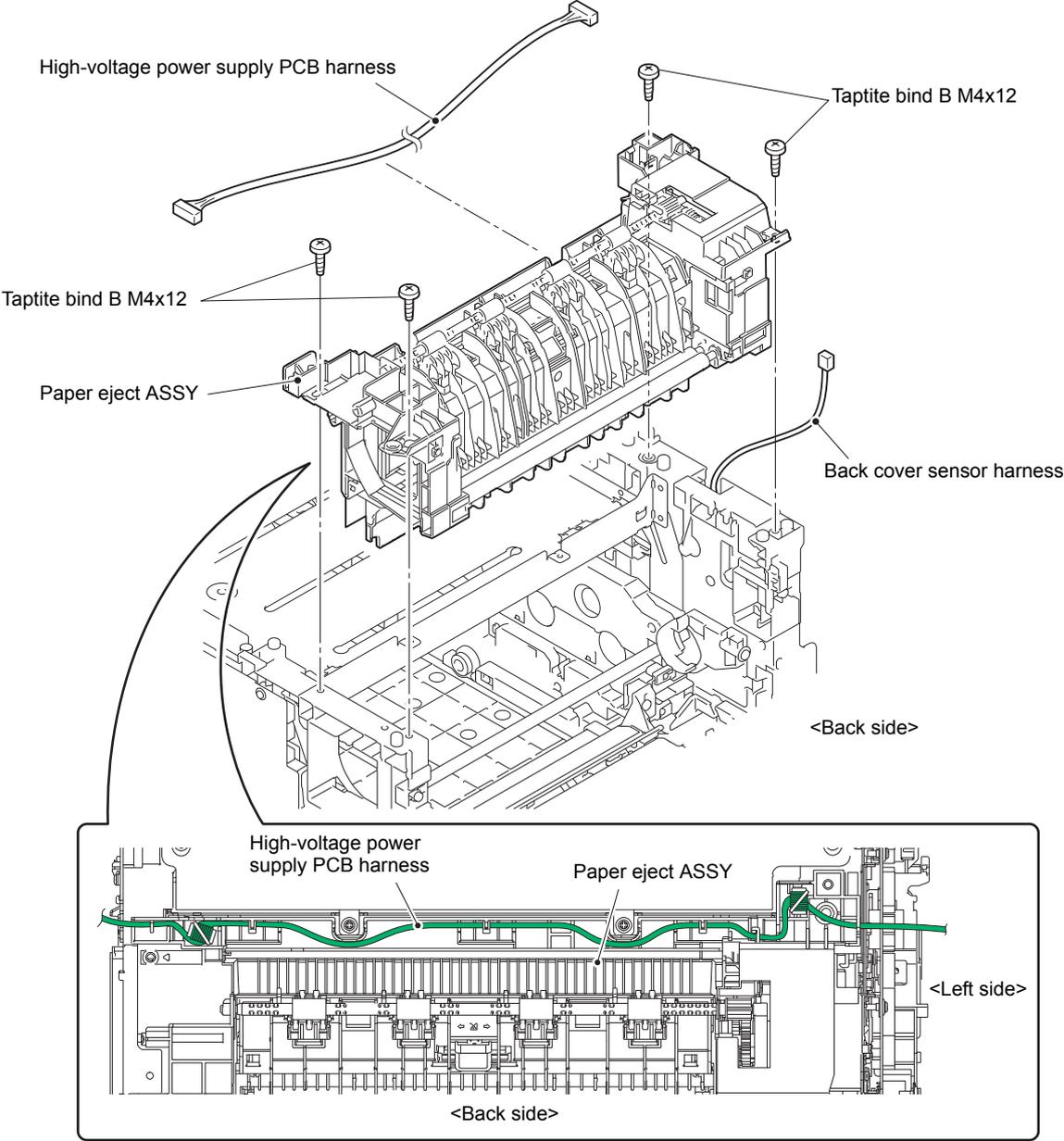


Fig. 3-103

Harness routing: Refer to "9. Paper eject ASSY", "10. Back cover sensor".

# 9.27 Toner filter ASSY

(1) Release each Hook and remove the Toner filter ASSY from the Paper eject ASSY.

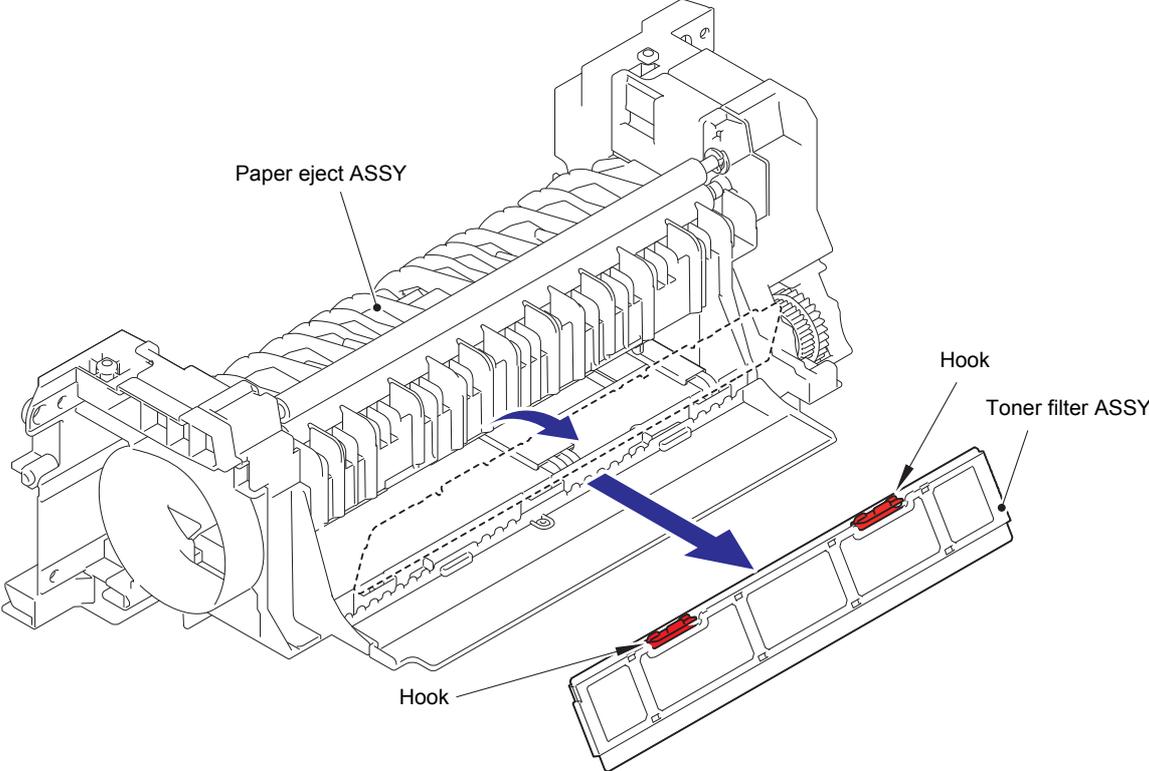
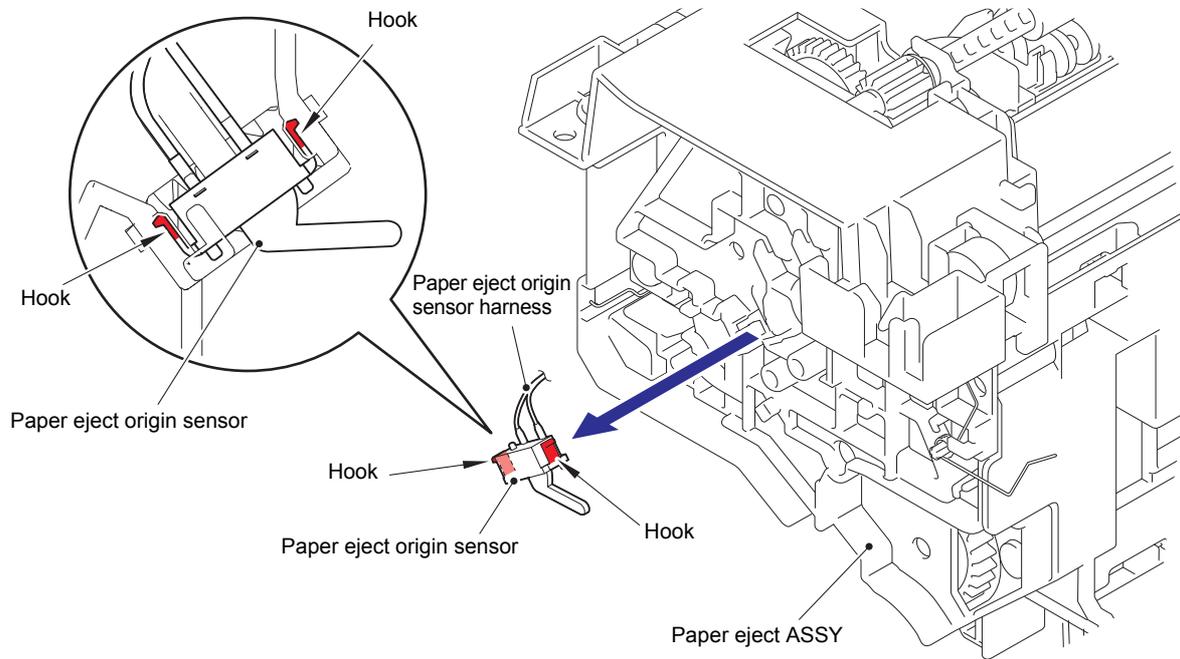


Fig. 3-104

## 9.28 Paper eject origin sensor (Only for Touch-panel models)

- (1) Release the wiring of Paper eject origin sensor harness.
- (2) Release each Hook and remove the Paper eject origin sensor from the Paper eject ASSY.



**Fig. 3-105**

Harness routing: Refer to "9. Paper eject ASSY".

# 9.29 Back cover sensor ASSY

- (1) Release the wiring of Back cover sensor harness.
- (2) Release each Hook and remove the Back cover sensor ASSY from the Frame L.

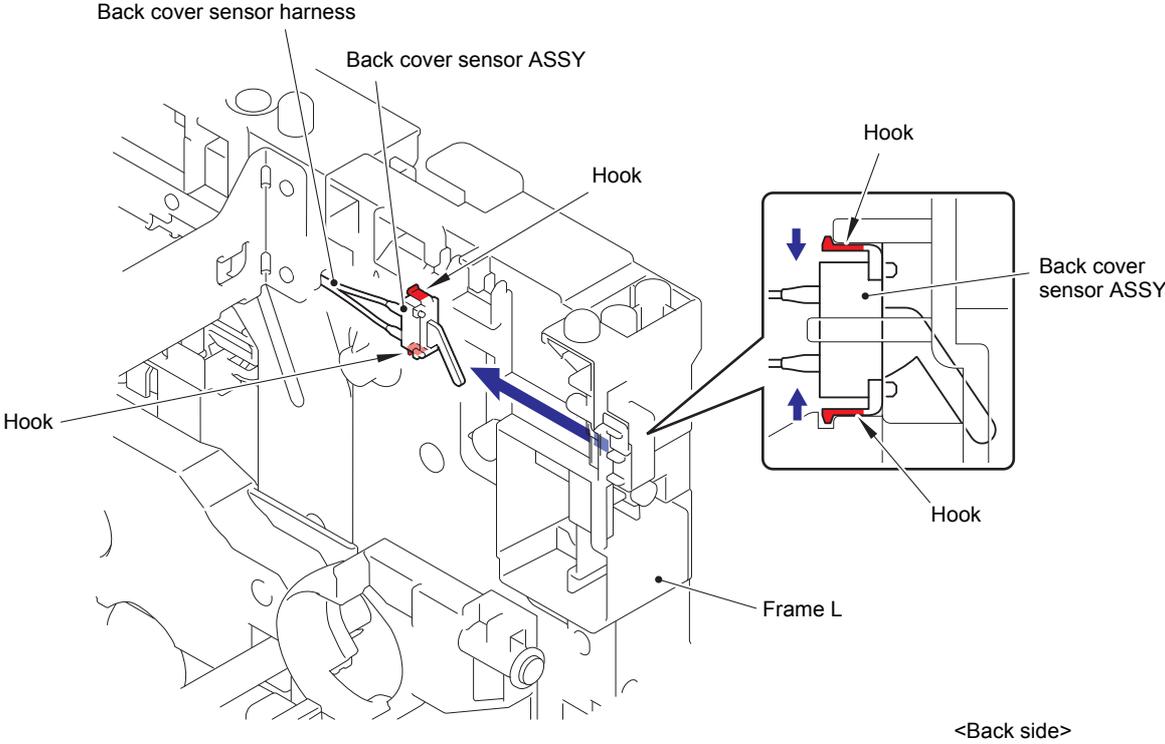


Fig. 3-106

Harness routing: Refer to "9. Paper eject ASSY".

## 9.30 Eject sensor PCB ASSY

- (1) Release the wiring of Eject sensor PCB harness.
- (2) Release the Hook and remove the Eject sensor PCB ASSY from the Frame L.

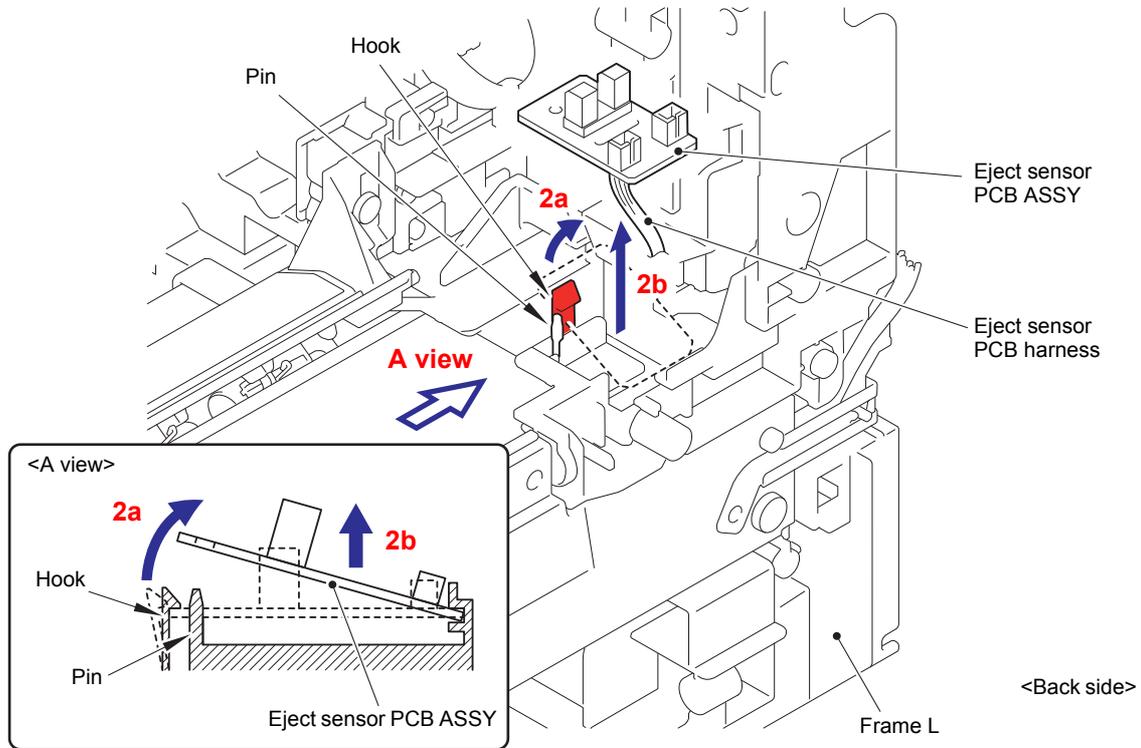


Fig. 3-107

Harness routing: Refer to "1. Fuser unit, Eject sensor PCB ASSY".

## 9.31 Registration mark sensor unit

- (1) Release the wiring of Registration mark sensor harness.
- (2) Remove the two Taptite bind B M3x10 screws from the Registration mark sensor unit. Release each Boss and remove the Registration mark sensor unit.

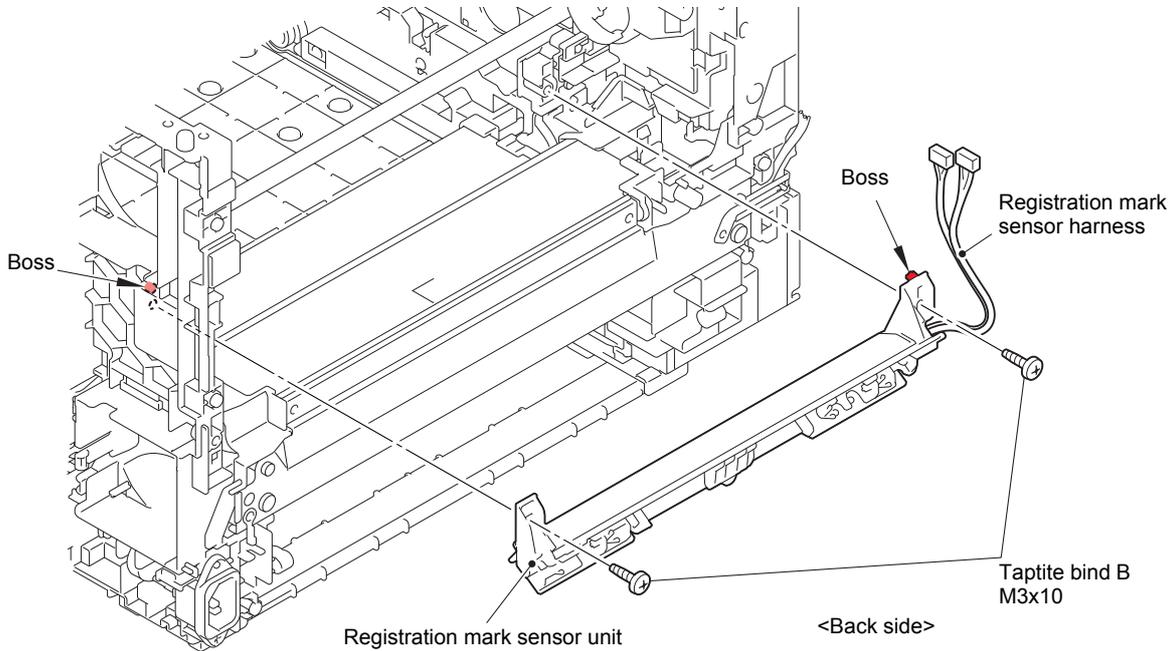


Fig. 3-108

Harness routing: Refer to "11. Registration mark sensor unit".

### Assembling Note:

- When attaching the Registration mark sensor unit, make sure that the Registration ground spring is placed as shown in the figure.
- After assembling the Registration mark sensor unit, make sure that the Front chute flapper moves.

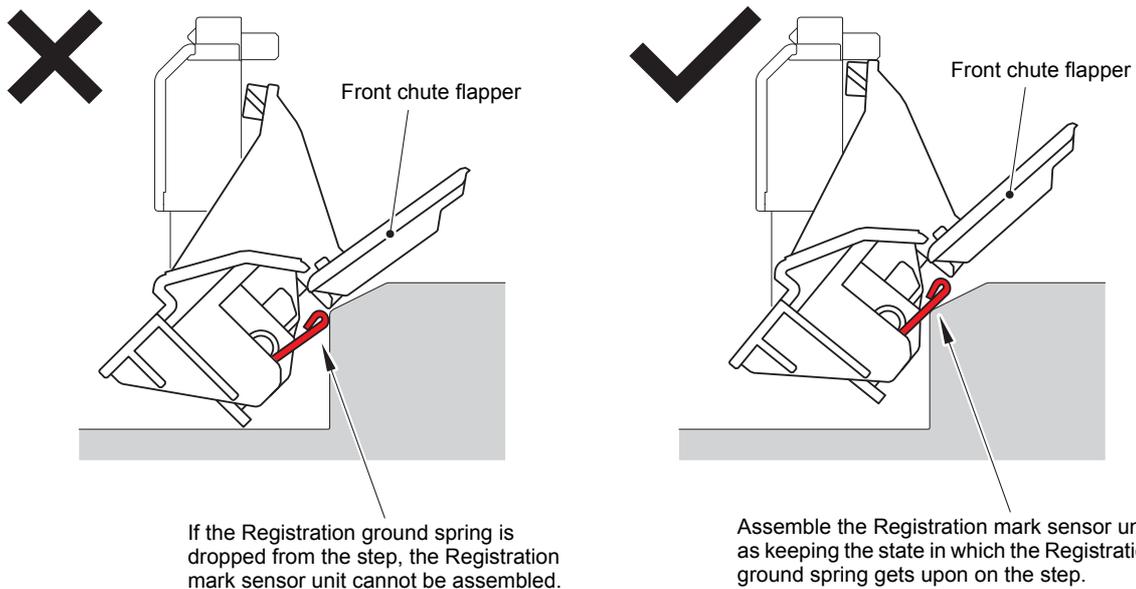


Fig. 3-109

## 9.32 Low-voltage power supply PCB ASSY

- (1) Remove the Screw pan (S/P washer) M3.5x6 screw and remove the Ground wire from the Low-voltage power supply PCB ASSY.
- (2) Remove the Taptite flat B M3x10 screw. Pull the Inlet backwards in the direction of arrow A to pull out from the Boss of Frame R and remove it towards the direction of arrow B. Pull out the Ground wire from the Hole of Frame R.
- (3) Release the wiring of Inlet harness ASSY.
- (4) Release the wiring of LVPS-heater harness ASSY.

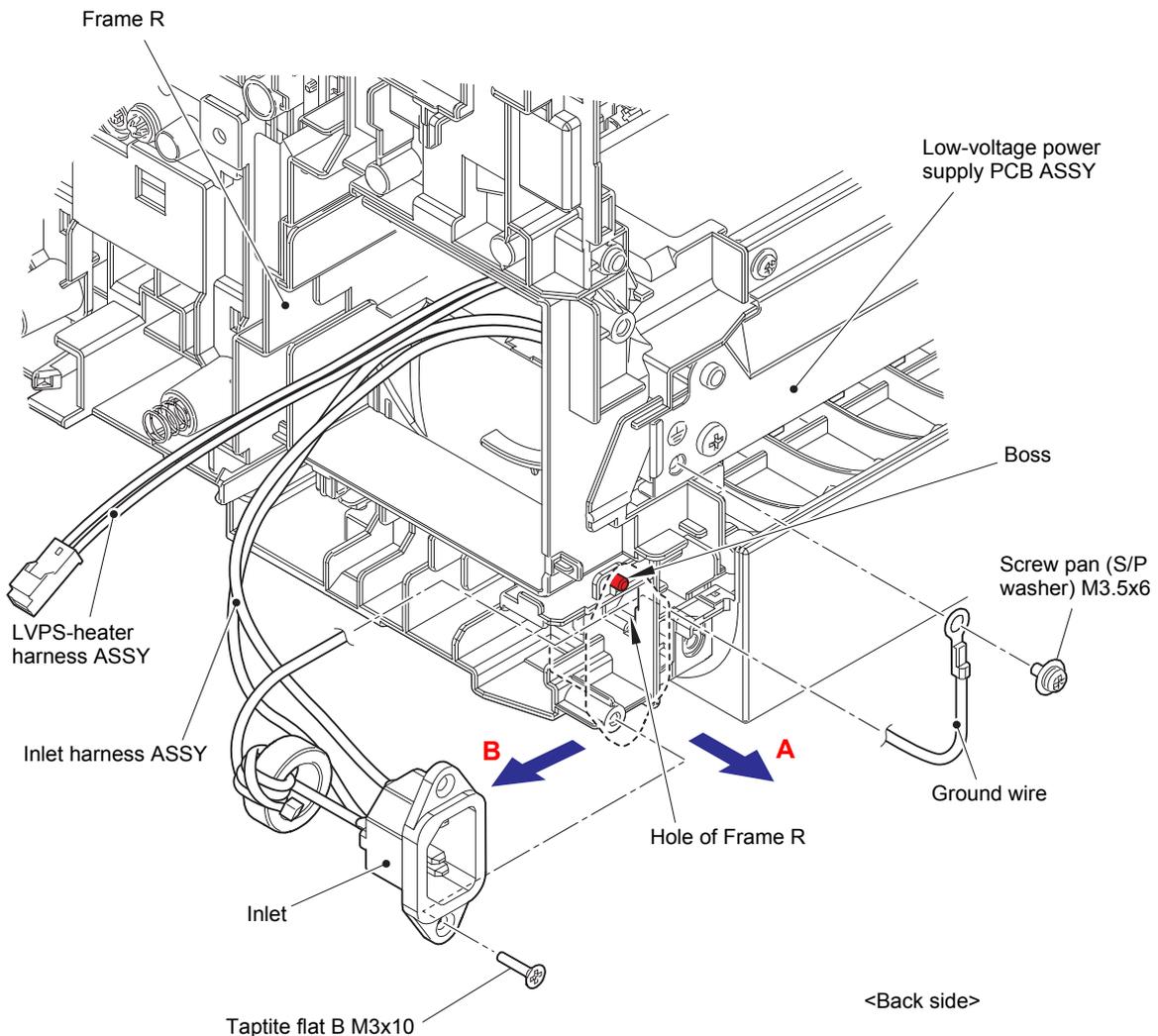


Fig. 3-110

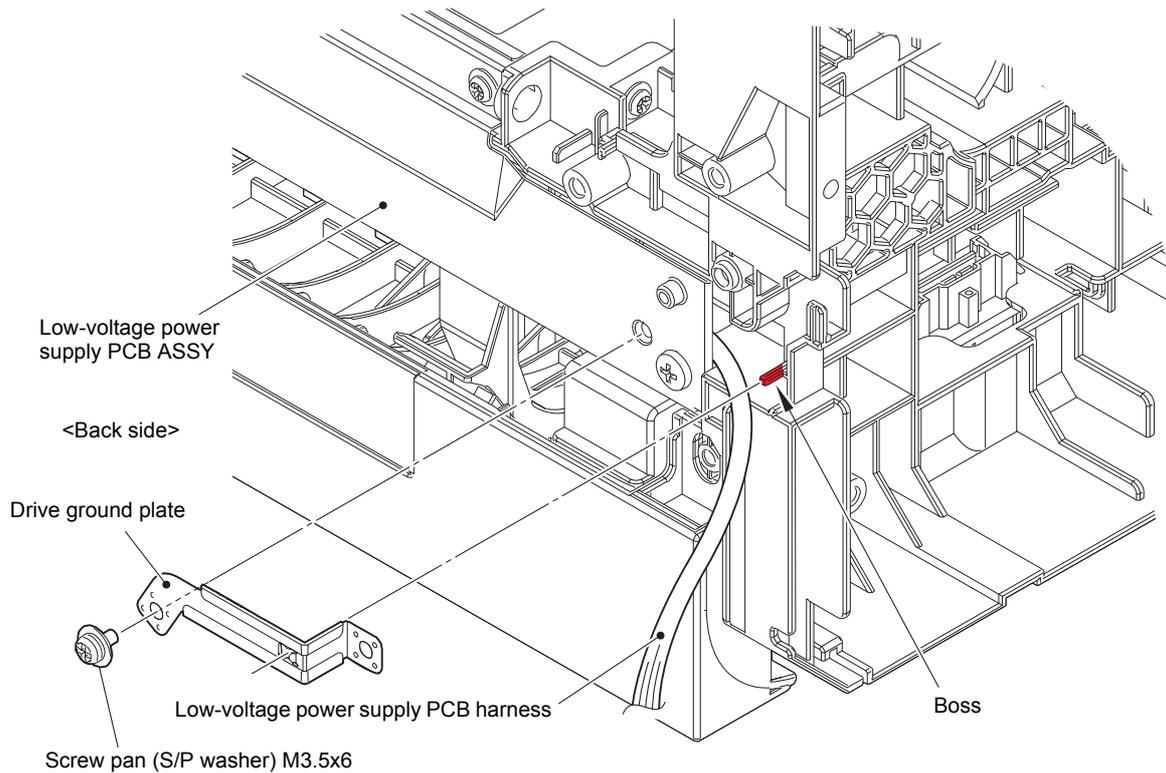
Harness routing: Refer to "12. Low-voltage power supply PCB ASSY".

- (5) Remove the Screw pan (S/P washer) M3.5x6 screw from the Drive ground plate.
- (6) Release the Boss and remove the Drive ground plate from the Low-voltage power supply PCB ASSY.

**Assembling Note:**

If you forget to screw the Drive ground plate or Drive ground plate, it may create the risk of an electrical shock.

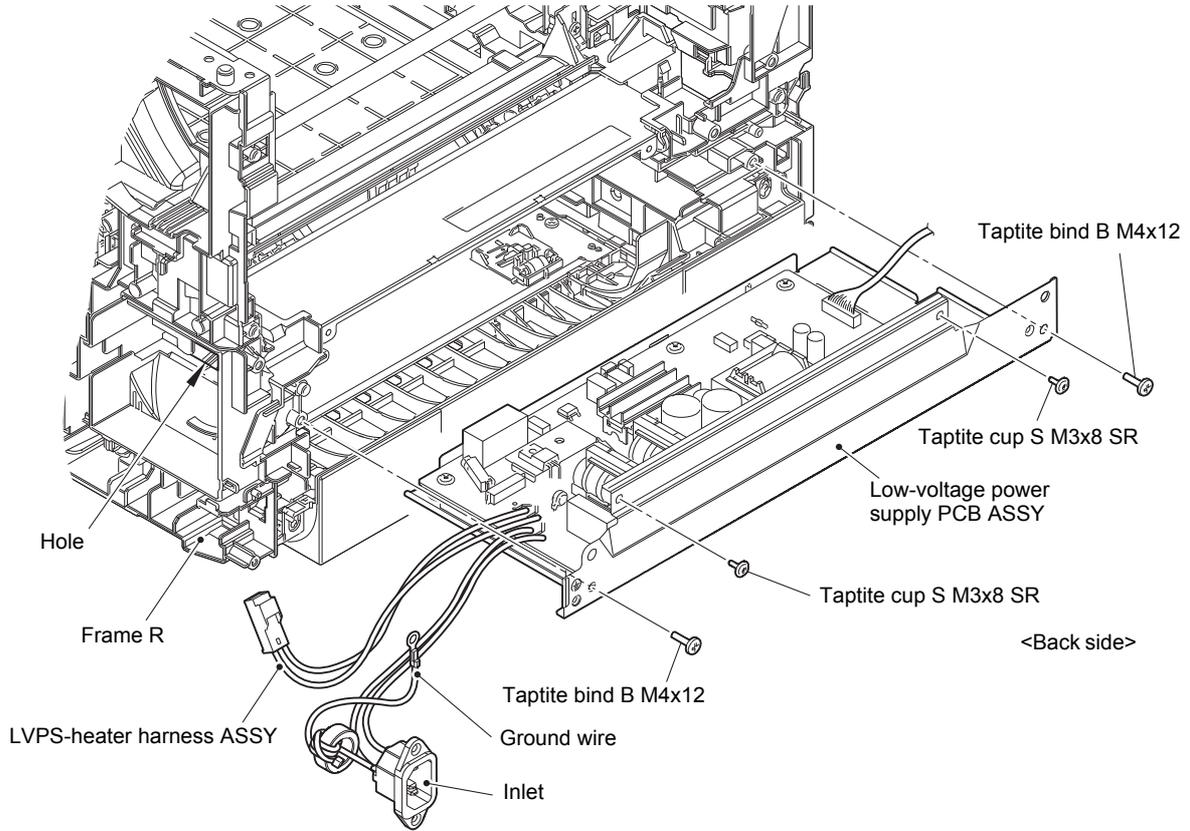
- (7) Release the wiring of Low-voltage power supply PCB harness.



**Fig. 3-111**

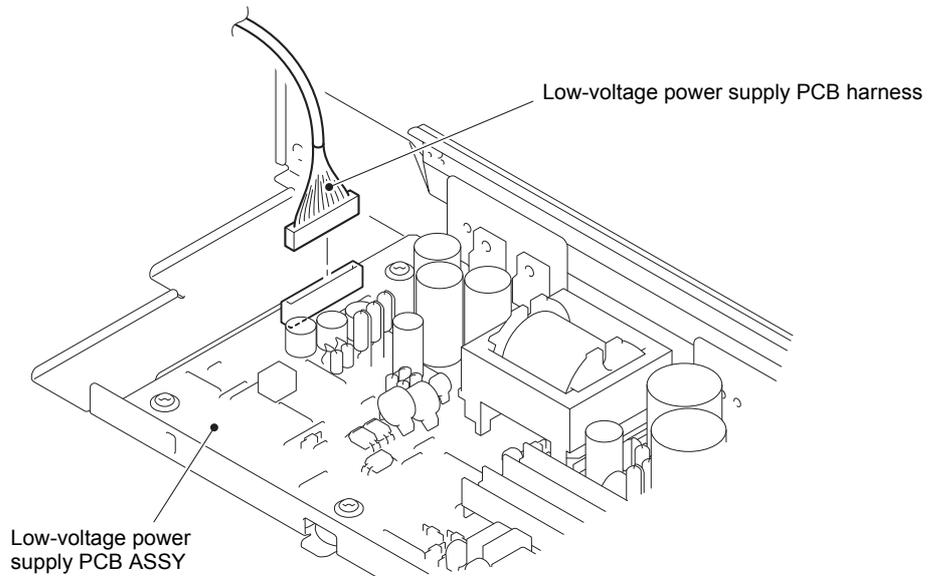
Harness routing: Refer to "12. Low-voltage power supply PCB ASSY".

- (8) Remove the two Taptite cup S M3x8 SR screws and two Taptite bind B M4x12 screws, and remove the Low-voltage power supply PCB ASSY. Pull out each harness from the hole of Frame R.



**Fig. 3-112**

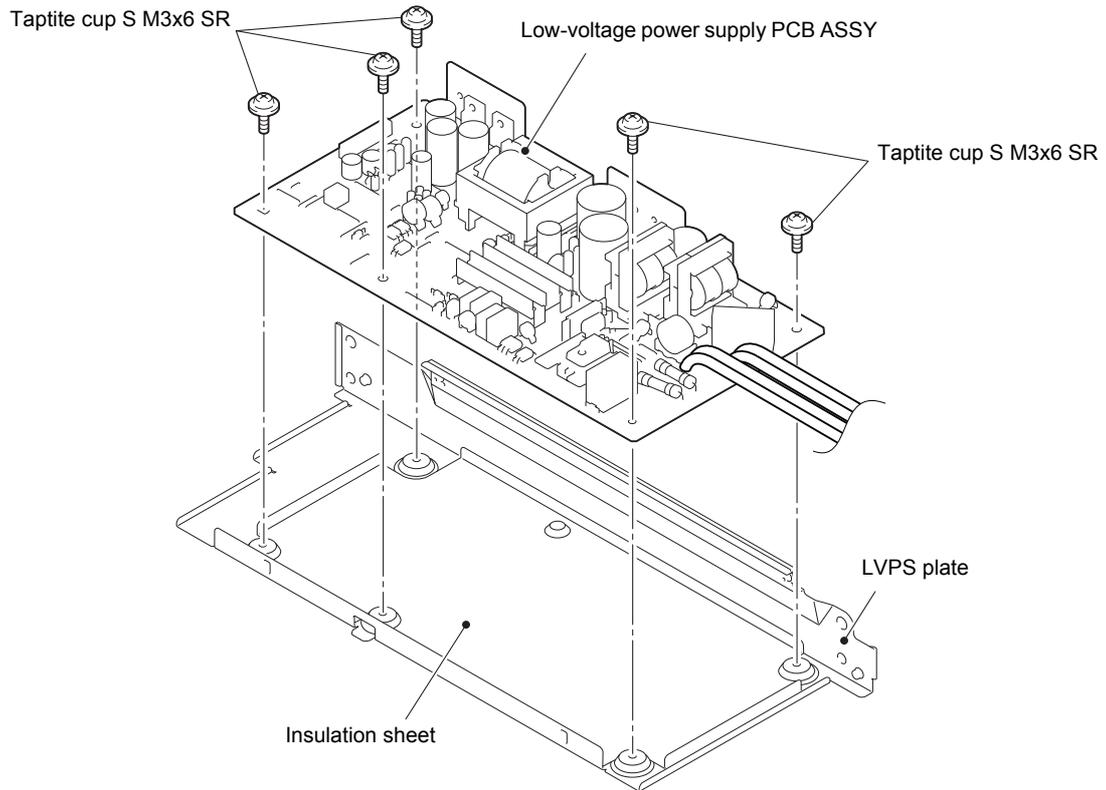
- (9) Disconnect the Low-voltage power supply PCB harness from the Low-voltage power supply PCB ASSY.



**Fig. 3-113**

Harness routing: Refer to "12. Low-voltage power supply PCB ASSY".

(10) Remove the five Taptite cup S M3x6 SR screws and remove the Low-voltage power supply PCB ASSY from the LVPS plate.



**Fig. 3-114**

**Assembling Note:**

Do not forget the Insulation sheet under the Low-voltage power supply PCB. Otherwise it may catch fire.

### 9.33 MP paper empty/registration front sensor PCB ASSY

- (1) Press "A" to release the Hook and remove the MP upper frame cover from the MP upper cover ASSY.

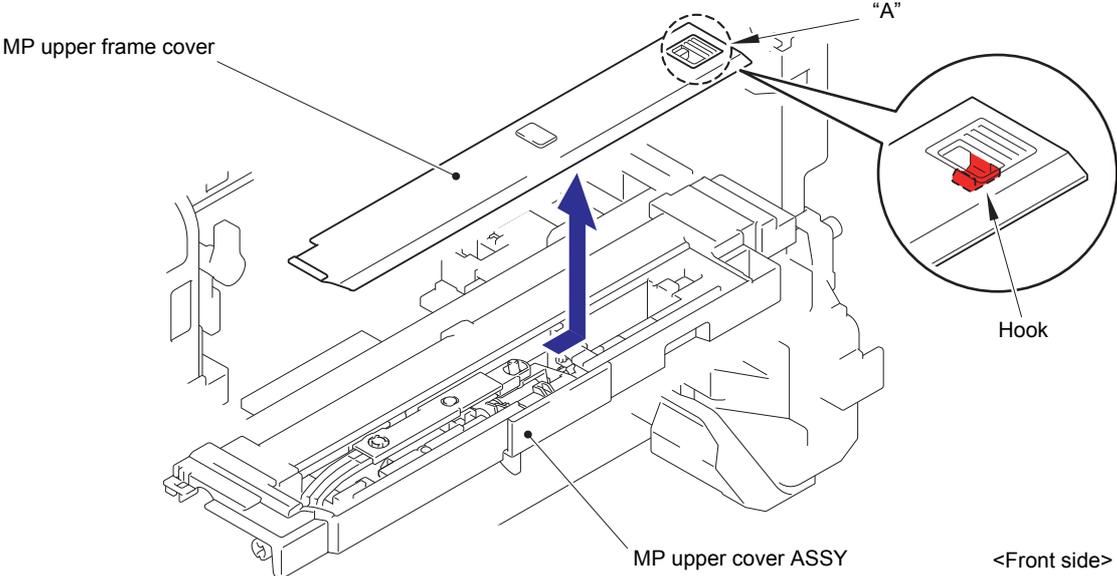


Fig. 3-115

- (2) Remove the MP lift arm B from the MP upper cover ASSY.

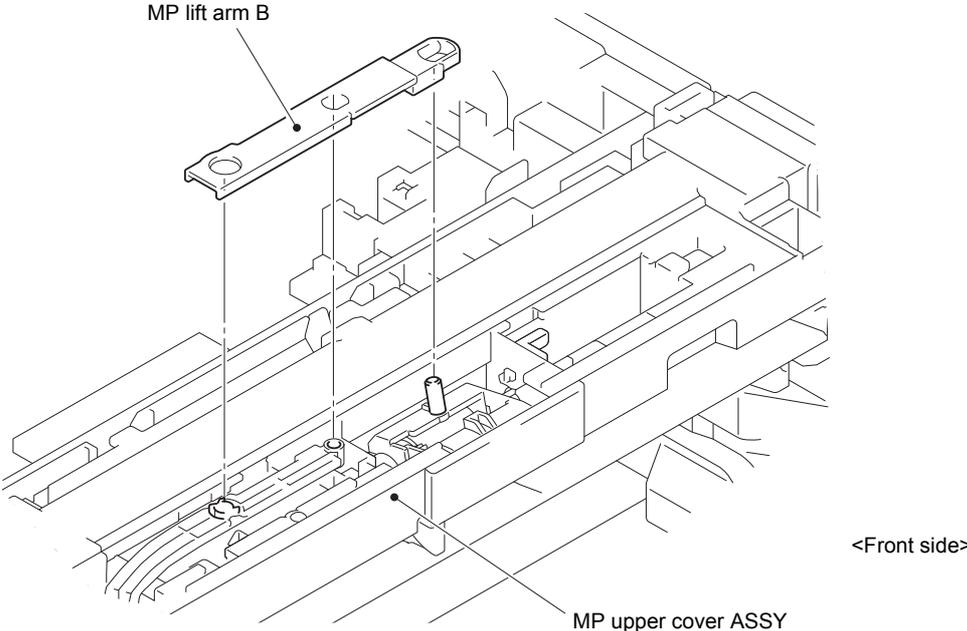
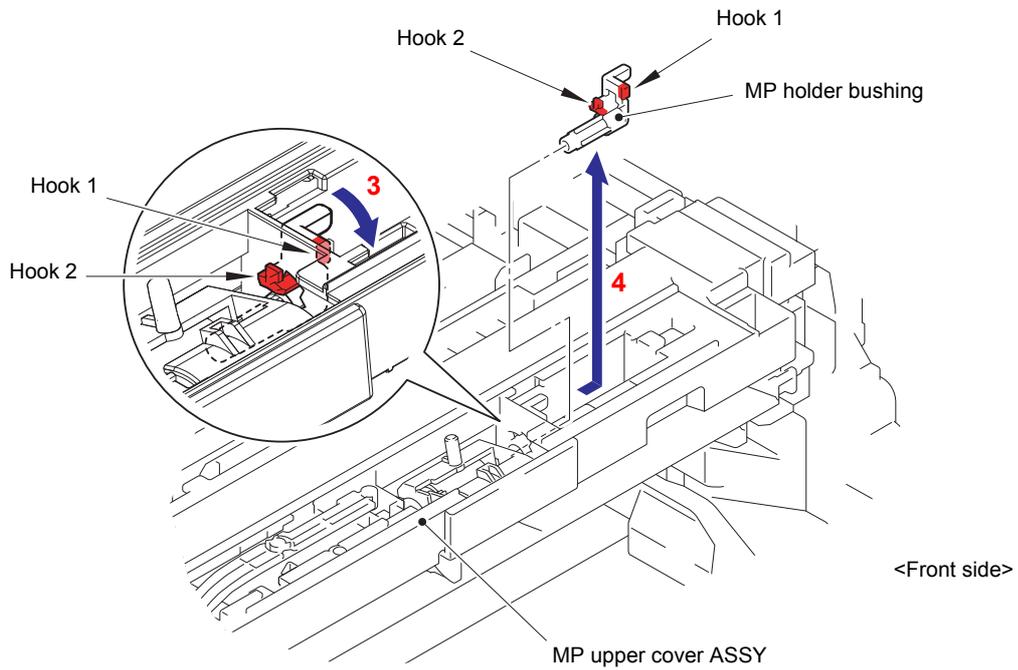


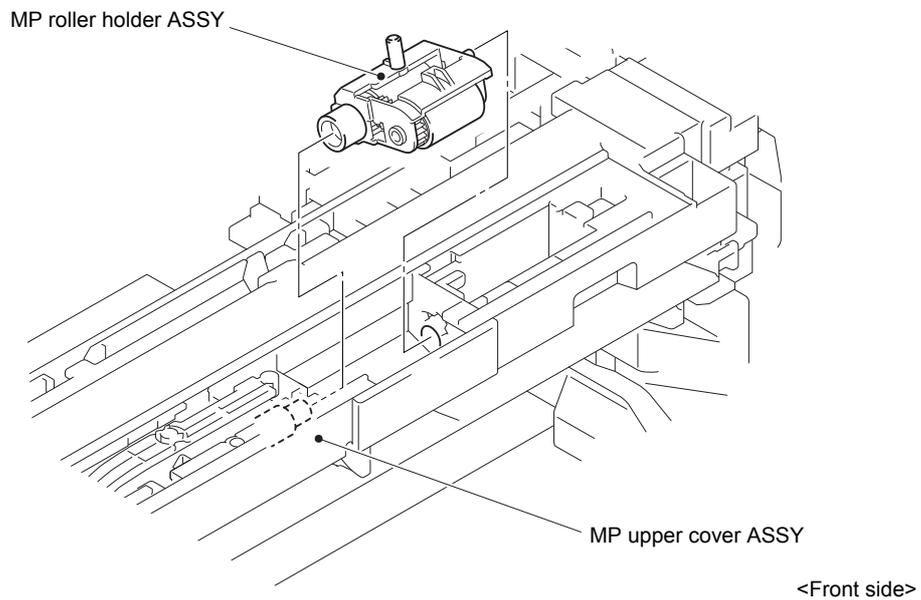
Fig. 3-116

- (3) Release the Hook 1 and rotate the MP holder bushing in the direction of the arrow.
- (4) Release the Hook 2 and remove the MP holder bushing from the MP upper cover ASSY.



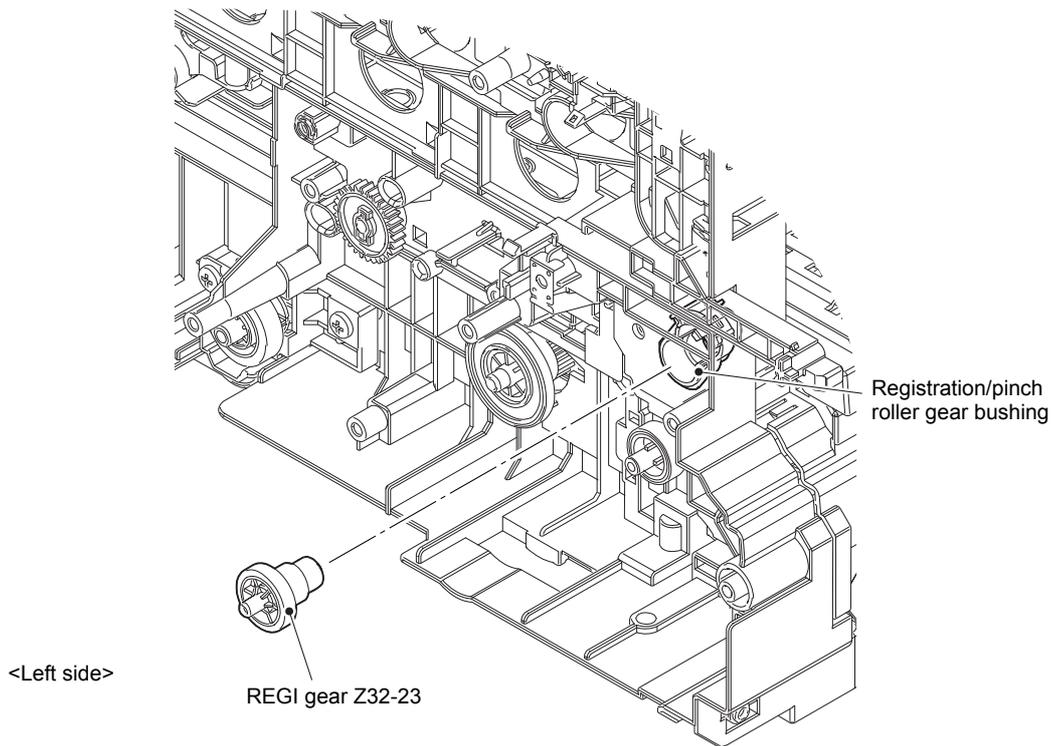
**Fig. 3-117**

- (5) Remove the MP roller holder ASSY from the MP upper cover ASSY.



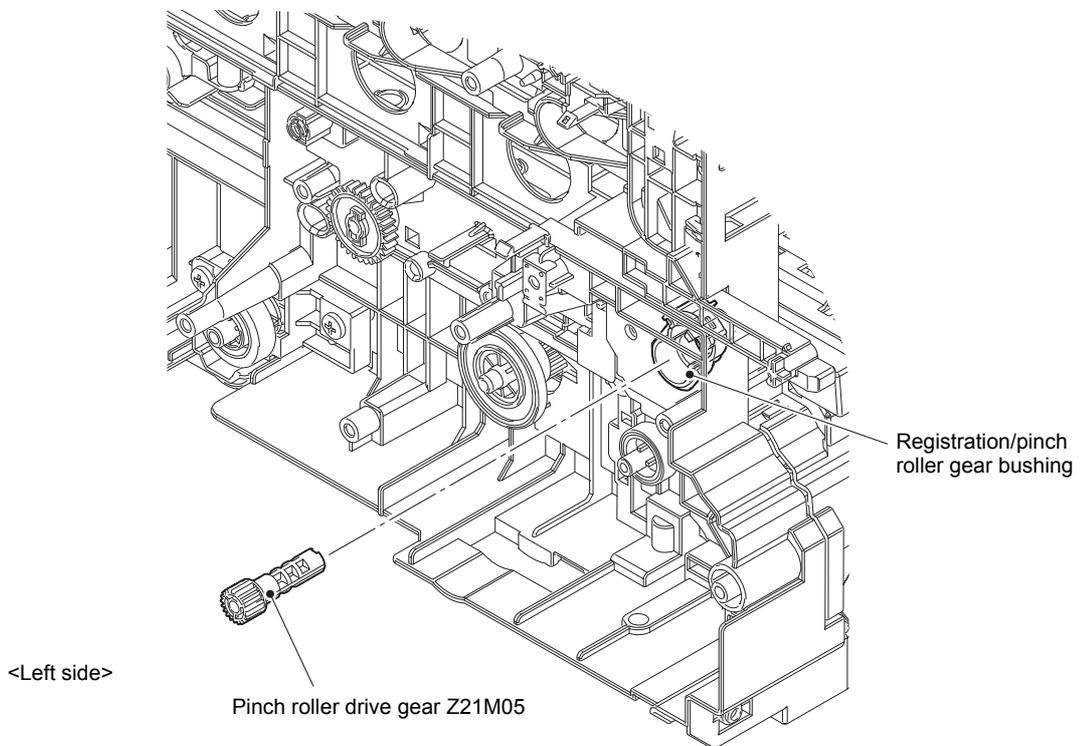
**Fig. 3-118**

- (6) Remove the REGI gear Z32-23 from the Registration/pinch roller gear bushing.



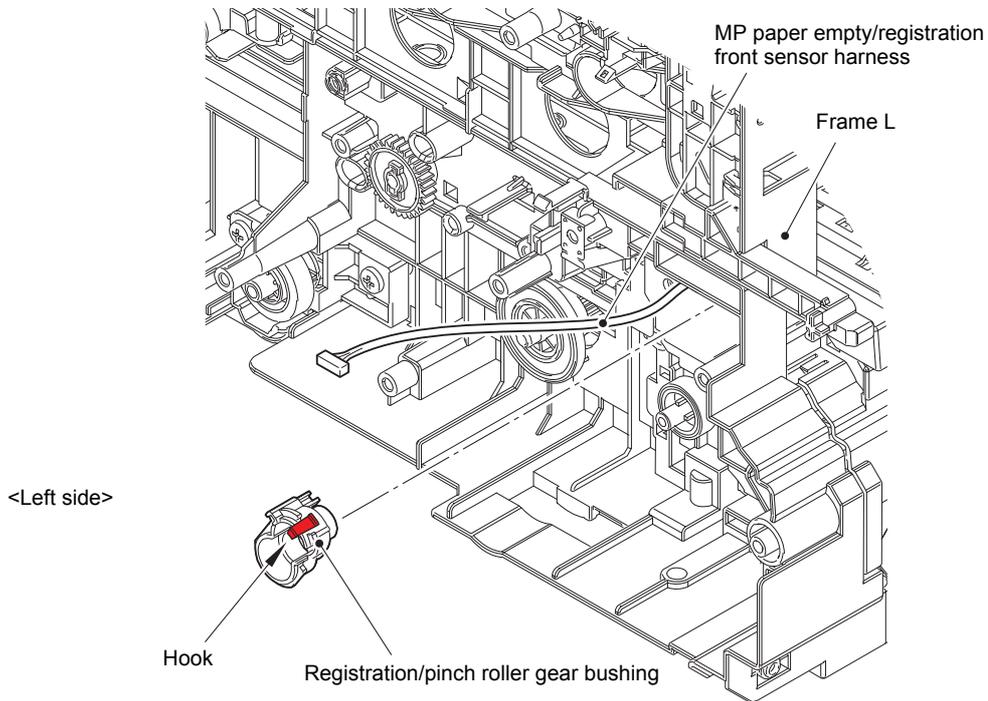
**Fig. 3-119**

- (7) Remove the Pinch roller drive gear Z21M05 from the Registration/pinch roller gear bushing.



**Fig. 3-120**

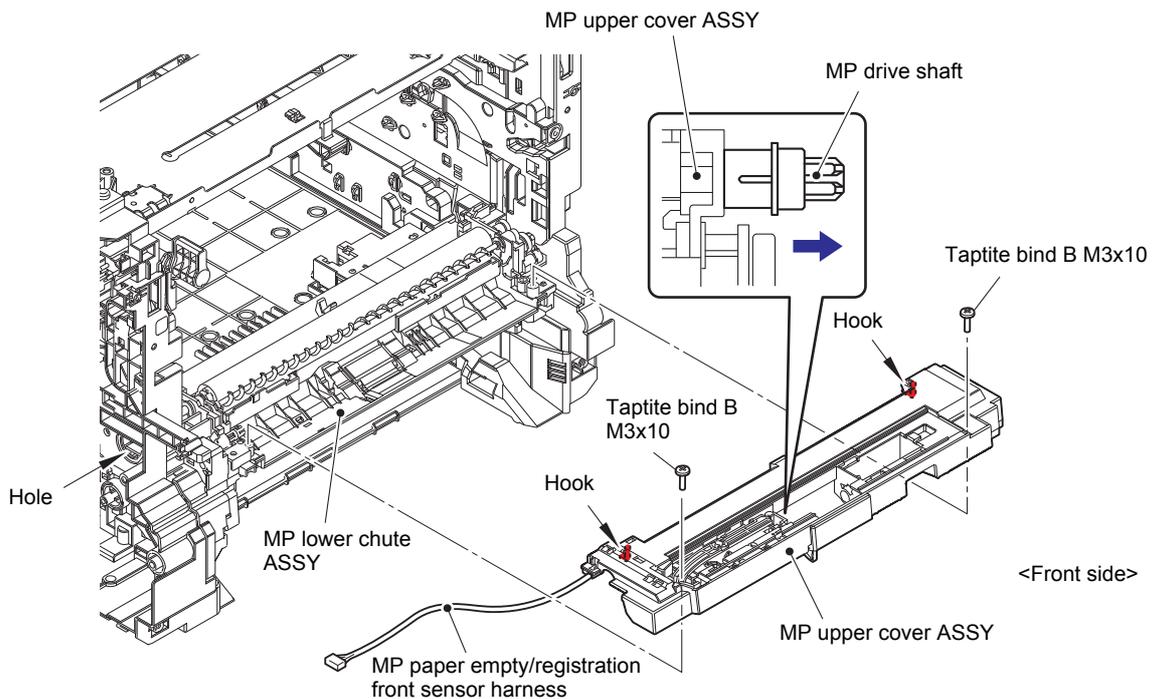
- (8) Release the Hook and remove the Registration/pinch roller gear bushing from the Frame L.
- (9) Release the wiring of MP paper empty/registration front sensor harness from the Registration/pinch roller gear bushing.



**Fig. 3-121**

Harness routing: Refer to "13. MP paper empty/registration front sensor PCB ASSY".

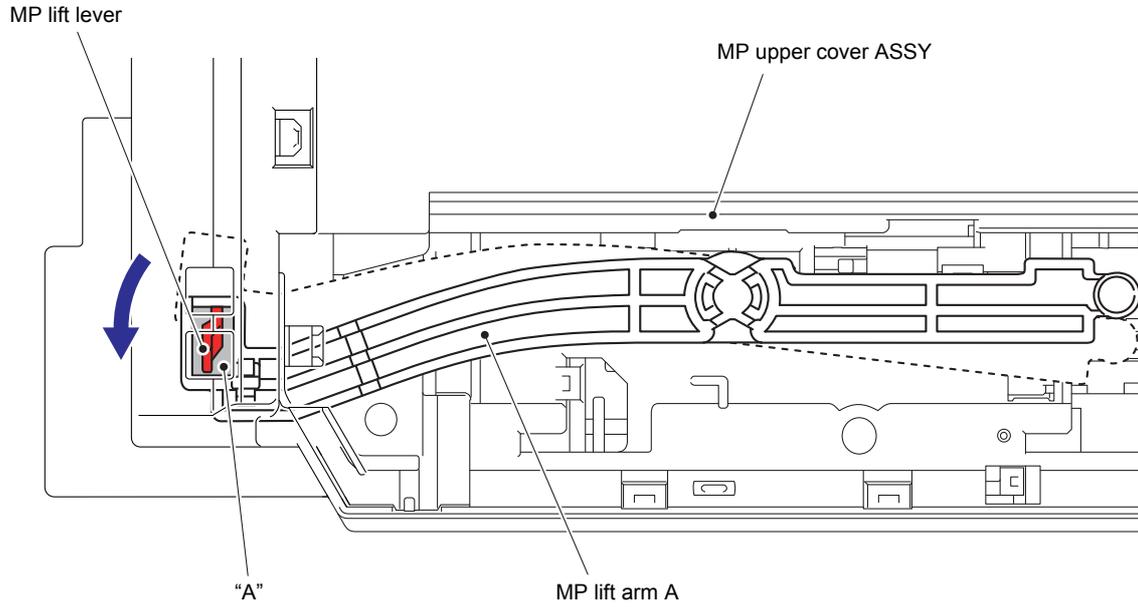
- (10) Slide the MP drive shaft in the direction of the arrow.
- (11) Remove the two Taptite bind B M3x10 screws from the MP upper cover ASSY. Release each Hook and remove the MP upper cover ASSY from the MP lower chute ASSY. Pull out the MP paper empty/registration front sensor harness through the Hole.



**Fig. 3-122**

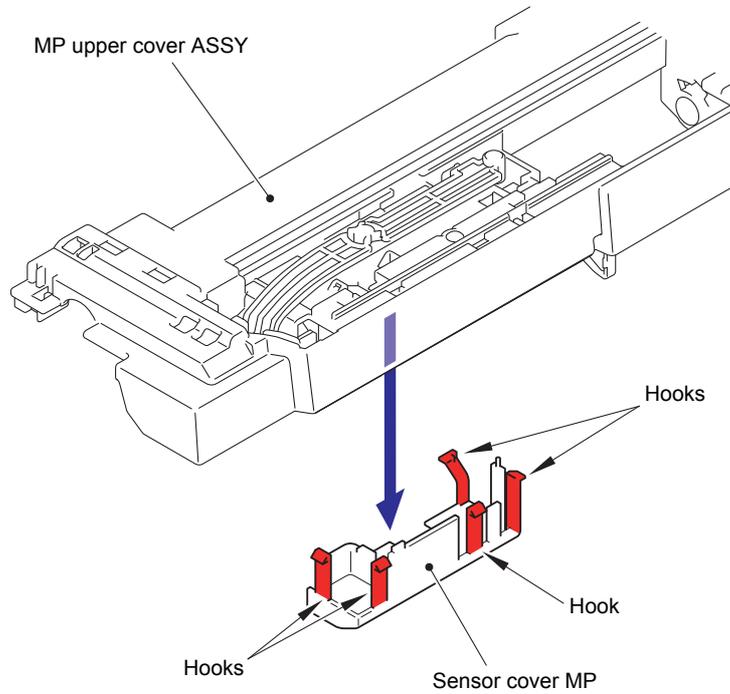
**Assembling Note:**

When assembling the MP upper cover ASSY, attach "A" of the MP lift arm A to the MP lift lever.



**Fig. 3-123**

(12) Release each Hook and remove the Sensor cover MP from the MP upper cover ASSY.



**Fig. 3-124**

(13) Release each Hook and remove the MP paper empty actuator A ASSY from the MP upper cover ASSY.

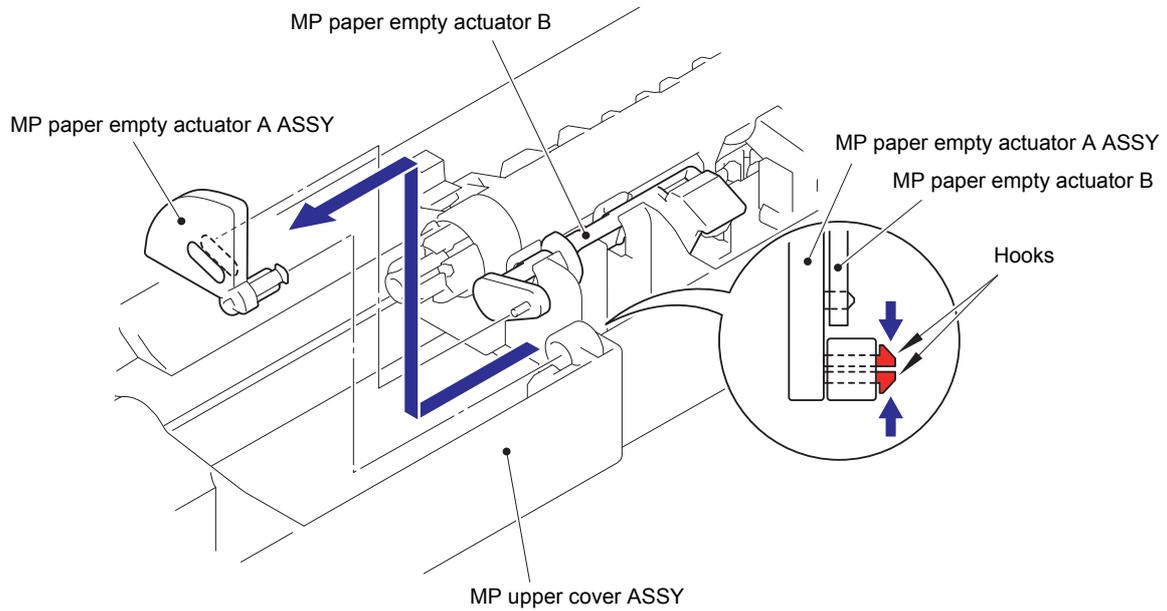


Fig. 3-125

(14) Release the Hook and remove the MP paper empty actuator B from the MP upper cover ASSY.

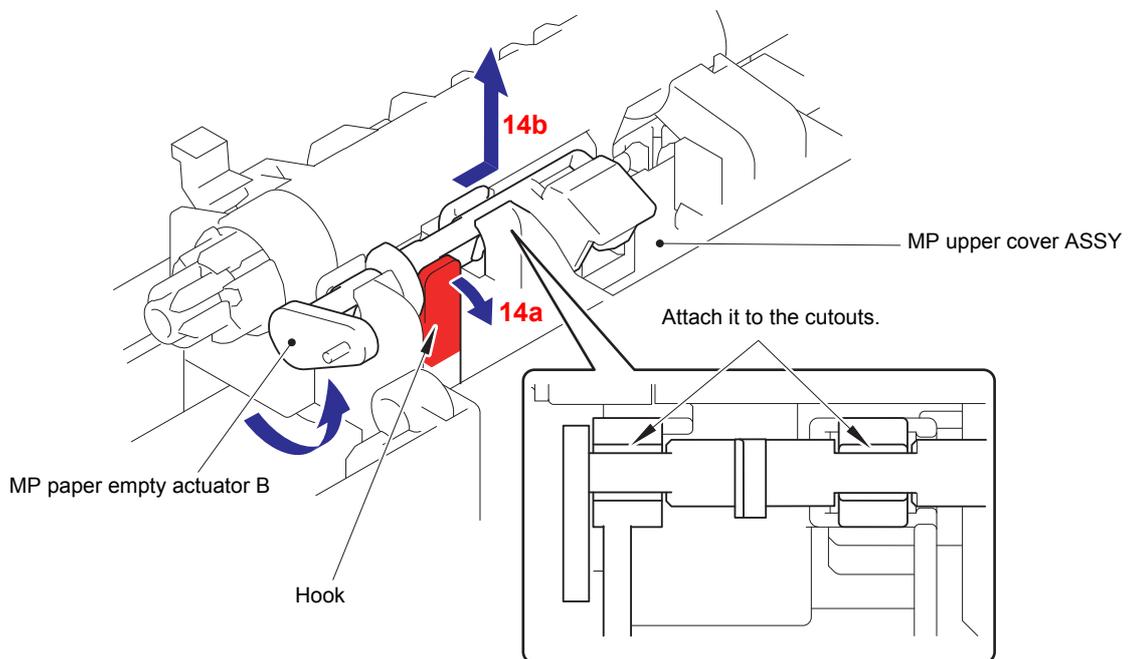
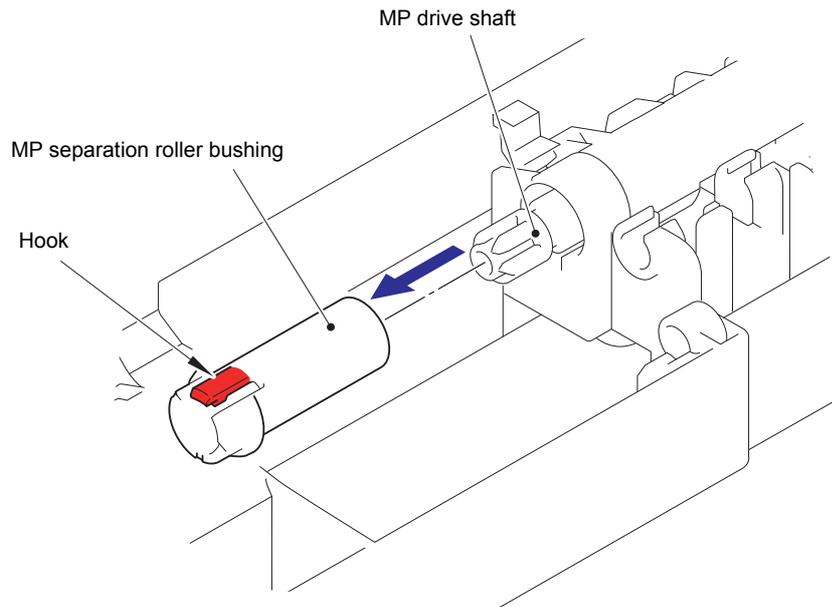


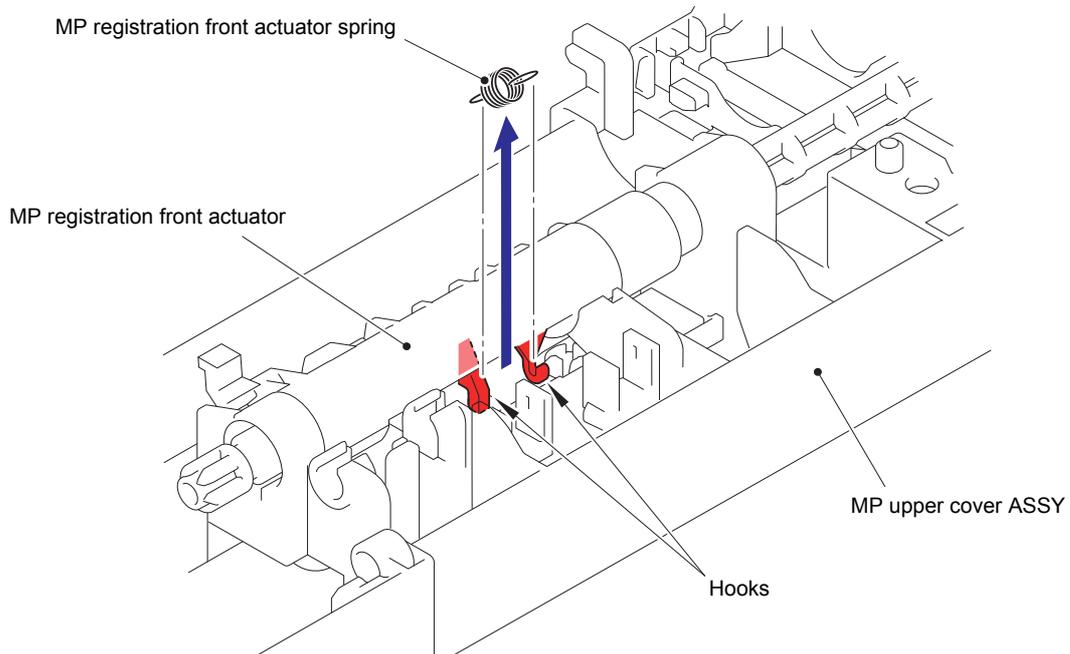
Fig. 3-126

(15) Release the Hook and remove the MP separation roller bushing from the MP drive shaft.



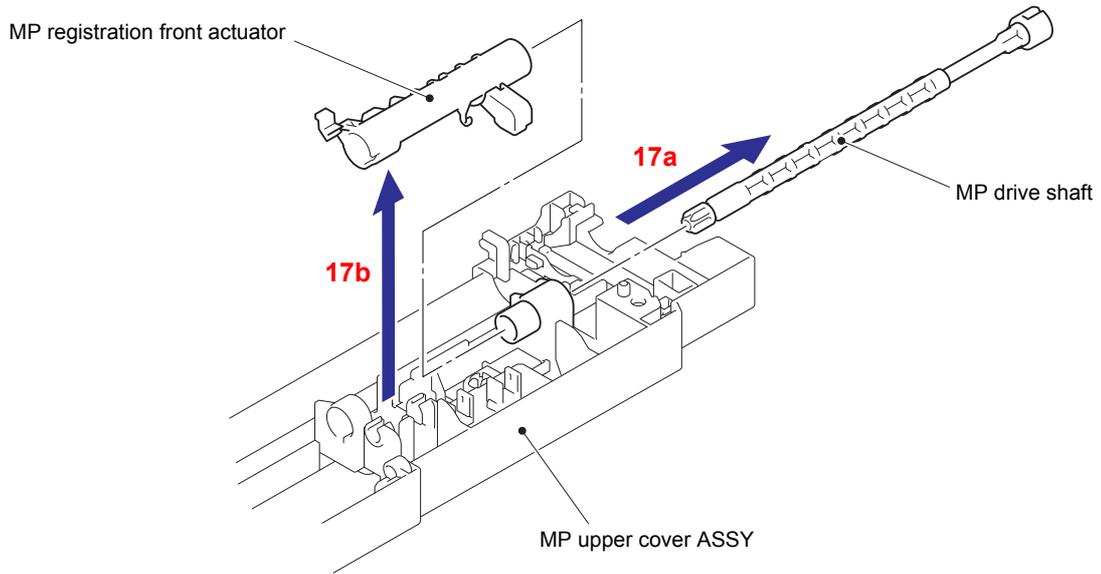
**Fig. 3-127**

(16) Release each Hook and remove the MP registration front actuator spring from the MP registration front actuator.



**Fig. 3-128**

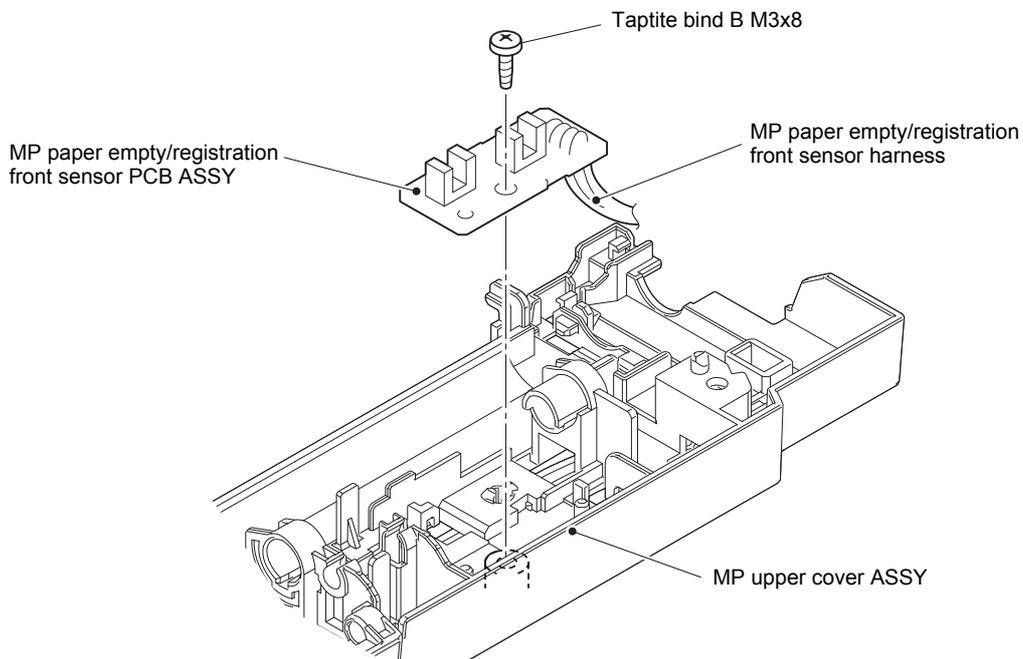
(17) Pull out the MP drive shaft and remove the MP registration front actuator from the MP upper cover ASSY.



**Fig. 3-129**

(18) Release the wiring of MP paper empty/registration front sensor harness.

(19) Remove the Taptite bind B M3x8 screw and remove the MP paper empty/registration front sensor PCB ASSY from the MP upper cover ASSY.



**Fig. 3-130**

Harness routing: Refer to "13. MP paper empty/registration front sensor PCB ASSY".

## 9.34 Paper feed unit / Joint pin

- (1) Push the T1 lift arm to the back and remove "B" of the Roller holder ASSY from "A" of the T1 lift arm.

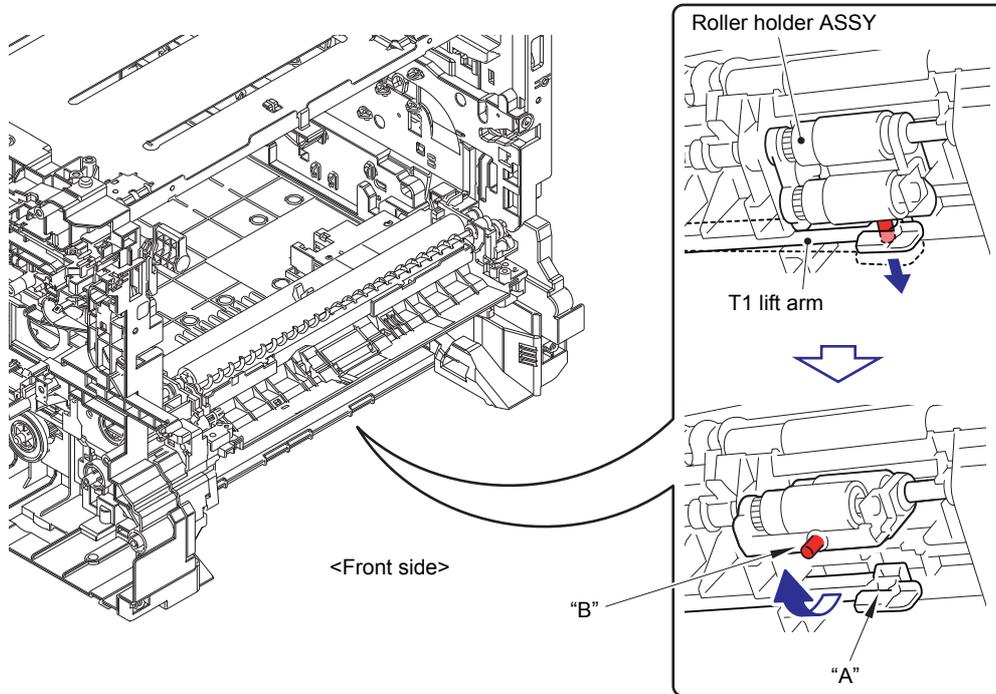
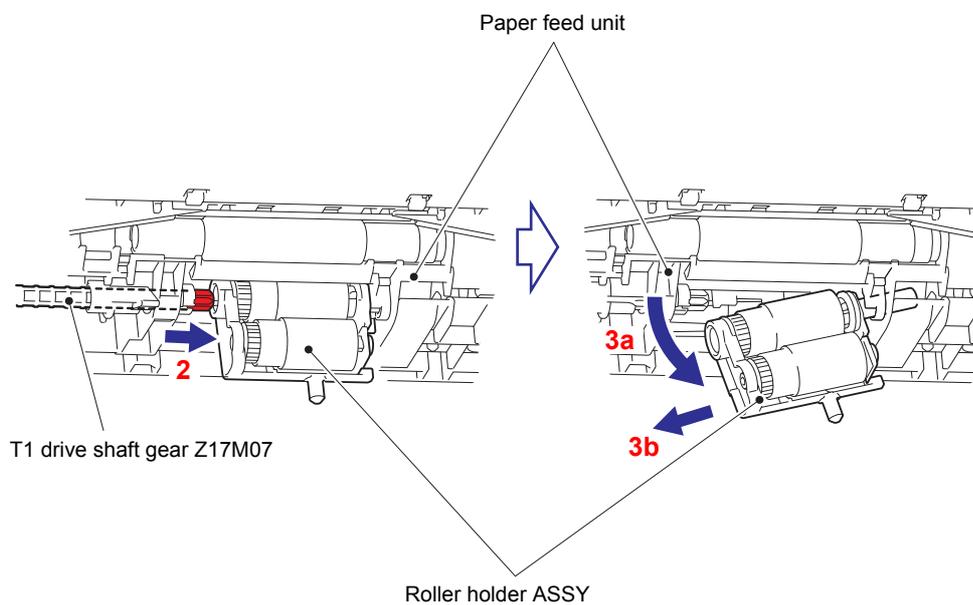


Fig. 3-131

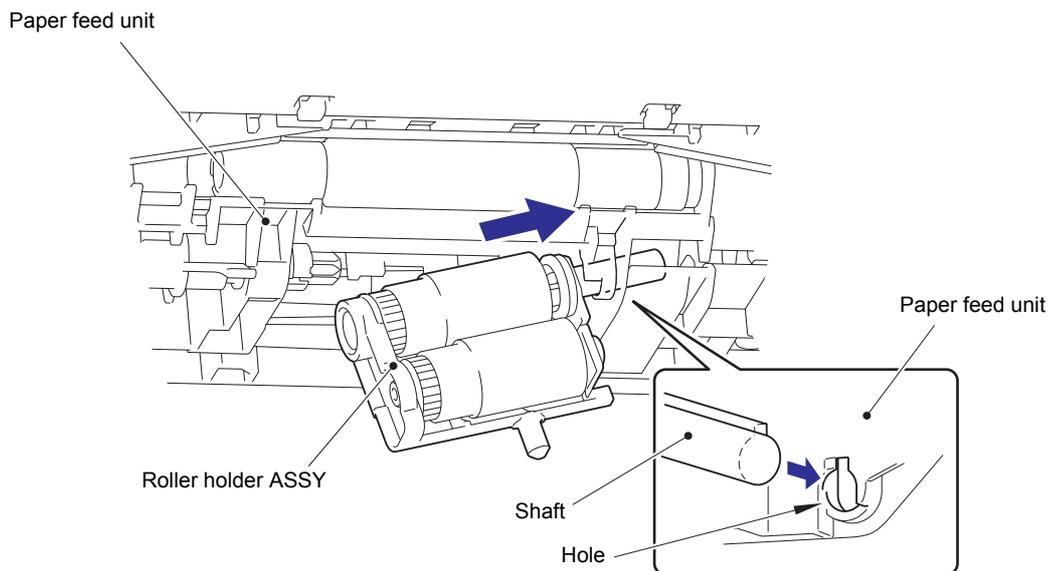
- (2) Slide the Roller holder ASSY in the direction of the arrow and remove it from the T1 drive shaft gear Z17M07.
- (3) Slide the Roller holder ASSY in the direction of the arrow 3a and 3b in this order and remove it from the Paper feed unit.



**Fig. 3-132**

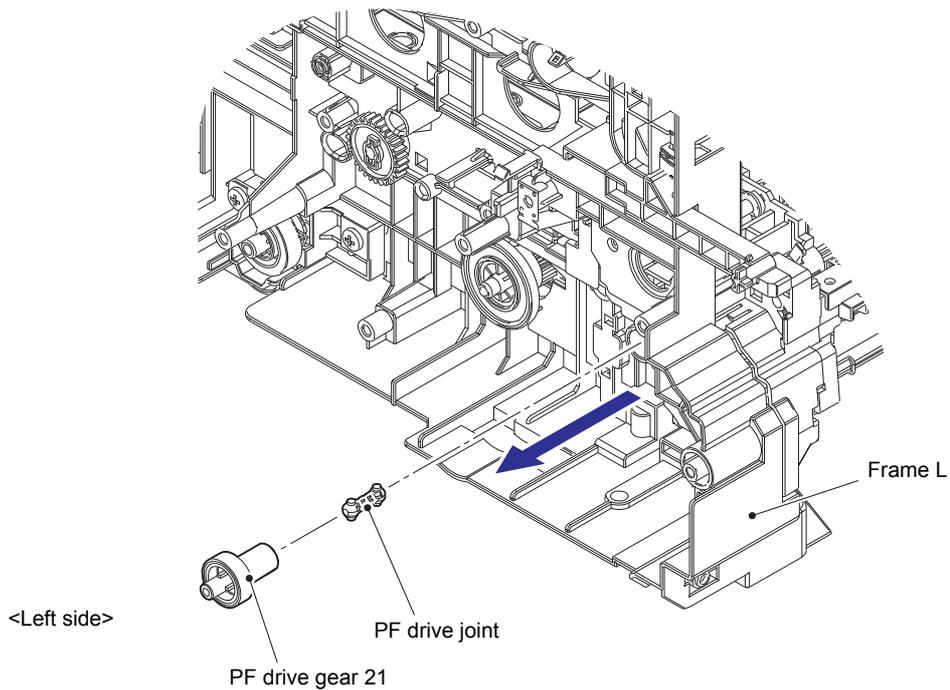
**Assembling Note:**

Align the Hole of the Paper feed unit to the Shaft of the Roller holder ASSY and insert it into the Hole.



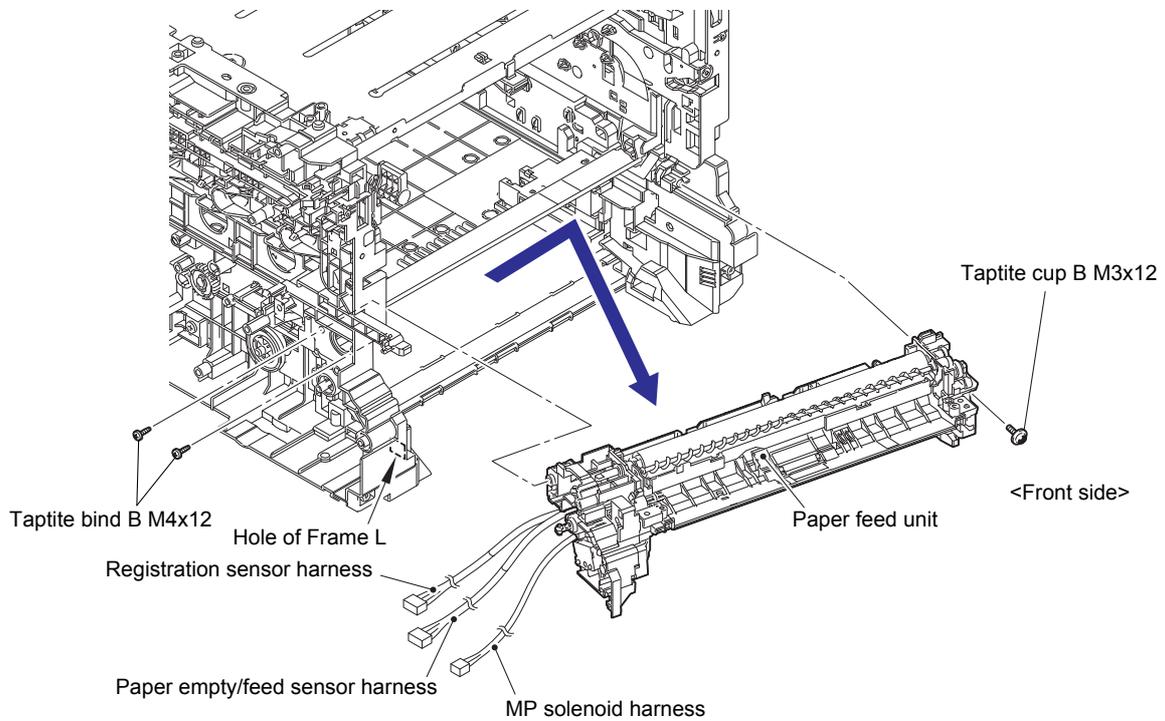
**Fig. 3-133**

- (4) Remove the PF drive gear 21 and PF drive joint from the Frame L.



**Fig. 3-134**

- (5) Remove the Taptite cup B M3x12 screw from the Paper feed unit.
- (6) Remove the two Taptite bind B M4x12 screws, then shift the Paper feed unit to the right, and remove it. Pull out each harness from the Hole of Frame L.



**Fig. 3-135**

Harness routing: Refer to "14. Paper feed unit".

- (7) Remove the Registration roller drive joint from the PF registration roller shaft.
- (8) Remove the Joint pin from the PF registration roller shaft.

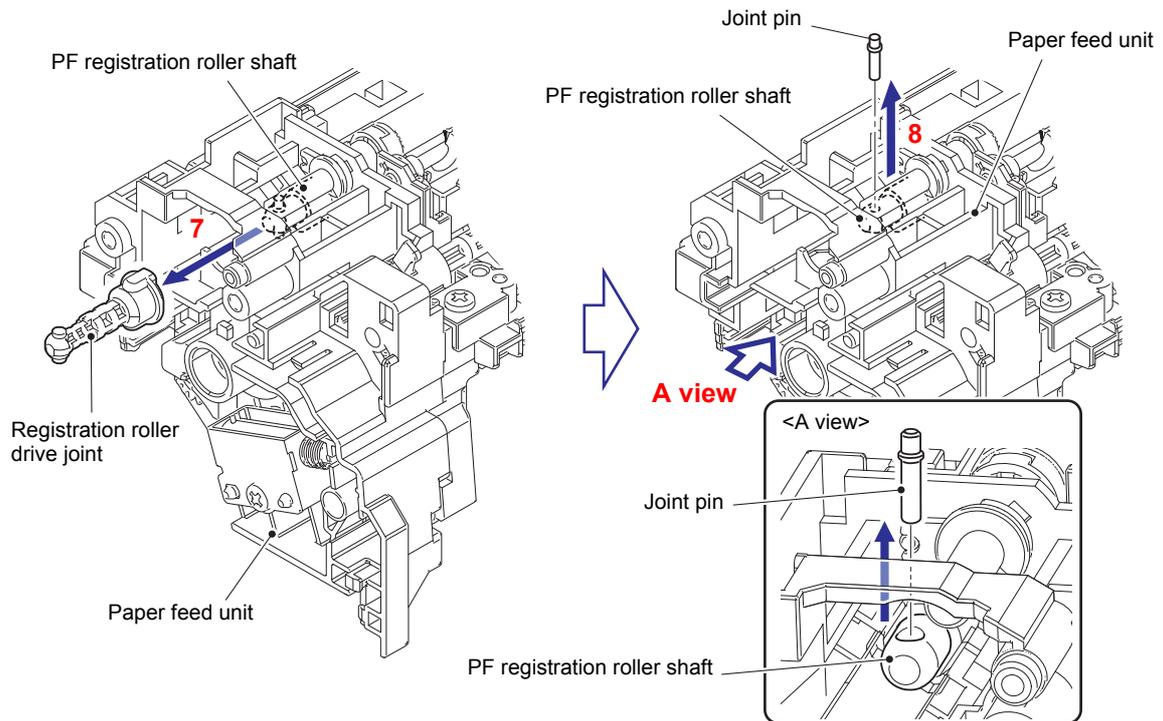


Fig. 3-136

## 9.35 Registration front/rear sensor PCB ASSY

- (1) Release the wiring of Registration sensor harness.
- (2) Remove the Taptite bind B M3x10 screw and remove the Registration front/rear sensor PCB holder from the Paper feed unit.

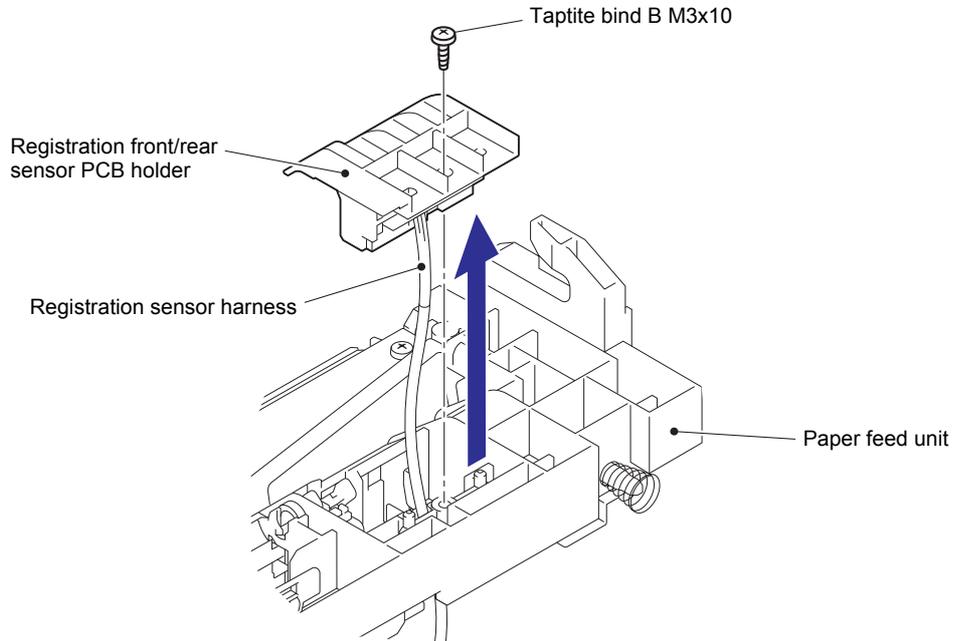


Fig. 3-137

Harness routing: Refer to "14. Paper feed unit".

- (3) Release each Hook and remove the Registration front/rear sensor PCB ASSY from the Registration front/rear sensor PCB holder.

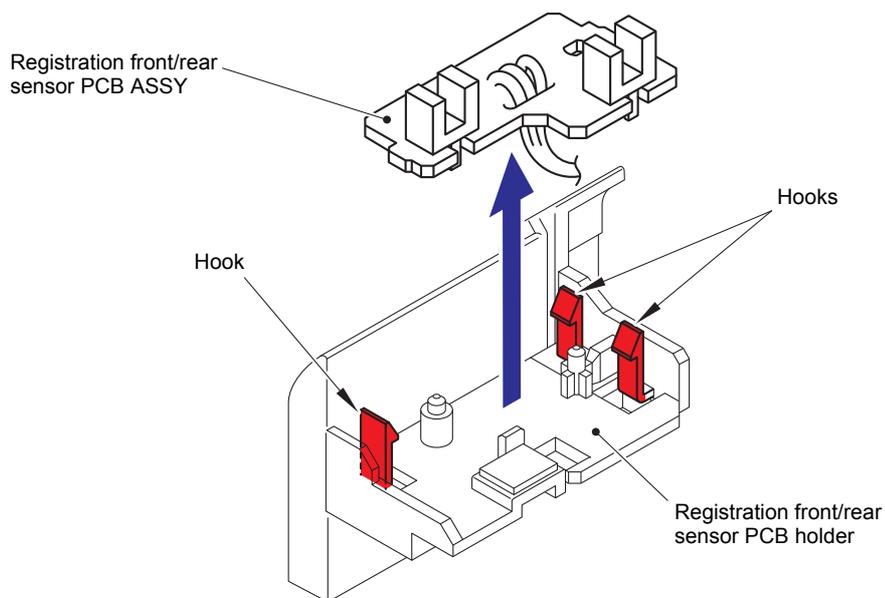


Fig. 3-138

## 9.36 T1 paper empty/paper feed sensor PCB ASSY (T1 paper feed sensor PCB ASSY (non NFC models))

- (1) Release all the wiring from the MP drive frame.
- (2) Remove the three Taptite bind B M3x10 screws and remove the MP drive frame from the Paper feed unit.

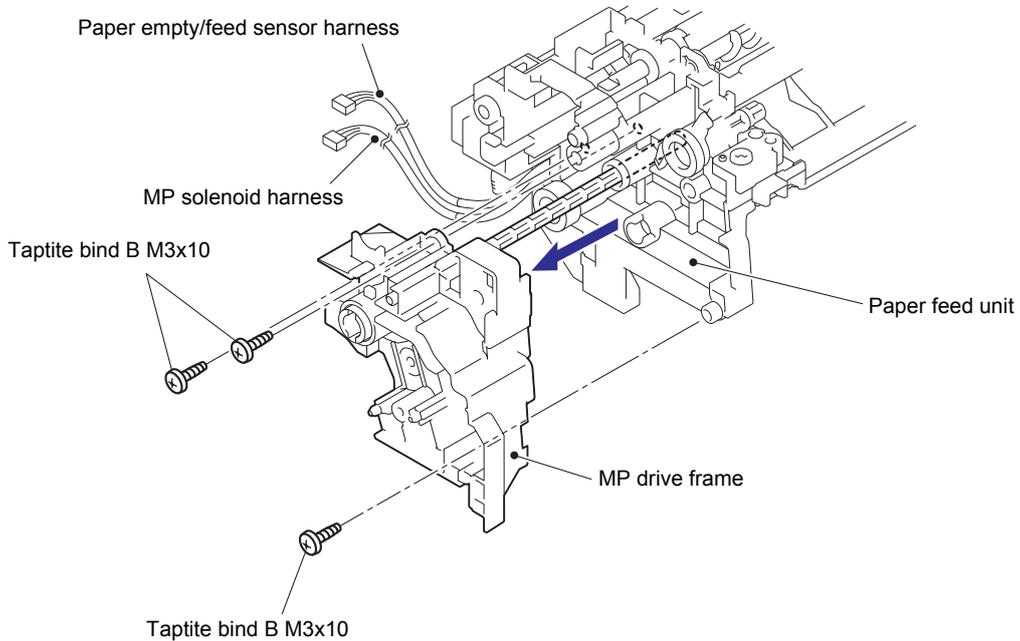


Fig. 3-139

Harness routing: Refer to "14. Paper feed unit".

**Note:**

- As the MP drive shaft gear Z17M07, MP lift lever and Registration roller drive joint tend to come off, be careful not to lose them.
- When the MP drive shaft gear Z17M07 and MP lift lever come off, assemble them as shown in the figure.

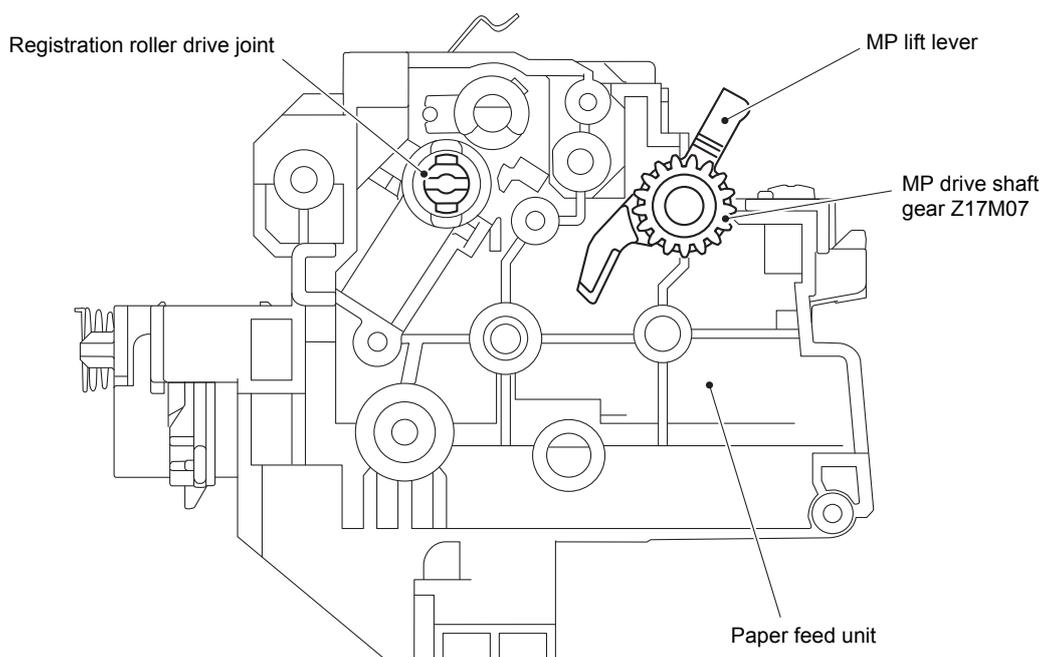
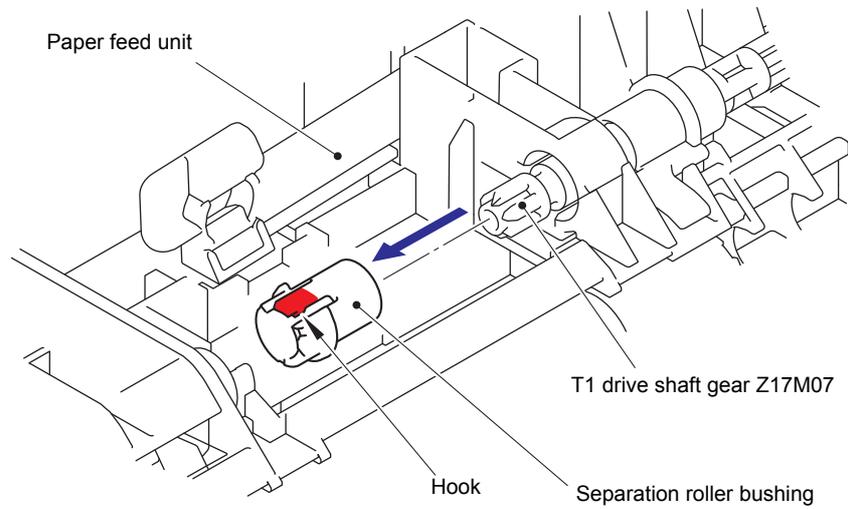


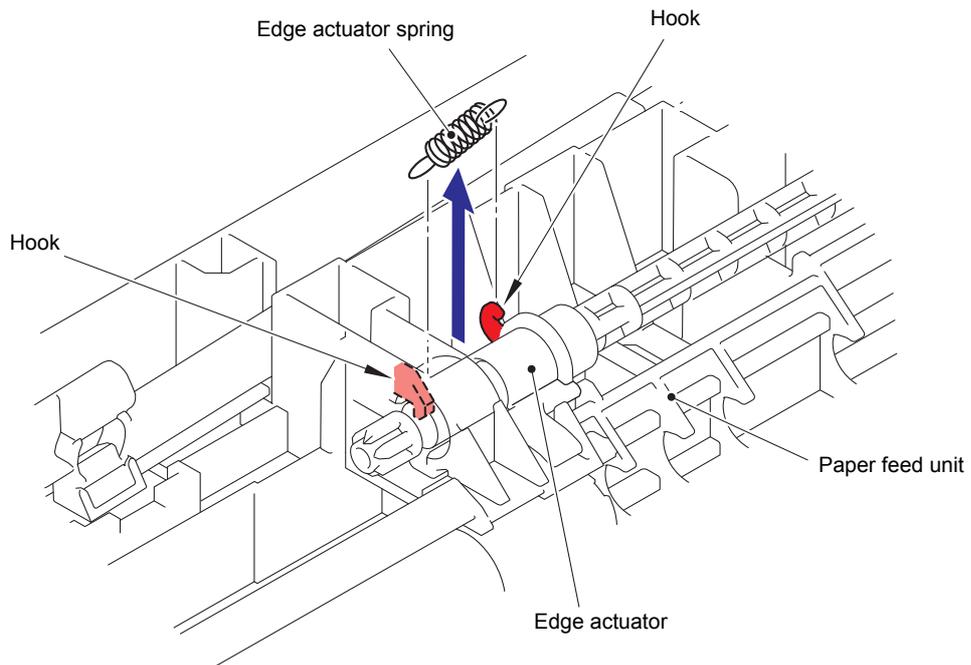
Fig. 3-140

- (3) Release the Hook and remove the Separation roller bushing from the T1 drive shaft gear Z17M07.



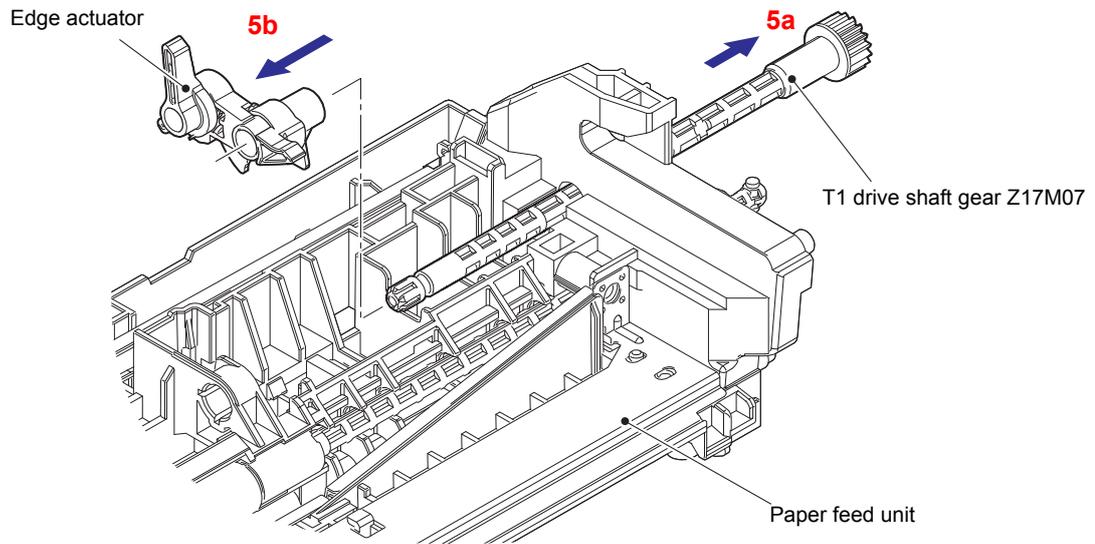
**Fig. 3-141**

- (4) Remove the Edge actuator spring from the Hook of the Paper feed unit and the Hook of the Edge actuator.



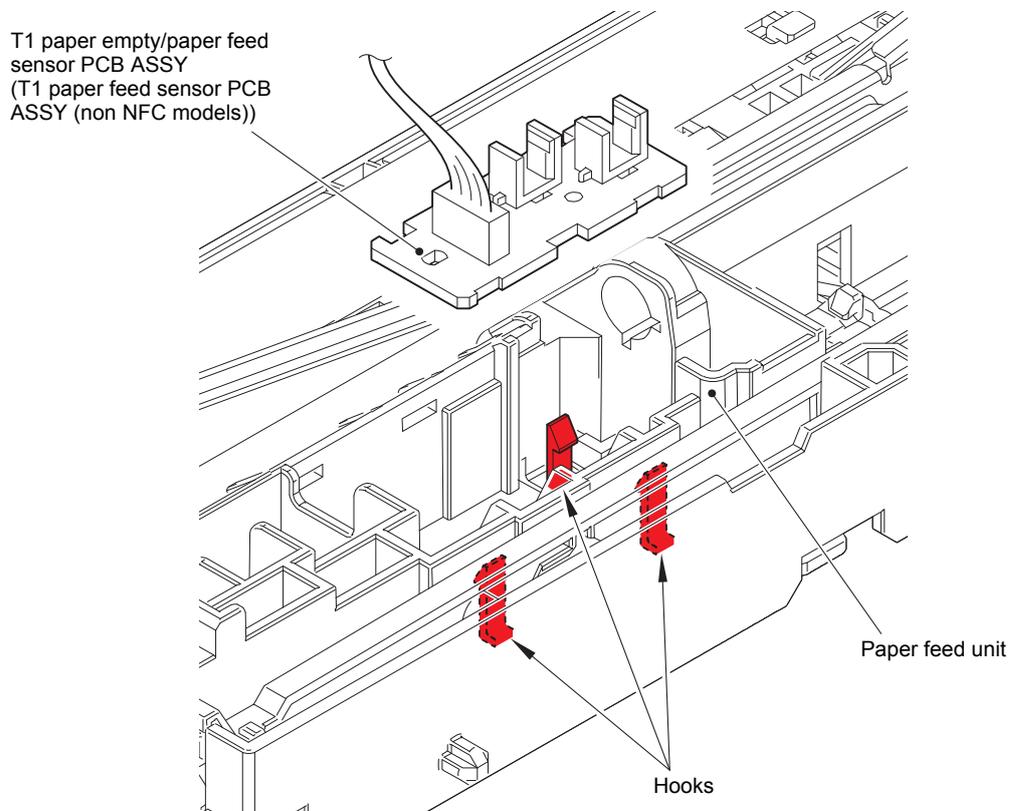
**Fig. 3-142**

- (5) Pull out the T1 drive shaft gear Z17M07 from the Paper feed unit and remove the Edge actuator.



**Fig. 3-143**

- (6) Release the wiring of T1 paper empty/paper feed sensor PCB ASSY (T1 paper feed sensor PCB ASSY (non NFC models)).
- (7) Release each Hook and remove the T1 paper empty/paper feed sensor PCB ASSY (T1 paper feed sensor PCB ASSY (non NFC models)) from the Paper feed unit.



**Fig. 3-144**

Harness routing: Refer to "14. Paper feed unit".

## 9.37 Blower

- (1) Remove the double-sided adhesive tape of the Air duct film where the Blower is putted on.
- (2) Release the wiring of Blower harness.
- (3) Release each Hook and remove the Blower from the Frame R.

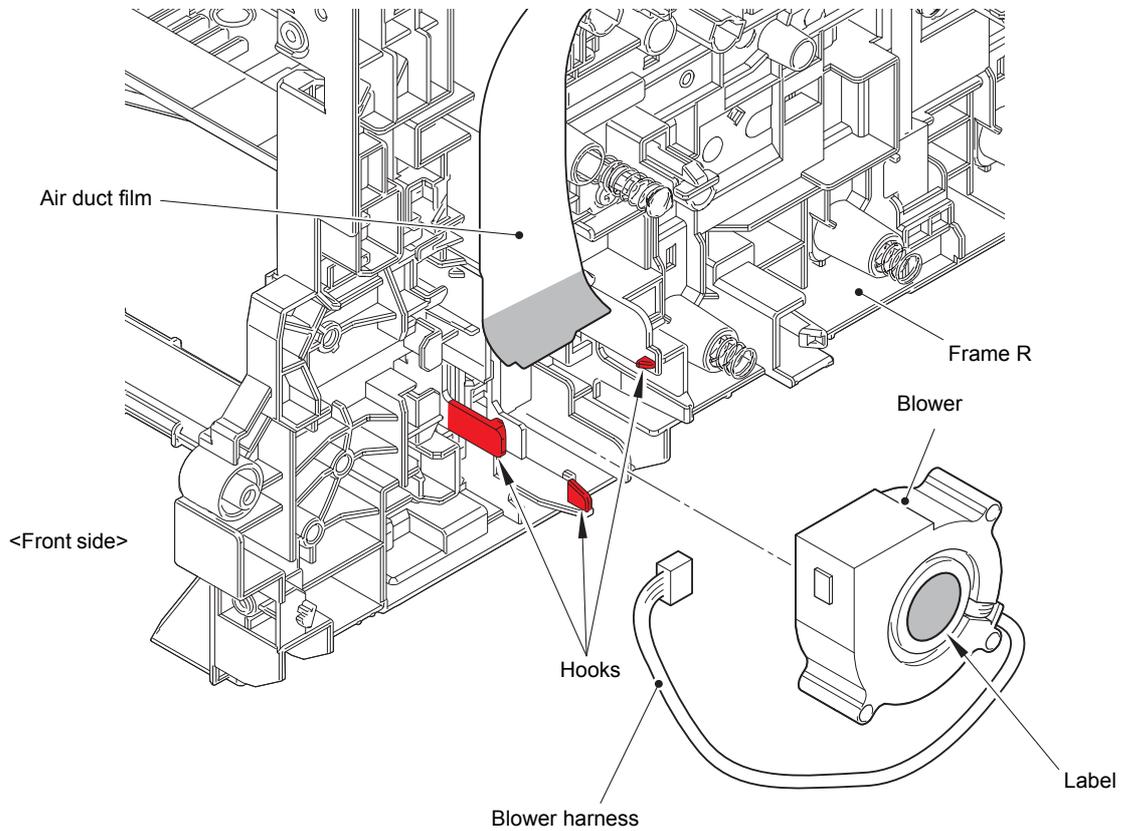


Fig. 3-145

**Assembling Note:**

When assembling the Blower, be sure to assemble it in a way that the Label side faces out.

Harness routing: Refer to "15. Blower".

# 10. DISASSEMBLY PROCEDURE (LT-330CL)

## 10.1 LT paper tray / Separation pad ASSY

- (1) Take out the LT paper tray unit from the LT unit.

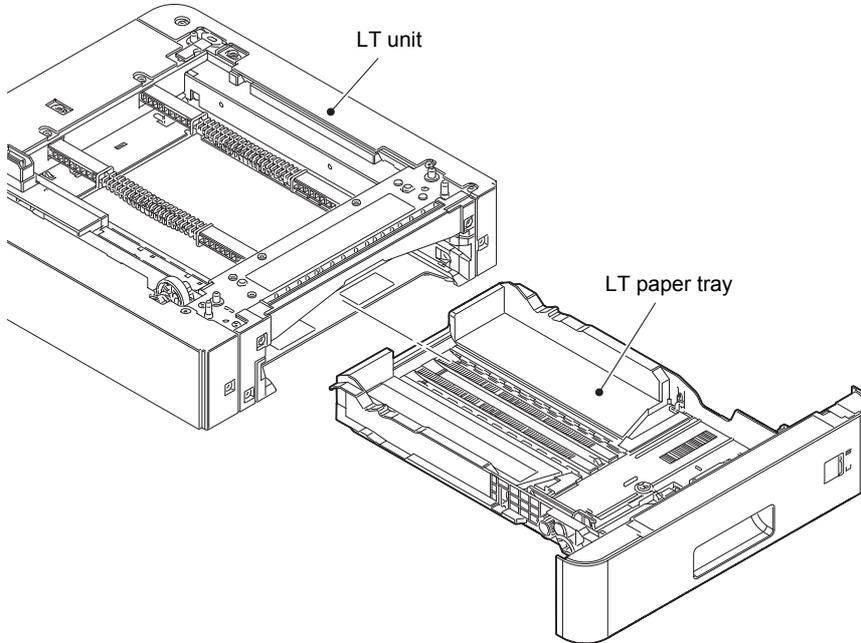


Fig. 3-146

- (2) Release each Hook of the Separation pad ASSY from the Paper tray.
- (3) Push both side Arms on the Separation pad ASSY inwards to remove the Pins, and remove the Separation pad ASSY from the Paper tray.
- (4) Remove the Separation pad spring from the Separation pad ASSY.

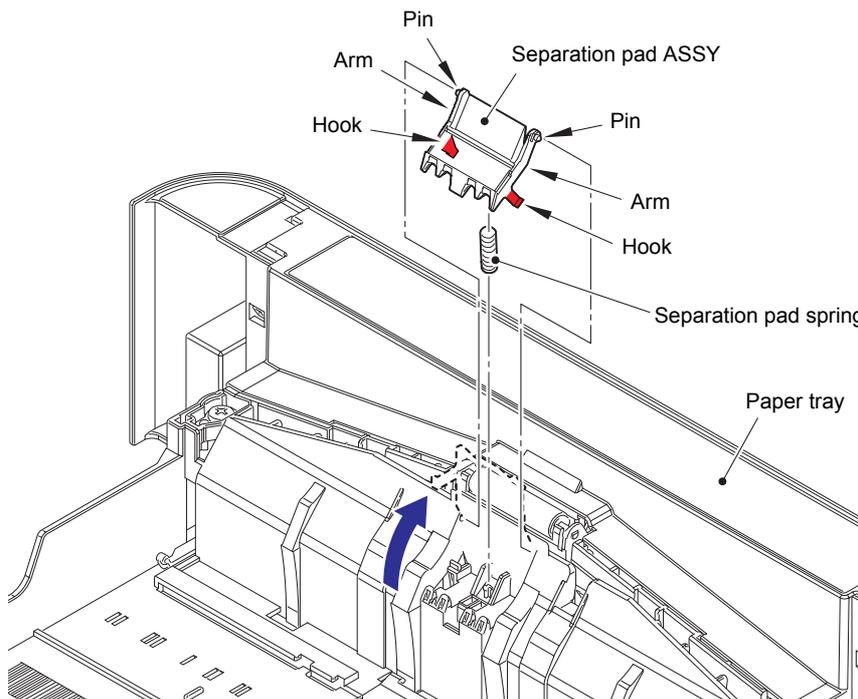


Fig. 3-147

## 10.2 LT roller holder ASSY

- (1) Push the Link arm in the direction of the arrow A, and turn the LT roller holder ASSY to remove the Boss.
- (2) Slide the LT roller holder ASSY in the direction of the arrow B to remove it from the Shaft, and remove the LT roller holder ASSY.

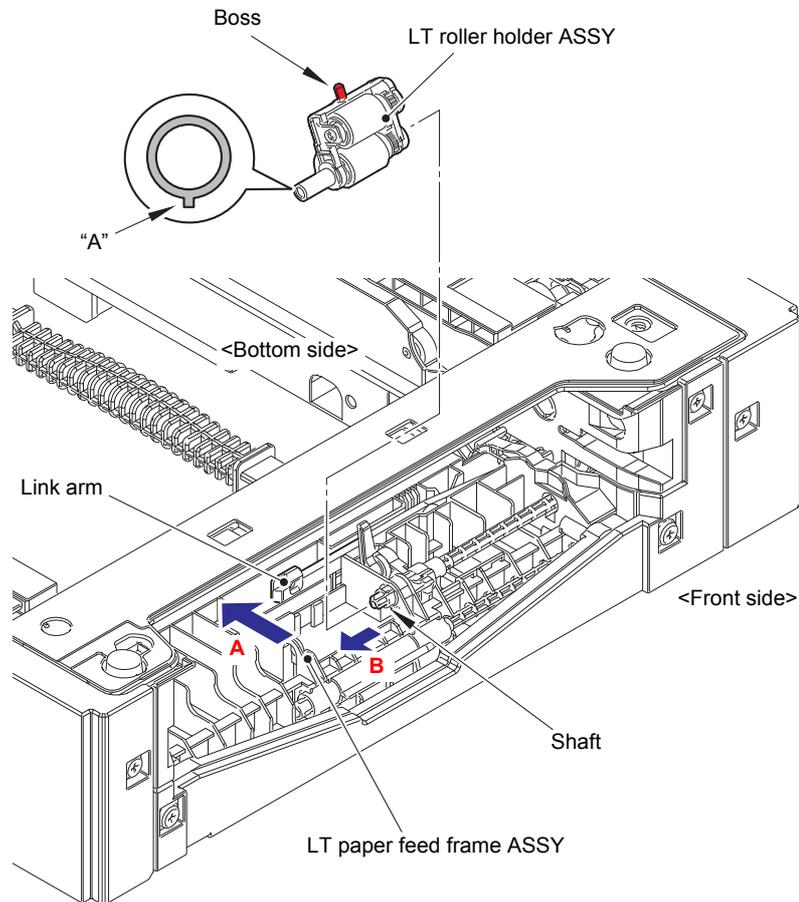


Fig. 3-148

### Assembling Note:

When attaching the LT roller holder ASSY, engage "A" on the Shaft of the LT roller holder ASSY with the Hole on the LT paper feed frame ASSY, and insert the Shaft into the Hole.

## 10.3 LT control PCB ASSY

- (1) Remove the two Shoulder screws M3 and the Taptite pan B M3x8 screw. Release each Hook and Boss, and remove the LT side cover L from the LT unit.

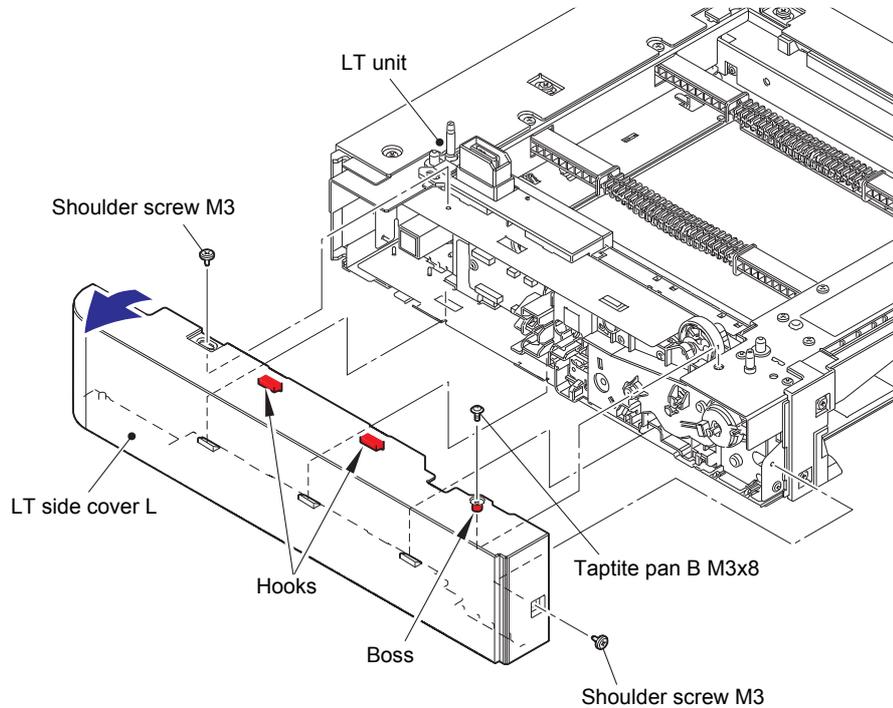


Fig. 3-149

- (2) Disconnect all harnesses from the LT control PCB ASSY.

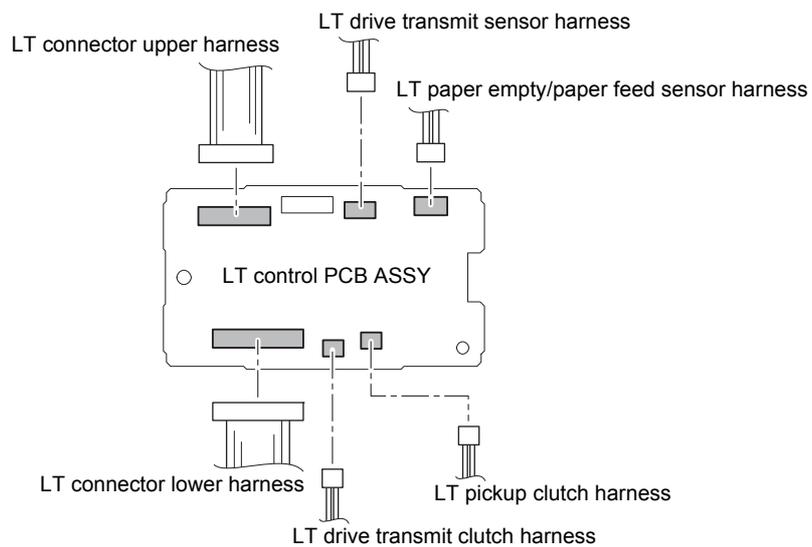
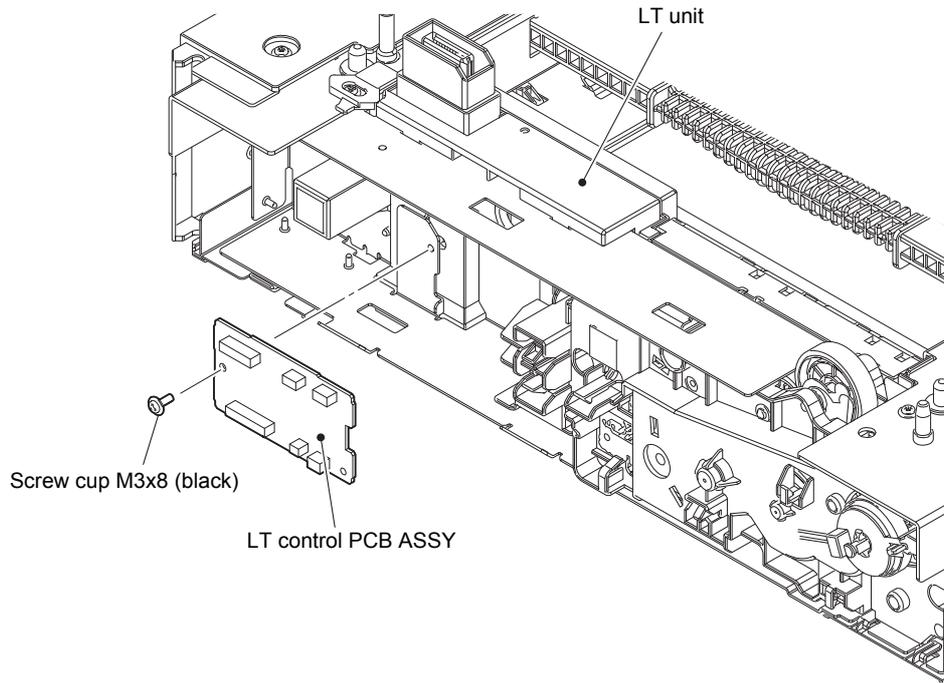


Fig. 3-150

Harness routing: Refer to "16. LT-330CL".

- (3) Remove the Screw cup S M3x8 (black) screw and remove the LT control PCB ASSY from the LT unit.



**Fig. 3-151**

## 10.4 LT paper feed unit

- (1) Remove the two Shoulder screws M3. Release each Hook and Boss, and remove the LT side cover R from the LT unit.

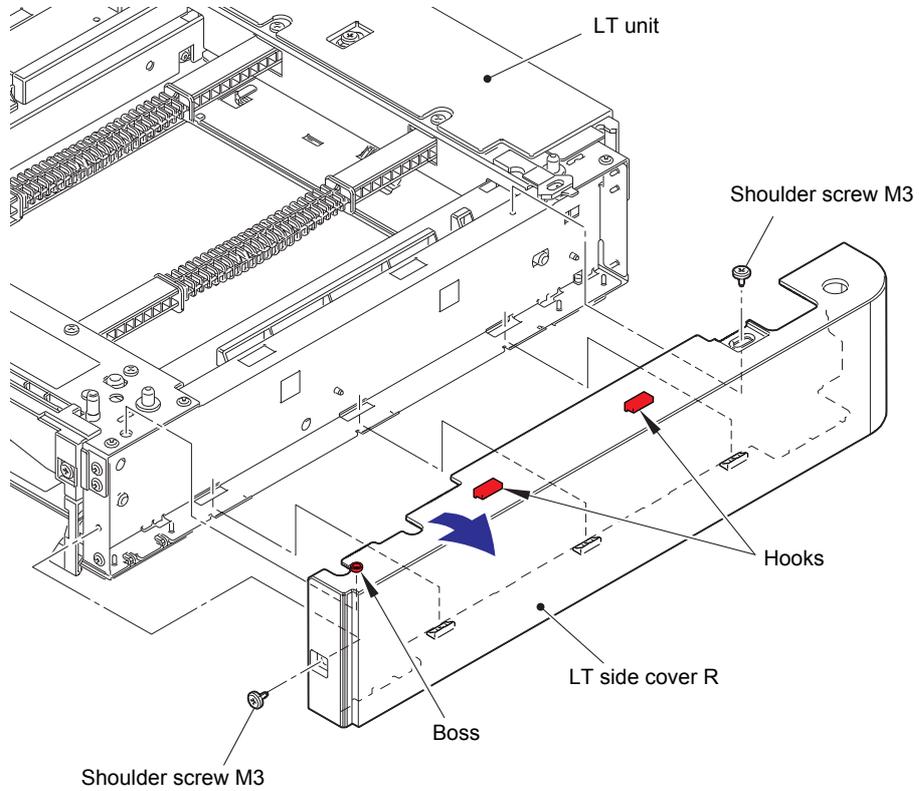
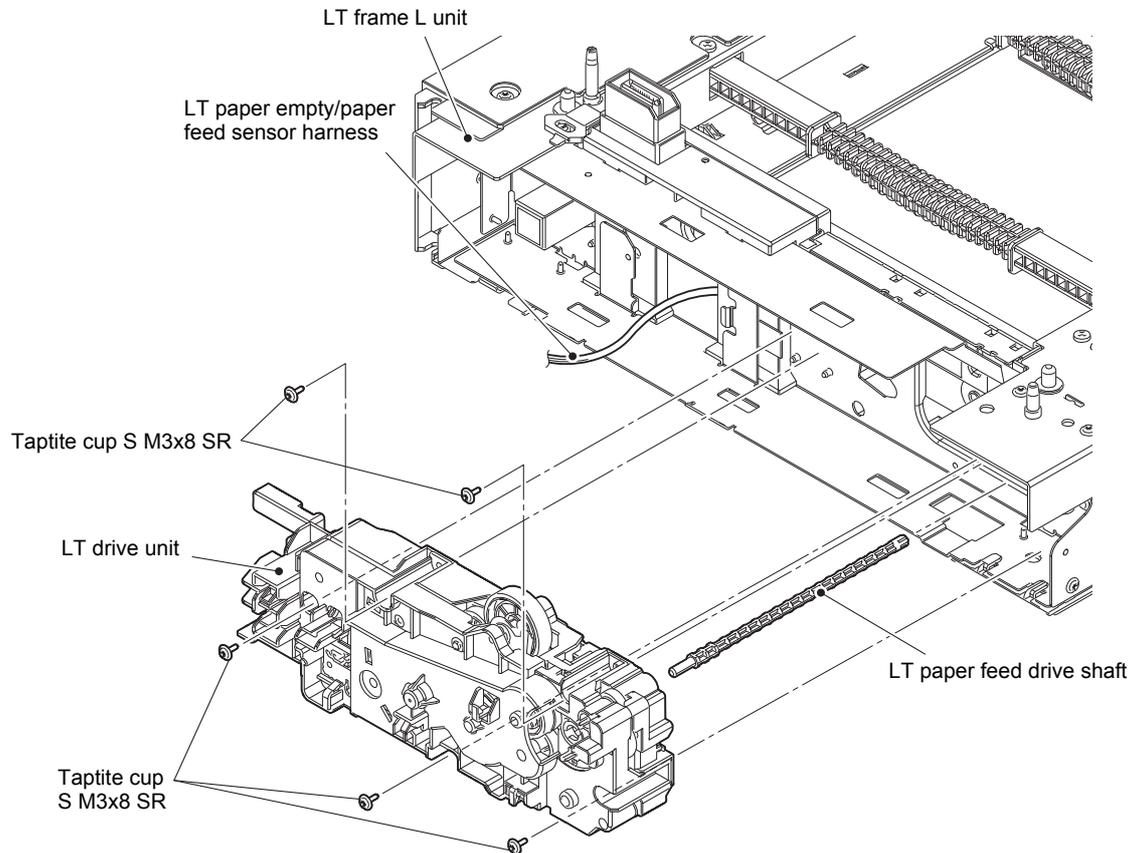


Fig. 3-152

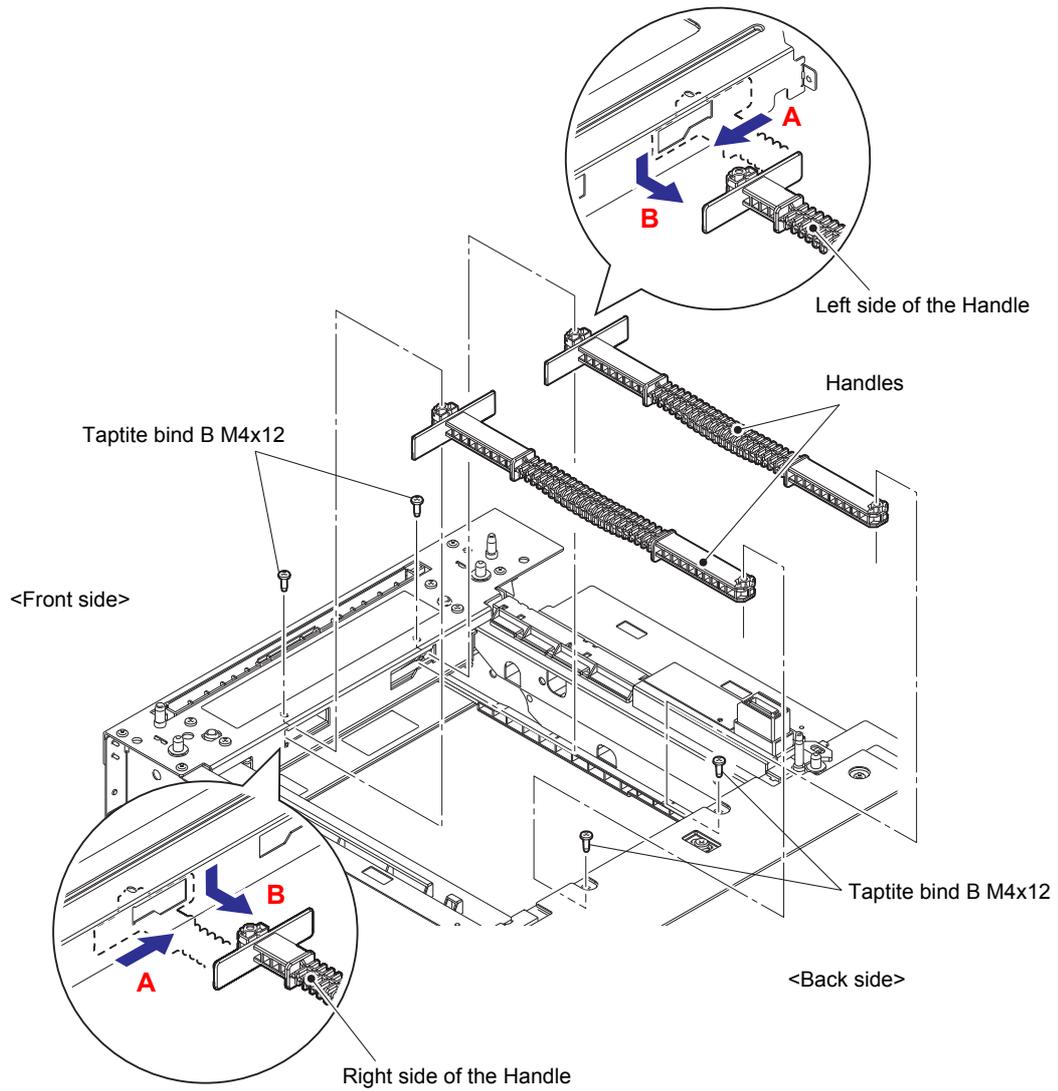
- (2) Release the LT paper empty/paper feed sensor harness from the securing fixtures.
- (3) Remove the five Taptite cup S M3x8 SR screws and remove the LT drive unit from the LT frame L unit.
- (4) Remove the LT paper feed drive shaft from the LT frame L unit.



**Fig. 3-153**

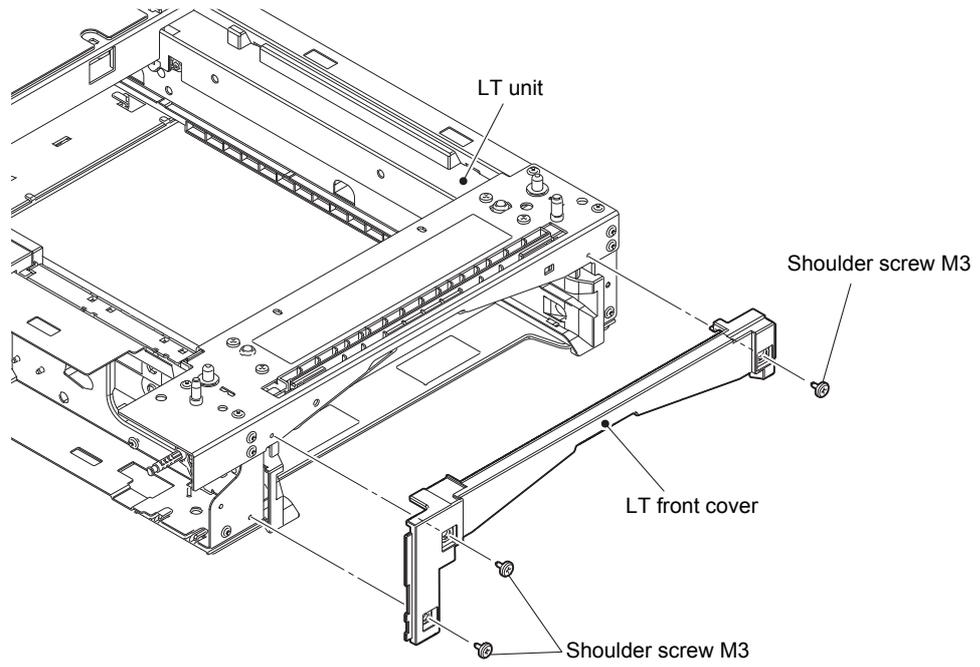
Harness routing: Refer to "16. LT-330CL".

(5) Remove the four Taptite bind B M4x12 screws and remove the two Handles.



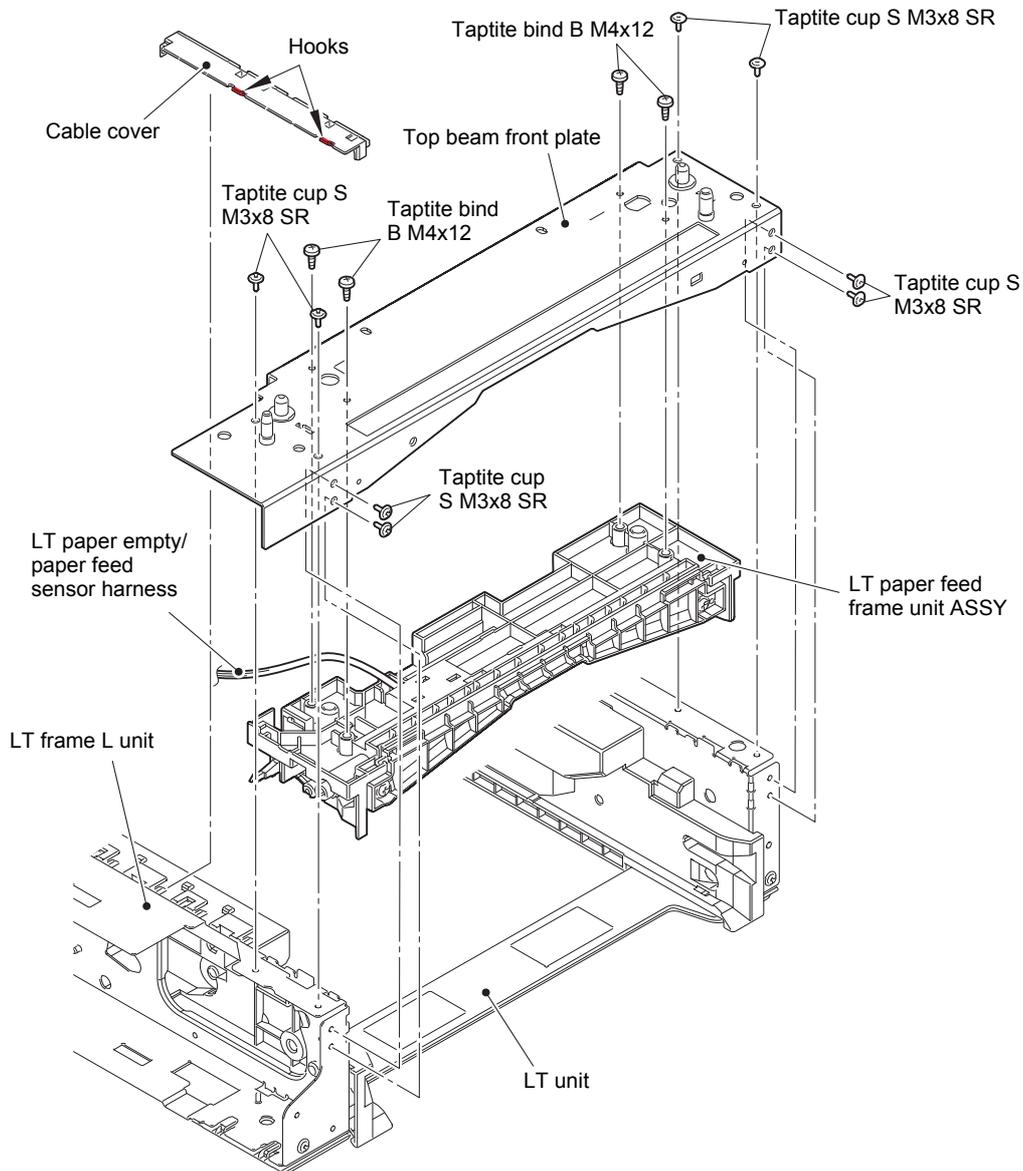
**Fig. 3-154**

(6) Remove the three Shoulder screws M3 and remove the LT front cover from the LT unit.



**Fig. 3-155**

- (7) Release each Hook of the Cable cover and remove the Cable cover from the LT frame L unit.
- (8) Remove the eight Taptite cup S M3x8 SR screws and four Taptite bind B M4x12 screws to remove the Top beam front plate from the LT unit.
- (9) Release the LT paper empty/paper feed sensor harness from the securing fixtures.
- (10) Remove the LT paper feed frame unit ASSY from the LT unit.



**Fig. 3-156**

Harness routing: Refer to "16. LT-330CL".

## 10.5 LT paper empty/paper feed sensor PCB ASSY

- (1) Remove the LT edge actuator spring from the Hook of LT paper feed frame unit ASSY and LT edge actuator.
- (2) Release the Hook on the Bushing, and pull out the LT separation roller shaft to remove the LT edge actuator and LT paper empty actuator.
- (3) Release the LT paper empty/paper feed sensor harness from the securing fixtures. Remove each Hook, and remove the LT paper empty/paper feed sensor PCB ASSY from the LT paper feed frame unit ASSY.

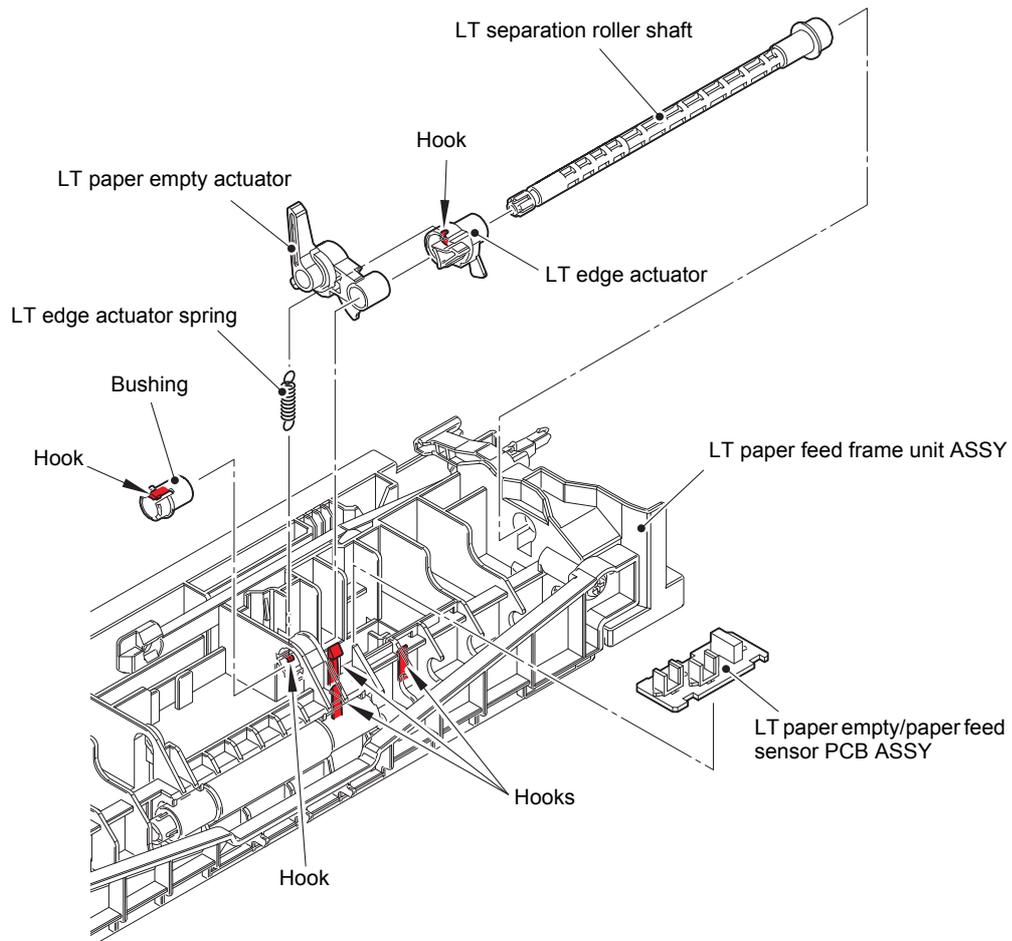


Fig. 3-157

# 11. DISASSEMBLY PROCEDURE (LT-340CL)

## 11.1 LT paper tray / Separation pad ASSY

- (1) Take out the LT paper tray unit from the LT unit.

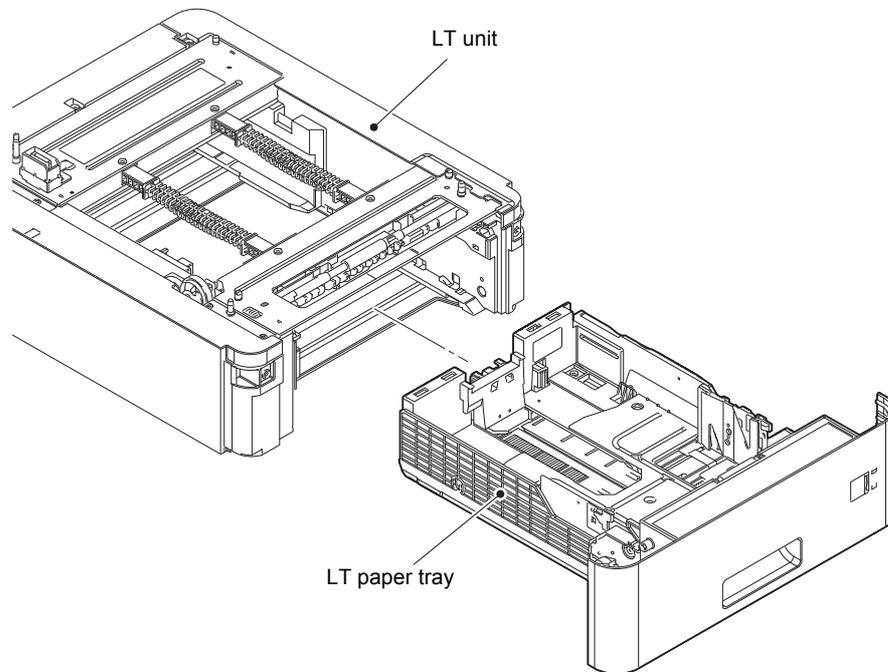


Fig. 3-158

- (2) Release each Hook of the Separation pad ASSY from the Paper tray.
- (3) Push both side Arms on the Separation pad ASSY inwards to remove the Pins, and remove the Separation pad ASSY from the paper tray.
- (4) Remove the Separation pad spring from the Separation pad ASSY.

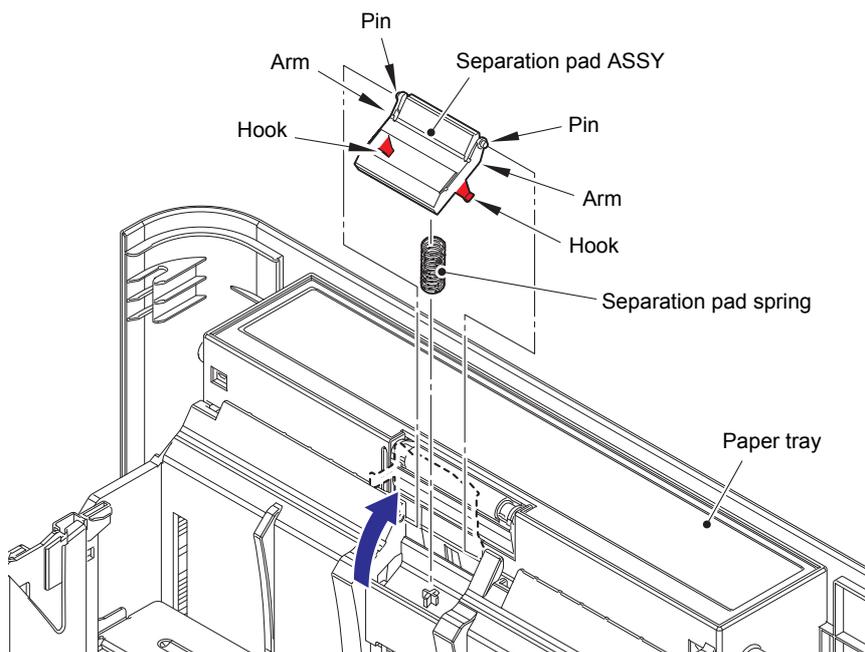


Fig. 3-159

## 11.2 Separation roller ASSY

- (1) Release the Hook and slide the Separation roller ASSY in the direction of the arrow.
- (2) Turn the Separation roller ASSY in the direction of the arrow 2a. Remove the Separation roller ASSY from the Paper feed drive shaft in the direction of the arrow 2b.

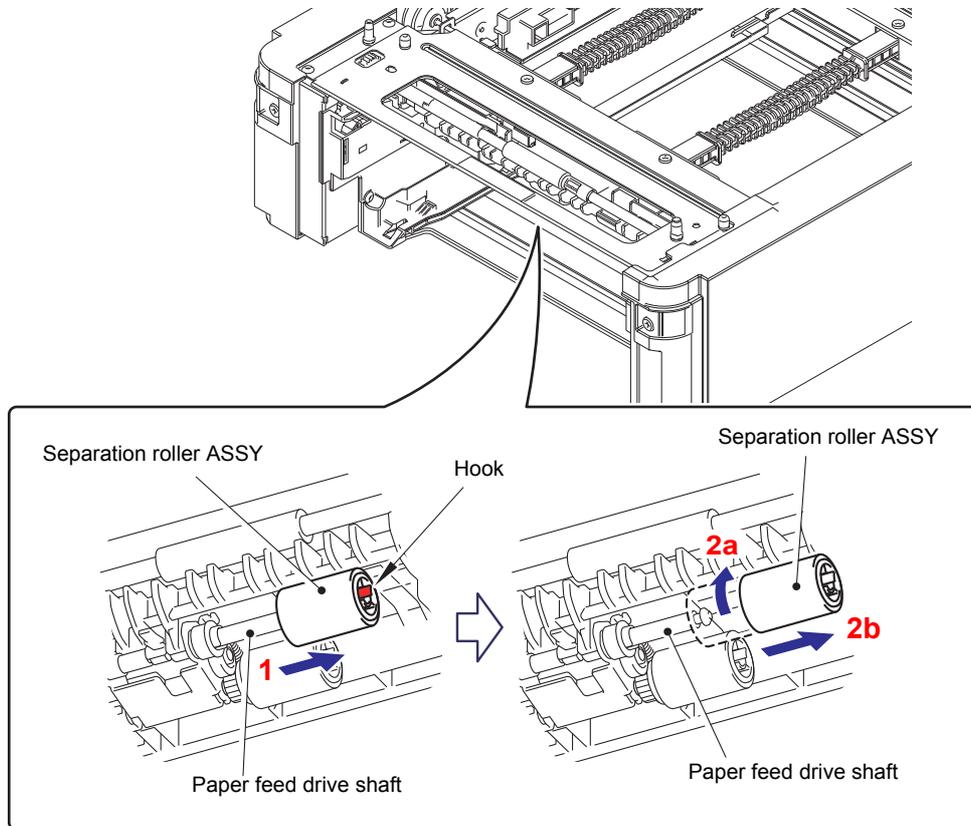


Fig. 3-160

### Assembling Note:

- When assembling the Separation roller ASSY, assemble it by sliding it in the direction of the arrow b as rotating the Separation roller ASSY in the direction of the arrow a.

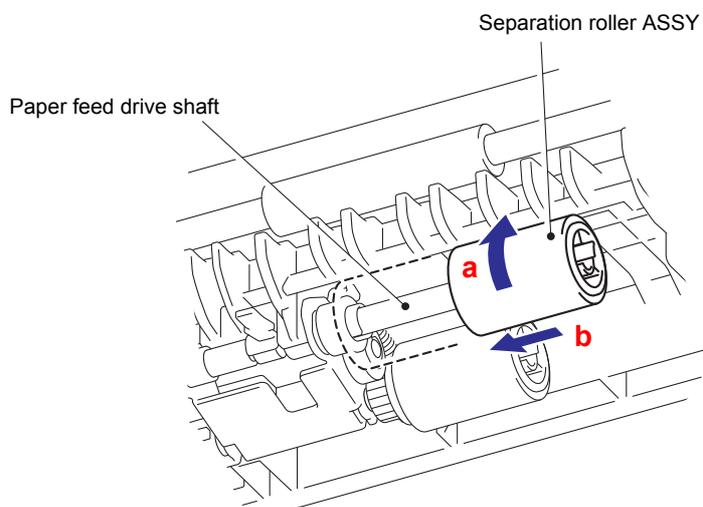


Fig. 3-161

## 11.3 LT cover rear

- (1) Remove the Shoulder screw M3. Release each Boss, and remove the LT cover rear.

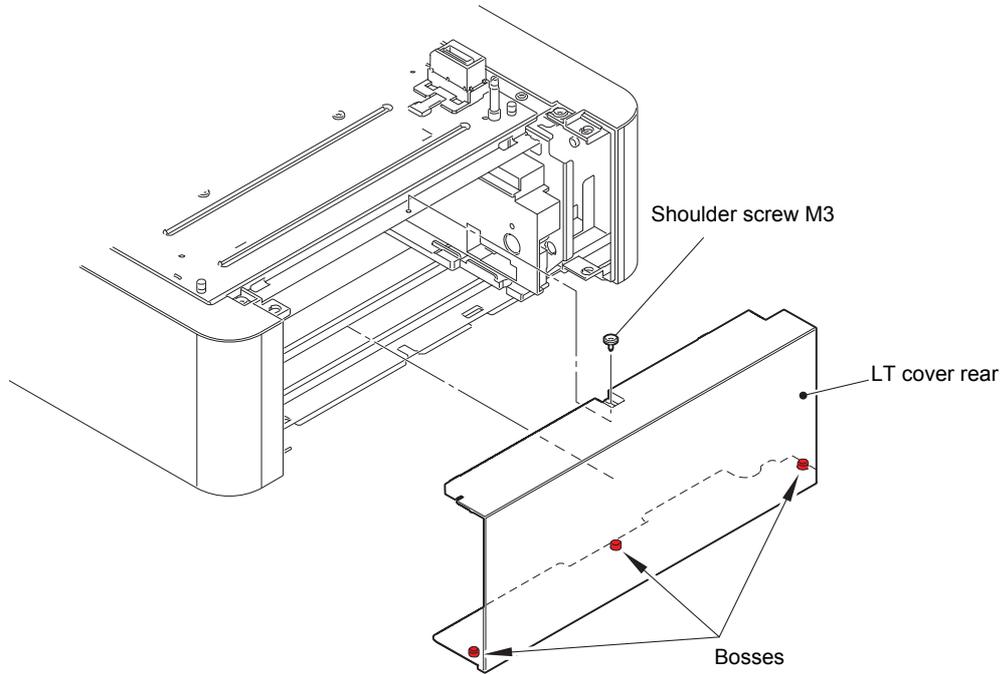


Fig. 3-162

## 11.4 LT control PCB ASSY

- (1) Remove the two Shoulder screws M3. Release each Hook, and remove the LT cover left.

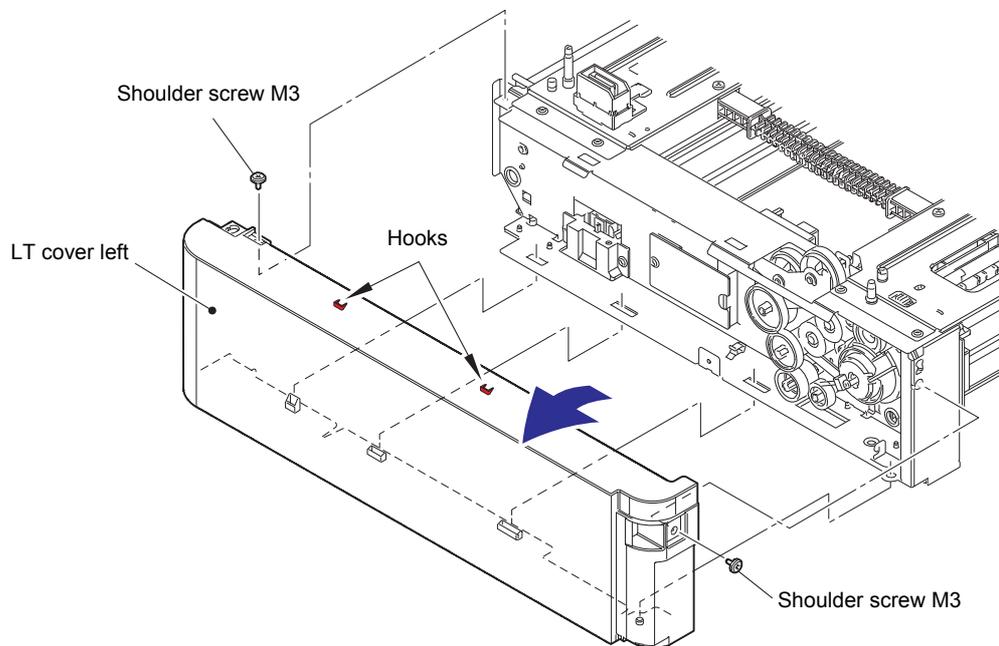


Fig. 3-163

- (2) Disconnect all harnesses from the LT control PCB ASSY.  
(Remove the Plate motor harness after release the Connector lock.)

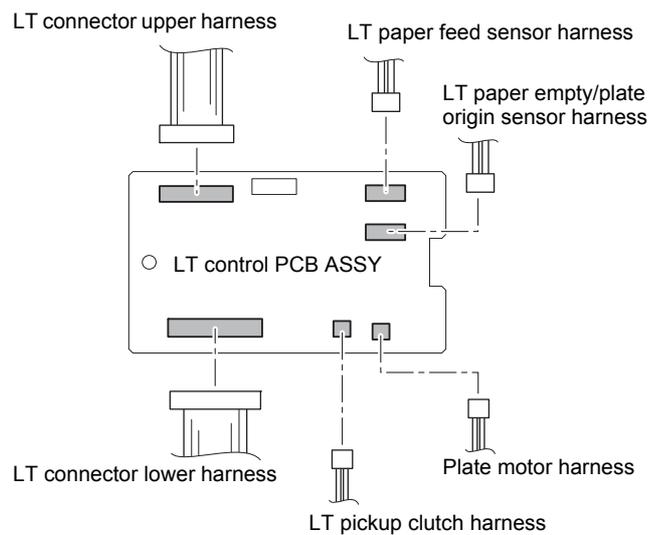
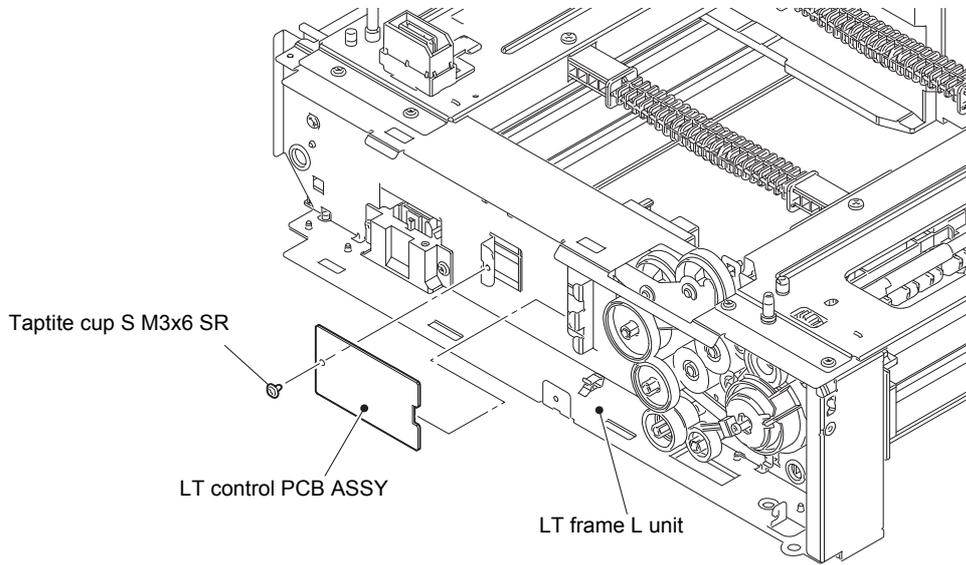


Fig. 3-164

Harness routing: Refer to "17. LT-340CL".

- (3) Remove the Taptite cup S M3x6 SR screw and remove the LT control PCB ASSY from the LT frame L unit.



**Fig. 3-165**

## 11.5 LT paper feed frame unit

- (1) Remove the two Shoulder screws M3. Release each Hook, and remove the LT cover right.

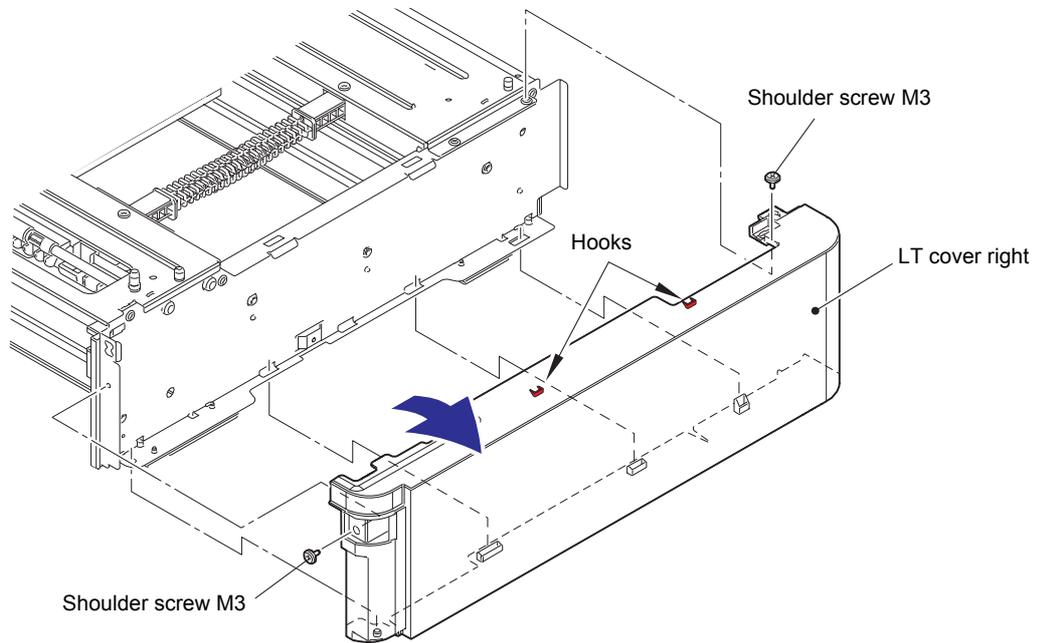


Fig. 3-166

- (2) Remove the Clutch spring from the Hook of Clutch arm ASSY and the Hook of LT frame L unit.

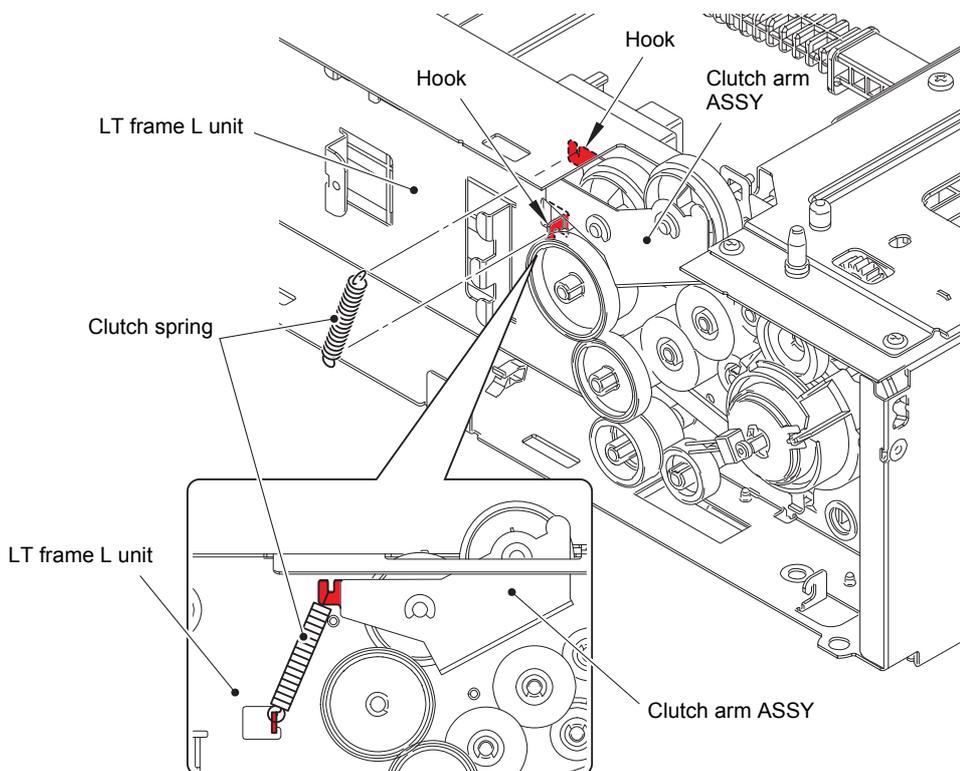
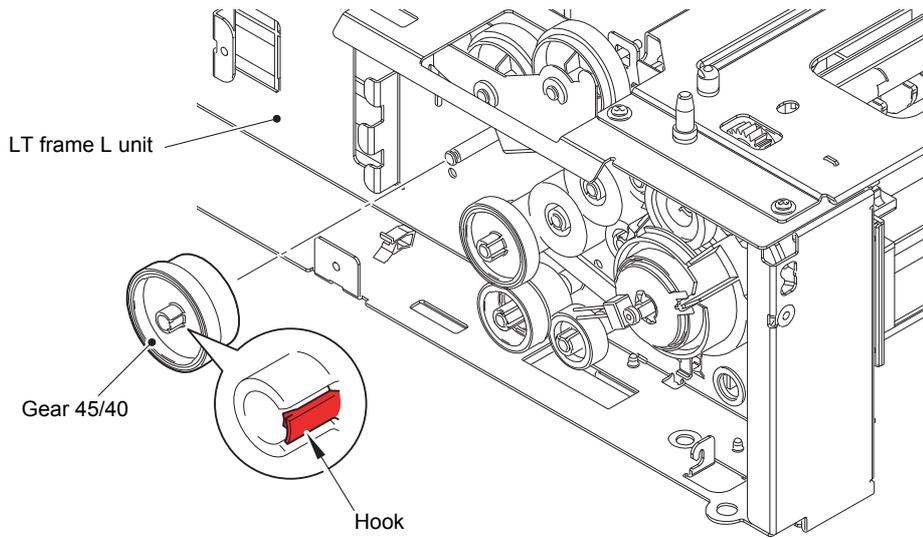


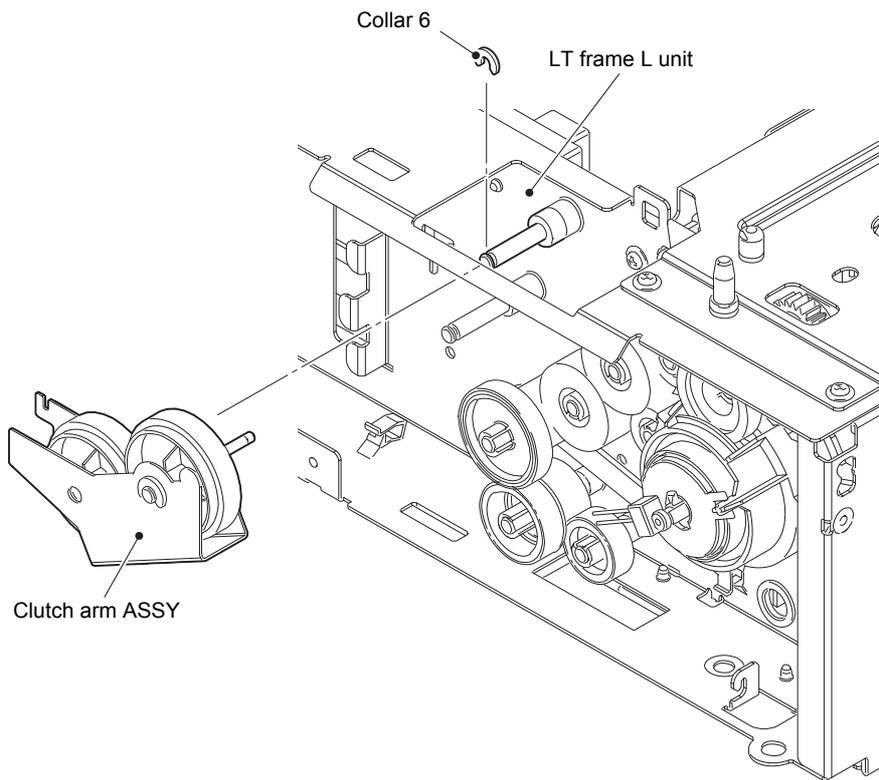
Fig. 3-167

(3) Release the Hook and remove the Gear 45/40 from the LT frame L unit.



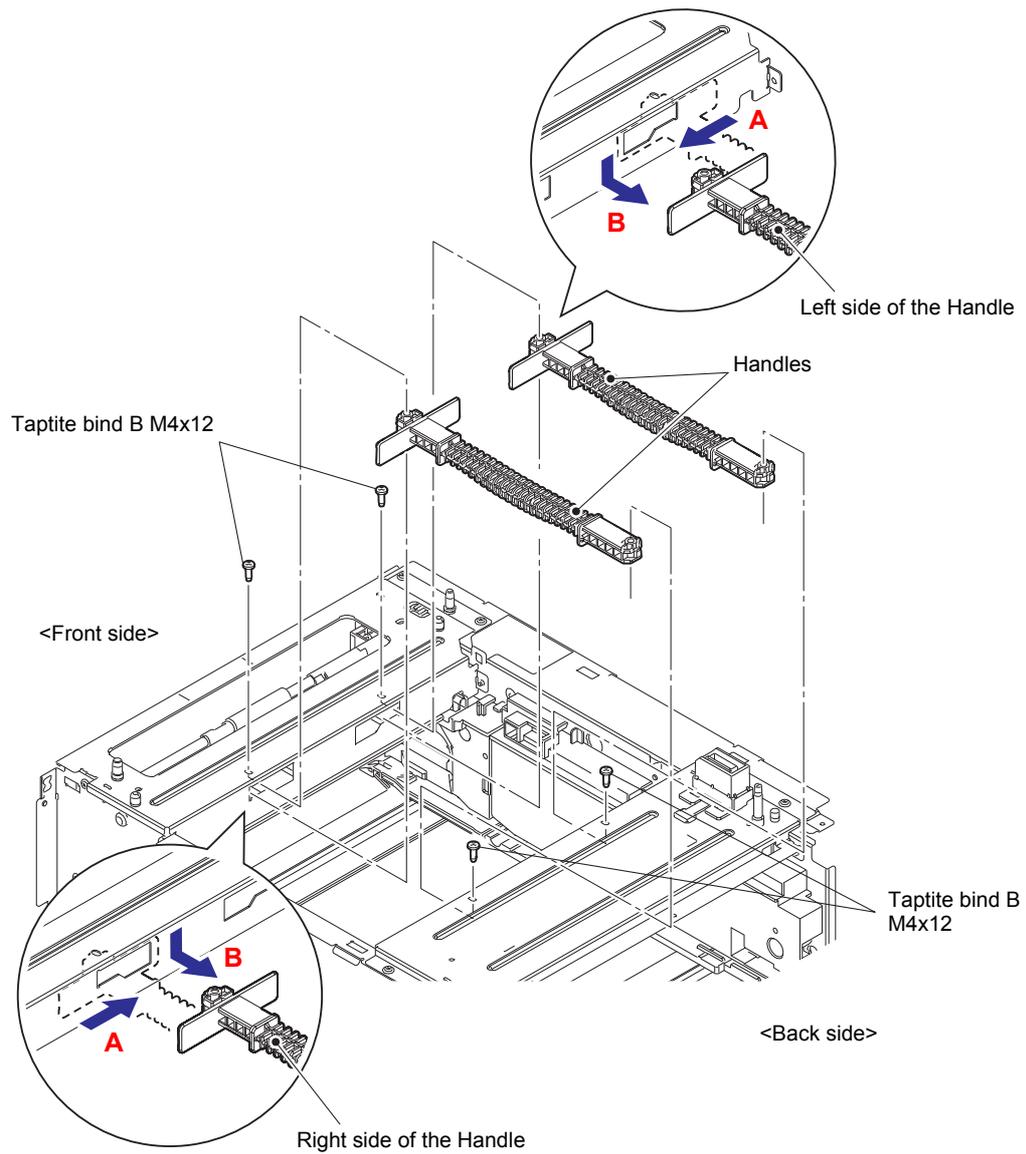
**Fig. 3-168**

(4) Remove the Collar 6, and remove the Clutch arm ASSY from the LT frame L unit.



**Fig. 3-169**

(5) Remove the four Taptite bind B M4x12 screws and remove the two Handles.



**Fig. 3-170**

- (6) Remove the five Taptite cup S M3x6 SR screws and remove the LT beam F ASSY.

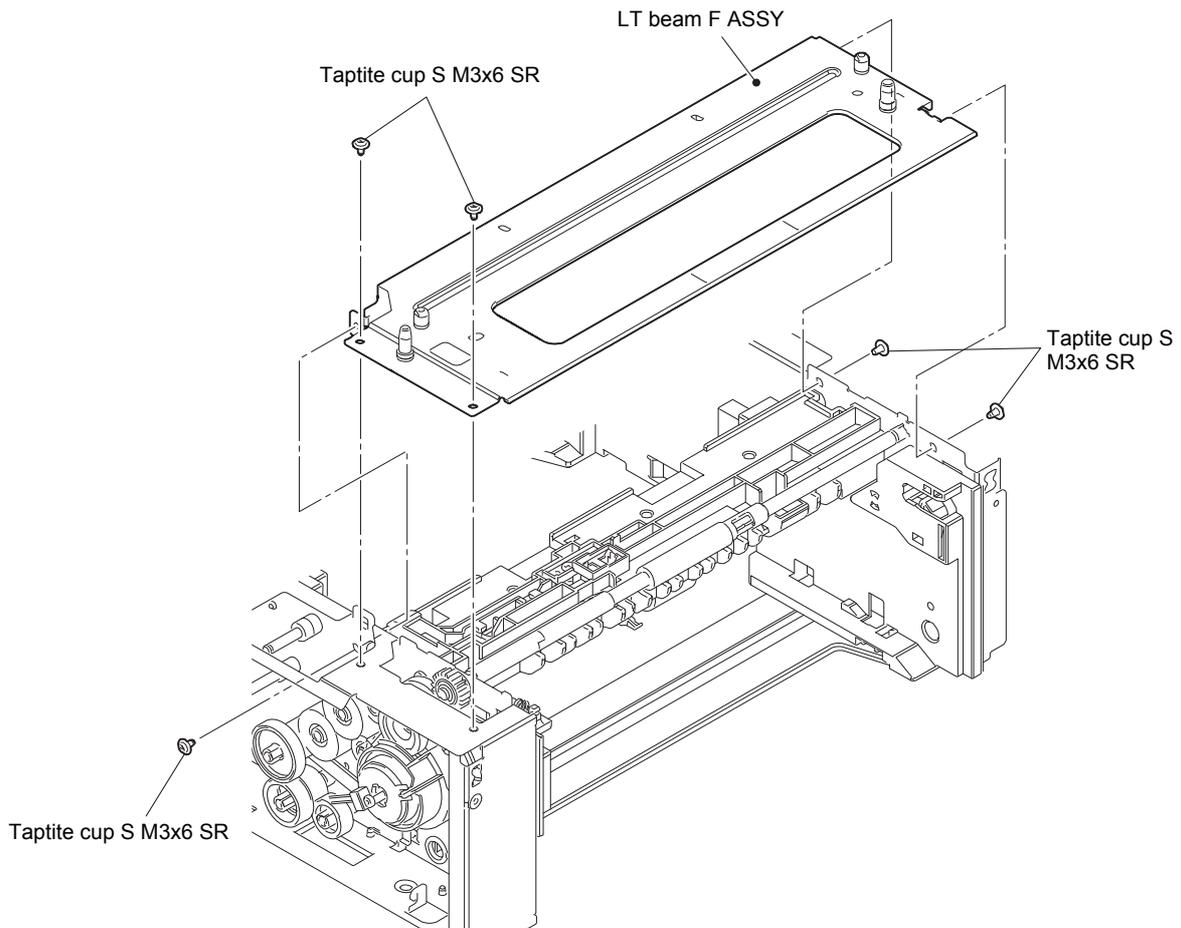


Fig. 3-171

- (7) Remove the Retaining ring E4 from the Feed roller and remove the Gear 24 and Feed roller bushing.

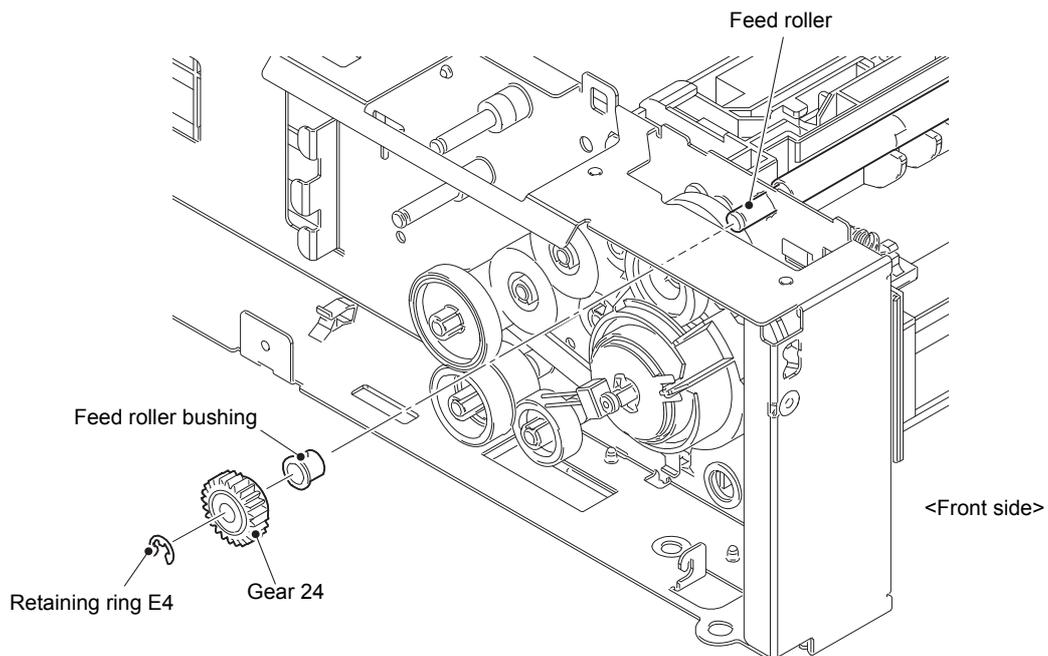
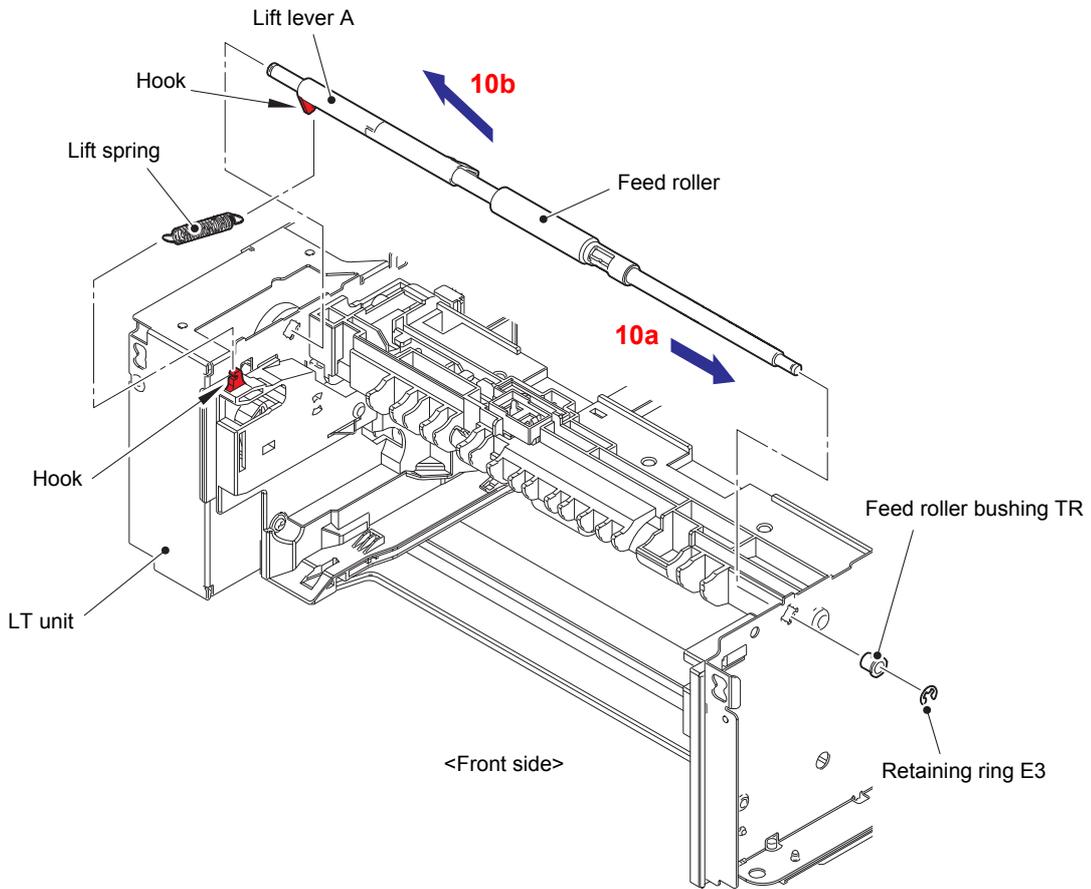


Fig. 3-172

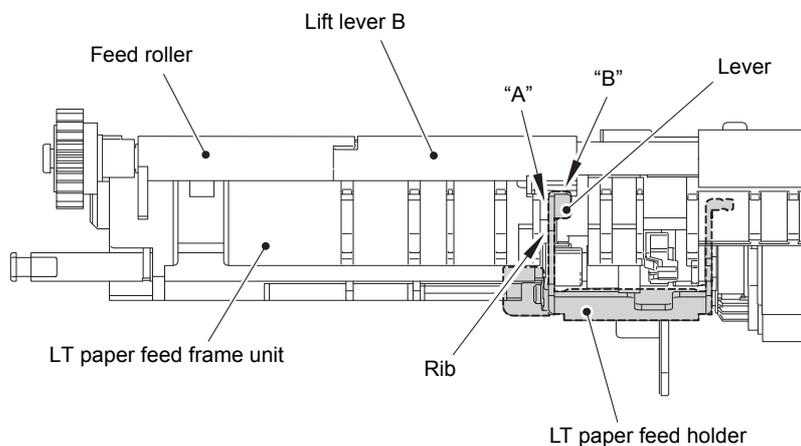
- (8) Remove the Retaining ring E3 from the Feed roller and remove the Feed roller bushing TR.
- (9) Remove the Lift spring from the Hook of the Lift lever A and the Hook of the LT unit.
- (10) Remove the Feed roller in the directions of the arrows 10a and 10b in this order.



**Fig. 3-173**

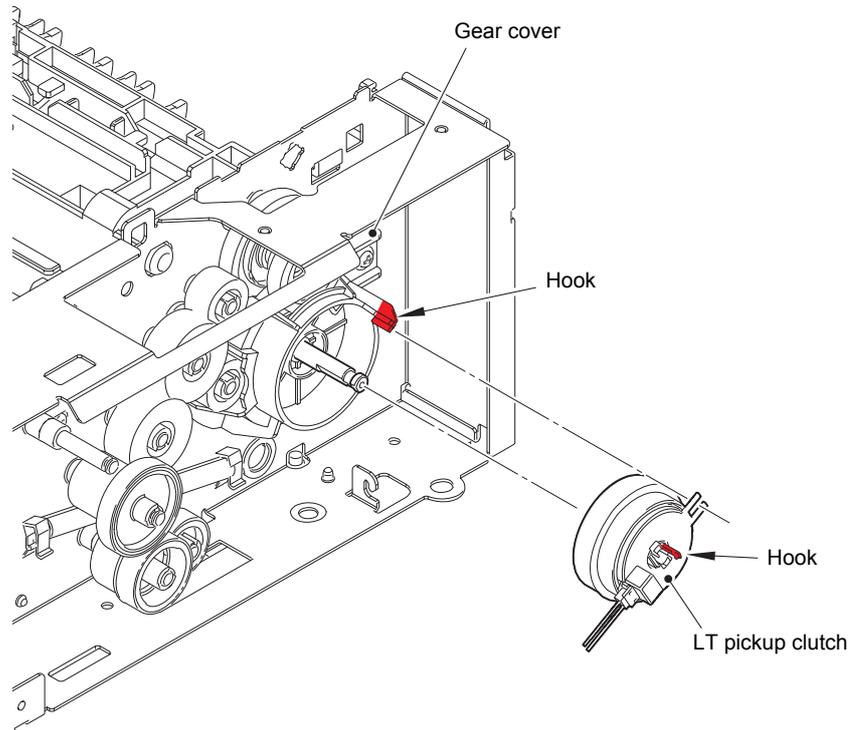
**Assembling Note:**

When assembling the Feed roller, be sure to assemble it in a way that the LT paper feed frame unit comes between "A" and "B" of the Lift lever B, and the Lever of the LT paper feed holder comes in front of "B".



**Fig. 3-174**

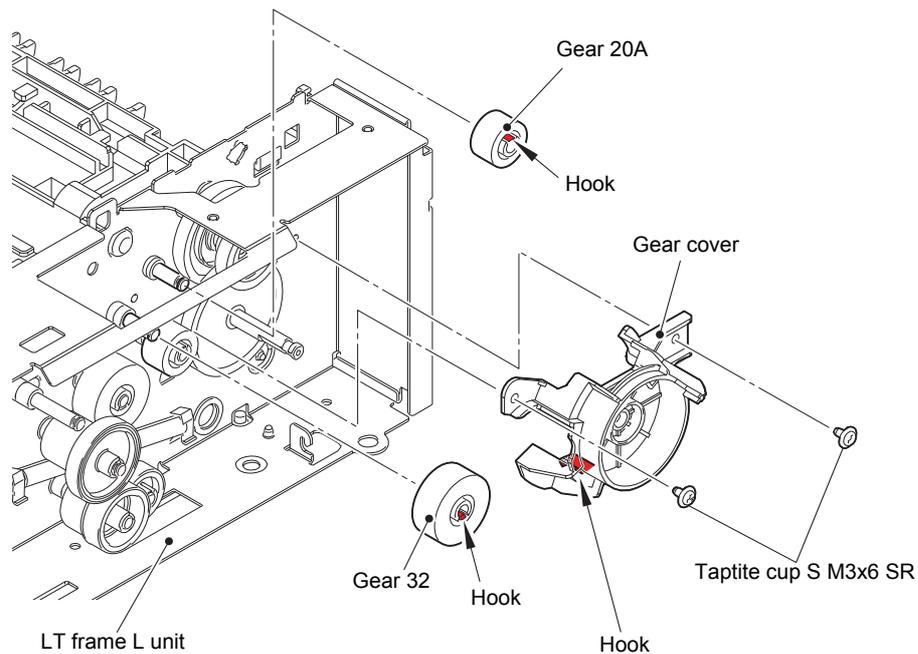
- (11) Release the LT pickup clutch harness from the securing fixtures. Release the Hook of LT pickup clutch and the Hook of Gear cover, then remove the LT pickup clutch.



**Fig. 3-175**

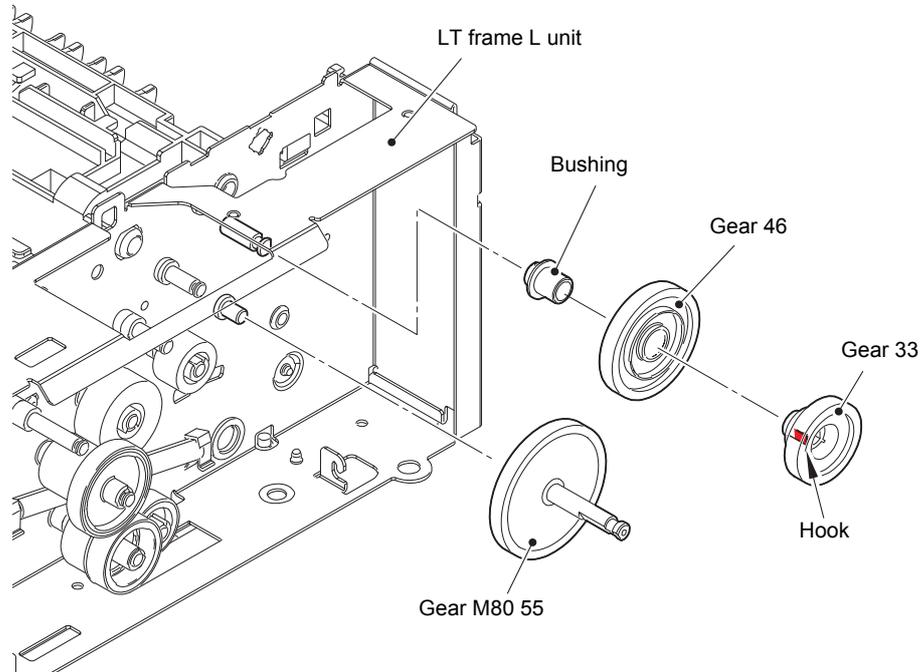
Harness routing: Refer to "17. LT-340CL".

- (12) Release the Hook and remove the Gear 32 from the LT frame L unit.  
(13) Release the Hook and remove the Gear 20A from the LT frame L unit.  
(14) Remove the two Taptite cup S M3x6 SR screws. Release the Hook and remove the Gear cover from the LT frame L unit.



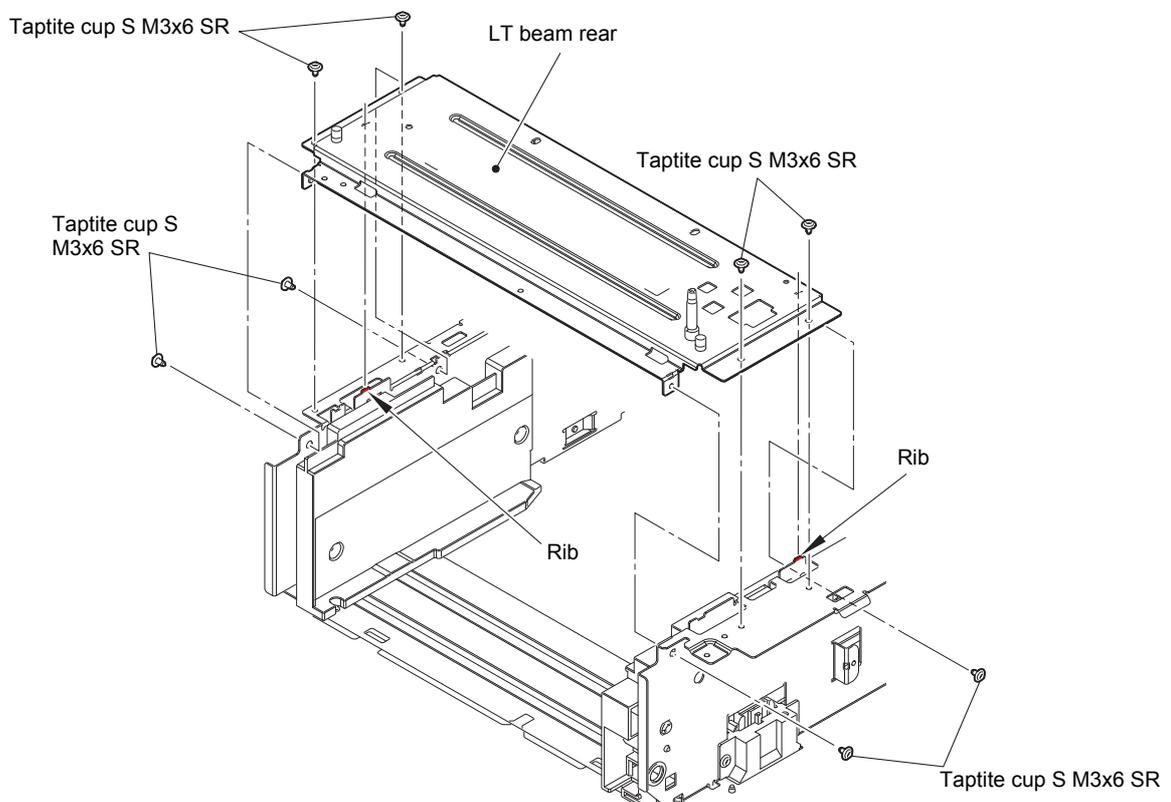
**Fig. 3-176**

- (15) Release the Hook and remove the Gear 33 from the LT frame L unit.
- (16) Remove the Gear M80 55 from the LT frame L unit.
- (17) Remove the Gear 46 from the LT frame L unit.
- (18) Remove the Bushing from the LT frame L unit.



**Fig. 3-177**

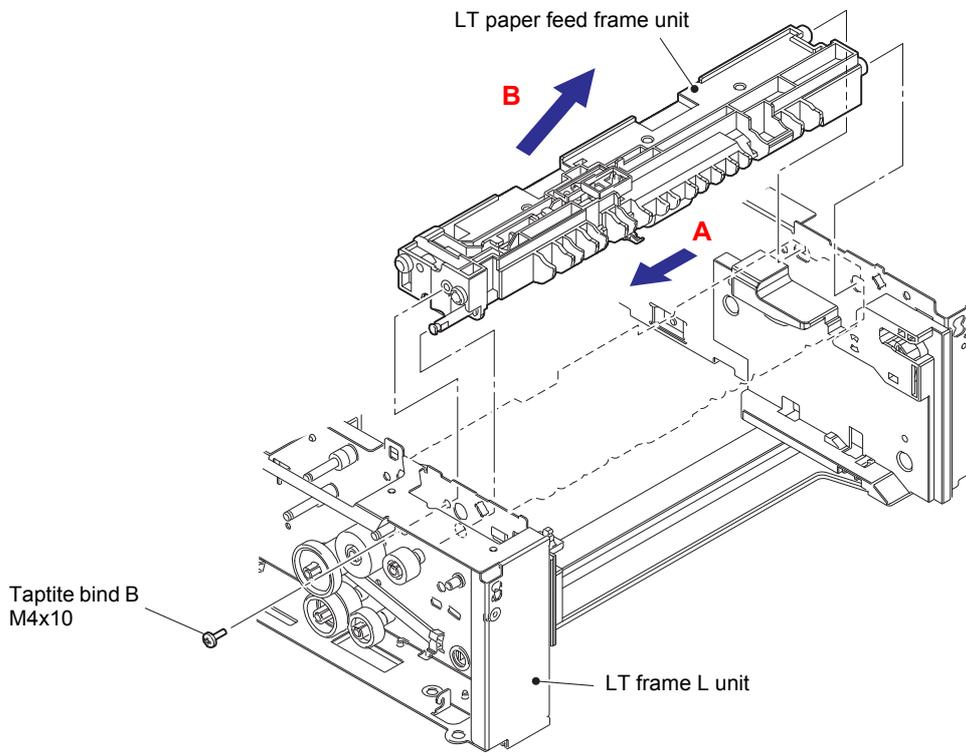
- (19) Remove the eight Taptite cup S M3x6 SR screws and lift the LT beam rear from the two Ribs slightly.



**Fig. 3-178**

(20) Release the LT paper feed sensor harness and LT paper empty/plate origin sensor harness from the securing fixtures.

(21) Remove the Taptite bind B M4x10 screw. Remove the LT paper feed frame unit as figure below.

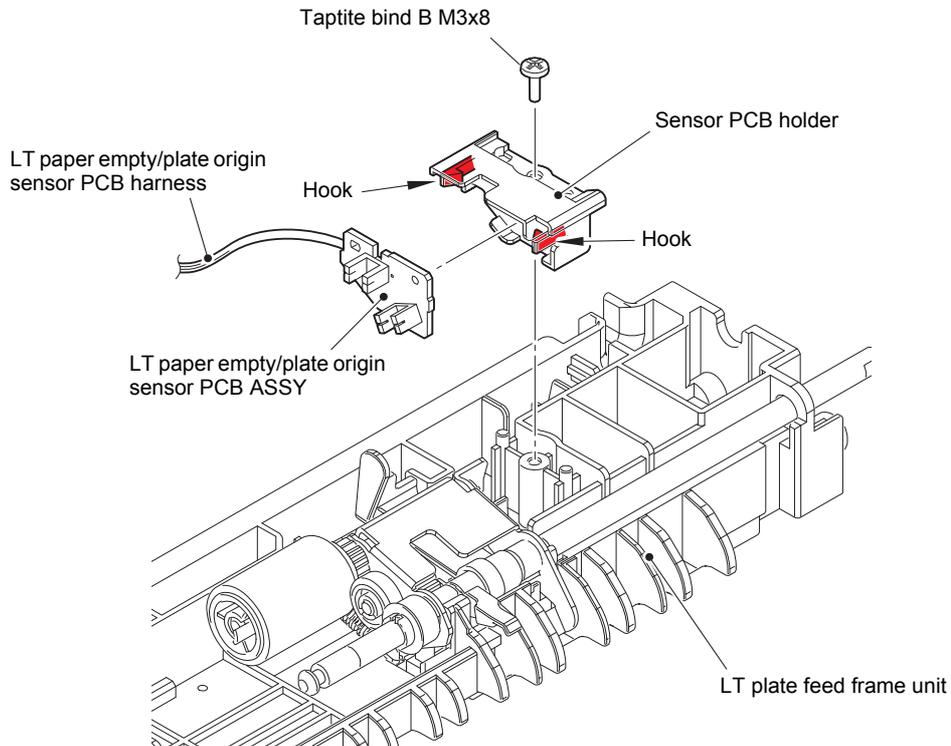


**Fig. 3-179**

Harness routing: Refer to "17. LT-340CL".

## 11.6 LT paper empty/plate origin sensor PCB ASSY

- (1) Release the LT paper empty/plate origin sensor PCB harness from the securing fixtures.
- (2) Remove the Taptite bind B M3x8 screw and remove the Sensor PCB holder from the LT plate feed frame unit.
- (3) Remove each Hook, and remove the LT paper empty/plate origin sensor PCB ASSY from the Sensor PCB holder.



**Fig. 3-180**

Harness routing: Refer to "17. LT-340CL".

## 12. DISASSEMBLY PROCEDURE (TT UNIT)

### 12.1 Preparation

#### ■ Disconnecting Cables and Removing Accessories

Prior to proceeding with the disassembly procedure,

(1) Disconnect the following:

- AC cord
- Relay AC cord

(2) Remove the following:

- TT paper trays

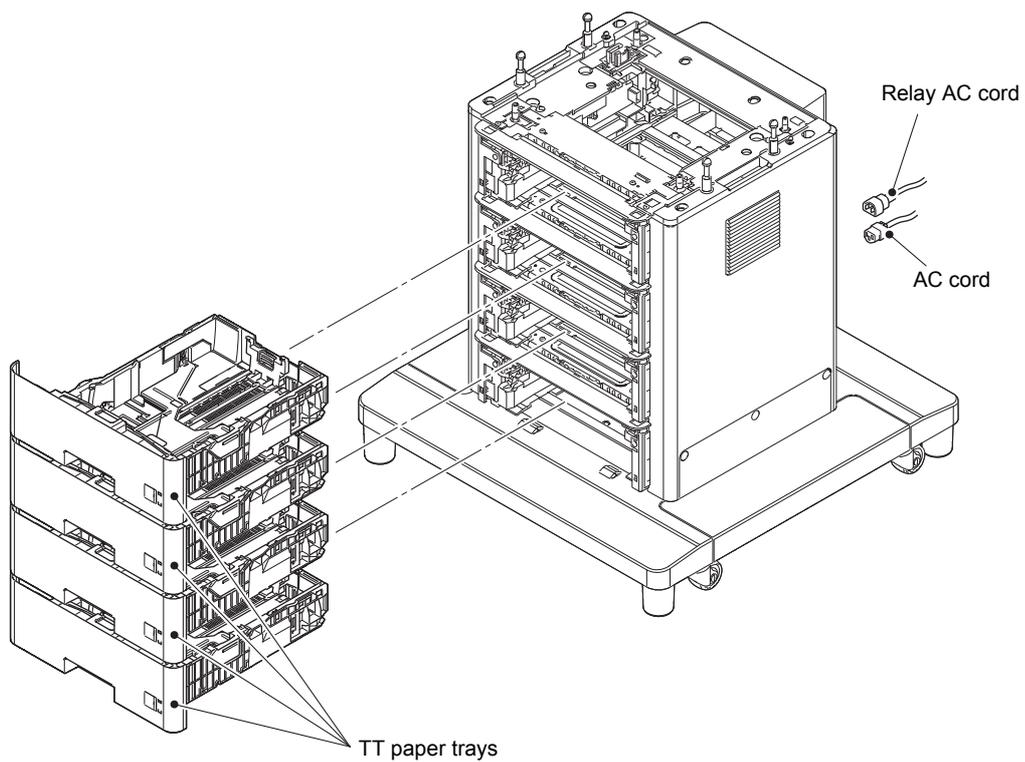


Fig. 3-181

## 12.2 TT paper tray

- (1) Release the two hooks on the separation pad ASSY from the TT paper tray.
- (2) Push both arms of the separation pad ASSY inwards and release the pins to remove the separation pad ASSY from the TT paper tray.
- (3) Remove the separation pad spring from the separation pad ASSY.

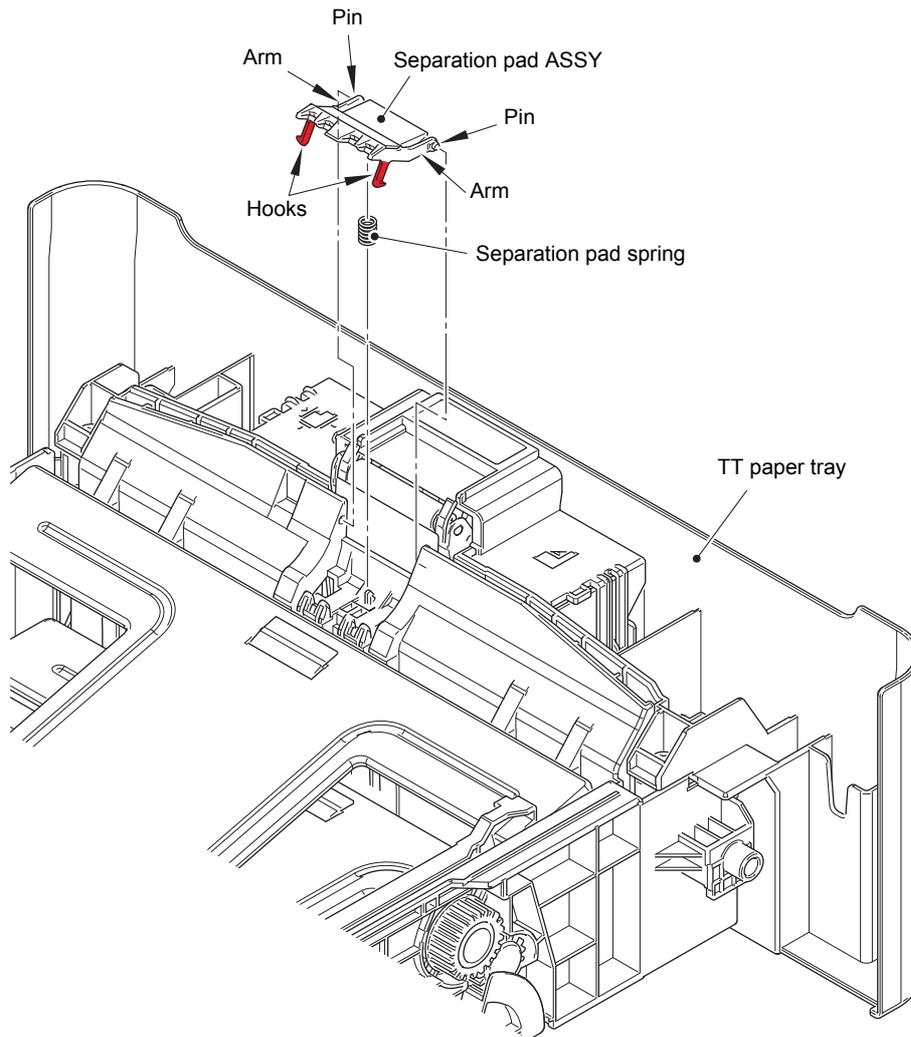
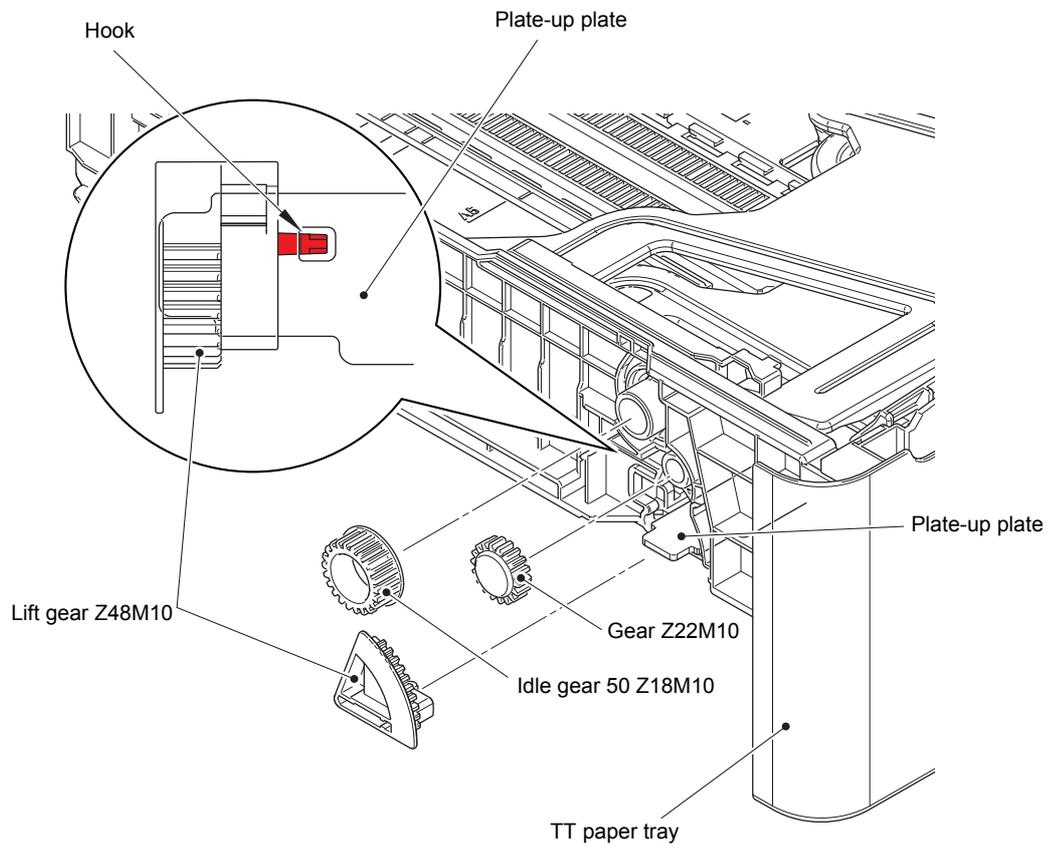


Fig. 3-182

- (4) Press the hook on the lift gear Z48M10 while lifting the plate-up plate to remove the lift gear Z48M10 from the TT paper tray.
- (5) Remove the gear Z22M10 and idle gear 50 Z18M10 from the TT paper tray.



**Fig. 3-183**

## 12.3 TT roller holder ASSY

- (1) Push the link arm in the direction of the arrow A, and turn the TT roller holder ASSY to remove the boss.
- (2) Slide the TT roller holder ASSY in the direction of the arrow B to remove it from the shaft, and remove the TT roller holder ASSY.

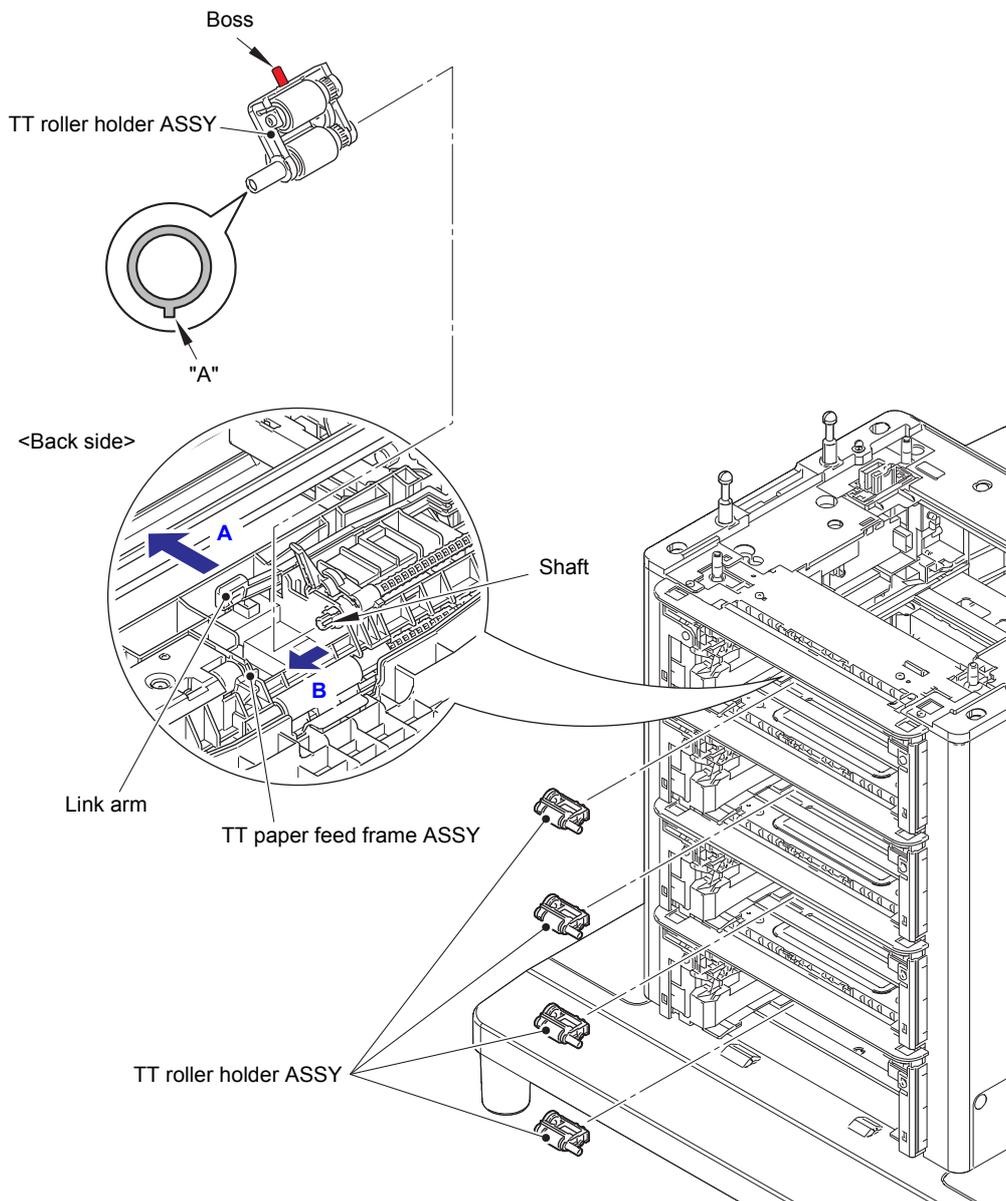


Fig. 3-184

### Assembling Note:

- When assembling the TT roller holder ASSY, engage the hole of the TT paper feed frame ASSY with the "A" part of the shaft on the TT roller holder ASSY.

## 12.4 Covers

- (1) Remove the eight shoulder screws and two taptite bind B M4x10 screws. Release the two hooks to remove the top cover TT.

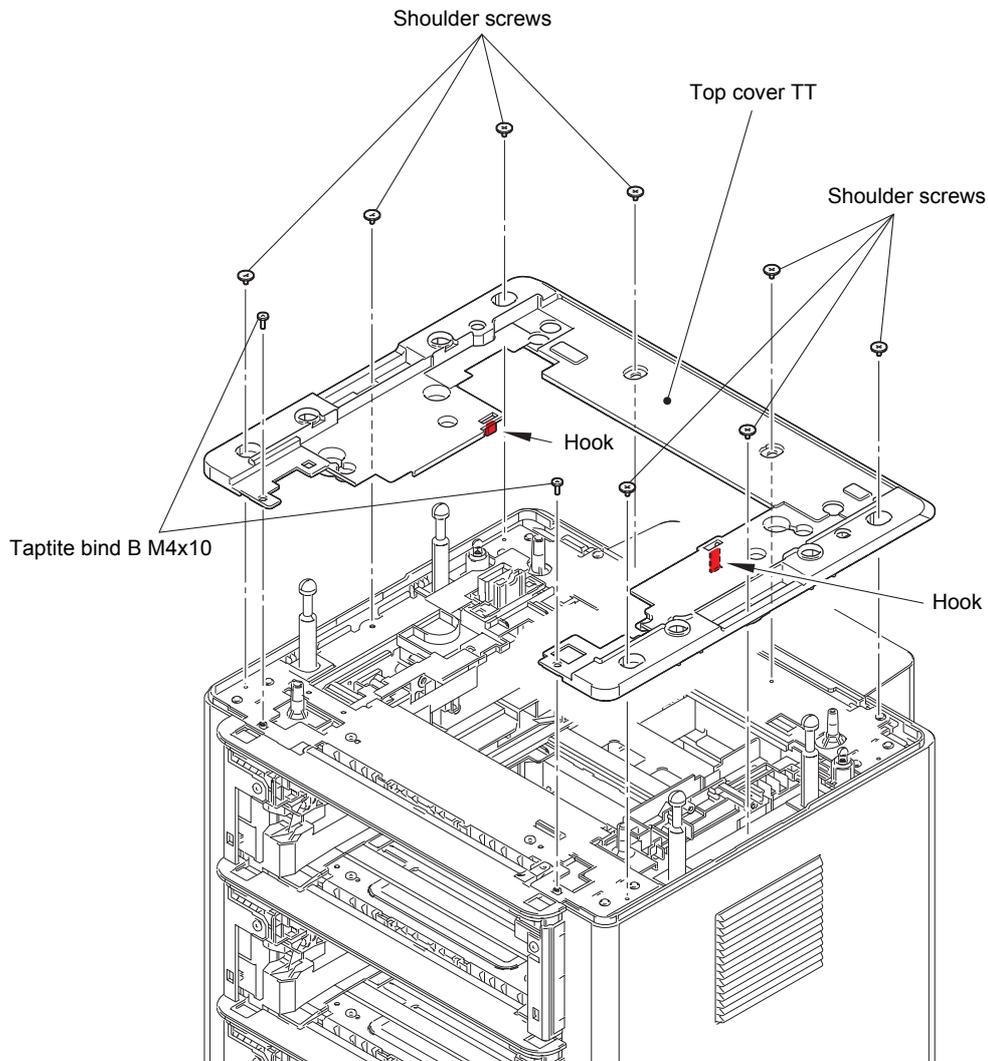


Fig. 3-185

- (2) Remove the seven taptite bind B M4x10 screws. Release the front hooks, and remove the boss while pushing the rear top in the direction of the arrow A. Release the inner hook while sliding it in the direction of the arrow B to remove the side cover L.

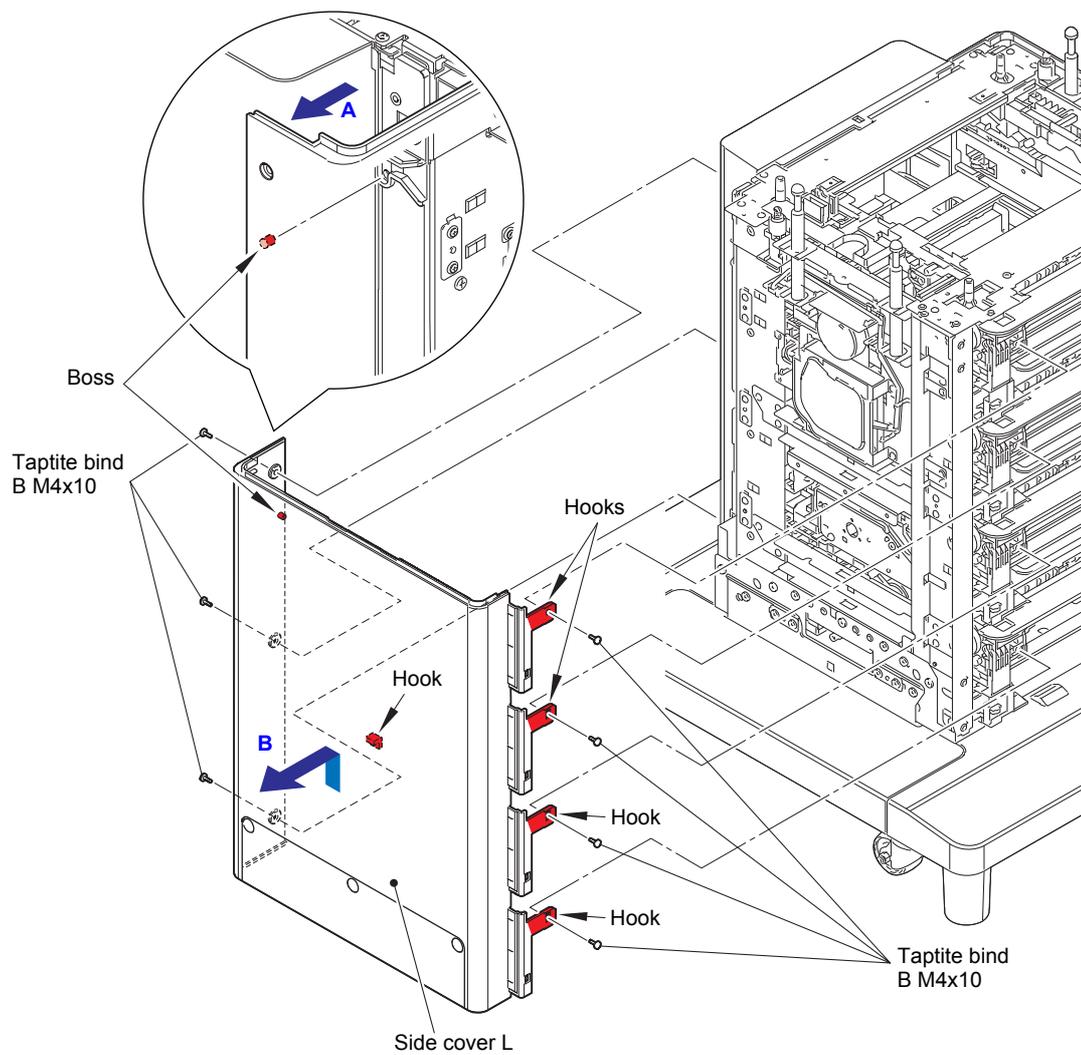
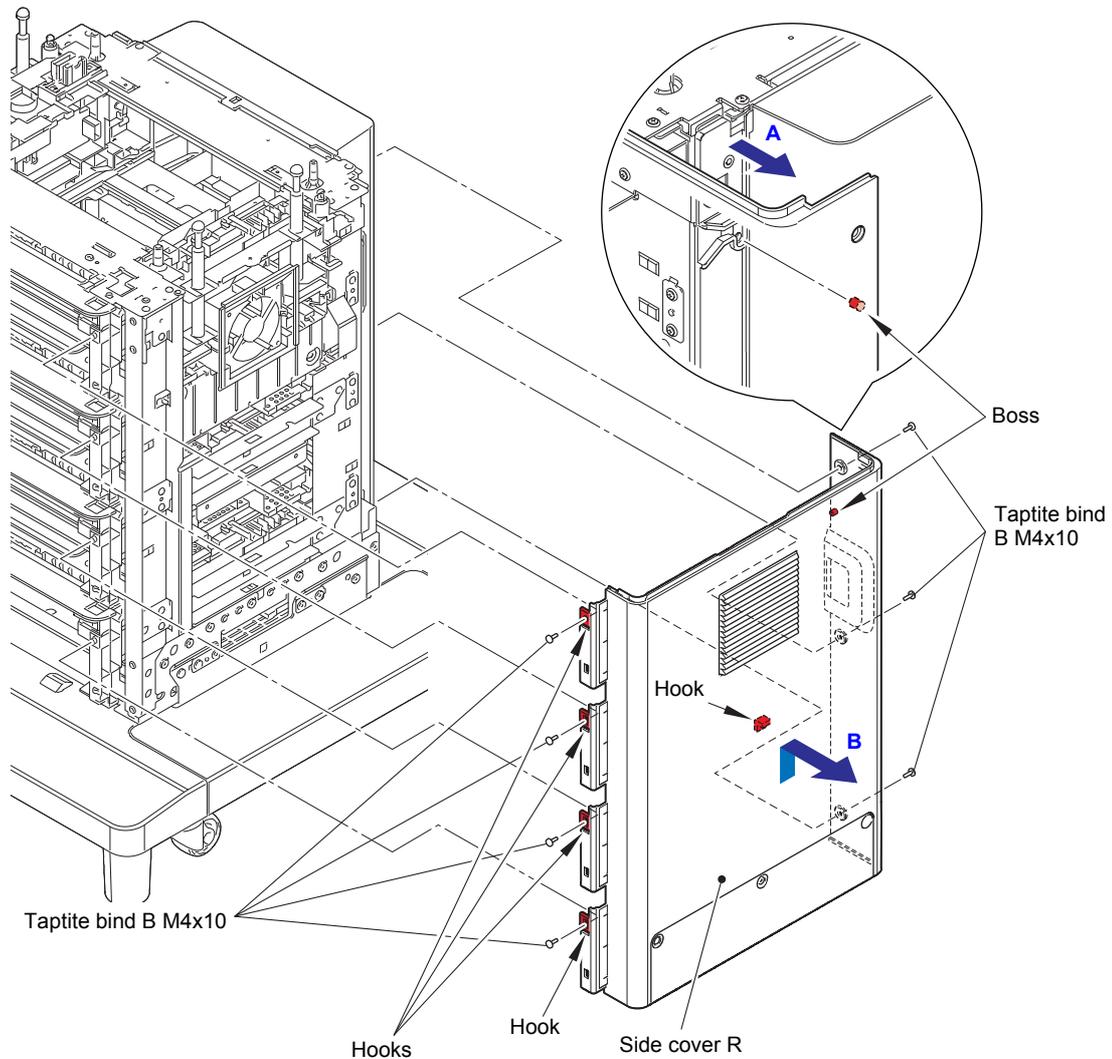


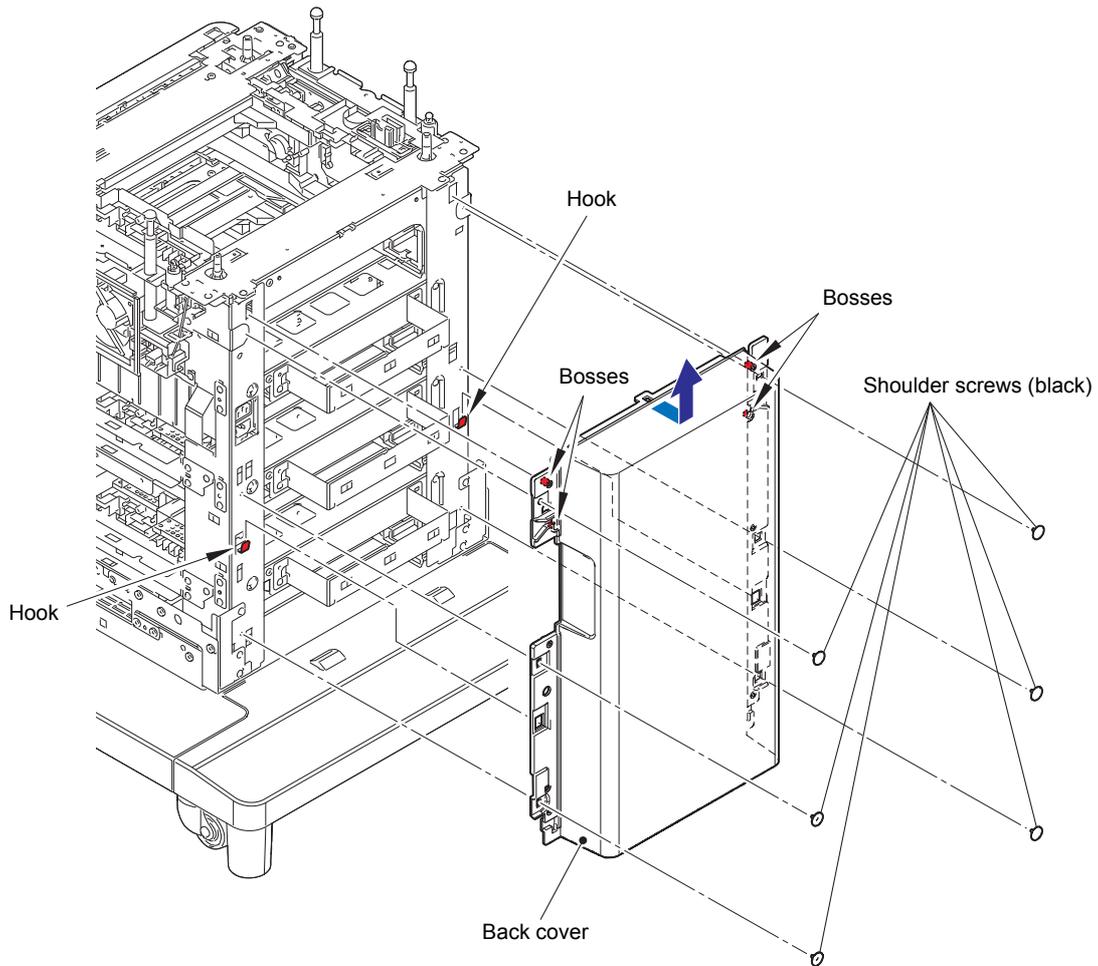
Fig. 3-186

- (3) Remove the seven taptite bind B M4x10 screws. Release the front hooks, and remove the boss while pushing the rear top in the direction of the arrow A. Release the inner hook while sliding it in the direction of the arrow B to remove the side cover R.



**Fig. 3-187**

- (4) Remove the six shoulder screws (black).
- (5) Remove the four bosses while pushing the back cover top in the direction of the arrow, slide it up to release the two hooks, and remove the back cover.



**Fig. 3-188**

## 12.5 TT control PCB ASSY

- (1) Remove the three screw cup M3x8 (black) screws to remove the PCB cover plate.

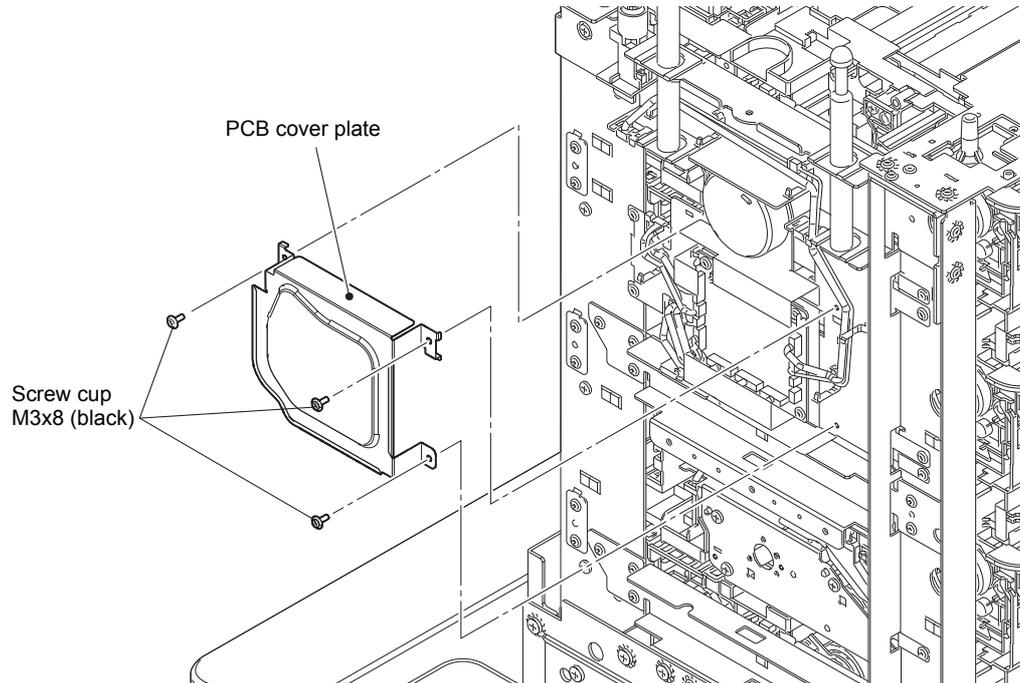


Fig. 3-189

- (2) Disconnect all harnesses connected to the TT control PCB ASSY.

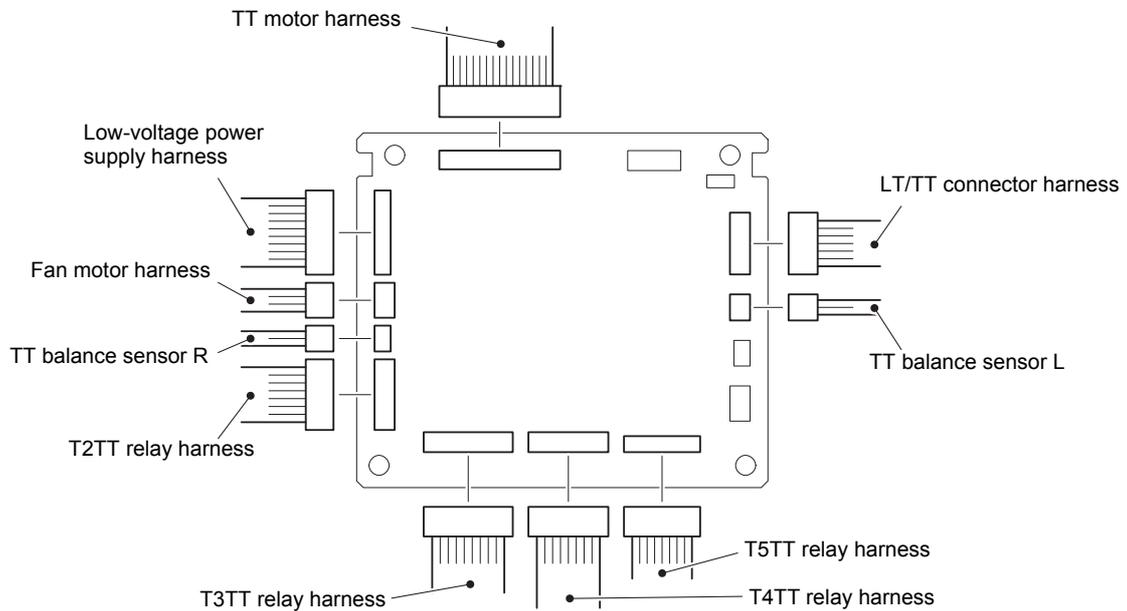
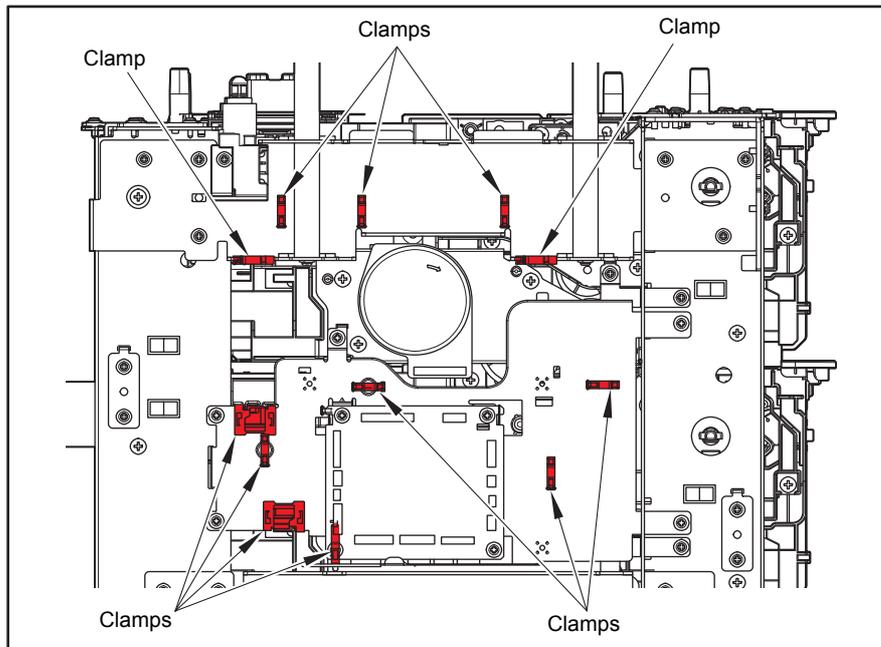
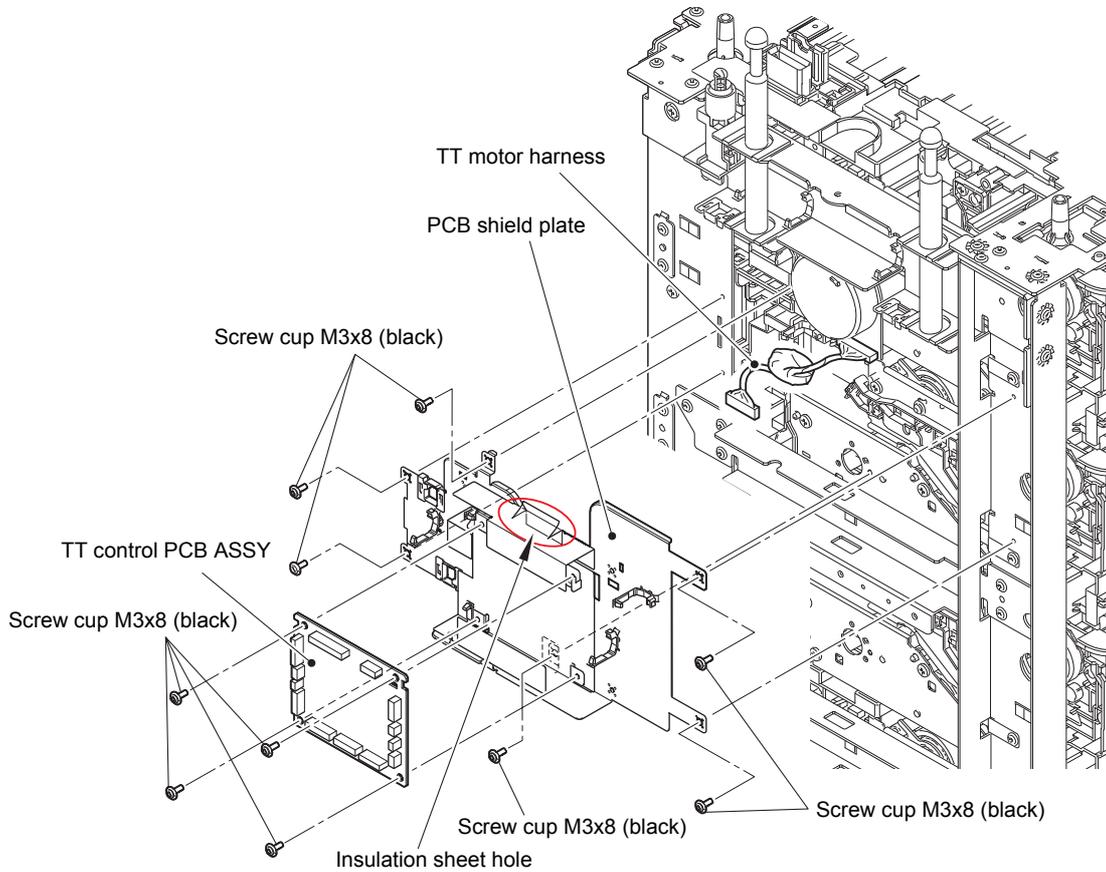


Fig. 3-190

- (3) Remove the four screw cup M3x8 (black) screws to remove the TT control PCB ASSY.
- (4) Loosen all clamps and release them from the securing fixtures.
- (5) Remove the six screw cup M3x8 (black) screws to remove the PCB shield plate. Pull out the TT motor harness through the insulation sheet hole.



**Fig. 3-191**

Harness routing: Refer to "18. TT control PCB ASSY".

## 12.6 TT balance sensor L / TT balance sensor R

- (1) Remove the taptite cup S M3x8 SR screw to remove the attach sensor holder.
- (2) Release the two hooks to remove the TT balance sensor L from the attach sensor holder.

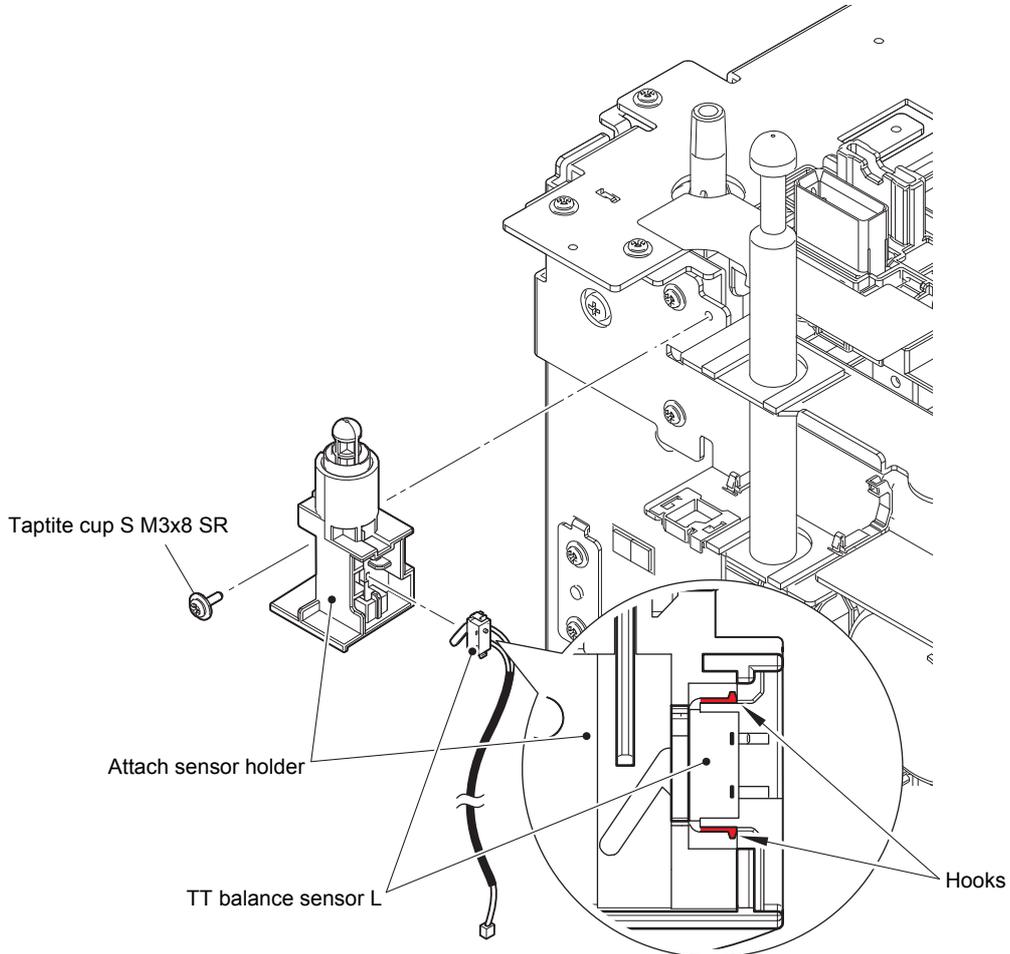
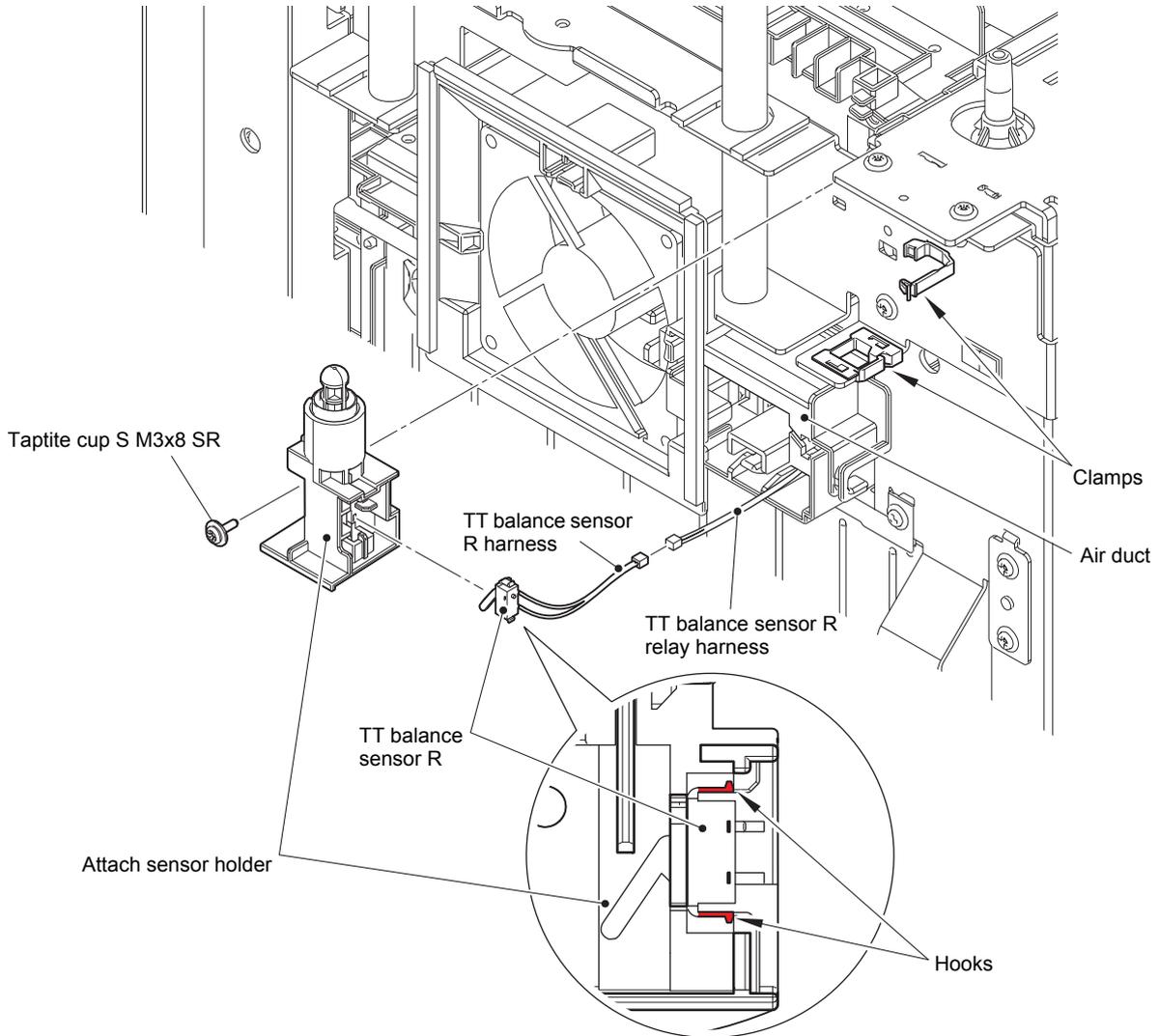


Fig. 3-192

- (3) Loosen each clamp, release the TT balance sensor R harness from the securing fixtures, and disconnect it from the TT balance sensor R relay harness.
- (4) Remove the taptite cup S M3x8 SR screw to remove the attach sensor holder.
- (5) Release the two hooks to remove the TT balance sensor R from the attach sensor holder.



**Fig. 3-193**

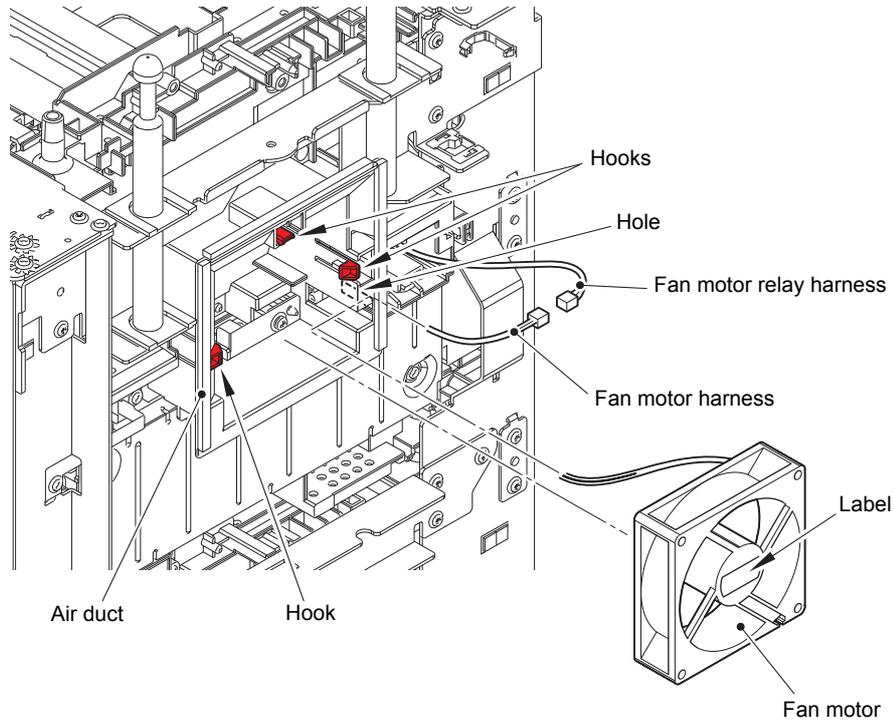
Harness routing: Refer to "20. Upper right of the TT".

**Assembling Note:**

- Do not pull the TT balance sensor R relay harness too much, it may cause a connection failure with the TT control PCB ASSY.
- When wiring, make sure that the TT balance sensor R harness does not come out of the air duct.

## 12.7 Fan motor

- (1) Release the fan motor harness from the securing fixtures, and disconnect it from the fan motor relay harness.
- (2) Release all hooks to remove the fan motor from the air duct.



**Fig. 3-194**

Harness routing: Refer to "20. Upper right of the TT".

### **Assembling Note:**

- Place the fan motor so that the attached label faces outwards.
- Do not pull the fan motor relay harness too much, it may cause a connection failure with the TT control PCB ASSY.
- When wiring, make sure that the fan motor harness does not come out of the air duct.

## 12.8 TT motor

- (1) Remove the four taptite cup S M3x8 SR screws to remove the FG plate L.
- (2) Remove the four taptite bind B M4x10 screws to remove the motor plate calking ASSY.

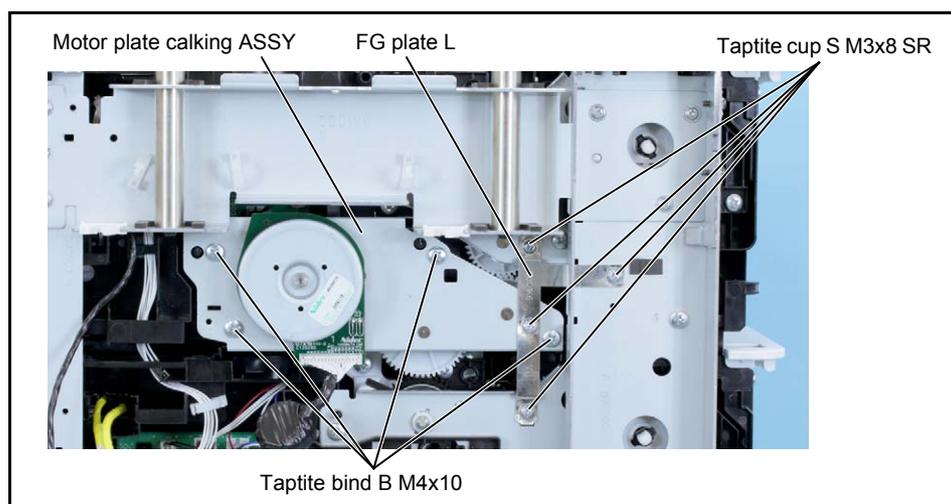
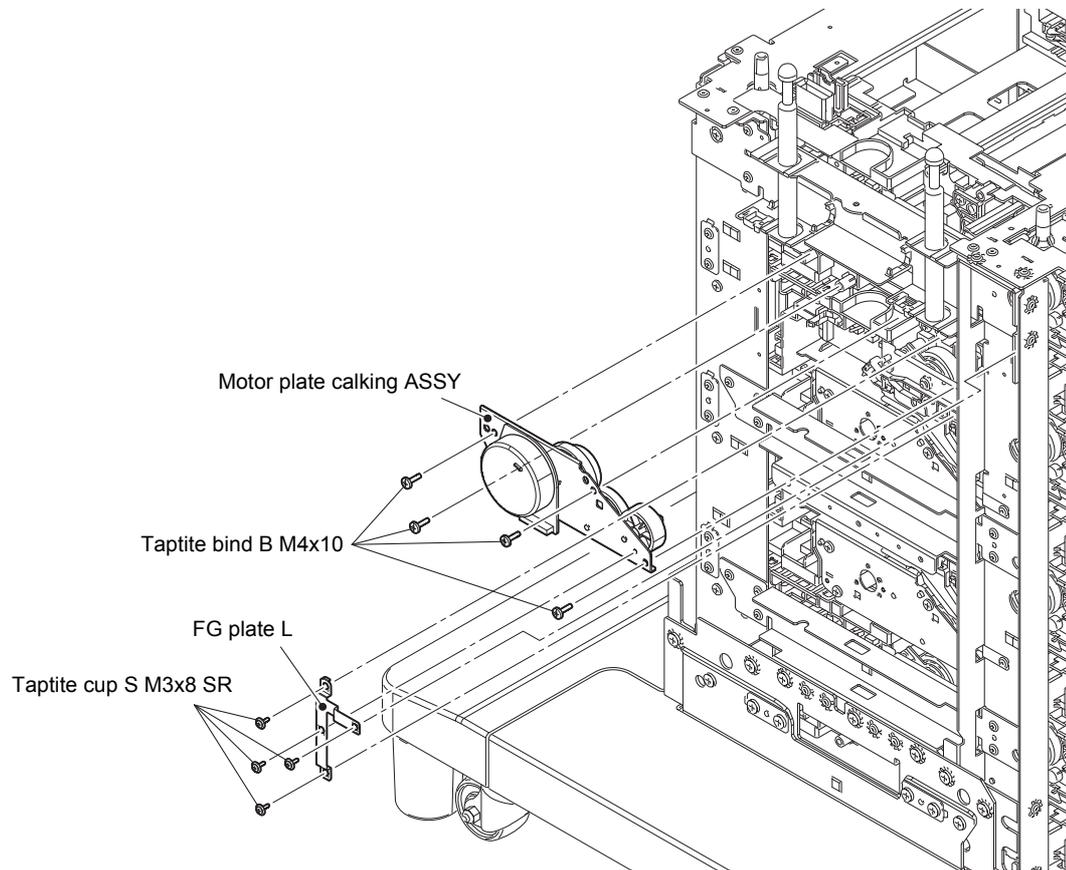
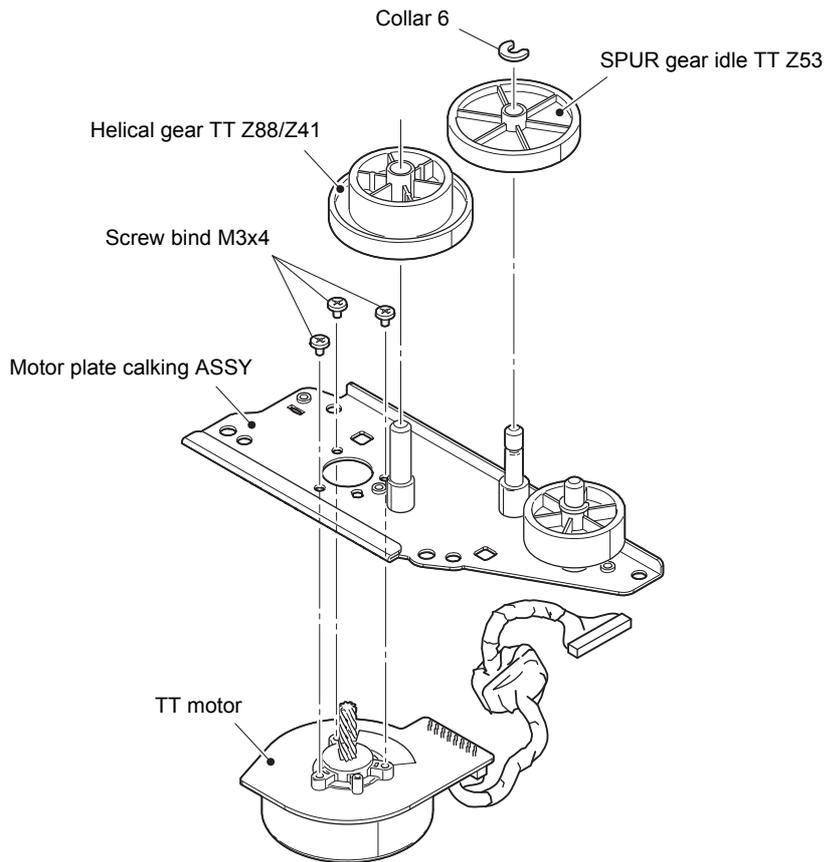


Fig. 3-195

- (3) Remove the collar 6 to remove the SPUR gear idle TT Z53 from the motor plate calking ASSY.
- (4) Remove the helical gear TT Z88/Z41 from the motor plate calking ASSY.
- (5) Remove the three screw bind M3x4 screws to remove the TT motor from the motor plate calking ASSY.



**Fig. 3-196**

## 12.9 T2TT unit

- (1) Remove the six taptite cup S M3x8 SR screws to remove the reinforcing plate top L.

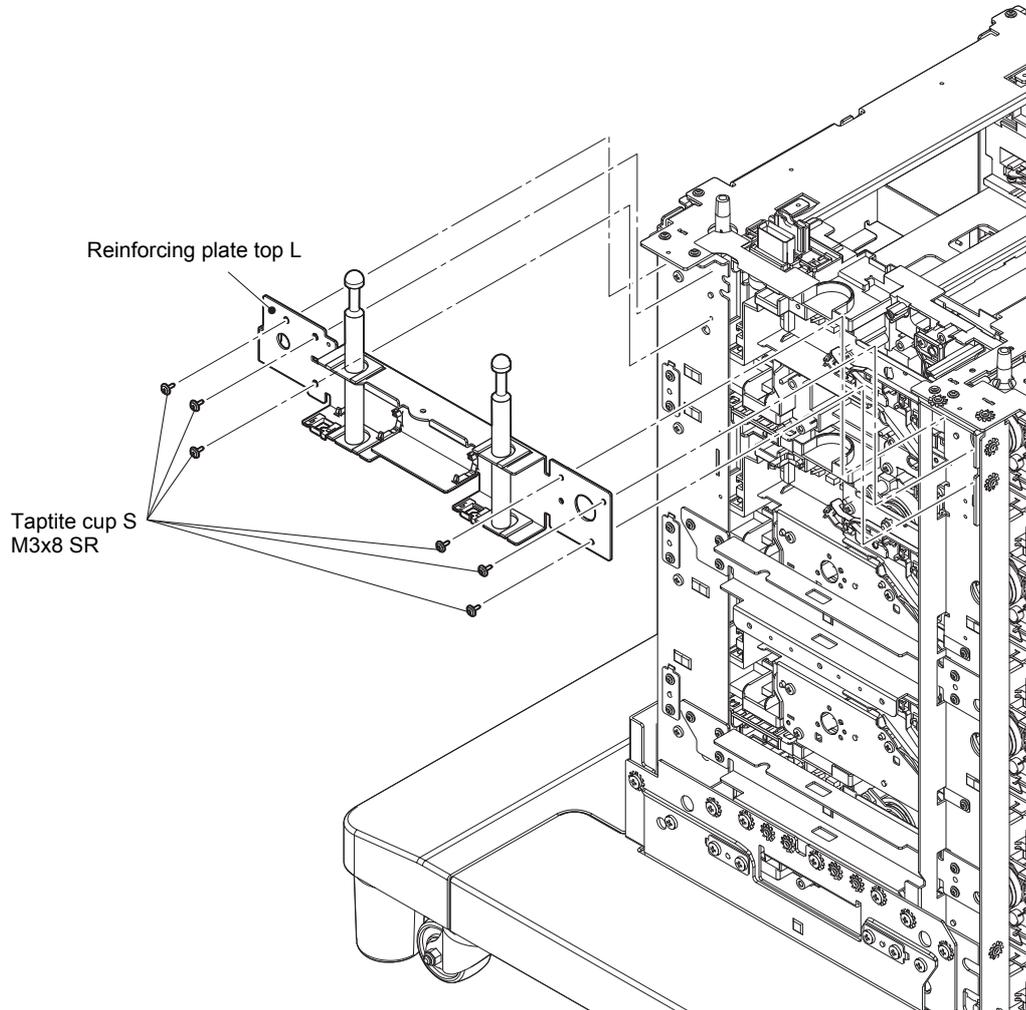


Fig. 3-197

- (2) Remove the taprite bind B M4x10 screw to remove the air duct. Pull out the two harnesses through the air duct hole.

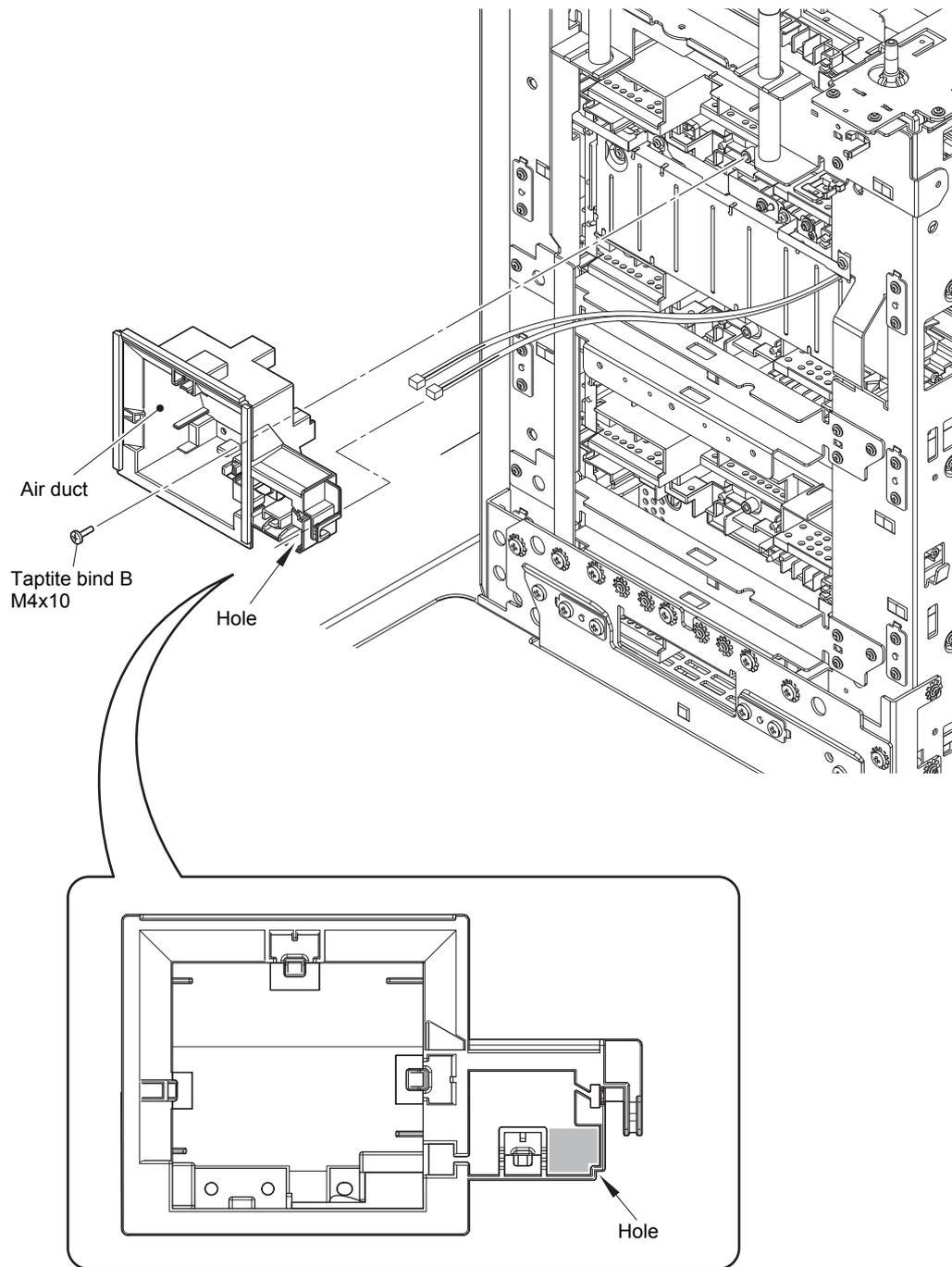
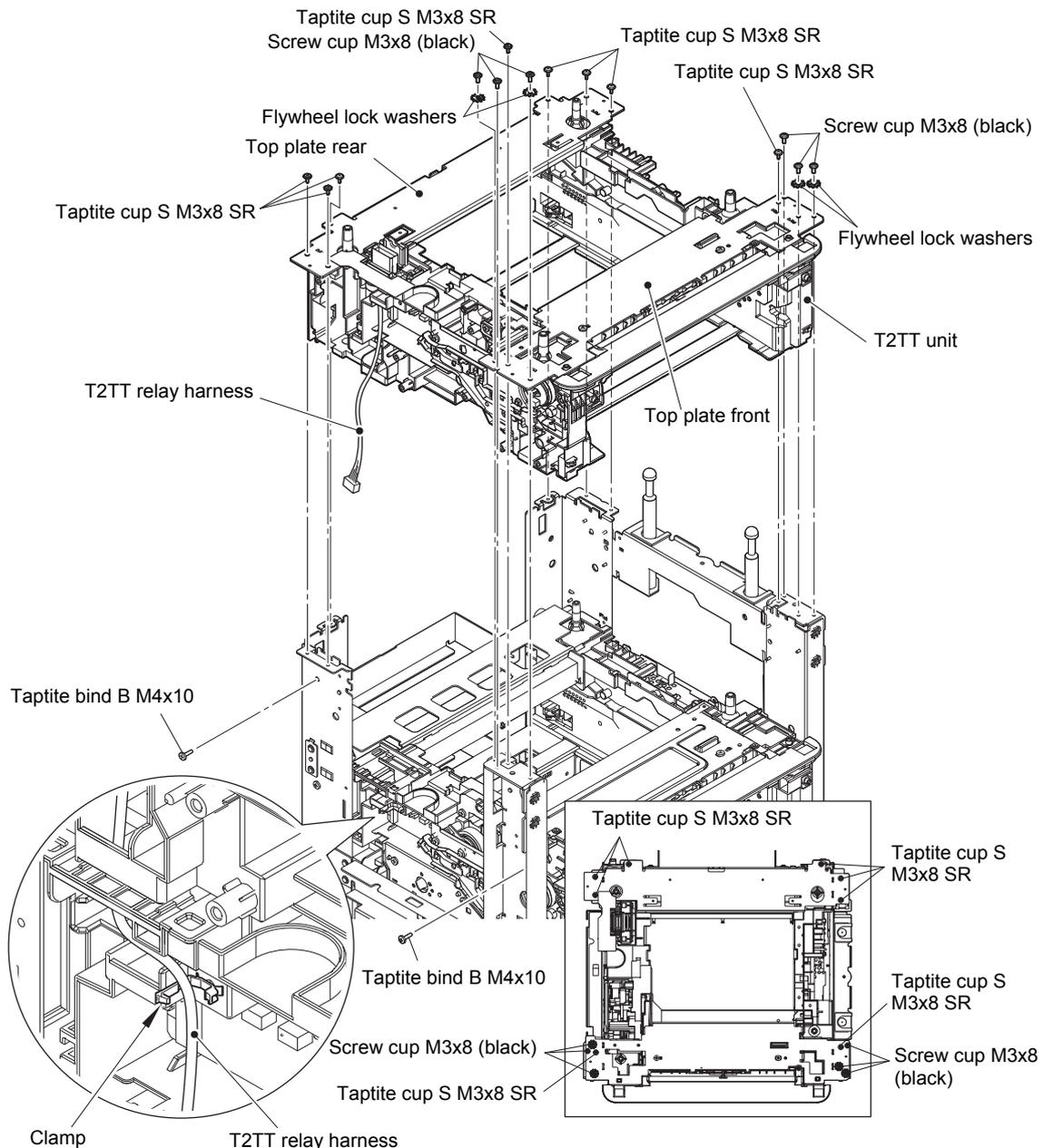


Fig. 3-198

**Assembling Note:**

- When assembling the T2TT after disassembling the whole TT unit, the top plate front or top plate rear may not be attachable. Loosen the screw securing each TT unit to attach the top plate front or rear and tighten all screws after attaching the T2TT without fail.

- (3) Loosen the clamp, and release the T2TT relay harness from the securing fixtures.
- (4) Remove the four screw cup M3x8 (black) screws and the four flywheel lock washers from the Top plate front. Remove the eight taptite cup S M3x8 SR screws, the two taptite bind B M4x10 screws, and the two screw cup M3x8 (black) screws to remove the T2TT unit.

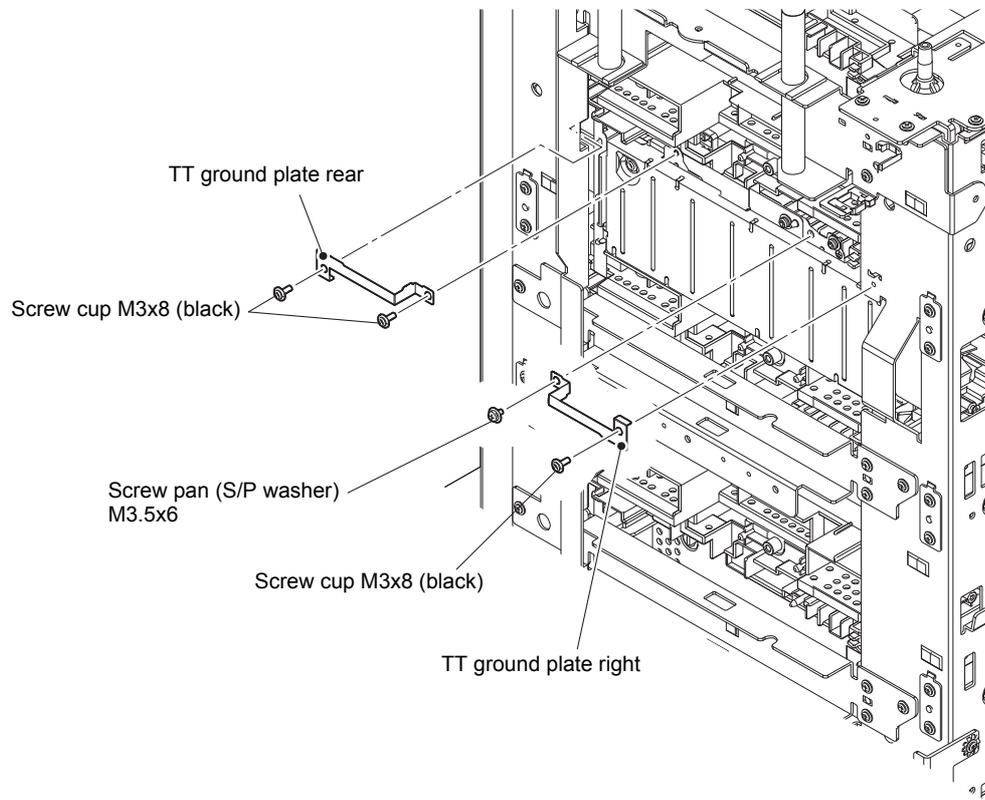


**Fig. 3-199**

Harness routing: Refer to "19. Left side of the TT".

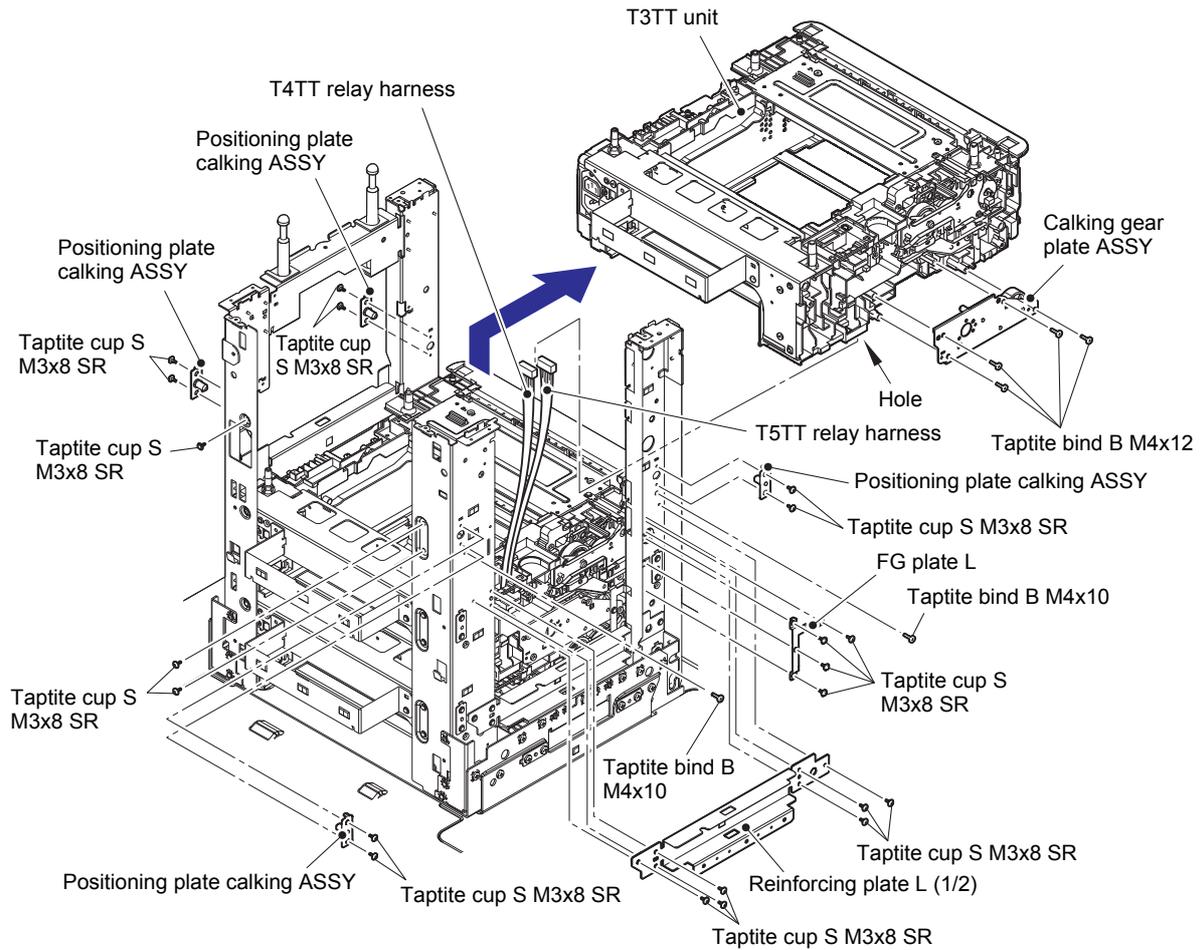
## 12.10 T3TT unit

- (1) Remove the screw pan (S/P washer) M3.5x6 screw and screw cup M3x8 (black) screw to remove the TT ground plate right.
- (2) Remove the two screw cup M3x8 (black) screws to remove the TT ground plate rear.



**Fig. 3-200**

- (3) Remove the two taptite cup S M3x8 SR screws to remove the positioning plate calking ASSY. (Four places)
- (4) Remove the six taptite cup S M3x8 SR screws to remove the reinforcing plate L (1/2).
- (5) Remove the four taptite cup S M3x8 SR screws to remove the FG plate L.
- (6) Remove the four taptite bind B M4x12 screws to remove the calking gear plate ASSY.
- (7) Remove the three taptite cup S M3x8 SR screws and the two taptite bind B M4x10 screws. Lift the T3TT unit slightly, and pull the T4TT relay harness and T5TT relay harness from the T3TT unit hole to remove the T3TT unit in the direction of the arrow.



**Fig. 3-201**

Harness routing: Refer to "19. Left side of the TT".

## 12.11 Low-voltage power supply PCB ASSY

- (1) Remove the screw pan (S/P washer) M3.5x6 screw and the two screw cup M3x8 (black) screws to remove the LV shield plate cover.
- (2) Remove the LV insulation sheet.

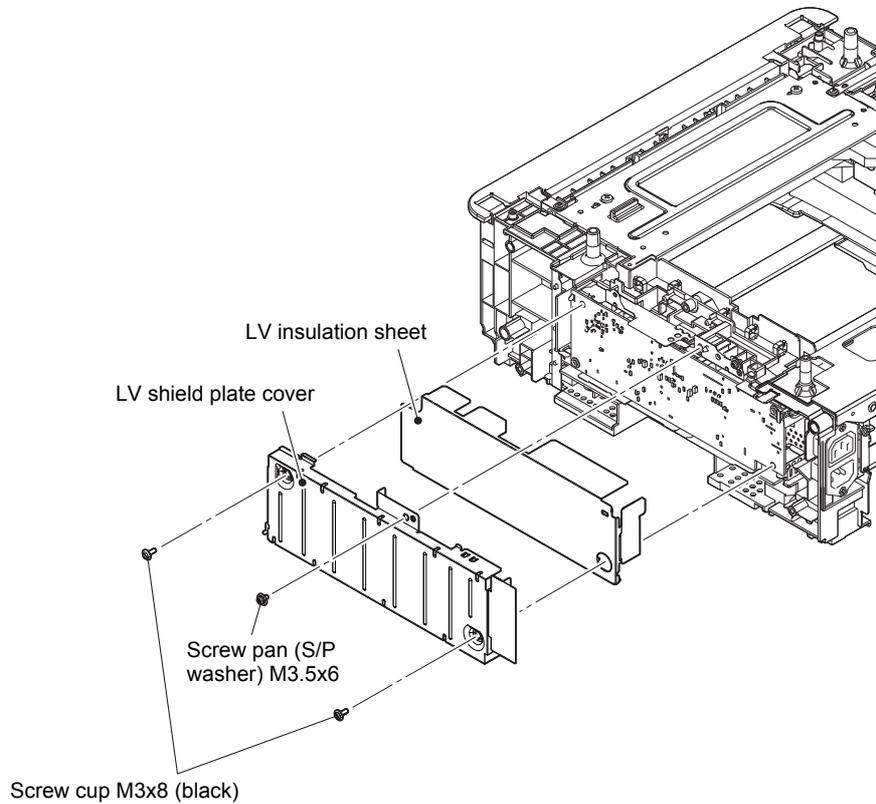
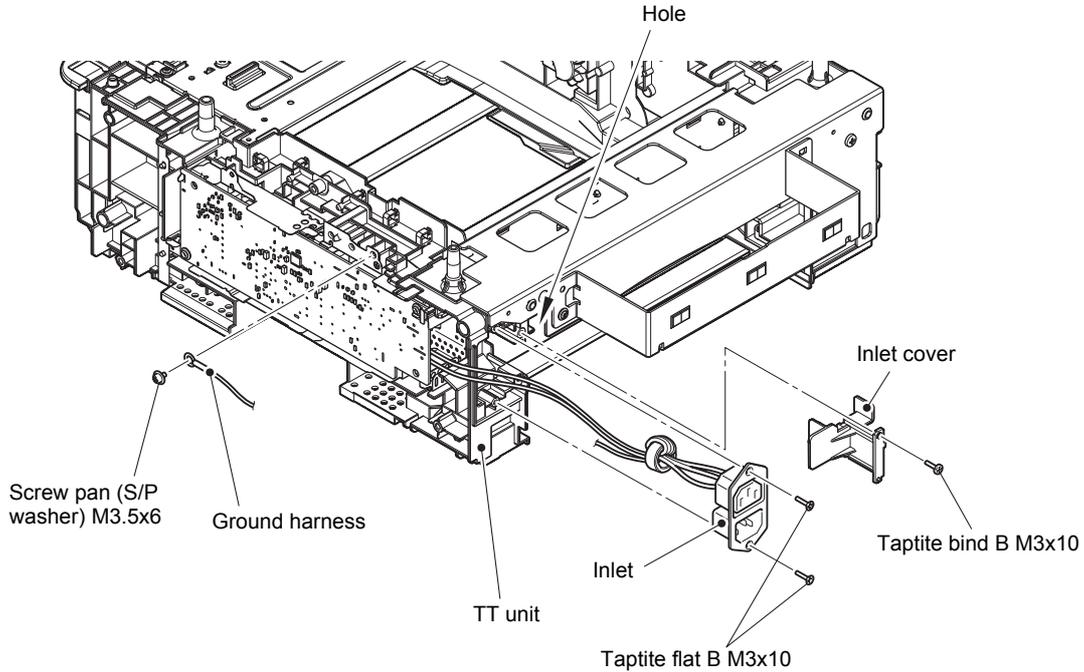


Fig. 3-202

- (3) Remove the screw pan (S/P washer) M3.5x6 screw to disconnect the ground harness.
- (4) Remove the two taptite flat B M3x10 screws from the inlet.
- (5) Remove the taptite bind B M3x10 screw to remove the inlet cover by pulling the inlet forwards.
- (6) Pull out the inlet through the TT unit hole.

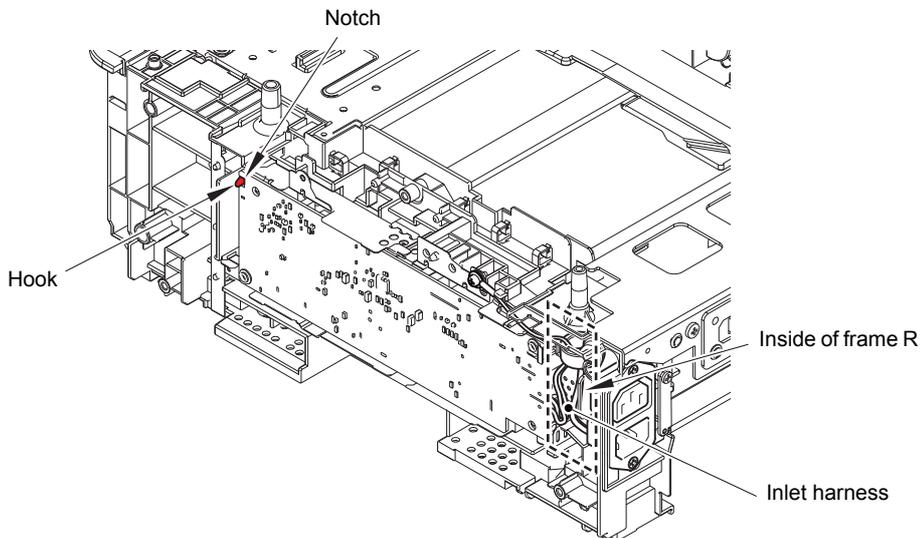


**Fig. 3-203**

Harness routing: Refer to "20. Upper right of the TT", "22. T3TT unit".

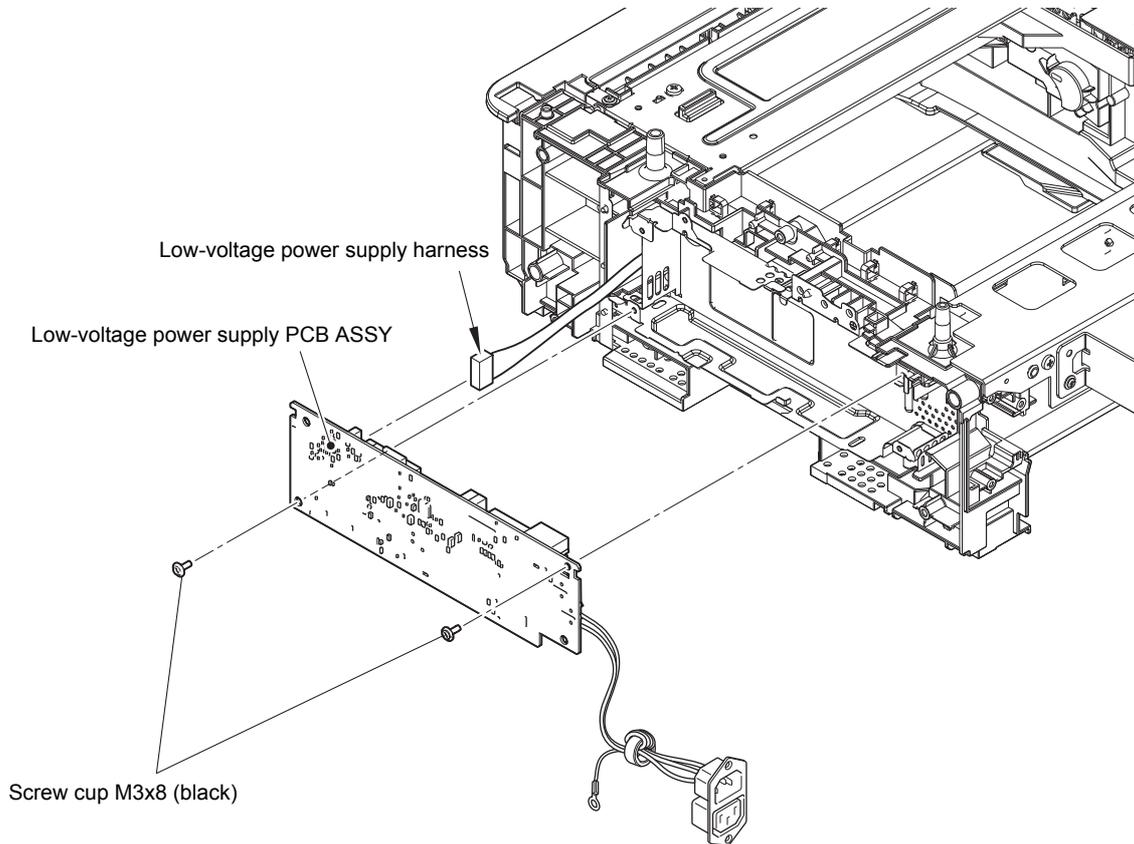
**Assembling Note:**

- When assembling the low-voltage power supply PCB ASSY, engage the notch of the low-voltage power supply PCB ASSY with the hook.
- Check that the inlet harness is housed in the frame R as shown in the illustration below. Otherwise the harness may be caught in some sections of the machine, and may catch fire.



**Fig. 3-204**

- (7) Remove the two screw cup M3x8 (black) screws to remove the low-voltage power supply PCB ASSY. Disconnect the low-voltage power supply harness from the low-voltage power supply PCB ASSY.



**Fig. 3-205**

## 12.12 T4TT unit

- (1) Remove the two taprite cup S M3x8 SR screws to remove the positioning plate calking ASSY. (Four places)
- (2) Remove the three screw bind M5x8 screws, the three flywheel lock washers, the four screw cup M3x8 (black) screws, and the four flywheel lock washers from the Reinforcing plate L (2/2). Remove the six taprite cup S M3x8 SR screws to remove the reinforcing plate L (2/2).
- (3) Remove the taprite cup S M3x8 SR screw from the reinforcing plate R (1/2).

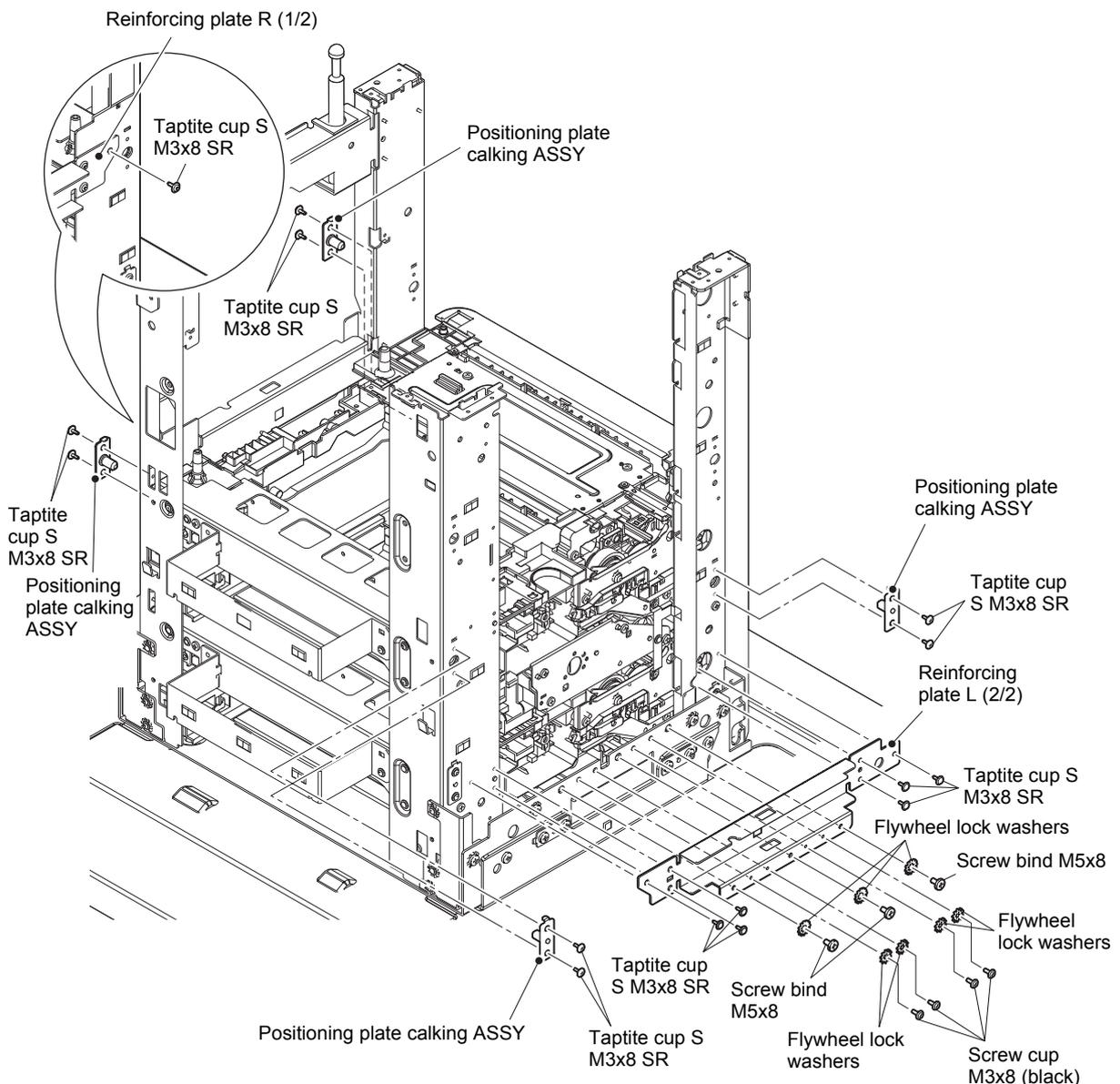
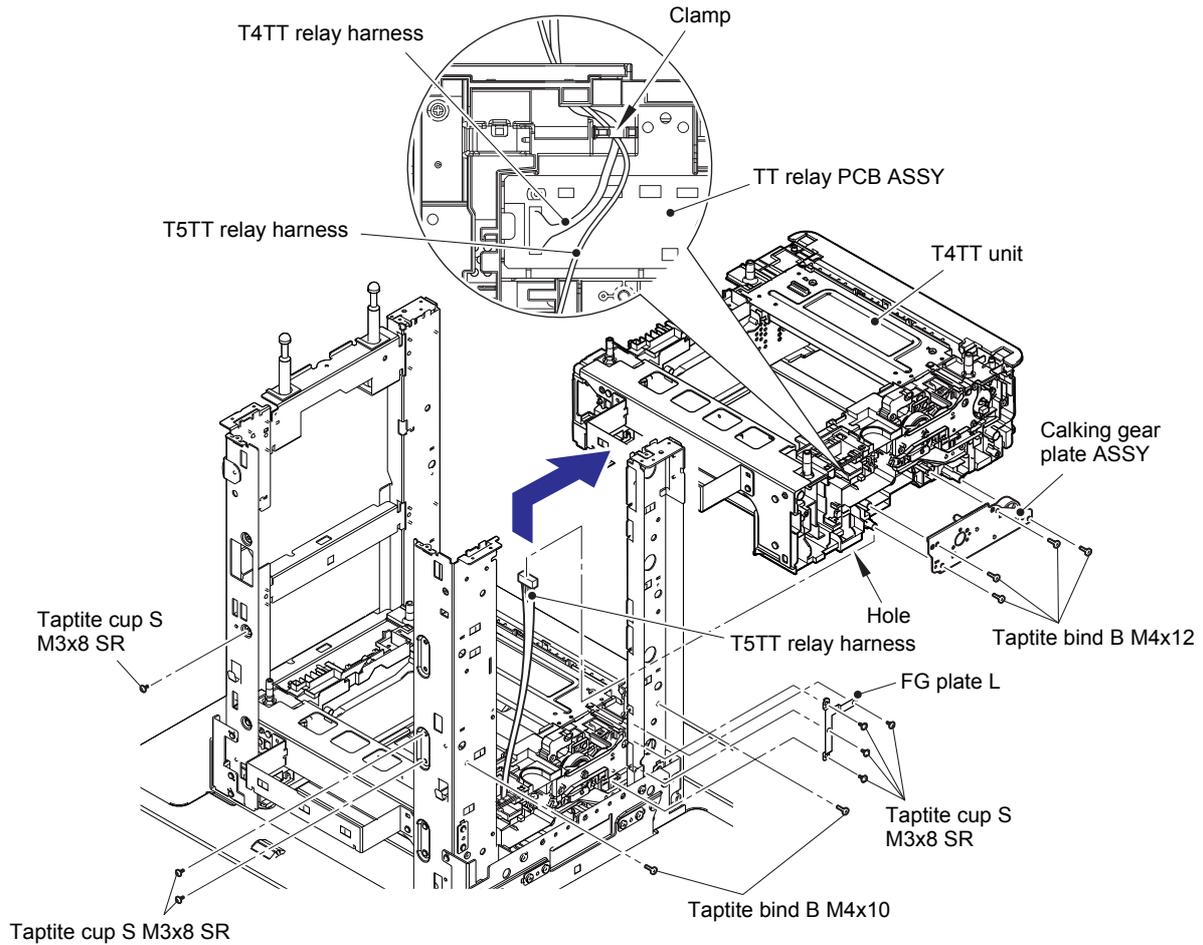


Fig. 3-206

- (4) Loosen the clamp, and release the T4TT relay harness and the T5TT relay harness from the securing fixtures.
- (5) Remove the four taptite cup S M3x8 SR screws to remove the FG plate L.
- (6) Remove the four taptite bind B M4x12 screws to remove the calking gear plate ASSY.
- (7) Remove the three taptite cup S M3x8 SR screws and the two taptite bind B M4x10 screws. Lift the T4TT unit slightly, and pull the T5TT relay harness from the T4TT unit hole to remove the T4TT unit in the direction of the arrow.



**Fig. 3-207**

Harness routing: Refer to "19. Left side of the TT".

## 12.13 T5TT unit

- (1) Remove the two taptite cup S M3x8 SR screws to remove the positioning plate calking ASSY. (Four places)
- (2) Remove the three taptite cup S M3x8 SR screws and the two taptite bind B M4x10 screws. Remove the T5TT unit in the direction of the arrow.

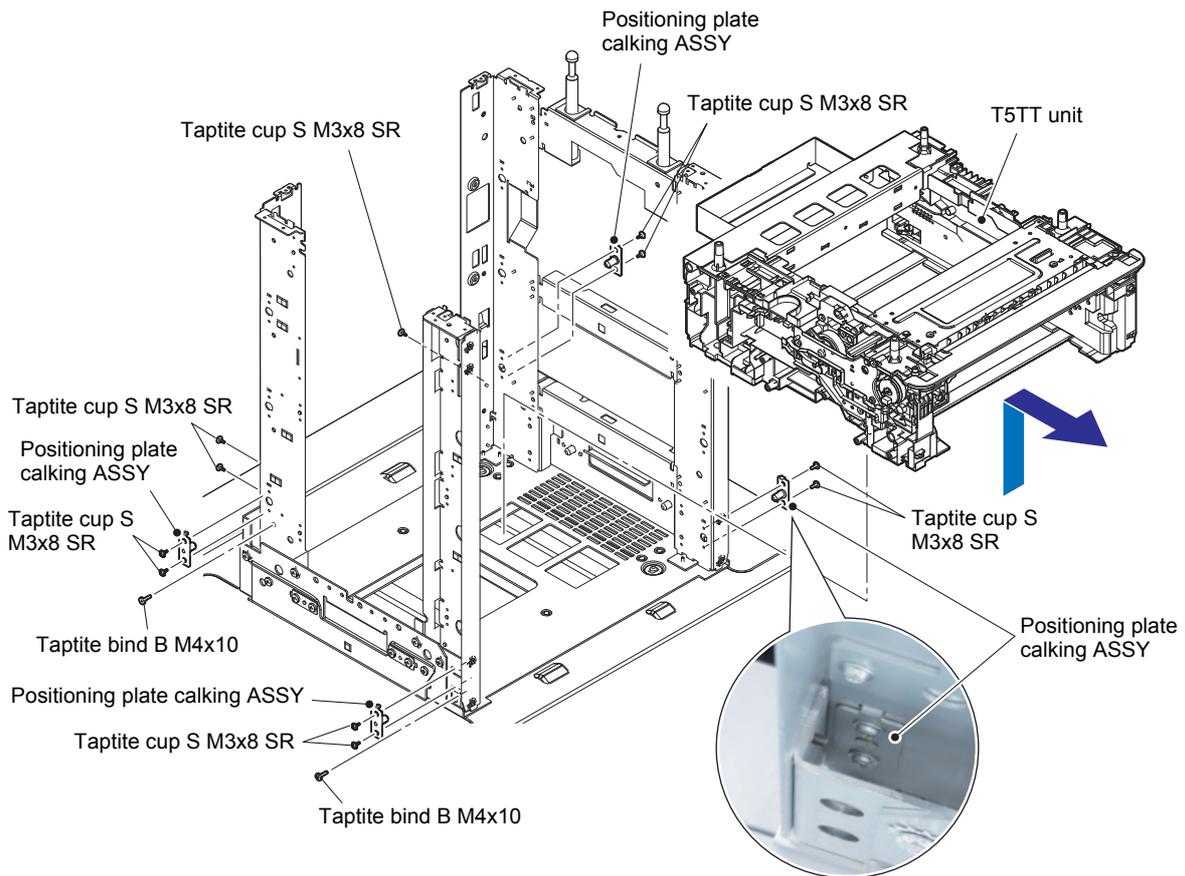


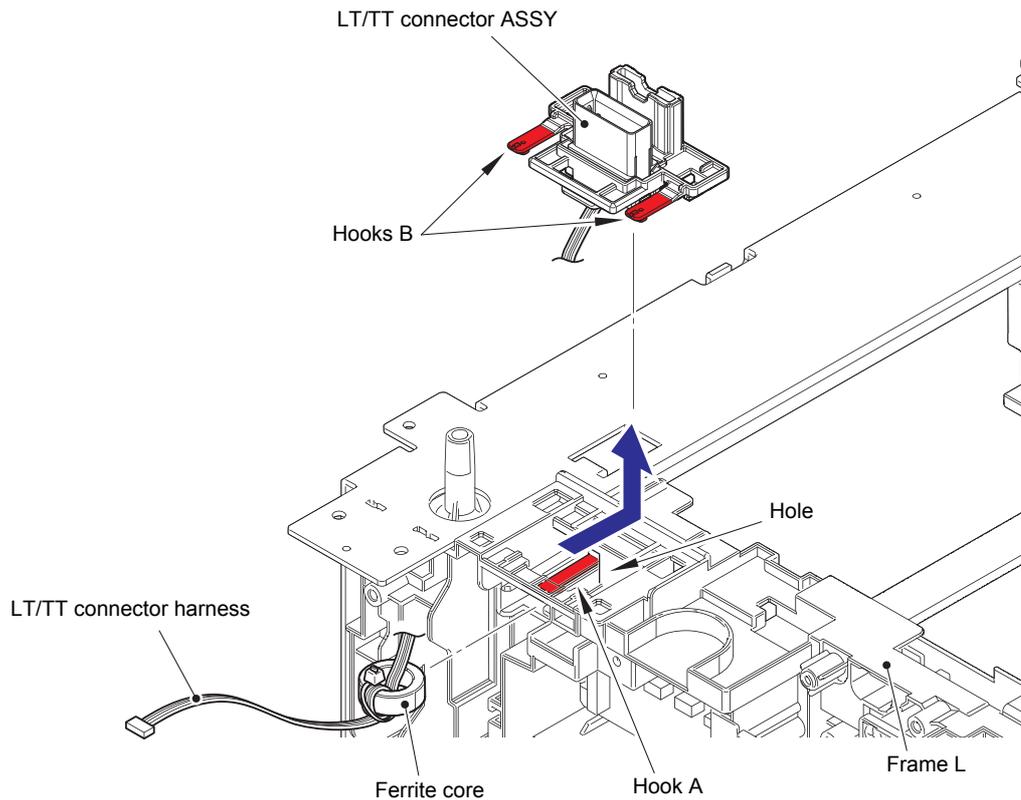
Fig. 3-208

### Assembling Note:

- It's easier to attach the positioning plate calking ASSY on the right side with a magnet due to the narrow work space.

## 12.14 LT/TT connector ASSY (T2TT only)

- (1) Release the LT/TT connector harness from the securing fixtures.
- (2) Release the hook A to remove the ferrite core.
- (3) Release the two hooks B, and slide the LT/TT connector ASSY in the direction of the arrow to remove it. Pull out the LT/TT connector harness through the frame L hole.

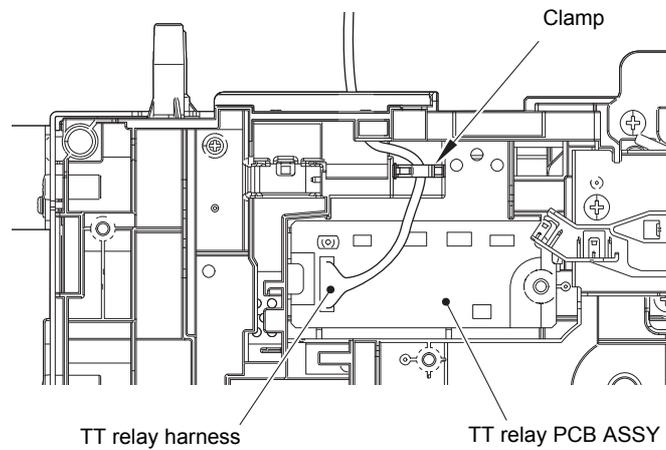


**Fig. 3-209**

Harness routing: Refer to "19. Left side of the TT".

## 12.15 TT relay PCB ASSY (Common to all TT)

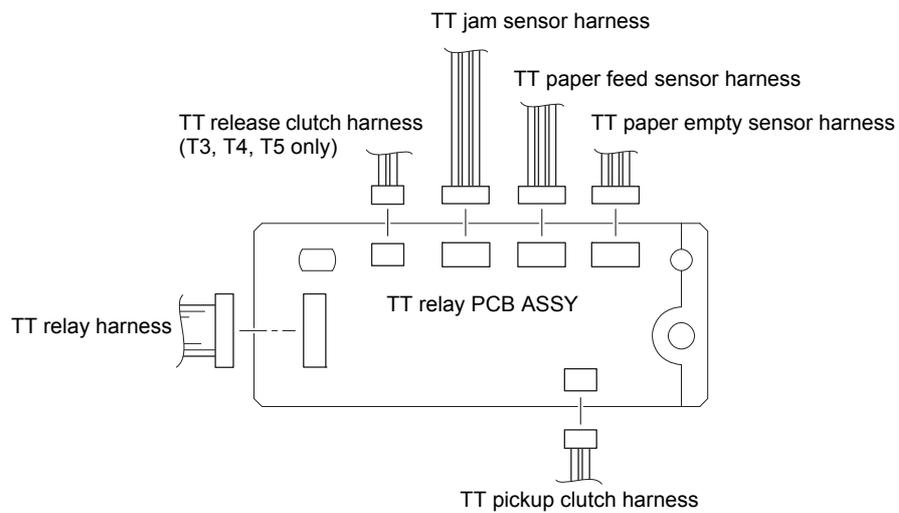
- (1) Loosen the clamp and release the TT relay harness from the securing fixtures. Pull out the TT relay harness through the frame L hole.



**Fig. 3-210**

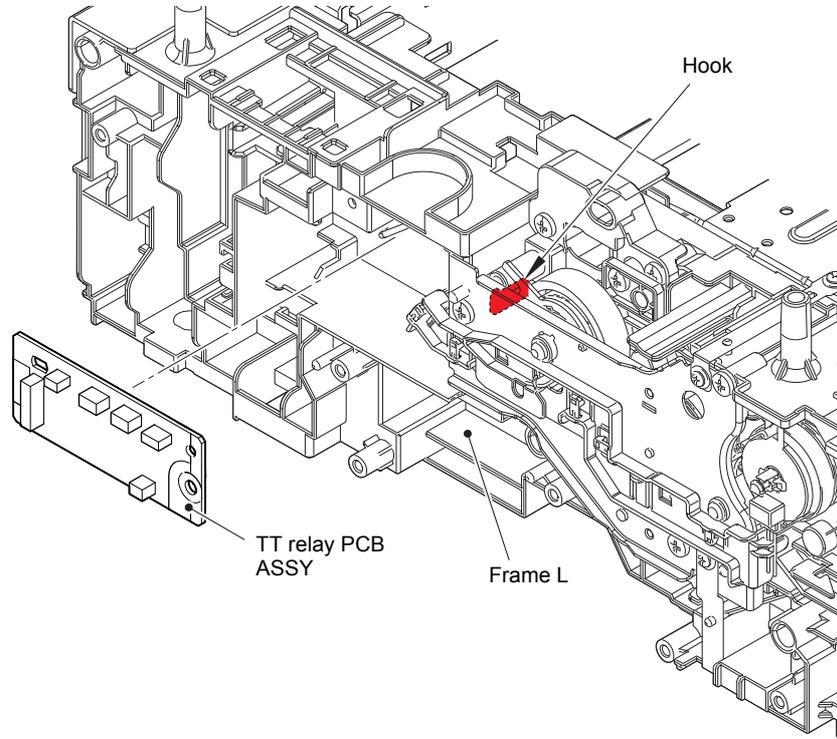
Harness routing: Refer to "19. Left side of the TT".

- (2) Disconnect all harnesses connected to the TT relay PCB ASSY.



**Fig. 3-211**

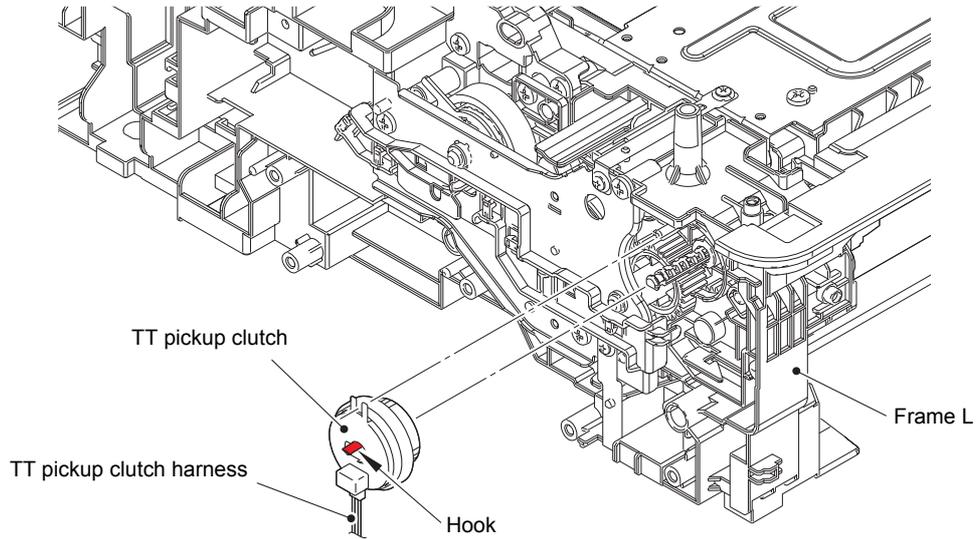
(3) Release the hook to remove the TT relay PCB ASSY from the frame L.



**Fig. 3-212**

## 12.16 TT pickup clutch (Common to all TT)

- (1) Release the TT pickup clutch harness from the securing fixtures. Release the hook to remove the TT pickup clutch from the frame L.



**Fig. 3-213**

Harness routing: Refer to "21. TT relay PCB ASSY (Each TT unit)".

## 12.17 TT release clutch (Common to all TT)

- (1) Remove the two taptite cup S M3x8 SR screws to remove the TT ground plate.
- (2) Remove the two taptite bind B M4x12 screws to remove the front under bar.
- (3) Remove the taptite cup S M3x8 SR screw to remove the under bar ground plate L.

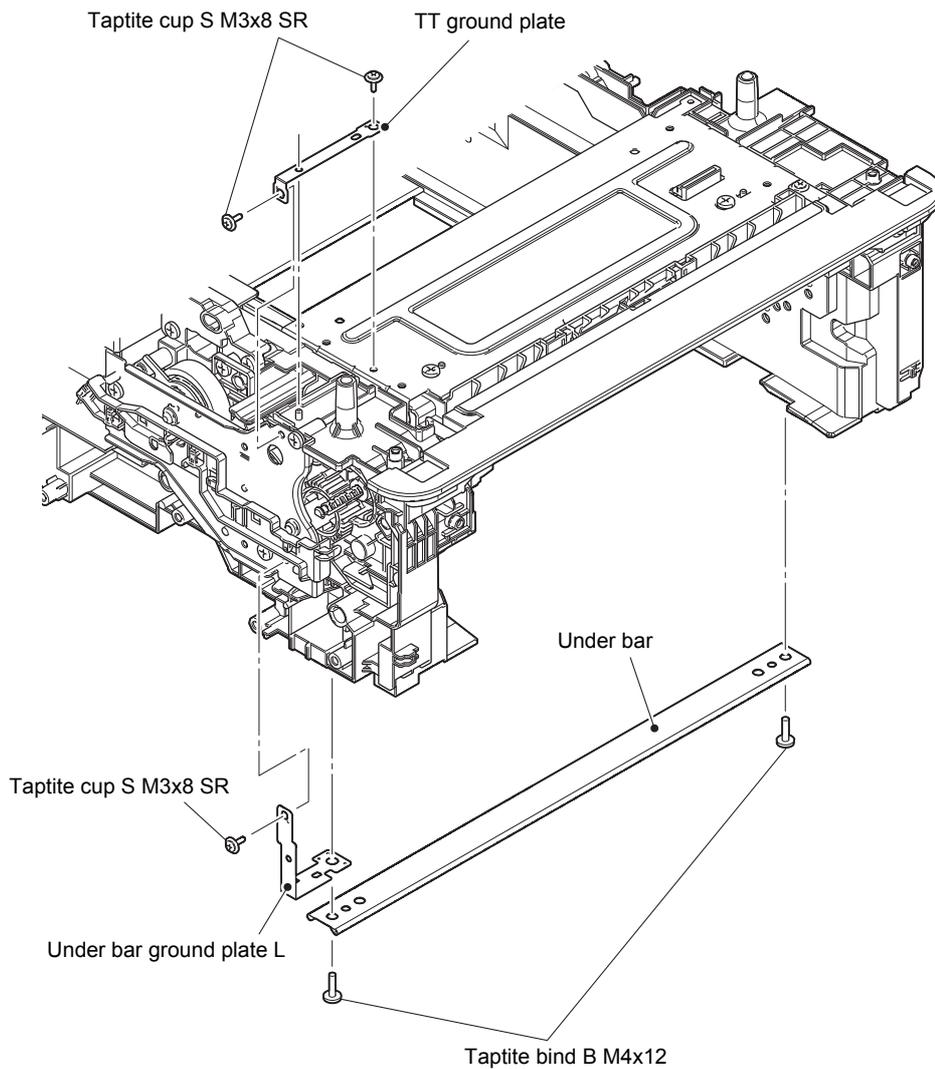
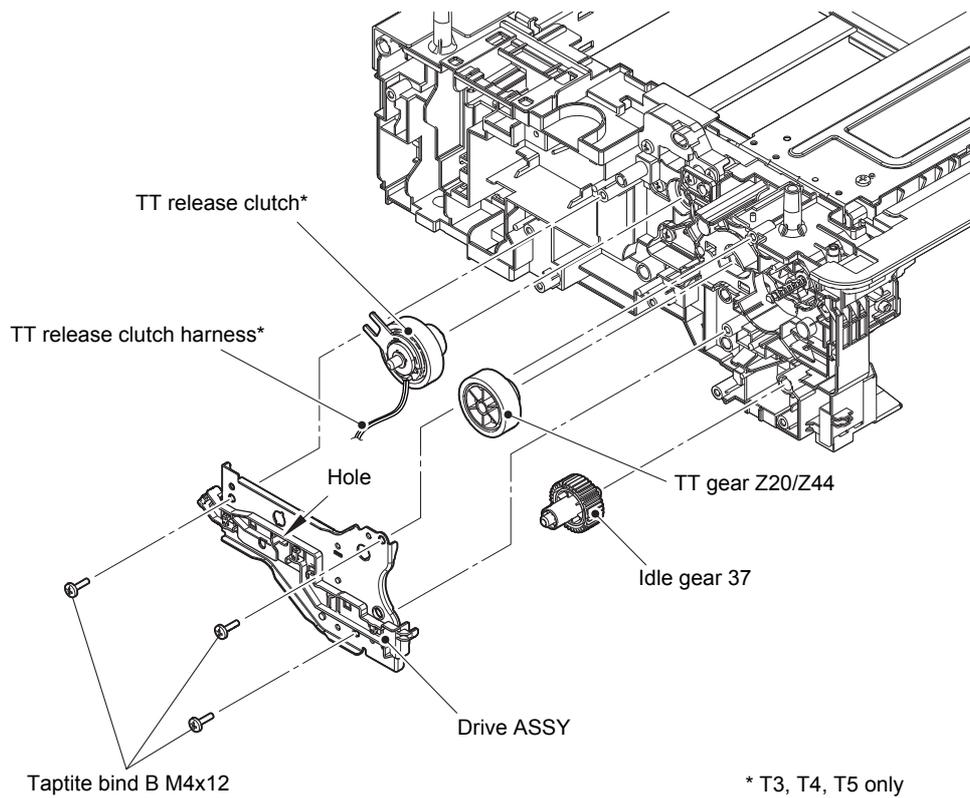


Fig. 3-214

- (4) Release the TT release clutch harness\* from the securing fixtures. Remove the three taptite bind B M4x12 screws. Remove the drive ASSY and pull out the TT release clutch harness\* through the hole.
- (5) Remove the TT release clutch\*, the TT gear Z20/Z44, and the idle gear 37.

**Note:**

- The T2TT unit does not have the TT release clutch\*.



**Fig. 3-215**

## 12.18 TT jam sensor PCB ASSY (Common to all TT)

- (1) Remove the two taptite cup B M4x12 screws and the taptite cup S M3x8 SR screw to remove the TT front cover.

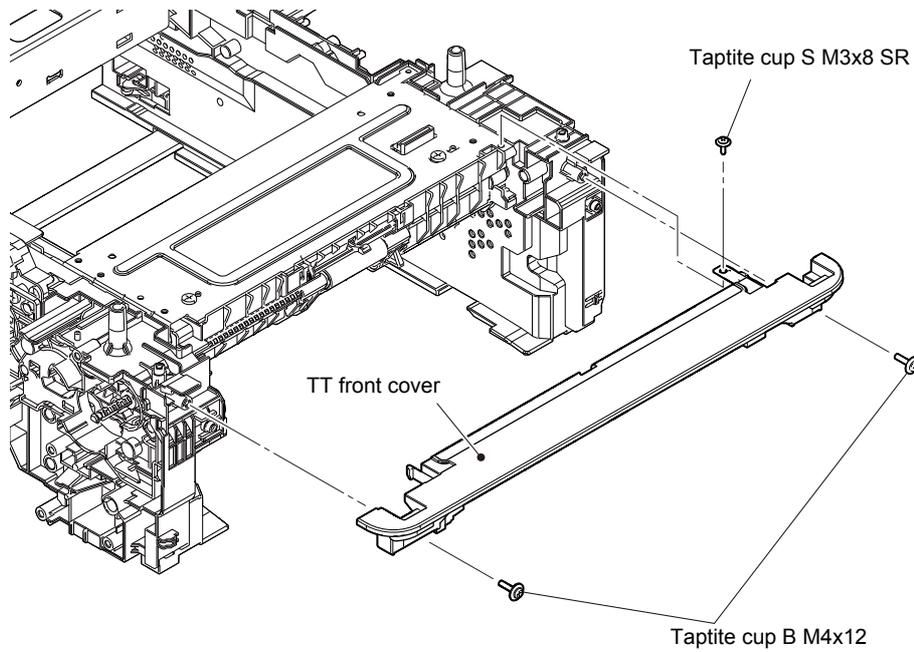
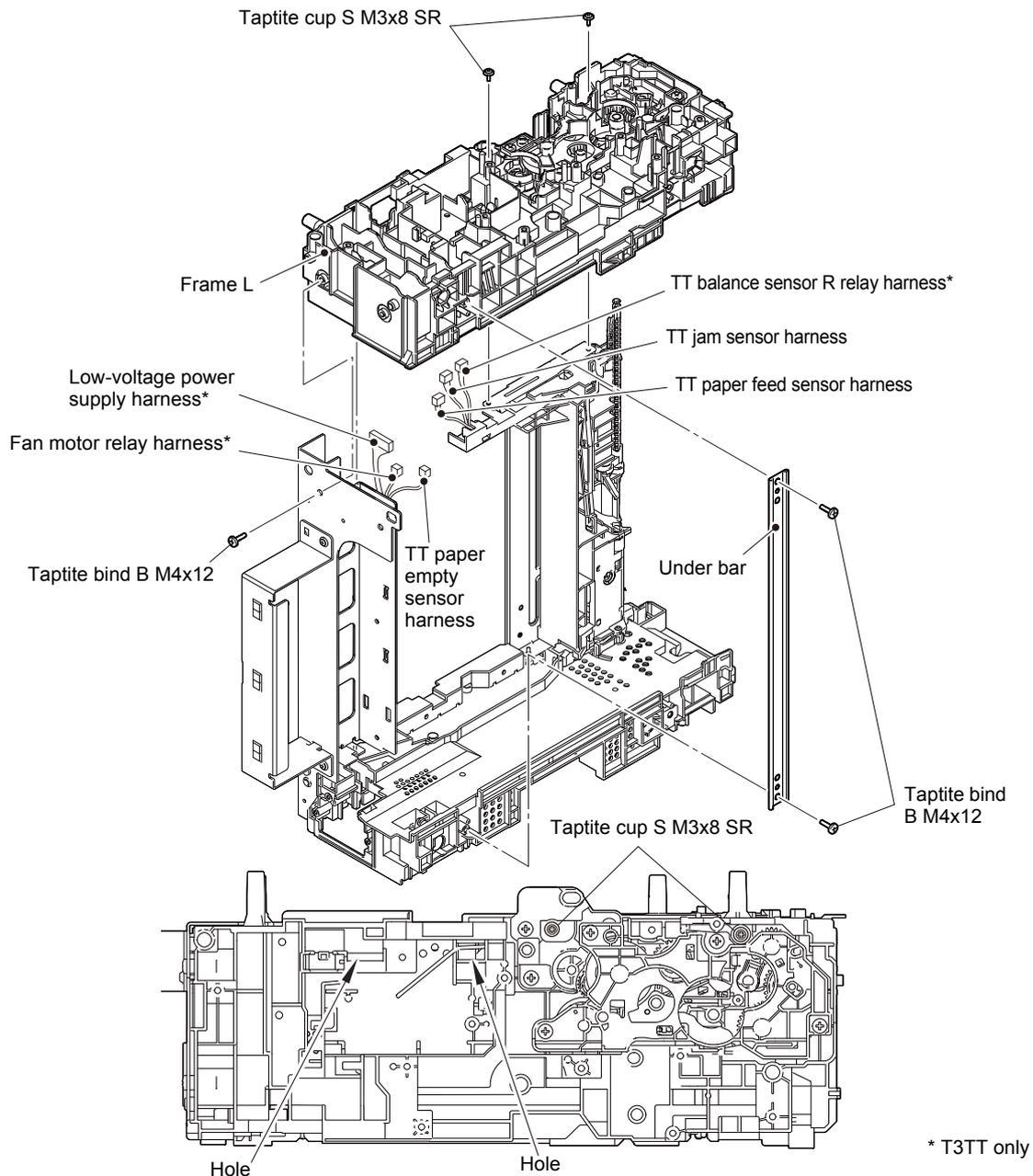


Fig. 3-216

- (2) Remove the two taptite bind B M4x12 screws to remove the rear under bar.
- (3) Remove the two taptite cup S M3x8 SR screws and the taptite bind B M4x12 screw. Remove the Frame L, and pull out the low-voltage power supply harness\*, the fan motor relay harness\*, the TT balance sensor R relay harness\*, the TT jam sensor harness, the TT paper feed sensor harness and the TT paper empty sensor harness through the two holes.

**Note:**

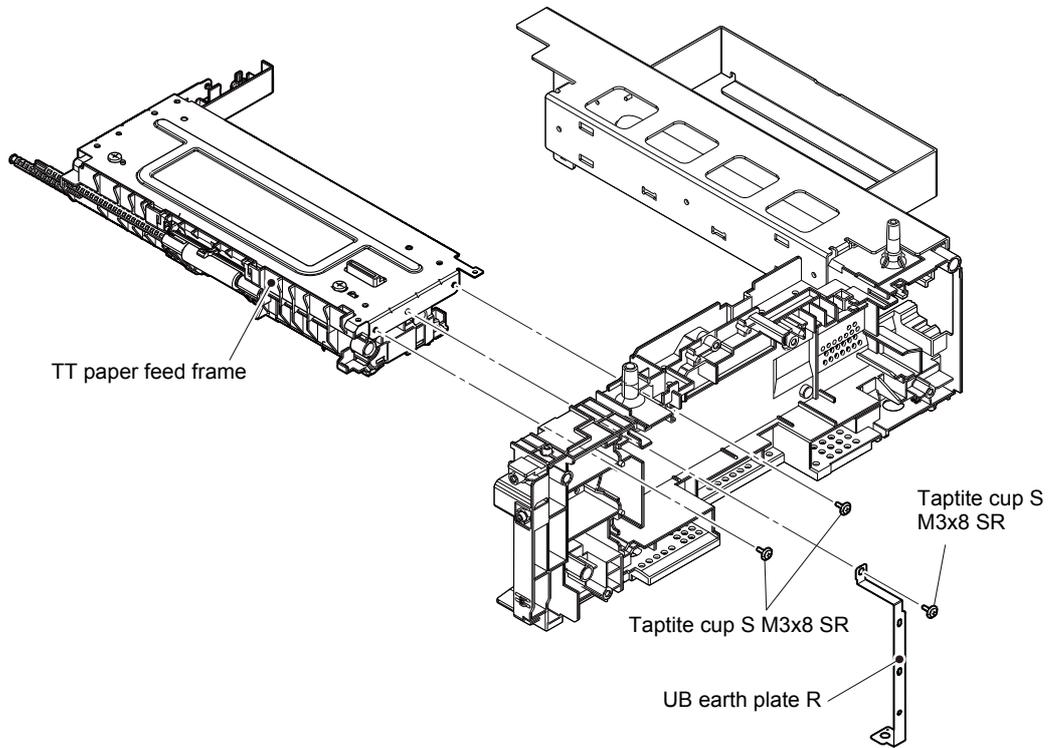
- Three harnesses for T2TT, T4TT, and T5TT.



**Fig. 3-217**

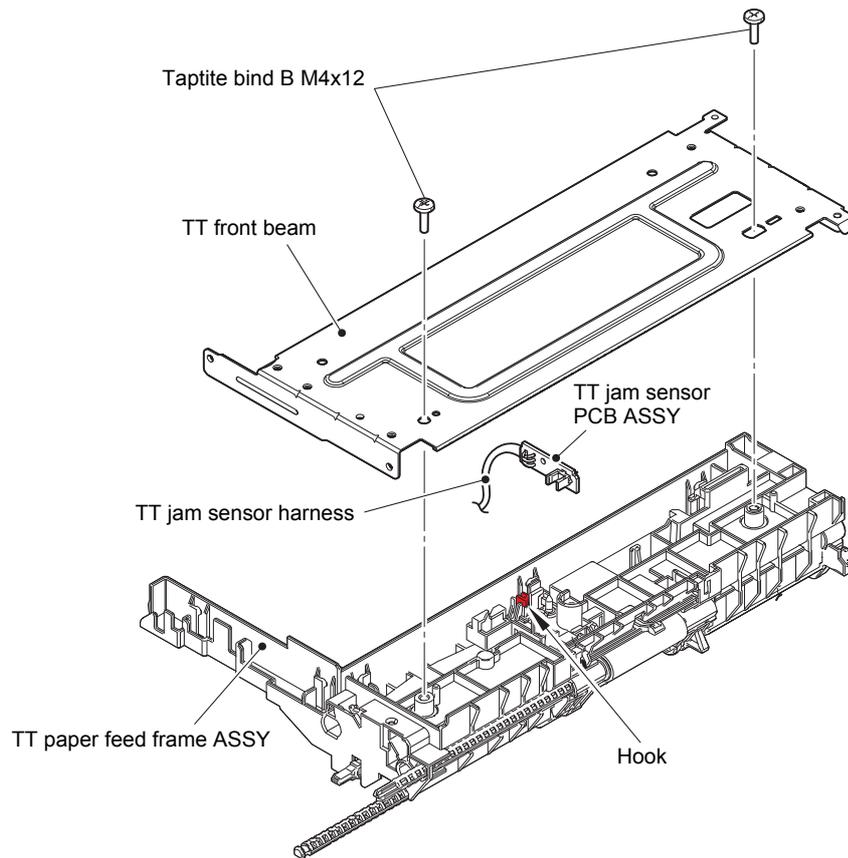
Harness routing: Refer to "21. TT relay PCB ASSY (Each TT unit)", "22. T3TT unit".

- (4) Remove the taptite cup S M3x8 SR screw to remove the UB earth plate R.
- (5) Remove the two taptite cup S M3x8 SR screws to remove the TT paper feed frame.



**Fig. 3-218**

- (6) Remove the two taptite bind B M4x12 screws to remove the TT front beam from the TT paper feed frame ASSY.
- (7) Release the TT jam sensor harness from the securing fixtures.
- (8) Release the hook to remove the TT jam sensor PCB ASSY.

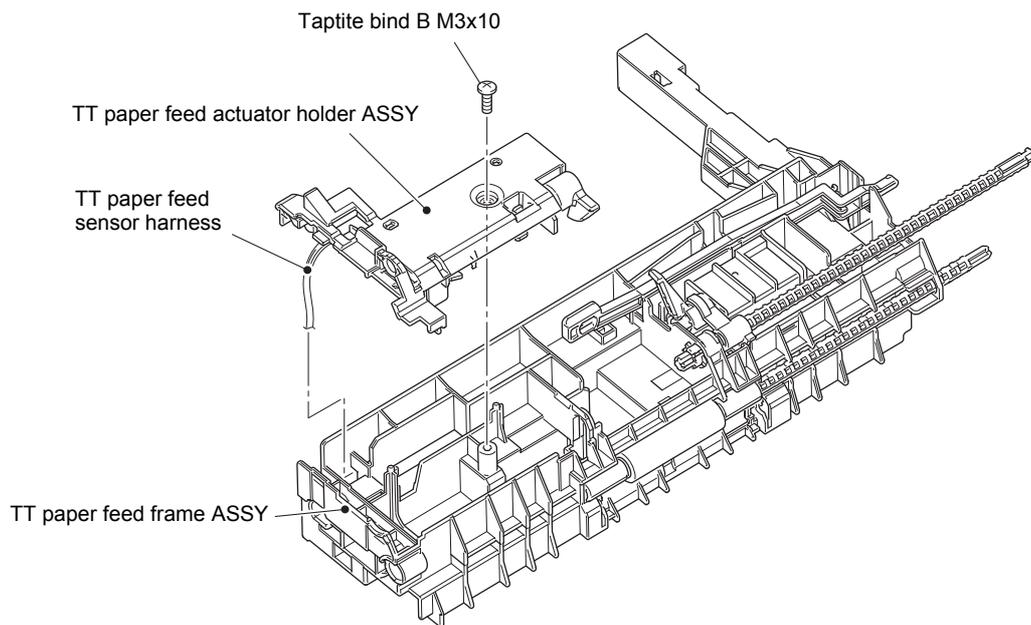


**Fig. 3-219**

Harness routing: Refer to "21. TT relay PCB ASSY (Each TT unit)".

## 12.19 TT paper feed sensor PCB ASSY (Common to all TT)

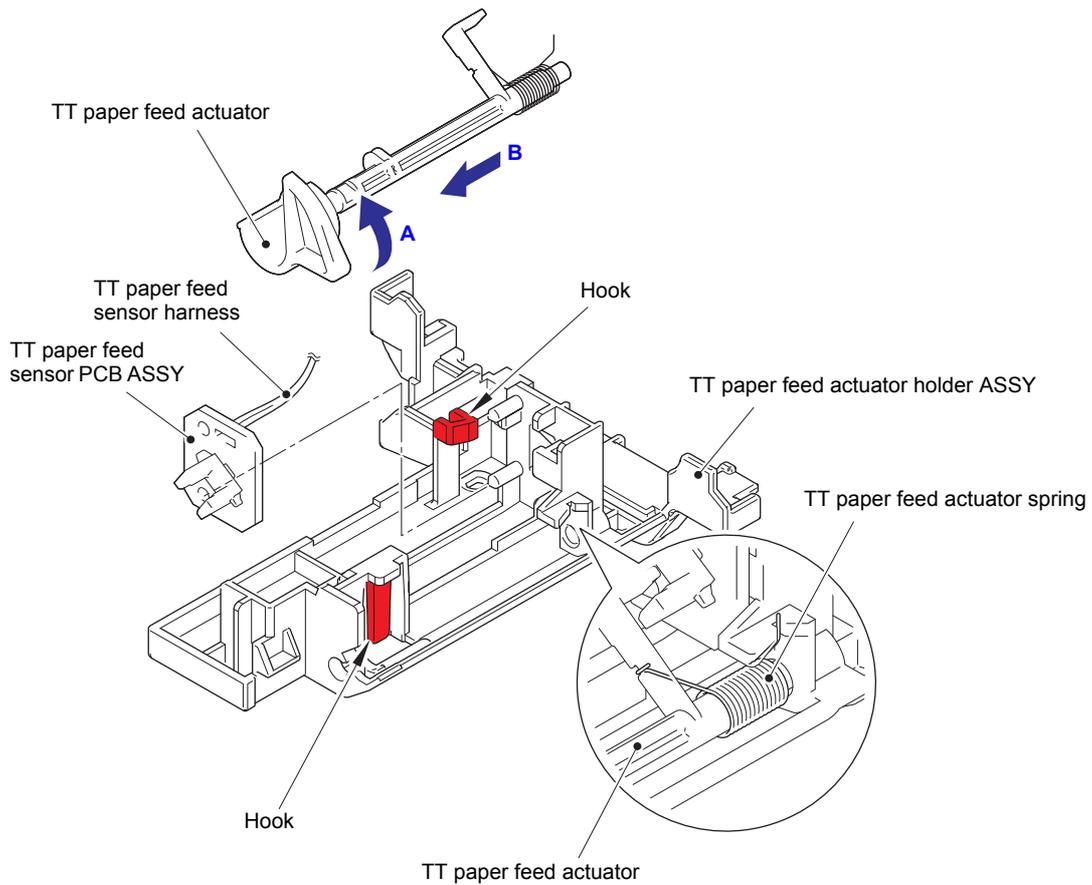
- (1) Release the TT paper feed sensor harness from the securing fixtures.
- (2) Remove the taptite bind B M3x10 screw to remove the TT paper feed actuator holder ASSY from the TT paper feed frame ASSY. Disconnect the TT paper feed sensor harness from the TT paper feed frame ASSY.



**Fig. 3-220**

Harness routing: Refer to "21. TT relay PCB ASSY (Each TT unit)".

- (3) Turn the TT paper feed actuator in the direction of the arrow A and press the hook on the TT paper feed actuator holder ASSY. Slide the TT paper feed actuator in the direction of the arrow B to remove it from the TT paper feed actuator holder ASSY.
- (4) Release the TT paper feed sensor harness from the securing fixtures of the TT paper feed actuator holder ASSY, and release the hook to remove the TT paper feed sensor PCB ASSY from the TT paper feed actuator holder ASSY.



**Fig. 3-221**

Harness routing: Refer to "21. TT relay PCB ASSY (Each TT unit)".

## 12.20 TT paper empty sensor PCB ASSY (Common to all TT)

- (1) Release the hook on the bushing, and pull out the TT separation roller shaft to remove the TT paper empty actuator.
- (2) Release the hook to remove the TT paper empty actuator cover.
- (3) Release the TT paper empty sensor harness from the securing fixtures.
- (4) Remove the taprite bind B M3x10 screw to remove the TT paper empty sensor PCB ASSY.

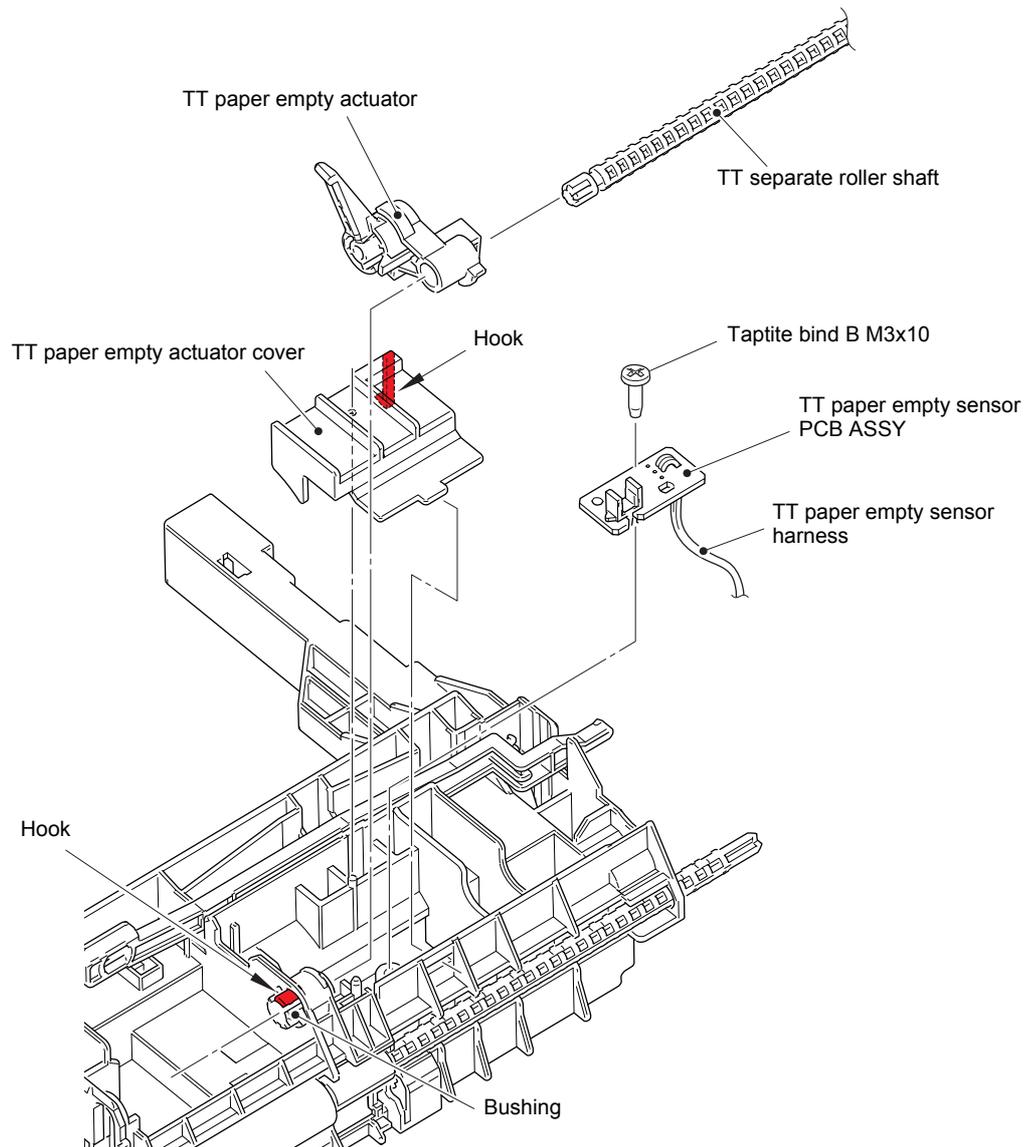


Fig. 3-222

Harness routing: Refer to "21. TT relay PCB ASSY (Each TT unit)".

## 12.21 Adjuster

- (1) Remove the four adjusters.

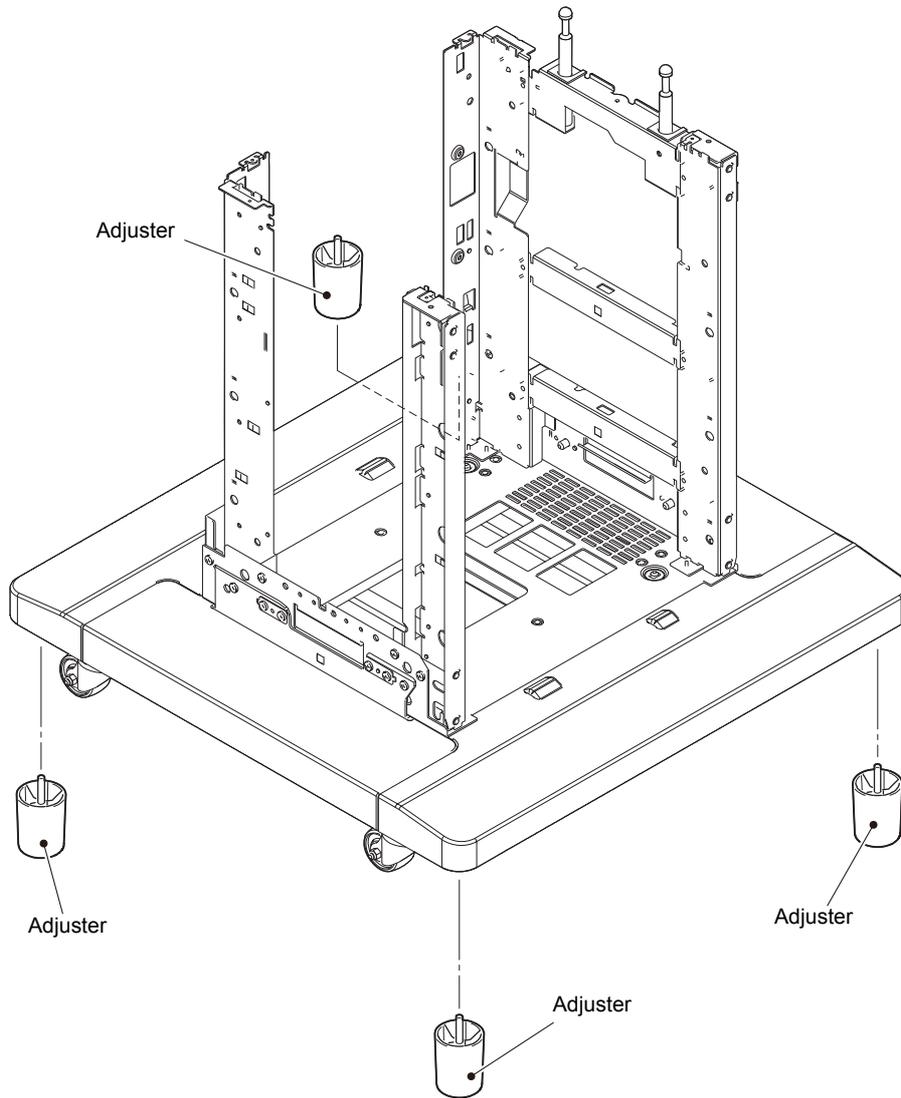


Fig. 3-223

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# CHAPTER 4 ADJUSTMENTS AND UPDATING OF SETTINGS, REQUIRED AFTER PARTS REPLACEMENT

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## 1. IF YOU REPLACE THE MAIN PCB ASSY

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### ■ What to do after replacement

- Installing the Firmware (Sub Firmware and Main Firmware)
- Adjusting Touch Panel (Function code 61) (Touch panel models only)
- Initializing the EEPROM of the Main PCB ASSY (Function code 01)
- Configure for Country/Region and Model (Function code 74)
- Continuous Adjustments of Density and Registration Sensor (Function code 73)
- Setting the Serial Number (Function code 80)
- Adjusting Left-end and Upper-end Print Position (Function code 45) (TT only)
- Resetting to Factory Shipping State (Function code 03)

### ■ What you need to prepare

- (1) USB flash memory
- (2) One USB cable  
(Only when installing the firmware and setting the Serial Number using computer.)
- (3) Create a temporary folder on the C drive of the computer (Windows® XP or later).
- (4) Download utility (Filedg32.exe)  
(Only when installing the firmware using computer.)  
Copy it into the temporary folder that has been created in the C drive.
- (5) Maintenance printer driver (Maintenance\_driver.zip)  
(Only when installing the firmware and setting the Serial Number using computer.)  
When the maintenance printer driver is not installed, copy this file into the temporary folder created on the C drive, and extract the copied file. Refer to **"APPENDIX 3 INSTALLING THE MAINTENANCE PRINTER DRIVER"** to install the driver.
- (6) Firmware

Sub1 firmware	djf or upd file (ex. D009U9_A.djf or D009U9_A.upd)
Sub3 firmware (China only)	djf or upd file (ex. D00J78_A.djf or D00J78_A.upd)
Main firmware	djf or upd file (ex. D009U3_A.djf or D009U3_A.upd)

- (7) Touch pen (Touch panel models only)

# 1.1 Installing the Firmware (Sub Firmware and Main Firmware)

## 1.1.1 Checking firmware version

Check whether the firmware installed on the machine is the latest version. If it is the latest version, there is no need to install the firmware. If it is not, be sure to install the firmware to the machine as described in “1.1.2 Installing firmware”.

### <How to check firmware version>

#### Non touch panel models

- (1) Press the [OK], and then the [Go] key while the machine is in the ready state. Then, press the [▲] key four times to enter the maintenance mode.
- (2) Press the [▲] or [▼] key to display “MAINTENANCE 25” on the LCD, and press the [OK] key. Then, the Main firmware version information is displayed on the LCD.
- (3) Next, press the [Go] key to display the version information of the Sub firmware and check the information.

#### Touch panel models

- (1) Press and hold the  key for approximately five seconds while the machine is in the ready state.
- (2) Press the blank field at the bottom.
- (3) Press the [\*], [2], [8], [6], and [4] key on the LCD in this order, and the machine enters into maintenance mode.
- (4) Press the [2], and then the [5] key in the initial state of maintenance mode. Then, the Main firmware version information is displayed on the LCD.
- (5) Next, press the [Mono Start] key to display the version information of the Sub firmware on the LCD and check the information.

#### **Memo:**

You can also check the Sub firmware and Main firmware version by implementing “Print maintenance information (Function code 77)” (refer to “1.3.23 Print maintenance information (Function code 77)” in Chapter 5).

## 1.1.2 Installing firmware

### ■ Firmware installation using USB flash memory

#### Note:

TT and LT have their own firmware respectively. They are included in the main firmware. When connecting the options to the machine and turning on the power switch, the firmwares of these options will be updated with the main firmware version of the machine.

#### Memo:

- Firmware installation using USB flash memory is inoperable when the machine is in deep sleep mode. Release the deep sleep mode by opening / closing the front cover before the operation.
- Be sure to reinstall the sub firmware and then the main firmware in this order.
- Do not disconnect the power cord, USB flash memory from the machine or computer during installing.
- When the firmware installation using USB flash memory is failed and the error message or no character appears on the LCD, refer to "[■ Firmware installation using PC](#)" in this chapter to install firmware using PC.

### <Operating procedure>

#### ■ Firmware files installation for some models selecting manually

##### Non touch panel models

- (1) Save the program files (ex: D009U9\_A.djf) which are necessary for installing the firmware to just below the USB flash memory.
- (2) While the machine is in the ready state, connect the USB flash memory drive to the USB direct interface on the front of the machine.
- (3) When the machine detects the USB flash memory, the program names are displayed on the LCD. Press the [▲] or [▼] key to select the program name that you want to install.
- (4) Press the [Go] key to start installing.
- (5) When installation is completed, the machine automatically restarts.
- (6) Repeat the procedures (3) to (5) to install necessary firmware.
- (7) When all firmware installation has been completed, remove the USB flash memory from the USB direct interface.

##### Touch panel models

- (1) Save the program files (ex: D009U9\_A.djf) which are necessary for installing the firmware to just below the USB flash memory.
- (2) While the machine is in the ready state, connect the USB flash memory drive to the USB direct interface on the front of the machine.
- (3) When the machine detects the USB flash memory, the program names are displayed on the LCD. Press the [▲] or [▼] key to display the program name that you want to install.
- (4) Press the program name that you want to install on the LCD to start installing.
- (5) When installation is completed, the machine automatically restarts.
- (6) Repeat the procedures (3) to (5) to install necessary firmware.
- (7) When all firmware installation has been completed, remove the USB flash memory from the USB direct interface.

## ■ Firmware files installation for one model automatically

### Memo:

You can install simultaneously the Sub firmware and Main firmware for one model. However, if you save firmware for some different models to the USB flash memory, an error will be occurred.

### Common to Non touch panel models / Touch panel models

- (1) Create and save a file for automatic firmware update (file name: “\_@\$UPD\$OP0.8080”) under the USB flash memory.
- (2) Create the “FIRM” folder under the USB flash memory, and save the program file needed for firmware install (ex: 2LINE: D009U3\_A.djf, Touch panel: D009U4\_A.djf) in the “FIRM” folder.
- (3) Connect the USB flash memory to the USB flash memory port at the side of the machine while the machine is in the ready state. “Program Updating.Do not turn off.” appears on the LCD and installation starts automatically. Back light blinks during the installation.
- (4) When installing is completed, the machine restarts automatically and “Completed...” appears on the LCD. Remove the USB flash memory. If multiple program files are saved in the USB flash memory, other installations start automatically after the restart. If the installation fails, “Unable to Update:\*\*” appears on the LCD. (“\*\*” indicates the error code.) Refer to the remedy and eliminate the error. Then reboot the machine and start from the procedure (1).

## ■ Firmware installation using PC

### Memo:

- Be sure to reinstall the sub firmware and then the main firmware in this order.
- Do not disconnect the power cord, USB flash memory or USB cable from the machine or computer during installing.
- If the installation is failed, turn OFF the machine and turn it back on. The machine enters the firmware install mode automatically. Continue the operation procedure below.

## <Operating procedure>

### Common to Non touch panel models / Touch panel models

- (1) If the computer and machine are connected with a USB cable, disconnect the USB cable and enter the maintenance mode. (Refer to “1.1 How to Enter Maintenance Mode” in Chapter 5.)
- (2) Connect the computer to the machine with the USB cable.
- (3) Open the temporary folder, double-click the “Filedg32.exe” to start, and select “Brother Maintenance USB Printer”.
- (4) Drag and drop a necessary program file (ex: D009U3\_\$.djf) located in the same folder to the Brother Maintenance USB Printer icon located within the FILEDG32 screen. The files are sent to the machine and installation into the flash ROM is started.
- (5) When installation is completed, the machine reboots and returns to the ready state.
- (6) Turn OFF the power of the machine, and repeat the procedures (1) to (5) to install necessary firmware.
- (7) Turn OFF the power of the machine, and disconnect the USB cable.

## 1.2 Adjusting Touch Panel (Function code 61) (Touch panel models only)

Perform adjustment of touch panel in accordance with “1.3.13 Adjust touch panel (Touch panel models only) (Function code 61)” in Chapter 5.

## 1.3 Initializing the EEPROM of the Main PCB ASSY (Function code 01)

**Note:**

Skip the operation procedure when “1.8 Resetting to Factory Shipping State (Function code 03)” has been executed after replacement of the Main PCB ASSY with a new one.

Initialize the EEPROM of the main PCB ASSY in accordance with “1.3.1 Initialize EEPROM parameters (Function code 01, 91)” in Chapter 5.

## 1.4 Configure for Country/Region and Model (Function code 74)

Perform settings for a country/region as described in “1.3.22 Configure for country/region and model (Function code 74)” in Chapter 5.

## 1.5 Continuous Adjustments of Density and Registration Sensor (Function code 73)

Perform Continuous Adjustments of Density and Registration sensor in accordance with “1.3.21 Continuous adjustments of density / registration sensor (Function code 73)” in Chapter 5.

## 1.6 Setting the Serial Number (Function code 80)

### <Operating procedure>

#### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 80" on the LCD, and press the [OK] key. "MACERR\_01:\*\*\*\*" is displayed on the LCD.
- (2) Press the [Go] key several times until "USB:\*\*\*\*\*" is displayed on the LCD.
- (3) Press the [▲] or [▼] key to display "9" on the LCD, and press the [OK] key. LCD displays the serial number again.
- (4) Press the [▲] or [▼] key and enter the "4", "7" and "5" in this order. The first digit of the serial number on the LCD starts flashing and enter the edit mode.
- (5) Press the [▲] or [▼] key to display the first number of the serial number on the LCD, and press the [OK] key. The second digit starts to flash.
- (6) Enter the second digit to the 15th digit similarly.
- (7) Press the [Go] key, and the new serial number is saved. The machine returns to the initial state of maintenance mode.

#### Touch panel models

- (1) Press the [8], and then the [0] key in the initial state of maintenance mode. "MACERR\_01:\*\*\*\*" is displayed on the LCD.
- (2) Press the [Mono Start] key several times until "USB:\*\*\*\*\*" is displayed on the LCD.
- (3) Press the [9], [4], [7], and [5] key in this order to enter the edit mode.
- (4) Use the keypad to enter the first digit of the serial number. Enter the second digit to the 15th digit similarly.

#### **Memo:**

When you enter alphanumeric characters other than A, B, C, D, E and F, see the table below and press the corresponding key until the desired character is displayed.

Keypad	Assigned characters
4	4 → G → H → I
5	5 → J → K → L
6	6 → M → N → O
7	7 → P → Q → R → S
8	8 → T → U → V
9	9 → W → X → Y → Z

- (5) Press the [SET] key, and the new serial number is saved. The machine returns to the initial state of maintenance mode.

## 1.7 Adjusting Left-end and Upper-end Print Position (Function code 45) (TT only)

This procedure is for adjusting the printing position according to the tray displacement happened in the TT assembly.

Acceptable displacement quantity against the T1 is 3.5 mm or less.

If the displacement quantity is 3.5 mm or less, adjustment is not necessary. Even the displacement quantity is 3.5 mm or less, adjust the position in response to the customer's request.

### <Operating procedure>

#### ■ Lattice printing from each paper tray

- (1) Set A4 or Letter size paper in all paper trays (T1, 2, 3, 4 or 5).
- (2) Enter the maintenance mode. (Refer to “1.1 How to Enter Maintenance Mode” in Chapter 5.)
- (3) Press the [6], and then the [7] key. “SELECT: K 100%” is displayed on the LCD.
- (4) Press the [▲] or [▼] key to display “SELECT:Lattice” on the LCD, and press the [SET] key. “SELECT:A4” is displayed on the LCD.
- (5) Press the [▲] or [▼] key to select the paper size of the paper set in the paper tray, and press the [SET] key. “SELECT: PLAIN” is displayed on the LCD.
- (6) Press the [▲] or [▼] key to select the desired media specifications of the paper set in the paper tray, and press the [SET] key. “SELECT: TRAY1 SX” is displayed on the LCD.
- (7) Press the [▲] or [▼] key to display “SELECT:TRAY1 DX” on the LCD, and press the [SET] key. “SELECT:1PAGE” is displayed on the LCD.
- (8) Press the [▲] or [▼] key to display “SELECT: 1PAGE” on the LCD, and press the [SET] key. “PAPER FEED TEST” is displayed on the LCD, and Lattice printing test pattern starts. When printing the test pattern is completed, the machine returns to the initial state of maintenance mode.
- (9) Perform the test printing for all trays by repeating the procedure (3) to (8) while changing the paper tray setting in the procedure (6) from T1, 2, 3, 4 or 5.

#### ■ Measuring a displacement of each paper tray

- (10) Measure the left and top margin of the Lattice pattern printed from each tray.
- (11) Compare the measurements with the margin of T1 as a standard and calculate the left and top margin difference for all paper trays. Calculate the second side similarly.

For example,

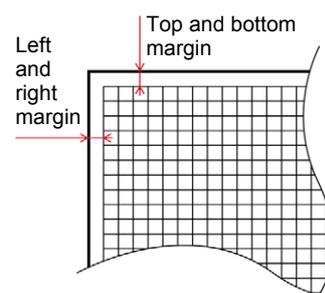
T1: the top and bottom margin 4.2 mm / the left and right margin 4.2 mm

T2: the top and bottom margin 5.3 mm / the left and right margin 3.5 mm

In this case, T2 margin differences are as follows.

the top and bottom margin 1.1 mm

the left and right margin 0.7 mm



## ■ Adjusting each paper tray

- (12) Press the [4], and then the [5] key in the initial state of maintenance mode. "USBNo." is displayed on the LCD, and then the screen shifts to function selecting menu of the function code 45.
- When operating adjust left-end print position
- (13) Press the [▲] or [▼] key to display "X Adjust" on the LCD, and press the [SET] key. "XAdjust MP" is displayed on the LCD.
- (14) Press the [▲] or [▼] key to display "X Adjust T2" on the LCD, and press the [SET] key. "XAdj. T2= 0" is displayed on the LCD.
- (15) To shift the writing start position to the left, press the [▼] key to decrease the value. To shift the position to the right, press the [▲] key to increase the value. (It shifts by 0.085 mm for a count.)  
In the example, the T2 left and right margin is 0.7 mm to the left side, then display "XAdj. T2= 8" on the LCD and press the [SET] key.  
"Accepted" is displayed, and then "XAdj. T2= 0" is displayed on the LCD and the machine returns to the selection state of paper tray.  
Press the [X] key to finish this operation.  
When operating adjust left-end print position from T3, 4 or 5, press the [▲] or [▼] key to select paper tray to adjust and enter the value in the same way as the procedure (14) and (15).  
When operating adjust upper-end print position press the [◀] key.  
"X Adjust" is displayed on the LCD, and then the screen shifts to function selecting menu of the function code 45.  
Press the [▼] key to display "Y Adjust" on the LCD.- When operating adjust upper-end print position

(16) About the top and bottom margin, press the [▲] or [▼] key to display "Y Adjust" on the LCD, and press the [SET] key. Enter the value by selecting T2 in the same way as the procedure (13) to (15).

(17) Similarly adjust left-end and upper-end print position for all trays.

## 1.8 Resetting to Factory Shipping State (Function code 03)

### Memo:

- When using the new main PCB ASSY, be sure to perform the procedure after repair. Otherwise security level (e.g., against information leakage risk) would be low.
- If you use the main PCB ASSY has been used even once in the market, there is no need to follow the procedure.

### <Operating procedure>

#### Non touch panel models

- (1) Be sure to enter the maintenance mode. (Refer to “1.1 How to Enter Maintenance Mode” in Chapter 5.)
- (2) Press the [▲] or [▼] key in the initial state of maintenance mode to display “MAINTENANCE 03” on the LCD, and press the [OK] key. “1.LT1 MN LOAD?” is displayed on the LCD.
- (3) Press the [▲] or [▼] key to select “7.PowerOnFunc ?” and then press the [OK] key. “FUNC\_ENABLE” or “FUNC\_DISABLE” is displayed on the LCD.
- (4) When “FUNC\_DISABLE” is displayed on the LCD, the machine is at shipping state. Press the [X] key to return to the initial state of the maintenance mode. When “FUNC\_ENABLE” is displayed on the LCD, press the [▲] or [▼] key to select “FUNC\_DISABLE” and then press the [OK] key. “1.LT1 MN LOAD?” is displayed on the LCD.
- (5) Press the [▲] or [▼] key to display “8.ShippingStat?” on the LCD, and press the [OK] key. “ON” or “OFF:Change OK?” is displayed on the LCD.
- (6) When “ON” is displayed on the LCD, turn OFF the power switch of the machine and quit. When “OFF:Change OK?” is displayed on the LCD, press the [OK] key. The machine is reset to a factory shipping state. Turn the power off and then unplug the AC cord of the machine to finish the procedure.

#### Touch panel models

- (1) Be sure to enter the maintenance mode. (Refer to “1.1 How to Enter Maintenance Mode” in Chapter 5.)
- (2) Press the [0], and then the [3] key in the initial state of maintenance mode. “1.LT1 MN LOAD?” is displayed on the LCD.
- (3) Press the [▲] or [▼] key to select “7.PowerOnFunc ?” and then press the [Mono Start] key. “FUNC\_ENABLE” or “FUNC\_DISABLE” is displayed on the LCD.
- (4) When “FUNC\_DISABLE” is displayed on the LCD, the machine is at shipping state. Press the [X] key to return to the initial state of the maintenance mode. When “FUNC\_ENABLE” is displayed on the LCD, press the [▲] or [▼] key to select “FUNC\_DISABLE” and then press the [SET] key. “1.LT1 MN LOAD?” is displayed on the LCD.
- (5) Press the [▲] or [▼] key to display “8.ShippingStat?” on the LCD, and press the [Mono Start] key. “ON” or “OFF:Change OK?” is displayed on the LCD.
- (6) When “ON” is displayed on the LCD, turn OFF the power switch of the machine and quit. When “OFF:Change OK?” is displayed on the LCD, press the [SET] key. The machine is reset to a factory shipping state. Turn the power off and then unplug the AC cord of the machine to finish the procedure.

## 2. IF YOU REPLACE THE REGISTRATION MARK SENSOR UNIT

---

### ■ What to do after replacement

- Continuous Adjustments of Density and Registration Sensor (Function code 73)

### ■ What you need to prepare

None

### 2.1 Continuous Adjustments of Density and Registration Sensor (Function code 73)

Perform continuous adjustments of density and registration sensor in accordance with [“1.3.21 Continuous adjustments of density / registration sensor \(Function code 73\)”](#) in Chapter 5.

## 3. IF YOU REPLACE THE LOW-VOLTAGE POWER SUPPLY PCB ASSY

---

### ■ What to do after replacement

- Resetting Irregular Power Supply Counter of the Low-voltage Power Supply PCB (Reset counters for consumable parts (Function code 88))

### ■ What you need to prepare

None

### 3.1 Resetting Irregular Power Supply Counter of the Low-voltage Power Supply PCB (Reset counters for consumable parts (Function code 88))

Refer to “[1.3.28 Reset counters for consumable parts \(Function code 88\)](#)” in [Chapter 5](#) to reset the irregular power supply counter of the low-voltage power supply PCB.

## 4. IF YOU REPLACE TOP COVER ASSY, LCD, CONTROL PANEL ASSY OR PANEL PCB ASSY

---

### ■ What to do after replacement

- Adjusting Touch Panel (Function code 61) (Touch Panel Models only)
- Checking LCD Operation (Function code 12)

### ■ What you need to prepare

- (1) Touch pen (Touch panel models only)

### 4.1 Adjusting Touch Panel (Function code 61) (Touch Panel Models only)

Adjust the touch panel as described in “1.3.13 Adjust touch panel (Touch panel models only) (Function code 61)” in Chapter 5.

### 4.2 Checking LCD Operation (Function code 12)

Check LCD operation as described in “1.3.5 Check LCD operation (Function code 12)” in Chapter 5.

## 5. IF YOU REPLACE THE LASER UNIT

---

### ■ What to do after replacement

- Continuous Adjustments of Density and Registration Sensor (Function code 73)
- Resetting Printed Pages Counter of the Laser Unit (Reset counters for consumable parts (Function code 88))

### ■ What you need to prepare

None

## 5.1 Continuous Adjustments of Density and Registration Sensor (Function code 73)

Perform continuous adjustments of density and registration sensor in accordance with [“1.3.21 Continuous adjustments of density / registration sensor \(Function code 73\)”](#) in Chapter 5.

## 5.2 Resetting Printed Pages Counter of the Laser Unit (Reset counters for consumable parts (Function code 88))

Refer to [“1.3.28 Reset counters for consumable parts \(Function code 88\)”](#) in Chapter 5 to reset the printed pages counter of the laser unit.

## 6. IF YOU REPLACE THE FUSER UNIT

---

### ■ What to do after replacement

- Resetting Printed Pages Counter of the Fuser Unit  
(Reset counters for consumable parts (Function code 88))

### ■ What you need to prepare

None

## 6.1 Resetting Printed Pages Counter of the Fuser Unit (Reset counters for consumable parts (Function code 88))

Refer to “[1.3.28 Reset counters for consumable parts \(Function code 88\)](#)” in Chapter 5 to reset the printed pages counter of the fuser unit.

## 7. IF YOU REPLACE A PF KIT

---

### ■ What to do after replacement

- Resetting Printed Pages Counter of a PF Kit  
(Reset counters for consumable parts (Function code 88))

### ■ What you need to prepare

None

## 7.1 Resetting Printed Pages Counter of a PF Kit (Reset counters for consumable parts (Function code 88))

Refer to [“1.3.28 Reset counters for consumable parts \(Function code 88\)”](#) in Chapter 5 to reset the printed pages counter of the appropriate PF kit.

## 8. IF YOU REPLACE THE TT/LT

---

### ■ What to do after replacement

- Installing Firmware (Main Firmware)
- Adjusting Left-end and Upper-end Print Position (Function code 45) (TT only)

### ■ What you need to prepare

- (1) One USB cable (only for when Firmware installation using PC)
- (2) USB flash memory
- (3) Create a temporary folder on the C drive of the computer (Windows® XP or later).
- (4) Download utility (Filedg32.exe)  
Copy this file into the temporary folder created on the C drive.
- (5) Maintenance driver (Maintenance\_driver.zip) (only for when Firmware installation using PC)  
When the maintenance driver is not installed on the computer, copy this file into the temporary folder created on the C drive, and extract the copied file. Refer to **“APPENDIX 3 INSTALLING THE MAINTENANCE PRINTER DRIVER”** to install the driver.
- (6) Firmware

Sub1 firmware	djf or upd file (ex. D009U9_A.djf or D009U9_A.upd)
Sub3 firmware (China only)	djf or upd file (ex. D00J78_A.djf or D00J78_A.upd)
Main firmware	djf or upd file (ex. D009U3_A.djf or D009U3_A.upd)

## 8.1 Installing Firmware (Main Firmware)

### 8.1.1 Checking firmware version

Check whether the firmwares installed on the machine are the latest version, refer to [“1.1.1 Checking firmware version” in this chapter](#). If they are the latest version, there is no need to install the firmware. If they are not, be sure to install all firmwares to the machine.

#### <How to check firmware version>

##### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display “MAINTENANCE 25” on the LCD.
- (2) Press the [OK] key. “MAIN:Ver\*. \*\* (#)” is displayed on the LCD.
- (3) Pressing the [▲] or [Mono Start] key changes the display to the next item.
- (4) When you press the [Stop] key, this operation is finished and the machine returns to the initial state of maintenance mode.

##### Touch panel models

- (1) Press the [2], and then the [5] key in the initial state of maintenance mode. “MAIN:Ver\*. \*\* (#)” is displayed on the LCD.
- (2) Pressing the [▲] or [Mono Start] key changes the display to the next item.
- (3) When you press the [X] key, this operation is finished and the machine returns to the initial state of maintenance mode.

#### **Memo:**

You can also check the sub firmware and main firmware versions by implementing “Print maintenance information (Function code 77)” (refer to [“1.3.23 Print maintenance information \(Function code 77\)” in Chapter 5](#)).

### 8.1.2 Installing firmware

#### **Note:**

TT and LT have their own firmware respectively. They are included in the main firmware. When connecting the options to the machine and turning on the power switch, the firmwares of these options will be updated with the main firmware version of the machine.

#### **Memo:**

- Do not disconnect the power cord, USB flash memory or USB cable from the machine or computer during installing.
- If the installation is failed, turn OFF the machine and turn it back on. The machine enters the firmware install mode automatically. Continue the operation procedure below.
- Firmware installation using USB flash memory is inoperable when the machine is in deep sleep mode. Release the deep sleep mode by opening / closing the front cover before the operation.
- When the firmware installation using USB flash memory is failed and the error message or no character appears on the LCD, refer to [“■ Firmware installation using PC” in this chapter](#) to install firmware using PC.

If the firmware installed on the machine is not the latest version, be sure to install the firmware to the machine as described in [“1.1.2 Installing firmware”](#).

## 8.2 Adjusting Left-end and Upper-end Print Position (Function code 45) (TT only)

Follow the instruction in “1.7 Adjusting Left-end and Upper-end Print Position (Function code 45) (TT only)” in this chapter to adjust left-end or upper-end print position.

# CHAPTER 5 SERVICE FUNCTIONS

## 1. MAINTENANCE MODE

Maintenance mode is exclusively designed for checking, setting and adjusting the machine using the keys on the control panel. Using maintenance mode functions, you can conduct operational checks of sensors or test printing, display the log information or error codes, and change the worker switches (WSW) etc.

### 1.1 How to Enter Maintenance Mode

#### 1.1.1 Method of entering maintenance mode for service personnel

##### < Operating Procedure >

###### Non touch panel models

- (1) Press the [OK] key and then the [Go] key while the machine is in the ready state. Then, press the [▲] key four times to enter the maintenance mode.

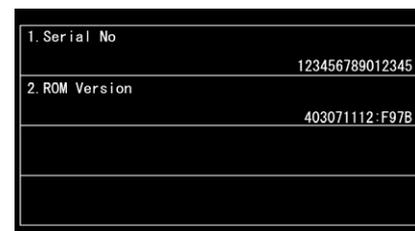
###### **Note:**

To enter the maintenance mode, press the [Go] key in two seconds after pressing the [OK] key. Similarly, press the [▲] key in two seconds after pressing the [Go] key.

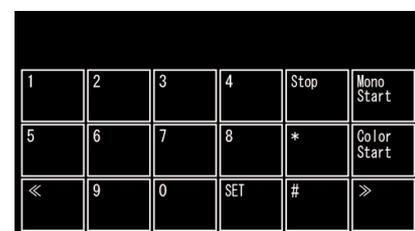
- (2) “■■ MAINTENANCE ■■” is displayed on the LCD to indicate that the machine entered the initial state of maintenance mode. The machine is ready to accept entry via keys.
- (3) To select any of the maintenance mode functions shown in the “1.2 List of Maintenance Mode Functions”, press the [▲] or [▼] key. Check that the desired maintenance mode is displayed on the LCD, and press the [OK] key.

###### Touch panel models

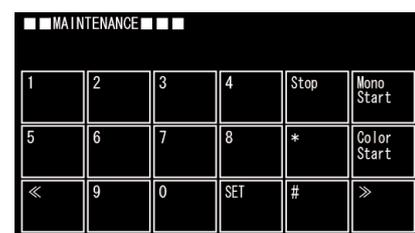
- (1) Press and hold the  key for approximately five seconds while the machine is in the ready state. The display shown on the right appears on the LCD.



- (2) Press the blank field at the bottom on the LCD. The display shown on the right appears on the LCD.



- (3) Press the [\*, [2], [8], [6], and [4] keys in this order. The display shown on the right appears on the LCD, and the machine enters into maintenance mode.



- (4) To select any of the maintenance mode functions shown in the “1.2 List of Maintenance Mode Functions”, use the keypad to enter the maintenance mode function code to be executed.

## 1.1.2 Method of entering end-user accessible maintenance mode

The maintenance mode functions should only be accessed by service personnel. However, end users are allowed to use some of these functions under the guidance of service personnel over the phone. End users can only use the functions shaded in the table “1.2 List of Maintenance Mode Functions” (Function code 09, 10, 11, 12, 18, 25, 45, 61, 66, 68, 72, 77, 80, 82, 91).

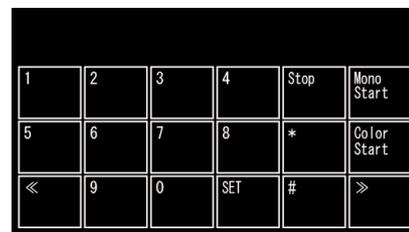
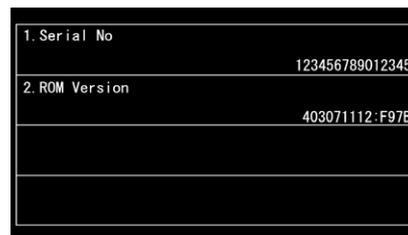
### < Operating Procedure >

#### Non touch panel models

- (1) Press the [OK], [Go], and [OK] keys in this order while the machine is in the ready state. “0” is displayed on the LCD.
- (2) Press the [▲] or [▼] key several times until the desired maintenance mode function is displayed on the LCD. Check that the desired maintenance mode is displayed on the LCD, and press the [OK] key.
- (3) Each time the selected maintenance mode function is completed, the machine returns to the ready state automatically. For function codes 12, 25, 45, 66, 68, 80, and 82, pressing the [X] key returns the machine to the ready state.

#### Touch panel models

- (1) Press and hold the  key for approximately five seconds while the machine is in the ready state. The display shown on the right appears on the LCD.
- (2) Press the blank field at the bottom on the LCD. The display shown on the right appears on the LCD.
- (3) Press the [\*], [0], and [#] keys on the LCD in this order. The machine enters into ready state to accept function code entry, so press the function code you want to execute.
- (4) Each time the selected maintenance mode function is completed, the machine returns to the ready state automatically.



## 1.2 List of Maintenance Mode Functions

Function code	Function	Refer to:
01	Initialize EEPROM parameters	1.3.1 (5-4)
03	Transition to shipping state	1.3.2 (5-5)
09	Print quality test pattern	1.3.3 (5-7)
10	Set worker switches (WSW)	1.3.4 (5-8)
11	Print worker switch (WSW) setting data	1.3.4 (5-8)
12	Check LCD operation	1.3.5 (5-11)
13	Check control panel key operation	1.3.6 (5-13)
18	Save the NetConfig information	1.3.7 (5-14)
25	Display software version	1.3.8 (5-15)
32	Check sensor operation	1.3.9 (5-16)
33	Display LAN connection status	1.3.10 (5-20)
45	Change USB No. return value / Switching Dither Pattern / Change ON/OFF setting of Direct Print Color mode-Improve Gray Color / Switching of timing to execute Auto Registration / Adjust left-end print position / Adjust upper-end print position / Change of the transfer current setting / Change of ghost reduction setting	1.3.11 (5-21)
46	Adjust printable range for each speed level	1.3.12 (5-31)
61	Adjust touch panel	1.3.13 (5-33)
66	Adjustment of color registration (Adjustment of inter-color position alignment)	1.3.14 (5-34)
67	Continuous print test	1.3.15 (5-40)
68	Laser unit test pattern print	1.3.16 (5-44)
69	Print frame pattern (single-side printing)	1.3.17 (5-45)
70	Print frame pattern (duplex printing)	1.3.18 (5-46)
71	Color test pattern	1.3.19 (5-47)
72	Sensitivity adjustment of density sensor	1.3.20 (5-50)
73	Continuous adjustments of density / registration sensor	1.3.21 (5-52)
74	Configure for country / region and model	1.3.22 (5-53)
77	Print maintenance information	1.3.23 (5-55)
78	Check fan operation	1.3.24 (5-57)
80	Display machine log information	1.3.25 (5-58)
82	Display machine error code	1.3.26 (5-63)
83	Developing bias voltage correction	1.3.27 (5-64)
88	Reset counters for consumable parts	1.3.28 (5-66)
91	Initialize EEPROM parameters	1.3.1 (5-4)
99	Quit maintenance mode	1.3.29 (5-67)

\* The maintenance mode functions shaded in the table can be used by end users.

## 1.3 Details of Maintenance Mode Functions

### 1.3.1 Initialize EEPROM parameters (Function code 01, 91)

#### < Function >

This function is used to initialize the setting values for operation parameters, user switches, and worker switches (WSW) registered in the EEPROM. Entering function code 01 initializes most EEPROM areas. Entering function code 91 initializes only the specified areas as shown in the table below.

Data item	01	91
Printer switch (Counter information)	Areas not to be initialized	Areas not to be initialized
Error history		
Mac Address (Ethernet Address)		
Password for control panel operation lock	Areas to be initialized	Areas to be initialized
Worker switches		
User switches (items initialized when Factory Reset is executed)		
Secure function lock		
Function settings except user switches (settings not subject to "Factory Reset") - Language - Interface		Areas to be initialized
LAN setting		
PCL core area (Emulation setting values)		

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "Maintenance 01" (or "Maintenance 91" as required) on the LCD, and press the [OK] key. "PARAMETER INIT" is displayed on the LCD.
- (2) When initializing parameters is completed, the machine returns to the initial state of maintenance mode.

##### Touch panel models

- (1) Press the [0], and then the [1] key (or press the [9], and then the [1] key as required) in the initial state of maintenance mode. "PARAMETER INIT" is displayed on the LCD.
- (2) When initializing parameters is completed, the machine returns to the initial state of maintenance mode.

#### **Note:**

Function code 01 is for service personnel. Function code 91 is for user support.

### 1.3.2 Transition to shipping state (Function code 03)

This function contains update of TT/LT firmware, display soft switch Check SUM, change ON/OFF setting of special function at start up and transfer to the shipping state. Update of TT/LT firmware, display soft switch Check SUM and change ON/OFF setting of special function at start up are function for sales correspondence or production process and not used for the service. Only transfer to the shipping state can be used for the service.

#### ■ Update of TT/LT firmware

##### < Function >

This function is for sales special correspondence, and not used for the service. Usually, when update the main firmware of the machine while connecting the TT and LT, firmware of TT and LT will be updated to the latest version automatically.

These functions are displayed on LCD after entering function code 03 as "1.LT1 MN LOAD?", "2.LT2 MN LOAD?", "3.LT3 MN LOAD?", "4.MB1 MN LOAD?" and "5.TT MN LOAD?".

#### ■ Display soft switch Check SUM

##### < Function >

This function is to display soft switch check SUM such as FSW/USW/WSW etc. Only for soft switch display and not used for the service.

This function is displayed on LCD after entering function code 03 as "6.SWSUM?".

#### ■ Change ON/OFF setting of special function at start up

##### < Function >

By the special function at start up is set to an invalid state, "■ Transfer to the shipping state" in the next item can be used.

Be careful it is unable to transfer the machine to the shipping state a valid state.

##### < Operating Procedure >

###### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 03" on the LCD, and press the [OK] key. "1.LT1 MN LOAD?" is displayed on the LCD.
- (2) Press the [▲] or [▼] key to select "7.PowerOnFunc?" and then press the [OK] key. "FUNC\_ENABLE" or "FUNC\_DISABLE" is displayed on the LCD.
- (3) When "FUNC\_DISABLE" is displayed on the LCD, the machine is at shipping state. Press the [X] key to return to the initial state of the maintenance mode. When "FUNC\_ENABLE" is displayed on the LCD, press the [▲] or [▼] key to select "FUNC\_DISABLE" and then press the [OK] key. "1.LT1 MN LOAD?" is displayed on the LCD.

###### Touch panel models

- (1) Press the [0], and then the [3] key in the initial state of maintenance mode. "1.LT1 MN LOAD?" is displayed on the LCD.
- (2) Press the [▲] or [▼] key to select "7.PowerOnFunc?" and then press the [Mono Start] key. "FUNC\_ENABLE" or "FUNC\_DISABLE" is displayed on the LCD.
- (3) When "FUNC\_DISABLE" is displayed on the LCD, the machine is at shipping state. Press the [X] key to return to the initial state of the maintenance mode. When "FUNC\_ENABLE" is displayed on the LCD, press the [▲] or [▼] key to select "FUNC\_DISABLE" and then press the [SET] key. "1.LT1 MN LOAD?" is displayed on the LCD.

## ■ Transfer to the shipping state

### < Function >

This function is to transfer the machine to the shipping state when used new spare Main PCB for repair, etc. When not perform this function to the new spare Main PCB and leave, some software will be unavailable such as MPS applications or BrAdmin tool. Also, the machine keeps poor state of security such as risk of leaking private information. Do not forget to perform this function after replacing the new spare Main PCB. However, this product does not have function for place back to the pre-shipping state from the shipping state.

### < Operating Procedure >

#### Note:

Be careful that if the special function at start up in the preceding item is a valid state, it is unable to transfer the machine to the shipping state.  
Be sure to operate after changing to an invalid state.

#### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 03" on the LCD, and press the [OK] key. "1.LT1 MN LOAD?" is displayed on the LCD.
- (2) Press the [▲] or [▼] key to select "8.ShippingStat?" and then press the [OK] key. "ON" or "OFF: Change OK?" is displayed on the LCD.
- (3) When "ON" is displayed on the LCD, the machine is at shipping state. Press the [X] key to return to the initial state of the maintenance mode.  
When "OFF: Change OK?" is displayed on the LCD, press the [OK] key. The machine will transfer to the shipping state and returns to the initial state of the maintenance mode.

#### Touch panel models

- (1) Press the [0], and then the [3] key in the initial state of maintenance mode. "1.LT1 MN LOAD?" is displayed on the LCD.
- (2) Press the [▲] or [▼] key to select "8.ShippingStat?" and then press the [Mono Start] key. "ON" or "OFF: Change OK?" is displayed on the LCD.
- (3) When "ON" is displayed on the LCD, the machine is at shipping state. Press the [X] key to return to the initial state of the maintenance mode.  
When "OFF: Change OK?" is displayed on the LCD, press the [SET] key. The machine will transfer to the shipping state and returns to the initial state of the maintenance mode.

### 1.3.3 Print quality test pattern (Function code 09)

#### < Function >

This function is used to print test patterns to check any missing image and print quality.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display “MAINTENANCE 09” on the LCD, and press the [OK] key. It starts printing the print quality test pattern (refer to the figure below).
- (2) When printing is completed, the machine returns to the initial state of maintenance mode.

##### Touch panel models

- (1) Press the [0], and then the [9] key in the initial state of maintenance mode. “MAINTENANCE 09” is displayed on the LCD, and the machine starts printing the print quality test pattern (refer to the figure below).
- (2) When printing is completed, the machine returns to the initial state of maintenance mode.

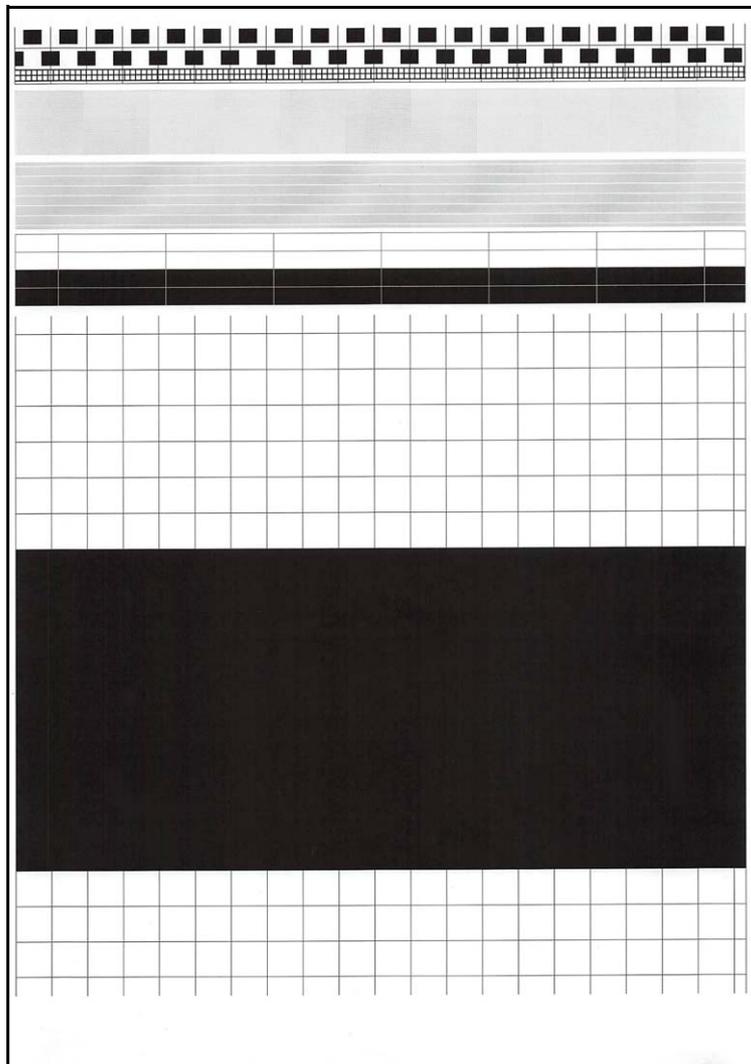


Fig. 5-1

#### **Note:**

This print is available even Cyan, Magenta and Yellow toner cartridge is empty or “No toner” status.

### 1.3.4 Set worker switches (WSW) and print worker switch setting data (Function code 10, 11)

#### [1] Set worker switches (Function code 10)

##### < Function >

The worker switches shown in the table below can be used to set the function to satisfy various requirements. These switch settings can be changed using the keys on the control panel.

The worker switches are factory set to conform to the laws and regulations of the country the machine is shipped to. Do not change these settings unless necessary.

WSW No.	Function
<b>WSW17 selector 5</b>	Change time display method (American: MM/DD/YY or European: DD/MM/YY)
<b>WSW44 selector 8</b>	Change ON/OFF setting for displaying OFF for LCD back light
<b>WSW47 selector 8</b>	Change USB High/Full Speed
<b>WSW49 selector 7</b>	Change paper size select method at PDF printing
<b>WSW55 selector 1-8</b>	Change the Developing bias voltage correction interval
<b>WSW56 selector 6</b>	Change coverage type display
<b>WSW59 selector 1</b>	Change ON/OFF setting for USB serial number sending
<b>WSW63 selector 3</b>	Change time display method (Japanese: YY/MM/DD or others)
<b>WSW63 selector 4-7</b>	Demo printing type
<b>WSW63 selector 8</b>	Change ON/OFF setting for Israeli font support
<b>WSW64 selector 1-6</b>	Language setting
<b>WSW64 selector 7-8</b>	Default paper size
<b>WSW65 selector 1-2</b>	Default media type
<b>WSW65 selector 3</b>	Change ON/OFF setting for Bond Paper support
<b>WSW65 selector 4</b>	Change ON/OFF setting for Postcard support
<b>WSW65 selector 6</b>	Change ON/OFF setting for Label support
<b>WSW65 selector 7</b>	Change ON/OFF setting for Glossy paper support
<b>WSW81 selector 1</b>	Change ON/OFF setting for models with PS emulation function.
<b>WSW81 selector 2</b>	Change ON/OFF setting for models with PCL emulation function.

\* Refer to the separate manual for details of worker switches.

## < Operating Procedure >

### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 10" on the LCD.
- (2) Press the [OK] key. "WSW00" is displayed on the LCD, indicating that the machine is ready for worker switch number entry.
- (3) Press the [▲] or [▼] key to display the worker switch number for which you want to change the setting on the LCD.
- (4) Press the [OK] key. The following message is displayed on the LCD.  

Selector No.1	Selector No.8
↓	↓
WSWXX = <u>0</u> 0 0 0 0 0 0 0	
- (5) Pressing the [▲] key enters "1", and pressing the [▼] key enters "0". Press either to enter desired number to Selector No.1. The next digit starts flashing.
- (6) Keep entering numbers to Selector No.8 using the [▲] or [▼] key as described in the procedure (2) to (5).
- (7) Press the [OK] key. The new selector setting value is stored in the EEPROM, and the LCD returns to the ready state for worker switch number entry ([WSW00]).
- (8) When all switch setting is completed, press the [X] key to return the machine to the initial state of maintenance mode.

### Touch panel models

- (1) Press the [1], and then the [0] key in the initial state of maintenance mode. "WSW00" is displayed on the LCD.
- (2) Enter the worker switch number that you want to change the setting. The following display appears on the LCD.  

Selector No.1	Selector No.8
↓	↓
WSWXX = <u>0</u> 0 0 0 0 0 0 0	
- (3) Press the [◀] or [▶] key to move the cursor to the desired selector, and change the setting by pressing the [1] or [0] key.
- (4) When changing the setting is completed, press the [SET] key. The new selector setting value is stored in the EEPROM, and the LCD returns to the ready state for worker switch number entry ("WSW00").
- (5) When all switch setting is completed, press the [X] key to return the machine to the initial state of maintenance mode.

## [2] Print worker switch (WSW) setting data (Function code 11)

### < Function >

This function is used to print the worker switch settings and details.

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 11" on the LCD, and press the [OK] key.
- (2) "PRINTING" is displayed on the LCD, and printing the CONFIGURATION LIST (refer to the figure below) starts.
- (3) When printing is completed, the machine returns to the initial state of maintenance mode.

#### Touch panel models

- (1) Press the [1] key twice in the initial state of maintenance mode.
- (2) "PRINTING" is displayed on the LCD, and printing the CONFIGURATION LIST (refer to the figure below) starts.
- (3) When printing is completed, the machine returns to the initial state of maintenance mode.

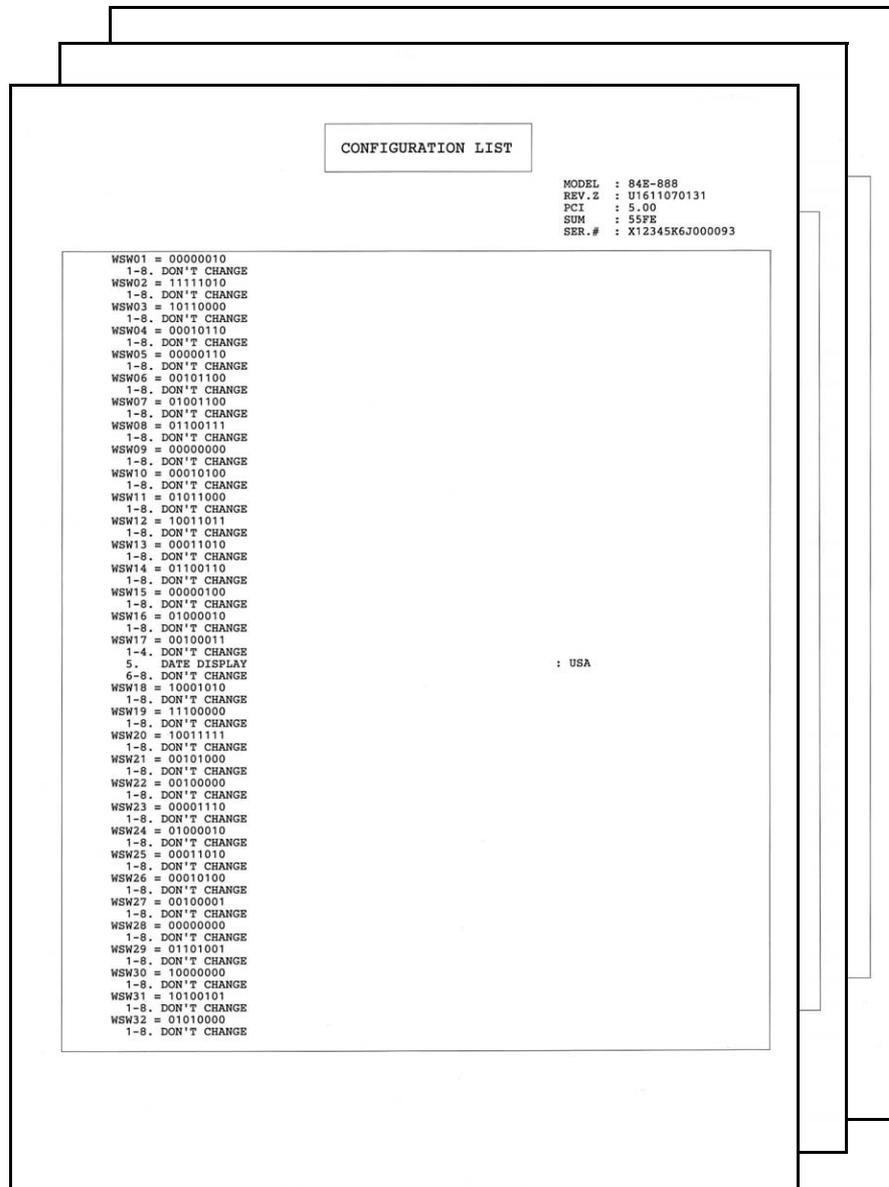


Fig. 5-2

### 1.3.5 Check LCD operation (Function code 12)

#### < Function >

This function is used to check that the LCD on the control panel is operating normally.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 12" on the LCD, and press the [OK] key.
- (2) Each press of the [Go] key cycles through the displays as shown in the figure below.
- (3) When you press the [X] key, the machine returns to the initial state of maintenance mode, regardless of the display status.

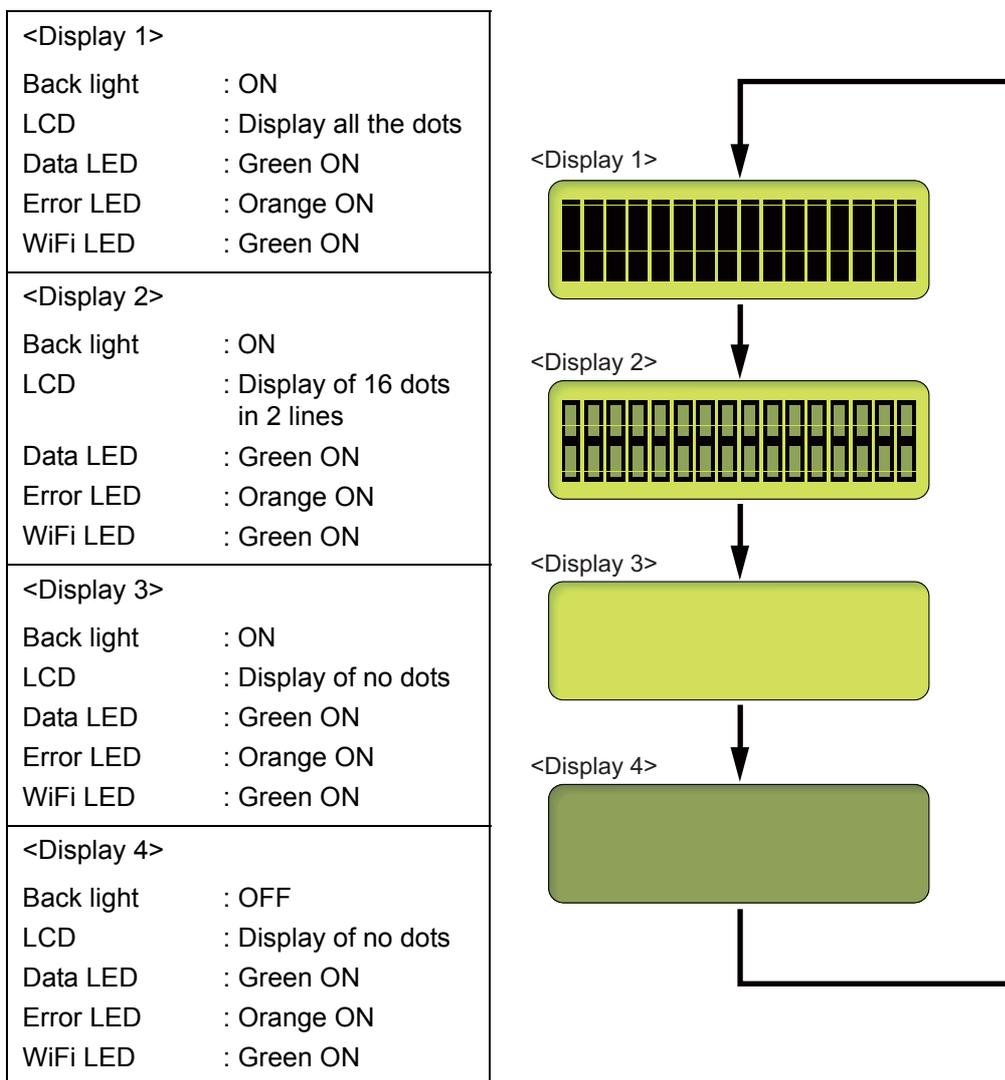


Fig. 5-3

< Operating Procedure >

(1) Press the [1], and then the [2] key in the initial state of maintenance mode. LCD displays shown as the chart below.

(2) Press the  key to switch the display column A and display column B.

By pressing the  key, LCD moves to the next display of the each column according to the chart. When you press the  key at the Display B-7 of the each column, LCD returns to display B-1. Press the  key to return to the last LCD display.

**Note:**

At <Display A-7>, you cannot switch the display to column B even press the  key.

(3) When you press the [X] key at the Display A-7 or B-1 to 7, the machine returns to the initial state of the maintenance mode.

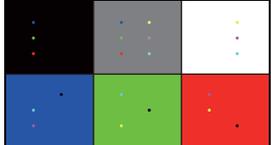
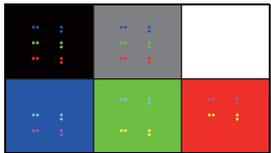
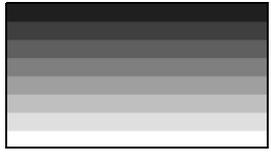
<p>&lt;Display A-1&gt; all white</p> 	<p>&lt;Display B-1&gt; bright point/ down point</p> 
<p>&lt;Display A-2&gt; all black</p> 	<p>&lt;Display B-2&gt; bright point</p> 
<p>&lt;Display A-3&gt; all gray</p> 	<p>&lt;Display B-3&gt; white gradual</p> 
<p>&lt;Display A-4&gt; all red</p> 	<p>&lt;Display B-4&gt; red gradual</p> 
<p>&lt;Display A-5&gt; all green</p> 	<p>&lt;Display B-5&gt; green gradual</p> 
<p>&lt;Display A-6&gt; all blue</p> 	<p>&lt;Display B-6&gt; blue gradual</p> 
<p>&lt;Display A-7&gt; picture data</p> 	<p>&lt;Display B-7&gt; Displays BMP file in the Media by rotation</p>

Fig. 5-4

### 1.3.6 Check control panel key operation (Function code 13)

#### < Function >

This function is used to check that keys on the control panel are operating normally.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 13" on the LCD, and press the [OK] key. "00" is displayed on the LCD.
- (2) Press the keys on the control panel according to the numbers provided in the figure below. Each time the key is pressed, the corresponding figure is displayed on the LCD in decimal notation. Check that the number and the key name displayed on the LCD matches the number assigned to the key that has been pressed. If the keys are pressed in the incorrect order, "INVALID OPERATE" is displayed on the LCD. Press the [X] key and try again with the correct key.
- (3) When the key operation is normal, the machine returns to the initial state of maintenance mode when the last key is pressed. To cancel operation and return to the initial state of maintenance mode, press the [X] key.

##### Touch panel models

- (1) Press the [1], and then the [3] key in the initial state of maintenance mode. "00" is displayed on the LCD.
- (2) Press the keys on the control panel according to the numbers provided in the figure below. Each time the key is pressed, the corresponding figure is displayed on the LCD in decimal notation. Check that the number displayed on the LCD matches the number assigned to the key that has been pressed. If the keys are pressed in the incorrect order, "INVALID OPERATE" is displayed on the LCD. Press the [X] key and try again with the correct key.
- (3) When the key operation is normal, the machine returns to the initial state of maintenance mode when the last key is pressed. To cancel operation and return to the initial state of maintenance mode, press the [X] key.

#### ■ Order of pressing keys

##### <Non touch panel models>



##### <Touch panel models>



Fig. 5-5

### 1.3.7 Save the NetConfig information (Function code 18)

#### < Function >

This function is to save the NetConfig information to USB flash memory.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 18" on the LCD, and press the [OK] key. "NETCONFIG" is displayed on the LCD.
- (2) Set the USB flash memory to the USB host terminal.
- (3) Press the [OK] key. "SAVE TO USB" is displayed on the LCD.
- (4) Press the [OK] key. "USB SAVING" is displayed on the LCD and "NetConfig" folder is created in the USB flash memory. NetConfig information is saved as "CFG-PAGE\_\*\*.txt" in the folder and returns to initial state of the maintenance mode.

##### Touch panel models

- (1) Press the [1], and then the [8] key in the initial state of maintenance mode. "NETCONFIG" is displayed on the LCD.
- (2) Set the USB flash memory to the USB host terminal.
- (3) Press the [SET] key. "SAVE TO USB" is displayed on the LCD.
- (4) Press the [SET] key. "USB SAVING" is displayed on the LCD and "NetConfig" folder is created in the USB flash memory. NetConfig information is saved as "CFG-PAGE\_\*\*.txt" in the folder and returns to initial state of the maintenance mode.

"\*\*" in the file name is the number of NetConfig information appearance in the folder.

If there are no NetConfig information in the folder, the file will be saved as "00" and if the same name is already in it, the file will be made as "01".

## 1.3.8 Display software version (Function code 25)

### < Function >

This function is used to check the version information of the firmwares and programs, or check sum information.

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 25" on the LCD, and press the [OK] key. "MAIN:Ver\*.\*\* (#)" is displayed on the LCD.
- (2) Pressing the [Go], [▲] or [▼] key changes the display item as shown in the table below.
- (3) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### Touch panel models

- (1) Press the [2], and then the [5] key in the initial state of maintenance mode. "MAIN:Ver\*.\*\* (#)" is displayed on the LCD.
- (2) Pressing the [▲], [▼], or [Mono Start] key changes the display to the next item.
- (3) Press the [X] key, and the machine returns to the initial state of maintenance mode.

LCD	Description
MAIN: Ver1.00 (A) <sup>*1</sup>	Main firmware version information ((A): Revision information)
SUB1 : Ver1.00 (P) <sup>*1</sup>	Sub firmware version information ((P): Identifier for PCL/PS) <sup>*2</sup>
SUB3 : M1612312359 <sup>*1</sup>	Sub3 firmware creation date (Only for China touch panel models)
ENG : Ver1.00	Engine program version information
NET : Ver1.00	Network program version information
LT1 :Ver1.00	LT1 firmware version information <sup>*3</sup>
LT2 :Ver1.00	LT2 firmware version information <sup>*3</sup>
LT3 :Ver1.00	LT3 firmware version information <sup>*3</sup>
TT :Ver1.00	TT firmware version information <sup>*3</sup>
B1612312359:1234 <sup>*1</sup>	Boot program creation date
U1612312359:1234 <sup>*1</sup>	Main firmware creation date
M1612312359:1234 <sup>*1</sup>	Main data 2 creation date (Only for China touch panel models)
C1606021159:1234	UI custom data version information
P0612271602:BD40 <sup>*1</sup>	Sub firmware (PCL/PS) creation date
ROM Check Sum	Check sum self-diagnosis function <sup>*4</sup>

<sup>\*1</sup> How to display the check sum information  
You can check the check sum information by pressing the [OK] key (Non touch panel models) or [SET] key (Touch panel models) while each version is displayed. When the [OK] or [SET] key is pressed again, the LCD returns to the version display.

<sup>\*2</sup> (P), (G), or (-) is displayed at the place of (P).  
(P): Supports PCL/PS, (G): Supports GDI, (-): Unrecognized

<sup>\*3</sup> Only displayed when LT/TT is connected.

<sup>\*4</sup> There are two types of check sum information that can be checked with this function. This function checks if the two types of check sum information match each other. When the [OK] key (Non touch panel models) or [SET] key (Touch panel models) is pressed while "ROM Check Sum" is displayed, check is automatically conducted for each ROM of each software part. When the check sum matches, "OK" is displayed on the LCD. When all ROMs result in "OK", "ROM Check Sum OK" is displayed at the end, and the operation is finished. When the check sum of any ROM does not match, "NG" is displayed, and the display stops.

### 1.3.9 Check sensor operation (Function code 32)

#### < Function >

This function is used to check whether the sensors, solenoids, and clutches are operating normally.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 32" on the LCD, and press the [OK] key. Following example is displayed on the LCD.  
e.g.) RCNKNCNMNYCV\*\*\*\*
- (2) Pressing the [Go] key changes the display to the next item.
- (3) Change the conditions subject to sensor detection shown below and check that the display on the LCD changes depending on the sensor status. For example, feed the paper through the registration front/rear sensor, open the front cover or back cover, remove the toner cartridge, or create paper jam at the exit.
- (4) Press the [X] key, and the machine returns to the initial state of maintenance mode.

##### Touch panel models

- (1) Press the [3], and then the [2] key in the initial state of maintenance mode. Following example is displayed on the LCD.  
e.g.) RCNKNCNMNYCV\*\*\*\*
- (2) Pressing the [Mono Start] key changes the display to the next item.
- (3) Change the conditions subject to sensor detection shown below and check that the display on the LCD changes depending on the sensor status. For example, feed the paper through the registration front/rear sensor, open the front cover or back cover, remove the toner cartridge, or create paper jam at the exit.
- (4) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### <Sensor check>

The table below summarizes the displays on the LCD, sensor names and detection status.

LCD	Sensor name	Detection status	
		With display	No display
RC	Back cover sensor	Back cover closed	Back cover open
NK	New toner sensor (Black)	OFF	ON
NC	New toner sensor (Cyan)	OFF	ON
NM	New toner sensor (Magenta)	OFF	ON
NY	New toner sensor (Yellow)	OFF	ON
CV	Front cover sensor	Front cover closed	Front cover open
C1	T1 paper feed sensor	T1 closed	T1 open
P1	T1 paper empty sensor	No paper	Paper set
MP	MP paper empty sensor	No paper	Paper set
MR	MP registration front sensor	No paper	Paper set
PO	Eject sensor	No paper	Paper set
RM	Registration front sensor	No paper	Paper set
RA	Registration rear sensor	No paper	Paper set
FW	Waste toner sensor	Waste toner detected	Waste toner not detected
KC	Toner sensor (Black)	Toner detected	Toner not detected
CC	Toner sensor (Cyan)	Toner detected	Toner not detected
MC	Toner sensor (Magenta)	Toner detected	Toner not detected
YC	Toner sensor (Yellow)	Toner detected	Toner not detected

LCD	Sensor name	Detection status	
		With display	No display
MACxx	Internal temperature sensor	XX °C	NG
OTxx	External temperature sensor	XX °C	NG
OHxx	External humidity sensor	XX%	NG
C2	T2LT paper feed sensor (When LT is in use)	T2 closed	T2 open
P2	T2LT paper empty sensor (When LT is in use)	No paper	Paper set
L2	T2 plate origin sensor (When LT is in use)	T2 Plate down	T2 Plate up
C3	T3LT paper feed sensor (When LT is in use)	T3 closed	T3 open
P3	T3LT paper empty sensor (When LT is in use)	No paper	Paper set
L3	T3LT plate origin sensor (When LT is in use)	T3 Plate down	T3 Plate up
C4	T4LT paper feed sensor (When LT is in use)	TT T4 closed	TT T4 open
P4	T4LT paper empty sensor (When LT is in use)	No paper	Paper set
E2	T2TT paper feed sensor	TT T2 closed and No paper	TT T2 open and Paper set
D2	T2TT paper empty sensor	No paper	Paper set
E3	T3TT paper feed sensor	TT T3 closed and No paper	TT T3 open and Paper set
D3	T3TT paper empty sensor	No paper	Paper set
E4	T4TT paper feed sensor	TT T4 closed and No paper	TT T4 open and Paper set
D4	T4TT paper empty sensor	No paper	Paper set
E5	T5TT paper feed sensor	TT T5 closed and No paper	TT T5 open and Paper set
D5	T5TT paper empty sensor	No paper	Paper set
J2	T2TT jam sensor	No paper	Paper set
J3	T3TT jam sensor	No paper	Paper set
J4	T4TT jam sensor	No paper	Paper set
J5	T5TT jam sensor	No paper	Paper set
AL	TT balance sensor L	With attachment	No attachment
AR	TT balance sensor R	With attachment	No attachment
TT	TT connection sensor	TT connected	—

**Note:**

If the external temperature/humidity sensor detects the unusual value, the machine displays “NG” on the LCD.

■ Location of sensors

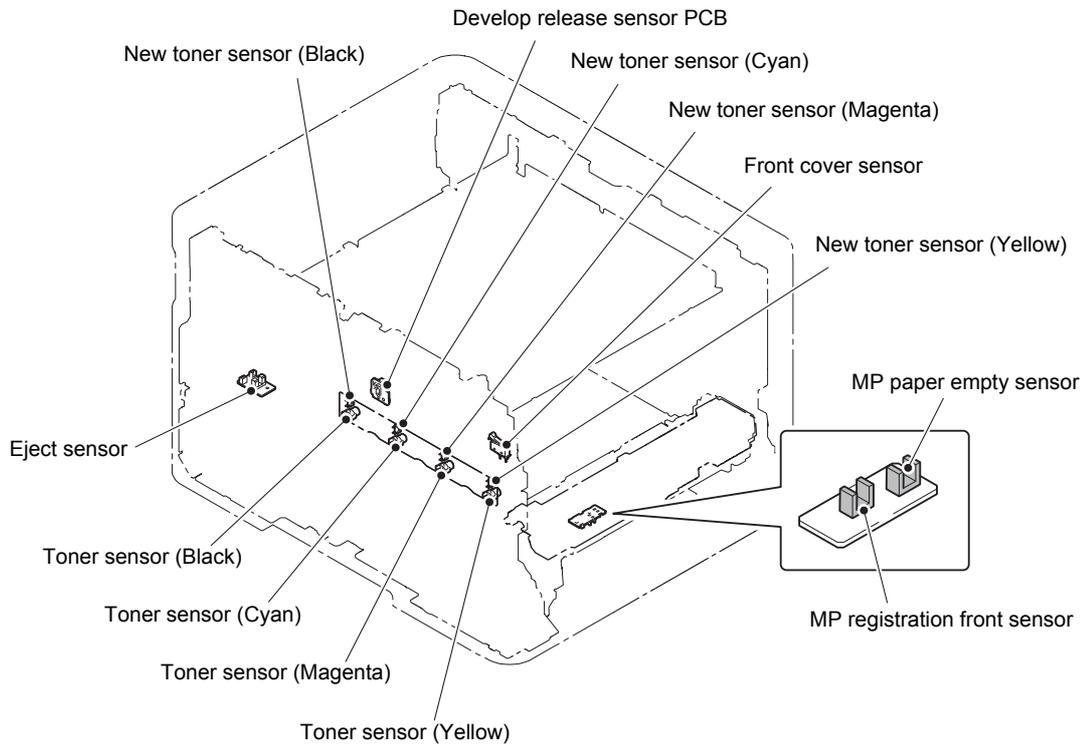
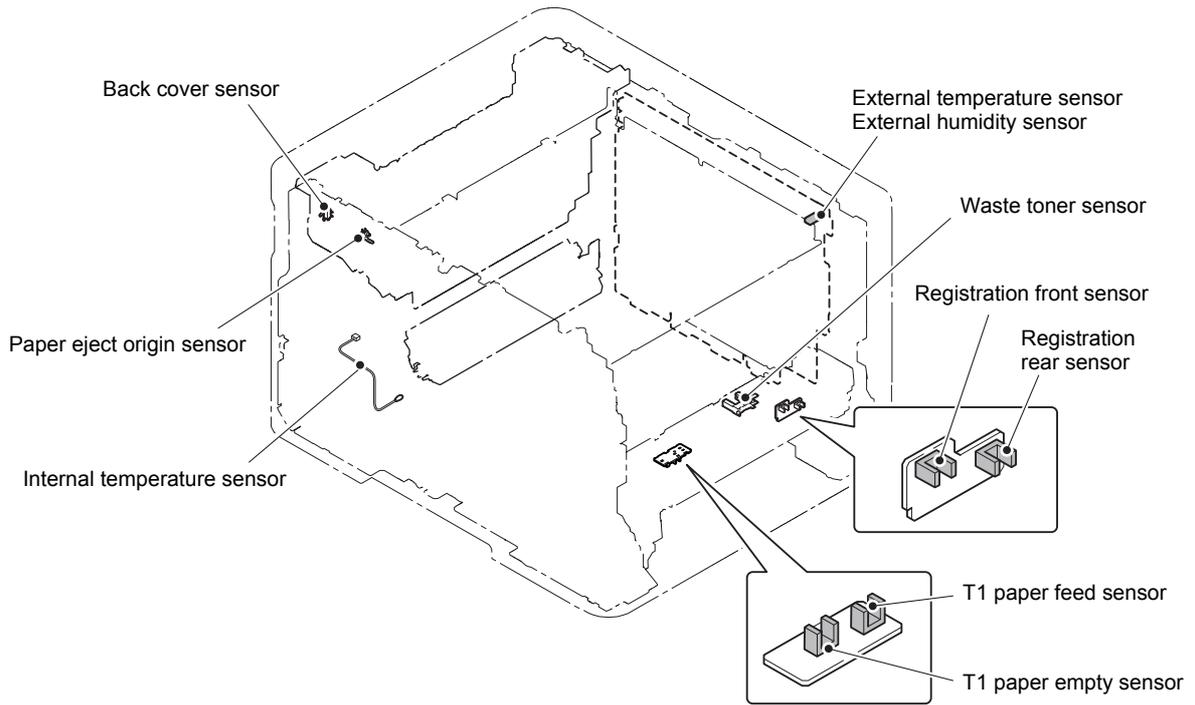
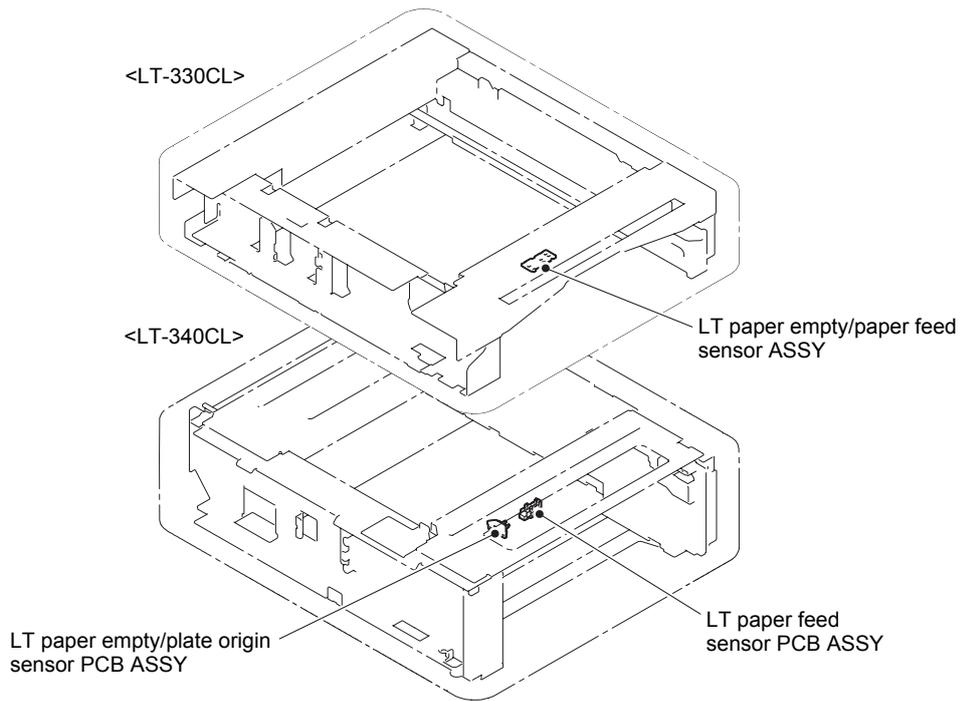
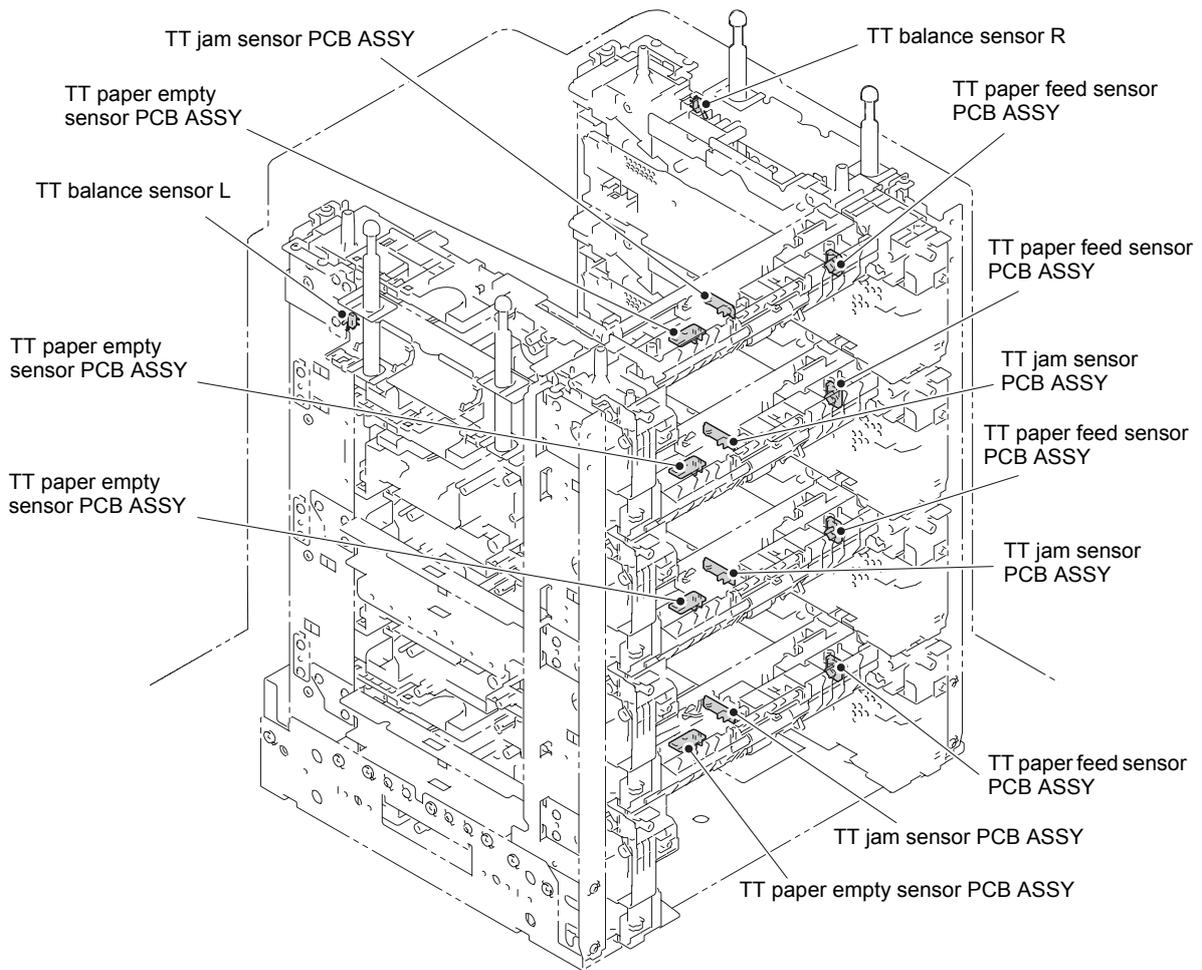


Fig. 5-6



**Fig. 5-7**



**Fig. 5-8**

### 1.3.10 Display LAN connection status (Function code 33)

#### < Function >

This function is used to check the connection status of the wired LAN.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 33" on the LCD, and press the [OK] key.
- (2) One of the items in the following table is displayed on the LCD depending on the wired LAN connection of the machine.
- (3) Press the [X] key, and the machine returns to the initial state of maintenance mode.

##### Touch panel models

- (1) Press the [3] key twice in the initial state of maintenance mode.
- (2) One of the items in the following table is displayed on the LCD depending on the wired LAN connection of the machine.
- (3) Press the [X] key, and the machine returns to the initial state of maintenance mode.

LCD	LAN connection status
Active 1000B-FD	1000B-FD
Active 100B-FD	100B-FD
Active 100B-HD	100B-HD
Active 10B-FD	10B-FD
Active 10B-HD	10B-HD
Inactive	Not connected

### 1.3.11 Change USB No. return value / Switching Dither Pattern / Switching of ON/OFF of DirectPrint Color mode-Improve Gray Color / Switching of timing to execute Auto Registration / Adjust left-end print position / Adjust upper-end print position / Change of the transfer current setting / Change of ghost reduction setting (Function code 45)

#### ■ Change USB No. return value

##### < Function >

When the operating system (OS) installed on the computer is Windows Vista<sup>®</sup>, and the machine is connected to this computer using USB2.0FULL, the OS may not be able to obtain the USB device serial number depending on the computer and USB device. If the serial number cannot be obtained, the number of devices increases each time the device is connected to the computer. To avoid this problem, set this function to “USBNo.=ON” and fix the USB No. return value to “0”.

LCD	Description
USBNo. =ON	Returns “0”.
USBNo. =OFF	Returns the serial number of the machine. (default)

The setting currently selected is marked “\*” at the end of the display.

##### < Operating Procedure >

###### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display “MAINTENANCE 45” on the LCD, and press the [OK] key. “USBNo.” is displayed on the LCD.
- (2) Press the [OK] or [Go] key. “USBNo.=OFF” is displayed on the LCD.
- (3) Press the [▲] or [▼] key to select “USBNo.=ON” or “USBNo.=OFF”, and then press the [OK] or [Go] key.
- (4) “Accepted” is displayed on the LCD, and the machine returns to the initial state of maintenance mode.
- (5) Turn the power switch OFF.

###### Touch panel models

- (1) Press the [4], and then the [5] key in the initial state of maintenance mode. “USBNo.” is displayed on the LCD.
- (2) Press the [Mono Start] or [SET] key. “USBNo.=ON” or “USBNo.=OFF” is displayed on the LCD.
- (3) Press the [▲] or [▼] key to select “USBNo.=ON” or “USBNo.=OFF”, and then press the [Mono Start] or [SET] key.
- (4) “Accepted” is displayed on the LCD, and the machine returns to the initial state of maintenance mode.
- (5) Turn the power switch OFF.

#### **Note:**

This setting is applied after the power switch is turned OFF and then ON again.

## ■ Switching Dither Pattern

### < Function >

This function is to switch the dither pattern when printed letters and/or slanted lines are not smooth, and thin lines are rough or uneven.

LCD	Description
PS.DitherType=0	Dither Pattern 0 is selected. (A dither pattern which improves roughness of letters and slanted lines) (default)
PS.DitherType=1	Dither Pattern 1 is selected. (A dither pattern which alleviates banding)

“\*” is displayed at the end of the currently specified function in the LCD display.

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display “MAINTENANCE 45” on the LCD, and press the [OK] key. “USBNo.” is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display “PS.DitherType” on the LCD, and press the [OK] or [Go] key.
- (3) Press the [▲] or [▼] key to select “PS.DitherType = 0” or “PS.DitherType = 1” on the LCD, and press the [OK] or [Go] key.
- (4) “Accepted” is displayed on the LCD, and the machine returns to the initial state of maintenance mode.

#### Touch panel models

- (1) Press the [4], and then the [5] key in the initial state of maintenance mode. “USBNo.” is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display “PS.DitherType” on the LCD, and press the [Mono Start] or [SET] key.
- (3) Press the [▲] or [▼] key to select “PS.DitherType = 0” or “PS.DitherType = 1” on the LCD, and press the [Mono Start] or [SET] key.
- (4) “Accepted” is displayed on the LCD, and the machine returns to the initial state of maintenance mode.

## ■ Switching of ON/OFF of DirectPrint Color mode-Improve Gray Color

### < Function >

This function is to switch ON/OFF of the print control for the gray color when other colors are slightly blended in the gray color or the gray color is uneven upon printing.

LCD	Description
DP.ImpGray=ON	DirectPrint Color mode - Improve Gray Color. (Print control for gray color) ON (Improves the symptom that other colors are slightly blended in the gray color.) (default)
DP.ImpGray=OFF	DirectPrint Color mode - Improve Gray Color. (Print control for gray color) OFF (Improves the unevenness of the gray color.)

“\*” is displayed at the end of the currently specified function in the LCD display.

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display “MAINTENANCE 45” on the LCD, and press the [OK] key. “USBNo.” is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display “DP ImpGray” on the LCD, and press the [OK] or [Go] key.
- (3) Press the [▲] or [▼] key to select “DP ImpGray = ON” or “DP ImpGray = OFF” on the LCD, and press the [OK] or [Go] key.
- (4) “Accepted” is displayed on the LCD, and the machine returns to the initial state of maintenance mode.

#### Touch panel models

- (1) Press the [4], and then the [5] key in the initial state of maintenance mode. “USBNo.” is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display “DP ImpGray” on the LCD, and press the [Mono Start] or [SET] key.
- (3) Press the [▲] or [▼] key to select “DP ImpGray = ON” or “DP ImpGray = OFF” on the LCD, and press the [Mono Start] or [SET] key.
- (4) “Accepted” is displayed on the LCD, and the machine returns to the initial state of maintenance mode.

## ■ Switching of timing to execute Auto Registration

### Note:

Available by firmware released later than April 2017.

### < Function >

Relative displacement between Cyan, Magenta, Yellow, and Black is detected using the registration mark sensor, and the Auto Registration is executed at the timing when the displacement value exceeds the stipulated threshold value.

This function is to switch the threshold value which is used as the timing to execute Auto Registration. The threshold value can be switched in three phases between High, Mid, and Low.

LCD	Description
Regi Freq=Mid	The frequency to execute Auto Registration is middle. (default)
Regi Freq=High	The frequency to execute Auto Registration is high.
Regi Freq=Low	The frequency to execute Auto Registration is low.

“\*” is displayed at the end of the currently specified function in the LCD display.

### Note:

It can be set regardless of the Auto Registration switching function in the function menu. Even if this function is switched, it does not affect the timing to execute Auto Registration in the function menu.

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display “MAINTENANCE 45” on the LCD, and press the [OK] key. “USBNo.” is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display “RegiFreq” on the LCD, and press the [OK] or [Go] key.
- (3) Press the [▲] or [▼] key to select “RegiFreq = Mid” “RegiFreq = High” or “RegiFreq = Low” on the LCD, and press the [OK] or [Go] key.
- (4) “Accepted” is displayed on the LCD, and the machine returns to the initial state of maintenance mode.

#### Touch panel models

- (1) Press the [4], and then the [5] key in the initial state of maintenance mode. “USBNo.” is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display “RegiFreq” on the LCD, and press the [Mono Start] or [SET] key.
- (3) Press the [▲] or [▼] key to select “RegiFreq = Mid” “RegiFreq = High” or “RegiFreq = Low” on the LCD, and press the [Mono Start] or [SET] key.
- (4) “Accepted” is displayed on the LCD, and the machine returns to the initial state of maintenance mode.

## ■ Adjust left-end print position

### < Function >

In the event that the left-end print start position deviates, use this function to adjust the position left and right. The adjustable range is -100 to 750 (1 unit = 0.084 mm = 300 dpi).  
(Shifted to the left when the value is negative)

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 45" on the LCD, and press the [OK] key. "USBNo." is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display "X Adjust" on the LCD, and press the [OK] or [Go] key. "XAdjust MP" is displayed on the LCD.
- (3) Refer to <Adjustment option table> on next page, press the [▲] or [▼] key to select from the adjustment options, and press the [OK] or [Go] key. "XAdj. \*\*= 0\*" is displayed on the LCD. (Selected option is shown for \*\*.)
- (4) To shift the writing start position to the left, press the [▼] key to decrease the value. To shift the position to the right, press the [▲] key to increase the value.
- (5) Press the [OK] or [Go] key after adjusting the value. "Accepted" is displayed on the LCD.
- (6) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### Touch panel models

- (1) Press the [4], and then the [5] key in the initial state of maintenance mode. "USBNo." is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display "X Adjust" on the LCD, and press the [Mono Start] or [SET] key. "XAdjust MP" is displayed on the LCD.
- (3) Refer to <Adjustment option table> on next page, press the [▲] or [▼] key to select from the adjustment options, and press the [SET] key. "XAdj. \*\*= 0\*" is displayed on the LCD. (Selected option is shown for \*\*.)
- (4) To shift the writing start position to the left, press the [▼] key to decrease the value. To shift the position to the right, press the [▲] key to increase the value.
- (5) Press the [Mono Start] or [SET] key after adjusting the value. "Accepted" is displayed on the LCD.
- (6) Press the [X] key, and the machine returns to the initial state of maintenance mode.

<Adjustment option table>

Single-side printing

Adjustment option	LCD
MP tray first side	X Adjust MP
T1 first side	X Adjust T1
T2 first side	X Adjust T2
T3 first side	X Adjust T3
T4 first side	X Adjust T4
T5 first side	X Adjust T5
N/A (disabled)	X Adjust DX
N/A (disabled)	X Adjust DXMP
N/A (disabled)	X Adjust DXT1
N/A (disabled)	X Adjust DXT2
N/A (disabled)	X Adjust DXT3
N/A (disabled)	X Adjust DXT4
N/A (disabled)	X Adjust DXT5

Duplex printing

Adjustment option	LCD
MP tray second side	X Adjust MP
T1 second side	X Adjust T1
T2 second side	X Adjust T2
T3 second side	X Adjust T3
T4 second side	X Adjust T4
T5 second side	X Adjust T5
*1	X Adjust DX
MP tray first side	X Adjust DXMP
T1 first side	X Adjust DXT1
T2 first side	X Adjust DXT2
T3 first side	X Adjust DXT3
T4 first side	X Adjust DXT4
T5 first side	X Adjust DXT5

\*1 Adjusts first side print start position of all tray (T1, 2, 3, 4, 5 and MP tray). Value of X Adjust DX is added to each tray adjustment value.  
 For example, when printing from T1, it adjusts as "X Adjust DXT1 value" + "X Adjust DX value" and print. Besides, when the added value is over than the adjustable range (-100 to 750), adjusted value will be for minimum -100 and maximum 750 and does not become out of adjustable range.

## ■ Adjust upper-end print position

### < Function >

In the event that the upper-end print start position deviates, use this function to adjust the position up and down. Adjustable range is -50 to 50 (1 unit = 0.084 mm = 300 dpi).  
(Shifted down when the value is negative)

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 45" on the LCD, and press the [OK] key. "USBNo." is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display "Y Adjust" on the LCD, and press the [OK] or [Go] key. "YAdjust MP" is displayed on the LCD.
- (3) Refer to <Adjustment option table> on previous page, press the [▲] or [▼] key to select from the adjustment options, and press the [OK] or [Go] key. "YAdj. \*\*= 0\*" is displayed on the LCD. (Selected option is shown for \*\*.)
- (4) To shift the writing start position down, press the [▼] key to decrease the value. To shift the position up, press the [▲] key to increase the value.
- (5) Press the [OK] or [Go] key after adjusting the value. "Accepted" is displayed on the LCD.
- (6) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### Touch panel models

- (1) Press the [4], and then the [5] key in the initial state of maintenance mode. "USBNo." is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display "Y Adjust" on the LCD, and press the [Mono Start] or [SET] key. "YAdjust MP" is displayed on the LCD.
- (3) Refer to <Adjustment option table> on previous page, press the [▲] or [▼] key to select from the adjustment options, and press the [SET] key. "YAdj. \*\*= 0\*" is displayed on the LCD. (Selected option is shown for \*\*.)
- (4) To shift the writing start position down, press the [▼] key to decrease the value. To shift the position up, press the [▲] key to increase the value.
- (5) Press the [OK] or [Go] key after adjusting the value. "Accepted" is displayed on the LCD.
- (6) Press the [X] key, and the machine returns to the initial state of maintenance mode.

<Adjustment option table>

Single-side printing

Adjustment option	LCD
MP tray first side	Y Adjust MP
T1 first side	Y Adjust T1
T2 first side	Y Adjust T2
T3 first side	Y Adjust T3
T4 first side	Y Adjust T4
T5 first side	Y Adjust T5
*1	Y Adjust TRAY
N/A (disabled)	Y Adjust DX
N/A (disabled)	Y Adjust DXMP
N/A (disabled)	Y Adjust DXT1
N/A (disabled)	Y Adjust DXT2
N/A (disabled)	Y Adjust DXT3
N/A (disabled)	Y Adjust DXT4
N/A (disabled)	Y Adjust DXT5

Duplex printing

Adjustment option	LCD
MP tray second side	Y Adjust MP
T1 second side	Y Adjust T1
T2 second side	Y Adjust T2
T3 second side	Y Adjust T3
T4 second side	Y Adjust T4
T5 second side	Y Adjust T5
*2	Y Adjust TRAY
*1	Y Adjust DX
MP tray first side	Y Adjust DXMP
T1 first side	Y Adjust DXT1
T2 first side	Y Adjust DXT2
T3 first side	Y Adjust DXT3
T4 first side	Y Adjust DXT4
T5 first side	Y Adjust DXT5

\*1 Adjusts first side print start position of all tray (T1, 2, 3, 4, 5 and MP tray). Value of Y Adjust TRAY and Y Adjust DX is added to each tray adjustment value.

For example, when printing from T1, it adjusts as “Y Adjust T1 value” + “Y Adjust TRAY value” or “Y Adjust DXT1 value” + “Y Adjust DX value” and print. Besides, when the added value is over than the adjustable range (-50 to 50), adjusted value will be for minimum -50 and maximum 50 and does not become out of adjustable range.

\*2 Adjusts second side print start position of all tray (T1, 2, 3, 4, 5 and MP tray). Value of Y Adjust TRAY is added to each tray adjustment value.

For example, when printing from T1, it adjusts as “Y Adjust T1 value” + “Y Adjust TRAY value” and print. Besides, when the added value is over than the adjustable range (-50 to 50), adjusted value will be for minimum -50 and maximum 50 and does not become out of adjustable range.

## ■ Change of the transfer current setting (Only for Japan models)

### < Function >

Dots appeared when hagaki printing is performed can be alleviated by changing the transfer current setting.

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 45" on the LCD, and press the [OK] key. "USBNo." is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display "Special Printing" on the LCD, and press the [OK] or [Go] key. "default" is displayed on the LCD.
- (3) Press the [▲] or [▼] key to change the setting, and press the [OK] or [Go] key. There are four setting options: "default", "HAGAKI1", "HAGAKI2", and "HAGAKI3". ("\*" is displayed at the end of the currently specified function in the LCD display. The initial value is "default".)
- (4) "Accepted" is displayed on the LCD, and the machine returns to the initial state of maintenance mode.
- (5) Perform hagaki printing again to check if the dot symptom is improved.
- (6) If not, repeat the steps (1) to (4) to set an optimum option, and then perform hagaki printing.

#### Touch panel models

- (1) Press the [4], and then the [5] key in the initial state of maintenance mode. "USBNo." is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display "Special Printing" on the LCD, and press the [Mono Start] or [SET] key. "default" is displayed on the LCD.
- (3) Press the [▲] or [▼] key to change the setting, and press the [Mono Start] or [SET] key. There are four setting options: "default", "HAGAKI1", "HAGAKI2", and "HAGAKI3". ("\*" is displayed at the end of the currently specified function in the LCD display. The initial value is "default".)
- (4) "Accepted" is displayed on the LCD, and the machine returns to the initial state of maintenance mode.
- (5) Perform hagaki printing again to check if the dot symptom is improved.
- (6) If not, repeat the steps (1) to (4) to set an optimum option, and then perform hagaki printing.

## ■ Change of ghost reduction setting

### < Function >

This function is a mode to reduce the level of ghost when it appears in low temperature and high humidity environment. If this function is turned ON, however, spots and dirt may appear on print.

LCD	Description
ON	Turn ON the ghost reduction function.
OFF	Turn OFF the ghost reduction function. (default)

“\*” is displayed at the end of the currently specified function in the LCD display.

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display “MAINTENANCE 45” on the LCD, and press the [OK] key. “USBNo.” is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display “Ghost Reduction” and then press the [OK] or [Go] key.
- (3) Press the [▲] or [▼] key to select “ON” or “OFF”, and press the [OK] or [Go] key.
- (4) “Accepted” is displayed on the LCD, and the machine returns to the initial state of maintenance mode.

#### Touch panel models

- (1) Press the [4], and then the [5] key in the initial state of maintenance mode. “USBNo.” is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display “Ghost Reduction” and then press the [Mono Start] or [SET] key.
- (3) Press the [▲] or [▼] key to select “ON” or “OFF”, and press the [Mono Start] or [SET] key.
- (4) “Accepted” is displayed on the LCD, and the machine returns to the initial state of maintenance mode.

## 1.3.12 Adjust printable range for each speed level (Function code 46)

### < Function >

This function is to adjust the printing position in horizontal / vertical direction.

Position can be adjusted in 11 steps from -0.5% to 0.5% (Printing width gets smaller when the value is negative).

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 46" on the LCD, and press the [OK] key. "MAIN SIZE SET" is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display "PRINT TEST PTN" on the LCD, and press the [OK] key. "PRINTING" is displayed on the LCD, and the print adjustment test pattern (refer to the [next page](#)) is printed on a sheet of paper.
- (3) Adjust the line so that the width is 10 mm in horizontal / vertical direction. Press the [▲] or [▼] key to display desired direction on the LCD.
  - Horizontal direction  
→ "MAIN SIZE SET"
  - Vertical direction  
→ "SUB SIZE SET"Press the [OK] key. "0.0 %" is displayed on the LCD.
- (4) To make the print width smaller, press the [▼] key to decrease the value. Press the [OK] key after adjusting the value.
- (5) After adjustment, repeat the procedure (2) to check if the adjustment was correctly done.
- (6) Press the [X] key to return the machine to the initial state of maintenance mode after adjusting the value.

#### Touch panel models

- (1) Press the [4], and then the [6] key in the initial state of maintenance mode. "MAIN SIZE SET" is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display "PRINT TEST PTN" on the LCD, and press the [SET] key. "PRINTING" is displayed on the LCD, and the print adjustment test pattern (refer to the [next page](#)) is printed on a sheet of paper.
- (3) Adjust the line so that the width is 10 mm in horizontal / vertical direction. Press the [▲] or [▼] key to display desired direction on the LCD.
  - Horizontal direction  
→ "MAIN SIZE SET"
  - Vertical direction  
→ "SUB SIZE SET"Press the [SET] key. "0.0 %" is displayed on the LCD.
- (4) To make the print width smaller, press the [▼] key to decrease the value. Press the [SET] key after adjusting the value.
- (5) After adjustment, repeat the procedure (2) to check if the adjustment was correctly done.
- (6) Press the [X] key to return the machine to the initial state of maintenance mode after adjusting the value.

■ Print adjustment test pattern

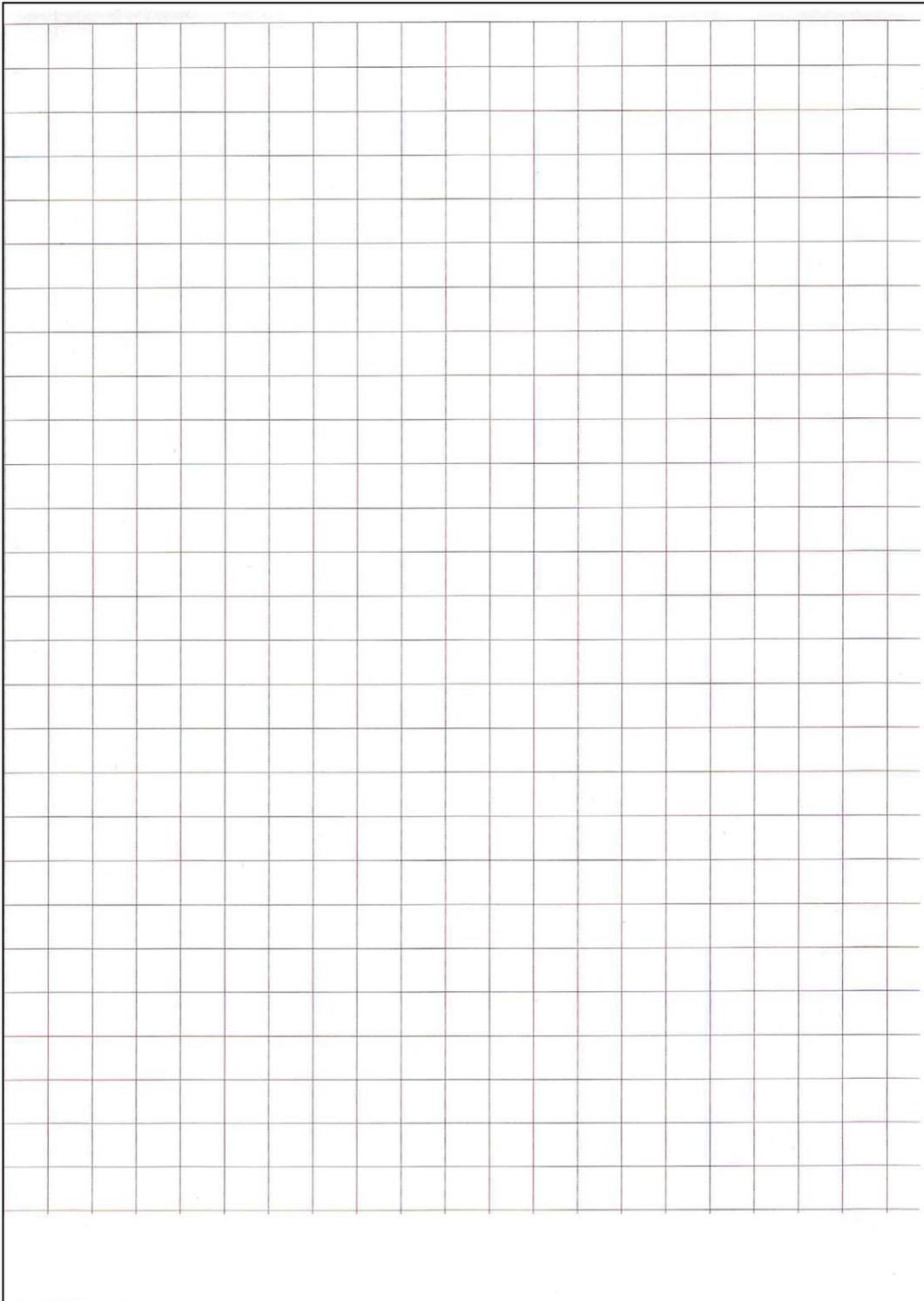


Fig. 5-9

### 1.3.13 Adjust touch panel (Touch panel models only) (Function code 61)

#### < Function >

This function is used to adjust the touch panel.

#### Note:

This adjustment requires a touch pen with a thin tip. A commercially available touch pen designed for electronic dictionaries or personal digital assistance (PDA) can be used. If one is not available at hand, order a "Touch pen" from Brother's parts list.

#### < Operating Procedure >

- (1) Press the [6], and then the [1] key in the initial state of maintenance mode. The adjustment screen shown below appears on the LCD.
- (2) Use a touch pen and touch the center on the mark at the upper left corner of the screen. The mark disappears when touched, then touch the mark at the lower left. Similarly touch the mark at the lower right, upper right and center.

#### Note:

- Do not use any tools other than a touch pen. In particular, never use a pointed tool (e.g., screwdriver). Using such a tool will damage the touch panel.
- Do not touch the touch panel with your fingers. The contact area of a finger is too large to adjust the touch panel precisely.
- If no operation is performed for one minute or the [X] key is pressed, the machine returns to the initial state of maintenance mode.

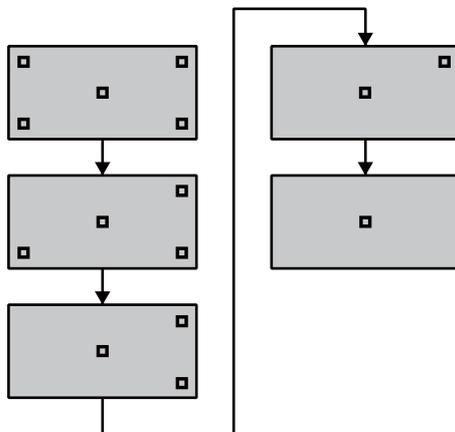


Fig. 5-10

- (3) When the center (the 5th mark) is touched, "OK" is displayed on the LCD if the specified area is adjusted correctly. The machine returns to the initial state of maintenance mode.

#### Note:

If "NG" is still displayed on the LCD even after this operation is repeated two to three times, check the connection of the touch panel flat cable. If the LCD keeps displaying "NG" even there is no problem, replace the LCD panel ASSY.

### 1.3.14 Adjustment of color registration (Adjustment of inter-color position alignment) (Function code 66)

#### < Function >

This function allows service personnel to forcibly activate the adjustment of color registration (adjustment of inter-color position alignment) function which is usually executed automatically under a specified condition. If adjustment of inter-color position alignment (auto) fails because toner reaches its life, etc., you can adjust inter-color position alignment manually. The end users are allowed to perform “Adjustment of inter-color position alignment without registration sensor calibration (auto)” only.

#### Note:

If an error occurs after executing function code 66, upgrade the firmware to the latest one. (Refer to “1.1 Installing the Firmware (Sub Firmware and Main Firmware)” in Chapter 4.) After upgrading the firmware, execute function code 66 again.

This function has the following functions.

Function	Description	LCD
Adjustment of inter-color position alignment without registration sensor calibration (auto)	Automatically correct misregistration between colors that occurs as the number of printed pages increases and time passes.	REGISTRATION
Adjustment of inter-color position alignment (manual)	Using the chart, manually correct misregistration between colors that occurs as the number of printed pages increases and time passes. This is performed when automatic adjustment fails.	SET REGISTRATION
Printing of misregistration correction chart	Print the chart that you check for an input value when manually correcting misregistration between colors.	PRINT CHART
Adjustment of inter-color position alignment including registration sensor calibration (auto)	After the sensitivity adjustment of registration sensor, correct misregistration between colors that occurs as the number of printed pages increases and time passes.	ADD REGISTRATION

## ■ Adjustment of inter-color position alignment without registration sensor calibration (auto)

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key to display “MAINTENANCE 66” on the LCD in the initial state of the maintenance mode. Then, press the [OK] key. “REGISTRATION” is displayed on the LCD.
- (2) Press the [Go] key. “PLS WAIT 66-1” is displayed on the LCD, and adjustment of inter-color position alignment is automatically done.
- (3) When this operation is completed without an error, “COMPLETED” is displayed on the LCD.
- (4) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### Touch panel models

- (1) Press the [6] key twice in the initial state of the maintenance mode. “REGISTRATION” is displayed on the LCD.
- (2) Press the [SET] key. “PLS WAIT 66-1” is displayed on the LCD, and adjustment of inter-color position alignment is automatically done.
- (3) When this operation is completed without an error, “COMPLETED” is displayed on the LCD.
- (4) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### **Note:**

If the Adjustment of inter-color position alignment without registration sensor calibration (auto) fails while being in process, “ERROR 66-1” is displayed on the LCD. Press [▼] key to see the details of the error, and refer to the error message list in the table on [next page](#) for the troubleshooting.

■ **Error message list**

Error message	Remedy
FAILED REGIST	Press the [Go] key for non touch panel models and the [Mono Start] key for touch panel models to clear the error. Perform the Adjustment of inter-color position alignment (auto) again. If the error recurs, clean the belt unit and the drum unit and then perform the adjustment again. If the error still recurs, replace the belt unit and the drum unit.
TONER EMPTY # *	Replace the empty toner cartridge and press the [Go] key for the model without a touch panel and the [Mono Start] key for the model with a touch panel to clear the error. Perform the Adjustment of inter-color position alignment (auto) again.
NG L:C080 R:M105	Press the [Go] key for non touch panel models and the [Mono Start] key for touch panel models to clear the error. Perform the Adjustment of inter-color position alignment (auto) again.
NG R-L:C030	
NG PWM L120 R180	
NG PWM R-L:080	
NG CNT R100 L100	
NG S-POSI R:080	
NG SKEW:C0120	
NG PWM R-P L:080	
NG XMARGIN:M191	
Cover is Open	

\* # indicates the toner color (Y, M, or C) of which cartridge became empty.

## ■ Adjustment of inter-color position alignment (manual)

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key to display "MAINTENANCE 66" on the LCD in the initial state of the maintenance mode. Then, press the [OK] key. "REGISTRATION" is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display "SET REGISTRATION" on the LCD.
- (3) Press the [Go] key. "1. MAGENTA=0" is displayed on the LCD. Using the misregistration correction chart printed by "■ Printing of misregistration correction chart", identify the numeric value whose color is the darkest in the pattern of ① (Magenta Left). Press the [▲] or [▼] key to display the identified numeric value.
- (4) Press the [Go] key, and enter each numeric value of the patterns ② to ⑨ in the same way.
- (5) When you enter the numeric value of the pattern ⑨ (Yellow Right), "COMPLETED" is displayed on the LCD.
- (6) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### Touch panel models

- (1) Press the [6] key twice in the initial state of the maintenance mode. "REGISTRATION" is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display "SET REGISTRATION" on the LCD.
- (3) Press the [SET] key. "1. MAGENTA=0" is displayed on the LCD. Using the misregistration correction chart printed by "■ Printing of misregistration correction chart", identify the numeric value whose color is the darkest in the pattern of ① (Magenta Left). Press the [▲] or [▼] key to display the identified numeric value.
- (4) Press the [SET] key, and enter each numeric value of the patterns ② to ⑨ in the same way.
- (5) When you enter the numeric value of the pattern ⑨ (Yellow Right), "COMPLETED" is displayed on the LCD.
- (6) Press the [X] key, and the machine returns to the initial state of maintenance mode.

## ■ Printing of misregistration correction chart

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key to display "MAINTENANCE 66" on the LCD in the initial state of the maintenance mode. Then, press the [OK] key. "REGISTRATION" is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display "PRINT CHART" on the LCD.
- (3) Press the [Go] key. "PRINTING" is displayed on the LCD, and misregistration correction chart (see the figure below) is printed. When printing is finished, "PRINT CHART" is displayed on the LCD.
- (4) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### Touch panel models

- (1) Press the [6] key twice in the initial state of the maintenance mode. "REGISTRATION" is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display "PRINT CHART" on the LCD.
- (3) Press the [SET] key. "PRINTING" is displayed on the LCD, and misregistration correction chart (see the figure below) is printed. When printing is finished, "PRINT CHART" is displayed on the LCD.
- (4) Press the [X] key, and the machine returns to the initial state of maintenance mode.

## ■ Misregistration correction chart

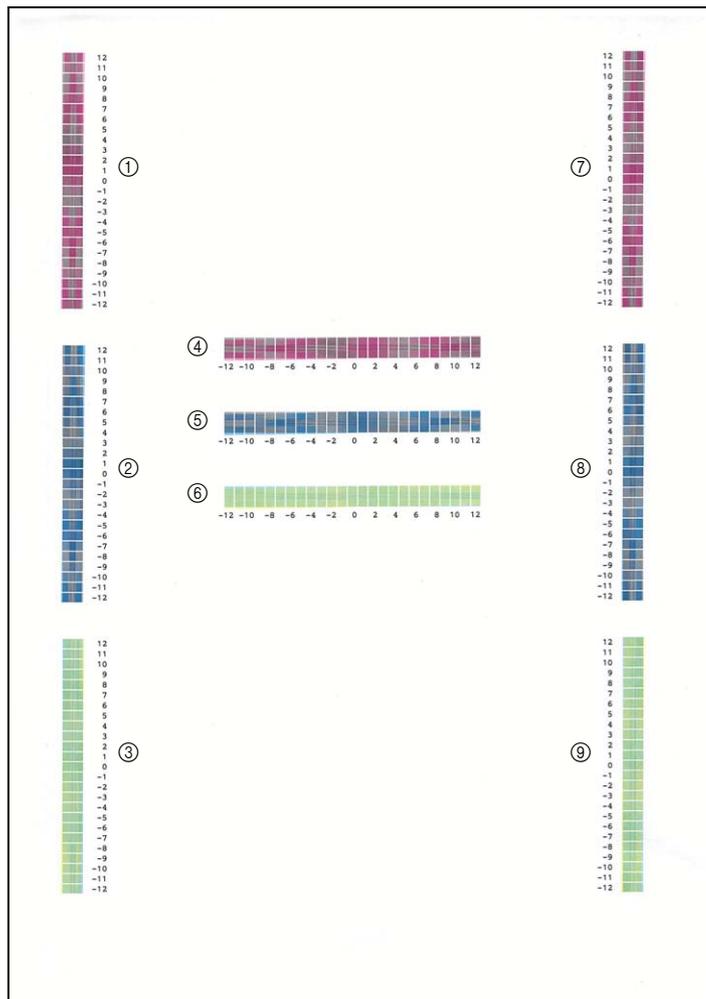


Fig. 5-11

## ■ Adjustment of inter-color position alignment including registration sensor calibration (auto)

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key to display "MAINTENANCE 66" on the LCD in the initial state of the maintenance mode. Then, press the [OK] key. "REGISTRATION" is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display "ADD REGISTRATION" on the LCD.
- (3) Press the [Go] key. "PLS WAIT 66-1" is displayed on the LCD and sensitivity adjustment of registration sensor and adjustment of inter-color position alignment are performed automatically.
- (4) When this operation is completed without an error, "COMPLETED" is displayed on the LCD.
- (5) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### Touch panel models

- (1) Press the [6] key twice in the initial state of the maintenance mode. "REGISTRATION" is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display "ADD REGISTRATION" on the LCD.
- (3) Press the [SET] key. "PLS WAIT 66-1" is displayed on the LCD and sensitivity adjustment of registration sensor and adjustment of inter-color position alignment are performed automatically.
- (4) When this operation is completed without an error, "COMPLETED" is displayed on the LCD.
- (5) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### **Note:**

If the Adjustment of inter-color position alignment including registration sensor calibration (auto) fails while being in process, "ERROR 66-1" is displayed on the LCD. Press the [▼] key to display the details of the error. Refer to the error message list on [5-36](#) for the troubleshooting.

### 1.3.15 Continuous print test (Function code 67)

#### < Function >

This function is used to conduct paper feed and eject tests while printing patterns.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display “MAINTENANCE 67” on the LCD, and press the [OK] key. “SELECT: K 100%” is displayed on the LCD.
- (2) Refer to the <Print pattern> table, press the [▲] or [▼] key to select the print pattern, and press the [OK] key. “SELECT: A4” is displayed on the LCD.
- (3) Refer to the <Paper size> table, press the [▲] or [▼] key to select the paper size, and press the [OK] key. “SELECT: PLAIN” is displayed on the LCD.
- (4) Refer to the <Print specification> table, press the [▲] or [▼] key to select the media specification, and press the [OK] key. “SELECT: TRAY1 SX” is displayed on the LCD.
- (5) Refer to the <Print type> table, press the [▲] or [▼] key to select the print type, and press the [OK] key. “SELECT:1 PAGE” is displayed on the LCD.
- (6) Refer to the <Print page> table, press the [▲] or [▼] key to select the pages printing, and press the [OK] key. For intermittent pattern printing, “SELECT: 1P/JOB” is displayed on the LCD. For other printings, or move on to the procedure (8).
- (7) Refer to the <Number of pages per job> table, press the [▲] or [▼] key to select the number of pages for 1 job, and press the [OK] key. (Only for intermittent pattern printing)
- (8) “PAPER FEED TEST” is displayed on the LCD, and printing test pattern starts using the selected conditions.
- (9) When you press the [X] key, test pattern printing is stopped, and the machine returns to the initial state of maintenance mode.

##### Touch panel models

- (1) Press the [6], and then the [7] key in the initial state of maintenance mode. “SELECT: K 100%” is displayed on the LCD.
- (2) Refer to the <Print pattern> table, press the [▲] or [▼] key to select the print pattern, and press the [OK] key. “SELECT: A4” is displayed on the LCD.
- (3) Refer to the <Paper size> table, press the [▲] or [▼] key to select the paper size, and press the [OK] key. “SELECT: PLAIN” is displayed on the LCD.
- (4) Refer to the <Print specification> table, press the [▲] or [▼] key to select the media specification, and press the [OK] key. “SELECT: TRAY1 SX” is displayed on the LCD.
- (5) Refer to the <Print type> table, press the [▲] or [▼] key to select the print type, and press the [OK] key. “SELECT:1 PAGE” is displayed on the LCD.
- (6) Refer to the <Print page> table, press the [▲] or [▼] key to select the pages printing, and press the [OK] key. For intermittent pattern printing, “SELECT: 1P/JOB” is displayed on the LCD. For other printings, or move on to the procedure (8).
- (7) Refer to the <Number of pages per job> table, press the [▲] or [▼] key to select the number of pages for 1 job, and press the [OK] key. (Only for intermittent pattern printing)
- (8) “PAPER FEED TEST” is displayed on the LCD, and printing test pattern starts using the selected conditions.
- (9) When you press the [X] key, test pattern printing is stopped, and the machine returns to the initial state of maintenance mode.

**<Print pattern>**

LCD	Description
SELECT: K 100%	Black 100% solid print
SELECT: C 100%	Cyan 100% solid print
SELECT: M 100%	Magenta 100% solid print
SELECT: Y 100%	Yellow 100% solid print
SELECT: W 100%	White 100% solid print
SELECT: R 100%	Red 100% solid print
SELECT: G 100%	Green 100% solid print
SELECT: B 100%	Blue 100% solid print
SELECT: KCMY1%	Black/Cyan/Magenta/Yellow 1% intermittent pattern print *
SELECT: KCMY5%	Black/Cyan/Magenta/Yellow 5% intermittent pattern print *
SELECT: Lattice	Lattice print
SELECT: Total	Total pattern print

\* Up to 500 sheets in one-sided printing and 1,000 sheets in two-sided printing in the case of job printing.

**<Paper size>**

LCD	Description
SELECT: A4	A4
SELECT: LETTER	Letter
SELECT:ISOB5	ISO B5
SELECT:JISB5	JIS B5
SELECT:A5	A5
SELECT:A5L	A5L
SELECT:JISB6	JIS B6
SELECT:A6	A6
SELECT:EXECUTE	Executive size
SELECT:LEGAL	Legal size
SELECT:FOLIO	Folio size
SELECT:HAGAKI	Postcard size *

\* Supports only for TRAY1 SX, MP TRAY SX and AUTO SX.

**<Print specification>**

LCD	Description
SELECT: PLAIN	Plain paper
SELECT: THIN	Plain paper (thin)
SELECT: THICK	Plain paper (thick)
SELECT:THICKER	Plain paper (thicker)
SELECT:RECYCLED	Recycled paper
SELECT:BOND	Bond paper
SELECT:LABEL	Label
SELECT:ENVELOPE	Envelope
SELECT:ENVTHIN	Envelope (thin)
SELECT:ENVTHICK	Envelope (thick)
SELECT:GLOSSY	Glossy paper
SELECT:HAGAKI	Postcard*

\* Display appears on LCD, but it is not available.

**<Print type>**

LCD	Description
SELECT: TRAY1 SX	Single-side printing from T1
SELECT: TRAY2 SX <sup>*1</sup>	Single-side printing from T2
SELECT: TRAY3 SX <sup>*1</sup>	Single-side printing from T3
SELECT: TRAY4 SX <sup>*1</sup>	Single-side printing from T4
SELECT: TRAY5 SX <sup>*1</sup>	Single-side printing from T5
SELECT: MP SX	Single-side printing from MP tray
SELECT: TRAY1 DX <sup>*2</sup>	Duplex printing from T1
SELECT: TRAY2 DX <sup>*2</sup>	Duplex printing from T2
SELECT: TRAY3 DX <sup>*2</sup>	Duplex printing from T3
SELECT: TRAY4 DX <sup>*2</sup>	Duplex printing from T4
SELECT: TRAY5 DX <sup>*2</sup>	Duplex printing from T5
SELECT: MP DX <sup>*2</sup>	Duplex printing from MP tray
SELECT: AUTO SX	Single-side printing to automatically selected tray
SELECT: AUTO DX <sup>*2</sup>	Double-side printing to automatically selected tray

<sup>\*1</sup> Does not support A5L and A6 size paper.

<sup>\*2</sup> Supports paper size only for A4, Letter, Legal and Folio.

**<Print page>**

LCD	Description
SELECT: 1PAGE	1-page printing
SELECT: CONTINUE	Continuous printing
SELECT: JOB	Intermittent printing per job *

\* Selectable only when the printing pattern is set to "KCMY1%" or "KCMY5%", and the print type is not set to the manual feed slot.

**<Number of pages per job> (Only for intermittent pattern printing)**

LCD	Description
SELECT: 1P/JOB	Prints 1 page per job <sup>*1</sup>
SELECT: 2P/JOB	Prints 2 pages per job <sup>*1</sup>
SELECT: 5P/JOB	Prints 5 pages per job <sup>*1</sup>
SELECT: 10P/JOB	Prints 10 pages per job <sup>*1</sup>
SELECT: 2I/JOB	Prints 2 images per job <sup>*2</sup>
SELECT: 5I/JOB	Prints 5 images per job <sup>*2</sup> <sup>*3</sup>
SELECT: 10I/JOB	Prints 10 images per job <sup>*2</sup>
SELECT: 20I/JOB	Prints 20 images per job <sup>*2</sup>

<sup>\*1</sup> Selectable only when SX is selected as print type.

<sup>\*2</sup> Selectable only when DX is selected as print type.

<sup>\*3</sup> One-sided printing for the 5th page.

■ **Print pattern**

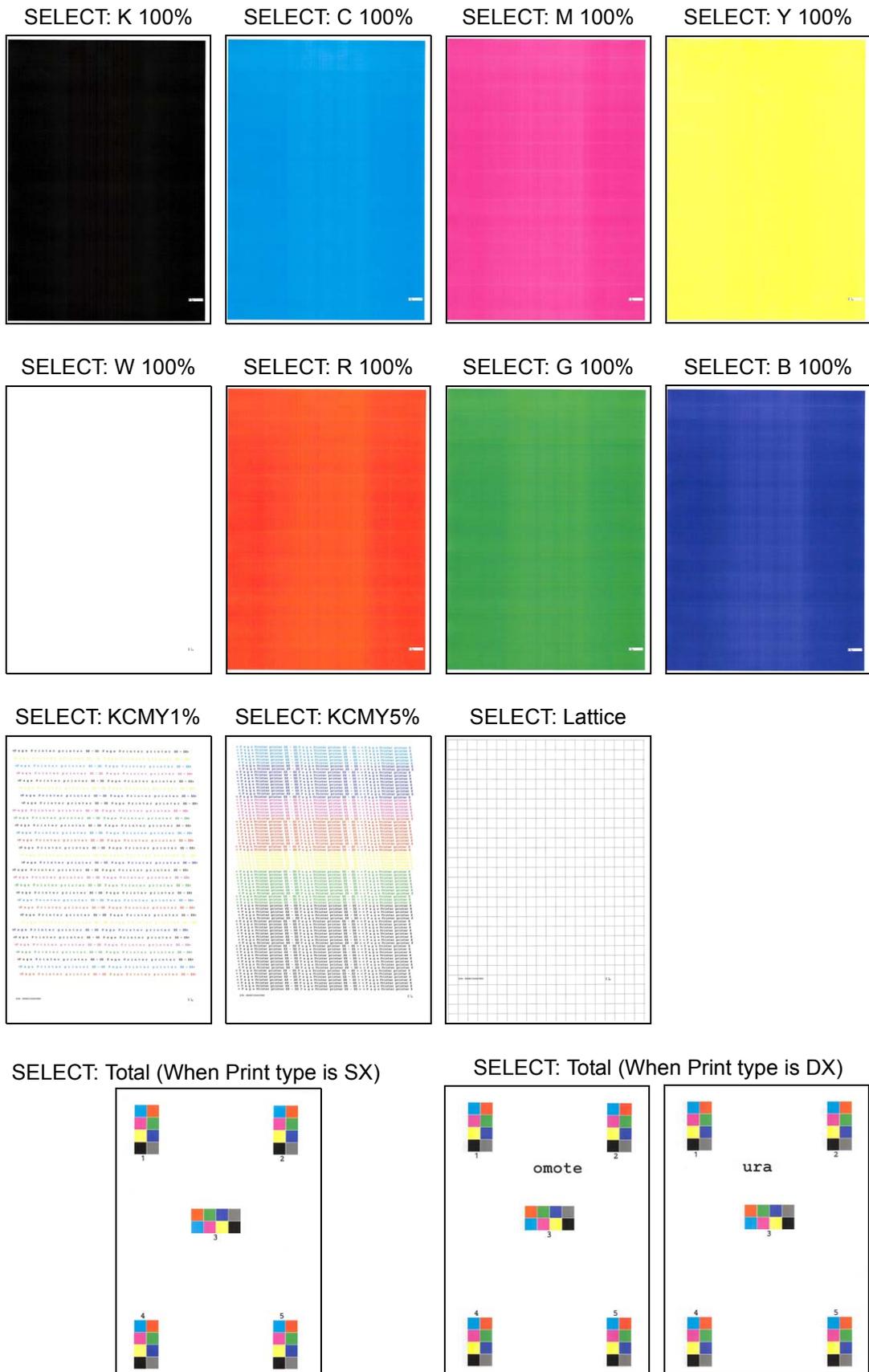


Fig. 5-12

### 1.3.16 Laser unit test pattern print (Function code 68)

#### < Function >

This function is used to print the laser unit test patterns and check if there is any failure in the laser unit.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key to display "MAINTENANCE 68" on the LCD in the initial state of the maintenance mode. Then, press the [OK] key. "PRINTING" is displayed on the LCD, and one laser unit test pattern (see the figure below) is printed.
- (2) When this operation is completed without an error, "SCANNER CHECK" is displayed on the LCD.
- (3) Press the [X] key, and the machine returns to the initial state of maintenance mode.

##### Touch panel models

- (1) Press the [6] and [8] keys in this order in the initial state of the maintenance mode. "PRINTING" is displayed on the LCD, and one laser unit test pattern (see the figure below) is printed.
- (2) When this operation is completed without an error, "SCANNER CHECK" is displayed on the LCD.
- (3) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### Note:

When printing fails, the following error indications are displayed on the LCD. When the error factors are removed, press the [Go] key for Non touch panel models, [Mono Start] key for Touch panel models, and the machine automatically recovers to the re-executable state. "PRINTING" is displayed on the LCD, and the laser unit test pattern is printed on a sheet.

Error display	Remedy
Replace Toner #*	Replace the toner cartridge and press [Go] key for Non touch panel models, [Mono Start] key for Touch panel models to release the error.
Cover is Open	Close the Front cover.
No Paper	Refill the paper, close the paper tray and press [Go] key for Non touch panel models, [Mono Start] key for Touch panel models to release the error.
Jam Tray1	Remove the jammed paper, then close the paper tray and all covers, press [Go] key for Non touch panel models, [Mono Start] key for Touch panel models to release the error.
Jam Rear	

\* # indicates the toner color (Y, M, or C) of which cartridge became empty.

#### ■ Laser unit test pattern

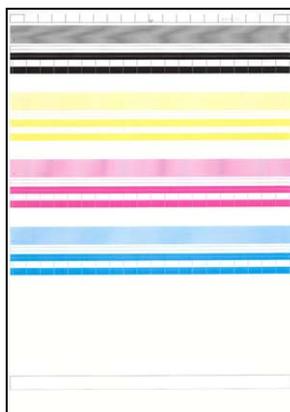


Fig. 5-13

### 1.3.17 Print frame pattern (single-side printing) (Function code 69)

#### < Function >

This function is used to print the frame pattern on single side of the paper to check for printing flaws and omission.

#### < Operating Procedure >

##### Non touch panel models

- (1) Set the paper specified in the default paper settings (A4 or Letter) to the paper tray.
- (2) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 69" on the LCD, and press the [OK] key. "PRINTING" is displayed on the LCD, and the frame pattern (refer to the figure below) is printed on single side of the paper.
- (3) When printing is completed, "WAKU SX" is displayed on the LCD.
- (4) Press the [X] key, and the machine returns to the initial state of maintenance mode.

##### Touch panel models

- (1) Set the paper specified in the default paper settings (A4 or Letter) to the paper tray.
- (2) Press the [6], and then the [9] key in the initial state of maintenance mode. "PRINTING" is displayed on the LCD, and the frame pattern (refer to the figure below) is printed on single side of the paper.
- (3) When printing is completed, "WAKU SX" is displayed on the LCD.
- (4) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### **Note:**

If printing fails, printing is stopped with displaying any of the errors shown in the table below. To retry printing, refer to the "Remedy" in the table below and eliminate the error cause and press [Go] key for Non touch panel models, [Mono Start] key for Touch panel models. "PRINTING" is displayed on the LCD, and the frame pattern is printed on a single sheet of paper.

Error display	Remedy
Replace Toner	Replace the toner cartridge and press [Go] key for Non touch panel models, [Mono Start] key for Touch panel models to release the error.
Cover is Open	Close the Front cover.
No Paper	Refill the paper, close the paper tray and press [Go] key for Non touch panel models, [Mono Start] key for Touch panel models to release the error.
Jam Tray1	Remove the jammed paper, then close the paper tray and all covers, press [Go] key for Non touch panel models, [Mono Start] key for Touch panel models to release the error.
Jam Rear	

#### ■ Frame pattern

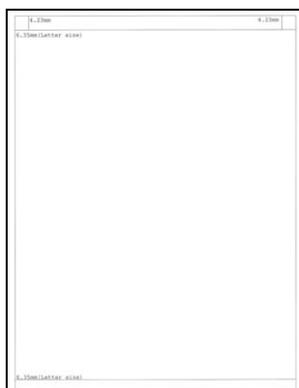


Fig. 5-14

### 1.3.18 Print frame pattern (duplex printing) (Function code 70)

#### < Function >

This function is used to print the frame pattern on both sides of the paper to check for printing flaws and omission.

#### < Operating Procedure >

##### Non touch panel models

- (1) Set the paper specified in the default paper settings (A4 or Letter) to the paper tray.
- (2) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 70" on the LCD, and press the [OK] key. "PRINTING" is displayed on the LCD, and the frame pattern (refer to the figure below) is printed on both sides of the paper.
- (3) When printing is completed, "WAKU DX" is displayed on the LCD.
- (4) Press the [X] key, and the machine returns to the initial state of maintenance mode.

##### Touch panel models

- (1) Set the paper specified in the default paper settings (A4 or Letter) to the paper tray.
- (2) Press the [7], and then the [0] key in the initial state of maintenance mode. "PRINTING" is displayed on the LCD, and the frame pattern (refer to the figure below) is printed on both sides of the paper.
- (3) When printing is completed, "WAKU DX" is displayed on the LCD.
- (4) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### Note:

If printing fails, printing is stopped with displaying any of the errors shown in the table below. To retry printing, refer to the "Remedy" in the table below and eliminate the error cause and press [Go] key for Non touch panel models, [Mono Start] key for Touch panel models. "PRINTING" is displayed on the LCD, and the frame pattern is printed on both sides of a sheet of paper.

Error display	Remedy
Replace Toner	Replace the toner cartridge and press [Go] key for Non touch panel models, [Mono Start] key for Touch panel models to release the error.
Cover is Open	Close the Front cover.
No Paper	Refill the paper, close the paper tray and press [Go] key for Non touch panel models, [Mono Start] key for Touch panel models to release the error.
Jam Tray1	Remove the jammed paper, then close the paper tray and all covers, press [Go] key for Non touch panel models, [Mono Start] key for Touch panel models to release the error.
Jam Rear	
Jam Duplex	
Duplex Disabled	Refill the paper, then close the paper tray and all covers, press [Go] key for Non touch panel models, [Mono Start] key for Touch panel models to release the error.

#### ■ Frame pattern

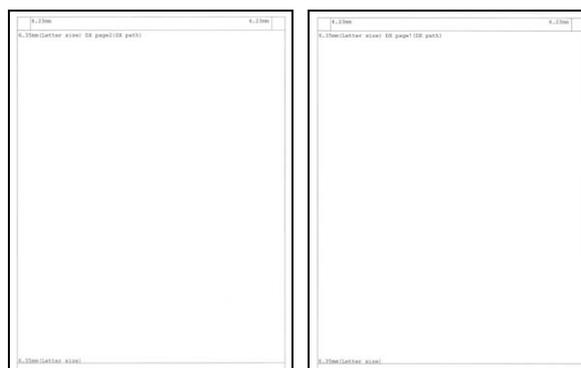


Fig. 5-15

### 1.3.19 Color test pattern (Function code 71)

#### < Function >

This function is used to print the test pattern to check whether the develop roller or exposure drum is dirty or damaged.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 71" on the LCD, and press the [OK] key. "2D3S YMCBWKW\_A" is displayed on the LCD.
- (2) Refer to the <Print pattern> table, press the [▲] or [▼] key to select the desired print pattern and press the [OK] key. When "2D3S YMCBWKW\_A" is selected, "PRINTING" is displayed on the LCD and test pattern printing is started. When a print pattern other than "2D3S YMCBWKW\_A" is selected, "SELECT: LETTER" is displayed on the LCD. (Following steps (3) to (6) described below, select an option in each item and perform test pattern printing.)
- (3) Refer to the <Paper size> table, press the [▲] or [▼] key to select the paper size, and press the [OK] key. "SELECT: PLAIN" is displayed on the LCD.
- (4) Refer to the <Print specification> table, press the [▲] or [▼] key to select the media specification, and press the [OK] key. "SELECT: SX" is displayed on the LCD.
- (5) Refer to the <Print type> table, press the [▲] or [▼] key to select the print type, and press the [OK] key. "SELECT: 1PAGE" is displayed on the LCD.
- (6) Refer to the <Print page> table, press the [▲] or [▼] key to select the pages printing, and press the [OK] key. "PRINTING" is displayed on the LCD, and printing test pattern starts using the selected conditions.
- (7) When printing is completed, LCD display returns to the printing pattern display. Press the [OK] key to perform this again.
- (8) Press the [X] key, and the machine returns to the initial state of maintenance mode.

##### Touch panel models

- (1) Press the [7], and then the [1] key in the initial state of maintenance mode. "2D3S YMCBWKW\_A" is displayed on the LCD.
- (2) Refer to the <Print pattern> table, press the [▲] or [▼] key to select the desired print pattern and press the [SET] key. When "2D3S YMCBWKW\_A" is selected, "PRINTING" is displayed on the LCD and test pattern printing is started. When a print pattern other than "2D3S YMCBWKW\_A" is selected, "SELECT: LETTER" is displayed on the LCD. (Following steps (3) to (6) described below, select an option in each item and perform test pattern printing.)
- (3) Refer to the <Paper size> table, press the [▲] or [▼] key to select the paper size, and press the [SET] key. "SELECT: PLAIN" is displayed on the LCD.
- (4) Refer to the <Print specification> table, press the [▲] or [▼] key to select the media specification, and press the [SET] key. "SELECT: SX" is displayed on the LCD.
- (5) Refer to the <Print type> table, press the [▲] or [▼] key to select the print type, and press the [SET] key. "SELECT: 1PAGE" is displayed on the LCD.
- (6) Refer to the <Print page> table, press the [▲] or [▼] key to select the pages printing, and press the [SET] key. "PRINTING" is displayed on the LCD, and printing test pattern starts using the selected conditions.
- (7) When printing is completed, LCD display returns to the printing pattern display. Press the [Mono Start] key to perform this again.
- (8) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### **Note:**

If printing fails, printing is stopped with displaying any of the errors shown in the <Error display> table. To retry printing, refer to the "Remedy" in the table, eliminate the error cause and press [Go] key for Non touch panel models, [Mono Start] key for Touch panel models. "PRINTING" is displayed on the LCD, and the test pattern is printed.

**<Print pattern>**

LCD	Description
2D3S YMCBWKW_A	Total seven sheets of one sheet for each color with full page print mode* + two blank sheets + data to check Banding
2D3S M	Magenta
2D3S K	Black
2D3S C	Cyan
2D3S Y	Yellow
2D3S MCKY	4-color horizontal band

\* In the full page print mode, the cleaning operation is performed between printing of blank paper and Black.

**<Paper size>**

LCD	Description
SELECT: LETTER	Letter
SELECT: A4	A4
SELECT:ISOB5	ISO B5
SELECT:JISB5	JIS B5
SELECT:A5	A5
SELECT:A5L	A5L
SELECT:JISB6	JIS B6
SELECT:A6	A6
SELECT:EXECUTE	Executive size
SELECT:LEGAL	Legal size
SELECT:FOLIO	Folio size
SELECT:HAGAKI	Postcard size

**<Print specification>**

LCD	Description
SELECT: PLAIN	Plain paper
SELECT: THICK	Plain paper (thick)
SELECT: THIN	Plain paper (thin)
SELECT:THICKER	Plain paper (thicker)
SELECT:RECYCLED	Recycled paper
SELECT:BOND	Bond paper
SELECT:LABEL	Label
SELECT:ENVELOPE	Envelope
SELECT:ENVTHIN	Envelope (thin)
SELECT:ENVTHICK	Envelope (thick)
SELECT:GLOSSY	Glossy paper
SELECT:HAGAKI	Postcard

**<Print type>**

LCD	Description
SELECT: SX	Single-side printing from T1
SELECT: DX *	Duplex printing from T1

\* Supports paper size only for A4, Letter, Legal, and Folio in duplex printing.

**<Print page>**

LCD	Description
SELECT: 1PAGE	1-page printing
SELECT: CONTINUE	Continuous printing *

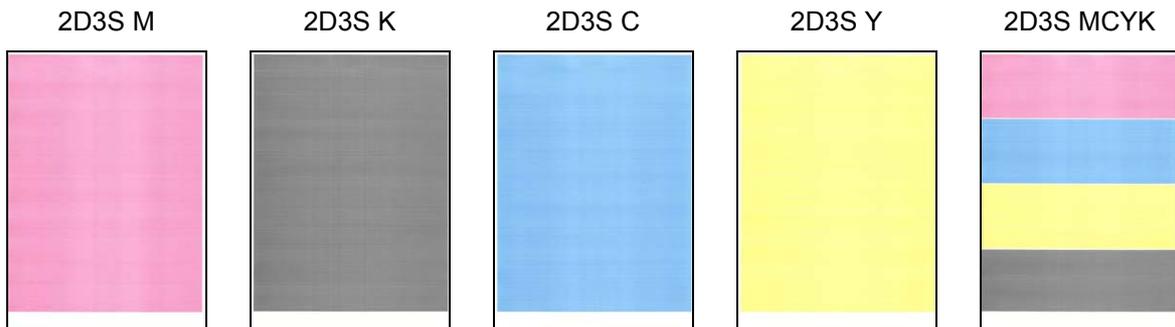
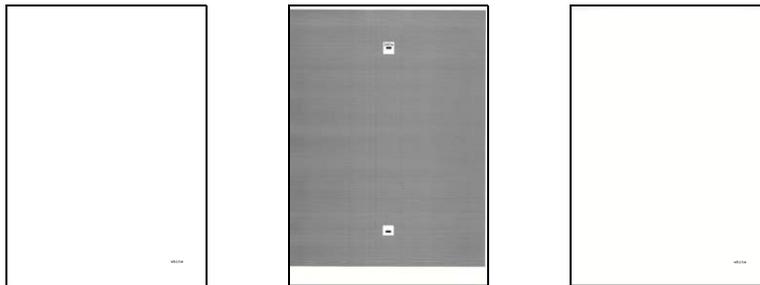
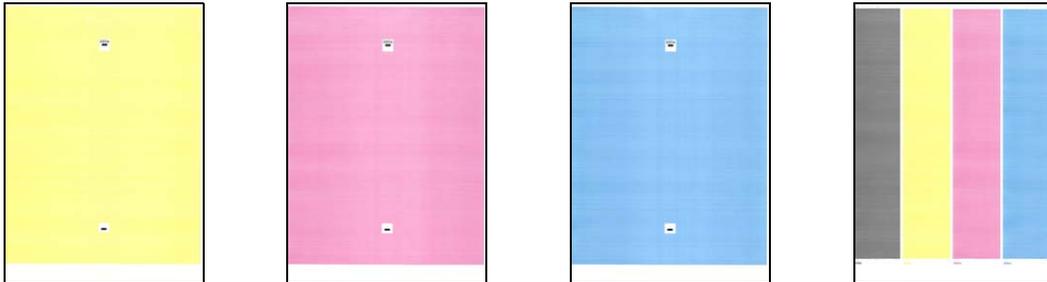
\* Press [Cancel] or [Stop] key to end the continuous printing.

**<Error display>**

Error display	Remedy
Replace Toner	Replace the toner cartridge and press [Go] key for Non touch panel models, [Mono Start] key for Touch panel models to release the error.
Cover is Open	Close the Front cover.
No Paper	Refill the paper, close the paper tray and press [Go] key for Non touch panel models, [Mono Start] key for Touch panel models to release the error.
Jam Tray1	Remove the jammed paper, then close the paper tray and all covers, press [Go] key for Non touch panel models, [Mono Start] key for Touch panel models to release the error.
Jam Rear	

**■ Color test pattern**

2D3S YMCKWKW\_A



**Fig. 5-16**

### 1.3.20 Sensitivity adjustment of density sensor (Function code 72)

#### < Function >

This function is used to print the patch data for density sensor sensitivity adjustment on the belt unit and measure the density with the density sensor. The characteristics of the density sensor are calculated based on the value measured by the density sensor, and the parameter for correcting developing bias voltage is adjusted.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key to display "MAINTENANCE 72" on the LCD in the initial state of the maintenance mode. Then, press the [OK] key. "PLS WAIT 72" is displayed on the LCD and performs the sensitivity adjustment of the density sensor.
- (2) When this operation is completed without errors, "OK" is displayed on the LCD.
- (3) Press the [X] key, and the machine returns to the initial state of maintenance mode.

##### Touch panel models

- (1) Press the [7] and [2] keys in this order in the initial state of the maintenance mode. "PLS WAIT 72" is displayed on the LCD and performs the sensitivity adjustment of the density sensor.
- (2) When this operation is completed without errors, "OK" is displayed on the LCD.
- (3) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### **Note:**

If the sensitivity adjustment of the density sensor fails, "ERROR 72" is displayed on the LCD. Display the error message by pressing the [▼] key, and take the following remedy that corresponds to the error message.

Error display	Remedy
dens_l_drk_err	<ul style="list-style-type: none"> <li>• Reconnect the harness of the eject sensor PCB.</li> <li>• Replace the registration mark sensor unit.</li> <li>• Replace the main PCB ASSY.</li> </ul>
belt_err	<ul style="list-style-type: none"> <li>• Replace the belt unit.</li> <li>• Replace the waste toner box.</li> <li>• Replace the registration mark sensor unit.</li> <li>• Replace the main PCB ASSY.</li> </ul>
dens_pat_err dens_calc_err	<ul style="list-style-type: none"> <li>• Check if the toner cartridges are set in the correct order of colors.</li> <li>• Replace the toner cartridges and drum unit.</li> <li>• Replace the registration mark sensor unit.</li> <li>• Replace the main PCB ASSY.</li> </ul>
dens_led_adj_err	<ul style="list-style-type: none"> <li>• Replace the belt unit.</li> <li>• Replace the waste toner box.</li> <li>• Replace the registration mark sensor unit.</li> <li>• Replace the main PCB ASSY.</li> </ul>
lph_calc_err	<ul style="list-style-type: none"> <li>• Replace the toner cartridges and drum unit.</li> <li>• Securely close the front cover.</li> <li>• Wipe the scanner window of the laser unit with a soft lint-free cloth.</li> <li>• Re-assemble the laser unit.</li> </ul>

Error display	Remedy
TONER EMPTY # *	Replace the empty toner cartridge and press the [Go] key for non touch panel models and the [Mono Start] key for touch panel models to clear the error. Perform the sensitivity adjustment of the density sensor again.
Cover is Open	Close the front cover.
Replace Toner	Replace the black toner cartridge and press the [Go] key for non touch panel models and the [Mono Start] key for touch panel models to clear the error. Perform the sensitivity adjustment of the density sensor again.

\* # indicates the toner color (Y, M, or C) of which cartridge became empty.

## 1.3.21 Continuous adjustments of density / registration sensor (Function code 73)

### < Function >

This function is used to perform the following functions consecutively:

Sensitivity adjustment of density sensor (Function code 72), Developing bias voltage correction (Function code 83), and Adjustment of color registration (Adjustment of inter-color position alignment) including registration sensor calibration (Function code 66).

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key to display "MAINTENANCE 73" on the LCD in the initial state of the maintenance mode. Then, press the [OK] key. "72/83/66-1" is displayed on the LCD.
- (2) Press the [OK] key. "PLS WAIT 72" is displayed on the LCD and each adjustment is performed in the following order.
  - 1) Sensitivity adjustment of density sensor (Function code 72)  
LCD: PLS WAIT 72
  - 2) Developing bias voltage correction (Function code 83)  
LCD: PLS WAIT 83
  - 3) Adjustment of color registration (Adjustment of inter-color position alignment) including registration sensor calibration (Function code 66) LCD: PLS WAIT 66-1
- (3) When all operations are completed, "COMP" is displayed on the LCD. Pressing the [▼] and [X] key in this order and the machine returns to the initial state of the maintenance mode.

#### Touch panel models

- (1) Press the [7] and [3] keys in this order in the initial state of the maintenance mode. "72/83/66-1" is displayed on the LCD.
- (2) Press the [SET] key. "PLS WAIT 72" is displayed on the LCD and each adjustment is performed in the following order.
  - 1) Sensitivity adjustment of density sensor (Function code 72)  
LCD: PLS WAIT 72
  - 2) Developing bias voltage correction (Function code 83)  
LCD: PLS WAIT 83
  - 3) Adjustment of color registration (Adjustment of inter-color position alignment) including registration sensor calibration (Function code 66) LCD: PLS WAIT 66-1
- (3) When all operations are completed, "COMP" is displayed on the LCD. Pressing the [▼] and [X] key in this order and the machine returns to the initial state of the maintenance mode.

#### **Note:**

If each adjustment fails, "ERROR\*\*" is displayed on the LCD and the adjustment is stopped. If you press the [▼] key with "ERROR\*\*" displayed, the details of the error are shown. "\*\*\*" in "ERROR \*\*\*" displayed on the LCD indicates corresponding function code number. Make sure to take an appropriate remedy after checking the remedy provided in each function code.

## 1.3.22 Configure for country/region and model (Function code 74)

### < Function >

This function is used to customize the machine according to language, function settings, and worker switch settings.

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 74" on the LCD, and press the [OK] key. The spec code currently set is displayed on the LCD (The first digit is flashing).
- (2) Press the [OK] key to move the flashing digit.
- (3) Press the [▲] key to enter "1", or the [▼] key to enter "0". Then press the [OK] key. The second digit is completed and the fourth digit starts to flash.
- (4) The third digit and fourth digit changes at once when the [▲] or [▼] key is pressed. Press the [OK] key when the desired value is shown on the LCD.
- (5) Press the [Go] key, the new setting is saved, and "PARAMETER INIT" is displayed on the LCD. After the setting is saved, the machine returns to the initial state of the maintenance mode.

#### Touch panel models

- (1) Press the [7], and then the [4] key in the initial state of maintenance mode. The spec code currently set is displayed on the LCD.
- (2) Enter the spec code (four digits) you want to set.
- (3) Press the [Mono Start] key to save the new setting, and "PARAMETER INIT" is displayed on the LCD. The machine then returns to the initial state of maintenance mode.

■ Setting by spec code list

MODEL	Spec Code		MODEL	Spec Code	
HL-L8260CDN	China	0020	HL-L9310CDW	Australia/ New Zealand	0206
	Singapore	0040		Canada	0201
HL-L8260CDW	Australia/ New Zealand	0106		CEE-General	0203
	CEE-General	0103	China	0220	
	EU-Regional	0103	EU-Regional	0203	
	France/Belgium/ Netherlands	0103	France/Belgium/ Netherlands	0203	
	Germany	0103	Germany	0203	
	Italy/Iberia	0103	Italy/Iberia	0203	
	Pan-Nordic	0103	Japan	0247	
	Russia	0148	Pan-Nordic	0203	
	Switzerland	0103	Russia	0248	
	U.S.A	0101	Switzerland	0203	
	UK	0103	U.S.A	0201	
	HL-L8360CDW(T)	Argentina	0036	UK	0203
Australia/ New Zealand		0006			
Brazil		0042			
Canada		0001			
CEE-General		0003			
Chile		0036			
EU-Regional		0003			
France/Belgium/ Netherlands		0003			
Germany		0003			
Gulf		0041			
Italy/Iberia		0003			
Japan		0047			
Korea		0044			
Pan-Nordic		0003			
Russia		0048			
Singapore		0040			
Switzerland		0003			
Taiwan		0023			
U.S.A		0001			
UK		0003			

**Note:**

- If there is no entry for one minute or longer, the machine returns to the initial state of maintenance mode automatically, regardless of the display status.
- The spec code list above is current as of January 2017.
- Please contact Brother distributors for the latest information.

### 1.3.23 Print maintenance information (Function code 77)

#### < Function >

This function is used to print the maintenance information, such as remaining amount of consumables, the number of replacements, and counter information.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 77" on the LCD, and press the [OK] key. Printing maintenance information starts.
- (2) When printing is completed, the machine returns to the initial state of maintenance mode.

##### Touch panel models

- (1) Press the [7] key twice in the initial state of maintenance mode. Printing maintenance information starts.
- (2) When printing is completed, the machine returns to the initial state of maintenance mode.

### ■ Maintenance information

```

MAINTENANCE
-----
①HL-L9310CDW series②Serial No.=X12345K6J000093 ③Model=84E-888④Country=0201 ⑤SW CheckSum=DC /OK
⑥Main ROM: Ver.0.77 U1611070131 ⑦ROM ChkSum: 55FE ⑧OK 67000000FF 00 03030303 FFFFFFFF
⑨Sub ROM: Ver.0.80 P1611070032 ⑩OKNG 000000000001
⑪MDT2 ROM: ----- ⑫0002 0001 0001 000D 0003 0000 0001
⑬Boot ROM: B1610110735
⑭Engine Version: 0.79
⑮LT1 Main ROM: --- ⑯USB Prod.ID: 008E
⑰LT2 Main ROM: --- ⑱RAM Size = 1024Mbyte
⑲LT3 Main ROM: --- ⑳TT Main ROM: ---

Remaining life of :
⑳**Toner Cartridge ㉑**Drum Unit: 29922 (100%) ㉒PF Kit 1: 99960 (100%)
Cyan(C): 98% ㉓Belt Unit: 99870 (100%)
Magenta(M): 98% ㉔Fuser Unit: 99988 (100%)
Yellow(Y): 98% ㉕Laser Unit: 99988 (100%)
Black(BK): 98% ㉖PF Kit MP: 49995 (100%)

<Device Status(Total/2-sided)> ㉗<Error History (last 10 errors)> Page (C) %
⑳Total Page Count: 58/26 1: 1B01: 20 0 0
Color: 42/22 Mono: 16/4 2:
㉘PC-Print Count: 18/4 3:
Color: 16/4 Mono: 2/0 4:
㉙Other Count: 40/22 5:
Color: 26/18 Mono: 14/4 6:
7:
***Average Coverage(Total) 8:
㉚C: 5.08% M: 5.48% Y: 4.71% K: 4.72% 9:
***Average Coverage(Current)* 10:
㉛C: 5.08% M: 5.48% Y: 4.71% K: 4.72%
***Average Coverage(Previous) ㉜<Replace Count>
㉜C: 0.00% M: 0.00% Y: 0.00% K: 0.00% Toner Cartridge Drum Unit: 0
***Average Coverage(Latest) C: 0 (0)# Waste Toner: 0
㉜C: 9.81% M: 9.66% Y: 9.87% K: 9.51% M: 0 (0)# Belt Unit: 0
Y: 0 (0)# Laser Unit: 0
K: 0 (0)#
<Drum Information>
㉝Drum Page Count:78 Drum Count: 1736 PF Kit MP: 0 PF Kit 1: 0 PF Kit 2: 0
㉞<Developing Roller Count(Current/Previous)> PF Kit 3: 0 PF Kit 4: 0 PF Kit 5: 0
(C): 2215/0 (Y): 2215/0 Fuser Unit: 0/46
(M): 2215/0 (BK): 2713/0

㉞<Total Pages> 58 ㉞<Developing Bias: C:402V M:402V Y:420V K:406V>
MP Tray: 5 2-sided: 13 ㉞<Engine Sensor Log>
Tray 1: 40 Tray 2: 0 KO: 000150/001675 MN: 000290/001670
Tray 3: 0 Tray 4: 0 RS: 000480/001650 EJ: 002615/001690
Tray 5: 0 Std.Output: 45
A4/Letter: 58 Envelope: 0 ㉞<Status Log>
Legal/Folio: 0 AS: 0 830100 830100 830100 830100
B5/Executive: 0 Others: 0 830100 830100 830100 853801 830100
Plain/Thin/Recycled: 55
Thick/Thicker/Bond: 2 ㉞<Temperature> 25 degrees (C) (MAX:27 MIN:23)
Envelope/Env.Thick/Env.Thin: 0 ㉞<Humidity> 29% (MAX:66 MIN:32)
Color: 0 Letterhead: 0 ㉞<Power On Time: 8 hours> <Power On Count: 17>
Label Paper: 0 Hagaki: 0 ㉞<First Date PC Prn: 03/04/16>
Glossy: 1 ㉞<Last Media Type: Plain>

㉞Toner (Current/Previous)
C: 42/0 Y: 42/0 ㉞<NewTonerDetectLog>
M: 42/0 K: 58/0 1:0,0:0,0,0,0,0,0,0,0:0
㉞Waste Toner: 58 2:0,0:0,0,0,0,0,0,0,0:0
㉞Developing Roller Count(Current/Previous) 3:0,0:0,0,0,0,0,0,0,0:0
(C): 1205/0 (Y): 1205/0 4:0,0:0,0,0,0,0,0,0,0:0
(M): 1205/0 (BK): 1578/0

㉞<Total Paper Jams: 0>
Jam Tray1: 0 Jam Rear: 0 * Remaining life will vary depending on the types of documents printed,
Jam Tray2: 0 Jam 2-sided: 0 their coverage and device usage.
Jam Tray3: 0 ** Based on A4/Letter printing.
Jam Tray4: 0 *** Calculated coverage.
Jam Tray5: 0
Jam MP Tray: 0
Jam Inside: 0
    
```

Fig. 5-17

1	Model name	27	Remaining life of PF kit 1
2	Serial number	28	Total printed pages Color / Mono (Total / Duplex)
3	Model code	29	Total PC printed pages Color / Mono (Total / Duplex)
4	Spec code	30	Total pages printed by other methods Color / Mono (Total / Duplex)
5	Switch check sum (factory use) and comparison of default / current value	31	Accumulated average coverage by each toner cartridge
6	Main firmware version	32	Average coverage by current each toner cartridge
7	ROM check sum	33	Average coverage by the previous each toner cartridge
8	Sub firmware version	34	Latest job average coverage by each toner cartridge
9	Main data 2 firmware version	35	Drum page count / Rotations of the drum
10	Boot ROM version	36	Total rotations of the develop roller (currently use / previously used toner cartridge)
11	Engine archive version	37	Total printed pages per paper tray / paper size / paper type
12	ROM version for T2 control PCB	38	Printed pages per toner cartridge (current / previous)
13	ROM version for T3 control PCB	39	Number of pages printed from the waste toner box
14	ROM version for T4 control PCB	40	Total rotations of the develop roller (currently use / previously used toner cartridge)
15	USB ID code	41	Total number of paper jams / Paper jams by sections of the product
16	RAM size	42	Machine error log / Total pages printed at the time of the error / Temperature and humidity
17	TT firmware version	43	Number of times each consumable has been replaced
18	Result of maintenance function 72 / Main PCB serial number / Wireless LAN setting by country / Wireless LAN output peak / WLAN Setup YES/NO setting / One Push Demo Setting / Toner type CMYK (current) / Toner type CMYK (previous)	44	Each Developing bias voltage value
19	Main PCB inspection log / High voltage inspection log / The number of times that the discharge error / Fuser unit error / Polygon motor lock error / Irregular power supply detection error occurred / Next Power On setting for Power Button	45	Engine sensor log (Not necessary for maintenance)
20	Auto registration / Developing bias voltage correction / Gamma correction / Auto registration (user) / Developing bias voltage correction (user) / Gamma correction (user) / Registration error / Color calibration flag	46	Status log (Not necessary for maintenance)
21	Estimated remaining toner amount	47	Current temperature / Highest and lowest temperature in the past
22	Remaining life of drum unit	48	Current humidity / Highest and lowest humidity in the past
23	Remaining life of belt unit	49	Total power distribution time / The number of times that the power is turned ON
24	Remaining life of fuser unit	50	Start date for machine operation
25	Remaining life of laser unit	51	Latest paper type used
26	Remaining life of PF kit MP	52	New toner cartridge detection log

### 1.3.24 Check fan operation (Function code 78)

#### < Function >

This function is used to check that the fan is operating normally. Switch the setting among rotation speed 100%, 50%, and OFF.

LCD	Name	Description
F	Fuser fan	Emits the heat in the fuser unit.
P	Power fan	Emits the heat in the Low-voltage power supply PCB ASSY.
B	Blower	Intake air to prevent a dirt on the corona wire.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 78" on the LCD, and press the [OK] key. "F100 P100 B100" is displayed on the LCD and all the fan rotates at 100% speed.
- (2) By pressing the [Go] key, "F50 P 50 B 0" is displayed on the LCD and the fuser fan and power fan rotates at 50% speed.
- (3) By pressing the [Go] key again, "F 0 P 0 B 0" is displayed on the LCD and all the fan stops.
- (4) Press the [X] key, and the machine returns to the initial state of maintenance mode.

##### Touch panel models

- (1) Press the [7], and then the [8] key in the initial state of maintenance mode. "F100 P100 B100" is displayed on the LCD and all the fan rotates at 100% speed.
- (2) By pressing the [Mono Start] key, "F50 P 50 B 0" is displayed on the LCD and the fuser fan and power fan rotates at 50% speed.
- (3) By pressing the [Mono Start] key again, "F 0 P 0 B 0" is displayed on the LCD and all the fan stops.
- (4) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### ■ Location of fans

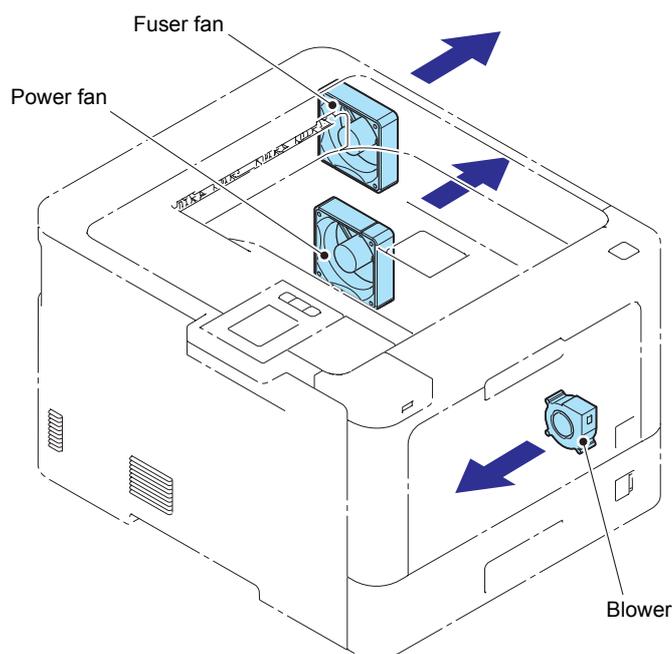


Fig. 5-18

### 1.3.25 Display machine log information (Function code 80)

#### < Function >

This function is used to display the log information on the LCD.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [8], and then the [0] key in the initial state of maintenance mode. "MACERR\_01:\*\*\*\*" is displayed on the LCD (\*\*\*\* indicates error code).
- (2) Press the [Go] key, then the next item is displayed. Press the [Back] key to go back to the previous item.
- (3) Press the [X] key, and the machine returns to the initial state of maintenance mode.

##### Touch panel models

- (1) Press the [8], and then the [0] key in the initial state of maintenance mode. "MACERR\_01:\*\*\*\*" is displayed on the LCD (\*\*\*\* indicates error code).
- (2) Press the [Mono Start] key, then the next item is displayed. Press the [▲] key to go back to the previous item.
- (3) Press the [X] key, and the machine returns to the initial state of maintenance mode.

#### ■ Maintenance information

LCD	Description
MACERR_#:0000	Machine error log (last ten errors) *1
USB:000G8J000166	Serial number *2
MAC:008077112233	MAC address
PCB:911309123456	Main PCB serial number
CTN_ERM:78%	Amount of remaining cyan toner estimated from coverage
CTN_RRM:67%	Amount of remaining cyan toner estimated from the number of develop rotations
MTN_ERM:78%	Amount of remaining magenta toner estimated from coverage
MTN_RRM:67%	Amount of remaining magenta toner estimated from the number of develop rotations
YTN_ERM:78%	Amount of remaining yellow toner estimated from coverage
YTN_RRM:67%	Amount of remaining yellow toner estimated from the number of develop rotations
KTN_ERM:87%	Amount of remaining black toner estimated from coverage
KTN_RRM:67%	Amount of remaining black toner estimated from the number of develop rotations
DRUM_PG:00000000	Printed pages for drum unit
PFMP_PG:00000000	Pages fed from PF kit MP
PFK1_PG:00000000	Pages fed from PF kit 1
PFK2_PG:00000000	Pages fed from PF kit 2
PFK3_PG:00000000	Pages fed from PF kit 3
PFK4_PG:00000000	Pages fed from PF kit 4
PFK5_PG:00000000	Pages fed from PF kit 5
FUSR_PG:00000000	Printed pages on fuser unit
LASR_PG:00000000	Printed pages on laser unit
BELT_PG:00000000	Printed pages on belt unit

LCD	Description
TTL_PG:00000000	Total number of pages printed
DX_PG:00000000	Paper input for duplex tray
TTL_CO:00000000	Total number of color pages printed
TTL_MO:00000000	Total number of monochrome pages printed
DX_CO:00000000	Total number of two-sided color pages printed
DX_MO:00000000	Total number of two-sided monochrome pages printed
TTLPCPT:00000000	Total number of pages printed via PC
DX_PCPT:00000000	Total number of two-sided pages printed via PC
CL_PCPT:00000000	Total number of color pages printed via PC
MN_PCPT:00000000	Total number of monochrome pages printed via PC
DX_CPCP:00000000	Total number of two-sided color pages printed via PC
DX_MPCP:00000000	Total number of two-sided monochrome pages printed via PC
TTL_OTH:00000000	Total number of pages printed by other methods
DX_OTH:00000000	Total number of two-sided pages printed by other methods
CL_OTH:00000000	Total number of color pages printed by other methods
MN_OTH:00000000	Total number of monochrome pages printed by other methods
DX_COTH:00000000	Total number of two-sided color pages printed by other methods
DX_MOTH:00000000	Total number of two-sided monochrome pages printed by other methods
CCVRGUSI:4.32%*	Average coverage by the current cyan toner cartridge
CCVRGACC:3.47%	Accumulated average coverage of cyan toner cartridge
MCVRGUSI:4.32%*	Average coverage by the current magenta toner cartridge
MCVRGACC:3.47%	Accumulated average coverage of magenta toner cartridge
YCVRGUSI:4.32%*	Average coverage by the current yellow toner cartridge
YCVRGACC:3.47%	Accumulated average coverage of yellow toner cartridge
KCVRGUSI:4.32%*	Average coverage by the current black toner cartridge
KCVRGACC:3.47%	Accumulated average coverage of black toner cartridge
DRUM:00000000	Number of drum rotations
CTN_RND: 00000000	Number of cyan develop roller rotations
MTN_RND: 00000000	Number of magenta develop roller rotations
YTN_RND: 00000000	Number of yellow develop roller rotations
KTN_RND: 00000000	Number of black develop roller rotations
MP_PG:00000000	Paper input for MP tray
TR1_PG:00000000	Paper input for T1
TR2_PG:00000000	Paper input for T2
TR3_PG:00000000	Paper input for T3
TR4_PG:00000000	Paper input for T4
TR5_PG:00000000	Paper input for T5
DX_PG:00000000	Paper passed through duplex tray
A4+LTR:00000000	Total paper input for A4 and Letter
LG+FOL:00000000	Total paper input for Legal and Folio

LCD	Description
B5+EXE:00000000	Total paper input for B5 and Executive
ENVLOP:00000000	Paper input for Envelope
A5 :00000000	Paper input for A5 (including A5 Landscape)
OTHER :00000000	Paper input for other sizes
PLTNRE:00000000	Total printed pages of plain, thin, and recycled paper
TKTRBD:00000000	Total printed pages of thick, thicker, and bond paper
ENVTYP:00000000	Total printed pages of envelope, thick envelope, and thin envelope
COLOR:00000000	Full-color printed pages
LTHD:00000000	Printed pages on letter head
LABEL:00000000	Printed pages on label
HAGAKI:00000000	Printed pages on postcard
GLOSSY:00000000	Printed pages on glossy paper
TTL_JAM:00000000	Total paper jams that have occurred
MP_JAM:00000	Paper jams that have occurred in the MP tray
TR1_JAM:00000000	Paper jams that have occurred in T1
TR2_JAM:00000	Paper jams that have occurred in T2
TR3_JAM:00000	Paper jams that have occurred in T3
TR4_JAM:00000	Paper jams that have occurred in T4
TR5_JAM:00000	Paper jams that have occurred in T5
IN_JAM:00000000	Paper jams that have occurred in the machine
RE_JAM:00000000	Paper jams that have occurred at the ejecting section or back cover
DX_JAM:00000000	Paper jams that have occurred in the duplex tray
POWER:00000375	Total power distribution time (unit: hour)
PWRCNT:00000001	Number of times that the power is turned ON
CTN_CH:0000	Number of times that the cyan toner cartridge has been replaced *3
MTN_CH:0000	Number of times that the magenta toner cartridge has been replaced *3
YTN_CH:0000	Number of times that the yellow toner cartridge has been replaced *3
KTN_CH:0000	Number of times that the black toner cartridge has been replaced *3
DRUM_CH:0000	Number of times that the drum unit has been replaced *3
WTNR_CH:0000	Number of times that the waste toner box has been replaced *3
BELT_CH:0000	Number of times that the belt unit has been replaced *3
FUSR_CH:0000	Number of times that the fuser unit has been replaced *3
LASR_CH:0000	Number of times that the laser unit has been replaced *3
PFMP_CH:0000	Number of times that the PF kit MP has been replaced *3
PFK1_CH:0000	Number of times that the PF kit 1 has been replaced *3
PFK2_CH:0000	Number of times that the PF kit 2 has been replaced *3
PFK3_CH:0000	Number of times that the PF kit 3 has been replaced *3
PFK4_CH:0000	Number of times that the PF kit 4 has been replaced *3
PFK5_CH:0000	Number of times that the PF kit 5 has been replaced *3

LCD	Description
CTN_PG1:00000000	Number of pages printed from the currently installed cyan toner cartridge
CTN_PG2:00000000	Number of pages printed from the previous installed cyan toner cartridge
MTN_PG1:00000000	Number of pages printed from the currently installed magenta toner cartridge
MTN_PG2:00000000	Number of pages printed from the previous installed magenta toner cartridge
YTN_PG1:00000000	Number of pages printed from the currently installed yellow toner cartridge
YTN_PG2:00000000	Number of pages printed from the previous installed yellow toner cartridge
KTN_PG1:00000000	Number of pages printed from the currently installed black toner cartridge
KTN_PG2:00000000	Number of pages printed from the previous installed black toner cartridge
WTNR_PG:00000000	Number of pages printed with the current waste toner box
CDEV_BIAS:400V	Cyan developing bias voltage
MDEV_BIAS:400V	Magenta developing bias voltage
YDEV_BIAS:400V	Yellow developing bias voltage
KDEV_BIAS:400V	Black developing bias voltage value
ENGERR##:000000	Engine error log (last ten errors) <sup>*4</sup>
HODN_ER:0000	The number of discharge errors occurred
FUSR_ER:0000	The number of fuser unit errors occurred
MTLK_ER:0000	The number of polygon motor lock errors occurred in the laser scanner
DEVSTATUS ##:00	Log for design analysis <sup>*5</sup>

<sup>\*1</sup> 01 to 10 will be displayed for “##” in chronological order. Pressing the [OK] for Non touch panel models or [SET] key for Touch panel models while the machine error log is displayed shows “PGCNT:00000000 (total pages printed at the time of the error)” on the LCD, and pressing the [OK] key again shows “TMP:000 HUM:000 (TMP: temperature at the time of the error (°C), HUM: humidity at the time of the error (%))” on the LCD. Pressing the [OK] key again returns the LCD display to machine error log.

\*2 Last 12 digits of the serial number are displayed.

The serial number can be changed according to the procedures below.

Non touch panel models

- 1) Press the [▲] or [▼] key while the serial number is displayed to display “9” on the LCD, and press the [OK] key. LCD displays the serial number again.
- 2) Enter the “4”, “7” and “5” in this order as described in the procedure 1). Serial number is displayed on the LCD. The first digit starts flashing to indicate that it is editable.
- 3) Press the first digit of the serial number on the keypad, [▲] or [▼] to display the first number of the serial number on the LCD, and press the [OK] key. The second digit starts to flash. Enter the second digit to the 15th digit similarly.
- 4) Press the [Go] key, and the new serial number is saved. The machine returns to the initial state of maintenance mode.

Touch panel models

- 1) While the serial number is displayed, press the [9], [4], [7], and [5] key in this order to enter the edit mode.
- 2) Use the keypad to enter the first digit of the serial number. Enter the second digit to the 15th digit similarly.

<Entry method of alphanumeric characters>  
See the table below and press the corresponding key until the desired character is displayed.

Keypad	Assigned characters
2	2 → A → B → C
3	3 → D → E → F
4	4 → G → H → I
5	5 → J → K → L
6	6 → M → N → O
7	7 → P → Q → R → S
8	8 → T → U → V
9	9 → W → X → Y → Z

- 3) Press the [Mono Start] key. The serial number is saved and the machine returns to the initial state of maintenance mode.

\*3 Pressing the [SET] key while the number of each consumable part had replaced is displayed shows “DATE\_XX:000000” (XX: each consumable part) and the replaced date on the LCD.

\*4 01 to 10 will be displayed for “##” in chronological order. Pressing the [OK] key for Non touch panel models or [SET] key for Touch panel models while the engine error log is displayed shows “TM:00000 BT:000 (TM: the minutes passed from the previous error, BT: the number of times that the power is turned ON/OFF) on the LCD. Pressing the [OK] key again returns the LCD display to engine error log.

\*5 01 to 10 will be displayed for “##” in chronological order. Pressing the [OK] key for Non touch panel models or [SET] key for Touch panel models while log for design analysis is displayed shows “PGCNT:00000000 (total pages printed at the time of the error)” on the LCD. Pressing the [OK] key again returns the LCD display to log for design analysis.

### 1.3.26 Display machine error code (Function code 82)

#### < Function >

This function is used to display the latest error code on the LCD.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 82" on the LCD, and press the [OK] key. "MACHINE ERR XXXX" is displayed on the LCD.
- (2) Press the [X] key, and the machine returns to the initial state of maintenance mode.

##### Touch panel models

- (1) Press the [8], and then the [2] key in the initial state of maintenance mode. "MACHINE ERR XXXX" is displayed on the LCD.
- (2) Press the [X] key, and the machine returns to the initial state of maintenance mode.

## 1.3.27 Developing bias voltage correction (Function code 83)

### < Function >

This function performs developing bias voltage correction to fix the density of each color toner when printed color is not correct.

#### Note:

Before this function is performed, there is a need that the “1.3.20 Sensitivity adjustment of density sensor (Function code 72)” in this chapter has been done more than once. When performing this function code 83 after replacing the main PCB ASSY, make sure to perform the “1.3.20 Sensitivity adjustment of density sensor (Function code 72)” first.

### < Operating Procedure >

#### Non touch panel models

- (1) Press the [▲] or [▼] key to display “MAINTENANCE 83” on the LCD in the initial state of the maintenance mode. Then, press the [OK] key. The machine displays “PLS WAIT 83” on the LCD and starts the developing bias voltage correction.
- (2) When developing bias voltage correction is completed, “MODE KYMC \*\*\*\*” is displayed on the LCD. When you press the [Go] key, the machine returns to the initial state of the maintenance mode.  
(\* represents any number from 0 to 3.)

#### Touch panel models

- (1) Press the [8] and [3] keys in this order in the initial state of the maintenance mode. The machine displays “PLS WAIT 83” on the LCD and starts the developing bias voltage correction.
- (2) When developing bias voltage correction is completed, “MODE KYMC \*\*\*\*” is displayed on the LCD. When you press the [Mono Start] key, the machine returns to the initial state of the maintenance mode.  
(\* represents any number from 0 to 3.)

#### Note:

If developing bias voltage correction fails, “ERROR 83” is displayed on the LCD. Display the error message by pressing the [▼] key, and take the following remedy that corresponds to the error message.

Error display	Remedy
FAILED DEVBIAS	<p>Remove the error cause with the following operations and press the [Go] key for the model without a touch panel and the [Mono Start] key for the model with a touch panel to clear the error.</p> <ul style="list-style-type: none"> <li>• Re-insert the toner cartridge in the correct position.</li> <li>• Replace the toner cartridge.</li> <li>• Replace the drum unit.</li> <li>• Replace the waste toner box.</li> <li>• Replace the belt unit.</li> <li>• Replace the registration mark sensor unit.</li> </ul>
TONER EMPTY # *	<p>Replace the empty toner cartridge and press the [Go] key for the model without a touch panel and the [Mono Start] key for the model with a touch panel to clear the error. After the sensitivity adjustment of the density sensor (Function code 72) is performed, the developing bias voltage value is compensated again.</p>
Cover is Open	<p>Close the front cover.</p>
Replace Toner	<p>Replace the black toner cartridge and press the [Go] key for the model without a touch panel and the [Mono Start] key for the model with a touch panel to clear the error. After the sensitivity adjustment of the density sensor (Function code 72) is performed, the developing bias voltage value is compensated again.</p>

\* # indicates the toner color (Y, M, or C) of which cartridge became empty.

### 1.3.28 Reset counters for consumable parts (Function code 88)

#### < Function >

This function is performed to reset the counter for each consumable part in the main PCB after that has been replaced.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 88" on the LCD, and press the [OK] key. "Reset-Laser unit" is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display the part with the counter to be reset on the LCD, and press the [OK] key.
- (3) "\*\*\*\*\*OK?" is displayed on the LCD. Press the [OK] key to reset the counter for the selected part and return the display to the procedure (2). (\*\*\*\*\* represents the name of the selected part)
- (4) Press the [X] key, and the machine returns to the initial state of maintenance mode.

##### Touch panel models

- (1) Press the [8] key twice in the initial state of maintenance mode. "Reset-Laser Unit" is displayed on the LCD.
- (2) Press the [▲] or [▼] key to display the part with the counter to be reset on the LCD, and press the [Mono Start] key.
- (3) "\*\*\*\*\*OK?" is displayed on the LCD. Press the [Mono Start] key to reset the counter for the selected part and return the display to the procedure (2). (\*\*\*\*\* represents the name of the selected part)
- (4) Press the [X] key, and the machine returns to the initial state of maintenance mode.

Selectable parts are shown in the table below.

Error display	Part name	Counter to be reset
Reset-Laser Unit	Laser unit	Printed pages counter
Reset-Fuser Unit	Fuser unit	Printed pages counter
Reset-PF Kit T1	PF kit 1	Printed pages counter
Reset-PF Kit T2	PF kit 2	Printed pages counter
Reset-PF Kit T3	PF kit 3	Printed pages counter
Reset-PF Kit T4	PF kit 4	Printed pages counter
Reset-PF Kit T5	PF kit 5	Printed pages counter
Reset-PF Kit MP	PF kit MP	Printed pages counter
Reset-LVPS	Low-voltage power supply PCB ASSY	Irregular power supply detection counter

### 1.3.29 Quit maintenance mode (Function code 99)

#### < Function >

This function is used to quit the maintenance mode, restart the machine, and return it to the ready state. Also forcefully close the fuser unit error.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "MAINTENANCE 99" on the LCD, and press the [OK] key. The machine quits the maintenance mode and returns to the ready state.

##### Touch panel models

- (1) Press the [9] key twice in the initial state of maintenance mode. The machine quits the maintenance mode and returns to the ready state.

## 2. OTHER SERVICE FUNCTIONS

### 2.1 Drum Cleaning

#### < Function >

This function is to attach a special cleaning sheet on the drum unit and perform the cleaning of the drum.

#### < Operating Procedure >

##### Non touch panel models

- (1) Press the [▲] or [▼] key to display "Machine Info." on the LCD in ready state and press the [OK] key.
- (2) Press the [▲] or [▼] key to display "Parts Life" on the LCD then press the [OK] key.
- (3) Press the [▲] or [▼] key to display "Drum" on the LCD then press the [OK] key. "Remaining: \*%" is displayed on the LCD.
- (4) Press the [▼] and [X Cancel] key at the same time. "Drum Cleaning" is displayed on the LCD.
- (5) Open the front cover, take out the drum unit, and attach the cleaning sheet on the drum unit. (For the method of attaching the cleaning sheet, refer to the insertion of the cleaning sheet.)
- (6) Put the drum unit back in the machine and close the front cover. "Drum Cleaning/ Please wait" is displayed on the LCD, and then drum cleaning starts.
- (7) When drum cleaning is completed, "Drum Cleaning/ Drum Cleaning completed. Remove the cleaning sheet." is displayed on the LCD. Then, open the front cover, take out the drum unit, and remove the cleaning sheet from the drum unit.

##### **Note:**

Open the front cover slightly, not fully, and then close it again. "Please Wait" is displayed on the LCD and also the toner level is displayed on the LCD.

- (8) Put the drum unit back in the machine and close the front cover. Then the machine returns to the ready state.

##### Touch panel models

- (1) Press the  key in the ready state.
- (2) Press [All Settings] key.
- (3) Press the [∧] or [∨] key to display [Machine Information] key on the LCD then press it.
- (4) Press the [∧] or [∨] key to display [Parts Life] key on the LCD then press it.
- (5) Press [Drum \*%] key.
- (6) Press the [X] key for five seconds or more. "Attach the cleaning sheet. Please refer to the included instructions." is displayed on the LCD.
- (7) Open the front cover, take out the drum unit, and attach the cleaning sheet on the drum unit. (For the method of attaching the cleaning sheet, refer to the insertion of the cleaning sheet.)
- (8) Put the drum unit back in the machine and close the front cover. "Drum Cleaning/ Please wait" is displayed on the LCD, and then drum cleaning starts.
- (9) When drum cleaning is completed, "Drum Cleaning completed. Remove the cleaning sheet." is displayed on the LCD. Then, open the front cover, take out the drum unit, and remove the cleaning sheet from the drum unit.
- (10) Put the drum unit back in the machine and close the front cover. Then the machine returns to the ready state.

## 2.2 Change ON/OFF setting of color registration (Only for Non touch panel models)

### < Function >

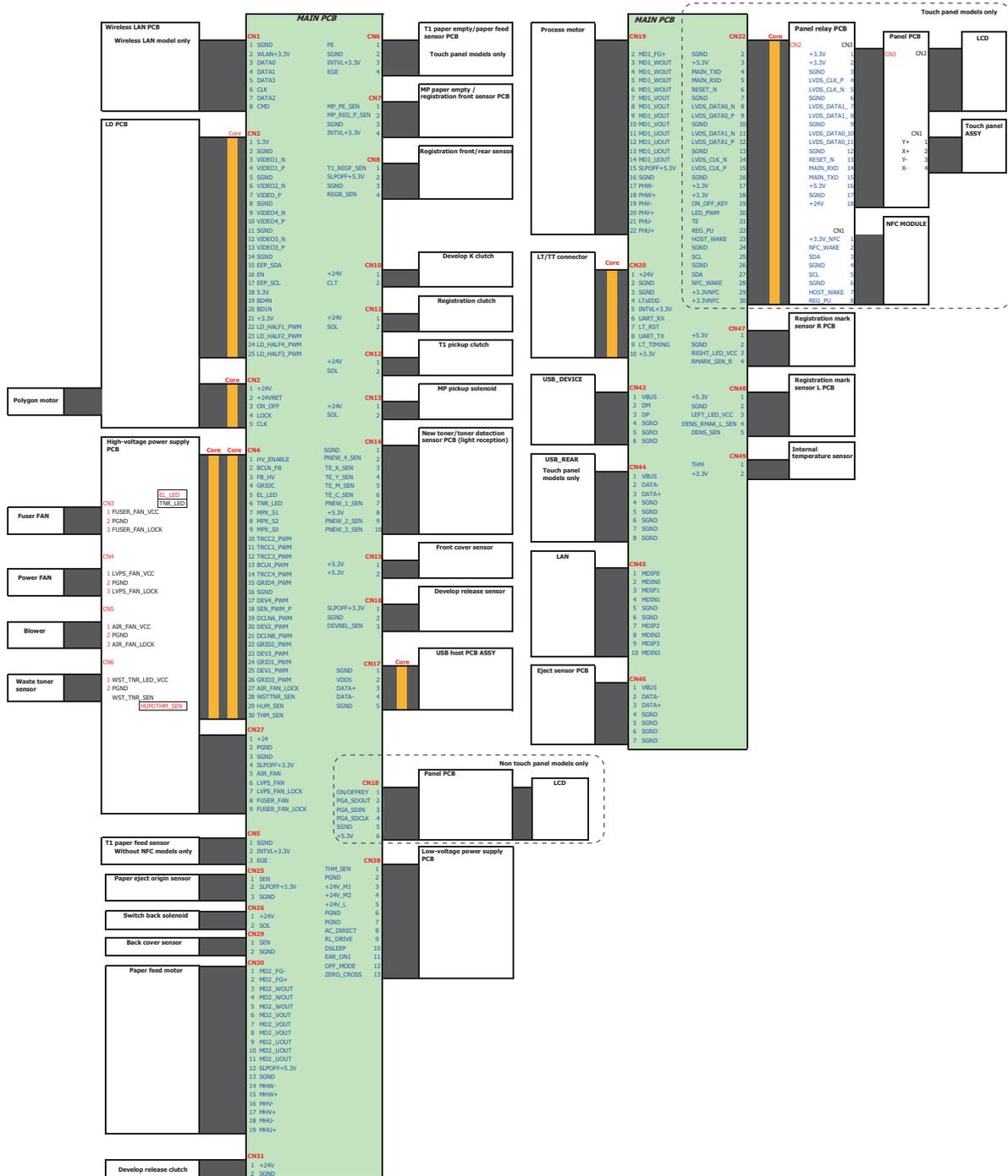
Situation and timing of adjustment of color registration is decided by machine features of each models, and it will be performed by the decided timing. This function switches the registration starts automatically or not. However, registration will be performed when the machine cannot print normally even the auto registration is OFF.

### < Operating Procedure >

- (1) Press the [▲] or [▼] key to display "Printer" on the LCD in ready state and press the [OK] key.
- (2) Press the [▲] or [▼] key to display "Color Correction" on the LCD then press the [OK] key.
- (3) Press the [▲] or [▼] key to display "Calibration" on the LCD then press the [OK] key. "Calibrate" is displayed on the LCD.
- (4) Press the [▼] and [X Cancel] key at the same time. "Auto Calibration / On \*" is displayed on the LCD.
- (5) Press the [▲] or [▼] key to display "On \*" to switch ON or display "Off \*" to switch OFF the function.
- (6) Press the [OK] key then "Accepted" is displayed on the LCD then returns to (3).

# CHAPTER 6 WIRING DIAGRAM

## 1. WIRING DIAGRAM



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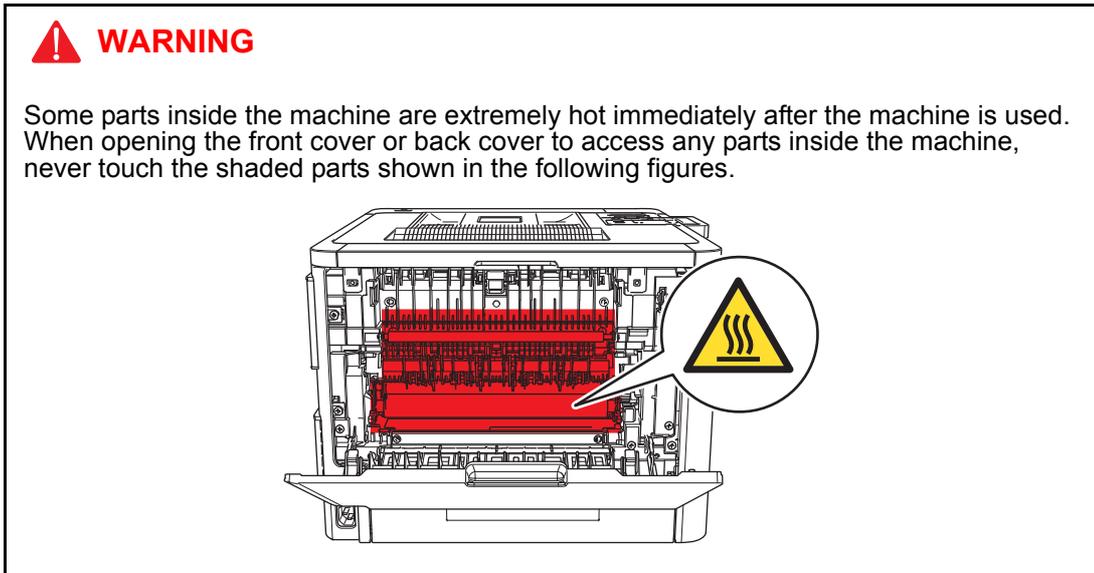
# CHAPTER 7 PERIODICAL MAINTENANCE

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## 1. SAFETY PRECAUTIONS

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To avoid creating secondary problems by mishandling, follow the warnings and precautions below during maintenance work.



- Be careful not to lose screws, washers, or other parts removed.
- Be sure to apply grease to the gears and applicable positions specified in [chapter 3](#).
- When using soldering irons or other heat-generating tools, take care not to accidentally damage parts such as wires, PCBs and covers.
- Static electricity charged in your body may damage electronic parts. When transporting PCBs, be sure to wrap them in conductive sheets.
- When replacing the PCB and all the other related parts, put on a grounding wrist band and perform the job on a static mat. Also take care not to touch the conductor sections on the flat cables or on the wire harness.
- After disconnecting flat cables, check that each cable is not damaged at its end or short-circuited.
- When connecting flat cables, do not insert them at an angle. After insertion, check that the cables are not at an angle.
- When connecting or disconnecting harnesses, hold the connector body, not the cables. If the connector is locked, release it first.
- After a repair, check not only the repaired portion but also handling of harnesses. Also check that other related portions are functioning properly before operational checks.
- There must be no damage in the insulation sheet.
- After a repair, update the firmware to the latest version.
- Forcefully closing the front cover without mounting the toner cartridge and the drum unit can damage the machine.

## 2. PERIODICAL REPLACEMENT PARTS

### 2.1 Preparation

#### ■ Disconnecting cables and removing accessories

Prior to proceeding with the disassembly procedure,

- (1) Unplug
  - the AC cord,
  - the USB cable, if connected,
  - the LAN cable, if connected, and
  - USB flash memory drive, if connected.
  
- (2) Remove
  - the Toner cartridge,
  - the Drum unit,
  - the Belt unit,
  - the Waste toner box,
  - the Paper tray, and
  - LAN port cap.

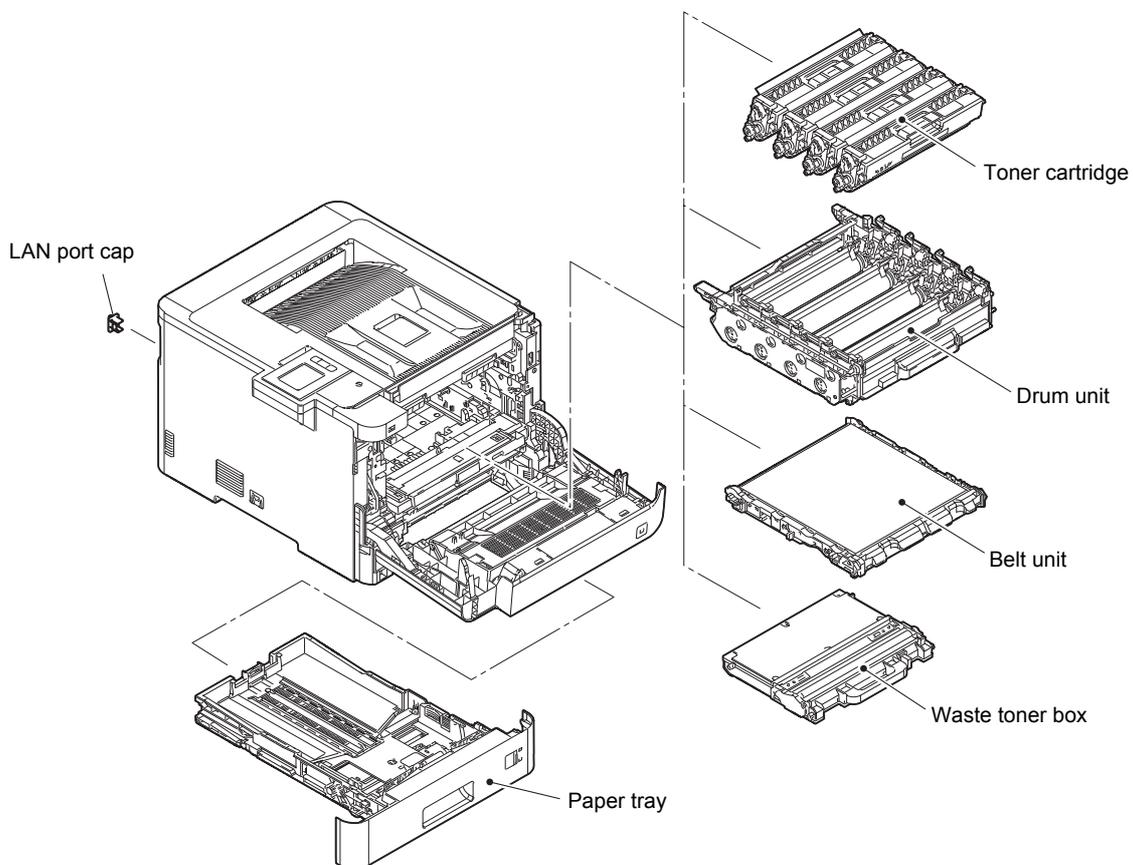


Fig. 7-1

## 2.2 Fuser unit

(1) Open the Back cover.

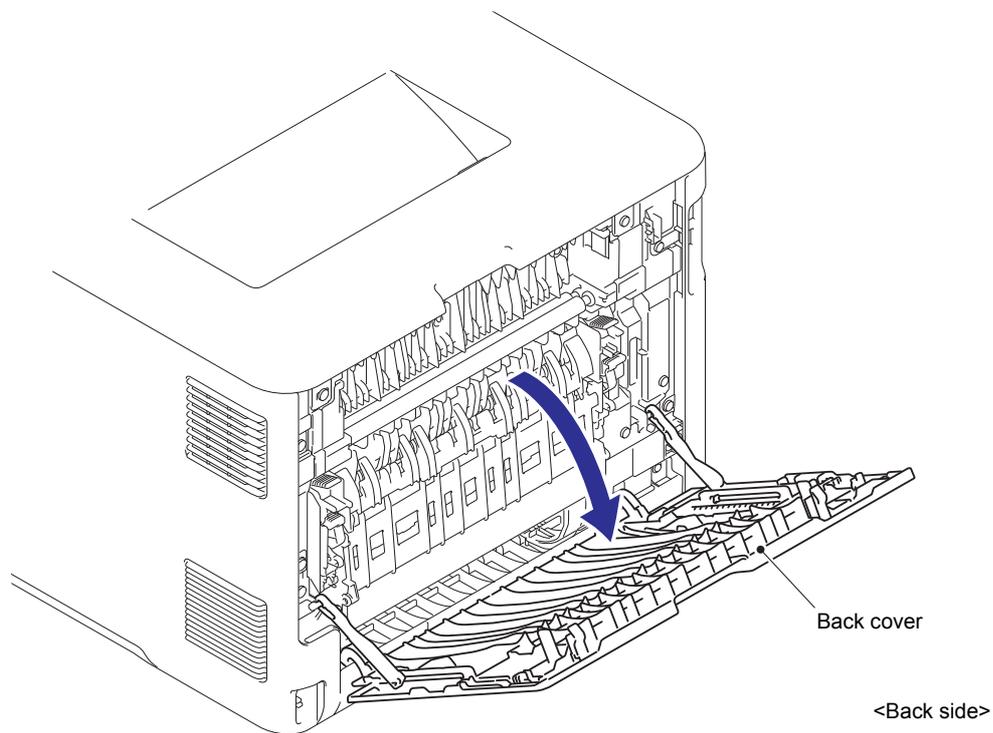


Fig. 7-2

(2) Remove the Back cover stopper arm L/R from the Boss.

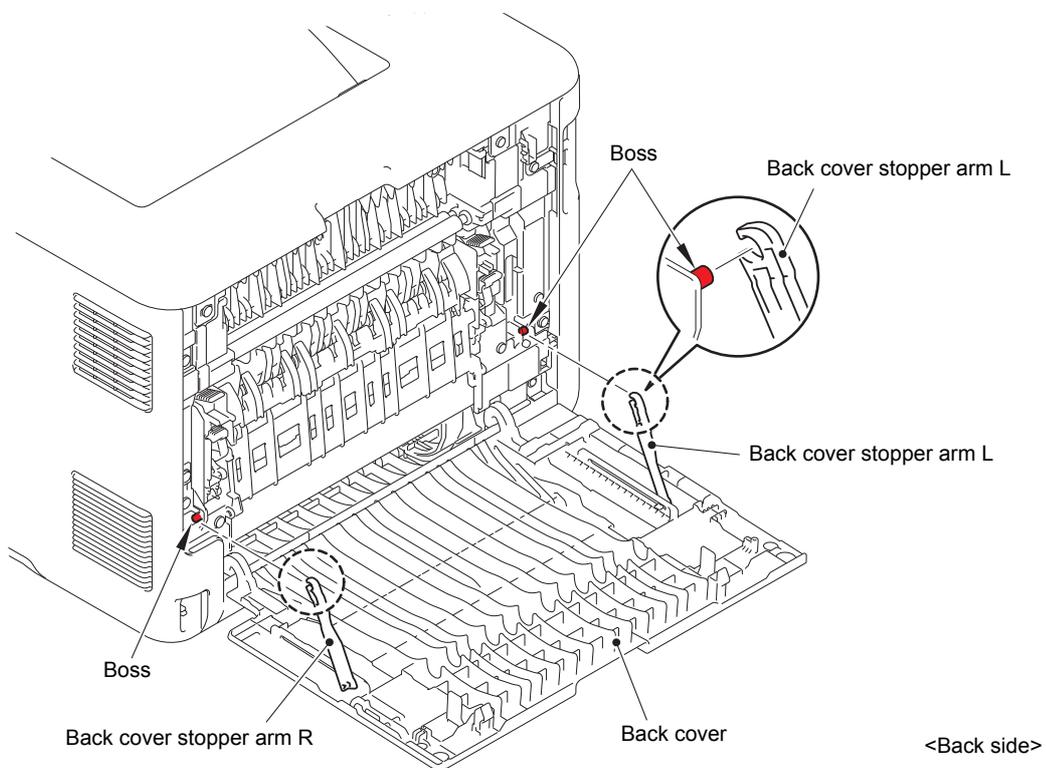


Fig. 7-3

(3) Remove the Boss of the Back cover from the Bush on the Frame R.

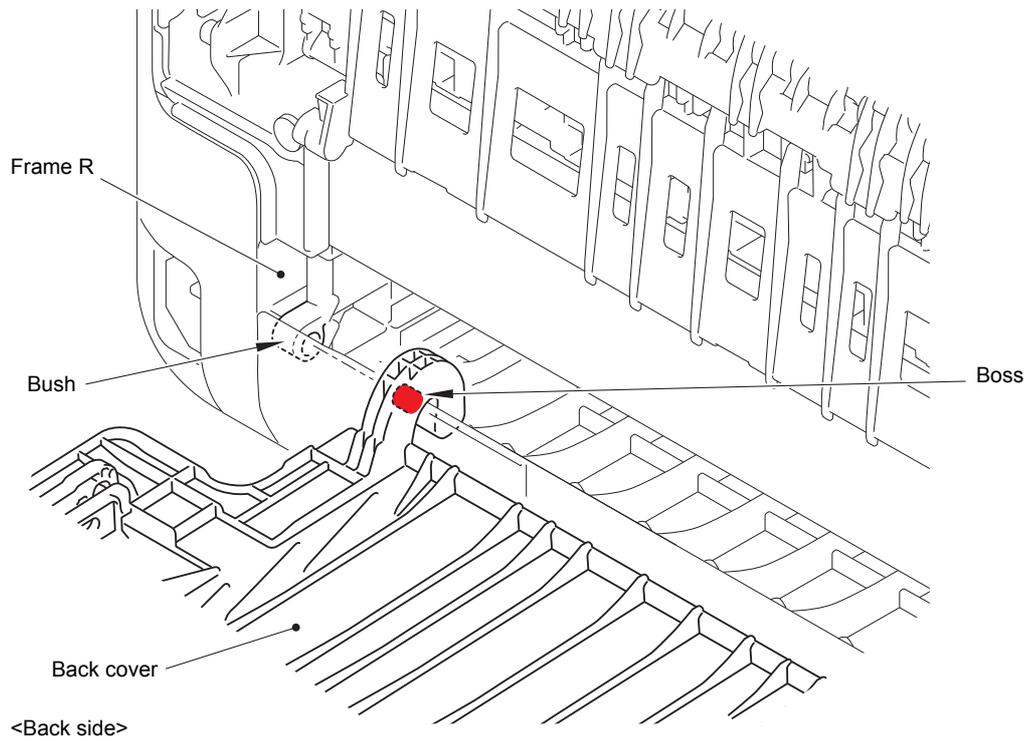


Fig. 7-4

(4) Remove the Back cover. (4a → 4b)

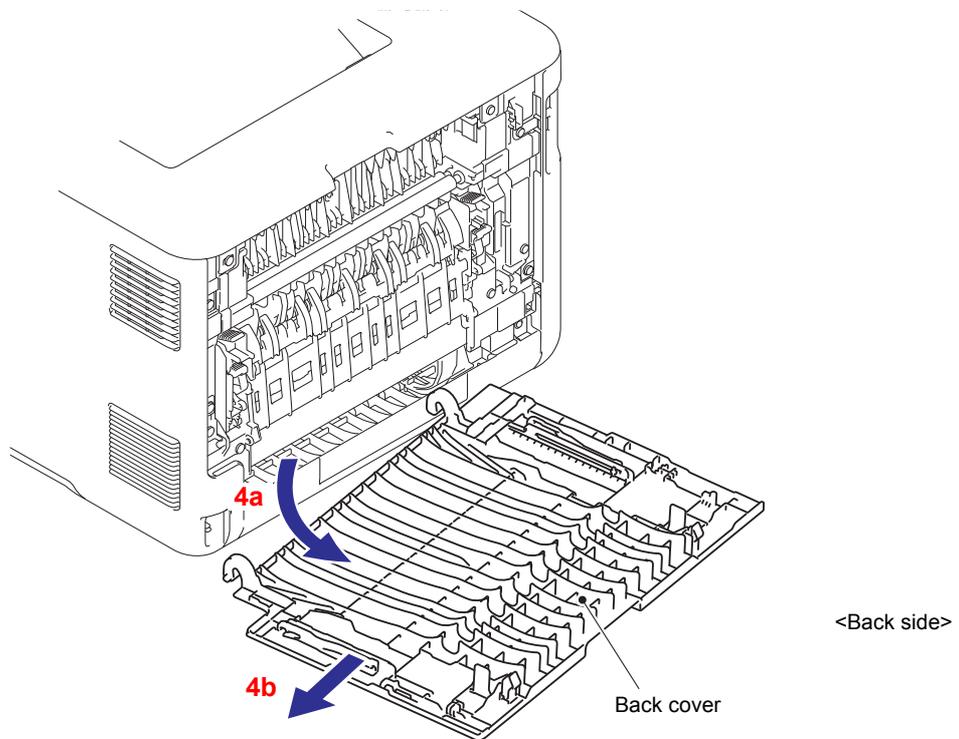
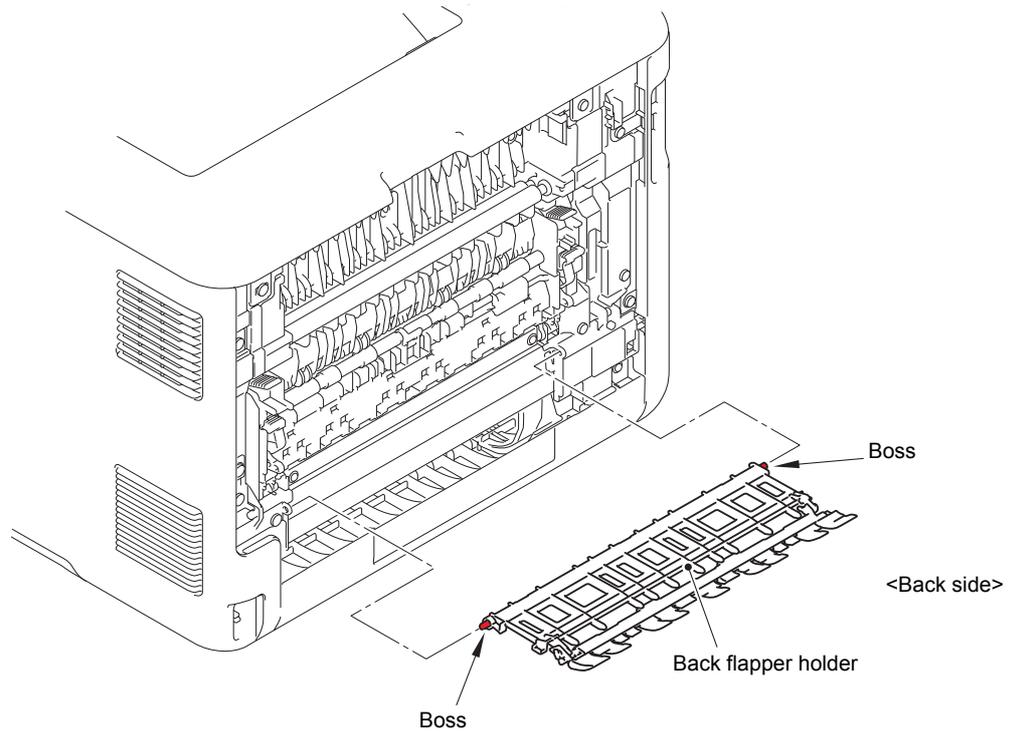


Fig. 7-5

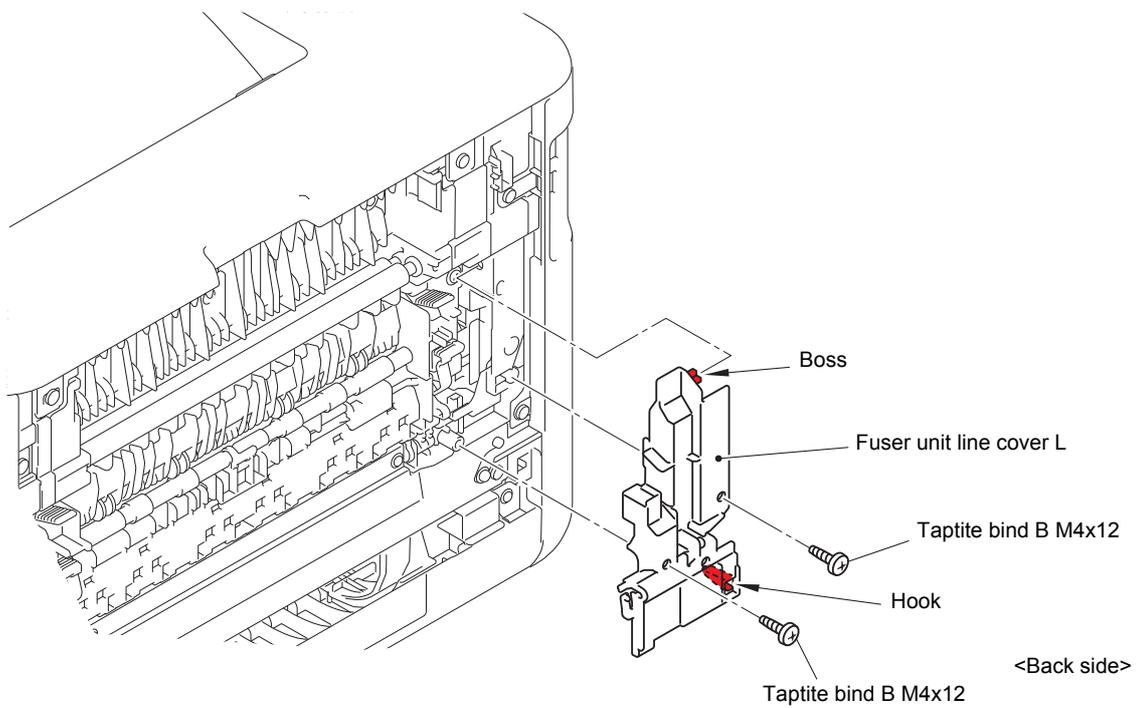
(5) Open the Back flapper holder. Release each Boss and remove the Back flapper holder.



**Fig. 7-6**

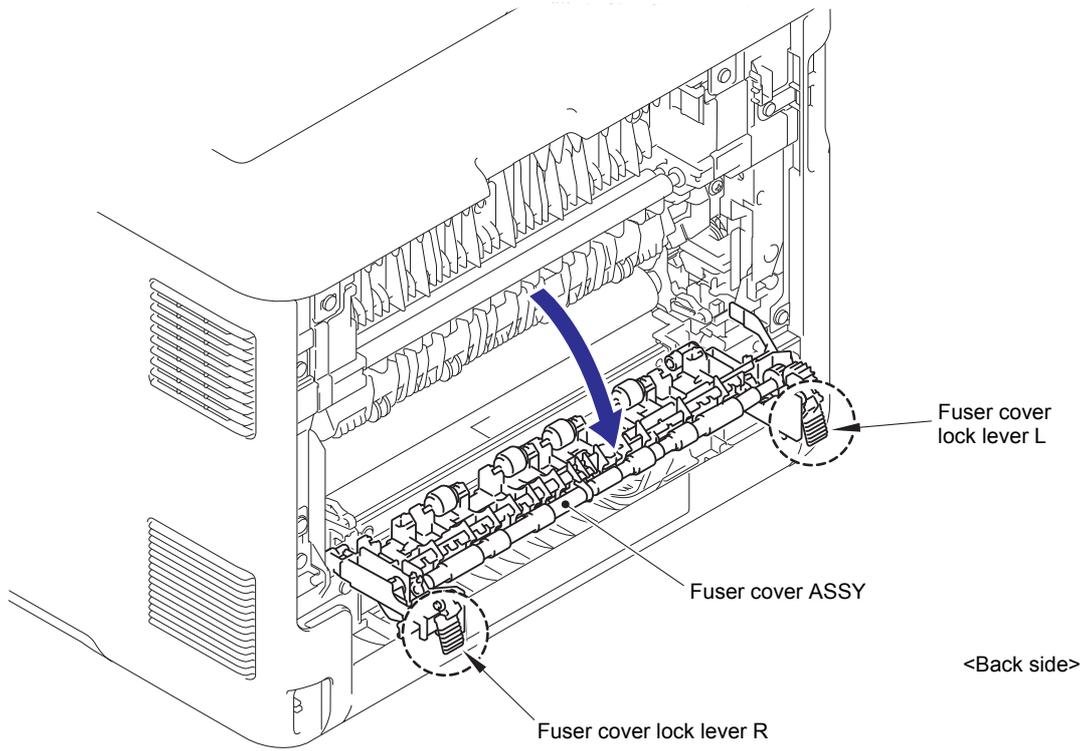
(6) Remove the two Taptite bind B M4x12 screws from the Fuser unit line cover L.

(7) Release the Hook and Boss and remove the Fuser unit line cover L.



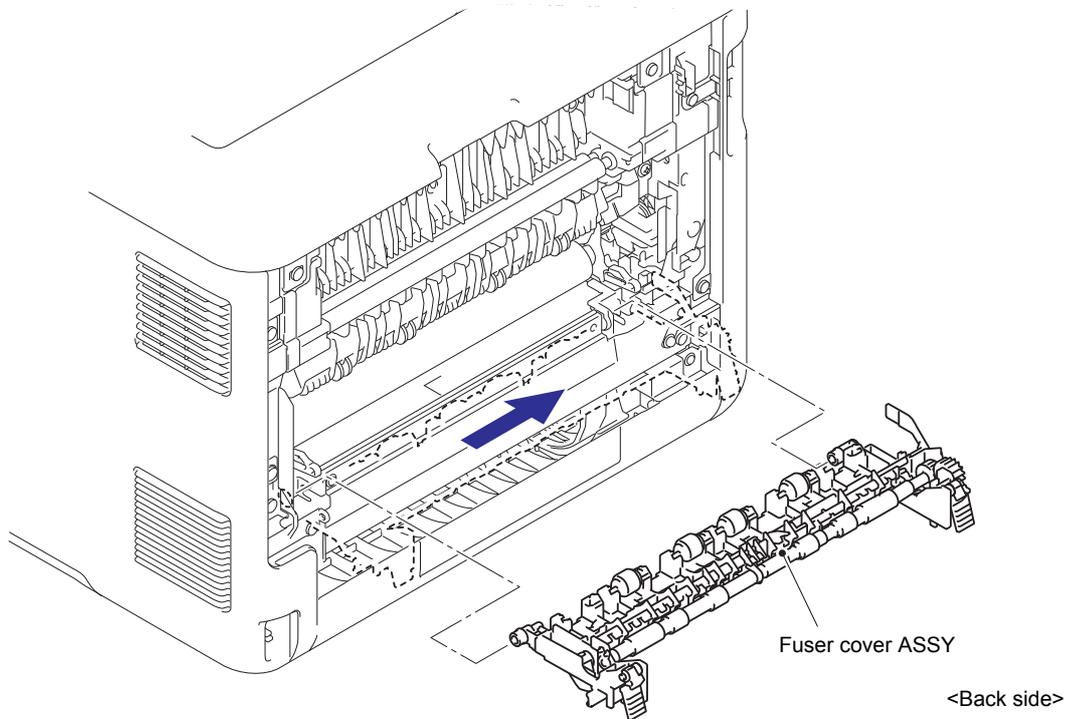
**Fig. 7-7**

(8) Release the lock of the Fuser cover lock lever L/R to open the Fuser cover ASSY.



**Fig. 7-8**

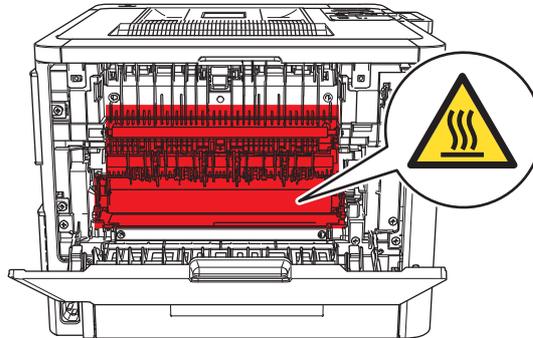
(9) Slide the Fuser cover ASSY in the direction of the arrow and remove it to the front.



**Fig. 7-9**

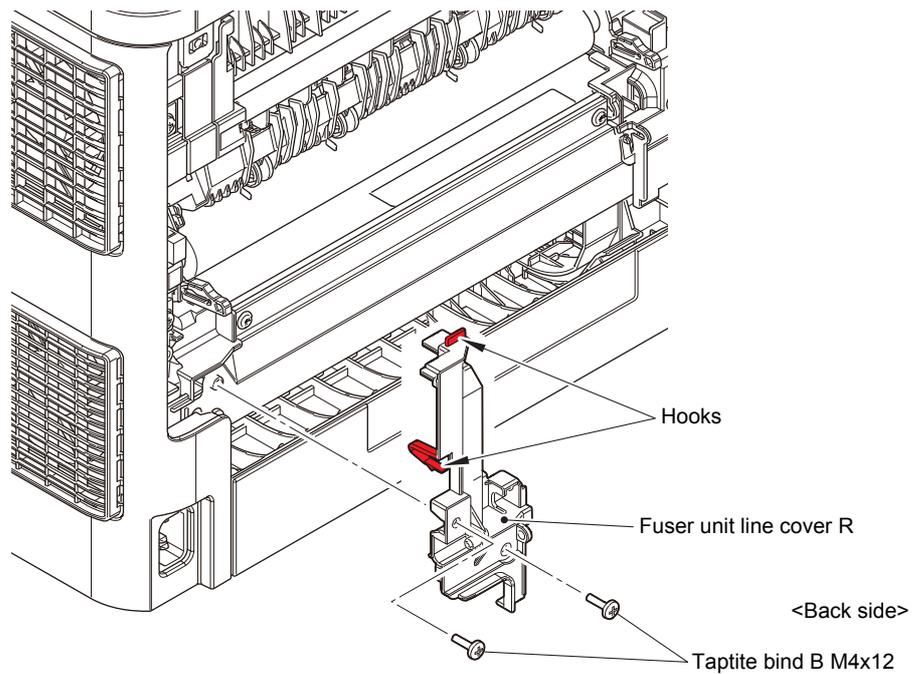
**CAUTION**

Some parts inside the machine are extremely hot immediately after the machine is used. When opening the Front cover or Back cover to access any parts inside the machine, never touch the shaded parts shown in the following figure.



(10) Remove the two Taptite bind B M4x12 screws from the Fuser unit line cover R.

(11) Release each Hook and remove the Fuser unit line cover R.



**Fig. 7-10**

(12) Disconnect the Center thermistor harness and Side thermistor harness from the Eject sensor PCB ASSY.

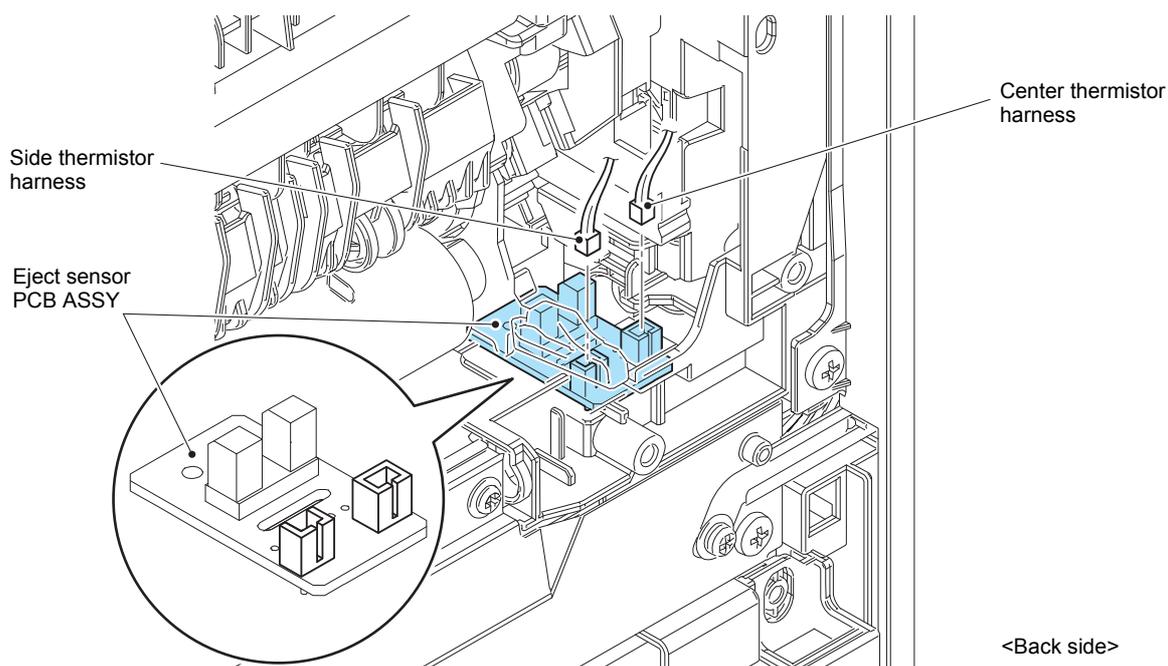


Fig. 7-11

(13) Disconnect the Heater harness of the Fuser unit from the LVPS-heater harness ASSY.

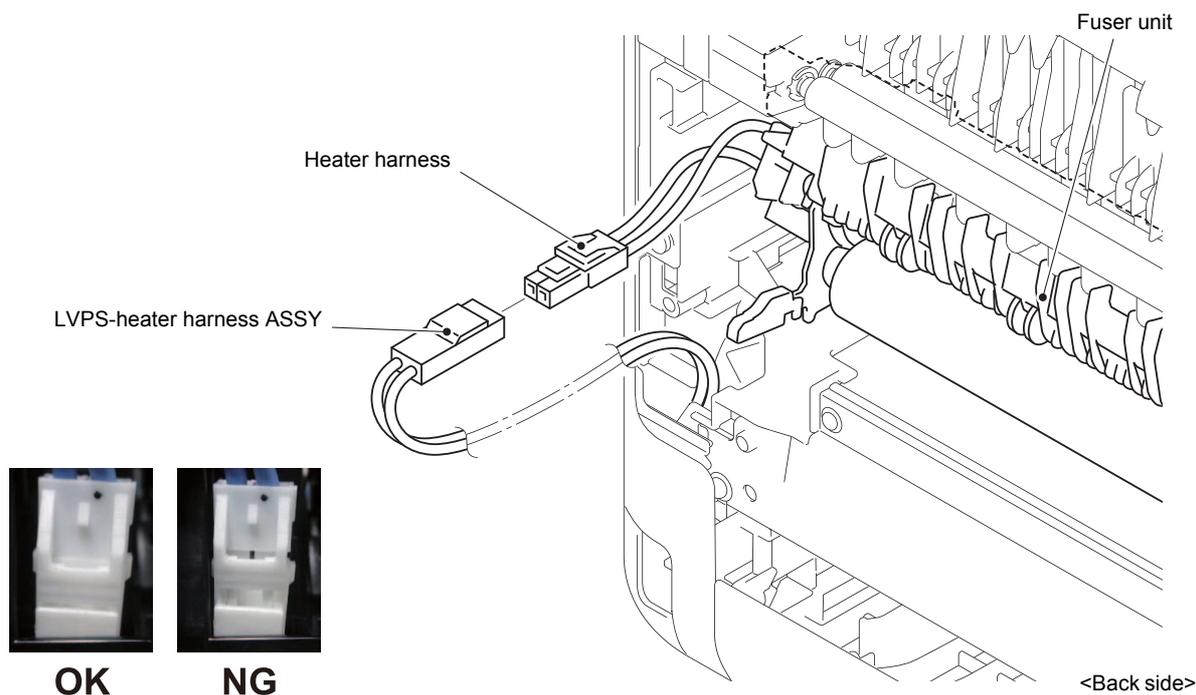


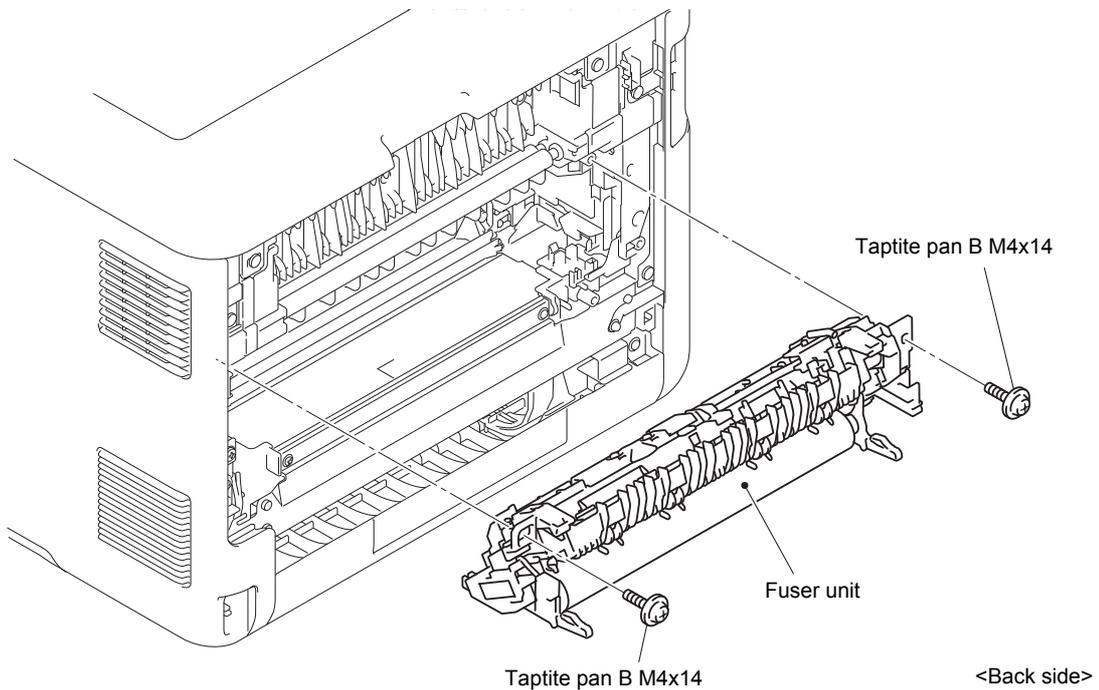
Fig. 7-12

Harness routing: Refer to "1. Fuser unit, Eject sensor PCB ASSY".

**Note:**

After connecting the Heater harness, pull the Connector on the Heater harness side while holding the Connector on the LVPS-heater harness ASSY side to make sure it is locked.

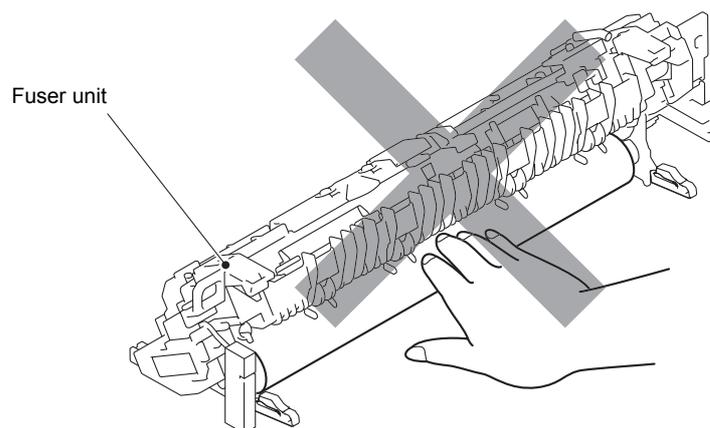
(14) Remove the two Taptite pan B M4x14 screws to remove the Fuser unit.



**Fig. 7-13**

**Note:**

- Do not apply a physical impact or vibration to the Fuser unit.
- Do not touch the roller as shown in the figure below to prevent breakage of the Fuser unit.



**Fig. 7-14**

(15) After replacing the Fuser unit, reset the counter.

(Refer to "1.3.28 Reset counters for consumable parts (Function code 88)" in Chapter 5.)

## 2.3 Laser unit

- (1) Make the Front cover half open. (When fully opened, the Front cover arm will touch to the Side cover L ASSY and Side cover L ASSY cannot be removed.)

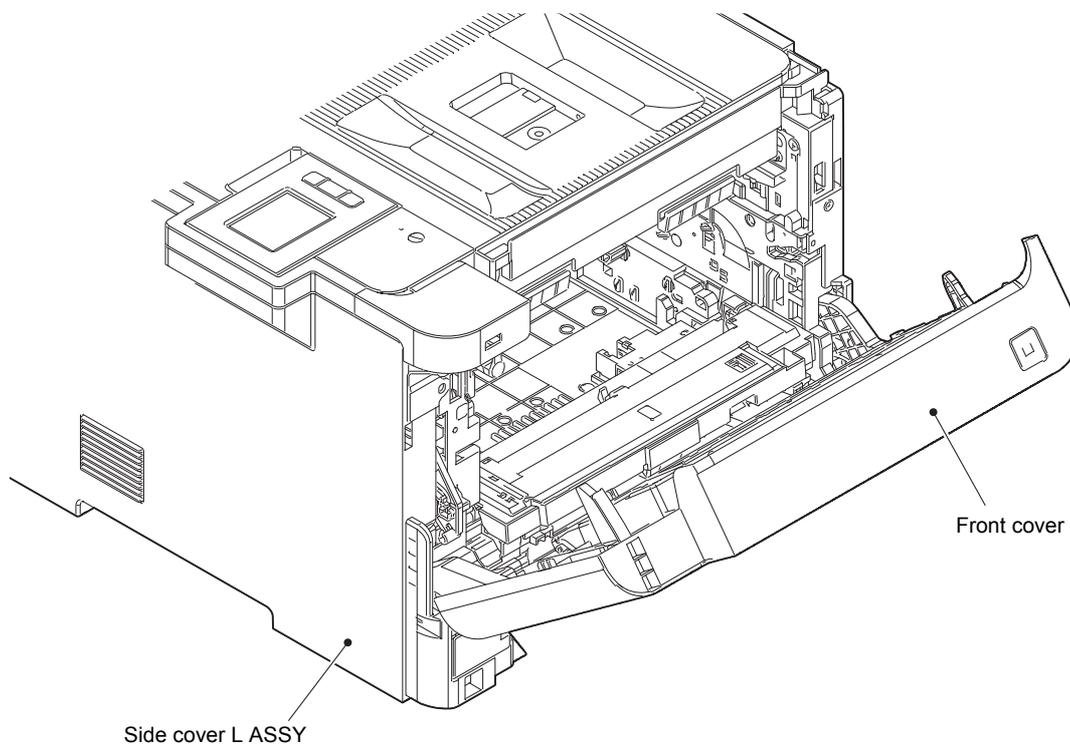


Fig. 7-15

- (2) Open the Back cover.

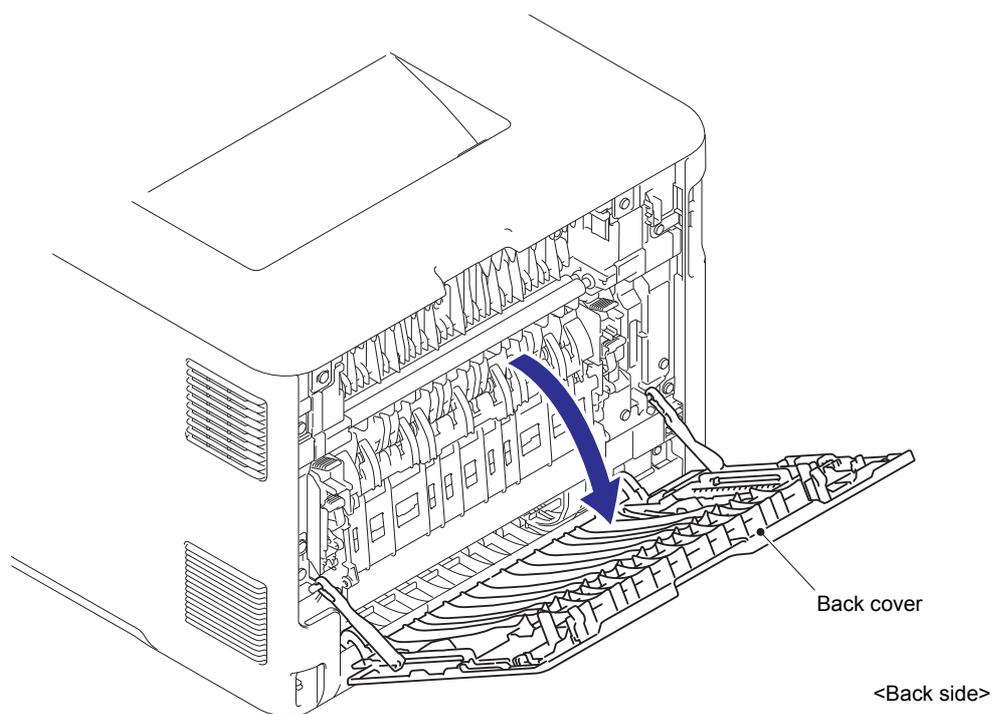


Fig. 7-16

(3) Remove the Back cover stopper arm L/R from the Boss.

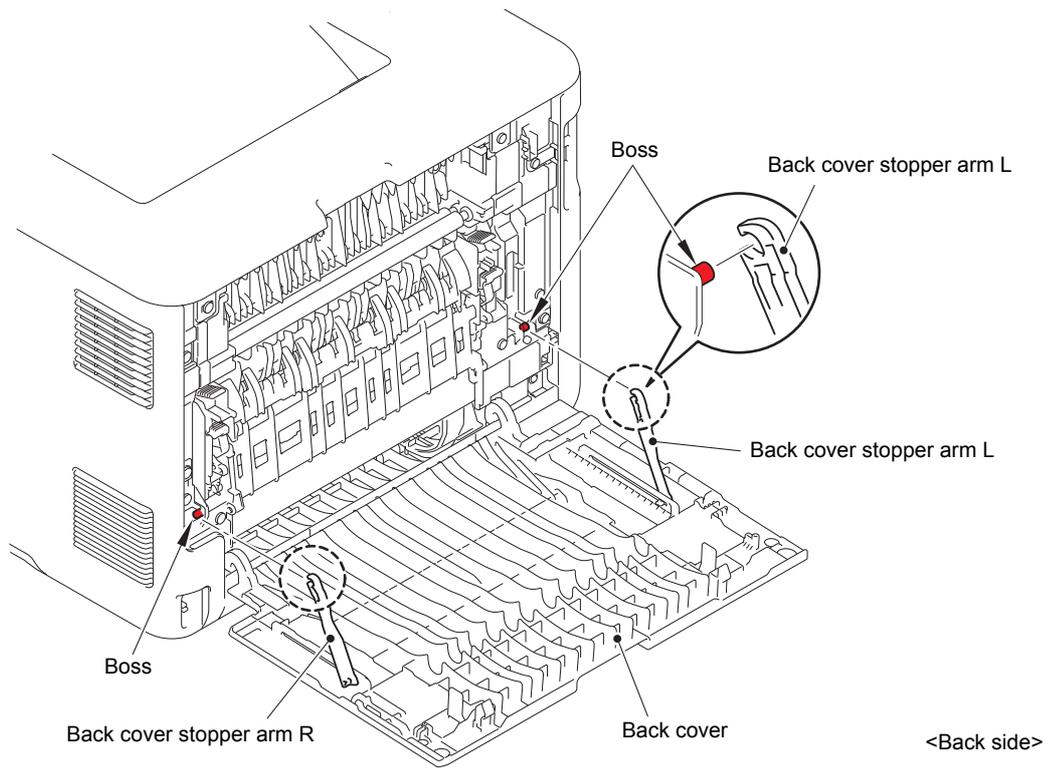


Fig. 7-17

(4) Remove the Boss of the Back cover from the Bush on the Frame R.

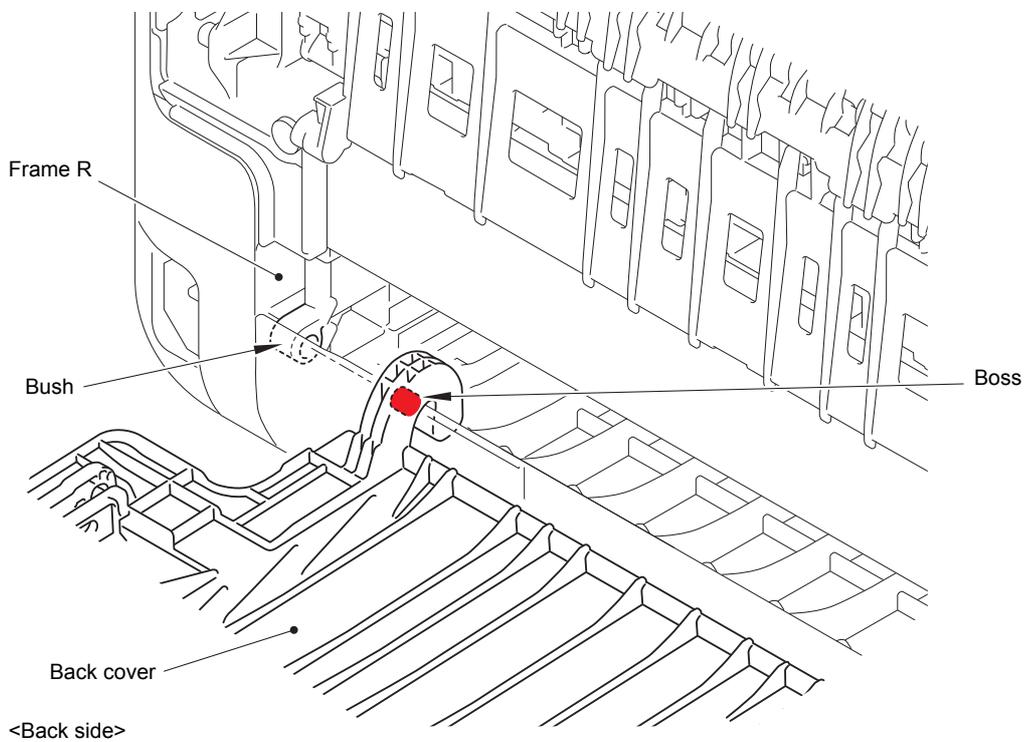


Fig. 7-18

(5) Remove the Back cover.

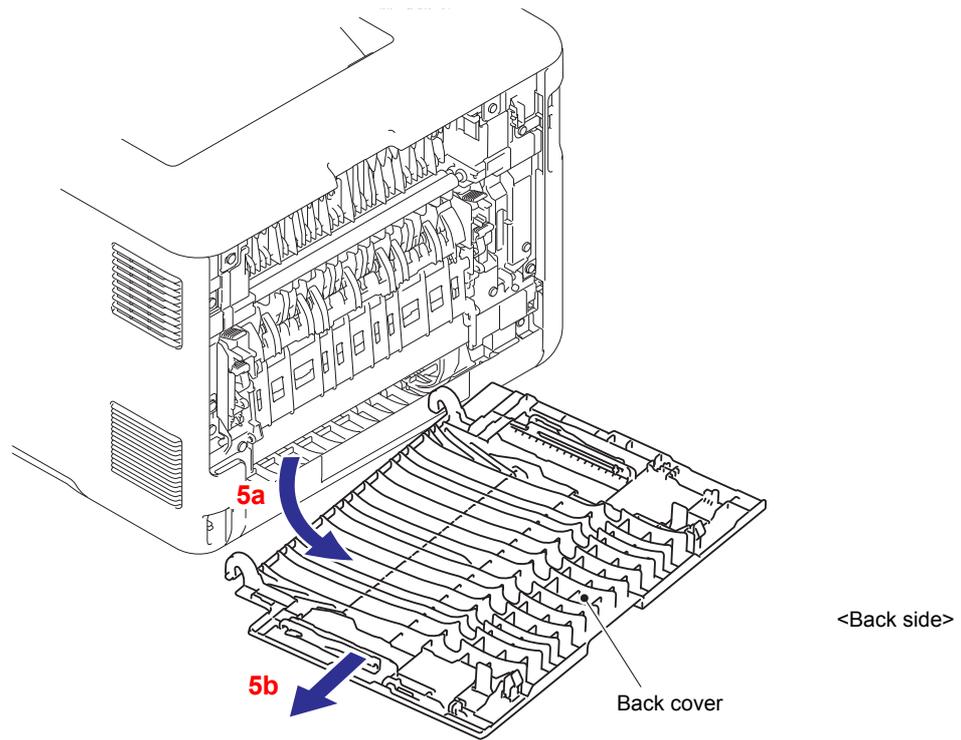
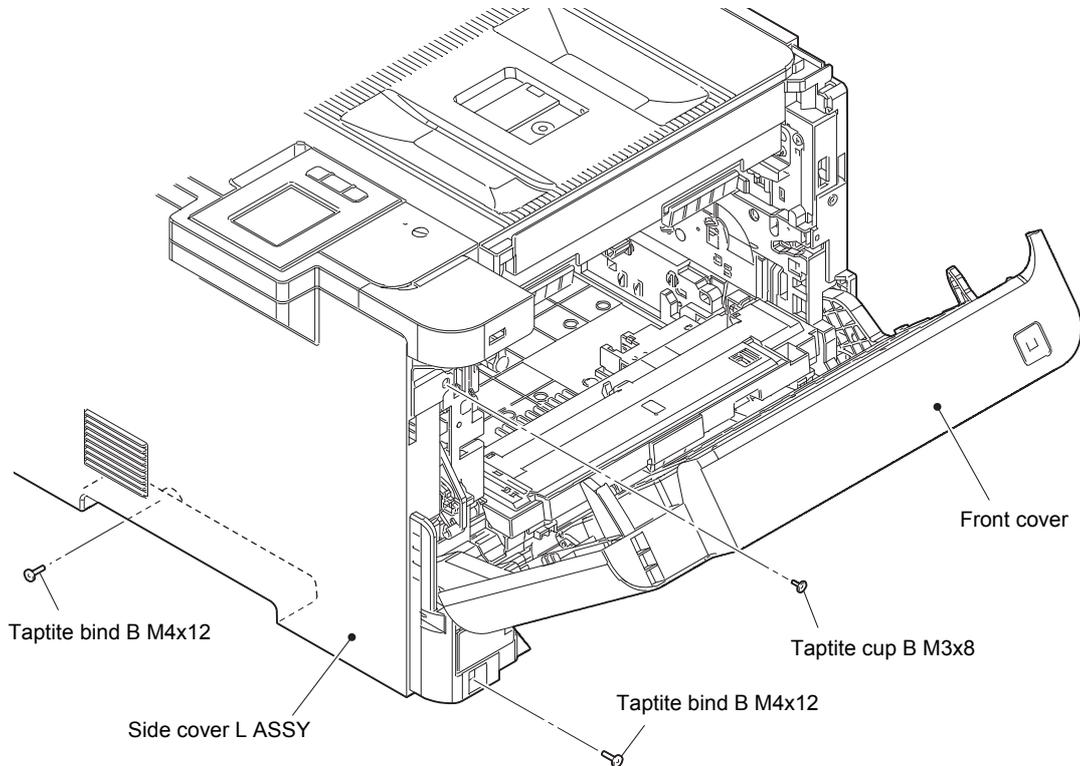


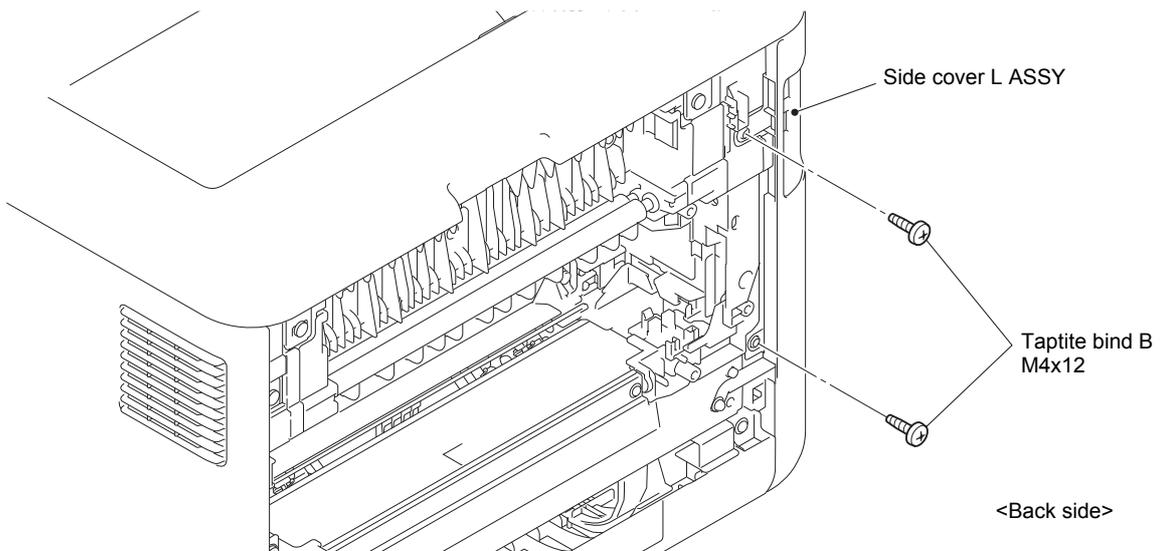
Fig. 7-19

- (6) Remove the Taptite cup B M3x8 screw and the Taptite bind B M4x12 screw from the front of the Side cover L ASSY.
- (7) Remove the Taptite bind B M4x12 screw from the side of the Side cover L ASSY.



**Fig. 7-20**

- (8) Remove the two Taptite bind B M4x12 screws from the back of the Side cover L ASSY.



**Fig. 7-21**

- (9) Release the Hooks A, B and C in order of the arrow A, B and C, then remove the Side cover L ASSY upward.

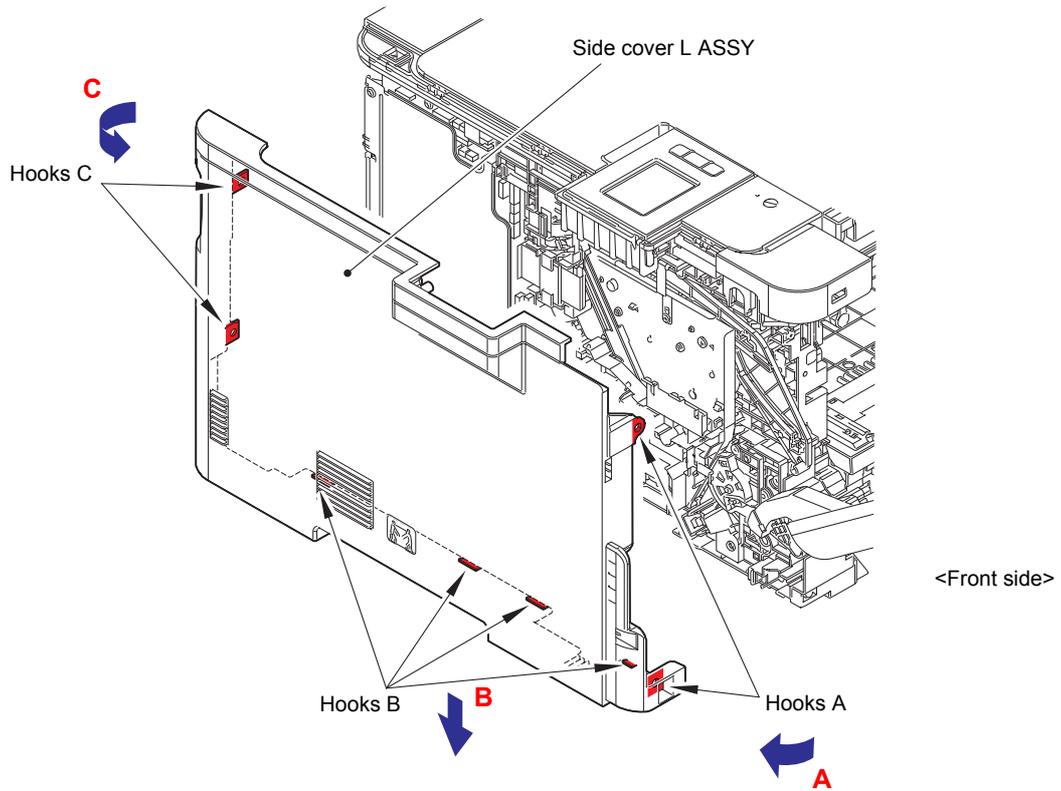


Fig. 7-22

\* Inside of Side cover L ASSY

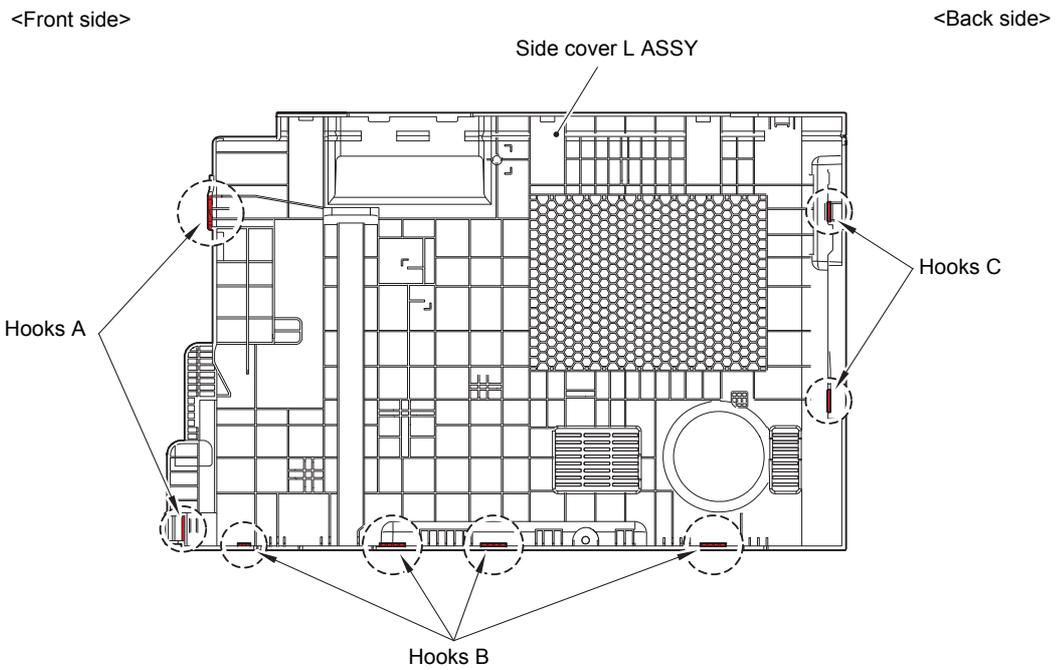


Fig. 7-23

(10) Remove the Taptite cup B M3x8 screw and the Taptite bind B M4x12 screw from the front of the Side cover R.

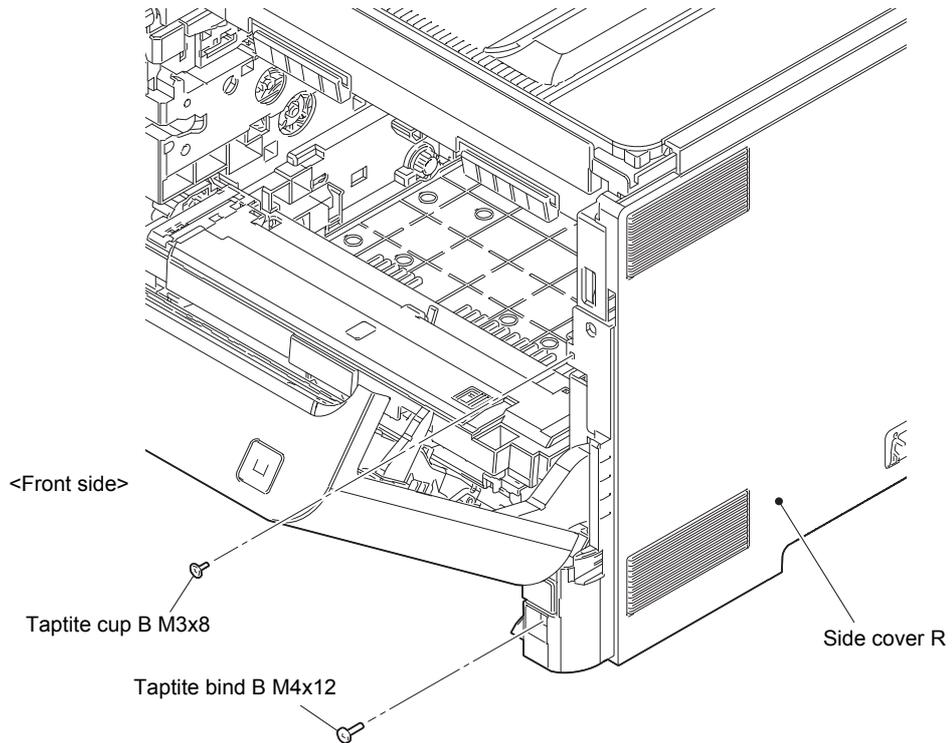


Fig. 7-24

(11) Remove the two Taptite bind B M4x12 screws from the back of the Side cover R.

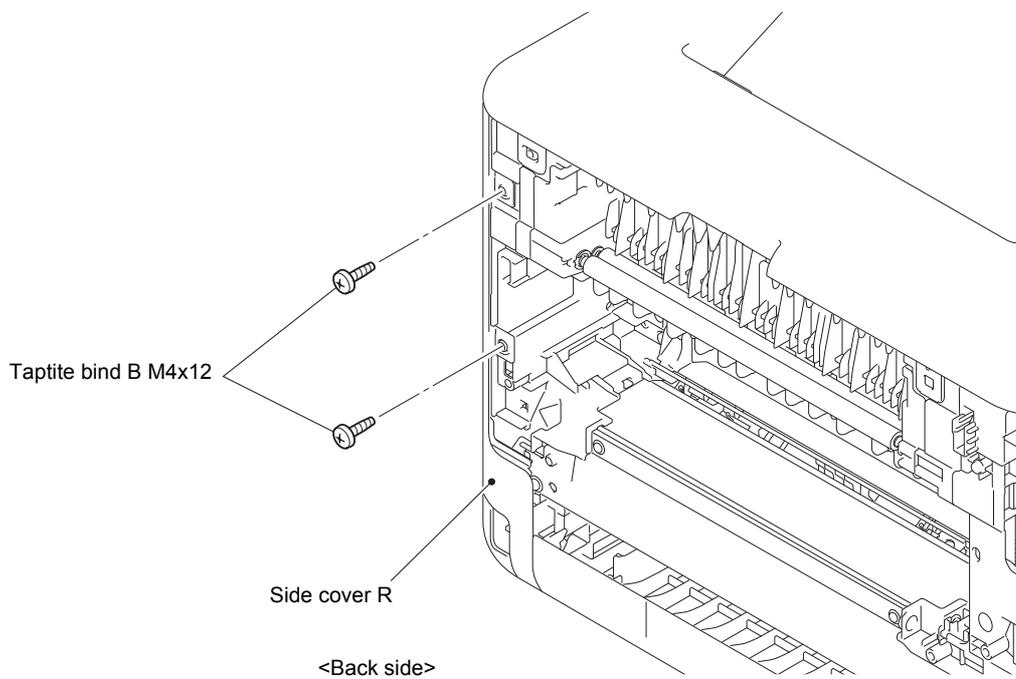


Fig. 7-25

(12) Check that the Front cover is half opened. (When fully opened, the Front cover arm will touch to the Side cover R and Side cover R cannot be removed.) Release the Hooks A, B and C in order of the arrow A, B and C, then remove the Side cover R upward.

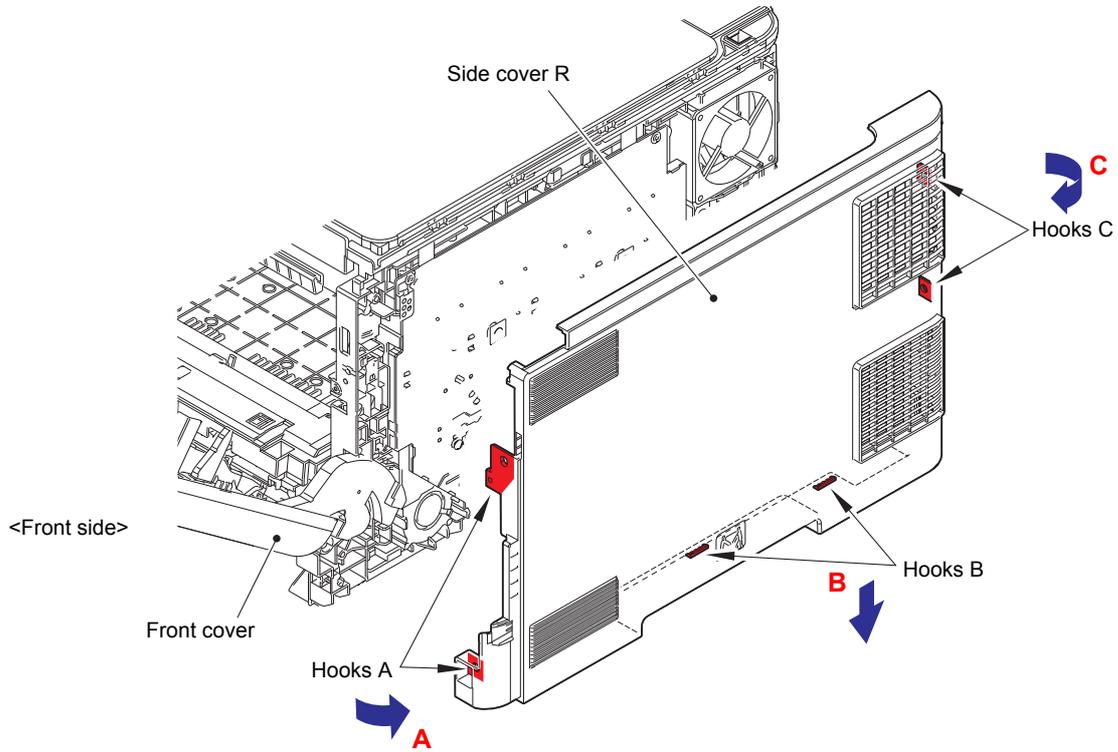


Fig. 7-26

\* Inside of Side cover R

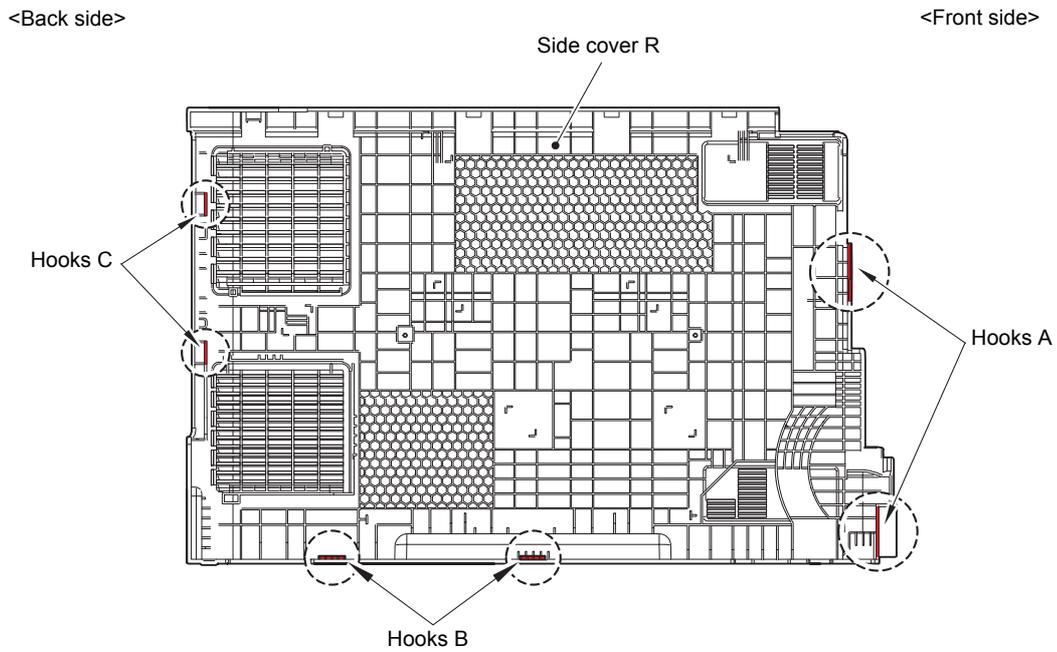
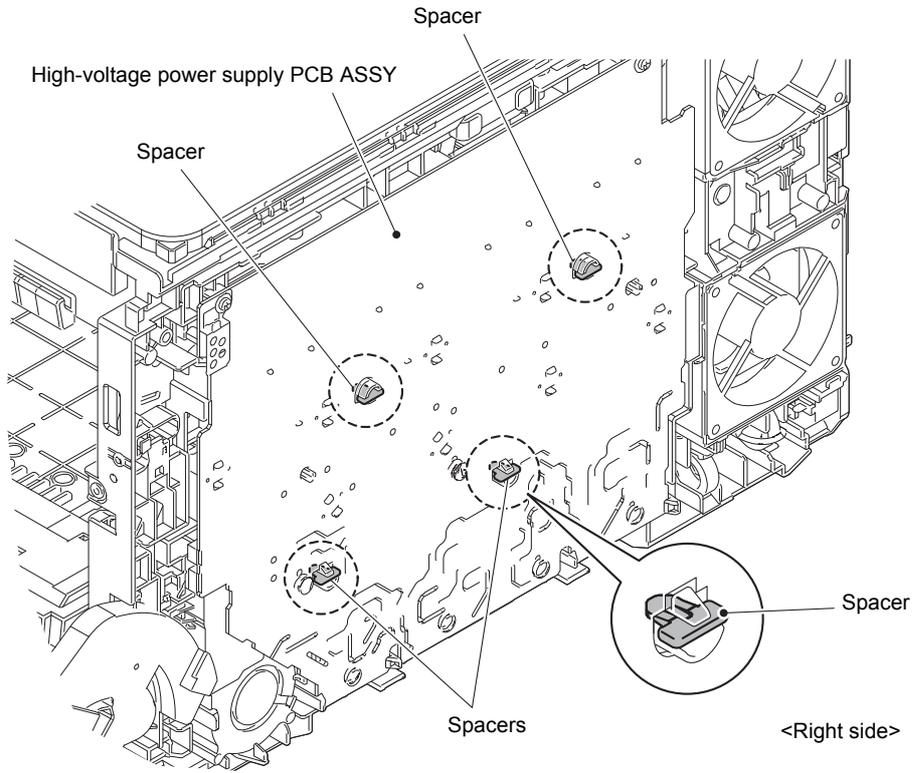


Fig. 7-27

**Note:**

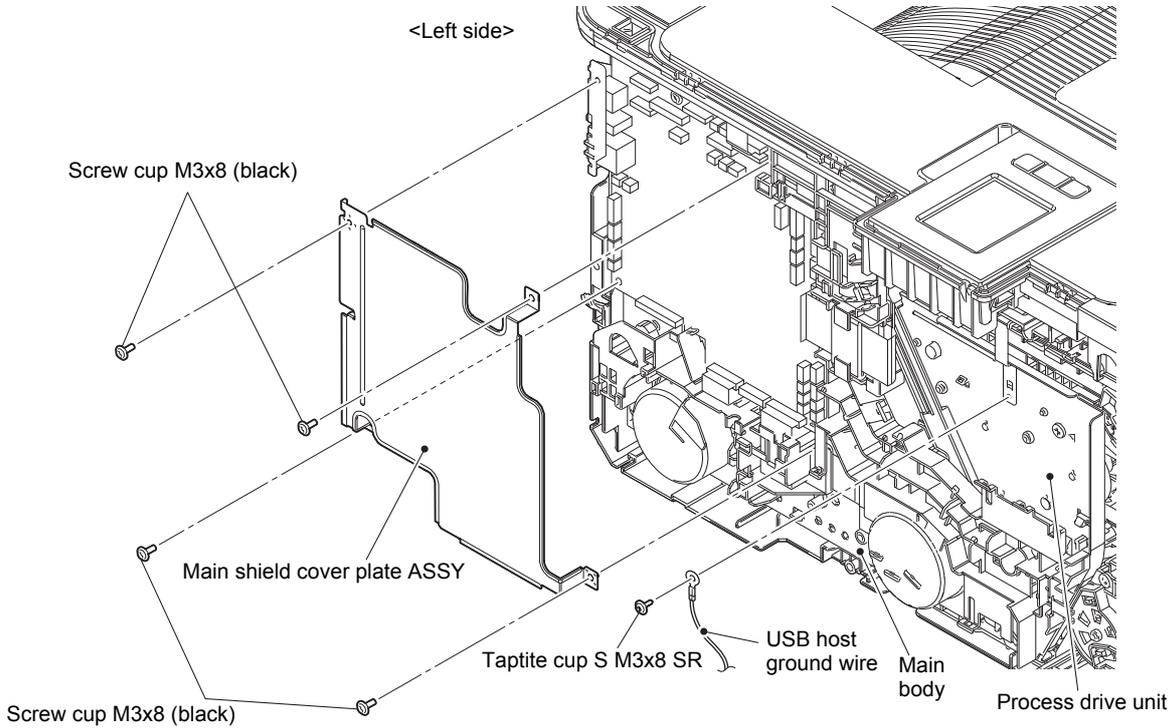
As the Spacer tends to come off, be careful not to lose it.



**Fig. 7-28**

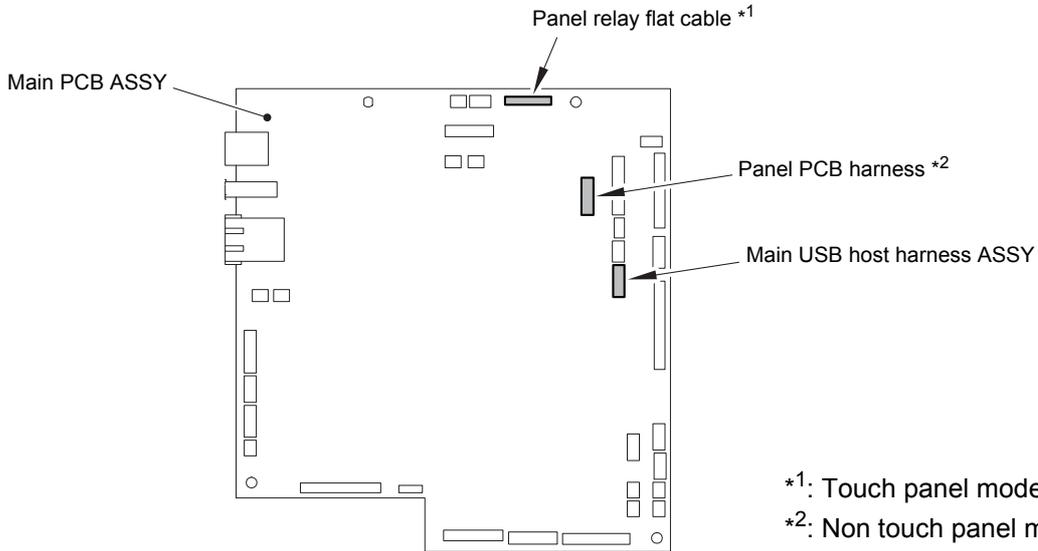
(13) Remove the four Screw cup M3x8 (black) screws and remove the Main shield cover plate ASSY from the Main body.

(14) Remove the Taptite cup S M3x8 SR screw and release the USB host ground wire from the Process drive unit.



**Fig. 7-29**

(15) Pull out the Panel relay flat cable \*1, Panel PCB harness \*2, Main USB host harness ASSY from the Main PCB ASSY and release the wiring.



\*1: Touch panel models only  
\*2: Non touch panel models only

**Fig. 7-30**

Harness routing: Refer to "3. Top cover ASSY (Touch panel models)" and "4. Top cover ASSY (Non touch panel models)".

(16) Remove the two Taptite bind B M4x12 screws from the back of the Top cover ASSY.

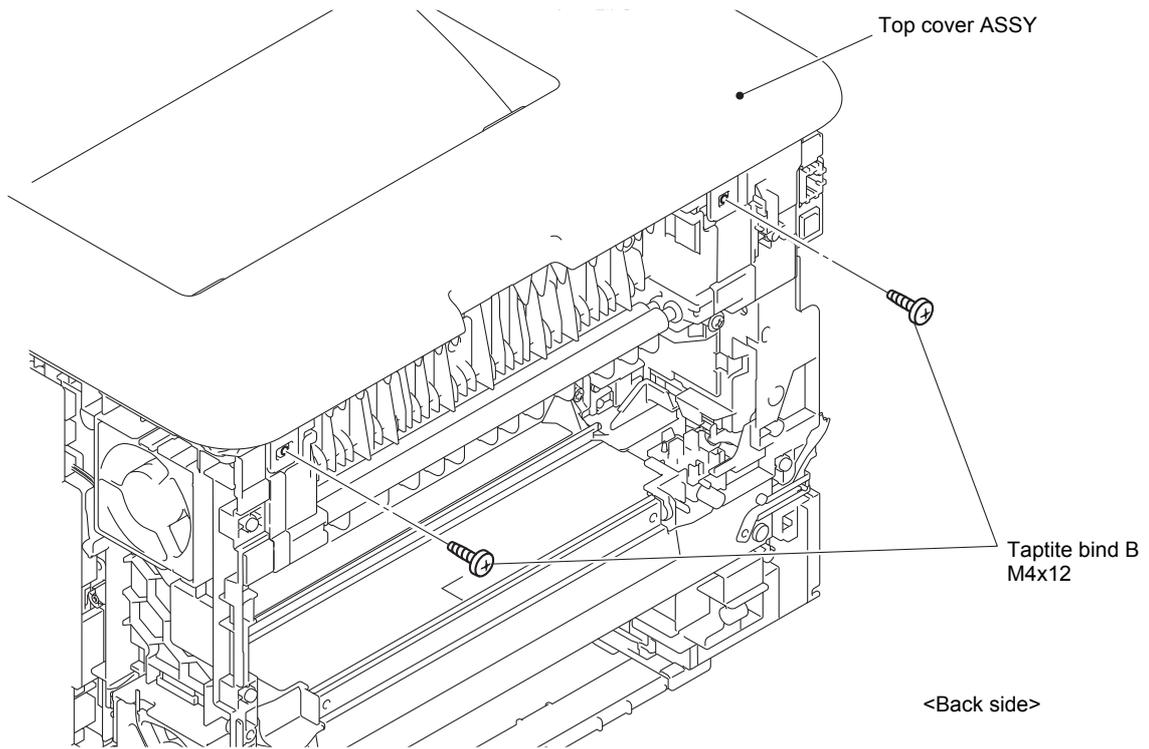


Fig. 7-31

(17) Release each Hook 1 and each Boss. Release other each Hook and remove the Top cover ASSY from the Main body.

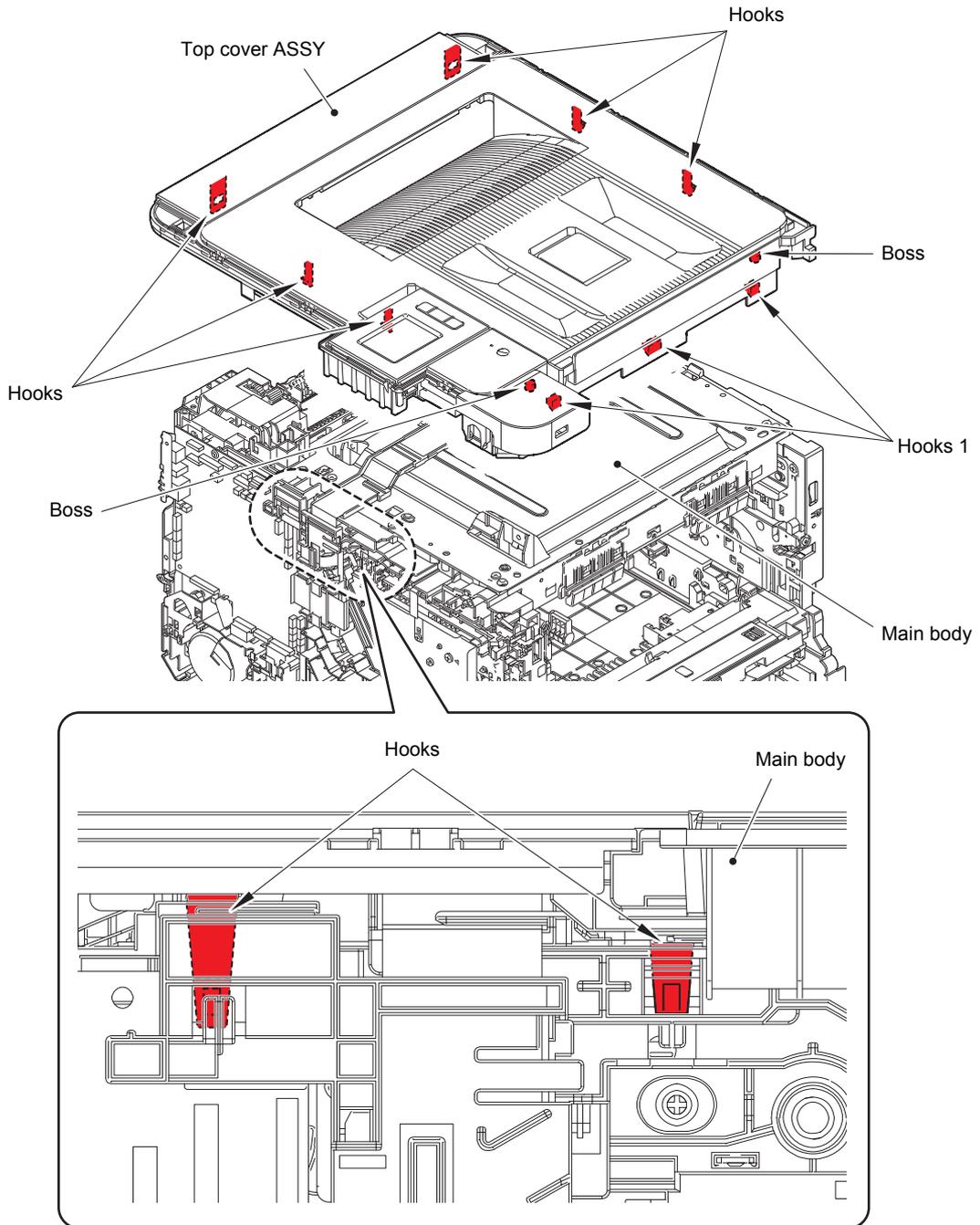


Fig. 7-32

(18) Release the Hook of Plate cover L and slide to left side to remove. Release the Hook of Plate cover R and slide to left side to remove.

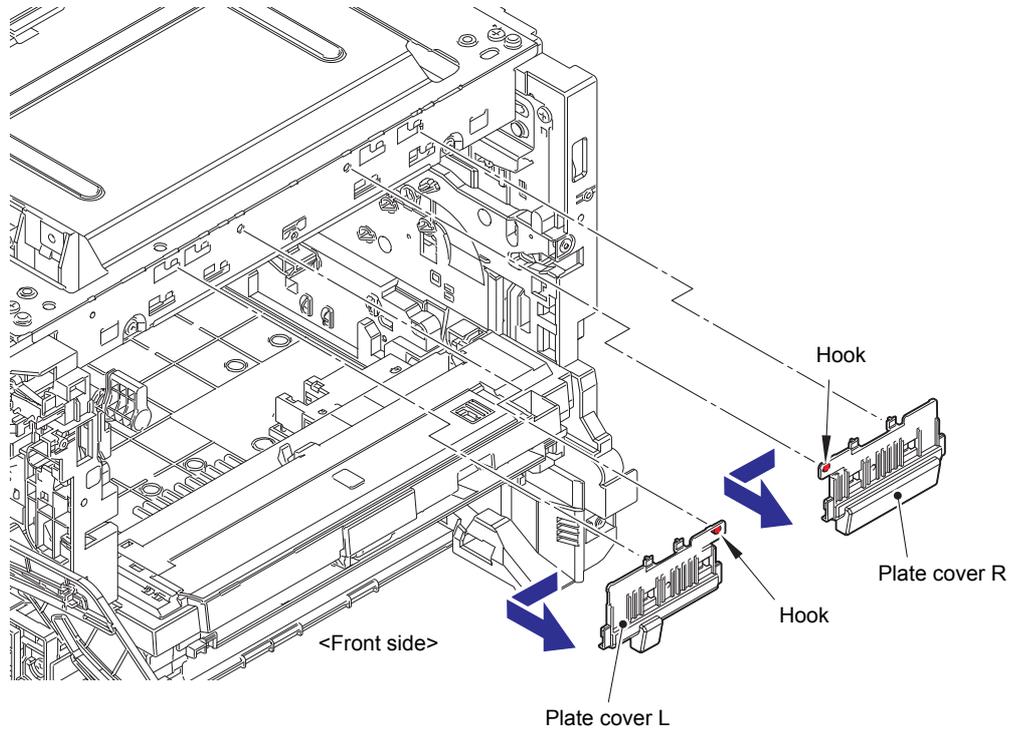
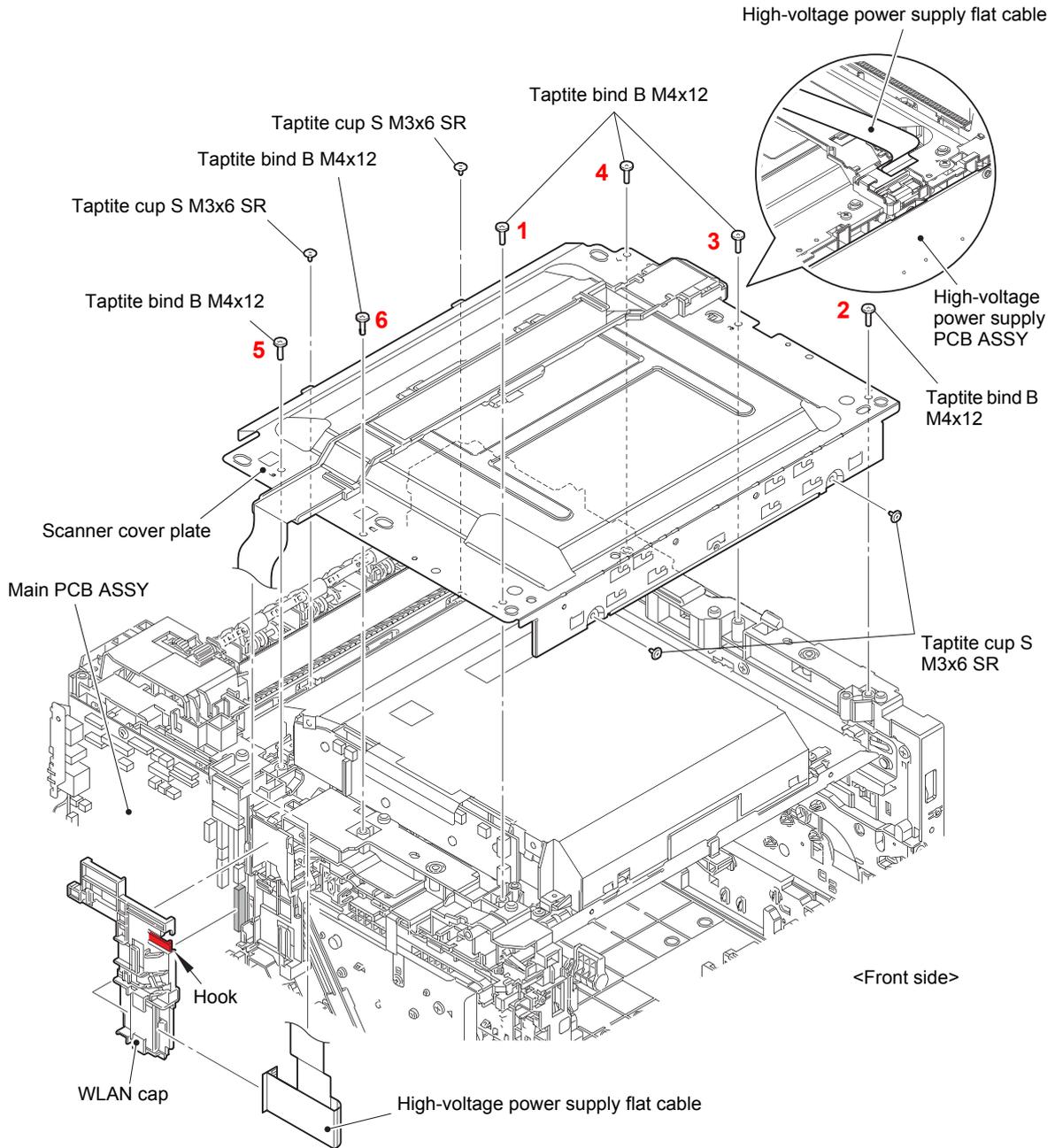


Fig. 7-33

- (19) Release the Hook and remove the WLAN cap.
- (20) Disconnect the High-voltage power supply flat cable from the Main PCB ASSY and the High-voltage power supply PCB ASSY and release the wiring.
- (21) Remove the six Taptite bind B M4x12 screws and four Taptite cup S M3x6 SR screws, and remove the Scanner cover plate.

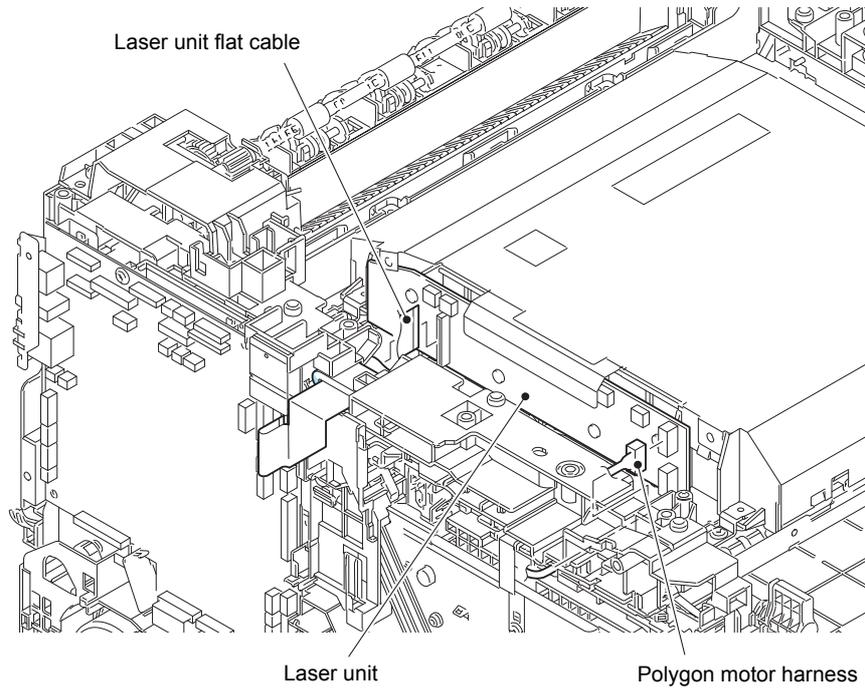
**Assembling Note:**

When assembling the six screws of the Taptite bind B M4x12, be sure to assemble them in the order shown in the figure.



**Fig. 7-34**

(22) Disconnect the Laser unit flat cable and Polygon motor harness from the Laser unit.



**Fig. 7-35**

Harness routing: Refer to ["7. Laser unit"](#).

**Note:**

- After disconnecting flat cables, check that each cable is not damaged at its end or short-circuited.
- When connecting flat cables, do not insert them at an angle. After insertion, check that the cables are not at an angle.

(23) Remove the five Taptite cup S M3x6 SR screws and remove the four Scanner holders from the Scanner plate.

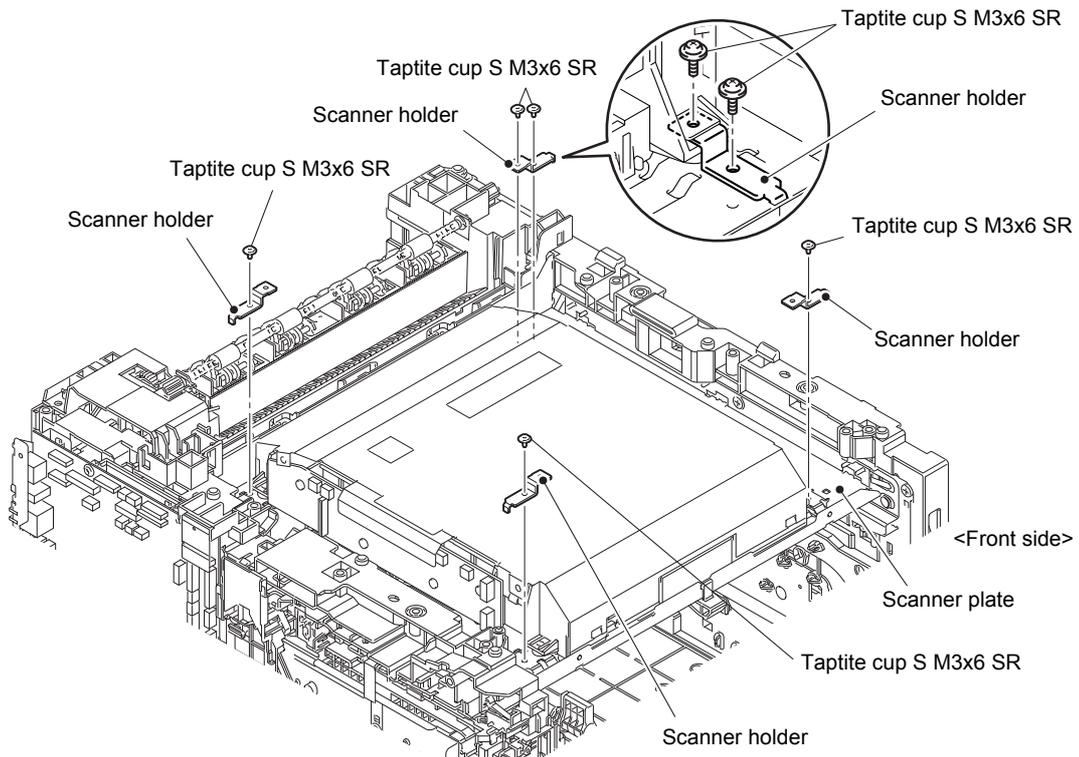


Fig. 7-36

**Assembling Note:**

- When assembling the Scanner holder to “A” of the Laser unit, be sure to use the Scanner holder of which “B” is a screw and not to use other Scanner holders.
- When assembling the Scanner holder to “A” of the Laser unit, be sure that the Scanner holder is placed as shown in the figure.

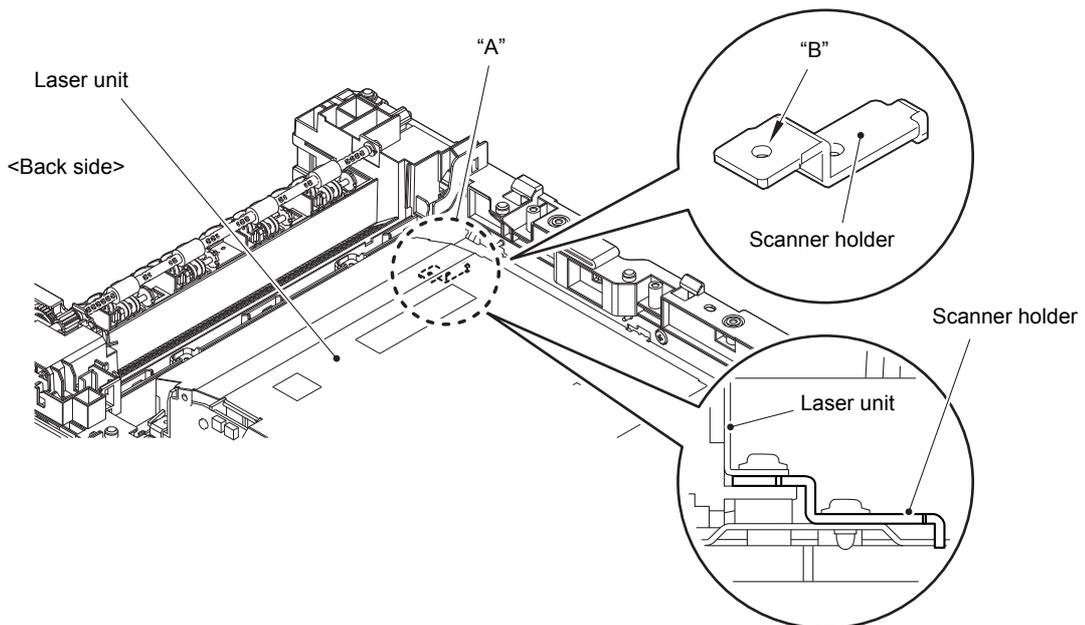
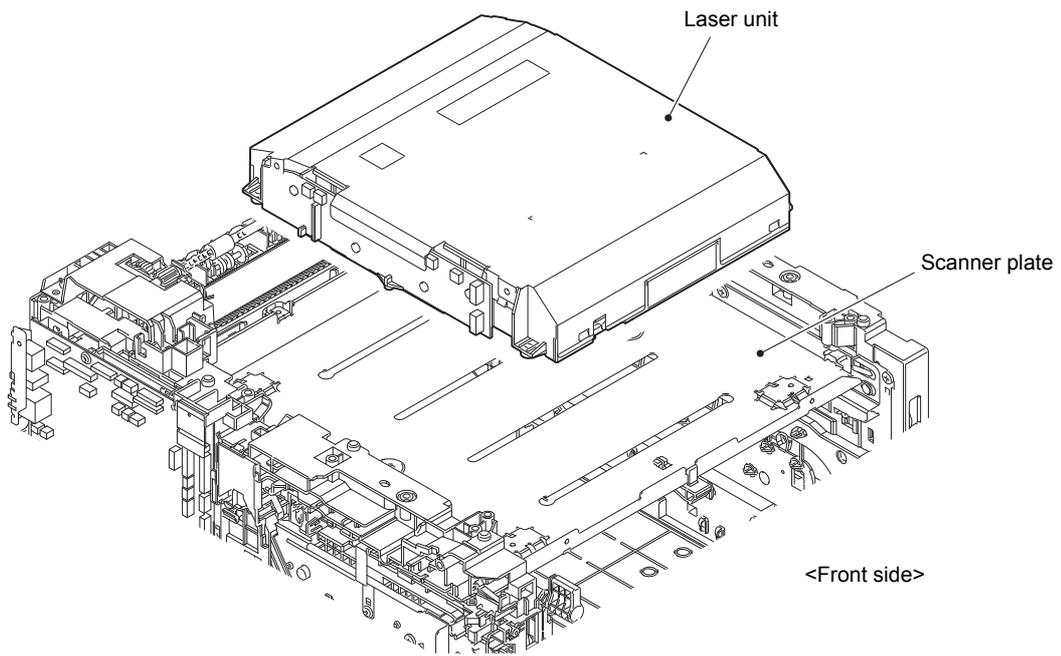


Fig. 7-37

(24) Remove the Laser unit from the Scanner plate.



**Fig. 7-38**

(25) After replacing the Laser unit, reset the counter.

(Refer to "1.3.28 Reset counters for consumable parts (Function code 88)" in Chapter 5.)

## 2.4 PF kit 1

- (1) Release the Hook and remove the Separation pad ASSY from the Paper tray.
- (2) Remove the Separation pad spring from the Paper tray.

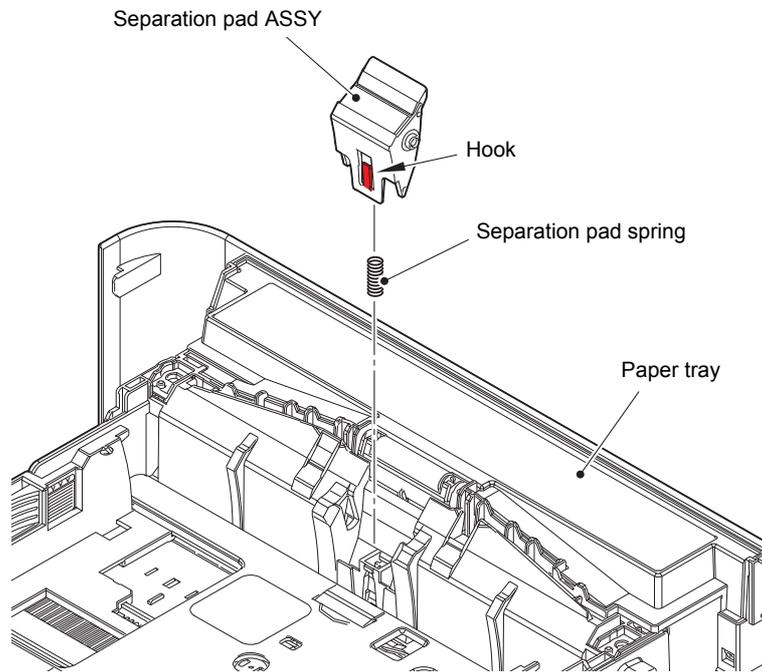


Fig. 7-39

- (3) Push the T1 lift arm to the back and remove "B" of the Roller holder ASSY from "A" of the T1 lift arm.

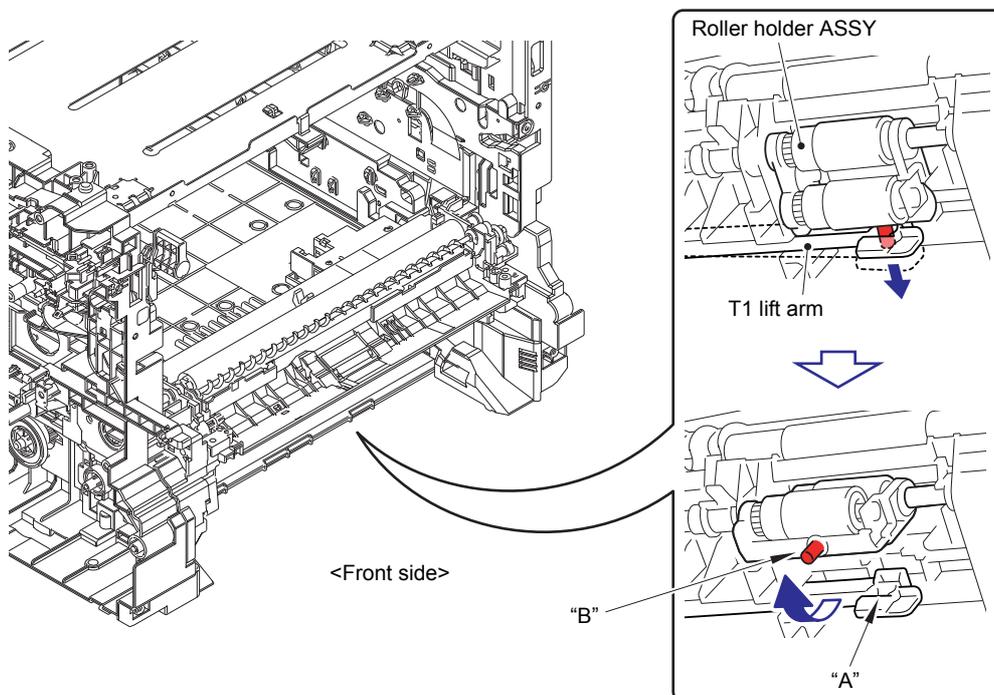
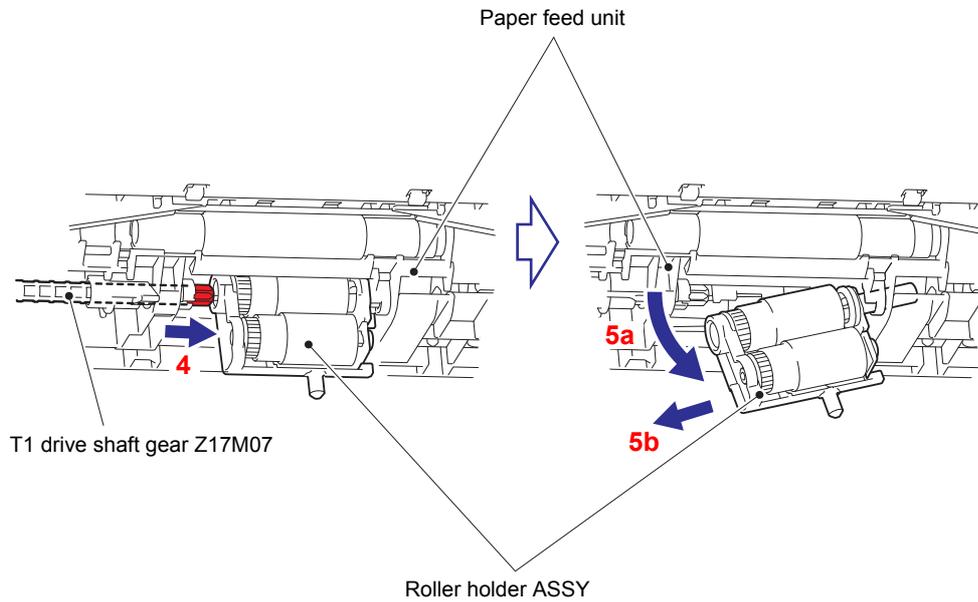


Fig. 7-40

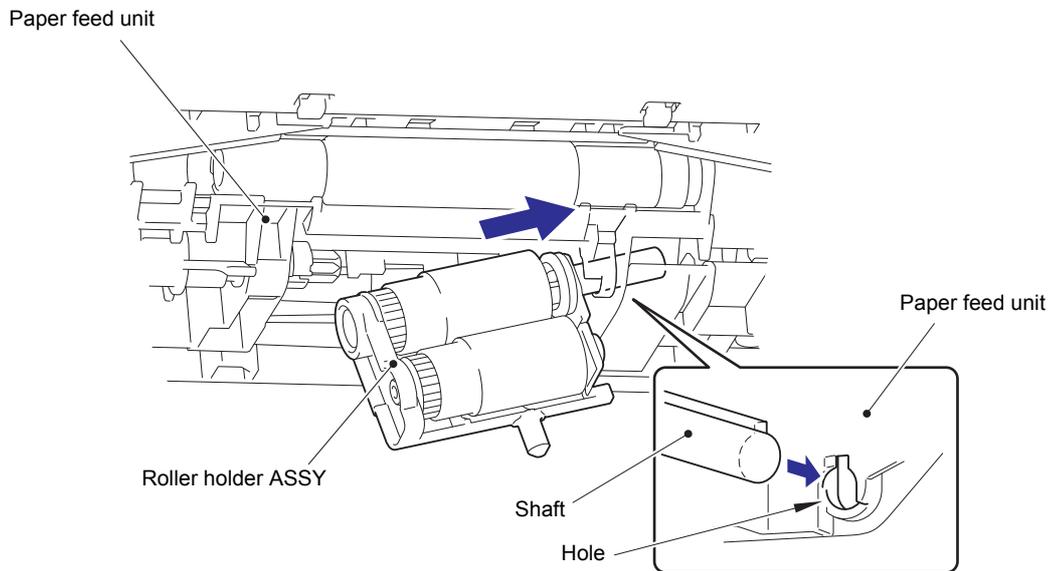
- (4) Slide the Roller holder ASSY in the direction of the arrow and remove it from the T1 drive shaft gear Z17M07.
- (5) Remove the Roller holder ASSY in the direction of the arrow 5a and 5b in this order from the Paper feed unit.



**Fig. 7-41**

**Assembling Note:**

Align the Hole of the Paper feed unit to the Shaft of the Roller holder ASSY and insert it into the Hole.



**Fig. 7-42**

- (6) After replacing the PF kit 1, reset the counter.  
(Refer to "1.3.28 Reset counters for consumable parts (Function code 88)" in Chapter 5.)

## 2.5 PF kit 2

### ■ LT-330CL

- (1) Release each Hook of the Separation pad ASSY from the Paper tray.
- (2) Push both side Arms on the Separation pad ASSY inwards to remove the Pins, and remove the Separation pad ASSY from the Paper tray.
- (3) Remove the Separation pad spring from the Separation pad ASSY.

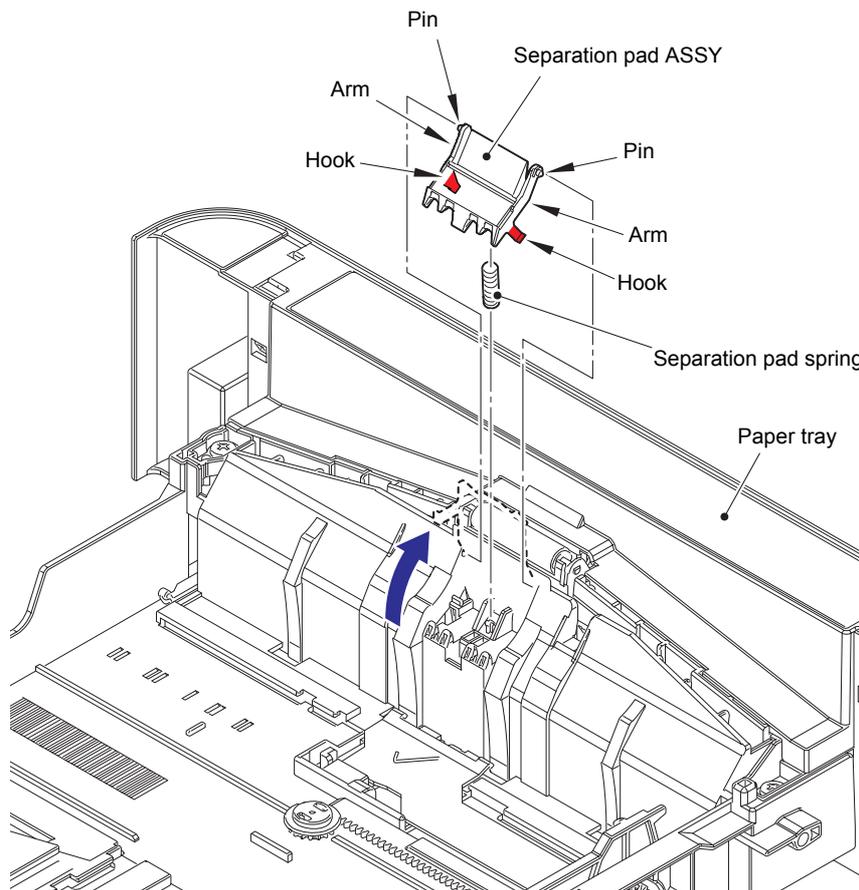


Fig. 7-43

- (4) Push the Link arm in the direction of the arrow, and turn the LT roller holder ASSY to remove the Boss.
- (5) Slide the LT roller holder ASSY in the direction of the arrow to remove it from the Shaft, and remove the LT roller holder ASSY.

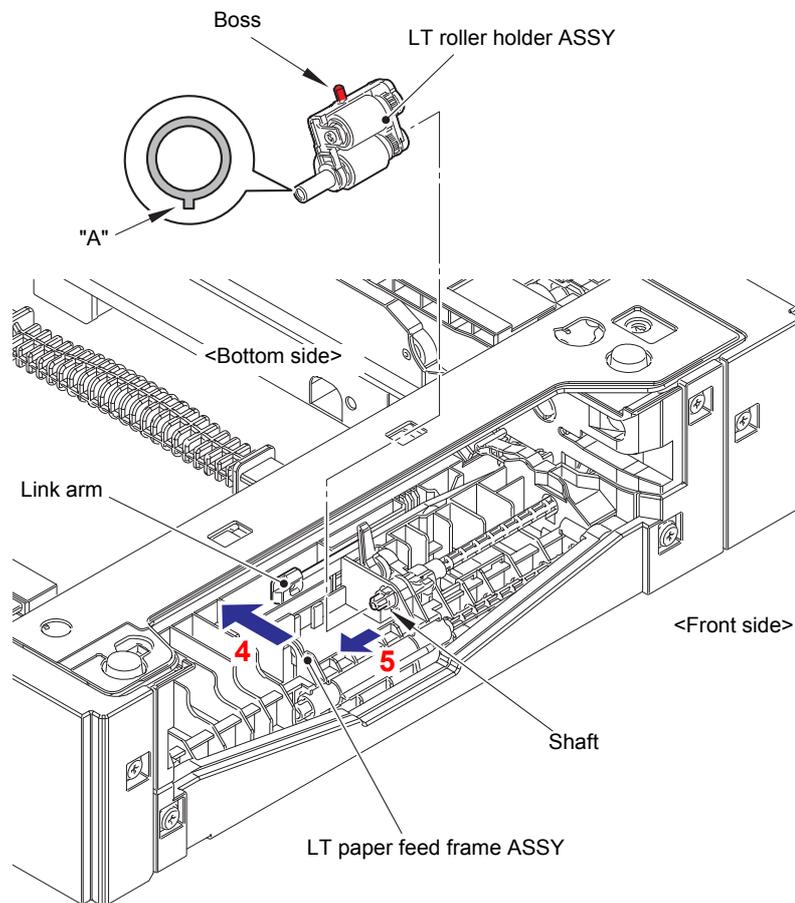


Fig. 7-44

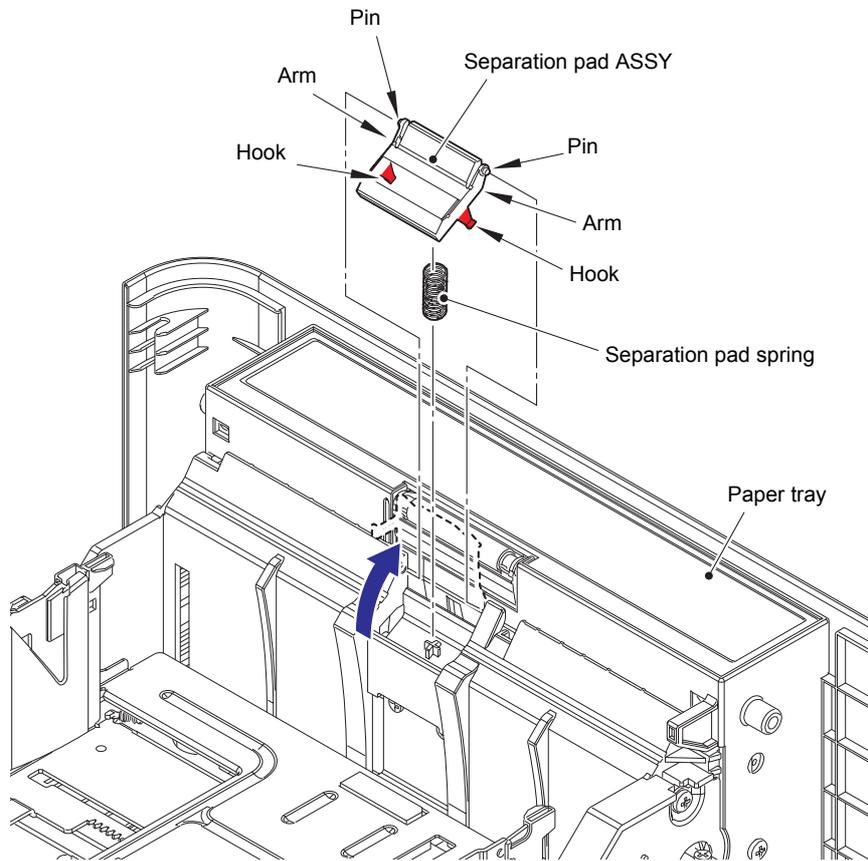
**Assembling Note:**

When attaching the LT roller holder ASSY, engage "A" on the shaft of the LT roller holder ASSY with the hole on the LT paper feed frame ASSY, and insert the shaft into the hole.

- (6) After replacing the PF kit 2, reset the counter.  
(Refer to "1.3.28 Reset counters for consumable parts (Function code 88)" in Chapter 5.)

■ **LT-340CL**

- (1) Release each Hook of the Separation pad ASSY from the Paper tray.
- (2) Push both side Arms on the Separation pad ASSY inwards to remove the Pins, and remove the Separation pad ASSY from the paper tray.
- (3) Remove the Separation pad spring from the Separation pad ASSY.



**Fig. 7-45**

- (4) Release the Hook and slide the Separation roller ASSY in the direction of the arrow.
- (5) Turn the Separation roller ASSY in the direction of the arrow 5a. Remove the Separation roller ASSY from the Paper feed drive shaft in the direction of the arrow 5b.

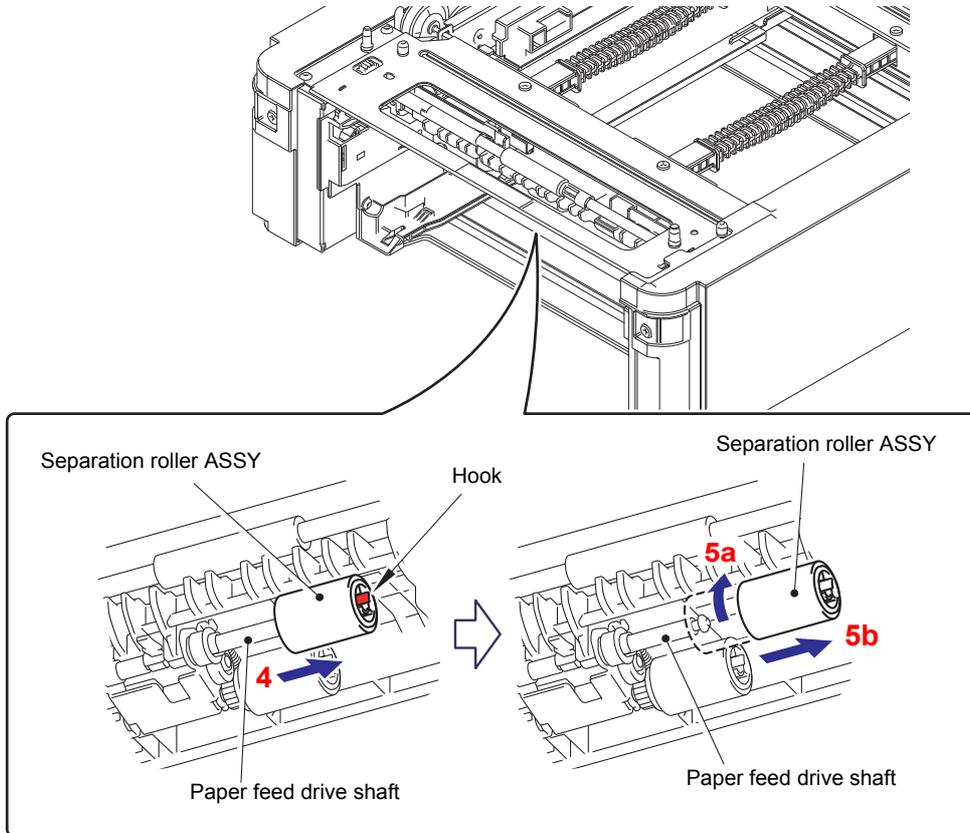


Fig. 7-46

**Assembling Note:**

- When assembling the Separation roller ASSY, assemble it by sliding it in the direction of the arrow b as rotating the Separation roller ASSY in the direction of the arrow a.

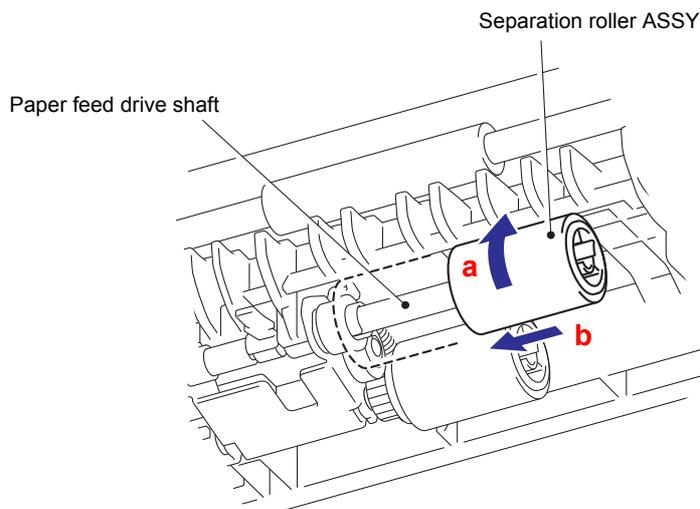
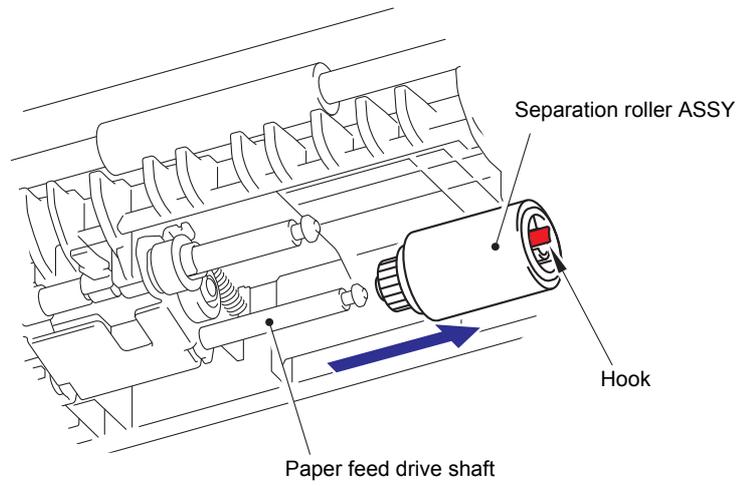


Fig. 7-47

- (6) Release the Hook and remove the Separation roller ASSY from the Paper feed drive shaft.



**Fig. 7-48**

- (7) After replacing the PF kit 2, reset the counter.  
(Refer to "1.3.28 Reset counters for consumable parts (Function code 88)" in Chapter 5.)

## 2.6 PF kit MP

- (1) Press "A" to release the Hook and remove the MP upper frame cover from the MP upper cover ASSY.

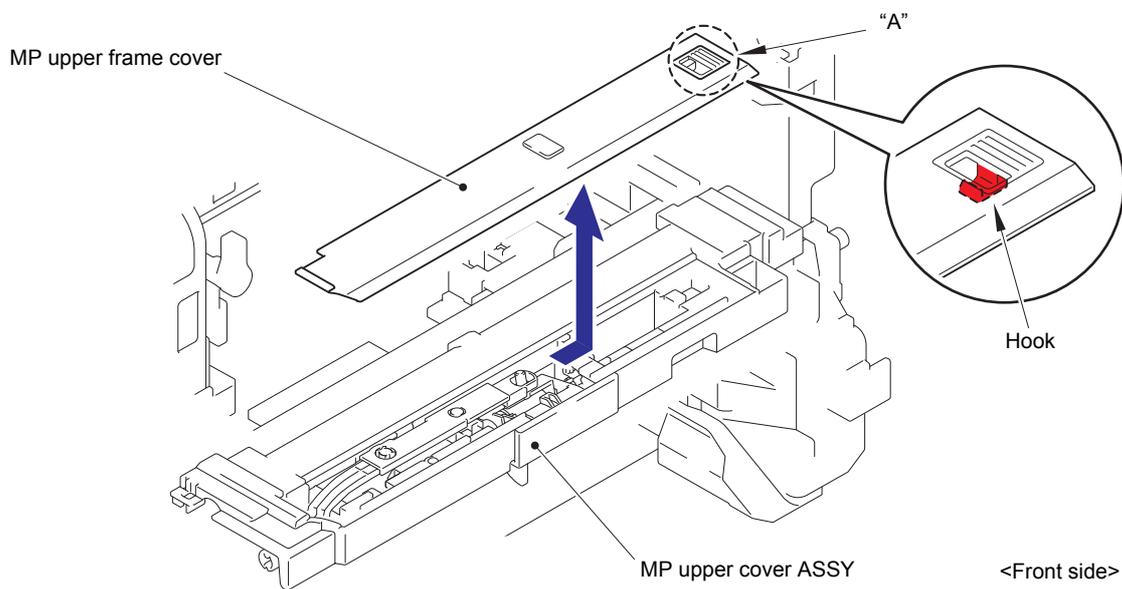


Fig. 7-49

- (2) Remove the MP lift arm B from the MP upper cover ASSY.

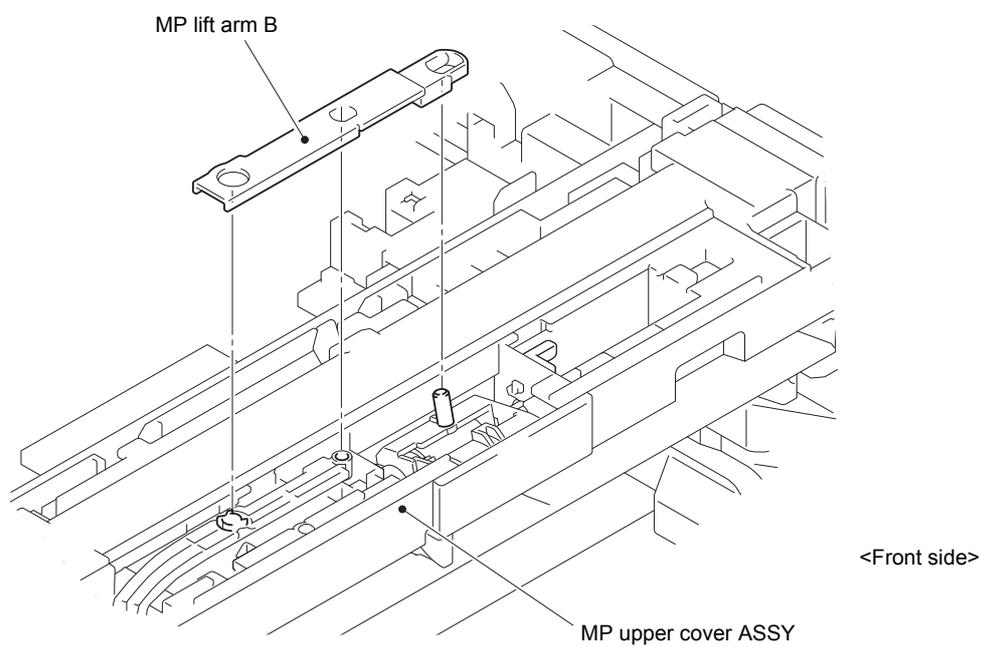
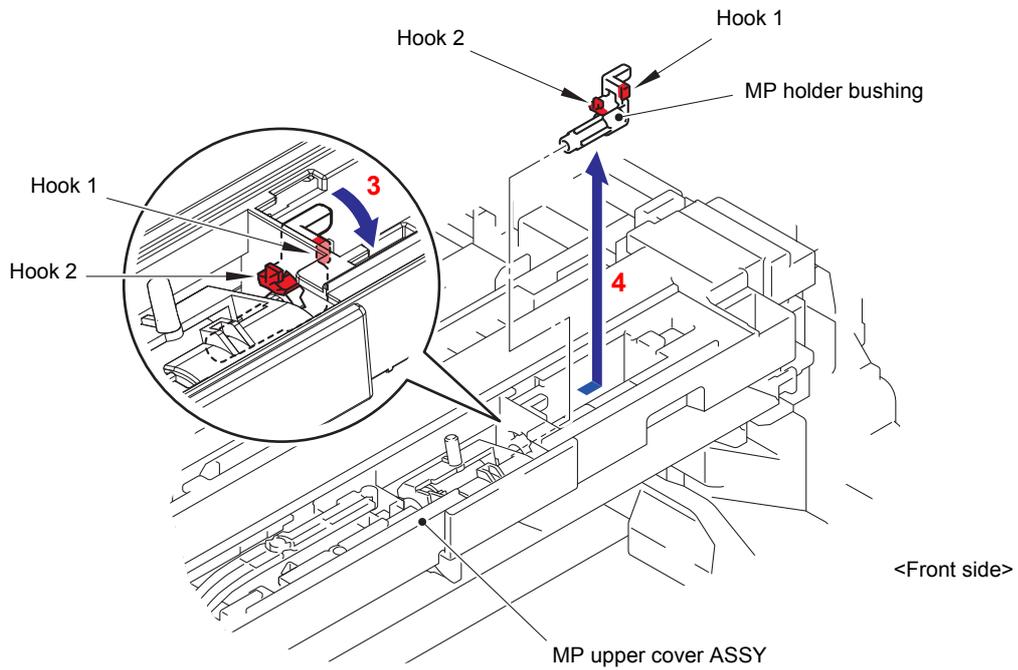


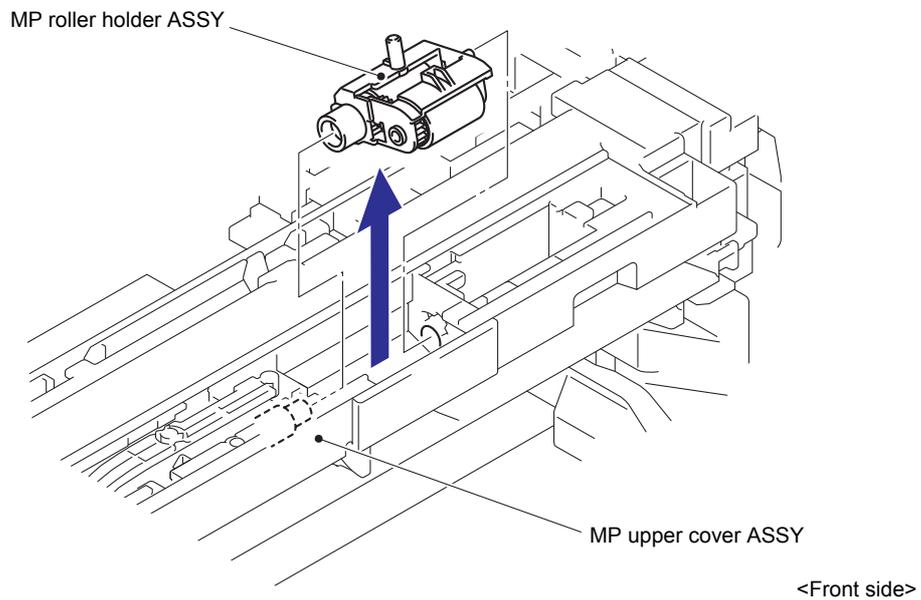
Fig. 7-50

- (3) Release the Hook 1 and rotate the MP holder bushing in the direction of the arrow.
- (4) Release the Hook 2 and remove the MP holder bushing from the MP upper cover ASSY.



**Fig. 7-51**

- (5) Remove the MP roller holder ASSY from the MP upper cover ASSY.



**Fig. 7-52**

- (6) Turn the MP separation pad ASSY upright to remove it from the MP upper cover ASSY.

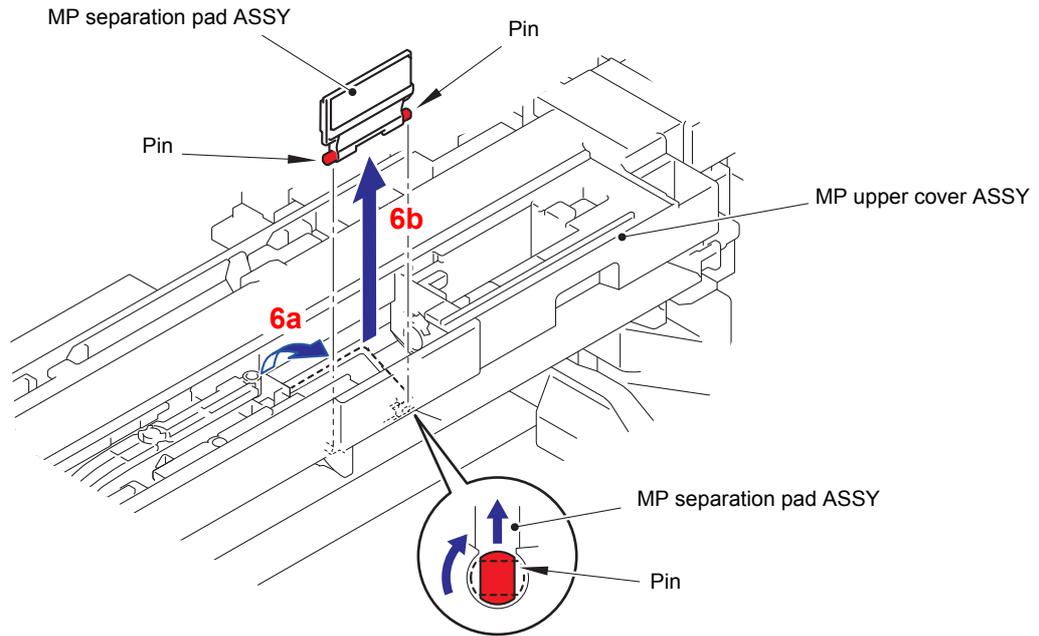


Fig. 7-53

- (7) Remove the MP separation pad spring from the two Pins of MP upper cover ASSY.

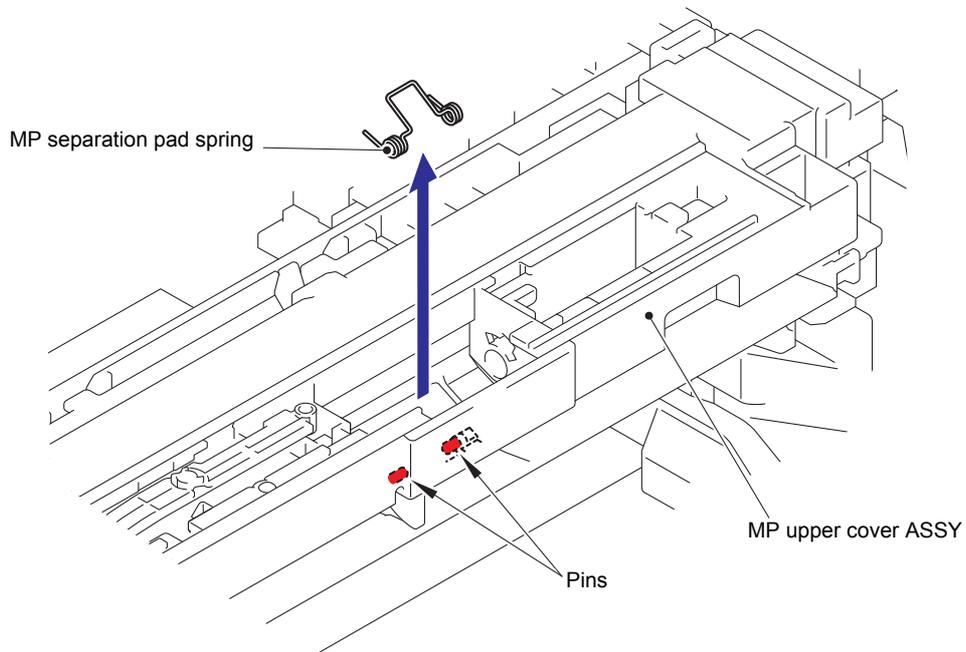


Fig. 7-54

- (8) After replacing the PF kit MP, reset the counter.  
(Refer to "1.3.28 Reset counters for consumable parts (Function code 88)" in Chapter 5.)

# APPENDIX 1 SERIAL NUMBERING SYSTEM

## Serial number labels on the printer

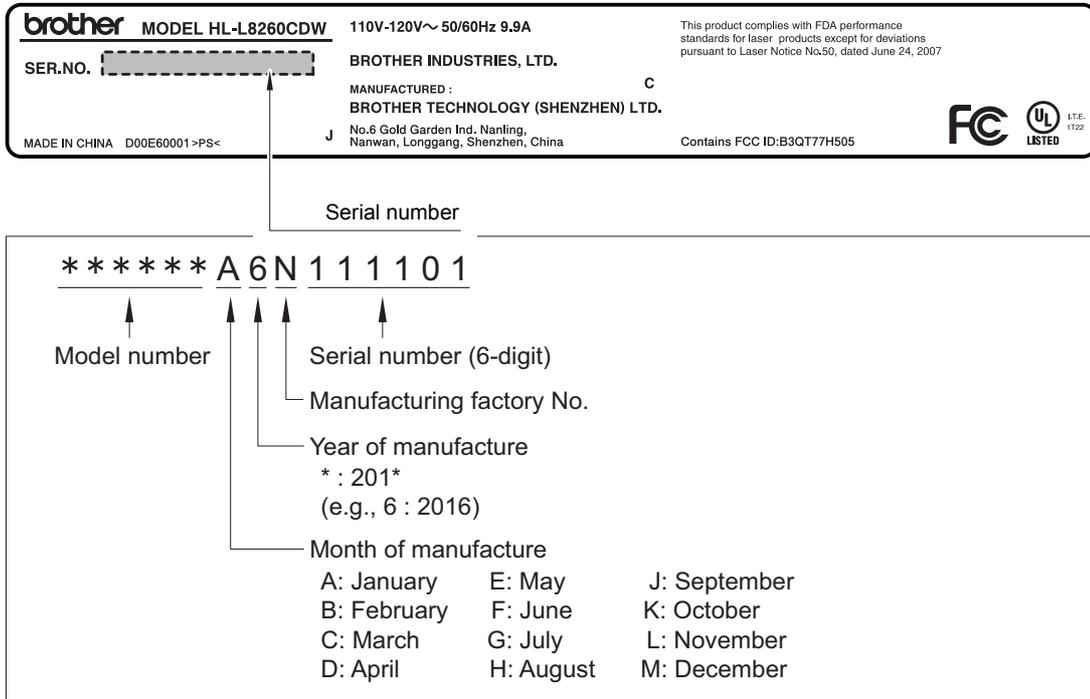


Fig. App 1-1

### <Location>

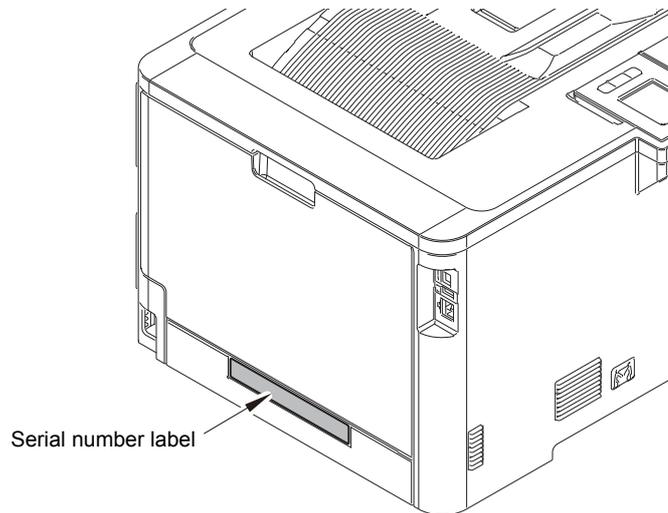


Fig. App 1-2

# APPENDIX 2 DELETING USER SETTING INFORMATION

The user setting information for the machine is stored in the main PCB. You can return this to the default settings by following the procedure below.

## <Operating Procedure>

### Non touch panel models

- (1) Press the [▲] or [▼] key in the initial state of maintenance mode to display "Initial Setup" on the LCD, and press the [OK] key.
- (2) Press the [▲] or [▼] key to display "Reset" on the LCD, and press the [OK] key.
- (3) Press the [▲] or [▼] key to display "Factory Reset" on the LCD, and press the [OK] key.
- (4) Press the [▲] key. User setting information is deleted and the machine returns to the ready state.

### Touch panel models

- (1) Press the [Settings] key while the machine is in the ready state.
- (2) Press the [ALL Settings] key on the LCD.
- (3) Press the [∧] or [∨] key to display "Initial Setup" on the LCD, and press the [Initial Setup] key.
- (4) Press the [Reset] key on the LCD then press the [Factory Reset] key on the LCD.  
"Reboot OK? Press [Yes] for 2 seconds to confirm" is displayed on the LCD.
- (5) Press and hold the [Yes] key for two seconds or longer.  
User setting information is deleted and the machine returns to the ready state.

# APPENDIX 3 INSTALLING THE MAINTENANCE PRINTER DRIVER

To identify machines connected via USB direct interface, the computer requires the corresponding driver for the virtual USB device. If you connect any number of machines to your computer, the same number of virtual USB devices will be automatically configured on your computer. To prevent many virtual USB devices from being configured, use the unique driver installation procedure described below that enables your computer to identify terminals via one single virtual USB device.

## Note:

- Once this installation procedure is carried out for a computer, no more driver/software installation will be required for that computer to identify machines. If the Brother Maintenance USB Printer driver has been already installed to your computer according to this procedure, skip this section.
- Before proceeding to the procedure given below, make sure that the Brother Maintenance USB Printer driver is stored in your computer.

## ■ Windows XP

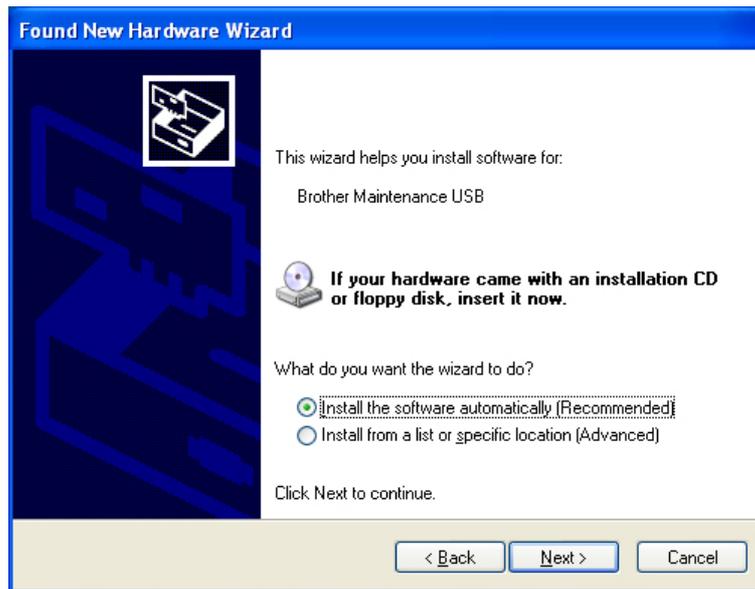
- (1) Check that the power switch of the machine is turned OFF. Disconnect the USB cable that connects the machine with your computer.
- (2) Turn ON your computer.
- (3) Turn ON the power switch of the machine.
- (4) Enter the maintenance mode.  
(Refer to “1.1 How to Enter Maintenance Mode” in Chapter 5.)
- (5) Connect the machine to your computer using a USB cable.  
The following window appears.



- (6) The following screen appears, indicating the detection of new hardware device by the system. Select “No, not this time.” And click [Next].

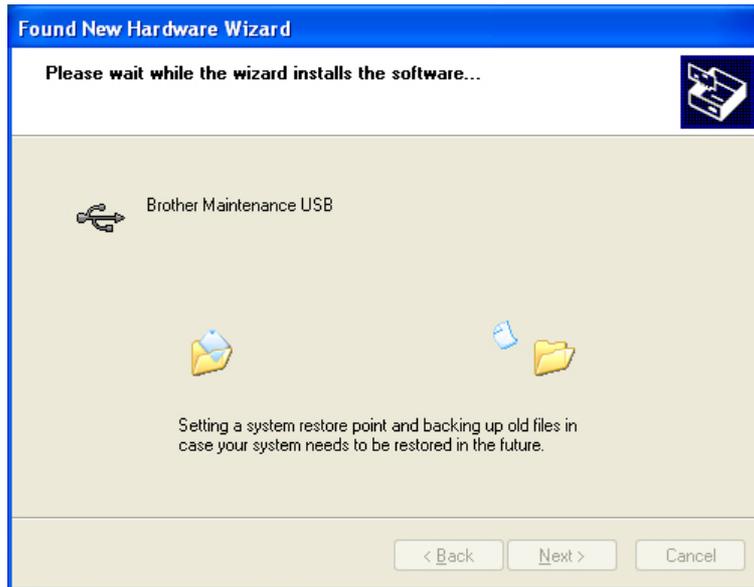


(7) Select "Install the software automatically (Recommended)" and click [Next].



(8) Alert warning message of WHQL appears. Click [Continue Anyway] to proceed.





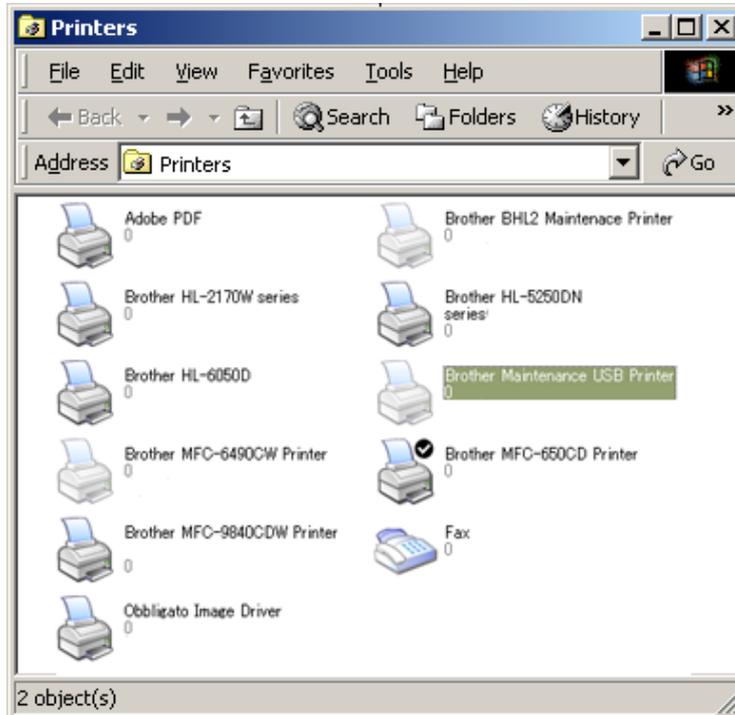
(9) Repeat steps (6) to (8) three times. Installation is completed.

(10) If the Brother Maintenance USB Printer driver is successfully installed, the following message screen appears. Click [Finish] to return.



**Note:**

In order to check whether the printer driver is successfully installed, click [Start], [Settings], [Printers] to select the Printers window. Then, check that the Brother Maintenance USB Printer icon is shown.

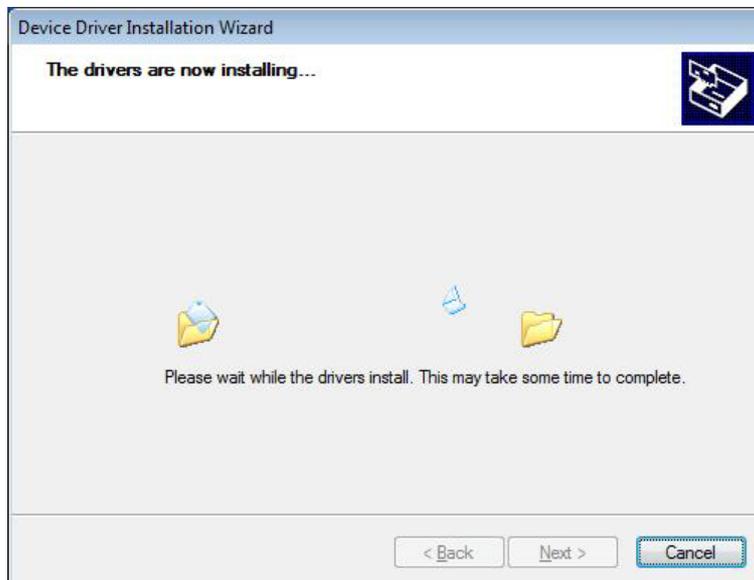


■ **Windows Vista/Windows 7/Windows 8/Windows 8.1/Windows 10**

- (1) Check that the AC cord of the machine is unplugged from the electrical outlet. Disconnect the USB cable that connects the machine with your computer.
- (2) Turn ON your computer.
- (3) Double-click Setup.exe inside the Brother Maintenance USB Printer folder that was saved in a temporary folder. The following screen appears. Click the [Next] button.



The following screen is displayed during installation.



- (4) Wait for the following screen to appear and click [Finish].



- (5) Plug the AC cord of the machine into an electrical outlet.
- (6) Enter the maintenance mode.  
(Refer to "1.1 How to Enter Maintenance Mode" in Chapter 5.)
- (7) Connect the machine to your computer using a USB cable and the installation will be performed automatically.