# brother

## Brother Laser MFC
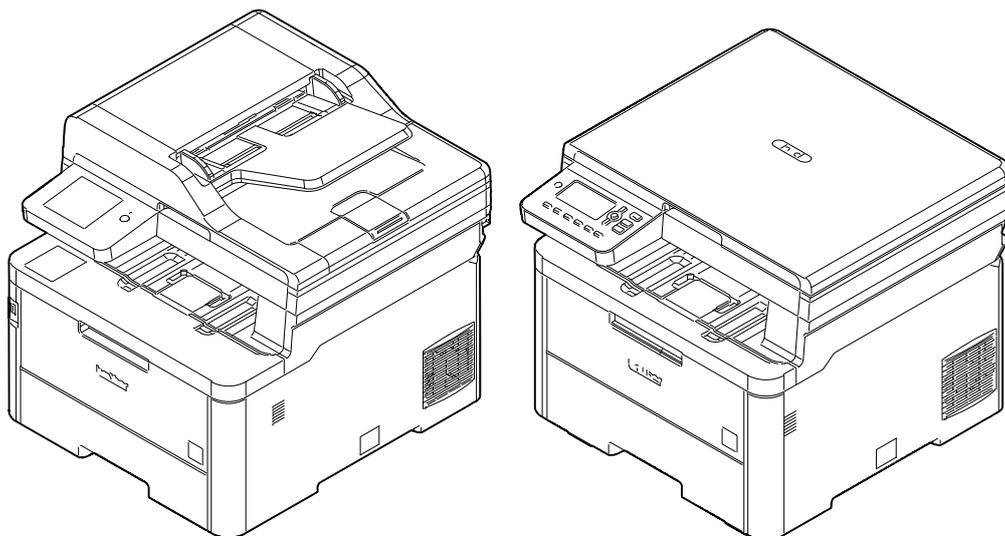# SERVICE MANUAL

## MODEL

**DCP-** **L3515CDW/L3520CDW/L3520CDWE/**
**L3527CDW/L3555CDW/L3560CDW**
**HL-** **L3300CDW**
**MFC-** **L3720CDW/L3740CDW/L3740CDWE/**
**L3755CDW/L3760CDW/L3765CDW/**
**L3780CDW/L8340CDW/L8390CDW/**
**L8395CDW**

## OPTION

**LT : Lower Tray**          **LT-310CL**

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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# Preface

This Service Manual is intended for use by service personnel and details the specifications, construction, and maintenance for the Brother machines noted on the front cover. It includes information required for troubleshooting and service--disassembly, reassembly, and lubrication--so that service personnel will be able to understand equipment function, repair the equipment in a timely manner and order spare parts as necessary.

To perform appropriate maintenance so that the machine is always in the best possible condition for the customer, service personnel must adequately understand and apply this manual.

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# CONTENTS

# CHAPTER 3  DISASSEMBLY AND ASSEMBLY

## 9. DISASSEMBLY PROCEDURE (LT UNIT) ....................................................... 3-224

# CHAPTER 4  ADJUSTMENTS AND UPDATING OF SETTINGS, REQUIRED AFTER PARTS REPLACEMENT

## 1. IF YOU REPLACE THE MAIN PCB ........................................................................ 4-1

## 2. IF YOU REPLACE THE REG MARK SENSOR ASSY OR LED ASSY ................... 4-7

# CHAPTER 5  SERVICE FUNCTIONS

# CHAPTER 6  PERIODICAL MAINTENANCE

# 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 telephone line cord first (MFC models only) and then the power cord from the AC power outlet, as well as any telephone/RJ-11 (MFC models only) or 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.

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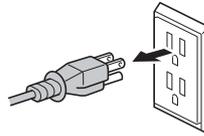
Unplug the power plug regularly to clean it. Use a dry cloth to clean the root of the plug blades and between the blades. If the power plug is plugged into the outlet over a long period, dust accumulates around the plug blades, which may cause a short circuit, resulting in a fire.

⚡

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

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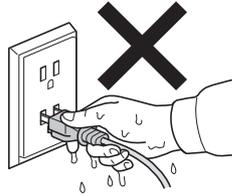
Always make sure the plug is fully inserted. DO NOT use the product or handle the cord if the cord has become worn or frayed.

⚡ 🔥

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.

(MFC models only)
Use caution when installing or modifying telephone lines. Never touch telephone wires or terminals that are not insulated unless the telephone line has been unplugged from the wall jack.
Never install telephone wiring during a thunderstorm. Never install a telephone wall jack in a location that is wet or may become wet, for example, near a refrigerator or other appliance that produces condensation.

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.
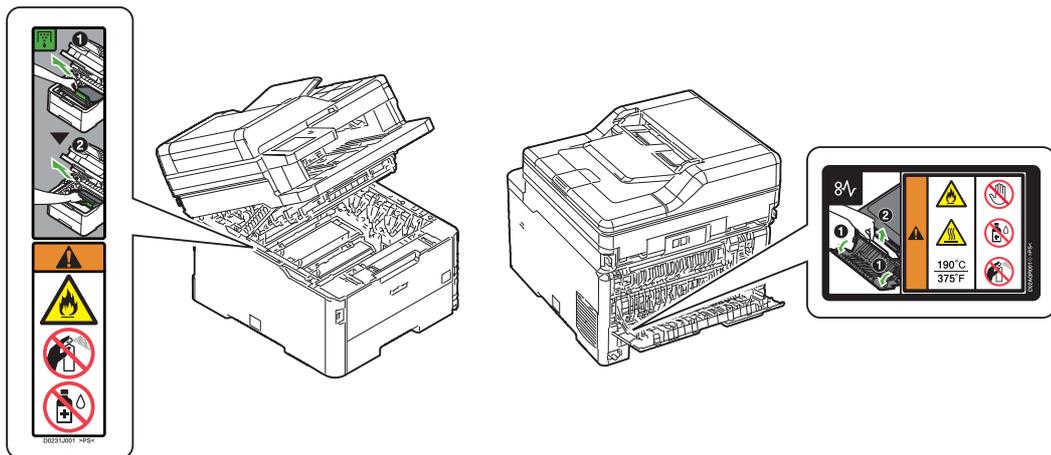


DO NOT attempt to operate this product when a paper jam or stray pieces of paper are inside the product. Prolonged contact of the paper with the fuser could cause a fire.

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.

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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

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## 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.
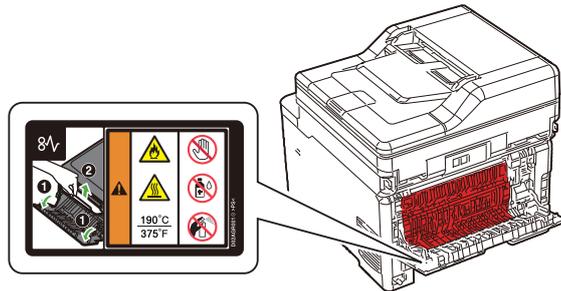


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If you use a Lower Tray, DO NOT carry the product with the Lower Tray as you may be injured or cause damage to the product because it is not attached to the Lower Tray.

## ⚠ CAUTION

To prevent possible injuries, at least two people should lift the product by holding it from the front and back.
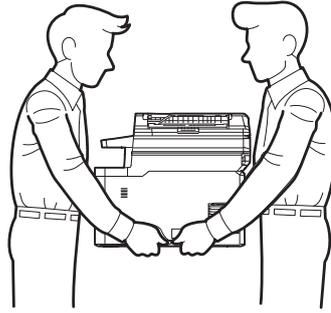
If you use a Lower Tray, DO NOT carry the product with the Lower Tray, as you may be injured or cause damage to the product because it is not attached to the Lower Tray.
To prevent injuries, be careful not to put your fingers in the areas shown in the illustrations.
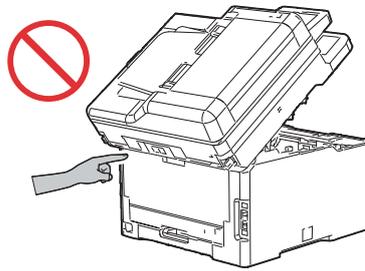
(MFC models only)
Use caution when installing or modifying telephone lines. Never touch telephone wires or terminals that are not insulated unless the telephone line has been unplugged from the wall jack.
Never install telephone wiring during a thunderstorm. Never install a telephone wall jack in a location that is wet or may become wet, for example, near a refrigerator or other appliance that produces condensation.

(MFC models only)
When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electrical shock, and injury to people. These important safety precautions include the following:

(1) DO NOT use this product near water or locations that may become wet, for example, near a bathtub, wash bowl, kitchen sink or washing machine, in a wet basement, or near a swimming pool.

(2) Avoid using this product during a thunderstorm. There may be a remote risk of an electrical shock from lightning.

(3) DO NOT use this product to report a gas leak in the vicinity of the leak.

(4) Use only the power cord provided with the product.

Read all of the instructions. Save them for later reference.

(MFC models only)
To reduce the risk of fire, electrical shock, and injury to people;
Use only a No. 26 AWG or larger telecommunication line cord.

## IMPORTANT

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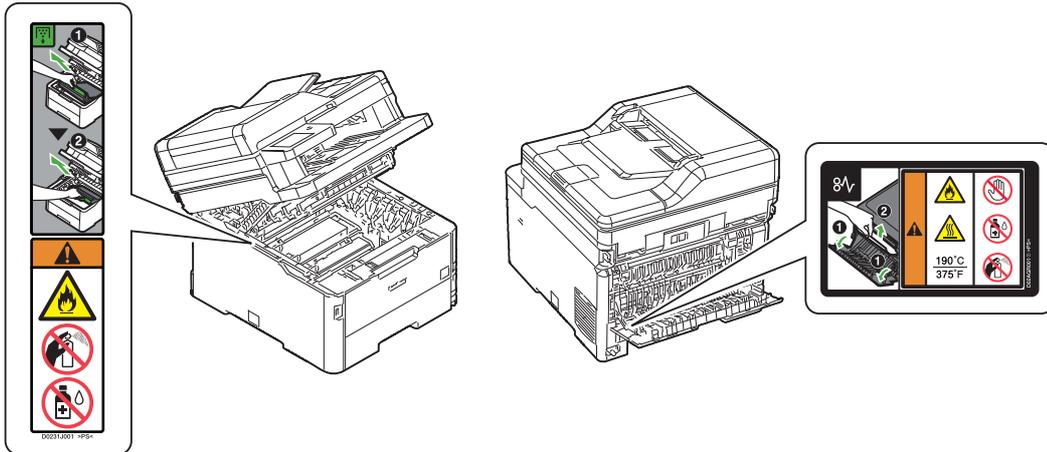


- DO NOT put objects on top of the product. Doing so could increase the risk of overheating should the product malfunction.

■ **Standard Telephone and FCC Notices (MFC Models Only)**

**These notices are in effect on models sold and used in the United States only.**

**When programming emergency numbers or making test calls to emergency numbers:**

- Remain on the line and briefly explain to the dispatcher the reason for the call before hanging up.

- Perform these activities in the off-peak hours, such as early morning or late evening.

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the back side of this equipment is a label that contains, among other information, a product identifier in the format US: AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

You may safely connect this equipment to the telephone line by means of a standard modular jack, USOC RJ11C.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

The Ringer Equivalence Number (REN) is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 06 is a REN of 0.6). For earlier products, the REN is separately shown on the label.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify you as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment, for repair or warranty information, contact Brother Customer Service (see the *Online User's Guide: Brother Numbers*). If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this equipment does not disable your alarm equipment. If you have questions about what will disable the alarm equipment, call your telephone company or a qualified installer.

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or electronic device to send any message via a telephone fax machine unless such messages clearly contain, in a margin at the top or bottom of each transmitted page, or on the first page of the transmission, the date and time it is sent and an identification of the business or other entity or other individual sending the message and the telephone number of the sending machine or such business, other entity or individual. To program this information into your machine, see the *Quick Setup Guide: Set the Date and Time and Set Your Station ID*.

If you are not able to solve a problem with your product, contact Brother Customer Service (see the *Online User's Guide: Brother Numbers*).

## ⚠ WARNING

For protection against the risk of electrical shock, always disconnect all cables from the walloutlet before the equipment is installed, serviced, or modified.

## IMPORTANT

- This equipment may not be used on coin service lines provided by the telephone company or connected to party lines.
- Brother cannot accept any financial or other responsibilities that may be the result of your use of this information, including direct, special or consequential damages. There are no warranties extended or granted by this document.
- A grounded plug should be plugged into a grounded AC power outlet after checking the rating of the local power supply for the product to operate properly and safely.

# GLOSSARY

Terms which appear in this manual have the meaning in the table below.

| Term | Meaning |
|---|---|
| 1st side CIS unit | Scans the First side of the paper in the auto 2-sided scanning model. |
| 2nd side CIS unit | Scans the Second side of the paper in the auto 2-sided scanning model. |
| ADF | Auto Document Feeder |
| Brother Maintenance USB Printer | A maintenance printer driver that allows you to connect Brother's printer to your computer even without the printer driver for the machine to be repaired. |
| CIS | Contact Image Sensor (Used for image scanning of documents.) |
| DJF | A type of firmware file. File extension: djf. |
| dpi | Dot per inch |
| DX | Duplex |
| FB | Flatbed scanner |
| Filedg32.exe | A utility that drags and drops files onto the displayed printer icon and sends the data to the printer. |
| HVPS | High Voltage Power Supply |
| Initial state of maintenance mode | An input waiting state for maintenance mode functions. |
| ipm | Image per minute |
| LT | Lower Tray |
| LVPS | Low Voltage Power Supply |
| Maintenance mode | A mode to use repair and maintenance functions. |
| MP (tray) / MF (tray) | Multi Purpose (tray) / Manual Feed (tray) |
| PCB | Print Circuit Board |
| PF kit | A periodical maintenance part with a pair of the separation roller and separation pad. |
| Ready state | In the state that a user uses the machine, a ready state that is not the sleep mode. |
| SX | Simplex |
| T1 | Paper tray 1 |
| UPD | A type of firmware file. File extension: upd.<br>Note that the upd file can be installed into non-compliant models. |
| Y (toner) / M (toner) / C (toner) / K (toner) | Yellow (toner) / Magenta (toner) / Cyan (toner) / Black (toner) |

# CHAPTER 1  SUPPLEMENTAL SPECIFICATIONS

For details on product specifications, refer to the user's guide.
If there is a difference between the product specifications and the user's guide, the user's guide should take precedence over the product specifications.
The product specifications may change without prior notice.

## 1.  GENERAL

| Model | HL-L3300CDW | DCP-L3515CDW / DCP-L3520CDW / DCP-L3520CDWE / DCP-L3527CDW | DCP-L3555CDW / DCP-L3560CDW | MFC-L3720CDW | MFC-L3740CDW / MFC-L3740CDWE | MFC-L3755CDW | MFC-L3760CDW | MFC-L3765CDW | MFC-L3780CDW | MFC-L8340CDW | MFC-L8390CDW | MFC-L8395CDW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CPU | Main: Cortex-A53 800MHz, Sub: ARM946 133MHz | | | | | | | | | | | |
| Backup Clock | Up to 55 hours | | | | | | | | | | | |
| Wired LAN | N/A | N/A | 10Base-T/100Base-TX/1000Base-T | N/A | 10Base-T/100Base-TX/1000Base-T | 10Base-T/100Base-TX/1000Base-T | 10Base-T/100Base-TX/1000Base-T | 10Base-T/100Base-TX/1000Base-T | 10Base-T/100Base-TX/1000Base-T | N/A | 10Base-T/100Base-TX/1000Base-T | 10Base-T/100Base-TX/1000Base-T |
| Wireless LAN — 2.4GHz | Infrastructure Mode: IEEE 802.11 b/g/n, Wi-Fi Direct: IEEE 802.11 g/n | | | | | | | | | | | |
| Wireless LAN — 5GHz | Infrastructure Mode: IEEE 802.11 a/n, Wi-Fi Direct: IEEE 802.11 a/n (* 5GHz in GULF unsupported) | | | | | | | | | | | |
| Duplex Printing | Available | | | | | | | | | | | |
| Auto Duplex Copy | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Available | N/A | Available | Available |
| Duplex Scan | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Available | N/A | Available | Available |
| Scanning Method | CIS | CIS | CIS | CIS | CIS | CIS | CIS | CIS | Dual CIS | CIS | Dual CIS | Dual CIS |
| LCD Type | 16 characters x 2 lines | 16 characters x 2 lines | 3.5" TFT ColorLCD | 3.5" TFT ColorLCD | 3.5" TFT ColorLCD | 3.5" TFT ColorLCD | 3.5" TFT ColorLCD | 3.5" TFT ColorLCD | 3.5" TFT ColorLCD | 3.5" TFT ColorLCD | 3.5" TFT ColorLCD | 3.5" TFT ColorLCD |
| Flatbed Scanner (Size) | Up to A4/LTR | | | | | | | | | | | |
| USB Host (Front) — USB 2.0 High-Speed | N/A | N/A | N/A | N/A | N/A | N/A | Available | Available | Available | Available | Available | Available |
| USB Host (Rear) | N/A | | | | | | | | | | | |
| NFC — Card reader / NFC shortcut | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Available | N/A | Available | Available |
| Auto Paper Low Detection | N/A | | | | | | | | | | | |
| PCL/PS | PCL5e, PCL5c, PCL6 (PCL XL Class3.0), BR-Script3, PDF Version 1.7, XPS Version 1.0 | | | | | | | | | | | |
| Paper Capacity — Standard tray | 250 sheets | | | | | | | | | | | |
| Paper Capacity — MP tray | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 30 sheets Envelope: 3 envelopes up to 6 mm thick | 30 sheets Envelope: 3 envelopes up to 6 mm thick | 30 sheets Envelope: 3 envelopes up to 6 mm thick |
| Paper Capacity — ADF | N/A | N/A | 50 sheets | 50 sheets | 50 sheets | 50 sheets | 50 sheets | 50 sheets | 50 sheets | 50 sheets | 50 sheets | 50 sheets |
| Paper Output | 150 sheets face down (80 g/m$^2$), 1 sheet face-up (straight paper path) | | | | | | | | | | | |
| Option — Lower tray | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 250 sheets | N/A | 250 sheets |
| Warm-up Time At 73.4F / 50% (23°C / 50%) — From Sleep mode | less than 28 sec. at 73.4F (23°C/50%) | less than 28 sec. at 73.4F (23°C/50%) | less than 24 sec. at 73.4F (23°C/50%) | less than 28 sec. at 73.4F (23°C/50%) | less than 28 sec. at 73.4F (23°C/50%) | less than 24 sec. at 73.4F (23°C/50%) | less than 24 sec. at 73.4F (23°C/50%) | less than 24 sec. at 73.4F (23°C/50%) | less than 24 sec. at 73.4F (23°C/50%) | less than 24 sec. at 73.4F (23°C/50%) | less than 24 sec. at 73.4F (23°C/50%) | less than 24 sec. at 73.4F (23°C/50%) |
| Warm-up Time — From Power OFF → ON | less than 30 sec. at 73.4F (23°C/50%) | less than 30 sec. at 73.4F (23°C/50%) | less than 28 sec. at 73.4F (23°C/50%) | less than 30 sec. at 73.4F (23°C/50%) | less than 30 sec. at 73.4F (23°C/50%) | less than 28 sec. at 73.4F (23°C/50%) | less than 28 sec. at 73.4F (23°C/50%) | less than 28 sec. at 73.4F (23°C/50%) | less than 28 sec. at 73.4F (23°C/50%) | less than 28 sec. at 73.4F (23°C/50%) | less than 28 sec. at 73.4F (23°C/50%) | less than 28 sec. at 73.4F (23°C/50%) |
| First Print Time (Mono/Color) At 73.4F (23°C) — From Ready mode | Less than 15/15 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 15/15 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 13.5/13.5 secs (Mono/Color) at 73.4F (23°C) / 115V/127V/230V | Less than 15/15 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 15/15 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 13.5/13.5 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 13.5/13.5 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 13.5/13.5 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 12.5/12.5 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 12.5/12.5 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 12.5/12.5 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 12.5/12.5 secs (Mono/Color) at 73.4F (23°C) / 115V/230V |
| First Print Time — From Sleep mode | Less than 32/32 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 32/32 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 30/30 secs (Mono/Color) at 73.4F (23°C) / 115V/127V/230V | Less than 32/32 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 32/32 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 30/30 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 30/30 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 30/30 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 30/30 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 30/30 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 30/30 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | Less than 30/30 secs (Mono/Color) at 73.4F (23°C) / 115V/230V |

# 2. FAX / COPY / SCANNER

| Model | HL-L3300CDW | DCP-L3515CDW DCP-L3520CDW DCP-L3520CDWE DCP-L3527CDW | DCP-L3555CDW DCP-L3560CDW | MFC-L3720CDW | MFC-L3740CDW MFC-L3740CDWE | MFC-L3755CDW | MFC-L3760CDW | MFC-L3765CDW | MFC-L3780CDW | MFC-L8340CDW | MFC-L8390CDW | MFC-L8395CDW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Modem Speed | N/A | | | 33,600 bps (Fax) | | | | | | | | |
| Transmission Speed (ITU-T Test Chart, Std resolution, JBIG) | N/A | | | Approx. 2.5 sec. | | | | | | | | |
| ITU-T Group | N/A | | | Super G3 | | | | | | | | |
| Color FAX | N/A | | | | | | | | | | | |
| Internet FAX (ITU T.37 simple mode) | N/A | | | Available for ASA Available (Download) for US | Available | | | Available (Download) | Available | | | |
| Handset | N/A | | | | | | | | | | | |
| Copy Speed (A4/Letter) | Up to 18/19 cpm (Quiet mode: Up to 12/12 cpm) | | Up to 26/27 cpm (Quiet mode: Up to 12/12 cpm) | Up to 18/19 cpm (Quiet mode: Up to 12/12 cpm) | | Up to 26/27 cpm (Quiet mode: Up to 12/12 cpm) | | | Up to 30/31 cpm (Quiet mode: Up to 12/12 cpm) | | | |
| First Copy Time (Mono/Color) At 73.4F (23°C) — From Ready mode and Standard tray | Less than 17/17 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | | Less than 14.5/15.5 secs (Mono/Color) at 73.4F (23°C) / 115V/127V/230V | Less than 17/17 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | | Less than 14.5/15.5 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | | | Less than 13.5/14.5 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | | | |
| First Copy Time (Mono/Color) At 73.4F (23°C) — From Sleep mode and Standard tray | Less than 32/32 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | | Less than 30/30 secs (Mono/Color) at 73.4F (23°C) / 115V/127V/230V | Less than 32/32 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | | Less than 30/30 secs (Mono/Color) at 73.4F (23°C) / 115V/230V | | | | | | |
| Print Resolution | 600 x 600 dpi, 2,400 dpi (600 x 2,400) quality | | | | | | | | | | | |
| Resolution (Optical) FB | Max. 1,200 x 1,200 dpi | | | | | | | | | | | |
| Resolution (Optical) ADF | N/A | | Max. 600 x 600 dpi | | | | | | | | | |
| Resolution (Interpolated) | Max. 19,200 x 19,200 dpi | | | | | | | | | | | |
| Scanning Speed (Mono/Color) ISO/IEC17991 Single | N/A | | 27/21 ipm (A4) 29/22 ipm (LTR) In accordance with ISO/IEC17991 | | | | | | | | | |
| Scanning Speed (Mono/Color) ISO/IEC17991 Duplex | N/A | | | | | | | | 56/32 ipm (A4) 58/34 ipm (LTR) In accordance with ISO/IEC17991 | N/A | | 56/32 ipm (A4) 58/34 ipm (LTR) In accordance with ISO/IEC17991 |

# 3. SERVICE INFORMATION / SUPPLIES

| Model | HL-L3300CDW | DCP-L3515CDW DCP-L3520CDW DCP-L3520CDWE DCP-L3527CDW | DCP-L3555CDW DCP-L3560CDW | MFC-L3720CDW | MFC-L3740CDW MFC-L3740CDWE | MFC-L3755CDW | MFC-L3760CDW | MFC-L3765CDW | MFC-L3780CDW | MFC-L8340CDW | MFC-L8390CDW | MFC-L8395CDW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Machine Life | 100,000 pages (A4 / LTR) or 7 years | | | | | | | 200,000 pages (A4 / LTR) or 7 years | | | | |
| Machine Life (ADF) | N/A | | 50,000 pages or 7 years | | | | | | | | | |
| Machine Life (Scanner) | 50,000 pages or 7 years | | | | | | | | | | | |
| MTBF | 4,000 hours | | | | | | | | | | | |
| MTTR | 0.5 hours | | | | | | | | | | | |
| Maximum Monthly Volume | Up to 40,000 pages | | | | | | | Up to 50,000 pages | | | | |
| Periodical Maintenance Parts [1] — Fuser | 50,000 pages (2 pages/job) | | | | | | | 50,000 pages (2 pages/job), 100,000 pages (5 pages/job) * Replace notification will appear at 50,000 pages. | | | | |
| Periodical Maintenance Parts [1] — PF kit 1 | 200,000 pages | | | | | | | | | | | |
| Periodical Maintenance Parts [1] — PF kit 2 | N/A | | | | | | | 200,000 pages | | | | |
| Periodical Maintenance Parts [1] — PF kit MP | N/A | | | | | | | 50,000 pages | | | | |

## Toner Cartridge

| Model | HL-L3300CDW | DCP-L3515CDW DCP-L3520CDW DCP-L3520CDWE DCP-L3527CDW | DCP-L3555CDW DCP-L3560CDW | MFC-L3720CDW | MFC-L3740CDW MFC-L3740CDWE | MFC-L3755CDW | MFC-L3760CDW | MFC-L3765CDW | MFC-L3780CDW | MFC-L8340CDW | MFC-L8390CDW | MFC-L8395CDW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Starter toner [2] | BK: Approx. 500 pages CMY: Approx. 500 pages (for DCP-L3515CDW) BK: Approx. 1,000 pages CMY: Approx. 1,000 pages (except for DCP-L3515CDW) | | | | BK: Approx. 500 pages CMY: Approx. 500 pages (for MFC-L3740CDWE) BK: Approx. 1,000 pages CMY: Approx. 1,000 pages (for MFC-L3740CDW) | BK: Approx. 1,000 pages CMY: Approx. 1,000 pages | | BK: Approx. 3,000 pages CMY: Approx. 1,000 pages | BK: Approx. 1,000 pages CMY: Approx. 1,000 pages (for ASA) BK: Approx. 2,300 pages CMY: Approx. 1,200 pages (for US) | BK: Approx. 1,000 pages CMY: Approx. 1,000 pages | BK: Approx. 1,000 pages CMY: Approx. 1,000 pages (for ASA) BK: Approx. 2,600 pages CMY: Approx. 1,400 pages (for EU and OCE) | BK: Approx. 3,000 pages CMY: Approx. 1,400 pages |
| Standard toner | BK: Approx. 1,500 pages CMY: Approx. 1,200 pages | BK: Approx. 1,500 pages CMY: Approx. 1,200 pages (for ASA) BK: Approx. 1,000 pages CMY: Approx. 1,000 pages (for EU and OCE) | BK: Approx. 1,000 pages CMY: Approx. 1,000 pages (for EU and OCE) BK: Approx. 1,500 pages CMY: Approx. 1,200 pages (for Brazil, LTN and ASA) | BK: Approx. 1,500 pages CMY: Approx. 1,200 pages | BK: Approx. 1,000 pages CMY: Approx. 1,000 pages | | BK: Approx. 1,000 pages CMY: Approx. 1,000 pages (for EU and OCE) BK: Approx. 1,500 pages CMY: Approx. 1,200 pages (for LTN and ASA) | BK: Approx. 1,500 pages CMY: Approx. 1,200 pages | | BK: Approx. 1,000 pages CMY: Approx. 1,000 pages (for EU) BK: Approx. 1,500 pages CMY: Approx. 1,200 pages (for ASA) | BK: Approx. 1,000 pages CMY: Approx. 1,000 pages (for EU and OCE) BK: Approx. 1,500 pages CMY: Approx. 1,200 pages (for ASA) | BK: Approx. 1,500 pages CMY: Approx. 1,200 pages |
| High capacity toner | BK: Approx. 3,000 pages, CMY: Approx. 2,300 pages | | | | | | | | | | | |
| Super high capacity toner | N/A | BK: Approx. 4,500 pages CMY: Approx. 4,000 pages (for Brazil and ASA) N/A (for LTN, EU and OCE) | N/A | | | | BK: Approx. 4,500 pages CMY: Approx. 4,000 pages (for ASA) N/A (except for ASA) | N/A | BK: Approx. 4,500 pages CMY: Approx. 4,000 pages | | | |

When printing A4/LTR size one sided pages in accordance with ISO/IEC19798
Best before date: 2 years without opening (6 months after opening)

| Drum Unit | Life expectancy: Approx. 20,000 pages (1 page/job), Approx. 30,000 pages (3 pages/job)  * Replace notification will appear at 20,000 pages. The life expectancy varies according to the use condition. Best before date: 2 years |
|---|---|

The best before date 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 45 °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 (2 pages/job), Approx. 60,000 pages (3 pages/job)  * Replace notification will appear at 50,000 pages. |
|---|---|
| Waste Toner Box | Approx. 50,000 pages (5 pages/job) |

[1] As for replacement of the periodical maintenance parts, refer to "PERIODICAL MAINTENANCE" in Chapter 6.

[2] Toner supplied with the machine.

# 4. DIMENSIONS / WEIGHT

| | Model | HL-L3300CDW | DCP-L3515CDW DCP-L3520CDW DCP-L3520CDWE DCP-L3527CDW | DCP-L3555CDW DCP-L3560CDW | MFC-L3720CDW | MFC-L3740CDW MFC-L3740CDWE | MFC-L3755CDW | MFC-L3760CDW | MFC-L3765CDW | MFC-L3780CDW | MFC-L8340CDW | MFC-L8390CDW | MFC-L8395CDW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dimensions (W x D x H) | Carton size | 536 x 497 x 497 mm (21.10 x 19.57 x 19.57") | | | | | | | | 583 x 497 x 533 mm (22.95 x 19.57 x 20.98") | | | |
| | Machine size | 444 x 410 x 355 mm (17.46 x 16.14 x 13.98") | | | | | | | | 462 x 410 x 401 mm (18.19 x 16.14 x 15.79") | | | |
| | LT-250 without carton | N/A | | | | | | | | 399 x 446 x 122 mm (15.71 x 17.56 x 4.80") | N/A | 399 x 446 x 122 mm (15.71 x 17.56 x 4.80") | |
| Weights | with carton | 21.8 kg / 48.0 lb | 21.7 kg / 47.9 lb (for DCP-L3520CDWE: GER) 21.8 kg / 48.0 lb (for DCP-L3520CDWE: UK) 21.9 kg / 48.2 lb (for DCP-L3527CDW) 21.8 kg / 48.1 lb (for GER, UK and OCE) 22.0 kg / 48.5 lb (for SWI and RUS) 22.1 kg / 48.6 lb (for KOR) 22.4 kg / 49.5 lb (for CEE) 22.5 kg / 49.5 lb (for GULF) | 23.1 kg / 51.0 lb (for BRAZIL) 23.2 kg / 51.2 lb (for ARG) 23.3 kg / 51.3 lb (for GER and OCE) 23.3 kg / 51.4 lb (for UK, US and IND) 23.4 kg / 51.6 lb (for CHL) 23.5 kg / 51.7 lb (for SWI) 23.5 kg / 51.8 lb (for RUS) 23.7 kg / 52.2 lb (for ASA) 23.9 kg / 52.7 lb (for CEE) 24.0 kg / 53.0 lb (for GULF) | 23.2 kg / 51.2 lb (for US) 24.0 kg / 53.0 lb (for ASA) | 23.8 kg / 52.5 lb (for MFC-L3740CDWE) 23.2 kg / 51.2 lb (for GER) 23.3 kg / 51.3 lb (for UK) 23.4 kg / 51.7 lb (for SWI) 23.9 kg / 52.7 lb (for CEE) | 23.3 kg / 51.4 lb | 23.4 kg / 51.7 lb (for GER) 23.5 kg / 51.8 lb (for UK and OCE) 23.6 kg / 51.9 lb (for TWN) 23.6 kg / 52.0 lb (for IND and LTN) 23.6 kg / 52.1 lb (for SWI) 23.7 kg / 52.3 lb (for KOR) 24.0 kg / 52.8 lb (for ASA) 24.2 kg / 53.5 lb (for GULF) | 23.5 kg / 51.8 lb | 25.0 kg / 55.0 lb (for US) 25.1 kg / 55.3 lb (for ASA) | 24.6 kg / 54.3 lb (for GER and PHL) 24.9 kg / 54.9 lb (for UK) 25.1 kg / 55.3 lb (for ASA) 25.3 kg / 55.7 lb (for CEE) | 24.9 kg / 54.9 lb (for OCE) 25.0 kg / 55.0 lb (for GER) 25.2 kg / 55.5 lb (for RUS) 25.2 kg / 55.6 lb (for UK) 25.3 kg / 55.9 lb (for ASA) 25.6 kg / 56.4 lb (for CEE) 25.7 kg / 56.6 lb (for GULF) | 25.0 kg / 55.0 lb |
| | without carton, with toner/drum | 18.5 kg / 40.8 lb | 18.5 kg / 40.8 lb (for DCP-L3520CDWE) 18.6 kg / 41.0 lb (for DCP-L3520CDW: UK) 18.6 kg / 40.9 lb (for OCE) 19.0 kg / 42.0 lb (for GULF) 18.5 kg / 40.9 lb (for Others) | 20.0 kg / 44.0 lb (for US) 20.0 kg / 44.2 lb (for UK and BRAZIL) 20.1 kg / 44.2 lb (for IND) 20.2 kg / 44.4 lb (for CHL) 20.2 kg / 44.6 lb (for ASA) 20.5 kg / 45.2 lb (for GULF) 20.0 kg / 44.1 lb (for Others) | 20.0 kg / 44.0 lb (for US) 20.5 kg / 45.1 lb (for ASA) | 20.0 kg / 44.1 lb (for MFC-L3740CDW) 19.9 kg / 44.0 lb (for MFC-L3740CDWE) | 20.0 kg / 44.1 lb | 20.2 kg / 44.6 lb (for UK, TWN and IND) 20.3 kg / 44.8 lb (for LTN) 20.4 kg / 45.0 lb (for ASA) 20.7 kg / 45.6 lb (for GULF) 20.2 kg / 44.5 lb (for Others) | 20.2 kg / 44.5 lb | 21.7 kg / 47.8 lb (for US) 21.7 kg / 47.9 lb (for ASA) | 21.4 kg / 47.1 lb (for PHL) 21.6 kg / 47.7 lb (for UK and ASA) 21.4 kg / 47.2 lb (for Others) | 21.6 kg / 47.7 lb (for OCE) 21.9 kg / 48.2 lb (for ASA) 21.9 kg / 48.4 lb (for UK) 22.1 kg / 48.7 lb (for GULF) 21.7 kg / 47.9 lb (for Others) | 21.7 kg / 47.8 lb |
| | without carton nor toner/drum | 14.5 kg / 32.0 lb | 14.5 kg / 32.0 lb | 16.0 kg / 35.5 lb (for DCP-L3555CDW) 16.0 kg / 35.3 lb (for DCP-L3560CDW) | 16.0 kg / 35.2 lb | 16.0 kg / 35.2 lb | 16.2 kg / 35.7 lb | 16.2 kg / 35.7 lb | 16.2 kg / 35.7 lb | 17.6 kg / 38.8 lb | 17.4 kg / 38.3 lb | 17.6 kg / 38.8 lb | 17.6 kg / 38.8 lb |
| | LT-250 without carton | N/A | | | | | | | | 3.21 kg / 7.08 lb | N/A | 3.21 kg / 7.08 lb | |

# CHAPTER 2  ERROR INDICATION AND TROUBLESHOOTING

## 1.  INTRODUCTION

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

Refer to "SAFETY INFORMATION".

# 1.2 Checks before Commencing Troubleshooting

Check the following items before attempting to repair the machine.

## 1.2.1 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 °C (89.6 °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.

## 1.2.2 Power supply

(1) The AC input power supply described on the rating plate of the machine should be within ±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.

## 1.2.3 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.

## 1.2.4 Consumable parts

(1) The drum unit (including the toner cartridge) is installed correctly.

(2) The belt unit and waste toner box are installed correctly.

## 1.2.5 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 under 10 °C (50 °F). This is due to there being too much load to drive each unit. In this case, increase the room temperature.

## 1.2.6 Cleaning

Use a soft dry lint-free cloth.

⚠️ **WARNING**

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

# 2. OVERVIEW

## 2.1 Cross-section Drawing

### 2.1.1 Printer part
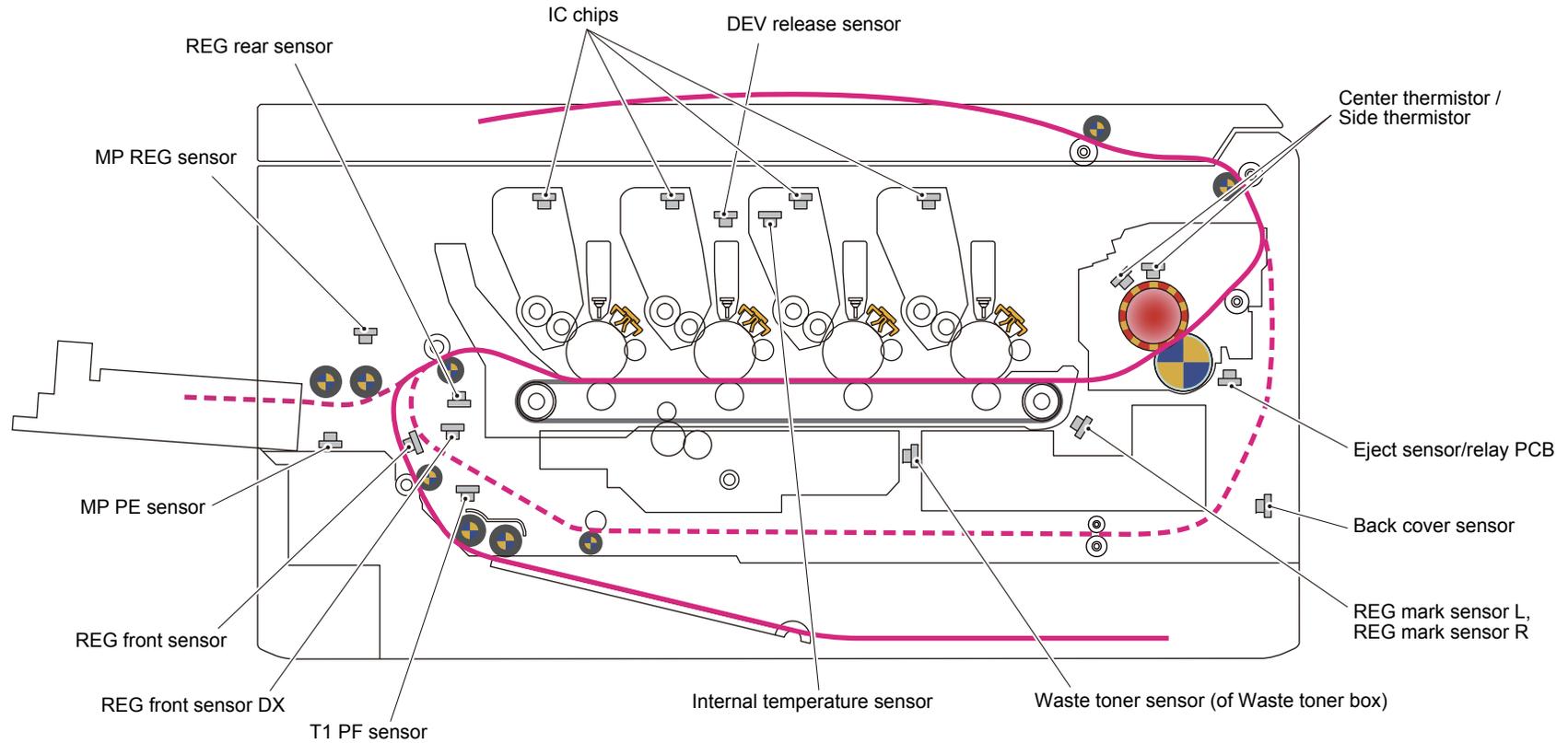


**Fig. 2-1**

## 2.1.2 LT
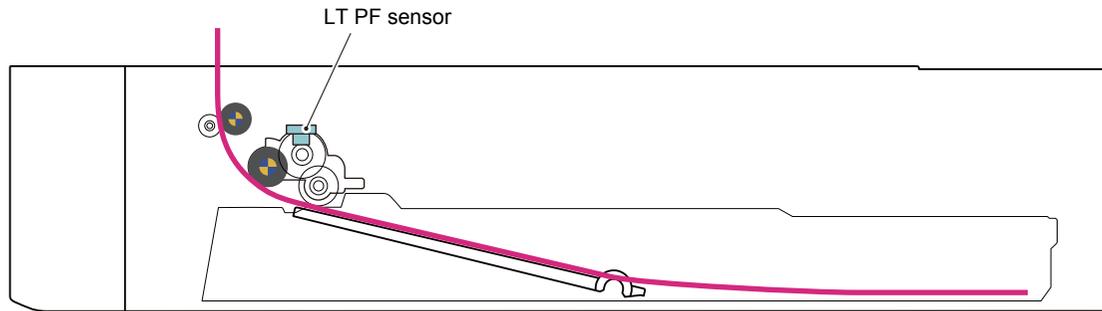


**Fig. 2-2**

## 2.1.3 ADF
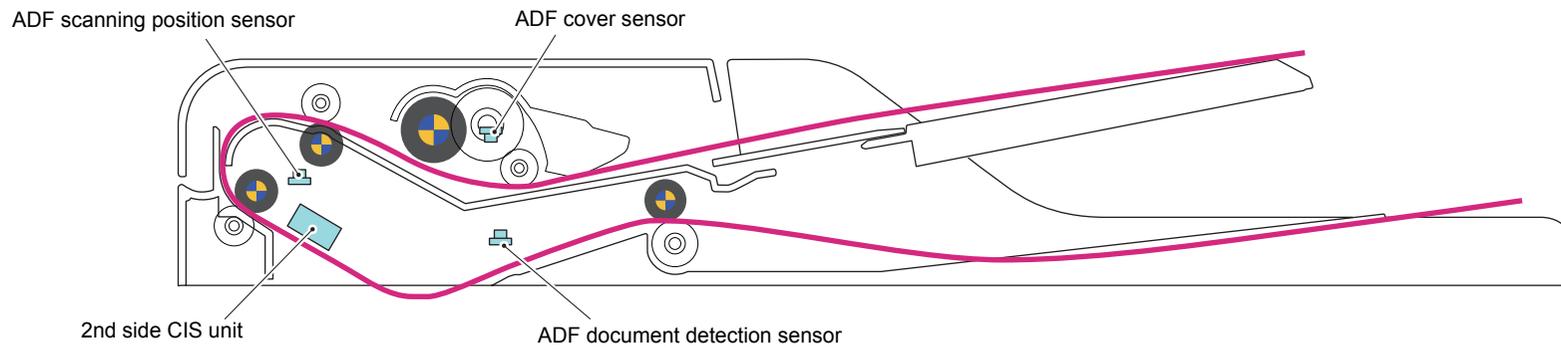


**Fig. 2-3**

## 2.2 Paper Feeding

### 2.2.1 Printer part



**Fig. 2-4**

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## 2.2.2 LT



Paper dust cleaning roller

Separation roller

Paper feed path

**Fig. 2-5**

## 2.2.3 ADF



ADF feed roller 1

ADF pickup roller

Document feed path

ADF feed roller 2

ADF eject roller
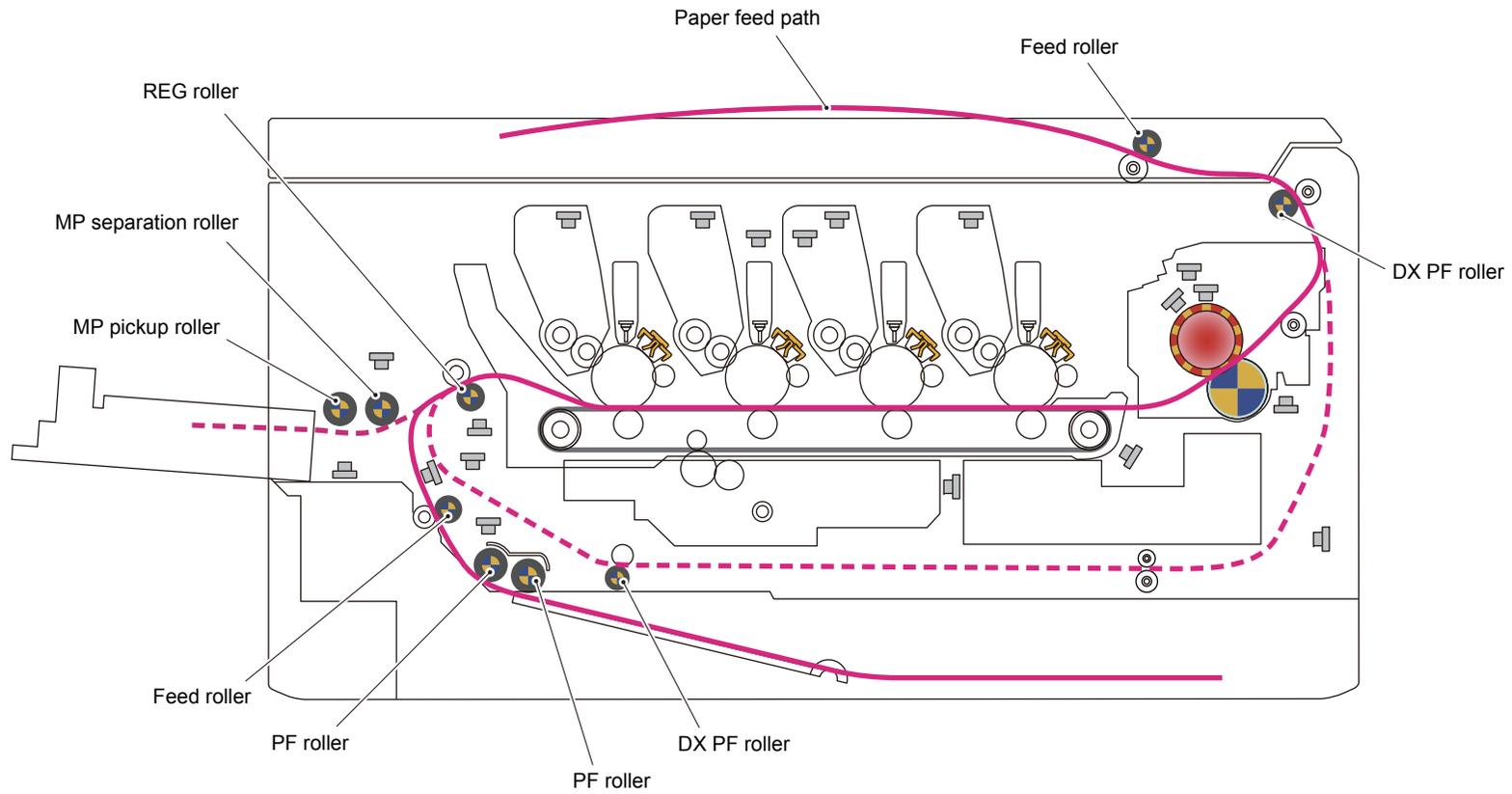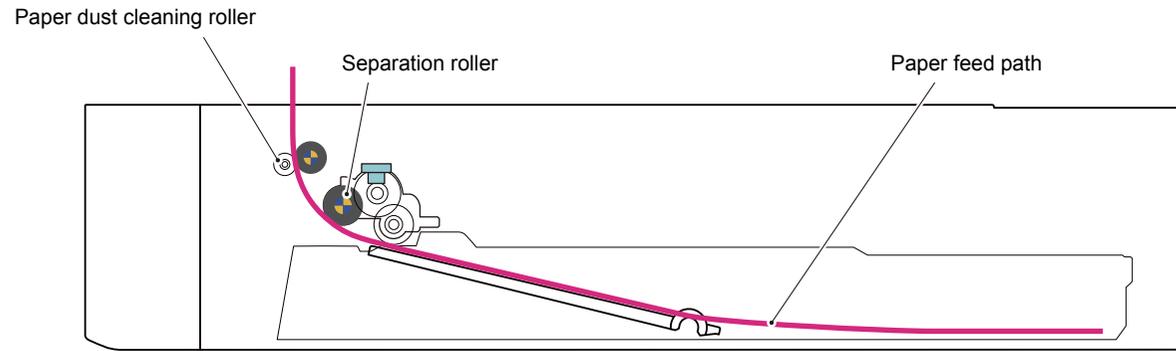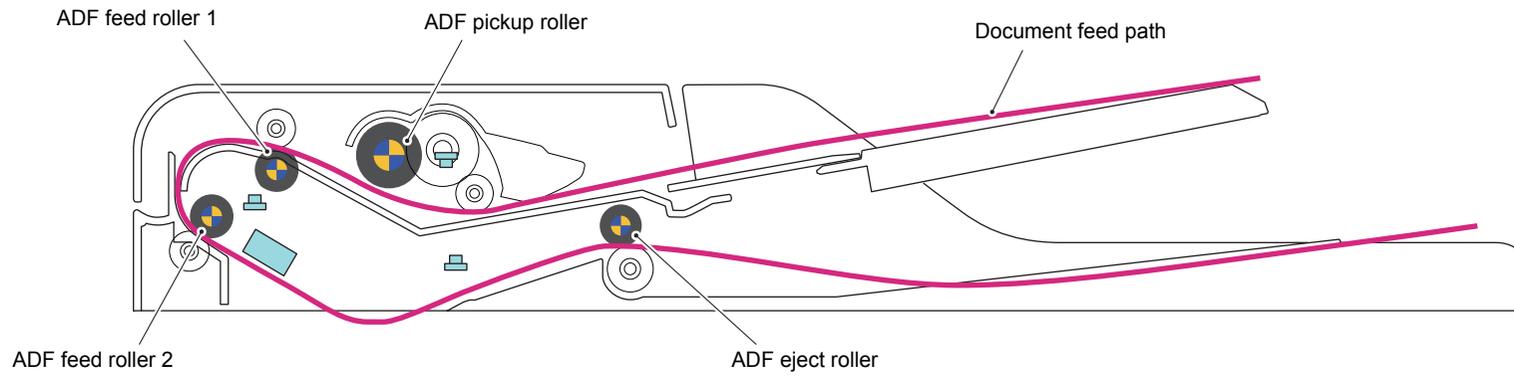
**Fig. 2-6**

# 2.3    Operation of Each Part and Location of Parts

| Part name | Operation |
|---|---|
| ADF cover sensor | Detects the ADF upper cover (open / closed). |
| ADF document detection sensor/actuator | Detects whether a document is set in the ADF. |
| ADF eject roller | Feeds the document to the output tray. |
| ADF pickup roller | Feeds document from the ADF tray to the scanning unit. |
| ADF scanning position sensor/actuator | Detects the 1st/2nd side scanning start position.<br>Detects a document jam in the ADF. |
| ADF separation pad/roller | Separates the document fed from the ADF tray into single sheets. |
| Back cover sensor | Detects whether the back cover is open. |
| Belt cleaning roller | Cleans the collected waste toner in the belt unit. |
| Belt unit | Feeds the paper to the drum unit and transfers toner on the paper. |
| Cartridge sensor (Each color) | Communicates with the IC chip of the toner cartridge, and reads/writes information. |
| DEV K CLUTCH FCL | Controls the drive of the DEV roller. |
| DEV REL CLUTCH FCL | Controls the release of the DEV roller (all colors). |
| DEV release sensor PCB | Detects whether the DEV roller is separated from the exposure drum. |
| DX PF roller | Feeds the paper passing through the DX tray to the REG roller. |
| Eject roller 1 | Feeds the paper ejected from the fuser to eject roller 2. |
| Eject roller 2 | Feeds the paper to the eject roller 3.<br>In 2-sided printing, after the first side 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 DX tray. |
| Eject roller 3 | Ejects the paper to the face-down output tray.<br>In 2-sided printing, after the first side of the sheet is printed and the paper is fed up to a certain point, the eject roller 3 rotates conversely, and the paper is fed to the eject roller 2. |
| Eject sensor/actuator | Detects whether or not paper is ejected from the fuser.<br>In the case of the 2-sided printing, detects the rear edge of paper and adjusts the timing of the eject roller 2 and 3 switching.<br>Detects paper jam in the rear section of the machine.<br>Detects whether the fuser cover is open. |
| Eject sensor/relay PCB | Detects whether or not paper is ejected from the fuser.<br>In the case of the 2-sided printing, detects the rear edge of paper and adjusts the timing of the eject roller 2 and 3 switching.<br>Detects paper jam in the rear section of the machine. |
| External temperature/humidity sensor | Detects external temperature and humidity around the machine. |
| Fuser cover sensor/actuator | Detects whether or not paper is ejected from the fuser.<br>In the case of the 2-sided printing, detects the rear edge of paper and adjusts the timing of the eject roller 2 and 3 switching.<br>Detects paper jam in the rear section of the machine.<br>Detects whether the fuser cover is open. |
| Heat roller (of fuser) | Fuses the toner transferred to paper by heat and pressure, and feeds paper to the eject roller 1. |
| Internal temperature sensor | Detects temperature inside the machine. |
| MP PE sensor/actuator | Detects the paper in the MP tray.<br>Detects paper jams in the MP tray. |
| MP pickup roller | Feeds paper from the MP tray to the MP separation roller. |
| MP pickup solenoid | Presses the MP pickup roller against the paper when feeding from the MP tray. |
| MP REG sensor/actuator | Detects paper jams in the MP tray. |

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| Part name | Operation |
|---|---|
| MP separation pad/roller | Separates the paper fed from the MP tray into single sheets. |
| Pressure roller (of fuser) | Fuses the toner transferred to paper by heat and pressure, and feeds paper to the eject roller 1. |
| REG front sensor/actuator | Detects the front edge of the paper to control the REG roller drive. Detects paper jams in the front section of the machine. Detects whether paper is fed from the T1. |
| REG mark sensor L | Checks a phase of each color. |
| REG mark sensor R | Checks a phase of each color. |
| REG rear sensor/actuator | 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. |
| REG roller | Corrects the paper alignment when the paper makes contact with the stopped REG roller. After the correction, it rotates to feed the paper to the belt unit. |
| REGI ELECTRIC CLUTCH FCL | Controls the activation of the REG roller for the paper alignment adjustment. |
| T1 ELECTRIC CLUTCH FCL | Drives the T1 pickup roller at the timing of paper feeding. |
| T1 PF sensor/actuator | Detects the T1 (open / closed). Detects paper jams in the T1. Determines whether paper is fed from the T1. |
| T1 pickup roller | Feeds document from the T1. |
| T1 separation pad/roller | Separates paper fed from the T1 into single sheets. |
| Waste toner sensor (of waste toner box) | Detects a certain amount of waste toner in the waste toner box. |

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# ■ Location of sensors and clutches



**Fig. 2-7**

ADF cover sensor

ADF document detection sensor

ADF scanning position sensor

LT PF sensor

LT RELEASE CLUTCH

T1 CLUTCH 30
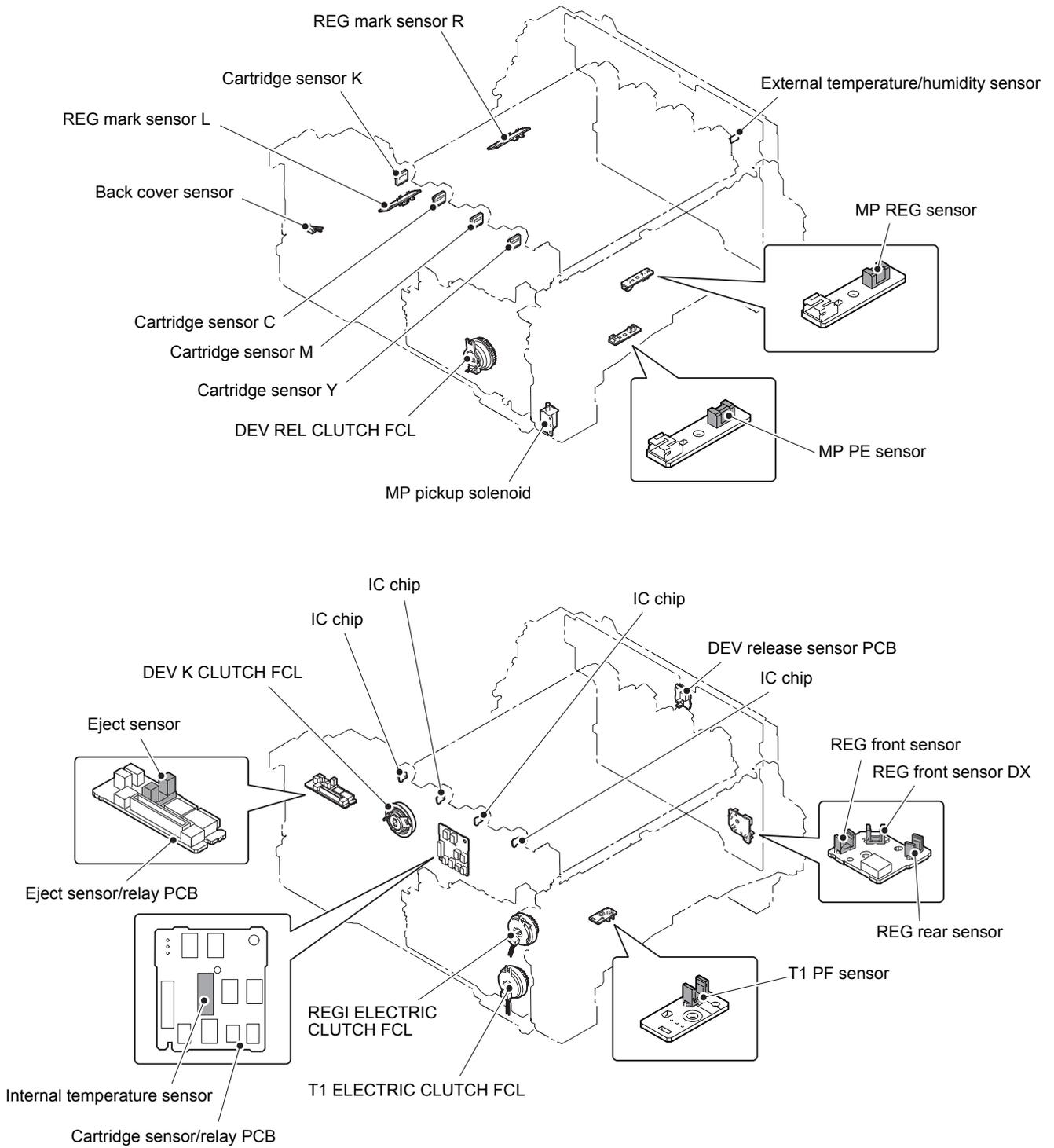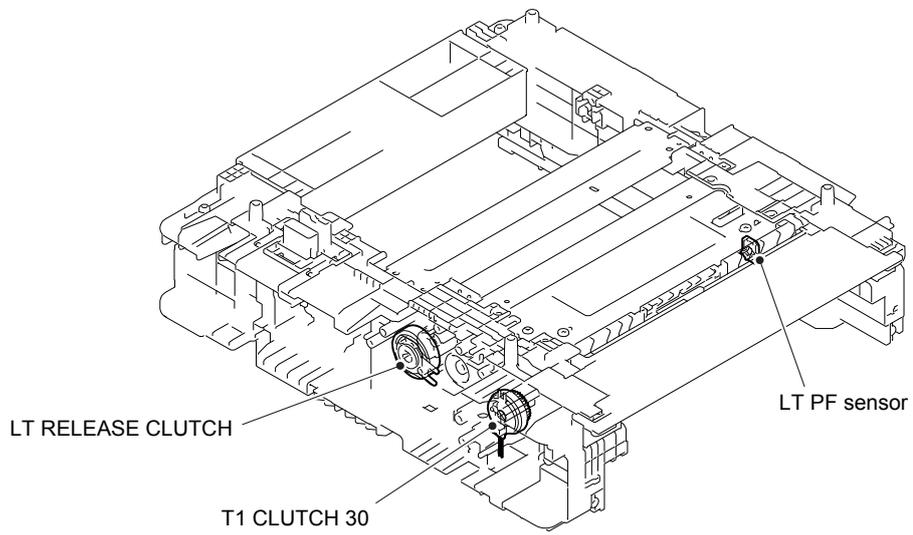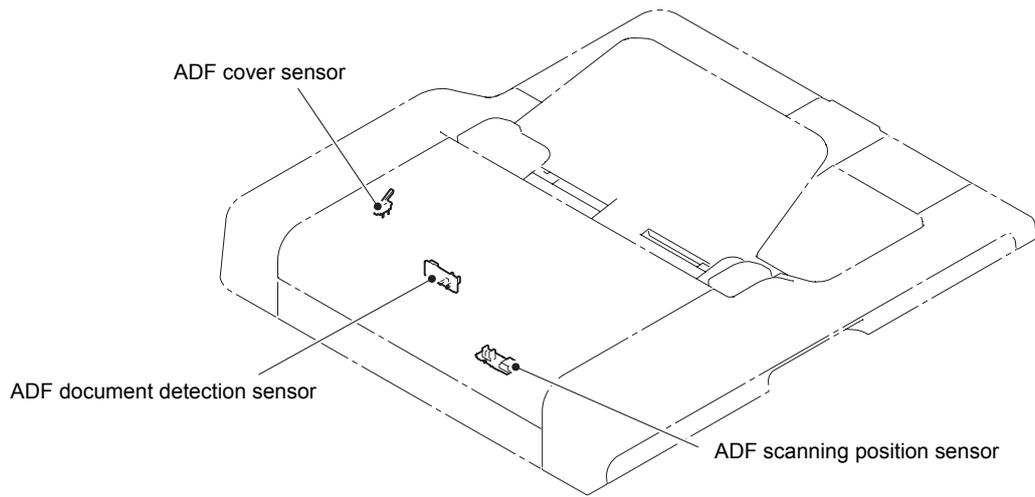
**Fig. 2-8**

# 2.4 Block Diagram
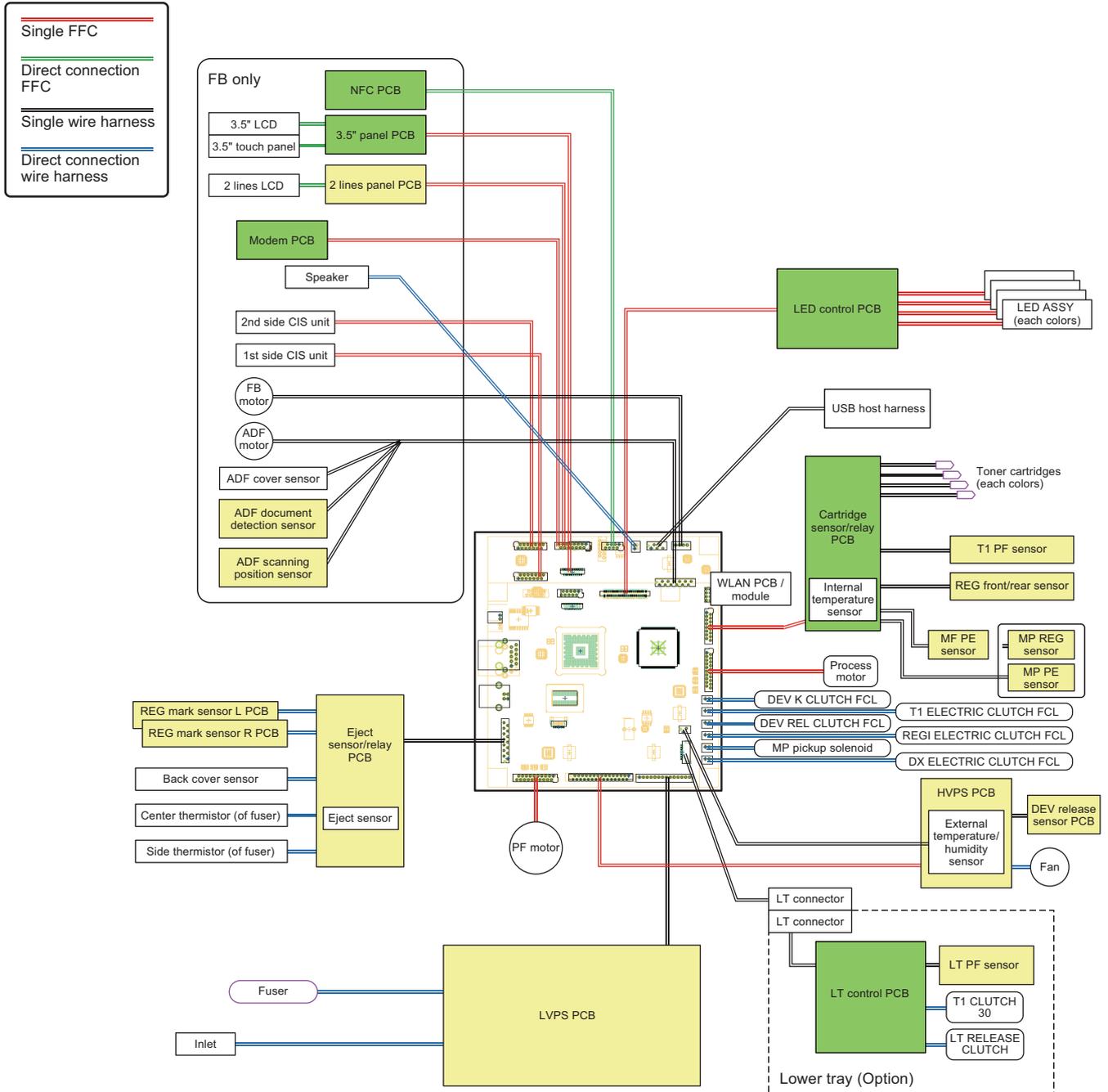


**Fig. 2-9**

# 2.5 Main Components

Panel unit
(for models with touch panel)

FB unit

Modem unit

Panel unit
(for models with 2 lines LCD)

ADF unit

Speaker

Joint cover ASSY

Back cover

Side cover R

DX tray

Fuser cover

LED ASSY

HVPS PCB

Fuser

Paper eject ASSY

Fan

FUSER DRIVE
GEAR Z25 FCL

Process drive unit

PF unit

DEV REL CLUTCH FCL

PF drive unit

MP unit

Main PCB

REGI ELECTRIC
CLUTCH FCL

Roller holder ASSY

WLAN PCB

T1 ELECTRIC
CLUTCH FCL

USB host harness

Cartridge sensor/relay PCB

Inner front cover

LVPS PCB

Side cover L

Belt unit

Paper tray

Waste toner box

**Fig. 2-10**

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# 3. ERROR INDICATIONS

You can obtain any error contents according to error codes and error messages.

## 3.1 Error Codes

**Note:**
- An Error not listed in the following table may be occurred due to noise or program failure.
  In that case, turn the power OFF and unplug the AC cord to clear the error.
- Contact Brother distributor when one error occurs repeatedly.

| Error codes | Description | Refer to: | Error codes | Description | Refer to: |
|---|---|---|---|---|---|
| 0000 | An error for a specific user who uses the subscription service. | 2-41 | 0C00 | Density sensor failure | 2-44 |
| 0101 | Main PCB failure (ASIC / motor driver) | 2-41 | 0E00 | HVPS PCB communication error | 2-44 |
| 0201 | Communication error of the PF motor / Unstable speed | 2-41 | 1003 | REG mark sensor R failure | 2-44 |
| 0202 | Process motor failure | 2-41 | 1004 | REG mark sensor L failure | 2-44 |
| 0501 | Fuser temperature abnormality (Low temperature, center thermistor) | 2-42 | 1400 | Condensation (Main PCB temperature/humidity sensor) | 2-45 |
| 0502 | Fuser temperature abnormality (Low temperature, center thermistor) | 2-42 | 1801 | LT communication error (Main PCB - LT control PCB) | 2-45 |
| 0503 | Fuser temperature abnormality (High temperature, center thermistor) | 2-42 | 1D01 | LED ASSY (K) communication error | 2-45 |
| 0504 | Fuser temperature abnormality (Low temperature, center thermistor) | 2-42 | 1D02 | LED ASSY (Y) communication error | 2-45 |
| 0505 | Fuser temperature abnormality (Temperature rise, center thermistor) | 2-42 | 1D03 | LED ASSY (M) communication error | 2-45 |
| 0506 | Fuser temperature abnormality (Temperature fall, center thermistor) | 2-42 | 1D04 | LED ASSY (C) communication error | 2-45 |
| 050A | Fuser temperature abnormality (Center thermistor, side thermistor) | 2-42 | 1E01 | LED control PCB communication error (Access error) | 2-45 |
| 050B | Fuser temperature abnormality (Center thermistor, side thermistor) | 2-42 | 1E02 | LED control PCB communication error (Read/Write error) | 2-45 |
| 050C | Fuser temperature abnormality (Center thermistor, side thermistor) | 2-42 | 2100 | Wrong K toner cartridge (The toner cartridge other than black is installed.) | 2-46 |
| 0800 | Internal temperature abnormality (Internal thermistor) | 2-42 | 2101 | Wrong Y toner cartridge (The toner cartridge other than yellow is installed.) | 2-46 |
| 0900 | Detected irregular power supply for more than 100 times. | 2-43 | 2102 | Wrong C toner cartridge (The toner cartridge other than cyan is installed.) | 2-46 |
| 0A02 | Fan failure | 2-43 | 2103 | Wrong M toner cartridge (The toner cartridge other than magenta is installed.) | 2-46 |
| 0B01 | HVPS PCB failure (during operating) | 2-43 | 2200 | Wrong K toner cartridge (The non-compliant toner cartridge is installed.) | 2-47 |
| 0B02 | HVPS PCB failure (in the stand-by state) | 2-43 | 2201 | Wrong Y toner cartridge (The non-compliant toner cartridge is installed.) | 2-47 |

| Error codes | Description | Refer to: | Error codes | Description | Refer to: |
|---|---|---|---|---|---|
| 2202 | Wrong C toner cartridge (The non-compliant toner cartridge is installed.) | 2-47 | 2E02 | Main PCB failure (IC chip) | 2-51 |
| 2203 | Wrong M toner cartridge (The non-compliant toner cartridge is installed.) | 2-47 | 2E04 | Main PCB failure (IC chip) | 2-51 |
| 2400 | Wrong K toner cartridge (The incompatible toner cartridge is installed.) | 2-48 | 3801 | External temperature abnormality (Internal thermistor) | 2-51 |
| 2401 | Wrong Y toner cartridge (The incompatible toner cartridge is installed.) | 2-48 | 3A00 | Main PCB failure (Sub CPU) | 2-51 |
| 2402 | Wrong C toner cartridge (The incompatible toner cartridge is installed.) | 2-48 | 4001 | The K drum unit will be replaced soon. (Part life - Number of pages printed) | 2-52 |
| 2403 | Wrong M toner cartridge (The incompatible toner cartridge is installed.) | 2-48 | 4002 | The Y drum unit will be replaced soon. (Part life - Number of pages printed) | 2-52 |
| 2500 | Wrong K toner cartridge (Consumables information access error) | 2-49 | 4003 | The M drum unit will be replaced soon. (Part life - Number of pages printed) | 2-52 |
| 2501 | Wrong Y toner cartridge (Consumables information access error) | 2-49 | 4004 | The C drum unit will be replaced soon. (Part life - Number of pages printed) | 2-52 |
| 2502 | Wrong C toner cartridge (Consumables information access error) | 2-49 | 4201 | Replace the K drum. (Part life - Number of pages printed) | 2-52 |
| 2503 | Wrong M toner cartridge (Consumables information access error) | 2-49 | 4202 | Replace the Y drum. (Part life - Number of pages printed) | 2-52 |
| 2600 | Wrong K toner cartridge (The toner cartridge that does not match the model is installed.) | 2-50 | 4203 | Replace the M drum. (Part life - Number of pages printed) | 2-52 |
| 2601 | Wrong Y toner cartridge (The toner cartridge that does not match the model is installed.) | 2-50 | 4204 | Replace the C drum. (Part life - Number of pages printed) | 2-52 |
| 2602 | Wrong C toner cartridge (The toner cartridge that does not match the model is installed.) | 2-50 | 4300 | The belt unit will be replaced soon. (Part life - Number of pages printed) | 2-52 |
| 2603 | Wrong M toner cartridge (The toner cartridge that does not match the model is installed.) | 2-50 | 4400 | Replace the belt unit. (Part life - Number of pages printed) | 2-52 |
| 2800 | Wrong K toner cartridge (Non-genuine cartridge prohibited) | 2-51 | 4500 | Replace the fuser. (Part life - Number of pages printed) | 2-52 |
| 2801 | Wrong Y toner cartridge (Non-genuine cartridge prohibited) | 2-51 | 4700 | The waste toner box will be replaced soon. (Amount of waste toner) | 2-52 |
| 2802 | Wrong C toner cartridge (Non-genuine cartridge prohibited) | 2-51 | 4800 | Replace the waste toner box. (Amount of waste toner) | 2-53 |
| 2803 | Wrong M toner cartridge (Non-genuine cartridge prohibited) | 2-51 | 4A00 | Replace the waste toner box. (Number of belt cleaning roller rotations) | 2-54 |
| 2E00 | Main PCB failure (IC chip) | 2-51 | 4B01 | The K toner cartridge will be replaced soon. (Part life - DEV roller/Dot counter) | 2-54 |
| 2E01 | Data in the main PCB is damaged. | 2-51 | 4B02 | The Y toner cartridge will be replaced soon. (Part life - DEV roller/Dot counter) | 2-54 |

| Error codes | Description | Refer to: | Error codes | Description | Refer to: |
|---|---|---|---|---|---|
| 4B03 | The M toner cartridge will be replaced soon. (Part life - DEV roller/Dot counter) | 2-54 | 6203 | No M drum | 2-58 |
| 4B04 | The C toner cartridge will be replaced soon. (Part life - DEV roller/Dot counter) | 2-54 | 6204 | No C drum | 2-58 |
| 4C01 | Replace the K toner cartridge. (Part life - DEV roller/Dot counter) | 2-55 | 620A | No K drum | 2-60 |
| 4C02 | Replace the Y toner cartridge. (Part life - DEV roller/Dot counter) | 2-55 | 620B | No Y drum | 2-60 |
| 4C03 | Replace the M toner cartridge. (Part life - DEV roller/Dot counter) | 2-55 | 620C | No M drum | 2-60 |
| 4C04 | Replace the C toner cartridge. (Part life - DEV roller/Dot counter) | 2-55 | 620D | No C drum | 2-60 |
| 4C05 | Replace the Y/M/C toner cartridge in printing. (Part life - DEV roller/Dot counter) | 2-55 | 6300 | No waste toner box | 2-60 |
| 5001 | Replace the PF kit MP. (Part life - Number of pages printed) | 2-55 | 6400 | No belt unit | 2-61 |
| 5002 | Replace the PF kit T1. (Part life - Number of pages printed) | 2-55 | 6801 | High temperature inside the machine | 2-61 |
| 5003 | Replace the PF kit T2. (Part life - Number of pages printed) | 2-55 | 6901 | Fuser failure (When turning the power ON) | 2-62 |
| 5702 | Communication error when inserting the K toner cartridge. (Cartridge sensor) | 2-56 | 6902 | Fuser failure (When turning the power OFF and then back on again after 6901 occurred) | 2-62 |
| 5703 | Communication error when inserting the Y toner cartridge. (Cartridge sensor) | 2-56 | 6A00 | The drum unit abnormally discharged. (Corona wire) | 2-62 |
| 5704 | Communication error when inserting the C toner cartridge. (Cartridge sensor) | 2-56 | 6B01 | The K drum abnormally discharged. (Detected after exceeding twice of the drum life.) | 2-63 |
| 5705 | Communication error when inserting the M toner cartridge. (Cartridge sensor) | 2-56 | 6B02 | The Y drum abnormally discharged. (Detected after exceeding twice of the drum life.) | 2-63 |
| 6001 | Top cover open | 2-56 | 6B03 | The M drum abnormally discharged. (Detected after exceeding twice of the drum life.) | 2-63 |
| 6004 | Fuser cover open | 2-56 | 6B04 | The C drum abnormally discharged. (Detected after exceeding twice of the drum life.) | 2-63 |
| 6101 | No K toner cartridge | 2-57 | 6D00 | Too many LTs connected | 2-63 |
| 6102 | No Y toner cartridge | 2-57 | 6E00 | DEV roller press-contact/release error | 2-64 |
| 6103 | No M toner cartridge | 2-57 | 6F00 | Detected irregular power supply for less than 100 times. | 2-64 |
| 6104 | No C toner cartridge | 2-57 | 7000 | Jam inside (REG rear sensor: ON - Eject sensor: OFF) | 2-65 |
| 6201 | No K drum | 2-58 | 7100 | Jam rear (REG rear sensor: OFF - Eject sensor: ON) | 2-65 |
| 6202 | No Y drum | 2-58 | 7200 | MP tray jam (When printing from MP tray, the REG rear sensor is still OFF.) | 2-66 |

| Error codes | Description | Refer to: | Error codes | Description | Refer to: |
|---|---|---|---|---|---|
| 7302 | T1 jam (When printing from T1, the REG front sensor is still OFF.) | 2-66 | 9302 | No paper in T1 (T1 PF sensor) | 2-72 |
| 7402 | T2 jam (When printing from T2, the REG front sensor is still OFF.) | 2-67 | 9309 | No paper in all trays (Paper source setting: AUTO, PE sensor) | 2-72 |
| 7800 | DX tray jam | 2-67 | 930A | No paper in Fax/FilePrint printing | 2-73 |
| 7900 | MF tray jam | 2-68 | 9400 | An error for a specific user who uses the subscription service. | 2-41 |
| 8501 | T1 open (The error detected on the controller side before the registration of printing in the engine.) | 2-68 | 9401 | An error for a specific user who uses the subscription service. | 2-41 |
| 8502 | T2 open (The error detected on the controller side before the registration of printing in the engine.) | 2-68 | 9402 | An error for a specific user who uses the subscription service. | 2-41 |
| 8506 | T1 open (The error detected on the engine side after the registration of printing in the engine.) | 2-68 | 9403 | An error for a specific user who uses the subscription service. | 2-41 |
| 8903 | Back cover open - 2-sided printing (The error detected on the controller side before the registration of printing in the engine.) | 2-69 | 9404 | An error for a specific user who uses the subscription service. | 2-41 |
| 8904 | Back cover open - 2-sided printing (The error detected on the engine side after the registration of printing in the engine.) | 2-69 | 9405 | An error for a specific user who uses the subscription service. | 2-41 |
| 8A01 | The paper size for 2-sided printing is out of specification. (REG rear sensor) | 2-69 | 9406 | An error for a specific user who uses the subscription service. | 2-41 |
| 8C00 | No paper in MF tray (When printing from MF tray) | 2-69 | 9407 | An error for a specific user who uses the subscription service. | 2-41 |
| 8D01 | Paper size error (Print settings) | 2-70 | 9408 | An error for a specific user who uses the subscription service. | 2-41 |
| 8D02 | Paper size error (Print data) | 2-70 | 9409 | An error for a specific user who uses the subscription service. | 2-41 |
| 8E01 | Paper size error (FAX) | 2-70 | 940A | An error for a specific user who uses the subscription service. | 2-41 |
| 8E02 | Paper size error (FAX) | 2-70 | 940B | An error for a specific user who uses the subscription service. | 2-41 |
| 9001 | Paper size mismatch - MP tray (Printer driver setting, Printer setting) | 2-71 | 940C | An error for a specific user who uses the subscription service. | 2-41 |
| 9002 | T1 paper size mismatch (Printer driver setting, Printer setting) | 2-71 | 9701 | The paper size for 2-sided printing is out of specification. (Printer driver setting) | 2-73 |
| 9003 | T2 paper size mismatch (Printer driver setting, Printer setting) | 2-71 | 9702 | T1 paper size is out of specification. (Printer driver setting) | 2-73 |
| 9201 | MP tray paper type mismatch (Printer driver setting, Printer setting) | 2-71 | 9703 | T2 paper size is out of specification. (Printer driver setting) | 2-73 |
| 9202 | T1 paper type mismatch (Printer driver setting, Printer setting) | 2-71 | 9801 | Density calibration failure (Incorrect measured value) | 2-73 |
| 9203 | T2 paper type mismatch (Printer driver setting, Printer setting) | 2-71 | 9802 | Density calibration failure (Toner empty) | 2-73 |
| 9301 | No paper in MP tray (MP PE sensor) | 2-71 | 9803 | Density calibration failure (Others) | 2-74 |

| Error codes | Description | Refer to: | Error codes | Description | Refer to: |
|---|---|---|---|---|---|
| 9804 | Density sensor sensitivity adjustment (Function code 72) failure | 2-74 | C001 | EWS (Web based management) settings error | 2-80 |
| 9901 | Manual color registration failure (Incorrect measured value) | 2-74 | C002 | EWS (Web based management) settings error | 2-80 |
| 9902 | Manual color registration failure (Toner empty) | 2-74 | C003 | EWS (Web based management) settings error | 2-80 |
| 9903 | Manual color registration failure (Others) | 2-75 | C004 | EWS (Web based management) settings error | 2-80 |
| 9A01 | Auto color registration failure (Incorrect measured value) | 2-75 | C100 | Failure to save HEXDUMP data to USB flash memory (Function code 45) | 2-81 |
| 9A02 | Auto color registration failure (Toner empty) | 2-75 | C700 | Main PCB is out of memory (PC-Print) | 2-81 |
| 9A03 | Auto color registration failure (Others) | 2-76 | C800 | Main PCB is out of memory (Secure print) | 2-81 |
| 9B03 | No paper in T2 when FAX is printed. (T2 PE sensor) | 2-76 | C900 | Memory full for Storage device (USB flash memory) | 2-81 |
| 9E00 | An error for a specific user who uses the subscription service. | 2-41 | C901 | Memory full for Storage device (USB flash memory) | 2-81 |
| 9E01 | An error for a specific user who uses the subscription service. | 2-41 | CA00 | Communication error with Storage device (USB flash memory) | 2-81 |
| 9F00 | An error for a specific user who uses the subscription service. | 2-41 | D100 | Modem initialization failure | 2-81 |
| 9F01 | An error for a specific user who uses the subscription service. | 2-41 | D200 | Detected that the modem PCB is not connected. | 2-81 |
| 9F02 | An error for a specific user who uses the subscription service. | 2-41 | D800 | Touch panel initialization failure | 2-82 |
| 9F03 | An error for a specific user who uses the subscription service. | 2-41 | DB00 | Main PCB failure (ASIC) | 2-82 |
| A000 | Incorrect scanning data for 2nd side | 2-76 | E000 | Data in the main PCB is damaged. | 2-82 |
| A200 | The document is 90 cm or more in length. (ADF cover sensor) | 2-77 | E001 | Main PCB failure (Other operation errors) | 2-82 |
| A300 | The rear edge of document is not detected. (ADF cover sensor) | 2-77 | E100 | Program data error | 2-82 |
| A400 | ADF upper cover open | 2-77 | E500 | Main PCB failure (DRAM) | 2-82 |
| A500 | Scanning error when sending FAX (1st side) (First time) | 2-78 | E600 | Main PCB failure (EEPROM) | 2-82 |
| A600 | Scanning error when sending FAX (1st side) (Second time or later) | 2-78 | E701 | Main PCB failure (Flash) | 2-83 |
| AC00 | Scanning error when sending FAX (2nd side) (First time) | 2-78 | E900 | NFC initialization failure | 2-83 |
| AD00 | Incorrect scanning data | 2-79 | EB00 | An error for a specific user who uses the subscription service. | 2-41 |
| AF00 | CIS (FB unit) home position detection failure | 2-79 | EB01 | An error for a specific user who uses the subscription service. | 2-41 |
| B000 | Connection failure of CIS FFC (When Function code 55 is executed) | 2-79 | EB02 | An error for a specific user who uses the subscription service. | 2-41 |
| BB00 | White level data error (When Function code 55 is executed) | 2-79 | EB03 | An error for a specific user who uses the subscription service. | 2-41 |
| BC00 | Scanning error when sending FAX (2nd side) (Second time or later) | 2-80 | EB04 | An error for a specific user who uses the subscription service. | 2-41 |
| BD00 | Black level data error (When Function code 55 is executed) | 2-80 | EC00 | Abnormal current flowing through a USB connector (Eddy current) | 2-83 |
| BF00 | The document for scanning is 40 cm or more in length. (ADF 2-sided scanning) (ADF cover sensor) | 2-80 | F100 | Internal temperature abnormality (Internal thermistor) | 2-83 |

# 3.2 Error Messages

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

## 3.2.1 Non touch panel models

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **2-sided Disabled** | **Close the Back Cover and put the 2-sided Tray back in.** | Back cover open - 2-sided printing (The error detected on the controller side before the registration of printing in the engine.) | 8903 | 2-69 |
| | | Back cover open - 2-sided printing (The error detected on the engine side after the registration of printing in the engine.) | 8904 | 2-69 |
| **Belt End Soon** | **-** | The belt unit will be replaced soon. (Part life - Number of pages printed) | 4300 | 2-52 |
| **Calibrate** | **Calibration failed. Insufficient Toner for Calibration.** | Density calibration failure (Toner empty) | 9802 | 2-73 |
| | **Calibration failed. Press OK.** | Density calibration failure (Others) | 9803 | 2-74 |
| | **Calibration failed. Press OK.** | Density sensor sensitivity adjustment (Function code 72) failure | 9804 | 2-74 |
| | **Calibration failed. Turn the power off and then back on again.** | Density calibration failure (Incorrect measured value) | 9801 | 2-73 |
| **Cannot Connect** | **Make sure the machine is connected to your network.** | An error for a specific user who uses the subscription service. | 9F00 | 2-41 |
| | | An error for a specific user who uses the subscription service. | EB00 | 2-41 |
| **Cannot Detect** | **Put the Toner Cartridge back in.** | Wrong K toner cartridge (The incompatible toner cartridge is installed.) | 2400 | 2-48 |
| | | Wrong Y toner cartridge (The incompatible toner cartridge is installed.) | 2401 | 2-48 |
| | | Wrong C toner cartridge (The incompatible toner cartridge is installed.) | 2402 | 2-48 |
| | | Wrong M toner cartridge (The incompatible toner cartridge is installed.) | 2403 | 2-48 |
| **Cannot Print** | **Visit the subscription dashboard to check your account status.** | An error for a specific user who uses the subscription service. | 9E01 | 2-41 |
| **Cannot Print 01** | **Turn the power off and then back on again.** | Main PCB failure (ASIC / motor driver) | 0101 | 2-41 |
| **Cannot Print 02** | **Turn the power off and then back on again.** | Communication error of the PF motor / Unstable speed | 0201 | 2-41 |
| | | Process motor failure | 0202 | 2-41 |

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **Cannot Print 05** | **Turn the power off and then back on again.** | Fuser temperature abnormality (Low temperature, center thermistor) | 0501 | 2-42 |
| | | Fuser temperature abnormality (Low temperature, center thermistor) | 0502 | 2-42 |
| | | Fuser temperature abnormality (High temperature, center thermistor) | 0503 | 2-42 |
| | | Fuser temperature abnormality (Low temperature, center thermistor) | 0504 | 2-42 |
| | | Fuser temperature abnormality (Temperature rise, center thermistor) | 0505 | 2-42 |
| | | Fuser temperature abnormality (Temperature fall, center thermistor) | 0506 | 2-42 |
| | | Fuser temperature abnormality (Center thermistor, side thermistor) | 050A | 2-42 |
| | | Fuser temperature abnormality (Center thermistor, side thermistor) | 050B | 2-42 |
| | | Fuser temperature abnormality (Center thermistor, side thermistor) | 050C | 2-42 |
| **Cannot Print 08** | **Turn the power off and then back on again.** | Internal temperature abnormality (Internal thermistor) | 0800 | 2-42 |
| **Cannot Print 09** | **Turn the power off and then back on again.** | Detected irregular power supply for more than 100 times. | 0900 | 2-43 |
| **Cannot Print 0A** | **Turn the power off and then back on again.** | Fan failure | 0A02 | 2-43 |
| **Cannot Print 0B** | **Turn the power off and then back on again.** | HVPS PCB failure (during operating) | 0B01 | 2-43 |
| | | HVPS PCB failure (in the stand-by state) | 0B02 | 2-43 |
| **Cannot Print 0C** | **Turn the power off and then back on again.** | Density sensor failure | 0C00 | 2-44 |
| **Cannot Print 0E** | **Turn the power off and then back on again.** | HVPS PCB communication error | 0E00 | 2-44 |
| **Cannot Print 10** | **Turn the power off and then back on again.** | REG mark sensor R failure | 1003 | 2-44 |
| | | REG mark sensor L failure | 1004 | 2-44 |
| **Cannot Print 18** | **Turn the power off and then back on again.** | LT communication error (Main PCB - LT control PCB) | 1801 | 2-45 |
| **Cannot Print 1D** | **Turn the power off and then back on again.** | LED ASSY (K) communication error | 1D01 | 2-45 |
| | | LED ASSY (Y) communication error | 1D02 | 2-45 |
| | | LED ASSY (M) communication error | 1D03 | 2-45 |
| | | LED ASSY (C) communication error | 1D04 | 2-45 |
| **Cannot Print 1E** | **Turn the power off and then back on again.** | LED control PCB communication error (Access error) | 1E01 | 2-45 |
| | | LED control PCB communication error (Read/Write error) | 1E02 | 2-45 |
| **Cannot Print 2E** | **Turn the power off and then back on again.** | Main PCB failure (IC chip) | 2E00 | 2-51 |
| | | Data in the main PCB is damaged. | 2E01 | 2-51 |
| | | Main PCB failure (IC chip) | 2E02 | 2-51 |
| | | Main PCB failure (IC chip) | 2E04 | 2-51 |
| **Cannot Print 38** | **Turn the power off and then back on again.** | External temperature abnormality (Internal thermistor) | 3801 | 2-51 |
| **Cannot Print 3A** | **Turn the power off and then back on again.** | Main PCB failure (Sub CPU) | 3A00 | 2-51 |
| **Cannot Print C1** | **Turn the power off and then back on again.** | Failure to save HEXDUMP data to USB flash memory (Function code 45) | C100 | 2-81 |
| **Cannot Print D1** | **Turn the power off and then back on again.** | Modem initialization failure | D100 | 2-81 |

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| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **Cannot Print E0** | **Turn the power off and then back on again.** | Data in the main PCB is damaged. | E000 | 2-82 |
| | | Main PCB failure (Other operation errors) | E001 | 2-82 |
| **Cannot Print E5** | **Turn the power off and then back on again.** | Main PCB failure (DRAM) | E500 | 2-82 |
| **Cannot Print E6** | **Turn the power off and then back on again.** | Main PCB failure (EEPROM) | E600 | 2-82 |
| **Cannot Print E7** | **Turn the power off and then back on again.** | Main PCB failure (Flash) | E701 | 2-83 |
| **Cannot Print E9** | **Turn the power off and then back on again.** | NFC initialization failure | E900 | 2-83 |
| **Cannot Print F1** | **Turn the power off and then back on again.** | Internal temperature abnormality (Internal thermistor) | F100 | 2-83 |
| **Cannot Print ZC** | **Turn the power off and then back on again.** | Detected irregular power supply for less than 100 times. | 6F00 | 2-64 |
| **Cannot Scan** | **Document is too long for 2-sided scanning. Press Stop key.** | The document for scanning is 40 cm or more in length. (ADF 2-sided scanning) (ADF cover sensor) | BF00 | 2-80 |
| **Cannot Scan A0** | **Turn the power off and then back on again.** | Incorrect scanning data for 2nd side | A000 | 2-76 |
| **Cannot Scan AD** | **Turn the power off and then back on again.** | Incorrect scanning data | AD00 | 2-79 |
| **Cannot Scan AF** | **Turn the power off and then back on again.** | CIS (FB unit) home position detection failure | AF00 | 2-79 |
| **Cartridge Error** | **Open the Top Cover.Check color and position of toner cartridges.** | Wrong K toner cartridge (The toner cartridge other than black is installed.) | 2100 | 2-46 |
| | | Wrong Y toner cartridge (The toner cartridge other than yellow is installed.) | 2101 | 2-46 |
| | | Wrong C toner cartridge (The toner cartridge other than cyan is installed.) | 2102 | 2-46 |
| | | Wrong M toner cartridge (The toner cartridge other than magenta is installed.) | 2103 | 2-46 |
| **Change Cartridge** | **Install a non-subscription cartridge.** | An error for a specific user who uses the subscription service. | 9400 | 2-41 |
| | **Install a subscription cartridge.** | An error for a specific user who uses the subscription service. | 9408 | 2-41 |
| | **Install an unused subscription cartridge.** | An error for a specific user who uses the subscription service. | 9404 | 2-41 |
| | **Install your new subscription cartridge when it arrives. Press OK.** | An error for a specific user who uses the subscription service. | 940C | 2-41 |
| **Condensation** | **Leave switched ON. Fully open the Top cover. Wait 30 minutes, switch OFF and close cover, then switch ON.** | Condensation (Main PCB temperature/humidity sensor) | 1400 | 2-45 |
| **Cooling Down** | **Wait for a while** | High temperature inside the machine | 6801 | 2-61 |

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **Cover is Open** | **Close the ADF Cover.** | ADF upper cover open | | |
| | **Close the ADF Cover, then press the Stop Key.** | | A400 | 2-77 |
| | **Close the Fuser Cover which can be found behind the Back Cover of the machine.** | Fuser cover open | 6004 | 2-56 |
| | **Close the Top Cover.** | Top cover open | 6001 | 2-56 |
| **Document Jam** | **Clear the scanner jam, then press the Stop Key.** | The document is 90 cm or more in length. (ADF cover sensor) | A200 | 2-77 |
| | | The rear edge of document is not detected. (ADF cover sensor) | A300 | 2-77 |
| **Drum !** | **Slide the Green tab on Drum Unit. Black (BK)** | No K drum | 620A | 2-60 |
| | **Slide the Green tab on Drum Unit. Cyan (C).** | No C drum | 620D | 2-60 |
| | **Slide the Green tab on Drum Unit. Magenta (M).** | No M drum | 620C | 2-60 |
| | **Slide the Green tab on Drum Unit. Yellow (Y).** | No Y drum | 620B | 2-60 |
| **Drum End Soon:BK** | - | The K drum unit will be replaced soon. (Part life - Number of pages printed) | 4001 | 2-52 |
| **Drum End Soon:C** | - | The C drum unit will be replaced soon. (Part life - Number of pages printed) | 4004 | 2-52 |
| **Drum End Soon:M** | - | The M drum unit will be replaced soon. (Part life - Number of pages printed) | 4003 | 2-52 |
| **Drum End Soon:Y** | - | The Y drum unit will be replaced soon. (Part life - Number of pages printed) | 4002 | 2-52 |
| **Drum Stop** | **Replace the Drum Unit.Black(BK)** | The K drum abnormally discharged. (Detected after exceeding twice of the drum life.) | 6B01 | 2-63 |
| | **Replace the Drum Unit.Cyan(C)** | The C drum abnormally discharged. (Detected after exceeding twice of the drum life.) | 6B04 | 2-63 |
| | **Replace the Drum Unit.Magenta(M)** | The M drum abnormally discharged. (Detected after exceeding twice of the drum life.) | 6B03 | 2-63 |
| | **Replace the Drum Unit.Yellow(Y)** | The Y drum abnormally discharged. (Detected after exceeding twice of the drum life.) | 6B02 | 2-63 |
| **Jam 2-sided** | **Pull out the 2-sided Tray at the back of the machine and remove the jammed paper.** | DX tray jam | 7800 | 2-67 |
| **Jam Inside** | **Open the Top Cover, pull out the Drum Unit completely and remove the jammed paper.** | Jam inside (REG rear sensor: ON - Eject sensor: OFF) | 7000 | 2-65 |
| **Jam Manual Feed** | **Pull out the jammed paper from Manual Feed and press Start.** | MF tray jam | 7900 | 2-68 |

*Confidential*

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **Jam MP Tray** | **Pull out the jammed paper from MP Tray and press Start.** | MP tray jam (When printing from MP tray, the REG rear sensor is still OFF.) | 7200 | 2-66 |
| **Jam Rear** | **Open the Back Cover and remove the jammed paper, then press Start.** | Jam rear (REG rear sensor: OFF - Eject sensor: ON) | 7100 | 2-65 |
| **Jam Tray 1** | **Remove the jammed paper from Tray 1.** | T1 jam (When printing from T1, the REG front sensor is still OFF.) | 7302 | 2-66 |
| **Jam Tray 2** | **Remove the jammed paper from Tray 2.** | T2 jam (When printing from T2, the REG front sensor is still OFF.) | 7402 | 2-67 |
| **Log Access Error** | **Authentication Error, contact your administrator.** | EWS (Web based management) settings error | C002 | 2-80 |
| | **File Access Error, contact your administrator.** | EWS (Web based management) settings error | C003 | 2-80 |
| | **Server Timeout, contact your administrator.** | EWS (Web based management) settings error | C001 | 2-80 |
| | **Wrong Date&Time, contact your administrator.** | EWS (Web based management) settings error | C004 | 2-80 |
| **Machine Error** | **-** | Detected that the modem PCB is not connected. | D200 | 2-81 |
| **Manual Feed** | **Load Paper.** | No paper in MF tray (When printing from MF tray) | 8C00 | 2-69 |
| **Media Mismatch** | **Reload correct paper in the MP Tray, then press Start.** | MP tray paper type mismatch (Printer driver setting, Printer setting) | 9201 | 2-71 |
| | **Reload correct paper in Tray 1, then press Start.** | T1 paper type mismatch (Printer driver setting, Printer setting) | 9202 | 2-71 |
| | **Reload correct paper in Tray 2, then press Go.** | T2 paper type mismatch (Printer driver setting, Printer setting) | 9203 | 2-71 |
| **No Belt Unit** | **Open the Top Cover, pull out all 4 Drum Units completely and install the Belt Unit.** | No belt unit | 6400 | 2-61 |
| **No Drum Unit** | **Open the Top Cover, then install the Drum Unit. Black(BK)** | No K drum | 6201 | 2-58 |
| | **Open the Top Cover, then install the Drum Unit. Cyan(C)** | No C drum | 6204 | 2-58 |
| | **Open the Top Cover, then install the Drum Unit. Magenta(M)** | No M drum | 6203 | 2-58 |
| | **Open the Top Cover, then install the Drum Unit. Yellow(Y).** | No Y drum | 6202 | 2-58 |
| **No Paper** | **Reload paper in Tray.** | No paper in all trays (Paper source setting: AUTO, PE sensor) | 9309 | 2-72 |
| **No Paper MP** | **Reload paper in MP Tray.** | No paper in MP tray (MP PE sensor) | 9301 | 2-71 |
| **No Paper T1** | **Reload paper in Tray1.** | No paper in T1 (T1 PF sensor) | 9302 | 2-72 |

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **No Toner** | **Open the Top Cover, then install Toner Cartridge.** | Wrong K toner cartridge (Consumables information access error) | 2500 | 2-49 |
| | | Wrong Y toner cartridge (Consumables information access error) | 2501 | 2-49 |
| | | Wrong C toner cartridge (Consumables information access error) | 2502 | 2-49 |
| | | Wrong M toner cartridge (Consumables information access error) | 2503 | 2-49 |
| | **Open the Top Cover, then install Toner Cartridge. Black(BK).** | No K toner cartridge | 6101 | 2-57 |
| | **Open the Top Cover, then install Toner Cartridge. Cyan(C).** | No C toner cartridge | 6104 | 2-57 |
| | **Open the Top Cover, then install Toner Cartridge. Magenta(M).** | No M toner cartridge | 6103 | 2-57 |
| | **Open the Top Cover, then install Toner Cartridge. Yellow(Y).** | No Y toner cartridge | 6102 | 2-57 |
| **No Tray T1** | **Reinstall Tray 1** | T1 open (The error detected on the controller side before the registration of printing in the engine.) | 8501 | 2-68 |
| | | T1 open (The error detected on the engine side after the registration of printing in the engine.) | 8506 | 2-68 |
| **No Tray T2** | **Reinstall Tray 2** | T2 open (The error detected on the controller side before the registration of printing in the engine.) | 8502 | 2-68 |
| **No Waste Toner** | **Install the Waste Toner Box.** | No waste toner box | 6300 | 2-60 |
| **Out of Memory** | **Press Stop Key** | Main PCB is out of memory (PC-Print) | C700 | 2-81 |
| **Print Data Full** | **Print Data is full. Press Stop and delete the previously stored data.** | Main PCB is out of memory (Secure print) | C800 | 2-81 |
| **Registration** | **Registration failed. Insufficient Toner for Registration.** | Auto color registration failure (Toner empty) | 9A02 | 2-75 |
| | **Registration failed. Press OK.** | Manual color registration failure (Toner empty) | 9902 | 2-74 |
| | | Manual color registration failure (Others) | 9903 | 2-75 |
| | | Auto color registration failure (Others) | 9A03 | 2-76 |
| | **Registration failed. Turn the power off and then back on again.** | Manual color registration failure (Toner empty) | 9901 | 2-74 |
| | | Auto color registration failure (Incorrect measured value) | 9A01 | 2-75 |
| **Replace Belt** | - | Replace the belt unit. (Part life - Number of pages printed) | 4400 | 2-52 |
| **Replace Drum: BK** | - | Replace the K drum. (Part life - Number of pages printed) | 4201 | 2-52 |

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **Replace Drum: C** | - | Replace the C drum. (Part life - Number of pages printed) | 4204 | 2-52 |
| **Replace Drum: M** | - | Replace the M drum. (Part life - Number of pages printed) | 4203 | 2-52 |
| **Replace Drum: Y** | - | Replace the Y drum. (Part life - Number of pages printed) | 4202 | 2-52 |
| **Replace Fuser** | - | Replace the fuser. (Part life - Number of pages printed) | 4500 | 2-52 |
| **Replace PF KitMP** | - | Replace the PF kit MP. (Part life - Number of pages printed) | 5001 | 2-55 |
| **Replace Toner** | **Open the Top Cover, replace Toner Cartridge. Black (BK).** | Replace the K toner cartridge. (Part life - DEV roller/Dot counter) | 4C01 | 2-55 |
| | **Open the Top Cover, replace Toner Cartridge. Cyan (C).** | Replace the C toner cartridge. (Part life - DEV roller/Dot counter) | 4C04 | 2-55 |
| | **Open the Top Cover, replace Toner Cartridge. Magenta (M).** | Replace the M toner cartridge. (Part life - DEV roller/Dot counter) | 4C03 | 2-55 |
| | **Open the Top Cover, replace Toner Cartridge. Yellow (Y).** | Replace the Y toner cartridge. (Part life - DEV roller/Dot counter) | 4C02 | 2-55 |
| **Replace WT Box** | **Replace the Waste Toner Box inside the machine.** | Replace the waste toner box. (Number of belt cleaning roller rotations) | 4A00 | 2-54 |
| | | Replace the waste toner box. (Amount of waste toner) | 4800 | 2-53 |
| **Self-Diagnostic** | **Turn the power off, then on again. Leave the machine for 15 min.** | Fuser failure (When turning the power ON) | 6901 | 2-62 |
| | **Will Automatically Restart within 15 minutes.** | Fuser failure (When turning the power OFF and then back on again after 6901 occurred) | 6902 | 2-62 |
| **Short paper** | **Open the Back Cover and then press Start.** | Paper size error (Print settings) | 8D01 | 2-70 |
| **Size Error** | **Specify the correct paper size for Tray 1.** | T1 paper size is out of specification. (Printer driver setting) | 9702 | 2-73 |
| | **Specify the correct paper size for Tray 2.** | T2 paper size is out of specification. (Printer driver setting) | 9703 | 2-73 |
| **Size Error DX** | **Press Stop Key. Specify the correct paper and load the same size paper as the Printer driver setting.** | The paper size for 2-sided printing is out of specification. (Printer driver setting) | 9701 | 2-73 |
| | **Specify the correct paper.** | The paper size for 2-sided printing is out of specification. (REG rear sensor) | 8A01 | 2-69 |
| **Size mismatch** | **Fax received. Set correct paper size in menu.** | Paper size error (FAX) | 8E01 | 2-70 |

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **Size Mismatch** | **Load #S paper in #T and press Go.** | T2 paper size mismatch (Printer driver setting, Printer setting) | 9003 | 2-71 |
| | **Reload correct paper.** | Paper size error (FAX) | 8E02 | 2-70 |
| | **Reload correct paper in the MP Tray, then press Start.** | Paper size mismatch - MP tray (Printer driver setting, Printer setting) | 9001 | 2-71 |
| | **Reload correct paper in Tray1, then press Start.** | T1 paper size mismatch (Printer driver setting, Printer setting) | 9002 | 2-71 |
| **Storage Full** | **There is limited free space on the storage device.** | Memory full for Storage device (USB flash memory) | C901 | 2-81 |
| **Toner Error** | **One or more Toner Cartridges are not detected. Pull out and reinsert all 4 Toner Cartridges.** | DEV roller press-contact/release error | 6E00 | 2-64 |
| **Toner Low: BK** | - | The K toner cartridge will be replaced soon. (Part life - DEV roller/ Dot counter) | 4B01 | 2-54 |
| **Toner Low: C** | - | The C toner cartridge will be replaced soon. (Part life - DEV roller/ Dot counter) | 4B04 | 2-54 |
| **Toner Low: M** | - | The M toner cartridge will be replaced soon. (Part life - DEV roller/ Dot counter) | 4B03 | 2-54 |
| **Toner Low: Y** | - | The Y toner cartridge will be replaced soon. (Part life - DEV roller/ Dot counter) | 4B02 | 2-54 |
| **Too Many Trays** | **Turn the power off and remove additional trays.** | Too many LTs connected | 6D00 | 2-63 |
| **Unusable Device** | **Remove the Device. Turn the power off and back on again.** | Abnormal current flowing through a USB connector (Eddy current) | EC00 | 2-83 |
| **Wrong Toner** | **Open the Top Cover, then install Toner Cartridge.** | Wrong K toner cartridge (The non-compliant toner cartridge is installed.) | 2200 | 2-47 |
| | | Wrong Y toner cartridge (The non-compliant toner cartridge is installed.) | 2201 | 2-47 |
| | | Wrong C toner cartridge (The non-compliant toner cartridge is installed.) | 2202 | 2-47 |
| | | Wrong M toner cartridge (The non-compliant toner cartridge is installed.) | 2203 | 2-47 |
| **WT Box End Soon** | - | The waste toner box will be replaced soon. (Amount of waste toner) | 4700 | 2-52 |

## 3.2.2 Touch panel models

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| **1st message** | **2nd message** | | | |
| **2-sided Disabled** | **Close the Back Cover and put the 2-sided Tray back in.** | Back cover open - 2-sided printing (The error detected on the controller side before the registration of printing in the engine.) | 8903 | 2-69 |
| | | Back cover open - 2-sided printing (The error detected on the engine side after the registration of printing in the engine.) | 8904 | 2-69 |
| **Calibration** | **Calibration failed. Insufficient Toner for Calibration.** | Density calibration failure (Toner empty) | 9802 | 2-73 |
| | **Calibration failed. Press [OK]** | Density calibration failure (Others) | 9803 | 2-74 |
| | **Calibration failed. Press [OK]** | Density sensor sensitivity adjustment (Function code 72) failure | 9804 | 2-74 |
| | **Calibration failed. Turn the power off and then back on again.** | Density calibration failure (Incorrect measured value) | 9801 | 2-73 |
| **Cannot Connect** | **Make sure the machine is connected to your network. Go to Settings > Subscription > Check Status. If the connection issue remains, you may not be able to print.** | An error for a specific user who uses the subscription service. | EB00 | 2-41 |
| | **Make sure the machine is connected to your network. Go to Settings > Subscription > Check Status.** | An error for a specific user who uses the subscription service. | 9F00 | 2-41 |
| | **To be able to print, make sure the machine is connected to your network. Go to Settings > Subscription >Check Status.** | An error for a specific user who uses the subscription service. | 9E00 | 2-41 |
| **Cannot Detect** | **Put the Toner Cartridge back in. [C][M][Y][K]** | Wrong K toner cartridge (The incompatible toner cartridge is installed.) | 2400 | 2-48 |
| | | Wrong Y toner cartridge (The incompatible toner cartridge is installed.) | 2401 | 2-48 |
| | | Wrong C toner cartridge (The incompatible toner cartridge is installed.) | 2402 | 2-48 |
| | | Wrong M toner cartridge (The incompatible toner cartridge is installed.) | 2403 | 2-48 |
| **Cannot Print 01** | **Turn the power off and then back on again.** | Main PCB failure (ASIC / motor driver) | 0101 | 2-41 |

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **Cannot Print 02** | **Turn the power off and then back on again.** | Communication error of the PF motor / Unstable speed | 0201 | 2-41 |
| | | Process motor failure | 0202 | 2-41 |
| **Cannot Print 05** | **Turn the power off and then back on again.** | Fuser temperature abnormality (Low temperature, center thermistor) | 0501 | 2-42 |
| | | Fuser temperature abnormality (Low temperature, center thermistor) | 0502 | 2-42 |
| | | Fuser temperature abnormality (High temperature, center thermistor) | 0503 | 2-42 |
| | | Fuser temperature abnormality (Low temperature, center thermistor) | 0504 | 2-42 |
| | | Fuser temperature abnormality (Temperature rise, center thermistor) | 0505 | 2-42 |
| | | Fuser temperature abnormality (Temperature fall, center thermistor) | 0506 | 2-42 |
| | | Fuser temperature abnormality (Center thermistor, side thermistor) | 050A | 2-42 |
| | | Fuser temperature abnormality (Center thermistor, side thermistor) | 050B | 2-42 |
| | | Fuser temperature abnormality (Center thermistor, side thermistor) | 050C | 2-42 |
| **Cannot Print 08** | **Turn the power off and then back on again.** | Internal temperature abnormality (Internal thermistor) | 0800 | 2-42 |
| **Cannot Print 09** | **Turn the power off and then back on again.** | Detected irregular power supply for more than 100 times. | 0900 | 2-43 |
| **Cannot Print 0A** | **Turn the power off and then back on again.** | Fan failure | 0A02 | 2-43 |
| **Cannot Print 0B** | **Turn the power off and then back on again.** | HVPS PCB failure (during operating) | 0B01 | 2-43 |
| | | HVPS PCB failure (in the stand-by state) | 0B02 | 2-43 |
| **Cannot Print 0C** | **Turn the power off and then back on again.** | Density sensor failure | 0C00 | 2-44 |
| **Cannot Print 0E** | **Turn the power off and then back on again.** | HVPS PCB communication error | 0E00 | 2-44 |
| **Cannot Print 10** | **Turn the power off and then back on again.** | REG mark sensor R failure | 1003 | 2-44 |
| | | REG mark sensor L failure | 1004 | 2-44 |
| **Cannot Print 18** | **Turn the power off and then back on again.** | LT communication error (Main PCB - LT control PCB) | 1801 | 2-45 |
| **Cannot Print 1D** | **Turn the power off and then back on again.** | LED ASSY (K) communication error | 1D01 | 2-45 |
| | | LED ASSY (Y) communication error | 1D02 | 2-45 |
| | | LED ASSY (M) communication error | 1D03 | 2-45 |
| | | LED ASSY (C) communication error | 1D04 | 2-45 |
| **Cannot Print 1E** | **Turn the power off and then back on again.** | LED control PCB communication error (Access error) | 1E01 | 2-45 |
| | | LED control PCB communication error (Read/Write error) | 1E02 | 2-45 |
| **Cannot Print 2E** | **Turn the power off and then back on again.** | Main PCB failure (IC chip) | 2E00 | 2-51 |
| | | Data in the main PCB is damaged. | 2E01 | 2-51 |
| | | Main PCB failure (IC chip) | 2E02 | 2-51 |
| | | Main PCB failure (IC chip) | 2E04 | 2-51 |
| **Cannot Print 38** | **Turn the power off and then back on again.** | External temperature abnormality (Internal thermistor) | 3801 | 2-51 |
| **Cannot Print 3A** | **Turn the power off and then back on again.** | Main PCB failure (Sub CPU) | 3A00 | 2-51 |
| **Cannot Print D1** | **Turn the power off and then back on again.** | Modem initialization failure | D100 | 2-81 |
| **Cannot Print DB** | **Turn the power off and then back on again.** | Main PCB failure (ASIC) | DB00 | 2-82 |

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **Cannot Print E0** | **Turn the power off and then back on again.** | Data in the main PCB is damaged. | E000 | 2-82 |
| | | Main PCB failure (Other operation errors) | E001 | 2-82 |
| **Cannot Print E5** | **Turn the power off and then back on again.** | Main PCB failure (DRAM) | E500 | 2-82 |
| **Cannot Print E6** | **Turn the power off and then back on again.** | Main PCB failure (EEPROM) | E600 | 2-82 |
| **Cannot Print E7** | **Turn the power off and then back on again.** | Main PCB failure (Flash) | E701 | 2-83 |
| **Cannot Print E9** | **Turn the power off and then back on again.** | NFC initialization failure | E900 | 2-83 |
| **Cannot Print ZC** | **Turn the power off and then back on again.** | Detected irregular power supply for less than 100 times. | 6F00 | 2-64 |
| **Cannot Print F1** | **Turn the power off and then back on again.** | Internal temperature abnormality (Internal thermistor) | F100 | 2-83 |
| **Cannot Scan** | **Document is too long for 2-sided scanning. Press Stop[x].** | The document for scanning is 40 cm or more in length. (ADF 2-sided scanning) (ADF cover sensor) | BF00 | 2-80 |
| **Cannot Scan A0** | **Turn the power off and then back on again.** | Incorrect scanning data for 2nd side | A000 | 2-76 |
| **Cannot Scan AD** | **Turn the power off and then back on again.** | Incorrect scanning data | AD00 | 2-79 |
| **Cannot Scan AF** | **Turn the power off and then back on again.** | CIS (FB unit) home position detection failure | AF00 | 2-79 |
| **Cartridge Error** | **Open the Top Cover. Check color and position of toner cartridges. [C][M][Y][K]** | Wrong K toner cartridge (The toner cartridge other than black is installed.) | 2100 | 2-46 |
| | | Wrong Y toner cartridge (The toner cartridge other than yellow is installed.) | 2101 | 2-46 |
| | | Wrong C toner cartridge (The toner cartridge other than cyan is installed.) | 2102 | 2-46 |
| | | Wrong M toner cartridge (The toner cartridge other than magenta is installed.) | 2103 | 2-46 |
| | **Reinstall the Toner Cartridge. [BK] Black** | Communication error when inserting the K toner cartridge. (Cartridge sensor) | 5702 | 2-56 |
| | **Reinstall the Toner Cartridge. [C] Cyan** | Communication error when inserting the C toner cartridge. (Cartridge sensor) | 5704 | 2-56 |
| | **Reinstall the Toner Cartridge. [M] Magenta** | Communication error when inserting the M toner cartridge. (Cartridge sensor) | 5705 | 2-56 |
| | **Reinstall the Toner Cartridge. [Y] Yellow** | Communication error when inserting the Y toner cartridge. (Cartridge sensor) | 5703 | 2-56 |
| **Change Cartridge** | **Install your new subscription cartridge when it arrives.** | An error for a specific user who uses the subscription service. | 940C | 2-41 |
| | **Non-subscription cartridge detected. You will still be charged your monthly plan rate. Install a subscription cartridge to provide accurate usage data.** | An error for a specific user who uses the subscription service. | 9408 | 2-41 |

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **Condensation** | **Leave switched ON. Fully open the Top Cover. Wait 30 minutes, switch OFF and close cover, then switch ON.** | Condensation (Main PCB temperature/humidity sensor) | 1400 | 2-45 |
| **Cooling Down** | **Wait for a while.** | High temperature inside the machine | 6801 | 2-61 |
| **Cover is Open.** | **Close the ADF Cover.** | ADF upper cover open | A400 | 2-77 |
| | **Close the ADF Cover, then press Stop[x].** | | | |
| | **Close the Back Cover of the Machine** | Fuser cover open | 6004 | 2-56 |
| | **Close the Top Cover.** | Top cover open | 6001 | 2-56 |
| **Document Jam** | **Clear the scanner jam, then press Stop[x].** | The document is 90 cm or more in length. (ADF cover sensor) | A200 | 2-77 |
| | | The rear edge of document is not detected. (ADF cover sensor) | A300 | 2-77 |
| **Drum !** | **Open the Top Cover. Pull out all four drum and toner cartridge assemblies. Slide the Green tab on Drum Unit. [BK] Black [C] Cyan [M] Magenta [Y] Yellow** | The drum unit abnormally discharged. (Corona wire) | 6A00 | 2-62 |
| | **Open the Top Cover. Pull out the drum unit and toner cartridge. Slide the Green tab on Drum Unit. [BK] Black** | No K drum | 620A | 2-60 |
| | **Open the Top Cover. Pull out the drum unit and toner cartridge. Slide the Green tab on Drum Unit. [C] Cyan [M] Magenta [Y] Yellow** | No Y drum | 620B | 2-60 |
| | **Open the Top Cover. Pull out the drum unit and toner cartridge. Slide the Green tab on Drum Unit. [C] Cyan [M] Magenta [Y] Yellow** | No M drum | 620C | 2-60 |
| | **Open the Top Cover. Pull out the drum unit and toner cartridge. Slide the Green tab on Drum Unit. [C] Cyan [M] Magenta [Y] Yellow** | No C drum | 620D | 2-60 |

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **Drum Stop** | **Replace the Drum Unit. Refer to the instructions in the carton of the new drum. [BK]** | The K drum abnormally discharged. (Detected after exceeding twice of the drum life.) | 6B01 | 2-63 |
| | **Replace the Drum Unit. Refer to the instructions in the carton of the new drum. [C]** | The C drum abnormally discharged. (Detected after exceeding twice of the drum life.) | 6B04 | 2-63 |
| | **Replace the Drum Unit. Refer to the instructions in the carton of the new drum. [M]** | The M drum abnormally discharged. (Detected after exceeding twice of the drum life.) | 6B03 | 2-63 |
| | **Replace the Drum Unit. Refer to the instructions in the carton of the new drum. [Y]** | The Y drum abnormally discharged. (Detected after exceeding twice of the drum life.) | 6B02 | 2-63 |
| **Jam 2-sided** | **Pull out the 2-sided Tray. Remove the jammed paper.** | DX tray jam | 7800 | 2-67 |
| **Jam Inside** | **Open the Top Cover. Pull out all four drum and toner cartridge assemblies. Remove the jammed paper.** | Jam inside (REG rear sensor: ON - Eject sensor: OFF) | 7000 | 2-65 |
| **Jam Manual Feed** | **Pull out the jammed paper from Manual Feed and press [Retry].** | MF tray jam | 7900 | 2-68 |
| **Jam MP Tray** | **Remove the jammed paper from MP Tray and press [Retry].** | MP tray jam (When printing from MP tray, the REG rear sensor is still OFF.) | 7200 | 2-66 |
| **Jam Rear** | **Open the Back Cover and remove the jammed paper, then press [Retry].** | Jam rear (REG rear sensor: OFF - Eject sensor: ON) | 7100 | 2-65 |
| **Jam Tray 1** | **Remove the jammed paper from Tray 1.** | T1 jam (When printing from T1, the REG front sensor is still OFF.) | 7302 | 2-66 |
| **Jam Tray 2** | **Remove the jammed paper from Tray 2.** | T2 jam (When printing from T2, the REG front sensor is still OFF.) | 7402 | 2-67 |

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| Log Access Error | Authentication Error, contact your administrator. | EWS (Web based management) settings error | C002 | 2-80 |
| | File Access Error, contact your administrator. | EWS (Web based management) settings error | C003 | 2-80 |
| | Server Timeout, contact your administrator. | EWS (Web based management) settings error | C001 | 2-80 |
| | Wrong Date&Time, contact your administrator. | EWS (Web based management) settings error | C004 | 2-80 |
| Machine Error | - | Detected that the modem PCB is not connected. | D200 | 2-81 |
| Maintenance | Replace Fuser | Replace the fuser. (Part life - Number of pages printed) | 4500 | 2-52 |
| | Replace PF Kit 1 | Replace the PF kit T1. (Part life - Number of pages printed) | 5002 | 2-55 |
| | Replace PF Kit 2 | Replace the PF kit T2. (Part life - Number of pages printed) | 5003 | 2-55 |
| | Replace PF Kit MP | Replace the PF kit MP. (Part life - Number of pages printed) | 5001 | 2-55 |
| Manual Feed | Load paper. | No paper in MF tray (When printing from MF tray) | 8C00 | 2-69 |
| Media Type Mismatch | Reload correct paper in MP Tray, then press [Retry]. | MP tray paper type mismatch (Printer driver setting, Printer setting) | 9201 | 2-71 |
| | Reload correct paper in Tray1, then press [Retry]. | T1 paper type mismatch (Printer driver setting, Printer setting) | 9202 | 2-71 |
| | Reload correct paper in Tray2, then press [Retry]. | T2 paper type mismatch (Printer driver setting, Printer setting) | 9203 | 2-71 |
| No Belt Unit | Open the Top Cover, pull out all 4 Drum Units completely and install the Belt Unit. | No belt unit | 6400 | 2-61 |
| No Drum Unit | Open the Top Cover, then install the Drum Unit. [BK] Black | No K drum | 6201 | 2-58 |
| | Open the Top Cover, then install the Drum Unit. [C] Cyan | No C drum | 6204 | 2-58 |
| | Open the Top Cover, then install the Drum Unit. [M] Magenta | No M drum | 6203 | 2-58 |
| | Open the Top Cover, then install the Drum Unit. [Y] Yellow | No Y drum | 6202 | 2-58 |
| No Paper | Reload paper in Tray. | No paper in all trays (Paper source setting: AUTO, PE sensor) | 9309 | 2-72 |
| No Paper MP | Reload paper in MP Tray. | No paper in MP tray (MP PE sensor) | 9301 | 2-71 |
| No Paper Tray1 | Reload paper in Tray 1. | No paper in T1 (T1 PF sensor) | 9302 | 2-72 |

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **No Toner** | **Open the Top Cover, then install Toner Cartridge. [C][M][Y][K]** | Wrong K toner cartridge (Consumables information access error) | 2500 | 2-49 |
| | | Wrong Y toner cartridge (Consumables information access error) | 2501 | 2-49 |
| | | Wrong C toner cartridge (Consumables information access error) | 2502 | 2-49 |
| | | Wrong M toner cartridge (Consumables information access error) | 2503 | 2-49 |
| | **Open the Top Cover, then install Toner Cartridge. [BK] Black** | No K toner cartridge | 6101 | 2-57 |
| | **Open the Top Cover, then install Toner Cartridge. [C] Cyan** | No C toner cartridge | 6104 | 2-57 |
| | **Open the Top Cover, then install Toner Cartridge. [M] Magenta** | No M toner cartridge | 6103 | 2-57 |
| | **Open the Top Cover, then install Toner Cartridge. [Y] Yellow** | No Y toner cartridge | 6102 | 2-57 |
| **No Tray T1** | **Reinstall Tray 1.** | T1 open (The error detected on the controller side before the registration of printing in the engine.) | 8501 | 2-68 |
| | | T1 open (The error detected on the engine side after the registration of printing in the engine.) | 8506 | 2-68 |
| **No Tray T2** | **Reinstall Tray 2.** | T2 open (The error detected on the controller side before the registration of printing in the engine.) | 8502 | 2-68 |
| **No Waste Toner** | **Install the Waste Toner Box.** | No waste toner box | 6300 | 2-60 |
| **Out of Memory** | **Press stop[x].** | Main PCB is out of memory (PC-Print) | C700 | 2-81 |
| **Print Data Full** | **Print Data is full. Press Stop[x] and delete the previously stored data.** | Main PCB is out of memory (Secure print) | C800 | 2-81 |
| **Received Fax 9B** | **Set the appropriate paper in expect Tray 2.** | No paper in T2 when FAX is printed. (T2 PE sensor) | 9B03 | 2-76 |

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **Registration** | **Registration failed. Insufficient Toner for Registration.** | Auto color registration failure (Toner empty) | 9A02 | 2-75 |
| | **Registration failed. Press [OK]** | Manual color registration failure (Toner empty) | 9902 | 2-74 |
| | | Manual color registration failure (Others) | 9903 | 2-75 |
| | | Auto color registration failure (Others) | 9A03 | 2-76 |
| | **Registration failed. Turn the power off and then back on again.** | Manual color registration failure (Toner empty) | 9901 | 2-74 |
| | | Auto color registration failure (Incorrect measured value) | 9A01 | 2-75 |
| **Replace Toner** | **Open the Top Cover Pull out the drum unit with toner to be replaced. Press the green lever. Replace toner. [BK] Black** | Replace the K toner cartridge. (Part life - DEV roller/Dot counter) | 4C01 | 2-55 |
| | **Open the Top Cover Pull out the drum unit with toner to be replaced. Press the green lever. Replace toner. [C] Cyan** | Replace the C toner cartridge. (Part life - DEV roller/Dot counter) | 4C04 | 2-55 |
| | **Open the Top Cover. Pull out the drum unit with toner to be replaced. Press the green lever. Replace toner. [C] Cyan [M] Magenta [Y] Yellow** | Replace the Y/M/C toner cartridge in printing. (Part life - DEV roller/Dot counter) | 4C05 | 2-55 |
| | **Open the Top Cover Pull out the drum unit with toner to be replaced. Press the green lever. Replace toner. [M] Magenta** | Replace the M toner cartridge. (Part life - DEV roller/Dot counter) | 4C03 | 2-55 |
| | **Open the Top Cover Pull out the drum unit with toner to be replaced. Press the green lever. Replace toner. [Y] Yellow** | Replace the Y toner cartridge. (Part life - DEV roller/Dot counter) | 4C02 | 2-55 |
| **Replace WT Box** | **Replace the Waste Toner Box inside the machine.** | Replace the waste toner box. (Amount of waste toner) | 4800 | 2-53 |
| **Self-Diagnostic** | **Turn the power off, then on again. Leave the machine for 15 min.** | Fuser failure (When turning the power ON) | 6901 | 2-62 |
| | **Will Automatically Restart within 15 minutes.** | Fuser failure (When turning the power OFF and then back on again after 6901 occurred) | 6902 | 2-62 |

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **Short paper** | **Open the Back Cover and then press [Retry].** | Paper size error (Print settings) | 8D01 | 2-70 |
| **Size Error** | **Specify the correct paper size for Tray 1.** | T1 paper size is out of specification. (Printer driver setting) | 9702 | 2-73 |
| | **Specify the correct paper size for Tray 2.** | T2 paper size is out of specification. (Printer driver setting) | 9703 | 2-73 |
| **Size Error 2-sided** | **Press [OK]. Specify the correct paper and load the same size paper as the Printer driver setting.** | The paper size for 2-sided printing is out of specification. (Printer driver setting) | 9701 | 2-73 |
| | **Specify the correct paper** | The paper size for 2-sided printing is out of specification. (REG rear sensor) | 8A01 | 2-69 |
| **Size Mismatch** | **Fax received. Set correct paper size in menu.** | Paper size error (FAX) | 8E01 | 2-70 |
| | **Reload correct paper.** | Paper size error (FAX) | 8E02 | 2-70 |
| | **Reload correct paper in MP Tray, then press [Retry].** | Paper size mismatch - MP tray (Printer driver setting, Printer setting) | 9001 | 2-71 |
| | **Reload correct paper in Tray 1, then press [Retry].** | T1 paper size mismatch (Printer driver setting, Printer setting) | 9002 | 2-71 |
| | **Reload correct paper in Tray2, then press [Retry].** | T2 paper size mismatch (Printer driver setting, Printer setting) | 9003 | 2-71 |
| **Storage Full** | **There is limited free space on the storage device.** | Memory full for Storage device (USB flash memory) | C901 | 2-81 |

| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **Supplies** | **Belt End Soon** | The belt unit will be replaced soon. (Part life - Number of pages printed) | 4300 | 2-52 |
| | **Drum End Soon: [BK]** | The K drum unit will be replaced soon. (Part life - Number of pages printed) | 4001 | 2-52 |
| | **Drum End Soon: [Y]** | The Y drum unit will be replaced soon. (Part life - Number of pages printed) | 4002 | 2-52 |
| | **Drum End Soon: [M]** | The M drum unit will be replaced soon. (Part life - Number of pages printed) | 4003 | 2-52 |
| | **Drum End Soon: [C]** | The C drum unit will be replaced soon. (Part life - Number of pages printed) | 4004 | 2-52 |
| | **Replace Belt** | Replace the belt unit. (Part life - Number of pages printed) | 4400 | 2-52 |
| | **Replace Drum: [BK]** | Replace the K drum. (Part life - Number of pages printed) | 4201 | 2-52 |
| | **Replace Drum: [Y]** | Replace the Y drum. (Part life - Number of pages printed) | 4202 | 2-52 |
| | **Replace Drum: [M]** | Replace the M drum. (Part life - Number of pages printed) | 4203 | 2-52 |
| | **Replace Drum: [C]** | Replace the C drum. (Part life - Number of pages printed) | 4204 | 2-52 |
| | **Toner Low: [BK]** | The K toner cartridge will be replaced soon. (Part life - DEV roller/ Dot counter) | 4B01 | 2-54 |
| | **Toner Low: [Y]** | The Y toner cartridge will be replaced soon. (Part life - DEV roller/ Dot counter) | 4B02 | 2-54 |
| | **Toner Low: [M]** | The M toner cartridge will be replaced soon. (Part life - DEV roller/ Dot counter) | 4B03 | 2-54 |
| | **Toner Low: [C]** | The C toner cartridge will be replaced soon. (Part life - DEV roller/ Dot counter) | 4B04 | 2-54 |
| | **WT Box End Soon** | The waste toner box will be replaced soon. (Amount of waste toner) | 4700 | 2-52 |
| **Toner Error** | **One or more Toner Cartridges are not detected. Pull out and reinsert all 4 Toner Cartridges.** | DEV roller press-contact/release error | 6E00 | 2-64 |
| **Too Many Trays** | **Turn the power off and remove additional trays.** | Too many LTs connected | 6D00 | 2-63 |
| **Touchscreen Initialization Failed** | **Remove any material which is on the touchscreen.** | Touch panel initialization failure | D800 | 2-82 |
| **Unusable Device** | **Remove the Device. Turn the power off and back on again.** | Abnormal current flowing through a USB connector (Eddy current) | EC00 | 2-83 |

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| Error messages | | Description | Error codes | Refer to: |
|---|---|---|---|---|
| 1st message | 2nd message | | | |
| **Wrong Toner Cartridge** | **Open the Top Cover, then install Toner Cartridge. [C][M][Y][K]** | Wrong K toner cartridge (The non-compliant toner cartridge is installed.) | 2200 | 2-47 |
| | | Wrong Y toner cartridge (The non-compliant toner cartridge is installed.) | 2201 | 2-47 |
| | | Wrong C toner cartridge (The non-compliant toner cartridge is installed.) | 2202 | 2-47 |
| | | Wrong M toner cartridge (The non-compliant toner cartridge is installed.) | 2203 | 2-47 |
| | **Open the Top Cover, then install Toner Cartridge. [BK] Black** | Wrong K toner cartridge (The toner cartridge that does not match the model is installed.) | 2600 | 2-50 |
| | **Open the Top Cover, then install Toner Cartridge. [C] Cyan** | Wrong C toner cartridge (The toner cartridge that does not match the model is installed.) | 2602 | 2-50 |
| | **Open the Top Cover, then install Toner Cartridge. [M] Magenta** | Wrong M toner cartridge (The toner cartridge that does not match the model is installed.) | 2603 | 2-50 |
| | **Open the Top Cover, then install Toner Cartridge. [Y] Yellow** | Wrong Y toner cartridge (The toner cartridge that does not match the model is installed.) | 2601 | 2-50 |

# 3.3   Communication Error Codes

| Code 1 | Code 2 | Cause | Refer to: |
|--------|--------|-------|-----------|
| 10 | 07 | No document set when calling. | 4.8.1 |
| 10 | 08 | Wrong fax number called. | 4.10.1 |
| 11 | 01 | No dial tone detected before dialing. | 4.10.1 |
| 11 | 02 | Busy tone detected before dialing. | 4.10.1 |
| 11 | 03 | 2nd dial tone not detected. | 4.10.1 |
| 11 | 05 | No loop current detected. | 4.10.1 |
| 11 | 06 | Busy tone detected after dialing or receiving a call. | 4.10.1 |
| 11 | 07 | No response from the receiver in sending. | 4.10.1 |
| 11 | 08 | No response from the remote station in sending Session Initiation Protocol (SIP). | 4.10.3 |
| 11 | 10 | No tone detected after dialing. | 4.10.1 |
| 11 | 11 | No acknowledgement returned after Fax2 net command was sent. | 4.10.1 |
| 13 | 12 | Error signal received after Fax2 net command was sent. | 4.10.1 |
| 16 | 09 | No Cipher registration. | 4.10.1 |
| 17 | 01 | Called using a dial number that cannot be used for the NGN line (33 digits or longer or non numeric characters). (T38) | 4.10.2 |
| 17 | 07 | No response from the caller in receiving. | 4.10.2 |
| 1C | 01 | Detected that access to the NGN line was not authorized. (T38: 403 Forbidden) | 4.10.3 |
| 1C | 02 | No file or folder (directory) found as a result of search via the NGN line. (T38: 404 Not Found) | 4.10.3 |
| 1C | 03 | Remote station does not support the NGN line. (T38: 488 Not Acceptable Here) | 4.10.3 |
| 1C | 04 | SIP (Session Initiation Protocol) connection not possible. (T38) / USW NGN FAX setting is OFF or calling attempted before acquisition of SIP information. | 4.10.3 |
| 1C | 05 | Internal error detected in the communication network. (T38) | 4.10.3 |
| 1C | 06 | SIP Server timeout. (T38) | 4.10.3 |
| 1C | 08 | An error other than 1C01,1C02,1C03,1C06,1D01, or 1D02 was detected. (T38) | 4.10.3 |
| 1D | 01 | Detected that the NGN line was busy. (T38: 486 Busy) | 4.10.3 |
| 1D | 02 | Detected that the NGN line was temporarily unavailable. (T38: 480 Temporarily Unavailable) | 4.10.3 |
| 1D | 04 | Network cable not connected (Link Down detected) or not connected to the Network. (T38) | 4.10.3 |
| 20 | 01 | Unable to detect flag field. | 4.10.3 |
| 20 | 02 | Carrier was OFF for 200 ms or longer. | 4.10.3 |
| 20 | 03 | Abort detected ("1" in succession for 7 bits or more). | 4.10.3 |
| 20 | 04 | Overrun detected. | 4.10.3 |
| 20 | 05 | A frame received for 3 seconds or more. | 4.10.3 |
| 20 | 06 | CRC error in answerback. | 4.10.3 |
| 20 | 07 | Echo command received. | 4.10.3 |
| 20 | 08 | Invalid command received. | 4.10.3 |
| 20 | 09 | Command ignored in document setting or damping-out at turn-around transmission. | 4.10.3 |
| 20 | 0A | T5 timeout error. | 4.10.3 |
| 20 | 0B | CRP received. | 4.10.3 |
| 20 | 0C | EOR or NULL received. | 4.10.3 |
| 20 | 0D | Corresponding command not received although the FIF command sending bit is ON. | 4.10.3 |
| 20 | 0E | EOR command received. | 4.10.3 |
| 20 | 13 | Line disconnected without receiving DCN after receiving the last page. (After receiving EOP and sending CFR, received BYE before receiving DCN.) (T38) | 4.10.3 |

| Code 1 | Code 2 | Cause | Refer to: |
|--------|--------|-------|-----------|
| 32 | 01 | Remote terminal only with V.29 capability in 2,400 or 4,800 bps transmission. | 4.10.3 |
| 32 | 02 | Remote terminal not ready for polling. | 4.10.3 |
| 32 | 10 | Remote terminal not equipped with password function or its password switch is OFF. | 4.10.3 |
| 32 | 11 | Remote terminal not equipped with or not ready for confidential mailbox function. | 4.10.3 |
| 32 | 12 | Remote terminal not equipped with or not ready for relay broadcasting function. | 4.10.3 |
| 32 | 13 | No confidential mail in the remote terminal. | 4.10.3 |
| 32 | 14 | Available memory space of the remote terminal is less than that required for reception of confidential mails or relay broad-casting instruction. | 4.10.3 |
| 32 | 15 | Remote terminal not equipped with Cipher receiving function. | 4.10.3 |
| 32 | 16 | Remote terminal not equipped with SEP function. | 4.10.3 |
| 32 | 17 | Remote terminal not equipped with SUB function. | 4.10.3 |
| 32 | 18 | Remote terminal not equipped with color function. | 4.10.3 |
| 40 | 02 | Illegal coding system requested. | 4.10.3 |
| 40 | 03 | Illegal recording width requested. | 4.10.3 |
| 40 | 05 | ECM requested although not allowed. | 4.10.3 |
| 40 | 06 | Polled while not ready. | 4.10.3 |
| 40 | 07 | No document to be sent when polled. | 4.8.1 |
| 40 | 10 | Spec code or manufacturer code not correct. | 4.10.1 |
| 40 | 11 | Group number not registered for relay broad-casting was specified or the number of addressees specified exceeded the maximum allowable number. | 4.10.1 |
| 40 | 12 | Retrieval attempted while not ready for retrieval. | 4.10.1 |
| 40 | 13 | Polled by any other manufacturers' terminal while waiting for secure polling. | 4.10.1 |
| 40 | 14 | Common key not registered although it needs to be used. | 4.10.1 |
| 40 | 15 | Black/Red data reception is requested when Black/Red receiving function is disabled. | 4.10.3 |
| 40 | 16 | Cipher transmission is requested when Cipher receiving function is disabled. | 4.10.3 |
| 40 | 17 | Invalid resolution selected. | 4.10.3 |
| 40 | 20 | Invalid full color mode selected. | 4.10.3 |
| 50 | 01 | Vertical resolution capability changed after compensation of background color. | 4.10.3 |
| 63 | 01 | "Password + last 4 digits of telephone number" does not match. | 4.10.1 |
| 63 | 02 | Password not correct. | 4.10.1 |
| 63 | 03 | Polling ID not correct. | 4.10.1 |
| 63 | 04 | Specified confidential ID and Mail Box ID do not match. | 4.10.1 |
| 63 | 05 | Relay broad-casting ID not correct. | 4.10.1 |
| 63 | 06 | Specified Retrieval ID and Mail Box Retrieval ID do not match. | 4.10.1 |
| 63 | 07 | Select receiving ID not correct. | 4.10.2 |
| 63 | 08 | Cipher Key not correct. | 4.10.2 |
| 74 | xx | DCN received. | 4.10.3 |
| 80 | 01 | Fallback impossible. | 4.10.3 |
| 90 | 01 | Unable to detect video signals or commands within 6 seconds after CFR is transmitted. | 4.10.3 |
| 90 | 02 | Received PPS containing invalid page count or block count. | 4.10.3 |
| A0 | 03 | Error correction sequence not terminated even at final transmission speed after fallback. | 4.10.3 |
| A0 | 11 | Receive buffer empty (5-second timeout). | 4.10.2 |
| A0 | 12 | Receive buffer full during operation except receiving into memory. | 4.10.4 |
| A0 | 13 | Decoding error continued on 500 lines or more. | 4.10.3 |

| Code 1 | Code 2 | Cause | Refer to: |
|--------|--------|-------|-----------|
| A0 | 14 | Decoding error continued for 15 seconds or more. | 4.10.3 |
| A0 | 15 | Timeout: 13 seconds or more for one-line transmission. | 4.10.3 |
| A0 | 16 | RTC not found or carrier OFF detected for 6 seconds. | 4.10.3 |
| A0 | 17 | RTC found but no command detected for 60 seconds or longer. | 4.10.3 |
| A0 | 19 | No video data to be sent. | 4.10.3 |
| A0 | 20 | Cannot continue receiving Color FAX (remaining ink low). | 4.10.3 |
| A8 | 01 | RTN, PIN, or ERR received (sending terminal). | 4.10.3 |
| A9 | 01 | RTN, PIN, or ERR sent (receiving terminal). | 4.10.3 |
| AA | 18 | Receive buffer full during receiving data into memory. | 4.10.4 |
| B0 | 01 | Polarity reversion detected. | 4.10.2 |
| B0 | 02 | Unable to receive the next-page data. | 4.10.2 |
| B0 | 03 | Unable to receive polling during turn-around transmission due to call reservation. | 4.10.2 |
| B0 | 04 | PC interface error. | 4.10.2 |
| C0 | 01 | No common modulation mode or failed to poll. | 4.10.3 |
| C0 | 02 | Unable to detect JM. | 4.10.3 |
| C0 | 03 | Unable to detect CM. | 4.10.3 |
| C0 | 04 | Unable to detect CJ. | 4.10.3 |
| C0 | 10 | Cannot finish V. 34 negotiation or training. | 4.10.3 |
| C0 | 11 | Modem error detected during V. 34 negotiation or training. | 4.10.3 |
| C0 | 20 | Modem error detected while sending commands. | 4.10.3 |
| C0 | 21 | Modem error detected while receiving commands. | 4.10.3 |
| C0 | 22 | Control channel connection timeout. | 4.10.3 |
| C0 | 30 | Modem error detected while sending video signals. | 4.10.3 |
| C0 | 31 | Modem error detected while receiving video signals. | 4.10.3 |
| E0 | 01 | Failed to detect 1,300 Hz signal in burn-in operation. | 4.10.3 |
| E0 | 02 | Failed to detect PB signals in burn-in operation. | 4.10.3 |
| E0 | 03 | Unable to detect commands in burn-in operation when RS232C is used. | 4.10.3 |

# 4. TROUBLESHOOTING

## 4.1 Error Cause and Remedy

■ **Error code 0000, 9400, 9401, 9402, 9403, 9404, 9405, 9406, 9407, 9408, 9409, 940A, 940B, 940C, 9E00, 9E01, 9F00, 9F01, 9F02, 9F03, EB00, EB01, EB02, EB03, EB04**

An error for a specific user who uses the subscription service.

**<User Check>**

- Check that the printer is a subscription service machine.
- Check that a subscription service cartridge is installed.
- Check that the cartridge is not the one ever used on the other subscription service machine.
- Check that the printer is connected to the network.

■ **Error code 0101**

Main PCB failure (ASIC / motor driver)

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 0201**

Communication error of the PF motor / Unstable speed

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | PF motor | Replace | PF motor |
| 2 | Connection failure | PF motor FFC | Reconnect | PF motor FFC |
| 3 | Failure | PF motor FFC | Replace | PF motor FFC (For models with MP tray) or PF motor FFC (For models with MF tray) |
| 4 | Failure | PF unit | Replace | PF unit (For models with MP tray) or PF unit (For models with MF tray) |
| 5 | Failure | Process drive unit | Replace | Process drive unit (For models with MP tray) or Process drive unit (For models with MF tray) |
| 6 | Failure | Main PCB | Replace | Main PCB |
| 7 | Failure | LVPS PCB | Replace | LVPS PCB |
| 8 | Connection failure | LVPS harness | Reconnect | LVPS harness |
| 9 | Failure | LVPS harness | Replace | LVPS harness |
| 10 | Failure | Fuser | Replace | Fuser |

■ **Error code 0202**

Process motor failure

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | Process motor | Replace | Process drive unit (For models with MP tray) or Process drive unit (For models with MF tray) |
| 2 | Connection failure | Process motor FFC | Reconnect | Process motor FFC |
| 3 | Failure | Process motor FFC | Replace | Process motor FFC |
| 4 | Failure | Process drive unit | Replace | Process drive unit (For models with MP tray) or Process drive unit (For models with MF tray) |
| 5 | Failure | Main PCB | Replace | Main PCB |
| 6 | Failure | LVPS PCB | Replace | LVPS PCB |
| 7 | Connection failure | LVPS harness | Reconnect | LVPS harness |
| 8 | Failure | LVPS harness | Replace | LVPS harness |

■ **Error code 0501, 0502**

Fuser temperature abnormality (Low temperature, center thermistor)

**Error code 0503**

Fuser temperature abnormality (High temperature, center thermistor)

**Error code 0504**

Fuser temperature abnormality (Low temperature, center thermistor)

**Error code 0505**

Fuser temperature abnormality (Temperature rise, center thermistor)

**Error code 0506**

Fuser temperature abnormality (Temperature fall, center thermistor)

**<User Check>**

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

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | Center thermistor harness (of fuser) | Reconnect | Center thermistor harness (of Fuser) |
| 2 | Failure | Fuser | Replace | Fuser |
| 3 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 4 | Failure | Eject sensor/relay harness | Replace | Eject sensor/relay harness |
| 5 | Failure | Eject sensor/relay PCB | Replace | Eject sensor/relay PCB |
| 6 | Failure | Main PCB | Replace | Main PCB |
| 7 | Failure | LVPS PCB | Replace | LVPS PCB |
| 8 | Connection failure | LVPS harness | Reconnect | LVPS harness |
| 9 | Failure | LVPS harness | Replace | LVPS harness |

■ **Error code 050A, 050B, 050C**

Fuser temperature abnormality (Center thermistor, side thermistor)

**<User Check>**

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

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | Side thermistor harness (of fuser) | Reconnect | Side thermistor harness (of Fuser) |
| 2 | Failure | Fuser | Replace | Fuser |
| 3 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 4 | Failure | Eject sensor/relay harness | Replace | Eject sensor/relay harness |
| 5 | Failure | Eject sensor/relay PCB | Replace | Eject sensor/relay PCB |
| 6 | Failure | Main PCB | Replace | Main PCB |
| 7 | Failure | LVPS PCB | Replace | LVPS PCB |
| 8 | Connection failure | LVPS harness | Reconnect | LVPS harness |
| 9 | Failure | LVPS harness | Replace | LVPS harness |

■ **Error code 0800**

Internal temperature abnormality (Internal thermistor)

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 2 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 3 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 4 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 0900

Detected irregular power supply for more than 100 times.

### <User Check>

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

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | Main PCB | Replace | Main PCB |
| 2 | Failure | LVPS PCB | Replace | LVPS PCB |
| 3 | Connection failure | LVPS harness | Reconnect | LVPS harness |
| 4 | Failure | LVPS harness | Replace | LVPS harness |

**Note:**

- The irregular power supply detection error (Error code 0900) of the LVPS 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 LVPS PCB is replaced. For this reason, be sure to ask users to rearrange the installation environment.

## ■ Error code 0A02

Fan failure

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | Fan harness | Reconnect | Fan harness |
| 2 | Failure | Fan harness | Replace | Fan |
| 3 | Failure | Fan | Replace | Fan |
| 4 | Connection failure | HVPS harness | Reconnect | HVPS harness |
| 5 | Failure | HVPS harness | Replace | HVPS harness |
| 6 | Failure | HVPS PCB | Replace | HVPS PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 0B01

HVPS PCB failure (during operating)

### Error code 0B02

HVPS PCB failure (in the stand-by state)

### < User Check >

- Slide the green tab on the drum unit to left and right for two to three times to clean the corona wires of all four colors.

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

- Replace the drum unit.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | HVPS FFC | Reconnect | HVPS FFC |
| 2 | Failure | HVPS FFC | Replace | HVPS FFC (For models with MP tray) or HVPS FFC (For models with MF tray) |
| 3 | Failure | HVPS PCB | Replace | HVPS PCB |
| 4 | Failure | Main PCB | Replace | Main PCB |

### ■ Error code 0C00

Density sensor failure

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | REG mark sensor L harness | Reconnect | REG mark sensor L harness |
| 2 | Failure | REG mark sensor L PCB | Replace | REG mark sensor L PCB |
| 3 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 4 | Failure | Eject sensor/relay PCB | Replace | Eject sensor/relay PCB |
| 5 | Failure | Main PCB | Replace | Main PCB |

### ■ Error code 0E00

HVPS PCB communication error

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | HVPS FFC | Reconnect | HVPS FFC |
| 2 | Failure | HVPS FFC | Replace | HVPS FFC (For models with MP tray) or HVPS FFC (For models with MF tray) |
| 3 | Failure | HVPS PCB | Replace | HVPS PCB |
| 4 | Failure | Main PCB | Replace | Main PCB |

### ■ Error code 1003

REG mark sensor R failure

**<User Check>**

• Clean the dirt on the belt unit, or replace the belt unit.

• Replace the waste toner box.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | REG mark sensor R harness | Reconnect | REG mark sensor R harness |
| 2 | Failure | REG mark sensor R PCB | Replace | REG mark sensor R PCB |
| 3 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 4 | Failure | Eject sensor/relay PCB | Replace | Eject sensor/relay PCB |
| 5 | Failure | Main PCB | Replace | Main PCB |

### ■ Error code 1004

REG mark sensor L failure

**<User Check>**

• Clean the dirt on the belt unit, or replace the belt unit.

• Replace the waste toner box.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | REG mark sensor L harness | Reconnect | REG mark sensor L harness |
| 2 | Failure | REG mark sensor L PCB | Replace | REG mark sensor L PCB |
| 3 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 4 | Failure | Eject sensor/relay PCB | Replace | Eject sensor/relay PCB |
| 5 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 1400

Condensation (Main PCB temperature/humidity sensor)

### \<User Check\>

• Leave switched on. Open the top cover/joint cover and the back cover. After Waiting for 30 minutes or more, turn the power switch OFF and close the covers, then turn the power switch ON.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 1801

LT communication error (Main PCB - LT control PCB)

### \<User Check\>

• Install the latest main firmware. (The main firmware contains the LT firmware.)

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Connection failure | LT connector harness (Machine side) | Reconnect | LT connector harness (Machine side) |
| 2 | Failure | LT connector harness (Machine side) | Replace | LT connector harness (Machine side) |
| 3 | Connection failure | LT connector harness (LT side) | Reconnect | LT connector harness (LT side) |
| 4 | Failure | LT connector harness (LT side) | Replace | LT connector (LT side) |
| 5 | Failure | LT control PCB | Replace | LT control PCB |
| 6 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 1D01

LED ASSY (K) communication error

### Error code 1D02

LED ASSY (Y) communication error

### Error code 1D03

LED ASSY (M) communication error

### Error code 1D04

LED ASSY (C) communication error

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Failure | LED ASSY (Each color) | Replace | LED ASSY (Each color) |
| 2 | Connection failure | LED FFC (Each color) | Reconnect | LED FFC (Each color) |
| 3 | Failure | LED FFC (Each color) | Replace | LED FFC (Each color) |
| 4 | Failure | LED control PCB | Replace | LED control PCB |
| 5 | Connection failure | LED control FFC | Reconnect | LED control FFC |
| 6 | Failure | LED control FFC | Replace | LED control FFC |
| 7 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 1E01

LED control PCB communication error (Access error)

### Error code 1E02

LED control PCB communication error (Read/Write error)

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Failure | LED control PCB | Replace | LED control PCB |
| 2 | Connection failure | LED control FFC | Reconnect | LED control FFC |
| 3 | Failure | LED control FFC | Replace | LED control FFC |
| 4 | Failure | Main PCB | Replace | Main PCB |

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■ **Error code 2100**

Wrong K toner cartridge (The toner cartridge other than black is installed.)

■ **Error code 2101**

Wrong Y toner cartridge (The toner cartridge other than yellow is installed.)

■ **Error code 2102**

Wrong C toner cartridge (The toner cartridge other than cyan is installed.)

■ **Error code 2103**

Wrong M toner cartridge (The toner cartridge other than magenta is installed.)

**<User Check>**

• Check that the toner cartridge is genuine.

• Check if a different color toner cartridge is not set.

• Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Terminal dirt | Toner cartridge (Each color) | Clean | Toner cartridge (Each color) (See Fig. 2-11 below.) |
| 2 | Failure | Toner cartridge (Each color) | Replace | Toner cartridge (Each color) |
| 3 | Terminal dirt | Cartridge sensor (Each color) | Clean | Cartridge sensor (Each color) (See Fig. 2-11 below.) |
| 4 | Failure | Cartridge sensor (Each color) | Replace | Cartridge sensor (Each color) |
| 5 | Connection failure | Cartridge sensor harness (Each color) | Reconnect | Cartridge sensor harness (Each color) |
| 6 | Failure | Cartridge sensor harness (Each color) | Replace | Cartridge sensor harness (Each color) |
| 7 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 8 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 9 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 10 | Failure | Main PCB | Replace | Main PCB |

■ **Toner cartridge sensor terminal (Toner cartridge)**
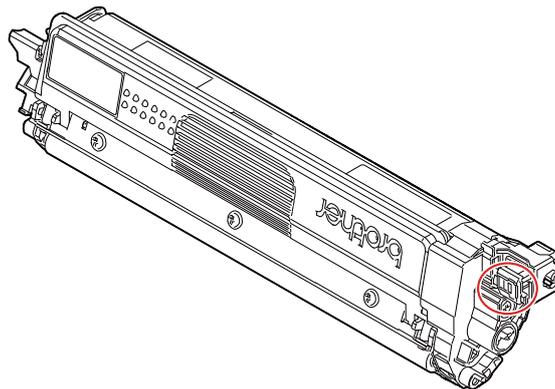


**Fig. 2-11**

■ **Error code 2200**

Wrong K toner cartridge (The non-compliant toner cartridge is installed.)

**Error code 2201**

Wrong Y toner cartridge (The non-compliant toner cartridge is installed.)

**Error code 2202**

Wrong C toner cartridge (The non-compliant toner cartridge is installed.)

**Error code 2203**

Wrong M toner cartridge (The non-compliant toner cartridge is installed.)

**<User Check>**

• Check that the toner cartridge is genuine.

• Check if a wrong toner cartridge is installed.

• Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Terminal dirt | Toner cartridge (Each color) | Clean | Toner cartridge (Each color) (Refer to Fig. 2-11.) |
| 2 | Failure | Toner cartridge (Each color) | Replace | Toner cartridge (Each color) |
| 3 | Terminal dirt | Cartridge sensor (Each color) | Clean | Cartridge sensor (Each color) (Refer to Fig. 2-11.) |
| 4 | Failure | Cartridge sensor (Each color) | Replace | Cartridge sensor (Each color) |
| 5 | Connection failure | Cartridge sensor harness (Each color) | Reconnect | Cartridge sensor harness (Each color) |
| 6 | Failure | Cartridge sensor harness (Each color) | Replace | Cartridge sensor harness (Each color) |
| 7 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 8 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 9 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 10 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 2400**

Wrong K toner cartridge (The incompatible toner cartridge is installed.)

**Error code 2401**

Wrong Y toner cartridge (The incompatible toner cartridge is installed.)

**Error code 2402**

Wrong C toner cartridge (The incompatible toner cartridge is installed.)

**Error code 2403**

Wrong M toner cartridge (The incompatible toner cartridge is installed.)

**<User Check>**

- Check that the toner cartridge is genuine.
- Check if a wrong toner cartridge is installed.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Terminal dirt | Toner cartridge (Each color) | Clean | Toner cartridge (Each color) (Refer to Fig. 2-11.) |
| 2 | Failure | Toner cartridge (Each color) | Replace | Toner cartridge (Each color) |
| 3 | Terminal dirt | Cartridge sensor (Each color) | Clean | Cartridge sensor (Each color) (Refer to Fig. 2-11.) |
| 4 | Failure | Cartridge sensor (Each color) | Replace | Cartridge sensor (Each color) |
| 5 | Connection failure | Cartridge sensor harness (Each color) | Reconnect | Cartridge sensor harness (Each color) |
| 6 | Failure | Cartridge sensor harness (Each color) | Replace | Cartridge sensor harness (Each color) |
| 7 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 8 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 9 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 10 | Failure | Main PCB | Replace | Main PCB |

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## ■ Error code 2500

Wrong K toner cartridge (Consumables information access error)

### Error code 2501

Wrong Y toner cartridge (Consumables information access error)

### Error code 2502

Wrong C toner cartridge (Consumables information access error)

### Error code 2503

Wrong M toner cartridge (Consumables information access error)

## <User Check>

• Check that the toner cartridge is genuine.

• Check if a wrong toner cartridge is installed.

• Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Terminal dirt | Toner cartridge (Each color) | Clean | Toner cartridge (Each color) (Refer to Fig. 2-11.) |
| 2 | Failure | Toner cartridge (Each color) | Replace | Toner cartridge (Each color) |
| 3 | Terminal dirt | Cartridge sensor (Each color) | Clean | Cartridge sensor (Each color) (Refer to Fig. 2-11.) |
| 4 | Failure | Cartridge sensor (Each color) | Replace | Cartridge sensor (Each color) |
| 5 | Connection failure | Cartridge sensor harness (Each color) | Reconnect | Cartridge sensor harness (Each color) |
| 6 | Failure | Cartridge sensor harness (Each color) | Replace | Cartridge sensor harness (Each color) |
| 7 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 8 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 9 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 10 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 2600**

Wrong K toner cartridge (The toner cartridge that does not match the model is installed.)

**Error code 2601**

Wrong Y toner cartridge (The toner cartridge that does not match the model is installed.)

**Error code 2602**

Wrong C toner cartridge (The toner cartridge that does not match the model is installed.)

**Error code 2603**

Wrong M toner cartridge (The toner cartridge that does not match the model is installed.)

## <User Check>

• Check that the toner cartridge is genuine.

• Check if a wrong toner cartridge is installed.

• Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Terminal dirt | Toner cartridge (Each color) | Clean | Toner cartridge (Each color) (Refer to Fig. 2-11.) |
| 2 | Failure | Toner cartridge (Each color) | Replace | Toner cartridge (Each color) |
| 3 | Terminal dirt | Cartridge sensor (Each color) | Clean | Cartridge sensor (Each color) (Refer to Fig. 2-11.) |
| 4 | Failure | Cartridge sensor (Each color) | Replace | Cartridge sensor (Each color) |
| 5 | Connection failure | Cartridge sensor harness (Each color) | Reconnect | Cartridge sensor harness (Each color) |
| 6 | Failure | Cartridge sensor harness (Each color) | Replace | Cartridge sensor harness (Each color) |
| 7 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 8 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 9 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 10 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 2800**

Wrong K toner cartridge (Non-genuine cartridge prohibited)

**Error code 2801**

Wrong Y toner cartridge (Non-genuine cartridge prohibited)

**Error code 2802**

Wrong C toner cartridge (Non-genuine cartridge prohibited)

**Error code 2803**

Wrong M toner cartridge (Non-genuine cartridge prohibited)

**<User Check>**

- Check that the toner cartridge is genuine.
- Check if a wrong toner cartridge is installed.
- According to the User's Guide, allow using non-genuine cartridges.

■ **Error code 2E00**

Main PCB failure (IC chip)

**Error code 2E01**

Data in the main PCB is damaged.

**Error code 2E02, 2E04**

Main PCB failure (IC chip)

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 3801**

External temperature abnormality (Internal thermistor)

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Connection failure | LVPS harness | Reconnect | LVPS harness |
| 2 | Failure | LVPS harness | Replace | LVPS harness |
| 3 | Failure | LVPS PCB | Replace | LVPS PCB |
| 4 | Connection failure | HVPS FFC | Reconnect | HVPS FFC |
| 5 | Failure | HVPS FFC | Replace | HVPS FFC (For models with MP tray) or HVPS FFC (For models with MF tray) |
| 6 | Failure | HVPS PCB | Replace | HVPS PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 3A00**

Main PCB failure (Sub CPU)

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 4001**

The K drum unit will be replaced soon. (Part life - Number of pages printed)

**Error code 4002**

The Y drum unit will be replaced soon. (Part life - Number of pages printed)

**Error code 4003**

The M drum unit will be replaced soon. (Part life - Number of pages printed)

**Error code 4004**

The C drum unit will be replaced soon. (Part life - Number of pages printed)

■ **Error code 4201**

Replace the K drum. (Part life - Number of pages printed)

**Error code 4202**

Replace the Y drum. (Part life - Number of pages printed)

**Error code 4203**

Replace the M drum. (Part life - Number of pages printed)

**Error code 4204**

Replace the C drum. (Part life - Number of pages printed)

**<User Check>**

• Replace the drum unit with a new one.

■ **Error code 4300**

The belt unit will be replaced soon. (Part life - Number of pages printed)

■ **Error code 4400**

Replace the belt unit. (Part life - Number of pages printed)

**<User Check>**

• Replace the belt unit with a new one.

■ **Error code 4500**

Replace the fuser. (Part life - Number of pages printed)

**<User Check>**

• Replace the fuser with a new one.

> **Note:**
> • Refer to "6.1 Resetting Printed Pages Counter for the Fuser (Reset Counters after Parts Replacement (Function Code 88))" in Chapter 4.

■ **Error code 4700**

The waste toner box will be replaced soon. (Amount of waste toner)

## ■ Error code 4800

Replace the waste toner box. (Amount of waste toner)

### <User Check>

• Replace the waste toner box with a new one.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Terminal dirt | Waste toner sensor (of waste toner box) | Clean | Waste toner sensor (of waste toner box) (See Fig. 2-12, Fig. 2-13 below.) |
| 2 | Failure | Waste toner sensor (of waste toner box) | Replace | Waste toner sensor (of waste toner box) |
| 3 | Connection failure | HVPS FFC | Reconnect | HVPS FFC |
| 4 | Failure | HVPS FFC | Replace | HVPS FFC (For models with MP tray) or HVPS FFC (For models with MF tray) |
| 5 | Terminal dirt | HVPS PCB | Clean | HVPS PCB (Refer to Fig. 2-14.) |
| 6 | Failure | HVPS PCB | Replace | HVPS PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

## ■ Waste toner sensor terminal (Machine)
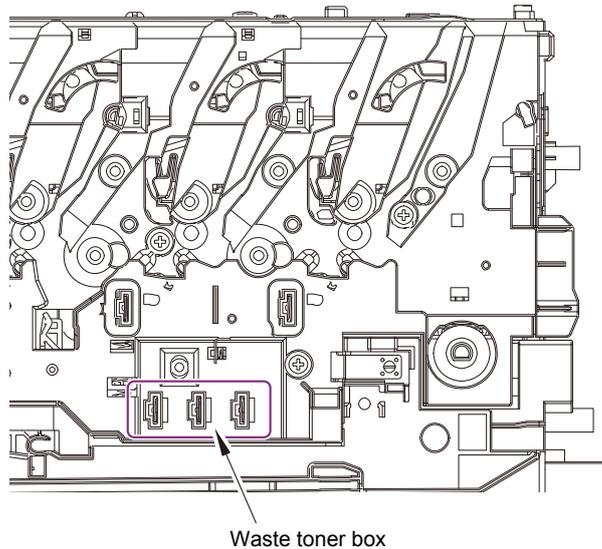


Waste toner box

**Fig. 2-12**

## ■ Waste toner sensor terminal (Waste toner box)



**Fig. 2-13**

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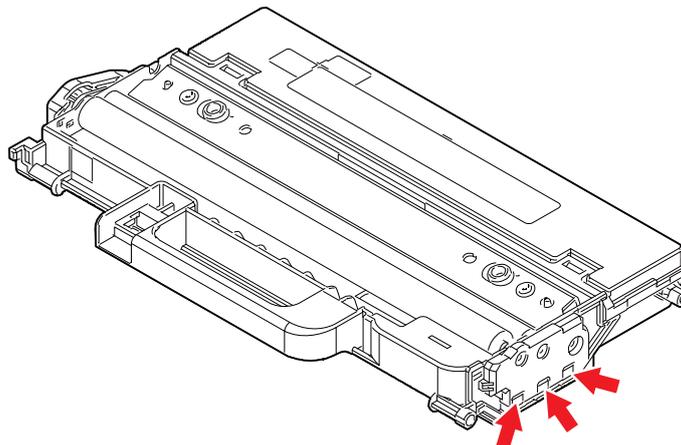
## ■ Electrodes location of HVPS PCB
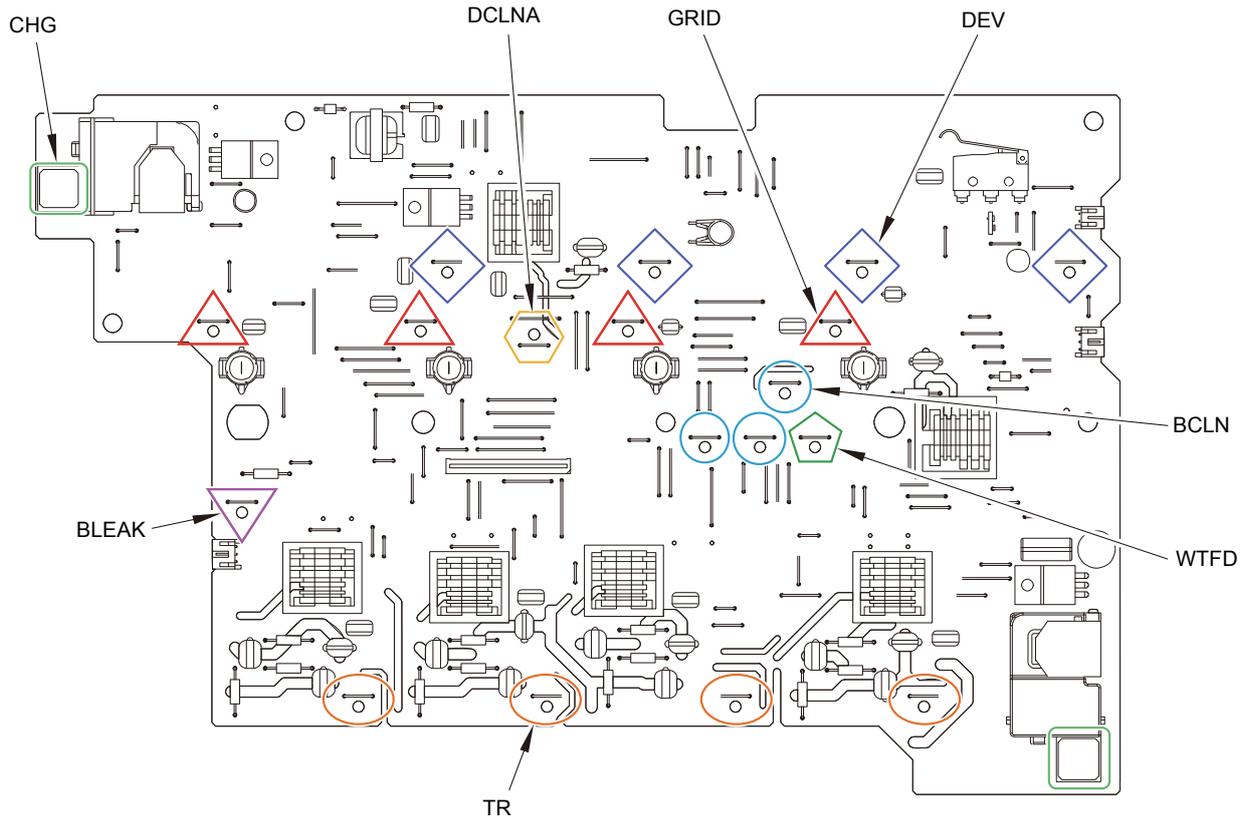


**Fig. 2-14**

## ■ Error code 4A00

Replace the waste toner box. (Number of belt cleaning roller rotations)

### <User Check>

• Replace the waste toner box with a new one.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 4B01

The K toner cartridge will be replaced soon. (Part life - DEV roller/Dot counter)

### Error code 4B02

The Y toner cartridge will be replaced soon. (Part life - DEV roller/Dot counter)

### Error code 4B03

The M toner cartridge will be replaced soon. (Part life - DEV roller/Dot counter)

### Error code 4B04

The C toner cartridge will be replaced soon. (Part life - DEV roller/Dot counter)

■ **Error code 4C01**

Replace the K toner cartridge. (Part life - DEV roller/Dot counter)

**Error code 4C02**

Replace the Y toner cartridge. (Part life - DEV roller/Dot counter)

**Error code 4C03**

Replace the M toner cartridge. (Part life - DEV roller/Dot counter)

**Error code 4C04**

Replace the C toner cartridge. (Part life - DEV roller/Dot counter)

**Error code 4C05**

Replace the Y/M/C toner cartridge in printing. (Part life - DEV roller/Dot counter)

**<User Check>**

• Replace the toner cartridge with a new one.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 5001**

Replace the PF kit MP. (Part life - Number of pages printed)

**<User Check>**

• Replace the PF kit MP.

• Reset the counter. (Refer to "PERIODICAL MAINTENANCE" in Chapter 6.)

■ **Error code 5002**

Replace the PF kit T1. (Part life - Number of pages printed)

**<User Check>**

• Replace the PF kit T1.

• Reset the counter. (Refer to "PERIODICAL MAINTENANCE" in Chapter 6.)

■ **Error code 5003**

Replace the PF kit T2. (Part life - Number of pages printed)

**<User Check>**

• Replace the PF kit T2.

• Reset the counter. (Refer to "PERIODICAL MAINTENANCE" in Chapter 6.)

■ **Error code 5702**

Communication error when inserting the K toner cartridge. (Cartridge sensor)

**Error code 5703**

Communication error when inserting the Y toner cartridge. (Cartridge sensor)

**Error code 5704**

Communication error when inserting the C toner cartridge. (Cartridge sensor)

**Error code 5705**

Communication error when inserting the M toner cartridge. (Cartridge sensor)

**<User Check>**

• Check that the toner cartridge is genuine.

• Check if a wrong toner cartridge is installed.

• Install the latest main firmware.

| No. | Cause | | | Remedy |
|---|---|---|---|---|
| 1 | Terminal dirt | Toner cartridge (Each color) | Clean | Toner cartridge (Each color) (Refer to Fig. 2-11.) |
| 2 | Failure | Toner cartridge (Each color) | Replace | Toner cartridge (Each color) |
| 3 | Terminal dirt | Cartridge sensor (Each color) | Clean | Cartridge sensor (Each color) (Refer to Fig. 2-11.) |
| 4 | Failure | Cartridge sensor (Each color) | Replace | Cartridge sensor (Each color) |
| 5 | Connection failure | Cartridge sensor harness (Each color) | Reconnect | Cartridge sensor harness (Each color) |
| 6 | Failure | Cartridge sensor harness (Each color) | Replace | Cartridge sensor harness (Each color) |
| 7 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 8 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 9 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 10 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 6001**

Top cover open

| No. | Cause | | | Remedy |
|---|---|---|---|---|
| 1 | Connection failure | HVPS harness | Reconnect | HVPS harness |
| 2 | Failure | HVPS PCB | Replace | HVPS PCB |
| 3 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 6004**

Fuser cover open

| No. | Cause | | | Remedy |
|---|---|---|---|---|
| 1 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 2 | Failure | Eject sensor/relay PCB | Replace | Eject sensor/relay PCB |
| 3 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 6101

No K toner cartridge

## Error code 6102

No Y toner cartridge

## Error code 6103

No M toner cartridge

## Error code 6104

No C toner cartridge

## <User Check>

- Check that the toner cartridge is genuine.

- Check if a wrong toner cartridge is installed.

- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Terminal dirt | Toner cartridge (Each color) | Clean | Toner cartridge (Each color) (Refer to Fig. 2-11.) |
| 2 | Failure | Toner cartridge (Each color) | Replace | Toner cartridge (Each color) |
| 3 | Terminal dirt | Cartridge sensor (Each color) | Clean | Cartridge sensor (Each color) (Refer to Fig. 2-11.) |
| 4 | Failure | Cartridge sensor (Each color) | Replace | Cartridge sensor (Each color) |
| 5 | Connection failure | Cartridge sensor harness (Each color) | Reconnect | Cartridge sensor harness (Each color) |
| 6 | Failure | Cartridge sensor harness (Each color) | Replace | Cartridge sensor harness (Each color) |
| 7 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 8 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 9 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 10 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 6201**

No K drum

**Error code 6202**

No Y drum

**Error code 6203**

No M drum

**Error code 6204**

No C drum

**<User Check>**

• Reinstall the drum unit.

• Install the latest main firmware.

| No. | Cause | | | Remedy | |
|-----|-------|-----|-----|--------|-----|
| 1 | Terminal dirt | Drum unit (Each color) | Clean | Drum unit (Each color) (See Fig. 2-15 below.) (Refer to Fig. 2-16.) |
| 2 | Failure | Drum unit (Each color) | Replace | Drum unit (Each color) |
| 3 | Connection failure | HVPS FFC | Reconnect | HVPS FFC |
| 4 | Failure | HVPS FFC | Replace | HVPS FFC (For models with MP tray) or HVPS FFC (For models with MF tray) |
| 5 | Terminal dirt | HVPS PCB | Clean | HVPS PCB (Refer to Fig. 2-14.) |
| 6 | Failure | HVPS PCB | Replace | HVPS PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

■ **Electrodes location of drum unit**
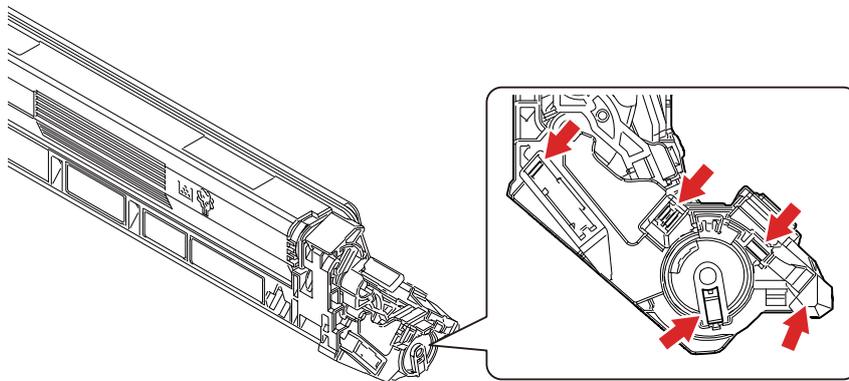


**Fig. 2-15**

## ■ Electrodes location of machine

<Frame R side>



Drum unit

Waste toner box

Belt unit

<Frame L side>



Drum unit

Belt unit
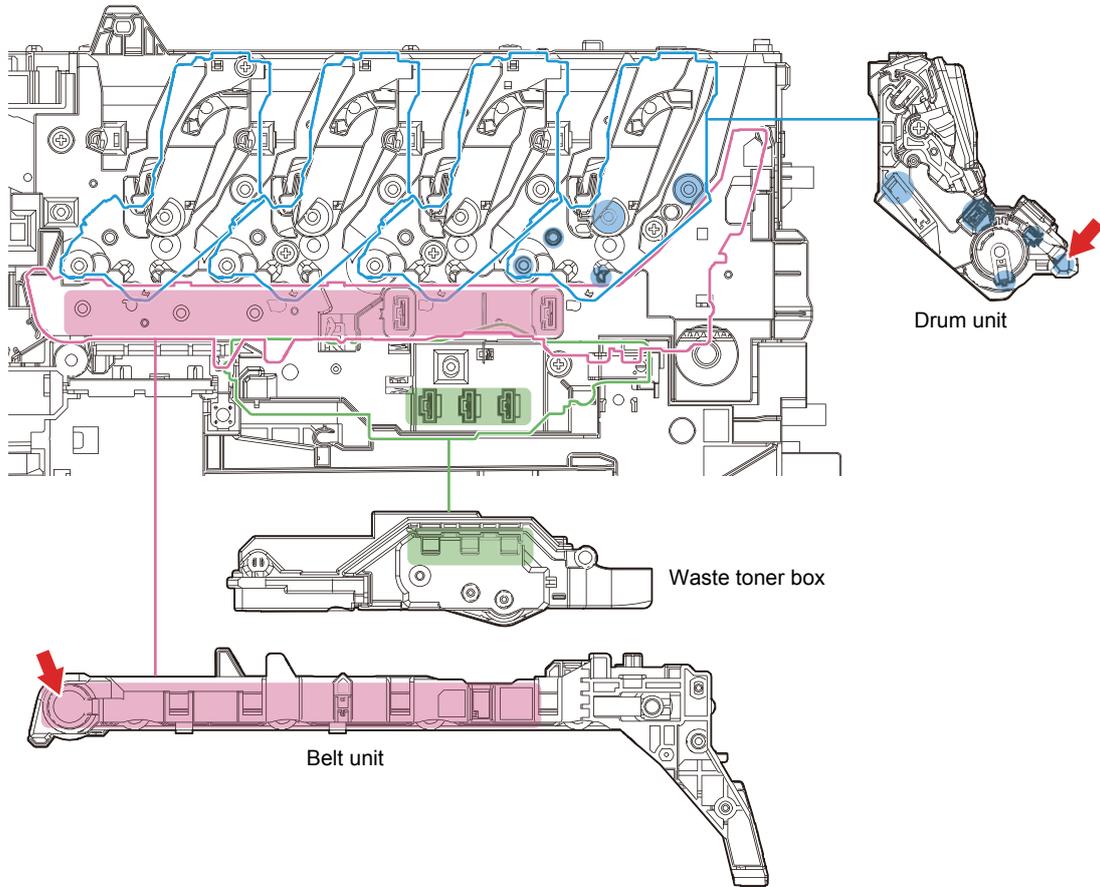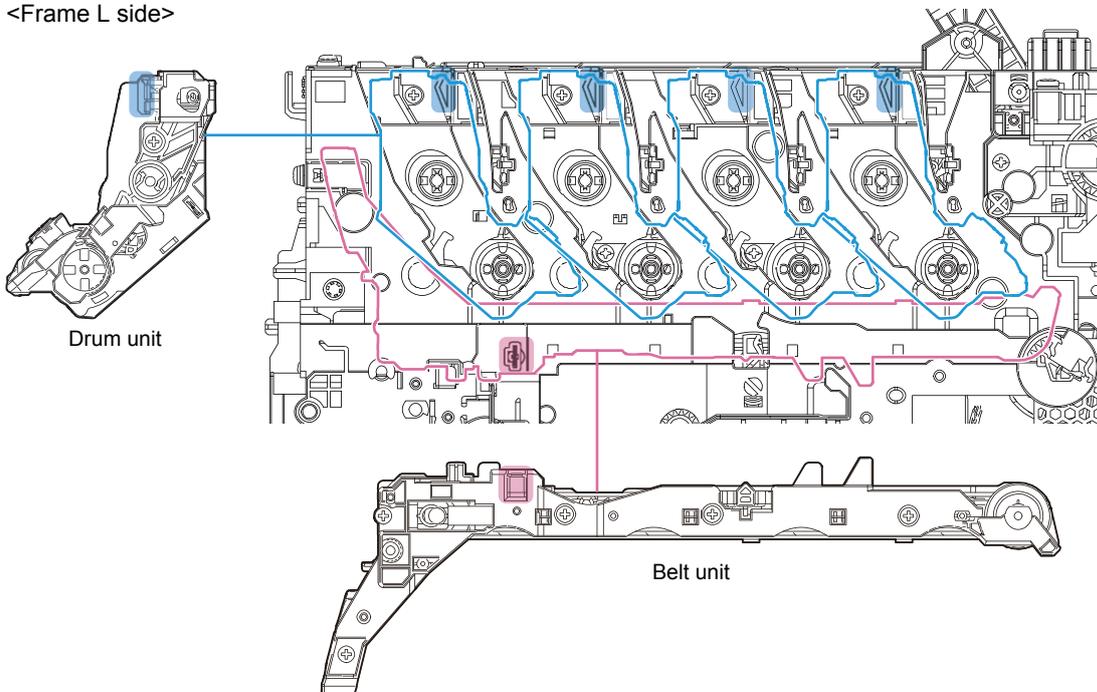
**Fig. 2-16**

■ **Error code 620A**

No K drum

**Error code 620B**

No Y drum

**Error code 620C**

No M drum

**Error code 620D**

No C drum

**<User Check>**

• Reinstall the drum unit.

• Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Terminal dirt | Drum unit (Each color) | Clean | Drum unit (Each color) (Refer to Fig. 2-15, Fig. 2-16.) |
| 2 | Failure | Drum unit (Each color) | Replace | Drum unit (Each color) |
| 3 | Connection failure | HVPS FFC | Reconnect | HVPS FFC |
| 4 | Failure | HVPS FFC | Replace | HVPS FFC (For models with MP tray) or HVPS FFC (For models with MF tray) |
| 5 | Terminal dirt | HVPS PCB | Clean | HVPS PCB (Refer to Fig. 2-14.) |
| 6 | Failure | HVPS PCB | Replace | HVPS PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 6300**

No waste toner box

**<User Check>**

• Install the latest main firmware.

• Reinstall the waste toner box.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Terminal dirt | Waste toner sensor (of waste toner box) | Clean | Waste toner sensor (of waste toner box) (Refer to Fig. 2-12, Fig. 2-13.) |
| 2 | Failure | Waste toner sensor (of waste toner box) | Replace | Waste toner sensor (of waste toner box) |
| 3 | Connection failure | HVPS FFC | Reconnect | HVPS FFC |
| 4 | Failure | HVPS FFC | Replace | HVPS FFC (For models with MP tray) or HVPS FFC (For models with MF tray) |
| 5 | Terminal dirt | HVPS PCB | Clean | HVPS PCB (Refer to Fig. 2-14.) |
| 6 | Failure | HVPS PCB | Replace | HVPS PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 6400

No belt unit

### <User Check>

• Reinstall the belt unit.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Connection failure | REG mark sensor L harness | Reconnect | REG mark sensor L harness |
| 2 | Failure | REG mark sensor L PCB | Replace | REG mark sensor L PCB |
| 3 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 4 | Failure | Eject sensor/relay PCB | Replace | Eject sensor/relay PCB |
| 5 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 6801

High temperature inside the machine

### <User Check>

• DO NOT use the machine in hot places.

• Keep the machine away from heating appliances.

• Check that the fan exhaust port is not clogged.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 2 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 3 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 4 | Failure | Fuser | Replace | Fuser |
| 5 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 6901

Fuser failure (When turning the power ON)

## Error code 6902

Fuser failure (When turning the power OFF and then back on again after 6901 occurred)

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Connection failure | Center thermistor harness (of fuser) | Reconnect | Center thermistor harness (of Fuser) |
| 2 | Connection failure | Side thermistor harness (of fuser) | Reconnect | Side thermistor harness (of Fuser) |
| 3 | Failure | Fuser | Replace | Fuser |
| 4 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 5 | Failure | Eject sensor/relay harness | Replace | Eject sensor/relay harness |
| 6 | Failure | Eject sensor/relay PCB | Replace | Eject sensor/relay PCB |
| 7 | Connection failure | LVPS heater harness | Reconnect | LVPS heater harness |
| 8 | Failure | LVPS heater harness | Replace | LVPS heater harness |
| 9 | Connection failure | LVPS harness | Reconnect | LVPS harness |
| 10 | Failure | LVPS harness | Replace | LVPS harness |
| 11 | Failure | LVPS PCB | Replace | LVPS PCB |
| 12 | Failure | Main PCB | Replace | Main PCB |

**Note:**

- Turn the power OFF. After the fuser has cooled sufficiently, turn the power ON again and leave the machine for 15 minutes. This problem may then be cleared.

- To release the fuser error after taking appropriate measures, enter the maintenance mode once and quit it with Function Code 99.

## ■ Error code 6A00

The drum unit abnormally discharged. (Corona wire)

## \<User Check\>

- Reinstall the drum unit.

- Slide the green tab on the drum unit to left and right for two to three times to clean the corona wires of all four colors.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Terminal dirt | Drum unit (Each color) | Clean | Drum unit (Each color) (Refer to Fig. 2-15, Fig. 2-16.) |
| 2 | Failure | Drum unit (Each color) | Replace | Drum unit (Each color) |
| 3 | Connection failure | HVPS FFC | Reconnect | HVPS FFC |
| 4 | Failure | HVPS FFC | Replace | HVPS FFC (For models with MP tray) or HVPS FFC (For models with MF tray) |
| 5 | Terminal dirt | HVPS PCB | Clean | HVPS PCB (Refer to Fig. 2-14.) |
| 6 | Failure | HVPS PCB | Replace | HVPS PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

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■ **Error code 6B01**

The K drum abnormally discharged. (Detected after exceeding twice of the drum life.)

**Error code 6B02**

The Y drum abnormally discharged. (Detected after exceeding twice of the drum life.)

**Error code 6B03**

The M drum abnormally discharged. (Detected after exceeding twice of the drum life.)

**Error code 6B04**

The C drum abnormally discharged. (Detected after exceeding twice of the drum life.)

**<User Check>**

• Reinstall the drum unit.

• Slide the green tab on the drum unit to left and right for two to three times to clean the corona wires of all four colors.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Terminal dirt | Drum unit (Each color) | Clean | Drum unit (Each color) (Refer to Fig. 2-15, Fig. 2-16.) |
| 2 | Failure | Drum unit (Each color) | Replace | Drum unit (Each color) |
| 3 | Connection failure | HVPS FFC | Reconnect | HVPS FFC |
| 4 | Failure | HVPS FFC | Replace | HVPS FFC (For models with MP tray) or HVPS FFC (For models with MF tray) |
| 5 | Terminal dirt | HVPS PCB | Clean | HVPS PCB (Refer to Fig. 2-14.) |
| 6 | Failure | HVPS PCB | Replace | HVPS PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 6D00**

Too many LTs connected

**<User Check>**

• Install the latest main firmware.

• Install LTs within the specified number.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Connection failure | LT connector harness (Machine side) | Reconnect | LT connector harness (Machine side) |
| 2 | Failure | LT connector harness (Machine side) | Replace | LT connector harness (Machine side) |
| 3 | Connection failure | LT connector harness (LT side) | Reconnect | LT connector harness (LT side) |
| 4 | Failure | LT connector harness (LT side) | Replace | LT connector (LT side) |
| 5 | Failure | LT control PCB | Replace | LT control PCB |
| 6 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 6E00

DEV roller press-contact/release error

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | DEV release clutch CMY harness | Reconnect | DEV release clutch CMY harness |
| 2 | Connection failure | DEV release clutch K harness | Reconnect | DEV release clutch K harness |
| 3 | Failure | DEV release clutch CMY harness | Replace | DEV REL CLUTCH FCL |
| 4 | Failure | DEV release clutch K harness | Replace | DEV release clutch K harness |
| 5 | Failure | DEV REL CLUTCH FCL | Replace | DEV REL CLUTCH FCL |
| 6 | Connection failure | DEV release sensor harness | Reconnect | DEV release sensor harness |
| 7 | Failure | DEV release sensor harness | Replace | DEV release sensor PCB |
| 8 | Failure | DEV release sensor | Replace | DEV release sensor PCB |
| 9 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 6F00

Detected irregular power supply for less than 100 times.

### <User Check>

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

• Introduce a noise filter at the power supply.

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## ■ Error code 7000

Jam inside (REG rear sensor: ON-Eject sensor: OFF)

### Error code 7100

Jam rear (REG rear sensor: OFF-Eject sensor: ON)

### <User Check>

• Remove the jammed paper.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Foreign object | Paper feeding path | Clean | Paper feeding path |
| 2 | Come off | Fuser cover | Reattach | Fuser cover ASSY |
| 3 | Failure | Fuser cover | Replace | Fuser cover ASSY |
| 4 | Come off | Back cover | Reattach | Back cover ASSY |
| 5 | Failure | Back cover | Replace | Back cover ASSY |
| 6 | Failure | FUSER DRIVE GEAR Z25 FCL | Replace | FUSER DRIVE GEAR Z25 FCL (For models with MP tray) or FUSER DRIVE GEAR Z25 FCL (For models with MF tray) |
| 7 | Failure | Process drive unit | Replace | Process drive unit (For models with MP tray) or Process drive unit (For models with MF tray) |
| 8 | Failure | PF unit | Replace | PF unit (For models with MP tray) or PF unit (For models with MF tray) |
| 9 | Failure | PF drive unit | Replace | PF drive unit (For models with MP tray) or PF drive unit (For models with MF tray) |
| 10 | Connection failure | Back cover sensor harness | Reconnect | Back cover sensor harness |
| 11 | Failure | Back cover sensor | Replace | Back cover sensor |
| 12 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 13 | Failure | Eject sensor/relay harness | Replace | Eject sensor/relay harness |
| 14 | Failure | Eject sensor/relay PCB | Replace | Eject sensor/relay PCB |
| 15 | Connection failure | REG front/rear sensor harness | Reconnect | REG front/rear sensor harness |
| 16 | Failure | REG front/rear sensor harness | Replace | REG front/rear sensor harness |
| 17 | Failure | REG front/rear sensor | Replace | REG front/rear sensor |
| 18 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 19 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 20 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 21 | Failure | Fuser | Replace | Fuser |
| 22 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 7200

MP tray jam (When printing from MP tray, the REG rear sensor is still OFF.)

### <User Check>

- Remove the jammed paper.
- Insert the papers straight using the paper guide of the MP tray.
- 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 top cover/joint cover correctly.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Foreign object | Paper feeding path | Clean | Paper feeding path |
| 2 | Abrasion | PF kit MP | Replace | PF kit MP |
| 3 | Failure | MP unit | Replace | MP unit |
| 4 | Come off | REG rear actuator | Reattach | REG rear actuator |
| 5 | Connection failure | REG front/rear sensor harness | Reconnect | REG front/rear sensor harness |
| 6 | Failure | REG front/rear sensor harness | Replace | REG front/rear sensor harness |
| 7 | Failure | REG front/rear sensor | Replace | REG front/rear sensor |
| 8 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 9 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 10 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 11 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 7302

T1 jam (When printing from T1, the REG front sensor is still OFF.)

### <User Check>

- Remove the jammed paper.
- Flip through the paper and reload it in the paper tray.
- Flip over the paper in the paper tray or rotate the paper 180°.
- Adjust each paper guide according to the paper size.
- Check if too much paper is loaded in the tray. (Up to 250-sheet)
- Check that the thickness of the paper is 60 to 163 $g/m^2$ (16 to 43 lb).

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Foreign object | Paper feeding path | Clean | Paper feeding path |
| 2 | Failure | Process drive unit | Replace | Process drive unit (For models with MP tray) or Process drive unit (For models with MF tray) |
| 3 | Failure | PF unit | Replace | PF unit (For models with MP tray) or PF unit (For models with MF tray) |
| 4 | Failure | PF drive unit | Replace | PF drive unit (For models with MP tray) or PF drive unit (For models with MF tray) |
| 5 | Come off | REG front actuator | Reattach | REG front actuator |
| 6 | Connection failure | REG front/rear sensor harness | Reconnect | REG front/rear sensor harness |
| 7 | Failure | REG front/rear sensor harness | Replace | REG front/rear sensor harness |
| 8 | Failure | REG front/rear sensor | Replace | REG front/rear sensor |
| 9 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 10 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 11 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 12 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 7402

T2 jam (When printing from T2, the REG front sensor is still OFF.)

### \<User Check\>

- Remove the jammed paper.
- Flip through the paper and reload it in the paper tray.
- Flip over the paper in the paper tray or rotate the paper 180°.
- Adjust each paper guide according to the paper size.
- Check if too much paper is loaded in the tray. (Up to 250-sheet)
- Check that the thickness of the paper is 60 to 163 g/m$^2$ (16 to 43 lb).

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Foreign object | Paper feeding path | Clean | Paper feeding path |
| 2 | Failure | Process drive unit | Replace | Process drive unit (For models with MP tray) or Process drive unit (For models with MF tray) |
| 3 | Failure | PF unit | Replace | PF unit (For models with MP tray) or PF unit (For models with MF tray) |
| 4 | Failure | PF drive unit | Replace | PF drive unit (For models with MP tray) or PF drive unit (For models with MF tray) |
| 5 | Come off | REG front actuator | Reattach | REG front actuator |
| 6 | Connection failure | REG front/rear sensor harness | Reconnect | REG front/rear sensor harness |
| 7 | Failure | REG front/rear sensor harness | Replace | REG front/rear sensor harness |
| 8 | Failure | REG front/rear sensor | Replace | REG front/rear sensor |
| 9 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 10 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 11 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 12 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 7800

DX tray jam

### \<User Check\>

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

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Foreign object | Paper feeding path | Clean | Paper feeding path |
| 2 | Connection failure | MP solenoid harness | Reconnect | MP solenoid harness |
| 3 | Failure | MP pickup solenoid | Replace | MP pickup solenoid |
| 4 | Failure | Paper eject roller | Replace | Paper eject roller |
| 5 | Failure | DX tray | Replace | DX tray |
| 6 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 7900

MF tray jam

### <User Check>

- Remove the jammed paper.
- Load paper properly using the paper guide of the MF tray.
- Load only one sheet of paper in the MF tray.
- Close the top cover/joint cover correctly.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Foreign object | Paper feeding path | Clean | Paper feeding path |
| 2 | Failure | MF unit | Replace | MF unit |
| 3 | Come off | REG rear actuator | Reattach | REG rear actuator |
| 4 | Connection failure | REG front/rear sensor harness | Reconnect | REG front/rear sensor harness |
| 5 | Failure | REG front/rear sensor harness | Replace | REG front/rear sensor harness |
| 6 | Failure | REG front/rear sensor | Replace | REG front/rear sensor |
| 7 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 8 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 9 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 10 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 8501

T1 open (The error detected on the controller side before the registration of printing in the engine.)

### Error code 8506

T1 open (The error detected on the engine side after the registration of printing in the engine.)

### <User Check>

- Install the latest main firmware.
- Close the paper tray correctly.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | PF unit | Replace | PF unit (For models with MP tray) or PF unit (For models with MF tray) |
| 2 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 3 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 4 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 5 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 8502

T2 open (The error detected on the controller side before the registration of printing in the engine.)

### <User Check>

- Reconnect the LT unit.
- Install the latest main firmware.
- Close the paper tray correctly.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | LT connector | Replace | LT connector |
| 2 | Connection failure | LT connector harness | Reconnect | LT connector harness |
| 3 | Failure | LT control PCB | Replace | LT control PCB |
| 4 | Failure | LT PF sensor PCB | Replace | LT PF sensor PCB |
| 5 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 8903

Back cover open - 2-sided printing (The error detected on the controller side before the registration of printing in the engine.)

### Error code 8904

Back cover open - 2-sided printing (The error detected on the engine side after the registration of printing in the engine.)

### <User Check>

• Close the back cover.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Come off | Back cover | Reattach | Back cover ASSY |
| 2 | Failure | Back cover | Replace | Back cover ASSY |
| 3 | Connection failure | Back cover sensor harness | Reconnect | Back cover sensor harness |
| 4 | Failure | Back cover sensor | Replace | Back cover sensor |
| 5 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 6 | Failure | Eject sensor/relay harness | Replace | Eject sensor/relay harness |
| 7 | Failure | Eject sensor/relay PCB | Replace | Eject sensor/relay PCB |
| 8 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 8A01

The paper size for 2-sided printing is out of specification. (REG rear sensor)

### <User Check>

• Use paper whose length is longer than LTR.

• Check if the paper setting in the printer driver is matched with the size of the paper loaded in the paper tray.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Connection failure | REG front/rear sensor harness | Reconnect | REG front/rear sensor harness |
| 2 | Failure | REG front/rear sensor harness | Replace | REG front/rear sensor harness |
| 3 | Failure | REG front/rear sensor | Replace | REG front/rear sensor |
| 4 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 5 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 6 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 8C00

No paper in MF tray (When printing from MF tray)

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Connection failure | MF PE sensor harness | Reconnect | MF PE sensor harness |
| 2 | Failure | MF PE sensor harness | Replace | MF PE sensor harness |
| 3 | Failure | MF PE sensor | Replace | MF PE sensor |
| 4 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 5 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 6 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 8D01**

Paper size error (Print settings)

**Error code 8D02**

Paper size error (Print data)

**<User Check>**

- Use paper whose length is longer than LTR.

- Check if the paper setting in the printer driver is matched with the paper loaded in the paper tray.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Connection failure | REG front/rear sensor harness | Reconnect | REG front/rear sensor harness |
| 2 | Failure | REG front/rear sensor harness | Replace | REG front/rear sensor harness |
| 3 | Failure | REG front/rear sensor | Replace | REG front/rear sensor |
| 4 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 5 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 6 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 8E01, 8E02**

Paper size error (FAX)

**<User Check>**

- For 1-sided printing, it occurs when the paper length is 10 mm or more shorter than 279.4 mm (11").

- For 2-sided printing, it occurs when the paper length is 10 mm or more shorter than the paper size specified in the function menu.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Connection failure | REG front/rear sensor harness | Reconnect | REG front/rear sensor harness |
| 2 | Failure | REG front/rear sensor harness | Replace | REG front/rear sensor harness |
| 3 | Failure | REG front/rear sensor | Replace | REG front/rear sensor |
| 4 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 5 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 6 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 9001**

Paper size mismatch - MP tray (Printer driver setting, Printer setting)

**Error code 9002**

T1 paper size mismatch (Printer driver setting, Printer setting)

**Error code 9003**

T2 paper size mismatch (Printer driver setting, Printer setting)

**<User Check>**

• Check if the paper setting in the printer driver is matched with the paper loaded in the paper tray.

| No. | Cause | | Remedy | |
|-----|-------|-------|--------|--------|
| 1 | Connection failure | REG front/rear sensor harness | Reconnect | REG front/rear sensor harness |
| 2 | Failure | REG front/rear sensor harness | Replace | REG front/rear sensor harness |
| 3 | Failure | REG front/rear sensor | Replace | REG front/rear sensor |
| 4 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 5 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 6 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 9201**

MP tray paper type mismatch (Printer driver setting, Printer setting)

**Error code 9202**

T1 paper type mismatch (Printer driver setting, Printer setting)

**Error code 9203**

T2 paper type mismatch (Printer driver setting, Printer setting)

**<User Check>**

• Check if the paper setting in the printer driver is matched with the paper loaded in the paper tray.

| No. | Cause | | Remedy | |
|-----|-------|------|--------|-----|
| 1 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 9301**

No paper in MP tray (MP PE sensor)

**<User Check>**

• Load paper in the paper tray.

| No. | Cause | | Remedy | |
|-----|-------|-------|--------|--------|
| 1 | Connection failure | MP PE sensor harness | Reconnect | MP PE sensor harness |
| 2 | Failure | MP PE sensor harness | Replace | MP PE sensor harness |
| 3 | Failure | MP unit | Replace | MP unit |
| 4 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 5 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 6 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 9302

No paper in T1 (T1 PF sensor)

### <User Check>

• Load paper in the paper tray.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | Process drive unit | Replace | Process drive unit (For models with MP tray) or Process drive unit (For models with MF tray) |
| 2 | Failure | PF unit | Replace | PF unit (For models with MP tray) or PF unit (For models with MF tray) |
| 3 | Failure | PF drive unit | Replace | PF drive unit (For models with MP tray) or PF drive unit (For models with MF tray) |
| 4 | Abrasion | PF kit | Replace | PF kit |
| 5 | Connection failure | T1 pickup clutch harness | Reconnect | T1 pickup clutch harness |
| 6 | Failure | T1 ELECTRIC CLUTCH FCL | Replace | T1 ELECTRIC CLUTCH FCL |
| 7 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 9309

No paper in all trays (Paper source setting: AUTO, PE sensor)

### <User Check>

• Load paper in the paper tray.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | MF PE sensor harness | Reconnect | MF PE sensor harness |
| 2 | Failure | MF PE sensor harness | Replace | MF PE sensor harness |
| 3 | Failure | MF PE sensor | Replace | MF PE sensor |
| 4 | Connection failure | MP PE sensor harness | Reconnect | MP PE sensor harness |
| 5 | Failure | MP PE sensor harness | Replace | MP PE sensor harness |
| 6 | Failure | MP unit | Replace | MP unit |
| 7 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 8 | Failure | Cartridge sensor/relay FFC | Replace | Cartridge sensor/relay FFC |
| 9 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 10 | Connection failure | LT PF sensor PCB harness | Reconnect | LT PF sensor PCB harness |
| 11 | Failure | LT PF sensor PCB harness | Replace | LT PF sensor PCB harness |
| 12 | Failure | LT PF sensor PCB | Replace | LT PF sensor PCB |
| 13 | Failure | LT control PCB | Replace | LT control PCB |
| 14 | Connection failure | LT connector harness (LT side) | Reconnect | LT connector harness (LT side) |
| 15 | Failure | LT connector harness (LT side) | Replace | LT connector (LT side) |
| 16 | Connection failure | LT connector (LT side)/(Machine side) | Reconnect | LT connector (LT side)/(Machine side) |
| 17 | Connection failure | LT connector harness (Machine side) | Reconnect | LT connector harness (Machine side) |
| 18 | Failure | LT connector harness (Machine side) | Replace | LT connector harness (Machine side) |
| 19 | Connection failure | T1 CLUTCH 30 harness | Reconnect | T1 CLUTCH 30 harness |
| 20 | Failure | T1 CLUTCH 30 | Replace | T1 CLUTCH 30 |
| 21 | Failure | Process drive unit | Replace | Process drive unit (For models with MP tray) or Process drive unit (For models with MF tray) |
| 22 | Failure | PF unit | Replace | PF unit (For models with MP tray) or PF unit (For models with MF tray) |
| 23 | Failure | PF drive unit | Replace | PF drive unit (For models with MP tray) or PF drive unit (For models with MF tray) |
| 24 | Connection failure | T1 pickup clutch harness | Reconnect | T1 pickup clutch harness |
| 25 | Failure | T1 ELECTRIC CLUTCH FCL | Replace | T1 ELECTRIC CLUTCH FCL |
| 26 | Failure | Main PCB | Replace | Main PCB |

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## ■ Error code 930A

No paper in Fax/FilePrint printing

### <User Check>

• Load paper in the paper tray.

## ■ Error code 9701

The paper size for 2-sided printing is out of specifications. (Printer driver setting)

### Error code 9702

T1 paper size is out of specification. (Printer driver setting)

### Error code 9703

T2 paper size is out of specification. (Printer driver setting)

### <User Check>

• Set the corresponding size for the paper in each tray of the Printer driver.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 9801

Density calibration failure (Incorrect measured value)

### <User Check>

• Replace the belt unit.

• If "WT Box End Soon" is displayed on the LCD, replace the waste toner box.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | REG mark sensor L harness | Reconnect | REG mark sensor L harness |
| 2 | Failure | REG mark sensor L harness | Replace | REG mark sensor L PCB |
| 3 | Dirt | REG mark sensor L PCB | Clean | REG mark sensor L PCB |
| 4 | Failure | REG mark sensor L PCB | Replace | REG mark sensor L PCB |
| 5 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 6 | Failure | Eject sensor/relay harness | Replace | Eject sensor/relay harness |
| 7 | Failure | Eject sensor/relay PCB | Replace | Eject sensor/relay PCB |
| 8 | Failure | Main PCB | Replace | Main PCB |

> **Note:**
>
> • If failure occurs when printing "Dthr K/W/Y/M/C_A" in Function Code 71,
>   refer to "4.3 Troubleshooting for Image Defects" in this chapter.

## ■ Error code 9802

Density calibration failure (Toner empty)

### <User Check>

• Replace the corresponding toner cartridge.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | Main PCB | Replace | Main PCB |

■ **Error code 9803**

Density calibration failure (Others)

**Error code 9804**

Density sensor sensitivity adjustment (Function code 72) failure

**<User Check>**

- Replace the belt unit.

- If "WT Box End Soon" is displayed on the LCD, replace the waste toner box.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Connection failure | REG mark sensor L harness | Reconnect | REG mark sensor L harness |
| 2 | Failure | REG mark sensor L harness | Replace | REG mark sensor L PCB |
| 3 | Dirt | REG mark sensor L PCB | Clean | REG mark sensor L PCB |
| 4 | Failure | REG mark sensor L PCB | Replace | REG mark sensor L PCB |
| 5 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 6 | Failure | Eject sensor/relay harness | Replace | Eject sensor/relay harness |
| 7 | Failure | Eject sensor/relay PCB | Replace | Eject sensor/relay PCB |
| 8 | Failure | Main PCB | Replace | Main PCB |

> **Note:**
> - If failure occurs when printing "Dthr K/W/Y/M/C_A" in Function Code 71,
>   refer to "4.3 Troubleshooting for Image Defects" in this chapter.

■ **Error code 9901**

Manual color registration failure (Incorrect measured value)

**<User Check>**

- Replace the belt unit.

- If "WT Box End Soon" is displayed on the LCD, replace the waste toner box.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Connection failure | REG mark sensor L harness | Reconnect | REG mark sensor L harness |
| 2 | Failure | REG mark sensor L harness | Replace | REG mark sensor L PCB |
| 3 | Dirt | REG mark sensor L PCB | Clean | REG mark sensor L PCB |
| 4 | Failure | REG mark sensor L PCB | Replace | REG mark sensor L PCB |
| 5 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 6 | Failure | Eject sensor/relay harness | Replace | Eject sensor/relay harness |
| 7 | Failure | Eject sensor/relay PCB | Replace | Eject sensor/relay PCB |
| 8 | Failure | Main PCB | Replace | Main PCB |

> **Note:**
> - If failure occurs when printing "Dthr K/W/Y/M/C_A" in Function Code 71,
>   refer to "4.3 Troubleshooting for Image Defects" in this chapter.

■ **Error code 9902**

Manual color registration failure (Toner empty)

**<User Check>**

- Replace the corresponding toner cartridge.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 9903

Manual color registration failure (Others)

### <User Check>

- Replace the belt unit.
- If "WT Box End Soon" is displayed on the LCD, replace the waste toner box.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Connection failure | REG mark sensor L harness | Reconnect | REG mark sensor L harness |
| 2 | Failure | REG mark sensor L harness | Replace | REG mark sensor L PCB |
| 3 | Dirt | REG mark sensor L PCB | Clean | REG mark sensor L PCB |
| 4 | Failure | REG mark sensor L PCB | Replace | REG mark sensor L PCB |
| 5 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 6 | Failure | Eject sensor/relay harness | Replace | Eject sensor/relay harness |
| 7 | Failure | Eject sensor/relay PCB | Replace | Eject sensor/relay PCB |
| 8 | Failure | Main PCB | Replace | Main PCB |

> **Note:**
> - If failure occurs when printing "Dthr K/W/Y/M/C_A" in Function Code 71, refer to "4.3 Troubleshooting for Image Defects" in this chapter.

## ■ Error code 9A01

Auto color registration failure (Incorrect measured value)

### <User Check>

- Replace the belt unit.
- If "WT Box End Soon" is displayed on the LCD, replace the waste toner box.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Connection failure | REG mark sensor L harness | Reconnect | REG mark sensor L harness |
| 2 | Failure | REG mark sensor L harness | Replace | REG mark sensor L PCB |
| 3 | Dirt | REG mark sensor L PCB | Clean | REG mark sensor L PCB |
| 4 | Failure | REG mark sensor L PCB | Replace | REG mark sensor L PCB |
| 5 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 6 | Failure | Eject sensor/relay harness | Replace | Eject sensor/relay harness |
| 7 | Failure | Eject sensor/relay PCB | Replace | Eject sensor/relay PCB |
| 8 | Failure | Main PCB | Replace | Main PCB |

> **Note:**
> - If failure occurs when printing "Dthr K/W/Y/M/C_A" in Function Code 71, refer to "4.3 Troubleshooting for Image Defects" in this chapter.

## ■ Error code 9A02

Auto color registration failure (Toner empty)

### <User Check>

- Replace the corresponding toner cartridge.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code 9A03

Auto color registration failure (Others)

### <User Check>

- Replace the belt unit.
- If "WT Box End Soon" is displayed on the LCD, replace the waste toner box.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Connection failure | REG mark sensor L harness | Reconnect | REG mark sensor L harness |
| 2 | Failure | REG mark sensor L harness | Replace | REG mark sensor L PCB |
| 3 | Dirt | REG mark sensor L PCB | Clean | REG mark sensor L PCB |
| 4 | Failure | REG mark sensor L PCB | Replace | REG mark sensor L PCB |
| 5 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 6 | Failure | Eject sensor/relay harness | Replace | Eject sensor/relay harness |
| 7 | Failure | Eject sensor/relay PCB | Replace | Eject sensor/relay PCB |
| 8 | Failure | Main PCB | Replace | Main PCB |

**Note:**

- If failure occurs when printing "Dthr K/W/Y/M/C_A" in Function Code 71,
  refer to "4.3 Troubleshooting for Image Defects" in this chapter.

## ■ Error code 9B03

No paper in T2 when FAX is printed. (T2 PE sensor)

### <User Check>

- Load paper in the printer's T2.
- According to the User's Guide, set the print settings so that paper is fed from other than the T2.

## ■ Error code A000

Incorrect scanning data for 2nd side

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Connection failure | 2nd side CIS FFC | Reconnect | 2nd side CIS FFC |
| 2 | Failure | 2nd side CIS FFC | Replace | 2nd side CIS FFC |
| 3 | Failure | 2nd side CIS unit | Replace | 2nd side CIS unit |
| 4 | Failure | Main PCB | Replace | Main PCB |

**Note:**

- Execute "Set CIS scan area" of (Function Code 55).

## ■ Error code A200

The document is 90 cm or more in length. (ADF cover sensor)

### <User Check>

- Install the latest main firmware.
- Use a document that is 336.5 mm (14") or less long.
- Remove the jammed document.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Foreign object | ADF paper feeding path | Clean | ADF paper feeding path |
| 2 | Connection failure | ADF/FB sensor/motor harness ASSY | Reconnect | ADF/FB sensor/motor harness ASSY |
| 3 | Failure | ADF document detection sensor | Replace | ADF unit |
| 4 | Failure | ADF scanning position sensor | Replace | ADF unit |
| 5 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code A300

The rear edge of document is not detected. (ADF cover sensor)

### <User Check>

- Install the latest main firmware.
- Use a document that is 336.5 mm (14") or less long.
- Remove the jammed document.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Foreign object | ADF paper feeding path | Clean | ADF paper feeding path |
| 2 | Connection failure | ADF/FB sensor/motor harness ASSY | Reconnect | ADF/FB sensor/motor harness ASSY |
| 3 | Failure | ADF document detection sensor | Replace | ADF unit |
| 4 | Failure | ADF scanning position sensor | Replace | ADF unit |
| 5 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code A400

ADF upper cover open

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | ADF/FB sensor/motor harness ASSY | Reconnect | ADF/FB sensor/motor harness ASSY |
| 2 | Failure | ADF/FB sensor/motor harness ASSY | Replace | ADF/FB sensor/motor harness ASSY |
| 3 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code A500

Scanning error when sending FAX (1st side) (First time)

### Error code A600

Scanning error when sending FAX (1st side) (Second time or later)

### <User Check>

• Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Dirt | FB unit | Clean | Scanning side (White tape) (See Fig. 2-17 below.) |
| 2 | Connection failure | 1st side CIS FFC | Reconnect | 1st side CIS FFC |
| 3 | Failure | 1st side CIS FFC | Replace | 1st side CIS FFC (For models with ADF) or 1st side CIS FFC (For models without ADF) |
| 4 | Failure | 1st side CIS unit | Replace | 1st side CIS unit (For models with ADF) or 1st side CIS unit (For models without ADF) |
| 5 | Failure | Main PCB | Replace | Main PCB |

**Note:**

• Execute "Acquire white level data" of (Function Code 55).
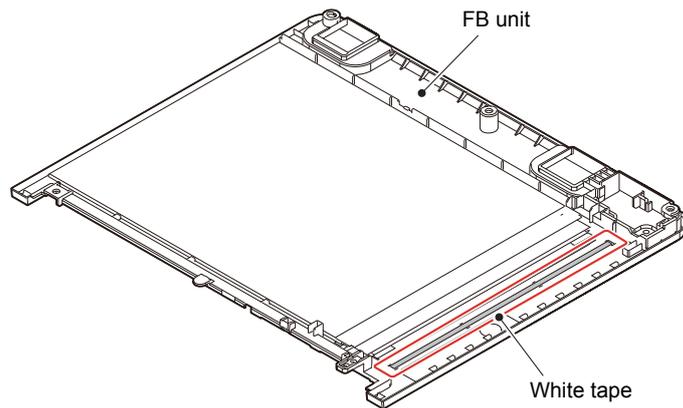


**Fig. 2-17**

## ■ Error code AC00

Scanning error when sending FAX (2nd side) (First time)

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Connection failure | 2nd side CIS FFC | Reconnect | 2nd side CIS FFC |
| 2 | Failure | 2nd side CIS FFC | Replace | 2nd side CIS FFC |
| 3 | Failure | 2nd side CIS unit | Replace | 2nd side CIS unit |
| 4 | Failure | Main PCB | Replace | Main PCB |

**Note:**

• Execute "Set CIS scan area" of (Function Code 55).

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## ■ Error code AD00

Incorrect scanning data

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | 1st side CIS FFC | Reconnect | 1st side CIS FFC |
| 2 | Failure | 1st side CIS FFC | Replace | 1st side CIS FFC (For models with ADF) or 1st side CIS FFC (For models without ADF) |
| 3 | Failure | 1st side CIS unit | Replace | 1st side CIS unit (For models with ADF) or 1st side CIS unit (For models without ADF) |
| 4 | Failure | Main PCB | Replace | Main PCB |

**Note:**
• Execute "Set CIS scan area" of (Function Code 55).

## ■ Error code AF00

CIS (FB unit) home position detection failure

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Dirt | FB unit | Clean | Scanning side (White tape) (Refer to Fig. 2-17.) |
| 2 | Dirt | FB unit | Clean | 1st side scanner glass |
| 3 | Connection failure | FB motor harness | Reconnect | FB motor harness |
| 4 | Failure | FB motor | Replace | FB unit |
| 5 | Connection failure | 1st side CIS FFC | Reconnect | 1st side CIS FFC |
| 6 | Failure | 1st side CIS FFC | Replace | 1st side CIS FFC (For models with ADF) or 1st side CIS FFC (For models without ADF) |
| 7 | Failure | 1st side CIS unit | Replace | 1st side CIS unit (For models with ADF) or 1st side CIS unit (For models without ADF) |
| 8 | Failure | Main PCB | Replace | Main PCB |

**Note:**
• Execute "Acquire white level data" of (Function Code 55).

## ■ Error code B000

Connection failure of CIS FFC (When Function code 55 is executed)

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | 1st side CIS FFC | Reconnect | 1st side CIS FFC |
| 2 | Failure | 1st side CIS FFC | Replace | 1st side CIS FFC (For models with ADF) or 1st side CIS FFC (For models without ADF) |
| 3 | Failure | 1st side CIS unit | Replace | 1st side CIS unit (For models with ADF) or 1st side CIS unit (For models without ADF) |
| 4 | Failure | Main PCB | Replace | Main PCB |

**Note:**
• Execute "Set CIS scan area" of (Function Code 55).

## ■ Error code BB00

White level data error (When Function code 55 is executed)

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | 1st side CIS FFC | Reconnect | 1st side CIS FFC |
| 2 | Failure | 1st side CIS FFC | Replace | 1st side CIS FFC (For models with ADF) or 1st side CIS FFC (For models without ADF) |
| 3 | Failure | 1st side CIS unit | Replace | 1st side CIS unit (For models with ADF) or 1st side CIS unit (For models without ADF) |
| 4 | Failure | Main PCB | Replace | Main PCB |

**Note:**
• Execute "Set CIS scan area" of (Function Code 55).

## ■ Error code BC00

Scanning error when sending FAX (2nd side) (Second time or later)

### <User Check>

• Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | 2nd side CIS FFC | Reconnect | 2nd side CIS FFC |
| 2 | Failure | 2nd side CIS FFC | Replace | 2nd side CIS FFC |
| 3 | Failure | 2nd side CIS unit | Replace | 2nd side CIS unit |
| 4 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code BD00

Black level data error (When Function code 55 is executed)

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | 1st side CIS FFC | Reconnect | 1st side CIS FFC |
| 2 | Failure | 1st side CIS FFC | Replace | 1st side CIS FFC (For models with ADF) or 1st side CIS FFC (For models without ADF) |
| 3 | Failure | 1st side CIS unit | Replace | 1st side CIS unit (For models with ADF) or 1st side CIS unit (For models without ADF) |
| 4 | Failure | Main PCB | Replace | Main PCB |

**Note:**

• Execute "Set CIS scan area" of (Function Code 55).

## ■ Error code BF00

The document for scanning is 40 cm or more in length. (ADF 2-sided scanning) (ADF cover sensor)

### <User Check>

• Install the latest main firmware.

• Use a document that is 336.5 mm (14") or less long.

• Remove the jammed document.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Foreign object | ADF paper feeding path | Clean | ADF paper feeding path |
| 2 | Connection failure | ADF/FB sensor/motor harness ASSY | Reconnect | ADF/FB sensor/motor harness ASSY |
| 3 | Failure | ADF document detection sensor | Replace | ADF unit |
| 4 | Failure | ADF scanning position sensor | Replace | ADF unit |
| 5 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code C001, C002, C003, C004

EWS (Web based management) settings error

### <User Check>

• According to the User's Guide, set the EWS (Web based management).

■ **Error code C100**

Failure to save HEXDUMP data to USB flash memory (Function code 45)

**<User Check>**

• Re-insert the USB flash memory.

• Check if there is something wrong with the USB flash memory during storage print.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Failure | Main PCB | Replace | Main PCB |

■ **Error code C700**

Main PCB is out of memory (PC-Print)

**Error code C800**

Main PCB is out of memory (Secure print)

**<User Check>**

• Print the print data stored in the memory.

• Divide the print data and print it.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Failure | Main PCB | Replace | Main PCB |

■ **Error code C900, C901**

Memory full for Storage device (USB flash memory)

**<User Check>**

• Re-insert the USB flash memory.

• Check if there is something wrong with the USB flash memory during storage print.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Failure | Main PCB | Replace | Main PCB |

■ **Error code CA00**

Communication error with Storage device (USB flash memory)

**<User Check>**

• Re-insert the USB flash memory.

• Check if there is something wrong with the USB flash memory during storage print.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Failure | Main PCB | Replace | Main PCB |

■ **Error code D100**

Modem initialization failure

**Error code D200**

Detected that the modem PCB is not connected.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Connection failure | Modem FFC | Reconnect | Modem FFC |
| 2 | Failure | Modem FFC | Replace | Modem FFC |
| 3 | Failure | Modem PCB | Replace | Modem PCB |
| 4 | Failure | Main PCB | Replace | Main PCB |

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## ■ Error code D800

Touch panel initialization failure

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | Touch panel FFC | Reconnect | Touch panel FFC |
| 2 | Failure | Touch panel | Replace | Touch panel |
| 3 | Connection failure | Panel FFC | Reconnect | Panel FFC (For models with touch panel) or Panel FFC (For models with 2-line LCD) |
| 4 | Failure | Panel FFC | Replace | Panel FFC (For models with 2-line LCD)or Panel FFC (For models with touch panel) |
| 5 | Failure | Panel PCB | Replace | Panel PCB |
| 6 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code DB00

Main PCB failure (ASIC)

### <User Check>

• Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code E000

Data in the main PCB is damaged.

### Error code E001

Main PCB failure (Other operation errors)

### <User Check>

• Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code E100

Program data error

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code E500

Main PCB failure (DRAM)

### <User Check>

• Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code E600

Main PCB failure (EEPROM)

### <User Check>

• Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code E701

Main PCB failure (Flash)

### <User Check>

• Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code E900

NFC initialization failure

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Failure | NFC PCB | Replace | NFC PCB |
| 2 | Connection failure | NFC FFC | Reconnect | NFC FFC |
| 3 | Failure | Key/NFC relay PCB | Replace | Key/NFC relay PCB |
| 4 | Connection failure | Key/NFC relay harness | Reconnect | Key/NFC relay harness |
| 5 | Failure | Key/NFC relay harness | Replace | Key/NFC relay harness |
| 6 | Failure | Main PCB | Replace | Main PCB |

**Note:**

• How to connect the NFC PCB differs depending on the model. For the FB models, the NFC PCB is directly connected to the main PCB. For the printer models, the NFC PCB is connected to the key/NFC relay PCB.

## ■ Error code EC00

Abnormal current flowing through a USB connector (Eddy current)

### <User Check>

• Remove the USB flash memory and turn the power OFF. After a while, turn the power ON again.

• Replace the USB flash memory with another one.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Connection failure | USB host harness | Reconnect | USB host harness |
| 2 | Failure | USB host harness | Replace | USB host harness |
| 3 | Failure | Main PCB | Replace | Main PCB |

## ■ Error code F100

Internal temperature abnormality (Internal thermistor)

### <User Check>

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

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Failure | LVPS PCB | Replace | LVPS PCB |
| 2 | Connection failure | LVPS harness | Reconnect | LVPS harness |
| 3 | Failure | LVPS harness | Replace | LVPS harness |
| 4 | Failure | Main PCB | Replace | Main PCB |

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# 4.2 Troubleshooting for Paper Feeding Problems

## 4.2.1 No paper feeding from T1

### <User Check>

- Check if the paper is correctly loaded in the paper tray.
- Check if not too much paper is loaded 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 163 g/m$^2$ (16 to 43 lb).
- Check if the MP tray / LT is not specified for the paper feeding tray.
- Flip through the paper and reload it in the paper tray.
- Clean the paper pickup roller.

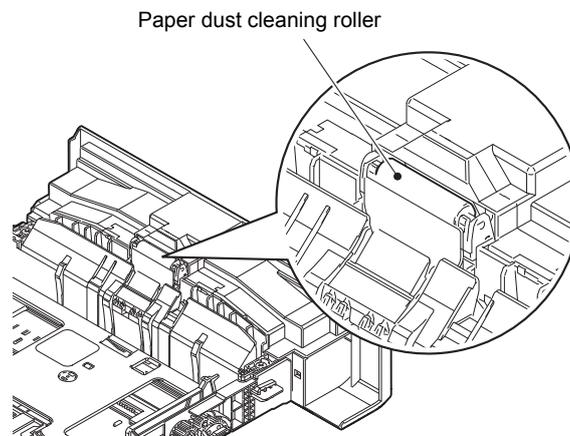| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Dirt | Paper dust cleaning roller of paper tray | Clean | Paper dust cleaning roller (See Fig. 2-18 below.) |
| 2 | Attachment failure | Roller holder ASSY | Reattach | Roller holder ASSY |
| 3 | Connection failure | PF motor FFC | Reconnect | PF motor FFC |
| 4 | Connection failure | T1 PF sensor harness | Reconnect | T1 PF sensor harness |
| 5 | Connection failure | T1 pickup clutch harness | Reconnect | T1 pickup clutch harness |
| 6 | Abrasion | T1 pickup roller | Replace | PF kit |
| 7 | Failure | Gears in the paper tray | Replace | Paper tray |
| 8 | Failure | PF drive unit | Replace | PF drive unit (For models with MP tray) or PF drive unit (For models with MF tray) |
| 9 | Failure | PF unit | Replace | PF unit (For models with MP tray) or PF unit (For models with MF tray) |
| 10 | Failure | Process drive unit | Replace | Process drive unit (For models with MP tray) or Process drive unit (For models with MF tray) |
| 11 | Failure | Fuser | Replace | Fuser |
| 12 | Failure | Main PCB | Replace | Main PCB |



Paper dust cleaning roller

**Fig. 2-18**

## 4.2.2 No paper feeding from LT

**<User Check>**

- Check if the paper is correctly loaded in the paper tray.
- Check if not too much paper is loaded 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 163 g/m$^2$ (16 to 43 lb).
- Check if the MP tray / T1 is not specified for the paper feeding tray.
- Flip through the paper and reload it in the paper tray.
- Clean the paper pickup roller.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Dirt | Paper dust cleaning roller of paper tray | Clean | Paper dust cleaning roller (Refer to Fig. 2-18.) |
| 2 | Attachment failure | Roller holder ASSY | Reattach | Roller holder ASSY |
| 3 | Connection failure | PF motor FFC | Reconnect | PF motor FFC |
| 4 | Connection failure | LT PF sensor harness | Reconnect | LT PF sensor harness |
| 5 | Connection failure | T1 CLUTCH 30 harness | Reconnect | T1 CLUTCH 30 harness |
| 6 | Abrasion | LT pickup roller | Replace | PF kit |
| 7 | Failure | Gears in the paper tray | Replace | Paper tray |
| 8 | Failure | PF drive unit | Replace | PF drive unit (For models with MP tray) or PF drive unit (For models with MF tray) |
| 9 | Failure | PF unit | Replace | PF unit (For models with MP tray) or PF unit (For models with MF tray) |
| 10 | Failure | Process drive unit | Replace | Process drive unit (For models with MP tray) or Process drive unit (For models with MF tray) |
| 11 | Failure | Fuser | Replace | Fuser |
| 12 | Failure | Main PCB | Replace | Main PCB |
| 13 | Connection failure | LT connector harness (LT side) | Reconnect | LT connector harness (LT side) |
| 14 | Connection failure | LT connector harness (Machine side) | Reconnect | LT connector harness (Machine side) |

## 4.2.3  No paper feeding from MF/MP tray

**\<User Check\>**

- Check that the paper is fully inserted in the MP tray.

- Check that not too much paper is 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$^2$ (16 to 43 lb).

- Check that the T1/LT is not set as the paper tray by the printer driver.

- Flip through the paper and reload it in the MP tray.

- Clean the MP pickup roller.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Attachment failure | MP roller holder ASSY | Reattach | Roller holder ASSY |
| 2 | Connection failure | PF motor FFC | Reconnect | PF motor FFC |
| 3 | Connection failure | MF PE sensor harness | Reconnect | MF PE sensor harness |
| 4 | Connection failure | MP REG sensor harness | Reconnect | MP REG sensor harness |
| 5 | Connection failure | MP PE sensor harness | Reconnect | MP PE sensor harness |
| 6 | Abrasion | MP separation roller | Replace | PF kit |
| 7 | Failure | PF drive unit | Replace | PF drive unit (For models with MP tray) or PF drive unit (For models with MF tray) |
| 8 | Failure | PF unit | Replace | PF unit (For models with MP tray) or PF unit (For models with MF tray) |
| 9 | Failure | Process drive unit | Replace | Process drive unit (For models with MP tray) or Process drive unit (For models with MF tray) |
| 10 | Failure | Fuser | Replace | Fuser |
| 11 | Failure | Main PCB | Replace | Main PCB |

## 4.2.4  Multiple sheets of paper are fed

**\<User Check\>**

- Check that not too much paper is loaded in each paper tray.

- Check if the paper is correctly loaded in each paper tray.

- Flip over the paper in each paper tray or rotate the paper 180°.

- Check that the thickness of each paper is 60 to 163 g/m$^2$ (16 to 43 lb).

- Flip through the paper and reload it in each paper tray.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Abrasion | PF kit | Replace | PF kit |

## 4.2.5 Paper becomes wrinkled

**<User Check>**

- Check if the paper is correctly loaded in each paper tray.
- Flip over the paper in each paper tray or rotate the paper 180°.
- Adjust the paper guide according to the paper size.
- Check that the thickness of each paper is 60 to 163 g/m$^2$ (16 to 43 lb).
- Check if the paper is not damp.
- Check if there is no dust stuck to the fuser.
- Check if the paper type is proper.

| No. | Cause | | Remedy | |
|-----|-------|-------|--------|--------|
| 1 | Failure | Paper eject ASSY | Replace | Paper eject ASSY |
| 2 | Failure | Fuser | Replace | Fuser |

## 4.2.6 Paper is fed at an angle

**<User Check>**

- Check if the paper is correctly loaded in each paper tray.
- 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 each paper is 60 to 163 g/m$^2$ (16 to 43 lb).
- Check that not too much paper is loaded in the paper tray.
- Check if the paper type is proper.
- Clean each paper pickup roller.

| No. | Cause | | Remedy | |
|-----|-------|-------|--------|--------|
| 1 | Abrasion | PF kit | Replace | PF kit |
| 2 | Failure | PF unit | Replace | PF unit (For models with MP tray) or PF unit (For models with MF tray) |

## 4.2.7 Paper curls

**<User Check>**

- Check if the paper specified in the printer driver matches the paper that is actually loaded.
- Select "Reduce Paper Curl" in the printer driver.
- Check if the paper is correctly loaded in each paper tray.
- Open the back cover and try printing with straight paper ejection mode.

| No. | Cause | | Remedy | |
|-----|-------|-------|--------|--------|
| 1 | Failure | Fuser | Replace | Fuser |
| 2 | Failure | Main PCB | Replace | Main PCB |

## 4.2.8 Unable to perform DX printing

**\<User Check\>**

- Check if the DX tray is fully inserted.
- Close the back cover.
- The paper length is 114 mm or more.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Attachment failure | Eject actuator | Reattach | Eject actuator |
| 2 | Failure | Back cover | Replace | Back cover ASSY |
| 3 | Connection failure | MP solenoid harness | Reconnect | MP solenoid harness |
| 4 | Failure | DX tray | Replace | DX tray |
| 5 | Connection failure | Eject sensor/relay harness | Reconnect | Eject sensor/relay harness |
| 6 | Failure | Paper eject ASSY | Replace | Paper eject ASSY |
| 7 | Failure | Main PCB | Replace | Main PCB |

# 4.2.9 Paper jam

## 4.2.9.1 Paper jam at the T1

### <User Check>

- Remove the jammed paper.
- Flip through the paper and reload it in the paper tray.
- Flip over the paper in the paper tray or rotate the paper 180°.
- Adjust each paper guide according to the paper size.
- Check if too much paper is loaded in the tray. (Up to 250-sheet)
- Check that the thickness of each paper is 60 to 163 g/m$^2$ (16 to 43 lb).
- Use paper within the specifications. Load the paper properly.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Foreign object | Paper feeding path | Clean | Paper feeding path |
| 2 | Foreign object | Paper dust cleaning roller of paper tray | Clean | Paper dust cleaning roller (Refer to Fig. 2-18.) |
| 3 | Attachment failure | PF actuator | Reattach | PF actuator |
| 4 | Attachment failure | REG front actuator | Reattach | REG front actuator |
| 5 | Connection failure | REG front/rear sensor harness | Reconnect | REG front/rear sensor harness |
| 6 | Connection failure | REG clutch harness | Reconnect | REG clutch harness |
| 7 | Connection failure | T1 PF sensor harness | Reconnect | T1 PF sensor harness |
| 8 | Failure | PF drive unit | Replace | PF drive unit (For models with MP tray) or PF drive unit (For models with MF tray) |
| 9 | Failure | PF unit | Replace | PF unit (For models with MP tray) or PF unit (For models with MF tray) |
| 10 | Failure | Process drive unit | Replace | Process drive unit (For models with MP tray) or Process drive unit (For models with MF tray) |
| 11 | Failure | Fuser | Replace | Fuser |
| 12 | Failure | Main PCB | Replace | Main PCB |

### 4.2.9.2 Paper jam at the LT

**<User Check>**

- Remove the jammed paper.
- Flip through the paper and reload it in the paper tray.
- Flip over the paper in the paper tray or rotate the paper 180°.
- Adjust each paper guide according to the paper size.
- Check if too much paper is loaded in the tray. (Up to 250-sheet)
- Check that the thickness of each paper is 60 to 163 g/m$^2$ (16 to 43 lb).
- Use paper within the specifications. Load the paper properly.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Foreign object | Paper feeding path | Clean | Paper feeding path |
| 2 | Foreign object | Paper dust cleaning roller of paper tray | Clean | Paper dust cleaning roller (Refer to Fig. 2-18.) |
| 3 | Attachment failure | PF actuator | Reattach | PF actuator |
| 4 | Attachment failure | REG front actuator | Reattach | REG front actuator |
| 5 | Connection failure | REG front/rear sensor harness | Reconnect | REG front/rear sensor harness |
| 6 | Connection failure | REG clutch harness | Reconnect | REG clutch harness |
| 7 | Connection failure | LT PF sensor harness | Reconnect | LT PF sensor harness |
| 8 | Failure | PF drive unit | Replace | PF drive unit (For models with MP tray) or PF drive unit (For models with MF tray) |
| 9 | Failure | PF unit | Replace | PF unit (For models with MP tray) or PF unit (For models with MF tray) |
| 10 | Failure | Process drive unit | Replace | Process drive unit (For models with MP tray) or Process drive unit (For models with MF tray) |
| 11 | Failure | Fuser | Replace | Fuser |
| 12 | Failure | Main PCB | Replace | Main PCB |

### 4.2.9.3 Paper jam at the MF/MP tray

Refer to error code 7200/7900 according to different errors.

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

Refer to error code 7000 according to different errors.

### 4.2.9.5 Paper jam at the eject section

Refer to error code 7100 according to different errors.

### 4.2.9.6 Paper jam in DX printing

Refer to error code 7200 according to different errors.

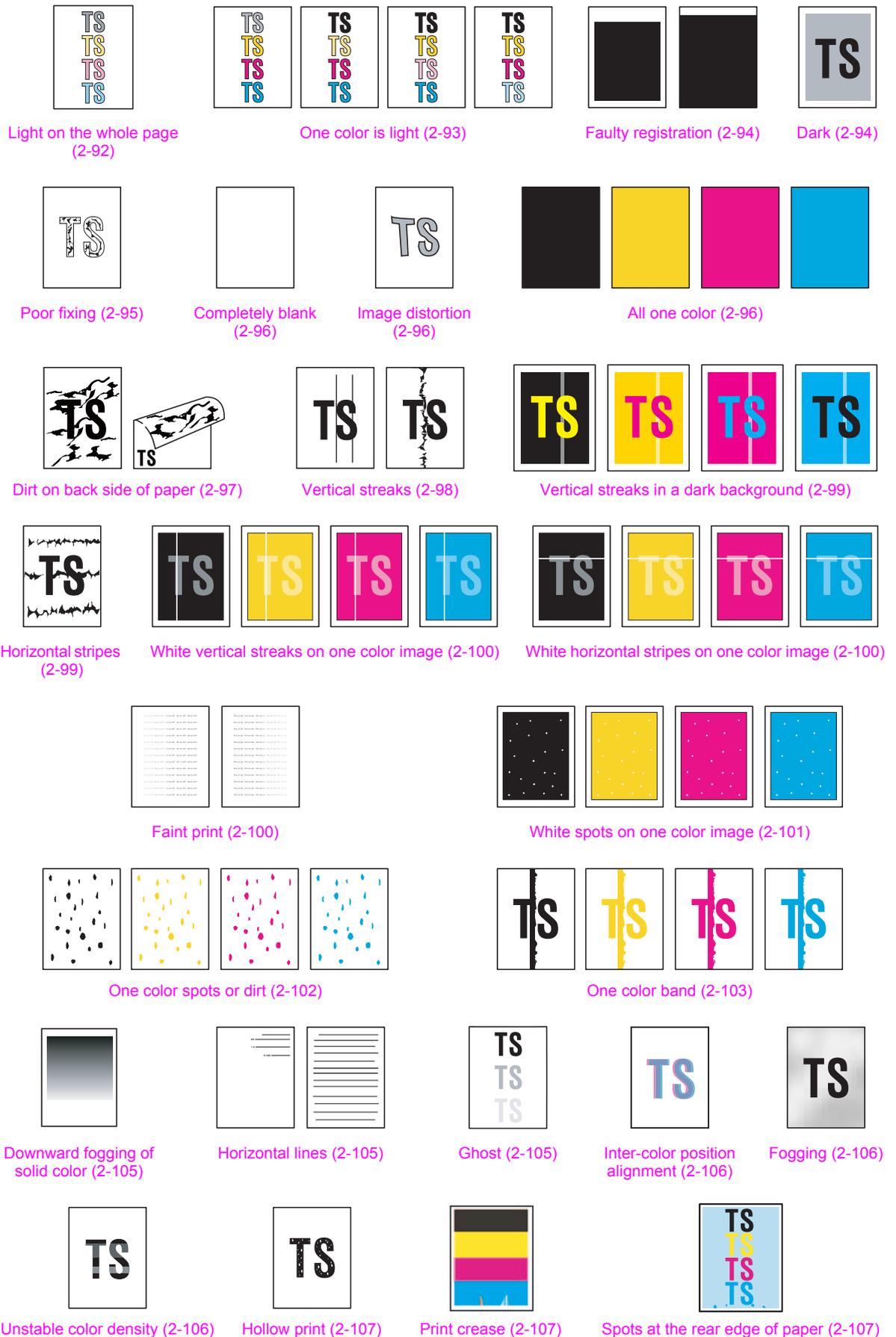# 4.3 Troubleshooting for Image Defects

## 4.3.1 Image defect examples



Light on the whole page (2-92)

One color is light (2-93)

Faulty registration (2-94)

Dark (2-94)

Poor fixing (2-95)

Completely blank (2-96)

Image distortion (2-96)

All one color (2-96)

Dirt on back side of paper (2-97)

Vertical streaks (2-98)

Vertical streaks in a dark background (2-99)

Horizontal stripes (2-99)

White vertical streaks on one color image (2-100)

White horizontal stripes on one color image (2-100)

Faint print (2-100)

White spots on one color image (2-101)

One color spots or dirt (2-102)

One color band (2-103)

Downward fogging of solid color (2-105)

Horizontal lines (2-105)

Ghost (2-105)

Inter-color position alignment (2-106)

Fogging (2-106)

Unstable color density (2-106)

Hollow print (2-107)

Print crease (2-107)

Spots at the rear edge of paper (2-107)

**Fig. 2-19**

## 4.3.2 Troubleshooting for each image defect

### 4.3.2.1 Light on the whole page



**<User Check>**
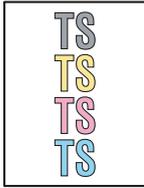
- Using the machine in hot-humid or cold-dry conditions can cause this problem.
- If the toner save mode is ON, turn OFF the toner save mode.
- Execute the color calibration from the control panel.
- Replace the drum unit.
- Replace the toner cartridge.
- Replace the belt unit.
- Turn the power OFF, and leave the machine for a while. (Condensation)
- Check if paper is not damp.
- Use specified paper.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Terminal dirt | Electrodes (Machine, Drum unit) | Clean | Electrodes (Machine, Drum unit) (Refer to Fig. 2-16, Fig. 2-15.) |
| 2 | Terminal dirt | Electrodes (Machine, HVPS PCB) | Clean | Electrodes (Machine, HVPS PCB) (Refer to Fig. 2-16, Fig. 2-14.) |
| 3 | Dirt | REG mark sensor L PCB | Clean | REG mark sensor L PCB |
| 4 | Failure | REG mark sensor L PCB | Replace | REG mark sensor L PCB |
| 5 | Failure | Fuser | Replace | Fuser |
| 6 | Failure | HVPS PCB | Replace | HVPS PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

### 4.3.2.2 One color is light



**<User Check>**
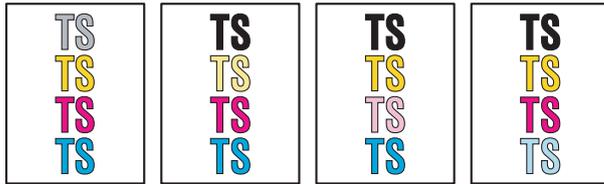
- Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Execute the color calibration from the control panel.
- Replace the drum unit.
- Replace the toner cartridge.
- Use specified paper.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Terminal dirt | Electrodes (Machine, Drum unit) | Clean | Electrodes (Machine, Drum unit) (Refer to Fig. 2-16, Fig. 2-15.) |
| 2 | Terminal dirt | Electrodes (Machine, Belt unit) | Clean | Electrodes (Machine, Belt unit) (Refer to Fig. 2-16, and see Fig. 2-20 below.) |
| 3 | Dirt | REG mark sensor L PCB | Clean | REG mark sensor L PCB |
| 4 | Failure | REG mark sensor L PCB | Replace | REG mark sensor L PCB |
| 5 | Failure | Fuser | Replace | Fuser |
| 6 | Failure | HVPS PCB | Replace | HVPS PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

■ **Electrodes location of belt unit**



Upper side
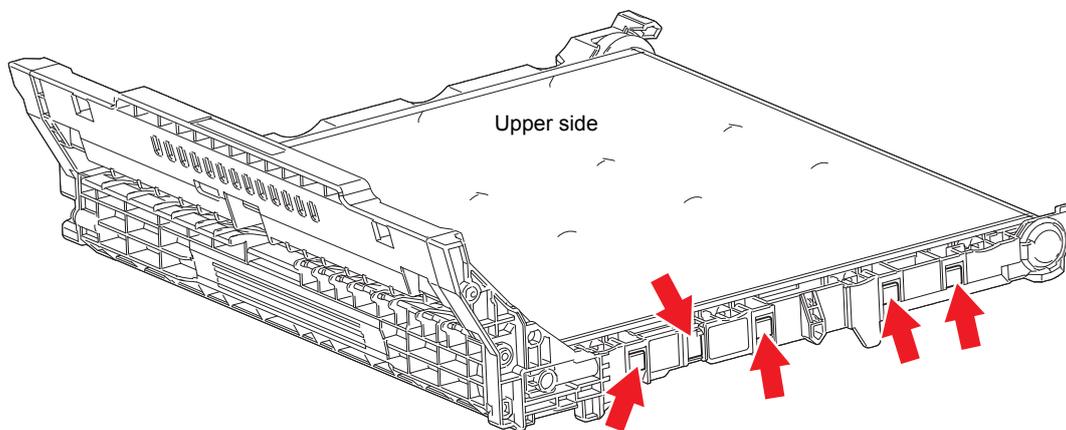
**Fig. 2-20**

### 4.3.2.3 Faulty registration
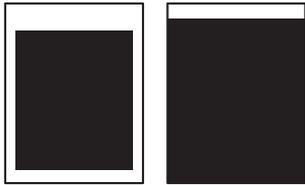


**\<User Check\>**

- Use specified paper.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Attachment failure | REG rear actuator | Reattach | REG rear actuator |
| 2 | Failure | Main PCB | Replace | Main PCB |

### 4.3.2.4 Dark



**\<User Check\>**

- 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 wires of all four colors on 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.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Terminal dirt | Electrodes (Machine, Drum unit) | Clean | Electrodes (Machine, Drum unit) (Refer to Fig. 2-16, Fig. 2-15.) |
| 2 | Terminal dirt | Electrodes (Machine, Belt unit) | Clean | Electrodes (Machine, Belt unit) (Refer to Fig. 2-16, Fig. 2-20.) |
| 3 | Dirt | REG mark sensor L PCB | Clean | REG mark sensor L PCB |
| 4 | Failure | REG mark sensor L PCB | Replace | REG mark sensor L PCB |
| 5 | Failure | Fuser | Replace | Fuser |
| 6 | Failure | HVPS PCB | Replace | HVPS PCB |
| 7 | Failure | Main PCB | Replace | Main PCB |

## 4.3.2.5 Poor fixing

**<User Check>**
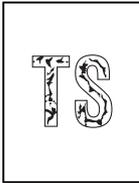
- Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Clean the corona wires of all four colors on the drum unit.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Replace the belt unit with a new one.
- Wipe the LED ASSY with a soft, lint-free cloth. (Refer to the figure below.)
- Install the latest main firmware.

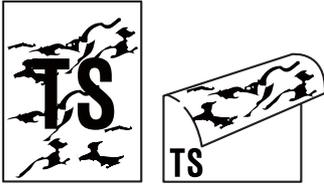| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Terminal dirt | Electrodes (Machine, Drum unit) | Clean | Electrodes (Machine, Drum unit) (Refer to Fig. 2-16, Fig. 2-15.) |
| 2 | Terminal dirt | Electrodes (Machine, Belt unit) | Clean | Electrodes (Machine, Belt unit) (Refer to Fig. 2-16, Fig. 2-20.) |
| 3 | Failure | Fuser | Replace | Fuser |
| 4 | Failure | HVPS PCB | Replace | HVPS PCB |
| 5 | Failure | LVPS PCB | Replace | LVPS PCB |
| 6 | Failure | Main PCB | Replace | Main PCB |
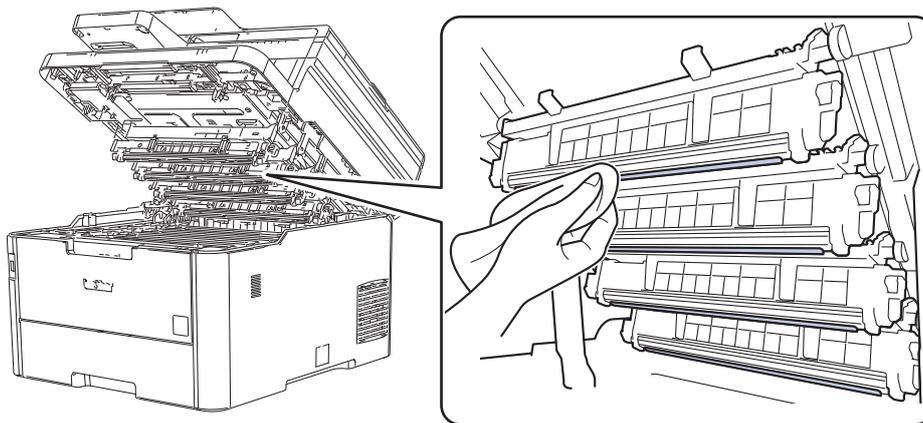


**Fig. 2-21**

### 4.3.2.6 Completely blank

**<User Check>**
- Clean the corona wires of all four colors on the drum unit.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Terminal dirt | Electrodes (Machine, Drum unit) | Clean | Electrodes (Machine, Drum unit) (Refer to Fig. 2-16, Fig. 2-15.) |
| 2 | Terminal dirt | Electrodes (Machine, Belt unit) | Clean | Electrodes (Machine, Belt unit) (Refer to Fig. 2-16, Fig. 2-20.) |
| 3 | Connection failure | LED FFC | Reconnect | LED FFC |
| 4 | Connection failure | LED control FFC | Reconnect | LED control FFC |
| 5 | Terminal dirt | Electrodes (Machine, HVPS PCB) | Clean | Electrodes (Machine, HVPS PCB) (Refer to Fig. 2-16, Fig. 2-14.) |
| 6 | Failure | Main PCB | Replace | Main PCB |

### 4.3.2.7 Image distortion



**<User Check>**
- Replace the belt unit with a new one.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | Main PCB | Replace | Main PCB |

### 4.3.2.8 All one color



**<User Check>**

- Clean the corona wires of all four colors on the drum unit.
- Replace the drum unit with a new one.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Terminal dirt | Electrodes (Machine, Drum unit) | Clean | Electrodes (Machine, Drum unit) (Refer to Fig. 2-16, Fig. 2-15.) |
| 2 | Terminal dirt | Electrodes (Machine, Belt unit) | Clean | Electrodes (Machine, Belt unit) (Refer to Fig. 2-16, Fig. 2-20.) |
| 3 | Connection failure | LED control FFC | Reconnect | LED control FFC |
| 4 | Terminal dirt | Electrodes (Machine, HVPS PCB) | Clean | Electrodes (Machine, HVPS PCB) (Refer to Fig. 2-16, Fig. 2-14.) |
| 5 | Failure | LED ASSY | Replace | LED ASSY |
| 6 | Failure | Main PCB | Replace | Main PCB |

### 4.3.2.9 Dirt on back side of paper



**<User Check>**

- Clean the corona wires of all four colors on the drum unit.
- Return the green tab for cleaning the corona wire to the ▲ position.
- This problem may disappear after printing multiple sheets of paper.
- Refer to <How to clean the drum unit> and remove the dirt on the exposure drum using a cotton swab.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Dirt | Paper feeding path | Clean | Paper feeding path |
| 2 | Terminal dirt | Electrodes (Machine, Belt unit) | Clean | Electrodes (Machine, Belt unit) (Refer to Fig. 2-16, Fig. 2-20.) |
| 3 | Terminal dirt | Electrodes (Machine, Waste toner box) | Clean | Electrodes (Machine, Waste toner box) (Refer to Fig. 2-16, and see Fig. 2-22 below.) |
| 4 | Failure | Fuser | Replace | Fuser |
| 5 | Failure | HVPS PCB | Replace | HVPS PCB |

■ **Electrodes location of waste toner box**
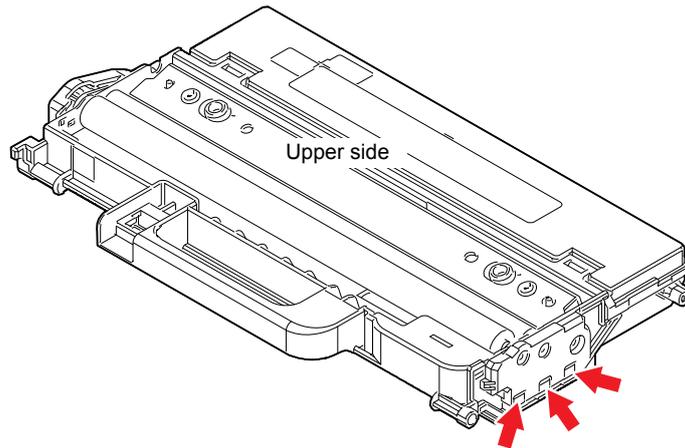


**Fig. 2-22**

## 4.3.2.10 Vertical streaks
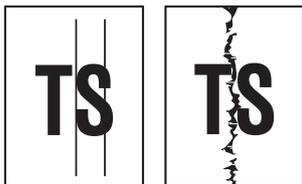


**\<User Check\>**
- Clean the corona wires of all four colors on the drum unit.
- Return the green tab for cleaning the corona wire to the ▲ position.
- This problem may disappear after printing multiple sheets of paper.
- Refer to \<How to clean the drum unit\> and remove the dirt on the exposure drum using a cotton swab.
- Wipe the LED ASSY with a soft, lint-free cloth. (Refer to Fig. 2-21.)
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Install the latest main firmware.

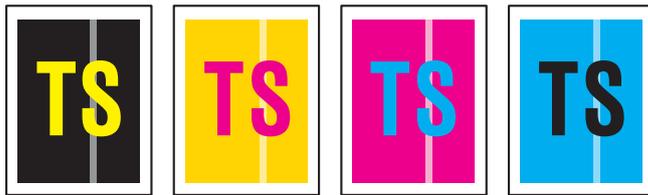| No. | Cause | | Remedy | |
|-----|-------------|---------------------------|---------|---------------------------------------------------|
| 1 | Dirt | Paper feeding path | Clean | Paper feeding path |
| 2 | Deformation | Ground wire of paper tray | Repair | Ground wire of paper tray (See Fig. 2-23 below.) |
| 3 | Failure | Fuser | Replace | Fuser |
| 4 | Failure | LED ASSY | Replace | LED ASSY |



Ground wire

Paper tray
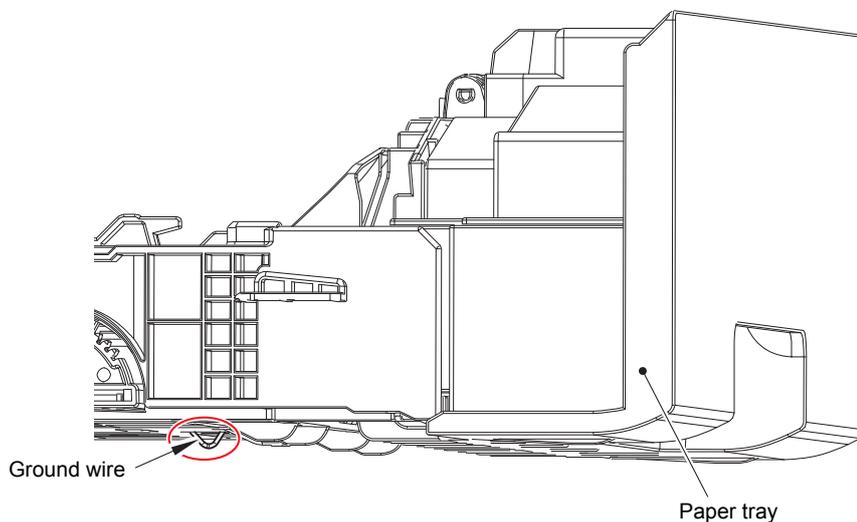
**Fig. 2-23**

### 4.3.2.11 Vertical streaks in a dark background



**<User Check>**

- Clean the corona wires of all four colors on the drum unit.
- This problem may disappear after printing multiple sheets of paper.
- Refer to <How to clean the drum unit> and remove the dirt on the exposure drum using a cotton swab.
- Turn the power OFF, and leave the machine for a while. (Condensation)
- Wipe the LED ASSY with a soft, lint-free cloth. (Refer to Fig. 2-21.)
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Terminal dirt | Electrodes (Machine, Drum unit) | Clean | Electrodes (Machine, Drum unit) (Refer to Fig. 2-16, Fig. 2-15.) |
| 2 | Failure | LED ASSY | Replace | LED ASSY |

### 4.3.2.12 Horizontal stripes



**<User Check>**

- Clean the corona wires of all four colors on the drum unit.
- This problem may disappear after printing multiple sheets of paper.
- Refer to <How to clean the drum unit> and remove the dirt on the exposure drum using a cotton swab.
- Turn the power OFF, and leave the machine for a while. (Condensation)
- Wipe the LED ASSY with a soft, lint-free cloth. (Refer to Fig. 2-21.)
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Terminal dirt | Electrodes (Machine, Drum unit) | Clean | Electrodes (Machine, Drum unit) (Refer to Fig. 2-16, Fig. 2-15.) |
| 2 | Failure | Fuser | Replace | Fuser |
| 3 | Failure | HVPS PCB | Replace | HVPS PCB |

## 4.3.2.13 White vertical streaks on one color image



### <User Check>

- Clean the corona wires of all four colors on the drum unit.
- Refer to <How to clean the drum unit> and remove the dirt on the exposure drum using a cotton swab.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Terminal dirt | Electrodes (Machine, Drum unit) | Clean | Electrodes (Machine, Drum unit) (Refer to Fig. 2-16, Fig. 2-15.) |
| 2 | Failure | LED ASSY | Replace | LED ASSY |

## 4.3.2.14 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.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Terminal dirt | Electrodes (Machine, Drum unit) | Clean | Electrodes (Machine, Drum unit) (Refer to Fig. 2-16, Fig. 2-15.) |
| 2 | Failure | Fuser | Replace | Fuser |
| 3 | Failure | HVPS PCB | Replace | HVPS PCB |

## 4.3.2.15 Faint print
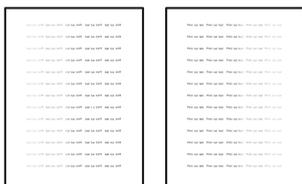
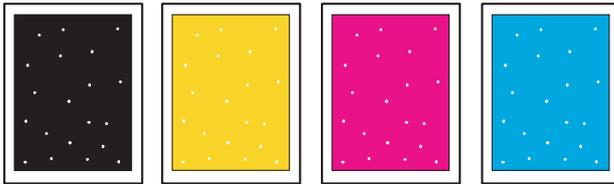

### <User Check>
- Check that the machine is placed on a level surface.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | LED ASSY | Replace | LED ASSY |
| 2 | Failure | Fuser | Replace | Fuser |
| 3 | Failure | Main PCB | Replace | Main PCB |

### 4.3.2.16 White spots on one color image



**<User Check>**

- Check if the fan are not clogged.
- Refer to <How to clean the drum unit> and remove the dirt on the exposure drum using a cotton swab.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Replace the belt unit with a new one.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Dirt | Paper dust cleaning roller of paper tray | Clean | Paper dust cleaning roller (Refer to Fig. 2-18.) |
| 2 | Dirt | Filter | Clean | Filter |
| 3 | Failure | Fuser | Replace | Fuser |
| 4 | Failure | HVPS PCB | Replace | HVPS PCB |

**Note:**

- Image defects which occur periodically may be caused by various roller defects. Refer to the table below to identify the cause based on the pitch appearing in the image.

<Pitches appearing in images caused by rollers>

| Part name | Pitches appearing in images |
|-----------|------------------------------|
| DEV roller | 29.0 mm |
| Exposure drum | 94.5 mm |
| Heat roller (of fuser) | 78.5 mm |
| Pressure roller (of fuser) | 78.5 mm |

### 4.3.2.17 One color spots or dirt
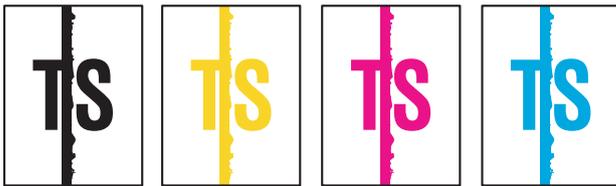


**<User Check>**
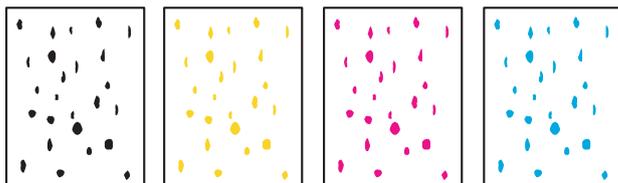
- Check if damp paper is used.
- Refer to <How to clean the drum unit> and remove the dirt on the exposure drum using a cotton swab.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Replace the belt unit with a new one.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Paper powder | Paper dust cleaning roller of paper tray | Clean | Paper dust cleaning roller (Refer to Fig. 2-18.) |
| 2 | Dirt | Filter | Clean | Filter |
| 3 | Failure | Fuser | Replace | Fuser |
| 4 | Failure | HVPS PCB | Replace | HVPS PCB |

**Note:**

- Image defects which occur periodically may be caused by various roller defects. Refer to <Pitches appearing in images caused by rollers> to identify the cause based on the pitch appearing in the image.

## 4.3.2.18 One color band



### <User Check>

- Clean the corona wires of all four colors on the drum unit.
- Return the green tab for cleaning the corona wire to the ▲ position.
- This problem may disappear after printing multiple sheets of paper.
- Refer to <How to clean the drum unit> and remove the dirt on the exposure drum using a cotton swab.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Deformation | Ground wire of paper tray | Repair | Ground wire of paper tray (Refer to Fig. 2-23.) |
| 2 | Failure | LED ASSY | Replace | LED ASSY |

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

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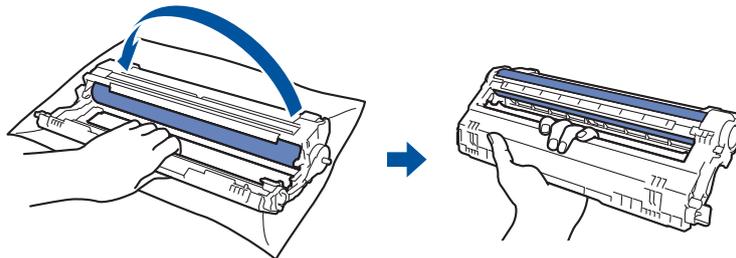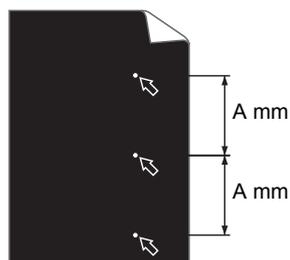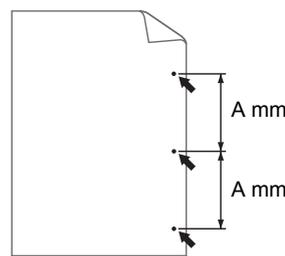


**Fig. 2-24**

< Examples of image distortion >



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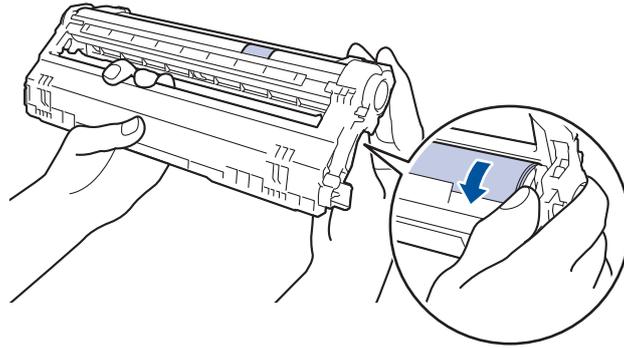
Black dots repeat in A mm distance on the page.

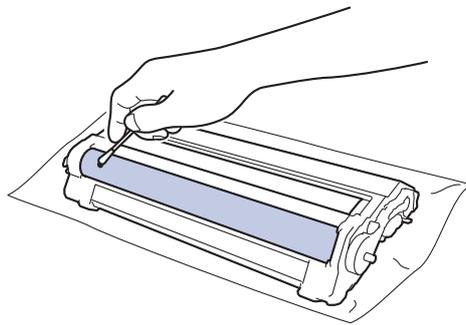**Fig. 2-25**

Refer to the table <Pitches appearing in 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. 2-26**

(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. 2-27**

**Note:**
• DO NOT clean the exposure drum surface with anything sharp like a ball pointed pen.

*Confidential*

### 4.3.2.19 Downward fogging of solid color



**<User Check>**
- Replace the toner cartridge with a new one.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Failure | HVPS PCB | Replace | HVPS PCB |
| 2 | Failure | Main PCB | Replace | Main PCB |

### 4.3.2.20 Horizontal lines



**<User Check>**
- This problem may disappear after printing multiple sheets of paper.
- Refer to <How to clean the drum unit> and remove the dirt on the exposure drum using a cotton swab.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Terminal dirt | Electrodes (Machine, Drum unit) | Clean | Electrodes (Machine, Drum unit) (Refer to Fig. 2-16, Fig. 2-15.) |
| 2 | Failure | Fuser | Replace | Fuser |
| 3 | Failure | HVPS PCB | Replace | HVPS PCB |

### 4.3.2.21 Ghost



**<User Check>**
- Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Check if an appropriate paper type is selected in the printer driver.
- Select "Improve Toner Fixing" in the printer driver.
- Replace the drum unit with a new one.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Failure | Fuser | Replace | Fuser |
| 2 | Failure | HVPS PCB | Replace | HVPS PCB |

### 4.3.2.22 Inter-color position alignment
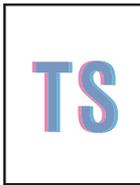
**<User Check>**
- Implement the adjustment of color registration (adjustment of inter-color position alignment).
- Replace the belt unit with a new one.
- Replace the drum unit with a new one.
- Replace the waste toner box with a new one.
- Install the latest main firmware.

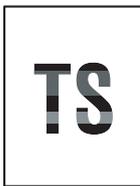| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | REG mark sensor R PCB | Replace | REG mark sensor R PCB |
| 2 | Failure | Main PCB | Replace | Main PCB |

### 4.3.2.23 Fogging

**<User Check>**
- 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.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | HVPS PCB | Replace | HVPS PCB |
| 2 | Failure | Main PCB | Replace | Main PCB |

### 4.3.2.24 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.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Terminal dirt | Electrodes (Machine, Drum unit) | Clean | Electrodes (Machine, Drum unit) (Refer to Fig. 2-16, Fig. 2-15.) |
| 2 | Terminal dirt | Electrodes (Machine, Belt unit) | Clean | Electrodes (Machine, Belt unit) (Refer to Fig. 2-16, Fig. 2-20.) |
| 3 | Failure | HVPS PCB | Replace | HVPS PCB |
| 4 | Failure | LED ASSY | Replace | LED ASSY |
| 5 | Failure | Main PCB | Replace | Main PCB |

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

### 4.3.2.25 Hollow print

**\<User Check\>**

- Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Refer to \<How to clean the drum unit\> and remove the dirt on the exposure drum using a cotton swab.
- Replace the toner cartridge with a new one.
- Replace the drum unit with a new one.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Paper powder | Paper dust cleaning roller of paper tray | Clean | Paper dust cleaning roller (Refer to Fig. 2-18.) |
| 2 | Failure | Fuser | Replace | Fuser |
| 3 | Failure | HVPS PCB | Replace | HVPS PCB |

### 4.3.2.26 Print crease

**\<User Check\>**

- 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.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | Fuser | Replace | Fuser |

### 4.3.2.27 Spots at the rear edge of paper

**\<User Check\>**

- Using the machine in hot-humid or cold-dry conditions can cause this problem.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | Fuser | Replace | Fuser |

# 4.4 Troubleshooting for Network Problems

## 4.4.1 Cannot make a print through network connection

**<User Check>**

- Try connecting with another LAN cable.
- Check the relevant section in the Network Setting Guide.
- Reset the network. (Refer to the online User's Guide.)
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Connection failure | WLAN PCB | Reconnect | WLAN PCB |
| 2 | Failure | Main PCB | Replace | Main PCB |

## 4.4.2 Cannot connect to access point

**<User Check>**

- Reset the wireless LAN settings.
- Reset the access point settings.
- Change the machine installation location.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Connection failure | WLAN PCB | Reconnect | WLAN PCB |
| 2 | Failure | Main PCB | Replace | Main PCB |

*Confidential*

# 4.5 Troubleshooting for Control Panel

## 4.5.1 Nothing is displayed on the LCD

**\<User Check\>**

- Turn the power OFF and then back ON again.
- Unplug the AC cord and then plug it again.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | LCD FFC | Reconnect | LCD FFC |
| 2 | Failure | LCD | Replace | LCD |
| 3 | Connection failure | Touch panel FFC | Reconnect | Touch panel FFC |
| 4 | Failure | Touch panel | Replace | Touch panel |
| 5 | Connection failure | Panel FFC | Reconnect | Panel FFC (For models with touch panel) or Panel FFC (For models with 2-line LCD) |
| 6 | Failure | Panel PCB | Replace | Panel PCB |
| 7 | Failure | LVPS PCB | Replace | LVPS PCB |
| 8 | Failure | Main PCB | Replace | Main PCB |

## 4.5.2 No LED indication

**\<User Check\>**

- Turn the power OFF and then back ON again.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | Panel FFC | Reconnect | Panel FFC (For models with touch panel) or Panel FFC (For models with 2-line LCD) |
| 2 | Failure | Panel PCB | Replace | Panel PCB |
| 3 | Failure | LVPS PCB | Replace | LVPS PCB |
| 4 | Failure | Main PCB | Replace | Main PCB |

## 4.5.3 Unable to perform panel operation

**\<User Check\>**

- Turn the power OFF and then back ON again.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Connection failure | Touch panel FFC | Reconnect | Touch panel FFC |
| 2 | Failure | Touch panel | Replace | Touch panel |
| 3 | Connection failure | Panel FFC | Reconnect | Panel FFC (For models with touch panel) or Panel FFC (For models with 2-line LCD) |
| 4 | Failure | Panel PCB | Replace | Panel PCB |
| 5 | Failure | Main PCB | Replace | Main PCB |

# 4.6 Troubleshooting for Toner Cartridge and Drum Unit

## 4.6.1 Toner cartridge not detected

### <User Check>

- Check that the toner cartridge is genuine.
- Check if a wrong toner cartridge is installed.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Terminal dirt | Toner cartridge (Each color) | Clean | Toner cartridge (Each color) (Refer to Fig. 2-11.) |
| 2 | Terminal dirt | Cartridge sensor (Each color) | Clean | Cartridge sensor (Each color) (Refer to Fig. 2-11.) |
| 3 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 4 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 5 | Failure | Main PCB | Replace | Main PCB |

## 4.6.2 Error message prompting toner cartridge replacement does not disappear

### <User Check>

- Check that the toner cartridge is genuine.
- Check if a wrong toner cartridge is installed.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Terminal dirt | Toner cartridge (Each color) | Clean | Toner cartridge (Each color) (Refer to Fig. 2-11.) |
| 2 | Terminal dirt | Cartridge sensor (Each color) | Clean | Cartridge sensor (Each color) (Refer to Fig. 2-11.) |
| 3 | Failure | Cartridge sensor/relay PCB | Replace | Cartridge sensor/relay PCB |
| 4 | Connection failure | Cartridge sensor/relay FFC | Reconnect | Cartridge sensor/relay FFC |
| 5 | Failure | Main PCB | Replace | Main PCB |

## 4.6.3 Drum error

### <User Check>

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

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Terminal dirt | Drum unit (Each color) | Clean | Drum unit (Each color) (Refer to Fig. 2-15, Fig. 2-16.) |
| 2 | Connection failure | HVPS harness | Reconnect | HVPS harness |
| 3 | Terminal dirt | HVPS PCB | Clean | HVPS PCB (Refer to Fig. 2-14.) |
| 4 | Failure | HVPS PCB | Replace | HVPS PCB |
| 5 | Failure | Main PCB | Replace | Main PCB |

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### 4.6.4 Error message prompting drum replacement does not disappear

**<User Check>**

- Reinstall the drum unit.
- Reset the drum counter according to the User's Guide.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Terminal dirt | Drum unit (Each color) | Clean | Drum unit (Each color) (Refer to Fig. 2-15, Fig. 2-16.) |
| 2 | Connection failure | HVPS harness | Reconnect | HVPS harness |
| 3 | Terminal dirt | HVPS PCB | Clean | HVPS PCB (Refer to Fig. 2-14.) |
| 4 | Failure | HVPS PCB | Replace | HVPS PCB |
| 5 | Failure | Main PCB | Replace | Main PCB |

# 4.7 Troubleshooting for PCB Problems

## 4.7.1 Full memory

**<User Check>**

- Print the accumulated data stored in the memory.
- Divide the print data and print it.
- Re-insert the USB flash memory.
- Check if there is something wrong with the USB flash memory during storage print.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | Main PCB | Replace | Main PCB |

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# 4.8 Troubleshooting for ADF Document Feeding Problems

## 4.8.1 No document is fed

**<User Check>**

- Load the document all the way.
- Close the ADF upper cover.
- Reduce the amount of document (ADF) to 100 sheets or less.
- Check the document thickness (ADF) (Spec.: 45 to 120 $g/m^2$ (12 to 32 lb)).
- Check the document width (ADF) (Spec.: 105 to 215.9 mm (4.1 to 8.5")).
- Match the document guide with the document size.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Attachment failure | ADF document detection actuator | Reattach | ADF document detection actuator |
| 2 | Connection failure | ADF sensor/motor harness | Reconnect | ADF sensor/motor harness |
| 3 | Failure | ADF document detection sensor | Replace | ADF unit |
| 4 | Failure | ADF separation roller ASSY | Replace | ADF separation roller ASSY |
| 5 | Failure | ADF separation pad | Replace | ADF separation pad |
| 6 | Failure | Gears in the ADF unit | Replace | ADF unit |
| 7 | Failure | Main PCB | Replace | Main PCB |

## 4.8.2 Multiple documents are fed

**<User Check>**

- Reduce the amount of document (ADF) to 100 sheets or less.
- Check the document thickness (ADF) (Spec.: 45 to 120 $g/m^2$ (12 to 32 lb)).
- Match the document guide with the document size.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Failure | ADF separation roller ASSY | Replace | ADF separation roller ASSY |
| 2 | Failure | ADF separation pad | Replace | ADF separation pad |

## 4.8.3  Document jam

**<User Check>**

- Check the document width (ADF) (Spec.: 105 to 215.9 mm (4.1 to 8.5")).
- Check the document length (ADF) (Spec.: 147.3 to 355.6 mm (5.8 to 14.0")).
- Check the document thickness (ADF) (Spec.: 45 to 120 g/m$^2$ (12 to 32 lb)).
- Match the document guide with the document size.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Foreign object | Document feeding path | Clean | Document feeding path |
| 2 | Attachment failure | ADF pickup roller | Reattach | ADF pickup roller |
| 3 | Attachment failure | ADF scanning position actuator | Reattach | ADF scanning position actuator |
| 4 | Connection failure | ADF sensor/motor harness | Reconnect | ADF sensor/motor harness |
| 5 | Abrasion | ADF separation roller ASSY | Replace | ADF separation roller ASSY |
| 6 | Failure | ADF scanning position sensor | Replace | ADF unit |
| 7 | Failure | Gears in the ADF unit | Replace | ADF unit |
| 8 | Failure | Main PCB | Replace | Main PCB |

## 4.8.4  Document becomes wrinkled

**<User Check>**

- Check if the document does not curl.
- Match the document guide with the document size.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Abrasion | ADF separation roller ASSY | Replace | ADF separation roller ASSY |
| 2 | Abrasion | ADF feed roller 1 | Replace | ADF unit |
| 3 | Abrasion | ADF feed roller 2 | Replace | ADF unit |

## 4.8.5  Document size is not detected correctly

**<User Check>**

- Check the document width (ADF) (Spec.: 105 to 215.9 mm (4.1 to 8.5")).
- Check the document length (ADF) (Spec.: 147.3 to 355.6 mm (5.8 to 14.0")).
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Failure | ADF motor | Replace | ADF unit |
| 2 | Failure | Main PCB | Replace | Main PCB |

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# 4.9 Troubleshooting for Scanning Image Defects

## 4.9.1 Image Defect examples



Light (2-114)   Faulty registration (2-114)   Dark (2-115)   Completely blank (2-115)   All black (2-115)

Vertical streaks (2-116)   White streaks (2-116)   Partially shaded (2-116)   Fully tinged (2-117)
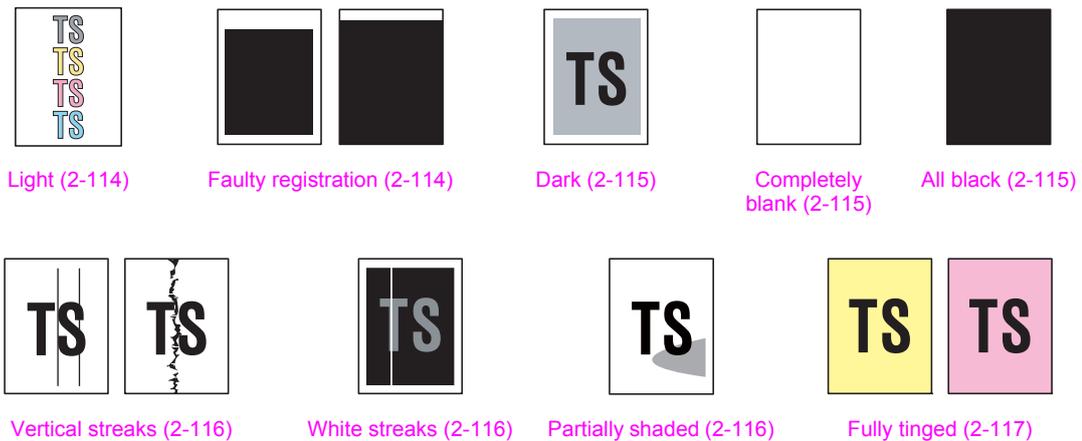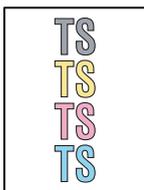
**Fig. 2-28**

## 4.9.2 Troubleshooting according to scanning image defects

### 4.9.2.1 Light



**<User Check>**
- Check that the contrast setting is not too light.
- Clean the glass surface of the ADF or FB.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Incorrect | White level correction data | Execute | "Acquire white level data" (Function Code 55) |
| 2 | Failure | 1st side CIS unit | Replace | 1st side CIS unit (For models with ADF) or 1st side CIS unit (For models without ADF) |
| 3 | Failure | 2nd side CIS unit | Replace | 2nd side CIS unit |
| 4 | Failure | Main PCB | Replace | Main PCB |

### 4.9.2.2 Faulty registration



| No. | Cause | | Remedy | |
|-----|-------|---|--------|---|
| 1 | Deviation | Scanning start position | Execute | "Fine adjustment of scan start position" (Function Code 54) |

### 4.9.2.3 Dark

**TS**

**<User Check>**
- Check that the contrast setting is not too dark.
- Clean the glass surface of the ADF or FB.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Incorrect | White level correction data | Execute | "Acquire white level data" (Function Code 55) |
| 2 | Failure | 1st side CIS unit | Replace | 1st side CIS unit (For models with ADF) or 1st side CIS unit (For models without ADF) |
| 3 | Failure | 2nd side CIS unit | Replace | 2nd side CIS unit |
| 4 | Failure | Main PCB | Replace | Main PCB |

### 4.9.2.4 Completely blank

**<User Check>**
- Check that the document is not reversed.
- Install the latest main firmware.

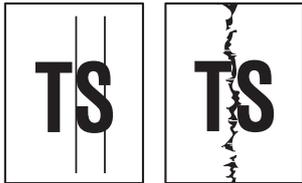| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Incorrect | White level correction data | Execute | "Acquire white level data" (Function Code 55) |
| 2 | Failure | 1st side CIS unit | Replace | 1st side CIS unit (For models with ADF) or 1st side CIS unit (For models without ADF) |
| 3 | Failure | 2nd side CIS unit | Replace | 2nd side CIS unit |
| 4 | Failure | Main PCB | Replace | Main PCB |
| 5 | Connection failure | 1st side CIS FFC | Reconnect | 1st side CIS FFC |
| 6 | Connection failure | 2nd side CIS FFC | Reconnect | 2nd side CIS FFC |

### 4.9.2.5 All black

**<User Check>**
- Check that the document is not reversed.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Incorrect | White level correction data | Execute | "Acquire white level data" (Function Code 55) |
| 2 | Failure | 1st side CIS unit | Replace | 1st side CIS unit (For models with ADF) or 1st side CIS unit (For models without ADF) |
| 3 | Failure | 2nd side CIS unit | Replace | 2nd side CIS unit |
| 4 | Failure | Main PCB | Replace | Main PCB |
| 5 | Connection failure | 1st side CIS FFC | Reconnect | 1st side CIS FFC |
| 6 | Connection failure | 2nd side CIS FFC | Reconnect | 2nd side CIS FFC |

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### 4.9.2.6 Vertical streaks



**<User Check>**
- Clean the glass surface of the ADF or FB.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Dirt | 1st side scanner glass | Clean | 1st side scanner glass |
| 2 | Dirt | 2nd side scanner glass | Clean | 2nd side scanner glass |
| 3 | Failure | 1st side CIS unit | Replace | 1st side CIS unit (For models with ADF) or 1st side CIS unit (For models without ADF) |
| 4 | Failure | 2nd side CIS unit | Replace | 2nd side CIS unit |
| 5 | Damage | 1st side scanner glass | Replace | FB unit |
| 6 | Damage | 2nd side scanner glass | Replace | ADF unit |

### 4.9.2.7 White streaks



**<User Check>**
- Clean the glass surface of the ADF or FB.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Dirt | 1st side scanner glass | Clean | 1st side scanner glass |
| 2 | Dirt | 2nd side scanner glass | Clean | 2nd side scanner glass |
| 3 | Failure | 1st side CIS unit | Replace | 1st side CIS unit (For models with ADF) or 1st side CIS unit (For models without ADF) |
| 4 | Failure | 2nd side CIS unit | Replace | 2nd side CIS unit |
| 5 | Damage | 1st side scanner glass | Replace | FB unit |
| 6 | Damage | 2nd side scanner glass | Replace | ADF unit |

### 4.9.2.8 Partially shaded



**<User Check>**
- Clean the glass surface of the ADF or FB.

| No. | Cause | | Remedy | |
|---|---|---|---|---|
| 1 | Damage | Document sponge | Replace | FB unit |
| 2 | Dirt | 1st side scanner glass | Clean | 1st side scanner glass |
| 3 | Dirt | 2nd side scanner glass | Clean | 2nd side scanner glass |

### 4.9.2.9 Fully tinged

**\<User Check\>**

- Clean the glass surface of the ADF or FB.
- Install the latest main firmware.

| No. | Cause | | | Remedy |
|-----|-------|--|--|--------|
| 1 | Incorrect | White level correction data | Execute | "Acquire white level data" (Function Code 55) |
| 2 | Failure | 1st side CIS unit | Replace | 1st side CIS unit (For models with ADF) or 1st side CIS unit (For models without ADF) |
| 3 | Failure | 2nd side CIS unit | Replace | 2nd side CIS unit |
| 4 | Failure | Main PCB | Replace | Main PCB |

# 4.10 Troubleshooting for Fax Problems

## 4.10.1 Fax cannot be sent

**<User Check>**

- Check if the telephone works normally. (Connection check)
- Check if the scanner works normally. (Scan function check)
- Check if the dial function setting (tone/pulse) is correct.
- Check if the fax document is correctly loaded on the ADF.
- Check if the number to be dialed is saved correctly in the telephone directory.
- Check if the receiver's machine works normally or has the function you want to perform.
- Move the machine to another location to check if there is any noise source near the machine.
- Install the latest main firmware.
- Replace the telephone line.

| No. | Cause | | Remedy | |
|-----|-------|--------|-----------|----------|
| 1 | Connection failure | Modem FFC | Reconnect | Modem FFC |
| 2 | Failure | Modem PCB | Replace | Modem PCB |
| 3 | Failure | Main PCB | Replace | Main PCB |

## 4.10.2 Fax cannot be received

**<User Check>**

- Check if the telephone works normally. (Connection check)
- Check if the receiving mode setting is correct.
- Check if the receiver's machine works normally or has the function you want to perform.
- Move the machine to another location to check if there is any noise source near the machine.
- Replace the telephone line.

| No. | Cause | | Remedy | |
|-----|-------|--------|-----------|----------|
| 1 | Connection failure | Modem FFC | Reconnect | Modem FFC |
| 2 | Failure | Modem PCB | Replace | Modem PCB |
| 3 | Failure | Main PCB | Replace | Main PCB |

## 4.10.3 A communication error occurs / Line types cannot be set

**<User Check>**

- Check if the receiving mode setting is correct.
- Move the machine to another location to check if there is any noise source near the machine.
- Replace the telephone line.

| No. | Cause | | Remedy | |
|-----|-------|--------|-----------|----------|
| 1 | Connection failure | Modem FFC | Reconnect | Modem FFC |
| 2 | Failure | Modem PCB | Replace | Modem PCB |
| 3 | Failure | Main PCB | Replace | Main PCB |

## 4.10.4 Receive buffer full during receiving into memory

**<User Check>**

- Print the print data stored in the memory.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|----------|-----------|----------|
| 1 | Failure | Main PCB | Replace | Main PCB |

# 4.11 Troubleshooting for Other Problems

## 4.11.1 Problems of USB direct interface

**<User Check>**

- Re-insert the USB flash memory.
- Replace the USB flash memory.
- Check that the data extension in the USB flash memory is correct.
- Install the latest main firmware.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Connection failure | USB host harness | Reconnect | USB host harness |
| 2 | Failure | USB host harness | Replace | USB host harness |
| 3 | Failure | Main PCB | Replace | Main PCB |

## 4.11.2 Cannot update firmware

**<User Check>**

- Turn the power OFF and then back ON again.

| No. | Cause | | Remedy | |
|-----|-------|--|--------|--|
| 1 | Interruption | During updating | Execute | <Update by upd file> below |
| 2 | Failure | Main PCB | Replace | Main PCB |

<Update by upd file>

For models without touch panel

(1)  Unplug the AC cord while the USB is connected.

(2)  Press and hold the [Cancel] and [Go].

| (3) | Plug the AC cord while pressing and holding the [Stop] and [Option]. | "■" |
|-----|--------------------------------------------------------------------|-----|
| (4) | Release the [Stop] and [Option]. | "■" |

(5)  Send the firmware (upd file) via the Maintenance Printer Driver.

(6)  Reboot automatically.


For models with touch panel

(1)  Unplug the AC cord while the USB is connected.

(2)  Press and hold the [ ⏻ ].

| (3) | Plug the AC cord while pressing and holding the [ ⏻ ]. | White screen |
|-----|--------------------------------------------------------|--------------|
| (4) | Release the [ ⏻ ]. | White screen |
| (5) | Press the [ ⏻ ] several times. | "02 DL" |

(6)  Send the firmware (upd file) via the Maintenance Printer Driver.

(7)  Reboot automatically.

\* By the above update procedure, other models' firmware can be updated to the machine. Be sure to check the firmware before correctly updating it. If you updated another model's firmware by mistake, the machine may repeat power ON/OFF or not powered ON. In this case, you need to replace the main PCB.

## 4.11.3 Firmware installation mode

1 line LCD model

| |
|---|
| Retry by USB |

2 lines LCD model

| |
|---|
| Retry by USB |

Touch panel model

| |
|---|
| Retry Updating<br><br>by USB |

Install the firmware in accordance with "1.3.2.3 Firmware installation using a computer" in Chapter 4.
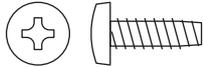
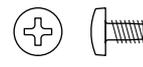# CHAPTER 3  DISASSEMBLY AND ASSEMBLY

## 1.  SAFETY PRECAUTIONS

Refer to "SAFETY INFORMATION".

# 2. SCREW CATALOGUE

## Taptite bind B

| Taptite bind B M4x12 | |
|---|---|
| Taptite bind B M3x10 | |

## Taptite bind S

| Taptite bind S M3x5 | |
|---|---|

## Taptite pan (washer)

| Taptite pan (washer) B M4x12DA | |
|---|---|

## Taptite pan B

| Taptite pan B M4x14 | |
|---|---|

## Taptite cup B
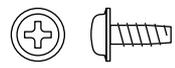
| Taptite cup B M3x8 | |
|---|---|
| Taptite cup B M3x10 | |

## Taptite cup S
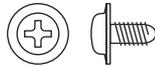
| Taptite cup S M3x6 SR | |
|---|---|
| Taptite cup S M3x8 SR | |

## Screw cup
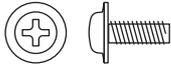
| Screw cup M3x8 | |
|---|---|
| Screw cup M3x8 SR | |
| Screw cup M3x6 | |

## Screw pan (S/P washer)

| Screw pan (S/P washer) M3x12DB | |
|---|---|
| Screw pan (S/P washer) M3.5x6 | |

## Screw pan

| Screw pan M4x8 | |
|---|---|

## Screw bind

| Screw bind M3x8 | |
|---|---|

# 3. SCREW TORQUE LIST

| Location of screw | Screw type | Q' ty | Tightening torque N·m (kgf·cm) |
|---|---|---|---|
| Fuser cover L | Taptite bind B M3x10 | 1 | 0.5±0.05 (5±0.5) |
| Fuser cover R | Taptite bind B M3x10 | 1 | 0.5±0.05 (5±0.5) |
| Fuser | Taptite pan (washer) B M4x12DA | 2 | 0.7±0.1 (7±1) |
| Cord hook (x2) | Taptite cup B M3x10 | 2 | 0.5±0.05 (5±0.5) |
| Side cover L | Taptite bind B M4x12 | 2 | 0.8±0.1 (8±1) |
| Side cover R | Taptite bind B M4x12 | 2 | 0.8±0.1 (8±1) |
| Modem FG harness L (Frame L side)<br>Panel FG harness | Screw cup M3x6 | 1 | 0.45±0.1 (4.5±1) |
| FB FG harness | Screw cup M3x6 | 1 | 0.45±0.1 (4.5±1) |
| ADF FG harness (Frame L side) | Screw cup M3x6 | 1 | 0.45±0.1 (4.5±1) |
| Line holder cover | Taptite cup B M3x8 | 1 | 0.45±0.1 (4.5±1) |
| Joint cover side L | Taptite bind B M4x12 | 1 | 0.8±0.1 (8±1) |
| ADF unit | Taptite bind B M4x12 | 1 | 0.8±0.1 (8±1) |
| ADF hinge ASSY L | Taptite bind B M4x12 | 3 | 0.8±0.1 (8±1) |
| ADF hinge arm R support<br>ADF hinge arm R | Taptite cup B M3x10 | 1 | 0.5±0.1 (5±1) |
| ADF hinge base R | Taptite cup B M3x10 | 3 | 0.5±0.1 (5±1) |
| ADF separation holder ASSY | Taptite cup B M3x10 | 1 | 0.5±0.1 (5±1) |
| ADF front cover | Taptite cup B M3x10 | 4 | 0.5±0.1 (5±1) |
| ADF upper document chute ASSY | Taptite cup B M3x10 | 6 | 0.5±0.1 (5±1) |
| ADF FG harness (ADF side) | Taptite cup S M3x6 SR | 1 | 0.8±0.1 (8±1) |
| DCP hinge base L | Taptite bind B M4x12 | 3 | 0.8±0.1 (8±1) |
| DCP hinge base R | Taptite bind B M4x12 | 3 | 0.8±0.1 (8±1) |
| Panel unit | Taptite cup B M3x10 | 4 | 0.5±0.1 (5±1) |
| Panel PCB | Screw pan (S/P washer) M3.5x6 | 1 | 0.6±0.1 (6±1) |
|  | Screw pan (S/P washer) M3x12DB | 4 | 0.45±0.05 (4.5±0.5) |
| Shield plate | Screw pan (S/P washer) M3x12DB | 3 | 0.45±0.05 (4.5±0.5) |
| FB dress cover | Taptite cup B M3x10 | 2 | 0.5±0.1 (5±1) |
| FB top cover ASSY | Taptite bind B M4x12 | 5 | 0.8±0.1 (8±1) |
| Modem FG harness L (Modem side) | Screw cup M3x6 | 1 | 0.45±0.05 (4.5±0.5) |
| Modem FG harness R | Screw cup M3x6 | 1 | 0.45±0.05 (4.5±0.5) |
| Modem shield plate | Taptite bind B M4x12 | 2 | 0.8±0.1 (8±1) |
| Modem PCB shield case | Screw cup M3x6 | 1 | 0.45±0.05 (4.5±0.5) |
| Modem PCB | Screw cup M3x8 | 3 | 0.45±0.05 (4.5±0.5) |

| Location of screw | Screw type | Q' ty | Tightening torque N·m (kgf·cm) |
|---|---|---|---|
| LED FG harness | Screw pan (S/P washer) M3x12DB | 1 | 0.65±0.1 (6.5±1) |
| Joint side cover R | Taptite bind B M4x12 | 2 | 0.8±0.1 (8±1) |
| Open lever cover | Taptite bind B M4x12 | 8 | 0.8±0.1 (8±1) |
| LED unit | Taptite bind B M4x12 | 5 | 0.8±0.1 (8±1) |
| LED shield plate | Screw cup M3x8 SR | 2 | 0.4±0.05 (4±1) |
| LED control PCB | Screw cup M3x8 SR | 2 | 0.4±0.05 (4±1) |
| LED weight plate | Screw cup M3x8 SR | 2 | 0.8±0.1 (8±1) |
| MP maintenance cover | Taptite pan B M4x14 | 2 | 0.8±0.1 (8±1) |
| Main PCB | Screw cup M3x8 | 4 | 0.45±0.05 (4.5±0.5) |
| Main ground plate | Taptite cup S M3x8 SR | 1 | 0.6±0.1 (6±1) |
| Inner front cover (For models with MP tray) | Taptite bind B M4x12 | 2 | 0.8±0.1 (8±1) |
| | Screw bind M3x8 | 2 | 0.45±0.05 (4.5±0.5) |
| | Taptite pan (washer) B M4x12DA | 1 | 0.8±0.1 (8±1) |
| USB holder ASSY | Taptite bind B M3x10 | 2 | 0.5±0.05 (5±0.5) |
| USB host ground plate | Screw pan (S/P washer) M3x12DB | 2 | 0.5±0.05 (5±0.5) |
| MP unit (For models with MP tray) | Taptite bind B M4x12 | 4 | 0.8±0.1 (8±1) |
| MP REG sensor PCB | Taptite bind B M3x10 | 1 | 0.5±0.05 (5±0.5) |
| MP sensor holder ASSY | Taptite bind B M3x10 | 2 | 0.5±0.05 (5±0.5) |
| MP PE sensor PCB | Taptite bind B M3x10 | 1 | 0.5±0.05 (5±0.5) |
| Inner front cover (For models with MF tray) | Taptite bind B M4x12 | 2 | 0.8±0.1 (8±1) |
| | Taptite cup S M3x8 SR | 2 | 0.6±0.1 (6±1) |
| HVPS ground plate front | Taptite cup S M3x8 SR | 1 | 0.75±0.05 (7.5±0.5) |
| | Taptite pan (washer) M4x12DA | 1 | 0.75±0.05 (7.5±0.5) |
| HVPS ground plate rear | Taptite pan (washer) M4x12DA | 2 | 0.75±0.05 (7.5±0.5) |
| UB ground spring 2R | Taptite pan (washer) M4x12DA | 1 | 0.75±0.05 (7.5±0.5) |
| HVPS PCB | Taptite bind B M4x12 | 2 | 0.75±0.05 (7.5±0.5) |
| Cartridge sensor/relay PCB | Screw cup M3x8 | 1 | 0.45±0.05 (4.5±0.5) |
| DEV clutch cover | Taptite cup S M3x8 SR | 1 | 0.75±0.05 (7.5±0.5) |
| Process drive unit | Taptite bind B M4x12 | 5 | 0.75±0.05 (7.5±0.5) |
| | Taptite cup S M3x8 SR | 2 | 0.75±0.05 (7.5±0.5) |
| | Taptite pan (washer) M4x12DA | 1 | 0.75±0.05 (7.5±0.5) |
| PF motor | Taptite bind B M4x12 | 2 | 0.75±0.05 (7.5±0.5) |
| | Taptite cup S M3x8 SR | 2 | 0.75±0.05 (7.5±0.5) |
| Fuser gear cover | Taptite cup S M3x8 SR | 4 | 0.75±0.05 (7.5±0.5) |
| PF drive unit | Taptite bind B M4x12 | 5 | 0.7±0.1 (7±1) |
| TR cover | Taptite bind B M3x10 | 1 | 0.65±0.05 (6.5±0.5) |
| PF unit | Taptite bind B M4x12 | 3 | 0.8±0.1 (8±1) |
| | Taptite pan (washer) M4x12DA | 1 | 0.9±0.05 (9±0.5) |
| | Taptite cup B M3x10 | 2 | 0.5±0.05 (5±0.5) |

| Location of screw | Screw type | Q' ty | Tightening torque N·m (kgf·cm) |
|---|---|---|---|
| Paper eject ASSY | Taptite bind B M4x12 | 4 | 1.1±0.1 (11±1) |
| LVPS harness cover lower | Taptite bind B M4x12 | 1 | 0.75±0.05 (7.5±0.5) |
| Base frame middle DX | Taptite bind B M3x10 | 2 | 0.5±0.05 (5±0.5) |
| LVPS harness cover upper | Screw cup M3x6 | 2 | 0.5±0.05 (5±0.5) |
| LVPS FG harness | Screw pan M4x8 | 1 | 0.5±0.05 (5±0.5) |
| HVPS ground plate rear | Taptite pan (washer) B M4x12DA | 1 | 0.75±0.05 (7.5±0.5) |
| Fan ground plate<br>    Fan FG harness | Taptite pan (washer) B M4x12DA | 2 | 0.75±0.05 (7.5±0.5) |
| LVPS shield plate | Taptite pan (washer) B M4x12DA | 4 | 0.75±0.05 (7.5±0.5) |
|  | Screw cup M3x6 | 3 | 0.6±0.05 (6±0.5) |
| REG mark sensor ASSY | Taptite bind S M3x5 | 1 | 0.5±0.05 (5±0.5) |
| LT side cover L | Taptite bind B M4x12 | 2 | 0.8±0.1 (8±1) |
| LT side cover R | Taptite bind B M4x12 | 2 | 0.8±0.1 (8±1) |
| LT front cover ASSY | Taptite cup S M3x8 SR | 1 | 0.6±0.1 (6±1) |
| LT under bar ground plate L | Taptite cup S M3x8 SR | 2 | 0.8±0.1 (8±1) |
| LT under bar front | Taptite cup S M3x8 SR (a) | 1 | 0.8±0.1 (8±1) |
|  | Taptite cup S M3x8 SR (b) | 1 | 0.6±0.1 (6±1) |
|  | Taptite bind B M4x12 | 2 | 0.8±0.1 (8±1) |
| LT drive ASSY | Taptite bind B M4x12 | 3 | 0.8±0.1 (8±1) |
| LT under bar | Taptite bind B M4x12 | 2 | 0.8±0.1 (8±1) |
| LT PF frame FG plate R | Taptite cup S M3x8 SR | 1 | 0.6±0.1 (6±1) |
| LT center FG plate L | Taptite cup S M3x8 SR (c) | 1 | 0.8±0.1 (8±1) |
|  | Taptite cup S M3x8 SR (d) | 1 | 0.6±0.1 (6±1) |
| LT center FG plate R | Taptite cup S M3x8 SR (e) | 1 | 0.8±0.1 (8±1) |
|  | Taptite cup S M3x8 SR (f) | 1 | 0.6±0.1 (6±1) |
| LT frame L unit | Taptite cup S M3x8 SR (g) | 2 | 0.6±0.1 (6±1) |
|  | Taptite cup S M3x8 SR (h) | 4 | 0.8±0.1 (8±1) |
|  | Taptite bind B M4x12 | 4 | 0.8±0.1 (8±1) |
| LT PF frame ASSY | Taptite cup S M3x8 SR (i) | 2 | 0.6±0.1 (6±1) |
|  | Taptite cup S M3x8 SR (j) | 2 | 0.6±0.1 (6±1) |
| LT front beam | Taptite bind B M4x12 | 2 | 0.8±0.1 (8±1) |
| LT PF actuator holder ASSY | Taptite cup B M3x10 | 1 | 0.5±0.1 (5±1) |

# 4.  LUBRICATION

| The kind of the lubricating oil (Maker name) | Lubrication point | Quantity of lubrication |
|---|---|---|
| FLOIL BG-10KS (Kanto Kasei) | T1 ELECTRIC CLUTCH FCL | 1.5 mm dia. ball |
| | REGI ELECTRIC CLUTCH FCL | 1.5 mm dia. ball |

REGI ELECTRIC
CLUTCH FCL

T1 ELECTRIC
CLUTCH FCL
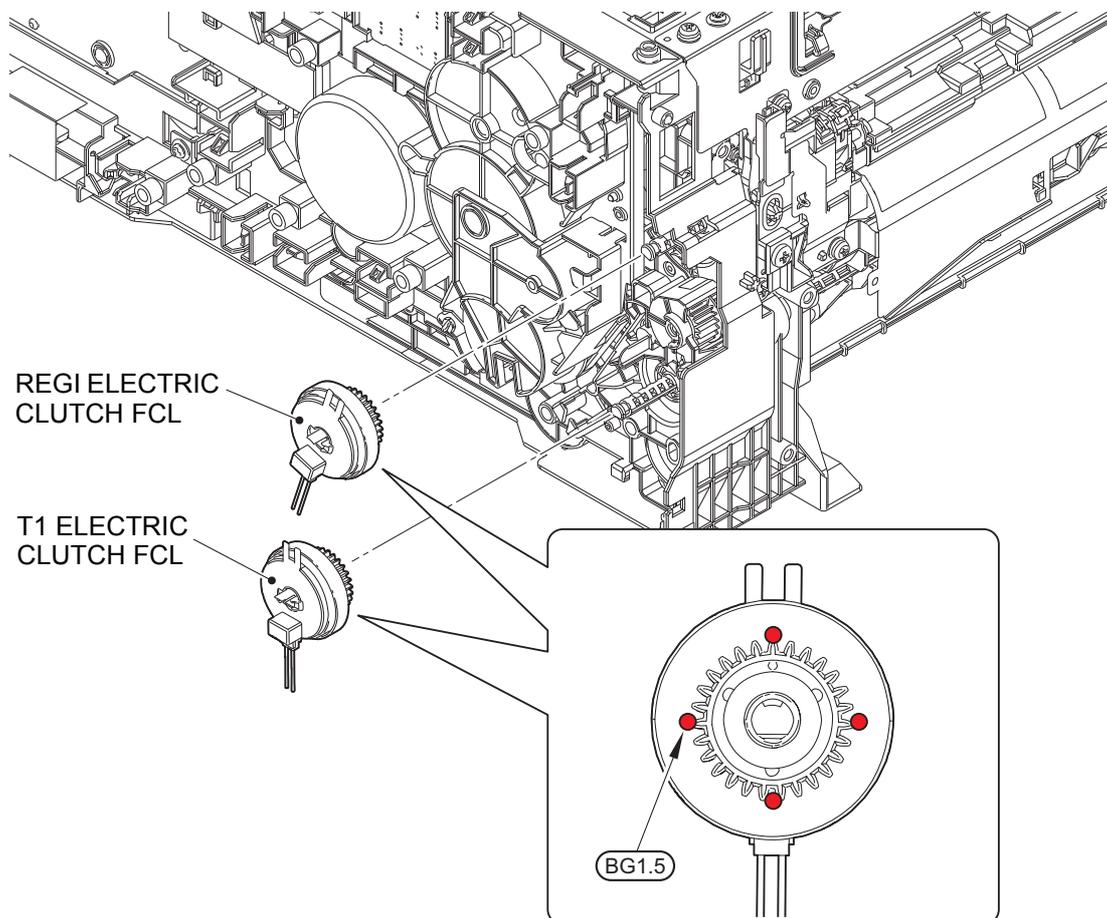
BG1.5

BG1.5: FLOIL BG-10KS (1.5 mm dia. ball)

| The kind of the lubricating oil (Maker name) | Lubrication point | Quantity of lubrication |
|---|---|---|
| NIPPECO PERMALUB BAN-5 | ADF separation roller ASSY | 1.5 to 2.0 mm dia. ball |
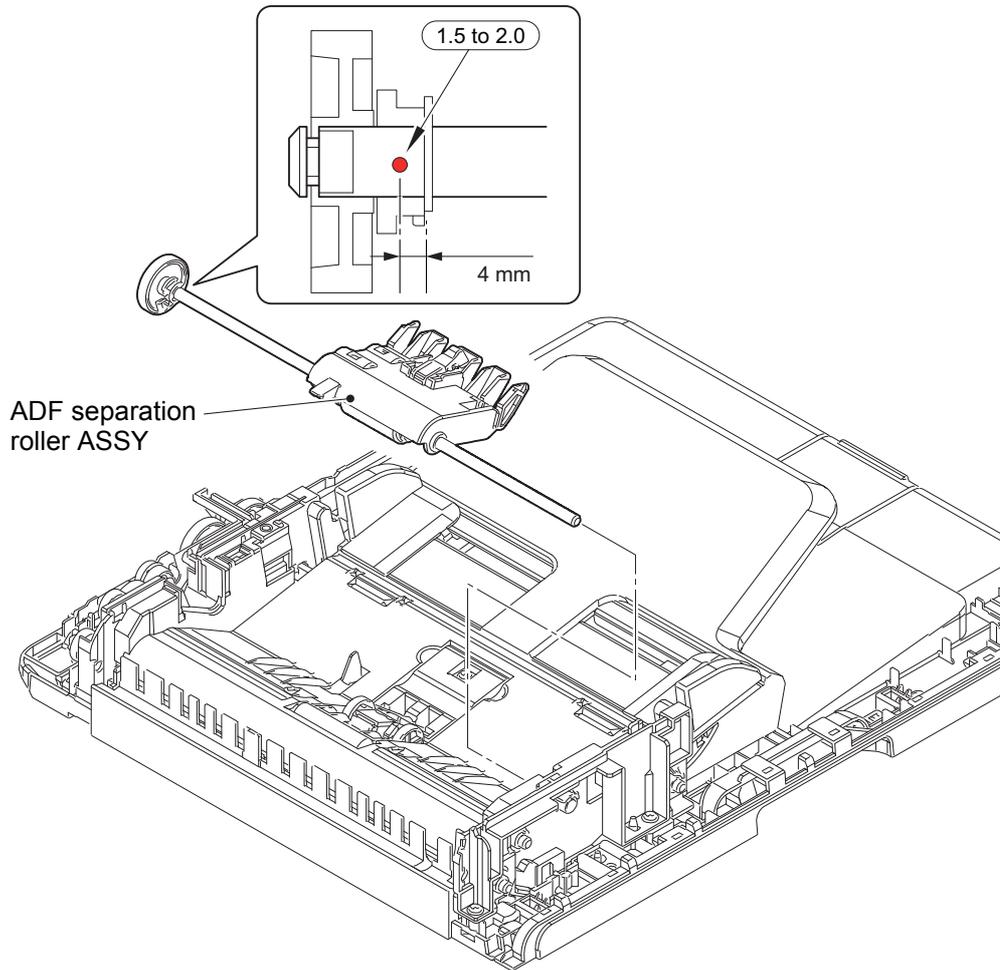


1.5 to 2.0: PERMALUB BAN-5 (1.5 to 2.0 mm dia. ball)

# 5. OVERVIEW OF GEARS

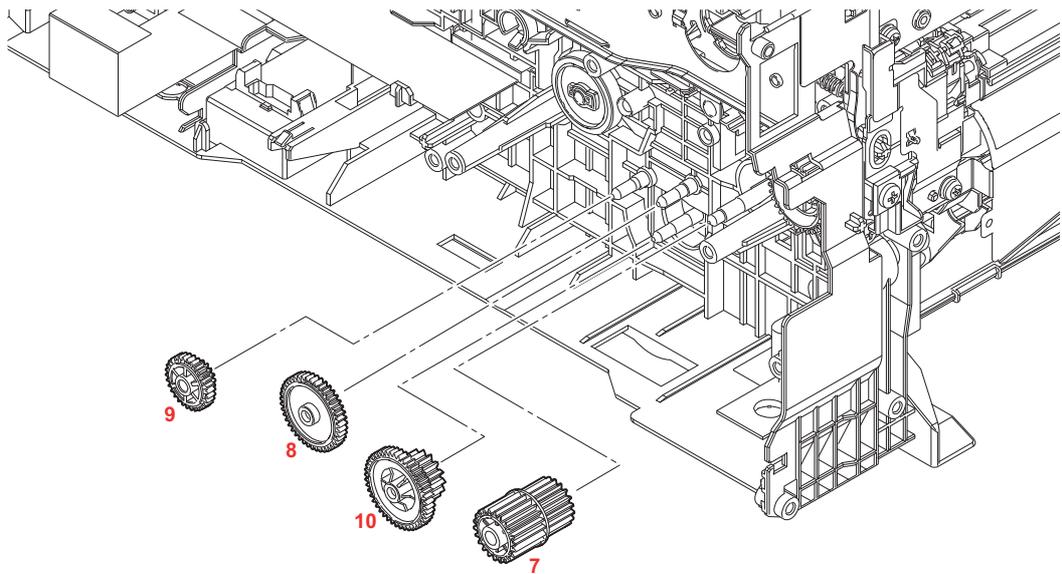When ordering repair parts, refer to the parts reference list.

**<Layout view>**



**<Development view>**



**<Name of gears>**
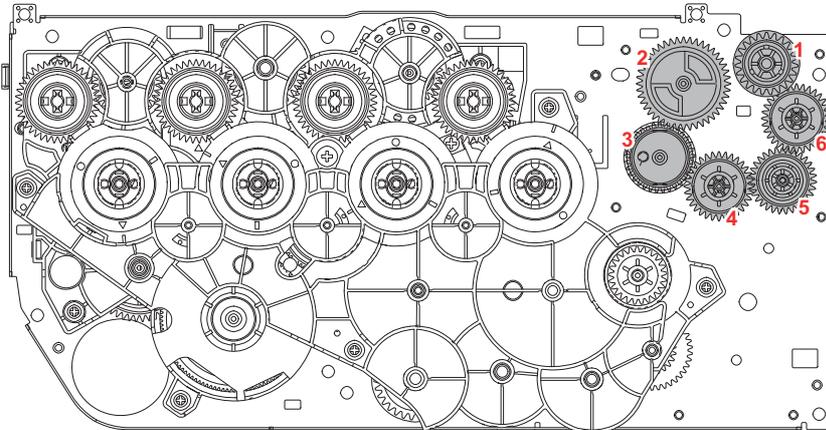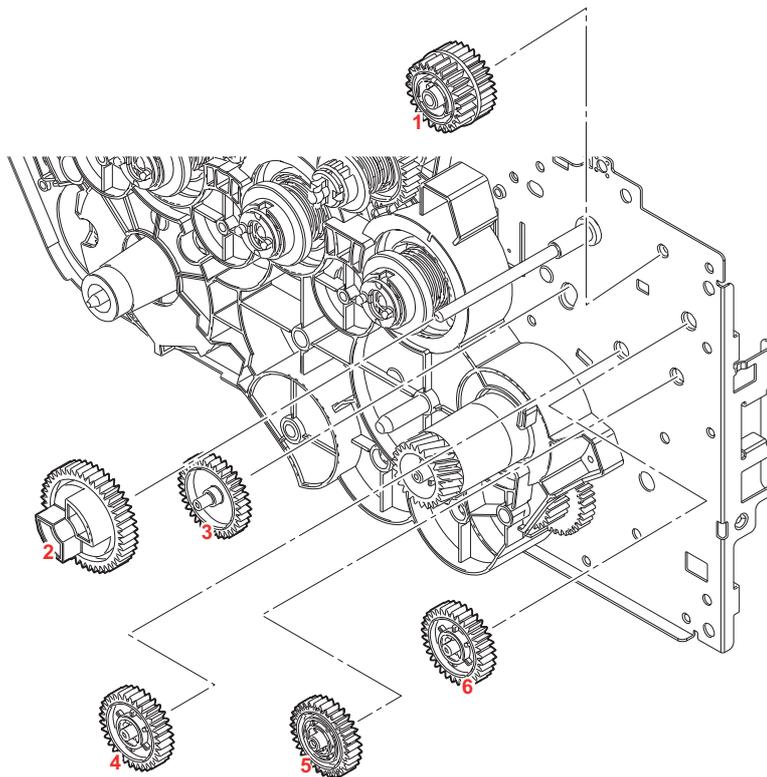
| 1 | D01J92 | EJECT DRIVE GEAR Z30-23 FCL |
|---|--------|------------------------------|
| 2 | D01J95 | FUSER DRIVE GEAR Z44 FCL |
| 3 | D01J97 | FUSER IDLE GEAR Z33 FCL |
| 4 | D01J94 | IDLE GEAR Z32 FCL |
| 5 | D01J93 | IDLE GEAR Z31 FCL |
| 6 | D01J94 | IDLE GEAR Z32 FCL |

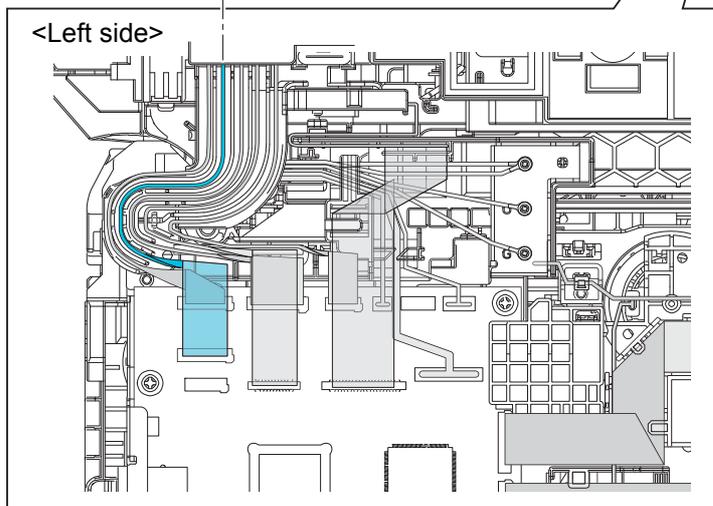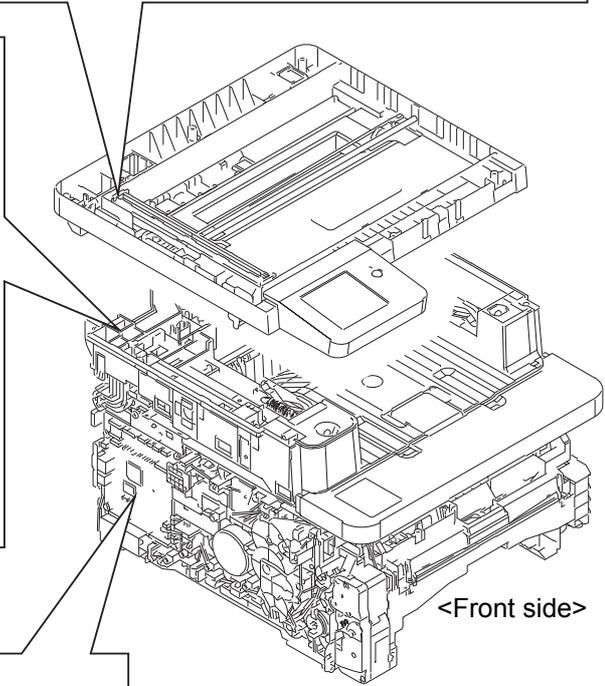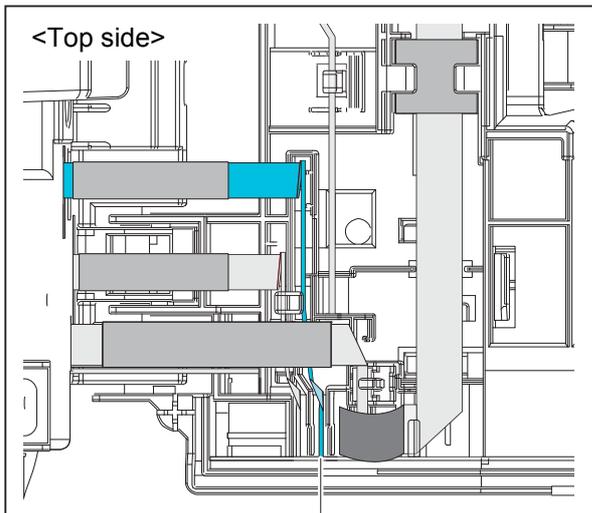\* These parts are subject to change without notice.

**\<Layout view\>**



**\<Development view\>**



**\<Name of gears\>**
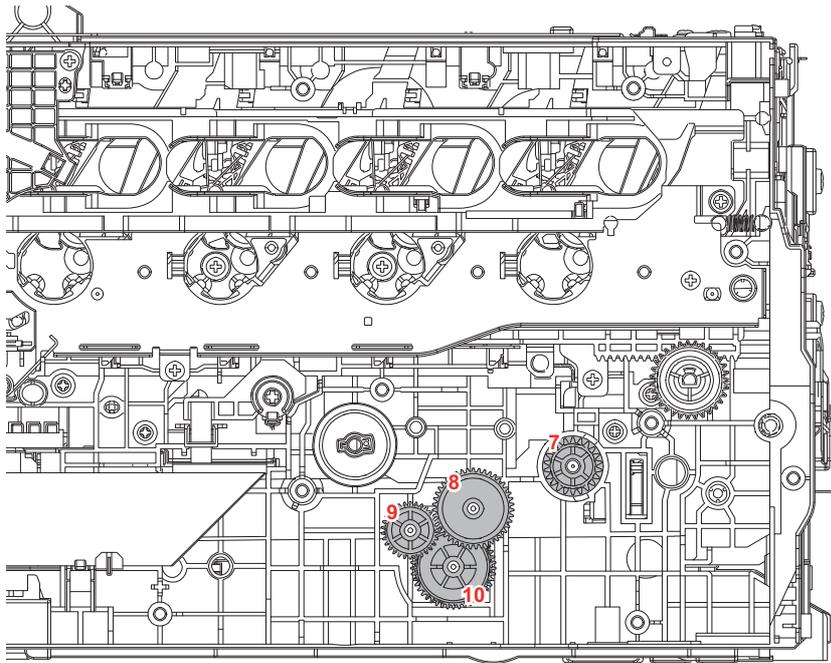
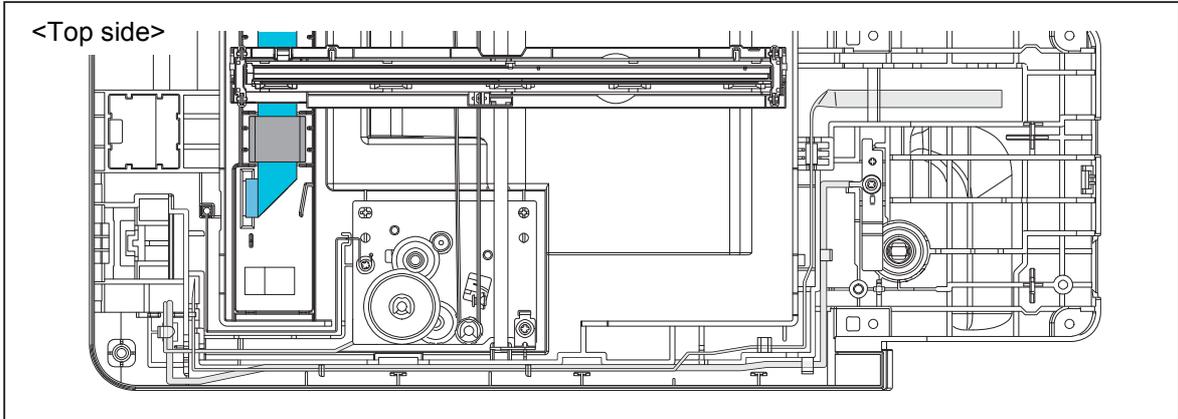| 7 | D01JTG | DX IDLE GEAR Z22-20 FCL |
|---|--------|-------------------------|
| 8 | D01JS3 | PT IDLE GEAR Z43 FCL |
| 9 | D01M5Y | PT IDLE GEAR Z30-17 FCL |
| 10 | D01JS2 | PT IDLE GEAR Z45-15 |

\* These parts are subject to change without notice.

# 6. HARNESS ROUTING

**1** 1st side CIS FFC
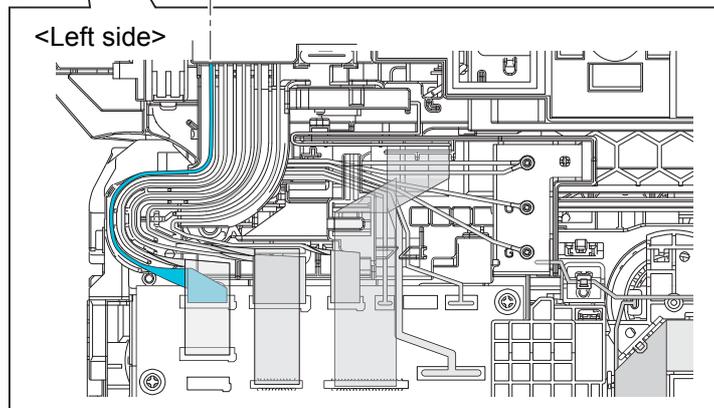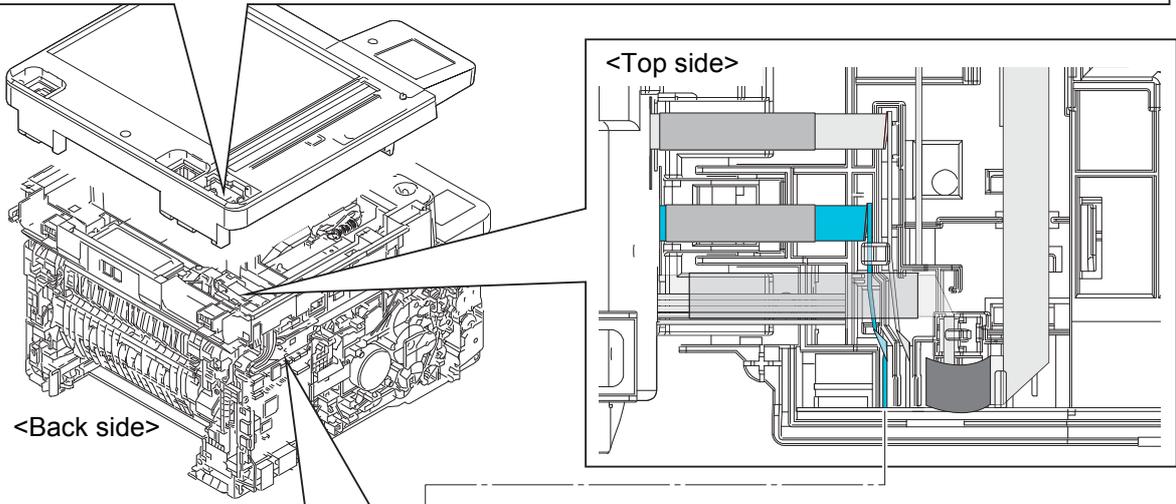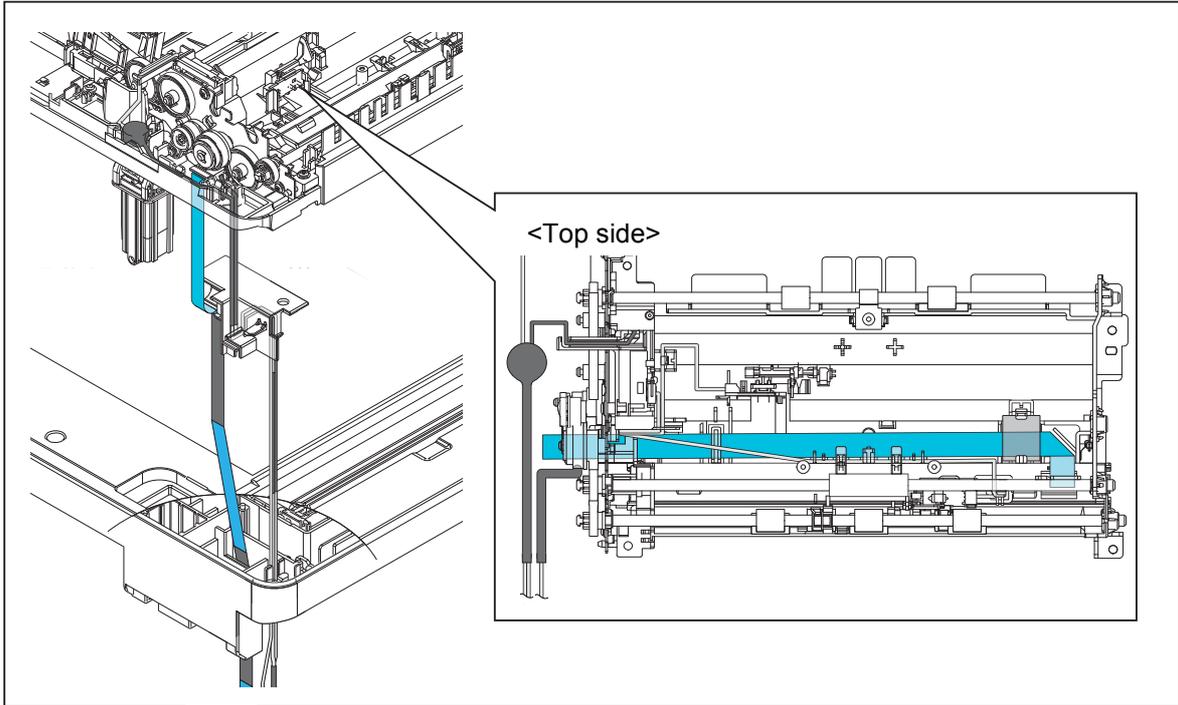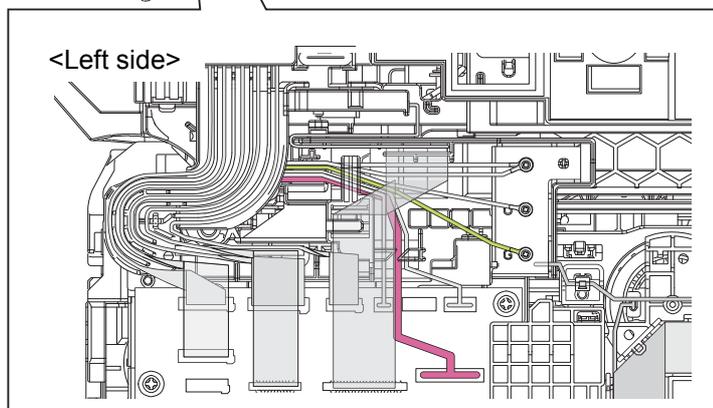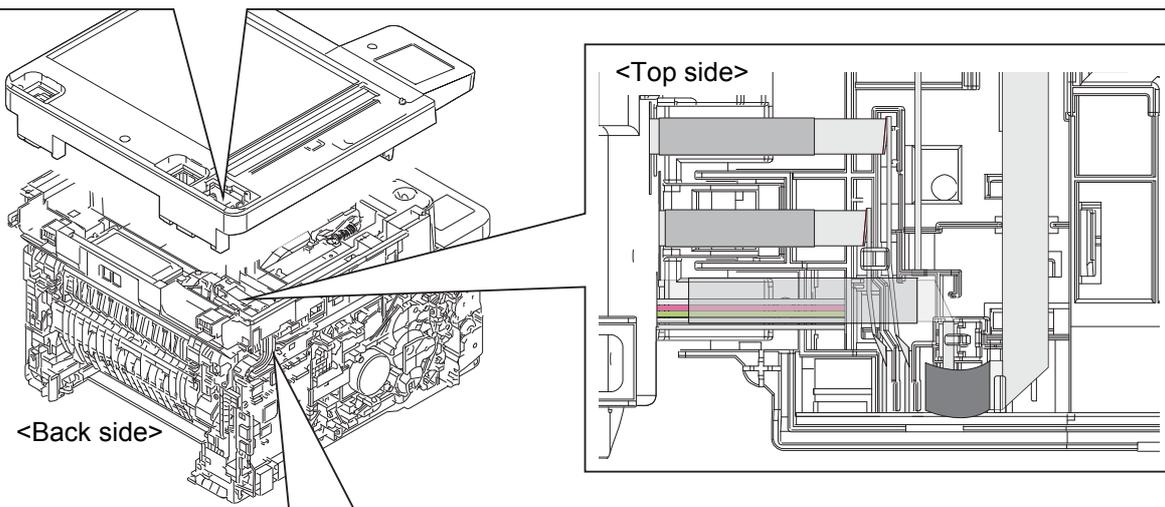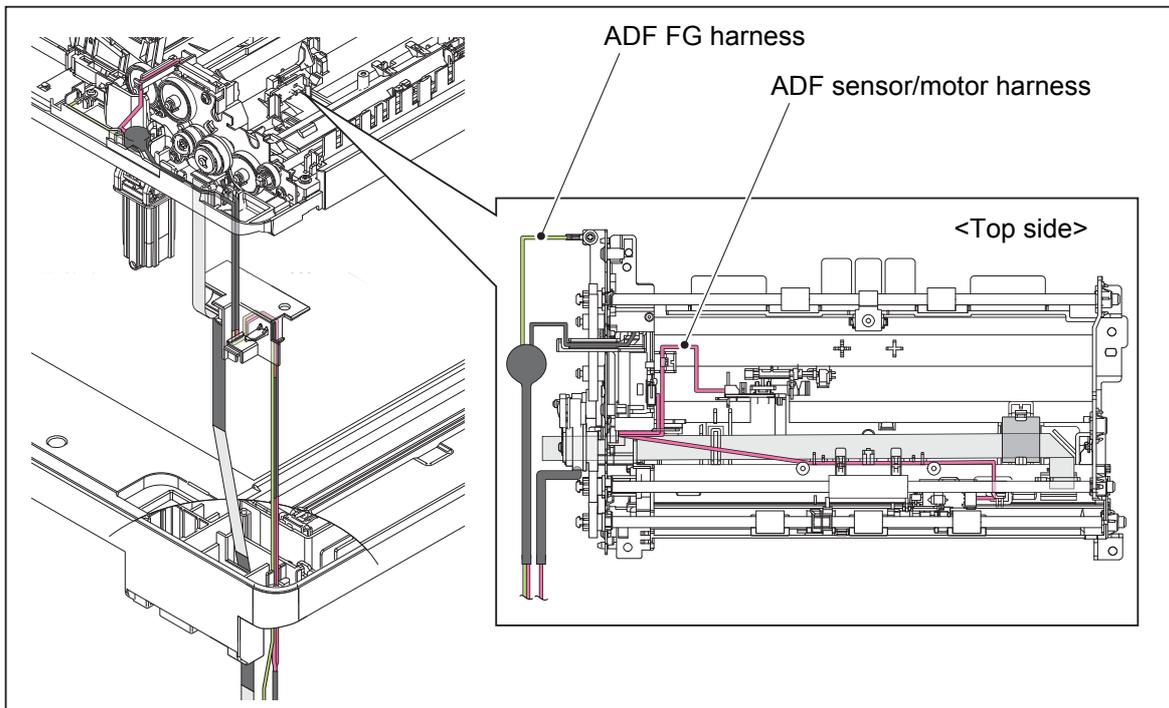


&lt;Top side&gt;

&lt;Top side&gt;

&lt;Left side&gt;

&lt;Front side&gt;

<Top side>

<Top side>

<Back side>

<Left side>

     *Confidential*

ADF FG harness

ADF sensor/motor harness

<Top side>

<Top side>

<Back side>

<Left side>

| 4 | Cartridge sensor harness C/M/Y/K |
|---|---|

Cartridge sensor harness K    Cartridge sensor harness C



Cartridge sensor harness Y    Cartridge sensor harness M

| 5 | Cartridge sensor/relay FFC |
|---|---|



*Confidential*
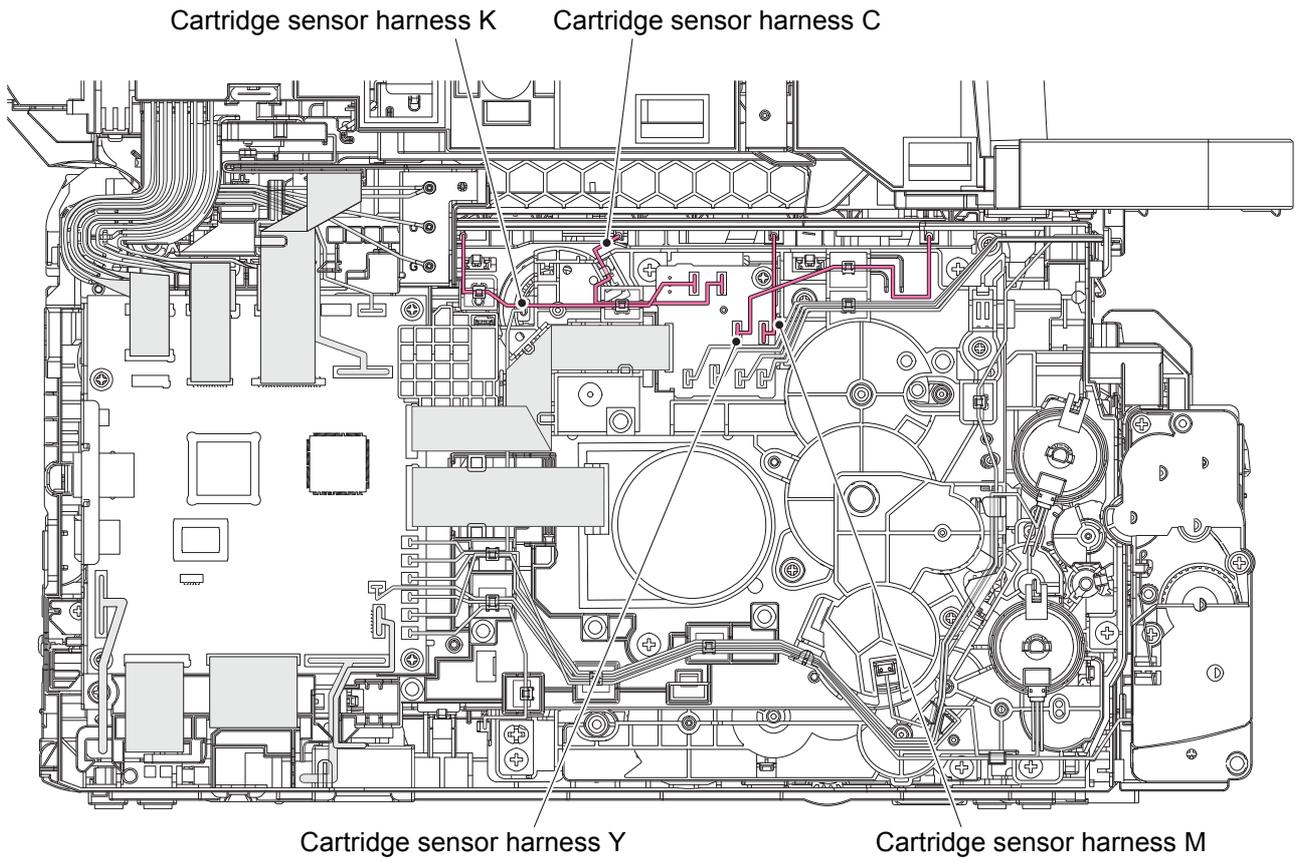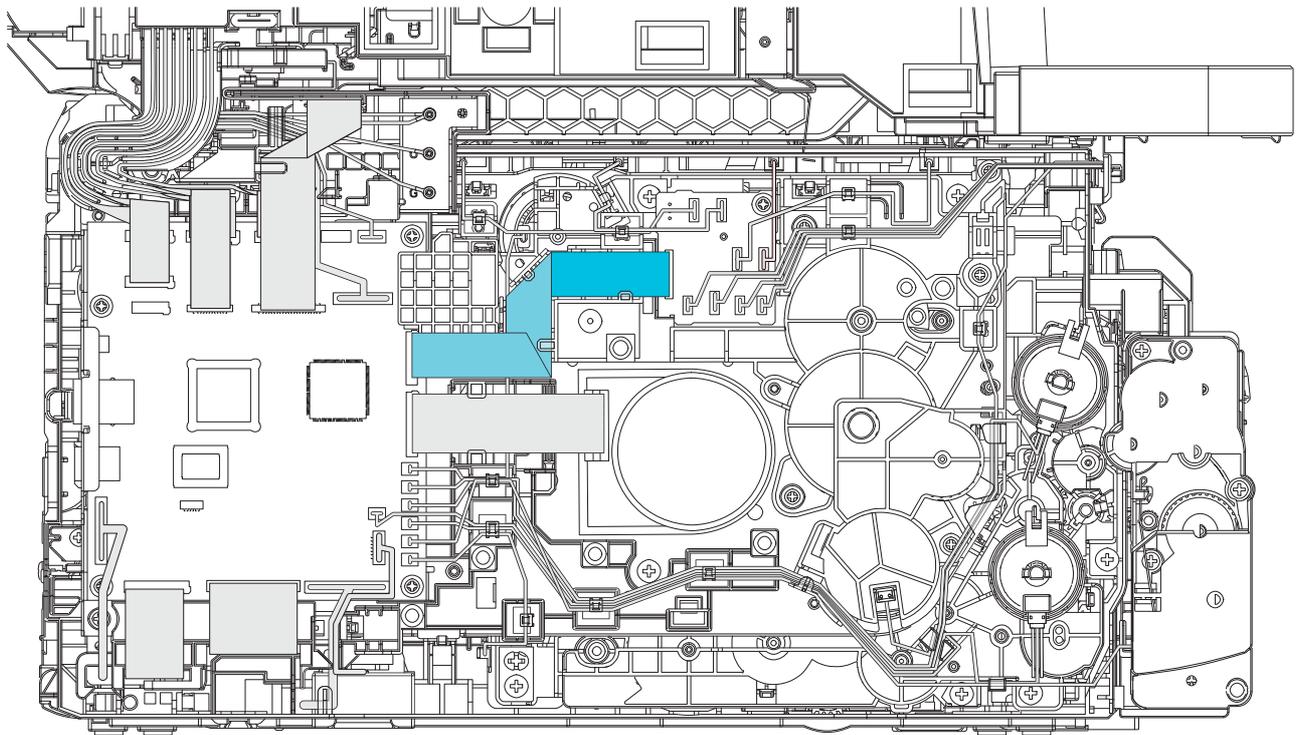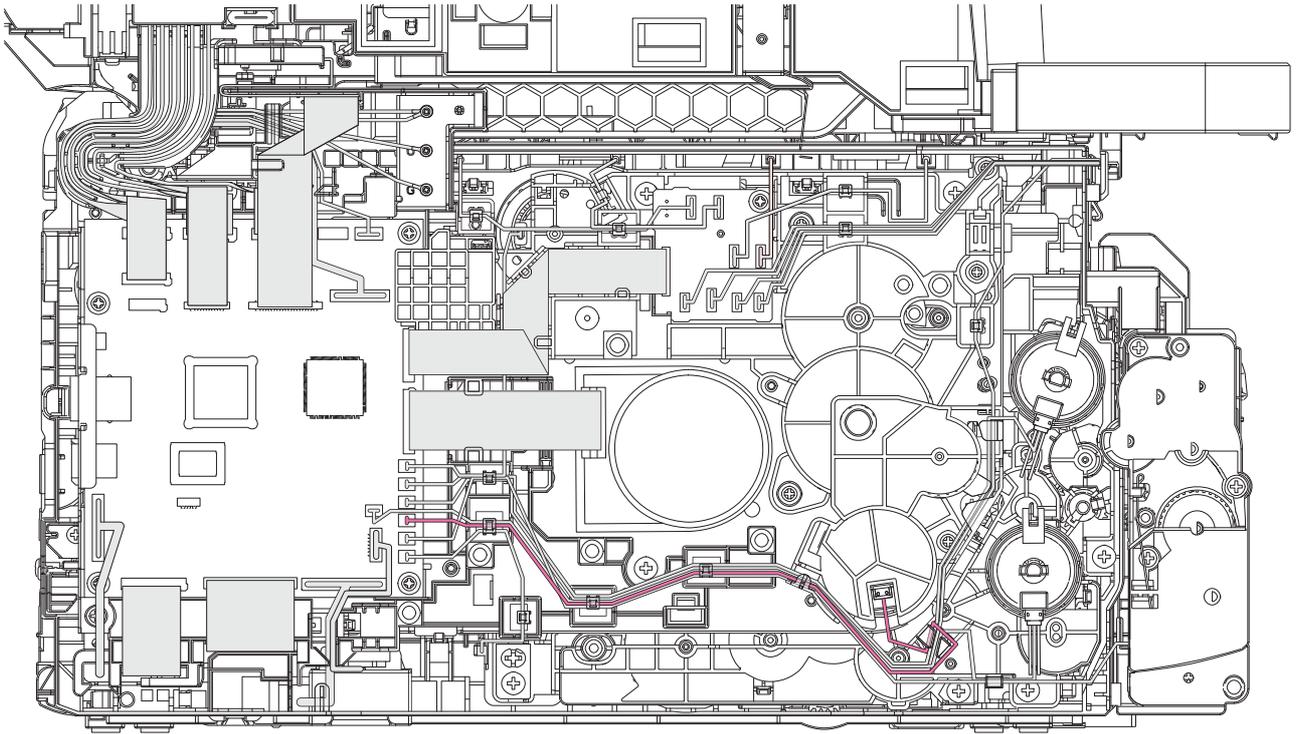
| 6 | DEV release clutch CMY harness |
|---|---|



| 7 | DEV release clutch K harness |
|---|---|

| **8** | DEV release sensor harness |
|---|---|



| **9** | DX clutch harness |
|---|---|
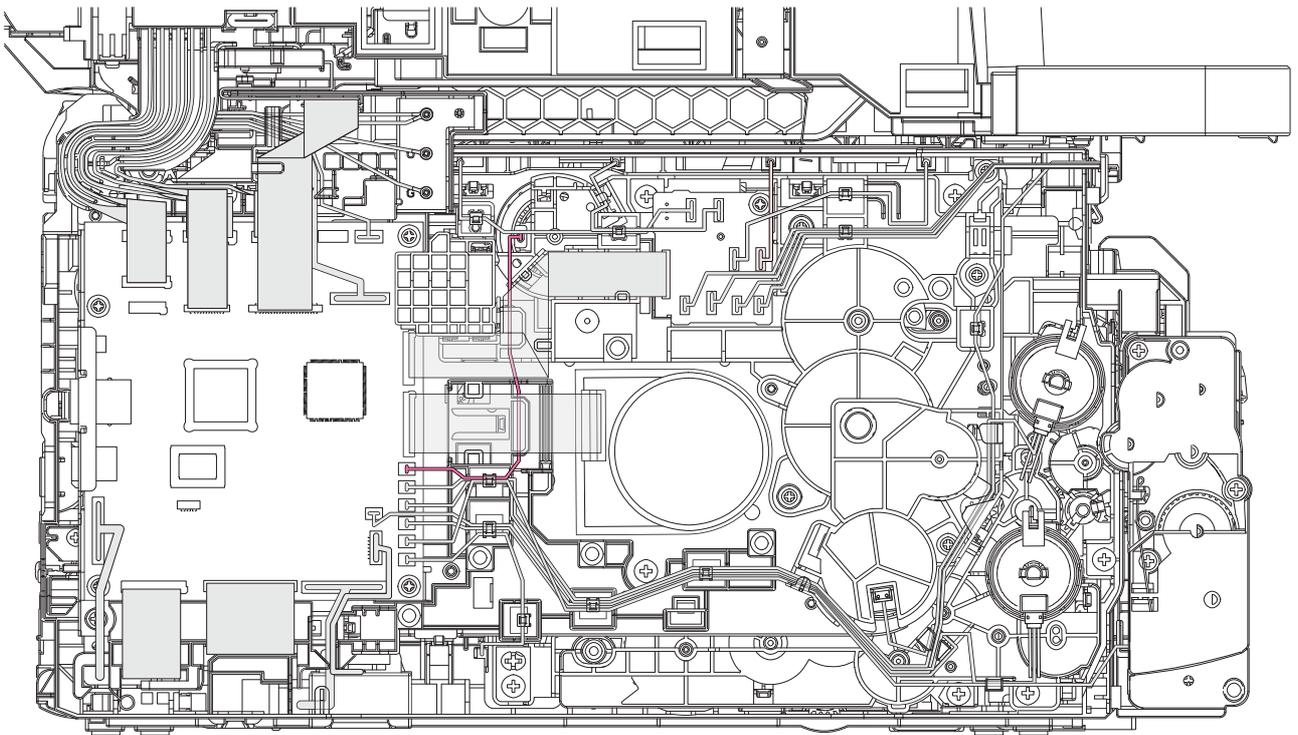
*Confidential*
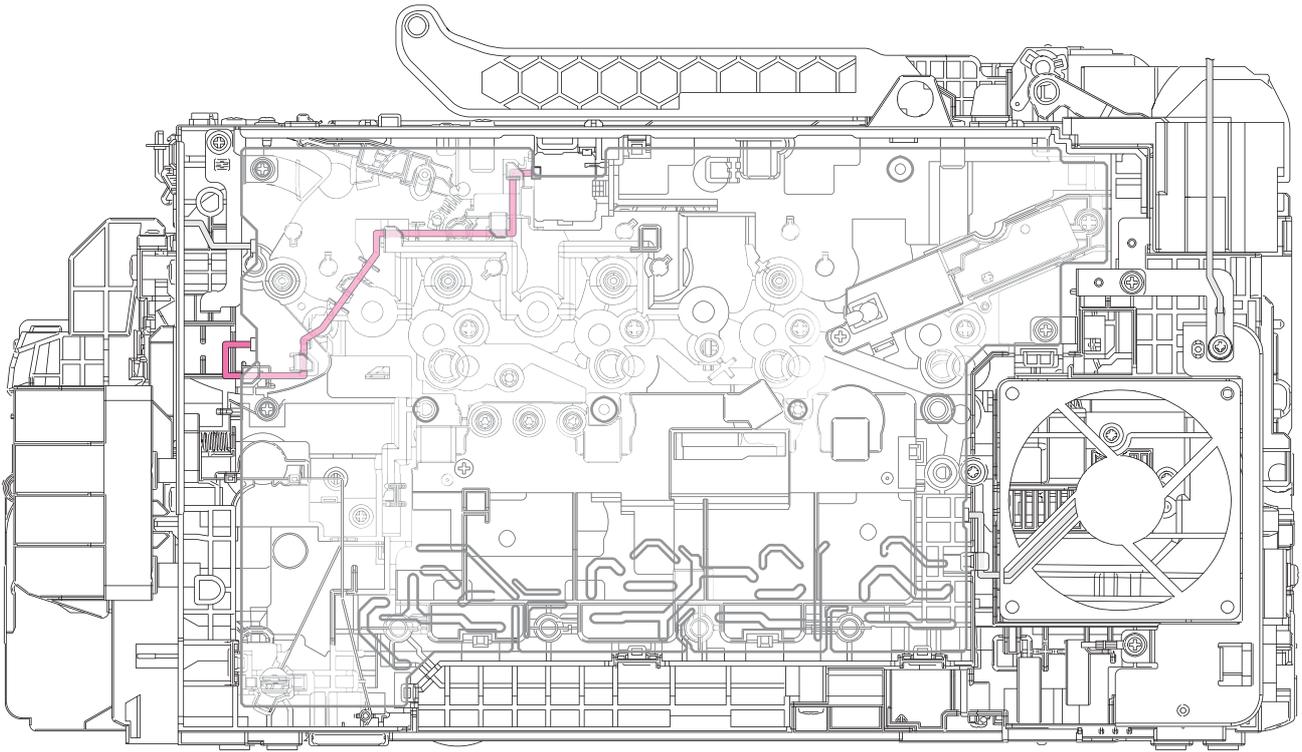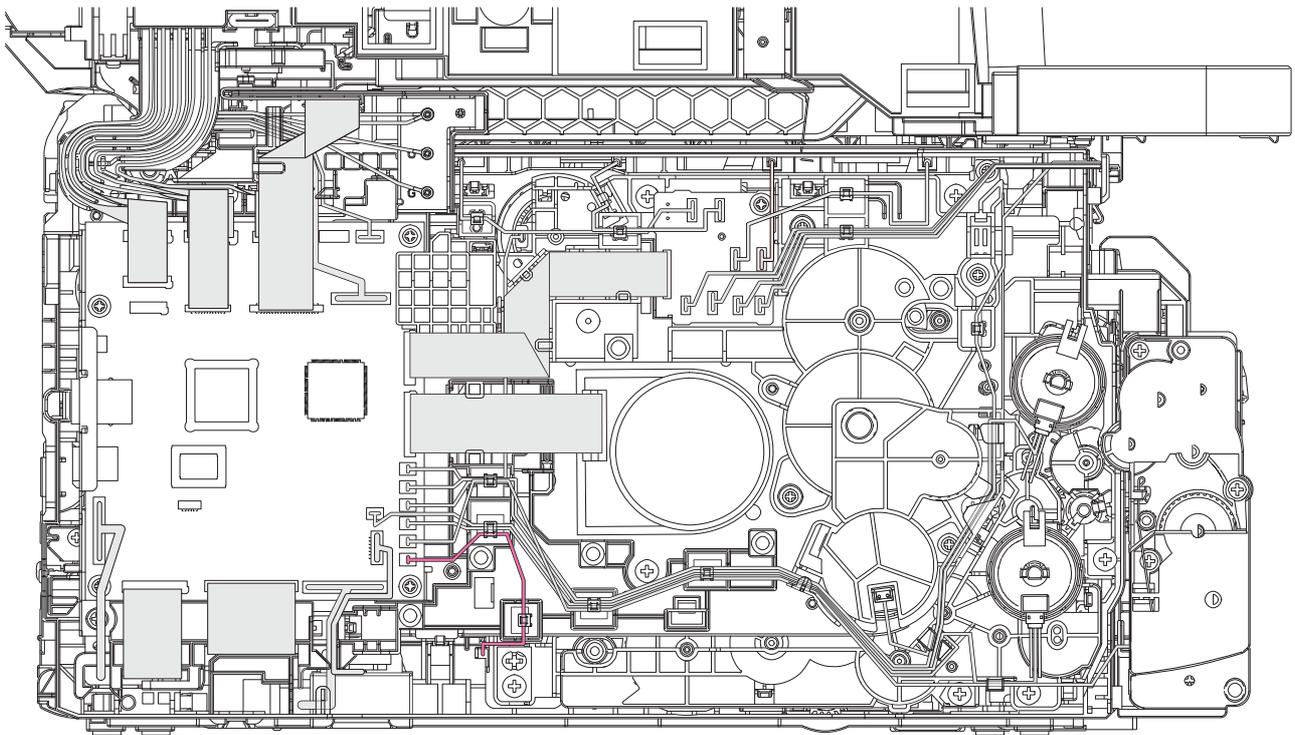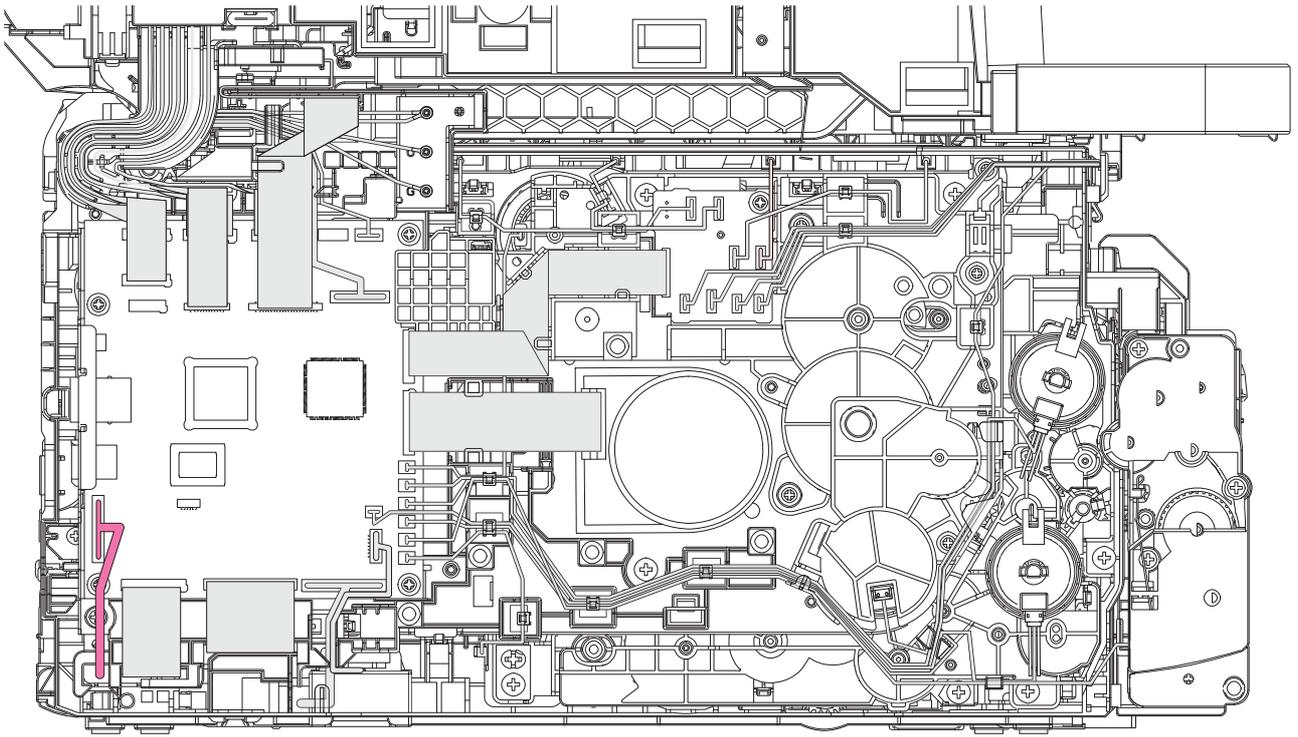
| **10** | Eject sensor/relay harness |
|---|---|



| **11** | Fan harness, Fan FG harness |
|---|---|
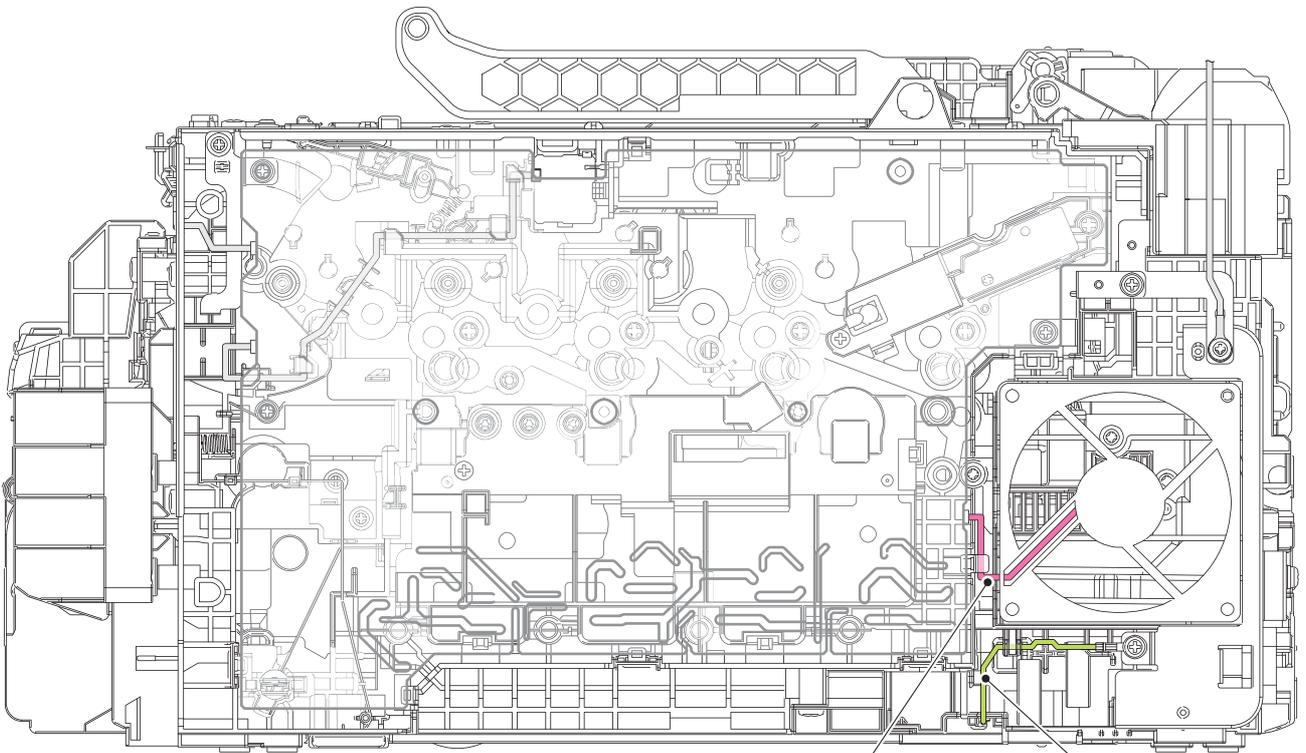


Fan harness                Fan FG harness

<Top side>

<Top side>

<Front side>

<Left side>

FB FG harness

FB motor harness

*Confidential*

&lt;Right side&gt;

&lt;Front side&gt;

<A view>

<A view>

<Right side>

LVPS heater harness

Inlet harness ASSY

<B view>

<C view>

<C view>

<C view>

<Left side>

LVPS harness

Main PCB

<B view>

<Bottom side>

LVPS FG harness

<A view>

LED FG harness

<Top side>

LED control FFC

<Right side>

<A view>

<Left side>

<Left side>

## 17 LED FFC Y/M/C/K

LED FFC C

LED FFC K

<Top side>
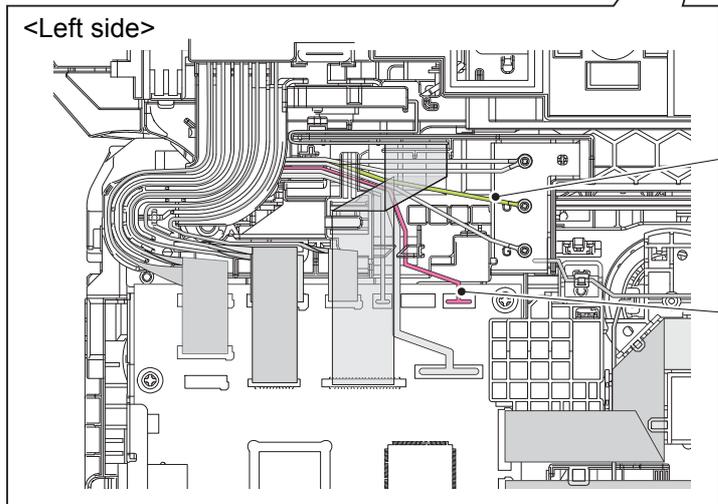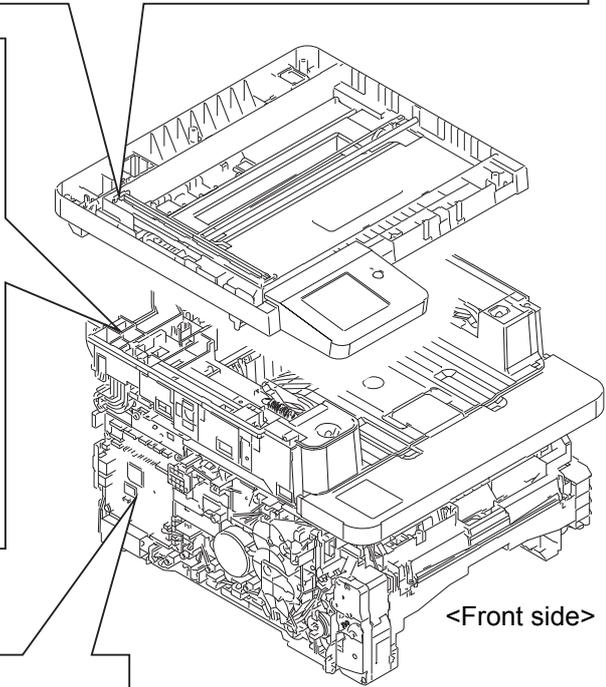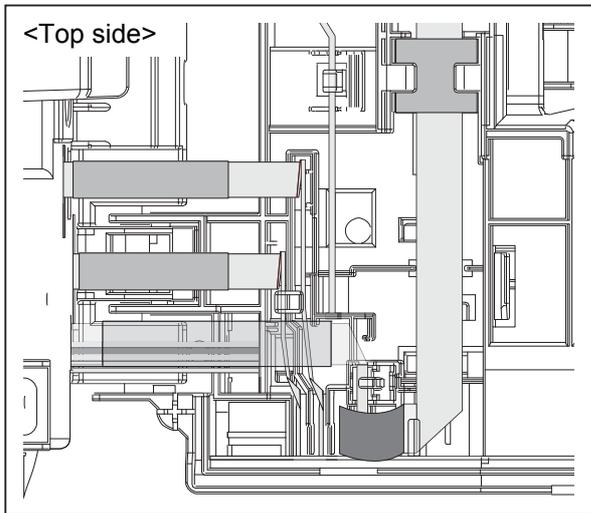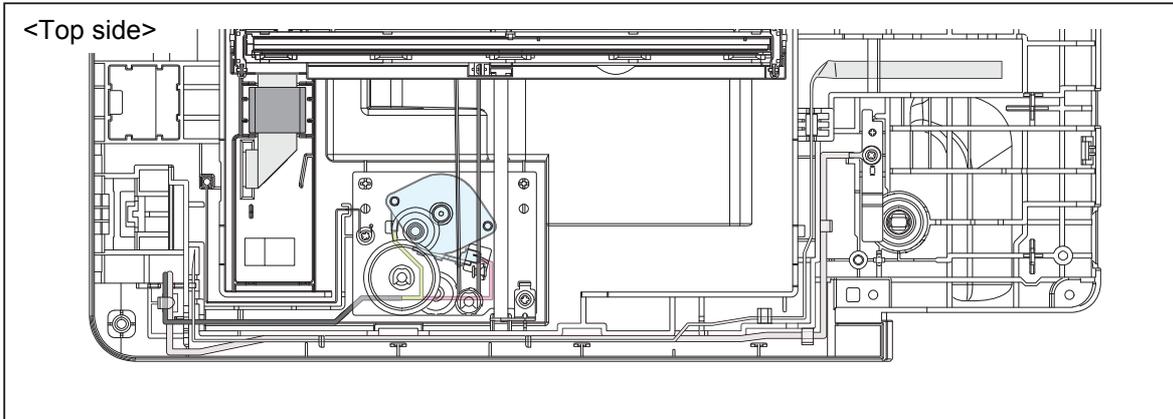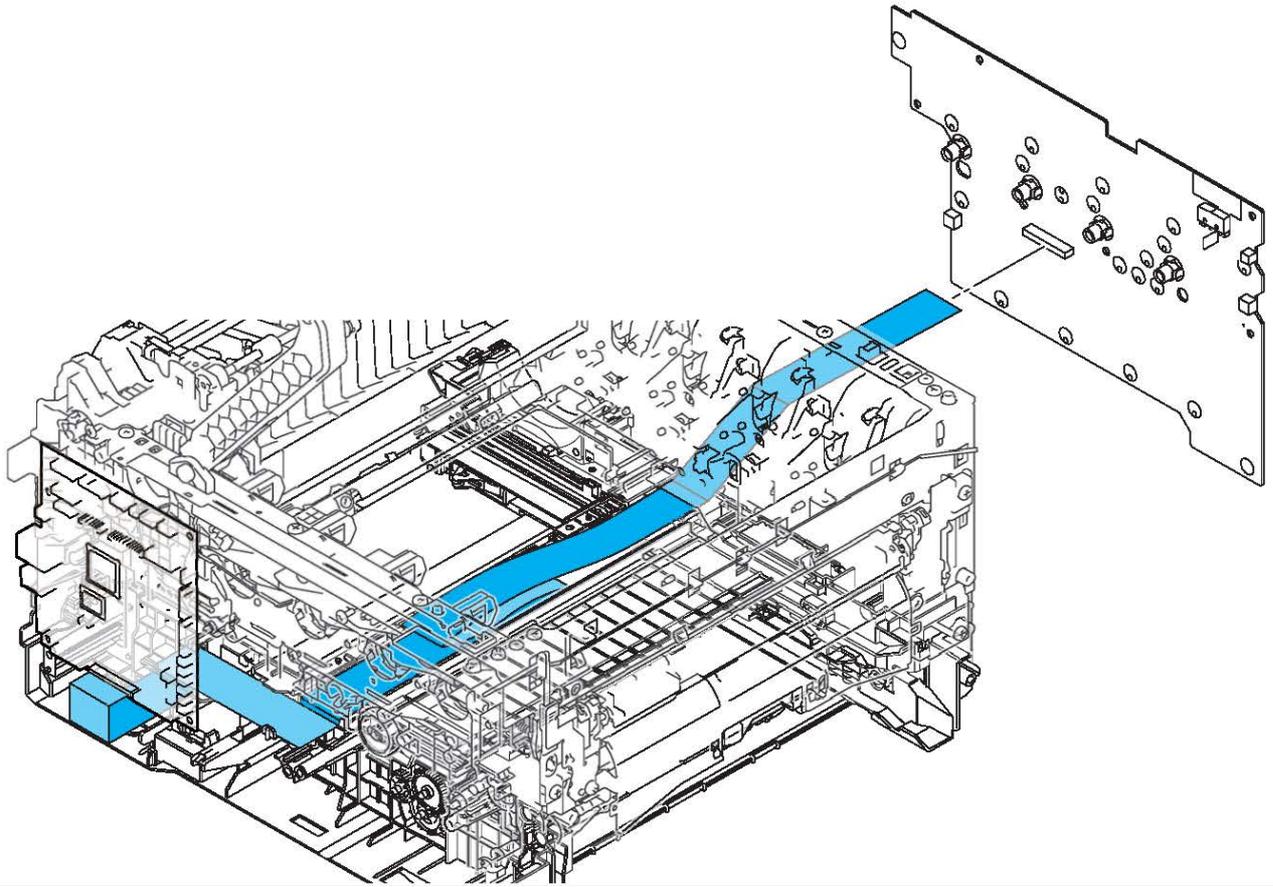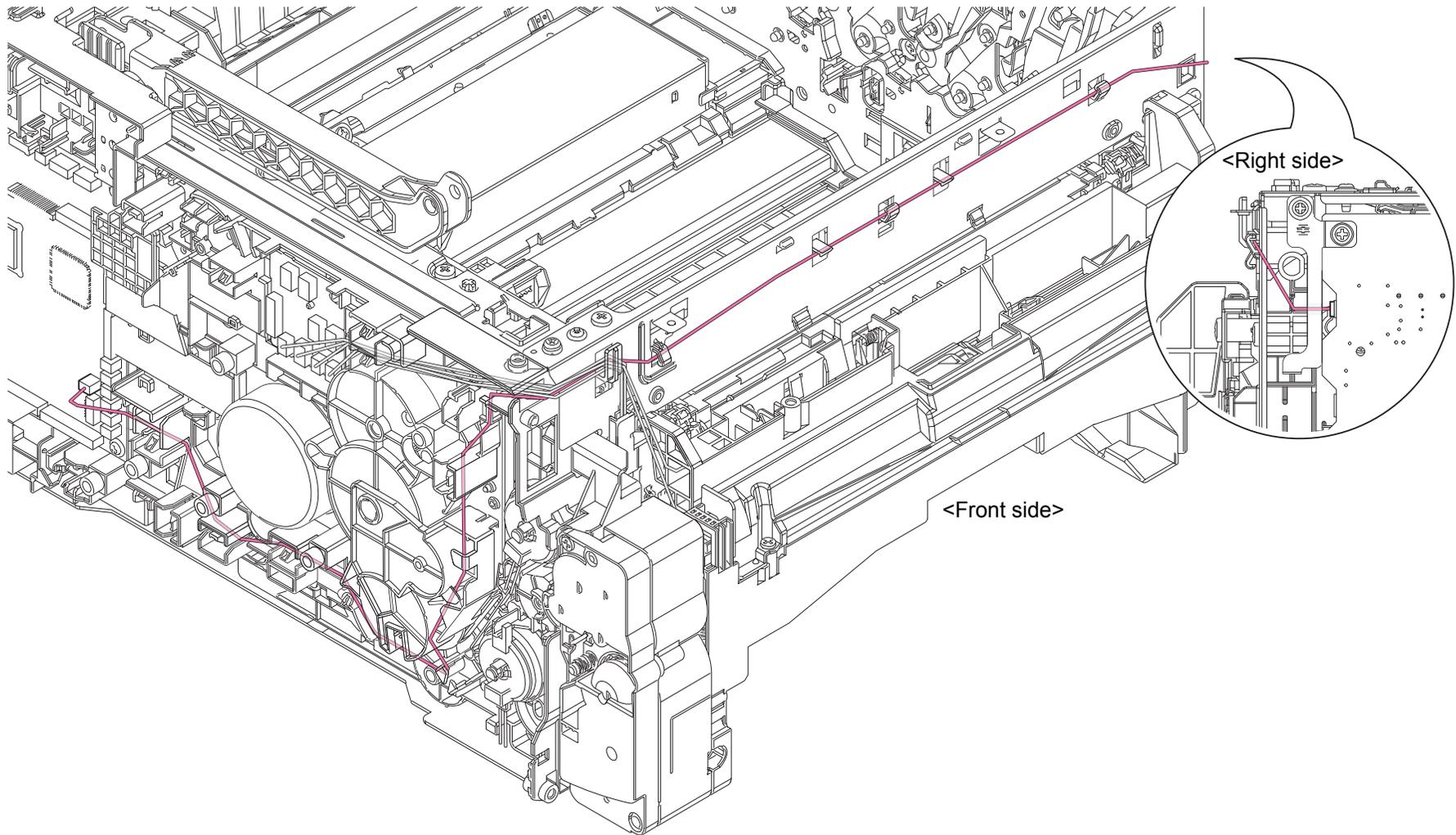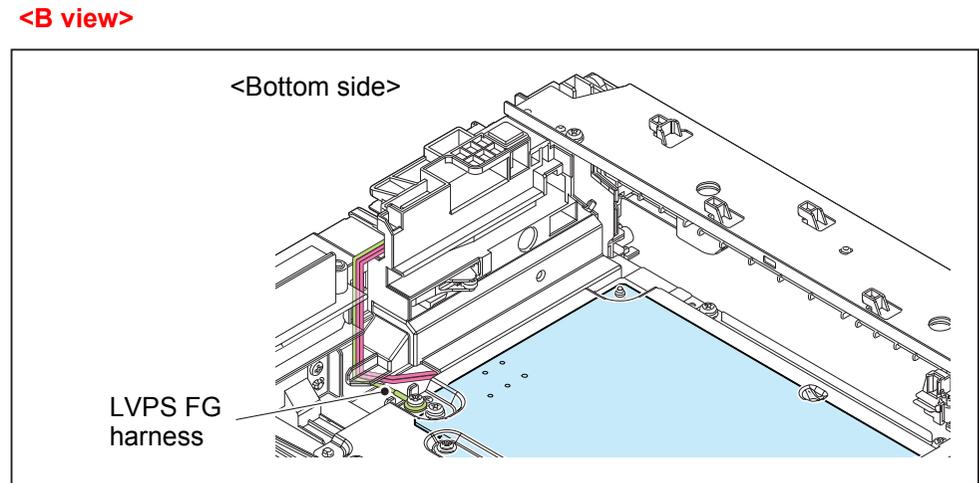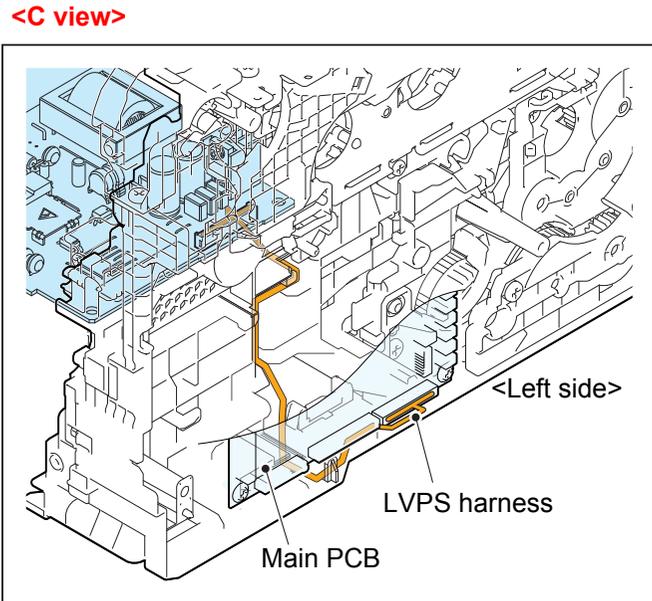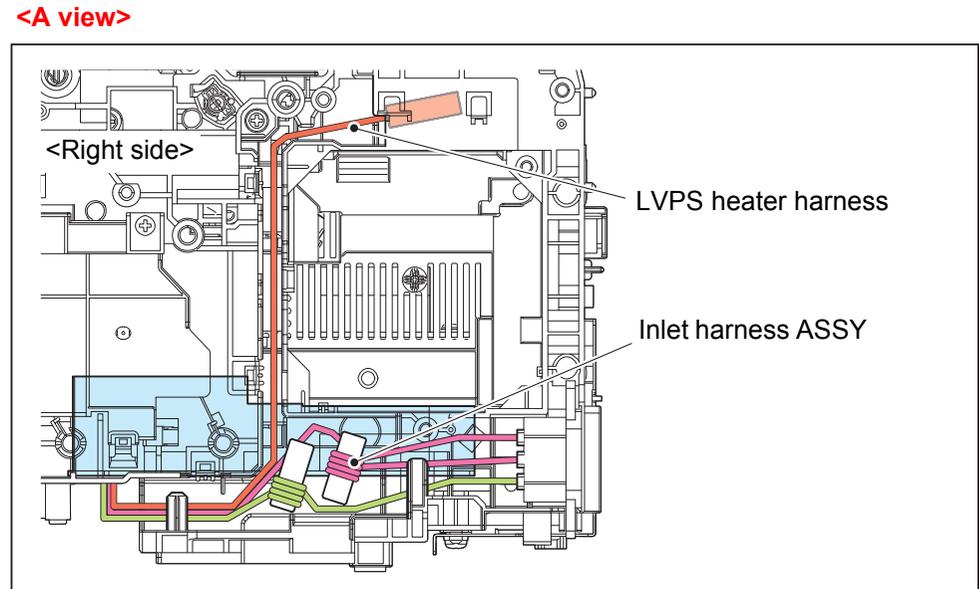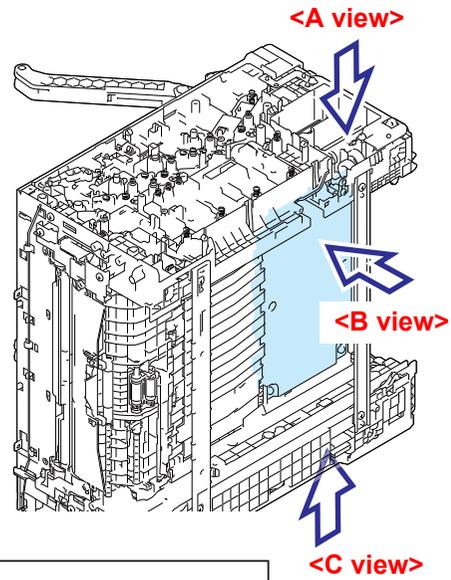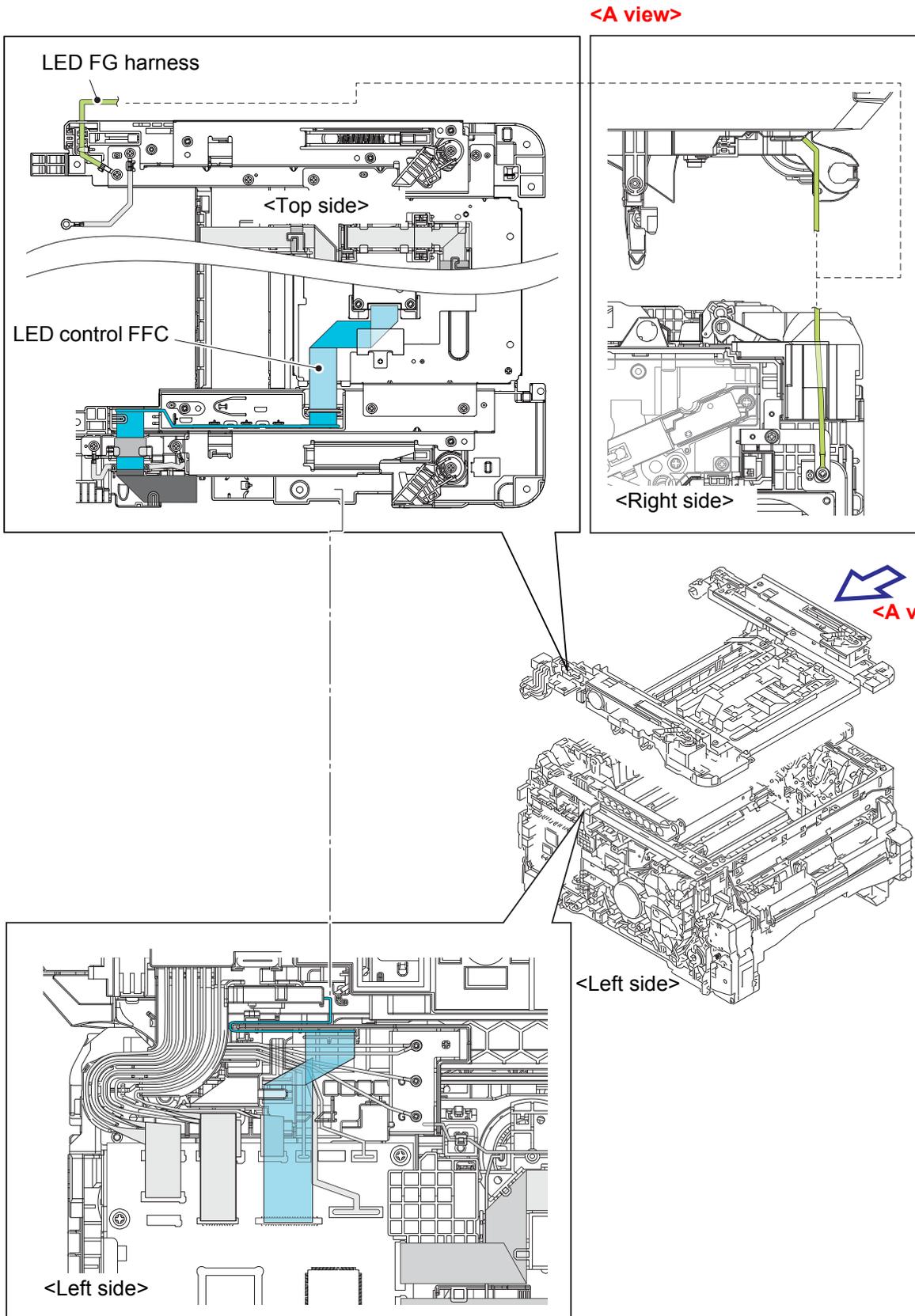
LED FFC C

LED FFC Y

LED FFC Y

LED FFC M
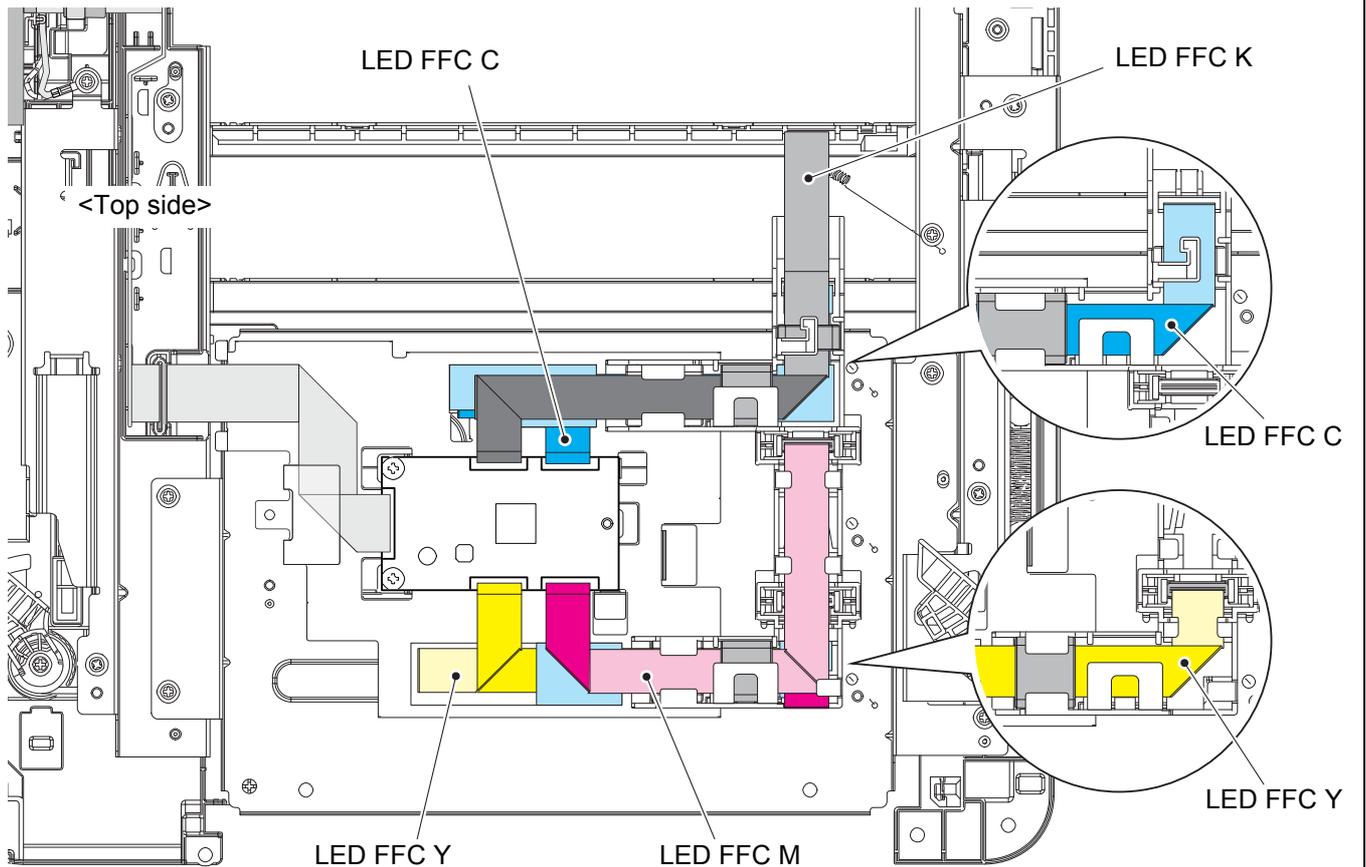
## 18 LT connector harness

<Left side>
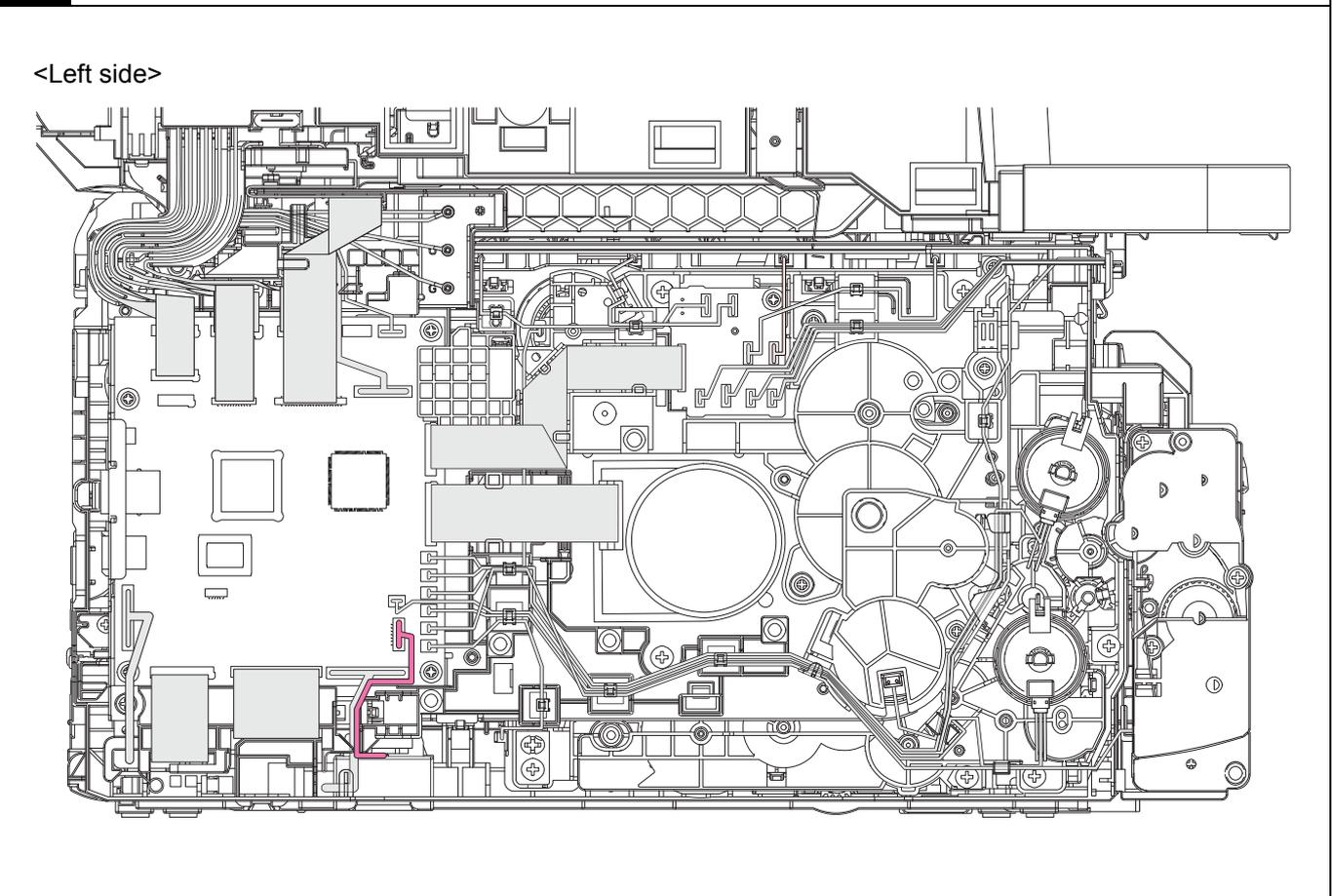
**19** LT PF sensor harness
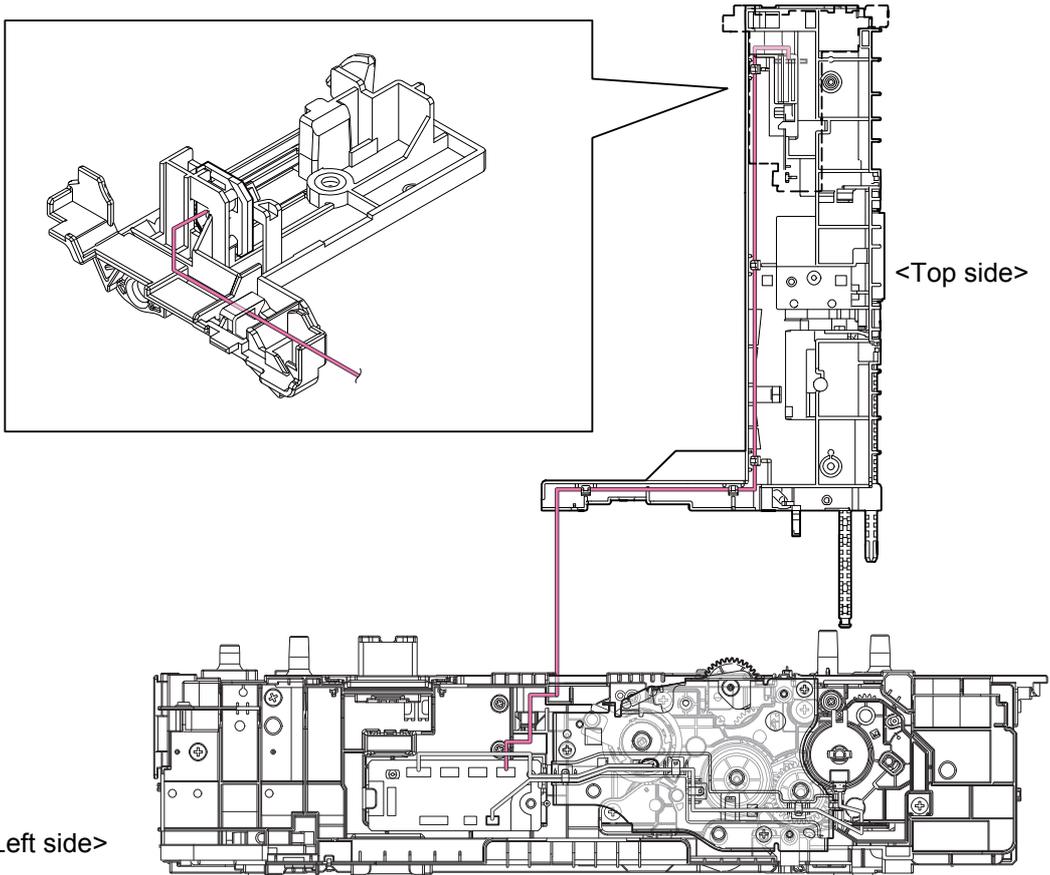
<Top side>

<Left side>

**20** LT release clutch harness

<Left side>

&lt;Left side&gt;

Modem FG harness L

Modem FFC

Modem FG harness R

<Top side>

<Right side>

<Back side>

<Left side>

MP REG sensor harness

<Left side>

MP PE sensor harness

MP solenoid harness

**<A view>**

<Bottom side>



**<A view>**

<Left side>

<Left side>

<Top side>

Panel FFC

Panel FG harness

<Top side>

<Left side>

<Left side>

Panel FG harness

Panel FFC

<Top side>

Panel FFC

Panel FG harness

<Top side>

<Left side>

<Left side>

Panel FG harness

Panel FFC

3-29

*Confidential*
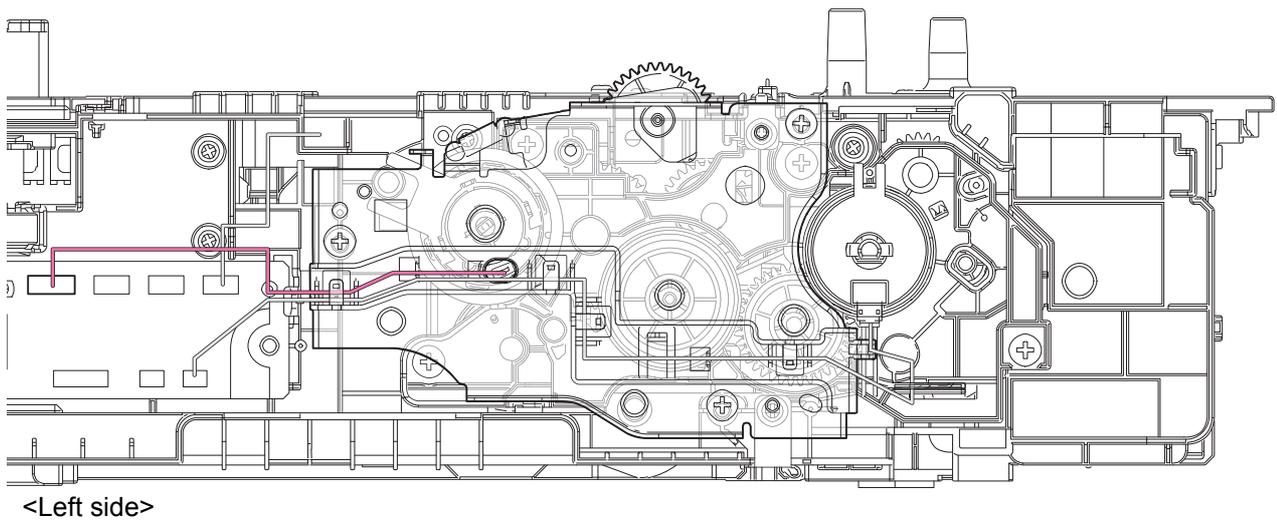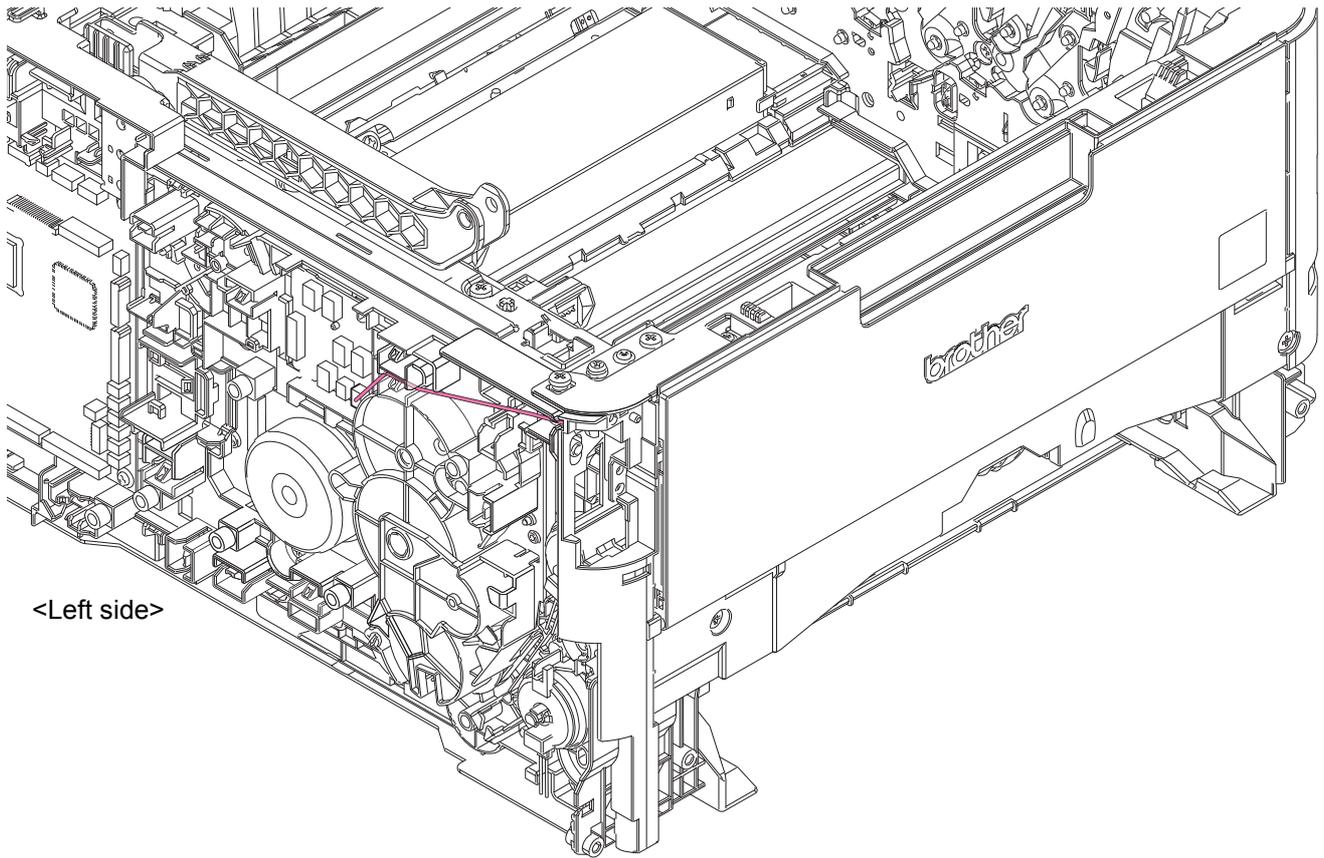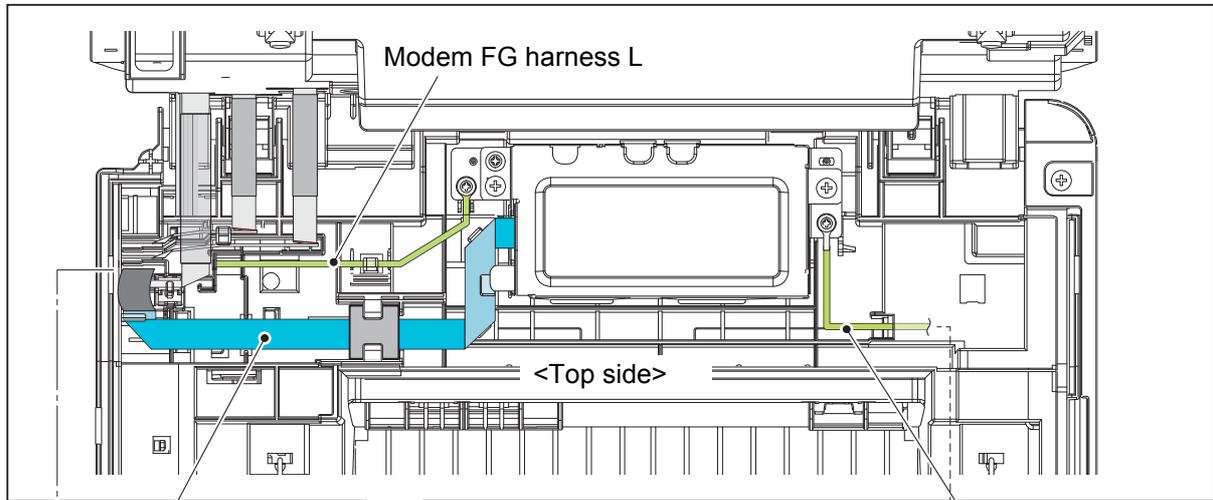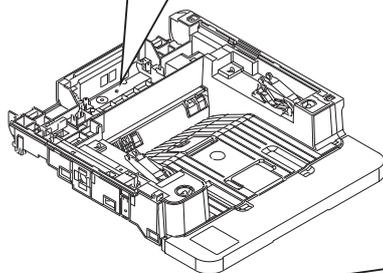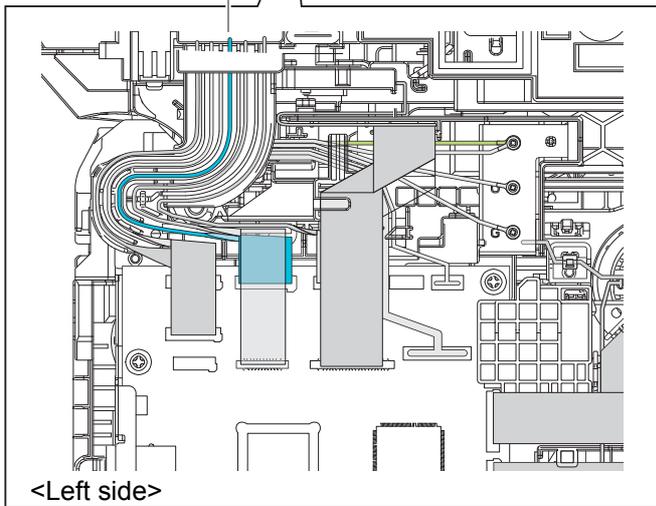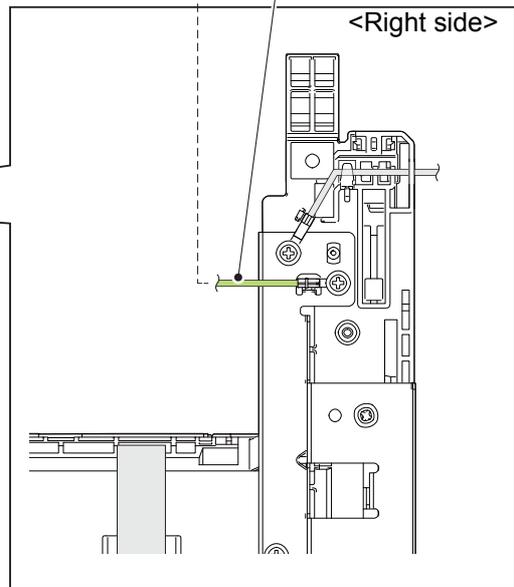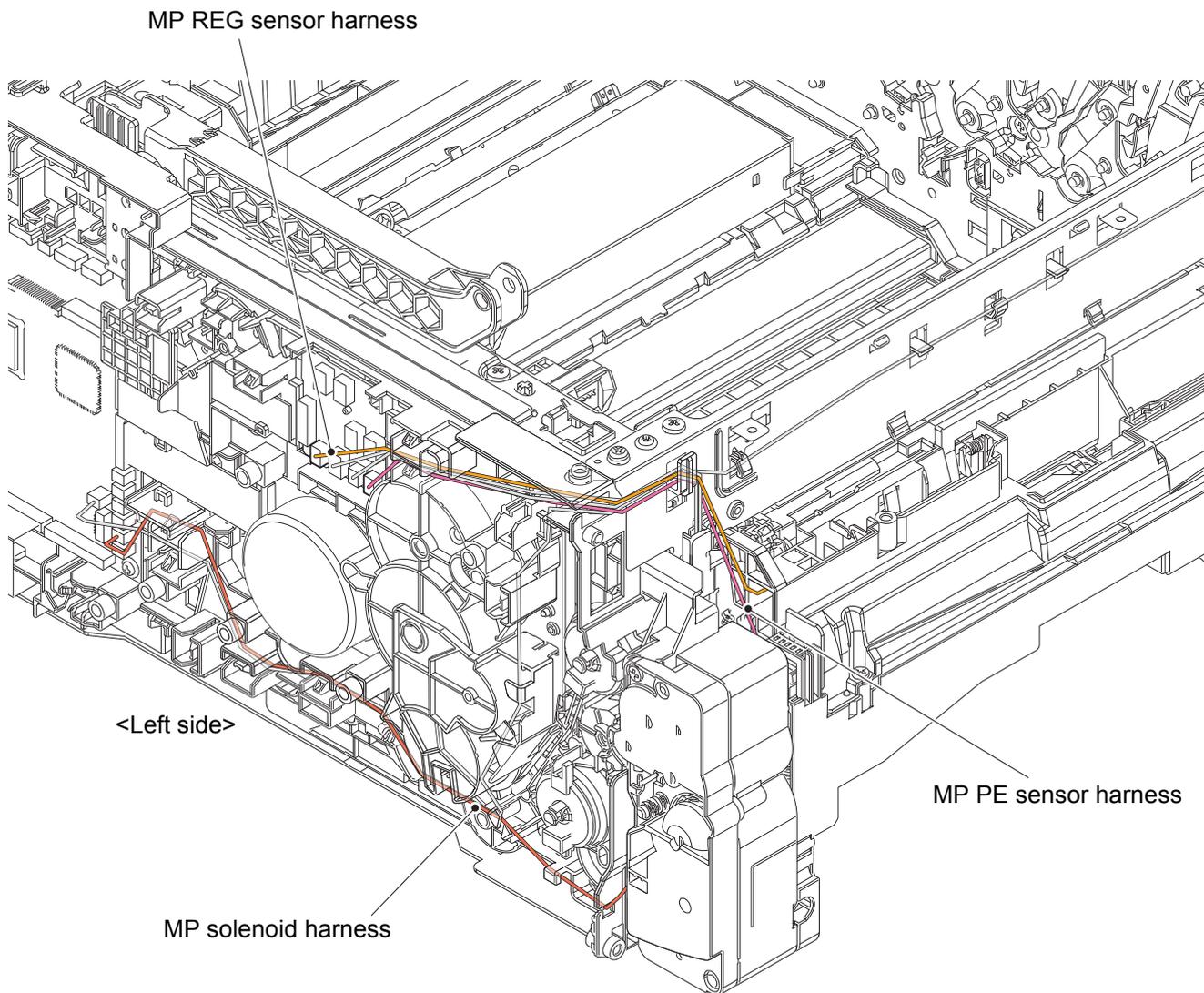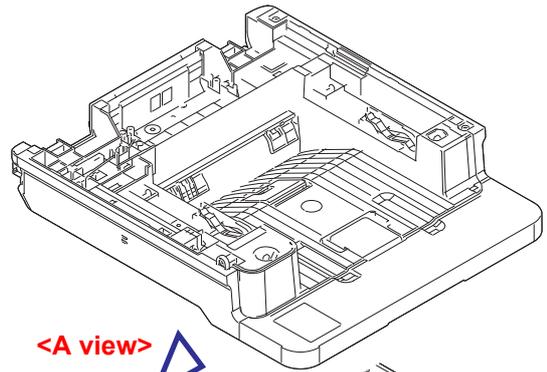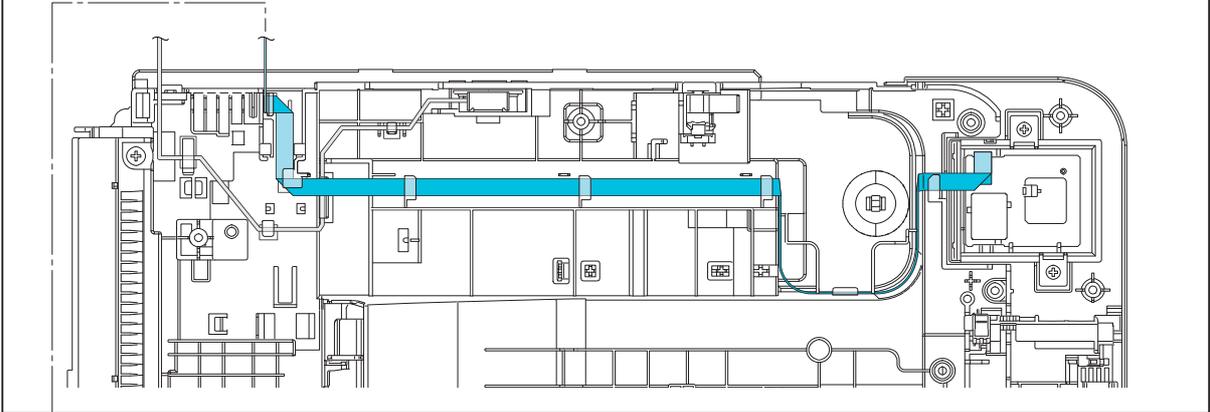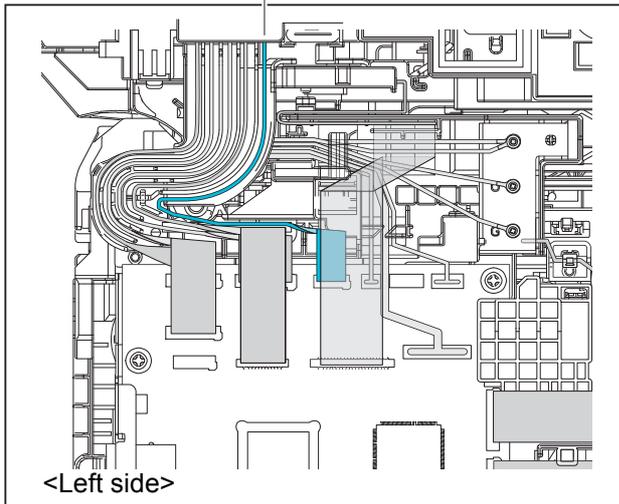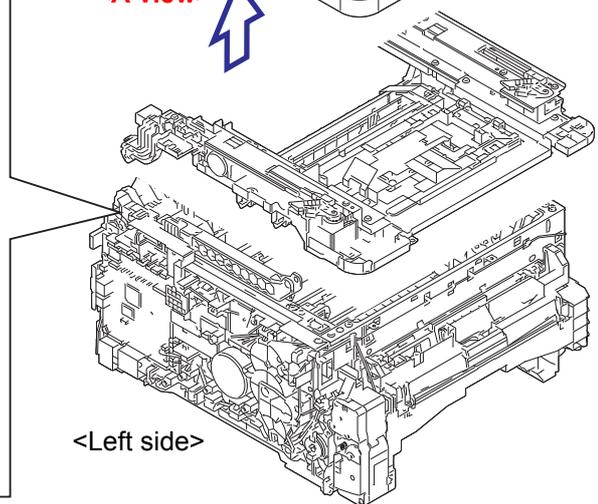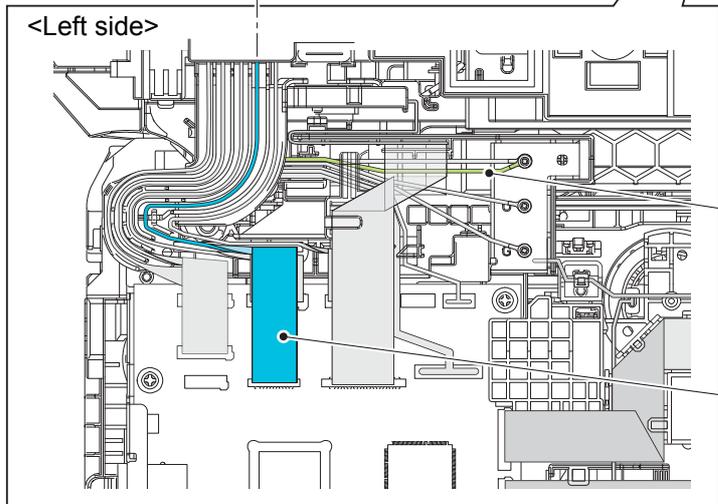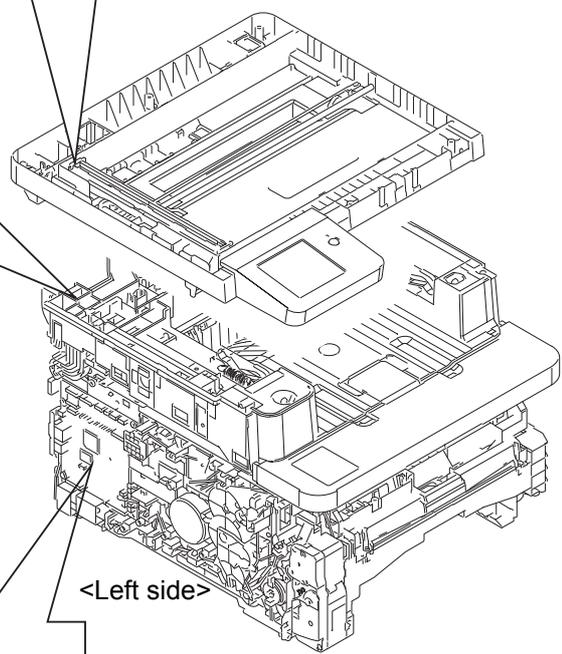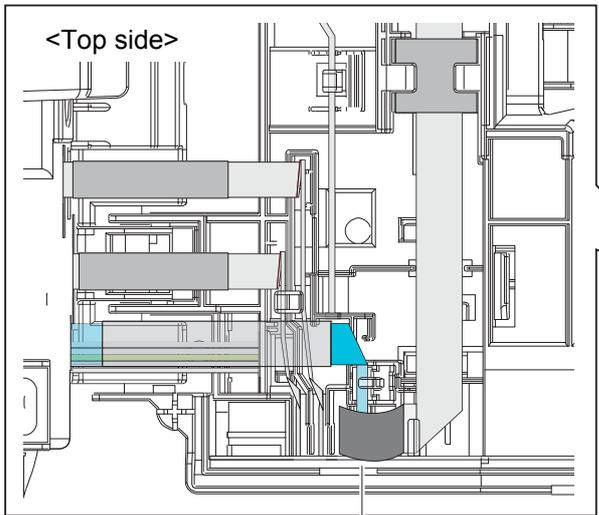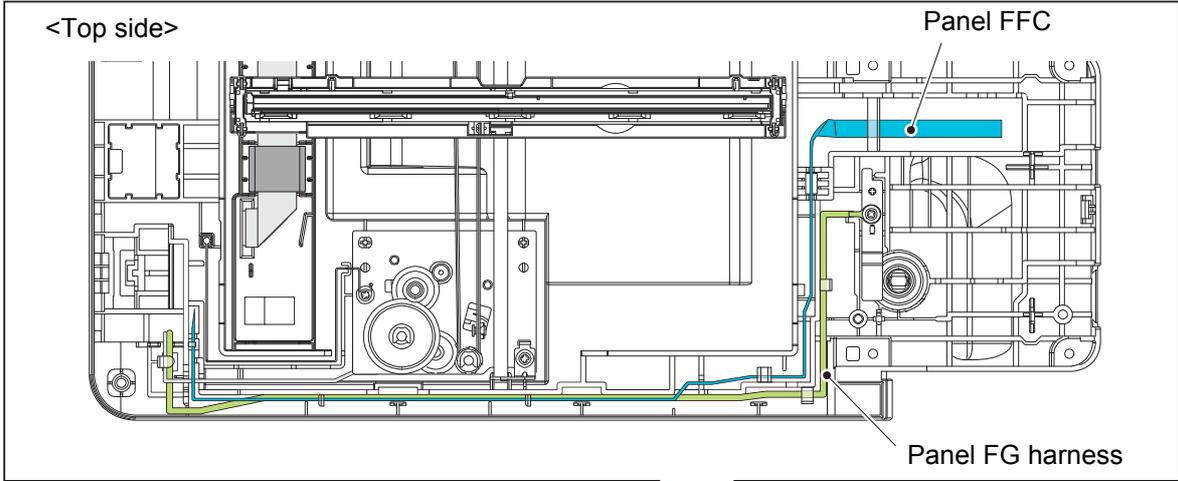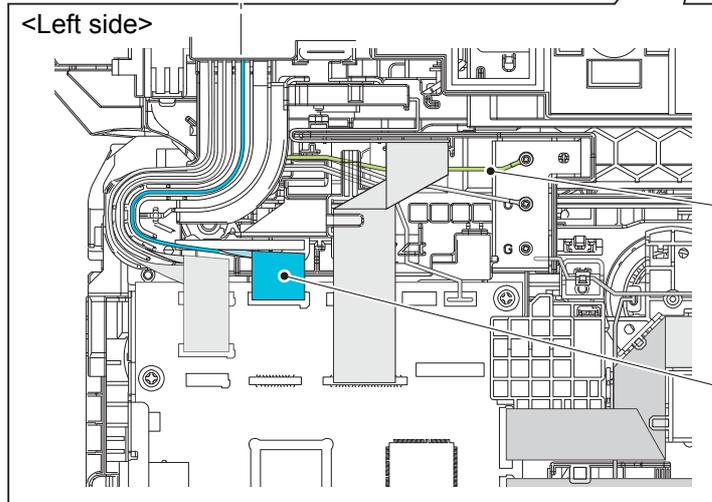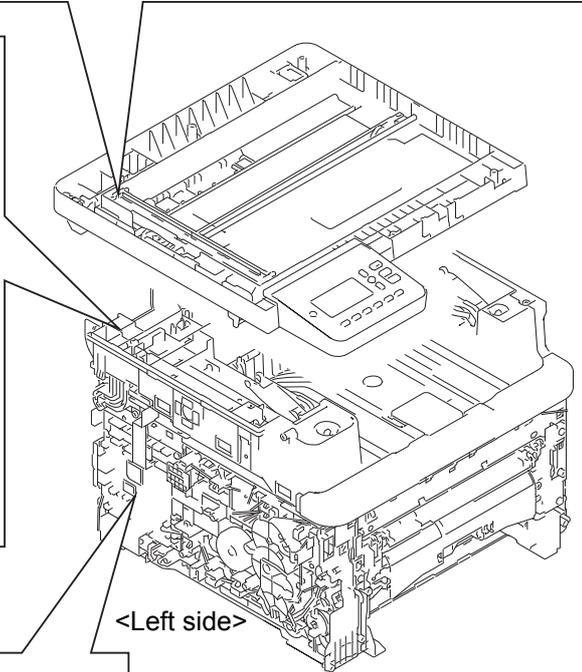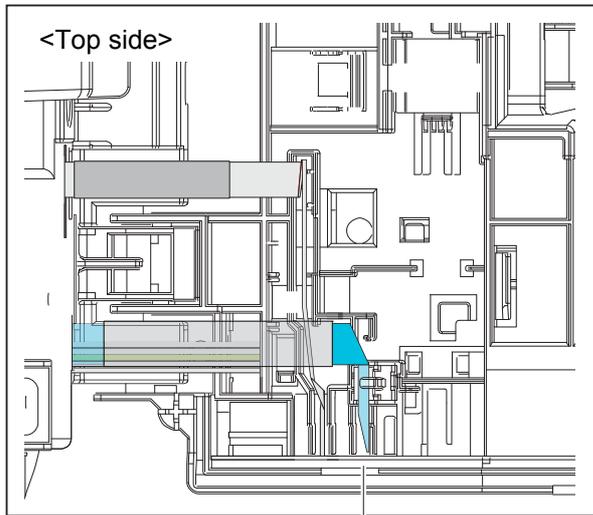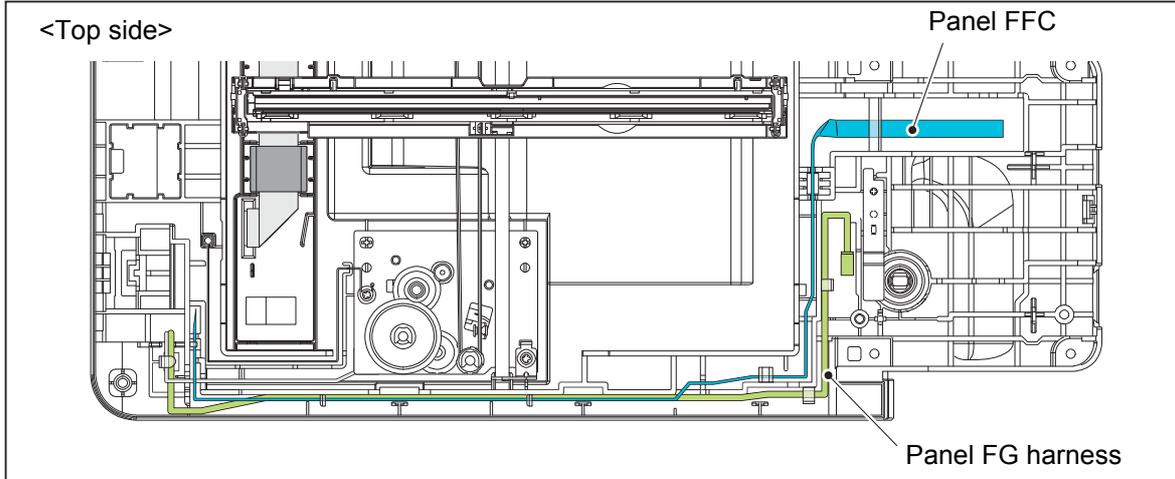
| 27 | PF motor FFC |
|----|--------------|



| 28 | Process motor FFC |
|----|-------------------|

<Left side>



*Confidential*
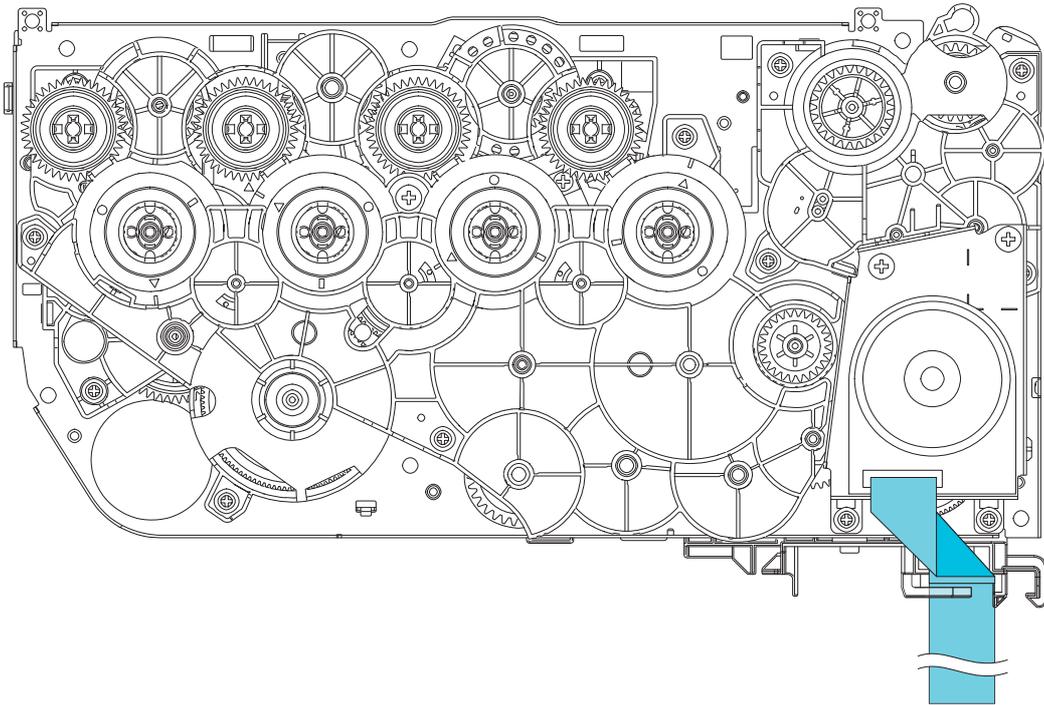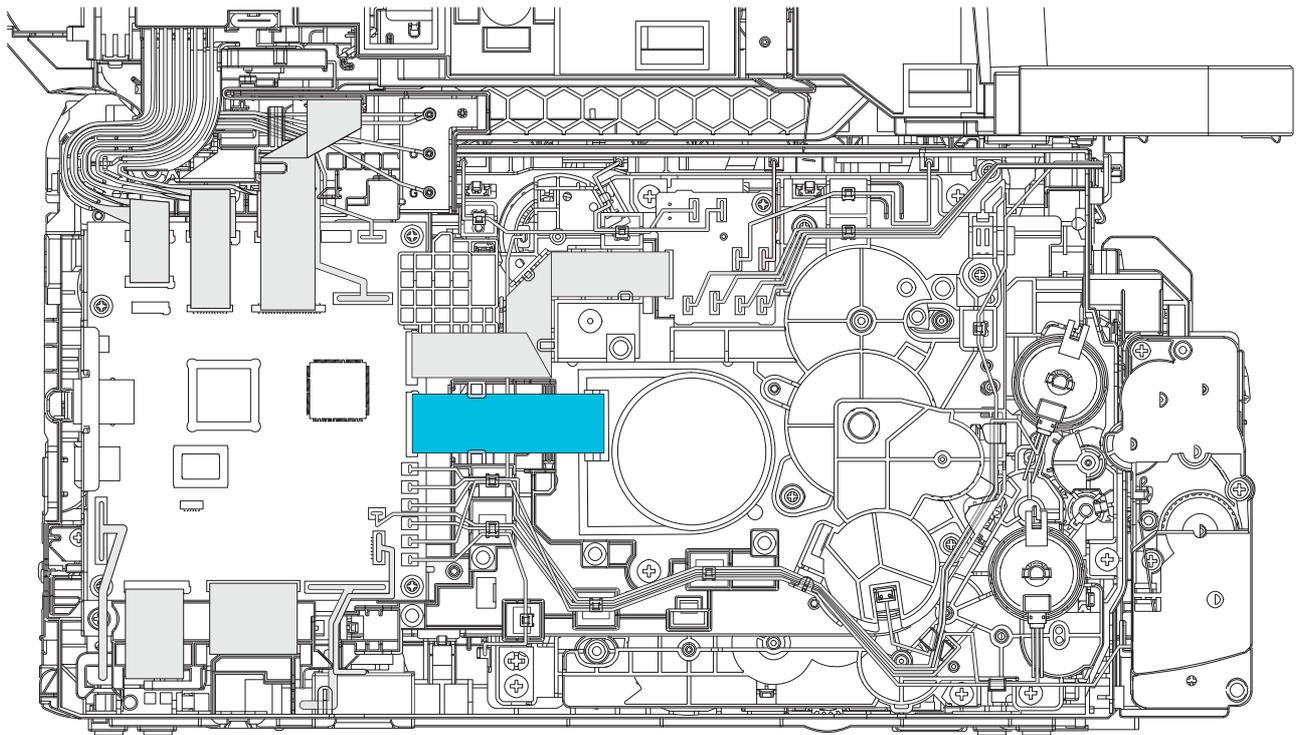
**29** REG clutch harness

<Left side>



**30** REG front/rear sensor harness, T1 PF sensor harness



<Left side>

REG front/rear sensor harness

T1 PF sensor harness

| **31** | REG mark sensor L harness, REG mark sensor R harness |
|---|---|

REG mark sensor L harness

REG mark sensor R harness
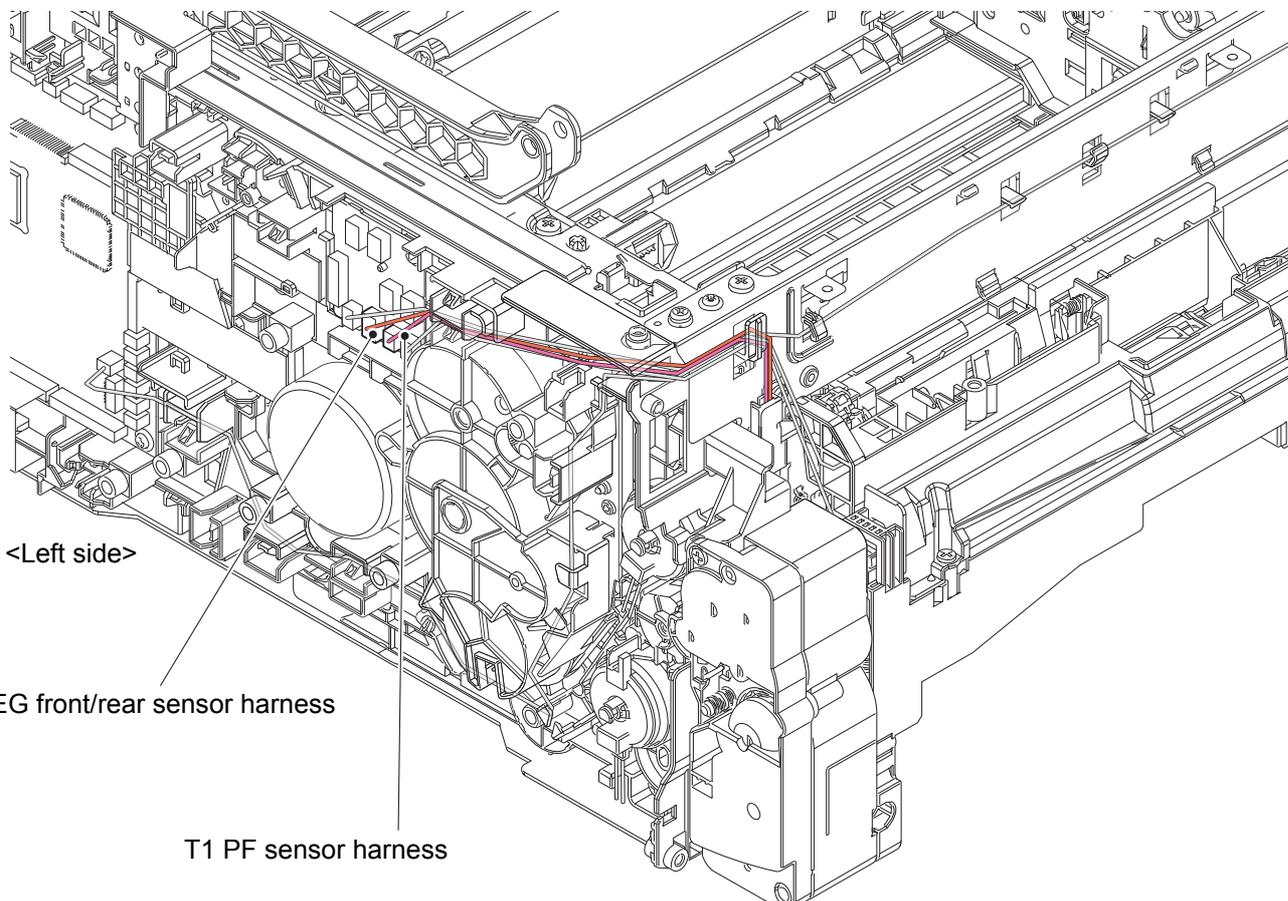
REG mark sensor L harness

REG mark sensor R harness

<Back side>

**\<A view\>**

\<Bottom side\>



**\<A view\>**

\<Left side\>

\<Left side\>

| 33 | T1 CLUTCH 30 harness |
|---|---|



&lt;Left side&gt;

| 34 | T1 pickup clutch harness |
|---|---|

&lt;Left side&gt;

<Left side>
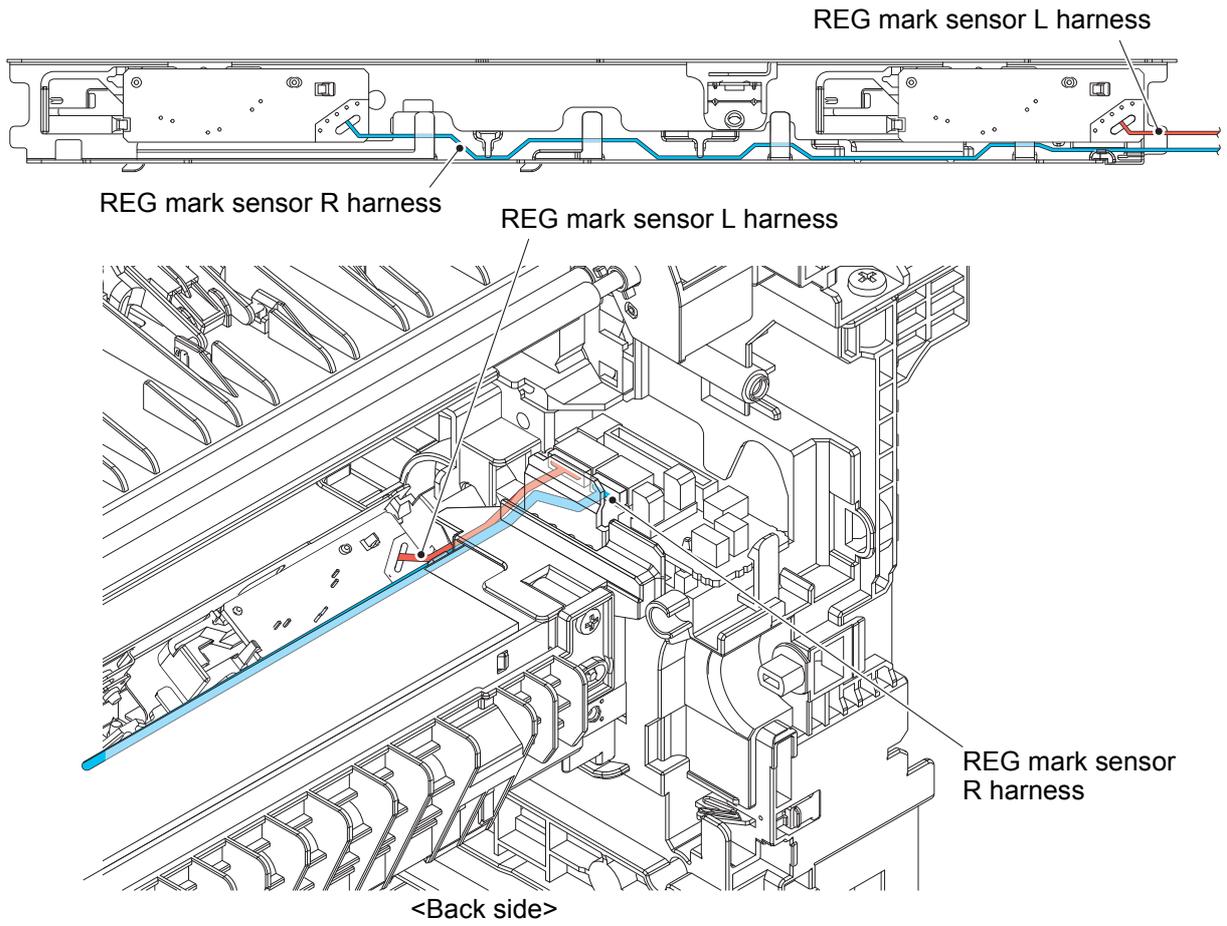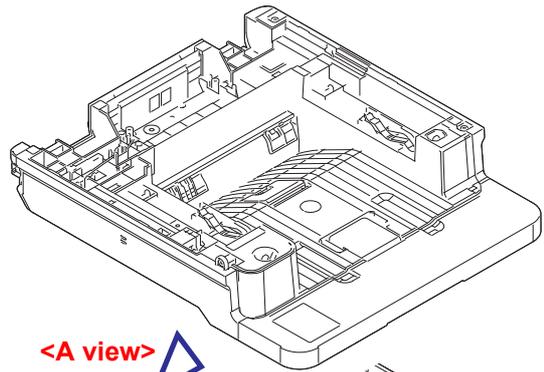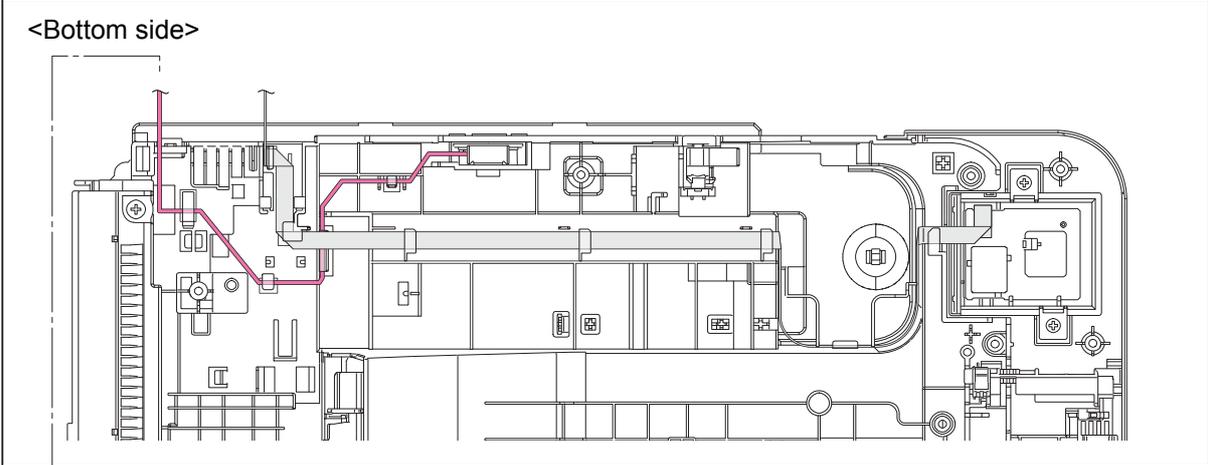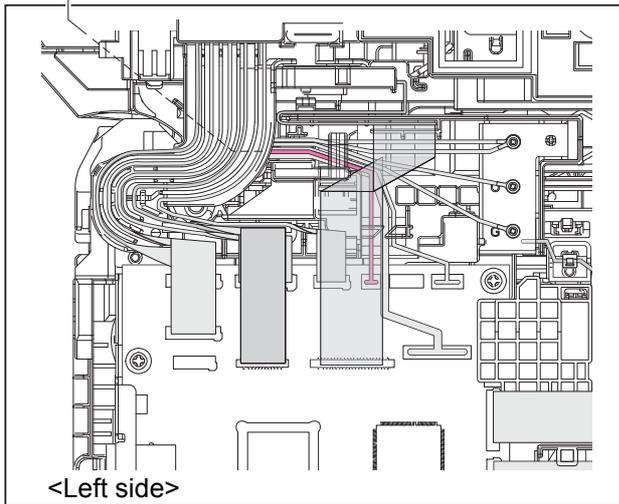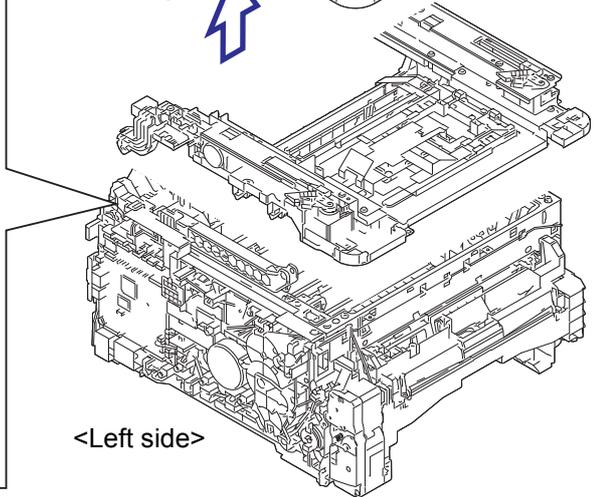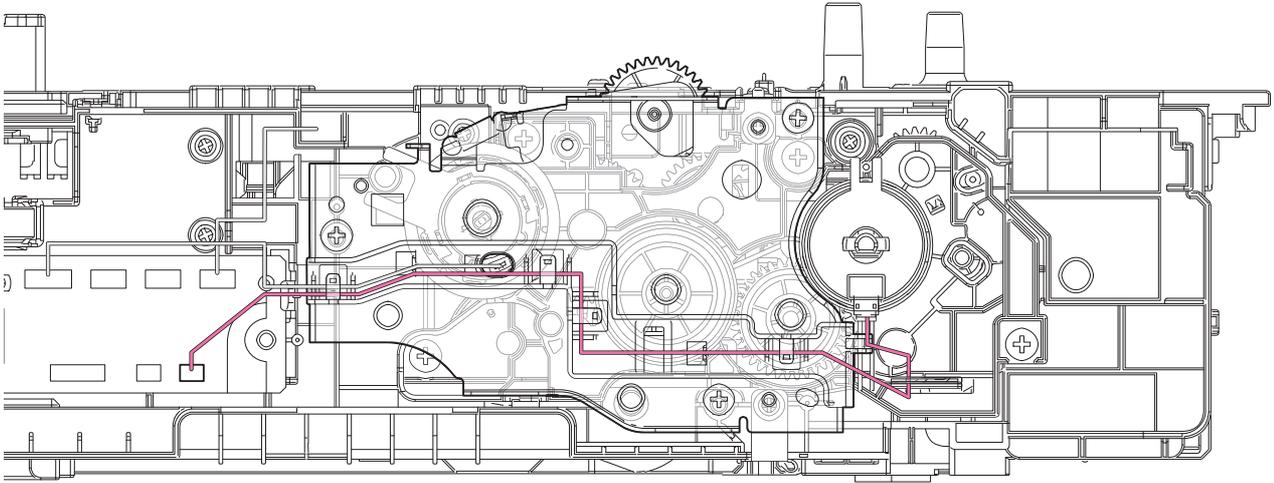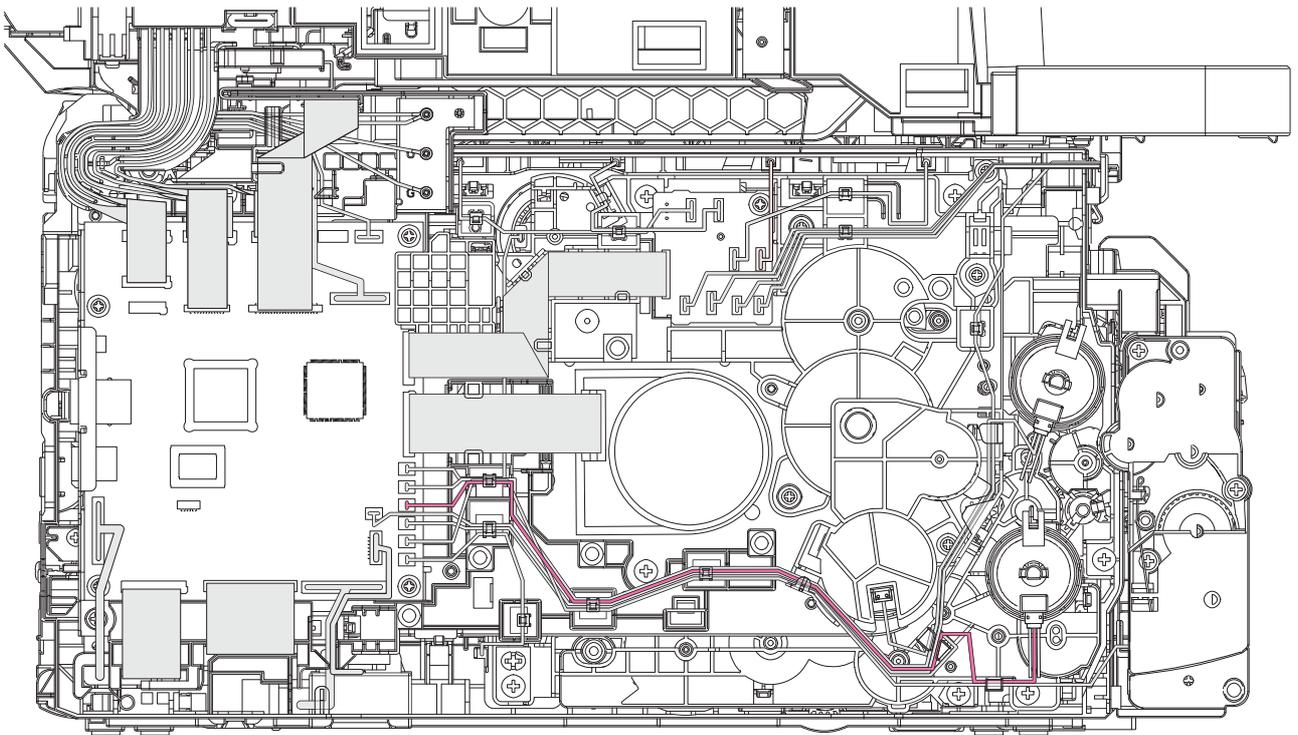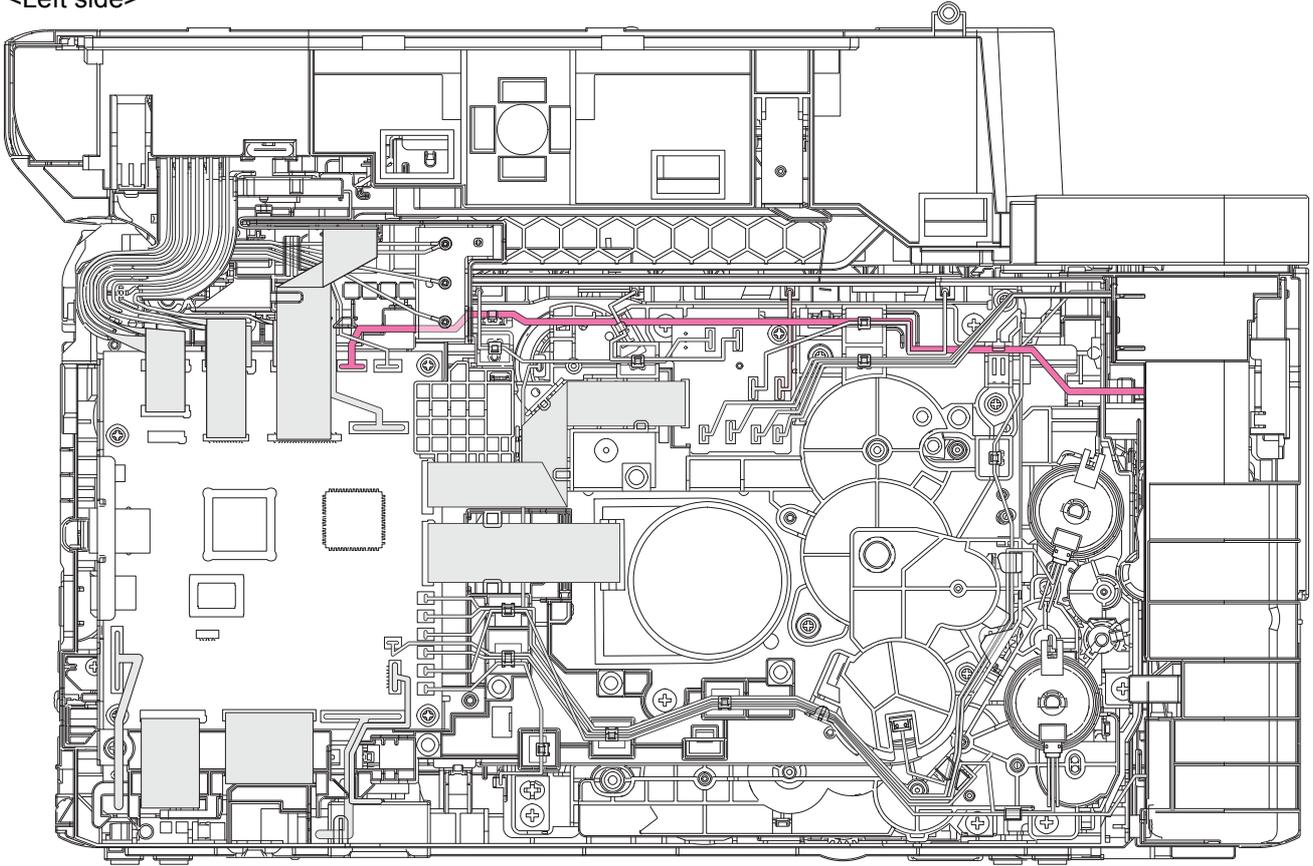
# 7.  DISASSEMBLY FLOW

## A

### ADF document detection sensor / ADF scanning position sensor

| 8.3  Back cover ASSY<br>Step number: (1)<br>H: 0 / S: 0 |
|---|

↓

| 8.9  Side cover L<br>Step number: (1), (2)<br>H: 8 / S: 2 |
|---|

↓

| 8.10  Side cover R<br>Step number: (1)<br>H: 8 / S: 2 |
|---|

↓

| 8.11  FB unit (For models with ADF)<br>Step number: (1) to (12)<br>H: 11 / S: 5 |
|---|

↓

| 8.12  ADF unit (For models with ADF)<br>Step number: (1) to (4)<br>H: 4 / S: 1 |
|---|

↓

| 8.13  ADF separation roller ASSY<br>Step number: (1) to (3)<br>H: 3 / S: 0 |
|---|

↓

| 8.14  ADF separation holder ASSY<br>Step number: (1)<br>H: 0 / S: 1 |
|---|

↓

| 8.15  2nd side CIS unit / 2nd side CIS FFC<br>Step number: (1) to (5)<br>H: 3 / S: 10 |
|---|

↓

| **8.16  ADF document detection sensor / ADF scanning position sensor**<br>Step number: (1) to (5)<br>H: 2 / S: 0 |
|---|

### ADF separation holder ASSY

| 8.3  Back cover ASSY<br>Step number: (1)<br>H: 0 / S: 0 |
|---|

↓

| 8.9  Side cover L<br>Step number: (1), (2)<br>H: 8 / S: 2 |
|---|

↓

| 8.10  Side cover R<br>Step number: (1)<br>H: 8 / S: 2 |
|---|

↓

| 8.11  FB unit (For models with ADF)<br>Step number: (1) to (12)<br>H: 11 / S: 5 |
|---|

↓

| 8.12  ADF unit (For models with ADF)<br>Step number: (1) to (4)<br>H: 4 / S: 1 |
|---|

↓

| 8.13  ADF separation roller ASSY<br>Step number: (1) to (3)<br>H: 3 / S: 0 |
|---|

↓

| **8.14  ADF separation holder ASSY**<br>Step number: (1)<br>H: 0 / S: 1 |
|---|

## ADF separation roller ASSY

| 8.3  Back cover ASSY |
| Step number: (1) |
| H: 0 / S: 0 |

↓

| 8.9  Side cover L |
| Step number: (1), (2) |
| H: 8 / S: 2 |

↓

| 8.10  Side cover R |
| Step number: (1) |
| H: 8 / S: 2 |

↓

| 8.11  FB unit (For models with ADF) |
| Step number: (1) to (12) |
| H: 11 / S: 5 |

↓

| 8.12  ADF unit (For models with ADF) |
| Step number: (1) to (4) |
| H: 4 / S: 1 |

↓

| **8.13  ADF separation roller ASSY** |
| Step number: (1) to (3) |
| H: 3 / S: 0 |

## ADF unit (For models with ADF)

| 8.3  Back cover ASSY |
| Step number: (1) |
| H: 0 / S: 0 |

↓

| 8.9  Side cover L |
| Step number: (1), (2) |
| H: 8 / S: 2 |

↓

| 8.10  Side cover R |
| Step number: (1) |
| H: 8 / S: 2 |

↓

| 8.11  FB unit (For models with ADF) |
| Step number: (1) to (12) |
| H: 11 / S: 5 |

↓

| **8.12  ADF unit (For models with ADF)** |
| Step number: (1) to (8) |
| H: 4 / S: 8 |

# B

## Back cover arm R, Back cover arm L

8.3  Back cover ASSY
Step number: (1), (2)
H: 2 / S: 0

↓

**8.4  Back cover arm R, Back cover arm L**
Step number: (1)
H: 0 / S: 0

## Back cover ASSY

**8.3  Back cover ASSY**
Step number: (1) to (3)
H: 2 / S: 0

# C

**Cartridge sensor/relay FFC**

| 8.3  Back cover ASSY |
| :--- |
| Step number: (1) |
| H: 0 / S: 0 |

↓

| 8.9  Side cover L |
| :--- |
| Step number: (1), (2) |
| H: 8 / S: 2 |

↓

| **8.50  Cartridge sensor/relay FFC** |
| :--- |
| Step number: (1), (2) |
| H: 0 / S: 0 |

**Cartridge sensor/relay PCB**

| 8.3  Back cover ASSY |
| :--- |
| Step number: (1) |
| H: 0 / S: 0 |

↓

| 8.9  Side cover L |
| :--- |
| Step number: (1), (2) |
| H: 8 / S: 2 |

↓

| 8.40  Main PCB |
| :--- |
| Step number: (1) The relevant harness(es) |
| H: 0 / S: 0 |

↓

| **8.51  Cartridge sensor/relay PCB** |
| :--- |
| Step number: (1), (2) |
| H: 0 / S: 1 |

## Cord hook

**8.8  Cord hook**
Step number: (1)
H: 0 / S: 2

# D

## DEV REL CLUTCH FCL

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.40  Main PCB
Step number: (1) The relevant harness(es)
H: 0 / S: 0

↓

**8.55  DEV REL CLUTCH FCL**
Step number: (1) to (4)
H: 2 / S: 1

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**E**

## DEV release sensor PCB

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.47  HVPS PCB
Step number: (1) to (9)
H: 8 / S: 7

↓

**8.48  DEV release sensor PCB**
Step number: (1) to (3)
H: 2 / S: 0

## Eject sensor/relay PCB

8.3  Back cover ASSY
Step number: (1), (2)
H: 2 / S: 0

↓

8.6  Fuser cover ASSY
Step number: (1) to (3)
H: 0 / S: 1

↓

8.7  Fuser
Step number: (1) to (4)
H: 1 / S: 3

↓

**8.61  Eject sensor/relay PCB**
Step number: (1) to (5)
H: 1 / S: 0

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# F

## Fan

| 8.3  Back cover ASSY |
| --- |
| Step number: (1) |
| H: 0 / S: 0 |

↓

| 8.9  Side cover L |
| --- |
| Step number: (1) |
| H: 0 / S: 0 |

↓

| 8.10  Side cover R |
| --- |
| Step number: (1) |
| H: 8 / S: 2 |

↓

| **8.49  Fan** |
| --- |
| Step number: (1), (2) |
| H: 0 / S: 0 |

## FB document cover ASSY (For models without ADF)

| **8.17  FB document cover ASSY (For models without ADF)** |
| --- |
| Step number: (1) to (3) |
| H: 2 / S: 6 |

## FB slide hinge arm L/R

8.11  FB unit
(For models with ADF) Step number: (8), (9)
H: 9 / S: 1
(For models without ADF) Step number: (7), (8)
H: 9 / S: 1

↓

**8.28  FB slide hinge arm L/R**
Step number: (1), (2)
H: 0 / S: 0

## FB top cover ASSY (For models with ADF)

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit (For models with ADF)
Step number: (1) to (12)
H: 11 / S: 5

↓

8.12  ADF unit (For models with ADF)
Step number: (1) to (4)
H: 4 / S: 1

↓

8.18  Panel unit (For models with touch panel)
Step number: (1) to (3)
H: 1 / S: 4

↓

**8.22  FB top cover ASSY**
Step number: (1) to (3)
H: 3 / S: 7

## FB top cover ASSY (For models without ADF)

```
┌─────────────────────────────────────┐
│ 8.3  Back cover ASSY                 │
│ Step number: (1)                     │
│ H: 0 / S: 0                          │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ 8.9  Side cover L                    │
│ Step number: (1), (2)                │
│ H: 8 / S: 2                          │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ 8.10  Side cover R                   │
│ Step number: (1)                     │
│ H: 8 / S: 2                          │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ 8.11  FB unit (For models without ADF) │
│ Step number: (1) to (11)             │
│ H: 11 / S: 4                         │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ 8.17  FB document cover ASSY (For models without ADF) │
│ Step number: (1) to (3)              │
│ H: 2 / S: 6                          │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ 8.18  Panel unit (For models with 2-line LCD) │
│ Step number: (1) to (3)              │
│ H: 1 / S: 4                          │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ 8.22  FB top cover ASSY              │
│ Step number: (1) to (3)              │
│ H: 3 / S: 7                          │
└─────────────────────────────────────┘
```

## FB unit

```
┌─────────────────────────────────────┐
│ 8.3  Back cover ASSY                 │
│ Step number: (1)                     │
│ H: 0 / S: 0                          │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ 8.9  Side cover L                    │
│ Step number: (1), (2)                │
│ H: 8 / S: 2                          │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ 8.10  Side cover R                   │
│ Step number: (1)                     │
│ H: 8 / S: 2                          │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ 8.11  FB unit                        │
│ (For models with ADF) Step number: (1) to (12) │
│ H: 11 / S: 5                         │
│ (For models without ADF) Step number: (1) to (11) │
│ H: 11 / S: 4                         │
└─────────────────────────────────────┘
```

**Fuser**

| |
|---|
| 8.3 Back cover ASSY<br>Step number: (1), (2)<br>H: 2 / S: 0 |

↓

| |
|---|
| 8.6 Fuser cover ASSY<br>Step number: (1) to (3)<br>H: 0 / S: 1 |

↓

| |
|---|
| **8.7 Fuser**<br>Step number: (1) to (4)<br>H: 1 / S: 3 |

**Fuser cover ASSY**

| |
|---|
| 8.3 Back cover ASSY<br>Step number: (1), (2)<br>H: 2 / S: 0 |

↓

| |
|---|
| **8.6 Fuser cover ASSY**<br>Step number: (1) to (6)<br>H: 4 / S: 1 |

## FUSER DRIVE GEAR Z25 FCL (For models with MP tray)

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.11  FB unit (For models with ADF)
Step number: (1) to (6), (11)
H: 0 / S: 4

↓

8.39  WLAN PCB
Step number: (1), (2)
H: 3 / S: 0

↓

8.40  Main PCB
Step number: (1) to (3)
H: 0 / S: 4

↓

8.41  Harness holder upper
Step number: (1), (2)
H: 1 / S: 1

↓

8.42  USB host harness
Step number: (1)
H: 0 / S: 0

↓

8.43  MP unit (For models with MP tray)
Step number: (1), (2)
H: 0 / S: 0

8.50  Cartridge sensor/relay FFC
Step number: (1)
H: 0 / S: 0

↓

8.51  Cartridge sensor/relay PCB
Step number: (1), (2)
H: 0 / S: 1

↓

8.52  Process motor FFC
Step number: (1)
H: 0 / S: 0

↓

8.53  REGI ELECTRIC CLUTCH FCL
Step number: (1), (2)
H: 1 / S: 0

↓

8.54  T1 ELECTRIC CLUTCH FCL
Step number: (1), (2)
H: 1 / S: 0

↓

8.55  DEV REL CLUTCH FCL
Step number: (1) to (4)
H: 2 / S: 1

↓

8.56  Process drive unit
Step number: (1), (2)
H: 3 / S: 8

↓

**8.58  FUSER DRIVE GEAR Z25 FCL**
Step number: (1) to (3)
H: 2 / S: 8

## FUSER DRIVE GEAR Z25 FCL (For models with MF tray)

```
┌─────────────────────────────────┐        ┌─────────────────────────────────┐
│ 8.3  Back cover ASSY            │   ┌───▶ │ 8.50  Cartridge sensor/relay FFC │
│ Step number: (1)                │   │     │ Step number: (1)                │
│ H: 0 / S: 0                     │   │     │ H: 0 / S: 0                     │
└─────────────────────────────────┘   │     └─────────────────────────────────┘
              ↓                        │                   ↓
┌─────────────────────────────────┐   │     ┌─────────────────────────────────┐
│ 8.9  Side cover L               │   │     │ 8.51  Cartridge sensor/relay PCB │
│ Step number: (1), (2)           │   │     │ Step number: (1), (2)           │
│ H: 8 / S: 2                     │   │     │ H: 0 / S: 1                     │
└─────────────────────────────────┘   │     └─────────────────────────────────┘
              ↓                        │                   ↓
┌─────────────────────────────────┐   │     ┌─────────────────────────────────┐
│ 8.11  FB unit                   │   │     │ 8.52  Process motor FFC         │
│ (For models with ADF) Step      │   │     │ Step number: (1)                │
│ number: (1) to (6), (11)        │   │     │ H: 0 / S: 0                     │
│ H: 0 / S: 4                     │   │     │                                 │
│ (For models without ADF) Step   │   │     │                                 │
│ number: (1) to (5), (10)        │   │     │                                 │
│ H: 0 / S: 3                     │   │     │                                 │
└─────────────────────────────────┘   │     └─────────────────────────────────┘
              ↓                        │                   ↓
┌─────────────────────────────────┐   │     ┌─────────────────────────────────┐
│ 8.39  WLAN PCB                  │   │     │ 8.53  REGI ELECTRIC CLUTCH FCL  │
│ Step number: (1), (2)           │   │     │ Step number: (1), (2)           │
│ H: 3 / S: 0                     │   │     │ H: 1 / S: 0                     │
└─────────────────────────────────┘   │     └─────────────────────────────────┘
              ↓                        │                   ↓
┌─────────────────────────────────┐   │     ┌─────────────────────────────────┐
│ 8.40  Main PCB                  │   │     │ 8.54  T1 ELECTRIC CLUTCH FCL    │
│ Step number: (1) to (3)         │   │     │ Step number: (1), (2)           │
│ H: 0 / S: 4                     │   │     │ H: 1 / S: 0                     │
└─────────────────────────────────┘   │     └─────────────────────────────────┘
              ↓                        │                   ↓
┌─────────────────────────────────┐   │     ┌─────────────────────────────────┐
│ 8.41  Harness holder upper      │   │     │ 8.55  DEV REL CLUTCH FCL        │
│ Step number: (1), (2)           │   │     │ Step number: (1) to (4)         │
│ H: 1 / S: 1                     │   │     │ H: 2 / S: 1                     │
└─────────────────────────────────┘   │     └─────────────────────────────────┘
              ↓                        │                   ↓
┌─────────────────────────────────┐   │     ┌─────────────────────────────────┐
│ 8.42  USB host harness          │   │     │ 8.56  Process drive unit        │
│ Step number: (1)                │   │     │ Step number: (1), (2)           │
│ H: 0 / S: 0                     │   │     │ H: 3 / S: 8                     │
└─────────────────────────────────┘   │     └─────────────────────────────────┘
              ↓                        │                   ↓
┌─────────────────────────────────┐   │     ┌─────────────────────────────────┐
│ 8.46  MF cover ASSY (For models │   │     │ 8.58  FUSER DRIVE GEAR Z25 FCL  │
│ with MF tray)                   │───┘     │ Step number: (1) to (3)         │
│ Step number: (1), (2)           │         │ H: 2 / S: 8                     │
│ H: 0 / S: 0                     │         └─────────────────────────────────┘
└─────────────────────────────────┘
```

# H

## Harness holder upper

```
8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0
```

↓

```
8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2
```

↓

```
8.11  FB unit
(For models with ADF) Step number: (1) to (6), (11)
H: 0 / S: 4
(For models without ADF) Step number: (1) to (5), (10)
H: 0 / S: 3
```

↓

```
8.39  WLAN PCB
Step number: (1), (2)
H: 3 / S: 0
```

↓

```
8.40  Main PCB
Step number: (1) to (3)
H: 0 / S: 4
```

↓

```
8.41  Harness holder upper
Step number: (1), (2)
H: 1 / S: 1
```

## HVPS FFC (For models with MP tray)

| | |
|---|---|
| **8.3 Back cover ASSY**<br>Step number: (1)<br>H: 0 / S: 0 | **8.47 HVPS PCB**<br>Step number: (1) to (9)<br>H: 8 / S: 7 |
| ↓ | ↓ |
| **8.9 Side cover L**<br>Step number: (1), (2)<br>H: 8 / S: 2 | **8.50 Cartridge sensor/relay FFC**<br>Step number: (1)<br>H: 0 / S: 0 |
| ↓ | ↓ |
| **8.10 Side cover R**<br>Step number: (1)<br>H: 8 / S: 2 | **8.51 Cartridge sensor/relay PCB**<br>Step number: (1), (2)<br>H: 0 / S: 1 |
| ↓ | ↓ |
| **8.11 FB unit (For models with ADF)**<br>Step number: (1) to (6), (11)<br>H: 0 / S: 4 | **8.52 Process motor FFC**<br>Step number: (1)<br>H: 0 / S: 0 |
| ↓ | ↓ |
| **8.39 WLAN PCB**<br>Step number: (1), (2)<br>H: 3 / S: 0 | **8.53 REGI ELECTRIC CLUTCH FCL**<br>Step number: (1), (2)<br>H: 1 / S: 0 |
| ↓ | ↓ |
| **8.40 Main PCB**<br>Step number: (1) to (3)<br>H: 0 / S: 4 | **8.54 T1 ELECTRIC CLUTCH FCL**<br>Step number: (1), (2)<br>H: 1 / S: 0 |
| ↓ | ↓ |
| **8.41 Harness holder upper**<br>Step number: (1), (2)<br>H: 1 / S: 1 | **8.55 DEV REL CLUTCH FCL**<br>Step number: (1) to (4)<br>H: 2 / S: 1 |
| ↓ | ↓ |
| **8.42 USB host harness**<br>Step number: (1)<br>H: 0 / S: 0 | **8.56 Process drive unit**<br>Step number: (1), (2)<br>H: 3 / S: 8 |
| ↓ | ↓ |
| **8.43 MP unit (For models with MP tray)**<br>Step number: (1), (2)<br>H: 0 / S: 0 | **8.60 HVPS FFC**<br>Step number: (1) to (3)<br>H: 3 / S: 1 |

## HVPS FFC (For models with MF tray)

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit
(For models with ADF) Step number: (1) to (6), (11)
H: 0 / S: 4
(For models without ADF) Step number: (1) to (5), (10)
H: 0 / S: 3

↓

8.39  WLAN PCB
Step number: (1), (2)
H: 3 / S: 0

↓

8.40  Main PCB
Step number: (1) to (3)
H: 0 / S: 4

↓

8.41  Harness holder upper
Step number: (1), (2)
H: 1 / S: 1

↓

8.42  USB host harness
Step number: (1)
H: 0 / S: 0

↓

8.46  MF cover ASSY (For models with MF tray)
Step number: (1), (2)
H: 0 / S: 0

→

8.47  HVPS PCB
Step number: (1) to (9)
H: 8 / S: 7

↓

8.50  Cartridge sensor/relay FFC
Step number: (1)
H: 0 / S: 0

↓

8.51  Cartridge sensor/relay PCB
Step number: (1), (2)
H: 0 / S: 1

↓

8.52  Process motor FFC
Step number: (1)
H: 0 / S: 0

↓

8.53  REGI ELECTRIC CLUTCH FCL
Step number: (1), (2)
H: 1 / S: 0

↓

8.54  T1 ELECTRIC CLUTCH FCL
Step number: (1), (2)
H: 1 / S: 0

↓

8.55  DEV REL CLUTCH FCL
Step number: (1) to (4)
H: 2 / S: 1

↓

8.56  Process drive unit
Step number: (1), (2)
H: 3 / S: 8

↓

**8.60  HVPS FFC**
Step number: (1) to (3)
H: 3 / S: 1

## HVPS PCB

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1)
H: 0 / S: 0

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

**8.47  HVPS PCB**
Step number: (1) to (9)
H: 8 / S: 7

## J

## Joint cover ASSY

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit
(For models with ADF) Step number: (1) to (12)
H: 11 / S: 5
(For models without ADF) Step number: (1) to (11)
H: 11 / S: 4

↓

8.26  Modem PCB
Step number: (1) to (4)
H: 0 / S: 4

↓

8.27  Modem FFC
Step number: (1) to (3)
H: 1 / S: 0

↓

8.28  FB slide hinge arm L/R
Step number: (1), (2)
H: 0 / S: 0

↓

**8.29  Joint cover ASSY**
Step number: (1) to (12)
H: 2 / S: 1

*Confidential*

# L

## LCD

8.9  Side cover L
Step number: (1)
H: 0 / S: 0

↓

8.18  Panel unit
(For models with touch panel) Step number: (1) to (3)
H: 1 / S: 4
(For models with 2-line LCD) Step number: (1) to (3)
H: 1 / S: 4

↓

8.19  Panel PCB
(For models with touch panel) Step number: (1) to (3)
H: 0 / S: 5
(For models with 2-line LCD) Step number: (1), (2)
H: 2 / S: 0

↓

**8.20  LCD**
(For models with touch panel) Step number: (1), (2)
H: 0 / S: 3
(For models with 2-line LCD) Step number: (1)
H: 2 / S: 0

## LED ASSY (Y/M/C/K) / LED FFC (Y/M/C/K) / LED FFC sponges

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit
(For models with ADF) Step number: (1) to (12)
H: 11 / S: 5
(For models without ADF) Step number: (1) to (11)
H: 11 / S: 4

↓

8.26  Modem PCB
Step number: (1) to (4)
H: 0 / S: 4

↓

8.27  Modem FFC
Step number: (1) to (3)
H: 1 / S: 0

↓

8.28  FB slide hinge arm L/R
Step number: (1), (2)
H: 0 / S: 0

↓

8.29  Joint cover ASSY
Step number: (1) to (12)
H: 2 / S: 1

↓

8.30  LED unit
Step number: (1) to (6)
H: 4 / S: 15

↓

8.33  LED control PCB
Step number: (1), (2)
H: 0 / S: 2

↓

**8.35  LED ASSY (Y/M/C/K) / LED FFC (Y/M/C/K) / LED FFC sponges**
Step number: (1) to (12)
H: 4 / S: 2

## LED control FFC

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit
(For models with ADF) Step number: (1) to (12)
H: 11 / S: 5
(For models without ADF) Step number: (1) to (11)
H: 11 / S: 4

↓

8.26  Modem PCB
Step number: (1) to (4)
H: 0 / S: 4

↓

8.27  Modem FFC
Step number: (1) to (3)
H: 1 / S: 0

↓

8.28  FB slide hinge arm L/R
Step number: (1), (2)
H: 0 / S: 0

↓

8.29  Joint cover ASSY
Step number: (1) to (12)
H: 2 / S: 1

↓

8.30  LED unit
Step number: (1) to (6)
H: 4 / S: 15

↓

8.33  LED control PCB
Step number: (1), (2)
H: 0 / S: 2

↓

**8.34  LED control FFC**
Step number: (1), (2)
H: 0 / S: 0

## LED control PCB

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit
(For models with ADF) Step number: (1) to (12)
H: 11 / S: 5
(For models without ADF) Step number: (1) to (11)
H: 11 / S: 4

↓

8.26  Modem PCB
Step number: (1) to (4)
H: 0 / S: 4

↓

8.27  Modem FFC
Step number: (1) to (3)
H: 1 / S: 0

↓

8.28  FB slide hinge arm L/R
Step number: (1), (2)
H: 0 / S: 0

↓

8.29  Joint cover ASSY
Step number: (1) to (12)
H: 2 / S: 1

↓

8.30  LED unit
Step number: (1) to (6)
H: 4 / S: 15

↓

**8.33  LED control PCB**
Step number: (1) to (3)
H: 0 / S: 4

## LED unit

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit
(For models with ADF) Step number: (1) to (12)
H: 11 / S: 5
(For models without ADF) Step number: (1) to (11)
H: 11 / S: 4

↓

8.26  Modem PCB
Step number: (1) to (4)
H: 0 / S: 4

↓

8.27  Modem FFC
Step number: (1) to (3)
H: 1 / S: 0

↓

8.28  FB slide hinge arm L/R
Step number: (1), (2)
H: 0 / S: 0

↓

8.29  Joint cover ASSY
Step number: (1) to (12)
H: 2 / S: 1

↓

**8.30  LED unit**
Step number: (1) to (6)
H: 4 / S: 15

## LVPS PCB

8.3  Back cover ASSY
Step number: (1) to (3)
H: 2 / S: 0

↓

8.6  Fuser cover ASSY
Step number: (1) to (3)
H: 0 / S: 1

↓

8.7  Fuser
Step number: (1) to (4)
H: 1 / S: 3

↓

8.9  Side cover L
Step number: (1)
H: 0 / S: 0

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.49  Fan
Step number: (1), (2)
H: 0 / S: 0

↓

**8.65  LVPS PCB**
Step number: (1) to (16)
H: 3 / S: 16

# M

## Main PCB

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.39  WLAN PCB
Step number: (1), (2)
H: 3 / S: 0

↓

**8.40  Main PCB**
Step number: (1) to (3)
H: 0 / S: 4

## MF cover ASSY (For models with MF tray)

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

**8.46  MF cover ASSY (For models with MF tray)**
Step number: (1) to (4)
H: 4 / S: 4

## Modem FFC

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit (For models with ADF)
Step number: (1) to (12)
H: 11 / S: 5

↓

8.26  Modem PCB
Step number: (4)
H: 0 / S: 0

↓

**8.27  Modem FFC**
Step number: (1) to (3)
H: 1 / S: 0

## Modem PCB

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit (For models with ADF)
Step number: (1) to (12)
H: 11 / S: 5

↓

**8.26  Modem PCB**
Step number: (1) to (6)
H: 0 / S: 8

## MP cover ASSY (For models with MP tray)

| 8.36  MP roller holder ASSY (For models with MP tray)<br>Step number: (1)<br>H: 0 / S: 0 |
|---|

↓

| **8.38  MP cover ASSY (For models with MP tray)**<br>Step number: (1), (2)<br>H: 1 / S: 0 |
|---|

## MP paper guide ASSY (For models with MP tray)

| 8.36  MP roller holder ASSY (For models with MP tray)<br>Step number: (1)<br>H: 0 / S: 0 |
|---|

↓

| **8.37  MP paper guide ASSY (For models with MP tray)**<br>Step number: (1)<br>H: 0 / S: 0 |
|---|

## MP PE sensor PCB (For models with MP tray)

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit (For models with ADF)
Step number: (1) to (6), (11)
H: 0 / S: 4

↓

8.36  MP roller holder ASSY (For models with MP tray)
Step number: (1), (2)
H: 0 / S: 2

↓

8.39  WLAN PCB
Step number: (1), (2)
H: 3 / S: 0

↓

8.40  Main PCB
Step number: (1) to (3)
H: 0 / S: 4

↓

8.41  Harness holder upper
Step number: (1), (2)
H: 1 / S: 1

↓

8.42  USB host harness
Step number: (1), (2)
H: 4 / S: 5

↓

8.43  MP unit (For models with MP tray)
Step number: (1) to (3)
H: 2 / S: 4

↓

**8.45  MP PE sensor PCB (For models with MP tray)**
Step number: (1) to (8)
H: 3 / S: 3

## MP REG sensor PCB (For models with MP tray)

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit (For models with ADF)
Step number: (1) to (6), (11)
H: 0 / S: 4

↓

8.36  MP roller holder ASSY (For models with MP tray)
Step number: (1), (2)
H: 0 / S: 2

↓

8.39  WLAN PCB
Step number: (1), (2)
H: 3 / S: 0

↓

8.40  Main PCB
Step number: (1) to (3)
H: 0 / S: 4

↓

8.41  Harness holder upper
Step number: (1), (2)
H: 1 / S: 1

↓

8.42  USB host harness
Step number: (1), (2)
H: 4 / S: 5

↓

**8.44  MP REG sensor PCB (For models with MP tray)**
Step number: (1), (2)
H: 1 / S: 1

## MP roller holder ASSY (For models with MP tray)

8.9  Side cover L
Step number: (1)
H: 0 / S: 0

↓

**8.36  MP roller holder ASSY (For models with MP tray)**
Step number: (1) to (6)
H: 3 / S: 2

## MP unit (For models with MP tray)

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit (For models with ADF)
Step number: (1) to (6), (11)
H: 0 / S: 4

↓

8.36  MP roller holder ASSY (For models with MP tray)
Step number: (1), (2)
H: 0 / S: 2

↓

8.39  WLAN PCB
Step number: (1), (2)
H: 3 / S: 0

↓

8.40  Main PCB
Step number: (1) to (3)
H: 0 / S: 4

↓

8.41  Harness holder upper
Step number: (1), (2)
H: 1 / S: 1

↓

8.42  USB host harness
Step number: (1), (2)
H: 4 / S: 5

↓

**8.43  MP unit (For models with MP tray)**
Step number: (1) to (3)
H: 2 / S: 4

# N

## NFC PCB

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit
(For models with ADF) Step number: (1) to (12)
H: 11 / S: 5

(For models without ADF) Step number: (1) to (11)
H: 11 / S: 4

↓

8.26  Modem PCB
Step number: (1) to (4)
H: 0 / S: 4

↓

8.27  Modem FFC
Step number: (1) to (3)
H: 1 / S: 0

↓

8.28  FB slide hinge arm L/R
Step number: (1), (2)
H: 0 / S: 0

↓

8.29  Joint cover ASSY
Step number: (1) to (12)
H: 2 / S: 1

↓

8.30  LED unit
Step number: (1) to (6)
H: 4 / S: 15

↓

**8.31  NFC PCB**
Step number: (1), (2)
H: 1 / S: 0

# P

## Panel FFC (For models with 2-line LCD)

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit (For models without ADF)
Step number: (1) to (11)
H: 11 / S: 4

↓

8.17  FB document cover ASSY (For models without ADF)
Step number: (1)
H: 2 / S: 0

↓

8.18  Panel unit (For models with 2-line LCD)
Step number: (1) to (3)
H: 1 / S: 4

↓

8.22  FB top cover ASSY
Step number: (1) to (3)
H: 3 / S: 7

↓

**8.23  Panel FFC (For models with 2-line LCD)**
Step number: (1), (2)
H: 0 / S: 0

## Panel FFC / Panel FFC sponge

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit (For models with ADF)
Step number: (1) to (12)
H: 11 / S: 5

↓

8.12  ADF unit (For models with ADF)
Step number: (1) to (4)
H: 4 / S: 1

↓

8.18  Panel unit (For models with touch panel)
Step number: (1) to (3)
H: 1 / S: 4

↓

8.22  FB top cover ASSY
Step number: (1) to (3)
H: 3 / S: 7

↓

**8.23  Panel FFC / Panel FFC sponge**
Step number: (1) to (3)
H: 0 / S: 0

## Panel PCB

8.9  Side cover L
Step number: (1)
H: 0 / S: 0

↓

8.18  Panel unit
(For models with touch panel) Step number: (1) to (3)
H: 1 / S: 4

(For models with 2-line LCD) Step number: (1) to (3)
H: 1 / S: 4

↓

**8.19  Panel PCB**
(For models with touch panel) Step number: (1) to (3)
H: 0 / S: 5

(For models with 2-line LCD) Step number: (1), (2)
H: 2 / S: 0

## Panel unit

8.9  Side cover L
Step number: (1)
H: 0 / S: 0

↓

**8.18  Panel unit**
(For models with touch panel) Step number: (1) to (3)
H: 1 / S: 4
(For models with 2-line LCD) Step number: (1) to (3)
H: 1 / S: 4

## Paper eject ASSY

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit
(For models with ADF) Step number: (1) to (12)
H: 11 / S: 5
(For models without ADF) Step number: (1) to (11)
H: 11 / S: 4

↓

8.26  Modem PCB
Step number: (1) to (4)
H: 0 / S: 4

↓

8.27  Modem FFC
Step number: (1) to (3)
H: 1 / S: 0

↓

8.28  FB slide hinge arm L/R
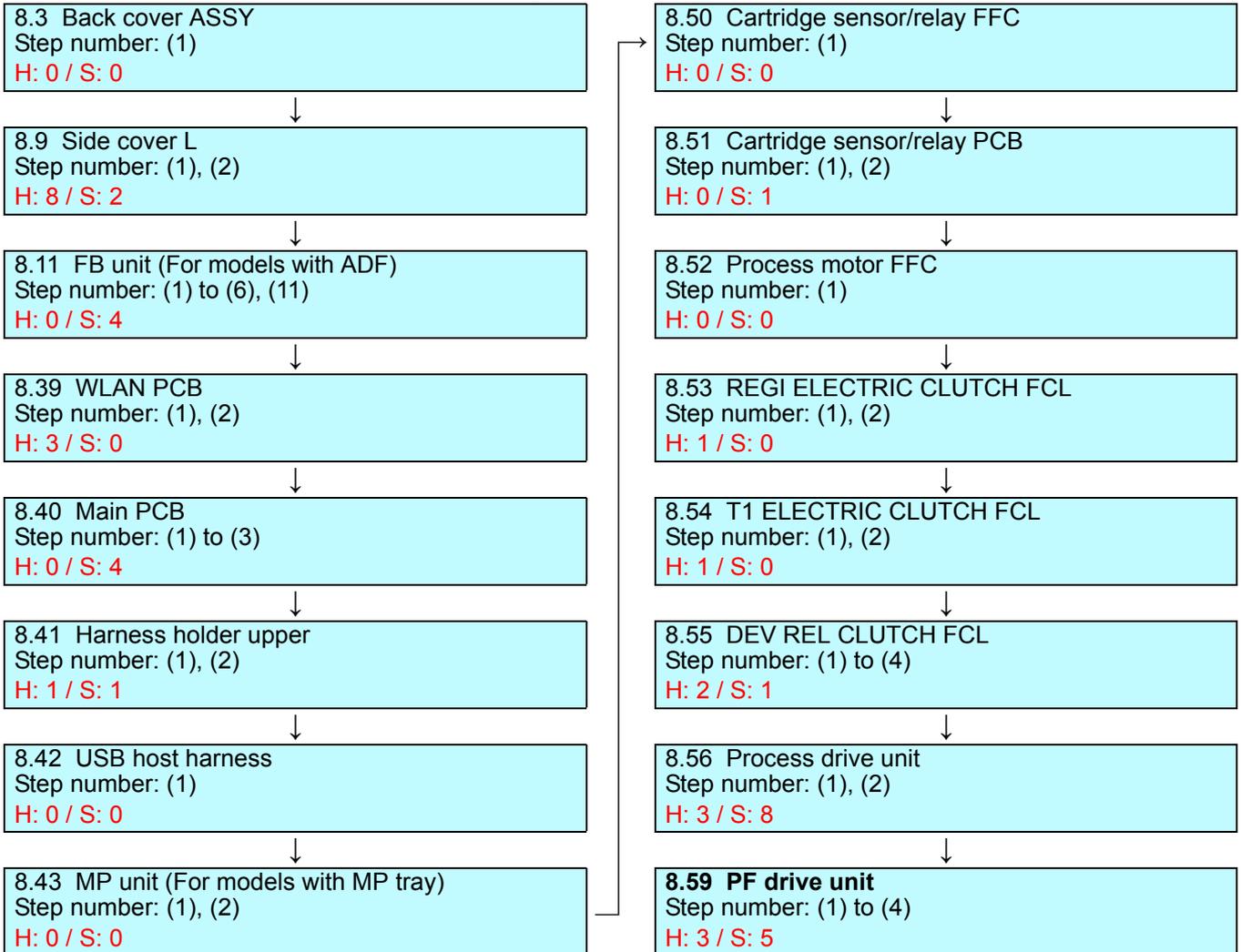Step number: (1), (2)
H: 0 / S: 0

↓

8.29  Joint cover ASSY
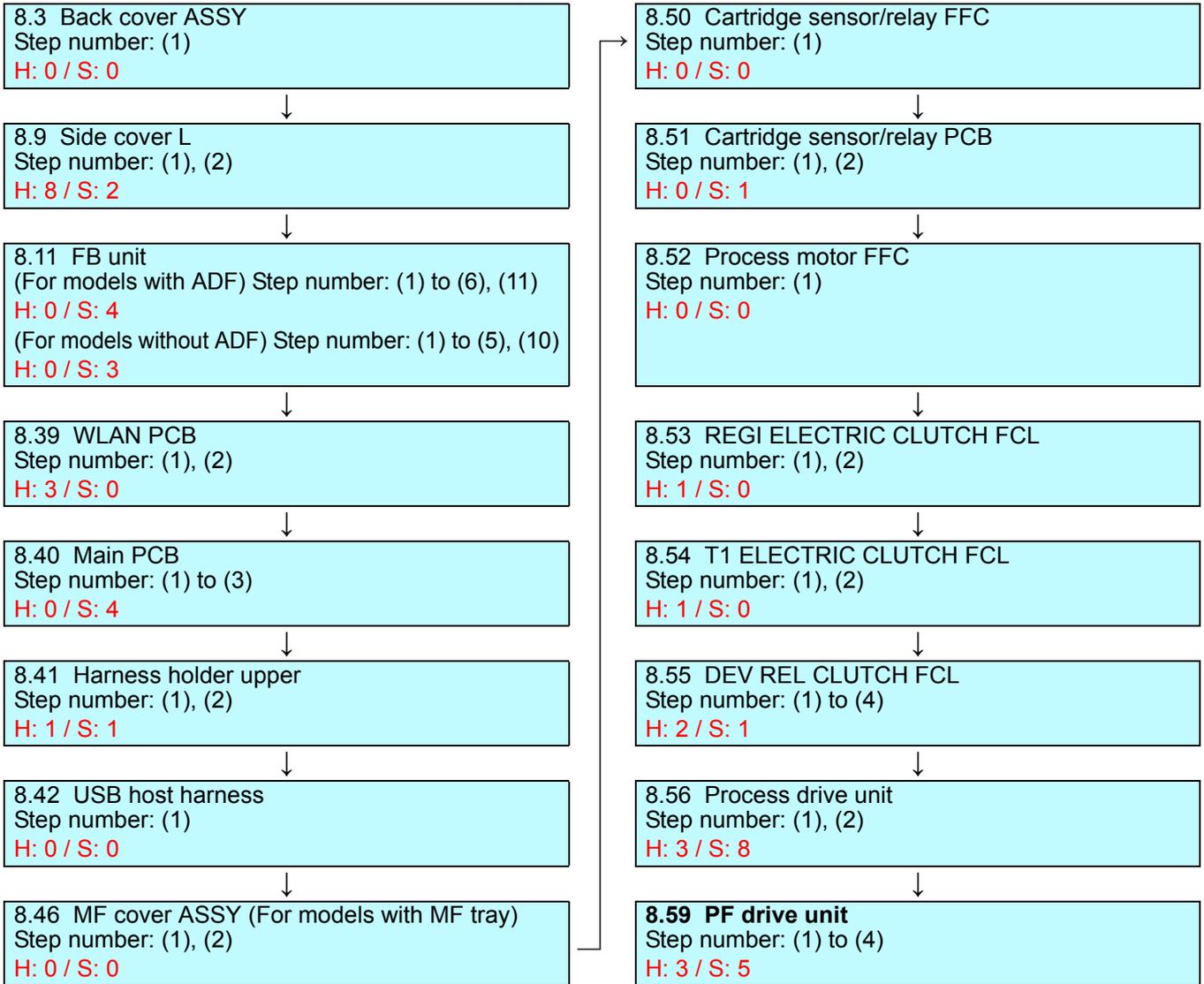Step number: (1) to (12)
H: 2 / S: 1

↓

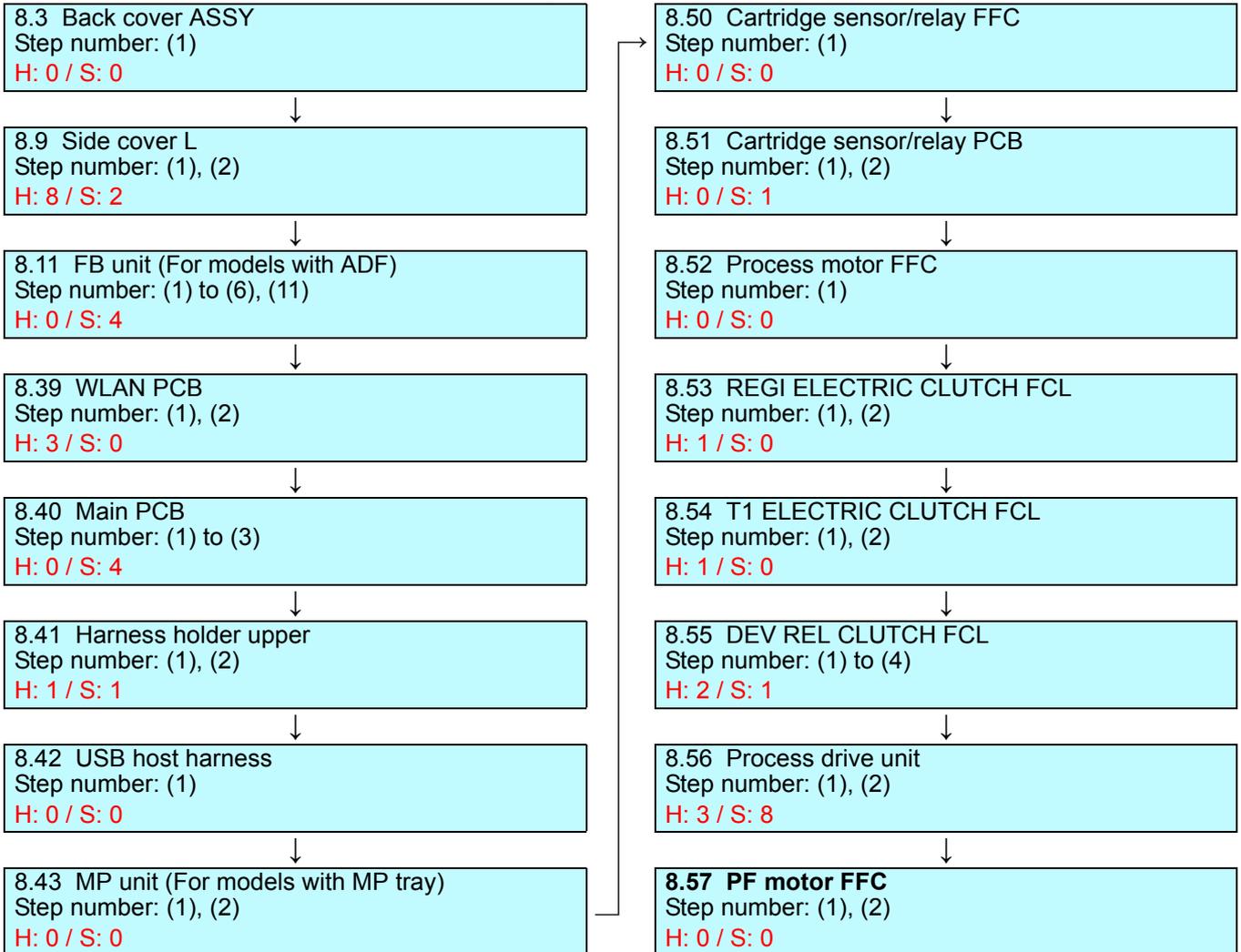**8.64  Paper eject ASSY**
Step number: (1), (2)
H: 0 / S: 4

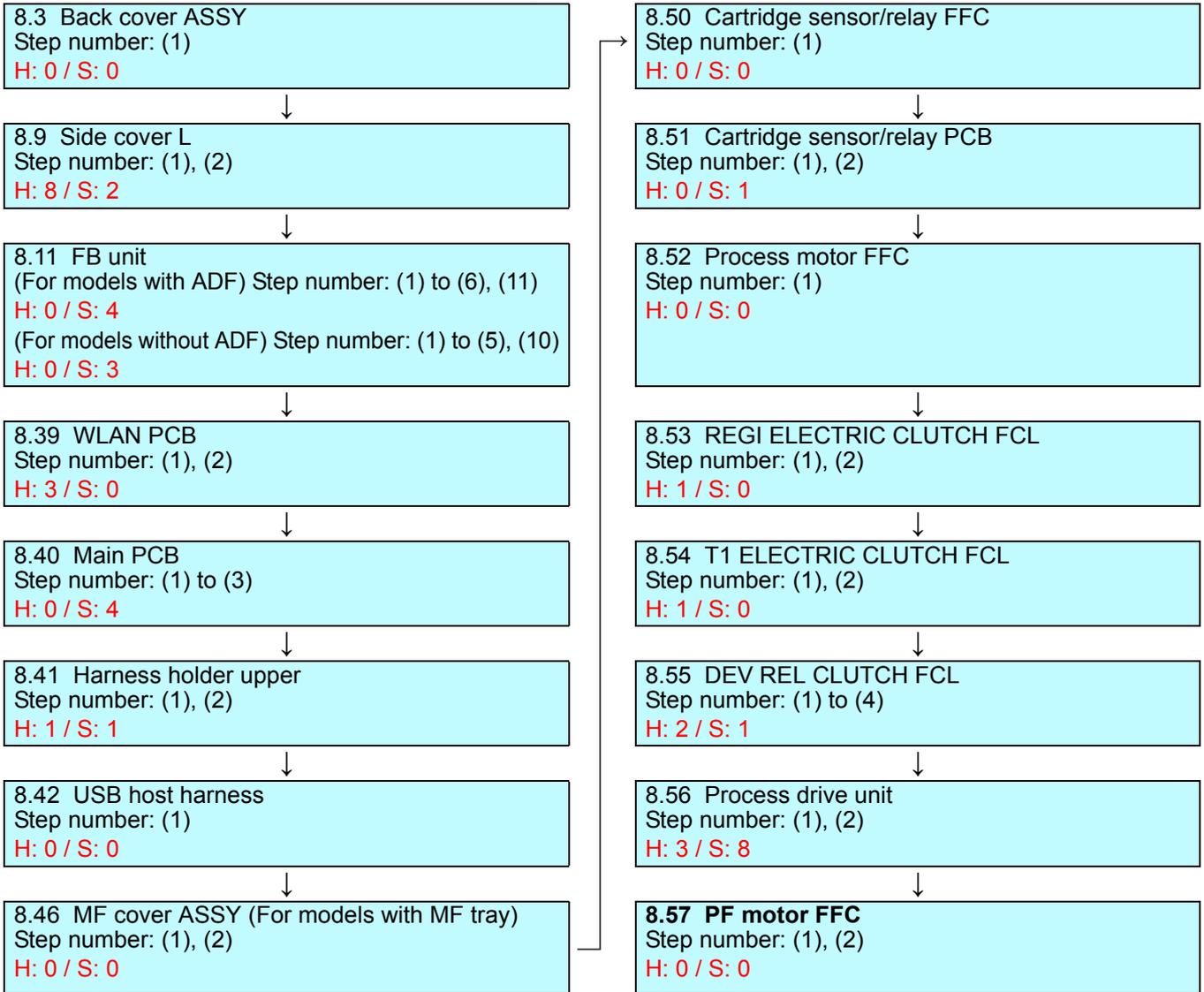*Confidential*

## PF drive unit (For models with MP tray)

| |
|---|
| 8.3  Back cover ASSY<br>Step number: (1)<br>H: 0 / S: 0 |

↓

| |
|---|
| 8.9  Side cover L<br>Step number: (1), (2)<br>H: 8 / S: 2 |

↓

| |
|---|
| 8.11  FB unit (For models with ADF)<br>Step number: (1) to (6), (11)<br>H: 0 / S: 4 |

↓

| |
|---|
| 8.39  WLAN PCB<br>Step number: (1), (2)<br>H: 3 / S: 0 |

↓

| |
|---|
| 8.40  Main PCB<br>Step number: (1) to (3)<br>H: 0 / S: 4 |

↓

| |
|---|
| 8.41  Harness holder upper<br>Step number: (1), (2)<br>H: 1 / S: 1 |

↓

| |
|---|
| 8.42  USB host harness<br>Step number: (1)<br>H: 0 / S: 0 |

↓

| |
|---|
| 8.43  MP unit (For models with MP tray)<br>Step number: (1), (2)<br>H: 0 / S: 0 |

| |
|---|
| 8.50  Cartridge sensor/relay FFC<br>Step number: (1)<br>H: 0 / S: 0 |

↓

| |
|---|
| 8.51  Cartridge sensor/relay PCB<br>Step number: (1), (2)<br>H: 0 / S: 1 |

↓

| |
|---|
| 8.52  Process motor FFC<br>Step number: (1)<br>H: 0 / S: 0 |

↓

| |
|---|
| 8.53  REGI ELECTRIC CLUTCH FCL<br>Step number: (1), (2)<br>H: 1 / S: 0 |

↓

| |
|---|
| 8.54  T1 ELECTRIC CLUTCH FCL<br>Step number: (1), (2)<br>H: 1 / S: 0 |

↓

| |
|---|
| 8.55  DEV REL CLUTCH FCL<br>Step number: (1) to (4)<br>H: 2 / S: 1 |

↓

| |
|---|
| 8.56  Process drive unit<br>Step number: (1), (2)<br>H: 3 / S: 8 |

↓

| |
|---|
| **8.59  PF drive unit**<br>Step number: (1) to (4)<br>H: 3 / S: 5 |

## PF drive unit (For models with MF tray)

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.11  FB unit
(For models with ADF) Step number: (1) to (6), (11)
H: 0 / S: 4
(For models without ADF) Step number: (1) to (5), (10)
H: 0 / S: 3

↓

8.39  WLAN PCB
Step number: (1), (2)
H: 3 / S: 0

↓

8.40  Main PCB
Step number: (1) to (3)
H: 0 / S: 4

↓

8.41  Harness holder upper
Step number: (1), (2)
H: 1 / S: 1

↓

8.42  USB host harness
Step number: (1)
H: 0 / S: 0

↓

8.46  MF cover ASSY (For models with MF tray)
Step number: (1), (2)
H: 0 / S: 0

→

8.50  Cartridge sensor/relay FFC
Step number: (1)
H: 0 / S: 0

↓

8.51  Cartridge sensor/relay PCB
Step number: (1), (2)
H: 0 / S: 1

↓

8.52  Process motor FFC
Step number: (1)
H: 0 / S: 0

↓

8.53  REGI ELECTRIC CLUTCH FCL
Step number: (1), (2)
H: 1 / S: 0

↓

8.54  T1 ELECTRIC CLUTCH FCL
Step number: (1), (2)
H: 1 / S: 0

↓

8.55  DEV REL CLUTCH FCL
Step number: (1) to (4)
H: 2 / S: 1

↓

8.56  Process drive unit
Step number: (1), (2)
H: 3 / S: 8

↓

**8.59  PF drive unit**
Step number: (1) to (4)
H: 3 / S: 5

## PF motor FFC (For models with MP tray)

8.3 Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9 Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.11 FB unit (For models with ADF)
Step number: (1) to (6), (11)
H: 0 / S: 4

↓

8.39 WLAN PCB
Step number: (1), (2)
H: 3 / S: 0

↓

8.40 Main PCB
Step number: (1) to (3)
H: 0 / S: 4

↓

8.41 Harness holder upper
Step number: (1), (2)
H: 1 / S: 1

↓

8.42 USB host harness
Step number: (1)
H: 0 / S: 0

↓

8.43 MP unit (For models with MP tray)
Step number: (1), (2)
H: 0 / S: 0

8.50 Cartridge sensor/relay FFC
Step number: (1)
H: 0 / S: 0

↓

8.51 Cartridge sensor/relay PCB
Step number: (1), (2)
H: 0 / S: 1

↓

8.52 Process motor FFC
Step number: (1)
H: 0 / S: 0

↓

8.53 REGI ELECTRIC CLUTCH FCL
Step number: (1), (2)
H: 1 / S: 0

↓

8.54 T1 ELECTRIC CLUTCH FCL
Step number: (1), (2)
H: 1 / S: 0

↓

8.55 DEV REL CLUTCH FCL
Step number: (1) to (4)
H: 2 / S: 1

↓

8.56 Process drive unit
Step number: (1), (2)
H: 3 / S: 8

↓

**8.57 PF motor FFC**
Step number: (1), (2)
H: 0 / S: 0

## PF motor FFC (For models with MF tray)

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.11  FB unit
(For models with ADF) Step number: (1) to (6), (11)
H: 0 / S: 4
(For models without ADF) Step number: (1) to (5), (10)
H: 0 / S: 3

↓

8.39  WLAN PCB
Step number: (1), (2)
H: 3 / S: 0

↓

8.40  Main PCB
Step number: (1) to (3)
H: 0 / S: 4

↓

8.41  Harness holder upper
Step number: (1), (2)
H: 1 / S: 1

↓

8.42  USB host harness
Step number: (1)
H: 0 / S: 0

↓

8.46  MF cover ASSY (For models with MF tray)
Step number: (1), (2)
H: 0 / S: 0

→

8.50  Cartridge sensor/relay FFC
Step number: (1)
H: 0 / S: 0

↓

8.51  Cartridge sensor/relay PCB
Step number: (1), (2)
H: 0 / S: 1

↓

8.52  Process motor FFC
Step number: (1)
H: 0 / S: 0

↓

8.53  REGI ELECTRIC CLUTCH FCL
Step number: (1), (2)
H: 1 / S: 0

↓

8.54  T1 ELECTRIC CLUTCH FCL
Step number: (1), (2)
H: 1 / S: 0

↓

8.55  DEV REL CLUTCH FCL
Step number: (1) to (4)
H: 2 / S: 1

↓

8.56  Process drive unit
Step number: (1), (2)
H: 3 / S: 8

↓

**8.57  PF motor FFC**
Step number: (1), (2)
H: 0 / S: 0

## PF unit (For models with MP tray)

**8.3  Back cover ASSY**
Step number: (1)
H: 0 / S: 0

↓

**8.9  Side cover L**
Step number: (1), (2)
H: 8 / S: 2

↓

**8.10  Side cover R**
Step number: (1)
H: 8 / S: 2

↓

**8.11  FB unit (For models with ADF)**
Step number: (1) to (6), (11)
H: 0 / S: 4

↓

**8.36  MP roller holder ASSY (For models with MP tray)**
Step number: (1), (2)
H: 0 / S: 2

↓

**8.39  WLAN PCB**
Step number: (1), (2)
H: 3 / S: 0

↓

**8.40  Main PCB**
Step number: (1) to (3)
H: 0 / S: 4

↓

**8.41  Harness holder upper**
Step number: (1), (2)
H: 1 / S: 1

↓

**8.42  USB host harness**
Step number: (1), (2)
H: 4 / S: 5

↓

**8.43  MP unit (For models with MP tray)**
Step number: (1) to (3)
H: 2 / S: 4

↓

**8.51  Cartridge sensor/relay PCB**
Step number: (1) The relevant harness(es)
H: 0 / S: 0

↓

**8.56  Process drive unit**
Step number: (1) The relevant harness(es)
H: 0 / S: 0

↓

**8.62  Roller holder ASSY**
Step number: (1)
H: 0 / S: 0

↓

**8.63  PF unit**
Step number: (1) to (3)
H: 0 / S: 6

## PF unit (For models with MF tray)

**8.3  Back cover ASSY**
Step number: (1)
H: 0 / S: 0

↓

**8.9  Side cover L**
Step number: (1), (2)
H: 8 / S: 2

↓

**8.10  Side cover R**
Step number: (1)
H: 8 / S: 2

↓

**8.46  MF cover ASSY (For models with MF tray)**
Step number: (1) to (4)
H: 4 / S: 4

↓

**8.51  Cartridge sensor/relay PCB**
Step number: (1) The relevant harness(es)
H: 0 / S: 0

↓

**8.56  Process drive unit**
Step number: (1) The relevant harness(es)
H: 0 / S: 0

↓

**8.62  Roller holder ASSY**
Step number: (1)
H: 0 / S: 0

↓

**8.63  PF unit**
Step number: (1) to (3)
H: 0 / S: 6

## Process drive unit (For models with MP tray)

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.11  FB unit (For models with ADF)
Step number: (1) to (6), (11)
H: 0 / S: 4

↓

8.39  WLAN PCB
Step number: (1), (2)
H: 3 / S: 0

↓

8.40  Main PCB
Step number: (1) to (3)
H: 0 / S: 4

↓

8.41  Harness holder upper
Step number: (1), (2)
H: 1 / S: 1

↓

8.42  USB host harness
Step number: (1)
H: 0 / S: 0

↓

8.43  MP unit (For models with MP tray)
Step number: (1), (2)
H: 0 / S: 0

8.50  Cartridge sensor/relay FFC
Step number: (1)
H: 0 / S: 0

↓

8.51  Cartridge sensor/relay PCB
Step number: (1), (2)
H: 0 / S: 1

↓

8.52  Process motor FFC
Step number: (1), (2)
H: 0 / S: 0

↓

8.53  REGI ELECTRIC CLUTCH FCL
Step number: (1), (2)
H: 1 / S: 0

↓

8.54  T1 ELECTRIC CLUTCH FCL
Step number: (1), (2)
H: 1 / S: 0

↓

8.55  DEV REL CLUTCH FCL
Step number: (1) to (4)
H: 2 / S: 1

↓

**8.56  Process drive unit**
Step number: (1), (2)
H: 3 / S: 8

## Process drive unit (For models with MF tray)

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.11  FB unit
(For models with ADF) Step number: (1) to (6), (11)
H: 0 / S: 4
(For models without ADF) Step number: (1) to (5), (10)
H: 0 / S: 3

↓

8.39  WLAN PCB
Step number: (1), (2)
H: 3 / S: 0

↓

8.40  Main PCB
Step number: (1) to (3)
H: 0 / S: 4

↓

8.41  Harness holder upper
Step number: (1), (2)
H: 1 / S: 1

↓

8.42  USB host harness
Step number: (1)
H: 0 / S: 0

↓

8.46  MF cover ASSY (For models with MF tray)
Step number: (1), (2)
H: 0 / S: 0

→

8.50  Cartridge sensor/relay FFC
Step number: (1)
H: 0 / S: 0

↓

8.51  Cartridge sensor/relay PCB
Step number: (1), (2)
H: 0 / S: 1

↓

8.52  Process motor FFC
Step number: (1), (2)
H: 0 / S: 0

↓

8.53  REGI ELECTRIC CLUTCH FCL
Step number: (1), (2)
H: 1 / S: 0

↓

8.54  T1 ELECTRIC CLUTCH FCL
Step number: (1), (2)
H: 1 / S: 0

↓

8.55  DEV REL CLUTCH FCL
Step number: (1) to (4)
H: 2 / S: 1

↓

**8.56  Process drive unit**
Step number: (1), (2)
H: 3 / S: 8

## Process motor FFC

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.40  Main PCB
Step number: (1) The relevant harness(es)
H: 0 / S: 0

↓

**8.52  Process motor FFC**
Step number: (1), (2)
H: 0 / S: 0

# R

## Rear flapper sub ASSY

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

**8.5  Rear flapper sub ASSY**
Step number: (1)
H: 0 / S: 0

## REG mark sensor L PCB, REG mark sensor R PCB

8.3  Back cover ASSY
Step number: (1), (2)
H: 2 / S: 0

↓

8.6  Fuser cover ASSY
Step number: (1) to (3)
H: 0 / S: 1

↓

8.7  Fuser
Step number: (1) to (4)
H: 1 / S: 3

↓

8.9  Side cover L
Step number: (1)
H: 0 / S: 0

↓

8.61  Eject sensor/relay PCB
Step number: (1) to (5)
H: 1 / S: 0

↓

**8.66  REG mark sensor L PCB, REG mark sensor R PCB**
Step number: (1) to (5)
H: 1 / S: 1

## REGI ELECTRIC CLUTCH FCL

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.40  Main PCB
Step number: (1) The relevant harness(es)
H: 0 / S: 0

↓

**8.53  REGI ELECTRIC CLUTCH FCL**
Step number: (1), (2)
H: 1 / S: 0

## Roller holder ASSY

**8.62  Roller holder ASSY**
Step number: (1)
H: 0 / S: 0

# S

## Side cover L

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

**8.9  Side cover L**
Step number: (1), (2)
H: 8 / S: 2

## Side cover R

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1)
H: 0 / S: 0

↓

**8.10  Side cover R**
Step number: (1)
H: 8 / S: 2

## Speaker

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit
(For models with ADF) Step number: (1) to (12)
H: 11 / S: 5
(For models without ADF) Step number: (1) to (11)
H: 11 / S: 4

↓

8.26  Modem PCB
Step number: (1) to (4)
H: 0 / S: 4

↓

8.27  Modem FFC
Step number: (1) to (3)
H: 1 / S: 0

↓

8.28  FB slide hinge arm L/R
Step number: (1), (2)
H: 0 / S: 0

↓

8.29  Joint cover ASSY
Step number: (1) to (12)
H: 2 / S: 1

↓

8.30  LED unit
Step number: (1) to (6)
H: 4 / S: 15

↓

**8.32  Speaker**
Step number: (1), (2)
H: 0 / S: 0

# T

## T1 ELECTRIC CLUTCH FCL

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.40  Main PCB
Step number: (1) The relevant harness(es)
H: 0 / S: 0

↓

**8.54  T1 ELECTRIC CLUTCH FCL**
Step number: (1), (2)
H: 1 / S: 0

## T1 separation pad

**8.2  T1 separation pad**
Step number: (1)
H: 2 / S: 0

## Touch panel (For models with touch panel)

8.9  Side cover L
Step number: (1)
H: 0 / S: 0

↓

8.18  Panel unit (For models with touch panel)
Step number: (1) to (3)
H: 1 / S: 4

↓

8.19  Panel PCB (For models with touch panel)
Step number: (1) to (3)
H: 0 / S: 5

↓

8.20  LCD (For models with touch panel)
Step number: (1), (2)
H: 0 / S: 3

↓

**8.21  Touch panel (For models with touch panel)**
Step number: (1), (2)
H: 0 / S: 0

# U

## USB host harness

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit
(For models with ADF) Step number: (1) to (6), (11)
H: 0 / S: 4
(For models without ADF) Step number: (1) to (5), (10)
H: 0 / S: 3

↓

8.36  MP roller holder ASSY (For models with MP tray)
Step number: (1), (2)
H: 0 / S: 2

↓

8.39  WLAN PCB
Step number: (1), (2)
H: 3 / S: 0

↓

8.40  Main PCB
Step number: (1) to (3)
H: 0 / S: 4

↓

8.41  Harness holder upper
Step number: (1), (2)
H: 1 / S: 1

↓

**8.42  USB host harness**
Step number: (1) to (4)
H: 5 / S: 9

# W

## WLAN PCB

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

**8.39  WLAN PCB**
Step number: (1), (2)
H: 3 / S: 0

# 1

## 1st side CIS FFC / 1st side CIS FFC sponge (For models with ADF)

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit (For models with ADF)
Step number: (1) to (12)
H: 11 / S: 5

↓

8.12  ADF unit (For models with ADF)
Step number: (1) to (4)
H: 4 / S: 1

↓

8.18  Panel unit (For models with touch panel)
Step number: (1) to (3)
H: 1 / S: 4

↓

8.22  FB top cover ASSY
Step number: (1) to (3)
H: 3 / S: 7

↓

8.24  1st side CIS unit
Step number: (1) to (4)
H: 0 / S: 0

↓

**8.25  1st side CIS FFC / 1st side CIS FFC sponge**
Step number: (1) to (3)
H: 0 / S: 0

**1st side CIS FFC / 1st side CIS FFC sponge (For models without ADF)**

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit (For models without ADF)
Step number: (1) to (11)
H: 11 / S: 4

↓

8.17  FB document cover ASSY (For models without ADF)
Step number: (1)
H: 2 / S: 0

↓

8.18  Panel unit (For models with 2-line LCD)
Step number: (1) to (3)
H: 1 / S: 4

↓

8.22  FB top cover ASSY
Step number: (1) to (3)
H: 3 / S: 7

↓

8.24  1st side CIS unit
Step number: (1) to (4)
H: 0 / S: 0

↓

**8.25  1st side CIS FFC / 1st side CIS FFC sponge**
Step number: (1) to (3)
H: 0 / S: 0

**1st side CIS unit (For models with ADF)**

8.3  Back cover ASSY
Step number: (1)
H: 0 / S: 0

↓

8.9  Side cover L
Step number: (1), (2)
H: 8 / S: 2

↓

8.10  Side cover R
Step number: (1)
H: 8 / S: 2

↓

8.11  FB unit (For models with ADF)
Step number: (1) to (12)
H: 11 / S: 5

↓

8.12  ADF unit (For models with ADF)
Step number: (1) to (4)
H: 4 / S: 1

↓

8.18  Panel unit (For models with touch panel)
Step number: (1) to (3)
H: 1 / S: 4

↓

8.22  FB top cover ASSY
Step number: (1) to (3)
H: 3 / S: 7

↓

**8.24  1st side CIS unit**
Step number: (1) to (4)
H: 0 / S: 0

**1st side CIS unit (For models without ADF)**

**2nd side CIS unit / 2nd side CIS FFC**

| 8.3  Back cover ASSY<br>Step number: (1)<br>H: 0 / S: 0 |
|---|

↓

| 8.9  Side cover L<br>Step number: (1), (2)<br>H: 8 / S: 2 |
|---|

↓

| 8.10  Side cover R<br>Step number: (1)<br>H: 8 / S: 2 |
|---|

↓

| 8.11  FB unit (For models without ADF)<br>Step number: (1) to (11)<br>H: 11 / S: 4 |
|---|

↓

| 8.17  FB document cover ASSY (For models without ADF)<br>Step number: (1)<br>H: 2 / S: 0 |
|---|

↓

| 8.18  Panel unit (For models with 2-line LCD)<br>Step number: (1) to (3)<br>H: 1 / S: 4 |
|---|

↓

| 8.22  FB top cover ASSY<br>Step number: (1) to (3)<br>H: 3 / S: 7 |
|---|

↓

| **8.24  1st side CIS unit**<br>Step number: (1) to (4)<br>H: 0 / S: 0 |
|---|

| 8.3  Back cover ASSY<br>Step number: (1)<br>H: 0 / S: 0 |
|---|

↓

| 8.9  Side cover L<br>Step number: (1), (2)<br>H: 8 / S: 2 |
|---|

↓

| 8.10  Side cover R<br>Step number: (1)<br>H: 8 / S: 2 |
|---|

↓

| 8.11  FB unit (For models with ADF)<br>Step number: (1) to (12)<br>H: 11 / S: 5 |
|---|

↓

| 8.12  ADF unit (For models with ADF)<br>Step number: (1) to (4)<br>H: 4 / S: 1 |
|---|

↓

| 8.13  ADF separation roller ASSY<br>Step number: (1) to (3)<br>H: 3 / S: 0 |
|---|

↓

| 8.14  ADF separation holder ASSY<br>Step number: (1)<br>H: 0 / S: 1 |
|---|

↓

| **8.15  2nd side CIS unit / 2nd side CIS FFC**<br>Step number: (1) to (14)<br>H: 6 / S: 11 |
|---|

■ **LT**

# L

## LIFT GEAR Z27M10, GEAR Z22M10, IDLE GEAR Z18M10

**9.3  LIFT GEAR Z27M10, GEAR Z22M10, IDLE GEAR Z18M10**
Step number: (1) to (3)
H: 1 / S: 0

## LT connector

9.5  LT side cover L
Step number: (1)
H: 8 / S: 2

↓

9.8  LT control PCB
Step number: (1) The relevant harness(es)
H: 0 / S: 0

↓

**9.11  LT connector**
Step number: (1), (2)
H: 3 / S: 0

## LT control PCB

| 9.5  LT side cover L<br>Step number: (1)<br>H: 8 / S: 2 |
| --- |

↓

| **9.8  LT control PCB**<br>Step number: (1), (2)<br>H: 1 / S: 0 |
| --- |

## LT front cover ASSY

| 9.5  LT side cover L<br>Step number: (1)<br>H: 8 / S: 2 |
| --- |

↓

| 9.6  LT side cover R<br>Step number: (1)<br>H: 8 / S: 2 |
| --- |

↓

| **9.7  LT front cover ASSY**<br>Step number: (1)<br>H: 3 / S: 1 |
| --- |

## LT PF sensor PCB

9.5  LT side cover L
Step number: (1)
H: 8 / S: 2

↓

9.6  LT side cover R
Step number: (1)
H: 8 / S: 2

↓

9.8  LT control PCB
Step number: (1) The relevant harness(es)
H: 0 / S: 0

↓

9.9  T1 CLUTCH 30
Step number: (1), (2)
H: 1 / S: 0

↓

9.10  LT RELEASE CLUTCH
Step number: (1), (2)
H: 0 / S: 6

↓

**9.12  LT PF sensor PCB**
Step number: (1) to (13)
H: 1 / S: 24

## LT RELEASE CLUTCH

9.5  LT side cover L
Step number: (1)
H: 8 / S: 2

↓

9.8  LT control PCB
Step number: (1) The relevant harness(es)
H: 0 / S: 0

↓

**9.10  LT RELEASE CLUTCH**
Step number: (1) to (6)
H: 0 / S: 9

**LT roller holder ASSY**

| |
|---|
| **9.4  LT roller holder ASSY**<br>Step number: (1)<br>H: 0 / S: 0 |

**LT separation pad**

| |
|---|
| **9.2  LT separation pad**<br>Step number: (1)<br>H: 2 / S: 0 |

## LT side cover L

**9.5  LT side cover L**
Step number: (1)
H: 8 / S: 2

## LT side cover R

**9.6  LT side cover R**
Step number: (1)
H: 8 / S: 2

# T

## T1 CLUTCH 30

| |
|---|
| 9.5  LT side cover L<br>Step number: (1)<br><span style="color:red">H: 8 / S: 2</span> |

↓

| |
|---|
| 9.8  LT control PCB<br>Step number: (1) The relevant harness(es)<br><span style="color:red">H: 0 / S: 0</span> |

↓

| |
|---|
| **9.9  T1 CLUTCH 30**<br>Step number: (1), (2)<br><span style="color:red">H: 1 / S: 0</span> |

# 8. DISASSEMBLY PROCEDURE

## 8.1 Preparation

### ■ Disconnecting cables and removing accessories

Prior to proceeding with the disassembly procedure,

(1) **Unplug** > AC cord,
USB cable, if connected,
LAN cable, if connected,
USB flash memory, if connected,
Line cord, if connected.

(2) **Remove** > Toner cartridge & Drum unit,
Belt unit,
Waste toner box,
Paper tray,
DX tray,
LAN port cap,
EXT cap.



**Fig. 3-1**

*Confidential*
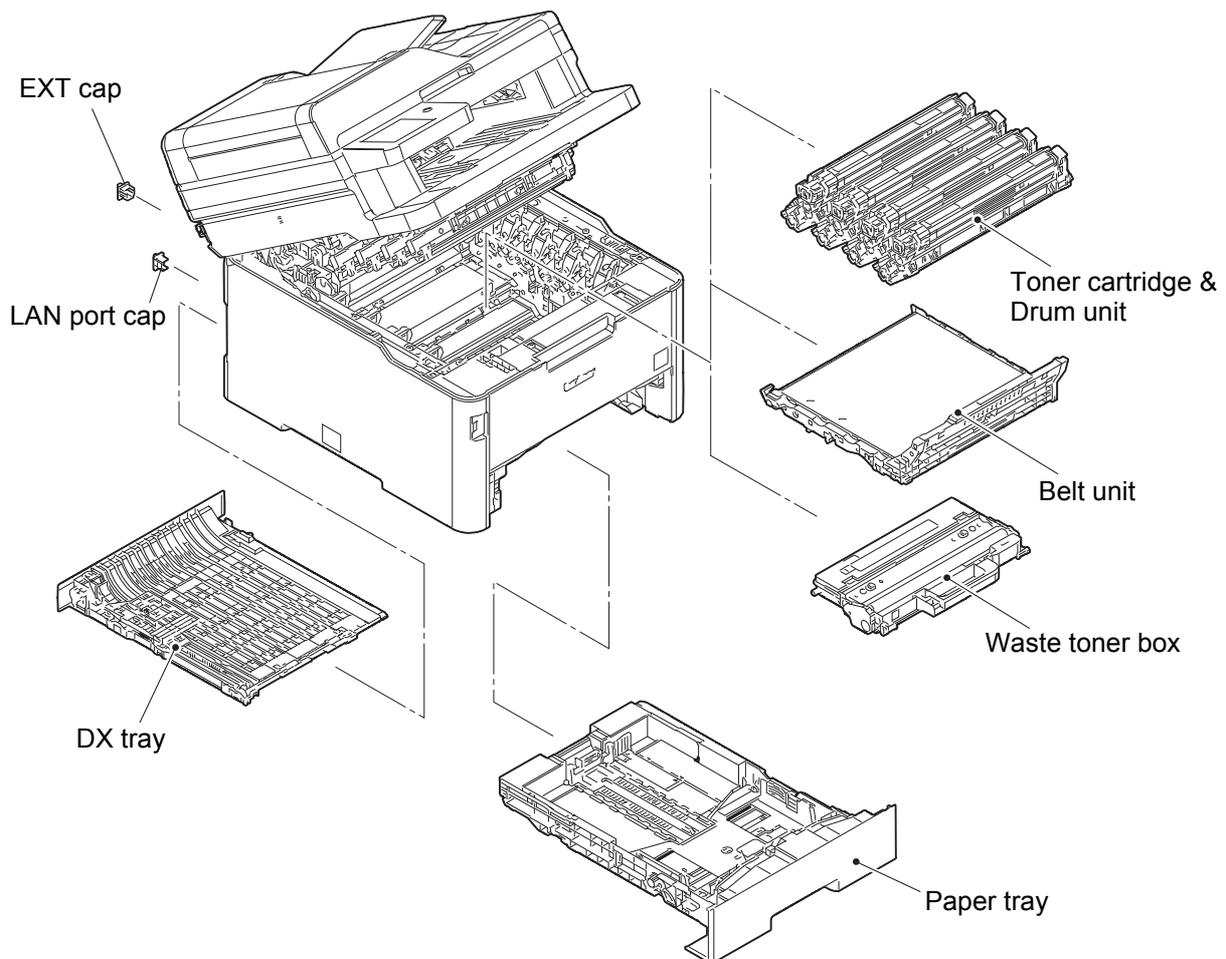
## 8.2 T1 separation pad

(1) **Remove** > T1 separation pad

  🔩 **Fixtures & Fittings**
  - Hook (x 2)
  - Boss (x 2)

(2) **Remove** > T1 separation pad spring

Boss

T1 separation pad

Boss

Hooks

T1 separation pad spring

Paper tray
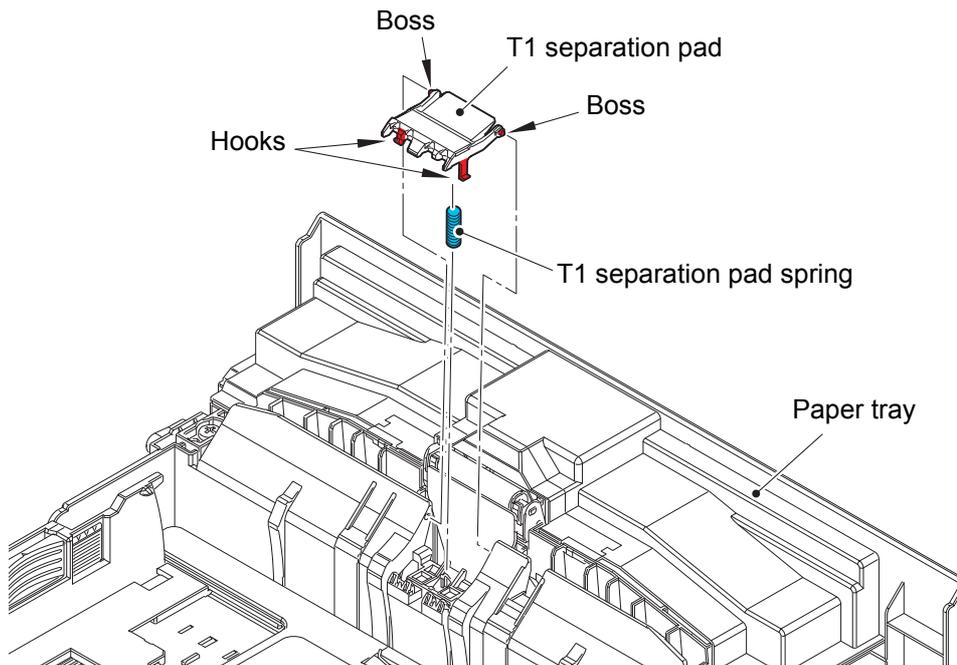
**Fig. 3-2**

## 8.3 Back cover ASSY

(1) **Open** > Back cover ASSY
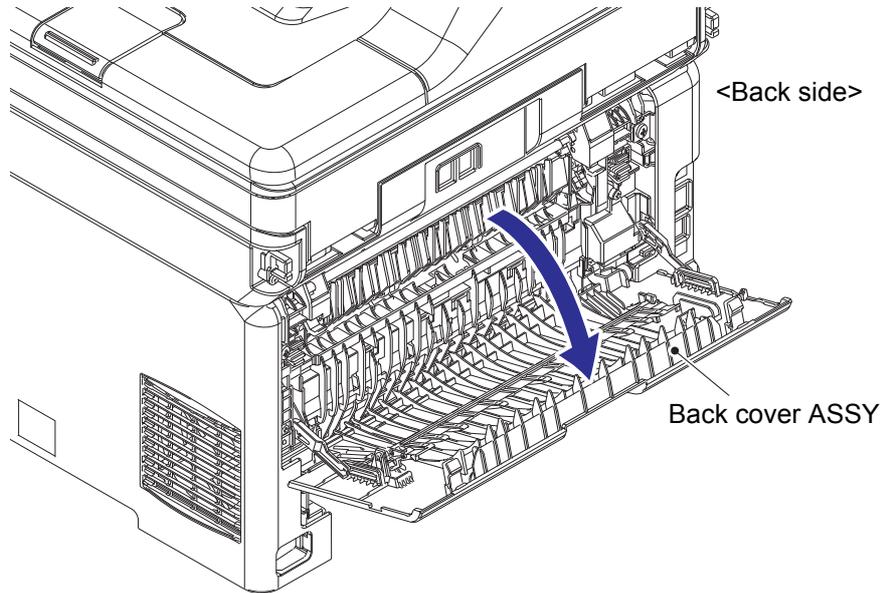


**Fig. 3-3**

(2) **Release** > Back cover arm R, Back cover arm L

✎ **Fixtures & Fittings**
   - Hook of the Back cover arm R
   - Hook of the Back cover arm L
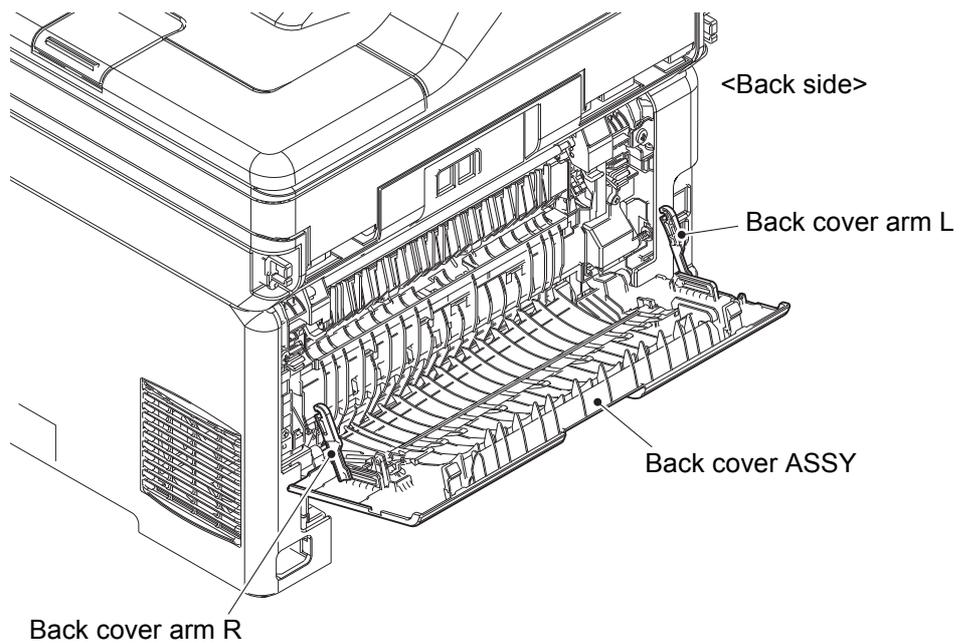


**Fig. 3-4**

(3) **Remove** > Back cover ASSY

> 💡 **Point:**
> • Remove the Back cover ASSY in the order of the arrows.



<Back side>

A

B
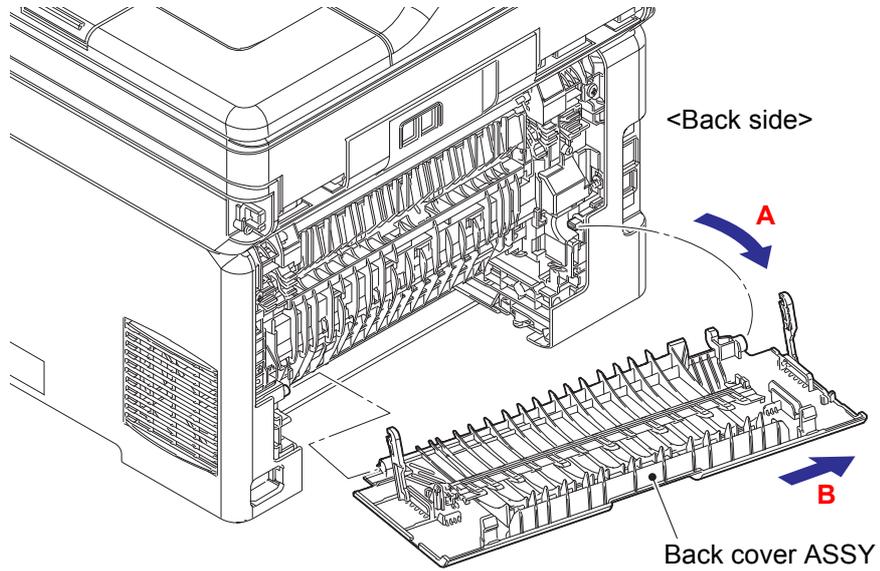
Back cover ASSY

**Fig. 3-5**

## 8.4 Back cover arm R, Back cover arm L

(1) **Remove** > Back cover arm R, Back cover arm L

Back cover arm L

Back cover ASSY

Back cover arm R
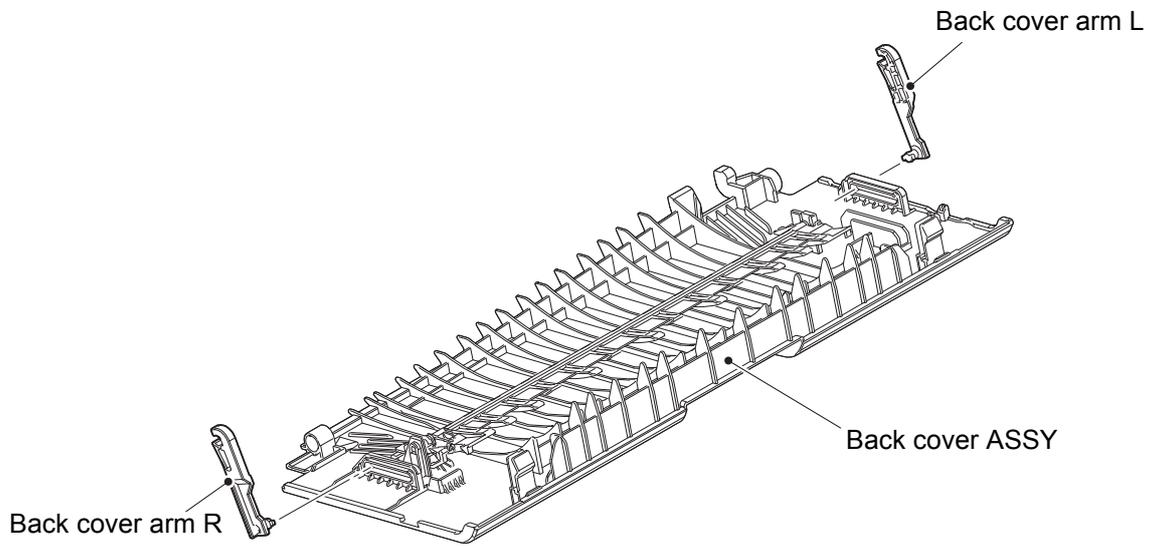
**Fig. 3-6**

## 8.5 Rear flapper sub ASSY

(1) **Remove** > Rear flapper sub ASSY



Rear flapper sub ASSY

Rear flapper spring

Back cover
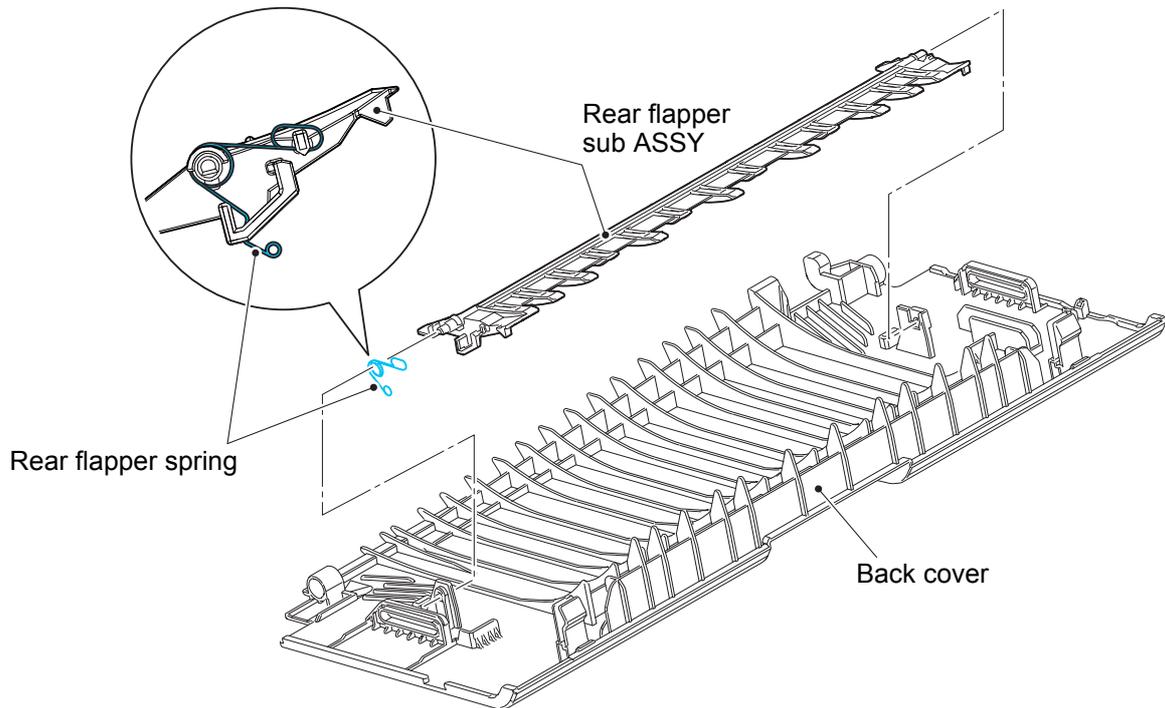
**Fig. 3-7**

**Assembling note:**
• Apply the Rear flapper spring as shown in the figure above.

## 8.6　Fuser cover ASSY

**Assembling note:**
- When replacing the Fuser cover ASSY, the Cleaner pinch roller is also replaced.

(1) **Remove** > Fuser cover L

**Fixtures & Fittings**
- Taptite bind B M3x10  (x 1)

**Point:**
- Remove the Fuser cover L in the order of the arrows.

C

B

A

Taptite bind B M3x10

Fuser cover L

<Back side>
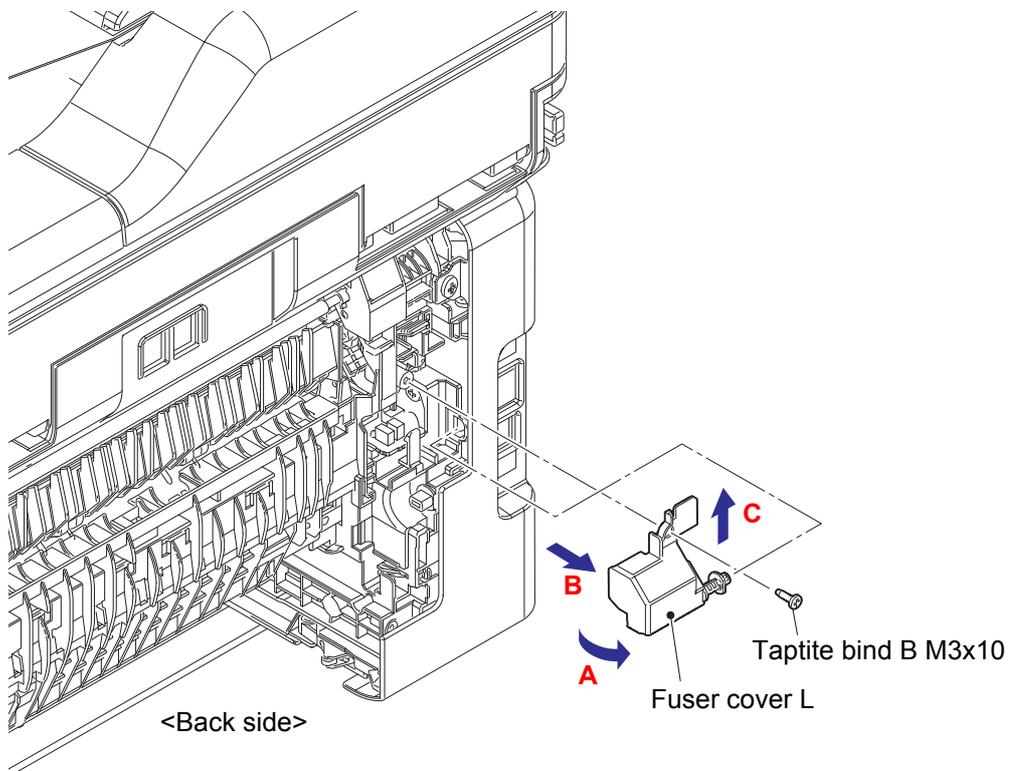
**Fig. 3-8**

(2) **Open** > Fuser cover ASSY

🔩 **Fixtures & Fittings**
   - Fuser cover lock lever L, Fuser cover lock lever R



Fuser cover lock lever L

Fuser cover ASSY

Fuser cover lock lever R

<Back side>
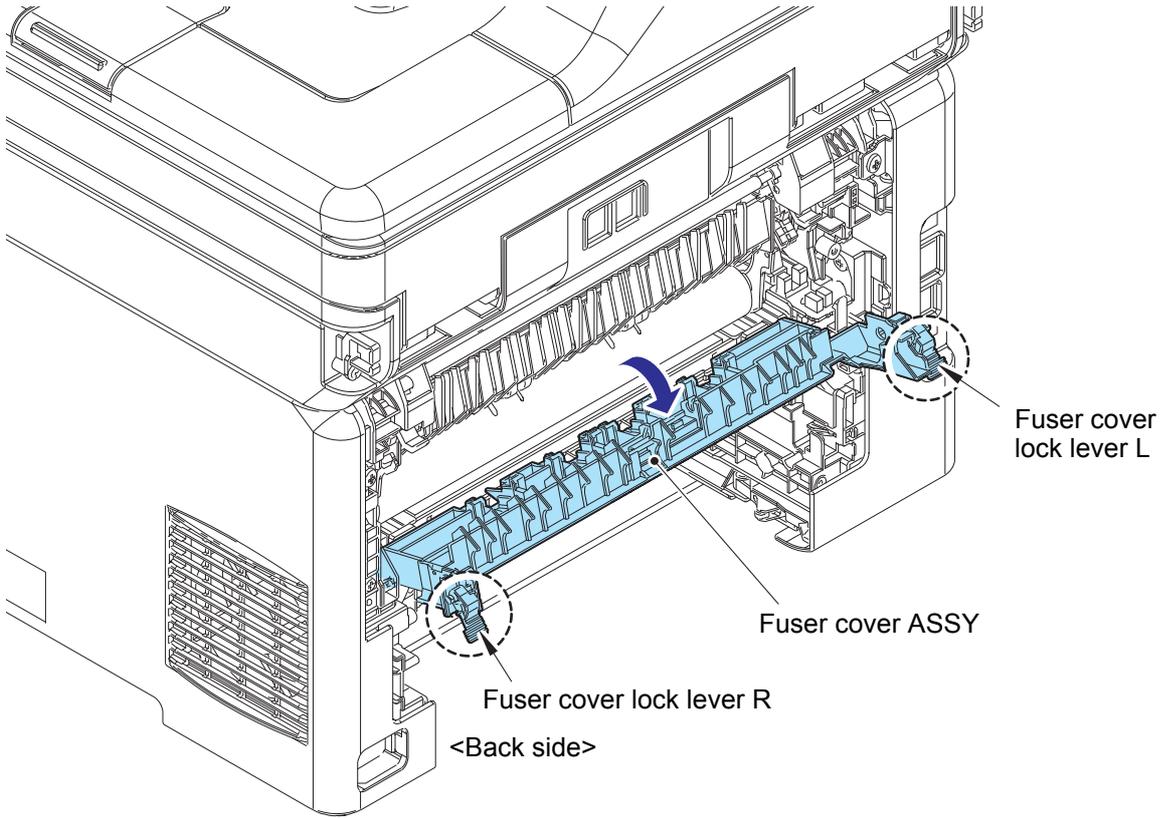
**Fig. 3-9**

(3) **Remove** > Fuser cover ASSY



A

B

Fuser cover ASSY

**Fig. 3-10**

*Confidential*
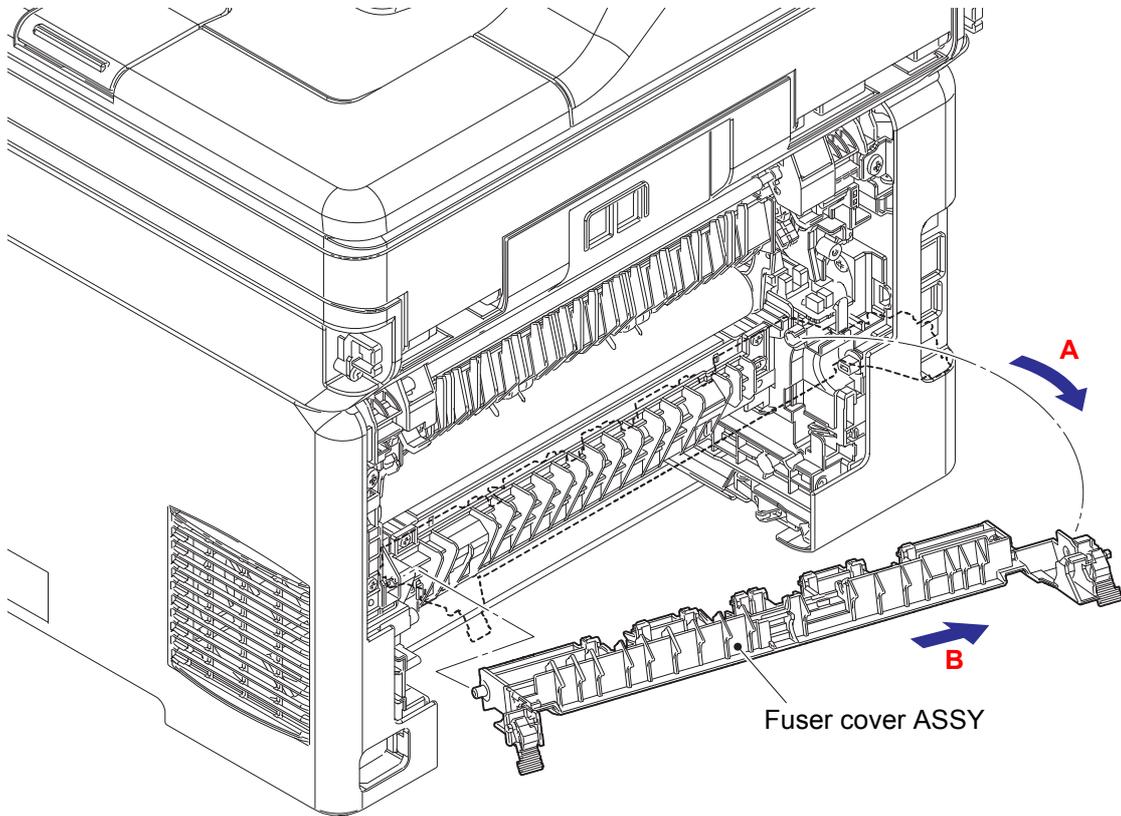
(4) **Release** >   Cleaner pinch roller spring  (x 4)

🔩 **Fixtures & Fittings**
   - Hook  (x 1)

(5) **Remove** >   Cleaner pinch roller  (x 4)

💡 **Point:**
   • Remove the Cleaner pinch roller in the direction of the arrow.

(6) **Remove** >   Cleaner pinch roller spring  (x 4)

Cleaner pinch roller

Hook

Cleaner pinch roller spring

Cleaner pinch roller

Cleaner pinch roller spring
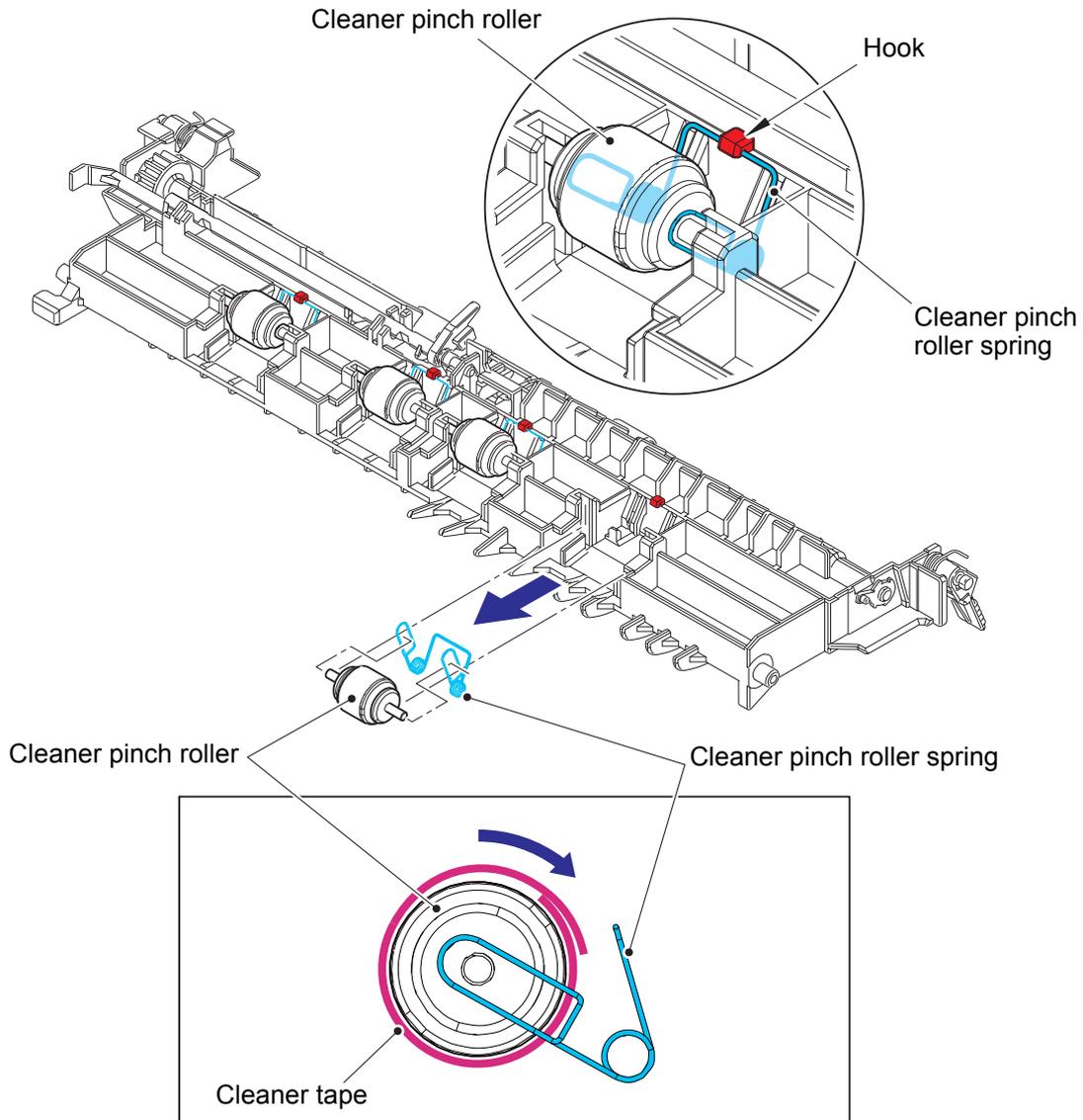
Cleaner tape

**Fig. 3-11**

✏ **Assembling note:**
   • The Cleaner pinch roller spring and the Cleaner pinch roller should be assembled as shown in the figure above, paying attention to how to wind the cleaner tape.

*Confidential*

## 8.7 Fuser



⚠️ **WARNING**

Some parts inside the machine are extremely hot immediately after the machine is used. When opening the Back cover to access any parts inside the machine, never touch the shaded parts shown in the following figures.
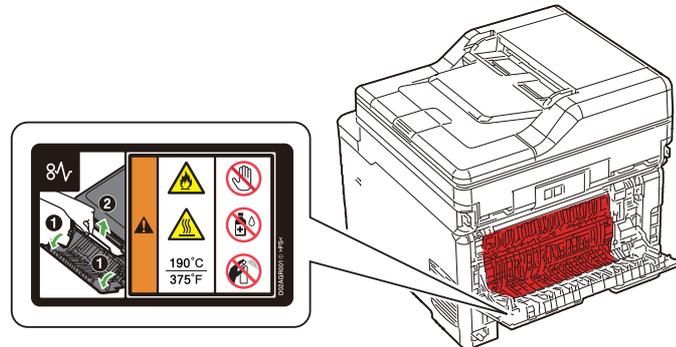
(1) **Remove** > Fuser cover R

🔩 **Fixtures & Fittings**
- Taptite bind B M3x10  (x 1)



&lt;Back side&gt;

Fuser cover R

Taptite bind B M3x10

**Fig. 3-12**

*Confidential*
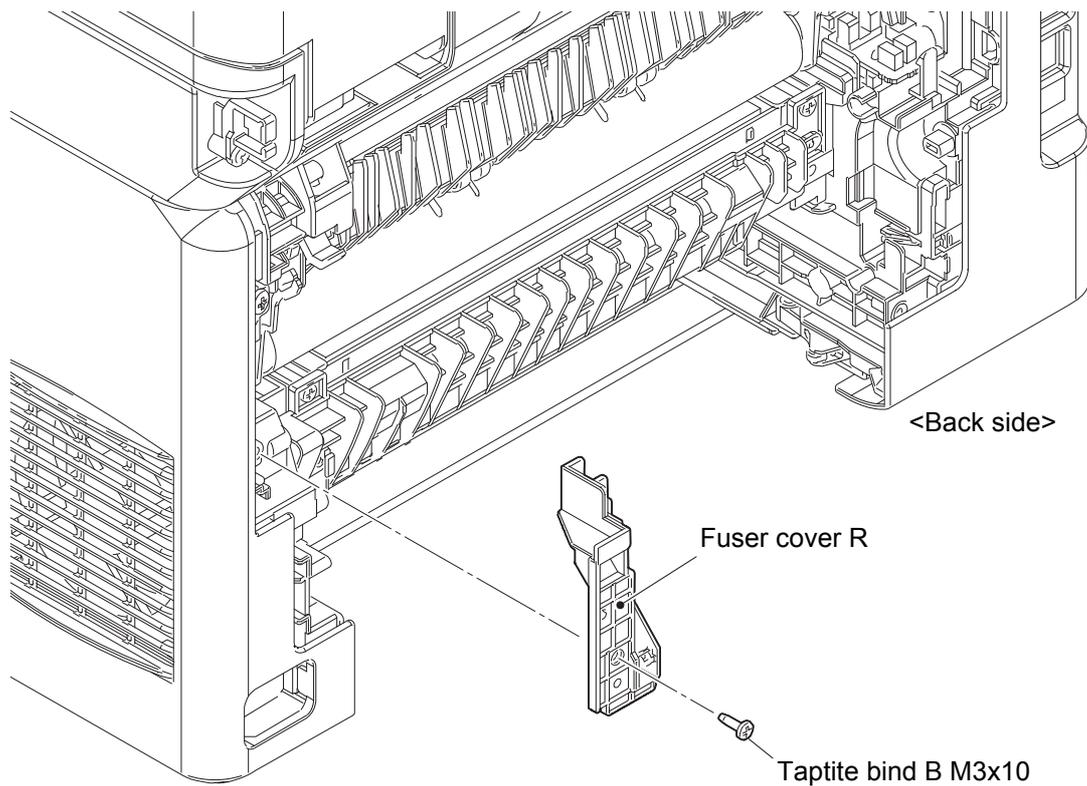
(2) **Disconnect** > Center thermistor harness (of Fuser), Side thermistor harness (of Fuser)



Eject sensor/relay PCB

Side thermistor harness (of Fuser)

Center thermistor harness (of Fuser)

<Back side>
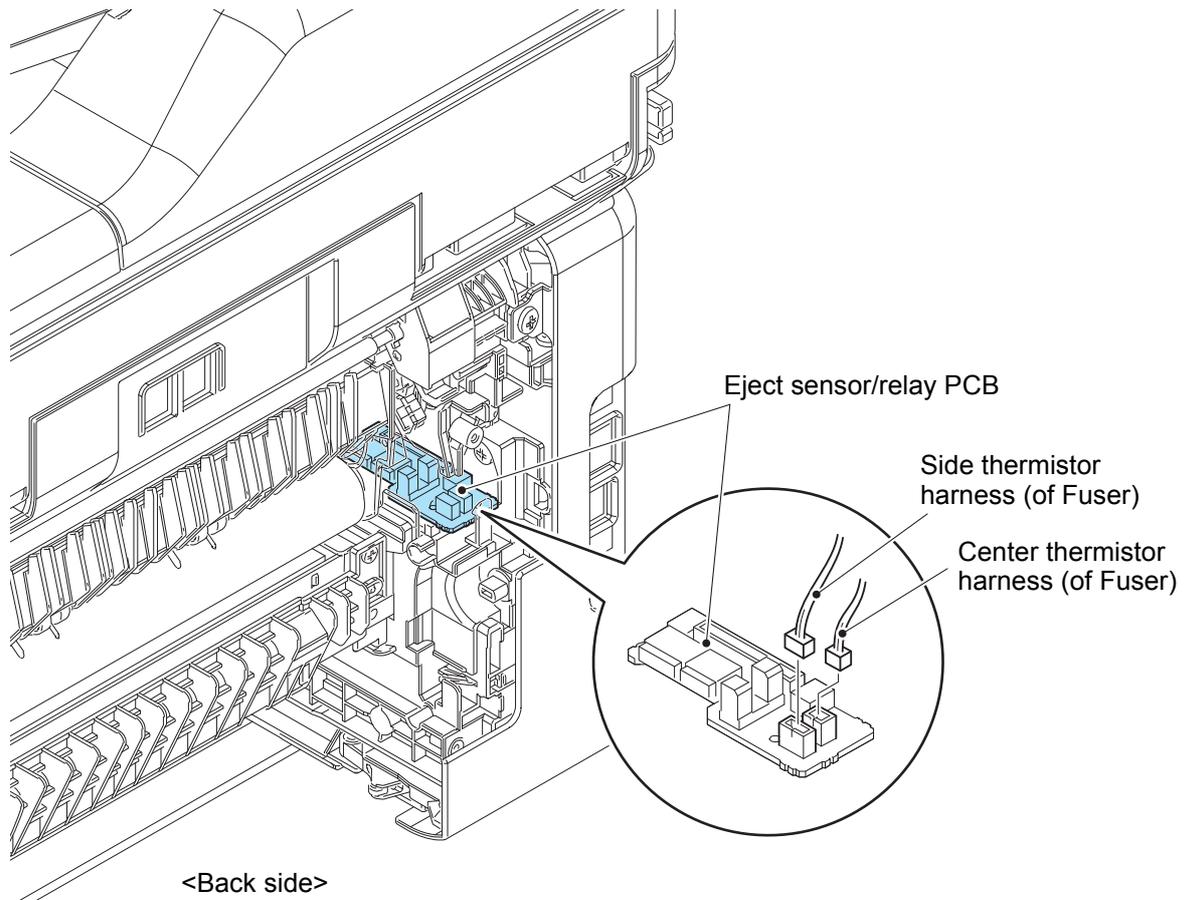
**Fig. 3-13**

(3) **Remove** > Fuser

**Fixtures & Fittings**
- Taptite pan (washer) B M4x12DA  (x 2)

(4) **Disconnect** > Heater harness (of Fuser)

**Fixtures & Fittings**
- Hook  (x 1)



Heater harness (of Fuser)

LVPS heater harness

Hook

OK          NG

Fuser

Taptite pan (washer) B M4x12DA

<Back side>
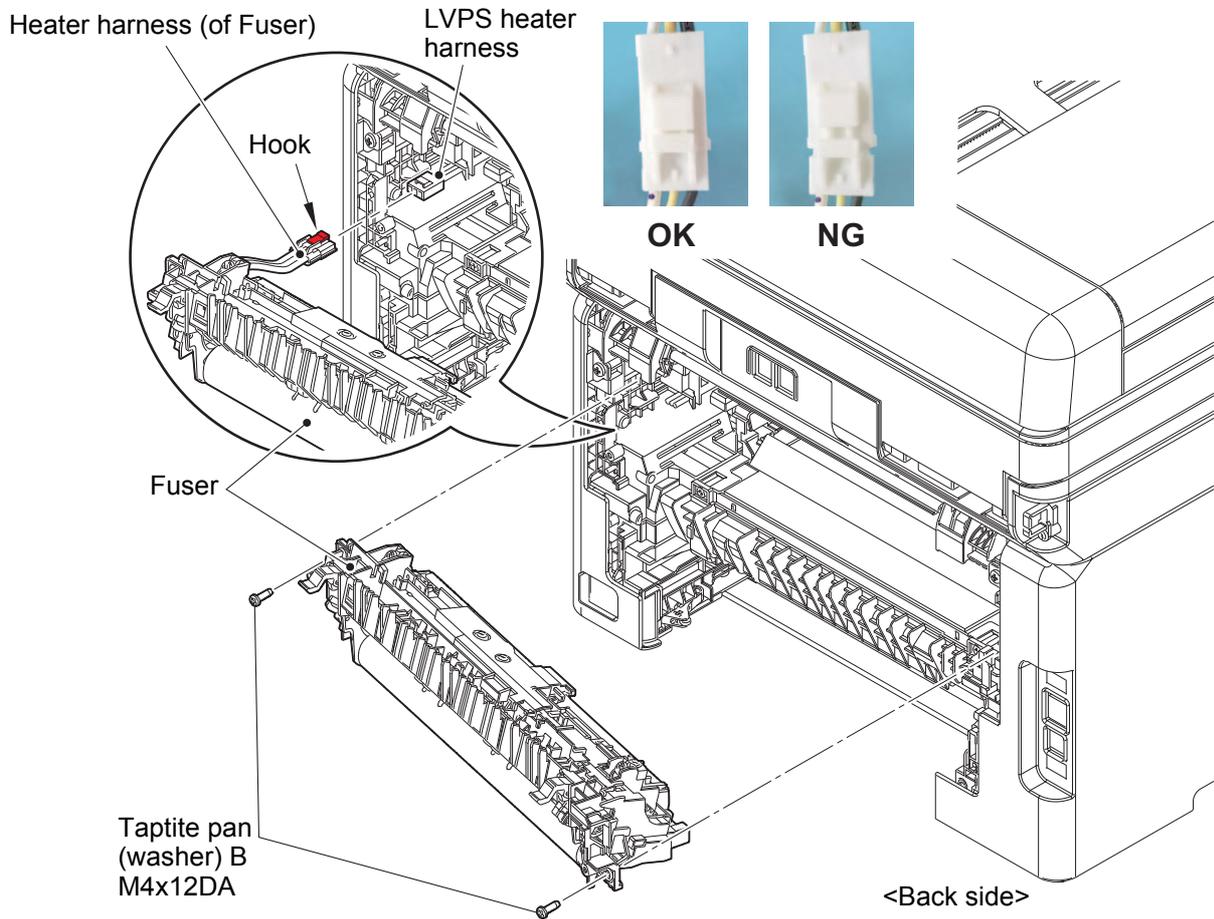
**Fig. 3-14**

**Assembling note:**
- After connecting the Heater harness (of Fuser), pull the Connector on the Heater harness (of Fuser) side while holding the Connector on the LVPS heater harness side to make sure it is locked.
- If you replaced the Fuser, refer to "6.  IF YOU REPLACE THE FUSER" in Chapter 4 to configure settings.

**Note:**
- Do not apply a physical impact or vibration to the Fuser.
- Do not touch the roller and the electrodes as shown in the figure below to prevent breakage of the Fuser.



Fuser

**Fig. 3-15**

*Confidential*
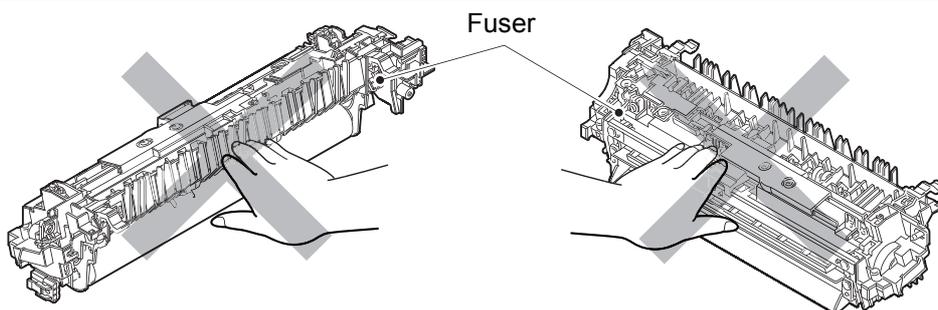
## 8.8 Cord hook

(1) **Remove** > Cord hook (x 2)

    🔩 **Fixtures & Fittings**
      - Taptite cup B M3x10 (x 2)

Cord hook

Taptite cup B M3x10

Cord hook

Taptite cup B M3x10

<Back side>
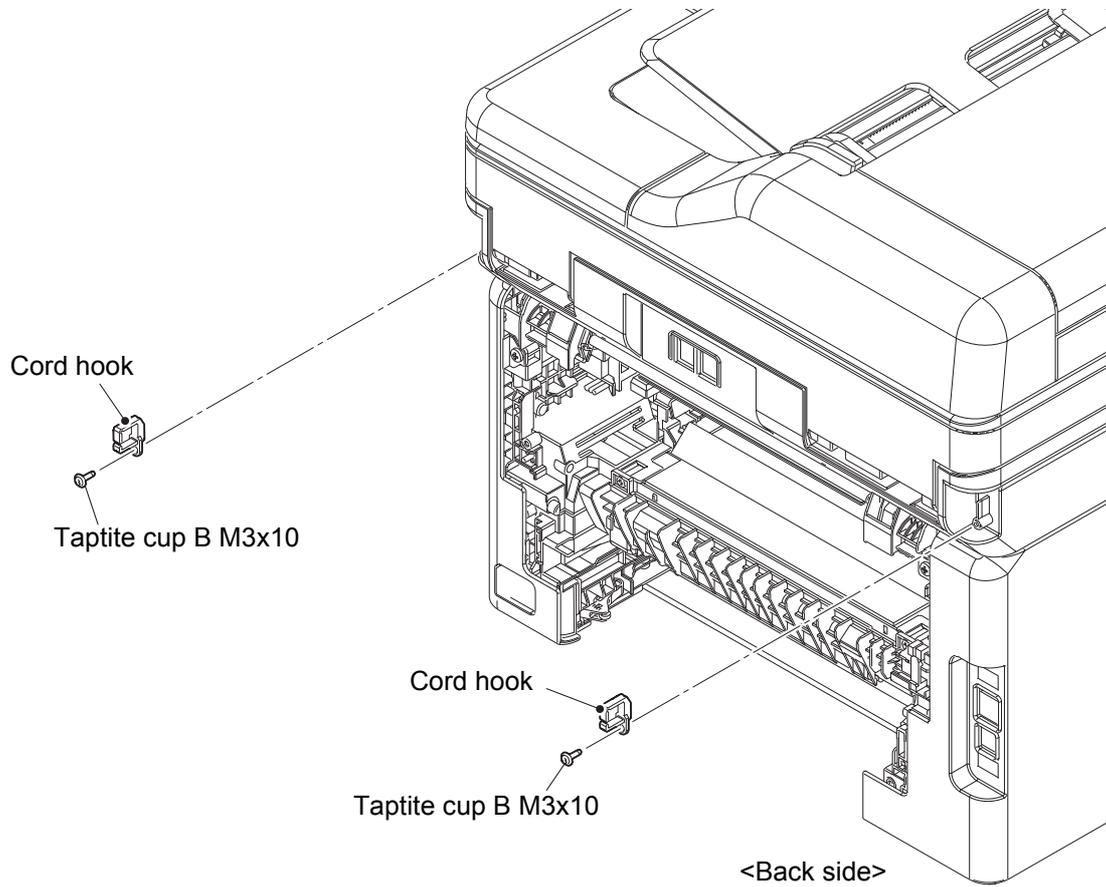
**Fig. 3-16**

## 8.9 Side cover L

(1) **Open** > Joint cover ASSY

(2) **Remove** > Side cover L

### ✎ Fixtures & Fittings
- Taptite bind B M4x12 (x 2)
- Hook (x 8)

> 💡 **Point:**
> • Release the hooks in the order of the arrows.

Joint cover ASSY

Taptite bind B M4x12

Hooks

Hooks

E

D

Hook

Side cover L

<Back side>

A

Taptite bind B M4x12

Hooks

C

Hook

B
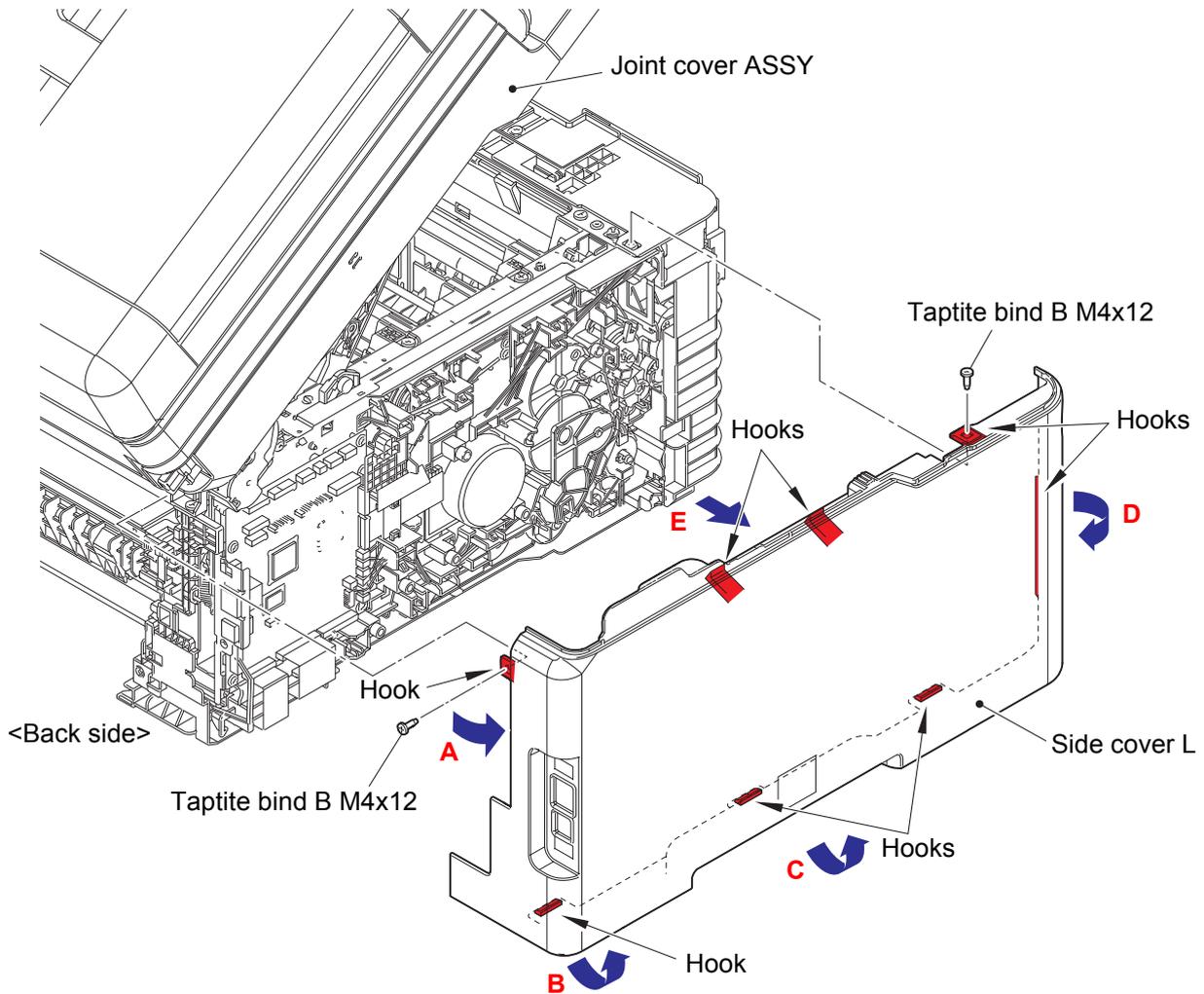
**Fig. 3-17**

## 8.10  Side cover R

(1)  **Remove** >  Side cover R

🔩 **Fixtures & Fittings**
   - Taptite bind B M4x12  (x 2)
   - Hook  (x 8)

💡 **Point:**
   • Release the hooks in the order of the arrows.

Taptite bind B M4x12

Hooks

Hooks

D

Hooks

E

C

Hooks

Hook

A

Taptite bind B M4x12

&lt;Back side&gt;

Hook

B

Side cover R
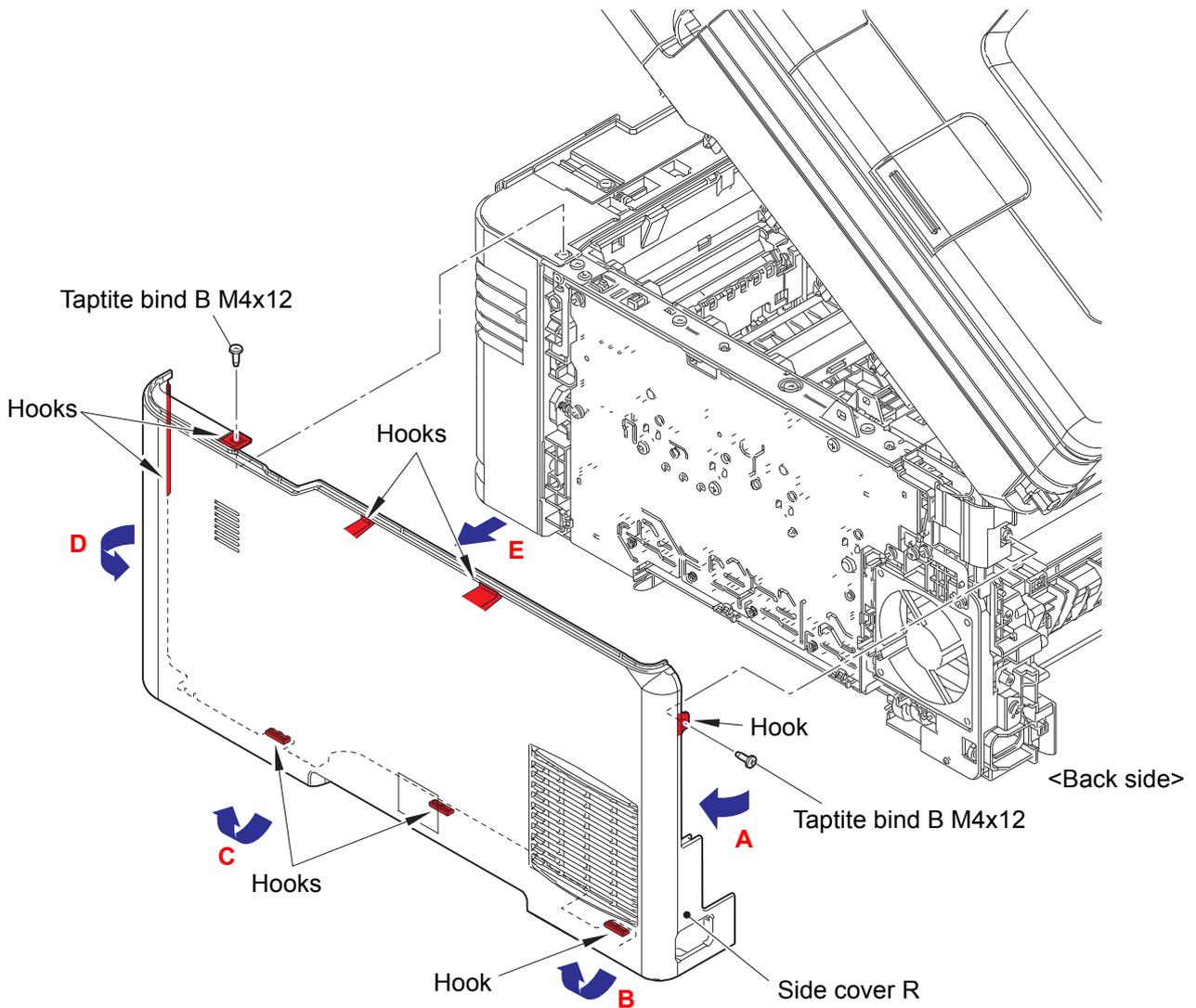
**Fig. 3-18**

## 8.11 FB unit

### ■ For models with ADF

(1) <u>**Disconnect**</u> > Panel FFC, 1st side CIS FFC, 2nd side CIS FFC, Modem FFC

   🔩 **Fixtures & Fittings**
   - Lock (x 1)

(2) <u>**Remove**</u> > Modem FG harness L, Panel FG harness

   🔩 **Fixtures & Fittings**
   - Screw cup M3x6 (x 1)

(3) <u>**Remove**</u> > FB FG harness

   🔩 **Fixtures & Fittings**
   - Screw cup M3x6 (x 1)
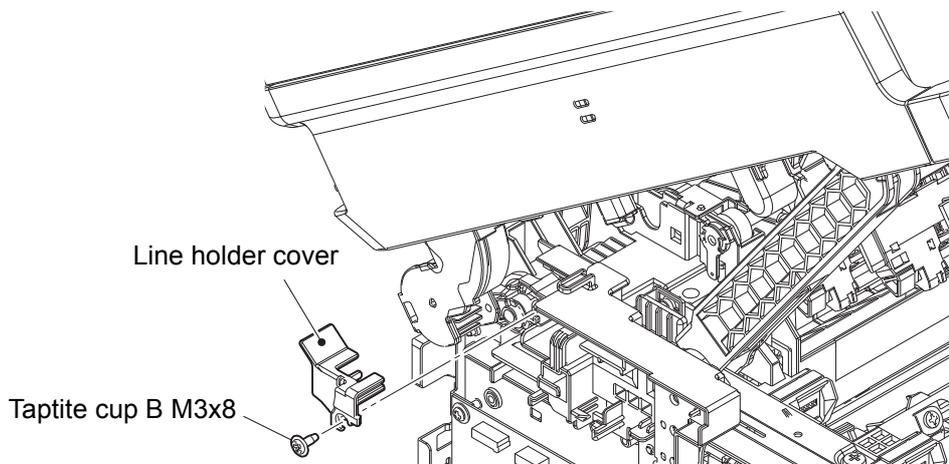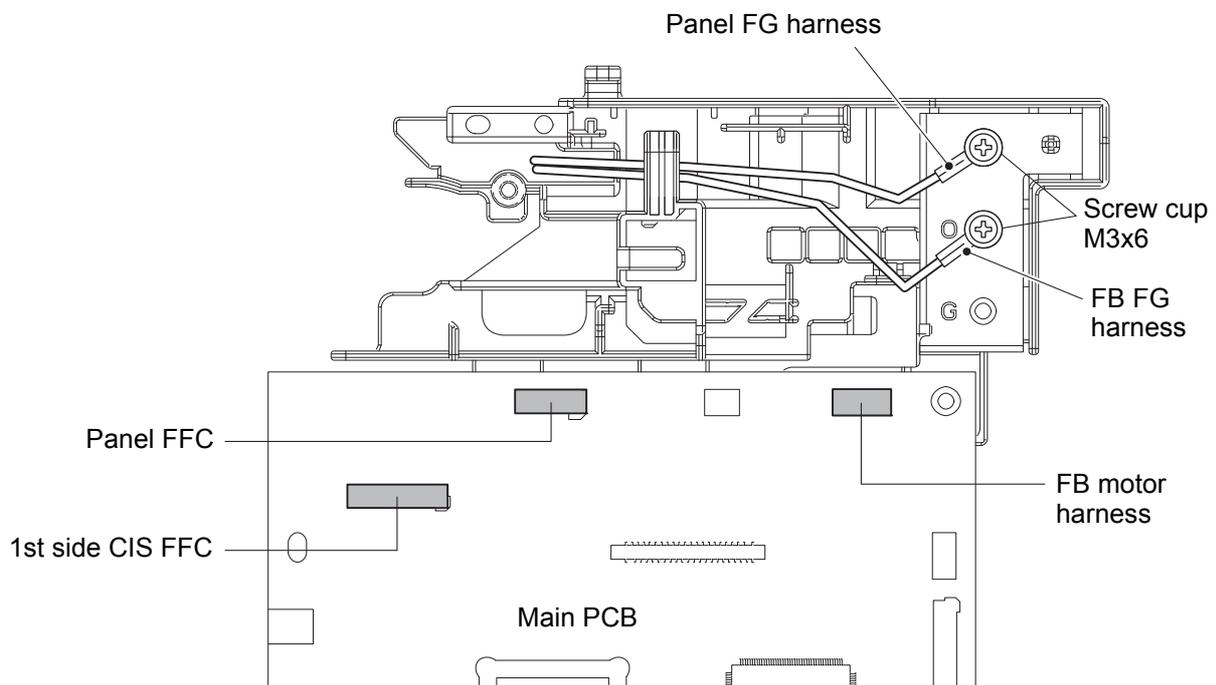
(4) <u>**Remove**</u> > ADF FG harness

   🔩 **Fixtures & Fittings**
   - Screw cup M3x6 (x 1)

(5) <u>**Remove**</u> > Line holder cover

   🔩 **Fixtures & Fittings**
   - Taptite cup B M3x8 (x 1)

(6) <u>**Disconnect**</u> > ADF sensor/motor harness, FB motor harness
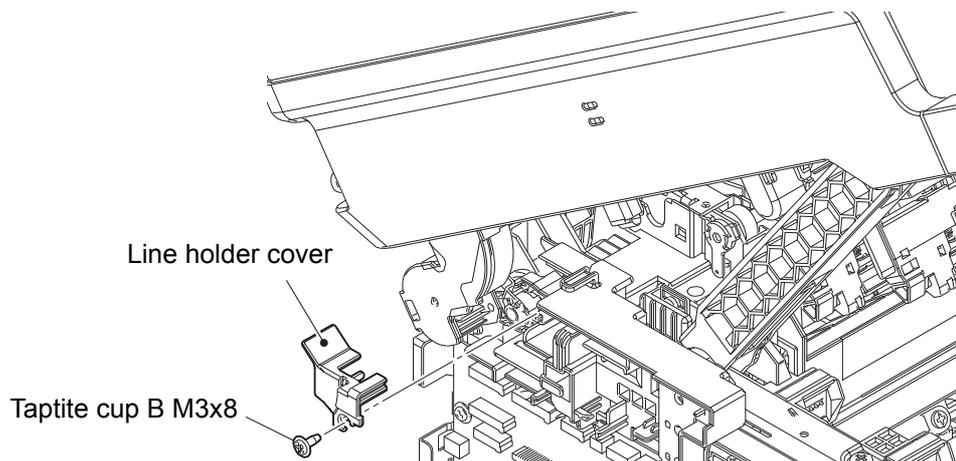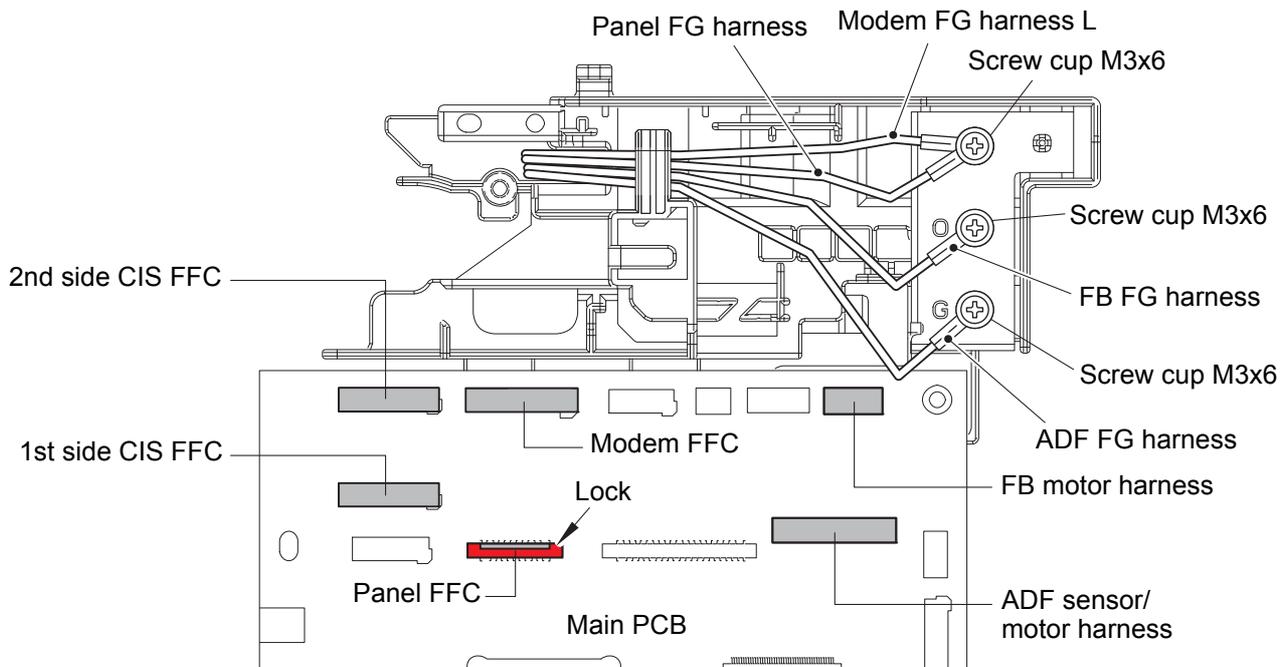


**Fig. 3-19**

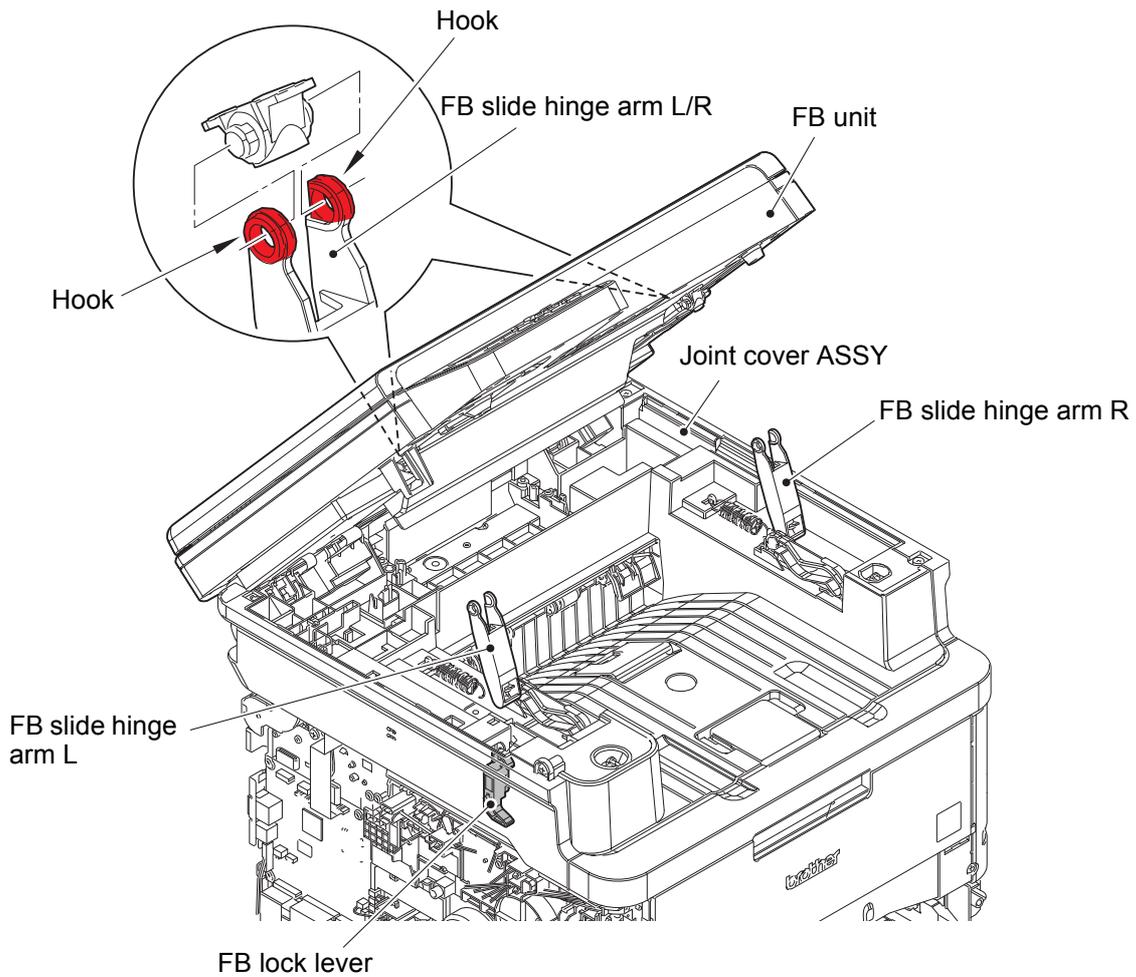(7) **Close** > Joint cover ASSY

(8) **Open** > FB unit

*✎* **Fixtures & Fittings**
   - Hook of the FB slide hinge arm L  (x 2)
   - Hook of the FB slide hinge arm R  (x 2)

> *💡* **Point:**
>  • Push the FB lock lever to open the FB unit.
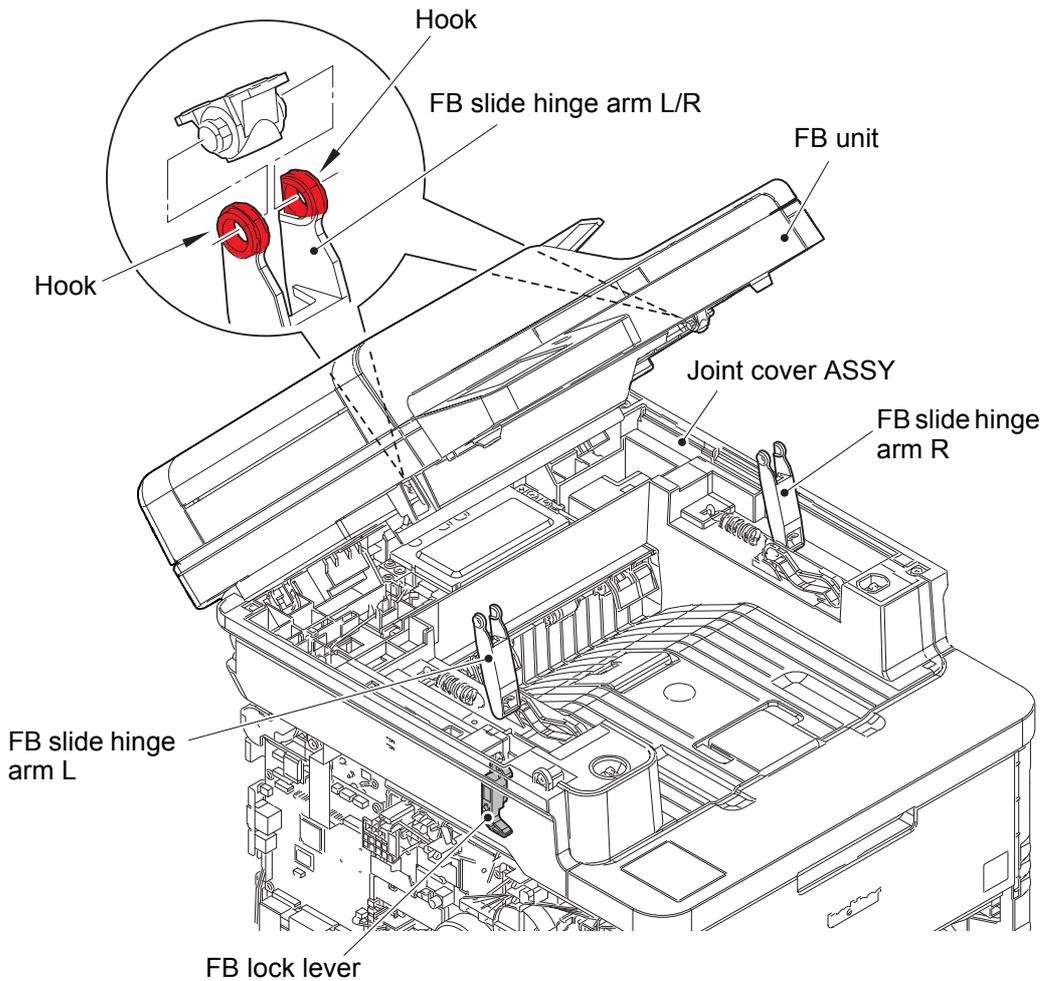


**Fig. 3-20**

(9) **Remove** > Joint cover side L

🔩 **Fixtures & Fittings**
- Taptite bind B M4x12 (x 1)
- Hook (x 5)

> 💡 **Point:**
> • Open the FB unit approximately 90 degrees to the Joint cover ASSY.
> • Remove the Joint cover side L in the order of the arrows.

> ⚠️ **Note:**
> • Be careful that the FB unit may drop when opening it approximately 90 degrees.

(10) **Remove** > FB FFC holder cover

🔩 **Fixtures & Fittings**
- Hook (x 2)
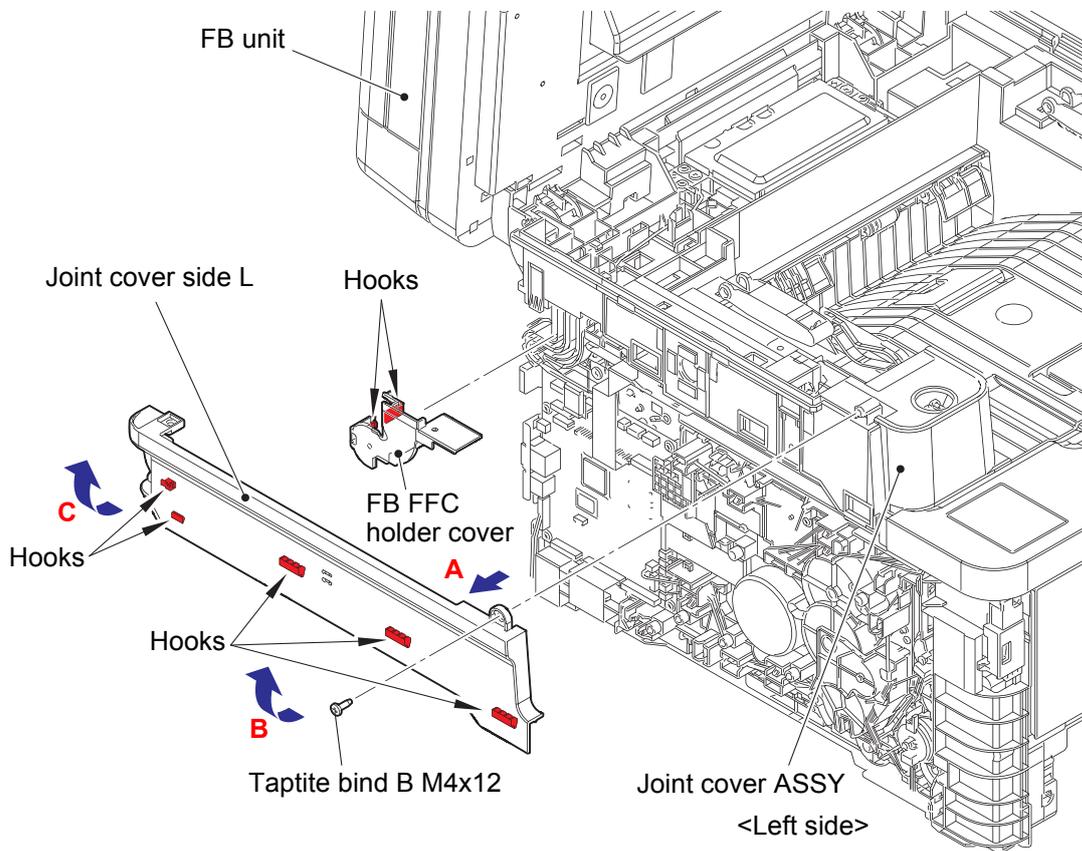


**Fig. 3-21**

(11) **Wiring** >    2nd side CIS FFC, 1st side CIS FFC, Modem FFC, Panel FFC, FB motor harness, ADF sensor/motor harness, ADF FG harness, FB FG harness, Panel FG harness

> **Point:**
> • Open the Joint cover ASSY slightly to release the FFCs and harnesses mentioned above from the securing fixtures, and then close the Joint cover ASSY.
> • Release the Modem FFC from the securing fixtures to the position shown in the figure.

(12) **Remove** >   FB unit

> **Point:**
> • Open the FB unit approximately 30 degrees to the joint cover ASSY, and then remove it upward.
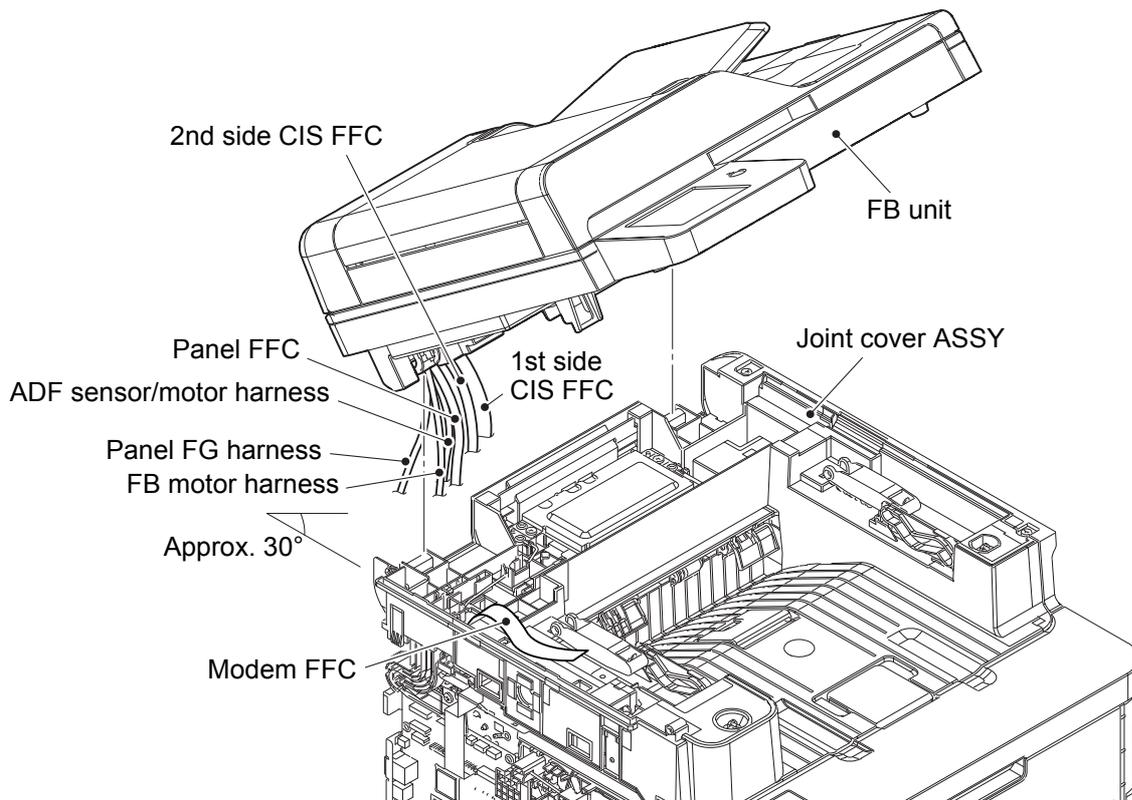


**Fig. 3-22**

Harness routing:  Refer to "2. 2nd side CIS FFC (For models with ADF), 1. 1st side CIS FFC, 22. Modem FFC, Modem FG harness L, Modem FG harness R, 25. Panel FFC, Panel FG harness (For models with touch panel), 12. FB motor harness, FB FG harness, 3. ADF sensor/ motor harness (For models with ADF), ADF FG harness".
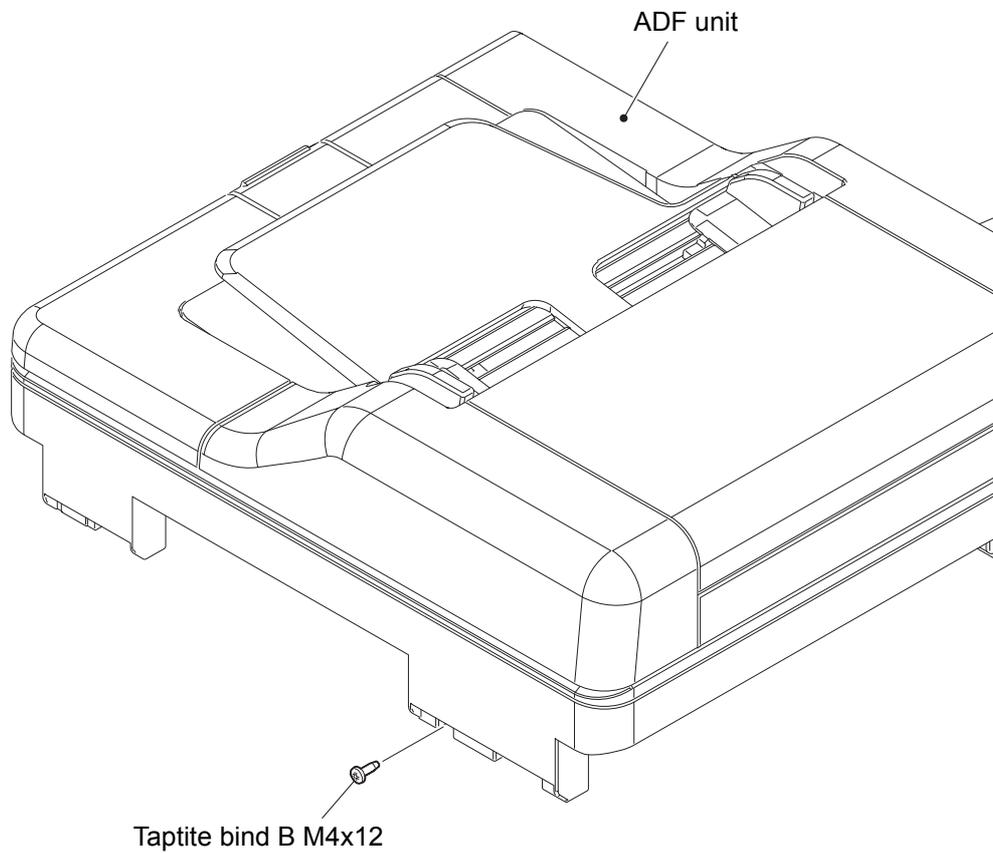
> **Assembling note:**
> • If you replaced the FB unit, refer to "5. IF YOU REPLACE THE ADF UNIT, 1ST SIDE CIS UNIT, 2ND SIDE CIS UNIT OR FB UNIT" in Chapter 4 to configure settings.

### For models without ADF

(1) **Disconnect** > Panel FFC, 1st side CIS FFC

(2) **Remove** > FB FG harness

🔩 **Fixtures & Fittings**
- Screw cup M3x6 (x 1)

(3) **Remove** > Panel FG harness

🔩 **Fixtures & Fittings**
- Screw cup M3x6 (x 1)

(4) **Remove** > Line holder cover

🔩 **Fixtures & Fittings**
- Taptite cup B M3x8 (x 1)

(5) **Disconnect** > FB motor harness

Panel FG harness

Screw cup M3x6

FB FG harness

Panel FFC

FB motor harness

1st side CIS FFC

Main PCB

Line holder cover

Taptite cup B M3x8

**Fig. 3-23**

*Confidential*

(6) **Close** > Joint cover ASSY

(7) **Open** > FB unit

🔩 **Fixtures & Fittings**
- Hook of the FB slide hinge arm L  (x 2)
- Hook of the FB slide hinge arm R  (x 2)

> 💡 **Point:**
> • Push the FB lock lever to open the FB unit.



**Fig. 3-24**

(8) **Remove** > Joint cover side L

🔩 **Fixtures & Fittings**
- Taptite bind B M4x12 (x 1)
- Hook (x 5)

> 💡 **Point:**
> • Remove the Joint cover side L in the order of the arrows.
> • Open the FB unit approximately 90 degrees to the Joint cover ASSY.

> ⚠️ **Note:**
> • Be careful that the FB unit may drop when opening it approximately 90 degrees.

(9) **Remove** > FB FFC holder cover

🔩 **Fixtures & Fittings**
- Hook (x 2)
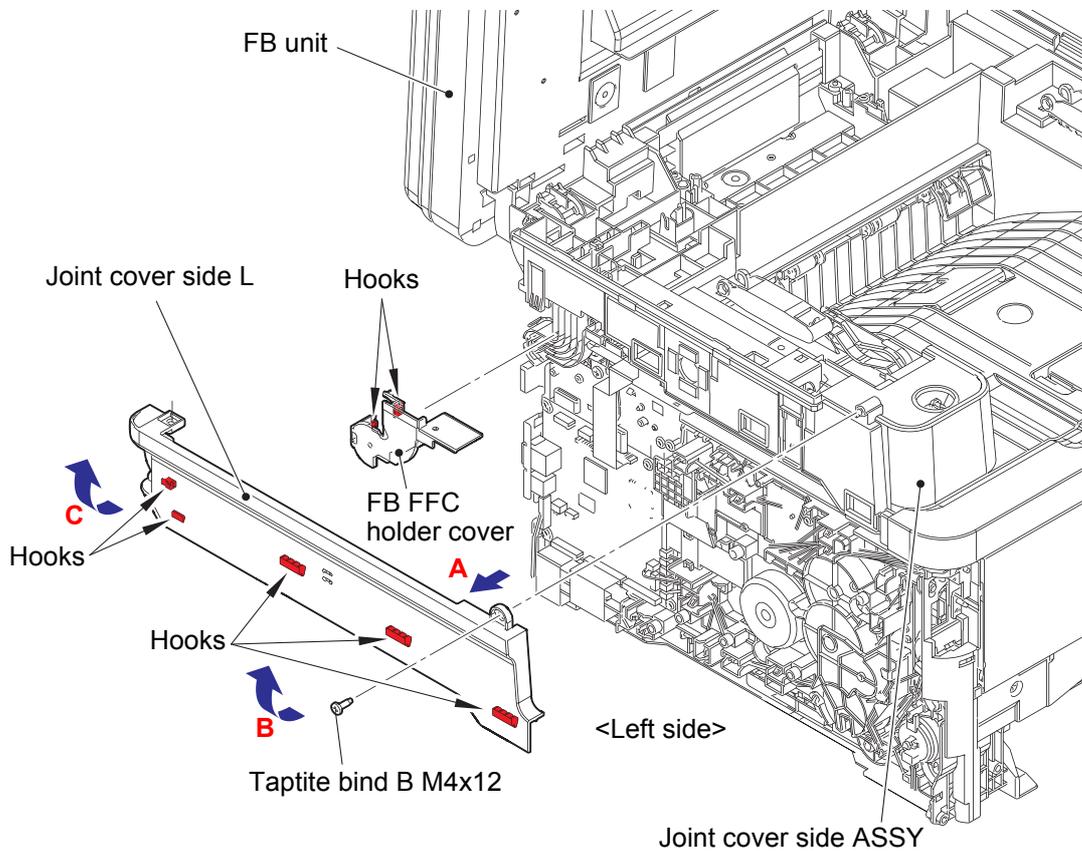


**Fig. 3-25**

(10) **Wiring** > 1st side CIS FFC, Panel FFC, FB motor harness, FB FG harness, Panel FG harness

> **Point:**
> • Open the Joint cover ASSY slightly to release the FFCs and harnesses mentioned above from the securing fixtures, and then close the Joint cover ASSY.

(11) **Remove** > FB unit

> **Point:**
> • Open the FB unit approximately 30 degrees to the joint cover ASSY, and then remove it upward.
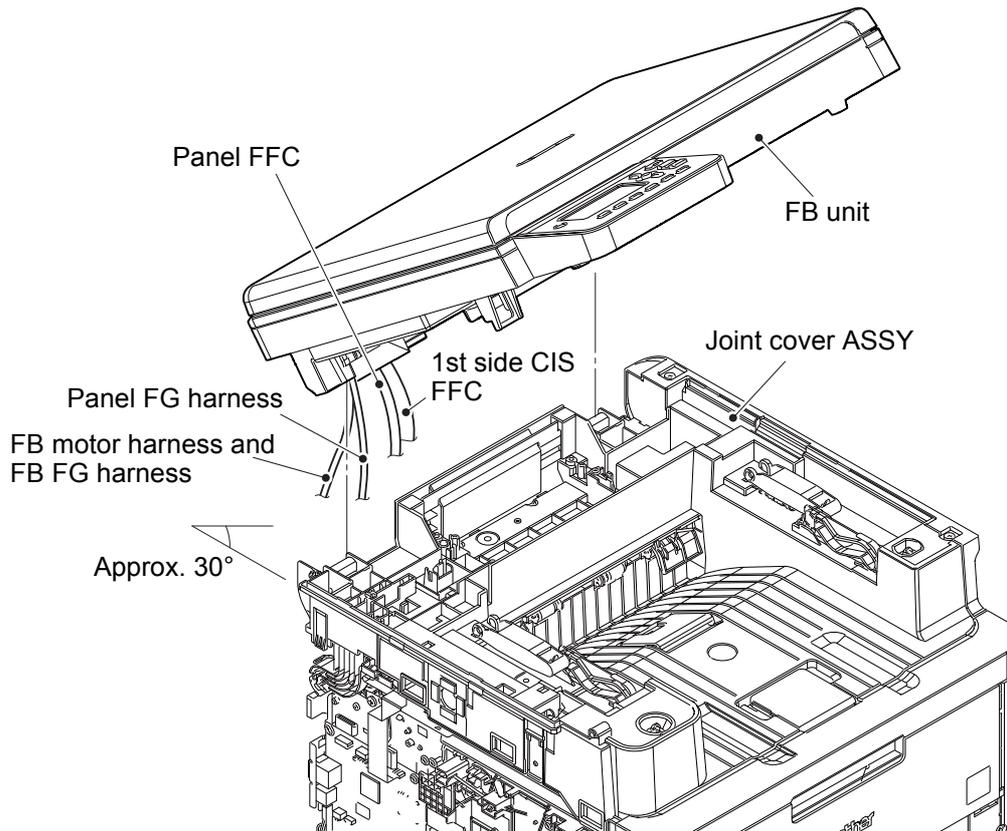
**Fig. 3-26**

Harness routing: Refer to "1. 1st side CIS FFC, 26. Panel FFC, Panel FG harness (For models with 2-line LCD), 12. FB motor harness, FB FG harness".
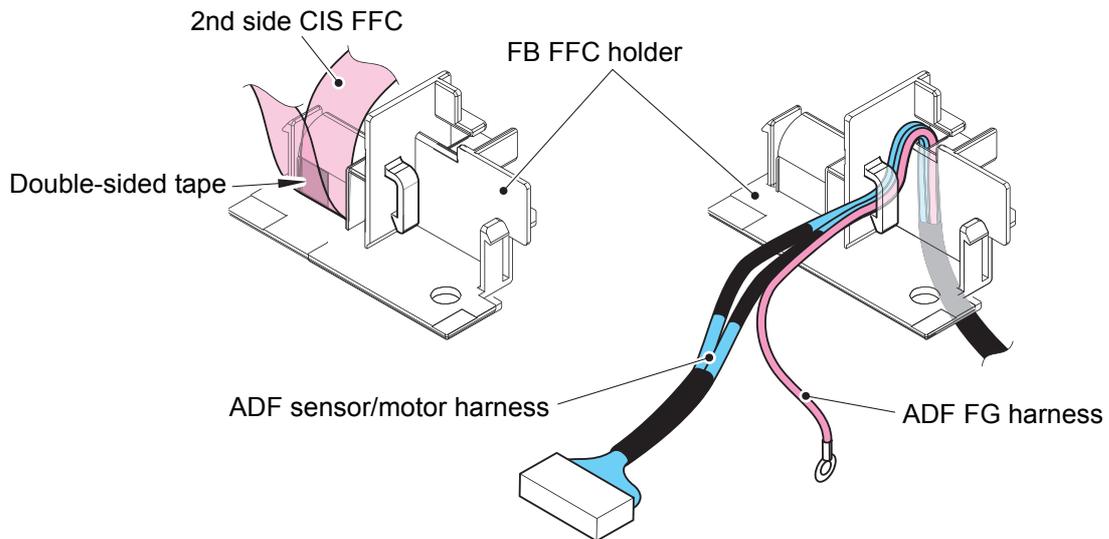
> **Assembling note:**
> • If you replaced the FB unit, refer to "5. IF YOU REPLACE THE ADF UNIT, 1ST SIDE CIS UNIT, 2ND SIDE CIS UNIT OR FB UNIT" in Chapter 4 to configure settings.

## 8.12 ADF unit (For models with ADF)

(1) **Remove** > Screw

✎ **Fixtures & Fittings**
   - Taptite bind B M4x12  (x 1)



ADF unit

Taptite bind B M4x12

**Fig. 3-27**

(2) **Open** > ADF unit

(3) **Remove** > FB FFC holder

⚙ **Fixtures & Fittings**
   - Hook (x 3)

💡 **Point:**
   • Lift the ADF unit up slightly.
   • Pull out the 2nd side CIS FFC, the ADF sensor/motor harness and the ADF FG harness through each hole of the FB unit.

(4) **Remove** > ADF unit

⚙ **Fixtures & Fittings**
   - Hook (x 1)



ADF unit

Hook

FB unit

2nd side CIS FFC

ADF sensor/motor harness and ADF FG harness

Hooks

Hook

FB FFC holder

The hole that the 2nd side CIS FFC is passed.

The hole that the ADF sensor/motor harness and the ADF FG harness are passed.
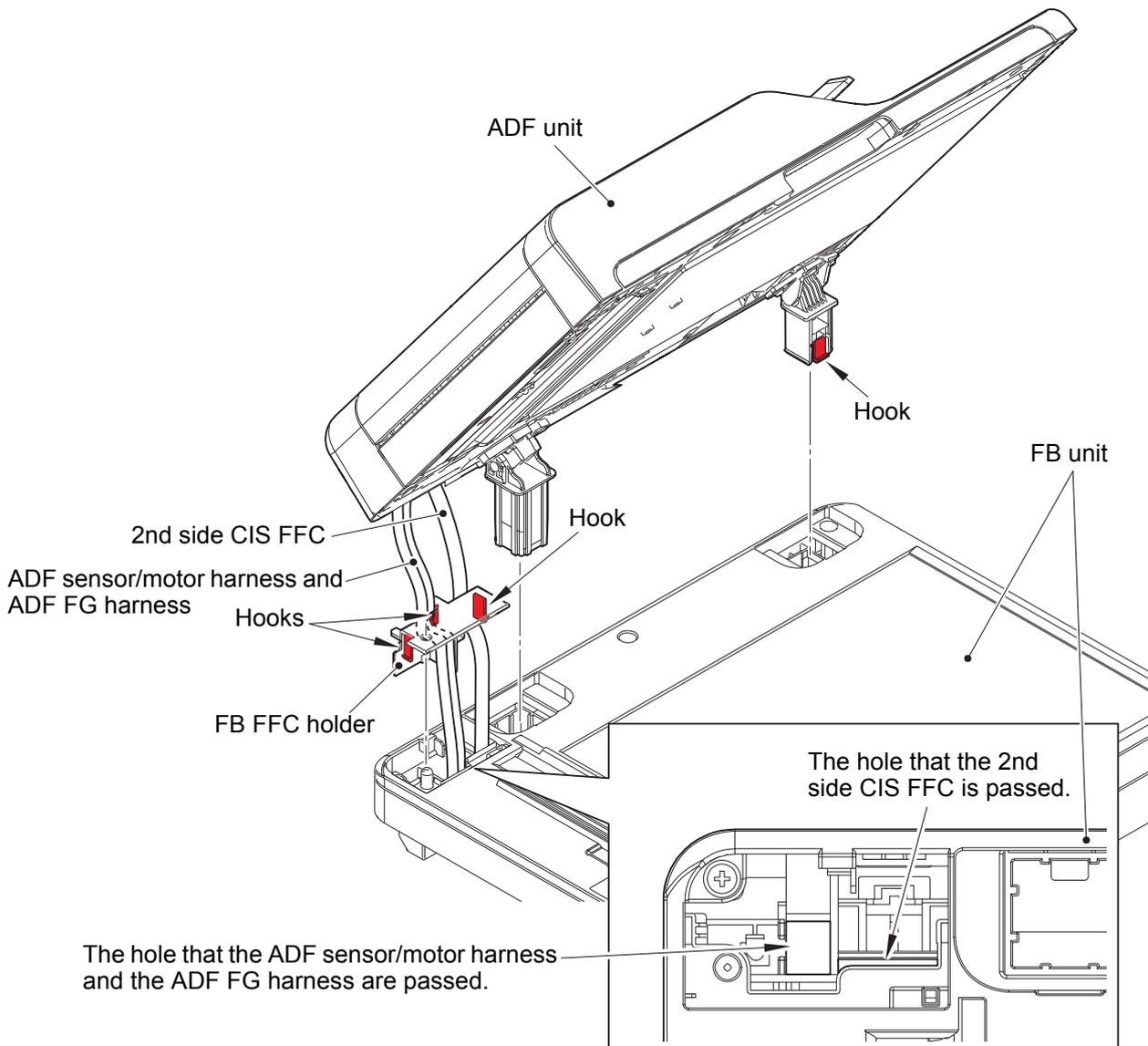
**Fig. 3-28**

🖊 **Assembling note:**
   • If you replaced the ADF unit, refer to "5. IF YOU REPLACE THE ADF UNIT, 1ST SIDE CIS UNIT, 2ND SIDE CIS UNIT OR FB UNIT" in Chapter 4 to configure settings.

*Confidential*

(5) **Wiring** >     2nd side CIS FFC, ADF sensor/motor harness, ADF FG harness

✎ **Fixtures & Fittings**
   - Double-sided tape  (x 1)



2nd side CIS FFC

FB FFC holder

Double-sided tape

ADF sensor/motor harness

ADF FG harness

**Fig. 3-29**

**Assembling note:**
- Connect the 2nd side CIS FFC, the ADF sensor/motor harness and the ADF FG harness to the FB FFC holder as described in the figure above.
- If you replaced the ADF unit, connect the 2nd side CIS FFC which is folded as described in the figure above.
- 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 cable is not at an angle.

(6)  **Remove** >   ADF hinge ASSY L

✎ **Fixtures & Fittings**
   - Taptite bind B M4x12  (x 3)

Taptite bind B M4x12

ADF unit

ADF hinge ASSY L

<Bottom side>

**Fig. 3-30**

*Confidential*
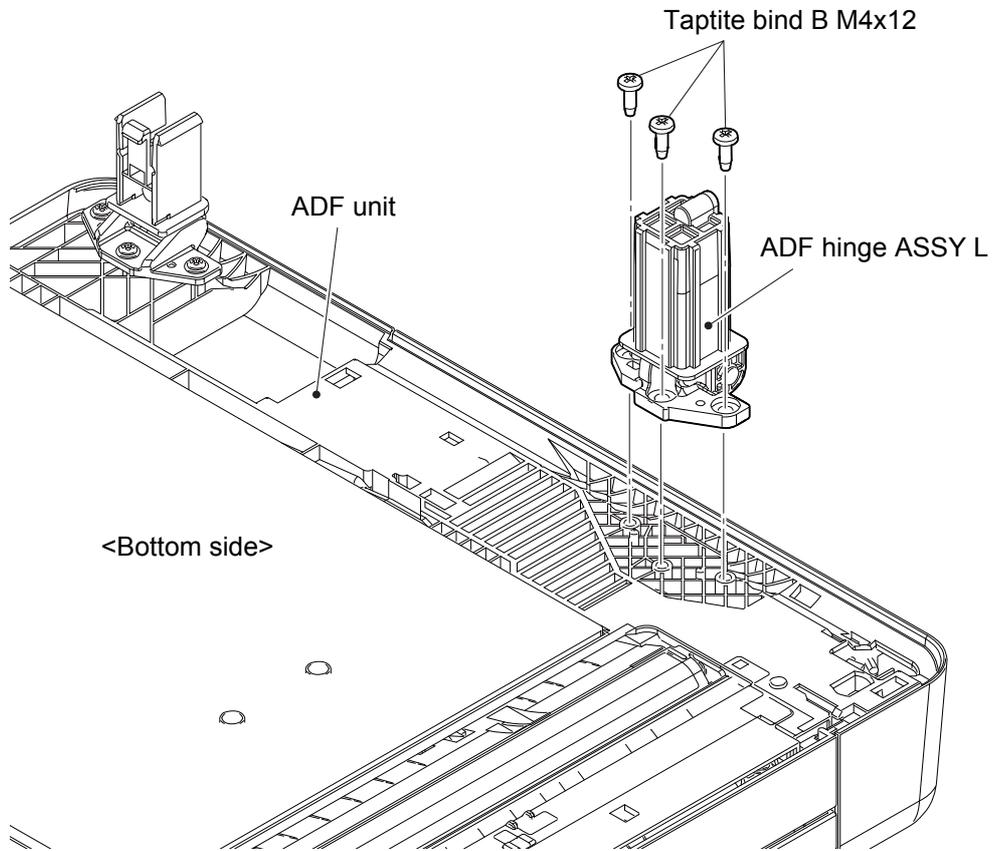
(7) **Remove** > ADF hinge arm R support, ADF hinge arm R

✎ **Fixtures & Fittings**
   - Taptite cup B M3x10 (x 1)

(8) **Remove** > ADF hinge base R

✎ **Fixtures & Fittings**
   - Taptite cup B M3x10 (x 3)



**Fig. 3-31**

*Confidential*
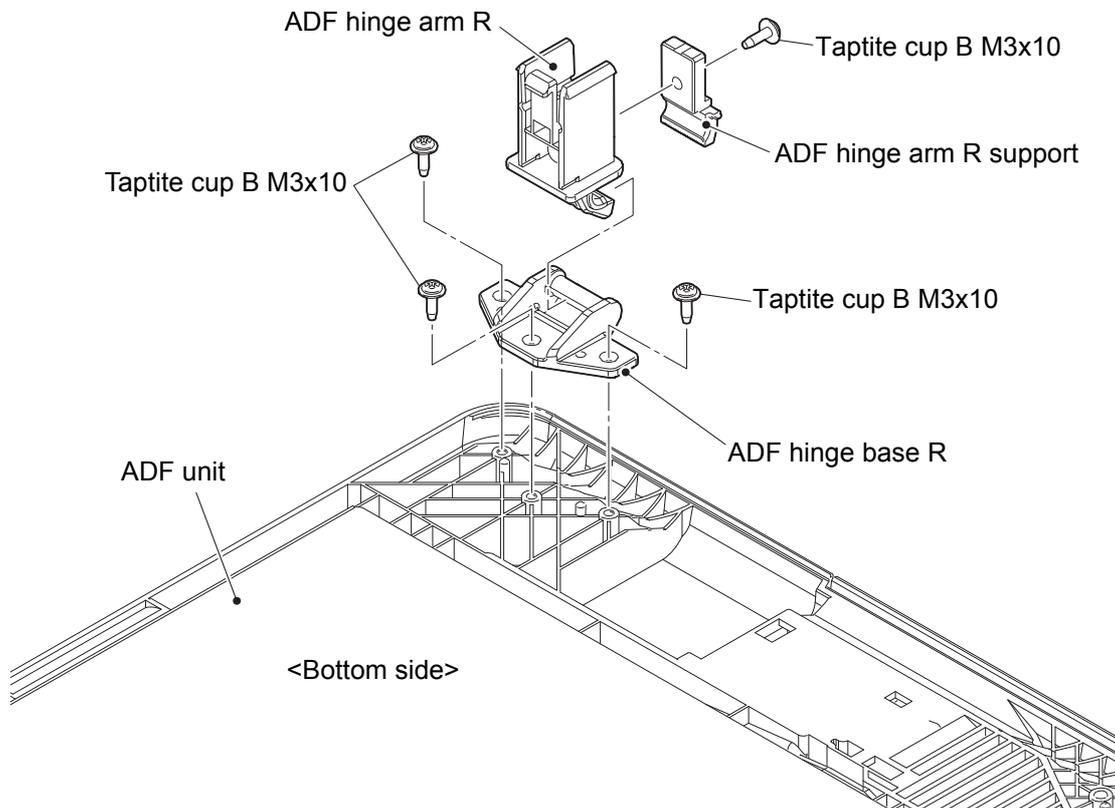
## 8.13 ADF separation roller ASSY

(1) **Open** >     ADF upper cover

(2) **Remove** >     ADF gear cover

**Fixtures & Fittings**
- Hook  (x 3)

ADF gear cover

ADF upper cover

Hooks
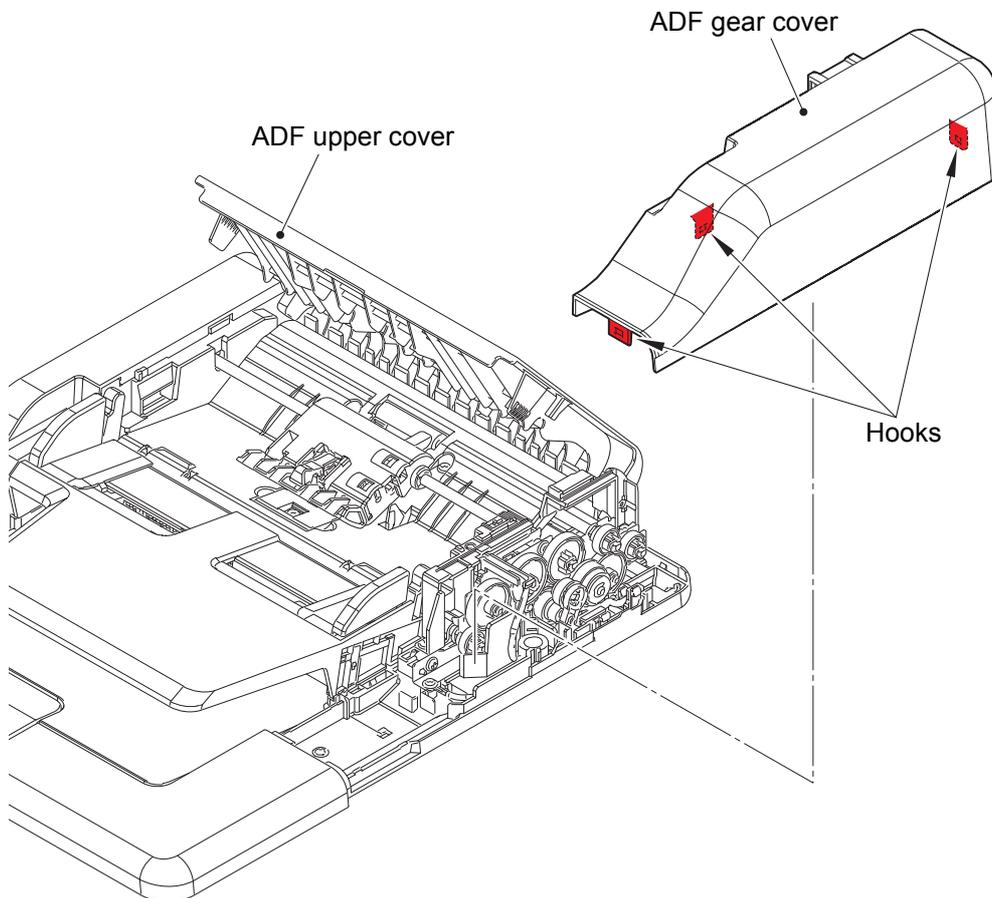
**Fig. 3-32**

(3) **Remove** > ADF separation roller ASSY

✎ **Fixtures & Fittings**
- Lock of the Conductive bushing  (x 1)
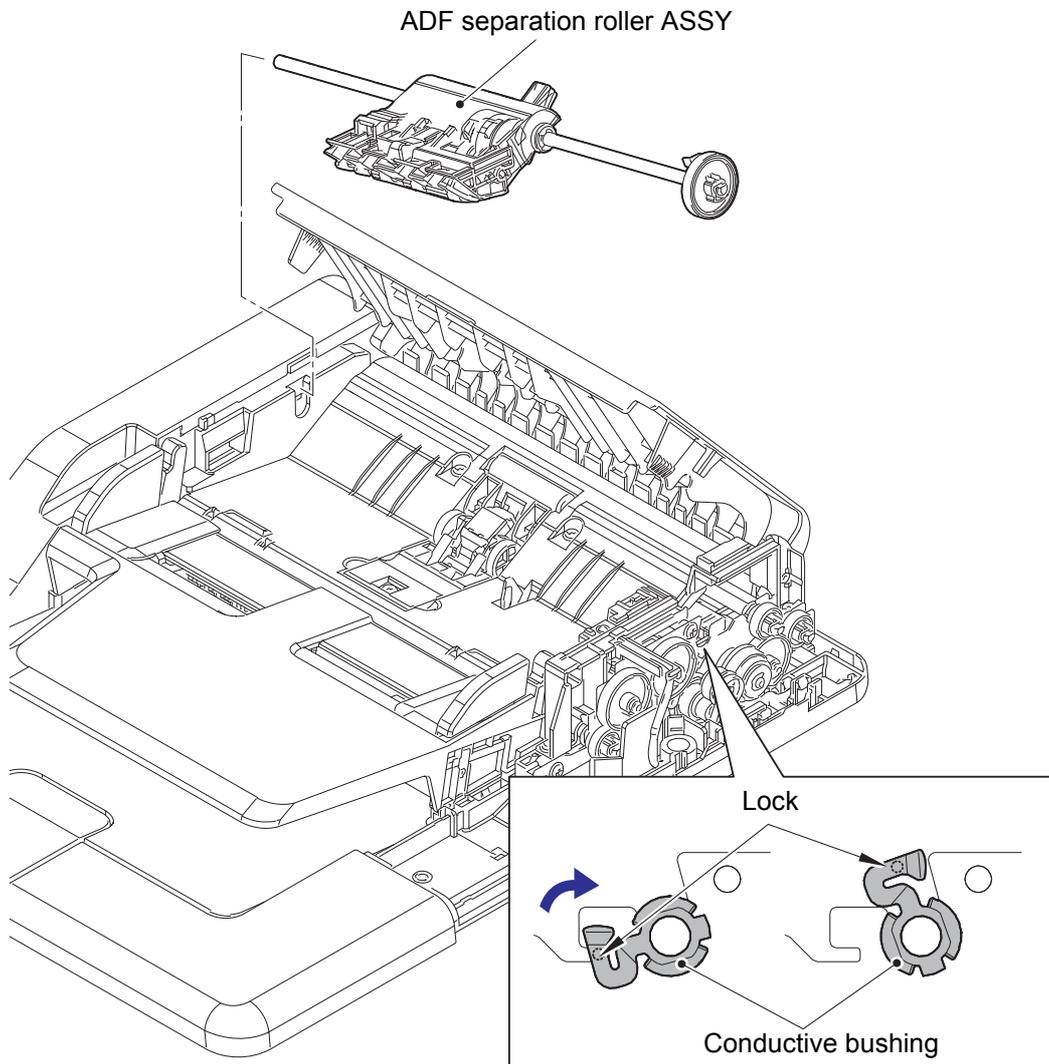


**Fig. 3-33**

## 8.14 ADF separation holder ASSY

(1) **Remove** > ADF separation holder ASSY

**Fixtures & Fittings**
- Taptite cup B M3x10 (x 1)

Taptite cup B M3x10 ————
———— ADF separation holder ASSY
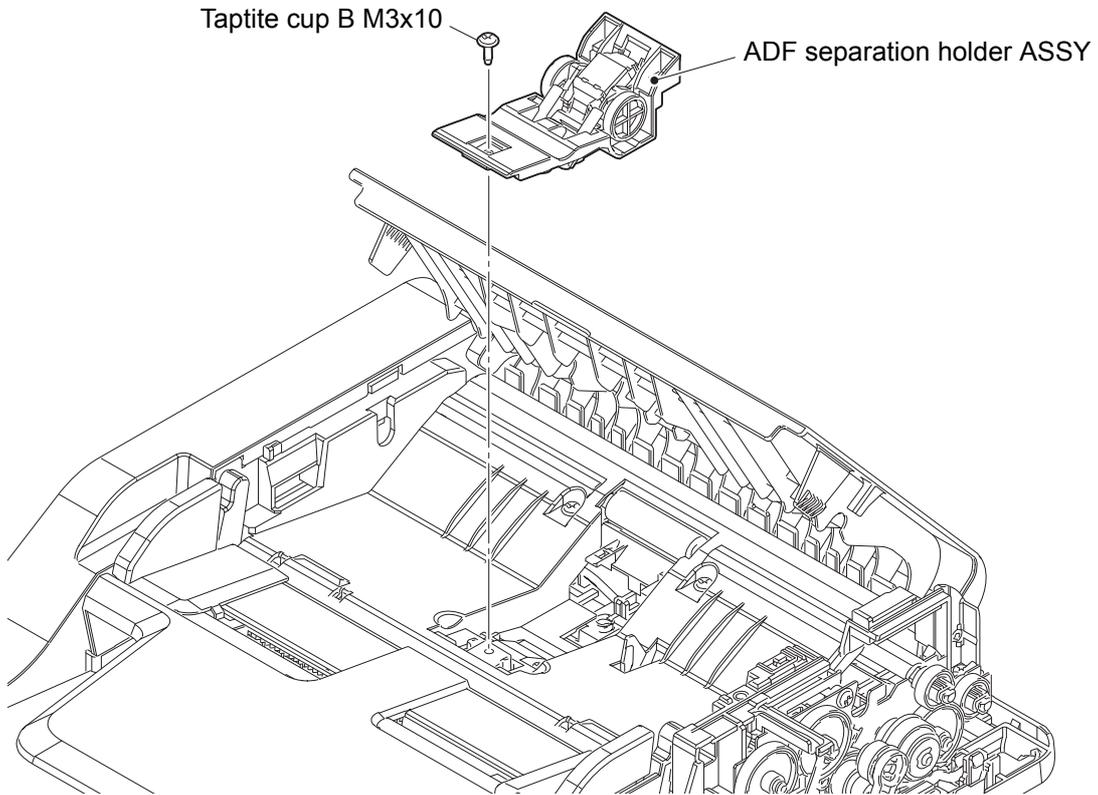
**Fig. 3-34**

## 8.15  2nd side CIS unit / 2nd side CIS FFC

(1)  **Close** >　　ADF upper cover
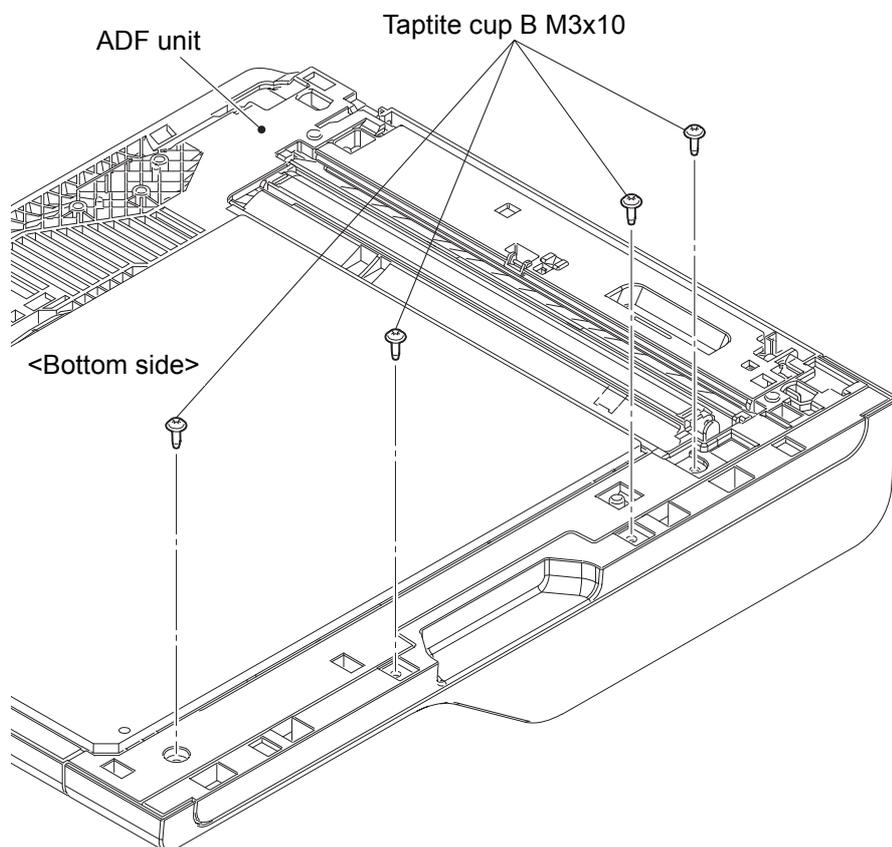
(2)  **Remove** >　Screws

　　🔩 **Fixtures & Fittings**
　　　- Taptite cup B M3x10  (x 4)
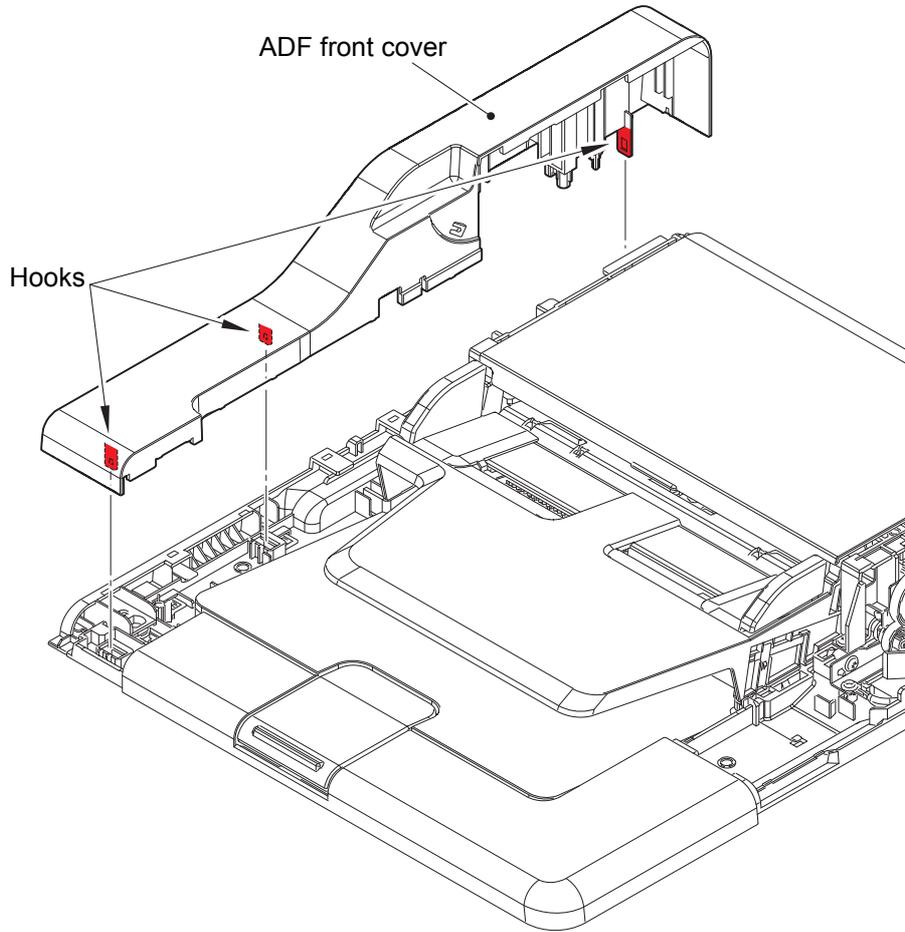
ADF unit

Taptite cup B M3x10

<Bottom side>
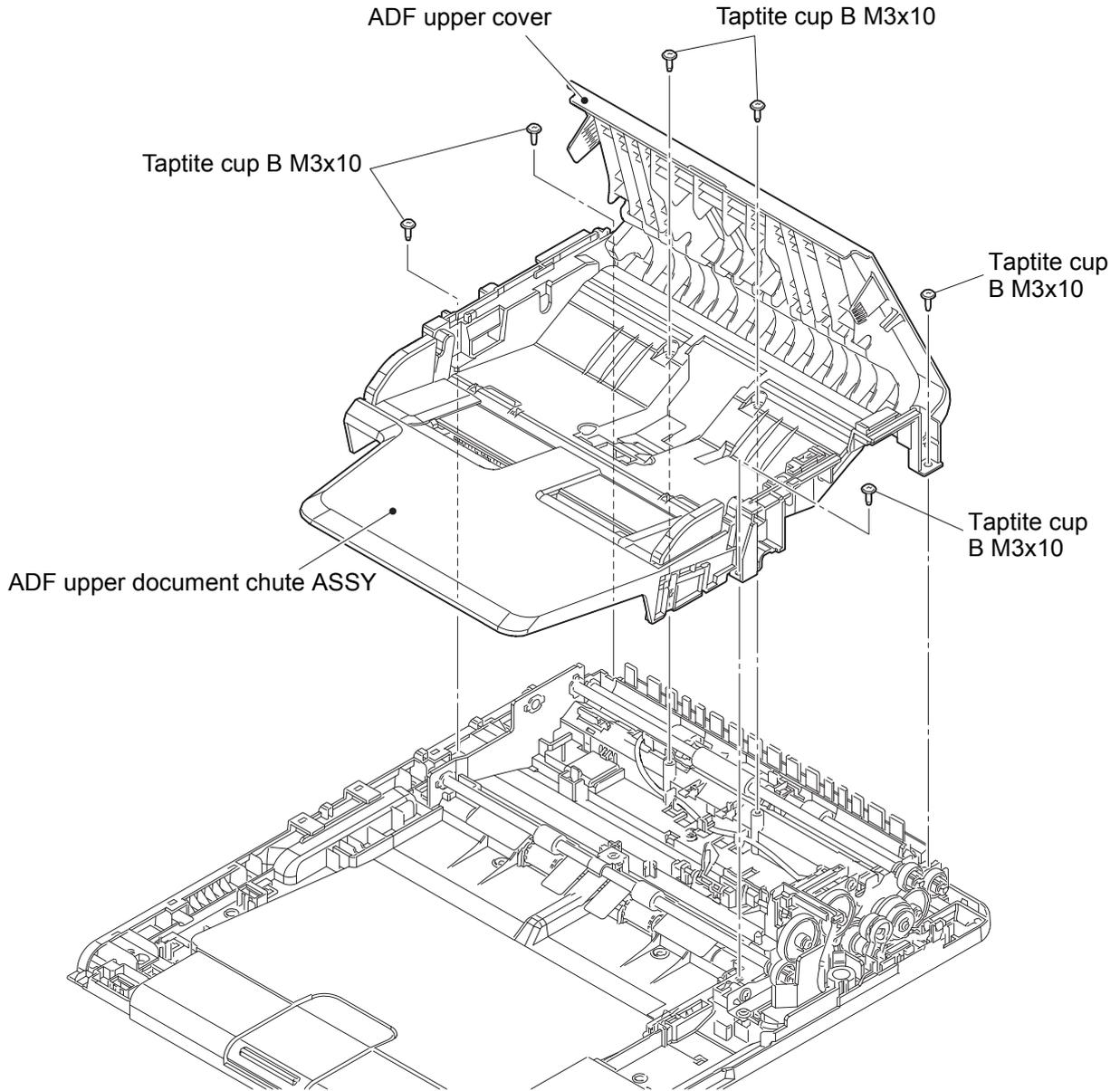
**Fig. 3-35**

(3) **Remove** > ADF front cover

✎ **Fixtures & Fittings**
- Hook  (x 3)



**Fig. 3-36**

(4) **Open** > ADF upper cover

(5) **Remove** > ADF upper document chute ASSY

✎ **Fixtures & Fittings**
- Taptite cup B M3x10  (x 6)

ADF upper cover        Taptite cup B M3x10

Taptite cup B M3x10

Taptite cup
B M3x10

Taptite cup
B M3x10

ADF upper document chute ASSY

**Fig. 3-37**

(6) **Remove** > ADF FG harness, ADF ground spring

✎ **Fixtures & Fittings**
- Taptite cup S M3x6 SR (x 1)

(7) **Wiring** > ADF FG harness, ADF sensor/motor harness

💡 **Point:**
- Pull out the ADF sensor/motor harness, the ADF FG harness and the 2nd side CIS FFC through each hole.

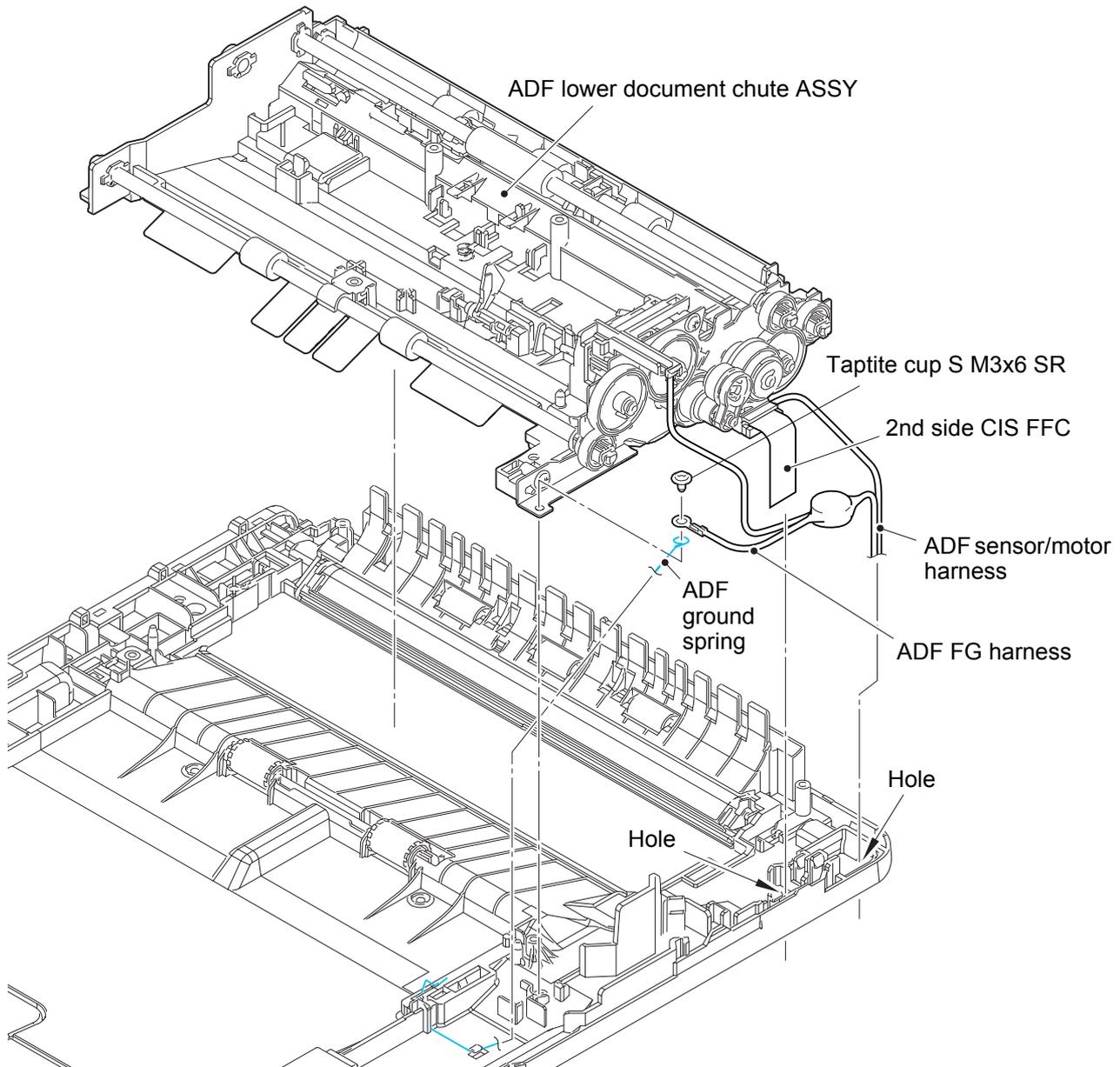(8) **Remove** > ADF lower document chute ASSY



**Fig. 3-38**

Harness routing: Refer to "3. ADF sensor/motor harness (For models with ADF), ADF FG harness".

*Confidential*

(9) **Wiring** >  2nd side CIS FFC

(10) **Remove** >  2nd side scanner glass

> **Point:**
> • Lift the Hook and slide the 2nd side scanner glass in the direction of arrow A. Lift the left end of the 2nd side scanner glass to remove it in the direction of arrow B.
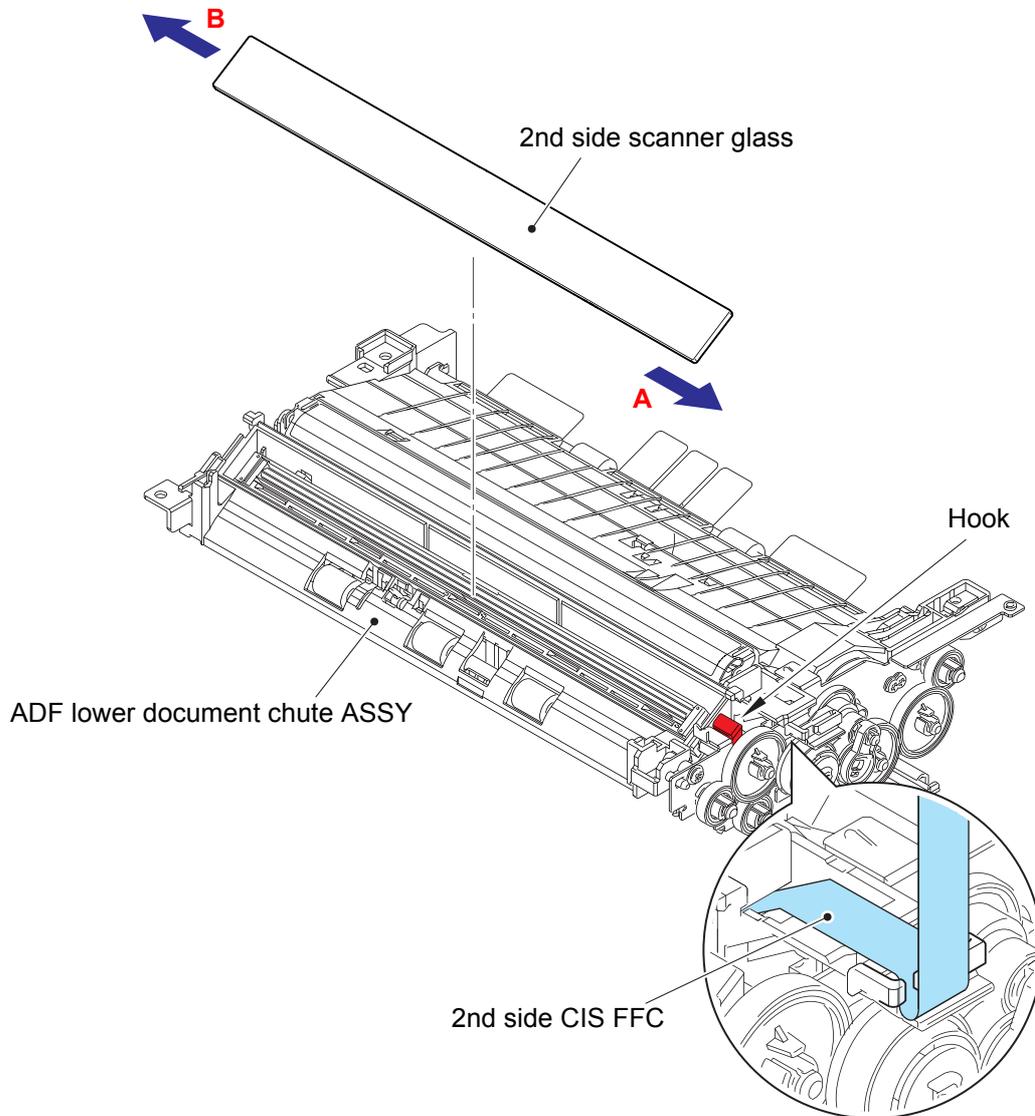


**Fig. 3-39**

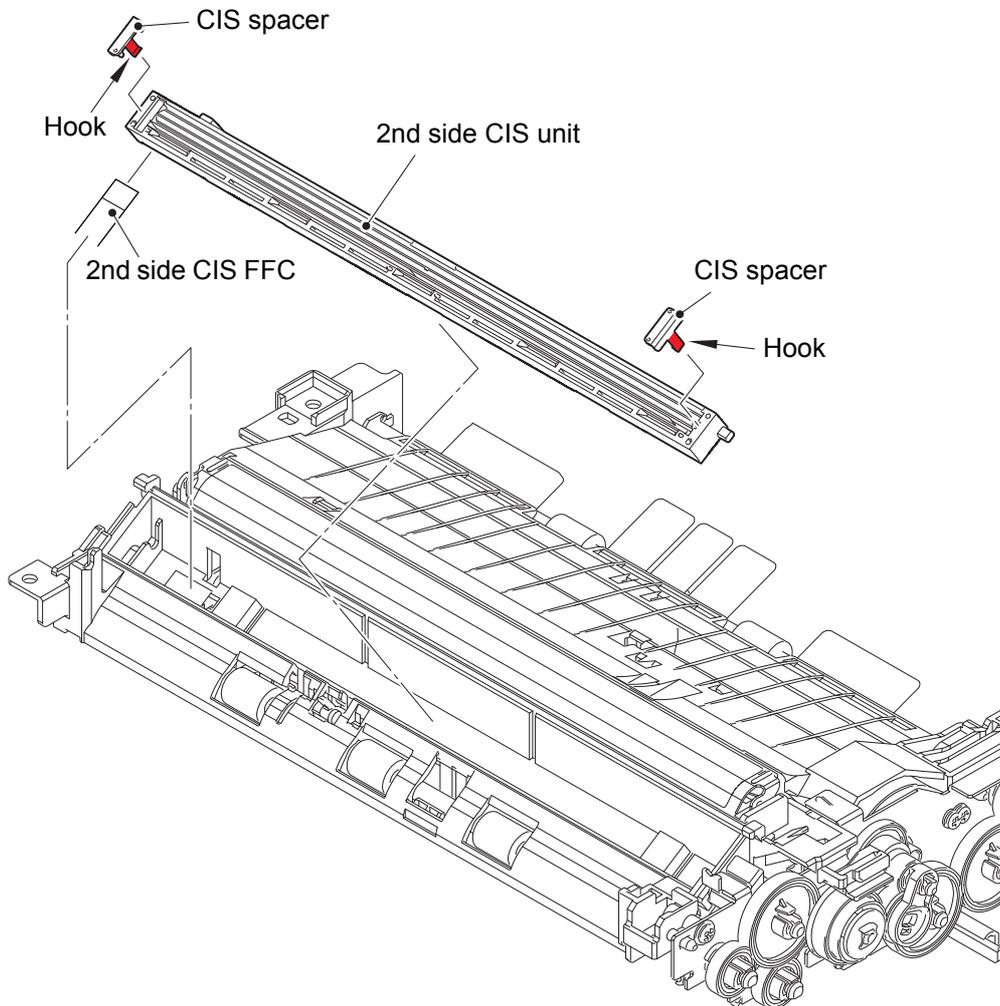Harness routing:  Refer to "2. 2nd side CIS FFC (For models with ADF)".

(11) **Remove** > 2nd side CIS unit

(12) **Disconnect** > 2nd side CIS FFC

(13) **Remove** > CIS spacer  (x 2)

    **Fixtures & Fittings**
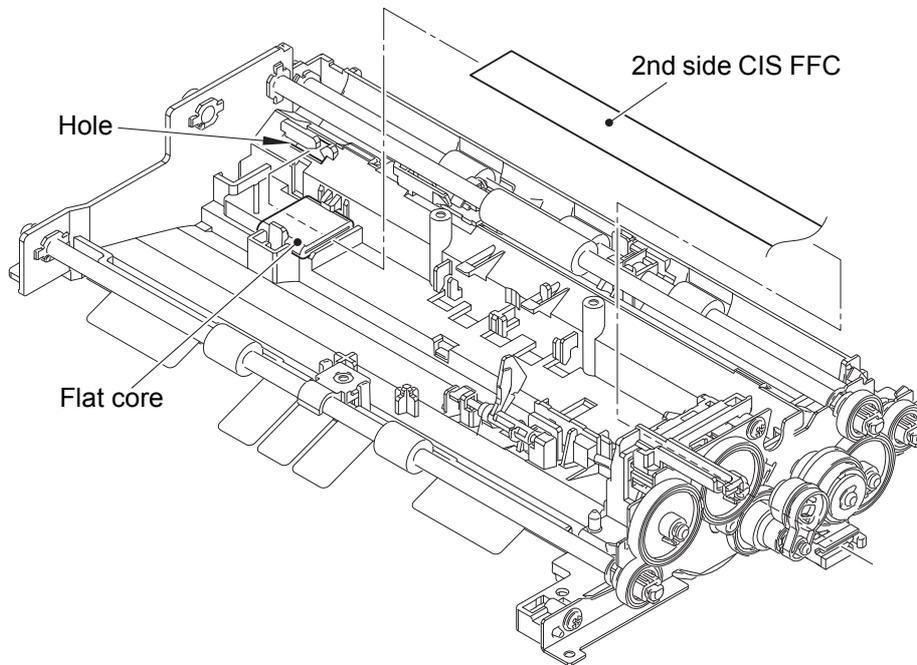    - Hook  (x 1)



**Fig. 3-40**

**Assembling note:**
- If you replaced the 2nd side CIS unit, refer to "5.  IF YOU REPLACE THE ADF UNIT, 1ST SIDE CIS UNIT, 2ND SIDE CIS UNIT OR FB UNIT" in Chapter 4 to configure settings.
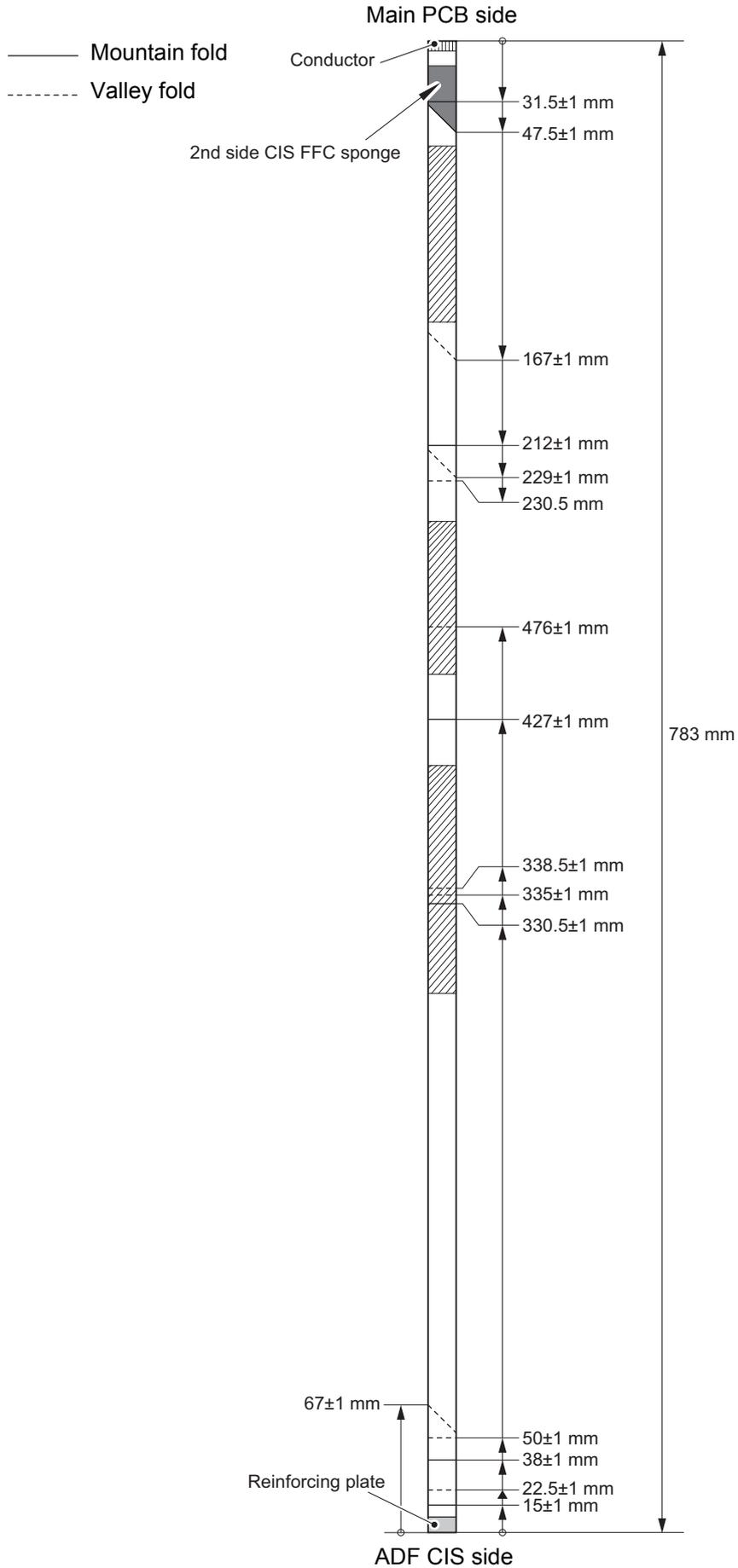
(14) **Remove** > 2nd side CIS FFC

> ☀ **Point:**
> • Pull out the 2nd side CIS FFC through the hole and the Flat core.



**Fig. 3-41**

Harness routing:  Refer to "2. 2nd side CIS FFC (For models with ADF)".

<How to fold the 2nd side CIS FFC>

Main PCB side

—————— Mountain fold

Conductor

- - - - - - Valley fold

2nd side CIS FFC sponge

31.5±1 mm
47.5±1 mm

167±1 mm

212±1 mm
229±1 mm
230.5 mm

476±1 mm

427±1 mm

783 mm

338.5±1 mm
335±1 mm
330.5±1 mm

67±1 mm

50±1 mm
38±1 mm

Reinforcing plate

22.5±1 mm
15±1 mm

ADF CIS side

The angle of the diagonal fold is 45°.

**Fig. 3-42**

*Confidential*

## 8.16 ADF document detection sensor / ADF scanning position sensor

(1) **Remove** > ADF document detection sensor

🔩 **Fixtures & Fittings**
- Hook (x 1)

(2) **Disconnect** > ADF sensor/motor harness

(3) **Remove** > ADF feed roller 1

🔩 **Fixtures & Fittings**
- Lock of the Conductive bushing (x 1)

(4) **Remove** > ADF scanning position sensor

🔩 **Fixtures & Fittings**
- Hook (x 1)

> 💡 **Point:**
> • Rotate the ADF scanning position actuator in the direction of the arrow. Push the Hook of the ADF lower document chute ASSY to remove the ADF scanning position sensor from the ADF lower document chute ASSY.

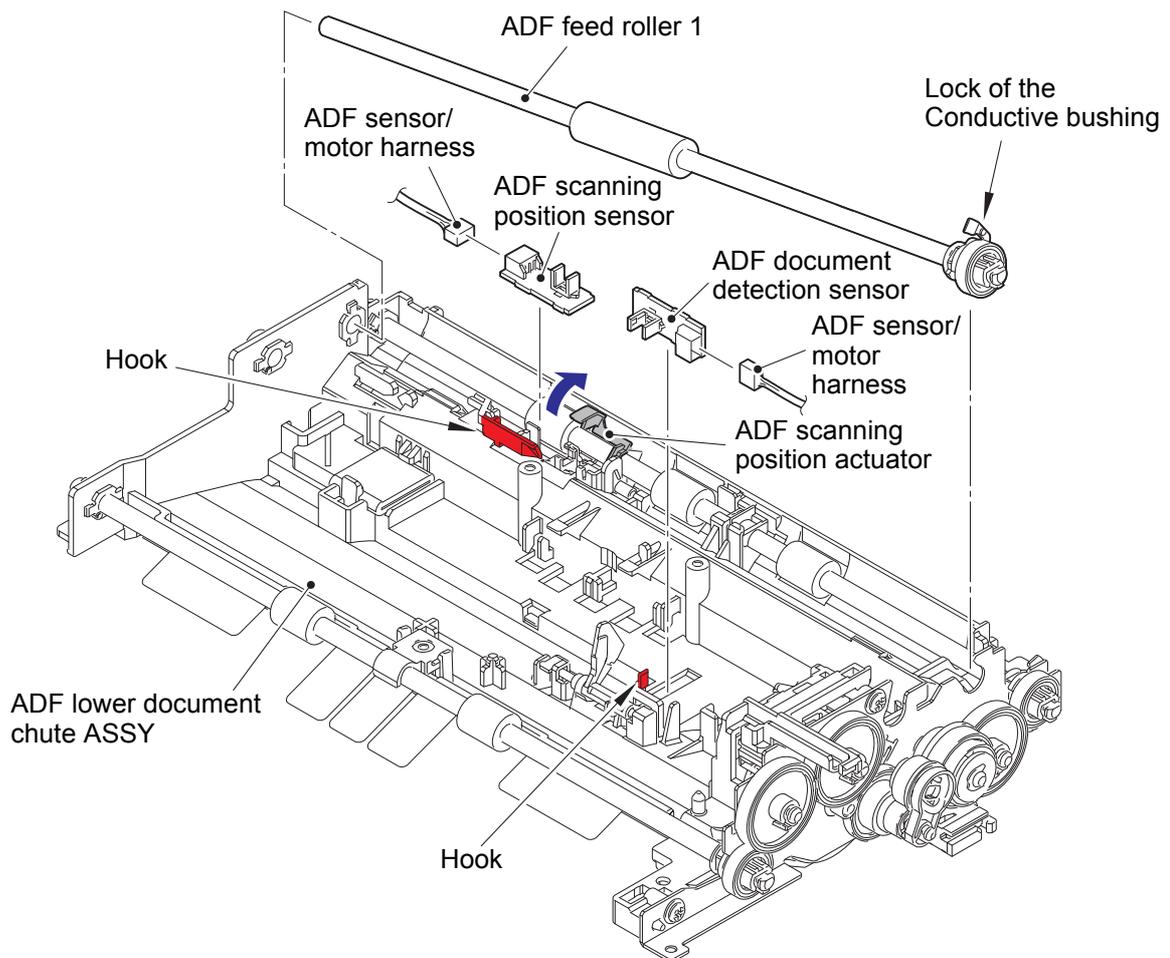(5) **Disconnect** > ADF sensor/motor harness



**Fig. 3-43**

## 8.17 FB document cover ASSY (For models without ADF)

(1) **Remove** > FB document cover ASSY

✎ **Fixtures & Fittings**
   - Hook  (x 2)



FB document cover ASSY
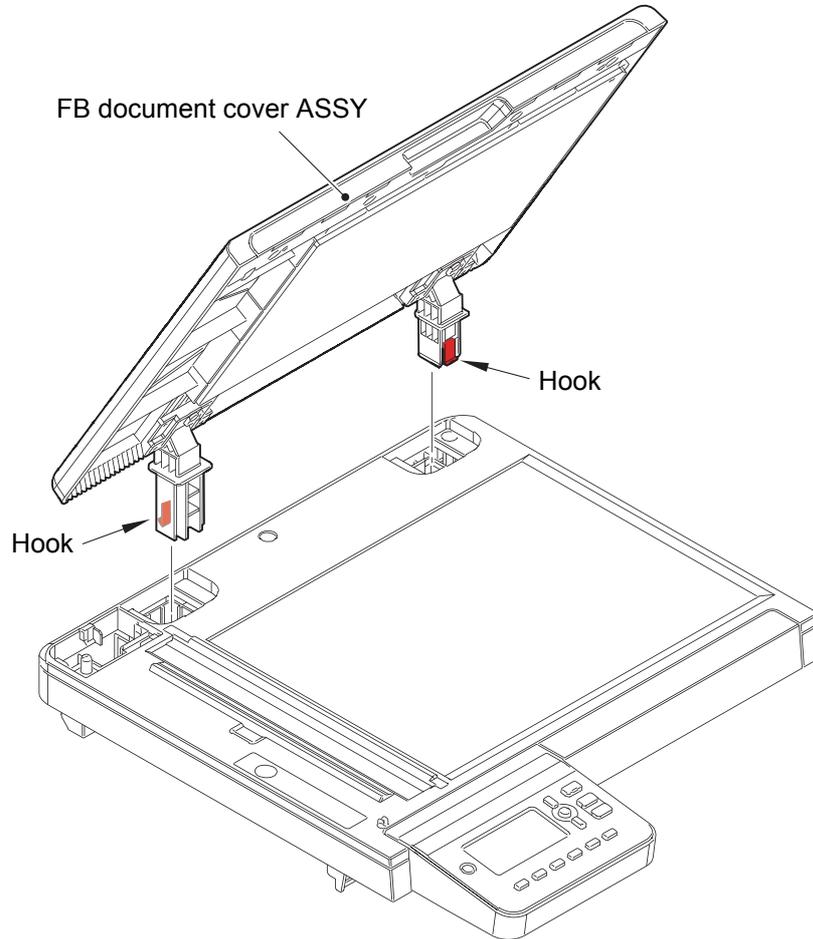
Hook

Hook

**Fig. 3-44**

(2) **Remove** > DCP hinge base L, DCP hinge arm L

✎ **Fixtures & Fittings**
   - Taptite bind B M4x12 (x 3)

(3) **Remove** > DCP hinge base R, DCP hinge arm R

✎ **Fixtures & Fittings**
   - Taptite bind B M4x12 (x 3)

Taptite bind B M4x12

DCP hinge base L

Taptite bind B M4x12

DCP hinge base R

\<Bottom side\>

DCP hinge arm L

DCP hinge arm R
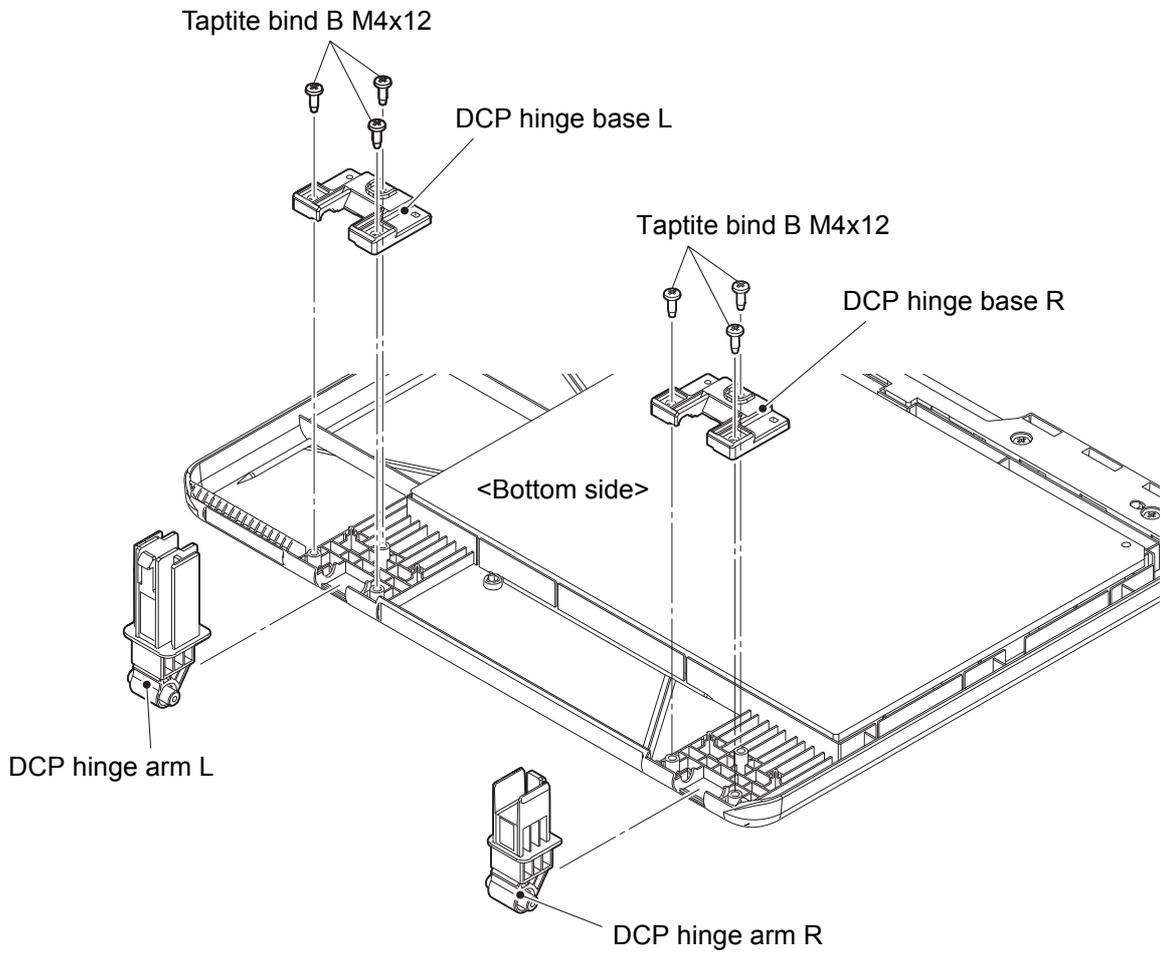
**Fig. 3-45**

## 8.18 Panel unit

### ■ For models with touch panel

(1) **Remove** > Screws

🪛 **Fixtures & Fittings**
- Taptite cup B M3x10 (x 4)

Taptite cup B M3x10

&lt;Bottom side&gt;

**Fig. 3-46**

(2) **Remove** > Panel unit

✎ **Fixtures & Fittings**
   - Hook  (x 1)

┌─────────────────────────────────────────────────────────────────────────┐
│ 💡  **Point:**                                                            │
│    • When removing the Panel unit, DO NOT pull the Panel unit strongly because it is connected │
│      to the Panel FFC.                                                     │
└─────────────────────────────────────────────────────────────────────────┘

(3) **Disconnect** > Panel FFC



**Fig. 3-47**

┌─────────────────────────────────────────────────────────────────────────┐
│ 🪛  **Assembling note:**                                                  │
│    • If you replaced the Panel unit, refer to "4.  IF YOU REPLACE THE LCD, PANEL UNIT OR │
│      PANEL PCB" in Chapter 4 to configure settings.                        │
└─────────────────────────────────────────────────────────────────────────┘

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■ **For models with 2-line LCD**

(1) **Remove** > Screws

✎ **Fixtures & Fittings**
   - Taptite cup B M3x10  (x 4)

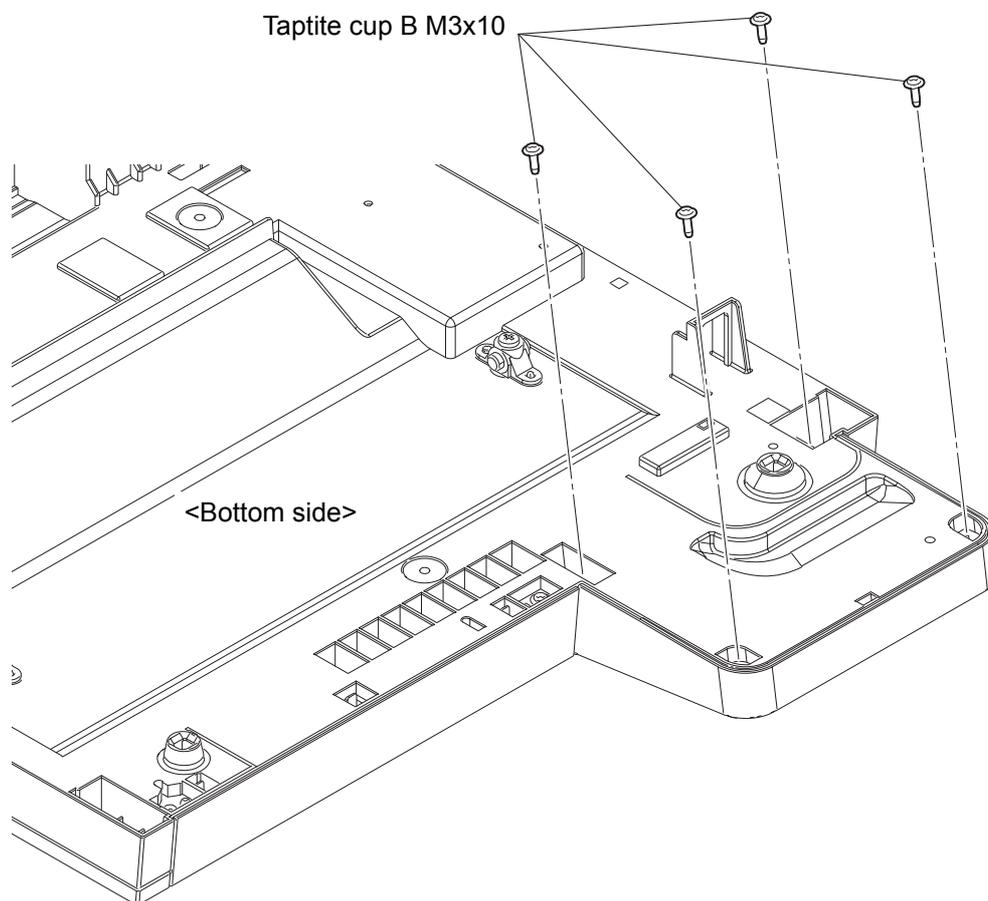Taptite cup B M3x10

<Bottom side>
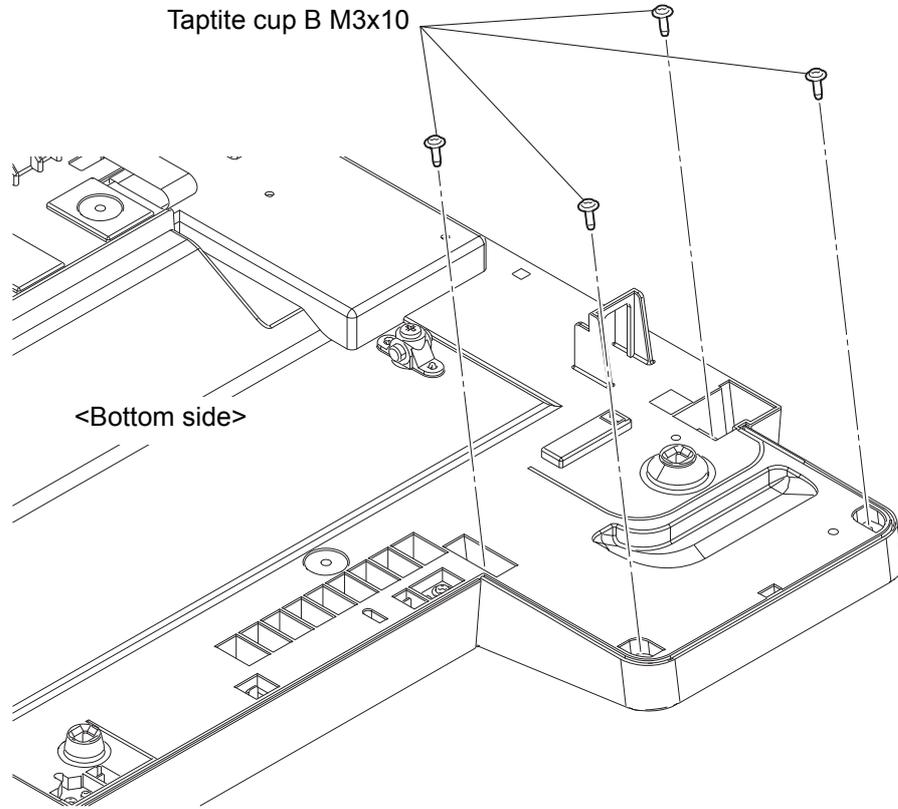
**Fig. 3-48**

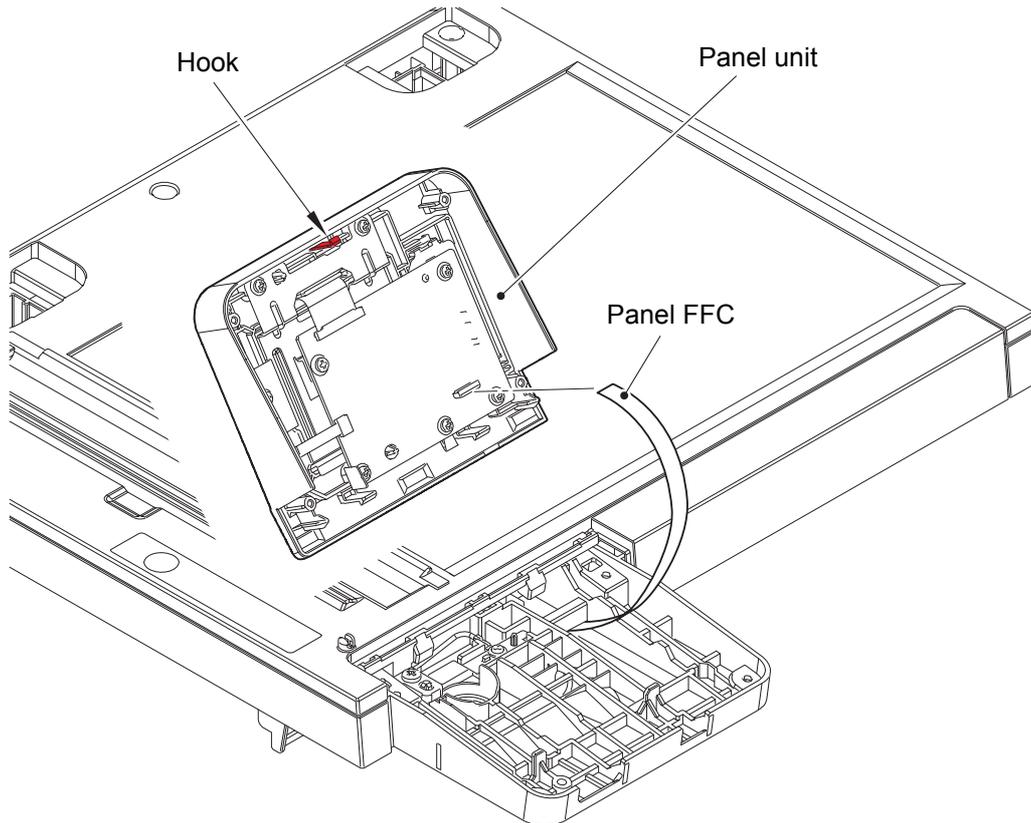(2) **Remove** > Panel unit

🪛 **Fixtures & Fittings**
   - Hook  (x 1)

💡 **Point:**
   • When removing the Panel unit, DO NOT pull the Panel unit strongly because it is connected to the Panel FFC.

(3) **Disconnect** > Panel FFC, Panel FG harness



Hook

Panel unit

Panel FFC

Panel FG harness
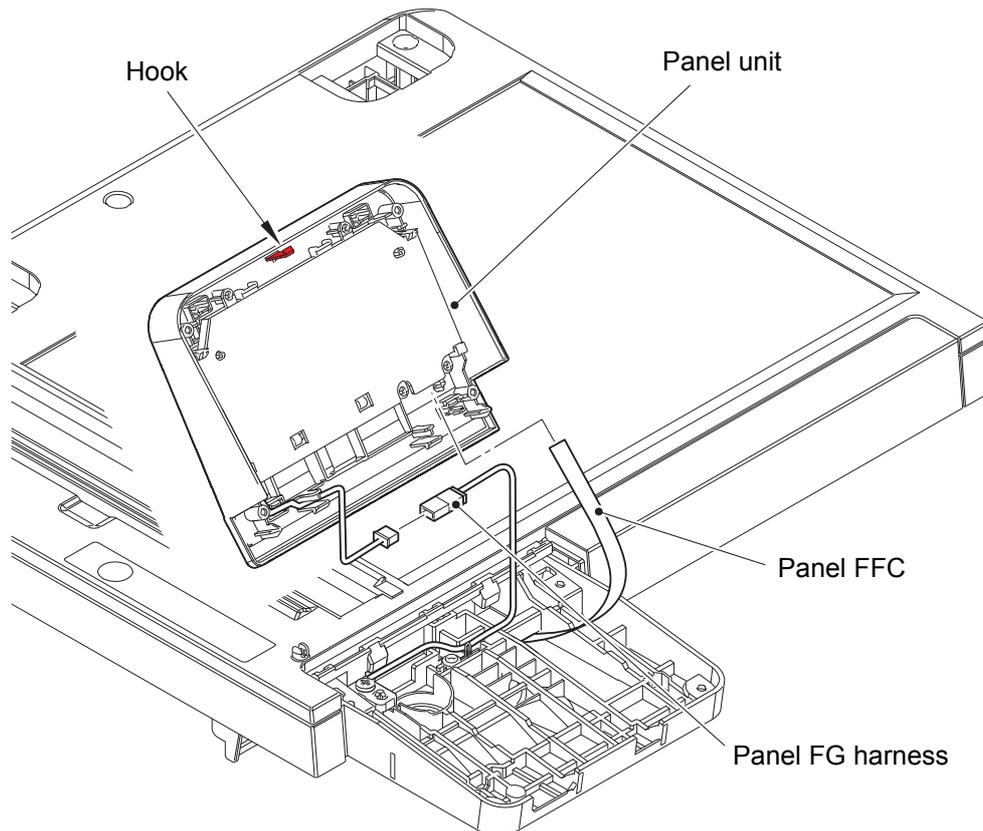
**Fig. 3-49**

🪛 **Assembling note:**
   • If you replaced the Panel unit, refer to "4. IF YOU REPLACE THE LCD, PANEL UNIT OR PANEL PCB" in Chapter 4 to configure settings.

## 8.19  Panel PCB

■ **For models with touch panel**

(1) **Disconnect** >  LCD FFC

    🔩 **Fixtures & Fittings**
    - Lock  (x 1)

(2) **Disconnect** >  Touch panel FFC

(3) **Remove** >  Panel PCB

    🔩 **Fixtures & Fittings**
    - Screw pan (S/P washer) M3x12DB  (x 4)
    - Screw pan (S/P washer) M3.5x6  (x 1)

Screw pan (S/P washer) M3x12DB

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

Touch panel FFC

LCD FFC

Panel PCB

Lock

**Fig. 3-50**

*Confidential*
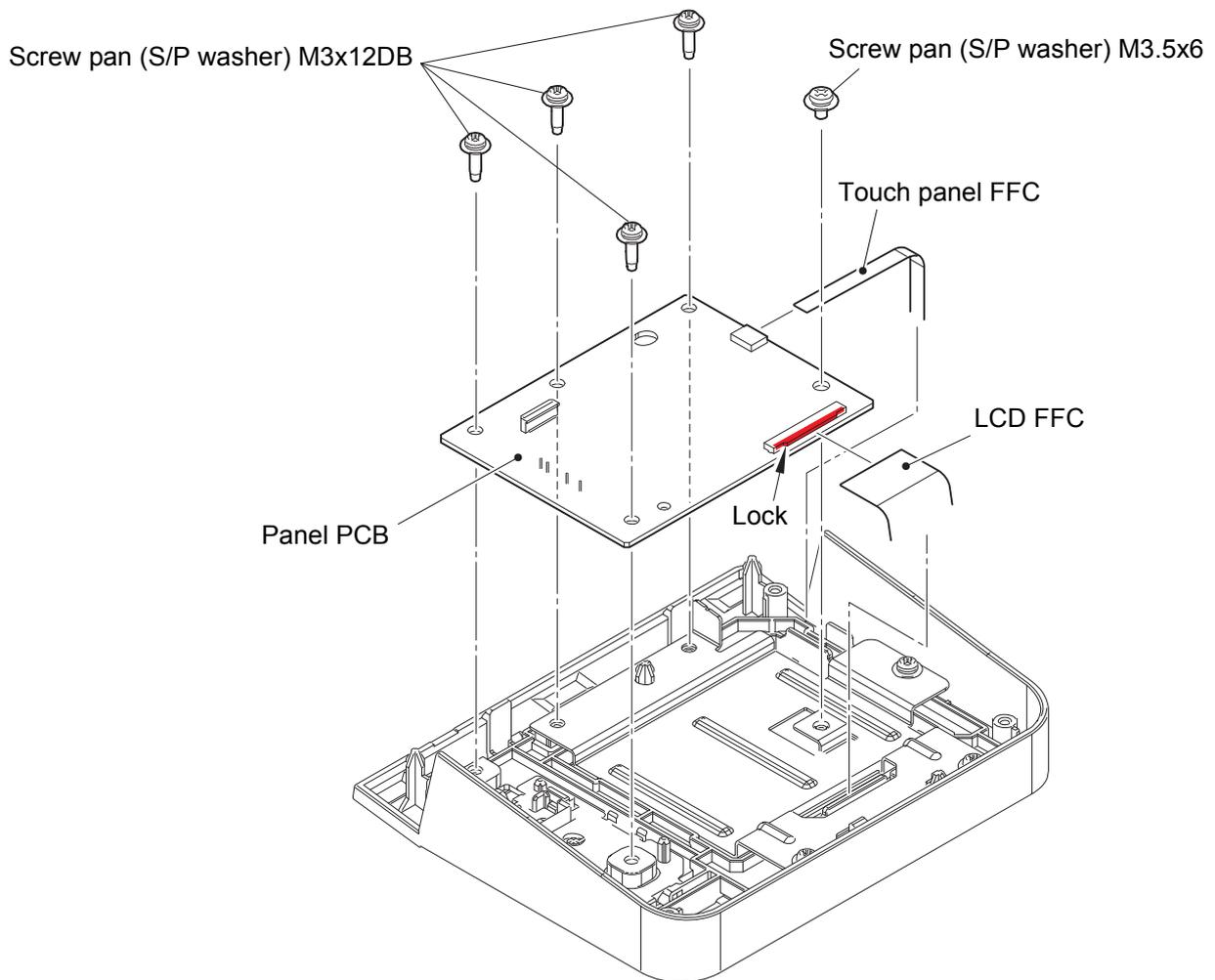
■ **For models with 2-line LCD**

(1) **Remove** > Panel PCB

✎ **Fixtures & Fittings**
- Hook (x 2)

(2) **Disconnect** > LCD FFC, Panel mini FG harness

✎ **Fixtures & Fittings**
- Lock (x 1)

Panel PCB

Lock

LCD FFC

Panel mini FG harness
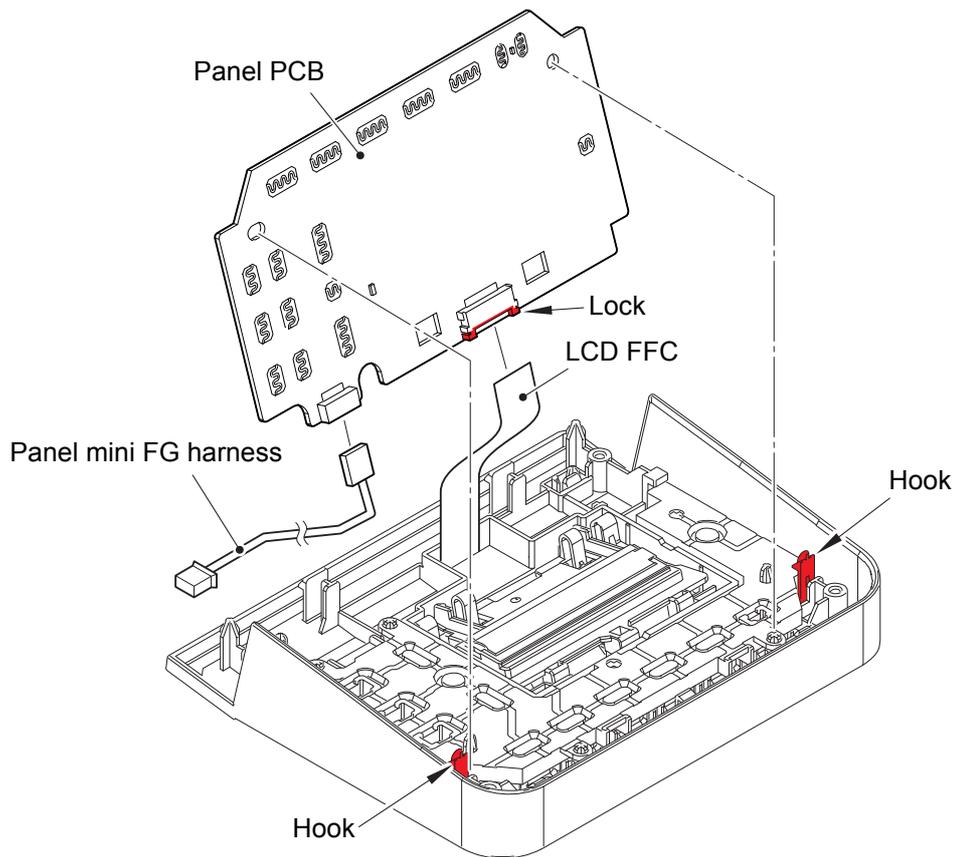
Hook

Hook

**Fig. 3-51**

## 8.20 LCD

■ **For models with touch panel**

(1) **Remove** > Shield plate

  🪛 **Fixtures & Fittings**
   - Screw pan (S/P washer) M3x12DB (x 3)

(2) **Remove** > LCD

Screw pan (S/P washer) M3x12DB

Shield plate

LCD
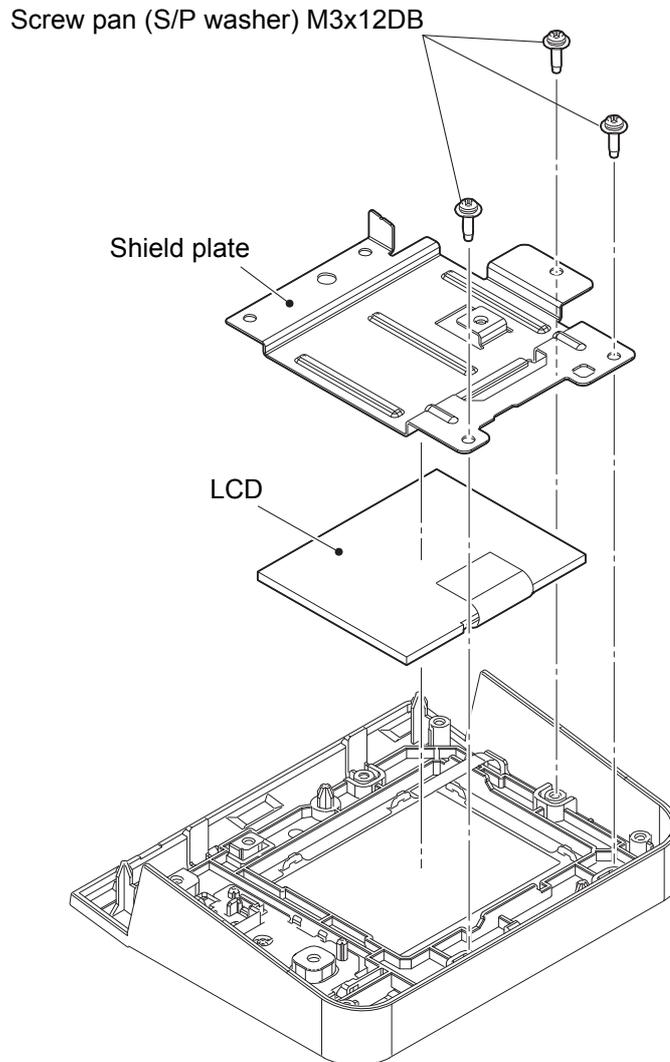
**Fig. 3-52**

■ **For models with 2-line LCD**

   (1)  **<u>Remove</u> >**   LCD

      🪛 **Fixtures & Fittings**
        - Hook  (x 2)
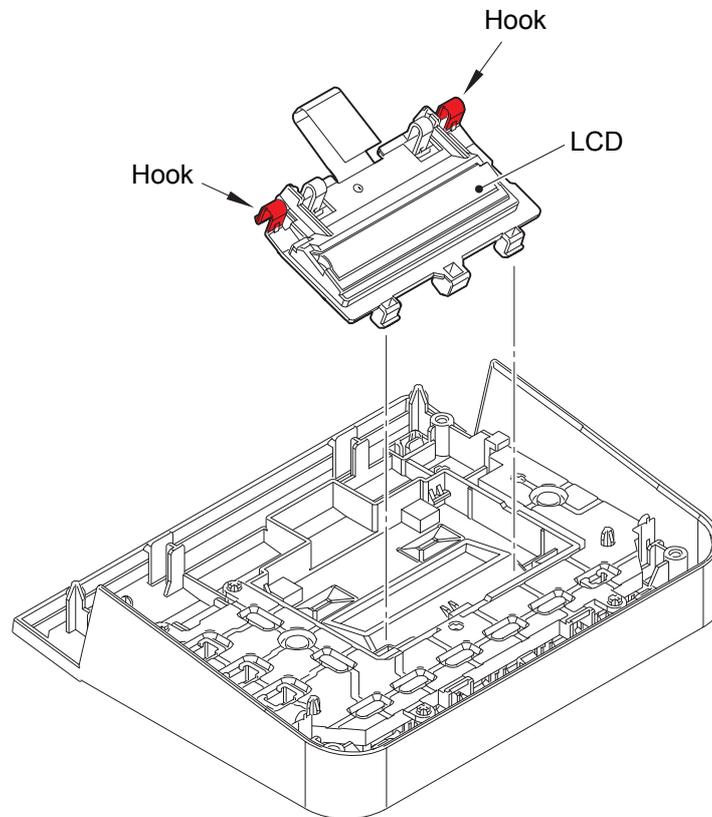


**Fig. 3-53**

## 8.21  Touch panel (For models with touch panel)

(1)  **Remove** >  Power key holder

(2)  **Remove** >  Touch panel

Power key holder
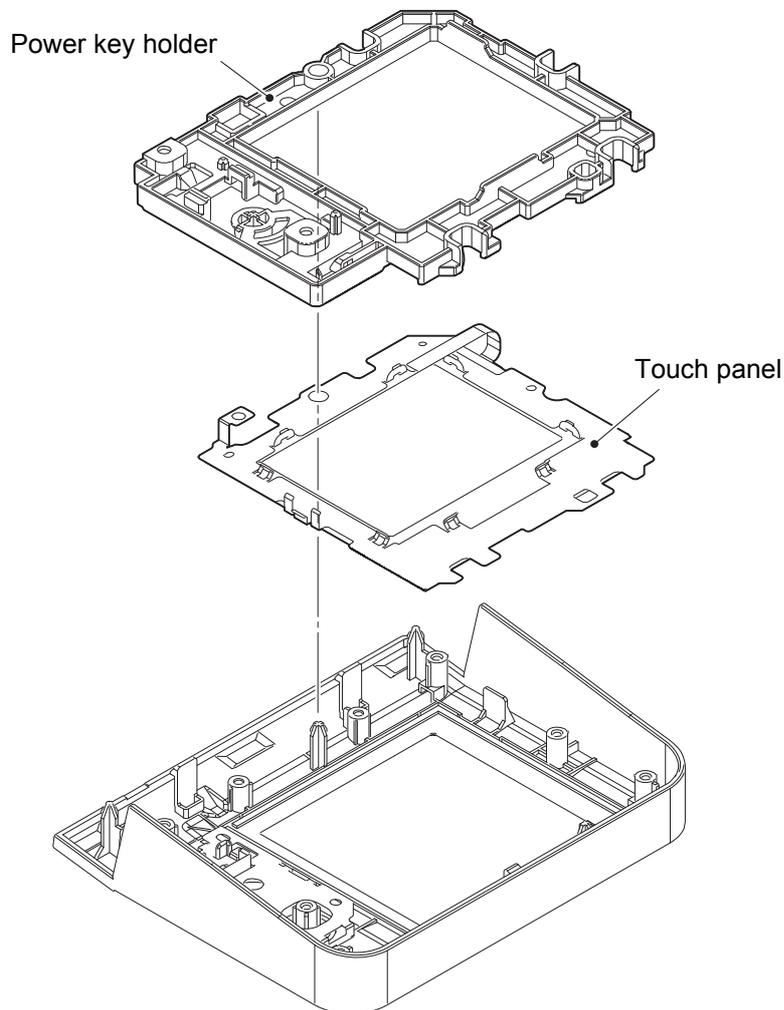
Touch panel

**Fig. 3-54**

**Assembling note:**
- If you replaced the Touch panel, refer to "4.  IF YOU REPLACE THE LCD, PANEL UNIT OR PANEL PCB" in Chapter 4 to configure settings.

## 8.22 FB top cover ASSY

(1) **Remove** > Screws

🔩 **Fixtures & Fittings**
- Taptite cup B M3x10 (x 2)

Taptite cup B M3x10

<Bottom side>
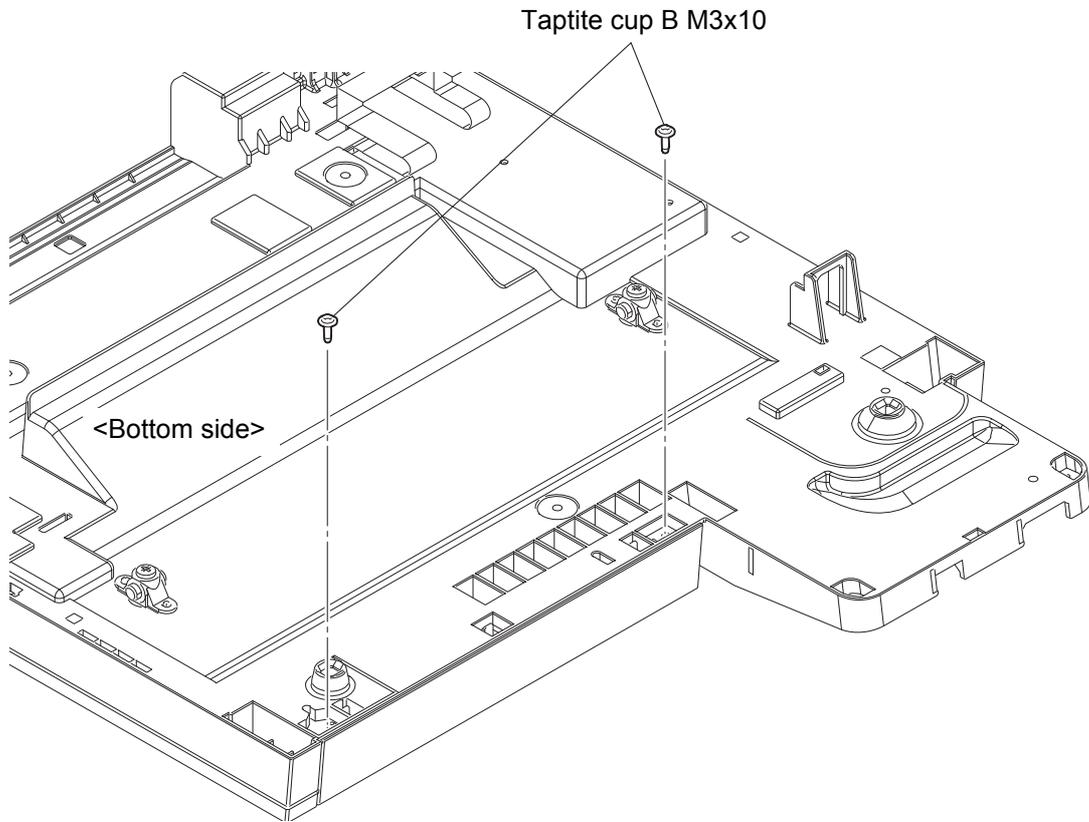
**Fig. 3-55**

(2) **Remove** > FB dress cover

🔩 **Fixtures & Fittings**
- Hook (x 3)

FB dress cover

Hooks

**Fig. 3-56**

*Confidential*
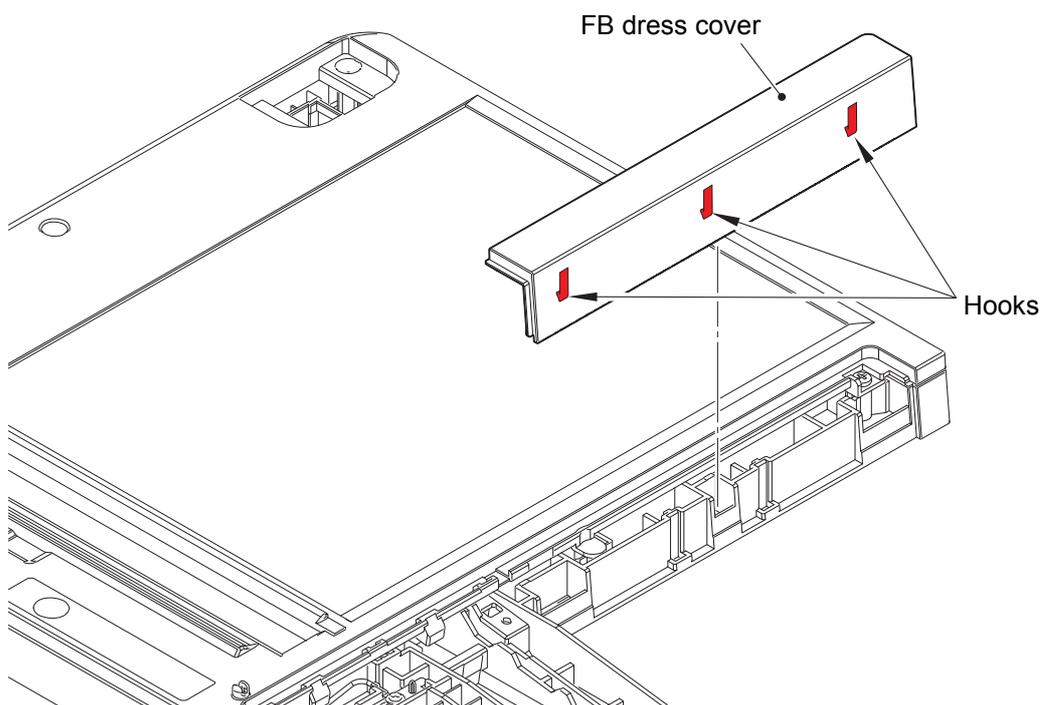
(3) **Remove** > FB top cover ASSY

✏️ **Fixtures & Fittings**
- Taptite bind B M4x12 (x 5)

Taptite bind B M4x12

FB top cover ASSY
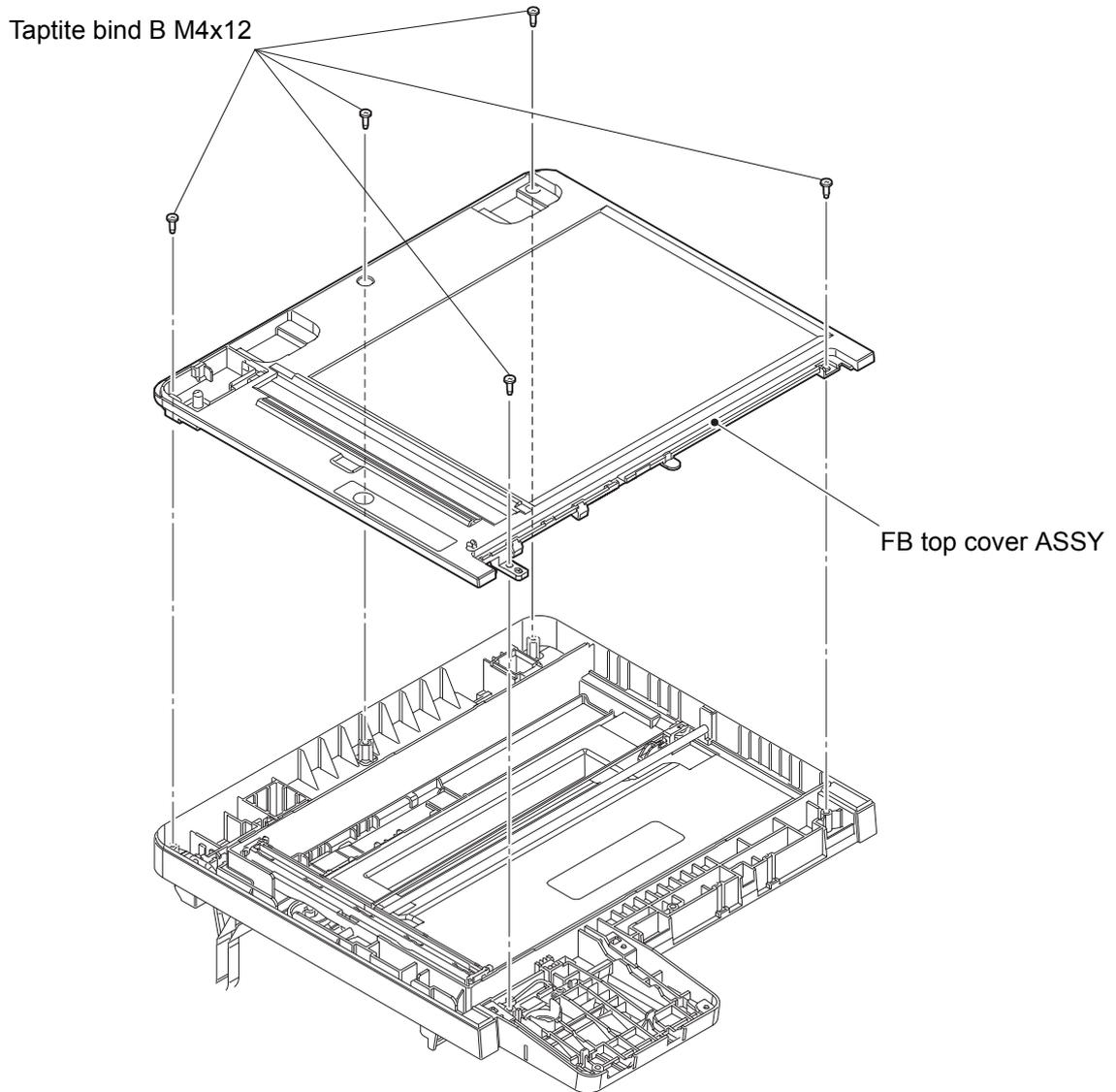
**Fig. 3-57**

## 8.23 Panel FFC / Panel FFC sponge

(1) **Wiring** >     FB motor harness

(2) **Remove** >     Panel FFC
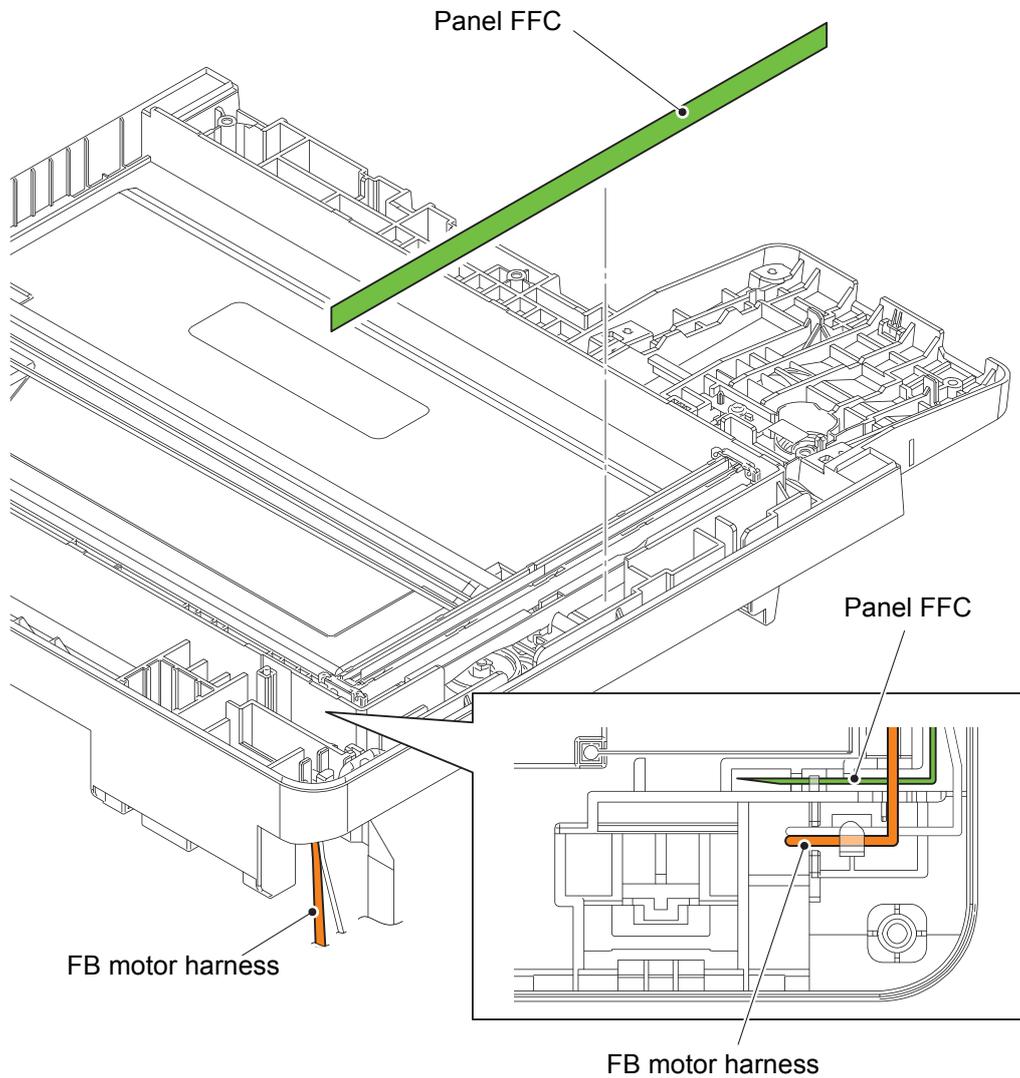


**Fig. 3-58**

Harness routing:  Refer to "25. Panel FFC, Panel FG harness (For models with touch panel), 26. Panel FFC, Panel FG harness (For models with 2-line LCD)".

(3) **Remove** > Panel FFC sponge

Panel FFC sponge

Panel FFC
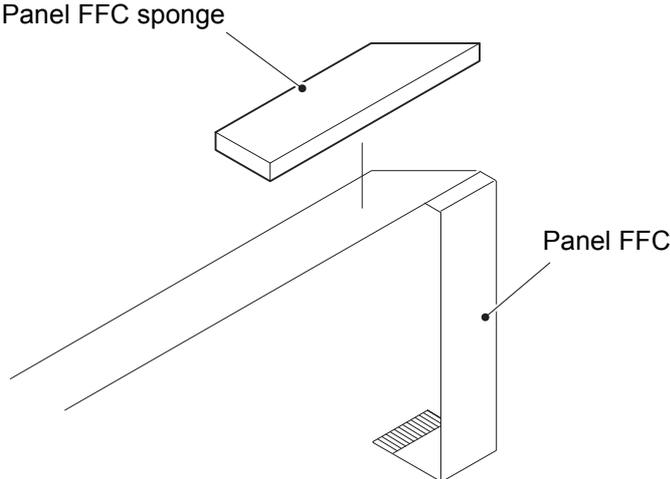
**Fig. 3-59**

<How to fold the Panel FFC>

<Models with touch panel>          <Models with 2-line LCD>

——— Mountain fold

------- Valley fold

Main PCB side                      Main PCB side
Conductor                          Conductor

13±1 mm                            11.5±1 mm
72±1 mm                            30.5±1 mm
                                   43±1 mm
58.5±1 mm

204.5±1 mm

Panel FFC sponge

                                   179±1 mm
                                   202.5±1 mm
229±1 mm                           215±1 mm
242.5±1 mm

                                   605±1 mm
610±1 mm
589±1 mm                           546±1 mm
550±1 mm

931 mm                             900 mm

                                   331±1 mm
334±1 mm                           321±1 mm
324±1 mm

277±1 mm

584±1 mm

                                   161±1 mm
160±1 mm                           150±1 mm

173±1 mm

                                   72±1 mm
71±1 mm                            55±1 mm

16±1 mm                            16±1 mm

Conductor                          Conductor
Panel PCB side                     Panel PCB side
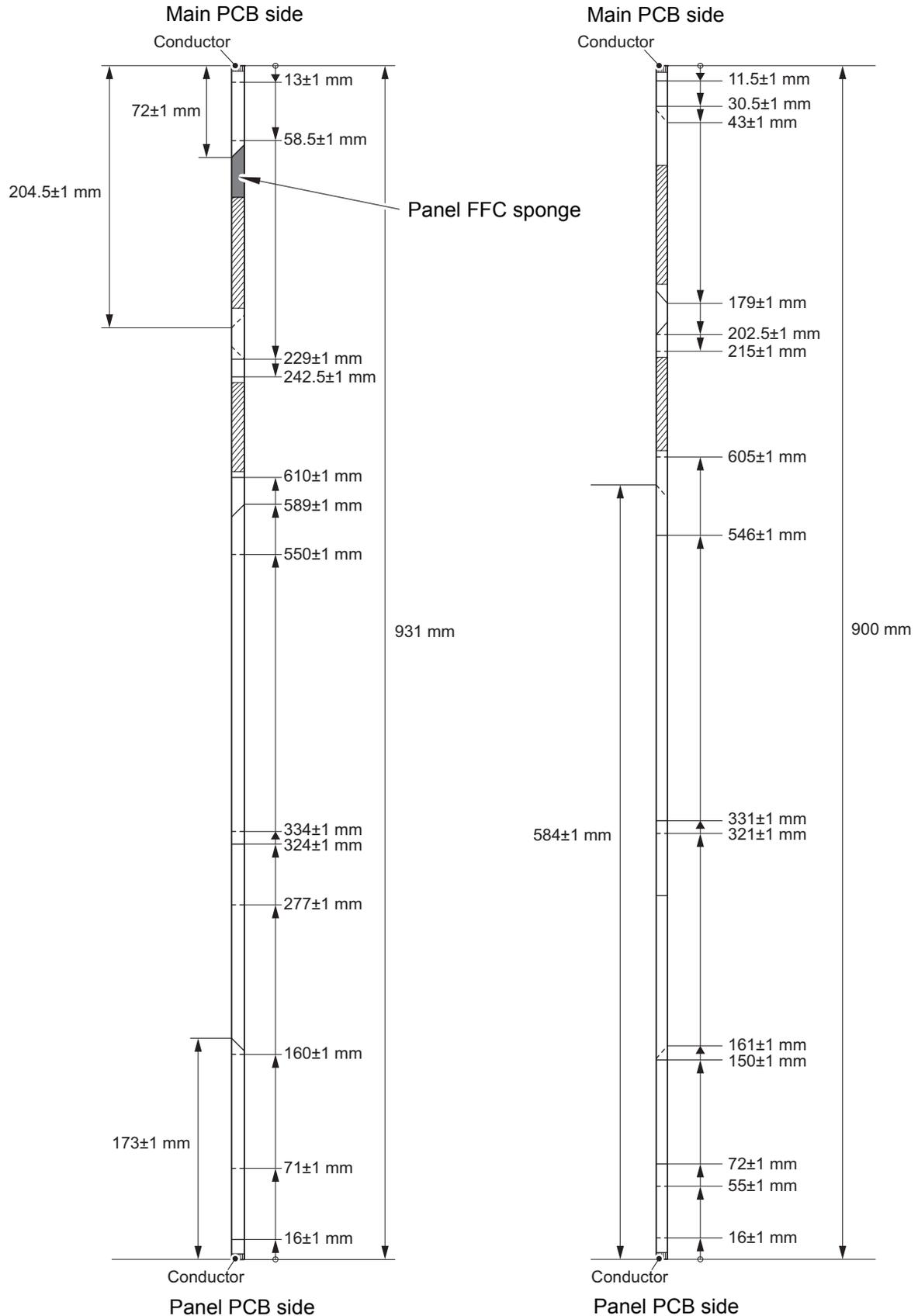
The angle of the diagonal fold is 45°.

**Fig. 3-60**

3-140                                    *Confidential*

## 8.24  1st side CIS unit

(1) **Slide** >  1st side CIS unit

(2) **Remove** >  CIS roller holder  (x 2)

CIS roller holder

CIS roller holder
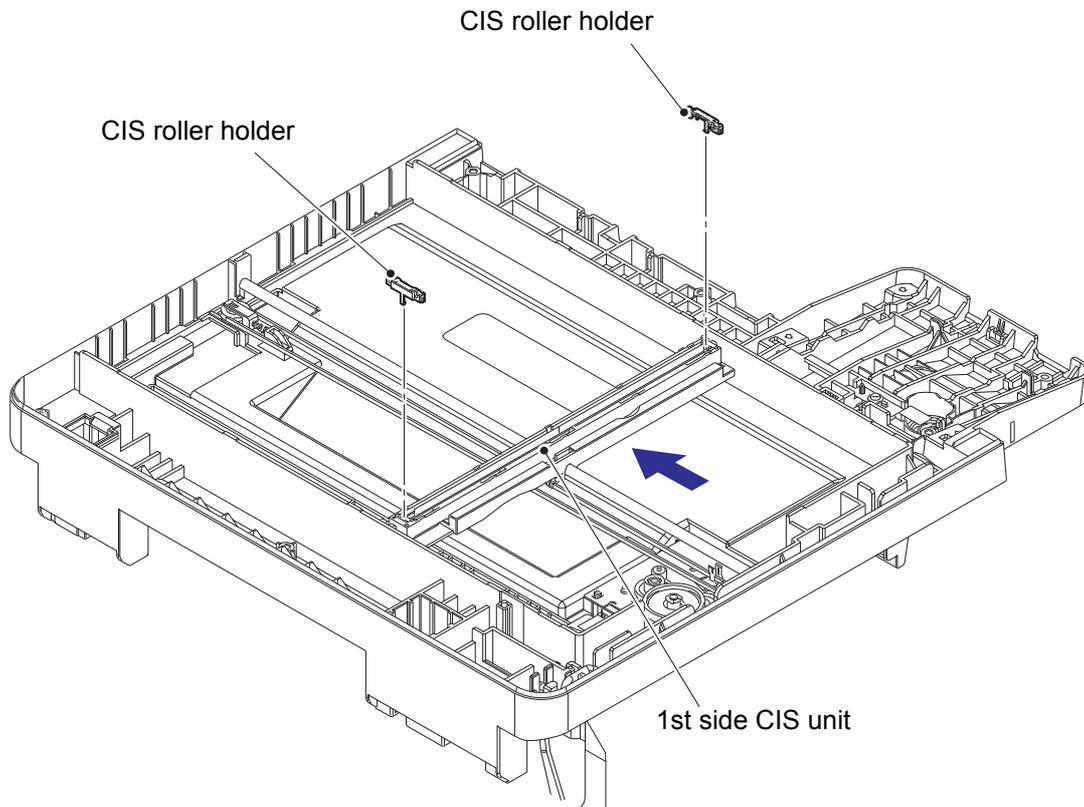
1st side CIS unit

**Fig. 3-61**

(3) **Remove** > 1st side CIS unit

> 💡 **Point:**
> • Open the 1st side CIS unit approximately 90 degrees to the CIS carriage.

(4) **Disconnect** > 1st side CIS FFC



1st side CIS unit

1st side CIS FFC

CIS carriage
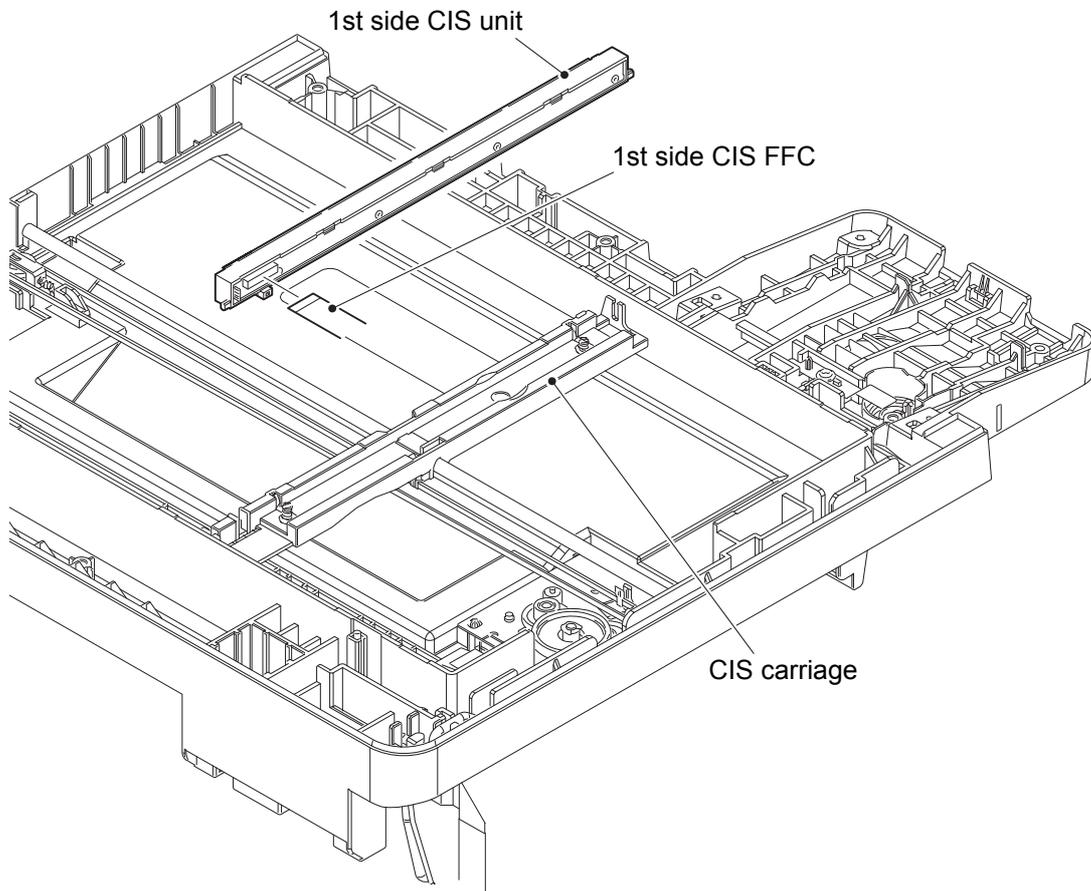
**Fig. 3-62**

> ✎ **Assembling note:**
> • If you replaced the 1st side CIS unit, refer to "5. IF YOU REPLACE THE ADF UNIT, 1ST SIDE CIS UNIT, 2ND SIDE CIS UNIT OR FB UNIT" in Chapter 4 to configure settings.
> • Acquire the white level data, and set the CIS scanning area.
> (Refer to "1.3.16 Acquire and Optimize White/Black Level (CIS Scan) (Function Code 55)" in Chapter 5.)

## 8.25 1st side CIS FFC / 1st side CIS FFC sponge

(1) **Peel** >      Double-sided tape

> ⚠ **Note:**
> • Be sure to replace the Double-sided tape with a new one after taking off the Double-sided tape from the CIS carriage.

(2) **Remove** >   1st side CIS FFC



1st side CIS FFC

Double-sided tape

CIS carriage
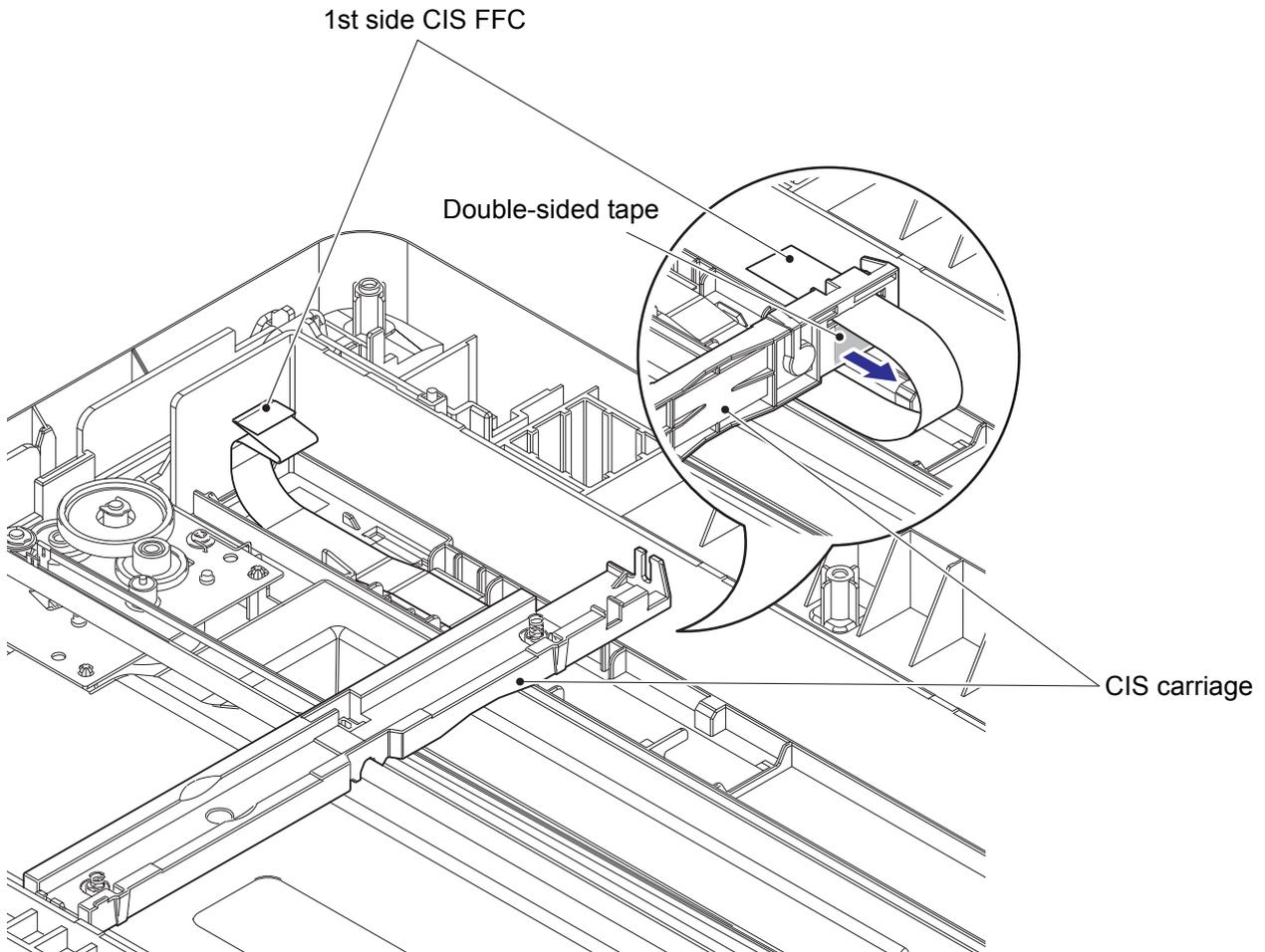
**Fig. 3-63**

Harness routing: Refer to "1. 1st side CIS FFC".

(3) **Remove** >   1st side CIS FFC sponge

1st side CIS FFC sponge

1st side CIS FFC

**Fig. 3-64**

*Confidential*

<How to fold the 1st side CIS FFC>

Main PCB side

——— Mountain fold

Reinforcing plate

-------- Valley fold

63±1 mm

46.5±1 mm

1st side CIS FFC sponge

183±1 mm

247±1 mm

264.5±1 mm

437±1 mm

434.5±1 mm

783 mm

413.5±1 mm

Flat core

268.5±1 mm

$183^{+1}_{0}$ mm

CIS FFC film

(85.5 mm)

31.5±1 mm

Conductor

10±1 mm

FB CIS side

The angle of the diagonal fold is 45°.
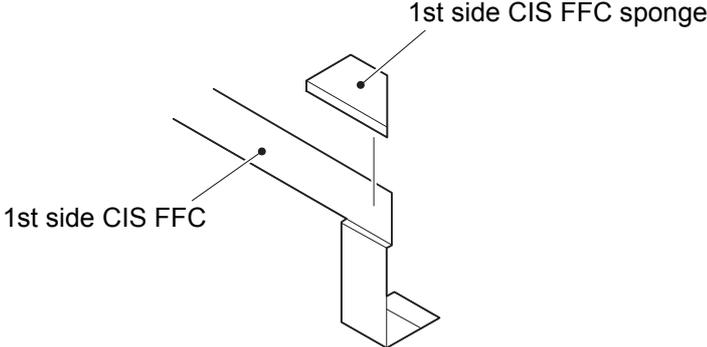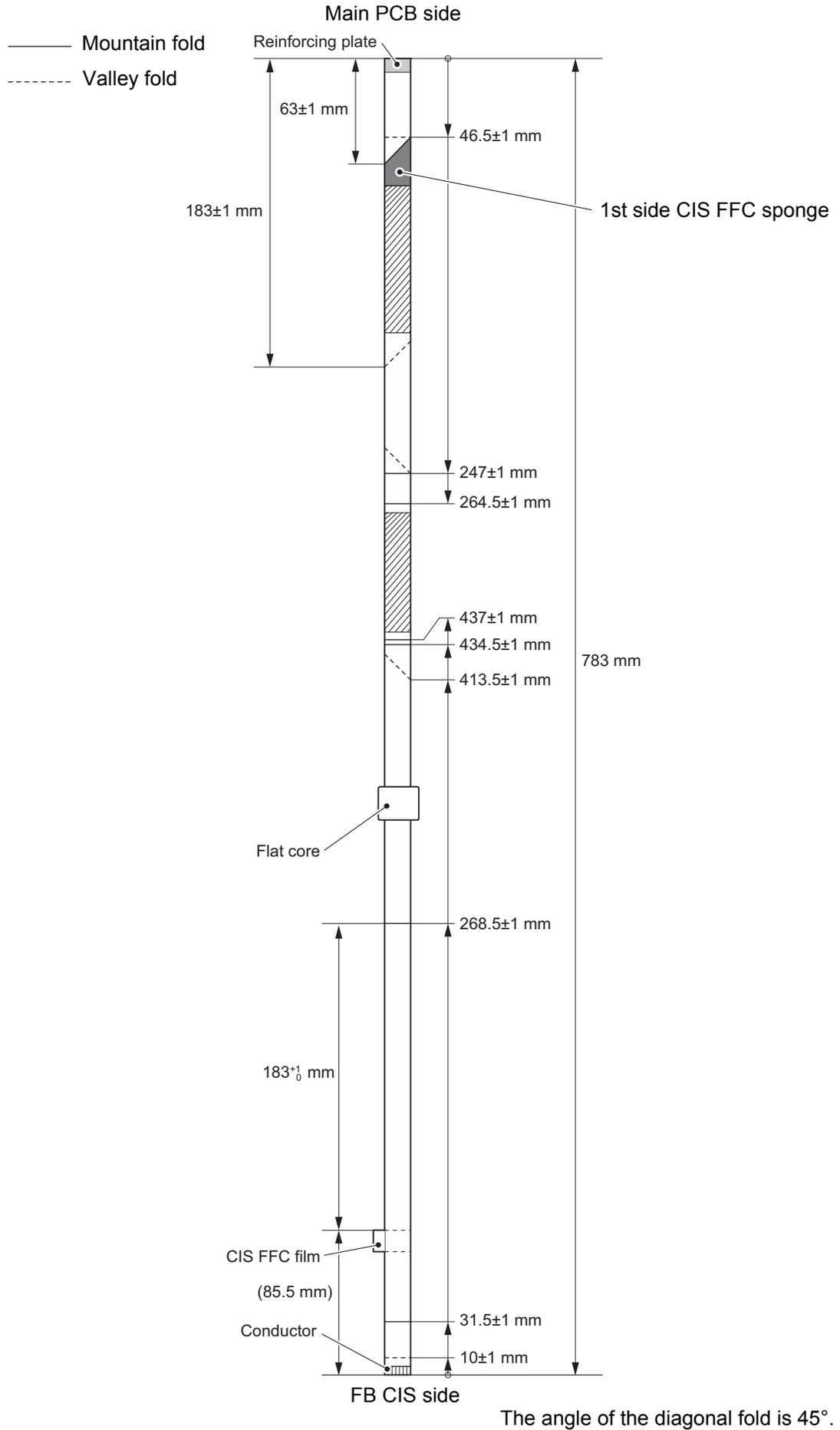
**Fig. 3-65**

## 8.26 Modem PCB

(1) **Remove** > Modem FG harness L

🪛 **Fixtures & Fittings**
- Screw cup M3x6 (x 1)

(2) **Remove** > Modem FG harness R

🪛 **Fixtures & Fittings**
- Screw cup M3x6 (x 1)

(3) **Remove** > Modem shield plate

🪛 **Fixtures & Fittings**
- Taptite bind B M4x12 (x 2)

(4) **Disconnect** > Modem FFC

(5) **Remove** > Modem PCB shield case

🪛 **Fixtures & Fittings**
- Screw cup M3x6 (x 1)

(6) **Remove** > Modem PCB

🪛 **Fixtures & Fittings**
- Screw cup M3x8 (x 3)
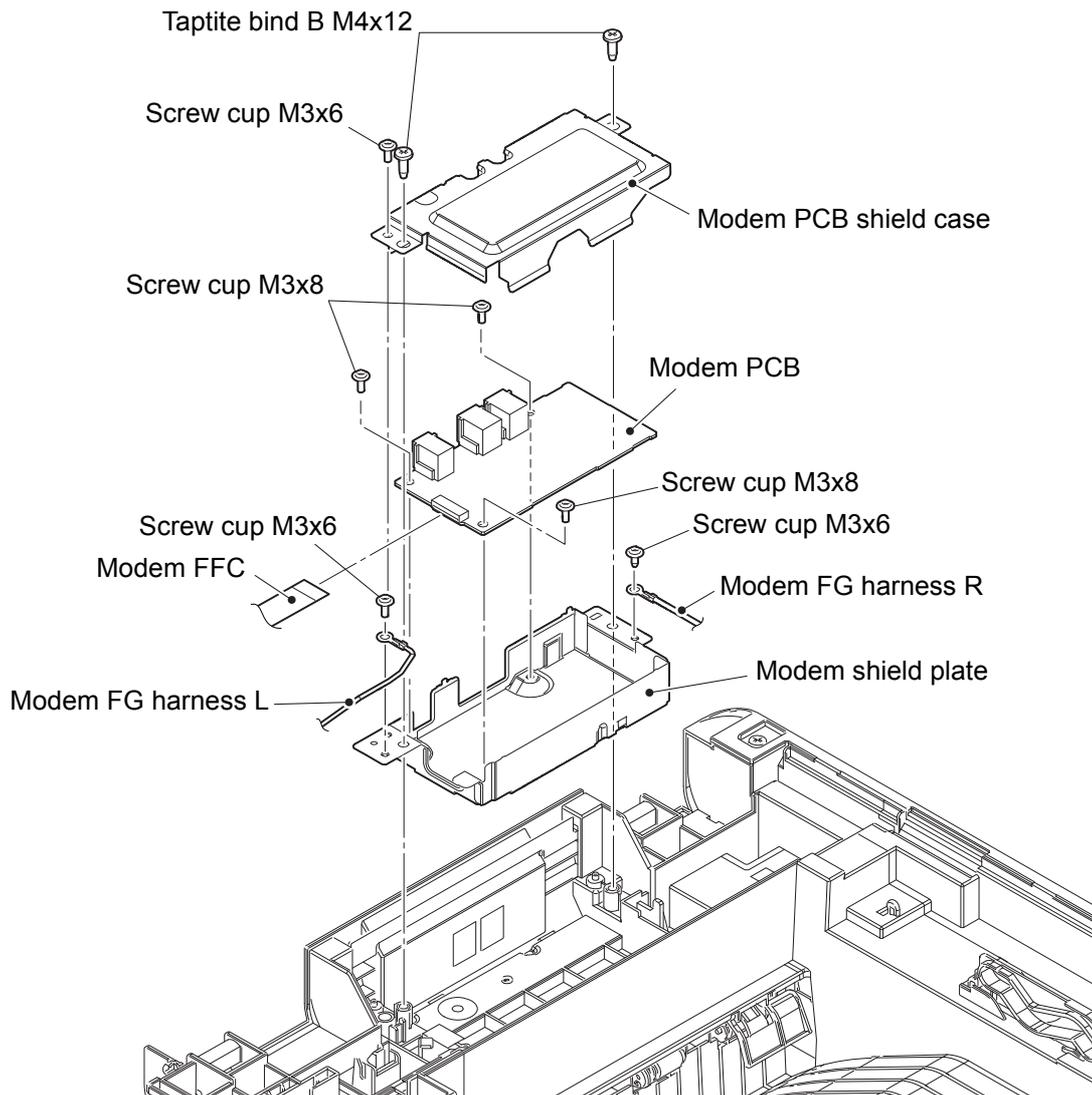


**Fig. 3-66**

## 8.27 Modem FFC

(1) **Release** > Flat core

     🪛 **Fixtures & Fittings**
       - Hook  (x 1)

(2) **Wiring** > Modem FFC

(3) **Remove** > Flat core
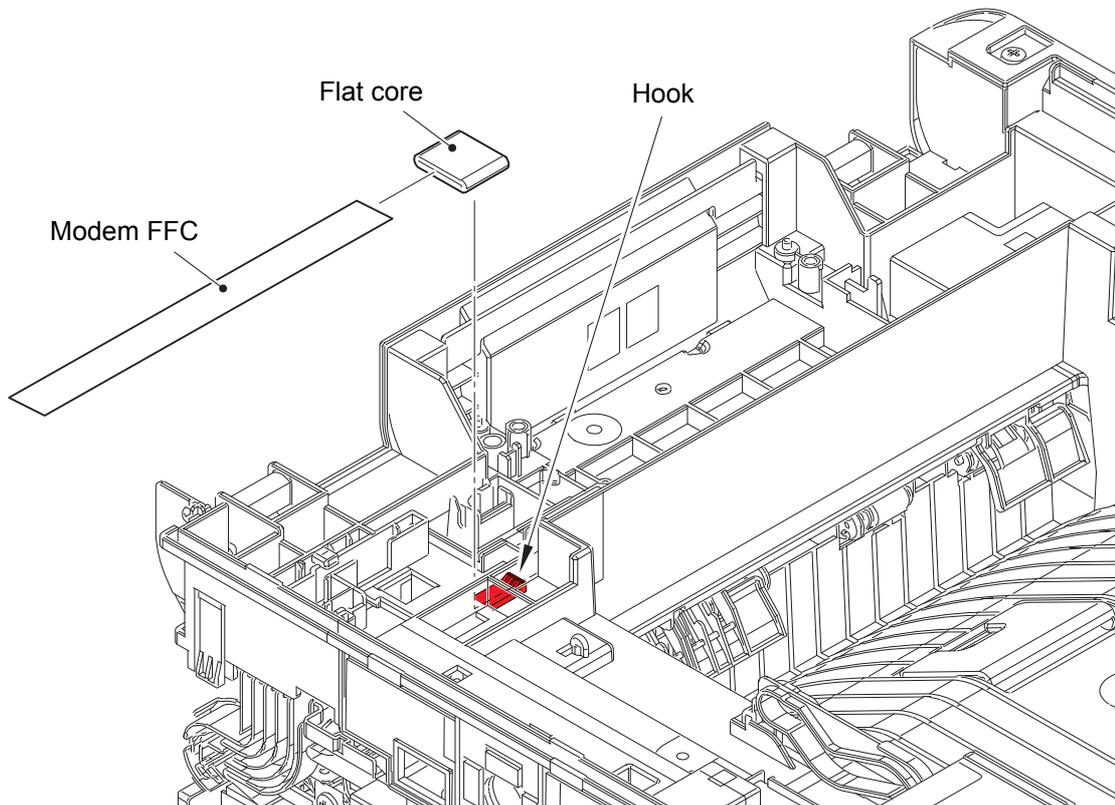


**Fig. 3-67**

Harness routing:  Refer to "22. Modem FFC, Modem FG harness L, Modem FG harness R".

<How to fold the Modem FFC>

Main PCB side

Reinforcing plate

——— Mountain fold

- - - - Valley fold

0 to 1 mm

FFC SPONGE
MAIN-MODEM 2 FCLFB (Reverse side)

37±1 mm

0 to 1 mm

54±1 mm

FFC SPONGE
MAIN-MODEM 1 FCLFB

0 to 1 mm

428 mm

235±1 mm

218±1 mm

205±1 mm

188±1 mm

71±1 mm

28±1 mm

Reinforcing plate

Modem PCB side

The angle of the diagonal fold is 45°.

**Fig. 3-68**

3-148

*Confidential*
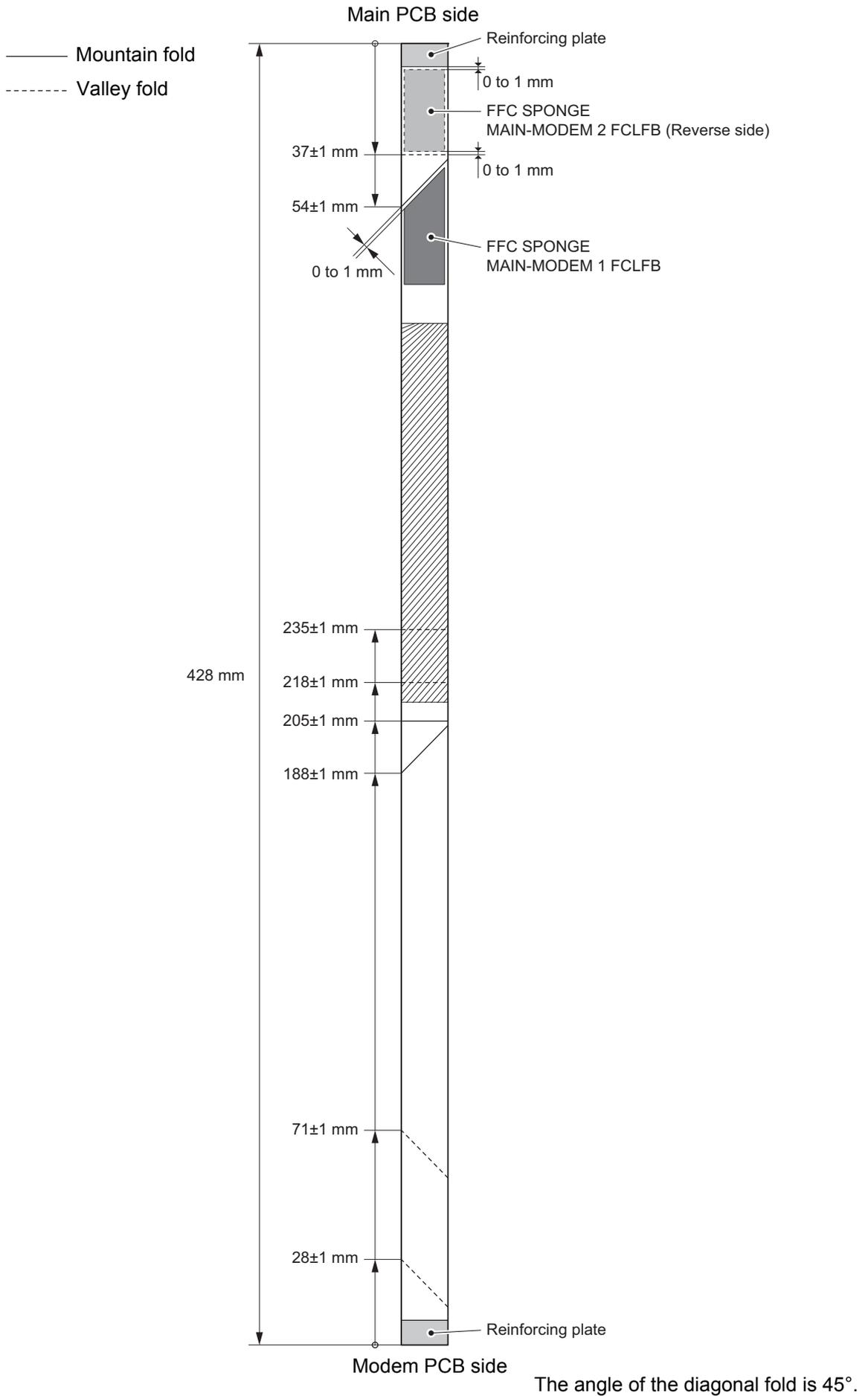
## 8.28 FB slide hinge arm L/R

(1) **Remove** > FB slide hinge arm L, FB slide hinge spring L

(2) **Remove** > FB slide hinge arm R, FB slide hinge spring R
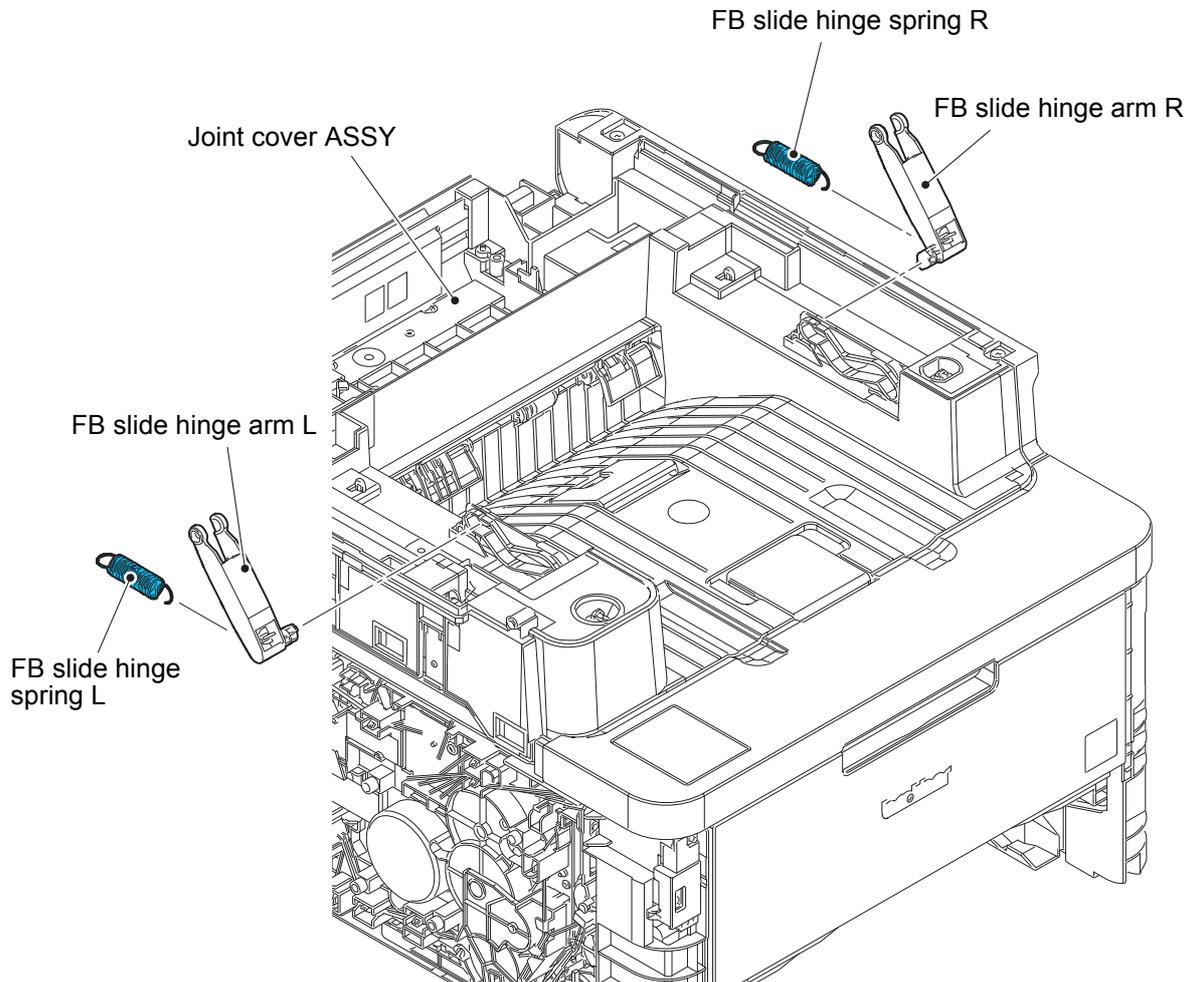


**Fig. 3-69**

## 8.29 Joint cover ASSY

(1) **Open** > Joint cover ASSY

(2) **Disconnect** > LED control FFC, NFC FFC

> ✎ **Fixtures & Fittings**
> - Lock (x 1)

(3) **Wiring** > LED control FFC, NFC FFC

(4) **Disconnect** > Speaker harness

(5) **Wiring** > Speaker harness

(6) **Wiring** > Modem FG harness L
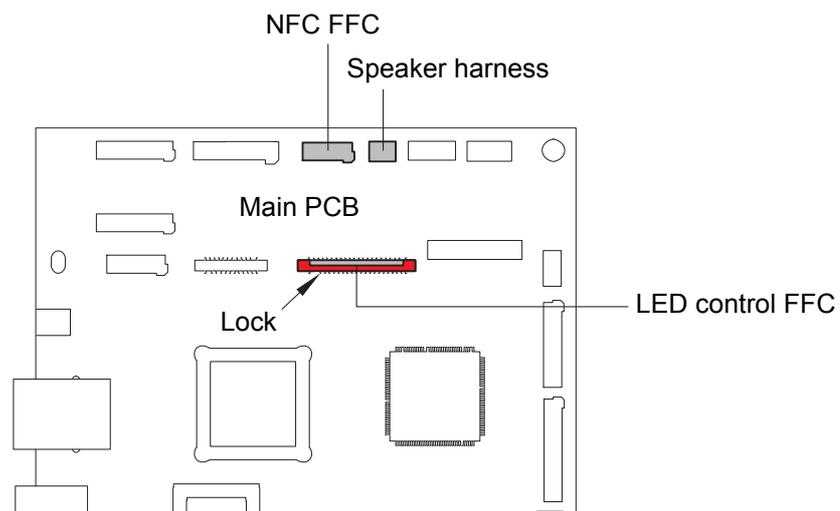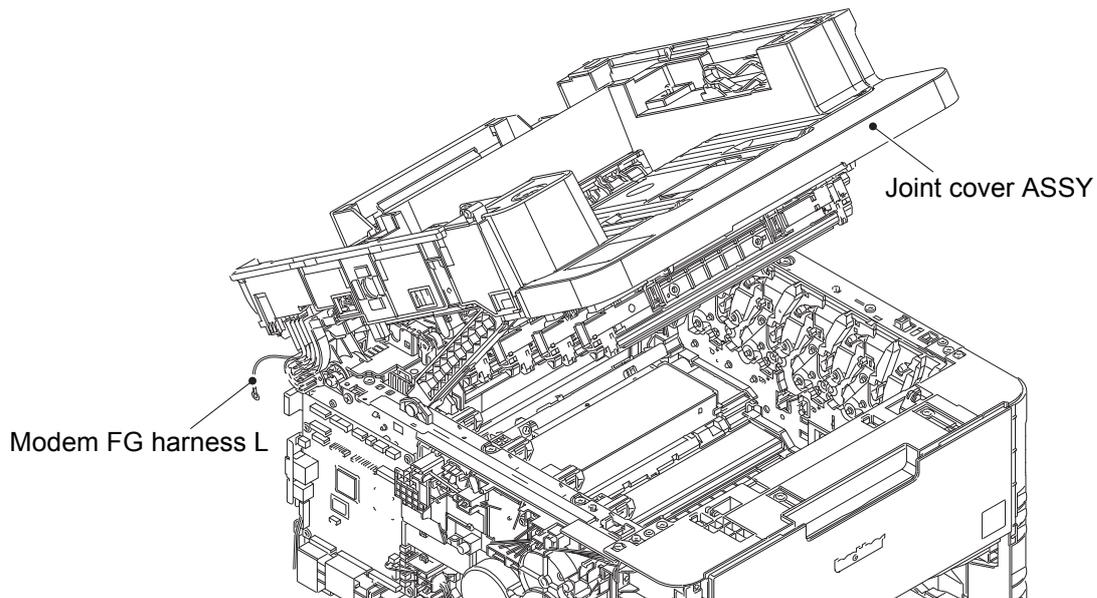


**Fig. 3-70**

Harness routing:  Refer to "16. LED control FFC, LED FG harness, 24. NFC FFC, 32. Speaker harness, 22. Modem FFC, Modem FG harness L, Modem FG harness R".

(7) **Remove** > LED FG harness

    ✎ **Fixtures & Fittings**
      - Screw pan (S/P washer) M3x12DB  (x 1)

(8) **Wiring** > LED FG harness

(9) **Release** > Joint sub arm R

    ✎ **Fixtures & Fittings**
      - Hook  (x 2)
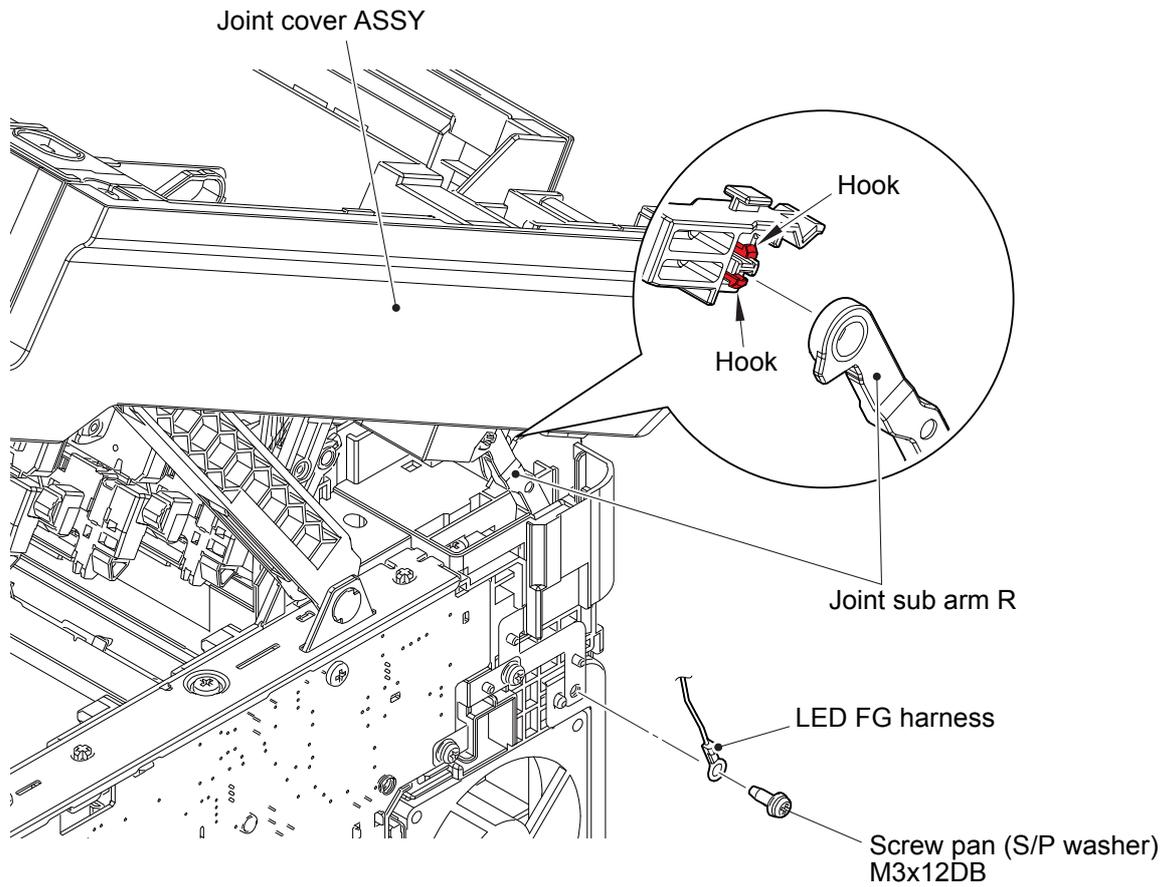


**Fig. 3-71**

Harness routing:  Refer to <span style="color:magenta">"16. LED control FFC, LED FG harness"</span>.

(10) **Release** > Joint hinge arm L

✎ **Fixtures & Fittings**
- Joint hinge base L

(11) **Release** > Joint hinge arm R

✎ **Fixtures & Fittings**
- Joint hinge base R

(12) **Remove** > Joint cover ASSY

> 💡 **Point:**
> • Open the Joint cover ASSY approximately 90 degrees to remove it upward.



Joint hinge base R

Joint cover ASSY

Joint hinge base L

Joint hinge arm R

Joint hinge arm L
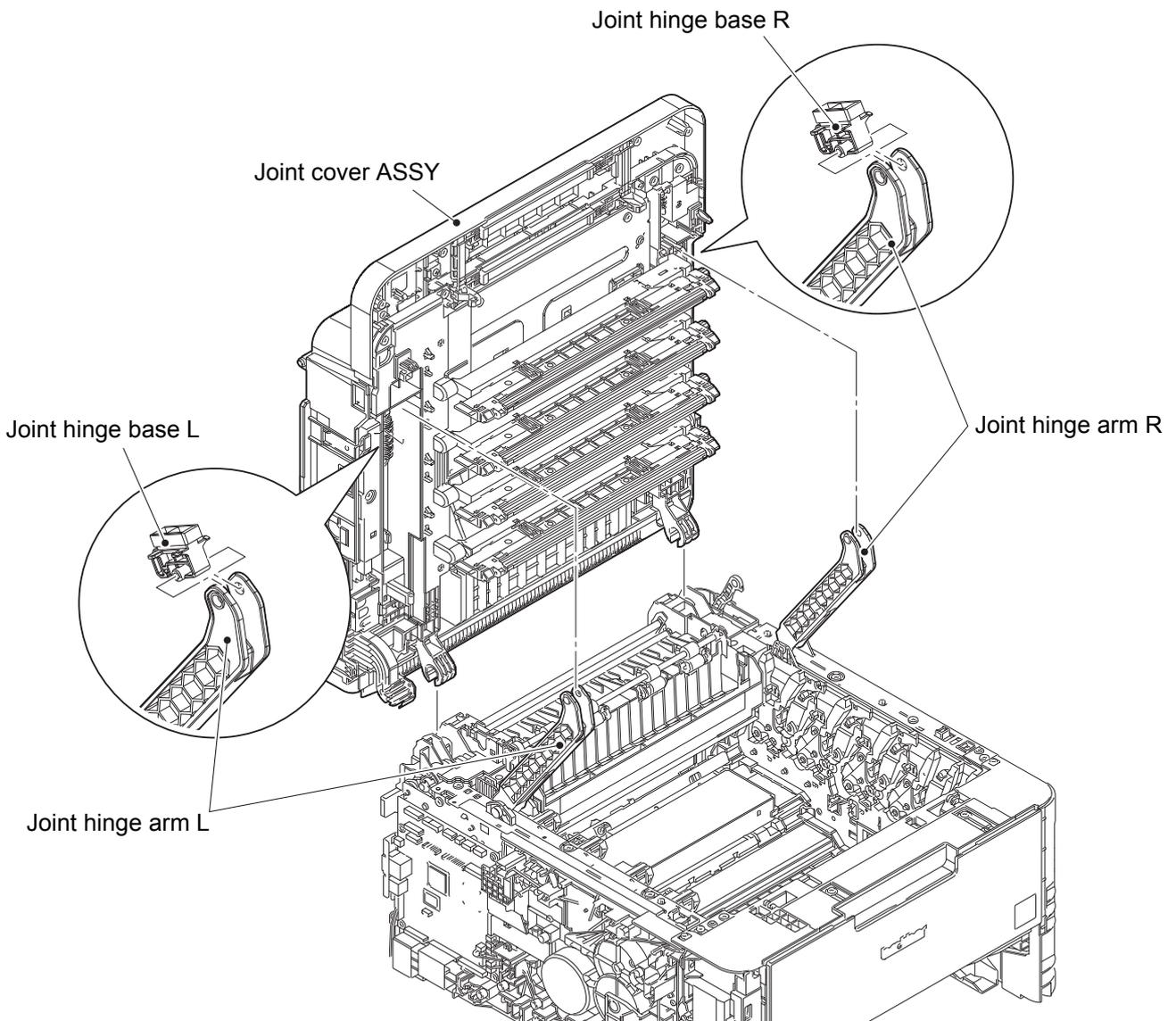
**Fig. 3-72**

## 8.30 LED unit

(1) **Remove** > Joint side cover R

**✎ Fixtures & Fittings**
- Taptite bind B M4x12 (x 2)
- Hook (x 4)
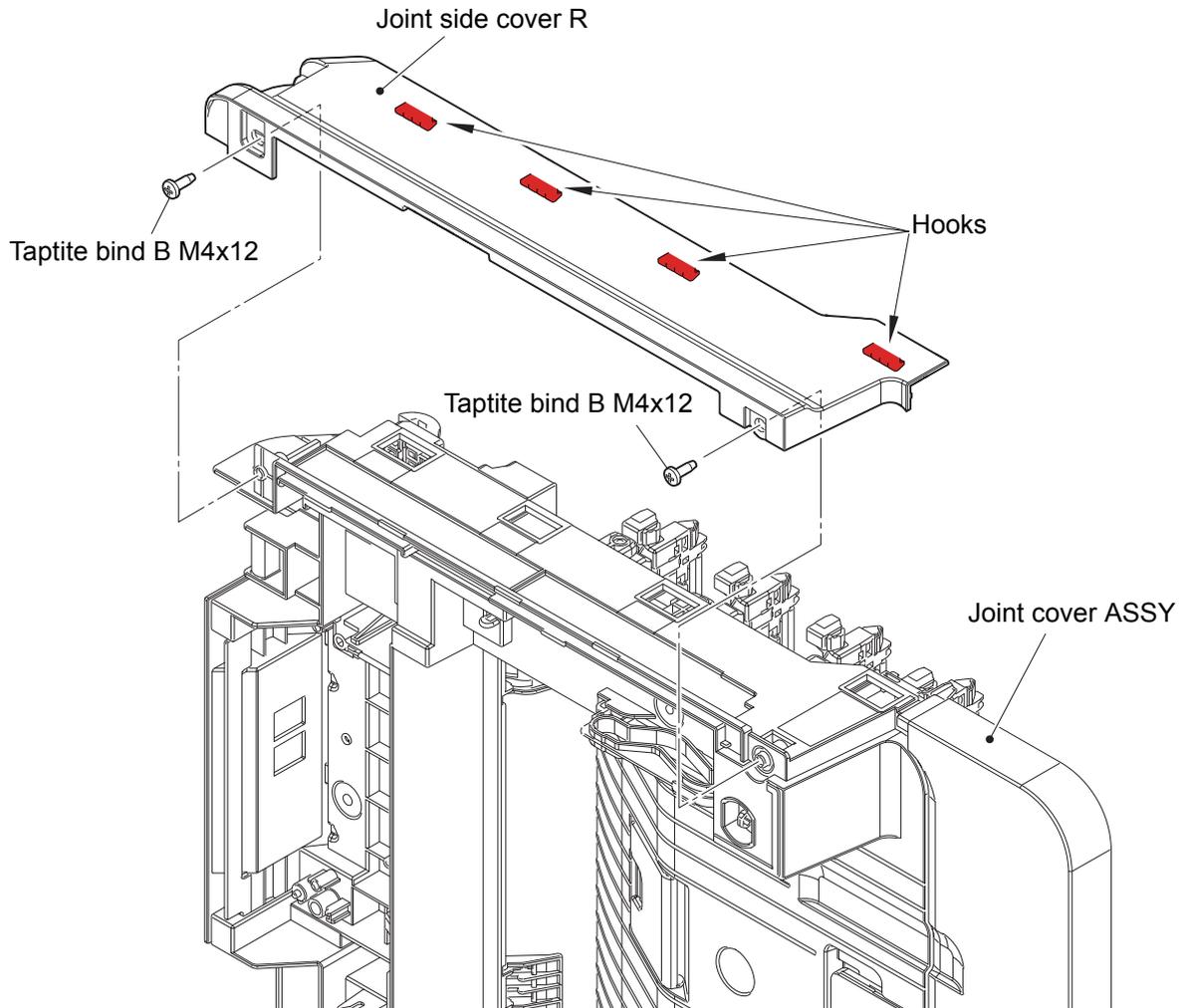


**Fig. 3-73**

(2) **Remove** > Open lever cover

✎ **Fixtures & Fittings**
 - Taptite bind B M4x12  (x 8)

(3) **Remove** > Open lever

(4) **Remove** > Open lever L, Open lever spring

(5) **Remove** > Open lever R, Open lever spring
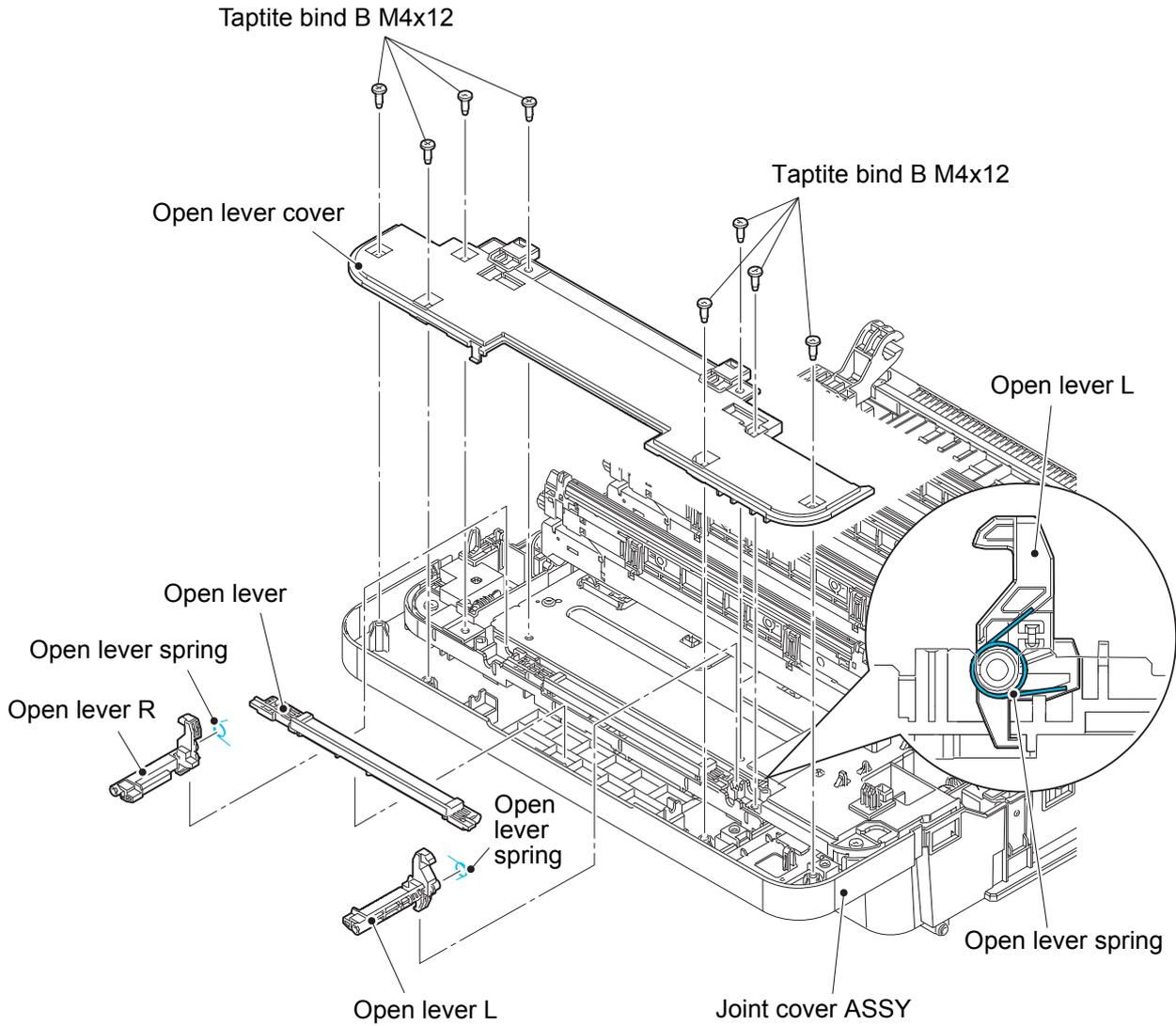


**Fig. 3-74**

**Assembling note:**
• Apply the Open lever spring as shown in the figure above.

(6) **Remove** > LED unit

✎ **Fixtures & Fittings**
- Taptite bind B M4x12 (x 5)

💡 **Point:**
• Pull out the Modem FG harness R through the hole of the Joint cover ASSY.

Taptite bind B M4x12

Taptite bind B M4x12

Modem FG
harness R

LED unit

Hole

Joint cover ASSY

Taptite bind B M4x12

Taptite bind B M4x12
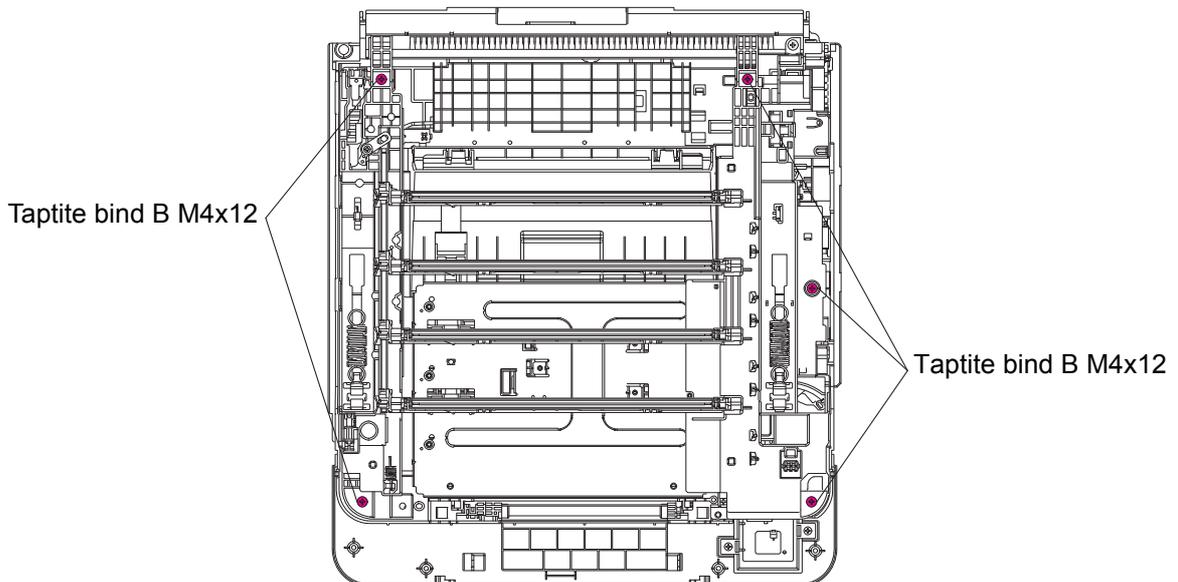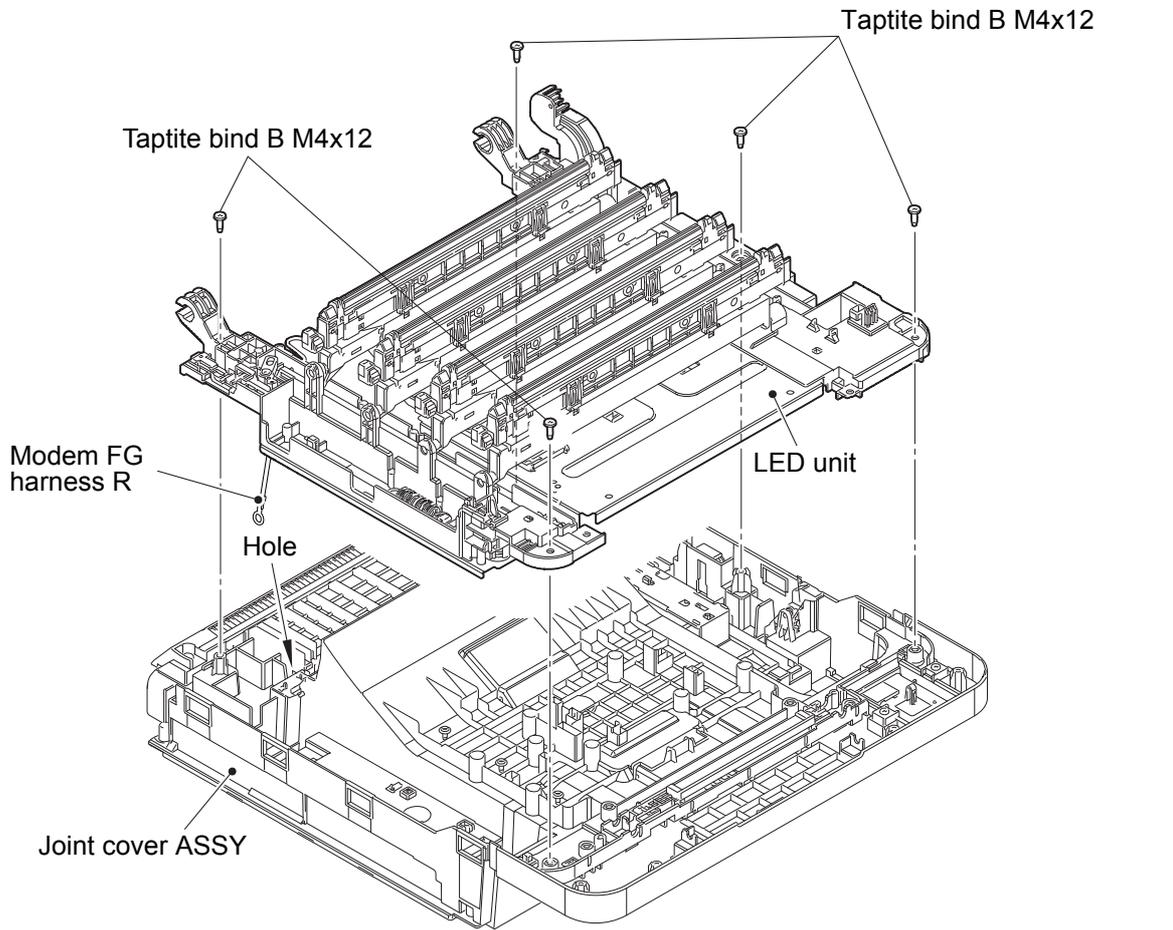
**Fig. 3-75**

## 8.31 NFC PCB

(1) **Wiring** >  NFC FFC

(2) **Remove** >  NFC PCB

🔩 **Fixtures & Fittings**
   - Hook  (x 1)



NFC FFC

NFC PCB

Hook

Joint cover ASSY
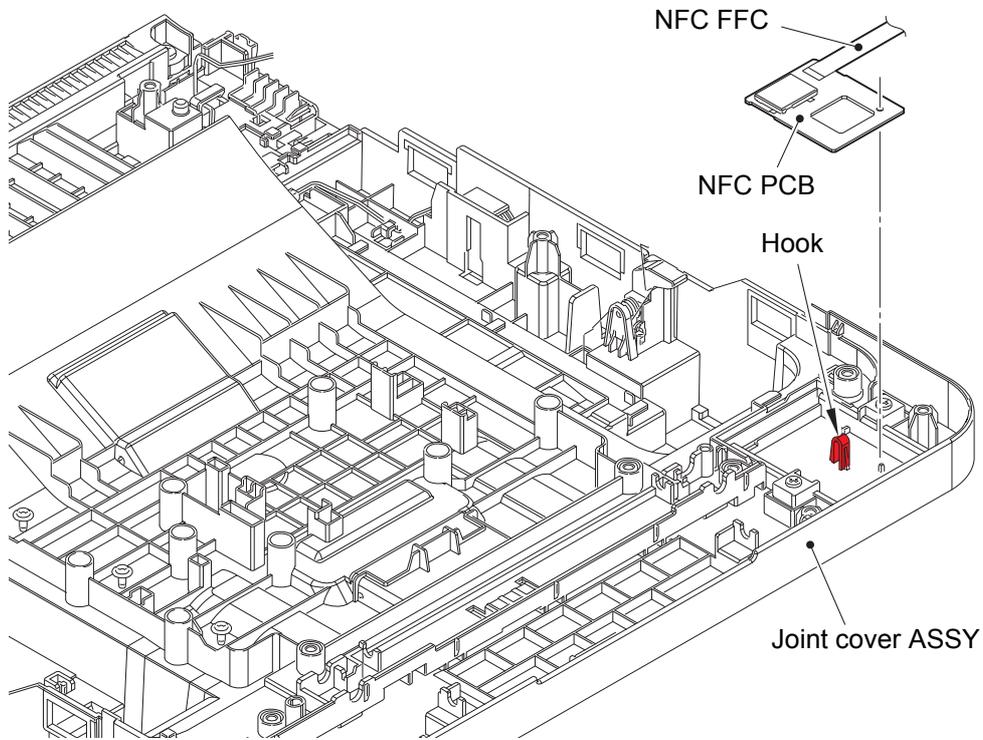
**Fig. 3-76**

Harness routing:  Refer to "24. NFC FFC".

<How to fold the NFC FFC>

Main PCB side

—————— Mountain fold

- - - - - - Valley fold

Reinforcing plate

42±1 mm

54±1 mm

181±1 mm

200±1 mm

234±1 mm

698 mm

2±0 mm

244±1 mm

106±1 mm

60±1 mm

28±1 mm

NFC PCB side
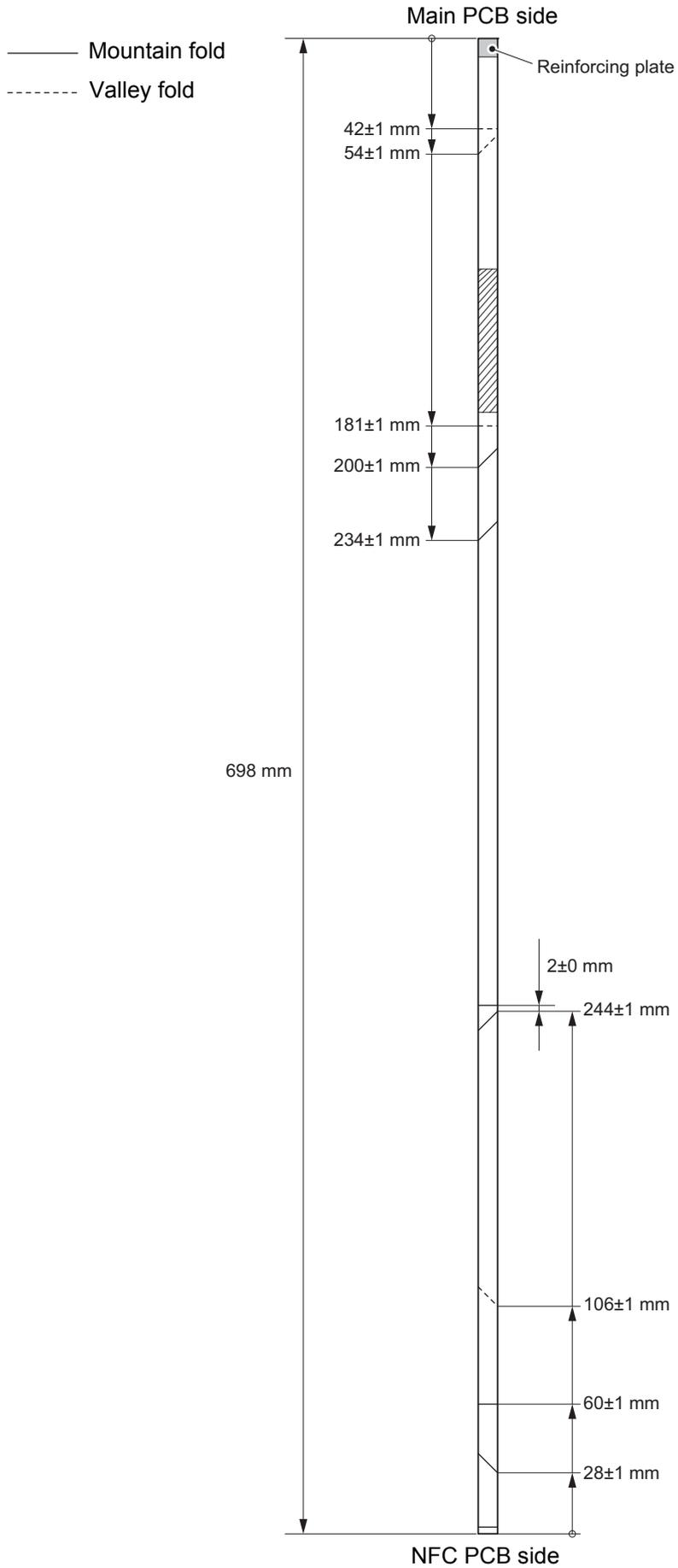
The angle of the diagonal fold is 45°.

**Fig. 3-77**

3-157

Confidential

## 8.32 Speaker

(1) **Wiring** >    Speaker harness

(2) **Remove** >    Speaker

   ✎ **Fixtures & Fittings**
   - Speaker spring



Speaker spring

Speaker harness

Speaker

Joint cover ASSY

<Bottom side>
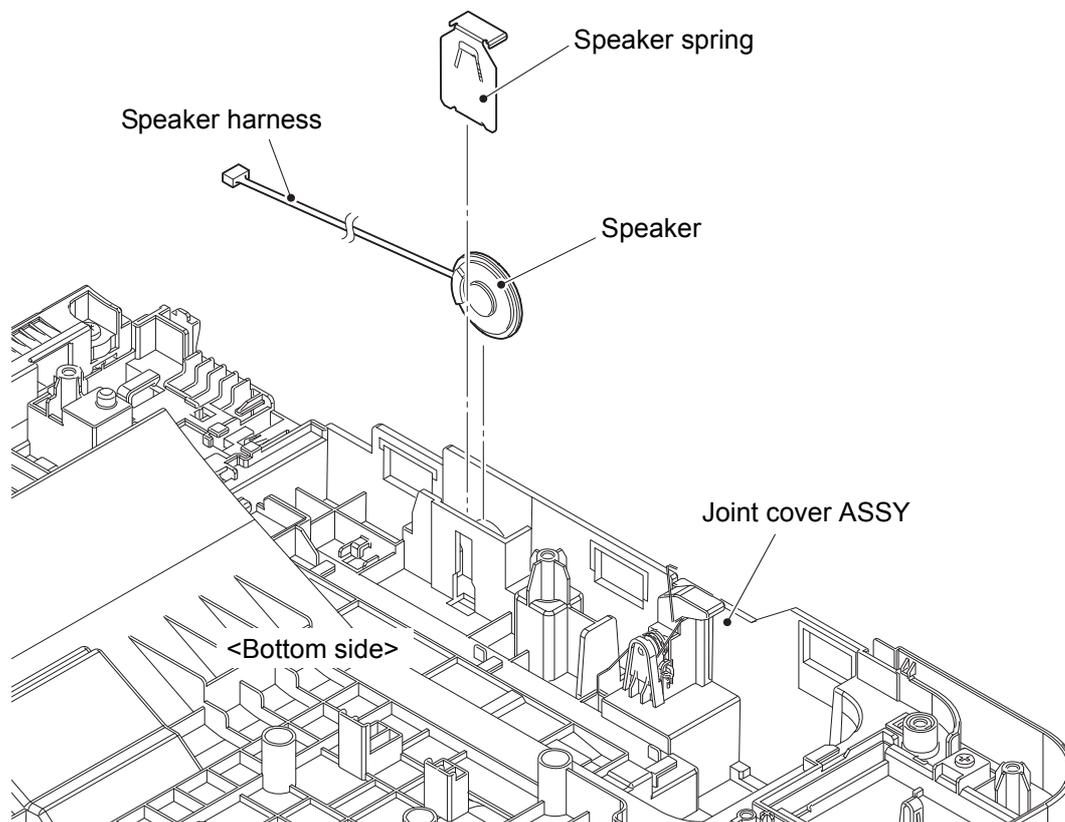
**Fig. 3-78**

Harness routing:  Refer to "32. Speaker harness".

## 8.33 LED control PCB

⚠ **Note:**
   • When disassembling/assembling the LED unit, attach it to the machine to prevent breakage of the LED ASSYs.

(1) **Remove** > LED shield plate

✏ **Fixtures & Fittings**
   - Screw cup M3x8 SR  (x 2)
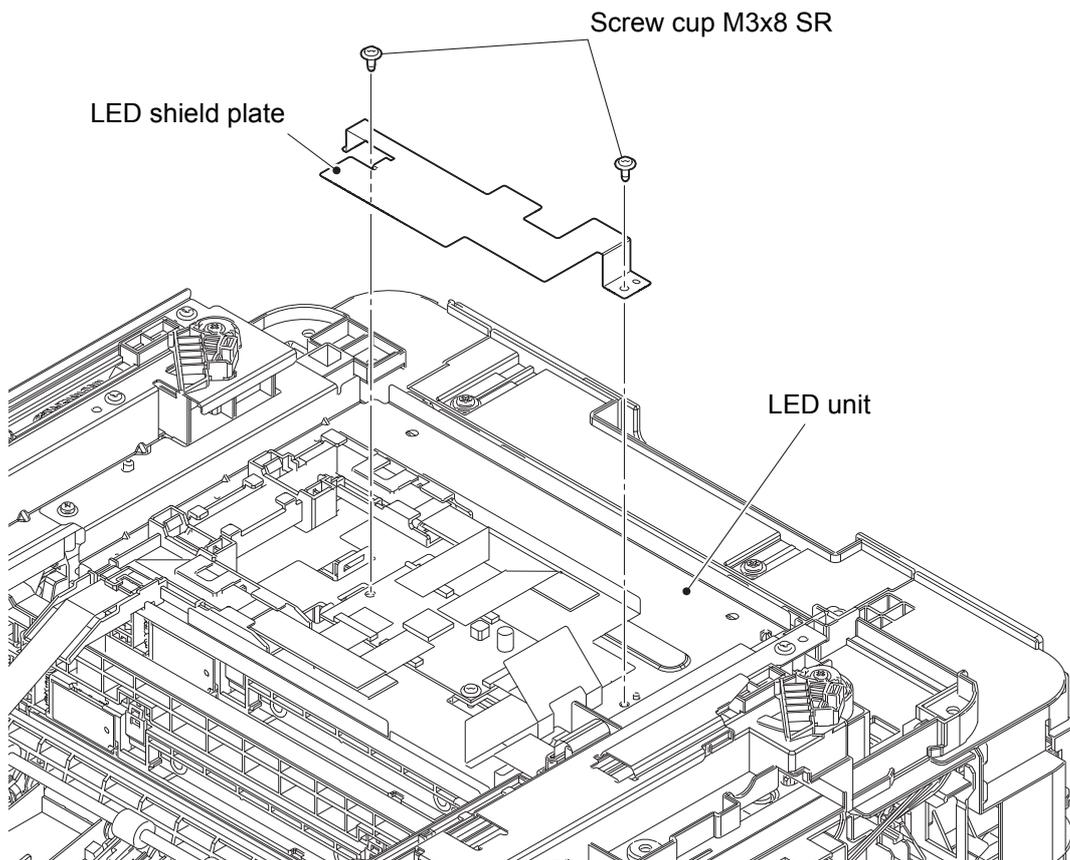


**Fig. 3-79**

(2) **Disconnect** > LED FFC Y/M/C/K, LED control FFC

🔩 **Fixtures & Fittings**
   - Lock  (x 5)

LED FFC M     LED FFC Y

Lock                    Lock

Lock

LED control PCB                    LED control FFC

Lock                    Lock

LED FFC C     LED FFC K
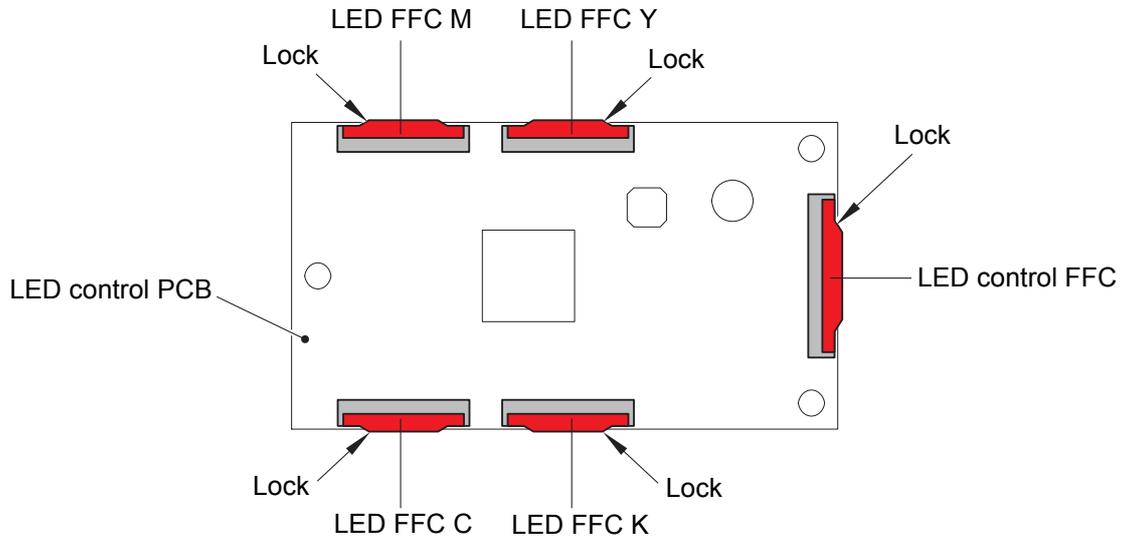
**Fig. 3-80**

(3) **Remove** > LED control PCB

🔩 **Fixtures & Fittings**
   - Screw cup M3x8 SR  (x 2)

Screw cup M3x8 SR

LED control PCB

**Fig. 3-81**

*Confidential*
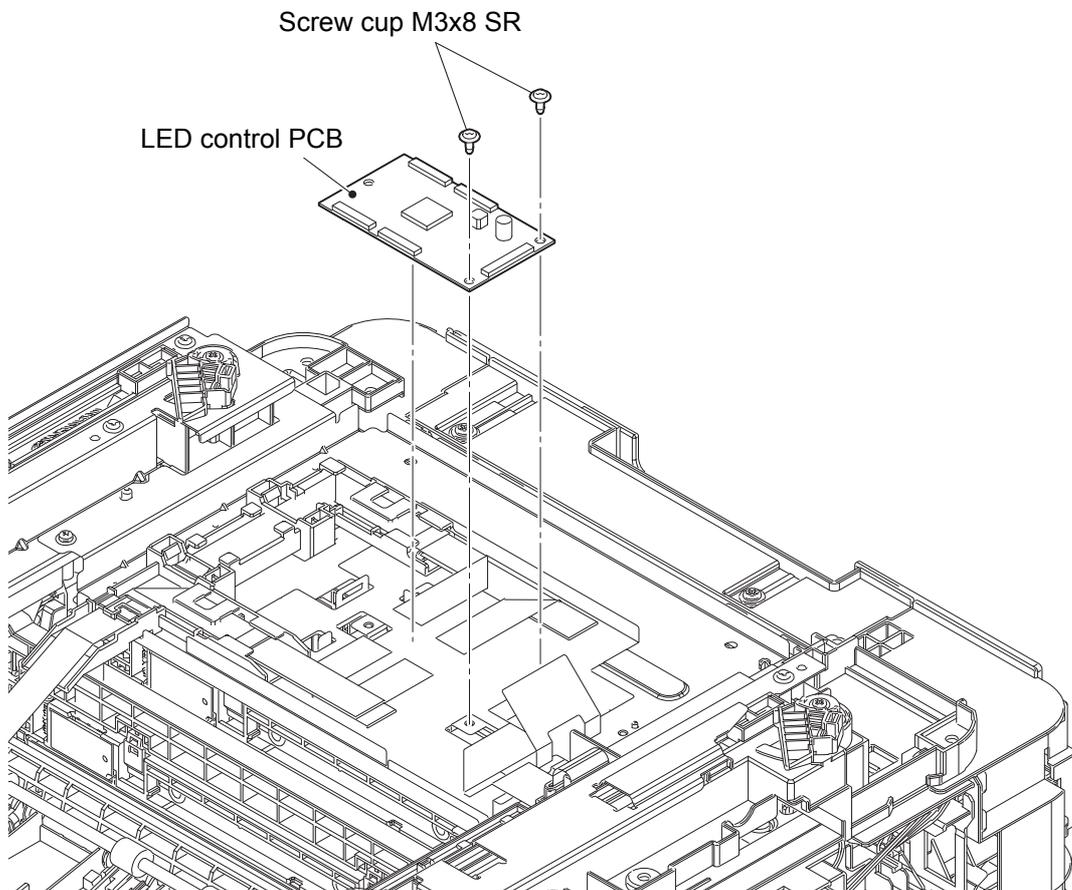
## 8.34  LED control FFC

(1)  **Wiring** >    LED control FFC

> 💡 **Point:**
>   • Release the two Flat cores from the securing fixtures.

(2)  **Remove** >    Flat core  (x 2)
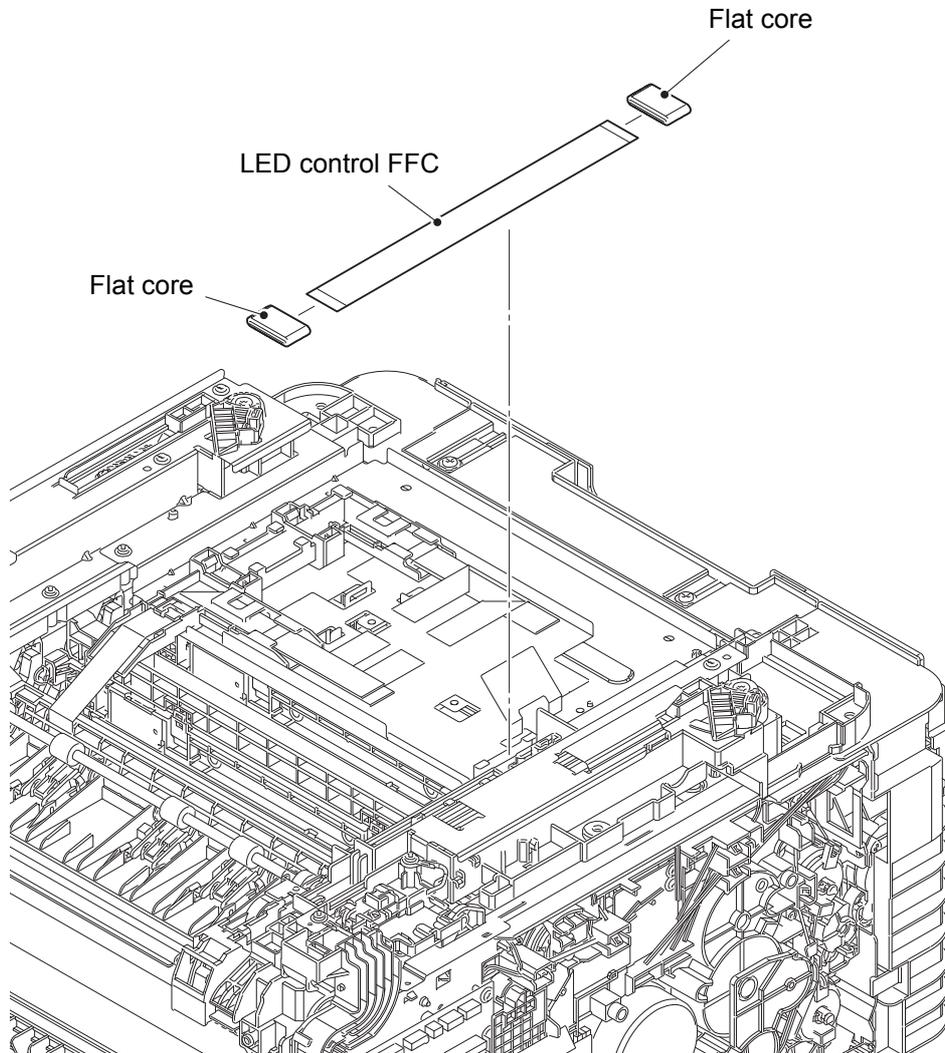


**Fig. 3-82**

Harness routing:  Refer to "16. LED control FFC, LED FG harness".

<How to fold the LED control FFC>

——— Mountain fold

------- Valley fold

Main PCB side

15±1 mm

Conductor

55±1 mm

FFC SPONGE
MAIN-LPH FCLFB

15±1 mm

0 to 1 mm

48±1 mm

701±10 mm

2±1 mm

415±1 mm

360±1 mm

1±1 mm

56±1 mm

75±1 mm

46±1 mm

Reinforcing plate

11±1 mm

LED control PCB side
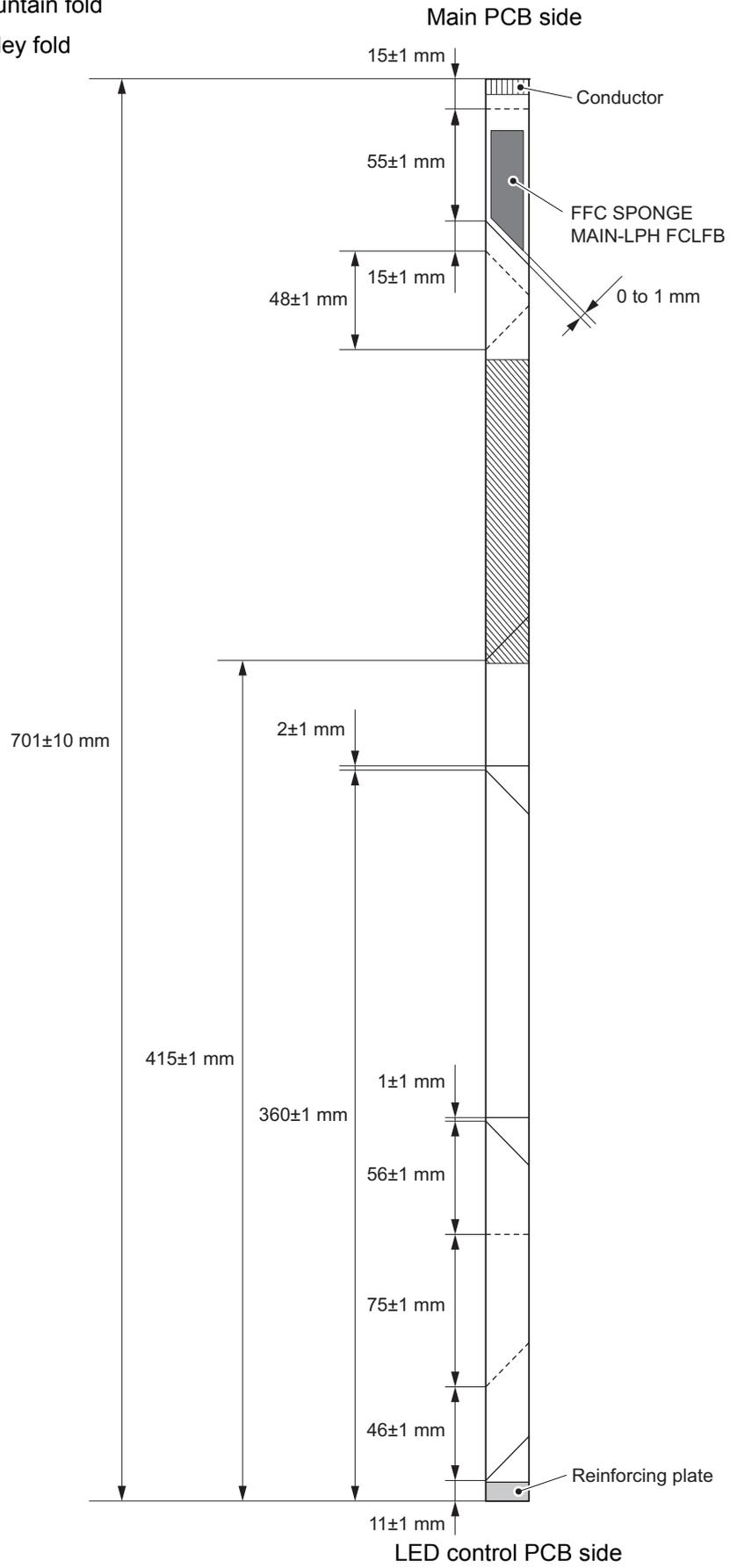
The angle of the diagonal fold is 45°.

**Fig. 3-83**

*Confidential*

## 8.35 LED ASSY (Y/M/C/K) / LED FFC (Y/M/C/K) / LED FFC sponges

(1) **Wiring** >    LED FFC K

> **Point:**
> • Pull out the LED FFC K through the two Flat cores iv/vii on the LED FFC holder.

(2) **Wiring** >    LED FFC M

> **Point:**
> • Pull out the LED FFC M through the two Flat cores ii/vi on the LED FFC holder.
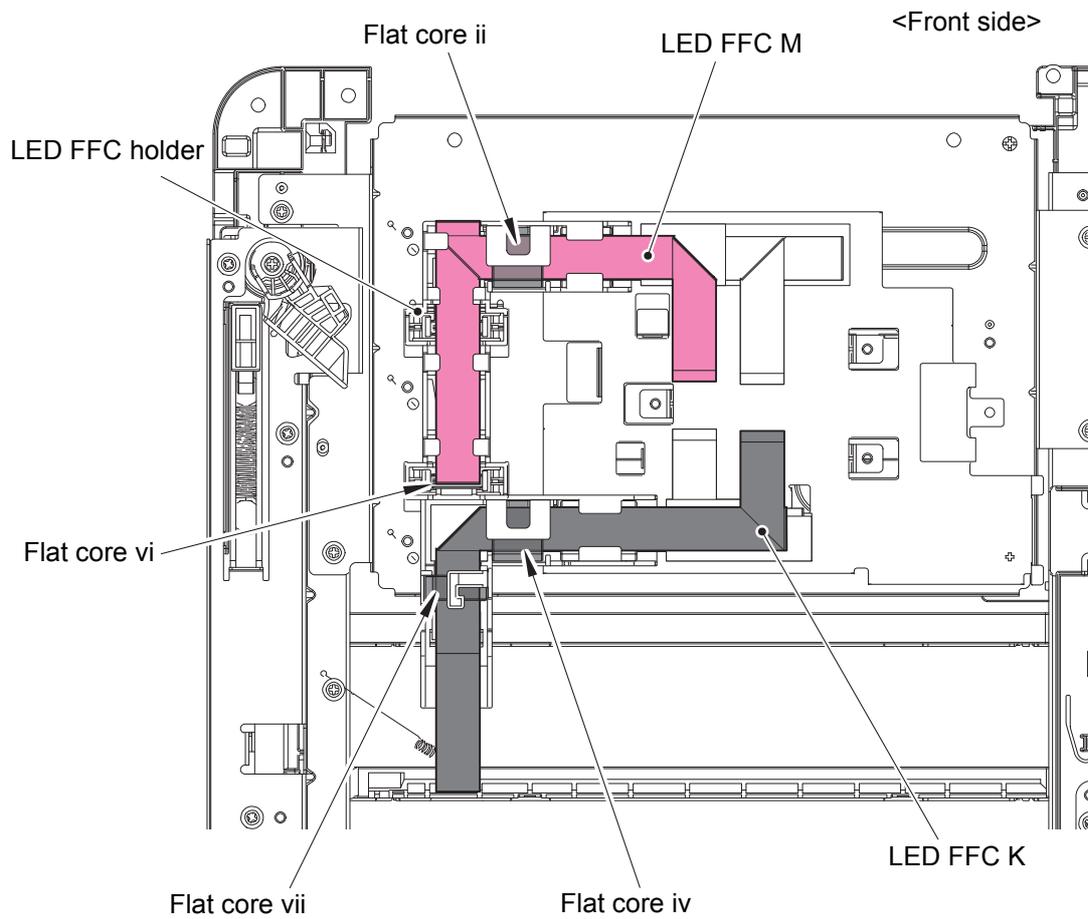


**Fig. 3-84**

Harness routing:  Refer to "17. LED FFC Y/M/C/K".

(3) **Remove** > LED FFC sponge 7, LED FFC sponge 6, LED FFC sponge 5, LED FFC sponge 4, LED FFC sponge 3



LED FFC sponge 3

LED FFC sponge 6

<Front side>

LED FFC Y

LED FFC C

LED FFC sponge 7

LED FFC sponge 4
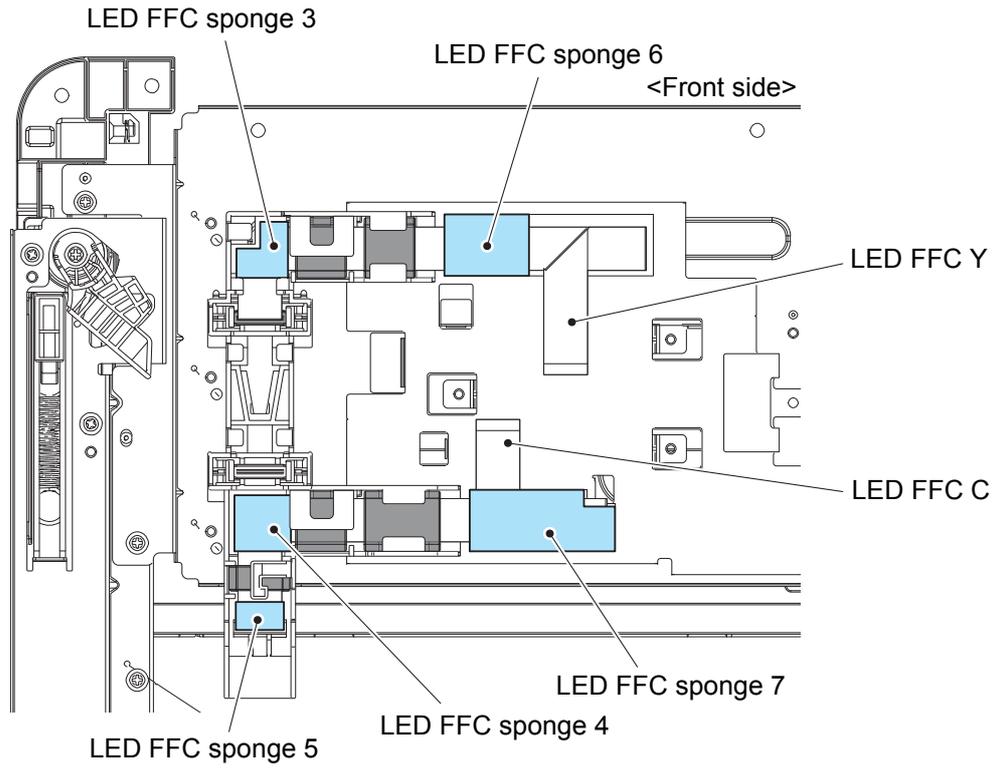
LED FFC sponge 5

**Fig. 3-85**

**Assembling note:**
• Once the LED FFC sponge is removed from the LED FFC, replace it with a new one.
• Attach the LED FFC sponges 3 and 6 to the LED FFC Y, and attach the LED FFC sponges 4, 5, and 7 to the LED FFC C as shown in the figure above.

(4) **Wiring** > LED FFC C

> 💡 **Point:**
> • Pull out the LED FFC C through the Flat core iii on the LED FFC holder and the hole.

(5) **Wiring** > LED FFC Y

> 💡 **Point:**
> • Pull out the LED FFC Y through the two Flat cores i/v on the LED FFC holder.
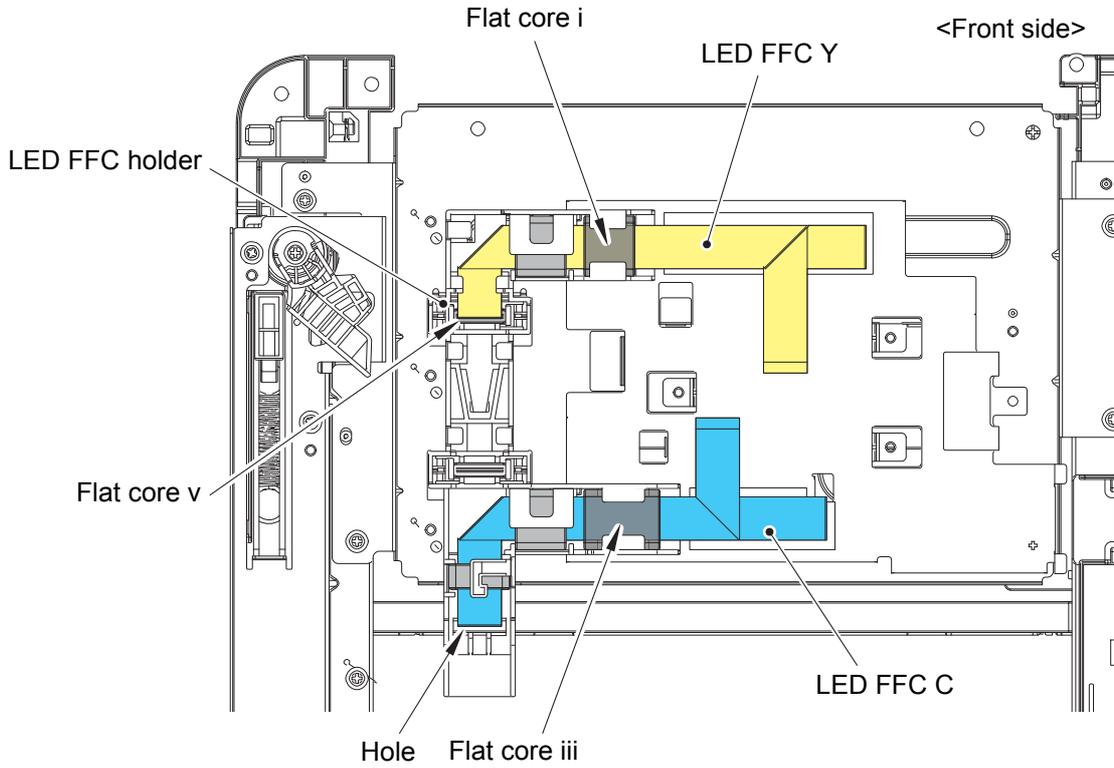


**Fig. 3-86**

Harness routing: Refer to "17. LED FFC Y/M/C/K".

(6) **Remove** > LED PCB insulation sheet



LED PCB insulation sheet

<Front side>
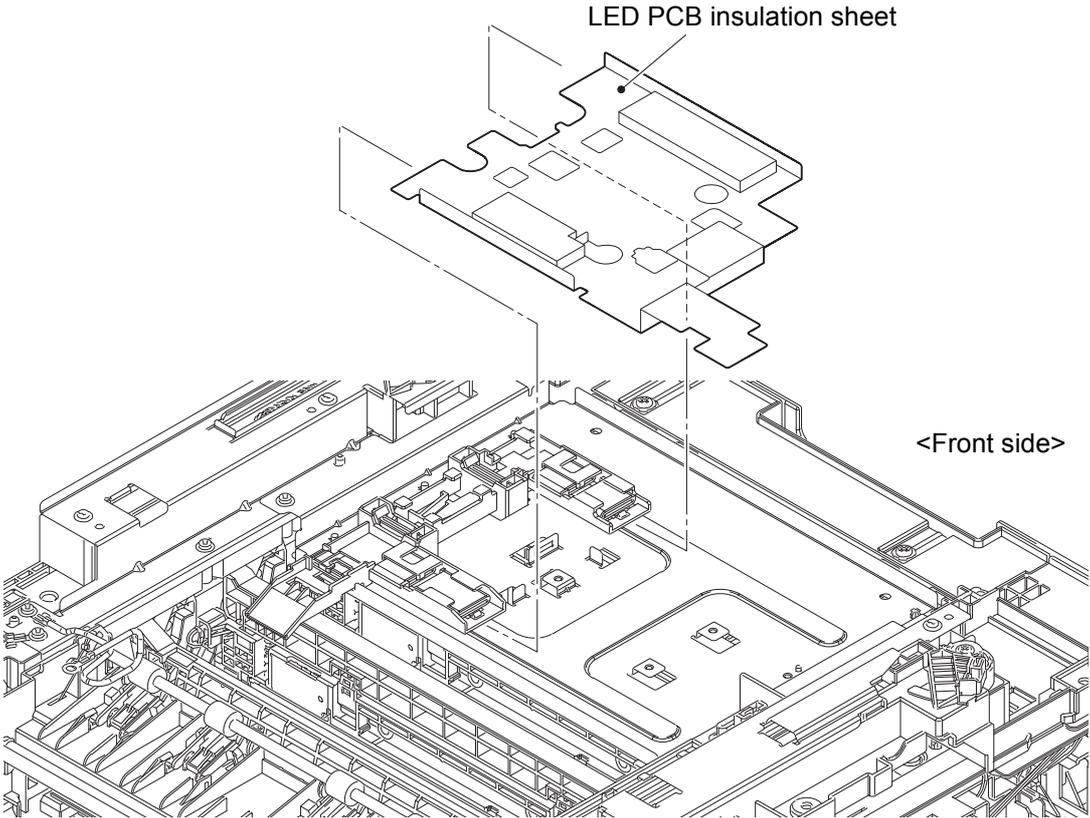
**Fig. 3-87**

(7) **Remove** > LED unit

> 💡 **Point:**
> • Refer to the disassembly procedure "8.29  Joint cover ASSY".

(8) **Remove** > LED holder hook  (x 2)

> 🔩 **Fixtures & Fittings**
>   - Hook A  (x 1)

> 💡 **Point:**
> • Be sure to stand the LED ASSYs up.

Hook B

Hook A

LED ASSY

LED holder hook

LED holder hooks

LED unit
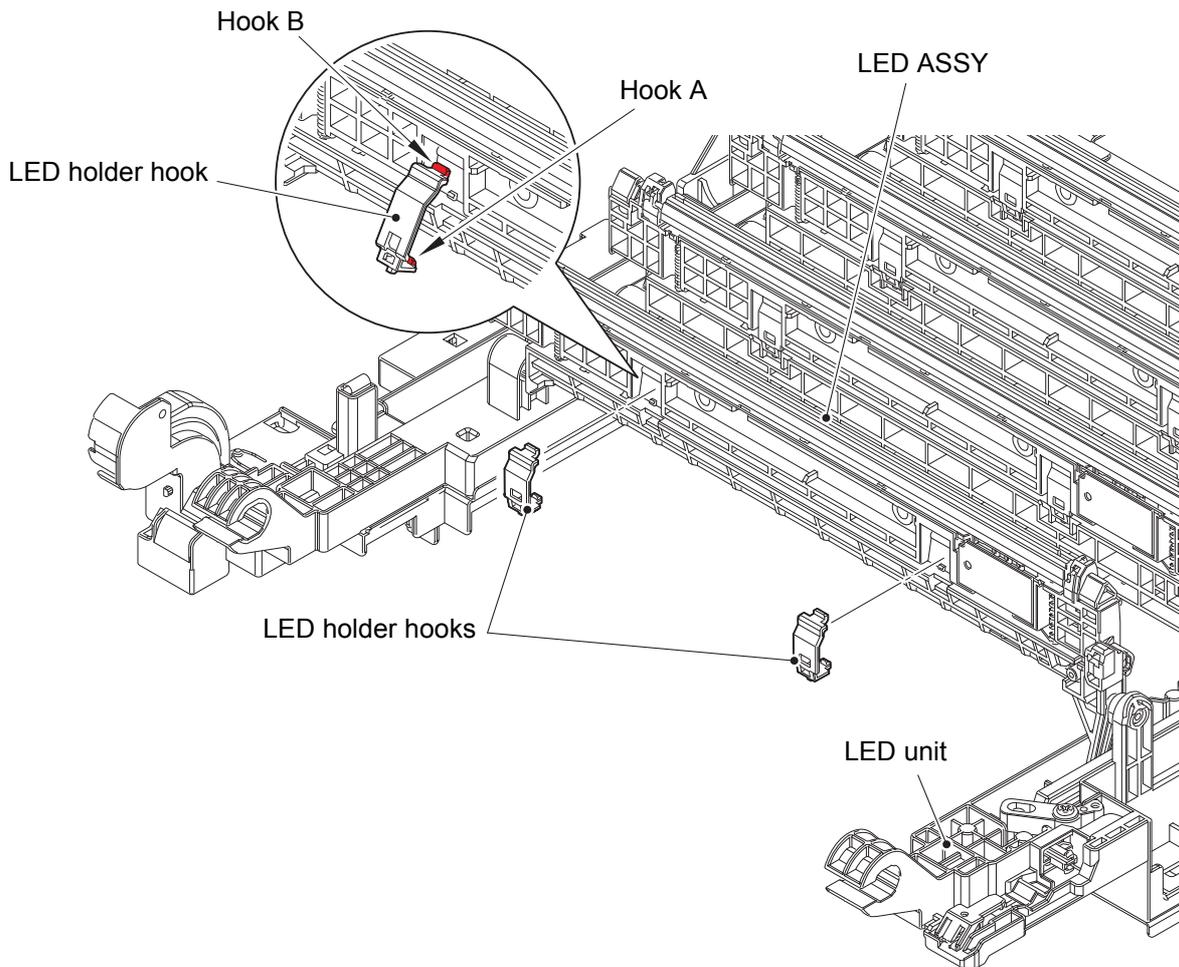
**Fig. 3-88**

> ✏️ **Assembling note:**
> • When assembling the LED holder hook, make sure to insert the Hook B of the LED holder hook into the groove of the LED ASSY first, and then assemble the Hook A of the LED holder hook.
> • After assembling, make sure to check that the Hook B is firmly engaged to the LED ASSY. If the LED holder hook is not engaged firmly, it might cause an image failure.

(9) **Remove** > LED ASSY

Boss

LED ASSY

Boss

LED FFC

Spring A

Spring A
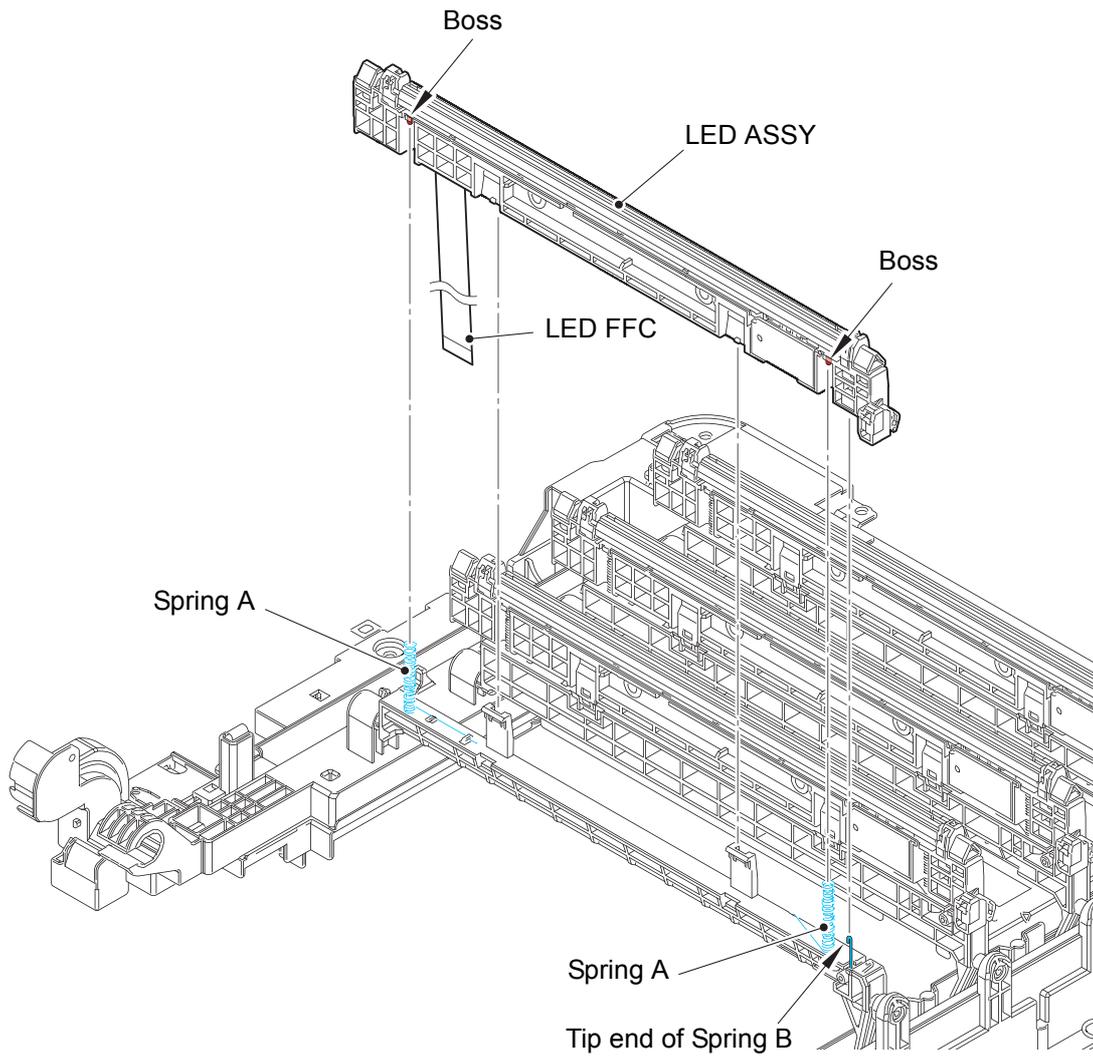
Tip end of Spring B

**Fig. 3-89**

**Assembling note:**
- When assembling the LED ASSY, insert the two Springs A into each Boss of the LED ASSY and insert the tip end of Spring B in the Hole of the LED ASSY.

(10) **Remove** >   LED control FFC cover

 ✎ **Fixtures & Fittings**
   - Hook  (x 2)

(11) **Disconnect** >  LED FFC

 ✎ **Fixtures & Fittings**
   - Lock  (x 1)



LED ASSY

Lock

Hooks

LED control FFC cover

LED FFC

**Fig. 3-90**

<How to fold the LED FFC Y/M/C/K>

——— Mountain fold

------- Valley fold

<LED FFC Y>        <LED FFC M>        <LED FFC C>        <LED FFC K>

LED control PCB side

Conductor          Conductor          Conductor          Conductor

25.5 mm                                18±1 mm            18±1 mm

41±1 mm            26±1 mm                               16±1 mm

21±1 mm                                46±1 mm

                                       30.5 mm           0.5 mm

                   84±1 mm

129±1 mm

                                                          109±1 mm

                                       115±1 mm

                   21±1 mm

                   5.5 mm

325 mm

                                                          151 mm

                                       115 mm

103 mm

14±1 mm            14±1 mm            14±1 mm            14±1 mm

17±1 mm            17±1 mm            17±1 mm            17±1 mm

LED ASSY side

Conductor          Conductor          Conductor          Conductor

The angle of the diagonal fold is 45°.

**Fig. 3-91**

*Confidential*

(12) **Remove** >   LED weight plate

✏️ **Fixtures & Fittings**
   - Screw cup M3x8 SR  (x 2)

> 💡 **Point:**
>   • Remove the LED weight plate only for models with the LED weight plate on the LED ASSY.

LED ASSY

LED weight plate

Screw cup M3x8 SR
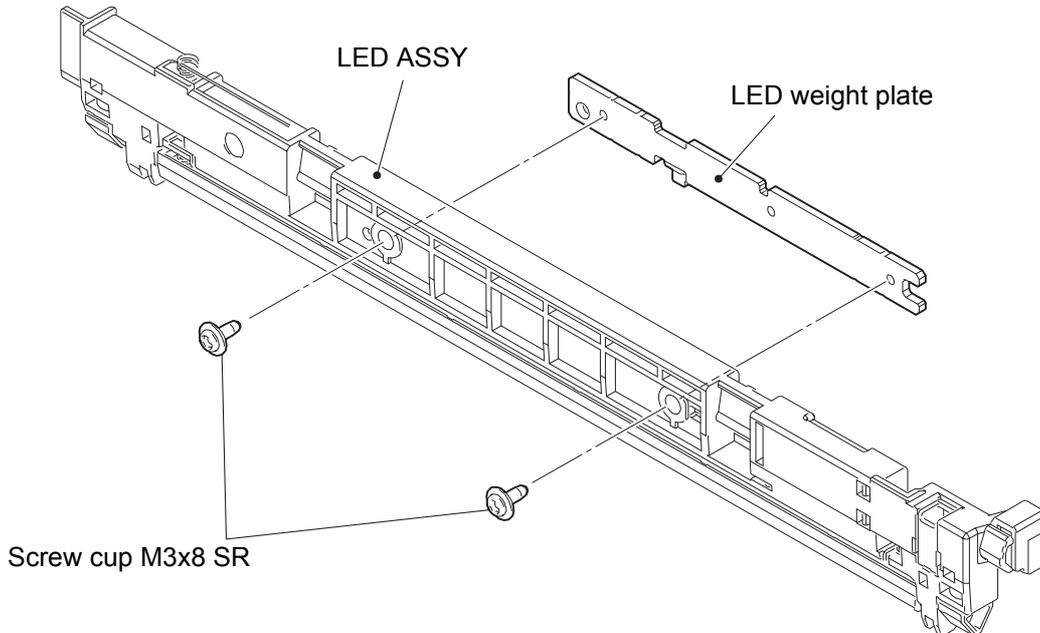
**Fig. 3-92**

> 🖊️ **Assembling note:**
>   • The LED parts of the LED ASSY for replacement are covered with protection tapes. Make sure not to remove the protection tapes until assembling of the LED ASSY is completed. After it is assembled, make sure to remove the protection tapes.
>   • If the LED parts get smeared, make sure to wipe smears on the LED parts with a clean and soft cloth.
>   • For models with the LED weight plate on the LED ASSY, DO NOT forget to attach the LED weight plate to the spare LED ASSY.
>   • For models without the LED weight plate on the LED ASSY, DO NOT attach the LED weight plate to the spare LED ASSY.

*Confidential*

## 8.36 MP roller holder ASSY (For models with MP tray)

(1) **Open** > MP cover ASSY

(2) **Remove** > MP maintenance cover

*✎ **Fixtures & Fittings***
- Taptite pan B M4x14 (x 2)

Taptite pan B M4x14

MP maintenance cover

MP cover ASSY
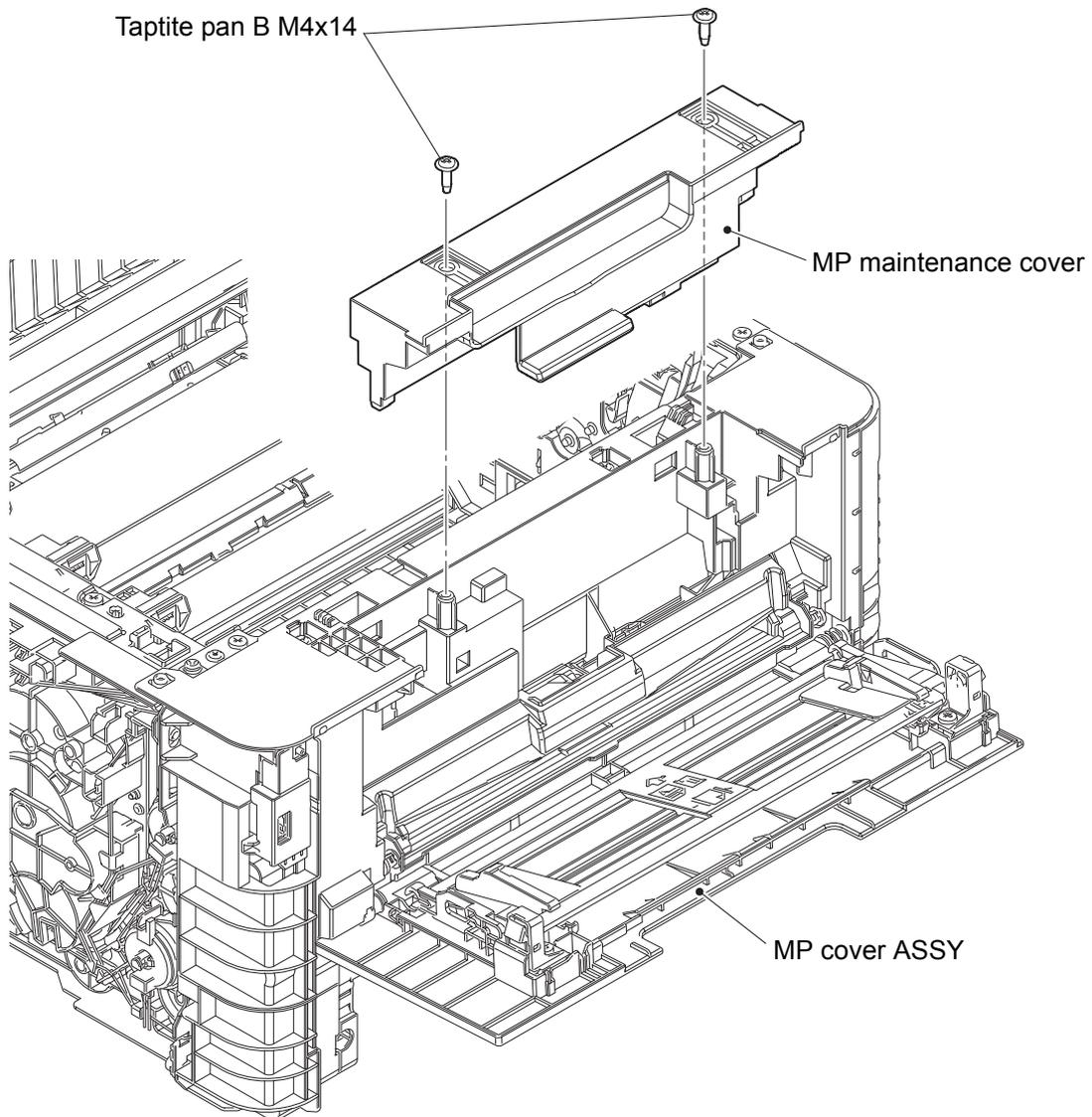
**Fig. 3-93**

(3) **Slide** > MP holder bushing

🔩 **Fixtures & Fittings**
   - Hook  (x 1)

(4) **Remove** > MP roller holder ASSY

💡 **Point:**
   • Remove the MP roller holder ASSY in the order of the arrows.

MP roller holder ASSY

Hook

MP holder bushing

B

A

<Front side>
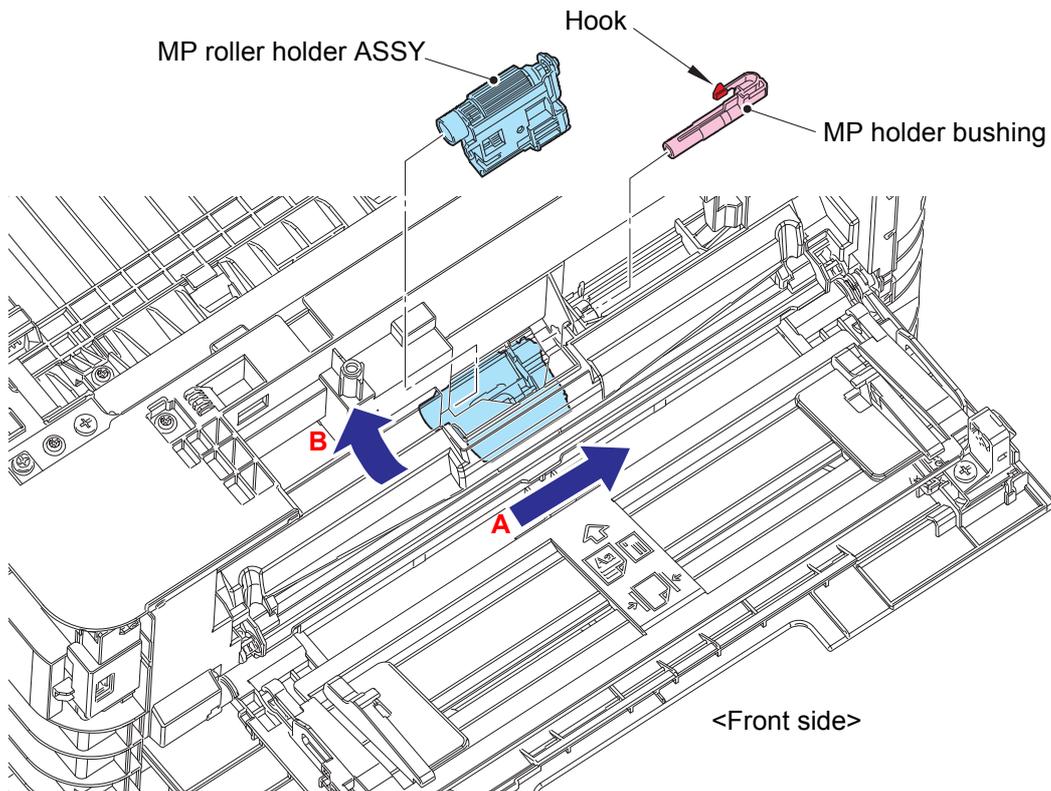
**Fig. 3-94**

🔧 **Assembling note:**
   • After replacing the MP roller holder ASSY, reset the counter.
     (Refer to "1.3.35 Reset Counters after Parts Replacement (Function Code 88)" in Chapter 5.)

(5) **Remove** > MP separation pad

✏ **Fixtures & Fittings**
   - Hook (x 2)

💡 **Point:**
   • Turn the MP separation pad upright to remove it upward.

(6) **Remove** > MP separation pad spring

MP separation pad spring

Hooks

MP separation pad

<Front side>

**Fig. 3-95**

*Confidential*
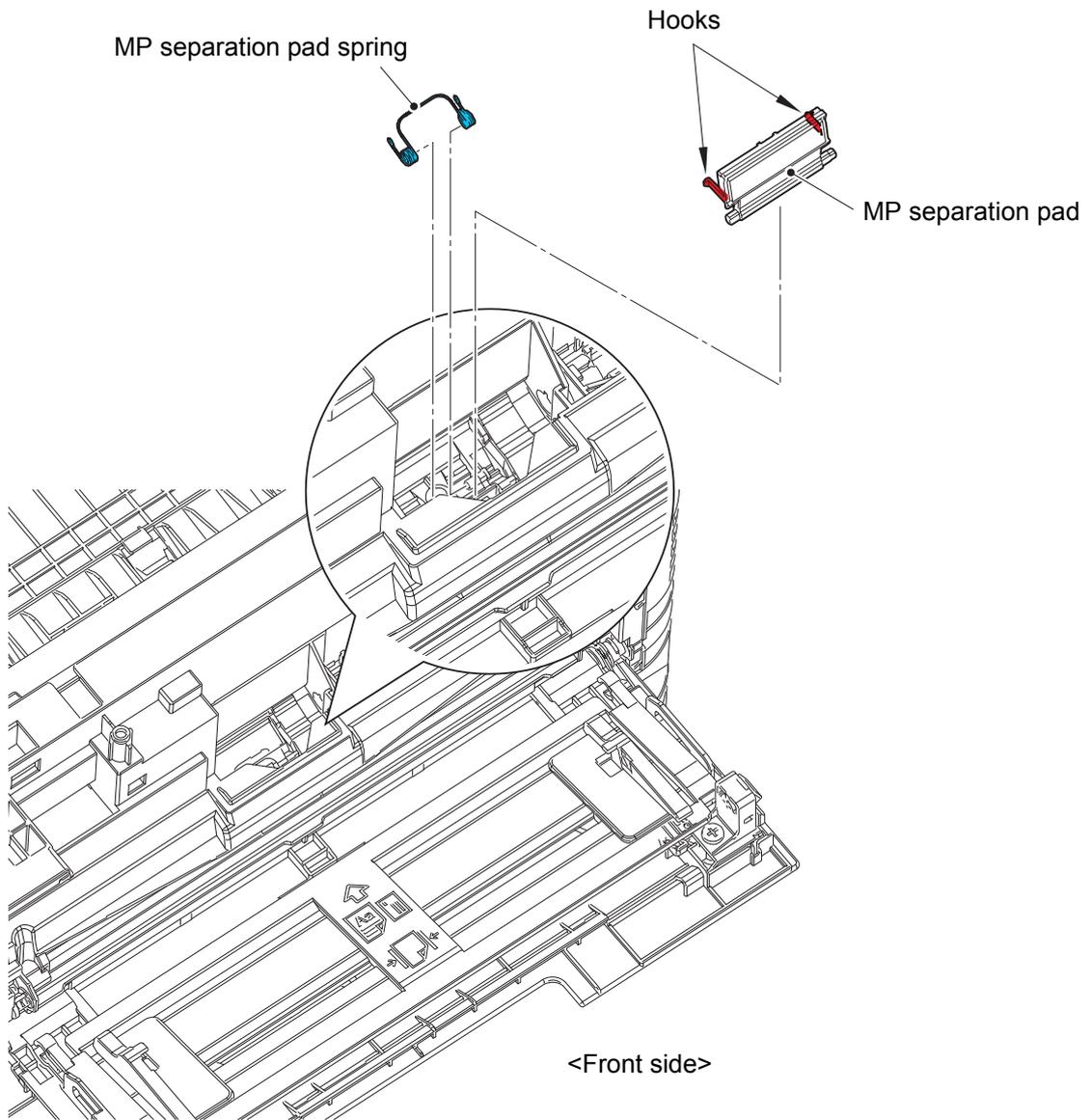
## 8.37  MP paper guide ASSY (For models with MP tray)

(1)  **Remove** >   MP paper guide ASSY

### 🔩 Fixtures & Fittings
- Boss  (x 2)

> 💡 **Point:**
> • Remove the MP paper guide ASSY in the direction of the arrow.



Boss

MP paper guide ASSY

<Front side>

Boss
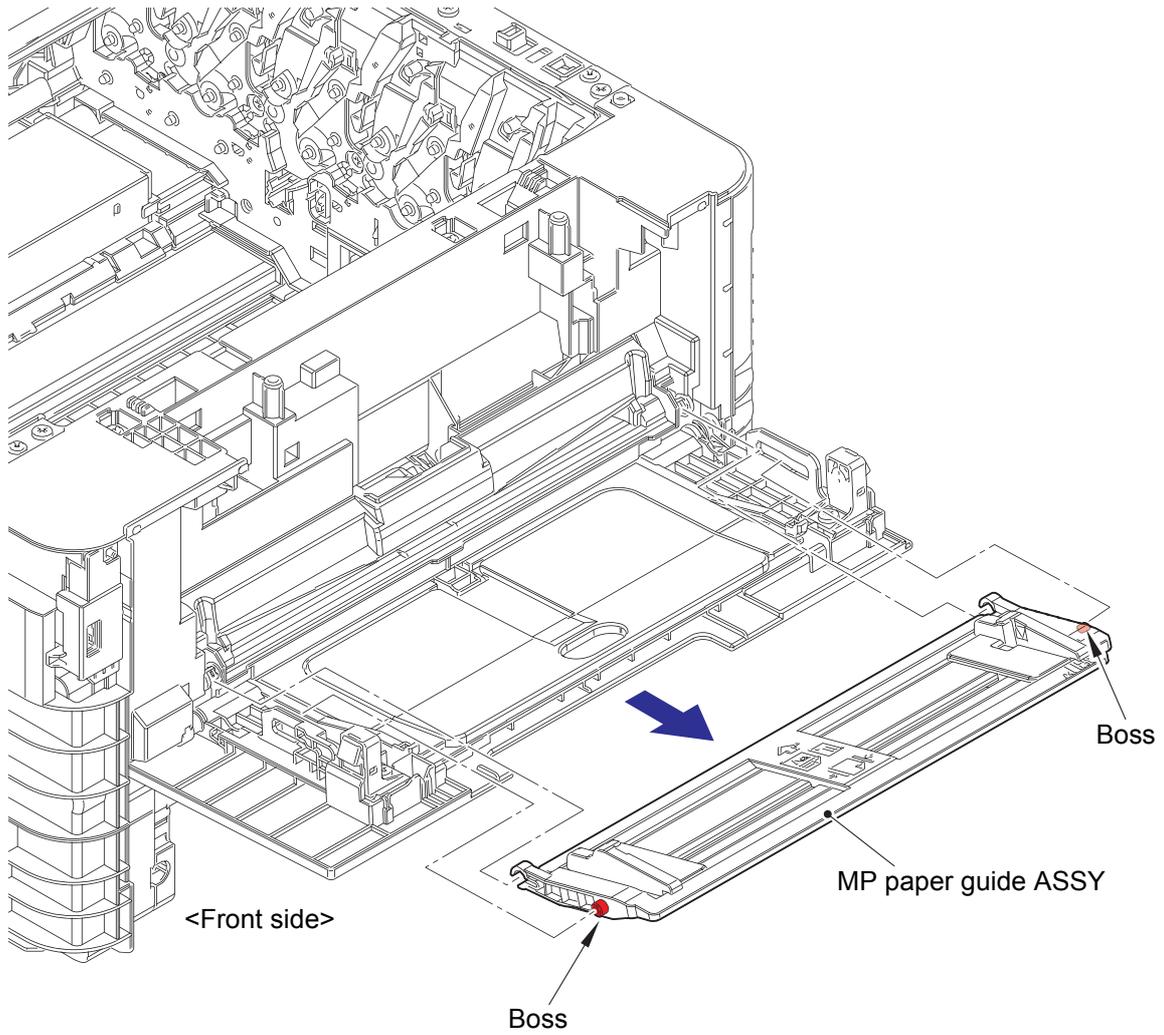
**Fig. 3-96**

## 8.38 MP cover ASSY (For models with MP tray)

(1) **Release** > Hook of MP cover damper spring

(2) **Remove** > MP cover ASSY

> 💡 **Point:**
> • Remove the MP cover ASSY in the direction of the arrow.



MP cover damper spring

Hook of MP cover damper spring

<Front side>

MP cover ASSY
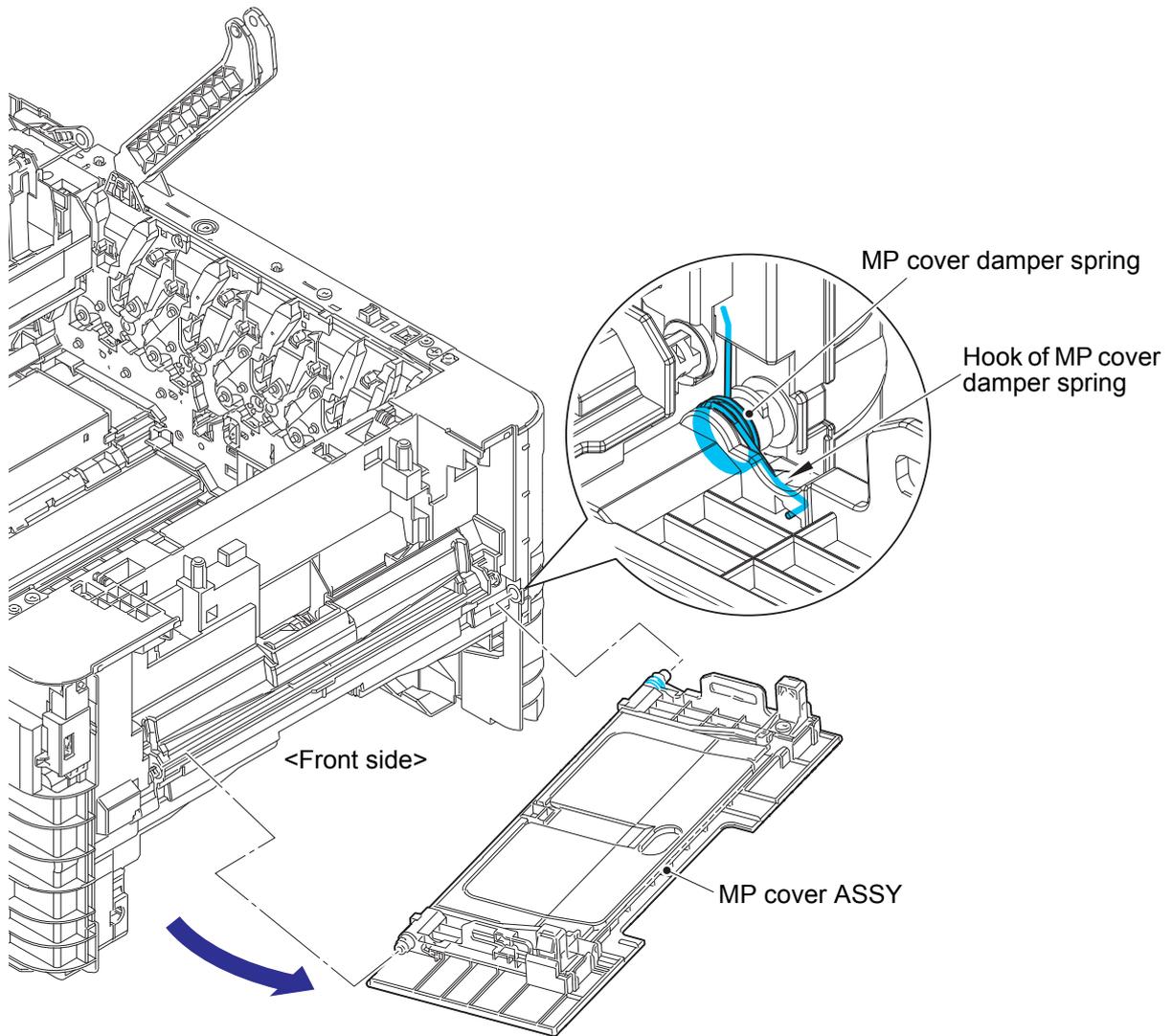
**Fig. 3-97**

## 8.39 WLAN PCB

(1) **Remove** > WLAN cap

🪛 **Fixtures & Fittings**
   - Hook  (x 3)

(2) **Remove** > WLAN PCB

WLAN PCB

Hook

WLAN cap

Hooks

**Fig. 3-98**

*Confidential*
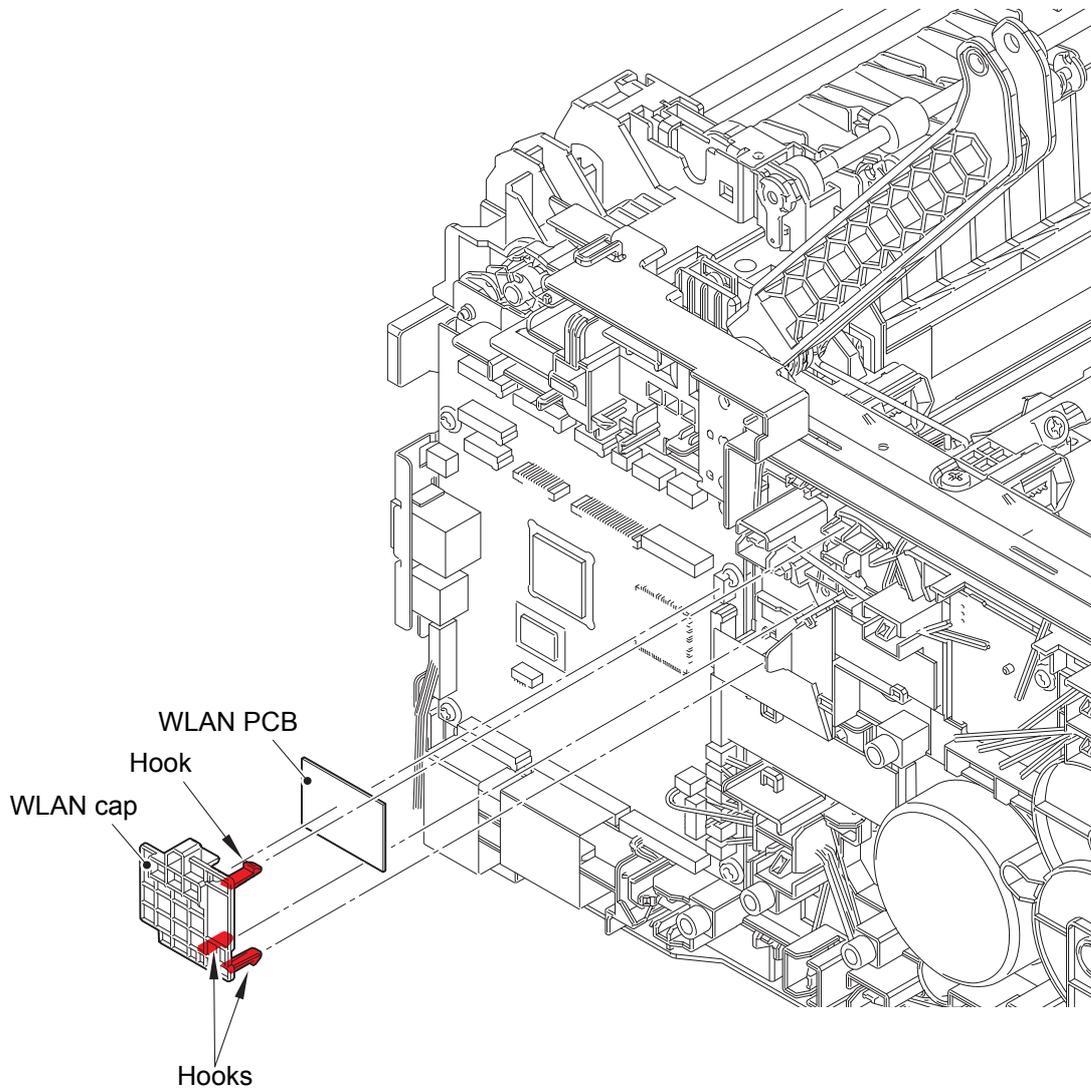
## 8.40 Main PCB

(1) **Disconnect** > All the harnesses and FFCs

🔩 **Fixtures & Fittings**
- Lock (x 1)
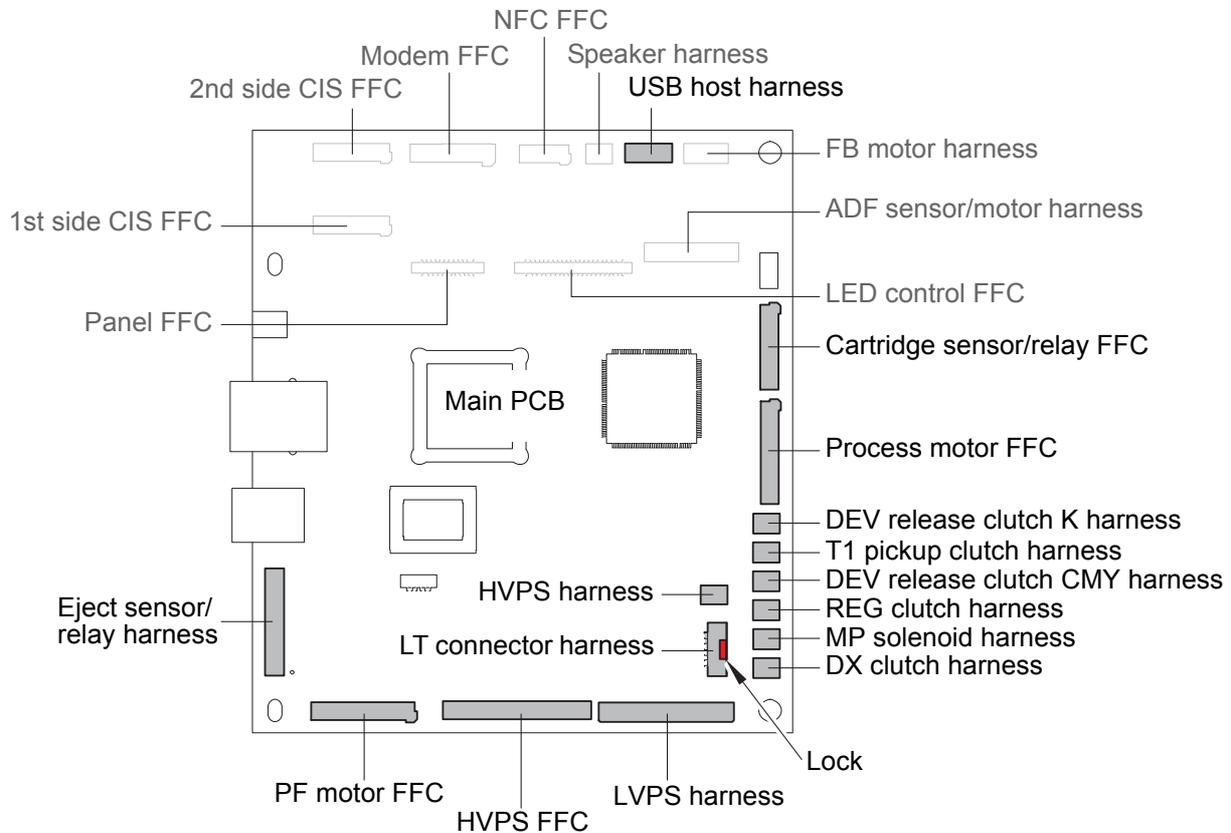


**Fig. 3-99**

> ⚠️ **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.

*Confidential*

(2) **Remove** > Main PCB

🪛 **Fixtures & Fittings**
- Screw cup M3x8  (x 4)

(3) **Remove** > Main PCB insulation sheet

Main PCB insulation sheet

Main PCB

<Left side>

Screw cup M3x8
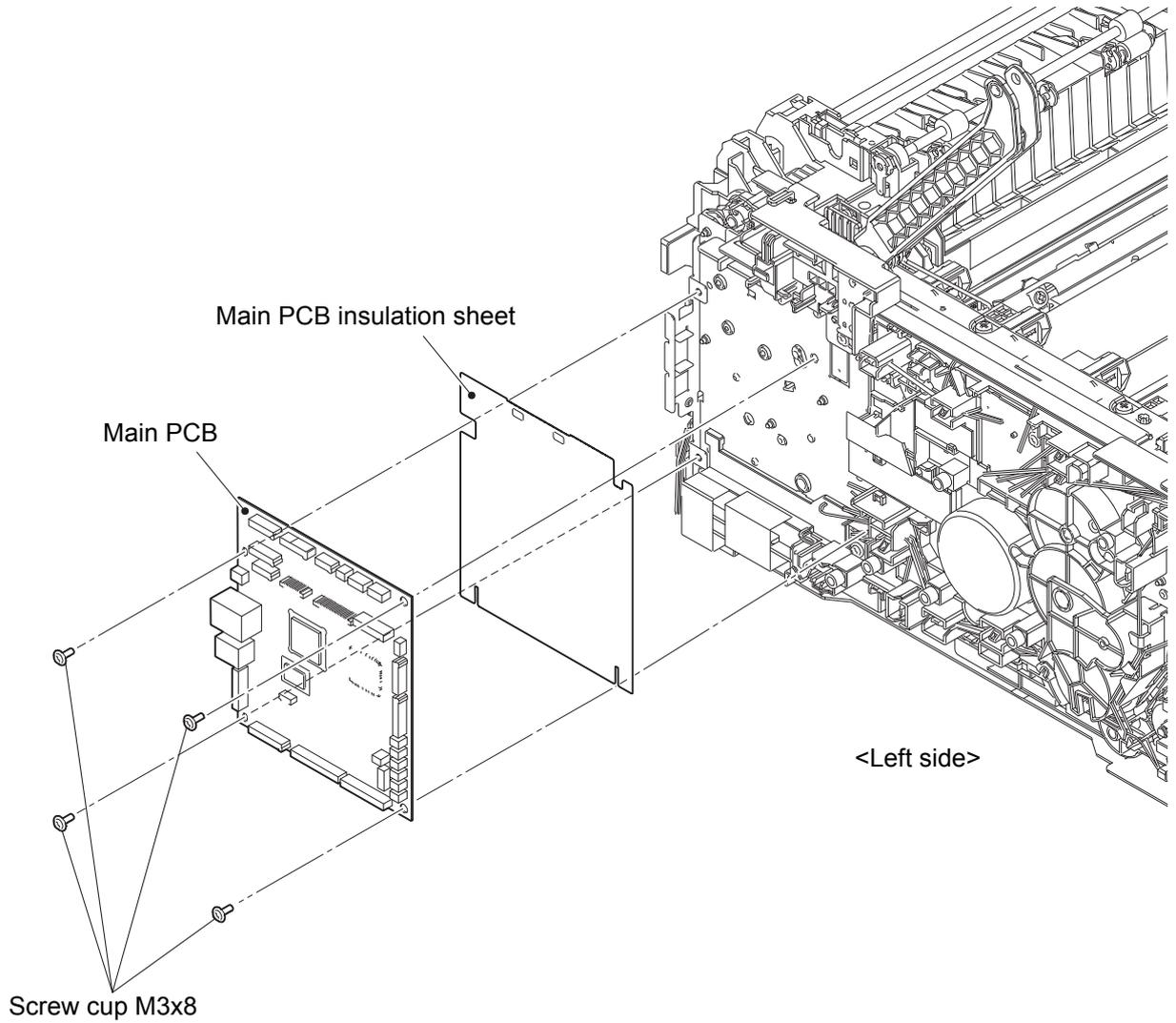
**Fig. 3-100**

## 8.41 Harness holder upper

(1) **Remove** > Main ground plate

✎ **Fixtures & Fittings**
   - Taptite cup S M3x8 SR  (x 1)

(2) **Remove** > Harness holder upper

✎ **Fixtures & Fittings**
   - Hook  (x 1)

> 💡 **Point:**
> • Remove the Harness holder upper in the order of the arrows.

Harness holder upper

B

A

Hook

Main ground plate

Taptite cup S M3x8 SR

\<Left side\>
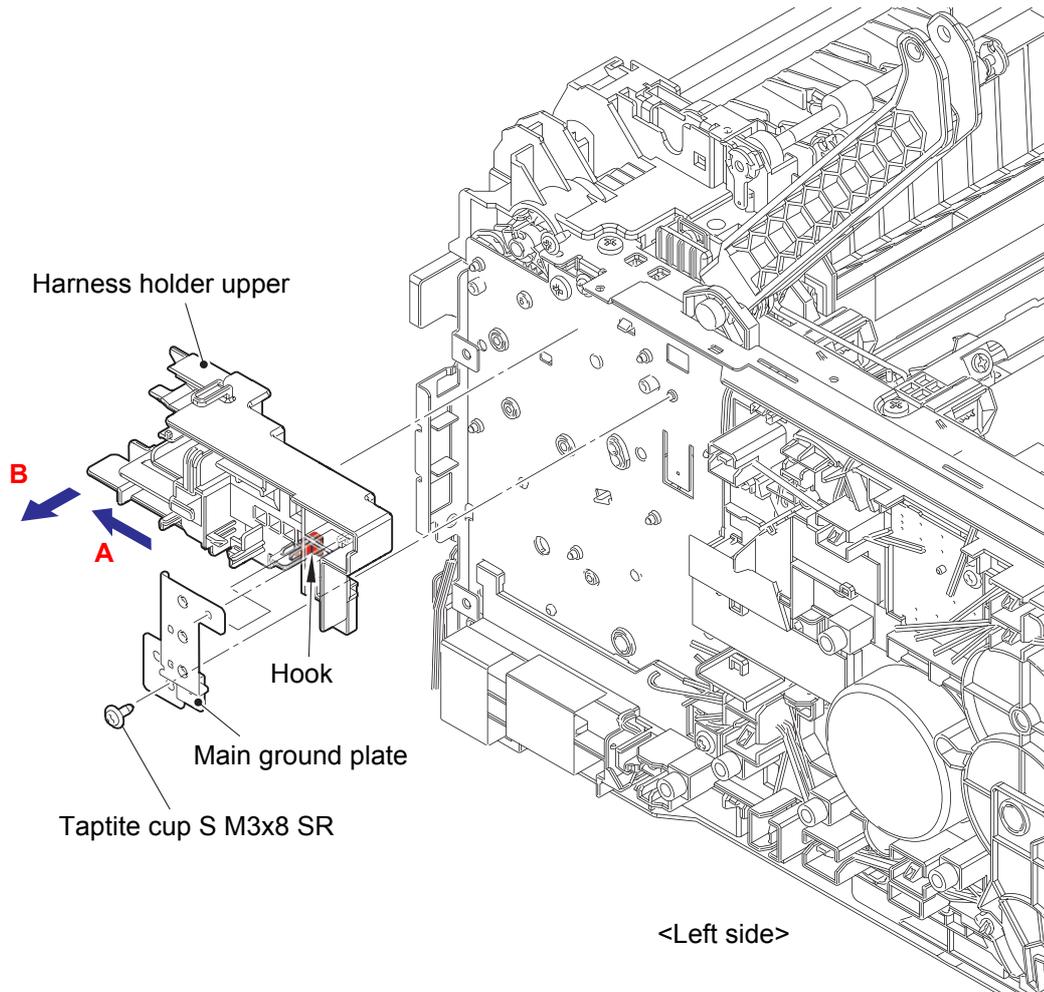
**Fig. 3-101**

## 8.42 USB host harness

(1) **Wiring** > USB host harness

(2) **Remove** > Inner front cover

### Fixtures & Fittings
- Taptite bind B M4x12 (x 2)
- Screw bind M3x8 (x 2)
- Taptite pan (washer) B M4x12DA (x 1)
- Hook (x 4)

> **Point:**
> • Pull out the USB host harness through the hole.
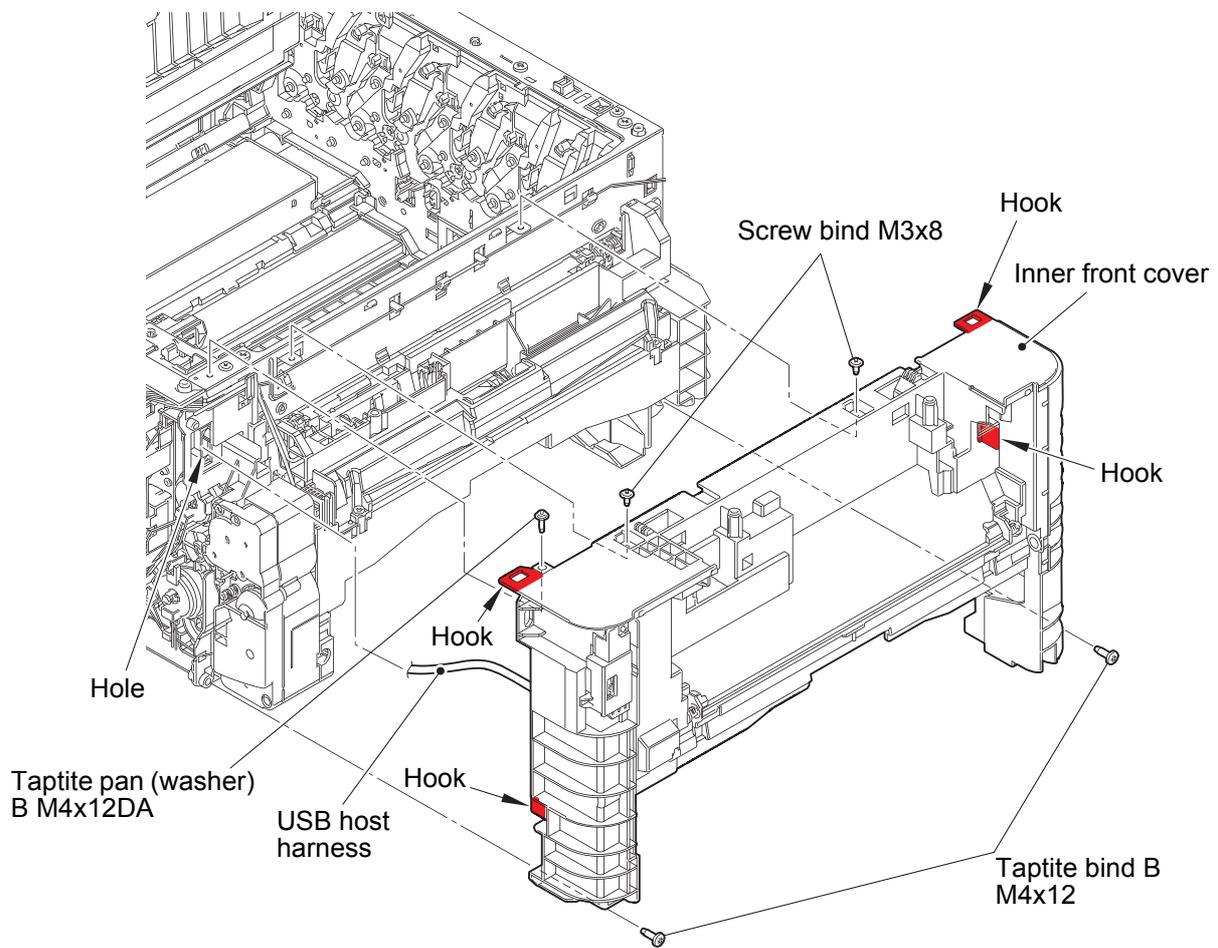


**Fig. 3-102**

Harness routing: Refer to "35. USB host harness".

(3) **Remove** > USB holder ASSY

**Fixtures & Fittings**
- Taptite bind B M3x10 (x 2)

Taptite bind B M3x10

USB holder ASSY
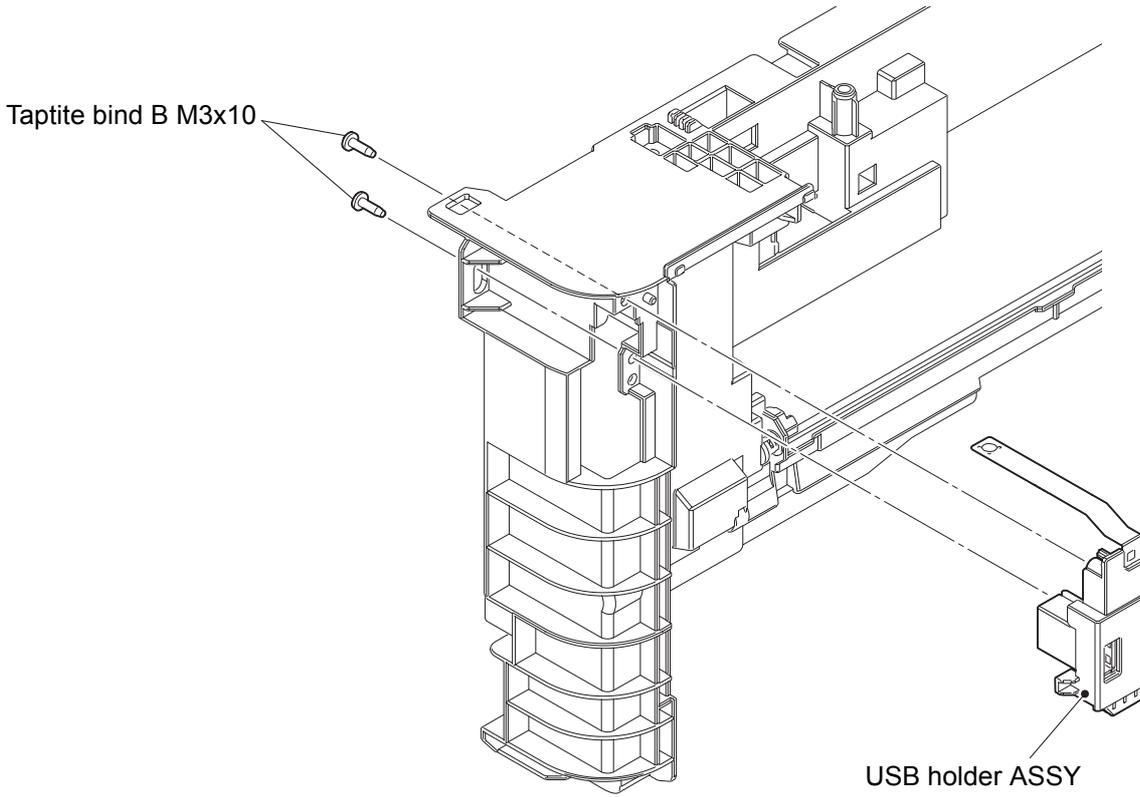
**Fig. 3-103**

(4) **Remove** > USB host harness, USB host ground plate

**Fixtures & Fittings**
- Screw pan (S/P washer) M3x12DB (x 2)
- Hook (x 1)

USB host ground plate

USB host harness

Screw pan (S/P washer) M3x12DB

Hook

USB holder ASSY
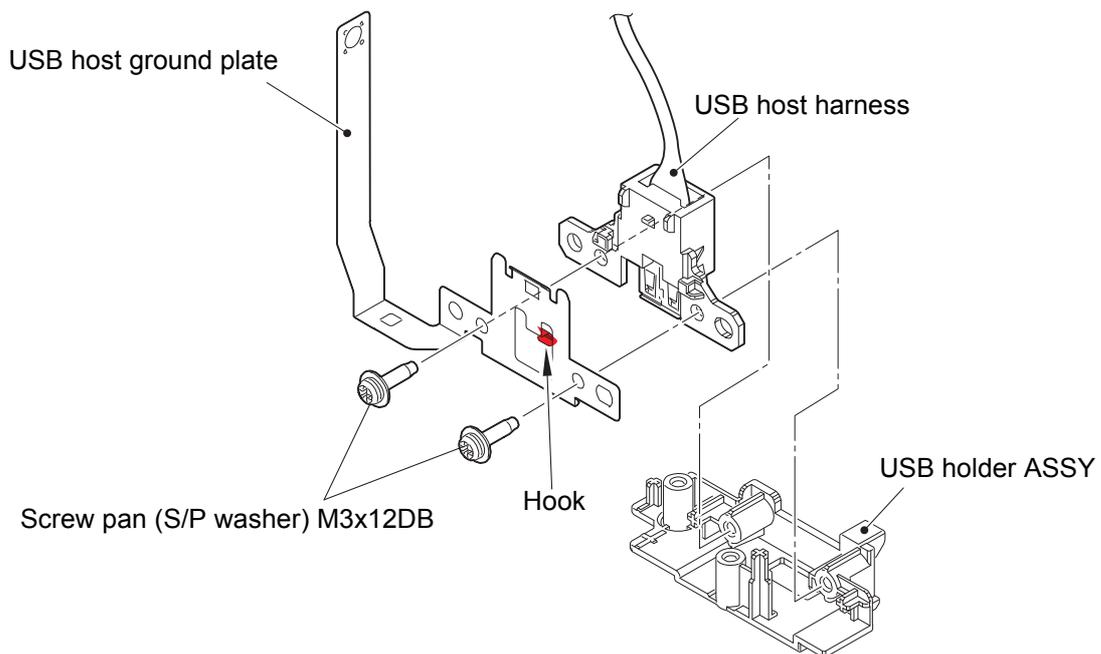
**Fig. 3-104**

## 8.43 MP unit (For models with MP tray)

(1) **Disconnect** > MP REG sensor harness, MP PE sensor harness

(2) **Wiring** > MP REG sensor harness, MP PE sensor harness, MP solenoid harness



Cartridge sensor/relay PCB

MP REG sensor harness —          — MP PE sensor harness
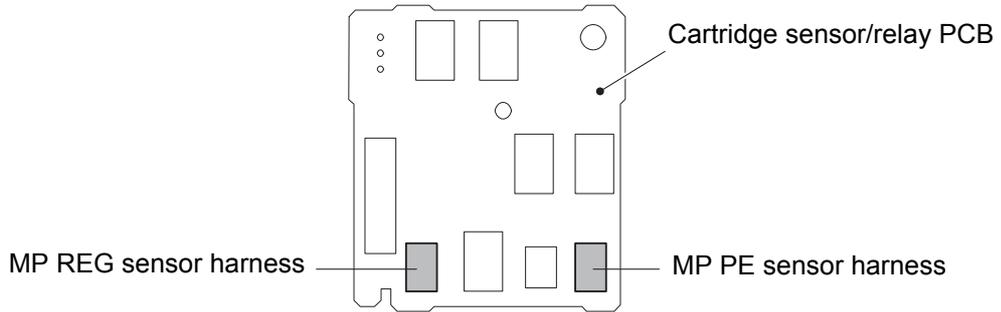
**Fig. 3-105**

Harness routing: Refer to "23. MP PE sensor harness, MP REG sensor harness, MP solenoid harness".

(3) **Remove** > MP unit

✏ **Fixtures & Fittings**
- Taptite bind B M4x12 (x 4)
- Hook (x 2)



Hook

Hook

MP unit

Taptite bind B M4x12



MP unit

Taptite bind B M4x12

Taptite bind B M4x12

<Left side>

<Right side>

**Fig. 3-106**

*Confidential*
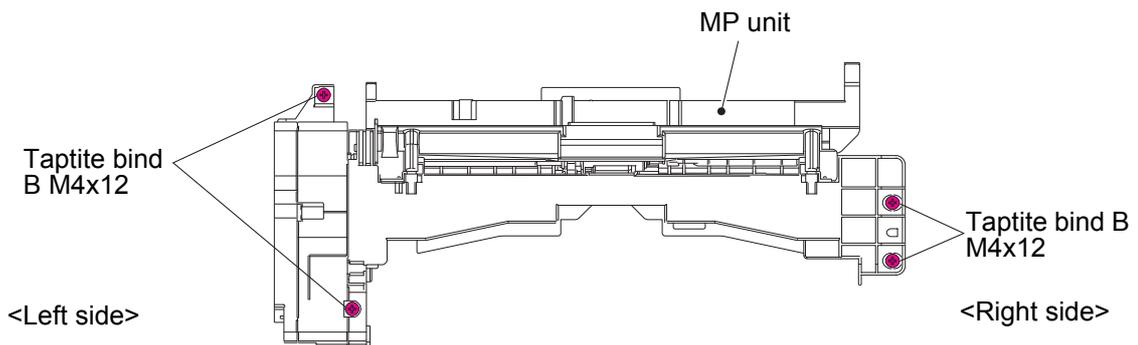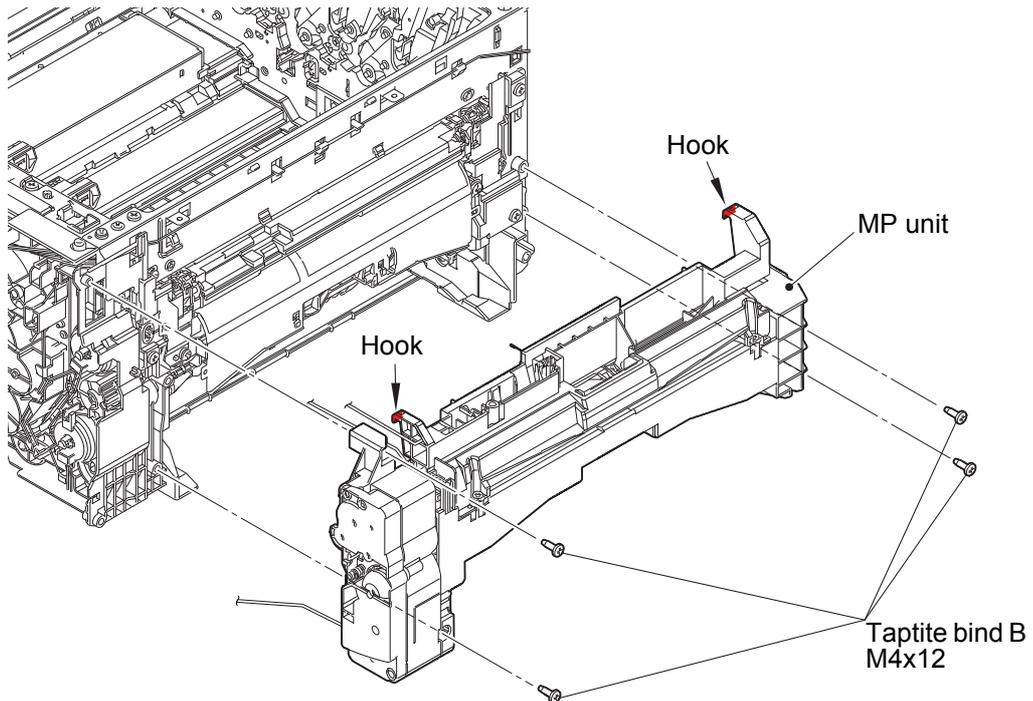
## 8.44 MP REG sensor PCB (For models with MP tray)

(1) **Remove** > MP REG sensor PCB

  ✎ **Fixtures & Fittings**
   - Taptite bind B M3x10  (x 1)
   - Hook  (x 1)

(2) **Disconnect** > MP REG sensor harness



**Fig. 3-107**

*Confidential*
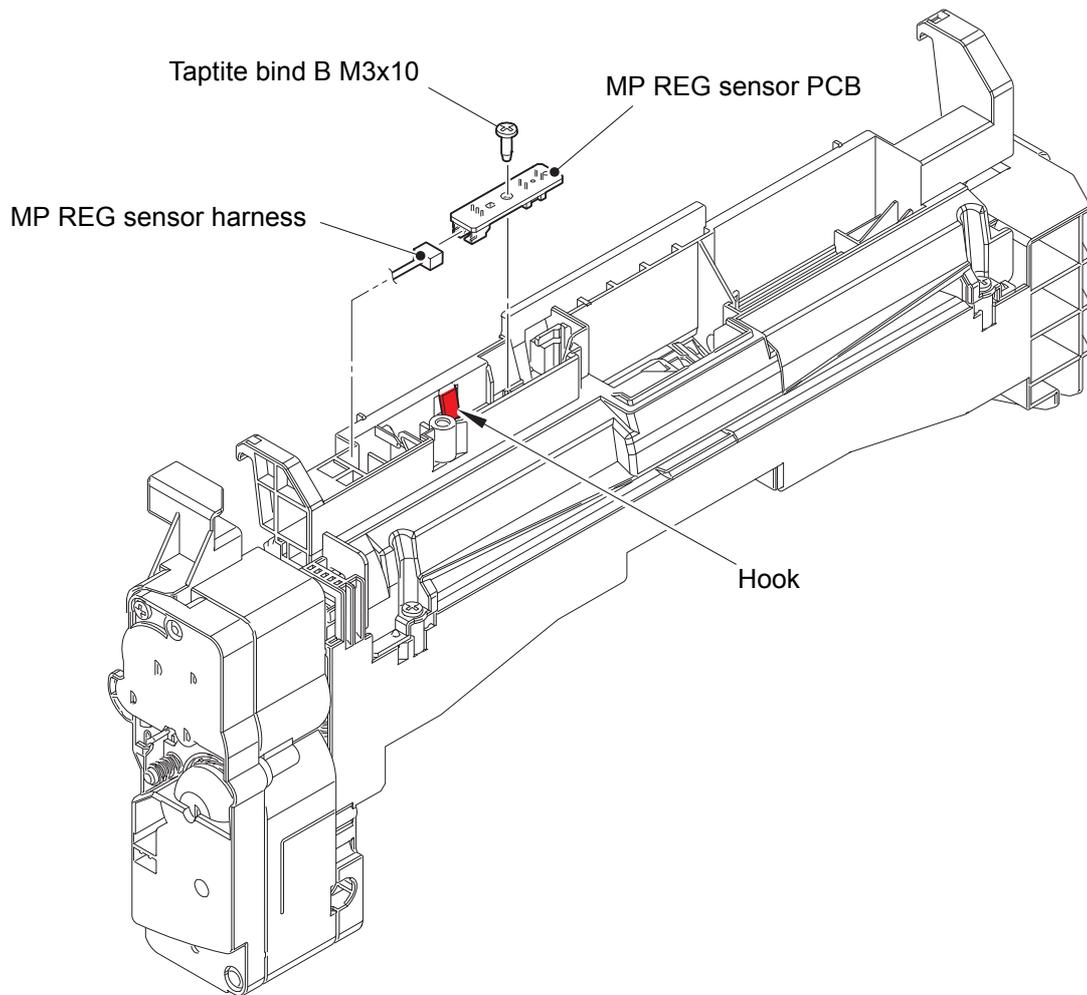
## 8.45 MP PE sensor PCB (For models with MP tray)

(1) **Remove** > Screws

✎ **Fixtures & Fittings**
  - Taptite bind B M3x10 (x 2)

Taptite bind B M3x10
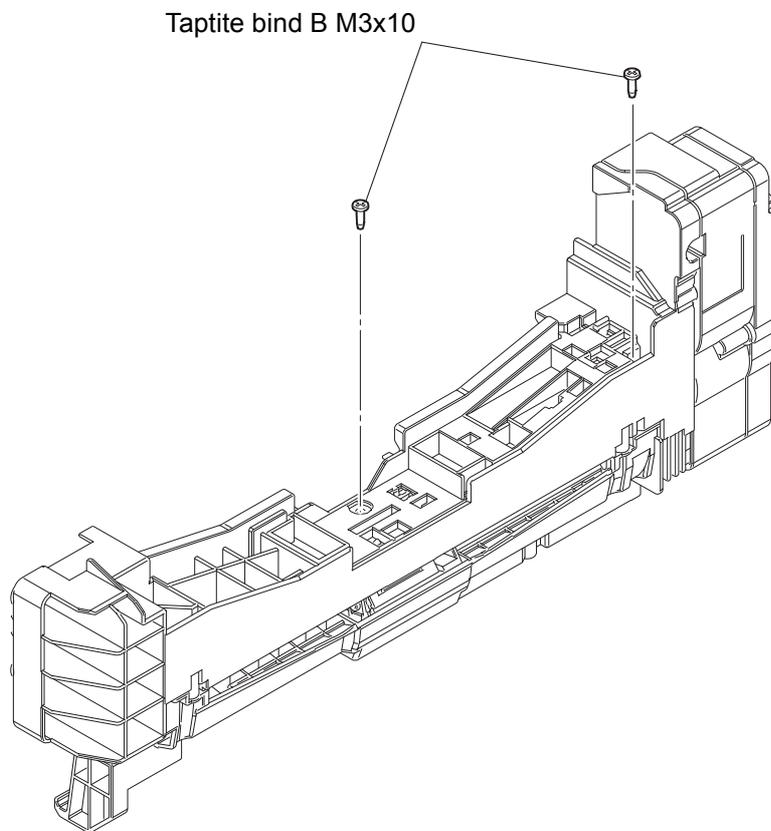
**Fig. 3-108**

(2) **Open** > MP sensor holder ASSY

(3) **Disconnect** > MP PE sensor harness

(4) **Remove** > MP spring A

(5) **Remove** > MP paper stopper

✎ **Fixtures & Fittings**
- Hook (x 1)

💡 **Point:**
• Remove the MP paper stopper in the order of the arrows.
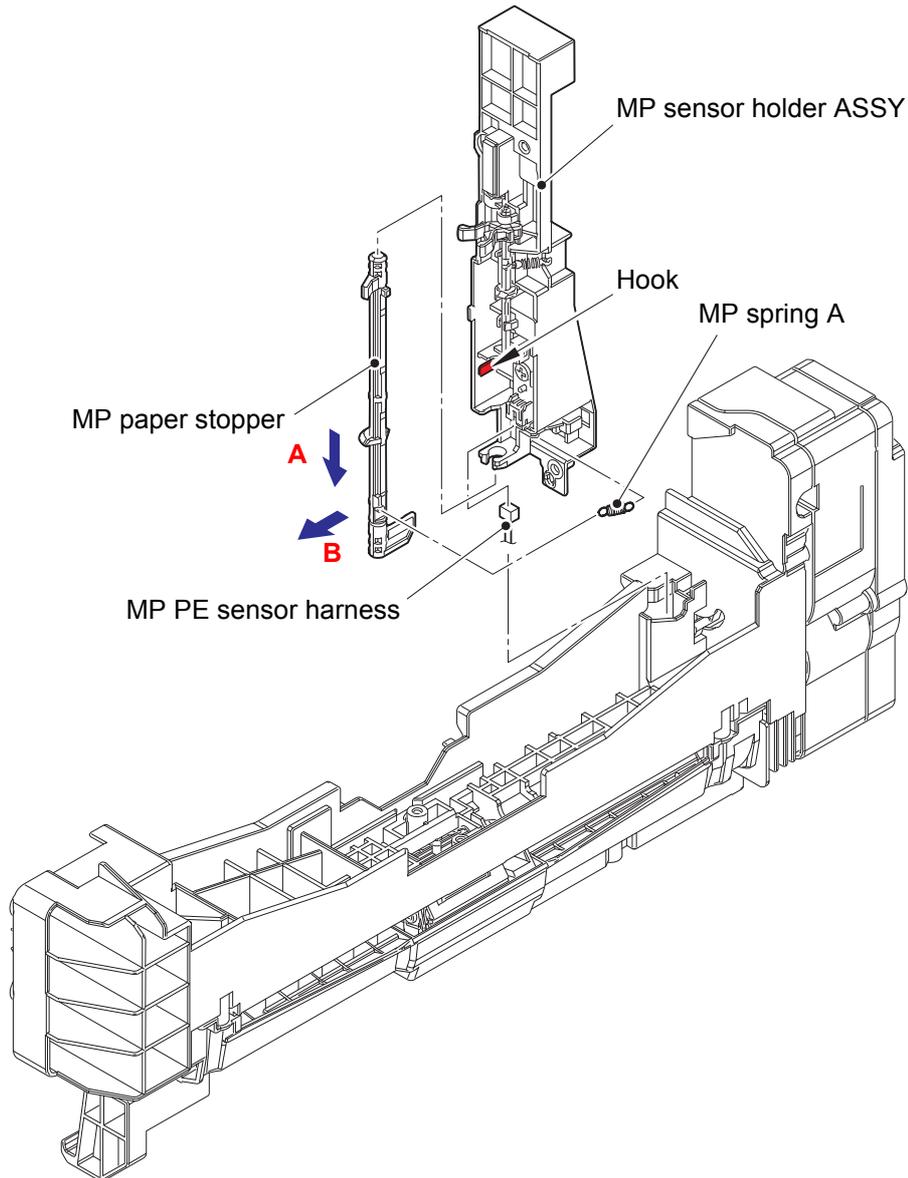


**Fig. 3-109**

(6) **Remove** > MP spring B

(7) **Remove** > MP PE actuator

🔩 **Fixtures & Fittings**
- Hook A  (x 1)

💡 **Point:**
• Remove the MP PE actuator in the order of the arrows.

(8) **Remove** > MP PE sensor PCB

🔩 **Fixtures & Fittings**
- Taptite bind B M3x10  (x 1)
- Hook B  (x 1)

MP PE actuator

Hook A

A

B

C

MP spring B

Hook B

Taptite bind B M3x10

MP PE sensor PCB
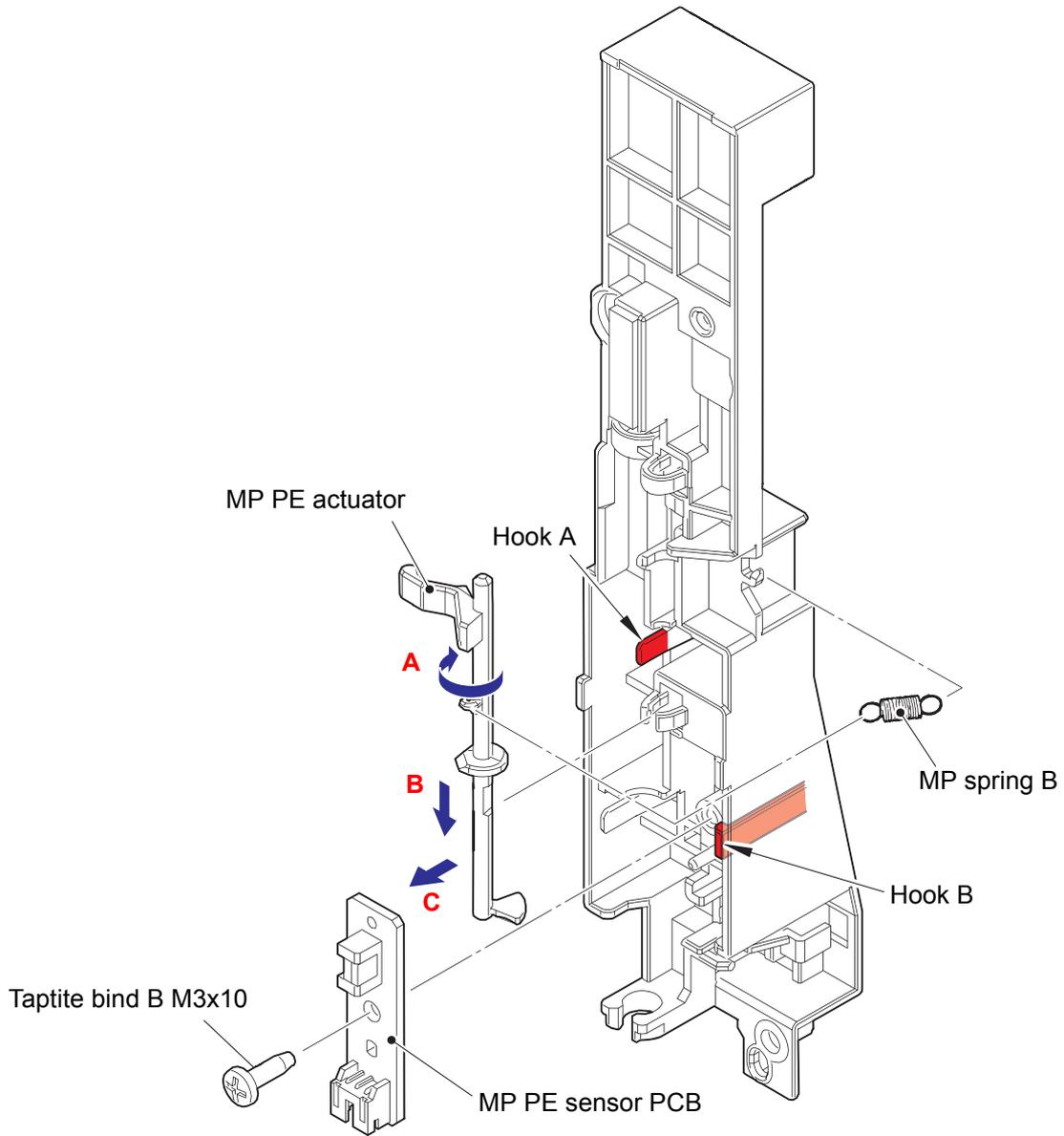
**Fig. 3-110**

## 8.46 MF cover ASSY (For models with MF tray)

(1) **Disconnect** > MF PE sensor harness

(2) **Wiring** > MF PE sensor harness
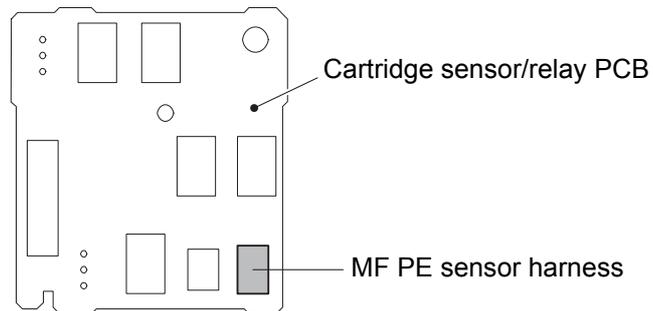


**Fig. 3-111**

Harness routing: Refer to "21. MF PE sensor harness".

(3) **Remove** > Inner front cover

✎ **Fixtures & Fittings**
- Taptite bind B M4x12 (x 2)
- Taptite cup S M3x8 SR (x 2)
- Hook (x 4)
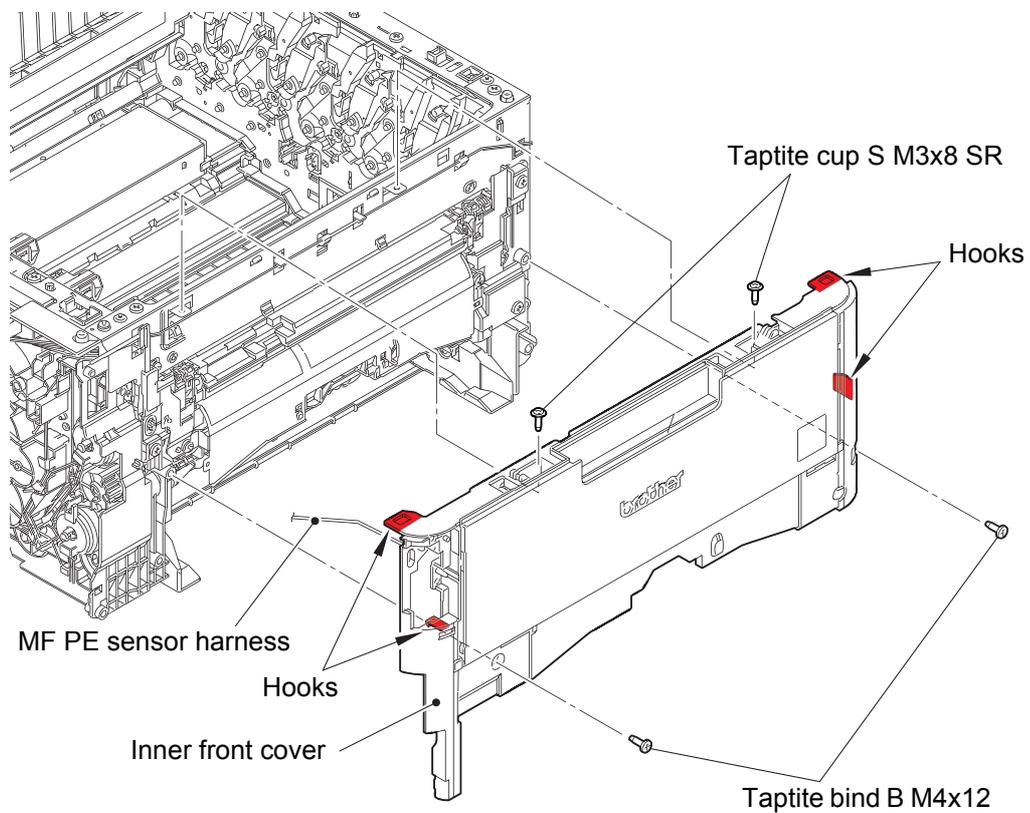


**Fig. 3-112**

(4) **Remove** > MF cover ASSY

🔩 **Fixtures & Fittings**
  - Boss (x 2)



Boss

Boss

MF cover ASSY
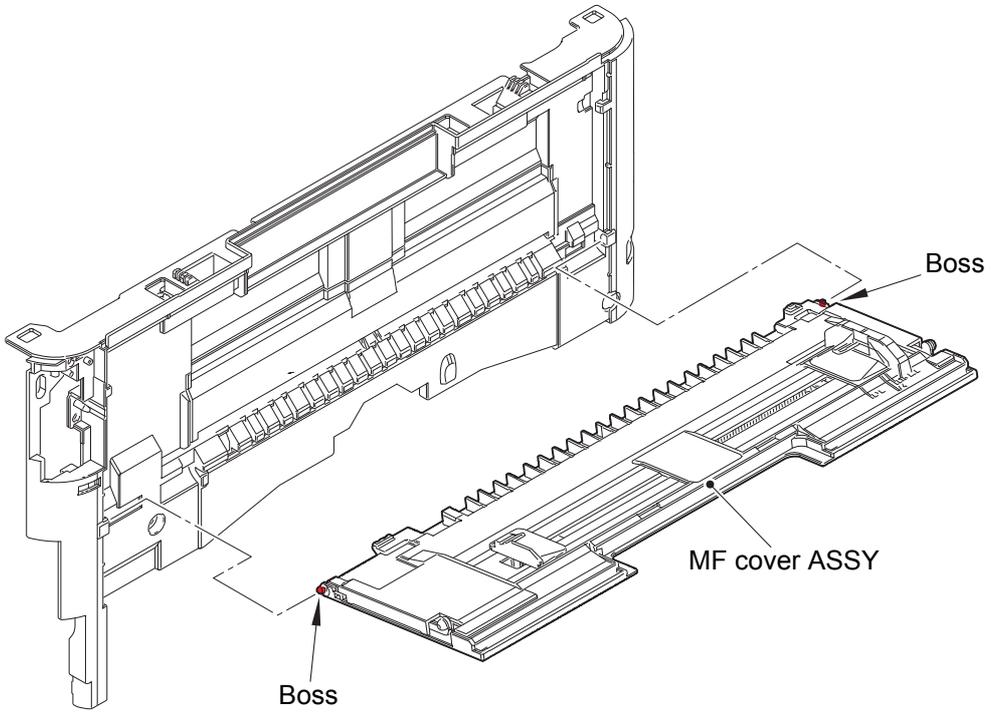
**Fig. 3-113**

## 8.47 HVPS PCB

(1) **Release** > HVPS FFC cover

🔩 **Fixtures & Fittings**
- Hook (x 2)

Hooks

HVPS FFC cover

<Left side>

<Left side>

<Bottom side>

Hooks
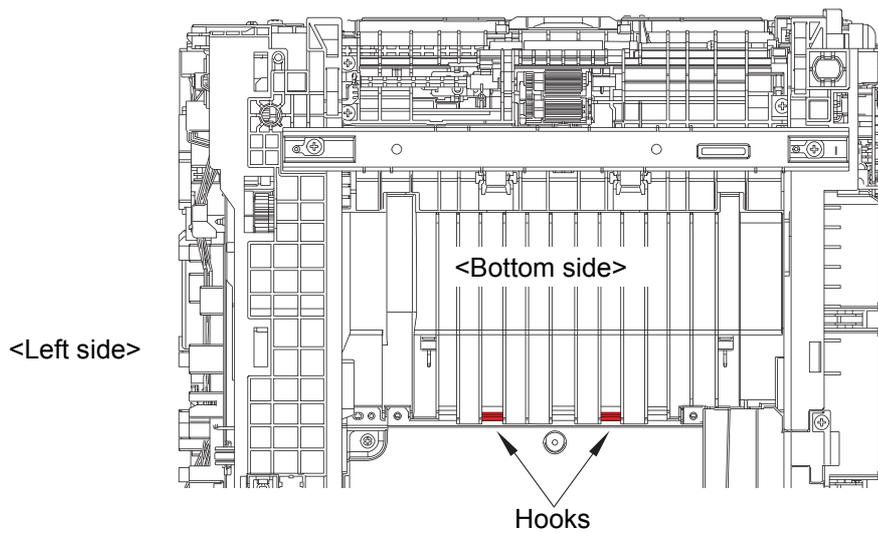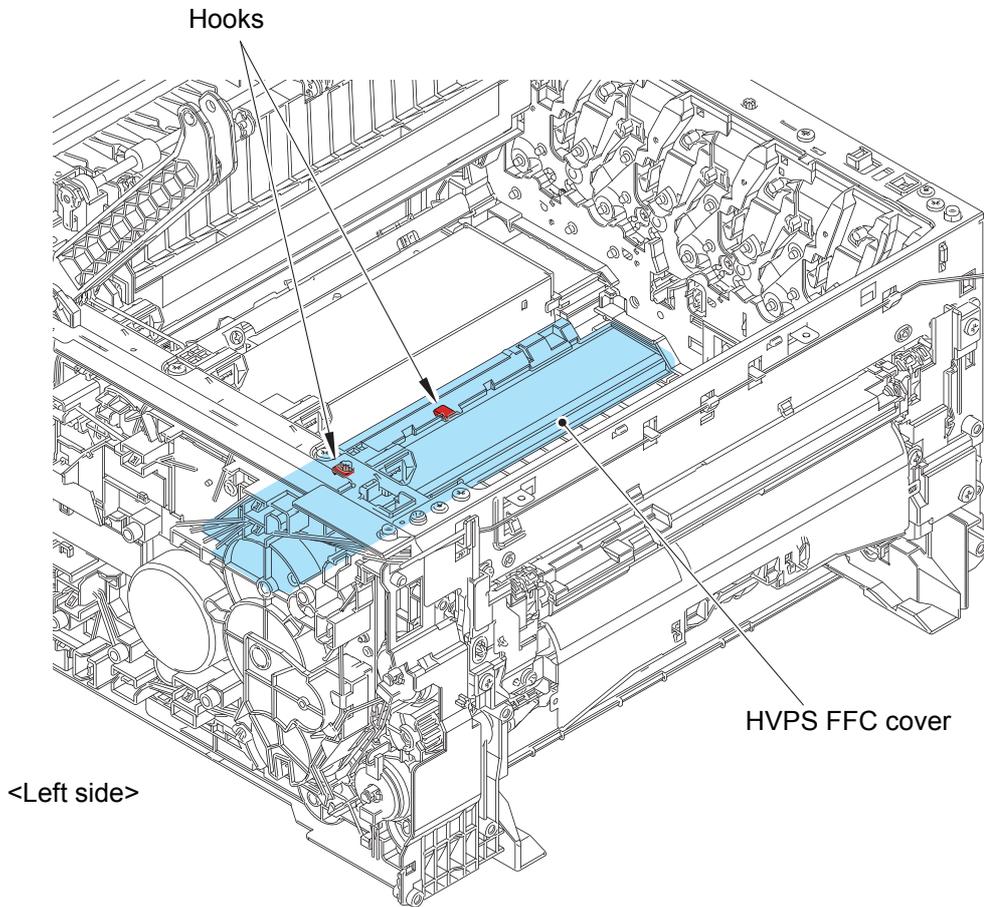
**Fig. 3-114**

(2) **Remove** > HVPS FFC cover

> **Point:**
> • Remove the HVPS FFC cover in the direction of the arrow.

HVPS FFC cover

<Front side>
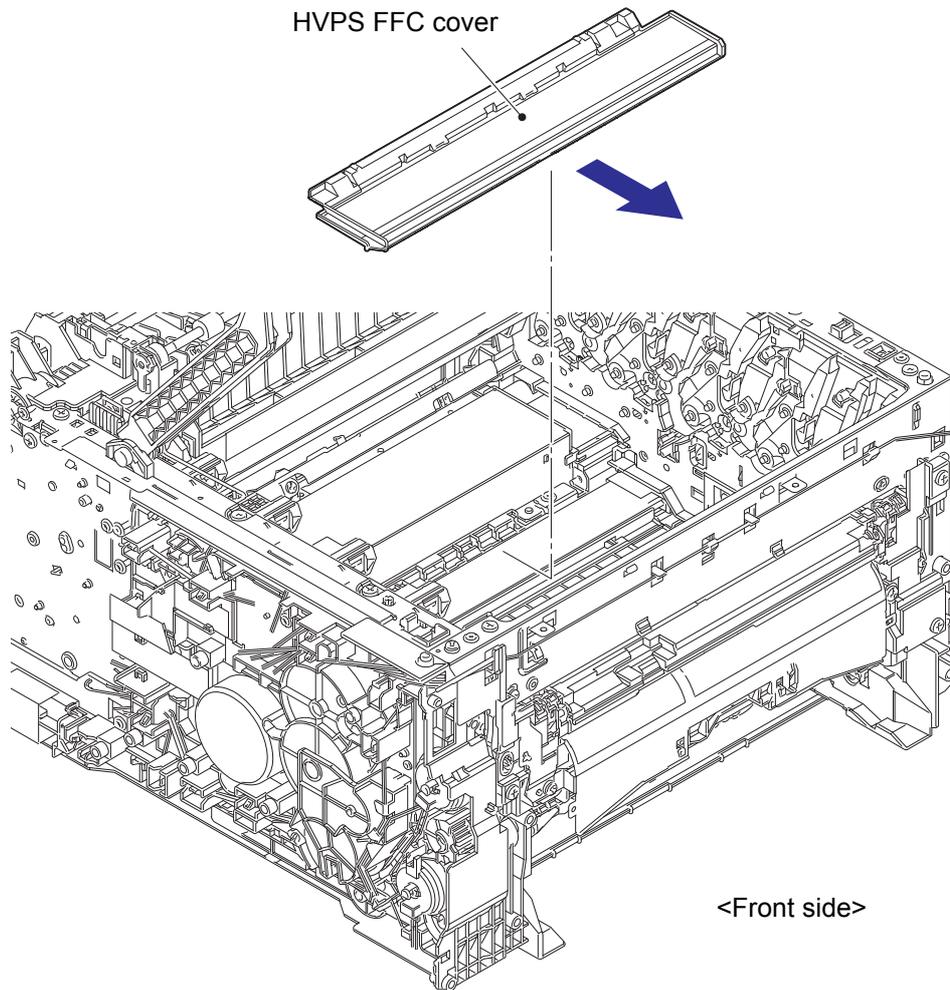
**Fig. 3-115**

(3)  **Remove** >  HVPS support chip  (x 3)

(4)  **Remove** >  HVPS support pad

(5)  **Remove** >  HVPS ground plate front

> ✎ **Fixtures & Fittings**
> - Taptite cup S M3x8 SR  (x 1)
> - Taptite pan (washer) M4x12DA  (x 1)

(6)  **Remove** >  HVPS ground plate rear

> ✎ **Fixtures & Fittings**
> - Taptite pan (washer) M4x12DA  (x 2)
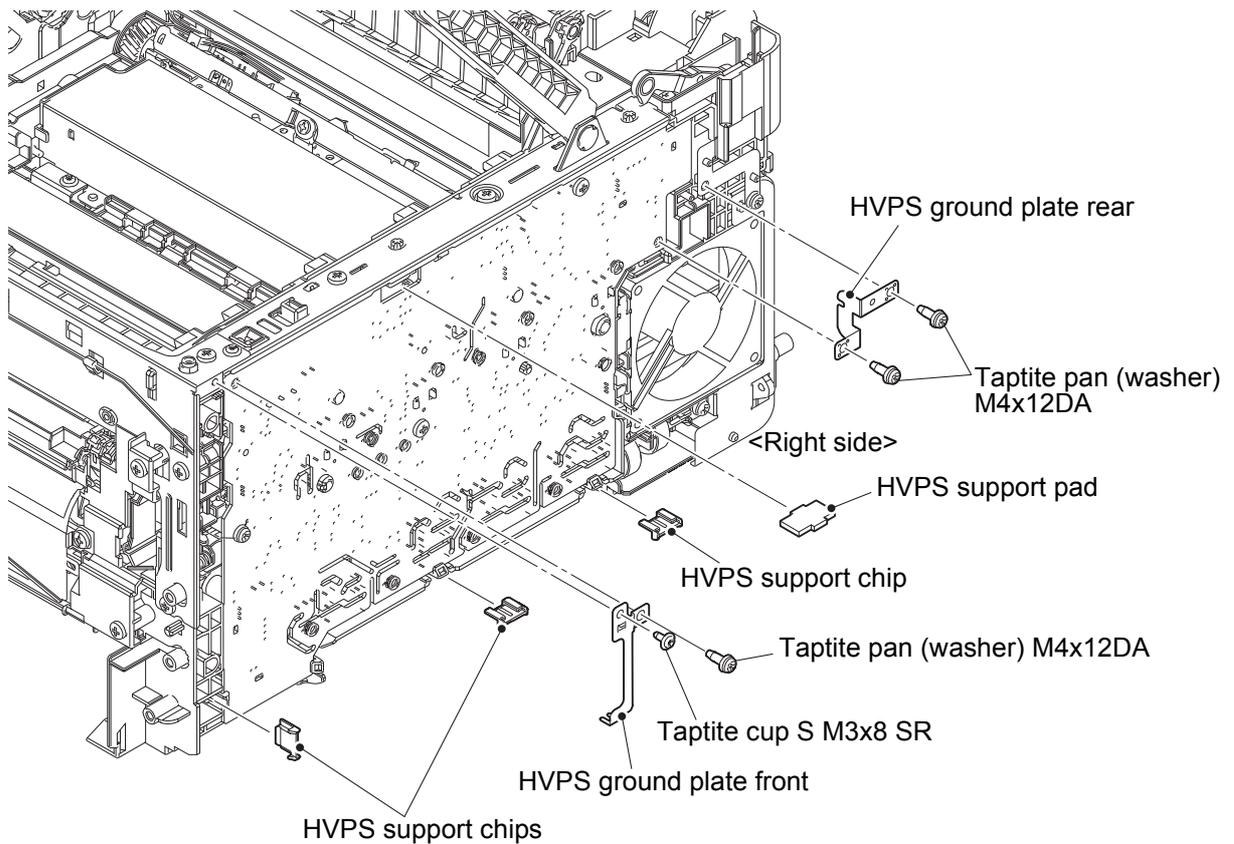


**Fig. 3-116**

(7) **Release** > UB ground spring 2R

✎ **Fixtures & Fittings**
   - Taptite pan (washer) M4x12DA  (x 1)

(8) **Remove** > HVPS PCB

✎ **Fixtures & Fittings**
   - Taptite bind B M4x12  (x 2)
   - Hook  (x 6)

💡 **Point:**
   • Do not pull the HVPS PCB strongly because each harness and the HVPS FFC are connected.

(9) **Disconnect** > Fan harness, HVPS harness, DEV release sensor harness, HVPS FFC
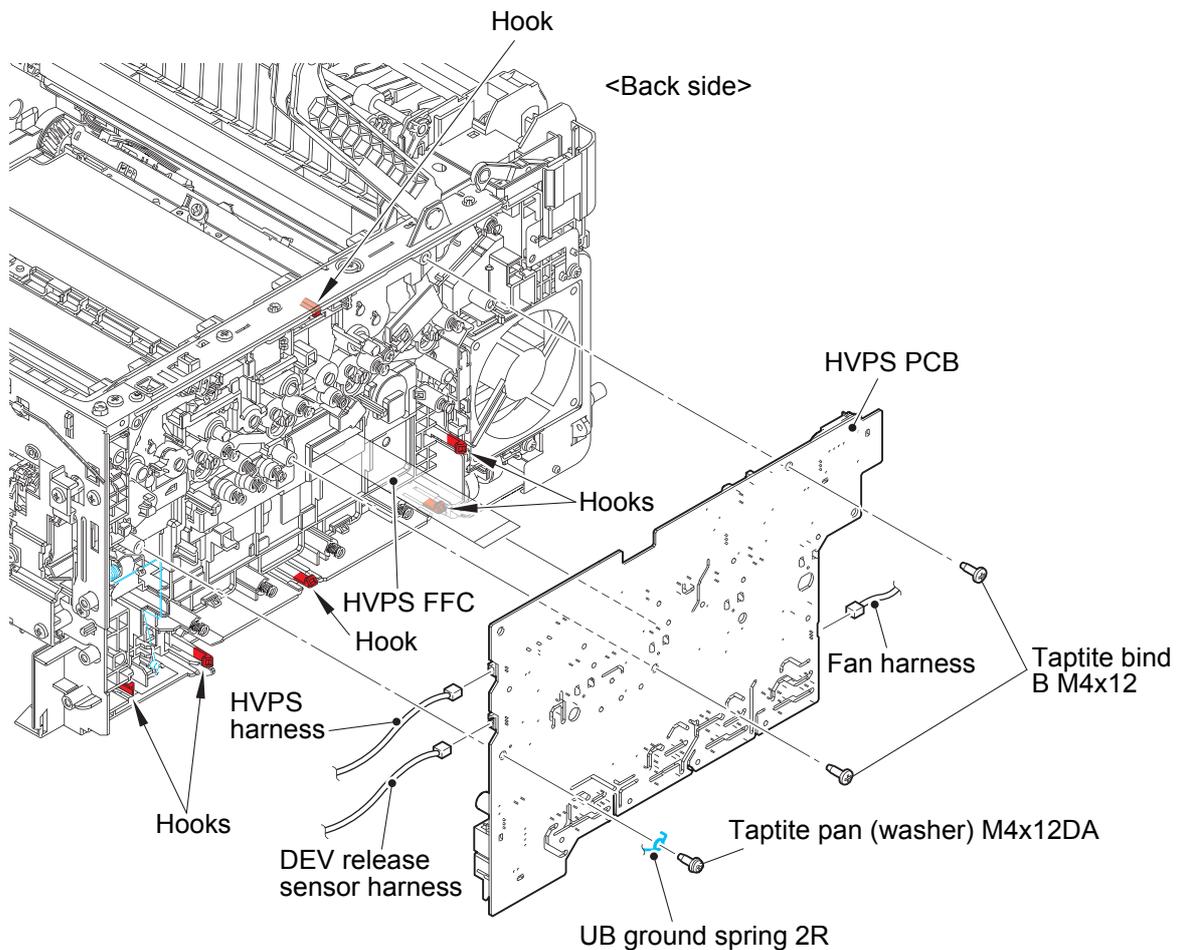


**Fig. 3-117**

🖋 **Assembling note:**
   • Be careful not to damage the HVPS FFC. (Fault Report: PS08838 related)
   • When attaching the HVPS PCB, refer to "13. HVPS FFC" to firstly pass the HVPS FFC through the hole from inside the machine and connect it to the HVPS PCB. After attaching the HVPS PCB to the machine, pull the HVPS FFC to the machine side.
   • After attaching the HVPS PCB, check whether the Electrodes inside the machine are not dropping or not get caught by pushing the Electrodes inside the machine.

## 8.48 DEV release sensor PCB

(1) **Wiring** > DEV release sensor harness

(2) **Remove** > DEV release sensor PCB

   ✎ **Fixtures & Fittings**
   - Hook (x 2)

(3) **Disconnect** > DEV release sensor harness

Hooks

<Right side>

DEV release
sensor PCB

DEV release
sensor harness
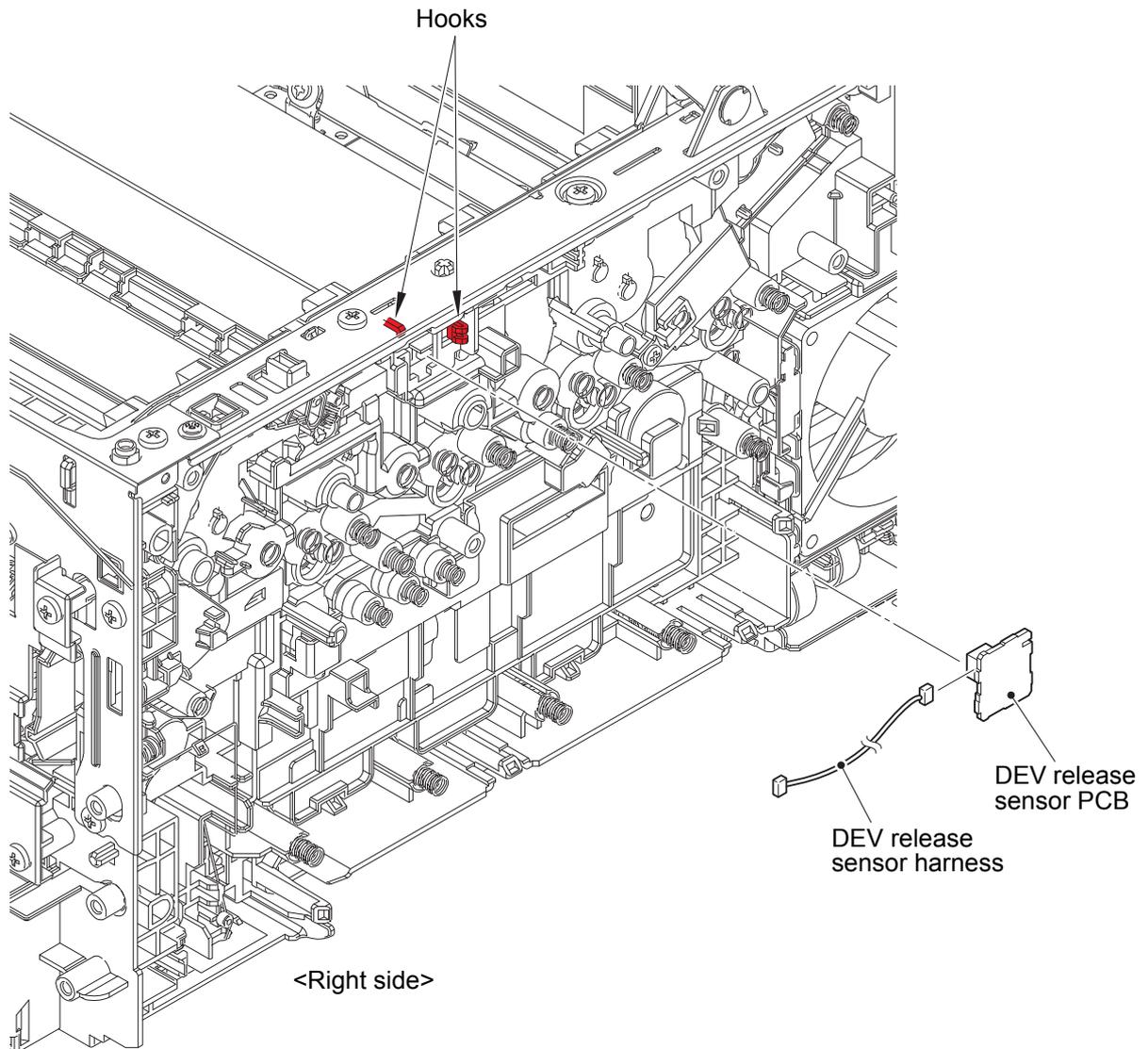
**Fig. 3-118**

Harness routing:  Refer to "8. DEV release sensor harness".

## 8.49 Fan

(1) **Wiring** > Fan harness

(2) **Remove** > Fan
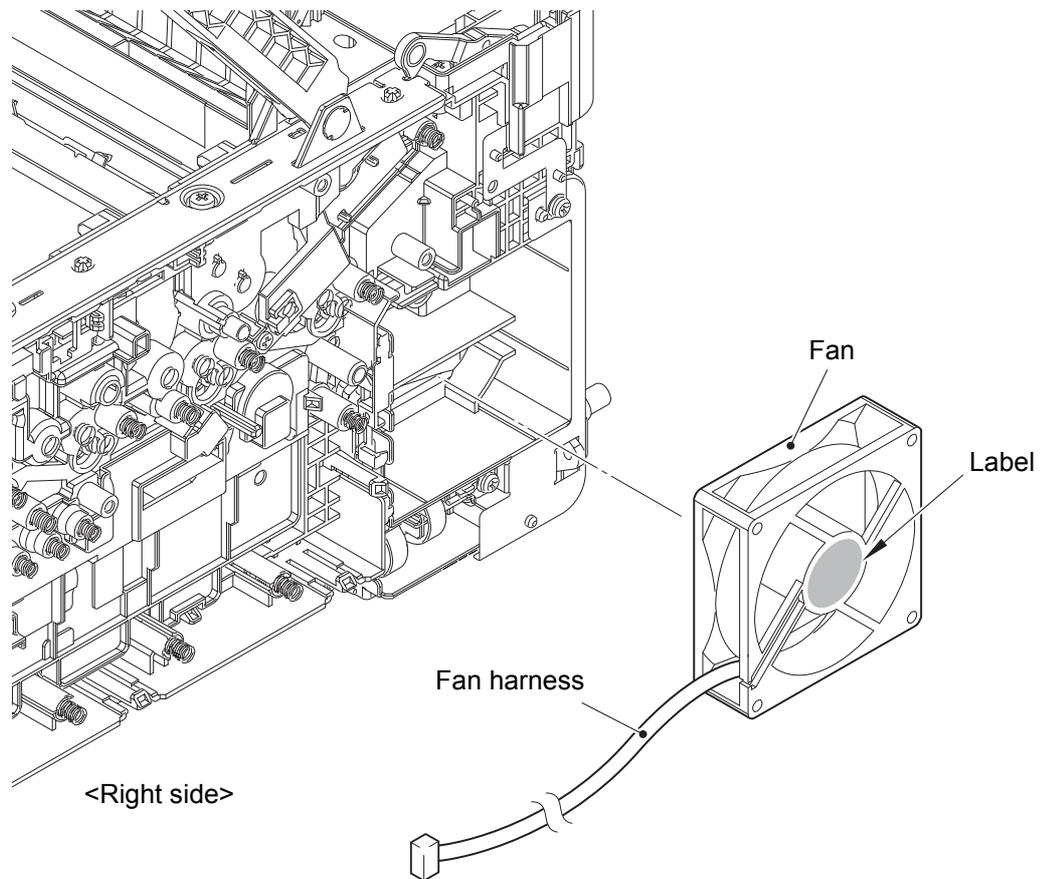


**Fig. 3-119**

Harness routing: Refer to "11. Fan harness, Fan FG harness".

---

🖉 **Assembling note:**
• When assembling the Fan, be sure to assemble it in a way that the Label side faces out.

---

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## 8.50 Cartridge sensor/relay FFC

(1) **Wiring** > Cartridge sensor/relay FFC

(2) **Disconnect** > Cartridge sensor/relay FFC



Cartridge sensor/relay FFC

&lt;Left side&gt;
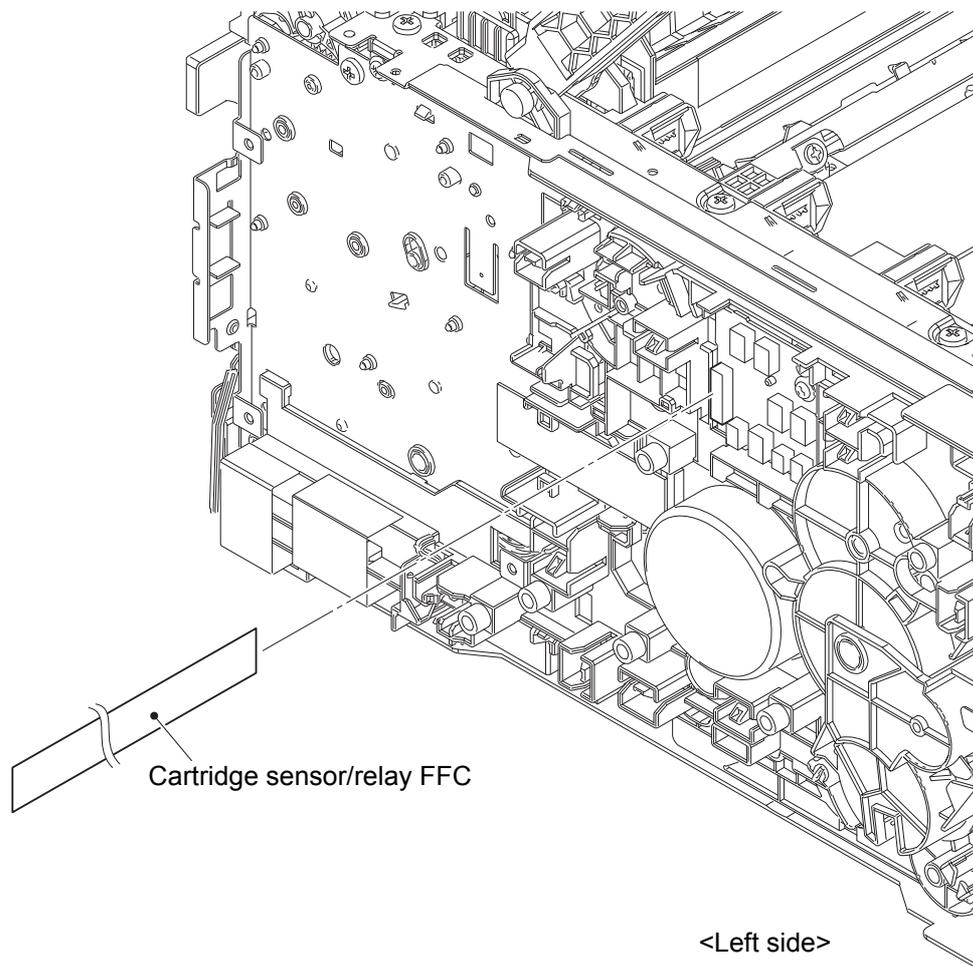
**Fig. 3-120**

Harness routing:  Refer to "5. Cartridge sensor/relay FFC".

<How to fold the Cartridge sensor/relay FFC>

——— Mountain fold

- - - - - - - Valley fold

Main PCB side

Reinforcing plate

45±2 mm

62±2 mm

89±2 mm

160±5 mm

Conductor

Cartridge sensor/relay PCB side
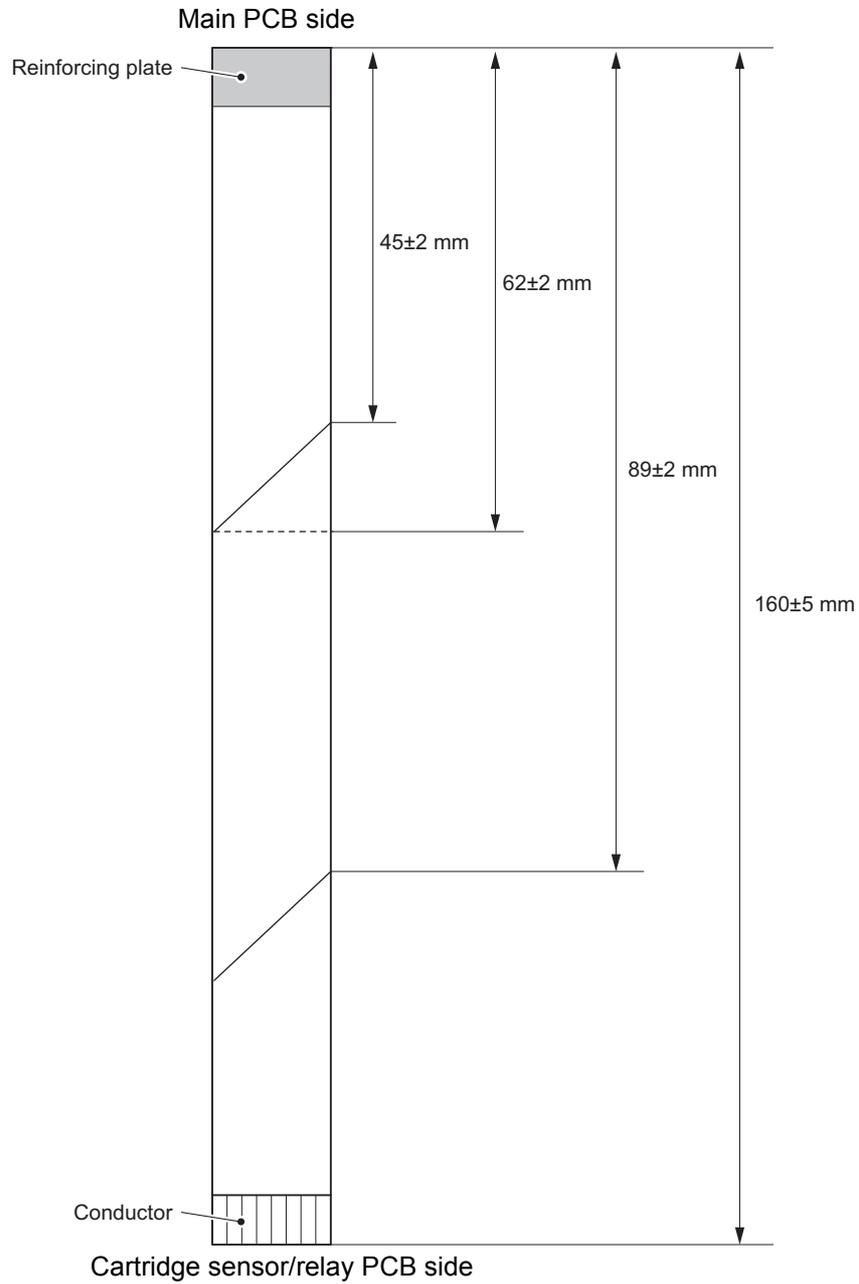
The angle of the diagonal fold is 45°.

**Fig. 3-121**

## 8.51 Cartridge sensor/relay PCB

(1) **Disconnect** > Cartridge sensor harness C, Cartridge sensor harness M, Cartridge sensor harness Y, Cartridge sensor harness K, T1 PF sensor harness, REG front/rear sensor harness

(2) **Remove** > Cartridge sensor/relay PCB

✎ **Fixtures & Fittings**
   - Screw cup M3x8  (x 1)

Cartridge sensor harness K — Cartridge sensor harness C

Cartridge sensor harness Y

Cartridge sensor harness M

Cartridge sensor/relay FFC —

MP REG sensor harness — MP PE sensor harness

REG front/rear sensor harness — T1 PF sensor harness

Screw cup M3x8

Cartridge sensor/relay PCB

<Left side>

**Fig. 3-122**

*Confidential*
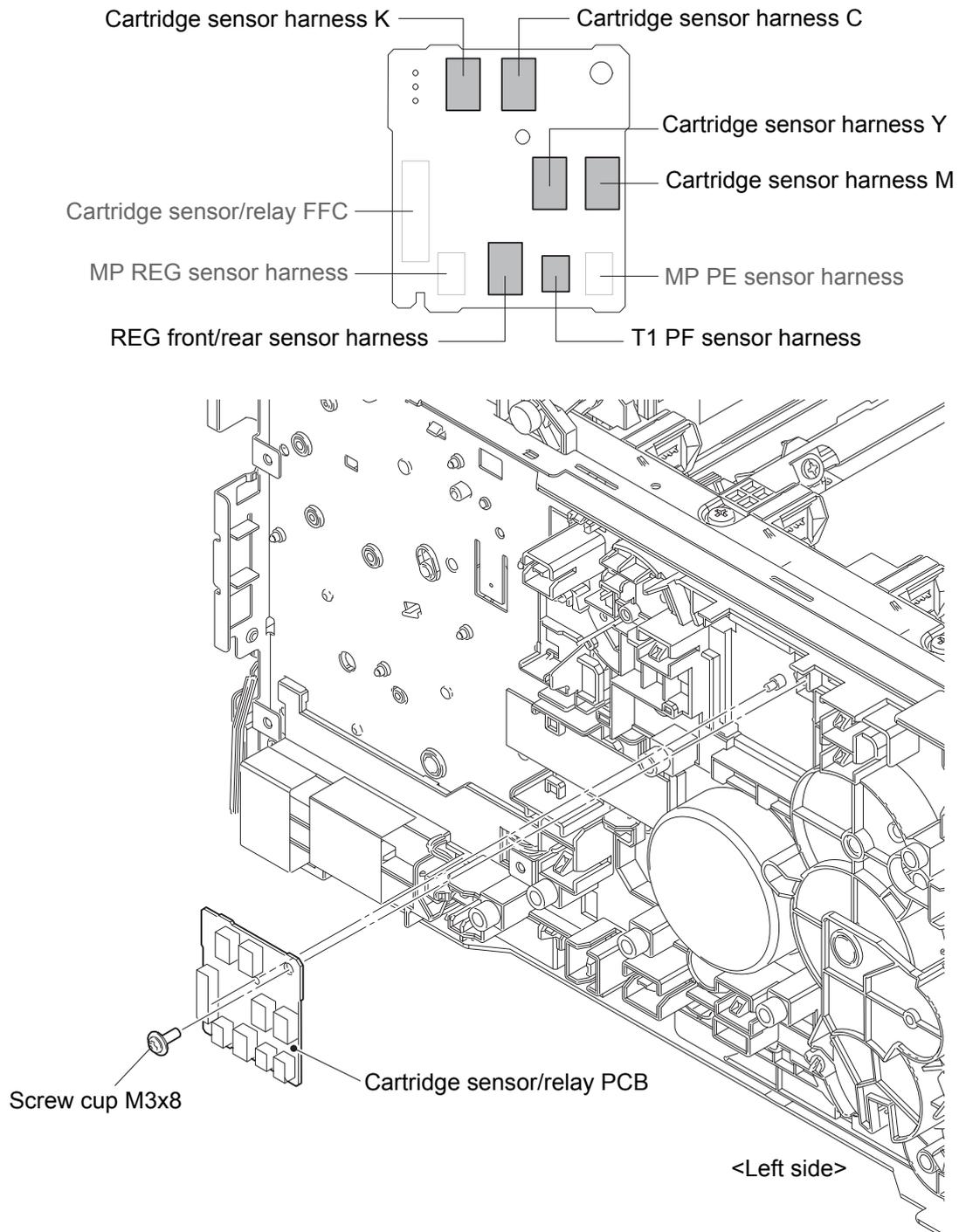
## 8.52 Process motor FFC

(1) **Wiring** > Process motor FFC

(2) **Disconnect** > Process motor FFC



Process motor FFC

&lt;Left side&gt;
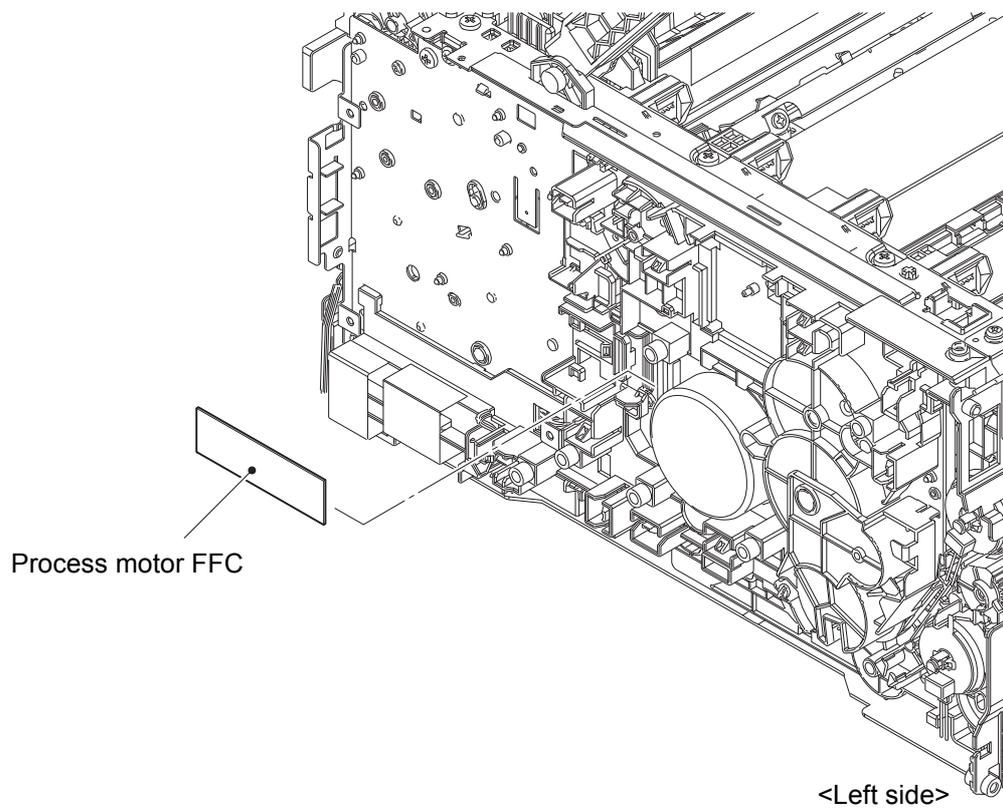
**Fig. 3-123**

Harness routing: Refer to "28. Process motor FFC".

## 8.53 REGI ELECTRIC CLUTCH FCL

(1) **Wiring** > REG clutch harness

(2) **Remove** > REGI ELECTRIC CLUTCH FCL

### ⚙ Fixtures & Fittings
- Hook (x 1)

<Left side>

Hook

REG clutch harness

REGI ELECTRIC CLUTCH FCL
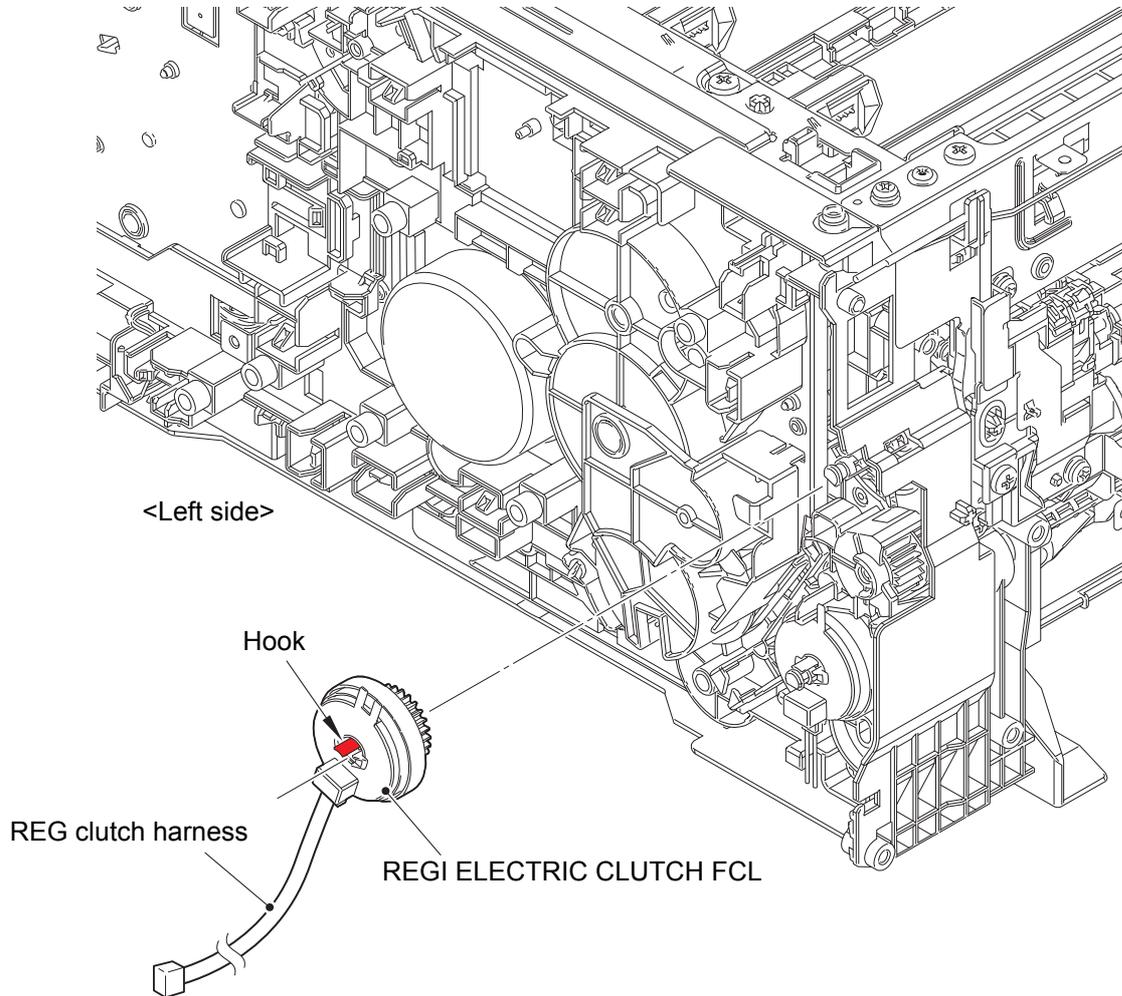
**Fig. 3-124**

Harness routing: Refer to "29. REG clutch harness".

## 8.54 T1 ELECTRIC CLUTCH FCL

(1) **Wiring** > T1 pickup clutch harness

(2) **Remove** > T1 ELECTRIC CLUTCH FCL

🔩 **Fixtures & Fittings**
- Hook (x 1)



<Left side>

Hook

T1 ELECTRIC CLUTCH FCL

T1 pickup clutch harness
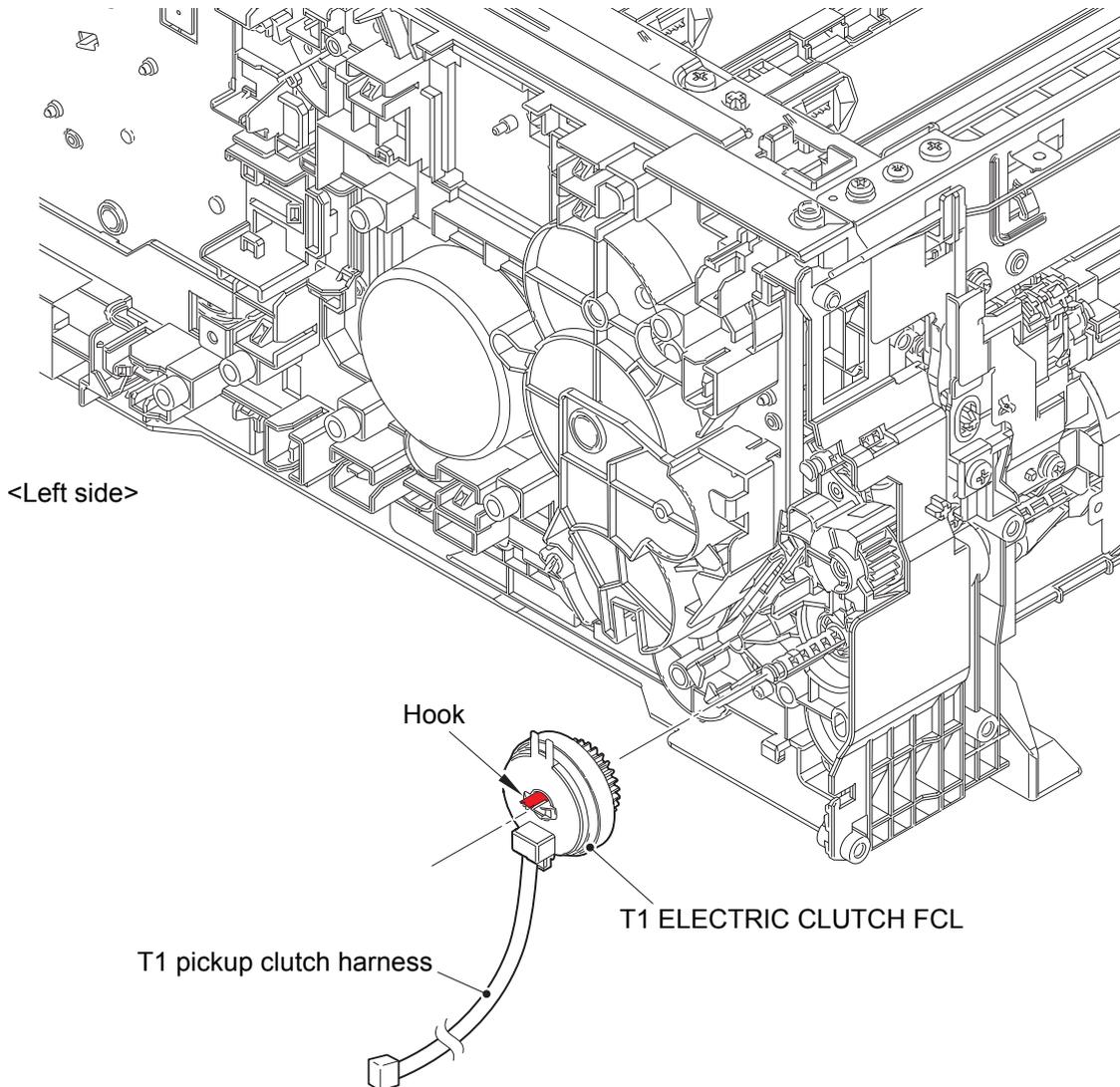
**Fig. 3-125**

Harness routing: Refer to "34. T1 pickup clutch harness".

*Confidential*

## 8.55 DEV REL CLUTCH FCL

(1) **Wiring** > DEV release clutch CMY harness, HVPS harness

(2) **Remove** > DEV clutch cover

> ✎ **Fixtures & Fittings**
> - Taptite cup S M3x8 SR (x 1)
> - Hook (x 2)

(3) **Remove** > DEV REL IDLE GEAR Z28

(4) **Remove** > DEV REL CLUTCH FCL



<Left side>

Hooks

DEV REL IDLE GEAR Z28

DEV clutch cover

Taptite cup S M3x8 SR

DEV REL CLUTCH FCL

HVPS harness

DEV release clutch CMY harness
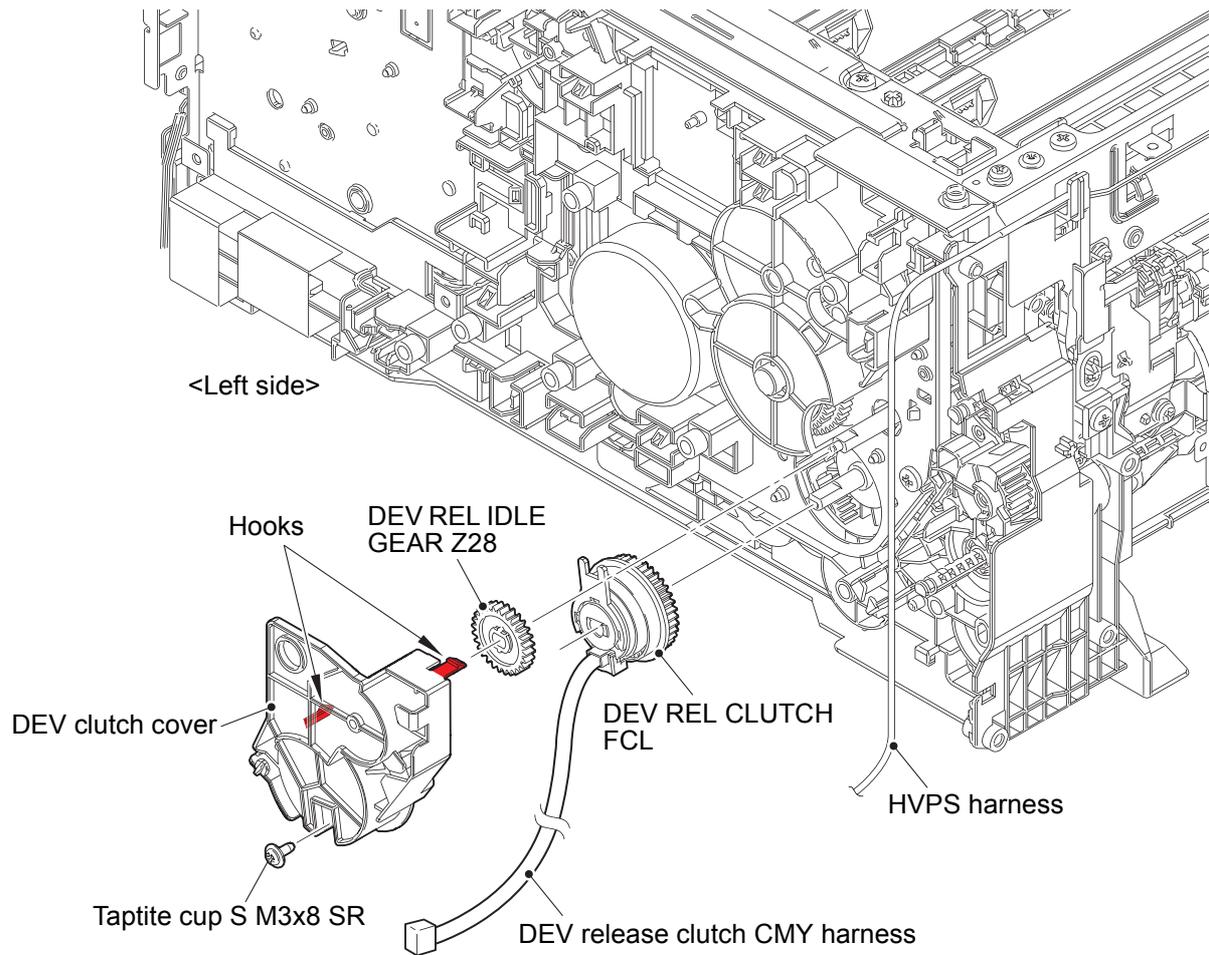
**Fig. 3-126**

Harness routing: Refer to "6. DEV release clutch CMY harness, 14. HVPS harness".

Joint hinge arm L/R

DEV REL GEAR Z36-29 FCL

<Left side>

DEV CLUTCH CAM FCL

DEV cam cover

Holes

DEV RELEASE GEAR Z57-50 FCL

**Fig. 3-127**

3-203

*Confidential*
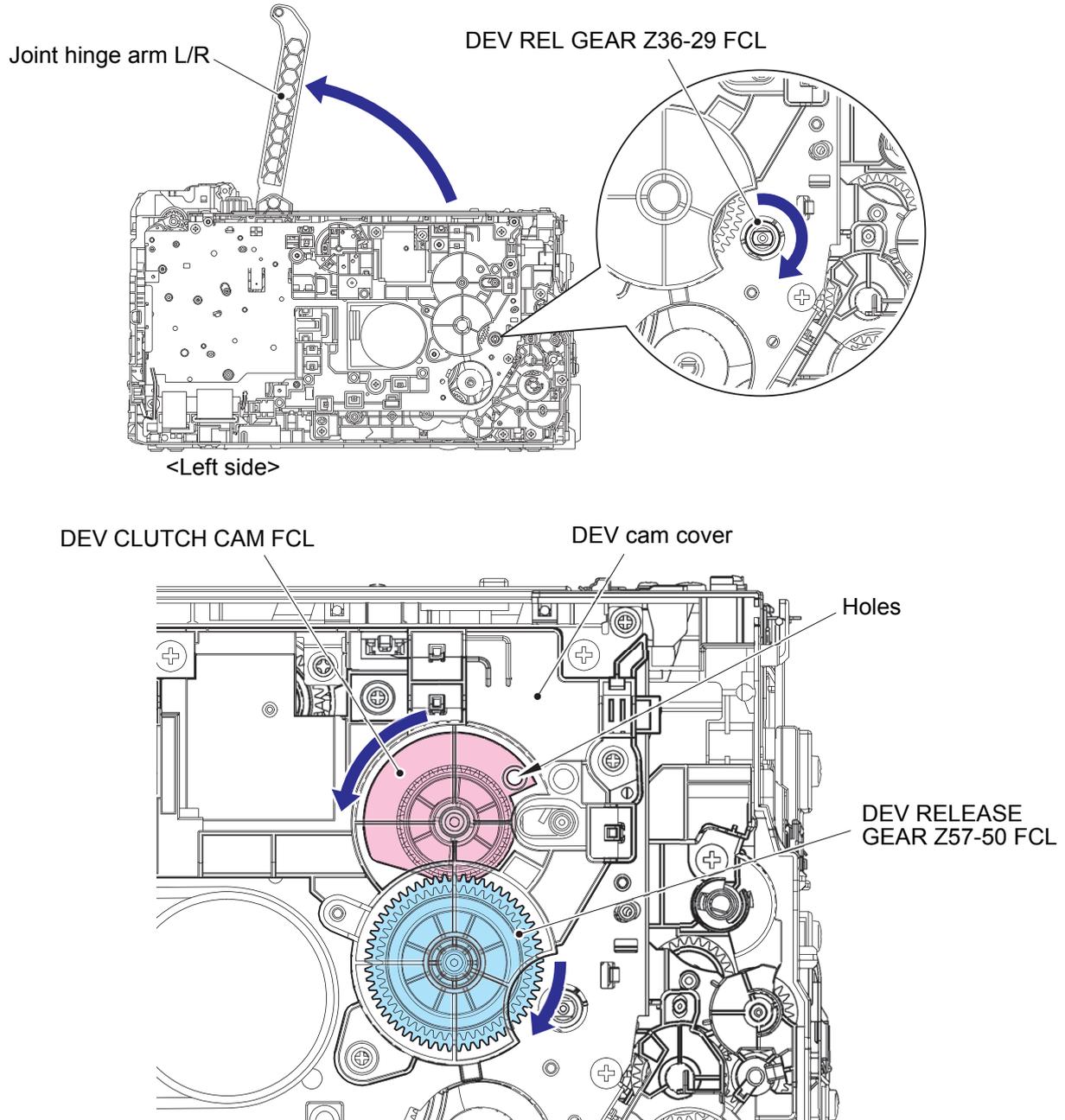
## 8.56 Process drive unit

(1) **Wiring** > Eject sensor/relay harness, LVPS harness, LT connector harness, DX clutch harness, DEV release clutch K harness, Cartridge sensor harness K, Cartridge sensor harness C, Cartridge sensor harness Y, T1 PF sensor harness, REG front/rear sensor harness

(2) **Remove** > Process drive unit

✎ **Fixtures & Fittings**
- Taptite bind B M4x12 (x 5)
- Taptite cup S M3x8 SR (x 2)
- Taptite pan (washer) M4x12DA (x 1)
- Hook (x 3)
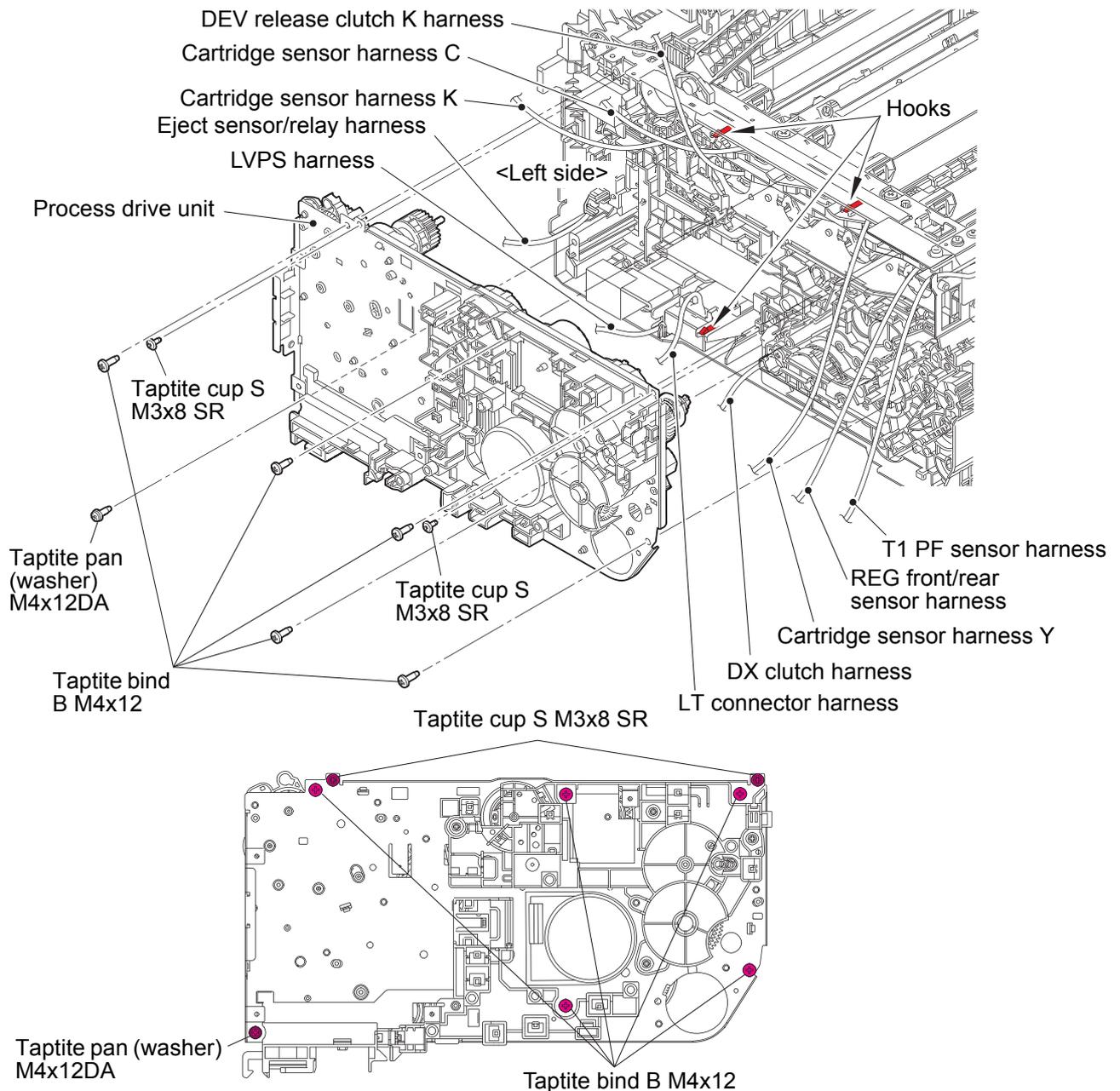


**Fig. 3-128**

Harness routing: Refer to "10. Eject sensor/relay harness, 15. Inlet harness ASSY, LVPS heater harness, LVPS harness, 18. LT connector harness, 9. DX clutch harness, 7. DEV release clutch K harness, 4. Cartridge sensor harness C/M/Y/K, 30. REG front/rear sensor harness, T1 PF sensor harness".

*Confidential*

## 8.57 PF motor FFC

(1) **Wiring** > PF motor FFC

(2) **Disconnect** > PF motor FFC



Process drive unit
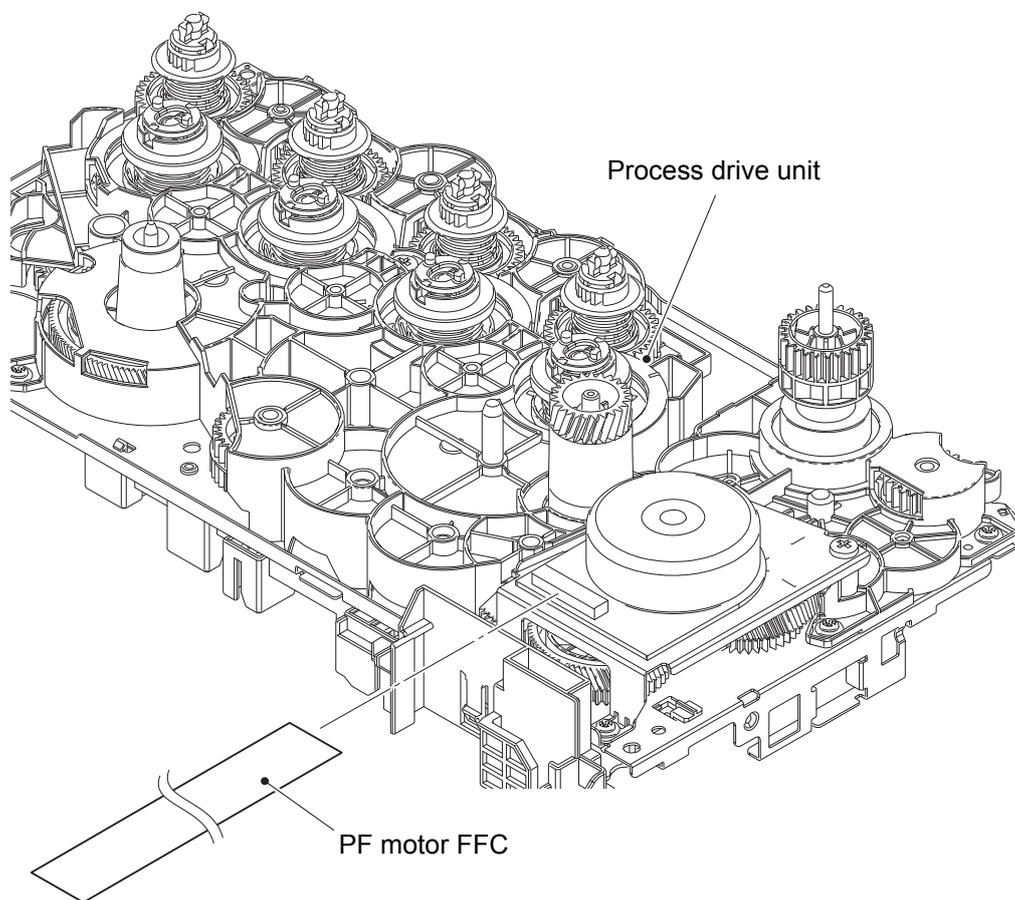
PF motor FFC

**Fig. 3-129**

Harness routing: Refer to "27. PF motor FFC".

<How to fold the PF motor FFC>

——— Mountain fold

------- Valley fold

Main PCB side

Conductor



146±5 mm

107±2 mm

53±2 mm

49±2 mm

31.5±2 mm

Conductor

PF motor side
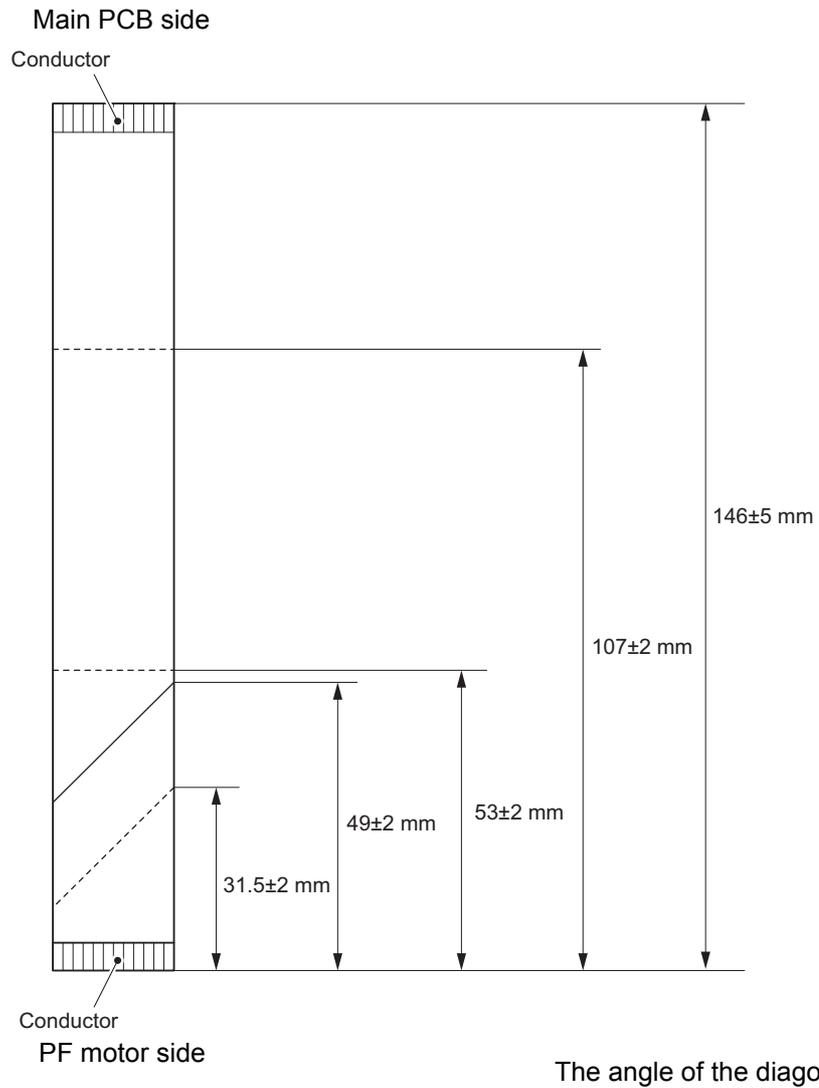
The angle of the diagonal fold is 45°.

**Fig. 3-130**

*Confidential*

## 8.58  FUSER DRIVE GEAR Z25 FCL

(1) **Remove** >  PF motor

🔩 **Fixtures & Fittings**
   - Taptite bind B M4x12  (x 2)
   - Taptite cup S M3x8 SR  (x 2)

(2) **Remove** >  Fuser gear cover

🔩 **Fixtures & Fittings**
   - Taptite cup S M3x8 SR  (x 4)
   - Hook  (x 2)

(3) **Remove** >  FUSER DRIVE GEAR Z25 FCL



Taptite bind B M4x12

Taptite cup S M3x8 SR

PF motor

Hook

Fuser gear cover

Taptite cup S M3x8 SR

Taptite cup S M3x8 SR

Hook

FUSER DRIVE GEAR Z25 FCL

Process drive unit
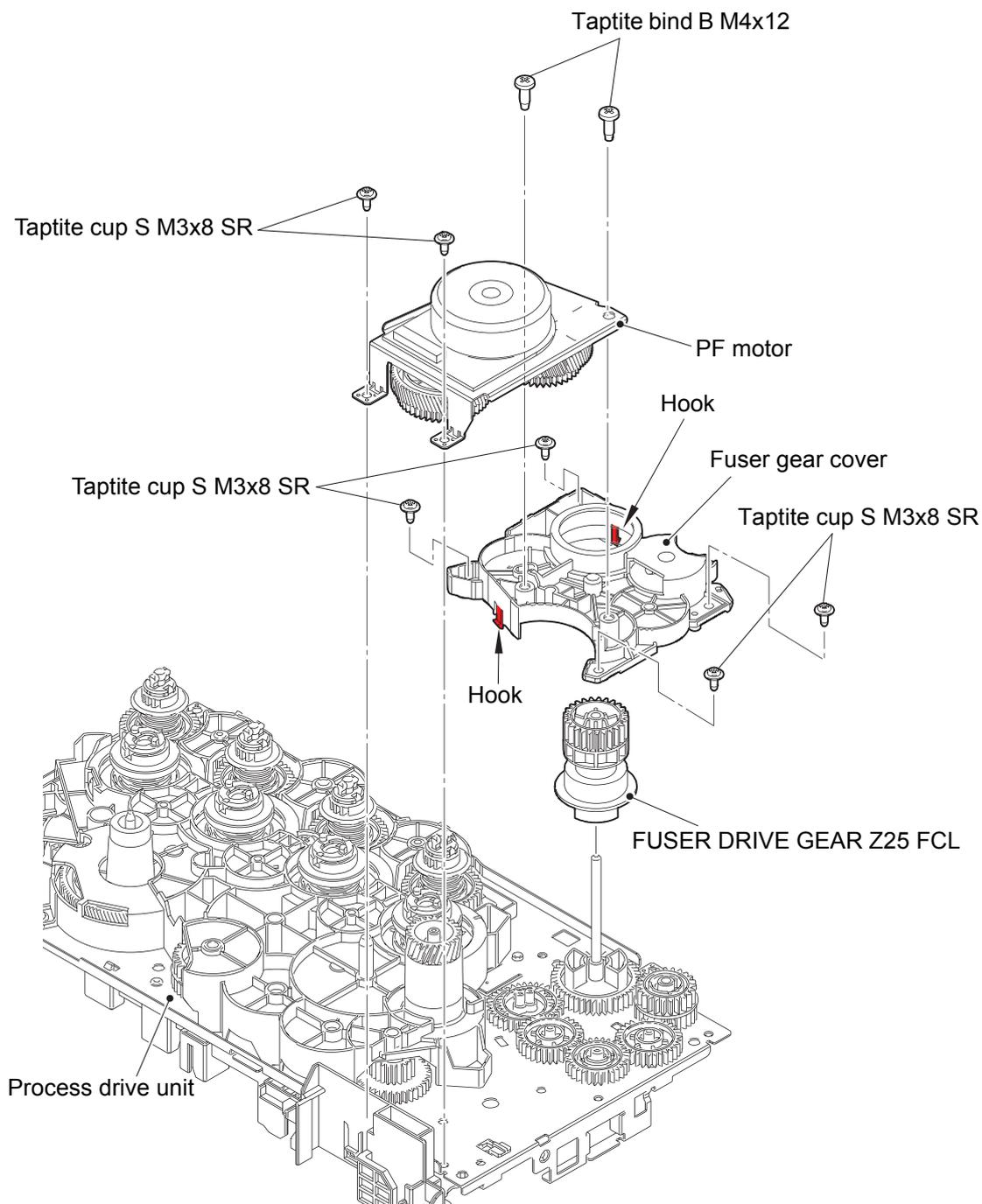
**Fig. 3-131**

## 8.59 PF drive unit

(1) **Remove** > T1 bearing 6, PF REG drive joint

🔩 **Fixtures & Fittings**
- Hook (x 1)

> 💡 **Point:**
> • Rotate the T1 bearing 6 in the direction of the arrow.

(2) **Remove** > PF bearing 5, Feed roller drive shaft

🔩 **Fixtures & Fittings**
- Hook (x 1)

(3) **Remove** > T1 bearing 6, Separation roller drive joint

🔩 **Fixtures & Fittings**
- Hook (x 1)

> 💡 **Point:**
> • Rotate the T1 bearing 6 in the direction of the arrow.
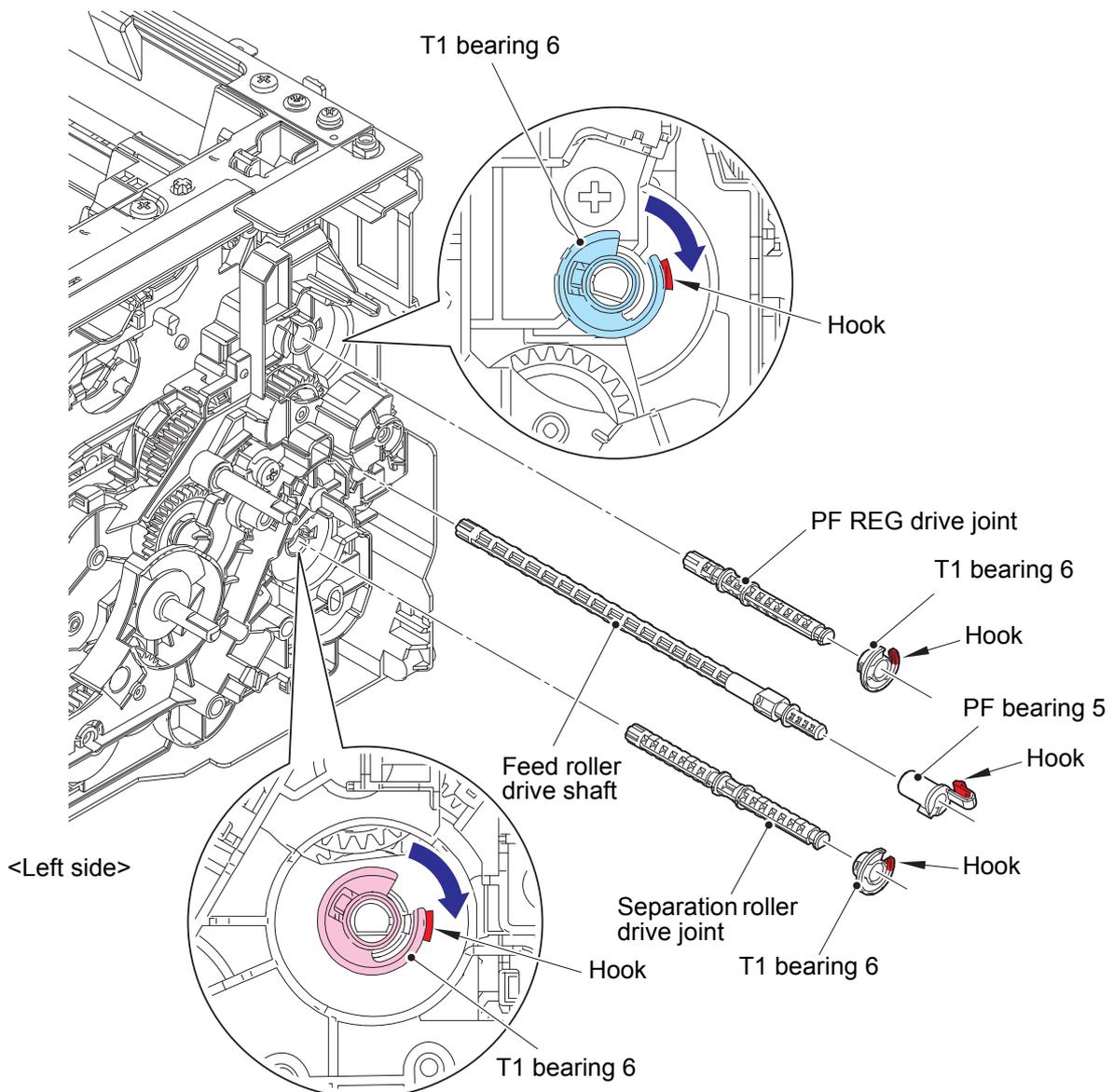


**Fig. 3-132**

(4) **Remove** > PF drive unit

✎ **Fixtures & Fittings**
- Taptite bind B M4x12  (x 5)



PF drive unit

<Left side>

Taptite bind B M4x12

Taptite bind B M4x12

Taptite bind B M4x12

PF drive unit

**Fig. 3-133**

*Confidential*
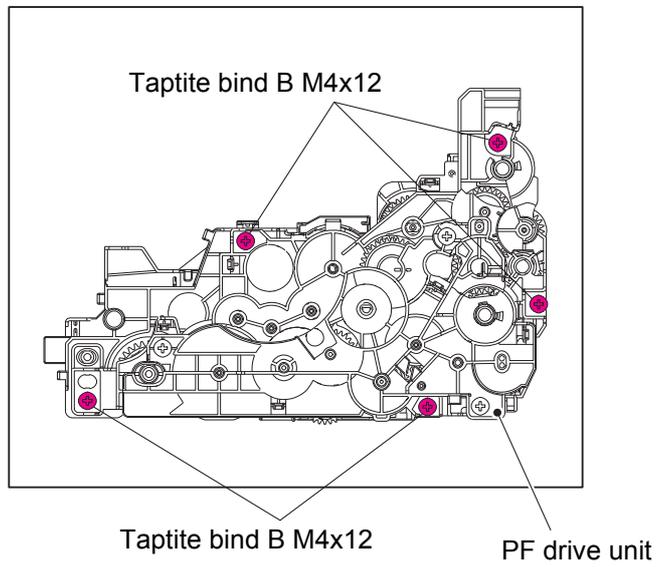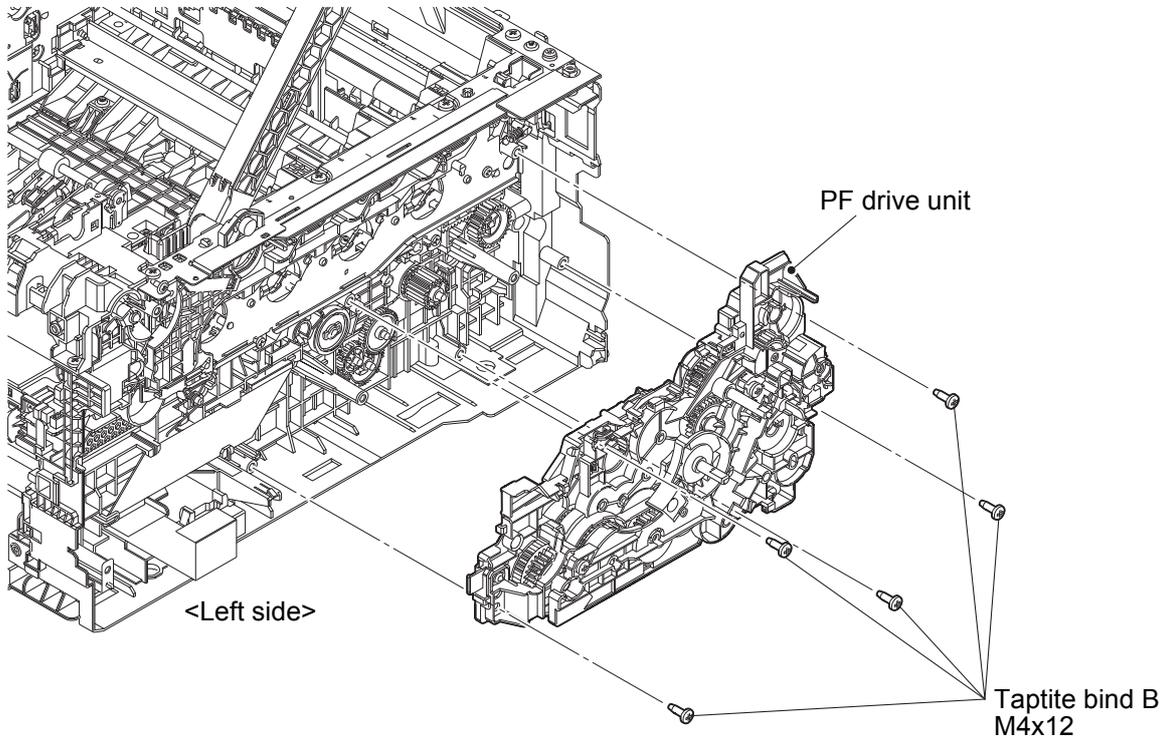
## 8.60 HVPS FFC

(1) **Remove** > TR cover

🔩 **Fixtures & Fittings**
- Taptite bind B M3x10 (x 1)
- Hook (x 3)

> 💡 **Point:**
> • Pull out the HVPS FFC through the hole.

(2) **Wiring** > HVPS FFC

(3) **Remove** > HVPS FFC

🔩 **Fixtures & Fittings**
- Double-sided tape (x 1)

Double-sided tape

HVPS FFC

Hook

Hole

TR cover

<Front side>

Hooks

Taptite bind B M3x10
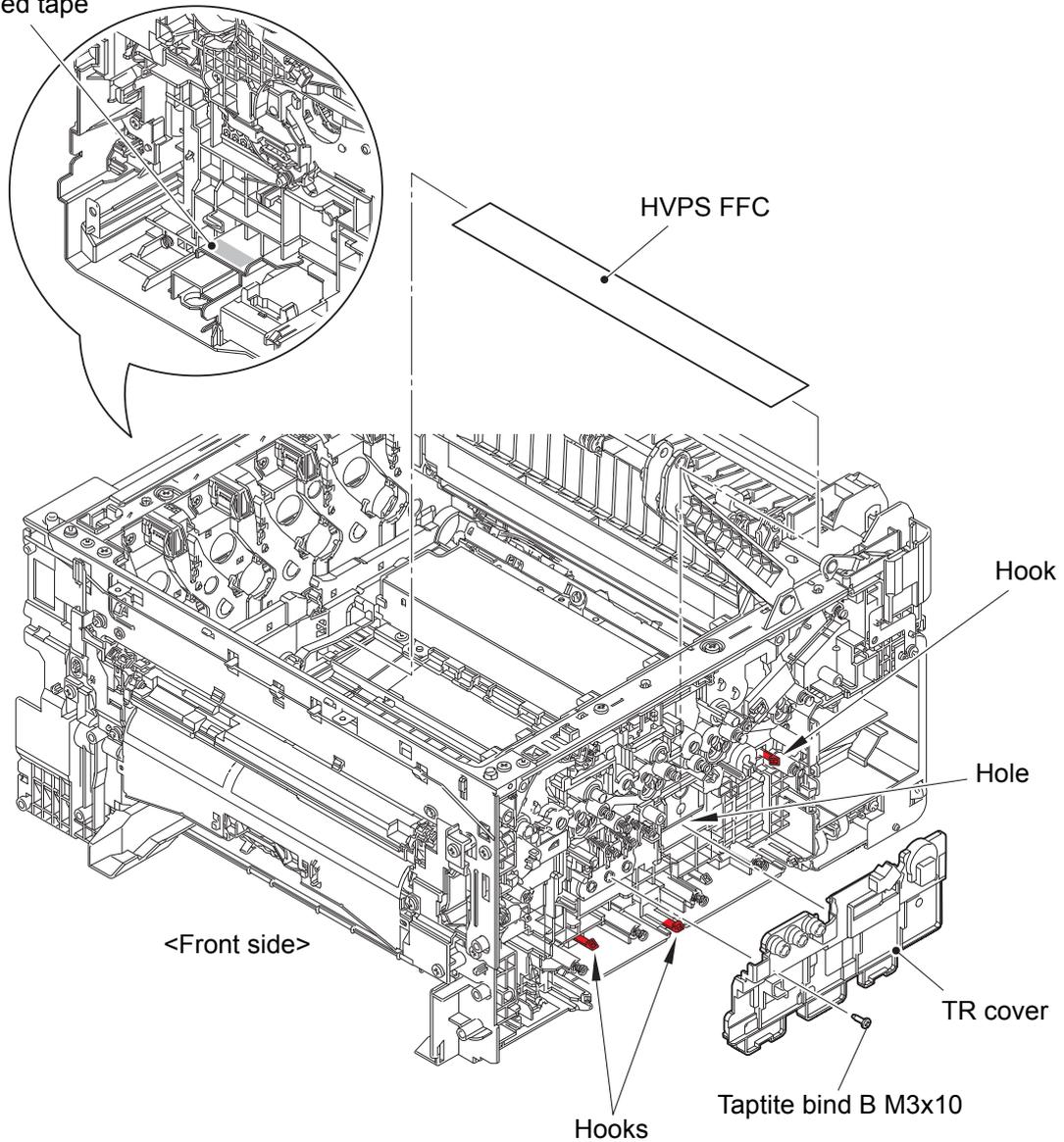
**Fig. 3-134**

Harness routing: Refer to "13. HVPS FFC".

<How to fold the HVPS FFC>

Main PCB side

——— Mountain fold

------- Valley fold

Reinforcing plate

669±2 mm

633.5±2 mm

521±2 mm

518±2 mm

424±2 mm

779 mm

334±2 mm

47±2 mm

13±2 mm

Conductor

HVPS PCB side

The angle of the diagonal fold is 45°.

**Fig. 3-135**

3-211

*Confidential*
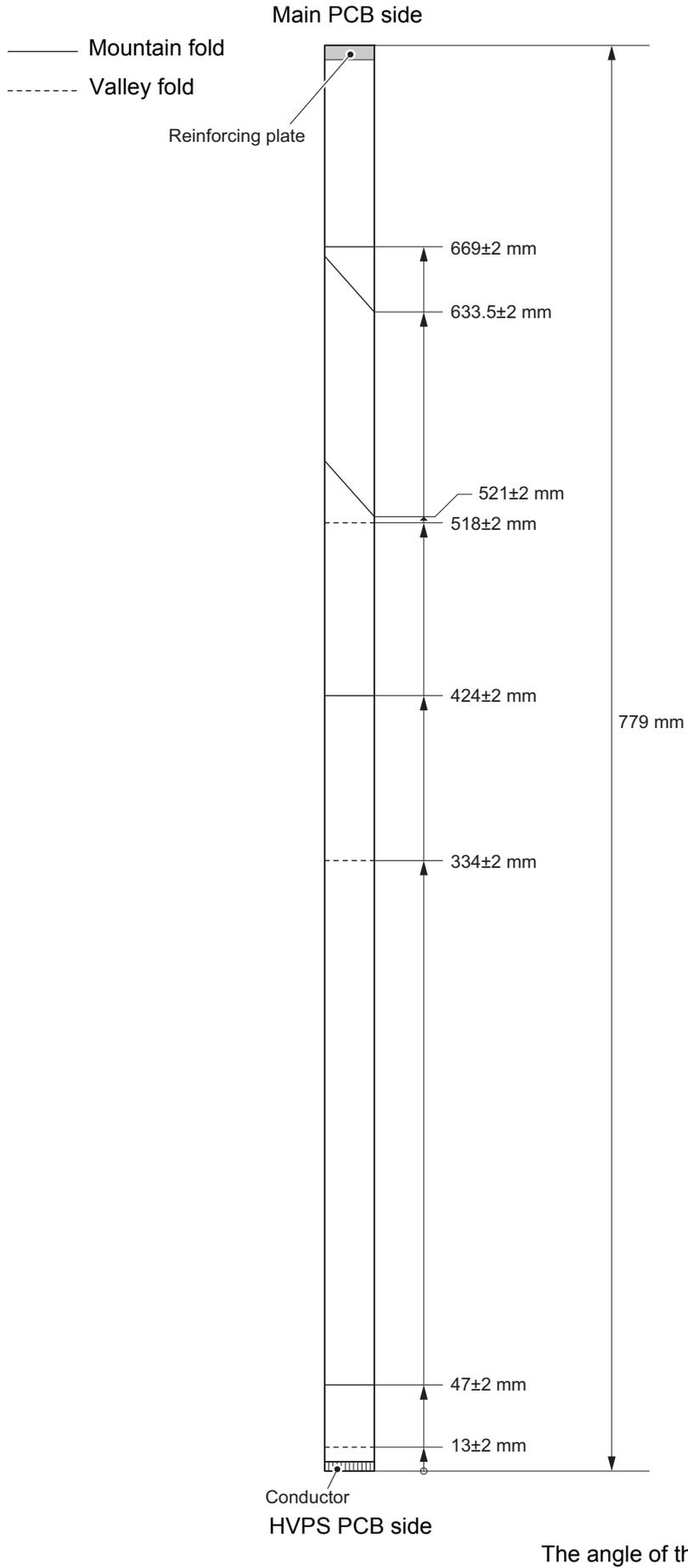
## 8.61  Eject sensor/relay PCB

(1)  **Disconnect** >  Back cover sensor harness

(2)  **Wiring** >  Eject sensor/relay harness

(3)  **Disconnect** >  Eject sensor/relay harness

(4)  **Remove** >  Eject sensor/relay PCB

   **Fixtures & Fittings**
   - Hook  (x 1)

(5)  **Disconnect** >  REG mark sensor L harness, REG mark sensor R harness
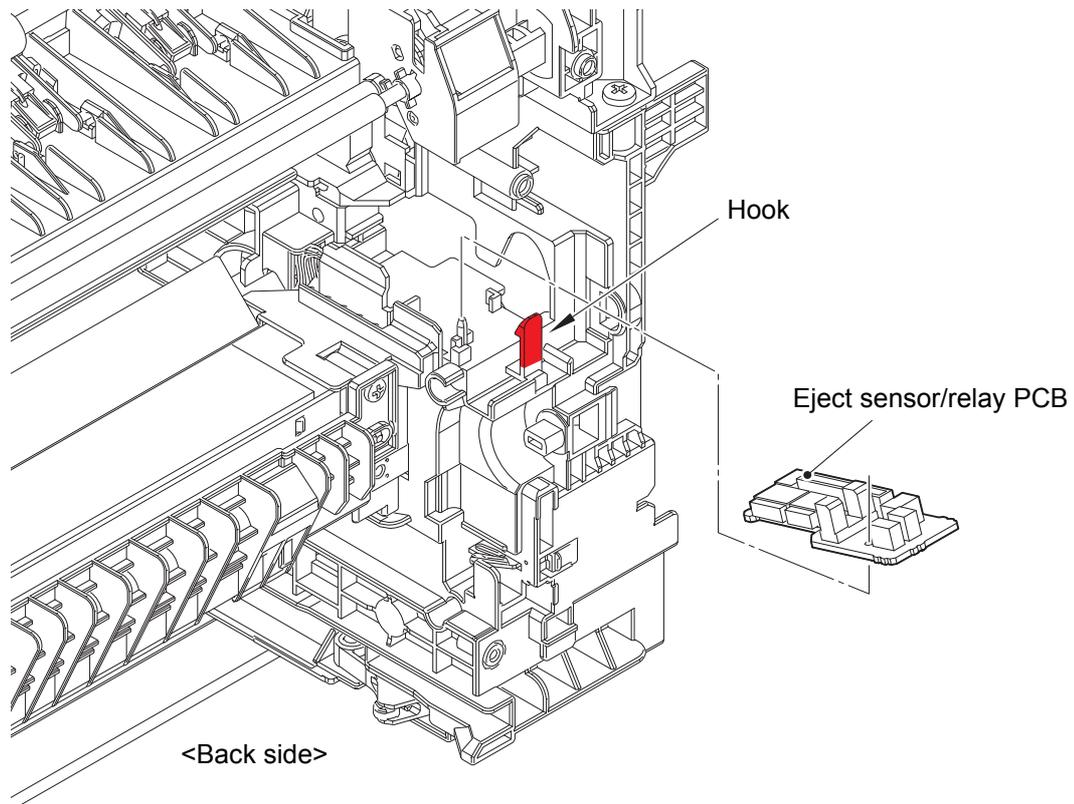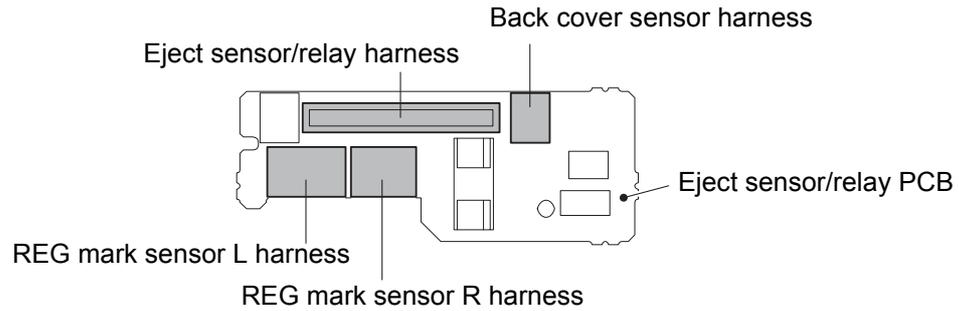




**Fig. 3-136**

Harness routing:  Refer to .

## 8.62 Roller holder ASSY

(1) **Remove** > Roller holder ASSY

🔩 **Fixtures & Fittings**
- Lift arm (x 1)

💡 **Point:**
- Remove the Roller holder ASSY in the order of the arrows.

Roller holder ASSY

D

B

C

<Front side>

A

<Bottom side>

Lift arm
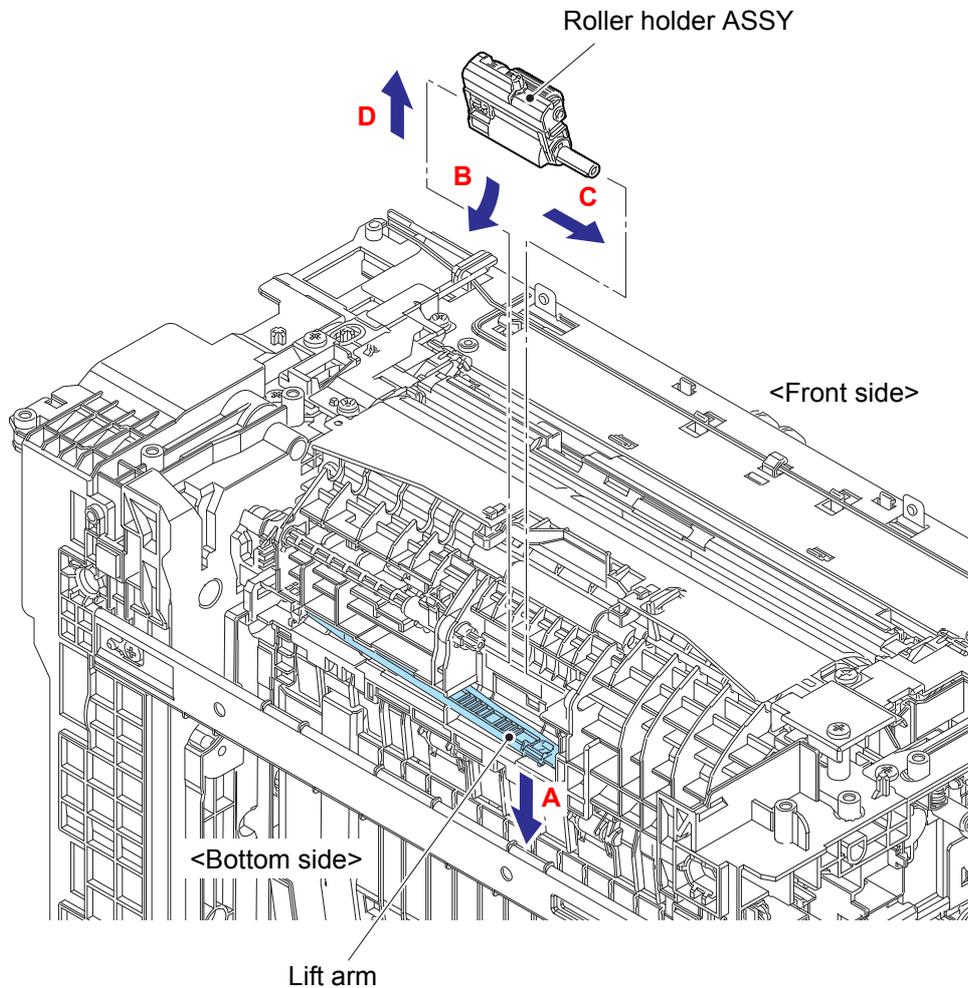
**Fig. 3-137**

🖊 **Assembling note:**
- After replacing the Roller holder ASSY, reset the counter.
  (Refer to "1.3.35 Reset Counters after Parts Replacement (Function Code 88)" in Chapter 5.)

*Confidential*

## 8.63 PF unit

(1) **Wiring** >     T1 PF sensor harness, REG front/rear sensor harness

(2) **Release** >     Lift arm

  ✎ **Fixtures & Fittings**
    - Boss  (x 1)

(3) **Remove** >   PF unit

  ✎ **Fixtures & Fittings**
    - Taptite bind B M4x12  (x 3)
    - Taptite pan (washer) M4x12DA  (x 1)
    - Taptite cup B M3x10  (x 2)

Taptite pan (washer) M4x12DA

Taptite bind B M4x12

REG front/rear sensor harness

T1 PF sensor harness

Boss

PF unit

Taptite bind B M4x12

Taptite cup B M3x10

Lift arm

**<A view>**

<Bottom side>

<Right side>

**<A view>**

Taptite cup B M3x10
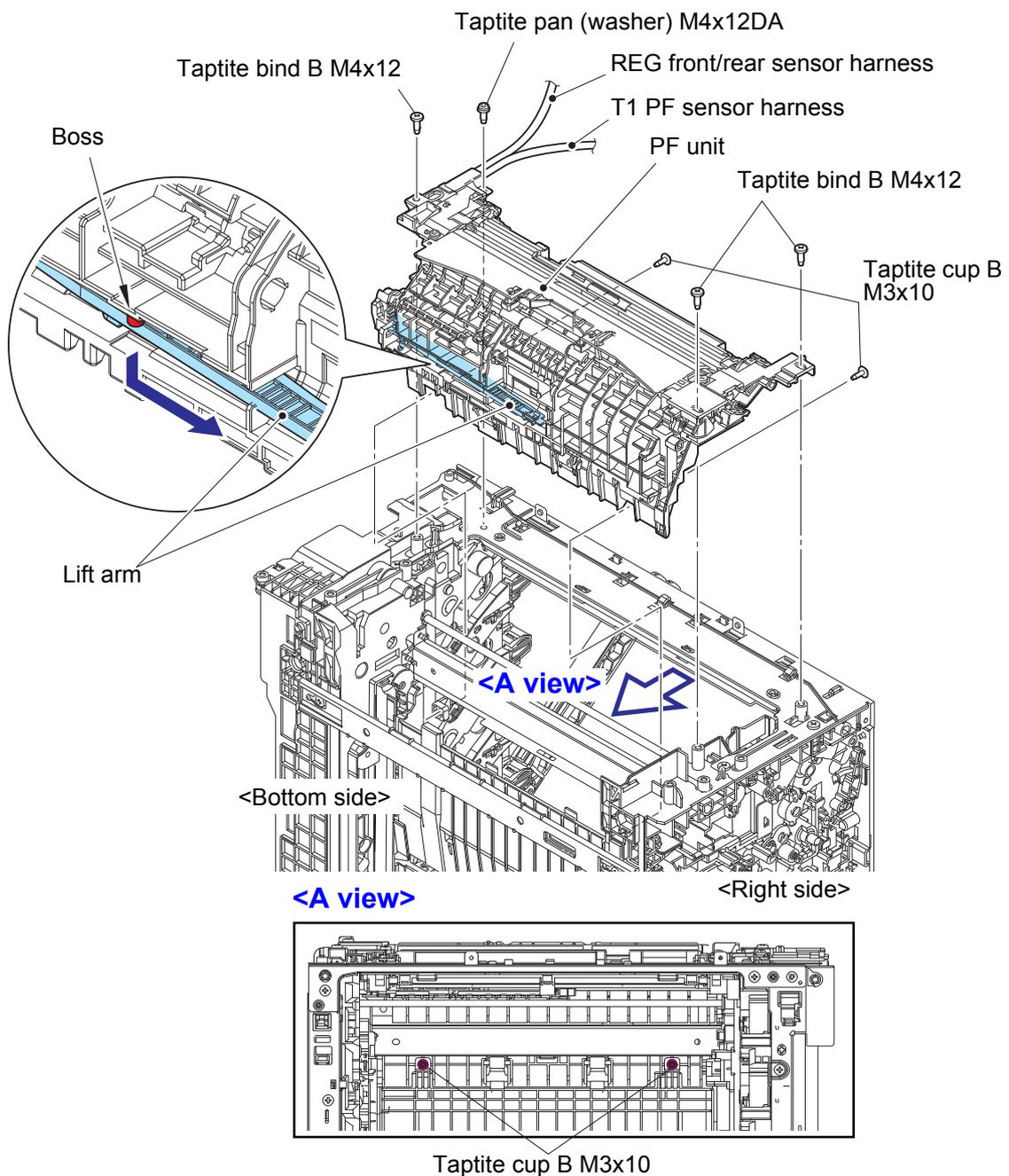
**Fig. 3-138**

Harness routing:  Refer to "30. REG front/rear sensor harness, T1 PF sensor harness".

## 8.64 Paper eject ASSY

(1) **Remove** > Joint sub arm R

(2) **Remove** > Paper eject ASSY

✎ **Fixtures & Fittings**
- Taptite bind B M4x12 (x 4)

Taptite bind B M4x12

Joint sub arm R

Paper eject ASSY

Taptite bind B M4x12

<Back side>
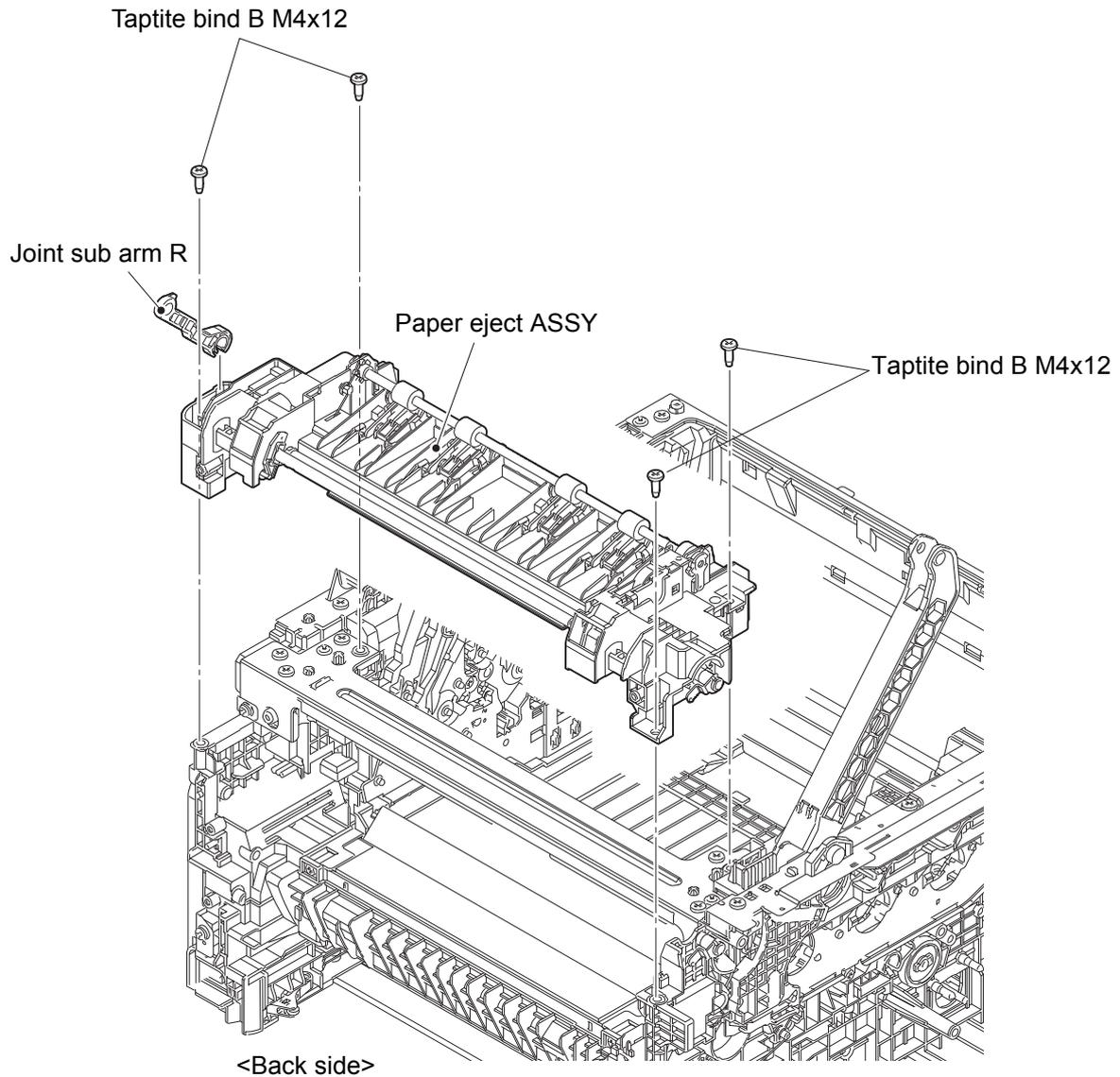
**Fig. 3-139**

## 8.65 LVPS PCB

| ⚠ WARNING | When removing the LVPS PCB, do not touch it within 3 minutes after disconnecting the AC cord as it may cause an electric shock due to the electric charge accumulated in the capacitor. |
|---|---|

(1) **Remove** > LVPS harness cover lower

✎ **Fixtures & Fittings**
- Taptite bind B M4x12 (x 1)

(2) **Remove** > Rib DX

✎ **Fixtures & Fittings**
- Hook (x 1)

(3) **Remove** > Base frame middle DX

✎ **Fixtures & Fittings**
- Taptite bind B M3x10 (x 2)
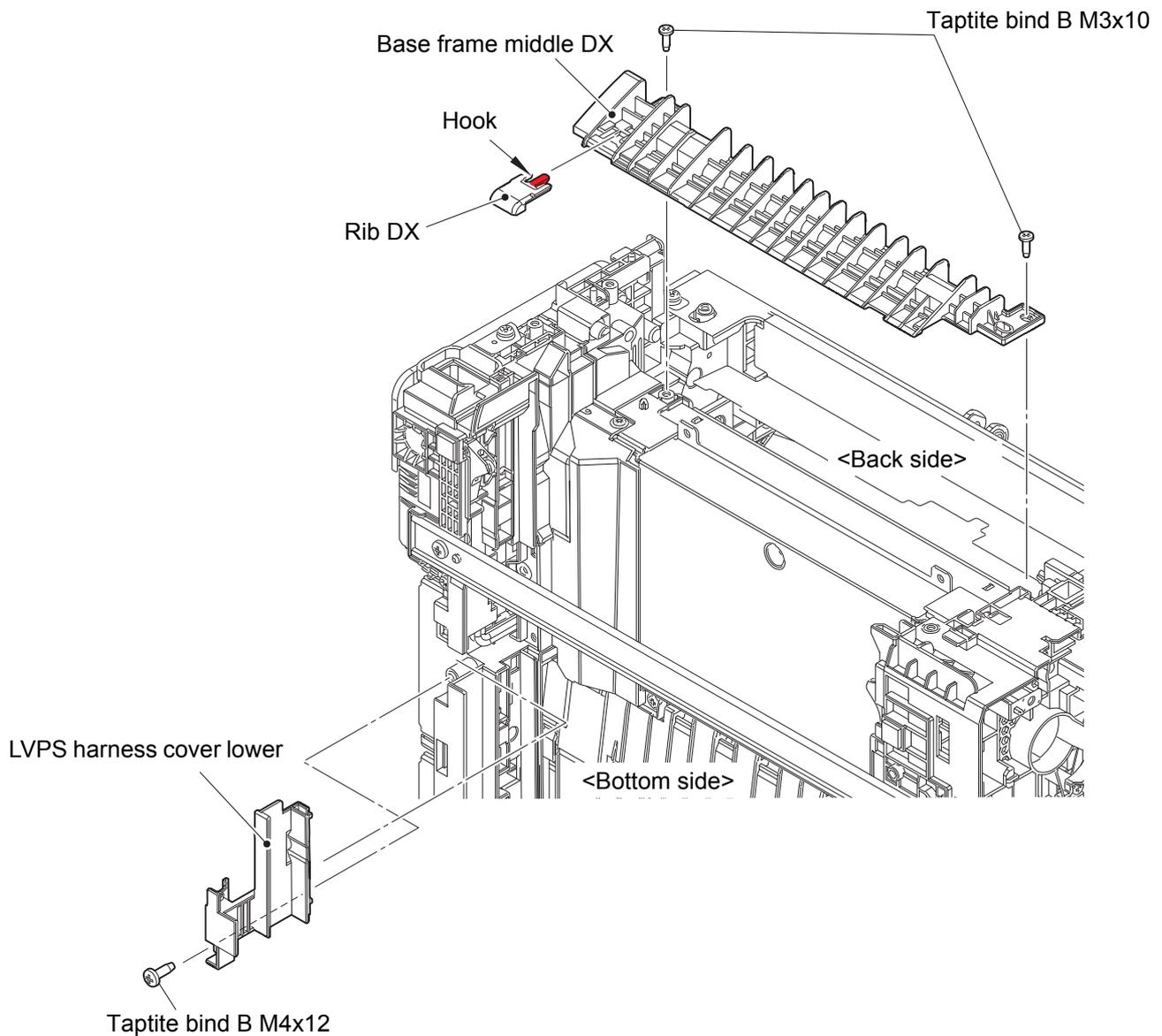


**Fig. 3-140**

(4) **Remove** > LVPS harness cover upper

✎ **Fixtures & Fittings**
   - Screw cup M3x6  (x 2)

💡 **Point:**
   • Remove the LVPS harness cover upper in the order of the arrows.

(5) **Remove** > LVPS FG harness

✎ **Fixtures & Fittings**
   - Screw pan M4x8  (x 1)
   - Washer spring 2-4  (x 1)
   - Washer 5  (x 1)

Screw cup M3x6

LVPS harness cover upper

<Back side>

A

B

LVPS FG harness

Screw pan M4x8

Washer spring 2-4

Washer 5

LVPS harness cover upper

<Bottom side>

Screw cup M3x6
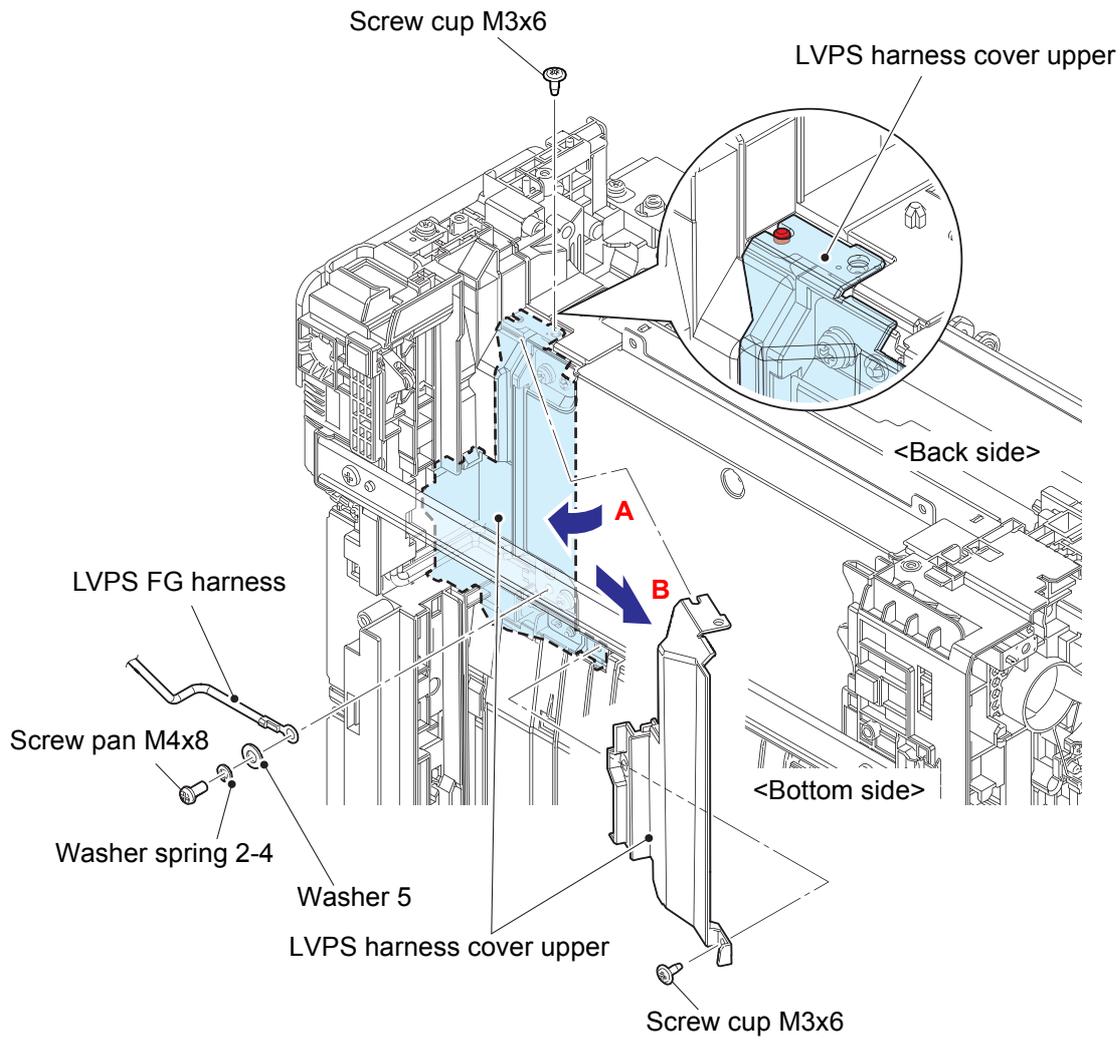
**Fig. 3-141**

(6) **Remove** > HVPS ground plate rear

📎 **Fixtures & Fittings**
- Taptite pan (washer) B M4x12DA  (x 1)

(7) **Remove** > Fan ground plate, LVPS ground plate rear

📎 **Fixtures & Fittings**
- Taptite pan (washer) B M4x12DA  (x 2)

(8) **Wiring** > Fan FG harness

(9) **Remove** > LVPS harness cap

📎 **Fixtures & Fittings**
- Hook  (x 2)
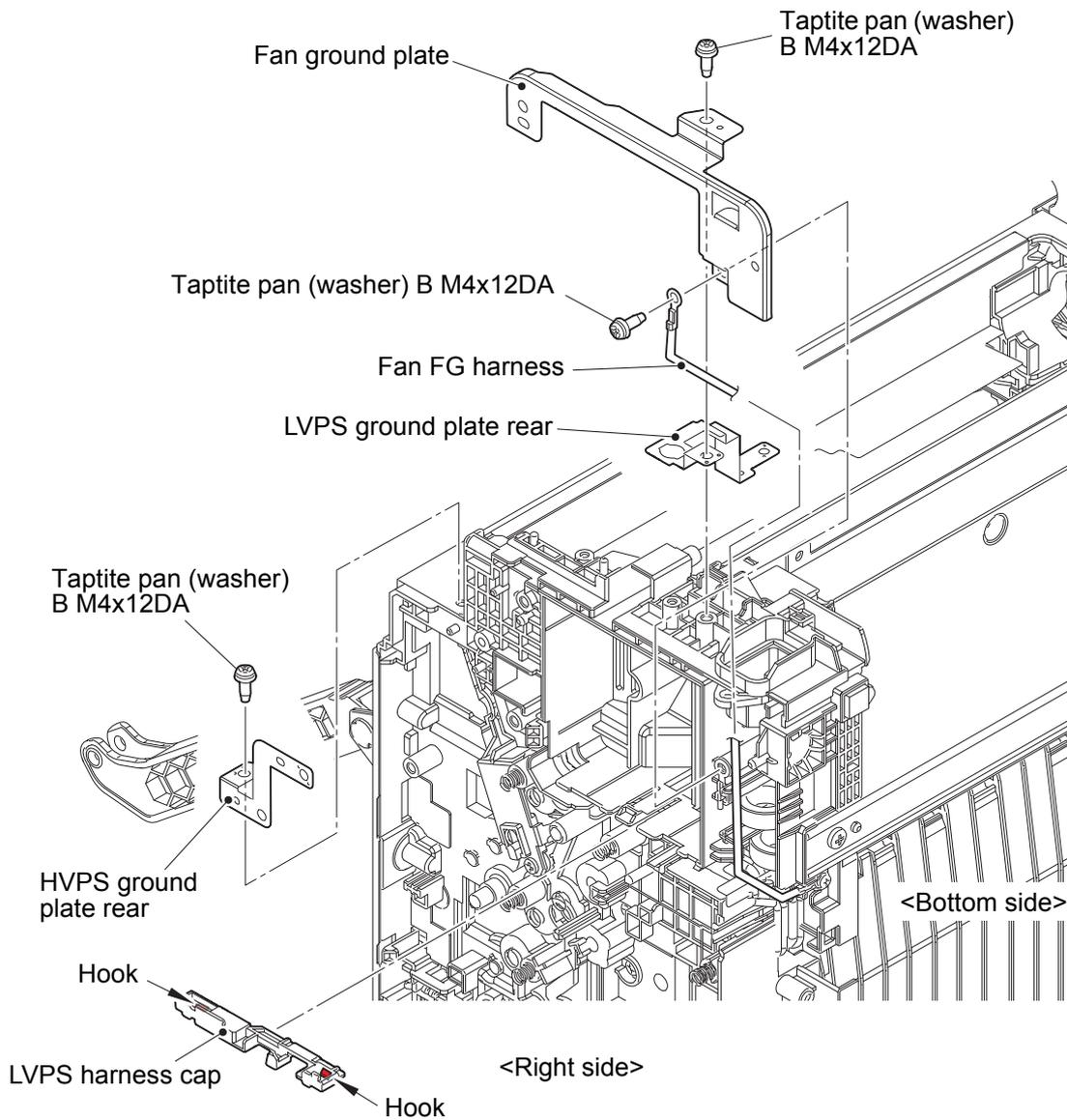


**Fig. 3-142**

Harness routing:  Refer to "11. Fan harness, Fan FG harness".

(10) **Remove** > Inlet

(11) **Wiring** > Inlet harness ASSY, LVPS heater harness

LVPS heater harness

Inlet

<Right side>

Inlet harness ASSY

<Bottom side>
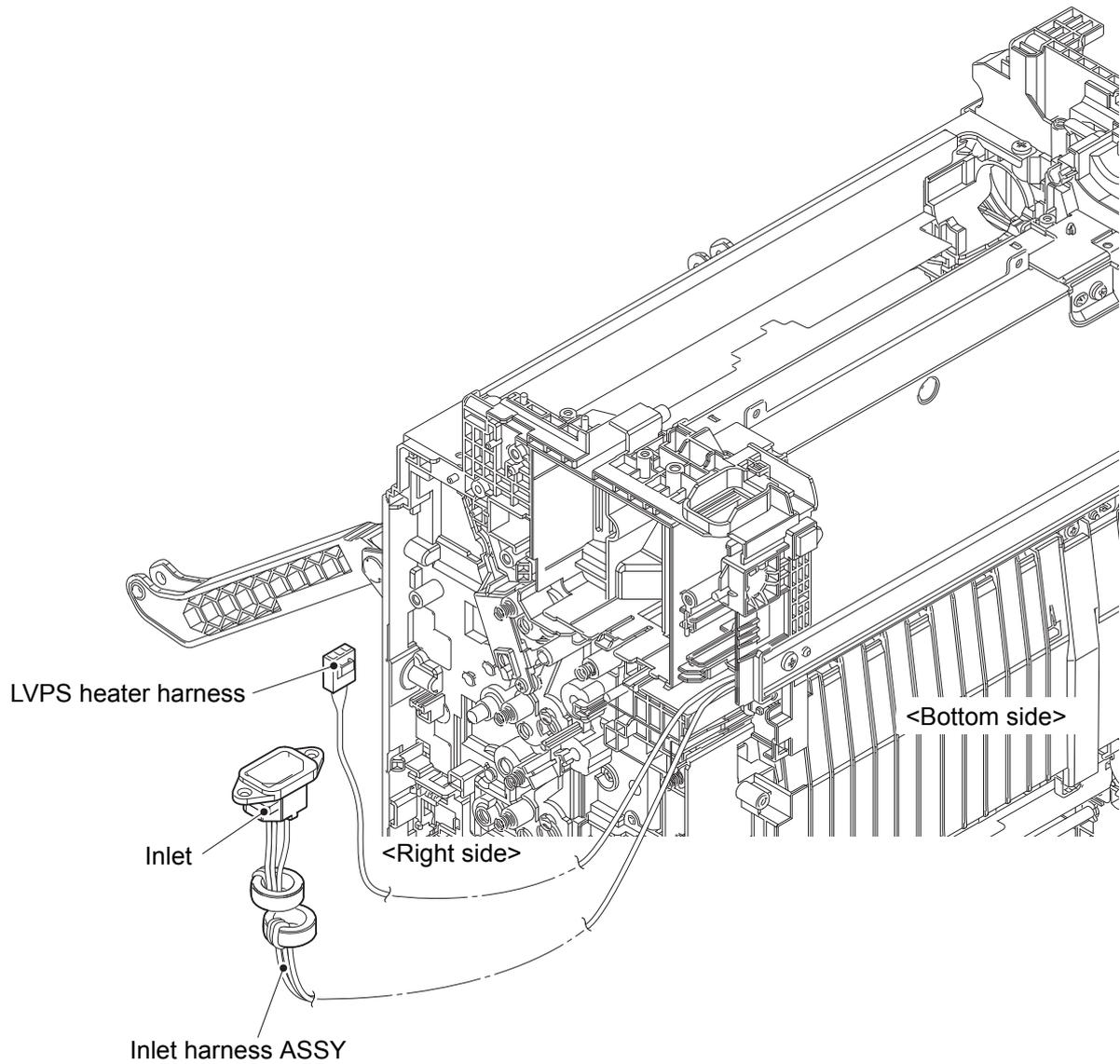
**Fig. 3-143**

Harness routing: Refer to "15. Inlet harness ASSY, LVPS heater harness, LVPS harness".

(12) **Wiring** >     LVPS harness

(13) **Remove** >     LVPS shield plate

✎ **Fixtures & Fittings**
- Taptite pan (washer) B M4x12DA  (x 4)
- Screw cup M3x6  (x 3)

(14) **Remove** >     LVPS PCB insulation sheet



<Back side>

LVPS harness

LVPS shield plate

<Bottom side>

LVPS PCB insulation sheet

Screw cup
M3x6

Taptite pan (washer) B M4x12DA
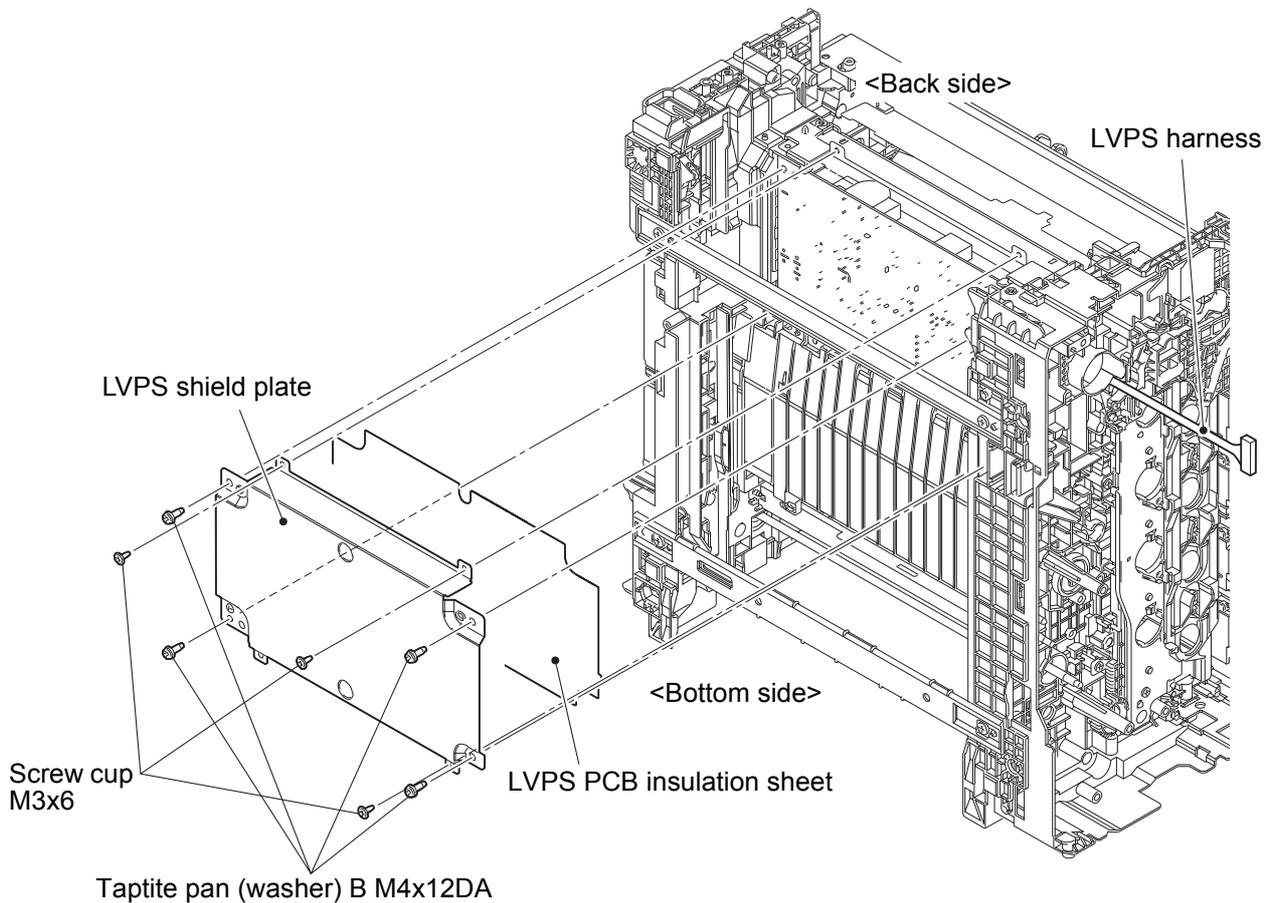
**Fig. 3-144**

Harness routing:  Refer to "15. Inlet harness ASSY, LVPS heater harness, LVPS harness".

(15) **Remove** > LVPS PCB

> 💡 **Point:**
> • Pull out the LVPS harness through the hole.

(16) **Disconnect** > LVPS harness

Hole

<Back side>

<Bottom side>

LVPS harness

LVPS PCB
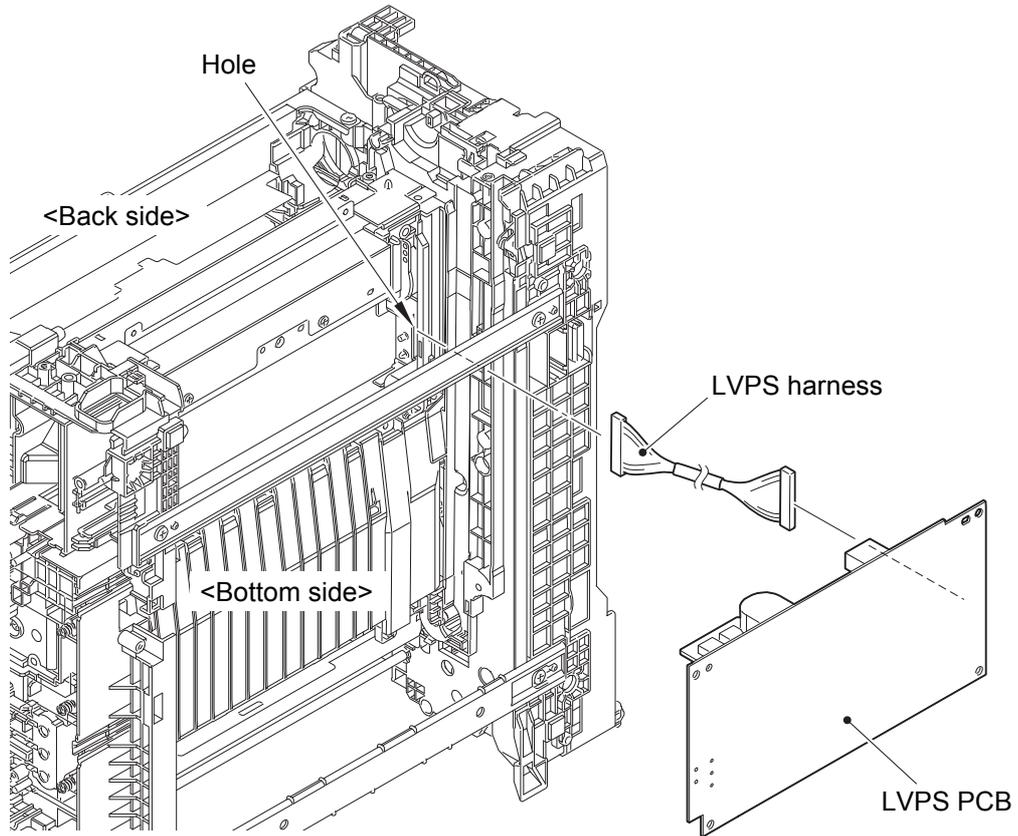
**Fig. 3-145**

## 8.66 REG mark sensor L PCB, REG mark sensor R PCB

(1) **Wiring** > REG mark sensor L harness, REG mark sensor R harness

(2) **Remove** > REG mark sensor ASSY

### 🔩 Fixtures & Fittings
- Taptite bind S M3x5 (x 1)
- Hook (x 1)

REG mark sensor R harness

REG mark sensor L harness

Taptite bind S M3x5

REG mark sensor ASSY

Hook

<Right side>

REG mark sensor ASSY
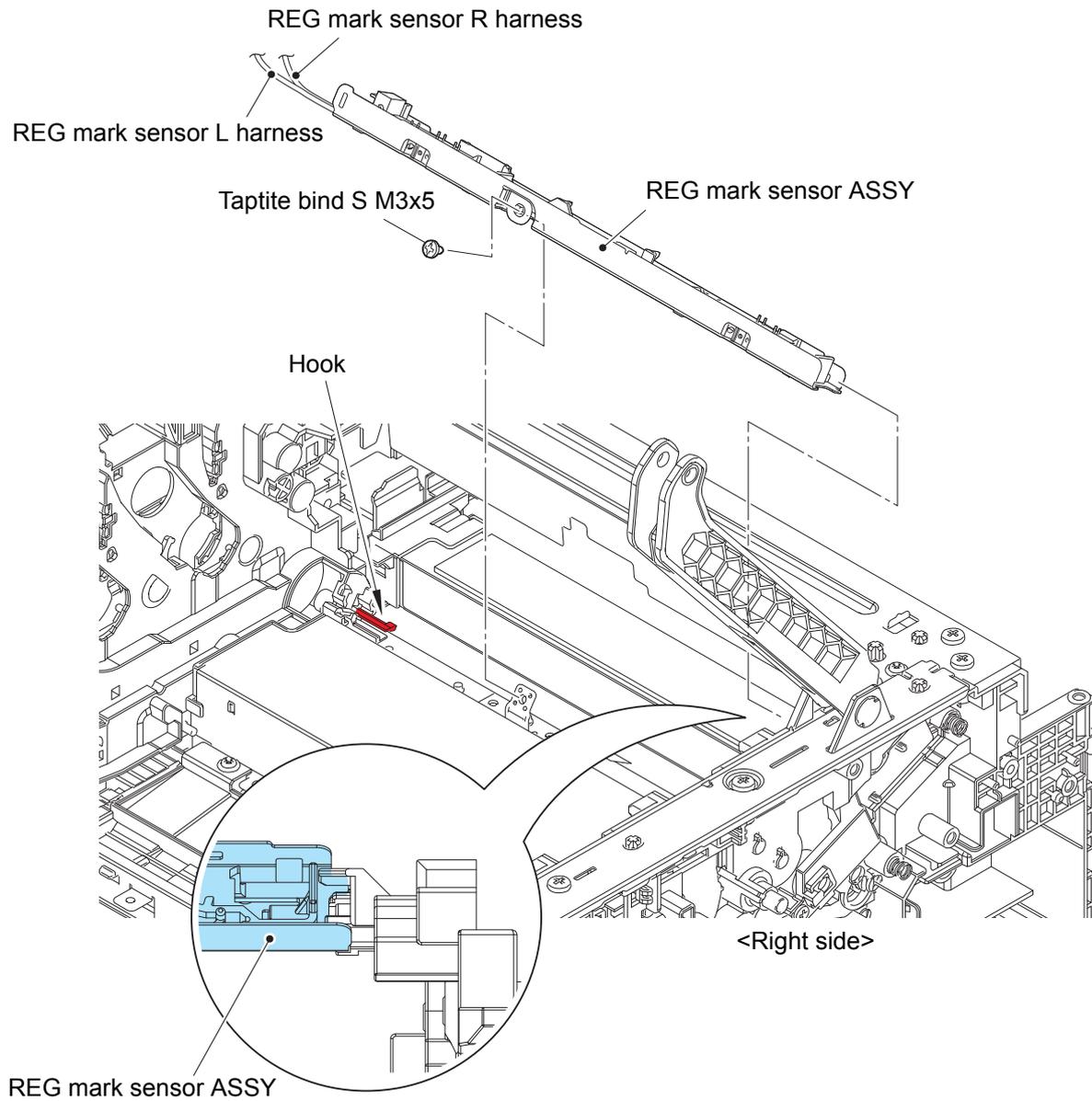
**Fig. 3-146**

Harness routing: Refer to <span style="color:magenta">"31. REG mark sensor L harness, REG mark sensor R harness"</span>.

(3) **Remove** >   REG mark sensor L PCB

✎ **Fixtures & Fittings**
   - Boss  (x 1)

💡 **Point:**
   • Remove the REG mark sensor L PCB in the order of arrows A and B.

(4) **Wiring** >   REG mark sensor R harness

(5) **Remove** >   REG mark sensor R PCB

✎ **Fixtures & Fittings**
   - Boss  (x 1)

💡 **Point:**
   • Remove the REG mark sensor R PCB in the order of arrows C and D.

REG mark sensor R PCB
Boss

D

C

Boss

REG mark sensor L PCB

REG mark sensor L harness

B

A

REG mark sensor R harness
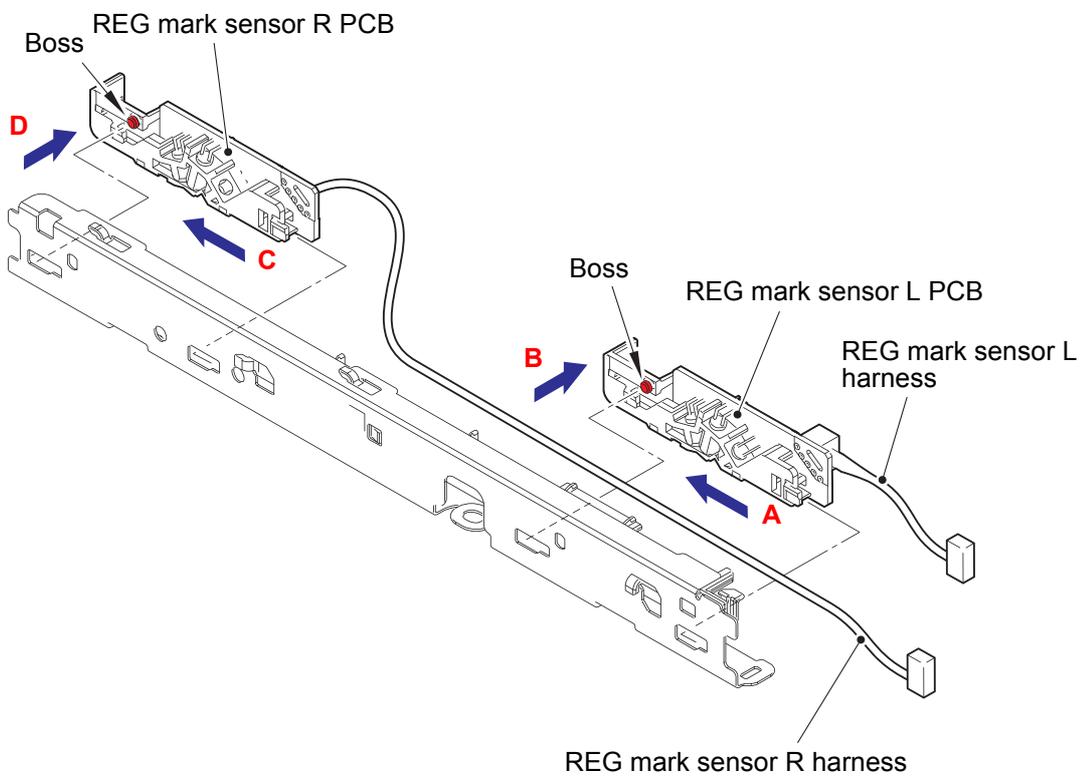
**Fig. 3-147**

Harness routing:  Refer to "31. REG mark sensor L harness, REG mark sensor R harness".

# 9. DISASSEMBLY PROCEDURE (LT unit)

## 9.1 Preparation

(1) **Remove** > LT paper tray



LT paper tray
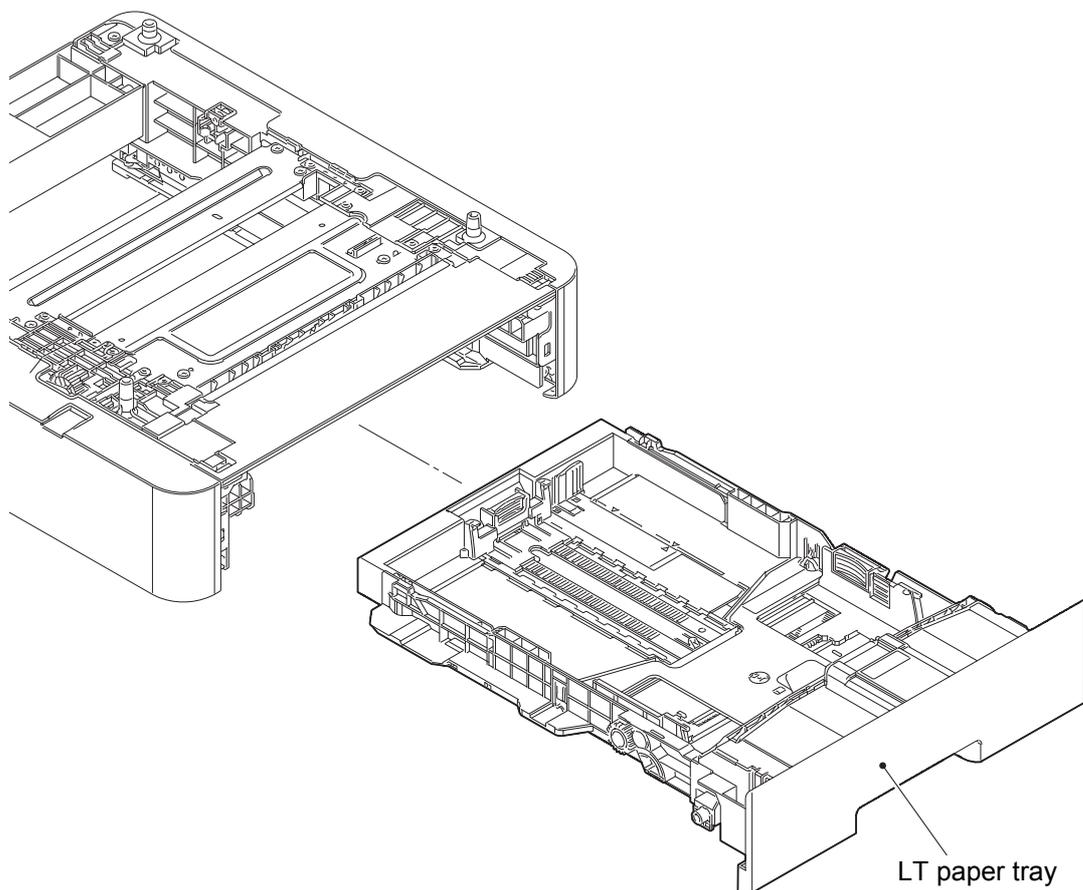
**Fig. 3-148**

## 9.2　LT separation pad

(1) **Remove** > 　LT separation pad

### 🔩 Fixtures & Fittings
- Hook  (x 2)
- Boss  (x 2)

(2) **Remove** > 　LT Separation pad spring

Boss

LT separation pad

Boss

Hook

Hook

LT Separation pad spring
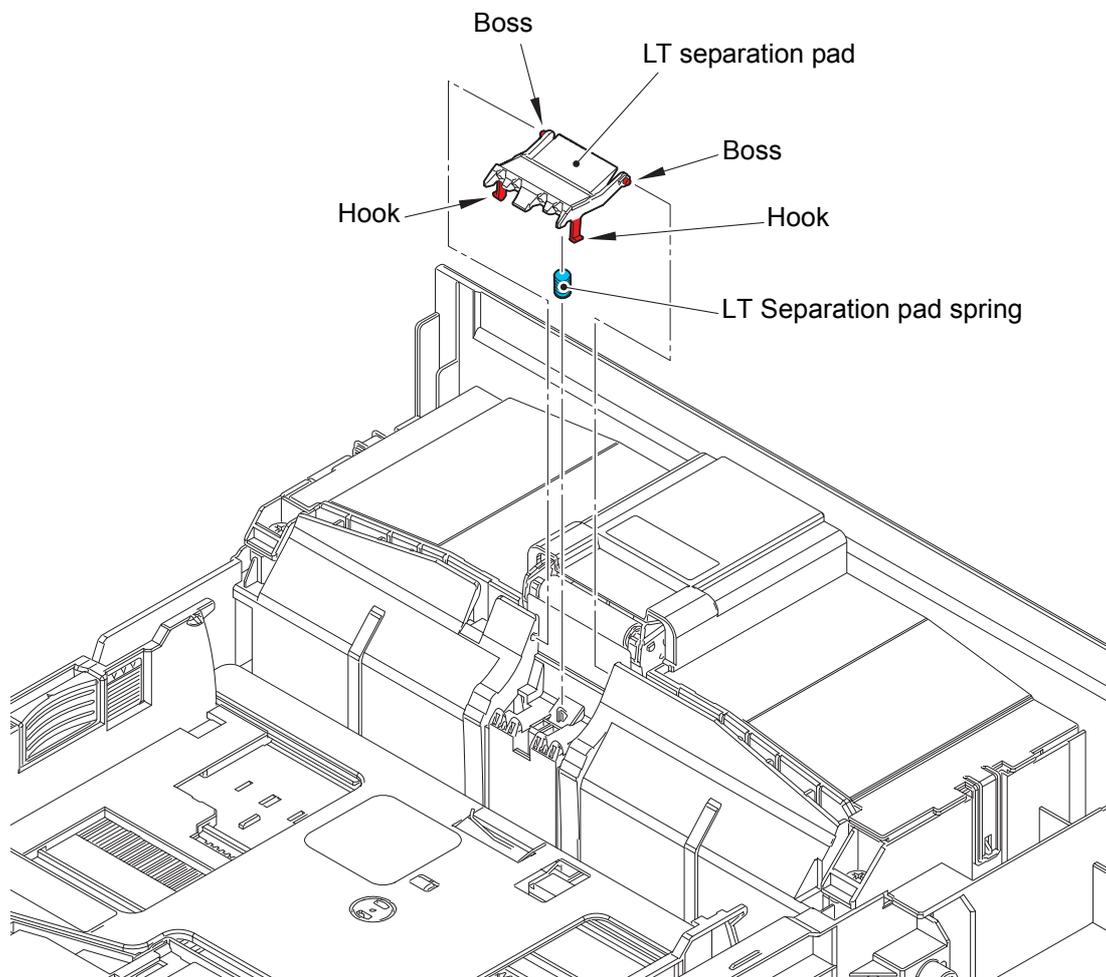
**Fig. 3-149**

## 9.3 LIFT GEAR Z27M10, GEAR Z22M10, IDLE GEAR Z18M10

(1) **Remove** > LIFT GEAR Z27M10

🔩 **Fixtures & Fittings**
   - Hook (x 1)

(2) **Remove** > GEAR Z22M10

(3) **Remove** > IDLE GEAR Z18M10



GEAR Z22M10

IDLE GEAR Z18M10

Hook

LIFT GEAR Z27M10
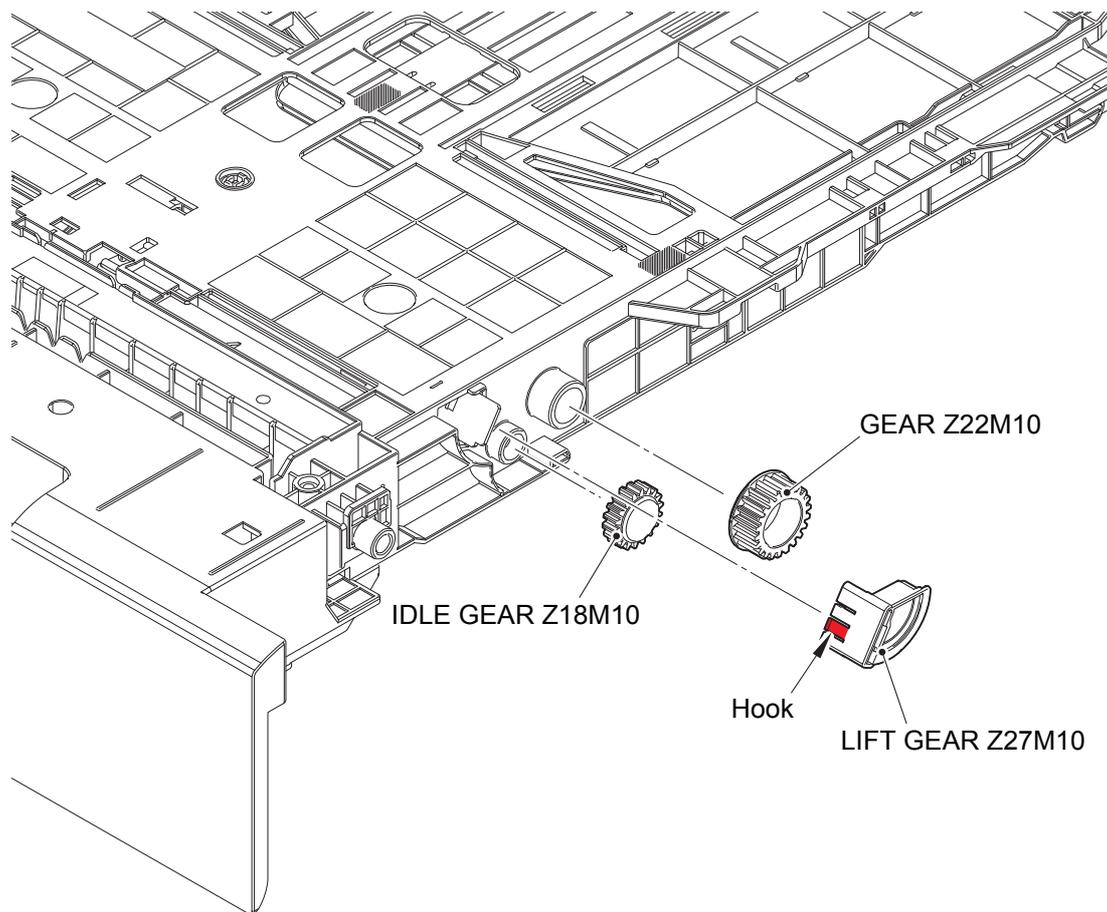
**Fig. 3-150**

## 9.4 LT roller holder ASSY

(1) **Remove** > LT roller holder ASSY

📎 **Fixtures & Fittings**
- Lift arm (x 1)

💡 **Point:**
• Remove the LT roller holder ASSY in the order of the arrows.

LT roller holder ASSY

Lift arm

D

A

B

C
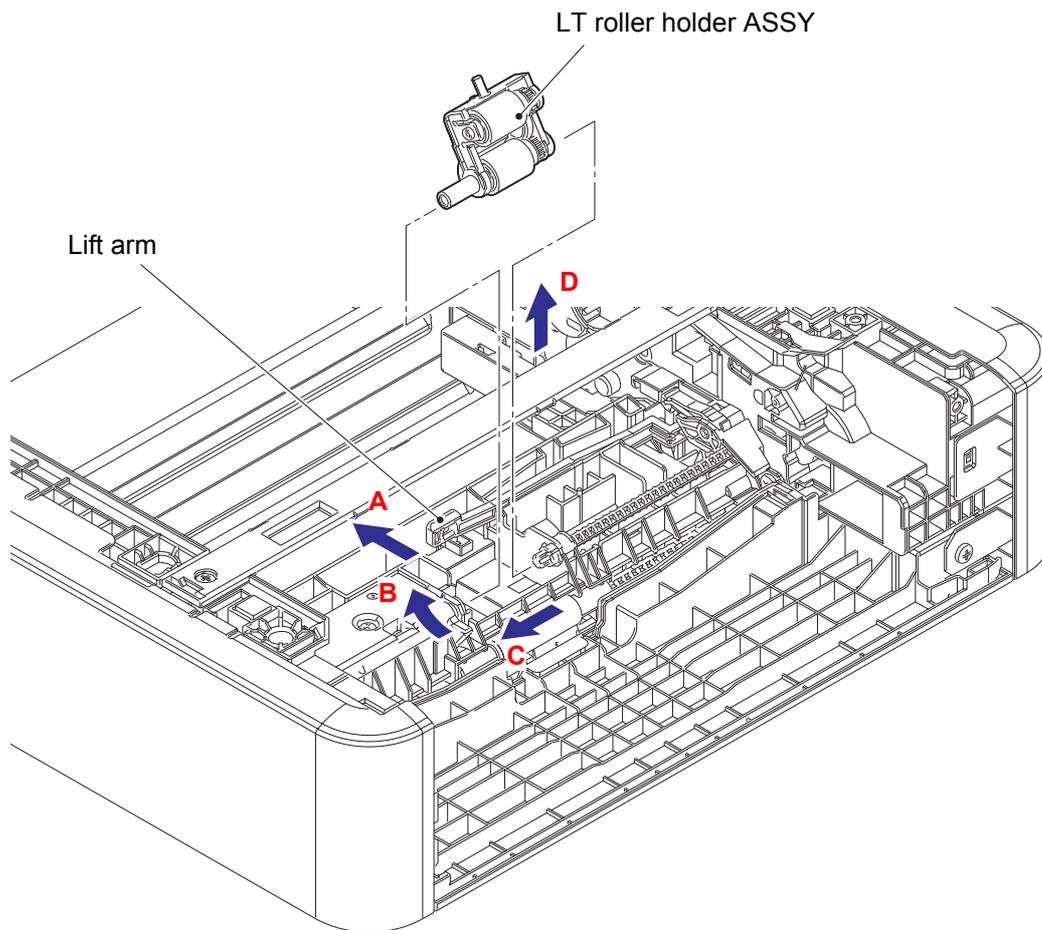
**Fig. 3-151**

✏️ **Assembling note:**
• After replacing the LT roller holder ASSY, reset the counter.
(Refer to "1.3.35 Reset Counters after Parts Replacement (Function Code 88)" in Chapter 5.)

## 9.5 LT side cover L

(1) **Remove** > LT side cover L

📎 **Fixtures & Fittings**
- Taptite bind B M4x12 (x 2)
- Hook (x 8)

💡 **Point:**
• Release the hooks in the order of the arrows.

Taptite bind B M4x12

E

Hook

F

Hook

D

Hook

Hook

Hooks

B

C

Taptite bind B M4x12

Hooks

A
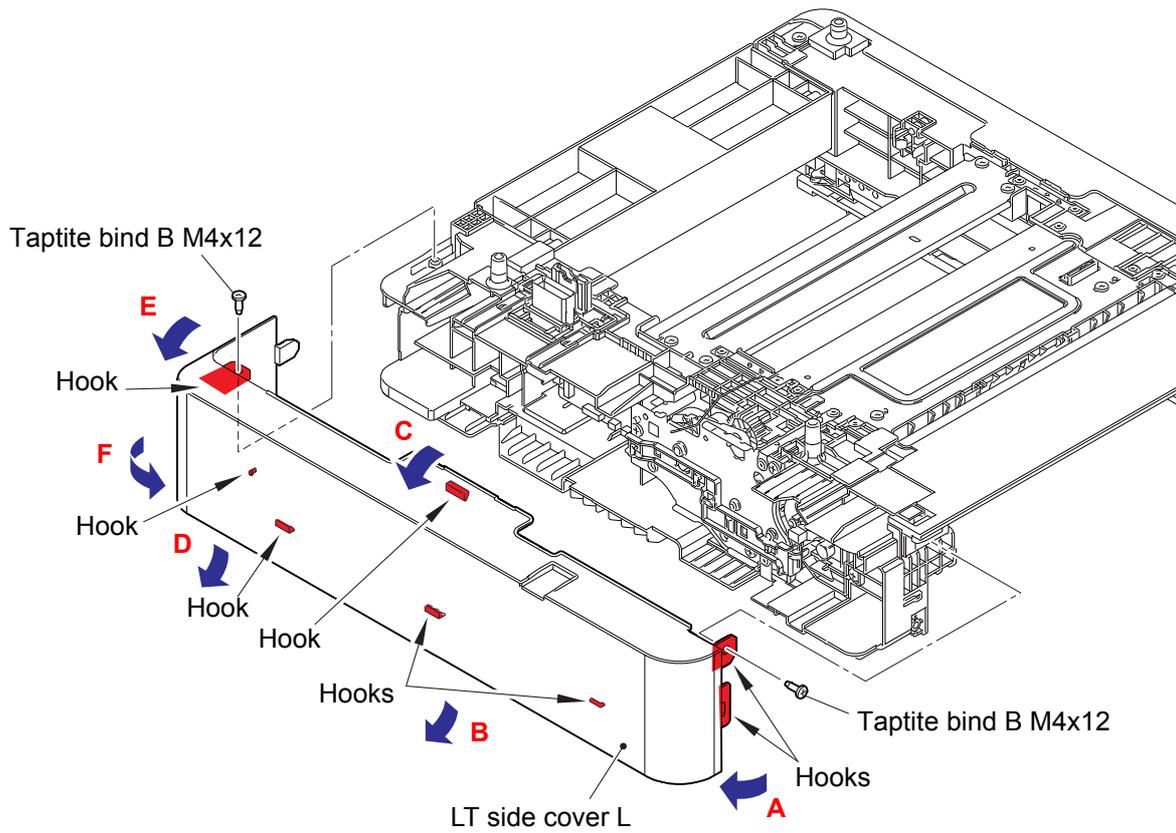
LT side cover L

**Fig. 3-152**

## 9.6 LT side cover R

(1) **Remove** > LT side cover R

**✎ Fixtures & Fittings**
- Taptite bind B M4x12 (x 2)
- Hook (x 8)

**Point:**
- Release the hooks in the order of the arrows.
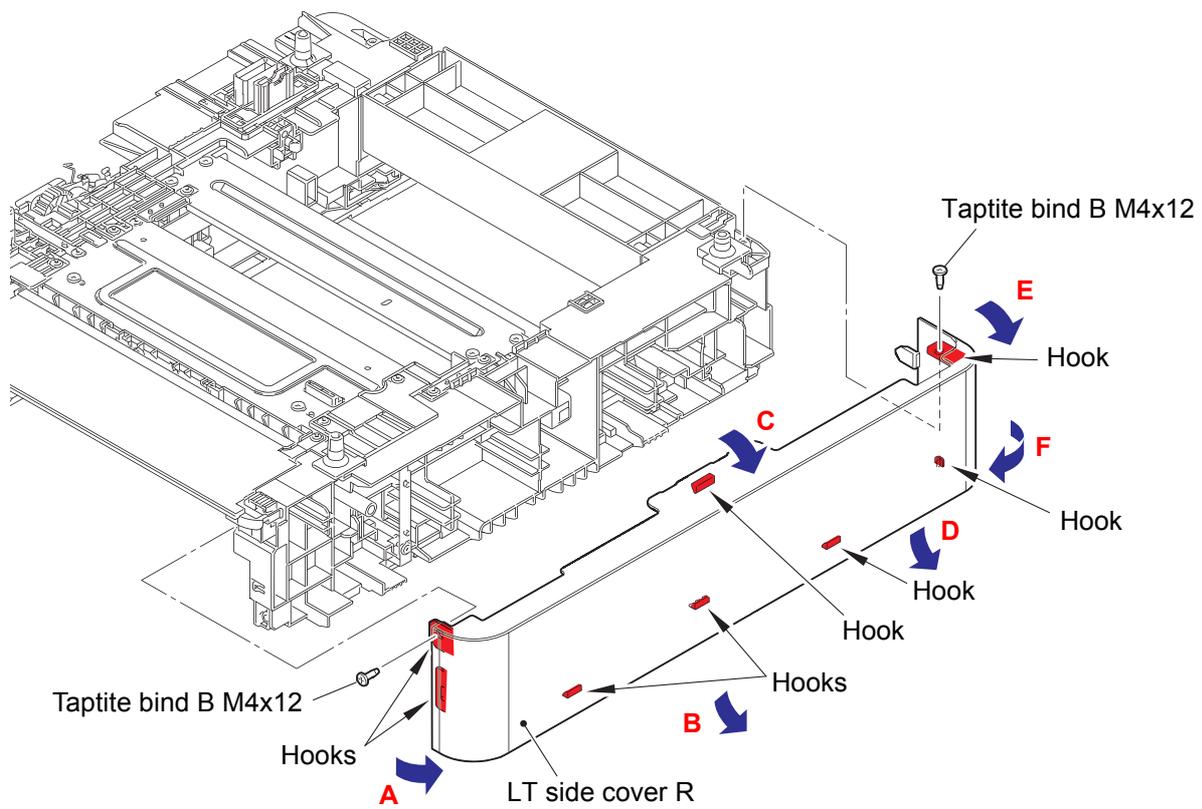


**Fig. 3-153**

## 9.7 LT front cover ASSY

(1) **Remove** > LT front cover ASSY

✎ **Fixtures & Fittings**
- Taptite cup S M3x8 SR (x 1)
- Hook (x 2)



Taptite cup S M3x8 SR

Hook

Hook

LT front cover ASSY
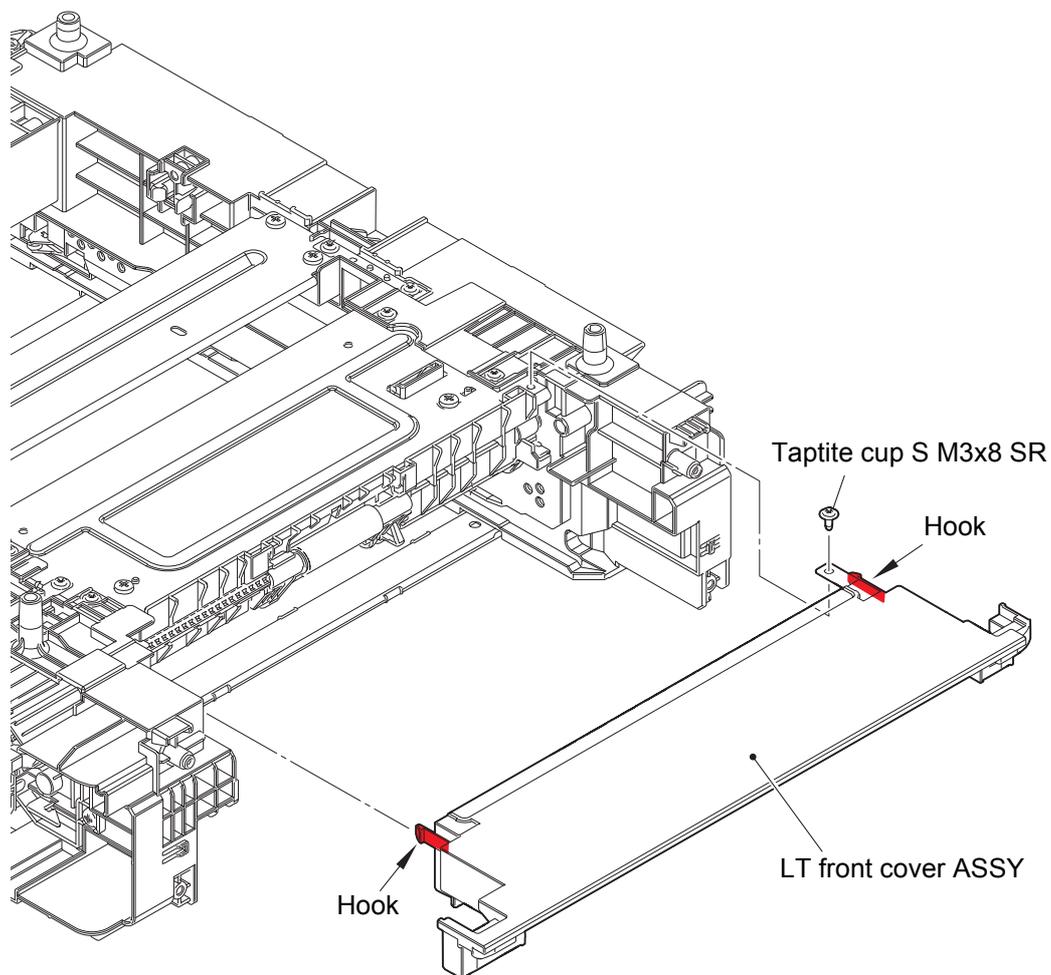
**Fig. 3-154**

## 9.8 LT control PCB

(1) **Disconnect** > LT connector harness, LT release clutch harness, LT PF sensor harness, T1 CLUTCH 30 harness

LT release clutch harness    LT PF sensor harness

LT connector harness

T1 CLUTCH 30 harness
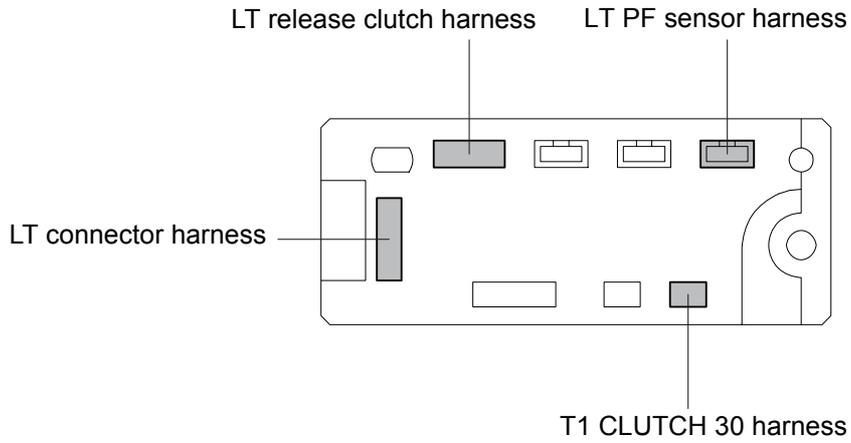
**Fig. 3-155**

(2) **Remove** > LT control PCB

✎ **Fixtures & Fittings**
- Hook (x 1)

Hook

LT control PCB
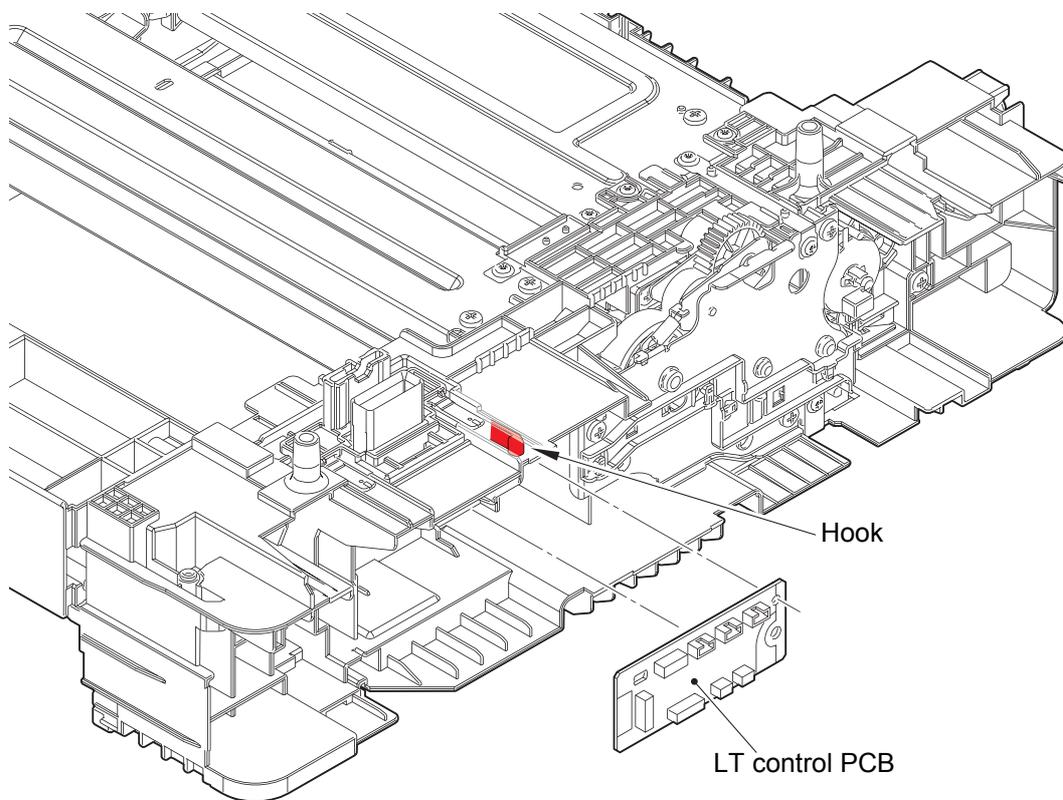
**Fig. 3-156**

## 9.9 T1 CLUTCH 30

(1) **Wiring** >     T1 CLUTCH 30 harness

(2) **Remove** >     T1 CLUTCH 30

    ✎ **Fixtures & Fittings**
      - Hook  (x 1)
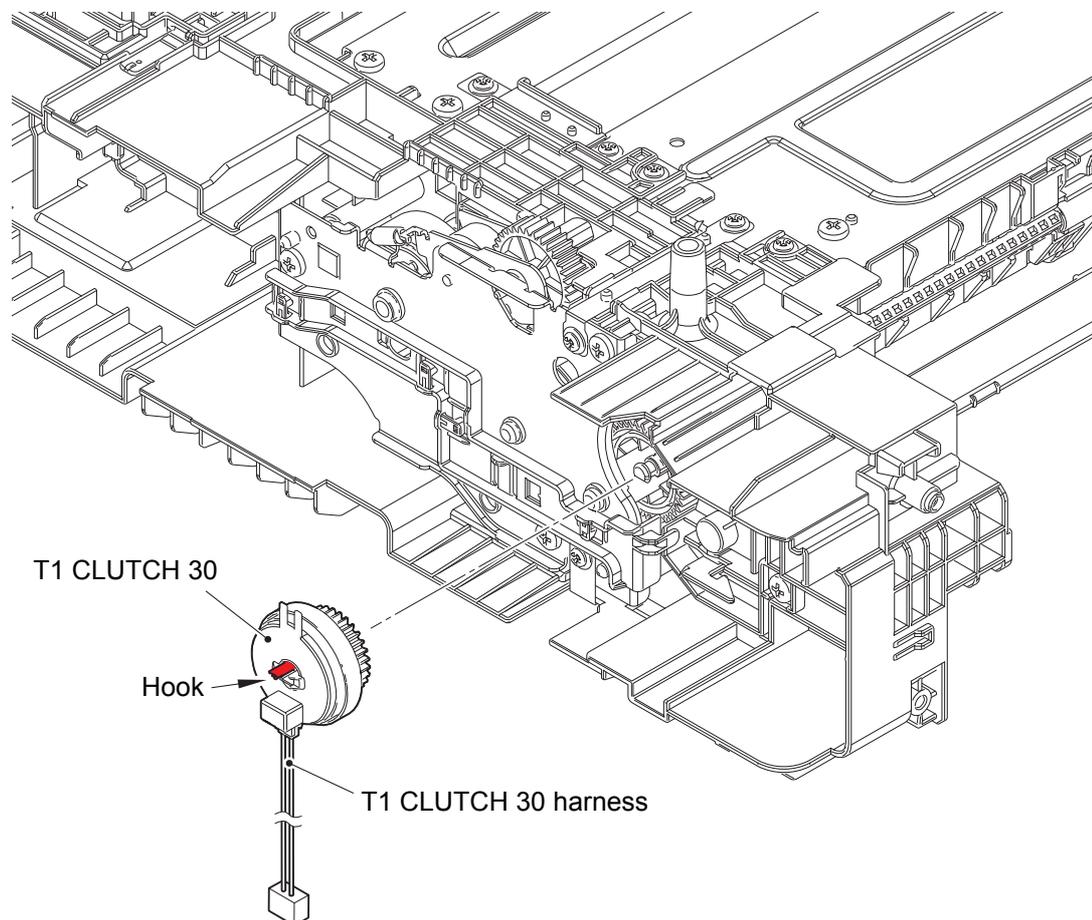


**Fig. 3-157**

Harness routing:  Refer to "33. T1 CLUTCH 30 harness".

*Confidential*

## 9.10 LT RELEASE CLUTCH

(1) **Remove** >   LT under bar ground plate L

✎ **Fixtures & Fittings**
 - Taptite cup S M3x8 SR  (x 2)



**Fig. 3-158**

*Confidential*
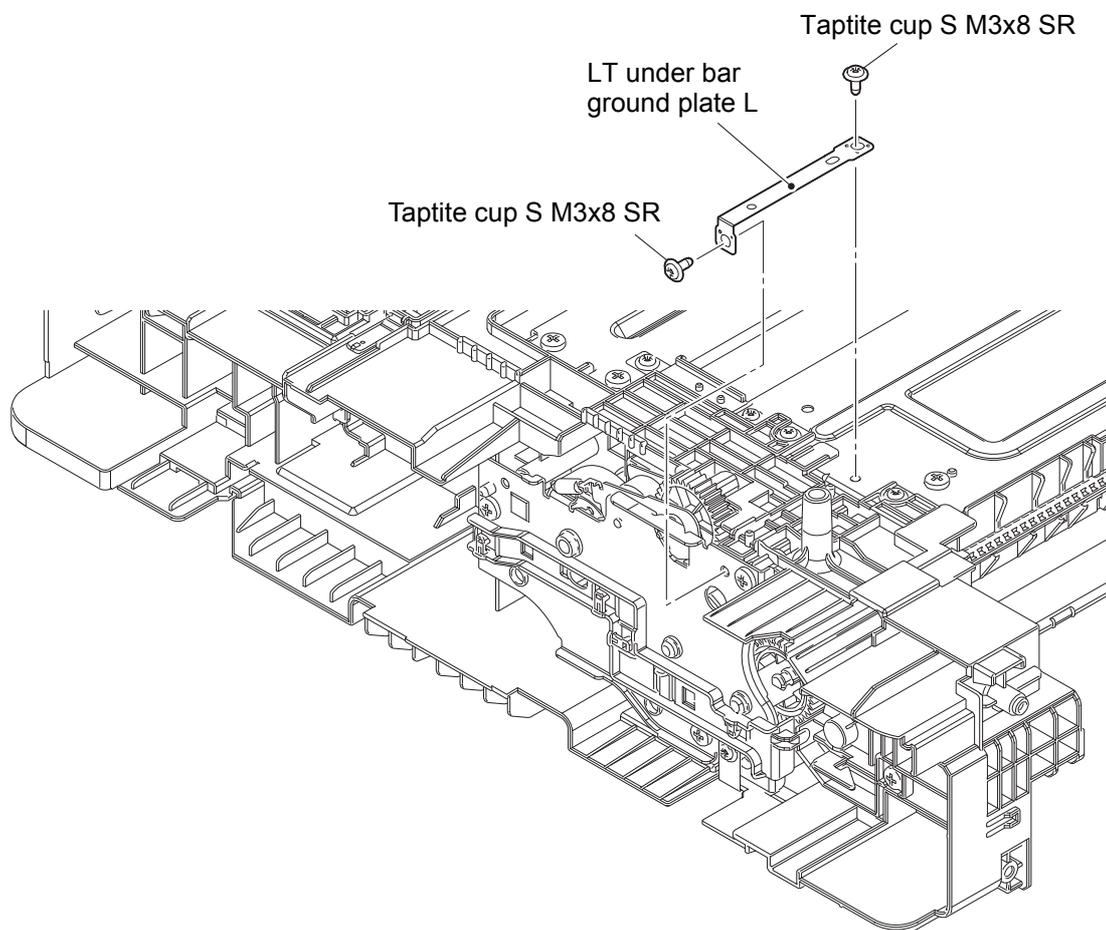
(2) **Remove** > LT under bar front

✎ **Fixtures & Fittings**
- Taptite cup S M3x8 SR (a)  (x 1)
- Taptite cup S M3x8 SR (b)  (x 1)
- Taptite bind B M4x12  (x 2)

Taptite bind B M4x12

LT under bar front

Taptite cup S M3x8 SR (a)

Taptite cup S
M3x8 SR (b)
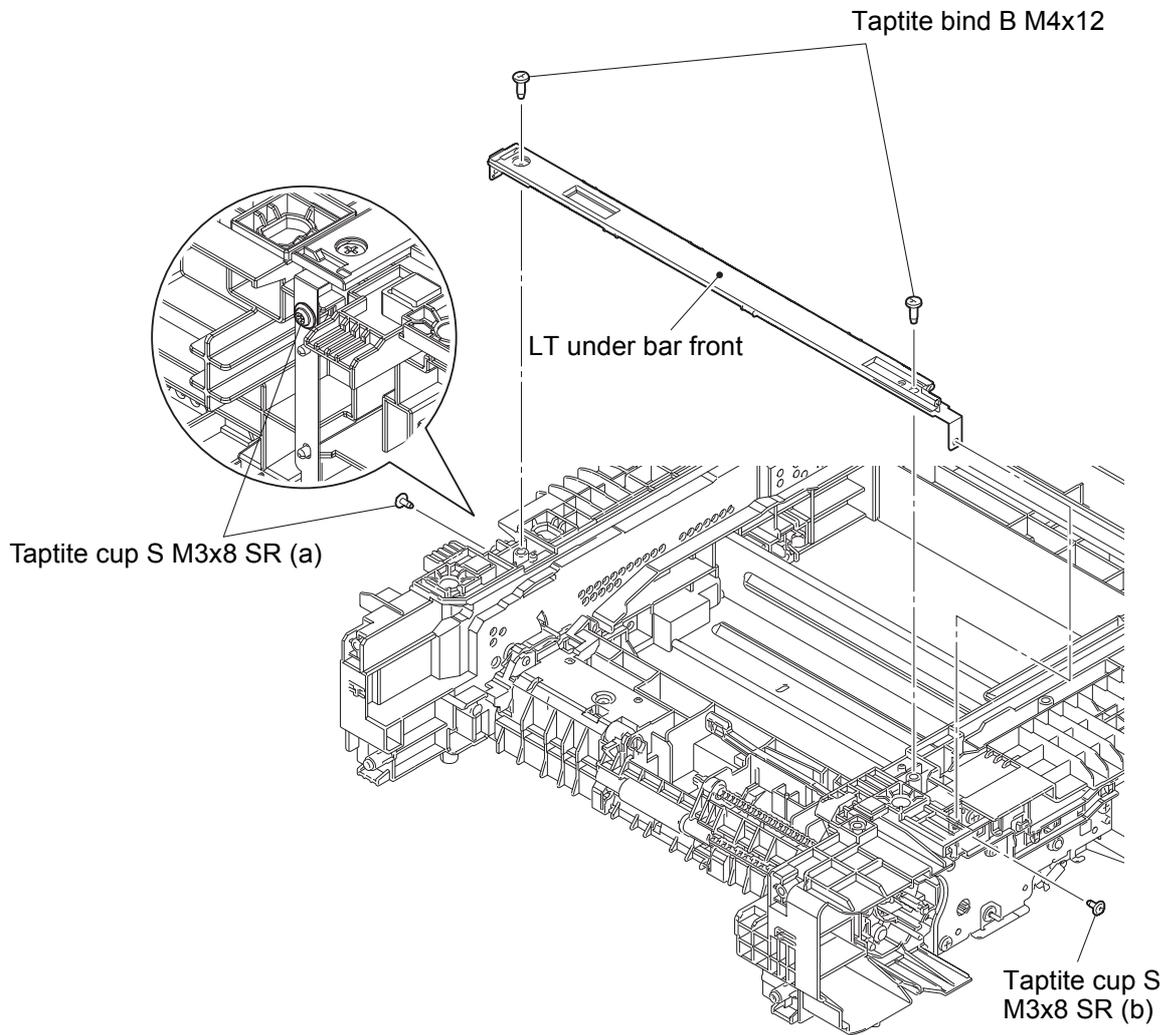
**Fig. 3-159**

(3) **Wiring** >     LT release clutch harness

(4) **Remove** >     LT drive ASSY

🪛 **Fixtures & Fittings**
    - Taptite bind B M4x12  (x 3)

💡 **Point:**
    • Pull out the LT release clutch harness through the hole.

Taptite bind B M4x12

Hole

LT drive ASSY

LT release clutch harness
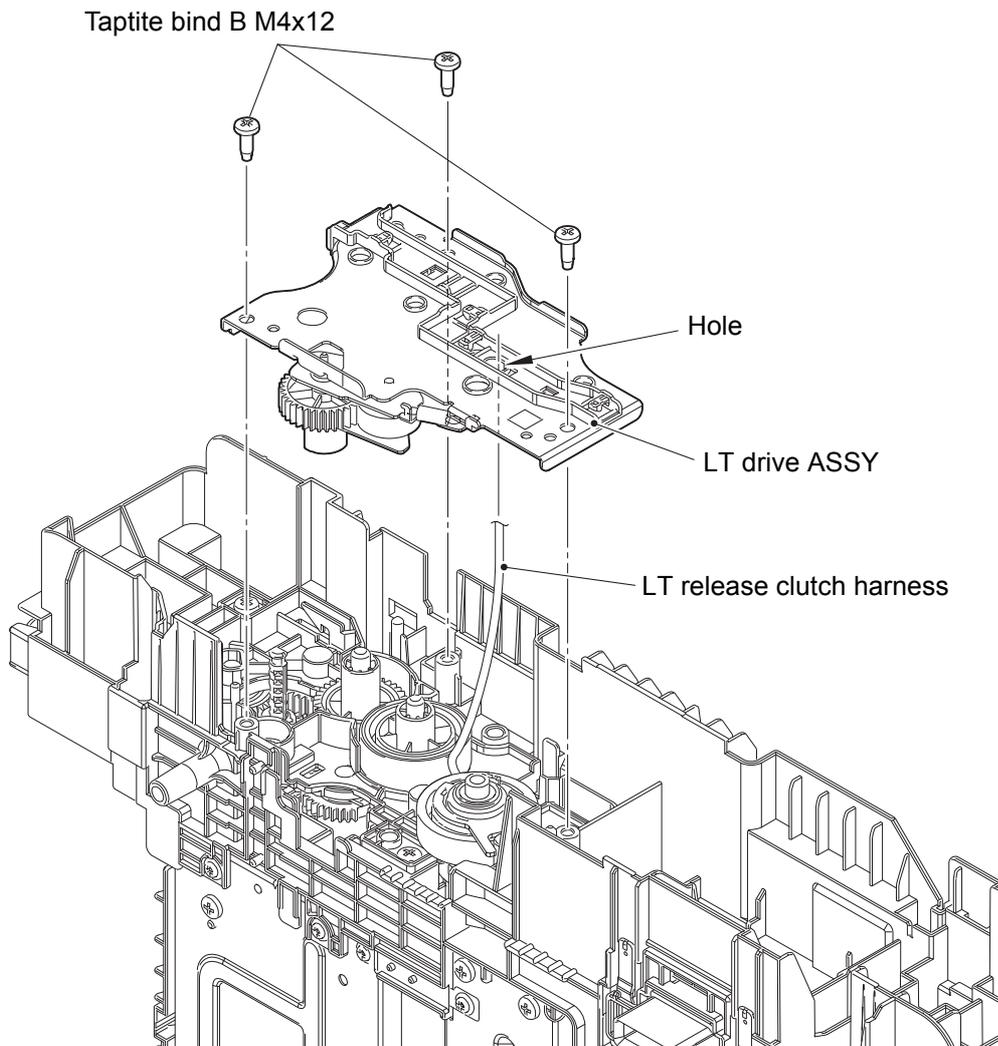
**Fig. 3-160**

Harness routing:  Refer to "20. LT release clutch harness".

(5) **Remove** > LT clutch shaft

(6) **Remove** > LT RELEASE CLUTCH



LT clutch shaft

LT RELEASE CLUTCH
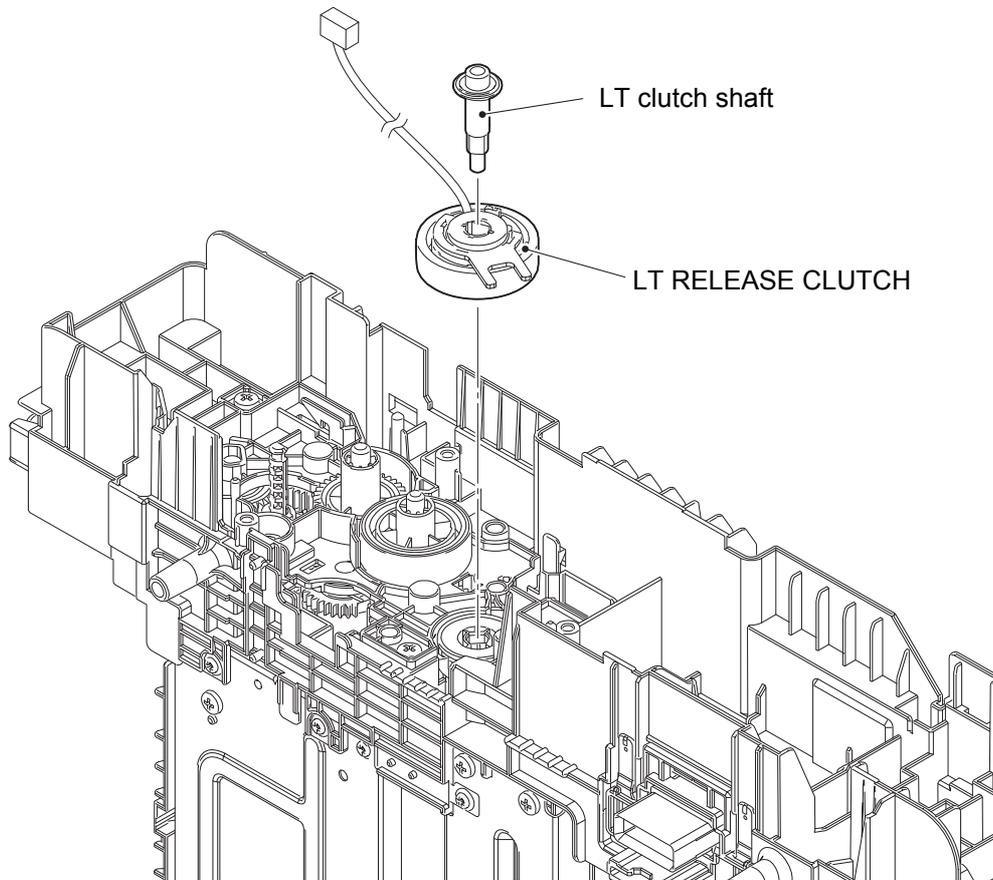
**Fig. 3-161**

> ⚠ **Note:**
> • Be careful not to lose gears.

*Confidential*

## 9.11  LT connector

(1)  **Release** >  LT connector harness

    🔩 **Fixtures & Fittings**
    - Hook  (x 1)

(2)  **Remove** >  LT connector

    🔩 **Fixtures & Fittings**
    - Hook  (x 2)



Hooks

LT connector

LT connector harness

Hook
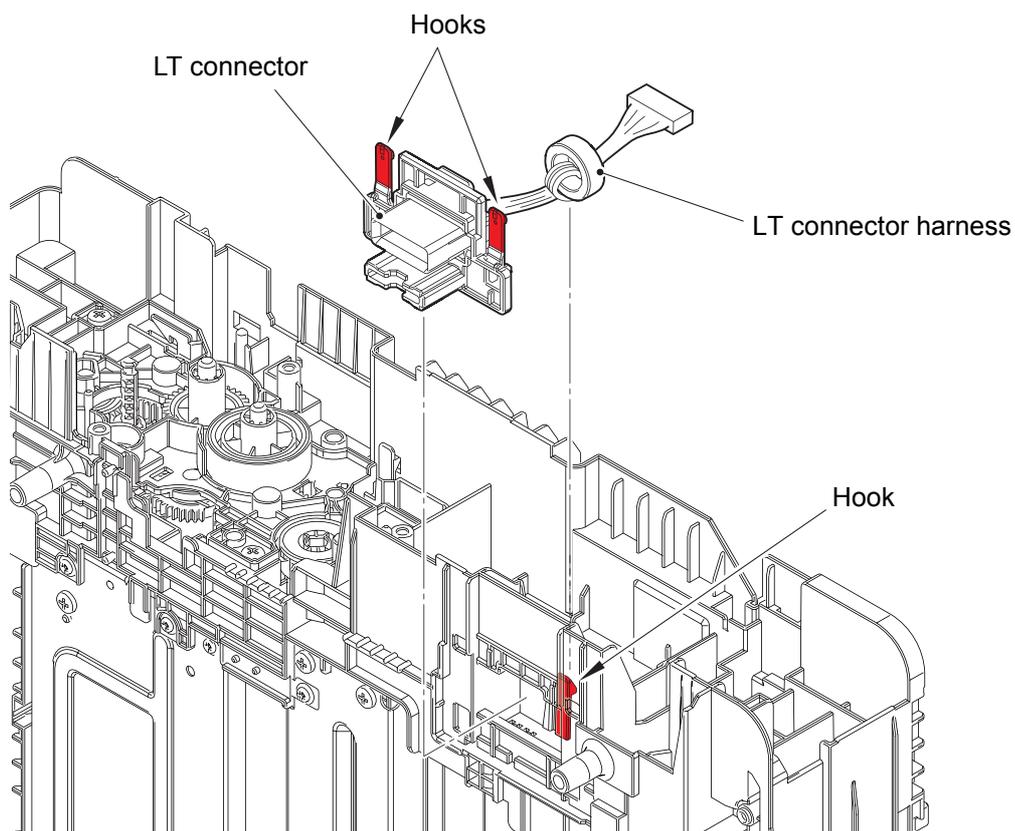
**Fig. 3-162**

## 9.12 LT PF sensor PCB

(1) **Remove** >   LT under bar

    ✎ **Fixtures & Fittings**
      - Taptite bind B M4x12  (x 2)

Taptite bind B M4x12

LT under bar
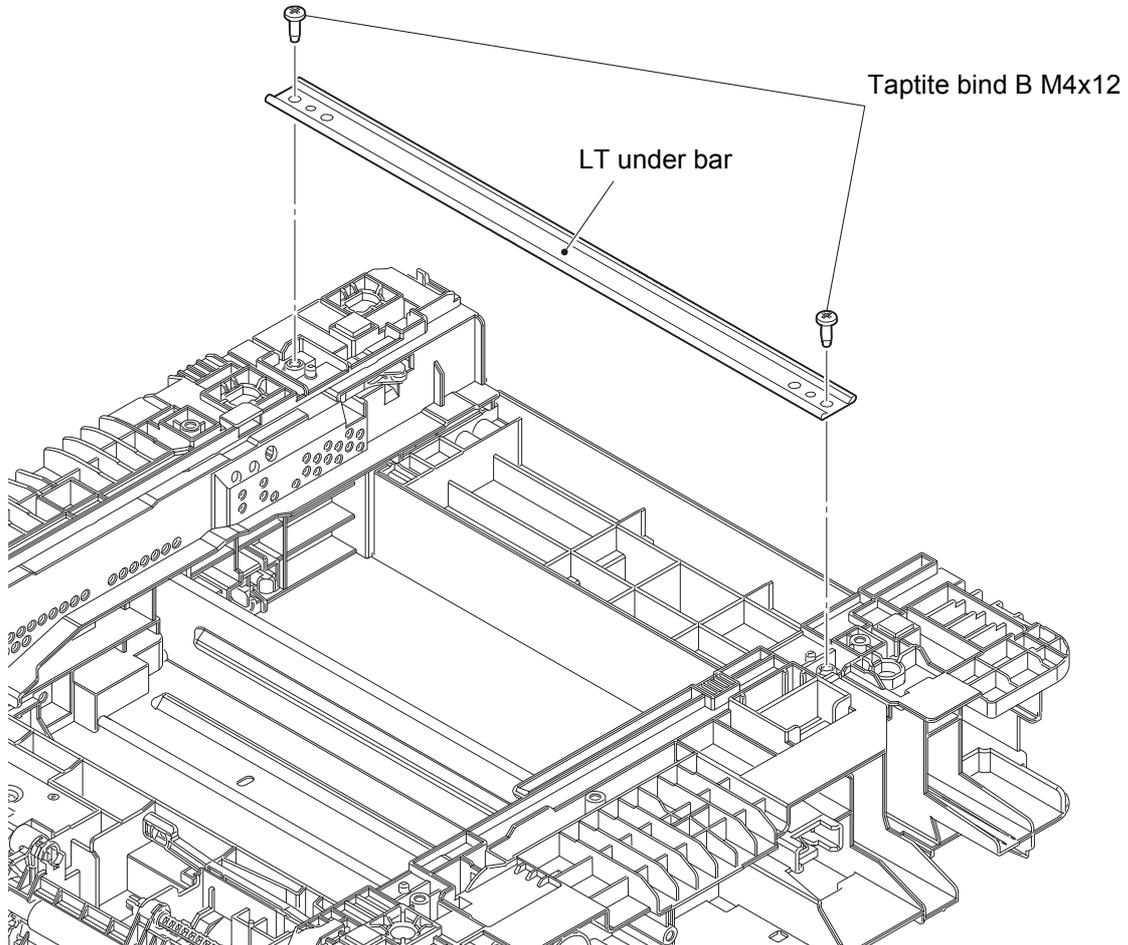
**Fig. 3-163**

(2) **Remove** > LT PF frame FG plate R

✎ **Fixtures & Fittings**
   - Taptite cup S M3x8 SR  (x 1)

(3) **Remove** > Screws

✎ **Fixtures & Fittings**
   - Taptite cup S M3x8 SR (i)  (x 2)

Taptite cup S M3x8 SR

LT PF frame FG plate R

Taptite cup S M3x8 SR (i)
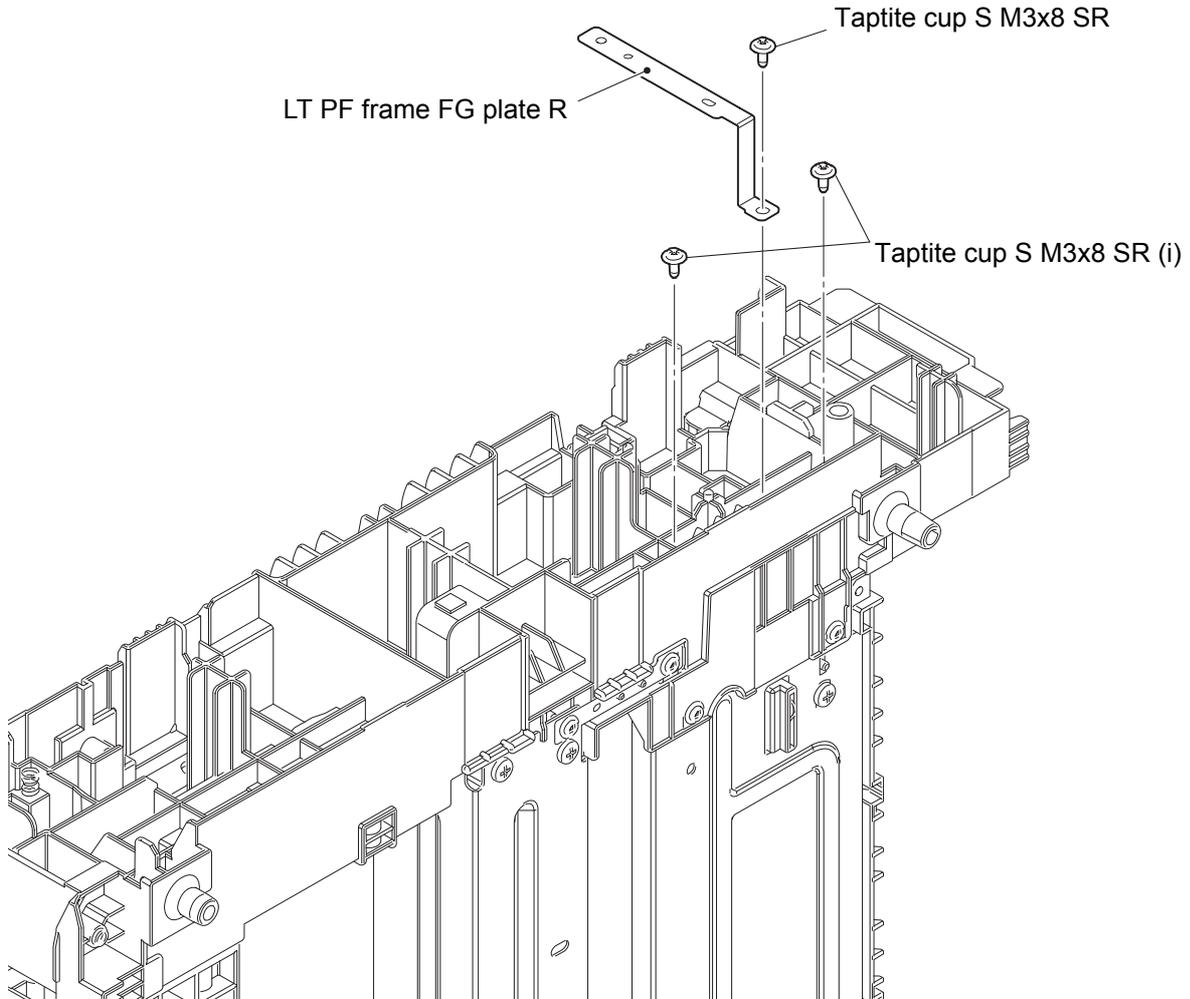
**Fig. 3-164**

(4) **Remove** > LT center FG plate L

**Fixtures & Fittings**
- Taptite cup S M3x8 SR (c)  (x 1)
- Taptite cup S M3x8 SR (d)  (x 1)

(5) **Remove** > LT center FG plate R

**Fixtures & Fittings**
- Taptite cup S M3x8 SR (e)  (x 1)
- Taptite cup S M3x8 SR (f)  (x 1)

(6) **Remove** > Screws

**Fixtures & Fittings**
- Taptite cup S M3x8 SR (g)  (x 2)
- Taptite cup S M3x8 SR (j)  (x 2)
- Taptite bind B M4x12  (x 2)
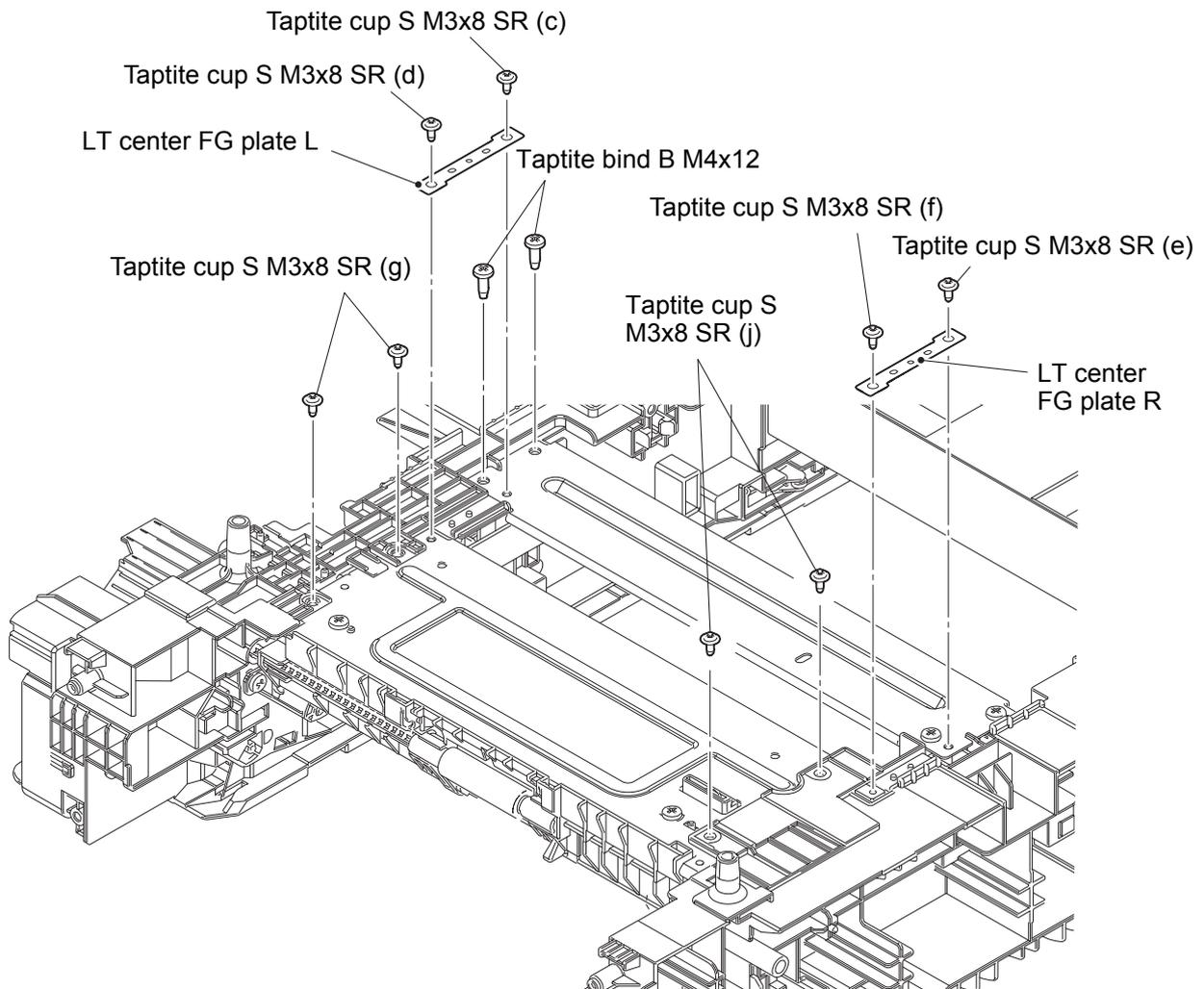


**Fig. 3-165**

(7) **Remove** > LT frame L unit

✎ **Fixtures & Fittings**
- Taptite cup S M3x8 SR (h)  (x 4)
- Taptite bind B M4x12  (x 2)

💡 **Point:**
• Pull out the LT PF sensor harness through the hole.

(8) **Remove** > LT PF frame ASSY

Taptite bind B M4x12

Taptite cup S M3x8 SR (h)

Taptite bind B M4x12

Hole

Taptite cup S M3x8 SR (h)

LT frame L unit

LT PF sensor harness

LT PF frame ASSY
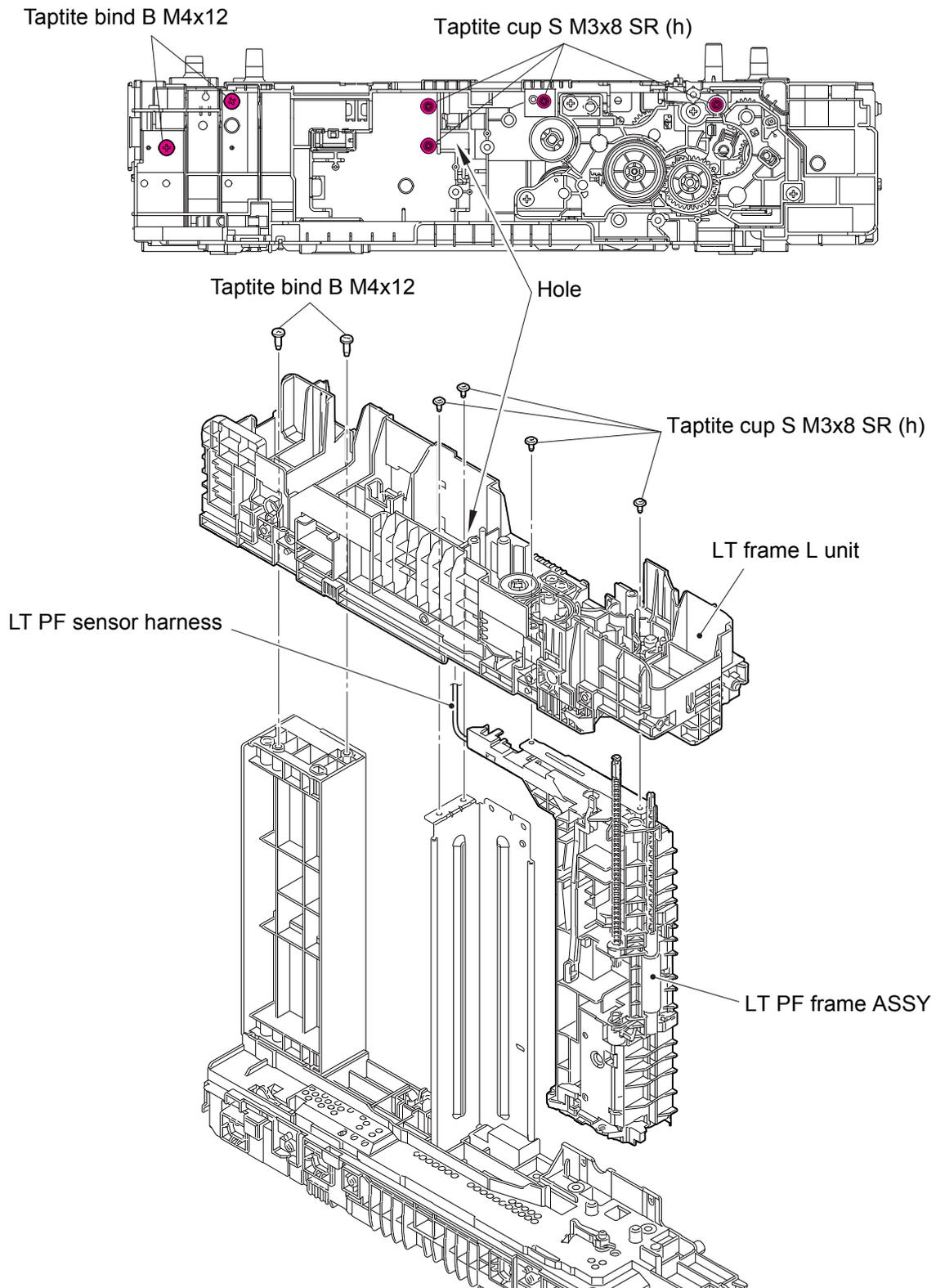
**Fig. 3-166**

(9) **Remove** > LT front beam

✏️ **Fixtures & Fittings**
   - Taptite bind B M4x12  (x 2)

(10) **Wiring** > LT PF sensor harness
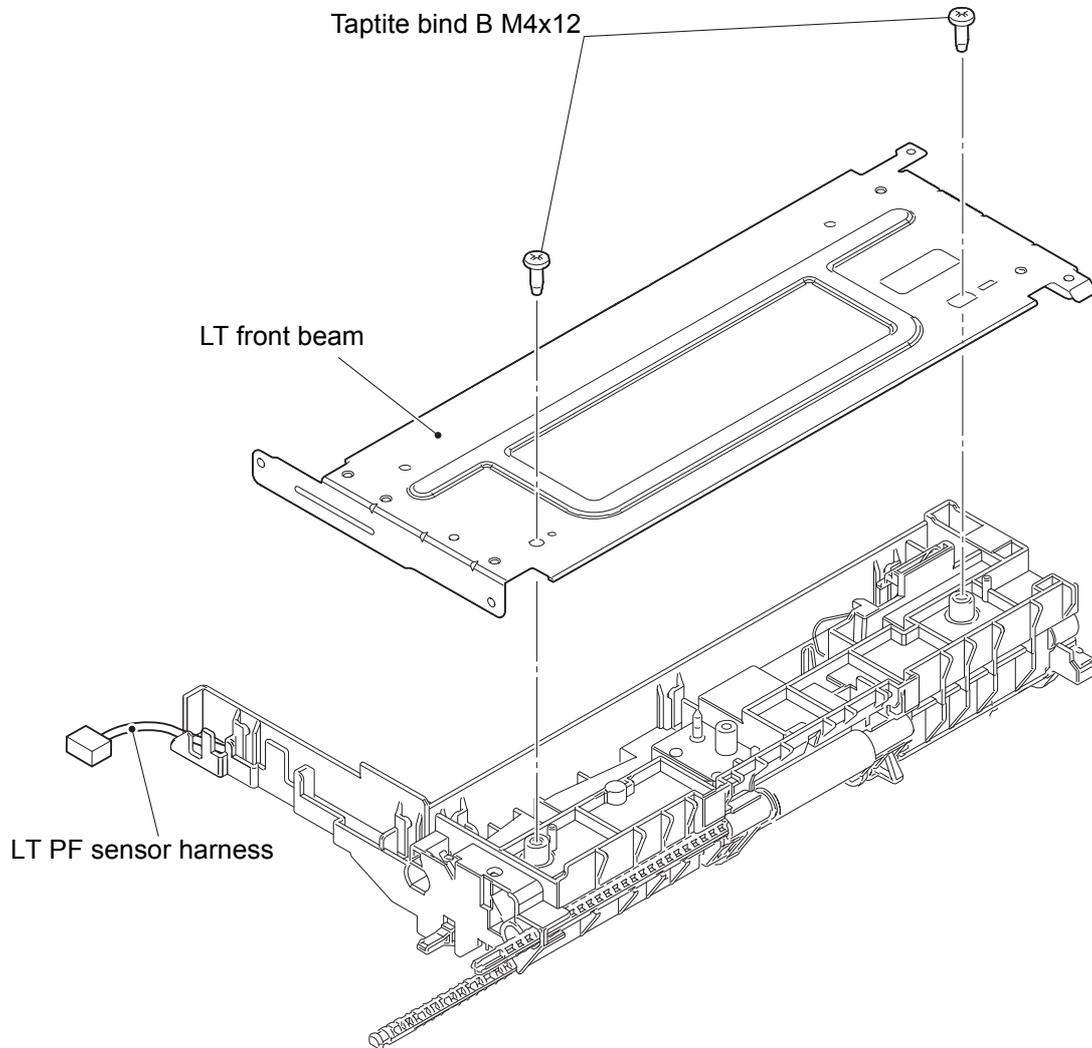


**Fig. 3-167**

Harness routing:  Refer to "19. LT PF sensor harness".

*Confidential*

(11) **Remove** > LT PF actuator holder ASSY

✎ **Fixtures & Fittings**
- Taptite cup B M3x10  (x 1)

Taptite cup B M3x10

LT PF actuator holder ASSY
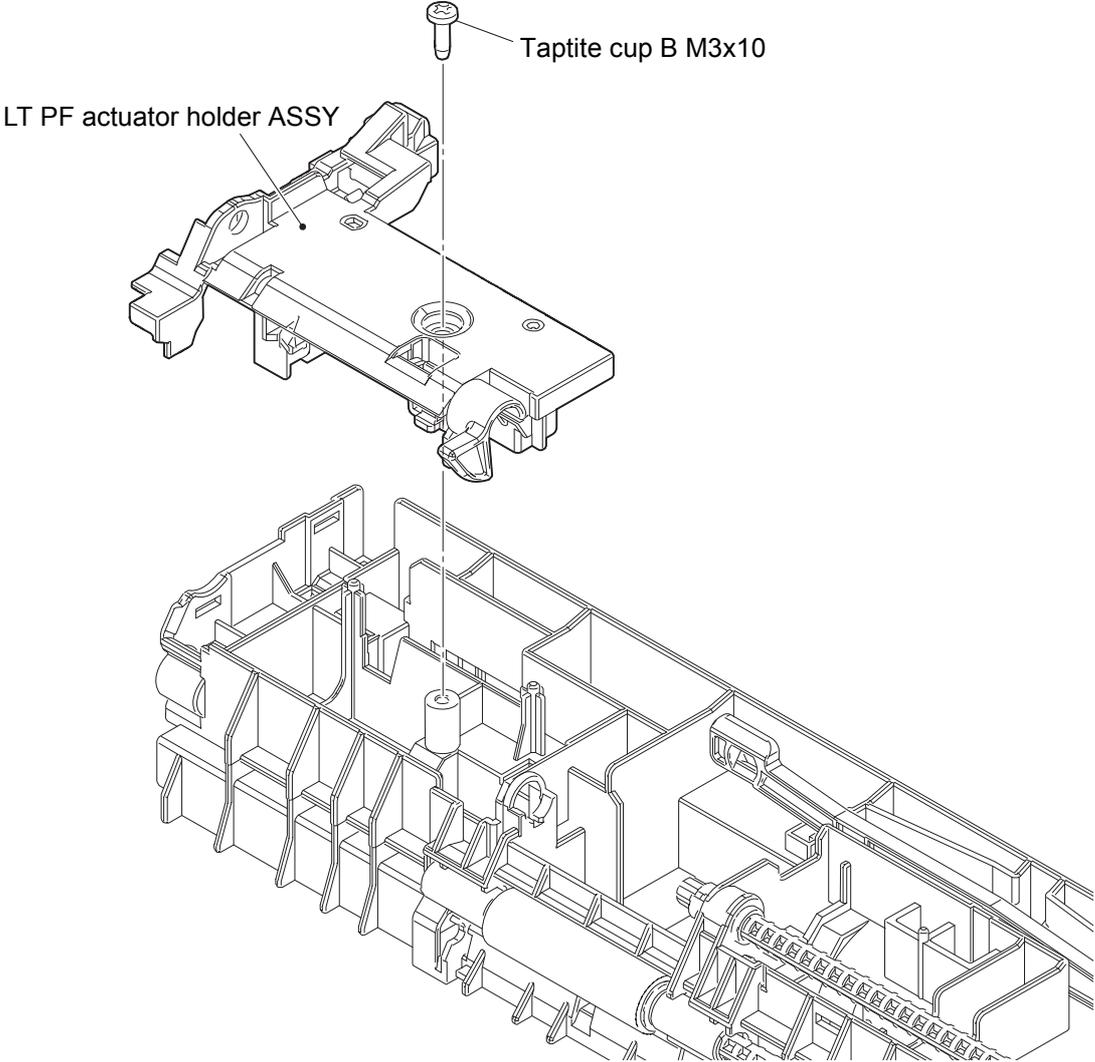
**Fig. 3-168**

(12) **Wiring** >     LT PF sensor harness

(13) **Remove** >     LT PF sensor PCB

    ✎ **Fixtures & Fittings**
      - Hook  (x 1)

> 💡 **Point:**
>    • Rotate the LT PF actuator in the direction of the arrow.



LT PF sensor harness           LT PF sensor PCB

Hook

LT PF actuator
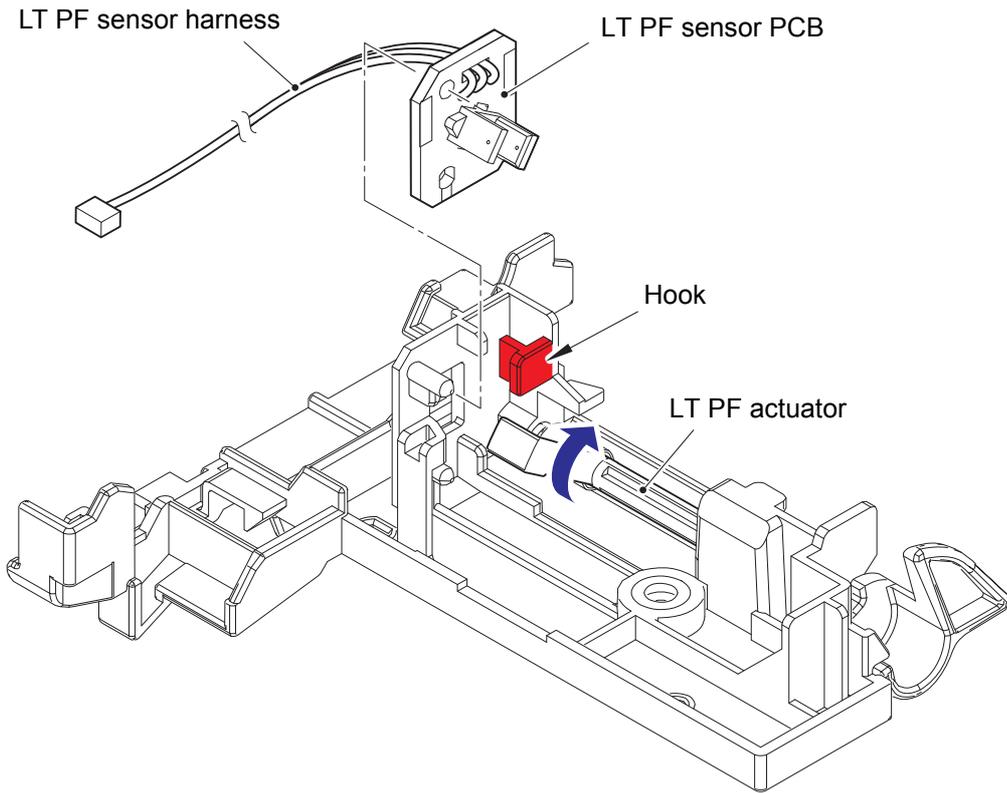
**Fig. 3-169**

Harness routing:  Refer to "19. LT PF sensor harness".

# CHAPTER 4  ADJUSTMENTS AND UPDATING OF SETTINGS, REQUIRED AFTER PARTS REPLACEMENT

## 1.  IF YOU REPLACE THE MAIN PCB

**Note:**
Always observe the following operation orders for the settings.
The settings cannot be completed correctly when the setting operations are not done in order or be omitted.
The settings cannot be completed correctly when turning OFF the power that is not instructed or rebooting the machine due to the maintenance function, etc.
When recycling the Main PCB to repair due to special circumstances, in order to ensure that personal information is deleted, you must perform Function Code 01 and confirm that the information has been deleted.

■ **What to do after replacement**

- Setting by Spec (Function Code 74)
- Quit Maintenance Mode (Function Code 99)
- Installing Firmware (Sub Firmware, Main Firmware)
- Initializing the EEPROM of the Main PCB (Function Code 01)
- Adjusting Touch Panel (Function Code 61)
- Continuous Adjustments of Density and Registration Sensor (Function Code 73)
- Adjustment of Scanning Position of FB (Function Code 54)
- Acquisition of White Level Data (Function Code 55)
- Setting the Serial Number (Function Code 80)
- Resetting to Factory Shipping State (Function Code 03)

■ **What you need to prepare**

- Firmware (Sub Firmware, Main Firmware - djf file)
- Touch pen

&lt;Using a USB Flash Memory&gt;
- USB flash memory (To save the latest firmware)

&lt;Using a computer&gt;
- Computer (To save the latest firmware)
- USB cable
- Filedg32.exe (Download utility)
- Maintenance printer driver
  (Refer to "APPENDIX 3 INSTALLING THE MAINTENANCE PRINTER DRIVER" for how to install the driver.)

**&lt;Explanation&gt;**

If pressing a key operation is needed, the key operation and the LCD display are described as follows.
Common Example:

| A key or Keys pressed | Message appears on the LCD |
| --- | --- |

### <Operating Procedure>

<u>For models with touch panel</u>

The display on the right* appears on the LCD and the machine automatically enters the maintenance mode only when replacing the main PCB with a new spare one.

<u>For models without touch panel</u>

"■■MAINTENANCE■C■"* appears on the LCD and the machine automatically enters the maintenance mode only when replacing the main PCB with a new spare one.

> **Note:**
> • This "■■MAINTENANCE■C■" will be released after "1.1 Setting by Spec (Function Code 74)" and "1.2 Quit Maintenance Mode (Function Code 99)".

\* The letter "C" in "■■MAINTENANCE■C■" differs depending on the product model.

## 1.1  Setting by Spec (Function Code 74)

Perform setting by spec in accordance with "1.3.27 Setting by Spec (Function Code 74)" in Chapter 5.

## 1.2  Quit Maintenance Mode (Function Code 99)

Reboot the machine once and enter the maintenance mode again.

## 1.3  Installing Firmware (Sub Firmware, Main Firmware)

### 1.3.1  Checking firmware version

Check if the firmware is the latest or not. There is no need to install the firmware if it is the latest.

### <How to check firmware version>

<u>For models with touch panel</u> (Main firmware only)

(1)  The machine enters into the initial state of maintenance mode.
      (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [2] [5] | Main firmware version |
|---|---|---|
| (3) | [X] | To the initial state of maintenance mode |

> **Note:**
> • You can check the firmware version even in Function Code 77. (Refer to "1.3.28 Print Maintenance Information (Function Code 77)" in Chapter 5.)

<u>For models without touch panel</u> (Sub firmware and Main firmware)

(1)  The machine enters into the initial state of maintenance mode.
      (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 25" |
|---|---|---|
| (3) | [OK] | Main firmware version |
| (4) | [▲], or [▼] | Sub firmware version |
| (5) | [Stop/Exit] | To the initial state of maintenance mode |

> **Note:**
> • You can check the firmware version even in Function Code 77. (Refer to "1.3.28 Print Maintenance Information (Function Code 77)" in Chapter 5.)

## 1.3.2 Installing firmware

**Note:**

- The LT firmware is included in the main firmware of the machine.
  After connecting the LT to the machine, the LT firmware is  automatically synchronized when the power is turned ON.

- Release the deep sleep mode before installation.

- Install the sub firmware, and the main firmware in this order.

- DO NOT turn the printer or your computer OFF during installation.

- DO NOT disconnect the USB flash memory or the USB cable during installation.

### 1.3.2.1  (USB flash memory) Manual selective installation for firmware

**<Operating Procedure>**

(1)   The machine is in the ready state.

(2)   Save the djf file of firmware in the root folder of the USB flash memory.

(3)   Insert the USB flash memory into the USB host (front).

(4)   | [▲], or [▼] | Select the firmware name to be installed on the LCD. |
      | --- | --- |

(5)   Press the firmware name. Installation starts.

(6)   The machine restarts.

(7)   Repeat steps from (4) to (6) to install the required firmware.

(8)   Disconnect the USB flash memory from the USB host (front).

**Note:**

- Failure to install the firmware using the USB flash memory. (Error display)
  (Refer to "4.11.3 Firmware installation mode" in Chapter 2.)

- Install the firmware according to "1.3.2.3 Firmware installation using a computer".

### 1.3.2.2  (USB flash memory) Automatic installation for all firmware of a model

**Note:**

- Be sure to save firmware for one model.

- Saving firmware for multiple models causes an error.

**<Operating Procedure>**

(1)   Save the following file to the root folder of the USB flash memory.
      File Name: _@$UPD$OP0.8080
      File Type: A blank text file

(2)   Save the following folder to the root of the USB flash memory.
      Folder Name: FIRM

(3)   Save the djf file of firmware in the FIRM folder.

(4)   The machine is in the ready state.

(5)   Insert the USB flash memory into the USB host (front).
      "Program Updating.Do not turn off." appears on the LCD.

(6)   Installation starts. The backlight blinks.

(7)   Installation is completed. The machine restarts.

(8)   Repeat steps from (6) to (7) to install the required firmware.

(9)   Disconnect the USB flash memory from the USB host (front).

**Note:**

- "Unable to Update:*****" means installation failure. (***** represents an error code.)

- After troubleshooting and turning the power of the machine OFF and then back ON, perform the procedure again.

### 1.3.2.3 Firmware installation using a computer

**<Operating Procedure>**

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

(2) Connect the machine to your computer with a USB cable.

(3) Double-click the Filedg32.exe to start, and select the Brother Maintenance USB Printer icon.
(If the Brother Maintenance USB Printer is invalid, reconnect the USB cable.)

(4) Drag and drop the djf file of firmware onto the selected icon.

(5) Installation starts.

(6) The installation is completed. The machine restarts.

(7) The machine returns to the ready state.

(8) Repeat steps from (1) to (7) to install the required firmware.

> **Note:**
> • Installation failure.
>   Restarting the machine enters into firmware installation mode.
>   Perform the procedure again.

## 1.4  Initializing the EEPROM of the Main PCB (Function Code 01)

Perform initializing the EEPROM of the Main PCB in accordance with "1.3.1 Initialize EEPROM Parameters (Function Code 01, 91)" in Chapter 5.

## 1.5  Adjusting Touch Panel (Function Code 61)

Perform adjusting touch panel in accordance with "1.3.18 Adjust Touch Panel (Function Code 61)" in Chapter 5.

## 1.6  Continuous Adjustments of Density and Registration Sensor (Function Code 73)

Perform continuous adjustments of density and registration sensor in accordance with "1.3.26 Adjustment of Color Registration + Sensitivity Adjustment of Density Sensor + Developing Bias Voltage Correction (Function Code 73)" in Chapter 5.

## 1.7  Adjustment of Scanning Position of FB (Function Code 54)

Perform adjustment of scanning position of FB in accordance with "1.3.15 Fine-tune Scanning Position (Function Code 54)" in Chapter 5.

## 1.8  Acquisition of White Level Data (Function Code 55)

Perform acquisition of white level data in accordance with "1.3.16 Acquire and Optimize White/Black Level (CIS Scan) (Function Code 55)" in Chapter 5.

# 1.9    Setting the Serial Number (Function Code 80)

**<Operating Procedure>**

<u>For models with touch panel</u>

(1)   The machine enters into the initial state of maintenance mode.
      (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [8] [0] | "MACERR_01:****"   **** represents an error code. |
|---|---|---|
| (3) | [Mono Start], or [Color Start] (several times) | "USB:************" |
| (4) | [9] [4] [7] [5] | The first digit of the serial number starts flashing. |

(5)   Enter the serial number from the first digit to the fifteenth digit. (Numeric key)
      (Repeatedly press the corresponding numeric key other than 0 to 9, A to F to enter the desired alphanumeric character. See the table below.)

| Numeric key | Assigned characters |
|---|---|
| 4 | 4→G→H→I→4... |
| 5 | 5→J→K→L→5... |
| 6 | 6→M→N→O→6... |
| 7 | 7→P→Q→R→S→7... |
| 8 | 8→T→U→V→8... |
| 9 | 9→W→X→Y→Z→9... |

| (6) | [Mono Start] | The serial number is written. |
|---|---|---|

(7)   The machine returns to in the initial state of maintenance mode.

<u>For models without touch panel</u>

(1)   The machine enters into the initial state of maintenance mode.
      (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 80" |
|---|---|---|
| (3) | [OK] | "MACERR_01:(****)"   **** represents an error code. |
| (4) | [Start] (several times) | "USB:************" |
| (5) | [▲], or [▼] | "9" |
| (6) | [OK] | |

(7)   Repeat the procedures (5) and (6) to enter "4", "7", and "5" respectively.

(8)   The first digit of the serial number starts flashing.

| (9) | [▲], or [▼] | Enter the first digit. |
|---|---|---|
| (10) | [OK] | The cursor moves to the second digit. |

(11)  Repeat the procedures (9) and (10) to enter the 15-digit serial number from the second digit to the last.

| (12) | [Start] | The serial number is written. |
|---|---|---|

(13)  The machine returns to in the initial state of maintenance mode.

*Confidential*

# 1.10 Resetting to Factory Shipping State (Function Code 03)

- When the machine is not in the factory shipping state, its security is weak, such as the risk of information leakage.
- Perform this operating procedure since a new spare main PCB is not in the factory shipping state.
- A factory-shipped machine cannot be changed into a non-factory-shipped one.
- Perform the function of <Transfer to the shipping state> after performing the function of <Switch special operations at startup>.

**<Operating Procedure>**

For models with touch panel

<Switch special operations at startup> - Disable machine's manufacturing functions

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [0] [3] | "1.LT1 MN LOAD?", or "1.SWSUM?" |
| (3) | [<<] | |
| (4) | [▲], or [▼] | "8.PowerOnFunc ?", or "2.PowerOnFunc ?" |
| (5) | [SET] | "FUNC ENABLE", or "FUNC DISABLE" |

"FUNC ENABLE": Enables the function for manufacturing.
"FUNC DISABLE": Disables the function for manufacturing.

| | | |
|---|---|---|
| (6) | [▲], or [▼] | "FUNC DISABLE" |
| (7) | [SET] | To the initial state of maintenance mode |

<Transfer to the shipping state>

| | | |
|---|---|---|
| (8) | [0] [3] | "1.LT1 MN LOAD?", or "1.SWSUM?" |
| (9) | [<<] | |
| (10) | [▲], or [▼] | "9.ShippingStat?", or "3.ShippingStat?" |
| (11) | [SET] | "OFF: Change OK?", or "ON" |

"OFF: Change OK?": Not in the factory shipping state.
"ON": Already in the factory shipping state.

| | | |
|---|---|---|
| (12) | [SET] | To the initial state of maintenance mode |

The machine that was not in the factory shipping state is changed into the factory shipping state.

For models without touch panel

<Switch special operations at startup> - Disable machine's manufacturing functions

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 03" |
| (3) | [OK] | "1.SWSUM?" |
| (4) | [▲], or [▼] | "2.PowerOnFunc ?" |
| (5) | [OK] | "FUNC ENABLE", or "FUNC DISABLE" |

"FUNC ENABLE": Enables the function for manufacturing.
"FUNC DISABLE": Disables the function for manufacturing.

| | | |
|---|---|---|
| (6) | [▲], or [▼] | "FUNC DISABLE" |
| (7) | [OK] | To the initial state of maintenance mode |

<Transfer to the shipping state>

| | | |
|---|---|---|
| (8) | [▲], or [▼] | "MAINTENANCE 03" |
| (9) | [OK] | "1.SWSUM?" |
| (10) | [▲], or [▼] | "3.ShippingStat?" |
| (11) | [OK] | "OFF: Change OK?", or "ON" |

"OFF: Change OK?": Not in the factory shipping state.
"ON": Already in the factory shipping state.

| | | |
|---|---|---|
| (12) | [OK] | To the initial state of maintenance mode |

The machine that was not in the factory shipping state is changed into the factory shipping state.

# 2. IF YOU REPLACE THE REG MARK SENSOR ASSY OR LED ASSY

■ **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 "1.3.26 Adjustment of Color Registration + Sensitivity Adjustment of Density Sensor + Developing Bias Voltage Correction (Function Code 73)" in Chapter 5.

# 3. IF YOU REPLACE THE LVPS PCB

■ **What to do after replacement**

• Resetting Irregular Power Supply detection Counter of the LVPS PCB
  (Reset Counters after Parts Replacement (Function Code 88))

■ **What you need to prepare**
None

## 3.1 Resetting Irregular Power Supply Detection Counter of the LVPS PCB (Reset Counters after Parts Replacement (Function Code 88))

Perform resetting irregular power supply detection counter of the LVPS PCB in accordance with "1.3.35 Reset Counters after Parts Replacement (Function Code 88)" in Chapter 5.

# 4. IF YOU REPLACE THE LCD, PANEL UNIT OR PANEL PCB

■ **What to do after replacement**

- Adjusting Touch Panel (Function Code 61)
- Checking LCD Operation (Function Code 12)

■ **What you need to prepare**

- Touch pen

## 4.1 Adjusting Touch Panel (Function Code 61)

Perform adjusting the touch panel in accordance with "1.3.18 Adjust Touch Panel (Function Code 61)" in Chapter 5.

## 4.2 Checking LCD Operation (Function Code 12)

Perform checking the LCD operation in accordance with "1.3.6 Check LCD Operation (Function Code 12)" in Chapter 5.

*Confidential*

# 5. IF YOU REPLACE THE ADF UNIT, 1ST SIDE CIS UNIT, 2ND SIDE CIS UNIT OR FB UNIT

■ **What to do after replacement**

- Adjustment of Scanning Position of FB (Function Code 54)

- Acquisition of White Level Data (Function Code 55)

- Scanning and Printing Check

■ **What you need to prepare**
None

## 5.1 Adjustment of Scanning Position of FB (Function Code 54)

Perform adjustment of scanning position of FB in accordance with "1.3.15 Fine-tune Scanning Position (Function Code 54)" in Chapter 5.

## 5.2 Acquisition of White Level Data (Function Code 55)

Perform Acquisition of white level data in accordance with "1.3.16 Acquire and Optimize White/Black Level (CIS Scan) (Function Code 55)" in Chapter 5.

## 5.3 Scanning and Printing Check

Copy the proper document on the 1st side scanner glass and the ADF unit, and check if there is any problem on the printed image.
Check if there is any problem on the FB unit, the ADF unit and the performance of recording part.

# 6. IF YOU REPLACE THE FUSER

■ **What to do after replacement**

• Resetting Printed Pages Counter for the Fuser
  (Reset Counters after Parts Replacement (Function Code 88))

■ **What you need to prepare**
None

## 6.1 Resetting Printed Pages Counter for the Fuser (Reset Counters after Parts Replacement (Function Code 88))

Perform resetting the printed pages counter for the Fuser in accordance with "1.3.35 Reset Counters after Parts Replacement (Function Code 88)" in Chapter 5.

*Confidential*

# 7. IF YOU REPLACE A PF KIT

■ **What to do after replacement**

- Resetting Printed Pages Counter of a PF Kit
  (Reset Counters after Parts Replacement (Function Code 88))

■ **What you need to prepare**
None

## 7.1 Resetting Printed Pages Counter of a PF Kit (Reset Counters after Parts Replacement (Function Code 88))

Perform resetting the printed pages counter of the appropriate PF kit in accordance with "1.3.35 Reset Counters after Parts Replacement (Function Code 88)" in Chapter 5.

# 8. IF YOU REPLACE LT OR LT CONTROL PCB

■ **What to do after replacement**

- Installing Main Firmware
(The LT firmware is included in the main firmware.)

■ **What you need to prepare**

- Main firmware - djf file

\<Using a USB flash memory\>

- USB flash memory (To save the latest firmware)

\<Using a computer\>

- Computer (To save the latest firmware)

- USB cable

- Filedg32.exe (Download utility)

- Maintenance printer driver
(Refer to "APPENDIX 3 INSTALLING THE MAINTENANCE PRINTER DRIVER" for how to install the driver.)

**\<Explanation\>**

If pressing a key operation is needed, the key operation and the LCD display are described as follows. Common Example:

| A key or Keys pressed | Message appears on the LCD |
|---|---|

## 8.1 Installing Main Firmware

### 8.1.1 Checking firmware version

Check if the main firmware including the LT firmware is the latest or not. There is no need to install the main firmware if it is the latest.

**\<How to check firmware version\>**

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [2] [5] | Main firmware version |
| (3) | [X] | To the initial state of maintenance mode |

> **Note:**
> - You can check the firmware version even in Function Code 77. (Refer to "1.3.28 Print Maintenance Information (Function Code 77)" in Chapter 5.)

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 25" |
| (3) | [OK] | Main firmware version |
| (4) | [Stop/Exit] | To the initial state of maintenance mode |

> **Note:**
> - You can check the firmware version even in Function Code 77. (Refer to "1.3.28 Print Maintenance Information (Function Code 77)" in Chapter 5.)

## 8.1.2 Installing Main Firmware

**Note:**
- The LT firmware is included in the main firmware of the machine.
  After connecting the LT to the machine, the LT firmware is automatically synchronized when the power is turned ON.
- Release the deep sleep mode before installation.
- DO NOT turn the printer or your computer OFF during installation.
- DO NOT disconnect the USB flash memory or the USB cable during installation.

### 8.1.2.1 (USB flash memory) Manual selective installation for firmware

**<Operating Procedure>**

(1) The machine is in the ready state.

(2) Save the djf file of firmware in the root folder of the USB flash memory.

(3) Insert the USB flash memory into the USB host (front).

| (4) | [▲], or [▼] | Select the main firmware name on the LCD. |
|---|---|---|

(5) Press the firmware name. Installation starts.

(6) The machine restarts.

(7) Disconnect the USB flash memory from the USB host (front).

**Note:**
- Failure to install the firmware using the USB flash memory. (Error display)
  (Refer to "4.11.3 Firmware installation mode" in Chapter 2.)
- Install the firmware according to "8.1.2.2 Firmware installation using a computer".

| Error display | Description | Remedy |
|---|---|---|
| Unable to Update:0001 | Memory full (Failed to secure the work area for update.) | Delete some data saved in the machine and install it again. |
| Unable to Update:0002 | No specified folder | Save the firmware in the root folder of the USB flash memory. |
| Unable to Update:0003 | The specified folder does not have a file. | |
| Unable to Update:0004 | File access failure | Change the USB flash memory and install it again. |
| Unable to Update:0005 | File data parsing error | Acquire the firmware from the data bank again. |
| Unable to Update:0006 | The file name has exceeded the character limit. | Shorten the file name to be 119 Byte or less. |
| Unable to Update:0007 | An unsupported DJF file is detected. | Acquire the firmware from the data bank again. |
| Unable to Update:0008 | Another function is in use. | Perform it again after finishing the running function. |

*Confidential*

### 8.1.2.2 Firmware installation using a computer

**<Operating Procedure>**

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

(2) Connect the machine to your computer with a USB cable.

(3) Double-click the Filedg32.exe to start, and select the Brother Maintenance USB Printer icon.
(If the Brother Maintenance USB Printer is invalid, reconnect the USB cable.)

(4) Drag and drop the djf file of firmware onto the selected icon.

(5) Installation starts.

(6) The installation is completed. The machine restarts.

(7) The machine returns to the ready state.

(8) Repeat steps from (1) to (7) to install the required firmware.

**Note:**

• Installation failure.
Restarting the machine enters into firmware installation mode.
Perform the procedure again.

# CHAPTER 5  SERVICE FUNCTIONS

# 1. MAINTENANCE MODE

Maintenance mode: A mode that uses functions for repair or maintenance.
Maintenance mode for service personnel: Exclusive to service personnel
End user-accessible maintenance mode: End users are able to use some functions under the guidance of service personnel over the phone.
The available functions are fewer than maintenance mode functions for service personnel.

## 1.1    List of Maintenance-mode Functions

| Function No. | Function | Refer to (Page): |
|---|---|---|
| 01 | Initialize EEPROM Parameters | 1.3.1 (5-4) |
| 03 | Transition to Shipping State | 1.3.2 (5-5) |
| 08 | ADF Test | 1.3.3 (5-6) |
| 09 | Monochrome Image Quality Test Pattern | 1.3.4 (5-7) |
| 10 | Set Worker Switch (WSW) | 1.3.5.1 (5-8) |
| 11 | Print WSW Setting Data | 1.3.5.2 (5-11) |
| 12 | Check LCD Operation | 1.3.6 (5-12) |
| 13 | Check Control Panel Key Operation (Models without Touch Panel Only) | 1.3.7 (5-14) |
| 18 | Save NetConfig Information (Models with USB Host Only) | 1.3.8 (5-14) |
| 25 | Display Software Version | 1.3.9 (5-15) |
| 32 | Check Sensor Operation | 1.3.10 (5-16) |
| 33 | Display Wired LAN Connection Status | 1.3.11 (5-19) |
| 45 | Switch USB No. Return Value / Switch ON/OFF Setting of Direct Print Color Mode-Improve Gray Color (Models with USB Host Only) / Switch Timing to Execute Auto Registration / Adjust Left-end Print Position / Adjust Upper-end Print Position / Change Transfer Current Setting / Switch Ghost (SX) Reduction Setting / Switch ON/OFF Setting of HEXDUMP-Mode / Disable SSW / Switch Firmware Downgrade Setting / Switch Fogging (left/right edge) Reduction Setting / Switch Ghost (DX) Reduction Setting / Additional Setting for Drum Warm-up before Starting Printing / Setting Drum Cleaning Time Extension During/after Printing | 1.3.12 (5-20) |
| 46 | Adjust Printing on Scale | 1.3.13 (5-35) |
| 53 | Transfer Received Fax Data / Log Information (Models with FAX) | 1.3.14 (5-37) |
| 54 | Fine-tune Scanning Position | 1.3.15 (5-39) |
| 55 | Acquire and Optimize White/Black Level (CIS Scan) | 1.3.16 (5-41) |
| 57 | Check Consumables Function | 1.3.17 (5-42) |
| 61 | Adjust Touch Panel | 1.3.18 (5-52) |
| 66 | Adjustment of Color Registration (Adjustment of Inter-color Position Alignment) | 1.3.19 (5-53) |
| 67 | Continuous Print Test | 1.3.20 (5-57) |
| 68 | LED ASSY Test Pattern Print | 1.3.21 (5-62) |
| 69 | Print Frame Pattern (1-sided Printing) | 1.3.22 (5-64) |
| 70 | Print Frame Pattern (2-sided Printing) | 1.3.23 (5-66) |
| 71 | Print Color Test Pattern | 1.3.24 (5-68) |
| 72 | Sensitivity Adjustment of Density Sensor | 1.3.25 (5-72) |
| 73 | Adjustment of Color Registration + Sensitivity Adjustment of Density Sensor + Developing Bias Voltage Correction | 1.3.26 (5-73) |
| 74 | Setting by Spec | 1.3.27 (5-74) |
| 77 | Print Maintenance Information | 1.3.28 (5-75) |
| 78 | Check Fan Operation | 1.3.29 (5-80) |
| 79 | Delete Fax Data | 1.3.30 (5-81) |
| 80 | Display Machine Log Information | 1.3.31 (5-81) |
| 82 | Display Machine Error Code | 1.3.32 (5-85) |
| 83 | Developing Bias Voltage Correction | 1.3.33 (5-86) |
| 87 | Send Error List (Telephone Line) | 1.3.34 (5-86) |
| 88 | Reset Counters after Parts Replacement | 1.3.35 (5-87) |
| 91 | Initialize EEPROM Parameters | 1.3.1 (5-4) |
| 99 | Quit Maintenance Mode | 1.3.36 (5-87) |

*  The functions shaded in the table above are end user-accessible.

# 1.2 How to Enter the Maintenance Mode

## <Explanation>

If pressing a key operation is needed, the key operation and the LCD display are described as follows.
Common Example:

| A key or Keys pressed | Message appears on the LCD |
| --- | --- |

## 1.2.1 How to Enter Maintenance Mode for Service Personnel

### <Operating Procedure>

For models with touch panel

(1) The machine is in the ready state.

| (2) | Press the [ ▮ ] for five seconds. | |
| --- | --- | --- |

(3) Press the blank field at the bottom.



| (4) | [*] [2] [8] [6] [4] | To the initial state of maintenance mode |
| --- | --- | --- |
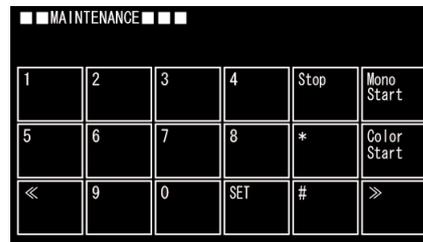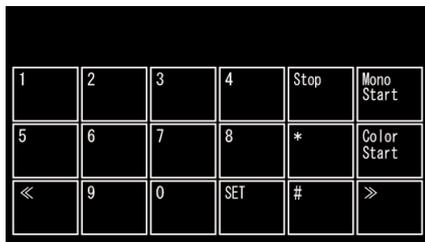


(5) Enter a function No. to use the function.

For models without touch panel

(1) The machine is in the ready state.

| (2) | [Menu] [Start] [▲] [▲] [▲] [▲] | To the initial state of maintenance mode |
| --- | --- | --- |
| (3) | [▲], or [▼] | Enter a function No. to use the function. |

## 1.2.2 How to Enter the End User-accessible Maintenance Mode

### <Operating Procedure>

For models with touch panel

(1)    The machine is in the ready state.

| (2) | Press the [ 🏠 ] for five seconds. | |
|---|---|---|

(3)    Press the blank field at the bottom.

```
1.Serial No
                                    123456789012345
2.ROM Version
                                    403071112:F97B


                           👆
```
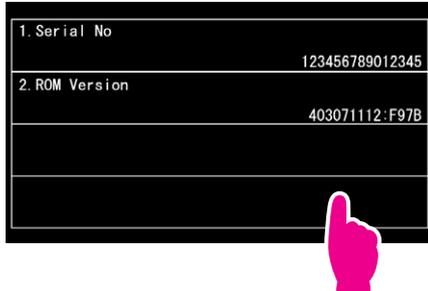
| (4) | [*] [0] [#] | To the initial state of maintenance mode for end users |
|---|---|---|
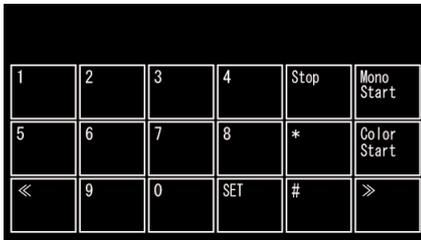
```
| 1  | 2  | 3  | 4   | Stop | Mono
                                    Start |
| 5  | 6  | 7  | 8   | *    | Color
                                    Start |
| ≪  | 9  | 0  | SET | #    | ≫    |
```

(5)    Enter a function No. to use the function.

> **Note:**
> • Each time the maintenance mode function ends, the machine will return to the ready state.

For models without touch panel

(1)    The machine is in the ready state.

| (2) | [Menu] [Start] [Menu] | "0" |
|---|---|---|
| (3) | [▲], or [▼] | Enter a function No. to use the function. |

> **Note:**
> • Each time the maintenance mode function ends, the machine will return to the ready state.

# 1.3 Details of Maintenance-mode Functions

## <Explanation>

If pressing a key operation is needed, the key operation and the LCD display are described as follows.
Common Example:

| A key or Keys pressed | Message appears on the LCD |
|---|---|

## 1.3.1 Initialize EEPROM Parameters (Function Code 01, 91)

### <Function>

- This function is used to initialize the parameters registered in the EEPROM in the table below.

### <Operating Procedure>

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [0] [1], or [9] [1] | "SELECT 01?", or "SELECT 91?" |
|---|---|---|
| (3) | [SET] | "PARAMETER INIT" |

(4) The initialization is performed.

(5) The machine returns to in the initial state of maintenance mode.

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 01", or "MAINTENANCE 91" |
|---|---|---|
| (3) | [OK] | "SELECT 01?", or "SELECT 91?" |
| (4) | [OK] | "PARAMETER INIT" |

(5) The initialization is performed.

(6) The machine returns to in the initial state of maintenance mode.

| Data Item | Function Code 01 | Function Code 91 |
|---|---|---|
| Printer switch (Counter information) | These not to be initialized | These not to be initialized |
| Error history | | |
| MAC address (Ethernet Address) | | |
| Continuity counter | | |
| Telephone function registration/ Telephone book | These to be initialized | |
| Clock (RTC) | | |
| Worker switches | | |
| Password for control panel operation lock | | |
| Secure function lock | | |
| User switches (Items to be initialized when resetting to the factory default settings) | | These to be initialized |
| Function settings except user switches (settings not subject to "Factory Reset") <br> • Language <br> • Interface | | |
| LAN setting | | |
| PCL core area (Emulation setting values) | | |

## 1.3.2 Transition to Shipping State (Function Code 03)

The following functions are not used in normal repair and maintenance.
Firmware Update function for LT, Check sum display function for soft switch, and Firmware type display function.

### 1.3.2.1 Firmware Update Function for LT (Not Used)

This function is for sales special correspondence. The followings are displayed on the LCD.
"1.LT1 MN LOAD?" to "3.LT3 MN LOAD?", "4.MB1 MN LOAD?", "5.TT MN LOAD?", "6.STF MN LOAD?"

### 1.3.2.2 Check Sum Display Function for Soft Switch (Not Used)

This function is used to display soft switch check SUM such as WSW. The following is displayed on the LCD.
"1.SWSUM?", "7.SWSUM?"

### 1.3.2.3 Special Operations Switching Function at Startup

**<Function>**

- This function is used to switch between enabling and disabling special functions used at startup during machine manufacturing.

**<Operating Procedure>**

For models with touch panel

| | | |
|---|---|---|
| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
| (2) | [0] [3] | "1.LT1 MN LOAD?", or "1.SWSUM?" |
| (3) | [<<] | |
| (4) | [▲], or [▼] | "8.PowerOnFunc ?", or "2.PowerOnFunc ?" |
| (5) | [SET] | "FUNC ENABLE", or "FUNC DISABLE" |

"FUNC ENABLE": Enables the function for manufacturing.
"FUNC DISABLE": Disables the function for manufacturing.

| | | |
|---|---|---|
| (6) | [▲], or [▼] | "FUNC DISABLE" |
| (7) | [SET] | To the initial state of maintenance mode |

For models without touch panel

| | | |
|---|---|---|
| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
| (2) | [▲], or [▼] | "MAINTENANCE 03" |
| (3) | [OK] | "1.SWSUM?" |
| (4) | [▲], or [▼] | "2.PowerOnFunc ?" |
| (5) | [OK] | "FUNC ENABLE", or "FUNC DISABLE" |

"FUNC ENABLE": Enables the function for manufacturing.
"FUNC DISABLE": Disables the function for manufacturing.

| | | |
|---|---|---|
| (6) | [▲], or [▼] | "FUNC DISABLE" |
| (7) | [OK] | To the initial state of maintenance mode |

### 1.3.2.4 Transfer to the Shipping State

- When the machine is not in the factory shipping state, its security is weak, such as the risk of information leakage.

- Perform this operating procedure since a new spare main PCB is not in the factory shipping state.

- A factory-shipped machine cannot be changed into a non-factory-shipped one.

- Perform this operating procedure after disabling special operations at "1.3.2.3 Special Operations Switching Function at Startup".

**\<Operating Procedure\>**

For models with touch panel

| | | |
|---|---|---|
| (1) | [0] [3] | "1.LT1 MN LOAD?", or "1.SWSUM?" |
| (2) | [\<\<] | |
| (3) | [▲], or [▼] | "9.ShippingStat?", or "3.ShippingStat?" |
| (4) | [SET] | "OFF: Change OK?", or "ON" |

"OFF: Change OK?": Not in the factory shipping state.
"ON": Already in the factory shipping state.

| | | |
|---|---|---|
| (5) | [SET] | To the initial state of maintenance mode |

The machine that was not in the factory shipping state is changed into the factory shipping state.

For models without touch panel

| | | |
|---|---|---|
| (1) | [▲], or [▼] | "MAINTENANCE 03" |
| (2) | [OK] | "1.SWSUM?" |
| (3) | [▲], or [▼] | "3.ShippingStat?" |
| (4) | [OK] | "OFF: Change OK?", or "ON" |

"OFF: Change OK?": Not in the factory shipping state.
"ON": Already in the factory shipping state.

| | | |
|---|---|---|
| (5) | [OK] | To the initial state of maintenance mode |

The machine that was not in the factory shipping state is changed into the factory shipping state.

### 1.3.2.5 Firmware Type Display Function (Not Used)

This function is used to display the firmware type (unencrypted / prototype / mass production). The following is displayed on the LCD.
"10. Firm Kind?"

## 1.3.3 ADF Test (Function Code 08)

**\<Function\>**

- This function is used to repeat the ADF operation until there are no more documents loaded.

**\<Operating Procedure\>**

| | | |
|---|---|---|
| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
| (2) | Load a document/documents in the ADF. | "DOC. READY" |
| (3) | [0] [8] | "ADF CHECK P.**" (** represents the current count of the scanned pages.) |
| (4) | [X] | To the initial state of maintenance mode |

## 1.3.4  Monochrome Image Quality Test Pattern (Function Code 09)

**<Function>**

- This function is used to print a sheet of monochrome test pattern. (See the figure below.)
  (This print is available even Cyan, Magenta and Yellow toner cartridge is empty or "No toner" status.)

**<Operating Procedure>**

For models with touch panel

| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
|---|---|---|
| (2) | [0] [9] | "MAINTENANCE 09" |

(3)  The test pattern printing is started.

(4)  The machine returns to the initial state of maintenance mode.

For models without touch panel

| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 09" |
| (3) | [OK] | |

(4)  The test pattern printing is started.

(5)  The machine returns to the initial state of maintenance mode.
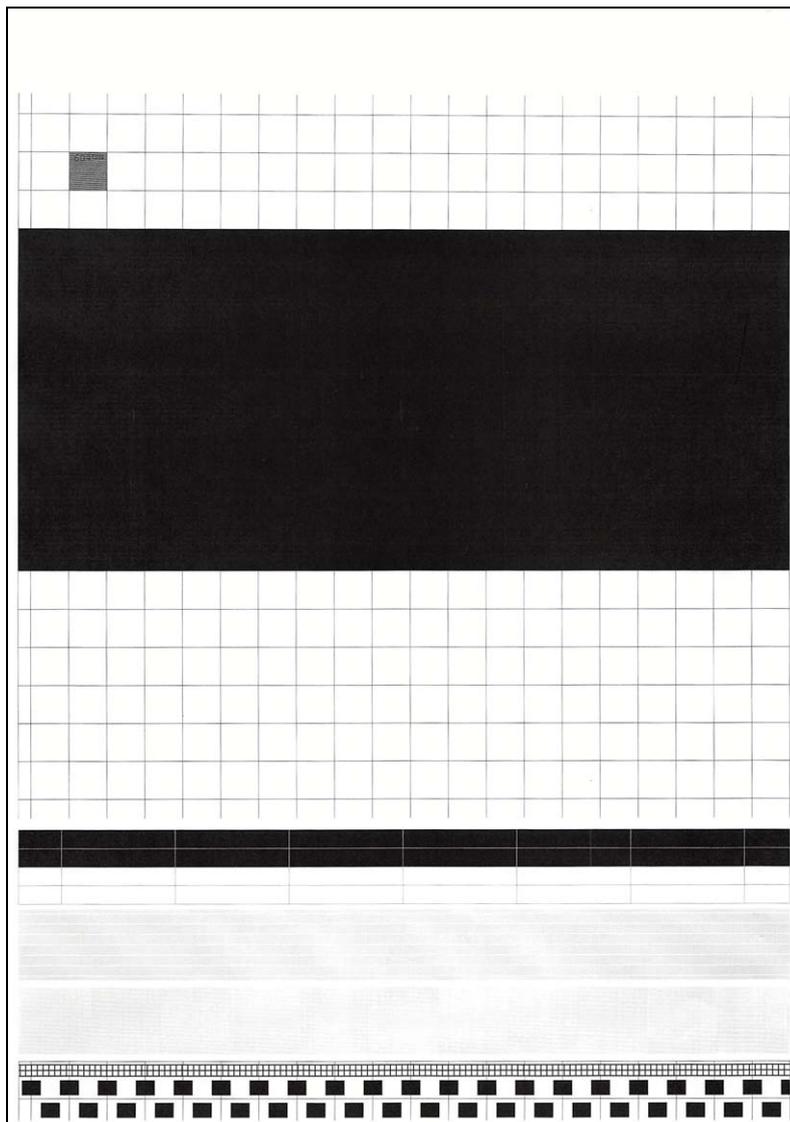


**Fig. 5-1**

## 1.3.5 Set Worker Switch (WSW) and Print WSW Setting Data (Function Code 10, 11)

### 1.3.5.1 Set Worker Switch (WSW) (Function Code 10)

**\<Function\>**

- The worker switches shown in the table below can be used to set the function.

- Refer to the separate Reference Manual for details of worker switches.

| WSW No. | Function | WSW No. | Function |
|---|---|---|---|
| WSW01 | Dial pulse setting | WSW35 | Function setting 13 |
| WSW02 | Tone signal setting | WSW36 | Function setting 14 |
| WSW03 | PABX mode setting | WSW37 | Function setting 15 |
| WSW04 | Transfer facility setting | WSW38 | V.34 transmission settings |
| WSW05 | 1st dial tone and busy tone detection | WSW39 | V.34 transmission speed |
| WSW06 | [Redial/Pause] key and 2nd dial tone detection | WSW40 | V.34 modem settings |
| | | WSW41 | ON-duration of the scanning light source |
| WSW07 | Dial tone setting 1 | WSW42 | Internet mail settings |
| WSW08 | Dial tone setting 2 | WSW43 | Function setting 16 |
| WSW09 | Protocol definition 1 | WSW44 | Speeding up scanning-1 |
| WSW10 | Protocol definition 2 | WSW45 | Speeding up scanning-2 |
| WSW11 | Busy tone setting | WSW46 | PC power monitoring and parallel port settings |
| WSW12 | Signal detection condition setting | | |
| WSW13 | Modem setting | WSW47 | Switching between USB2.0 High-Speed and USB 1.1 Full-Speed |
| WSW14 | AUTO ANS facility setting | | |
| WSW15 | Redial facility setting | WSW48 | USB setup latency |
| WSW16 | Function setting 1 | WSW49 | End-of-copying beep |
| WSW17 | Function setting 2 | WSW50 | SDAA setting |
| WSW18 | Function setting 3 | WSW51 | Function setting 17 |
| WSW19 | Transmission speed setting | WSW52 | Function setting 18 |
| WSW20 | Overseas communication mode setting | WSW53 | Function setting 19 |
| | | WSW54 | Function setting 20 |
| WSW21 | TAD setting 1 | WSW55 | Interval for regular developing bias value correction |
| WSW22 | ECM and call waiting caller ID | | |
| WSW23 | Communications setting | WSW56 | Function setting 21 |
| WSW24 | TAD setting 2 | WSW57 | Function setting 22 |
| WSW25 | TAD setting 3 | WSW58 | Function setting 23 |
| WSW26 | Function setting 4 | WSW59 | Function setting 24 |
| WSW27 | Function setting 5 | WSW60 | Function setting 25 |
| WSW28 | Function setting 6 | WSW61 | Scanning light intensity to judge to be stable 1 |
| WSW29 | Function setting 7 | | |
| WSW30 | Function setting 8 | WSW62 | Scanning light intensity to judge to be stable 2 |
| WSW31 | Function setting 9 | | |
| WSW32 | Function setting 10 | WSW63 | Function setting 26 |
| WSW33 | Function setting 11 | WSW64 | Language / default paper size setting |
| WSW34 | Function setting 12 | WSW65 | Paper support setting |

| WSW No. | Function | WSW No. | Function |
|---------|----------|---------|----------|
| WSW66 | Change of the setting is prohibited | WSW83 | Change of the setting is prohibited |
| WSW67 | Change of the setting is prohibited | WSW84 | Change of the setting is prohibited |
| WSW68 | Change of the setting is prohibited | WSW85 | Function setting 29 |
| WSW69 | Change of the setting is prohibited | WSW86 | Change of the setting is prohibited |
| WSW70 | Change of the setting is prohibited | WSW87 | Change of the setting is prohibited |
| WSW71 | Change of the setting is prohibited | WSW88 | Detection of the threshold of remaining T1 amount |
| WSW72 | Change of the setting is prohibited | | |
| WSW73 | Change of the setting is prohibited | WSW89 | Change of the setting is prohibited |
| WSW74 | ADF stop control | WSW90 | Detection of the threshold of remaining T2 amount |
| WSW75 | Switch back ejection distance | WSW91 | Change of the setting is prohibited |
| WSW76 | Set the limit for the number of documents to be ejected in reverse order for 1-sided scanning from ADF | WSW92 | Change of the setting is prohibited |
| WSW77 | Set the limit for the number of documents to be ejected in reverse order for 2-sided scanning from ADF | WSW93 | Detection of the threshold of remaining T3 amount |
| WSW78 | Recording stop function when the drum reaches the end of life | WSW94 | Detection of the threshold of remaining T4 amount |
| WSW79 | Function setting 28 | WSW95 | Detection of the threshold of remaining T5 amount |
| WSW80 | Copying speed control function | WSW96 | Change of the setting is prohibited |
| WSW81 | Changing emulation function enable/disable setting | WSW97 | Font type in Remote Setup display |
| | | WSW98 | Function setting 29 |
| WSW82 | AirPrint Icon No. setting | WSW99 | Change of the setting is prohibited |

## &lt;Operating Procedure&gt;

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
    (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | Press the [1], and then [0] to wait for entry of WSW No. | "WSW00" |
|---|---|---|
| (3) | Enter the WSW No. | "WSWXX = 00000000" |

```
        Selector No.1        Selector No.8
             ↓                    ↓
   WSWXX = 0 0 0 0 0 0 0 0
           ‾
```

| (4) | [<<] | |
|---|---|---|
| (5) | [◄], or [►] | Move the selector. |
| (6) | Enter the number value. (0, or 1) | |
| (7) | Repeat steps from (5) to (6) to enter all the selectors you want to change. | |
| (8) | Press the [SET] to confirm the entry, and wait for entry of WSW No. | "WSW00" |
| (9) | [X] | To the initial state of maintenance mode |

**Note:**

• To cancel operations and return the machine to the initial state of maintenance mode, press the [X].

• If there is no entry for one minute, the machine returns to the initial state of maintenance mode.

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
    (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 10" |
|---|---|---|
| (3) | Press the [OK] to wait for entry of WSW No. | "WSW00" |
| (4) | [▲], or [▼] | Enter the WSW No. |
| (5) | [OK] | "WSWXX = 00000000" |

```
        Selector No.1        Selector No.8
             ↓                    ↓
   WSWXX = 0 0 0 0 0 0 0 0
           ‾
```

| (6) | [▲]: "1"<br>[▼]: "0" | Move the selector.<br>Enter all the selectors you want to change. |
|---|---|---|
| (7) | Press the [OK] to confirm the entry, and wait for entry of WSW No. | "WSW00" |
| (8) | [Stop/Exit] | To the initial state of maintenance mode |

**Note:**

• To cancel operations and return the machine to the initial state of maintenance mode, press the [Stop/Exit].

• If there is no entry for one minute, the machine returns to the initial state of maintenance mode.

*Confidential*

## 1.3.5.2 Print WSW Setting Data (Function Code 11)

### <Function>

- This function is used to print the current worker switch settings and details.

### <Operating Procedure>

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to *"1.2 How to Enter the Maintenance Mode"* in Chapter 5.)

| (2) | [1] [1] | The printing is started. |
|---|---|---|

(3) The machine returns to in the initial state of maintenance mode.

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to *"1.2 How to Enter the Maintenance Mode"* in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 11" |
|---|---|---|
| (3) | [OK] | The printing is started. |

(4) The machine returns to the initial state of maintenance mode.



```
                                    ┌─────────────────────────┐
                                    │  CONFIGURATION LIST      │
                                    └─────────────────────────┘

                                                    MODEL  :
                                                    TIME   :
                                                    REV.V  :
                                                    PCI    :
                                                    SUM    :
                                                    SER.#  :

        WSW01 = 00010000
           1-2. DIA                              : NORMAL
           3-4. BRE                              : 67 MS
           5-6. INT                              : 800 MS
           7.   DP/                              : YES
           8.   DP/                              : PB
        WSW02 = 01011100
           1-2. ON                               : 80 MS
           3-4. OFF                              : 80 MS
           5-8. LIN                              : 12 DB
        WSW03 = 10110000
           1.   PAR                              : B
           2-4. PBX                              : 620 MS
           5.   PAR                              : A
           6-7. DT                               : 3.5 SEC
           8.   NOT USED
        WSW04 = 00010010
           1-4. NOT USED
           5.   OGM                              : OFF
           6-8. NOT USED
        WSW05 = 00000110
           1-3. DIA                              : 3.5 SEC
           4.   REM                              : 2 SEC
           5-6. BUS                              : AFTER DI
           7.   BUS                              : OFF
           8.   NOT USED
        WSW06 = 10001100
           1-3. PAU                              : 2.8 SEC
           4-6. 2ND                              : 620 MS
           7.   2ND                              : 1 CYCLE
           8.   2ND                              : 30 MS
        WSW07 = 01011000
           1-2. BRE                              : INITIAL
```
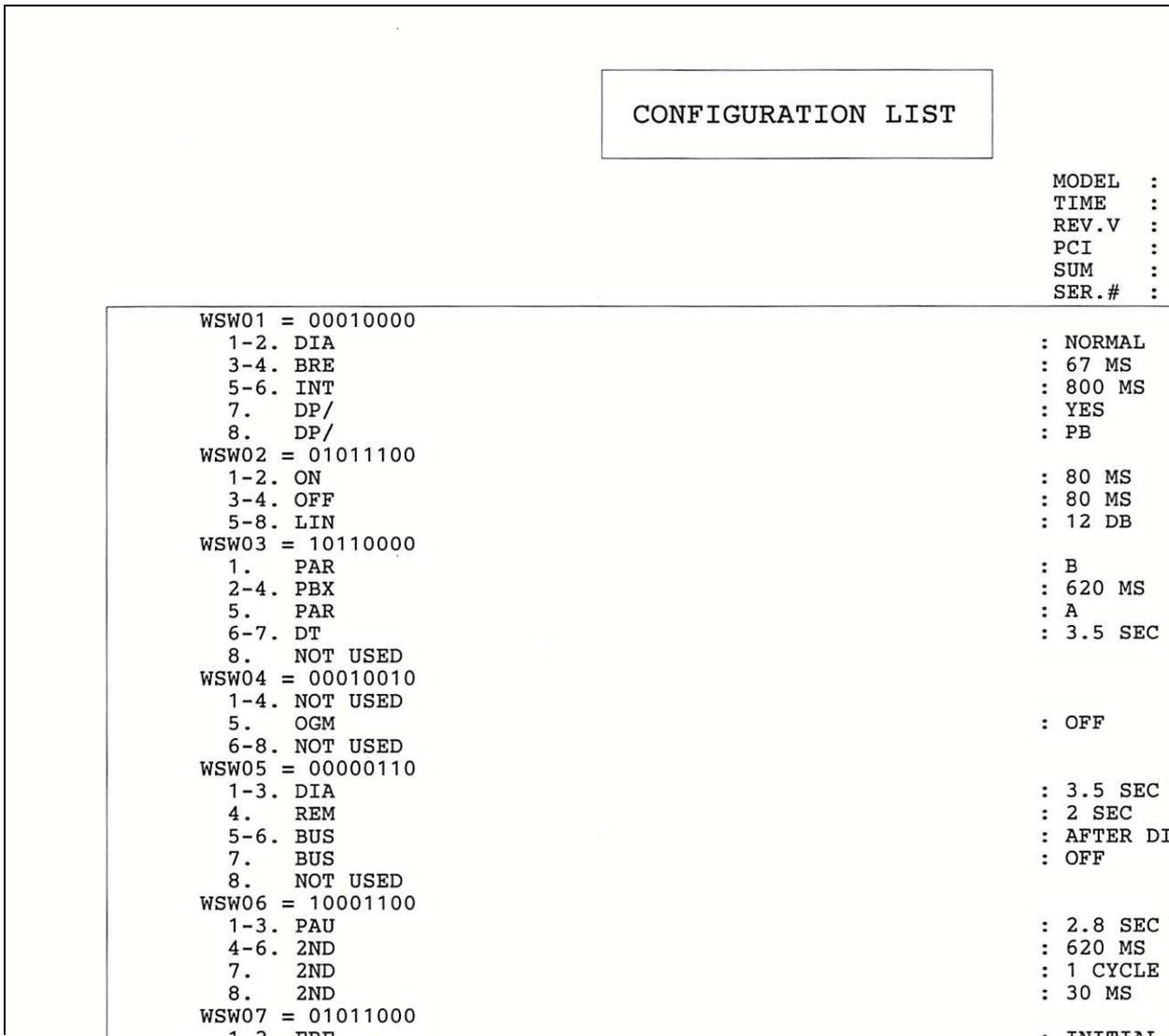
**Fig. 5-2**

## 1.3.6 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>

For models with touch panel

| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
|---|---|---|
| (2) | [1] [2] | A<1> in the figure below shows. |

[ ⏻ ]: LCD switches Column A and Column B in the figure below, and shows each <1>.
Pressing this key at A<8> is invalid.

[ 🏠 ]: LCD moves to the next display of each column in the figure below.
Pressing this key at A<8> is invalid. Pressing this key at B<8> returns the display to B<1>.

| (3) | [X] | To the initial state of maintenance mode. (Pressing the [X] at A<1> to A<7> is invalid.) |
|---|---|---|

| A<1><br>all white | | B<1><br>bright point/<br>down point | |
|---|---|---|---|
| A<2><br>all black | | B<2><br>bright point | |
| A<3><br>all gray | | B<3><br>white gradual | |
| A<4><br>all red | | B<4><br>red gradual | |
| A<5><br>all green | | B<5><br>green gradual | |
| A<6><br>all blue | | B<6><br>blue gradual | |
| A<7><br>picture data | | B<7> | |
| A<8><br>white<br>surrounded by a<br>red frame | | B<8><br>Displays BMP file in the Media by rotation | |
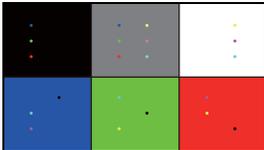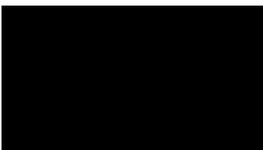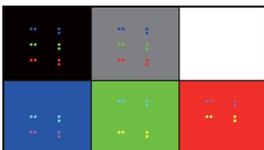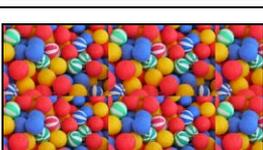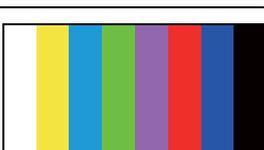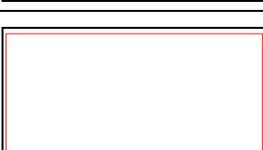
**Fig. 5-3**

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
    (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 12" |
|---|---|---|
| (3) | [OK] | Display 1 in the figure below shows. |
| | [Start]: LCD moves to the next display in the figure below. | |
| (4) | [Stop/Exit] | To the initial state of maintenance mode |
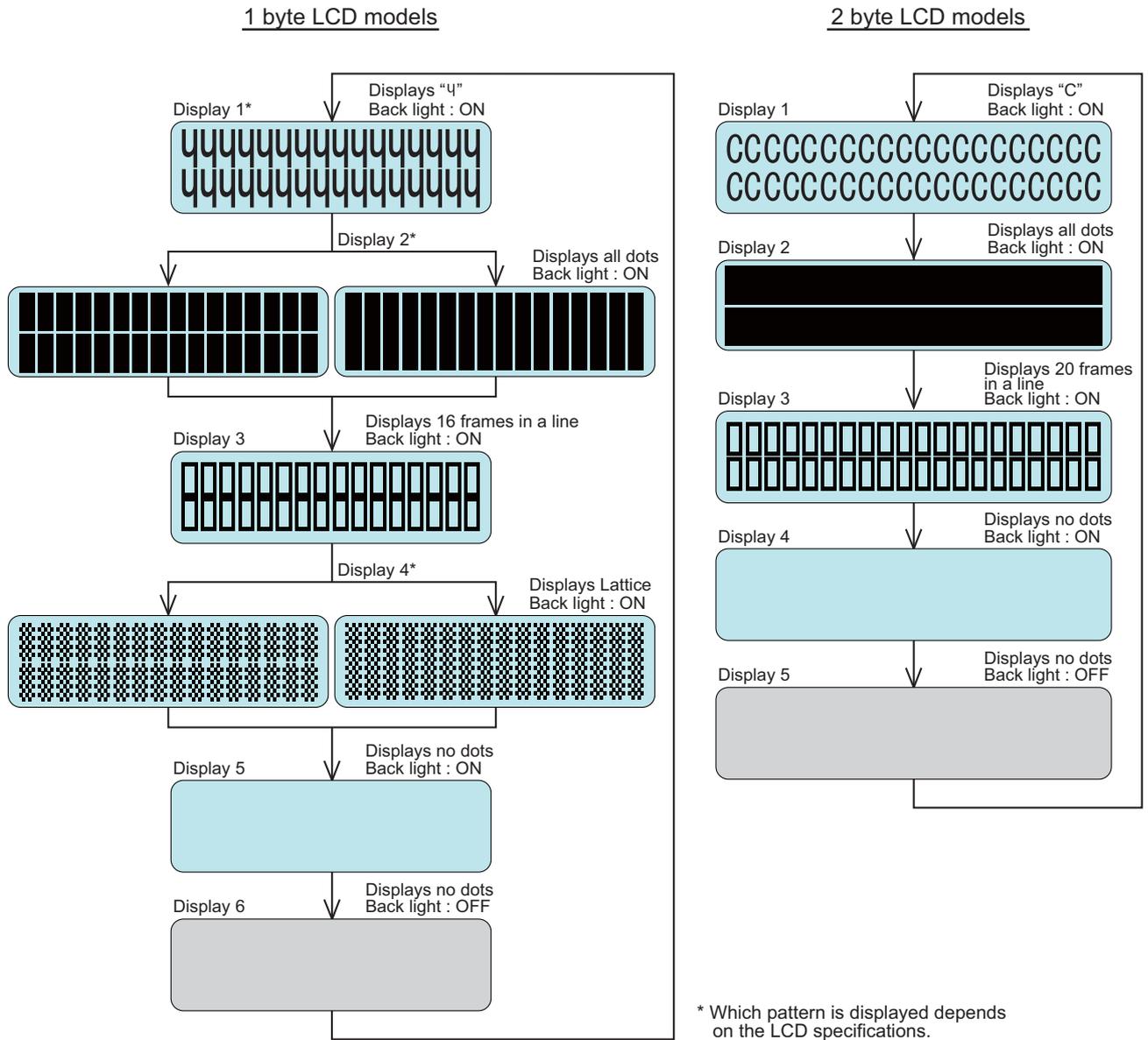


**Fig. 5-4**

## 1.3.7 Check Control Panel Key Operation (Models without Touch Panel Only) (Function Code 13)

**\<Function\>**

- This function is used to check that keys on the control panel are operating normally.

**\<Operating Procedure\>**

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | |
|---|---|
| (2) [▲], or [▼] | "MAINTENANCE 13" |
| (3) [OK] | "00" |
| (4) Press the key in the order of ① through ⑬ in the figure below. | "(The key number pressed)" |
|    1) At the time of an error | "INVALID OPERATE" |

   2) Press the [Stop/Exit] and try again with the correct key.

(5) The machine returns to the initial state of maintenance mode.



**Fig. 5-5**

## 1.3.8 Save NetConfig Information (Models with USB Host Only) (Function Code 18)

**\<Function\>**

- This function is used to save the NetConfig information into the USB flash memory.

**\<Operating Procedure\>**

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | |
|---|---|
| (2) [1] [8] | "NETCONFIG" |

(3) Insert the USB flash memory into the USB host (front).

| | |
|---|---|
| (4) [SET] | "SAVE TO USB" |
| (5) [SET] | "USB SAVING" |

- Create the NetConfig folder in the USB flash memory.

- Save data to the "CFG-PAGE_**.txt" file in the folder.

- ** represents a 2-digit number. Default value = 00. If there is a file with the same name in the folder, the number is another one.

(6) The machine returns to the initial state of maintenance mode.

*Confidential*

## 1.3.9 Display Software Version (Function Code 25)

### <Function>

- This function is used to check versions of firmware and program, or check sum information.

### <Operating Procedure>

For models with touch panel

| | | |
|---|---|---|
| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
| (2) | [2] [5] | "MAIN:Ver *" |
| (3) | [<<] | |
| (4) | [▲], or [▼] | To other items |
| | [SET] | Switches between Ver and Check Sum |
| (5) | [X] | To the initial state of maintenance mode |

For models without touch panel

| | | |
|---|---|---|
| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
| (2) | [▲], or [▼] | "MAINTENANCE 25" |
| (3) | [OK] | "MAIN:Ver *" |
| (4) | [▲], or [▼] | To other items |
| | [OK] | Switches between Ver and Check Sum |
| (5) | [Stop/Exit] | To the initial state of maintenance mode |

| LCD | Check Sum | Description |
|---|---|---|
| MAIN:Ver1.00 A | ○ | Main firmware version information |
| EMU :Ver1.00 (P) | N/A | Emulation firmware version information ((P): Identifier for PCL/PS) |
| SUB3:M0612312359 | ○ | MainData2 firmware version information [1] |
| ENG :Ver1.00 | N/A | Engine program version information |
| ENGS :1.00 (1.00a) | N/A | Engs firmware version information |
| LT1 :Ver1.00 | N/A | LT1 firmware version information [1] (Displays only when the LT is installed.) |
| B0612312359:1234 | ○ | Boot program creation date |
| U0612312359:1234 | ○ | Main firmware creation date |
| M0612312359:1234 | ○ | SUB3 firmware creation date [1] |
| i0801170900:0000 | N/A | I-FAX version information [2] |
| C1606021159:1234 | N/A | UI custom data version information [2] |
| c1906101530:1234 | N/A | Color profile data version information [2] |
| ROM Check Sum [3] | N/A | Check sum self-diagnosis function |

[1] Whether the item exists differs depending on the model.

[2] Only when the solution is supported.

[3] Calculates the check sum of the actual firmware (Boot, Main, SUB) and checks if it is the correct value or not. If the check sum is correct, "OK" is displayed. Otherwise, "NG" is displayed.
When all the check sums are correct, "ROM Check Sum OK" is displayed.

## 1.3.10 Check Sensor Operation (Function Code 32)

### \<Function\>

- This function is used to check that the sensors are operating normally.
  For example: Checks if the display/non-display of "C1" changes by opening/closing T1.
  If it changes, the T1 PF sensor is normal.

### \<Operating Procedure\>

For models with touch panel

| | | |
|---|---|---|
| (1) | The machine enters into the initial state of maintenance mode.<br>(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
| (2) | Press the [3] [2] to display sensor status and the machine beeps. | For example "RCCVC1MPMRPORMRA" |

> **Note:**
> - To stop beeping, press the [SET].

| | | |
|---|---|---|
| (3) | [Mono Start] | To next item |
| (4) | [X] | To the initial state of maintenance mode. |

For models without touch panel

| | | |
|---|---|---|
| (1) | The machine enters into the initial state of maintenance mode.<br>(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
| (2) | [▲], or [▼] | "MAINTENANCE 32" |
| (3) | Press the [OK] to display sensor status and the machine beeps. | For example "RCCVC1MPMRPORMRA" |

> **Note:**
> - To stop beeping, press the [OK].

| | | |
|---|---|---|
| (4) | [Start] | To next item |
| (5) | [Stop/Exit] | To the initial state of maintenance mode. |

\<Sensor Code, Sensor Name and Detection Status displayed on the LCD\>

| Sensor Code | Sensor Name | Detection Status | |
|---|---|---|---|
| | | ON | OFF |
| RC | Back cover sensor | Cover closed | Cover open |
| CV | Top cover sensor | Cover closed | Cover open |
| C1 | T1 PF sensor | Tray 1 cassette closed and No paper | Tray 1 cassette open or paper set |
| MP | MP PE sensor / MF PE sensor | No paper | Paper set |
| MR or ** [*1] | MP REG sensor | No paper | Paper set |
| PO | Eject sensor (Also use: Fuser cover sensor) | No paper /<br>Cover closed | Paper set /<br>Cover open |
| RM | REG front sensor<br>(Also use: REG front sensor DX) | No paper | Paper set |
| RA | REG rear sensor | No paper | Paper set |
| MAxx | Internal temperature sensor | xx: Temperature value measured | xx: NG |
| OTxx | External temperature sensor | xx: Temperature value measured | xx: NG |
| OHxx | External humidity sensor | xx: Humidity value measure | xx: NG |
| LVxx or **** [*1] | LVPS temperature sensor | xx: Temperature value measured | xx: NG |
| DF | ADF document detection sensor | No document | Document set |
| DR | ADF scanning position sensor | No document | Document set |
| AC | ADF cover sensor | Cover closed | Cover open |
| C2 | LT PF sensor (When LT is in use) | Tray 2 (LT) cassette closed and No paper | Tray 2 (LT) cassette open or paper set |

[*1] "*" denotes that the item does not exist.

## ■ Locations of sensors



REG mark sensor R

Cartridge sensor K

External temperature/humidity sensor

REG mark sensor L

Back cover sensor

MP REG sensor

Cartridge sensor C

Cartridge sensor M

Cartridge sensor Y

MP PE sensor

DEV release sensor PCB

Eject sensor

REG front sensor

REG front sensor DX

Eject sensor/relay PCB

REG rear sensor

T1 PF sensor

Internal temperature sensor

Cartridge sensor/relay PCB

**Fig. 5-6**

ADF cover sensor

ADF document detection sensor

ADF scanning position sensor

LT PF sensor

**Fig. 5-7**

## 1.3.11 Display Wired LAN Connection Status (Function Code 33)

**<Function>**

- This function is used to check the connection status of the wired LAN.

**<Operating Procedure>**

<u>For models with touch panel</u>

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [3] [3] | Connection status (See the table below.) |
|---|---|---|
| (3) | [X] | To the initial state of maintenance mode. |

<u>For models without touch panel</u>

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 33" |
|---|---|---|
| (3) | [OK] | Connection status (See the table below.) |
| (4) | [Stop/Exit] | To the initial state of maintenance mode. |

| LCD | Wired LAN connection status |
|---|---|
| Active 100B-FD | 100Mbps-Full Duplex |
| Active 100B-HD | 100Mbps-Half Duplex |
| Active 10B-FD | 10Mbps-Full Duplex |
| Active 10B-HD | 10Mbps-Half Duplex |
| Inactive | Not connected |

# 1.3.12 Various Settings (Function Code 45)

- Switch Various USB No. Return Value
- Switch ON/OFF Setting of Improve Gray Color (Models with USB Host Only)
- Switch Timing to Execute Auto Registration
- Adjust Left-end / Upper-end Print Position
- Change Transfer Current Setting
- Switch Ghost (SX) Reduction Setting
- Switch ON/OFF Setting of HEXDUMP-Mode
- Disable SSW
- Switch Firmware Downgrade Setting
- Switch Fogging (left/right edge) Reduction Setting
- Switch Ghost (DX) Reduction Setting
- Additional Setting for Drum Warm-up before Starting Printing
- Setting Drum Cleaning Time Extension During/after Printing

## 1.3.12.1 Switch USB No. Return Value

### <Function>

- This function is to perform changing USB serial No. return value.

### <Operating Procedure>

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [4] [5] | "USBNo." |
|---|---|---|
| (3) | [SET] (Press the [◄] to cancel the operation.) | "USB No.=(Selected Value)" |
| (4) | [<<] | |
| (5) | [▲], or [▼] | Select the desired value. |
| (6) | [SET] | "Accepted" |

(7) The machine returns to the initial state of maintenance mode.

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 45" |
|---|---|---|
| (3) | [OK] | "USBNo." |
| (4) | [OK] | "USB No.=(Selected Value)" |
| (5) | [▲], or [▼] | Select the desired value. |
| (6) | [OK] | "Accepted" |

(7) The machine returns to the initial state of maintenance mode.

### 1.3.12.2 Switch ON/OFF Setting of DirectPrint Color Mode-Improve Gray Color (Models with USB Host Only)

**\<Function\>**

- This function is used to change the print control for the gray color.

- And use this function when the print is light 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\>**

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [4] [5] | "USBNo." |
| (3) | [<<] | |
| (4) | [▲], or [▼] | "DP.ImpGray" |
| (5) | [SET] (Press the [◄] to cancel the operation.) | "DP.ImpGray=(Selected Value)" |
| (6) | [▲], or [▼] | Select the desired value. |
| (7) | [SET] | "Accepted" |

(8) The machine returns to the initial state of maintenance mode.

### 1.3.12.3 Switch Timing to Execute Auto Registration

**\<Function\>**

- This function is used to switch the frequency of Auto Registration.

- Auto Registration: Relative displacement between Cyan, Magenta, Yellow, and Black is detected using the REG mark sensor, and the Auto Registration is executed if the displacement value is large.

| 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\>**

For models with touch panel

(1)  The machine enters into the initial state of maintenance mode.
     (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [4] [5] | "USBNo." |
| (3) | [<<] | |
| (4) | [▲], or [▼] | "Regi Freq" |
| (5) | [SET] (Press the [◄] to cancel the operation.) | "Regi Freq=(Selected Value)" |
| (6) | [▲], or [▼] | Select the desired value. |
| (7) | [SET] | "Accepted" |

(8)  The machine returns to the initial state of maintenance mode.

For models without touch panel

(1)  The machine enters into the initial state of maintenance mode.
     (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 45" |
| (3) | [OK] | "USBNo." |
| (4) | [▲], or [▼] | "Regi Freq" |
| (5) | [OK] | "Regi Freq=(Selected Value)" |
| (6) | [▲], or [▼] | Select the desired value. |
| (7) | [OK] | "Accepted" |

(8)  The machine returns to the initial state of maintenance mode.

## 1.3.12.4 Adjust Left-end Print Position

### <Function>

- This function is used to adjust the left-end print position. (Left or Right)
- The adjustable range is -100 to 750. (1 unit = 0.084 mm = 1/300")
  (Shifted to the left when the value is negative.)

### <Operating Procedure>

For models with touch panel

(1)  The machine enters into the initial state of maintenance mode.
     (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [4] [5] | "USBNo." |
| (3) | [<<] | |
| (4) | [▲], or [▼] | "X Adjust" |
| (5) | [SET] (Press the [◄] to cancel the operation.) | "XAdjust (Adjustment Option)" |
| (6) | [▲], or [▼] (See the table below.) | Select the desired value. |
| (7) | [SET] | "XAdj. (Adjustment Option)= (Set Value)" |
| (8) | Press the [▲], or [▼] to change the set value. | "XAdj. (Adjustment Option)= (Set Value)" |
| (9) | [SET] | "Accepted" |
| (10) | [X] | To the initial state of maintenance mode |

For models without touch panel

(1)  The machine enters into the initial state of maintenance mode.
     (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 45" |
| (3) | [OK] | "USBNo." |
| (4) | [▲], or [▼] | "X Adjust" |
| (5) | [OK] | "XAdjust (Adjustment Option)" |
| (6) | [▲], or [▼] (See the table below.) | Select the desired value. |
| (7) | [OK] | "XAdj. (Adjustment Option)= (Set Value)" |
| (8) | Press the [▲], or [▼] to change the set value. | "XAdj. (Adjustment Option)= (Set Value)" |
| (9) | [OK] | "Accepted" |
| (10) | [Stop/Exit] | To the initial state of maintenance mode |

<Adjustment option table>

1-sided printing

| Adjustment option | LCD |
|---|---|
| MP tray 1st side | XAdjust MP |
| T1 1st side | XAdjust T1 |
| T2 1st side | XAdjust T2 |
| N/A (disabled) | XAdjust DX |
| N/A (disabled) | XAdjust DXMP |
| N/A (disabled) | XAdjust DXT1 |
| N/A (disabled) | XAdjust DXT2 |

2-sided printing

| Adjustment option | LCD |
|---|---|
| MP tray 2nd side | XAdjust MP |
| T1 2nd side | XAdjust T1 |
| T2 2nd side | XAdjust T2 |
| *1 | XAdjust DX |
| MP tray 1st side | XAdjust DXMP |
| T1 1st side | XAdjust DXT1 |
| T2 1st side | XAdjust DXT2 |

[*1] Adjusts 1st side print start position of all trays (T1, 2 and MP tray).
The value entered in "XAdjust DX" is added to the value entered in each tray.
For example, when printing from T1, it is adjusted by "XAdjust DXT1 value" + "XAdjust DX value" and printed.
In addition, if the added value is out of the adjustable range (-100 to 750), it will be -100 in the negative direction and be 750 in the positive direction. It is always within the adjustable range.

*Confidential*

### 1.3.12.5 Adjust Upper-end Print Position

**\<Function\>**

- This function is used to adjust the upper-end print position. (Up or Down)

- The adjustable range is -50 to 50. (1 unit = 0.084 mm = 1/300")
  (Shifted Up when the value is negative.)

**\<Operating Procedure\>**

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
    (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [4] [5] | "USBNo." |
| (3) | [<<] | |
| (4) | [▲], or [▼] | "Y Adjust" |
| (5) | [SET] (Press the [◄] to cancel the operation.) | "YAdjust (Adjustment Option)" |
| (6) | [▲], or [▼] (Refer to the table on the next page.) | Select the desired value. |
| (7) | [SET] | "YAdj. (Adjustment Option)= (Set Value)" |
| (8) | Press the [▲], or [▼] to change the set value. | "YAdj. (Adjustment Option)= (Set Value)" |
| (9) | [SET] | "Accepted" |
| (10) | [X] | To the initial state of maintenance mode |

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
    (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 45" |
| (3) | [OK] | "USBNo." |
| (4) | [▲], or [▼] | "Y Adjust" |
| (5) | [OK] | "YAdjust (Adjustment Option)" |
| (6) | [▲], or [▼] (Refer to the table on the next page.) | Select the desired value. |
| (7) | [OK] | "YAdj. (Adjustment Option)= (Set Value)" |
| (8) | Press the [▲], or [▼] to change the set value. | "YAdj. (Adjustment Option)= (Set Value)" |
| (9) | [OK] | "Accepted" |
| (10) | [Stop/Exit] | To the initial state of maintenance mode |

<Adjustment option table>

1-sided printing

| Adjustment option | LCD |
|---|---|
| MP tray 1st side | YAdjust MP |
| T1 1st side | YAdjust T1 |
| T2 1st side | YAdjust T2 |
| *1 | YAdjust TRAY |
| N/A (disabled) | YAdjust DX |
| N/A (disabled) | YAdjust DXMP |
| N/A (disabled) | YAdjust DXT1 |
| N/A (disabled) | YAdjust DXT2 |

2-sided printing

| Adjustment option | LCD |
|---|---|
| MP tray 2nd side | YAdjust MP |
| T1 2nd side | YAdjust T1 |
| T2 2nd side | YAdjust T2 |
| *2 | YAdjust TRAY |
| *1 | YAdjust DX |
| MP tray 1st side | YAdjust DXMP |
| T1 1st side | YAdjust DXT1 |
| T2 1st side | YAdjust DXT2 |

[*1] Adjusts 1st side print start position of all trays (T1, 2 and MP tray).
The value entered in "YAdjust TRAY", or "YAdjust DX" is added to the value entered in each tray.
For example, when printing from T1, it is adjusted by "YAdjust T1 value" + "YAdjust TRAY value", or "YAdjust DXT1 value" + "YAdjust DX value" and printed.
In addition, if the added value is out of the adjustable range (-50 to 50), it will be -50 in the negative direction and be 50 in the positive direction. It is always within the adjustable range.

[*2] Adjusts second side print start position of all trays (T1, 2 and MP tray).
The value entered in "YAdjust TRAY" is added to the value entered in each tray.
For example, when printing from T1, it is adjusted by "YAdjust T1 value" + "YAdjust TRAY value" and printed.
In addition, if the added value is out of the adjustable range (-50 to 50), it will be -50 in the negative direction and be 50 in the positive direction. It is always within the adjustable range.

### 1.3.12.6 Change Transfer Current Setting

**<Function>**

- This function is used to change the transfer current setting.

- Not used for maintenance.

- The set value: The initial value is automatically set to "default".
  Small Current "HAGAKI1" < "HAGAKI2" < "HAGAKI3" Large Current

**<Operating Procedure>**

For models with touch panel

(1)  The machine enters into the initial state of maintenance mode.
     (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [4] [5] | "USBNo." |
|---|---|---|
| (3) | [<<] | |
| (4) | [▲], or [▼] | "Special Printing" |
| (5) | [SET] (Press the [◄] to cancel the operation.) | "(Set Value)" |
| (6) | Press the [▲] or [▼] to change the set value. | "(Set Value)" |
| (7) | [SET] | "Accepted" |

(8)  The machine returns to the initial state of maintenance mode.

For models without touch panel

(1)  The machine enters into the initial state of maintenance mode.
     (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 45" |
|---|---|---|
| (3) | [OK] | "USBNo." |
| (4) | [▲], or [▼] | "Special Printing" |
| (5) | [OK] | "(Set Value)" |
| (6) | Press the [▲] or [▼] to change the set value. | "(Set Value)" |
| (7) | [OK] | "Accepted" |

(8)  The machine returns to the initial state of maintenance mode.

### 1.3.12.7 Switch Ghost (SX) Reduction Setting

**\<Function\>**

- This function is used to reduce ghost in simplex printing by reducing the light intensity of the erase lamp.

- If this function is turned ON, 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\>**

For models with touch panel

(1)    The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [4] [5] | "USBNo." |
|---|---|---|
| (3) | [<<] | |
| (4) | [▲], or [▼] | "Ghost Reduction" |
| (5) | [SET] (Press the [◄] to cancel the operation.) | "(Set Value)" |
| (6) | Press the [▲] or [▼] to change the set value. | "(Set Value)" |
| (7) | [SET] | "Accepted" |

(8)    The machine returns to the initial state of maintenance mode.

For models without touch panel

(1)    The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 45" |
|---|---|---|
| (3) | [OK] | "USBNo." |
| (4) | [▲], or [▼] | "Ghost Reduction" |
| (5) | [OK] | "(Set Value)" |
| (6) | Press the [▲] or [▼] to change the set value. | "(Set Value)" |
| (7) | [OK] | "Accepted" |

(8)    The machine returns to the initial state of maintenance mode.

*Confidential*

### 1.3.12.8 Switch ON/OFF Setting of HEXDUMP-Mode

**<Function>**

- This function is used to switch ON/OFF setting of HEXDUMP-Mode at the next startup.

- ON: At the next startup, the HEXDUMP-Mode is enabled.
  After rebooting, the HEXDUMP-Mode is automatically switched to OFF.
  OFF: At the next startup, the HEXDUMP-Mode is disabled.

**<Operating Procedure>**

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
    (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [4] [5] | "USBNo." |
| (3) | [<<] | |
| (4) | [▲], or [▼] | "HEXDUMP Setting" |
| (5) | [SET] (Press the [◄] to cancel the operation.) | "HEXDUMP (Set Value)" |
| (6) | Press the [▲] or [▼] to change the set value. | "HEXDUMP (Set Value)" |
| (7) | [SET] | "Accepted" |

(8) The machine returns to the initial state of maintenance mode.

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
    (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 45" |
| (3) | [OK] | "USBNo." |
| (4) | [▲], or [▼] | "HEXDUMP Setting" |
| (5) | [OK] | "HEXDUMP (Set Value)" |
| (6) | Press the [▲] or [▼] to change the set value. | "HEXDUMP (Set Value)" |
| (7) | [OK] | "Accepted" |

(8) The machine returns to the initial state of maintenance mode.

*Confidential*

### 1.3.12.9 Disable SSW

**\<Function\>**

- This function is used to disable any SSW.

**\<Operating Procedure\>**

For models with touch panel

(1)  The machine enters into the initial state of maintenance mode.
     (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [4] [5] | "USBNo." |
|---|---|---|
| (3) | [<<] | |
| (4) | [▲], or [▼] | "FUNC INVALID" |
| (5) | [SET] (Press the [◄] to cancel the operation.) | "FUNC = 0" |
| (6) | Press the [▲] or [▼] to select the SSW No. (The digit of No.10) | "FUNC = (SSW No.)" |
| (7) | Press the [SET] to confirm the digit of the SSW No.10.<br>(Press the [◄] to cancel the operation.) | "FUNC = (SSW No.)" |
| (8) | Press the [▲] or [▼] to select the SSW No. (The digit of No.1) | "FUNC = (SSW No.)" |
| (9) | Press the [SET] to confirm the digit of the SSW No.1.<br>(Press the [◄] to cancel the operation.) | "FUNC = (SSW No.)" |
| (10) | [SET] | "Accepted" |

(11)  The machine returns to the initial state of maintenance mode.

For models without touch panel

(1)  The machine enters into the initial state of maintenance mode.
     (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 45" |
|---|---|---|
| (3) | [OK] | "USBNo." |
| (4) | [▲], or [▼] | "FUNC INVALID" |
| (5) | [OK] | "FUNC = 0" |
| (6) | Press the [▲] or [▼] to select the SSW No. (The digit of No.10) | "FUNC = (SSW No.)" |
| (7) | Press the [OK] to confirm the digit of the SSW No.10. | "FUNC = (SSW No.)" |
| (8) | Press the [▲] or [▼] to select the SSW No. (The digit of No.1) | "FUNC = (SSW No.)" |
| (9) | Press the [OK] to confirm the digit of the SSW No.1. | "FUNC = (SSW No.)" |
| (10) | [OK] | "Accepted" |

(11)  The machine returns to the initial state of maintenance mode.

### 1.3.12.10 Switch Firmware Downgrade Setting

**<Function>**

- This function is used to switch the Firm Downgrade settings from an external device.

- ON: The Firm Downgrade from the external device is disabled.
  OFF: The Firm Downgrade from the external device is enabled.

**<Operating Procedure>**

For models with touch panel

(1)  The machine enters into the initial state of maintenance mode.
     (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [4] [5] | "USBNo." |
| (3) | [<<] | |
| (4) | [▲], or [▼] | "FIRMDOWN" |
| (5) | [SET] (Press the [◄] to cancel the operation.) | "FIRMDOWN = (Set Value)" |
| (6) | Press the [▲], or [▼] to change the set value. | "FIRMDOWN = (Set Value)" |
| (7) | [SET] | "Accepted" |

(8)  The machine returns to the initial state of maintenance mode.

For models without touch panel

(1)  The machine enters into the initial state of maintenance mode.
     (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 45" |
| (3) | [OK] | "USBNo." |
| (4) | [▲], or [▼] | "FIRMDOWN" |
| (5) | [OK] | "FIRMDOWN = (Set Value)" |
| (6) | Press the [▲], or [▼] to change the set value. | "FIRMDOWN = (Set Value)" |
| (7) | [OK] | "Accepted" |

(8)  The machine returns to the initial state of maintenance mode.

### 1.3.12.11 Switch Fogging (left/right edge) Reduction Setting

**<Function>**

- This function is used to reduce fogging (left/right side) by controlling the operation of the exhaust fan.

- ON: Fogging reduction setting is enabled.

- OFF: Fogging reduction setting is disabled.

**<Operating Procedure>**

<u>For models with touch panel</u>

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [4] [5] | "USBNo." |
|---|---|---|
| (3) | [<<] | |
| (4) | [▲], or [▼] | "SideFogReduction" |
| (5) | [SET] (Press the [◀] to cancel the operation.) | "(Set Value)" |
| (6) | Press the [▲] or [▼] to change the set value. | "(Set Value)" |
| (7) | [SET] | "Accepted" |

(8) The machine returns to the initial state of maintenance mode.

<u>For models without touch panel</u>

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 45" |
|---|---|---|
| (3) | [OK] | "USBNo." |
| (4) | [▲], or [▼] | "SideFogReduction" |
| (5) | [OK] | "(Set Value)" |
| (6) | Press the [▲] or [▼] to change the set value. | "(Set Value)" |
| (7) | [OK] | "Accepted" |

(8) The machine returns to the initial state of maintenance mode.

## 1.3.12.12 Switch Ghost (DX) Reduction Setting

### <Function>

- This function is used to reduce ghost in duplex printing by reducing the developing bias voltage in environments below a certain humidity.
- Level4: Lower the developing bias voltage the most.
- Level3: Lower the developing bias voltage a lot.
- Level2: Lower the developing bias voltage.
- Level1: Lower the developing bias voltage a little.
- OFF: Ghost (DX) reduction setting is disabled.

### <Operating Procedure>

For models with touch panel

(1)  The machine enters into the initial state of maintenance mode.
     (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [4] [5] | "USBNo." |
|---|---|---|
| (3) | [<<] | |
| (4) | [▲], or [▼] | "DX Ghost Improve" |
| (5) | [SET] (Press the [◄] to cancel the operation.) | "(Set Value)" |
| (6) | Press the [▲] or [▼] to change the set value. | "(Set Value)" |
| (7) | [SET] | "Accepted" |

(8)  The machine returns to the initial state of maintenance mode.

For models without touch panel

(1)  The machine enters into the initial state of maintenance mode.
     (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 45" |
|---|---|---|
| (3) | [OK] | "USBNo." |
| (4) | [▲], or [▼] | "DX Ghost Improve" |
| (5) | [OK] | "(Set Value)" |
| (6) | Press the [▲] or [▼] to change the set value. | "(Set Value)" |
| (7) | [OK] | "Accepted" |

(8)  The machine returns to the initial state of maintenance mode.

## 1.3.12.13 Additional Setting for Drum Warm-up before Starting Printing

### &lt;Function&gt;

- This mode is used to reduce fogging/spots by adding drum warm-up before printing starts.
- One time: After selecting this mode, this mode is enabled only once at the start of printing.

> **Note:**
> - After drum warm-up is completed, the mode setting value automatically switches from "One time" to "OFF".

- Auto: When the temperature, humidity, and remaining life of the drum reach certain conditions, this mode is enabled.
- OFF: This mode is disabled.

### &lt;Operating Procedure&gt;

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
    (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [4] [5] | "USBNo." |
|---|---|---|
| (3) | [<<] | |
| (4) | [▲], or [▼] | "DR WarmUp" |
| (5) | [SET] (Press the [◄] to cancel the operation.) | "(Set Value)" |
| (6) | Press the [▲] or [▼] to change the set value. | "(Set Value)" |
| (7) | [SET] | "Accepted" |

(8) The machine returns to the initial state of maintenance mode.

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
    (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 45" |
|---|---|---|
| (3) | [OK] | "USBNo." |
| (4) | [▲], or [▼] | "DR WarmUp" |
| (5) | [OK] | "(Set Value)" |
| (6) | Press the [▲] or [▼] to change the set value. | "(Set Value)" |
| (7) | [OK] | "Accepted" |

(8) The machine returns to the initial state of maintenance mode.

### 1.3.12.14 Setting Drum Cleaning Time Extension During/after Printing

**\<Function\>**

- This function is used to reduce dirt on back side of paper by extending drum cleaning time during/after printing.
- Level3: Extend drum cleaning time a lot.
- Level2: Extend drum cleaning time.
- Level1: Extend drum cleaning time a little.
- OFF: Setting drum cleaning time extension is disabled.

**\<Operating Procedure\>**

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [4] [5] | "USBNo." |
| (3) | [<<] | |
| (4) | [▲], or [▼] | "Enhance Belt Cln" |
| (5) | [SET] (Press the [◄] to cancel the operation.) | "(Set Value)" |
| (6) | Press the [▲] or [▼] to change the set value. | "(Set Value)" |
| (7) | [SET] | "Accepted" |

(8) The machine returns to the initial state of maintenance mode.

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 45" |
| (3) | [OK] | "USBNo." |
| (4) | [▲], or [▼] | "Enhance Belt Cln" |
| (5) | [OK] | "(Set Value)" |
| (6) | Press the [▲] or [▼] to change the set value. | "(Set Value)" |
| (7) | [OK] | "Accepted" |

(8) The machine returns to the initial state of maintenance mode.

## 1.3.13 Adjust Printing on Scale (Function Code 46)

### &lt;Function&gt;

- This function is used to enlarge/shrink the print in horizontal/vertical direction.

- Adjustable Range = -0.5% to +0.5% (-: Shrink, +: Enlarge)

### &lt;Operating Procedure&gt;

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [4] [6] | "MAIN SIZE SET" |
| (3) | [<<] | |
| (4) | [▲], or [▼] | "PRINT TEST PTN" |
| (5) | [SET] (Refer to the next page.) | "PRINTING" |

Follow the steps below to adjust the size of one quadrangle to 10 mm on each side, the top and the bottom.

| | | |
|---|---|---|
| (6) | Press the [▲], or [▼] to select the adjustment direction. | "MAIN SIZE SET", or "SUB SIZE SET" |

"MAIN SIZE SET": Horizontal direction (Main scanning direction)
"SUB SIZE SET": Vertical direction (Vertical scanning direction)

| | | |
|---|---|---|
| (7) | [SET] | "SET: (Set Value) %" |
| (8) | Press the [▲], or [▼] to enter the set value. | "SET: (Set Value) %" |
| (9) | [SET] | |
| (10) | [X] | To the initial state of maintenance mode |

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 46" |
| (3) | [OK] | "MAIN SIZE SET" |
| (4) | [▲], or [▼] | "PRINT TEST PTN" |
| (5) | [OK] (Refer to the next page.) | "PRINTING" |

Follow the steps below to adjust the size of one quadrangle to 10 mm on each side, the top and the bottom.

| | | |
|---|---|---|
| (6) | Press the [▲], or [▼] to select the adjustment direction. | "MAIN SIZE SET", or "SUB SIZE SET" |

"MAIN SIZE SET": Horizontal direction (Main scanning direction)
"SUB SIZE SET": Vertical direction (Vertical scanning direction)

| | | |
|---|---|---|
| (7) | [OK] | "SET: (Set Value) %" |
| (8) | Press the [▲], or [▼] to enter the set value. | "SET: (Set Value) %" |
| (9) | [OK] | |
| (10) | [Stop/Exit] | To the initial state of maintenance mode |

&lt;Initialization for the set value&gt;
Both the set values for the main size and the sub size are set to 0.0%.

| | | |
|---|---|---|
| (11) | [▲], or [▼] | "RESET PARAMETER" |
| (12) | [SET], or [OK] | "MAIN SIZE SET" |

## ■ Print adjustment test pattern
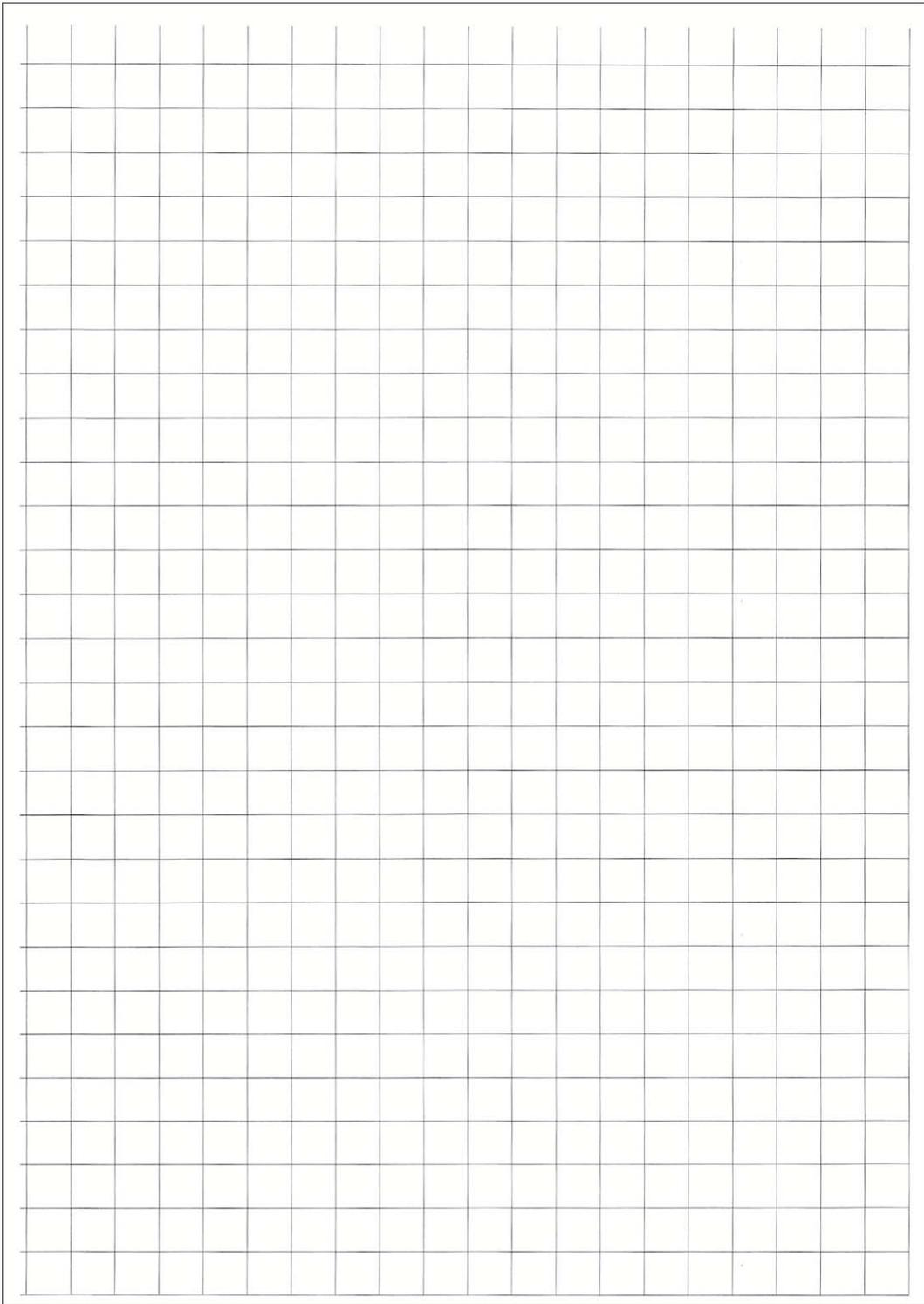


**Fig. 5-8**

## 1.3.14 Transfer Received Fax Data / Log Information (Models with FAX) (Function Code 53)

**<Function>**

- This function is used to transfer the following data to another machine. (The number of data in one operation is up to 99.)

- Received fax data, Communication management report, Communication list, Machine log information

- When the color function is not supported by the receiver machine, color data files cannot be transferred and an error occurs.

**<Operating Procedure>**

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [5] [3] | "FAX TRANSFER" |
|---|---|---|

(3) Select the transfer items and execute them.

<Display the number of Fax files received>

| 1) | [1] | "1.NO. OF JOBS" |
|---|---|---|
| 2) | Press the [SET] to display the number of files received. | "NO. OF JOBS: (**)"<br>** is the number of files received. |
| 3) | Press the [X] to return to (2). | "FAX TRANSFER" |

<Transfer the communication management report>

| 4) | [2] | "2.ACTIVITY" |
|---|---|---|
| 5) | [SET] | "ENTER NO. & SET" |

<Transfer the received FAX data + the communication management report>

| 6) | [3] | "3.DOCUMENTS" |
|---|---|---|
| 7) | [SET] | "ENTER NO. & SET" |

<Transfer the communication list (latest communication information)>

| 8) | [4] | "4.COM.LIST (NEW)" |
|---|---|---|
| 9) | [SET] | "ENTER NO. & SET" |

<Transfer the communication list (information for the past three errors)>

| 10) | [5] | "5.COM.LIST (ERR3)" |
|---|---|---|
| 11) | [SET] | "ENTER NO. & SET" |

<Transfer the maintenance information (Function Code 77)>

| 12) | [6] | "6.MNT77 LIST" |
|---|---|---|
| 13) | [SET] | "ENTER NO. & SET" |

(4) Enter the telephone number of the receiver machine. (Numeric keys)

| (5) | [SET] | "Accepted" |
|---|---|---|
| (6) | The data is transferred together with the data on the next page. | "DIALING  #001" |

■ **Cover page example**



```
=== FAX TRANSFER COVER PAGE ===

NO. OF JOBS   :001              ◄────── Job number to identify the transmission
TOTAL PAGE[S] :001             ◄────── Total number of pages to be transferred
NAME          :BROTHER          ◄────── Station ID registered in the sender machine
FAX           :052 824 2330    ◄────── Fax number of the sender machine
TEL           :                 ◄────── Telephone number of the sender machine
TIME          :06/06/2017 22:21 ◄──── Transfer date and time

8CE888                          ◄────── Model code
B0403261602                     ◄────── Boot ROM information
U0404221449 VER.0               ◄────── ROM information
G01234567890                    ◄────── Serial number
```

**Fig. 5-9**

■ **End page example**



```
=== FAX TRANSFER END PAGE ===

NO. OF JOBS   :001              ◄────── Job number to identify the transmission
TOTAL PAGE[S] :001             ◄────── Total number of pages to be transferred
NAME          :BROTHER          ◄────── Station ID registered in the sender machine
FAX           :052 824 2330    ◄────── Fax number of the sender machine
TEL           :                 ◄────── Telephone number of the sender machine

MACHINE STATUS 1    AF:0906062216 ◄
MACHINE STATUS 2    43:0906062216 ◄
MACHINE STATUS 3    48:0906022216 ◄
MACHINE STATUS 4    AF:0906062017 ◄
MACHINE STATUS 5    43:0906062017 ◄    Error codes
MACHINE STATUS 6    48:0906062017 ◄
MACHINE STATUS 7    AF:0906061756 ◄
MACHINE STATUS 8    43:0906061756 ◄
MACHINE STATUS 9    48:0906061756 ◄
```

**Fig. 5-10**

## 1.3.15 Fine-tune Scanning Position (Function Code 54)

### &lt;Function&gt;

- This function is used to adjust the scanning position.

### &lt;Operating Procedure&gt;

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [5] [4] | "SCAN START AD" |
|---|---|---|
| (3) | After two seconds. | "0: ADF 1: FB" |

&lt;Adjust the scanning position of ADF&gt;

| (4) | [0] | "0:MAIN 1:TP 2:HP" |
|---|---|---|

(5) [0], or [1], or [2]
[0]: Main scanning direction
[1]: Tip position in the vertical scanning direction
[2]: End position in the vertical scanning direction

&lt;2-sided scanning models&gt;

| 1) | | "0:FRONT 1:BACK" |
|---|---|---|
| 2) | [0], or [1] | Displays the set value. |

[0]: 1st side
[1]: 2nd side

&lt;1-sided scanning models&gt;

| 3) | | Displays the set value. |
|---|---|---|

&lt;Adjust the scanning position of FB&gt;

| (6) | [1] | "0:MAIN 1:SUB 2:AUTO" |
|---|---|---|

(7) [0], or [1], or [2]

| [0]: Main scanning direction | Displays the set value. |
|---|---|
| [1]: Vertical scanning direction | Displays the set value. |

[2]: The machine returns to the initial state of maintenance mode after automatic adjustment.

| (8) | [<<] | |
|---|---|---|
| (9) | Press the [▲], or [▼] to change the set value. (Refer to the next page.) | Displays the set value. |
| (10) | [SET] | "SCANNING" |
| (11) | | "OK" |
| (12) | [X] | To the initial state of maintenance mode |

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 54" |
|---|---|---|
| (3) | [OK] | "▲:MAIN ▼:SUB  [Clear]:AUTO" |

[▲] or [▼] or [Clear]

| (4) | [▲]: Main scanning direction | Displays the set value. |
|---|---|---|
| | [▼]: Vertical scanning direction | Displays the set value. |

[Clear]: The machine returns to the initial state of maintenance mode after automatic adjustment.

| (5) | Press the [▲], or [▼] to change the set value. (Refer to the next page.) | Displays the set value. |
|---|---|---|
| (6) | [OK] | "ACCEPTED" |
| (7) | [Clear] | "SCANNING" |
| (8) | | "OK" |
| (9) | [Stop/Exit] | To the initial state of maintenance mode |

## ■ Main scanning adjustment

Adjustable range: -20 to 15 (It is adjustable by 1 unit (1 unit = 0.1 mm).)

* The reference value (default) is "0".

Scanning range

Top

Left    Right

"-" adjustment
[▼]

"+"adjustment
[▲]

Bottom

The adjusted value is "0".
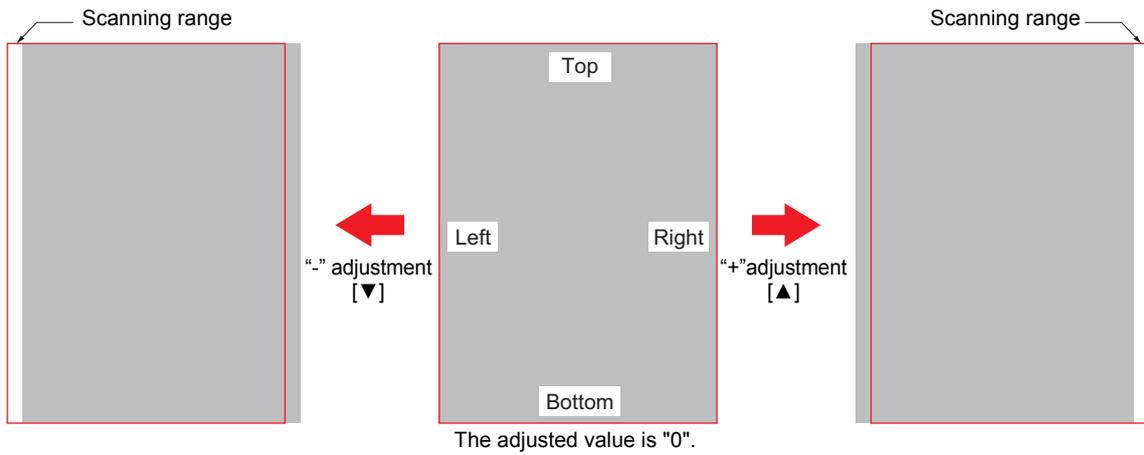
Scanning range

**Fig. 5-11**

## ■ Vertical scanning adjustment

Adjustable range: -50 to 50 (It is adjustable by 1 unit (1 unit = 0.1 mm).)

* The reference value (default) is "0".

Scanning range

Top

Left    Right

"-" adjustment
[▼]

"+"adjustment
[▲]

Bottom

The adjusted value is "0".

Scanning range

**Fig. 5-12**

*Confidential*
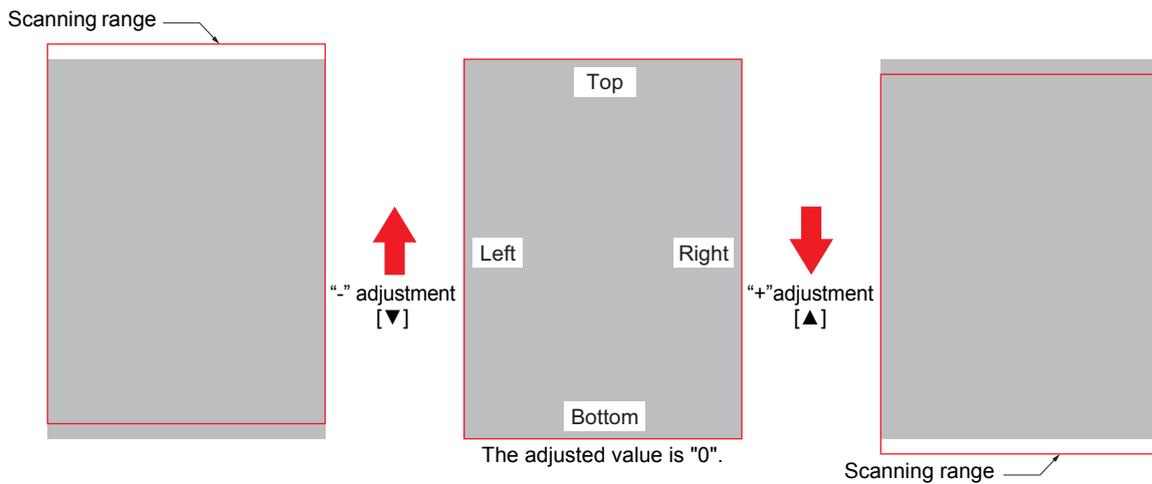
## 1.3.16 Acquire and Optimize White/Black Level (CIS Scan) (Function Code 55)

**<Function>**

- This function is used to acquire the white/black level and optimize them. (CIS scan)

**<Operating Procedure>**

<u>For models with touch panel</u>

(1)    The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [5] [5] | "Press START" |
|---|---|---|
| (3) | [Mono Start] | "SCANNER AREA SET" |

          <Error>
          "SCANNER ERROR", "SCANNER ERR ADF", or "SCANNER ERR FB" is displayed.
          Pressing the [X] returns the machine to the initial state of maintenance mode.

(4)    The machine returns to the initial state of maintenance mode.

<u>For models without touch panel</u>

(1)    The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 55" |
|---|---|---|
| (3) | [OK] | "Press START" |
| (4) | [Start] | "SCANNER AREA SET" |

          <Error>
          "SCANNER ERROR", or "SCANNER ERR FB" is displayed.
          Pressing the [Stop/Exit] returns the machine to the initial state of maintenance mode.

(5)    The machine returns to the initial state of maintenance mode.

## 1.3.17 Check Consumables Function (Function Code 57)

**<Function>**

- This function is used to determine whether the toner cartridge is supported, cartridge's color, destination, and size with the cartridge sensor.

### 1.3.17.1 Whether the Toner Cartridge is Supported or Not

**<Operating Procedure>**

For models with touch panel

| | | | |
|---|---|---|---|
| (1) | | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
| (2) | [5] [7] | | "IC_ACT ALL" |
| (3) | [<<] | | |
| (4) | [◄], or [►] | | Select the toner cartridge to be authorized. |

"IC_ACT ALL": If you want to select all colors
"IC_ACT BLACK": If you want to select black
"IC_ACT MAGENTA": If you want to select magenta
"IC_ACT CYAN": If you want to select cyan
"IC_ACT YELLOW": If you want to select yellow

| | | | |
|---|---|---|---|
| (5) | [Mono Start] | | "IC_ACT OK" |
| | 1) | At the time of an error | "IC_ACT NG*" (*: Class number) |
| | 2) | Refer to "Execution result". | The error appears. |

> **Note:**
> - When NG was displayed after performing the "IC_ACT ALL", which color cartridge had error cannot be determined. In that case, select the color individually and perform.

| | | | |
|---|---|---|---|
| (6) | [X] | | To the initial state of maintenance mode |

For models without touch panel

| | | | |
|---|---|---|---|
| (1) | | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
| (2) | [▲], or [▼] | | "MAINTENANCE 57" |
| (3) | [OK] | | "IC_ACT ALL" |
| (4) | [▲], or [▼] | | Select the toner cartridge to be authorized. |

"IC_ACT ALL": If you want to select all colors
"IC_ACT YELLOW": If you want to select yellow
"IC_ACT CYAN": If you want to select cyan
"IC_ACT MAGENTA": If you want to select magenta
"IC_ACT BLACK": If you want to select black

| | | | |
|---|---|---|---|
| (5) | [Start] | | "IC_ACT OK" |
| | 1) | At the time of an error | "IC_ACT NG*" (*: Class number) |
| | 2) | Refer to "Execution result". | The error appears. |

> **Note:**
> - When NG was displayed after performing the "IC_ACT ALL", which color cartridge had error cannot be determined. In that case, select the color individually and perform.

| | | | |
|---|---|---|---|
| (6) | [OK] | | To next item |
| (7) | [Stop/Exit] | | To the initial state of maintenance mode |

■ **Execution result**

| LCD | Description |
|---|---|
| NG* | Each color and the execution result are displayed. The color from left is first Y, then M, then C, and then K. (For the drum unit and the belt unit, one digit is displayed.)<br>0: Inspection passed.<br>1: Failed to communicate. No response from consumable chips.<br>   It may be caused that no consumable chip is installed, or there is no consumable chip, or consumable chip contacts are unstable or faulty.<br>2: Although the communication and the authorization passed, it is judged from the consumable chip information to be incompatible. It may be caused that the consumable chip is abnormal, or the cartridge is installed incorrectly.<br>-: No inspection was performed. |

## 1.3.17.2 Check Toner Cartridge's Color

### <Operating Procedure>

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [5] [7] | "IC_ACT ALL" |
|---|---|---|
| (3) | [2] | "IC_COL ALL" |
| (4) | [◄], or [►] | Select the toner cartridge to be authorized. |

"IC_COL ALL": If you want to select all colors
"IC_COL BLACK": If you want to select black
"IC_COL MAGENTA": If you want to select magenta
"IC_COL CYAN": If you want to select cyan
"IC_COL YELLOW": If you want to select yellow

| (5) | | [Mono Start] | "IC_COL OK" |
|---|---|---|---|
| | 1) | At the time of an error | "IC_COL NG*" (*: Class number) |
| | 2) | Refer to "Execution result". | The error appears. |

**Note:**

• When NG was displayed after performing the "IC_COL ALL", which color cartridge had error cannot be determined. In that case, select the color individually and perform.

| (6) | [X] | To the initial state of maintenance mode |
|---|---|---|

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 57" |
|---|---|---|
| (3) | [OK] | "IC_ACT ALL" |
| (4) | Press the [OK] several times. | "IC_COL ALL" |
| (5) | [▲], or [▼] | Select the toner cartridge to be authorized. |

"IC_COL ALL": If you want to select all colors
"IC_COL YELLOW": If you want to select yellow
"IC_COL CYAN": If you want to select cyan
"IC_COL MAGENTA": If you want to select magenta
"IC_COL BLACK": If you want to select black

| (6) | | [Start] | "IC_COL OK" |
|---|---|---|---|
| | 1) | At the time of an error | "IC_COL NG*" (*: Class number) |
| | 2) | Refer to "Execution result". | The error appears. |

**Note:**

• When NG was displayed after performing the "IC_COL ALL", which color cartridge had error cannot be determined. In that case, select the color individually and perform.

| (7) | [OK] | To next item |
|---|---|---|
| (8) | [Stop/Exit] | To the initial state of maintenance mode |

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### 1.3.17.3 Check Toner Cartridge's Destination

**<Operating Procedure>**

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [5] [7] | "IC_ACT ALL" |
|---|---|---|
| (3) | [3] | "IC_AREA ALL" |
| (4) | [◄], or [►] | Select the toner cartridge to be authorized. |

"IC_AREA ALL": If you want to select all colors
"IC_AREA BLACK": If you want to select black
"IC_AREA MAGENTA": If you want to select magenta
"IC_AREA CYAN": If you want to select cyan
"IC_AREA YELLOW": If you want to select yellow

| (5) | | [Mono Start] | "IC_AREA OK" |
|---|---|---|---|
| | 1) | At the time of an error | "IC_AREA NG*" (*: Class number) |
| | 2) | Refer to "Execution result". | The error appears. |

**Note:**
- When NG was displayed after performing the "IC_AREA ALL", which color cartridge had error cannot be determined. In that case, select the color individually and perform.

| (6) | [X] | To the initial state of maintenance mode |
|---|---|---|

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 57" |
|---|---|---|
| (3) | [OK] | "IC_ACT ALL" |
| (4) | Press the [OK] several times. | "IC_AREA ALL" |
| (5) | [▲], or [▼] | Select the toner cartridge to be authorized. |

"IC_AREA ALL": If you want to select all colors
"IC_AREA YELLOW": If you want to select yellow
"IC_AREA CYAN": If you want to select cyan
"IC_AREA MAGENTA": If you want to select magenta
"IC_AREA BLACK": If you want to select black

| (6) | | [Start] | "IC_AREA OK" |
|---|---|---|---|
| | 1) | At the time of an error | "IC_AREA NG*" (*: Class number) |
| | 2) | Refer to "Execution result". | The error appears. |

**Note:**
- When NG was displayed after performing the "IC_AREA ALL", which color cartridge had error cannot be determined. In that case, select the color individually and perform.

| (7) | [OK] | To next item |
|---|---|---|
| (8) | [Stop/Exit] | To the initial state of maintenance mode |

## 1.3.17.4 Check Toner Cartridge's Size

### <Operating Procedure>

For models with touch panel

| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
|---|---|---|
| (2) | [5] [7] | "IC_ACT ALL" |
| (3) | [4] | "IC_SIZE ALL" |
| (4) | [◄], or [►] | Select the toner cartridge to be authorized. |

"IC_SIZE ALL": If you want to select all colors
"IC_SIZE BLACK": If you want to select black
"IC_SIZE MAGENTA": If you want to select magenta
"IC_SIZE CYAN": If you want to select cyan
"IC_SIZE YELLOW": If you want to select yellow

| (5) | [Mono Start] | | "IC_SIZE OK" |
|---|---|---|---|
| | 1) | At the time of an error | "IC_SIZE NG*" (*: Class number) |
| | 2) | Refer to "Execution result". | The error appears. |

> **Note:**
> • When NG was displayed after performing the "IC_SIZE ALL", which color cartridge had error cannot be determined. In that case, select the color individually and perform.

| (6) | [X] | To the initial state of maintenance mode |
|---|---|---|

For models without touch panel

| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 57" |
| (3) | [OK] | "IC_ACT ALL" |
| (4) | Press the [OK] several times. | "IC_SIZE ALL" |
| (5) | [▲], or [▼] | Select the toner cartridge to be authorized. |

"IC_SIZE ALL": If you want to select all colors
"IC_SIZE YELLOW": If you want to select yellow
"IC_SIZE CYAN": If you want to select cyan
"IC_SIZE MAGENTA": If you want to select magenta
"IC_SIZE BLACK": If you want to select black

| (6) | [Start] | | "IC_SIZE OK" |
|---|---|---|---|
| | 1) | At the time of an error | "IC_SIZE NG*" (*: Class number) |
| | 2) | Refer to "Execution result". | The error appears. |

> **Note:**
> • When NG was displayed after performing the "IC_SIZE ALL", which color cartridge had error cannot be determined. In that case, select the color individually and perform.

| (7) | [OK] | To next item |
|---|---|---|
| (8) | [Stop/Exit] | To the initial state of maintenance mode |

## 1.3.17.5 Check Cartridge Sensor's Version

### <Operating Procedure>

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [5] [7] | "IC_ACT ALL" |
|---|---|---|
| (3) | [5] | "IC_VER BLACK" |
| (4) | [◄], or [►] | Select the toner cartridge to be authorized. |

"IC_VER BLACK": If you want to select black
"IC_VER MAGENTA": If you want to select magenta
"IC_VER CYAN": If you want to select cyan
"IC_VER YELLOW": If you want to select yellow

| (5) | [Mono Start] | | "IC_VER  OK:****" (**** indicates a version.) |
|---|---|---|---|
| | 1) | At the time of an error | "IC_VER NG*" (*: Class number) |
| | 2) | Refer to "Execution result". | The error appears. |
| (6) | [X] | | To the initial state of maintenance mode |

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 57" |
|---|---|---|
| (3) | [OK] | "IC_ACT ALL" |
| (4) | Press the [OK] several times. | "IC_VER BLACK" |
| (5) | [▲], or [▼] | Select the toner cartridge to be authorized. |

"IC_VER BLACK": If you want to select black
"IC_VER YELLOW": If you want to select yellow
"IC_VER CYAN": If you want to select cyan
"IC_VER MAGENTA": If you want to select magenta

| (6) | [Start] | | "IC_VER  OK:****" (**** indicates a version.) |
|---|---|---|---|
| | 1) | At the time of an error | "IC_VER NG*" (*: Class number) |
| | 2) | Refer to "Execution result". | The error appears. |
| (7) | [OK] | | To next item |
| (8) | [Stop/Exit] | | To the initial state of maintenance mode |

### 1.3.17.6 Check Toner Cartridge's Communication

**\<Operating Procedure\>**

<u>For models with touch panel</u>

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [5] [7] | "IC_ACT ALL" |
|---|---|---|
| (3) | [0] | "IC_TX ALL" |
| (4) | [◄], or [►] | Select the toner cartridge to be authorized. |

"IC_TX ALL": If you want to select all colors
"IC_TX BLACK": If you want to select black
"IC_TX MAGENTA": If you want to select magenta
"IC_TX CYAN": If you want to select cyan
"IC_TX YELLOW": If you want to select yellow

| (5) | [Mono Start] | | "IC_TX OK" |
|---|---|---|---|
| | 1) | At the time of an error | "IC_TX NG*" (*: Class number) |
| | 2) | Refer to "Execution result". | The error appears. |

> **Note:**
> • When NG was displayed after performing the "IC_TX ALL", which color cartridge had error cannot be determined. In that case, select the color individually and perform.

| (6) | [X] | To the initial state of maintenance mode |
|---|---|---|

<u>For models without touch panel</u>

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 57" |
|---|---|---|
| (3) | [OK] | "IC_ACT ALL" |
| (4) | Press the [OK] several times. | "IC_TX ALL" |
| (5) | [▲], or [▼] | Select the toner cartridge to be authorized. |

"IC_TX ALL": If you want to select all colors
"IC_TX YELLOW": If you want to select yellow
"IC_TX CYAN": If you want to select cyan
"IC_TX MAGENTA": If you want to select magenta
"IC_TX BLACK": If you want to select black

| (6) | [Start] | | "IC_TX OK" |
|---|---|---|---|
| | 1) | At the time of an error | "IC_TX NG*" (*: Class number) |
| | 2) | Refer to "Execution result". | The error appears. |

> **Note:**
> • When NG was displayed after performing the "IC_TX ALL", which color cartridge had error cannot be determined. In that case, select the color individually and perform.

| (7) | [OK] | To next item |
|---|---|---|
| (8) | [Stop/Exit] | To the initial state of maintenance mode |

## 1.3.17.7 Check Toner Cartridge's Generation

### <Operating Procedure>

<u>For models with touch panel</u>

(1) The machine enters into the initial state of maintenance mode.
(Refer to <span style="color:magenta">"1.2 How to Enter the Maintenance Mode" in Chapter 5</span>.)

| (2) | [5] [7] | "IC_ACT ALL" |
|---|---|---|
| (3) | [6] | "IC_GEN ALL" |
| (4) | [◄], or [►] | Select the toner cartridge to be authorized. |

"IC_GEN ALL": If you want to select all colors
"IC_GEN BLACK": If you want to select black
"IC_GEN MAGENTA": If you want to select magenta
"IC_GEN CYAN": If you want to select cyan
"IC_GEN YELLOW": If you want to select yellow

| (5) | [Mono Start] | | "IC_GEN OK" |
|---|---|---|---|
| | 1) | At the time of an error | "IC_GEN NG*" (*: Class number) |
| | 2) | Refer to "Execution result". | The error appears. |

**Note:**
- When NG was displayed after performing the "IC_GEN ALL", which color cartridge had error cannot be determined. In that case, select the color individually and perform.

| (6) | [X] | To the initial state of maintenance mode |
|---|---|---|

<u>For models without touch panel</u>

(1) The machine enters into the initial state of maintenance mode.
(Refer to <span style="color:magenta">"1.2 How to Enter the Maintenance Mode" in Chapter 5</span>.)

| (2) | [▲], or [▼] | "MAINTENANCE 57" |
|---|---|---|
| (3) | [OK] | "IC_ACT ALL" |
| (4) | Press the [OK] several times. | "IC_GEN ALL" |
| (5) | [▲], or [▼] | Select the toner cartridge to be authorized. |

"IC_GEN ALL": If you want to select all colors
"IC_GEN YELLOW": If you want to select yellow
"IC_GEN CYAN": If you want to select cyan
"IC_GEN MAGENTA": If you want to select magenta
"IC_GEN BLACK": If you want to select black

| (6) | [Start] | | "IC_GEN OK" |
|---|---|---|---|
| | 1) | At the time of an error | "IC_GEN NG*" (*: Class number) |
| | 2) | Refer to "Execution result". | The error appears. |

**Note:**
- When NG was displayed after performing the "IC_GEN ALL", which color cartridge had error cannot be determined. In that case, select the color individually and perform.

| (7) | [OK] | To next item |
|---|---|---|
| (8) | [Stop/Exit] | To the initial state of maintenance mode |

## 1.3.17.8 Display Toner Cartridge's Capacity Value

### <Operating Procedure>

For models with touch panel

| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
|---|---|---|
| (2) | [5] [7] | "IC_ACT ALL" |
| (3) | [7] | "IC_CAPA ALL" |
| (4) | [◄], or [►] | Select the toner cartridge to be authorized. |

"IC_CAPA ALL": If you want to select all colors
"IC_CAPA BLACK": If you want to select black
"IC_CAPA MAGENTA": If you want to select magenta
"IC_CAPA CYAN": If you want to select cyan
"IC_CAPA YELLOW": If you want to select yellow

| (5) | | [Mono Start] | "IC_CAPA :**" (** indicates a size.) (Refer to "Capacity information".) |
|---|---|---|---|
| | 1) | At the time of an error | "IC_CAPA NG" |
| (6) | | [X] | To the initial state of maintenance mode |

For models without touch panel

| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 57" |
| (3) | [OK] | "IC_ACT ALL" |
| (4) | Press the [OK] several times. | "IC_CAPA ALL" |
| (5) | [▲], or [▼] | Select the toner cartridge to be authorized. |

"IC_CAPA ALL": If you want to select all colors
"IC_CAPA YELLOW": If you want to select yellow
"IC_CAPA CYAN": If you want to select cyan
"IC_CAPA MAGENTA": If you want to select magenta
"IC_CAPA BLACK": If you want to select black

| (6) | | [Start] | "IC_CAPA :**" (** indicates a size.) (Refer to "Capacity information".) |
|---|---|---|---|
| | 1) | At the time of an error | "IC_CAPA NG" |
| (7) | | [OK] | To next item |
| (8) | | [Stop/Exit] | To the initial state of maintenance mode |

### ■ Capacity information

| The read-out capacity information (Capacity Type) is displayed. | <When colors are individually specified><br>11: Low<br>21: Standard<br>31: High<br>41: SuperHigh<br>* In a model that is distinguished by LowA / LowB for each capacity type, use the last digit to represent the A / B type.<br>  (In the model that is undistinguished, the last digit is fixed to 1.) |
|---|---|
| | <When ALL colors are specified><br>Information for the four colors is shown in the order of K / C / M / Y.<br>For example: For the standard toner with all colors, "IC_CAPA 21212121" is displayed. |

### 1.3.17.9 Display Toner Cartridge's Kind

**<Operating Procedure>**

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [5] [7] | "IC_ACT ALL" |
| (3) | [8] | "IC_KIND ALL" |
| (4) | [◄], or [►] | Select the toner cartridge to be authorized. |

"IC_KIND ALL": If you want to select all colors
"IC_KIND BLACK": If you want to select black
"IC_KIND MAGENTA": If you want to select magenta
"IC_KIND CYAN": If you want to select cyan
"IC_KIND YELLOW": If you want to select yellow

| | | | |
|---|---|---|---|
| (5) | [Mono Start] | | "IC_KIND :**" (** indicates a size.)<br>(Refer to "Capacity information".) |
| | 1) | At the time of an error | "IC_KIND NG" |
| (6) | [X] | | To the initial state of maintenance mode |

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 57" |
| (3) | [OK] | "IC_ACT ALL" |
| (4) | Press the [OK] several times. | "IC_KIND ALL" |
| (5) | [▲], or [▼] | Select the toner cartridge to be authorized. |

"IC_KIND ALL": If you want to select all colors
"IC_KIND YELLOW": If you want to select yellow
"IC_KIND CYAN": If you want to select cyan
"IC_KIND MAGENTA": If you want to select magenta
"IC_KIND BLACK": If you want to select black

| | | | |
|---|---|---|---|
| (6) | [Start] | | "IC_KIND :**" (** indicates a size.)<br>(Refer to "Capacity information".) |
| | 1) | At the time of an error | "IC_KIND NG" |
| (7) | [OK] | | To next item |
| (8) | [Stop/Exit] | | To the initial state of maintenance mode |

### ■ Capacity information

| | |
|---|---|
| The read-out kind information is displayed. | <When colors are individually specified><br>01: Normal Toner<br>02: P Toner<br>81: Normal Toner (Bundled)<br>82: P Toner (Bundled) |
| | <When ALL colors are specified><br>Information for the four colors is shown in the order of K / C / M / Y.<br>For example: For the normal toner with all colors, "IC_KIND 01010101" is displayed. |

## 1.3.17.10 Inspect Batch Function

### <Operating Procedure>

For models with touch panel

| | | |
|---|---|---|
| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
| (2) | [5] [7] | "IC_ACT ALL" |
| (3) | [*] | "IC_BATCH ALL" |
| (4) | [◄], or [►] | Select the toner cartridge to be authorized. |

"IC_BATCH ALL": If you want to select all colors
"IC_BATCH BLACK": If you want to select black
"IC_BATCH MAGENTA": If you want to select magenta
"IC_BATCH CYAN": If you want to select cyan
"IC_BATCH YELLOW": If you want to select yellow

| | | | |
|---|---|---|---|
| (5) | [Mono Start] | | "IC_BATCH OK" |
| | 1) | At the time of an error | "IC_BATCH NG*" (*: Class number) |
| | 2) | Refer to "Execution result". | The error appears. |

**Note:**
• When NG was displayed after performing the "IC_BATCH ALL", which color cartridge had error cannot be determined. In that case, select the color individually and perform.

| | | |
|---|---|---|
| (6) | [X] | To the initial state of maintenance mode |

For models without touch panel

| | | |
|---|---|---|
| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
| (2) | [▲], or [▼] | "MAINTENANCE 57" |
| (3) | [OK] | "IC_ACT ALL" |
| (4) | Press the [OK] several times. | "IC_BATCH ALL" |
| (5) | [▲], or [▼] | Select the toner cartridge to be authorized. |

"IC_BATCH ALL": If you want to select all colors
"IC_BATCH YELLOW": If you want to select yellow
"IC_BATCH CYAN": If you want to select cyan
"IC_BATCH MAGENTA": If you want to select magenta
"IC_BATCH BLACK": If you want to select black

| | | | |
|---|---|---|---|
| (6) | [Start] | | "IC_BATCH OK" |
| | 1) | At the time of an error | "IC_BATCH NG*" (*: Class number) |
| | 2) | Refer to "Execution result". | The error appears. |

**Note:**
• When NG was displayed after performing the "IC_BATCH ALL", which color cartridge had error cannot be determined. In that case, select the color individually and perform.

| | | |
|---|---|---|
| (7) | [OK] | To next item |
| (8) | [Stop/Exit] | To the initial state of maintenance mode |

*Confidential*

## 1.3.18 Adjust Touch Panel (Function Code 61)

### <Function>

- This function is used to adjust the detection position of the touch panel.

- This adjustment requires a pen for the touch panel (also known as a touch pen). (Also available in spare parts.)
  (Using ballpoint pens etc. will easily damage the touch panel.)

### <Operating Procedure>

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

(2)

| [6] [1] | The adjustment screen appears. (See the figure below.) |
|---|---|

(3) Touch the marks in the order of No.1 through No.5. (The touched mark will disappear.)

<Error>
"NG" appears after touching mark No.1.
> Reconnect the touch panel FFC.
> Replace the touch panel or the touch panel FFC.



**Fig. 5-13**

(4) The result appears.

| The adjustment is successful. | "OK" |
|---|---|

<Error> Proceed to (3) after the error appears for three seconds.

| The touched position is out of range. | "Point Error" |
|---|---|
| The distance from the last touched position is NG. | "Distance Error" |

(5) The machine returns to the initial state of maintenance mode.

## 1.3.19 Adjustment of Color Registration (Adjustment of Inter-color Position Alignment) (Function Code 66)

### <Function>

- The adjustment of inter-color position alignment (auto/manual) is described in the table below.

- Printing of correction chart (manual)

- In the end user-accessible maintenance mode, "Adjustment of inter-color position alignment including registration sensor calibration" is not available.

This mode 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 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 |

### 1.3.19.1 Adjustment of Inter-color Position Alignment without Registration Sensor Calibration (Auto)

#### <Operating Procedure>

For models with touch panel

| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | | |
|---|---|---|---|
| (2) | [6] [6] | | "REGISTRATION" |
| (3) | [SET] | | "PLS WAIT 66-1" |
| (4) | The correction is completed. | | "COMPLETED" |
| | 1) | At the time of an error | "ERROR 66-1" |
| | 2) | Press the [▼] to see the details. (Refer to "Details of errors".) | The error appears. |
| (5) | [X] | | To the initial state of maintenance mode |

For models without touch panel

| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | | |
|---|---|---|---|
| (2) | [▲], or [▼] | | "MAINTENANCE 66" |
| (3) | [OK] | | "REGISTRATION" |
| (4) | [OK] | | "PLS WAIT 66-1" |
| (5) | The correction is completed. | | "COMPLETED" |
| | 1) | At the time of an error | "ERROR 66-1" |
| | 2) | Press the [▼] to see the details. (Refer to "Details of errors".) | The error appears. |
| (6) | [Stop/Exit] | | To the initial state of maintenance mode |

### ■ Details of errors

- Pressing the [Mono Start], or [Start] clears the error.

- In the automatic adjustment of inter-color alignment, a toner pattern is formed on the belt and measured by the registration sensor to calibrate the color registration. The following errors also occur due to problems with related parts such as the drum dirt and the registration sensor failure.

- After clearing the error, perform "Adjustment of inter-color position alignment with/without registration sensor calibration (auto)", or "Printing of correction chart" and "Adjustment of inter-color position alignment (manual)" (1.3.19.2).

| Error display | |
|---|---|
| FAILED REGIST | NG PWM R-L:080 |
| TONER EMPTY # * | NG CNT R100 L100 |
| NG L:C080 R:M105 | NG S-POSI R:-080 |
| NG R-L:C030 | NG SKEW:120 |
| NG PWM L120 R180 | NG PWM R-P L:080 |

\* # indicates the toner color (Y, M, or C) of which cartridge became empty.

## 1.3.19.2 Printing of Correction Chart and Adjustment of Inter-color Position Alignment (Manual)

### <Operating Procedure>

For models with touch panel

- (1) The machine enters into the initial state of maintenance mode.
  (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [6] [6] | "REGISTRATION" |
| (3) | [<<] | |
| (4) | [▲], or [▼] | "PRINT CHART" |
| (5) | Press the [SET] to print the correction chart. (Refer to the next page.) | "PRINTING" |
| (6) | The printing is completed. | "PRINT CHART" |
| (7) | [X] | To the initial state of maintenance mode |
| (8) | [>>] | |
| (9) | [6] [6] | "REGISTRATION" |
| (10) | [<<] | |
| (11) | [▲], or [▼] | "SET REGISTRATION" |
| (12) | [SET] | "1. MAGENTA=0" |
| (13) | Identify the numeric value whose color is the darkest in the pattern of ①. | "1. MAGENTA=0" |
| (14) | Press the [▲], or [▼] to enter the numeric value of (13). | "1. MAGENTA=(Entered value)" |
| (15) | Press the [SET] to confirm the entered value. | |
| (16) | For the correction test pattern of ② to ⑨, repeat the steps from (13) to (15). | |
| (17) | The correction is completed. | "COMPLETED" |
| (18) | [X] | To the initial state of maintenance mode |

*Confidential*

For models without touch panel

| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
|-----|-----|-----|
| (2) | [▲], or [▼] | "MAINTENANCE 66" |
| (3) | [OK] | "REGISTRATION" |
| (4) | [▲], or [▼] | "PRINT CHART" |
| (5) | Press the [OK] to print the correction chart. (See the figure below.) | "PRINTING" |
| (6) | The printing is completed. | "PRINT CHART" |
| (7) | [Stop/Exit] | To the initial state of maintenance mode |
| (8) | [▲], or [▼] | "MAINTENANCE 66" |
| (9) | [OK] | "REGISTRATION" |
| (10) | [▲], or [▼] | "SET REGISTRATION" |
| (11) | [OK] | "1. MAGENTA=0" |
| (12) | Identify the numeric value whose color is the darkest in the pattern of ①. | "1. MAGENTA=0" |
| (13) | Press the [▲], or [▼] to enter the numeric value of (12). | "1. MAGENTA=(Entered value)" |
| (14) | Press the [OK] to confirm the entered value. | |
| (15) | For the correction test pattern of ② to ⑨, repeat the steps from (12) to (14). | |
| (16) | The correction is completed. | "COMPLETED" |
| (17) | [Stop/Exit] | To the initial state of maintenance mode |

■ **Correction chart**



**Fig. 5-14**

5-55

### 1.3.19.3 Adjustment of Inter-color Position Alignment including Registration Sensor Calibration (Auto)

**\<Operating Procedure\>**

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
   (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [6] [6] | | "REGISTRATION" |
|---|---|---|---|
| (3) | [<<] | | |
| (4) | [▲], or [▼] | | "ADD REGISTRATION" |
| (5) | [SET] | | "PLS WAIT 66-1" |
| (6) | The correction is completed. | | "COMPLETED" |
| | 1) | At the time of an error | "ERROR 66-1" |
| | 2) | Press the [▼] to see the details. (Refer to "Details of errors".) | The error appears. |
| (7) | [X] | | To the initial state of maintenance mode |

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
   (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | | "MAINTENANCE 66" |
|---|---|---|---|
| (3) | [OK] | | "REGISTRATION" |
| (4) | [▲], or [▼] | | "ADD REGISTRATION" |
| (5) | [OK] | | "PLS WAIT 66-1" |
| (6) | The correction is completed. | | "COMPLETED" |
| | 1) | At the time of an error | "ERROR 66-1" |
| | 2) | Press the [▼] to see the details. (Refer to "Details of errors".) | The error appears. |
| (7) | [Stop/Exit] | | To the initial state of maintenance mode |

## 1.3.20 Continuous Print Test (Function Code 67)

**\<Function\>**

- This function is used to print "Print pattern".

- And test the print image quality or the print operation.

**\<Operating Procedure\>**

For models with touch panel

| (1) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |
|---|---|---|
| (2) | [6] [7] | "SELECT: K 100%" |
| (3) | [<<] | |
| (4) | Press the [▲], or [▼] to select the print pattern. | Refer to \<Print pattern\>. |
| (5) | [SET] | "SELECT: A4" |
| (6) | Press the [▲], or [▼] to select the print size. | Refer to \<Paper size\>. |
| (7) | [SET] | "SELECT: PLAIN" |
| (8) | Press the [▲], or [▼] to select the print specification. | Refer to \<Print specification\>. |
| (9) | [SET] | "SELECT: TRAY1 SX" |
| (10) | Press the [▲], or [▼] to select TRAY, DX. | Refer to \<Print type\>. |
| (11) | [SET] | "SELECT: 1PAGE" |
| (12) | Press the [▲], or [▼] to select the print page. | Refer to \<Print page\>. |

\<SELECT: 1PAGE, CONTINUE \>

| (13) | Press the [SET] to confirm the item and the printing is started. | "PAPER FEED TEST" |
|---|---|---|
| (14) | Press the [X], or the specified number of sheets is completed. | To the initial state of maintenance mode |

\<SELECT: JOB \>

| (13) | [SET] | "SELECT: 1P/JOB" |
|---|---|---|
| (14) | Press the [▲], or [▼] to select the number of pages per job. | Refer to \<Number of pages per job\>. |
| (15) | [SET] | |
| (16) | (SELECT: xxP(I)/JOB only) Press the [▲], or [▼] to select the xxP(I)/JOB. Enter the image number (Up to 3 digits). | |
| (17) | (SELECT: xxP(I)/JOB only) Press the [SET] to confirm the item. | |
| (18) | The printing is started. | "PAPER FEED TEST" |
| (19) | Press the [X], or the specified number of sheets is completed. | To the initial state of maintenance mode |

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to <span style="color:magenta">"1.2 How to Enter the Maintenance Mode" in Chapter 5</span>.)

| | | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 67" |
| (3) | [OK] | "SELECT: K 100%" |
| (4) | Press the [▲], or [▼] to select the print pattern. | Refer to <Print pattern>. |
| (5) | [OK] | "SELECT: A4" |
| (6) | Press the [▲], or [▼] to select the print size. | Refer to <Paper size>. |
| (7) | [OK] | "SELECT: PLAIN" |
| (8) | Press the [▲], or [▼] to select the print specification. | Refer to <Print specification>. |
| (9) | [OK] | "SELECT: TRAY1 SX" |
| (10) | Press the [▲], or [▼] to select TRAY, DX. | Refer to <Print type>. |
| (11) | [OK] | "SELECT: 1PAGE" |
| (12) | Press the [▲], or [▼] to select the print page. | Refer to <Print page>. |

<SELECT: 1PAGE, CONTINUE >

| | | |
|---|---|---|
| (13) | Press the [OK] to confirm the item and the printing is started. | "PAPER FEED TEST" |
| (14) | Press the [Stop/Exit], or the specified number of sheets is completed. | To the initial state of maintenance mode |

<SELECT: JOB >

| | | |
|---|---|---|
| (13) | [OK] | "SELECT: 1P/JOB" |
| (14) | Press the [▲], or [▼] to select the number of pages per job. | Refer to <Number of pages per job>. |
| (15) | [OK] | |
| (16) | (SELECT: xxP(I)/JOB only) Press the [▲], or [▼] to select the xxP(I)/JOB. Enter the image number (Up to 3 digits). | |
| (17) | (SELECT: xxP(I)/JOB only) Press the [OK] to confirm the item. | |
| (18) | The printing is started. | "PAPER FEED TEST" |
| (19) | Press the [Stop/Exit], or the specified number of sheets is completed. | To the initial state of maintenance mode |

*Confidential*

**\<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 (LETTER, PLAIN, T1 SX, Standard paper eject, 1PAGE) |
| SELECT: DXEJECT | DX eject check (A4/LETTER, PLAIN, TRAY1 DX, Standard paper eject, CONTINUE, 1COPY, 6 image) |

\* Up to 500 sheets in 1-sided printing and 1,000 sheets in 2-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: MEXICANLEGAL | Mexico Legal |
| SELECT:INDIALEGAL | India Legal |
| SELECT:16K | 16K |
| 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 * |

\* HAGAKI appears on the LCD, but it is not available.

*Confidential*

**\<Print type\>**

| LCD | Description |
|---|---|
| SELECT: TRAY1 SX | 1-sided printing from T1 |
| SELECT: TRAY2 SX[*1] | 1-sided printing from T2 |
| SELECT: MP SX | 1-sided printing from MP tray |
| SELECT: MF SX | 1-sided printing from MF tray |
| SELECT: TRAY1 DX[*2] | 2-sided printing from T1 |
| SELECT: TRAY2 DX[*2] | 2-sided printing from T2 |
| SELECT: MP DX[*2] | 2-sided printing from MP tray |
| SELECT: MF DX[*2] | 2-sided printing from MF tray |
| SELECT: AUTO SX | 1-sided printing to automatically selected tray |
| SELECT: AUTO DX[*2] | 2-sided printing to automatically selected tray |

[*1] Does not support paper size for A5L and A6.

[*2] 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 MF tray.

**\<Number of pages per job\> (Only for intermittent pattern printing)**

| LCD | Description |
|---|---|
| SELECT: 1P/JOB | Prints 1 page per job [*1] |
| SELECT: 2P/JOB | Prints 2 pages per job [*1] |
| SELECT: 5P/JOB | Prints 5 pages per job [*1] |
| SELECT: 10P/JOB | Prints 10 pages per job [*1] |
| SELECT:xxP/JOB | Prints xx pages per job [*1] [*3] |
| SELECT: 2I/JOB | Prints 2 images per job [*2] |
| SELECT: 4I/JOB | Prints 4 images per job [*2] |
| SELECT: 5I/JOB | Prints 5 images per job [*2] [*4] |
| SELECT: 10I/JOB | Prints 10 images per job [*2] |
| SELECT: 20I/JOB | Prints 20 images per job [*2] |
| SELECT:xxI/JOB | Prints xx images per job [*2] [*3] |

[*1] Selectable only when SX is selected as print type.

[*2] Selectable only when DX is selected as print type.

[*3] Up to 3 digits can be entered after selection.

[*4] 1-sided printing for the 5th page.

## ■ Print pattern



SELECT: K 100%   SELECT: C 100%   SELECT: M 100%   SELECT: Y 100%

SELECT: W 100%   SELECT: R 100%   SELECT: G 100%   SELECT: B 100%

SELECT: KCMY1%   SELECT: KCMY5%   SELECT: Lattice   SELECT: Total (When Print Type is SX)

SELECT: Total (When Print Type is DX)   SELECT: DXEJECT
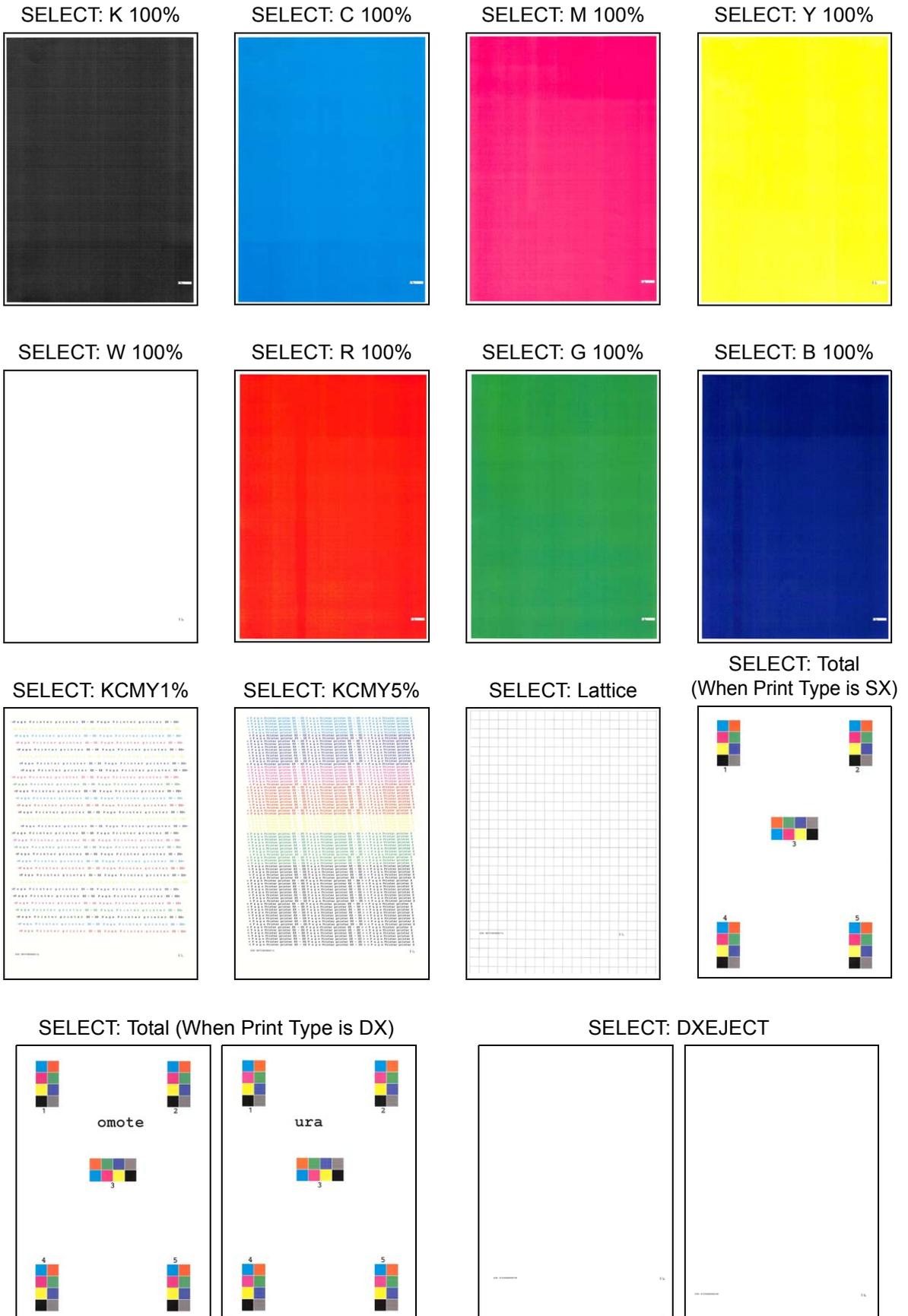
**Fig. 5-15**

## 1.3.21 LED ASSY Test Pattern Print (Function Code 68)

**<Function>**

- This function is used to print the LED ASSY test pattern.

- Test the print image quality or the print operation.

**<Operating Procedure>**

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [6] [8] | | "LCK-F-1P" |
|---|---|---|---|
| (3) | Press the [▲], or [▼] to select the print pattern. | | "M68-L" |
| (4) | [SET] | | "PRINTING" |
| (5) | The LED ASSY test pattern (refer to the next page) is printed. | | |
| (6) | The printing is completed. | | "OK" |
| | 1) | At the time of an error | See the "Error display" table below. |
| | 2) | Proceed to (5) after clearing the error. | "PRINTING" |
| (7) | [X] | | To the initial state of maintenance mode |

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | | "MAINTENANCE 68" |
|---|---|---|---|
| (3) | [OK] | | "LCK-F-1P" |
| (4) | Press the [▲], or [▼] to select the print pattern. | | "M68-L" |
| (5) | [OK] | | "PRINTING" |
| (6) | The LED ASSY test pattern (refer to the next page) is printed. | | |
| (7) | The printing is completed. | | "OK" |
| | 1) | At the time of an error | See the "Error display" table below. |
| | 2) | Proceed to (6) after clearing the error. | "PRINTING" |
| (8) | [Stop/Exit] | | To the initial state of maintenance mode |

| Error display | Remedy |
|---|---|
| Replace Toner # * | Replace the toner cartridge. |
| Cover is Open | Close the Top cover ASSY. |
| No Paper | Refill the paper, then close the paper tray. |
| Jam Tray1 | Remove the jammed paper, then close the paper tray and all covers. |
| Jam Rear | |

* # indicates the toner color (Y, M, or C) of which cartridge became empty.

*Confidential*

## ■ LED ASSY test pattern



**Fig. 5-16**

## 1.3.22 Print Frame Pattern (1-sided Printing) (Function Code 69)

**<Function>**

- This function is used to print the frame pattern on single side of the paper.

- And test the print image quality or the print operation.

**<Operating Procedure>**

For models with touch panel

(1) Load the paper specified in the default paper settings (A4 or Letter) in the paper tray.

(2) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (3) | [6] [9] | | "PRINTING" |
|-----|---------|---|------------|

(4) The frame pattern (refer to the next page) is printed.

| (5) | The printing is completed. | | "WAKU SX" |
|-----|----------------------------|---|-----------|
| | 1) | At the time of an error | See the "Error display" table below. |
| | 2) | Proceed to (4) after clearing the error. | "PRINTING" |

| (6) | [X] | | To the initial state of maintenance mode |
|-----|-----|---|------------------------------------------|

For models without touch panel

(1) Load the paper specified in the default paper settings (A4 or Letter) in the paper tray.

(2) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (3) | [▲], or [▼] | | "MAINTENANCE 69" |
|-----|-------------|---|------------------|
| (4) | [OK] | | "PRINTING" |

(5) The frame pattern (refer to the next page) is printed.

| (6) | The printing is completed. | | "WAKU SX" |
|-----|----------------------------|---|-----------|
| | 1) | At the time of an error | See the "Error display" table below. |
| | 2) | Proceed to (5) after clearing the error. | "PRINTING" |

| (7) | [Stop/Exit] | | To the initial state of maintenance mode |
|-----|-------------|---|------------------------------------------|

| Error display | Remedy |
|---------------|--------|
| Replace Toner | Replace the toner cartridge. |
| Cover is Open | Close the Top cover ASSY. |
| No Paper | Refill the paper, then close the paper tray. |
| Jam Tray1 | Remove the jammed paper, then close the paper tray and all covers. |
| Jam Rear | |

## ■ Frame pattern

4.23mm                                                                    4.23mm

6.35mm(Letter size)

5-65

6.35mm(Letter size)

**Fig. 5-17**

*Confidential*

## 1.3.23 Print Frame Pattern (2-sided Printing) (Function Code 70)

### <Function>

- This function is used to print the frame pattern on both sides of the paper.
- And test the print image quality or the print operation.

### <Operating Procedure>

For models with touch panel

(1) Load the paper specified in the default paper settings (A4 or Letter) in the paper tray.

(2) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (3) | [7] [0] | | "PRINTING" |
|-----|---------|---|------------|

(4) The frame pattern (refer to the next page) is printed.

| (5) | The printing is completed. | | "WAKU DX" |
|-----|-----|-----|-----|
| | 1) | At the time of an error | See the "Error display" table below. |
| | 2) | Proceed to (4) after clearing the error. | "PRINTING" |

| (6) | [X] | To the initial state of maintenance mode |
|-----|-----|-----|

For models without touch panel

(1) Load the paper specified in the default paper settings (A4 or Letter) in the paper tray.

(2) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (3) | [▲], or [▼] | "MAINTENANCE 70" |
|-----|-------------|------------------|
| (4) | [OK] | "PRINTING" |

(5) The frame pattern (refer to the next page) is printed.

| (6) | The printing is completed. | | "WAKU DX" |
|-----|-----|-----|-----|
| | 1) | At the time of an error | See the "Error display" table below. |
| | 2) | Proceed to (5) after clearing the error. | "PRINTING" |

| (7) | [Stop/Exit] | To the initial state of maintenance mode |
|-----|-------------|-----|

| Error display | Remedy |
|---------------|--------|
| Replace Toner | Replace the toner cartridge. |
| Cover is Open | Close the Top cover ASSY. |
| No Paper | Refill the paper, then close the paper tray. |
| Jam Tray1 | Remove the jammed paper, then close the paper tray and all covers. |
| Jam Rear | |
| Jam Duplex | |
| Duplex Disabled | Refill the paper, then close the paper tray and all covers. |

## ■ Frame pattern



4.23mm ... 4.23mm
6.35mm(Letter size) DX page1(DX path)

6.35mm(Letter size)

4.23mm ... 4.23mm
6.35mm(Letter size) DX page2(SX path)

6.35mm(Letter size)

**Fig. 5-18**

## 1.3.24 Print Color Test Pattern (Function Code 71)

**\<Function\>**

- This function is used to print "Color test pattern".

- And test the print image quality or the print operation.

**\<Operating Procedure\>**

For models with touch panel

| | | |
|---|---|---|
| (1) | Load the paper specified in the default paper settings (A4 or Letter) in the paper tray. | |
| (2) | The machine enters into the initial state of maintenance mode. (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.) | |

| | | |
|---|---|---|
| (3) | [7] [1] | "Dthr K/W/Y/M/C_A" |
| (4) | [<<] | |
| (5) | Press the [▲], or [▼] to select the print pattern. | Refer to \<Print pattern\>. |
| (6) | [SET] | "SELECT: LETTER" |
| (7) | Press the [▲], or [▼] to select the print size. | Refer to \<Paper size\>. |
| (8) | [SET] | "SELECT: PLAIN" |
| (9) | Press the [▲], or [▼] to select the print specification. | Refer to \<Print specification\>. |
| (10) | [SET] | "SELECT: SX" |
| (11) | Press the [▲], or [▼] to select SX/ DX. | Refer to \<Print type\>. |
| (12) | [SET] | "SELECT: 1PAGE" |
| (13) | Press the [▲], or [▼] to select the print page. | Refer to \<Print page\>. |
| (14) | Press the [SET] to confirm the item and the printing is started. | "PRINTING" |
| (15) | The printing is completed. | "OK" |

| | | | |
|---|---|---|---|
| | 1) | At the time of an error | Refer to \<Error display\>. |
| | 2) | Print it again after clearing the error. | |

| | | |
|---|---|---|
| | [Mono Start] | Refer to \<Error display\>. |

\* In some cases, printing starts without pressing the [Mono Start].

\<Reprinting\>

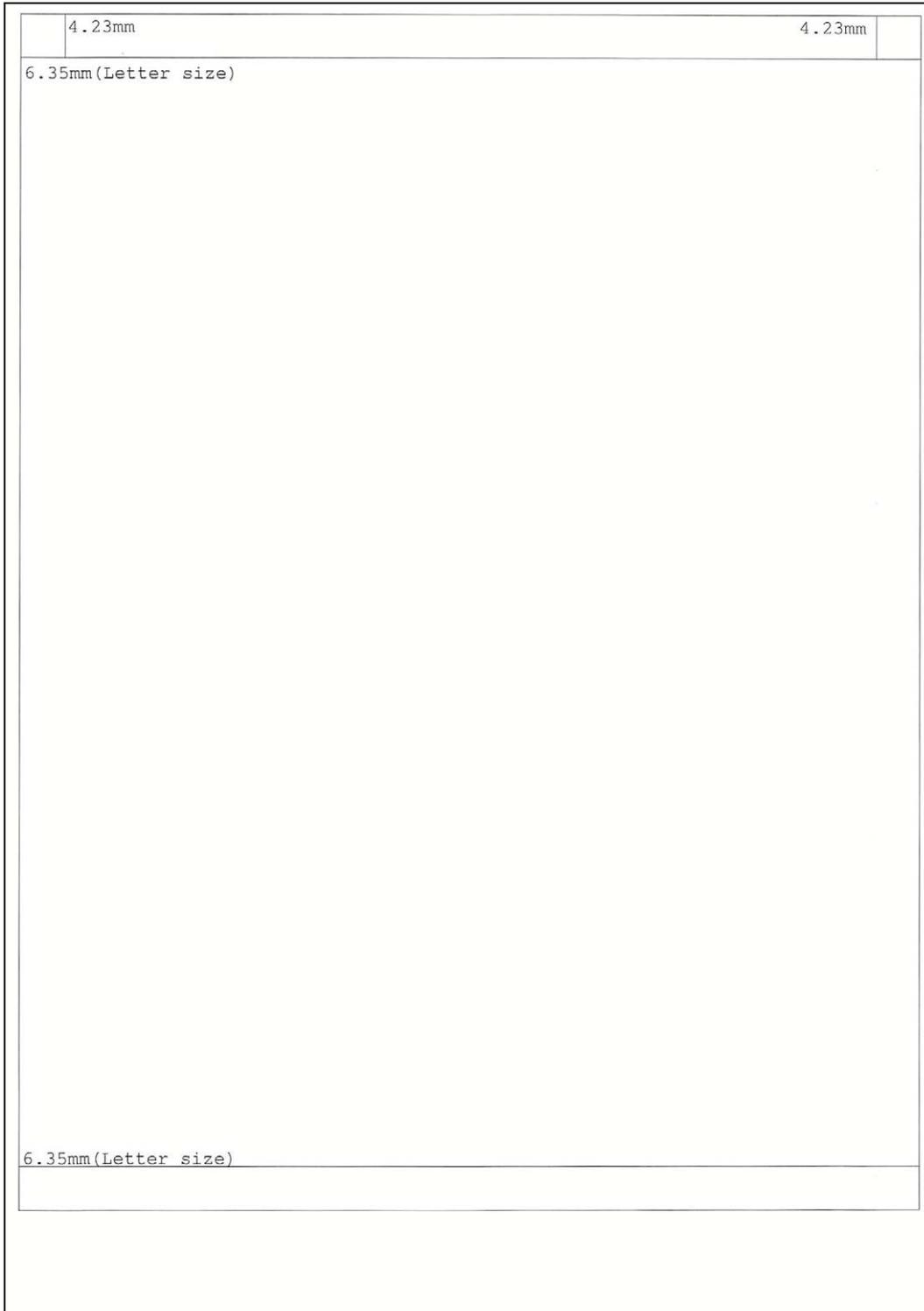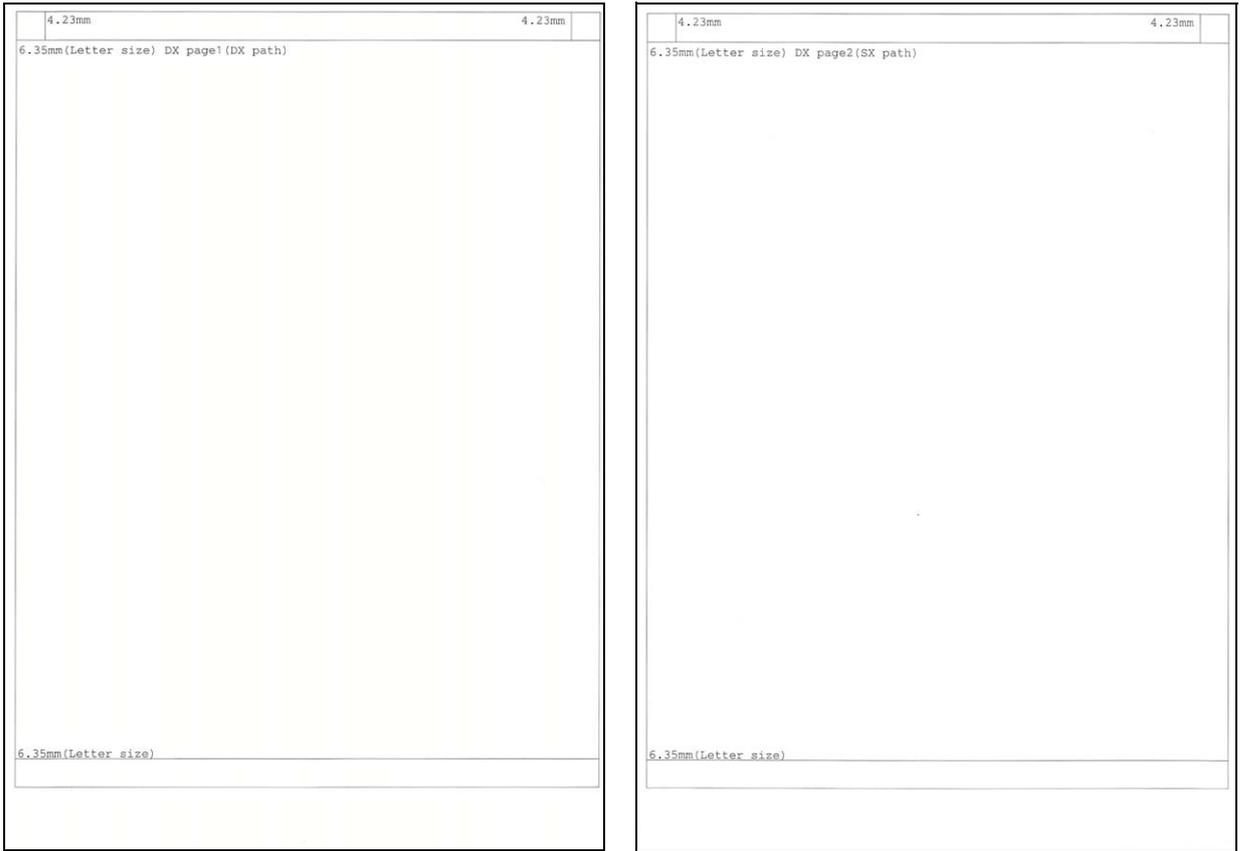| | | |
|---|---|---|
| (16) | [Mono Start] | Return to the print pattern. |
| (17) | [Mono Start] | To (5) |
| (18) | [X] | To the initial state of maintenance mode |

For models without touch panel

(1) Load the paper specified in the default paper settings (A4 or Letter) in the paper tray.

(2) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (3) | [▲], or [▼] | "MAINTENANCE 71" |
|---|---|---|
| (4) | [OK] | "Dthr K/W/Y/M/C_A" |
| (5) | Press the [▲], or [▼] to select the print pattern. | Refer to <Print pattern>. |
| (6) | [OK] | "SELECT: LETTER" |
| (7) | Press the [▲], or [▼] to select the print size. | Refer to <Paper size>. |
| (8) | [OK] | "SELECT: PLAIN" |
| (9) | Press the [▲], or [▼] to select the print specification. | Refer to <Print specification>. |
| (10) | [OK] | "SELECT: SX" |
| (11) | Press the [▲], or [▼] to select SX/DX. | Refer to <Print type>. |
| (12) | [OK] | "SELECT: 1PAGE" |
| (13) | Press the [▲], or [▼] to select the print page. | Refer to <Print page>. |
| (14) | Press the [OK] to confirm the item and the printing is started. | "PRINTING" |
| (15) | The printing is completed. | "OK" |

| | 1) | At the time of an error | Refer to <Error display>. |
|---|---|---|---|

2) Print it again after clearing the error.

| | [Start] | Refer to <Error display>. |
|---|---|---|

* In some cases, printing starts without pressing the [Start].

<Reprinting>

| (16) | [Start] | Return to the print pattern. |
|---|---|---|
| (17) | [Start] | To (5) |
| (18) | [Stop/Exit] | To the initial state of maintenance mode |

## <Print pattern>

| LCD | Description |
|---|---|
| Dthr K/W/Y/M/C_A | Total five sheets of one black sheet + one blank sheet + one sheet for each color with the color mode (auto) |
| MCYK V | 4-color vertical band |
| MCYK H | 4-color horizontal band |
| 2d3s Y | Yellow |
| 2d3s C | Cyan |
| 2d3s K | Black |
| 2d3s M | Magenta |
| Dthr K | Dither 33% black |

* 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:HAGAKI | Postcard size |
| SELECT:FOLIO | Folio size |
| SELECT:LEGAL | Legal size |
| SELECT:EXECUTE | Executive size |
| SELECT:A6 | A6 |
| SELECT:JISB6 | JIS B6 |
| SELECT:A5L | A5L |
| SELECT:A5 | A5 |
| SELECT:JISB5 | JIS B5 |
| SELECT:ISOB5 | ISO B5 |
| SELECT:A4 | A4 |

**\<Print specification\>**

| LCD | Description |
|---|---|
| SELECT:PLAIN | Plain paper |
| SELECT:HAGAKI | Postcard |
| SELECT:GLOSSY | Glossy paper |
| SELECT:ENVTHICK | Envelope (thick) |
| SELECT:ENVTHIN | Envelope (thin) |
| SELECT:ENVELOPE | Envelope |
| SELECT:LABEL | Label |
| SELECT:BOND | Bond paper |
| SELECT:RECYCLED | Recycled paper |
| SELECT:THICKER | Plain paper (thicker) |
| SELECT:THIN | Plain paper (thin) |
| SELECT:THICK | Plain paper (thick) |

**\<Print type\>**

| LCD | Description |
|---|---|
| SELECT:SX | 1-sided printing from T1 |
| SELECT:DX* | 2-sided printing from T1 |

\* Supports paper size only for A4, Letter, Legal, and Folio in 2-sided printing.

**\<Print page\>**

| LCD | Description |
|---|---|
| SELECT: 1PAGE | 1-page printing |
| SELECT: CONTINUE | Continuous printing * |

\* Press the [Stop] or [Stop/Exit] to end the continuous printing.

**\<Error display\>**

| LCD | Remedy |
|---|---|
| Replace Toner | Replace the toner cartridge. |
| Cover is Open | Close the Top cover ASSY. |
| No Paper | Refill the paper, then close the paper tray. |
| Jam Tray1 | Remove the jammed paper, then close the paper tray and all covers. |
| Jam Rear | |

## ■ Color test pattern

Dthr K/W/Y/M/C_A



MCYK V      MCYK H



2d3s Y      2d3s C      2d3s K      2d3s M



Dthr K
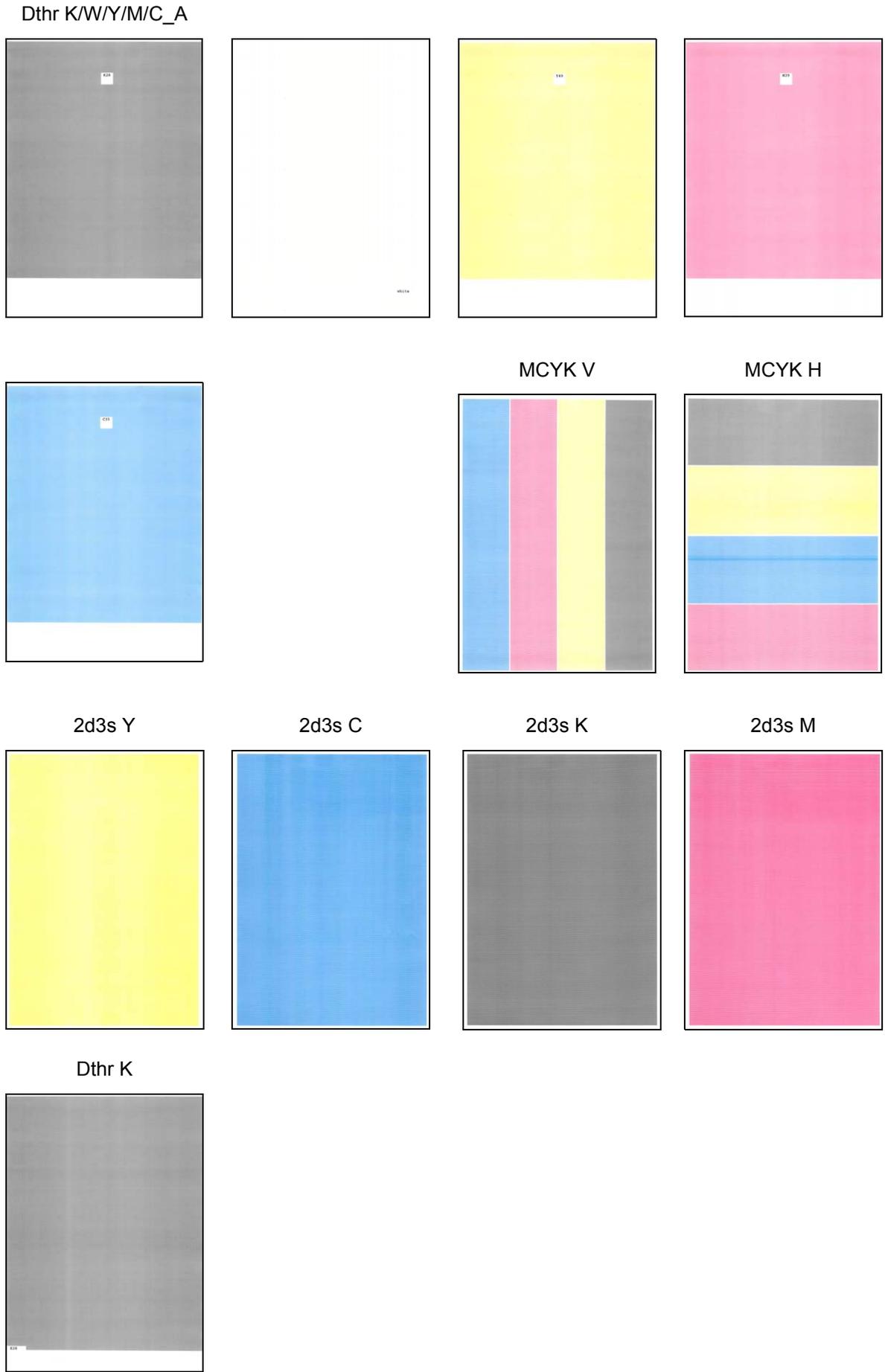


**Fig. 5-19**

## 1.3.25 Sensitivity Adjustment of Density Sensor (Function Code 72)

### <Function>

- This function is used to adjust the sensitivity of density sensor.

- Developing bias voltage correction

### <Operating Procedure>

For models with touch panel

(1)  The machine enters into the initial state of maintenance mode.
     (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [7] [2] | | "REGISTRATION" |
|---|---|---|---|
| (3) | [SET] | | "PLS WAIT 72" |
| (4) | The correction is completed. | | "OK" |
| | 1) | At the time of an error | "ERROR 72" |
| | 2) | Press the [▼] to see the details. (See the "Error display" table below.) | The error appears. |
| | | [Mono Start] | Clear the error. |
| (5) | [X] | | To the initial state of maintenance mode |

For models without touch panel

(1)  The machine enters into the initial state of maintenance mode.
     (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | | "MAINTENANCE 72" |
|---|---|---|---|
| (3) | [OK] | | "PLS WAIT 72" |
| (4) | The correction is completed. | | "OK" |
| | 1) | At the time of an error | "ERROR 72" |
| | 2) | Press the [▼] to see the details. (See the "Error display" table below.) | The error appears. |
| | | [Start] | Clear the error. |
| (5) | [Stop/Exit] | | To the initial state of maintenance mode |

| Error display | Remedy |
|---|---|
| I_Dark_Err<br>Belt_Meas Err<br>Gsp_Patch_Err<br>Gsp_Calc_Err<br>LED_Adj_Err<br>Sens_Belt_Err<br>FAILED DEVBIAS | • Replace the belt unit.<br>• Replace the waste toner box.<br>• Reconnect the eject sensor/relay harness.<br>• Replace the REG mark sensor ASSY.<br>• Replace the eject sensor/relay PCB.<br>• Replace the Main PCB. |
| TONER EMPTY # * | Replace the toner cartridge. |

* # indicates the toner color (Y, M, or C) of which cartridge became empty.

## 1.3.26 Adjustment of Color Registration + Sensitivity Adjustment of Density Sensor + Developing Bias Voltage Correction (Function Code 73)

### \<Function\>

- This function is used to consecutively execute Function Code 66 and Function Code 72.
- Function Code 66: Adjustment of color registration (Adjustment of inter-color position alignment) (auto)
- Function Code 72: Sensitivity adjustment of density sensor + Developing bias voltage correction

### \<Operating Procedure\>

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [7] [3] | "72/66-1" |
| (3) | Press the [SET] to execute Function Code 72. | "PLS WAIT 72" |
| 1) | At the time of an error | "ERROR 72" |
| 2) | Press the [▼] to see the details. (Refer to the "Error display" table of Function Code 72.) | The error appears. |
| | [Mono Start] | Clear the error and return. |
| (4) | Function Code 66 is executed automatically after Function Code 72 is completed. | "PLS WAIT 66-1" |
| 1) | At the time of an error | "ERROR 66-1" |
| 2) | Press the [▼] to see the details. (Refer to \<Error display\> of Function Code 66.) | The error appears. |
| | [Mono Start] | Clear the error and return. |
| (5) | All operations are completed. | "COMP" |
| (6) | [\<\<] | |
| (7) | Press the [▼] to proceed to (2). | "72/66-1" |
| (8) | [X] | To the initial state of maintenance mode |

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 73" |
| (3) | [OK] | "72/66-1" |
| (4) | Press the [OK] to execute Function Code 72. | "PLS WAIT 72" |
| 1) | At the time of an error | "ERROR 72" |
| 2) | Press the [▼] to see the details. (Refer to the "Error display" table of Function Code 72.) | The error appears. |
| | [Start] | Clear the error and return. |
| (5) | Function Code 66 is executed automatically after Function Code 72 is completed. | "PLS WAIT 66-1" |
| 1) | At the time of an error | "ERROR 66-1" |
| 2) | Press the [▼] to see the details. (Refer to \<Error display\> of Function Code 66.) | The error appears. |
| | [Start] | Clear the error and return. |
| (6) | All operations are completed. | "COMP" |
| (7) | Press the [▼] to proceed to (3). | "72/66-1" |
| (8) | [Stop/Exit] | To the initial state of maintenance mode |

*Confidential*

## 1.3.27 Setting by Spec (Function Code 74)

### <Function>

- This function is used to customize the machine according language, function settings.

- If there is no entry for one minute or longer, the machine returns to the initial state of maintenance mode.

### <Operating Procedure>

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [7] [4] | The currently set spec code |
| (3) | Enter the spec code (four digits) you want to set. (See the setting by spec code list below.) | The entered value |
| (4) | Press the [Mono Start] to confirm the entry. | "PARAMETER INIT" |

When an unsupported code is entered, return to (3).

(5) The machine returns to the initial state of maintenance mode.

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 74" |
| (3) | [OK] | The currently set spec code |
| (4) | [▲], or [▼] | Select the first digit |
| (5) | [OK] | The cursor moves to the second digit |
| (6) | Repeat steps (4) through (5), and enter the second digit to the fourth digit (skip the invalid number selected). | |
| (7) | [Start] | "PARAMETER INIT" |

(8) The machine returns to the initial state of maintenance mode.

### ■ Setting by spec code list
See attachment.
(Refer to "[FCL]SpecCode_(date of issue).pdf".)

## 1.3.28 Print Maintenance Information (Function Code 77)

**<Function>**

- This function is used to print the current machine information on maintenance.

**<Operating Procedure>**

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [7] [7] | The printing is started. |

(3) When printing is completed, the machine returns to the initial state of maintenance mode.

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 77" |
| (3) | [OK] | The printing is started. |

(4) When printing is completed, the machine returns to the initial state of maintenance mode.

■ **Maintenance information**



**MAINTENANCE**

① DCP-L3520CDW series Serial ② No.=E81510H1N000114
⑥ Main ROM: Ver.0.64 U2201312040    ⑪ ROM ChkSum: F7C2
⑦ Sub3 ROM: M2111261758             ⑫ RTC Check: NG
⑧ Boot ROM: B2201141640             ⑬ RTC BackUp: OK
⑨ Engine Version: f0.71             ⑭ RAM Size =  512Mbyte
⑩ LT1 Main ROM: 0.01                ⑮ Memory Version: a
                                    ⑯ USB Prod.ID: 04FA

**Fig. 5-20**



Print Date:01/01/23

③ Model=8CE-963 ④ Country=0701  ⑤ SW CheckSum=AB /NG
 ⑰ OK   OK    000000    00000000    00000000
 ⑱ OK NG 00 00 00 00 01 00
 ⑲ 0006 0007 0001 0010 0000 0000 00FF
    00000000 00000158 00000000 00000000
 ⑳ 00000000 00000000 00000000 00000000
    00000000 00000000 00000000 00000000
 ㉑ 00 00 00 00


 ㉔ Belt Unit: 49405 (99%)
 ㉕ Fuser Unit: 48488 (97%)
 ㉖ PF Kit MP: 50000 (100%)

**Fig. 5-21**

```
Remaining life of:
㉒ *Toner Cartridge          ㉓ **Drum Unit
   Cyan(C): 90%                Cyan(C): 18488 (93%)
   Magenta(M): 89%            Magenta(M): 18488 (93%)
   Yellow(Y): 89%             Yellow(Y): 18488 (93%)
   Black(BK): 86%            Black(BK): 18488 (93%)
   <Device Status(Total/2-sided)>            <Error H
㉗ Total Page Count: 1512/6                    1: 4C0
   Color: 5/2            Mono: 1507/4          2: 6E0
㉘ Copy Count: 5/2                             3: 250
   Color: 3/2            Mono: 2/0            4: 250
㉙ PC-Print Count: 1500/0                      5: 250
   Color: 0/0           Mono: 1500/0          6: 250
㉚ FAX Count: 0/0                              7: 6E0
   Color: 0/0           Mono: 0/0             8: 4C0
㉛ Other Count: 7/4                            9: 930
   Color: 2/0           Mono: 5/4            10: 700
```

**Fig. 5-22**

```
㊹ <Error History (last 10 errors)>            Page  (C)   %
    1: 4C01:Replace Toner (BK) 01/01/23 20:51  1510   21   42
    2: 6E00:Toner Error        01/01/23 20:32  1510   21   42
    3: 2502:No Toner           01/01/23 20:24  1510   21   42
    4: 2503:No Toner           01/01/23 20:24  1510   21   42
    5: 2501:No Toner           01/01/23 20:24  1510   21   42
    6: 2500:No Toner           01/01/23 20:24  1510   21   42
    7: 6E00:Toner Error        01/01/23 03:35  1510   25   38
    8: 4C01:Replace Toner (BK) 01/01/23 03:13  1510   26   39
    9: 9309:No Paper           01/01/23 03:00  1417   26   37
   10: 7000:Jam Inside         01/01/23 02:25   729   24   41
㊺ <Replace Count>
   Toner Cartridge                        Drum Unit
    C: 0                00/00/00            Cyan(C): 0
    M: 0                00/00/00            Magenta(M): 0
    Y: 0                00/00/00            Yellow(Y): 0
    K: 0                00/00/00            Black(BK): 0
   Waste Toner: 0
   Belt Unit: 0
   Fuser Unit: 0/0/   0 0 0
   PF Kit MP: 0
㊻ <Swap Count>Toner C#: 3   M#: 3   Y#: 3   K#: 5
```

**Fig. 5-23**

```
    ***Average Coverage(Total)
㉜C: 3.94%   M: 3.49%   Y: 12.59%  K: 0.30%
    ***Average Coverage(Current)*
㉝C: 655.35% M: 655.35% Y: 655.35% K: 655.35%
    ***Average Coverage(Previous)
㉞C: 0.00%   M: 0.00%   Y: 0.00%   K: 655.35%
    ***Average Coverage(Latest)
㉟C: 0.00%   M: 0.00%   Y: 41.38%  K: 0.00%
㊱<Drum Information (Page/Count)>
  (C): 1512/9247        (Y): 1512/9247
  (M): 1512/9247        (BK): 1512/9247
㊲<Developing Roller Count(Current/Previous)>
  (C): 1985/0           (Y): 1999/0
  (M): 1985/0           (BK): 2617/0
㊳<Total Pages>         1512
  MP Tray: 0            2-sided: 3
  Tray 1: 1511          Tray 2: 0
  Std.Output: 1509
  A4/Letter: 1512       Envelope: 0
  Legal/Folio: 0        A5: 0
  B5/Executive: 0       Others: 0
  Plain/Thin/Recycled: 1512
  Thick/Thicker/Bond: 0
  Envelope/Env.Thick/Env.Thin: 0
  Label: 0              Hagaki: 0
  Glossy: 0
```

**Fig. 5-24**

```
㊼<Scan Count>
  SX Page Count: 4      2-sided Page Count: 2
  FB Page Count: 4      Scanner Page Count: 2
  ADF Jam SX: 0         ADF Jam 2-sided: 0
㊽<Fax Count> Fax TX Count: 0
㊾<COM Error>
  1: 00000000  00/00/00 00:00
  2: 00000000  00/00/00 00:00
  3: 00000000  00/00/00 00:00
㊿<Developing Bias: C:433V M:435V Y:372V K:387V>
51<Engine Sensor Log>
  KO: 000130/001695    MN: 000315/001740
  RS: 000690/001700    EJ: 002535/001755
```

**Fig. 5-25**

㊴ Toner(Current/Previous)
   C: 2/0                   Y: 2/0
   M: 2/0                   K: 13/1503
㊵ Waste Toner: 1512
㊶ Developing Roller Count(Current/Previous)
 (C): 9999999/0          (Y): 9999999/0
 (M): 9999999/0         (BK): 9999999/0
  NGC: 0

㊷ <Total Paper Jams: 2>
  Jam MP Tray: 0
  Jam Tray 1: 1
  Jam Tray 2: 0
  Jam Inside: 1
  Jam Rear: 0
  Jam 2-sided: 0

㊸ <Function Info: 0000000000 0000000000 0000000000 0000000000 0000000000 0000000000>

RS: 000690/001
<Status Log>
 830100  862000
 830100  835003
<HP ME/HP ME Lo
 00/00:00:00:00
<Temperature> 2
<Humidity> 31%
<Power On Time:
<First Date PC
<Last Media Typ

*   Remaining life will
    their coverage and
**  Based on A4/Letter
*** Calculated coverage

**Fig. 5-26**

㊾ <Status Log>
  830100   862000   835003   830100   835003
  830100   835003   830100   854B01   854A01
㊾ <HP ME/HP ME Log>
  00/00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
㊾ <Temperature> 25 degrees(C)  (MAX:27 MIN:19)
㊾ <Humidity> 31%            (MAX:52 MIN:35)
㊾ <Power On Time: 4 hours> <Power On Count: 31>
㊾ <First Date PC Prn: --/--/--  /  RTC: --/--/-->
㊾ <Last Media Type: Plain>       ㊾ <Service Info: 0>

**Fig. 5-27**

*Confidential*

| | | | |
|---|---|---|---|
| 1 | Model name (Refer to Fig. 5-20.) | 29 | Total PC printed pages Color/Mono (Total/2-sided) (Refer to Fig. 5-22.) |
| 2 | Serial number (Refer to Fig. 5-20.) | 30 | Total fax pages Color/Mono (Total/2-sided) (Refer to Fig. 5-22.) |
| 3 | Model code (Refer to Fig. 5-21.) | 31 | Total pages printed by other methods Color/Mono (Total/2-sided) (Refer to Fig. 5-22.) |
| 4 | Spec code (Refer to Fig. 5-21.) | 32 | Accumulated average coverage (Each toner) (Refer to Fig. 5-24.) |
| 5 | Switch check sum (Factory use) and comparison of default / current value (Refer to Fig. 5-21.) | 33 | Average coverage (Current toner) (Refer to Fig. 5-24.) |
| 6 | Main firmware version (Refer to Fig. 5-20.) | 34 | Average coverage (Previous used toner) (Refer to Fig. 5-24.) |
| 7 | Sub firmware version (Models without touch panel only) (Refer to Fig. 5-20.) | 35 | Latest job average coverage (Each toner) (Refer to Fig. 5-24.) |
| 8 | Boot firmware version (Refer to Fig. 5-20.) | 36 | Drum page count / Rotations of drum (Refer to Fig. 5-24.) |
| 9 | Engine archive version (Refer to Fig. 5-20.) | 37 | Rotations of DEV roller (Current toner/ Previous used toner) (Refer to Fig. 5-24.) |
| 10 | ROM version for T2 control PCB (Refer to Fig. 5-20.) | 38 | Total printed pages per paper tray/paper size/paper type (Refer to Fig. 5-24.) |
| 11 | ROM check sum (Refer to Fig. 5-20.) | 39 | Printed pages per toner (Current/Previous) (Refer to Fig. 5-26.) |
| 12 | RTC (Real Time Clock) check (Refer to Fig. 5-20.) | 40 | Number of pages printed of waste toner box (Refer to Fig. 5-26.) |
| 13 | RTC (Real Time Clock) check backup (Refer to Fig. 5-20.) | 41 | Rotations of DEV roller used in printing (Current toner/Previous used toner) (Refer to Fig. 5-26.) |
| 14 | RAM size (Refer to Fig. 5-20.) | | |
| 15 | Memory version (Refer to Fig. 5-20.) | 42 | Total number of paper jams / Paper jams that have occurred in each section in the machine (Refer to Fig. 5-26.) |
| 16 | USB ID code (Refer to Fig. 5-20.) | 43 | Function information (Refer to Fig. 5-26.) |
| 17 | Result of function code 05 / Result of function code 72 / Setting by wireless LAN spec, Wireless LAN output peak, WLAN Setup YES or NO setting / Toner type CMYK (Current) / Toner type CMYK (Previous) (Refer to Fig. 5-21.) | 44 | Machine error log (Error code: Error message) / Time and Date / Total pages printed / Temperature and Humidity (Refer to Fig. 5-23.) |
| | | 45 | Number of times each consumable has been replaced (Refer to Fig. 5-23.) |
| 18 | Main PCB inspection log / High voltage inspection log / The number of times that the discharge error / Fuser error / Process status / Irregular power supply detection error occurred (Refer to Fig. 5-21.) | 46 | Scanned pages (Refer to Fig. 5-23.) |
| | | 47 | Number of times each toner has been swapped (Refer to Fig. 5-25.) |
| 19 | Auto registration / Developing bias voltage correction / Gamma correction / Auto registration (user) / Developing bias voltage correction (user) / Gamma correction (user) / Registration error / Color calibration flag (Refer to Fig. 5-21.) | 48 | Number of fax transmission times (Refer to Fig. 5-25.) |
| | | 49 | Communication error log (Refer to Fig. 5-25.) |
| | | 50 | Each development bias voltage value (Refer to Fig. 5-25.) |
| 20 | ADF sensor log (Refer to Fig. 5-21.) | 51 | Engine sensor log (Refer to Fig. 5-25.) |
| 21 | The number of MPS replacement parts used (Toner C/M/Y/K drum) / Genuine toner identification information (Refer to Fig. 5-21.) | 52 | Status log (Refer to Fig. 5-27.) |
| 22 | Estimated remaining toner amount (Refer to Fig. 5-22.) | 53 | Home position detection / Home position error display (Refer to Fig. 5-27.) |
| 23 | Remaining life of drum (Refer to Fig. 5-22.) | 54 | Current temperature / Highest and lowest temperature in the past (Refer to Fig. 5-27.) |
| 24 | Remaining life of belt unit (Refer to Fig. 5-21.) | 55 | Current humidity / Highest and lowest humidity in the past (Refer to Fig. 5-27.) |
| 25 | Remaining life of fuser (Refer to Fig. 5-21.) | 56 | Total power distribution time / The number of times that the power is turned ON (Refer to Fig. 5-27.) |
| 26 | Remaining life of PF kit (Refer to Fig. 5-21.) | 57 | Start date for machine operation / Initial set date of RTC (Refer to Fig. 5-27.) |
| 27 | Total printed pages Color/Mono (Total/2-sided) (Refer to Fig. 5-22.) | 58 | Latest paper type used (Refer to Fig. 5-27.) |
| 28 | Total copied pages Color/Mono (Total/2-sided) (Refer to Fig. 5-22.) | 59 | Subscription mode: Disabled/Enabled (Refer to Fig. 5-27.) |

## 1.3.29 Check Fan Operation (Function Code 78)

### <Function>

- This function is used to check if the fan operates normally.

- And check the rotation speeds changed among three settings: 100%, 50%, OFF.

| LCD | Name | Details |
|-----|------|---------|
| F | Fan | Evacuates hot air of the fuser. |

### <Operating Procedure>

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [7] [8] The fan rotates at 100% speed. | "F100" |
|-----|------|---------|
| (3) | [Mono Start] The fan rotates at 50% speed. | "F50" |
| (4) | [Mono Start] The fan stops. | "F 0" |
| (5) | [X] | To the initial state of maintenance mode |

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 78" |
|-----|------|---------|
| (3) | [OK] The fan rotates at 100% speed. | "F100" |
| (4) | [Start] The fan rotates at 50% speed. | "F50" |
| (5) | [Start] The fan stops. | "F 0" |
| (6) | [Stop/Exit] | To the initial state of maintenance mode |

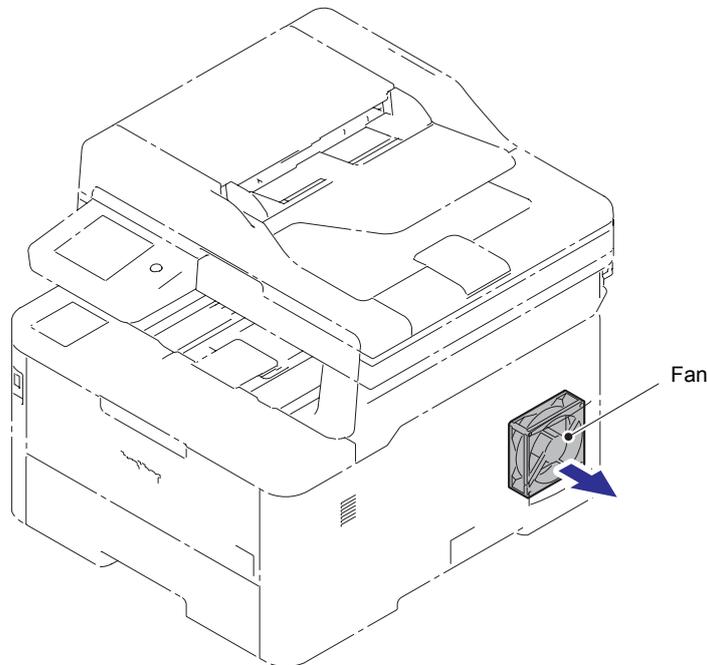### ■ Location of fan



**Fig. 5-28**

## 1.3.30 Delete Fax Data (Function Code 79)

### <Function>

- This function is used to delete the fax data in the machine memory.

### <Operating Procedure>

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [7] [9] | "SELECT 79?" |
|---|---|---|
| | [X] | To the initial state of maintenance mode |
| (3) | [SET] | "BACKUP CLEAR" |

(4) When deleting is completed, the machine returns to the ready state.

## 1.3.31 Display Machine Log Information (Function Code 80)

### <Function>

- This function is used to display the current machine information on the LCD.

### <Operating Procedure>

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [8] [0] | "MACERR_01:(****)"   **** represents an error code. |
|---|---|---|
| (3) | [<<] | |
| (4) | [▼] | To next item |
| | [▲] | To previous item |
| (5) | [X] | To the initial state of maintenance mode |

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 80" |
|---|---|---|
| (3) | [OK] | "MACERR_01:(****)"   **** represents an error code. |
| (4) | [Start] | To next item |
| | [Clear] | To previous item |
| (5) | [Stop/Exit] | 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 |
| WLAN: 47 0 | WLAN information |
| PCB: | Main PCB serial number [*3] |
| 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 |

| LCD | Description |
|---|---|
| KTN_RRM:67% | Amount of remaining black toner estimated from the number of develop rotations |
| CDRM_PG:00000000 | Printed pages for cyan drum unit |
| MDRM_PG:00000000 | Printed pages for magenta drum unit |
| YDRM_PG:00000000 | Printed pages for yellow drum unit |
| KDRM_PG:00000000 | Printed pages for black drum unit |
| PFMP_PG:00000000 | Pages fed from PF kit MP (For models with MP tray only) |
| FUSR_PG:00000000 | Printed pages on Fuser |
| BELT_PG:00000000 | Printed pages on belt unit |
| TTL_PG:00000000 | Total number of pages printed |
| DX_PG:00000000 | Paper input for DX 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 |
| TTLCOPY:00000000 | Total pages copied |
| DX_COPY:00000000 | Total pages copied on both sides |
| CL_COPY:00000000 | Total number of color pages copied |
| MN_COPY:00000000 | Total number of monochrome pages copied |
| DX_CCPY:00000000 | Total number of two-sided pages copied |
| DX_MCPY: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 |
| TTLFAX:00000000 | Total List / Fax pages printed (For models with FAX only) |
| DX_FAX:00000000 | Total List / Fax pages printed on both sides (For models with FAX only) |
| CL_FAX:00000000 | Total List / Fax pages color printed (For models with FAX only) |
| MN_FAX:00000000 | Total List / Fax pages monochrome printed (For models with FAX only) |
| DX_CFAX:00000000 | Total List / Fax pages color printed on both sides (For models with FAX only) |
| DX_MFAX:00000000 | Total List / Fax pages monochrome printed on both sides (For models with FAX only) |
| 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 |
| CDRUM:00000000 | Number of cyan drum rotations |
| MDRUM:00000000 | Number of magenta drum rotations |
| YDRUM:00000000 | Number of yellow drum rotations |
| KDRUM:00000000 | Number of black drum rotations |
| CTN_RND: 00000000 | Number of cyan DEV roller rotations |

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| LCD | Description |
|---|---|
| MTN_RND: 00000000 | Number of magenta DEV roller rotations |
| YTN_RND: 00000000 | Number of yellow DEV roller rotations |
| KTN_RND: 00000000 | Number of black DEV roller rotations |
| MP_PG:00000000 | Paper input for MP tray (For models with MP tray only) |
| MN_PG:00000000 | Paper input for MF tray (For models with MF tray only) |
| TR1_PG:00000000 | Paper input for T1 |
| TR2_PG:00000000 | Paper input for T2 |
| DX_PG:00000000 | Paper passed through DX tray |
| A4+LTR:00000000 | Total paper input for A4 and Letter |
| LG+FOL:00000000 | Total paper input for Legal and Folio |
| 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 |
| 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:00000000 | Paper jams that have occurred in the MP tray (For models with MP tray only) |
| MN_JAM:00000000 | Paper jams that have occurred in the MF tray (For models with MF tray only) |
| TR1_JAM:00000000 | Paper jams that have occurred in T1 |
| TR2_JAM:00000000 | Paper jams that have occurred in T2 |
| 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 DX 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 [4] |
| MTN_CH:0000 | Number of times that the magenta toner cartridge has been replaced [4] |
| YTN_CH:0000 | Number of times that the yellow toner cartridge has been replaced [4] |
| KTN_CH:0000 | Number of times that the black toner cartridge has been replaced [4] |
| CDRM_CH:0000 | Number of times that the cyan drum unit has been replaced [4] |
| MDRM_CH:0000 | Number of times that the magenta drum unit has been replaced [4] |
| YDRM_CH:0000 | Number of times that the yellow drum unit has been replaced [4] |
| KDRM_CH:0000 | Number of times that the black drum unit has been replaced [4] |
| WTNR_CH:0000 | Number of times that the waste toner box has been replaced [4] |
| BELT_CH:0000 | Number of times that the belt unit has been replaced [4] |
| FUSR_CH:0000 | Number of times that the Fuser has been replaced [4] |
| PFMP_CH:0000 | Number of times that the PF kit MP has been replaced [4] |
| CTN_SWP:0000 | Number of times that the cyan toner has been replaced [4] |
| MTN_SWP:0000 | Number of times that the magenta toner has been replaced [4] |
| YTN_SWP:0000 | Number of times that the yellow toner has been replaced [4] |
| KTN_SWP:0000 | Number of times that the black toner has been replaced [4] |
| 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 |

| LCD | Description |
|---|---|
| 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 |
| ADTL_PG:00000000 | Total pages of ADSX_PG and ADDX_PG |
| ADSX_PG:00000000 | ADF single-side scanned pages |
| ADDX_PG:00000000 | ADF double-side scanned pages |
| SCN_PG:00000000 | The number of scanned pages (except Fax and Copy) |
| FB_PG:00000000 | Total FB scanned pages |
| ADSX_JAM:000000 | Document jams that have occurred on ADF single-side scanning |
| ADDX_JAM:000000 | Document jams that have occurred on ADF duplex scanning (For duplex scanning models only) |
| FXTX_PG:00000000 | The number of faxed pages |
| COMERR#:00000000 | Communication error log (past three errors) [*5] |
| 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) [*6] |
| HODN_ER:0000 | The number of discharge errors occurred |
| FUSR_ER:0000 | The number of Fuser errors occurred |
| DEVSTATUS_##:00 | Log for design analysis [*7] |
| FUNC1=0000000000 | Function information |

[*1] 01 to 10 will be displayed for "##" in chronological order. Pressing the [SET] or [OK] 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 [SET] or [OK] 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.

[*2] Last 12 digits of the serial number are displayed.
The serial number can be changed according to the procedures below.

For models with touch panel

1) While the serial number is displayed, press the [9], [4], [7], and [5] in this order to enter the edit mode.

2) Use the numeric key to enter the first digit of the serial number. The second digit starts to flash. 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.

| Numeric key | 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]. The serial number is saved and the machine returns to the initial state of maintenance mode.

<u>For models without touch panel</u>

1) While "USB:********" is displayed on the LCD, press the [▲] or [▼] to display "9".

2) Press the [OK]. "USB:********" is displayed on the LCD again.

3) Repeat the procedures 1) and 2) to enter "4", "7", and "5" respectively.

4) When a cursor appears at the first digit of the serial number on the LCD display, the edit mode is entered.

5) Press the [▲] or [▼] to enter the first digit of the serial number.

6) Press the [OK]. The cursor moves to the second digit. Likewise, repeatedly enter the 15-digit serial number from the second digit to the last.

7) Press the [Start]. The serial number is saved and the machine returns to the initial state of maintenance mode.

[*3] Pressing the [SET] or [OK] while "PCB:" is displayed shows the serial number of the main PCB on the LCD.

[*4] Pressing the [SET] or [OK] 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.

[*5] Pressing the [SET] or [OK] while the communication error is displayed shows "DATE:0000000000" and the date of replacement on the LCD.

[*6] 01 to 10 will be displayed for "##" in chronological order. Pressing the [SET] or [OK] 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.

[*7] 01 to 10 will be displayed for "##" in chronological order. Pressing the [SET] or [OK] while log for design analysis is displayed shows "PGCNT:00000000" (total pages printed at the time of the error) on the LCD.

## 1.3.32 Display Machine Error Code (Function Code 82)

**<Function>**

- This function is used to display the last error code that occurred.

**<Operating Procedure>**

<u>For models with touch panel</u>

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [8] [2] | "MACHINE ERR (****)" **** represents an error code. |
|-----|---------|-----------------------------------------------------|
| (3) | [X]     | To the initial state of maintenance mode            |

<u>For models without touch panel</u>

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| (2) | [▲], or [▼] | "MAINTENANCE 82" |
|-----|-------------|------------------|
| (3) | [OK] | "MACHINE ERR (****)" **** represents an error code. |
| (4) | [Stop/Exit] | To the initial state of maintenance mode |

## 1.3.33 Developing Bias Voltage Correction (Function Code 83)

**\<Function\>**

- This function is used to perform developing bias voltage correction. (Fix the density of each color toner.)
  The developing bias voltage correction is also executed in Function Code 72 and Function Code 73.

**\<Operating Procedure\>**

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
    (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | Press the [8] and then [3] to start the correction. | "PLS WAIT 83" |
| (3) | The correction is completed. | "MODE KYMC (****)" * represents any number from 0 to 3. |
| | 1) At the time of an error | "ERROR 83" |
| | 2) Press the [▼] to see the details. (See the "Error display" table below.) | The error appears. |
| | [Mono Start] | Clear the error. |
| (4) | [SET] | To the initial state of maintenance mode |

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
    (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 83" |
| (3) | Press the [OK] to start the correction. | "PLS WAIT 83" |
| (4) | The correction is completed. | "MODE KYMC (****)" * represents any number from 0 to 3. |
| | 1) At the time of an error | "ERROR 83" |
| | 2) Press the [▼] to see the details. (See the "Error display" table below.) | The error appears. |
| | [Start] | Clear the error. |
| (5) | [OK] | To the initial state of maintenance mode |

| Error display | Remedy |
|---|---|
| I_Dark_Err<br>LED_Adj_Err<br>Belt_Meas_Err<br>Sens_Belt_Err<br>FAILED DEVBIAS | • Replace the belt unit.<br>• Replace the waste toner box.<br>• Reconnect the eject sensor/relay harness.<br>• Replace the REG mark sensor ASSY.<br>• Replace the eject sensor/relay PCB.<br>• Replace the Main PCB. |
| TONER EMPTY # * | Replace the toner cartridge. |

\* # indicates the toner color (Y, M, or C) of which cartridge became empty.

## 1.3.34 Send Error List (Telephone Line) (Function Code 87)

**\<Function\>**

- This function is used to send the error list to the service side.

**\<Operating Procedure\>**

(1) The phone is in a busy state.

(2) The machine enters into the initial state of maintenance mode.
    (Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (3) | Press the [8] and then the [7] to send the error list. | "SENDING P.01" |

(4) When sending the error list is completed, the machine returns to the ready state.

## 1.3.35 Reset Counters after Parts Replacement (Function Code 88)

### <Function>

- This function is used to clear the counter of each consumable part and count up Replace Count by one.

### <Operating Procedure>

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [8][8] | "Reset-Fuser Unit" |
| (3) | [<<] | |
| (4) | [▲], or [▼] | "Reset-(*******)"<br>******* represents the name of the selected part. |
| (5) | [SET] | "(*******) OK?" |
| (6) | Press the [SET] to reset the counter for the selected part and return to (4). | |
| (7) | [X] | To the initial state of maintenance mode |

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 88" |
| (3) | [OK] | "Reset-Fuser Unit" |
| (4) | [▲], or [▼] | "Reset-(*******)"<br>******* represents the name of the selected part. |
| (5) | [OK] | "(*******) OK?" |
| (6) | Press the [OK] to reset the counter for the selected part and return to (4). | |
| (7) | [Stop/Exit] | To the initial state of maintenance mode |

| LCD | Part name | Counter to be reset |
|---|---|---|
| Reset-Fuser Unit | Fuser | Printed pages counter |
| Reset-LVPS | LVPS PCB | Irregular power supply detection counter |
| Reset-PF Kit MP | PF kit MP | Printed pages counter |

## 1.3.36 Quit Maintenance Mode (Function Code 99)

### <Function>

- This function is used to restart the machine, and return it to the ready state.

### <Operating Procedure>

For models with touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [9] [9] | |

(3) The machine returns to the ready state.

For models without touch panel

(1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

| | | |
|---|---|---|
| (2) | [▲], or [▼] | "MAINTENANCE 99" |
| (3) | [OK] | |

(4) The machine returns to the ready state.

# 2. OTHER SERVICE FUNCTIONS

**<Explanation>**

If pressing a key operation is needed, the key operation and the LCD display are described as follows.
Common Example:

| A key or Keys pressed | Message appears on the LCD |
|---|---|

## 2.1 Switch ON/OFF setting of color registration

**<Function>**

- This function switches ON/OFF setting of color registration based on the specified conditions.

- If the correction is required, it will be executed automatically regardless of ON/OFF.

**<Operating Procedure>**

For models with touch panel

(1) The machine is in the ready state.

(2) 

| (3) | [All Settings] | |
|---|---|---|
| (4) | [Printer] | A selection screen |
| (5) | [ ∧ ], or [ ∨ ] | |
| (6) | [Color Correction] | The selected screen |
| (7) | [Auto Correction] | [On], or [Off] |

Return to (6).

| (8) | [  ] | To the ready state |
|---|---|---|

For models without touch panel

(1) The machine is in the ready state.

| (2) | [Menu] | |
|---|---|---|
| (3) | [▲], or [▼] | "3. Printer" |
| (4) | [OK] | A selection screen |
| (5) | [▲], or [▼] | "17. ClrCorrection" |
| (6) | [OK] | The selected screen |
| (7) | [▲], or [▼] | "3. Auto Correct" |
| (8) | [OK] | "(Set Value)" |
| (9) | [▲], or [▼] | Select the desired value. |
| (10) | [OK] | "Accepted" |

Return to (7).

| (11) | [Stop/Exit] | To the ready state |
|---|---|---|

## 2.2 Print Communication List

**<Function>**

• This function is used to print Communication List.

**<Operating Procedure>**

(1) The machine is in the ready state.

| | | |
|---|---|---|
| (2) | Press the [ 🏠 ] for five seconds. | |

(3) Press the blank field at the bottom.

```
1.Serial No
                    123456789012345
2.ROM Version
                    403071112:F97B
```
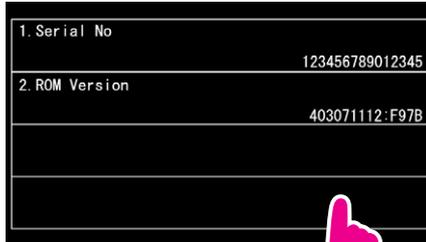
| | | |
|---|---|---|
| (4) | [#] [1] [0] [4] [1] [4] | The Communication List is printed. |

```
1      2      3      4      Stop   Mono
                                   Start
5      6      7      8      *      Color
                                   Start
≪      9      0      SET    #      ≫
```
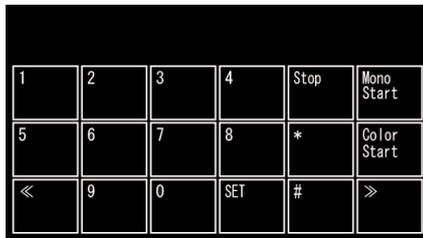
| | | |
|---|---|---|
| (5) | [X] | To the initial state of maintenance mode |

# CHAPTER 6  PERIODICAL MAINTENANCE

# 1.  SAFETY PRECAUTIONS

Refer to "SAFETY INFORMATION".

# 2.  PERIODICAL REPLACEMENT PARTS

## 2.1  Preparation

Refer to "8.1 Preparation" in Chapter 3.

## 2.2  Fuser

Refer to "8.7 Fuser" in Chapter 3.
After replacing the Fuser, reset the counter.
(Refer to "1.3.35  Reset Counters after Parts Replacement (Function Code 88)" in Chapter 5.)

## 2.3  PF kit 1

Refer to "8.62 Roller holder ASSY" in Chapter 3.
After replacing the PF kit 1, reset the counter.
(Refer to "1.3.35  Reset Counters after Parts Replacement (Function Code 88)" in Chapter 5.)

## 2.4  PF kit 2

Refer to "9.4 LT roller holder ASSY" in Chapter 3.
After replacing the PF kit 2, reset the counter.
(Refer to "1.3.35  Reset Counters after Parts Replacement (Function Code 88)" in Chapter 5.)

## 2.5  PF kit MP

Refer to "8.36 MP roller holder ASSY (For models with MP tray)" in Chapter 3.
After replacing the PF kit MP, reset the counter.
(Refer to "1.3.35  Reset Counters after Parts Replacement (Function Code 88)" in Chapter 5.)

# APPENDIX 1  SERIAL NUMBERING SYSTEM
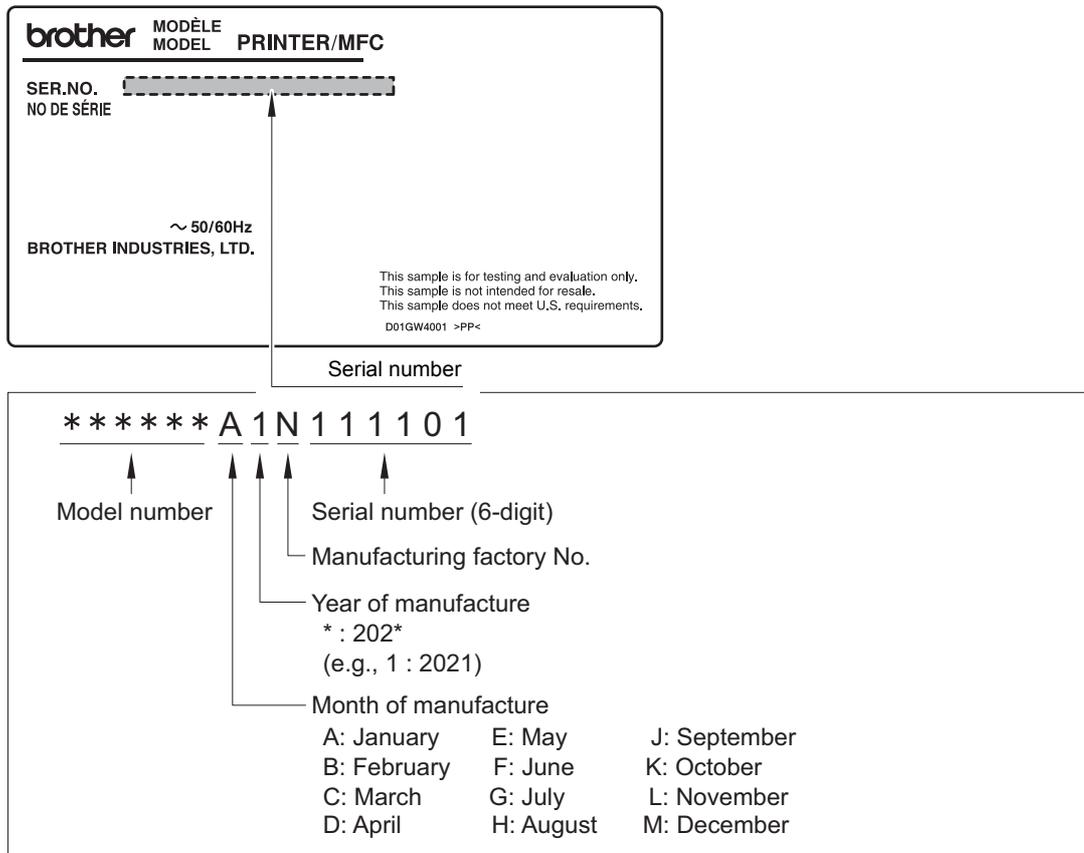
## ■ Serial number labels on the printer



**MODÈLE**
**MODEL**    **PRINTER/MFC**

**SER.NO.**
**NO DE SÉRIE**

∼ 50/60Hz
**BROTHER INDUSTRIES, LTD.**

This sample is for testing and evaluation only.
This sample is not intended for resale.
This sample does not meet U.S. requirements.

D01GW4001  >PP<

Serial number

$*****$ A 1 N 1 1 1 1 0 1

Model number

Serial number (6-digit)

Manufacturing factory No.

Year of manufacture
* : 202*
(e.g., 1 : 2021)

Month of manufacture
| A: January | E: May | J: September |
|---|---|---|
| B: February | F: June | K: October |
| C: March | G: July | L: November |
| D: April | H: August | M: December |

**Fig. App 1-1**

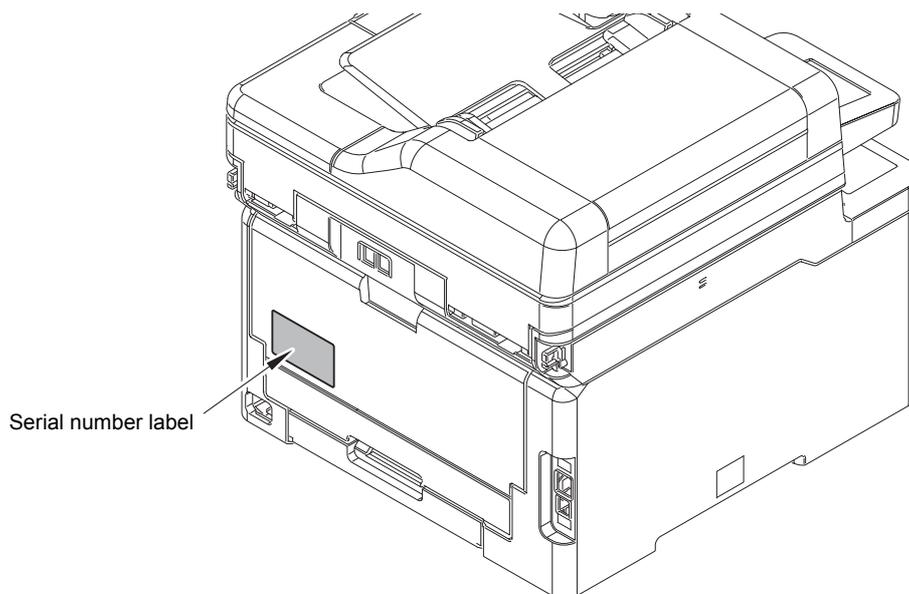## <Location>



Serial number label

**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\>**

For models with touch panel

(1)  The machine is in the ready state.

| (2) | [Settings] 🛠 | |
|---|---|---|

> **Note:**
> • If your machine displays the [All Settings] 🛠 menu on the LCD, start operating from step (3).

| (3) | [All Settings] | A selection screen |
|---|---|---|
| (4) | [∧], or [∨] | |
| (5) | [Initial Setup] | The selected screen |
| (6) | [∧], or [∨] | |
| (7) | [Reset] | A selection screen |
| (8) | [∧], or [∨] | |
| (9) | [Factory Reset] | "Machine will reboot after resetting. Press [OK] for 2 seconds to confirm." |
| (10) | Press the [OK] for two seconds. | Delete the user setting information and return the machine to the ready state. |

For models without touch panel

(1)  The machine is in the ready state.

| (2) | [Menu] | A selection screen |
|---|---|---|
| (3) | [▲], or [▼] | "0. Initial Setup" |
| (4) | [OK] | A selection screen |
| (5) | [▲], or [▼] | "2. Reset" |
| (6) | [OK] | The selected screen |
| (7) | [▲], or [▼] | Choose the type of Factory Reset. |

> **Note:**
> • Subdivided reset functions are not available for some models.

| (8) | [OK] | "▲ Reset ▼ Exit" |
|---|---|---|
| (9) | [▲] | "Reboot OK? ▲ Yes ▼ No" |

"▲ Yes": Reboot the machine. The machine will begin the reset.
"▼ No": The machine will exit without rebooting.

> **Note:**
> • If you do not reboot your machine, the reset process will not finish and your settings will remain unchanged.

# 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 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].
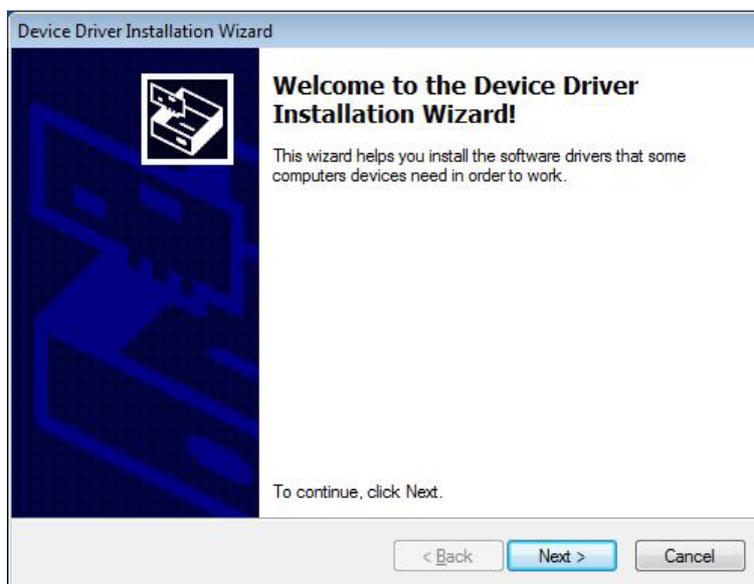
The following screen is displayed during installation.
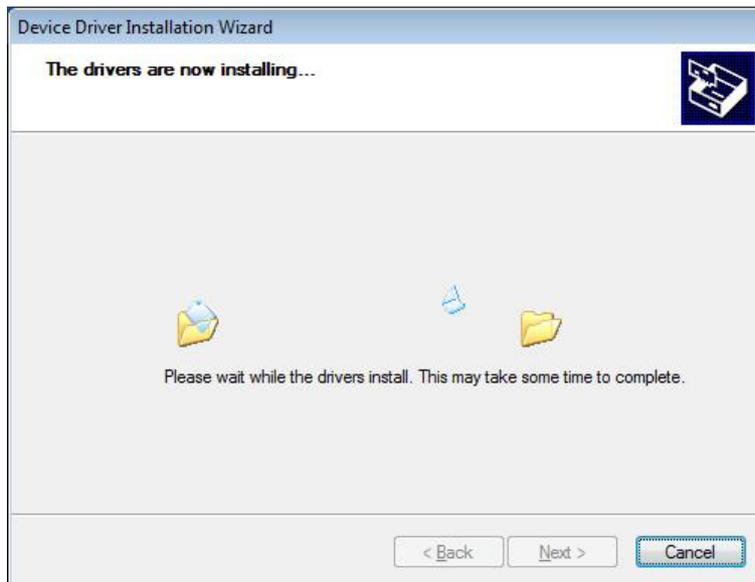


(4)  Wait for the following screen to appear and click [Finish].



(5)  Plug the AC cord of the machine into an electrical outlet.

(6)  Enter the maintenance mode.
     (Refer to "1.2  How to Enter the Maintenance Mode" in Chapter 5.)

(7)  Connect the machine to your computer using a USB cable and the installation will be performed automatically.