

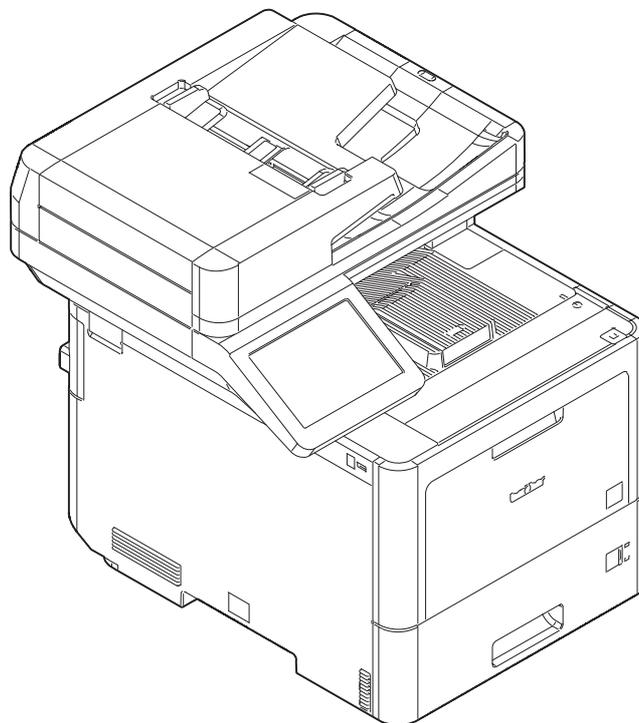
Brother Color Laser MFC SERVICE MANUAL

MODEL

**MFC- L9610CDN/L9630CDN/L9635CDN/
L9670CDN/EX670W**

OPTION

LT : Lower Tray	LT-330CL/340CL
TC : Tower Tray Connector	TC-4100
TT : Tower Tray	TT-4000



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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APPENDIX 1 SERIAL NUMBERING SYSTEM

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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.

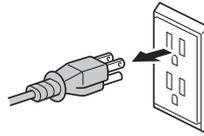
WARNING

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.



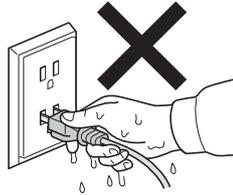
There are high-voltage electrodes inside the product. Before you access the inside of the product, including for routine maintenance such as cleaning, make sure you have unplugged the telephone line cord first (MFC models only) and then the power cord from the AC power outlet, as well as any telephone/RJ-11 (MFC models only) or Ethernet/ZRJ-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)

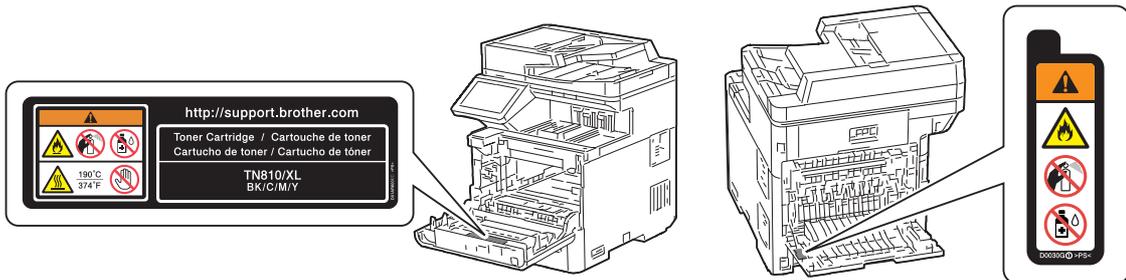
Use caution when installing or modifying telephone lines. Never touch telephone wires or terminals that are not insulated unless the telephone line has been unplugged from the wall jack. Never install telephone wiring during a thunderstorm. Never install a telephone wall jack in a location that is wet 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.



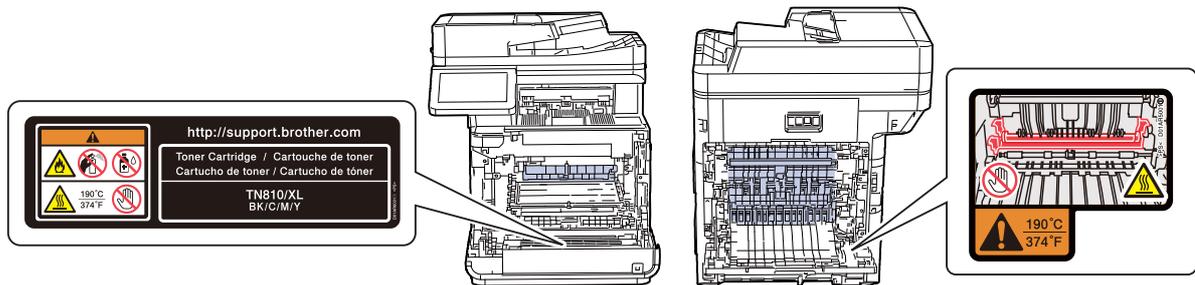
DO NOT place the following objects on the product.
If these objects contact the electrical parts inside the product, it may cause a fire or electrical shock.

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



HOT SURFACE

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



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.



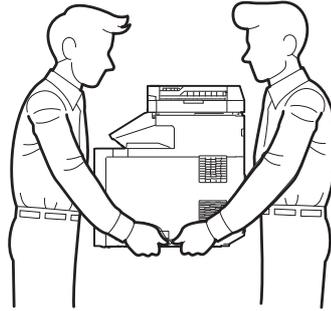
CAUTION

Machine weight: over 30 kg
Tower tray weight: over 46 kg

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

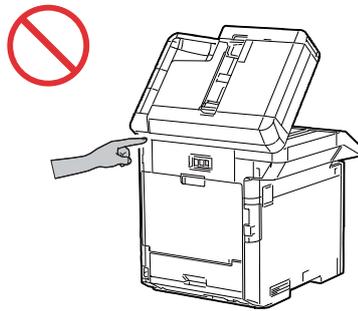
 **CAUTION**

This product is heavy and weighs more than 66 lb. (30 kg) including paper. To prevent possible injuries at least two people should lift the product by holding it from the front and back.



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

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.

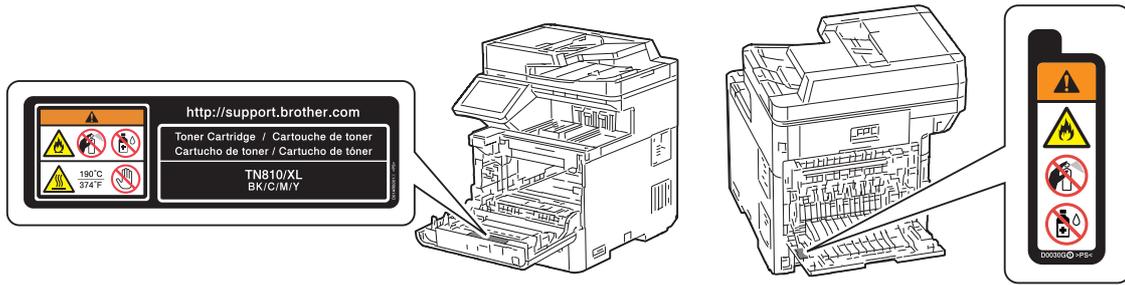


(MFC models only)

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.

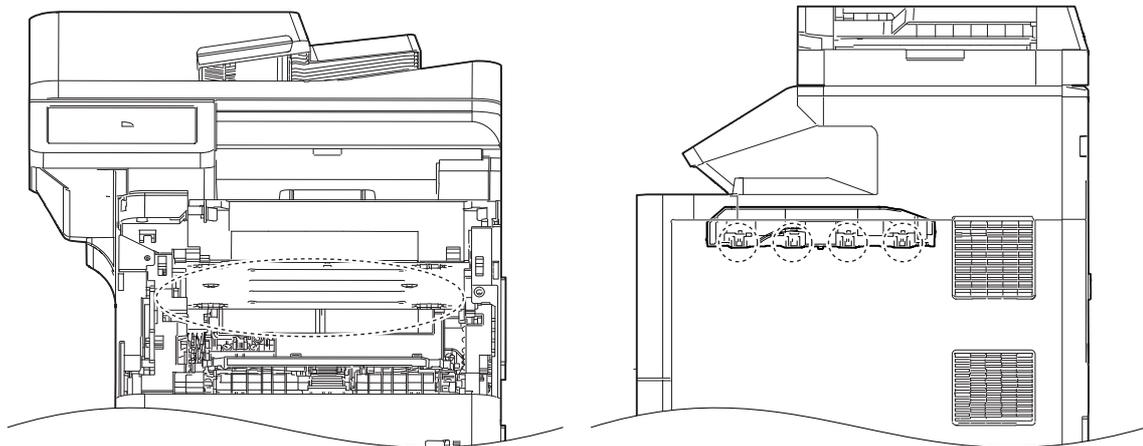


- DO NOT put objects on top of the product. Doing so could increase the risk of overheating should the product malfunction.

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

- CAUTION: When the machine during servicing is operated with the cover open, the regulations of VBG 93 and the performance instructions for VBG 93 are valid.
- CAUTION: In case of any trouble with the laser unit, replace the laser unit itself. To prevent direct exposure to the laser beam, do not try to open the enclosure of the laser unit.
- ACHTUNG: Im Falle von Störungen der Lasereinheit muß diese ersetzt werden. Das Gehäuse der Lasereinheit darf nicht geöffnet werden, da sonst Laserstrahlen austreten können.

<Locations of the laser beam windows>



■ **Additional Information**

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

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

In print

DANGER	WARNING INVISIBLE LASER RADIATION WHEN COVER OPEN AND INTER-LOCK DEFEATED. AVOID DIRECT EXPOSURE TO BEAM. CLASS 3B LASER PRODUCT.
GEFAHR	UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET UND VERriegELUNG GELOST. DIREKTEN KONTAKT MIT DEM LASERSTRAHL VERMEIDEN. KLASSE 3B LASERPRODUKT.
DANGER	RAYONNEMENT LASER INVISIBLE LORSQUE L'APPAREIL EST OUVERT OU ENDOMMAGE. EVITER TOUTES EXPOSITIONS DIRECTES AU FASCEAU. PRODUIT LASER DE CLASSE 3B.
FARA	OSYNLIG LASERSTRÄLNING NÄR LUCKAN ÄR ÖPPEN OCH LÅSEN TILL DENNA ENHET ÄR FORSERADE. UNDVIK DIREKT EXPONERING FRÅN LASERSTRÅLEN, KLASS 3B LASER PRODUKT.
FARE	USYNLIG LASERSTRÅLE NÄR MASKINEN ER ÅPEN OG DELKSELBRYTERE AKTIVERT, UNNGÅ DIREKTE EKSPONERING AV LASERSTRÅLEN KLASSE 3B LASER PRODUKT.
GEVAAR	ONZICHTBARE LASER STRALING BIJ OPENING EN OMZEILDE BEVEELIGING. VOORKOM DIRECTE BLOOTSTELLING AAN STRAAL. KLASSE 3B LASER PRODUCT.
FARE	USYNLIG LASERSTRÅLER, HVIS DU ÅBNER OG SAMTIDIGT BLOKERER LASEREN, UNNGÅ LASERSTRÅLERNE KLASSE 3B LASERPRODUKT.
PELIGRO	EMISIÓN DE RADIACIÓN LÁSER INVISIBLE CUANDO LA CUBIERTA SE ENCUENTRA ABIERTA Y DESBLOQUEADA. EVITE LA EXPOSICIÓN DIRECTA AL HAZ. PRODUCTO LÁSER DE CATEGORÍA 3B.
VAARA	LAITETTA AVATTAESSA JA SUOJALUKITUSTA PURKAESSA, LAITTEESTA LÄHTEE NÄKYMÄTÖNTÄ LASERSÄTELYÄ. VÄLTÄ SUORAA ALTISTUMISTA SÄTEELLE, LUOKAN 3 LASERLAITE.
危険	3B类激光产品。避免激光直接照射。开盖或盖锁失效，可能有激光外溢！
危険	セーフティインターロックを解除すると不可視レーザー光が出ます。ビームを直接見たり触れたりしないでください。

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.
C (toner)	Cyan (toner)
CIS unit	Contact Image Sensor (Used for image scanning of documents.)
djf file	A type of firmware file. File extension: djf.
dpi	Dot per inch
DX	Duplex
FB	Flatbed scanner
FFC	Flexible Flat Cable
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
ipm	Image per minute
K (toner)	Black (toner)
LT	Lower Tray
LVPS	Low Voltage Power Supply
M (toner)	Magenta (toner)
MP (tray)	Multi Purpose (tray)
PCB	Print Circuit Board
PE	Paper Empty
PF	Paper Feed
REG	Registration
SX	Simplex
SF	Staple Finisher
T1, T2, ...	Paper tray 1, Paper tray 2, ...
TC	Tower tray connector
TT	Tower tray
upd file	A type of firmware file. File extension: upd. Note that the upd file can be installed into non-compliant models.
Y (toner)	Yellow (toner)
Ready state	In the state that a user uses the machine, a ready state that is not the sleep mode.
Maintenance mode	A mode to use repair and maintenance functions.
Initial state of maintenance mode	An input waiting state for maintenance mode functions.

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		MFC-L9610CDN	MFC-L9630CDN	MFC-L9635CDN	MFC-L9670CDN	MFC-EX670W
CPU		Main: 800MHz, Sub: 133MHz				
Backup Clock		Up to 60 hours				
Wired LAN		10Base-T/100Base-TX/1000Base-T				
Wireless LAN		Option Infrastructure Mode: IEEE 802.11 b/g/n Wi-Fi Direct: IEEE 802.11 g/n				Standard Infrastructure Mode: IEEE 802.11 b/g/n Wi-Fi Direct: IEEE 802.11 g/n
Duplex Printing		Available				
Auto Duplex Copy		Available				
Duplex Scan		Available				
Scanning Method		Dual CIS				
LCD Type		7.0" TFT ColorLCD (17.6 cm / 176.1 mm)				
FB		Up to LGL				
USB Host (Front)		Available				
USB Host (Rear)		Available				
NFC		Available				
Auto Paper Low Detection		Available (Std tray), Available (Option LTs)				
PCL/PS		PCL5e, PCL5c, PCL6 (PCL XL Class3.0), BR-Script3, PDF Version 1.7, XPS Version 1.0				
Paper Capacity	Standard tray	520 sheets				
	MP tray	100 sheets, 15 envelopes				
	ADF	100 sheets				
Paper Output		250 sheets face down (80 g/m ²), 1 sheet face-up (straight paper path)				
Option	Lower tray	250 sheets (LT-330CL) x 3 pcs or 500 sheets (LT-340CL) x 2 pcs or 250 sheets (LT-330CL) x 1 pcs + 500 sheets (LT-340CL) x 1 pcs (Max. 1,000 sheets)				
	Tower tray	N/A	TT-4000 with TC-4100 (except for Brazil), N/A (for Brazil)	TT-4000 with TC-4100	TT-4000 with TC-4100 (except for CHN), N/A (for CHN)	TT-4000 with TC-4100
	Mailbox Stapler	N/A N/A				
Warm-up Time At 73.4F / 50% (23°C / 50%)	From Sleep mode	Less than 20 sec. / 115V	Less than 20 sec. / 115V (for US) Less than 20 sec. / 230V (except for US)	Less than 20 sec. / 230V	Less than 20 sec. / 230V (for EU) Less than 20 sec. / 115V (except for EU)	Less than 20 sec. / 115V
	From Power OFF → ON	Less than 55 sec. / 115V	Less than 55 sec. / 115V (for US) Less than 55 sec. / 230V (except for US)	Less than 55 sec. / 230V	Less than 55 sec. / 230V (for EU) Less than 55 sec. / 115V (except for EU)	Less than 55 sec. / 115V
First Print Time (Mono/Color) At 73.4F (23°C)	From Ready mode	Less than 10 sec. / 115V	Less than 10 sec. / 115V (for US) Less than 10 sec. / 127V (for Brazil) Less than 10 sec. / 230V (except for US and Brazil)	Less than 10 sec. / 230V	Less than 10 sec. / 115V (for US) Less than 10 sec. / 230V (except for US)	Less than 10 sec. / 115V
	From Sleep mode	Less than 30 sec. / 115V	Less than 30 sec. / 115V (for US) Less than 30 sec. / 127V (for Brazil) Less than 30 sec. / 230V (except for US and Brazil)	Less than 30 sec. / 230V	Less than 30 sec. / 115V (for US) Less than 30 sec. / 230V (except for US)	Less than 30 sec. / 115V

2. FAX / COPY / SCANNER

Model		MFC-L9610CDN	MFC-L9630CDN	MFC-L9635CDN	MFC-L9670CDN	MFC-EX670W
Modem Speed		33,600 bps (Fax)				
Transmission Speed (ITU-T Test Chart, Std resolution, JBIG)		Approx. 2.5 sec.				
ITU-T Group		Super G3				
Color FAX		N/A				
Internet FAX (ITU T.37 simple mode)		Available				
Handset		N/A				
Copy Speed (A4/Letter)		Up to 40/42 ppm (Quiet Mode: 20/21 ppm)				
First Copy Time (Mono/Color) At 73.4F (23°C)	From Ready mode and Standard tray	Less than 12/13 sec. / 115V	Less than 12/13 sec. / 115V (for US) Less than 12/13 sec. / 127V (for Brazil) Less than 12/13 sec. / 230V (except for US and Brazil)	Less than 12/13 sec. / 230V	Less than 12/13 sec. / 115V (for US) Less than 12/13 sec. / 230V (except for US)	Less than 12/13 sec. / 115V
	From Sleep mode and Standard tray	Less than 32/32 sec. / 115V	Less than 32/32 sec. / 115V (for US) Less than 32/32 sec. / 127V (for Brazil) Less than 32/32 sec. / 230V (except for US and Brazil)	Less than 32/32 sec. / 230V	Less than 32/32 sec. / 115V (for US) Less than 32/32 sec. / 230V (except for US)	Less than 32/32 sec. / 115V
Print Resolution		Max. 600 x 600 dpi				
Resolution (Optical)	FB	Max. 600 x 600 dpi				
	ADF	Max. 600 x 600 dpi				
Resolution (Interpolated)		Max. 19,200 x 19,200 dpi				
Scanning Speed (Mono/Color) ISO/IEC17991	Single	50/50 ipm (A4) 52/52 ipm (LTR)				
	Duplex	100/100 ipm (A4) 104/104 ipm (LTR)				

3. SERVICE INFORMATION / SUPPLIES

Model		MFC-L9610CDN	MFC-L9630CDN	MFC-L9635CDN	MFC-L9670CDN	MFC-EX670W
Machine Life		400,000 pages (A4/LTR) or 7 years			400,000 pages (A4/LTR) or 7 years (for US) 5 years (except for US)	400,000 pages (A4/LTR) or 5 years
MTBF		4,000 hours				
MTTR		0.5 hours				
Maximum Monthly Volume		Up to 120,000 pages			Up to 150,000 pages	
Periodical Maintenance Parts *1	Fuser	200,000 pages				
	Laser unit	200,000 pages				
	PF kit 1	200,000 pages				
	PF kit 2-5	100,000 pages				
	PF kit MP	50,000 pages				
Toner Cartridge	Starter toner *2	BK: Approx. 6,500 pages CMY: Approx. 5,000 pages	BK: Approx. 6,500 pages CMY: Approx. 5,000 pages (for OCE and TWN) BK: Approx. 9,000 pages CMY: Approx. 6,500 pages (for US, EU and Gulf) BK: Approx. 15,000 pages CMY: Approx. 12,000 pages (for Brazil and ASA)	BK: Approx. 15,000 pages CMY: Approx. 12,000 pages	BK: Approx. 6,500 pages CMY: Approx. 5,000 pages (for CHN) BK: Approx. 9,000 pages CMY: Approx. 6,500 pages (for US) BK: Approx. 12,000 pages CMY: Approx. 9,000 pages (for OCE and EU)	BK: Approx. 15,000 pages CMY: Approx. 12,000 pages
	Standard toner	BK: Approx. 9,000 pages CMY: Approx. 6,500 pages	BK: Approx. 9,000 pages CMY: Approx. 6,500 pages (except for EU and Brazil) N/A (for EU and Brazil)	N/A	BK: Approx. 9,000 pages CMY: Approx. 6,500 pages (except for EU) N/A (for EU)	BK: Approx. 9,000 pages CMY: Approx. 6,500 pages
	High capacity toner	BK: Approx. 12,000 pages CMY: Approx. 9,000 pages				
	Super high capacity toner	N/A	BK: Approx. 15,000 pages CMY: Approx. 12,000 pages (except for OCE) N/A (for OCE)	BK: Approx. 15,000 pages CMY: Approx. 12,000 pages		N/A
	Ultra high capacity toner	N/A				
When printing A4/Letter 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. 100,000 pages (3 pages/job) 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. 150,000 pages (2 pages/job) The life expectancy varies according to the use condition.				
Waste Toner Box (ISO/IEC 19798 (JIS X6932))		Approx. 100,000 pages (3 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		MFC-L9610CDN	MFC-L9630CDN	MFC-L9635CDN	MFC-L9670CDN	MFC-EX670W
Dimensions (W x D x H)	Carton size	580 x 663.7 x 734 mm (22.8 x 26.1 x 28.9")				
	Machine size	503 x 541 x 586 mm (19.8 x 21.3 x 23.1")				
	LT-330CL without carton	410 x 486 x 97 mm (16.1 x 19.1 x 3.8")				
	LT-340CL without carton	410 x 486 x 133 mm (16.1 x 19.1 x 5.2")				
	MX-4000 without carton	N/A				
	SF-4000 without carton	N/A				
	TC-4100 without carton	N/A	444 x 486 x 103 mm (17.5 x 19.1 x 4.1")			
	TT-4000 without carton	N/A	660 x 660 x 717.4 mm (26.0 x 26.0 x 28.2")			
Weights	with carton	42.2 kg / 92.9 lb	42.3 kg / 93.2 lb (for US) 42.7 kg / 94.2 lb (for EU) 42.2 kg / 92.9 lb (for OCE) 42.6 kg / 93.8 lb (for Brazil) 43.1 kg / 95.0 lb (for ASA)	43.1 kg / 94.9 lb	42.5 kg / 93.6 lb (for US) 42.6 kg / 93.9 lb (for OCE) 42.4 kg / 93.4 lb (for CHN) 43.1 kg / 95.0 lb (for EU)	42.8 kg / 94.3 lb
	without carton, with toner/drum	36.2 kg / 79.7 lb	36.3 kg / 80.0 lb (for US) 36.5 kg / 80.5 lb (for EU) 36.2 kg / 79.7 lb (for OCE) 36.6 kg / 80.6 lb (for Brazil) 37.1 kg / 81.7 lb (for ASA)	36.8 kg / 81.2 lb	36.5 kg / 80.4 lb (for US) 36.6 kg / 80.7 lb (for OCE) 36.4 kg / 80.2 lb (for CHN) 36.9 kg / 81.2 lb (for EU)	36.8 kg / 81.1 lb
	without carton nor toner/drum	30.1 kg / 66.4 lb			30.3 kg / 66.8 lb	
	LT-330CL without carton	5.1 kg / 11.2 lb				
	LT-340CL without carton	6.6 kg / 14.6 lb				
	MX-4000 without carton	N/A				
	SF-4000 without carton	N/A				
	TC-4100 without carton	N/A	5.9 kg / 12.9 lb			
	TT-4000 without carton	N/A	46.6 kg / 102.7 lb 47.7 kg / 105.2 lb with AC cord			

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.

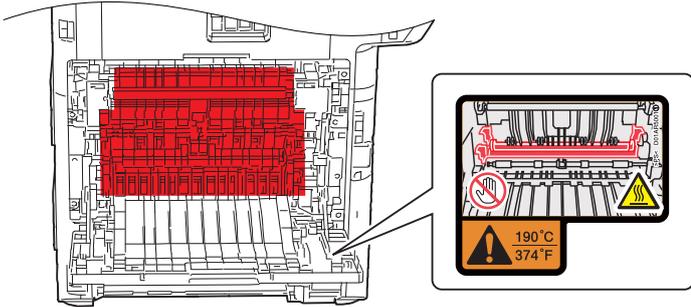
1.1 Precautions

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

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

 **WARNING**

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



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



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

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

1.2 Checks before Commencing Troubleshooting

Check the following items before attempting to repair the machine.

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

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, benzene, 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

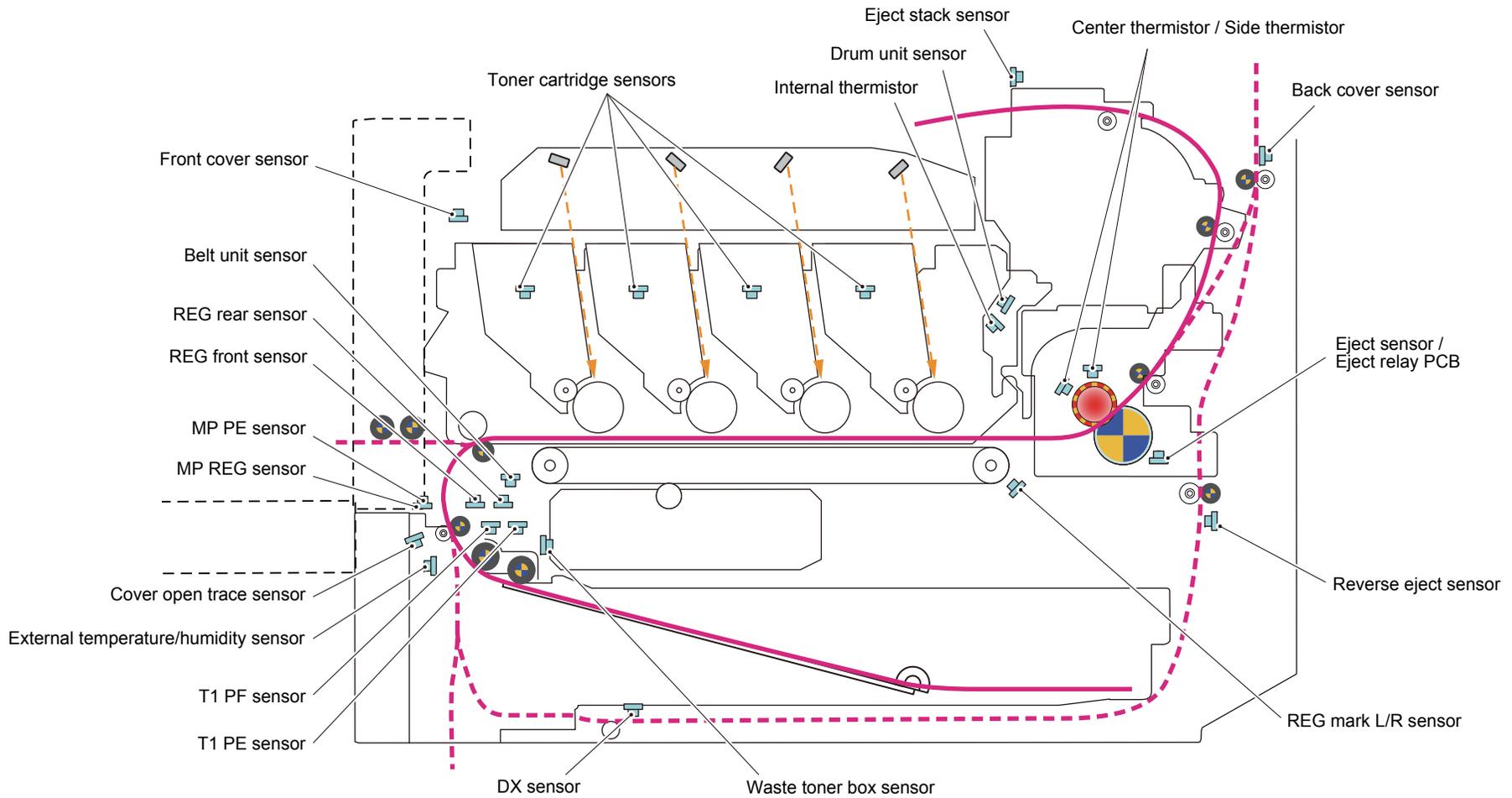
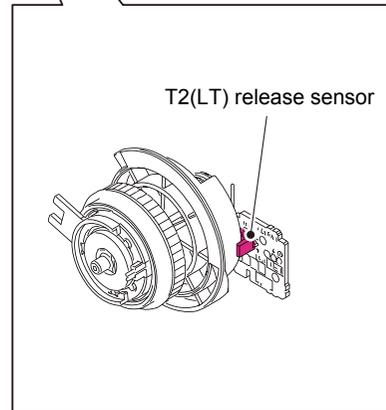
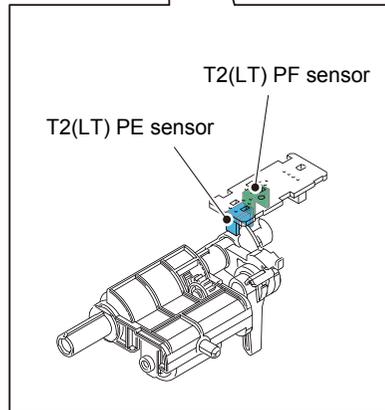
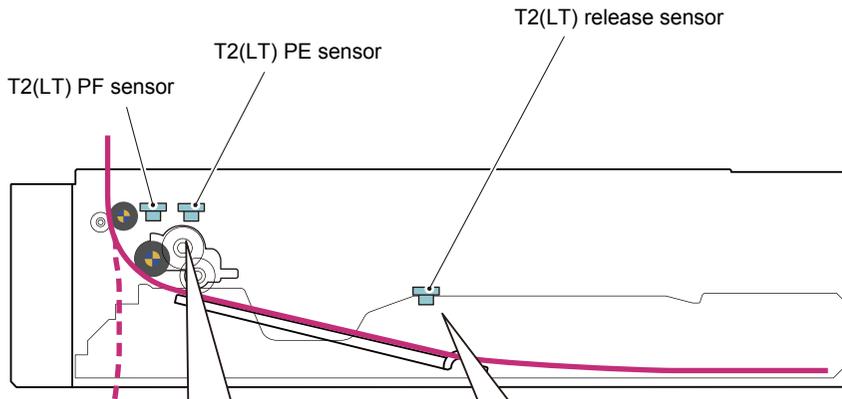


Fig. 2-1

2.1.2 LT

<LT-330CL>



<LT-340CL>

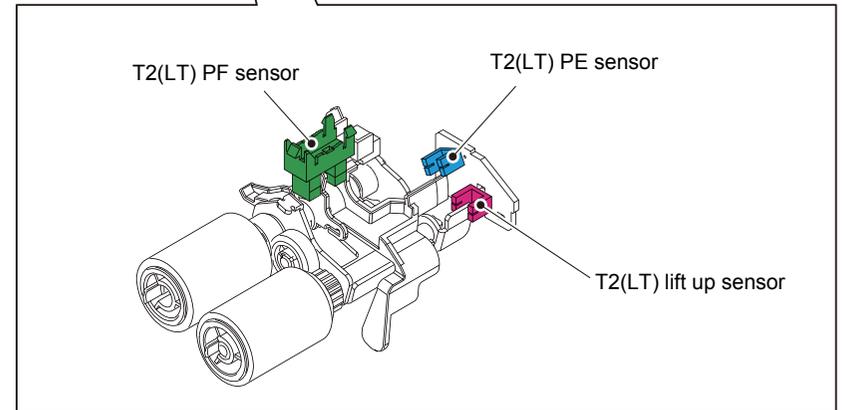
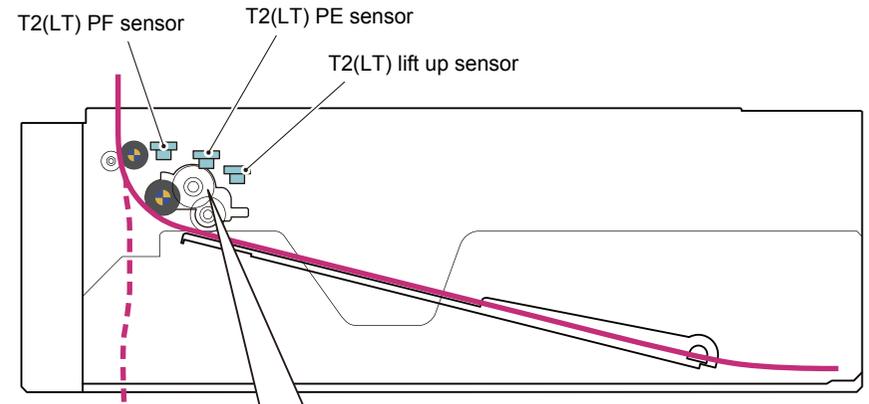


Fig. 2-2

2.1.3 TT

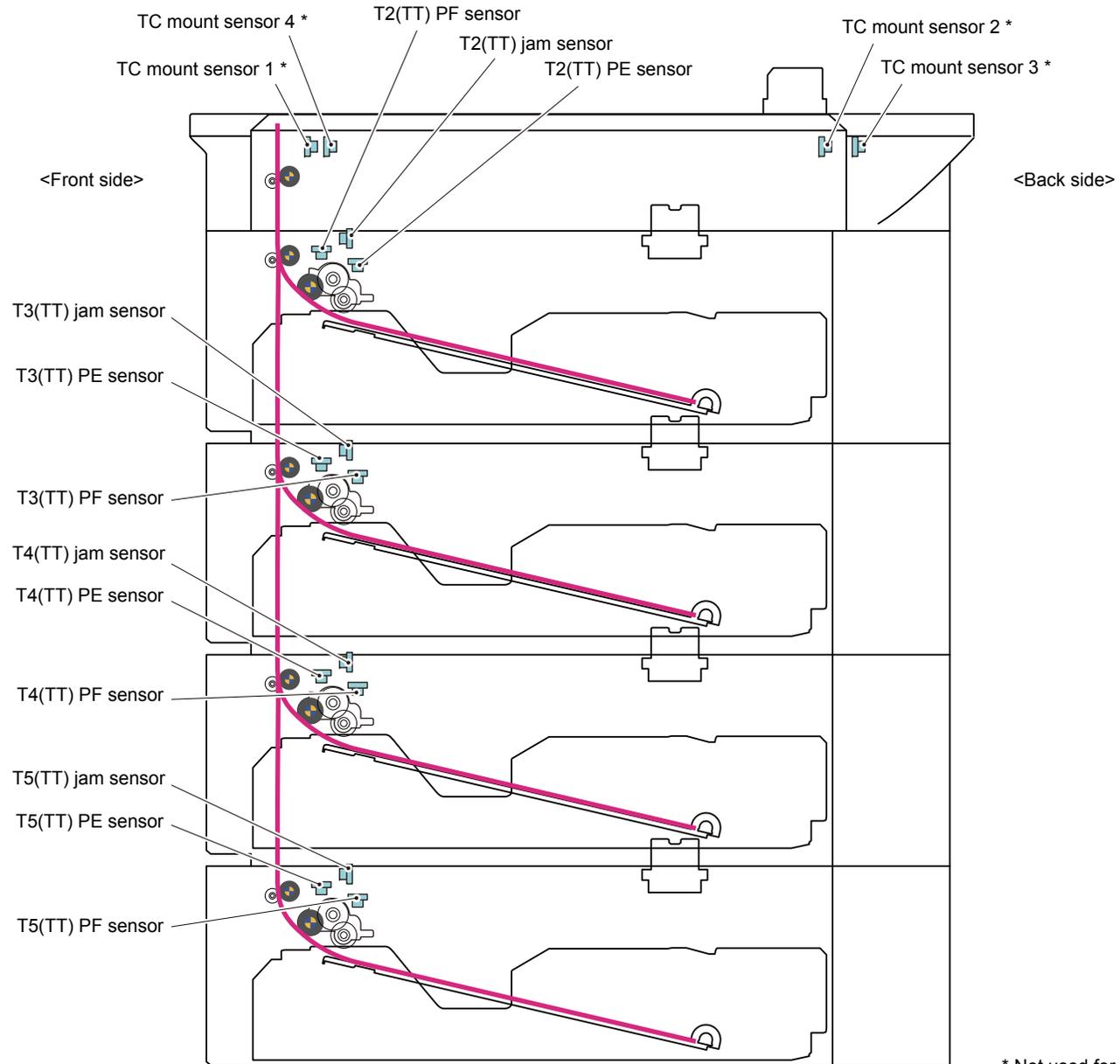


Fig. 2-3

2.1.4 ADF

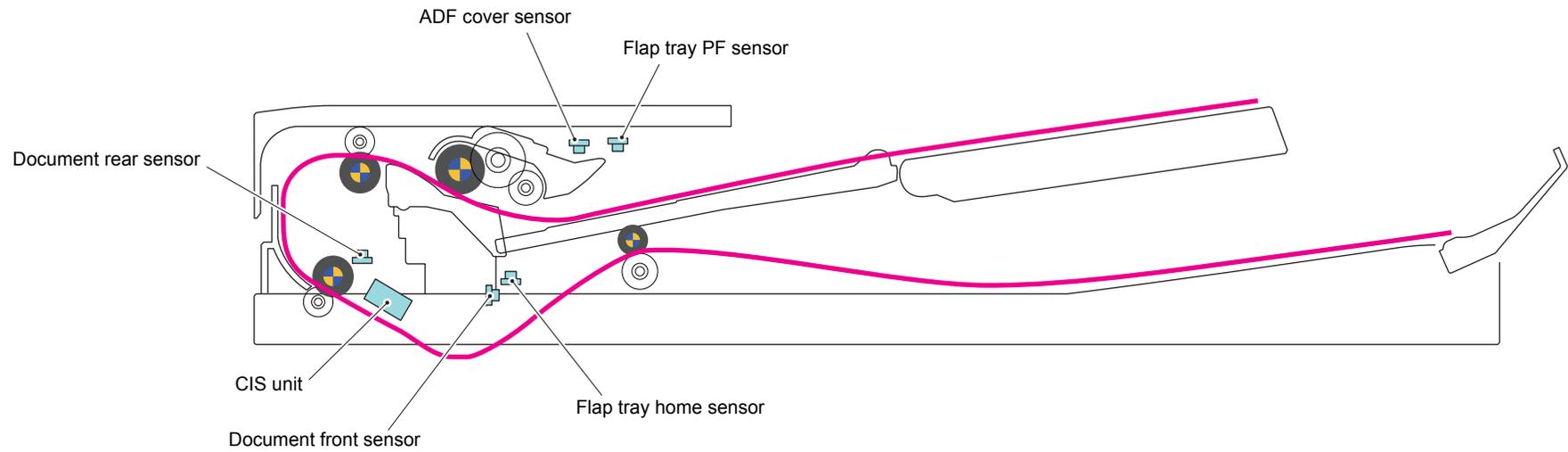


Fig. 2-4

2.2 Paper Feeding

2.2.1 Printer part

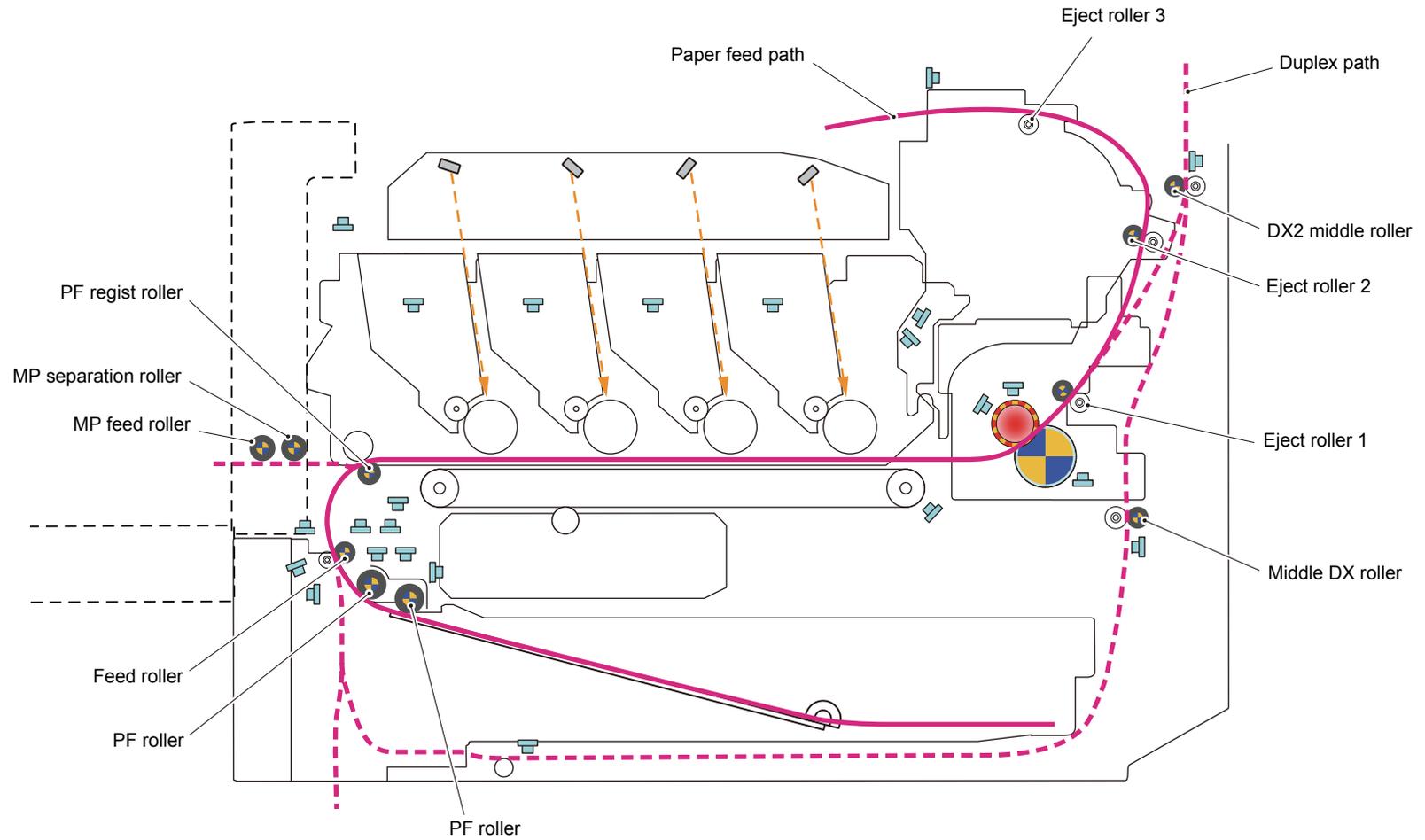


Fig. 2-5

2.2.2 LT

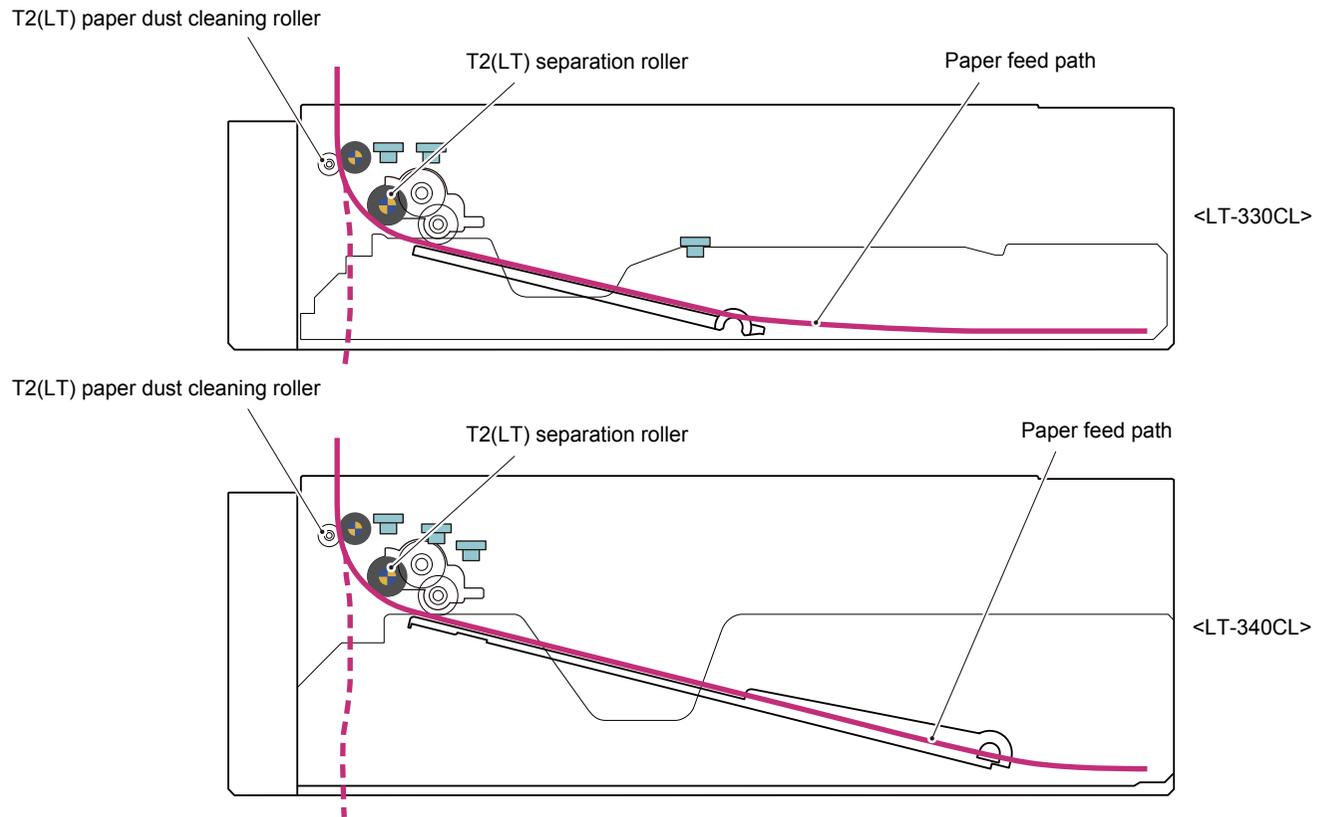


Fig. 2-6

2.2.3 TT

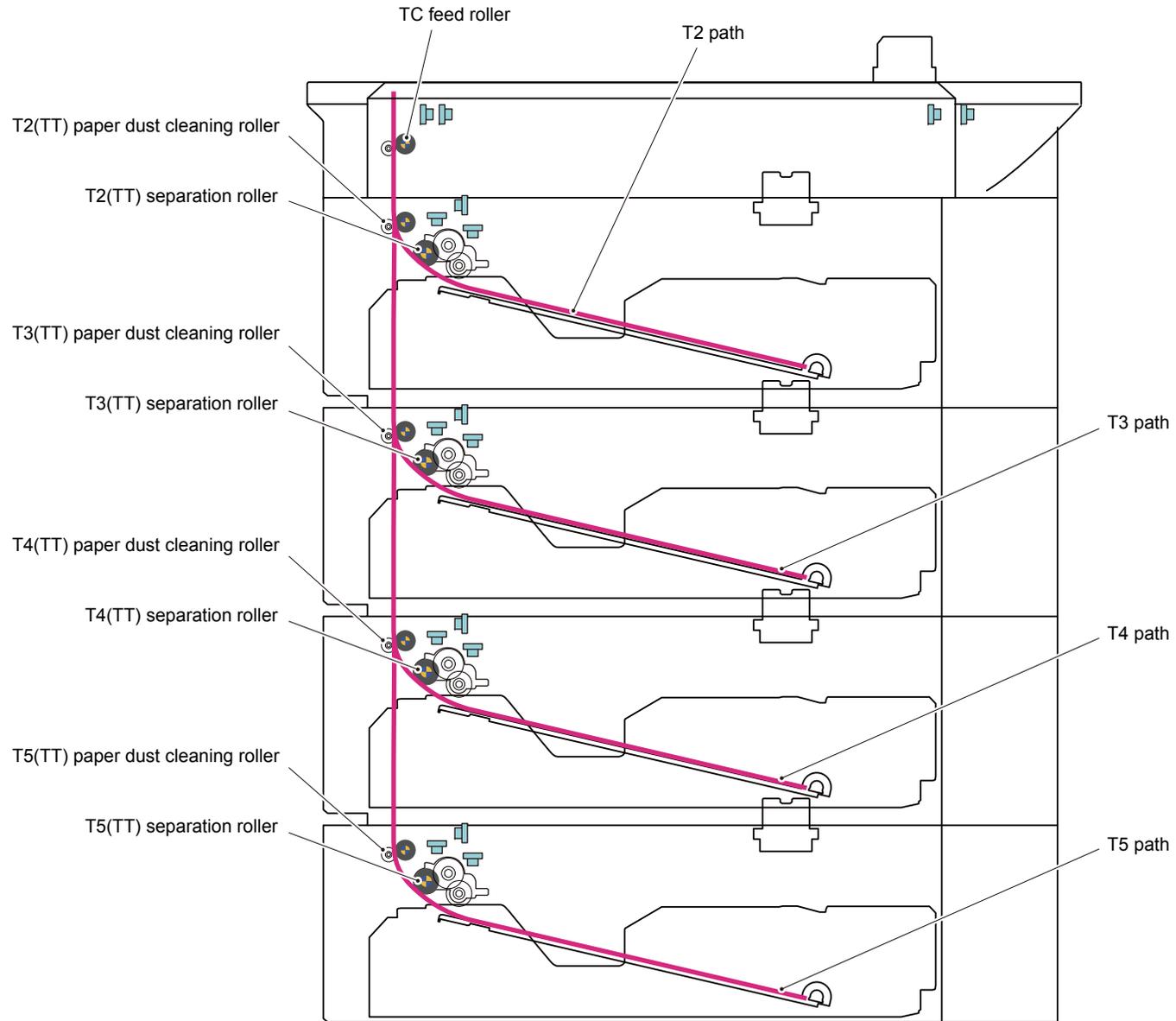


Fig. 2-7

2.2.4 ADF

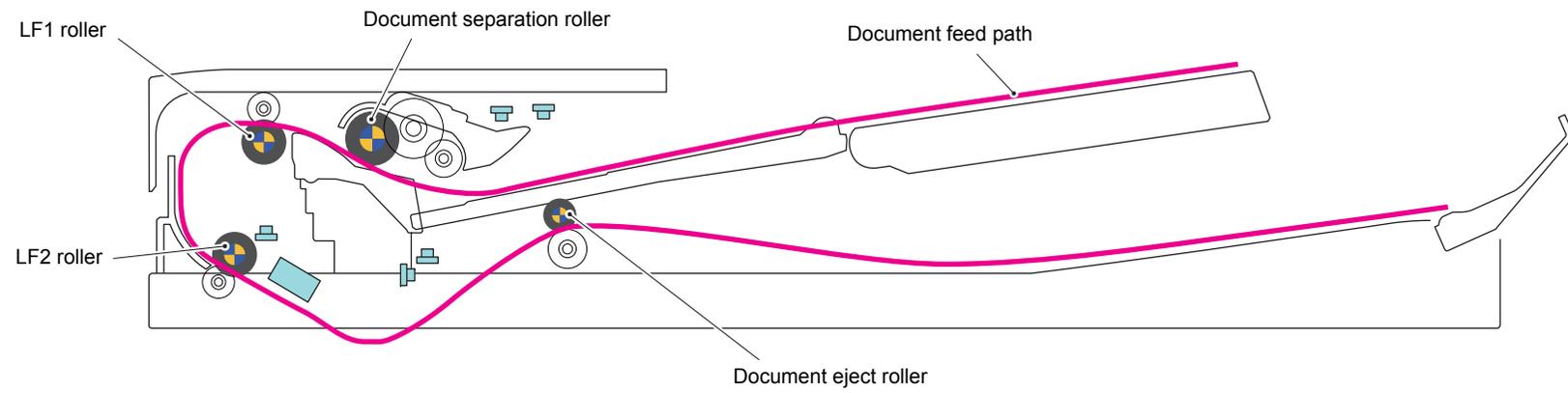


Fig. 2-8

2.3 Operation of Each Part and Location of Parts

Part name	Operation
Separation roller, Separation pad	Separates paper fed from the paper tray into single sheets.
Paper edge actuator (Paper edge sensor)	Detects paper trays (open / closed). Detects paper jams in paper trays. Detects whether paper is fed from the paper tray.
TT jam actuator (TT jam sensor)	Detects paper jams in the front section of the tray.
TC mount sensor 1/2/3/4 * Not used for EC (printer/FB) series.	Detects whether the machine and the TC-4100 are mounted properly.
TT balance sensor L/R	The machine has the sensor but it does not operate.
REG front actuator (REG front sensor)	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 paper tray.
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.
REG rear actuator (REG rear sensor)	Detects paper pass and adjusts the writing start position for the paper. Detects paper jams in the front or center section of the machine. Detects the rear edge of the paper to determine the paper size.
Belt unit	Feeds the paper to the drum unit and transfers toner on the paper.
Heat roller, Pressure roller	Fuses the toner transferred to paper by heat and pressure, and feeds paper to the eject roller 1.
Eject actuator (Eject sensor) / Fuser cover actuator (Fuser cover sensor)	Detects whether or not paper is ejected from the fuser. 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. Detects paper jam in the rear section of the machine. Detects whether the fuser cover is open.
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. 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. 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.
DX PF roller	Feeds the paper passing through the DX tray to the REG roller.
Belt cleaning roller	Cleans the collected waste toner in the belt unit.
Back cover sensor	Detects whether the back cover is open.
Front cover sensor	Detects the front cover (open / closed).
MP pick up roller	Feeds paper from the MP tray to the MP separation roller.
MP separation roller, MP separation pad	Separates the paper fed from the MP tray into single sheets.
MP PE actuator (MP PE sensor)	Detects the paper in the MP tray. Detects paper jams in the MP tray.
MP REG actuator (MP REG sensor)	Detects paper jams in MP part.
Reverse eject sensor	Detects the eject/reverse position state of the gear of the paper eject ASSY.
Document pick up roller	Feeds document from the document tray to the scanning unit.
Document separation roller, ADF separation pad	Separates the document fed from the document tray into single sheets.
Document front actuator (Document front sensor)	Detects whether a document is set in the ADF.

Part name	Operation
Document rear actuator (Document rear sensor)	Detects the 1st/2nd side scanning start position. Detects a document jam in the ADF.
Document eject roller	Feeds the document to the output tray.
ADF cover sensor	Detects the ADF cover (open / closed).
REG mark L/R sensor	Checks a phase of each color.
DEV release K sensor	Detects whether the K DEV roller is separated from the K exposure drum.
DEV release CMY sensor	Detects whether the CMY DEV roller is separated from the CMY exposure drum.
Toner cartridge sensor ×4 (Inside the drum unit)	Detects the toner cartridge is set.
Waste toner box sensor	Detects a certain amount of waste toner in the waste toner box.
External temperature/humidity sensor	Detects external temperature and humidity around the machine.
Nip release sensor	Detects whether the pressure roller of the fuser is separated from the heat roller of the fuser.
T1 clutch	Drives the pick up roller at the timing of paper feeding.
REG clutch	Controls the activation of the REG roller for the paper alignment adjustment.
DEV release clutch CMY	Controls the drive or release of the CMY DEV roller.
DEV release clutch K	Controls the drive or release of the K DEV roller.
DX clutch	Reverses the eject roller 2/3 in 2-sided printing.
Fuser release clutch	Drives the pressure roller of the fuser at the timing of paper feeding.
MP solenoid	Presses the MP pick up roller against the paper when feeding from the MP tray.
Flapper solenoid	Switches the position of the DX flapper ASSY, and switches between the paper feeding path for SX printing / DX printing.
TC feed roller	Feeds paper in the TC-4100 from the TT to the machine by a driving force of the machine.
TC drive transmit clutch	Makes rotate the roller by transmitting the power from the machine to the TC feed roller while feeding paper. In other times, the power transmission is cut-off and the roller is freely rotatable so that the paper can be easily removed when a paper jam occurs.

■ Location of sensors and clutches

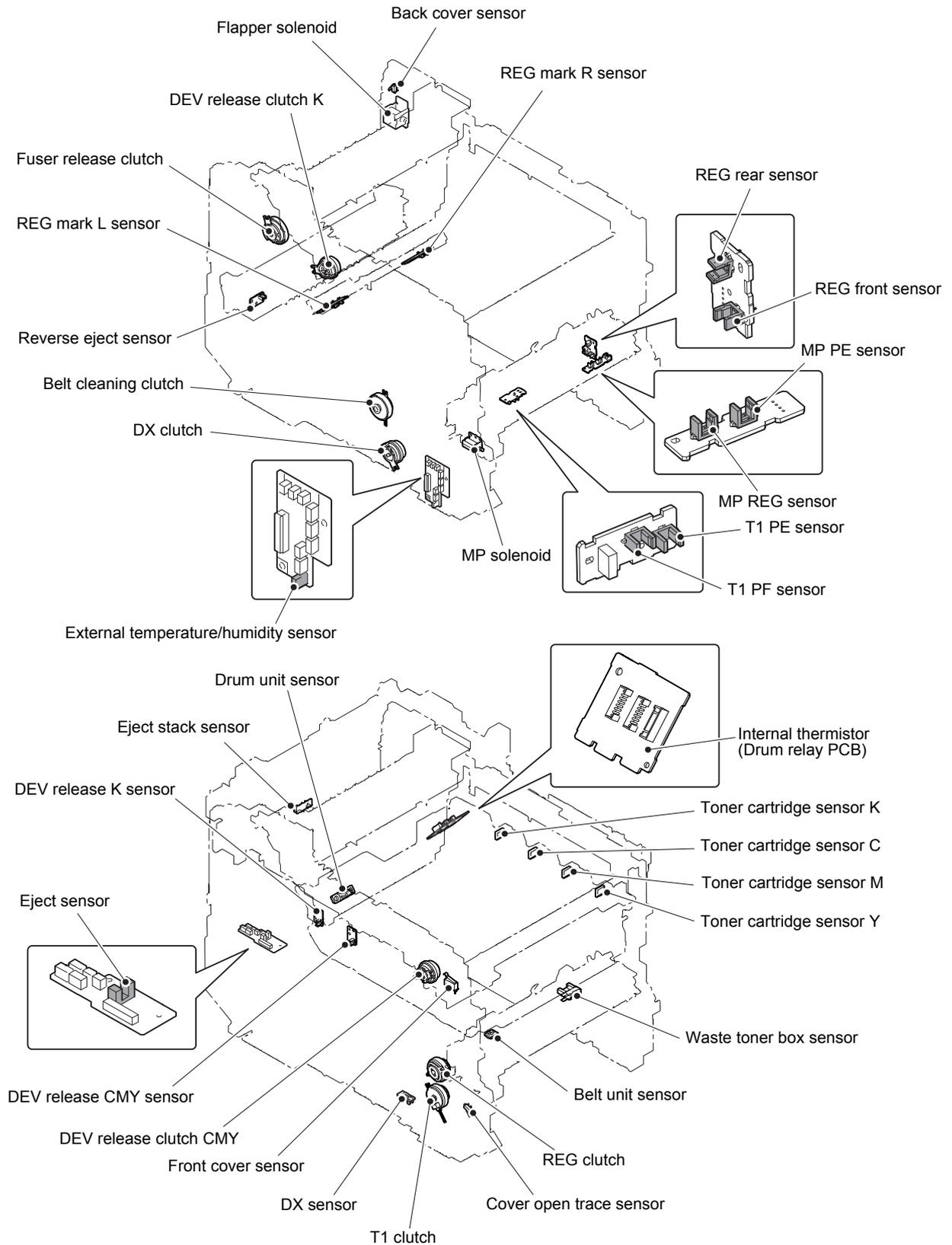


Fig. 2-9

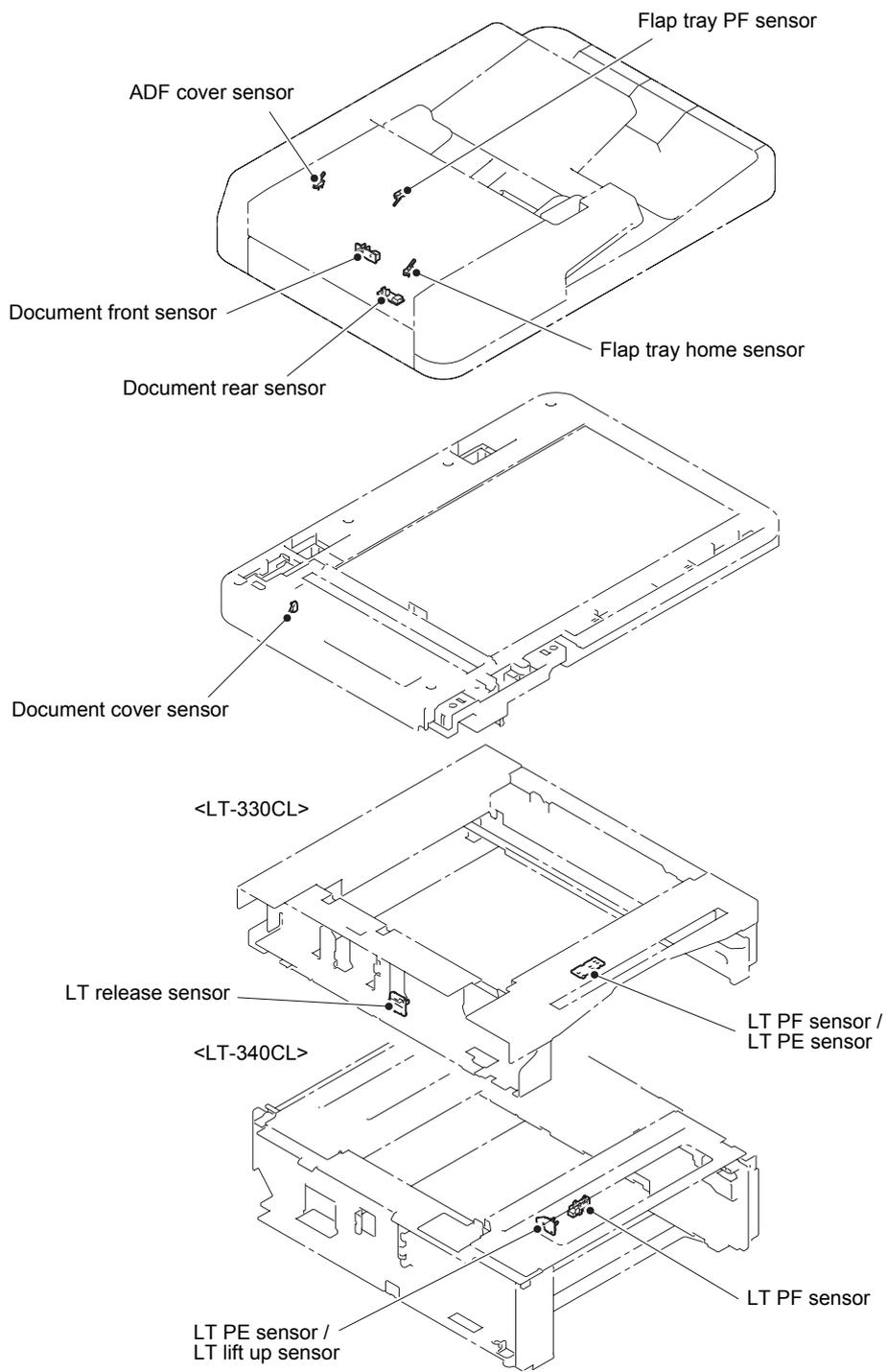
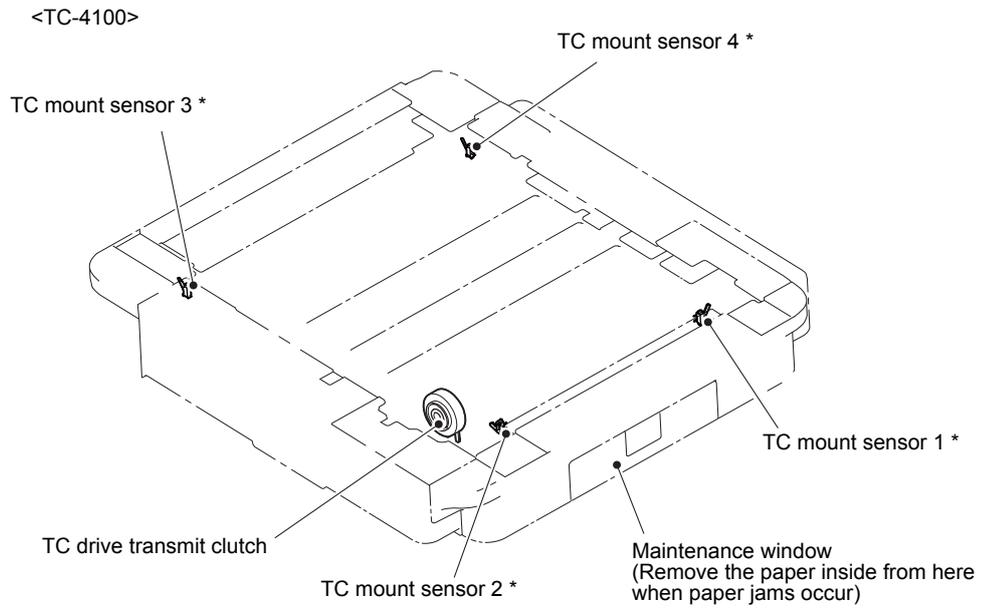


Fig. 2-10



* Not used for EC (printer/FB) series.

Fig. 2-11

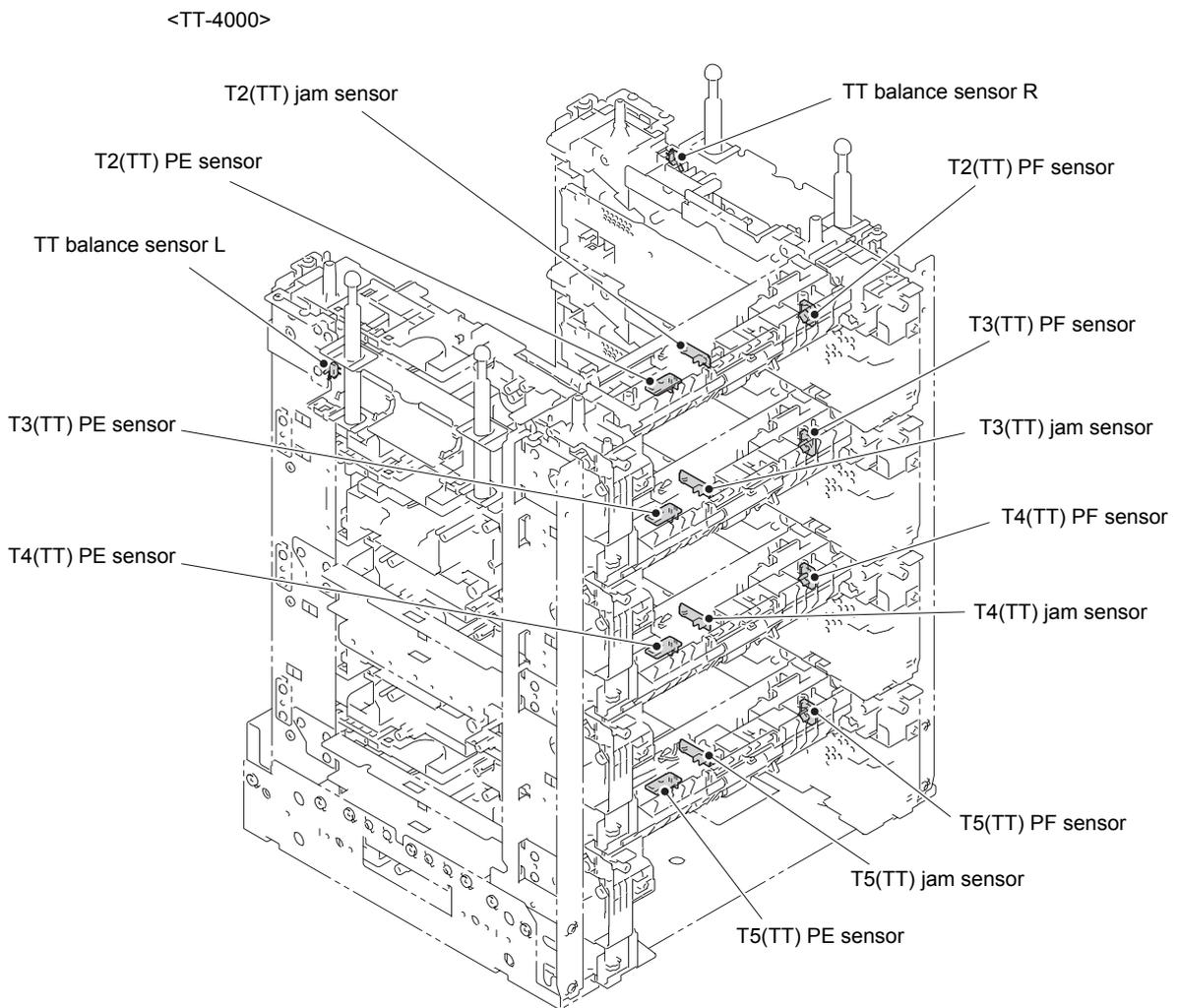


Fig. 2-12

2.4 Block Diagram

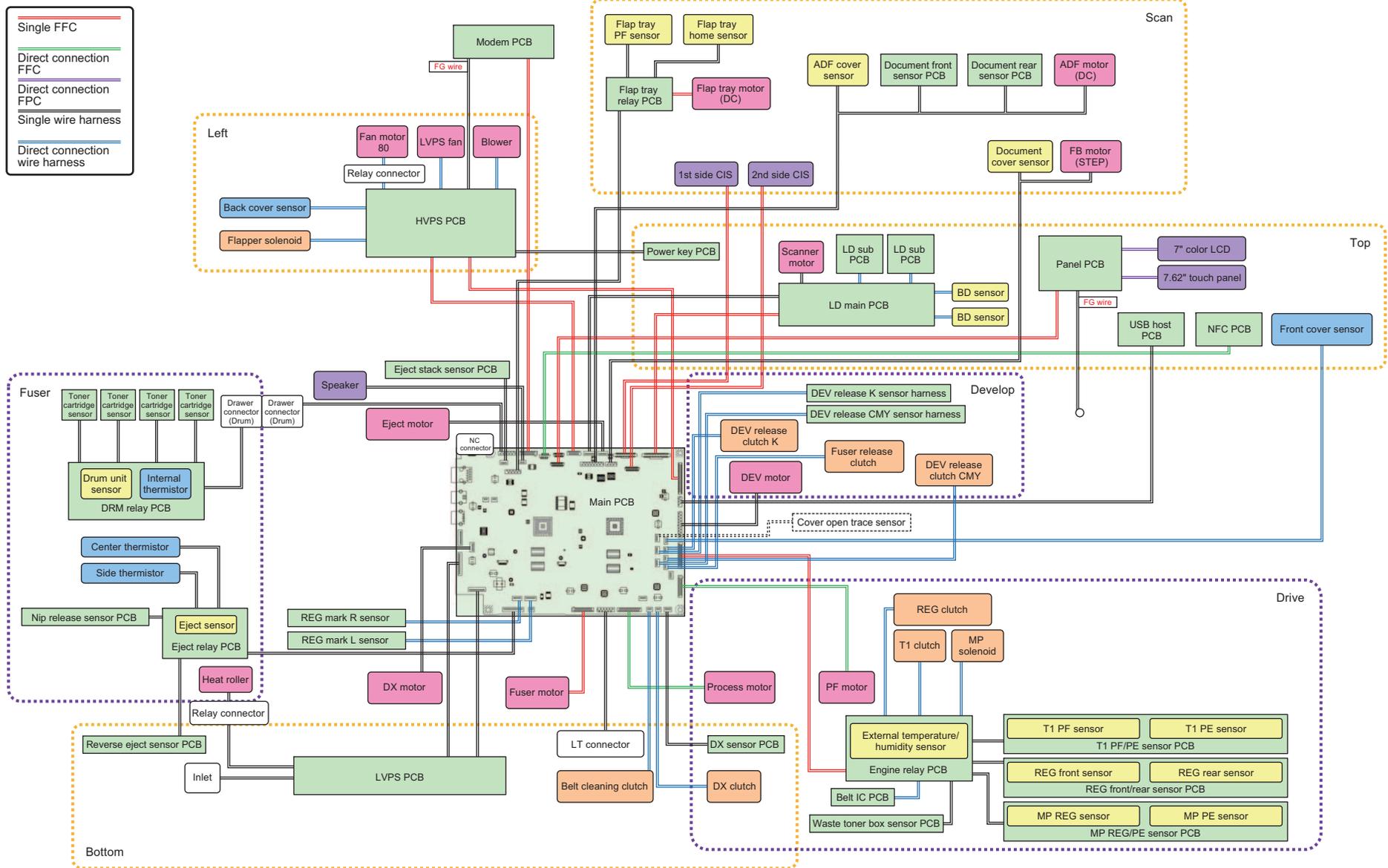


Fig. 2-13

2.5 Main Components

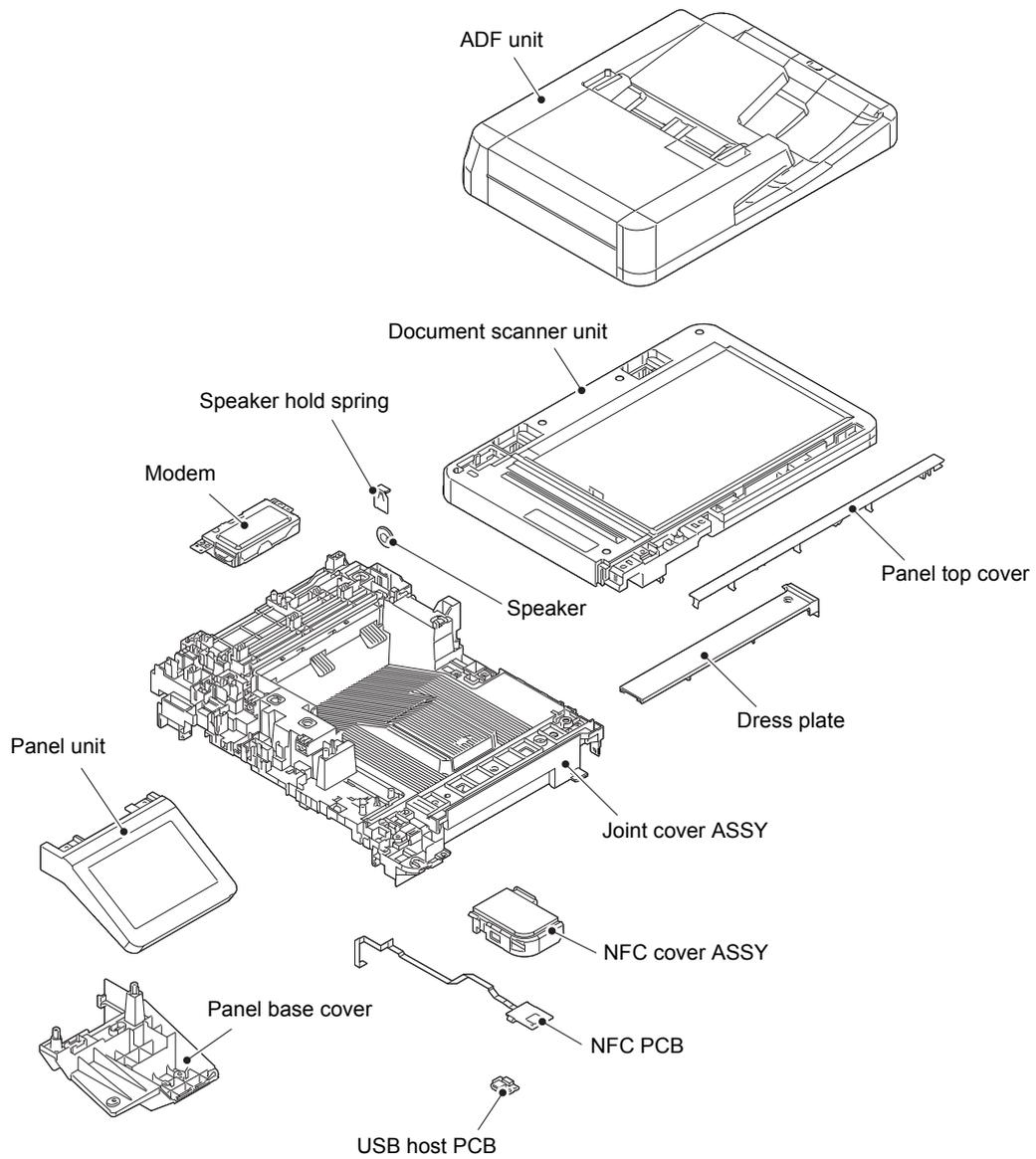


Fig. 2-15

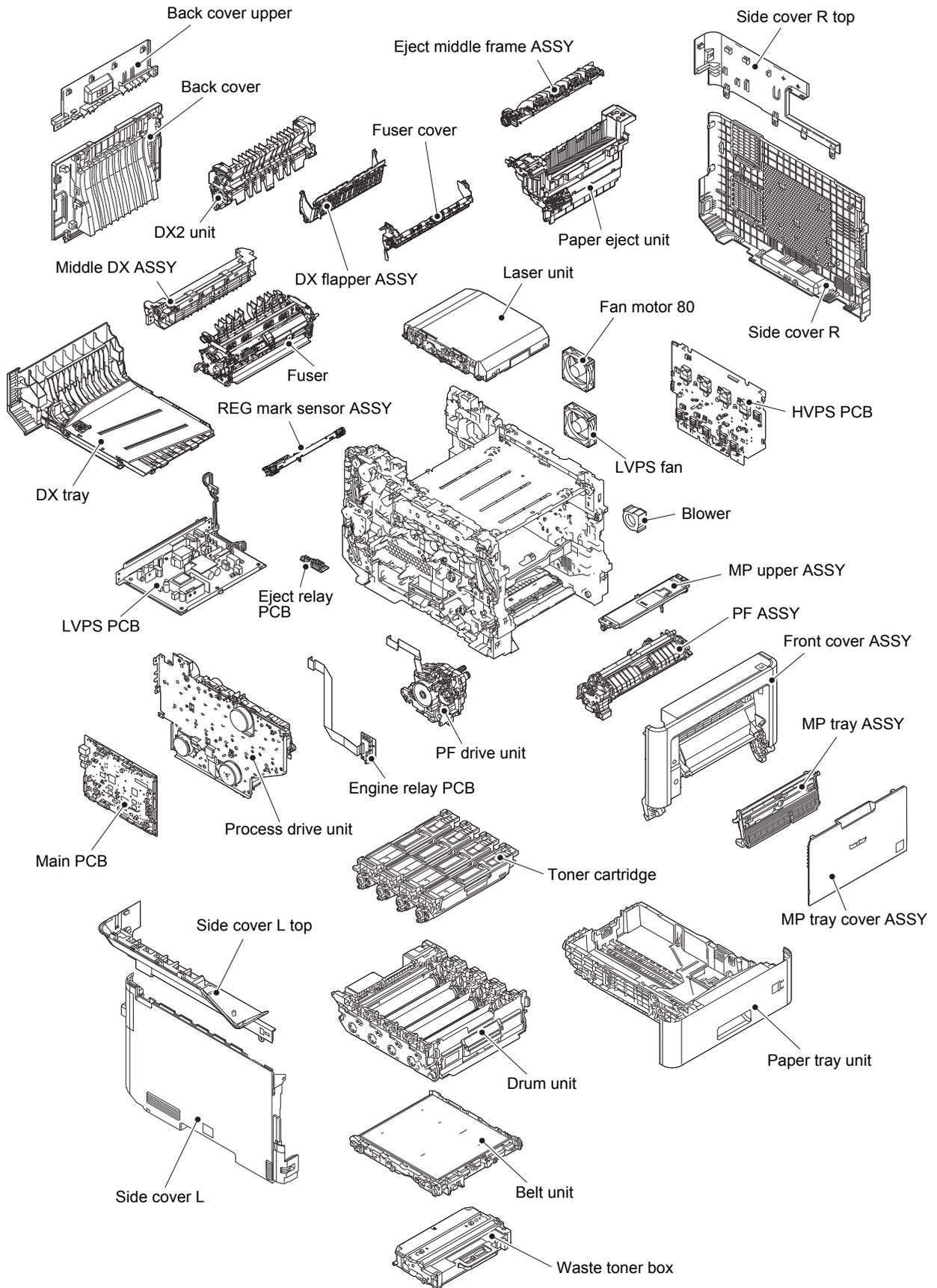


Fig. 2-16

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:
0101	Communication error (ASIC in the main PCB)	2-42	0900	Detected irregular power supply for more than 100 times.	2-45
0201	Communication error of the PF motor / Unstable speed	2-42	0A01	Blower failure	2-46
0202	Signal error of the process motor / Unstable speed	2-42	0A02	Fan motor 80 failure	2-46
0203	Eject motor failure	2-42	0A03	LVPS fan failure	2-46
0207	Fuser failure (Fuser motor)	2-43	0B01	HVPS PCB failure (during operating)	2-47
0208	DX motor failure	2-43	0B02	HVPS PCB failure (in the stand-by state)	2-47
020A	DEV motor failure	2-43	0C00	Density sensor failure	2-47
0300	Communication error of the laser unit (Scanner motor lock signal)	2-43	0E00	HVPS PCB communication error	2-47
0401	Laser unit failure (BD sensor 1)	2-44	1003	REG mark R sensor failure	2-48
0402	Laser unit failure (BD sensor 4)	2-44	1004	REG mark L sensor failure	2-48
0501	Fuser temperature abnormality (Low temperature, center thermistor)	2-44	1400	Condensation	2-48
0502	Fuser temperature abnormality (Low temperature, center thermistor)	2-44	1701	TT fan failure	2-48
0503	Fuser temperature abnormality (High temperature, center thermistor)	2-44	1801	T2LT communication error (Main PCB - T2(LT) control PCB)	2-49
0504	Fuser temperature abnormality (Low temperature, center thermistor)	2-44	1802	T3LT communication error (Main PCB - T3(LT) control PCB)	2-49
0505	Fuser temperature abnormality (Temperature rise, center thermistor)	2-44	1803	T4LT communication error (Main PCB - T4(LT) control PCB)	2-49
0506	Fuser temperature abnormality (Temperature fall, center thermistor)	2-44	1808	Communication error (LT only) (Main PCB - TT control PCB)	2-49
0509	Fuser failure (Press-contact/release related)	2-44	1901	TT failure (TT motor)	2-49
050A	Fuser temperature abnormality (Center thermistor, side thermistor)	2-45	1C00	Laser unit failure (Read error in EEPROM)	2-49
050B	Fuser temperature abnormality (Center thermistor, side thermistor)	2-45	2100	Wrong K toner cartridge (The toner cartridge other than black is installed.)	2-50
050C	Fuser temperature abnormality (Center thermistor, side thermistor)	2-45	2101	Wrong Y toner cartridge (The toner cartridge other than yellow is installed.)	2-50
0800	Internal thermistor abnormality	2-45	2102	Wrong C toner cartridge (The toner cartridge other than cyan is installed.)	2-50

Error codes	Description	Refer to:	Error codes	Description	Refer to:
2103	Wrong M toner cartridge (The toner cartridge other than magenta is installed.)	2-50	2605	Wrong belt unit (The belt unit that does not match the model is installed.)	2-56
2200	Wrong K toner cartridge (The non-compliant toner cartridge is installed.)	2-52	2E00	Consumables information communication error (Sensors in the machine side) (Toner cartridge/ Drum unit/Belt unit detect)	2-57
2201	Wrong Y toner cartridge (The non-compliant toner cartridge is installed.)	2-52	3801	External temperature/humidity abnormality (External temperature/ humidity sensor)	2-57
2202	Wrong C toner cartridge (The non-compliant toner cartridge is installed.)	2-52	3A00	Main PCB failure (Communication error in the main PCB)	2-57
2203	Wrong M toner cartridge (The non-compliant toner cartridge is installed.)	2-52	3B01	LT2 drive system failure (T2(LT) drive transmit sensor PCB)	2-57
2400	Wrong K toner cartridge (The incompatible toner cartridge is installed.)	2-52	3B02	LT3 drive system failure (T3(LT) drive transmit sensor PCB)	2-57
2401	Wrong Y toner cartridge (The incompatible toner cartridge is installed.)	2-52	3B03	LT4 drive system failure (T4(LT) drive transmit sensor PCB)	2-57
2402	Wrong C toner cartridge (The incompatible toner cartridge is installed.)	2-52	4000	The drum unit will be replaced soon. (Part life - Number of drum rotations)	2-58
2403	Wrong M toner cartridge (The incompatible toner cartridge is installed.)	2-52	4200	Replace the drum unit. (Part life - Number of drum rotations)	2-58
2404	Wrong drum unit (The incompatible drum unit is installed.)	2-53	4300	The belt unit will be replaced soon. (Part life - Number of pages printed)	2-58
2405	Wrong belt unit (The incompatible belt unit is installed.)	2-53	4400	Replace the belt unit. (Part life - Number of pages printed)	2-58
2500	Wrong K toner cartridge (Consumables information access error)	2-55	4500	Replace the fuser. (Part life - Number of pages printed)	2-58
2501	Wrong Y toner cartridge (Consumables information access error)	2-55	4600	Replace the laser unit. (Part life - Number of pages printed)	2-58
2502	Wrong C toner cartridge (Consumables information access error)	2-55	4700	The waste toner box will be replaced soon. (Amount of waste toner)	2-59
2503	Wrong M toner cartridge (Consumables information access error)	2-55	4800	Replace the waste toner box. (Amount of waste toner)	2-59
2504	Wrong drum unit (Consumables information access error)	2-55	4A00	Replace the waste toner box. (Number of belt cleaning roller rotations)	2-59
2505	Wrong belt unit (Consumables information access error)	2-55	4B01	The K toner cartridge will be replaced soon. (Part life - DEV roller/Dot counter)	2-59
2600	Wrong K toner cartridge (The toner cartridge that does not match the model is installed.)	2-56	4B02	The Y toner cartridge will be replaced soon. (Part life - DEV roller/Dot counter)	2-59
2601	Wrong Y toner cartridge (The toner cartridge that does not match the model is installed.)	2-56	4B03	The M toner cartridge will be replaced soon. (Part life - DEV roller/Dot counter)	2-59
2602	Wrong C toner cartridge (The toner cartridge that does not match the model is installed.)	2-56	4B04	The C toner cartridge will be replaced soon. (Part life - DEV roller/Dot counter)	2-59
2603	Wrong M toner cartridge (The toner cartridge that does not match the model is installed.)	2-56	4C01	Replace the K toner cartridge. (Part life - DEV roller/Dot counter)	2-60
2604	Wrong drum unit (The drum unit that does not match the model is installed.)	2-56	4C02	Y toner empty (Part life - DEV roller/ Dot counter)	2-60

Error codes	Description	Refer to:	Error codes	Description	Refer to:
4C03	M toner empty (Part life - DEV roller/Dot counter)	2-60	620D	C drum error (No drum unit, dirt corona wire, abnormal GRID current)	2-64
4C04	C toner empty (Part life - DEV roller/Dot counter)	2-60	6300	No waste toner box	2-66
4C05	Toner empty with one of Y, M, C toner - in printing (Part life - DEV roller/Dot counter)	2-60	6400	No belt unit (Belt unit sensor)	2-67
5001	Replace the PF kit MP. (Part life - Number of pages printed)	2-60	6801	High temperature inside the machine (Internal thermistor)	2-67
5002	Replace the PF kit T1. (Part life - Number of pages printed)	2-60	6901	Fuser failure (When turning the power ON)	2-67
5003	Replace the PF kit T2. (Part life - Number of pages printed)	2-60	6902	Fuser failure (When turning the power OFF and then back on again after 6901 occurred)	2-67
5004	Replace the PF kit T3. (Part life - Number of pages printed)	2-61	6A00	The drum unit abnormally discharged. (Corona wire)	2-68
5005	Replace the PF kit T4. (Part life - Number of pages printed)	2-61	6B01	The drum unit abnormally discharged. (The second abnormal discharge is detected beyond the drum life, or the abnormal discharge occurs once after double life.)	2-68
5006	Replace the PF kit T5. (Part life - Number of pages printed)	2-61	6C02	T2 plate drive system failure (T2 plate lift-up time out)	2-68
5702	Communication error when inserting the K toner cartridge. (Toner cartridge sensor)	2-62	6C03	T3 plate drive system failure (T3 plate lift-up time out)	2-68
5703	Communication error when inserting the Y toner cartridge. (Toner cartridge sensor)	2-62	6C04	T4 plate drive system failure (T4 plate lift-up time out)	2-68
5704	Communication error when inserting the C toner cartridge. (Toner cartridge sensor)	2-62	6D00	Too many paper trays	2-69
5705	Communication error when inserting the M toner cartridge. (Toner cartridge sensor)	2-62	6E00	DEV roller press-contact/release error	2-69
5706	Communication error when inserting the drum unit. (Drum unit sensor)	2-62	6F00	Detected irregular power supply for less than 100 times.	2-69
5707	Communication error when inserting the belt unit. (Belt unit sensor)	2-62	7000	Jam inside (REG rear sensor: ON - Eject sensor: OFF)	2-70
6001	Front cover open	2-63	7100	Jam rear (REG rear sensor: OFF - Eject sensor: ON)	2-70
6004	Fuser cover open	2-63	7107	Jam rear (2-sided printing)	2-71
6101	No K toner cartridge (Toner cartridge sensor)	2-63	7200	MP tray jam (When printing from MP tray, the REG rear sensor is still OFF.)	2-72
6102	No Y toner cartridge (Toner cartridge sensor)	2-63	7301	T1 jam (When printing from T1, the T1 PF sensor is still OFF.)	2-72
6103	No M toner cartridge (Toner cartridge sensor)	2-63	7302	T1 jam (When printing from T1, the REG front sensor is still OFF.)	2-73
6104	No C toner cartridge (Toner cartridge sensor)	2-63	7401	T2 jam (When printing from T2, the T2 PF sensor is still OFF.)	2-74
6200	No drum unit (Drum unit sensor)	2-64	7402	T2 jam (When printing from T2, the REG front sensor is still OFF.)	2-75
620A	K drum error (No drum unit, dirt corona wire, abnormal GRID current)	2-64	7501	T3 jam (When printing from T3, the T3 PF sensor is still OFF.)	2-76
620B	Y drum error (No drum unit, dirt corona wire, abnormal GRID current)	2-64	7502	T3 jam (When printing from T3, the REG front sensor is still OFF.)	2-77
620C	M drum error (No drum unit, dirt corona wire, abnormal GRID current)	2-64	7601	T4 jam (When printing from T4, the T4 PF sensor is still OFF.)	2-78

Error codes	Description	Refer to:	Error codes	Description	Refer to:
7602	T4 jam (When printing from T4, the REG front sensor is still OFF.)	2-79	9001	Paper size mismatch - MP tray (Printer driver setting, Printer setting)	2-87
7701	T5 jam (When printing from T5, the T5 PF sensor is still OFF.)	2-80	9002	T1 paper size mismatch (Printer driver setting, Printer setting)	2-87
7702	T5 jam (When printing from T5, the REG front sensor is still OFF.)	2-81	9003	T2 paper size mismatch (Printer driver setting, Printer setting)	2-87
7801	DX tray jam (Around DX tray)	2-81	9004	T3 paper size mismatch (Printer driver setting, Printer setting)	2-87
7802	DX tray jam (Around T1)	2-82	9005	T4 paper size mismatch (Printer driver setting, Printer setting)	2-87
7803	DX tray jam (Around T1 or DX tray)	2-82	9006	T5 paper size mismatch (Printer driver setting, Printer setting)	2-87
8501	T1 open	2-83	9201	MP tray paper type mismatch (Printer driver setting, Printer setting)	2-87
8502	T2 open	2-83	9202	T1 paper type mismatch (Printer driver setting, Printer setting)	2-87
8503	T3 open	2-83	9203	T2 paper type mismatch (Printer driver setting, Printer setting)	2-87
8504	T4 open	2-83	9204	T3 paper type mismatch (Printer driver setting, Printer setting)	2-87
8505	T5 open	2-83	9205	T4 paper type mismatch (Printer driver setting, Printer setting)	2-87
8506	T1 open (Detected that the T1 is open in printing.)	2-83	9206	T5 paper type mismatch (Printer driver setting, Printer setting)	2-87
8507	T2 open (Detected that the T2 is open in printing.)	2-83	9301	No paper in MP tray (MP PE sensor)	2-88
8508	T3 open (Detected that the T3 is open in printing.)	2-83	9302	No paper in T1 (T1 PE sensor)	2-88
8509	T4 open (Detected that the T4 is open in printing.)	2-83	9303	No paper in T2 (T2 PE sensor)	2-89
8702	The standard output tray fully stacks.	2-84	9304	No paper in T3 (T3 PE sensor)	2-89
8901	No DX tray	2-84	9305	No paper in T4 (T4 PE sensor)	2-89
8903	Back cover open - 2-sided printing	2-84	9306	No paper in T5 (T5 PE sensor)	2-89
8904	Back cover open - 2-sided printing (Detected that the back cover is open in printing.)	2-84	9309	No paper in all trays (Paper source setting: AUTO, PE sensor)	2-90
8A01	The paper size for 2-sided printing is out of specification. (REG rear sensor)	2-85	930A	No paper in Fax/List printing (PE sensor)	2-89
8A02	Duplex print error (The 2-sided printing suspends.)	2-85	9701	The paper size for 2-sided printing is out of specifications. (Printer driver setting)	2-90
8B01	The TT power is turned OFF. (The TT is connected, but the power is OFF.)	2-85	9702	T1 paper size is out of specification. (Printer driver setting)	2-90
8D01	The paper size is out of specification. (The REG rear sensor detects that the size is short.)	2-86	9703	T2 paper size is out of specification. (Printer driver setting)	2-90
8E02	The paper size for FAX/Report print is out of specification. (The REG rear sensor detects that the size is short.)	2-86	9704	T3 paper size is out of specification. (Printer driver setting)	2-90

Error codes	Description	Refer to:	Error codes	Description	Refer to:
9705	T4 paper size is out of specification. (Printer driver setting)	2-90	AD00	Incorrect scanning data	2-97
9706	T5 paper size is out of specification. (Printer driver setting)	2-90	AF00	Scanning home position detection failure (Does not change at the home position.)	2-97
9801	Density calibration failure - Density calibration from Panel (Incorrect measured value)	2-91	B000	Connection failure of CIS flat cable (1st/2nd side) (When Function code 55 is executed)	2-98
9802	Density calibration failure - Density calibration from Panel (Any of the color toners is unprintable.)	2-91	B300	Too much documents in ADF	2-98
9803	Density calibration failure - Density calibration from Panel (When printing the calibration data)	2-91	B400	ADF flap tray lift-up failure (Timer control malfunction)	2-98
9804	Density sensor sensitivity adjustment (Function code 72) failure (Incorrect measured value)	2-91	B401	ADF flap tray lift-up failure (The flap tray operation is improper.)	2-98
9901	Manual color registration failure (Incorrect measured value)	2-92	B402	ADF flap tray lift-up failure (The flap tray operation is improper, and the flap tray home sensor is ON.)	2-99
9902	Manual color registration failure (Any of the color toners is unprintable.)	2-92	B403	ADF flap tray lift-up failure (The flap tray operation is improper, and the flap tray home sensor is OFF.)	2-99
9903	Manual color registration failure (When printing the calibration data)	2-92	B410	ADF flap tray lift-down failure (Timer control malfunction)	2-99
9A01	Auto color registration failure (Incorrect measured value)	2-93	B411	ADF flap tray lift-down failure (The flap tray operation is improper.)	2-99
9A02	Auto color registration failure (Any of the color toners is unprintable.)	2-93	B412	ADF flap tray lift-down failure (The flap tray operation is improper, and the flap tray PF sensor is ON.)	2-100
9A03	Auto color registration failure (When printing the calibration data)	2-93	B413	ADF flap tray lift-down failure (The flap tray operation is improper, and the flap tray PF sensor is OFF.)	2-100
9B03	T2 FAX unprintable (Printer setting, Fax unprintable - T2)	2-94	BB00	White level data error (When Function code 55 is executed)	2-100
9B04	T3 FAX unprintable (Printer setting, Fax unprintable - T3)	2-94	BC00	Scanning error when sending FAX (2nd side) (Second time or later)	2-101
9B05	T4 FAX unprintable (Printer setting, Fax unprintable - T4)	2-94	BD00	Black level data error (When Function code 55 is executed)	2-101
9B06	T5 FAX unprintable (Printer setting, Fax unprintable - T5)	2-94	BF00	The document for scanning is 40 cm or more in length. (ADF 2-sided scanning)	2-101
A000	Incorrect scanning data for 2nd side	2-94	C001	Cannot access the server ("Log to Network" function, Server address setting)	2-102
A200	The document is 90 cm or more in length. (ADF front sensor, Document rear sensor)	2-94	C002	Incorrect server authentication information ("Log to Network" function)	2-102
A300	The front edge of document is not detected (Document rear sensor)	2-95	C003	Improper log saving folder setting ("Log to Network" function, Clock/SNTP setting)	2-102
A400	ADF cover open (ADF cover sensor)	2-95	C004	Set clock error ("Log to Network" function, Clock/SNTP setting)	2-102
A500	Scanning error when sending FAX (1st side) (First time)	2-96	C100	Failure to save data to USB flash memory	2-102
A600	Scanning error when sending FAX (1st side) (Second time or later)	2-96	C700	Out of memory (PC-Print)	2-103
A700	Incorrect scanning color parameters	2-97	C800	Out of memory (Secure print)	2-103
AC00	Scanning error when sending FAX (2nd side) (First time)	2-97	C900	Memory full for Storage device (Storage print)	2-103

Error codes	Description	Refer to:	Error codes	Description	Refer to:
C901	Memory full for Storage device (Storage print)	2-103	E500	An error in the main PCB	2-104
CA00	Communication error with Storage device (Storage print)	2-103	E600	EEPROM malfunction	2-104
D100	Modem initialization failure	2-103	E701	An error in the main PCB	2-104
D200	Detected that the modem PCB is not connected.	2-103	E702	An error in the main PCB	2-104
D800	Touch panel initialization failure	2-103	E900	NFC initialization failure	2-104
DB00	Communication error in the main PCB	2-104	EA00	No storage (USB flash memory)	2-105
E000	Program data error	2-104	EC00	Abnormal current flowing through a USB connector (Eddy current)	2-105
E001	Program data error	2-104	F900	Incorrect spec code	2-105

3.2 Error Messages

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

Error messages		Description	Error codes	Refer to:
1st message	2nd message			
2-sided Disabled	Close the Back Cover of the machine.	Back cover open - 2-sided printing	8903	2-84
		Back cover open - 2-sided printing (Detected that the back cover is open in printing.)	8904	2-84
Belt Error	Reinstall the Belt Unit.	Communication error when inserting the belt unit. (Belt unit sensor)	5707	2-62
Calibration	Calibration failed. Insufficient Toner for Calibration.	Density calibration failure - Density calibration from Panel (Any of the color toners is unprintable.)	9802	2-91
	Calibration failed. Press [OK]	Density calibration failure - Density calibration from Panel (When printing the calibration data)	9803	2-91
		Density sensor sensitivity adjustment (Function code 72) failure (Incorrect measured value)	9804	2-91
	Calibration failed. Turn the power off and then back on again.	Density calibration failure - Density calibration from Panel (Incorrect measured value)	9801	2-91
Cannot Detect	Put the Belt Unit back in.	Wrong belt unit (The incompatible belt unit is installed.)	2405	2-53
	Put the Drum Unit back in.	Wrong drum unit (The incompatible drum unit is installed.)	2404	2-53
	Put the Toner Cartridge back in. (BK) Black	Wrong K toner cartridge (The incompatible toner cartridge is installed.)	2400	2-52
	Put the Toner Cartridge back in. (C) Cyan	Wrong C toner cartridge (The incompatible toner cartridge is installed.)	2402	2-52
	Put the Toner Cartridge back in. (M) Magenta	Wrong M toner cartridge (The incompatible toner cartridge is installed.)	2403	2-52
	Put the Toner Cartridge back in. (Y) Yellow	Wrong Y toner cartridge (The incompatible toner cartridge is installed.)	2401	2-52
Cannot Print 01	Turn the power off and then back on again.	Communication error (ASIC in the main PCB)	0101	2-42
Cannot Print 02	Turn the power off and then back on again.	Communication error of the PF motor / Unstable speed	0201	2-42
		Signal error of the process motor / Unstable speed	0202	2-42
		Eject motor failure	0203	2-42
		Fuser failure (Fuser motor)	0207	2-43
		DEV motor failure	020A	2-43
Cannot Print 03	Turn the power off and then back on again.	Communication error of the laser unit (Scanner motor lock signal)	0300	2-43
Cannot Print 04	Turn the power off and then back on again.	Laser unit failure (BD sensor1)	0401	2-44
		Laser unit failure (BD sensor 4)	0402	2-44

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	2-44
		Fuser temperature abnormality (Low temperature, center thermistor)	0502	2-44
		Fuser temperature abnormality (High temperature, center thermistor)	0503	2-44
		Fuser temperature abnormality (Low temperature, center thermistor)	0504	2-44
		Fuser temperature abnormality (Temperature rise, center thermistor)	0505	2-44
		Fuser temperature abnormality (Temperature fall, center thermistor)	0506	2-44
		Fuser failure (Press-contact/release related)	0509	2-44
		Fuser temperature abnormality (Center thermistor, side thermistor)	050A	2-45
		Fuser temperature abnormality (Center thermistor, side thermistor)	050B	2-45
		Fuser temperature abnormality (Center thermistor, side thermistor)	050C	2-45
Cannot Print 08	Turn the power off and then back on again.	Internal thermistor abnormality	0800	2-45
Cannot Print 09	Turn the power off and then back on again.	Detected irregular power supply for more than 100 times.	0900	2-45
Cannot Print 0A	Turn the power off and then back on again.	Blower failure	0A01	2-46
		Fan motor 80 failure	0A02	2-46
		LVPS fan failure	0A03	2-46
Cannot Print 0B	Turn the power off and then back on again.	HVPS PCB failure (during operating)	0B01	2-47
		HVPS PCB failure (in the stand-by state)	0B02	2-47
Cannot Print 0C	Turn the power off and then back on again.	Density sensor failure	0C00	2-47
Cannot Print 0E	Turn the power off and then back on again.	HVPS PCB communication error	0E00	2-47
Cannot Print 10	Turn the power off and then back on again.	REG mark R sensor failure	1003	2-48
		REG mark L sensor failure	1004	2-48
Cannot Print 17	Turn the power off and then back on again.	TT fan failure	1701	2-48
Cannot Print 18	Turn the power off and then back on again.	T2LT communication error (Main PCB - T2(LT) control PCB)	1801	2-49
		T3LT communication error (Main PCB - T3(LT) control PCB)	1802	2-49
		T4LT communication error (Main PCB - T4(LT) control PCB)	1803	2-49
		Communication error (LT only) (Main PCB - TT control PCB)	1808	2-49
Cannot Print 19	Turn the power off and then back on again.	TT failure (TT motor)	1901	2-49
Cannot Print 1C	Turn the power off and then back on again.	Laser unit failure (Read error in EEPROM)	1C00	2-49

Error messages		Description	Error codes	Refer to:
1st message	2nd message			
Cannot Print 38	Turn the power off and then back on again.	External temperature/humidity abnormality (External temperature/humidity sensor)	3801	2-57
Cannot Print 3A	Turn the power off and then back on again.	Main PCB failure (Communication error in the main PCB)	3A00	2-57
Cannot Print 3B	Turn the power off and then back on again.	LT2 drive system failure (T2(LT) drive transmit sensor PCB)	3B01	2-57
		LT3 drive system failure (T3(LT) drive transmit sensor PCB)	3B02	2-57
		LT4 drive system failure (T4(LT) drive transmit sensor PCB)	3B03	2-57
Cannot Print 8B	Turn the power off and then back on again.	The TT power is turned OFF. (The TT is connected, but the power is OFF.)	8B01	2-85
Cannot Print C1	Turn the power off and then back on again.	Failure to save data to USB flash memory	C100	2-102
Cannot Print D1	Turn the power off and then back on again.	Modem initialization failure	D100	2-103
Cannot Print DB	Turn the power off and then back on again.	Communication error in the main PCB	DB00	2-104
Cannot Print E0	Turn the power off and then back on again.	Program data error	E000	2-104
		Program data error	E001	2-104
Cannot Print E5	Turn the power off and then back on again.	An error in the main PCB	E500	2-104
Cannot Print E6	Turn the power off and then back on again.	EEPROM malfunction	E600	2-104
Cannot Print E7	Turn the power off and then back on again.	An error in the main PCB	E701	2-104
		An error in the main PCB	E702	2-104
Cannot Print E9	Turn the power off and then back on again.	NFC initialization failure	E900	2-104
Cannot Print ZC	Turn the power off and then back on again.	Detected irregular power supply for less than 100 times.	6F00	2-69
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)	BF00	2-101
Cannot Scan A0	Turn the power off and then back on again.	Incorrect scanning data for 2nd side	A000	2-94
Cannot Scan A7	Turn the power off and then back on again.	Incorrect scanning color parameters	A700	2-97
Cannot Scan AD	Turn the power off and then back on again.	Incorrect scanning data	AD00	2-97
Cannot Scan AF	Turn the power off and then back on again.	Scanning home position detection failure (Does not change at the home position.)	AF00	2-97

Error messages		Description	Error codes	Refer to:
1st message	2nd message			
Cannot Scan B4	Turn the power off and then back on again.	ADF flap tray lift-up failure (Timer control malfunction)	B400	2-98
		ADF flap tray lift-up failure (The flap tray operation is improper.)	B401	2-98
		ADF flap tray lift-up failure (The flap tray operation is improper, and the flap tray home sensor is ON.)	B402	2-99
		ADF flap tray lift-up failure (The flap tray operation is improper, and the flap tray home sensor is OFF.)	B403	2-99
		ADF flap tray lift-down failure (Timer control malfunction)	B410	2-99
		ADF flap tray lift-down failure (The flap tray operation is improper.)	B411	2-99
		ADF flap tray lift-down failure (The flap tray operation is improper, and the flap tray PF sensor is ON.)	B412	2-100
		ADF flap tray lift-down failure (The flap tray operation is improper, and the flap tray PF sensor is OFF.)	B413	2-100
Cartridge Error	Open the Front Cover. Check color and position of toner cartridges. (BK) Black	Wrong K toner cartridge (The toner cartridge other than black is installed.)	2100	2-50
	Open the Front Cover. Check color and position of toner cartridges. (C) Cyan	Wrong C toner cartridge (The toner cartridge other than cyan is installed.)	2102	2-50
	Open the Front Cover. Check color and position of toner cartridges. (M) Magenta	Wrong M toner cartridge (The toner cartridge other than magenta is installed.)	2103	2-50
	Open the Front Cover. Check color and position of toner cartridges. (Y) Yellow	Wrong Y toner cartridge (The toner cartridge other than yellow is installed.)	2101	2-50
	Reinstall the Toner Cartridge. (BK) Black	Communication error when inserting the K toner cartridge. (Toner cartridge sensor)	5702	2-62
	Reinstall the Toner Cartridge. (C) Cyan	Communication error when inserting the C toner cartridge. (Toner cartridge sensor)	5704	2-62
	Reinstall the Toner Cartridge. (M) Magenta	Communication error when inserting the M toner cartridge. (Toner cartridge sensor)	5705	2-62
	Reinstall the Toner Cartridge. (Y) Yellow	Communication error when inserting the Y toner cartridge. (Toner cartridge sensor)	5703	2-62
Condensation	Leave switched ON. Fully open the Front Cover. Wait 30 minutes, switch OFF and close cover, then switch ON.	Condensation	1400	2-48
Cooling Down	Wait for a while.	High temperature inside the machine (Internal thermistor)	6801	2-67

Error messages		Description	Error codes	Refer to:
1st message	2nd message			
Cover is Open	Close the ADF Cover, then press Stop [X].	ADF cover open (ADF cover sensor)	A400	2-95
	Close the ADF Cover.	ADF cover open (ADF cover sensor)	A400	2-95
	Close the Back Cover of the machine.	Fuser cover open	6004	2-63
	Close the Front Cover.	Front cover open	6001	2-63
Document Jam	Clear the scanner jam, then press Stop [X].	The document is 90 cm or more in length. (ADF front sensor, Document rear sensor)	A200	2-94
		The front edge of document is not detected. (Document rear sensor)	A300	2-95
Drum !	Open the Front Cover, pull out the Drum Unit Pull out all four Toner Cartridges. Slide and back the all four Green tabs on Drum Unit.	K drum error (No drum unit, dirt corona wire, abnormal GRID current)	620A	2-64
		Y drum error (No drum unit, dirt corona wire, abnormal GRID current)	620B	2-64
		M drum error (No drum unit, dirt corona wire, abnormal GRID current)	620C	2-64
		C drum error (No drum unit, dirt corona wire, abnormal GRID current)	620D	2-64
		The drum unit abnormally discharged. (Corona wire)	6A00	2-68
Drum Error	Reinstall the Drum Unit.	Communication error when inserting the drum unit. (Drum unit sensor)	5706	2-62
Drum Stop	Replace the Drum Unit.	The drum unit abnormally discharged. (The second abnormal discharge is detected beyond the drum life, or the abnormal discharge occurs once after double life.)	6B01	2-68
Jam 2-sided	Pull out the 2-sided Tray at the back of the machine and remove the jammed paper.	DX tray jam (Around DX tray)	7801	2-81
	Pull the paper tray1 and 2-sided tray completely out of the machine. Check inside the machine to remove the jammed paper.	DX tray jam (Around T1 or DX tray)	7803	2-82
	Pull the paper tray1 completely out of the machine. Check inside the machine towards the rear to remove the jammed paper.	DX tray jam (Around T1)	7802	2-82
Jam Inside	Open the Front Cover. Pull out the Drum Unit completely. Remove the jammed paper.	Jam inside (REG rear sensor: ON - Eject sensor: OFF)	7000	2-70
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	2-72

Error messages		Description	Error codes	Refer to:
1st message	2nd message			
Jam Rear	Jam in several places. Open the Back Cover and remove the jammed paper. Open the Cover 2 and remove the jammed paper, then press [Retry].	Jam rear (2-sided printing)	7107	2-71
	Open the Back Cover and remove the jammed paper, then press [Retry].	Jam rear (REG rear sensor: OFF - Eject sensor: ON)	7100	2-70
Jam Tray 1	Remove the jammed paper from Tray 1.	T1 jam (When printing from T1, the REG front sensor is still OFF.)	7302	2-73
Jam Tray 2	Remove the jammed paper from Tray 2.	T2 jam (When printing from T2, the REG front sensor is still OFF.)	7402	2-75
Jam Tray 3	Remove the jammed paper from Tray 3.	T3 jam (When printing from T3, the REG front sensor is still OFF.)	7502	2-77
Jam Tray 4	Remove the jammed paper from Tray 4.	T4 jam (When printing from T4, the REG front sensor is still OFF.)	7602	2-79
Jam Tray 5	Remove the jammed paper from Tray 5.	T5 jam (When printing from T5, the REG front sensor is still OFF.)	7702	2-81
Log Access Error	Authentication Error, contact your administrator.	Incorrect server authentication information ("Log to Network" function)	C002	2-102
	File Access Error, contact your administrator.	Improper log saving folder setting ("Log to Network" function, Clock/SNTP setting)	C003	2-102
	Server Timeout, contact your administrator.	Cannot access the server ("Log to Network" function, Server address setting)	C001	2-102
	Wrong Date & Time, contact your administrator.	Set clock error ("Log to Network" function, Clock/SNTP setting)	C004	2-102
Machine Error	-	Detected that the modem PCB is not connected.	D200	2-103
Machine Error F9	-	Incorrect spec code	F900	2-105
Maintenance	Replace Fuser	Replace the fuser. (Part life - Number of pages printed)	4500	2-58
	Replace Laser	Replace the laser unit. (Part life - Number of pages printed)	4600	2-58
	Replace PF Kit 1	Replace the PF kit T1. (Part life - Number of pages printed)	5002	2-60
	Replace PF Kit 2	Replace the PF kit T2. (Part life - Number of pages printed)	5003	2-60
	Replace PF Kit 3	Replace the PF kit T3. (Part life - Number of pages printed)	5004	2-61
	Replace PF Kit 4	Replace the PF kit T4. (Part life - Number of pages printed)	5005	2-61
	Replace PF Kit 5	Replace the PF kit T5. (Part life - Number of pages printed)	5006	2-61
	Replace PF Kit MP	Replace the PF kit MP. (Part life - Number of pages printed)	5001	2-60

Error messages		Description	Error codes	Refer to:
1st message	2nd message			
Media Type Mismatch	Reload correct paper in MP Tray, then press [Retry].	MP tray paper type mismatch (Printer driver setting, Printer setting)	9201	2-87
	Reload correct paper in Tray1, then press [Retry].	T1 paper type mismatch (Printer driver setting, Printer setting)	9202	2-87
	Reload correct paper in Tray2, then press [Retry].	T2 paper type mismatch (Printer driver setting, Printer setting)	9203	2-87
	Reload correct paper in Tray3, then press [Retry].	T3 paper type mismatch (Printer driver setting, Printer setting)	9204	2-87
	Reload correct paper in Tray4, then press [Retry].	T4 paper type mismatch (Printer driver setting, Printer setting)	9205	2-87
	Reload correct paper in Tray5, then press [Retry].	T5 paper type mismatch (Printer driver setting, Printer setting)	9206	2-87
No 2-sided Tray	Install the 2-sided tray correctly.	No DX tray	8901	2-84
No Belt	Open the Front Cover, then install Belt Unit.	Wrong belt unit (Consumables information access error)	2505	2-55
No Belt Unit	Open the Front Cover, pull out the Drum Unit completely and install the Belt Unit.	No belt unit (Belt unit sensor)	6400	2-67
No Drum	Open the Front Cover, then install Drum Unit.	Wrong drum unit (Consumables information access error)	2504	2-55
No Drum Unit	Open the Front Cover, then install the Drum Unit.	No drum unit (Drum unit sensor)	6200	2-64
No Paper	Reload paper in Tray.	No paper in all trays (Paper source setting: AUTO, PE sensor)	9309	2-90
No Paper Fed T1	Reload paper in Tray 1, then press [Retry].	T1 jam (When printing from T1, the T1 PF sensor is still OFF.)	7301	2-72
No Paper Fed T2	Reload paper in Tray 2, then press [Retry].	T2 jam (When printing from T2, the T2 PF sensor is still OFF.)	7401	2-74
No Paper Fed T3	Reload paper in Tray 3, then press [Retry].	T3 jam (When printing from T3, the T3 PF sensor is still OFF.)	7501	2-76
No Paper Fed T4	Reload paper in Tray 4, then press [Retry].	T4 jam (When printing from T4, the T4 PF sensor is still OFF.)	7601	2-78
No Paper Fed T5	Reload paper in Tray 5, then press [Retry].	T5 jam (When printing from T5, the T5 PF sensor is still OFF.)	7701	2-80
No Paper MP Tray	Reload paper in MP Tray.	No paper in MP tray (MP PE sensor)	9301	2-88
No Paper Tray 1	Reload paper in Tray 1.	No paper in T1 (T1 PE sensor)	9302	2-88
No Paper Tray 2	Reload paper in Tray 2.	No paper in T2 (T2 PE sensor)	9303	2-89

Error messages		Description	Error codes	Refer to:
1st message	2nd message			
No Paper Tray 3	Reload paper in Tray 3.	No paper in T3 (T3 PE sensor)	9304	2-89
No Paper Tray 4	Reload paper in Tray 4.	No paper in T4 (T4 PE sensor)	9305	2-89
No Paper Tray 5	Reload paper in Tray 5.	No paper in T5 (T5 PE sensor)	9306	2-89
No Toner	Open the Front Cover, then install Toner Cartridge. (BK) Black	Wrong K toner cartridge (Consumables information access error)	2500	2-55
		No K toner cartridge (Toner cartridge sensor)	6101	2-63
	Open the Front Cover, then install Toner Cartridge. (C) Cyan	Wrong C toner cartridge (Consumables information access error)	2502	2-55
		No C toner cartridge (Toner cartridge sensor)	6104	2-63
	Open the Front Cover, then install Toner Cartridge. (M) Magenta	Wrong M toner cartridge (Consumables information access error)	2503	2-55
		No M toner cartridge (Toner cartridge sensor)	6103	2-63
	Open the Front Cover, then install Toner Cartridge. (Y) Yellow	Wrong Y toner cartridge (Consumables information access error)	2501	2-55
		No Y toner cartridge (Toner cartridge sensor)	6102	2-63
No Tray 1	Reinstall Tray 1.	T1 open	8501	2-83
		T1 open (Detected that the T1 is open in printing.)	8506	2-83
No Tray 2	Reinstall Tray 2.	T2 open	8502	2-83
		T2 open (Detected that the T2 is open in printing.)	8507	2-83
No Tray 3	Reinstall Tray 3.	T3 open	8503	2-83
		T3 open (Detected that the T3 is open in printing.)	8508	2-83
No Tray 4	Reinstall Tray 4.	T4 open	8504	2-83
		T4 open (Detected that the T4 is open in printing.)	8509	2-83
No Waste Toner	Install the Waste Toner Box.	No waste toner box	6300	2-66
Out of Memory	Press stop [X].	Out of memory (PC-Print)	C700	2-103
Output Tray Full	Remove the paper from the Standard Output Tray.	The standard output tray fully stacks.	8702	2-84
Print Data Full	Print Data is full. Press Stop [X] and delete the previously stored data.	Out of memory (Secure print)	C800	2-103

Error messages		Description	Error codes	Refer to:
1st message	2nd message			
Received Fax XX	Set the appropriate paper in except Tray 2.	T2 FAX unprintable (Printer setting, Fax unprintable - T2)	9B03	2-94
	Set the appropriate paper in except Tray 3.	T3 FAX unprintable (Printer setting, Fax unprintable - T3)	9B04	2-94
	Set the appropriate paper in except Tray 4.	T4 FAX unprintable (Printer setting, Fax unprintable - T4)	9B05	2-94
	Set the appropriate paper in except Tray 5.	T5 FAX unprintable (Printer setting, Fax unprintable - T5)	9B06	2-94
Registration	Registration failed. Insufficient Toner for Registration.	Auto color registration failure (Any of the color toners is unprintable.)	9A02	2-93
	Registration failed. Press [OK]	Manual color registration failure (Any of the color toners is unprintable.)	9902	2-92
		Manual color registration failure (When printing the calibration data)	9903	2-92
		Auto color registration failure (When printing the calibration data)	9A03	2-93
	Registration failed. Turn the power off and then back on again.	Manual color registration failure (Incorrect measured value)	9901	2-92
		Auto color registration failure (Incorrect measured value)	9A01	2-93
Replace Toner	Open the Front Cover. Pull out the Drum Unit. Replace Toner Cartridge. (BK) Black	Replace the K toner cartridge. (Part life - DEV roller/Dot counter)	4C01	2-60
	Open the Front Cover. Pull out the Drum Unit. Replace Toner Cartridge. (C) Cyan	C toner empty (Part life - DEV roller/Dot counter)	4C04	2-60
	Open the Front Cover. Pull out the Drum Unit. Replace Toner Cartridge. (C) Cyan (M) Magenta (Y) Yellow	Toner empty with one of Y, M, C toner - in printing (Part life - DEV roller/Dot counter)	4C05	2-60
	Open the Front Cover. Pull out the Drum Unit. Replace Toner Cartridge. (M) Magenta	M toner empty (Part life - DEV roller/Dot counter)	4C03	2-60
	Open the Front Cover. Pull out the Drum Unit. Replace Toner Cartridge. (Y) Yellow	Y toner empty (Part life - DEV roller/Dot counter)	4C02	2-60
Replace WT Box	Replace the Waste Toner Box inside the machine.	Replace the waste toner box. (Amount of waste toner)	4800	2-59

Error messages		Description	Error codes	Refer to:
1st message	2nd message			
Scanner Error	-	White level data error (When Function code 55 is executed)	BB00	2-100
		Black level data error (When Function code 55 is executed)	BD00	2-101
Self-Diagnostic	Turn the power off, then on again. Leave the machine for 15 min.	Fuser failure (When turning the power ON)	6901	2-67
	Will Automatically Restart within 15 minutes.	Fuser failure (When turning the power OFF and then back on again after 6901 occurred)	6902	2-67
Short paper	Open the Back Cover and then press [Retry].	The paper size is out of specification. (The REG rear sensor detects that the size is short.)	8D01	2-86
Size Error	Specify the correct paper size for Tray 1.	T1 paper size is out of specification. (Printer driver setting)	9702	2-90
	Specify the correct paper size for Tray 2.	T2 paper size is out of specification. (Printer driver setting)	9703	2-90
	Specify the correct paper size for Tray 3.	T3 paper size is out of specification. (Printer driver setting)	9704	2-90
	Specify the correct paper size for Tray 4.	T4 paper size is out of specification. (Printer driver setting)	9705	2-90
	Specify the correct paper size for Tray 5.	T5 paper size is out of specification. (Printer driver setting)	9706	2-90
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 specifications. (Printer driver setting)	9701	2-90
	Specify the correct paper	The paper size for 2-sided printing is out of specification. (REG rear sensor)	8A01	2-85
Size Mismatch	Reload correct paper in MP Tray, then press [Retry].	Paper size mismatch-MP tray (Printer driver setting, Printer setting)	9001	2-87
	Reload correct paper in Tray1, then press [Retry].	T1 paper size mismatch (Printer driver setting, Printer setting)	9002	2-87
	Reload correct paper in Tray2, then press [Retry].	T2 paper size mismatch (Printer driver setting, Printer setting)	9003	2-87
	Reload correct paper in Tray3, then press [Retry].	T3 paper size mismatch (Printer driver setting, Printer setting)	9004	2-87
	Reload correct paper in Tray4, then press [Retry].	T4 paper size mismatch (Printer driver setting, Printer setting)	9005	2-87
	Reload correct paper in Tray5, then press [Retry].	T5 paper size mismatch (Printer driver setting, Printer setting)	9006	2-87
	Reload correct paper.	The paper size for FAX/Report print is out of specification. (The REG rear sensor detects that the size is short.)	8E02	2-86

Error messages		Description	Error codes	Refer to:
1st message	2nd message			
Storage device not recognized	Reboot the machine. If the error remains after reboot, configure 'Job Save Location' setting again.	Communication error with Storage device (Storage print)	CA00	2-103
Storage Full	There is limited free space on the storage device.	Memory full for Storage device (Storage print)	C901	2-103
	There is no space in the Flash Memory.	Memory full for Storage device (Storage print)	C900	2-103
Supplies	Belt End Soon	The belt unit will be replaced soon. (Part life - Number of pages printed)	4300	2-58
	Drum End Soon	The drum unit will be replaced soon. (Part life - Number of drum rotations)	4000	2-58
	Replace Belt	Replace the belt unit. (Part life - Number of pages printed)	4400	2-58
	Replace Drum	Replace the drum unit. (Part life - Number of drum rotations)	4200	2-58
	Toner Low: (BK)	The K toner cartridge will be replaced soon. (Part life - DEV roller/ Dot counter)	4B01	2-59
	Toner Low: (C)	The C toner cartridge will be replaced soon. (Part life - DEV roller/ Dot counter)	4B04	2-59
	Toner Low: (M)	The M toner cartridge will be replaced soon. (Part life - DEV roller/ Dot counter)	4B03	2-59
	Toner Low: (Y)	The Y toner cartridge will be replaced soon. (Part life - DEV roller/ Dot counter)	4B02	2-59
	WT Box End Soon	The waste toner box will be replaced soon. (Amount of waste toner)	4700	2-59
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	2-69
Too Many Trays	Turn the power off and remove additional trays.	Too many paper trays	6D00	2-69
Too much documents in ADF	Reduce the amount of document in ADF, and then try again.	Too much documents in ADF	B300	2-98
Touchscreen Initialization Failed	Remove any material which is on the touchscreen.	Touch panel initialization failure	D800	2-103
Tray2 Error	Take out Tray2 and push it back in firmly.	T2 plate drive system failure (T2 plate lift-up time out)	6C02	2-68
Tray3 Error	Take out Tray3 and push it back in firmly.	T3 plate drive system failure (T3 plate lift-up time out)	6C03	2-68
Unusable Device	Remove the Device. Turn the power off and back on again.	Abnormal current flowing through a USB connector (Eddy current)	EC00	2-105
USB flash drive not detected	Insert a USB flash drive into the rear USB slot.	No storage (USB flash memory)	EA00	2-105

Error messages		Description	Error codes	Refer to:
1st message	2nd message			
Wrong Belt	Open the Front Cover, then install Belt Unit.	Wrong belt unit (The belt unit that does not match the model is installed.)	2605	2-56
Wrong Drum	Open the Front Cover, then install Drum Unit.	Wrong drum unit (The drum unit that does not match the model is installed.)	2604	2-56
Wrong Toner Cartridge	Open the Front Cover, then install Toner Cartridge. (BK) Black	Wrong K toner cartridge (The non-compliant toner cartridge is installed.)	2200	2-52
		Wrong K toner cartridge (The toner cartridge that does not match the model is installed.)	2600	2-56
	Open the Front Cover, then install Toner Cartridge. (C) Cyan	Wrong C toner cartridge (The non-compliant toner cartridge is installed.)	2202	2-52
		Wrong C toner cartridge (The toner cartridge that does not match the model is installed.)	2602	2-56
	Open the Front Cover, then install Toner Cartridge. (M) Magenta	Wrong M toner cartridge (The non-compliant toner cartridge is installed.)	2203	2-52
		Wrong M toner cartridge (The toner cartridge that does not match the model is installed.)	2603	2-56
	Open the Front Cover, then install Toner Cartridge. (Y) Yellow	Wrong Y toner cartridge (The non-compliant toner cartridge is installed.)	2201	2-52
		Wrong Y toner cartridge (The toner cartridge that does not match the model is installed.)	2601	2-56

3.3 Communication Error Codes

Code 1	Code 2	Cause	Refer to:
10	07	No document set when calling.	4.9.1
10	08	Wrong fax number called.	4.11.1
11	01	No dial tone detected before dialing.	4.11.1
11	02	Busy tone detected before dialing.	4.11.1
11	03	2nd dial tone not detected.	4.11.1
11	05	No loop current detected.	4.11.1
11	06	Busy tone detected after dialing or receiving a call.	4.11.1
11	07	No response from the receiver in sending.	4.11.1
11	08	No response from the remote station in sending Session Initiation Protocol (SIP).	4.11.3
11	10	No tone detected after dialing.	4.11.1
11	11	No acknowledgement returned after Fax2 net command was sent.	4.11.1
13	12	Error signal received after Fax2 net command was sent.	4.11.1
16	09	No Cipher registration	4.11.1
17	01	Called using a dial number that cannot be used for the NGN line (33 digits or longer or non numeric characters). (T38)	4.11.2
17	07	No response from the caller in receiving.	4.11.2
1C	01	Detected that access to the NGN line was not authorized. (T38: 403 Forbidden)	4.11.3
1C	02	No file or folder (directory) found as a result of search via the NGN line. (T38: 404 Not Found)	4.11.3
1C	03	Remote station does not support the NGN line. (T38: 488 Not Acceptable Here)	4.11.3
1C	04	SIP (Session Initiation Protocol) connection not possible. (T38) USW NGN FAX setting is OFF or calling attempted before acquisition of SIP information.	4.11.3
1C	05	Internal error detected in the communication network. (T38)	4.11.3
1C	06	SIP Server timeout (T38)	4.11.3
1C	08	An error other than 1C01,1C02,1C03,1C06,1D01, or 1D02 was detected. (T38)	4.11.3
1D	01	Detected that the NGN line was busy. (T38: 486 Busy)	4.11.3
1D	02	Detected that the NGN line was temporarily unavailable. (T38: 480 Temporarily Unavailable)	4.11.3
1D	04	Network cable not connected (Link Down detected) or not connected to the Network. (T38)	4.11.3
20	01	Unable to detect flag field.	4.11.3
20	02	Carrier was OFF for 200 ms or longer.	4.11.3
20	03	Abort detected ("1" in succession for 7 bits or more).	4.11.3
20	04	Overrun detected.	4.11.3
20	05	A frame received for 3 seconds or more.	4.11.3
20	06	CRC error in answerback.	4.11.3
20	07	Echo command received.	4.11.3
20	08	Invalid command received.	4.11.3
20	09	Command ignored in document setting or damping-out at turn-around transmission.	4.11.3
20	0A	T5 timeout error	4.11.3
20	0B	CRP received.	4.11.3
20	0C	EOR or NULL received.	4.11.3
20	0D	Corresponding command not received although the FIF command sending bit is ON.	4.11.3
20	0E	EOR command received.	4.11.3
20	13	Line disconnected without receiving DCN after receiving the last page. (After receiving EOP and sending CFR, received BYE before receiving DCN.) (T38)	4.11.3

Code 1	Code 2	Cause	Refer to:
32	01	Remote terminal only with V.29 capability in 2,400 or 4,800 bps transmission.	4.11.3
32	02	Remote terminal not ready for polling.	4.11.3
32	10	Remote terminal not equipped with password function or its password switch is OFF.	4.11.3
32	11	Remote terminal not equipped with or not ready for confidential mailbox function.	4.11.3
32	12	Remote terminal not equipped with or not ready for relay broadcasting function.	4.11.3
32	13	No confidential mail in the remote terminal.	4.11.3
32	14	Available memory space of the remote terminal is less than that required for reception of confidential mails or relay broadcasting instruction.	4.11.3
32	15	Remote terminal not equipped with Cipher receiving function.	4.11.3
32	16	Remote terminal not equipped with SEP function.	4.11.3
32	17	Remote terminal not equipped with SUB function.	4.11.3
32	18	Remote terminal not equipped with color function.	4.11.3
40	02	Illegal coding system requested.	4.11.3
40	03	Illegal recording width requested.	4.11.3
40	05	ECM requested although not allowed.	4.11.3
40	06	Polled while not ready.	4.11.3
40	07	No document to be sent when polled.	4.9.1
40	10	Spec code or manufacturer code not correct.	4.11.1
40	11	Group number not registered for relay broad-casting was specified or the number of addressees specified exceeded the maximum allowable number.	4.11.1
40	12	Retrieval attempted while not ready for retrieval.	4.11.1
40	13	Polled by any other manufacturers' terminal while waiting for secure polling.	4.11.1
40	14	Common key not registered although it needs to be used.	4.11.1
40	15	Black/Red data reception is requested when Black/Red receiving function is disabled.	4.11.3
40	16	Cipher transmission is requested when Cipher receiving function is disabled.	4.11.3
40	17	Invalid resolution selected.	4.11.3
40	20	Invalid full color mode selected.	4.11.3
50	01	Vertical resolution capability changed after compensation of background color.	4.11.3
63	01	"Password + last 4 digits of telephone number" does not match.	4.11.1
63	02	Password not correct	4.11.1
63	03	Polling ID not correct	4.11.1
63	04	Specified confidential ID and Mail Box ID do not match.	4.11.1
63	05	Relay broad-casting ID not correct	4.11.1
63	06	Specified Retrieval ID and Mail Box Retrieval ID do not match.	4.11.1
63	07	Select receiving ID not correct	4.11.2
63	08	Cipher Key not correct	4.11.2
74	xx	DCN received	4.11.3
80	01	Fallback impossible.	4.11.3
90	01	Unable to detect video signals or commands within 6 seconds after CFR is transmitted.	4.11.3
90	02	Received PPS containing invalid page count or block count.	4.11.3
A0	03	Error correction sequence not terminated even at final transmission speed after fallback.	4.11.3
A0	11	Receive buffer empty (5-second timeout)	4.11.2
A0	12	Receive buffer full during operation except receiving into memory.	4.11.4
A0	13	Decoding error continued on 500 lines or more.	4.11.3

Code 1	Code 2	Cause	Refer to:
A0	14	Decoding error continued for 15 seconds or more.	4.11.3
A0	15	Timeout: 13 seconds or more for one-line transmission.	4.11.3
A0	16	RTC not found or carrier OFF detected for 6 seconds	4.11.3
A0	17	RTC found but no command detected for 60 seconds or longer.	4.11.3
A0	19	No video data to be sent.	4.11.3
A0	20	Cannot continue receiving Color FAX (remaining ink low).	4.11.3
A8	01	RTN, PIN, or ERR received (sending terminal).	4.11.3
A9	01	RTN, PIN, or ERR sent (receiving terminal).	4.11.3
AA	18	Receive buffer full during receiving data into memory.	4.11.4
B0	01	Polarity reversion detected.	4.11.2
B0	02	Unable to receive the next-page data.	4.11.2
B0	03	Unable to receive polling during turn-around transmission due to call reservation.	4.11.2
B0	04	PC interface error	4.11.2
C0	01	No common modulation mode or failed to poll.	4.11.3
C0	02	Unable to detect JM.	4.11.3
C0	03	Unable to detect CM.	4.11.3
C0	04	Unable to detect CJ.	4.11.3
C0	10	Cannot finish V. 34 negotiation or training.	4.11.3
C0	11	Modem error detected during V. 34 negotiation or training.	4.11.3
C0	20	Modem error detected while sending commands.	4.11.3
C0	21	Modem error detected while receiving commands.	4.11.3
C0	22	Control channel connection timeout.	4.11.3
C0	30	Modem error detected while sending video signals.	4.11.3
C0	31	Modem error detected while receiving video signals.	4.11.3
E0	01	Failed to detect 1,300 Hz signal in burn-in operation.	4.11.3
E0	02	Failed to detect PB signals in burn-in operation.	4.11.3
E0	03	Unable to detect commands in burn-in operation when RS232C is used.	4.11.3

4. TROUBLESHOOTING

4.1 Error Cause and Remedy

■ Error code 0101

Communication error (ASIC in the main PCB)

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	Connection failure	PF motor FFC	Reconnect	PF motor FFC
2	Connection failure	LVPS harness1	Reconnect	LVPS harness1
3	Connection failure	LVPS harness2	Reconnect	LVPS harness2
4	Defect	PF motor FFC	Replace	PF motor FFC
5	Failure	PF drive unit	Replace	PF drive unit
6	Failure	Fuser	Replace	Fuser
7	Failure	LVPS PCB	Replace	LVPS PCB
8	Failure	Main PCB	Replace	Main PCB

■ Error code 0202

Signal error of the process motor / Unstable speed

No.	Cause		Remedy	
1	Connection failure	Process motor FFC	Reconnect	Process motor FFC
2	Connection failure	LVPS harness1	Reconnect	LVPS harness1
3	Connection failure	LVPS harness2	Reconnect	LVPS harness2
4	Failure	Process drive unit	Replace	Process drive unit
5	Failure	LVPS PCB	Replace	LVPS PCB
6	Failure	Main PCB	Replace	Main PCB

■ Error code 0203

Eject motor failure

No.	Cause		Remedy	
1	Connection failure	Eject motor harness	Reconnect	Eject motor harness
2	Connection failure	LVPS harness1	Reconnect	LVPS harness1
3	Connection failure	LVPS harness2	Reconnect	LVPS harness2
4	Failure	Paper eject unit	Replace	Paper eject ASSY
5	Failure	LVPS PCB	Replace	LVPS PCB
6	Failure	Main PCB	Replace	Main PCB

■ **Error code 0207**

Fuser failure (Fuser motor)

No.	Cause		Remedy	
1	Connection failure	Fuser motor FFC	Reconnect	Fuser motor FFC
2	Connection failure	LVPS harness1	Reconnect	LVPS harness1
3	Connection failure	LVPS harness2	Reconnect	LVPS harness2
4	Failure	LVPS PCB	Replace	LVPS PCB
5	Failure	Main PCB	Replace	Main PCB

■ **Error code 0208**

DX motor failure

No.	Cause		Remedy	
1	Connection failure	DX motor harness	Reconnect	DX motor harness
2	Connection failure	LVPS harness1	Reconnect	LVPS harness1
3	Connection failure	LVPS harness2	Reconnect	LVPS harness2
4	Failure	LVPS PCB	Replace	LVPS PCB
5	Failure	Main PCB	Replace	Main PCB

■ **Error code 020A**

DEV motor failure

No.	Cause		Remedy	
1	Connection failure	DEV motor harness	Reconnect	DEV motor harness
2	Connection failure	LVPS harness1	Reconnect	LVPS harness1
3	Connection failure	LVPS harness2	Reconnect	LVPS harness2
4	Failure	LVPS PCB	Replace	LVPS PCB
5	Failure	Main PCB	Replace	Main PCB

■ **Error code 0300**

Communication error of the laser unit (Scanner motor lock signal)

No.	Cause		Remedy	
1	Connection failure	Scanner motor harness	Reconnect	Scanner motor harness
2	Failure	Laser unit	Replace	Laser unit
3	Failure	Main PCB	Replace	Main PCB

■ **Error code 0401**

Laser unit failure (BD sensor 1)

Error code 0402

Laser unit failure (BD sensor 4)

<User Check>

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

No.	Cause		Remedy	
1	Connection failure	Laser unit FFC	Reconnect	Laser unit FFC
2	Defect	Laser unit FFC	Replace	Laser unit FFC
3	Failure	Laser unit	Replace	Laser unit
4	Failure	Main PCB	Replace	Main PCB

■ **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, Side thermistor harness	Reconnect	Center thermistor harness, Side thermistor harness
2	Connection failure	Fuser heater harness	Reconnect	Fuser heater harness
3	Connection failure	Eject relay PCB harness	Reconnect	Eject relay PCB harness
4	Connection failure	LVPS harness1	Reconnect	LVPS harness1
5	Connection failure	LVPS harness2	Reconnect	LVPS harness2
6	Failure	Eject relay PCB	Replace	Eject relay PCB
7	Failure	Fuser	Replace	Fuser
8	Failure	LVPS PCB	Replace	LVPS PCB
9	Failure	Main PCB	Replace	Main PCB

■ **Error code 0509**

Fuser failure (Press-contact/release related)

No.	Cause		Remedy	
1	Connection failure	Fuser release clutch harness	Reconnect	Fuser release clutch harness
2	Connection failure	DEV motor harness	Reconnect	DEV motor harness
3	Connection failure	Nip release sensor harness	Reconnect	Nip release sensor harness
4	Failure	Eject relay PCB	Replace	Eject relay PCB
5	Failure	Main PCB	Replace	Main PCB
6	Failure	Nip release sensor PCB	Replace	Fuser

■ **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	Center thermistor harness, Side thermistor harness	Reconnect	Center thermistor harness, Side thermistor harness
2	Connection failure	Fuser heater harness	Reconnect	Fuser heater harness
3	Connection failure	Eject relay PCB harness	Reconnect	Eject relay PCB harness
4	Connection failure	LVPS harness1	Reconnect	LVPS harness1
5	Connection failure	LVPS harness2	Reconnect	LVPS harness2
6	Failure	Eject relay PCB	Replace	Eject relay PCB
7	Failure	Fuser	Replace	Fuser
8	Failure	LVPS PCB	Replace	LVPS PCB
9	Failure	Main PCB	Replace	Main PCB

■ **Error code 0800**

Internal thermistor abnormality

No.	Cause		Remedy	
1	Connection failure	Drum unit	Reconnect	Drum unit
2	Failure	Drum unit	Replace	Drum unit
3	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	LVPS PCB	Replace	LVPS PCB
2	Failure	Main PCB	Replace	Main PCB

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 0A01**

Blower failure

No.	Cause		Remedy	
1	Foreign object	Blower	Remove the foreign object	Blower
2	Connection failure	Blower harness	Reconnect	Blower harness
3	Connection failure	HVPS FFC	Reconnect	HVPS FFC
4	Connection failure	HVPS2 FFC	Reconnect	HVPS2 FFC
5	Defect	HVPS FFC	Replace	HVPS FFC
6	Defect	HVPS2 FFC	Replace	HVPS2 FFC
7	Failure	Blower	Replace	Blower
8	Failure	HVPS PCB	Replace	HVPS PCB
9	Failure	Main PCB	Replace	Main PCB

■ **Error code 0A02**

Fan motor 80 failure

No.	Cause		Remedy	
1	Connection failure	Fan motor 80 harness	Reconnect	Fan motor 80 harness
2	Connection failure	HVPS FFC	Reconnect	HVPS FFC
3	Connection failure	HVPS2 FFC	Reconnect	HVPS2 FFC
4	Defect	HVPS FFC	Replace	HVPS FFC
5	Defect	HVPS2 FFC	Replace	HVPS2 FFC
6	Failure	Fan motor 80	Replace	Fan motor 80
7	Failure	HVPS PCB	Replace	HVPS PCB
8	Failure	Main PCB	Replace	Main PCB

■ **Error code 0A03**

LVPS fan failure

No.	Cause		Remedy	
1	Connection failure	LVPS fan harness	Reconnect	LVPS fan harness
2	Connection failure	HVPS FFC	Reconnect	HVPS FFC
3	Connection failure	HVPS2 FFC	Reconnect	HVPS2 FFC
4	Defect	HVPS FFC	Replace	HVPS FFC
5	Defect	HVPS2 FFC	Replace	HVPS2 FFC
6	Failure	LVPS fan	Replace	LVPS fan
7	Failure	HVPS PCB	Replace	HVPS PCB
8	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 front 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	Connection failure	HVPS2 FFC	Reconnect	HVPS2 FFC
3	Defect	HVPS FFC	Replace	HVPS FFC
4	Defect	HVPS2 FFC	Replace	HVPS2 FFC
5	Failure	HVPS PCB	Replace	HVPS PCB
6	Failure	Main PCB	Replace	Main PCB

■ **Error code 0C00**

Density sensor failure

No.	Cause		Remedy	
1	Connection failure	REG mark L sensor harness	Reconnect	REG mark L sensor harness
2	Failure	REG mark sensor ASSY	Replace	REG mark sensor ASSY
3	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	Connection failure	HVPS2 FFC	Reconnect	HVPS2 FFC
3	Failure	HVPS PCB	Replace	HVPS PCB
4	Failure	Main PCB	Replace	Main PCB

■ **Error code 1003**

REG mark R sensor 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 R sensor harness	Reconnect	REG mark R sensor harness
2	Failure	REG mark sensor ASSY	Replace	REG mark sensor ASSY
3	Failure	Main PCB	Replace	Main PCB

■ **Error code 1004**

REG mark L sensor 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 L sensor harness	Reconnect	REG mark L sensor harness
2	Failure	REG mark sensor ASSY	Replace	REG mark sensor ASSY
3	Failure	Main PCB	Replace	Main PCB

■ **Error code 1400**

Condensation

<User Check>

- Leave switched on. Open the front 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
2	Failure	Laser unit	Replace	Laser unit

■ **Error code 1701**

TT fan failure

<User Check>

- Install the latest main firmware. (The main firmware contains the TT or LT firmware.)

No.	Cause		Remedy	
1	Connection failure	TT fan harness	Reconnect	TT fan harness
2	Failure	LT/TT connector (Machine or option)	Replace	LT/TT connector (Machine or option)
3	Failure	TT fan	Replace	TT fan
4	Failure	TT control PCB	Replace	TT control PCB
5	Failure	TC control PCB	Replace	TC unit
6	Failure	Main PCB	Replace	Main PCB

■ **Error code 1801**

T2LT communication error (Main PCB - T2(LT) control PCB)

■ **Error code 1802**

T3LT communication error (Main PCB - T3(LT) control PCB)

■ **Error code 1803**

T4LT communication error (Main PCB - T4(LT) control PCB)

<User Check>

- Install the latest main firmware. (The main firmware contains the TT or LT firmware.)

No.	Cause		Remedy	
1	Failure	LT/TT connector (Machine or option)	Replace	LT/TT connector (Machine or option)
2	Failure	LT control PCB	Replace	LT control PCB
3	Failure	Main PCB	Replace	Main PCB

■ **Error code 1808**

Communication error (LT only) (Main PCB - TT control PCB)

<User Check>

- Install the latest main firmware. (The main firmware contains the TT or LT firmware.)

No.	Cause		Remedy	
1	Failure	LT/TT connector (Machine or option)	Replace	LT/TT connector (Machine or option)
2	Failure	TT control PCB	Replace	TT control PCB
3	Failure	TC control PCB	Replace	TC unit
4	Failure	Main PCB	Replace	Main PCB

■ **Error code 1901**

TT failure (TT motor)

<User Check>

- Install the latest main firmware. (The main firmware contains the TT or LT firmware.)

No.	Cause		Remedy	
1	Connection failure	TT motor harness	Reconnect	TT motor harness
2	Failure	LT/TT connector (Machine or option)	Replace	LT/TT connector (Machine or option)
3	Failure	TT motor	Replace	TT motor
4	Failure	TT control PCB	Replace	TT control PCB
5	Failure	TC control PCB	Replace	TC unit
6	Failure	Main PCB	Replace	Main PCB

■ **Error code 1C00**

Laser unit failure (Read error in EEPROM)

No.	Cause		Remedy	
1	Connection failure	Laser unit FFC	Reconnect	Laser unit FFC
2	Defect	Laser unit FFC	Replace	Laser unit FFC
3	Failure	Laser unit	Replace	Laser unit
4	Failure	Main PCB	Replace	Main PCB

■ **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	Dirt	Toner cartridge sensor terminal (Toner cartridge or Drum unit)	Clean	Toner cartridge sensor terminal (Toner cartridge or Drum unit) (See Fig. 2-17 and Fig. 2-18 below.)
2	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
3	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
4	Failure	Toner cartridge	Replace	Toner cartridge
5	Failure	Drum unit	Replace	Drum unit
6	Failure	Main PCB	Replace	Main PCB

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

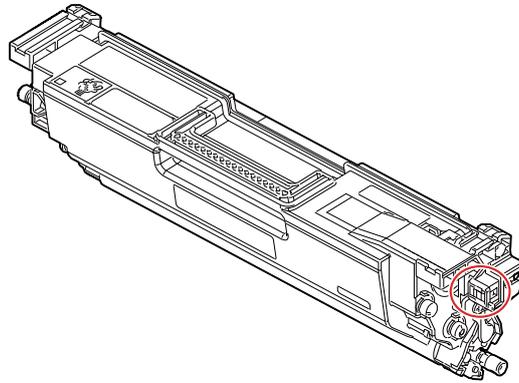


Fig. 2-17

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

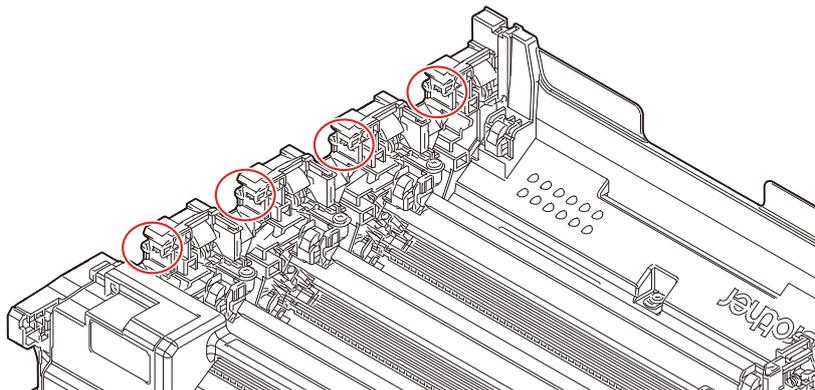


Fig. 2-18

■ Drum unit sensor terminal (Machine side)

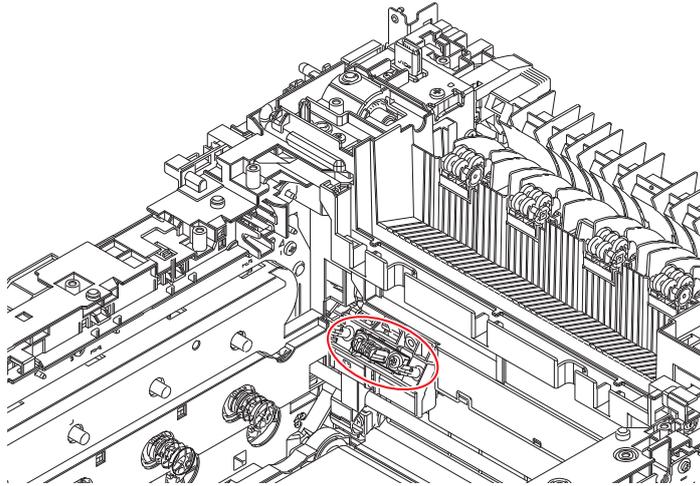


Fig. 2-19

■ Drum unit sensor terminal (Drum unit)

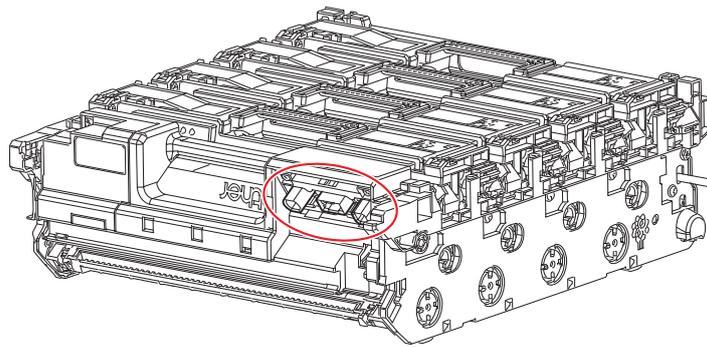


Fig. 2-20

■ **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	Dirt	Toner cartridge sensor terminal (Toner cartridge or Drum unit)	Clean	Toner cartridge sensor terminal (Toner cartridge or Drum unit) (Refer to Fig. 2-17, Fig. 2-18.)
2	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
3	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
4	Failure	Toner cartridge	Replace	Toner cartridge
5	Failure	Drum unit	Replace	Drum unit
6	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	Dirt	Toner cartridge sensor terminal (Toner cartridge or Drum unit)	Clean	Toner cartridge sensor terminal (Toner cartridge or Drum unit) (Refer to Fig. 2-17, Fig. 2-18.)
2	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
3	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
4	Failure	Toner cartridge	Replace	Toner cartridge
5	Failure	Drum unit	Replace	Drum unit
6	Failure	Main PCB	Replace	Main PCB

■ **Error code 2404**

Wrong drum unit (The incompatible drum unit is installed.)

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
2	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
3	Failure	Drum unit	Replace	Drum unit
4	Failure	Main PCB	Replace	Main PCB

■ **Error code 2405**

Wrong belt unit (The incompatible belt unit is installed.)

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	Belt unit sensor terminal (Machine or Belt)	Clean	Belt unit sensor terminal (Machine or Belt) (See Fig. 2-21 below, and refer to Fig. 2-22.)
2	Connection failure	Belt unit sensor terminal (Machine)	Reconnect	Belt unit sensor terminal (Machine)
3	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
4	Failure	Engine relay PCB	Replace	Engine relay PCB
5	Failure	Belt unit	Replace	Belt unit
6	Failure	Main PCB	Replace	Main PCB

■ **Belt unit sensor terminal (Machine)**

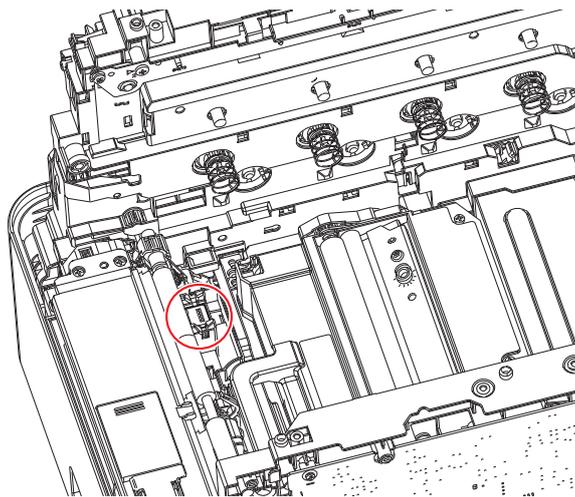


Fig. 2-21

■ Belt unit sensor terminal (Belt unit)

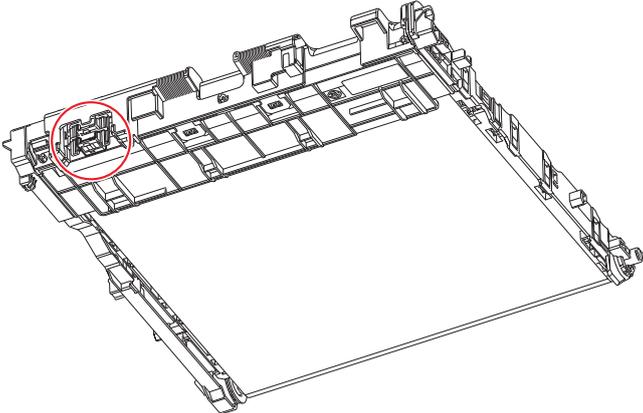


Fig. 2-22

■ **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	Dirt	Toner cartridge sensor terminal (Toner cartridge or Drum unit)	Clean	Toner cartridge sensor terminal (Toner cartridge or Drum unit) (Refer to Fig. 2-17, Fig. 2-18.)
2	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
3	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
4	Failure	Toner cartridge	Replace	Toner cartridge
5	Failure	Drum unit	Replace	Drum unit
6	Failure	Main PCB	Replace	Main PCB

■ **Error code 2504**

Wrong drum unit (Consumables information access error)

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
2	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
3	Failure	Drum unit	Replace	Drum unit
4	Failure	Main PCB	Replace	Main PCB

■ **Error code 2505**

Wrong belt unit (Consumables information access error)

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	Belt unit sensor terminal (Machine or Belt)	Clean	Belt unit sensor terminal (Machine or Belt) (Refer to Fig. 2-21, Fig. 2-22.)
2	Connection failure	Belt unit sensor terminal (Machine)	Reconnect	Belt unit sensor terminal (Machine)
3	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
4	Failure	Engine relay PCB	Replace	Engine relay PCB
5	Failure	Belt unit	Replace	Belt unit
6	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	Dirt	Toner cartridge sensor terminal (Toner cartridge or Drum unit)	Clean	Toner cartridge sensor terminal (Toner cartridge or Drum unit) (Refer to Fig. 2-17, Fig. 2-18.)
2	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
3	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
4	Failure	Toner cartridge	Replace	Toner cartridge
5	Failure	Drum unit	Replace	Drum unit
6	Failure	Main PCB	Replace	Main PCB

■ **Error code 2604**

Wrong drum unit (The drum unit that does not match the model is installed.)

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
2	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
3	Failure	Drum unit	Replace	Drum unit
4	Failure	Main PCB	Replace	Main PCB

■ **Error code 2605**

Wrong belt unit (The belt unit that does not match the model is installed.)

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	Belt unit sensor terminal (Machine or Belt)	Clean	Belt unit sensor terminal (Machine or Belt) (Refer to Fig. 2-21, Fig. 2-22.)
2	Connection failure	Belt unit sensor terminal (Machine)	Reconnect	Belt unit sensor terminal (Machine)
3	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
4	Failure	Engine relay PCB	Replace	Engine relay PCB
5	Failure	Belt unit	Replace	Belt unit
6	Failure	Main PCB	Replace	Main PCB

■ **Error code 2E00**

Consumables information communication error (Sensors in the machine side) (Toner cartridge/Drum unit/Belt unit detect)

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	Toner cartridge sensor terminal (Toner cartridge or Drum unit)	Clean	Toner cartridge sensor terminal (Toner cartridge or Drum unit) (Refer to Fig. 2-17, Fig. 2-18.)
2	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
3	Dirt	Belt unit sensor terminal (Machine or Belt)	Clean	Belt unit sensor terminal (Machine or Belt) (Refer to Fig. 2-21, Fig. 2-22.)
4	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
5	Connection failure	Belt unit sensor terminal (Machine)	Reconnect	Belt unit sensor terminal (Machine)
6	Failure	Toner cartridge	Replace	Toner cartridge
7	Failure	Drum unit	Replace	Drum unit
8	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
9	Failure	Engine relay PCB	Replace	Engine relay PCB
10	Failure	Belt unit	Replace	Belt unit
11	Failure	Main PCB	Replace	Main PCB

■ **Error code 3801**

External temperature/humidity abnormality (External temperature/humidity sensor)

No.	Cause		Remedy	
1	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
2	Failure	Engine relay PCB	Replace	Engine relay PCB
3	Failure	Main PCB	Replace	Main PCB

■ **Error code 3A00**

Main PCB failure (Communication error in the main PCB)

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code 3B01**

LT2 drive system failure (T2(LT) drive transmit sensor PCB)

Error code 3B02

LT3 drive system failure (T3(LT) drive transmit sensor PCB)

Error code 3B03

LT4 drive system failure (T4(LT) drive transmit sensor PCB)

No.	Cause		Remedy	
1	Connection failure	LT drive transmit sensor harness	Reconnect	LT drive transmit sensor harness
2	Connection failure	Harness in LT unit	Reconnect	Harness in LT unit
3	Failure	LT control PCB	Replace	LT control PCB
4	Failure	LT unit	Replace	LT unit
5	Failure	Main PCB	Replace	Main PCB

■ **Error code 4000**

The drum unit will be replaced soon. (Part life - Number of drum rotations)

<User Check>

- Prepare a new drum unit.

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code 4200**

Replace the drum unit. (Part life - Number of drum rotations)

<User Check>

- Replace the drum unit with a new one.

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code 4300**

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

<User Check>

- Prepare a new belt unit.

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code 4400**

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

<User Check>

- Replace the belt unit with a new one.

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code 4500**

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

No.	Cause		Remedy	
1	Life end	Fuser	Replace	Fuser
2	Failure	Main PCB	Replace	Main PCB

Note:

- Refer to "7.1 Adjusting Settings / Resetting Printed Pages Counter for the Fuser (Adjust Settings / Reset Counters after Parts Replacement (Function Code 88))" in Chapter 4.

■ **Error code 4600**

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

No.	Cause		Remedy	
1	Life end	Laser unit	Replace	Laser unit
2	Failure	Main PCB	Replace	Main PCB

Note:

- Refer to "5.2 Resetting Printed Pages Counter of the Laser Unit (Adjust Settings / 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)

<User Check>

- Prepare a new waste toner box.

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **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	Connection failure	Waste toner box sensor harness	Reconnect	Waste toner box sensor harness
2	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
3	Failure	Engine relay PCB	Replace	Engine relay PCB
4	Failure	Main PCB	Replace	Main PCB

■ **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)

<User Check>

- Prepare a new toner cartridge.

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **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**

Toner empty with one of Y, M, C toner - 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)

No.	Cause		Remedy	
1	Life end	PF kit MP	Replace	PF kit MP
2	Failure	Main PCB	Replace	Main PCB

Note:

- Refer to "8.1 Adjusting Settings / Resetting Printed Pages Counter of a PF Kit (Adjust Settings / Reset Counters after Parts Replacement (Function Code 88))" in Chapter 4.

■ **Error code 5002**

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

No.	Cause		Remedy	
1	Life end	PF kit 1	Replace	PF kit 1
2	Failure	Main PCB	Replace	Main PCB

Note:

- Refer to "8.1 Adjusting Settings / Resetting Printed Pages Counter of a PF Kit (Adjust Settings / Reset Counters after Parts Replacement (Function Code 88))" in Chapter 4.

■ **Error code 5003**

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

No.	Cause		Remedy	
1	Life end	PF kit 2	Replace	PF kit 2
2	Failure	Main PCB	Replace	Main PCB

Note:

- Refer to "8.1 Adjusting Settings / Resetting Printed Pages Counter of a PF Kit (Adjust Settings / Reset Counters after Parts Replacement (Function Code 88))" in Chapter 4.

■ **Error code 5004**

Replace the PF kit T3. (Part life - Number of pages printed)

No.	Cause		Remedy	
1	Life end	PF kit 3	Replace	PF kit 3
2	Failure	Main PCB	Replace	Main PCB

Note:

- Refer to "8.1 Adjusting Settings / Resetting Printed Pages Counter of a PF Kit (Adjust Settings / Reset Counters after Parts Replacement (Function Code 88))" in Chapter 4.

■ **Error code 5005**

Replace the PF kit T4. (Part life - Number of pages printed)

No.	Cause		Remedy	
1	Life end	PF kit 4	Replace	PF kit 4
2	Failure	Main PCB	Replace	Main PCB

Note:

- Refer to "8.1 Adjusting Settings / Resetting Printed Pages Counter of a PF Kit (Adjust Settings / Reset Counters after Parts Replacement (Function Code 88))" in Chapter 4.

■ **Error code 5006**

Replace the PF kit T5. (Part life - Number of pages printed)

No.	Cause		Remedy	
1	Life end	PF kit 5	Replace	PF kit 5
2	Failure	Main PCB	Replace	Main PCB

Note:

- Refer to "8.1 Adjusting Settings / Resetting Printed Pages Counter of a PF Kit (Adjust Settings / Reset Counters after Parts Replacement (Function Code 88))" in Chapter 4.

■ **Error code 5702**

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

Error code 5703

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

Error code 5704

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

Error code 5705

Communication error when inserting the M toner cartridge. (Toner 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	Dirt	Toner cartridge sensor terminal (Toner cartridge or Drum unit)	Clean	Toner cartridge sensor terminal (Toner cartridge or Drum unit) (Refer to Fig. 2-17, Fig. 2-18.)
2	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
3	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
4	Failure	Toner cartridge	Replace	Toner cartridge
5	Failure	Drum unit	Replace	Drum unit
6	Failure	Main PCB	Replace	Main PCB

■ **Error code 5706**

Communication error when inserting the drum unit. (Drum unit sensor)

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
2	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
3	Failure	Drum unit	Replace	Drum unit
4	Failure	Main PCB	Replace	Main PCB

■ **Error code 5707**

Communication error when inserting the belt unit. (Belt unit sensor)

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	Belt unit sensor terminal (Machine or Belt)	Clean	Belt unit sensor terminal (Machine or Belt) (Refer to Fig. 2-21, Fig. 2-22.)
2	Connection failure	Belt unit sensor terminal (Machine)	Reconnect	Belt unit sensor terminal (Machine)
3	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
4	Failure	Engine relay PCB	Replace	Engine relay PCB
5	Failure	Belt unit	Replace	Belt unit
6	Failure	Main PCB	Replace	Main PCB

■ **Error code 6001**

Front cover open

<User Check>

- Close the front cover.

No.	Cause		Remedy	
1	Connection failure	Front cover sensor harness	Reconnect	Front cover sensor harness
2	Failure	Front cover	Replace	Front cover ASSY
3	Failure	Front cover sensor	Replace	Front cover sensor
4	Failure	Main PCB	Replace	Main PCB

■ **Error code 6004**

Fuser cover open

<User Check>

- Close the back cover.

No.	Cause		Remedy	
1	Come off	Fuser cover	Reattach	Fuser cover
2	Connection failure	Eject relay PCB harness	Reconnect	Eject relay PCB harness
3	Failure	Fuser cover	Replace	Fuser cover
4	Failure	Eject relay PCB	Replace	Eject relay PCB
5	Failure	Main PCB	Replace	Main PCB

■ **Error code 6101**

No K toner cartridge (Toner cartridge sensor)

Error code 6102

No Y toner cartridge (Toner cartridge sensor)

Error code 6103

No M toner cartridge (Toner cartridge sensor)

Error code 6104

No C toner cartridge (Toner cartridge sensor)

<User Check>

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

No.	Cause		Remedy	
1	Dirt	Toner cartridge sensor terminal (Toner cartridge or Drum unit)	Clean	Toner cartridge sensor terminal (Toner cartridge or Drum unit) (Refer to Fig. 2-17, Fig. 2-18.)
2	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
3	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
4	Failure	Toner cartridge	Replace	Toner cartridge
5	Failure	Drum unit	Replace	Drum unit
6	Failure	Main PCB	Replace	Main PCB

■ **Error code 6200**

No drum unit (Drum unit sensor)

<User Check>

- Reinstall the drum unit.
- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
2	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
3	Failure	Drum unit	Replace	Drum unit
4	Failure	Main PCB	Replace	Main PCB

■ **Error code 620A**

K drum error (No drum unit, dirt corona wire, abnormal GRID current)

Error code 620B

Y drum error (No drum unit, dirt corona wire, abnormal GRID current)

Error code 620C

M drum error (No drum unit, dirt corona wire, abnormal GRID current)

Error code 620D

C drum error (No drum unit, dirt corona wire, abnormal GRID current)

<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	Dirt	Charging terminal (Corona wire) (Drum unit)	Clean	Charging terminal (Corona wire) (Drum unit) (See Fig. 2-23 below.)
2	Dirt	Charging terminal (Corona wire) (Machine)	Clean	Charging terminal (Corona wire) (Machine) (Refer to Fig. 2-24.)
3	Dirt	HVPS PCB terminal	Clean	HVPS PCB terminal (Refer to Fig. 2-25.)
4	Failure	Drum unit	Replace	Drum unit
5	Failure	HVPS PCB	Replace	HVPS PCB
6	Failure	Main PCB	Replace	Main PCB

■ **Electrodes location of drum unit**

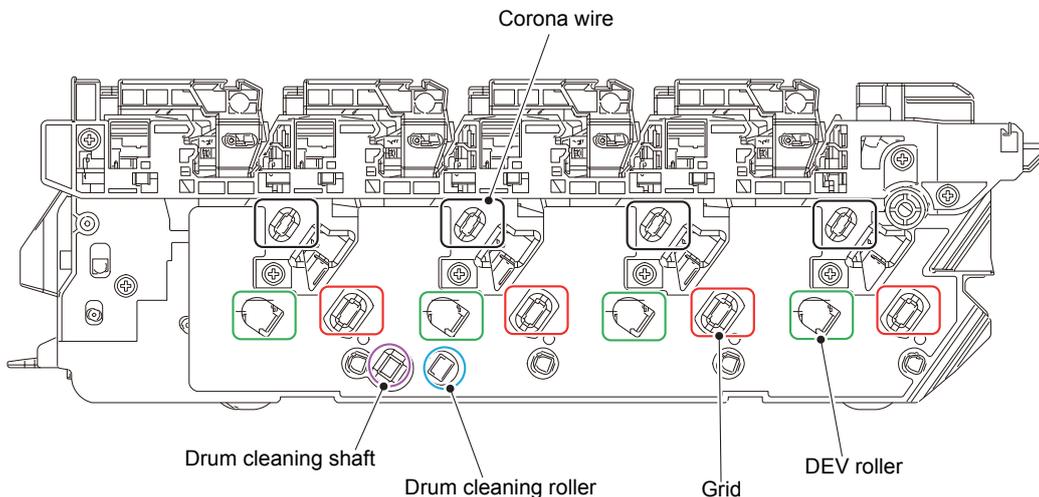


Fig. 2-23

■ Electrodes location of machine's right frame

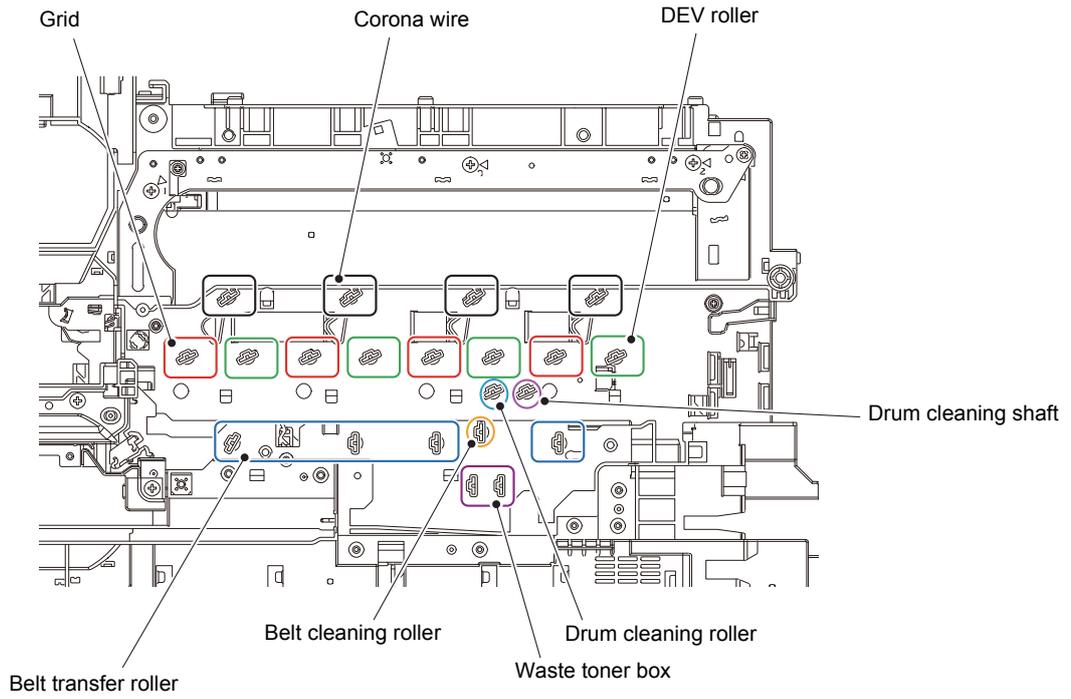


Fig. 2-24

■ Electrodes location of HVPS PCB



Fig. 2-25

■ **Error code 6300**

No waste toner box

<User Check>

- Install the latest main firmware.
- Reinstall the waste toner box.

No.	Cause		Remedy	
1	Dirt	Waste toner box sensor terminal (Machine or Waste toner box)	Clean	Waste toner box sensor terminal (Machine or Waste toner box) (See Fig. 2-26 and Fig. 2-27 below.)
2	Connection failure	Waste toner box sensor terminal (Machine)	Reconnect	Waste toner box sensor terminal (Machine)
3	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
4	Failure	Engine relay PCB	Replace	Engine relay PCB
5	Failure	Belt unit	Replace	Belt unit
6	Failure	Main PCB	Replace	Main PCB

■ **Waste toner box sensor terminal (Machine)**

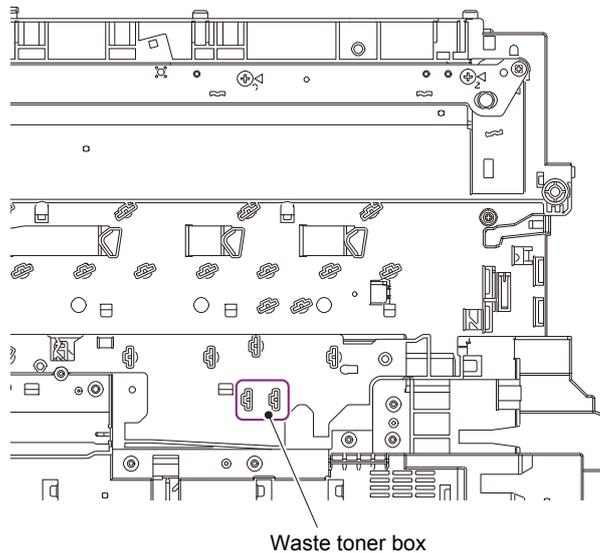


Fig. 2-26

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

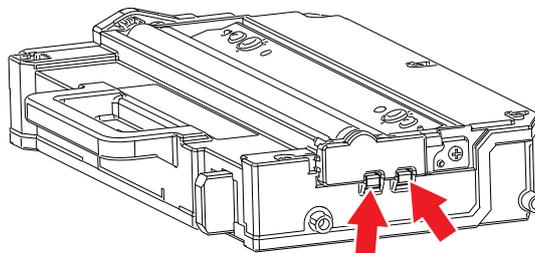


Fig. 2-27

■ **Error code 6400**

No belt unit (Belt unit sensor)

<User Check>

- Install the latest main firmware.
- Reinstall the belt unit.

No.	Cause		Remedy	
1	Dirt	Belt unit sensor terminal (Machine or Belt)	Clean	Belt unit sensor terminal (Machine or Belt) (Refer to Fig. 2-21, Fig. 2-22.)
2	Connection failure	Belt unit sensor terminal (Machine)	Reconnect	Belt unit sensor terminal (Machine)
3	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
4	Failure	Engine relay PCB	Replace	Engine relay PCB
5	Failure	Belt unit	Replace	Belt unit
6	Failure	Main PCB	Replace	Main PCB

■ **Error code 6801**

High temperature inside the machine (Internal thermistor)

<User Check>

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

No.	Cause		Remedy	
1	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
2	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
3	Failure	Drum unit	Replace	Drum unit
4	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	Each harness of fuser	Reconnect	Each harness of fuser
2	Connection failure	Eject relay PCB harness	Reconnect	Eject relay PCB harness
3	Connection failure	LVPS harness1	Reconnect	LVPS harness1
4	Connection failure	LVPS harness2	Reconnect	LVPS harness2
5	Failure	Eject relay PCB	Replace	Eject relay PCB
6	Failure	Fuser	Replace	Fuser
7	Failure	LVPS PCB	Replace	LVPS PCB
8	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	Dirt	Charging terminal (Corona wire) (Drum unit)	Clean	Charging terminal (Corona wire) (Drum unit) (Refer to Fig. 2-23.)
2	Dirt	Charging terminal (Corona wire) (Machine)	Clean	Charging terminal (Corona wire) (Machine) (Refer to Fig. 2-24.)
3	Dirt	HVPS PCB terminal	Clean	HVPS PCB terminal (Refer to Fig. 2-25.)
4	Failure	Drum unit	Replace	Drum unit
5	Failure	HVPS PCB	Replace	HVPS PCB
6	Failure	Main PCB	Replace	Main PCB

■ **Error code 6B01**

The drum unit abnormally discharged. (The second abnormal discharge is detected beyond the drum life, or the abnormal discharge occurs once after double life.)

<User Check>

- Replace the drum unit.

No.	Cause		Remedy	
1	Dirt	Charging terminal (Corona wire) (Drum unit)	Clean	Charging terminal (Corona wire) (Drum unit) (Refer to Fig. 2-23.)
2	Dirt	Charging terminal (Corona wire) (Machine)	Clean	Charging terminal (Corona wire) (Machine) (Refer to Fig. 2-24.)
3	Dirt	HVPS PCB terminal	Clean	HVPS PCB terminal (Refer to Fig. 2-25.)
4	Life end	Drum unit	Replace	Drum unit
5	Failure	HVPS PCB	Replace	HVPS PCB
6	Failure	Main PCB	Replace	Main PCB

■ **Error code 6C02**

T2 plate drive system failure (T2 plate lift-up time out)

Error code 6C03

T3 plate drive system failure (T3 plate lift-up time out)

Error code 6C04

T4 plate drive system failure (T4 plate lift-up time out)

<User Check>

- Pull the appropriate tray out, and then close it properly.

No.	Cause		Remedy	
1	Connection failure	LT PE/lift up sensor harness	Reconnect	LT PE/lift up sensor harness
2	Connection failure	LT connector upper/lower harness	Reconnect	LT connector upper/lower harness
3	Failure	LT control PCB	Replace	LT control PCB
4	Failure	LT PE/lift up sensor	Replace	LT PE/lift up sensor PCB
5	Damage	LT drive gear	Replace	LT unit
6	Failure	Main PCB	Replace	Main PCB

■ **Error code 6D00**

Too many paper trays

<User Check>

- Install the latest main firmware.
- Install LTs within the specified number.

No.	Cause		Remedy	
1	Dirt	LT/TT connector	Clean	LT/TT connector
2	Failure	LT/TT connector	Replace	LT/TT connector
3	Failure	An LT control PCB	Replace	The appropriate LT control PCB
4	Failure	Main PCB	Replace	Main PCB

■ **Error code 6E00**

DEV roller press-contact/release error

No.	Cause		Remedy	
1	Connection failure	DEV release CMY sensor harness, DEV release K sensor harness	Reconnect	DEV release CMY sensor harness, DEV release K sensor harness
2	Connection failure	DEV release clutch CMY harness	Reconnect	DEV release clutch CMY harness
3	Connection failure	DEV release clutch K harness	Reconnect	DEV release clutch K harness
4	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.

No.	Cause		Remedy	
1	Improper	Power supply waveform	Install	A voltage stabilizer in the power supply part

■ **Error code 7000**

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

<User Check>

- Remove the jammed paper.

No.	Cause		Remedy	
1	Foreign object	The back inside the machine	Remove the foreign object	The back inside the machine
2	Come off	Fuser cover	Reattach	Fuser cover
3	Come off	Back cover	Reattach	Back cover
4	Failure	Fuser cover	Replace	Fuser cover
5	Failure	Back cover	Replace	Back cover
6	Connection failure	REG front/rear sensor harness	Reconnect	REG front/rear sensor harness
7	Connection failure	Eject relay PCB harness	Reconnect	Eject relay PCB harness
8	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
9	Failure	REG rear sensor	Replace	REG front/rear sensor holder ASSY
10	Failure	Eject sensor	Replace	Eject relay PCB
11	Failure	Engine relay PCB	Replace	Engine relay PCB
12	Damage	Fuser drive gear	Replace	Gear fuser M07 1 Z50L 25L
13	Damage	Paper feeding gears in the process system	Replace	Process drive unit
14	Damage	Gears in the PF drive unit	Replace	PF drive unit
15	Failure	Fuser	Replace	Fuser
16	Failure	Main PCB	Replace	Main PCB

■ **Error code 7100**

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

<User Check>

- Remove the jammed paper.

No.	Cause		Remedy	
1	Foreign object	The back inside the machine	Remove the foreign object	The back inside the machine
2	Come off	Fuser cover	Reattach	Fuser cover
3	Come off	Back cover	Reattach	Back cover
4	Failure	Fuser cover	Replace	Fuser cover
5	Failure	Back cover	Replace	Back cover
6	Connection failure	REG front/rear sensor harness	Reconnect	REG front/rear sensor harness
7	Connection failure	Eject relay PCB harness	Reconnect	Eject relay PCB harness
8	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
9	Failure	REG rear sensor	Replace	REG front/rear sensor holder ASSY
10	Failure	Eject sensor	Replace	Eject relay PCB
11	Failure	Engine relay PCB	Replace	Engine relay PCB
12	Damage	Fuser drive gear	Replace	Gear fuser M07 1 Z50L 25L
13	Damage	Paper feeding gears in the process system	Replace	Process drive unit
14	Damage	Gears in the PF drive unit	Replace	PF drive unit
15	Failure	Fuser	Replace	Fuser
16	Failure	Main PCB	Replace	Main PCB

■ **Error code 7107**

Jam rear (2-sided printing)

<User Check>

- Remove the jammed paper.
- Close the back cover correctly.
- Check if the lever position of the DX tray matches the paper that is actually loaded.

No.	Cause		Remedy	
1	Foreign object	The back inside the machine	Remove the foreign object	The back inside the machine
2	Come off	DX flapper ASSY	Reattach	DX flapper ASSY
3	Come off	DX2 unit	Reattach	DX2 unit
4	Come off	Extension wire (When using Printer: MX-4000, SF-4000)	Reattach	Extension wire (When using Printer: MX-4000, SF-4000)
5	Connection failure	DX clutch harness	Reconnect	DX clutch harness
6	Connection failure	DX motor harness	Reconnect	DX motor harness
7	Connection failure	Eject relay PCB harness	Reconnect	Eject relay PCB harness
8	Failure	Eject sensor	Replace	Eject relay PCB
9	Failure	DX flapper ASSY	Replace	DX flapper ASSY
10	Failure	Main PCB	Replace	Main PCB

< Paper jam image (No extension wire) >

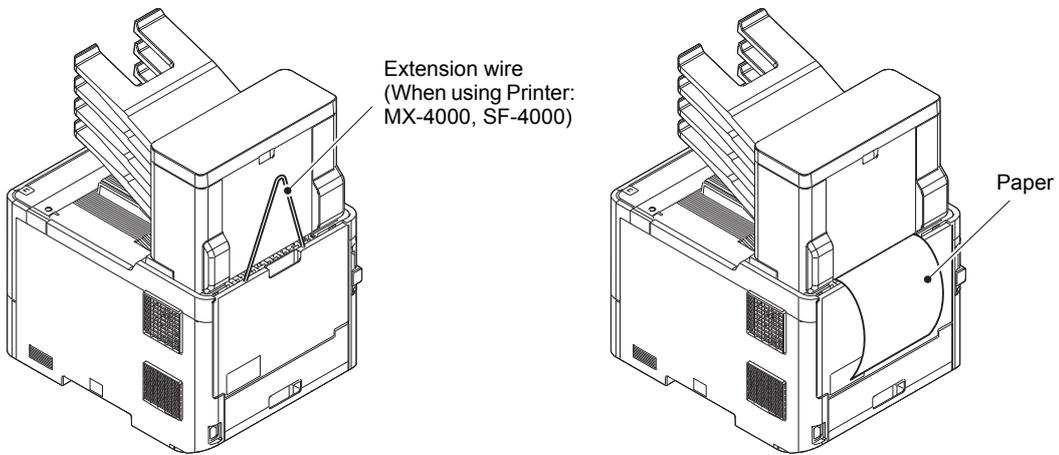


Fig. 2-28

■ **Error code 7200**

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

<User Check>

- Check if too much paper is loaded in the MP tray.
- 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 front cover correctly.

No.	Cause		Remedy	
1	Foreign object	The back inside the machine	Remove the foreign object	The back inside the machine
2	Connection failure	REG front/rear sensor harness	Reconnect	REG front/rear sensor harness
3	Wear	MP separation pad	Replace	PF kit MP
4	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
5	Failure	REG rear sensor	Replace	REG front/rear sensor holder ASSY
6	Failure	Engine relay PCB	Replace	Engine relay PCB
7	Damage	Gears in the PF drive unit	Replace	PF drive unit
8	Failure	Main PCB	Replace	Main PCB

■ **Error code 7301**

T1 jam (When printing from T1, the T1 PF 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.
- Check that the thickness of the paper is 60 to 230 g/m² (16 to 61 lb) (T1).
- Use paper within the specifications. Load the paper properly.

No.	Cause		Remedy	
1	Foreign object	The front inside the machine	Remove the foreign object	The front inside the machine
2	Come off	T1 pick up roller holder	Reattach	T1 pick up roller holder
3	Connection failure	T1 clutch harness	Reconnect	T1 clutch harness
4	Connection failure	T1 PF/PE sensor harness	Reconnect	T1 PF/PE sensor harness
5	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
6	Failure	PF kit 1	Replace	PF kit 1
7	Failure	T1 PF/PE sensor	Replace	T1 PF/PE sensor PCB
8	Failure	Engine relay PCB	Replace	Engine relay PCB
9	Damage	Gears in the PF drive unit	Replace	PF drive unit
10	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.
- Check that the thickness of the paper is 60 to 230 g/m² (16 to 61 lb) (T1).
- Use paper within the specifications. Load the paper properly.

No.	Cause		Remedy	
	1	Foreign object	The front inside the machine	Remove the foreign object
2	Connection failure	REG front/rear sensor harness	Reconnect	REG front/rear sensor harness
3	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
4	Failure	REG rear sensor	Replace	REG front/rear sensor holder ASSY
5	Failure	Engine relay PCB	Replace	Engine relay PCB
6	Damage	Gears in the PF drive unit	Replace	PF drive unit
7	Failure	Main PCB	Replace	Main PCB

■ **Error code 7401**

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

<User Check>

- Adjust the paper guide according to the paper size.
- Check if too much paper is loaded in the tray.
- Check that the thickness of the paper is 60 to 105 g/m² (16 to 28 lb).
- Flip through the paper and reload it in the tray.
- Install the latest main firmware.

No.	Cause		Remedy	
1	Foreign object	The front inside the machine	Remove the foreign object	The front inside the machine
2	Come off	PF actuator of a paper tray	Reattach	PF actuator of the appropriate paper tray
3	Come off	Paper pick up roller of a paper tray	Reattach	Paper pick up roller of the appropriate paper tray
4	Connection failure	(PE)/PF sensor harness of a paper tray	Reconnect	(PE)/PF sensor harness of the appropriate paper tray
5	Connection failure	TT control PCB harness	Reconnect	TT control PCB harness
6	Connection failure	Control PCB harness of a paper tray	Reconnect	Control PCB harness of the appropriate paper tray
7	Connection failure	T1 clutch harness of a paper tray	Reconnect	T1 clutch harness of the appropriate paper tray
8	Connection failure	LT drive transmit sensor harness (Model with 250-sheet only)	Reconnect	LT drive transmit sensor harness (Model with 250-sheet only)
9	Connection failure	LT drive transmit clutch harness (Model with 250-sheet only)	Reconnect	LT drive transmit clutch harness (Model with 250-sheet only)
10	Failure	(PE)/PF sensor PCB of a paper tray	Replace	(PE)/PF sensor PCB of the appropriate paper tray
11	Failure	PF drive unit (LT only)	Replace	PF drive unit (LT only)
12	Damage	Gears in the LT paper feeding system	Replace	LT
13	Damage	Gears in the TT paper feeding system	Replace	TT
14	Failure	Main PCB	Replace	Main PCB

■ **Error code 7402**

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

<User Check>

- Adjust the paper guide according to the paper size.
- Check if too much paper is loaded in the tray.
- Check that the thickness of the paper is 60 to 105 g/m² (16 to 28 lb).
- Flip through the paper and reload it in the tray.
- Install the latest main firmware.

No.	Cause		Remedy	
1	Foreign object	The front inside the machine	Remove the foreign object	The front inside the machine
2	Come off	T2(TT) jam sensor	Reattach	T2(TT) jam sensor
3	Connection failure	REG front/rear sensor harness	Reconnect	REG front/rear sensor harness
4	Connection failure	T2(TT) jam sensor harness	Reconnect	T2(TT) jam sensor harness
5	Connection failure	TT control PCB harness	Reconnect	TT control PCB harness
6	Connection failure	T2(LT) connector upper/lower harness	Reconnect	T2(LT) connector upper/lower harness
7	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
8	Failure	REG rear sensor	Replace	REG front/rear sensor holder ASSY
9	Failure	Engine relay PCB	Replace	Engine relay PCB
10	Failure	T2(TT) jam sensor	Replace	T2(TT) jam sensor PCB
11	Failure	TT control PCB	Replace	TT control PCB
12	Failure	T2(LT) control PCB	Replace	T2(LT) control PCB
13	Damage	Gears in the PF drive unit	Replace	PF drive unit
14	Failure	TT drive transmit clutch	Replace	TC unit
15	Damage	Gears in the LT paper feeding system	Replace	LT
16	Damage	Gears in the TT paper feeding system	Replace	TT
17	Failure	Main PCB	Replace	Main PCB

■ **Error code 7501**

T3 jam (When printing from T3, the T3 PF sensor is still OFF.)

<User Check>

- Adjust the paper guide according to the paper size.
- Check if too much paper is loaded in the tray.
- Check that the thickness of the paper is 60 to 105 g/m² (16 to 28 lb).
- Flip through the paper and reload it in the tray.
- Install the latest main firmware.

No.	Cause		Remedy	
1	Foreign object	The front inside the machine	Remove the foreign object	The front inside the machine
2	Come off	PF actuator of a paper tray	Reattach	PF actuator of the appropriate paper tray
3	Come off	Paper pick up roller of a paper tray	Reattach	Paper pick up roller of the appropriate paper tray
4	Connection failure	(PE)/PF sensor harness of a paper tray	Reconnect	(PE)/PF sensor harness of the appropriate paper tray
5	Connection failure	TT control PCB harness	Reconnect	TT control PCB harness
6	Connection failure	Control PCB harness of a paper tray	Reconnect	Control PCB harness of the appropriate paper tray
7	Connection failure	T1 clutch harness of a paper tray	Reconnect	T1 clutch harness of the appropriate paper tray
8	Connection failure	LT drive transmit sensor harness (Model with 250-sheet only)	Reconnect	LT drive transmit sensor harness (Model with 250-sheet only)
9	Connection failure	LT drive transmit clutch harness (Model with 250-sheet only)	Reconnect	LT drive transmit clutch harness (Model with 250-sheet only)
10	Failure	(PE)/PF sensor PCB of a paper tray	Replace	(PE)/PF sensor PCB of the appropriate paper tray
11	Failure	PF drive unit (LT only)	Replace	PF drive unit (LT only)
12	Damage	Gears in the LT paper feeding system	Replace	LT
13	Damage	Gears in the TT paper feeding system	Replace	TT
14	Failure	Main PCB	Replace	Main PCB

■ **Error code 7502**

T3 jam (When printing from T3, the REG front sensor is still OFF.)

<User Check>

- Adjust the paper guide according to the paper size.
- Check if too much paper is loaded in the tray.
- Check that the thickness of the paper is 60 to 105 g/m² (16 to 28 lb).
- Flip through the paper and reload it in the tray.
- Install the latest main firmware.

No.	Cause		Remedy	
1	Foreign object	The front inside the machine	Remove the foreign object	The front inside the machine
2	Come off	T2/T3(TT) jam sensor	Reattach	T2/T3(TT) jam sensor
3	Connection failure	REG front/rear sensor harness	Reconnect	REG front/rear sensor harness
4	Connection failure	T2/T3(TT) jam sensor harness	Reconnect	T2/T3(TT) jam sensor harness
5	Connection failure	TT control PCB harness	Reconnect	TT control PCB harness
6	Connection failure	T2/T3(LT) control PCB harness	Reconnect	T2/T3(LT) control PCB harness
7	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
8	Connection failure	T3(TT) release clutch harness	Reconnect	T3(TT) release clutch harness
9	Failure	T3(TT) release clutch	Replace	T3(TT) release clutch
10	Failure	REG rear sensor	Replace	REG front/rear sensor holder ASSY
11	Failure	Engine relay PCB	Replace	Engine relay PCB
12	Failure	T2/T3(TT) jam sensor	Replace	T2/T3(TT) jam sensor PCB
13	Failure	TT control PCB	Replace	TT control PCB
14	Failure	T2/T3(LT) control PCB	Replace	T2/T3(LT) control PCB
15	Damage	Gears in the PF drive unit	Replace	PF drive unit
16	Failure	TT drive transmit clutch	Replace	TC unit
17	Damage	Gears in the LT paper feeding system	Replace	LT
18	Damage	Gears in the TT paper feeding system	Replace	TT
19	Failure	Main PCB	Replace	Main PCB

■ **Error code 7601**

T4 jam (When printing from T4, the T4 PF sensor is still OFF.)

<User Check>

- Adjust the paper guide according to the paper size.
- Check if too much paper is loaded in the tray.
- Check that the thickness of the paper is 60 to 105 g/m² (16 to 28 lb).
- Flip through the paper and reload it in the tray.
- Install the latest main firmware.

No.	Cause		Remedy	
1	Foreign object	The front inside the machine	Remove the foreign object	The front inside the machine
2	Come off	PF actuator of a paper tray	Reattach	PF actuator of the appropriate paper tray
3	Come off	Paper pick up roller of a paper tray	Reattach	Paper pick up roller of the appropriate paper tray
4	Connection failure	(PE)/PF sensor harness of a paper tray	Reconnect	(PE)/PF sensor harness of the appropriate paper tray
5	Connection failure	TT control PCB harness	Reconnect	TT control PCB harness
6	Connection failure	Control PCB harness of a paper tray	Reconnect	Control PCB harness of the appropriate paper tray
7	Connection failure	T1 clutch harness of a paper tray	Reconnect	T1 clutch harness of the appropriate paper tray
8	Connection failure	LT drive transmit sensor harness (Model with 250-sheet only)	Reconnect	LT drive transmit sensor harness (Model with 250-sheet only)
9	Connection failure	LT drive transmit clutch harness (Model with 250-sheet only)	Reconnect	LT drive transmit clutch harness (Model with 250-sheet only)
10	Failure	(PE)/PF sensor PCB of a paper tray	Replace	(PE)/PF sensor PCB of the appropriate paper tray
11	Failure	PF drive unit (LT only)	Replace	PF drive unit (LT only)
12	Damage	Gears in the LT paper feeding system	Replace	LT
13	Damage	Gears in the TT paper feeding system	Replace	TT
14	Failure	Main PCB	Replace	Main PCB

■ **Error code 7602**

T4 jam (When printing from T4, the REG front sensor is still OFF.)

<User Check>

- Adjust the paper guide according to the paper size.
- Check if too much paper is loaded in the tray.
- Check that the thickness of the paper is 60 to 105 g/m² (16 to 28 lb).
- Flip through the paper and reload it in the tray.
- Install the latest main firmware.

No.	Cause		Remedy	
1	Foreign object	The front inside the machine	Remove the foreign object	The front inside the machine
2	Come off	T2/T3/T4(TT) jam sensor	Reattach	T2/T3/T4(TT) jam sensor
3	Connection failure	REG front/rear sensor harness	Reconnect	REG front/rear sensor harness
4	Connection failure	T2/T3/T4(TT) jam sensor harness	Reconnect	T2/T3/T4(TT) jam sensor harness
5	Connection failure	TT control PCB harness	Reconnect	TT control PCB harness
6	Connection failure	T2/T3/T4(LT) control PCB harness	Reconnect	T2/T3/T4(LT) control PCB harness
7	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
8	Connection failure	T3/T4(TT) release clutch harness	Reconnect	T3/T4(TT) release clutch harness
9	Failure	T3/T4(TT) release clutch	Replace	T3/T4(TT) release clutch
10	Failure	REG rear sensor	Replace	REG front/rear sensor holder ASSY
11	Failure	Engine relay PCB	Replace	Engine relay PCB
12	Failure	T2/T3/T4(TT) jam sensor	Replace	T2/T3/T4(TT) jam sensor PCB
13	Failure	TT control PCB	Replace	TT control PCB
14	Failure	T2/T3/T4(LT) control PCB	Replace	T2/T3/T4(LT) control PCB
15	Damage	Gears in the PF drive unit	Replace	PF drive unit
16	Failure	TT drive transmit clutch	Replace	TC unit
17	Damage	Gears in the LT paper feeding system	Replace	LT
18	Damage	Gears in the TT paper feeding system	Replace	TT
19	Failure	Main PCB	Replace	Main PCB

■ **Error code 7701**

T5 jam (When printing from T5, the T5 PF sensor is still OFF.)

<User Check>

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

No.	Cause		Remedy	
1	Foreign object	The front inside the machine	Remove the foreign object	The front inside the machine
2	Come off	PF actuator of a paper tray	Reattach	PF actuator of the appropriate paper tray
3	Come off	Paper pick up roller of a paper tray	Reattach	Paper pick up roller of the appropriate paper tray
4	Connection failure	T5(TT) pick up clutch harness	Reconnect	T5(TT) pick up clutch harness
5	Connection failure	T5(TT) PF sensor harness	Reconnect	T5(TT) PF sensor harness
6	Failure	T5(TT) pick up clutch	Replace	T5(TT) pick up clutch
7	Failure	T5(TT) PF sensor	Replace	T5(TT) PF sensor PCB
8	Failure	TT control PCB	Replace	TT control PCB
9	Failure	TT drive transmit clutch	Replace	TT drive transmit clutch
10	Failure	Main PCB	Replace	Main PCB

■ **Error code 7702**

T5 jam (When printing from T5, the REG front sensor is still OFF.)

<User Check>

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

No.	Cause		Remedy	
1	Foreign object	The front inside the machine	Remove the foreign object	The front inside the machine
2	Come off	T2/T3/T4/T5(TT) jam sensor	Reattach	T2/T3/T4/T5(TT) jam sensor
3	Connection failure	REG front/rear sensor harness	Reconnect	REG front/rear sensor harness
4	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
5	Connection failure	T2/T3/T4/T5(TT) jam sensor harness	Reconnect	T2/T3/T4/T5(TT) jam sensor harness
6	Connection failure	TT control PCB harness	Reconnect	TT control PCB harness
7	Connection failure	T3/T4/T5(TT) release clutch harness	Reconnect	T3/T4/T5(TT) release clutch harness
8	Failure	REG rear sensor	Replace	REG front/rear sensor holder ASSY
9	Failure	Engine relay PCB	Replace	Engine relay PCB
10	Failure	T3/T4/T5(TT) release clutch	Replace	T3/T4/T5(TT) release clutch
11	Failure	REG front/rear sensor	Replace	REG front/rear sensor holder ASSY
12	Failure	T2/T3/T4/T5(TT) jam sensor	Replace	T2/T3/T4/T5(TT) jam sensor PCB
13	Failure	TT control PCB	Replace	TT control PCB
14	Damage	Gears in the PF drive unit	Replace	PF drive unit
15	Failure	TT drive transmit clutch	Replace	TC unit
16	Damage	TT PF gears	Replace	TT
17	Failure	Main PCB	Replace	Main PCB

■ **Error code 7801**

DX tray jam (Around DX tray)

<User Check>

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

No.	Cause		Remedy	
1	Foreign object	Duplex paper path	Remove the foreign object	Duplex paper path
2	Come off	DX flapper ASSY	Reattach	DX flapper ASSY
3	Come off	DX2 unit	Reattach	DX2 unit
4	Connection failure	DX clutch harness	Reconnect	DX clutch harness
5	Connection failure	DX motor harness	Reconnect	DX motor harness
6	Connection failure	DX sensor harness	Reconnect	DX sensor harness
7	Failure	DX sensor	Replace	DX sensor PCB
8	Failure	DX flapper ASSY	Replace	DX flapper ASSY
9	Failure	DX tray	Replace	DX tray
10	Failure	Main PCB	Replace	Main PCB

■ **Error code 7802**

DX tray jam (Around T1)

<User Check>

- Remove the jammed paper.
- Close the back cover correctly.
- Check if the lever position of the DX tray matches the paper that is actually loaded.

No.	Cause		Remedy	
1	Foreign object	Duplex paper path	Remove the foreign object	Duplex paper path
2	Connection failure	DX clutch harness	Reconnect	DX clutch harness
3	Connection failure	DX sensor harness	Reconnect	DX sensor harness
4	Failure	DX sensor	Replace	DX sensor PCB
5	Failure	DX flapper ASSY	Replace	DX flapper ASSY
6	Failure	DX tray	Replace	DX tray
7	Failure	Main PCB	Replace	Main PCB

■ **Error code 7803**

DX tray jam (Around T1 or DX tray)

<User Check>

- Remove the jammed paper.
- Close the back cover correctly.
- Check if the lever position of the DX tray matches the paper that is actually loaded.

No.	Cause		Remedy	
1	Foreign object	Duplex paper path	Remove the foreign object	Duplex paper path
2	Come off	DX flapper ASSY	Reattach	DX flapper ASSY
3	Connection failure	DX clutch harness	Reconnect	DX clutch harness
4	Connection failure	DX motor harness	Reconnect	DX motor harness
5	Connection failure	DX sensor harness	Reconnect	DX sensor harness
6	Failure	DX sensor	Replace	DX sensor PCB
7	Failure	DX flapper ASSY	Replace	DX flapper ASSY
8	Failure	DX tray	Replace	DX tray
9	Failure	Main PCB	Replace	Main PCB

■ **Error code 8501**

T1 open

Error code 8502

T2 open

Error code 8503

T3 open

Error code 8504

T4 open

Error code 8505

T5 open

<User Check>

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

No.	Cause		Remedy	
1	Come off	An LT/TT PF sensor, TT PE sensor	Reattach	The appropriate LT/TT PF actuator
2	Failure	(PE/)PF sensor of a paper tray	Replace	(PE/)PF sensor of the appropriate paper tray
3	Failure	An LT control PCB	Replace	The appropriate LT control PCB
4	Failure	Each TT relay PCB	Replace	Each TT relay PCB ASSY
5	Failure	TT control PCB	Replace	TT control PCB
6	Failure	Main PCB	Replace	Main PCB

■ **Error code 8506**

T1 open (Detected that the T1 is open in printing.)

Error code 8507

T2 open (Detected that the T2 is open in printing.)

Error code 8508

T3 open (Detected that the T3 is open in printing.)

Error code 8509

T4 open (Detected that the T4 is open in printing.)

<User Check>

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

No.	Cause		Remedy	
1	Failure	(PE/)PF sensor of a paper tray	Replace	(PE/)PF sensor of the appropriate paper tray
2	Failure	An LT control PCB	Replace	The appropriate LT control PCB
3	Failure	Each TT relay PCB	Replace	Each TT relay PCB ASSY
4	Failure	TT control PCB	Replace	TT control PCB
5	Failure	Main PCB	Replace	Main PCB

■ **Error code 8702**

The standard output tray fully stacks.

<User Check>

- Remove the jammed paper in the eject tray.

No.	Cause		Remedy	
1	Connection failure	Eject stack sensor harness	Reconnect	Eject stack sensor harness
2	Failure	Main PCB	Replace	Main PCB

■ **Error code 8901**

No DX tray

<User Check>

- Check if the DX tray is fully inserted.

No.	Cause		Remedy	
1	Failure	DX tray	Replace	DX tray
2	Connection failure	DX sensor harness	Reconnect	DX sensor harness
3	Failure	DX sensor	Replace	DX sensor PCB
4	Failure	Main PCB	Replace	Main PCB

■ **Error code 8903**

Back cover open - 2-sided printing

Error code 8904

Back cover open - 2-sided printing (Detected that the back cover is open in printing.)

<User Check>

- Close the back cover.

No.	Cause		Remedy	
1	Connection failure	Back cover sensor harness	Reconnect	Back cover sensor harness
2	Connection failure	HVPS FFC	Reconnect	HVPS FFC
3	Connection failure	HVPS2 FFC	Reconnect	HVPS2 FFC
4	Come off	Back cover sensor	Reattach	Back cover sensor harness
5	Failure	Back cover	Replace	Back cover
6	Defect	HVPS FFC	Replace	HVPS FFC
7	Defect	HVPS2 FFC	Replace	HVPS2 FFC
8	Failure	HVPS PCB	Replace	HVPS PCB
9	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>

- It occurs when the paper length is shorter than 114 mm.

No.	Cause		Remedy	
1	Connection failure	REG front/rear sensor harness	Reconnect	REG front/rear sensor harness
2	Connection failure	Eject relay PCB harness	Reconnect	Eject relay PCB harness
3	Failure	REG rear sensor	Replace	REG front/rear sensor holder ASSY
4	Failure	Eject relay PCB	Replace	Eject relay PCB
5	Failure	Main PCB	Replace	Main PCB

■ **Error code 8A02**

Duplex print error (The 2-sided printing suspends.)

<User Check>

- Make the paper size loaded in the tray, the paper size set in the Function menu, and the paper size specified in the printer driver the same.
- Printing is interrupted for some reason in 2-sided printing. The error is reset by opening and closing the front cover.

No.	Cause		Remedy	
1	Connection failure	REG front/rear sensor harness	Reconnect	REG front/rear sensor harness
2	Connection failure	Eject relay PCB harness	Reconnect	Eject relay PCB harness
3	Failure	REG rear sensor	Replace	REG front/rear sensor holder ASSY
4	Failure	Eject relay PCB	Replace	Eject relay PCB
5	Failure	Main PCB	Replace	Main PCB

■ **Error code 8B01**

The TT power is turned OFF. (The TT is connected, but the power is OFF.)

<User Check>

- Check that TT is turned ON.
- Install the latest main firmware. (The main firmware contains the TT firmware.)

No.	Cause		Remedy	
1	Connection failure	TT LVPS PCB harness	Reconnect	TT LVPS PCB harness
2	Defect	AC cord of TT	Replace	AC cord of TT
3	Failure	LT/TT connector (Machine or Option)	Replace	LT/TT connector (Machine or Option)
4	Failure	TT LVPS PCB	Replace	TT LVPS PCB
5	Failure	TT control PCB	Replace	TT control PCB
6	Failure	TC control PCB	Replace	TC unit
7	Failure	Main PCB	Replace	Main PCB

■ **Error code 8D01**

The paper size is out of specification. (The REG rear sensor detects that the size is short.)

<User Check>

- Open the back cover and print using the straight paper path.
- Load the paper that is 114 mm or more long.

No.	Cause		Remedy	
1	Connection failure	REG front/rear sensor harness	Reconnect	REG front/rear sensor harness
2	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
3	Failure	REG rear sensor	Replace	REG front/rear sensor holder ASSY
4	Failure	Engine relay PCB	Replace	Engine relay PCB
5	Failure	Main PCB	Replace	Main PCB

■ **Error code 8E02**

The paper size for FAX/Report print is out of specification. (The REG rear sensor detects that the size is short.)

<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	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
3	Failure	REG rear sensor	Replace	REG front/rear sensor holder ASSY
4	Failure	Engine relay PCB	Replace	Engine relay PCB
5	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)

Error code 9004

T3 paper size mismatch (Printer driver setting, Printer setting)

Error code 9005

T4 paper size mismatch (Printer driver setting, Printer setting)

Error code 9006

T5 paper size mismatch (Printer driver setting, Printer setting)

<User Check>

- Make the paper size set in the function menu and the paper size specified in the printer driver the same.

No.	Cause		Remedy	
1	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)

Error code 9204

T3 paper type mismatch (Printer driver setting, Printer setting)

Error code 9205

T4 paper type mismatch (Printer driver setting, Printer setting)

Error code 9206

T5 paper type mismatch (Printer driver setting, Printer setting)

<User Check>

- Make the paper type set in the function menu and the paper type specified in the printer driver the same.

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 MP tray.

No.	Cause		Remedy	
1	Connection failure	MP sensor harness	Reconnect	MP sensor harness
2	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
3	Failure	MP REG/PE sensor PCB	Replace	MP REG/PE sensor PCB
4	Failure	Engine relay PCB	Replace	Engine relay PCB
5	Failure	Main PCB	Replace	Main PCB

■ **Error code 9302**

No paper in T1 (T1 PE sensor)

<User Check>

- Install the latest main firmware.
- Load paper in T1.

No.	Cause		Remedy	
1	Connection failure	T1 PF/PE sensor harness	Reconnect	T1 PF/PE sensor harness
2	Connection failure	T1 clutch harness	Reconnect	T1 clutch harness
3	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
4	Failure	Engine relay PCB	Replace	Engine relay PCB
5	Damage	Gears in the PF drive unit	Replace	PF drive unit
6	Failure	PF motor	Replace	PF drive unit
7	Failure	Main PCB	Replace	Main PCB

■ **Error code 9303**

No paper in T2 (T2 PE sensor)

Error code 9304

No paper in T3 (T3 PE sensor)

Error code 9305

No paper in T4 (T4 PE sensor)

Error code 9306

No paper in T5 (T5 PE sensor)

Error code 930A

No paper in Fax/List printing (PE sensor)

<User Check>

- Install the latest main firmware.
- Load paper in the appropriate paper tray.

No.	Cause		Remedy	
1	Connection failure	(PE)/PF sensor harness of a paper tray	Reconnect	(PE)/PF sensor harness of the appropriate paper tray
2	Connection failure	A TT PE sensor harness	Reconnect	The appropriate TT PE sensor harness
3	Come off	An LT/TT PE actuator	Reattach	The appropriate LT/TT PE actuator
4	Failure	An LT/TT PE sensor	Replace	The appropriate LT PE/lift up sensor PCB (Models with 500-sheet only), LT PE/PF sensor PCB (Models with 500-sheet only), TT PE sensor PCB
5	Failure	An LT control PCB	Replace	The appropriate LT control PCB
6	Failure	A TT relay PCB ASSY	Replace	The appropriate TT relay PCB ASSY
7	Failure	TT control PCB	Replace	TT control PCB
8	Damage	Gears in the PF drive unit	Replace	PF drive unit
9	Failure	PF motor	Replace	PF drive unit
10	Failure	Main PCB	Replace	Main PCB

■ **Error code 9309**

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

<User Check>

- Install the latest main firmware.
- Load paper in the paper tray.

No.	Cause		Remedy	
1	Connection failure	MP sensor harness	Reconnect	MP sensor harness
2	Connection failure	T1 PF/PE sensor harness	Reconnect	T1 PF/PE sensor harness
3	Connection failure	T1 clutch harness	Reconnect	T1 clutch harness
4	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
5	Connection failure	(PE)/PF sensor harness of a paper tray	Reconnect	All LT PE/PF sensor harnesses
6	Failure	All LT control PCBs	Replace	All LT control PCBs
7	Failure	TT control PCB	Replace	TT control PCB
8	Damage	Gears in the PF drive unit	Replace	PF drive unit
9	Failure	PF motor	Replace	PF drive unit
10	Failure	Main PCB	Replace	Main PCB

■ **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)

Error code 9704

T3 paper size is out of specification. (Printer driver setting)

Error code 9705

T4 paper size is out of specification. (Printer driver setting)

Error code 9706

T5 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 - Density calibration from Panel (Incorrect measured value)

<User Check>

- If the belt unit has a scratch, replace it.
- If “WT Box End Soon” is displayed on the LCD and the belt unit has dirt, replace the waste toner box.

No.	Cause		Remedy	
1	Dirt	REG mark L sensor	Clean	REG mark L sensor
2	Failure	Density calibration measurement pattern printing	Execute	If failure occurs when printing each test patterns in Function Code 71 , refer to “4.3 Troubleshooting for Image Defects” in this chapter.
3	Connection failure	REG mark L sensor harness	Reconnect	REG mark L sensor harness
4	Failure	Density sensor	Replace	REG mark sensor ASSY
5	Failure	Main PCB	Replace	Main PCB

■ **Error code 9802**

Density calibration failure - Density calibration from Panel (Any of the color toners is unprintable.)

<User Check>

- Replace the corresponding toner cartridge.

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code 9803**

Density calibration failure - Density calibration from Panel (When printing the calibration data)

Error code 9804

Density sensor sensitivity adjustment (Function code 72) failure (Incorrect measured value)

<User Check>

- If the belt unit has a scratch, replace it.
- If “WT Box End Soon” is displayed on the LCD and the belt unit has dirt, replace the waste toner box.

No.	Cause		Remedy	
1	Dirt	REG mark L sensor	Clean	REG mark L sensor
2	Failure	Density calibration measurement pattern printing	Execute	If failure occurs when printing each test patterns in Function Code 71 , refer to “4.3 Troubleshooting for Image Defects” in this chapter.
3	Connection failure	REG mark L sensor harness	Reconnect	REG mark L sensor harness
4	Failure	Density sensor	Replace	REG mark sensor ASSY
5	Failure	Main PCB	Replace	Main PCB

■ **Error code 9901**

Manual color registration failure (Incorrect measured value)

<User Check>

- If the belt unit has a scratch, replace it.
- If “WT Box End Soon” is displayed on the LCD and the belt unit has dirt, replace the waste toner box.

No.	Cause		Remedy	
1	Dirt	REG mark L sensor	Clean	REG mark L sensor
2	Failure	Density calibration measurement pattern printing	Execute	If failure occurs when printing each test patterns in Function Code 71 , refer to “4.3 Troubleshooting for Image Defects” in this chapter.
3	Connection failure	REG mark L sensor harness	Reconnect	REG mark L sensor harness
4	Failure	Density sensor	Replace	REG mark sensor ASSY
5	Failure	Main PCB	Replace	Main PCB

■ **Error code 9902**

Manual color registration failure (Any of the color toners is unprintable.)

<User Check>

- Replace the corresponding toner cartridge.

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code 9903**

Manual color registration failure (When printing the calibration data)

<User Check>

- If the belt unit has a scratch, replace it.
- If “WT Box End Soon” is displayed on the LCD and the belt unit has dirt, replace the waste toner box.

No.	Cause		Remedy	
1	Dirt	REG mark L sensor	Clean	REG mark L sensor
2	Failure	Density calibration measurement pattern printing	Execute	If failure occurs when printing each test patterns in Function Code 71 , refer to “4.3 Troubleshooting for Image Defects” in this chapter.
3	Connection failure	REG mark L sensor harness	Reconnect	REG mark L sensor harness
4	Failure	Density sensor	Replace	REG mark sensor ASSY
5	Failure	Main PCB	Replace	Main PCB

■ **Error code 9A01**

Auto color registration failure (Incorrect measured value)

<User Check>

- If the belt unit has a scratch, replace it.
- If “WT Box End Soon” is displayed on the LCD and the belt unit has dirt, replace the waste toner box.

No.	Cause		Remedy	
1	Dirt	REG mark L sensor	Clean	REG mark L sensor
2	Failure	Density calibration measurement pattern printing	Execute	If failure occurs when printing each test patterns in Function Code 71 , refer to “4.3 Troubleshooting for Image Defects” in this chapter.
3	Connection failure	REG mark L sensor harness	Reconnect	REG mark L sensor harness
4	Failure	Density sensor	Replace	REG mark sensor ASSY
5	Failure	Main PCB	Replace	Main PCB

■ **Error code 9A02**

Auto color registration failure (Any of the color toners is unprintable.)

<User Check>

- Replace the corresponding toner cartridge.

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code 9A03**

Auto color registration failure (When printing the calibration data)

<User Check>

- If the belt unit has a scratch, replace it.
- If “WT Box End Soon” is displayed on the LCD and the belt unit has dirt, replace the waste toner box.

No.	Cause		Remedy	
1	Dirt	REG mark L sensor	Clean	REG mark L sensor
2	Failure	Density calibration measurement pattern printing	Execute	If failure occurs when printing each test patterns in Function Code 71 , refer to “4.3 Troubleshooting for Image Defects” in this chapter.
3	Connection failure	REG mark L sensor harness	Reconnect	REG mark L sensor harness
4	Failure	Density sensor	Replace	REG mark sensor ASSY
5	Failure	Main PCB	Replace	Main PCB

■ **Error code 9B03**

T2 FAX unprintable (Printer setting, Fax unprintable - T2)

■ **Error code 9B04**

T3 FAX unprintable (Printer setting, Fax unprintable - T3)

■ **Error code 9B05**

T4 FAX unprintable (Printer setting, Fax unprintable - T4)

■ **Error code 9B06**

T5 FAX unprintable (Printer setting, Fax unprintable - T5)

<User Check>

- Set the settings in the function menu of the corresponding paper tray to other than "Separate tray" and "Skip tray".

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code A000**

Incorrect scanning data for 2nd side

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Incorrect	Scan data processing	Execute	"Set CIS scan area" (Function Code 55)
2	Connection failure	2nd side CIS FFC	Reconnect	2nd side CIS FFC
3	Failure	2nd side CIS unit	Replace	2nd side CIS unit
4	Failure	Main PCB	Replace	Main PCB

■ **Error code A200**

The document is 90 cm or more in length. (ADF front sensor, Document rear 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	Connection failure	ADF motor harness ASSY	Reconnect	ADF motor harness ASSY
2	Failure	Document front sensor	Replace	ADF unit
3	Failure	Document rear sensor	Replace	ADF unit
4	Failure	Main PCB	Replace	Main PCB

■ **Error code A300**

The front edge of document is not detected. (Document rear sensor)

<**User Check**>

- Match the document guide with the document size.
- Remove the jammed document.

No.	Cause		Remedy	
1	Foreign object	Inside the ADF	Remove the foreign object	Inside the ADF
2	Connection failure	ADF motor harness ASSY	Reconnect	ADF motor harness ASSY
3	Failure	Document rear sensor	Replace	ADF unit
4	Failure	Main PCB	Replace	Main PCB

■ **Error code A400**

ADF cover open (ADF cover sensor)

<**User Check**>

- Close the ADF cover.

No.	Cause		Remedy	
1	Connection failure	ADF motor harness ASSY	Reconnect	ADF motor harness ASSY
2	Failure	ADF cover	Replace	ADF cover
3	Failure	ADF cover sensor	Replace	ADF unit
4	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	Incorrect	Scan data processing	Execute	“Acquire white level data” (Function Code 55)
2	Dirt	White tape	Clean	White tape (See Fig. 2-29 below.)
3	Connection failure	1st side CIS FFC	Reconnect	1st side CIS FFC
4	Defect	1st side CIS FFC	Replace	1st side CIS FFC
5	Failure	1st side CIS unit	Replace	1st side CIS unit
6	Failure	White tape	Replace	Document scanner unit
7	Failure	Main PCB	Replace	Main PCB

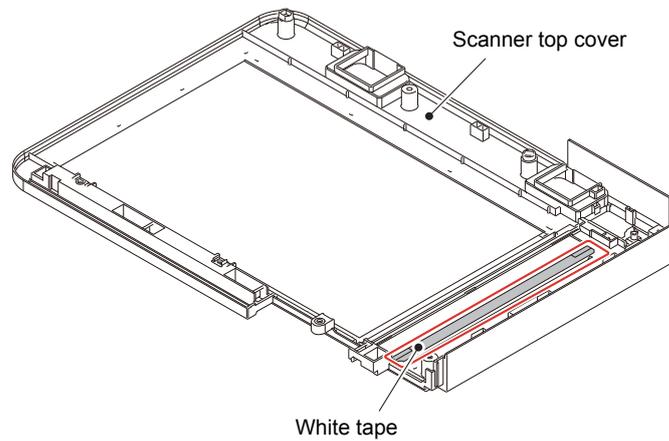


Fig. 2-29

■ **Error code A700**

Incorrect scanning color parameters

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Incorrect	Scan data processing	Execute	"Set CIS scan area" (Function Code 55)
2	Connection failure	1st side CIS FFC	Reconnect	1st side CIS FFC
3	Connection failure	2nd side CIS FFC	Reconnect	2nd side CIS FFC
4	Defect	1st side CIS FFC	Replace	1st side CIS FFC
5	Defect	2nd side CIS FFC	Replace	2nd side CIS FFC
6	Failure	1st side CIS unit	Replace	1st side CIS unit
7	Failure	2nd side CIS unit	Replace	2nd side CIS unit
8	Failure	Main PCB	Replace	Main PCB

■ **Error code AC00**

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

No.	Cause		Remedy	
1	Incorrect	Scan data processing	Execute	"Set CIS scan area" (Function Code 55)
2	Connection failure	2nd side CIS FFC	Reconnect	2nd side CIS FFC
3	Defect	2nd side CIS FFC	Replace	2nd side CIS FFC
4	Failure	2nd side CIS unit	Replace	2nd side CIS unit
5	Failure	Main PCB	Replace	Main PCB

■ **Error code AD00**

Incorrect scanning data

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Incorrect	Scan data processing	Execute	"Set CIS scan area" (Function Code 55)
2	Connection failure	1st side CIS FFC	Reconnect	1st side CIS FFC
3	Defect	1st side CIS FFC	Replace	1st side CIS FFC
4	Failure	1st side CIS unit	Replace	1st side CIS unit
5	Failure	Main PCB	Replace	Main PCB

■ **Error code AF00**

Scanning home position detection failure (Does not change at the home position.)

No.	Cause		Remedy	
1	Foreign object	Inside the document scanner unit	Remove the foreign object	Inside the document scanner unit
2	Connection failure	ADF motor harness ASSY	Reconnect	ADF motor harness ASSY
3	Connection failure	1st side CIS FFC	Reconnect	1st side CIS FFC
4	Defect	1st side CIS FFC	Replace	1st side CIS FFC
5	Failure	1st side CIS unit	Replace	1st side CIS unit
6	Failure	FB motor	Replace	Document scanner unit
7	Failure	Main PCB	Replace	Main PCB

■ **Error code B000**

Connection failure of CIS flat cable (1st/2nd side) (When Function code 55 is executed)

No.	Cause		Remedy	
1	Connection failure	1st side CIS FFC	Reconnect	1st side CIS FFC
2	Connection failure	2nd side CIS FFC	Reconnect	2nd side CIS FFC
3	Defect	1st side CIS FFC	Replace	1st side CIS FFC
4	Defect	2nd side CIS FFC	Replace	2nd side CIS FFC
5	Failure	1st side CIS unit	Replace	1st side CIS unit
6	Failure	2nd side CIS unit	Replace	2nd side CIS unit
7	Failure	Main PCB	Replace	Main PCB

■ **Error code B300**

Too much documents in ADF

<User Check>

- Reduce the amount of document (ADF) to 100 sheets or less.
- Check the document thickness (ADF) (Spec.: 45 to 120 g/m² (12 to 32 lb)).

No.	Cause		Remedy	
1	Foreign object	Document loading section	Remove the foreign object	Document loading section
2	Connection failure	Flap tray motor FFC	Reconnect	Flap tray motor FFC
3	Connection failure	Flap tray relay harness	Reconnect	Flap tray relay harness
4	Defect	Flap tray motor FFC	Replace	Flap tray motor FFC
5	Failure	Flap tray relay PCB	Replace	ADF unit
6	Failure	Flap tray motor	Replace	ADF unit
7	Failure	Main PCB	Replace	Main PCB

■ **Error code B400**

ADF flap tray lift-up failure (Timer control malfunction)

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code B401**

ADF flap tray lift-up failure (The flap tray operation is improper.)

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Connection failure	Flap tray motor FFC	Reconnect	Flap tray motor FFC
2	Connection failure	Flap tray relay harness	Reconnect	Flap tray relay harness
3	Defect	Flap tray motor FFC	Replace	Flap tray motor FFC
4	Failure	Flap tray relay PCB	Replace	ADF unit
5	Failure	Flap tray motor	Replace	ADF unit
6	Failure	Main PCB	Replace	Main PCB

■ **Error code B402**

ADF flap tray lift-up failure (The flap tray operation is improper, and the flap tray home sensor is ON.)

No.	Cause		Remedy	
1	Connection failure	Flap tray home sensor harness	Reconnect	Flap tray home sensor harness
2	Connection failure	Flap tray PF sensor harness	Reconnect	Flap tray PF sensor harness
3	Connection failure	Flap tray motor FFC	Reconnect	Flap tray motor FFC
4	Connection failure	Flap tray relay harness	Reconnect	Flap tray relay harness
5	Defect	Flap tray motor FFC	Replace	Flap tray motor FFC
6	Failure	Flap tray relay PCB	Replace	ADF unit
7	Failure	Flap tray motor	Replace	ADF unit
8	Failure	Main PCB	Replace	Main PCB

■ **Error code B403**

ADF flap tray lift-up failure (The flap tray operation is improper, and the flap tray home sensor is OFF.)

No.	Cause		Remedy	
1	Connection failure	Flap tray PF sensor harness	Reconnect	Flap tray PF sensor harness
2	Connection failure	Flap tray motor FFC	Reconnect	Flap tray motor FFC
3	Connection failure	Flap tray relay harness	Reconnect	Flap tray relay harness
4	Defect	Flap tray motor FFC	Replace	Flap tray motor FFC
5	Failure	Flap tray relay PCB	Replace	ADF unit
6	Failure	Flap tray motor	Replace	ADF unit
7	Failure	Main PCB	Replace	Main PCB

■ **Error code B410**

ADF flap tray lift-down failure (Timer control malfunction)

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code B411**

ADF flap tray lift-down failure (The flap tray operation is improper.)

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Connection failure	Flap tray motor FFC	Reconnect	Flap tray motor FFC
2	Connection failure	Flap tray relay harness	Reconnect	Flap tray relay harness
3	Defect	Flap tray motor FFC	Replace	Flap tray motor FFC
4	Failure	Flap tray relay PCB	Replace	ADF unit
5	Failure	Flap tray motor	Replace	ADF unit
6	Failure	Main PCB	Replace	Main PCB

■ **Error code B412**

ADF flap tray lift-down failure (The flap tray operation is improper, and the flap tray PF sensor is ON.)

No.	Cause		Remedy	
1	Connection failure	Flap tray home sensor harness	Reconnect	Flap tray home sensor harness
2	Connection failure	Flap tray PF sensor harness	Reconnect	Flap tray PF sensor harness
3	Connection failure	Flap tray motor FFC	Reconnect	Flap tray motor FFC
4	Connection failure	Flap tray relay harness	Reconnect	Flap tray relay harness
5	Defect	Flap tray motor FFC	Replace	Flap tray motor FFC
6	Failure	Flap tray relay PCB	Replace	ADF unit
7	Failure	Flap tray motor	Replace	ADF unit
8	Failure	Main PCB	Replace	Main PCB

■ **Error code B413**

ADF flap tray lift-down failure (The flap tray operation is improper, and the flap tray PF sensor is OFF.)

No.	Cause		Remedy	
1	Connection failure	Flap tray home sensor harness	Reconnect	Flap tray home sensor harness
2	Connection failure	Flap tray motor FFC	Reconnect	Flap tray motor FFC
3	Connection failure	Flap tray relay harness	Reconnect	Flap tray relay harness
4	Defect	Flap tray motor FFC	Replace	Flap tray motor FFC
5	Failure	Flap tray relay PCB	Replace	ADF unit
6	Failure	Flap tray motor	Replace	ADF unit
7	Failure	Main PCB	Replace	Main PCB

■ **Error code BB00**

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

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	White tape	Clean	White tape (Refer to Fig. 2-29.)
2	Connection failure	1st side CIS FFC	Reconnect	1st side CIS FFC
3	Connection failure	2nd side CIS FFC	Reconnect	2nd side CIS FFC
4	Defect	1st side CIS FFC	Replace	1st side CIS FFC
5	Defect	2nd side CIS FFC	Replace	2nd side CIS FFC
6	Failure	White tape	Replace	Document scanner unit
7	Failure	Main PCB	Replace	Main PCB

■ **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	Incorrect	Scan data processing	Execute	"Acquire white level data" (Function Code 55)
2	Dirt	White tape	Clean	White tape (Refer to Fig. 2-29.)
3	Connection failure	2nd side CIS FFC	Reconnect	2nd side CIS FFC
4	Defect	2nd side CIS FFC	Replace	2nd side CIS FFC
5	Failure	2nd side CIS unit	Replace	2nd side CIS unit
6	Failure	White tape	Replace	Document scanner unit
7	Failure	Main PCB	Replace	Main PCB

■ **Error code BD00**

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

<**User Check**>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	White tape	Clean	White tape (Refer to Fig. 2-29.)
2	Connection failure	1st side CIS FFC	Reconnect	1st side CIS FFC
3	Connection failure	2nd side CIS FFC	Reconnect	2nd side CIS FFC
4	Defect	1st side CIS FFC	Replace	1st side CIS FFC
5	Defect	2nd side CIS FFC	Replace	2nd side CIS FFC
6	Failure	White tape	Replace	Document scanner unit
7	Failure	Main PCB	Replace	Main PCB

■ **Error code BF00**

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

<**User Check**>

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

No.	Cause		Remedy	
1	Failure	Document front sensor	Replace	ADF unit
2	Failure	Document rear sensor	Replace	ADF unit
3	Failure	Main PCB	Replace	Main PCB

■ **Error code C001**

Cannot access the server (“Log to Network” function, Server address setting)

<User Check>

- Check that the server power is ON.
- Check the connection of LAN cable.
- Check the network (wired/wireless) settings . (cannot access the server due to a wrong server name.)

No.	Cause		Remedy	
1	Connection failure	NC-9000W	Reconnect	NC-9000W
2	Failure	NC-9000W	Replace	NC-9000W
3	Failure	Main PCB	Replace	Main PCB

■ **Error code C002**

Incorrect server authentication information (“Log to Network” function)

<User Check>

- Check the network (wired/wireless) settings. (Wrong user’s name and/or password, different date of server and machine)

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code C003**

Improper log saving folder setting (“Log to Network” function, Clock/SNTP setting)

<User Check>

- Check the network (wired/wireless) settings. (User authentication failed due to incorrect folder name or path. No right to write to the folder.)

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code C004**

Set clock error (“Log to Network” function, Clock/SNTP setting)

<User Check>

- Set the machine’s clock. (The current time is required for User authentication.)

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code C100**

Failure to save data to USB flash memory

<User Check>

- Re-insert the USB flash memory.
- Check if the USB flash memory is out of memory.
- Replace the USB flash memory with another one.

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

■ **Error code C700**

Out of memory (PC-Print)

Error code C800

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 (Storage print)

<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 (Storage print)

<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	Defect	Modem FFC	Replace	Modem FFC
3	Failure	Modem PCB	Replace	Modem PCB
4	Failure	Main PCB	Replace	Main PCB

■ **Error code D800**

Touch panel initialization failure

No.	Cause		Remedy	
1	Connection failure	LCD FFC	Reconnect	LCD FFC
2	Connection failure	Touch panel FFC	Reconnect	Touch panel FFC
3	Connection failure	7 PNL main FFC harness	Reconnect	7 PNL main FFC harness
4	Failure	Touch panel	Replace	Touch panel
5	Failure	Panel PCB	Replace	Panel PCB
6	Failure	LCD	Replace	LCD
7	Failure	Main PCB	Replace	Main PCB

■ **Error code DB00**

Communication error in the main PCB

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code E000, E001**

Program data error

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code E500**

An error in the main PCB

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code E600**

EEPROM malfunction

<User Check>

- Install the latest main firmware.

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ **Error code E701, E702**

An error in the main PCB

<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	Connection failure	NFC FFC	Reconnect	NFC FFC
2	Defect	NFC FFC	Replace	NFC PCB
3	Failure	NFC PCB	Replace	NFC PCB
4	Failure	Main PCB	Replace	Main PCB

■ **Error code EA00**

No storage (USB flash memory)

<User Check>

- Install the latest main firmware.
- Check if a USB device other than USB flash memory is inserted.
- Check if the USB flash memory is out of memory.
- Replace the USB device with another one.

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main 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 PCB harness	Reconnect	USB host PCB harness
2	Failure	USB host PCB	Replace	USB host PCB
3	Failure	Main PCB	Replace	Main PCB

■ **Error code F900**

Incorrect spec code

No.	Cause		Remedy	
1	Incorrect	Spec code	Execute	Setting by spec (Refer to "1.3.26 Setting by Spec (Function Code 74)" in Chapter 5.)
2	Failure	Main PCB	Replace	Main PCB

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 230 g/m² (16 to 61 lb).
- Check if the MP tray / LT / TT is not specified for the paper feeding tray.
- Flip through the paper and reload it in the paper tray.
- Clean the paper pick up roller.

No.	Cause		Remedy	
1	Dirt	Paper dust cleaning roller of paper tray	Clean	Paper dust cleaning roller (See Fig. 2-30 below.)
2	Attachment failure	T1 pick up roller holder	Reattach	T1 pick up roller holder
3	Connection failure	T1 clutch harness	Reconnect	T1 clutch harness
4	Connection failure	T1 PF/PE sensor harness	Reconnect	T1 PF/PE sensor harness
5	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
6	Connection failure	PF motor FFC	Reconnect	PF motor FFC
7	Connection failure	LVPS harness1	Reconnect	LVPS harness1
8	Connection failure	LVPS harness2	Reconnect	LVPS harness2
9	Failure	PF kit 1	Replace	PF kit 1
10	Failure	T1 PF/PE sensor	Replace	T1 PF/PE sensor PCB
11	Failure	Engine relay PCB	Replace	Engine relay PCB
12	Damage	Gears in the PF drive unit	Replace	PF drive unit
13	Failure	PF unit	Replace	PF unit
14	Failure	Main PCB	Replace	Main PCB

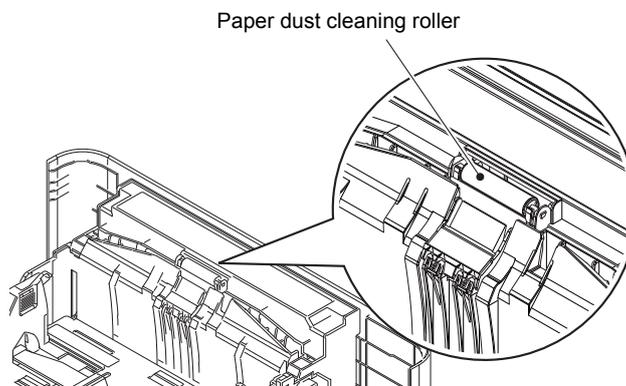


Fig. 2-30

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 105 g/m² (16 to 28 lb) for T2, 3, or 4.
- Check if the T1 / MP tray is not specified for the paper feeding tray.
- Flip through the paper and reload it in the paper tray.
- Clean the paper pick up roller.

No.	Cause		Remedy	
1	Dirt	Paper dust cleaning roller of paper tray	Clean	Paper dust cleaning roller (Refer to Fig. 2-30.)
2	Attachment failure	Each roller holder ASSY	Reattach	Each roller holder ASSY
3	Connection failure	PF motor FFC	Reconnect	PF motor FFC
4	Connection failure	Each LT PE/lift up sensor harness (Models with 500-sheet only)	Reconnect	Each LT PE/lift up sensor harness (Models with 500-sheet only)
5	Connection failure	Each LT PE/PF sensor harness (Models with 250-sheet only)	Reconnect	Each LT PE/PF sensor harness (Models with 250-sheet only)
6	Connection failure	An Harness in LT unit	Reconnect	The appropriate Harness in LT unit
7	Connection failure	An LT pick up clutch harness	Reconnect	The appropriate LT pick up clutch harness
8	Attachment failure	Each LT PE actuator	Reattach	Each LT PE actuator
9	Failure	A PF kit	Replace	The appropriate PF kit
10	Failure	An LT PE/lift up sensor	Replace	The appropriate LT PE/lift up sensor PCB
11	Damage	Fuser gear	Replace	Gear fuser M07 1 Z50L 25L
12	Failure	An LT control PCB	Replace	The appropriate LT control PCB
13	Damage	Gears in the PF drive unit	Replace	PF drive unit
14	Failure	PF motor	Replace	PF drive unit
15	Failure	PF unit	Replace	PF unit
16	Damage	LT's drive gear	Replace	LT unit
17	Failure	Main PCB	Replace	Main PCB

4.2.3 No paper feeding from TT

<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 105 g/m² (16 to 28 lb) for T2, 3, 4, or 5.
- Check if the T1 / MP tray is not specified for the paper feeding tray.
- Flip through the paper and reload it in the paper tray.
- Clean the paper pick up roller.

No.	Cause		Remedy	
1	Dirt	Paper dust cleaning roller of paper tray	Clean	Paper dust cleaning roller (Refer to Fig. 2-30.)
2	Attachment failure	A roller holder ASSY	Reattach	The appropriate roller holder ASSY
3	Connection failure	TT motor harness	Reconnect	TT motor harness
4	Connection failure	A TT PF sensor harness	Reconnect	The appropriate TT PF sensor harness
5	Connection failure	A TT PE sensor harness	Reconnect	The appropriate TT PE sensor harness
6	Connection failure	A TT relay PCB harness	Reconnect	The appropriate TT relay PCB harness
7	Connection failure	TT control PCB harness	Reconnect	TT control PCB harness
8	Connection failure	TC control PCB harness	Reconnect	TC control PCB harness
9	Connection failure	TT LVPS PCB harness	Reconnect	TT LVPS PCB harness
10	Connection failure	A TT release clutch harness	Reconnect	The appropriate TT release clutch harness
11	Connection failure	A TT pickup clutch harness	Reconnect	The appropriate TT pickup clutch harness
12	Connection failure	TT drive transmit clutch harness	Reconnect	TT drive transmit clutch harness
13	Connection failure	A TT jam sensor harness	Reconnect	The appropriate TT jam sensor harness
14	Attachment failure	A TT PE actuator	Reattach	The appropriate TT PE actuator
15	Failure	A PF kit	Replace	The appropriate PF kit
16	Failure	Each TT release clutch	Replace	The appropriate TT release clutch
17	Failure	Each TT pickup clutch	Replace	The appropriate TT pickup clutch
18	Failure	Each TT PF sensor	Replace	The appropriate TT PF sensor PCB
19	Failure	Each TT PE sensor	Replace	The appropriate TT PE sensor PCB
20	Failure	Each TT jam sensor	Replace	The appropriate TT jam sensor PCB
21	Damage	Each plate gear	Replace	The appropriate plate gear
22	Failure	Each LT/TT connector	Replace	The appropriate LT/TT connector
23	Failure	TT motor	Replace	TT motor
24	Failure	Each TT relay PCB	Replace	The appropriate TT relay PCB ASSY
25	Failure	TT control PCB	Replace	TT control PCB
26	Failure	TT LVPS PCB	Replace	TT LVPS PCB
27	Failure	TC control PCB	Replace	TC unit
28	Failure	Main PCB	Replace	Main PCB

4.2.4 No paper feeding from 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 230 g/m² (16 to 61 lb).
- Check that the T1, 2, 3, 4 or 5 is not set as the paper tray by the printer driver.
- Flip through the paper and reload it in the MP tray.
- Clean the MP pick up roller.

No.	Cause		Remedy	
1	Connection failure	PF motor FFC	Reconnect	PF motor FFC
2	Connection failure	MP sensor harness	Reconnect	MP sensor harness
3	Connection failure	REG front/rear sensor harness	Reconnect	REG front/rear sensor harness
4	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
5	Failure	MP REG/PE sensor	Replace	MP REG/PE sensor PCB
6	Failure	Engine relay PCB	Replace	Engine relay PCB
7	Failure	PF kit MP	Replace	PF kit MP
8	Damage	Gears in the PF drive unit	Replace	PF drive unit
9	Failure	PF motor	Replace	PF drive unit
10	Failure	PF unit	Replace	PF unit
11	Failure	Main PCB	Replace	Main PCB

4.2.5 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 230 g/m² (16 to 61 lb) for T1 or MP tray, and 60 to 105 g/m² (16 to 28 lb) for T2, 3, 4, or 5.
- Flip through the paper and reload it in each paper tray.

No.	Cause		Remedy	
1	Failure	A PF kit	Replace	The appropriate PF kit

4.2.6 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 230 g/m² (16 to 61 lb) for T1 or MP tray, and 60 to 105 g/m² (16 to 28 lb) for T2, 3, 4, or 5.
- 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

4.2.7 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 the paper is 60 to 230 g/m² (16 to 61 lb) for T1 or MP tray, and 60 to 105 g/m² (16 to 28 lb) for T2, 3, 4, or 5.
- Check that not too much paper is loaded in the paper tray.
- Check if the paper type is proper.
- Clean each paper pick up roller.

No.	Cause		Remedy	
1	Failure	A PF kit	Replace	The appropriate PF kit
2	Failure	PF unit	Replace	PF unit

4.2.8 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

4.2.9 Unable to perform 2-sided printing

<User Check>

- Check if the DX tray is fully inserted.
- Close the back cover.
- The paper width is A4 or LTR, and the paper length is 270 mm or more, and LGL or less.
- Check if the paper setting in the printer driver matches the paper that is actually loaded.

No.	Cause		Remedy	
1	Connection failure	Back cover sensor harness	Reconnect	Back cover sensor harness
2	Connection failure	REG front/rear sensor harness	Reconnect	REG front/rear sensor harness
3	Connection failure	Eject relay PCB harness	Reconnect	Eject relay PCB harness
4	Connection failure	HVPS FFC	Reconnect	HVPS FFC
5	Connection failure	HVPS2 FFC	Reconnect	HVPS2 FFC
6	Attachment failure	Back cover sensor harness	Reattach	Back cover sensor harness
7	Attachment failure	DX flapper ASSY	Reattach	DX flapper ASSY
8	Failure	DX2 unit	Replace	DX2 unit
9	Failure	Back cover	Replace	Back cover
10	Defect	HVPS FFC	Replace	HVPS FFC
11	Defect	HVPS2 FFC	Replace	HVPS2 FFC
12	Failure	HVPS PCB	Replace	HVPS PCB
13	Failure	Eject relay PCB	Replace	Eject relay PCB
14	Failure	DX tray	Replace	DX tray
15	Failure	DX flapper ASSY	Replace	DX flapper ASSY
16	Failure	Main PCB	Replace	Main PCB

4.2.10 Paper jam

4.2.10.1 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.
- Check that the thickness of the paper is 60 to 230 g/m² (16 to 61 lb) (T1).
- Use paper within the specifications. Load the paper properly.

No.	Cause		Remedy	
1	Foreign object	The front inside the machine	Remove the foreign object	The front inside the machine
2	Attachment failure	T1 pick up roller holder	Reattach	T1 pick up roller holder
3	Connection failure	T1 clutch harness	Reconnect	T1 clutch harness
4	Connection failure	T1 PF/PE sensor harness	Reconnect	T1 PF/PE sensor harness
5	Connection failure	REG front/rear sensor harness	Reconnect	REG front/rear sensor harness
6	Connection failure	Engine relay FFC	Reconnect	Engine relay FFC
7	Failure	PF kit 1	Replace	PF kit 1
8	Failure	T1 PF/PE sensor	Replace	T1 PF/PE sensor PCB
9	Failure	REG rear sensor	Replace	REG front/rear sensor holder ASSY
10	Failure	Engine relay PCB	Replace	Engine relay PCB
11	Damage	Gears in the PF drive unit	Replace	PF drive unit
12	Failure	Main PCB	Replace	Main PCB

4.2.10.2 Paper jam at the LT

Refer to error code **7401** (T2 jam), **7402** (T2 jam), **7501** (T3 jam), **7502** (T3 jam), **7601** (T4 jam), **7602** (T4 jam) according to different errors.

4.2.10.3 Paper jam at the TT

Refer to error code **7401** (T2 jam), **7402** (T2 jam), **7501** (T3 jam), **7502** (T3 jam), **7601** (T4 jam), **7602** (T4 jam), **7701** (T5 jam), **7702** (T5 jam) according to different errors.

4.2.10.4 Paper jam at the MP tray

Refer to error code **7200** (MP tray jam).

4.2.10.5 Paper jam at the paper feeding section at the center of the machine

Refer to error code **7000** (REG rear sensor: ON - Eject sensor: OFF) according to different errors.

4.2.10.6 Paper jam at the eject section

Refer to error code **7100** (REG rear sensor: OFF - Eject sensor: ON) according to different errors.

4.2.10.7 Paper jam in 2-sided printing

Refer to error code **7107** (Jam rear - 2-sided printing), **7801** (Jam tray - around DX tray), **7802** (Jam tray - around T1), **7803** (Jam tray - around T1 or DX tray) according to different errors.

4.3 Troubleshooting for Image Defects

4.3.1 Image defect examples

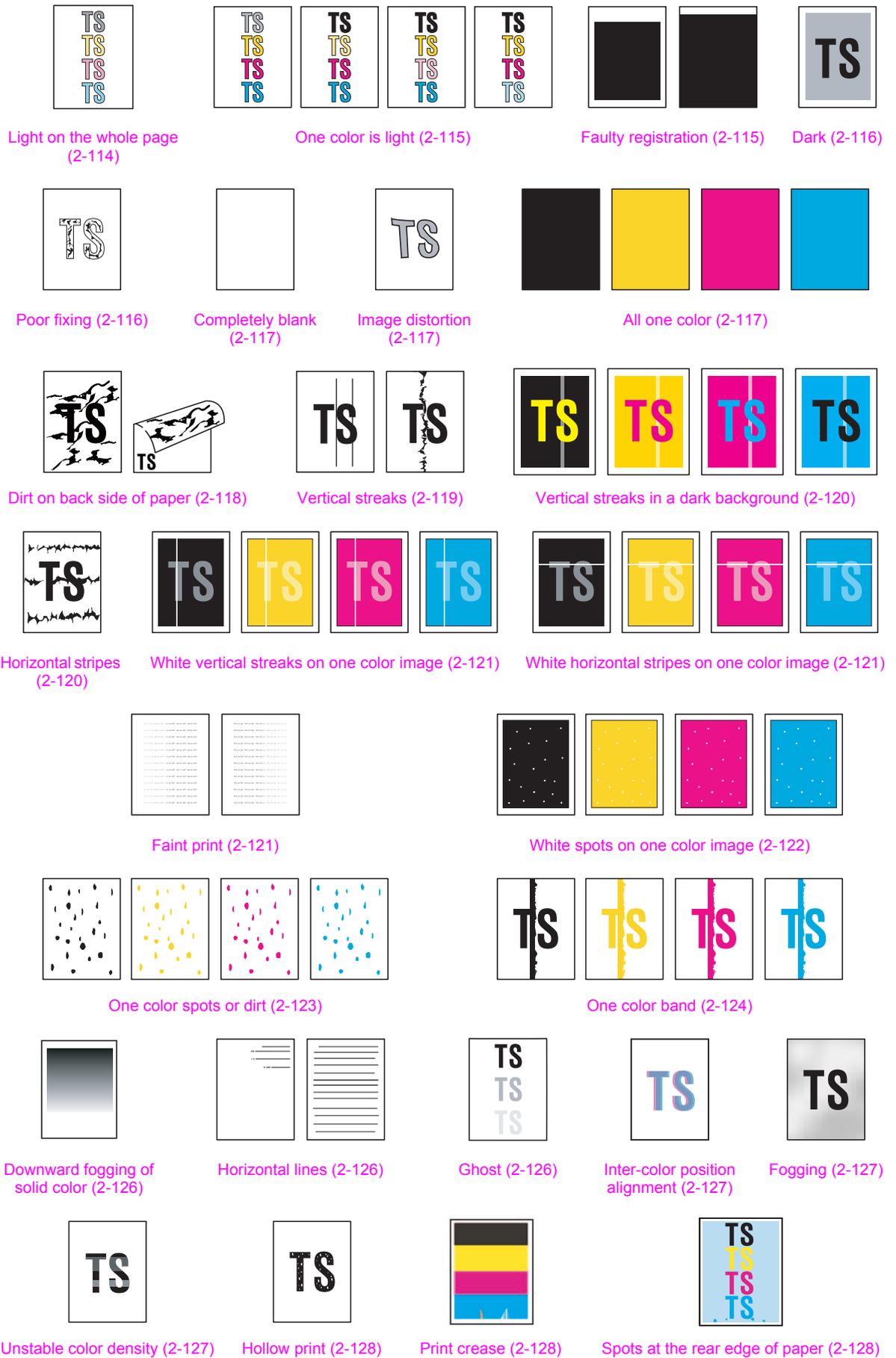


Fig. 2-31

4.3.2 Troubleshooting for each image defect

4.3.2.1 Light on the whole page



<User Check>

- Check the usage environment of the machine. Using the machine in hot-humid or cold-dry conditions can cause this problem.
- If the whole page is light, the toner save mode may be ON. Turn OFF the toner save mode.
- Adjust 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	Dirt	Electrodes (Machine, Drum unit, Belt unit)	Clean	Electrodes (Machine, Drum unit, Belt unit) (Refer to Fig. 2-24, Fig. 2-23, and see Fig. 2-32 below.)
2	Dirt	Electrodes (HVPS PCB)	Clean	Electrodes (HVPS PCB) (Refer to Fig. 2-25.)
3	Failure	Density sensor	Replace	REG mark sensor ASSY
4	Failure	Fuser	Replace	Fuser
5	Failure	HVPS PCB	Replace	HVPS PCB
6	Failure	Main PCB	Replace	Main PCB

■ Electrodes location of belt unit

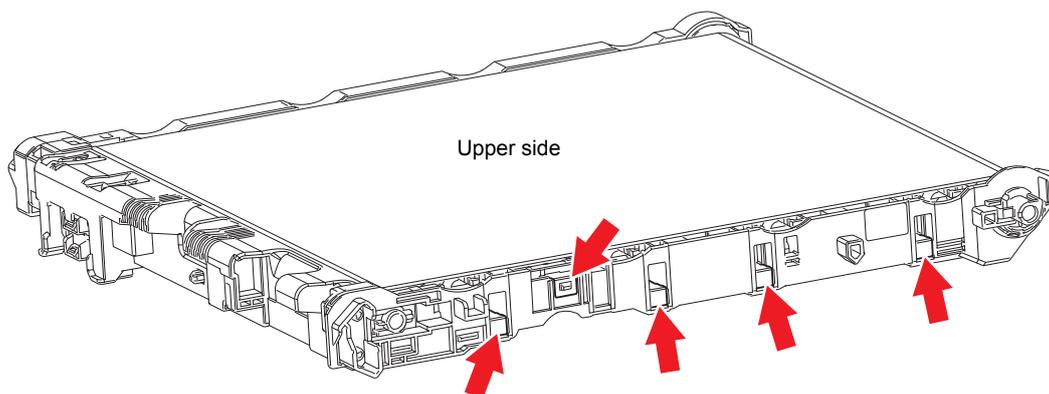


Fig. 2-32

4.3.2.2 One color is light

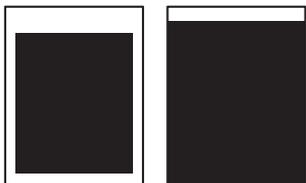


<User Check>

- Check the usage environment of the machine. Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Adjust the color calibration from the control panel.
- Replace the drum unit.
- Replace the toner cartridge.
- Use specified paper.
- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	Electrodes (Machine, Drum unit)	Clean	Electrodes (Machine, Drum unit) (Refer to Fig. 2-24, Fig. 2-23.)
2	Dirt	Electrodes (HVPS PCB)	Clean	Electrodes (HVPS PCB) (Refer to Fig. 2-25.)
3	Failure	Density sensor	Replace	REG mark sensor ASSY
4	Failure	Fuser	Replace	Fuser
5	Failure	HVPS PCB	Replace	HVPS PCB
6	Failure	Main PCB	Replace	Main PCB

4.3.2.3 Faulty registration



<User Check>

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

No.	Cause		Remedy	
1	Come off	REG rear actuator	Reattach	REG rear actuator
2	Incorrect	Calibration value for left-end/ upper-end print position	Set	Calibration value for left-end/ upper-end print position (Function code 45)
3	Failure	Laser unit	Replace	Laser unit
4	Failure	Main PCB	Replace	Main PCB

4.3.2.4 Dark

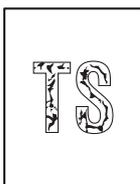


<User Check>

- Check the usage environment of the machine. Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Execute density adjustment from the control panel.
- Clean the corona wire 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	Dirt	Electrodes (Machine, Drum unit, Belt unit)	Clean	Electrodes (Machine, Drum unit, Belt unit) (Refer to Fig. 2-24, Fig. 2-23, Fig. 2-32.)
2	Dirt	Electrodes (HVPS PCB)	Clean	Electrodes (HVPS PCB) (Refer to Fig. 2-25.)
3	Failure	Density sensor	Replace	REG mark sensor ASSY
4	Failure	Fuser	Replace	Fuser
5	Failure	HVPS PCB	Replace	HVPS PCB
6	Failure	Laser unit	Replace	Laser unit
7	Failure	Main PCB	Replace	Main PCB

4.3.2.5 Poor fixing



<User Check>

- Check the usage environment of the machine. Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Clean the corona wire of 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 scanner windows of the laser unit with a soft, lint-free cloth.
- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	Electrodes (Machine, Drum unit, Belt unit)	Clean	Electrodes (Machine, Drum unit, Belt unit) (Refer to Fig. 2-24, Fig. 2-23, Fig. 2-32.)
2	Failure	Fuser	Replace	Fuser
3	Failure	HVPS PCB	Replace	HVPS PCB
4	Failure	LVPS PCB	Replace	LVPS PCB
5	Failure	Laser unit	Replace	Laser unit
6	Failure	Main PCB	Replace	Main PCB

4.3.2.6 Completely blank

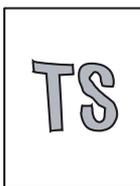


<User Check>

- Clean the corona wire 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	Dirt	Electrodes (Machine, Drum unit, Belt unit)	Clean	Electrodes (Machine, Drum unit, Belt unit) (Refer to Fig. 2-24, Fig. 2-23, Fig. 2-32.)
2	Dirt	Electrodes (HVPS PCB)	Clean	Electrodes (HVPS PCB) (Refer to Fig. 2-25.)
3	Connection failure	Laser unit FFC	Reconnect	Laser unit FFC
4	Defect	Laser unit FFC	Replace	Laser unit FFC
5	Failure	Laser unit	Replace	Laser unit
6	Failure	Main PCB	Replace	Main PCB

4.3.2.7 Image distortion

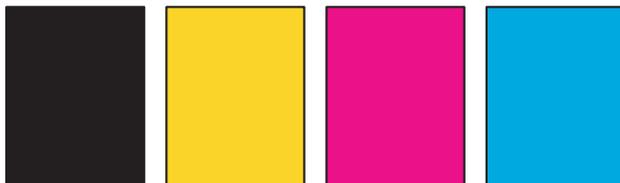


<User Check>

- Replace the belt unit with a new one.
- Install the latest main firmware.

No.	Cause		Remedy	
1	Failure	Laser unit	Replace	Laser unit
2	Failure	Main PCB	Replace	Main PCB

4.3.2.8 All one color

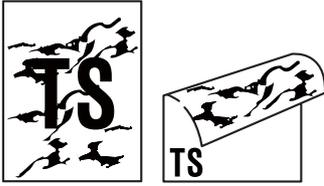


<User Check>

- Clean the corona wire 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	Dirt	Electrodes (Machine, Drum unit, Belt unit)	Clean	Electrodes (Machine, Drum unit, Belt unit) (Refer to Fig. 2-24, Fig. 2-23, Fig. 2-32.)
2	Dirt	Electrodes (HVPS PCB)	Clean	Electrodes (HVPS PCB) (Refer to Fig. 2-25.)
3	Defect	Laser unit FFC	Replace	Laser unit FFC
4	Failure	Laser unit	Replace	Laser unit
5	Failure	Main PCB	Replace	Main PCB

4.3.2.9 Dirt on back side of paper



<User Check>

- Clean the corona wire of all four colors on the drum unit.
- Return the green tab for cleaning the corona wire to the left end.
- 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	Dirt	Electrodes (Machine, Belt unit)	Clean	Electrodes (Machine, Belt unit) (Refer to Fig. 2-24, Fig. 2-32.)
3	Dirt	Electrodes (Machine, Waste toner box)	Clean	Electrodes (Machine, Waste toner box) (Refer to Fig. 2-24, and see Fig. 2-33 below.)
4	Failure	Fuser	Replace	Fuser
5	Failure	HVPS PCB	Replace	HVPS PCB

■ Electrodes location of waste toner box

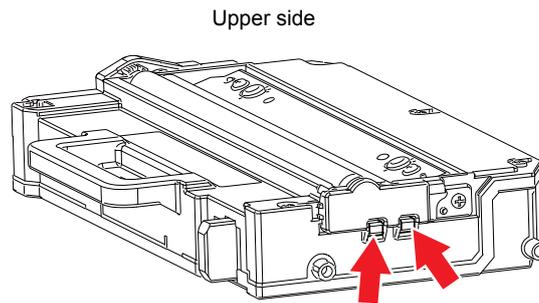
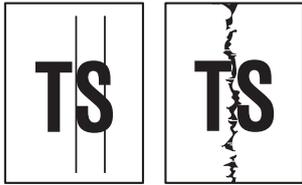


Fig. 2-33

4.3.2.10 Vertical streaks



<User Check>

- Clean the corona wire of all four colors on the drum unit.
- Return the green tab for cleaning the corona wire to the left end.
- 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 scanner windows of the laser unit with a soft, lint-free cloth.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Install the latest main firmware.

No.	Cause		Remedy	
	1	Dirt	Paper feeding path	Clean
2	Deformation	Ground wire of paper tray	Repair	Ground wire of paper tray (See Fig. 2-34 below.)
3	Failure	Fuser	Replace	Fuser
4	Failure	Laser unit	Replace	Laser unit

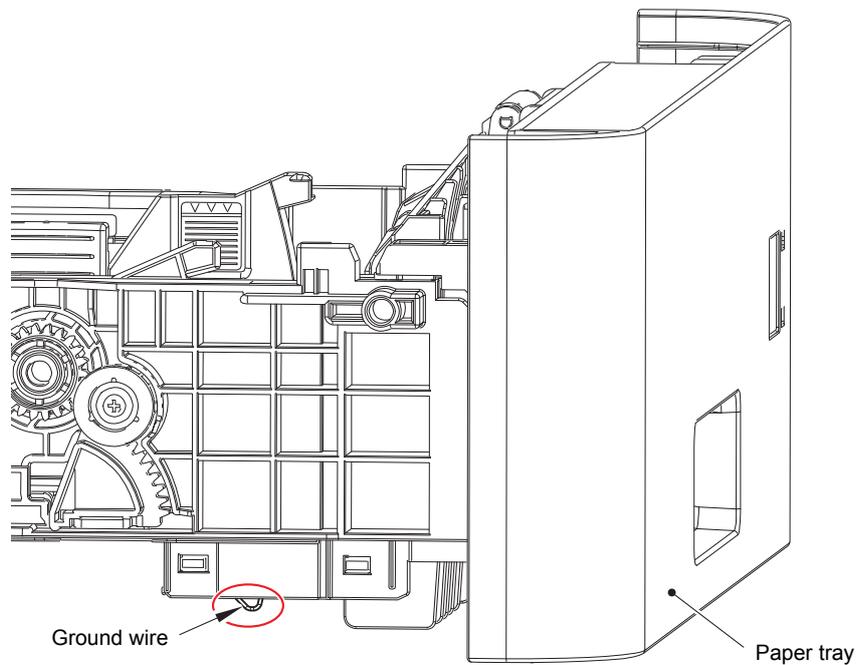
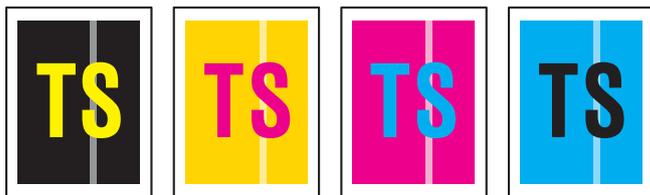


Fig. 2-34

4.3.2.11 Vertical streaks in a dark background



<User Check>

- Clean the corona wire 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 scanner windows of the laser unit with a soft, lint-free cloth.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	Electrodes (Machine, Drum unit)	Clean	Electrodes (Machine, Drum unit) (Refer to Fig. 2-24, Fig. 2-23.)
2	Failure	Laser unit	Replace	Laser unit

4.3.2.12 Horizontal stripes

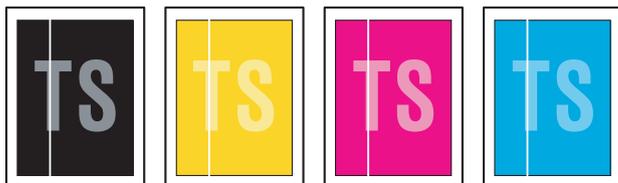


<User Check>

- Clean the corona wire 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 scanner windows of the laser unit with a soft, lint-free cloth.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	Electrodes (Machine, Drum unit)	Clean	Electrodes (Machine, Drum unit) (Refer to Fig. 2-24, Fig. 2-23.)
2	Failure	Fuser	Replace	Fuser
3	Failure	HVPS PCB	Replace	HVPS PCB

4.3.2.13 White vertical streaks on one color image

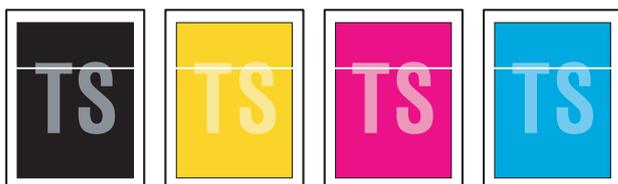


<User Check>

- Clean the corona wire 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	Dirt	Electrodes (Machine, Drum unit)	Clean	Electrodes (Machine, Drum unit) (Refer to Fig. 2-24, Fig. 2-23.)
2	Failure	Laser unit	Replace	Laser unit

4.3.2.14 White horizontal stripes on one color image

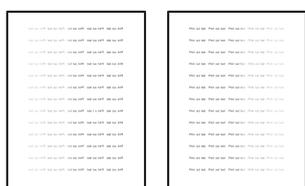


<User Check>

- 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	Dirt	Electrodes (Machine, Drum unit)	Clean	Electrodes (Machine, Drum unit) (Refer to Fig. 2-24, Fig. 2-23.)
2	Failure	Fuser	Replace	Fuser
3	Failure	HVPS PCB	Replace	HVPS PCB

4.3.2.15 Faint print

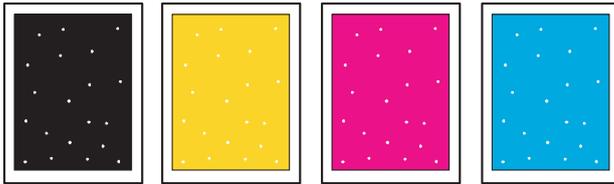


<User Check>

- 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	Laser unit	Replace	Laser unit
2	Failure	Fuser	Replace	Fuser
3	Failure	Main PCB	Replace	Main PCB

4.3.2.16 White spots on one color image



<User Check>

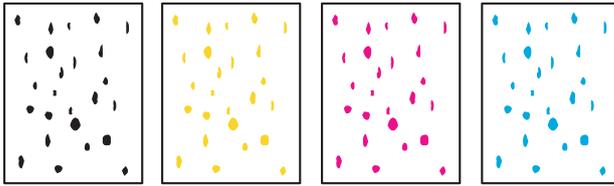
- Check if the Fan motor 80 and/or the blower are not clogged.
- Refer to <How to clean the drum unit> and remove the dirt on the exposure drum using a cotton swab.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Replace the belt unit with a new one.
- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	Paper dust cleaning roller of paper tray	Clean	Paper dust cleaning roller (Refer to Fig. 2-30.)
2	Dirt	Filter	Clean	Filter
3	Failure	Fuser	Replace	Fuser
4	Failure	HVPS PCB	Replace	HVPS PCB

<Pitches appearing in images caused by rollers>

Part name	Pitches appearing in images
DEV roller of toner cartridge	29.2 mm
Exposure drum of drum unit	94 mm
Heat roller of fuser	78.4 mm
Pressure belt of fuser	103.7 mm

4.3.2.17 One color spots or dirt



<User Check>

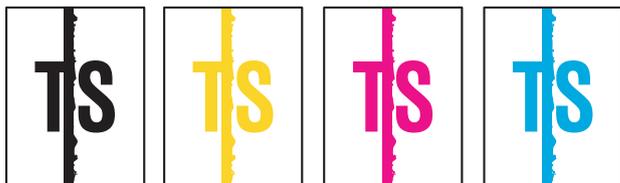
- Check if damp paper is used.
- Refer to <How to clean the drum unit> and remove the dirt on the exposure drum using a cotton swab.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Replace the belt unit with a new one.
- Install the latest main firmware.

No.	Cause		Remedy	
1	Dirt	Paper dust cleaning roller of paper tray	Clean	Paper dust cleaning roller (Refer to Fig. 2-30.)
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 <itches 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 wire of all four colors on the drum unit.
- Return the green tab for cleaning the corona wire to the left end.
- 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. 2-34.)
2	Failure	Laser unit	Replace	Laser unit

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

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

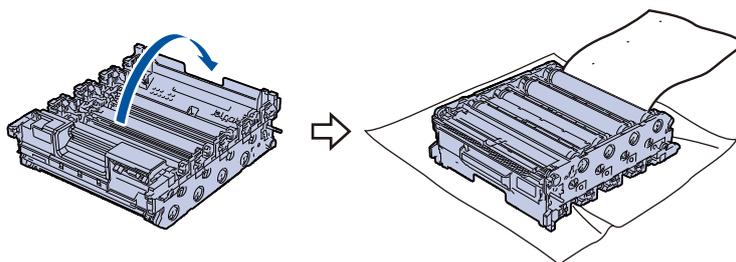
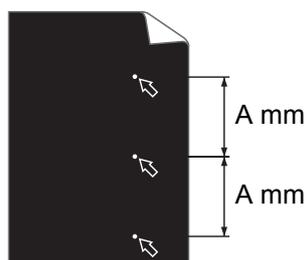
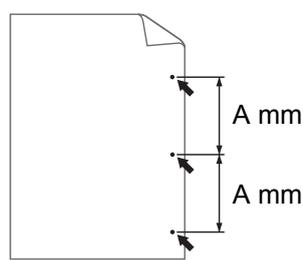


Fig. 2-35

<Examples of image defect>



White dots repeat in A mm distance on the page that a black image is printed.



Black dots repeat in A mm distance on the printed page.

Fig. 2-36

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

- (2) Turn the drum unit gear and the edge of the drum unit toward you using both hands while looking at the surface of the suspected area.

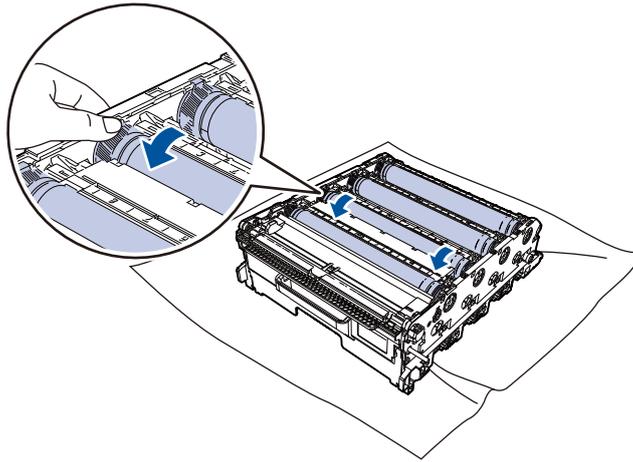


Fig. 2-37

- (3) If the dirt locations on the drum and the dots on the print sample match, wipe the exposure drum surface with a cotton swab until dirt or paper dust comes off.

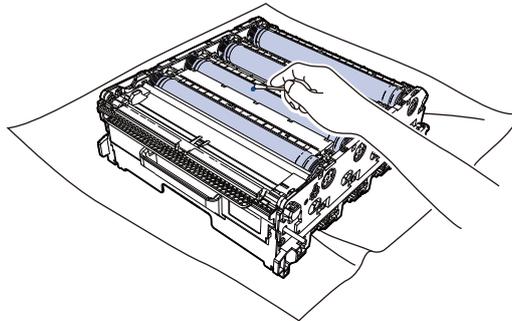


Fig. 2-38

Note:

- DO NOT clean the exposure drum surface with anything sharp like a ball pointed pen.
- The drum deteriorates when it is exposed to light (electricity, sunlight). Immediately return the drum to the machine (dark place) after cleaning it.
- The drum deteriorates when human-derived components such as dandruff, saliva, sweat, and hand fat adhere to it. Be careful not to adhere during operations.

4.3.2.19 Downward fogging of solid color

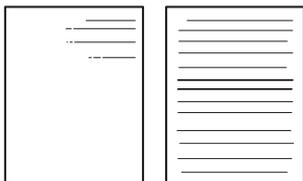


<User Check>

- 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	Dirt	Electrodes (Machine, Drum unit)	Clean	Electrodes (Machine, Drum unit) (Refer to Fig. 2-24 , Fig. 2-23 .)
2	Failure	Fuser	Replace	Fuser
3	Failure	HVPS PCB	Replace	HVPS PCB

4.3.2.21 Ghost



<User Check>

- Check the usage environment of the machine. Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Check 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 ASSY	Replace	REG mark sensor ASSY
2	Failure	Main PCB	Replace	Main PCB

Note:

- After replacing the fuser or the PF unit, enter Function Code 88 and execute Adjust-FuserUnit / Adjust-PFUnit to adjust the speed.

4.3.2.23 Fogging



<User Check>

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

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

Note:

- This problem tends to occur when the life of the drum unit or toner cartridge is expiring.
- Enter Function Code 45 and execute Fogging Reduction.

4.3.2.24 Unstable color density

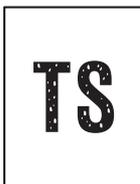


<User Check>

- 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	Dirt	Electrodes (Machine, Drum unit, Belt unit)	Clean	Electrodes (Machine, Drum unit, Belt unit) (Refer to Fig. 2-24, Fig. 2-23, Fig. 2-32.)
2	Failure	HVPS PCB	Replace	HVPS PCB
3	Failure	Laser unit	Replace	Laser unit
4	Failure	Main PCB	Replace	Main PCB

4.3.2.25 Hollow print



<User Check>

- Check the usage environment of the machine. Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Refer to <How to clean the drum unit> 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	Dirt	Paper dust cleaning roller of paper tray	Clean	Paper dust cleaning roller (Refer to Fig. 2-30.)
2	Failure	Fuser	Replace	Fuser
3	Failure	HVPS PCB	Replace	HVPS PCB

4.3.2.26 Print crease



<User Check>

- Check the usage environment of the machine. Using the machine in hot-humid or cold-dry conditions can cause this problem.
- Change the paper to thick paper.
- Check if paper is not damp
- Check if the thickness of the paper is properly set in the driver.
- 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>

- Check the usage environment of the machine. 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 Software Problems

4.4.1 Does not receive data

<User Check>

- Install the latest main firmware.
- Check that the USB cable or LAN cable is not damaged.
- Check the communication settings.
- Check that the correct machine is selected when using an interface switching device.
- Check the relevant section in the online User's Guide.
- When using Macintosh, check the Product ID* and update the firmware if the Product ID is wrong.
- Restore the settings at factory shipment. (Refer to the online User's Guide.)

* Follow the procedures below to verify the Product ID in Macintosh.

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

No.	Cause		Remedy	
1	Failure	Main PCB	Replace	Main PCB

■ Product ID (Hexadecimal)

MFC-EX670: 0482

MFC-L9610CDN: 047F

MFC-L9630CDN: 0480

MFC-L9635CDN: 0480

MFC-L9670CDN: 046C

4.5 Troubleshooting for Network Problems

4.5.1 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	Failure	NC-9000W	Replace	NC-9000W
2	Failure	Main PCB	Replace	Main PCB

4.5.2 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	Failure	NC-9000W	Replace	NC-9000W
2	Failure	Main PCB	Replace	Main PCB

4.6 Troubleshooting for Control Panel

4.6.1 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	Connection failure	Touch panel FFC	Reconnect	Touch panel FFC
3	Connection failure	7 PNL main FFC harness	Reconnect	7 PNL main FFC harness
4	Connection failure	LVPS harness2	Reconnect	LVPS harness2
5	Defect	AC cord	Replace	AC cord
6	Failure	LCD	Replace	LCD
7	Failure	Touch panel	Replace	Touch panel
8	Failure	Panel PCB	Replace	Panel PCB
9	Failure	LVPS PCB	Replace	LVPS PCB
10	Failure	Main PCB	Replace	Main PCB

4.6.2 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	7 PNL main FFC harness	Reconnect	7 PNL main FFC harness
2	Defect	7 PNL main FFC harness	Replace	7 PNL main FFC harness
3	Failure	Panel PCB	Replace	Panel PCB
4	Failure	Main PCB	Replace	Main PCB

4.6.3 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	Connection failure	7 PNL main FFC harness	Reconnect	7 PNL main FFC harness
3	Failure	Touch panel	Replace	Touch panel
4	Failure	Panel PCB	Replace	Panel PCB
5	Failure	Main PCB	Replace	Main PCB

4.7 Troubleshooting for Toner Cartridge and Drum Unit

4.7.1 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	Dirt	Toner cartridge sensor terminal (Toner cartridge or Drum unit)	Clean	Toner cartridge sensor terminal (Toner cartridge or Drum unit) (Refer to Fig. 2-17, Fig. 2-18.)
2	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
3	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
4	Failure	Toner cartridge	Replace	Toner cartridge
5	Failure	Drum unit	Replace	Drum unit
6	Failure	Main PCB	Replace	Main PCB

4.7.2 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	Dirt	Toner cartridge sensor terminal (Toner cartridge or Drum unit)	Clean	Toner cartridge sensor terminal (Toner cartridge or Drum unit) (Refer to Fig. 2-17, Fig. 2-18.)
2	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
3	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
4	Failure	Toner cartridge	Replace	Toner cartridge
5	Failure	Drum unit	Replace	Drum unit
6	Failure	Main PCB	Replace	Main PCB

4.7.3 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	Dirt	Electrodes (Machine, Drum unit)	Clean	Electrodes (Machine, Drum unit) (Refer to Fig. 2-24, Fig. 2-23.)
2	Dirt	Electrodes (HVPS PCB)	Clean	Electrodes (HVPS PCB) (Refer to Fig. 2-25.)
3	Failure	HVPS PCB	Replace	HVPS PCB
4	Failure	Main PCB	Replace	Main PCB

4.7.4 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	Dirt	Drum unit sensor terminal (Machine or Drum)	Clean	Drum unit sensor terminal (Machine or Drum) (Refer to Fig. 2-19, Fig. 2-20.)
2	Connection failure	Drum unit sensor terminal (Machine)	Reconnect	Drum unit sensor terminal (Machine)
3	Failure	Drum unit	Replace	Drum unit
4	Failure	Main PCB	Replace	Main PCB

4.8 Troubleshooting for PCB Problems

4.8.1 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

4.9 Troubleshooting for ADF Document Feeding Problems

4.9.1 No document is fed

<User Check>

- Load the document all the way.
- Close the ADF cover.
- Reduce the amount of document (ADF) to 100 sheets or less.
- Check the document thickness (ADF) (Spec.: 45 to 120 g/m² (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	Connection failure	ADF motor harness ASSY	Reconnect	ADF motor harness ASSY
2	Connection failure	Flap tray home sensor harness	Reconnect	Flap tray home sensor harness
3	Connection failure	Flap tray motor FFC	Reconnect	Flap tray motor FFC
4	Connection failure	Flap tray PF sensor harness	Reconnect	Flap tray PF sensor harness
5	Connection failure	Flap tray relay harness	Reconnect	Flap tray relay harness
6	Defect	Flap tray motor FFC	Replace	Flap tray motor FFC
7	Failure	Flap tray relay PCB	Replace	ADF unit
8	Failure	Separation holder ASSY	Replace	Separation holder ASSY
9	Failure	Separation roller	Replace	Separation roller
10	Failure	ADF cover	Replace	ADF cover
11	Failure	Flap tray motor	Replace	ADF unit
12	Failure	ADF unit	Replace	ADF unit
13	Failure	Main PCB	Replace	Main PCB

4.9.2 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/m² (12 to 32 lb)).
- Match the document guide with the document size.

No.	Cause		Remedy	
1	Failure	Separation holder ASSY	Replace	Separation holder ASSY
2	Failure	Separation roller	Replace	Separation roller

4.9.3 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/m² (12 to 32 lb)).
- Match the document guide with the document size.

No.	Cause		Remedy	
1	Foreign object	Document feeding path	Remove the foreign object	Document feeding path
2	Failure	ADF cover	Replace	ADF cover
3	Failure	LF1 roller ASSY	Replace	LF1 roller ASSY
4	Failure	LF2 roller ASSY	Replace	LF2 roller ASSY
5	Failure	ADF unit	Replace	ADF unit
6	Failure	Main PCB	Replace	Main PCB

4.9.4 Document becomes wrinkled

<User Check>

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

No.	Cause		Remedy	
1	Failure	Separation holder ASSY	Replace	Separation holder ASSY
2	Failure	Separation roller	Replace	Separation roller
3	Failure	LF1 roller ASSY	Replace	LF1 roller ASSY
4	Failure	LF2 roller ASSY	Replace	LF2 roller ASSY

4.9.5 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 unit	Replace	ADF unit
2	Failure	Main PCB	Replace	Main PCB

4.10 Troubleshooting for Scanning Image Defects

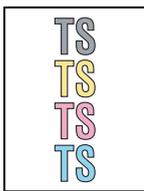
4.10.1 Image defect examples



Fig. 2-39

4.10.2 Troubleshooting according to scanning image defects

4.10.2.1 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
3	Failure	2nd side CIS unit	Replace	2nd side CIS unit
4	Failure	ADF unit	Replace	ADF unit
5	Failure	Main PCB	Replace	Main PCB

4.10.2.2 Faulty registration



No.	Cause		Remedy	
1	Deviation	Scanning start position	Execute	“Fine adjustment of scan start position” (Function Code 54)

4.10.2.3 Dark



<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
3	Failure	2nd side CIS unit	Replace	2nd side CIS unit
4	Failure	ADF unit	Replace	ADF unit
5	Failure	Main PCB	Replace	Main PCB

4.10.2.4 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	Connection failure	1st side CIS FFC	Reconnect	1st side CIS FFC
3	Connection failure	2nd side CIS FFC	Reconnect	2nd side CIS FFC
4	Failure	1st side CIS unit	Replace	1st side CIS unit
5	Failure	2nd side CIS unit	Replace	2nd side CIS unit
6	Failure	Main PCB	Replace	Main PCB

4.10.2.5 All black

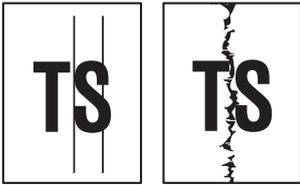


<User Check>

- 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	Connection failure	1st side CIS FFC	Reconnect	1st side CIS FFC
3	Connection failure	2nd side CIS FFC	Reconnect	2nd side CIS FFC
4	Failure	1st side CIS unit	Replace	1st side CIS unit
5	Failure	2nd side CIS unit	Replace	2nd side CIS unit
6	Failure	Main PCB	Replace	Main PCB

4.10.2.6 Vertical streaks



<User Check>

- Clean the glass surface of the ADF or FB.

No.	Cause		Remedy	
1	Failure	1st side CIS unit	Replace	1st side CIS unit
2	Failure	2nd side CIS unit	Replace	2nd side CIS unit
3	Failure	Glass surface of FB	Replace	Document scanner unit
4	Failure	ADF unit	Replace	ADF unit

4.10.2.7 White streaks



<User Check>

- Clean the glass surface of the ADF or FB.

No.	Cause		Remedy	
1	Failure	1st side CIS unit	Replace	1st side CIS unit
2	Failure	2nd side CIS unit	Replace	2nd side CIS unit
3	Defect	Glass surface of FB	Replace	Document scanner unit
4	Failure	ADF unit	Replace	ADF unit

4.10.2.8 Partially shaded

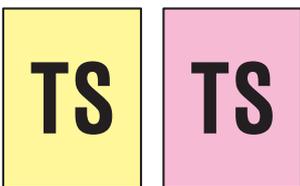


<User Check>

- Clean the glass surface of the ADF or FB.

No.	Cause		Remedy	
1	Defect	Glass surface of FB	Replace	Document scanner unit

4.10.2.9 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
3	Failure	2nd side CIS unit	Replace	2nd side CIS unit
4	Failure	Main PCB	Replace	Main PCB

4.11 Troubleshooting for Fax Problems

4.11.1 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	Defect	Modem FFC	Replace	Modem FFC
3	Failure	Modem PCB	Replace	Modem PCB
4	Failure	Main PCB	Replace	Main PCB

4.11.2 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	Defect	Modem FFC	Replace	Modem FFC
3	Failure	Modem PCB	Replace	Modem PCB
4	Failure	Main PCB	Replace	Main PCB

4.11.3 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	Defect	Modem FFC	Replace	Modem FFC
3	Failure	Modem PCB	Replace	Modem PCB
4	Failure	Main PCB	Replace	Main PCB

4.11.4 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

4.12 Troubleshooting for Other Problems

4.12.1 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 PCB harness	Reconnect	USB host PCB harness
2	Failure	USB host PCB	Replace	USB host PCB
3	Failure	Main PCB	Replace	Main PCB

4.12.2 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>

(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 [].

(4) Release the [].

(5) Press the [] several times.

(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.

4.12.3 "Paper Low" message does not disappear (T1)

<User Check>

- Refill the paper in the appropriate paper tray.

No.	Cause		Remedy	
1	Failure	T1 PF/PE sensor	Replace	T1 PF/PE sensor PCB
2	Failure	Main PCB	Replace	Main PCB

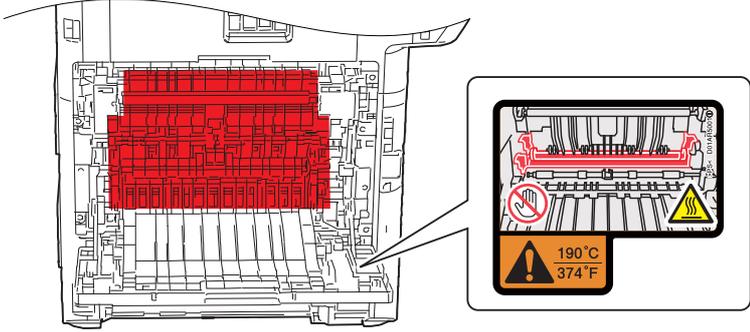
CHAPTER 3 DISASSEMBLY AND ASSEMBLY

1. SAFETY PRECAUTIONS

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

WARNING

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



The diagram shows a top-down view of a machine's internal assembly. A large rectangular area in the center is shaded in red, indicating a hot zone. An inset diagram on the right shows a close-up of a component with a warning symbol and temperature readings: 190°C and 374°F.

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

2. SCREW TORQUE LIST

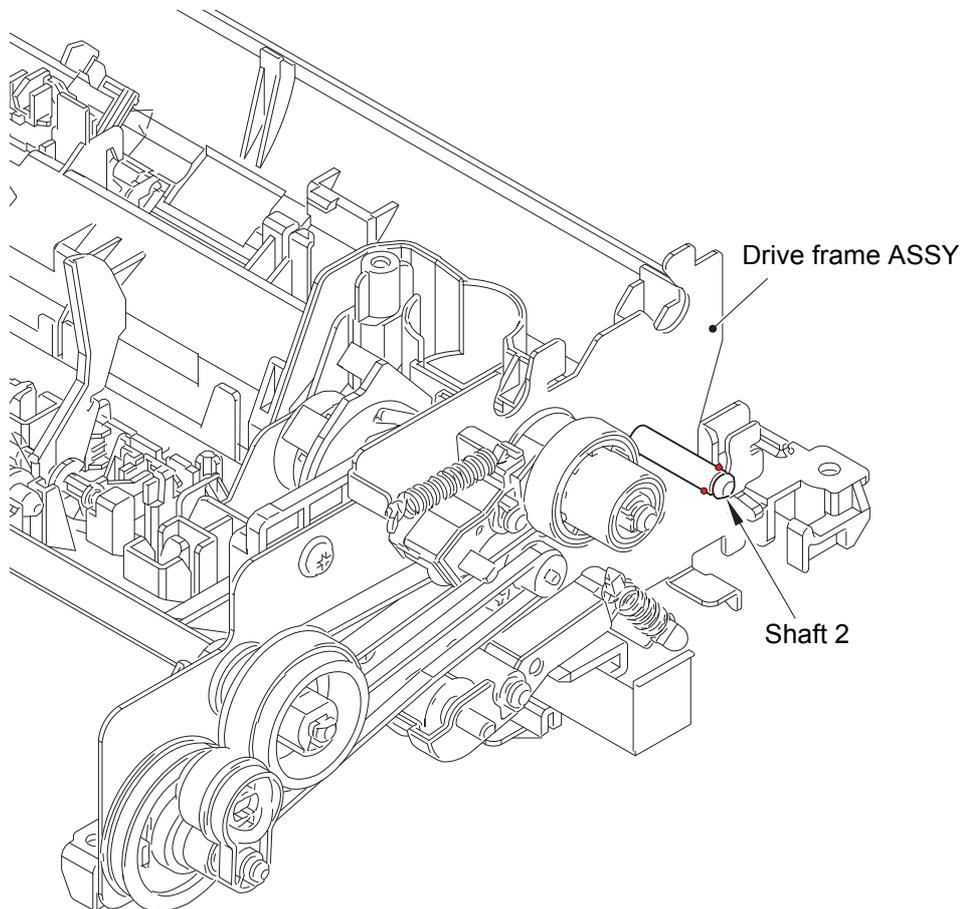
Location of screw	Screw type	Q' ty	Tightening torque N·m (kgf·cm)
Fuser cover L	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Fuser cover R	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Fuser	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Side cover L	Taptite bind B M4x12	3	0.8±0.1 (8±1)
	Taptite bind B M3x8	1	0.5±0.1 (5±1)
	Taptite cup B 3x8	1	0.5±0.1 (5±1)
Side cover R	Taptite bind B M4x12	4	0.8±0.1 (8±1)
	Taptite bind B M3x8	1	0.5±0.1 (5±1)
Side cover R top	Taptite bind B M4x12	3	0.8±0.1 (8±1)
Front cover ASSY	Taptite bind B M4x12	2	0.8±0.1 (8±1)
F cover arm L	Taptite pan B M4x14	1	0.8±0.1 (8±1)
F cover arm R	Taptite pan B M4x14	1	0.8±0.1 (8±1)
FG harness (OR)	Screw cup M3x8 SR	1	0.5±0.05 (5±0.5)
Panel unit	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Shield cover	Taptite cup S M3x6 SR	4	0.7±0.05 (7±0.5)
Shield plate FG harness (OR)	Taptite cup B M3x10	5	0.5±0.1 (5±1)
		1	
Side cover L top	Taptite bind B M4x12	4	0.8±0.1 (8±1)
Back cover upper	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Earth plate R	Taptite pan B 3x10	2	0.5±0.1 (5±1)
Reinforce plate R1	Taptite bind B M4x12	4	0.8±0.1 (8±1)
FG harness (RD)	Screw cup M3x8 SR	1	0.5±0.05 (5±0.5)
FG harness (BK)	Screw cup M3x8 SR	1	0.5±0.05 (5±0.5)
Document scanner unit	Taptite bind B M4x12	5	0.8±0.1 (8±1)
FFC holder DS	Taptite cup B M3x10	2	0.5±0.1 (5±1)
ADF unit	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Hinge ASSY (x 2)	Taptite bind B M4x12	6	0.8±0.1 (8±1)
ADF front cover base	Taptite cup B M3x10	4	0.5±0.1 (5±1)
Separation holder ASSY	Taptite cup B M3x10	2	0.5±0.1 (5±1)
Upper document chute ASSY	Taptite cup B M3x10	7	0.5±0.1 (5±1)
FG harness (ADF motor harness ASSY)	Taptite cup S M3x6 SR	1	0.8±0.1 (8±1)
Drive frame ASSY	Taptite cup B M3x10	4	0.5±0.1 (5±1)
Scanner top cover	Taptite cup B M3x10	8	0.5±0.1 (5±1)
Panel base cover	Taptite bind B M4x12	3	0.8±0.1 (8±1)
Dress cover B	Taptite bind B M4x12	1	0.8±0.1 (8±1)
USB host FG harness	Screw cup M3x8 SR	1	0.5±0.05 (5±0.5)
FG harness modem-main	Screw cup M3x8 SR	1	0.45±0.05 (4.5±0.5)

Location of screw	Screw type	Q' ty	Tightening torque N·m (kgf·cm)
FG harness modem-HVPS	Taptite pan B 3x10	1	0.5±0.1 (5±1)
Joint cover ASSY	Taptite bind B M4x12	10	0.8±0.1 (8±1)
Dress plate	Taptite bind B M4x12	2	0.8±0.1 (8±1)
NFC cover ASSY	Taptite bind B M4x12	3	0.8±0.1 (8±1)
USB host PCB	Taptite bind B M4x12	1	0.8±0.1 (8±1)
USB host FG harness			
Modem	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Modem cover	Screw cup M3x8 SR	1	0.45±0.05 (4.5±0.5)
Modem PCB	Screw cup M3x8 SR	3	0.45±0.05 (4.5±0.5)
Interface plate	Screw cup M3x8 SR	2	0.8±0.1 (8±1)
Main PCB	Screw cup M3x8 SR	4	0.5±0.05 (5±0.5)
HVPS PCB	Taptite pan B 3x10	1	0.5±0.1 (5±1)
Scanner cover plate	Taptite bind B M4x12	6	0.8±0.1 (8±1)
	Taptite cup S M3x6 SR	4	0.8±0.1 (8±1)
Scanner holder (x 4)	Taptite cup S M3x6 SR	5	0.8±0.1 (8±1)
Sector open detect	Taptite cup B 3x8	1	0.8±0.1 (8±1)
Front cover sensor unit	Taptite bind B M4x12	1	0.3±0.05 (3±0.5)
Engine relay PCB	Taptite bind B M4x12	1	0.8±0.1 (8±1)
PF drive unit	Taptite bind B M4x12	5	0.8±0.1 (8±1)
DX eject feed ASSY	Taptite bind B M4x12	2	0.8±0.1 (8±1)
DX sensor cover	Taptite bind B M4x12	1	0.8±0.1 (8±1)
Line holder upper	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Line holder under	Taptite bind B M4x12	1	0.8±0.1 (8±1)
Main PCB support plate	Screw cup M3x8 SR	1	0.8±0.1 (8±1)
Cable rack	Screw cup M3x8 SR	1	0.8±0.1 (8±1)
	Taptite bind B M3x10	1	0.5±0.1 (5±1)
Earth plate process drive	Screw cup M3x8 SR	1	0.8±0.1 (8±1)
	Taptite cup S M3x8 SR	1	0.6±0.1 (6±1)
Process drive unit	Taptite pan (washer) B M4x12 DA	2	0.8±0.1 (8±1)
	Taptite bind B M4x12	5	0.8±0.1 (8±1)
	Taptite cup S M3x8 SR	1	0.8±0.1 (8±1)
Belt cleaning gear cover	Screw cup M3x8 SR	2	0.8±0.1 (8±1)
Drum gear cover	Screw cup M3x8 SR	5	0.8±0.1 (8±1)
Eject middle frame ASSY	Taptite bind B M4x12	2	0.8±0.1 (8±1)
Paper eject unit	Taptite bind B M4x12	3	0.8±0.1 (8±1)
	Screw pan (S/P washer) M3x10	1	0.5±0.1 (5±1)
Eject duct cover	Taptite bind B M4x12	1	0.8±0.1 (8±1)
Middle DX ASSY	Taptite bind B M4x12	4	0.8±0.1 (8±1)
Ground wire	Screw pan M4x8	1	0.5±0.1 (5±1)
LVPS PCB	Screw cup M3x8 SR	2	0.6±0.1 (6±1)
	Taptite bind B M4x12	2	0.8±0.1 (8±1)

Location of screw	Screw type	Q' ty	Tightening torque N·m (kgf·cm)
PF unit	Taptite bind B M4x12	2	0.8±0.1 (8±1)
MP solenoid	Taptite bind B M3x10	1	0.5±0.1 (5±1)
MP gear cover	Taptite bind B M3x10	2	0.5±0.1 (5±1)
REG front/rear sensor holder ASSY	Taptite bind B M3x10	2	0.5±0.1 (5±1)
MP gear frame	Taptite bind B M3x10	1	0.5±0.1 (5±1)
PF ASSY	Taptite cup B M3x10	4	0.5±0.1 (5±1)
MP upper ASSY	Taptite bind B M3x8	4	0.65±0.1 (6.5±1)

3. LUBRICATION

The kind of the lubricating oil (Maker name)	Lubrication point	Quantity of lubrication
NIPPECO PERMALUB BAN-5	Shaft 2 of the Drive frame ASSY	1.5 to 2.0 mm dia. ball x 2

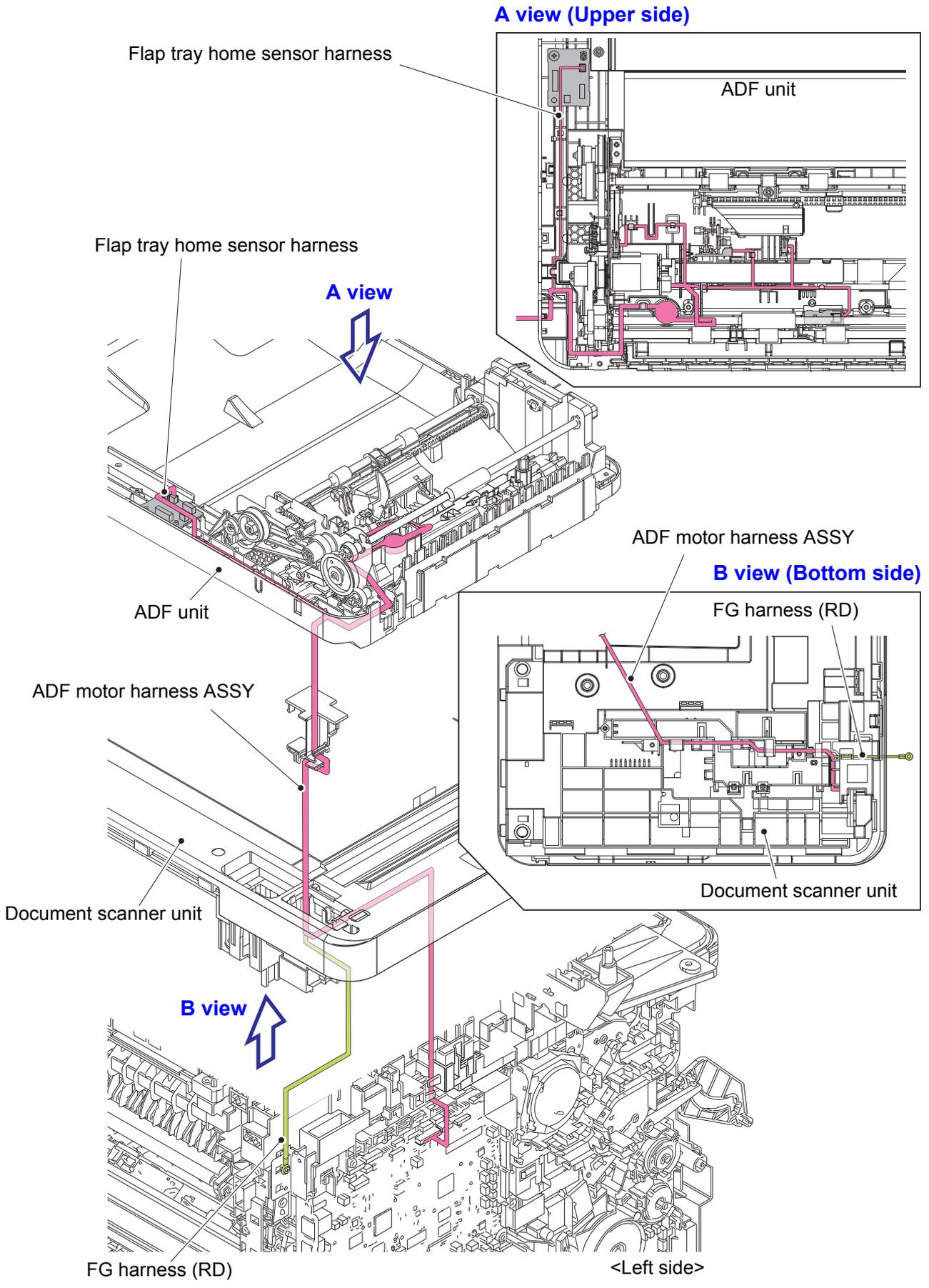


4. OVERVIEW OF GEARS

There are no gears to be replaced.

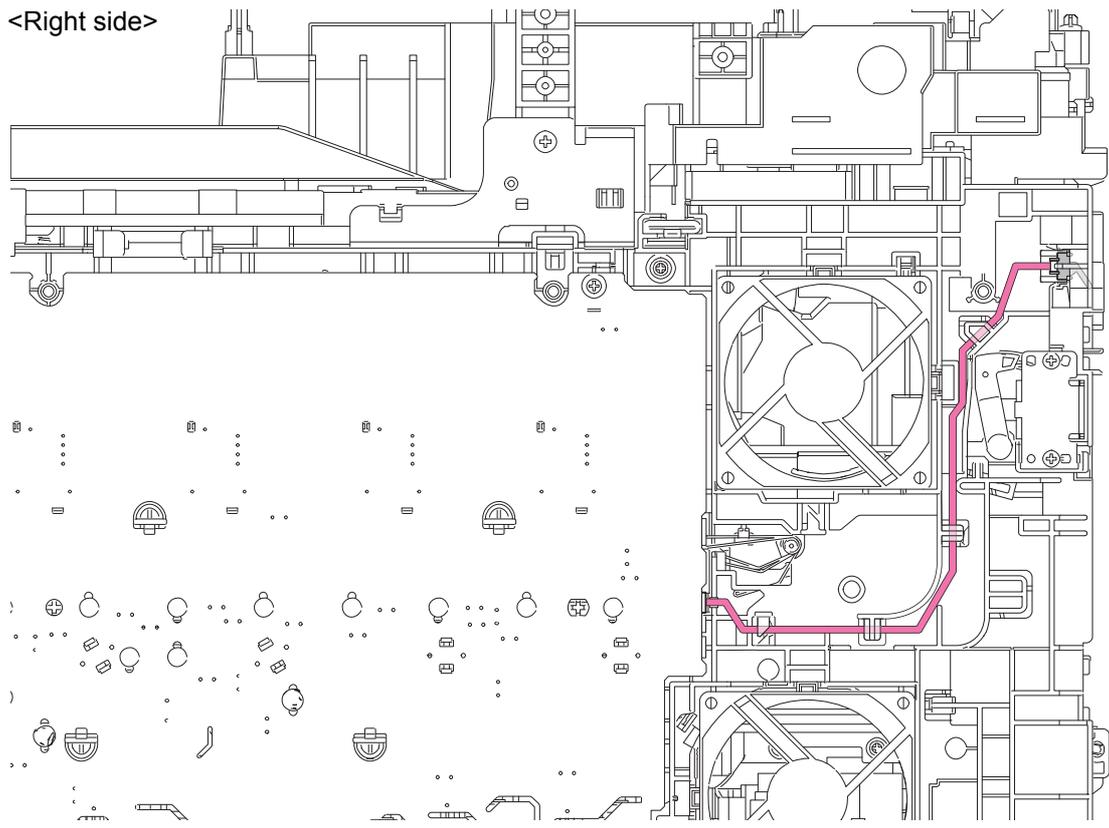
5. HARNESS ROUTING

1 ADF motor harness ASSY



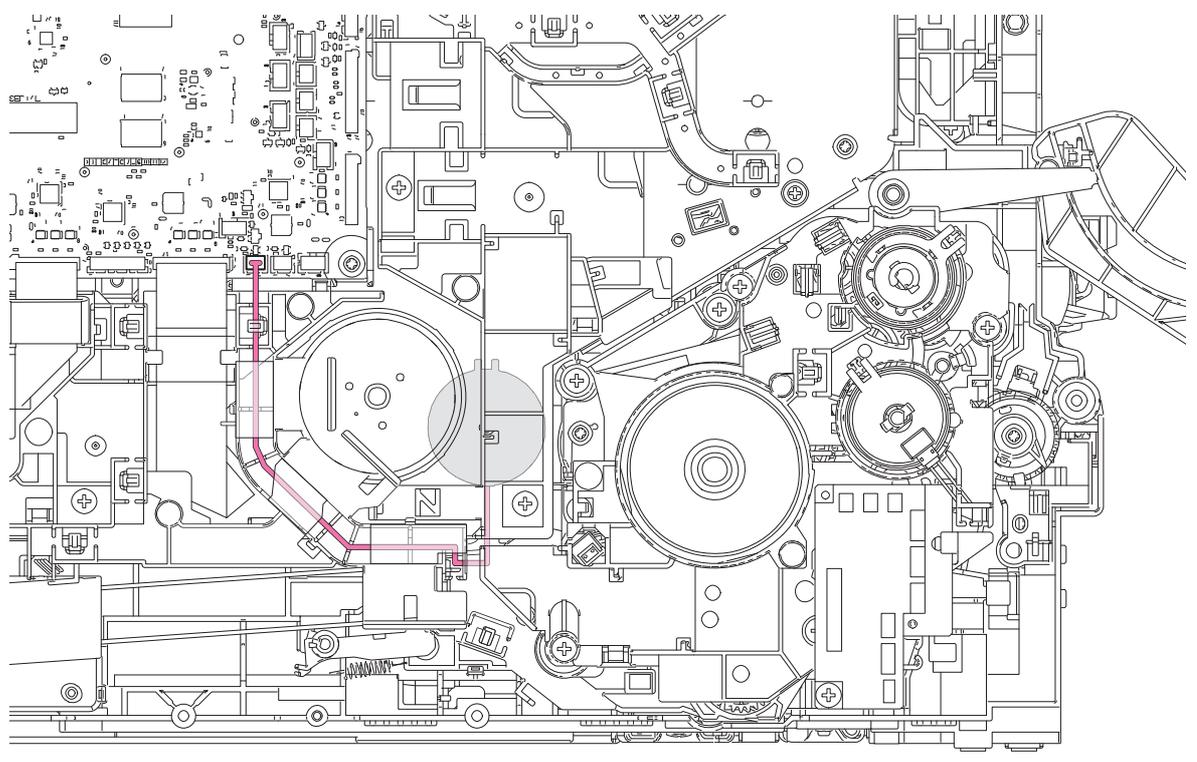
2 Back cover sensor harness

<Right side>



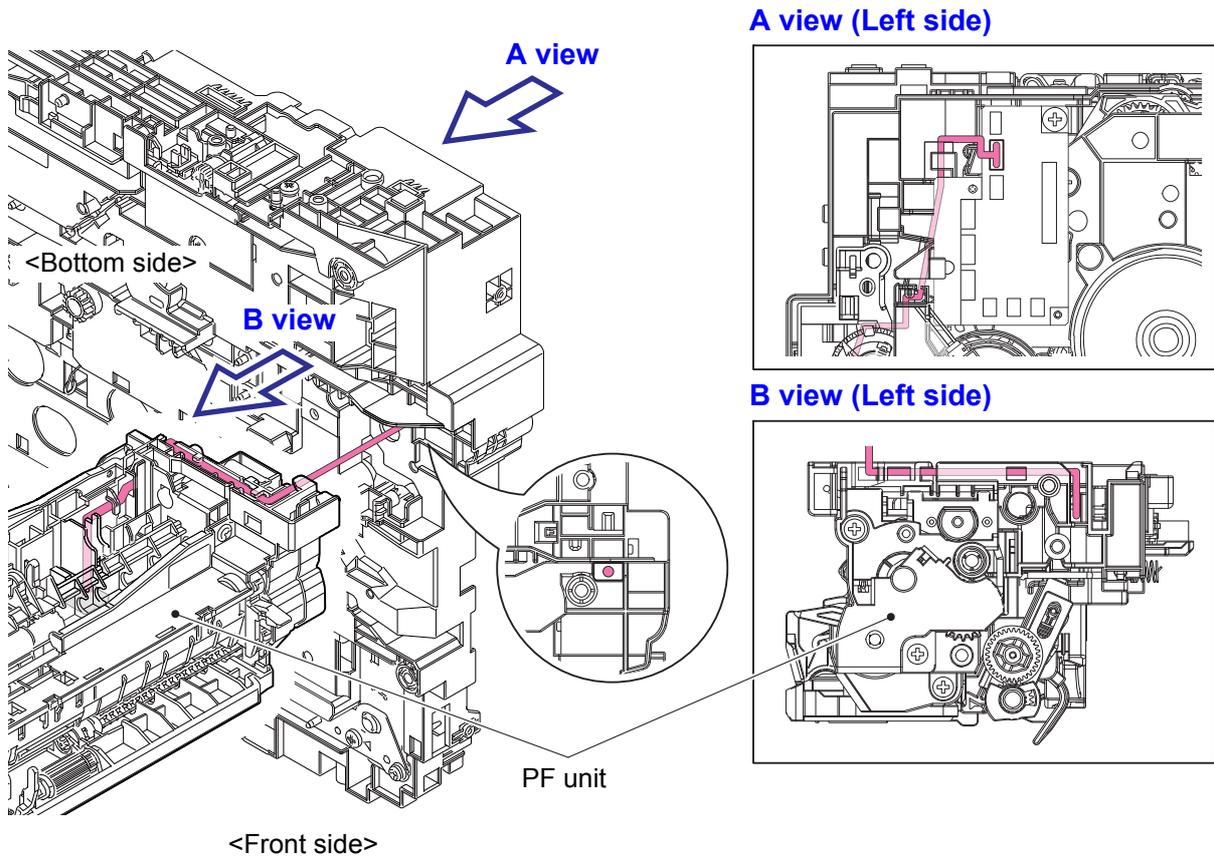
3 Belt cleaning clutch harness

<Left side>



4

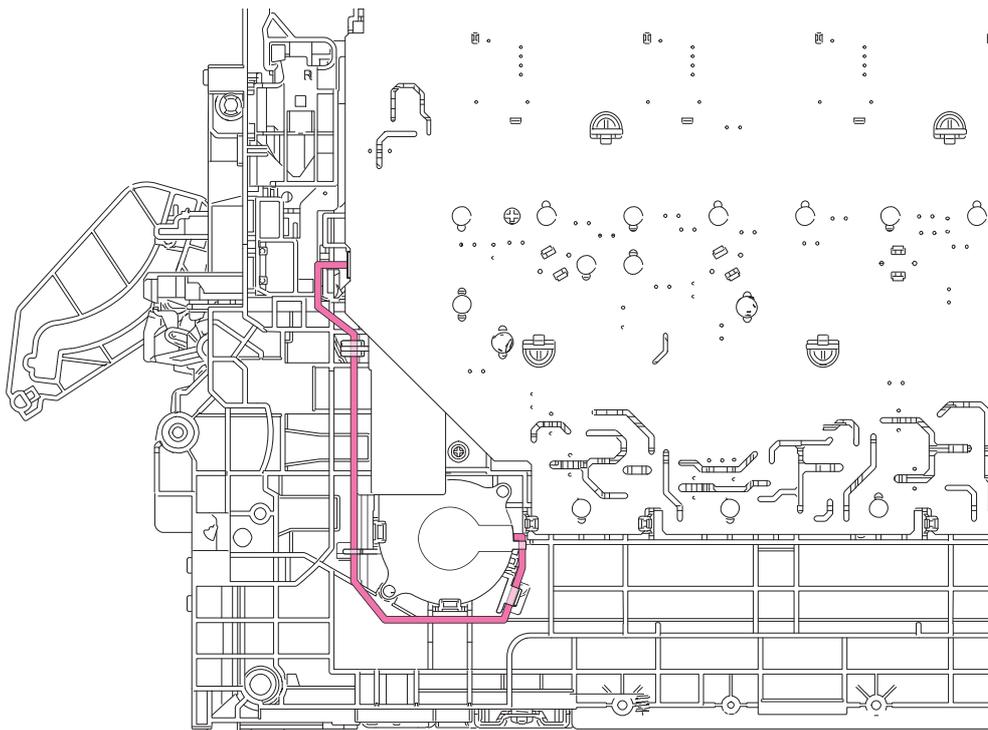
Belt IC harness



5

Blower harness

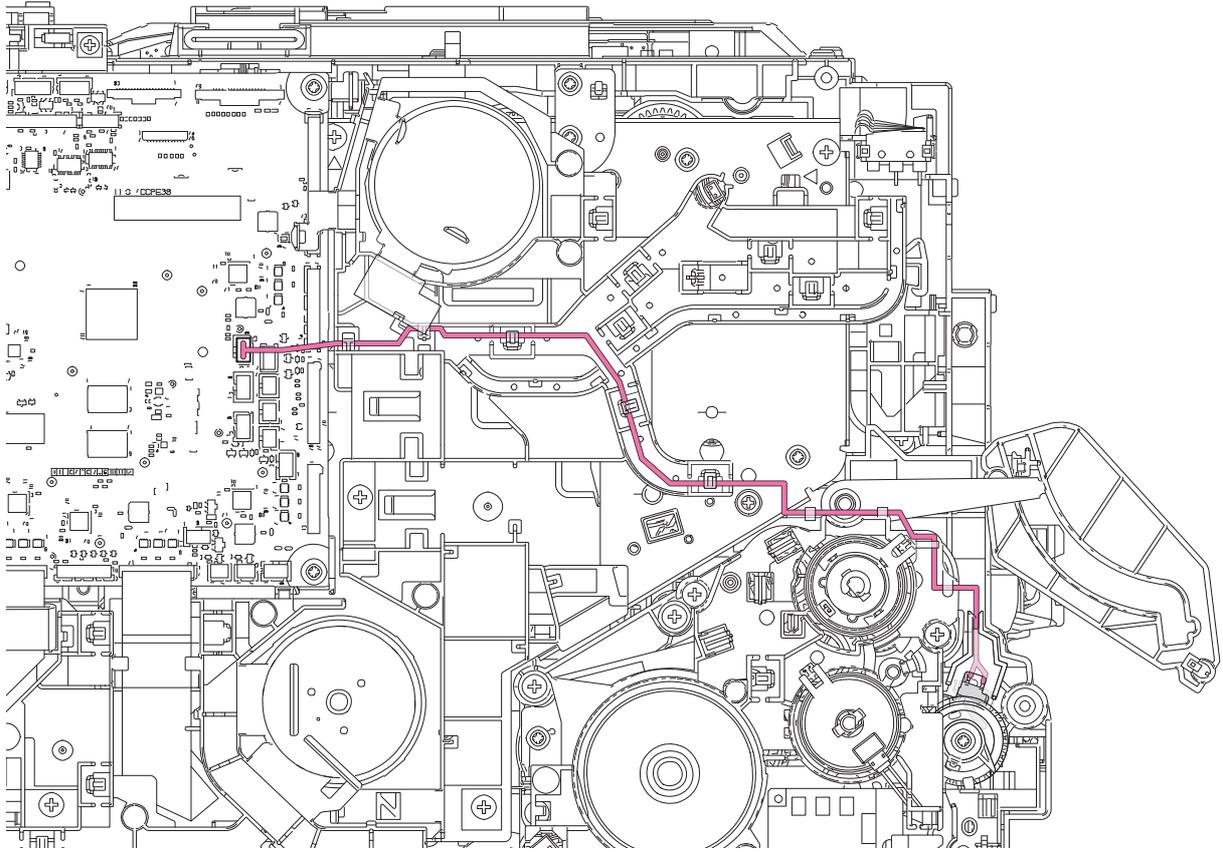
<Right side>



6

Cover open trace sensor harness

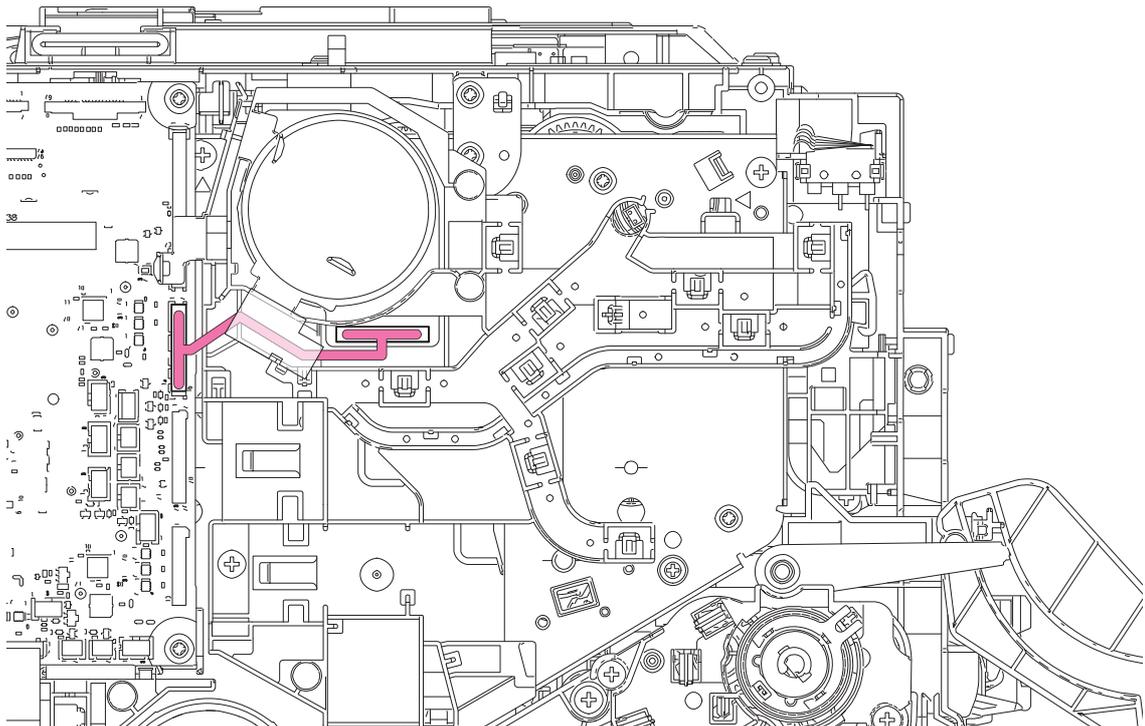
<Left side>



7

DEV motor harness

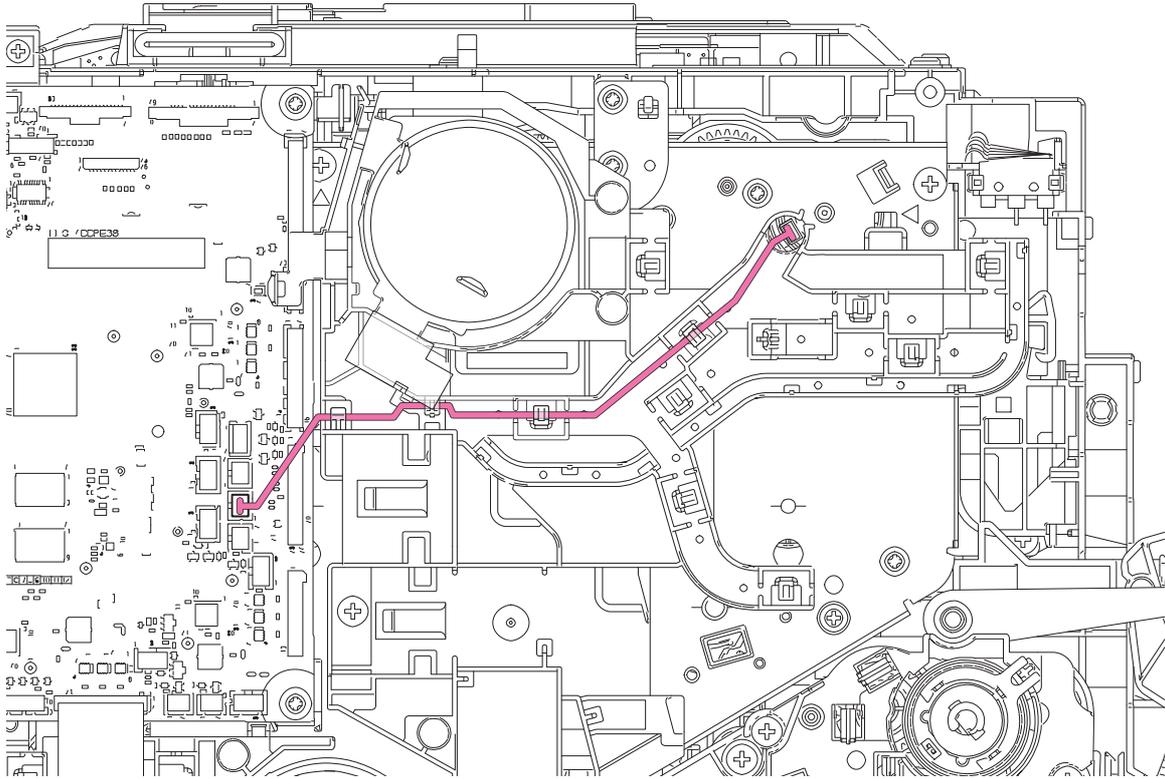
<Left side>



8

DEV release clutch CMY harness

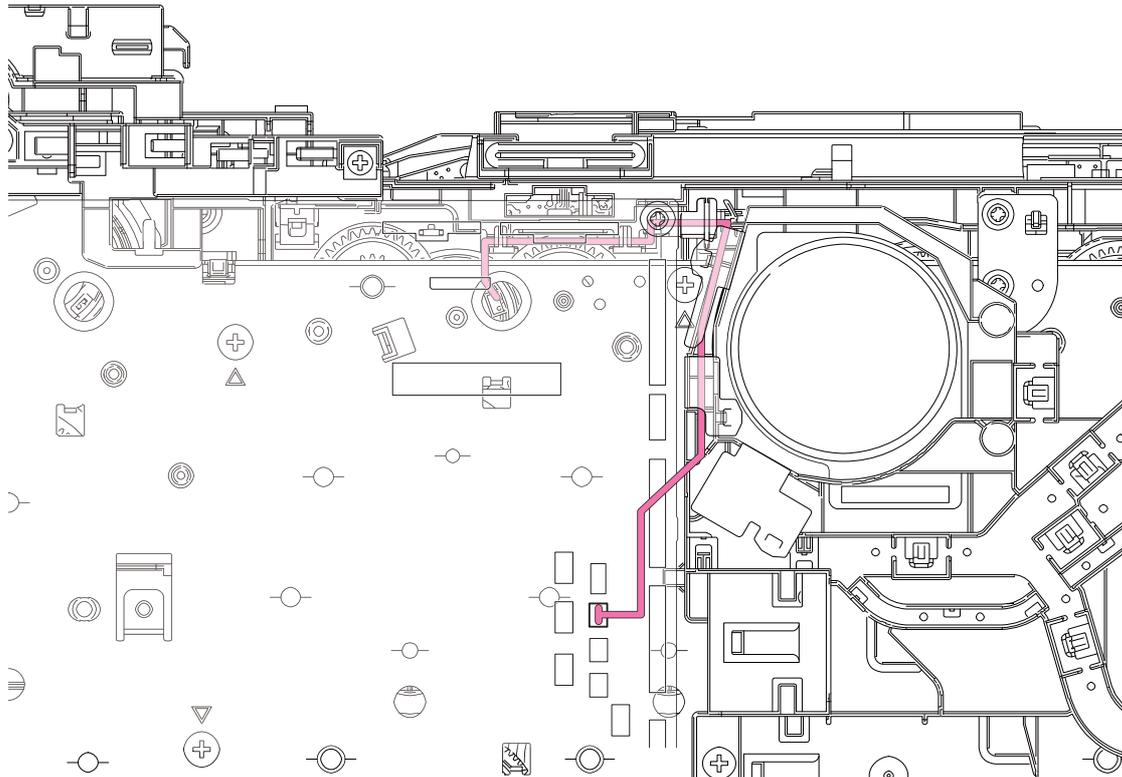
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9

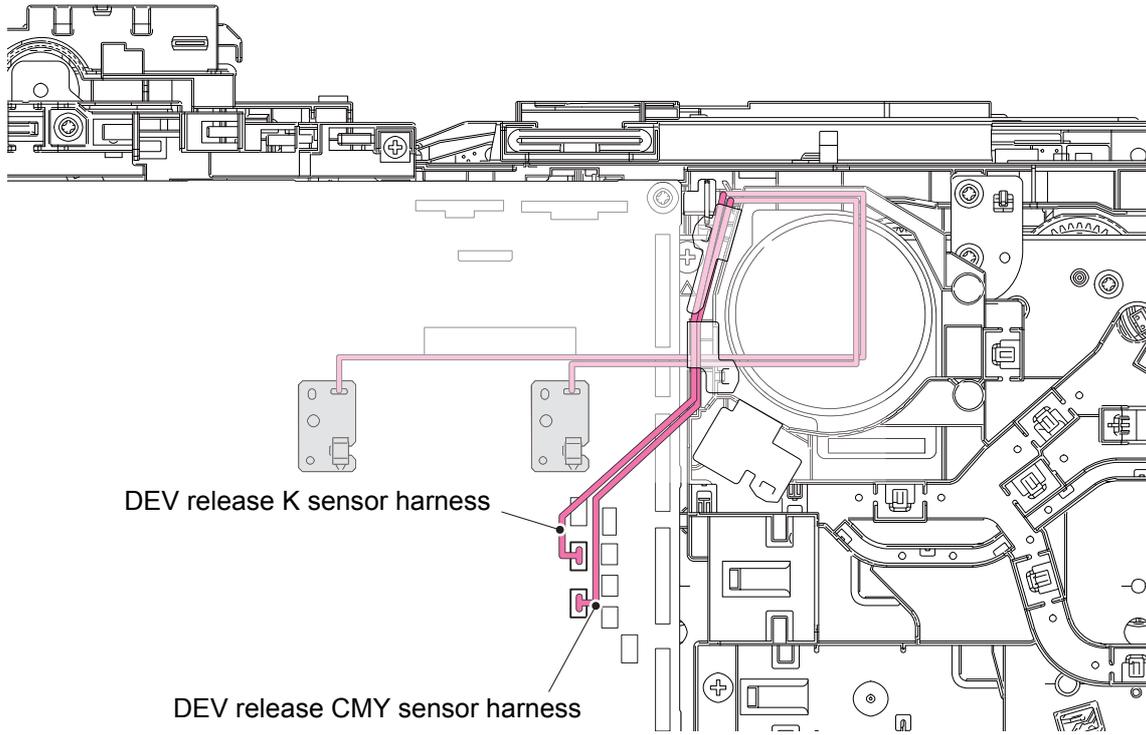
DEV release clutch K harness

<Left side>



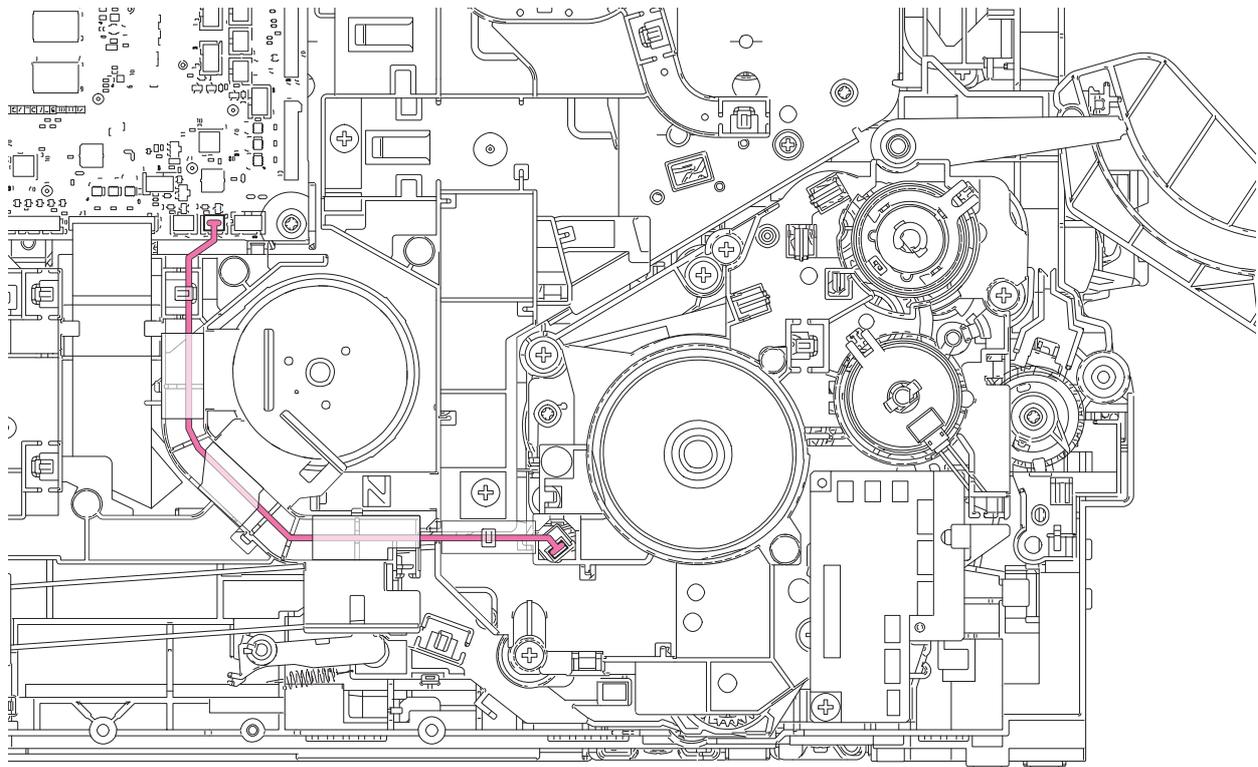
10 DEV release CMY sensor harness, DEV release K sensor harness

<Left side>



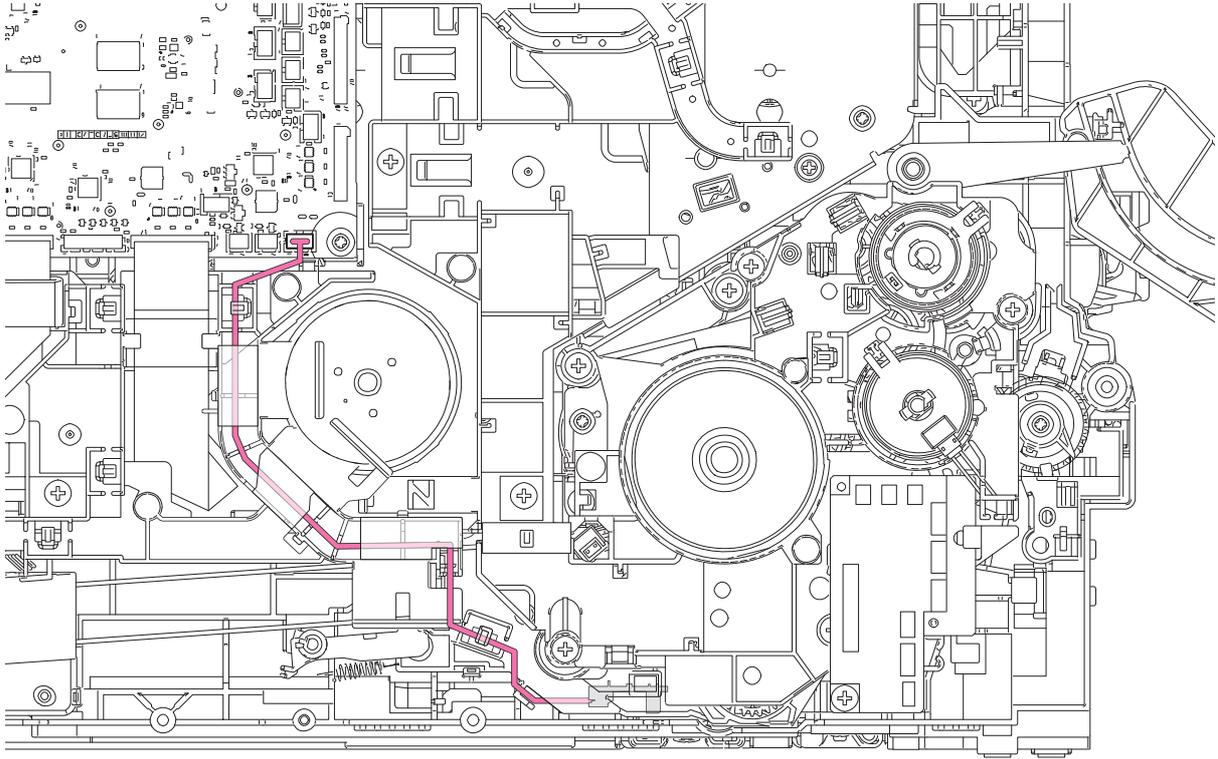
11 DX clutch harness

<Left side>



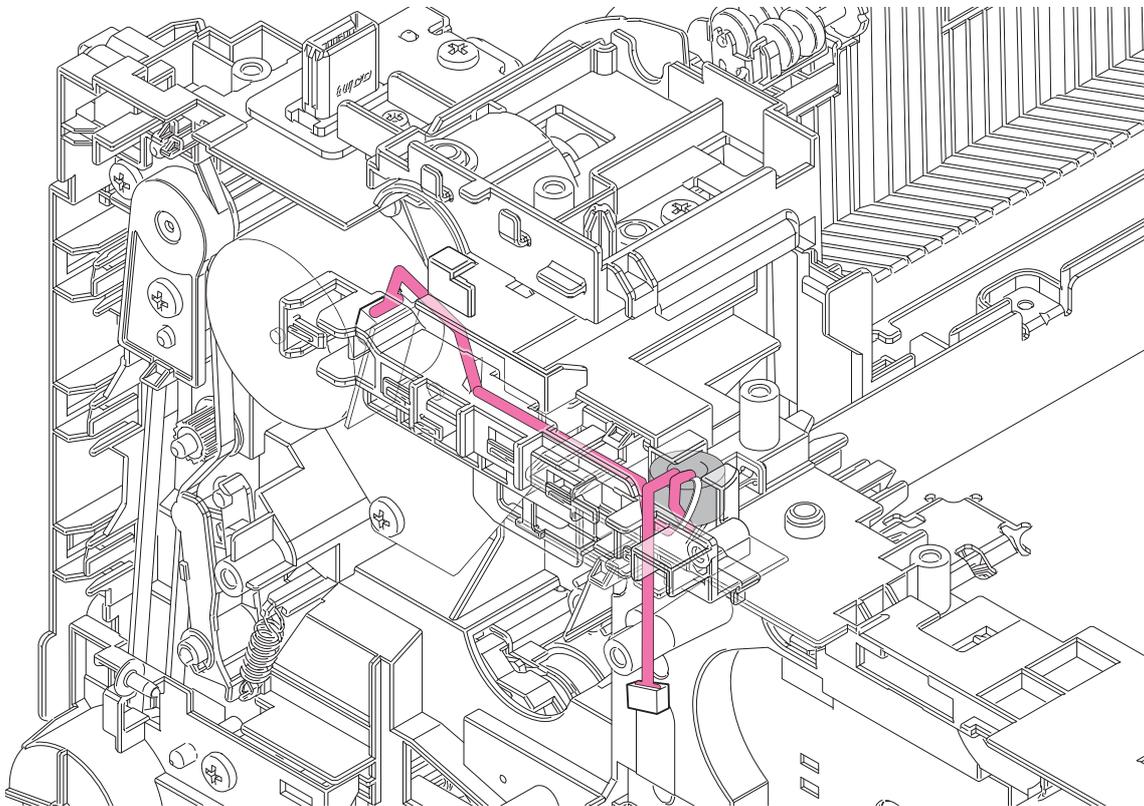
12 DX sensor harness

<Left side>

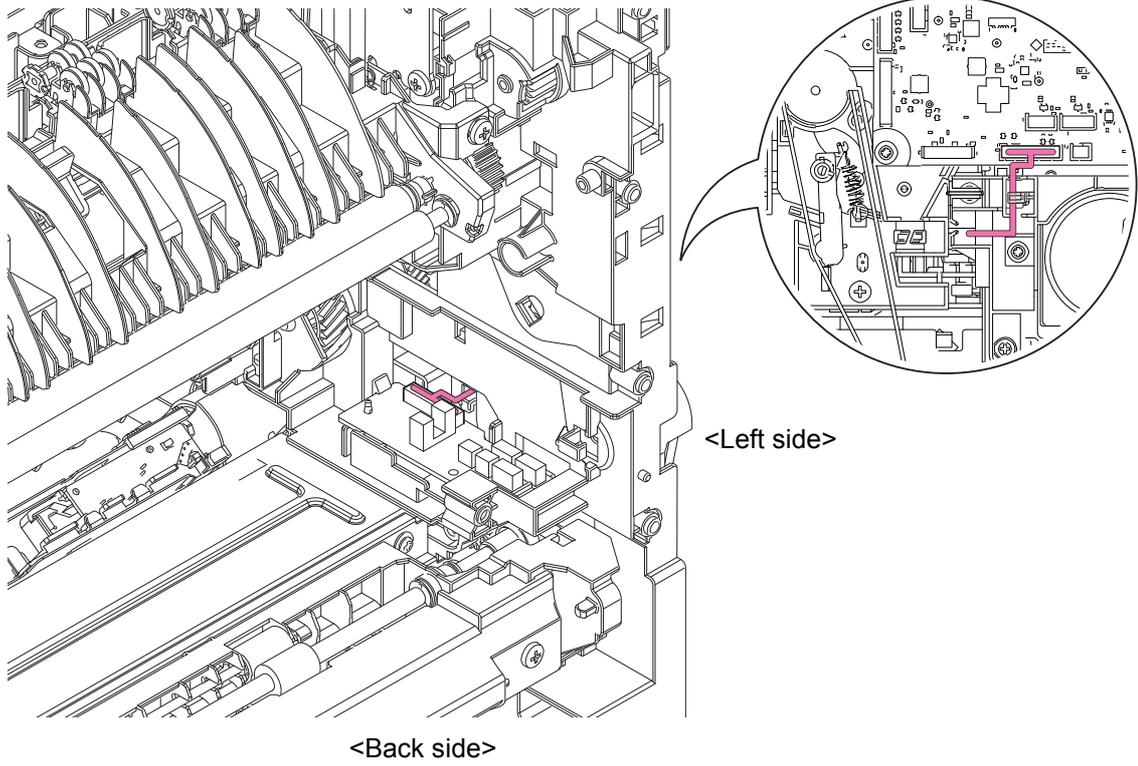


13 Eject motor harness

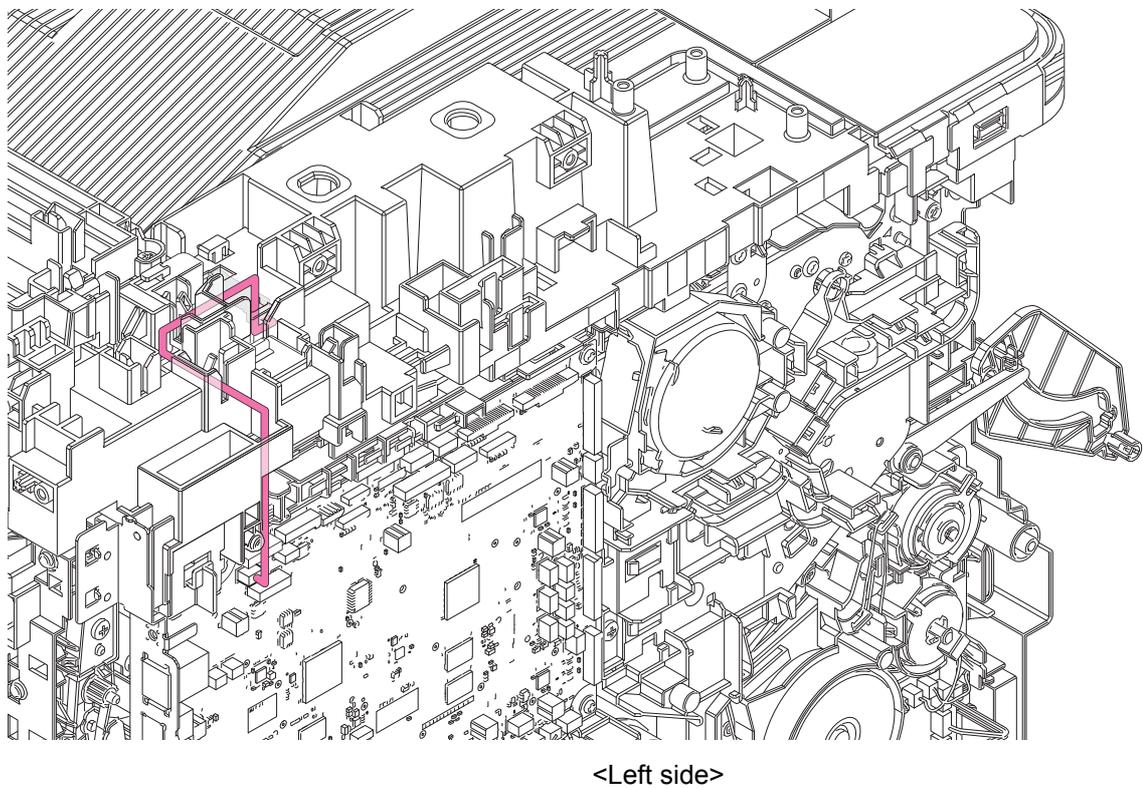
<Left side>



14 Eject relay PCB harness

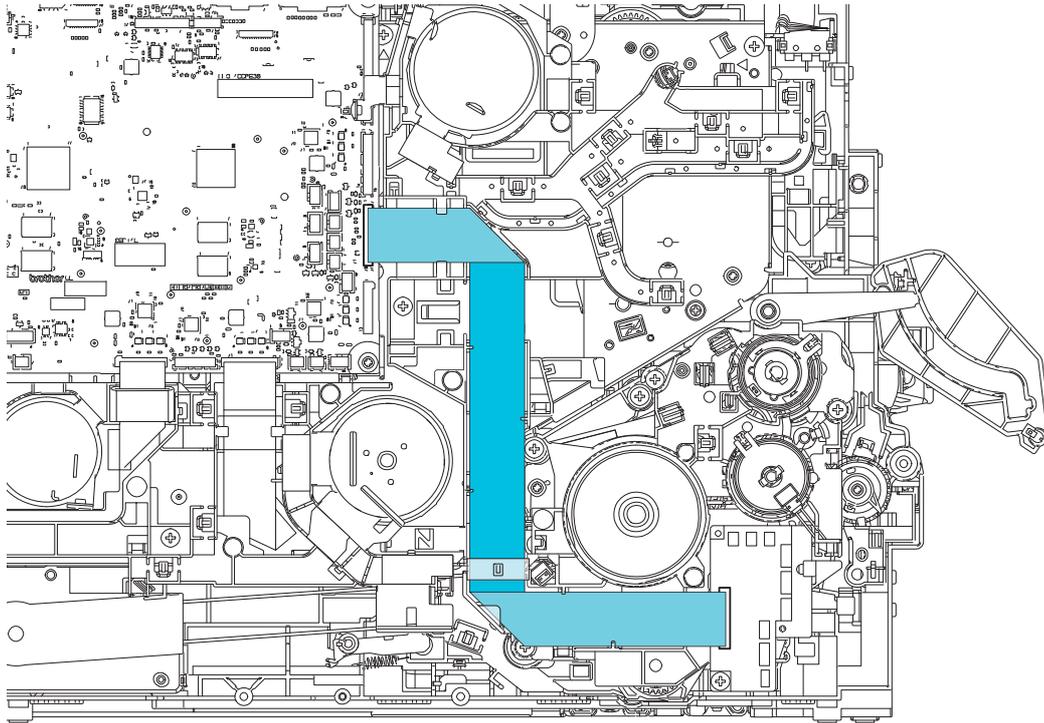


15 Eject stack sensor harness



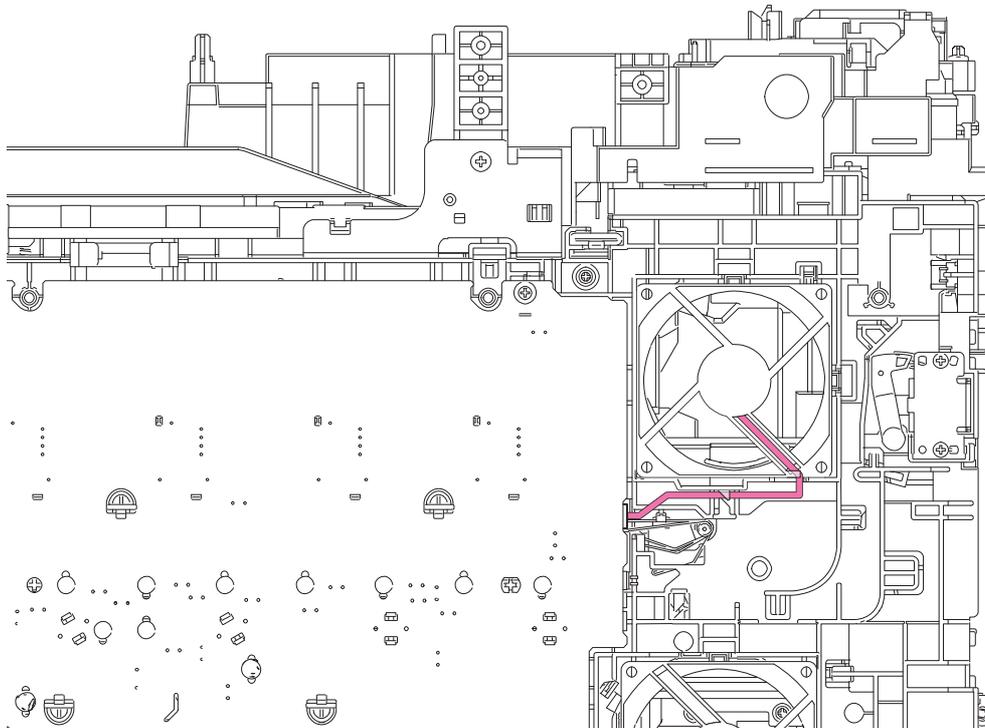
16 Engine relay FFC

<Left side>

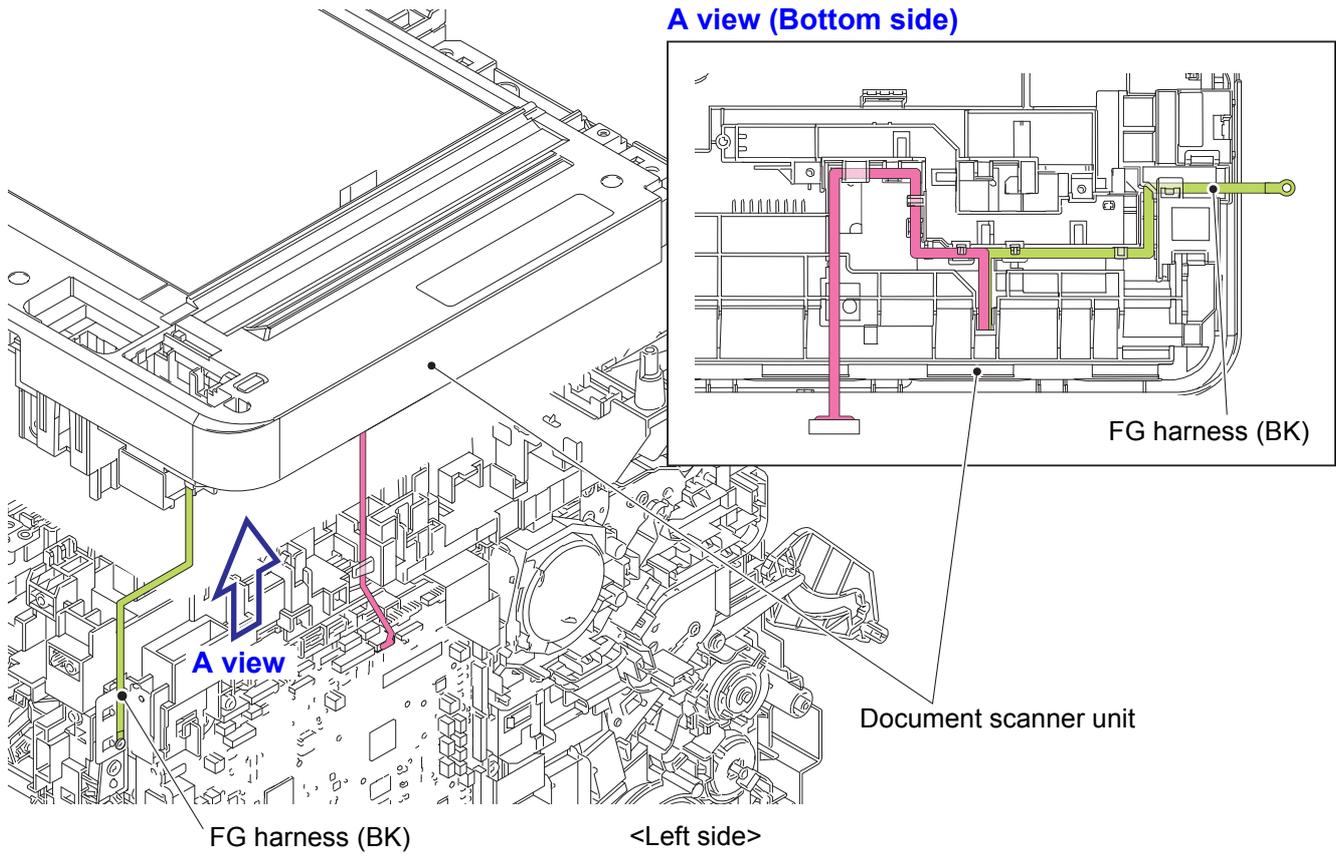


17 Fan motor 80 harness

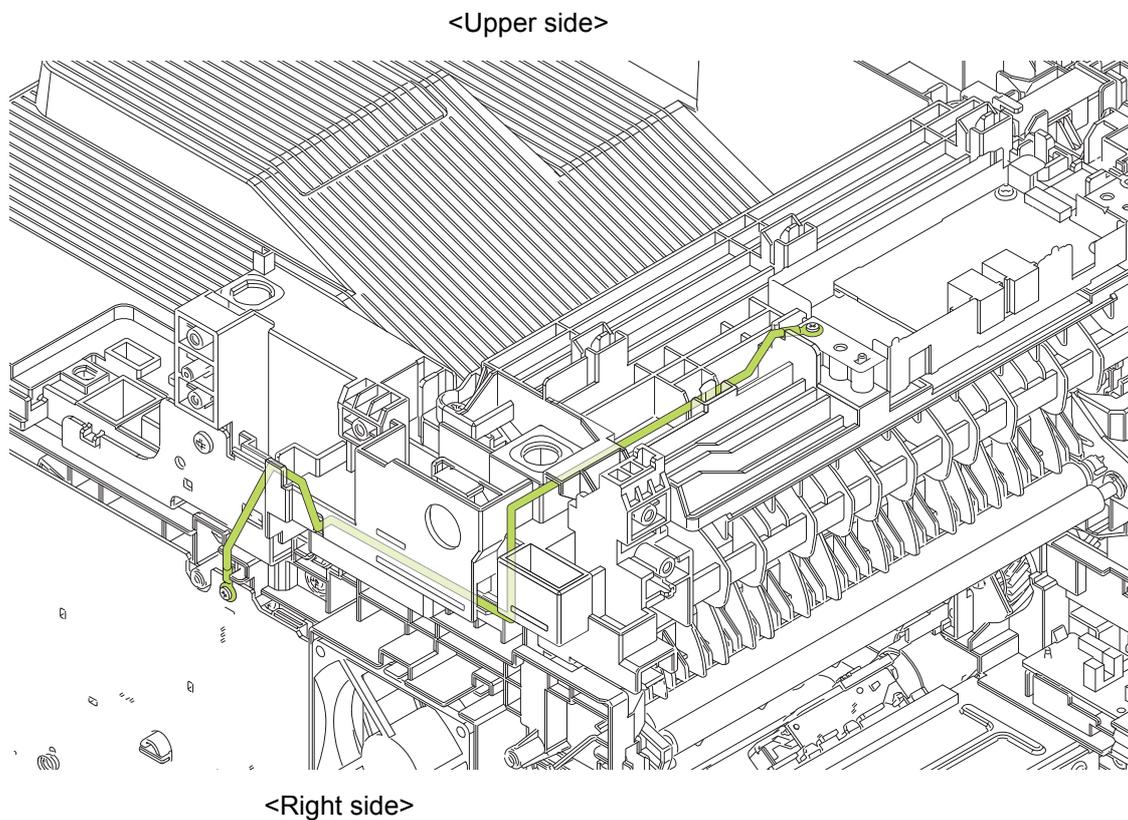
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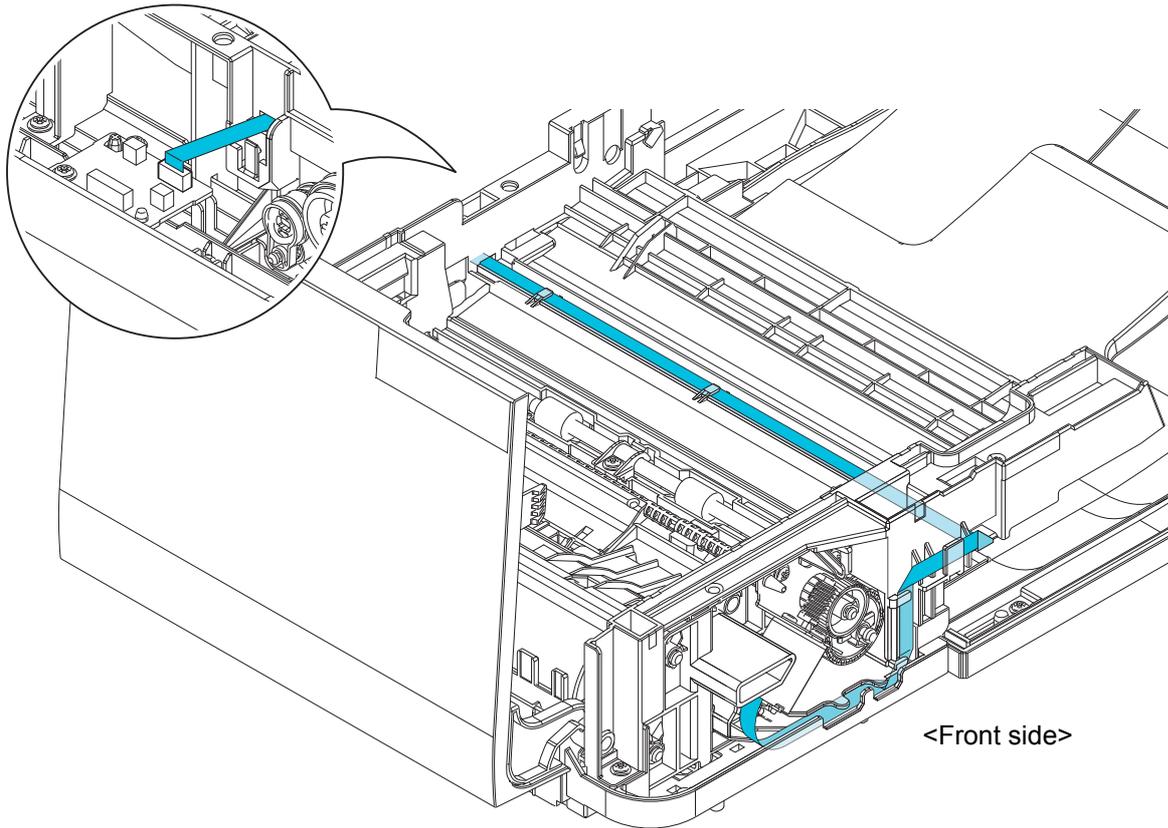
18 FB motor harness



19 FG harness modem-HVPS

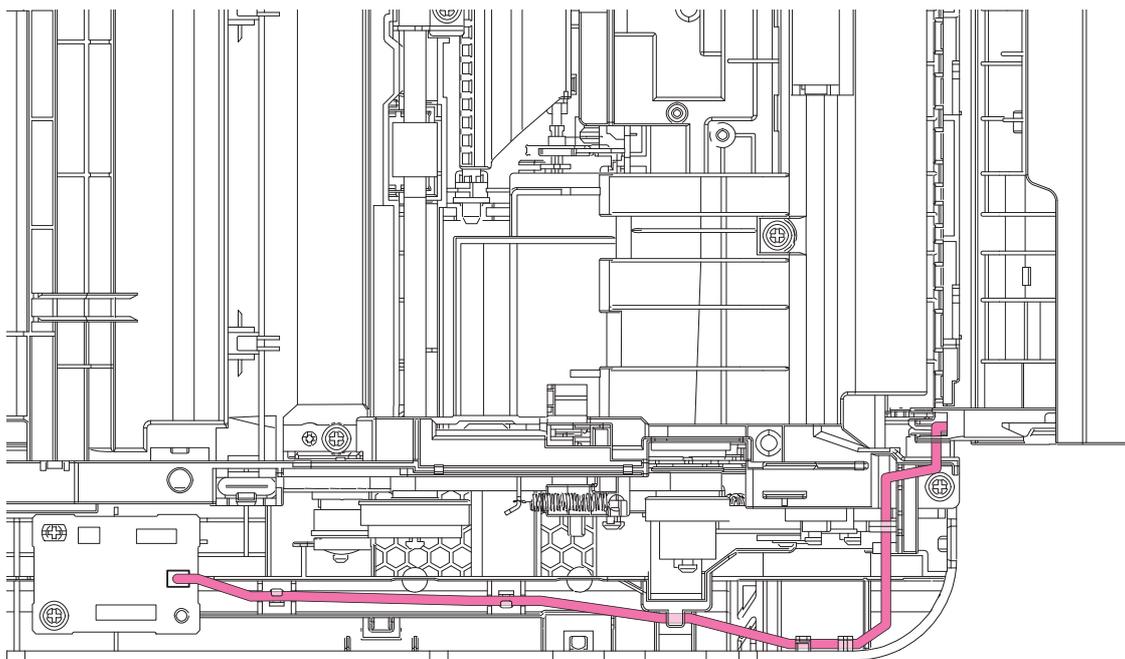


20 Flap tray motor FFC

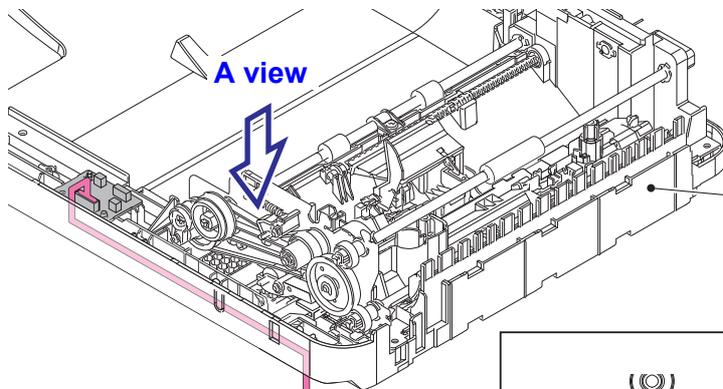
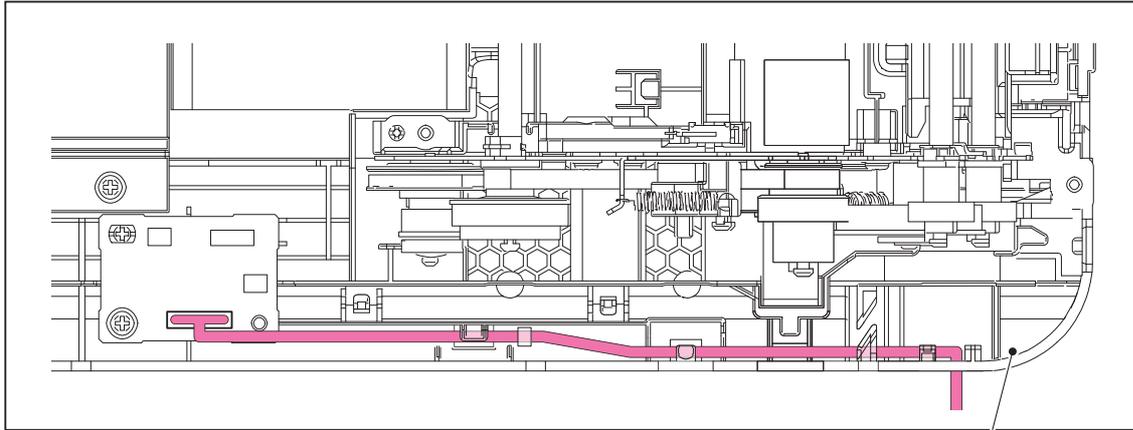


21 Flap tray PF sensor harness

<Upper side>

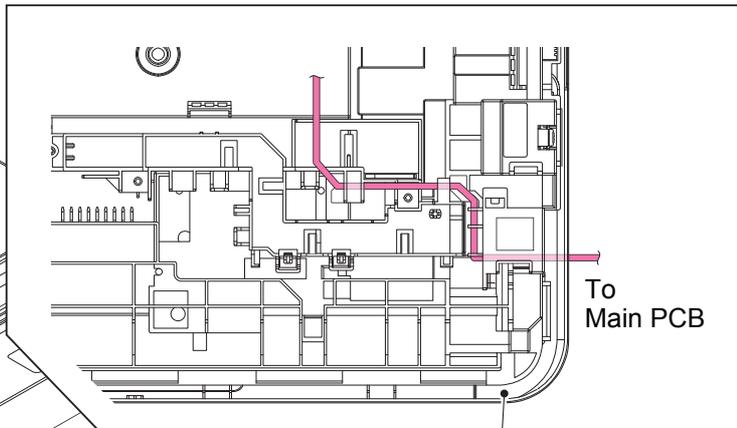


A view (Upper side)

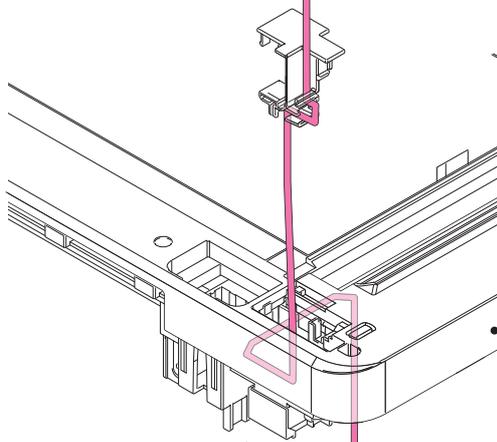


ADF unit

B view (Bottom side)

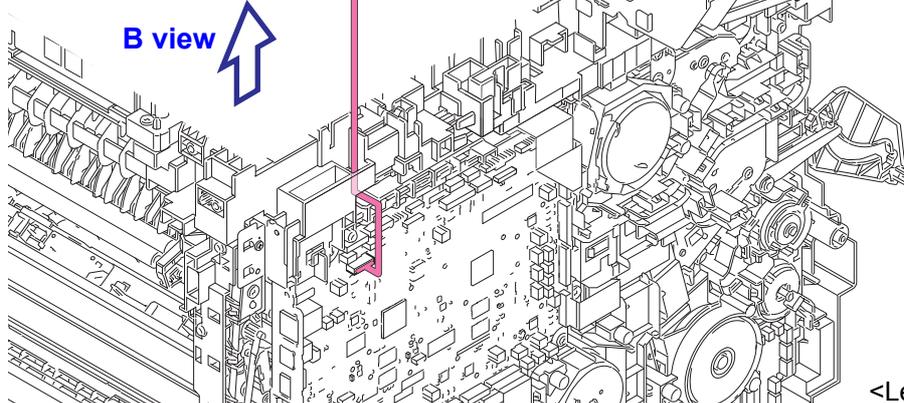


To Main PCB



Document scanner unit

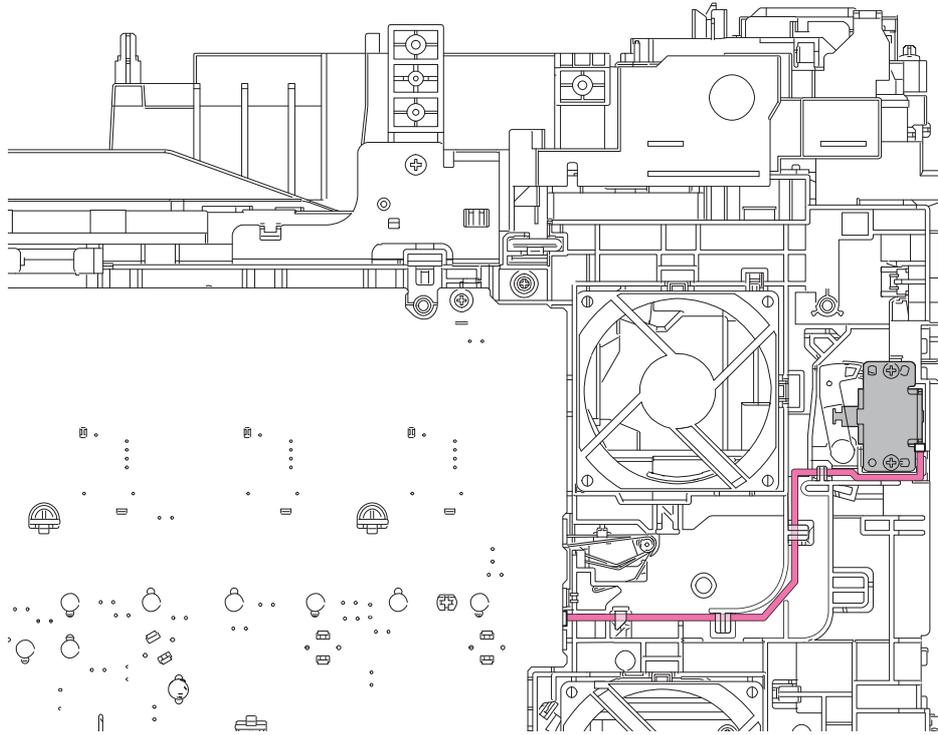
B view



<Left side>

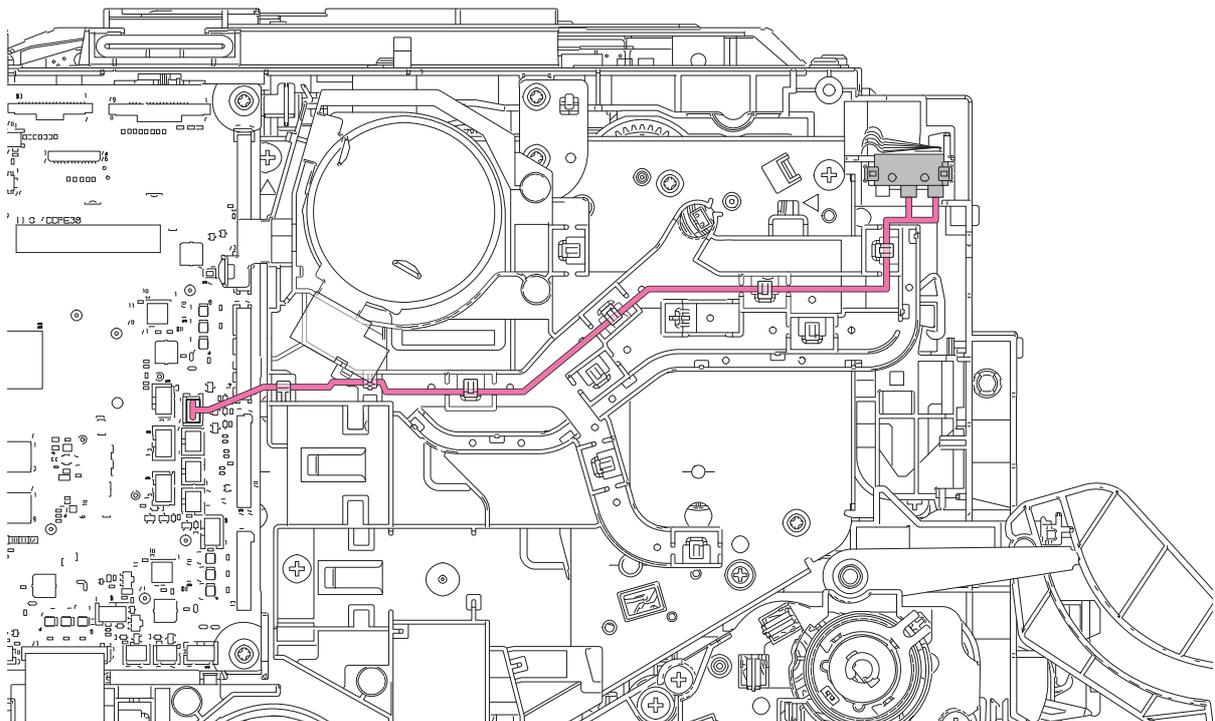
23 Flapper solenoid harness

<Right side>



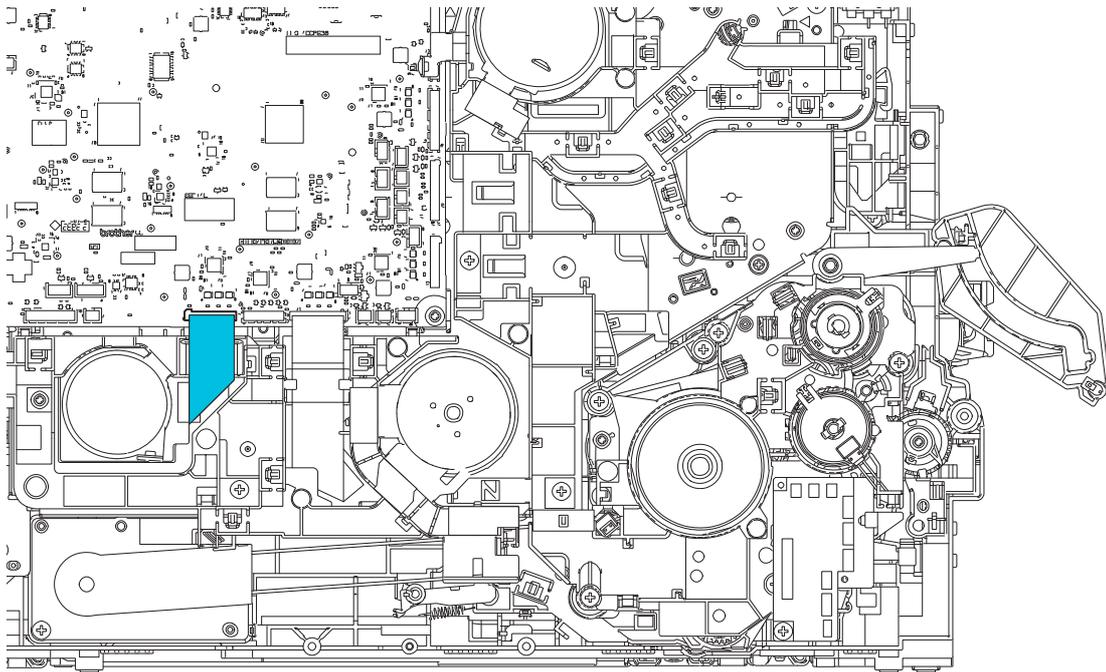
24 Front cover sensor harness

<Left side>



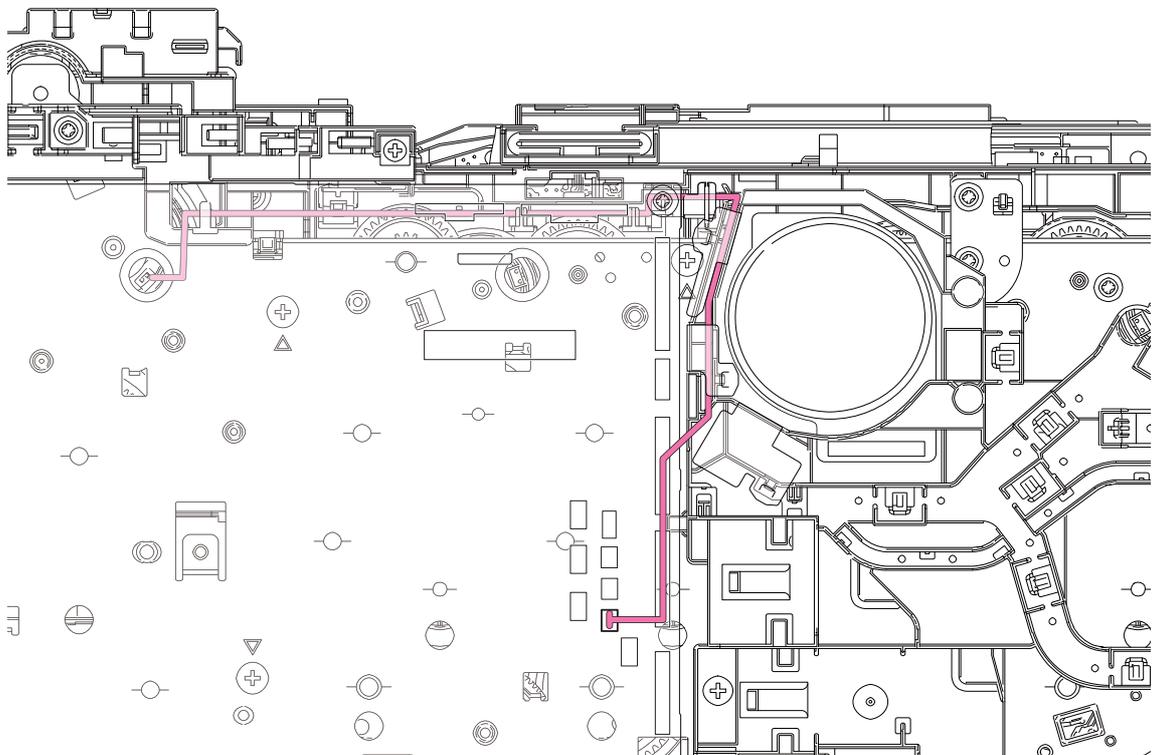
25 Fuser motor FFC

<Left side>

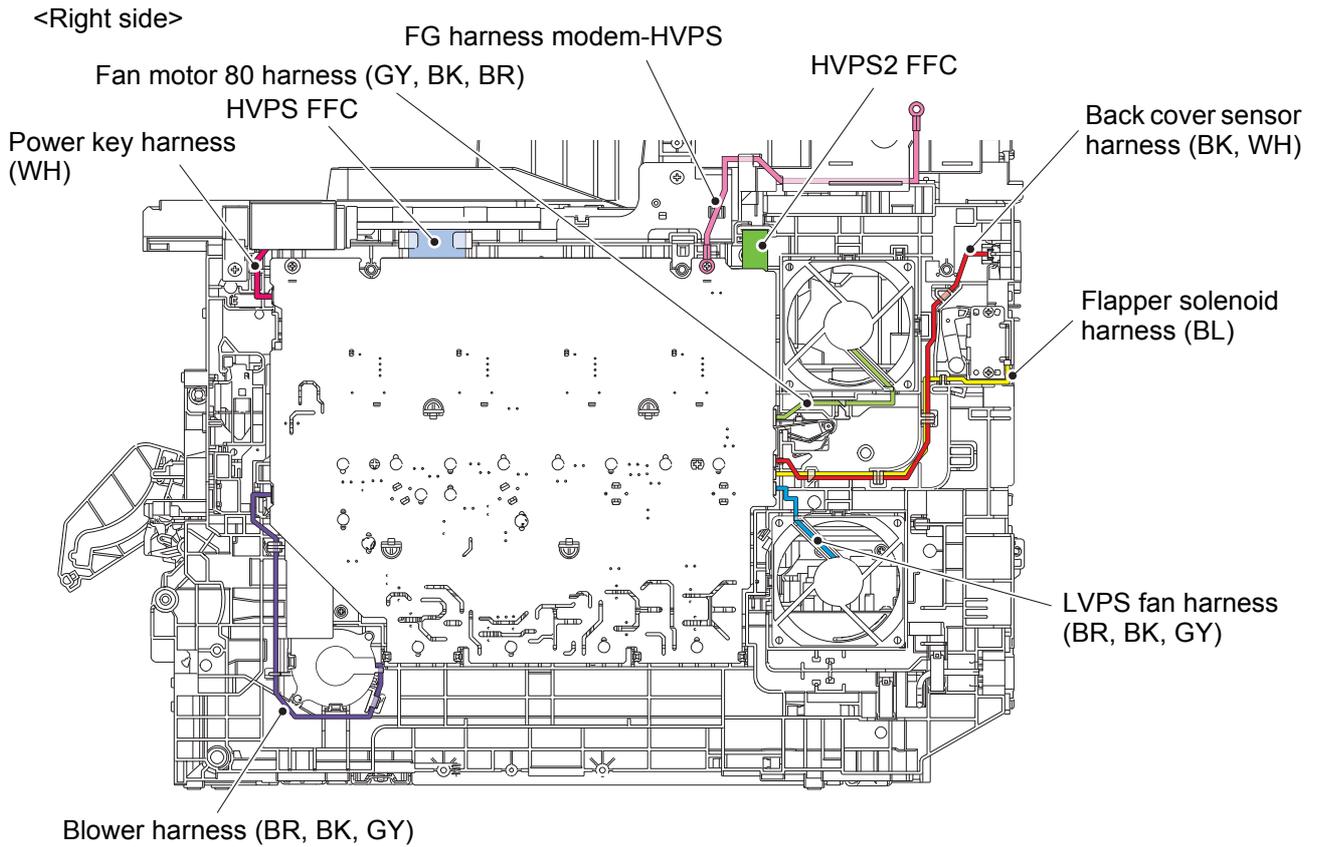


26 Fuser release clutch harness

<Left side>

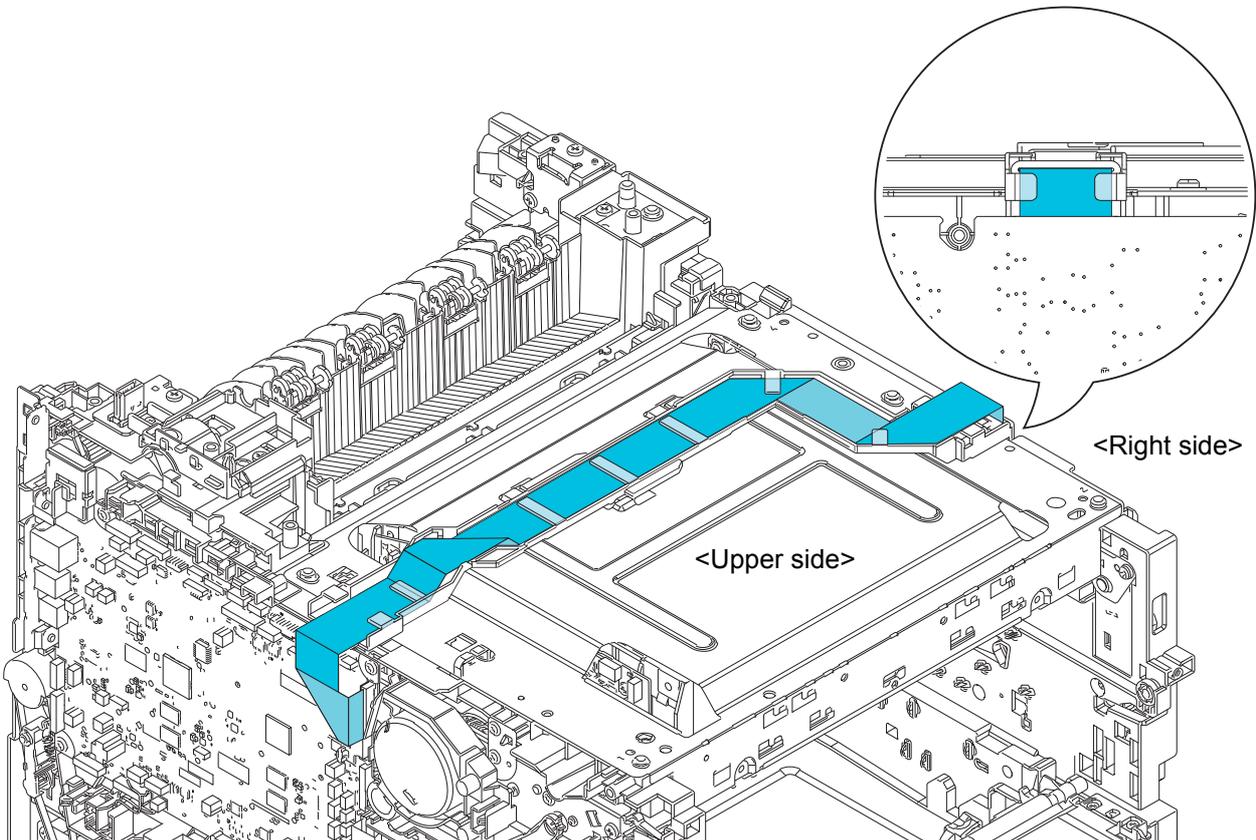


27 HVPS

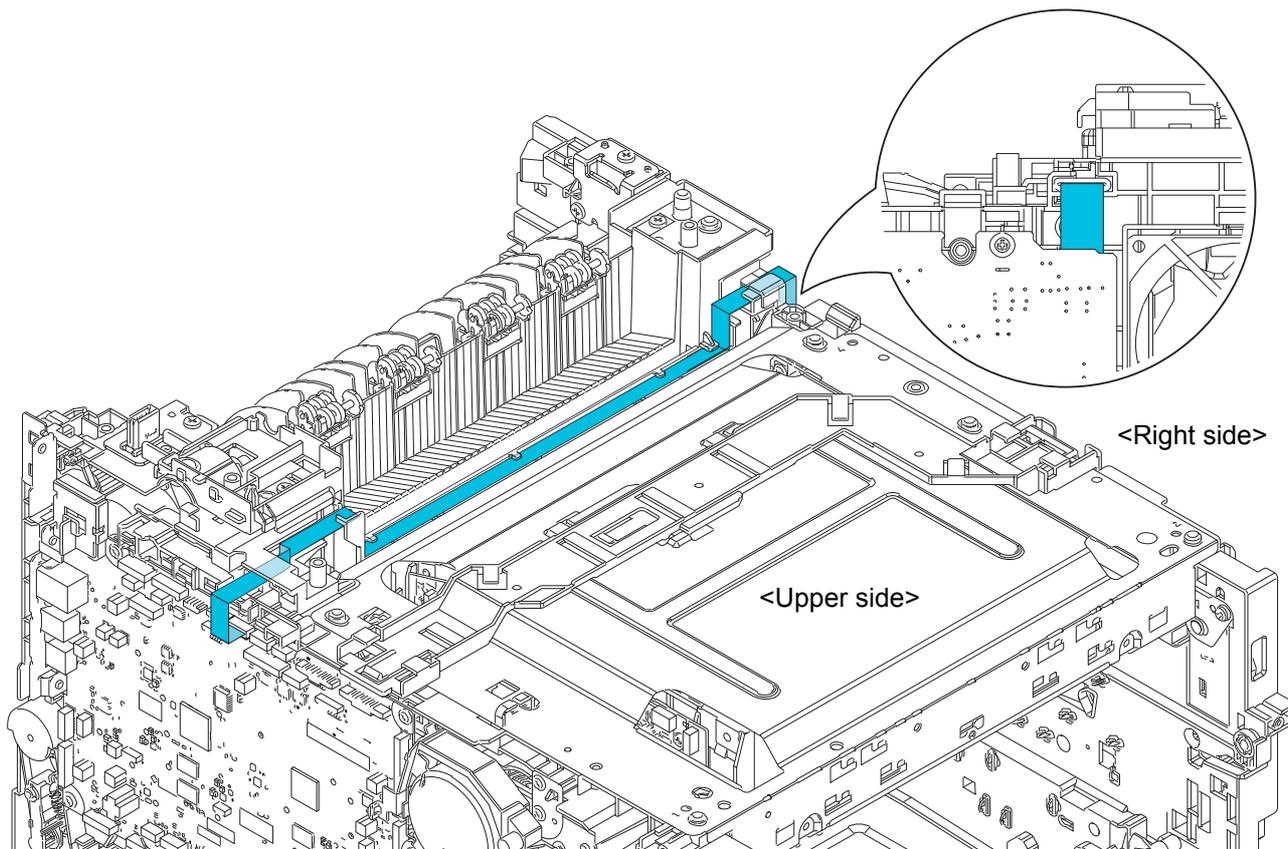


Harness colors may be changed for any reason.

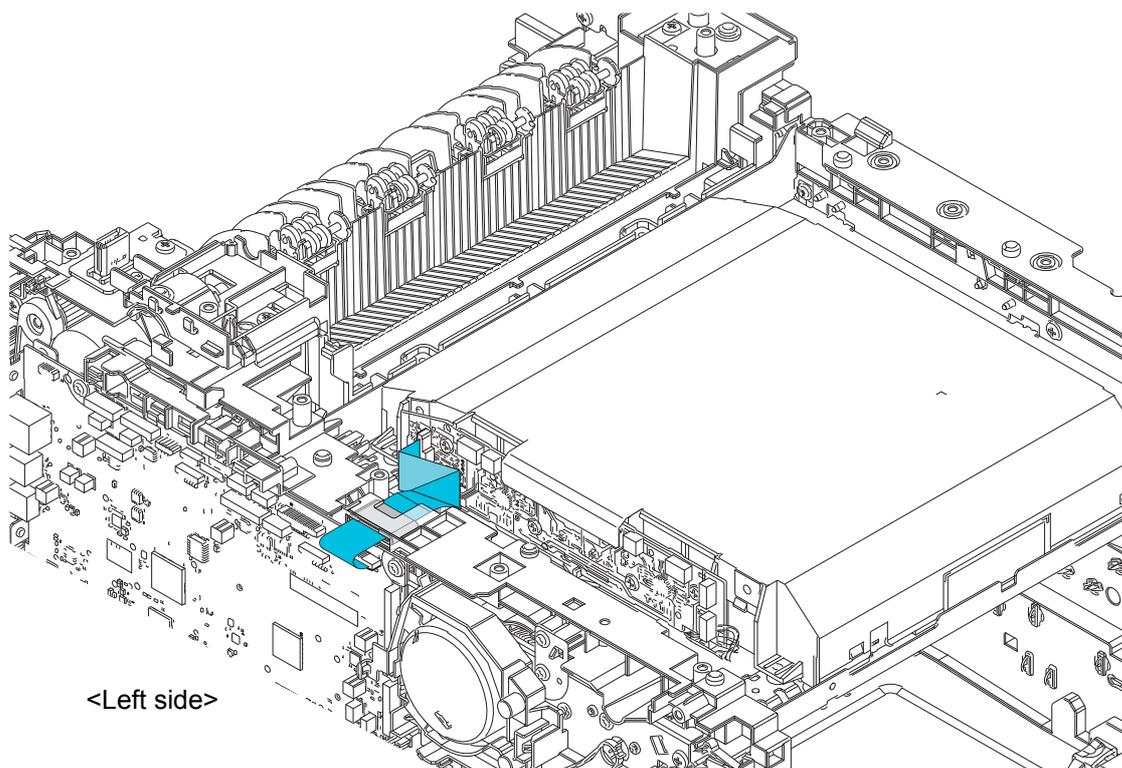
28 HVPS FFC



29 HVPS2 FFC

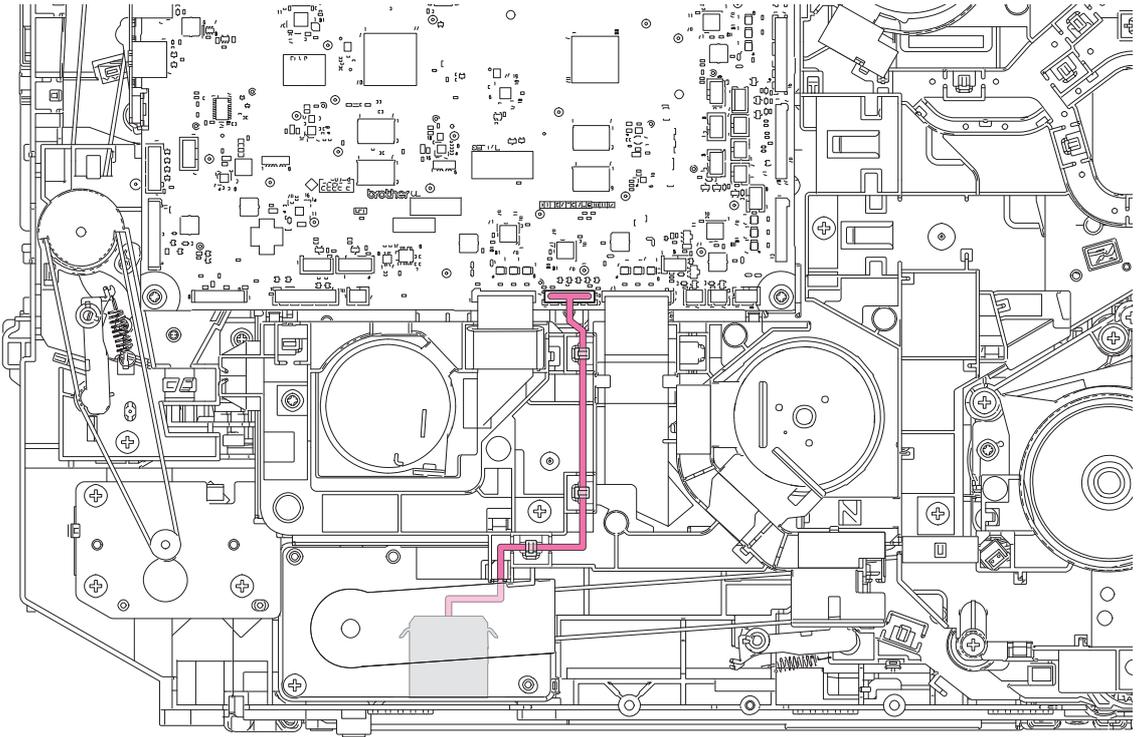


30 Laser unit FFC



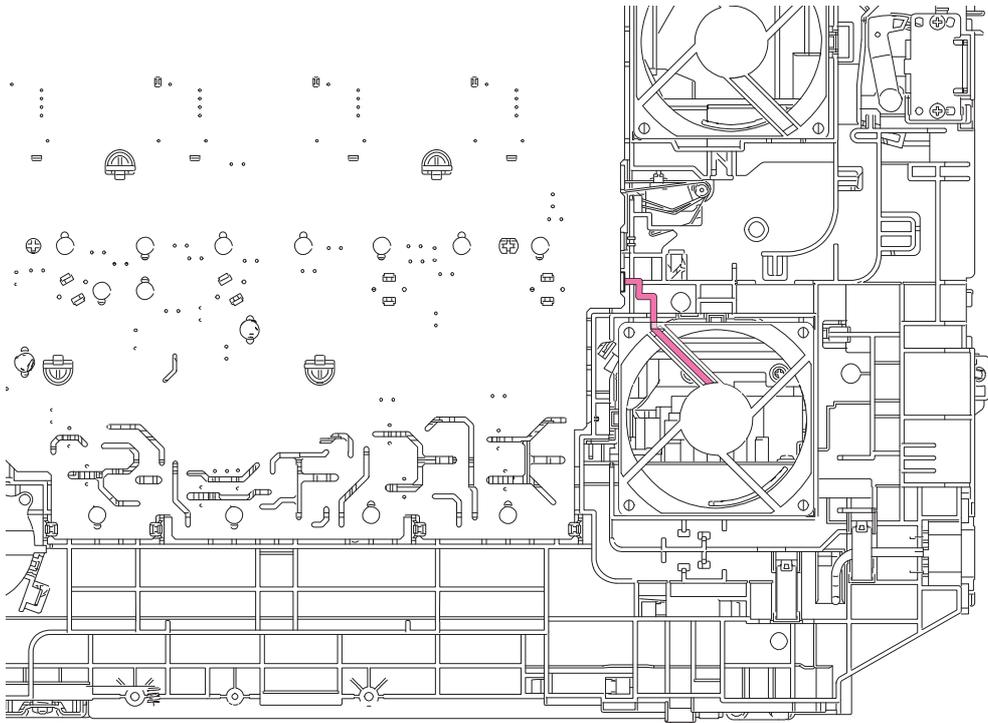
31 LT connector harness

<Left side>

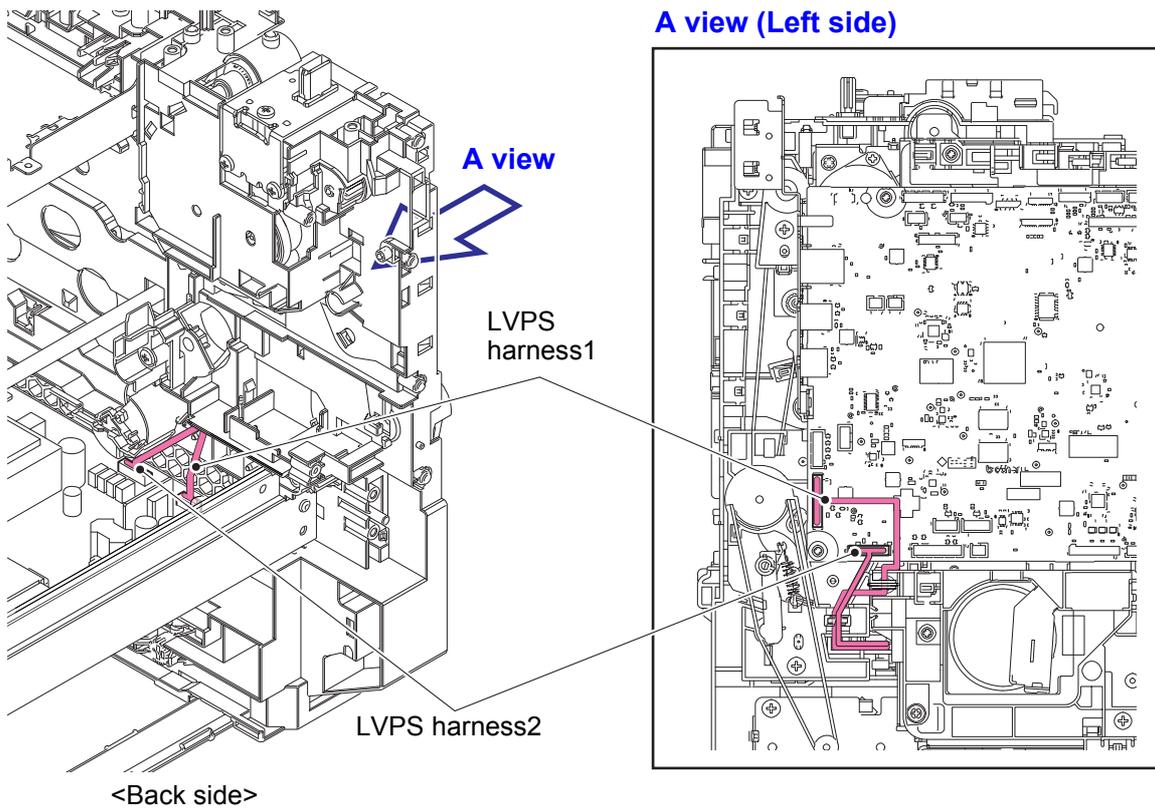


32 LVPS fan harness

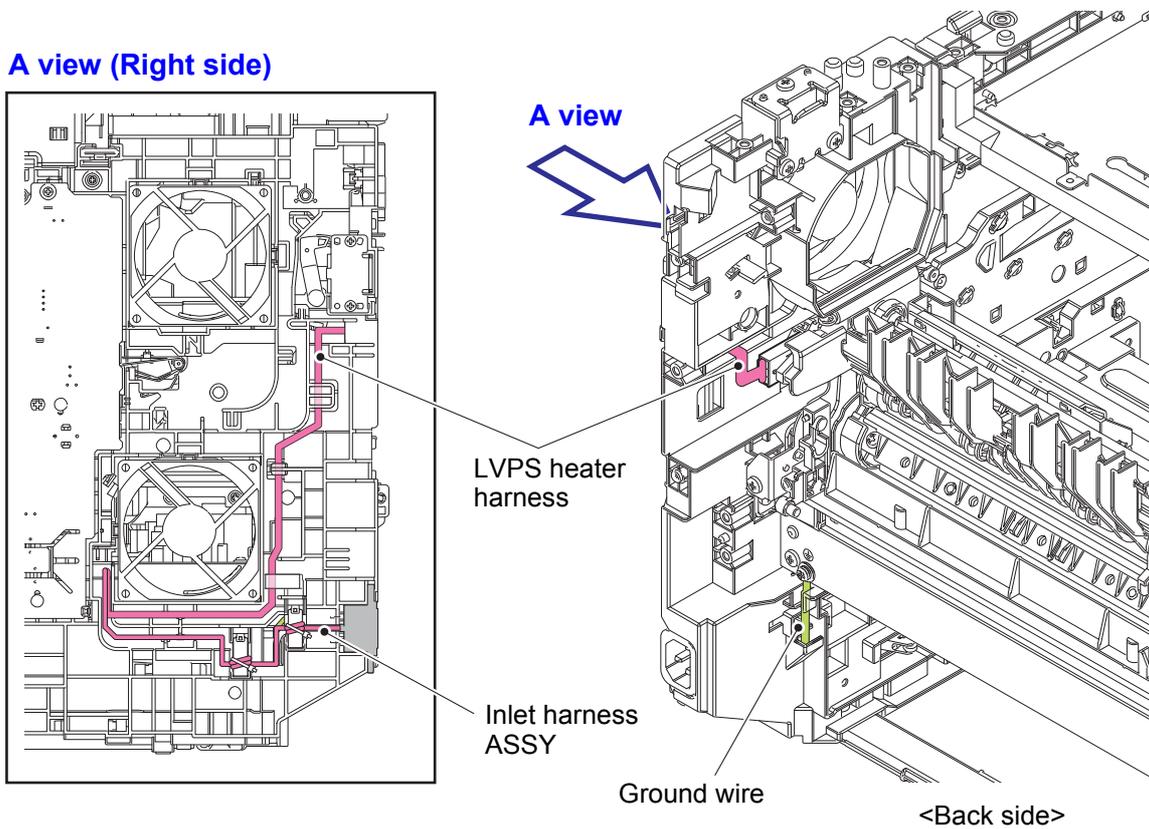
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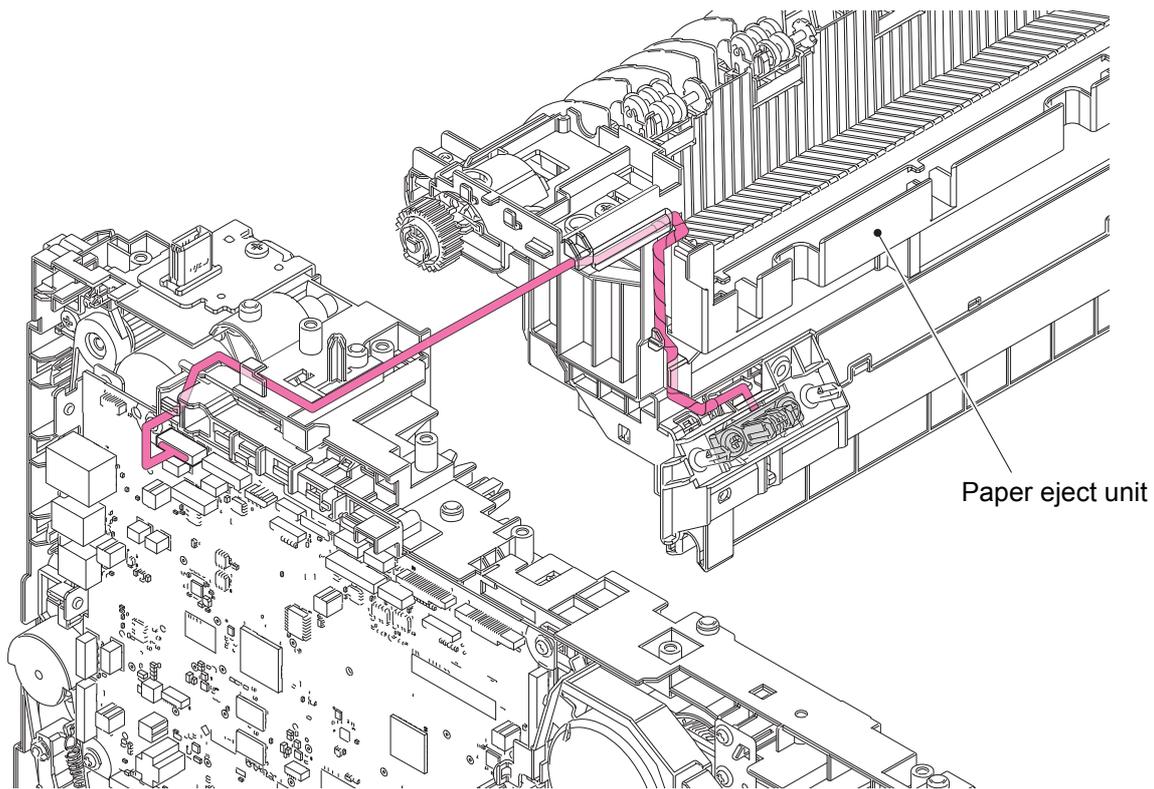
33 LVPS harness1, LVPS harness2



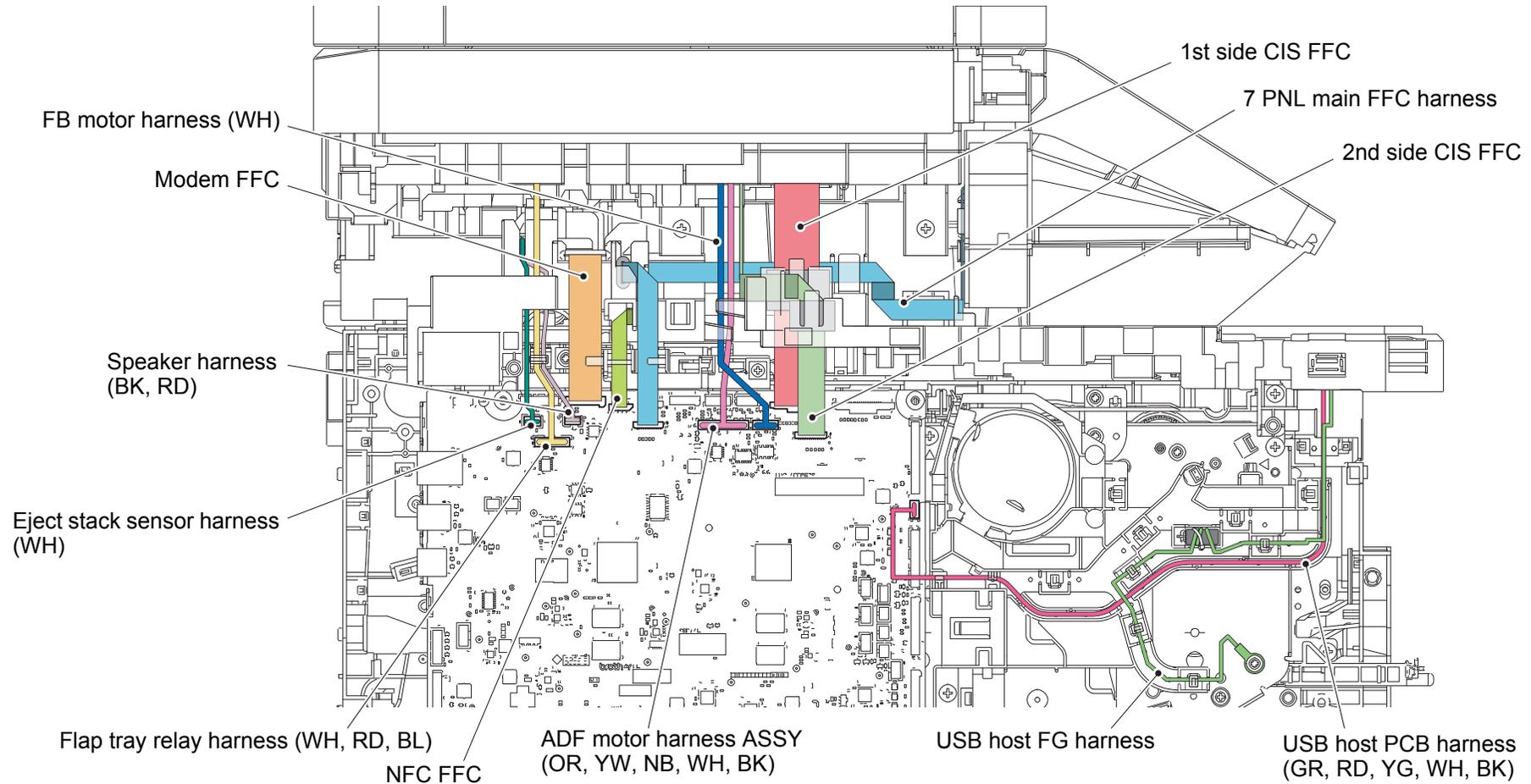
34 LVPS heater harness, Inlet harness ASSY



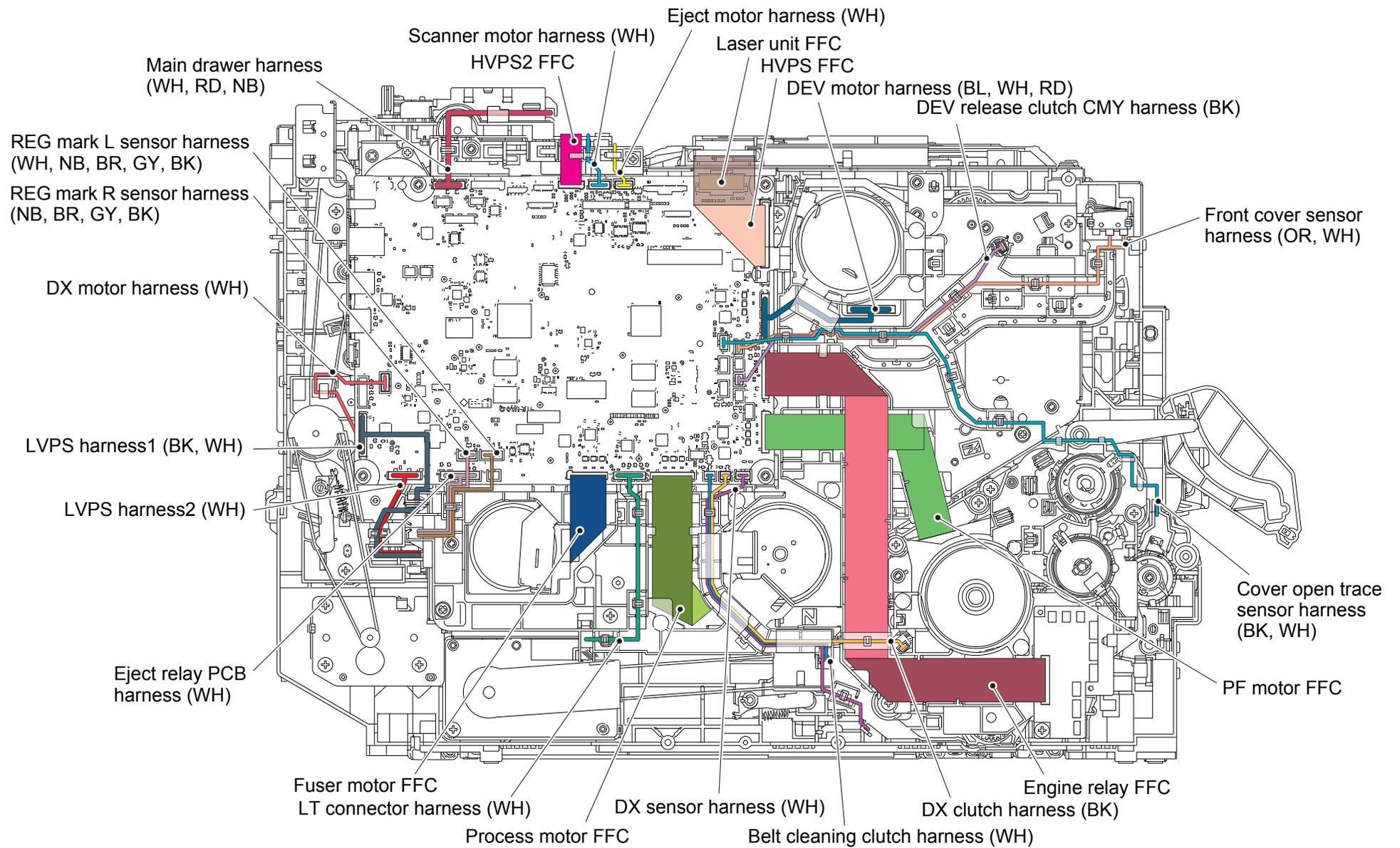
35 Main drawer harness



<Left side>

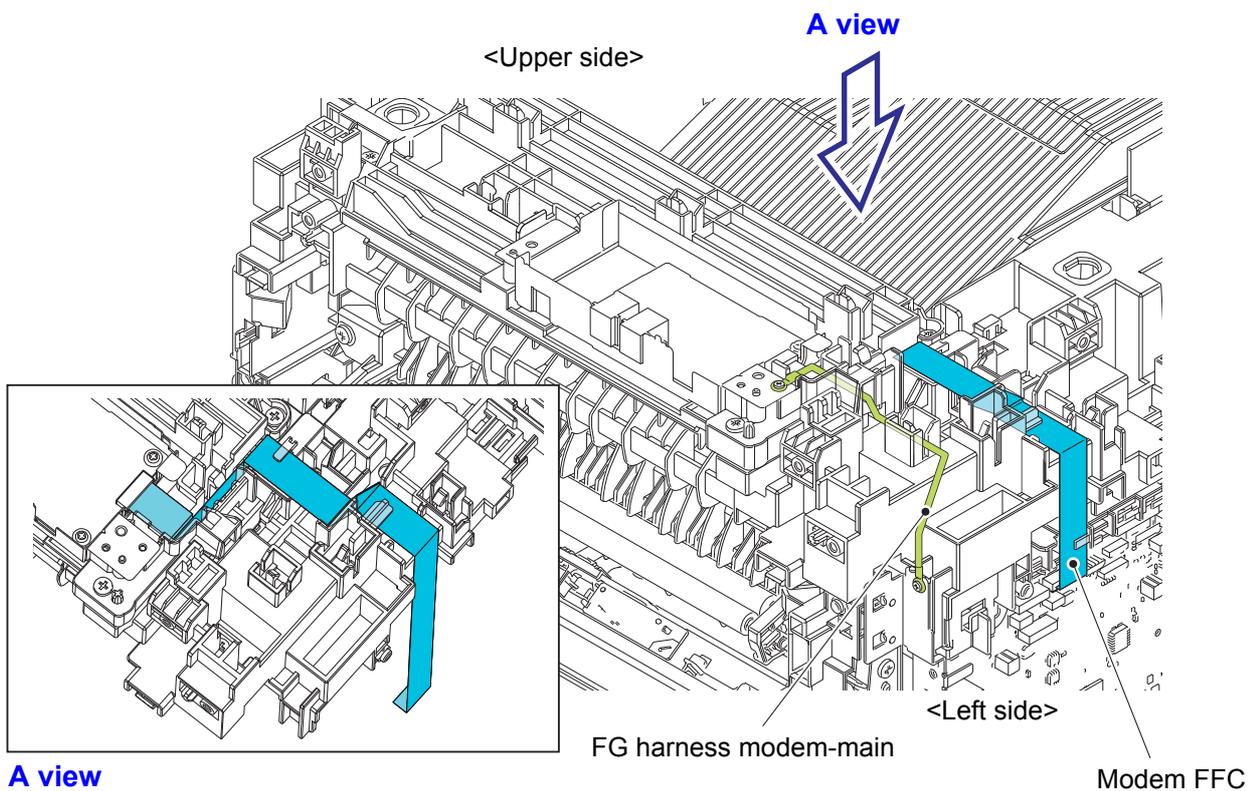


Harness colors may be changed for any reason.

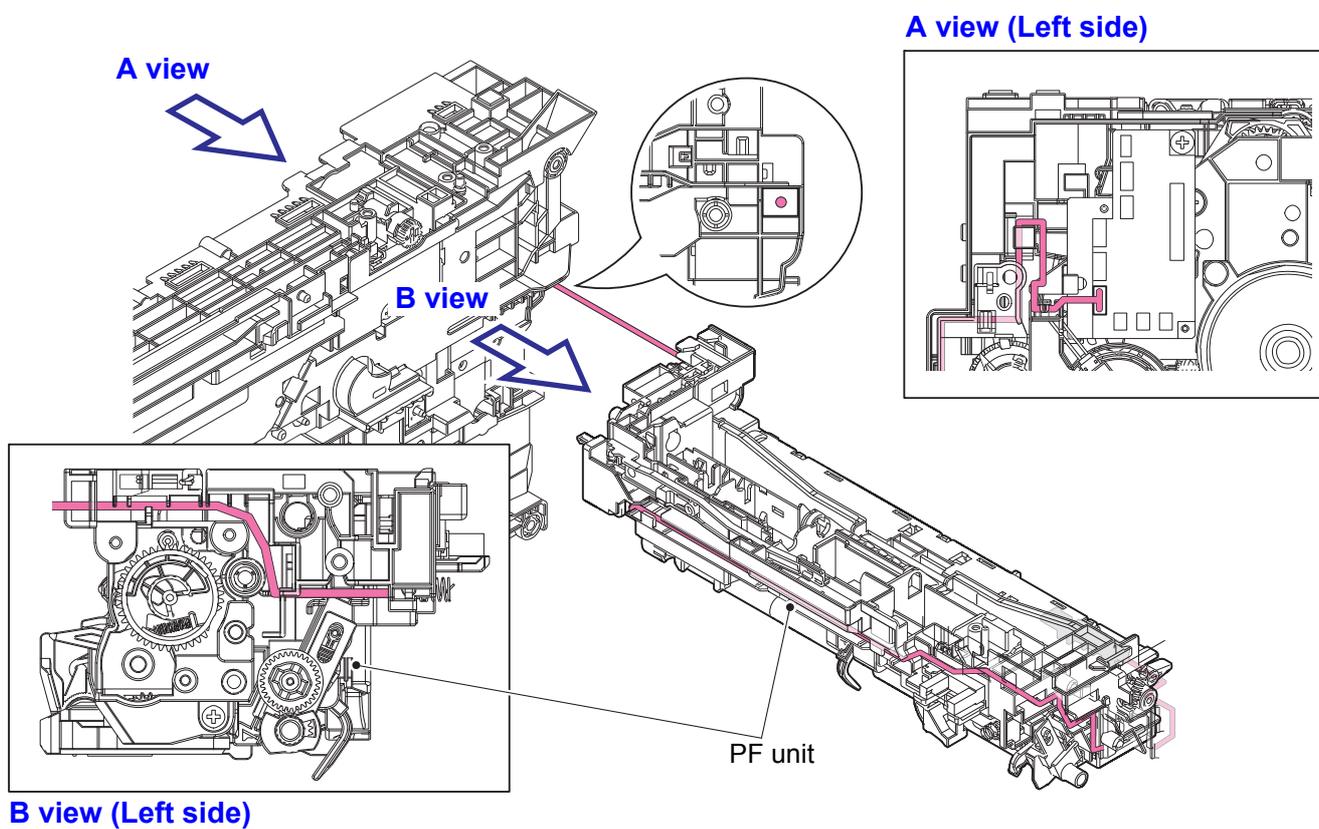


Harness colors may be changed for any reason.

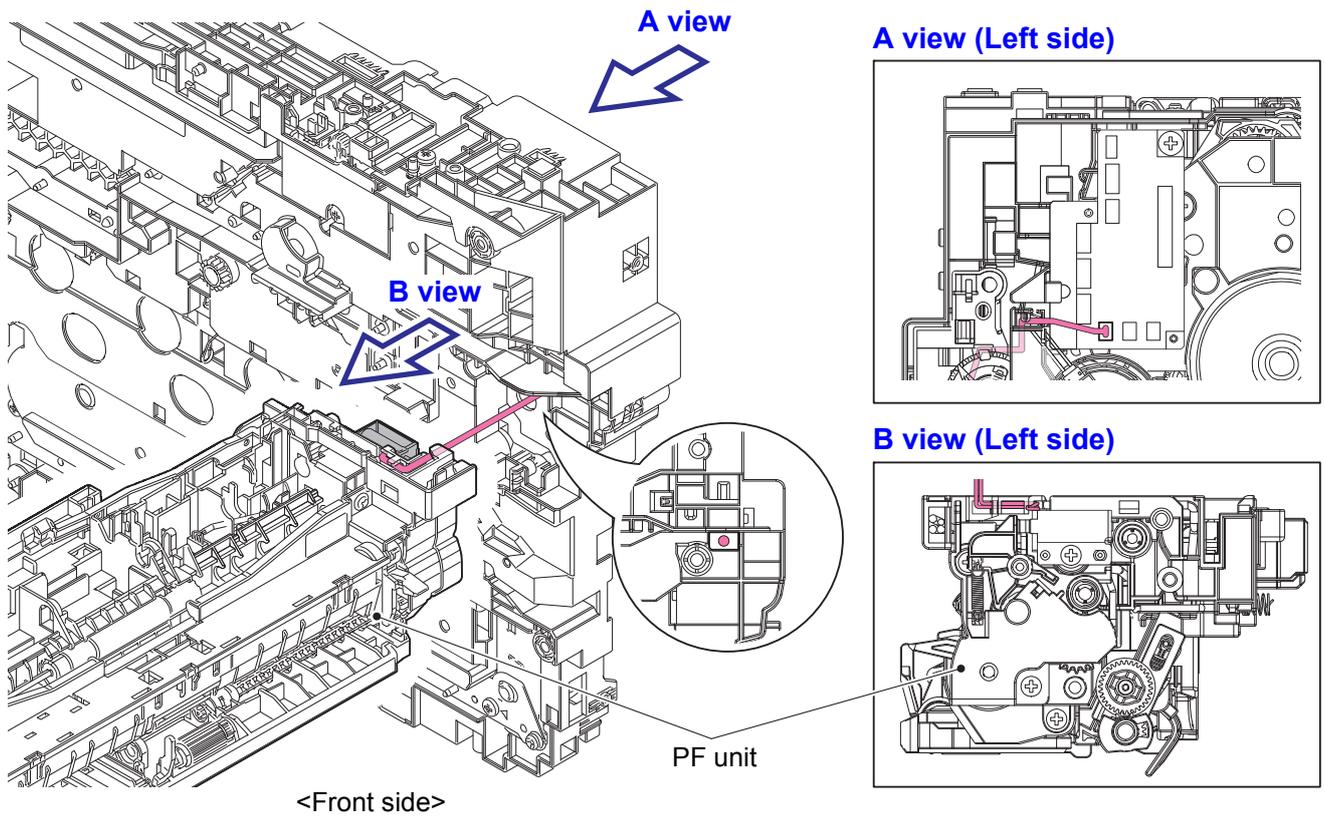
38 Modem FFC



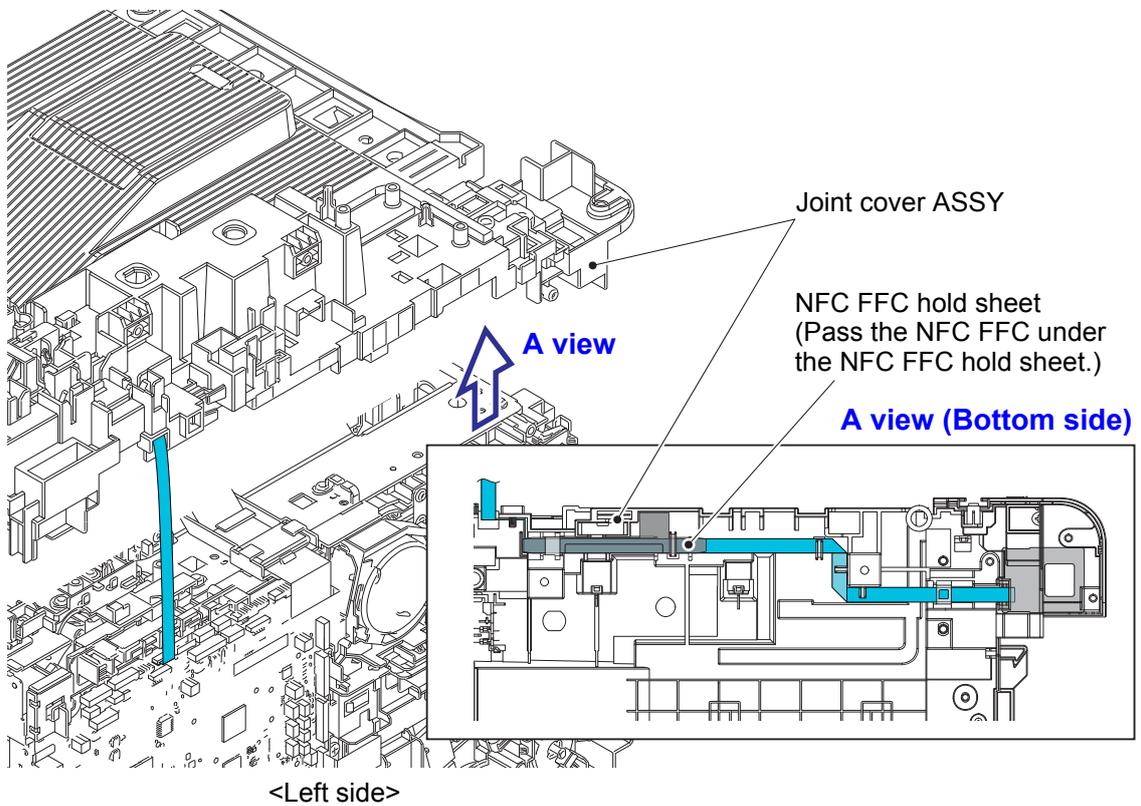
39 MP sensor harness



40 MP solenoid harness

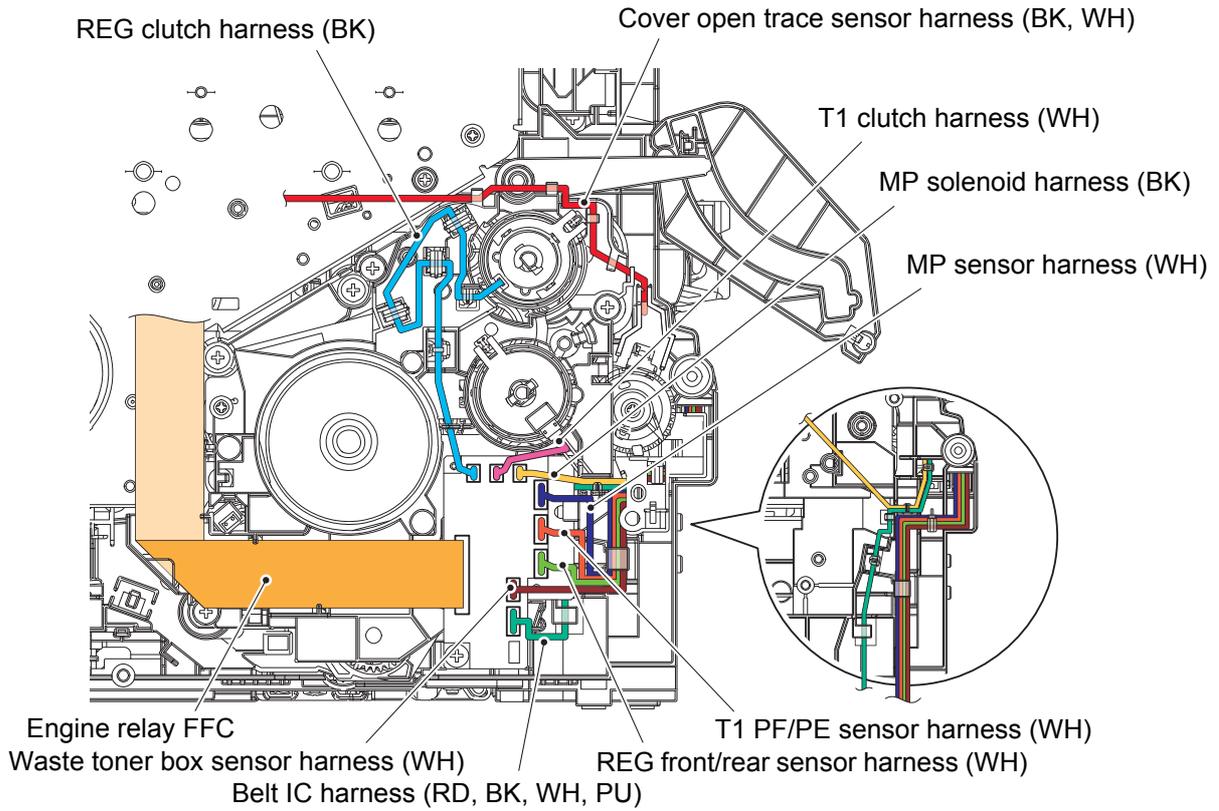


41 NFC FFC



42 PF drive unit

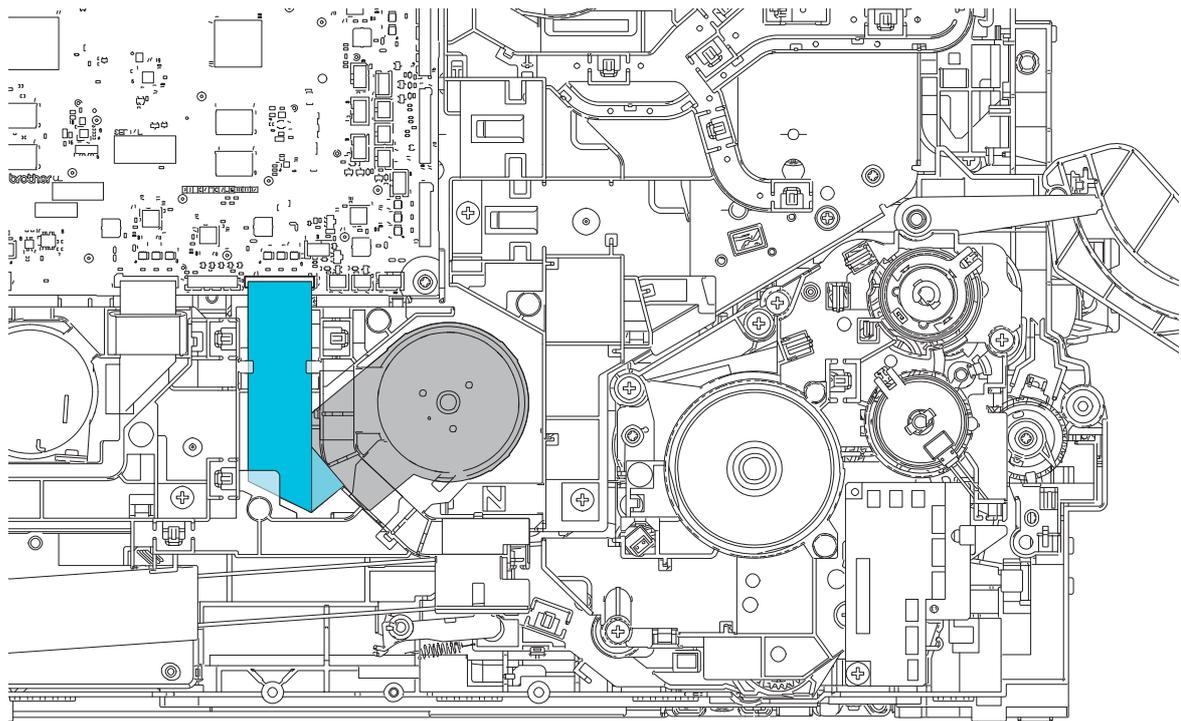
<Left side>



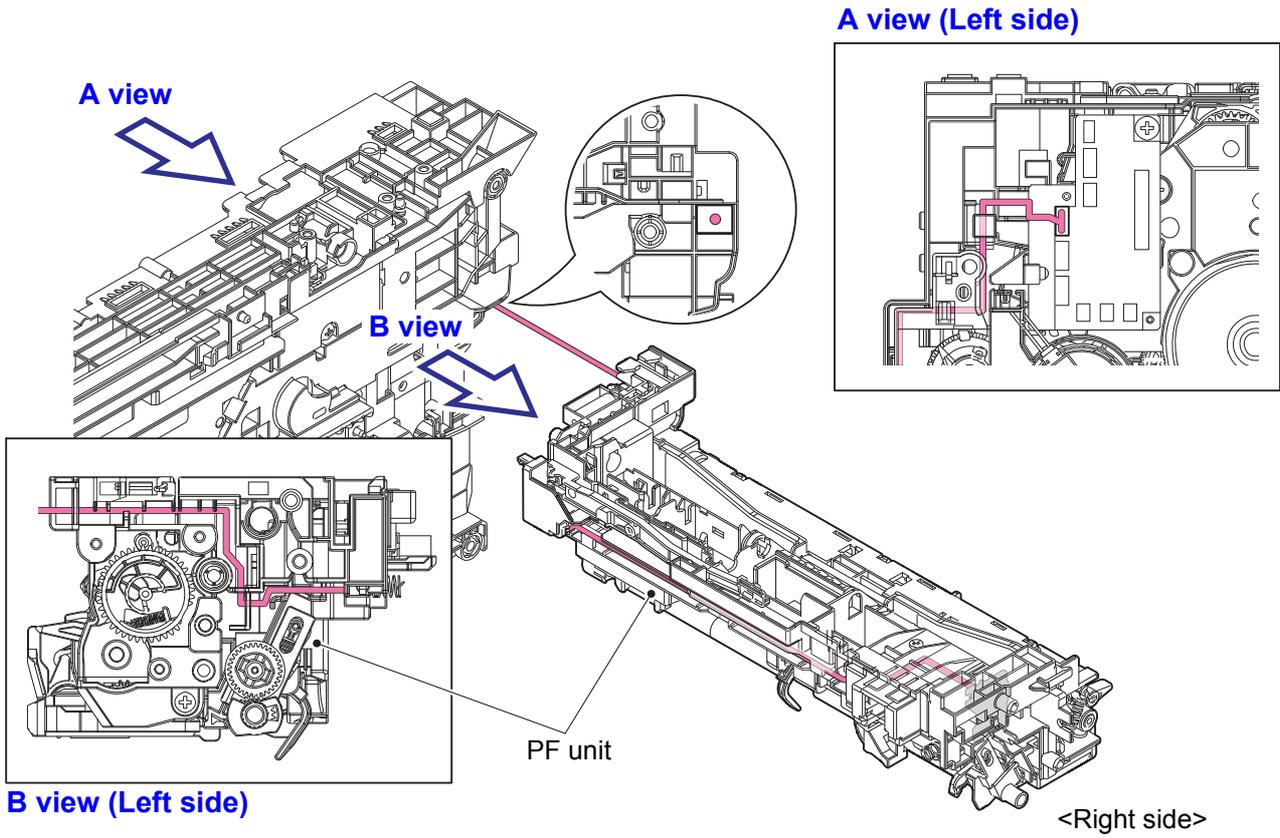
Harness colors may be changed for any reason.

43 Process motor FFC

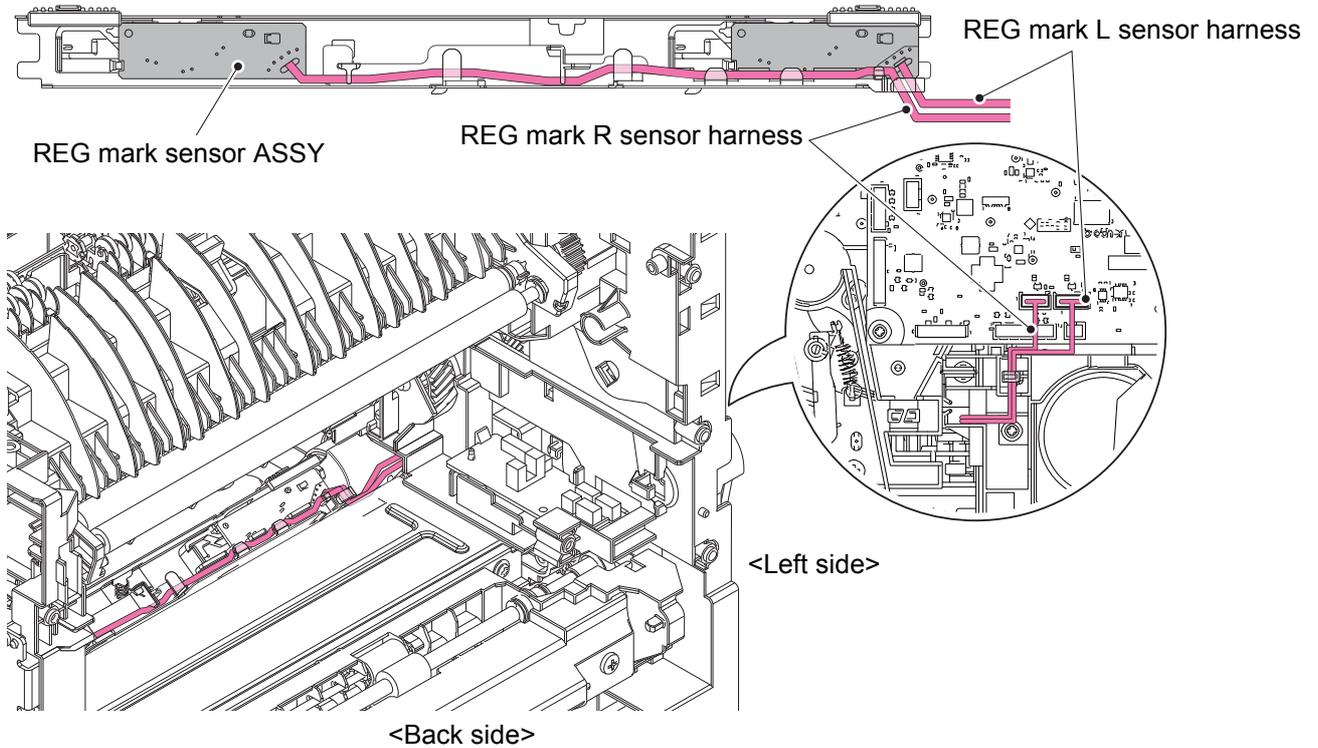
<Left side>



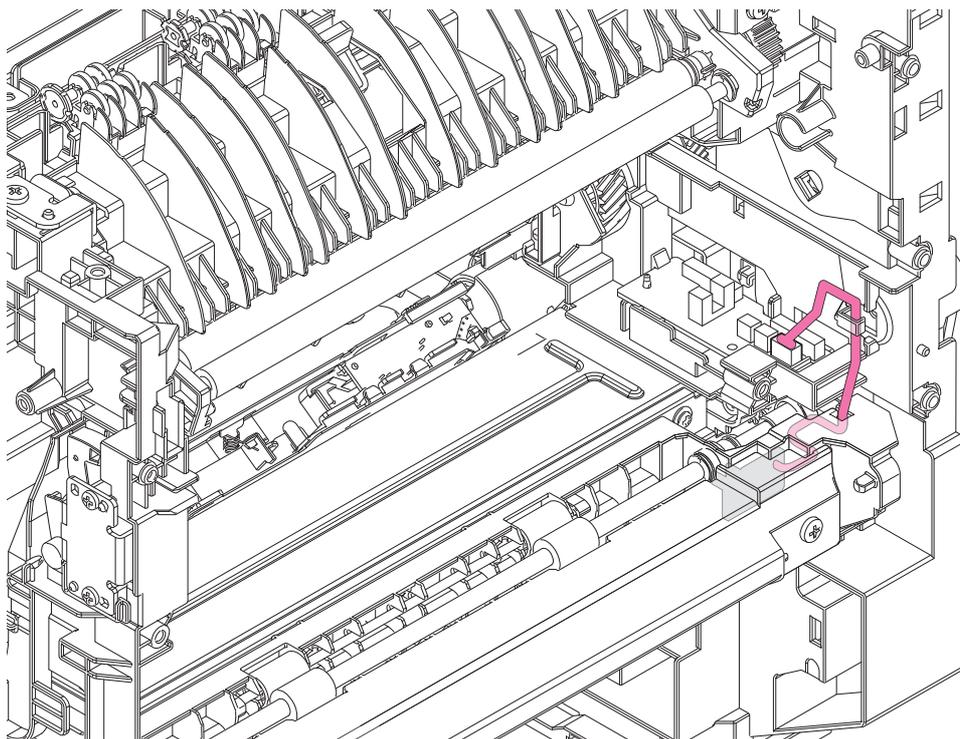
44 REG front/rear sensor harness



45 REG mark L sensor harness, REG mark R sensor harness



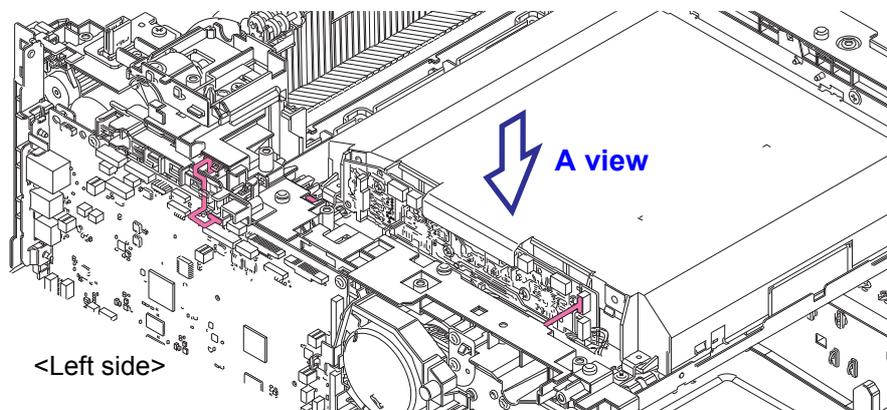
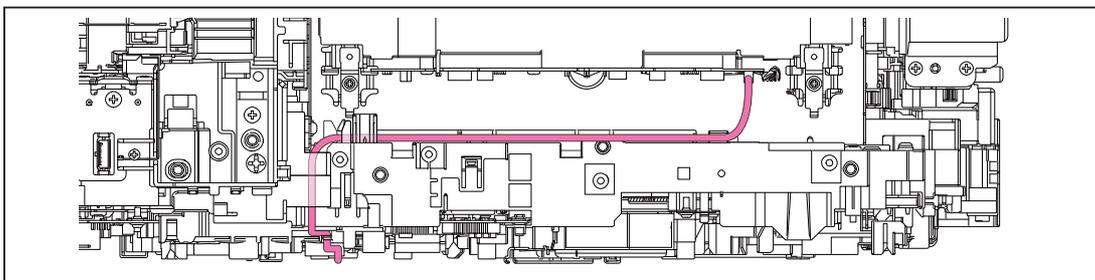
46 Reverse eject sensor harness



<Back side>

47 Scanner motor harness

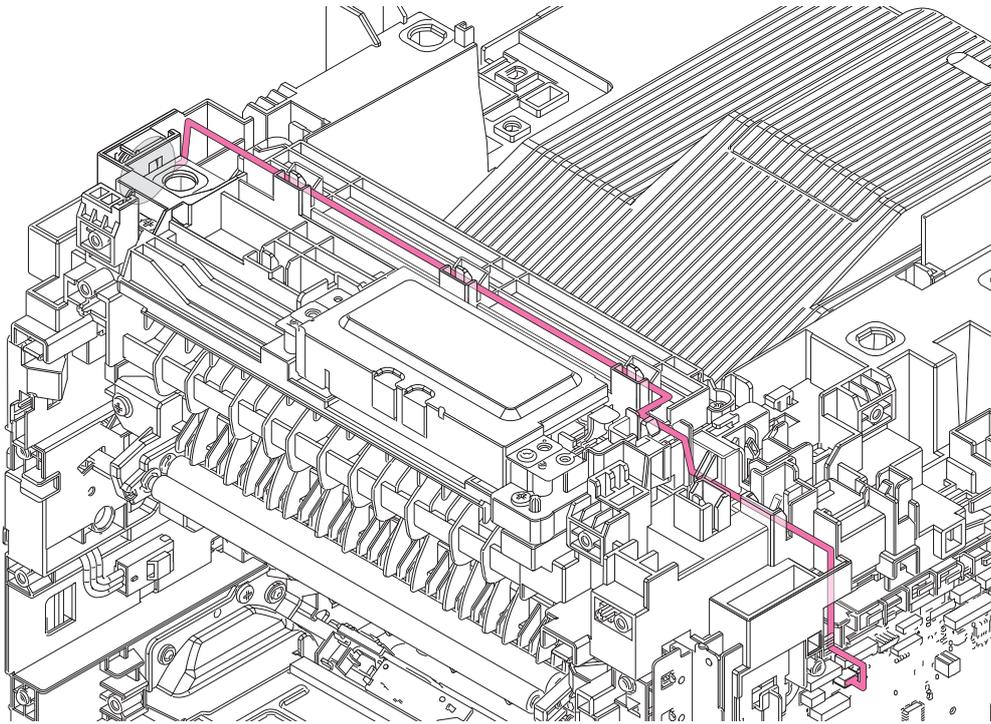
A view (Upper side)



<Left side>

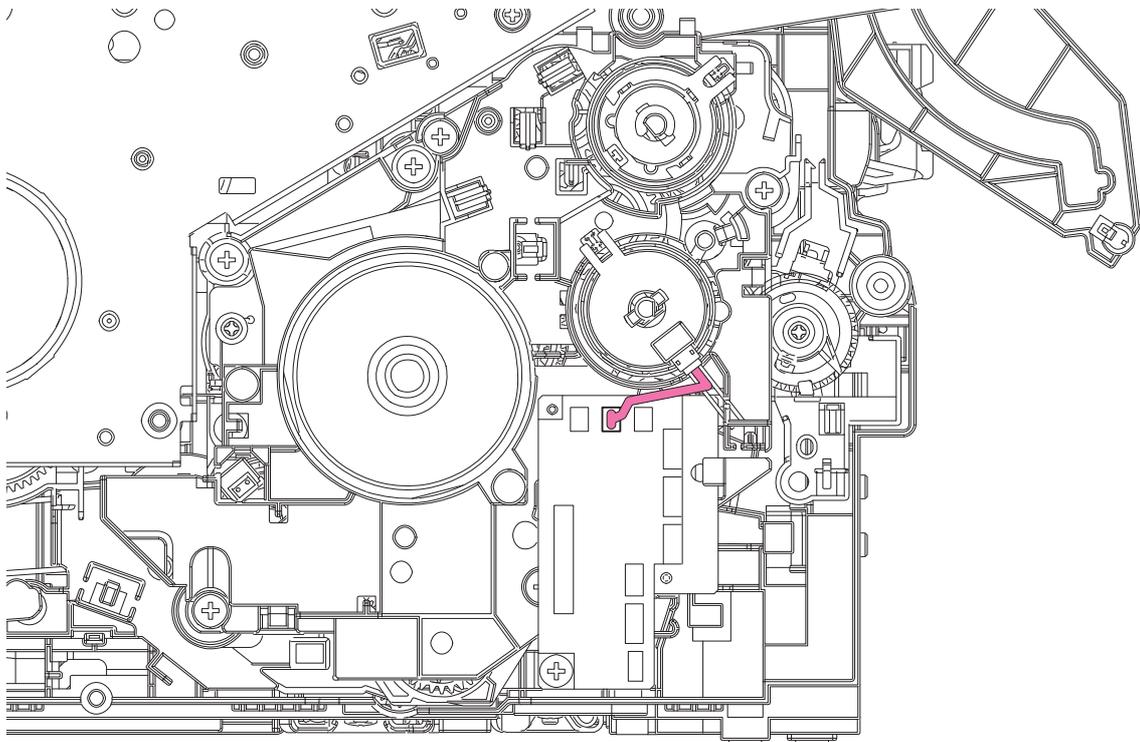
48 Speaker harness

<Upper side>

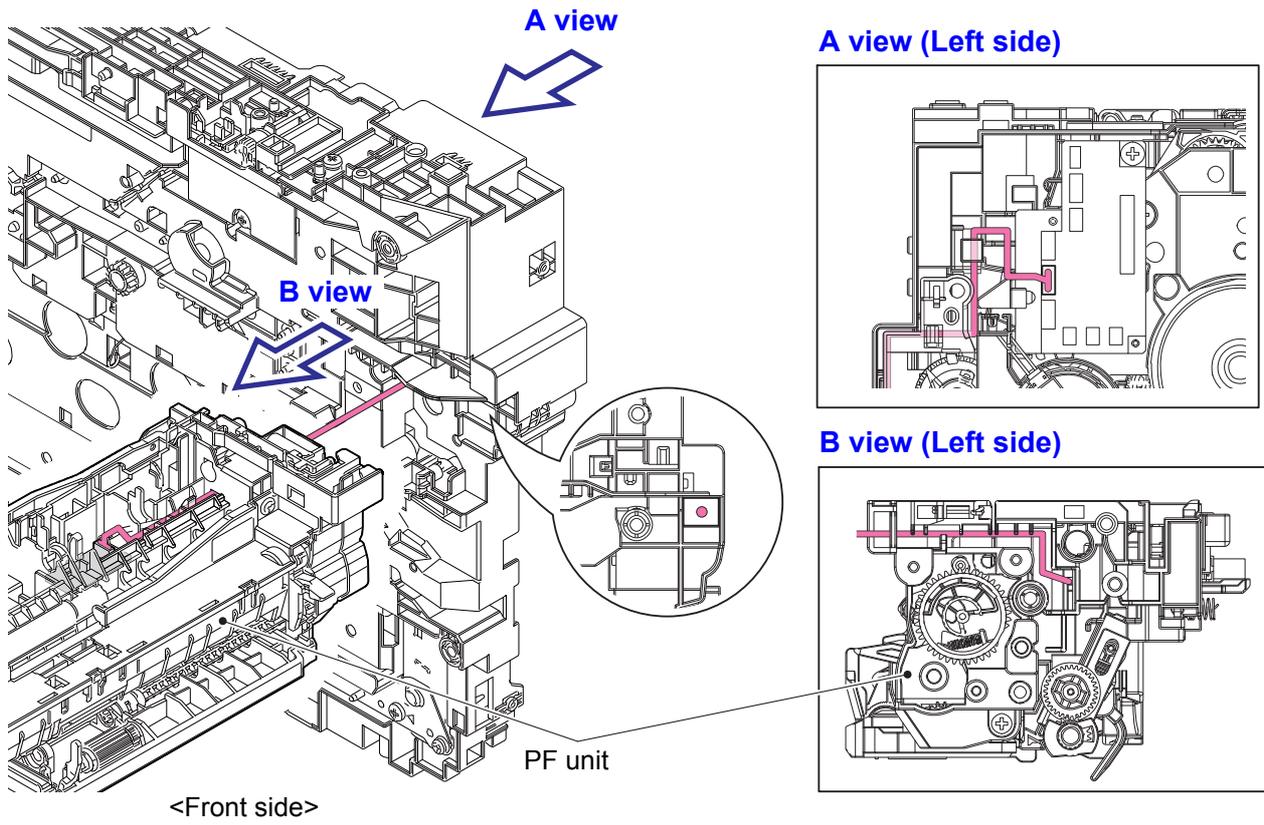


49 T1 clutch harness

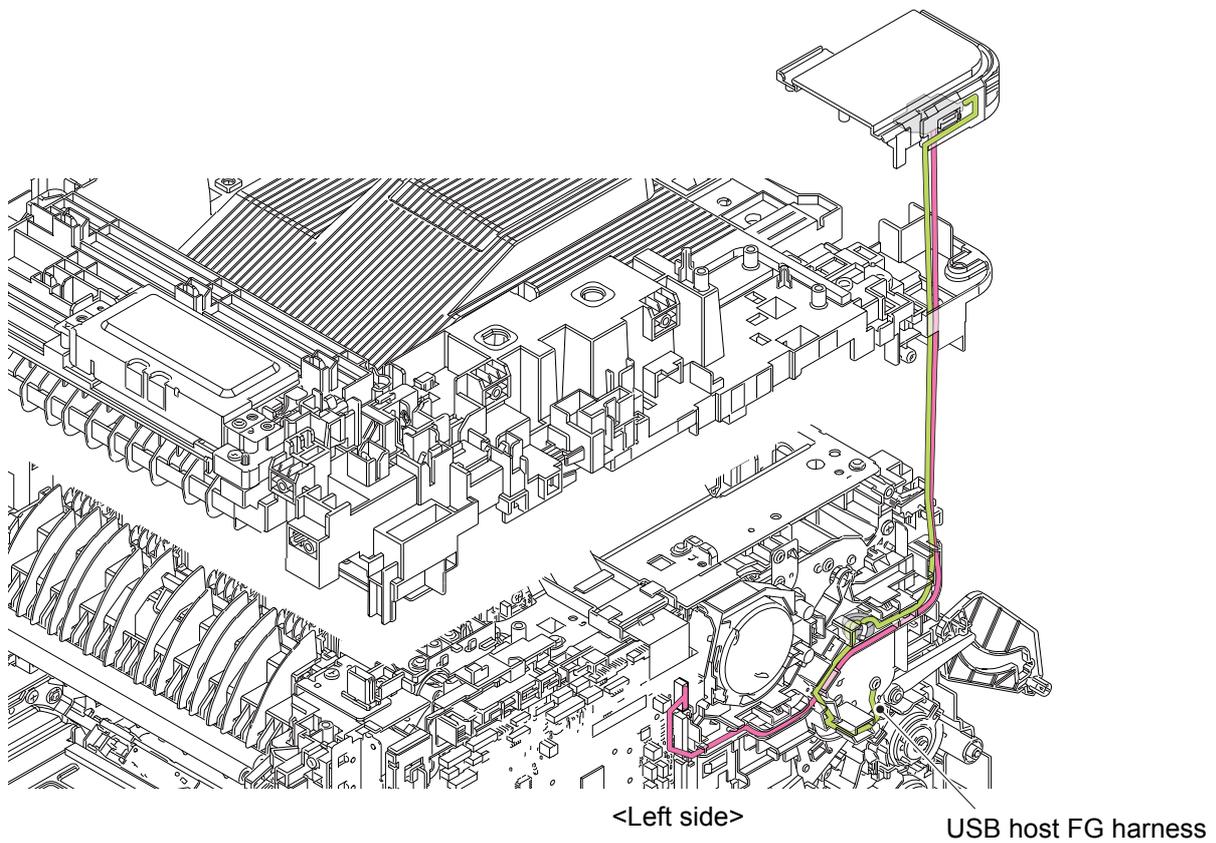
<Left side>



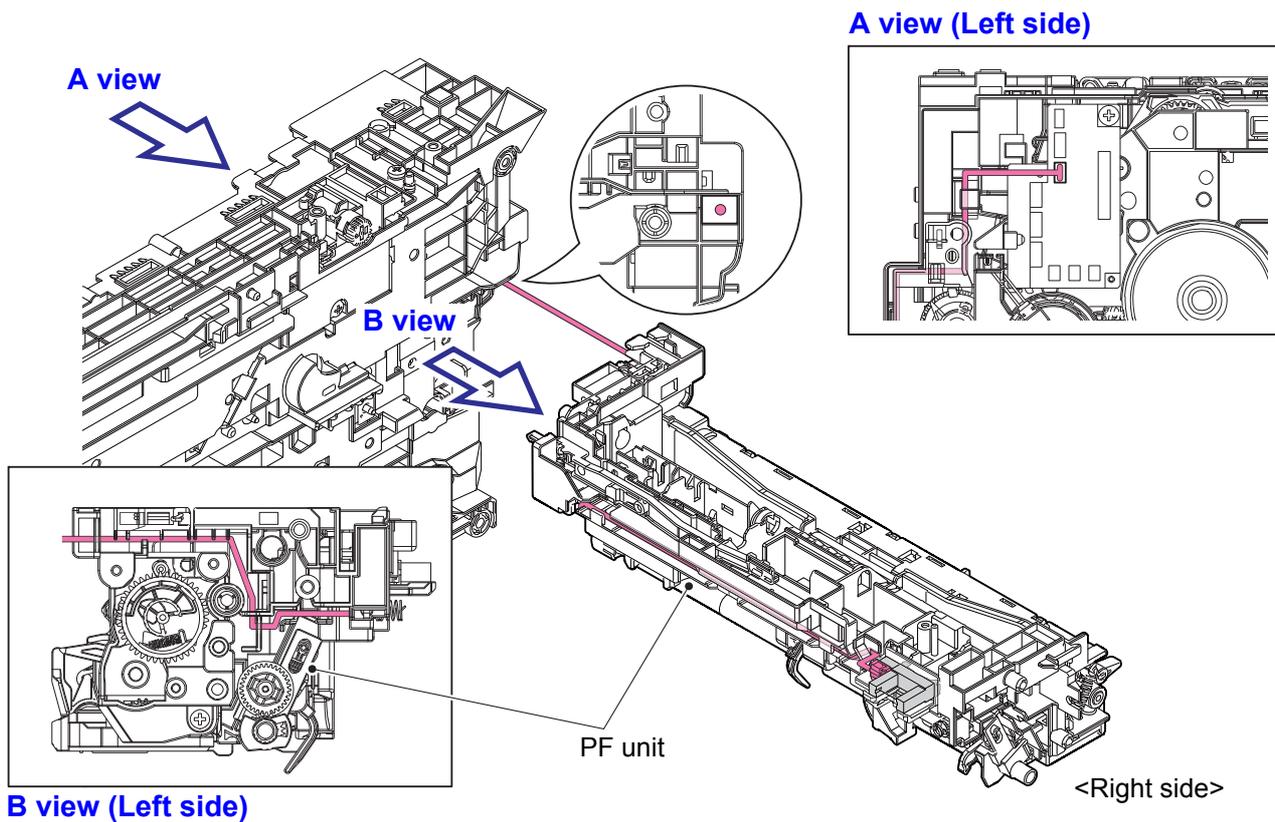
50 T1 PF/PE sensor harness



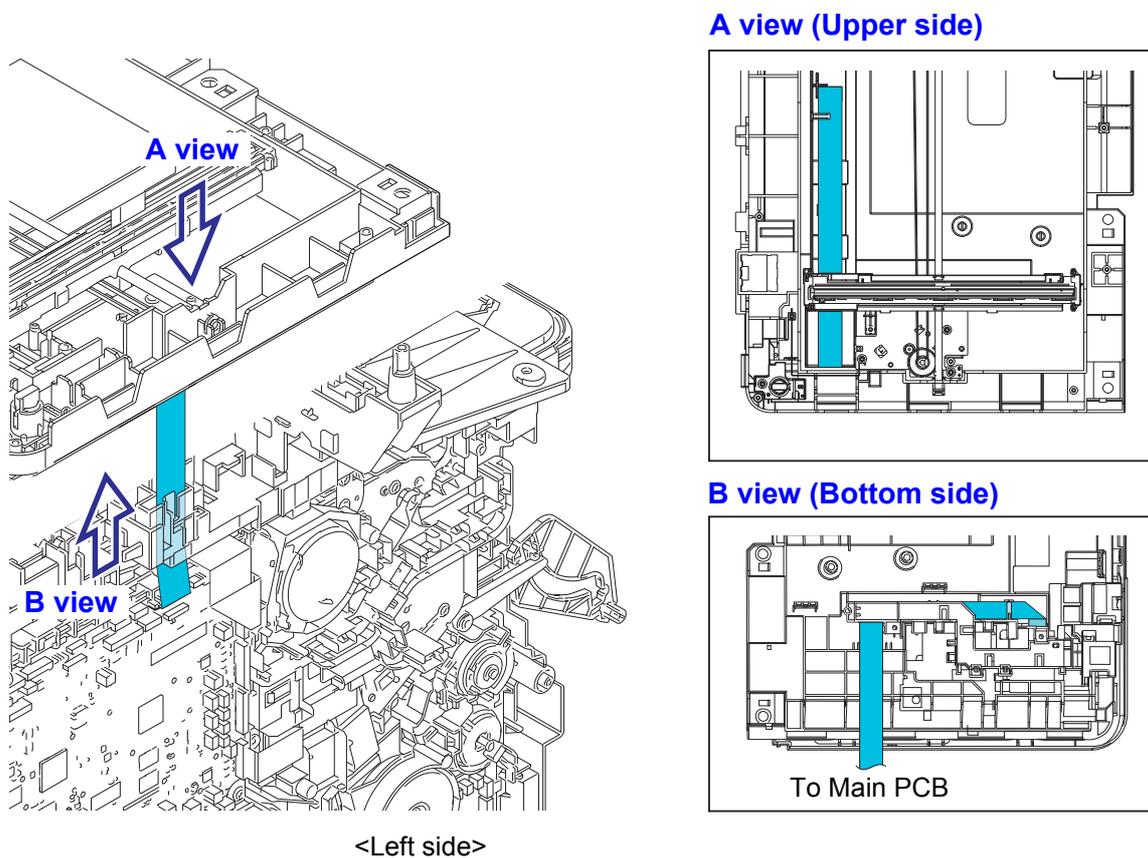
51 USB host PCB harness



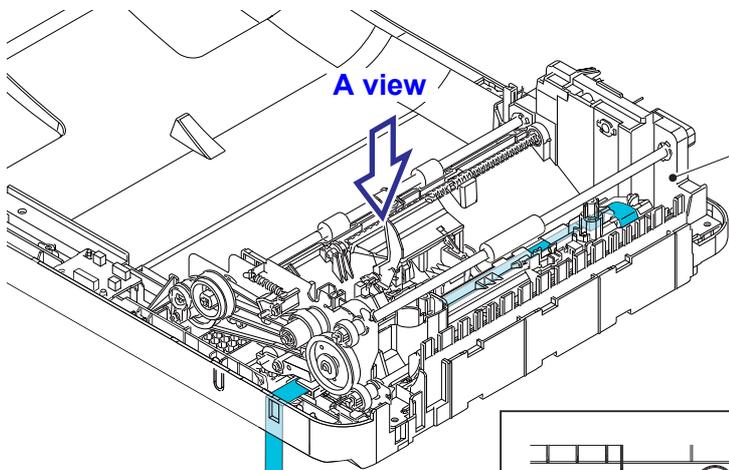
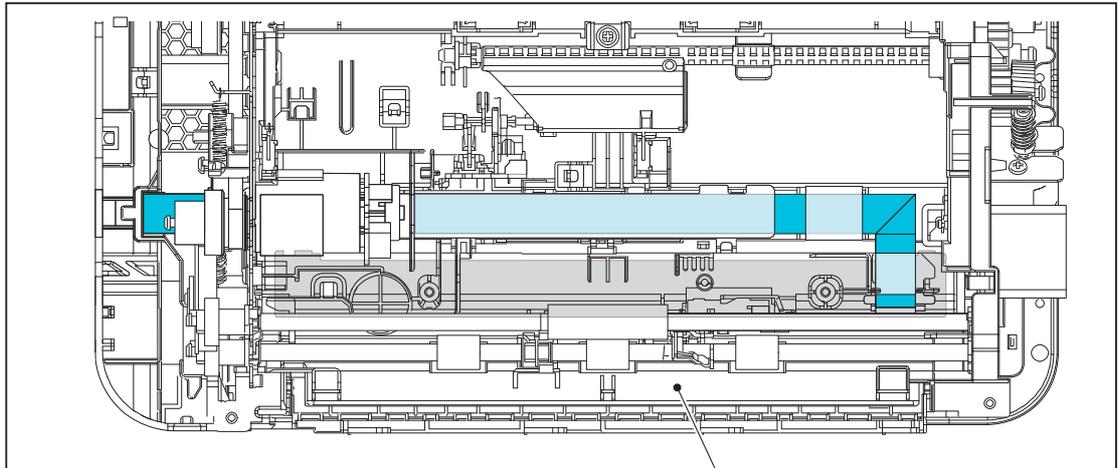
52 Waste toner box sensor harness



53 1st side CIS FFC

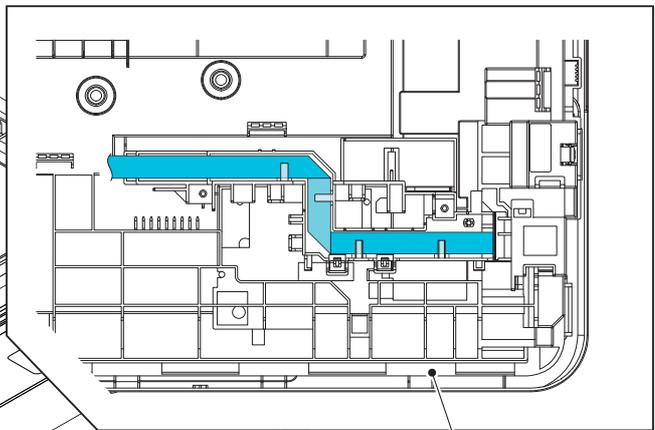


A view (Upper side)



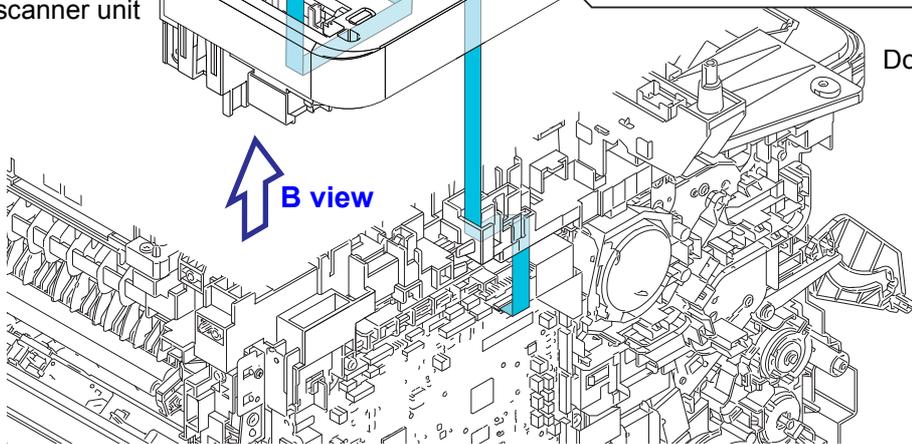
ADF unit

B view (Bottom side)

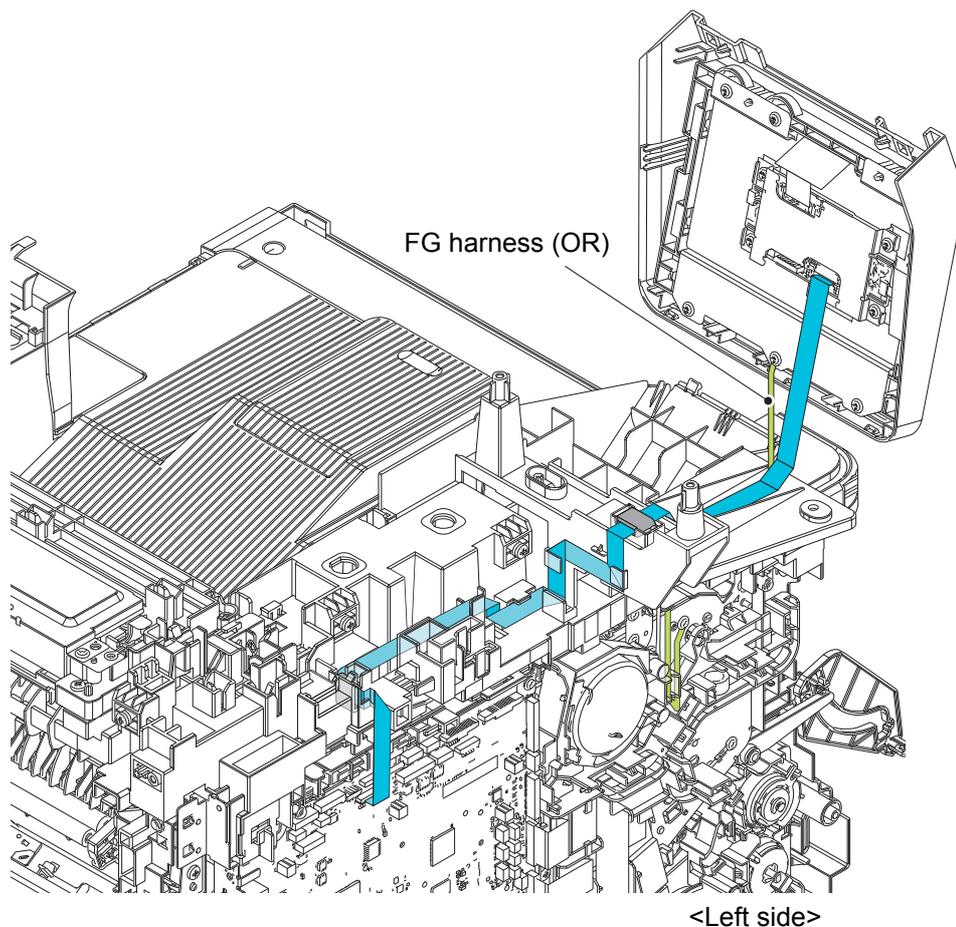


Document scanner unit

Document scanner unit



<Left side>



6. DISASSEMBLY FLOW

Hook (H) / Screw (S) (pcs)

A

ADF cover

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.23 ADF unit
Step number: (1) to (6)
H: 2 / S: 4



7.25 Separation roller
Step number: (1) to (5)
H: 9 / S: 4



7.26 Separation holder ASSY
Step number: (1)
H: 0 / S: 2



7.27 ADF cover
Step number: (1) to (5)
H: 1 / S: 7

ADF unit

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.23 ADF unit
Step number: (1) to (6)
H: 2 / S: 4

ADF unit, Document scanner unit

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13

B

Back cover

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

Back cover sensor harness

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



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



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.48 Back cover sensor harness
Step number: (1) to (3)
H: 2 / S: 0

Back cover stopper arm R, Back cover stopper arm L

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



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

Back cover upper

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.16 Panel unit
Step number: (1), (2), (5)
H: 1 / S: 2



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2

Blower

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



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



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.39 Joint cover ASSY
Step number: (9), (10)
H: 0 / S: 1



7.46 Fan motor 80
Step number: (1)
H: 0 / S: 0



7.47 LVPS fan
Step number: (1)
H: 0 / S: 0



7.48 Back cover sensor harness
Step number: (1)
H: 0 / S: 0



7.49 HVPS PCB
Step number: (1) to (4)
H: 8 / S: 1



7.50 Blower
Step number: (1) to (3)
H: 2 / S: 0

C

CIS sponge

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.23 ADF unit
Step number: (1) to (6)
H: 2 / S: 4



7.25 Separation roller
Step number: (1) to (5)
H: 9 / S: 4



7.26 Separation holder ASSY
Step number: (1)
H: 0 / S: 2



7.27 ADF cover
Step number: (1) to (4)
H: 1 / S: 7



7.32 2nd side CIS unit
Step number: (1) to (8)
H: 0 / S: 0



7.33 CIS sponge
Step number: (1)
H: 0 / S: 0

Cover open trace sensor

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



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



7.55 Cover open trace sensor
Step number: (1) to (5)
H: 5 / S: 2

D

Document front sensor

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.23 ADF unit
Step number: (1) to (6)
H: 2 / S: 4



7.25 Separation roller
Step number: (1) to (5)
H: 9 / S: 4



7.26 Separation holder ASSY
Step number: (1)
H: 0 / S: 2



7.27 ADF cover
Step number: (1) to (4)
H: 1 / S: 7



7.30 Document front sensor
Step number: (1), (2)
H: 1 / S: 0

Document rear sensor

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.23 ADF unit
Step number: (1) to (6)
H: 2 / S: 4



7.25 Separation roller
Step number: (1) to (5)
H: 9 / S: 4



7.26 Separation holder ASSY
Step number: (1)
H: 0 / S: 2



7.27 ADF cover
Step number: (1) to (4)
H: 1 / S: 7



7.31 Document rear sensor
Step number: (1), (2)
H: 1 / S: 0

Document stopper

7.35 Document stopper
Step number: (1)
H: 0 / S: 0

DX sensor PCB

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



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



7.56 PF drive unit
Step number: (1)
H: 0 / S: 0



7.57 DX sensor PCB
Step number: (1) to (5)
H: 0 / S: 3

DX2 unit

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



7.4 Fuser cover
Step number: (1) to (6)
H: 0 / S: 4



7.5 DX2 unit
Step number: (1), (2)
H: 1 / S: 0

E

Eject relay PCB

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



7.4 Fuser cover
Step number: (1) to (6)
H: 0 / S: 4



7.5 DX2 unit
Step number: (1), (2)
H: 1 / S: 0



7.6 Fuser
Step number: (1) to (3)
H: 0 / S: 2



7.63 Eject relay PCB
Step number: (1) to (4)
H: 2 / S: 0

F

F cover arm L

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.13 Front cover ASSY
Step number: (1) to (3)
H: 3 / S: 2



7.14 F cover arm L
Step number: (1)
H: 1 / S: 1

F cover arm R

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.13 Front cover ASSY
Step number: (1) to (3)
H: 3 / S: 2



7.15 F cover arm R
Step number: (1)
H: 0 / S: 1

Fan motor 80

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



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



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.46 Fan motor 80
Step number: (1) to (3)
H: 3 / S: 0

Front cover ASSY

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.10 MP tray ASSY
Step number: (1) to (4)
H: 0 / S: 0



7.11 MP tray cover ASSY
Step number: (1) to (6)
H: 0 / S: 0



7.12 MP link L, MP link R
Step number: (1)
H: 0 / S: 0



7.13 Front cover ASSY
Step number: (1) to (3)
H: 3 / S: 2

Front cover sensor

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.38 7 PNL main FFC harness
Step number: (1)
H: 0 / S: 0



7.39 Joint cover ASSY
Step number: (1) to (11)
H: 8 / S: 17



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



7.54 Front cover sensor
Step number: (1), (2)
H: 2 / S: 0

Fuser

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



7.4 Fuser cover
Step number: (1) to (6)
H: 0 / S: 4



7.5 DX2 unit
Step number: (1), (2)
H: 1 / S: 0



7.6 Fuser
Step number: (1) to (3)
H: 0 / S: 2

Fuser cover

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



7.4 Fuser cover
Step number: (1) to (6)
H: 0 / S: 4

G

Gear fuser M07 1 Z50L 25L



H

Hinge ASSY

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13

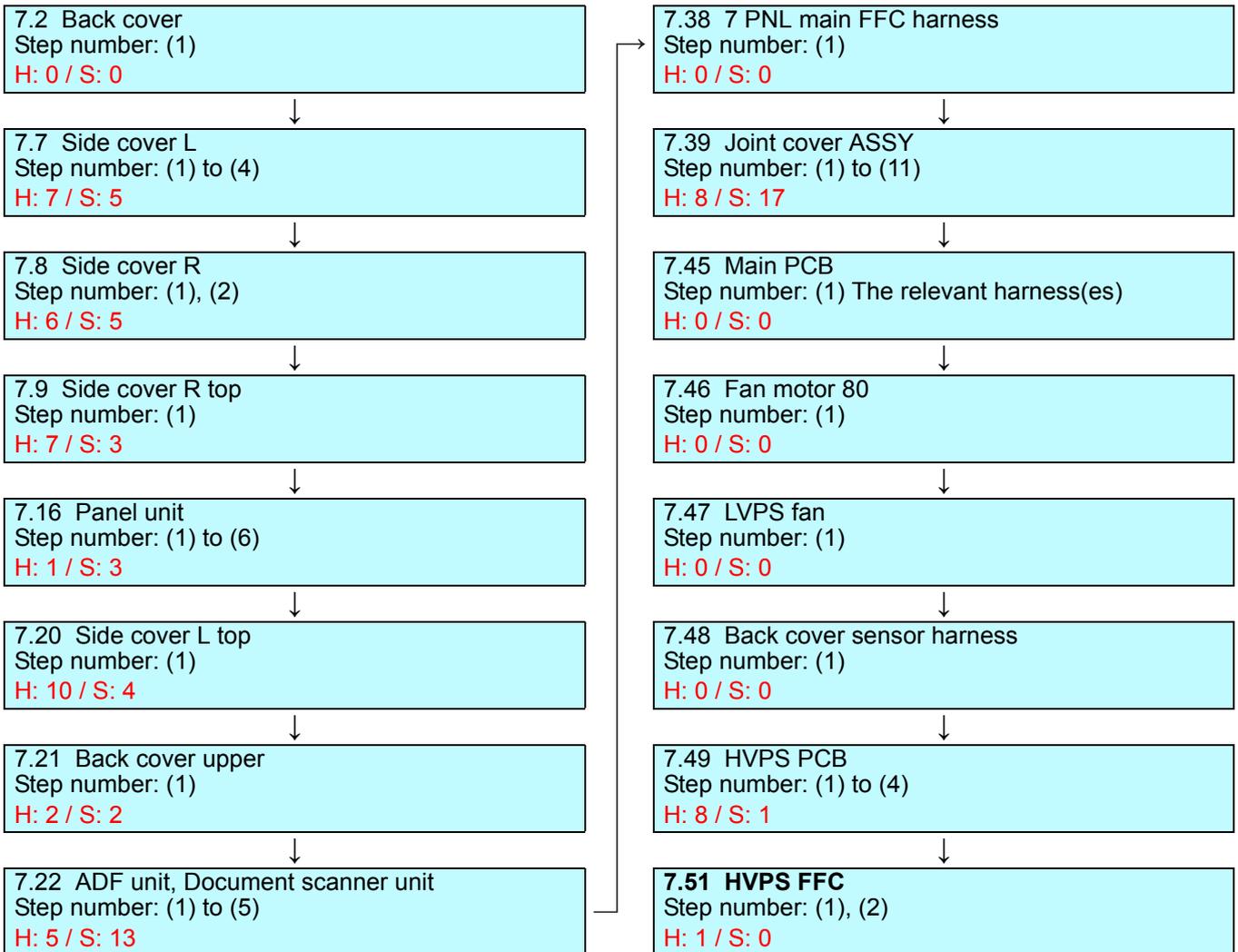


7.23 ADF unit
Step number: (1) to (6)
H: 2 / S: 4



7.24 Hinge ASSY
Step number: (1)
H: 0 / S: 6

HVPS FFC



HVPS PCB

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



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



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.39 Joint cover ASSY
Step number: (9), (10)
H: 0 / S: 1



7.46 Fan motor 80
Step number: (1)
H: 0 / S: 0



7.47 LVPS fan
Step number: (1)
H: 0 / S: 0



7.48 Back cover sensor harness
Step number: (1)
H: 0 / S: 0



7.49 HVPS PCB
Step number: (1) to (4)
H: 8 / S: 1

J

Joint cover ASSY

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.38 7 PNL main FFC harness
Step number: (1) to (3)
H: 1 / S: 0



7.39 Joint cover ASSY
Step number: (1) to (11)
H: 8 / S: 17

Joint pin 2x8

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.13 Front cover ASSY
Step number: (1) to (3)
H: 3 / S: 2



7.14 F cover arm L
Step number: (1)
H: 1 / S: 1



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



7.55 Cover open trace sensor
Step number: (1) to (4)
H: 3 / S: 2



7.56 PF drive unit
Step number: (1) to (15)
H: 2 / S: 6



7.67 PF unit
Step number: (1) to (4)
H: 0 / S: 2



7.68 T1 PF/PE sensor PCB
Step number: (1) to (5)
H: 0 / S: 3

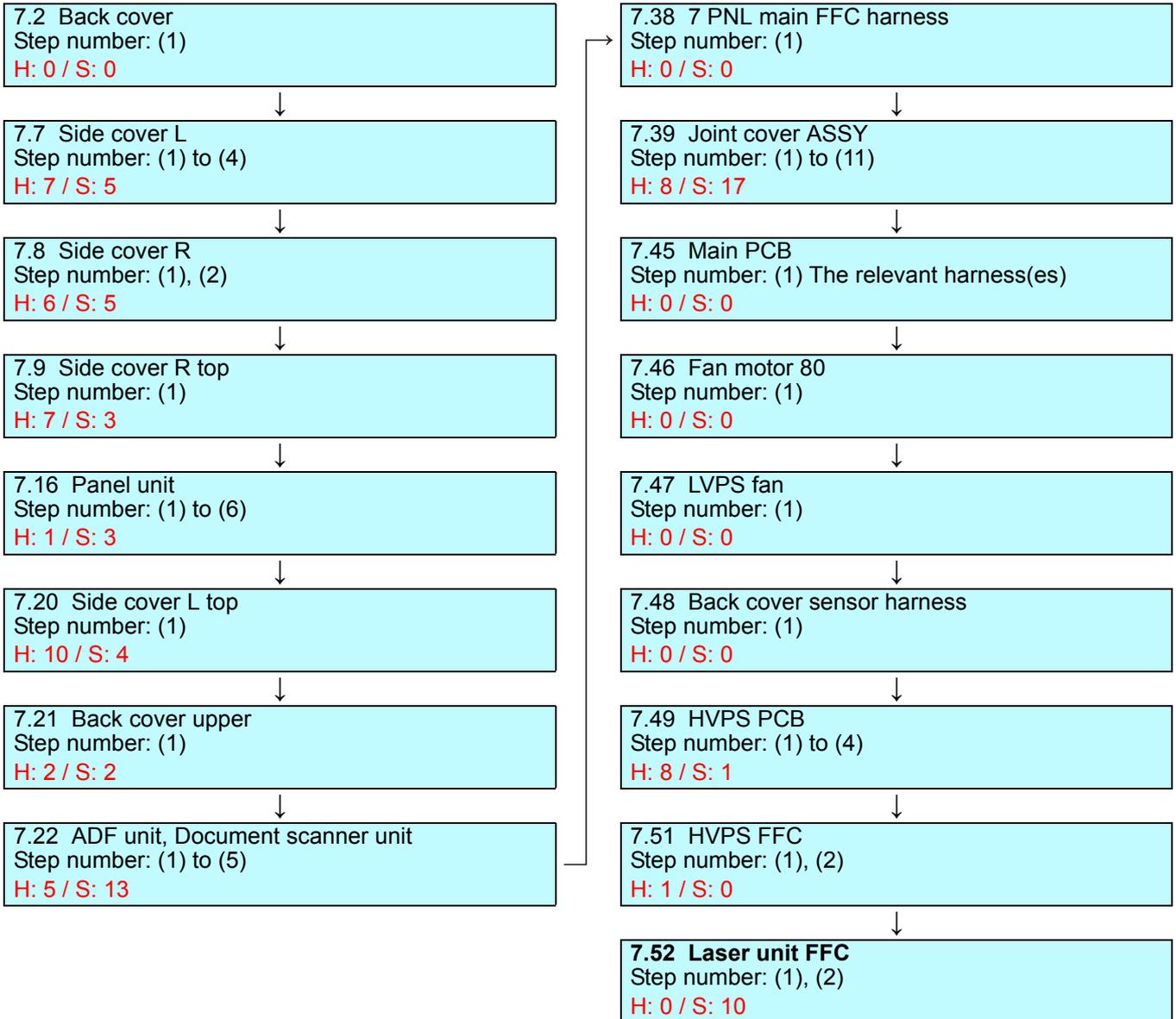


7.69 REG front/rear sensor holder ASSY
Step number: (1), (2)
H: 0 / S: 2



7.70 Joint pin 2x8
Step number: (1) to (12)
H: 4 / S: 5

Laser unit FFC



LCD

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.17 Panel PCB
Step number: (1), (2)
H: 0 / S: 0



7.18 LCD
Step number: (1)
H: 0 / S: 6

LF1 roller ASSY

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.23 ADF unit
Step number: (1) to (6)
H: 2 / S: 4



7.25 Separation roller
Step number: (1) to (5)
H: 9 / S: 4



7.26 Separation holder ASSY
Step number: (1)
H: 0 / S: 2



7.27 ADF cover
Step number: (1) to (4)
H: 1 / S: 7



7.28 LF1 roller ASSY
Step number: (1)
H: 0 / S: 0

LF2 roller ASSY

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.23 ADF unit
Step number: (1) to (6)
H: 2 / S: 4



7.25 Separation roller
Step number: (1) to (5)
H: 9 / S: 4



7.26 Separation holder ASSY
Step number: (1)
H: 0 / S: 2



7.27 ADF cover
Step number: (1) to (4)
H: 1 / S: 7



7.29 LF2 roller ASSY
Step number: (1) to (3)
H: 1 / S: 0

LVPS fan

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



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



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.47 LVPS fan
Step number: (1), (2)
H: 2 / S: 0

LVPS PCB

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



7.4 Fuser cover
Step number: (1) to (6)
H: 0 / S: 4



7.5 DX2 unit
Step number: (1), (2)
H: 1 / S: 0



7.6 Fuser
Step number: (1) to (3)
H: 0 / S: 2



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.47 LVPS fan
Step number: (1), (2)
H: 2 / S: 0



7.65 LVPS PCB
Step number: (1) to (6)
H: 0 / S: 5

M

Main PCB

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.45 Main PCB
Step number: (1) to (3)
H: 0 / S: 6

Middle DX ASSY

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



7.4 Fuser cover
Step number: (1)
H: 0 / S: 2



7.63 Eject relay PCB
Step number: (1)
H: 0 / S: 0



7.64 Middle DX ASSY
Step number: (1), (2)
H: 0 / S: 4

Modem FFC

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.39 Joint cover ASSY
Step number: (6) to (9)
H: 0 / S: 2



7.42 Modem PCB
Step number: (1), (2)
H: 0 / S: 2



7.43 Modem FFC
Step number: (1)
H: 0 / S: 0

Modem PCB

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.39 Joint cover ASSY
Step number: (6) to (9)
H: 0 / S: 2



7.42 Modem PCB
Step number: (1) to (4)
H: 0 / S: 6

MP link L, MP link R

7.10 MP tray ASSY
Step number: (2)
H: 0 / S: 0



7.12 MP link L, MP link R
Step number: (1)
H: 0 / S: 0

MP REG/PE sensor PCB

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.13 Front cover ASSY
Step number: (1) to (3)
H: 3 / S: 2



7.14 F cover arm L
Step number: (1)
H: 1 / S: 1



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



7.55 Cover open trace sensor
Step number: (1) to (4)
H: 3 / S: 2



7.56 PF drive unit
Step number: (1) to (15)
H: 2 / S: 6



7.67 PF unit
Step number: (1) to (4)
H: 0 / S: 2



7.68 T1 PF/PE sensor PCB
Step number: (1) to (5)
H: 0 / S: 3



7.69 REG front/rear sensor holder ASSY
Step number: (1), (2)
H: 0 / S: 2



7.70 Joint pin 2x8
Step number: (1) to (5)
H: 0 / S: 5



7.71 MP REG/PE sensor PCB
Step number: (1) to (4)
H: 8 / S: 4

MP tray ASSY

7.10 MP tray ASSY
Step number: (2) to (4)
H: 0 / S: 0

MP tray cover ASSY

7.10 MP tray ASSY
Step number: (2) to (4)
H: 0 / S: 0



7.11 MP tray cover ASSY
Step number: (1) to (6)
H: 0 / S: 0

N

NFC PCB

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.38 7 PNL main FFC harness
Step number: (1) to (3)
H: 1 / S: 0



7.39 Joint cover ASSY
Step number: (1) to (11)
H: 8 / S: 17



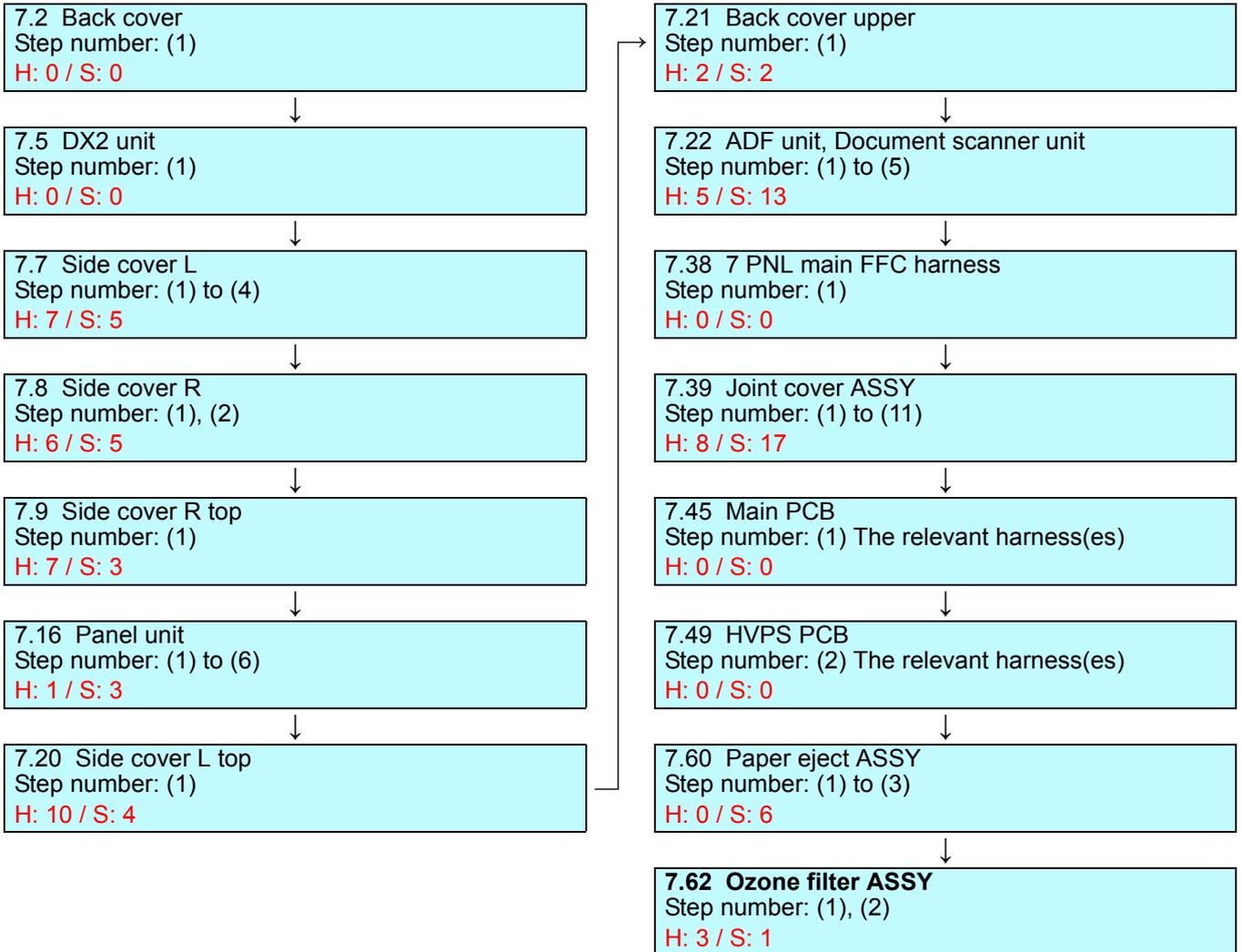
7.40 USB host PCB
Step number: (1) to (7)
H: 4 / S: 6



7.41 NFC PCB
Step number: (1)
H: 1 / S: 0

O

Ozone filter ASSY



P

Panel PCB

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.17 Panel PCB
Step number: (1) to (3)
H: 0 / S: 4

Panel unit

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3

Paper eject ASSY

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



7.5 DX2 unit
Step number: (1)
H: 0 / S: 0



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.38 7 PNL main FFC harness
Step number: (1)
H: 0 / S: 0



7.39 Joint cover ASSY
Step number: (1) to (11)
H: 8 / S: 17



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



7.49 HVPS PCB
Step number: (2) The relevant harness(es)
H: 0 / S: 0



7.60 Paper eject ASSY
Step number: (1) to (3)
H: 0 / S: 6

PF drive unit

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.13 Front cover ASSY
Step number: (1) to (3)
H: 3 / S: 2



7.14 F cover arm L
Step number: (1)
H: 1 / S: 1



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



7.56 PF drive unit
Step number: (1) to (15)
H: 2 / S: 6

PF unit

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.13 Front cover ASSY
Step number: (1) to (3)
H: 3 / S: 2



7.14 F cover arm L
Step number: (1)
H: 1 / S: 1



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



7.55 Cover open trace sensor
Step number: (1) to (4)
H: 3 / S: 2

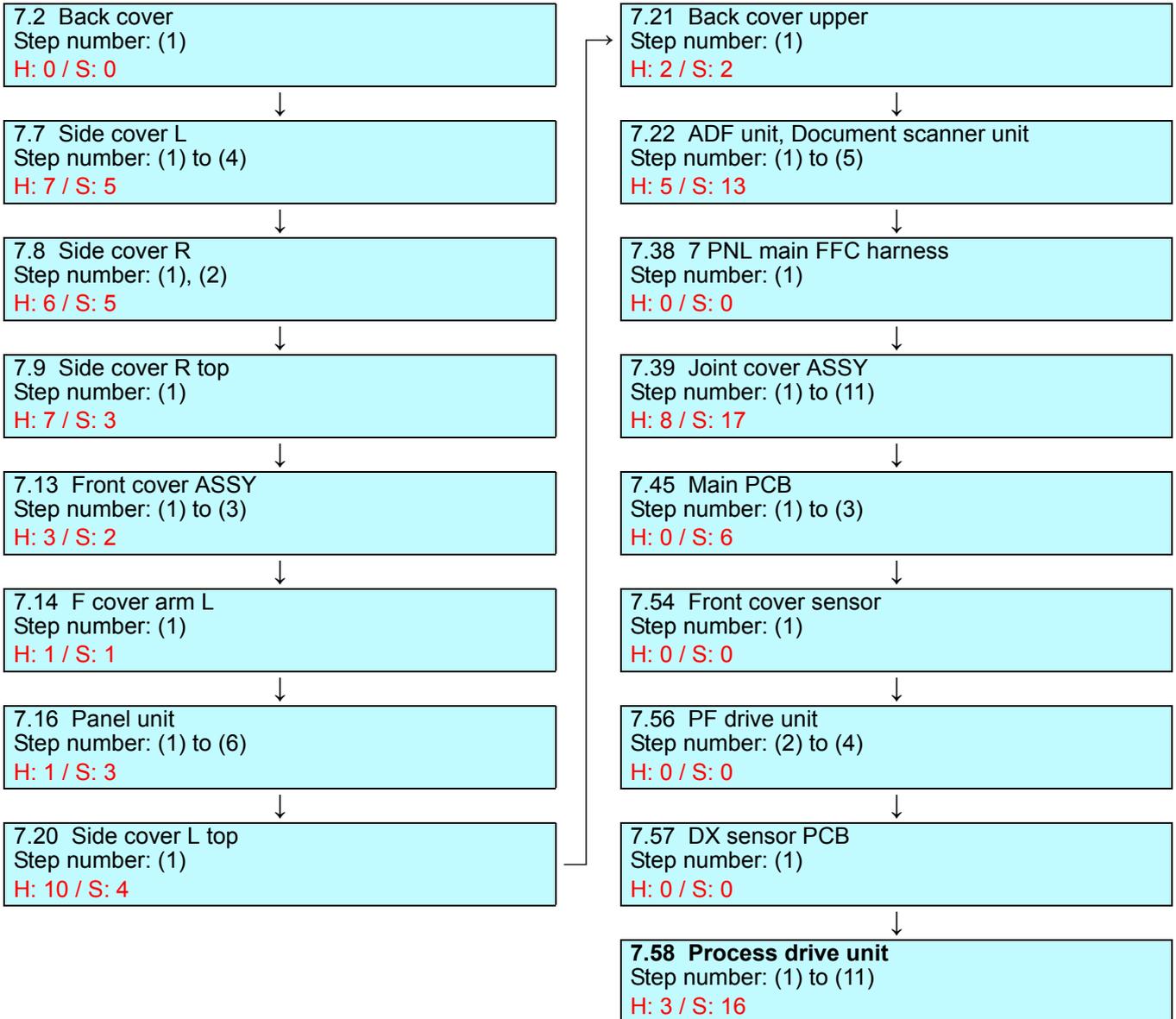


7.56 PF drive unit
Step number: (1) to (15)
H: 2 / S: 6



7.67 PF unit
Step number: (1) to (4)
H: 0 / S: 2

Process drive unit



R

REG front/rear sensor holder ASSY

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.13 Front cover ASSY
Step number: (1) to (3)
H: 3 / S: 2



7.14 F cover arm L
Step number: (1)
H: 1 / S: 1



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



7.55 Cover open trace sensor
Step number: (1) to (4)
H: 3 / S: 2



7.56 PF drive unit
Step number: (1) to (15)
H: 2 / S: 6



7.67 PF unit
Step number: (1) to (4)
H: 0 / S: 2



7.68 T1 PF/PE sensor PCB
Step number: (1) to (5)
H: 0 / S: 3



7.69 REG front/rear sensor holder ASSY
Step number: (1), (2)
H: 0 / S: 2

REG mark sensor ASSY



S

Separation holder ASSY

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.23 ADF unit
Step number: (1) to (6)
H: 2 / S: 4



7.25 Separation roller
Step number: (1) to (5)
H: 9 / S: 4



7.26 Separation holder ASSY
Step number: (1)
H: 0 / S: 2

Separation roller

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.23 ADF unit
Step number: (1) to (6)
H: 2 / S: 4



7.25 Separation roller
Step number: (1) to (5)
H: 9 / S: 4

Side cover L

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5

Side cover L top

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.16 Panel unit
Step number: (1), (2), (5)
H: 1 / S: 2



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4

Side cover R

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



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



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5

Side cover R top

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



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



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3

Speaker

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



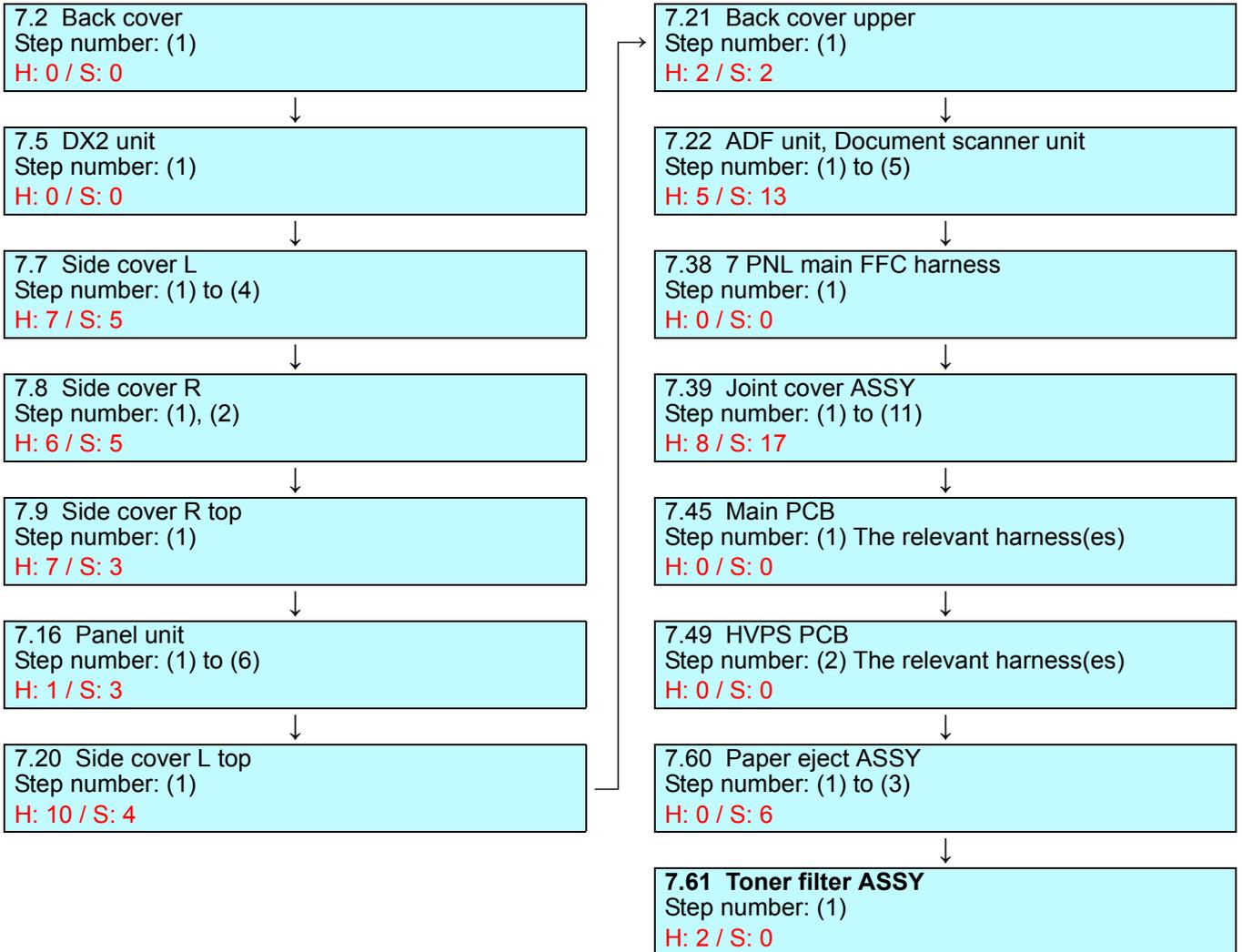
7.39 Joint cover ASSY
Step number: (7) The relevant harness(es)
H: 0 / S: 0



7.44 Speaker
Step number: (1) to (3)
H: 1 / S: 0

T

Toner filter ASSY



Touch panel, Panel cover

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.17 Panel PCB
Step number: (1), (2)
H: 0 / S: 0



7.18 LCD
Step number: (1)
H: 0 / S: 6



7.19 Touch panel, Panel cover
Step number: (1)
H: 0 / S: 0

T1 PF/PE sensor PCB

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.13 Front cover ASSY
Step number: (1) to (3)
H: 3 / S: 2



7.14 F cover arm L
Step number: (1)
H: 1 / S: 1



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



7.55 Cover open trace sensor
Step number: (1) to (4)
H: 3 / S: 2



7.56 PF drive unit
Step number: (1) to (15)
H: 2 / S: 6



7.67 PF unit
Step number: (1) to (4)
H: 0 / S: 2



7.68 T1 PF/PE sensor PCB
Step number: (1) to (11)
H: 9 / S: 3

U

USB host PCB

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.38 7 PNL main FFC harness
Step number: (1) to (3)
H: 1 / S: 0



7.39 Joint cover ASSY
Step number: (1) to (11)
H: 8 / S: 17



7.40 USB host PCB
Step number: (1) to (7)
H: 4 / S: 6

1

1st side CIS FFC

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.23 ADF unit
Step number: (1) to (6)
H: 2 / S: 4



7.25 Separation roller
Step number: (1) to (5)
H: 9 / S: 4



7.26 Separation holder ASSY
Step number: (1)
H: 0 / S: 2



7.27 ADF cover
Step number: (1) to (4)
H: 1 / S: 7



7.36 1st side CIS unit
Step number: (1) to (4)
H: 2 / S: 8



7.37 1st side CIS FFC
Step number: (1)
H: 0 / S: 0

2

1st side CIS unit

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.23 ADF unit
Step number: (1) to (6)
H: 2 / S: 4



7.25 Separation roller
Step number: (1) to (5)
H: 9 / S: 4



7.26 Separation holder ASSY
Step number: (1)
H: 0 / S: 2



7.27 ADF cover
Step number: (1) to (4)
H: 1 / S: 7



7.36 1st side CIS unit
Step number: (1) to (4)
H: 2 / S: 8

2nd side CIS FFC

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.23 ADF unit
Step number: (1) to (6)
H: 2 / S: 4



7.25 Separation roller
Step number: (1) to (5)
H: 9 / S: 4



7.26 Separation holder ASSY
Step number: (1)
H: 0 / S: 2



7.27 ADF cover
Step number: (1) to (4)
H: 1 / S: 7



7.32 2nd side CIS unit
Step number: (1) to (5)
H: 0 / S: 0



7.34 2nd side CIS FFC
Step number: (1) to (7)
H: 1 / S: 5

7

2nd side CIS unit

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.23 ADF unit
Step number: (1) to (6)
H: 2 / S: 4



7.25 Separation roller
Step number: (1) to (5)
H: 9 / S: 4



7.26 Separation holder ASSY
Step number: (1)
H: 0 / S: 2



7.27 ADF cover
Step number: (1) to (4)
H: 1 / S: 7



7.32 2nd side CIS unit
Step number: (1) to (8)
H: 0 / S: 0

7 PNL main FFC harness

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



7.7 Side cover L
Step number: (1) to (4)
H: 7 / S: 5



7.8 Side cover R
Step number: (1), (2)
H: 6 / S: 5



7.9 Side cover R top
Step number: (1)
H: 7 / S: 3



7.16 Panel unit
Step number: (1) to (6)
H: 1 / S: 3



7.20 Side cover L top
Step number: (1)
H: 10 / S: 4



7.21 Back cover upper
Step number: (1)
H: 2 / S: 2



7.22 ADF unit, Document scanner unit
Step number: (1) to (5)
H: 5 / S: 13



7.38 7 PNL main FFC harness
Step number: (1) to (3)
H: 1 / S: 0

7. DISASSEMBLY PROCEDURE

7.1 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 drive, if connected,
Line cord, if connected.
- (2) **Remove** > Toner cartridge,
Drum unit,
Belt unit,
Waste toner box,
Paper tray unit,
DX tray,
LAN port cap,
EXT cap,
WLAN module (NC-9000W) (Only for wireless network models)

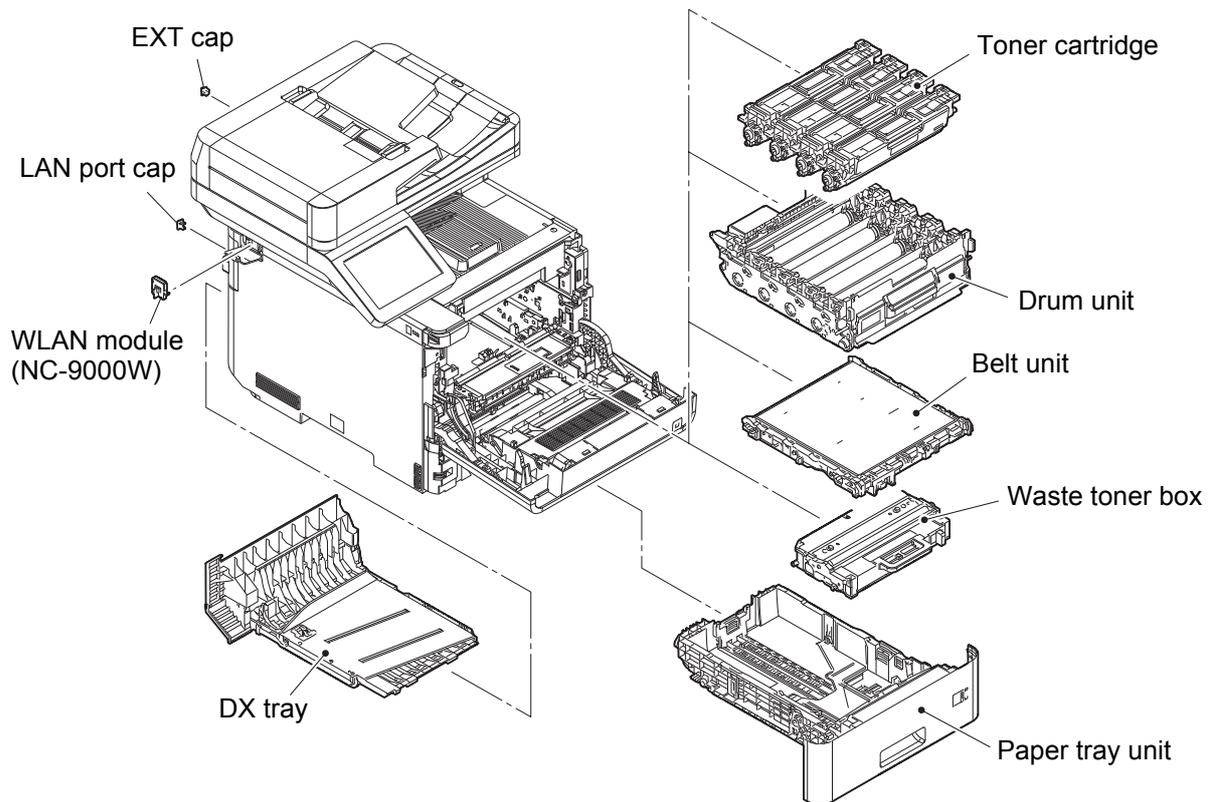


Fig. 3-1

7.2 Back cover

(1) Open > Back cover

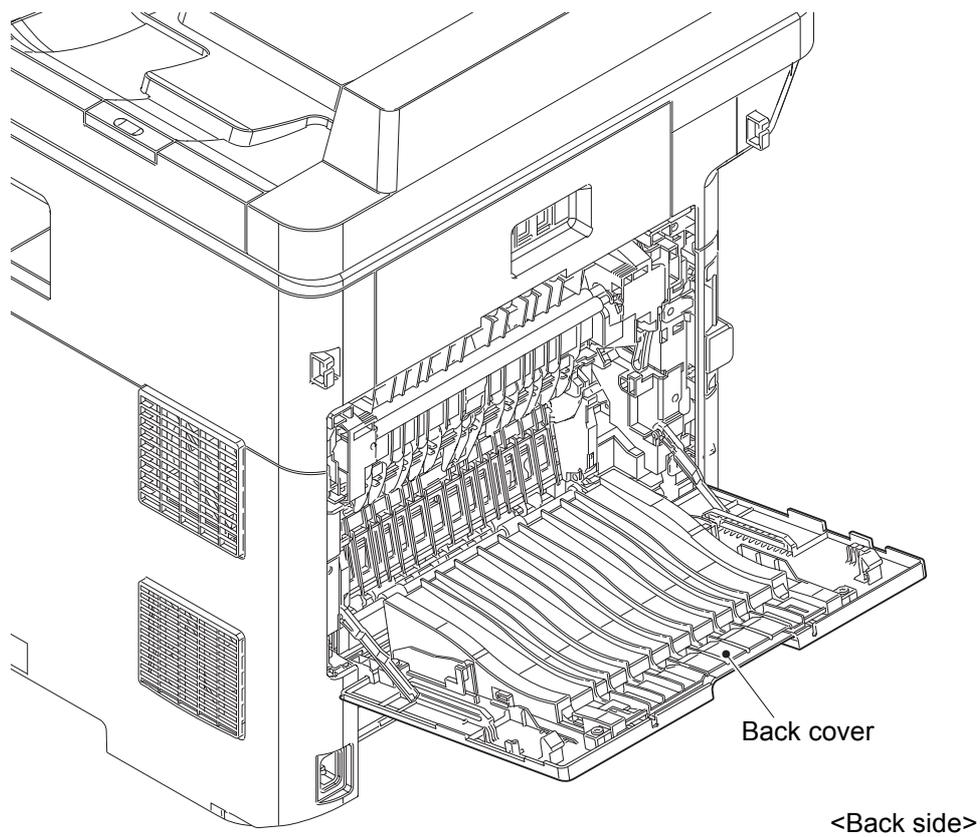


Fig. 3-2

(2) **Release** > Back cover stopper arm R, Back cover stopper arm L

 **Fixtures & Fittings**

- Hook of the Back cover stopper arm R
- Hook of the Back cover stopper arm L

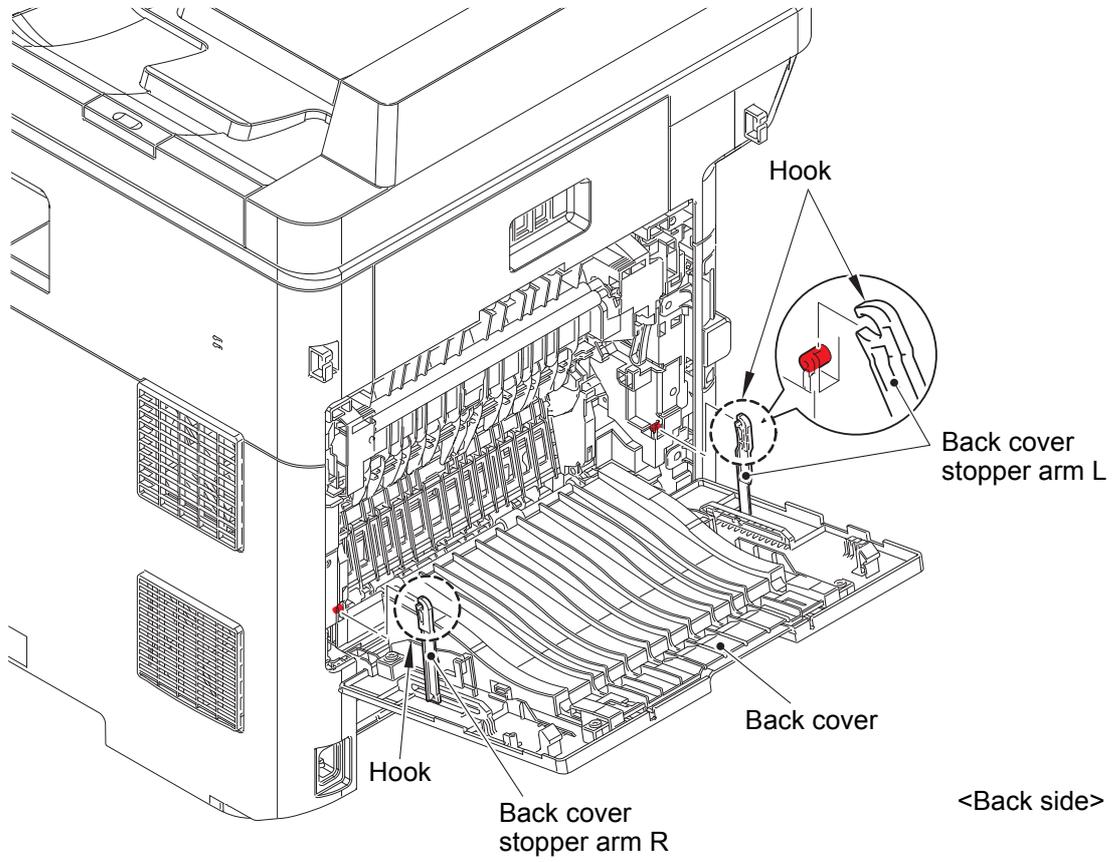


Fig. 3-3

(3) **Remove** > Back cover

 **Point:**
• Remove the Back cover in the order of the arrows.

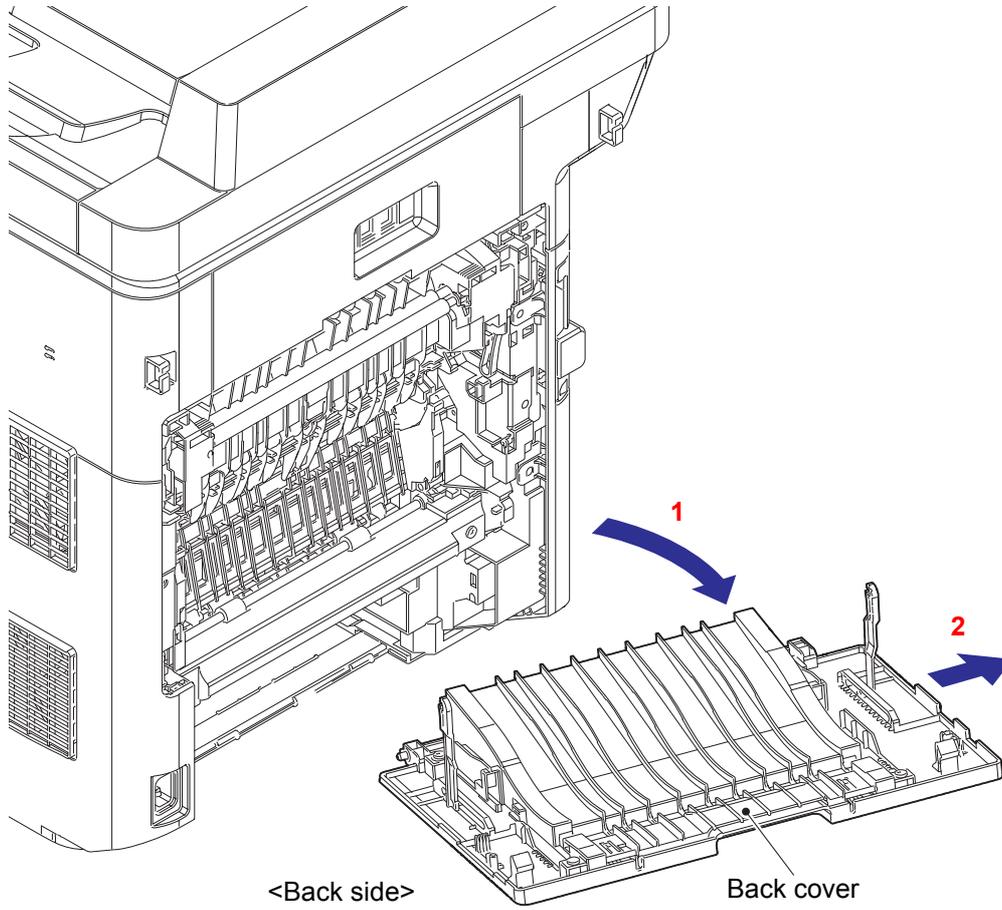


Fig. 3-4

7.3 Back cover stopper arm R, Back cover stopper arm L

(1) **Remove** > Back cover stopper arm R, Back cover stopper arm L

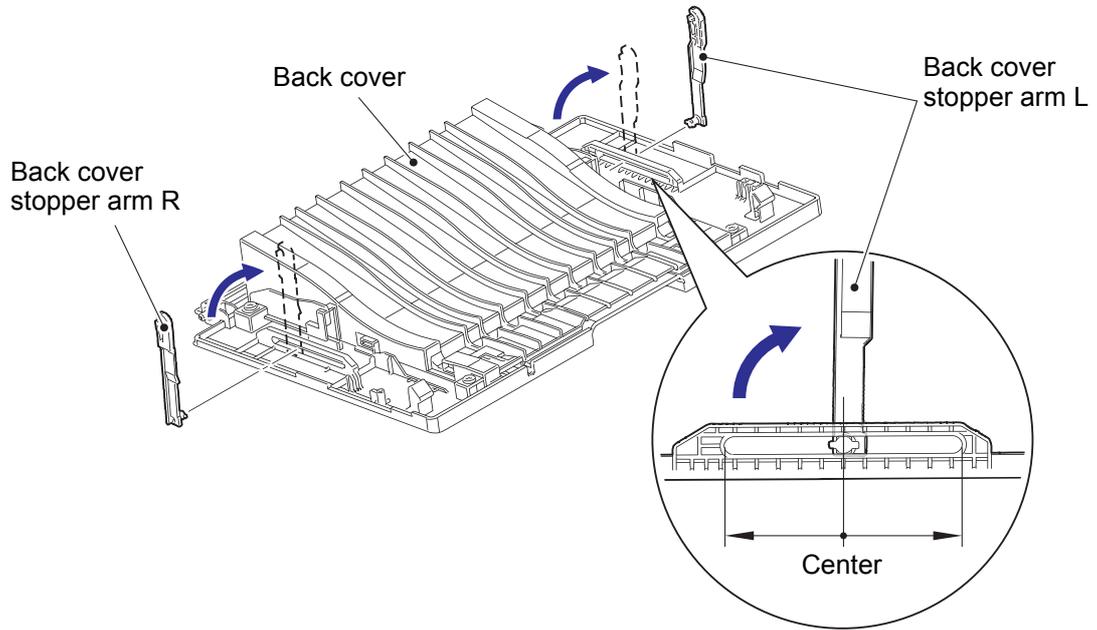


Fig. 3-5

7.4 Fuser cover

(1) **Remove** > Fuser cover L

-  **Fixtures & Fittings**
 - Taptite bind B M4x12 (x 2)

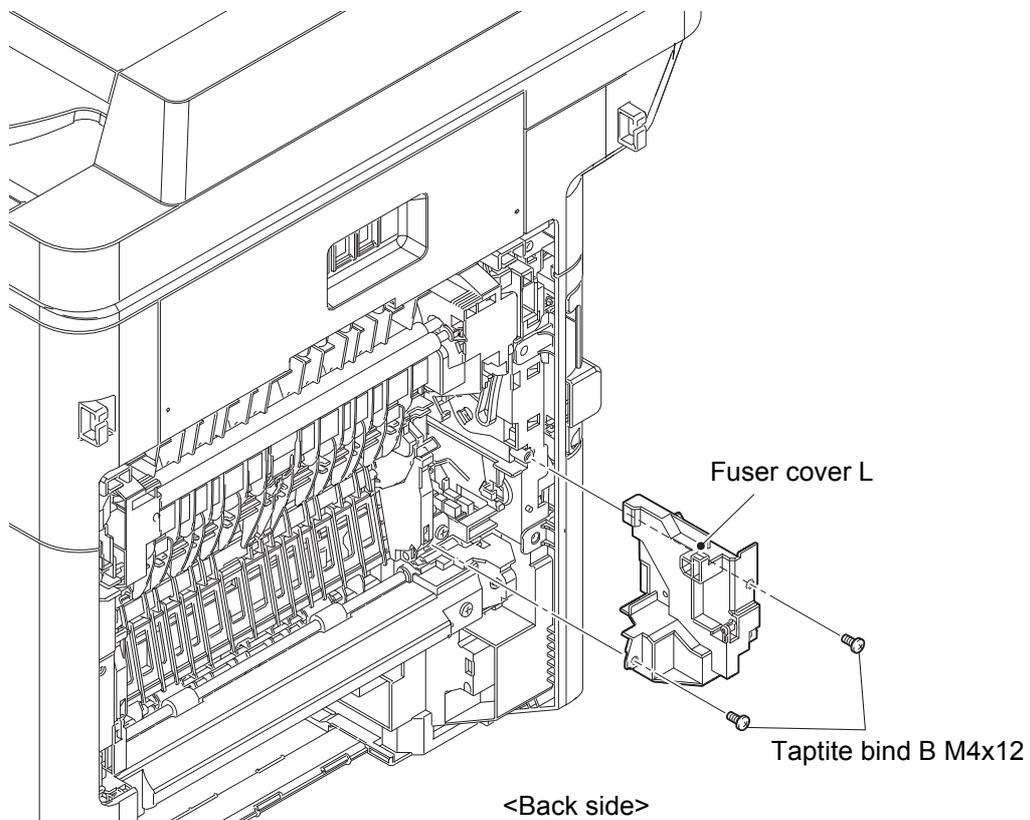


Fig. 3-6

(2) **Remove** > Fuser cover R

Fixtures & Fittings

- Taptite bind B M4x12 (x 2)

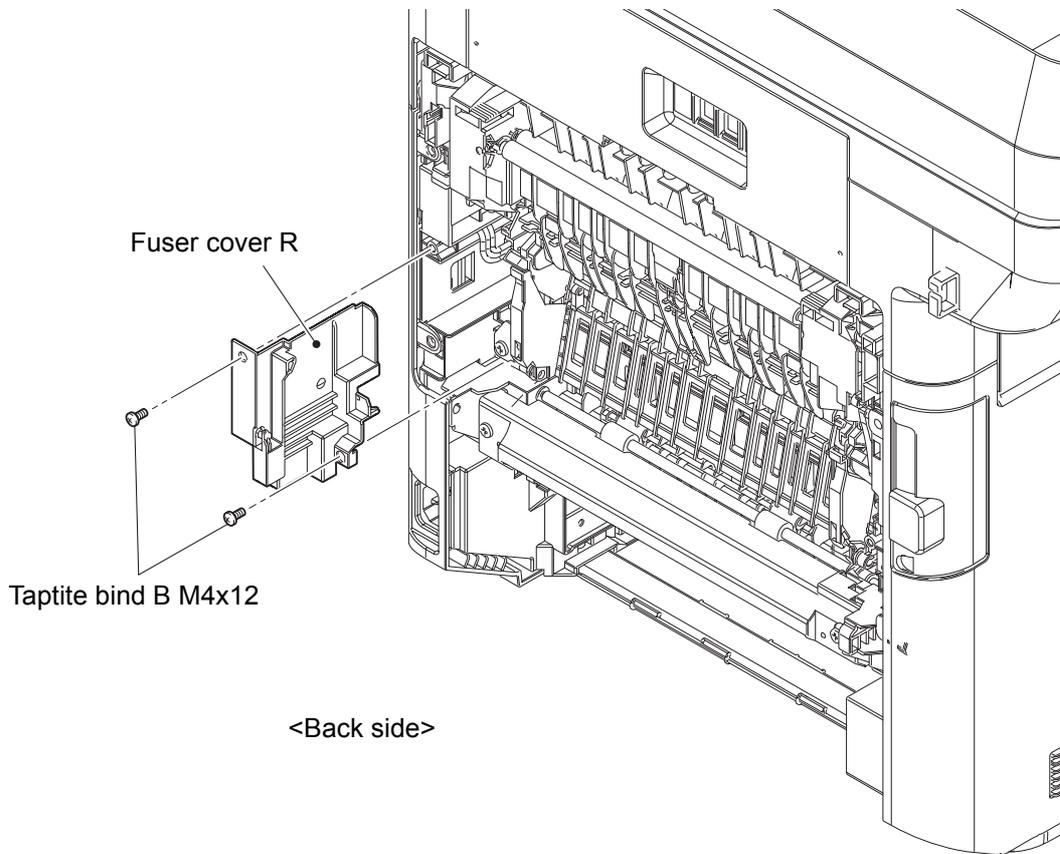


Fig. 3-7

(3) **Remove** > DX flapper ASSY

 **Fixtures & Fittings**
- Boss (x 2)

(4) **Remove** > Spring DX flapper holder L, Spring DX flapper holder R

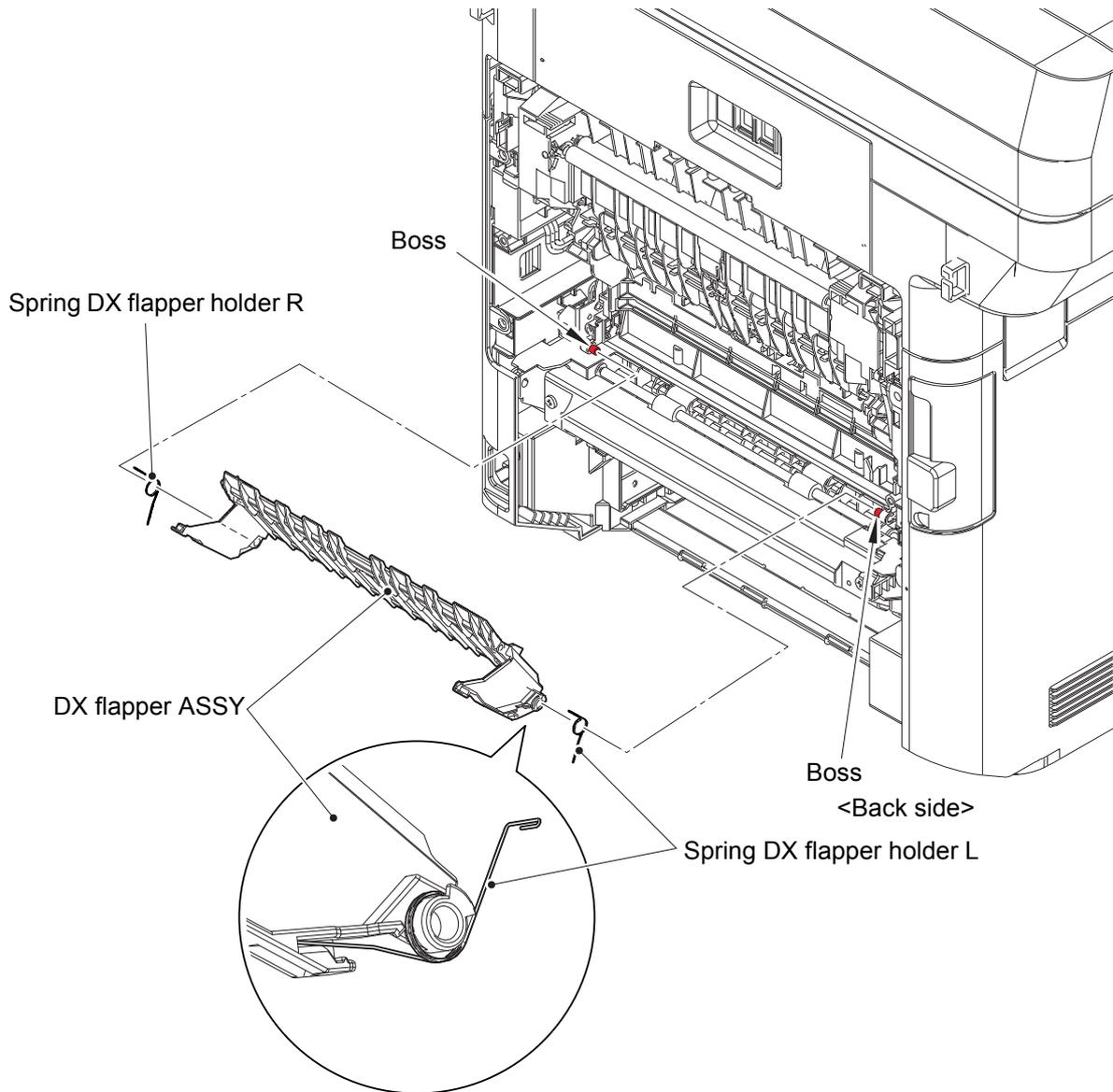


Fig. 3-8



Assembling note:

- Apply the Spring DX flapper holder L/R as shown in the figure above.

(5) **Open** > Fuser cover

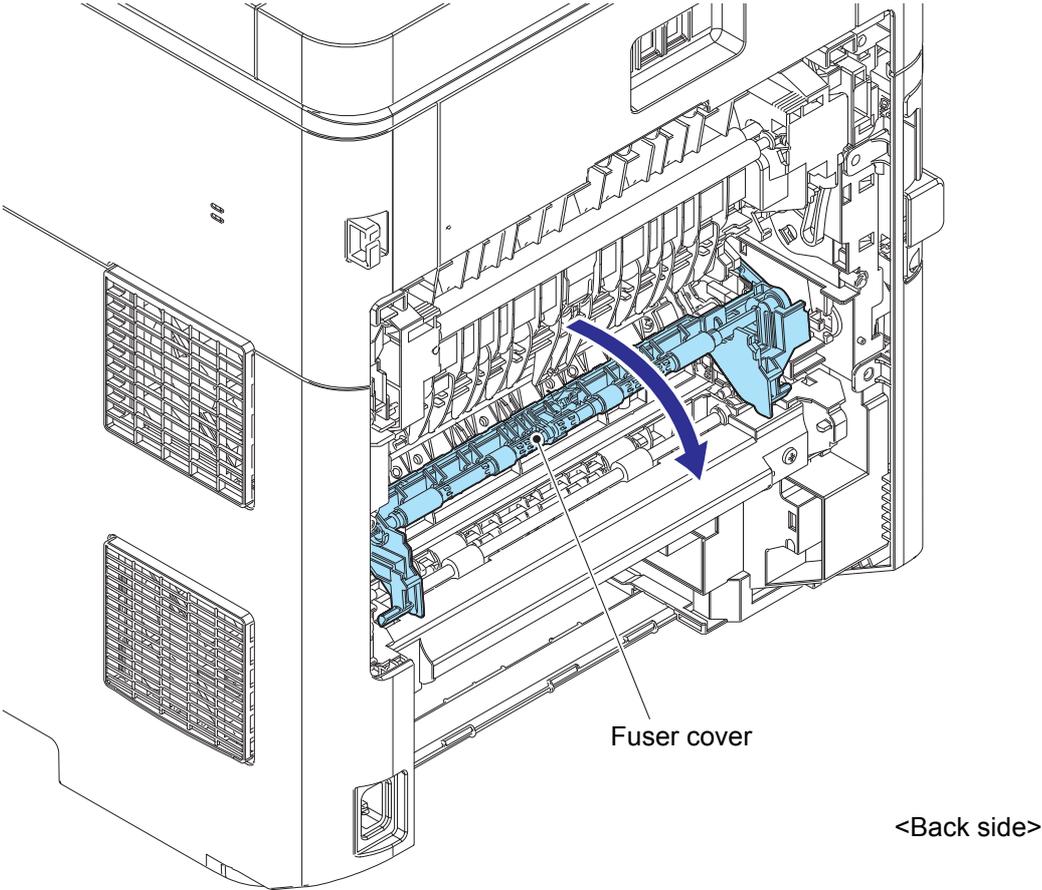


Fig. 3-9

(6) **Remove** > Fuser cover



Point:

- Remove the Fuser cover in the order of the arrows.

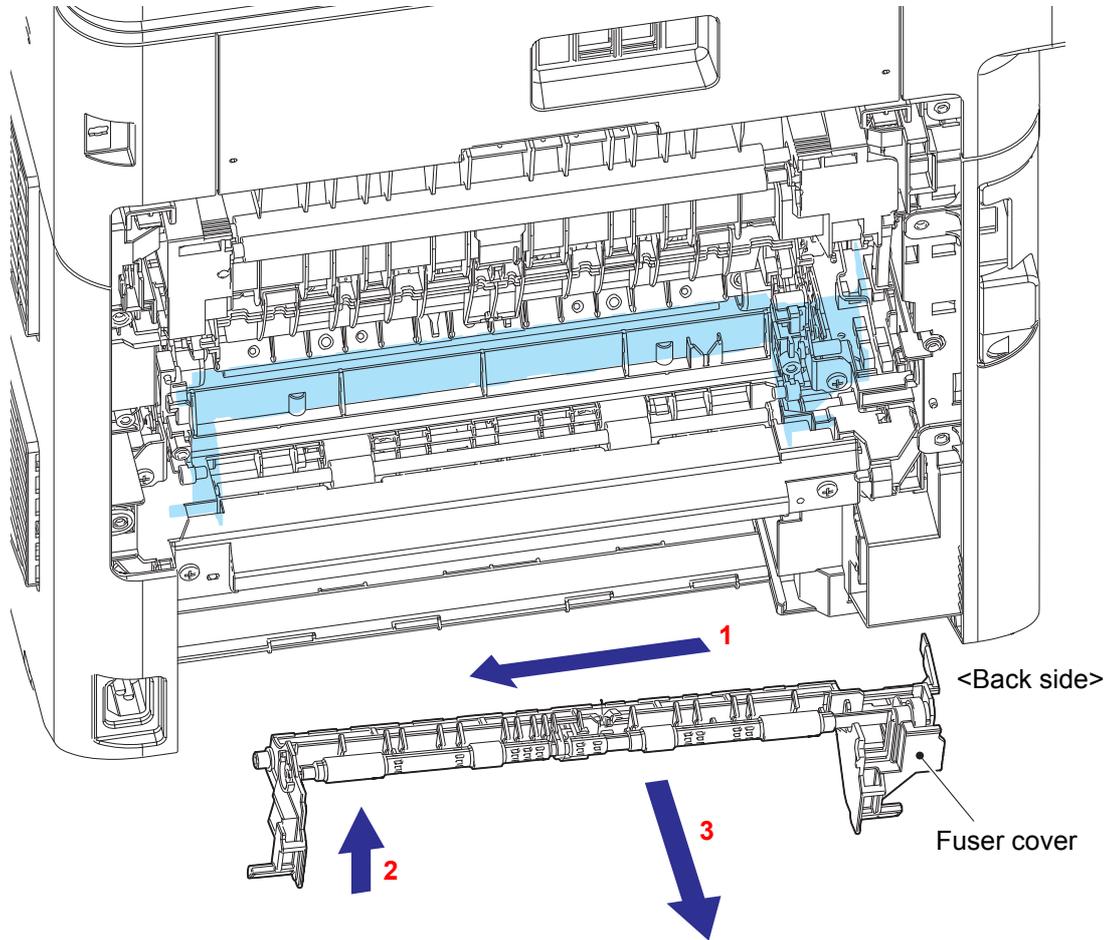


Fig. 3-10

7.5 DX2 unit

(1) Open > DX2 unit

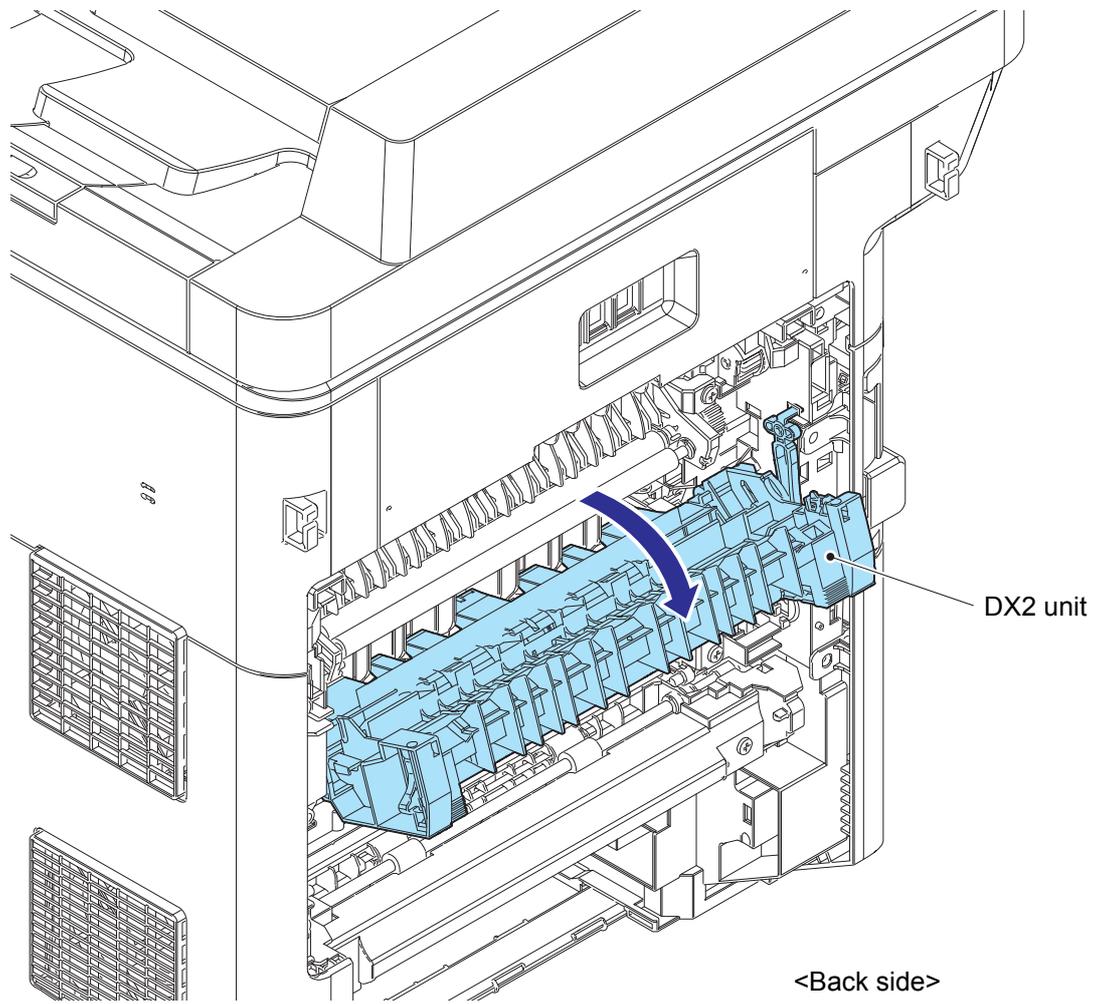


Fig. 3-11

(2) **Remove** > DX2 unit

 **Fixtures & Fittings**

- Hook of the DX2 hold arm (x 1)

 **Point:**

- Remove the DX2 unit in the order of the arrows.

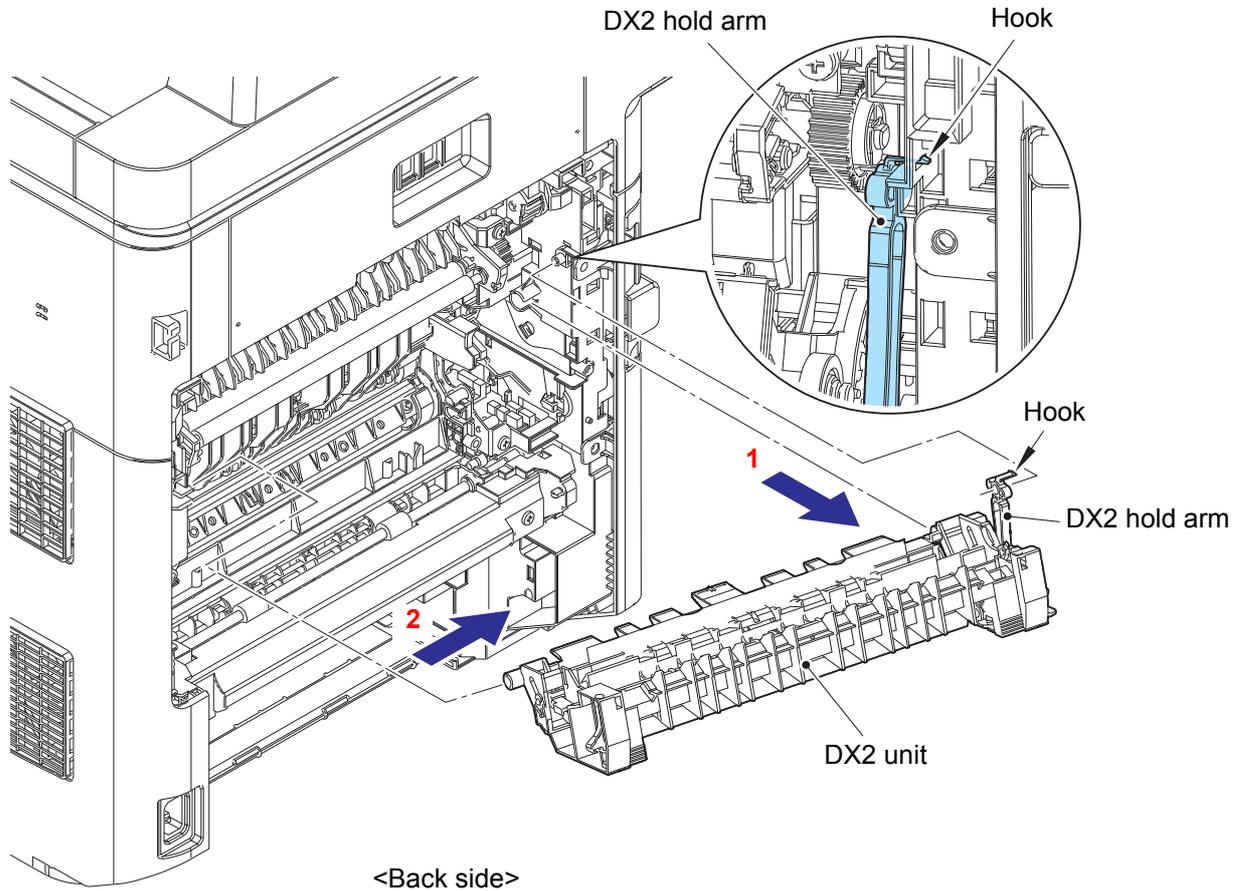
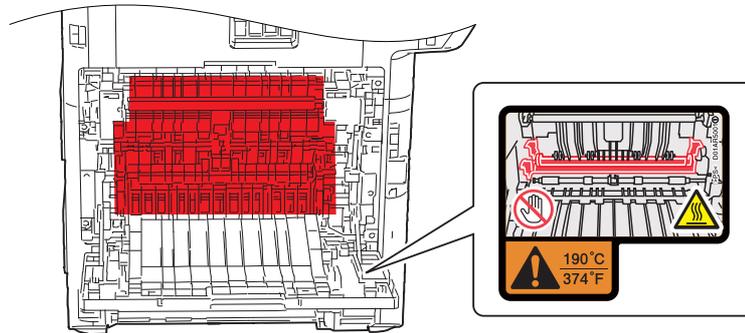


Fig. 3-12

7.6 Fuser

WARNING

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



(1) Disconnect > Fuser heater harness

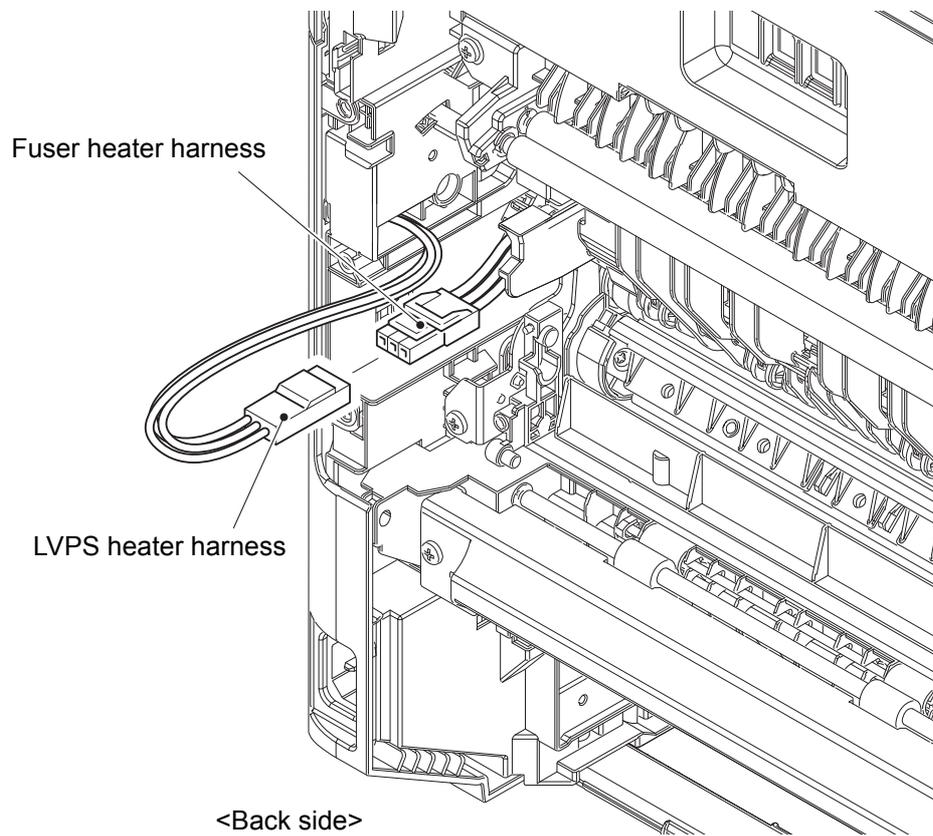


Fig. 3-13



Note:

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

- (2) **Disconnect** > Nip release sensor harness, Center thermistor harness, Side thermistor harness

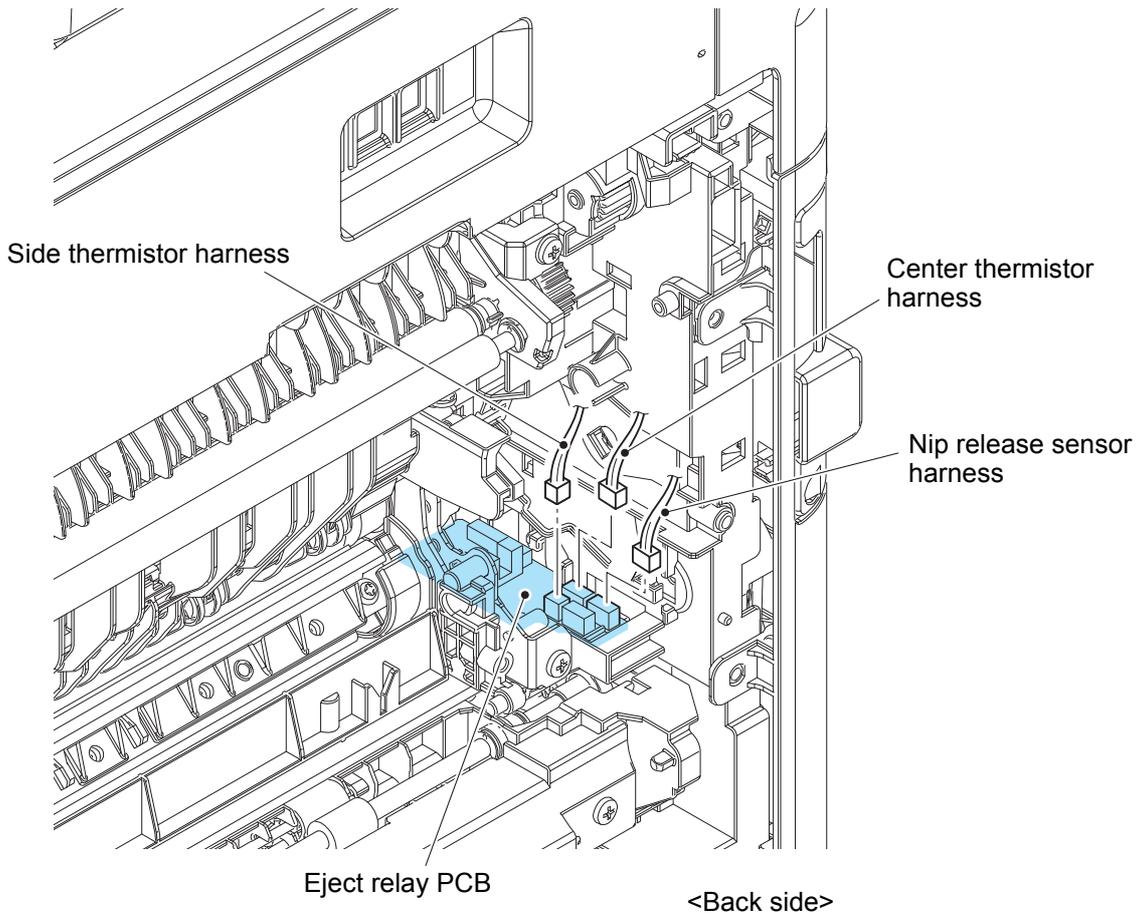


Fig. 3-14

(3) **Remove** > Fuser

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 2)

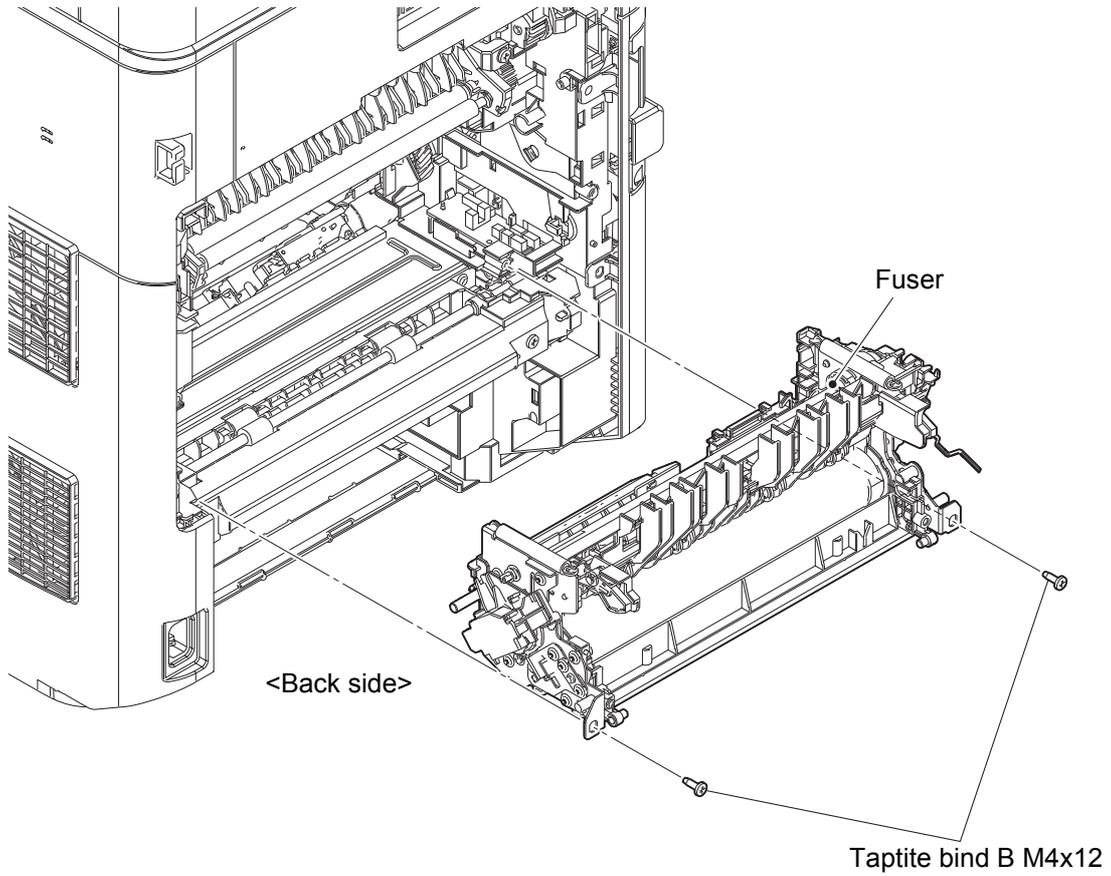


Fig. 3-15



Note:

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

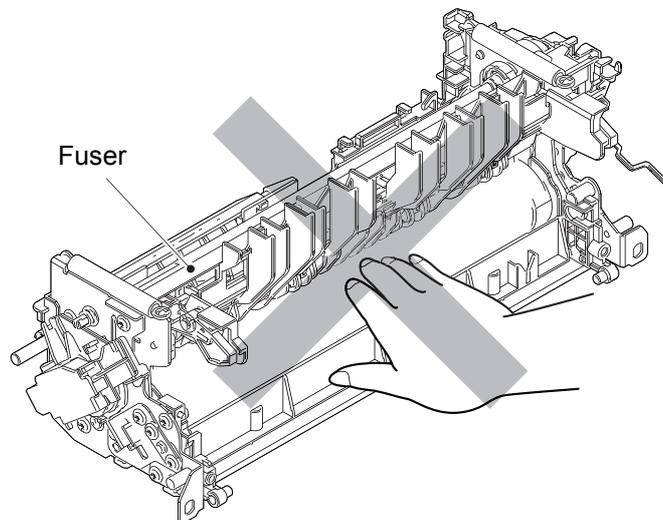


Fig. 3-16

7.7 Side cover L

- (1) **Open** > Front cover ASSY
- (2) **Open** > WLAN cover

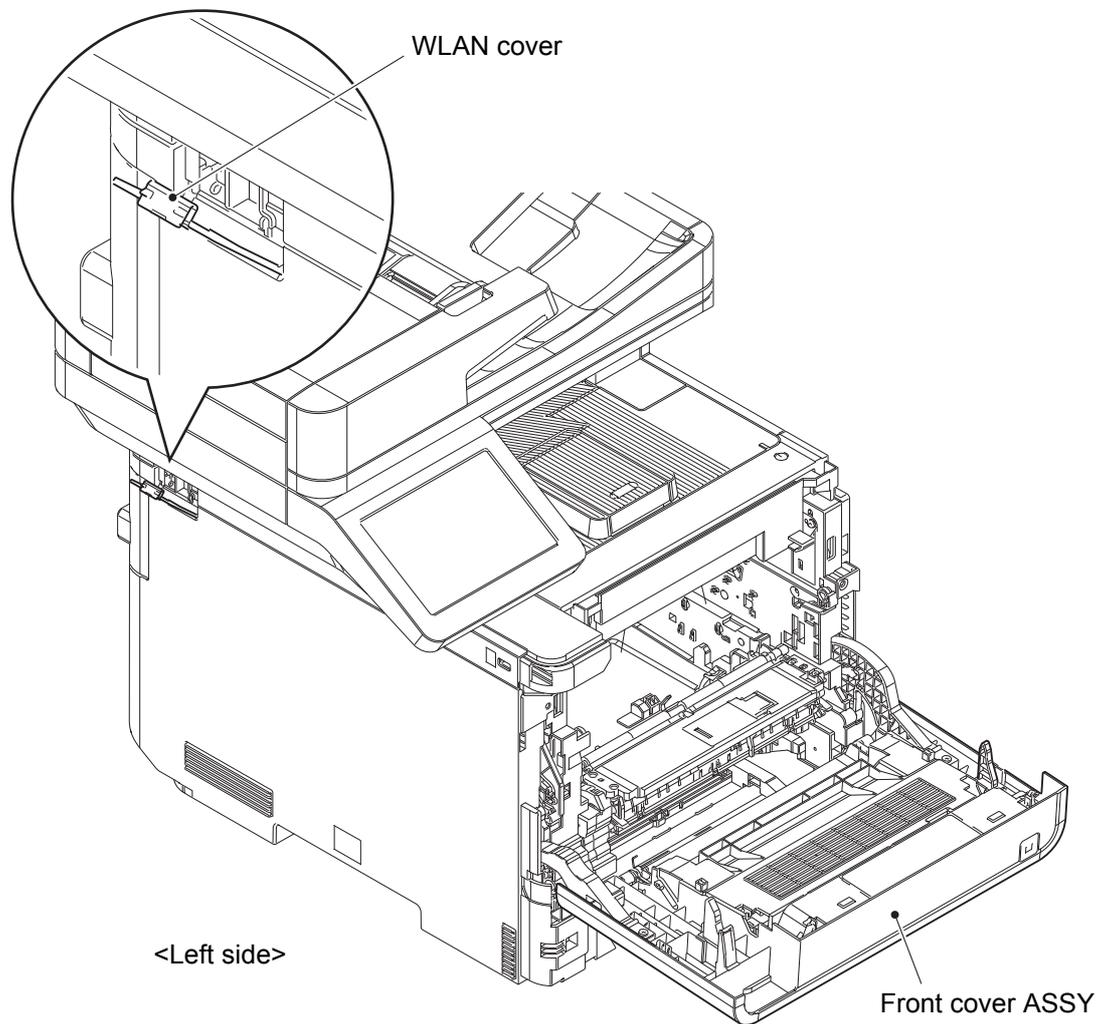


Fig. 3-17

(3) **Remove** > Screws

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 3)
- Taptite bind B M3x8 (x 1)
- Taptite cup B 3x8 (x 1)

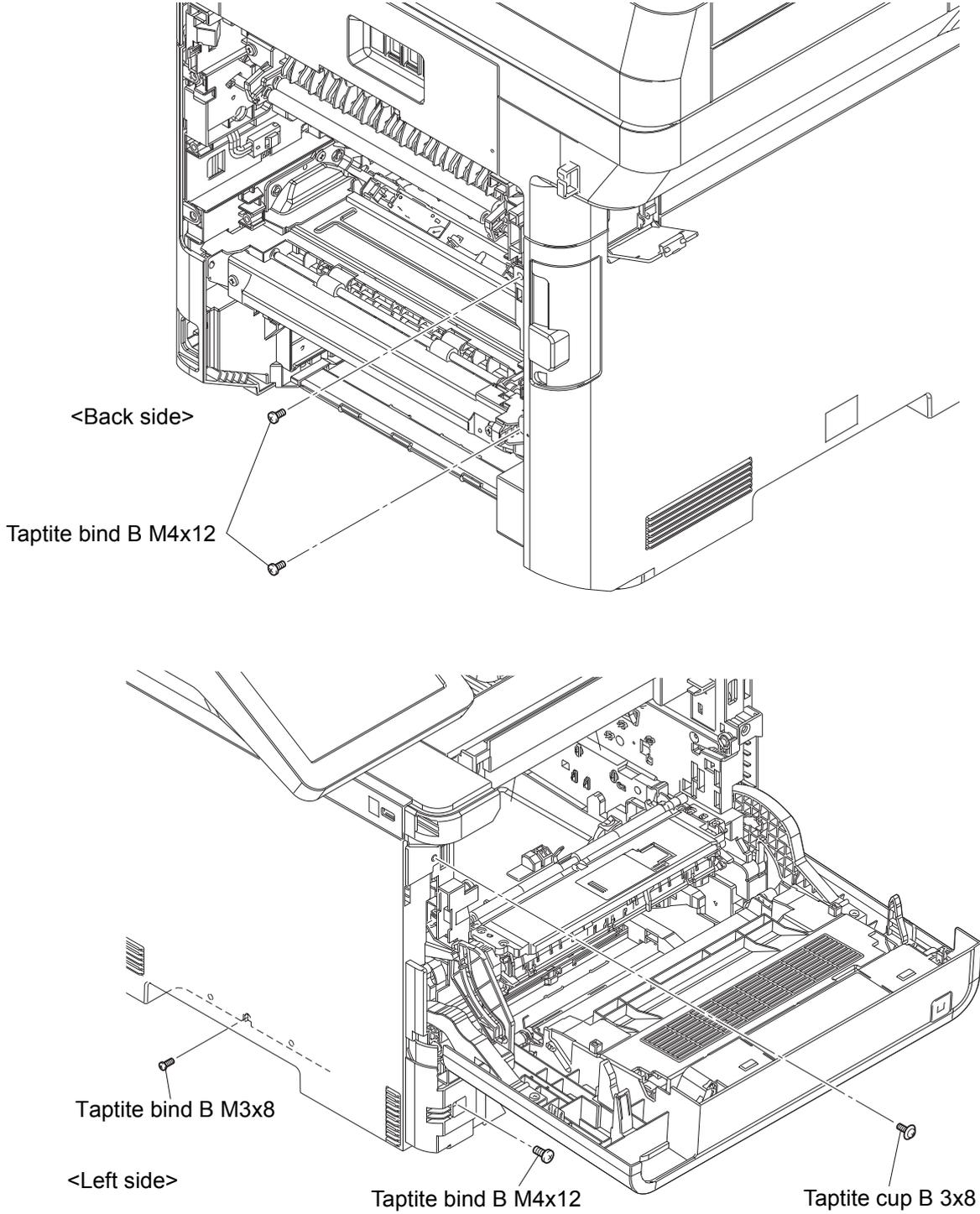


Fig. 3-18

(4) **Remove** > Side cover L

- Fixtures & Fittings**
- Hook (x 7)

Point:
• Release the hooks in the order of the arrows.

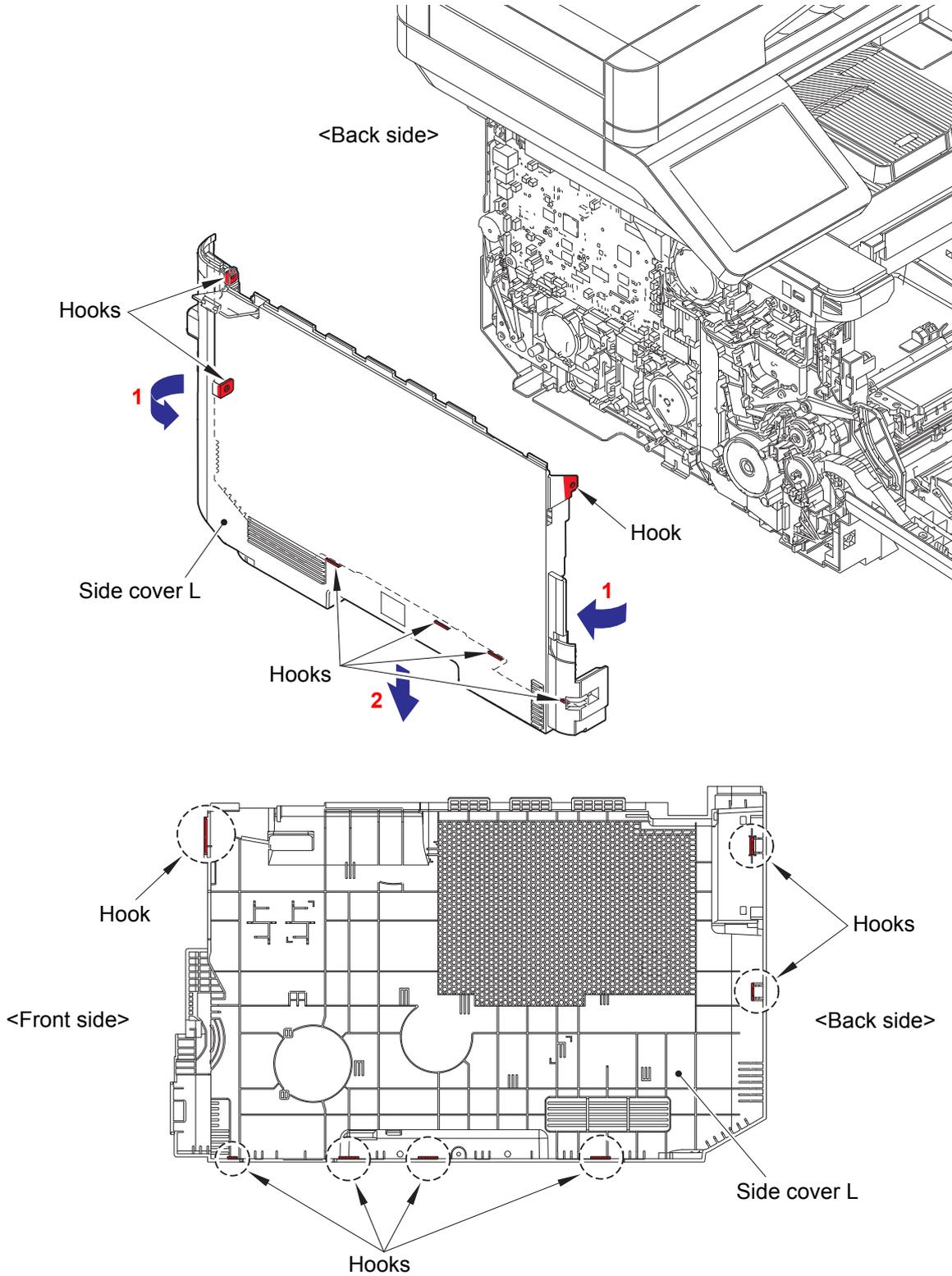


Fig. 3-19

7.8 Side cover R

(1) **Remove** > Screws

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 4)
- Taptite bind B M3x8 (x 1)

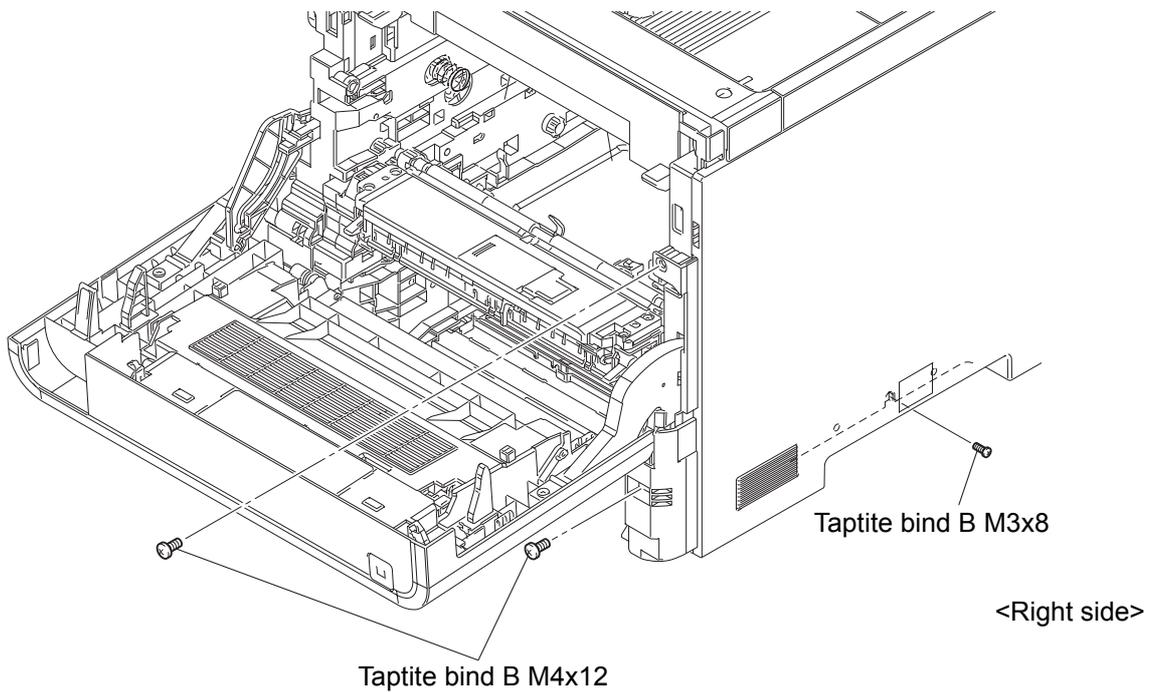
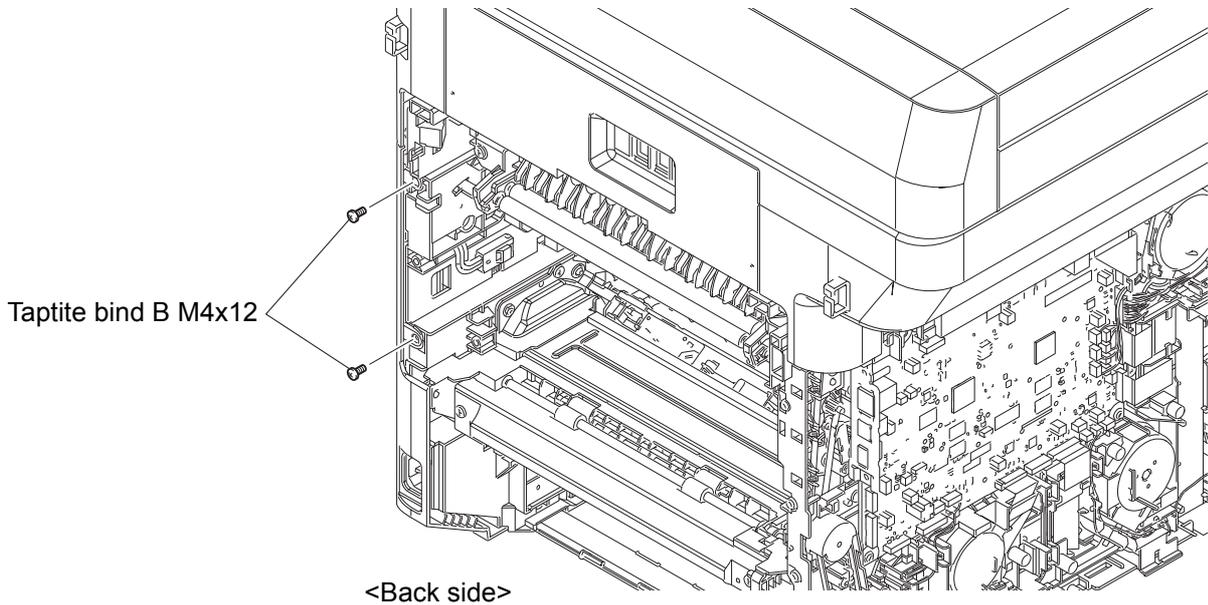


Fig. 3-20

(2) **Remove** > Side cover R

-  **Fixtures & Fittings**
- Hook (x 6)

 **Point:**

- Release the hooks in the order of the arrows.

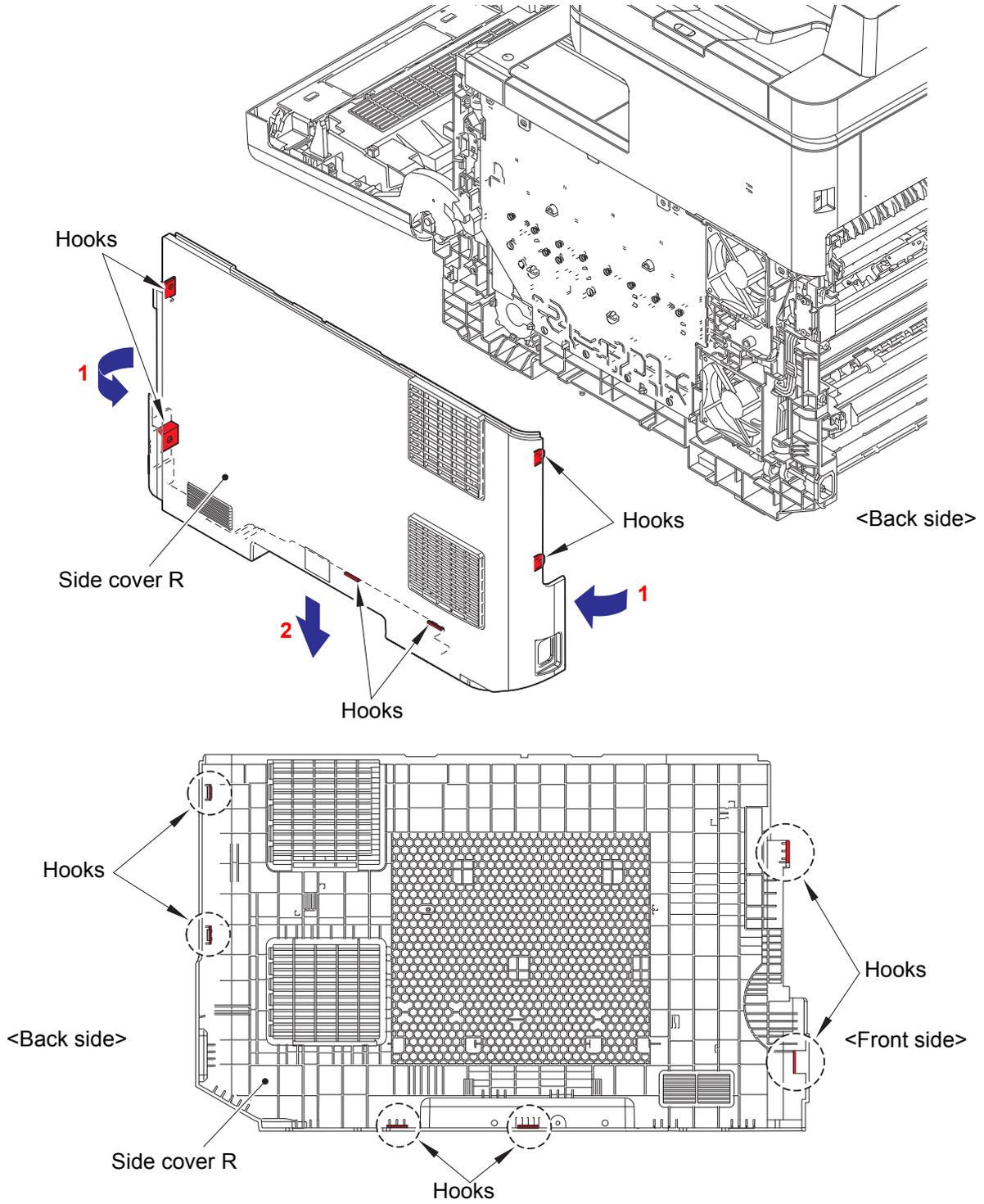


Fig. 3-21

7.9 Side cover R top

(1) **Remove** > Side cover R top



Fixtures & Fittings

- Taptite bind B M4x12 (x 3)
- Hook (x 7)



Point:

- Release the hooks in the order of the arrows.

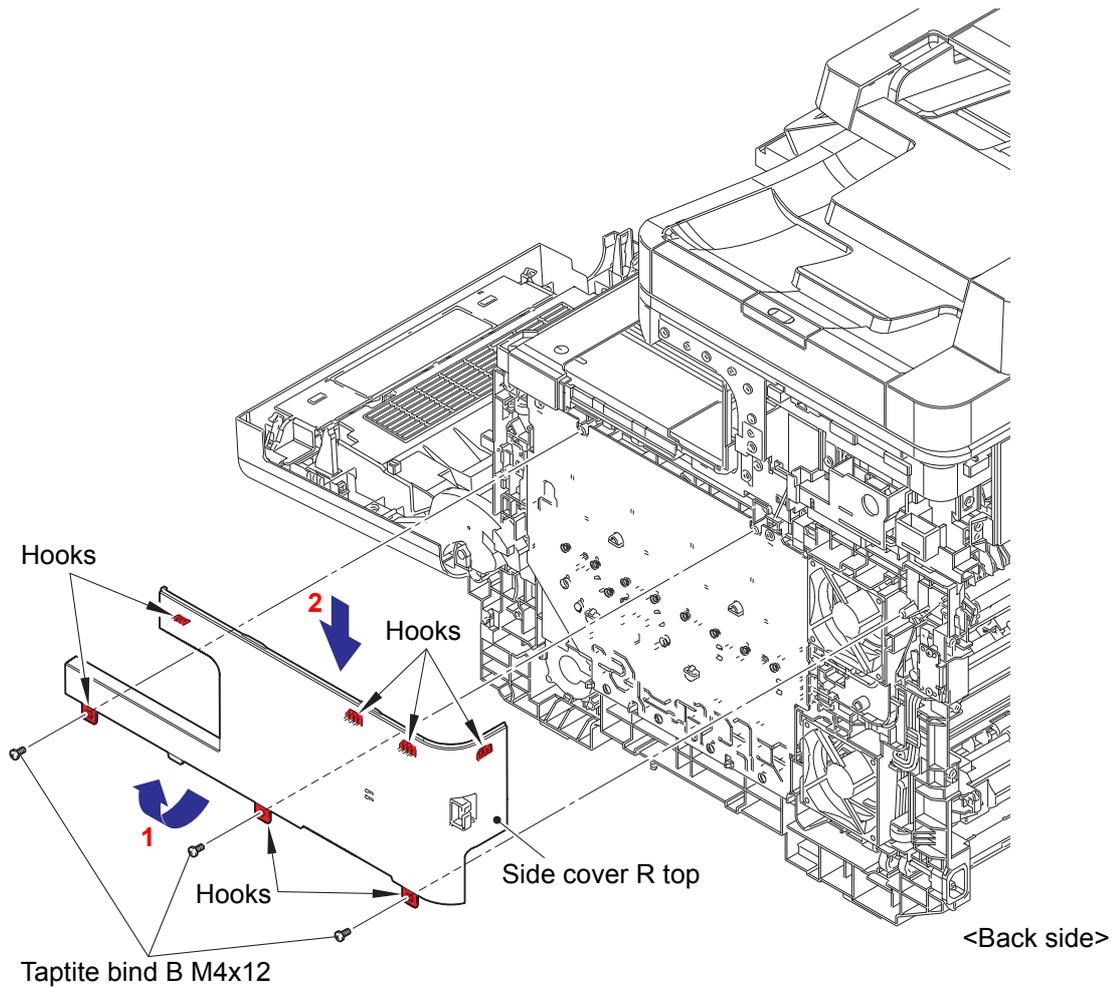


Fig. 3-22

7.10 MP tray ASSY

- (1) **Close** > Front cover ASSY
- (2) **Open** > MP tray cover ASSY
- (3) **Release** > MP link L, MP link R

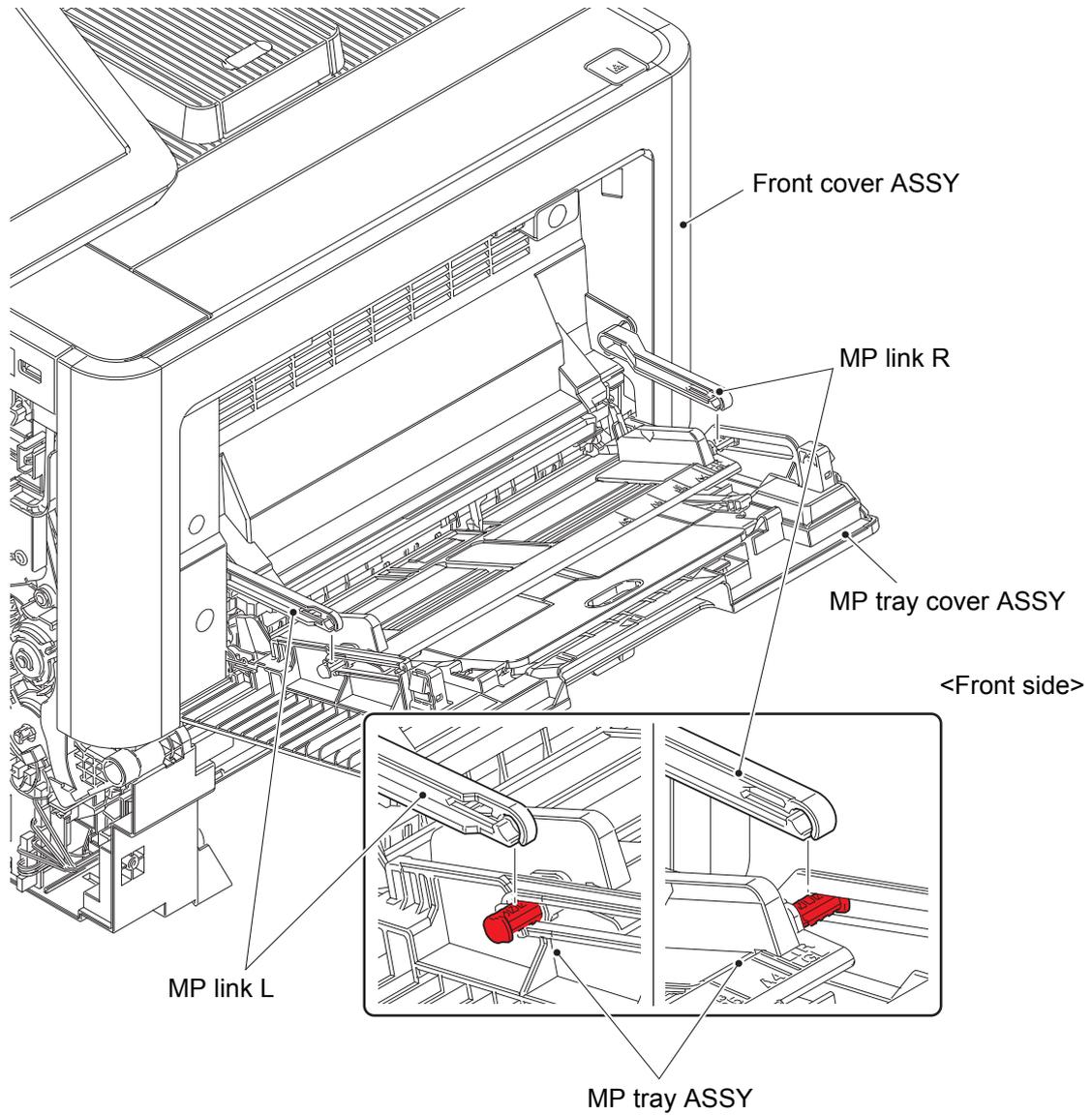


Fig. 3-23

(4) **Remove** > MP tray ASSY

 **Point:**

- Remove the MP tray ASSY in the order of the arrows.

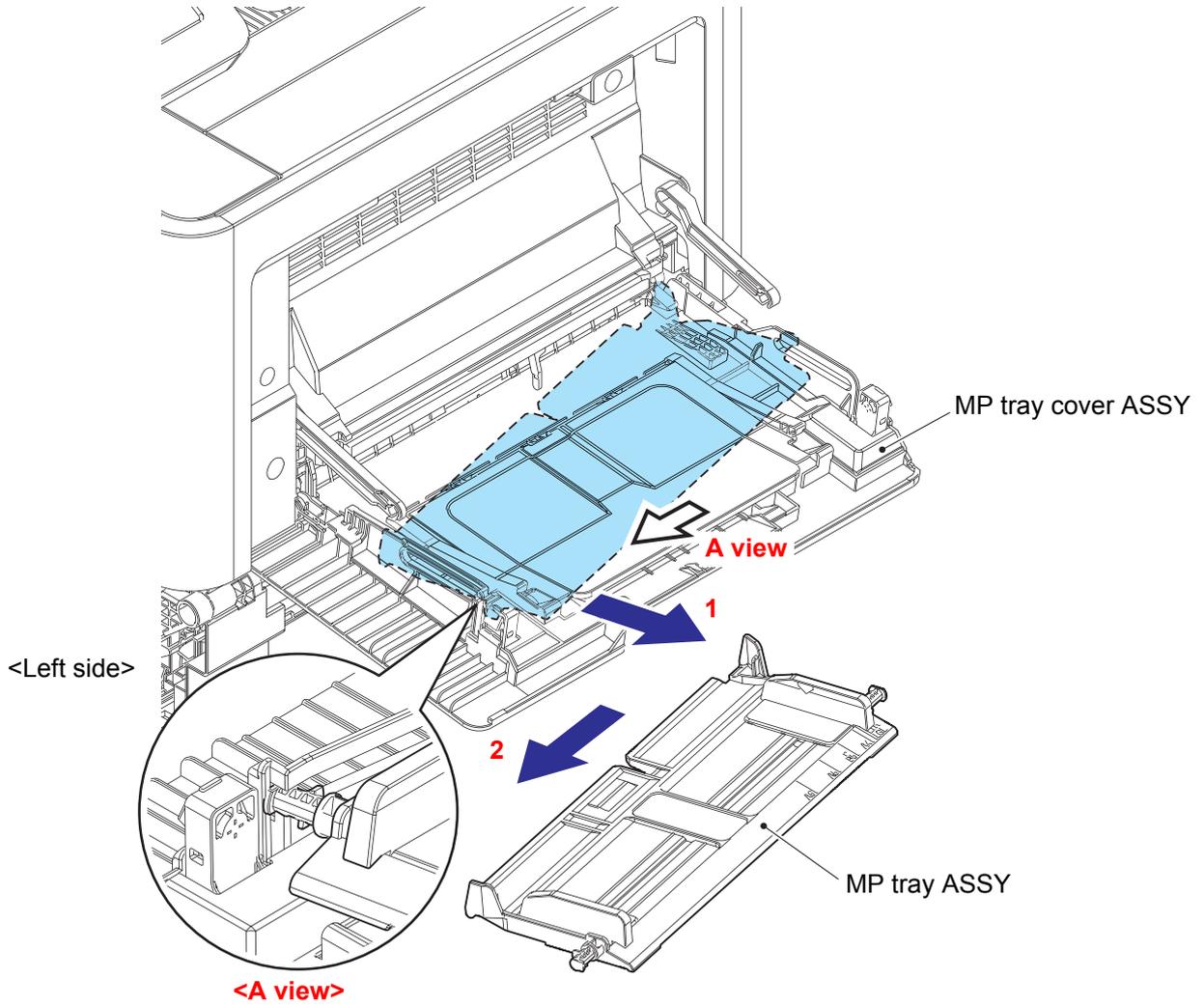


Fig. 3-24

7.11 MP tray cover ASSY

- (1) **Close** > MP tray cover ASSY
- (2) **Open** > Front cover ASSY
- (3) **Release** > Tip of the MP damper spring

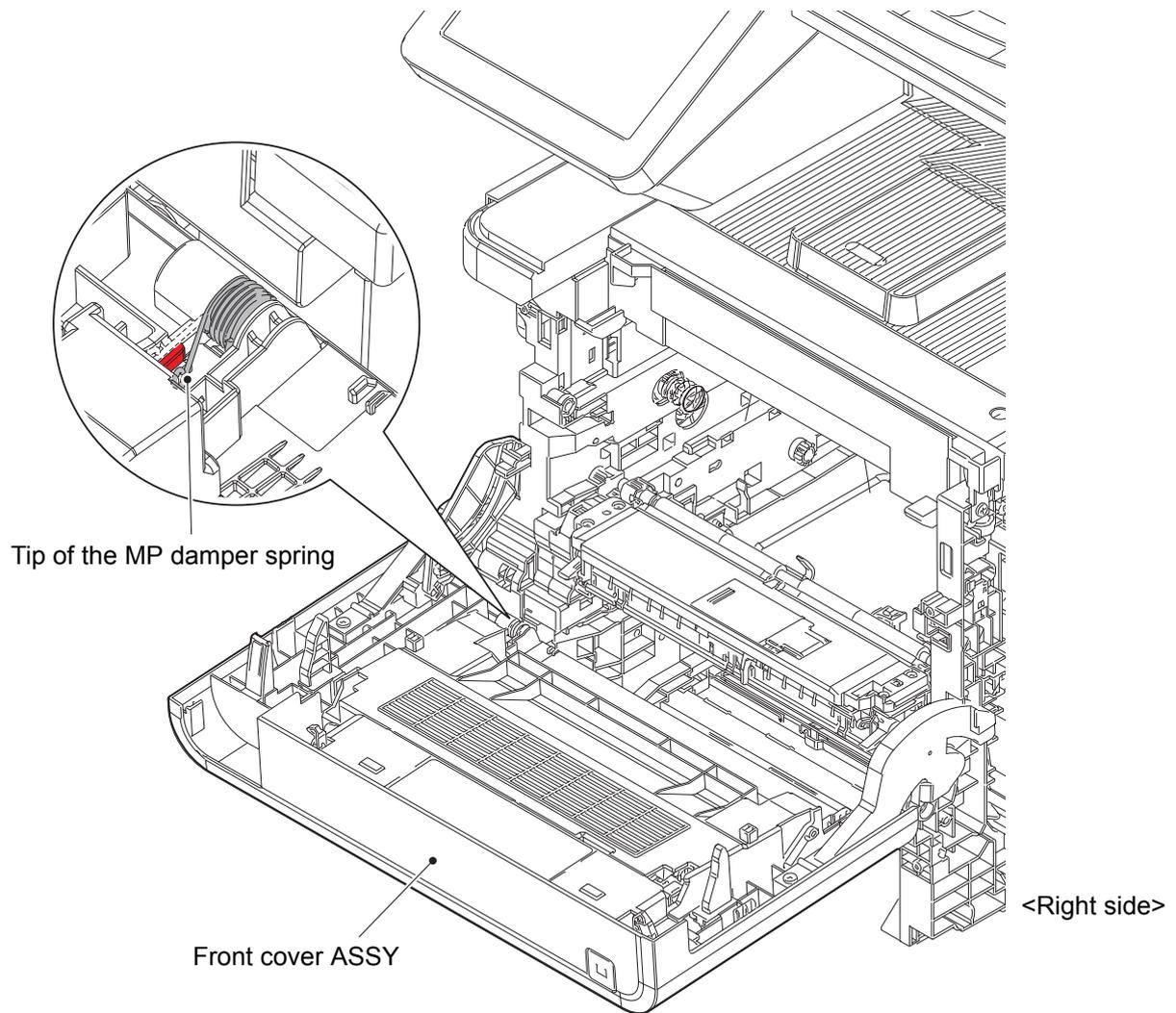


Fig. 3-25

- (4) **Close** > Front cover ASSY
- (5) **Open** > MP tray cover ASSY
- (6) **Remove** > MP tray cover ASSY

 **Fixtures & Fittings**
- Boss (x 2)

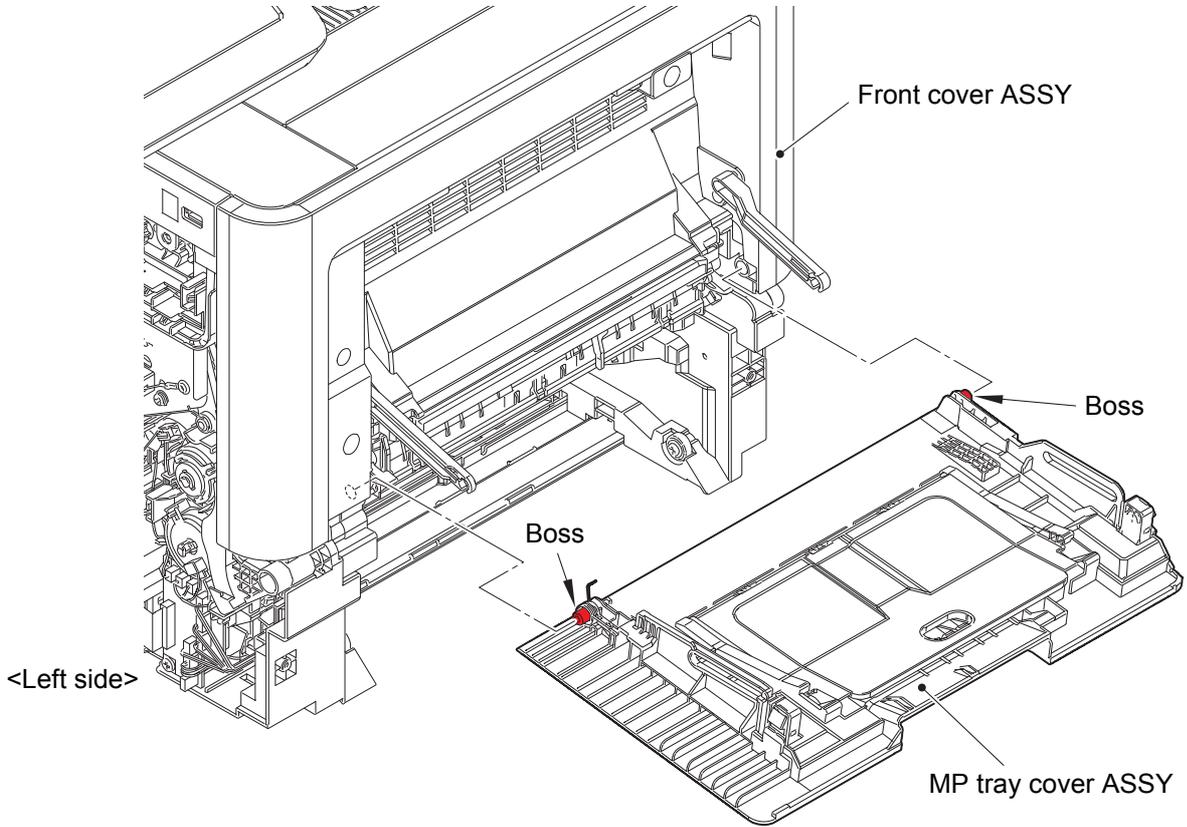


Fig. 3-26

7.12 MP link L, MP link R

(1) **Remove** > MP link L, MP link R

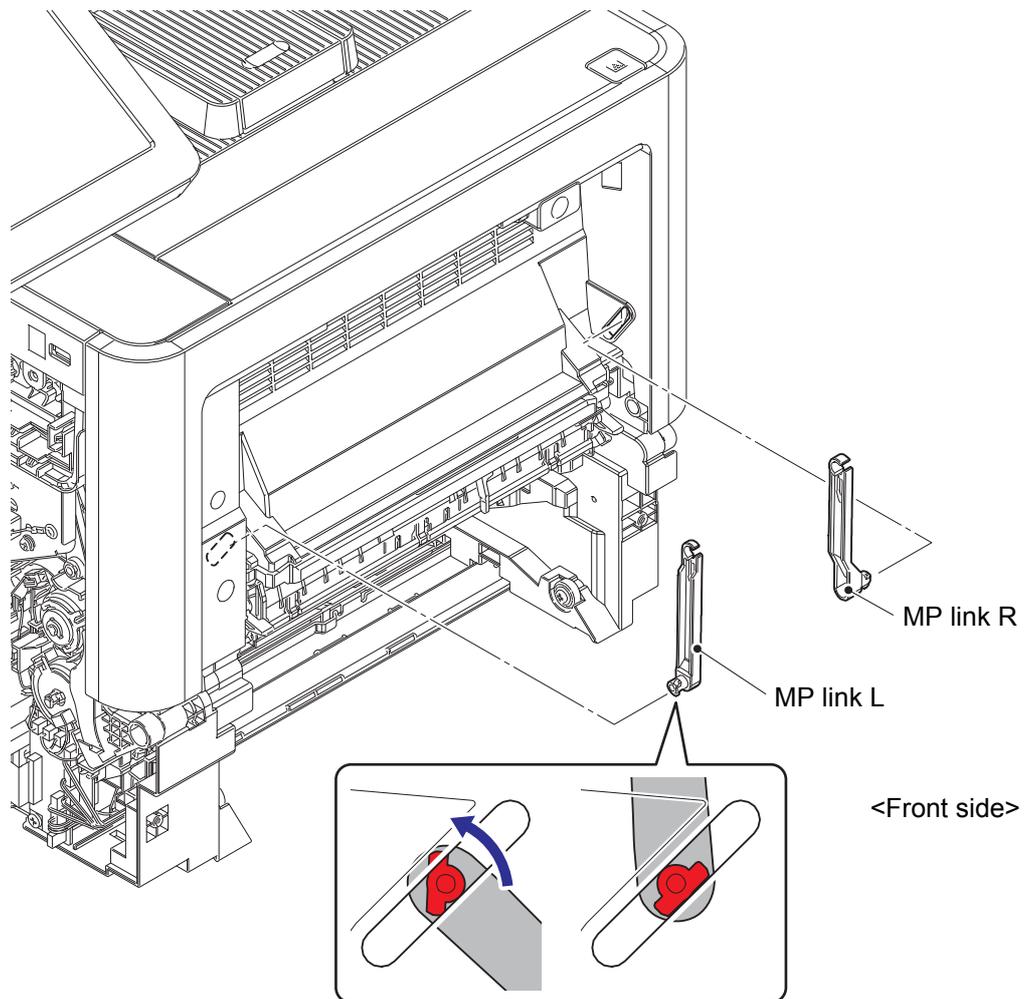


Fig. 3-27

7.13 Front cover ASSY

(1) **Remove** > F cover damper spring

 **Fixtures & Fittings**

- Hook (x 1)

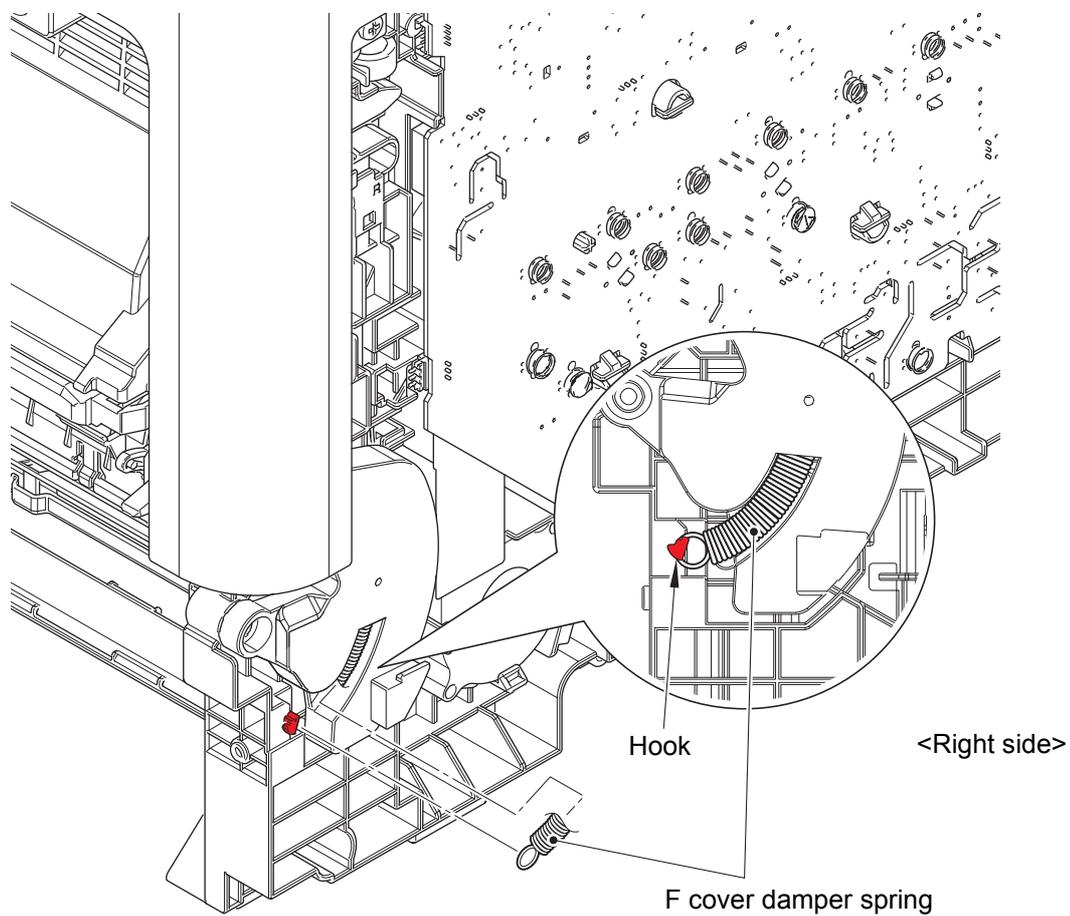


Fig. 3-28

(2) **Open** > Front cover ASSY

(3) **Remove** > Front cover ASSY

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 2)

- Hook (x 2)

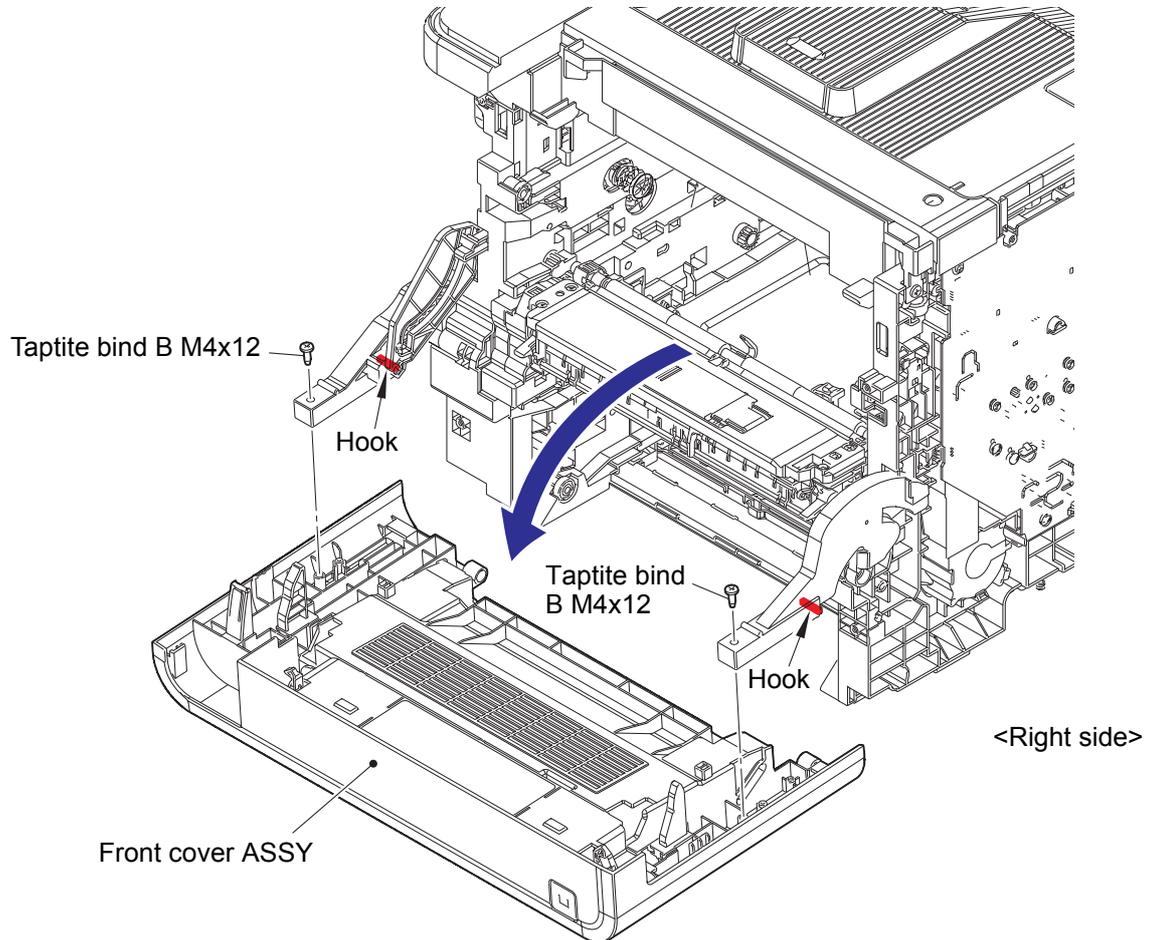


Fig. 3-29

7.14 F cover arm L

(1) **Remove** > F cover arm L



Fixtures & Fittings

- Taptite pan B M4x14 (x 1)
- Hook (x 1)



Point:

- Release the Hook to remove the Force release link from the F cover arm L.

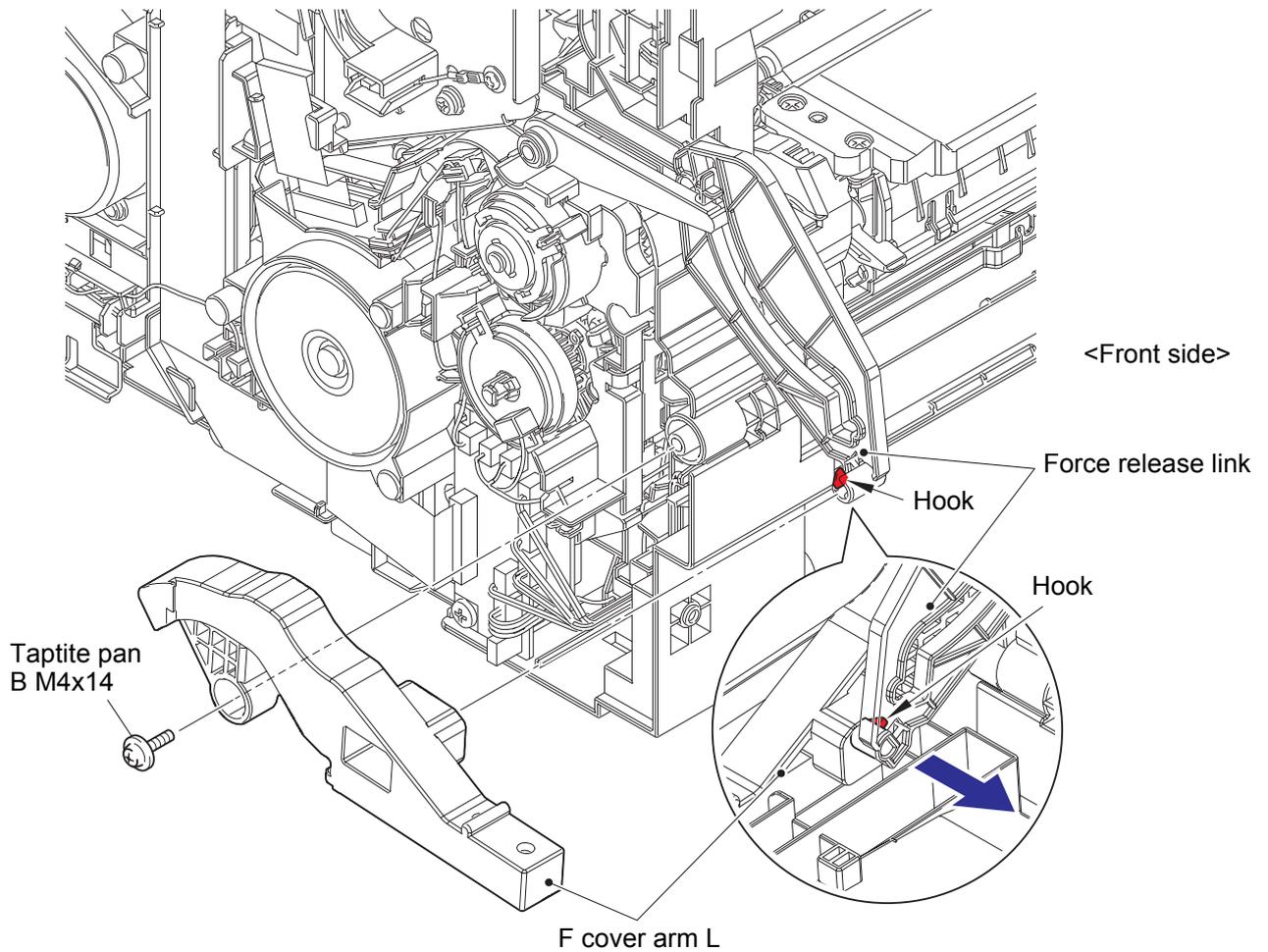


Fig. 3-30

7.15 F cover arm R

(1) **Remove** > F cover arm R

-  **Fixtures & Fittings**
- Taptite pan B M4x14 (x 1)

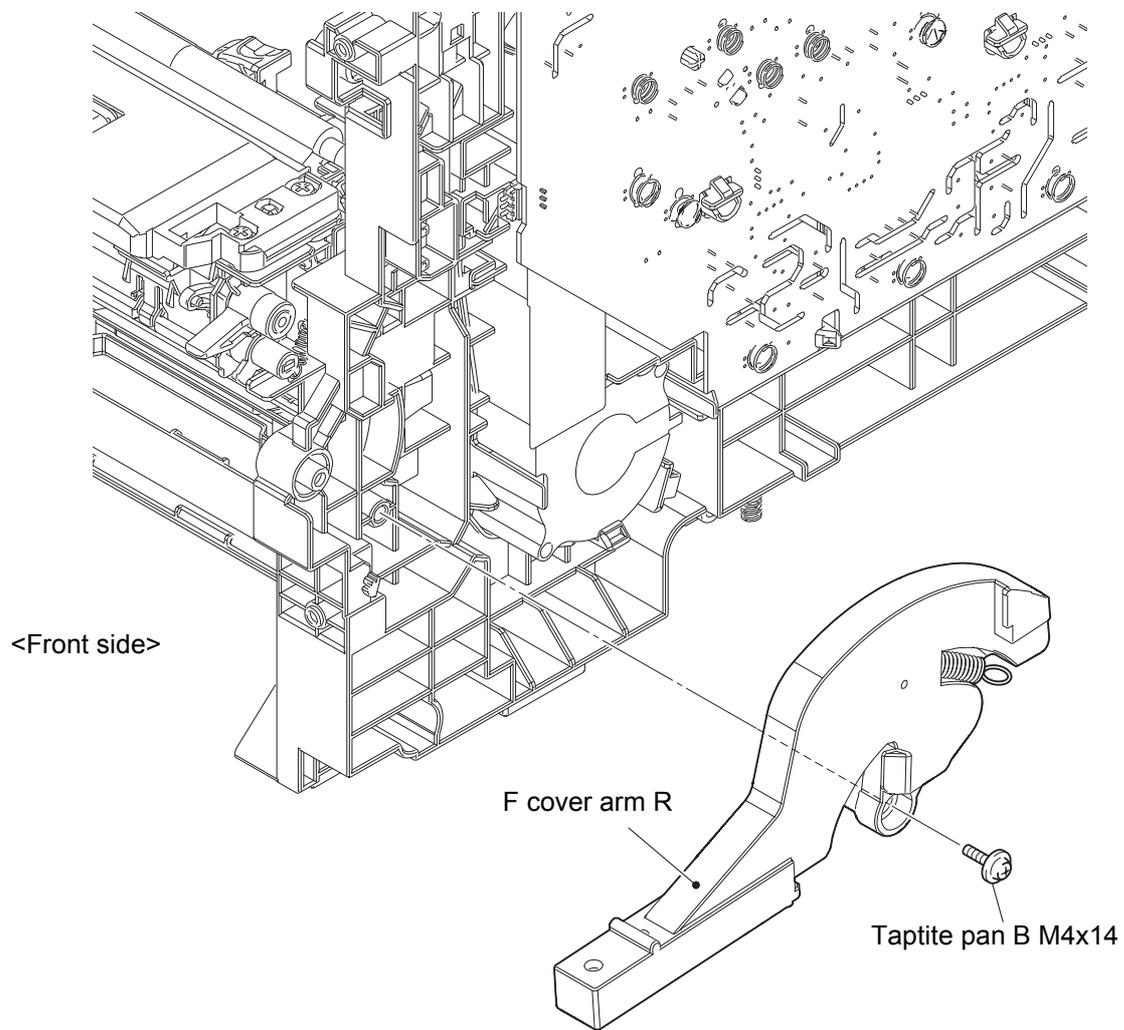
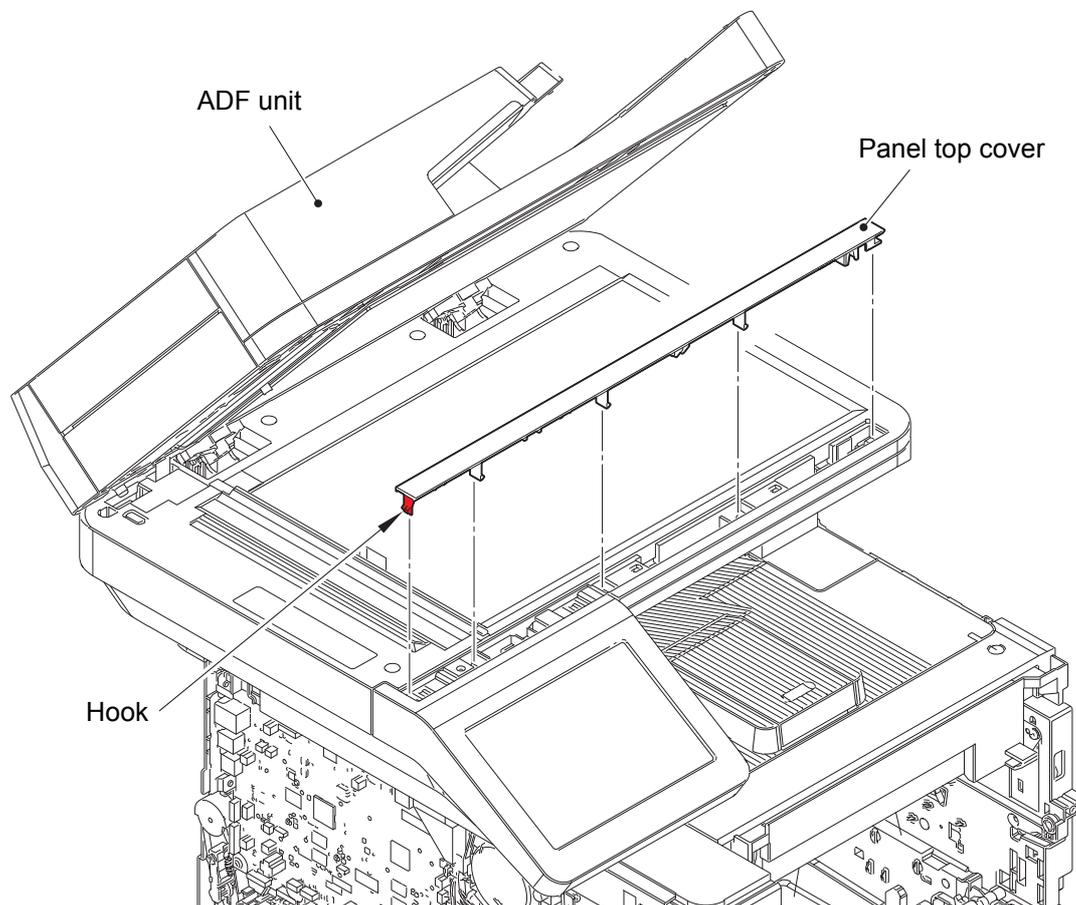


Fig. 3-31

7.16 Panel unit

- (1) **Open** > ADF unit
- (2) **Remove** > Panel top cover

 **Fixtures & Fittings**
- Hook (x 1)



<Left side>

Fig. 3-32

(3) **Remove** > FG harness (OR)

- Fixtures & Fittings**
- Screw cup M3x8 SR (x 1)

(4) **Wiring** > FG harness (OR)

(5) **Remove** > Panel unit

- Fixtures & Fittings**
- Taptite bind B M4x12 (x 2)

Point:

- Do not pull the Panel unit strongly because the FFC is connected. Remove it in the direction of the arrow.
- Pull out the FG harness (OR) through the hole of the Joint cover ASSY.

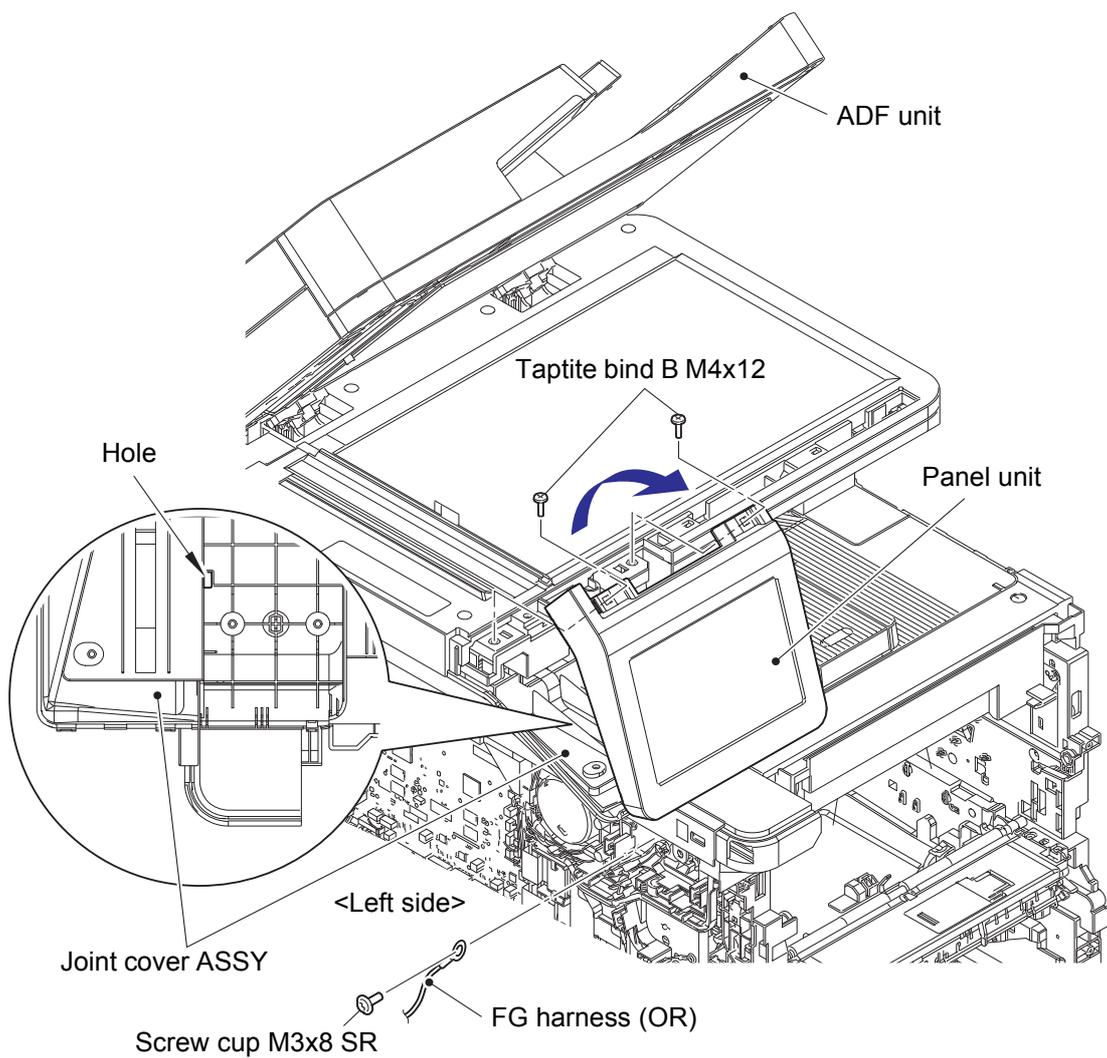


Fig. 3-33

Harness routing: Refer to "55. 7 PNL main FFC harness".

(6) **Disconnect** > 7 PNL main FFC harness

-  **Fixtures & Fittings**
- Lock (x 1)

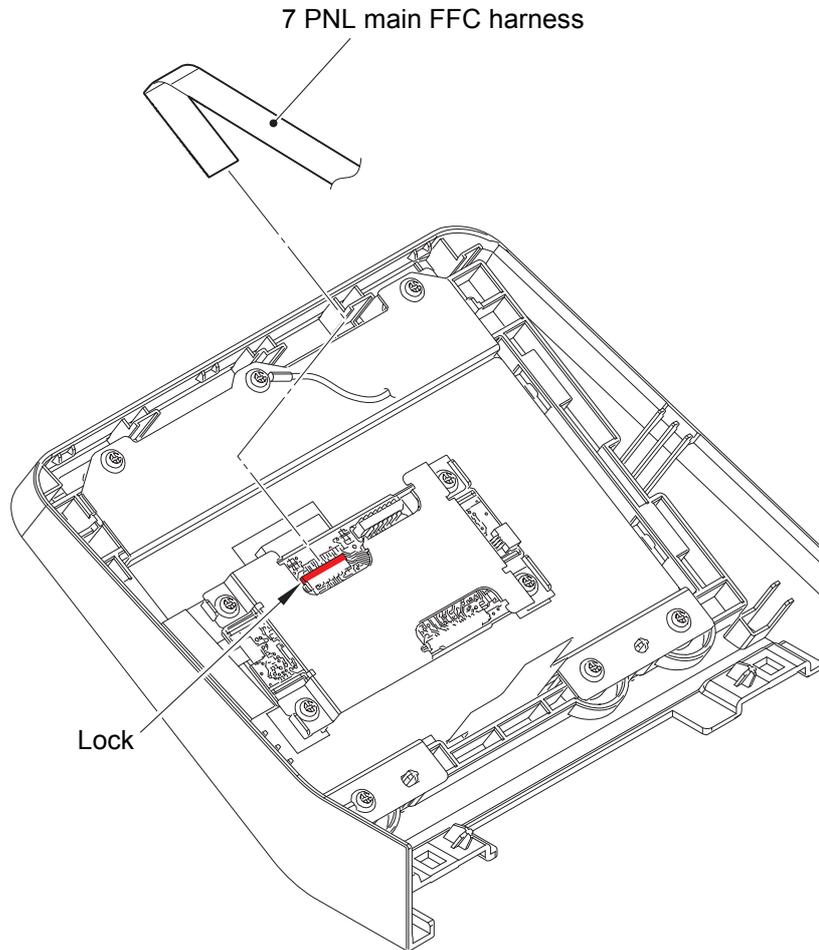


Fig. 3-34

(7) **Close** > ADF unit

7.17 Panel PCB

- (1) **Disconnect** > Touch panel FFC
- (2) **Disconnect** > LCD FFC

 **Fixtures & Fittings**
- Lock (x 1)

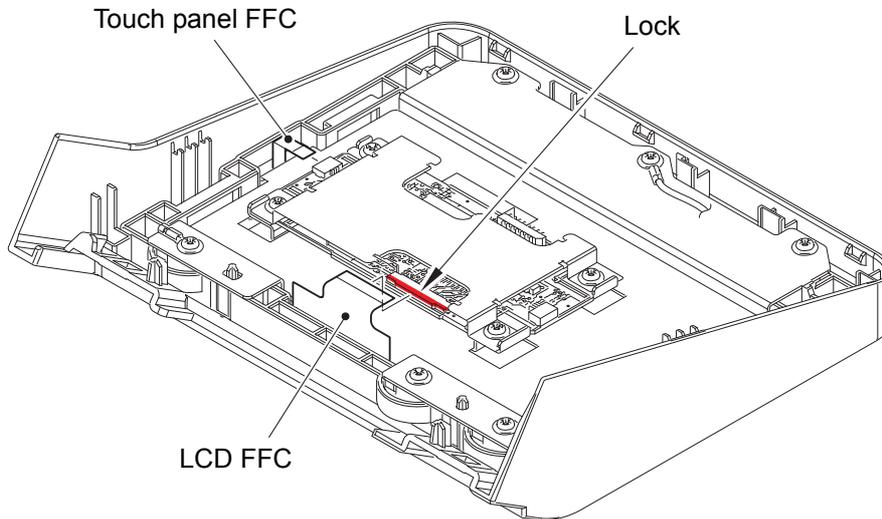


Fig. 3-35

(3) **Remove** > Shield cover, Panel PCB, Panel insulation sheet

 **Fixtures & Fittings**

- Taptite cup S M3x6 SR (x 4)

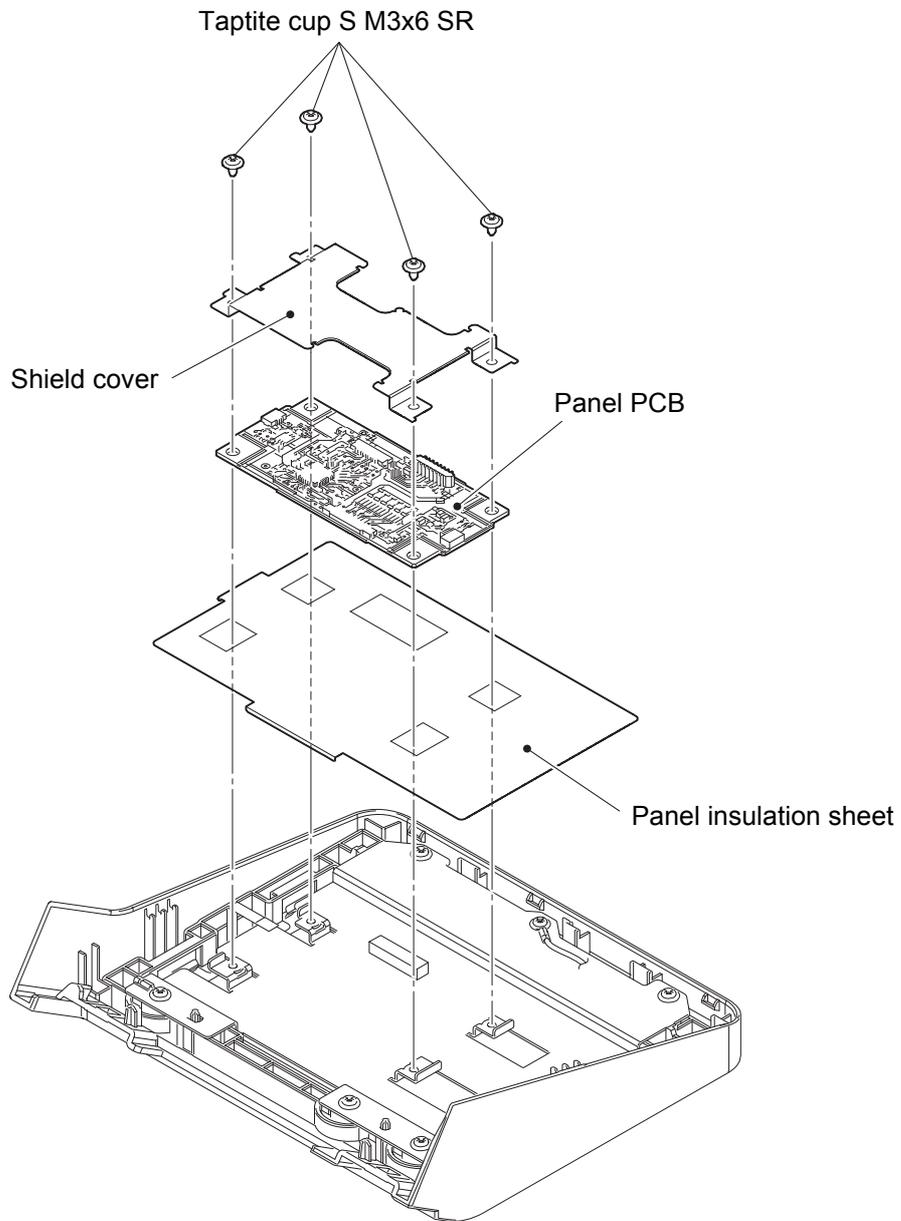


Fig. 3-36

7.18 LCD

(1) **Remove** > FG harness (OR), Shield plate, LCD



Fixtures & Fittings

- Taptite cup B M3x10 (x 6)

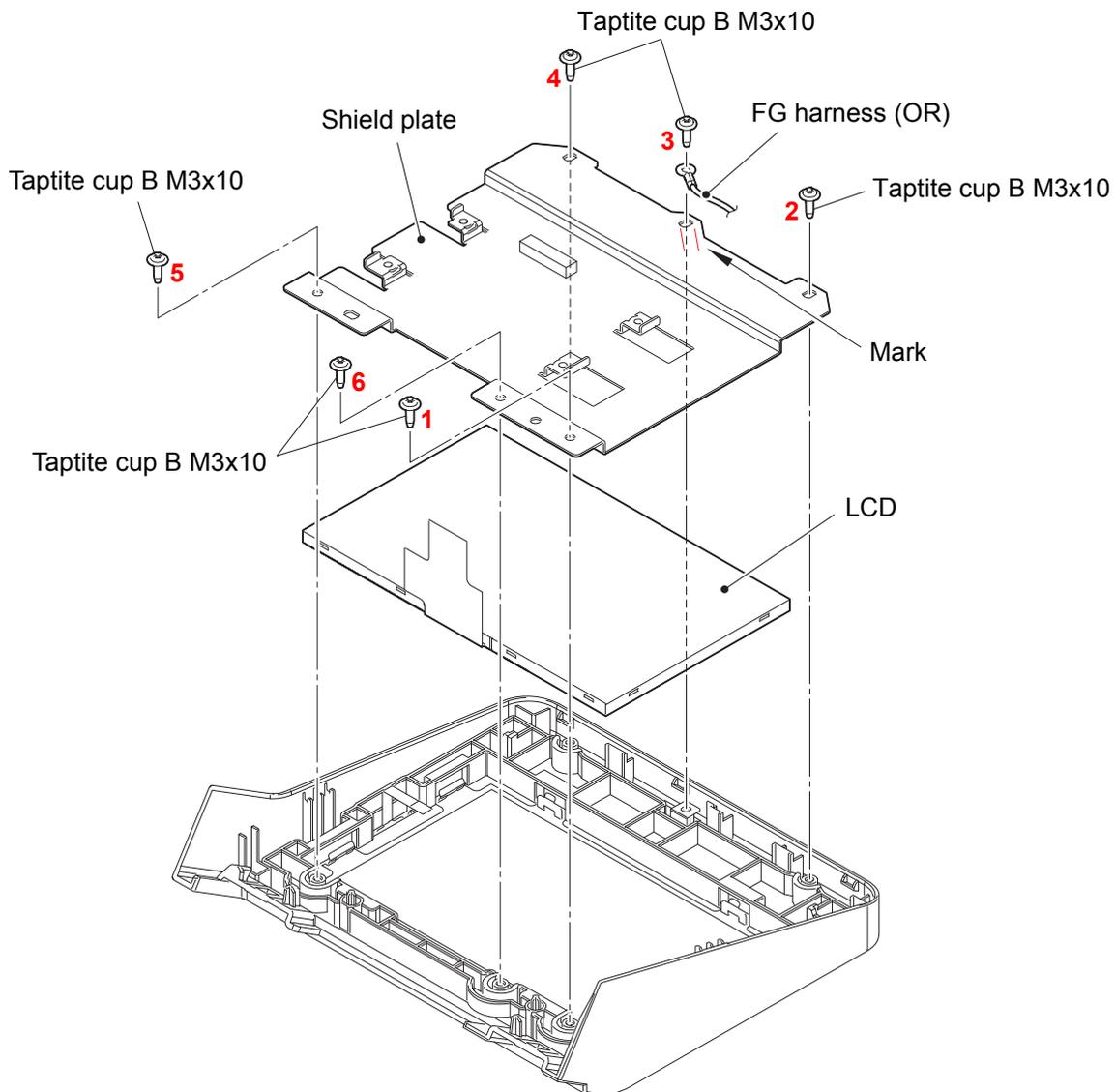


Fig. 3-37



Assembling note:

- When attaching the Shield plate, tighten the screws as the number orders marked on the Shield plate. When attaching the FG harness (OR), align the FG harness with the mark on the Shield plate.

7.19 Touch panel, Panel cover

- (1) **Remove** > Touch panel pressure, Touch panel plate, LCD blind film, Touch panel, Panel cover



Fixtures & Fittings

- Double-sided adhesive tape (x 7)

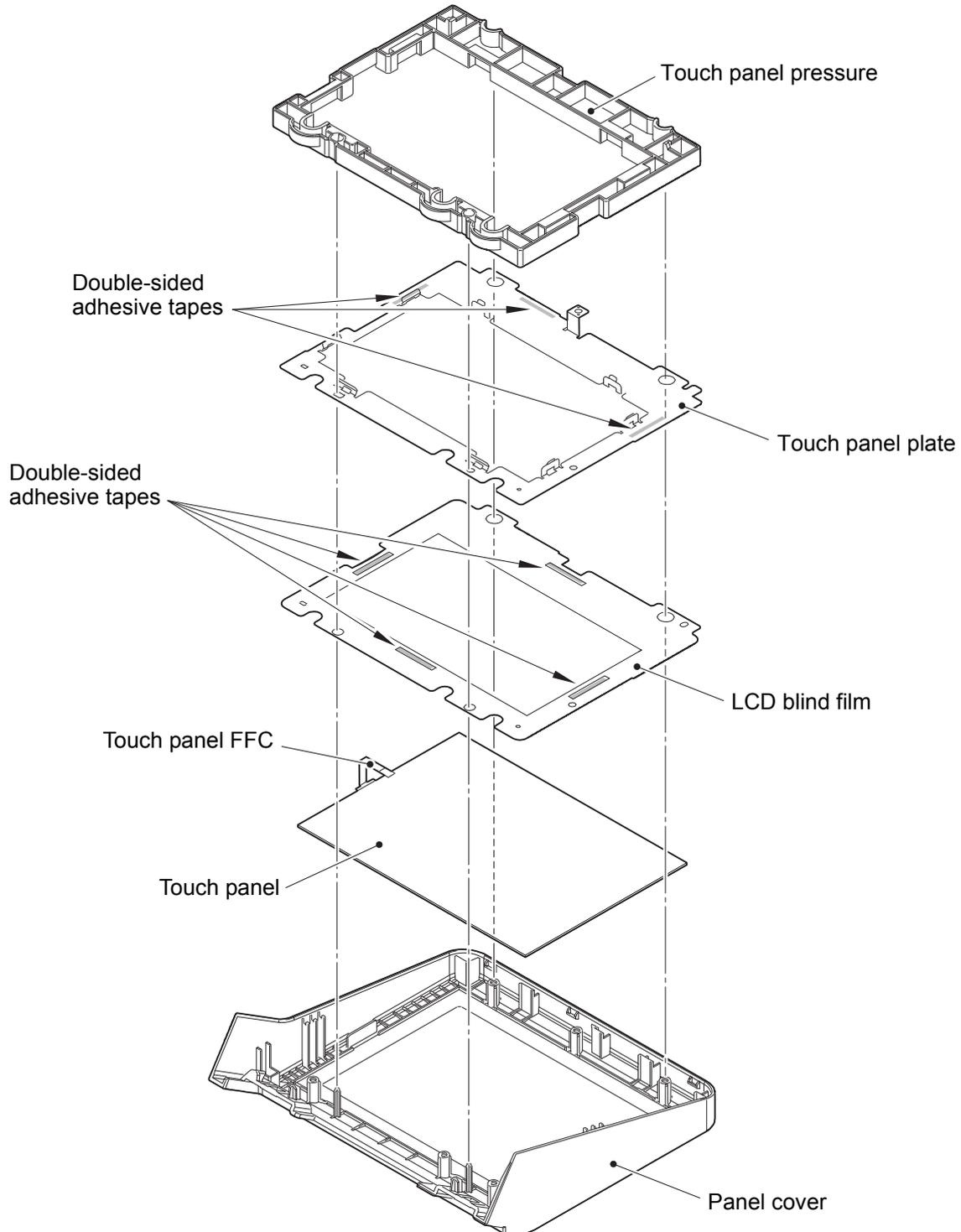


Fig. 3-38



Assembling note:

- Be careful not to pinch the Touch panel FFC when attaching the Touch panel pressure.

7.20 Side cover L top

(1) **Remove** > Side cover L top



Fixtures & Fittings

- Taptite bind B M4x12 (x 4)
- Hook A (x 5)
- Hook B (x 5)



Point:

- Remove the Side cover L top in the order of the arrows.

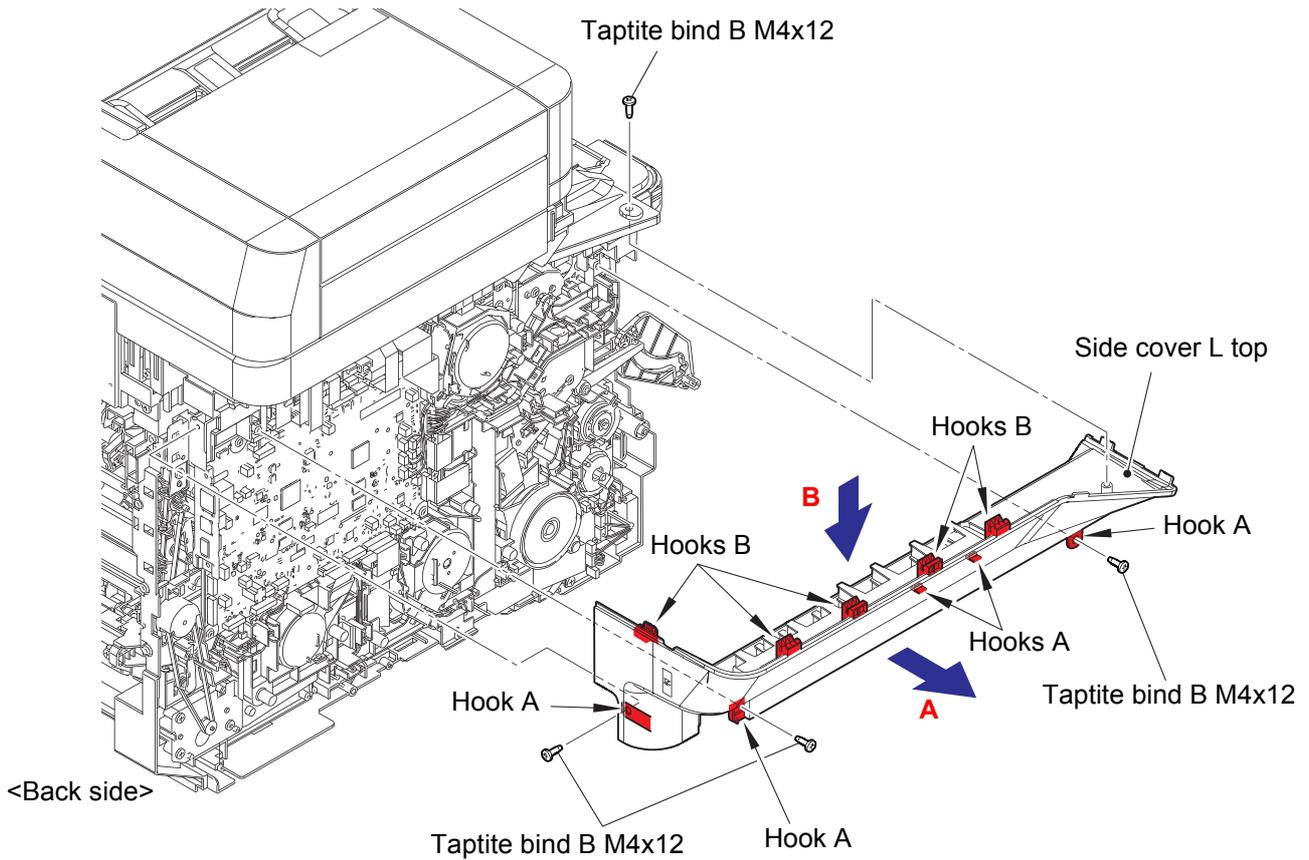


Fig. 3-39

7.21 Back cover upper

(1) **Remove** > Back cover upper



Fixtures & Fittings

- Taptite bind B M4x12 (x 2)
- Hook (x 2)

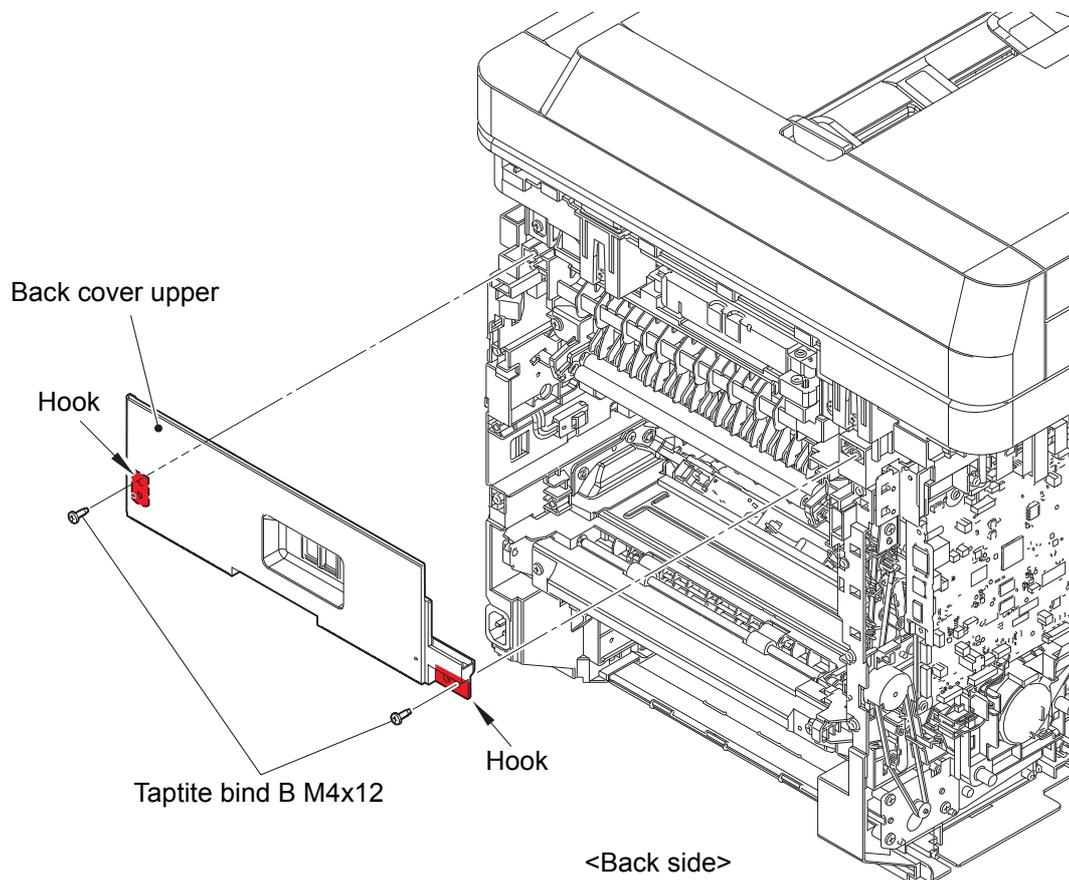


Fig. 3-40

7.22 ADF unit, Document scanner unit

(1) **Remove** > Earth plate R

-  **Fixtures & Fittings**
- Taptite pan B 3x10 (x 2)

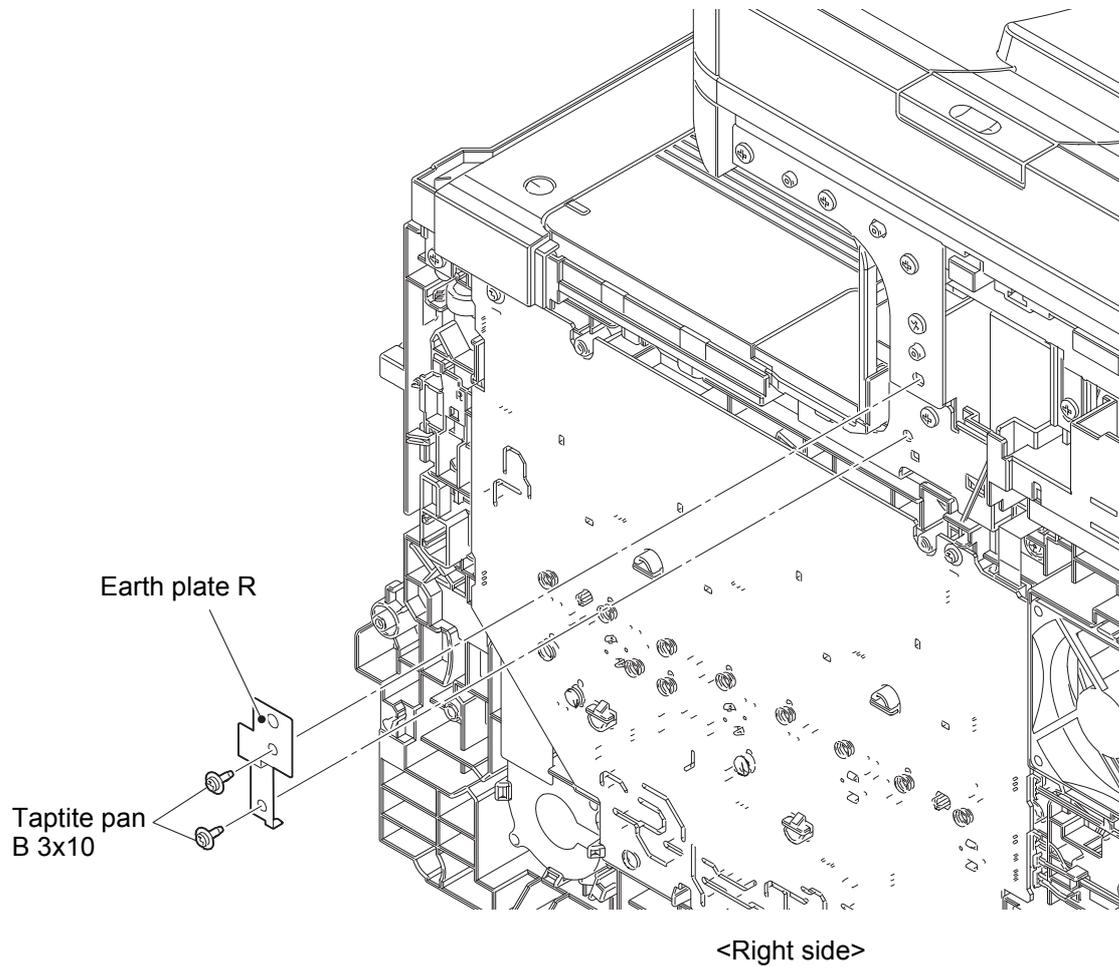


Fig. 3-41

(2) **Remove** > Reinforce plate R1

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 4)

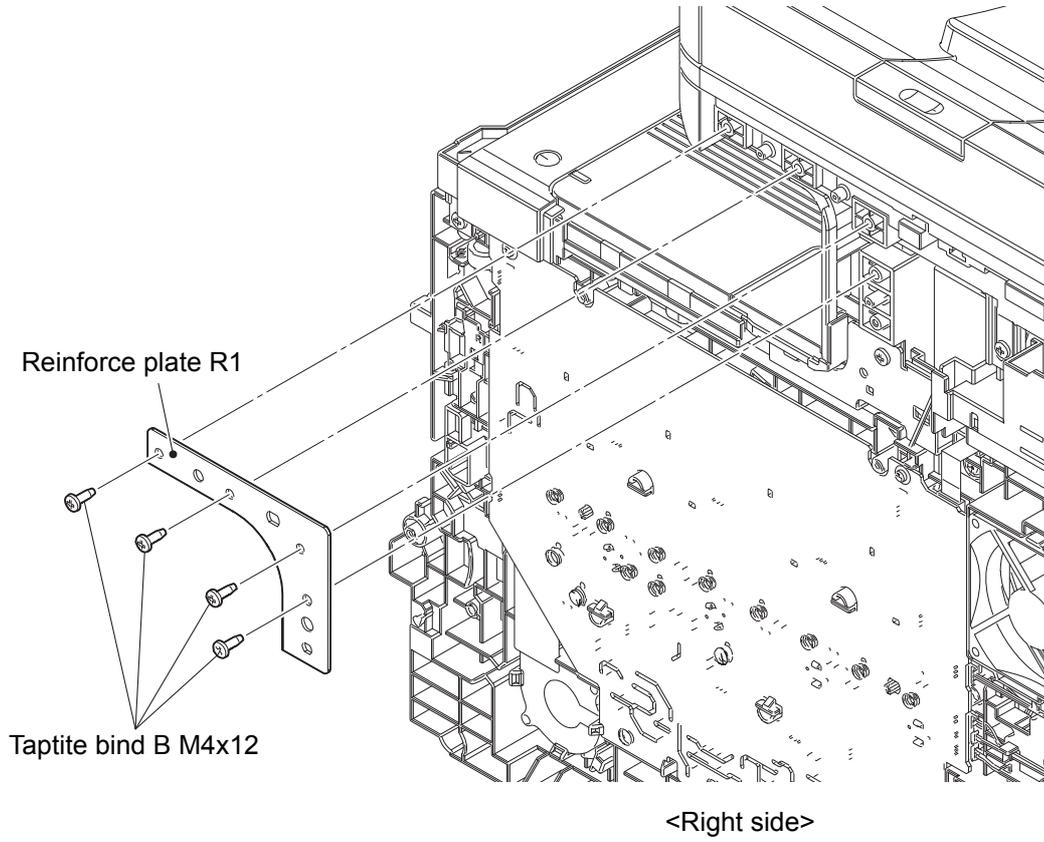


Fig. 3-42

- (3) **Disconnect** > 2nd side CIS FFC, 1st side CIS FFC, FB motor harness, ADF motor harness ASSY, Flap tray relay harness

 **Fixtures & Fittings**

- Lock (x 1)

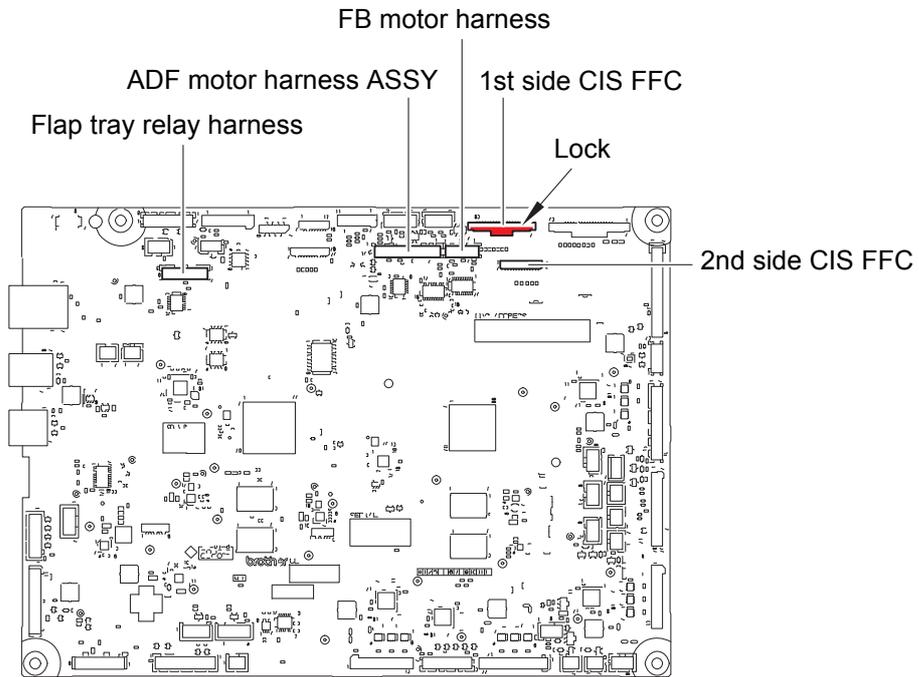


Fig. 3-43

(4) **Remove** > FG harness (RD), FG harness (BK)

Fixtures & Fittings

- Screw cup M3x8 SR (x 2)

(5) **Remove** > Document scanner unit

Fixtures & Fittings

- Taptite bind B M4x12 (x 5)

- Hook (x 5)

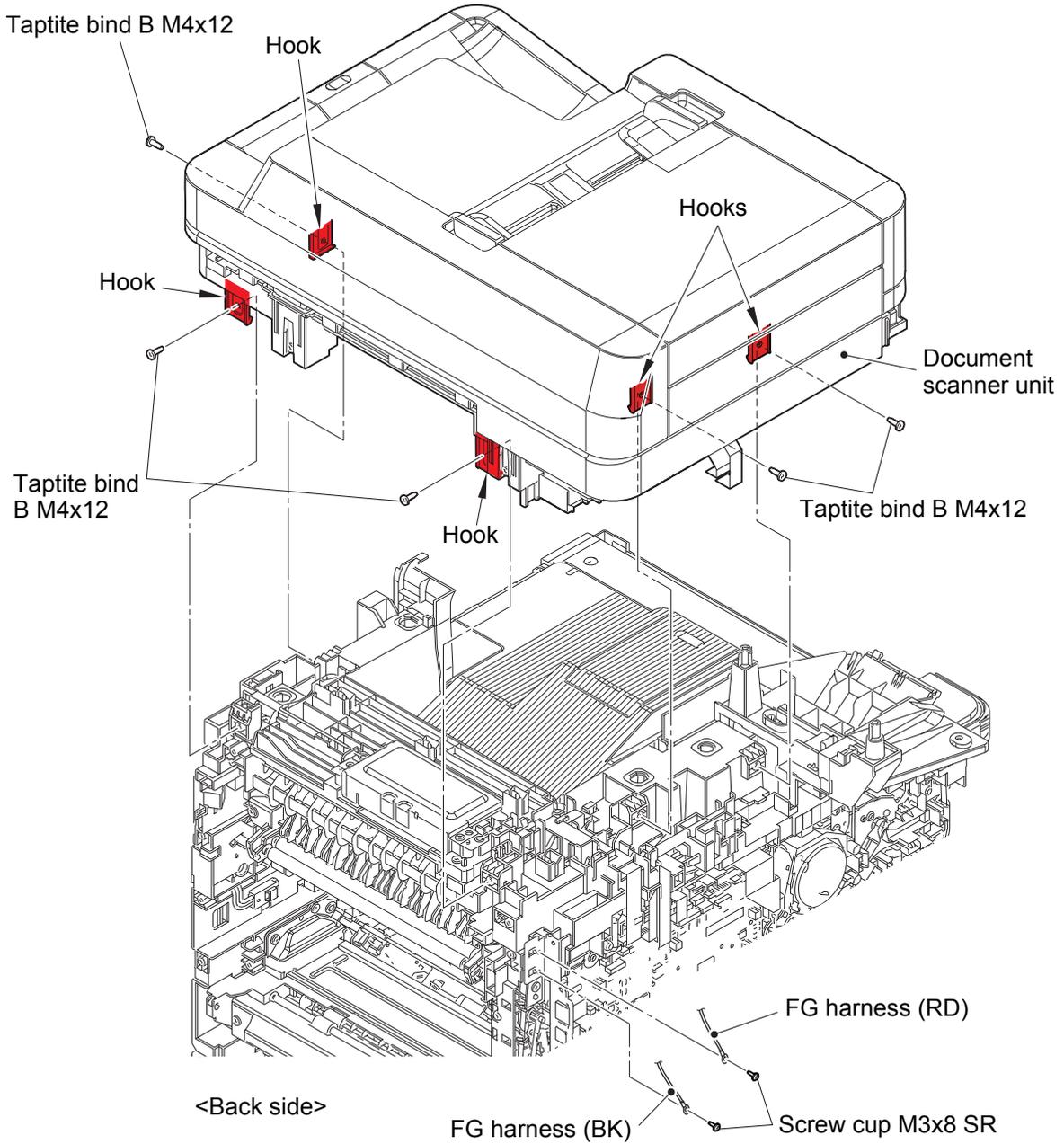


Fig. 3-44

7.23 ADF unit

- (1) **Wiring** > 2nd side CIS FFC, 1st side CIS FFC, ADF motor harness ASSY, FB motor harness, Flap tray relay harness
- (2) **Remove** > FFC holder DS

-  **Fixtures & Fittings**
- Taptite cup B M3x10 (x 2)

 **Point:**

- Pull out the 1st side CIS FFC and the 2nd side CIS FFC through the holes of the FFC holder DS.

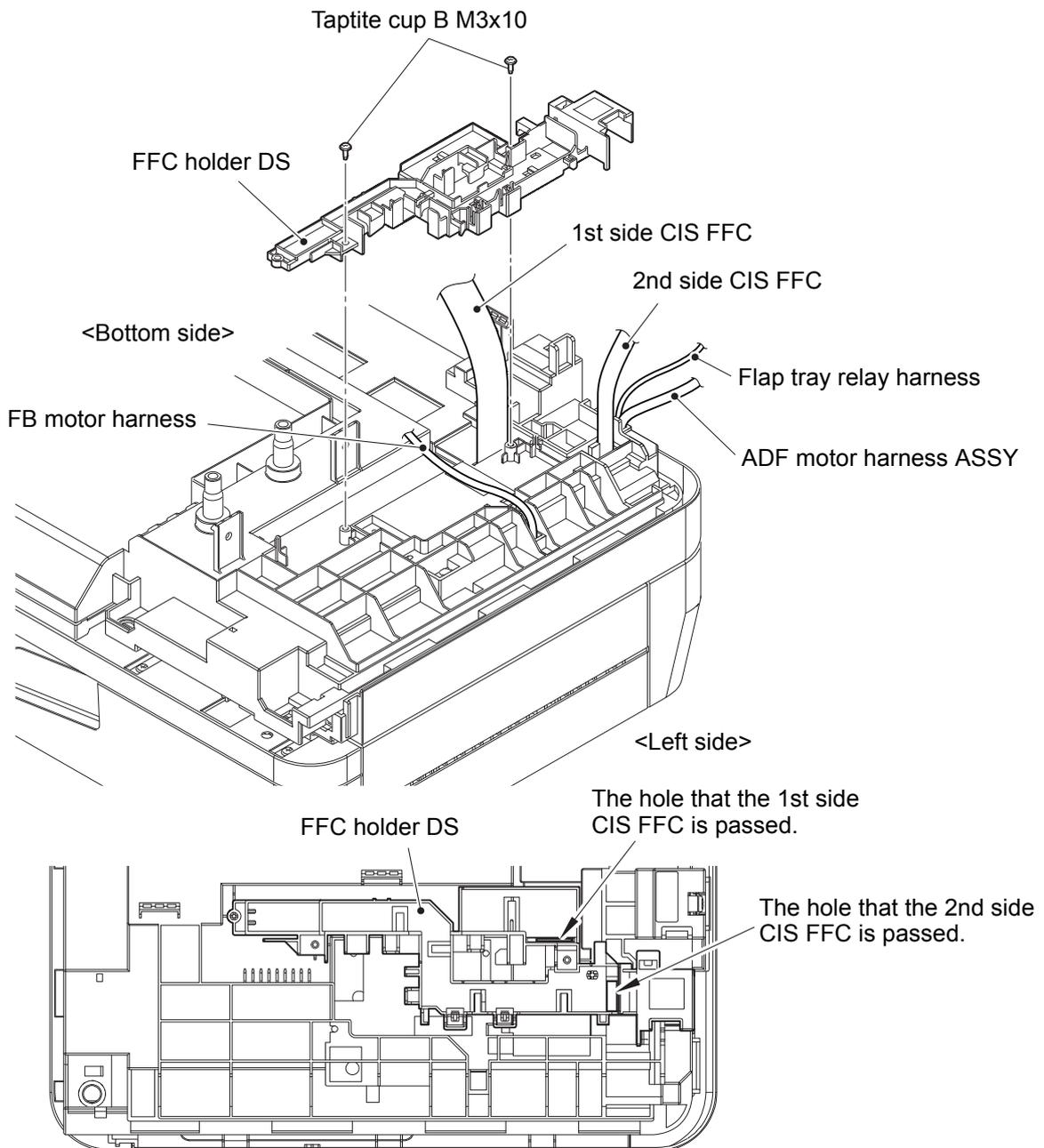


Fig. 3-45

Harness routing: Refer to "54. 2nd side CIS FFC, 53. 1st side CIS FFC, 1. ADF motor harness ASSY, 18. FB motor harness, 22. Flap tray relay harness".

(3) **Remove** > Screws



Fixtures & Fittings

- Taptite bind B M4x12 (x 2)

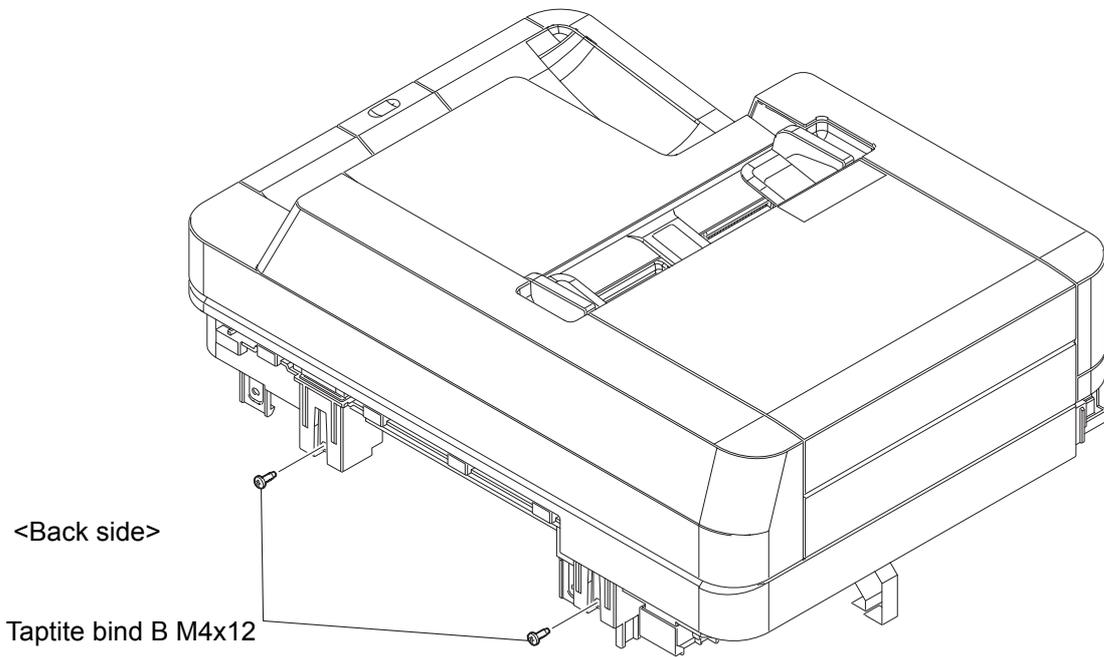


Fig. 3-46

(4) **Remove** > FFC holder

-  **Fixtures & Fittings**
- Hook (x 2)

 **Point:**

- Lift the ADF unit up slightly.
- Remove the FFC holder upward.
- Pull out the 2nd side CIS FFC, the Flap tray relay harness, and the ADF motor harness ASSY through the holes of the Document scanner unit.

(5) **Remove** > ADF unit

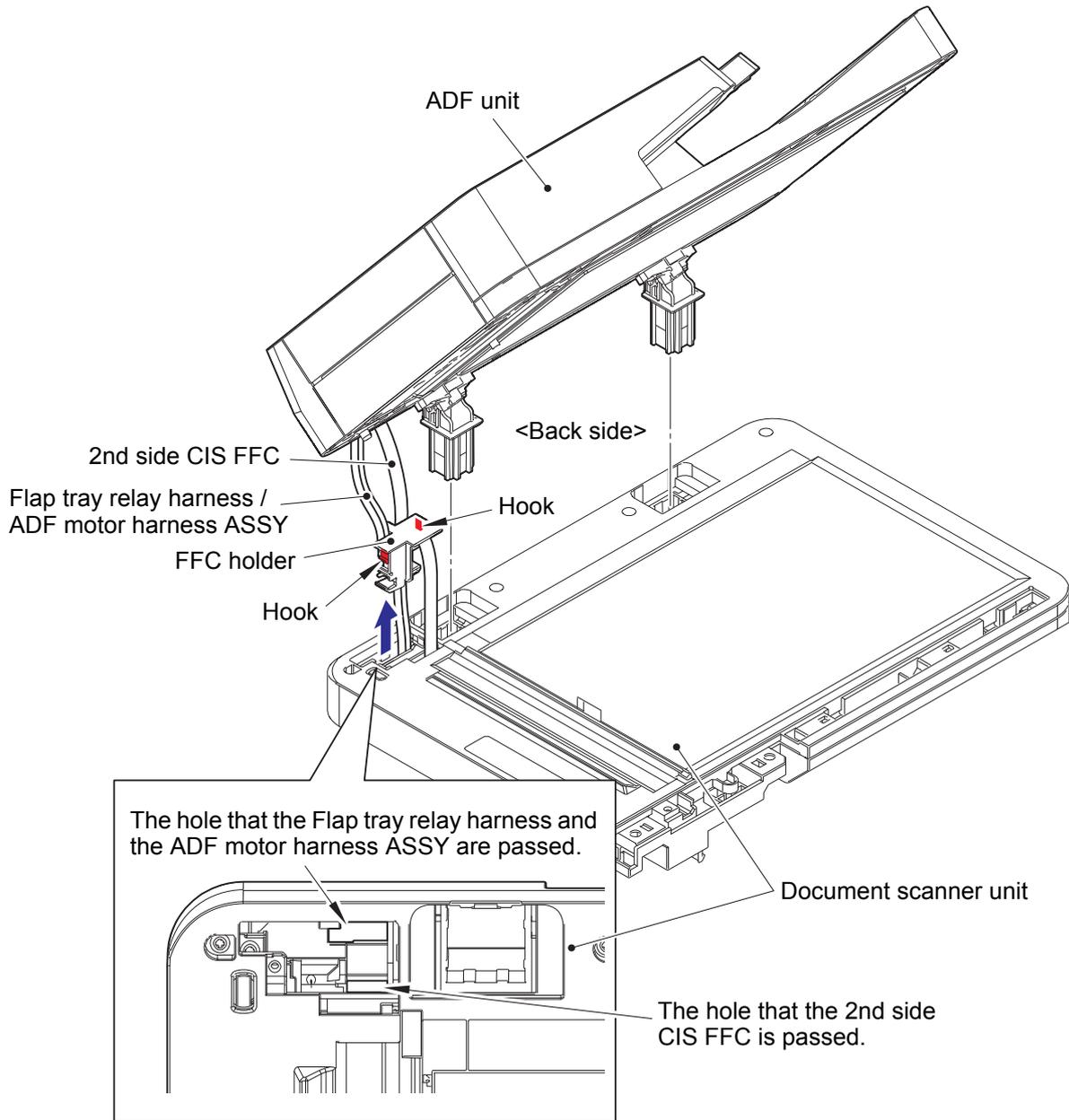


Fig. 3-47

(6) **Wiring** > 2nd side CIS FFC, ADF motor harness ASSY, Flap tray relay harness

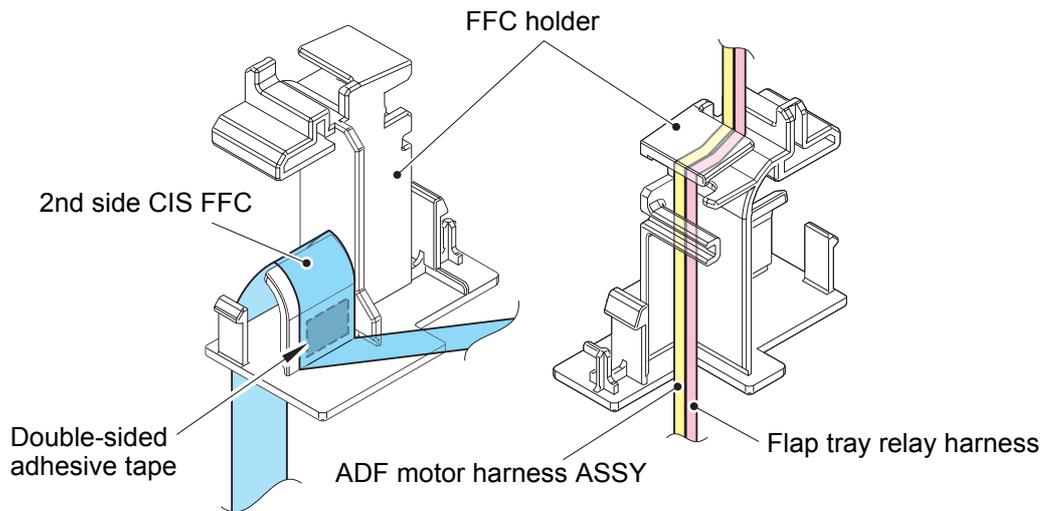


Fig. 3-48

Harness routing: Refer to "54. 2nd side CIS FFC, 1. ADF motor harness ASSY, 22. Flap tray relay harness".



Assembling note:

- Connect the 2nd side CIS FFC, ADF motor harness ASSY and Flap tray relay harness to the 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 shortcircuited.
- When connecting flat cables, do not insert them at an angle. After insertion, check that the cable is not at an angle.

7.24 Hinge ASSY

(1) **Remove** > Hinge ASSY (x 2)



Fixtures & Fittings

- Taptite bind B M4x12 (x 6)

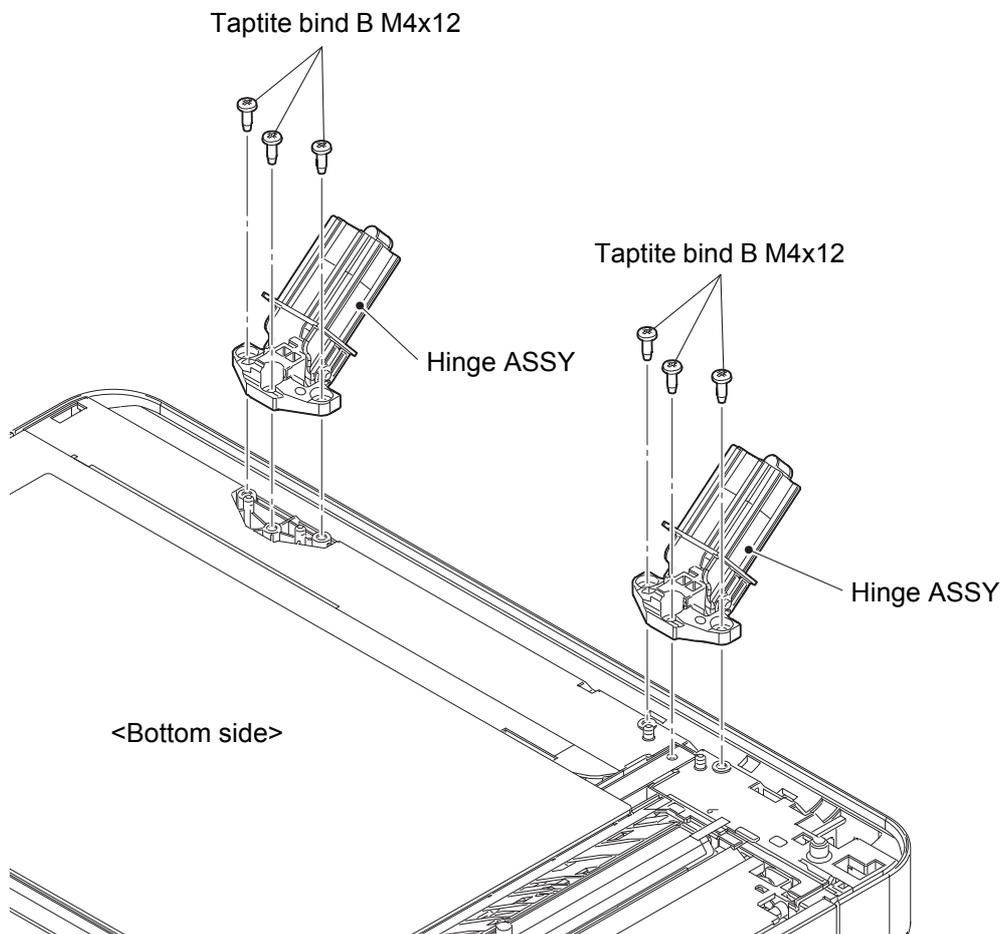


Fig. 3-49

7.25 Separation roller

(1) **Remove** > ADF front cover base

Fixtures & Fittings

- Taptite cup B M3x10 (x 4)
- Boss (x 3)

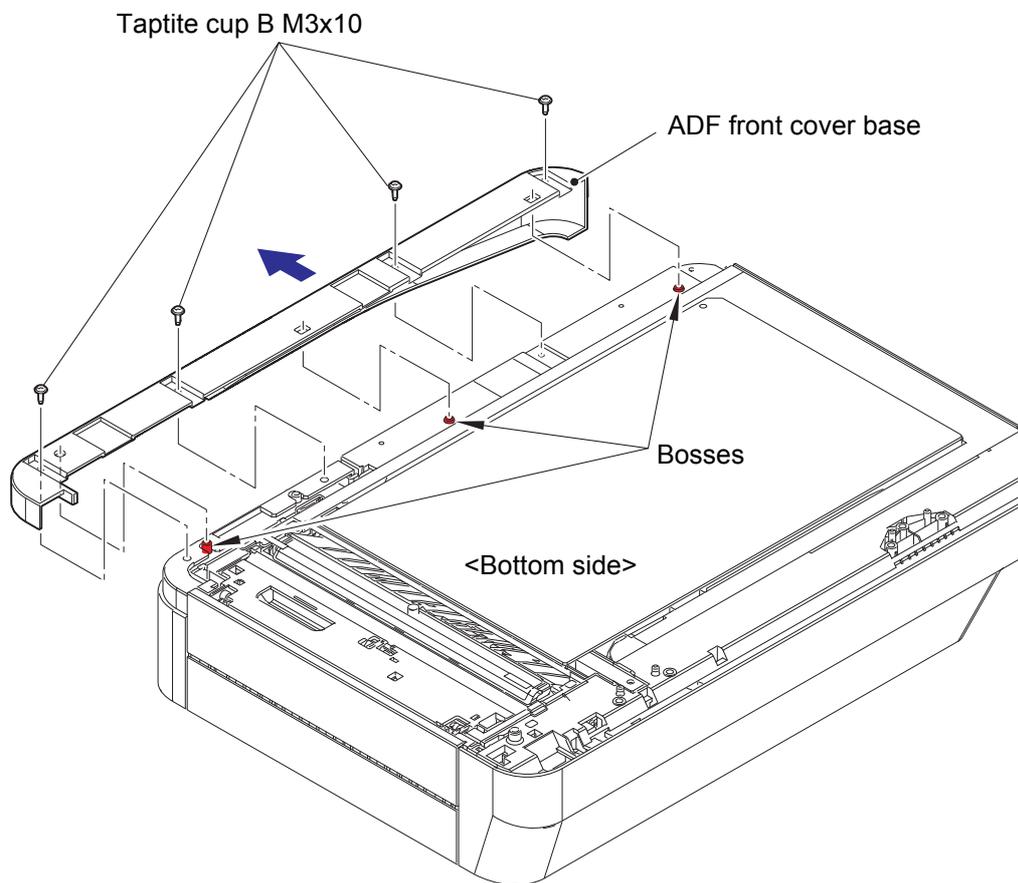


Fig. 3-50

- (2) **Open** > ADF cover
- (3) **Remove** > ADF front cover top

 **Fixtures & Fittings**
- Hook (x 6)

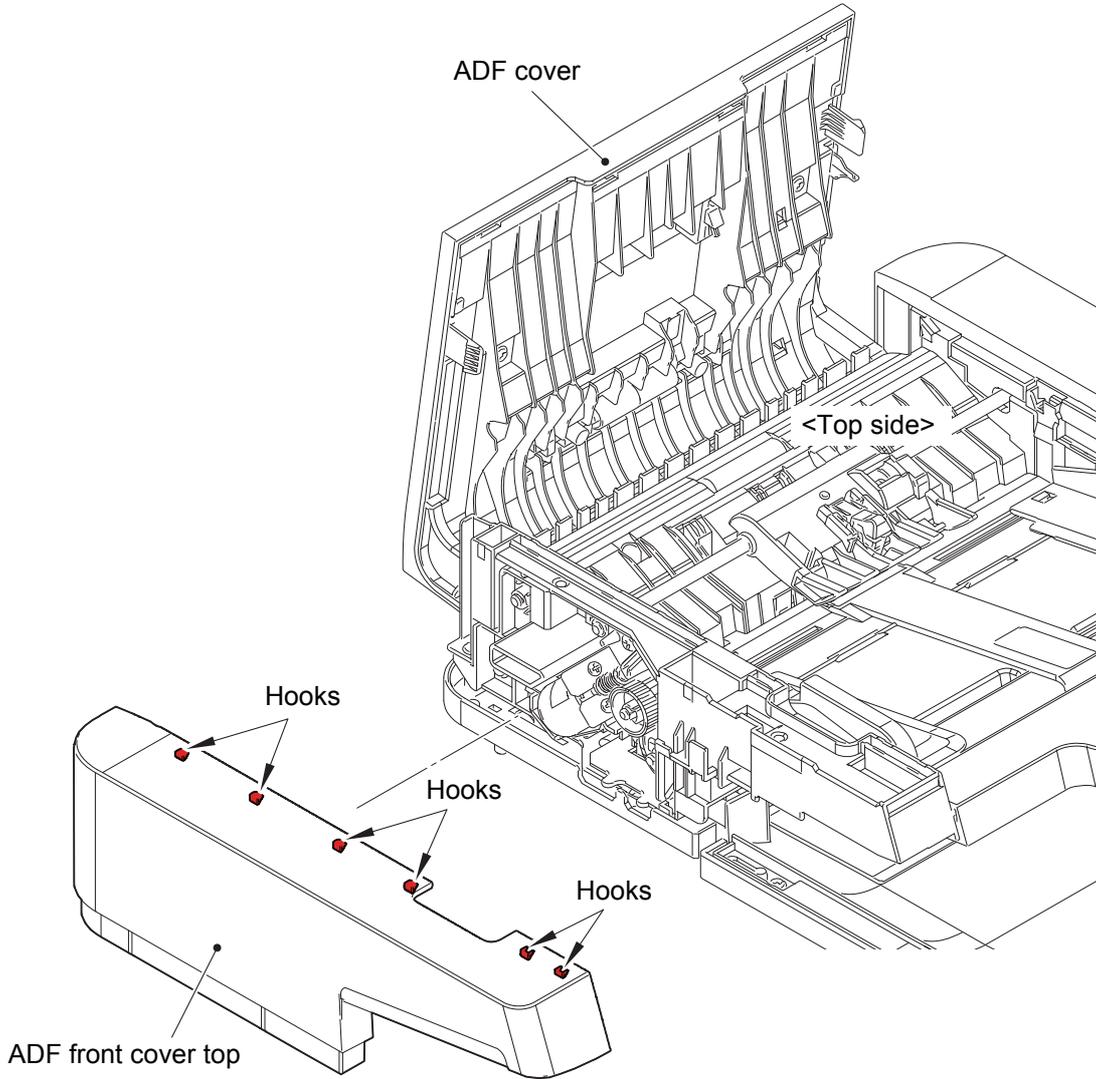


Fig. 3-51

(4) **Remove** > ADF back cover

-  **Fixtures & Fittings**
- Hook (x 3)

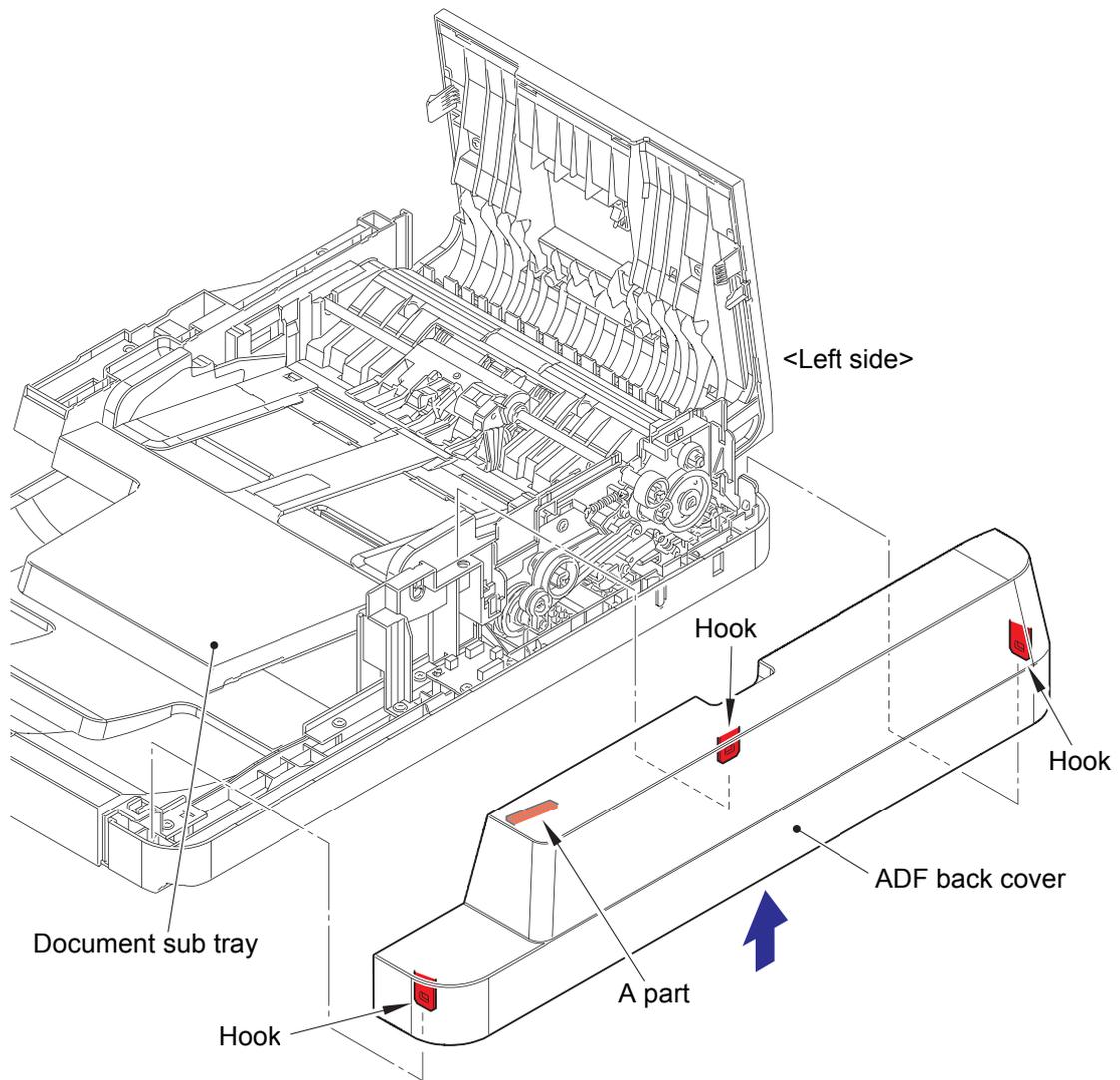


Fig. 3-52

 **Assembling note:**

- Put the A part of the ADF back cover under the Document sub tray, and then attach the ADF back cover.

(5) **Remove** > Separation roller

 **Fixtures & Fittings**

- Lock of the Conductive bushing (x 1)

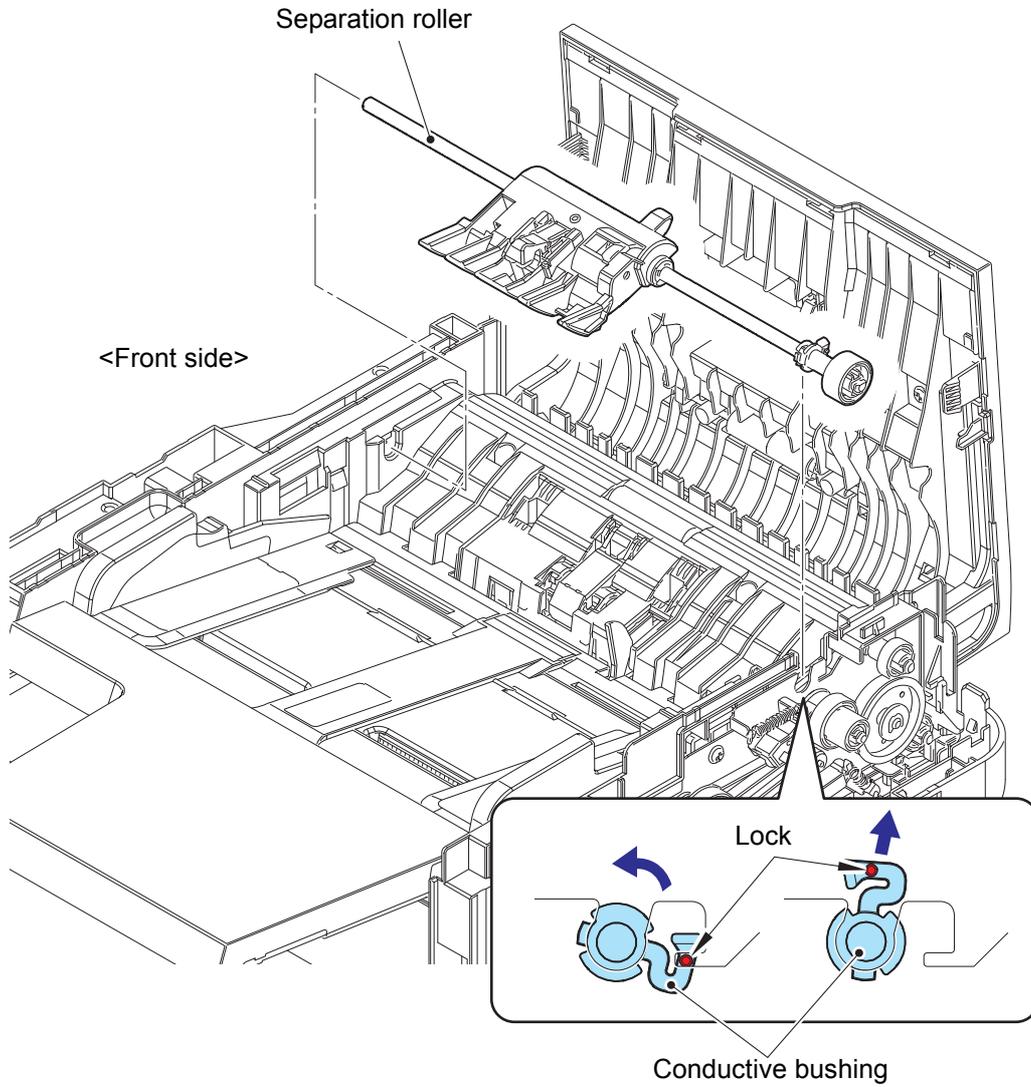


Fig. 3-53

7.26 Separation holder ASSY

(1) **Remove** > Separation holder ASSY

-  **Fixtures & Fittings**
 - Taptite cup B M3x10 (x 2)

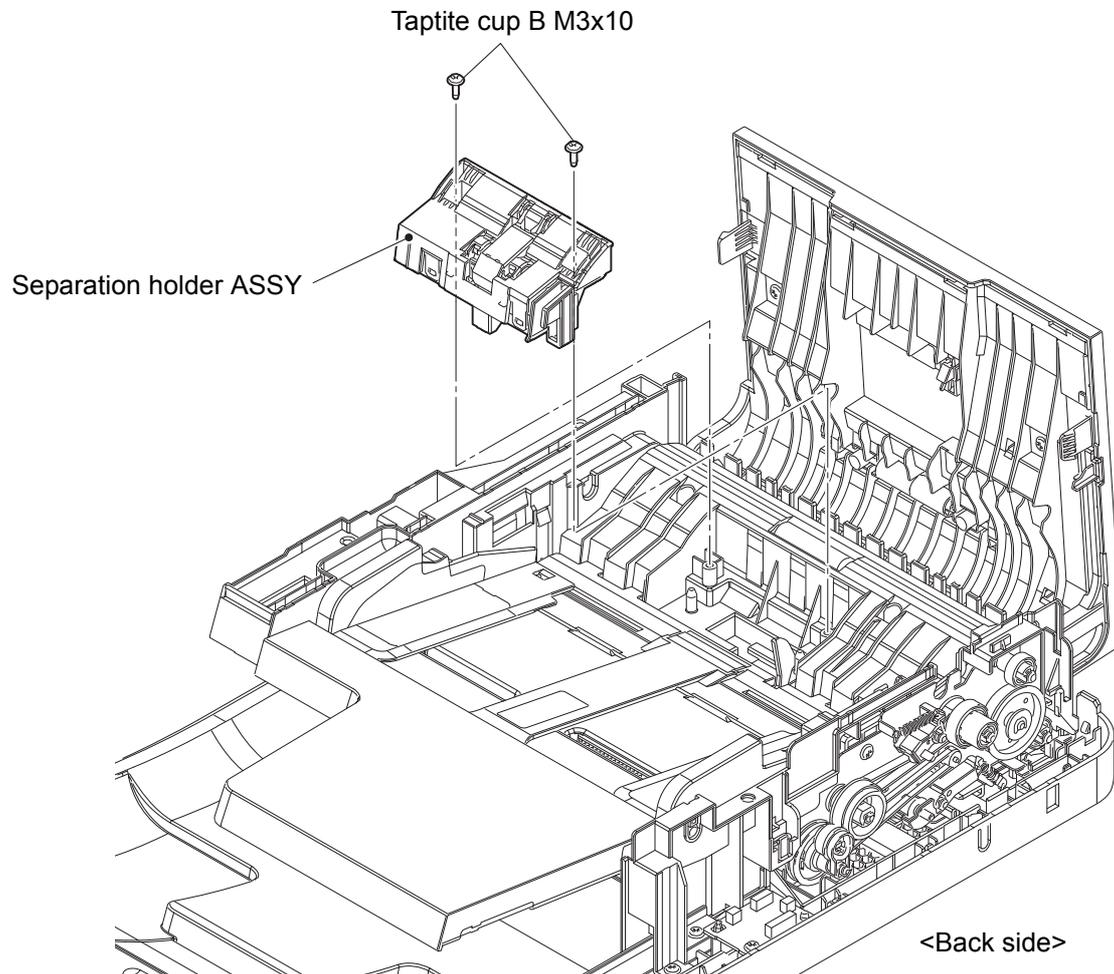


Fig. 3-54

7.27 ADF cover

(1) **Remove** > ADF flap tray

 **Fixtures & Fittings**
- Hook (x 1)

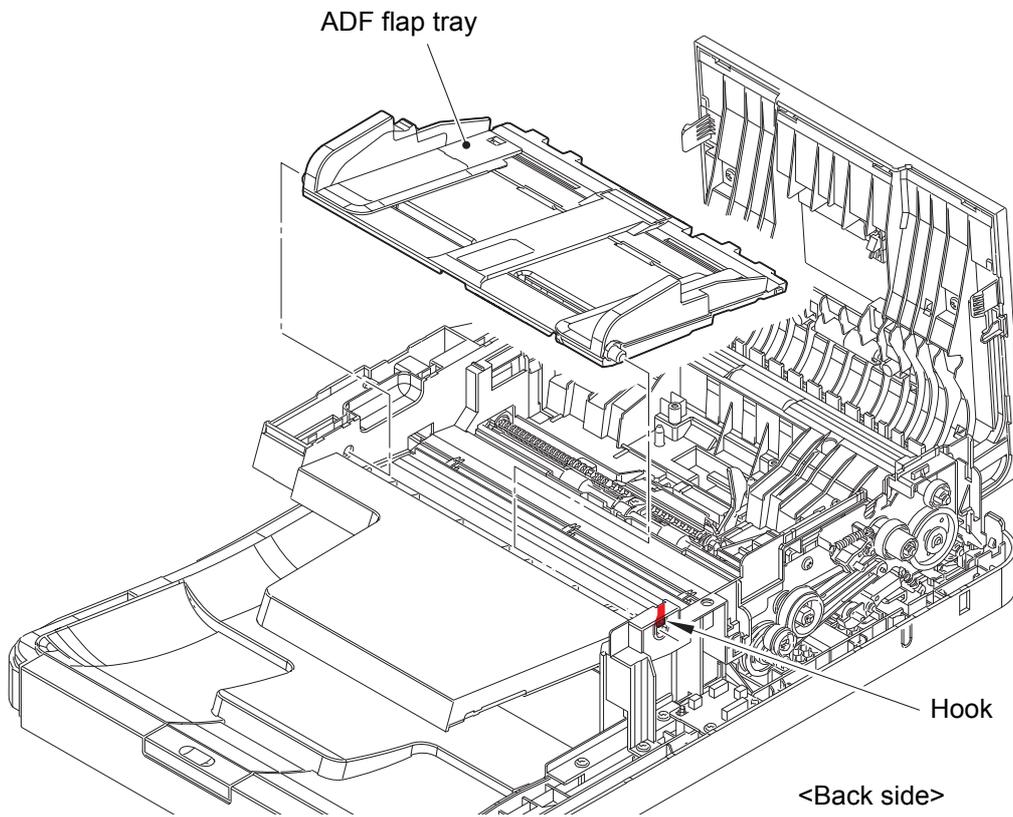


Fig. 3-55

- (2) **Disconnect** > Flap tray motor FFC (PCB side), Flap tray motor FFC (motor side), Flap tray PF sensor harness
- (3) **Wiring** > Flap tray motor FFC, Flap tray PF sensor harness
- (4) **Remove** > Upper document chute ASSY

Fixtures & Fittings
 - Taptite cup B M3x10 (x 7)

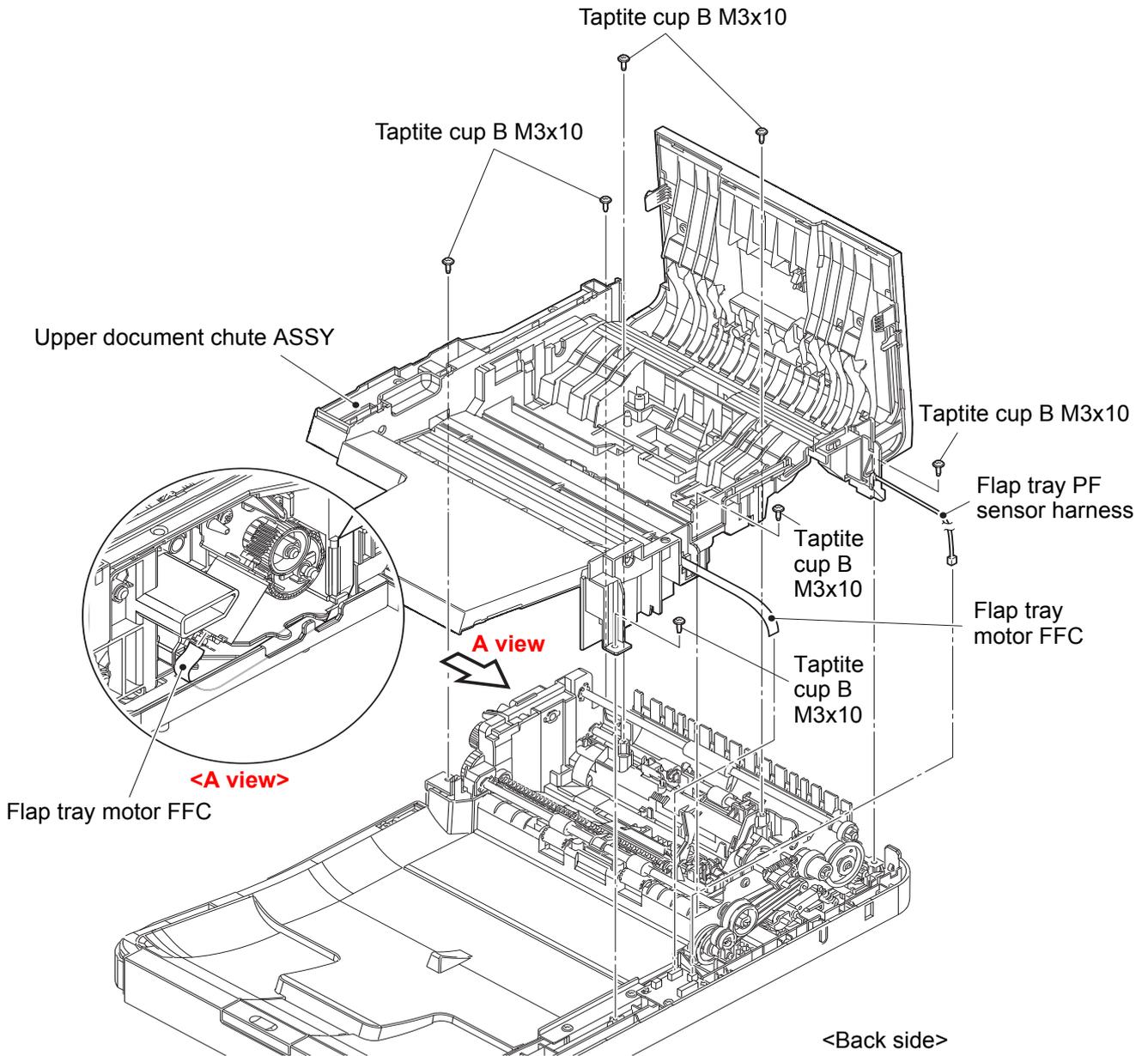


Fig. 3-56

Harness routing: Refer to "20. Flap tray motor FFC, 21. Flap tray PF sensor harness".

<How to fold the Flap tray motor FFC>

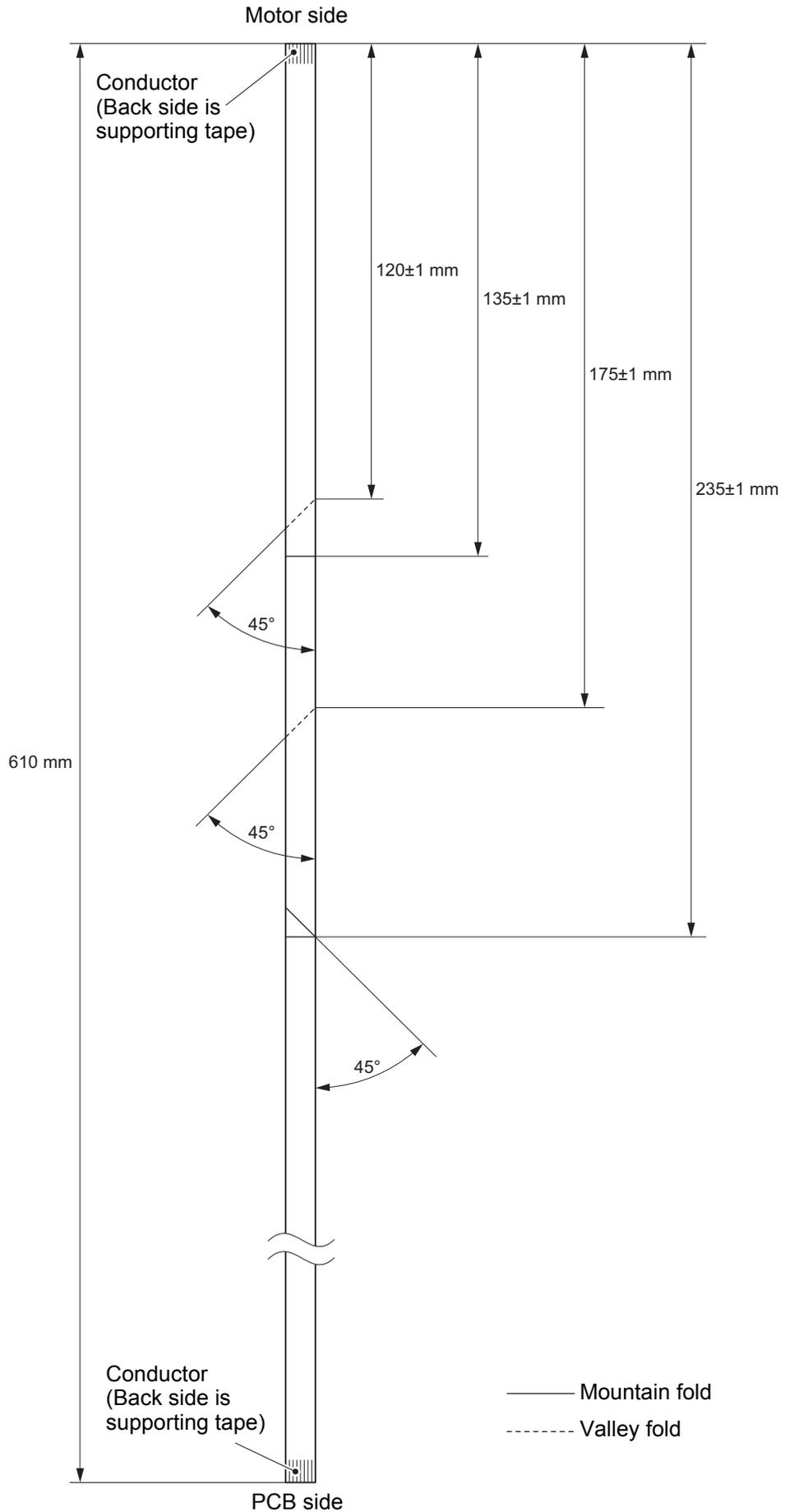


Fig. 3-57

(5) **Remove** > ADF cover

 **Fixtures & Fittings**
- Boss (x 2)

 **Point:**

- Pull out the Flap tray PF sensor harness through the hole of the Upper document chute ASSY.

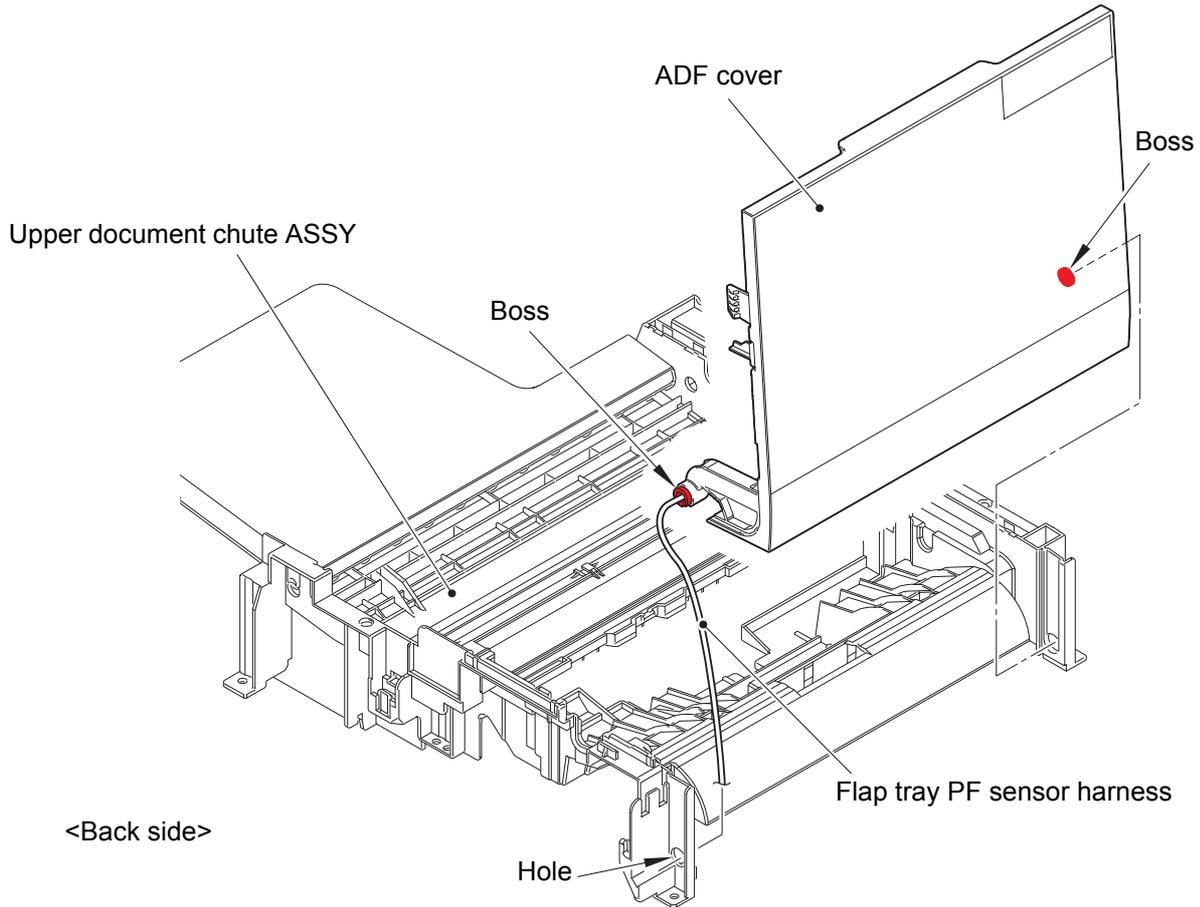


Fig. 3-58

7.28 LF1 roller ASSY

(1) **Remove** > LF1 roller ASSY



Fixtures & Fittings

- Lock of the Conductive bushing (x 1)

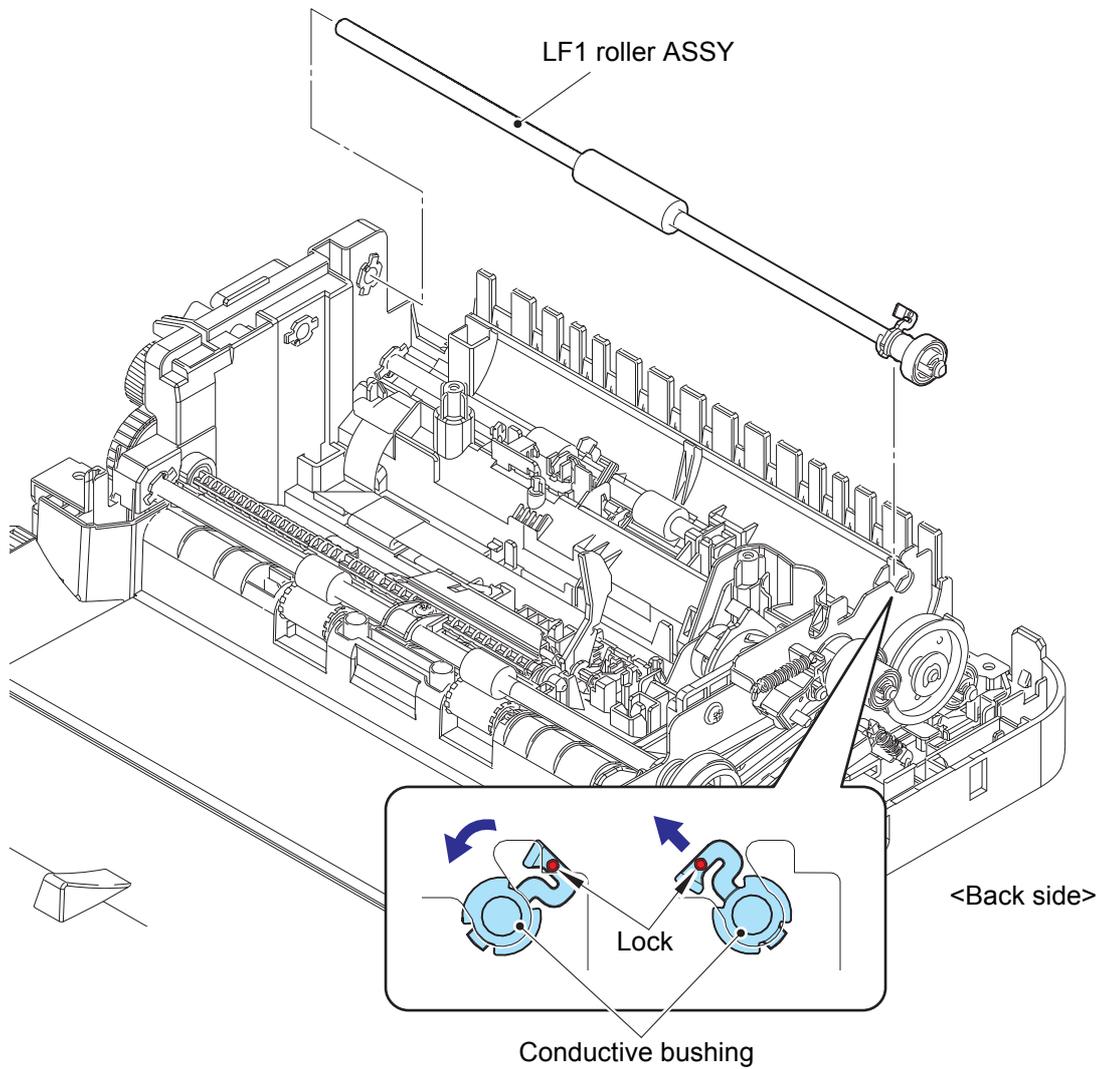


Fig. 3-59

7.29 LF2 roller ASSY

- (1) **Remove** > Detent ring, Gear 51

 **Fixtures & Fittings**
- Plastic retaining ring (x 1)

- (2) **Remove** > C bushing

 **Fixtures & Fittings**
- Hook (x 1)

 **Point:**
• Slide the C bushing in the direction of the arrow.

- (3) **Remove** > LF2 roller ASSY

 **Fixtures & Fittings**
- Lock of the Conductive bushing (x 1)

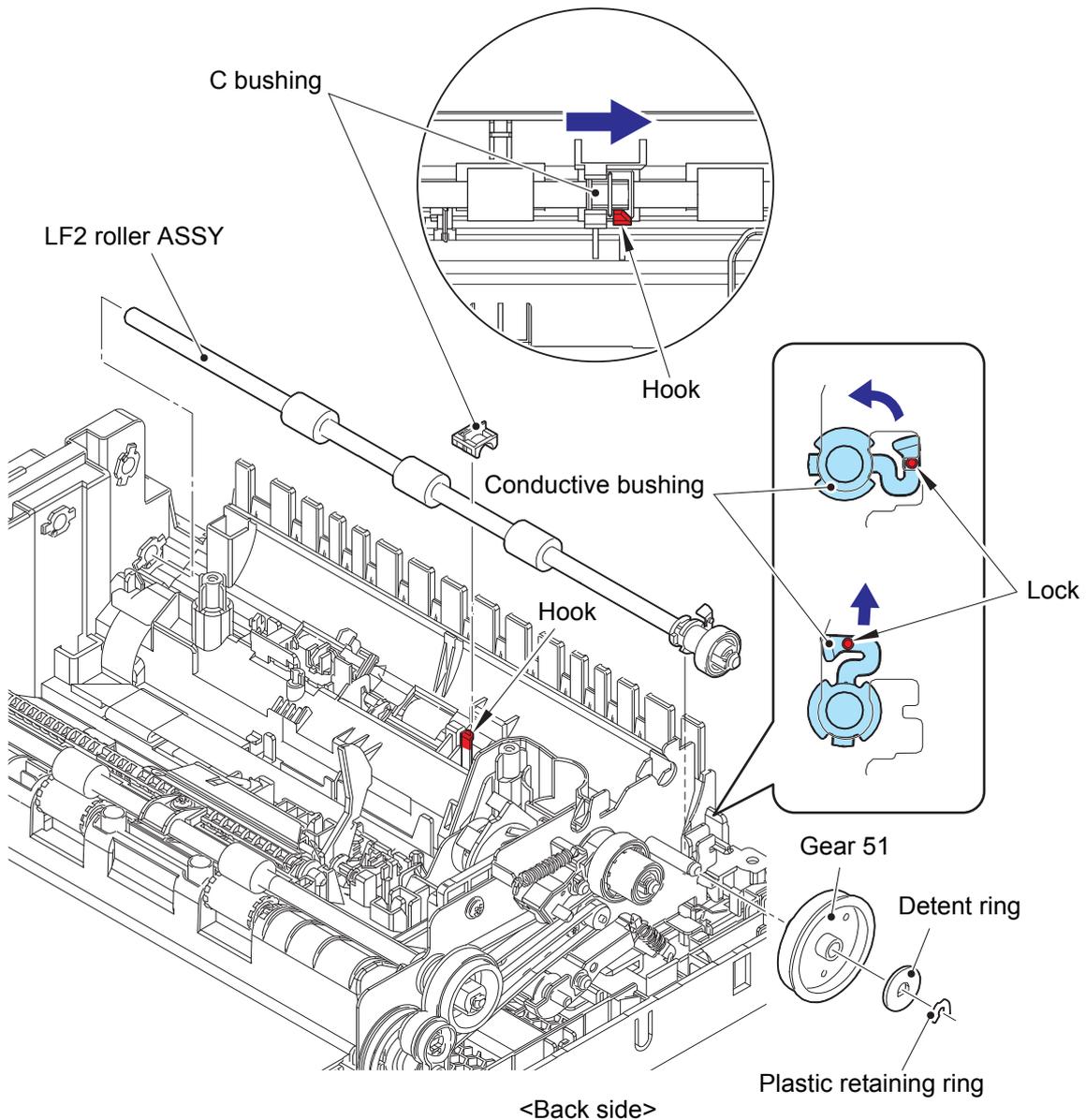


Fig. 3-60

7.30 Document front sensor

(1) **Remove** > Document front sensor

 **Fixtures & Fittings**

- Hook (x 1)



Point:

- Remove the Document front sensor while lifting the actuator up.
- Do not pull the Document front sensor strongly because the ADF motor harness ASSY is connected.

(2) **Disconnect** > ADF motor harness ASSY

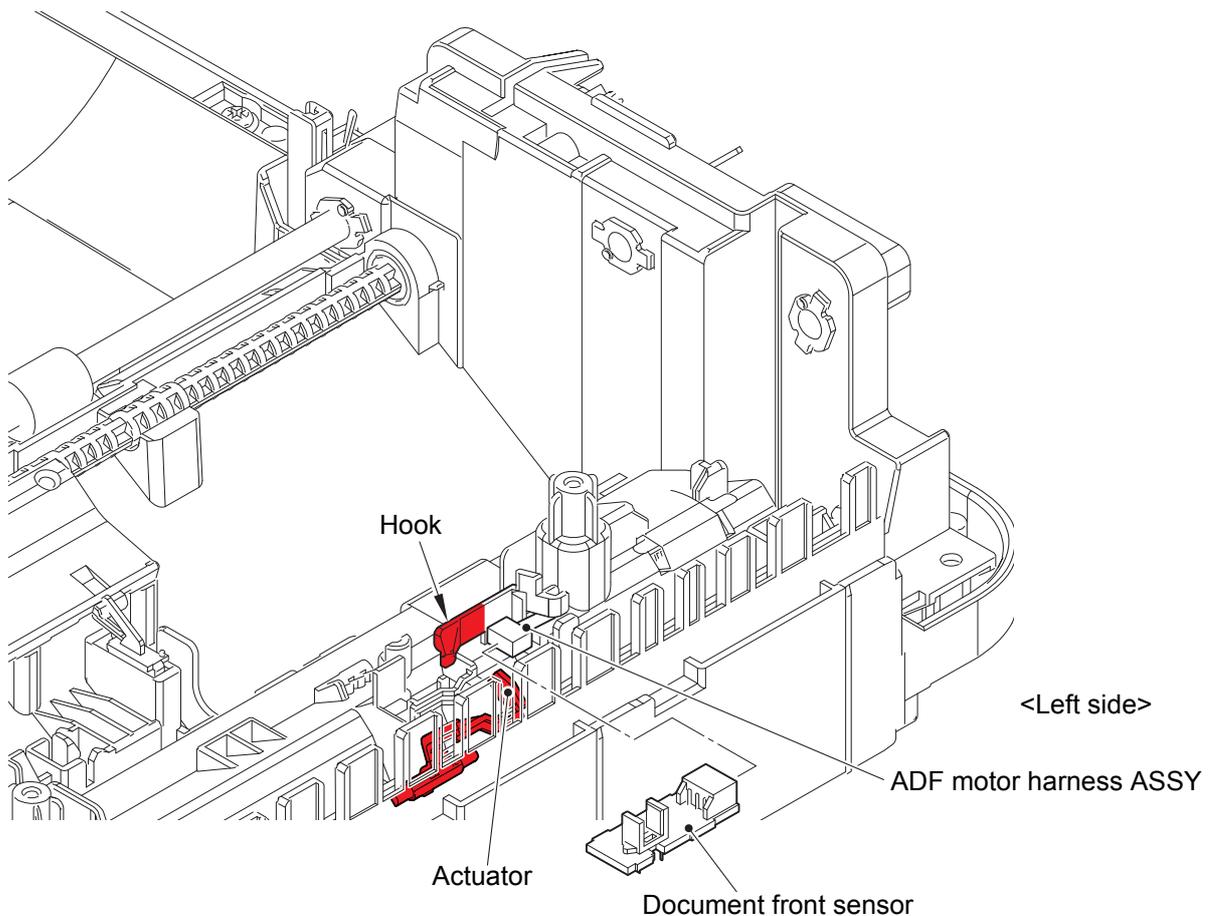


Fig. 3-61

7.31 Document rear sensor

- (1) **Remove** > Document rear sensor

 **Fixtures & Fittings**
- Hook (x 1)



Point:

- Do not pull the Document rear sensor strongly because the ADF motor harness ASSY is connected.

- (2) **Disconnect** > ADF motor harness ASSY

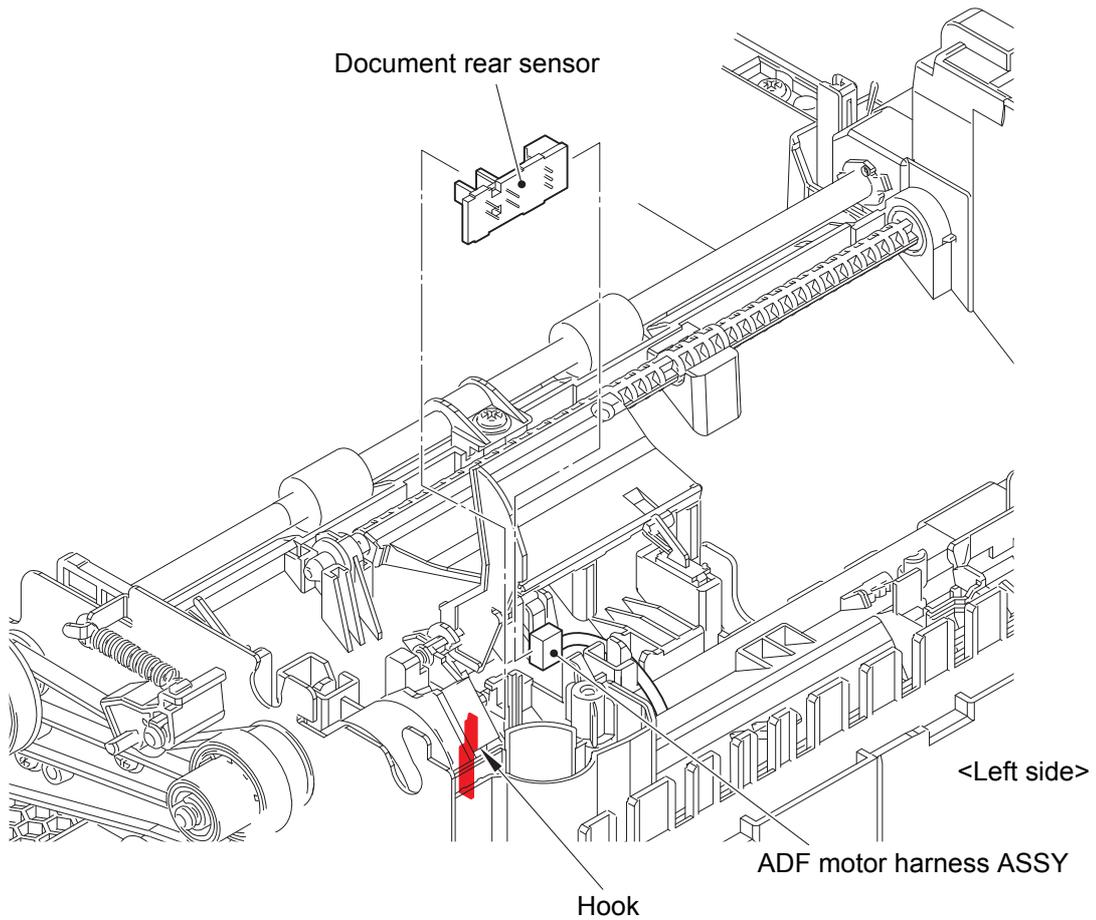


Fig. 3-62

7.32 2nd side CIS unit

- (1) **Disconnect** > ADF motor harness ASSY
- (2) **Wiring** > ADF motor harness ASSY, 2nd side CIS FFC



Fixtures & Fittings

- Double-sided adhesive tape (x 1)

- (3) **Remove** > Lower D chute ASSY

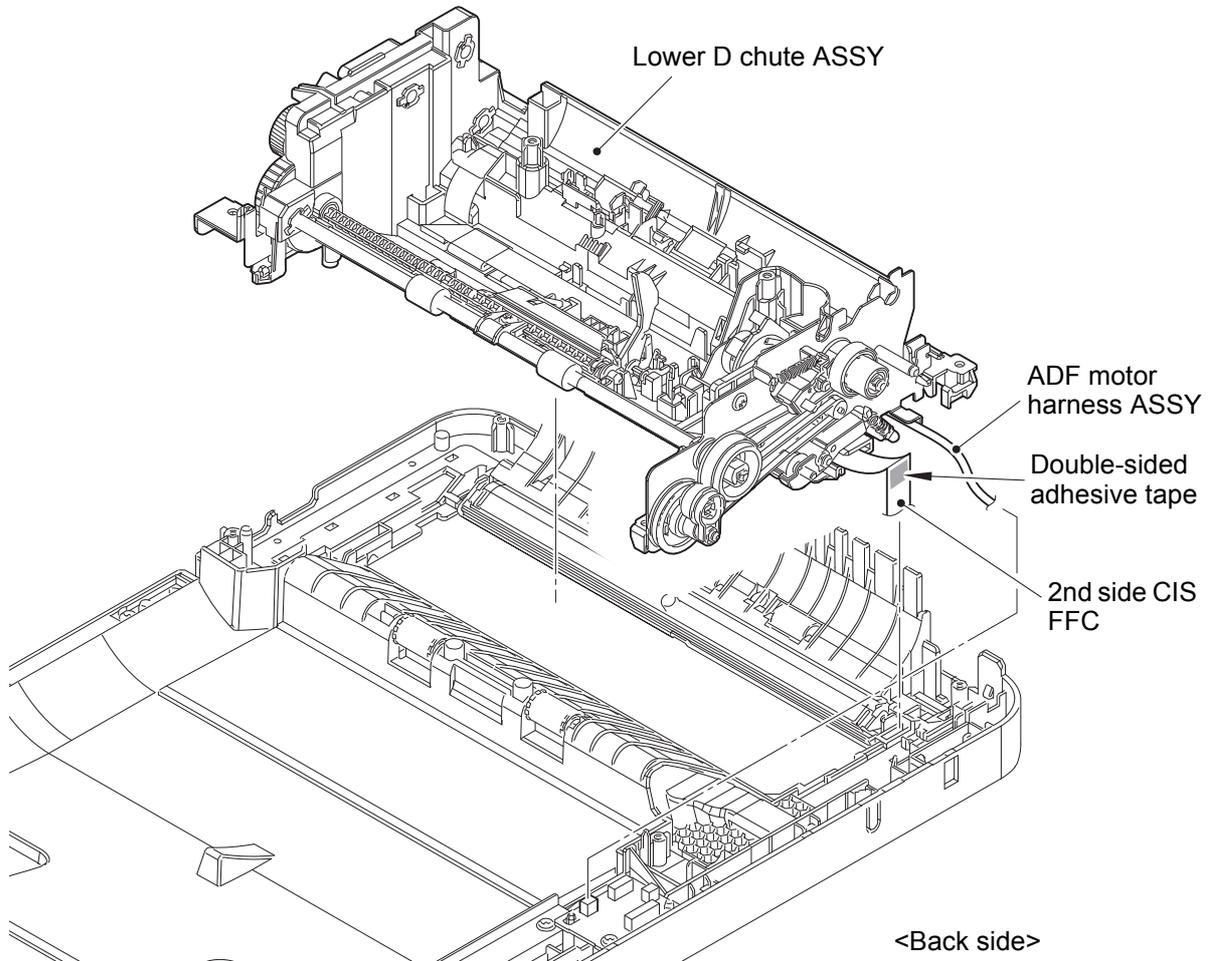


Fig. 3-63

Harness routing: Refer to "1. ADF motor harness ASSY, 54. 2nd side CIS FFC".

(4) **Remove** > FFC film 1

(5) **Disconnect** > 2nd side CIS FFC

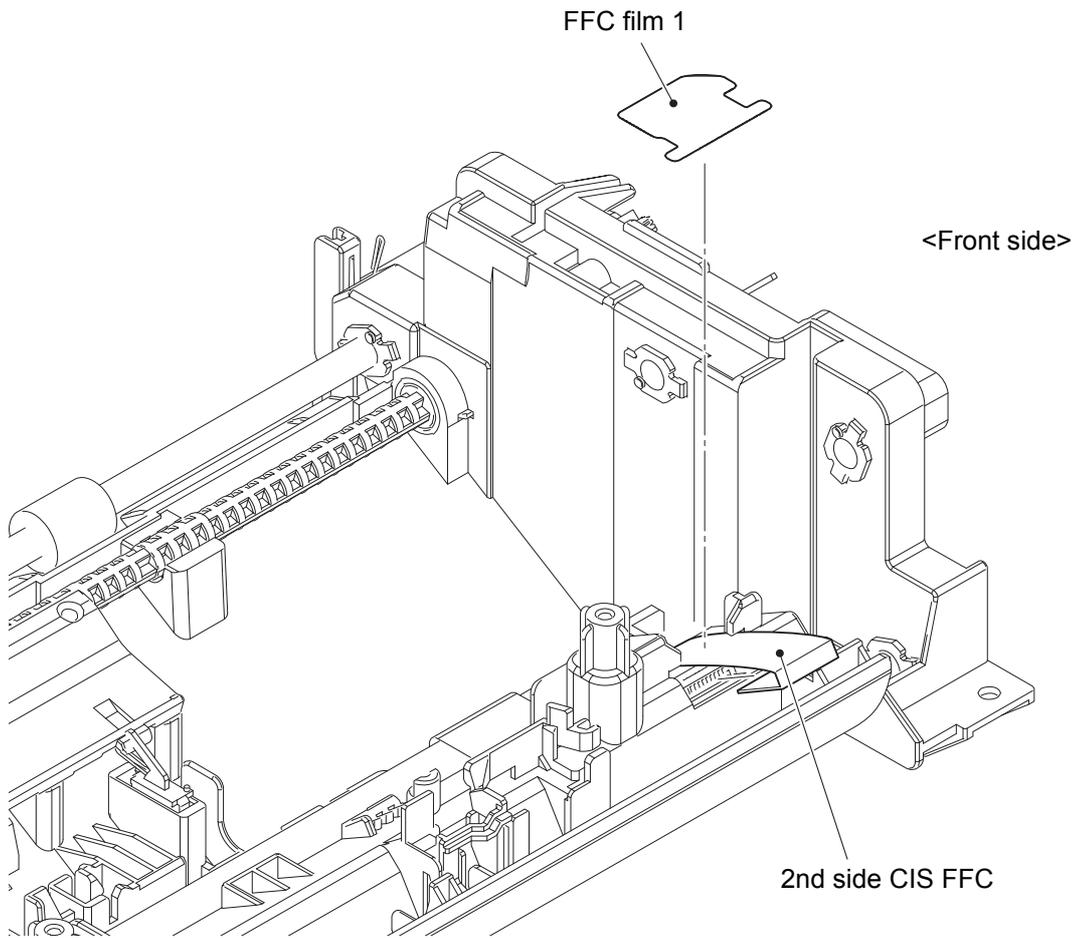


Fig. 3-64

(6) **Remove** > Cover glass



Point:

- Push the Cover glass in the direction of arrow 1 into the A part, and then remove the Cover glass in the order of arrows 2 to 4.

(7) **Remove** > CIS spacer R, CIS spacer F

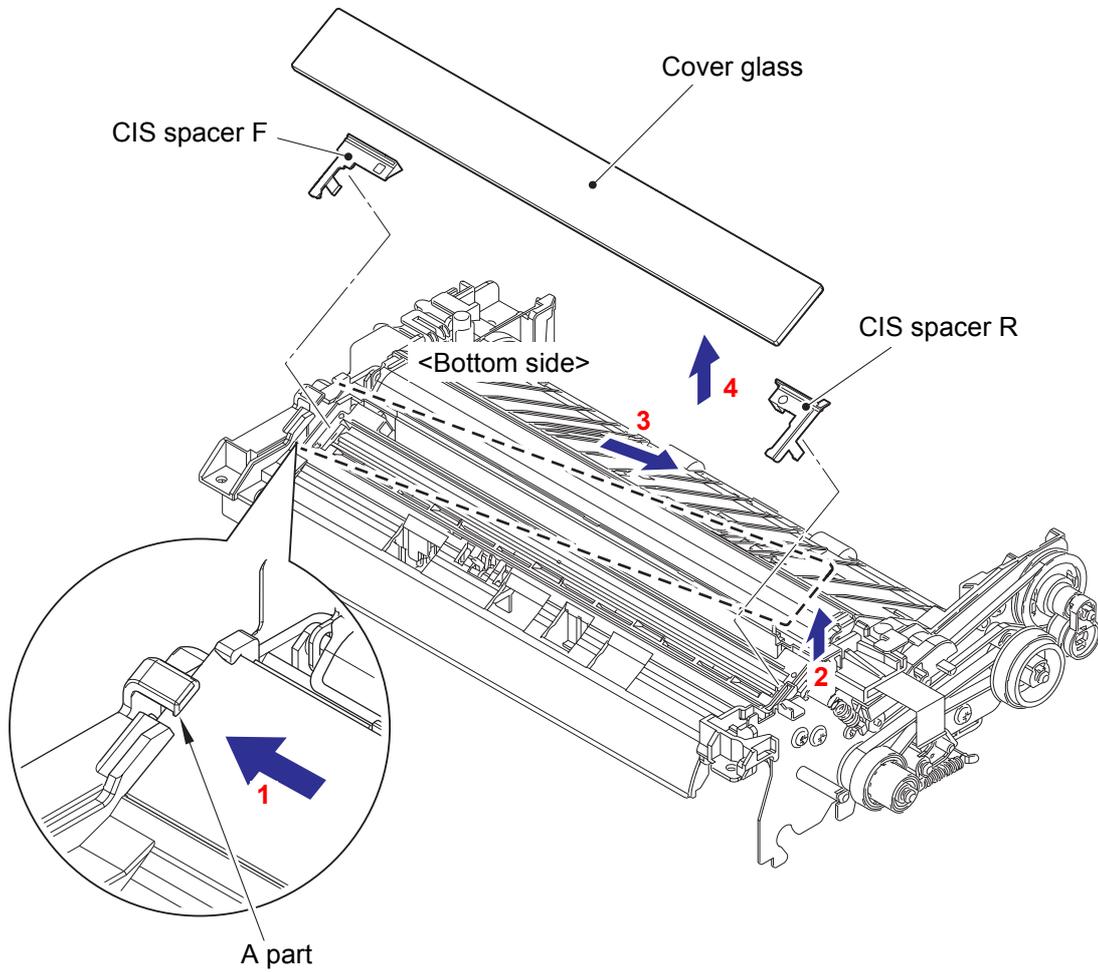


Fig. 3-65

(8) **Remove** > 2nd side CIS unit

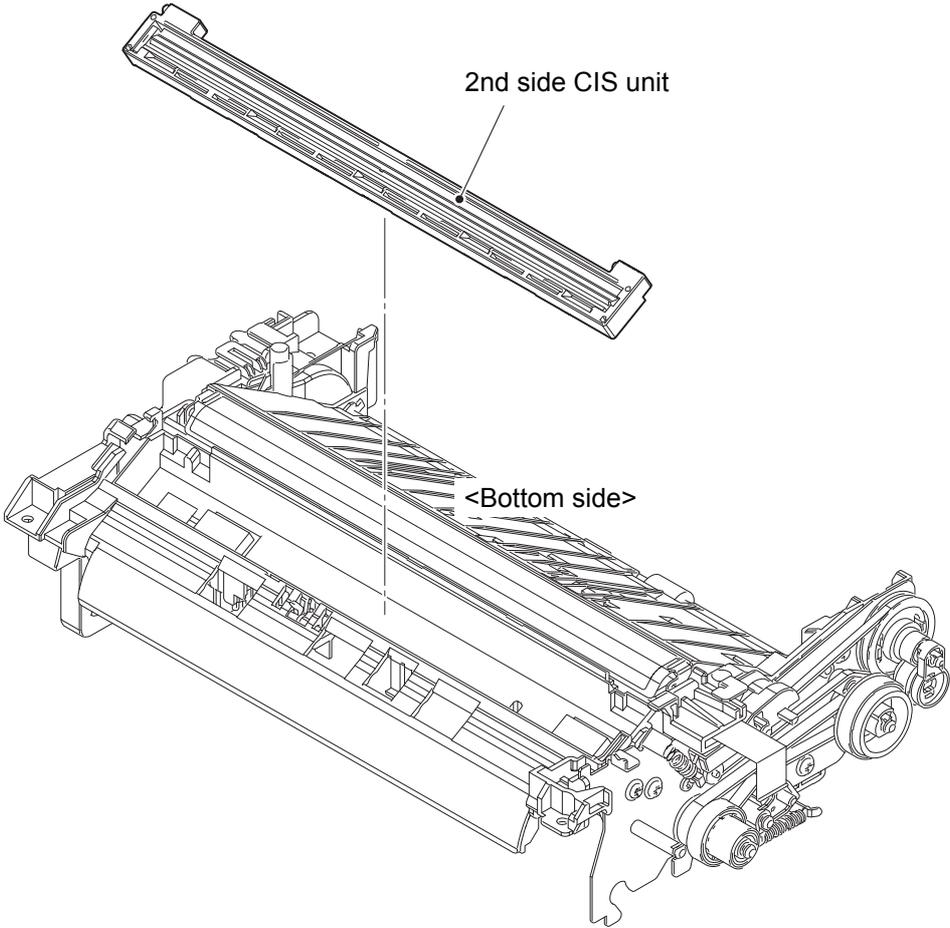


Fig. 3-66

7.33 CIS sponge

(1) Remove > CIS sponge (x 2)

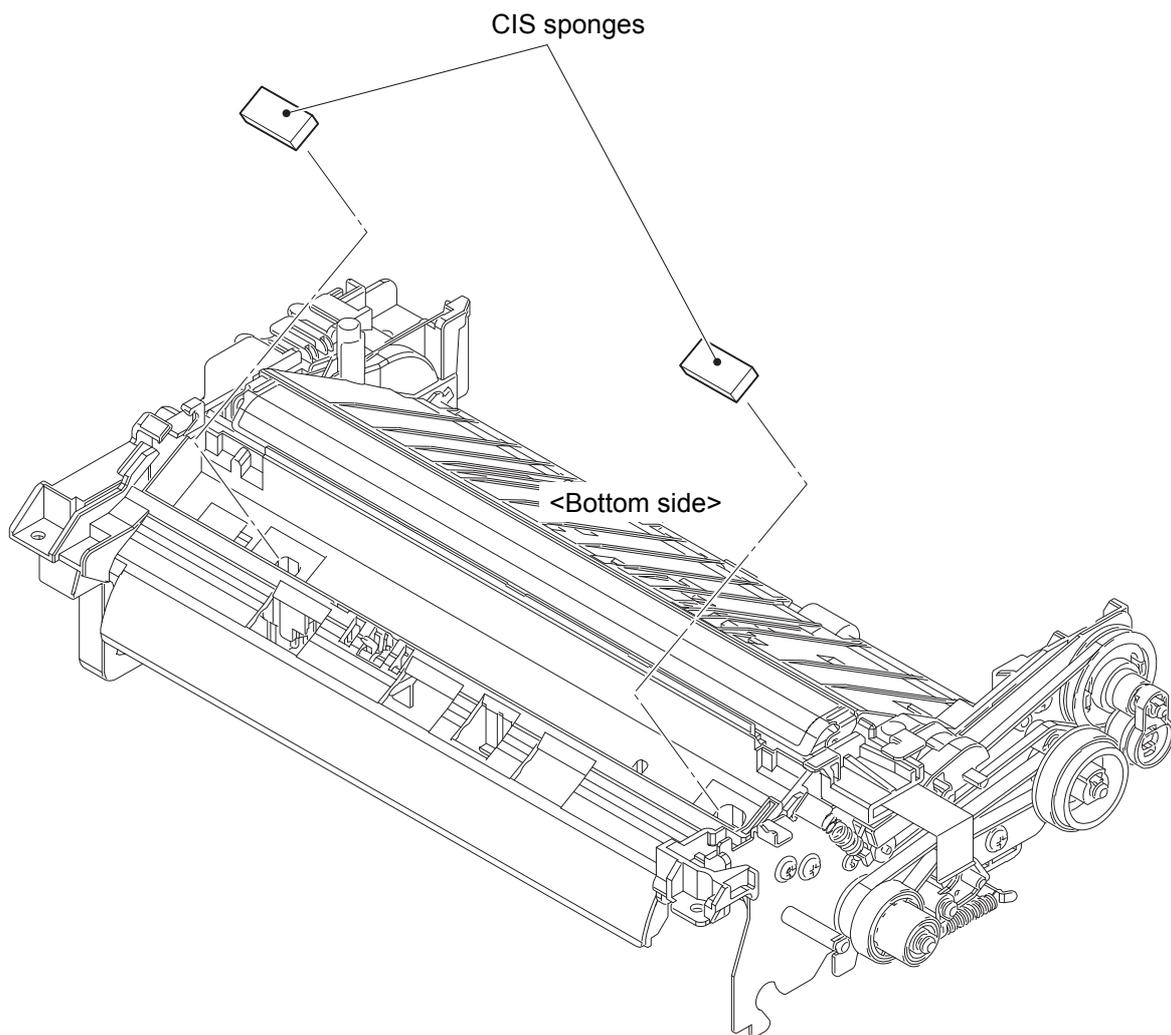


Fig. 3-67

7.34 2nd side CIS FFC

- (1) **Remove** > Eject tension spring
- (2) **Remove** > Ejection roller gear, Exit belt

 **Fixtures & Fittings**
- Hook (x 1)

- (3) **Remove** > FG harness (ADF motor harness ASSY)

 **Fixtures & Fittings**
- Taptite cup S M3x6 SR (x 1)

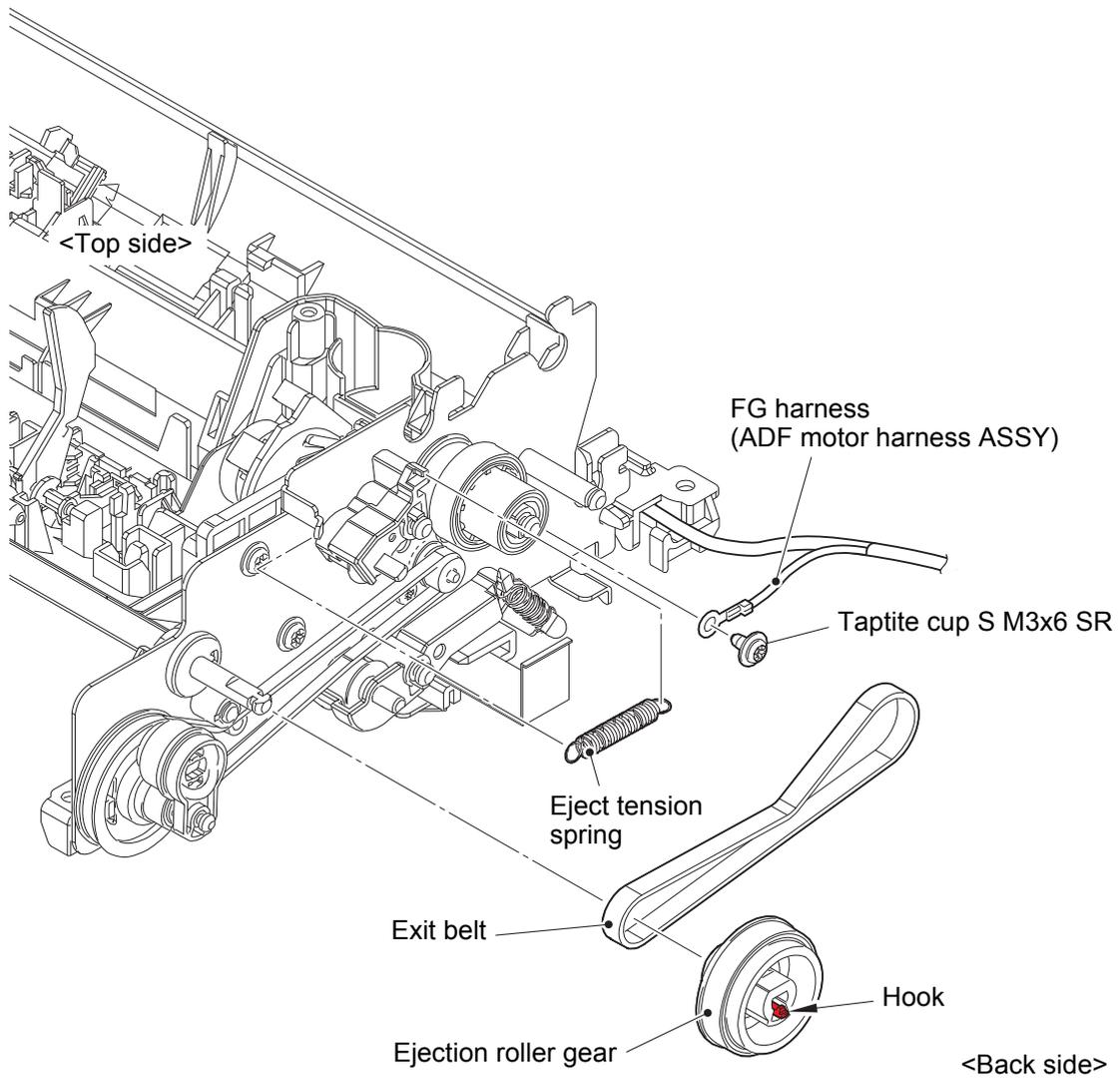


Fig. 3-68

- (4) **Disconnect** > ADF motor harness ASSY
- (5) **Remove** > Bushing EJ, Drive frame ASSY

 **Fixtures & Fittings**
- Taptite cup B M3x10 (x 4)

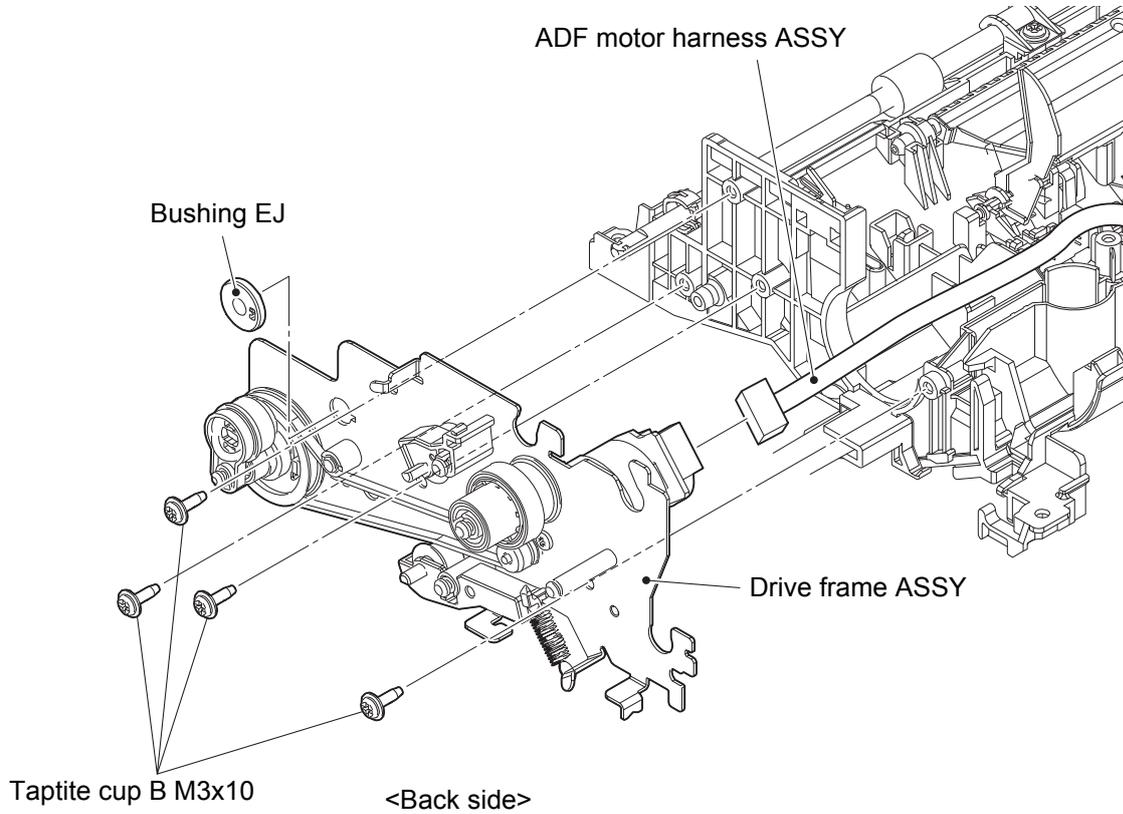


Fig. 3-69

- (6) **Remove** > FFC film ADF
- (7) **Wiring** > 2nd side CIS FFC

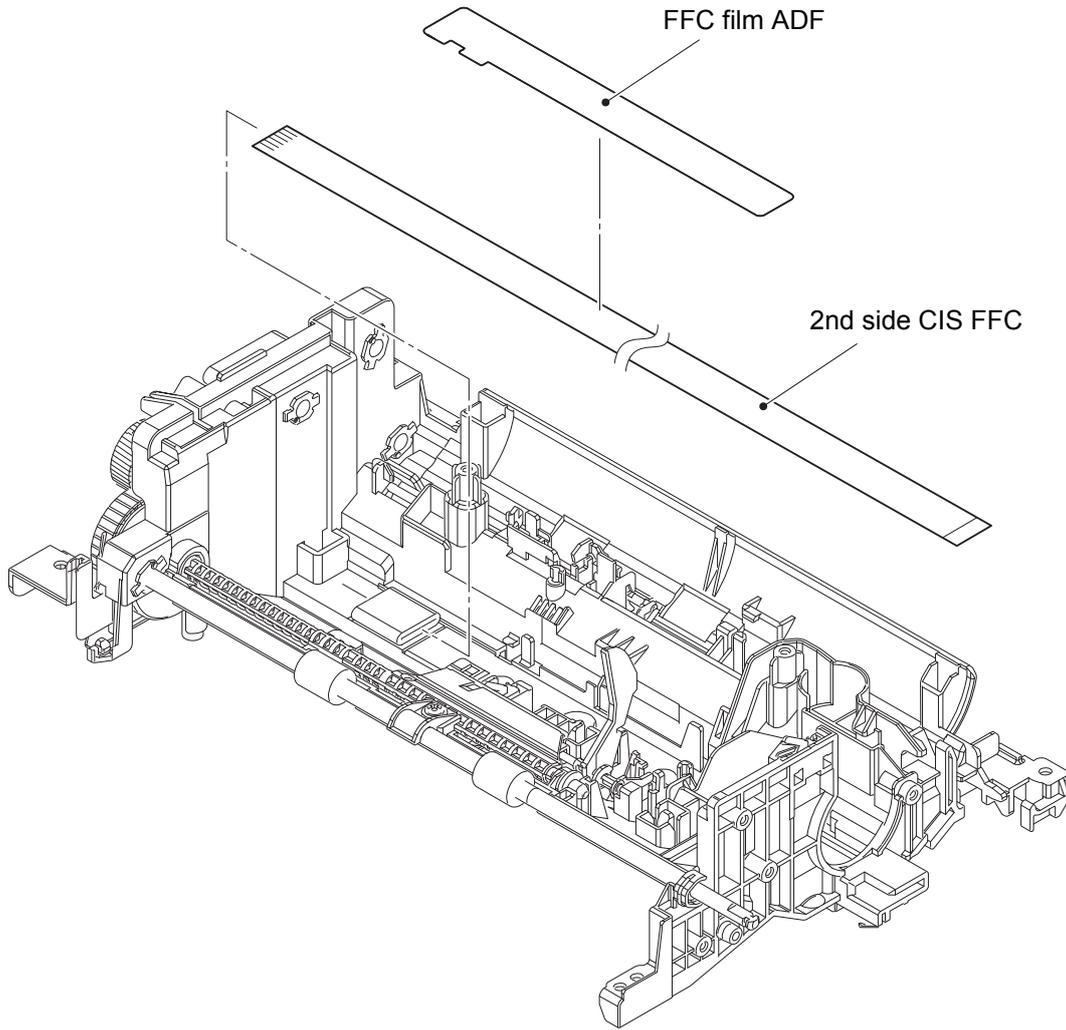


Fig. 3-70

Harness routing: Refer to "54. 2nd side CIS FFC".

<How to fold the 2nd side CIS FFC>

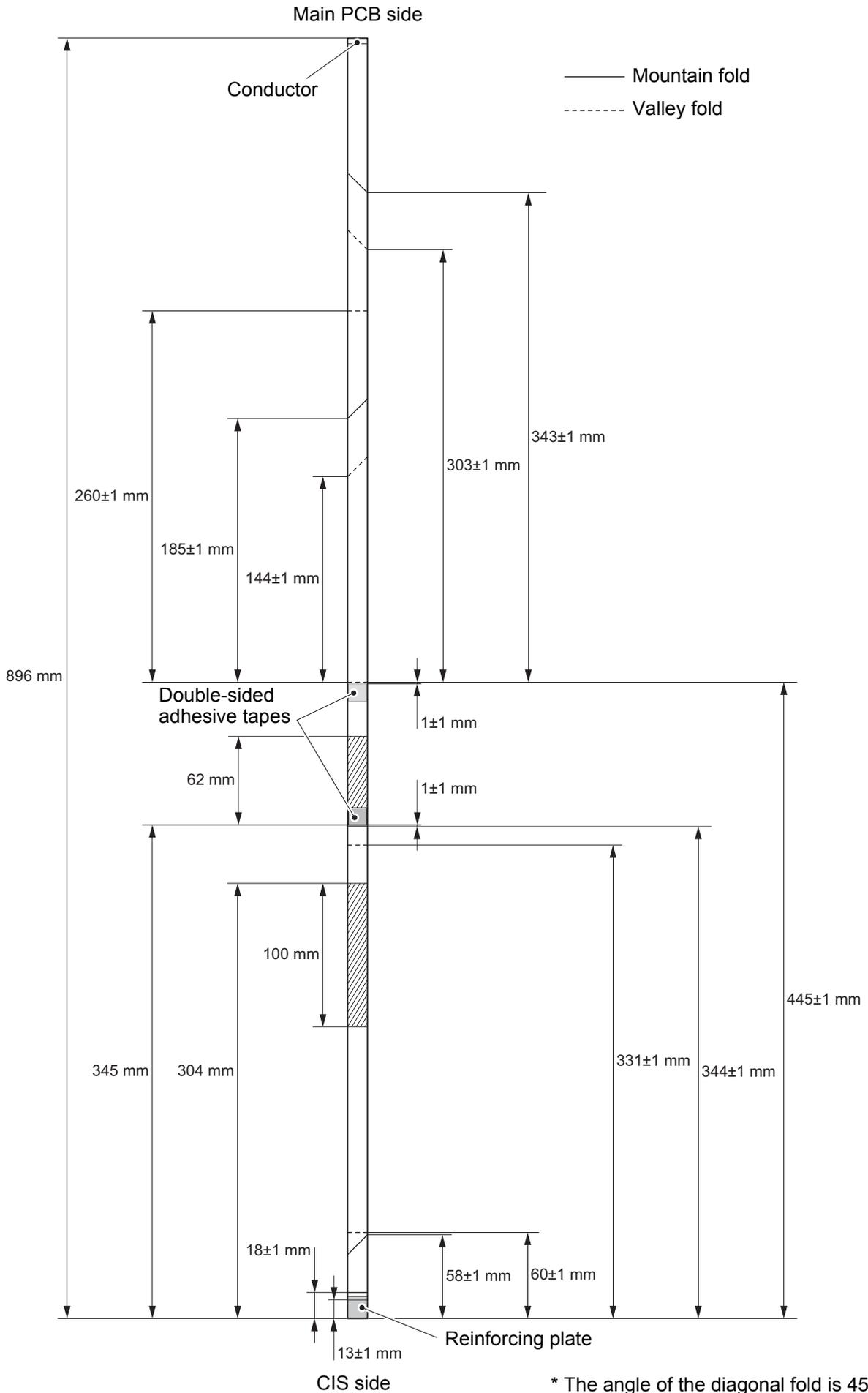


Fig. 3-71

7.35 Document stopper

(1) **Remove** > Document stopper

 **Fixtures & Fittings**
- Boss (x 2)

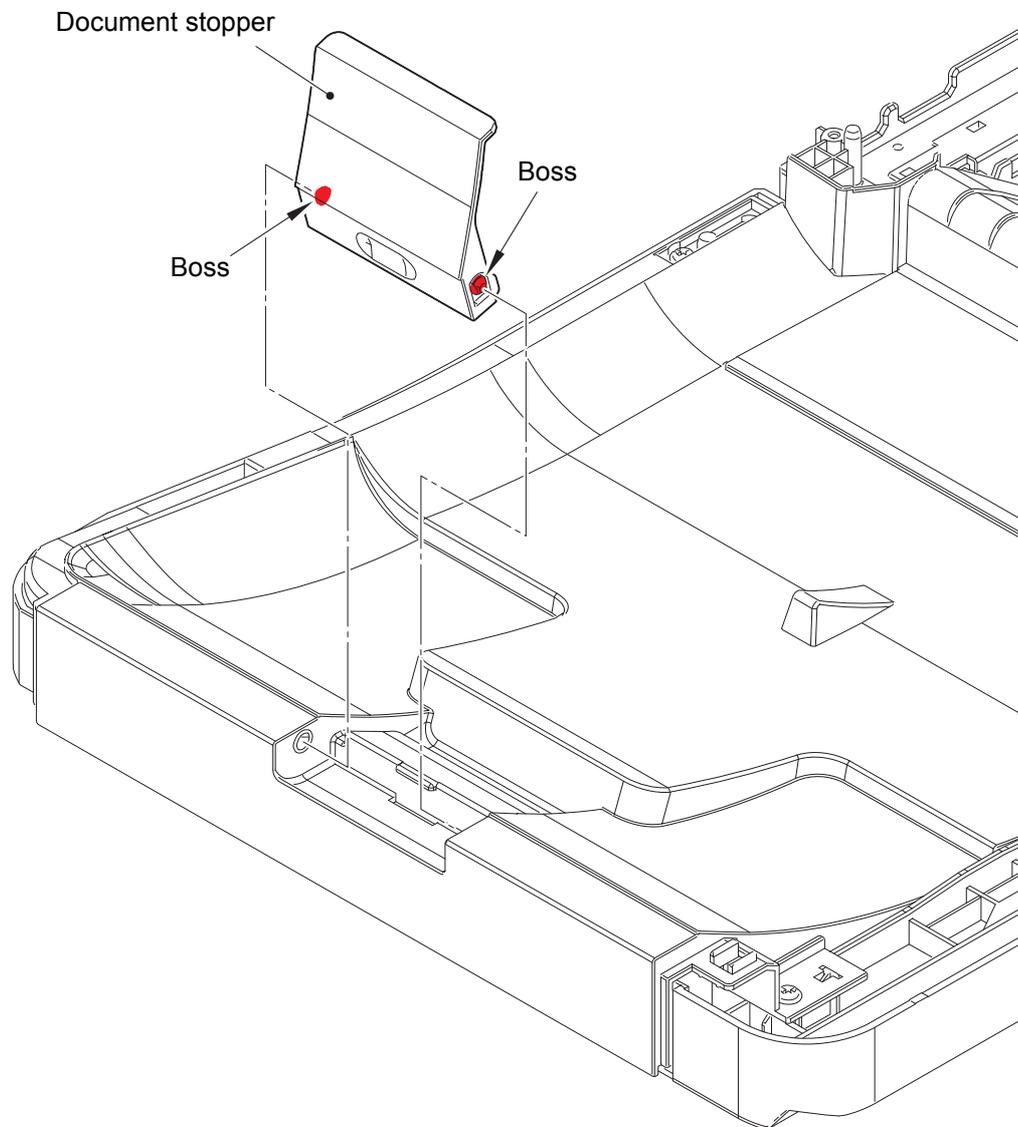


Fig. 3-72

7.36 1st side CIS unit

(1) **Remove** > Scanner top cover

-  **Fixtures & Fittings**
 - Taptite cup B M3x10 (x 8)

(2) **Remove** > CIS roller holder F ASSY, CIS roller holder R ASSY

-  **Fixtures & Fittings**
 - Hook (x 2)

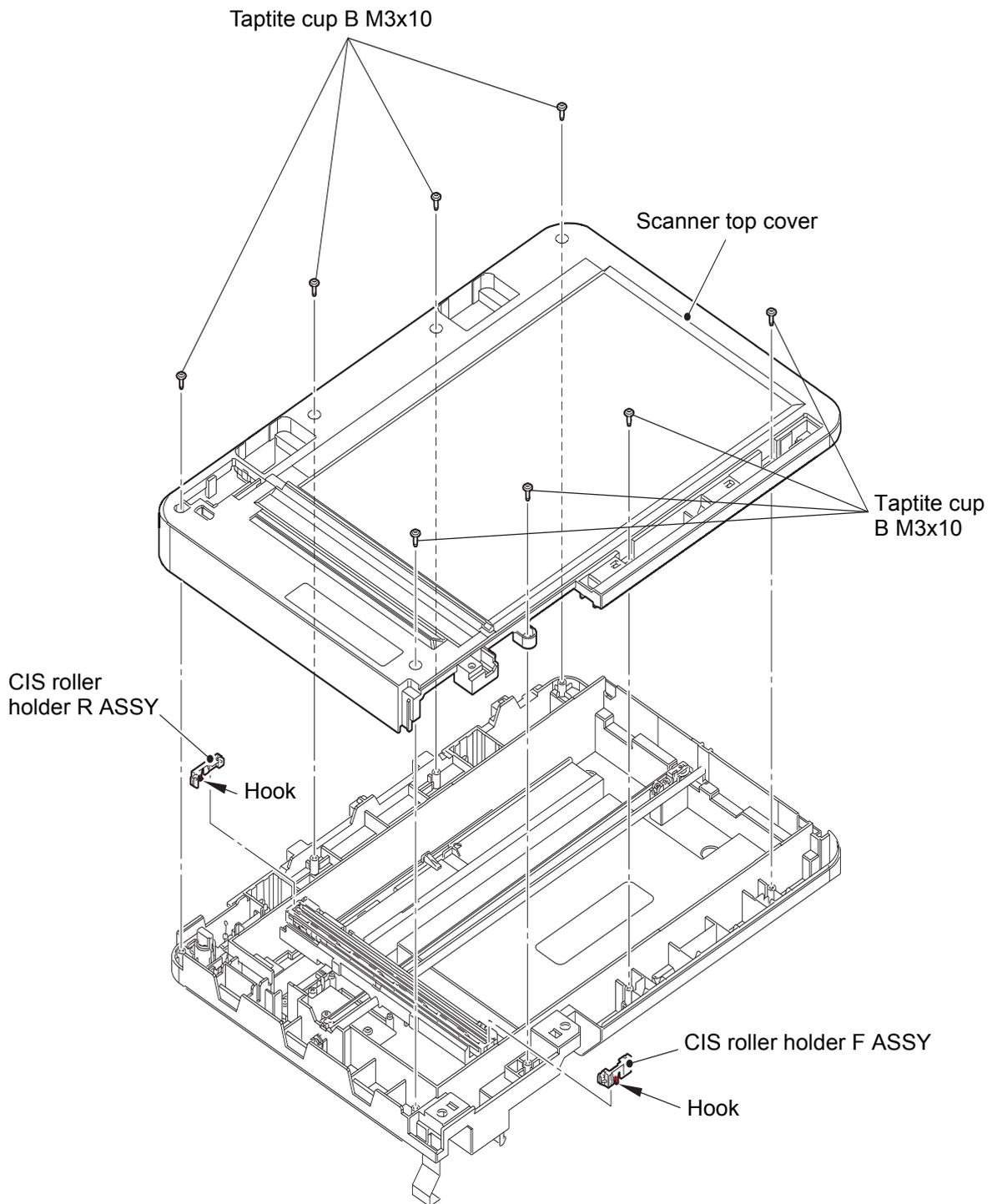


Fig. 3-73

(3) **Remove** > 1st side CIS unit

-  **Fixtures & Fittings**
- Boss (x 2)

 **Point:**

- Stand the 1st side CIS unit up, and push it in the direction of the arrows to release the bosses.
- Do not pull the 1st side CIS unit strongly because the 1st side CIS FFC is connected.

(4) **Disconnect** > 1st side CIS FFC

-  **Fixtures & Fittings**
- Lock (x 1)

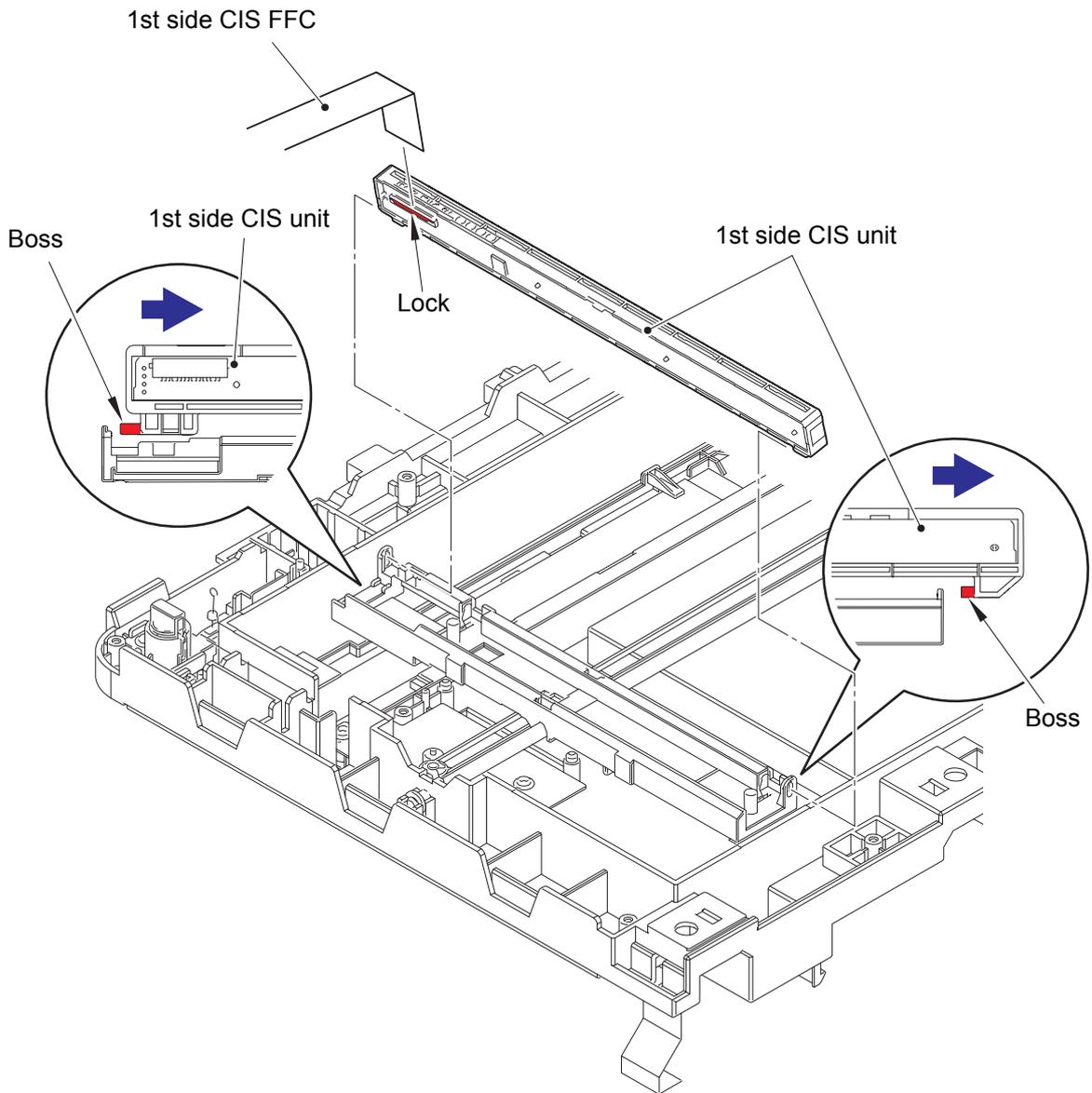


Fig. 3-74

7.37 1st side CIS FFC

(1) Remove > 1st side CIS FFC

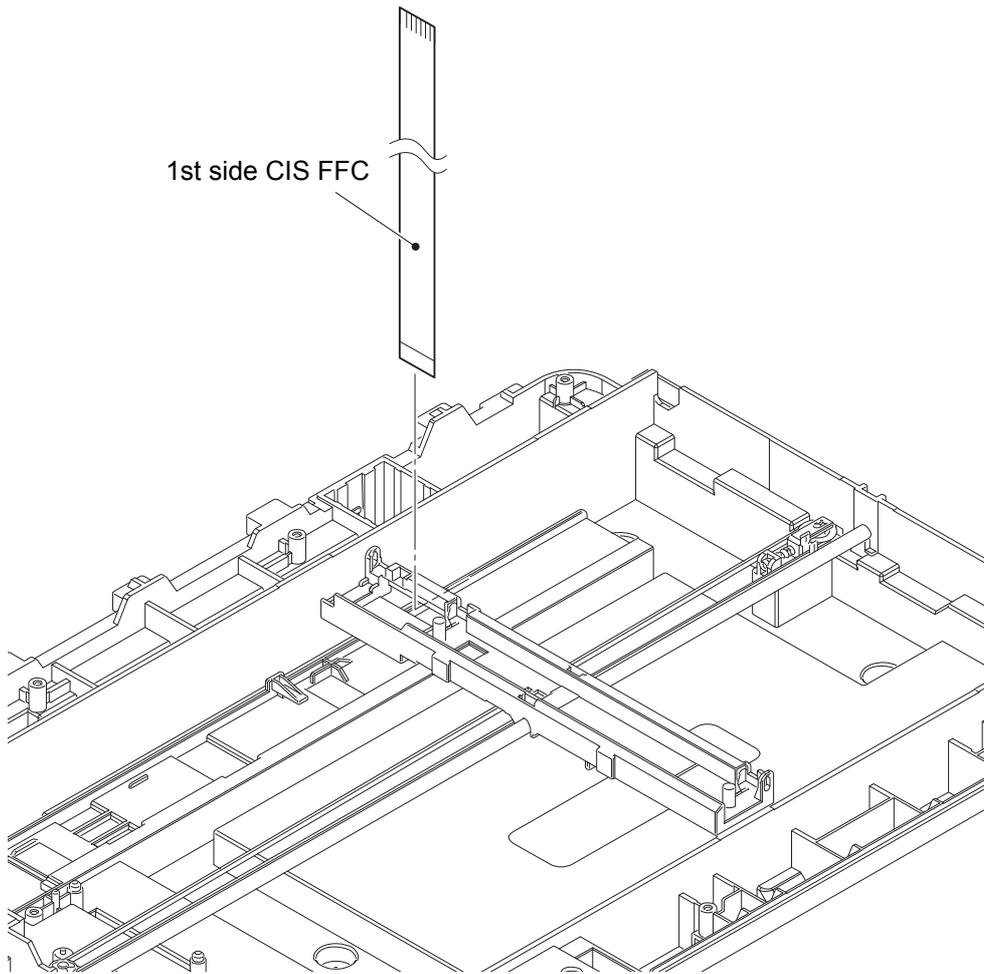


Fig. 3-75

<How to fold the 1st side CIS FFC>

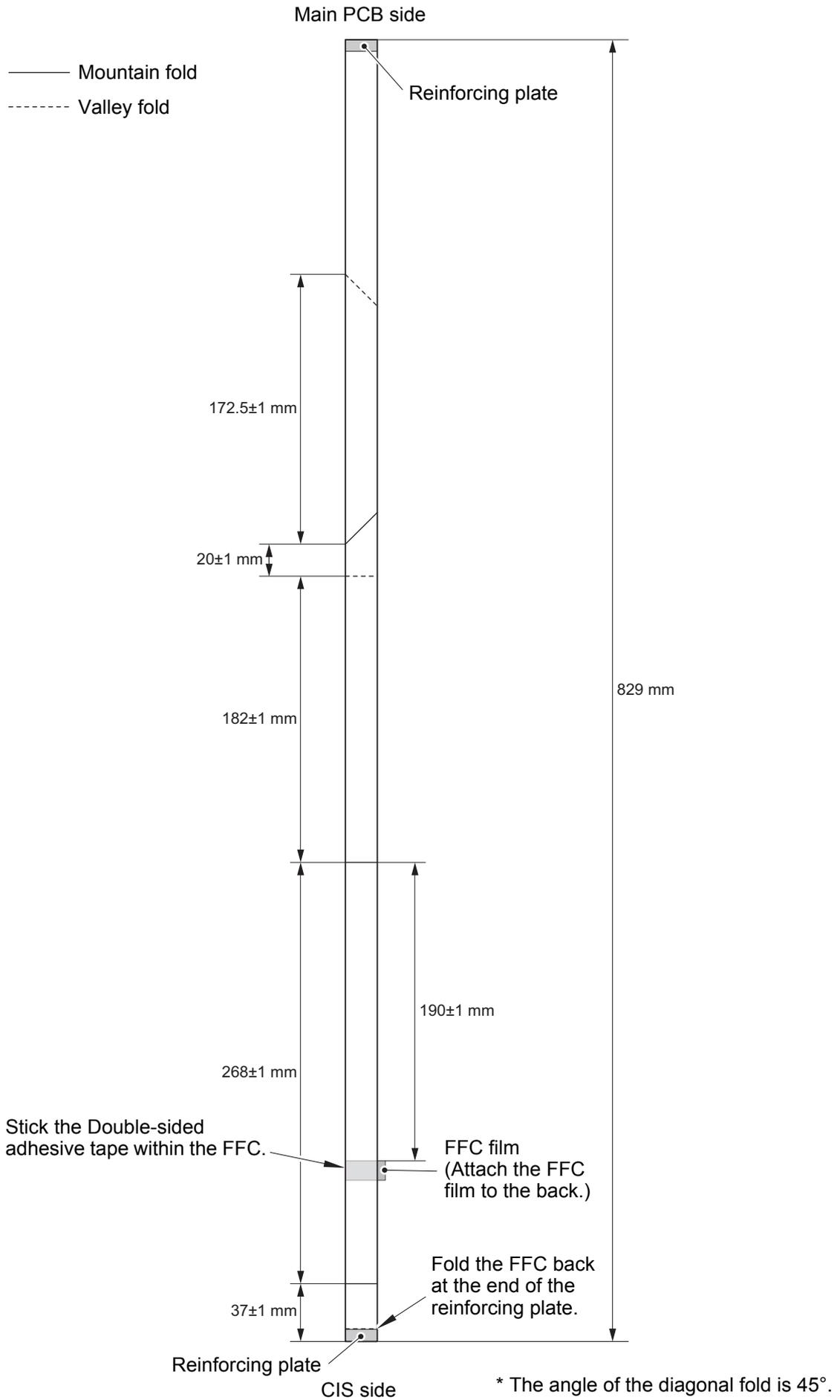


Fig. 3-76

7.38 7 PNL main FFC harness

- (1) **Disconnect** > 7 PNL main FFC harness
- (2) **Wiring** > 7 PNL main FFC harness

 **Fixtures & Fittings**
- Hook (x 1)

 **Point:**

- Release the hook and remove the Ferrite core(1), then pull out the 7 PNL main FFC harness through the Ferrite core(2).

- (3) **Remove** > Ferrite core(1)

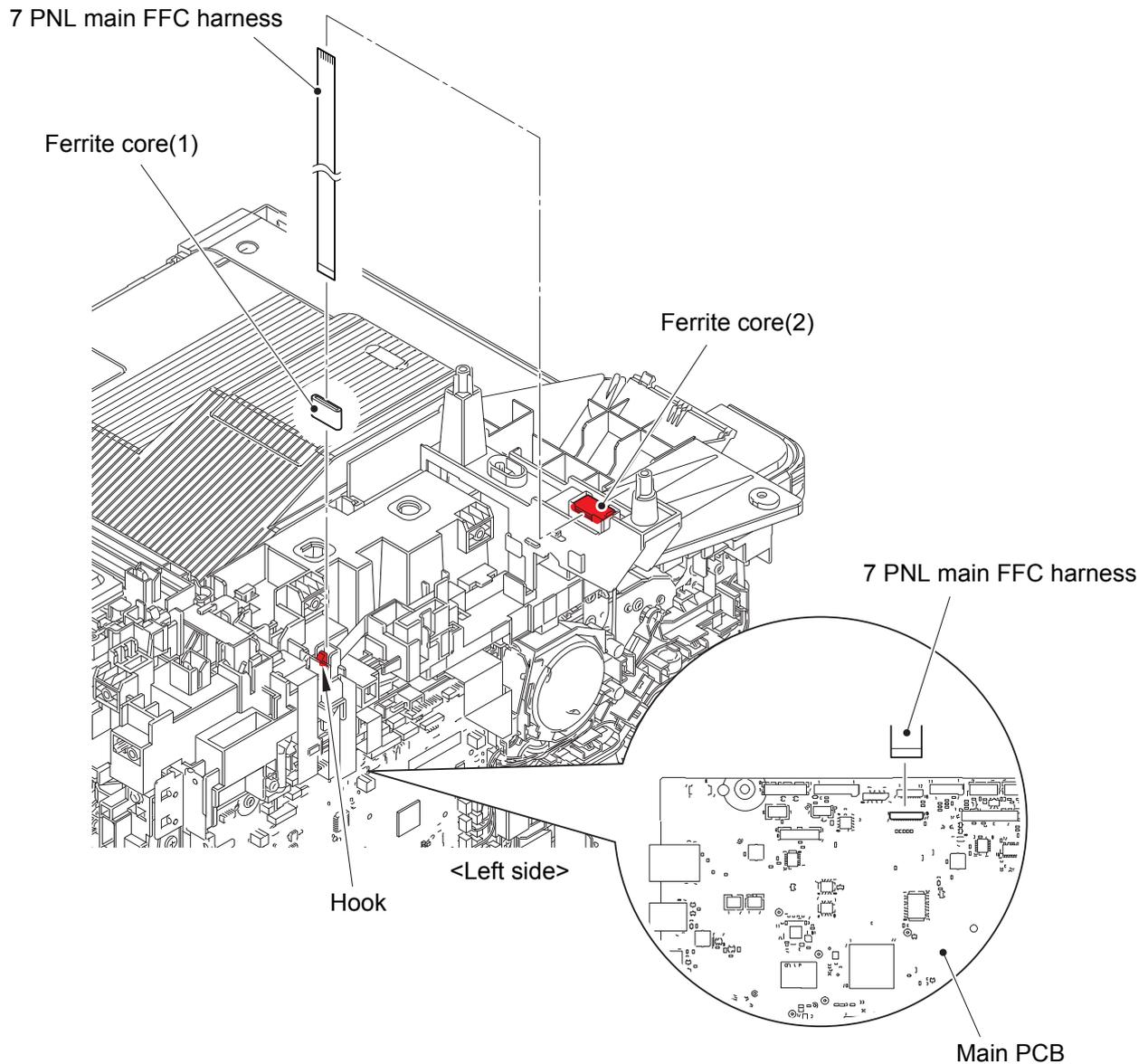
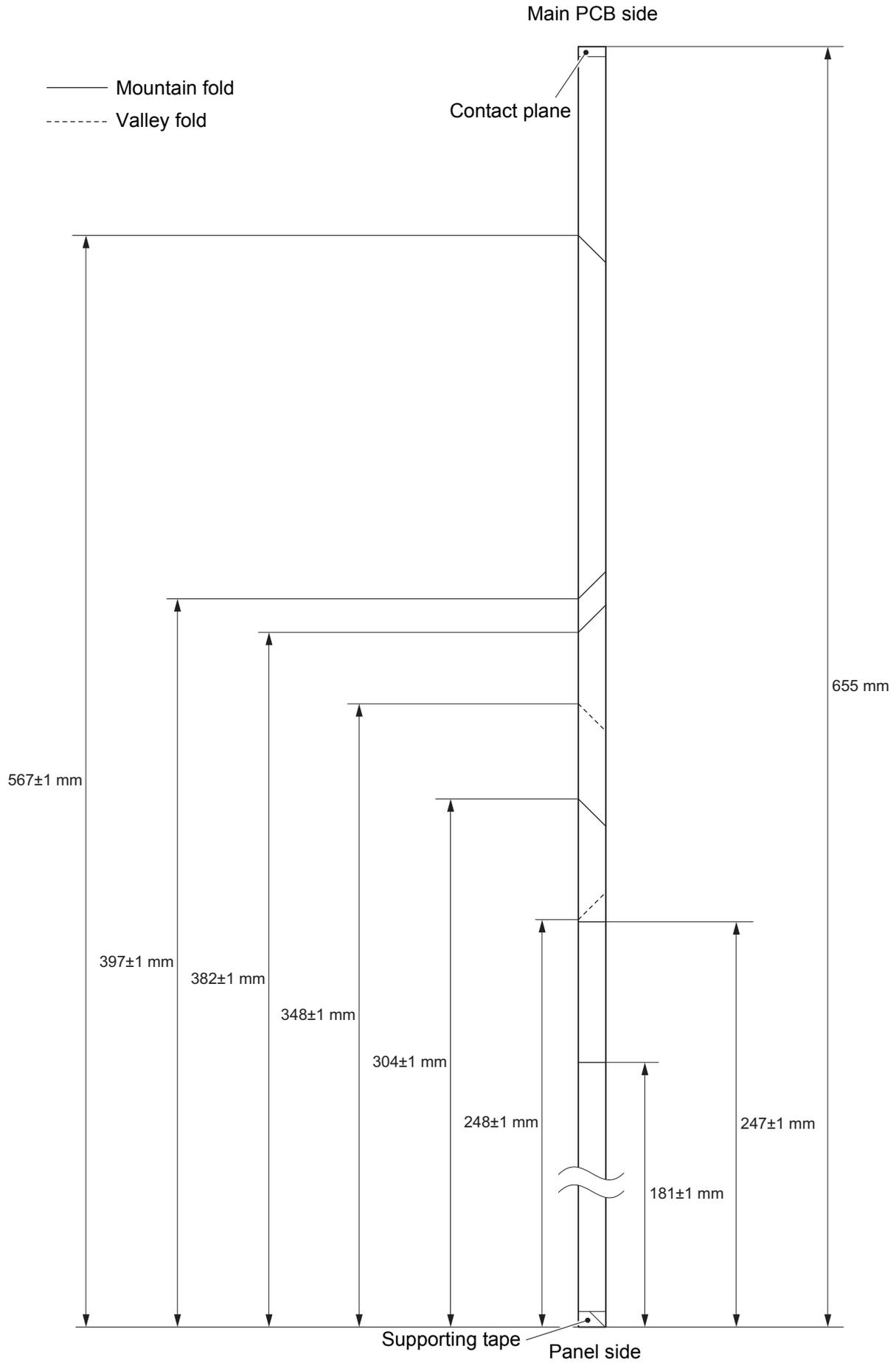


Fig. 3-77

Harness routing: Refer to "55. 7 PNL main FFC harness".

<How to fold the 7 PNL main FFC harness>



* The angle of the diagonal fold is 45°.

Fig. 3-78

7.39 Joint cover ASSY

(1) **Remove** > Panel base cover

-  **Fixtures & Fittings**
 - Taptite bind B M4x12 (x 3)

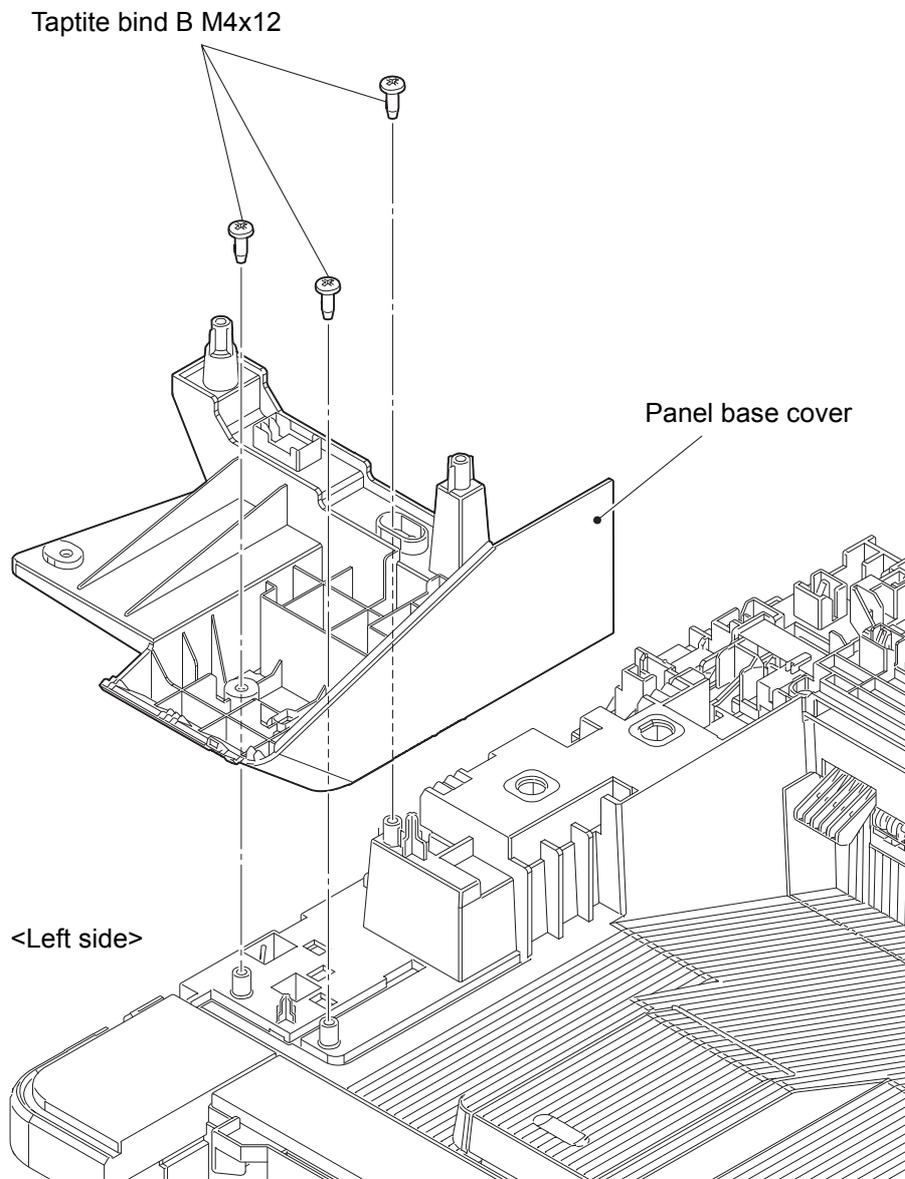
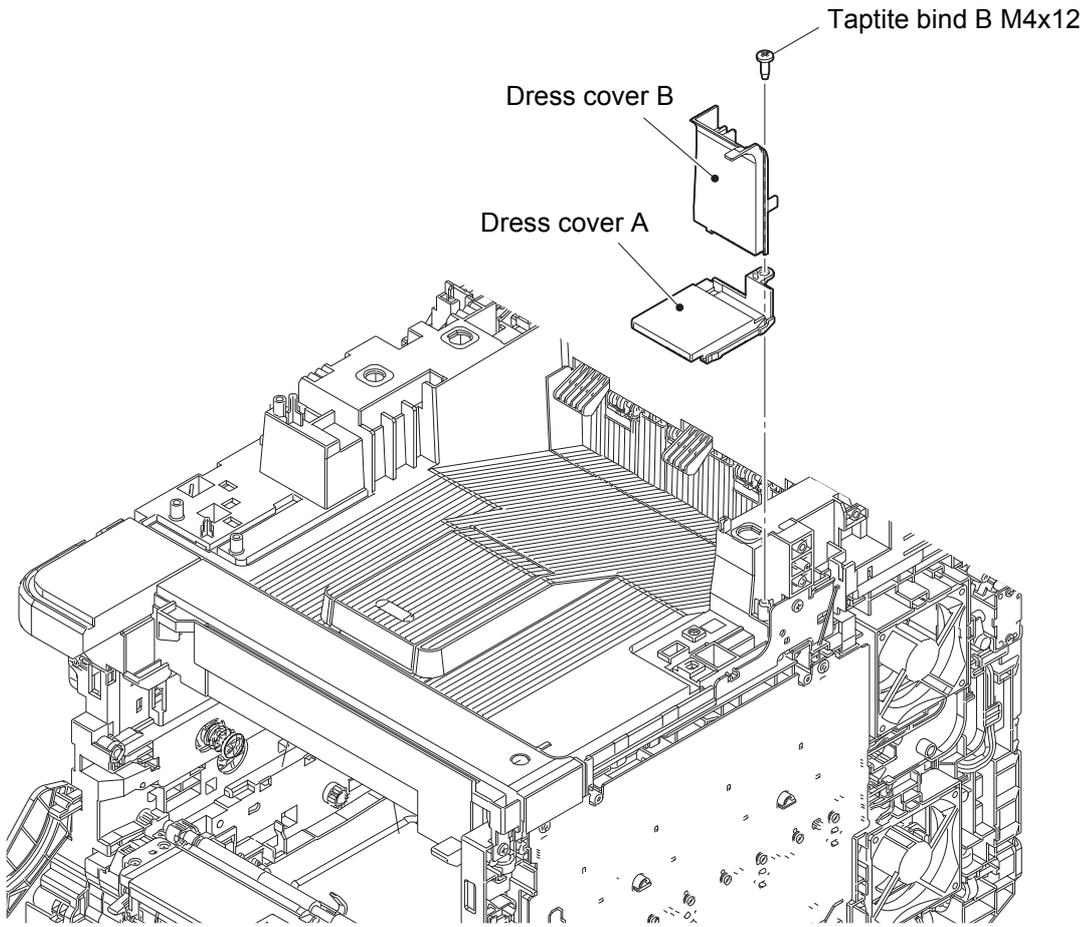


Fig. 3-79

(2) **Remove** > Dress cover B, Dress cover A

Fixtures & Fittings

- Taptite bind B M4x12 (x 1)



<Right side>

Fig. 3-80

(3) **Remove** > USB host FG harness

 **Fixtures & Fittings**

- Screw cup M3x8 SR (x 1)

(4) **Disconnect** > USB host PCB harness

(5) **Wiring** > USB host FG harness, USB host PCB harness

(6) **Remove** > FG harness modem-main

 **Fixtures & Fittings**

- Screw cup M3x8 SR (x 1)

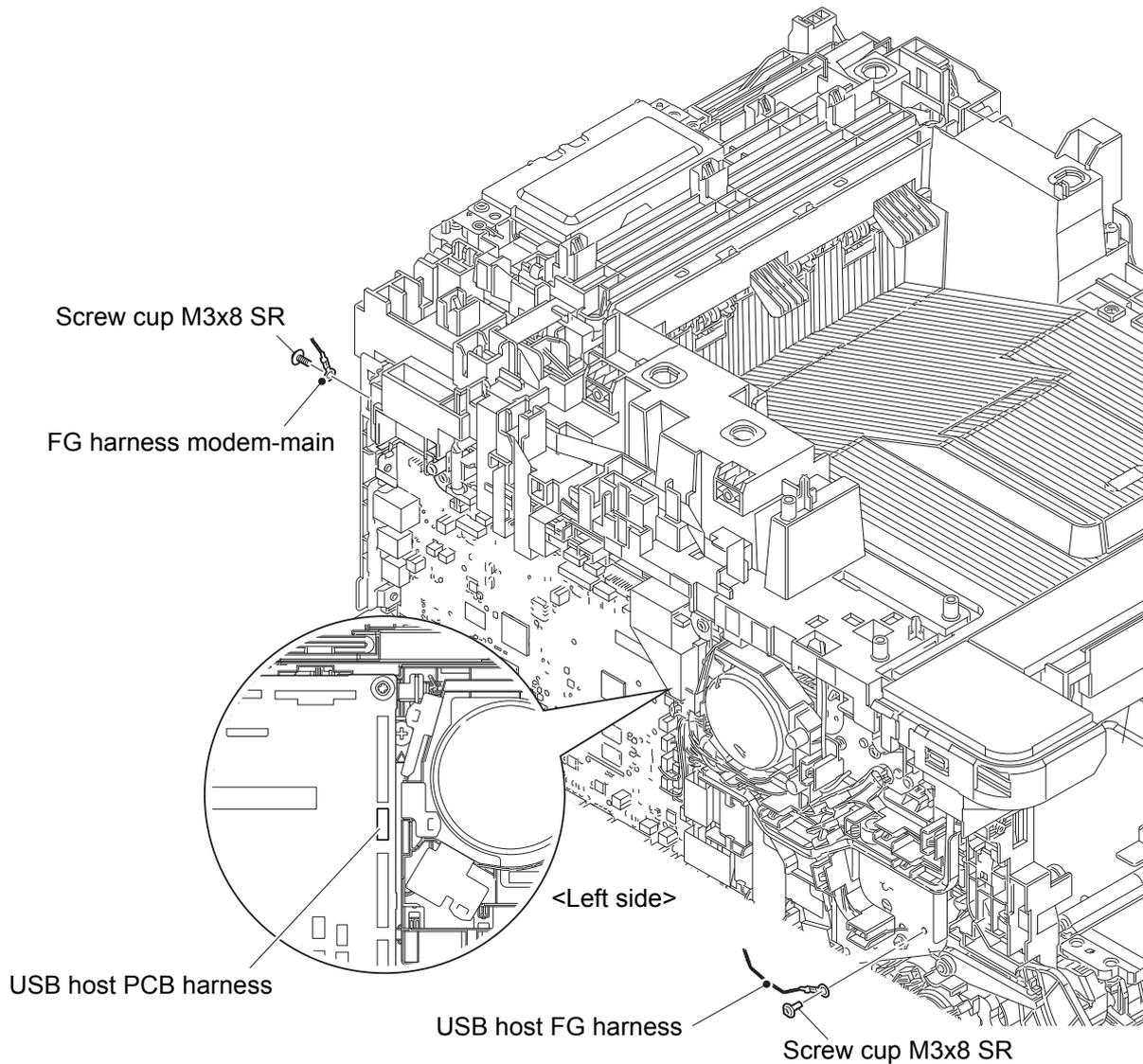


Fig. 3-81

Harness routing: Refer to "36. Main PCB (FB side), 51. USB host PCB harness".

- (7) **Disconnect** > NFC FFC, Modem FFC, Speaker harness, Eject stack sensor harness
- (8) **Wiring** > NFC FFC, Modem FFC, Speaker harness

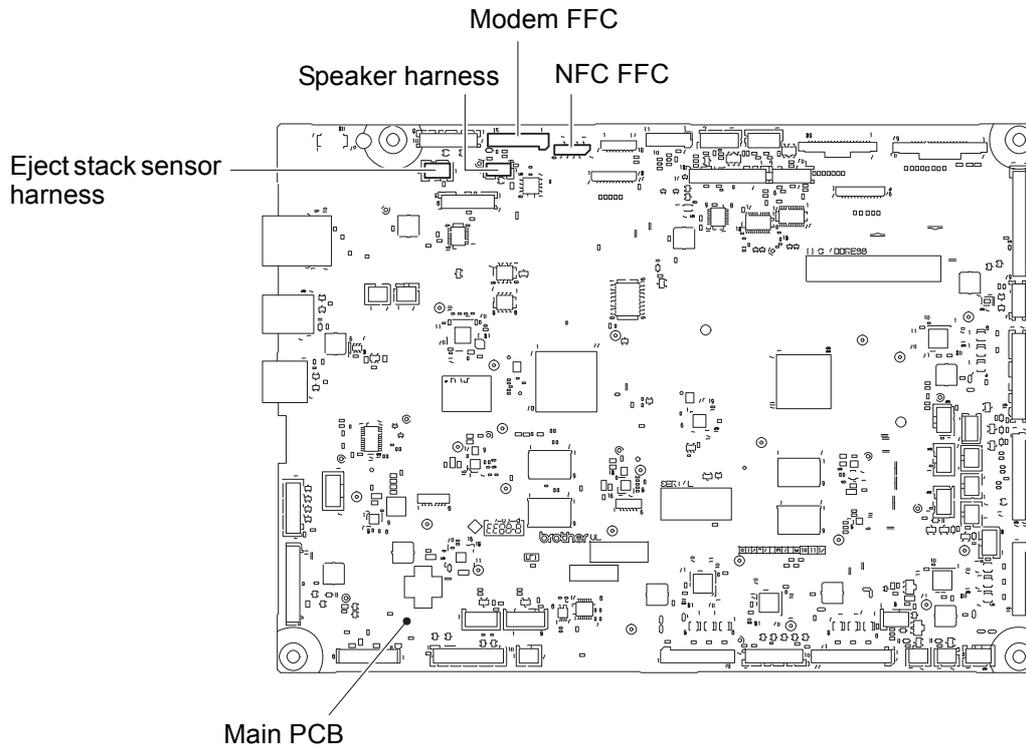


Fig. 3-82

Harness routing: Refer to “41. NFC FFC, 38. Modem FFC, 48. Speaker harness”.

(9) **Remove** > FG harness modem-HVPS

Fixtures & Fittings

- Taptite pan B 3x10 (x 1)

(10) **Disconnect** > Power key harness

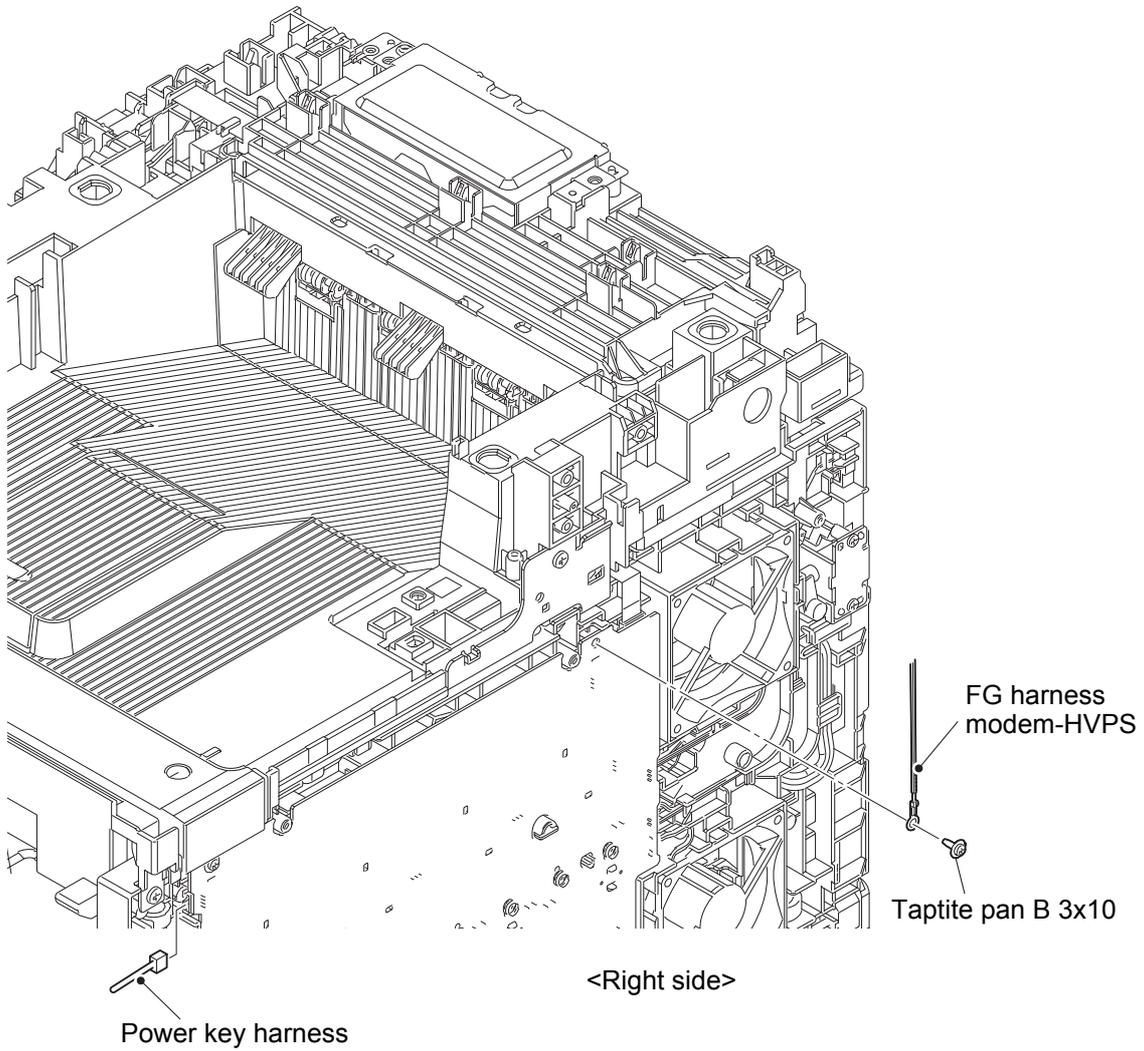


Fig. 3-83

Harness routing: Refer to "27. HVPS".

(11) **Remove** > Joint cover ASSY

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 10)
- Hook (x 6)

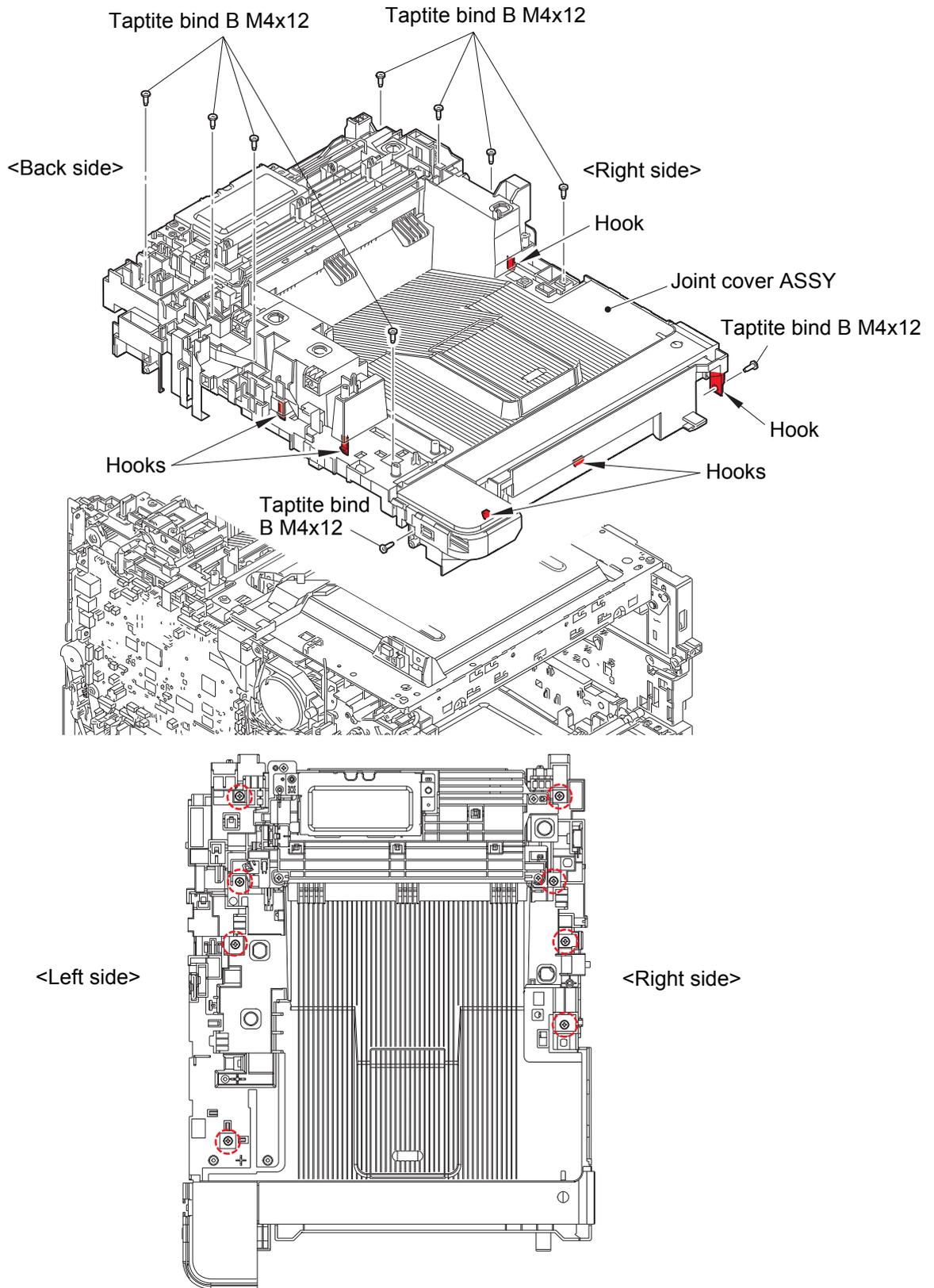


Fig. 3-84

7.40 USB host PCB

(1) Remove > Screws



Fixtures & Fittings

- Taptite bind B M4x12 (x 2)

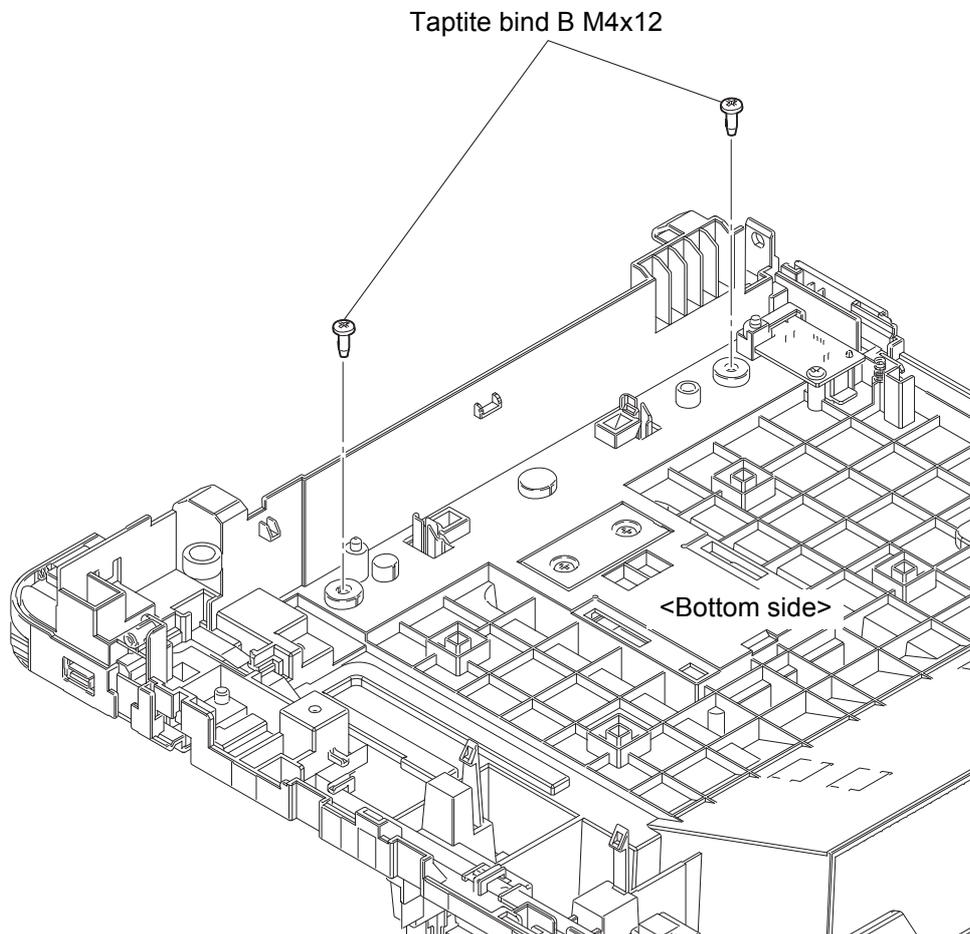


Fig. 3-85

(2) **Remove** > Dress plate

 **Fixtures & Fittings**
- Hook (x 3)

(3) **Remove** > Power key

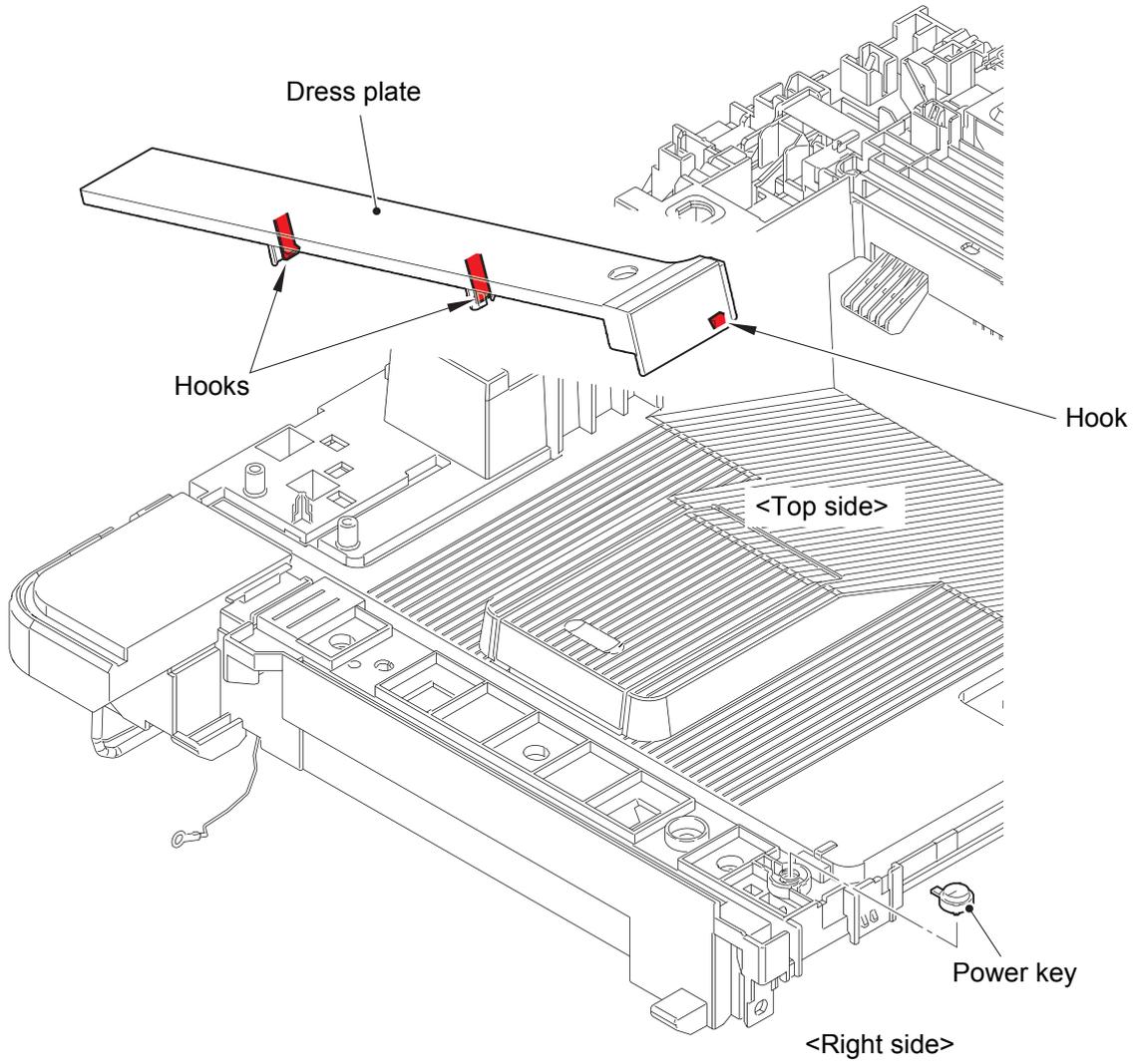


Fig. 3-86

(4) **Wiring** > NFC FFC

(5) **Remove** > NFC cover ASSY

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 3)
- Hook (x 1)



Point:

- Pull out the NFC FFC, the USB host PCB harness, and the USB host FG harness through the holes of the Joint cover ASSY.

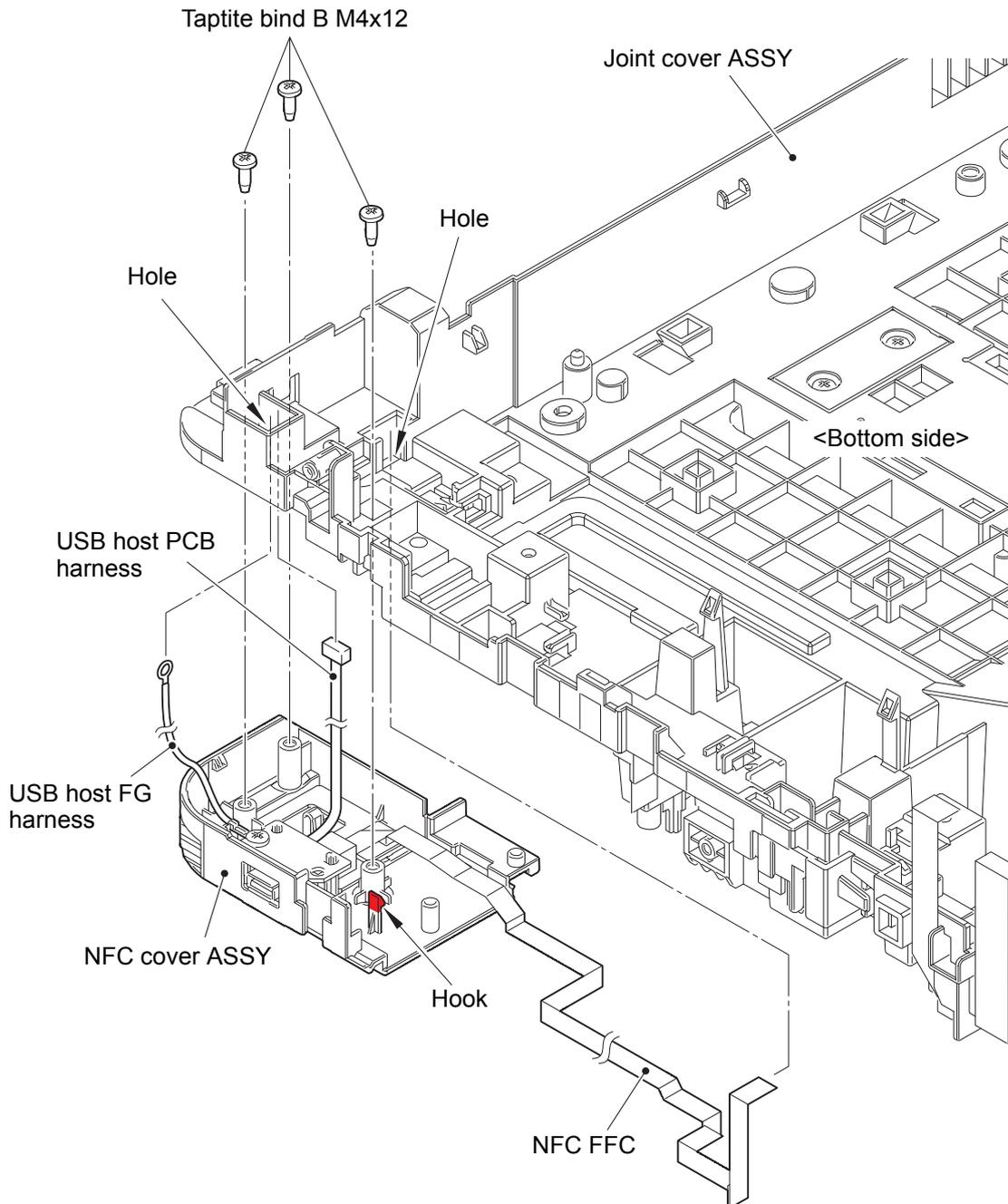


Fig. 3-87

Harness routing: Refer to "41. NFC FFC".

(6) **Disconnect** > USB host PCB harness

(7) **Remove** > USB host FG harness, USB host PCB

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 1)

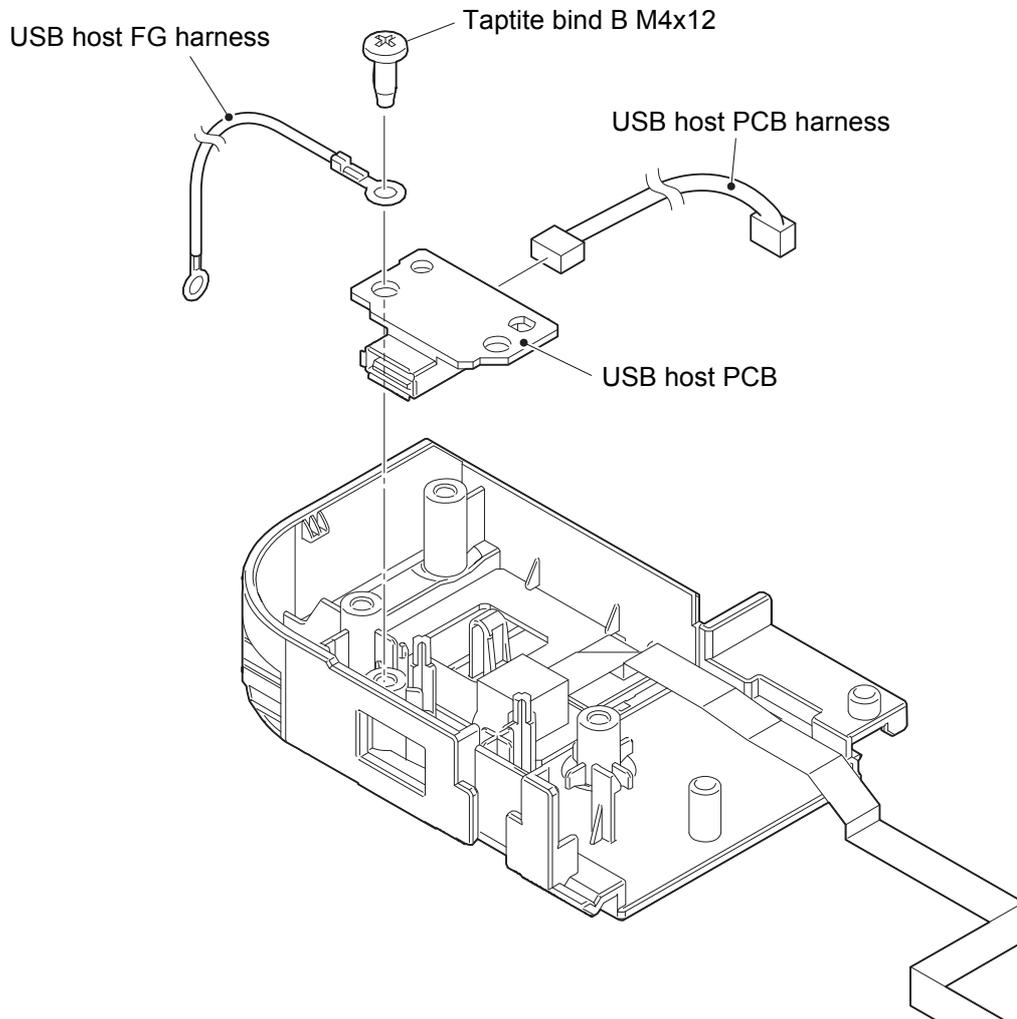


Fig. 3-88

7.41 NFC PCB

(1) **Remove** > NFC PCB

 **Fixtures & Fittings**
- Hook (x 1)

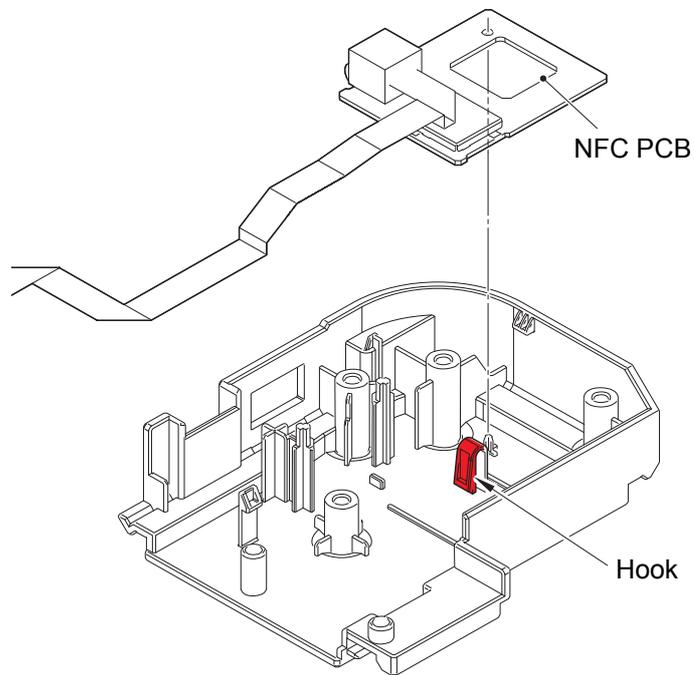


Fig. 3-89

7.42 Modem PCB

- (1) **Wiring** > Modem FFC, FG harness modem-HVPS, FG harness modem-main
- (2) **Remove** > Modem



Fixtures & Fittings

- Taptite bind B M4x12 (x 2)

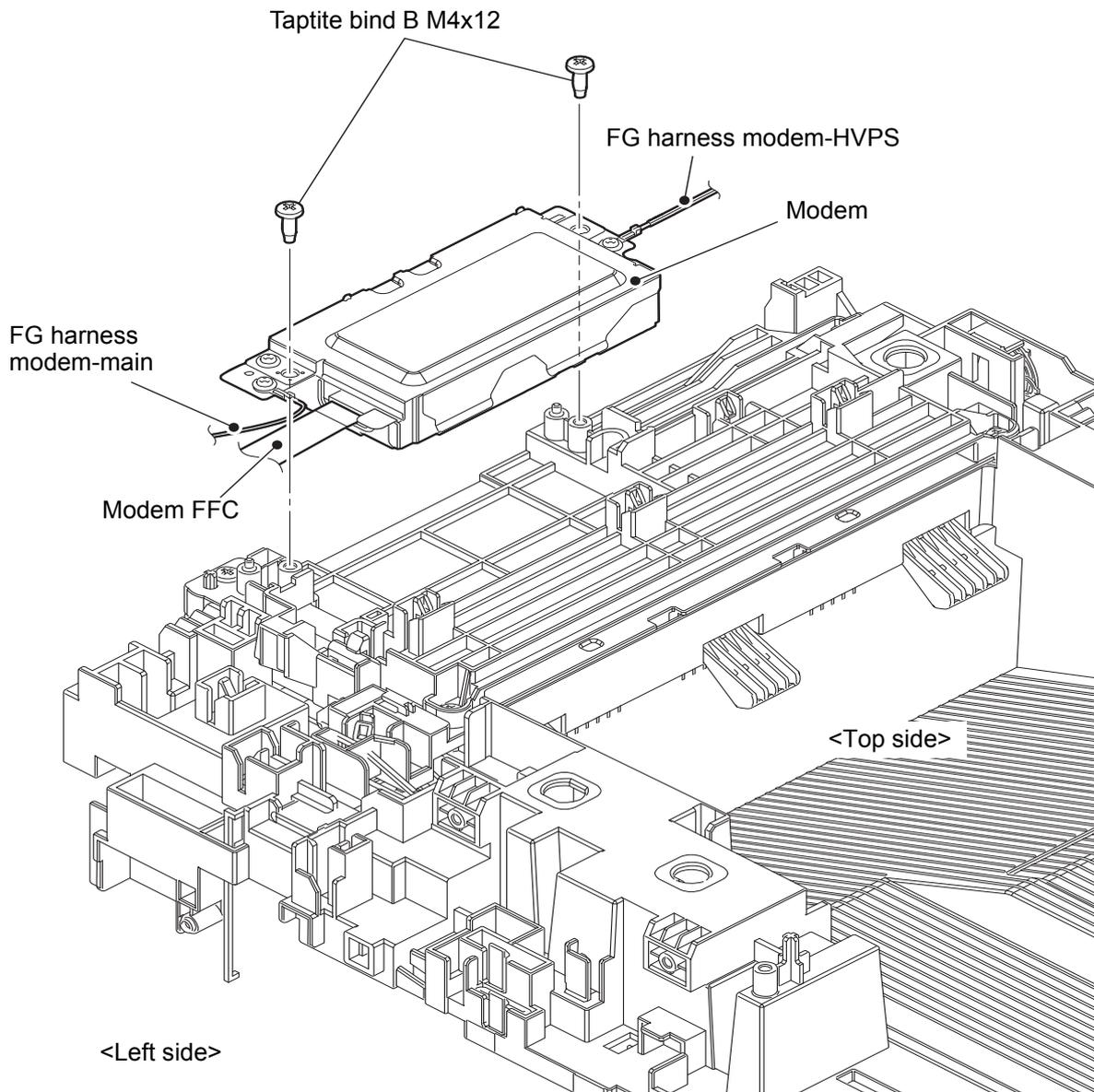


Fig. 3-90

Harness routing: Refer to "38. Modem FFC, 19. FG harness modem-HVPS".

(3) **Remove** > Modem cover

- Fixtures & Fittings**
 - Screw cup M3x8 SR (x 1)

(4) **Remove** > Modem PCB

- Fixtures & Fittings**
 - Screw cup M3x8 SR (x 3)

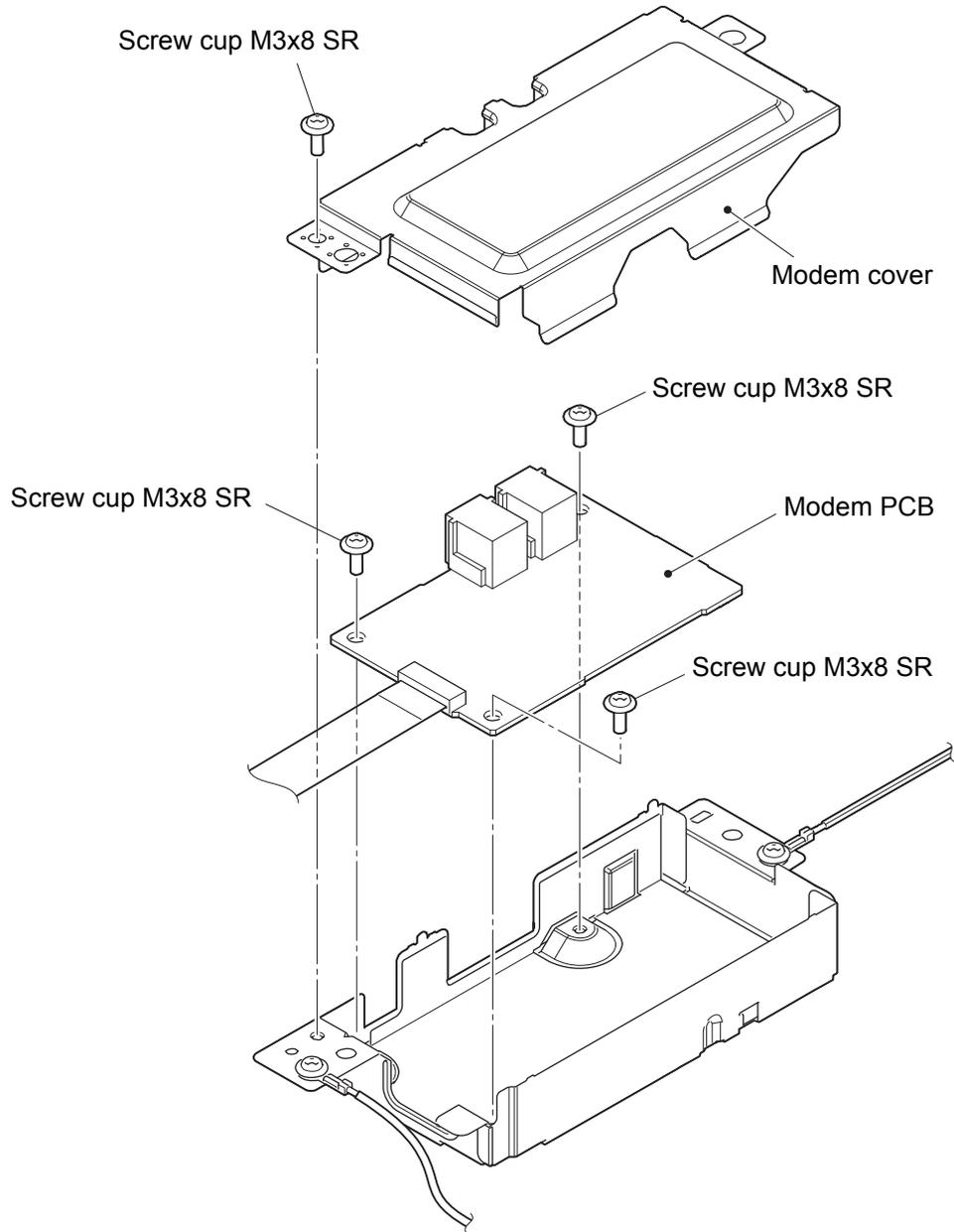


Fig. 3-91

7.43 Modem FFC

(1) Disconnect > Modem FFC

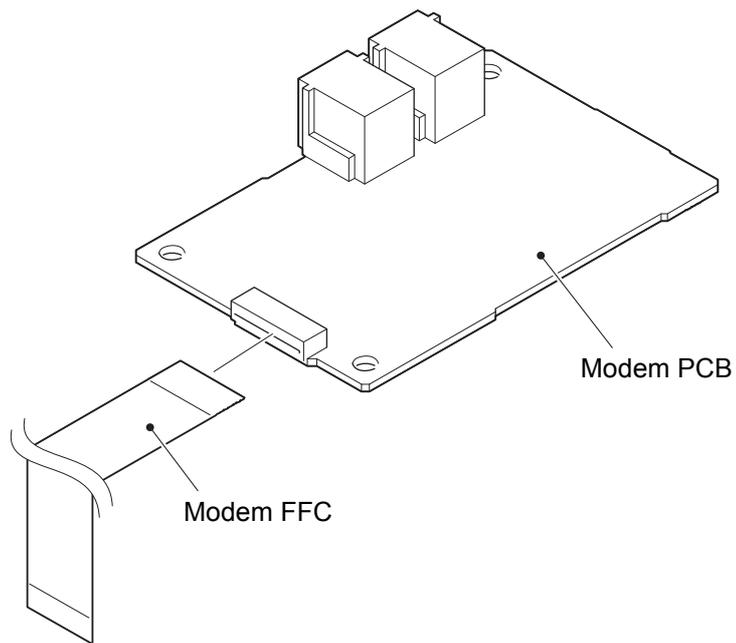


Fig. 3-92

<How to fold the Modem FFC>

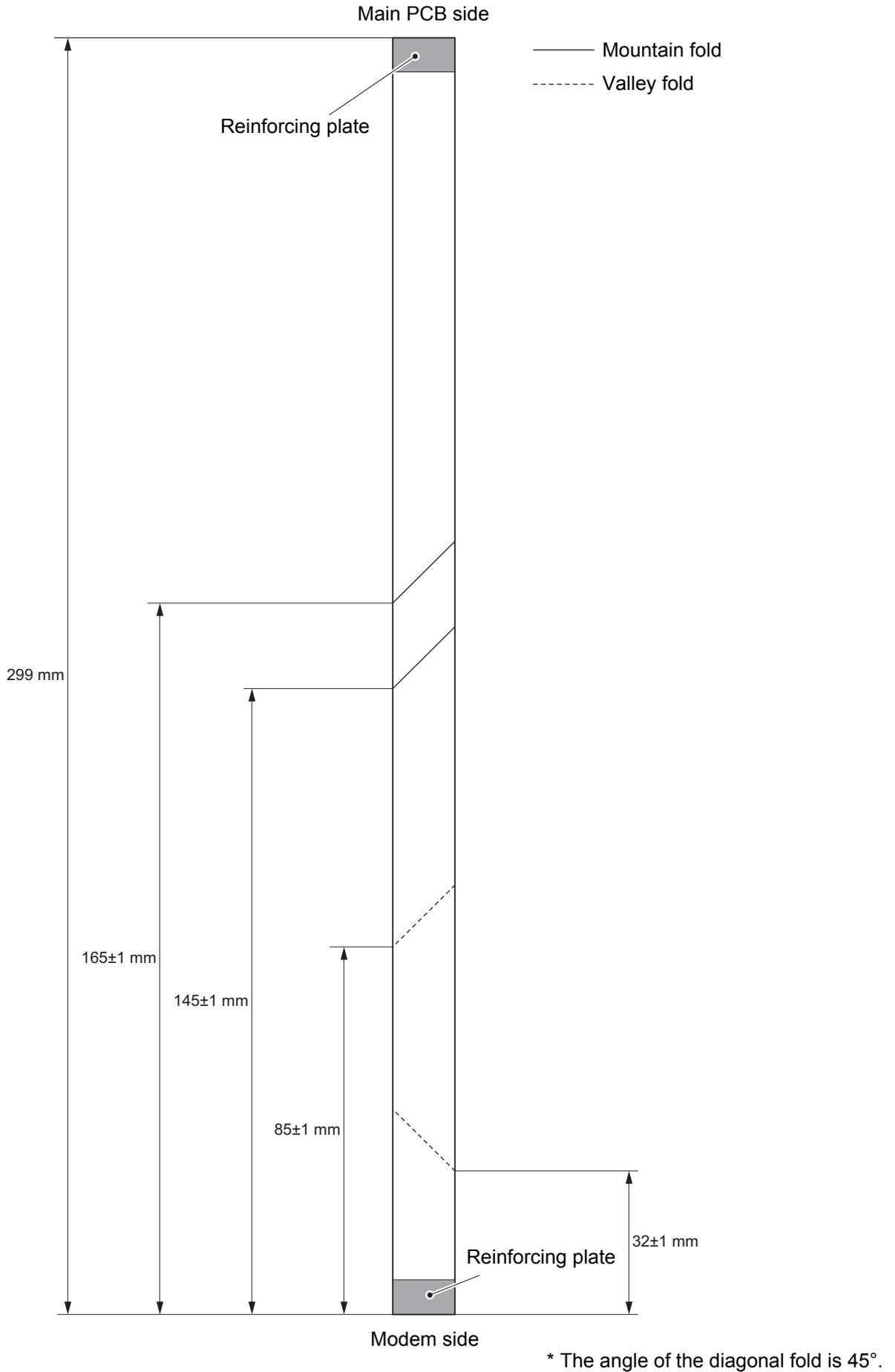


Fig. 3-93

7.44 Speaker

- (1) **Wiring** > Speaker harness
- (2) **Remove** > Speaker hold spring

 **Fixtures & Fittings**
- Hook (x 1)

- (3) **Remove** > Speaker

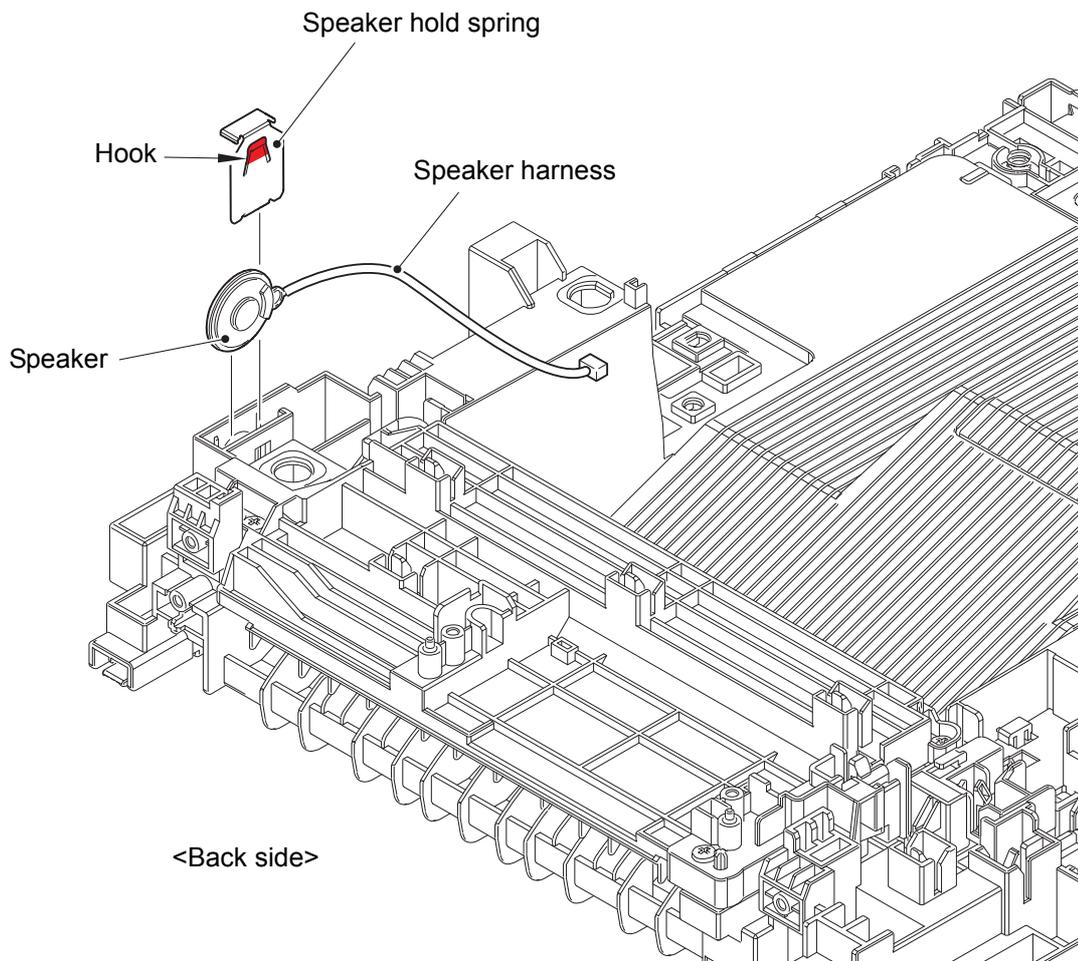


Fig. 3-94

Harness routing: Refer to "48. Speaker harness".

7.45 Main PCB

(1) **Disconnect** > All the flat cables and harnesses

Fixtures & Fittings

- Lock (x 1)

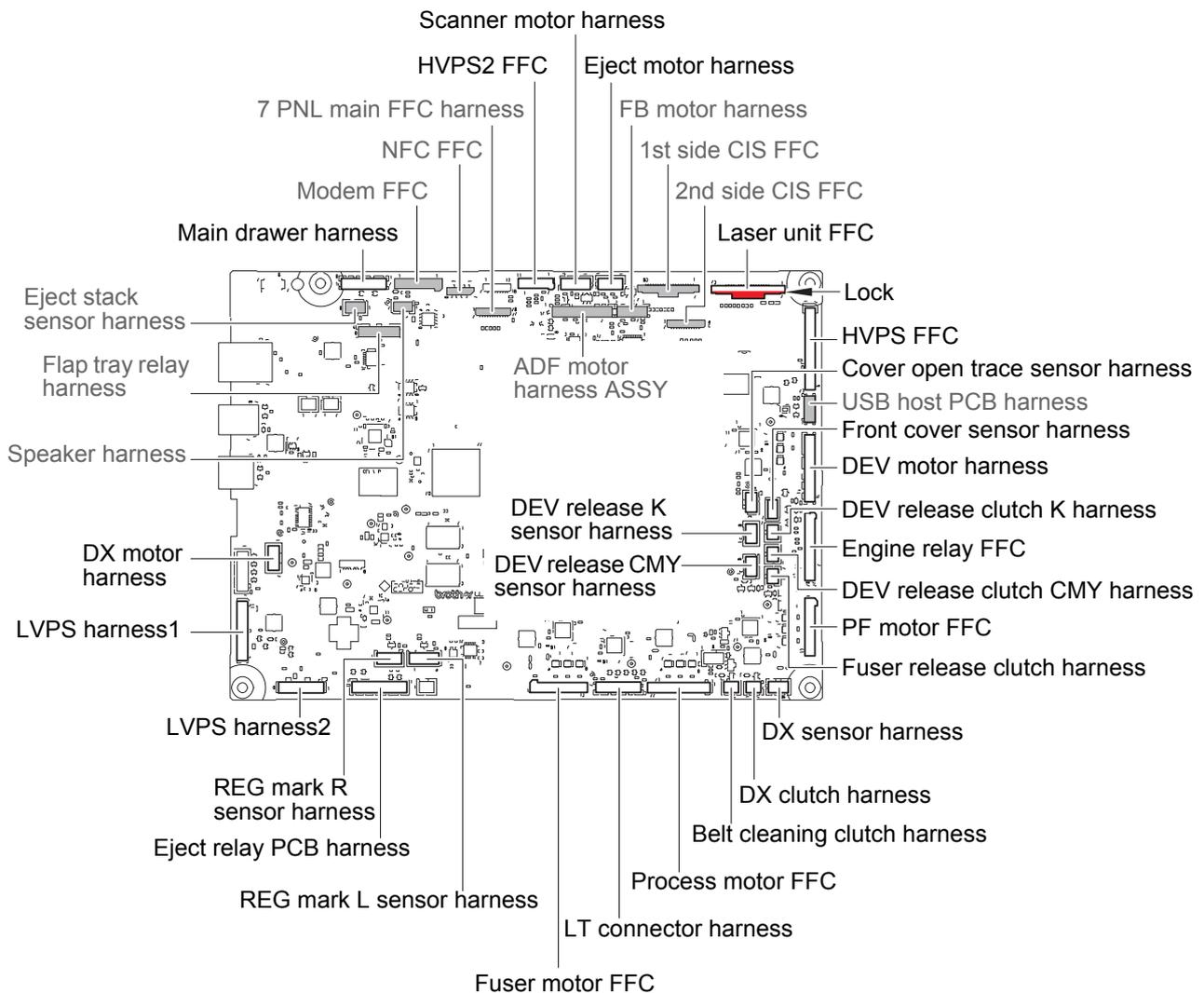


Fig. 3-95

Harness routing: Refer to "36. Main PCB (FB side), 37. Main PCB (Printer side)".



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.

(2) **Remove** > Interface plate

-  **Fixtures & Fittings**
 - Screw cup M3x8 SR (x 2)

(3) **Remove** > Main PCB

-  **Fixtures & Fittings**
 - Screw cup M3x8 SR (x 4)

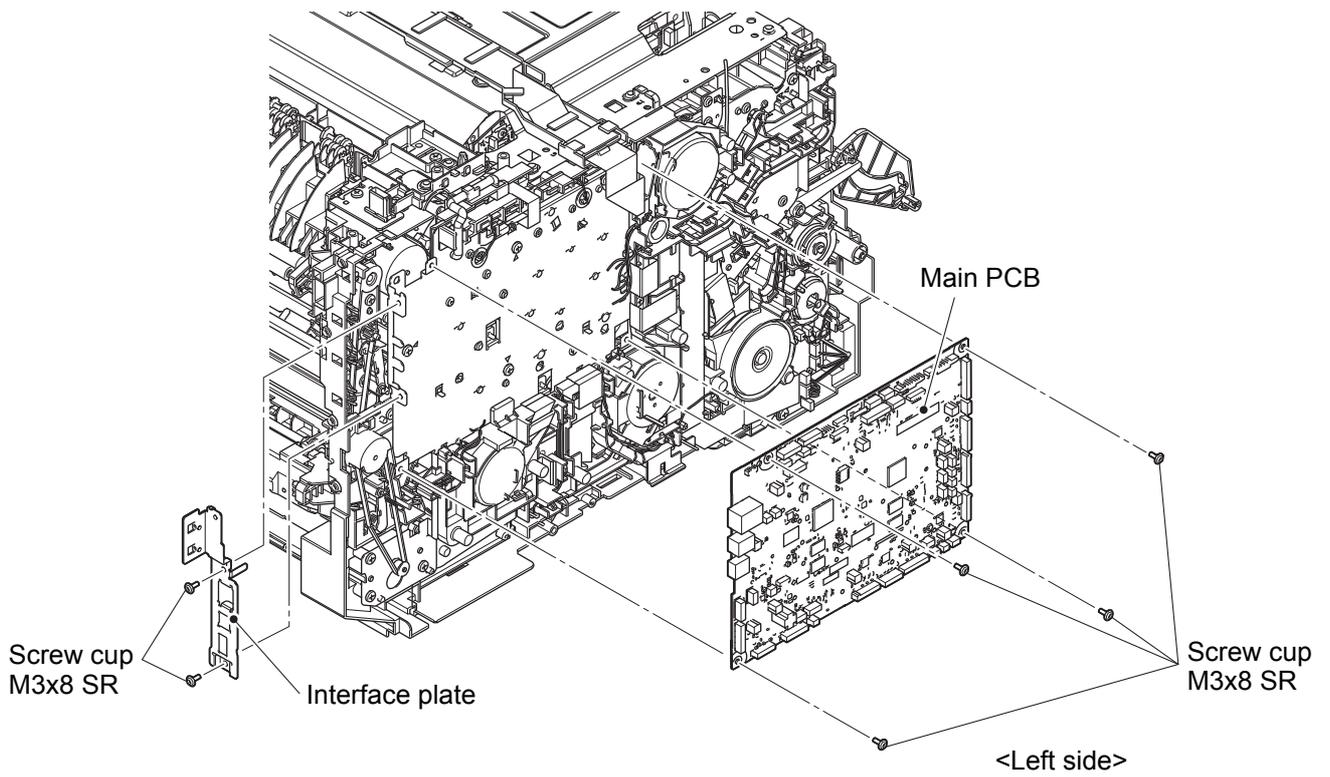


Fig. 3-96

7.46 Fan motor 80

- (1) **Disconnect** > Fan motor 80 harness
- (2) **Wiring** > Fan motor 80 harness
- (3) **Remove** > Fan motor 80

Fixtures & Fittings

- Hook (x 3)

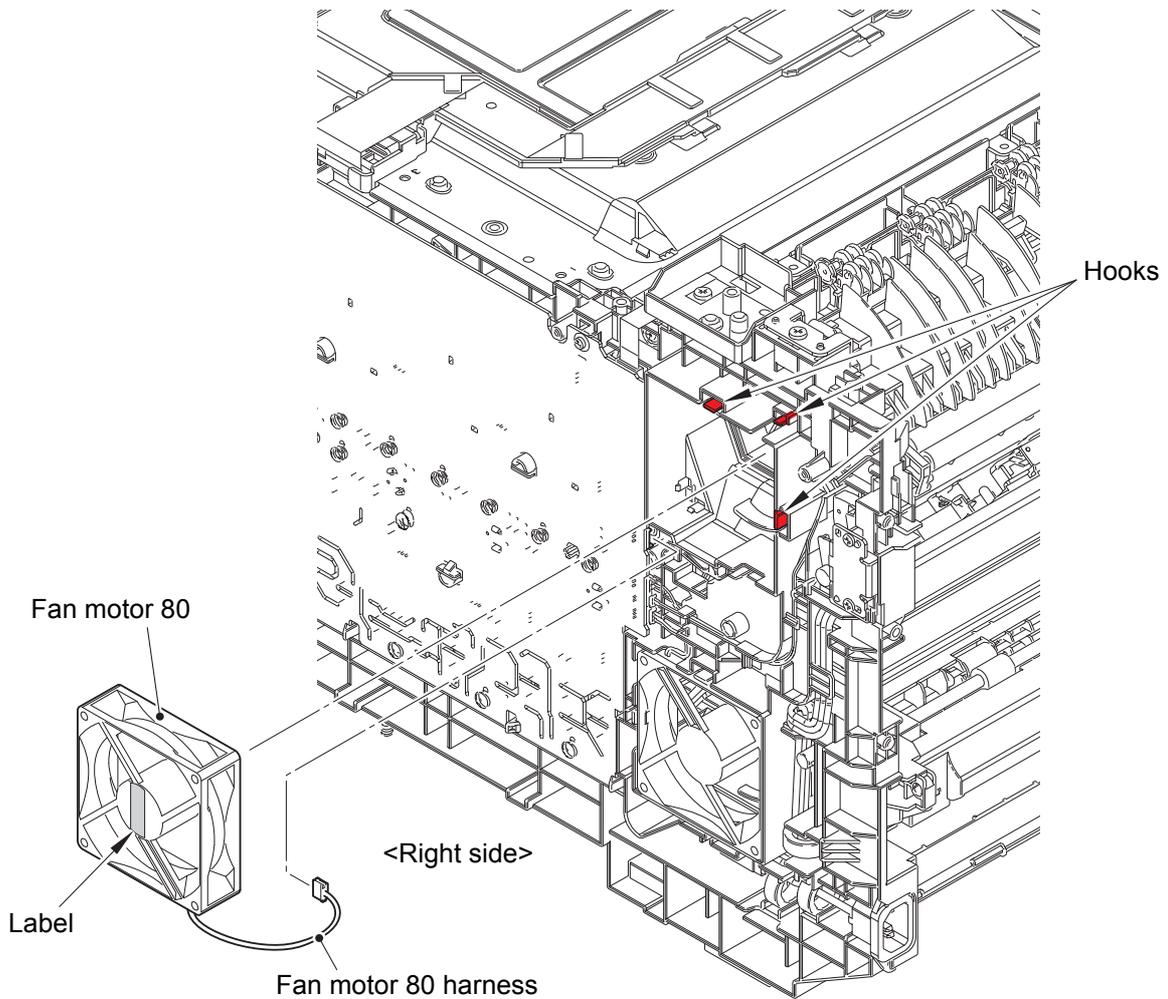


Fig. 3-97

Harness routing: Refer to "17. Fan motor 80 harness".



Assembling note:

- When assembling the Fan motor 80, be sure to assemble it in a way that the Label side faces out.

7.47 LVPS fan

- (1) **Disconnect** > LVPS fan harness
- (2) **Remove** > LVPS fan

 **Fixtures & Fittings**
- Hook (x 2)

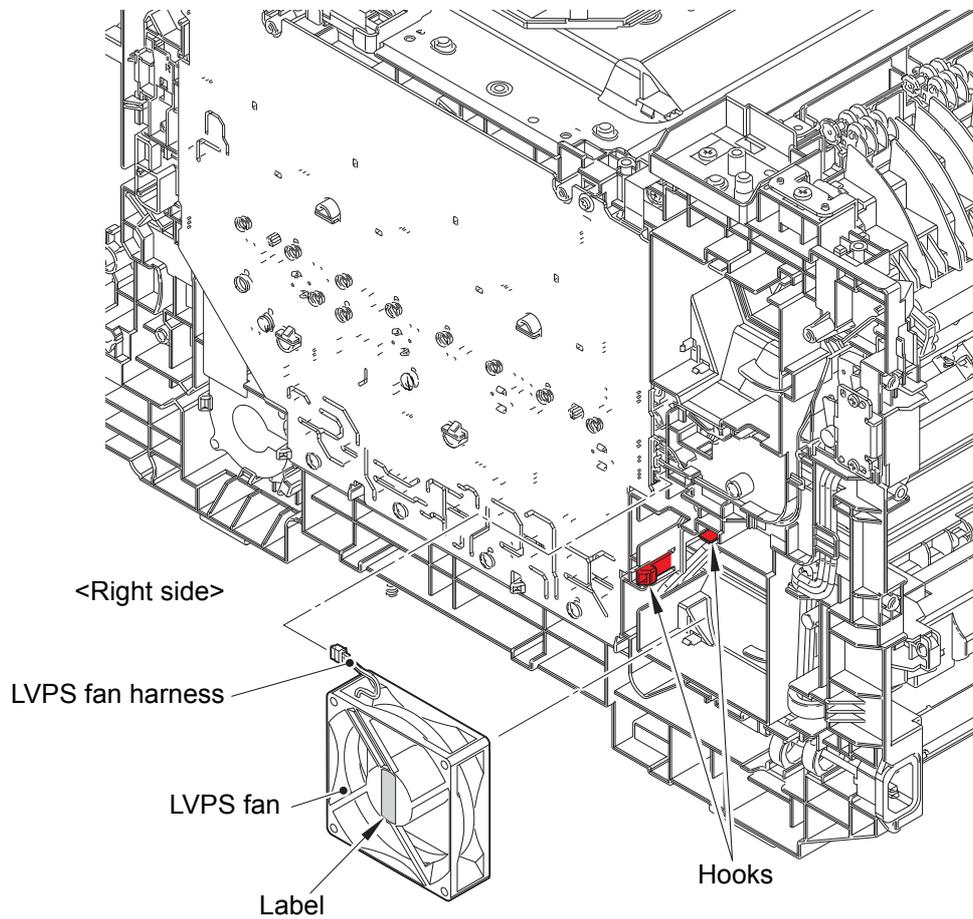


Fig. 3-98

Harness routing: Refer to **"32. LVPS fan harness"**.



Assembling note:

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

7.48 Back cover sensor harness

- (1) **Disconnect** > Back cover sensor harness
- (2) **Wiring** > Back cover sensor harness
- (3) **Remove** > Back cover sensor harness

 **Fixtures & Fittings**
- Hook (x 2)

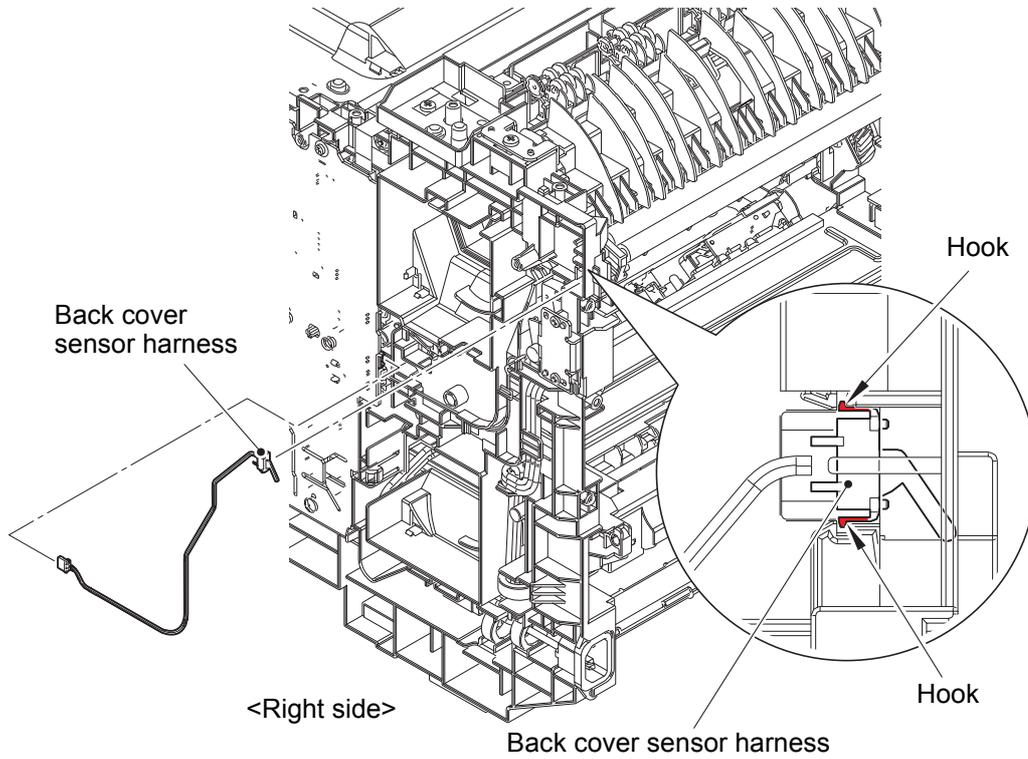


Fig. 3-99

Harness routing: Refer to "2. Back cover sensor harness".

7.49 HVPS PCB

(1) Remove > Spacer (x 4)

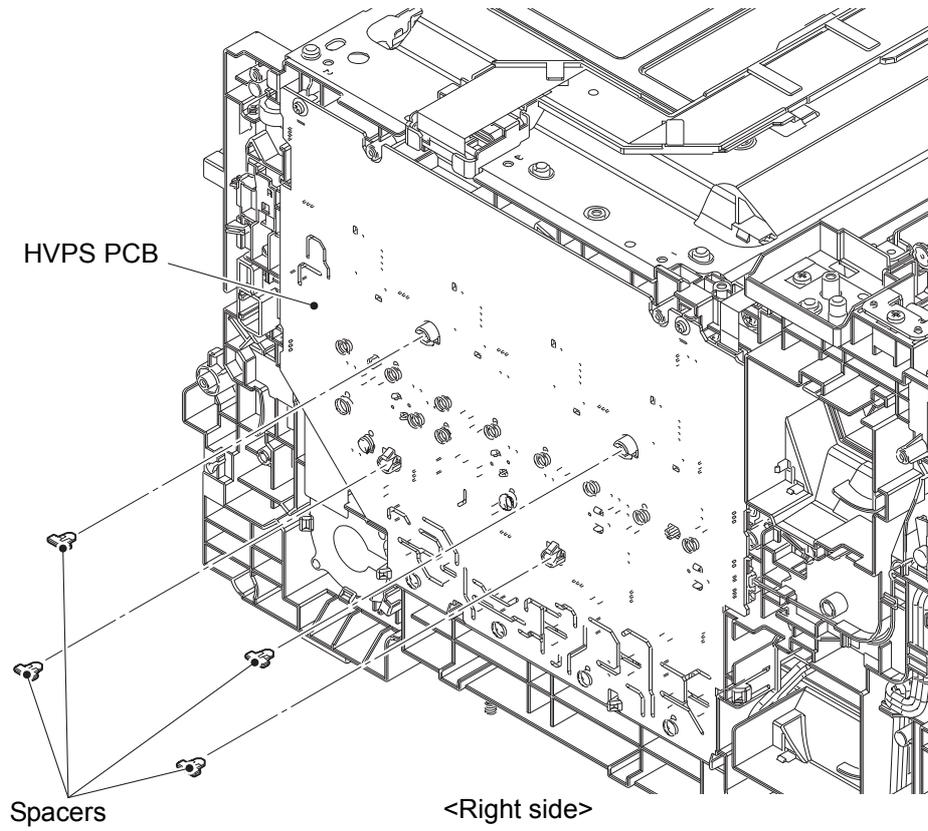


Fig. 3-100

(2) **Disconnect** > Blower harness, Flapper solenoid harness, HVPS2 FFC

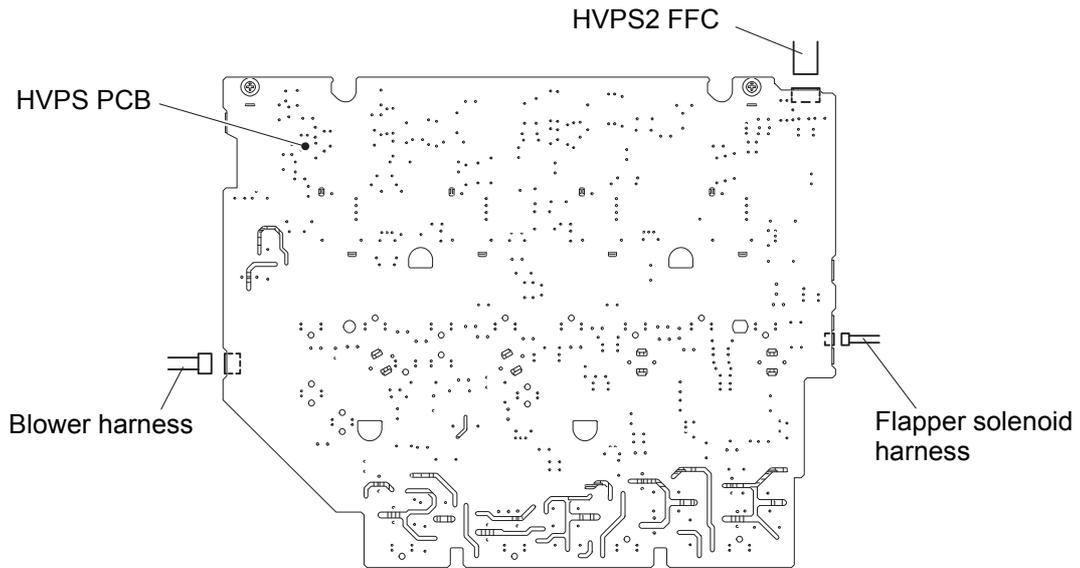


Fig. 3-101

Harness routing: Refer to "5. Blower harness, 23. Flapper solenoid harness, 29. HVPS2 FFC, 27. HVPS".

(3) **Remove** > HVPS PCB

 **Fixtures & Fittings**

- Taptite pan B 3x10 (x 1)
- Hook (x 8)

 **Point:**
• Do not pull the HVPS PCB strongly because the HVPS FFC is connected.

(4) **Disconnect** > HVPS FFC

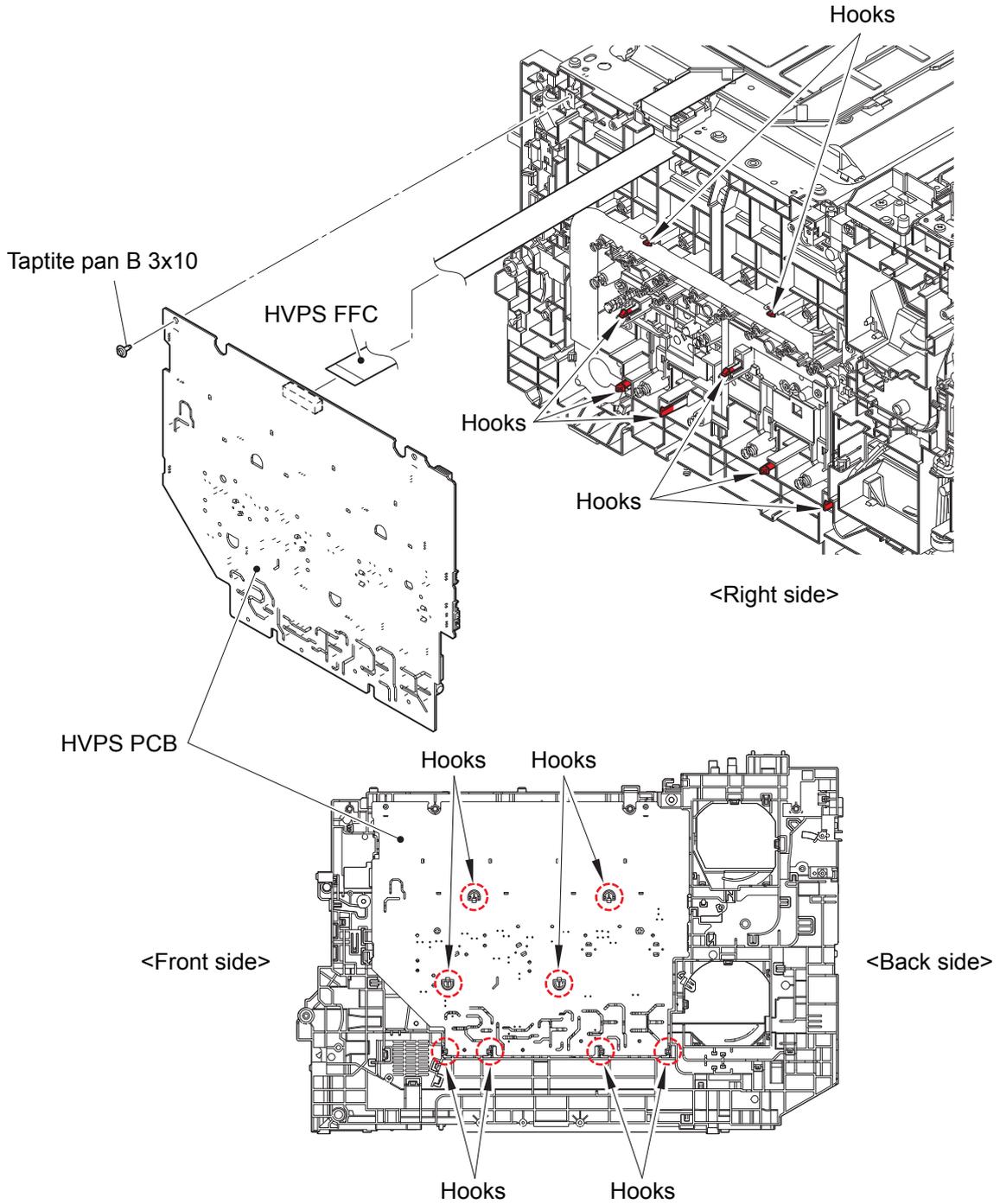


Fig. 3-102

7.50 Blower

- (1) **Wiring** > Blower harness
- (2) **Remove** > Double-sided adhesive tape of the Air duct sheet
- (3) **Remove** > Blower

Fixtures & Fittings

- Hook (x 2)

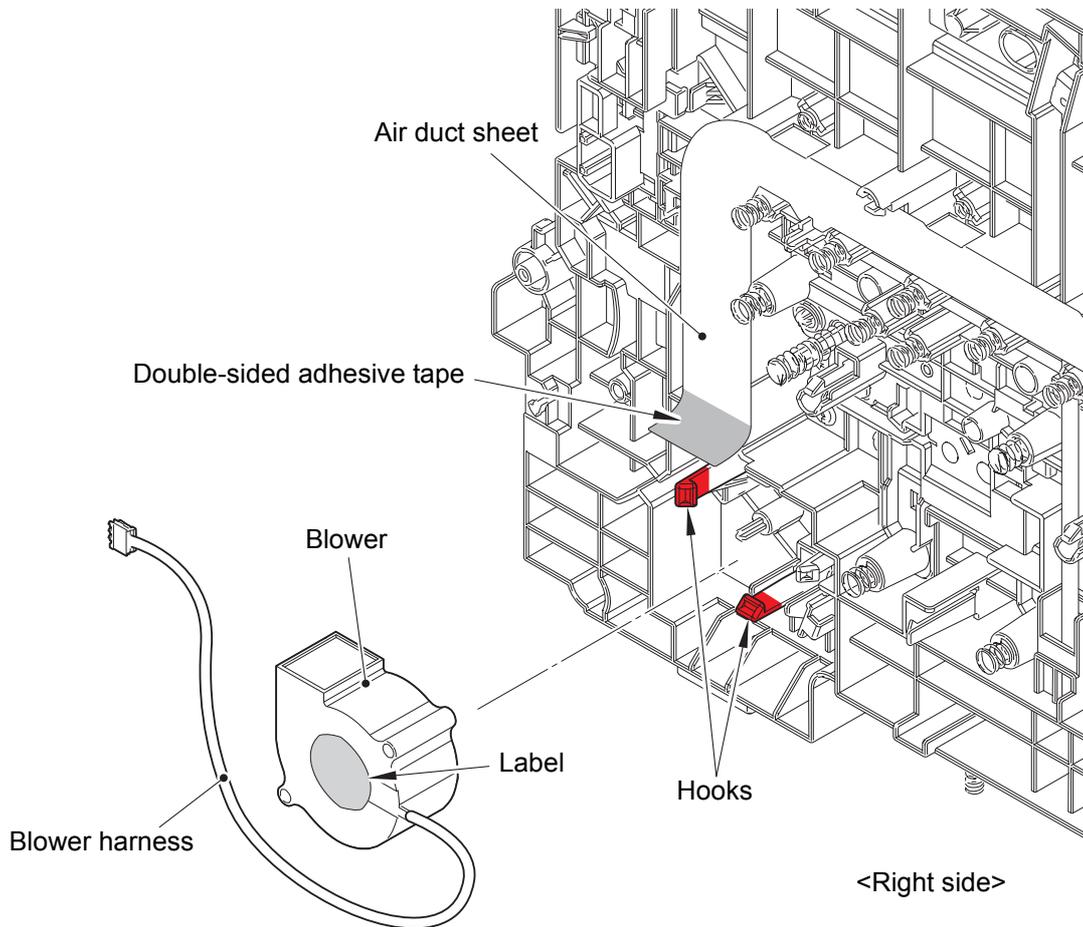


Fig. 3-103

Harness routing: Refer to "5. Blower harness".



Assembling note:

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

7.51 HVPS FFC

- (1) **Wiring** > HVPS FFC
- (2) **Remove** > HVPS FFC holder

 **Fixtures & Fittings**
- Hook (x 1)

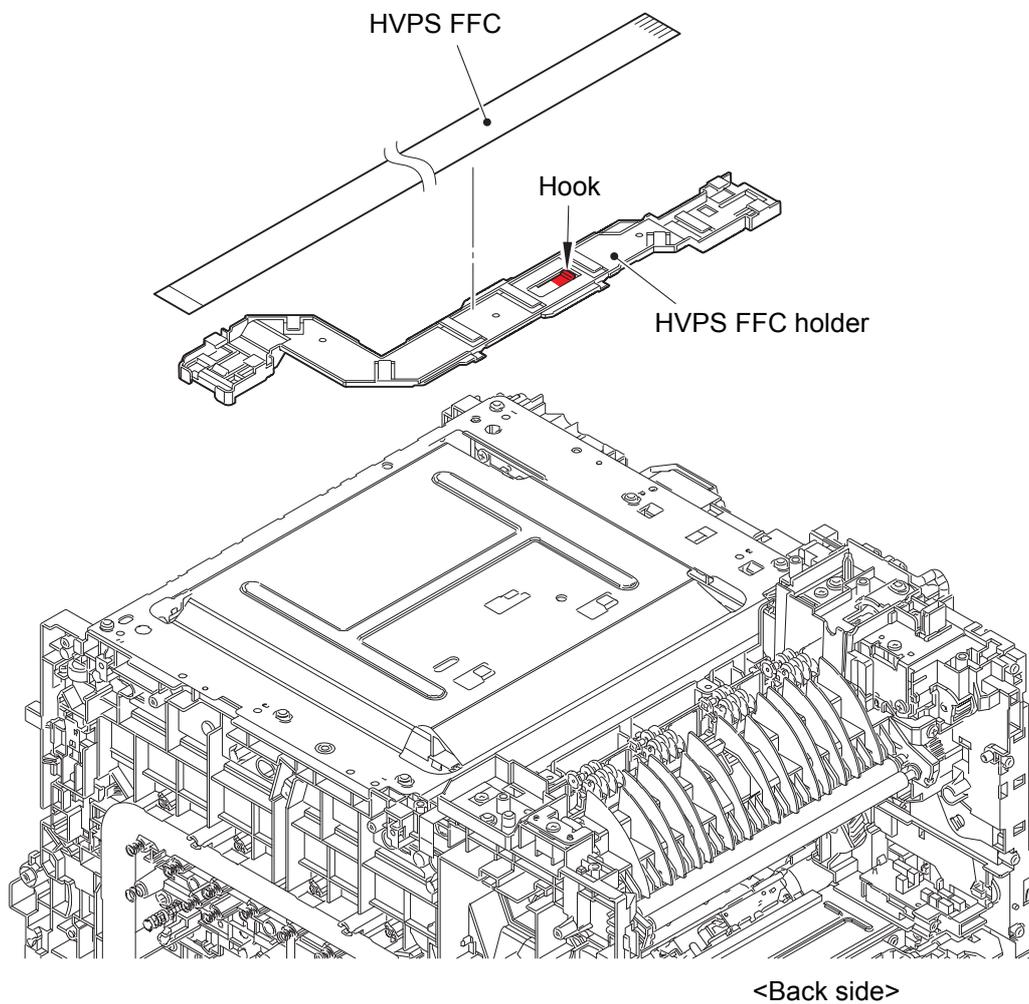
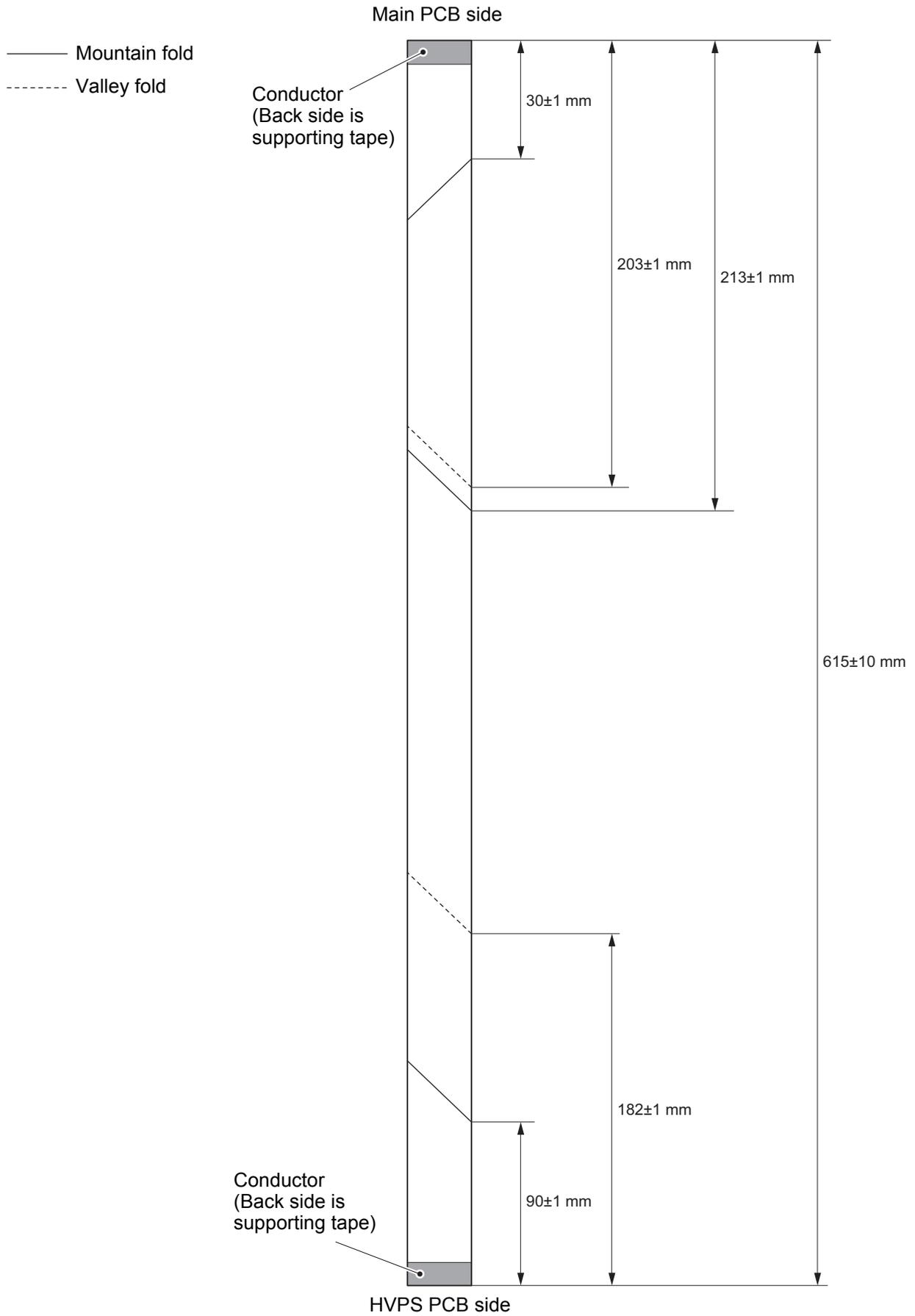


Fig. 3-104

Harness routing: Refer to "28. HVPS FFC".

<How to fold the HVPS FFC>



* The angle of the diagonal fold is 45° .

Fig. 3-105

7.52 Laser unit FFC

(1) **Remove** > Scanner cover plate

Fixtures & Fittings

- Taptite bind B M4x12 (x 6)
- Taptite cup S M3x6 SR (x 4)

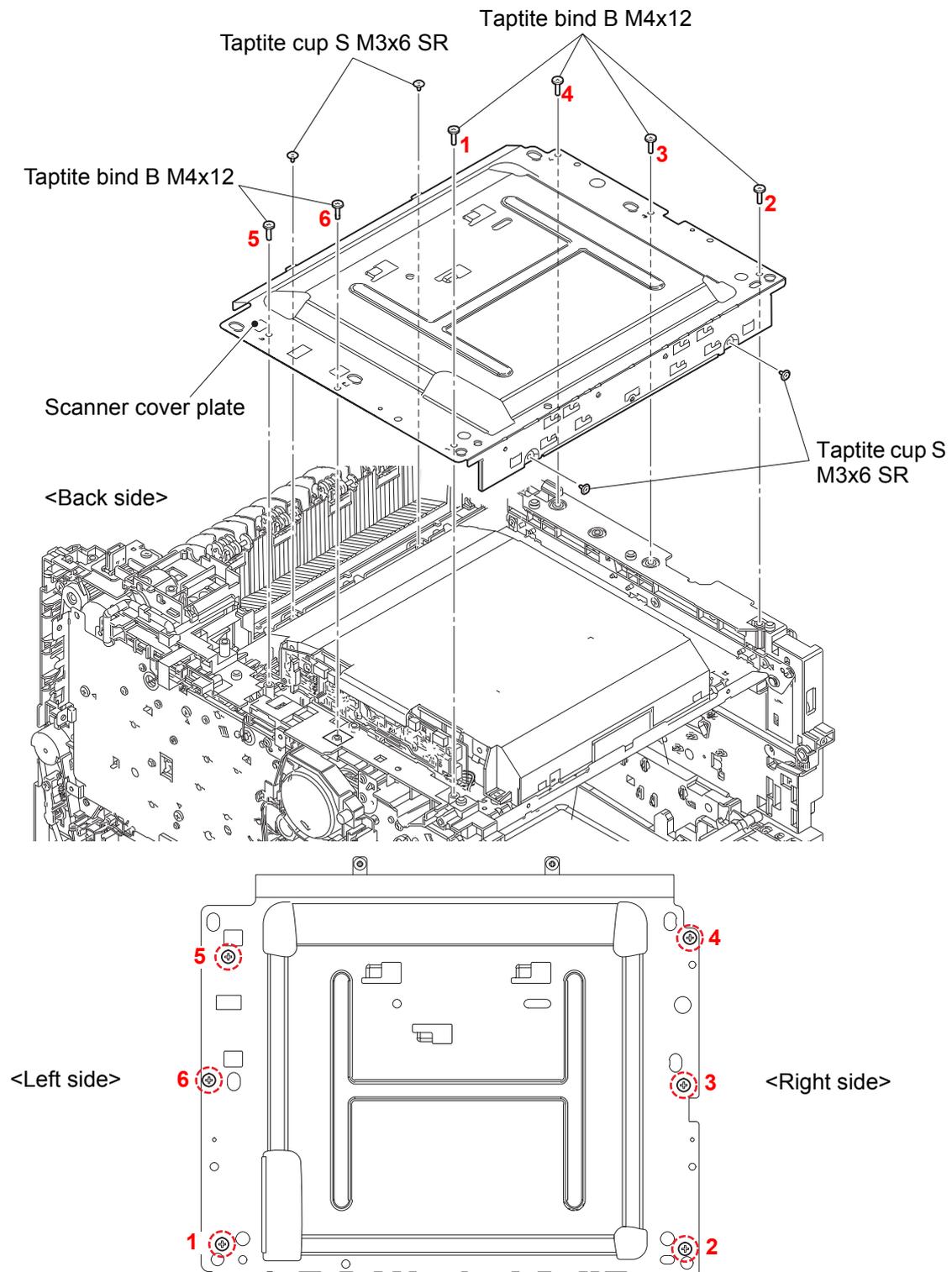


Fig. 3-106



Assembling note:

- Tighten the six Taptite bind B M4x12 screws as the marked number orders.

(2) **Disconnect** > Laser unit FFC

-  **Fixtures & Fittings**
- Lock (x 1)

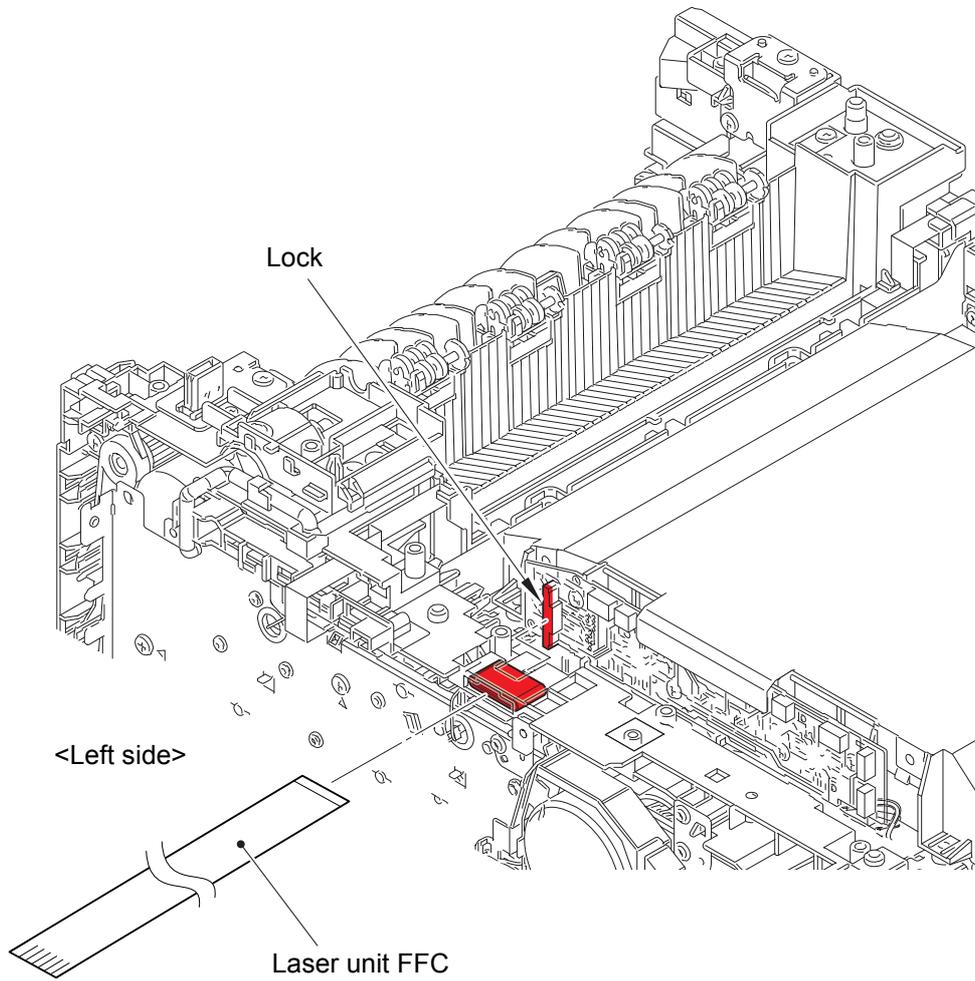
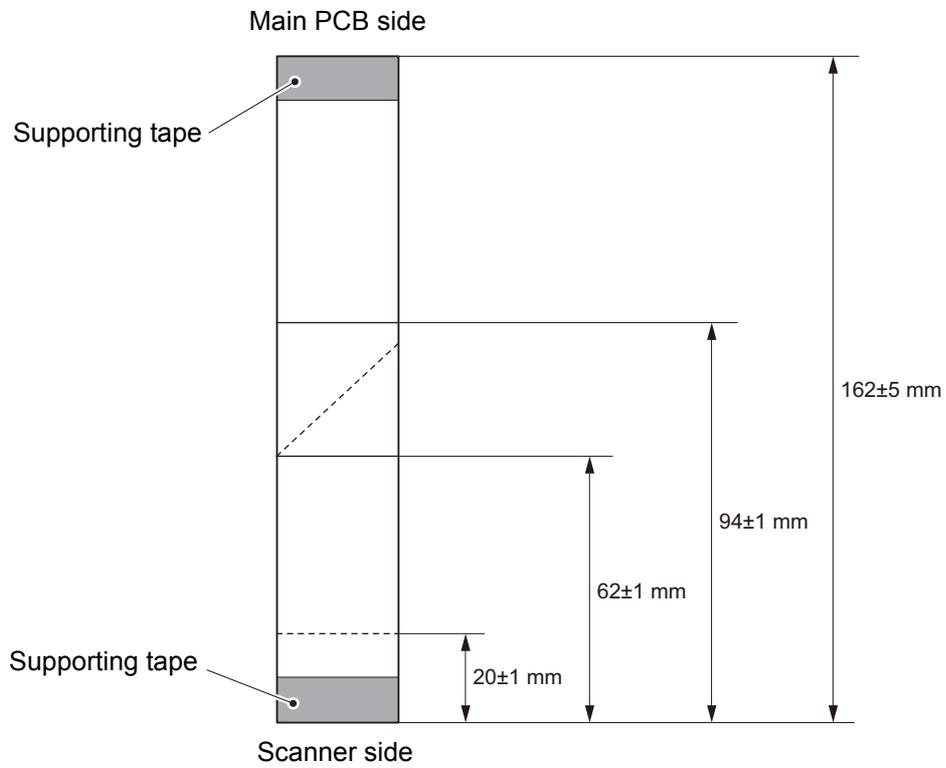


Fig. 3-107

Harness routing: Refer to "30. Laser unit FFC".

<How to fold the Laser unit FFC>

- Mountain fold
- Valley fold



* The angle of the diagonal fold is 45° .

Fig. 3-108

7.53 Laser unit

(1) Disconnect > Scanner motor harness

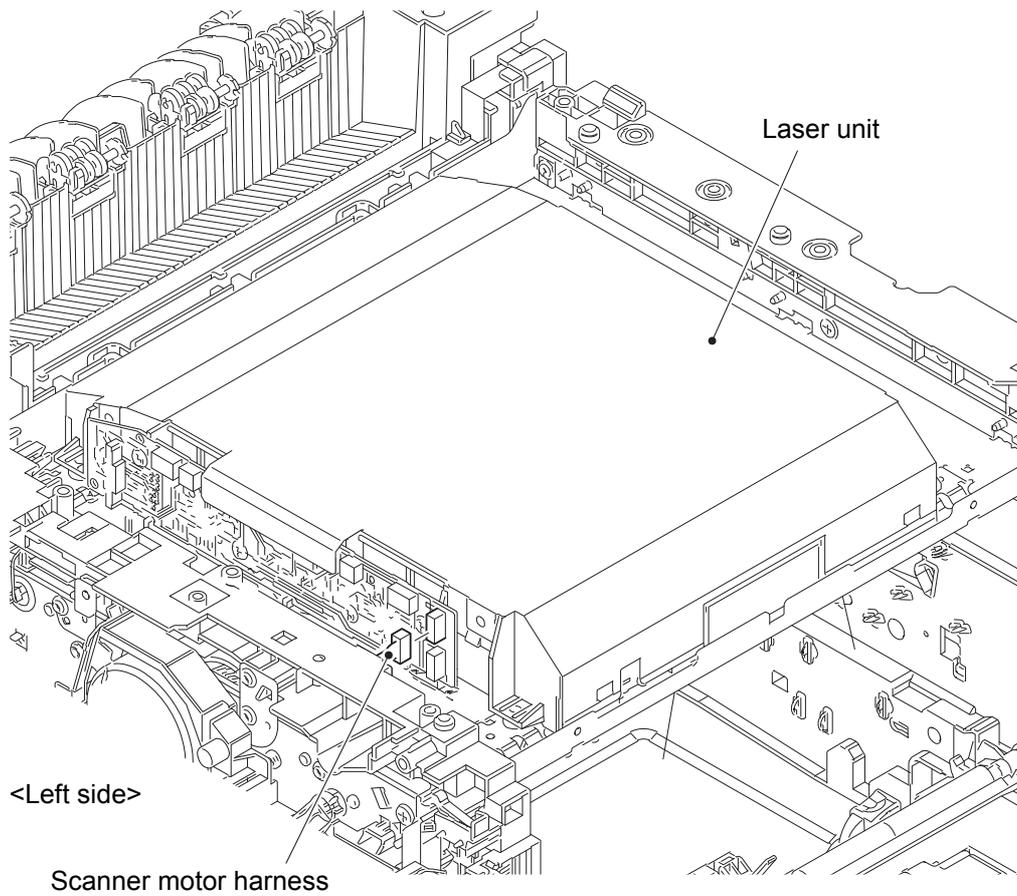


Fig. 3-109

(2) **Remove** > Scanner holder (x 4)

Fixtures & Fittings

- Taptite cup S M3x6 SR (x 5)

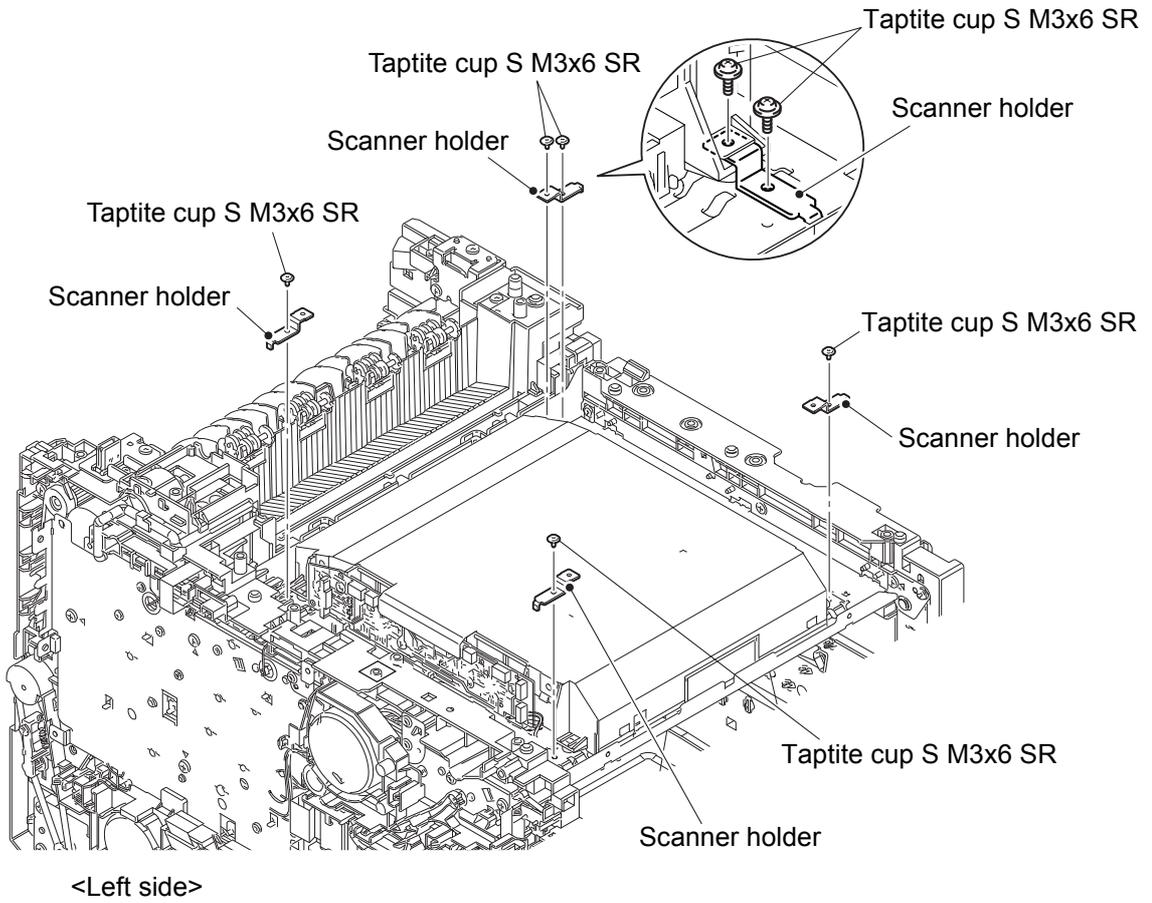


Fig. 3-110



Assembling note:

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

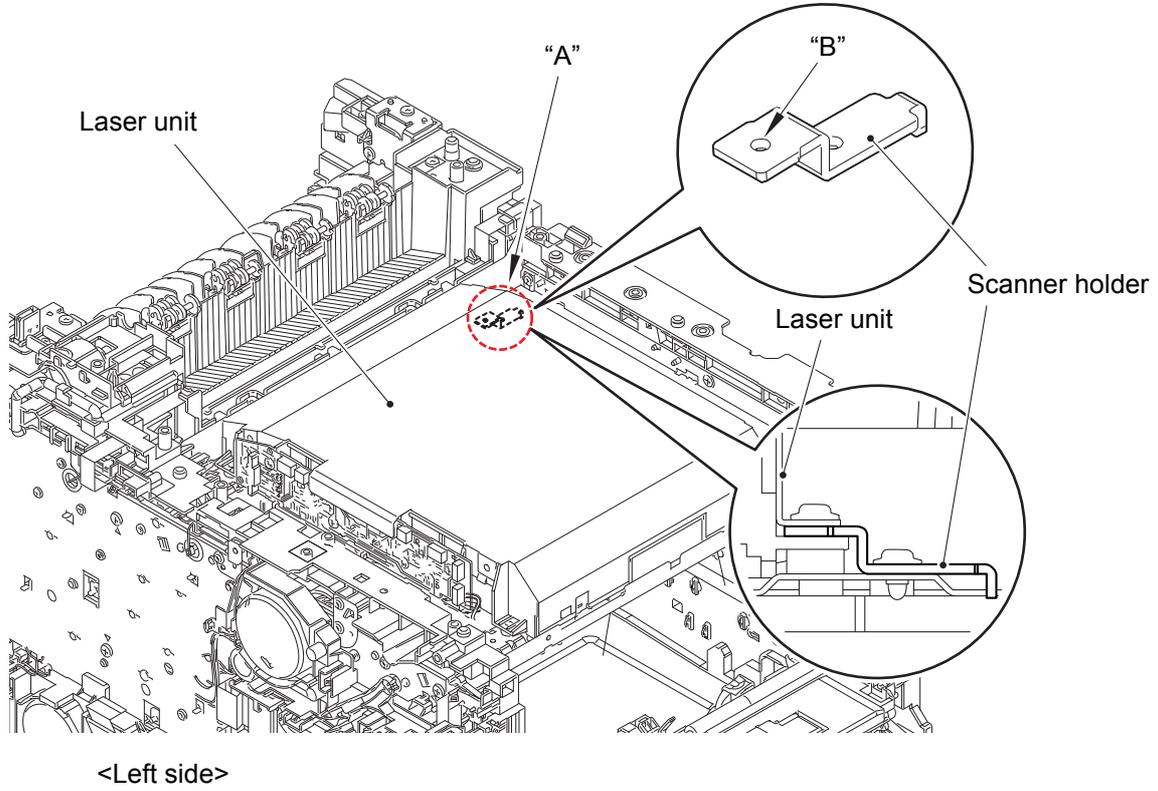
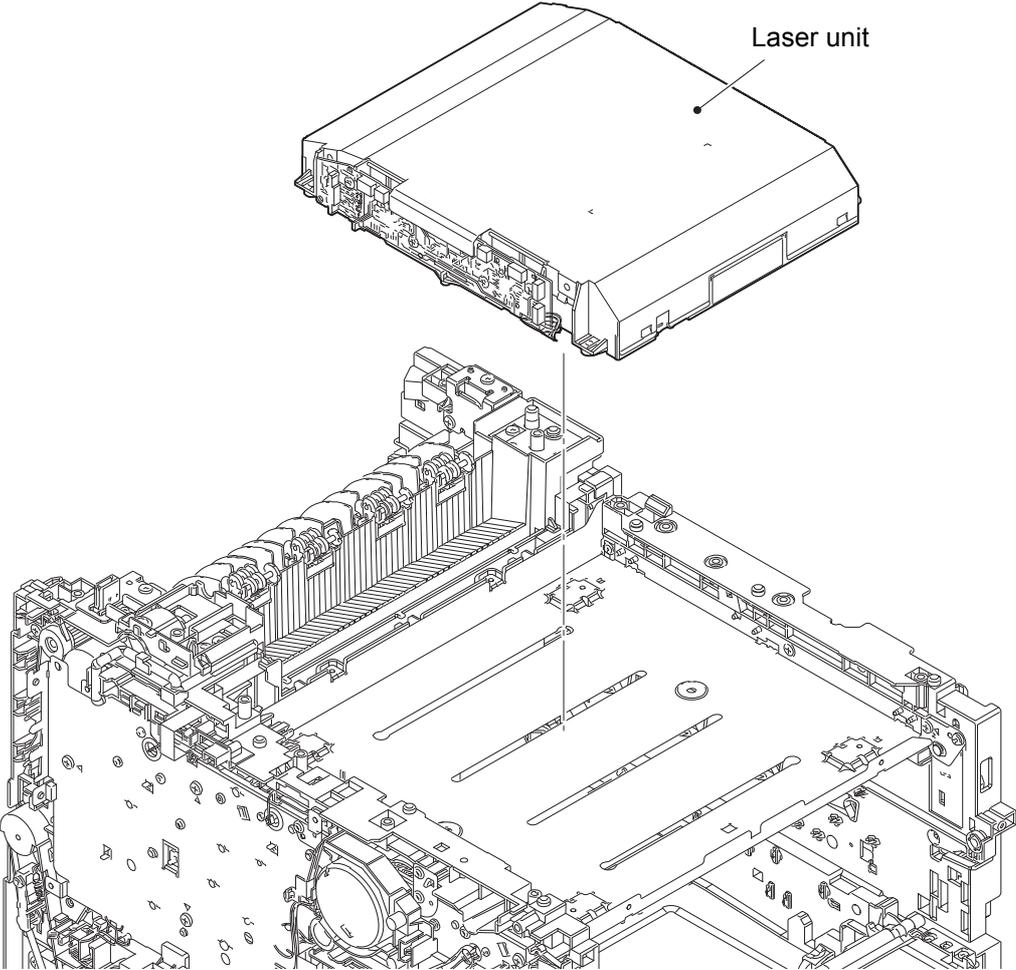


Fig. 3-111

(3) **Remove** > Laser unit



<Left side>

Fig. 3-112

7.54 Front cover sensor

- (1) **Wiring** > Front cover sensor harness
- (2) **Remove** > Front cover sensor

 **Fixtures & Fittings**
- Hook (x 2)

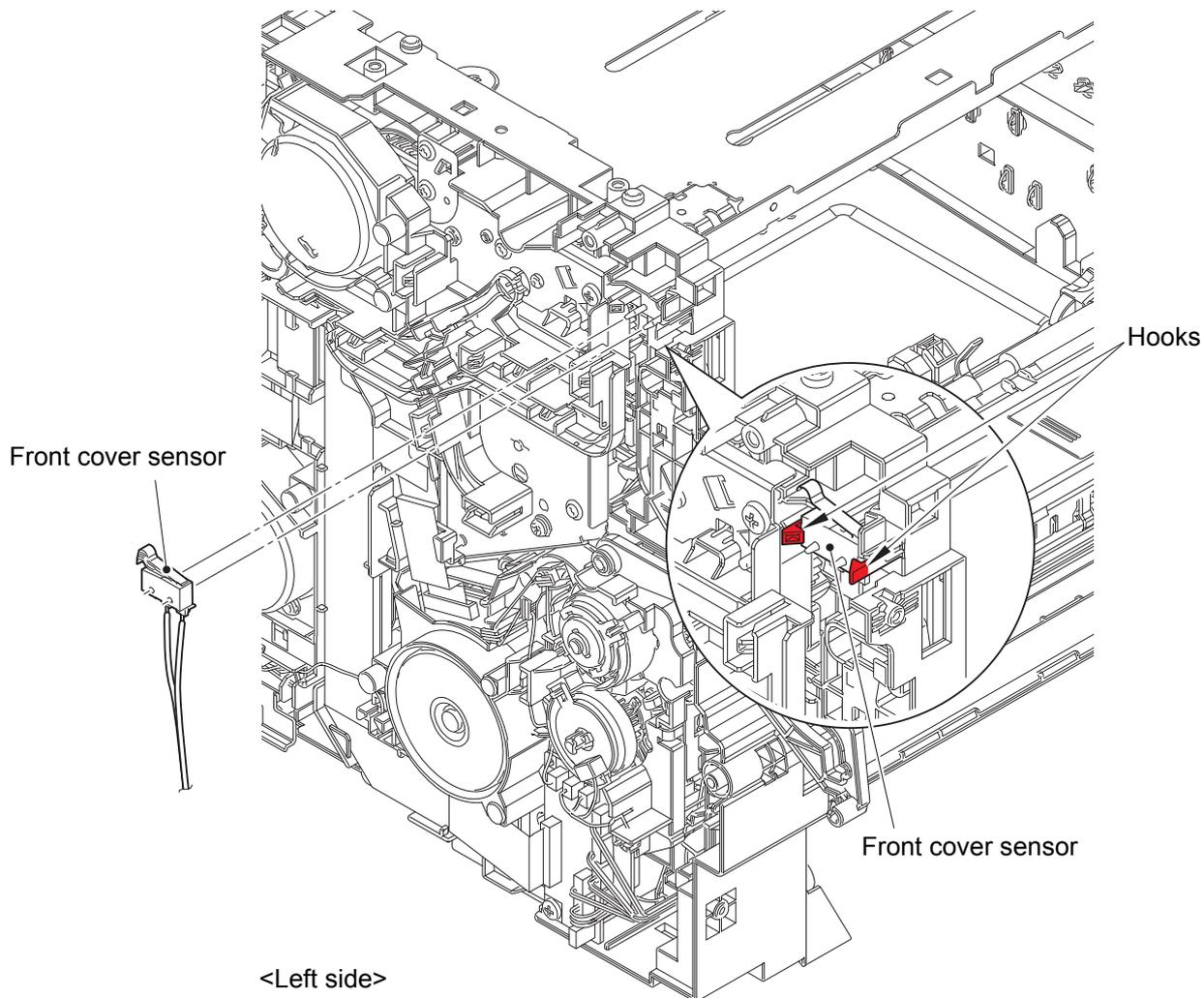


Fig. 3-113

Harness routing: Refer to "24. Front cover sensor harness".

7.55 Cover open trace sensor

(1) **Release** > Spring open detect (x 1)

 **Fixtures & Fittings**
- Hook (x 1)

(2) **Remove** > Sector open detect

 **Fixtures & Fittings**
- Taptite cup B 3x8 (x 1)

 **Point:**
• Turn the Sector open detect to the position shown in the figure.

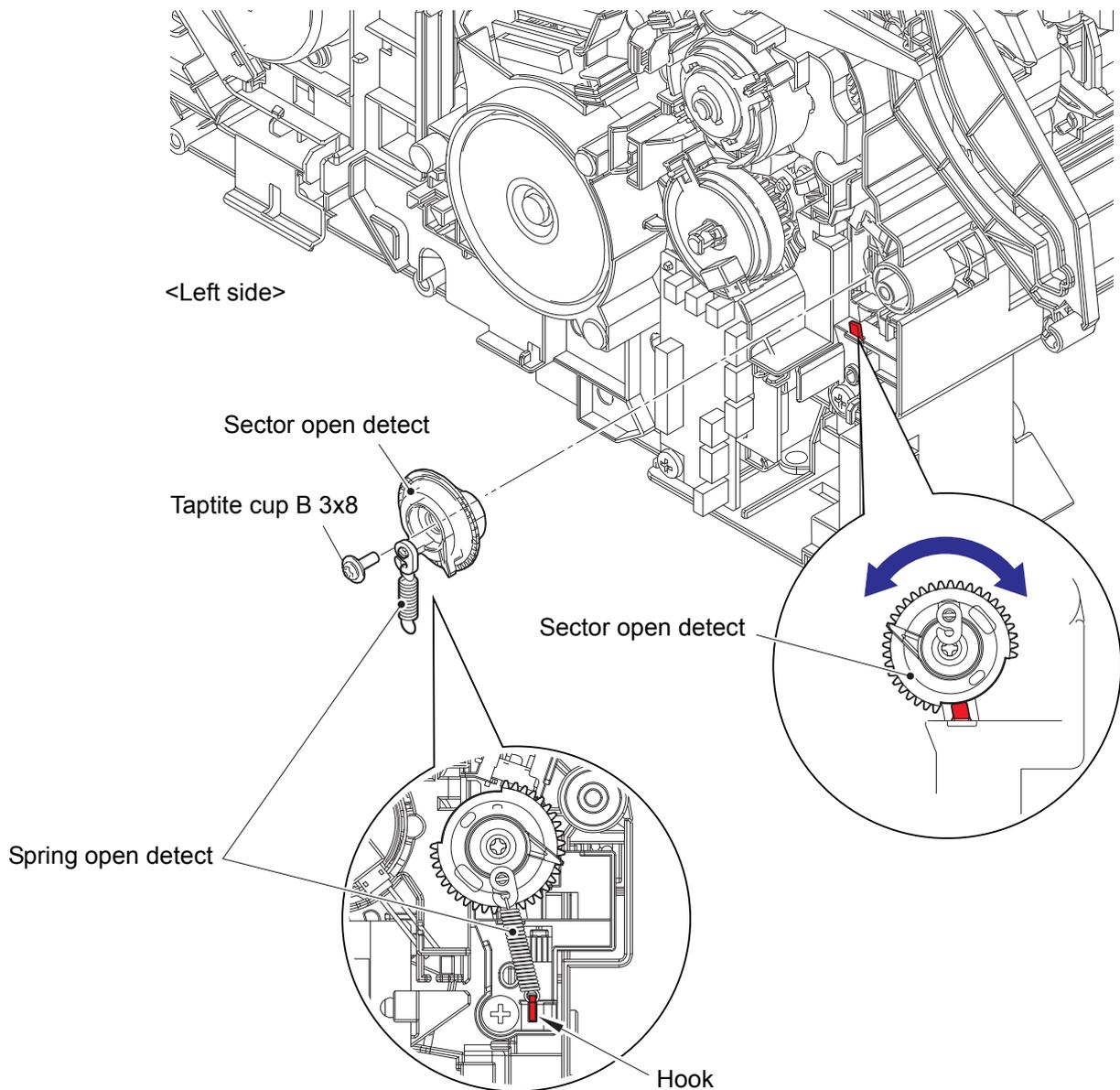


Fig. 3-114

(3) **Wiring** > Cover open trace sensor harness

(4) **Remove** > Front cover sensor unit

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 1)

- Hook (x 2)

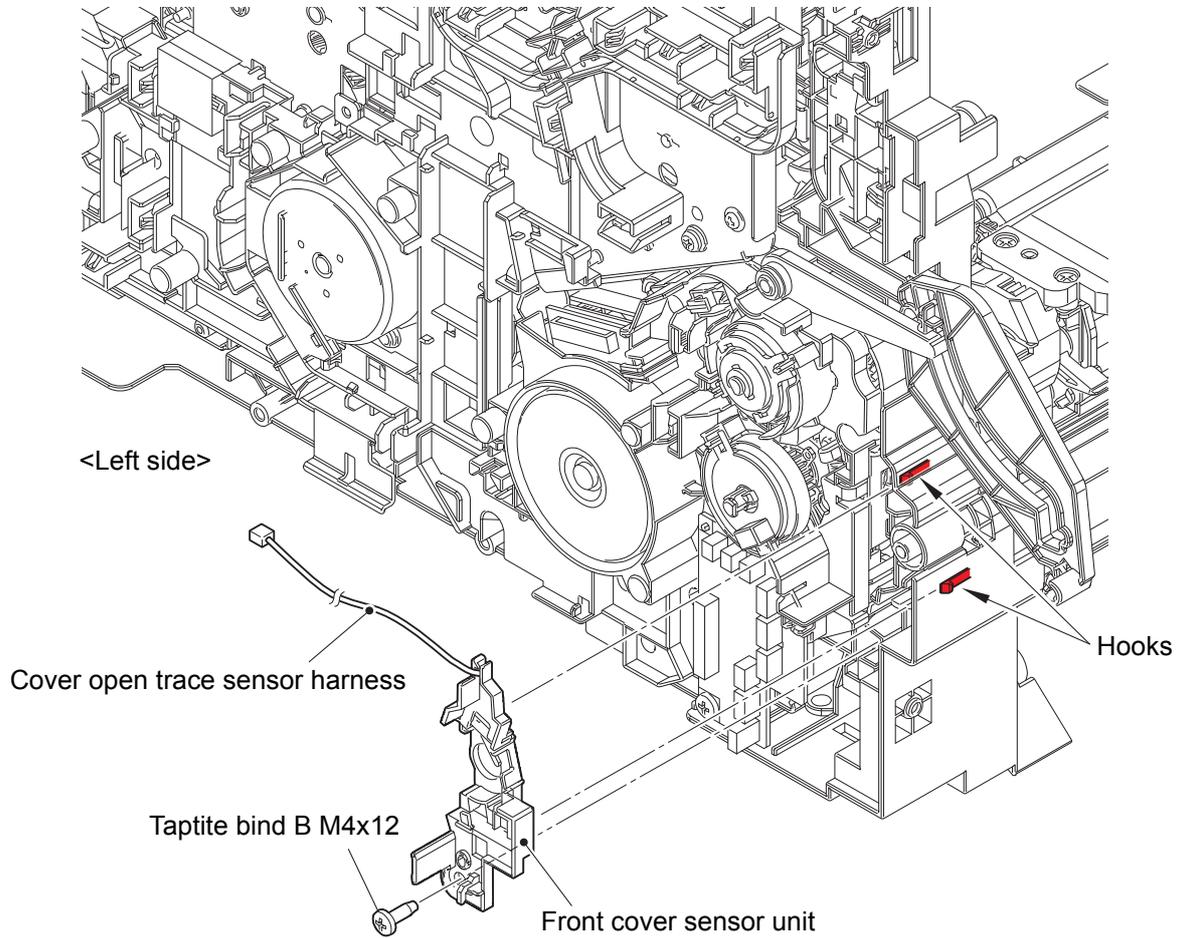


Fig. 3-115

Harness routing: Refer to "6. Cover open trace sensor harness".

(5) **Remove** > Cover open trace sensor

-  **Fixtures & Fittings**
- Hook (x 2)

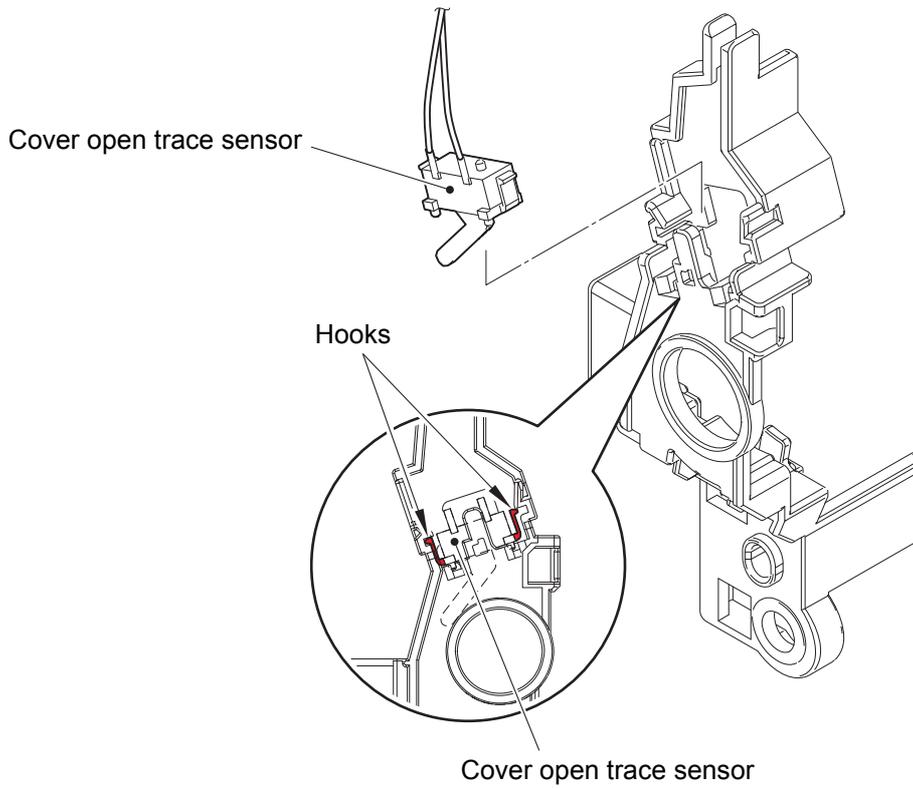


Fig. 3-116

7.56 PF drive unit

- (1) **Open** > Line holder under's lid (x 3)
- (2) **Wiring** > DX clutch harness
- (3) **Open** > Line holder upper's lid (x 1)

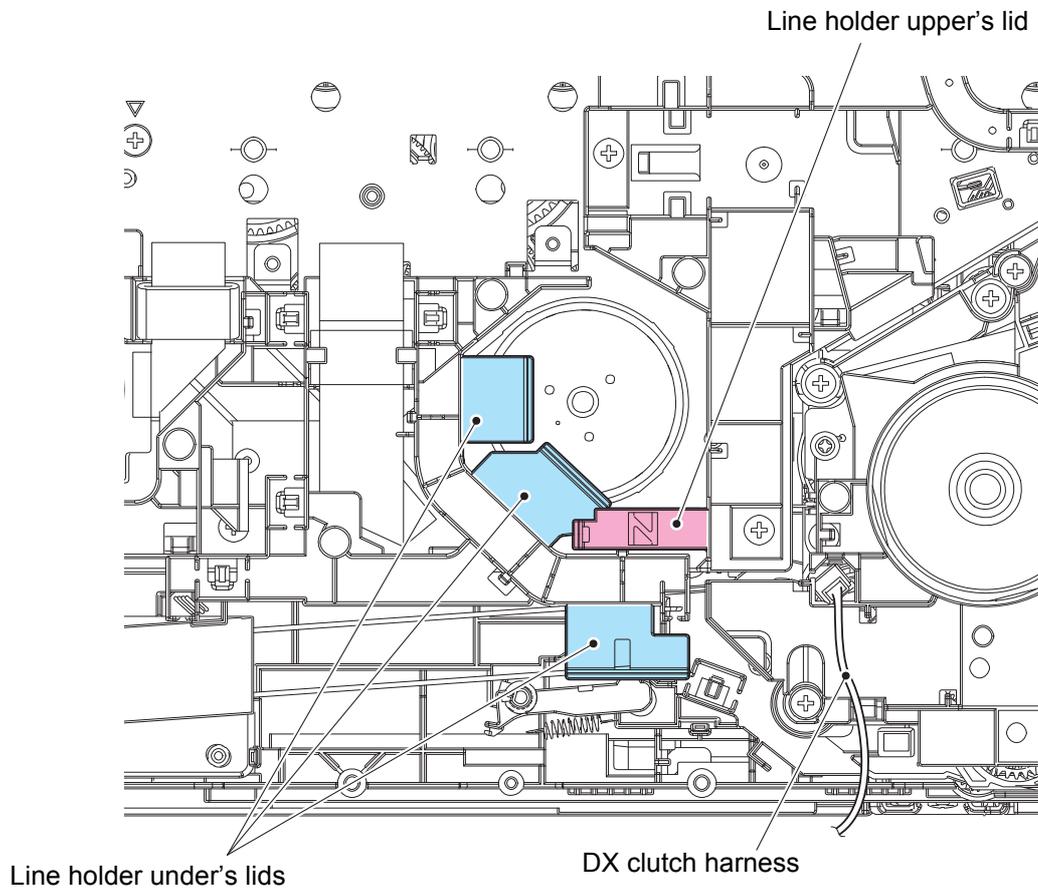


Fig. 3-117

Harness routing: Refer to "11. DX clutch harness".

- (4) **Wiring** > Engine relay FFC
- (5) **Disconnect** > MP solenoid harness, T1 PF/PE sensor harness, REG front/rear sensor harness, Belt IC harness, Waste toner box sensor harness, MP sensor harness, T1 clutch harness, REG clutch harness
- (6) **Wiring** > T1 clutch harness
- (7) **Remove** > Engine relay PCB

Fixtures & Fittings

- Taptite bind B M4x12 (x 1)

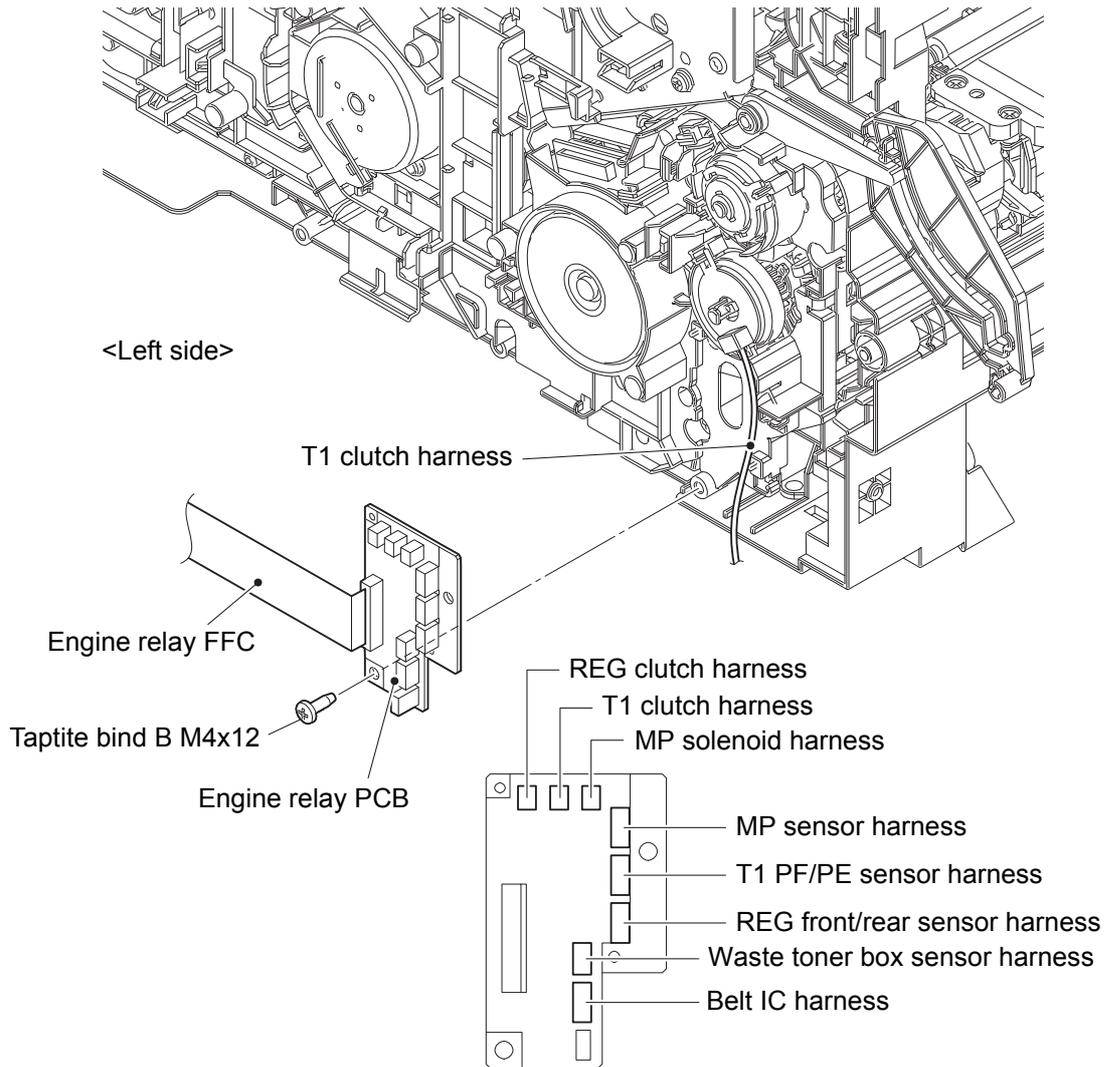


Fig. 3-118

Harness routing: Refer to "16. Engine relay FFC, 42. PF drive unit, 49. T1 clutch harness".

(8) **Remove** > T1 clutch

-  **Fixtures & Fittings**
- Hook (x 1)

(9) **Remove** > T1 bushing 6

 Point: <ul style="list-style-type: none">• Rotate the T1 bushing 6 in the direction of the arrow.
--

(10) **Remove** > Shaft pick roller

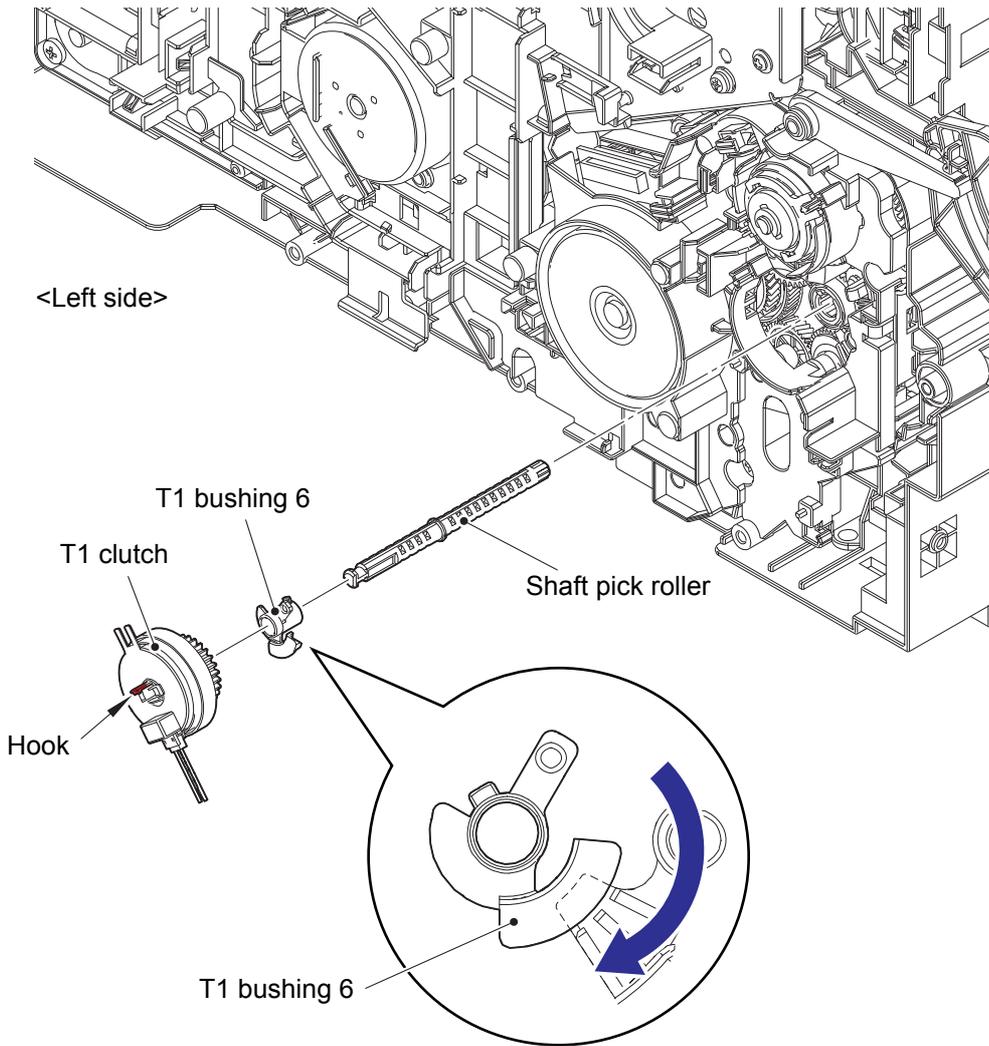


Fig. 3-119

(11) **Remove** > PF bushing 5

 **Fixtures & Fittings**
- Hook (x 1)

(12) **Remove** > Feed roller drive shaft

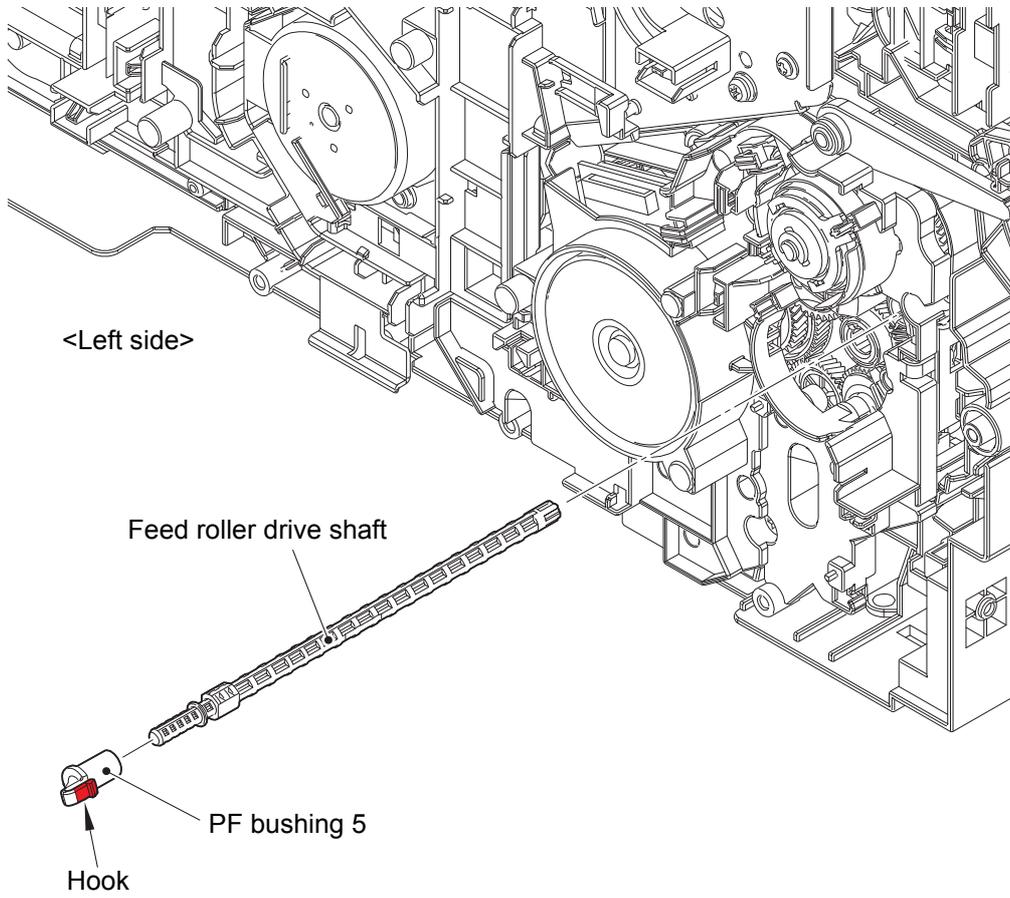


Fig. 3-120

(13) **Wiring** > PF motor FFC

(14) **Remove** > PF drive unit



Fixtures & Fittings

- Taptite bind B M4x12 (x 5)

(15) **Remove** > REG roller joint, Pinch roller idle gear M07Z13

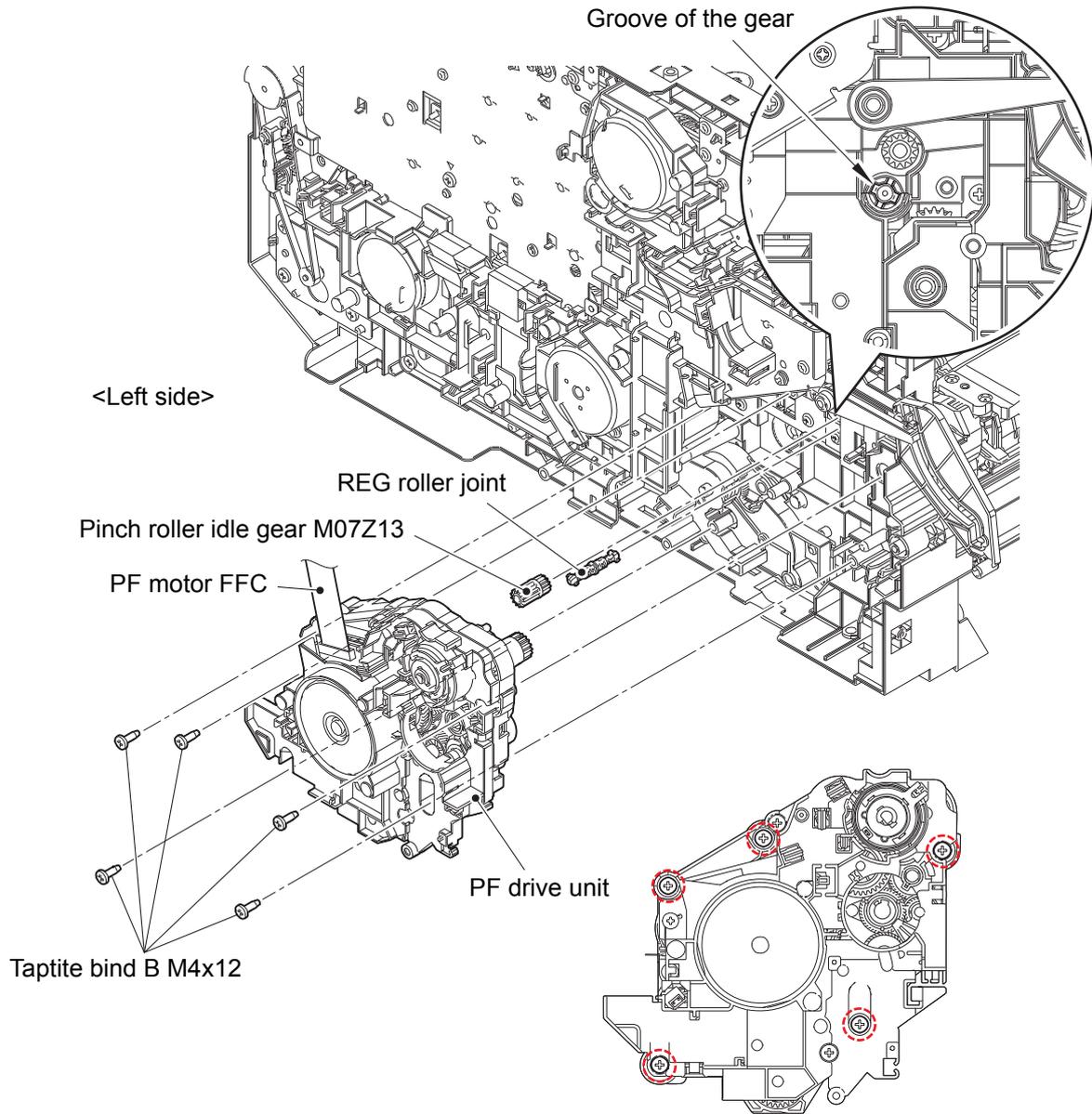


Fig. 3-121

Harness routing: Refer to "37. Main PCB (Printer side)".



Assembling note:

- Align the REG roller joint with the groove of the gear on the machine.

7.57 DX sensor PCB

- (1) Wiring > DX sensor harness

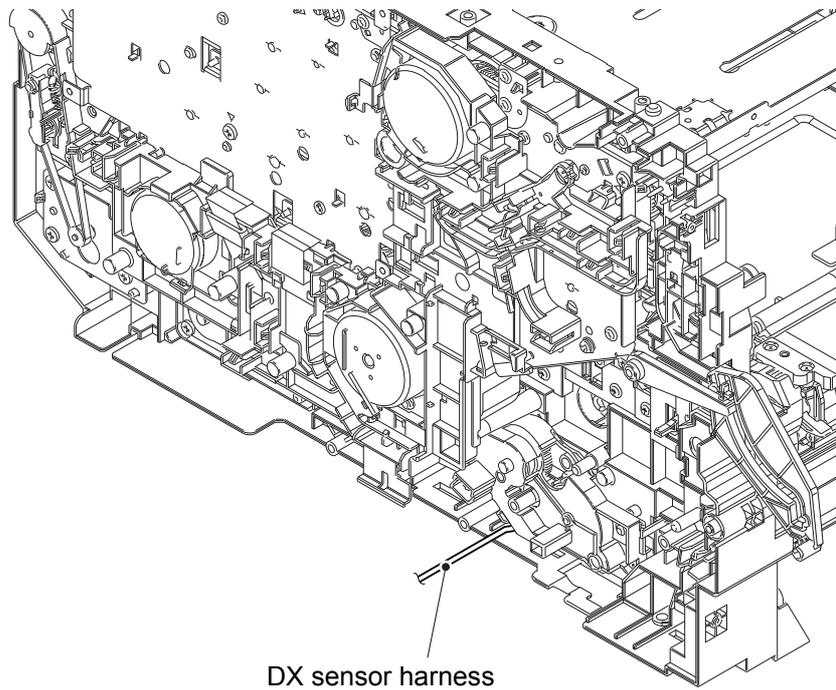


Fig. 3-122

Harness routing: Refer to "12. DX sensor harness".

(2) **Remove** > DX eject feed ASSY

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 2)

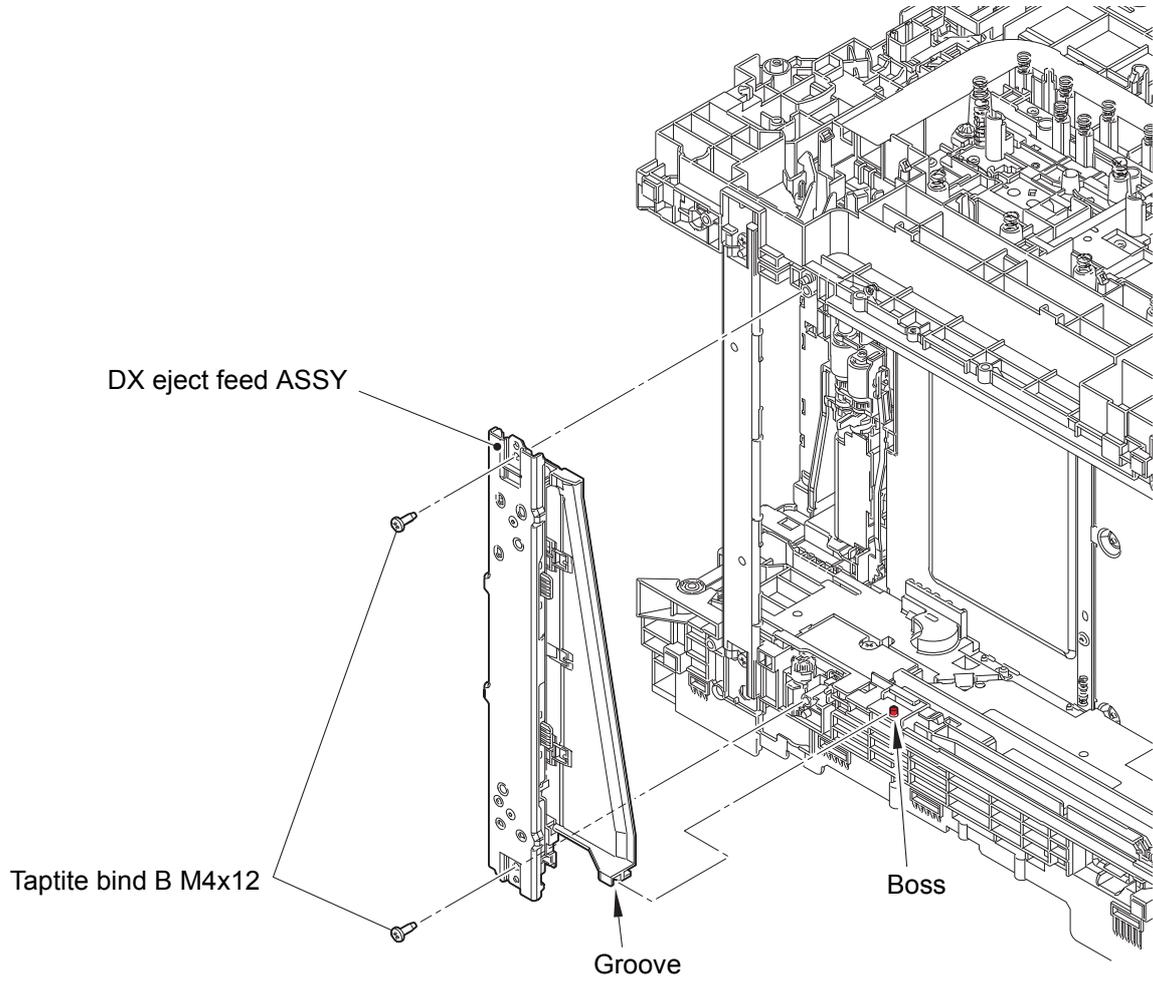


Fig. 3-123



Assembling note:

- When attaching the DX eject feed ASSY, engage the machine's Boss with the groove of the DX eject feed ASSY.

(3) **Remove** > DX sensor cover

- Fixtures & Fittings**
- Taptite bind B M4x12 (x 1)

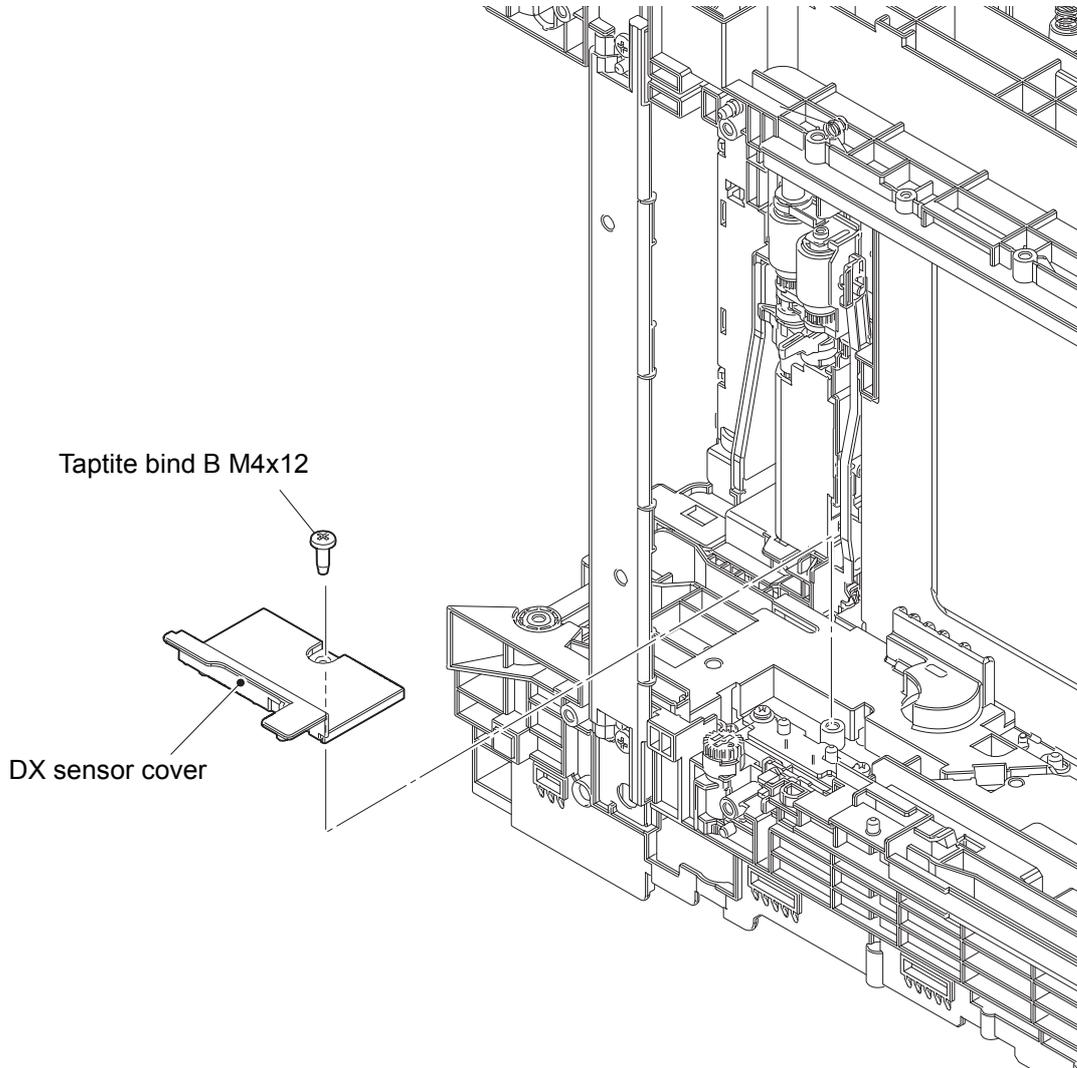


Fig. 3-124

- (4) **Remove** > DX sensor PCB
- (5) **Disconnect** > DX sensor harness

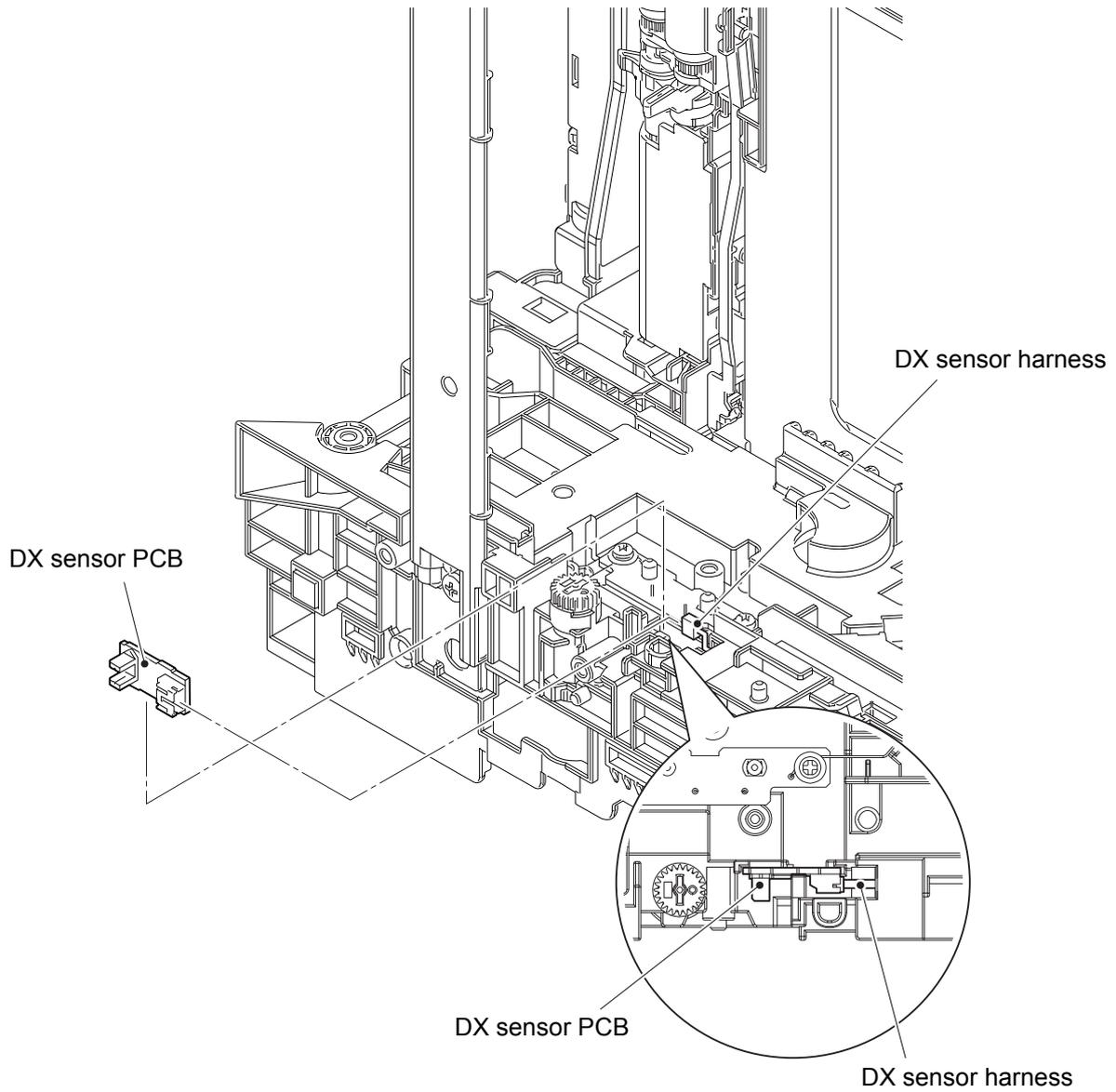


Fig. 3-125

7.58 Process drive unit

- (1) **Open** > Line holder upper's lid (x 3)
- (2) **Wiring** > DEV motor harness, DEV release clutch K harness, DEV release clutch CMY harness, Fuser release clutch harness, DEV release CMY sensor harness, DEV release K sensor harness
- (3) **Remove** > Line holder upper

Fixtures & Fittings

- Taptite bind B M4x12 (x 2)
- Hook (x 1)

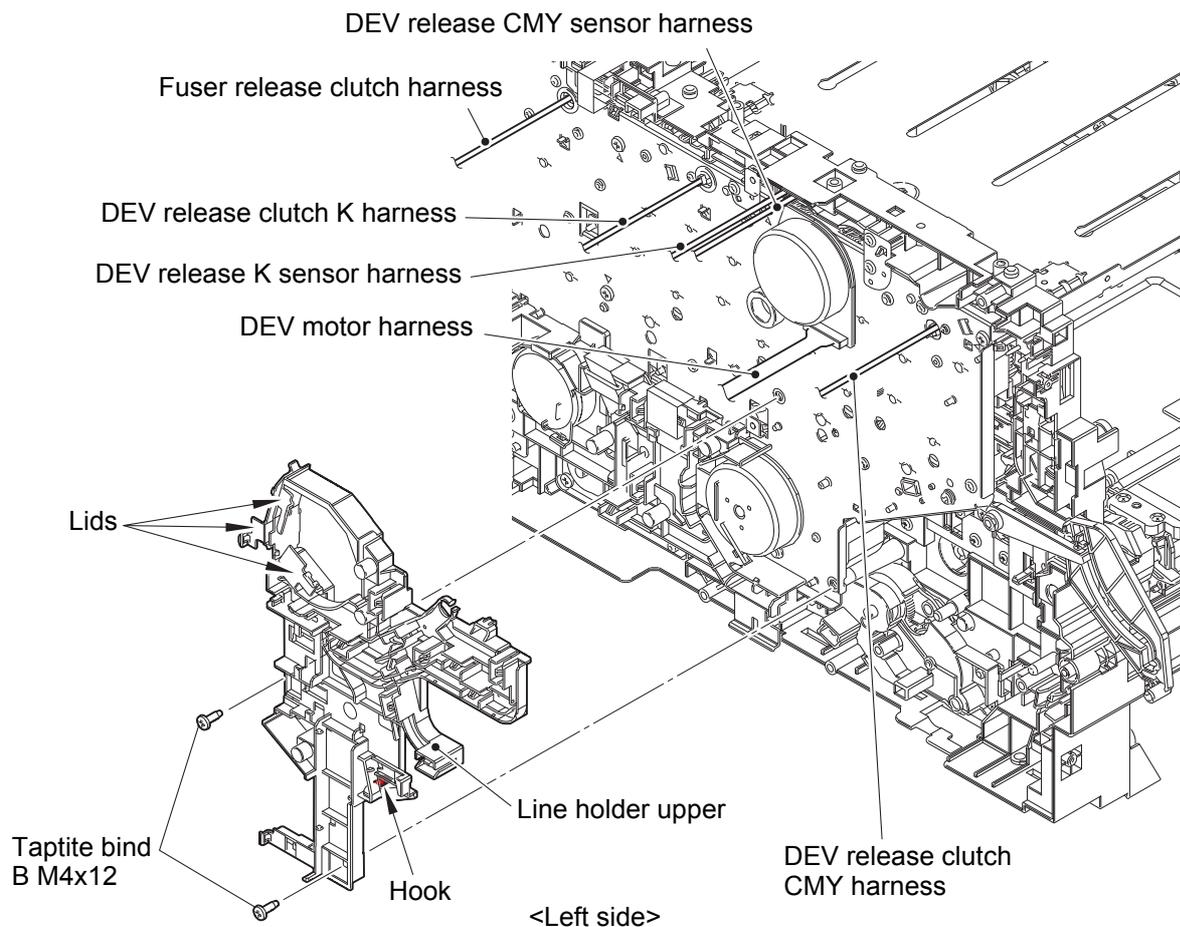


Fig. 3-126

Harness routing: Refer to "7. DEV motor harness, 9. DEV release clutch K harness, 8. DEV release clutch CMY harness, 26. Fuser release clutch harness, 10. DEV release CMY sensor harness, DEV release K sensor harness".

- (4) **Open** > Line holder under's lid (x 1)
- (5) **Wiring** > LVPS harness2, REG mark L sensor harness, REG mark R sensor harness, Eject relay PCB harness, Process motor FFC, LT connector harness, Fuser motor FFC, Belt cleaning clutch harness
- (6) **Remove** > Line holder under



Fixtures & Fittings

- Taptite bind B M4x12 (x 1)
- Hook (x 1)

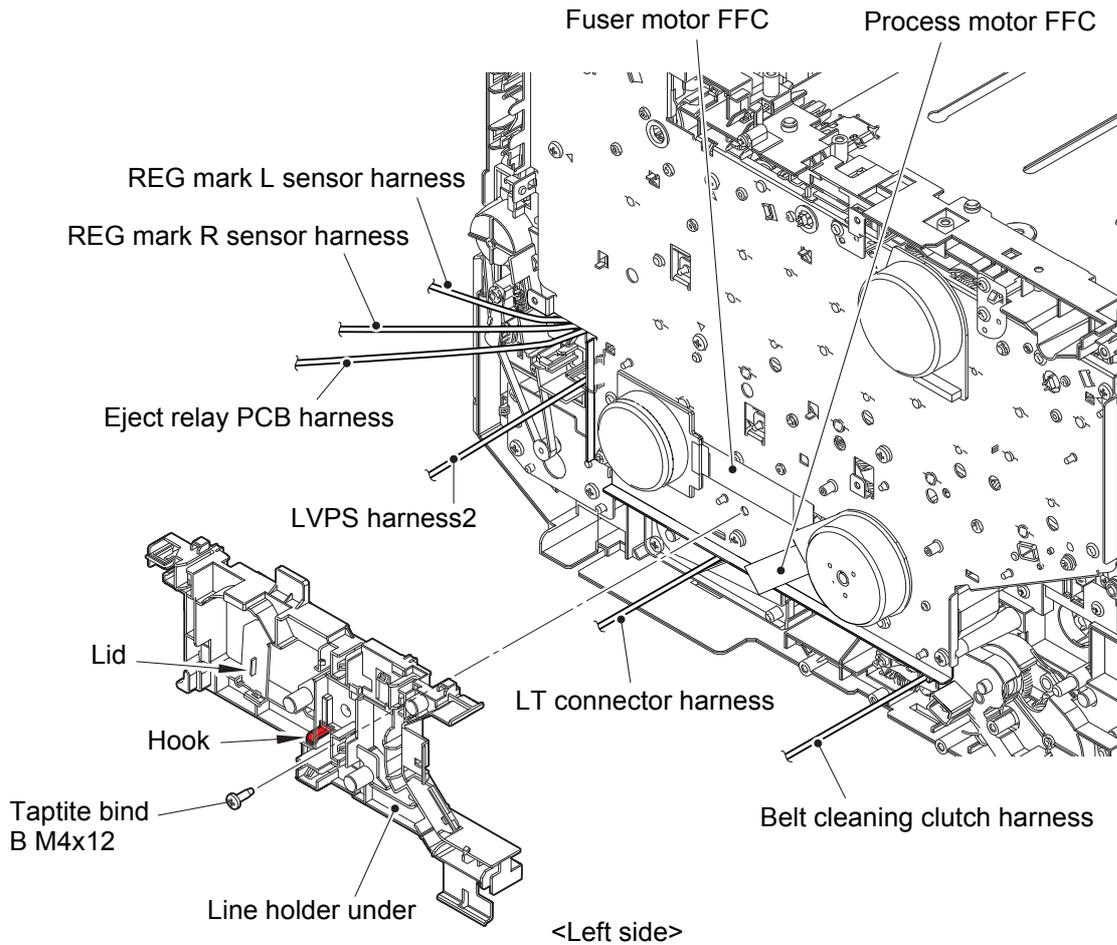


Fig. 3-127

Harness routing: Refer to "33. LVPS harness1, LVPS harness2, 45. REG mark L sensor harness, REG mark R sensor harness, 14. Eject relay PCB harness, 43. Process motor FFC, 31. LT connector harness, 25. Fuser motor FFC, 3. Belt cleaning clutch harness".

(7) **Remove** > Main PCB support plate

 **Fixtures & Fittings**

- Screw cup M3x8 SR (x 1)

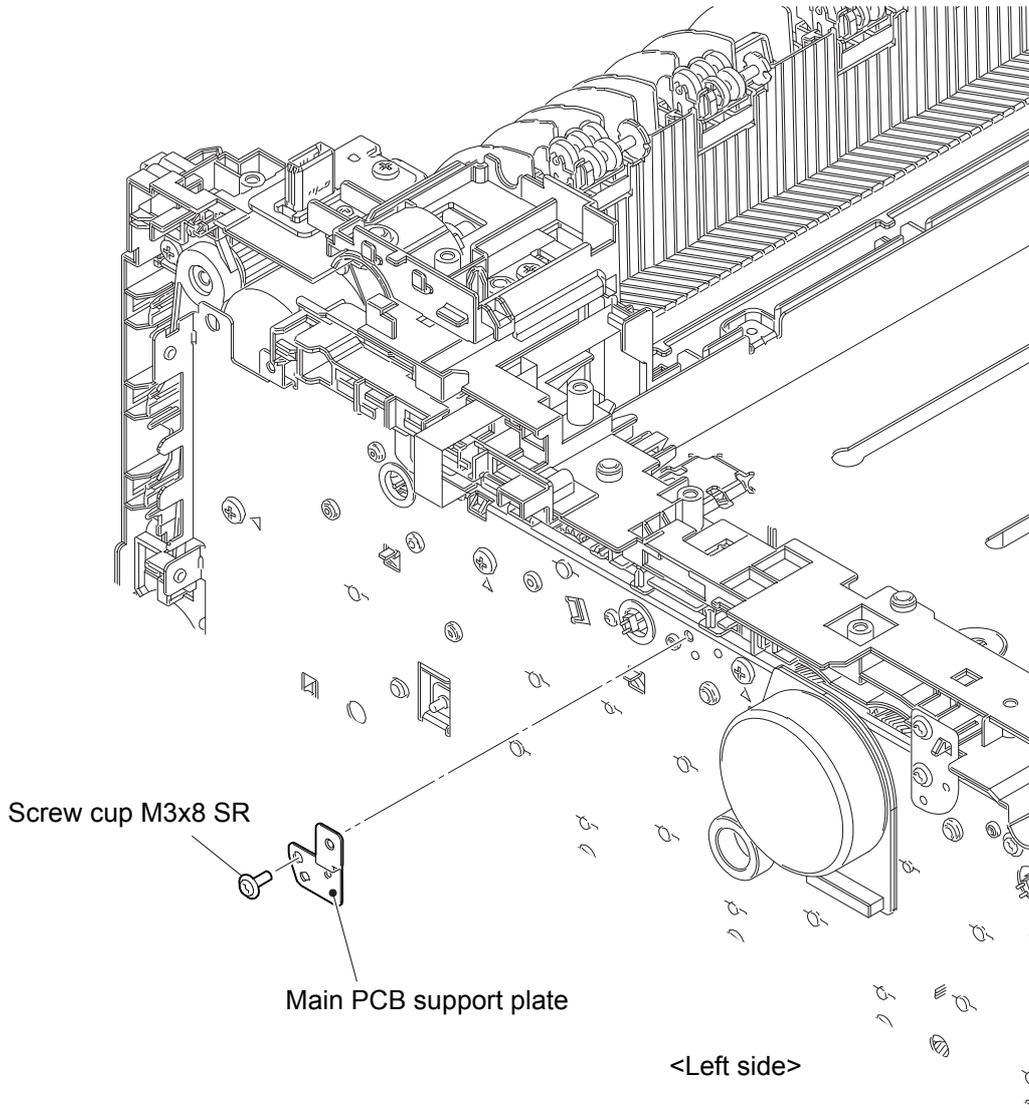


Fig. 3-128

(8) **Wiring** > Eject motor harness, Main drawer harness, Scanner motor harness, HVPS2 FFC

(9) **Remove** > Cable rack

 **Fixtures & Fittings**

- Screw cup M3x8 SR (x 1)
- Taptite bind B M3x10 (x 1)

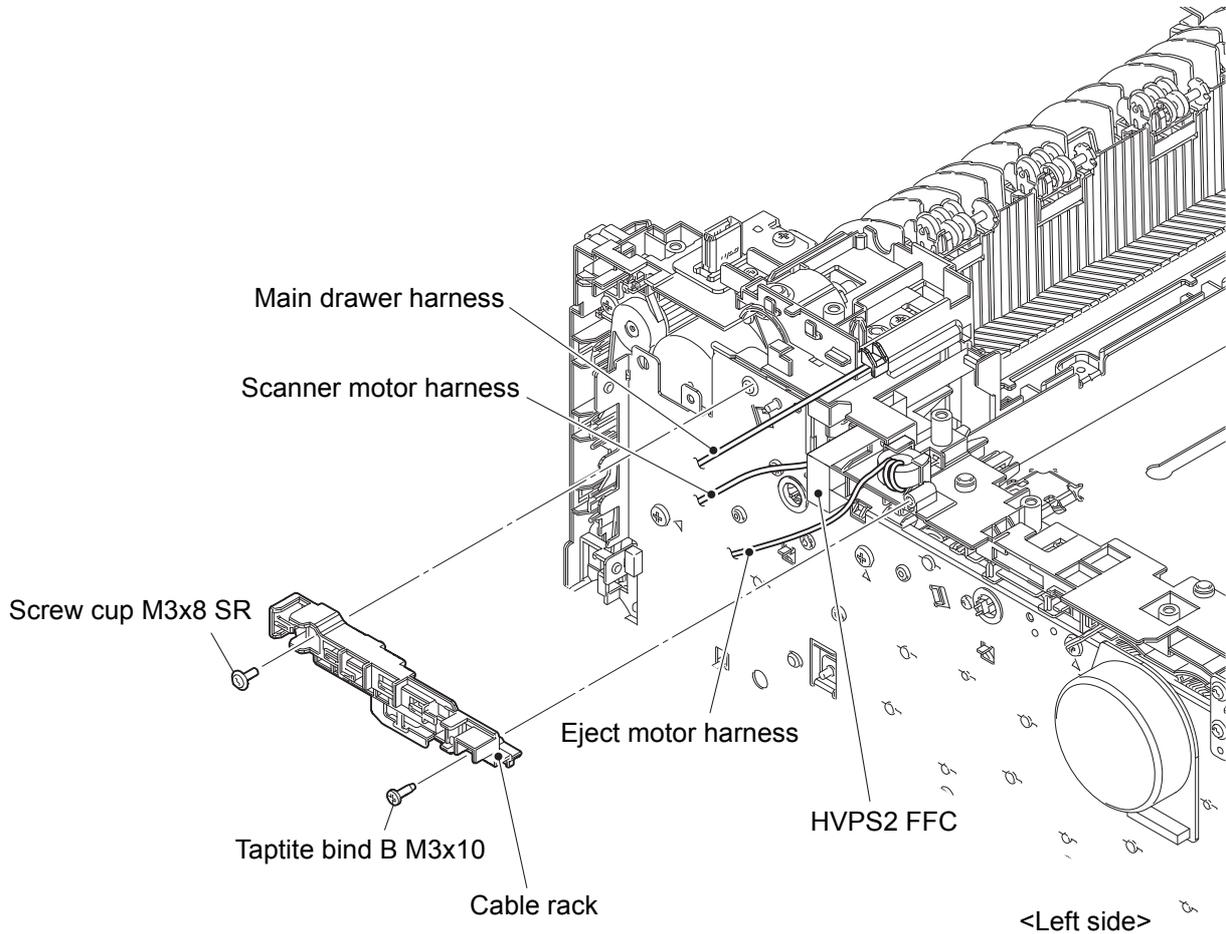


Fig. 3-129

Harness routing: Refer to "13. Eject motor harness, 35. Main drawer harness, 47. Scanner motor harness, 29. HVPS2 FFC".

(10) **Remove** > Earth plate process drive

 **Fixtures & Fittings**

- Screw cup M3x8 SR (x 1)
- Taptite cup S M3x8 SR (x 1)

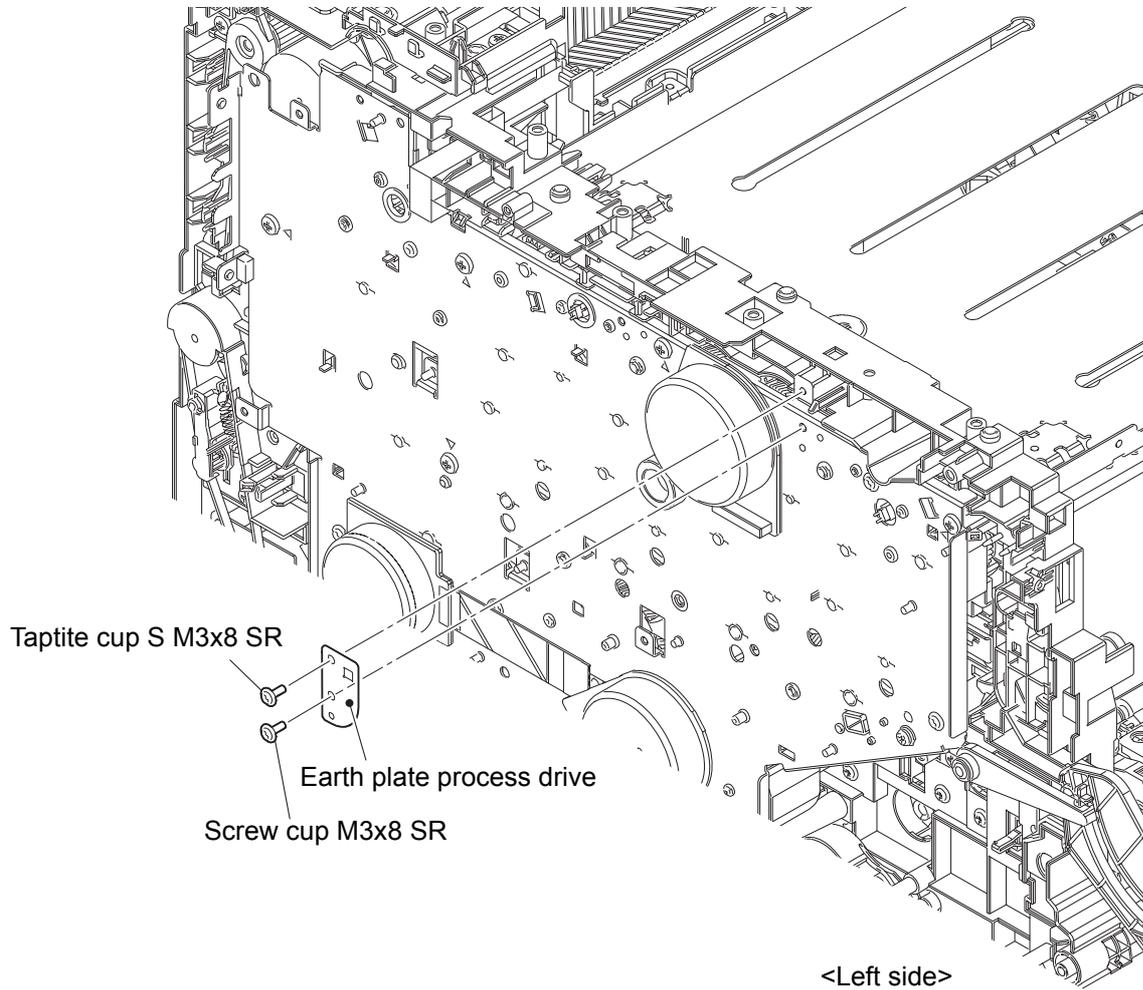


Fig. 3-130

(11) **Remove** > Process drive unit

 **Fixtures & Fittings**

- Taptite pan (washer) B M4x12 DA (x 2)
- Taptite bind B M4x12 (x 5)
- Taptite cup S M3x8 SR (x 1)
- Hook (x 1)

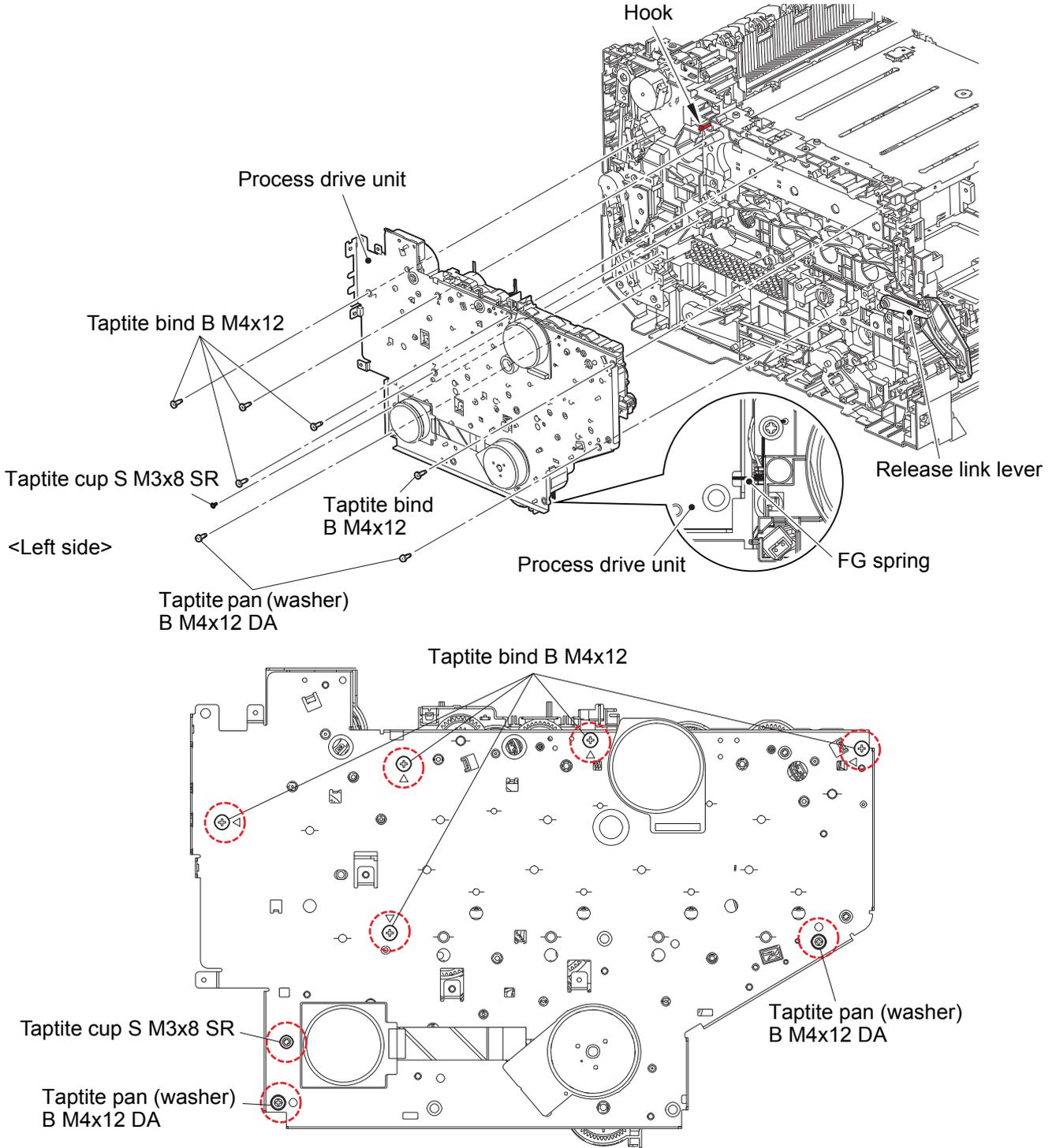


Fig. 3-131



Assembling note:

- Be careful that each harness may be caught in.
- If the Process drive unit is removed without removing the PF drive unit, apply the FG spring when assembling the Process drive unit.

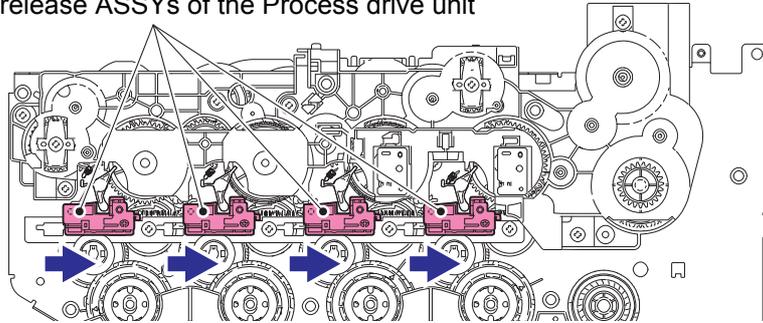


Assembling note:

- Slide the four Slider DEV release ASSYs of the Process drive unit to the OK positions shown in the figure. Push the Release link lever in the direction of the arrow, and put the Joint release cam at the position shown in the figure to attach the Process drive unit.

Slider DEV release ASSYs of the Process drive unit

OK



Slider DEV release ASSYs of the Process drive unit

NG

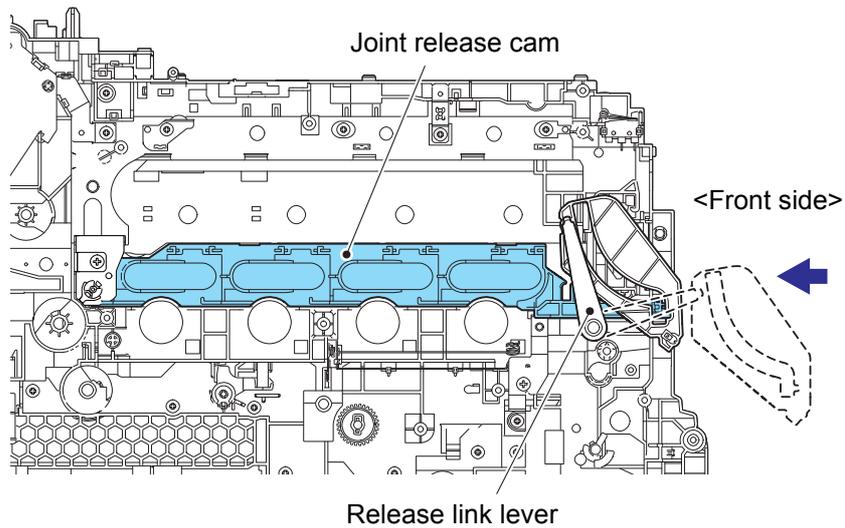
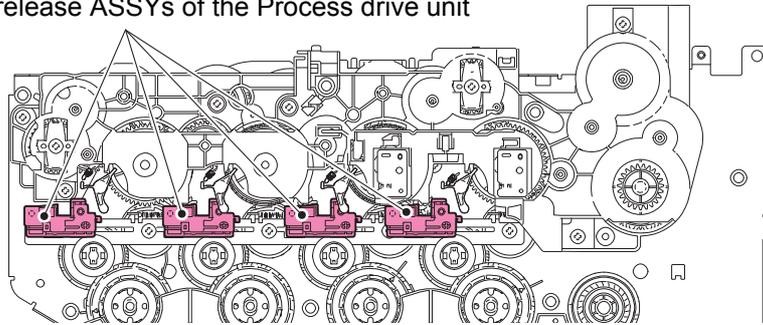


Fig. 3-132

(12) **Remove** > Release link lever, Force release link

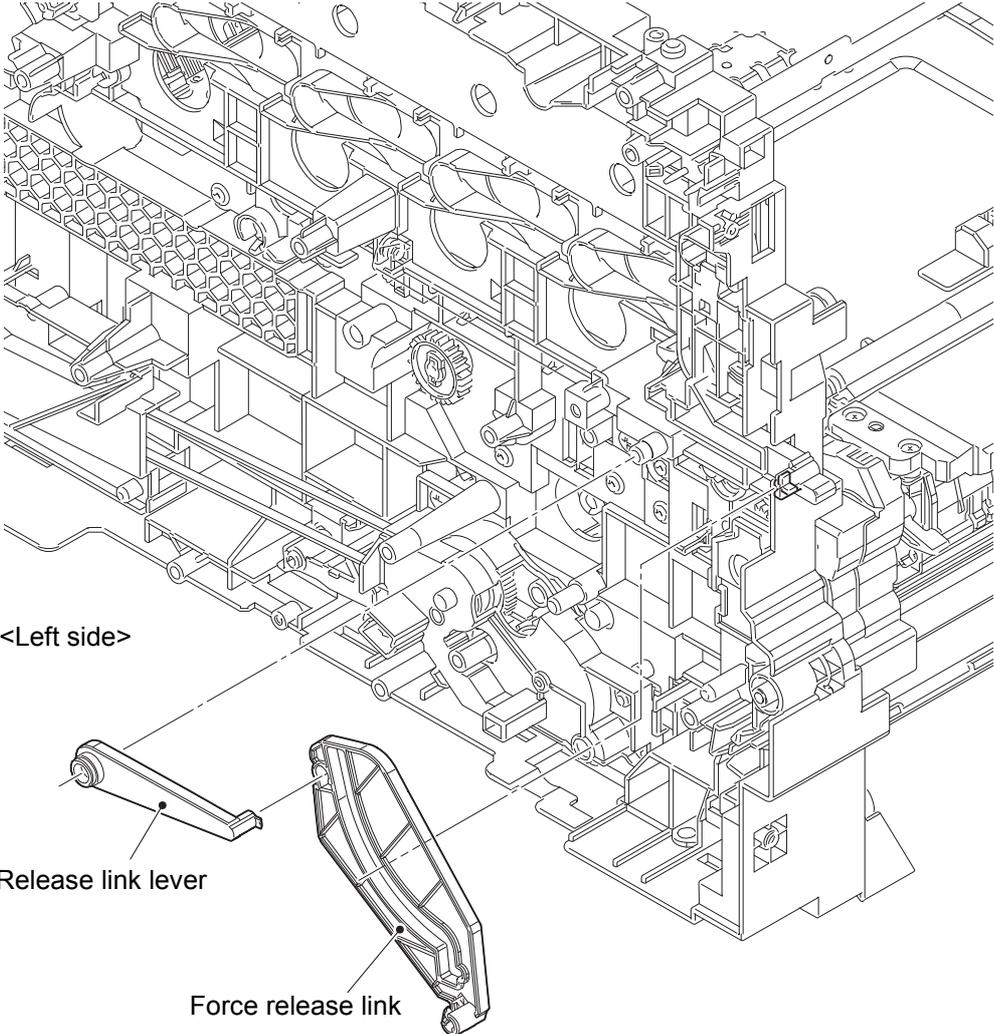


Fig. 3-133

7.59 Gear fuser M07 1 Z50L 25L

- (1) **Wiring** > Belt cleaning clutch harness
- (2) **Remove** > Belt cleaning gear cover, Gear shaft CLN CLU M08 Z19, Belt cleaning clutch



Fixtures & Fittings

- Screw cup M3x8 SR (x 2)
- Hook (x 1)



Point:

- Pull out the Belt cleaning clutch harness through the hole of the Belt cleaning gear cover.

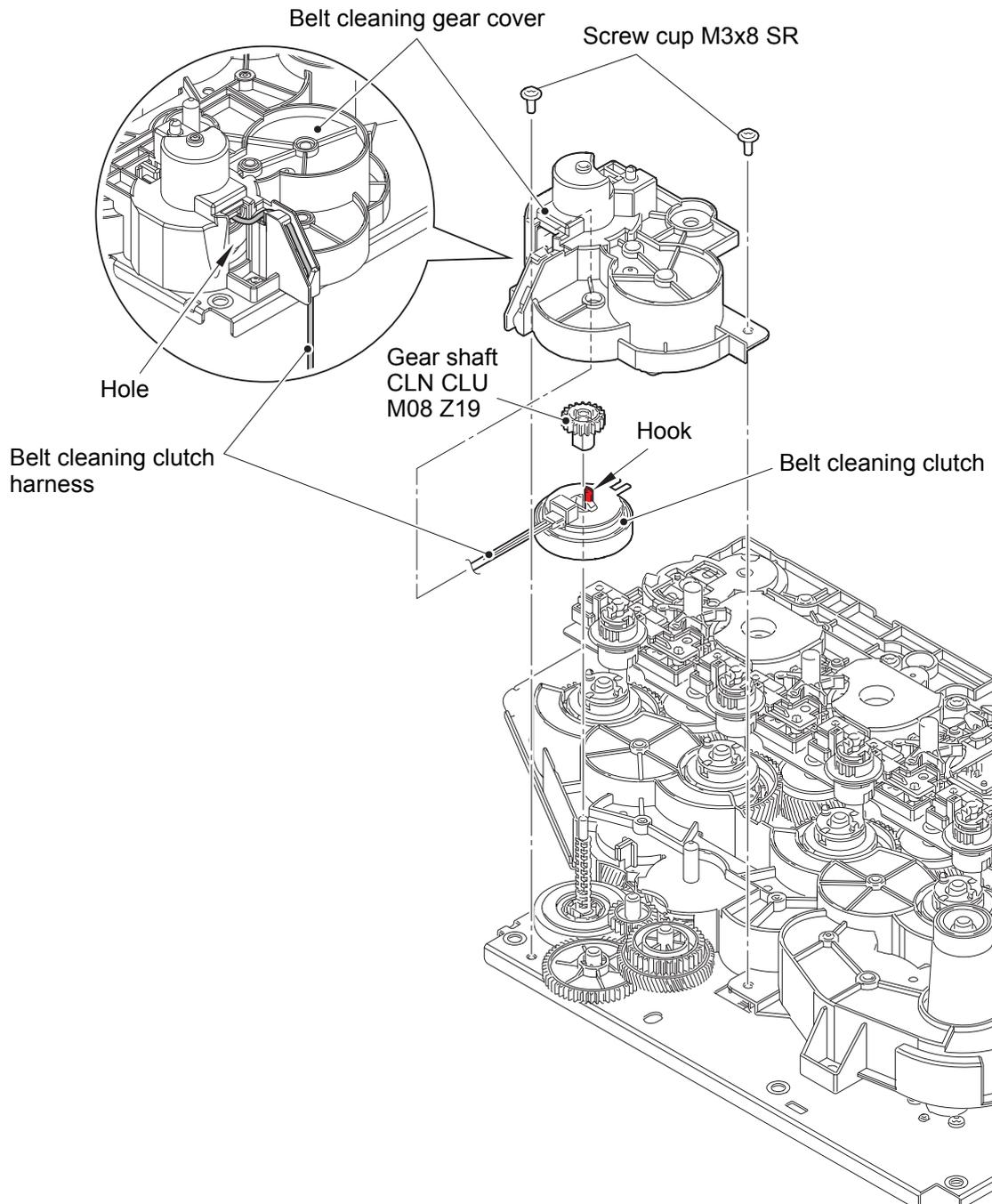


Fig. 3-134

Harness routing: Refer to "3. Belt cleaning clutch harness".

(3) **Remove** > Drum gear cover

-  **Fixtures & Fittings**
- Screw cup M3x8 SR (x 5)

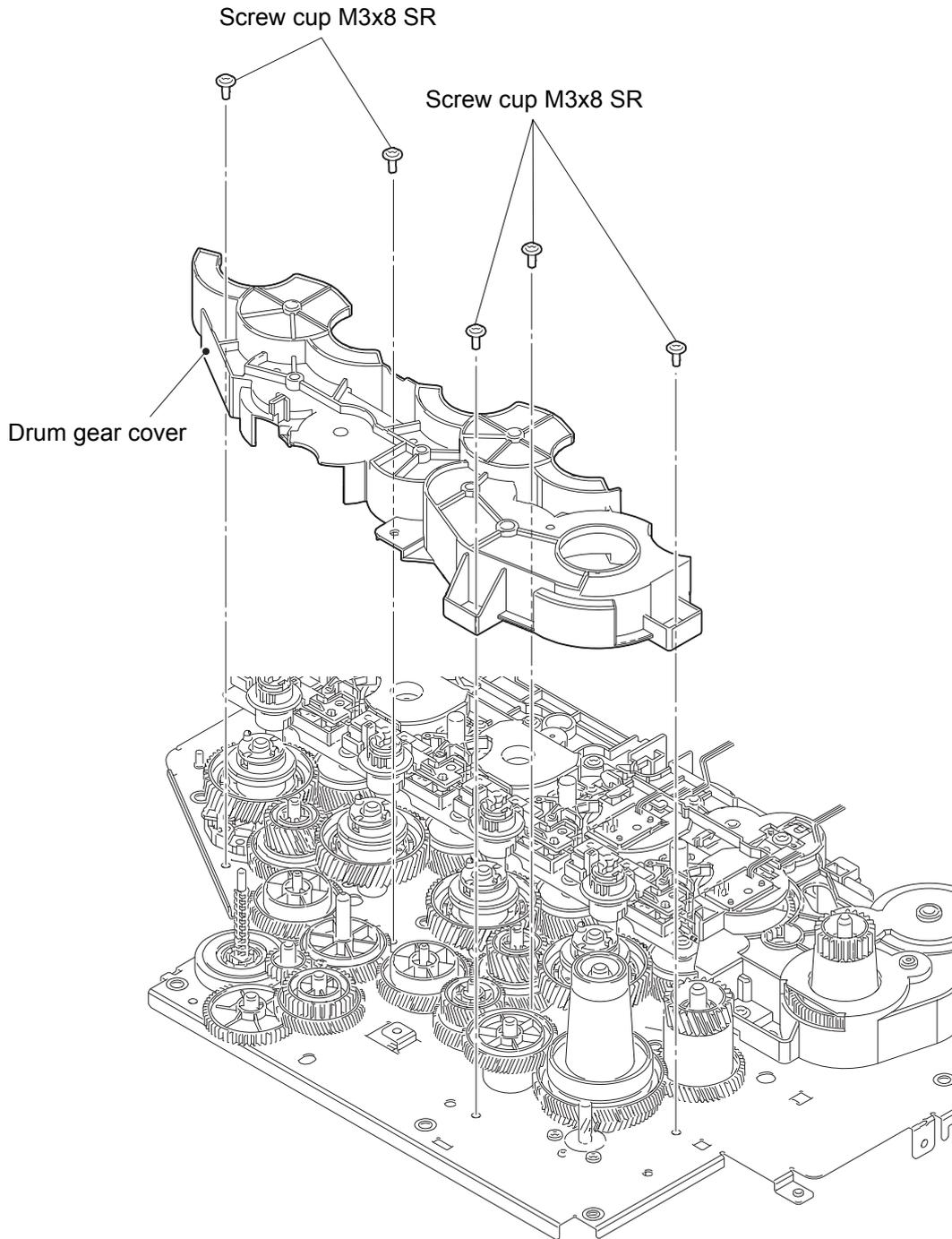


Fig. 3-135

- (4) **Remove** > BC belt drive gear 25-80, Helical gear belt M05 Z72R, Gear fuser Z103L 67R, Gear fuser M07 1 Z50L 25L

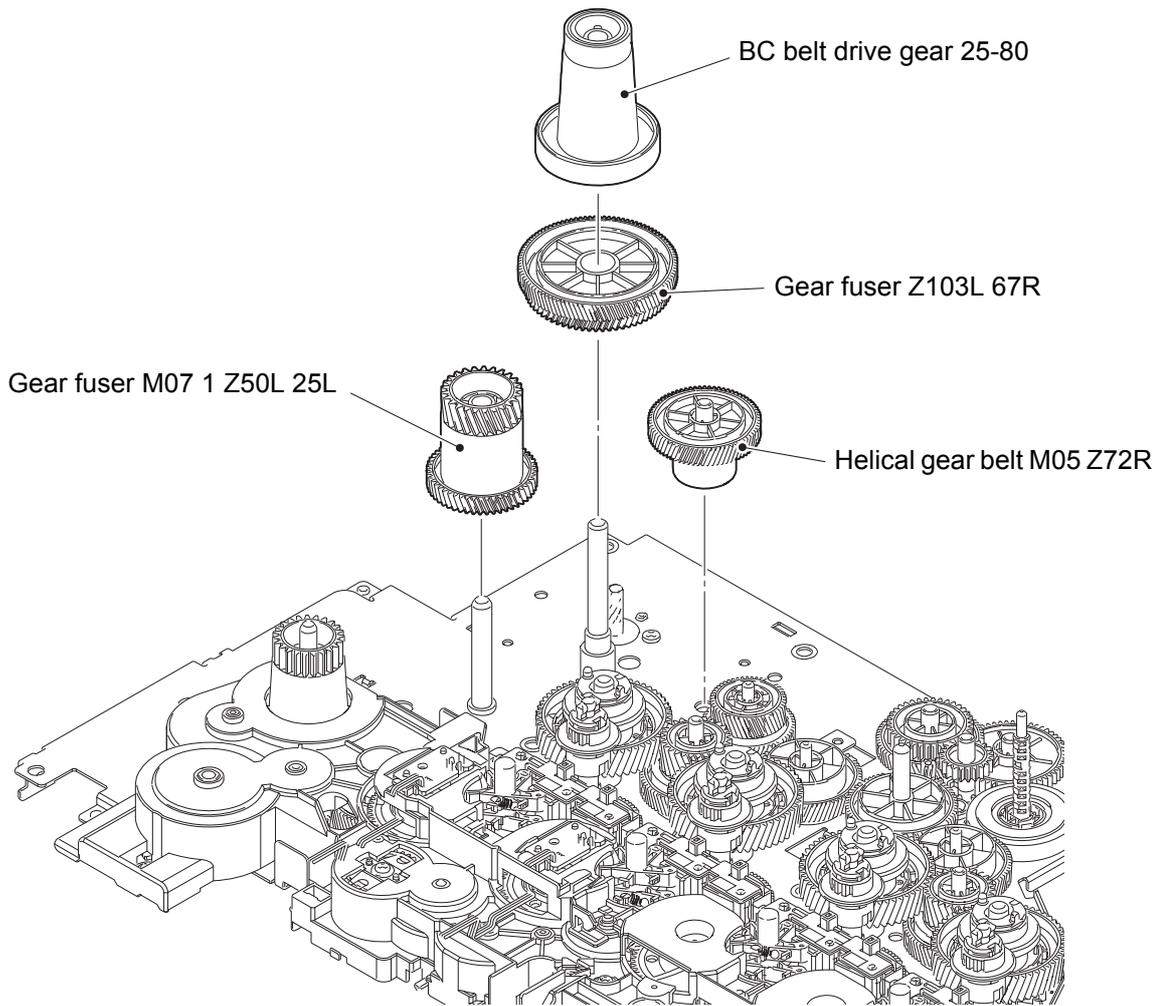


Fig. 3-136

7.60 Paper eject ASSY

(1) **Remove** > Eject middle frame ASSY of the Paper eject ASSY



Fixtures & Fittings

- Taptite bind B M4x12 (x 2)

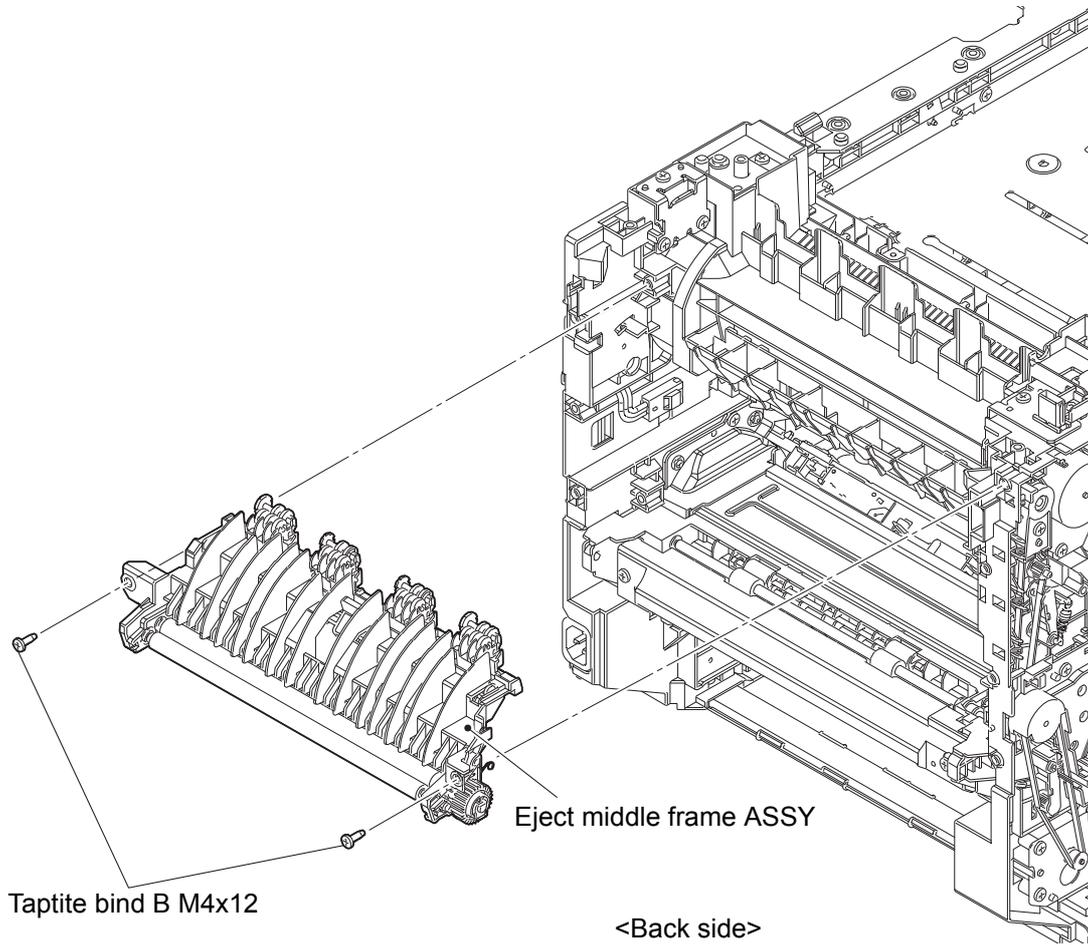


Fig. 3-137

7.61 Toner filter ASSY

(1) **Remove** > Toner filter ASSY

 **Fixtures & Fittings**
- Hook (x 2)

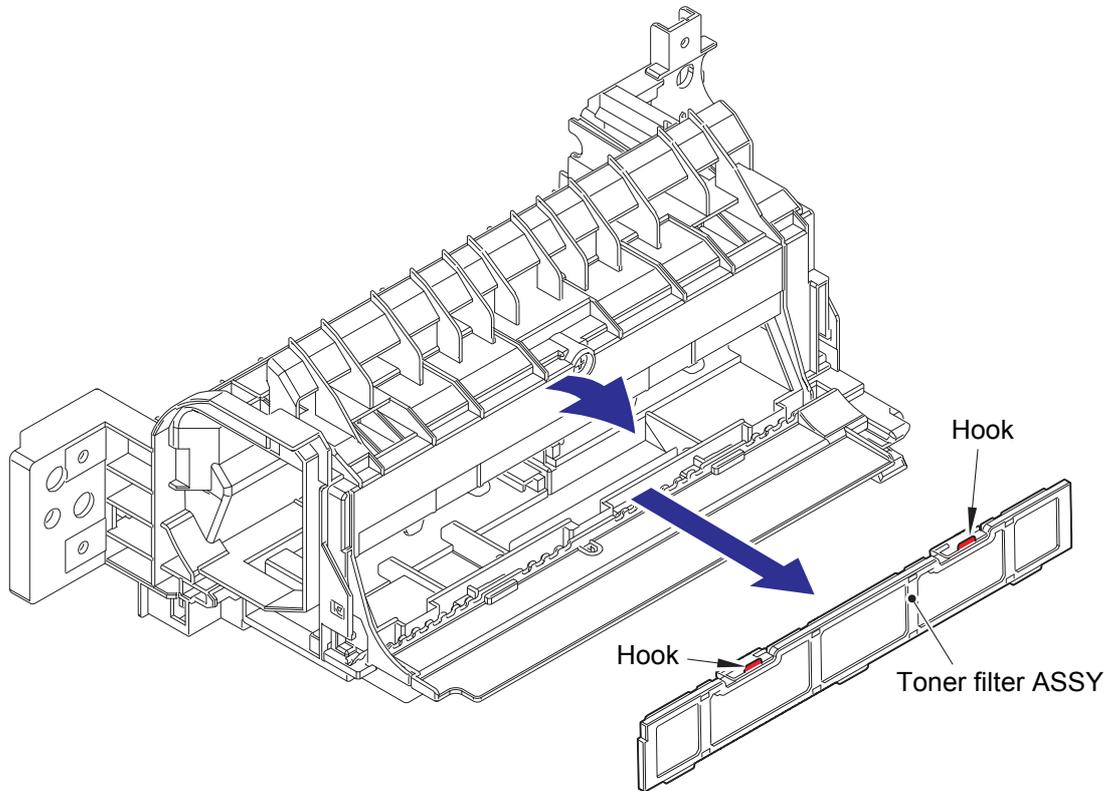


Fig. 3-139

7.62 Ozone filter ASSY

(1) **Remove** > Eject duct cover, Ozone filter insulation sheet



Fixtures & Fittings

- Taptite bind B M4x12 (x 1)
- Hook (x 3)

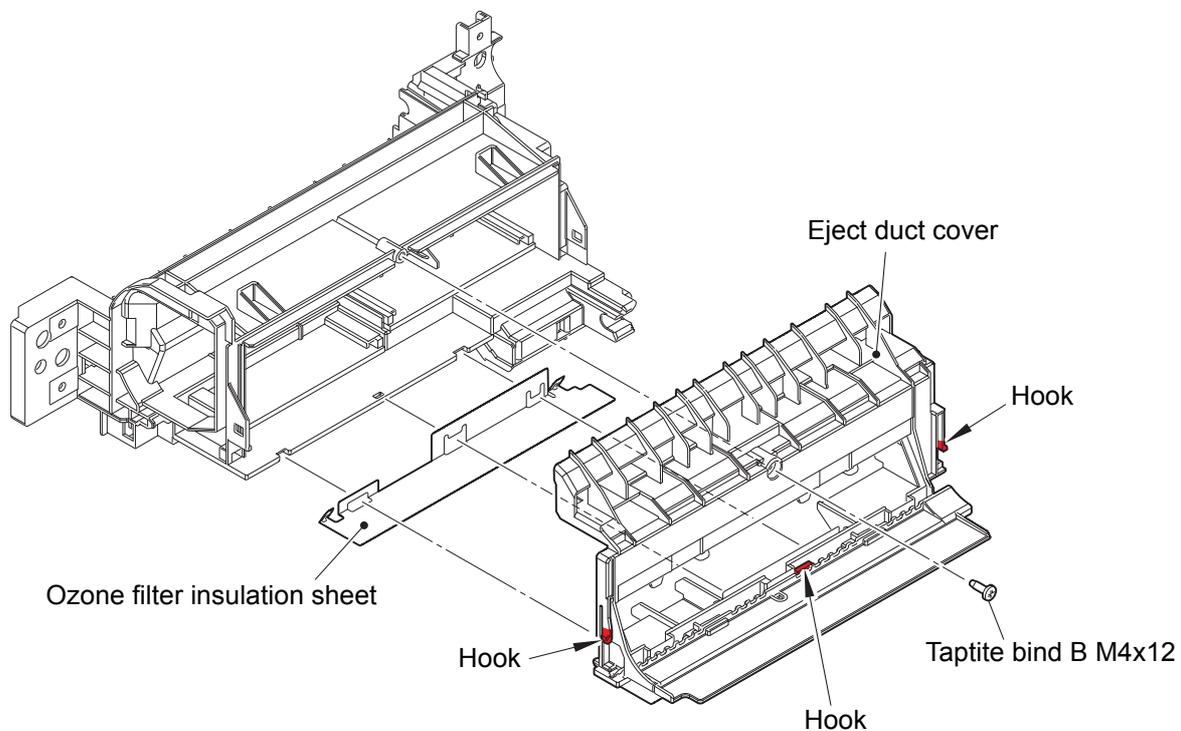


Fig. 3-140

(2) **Remove** > Ozone filter ASSY (x 2)

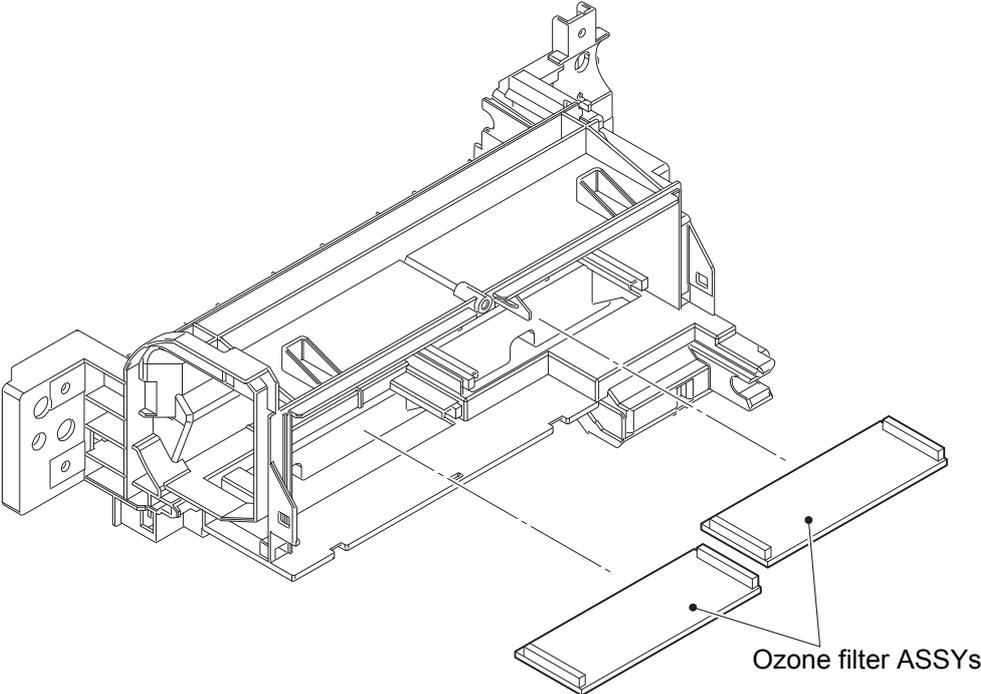


Fig. 3-141

7.63 Eject relay PCB

- (1) **Disconnect** > Reverse eject sensor harness
- (2) **Wiring** > Eject relay PCB harness
- (3) **Remove** > Eject relay PCB

Fixtures & Fittings

- Hook (x 2)

- (4) **Disconnect** > Eject relay PCB harness

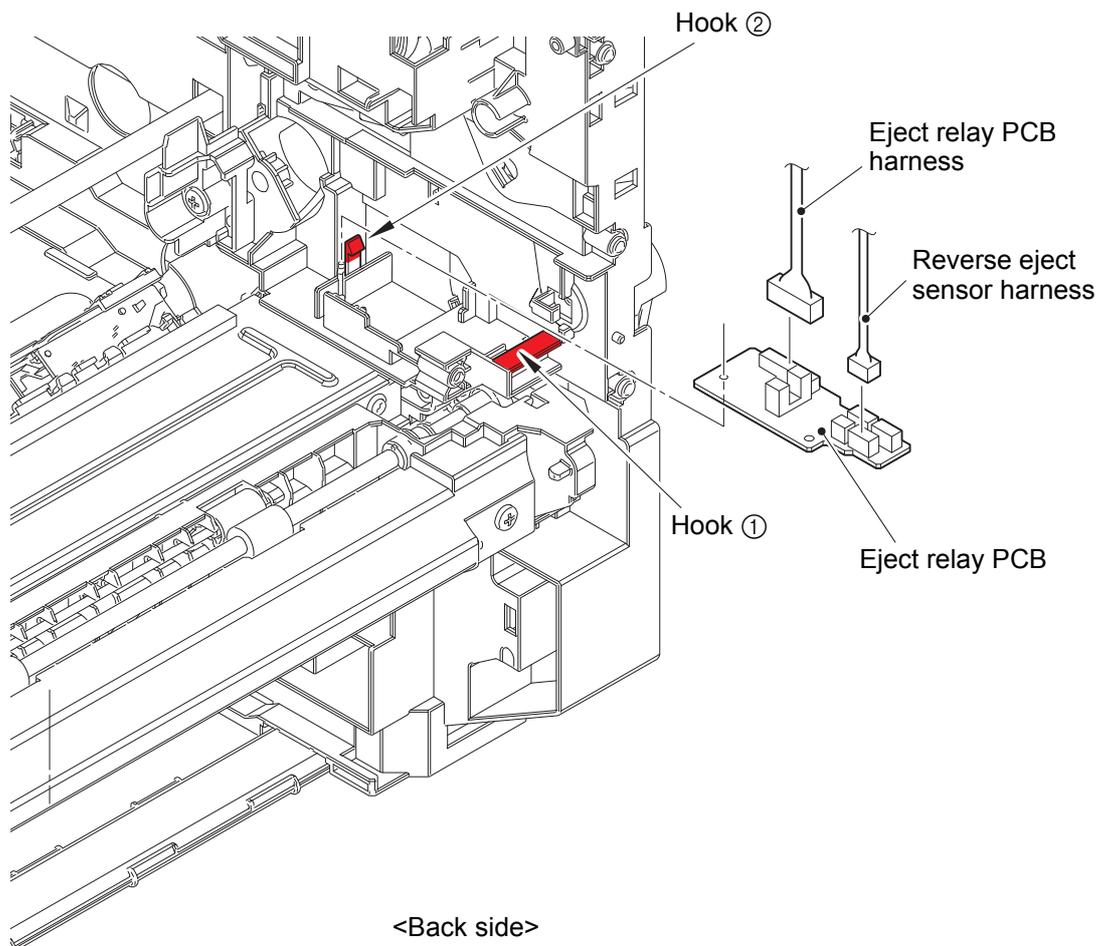


Fig. 3-142

Harness routing: Refer to "14. Eject relay PCB harness".



Assembling note:

- Insert the Eject relay PCB to the Hook ①, and then attach the Eject relay PCB with the Hook ②.

7.64 Middle DX ASSY

- (1) **Wiring** > Reverse eject sensor harness
- (2) **Remove** > Middle DX ASSY



Fixtures & Fittings

- Taptite bind B M4x12 (x 4)

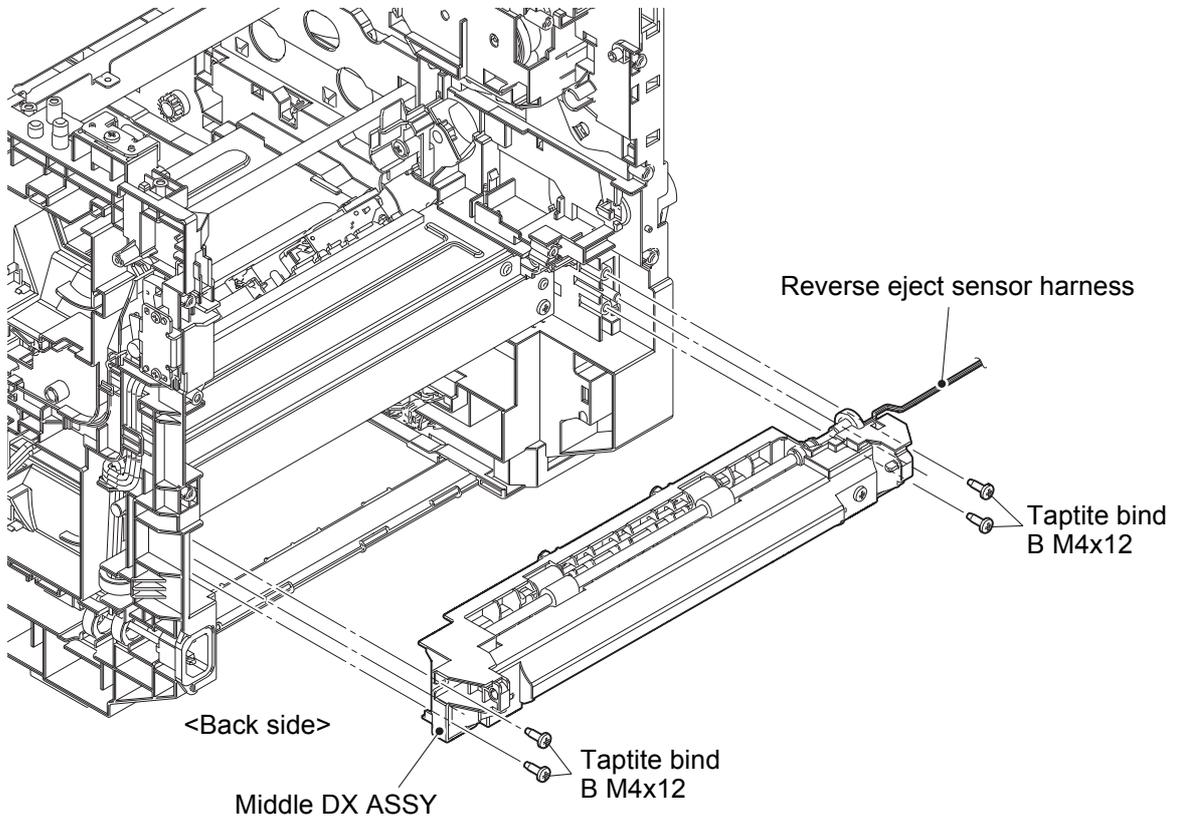


Fig. 3-143

Harness routing: Refer to "46. Reverse eject sensor harness".

7.65 LVPS PCB

(1) **Wiring** > LVPS heater harness

(2) **Remove** > Ground wire

Fixtures & Fittings

- Screw pan M4x8 (x 1)
- Washer spring 2-4 (x 1)
- Washer 5 (x 1)

(3) **Wiring** > Inlet harness ASSY

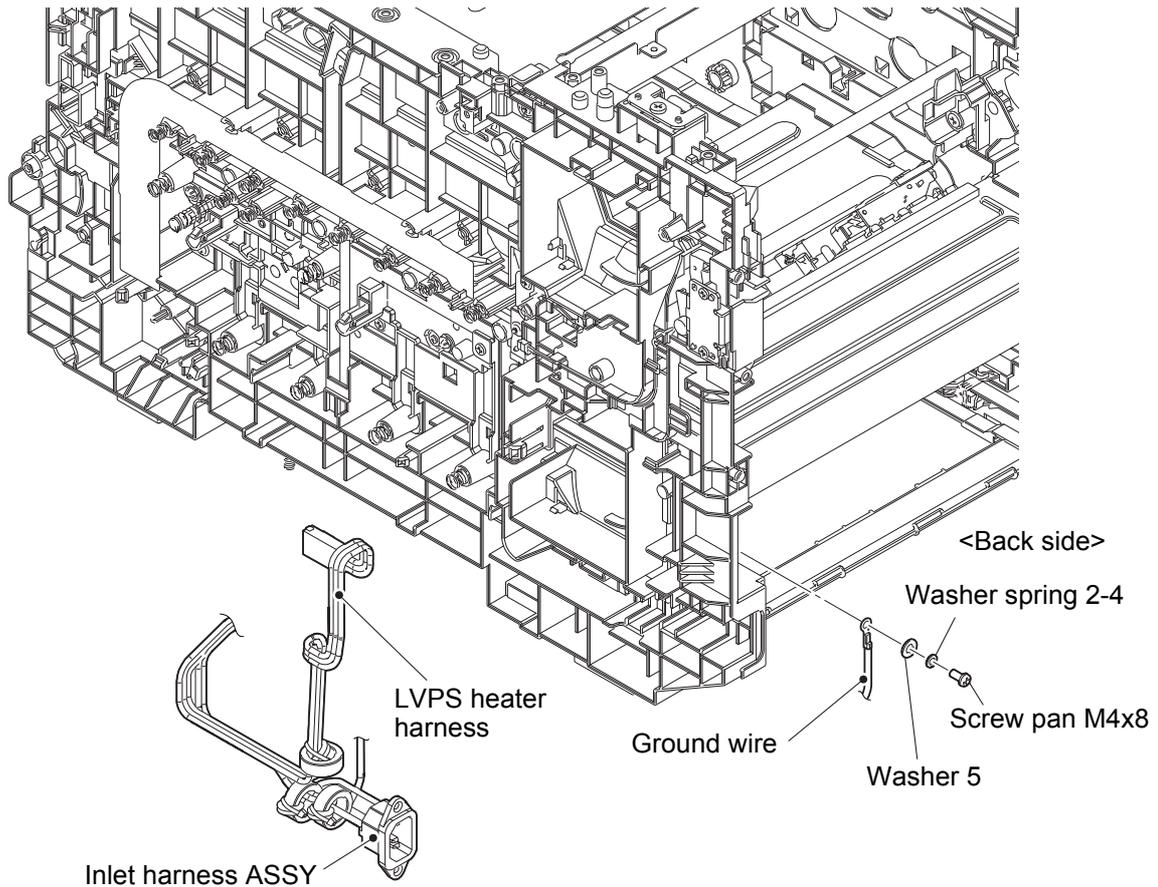


Fig. 3-144

Harness routing: Refer to "34. LVPS heater harness, Inlet harness ASSY".

(4) **Remove** > Screws

 **Fixtures & Fittings**

- Screw cup M3x8 SR (x 2)
- Taptite bind B M4x12 (x 2)

(5) **Disconnect** > LVPS harness1, LVPS harness2

 Point: <ul style="list-style-type: none">• Pull out the LVPS PCB by approximately 10 cm.

(6) **Remove** > LVPS PCB

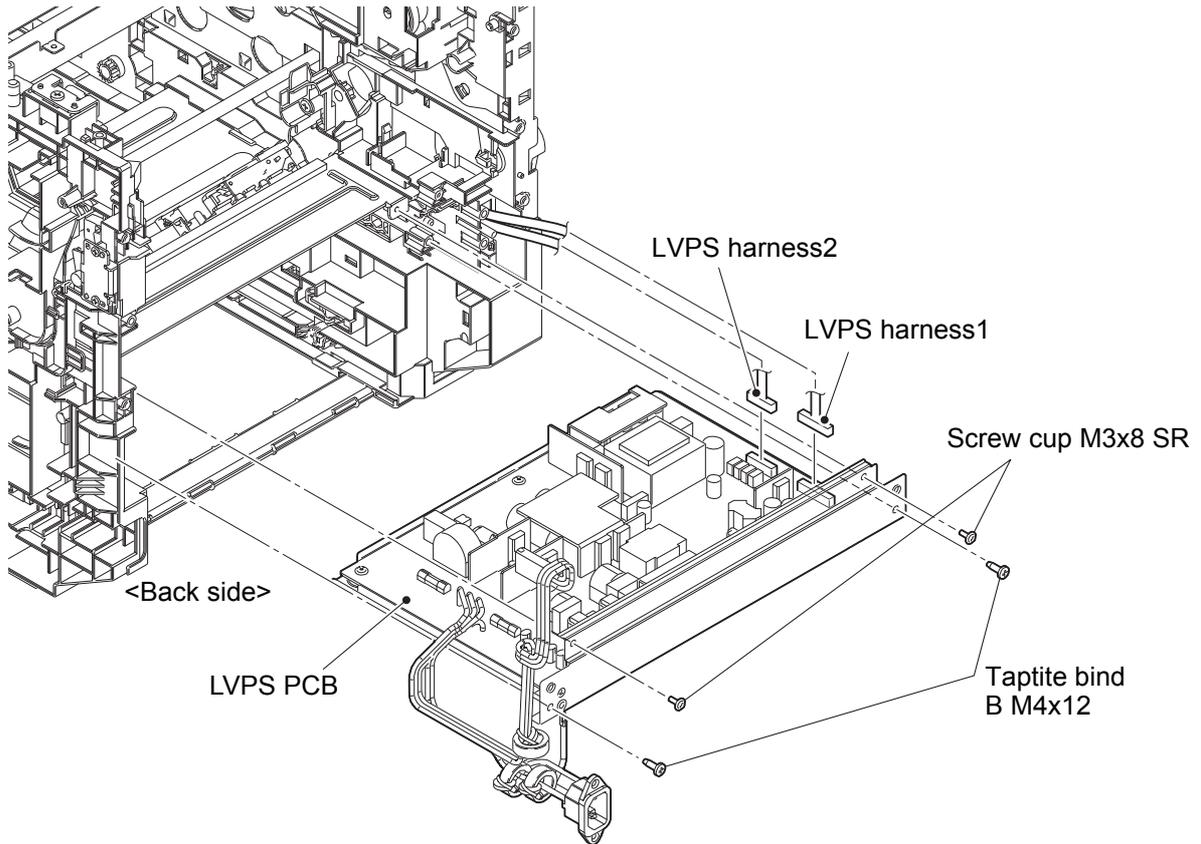


Fig. 3-145

7.66 REG mark sensor ASSY

- (1) **Wiring** > REG mark L sensor harness, REG mark R sensor harness
- (2) **Slide** > Stopper REG unit (x 2)

 **Fixtures & Fittings**
- Hook (x 2)

- (3) **Remove** > REG mark sensor ASSY

 **Point:**
• Be careful that the FG spring does not come off.

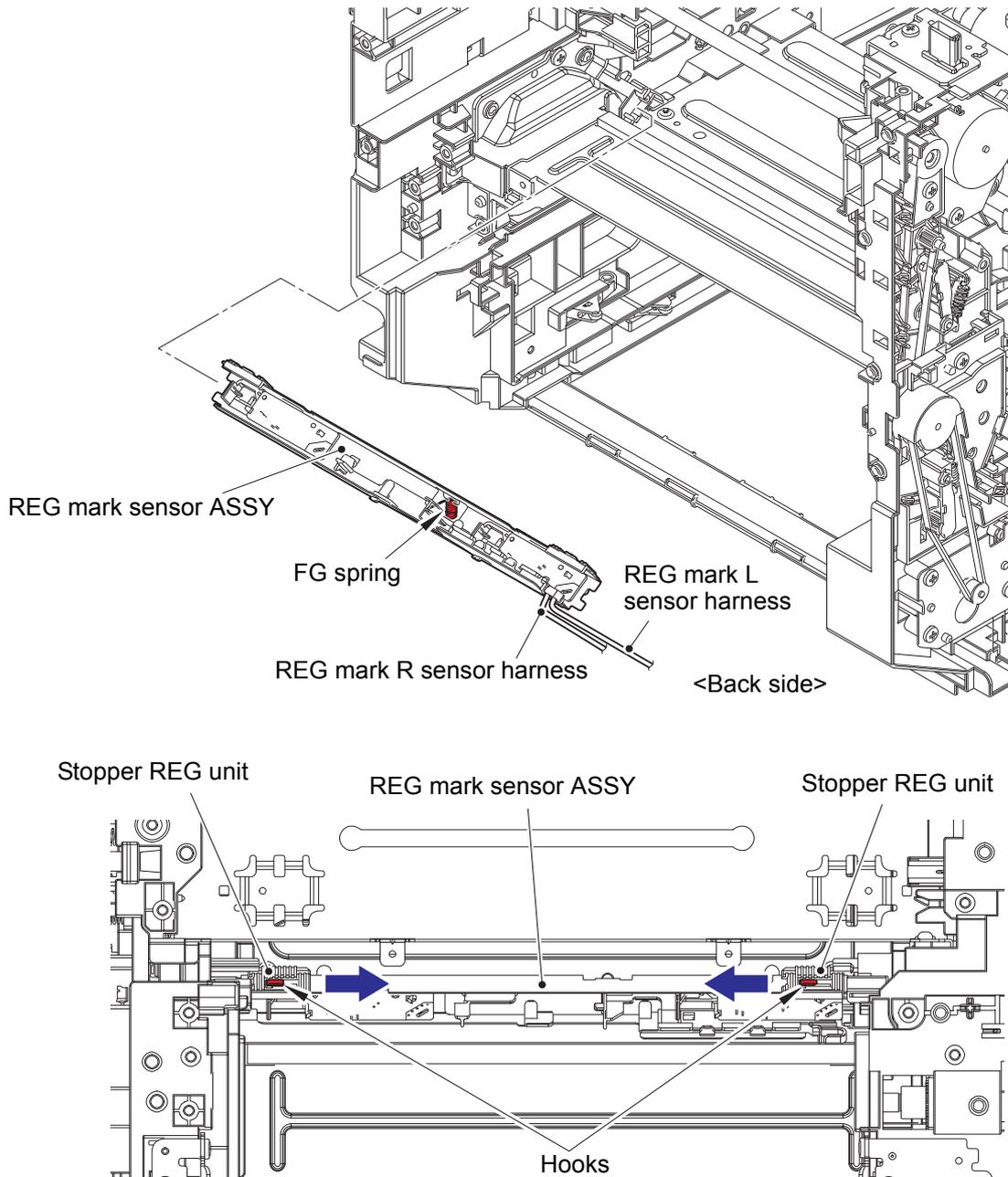


Fig. 3-146

Harness routing: Refer to "45. REG mark L sensor harness, REG mark R sensor harness".

7.67 PF unit

(1) **Remove** > T1 pick up roller holder

 **Fixtures & Fittings**
- Lift arm (x 1)



Point:

- Remove the T1 pick up roller holder in the order of the arrows.

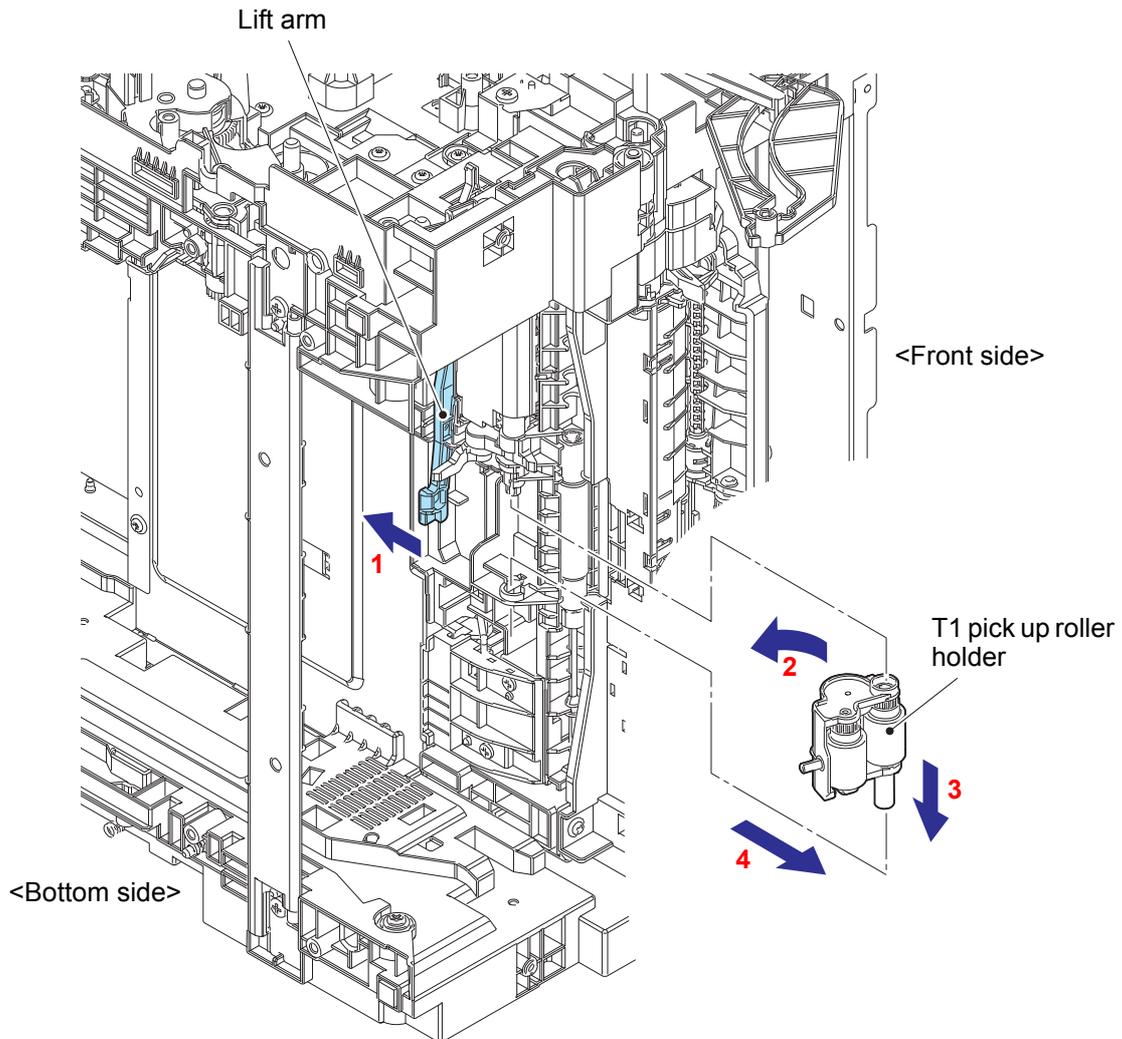


Fig. 3-147

(2) **Wiring** > MP solenoid harness, T1 PF/PE sensor harness, REG front/rear sensor harness, Belt IC harness, Waste toner box sensor harness, MP sensor harness

(3) **Release** > Lift arm

 **Fixtures & Fittings**

- Boss (x 1)

(4) **Remove** > PF unit

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 2)

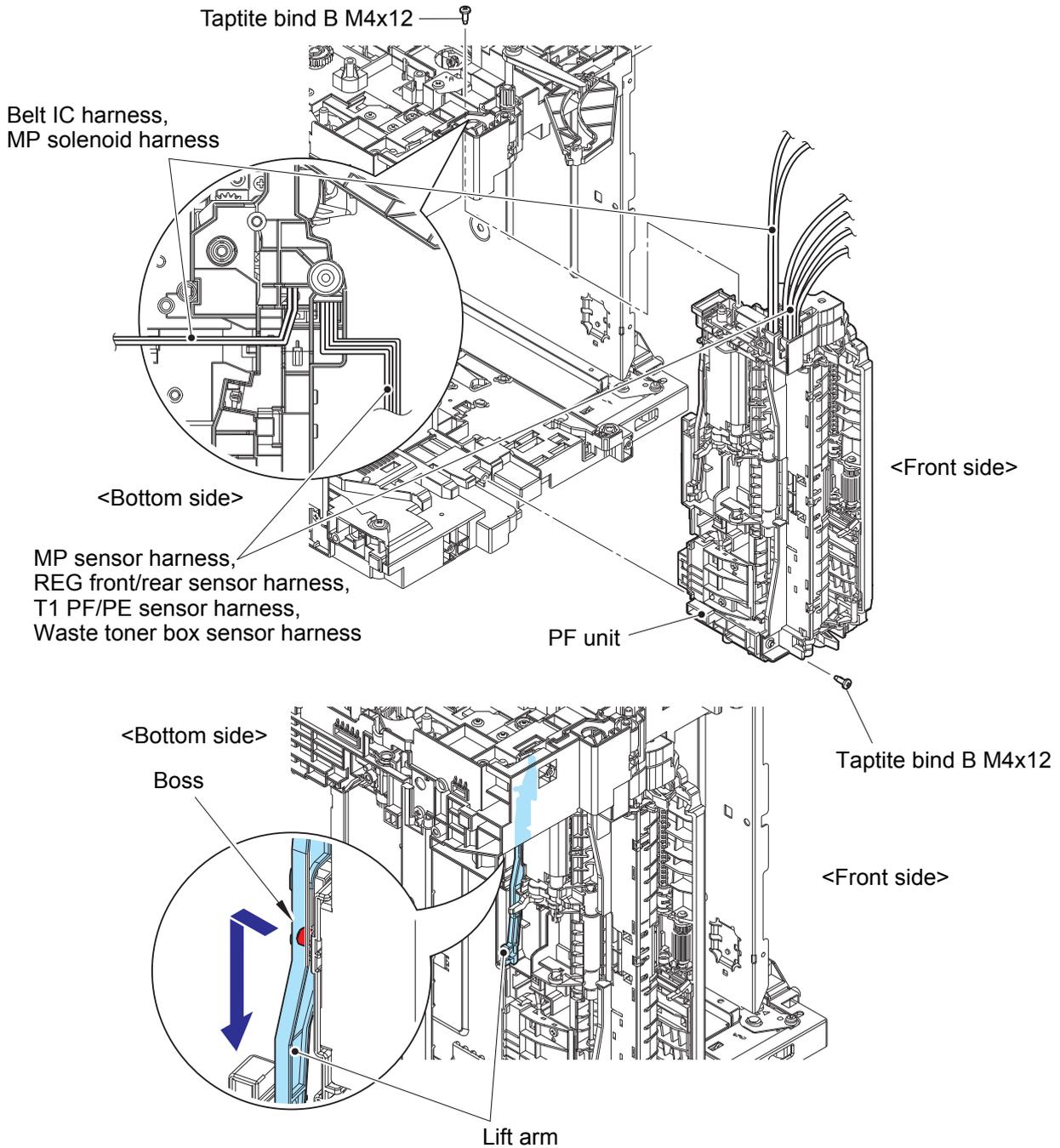


Fig. 3-148

Harness routing: Refer to "42. PF drive unit, 40. MP solenoid harness, 50. T1 PF/PE sensor harness, 44. REG front/rear sensor harness, 4. Belt IC harness, 52. Waste toner box sensor harness, 39. MP sensor harness".

7.68 T1 PF/PE sensor PCB

- (1) **Wiring** > MP solenoid harness
- (2) **Remove** > T1 solenoid lever spring
- (3) **Remove** > MP solenoid, MP solenoid lever



Fixtures & Fittings

- Taptite bind B M3x10 (x 1)

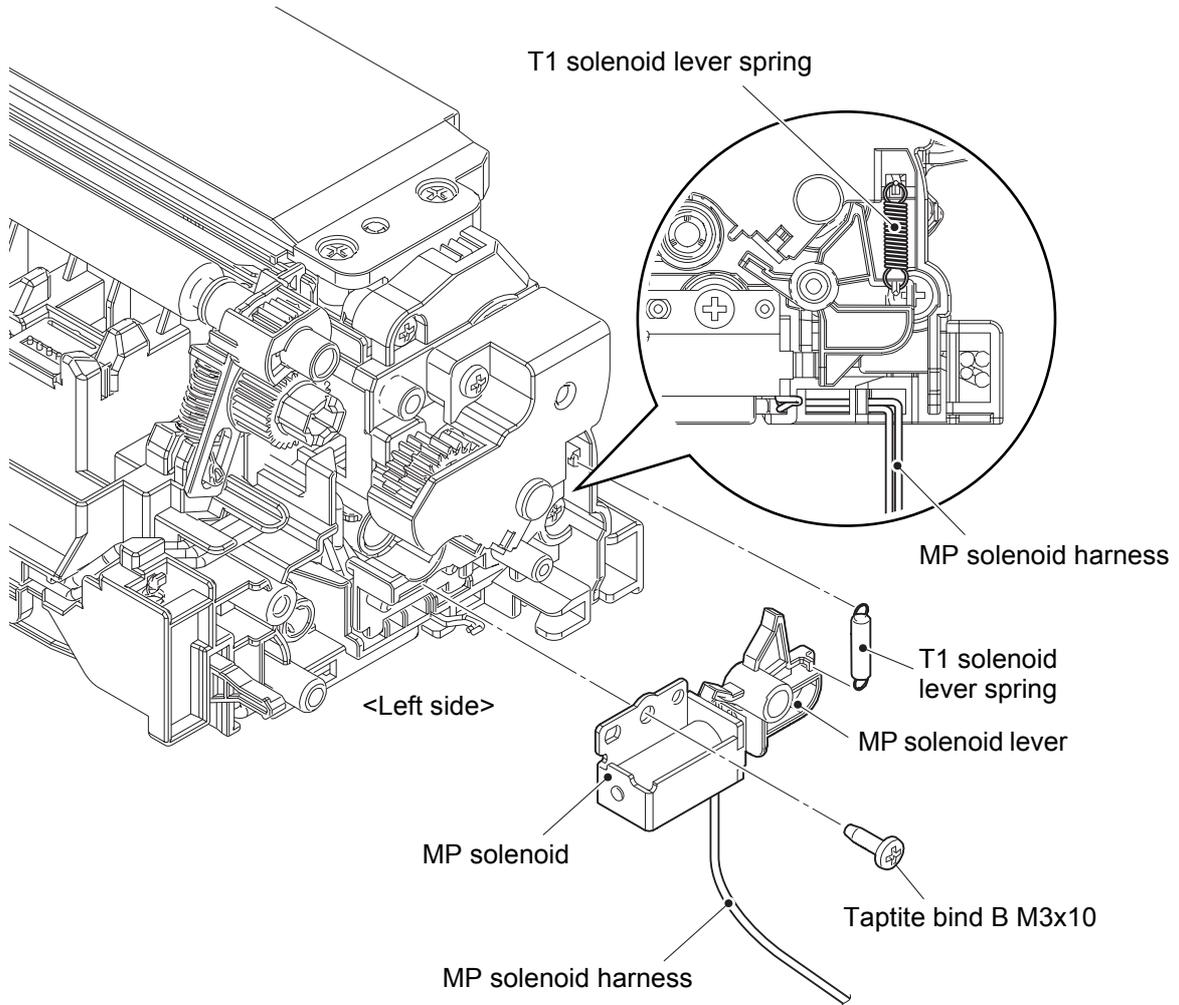


Fig. 3-149

(4) **Remove** > MP gear cover

- Fixtures & Fittings**
- Taptite bind B M3x10 (x 2)

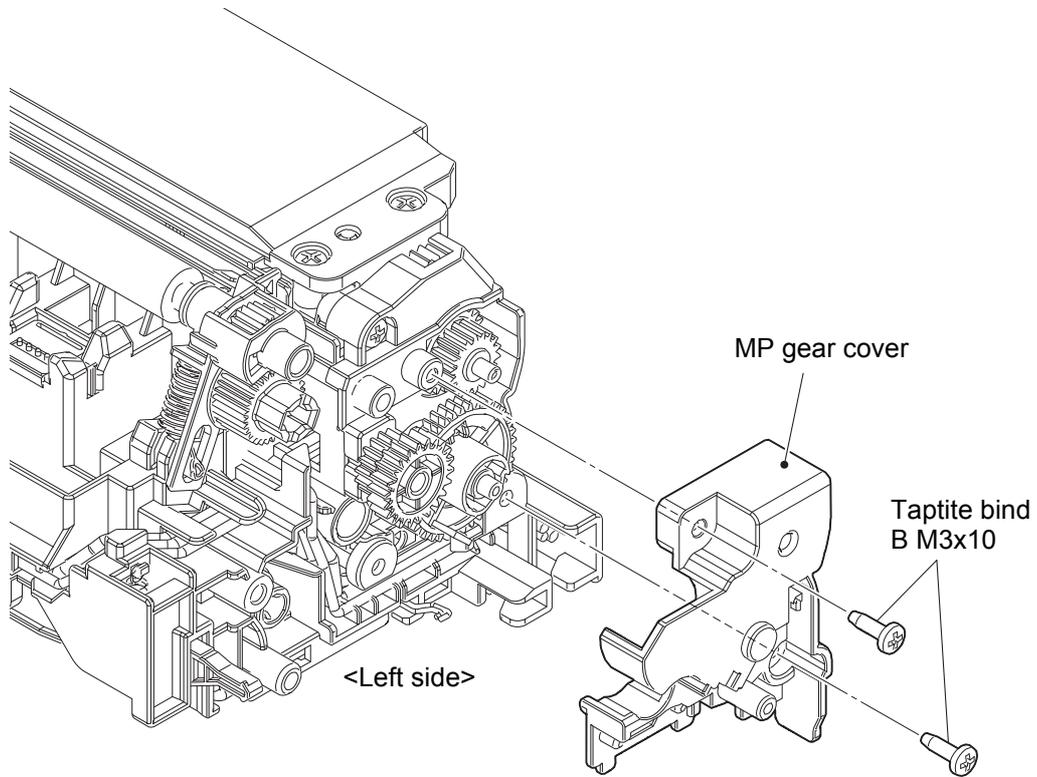


Fig. 3-150

(5) **Remove** > MP gear M08 Z22 M07 Z18, MP sector gear 1/2, MP gear M07 Z25-18

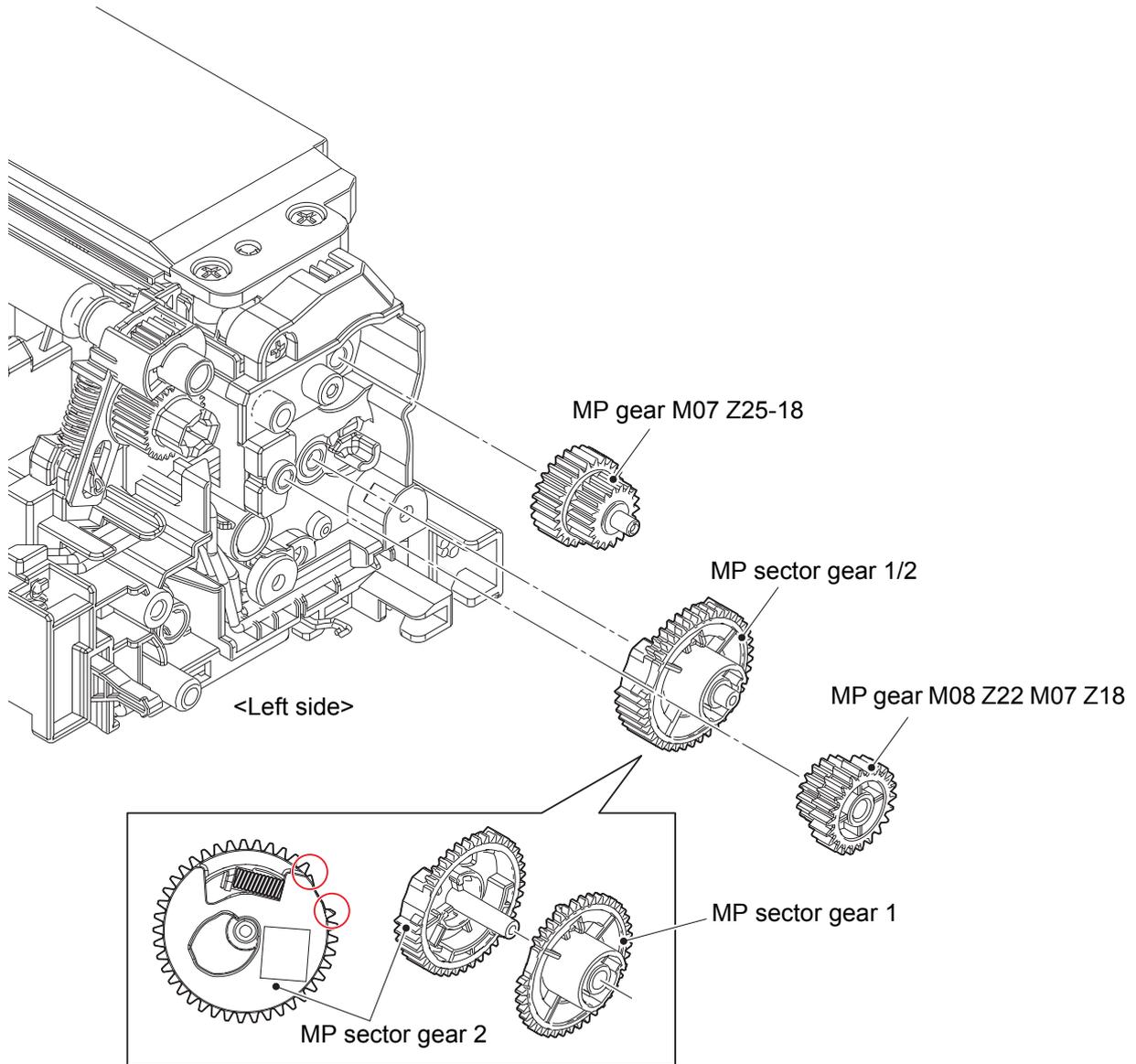


Fig. 3-151



Assembling note:

- Align the teeth of the MP sector gear 1 with the teeth of the MP sector gear 2 as shown in the figure above, and then assemble them.

(6) **Remove** > Paper edge actuator cover

-  **Fixtures & Fittings**
- Hook (x 6)

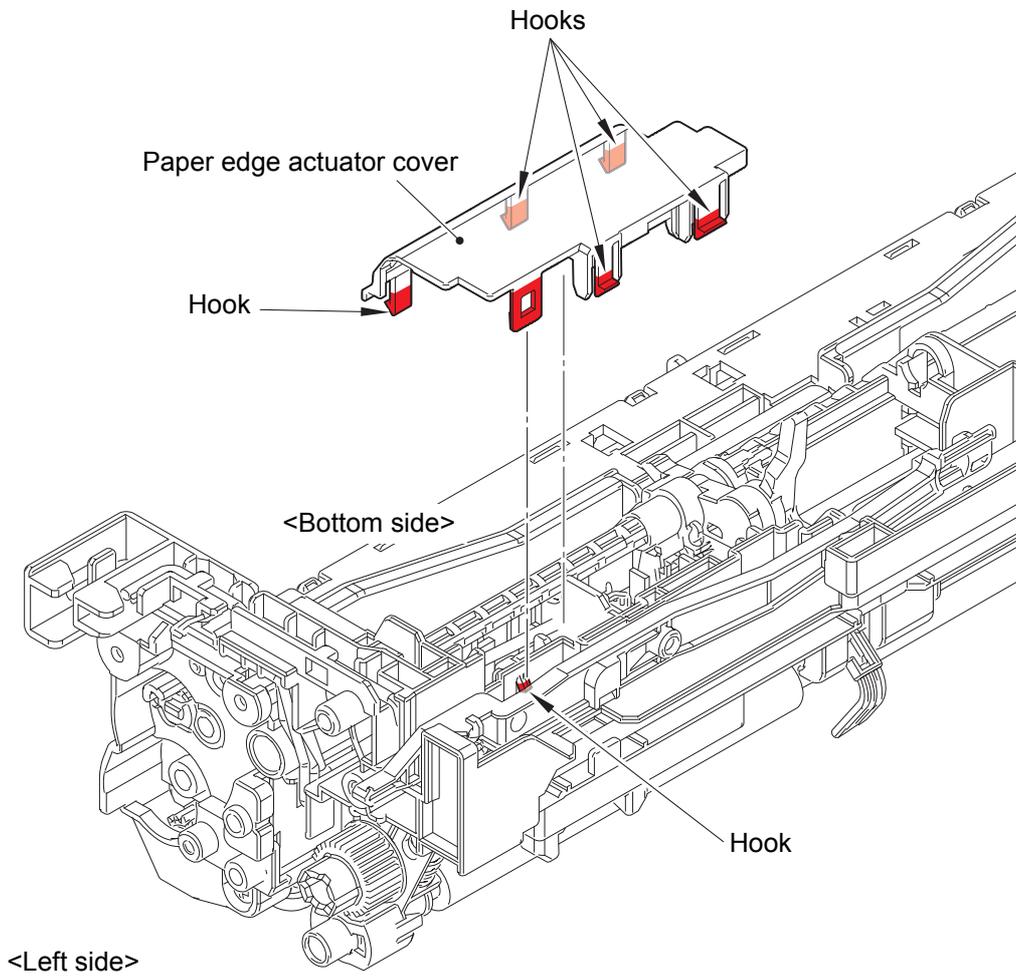


Fig. 3-152

(7) **Remove** > Separation R shaft bushing

- Fixtures & Fittings**
- Hook (x 1)

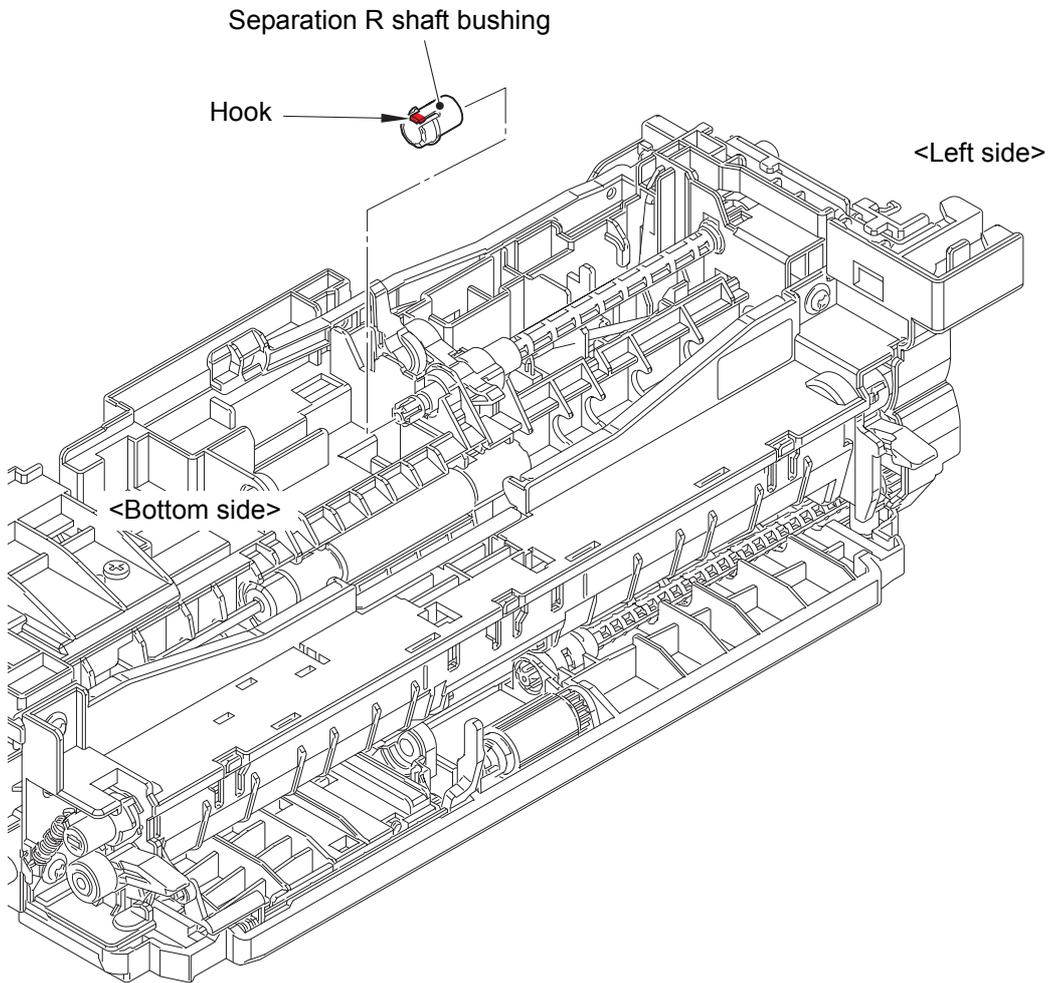


Fig. 3-153

(8) **Remove** > Paper edge actuator spring

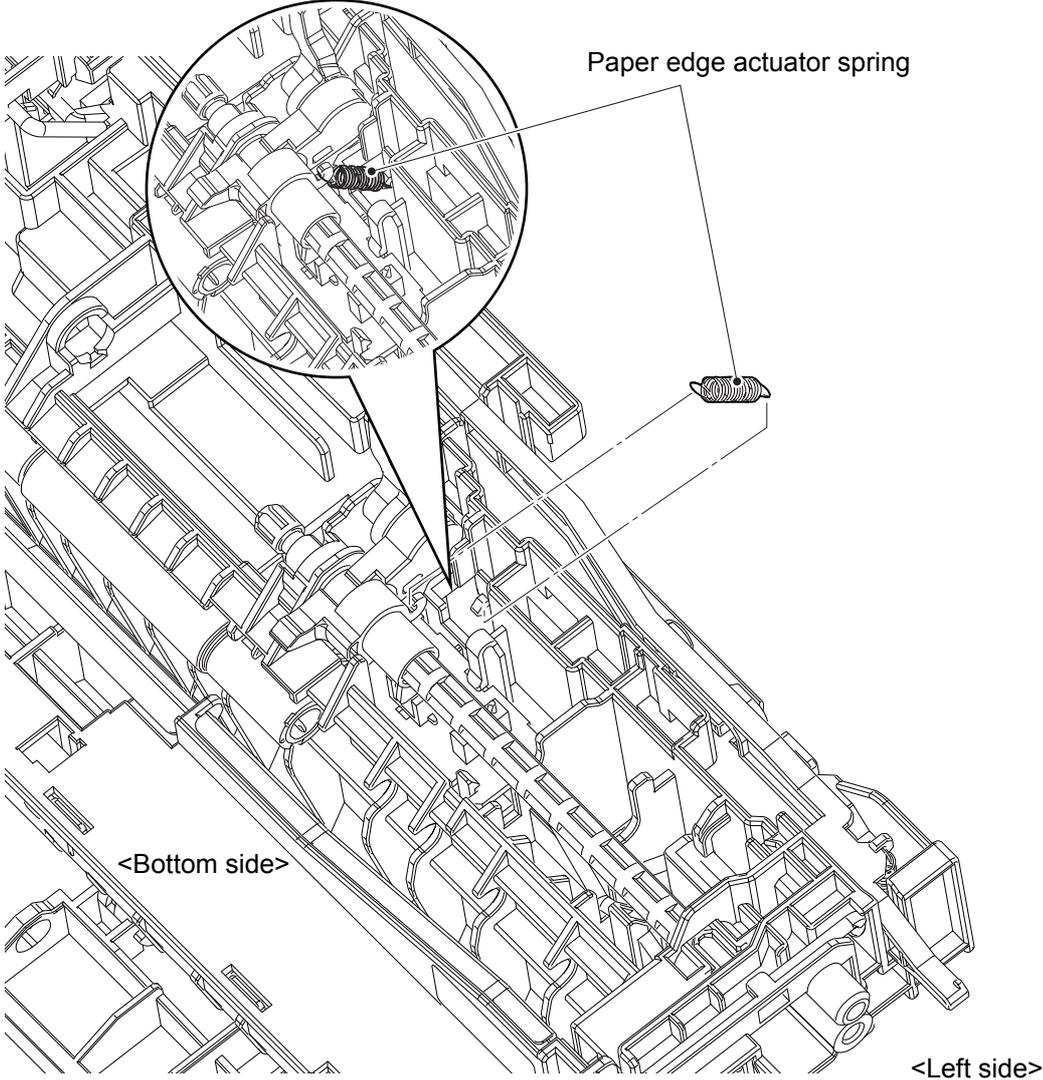


Fig. 3-154

- (9) **Remove** > Separation roller drive shaft, Drive shaft bushing, Paper edge actuator, PE actuator



Point:

- Remove them in the order of the arrows.

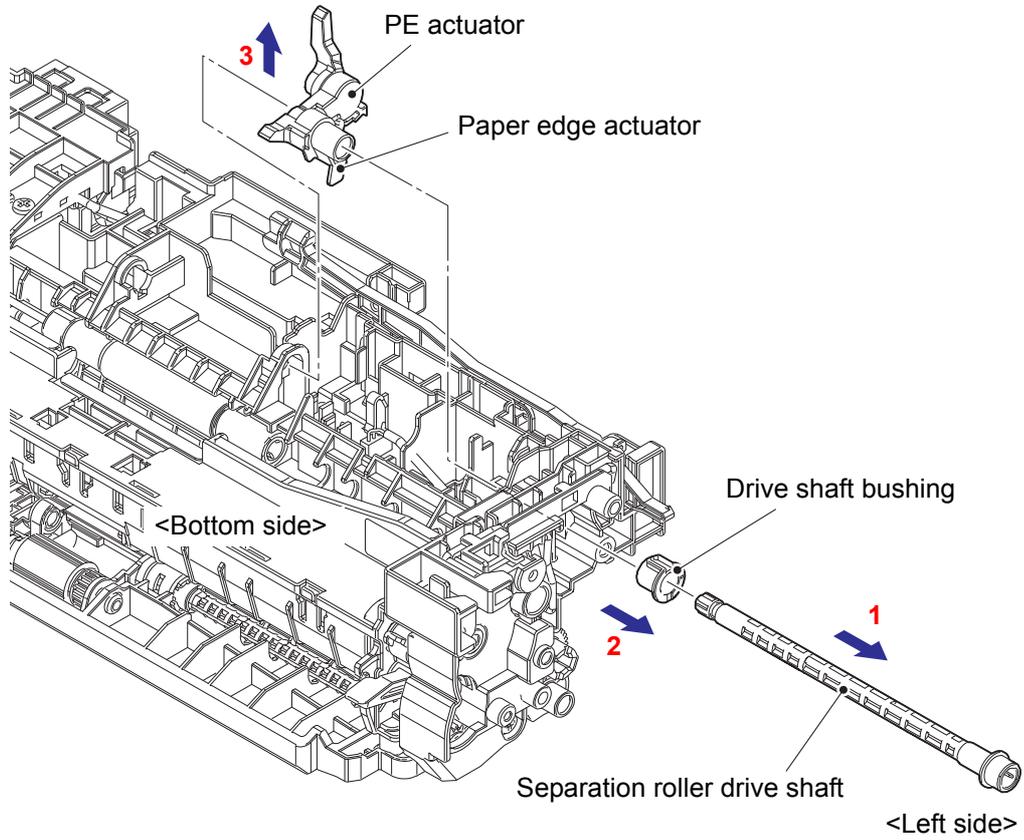


Fig. 3-155

(10) **Wiring** > T1 PF/PE sensor harness

(11) **Remove** > T1 PF/PE sensor PCB

 **Fixtures & Fittings**

- Hook (x 2)

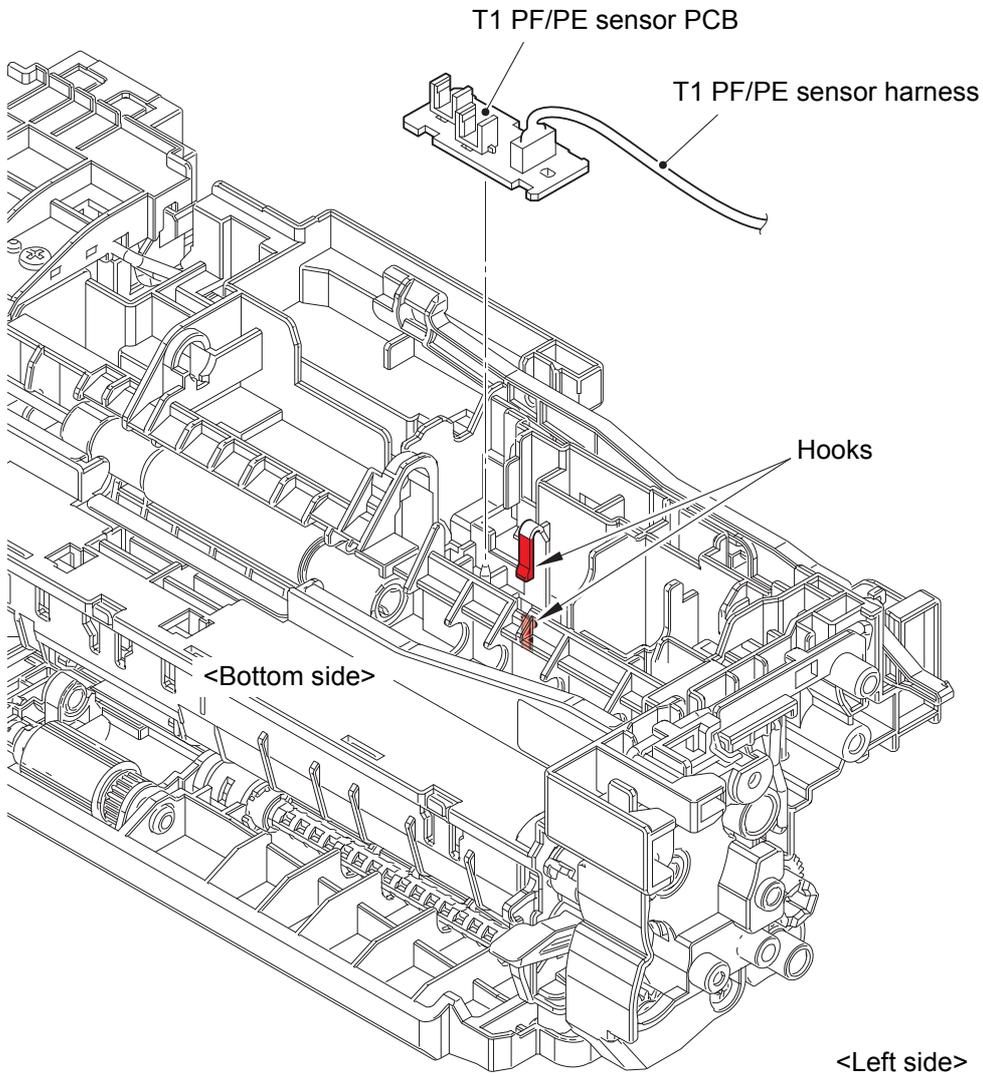


Fig. 3-156

Harness routing: Refer to "50. T1 PF/PE sensor harness".

7.69 REG front/rear sensor holder ASSY

- (1) **Wiring** > REG front/rear sensor harness
- (2) **Remove** > REG front/rear sensor holder ASSY



Fixtures & Fittings

- Taptite bind B M3x10 (x 2)

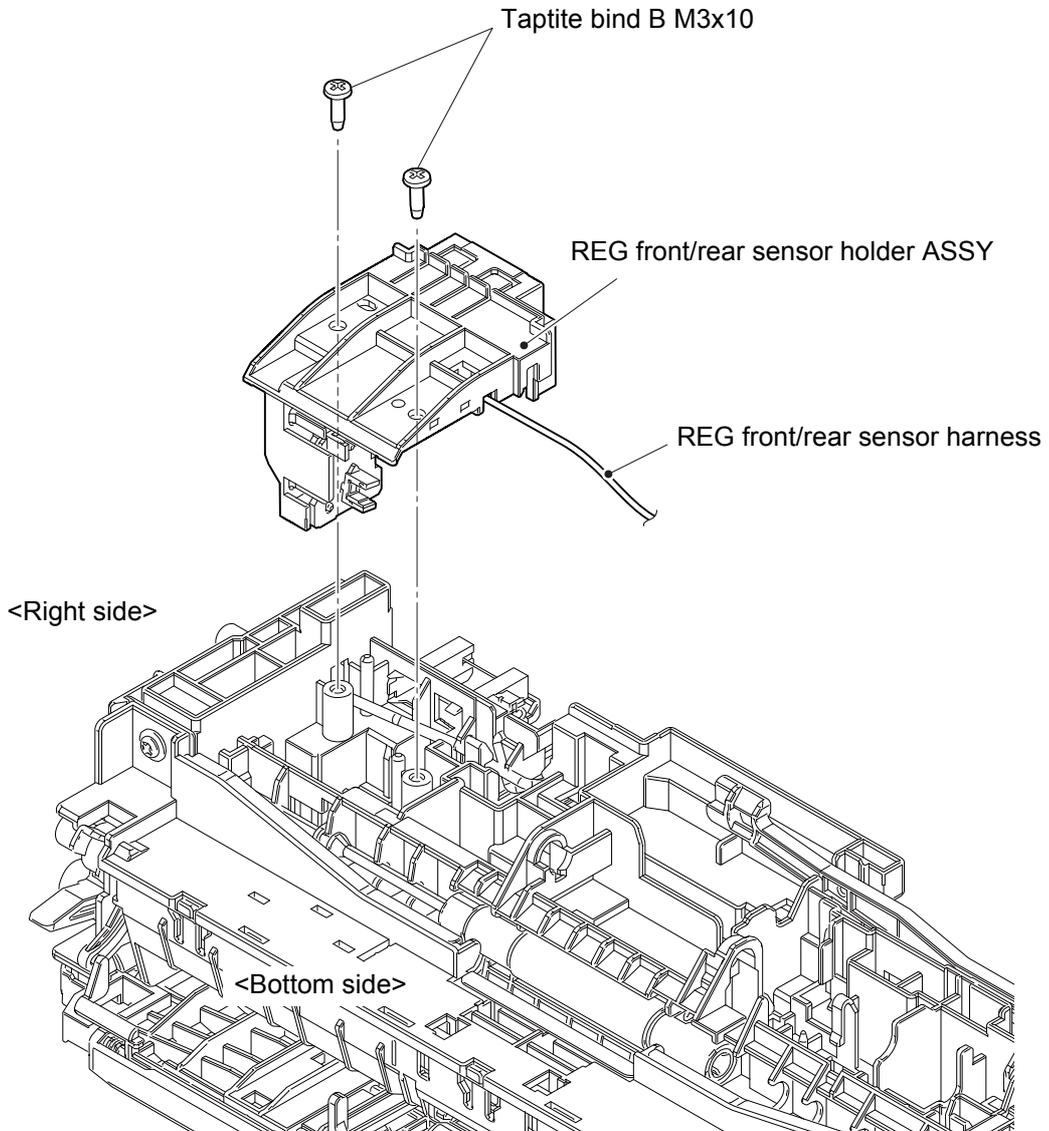


Fig. 3-157

Harness routing: Refer to "44. REG front/rear sensor harness".

7.70 Joint pin 2x8

- (1) **Wiring** > Belt IC harness, Waste toner box sensor harness, MP sensor harness
- (2) **Remove** > MP gear frame



Fixtures & Fittings

- Taptite bind B M3x10 (x 1)

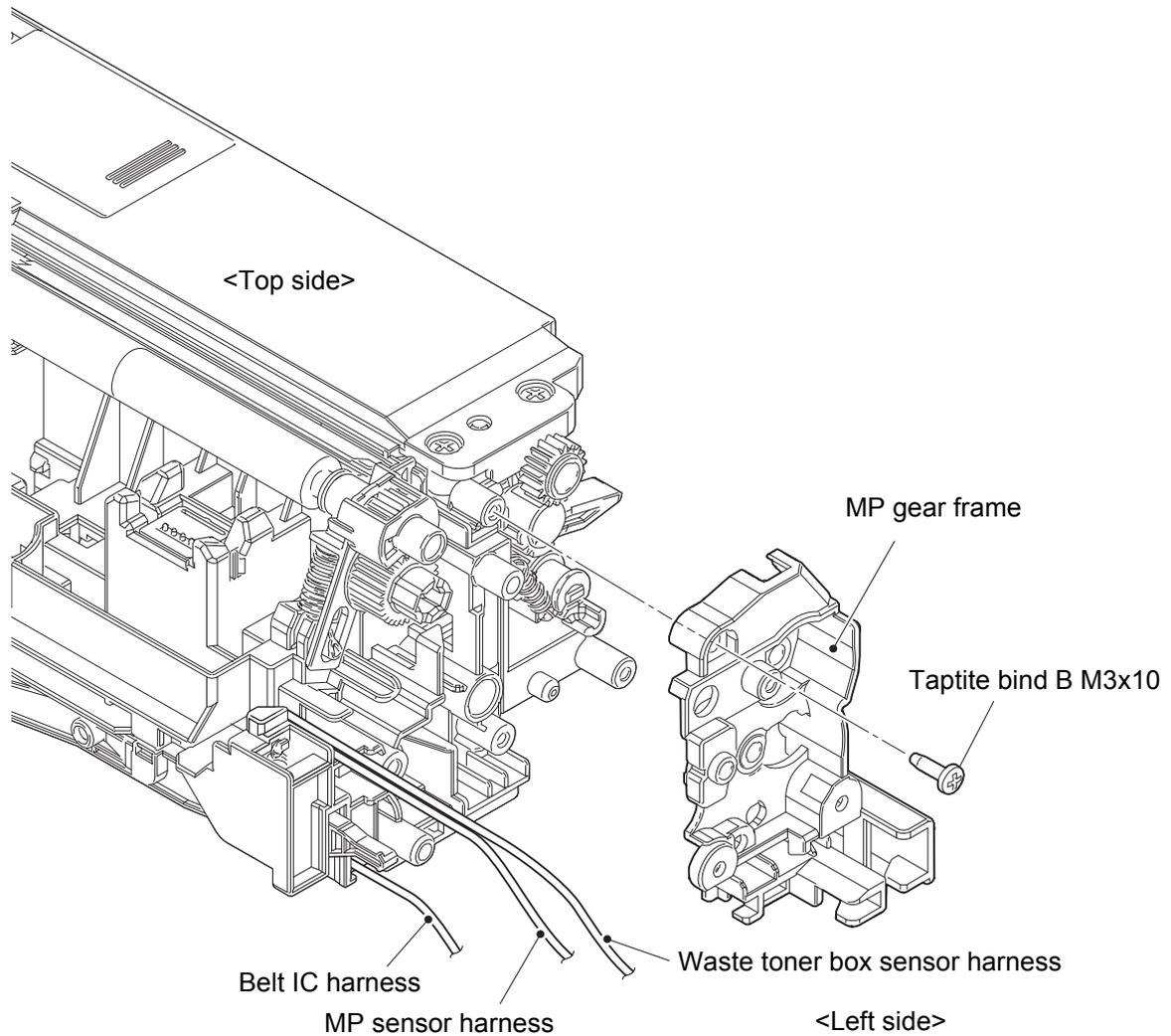


Fig. 3-158

Harness routing: Refer to "4. Belt IC harness, 52. Waste toner box sensor harness, 39. MP sensor harness".

- (3) **Wiring** > MP sensor harness
- (4) **Remove** > MP plate up spring (x 2)

Point:

- Be careful that each gear comes off.

- (5) **Remove** > PF ASSY

- Fixtures & Fittings**
- Taptite cup B M3x10 (x 4)

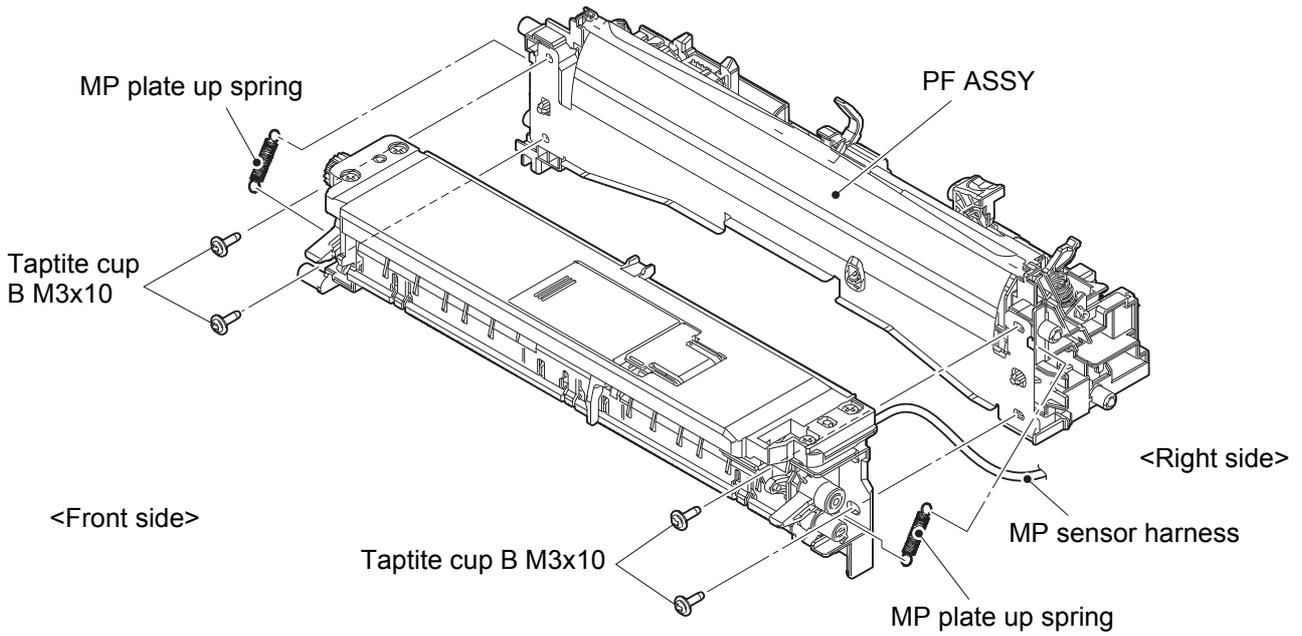


Fig. 3-159

Harness routing: Refer to "39. MP sensor harness".

(6) **Remove** > PF chute

-  **Fixtures & Fittings**
- Hook (x 1)

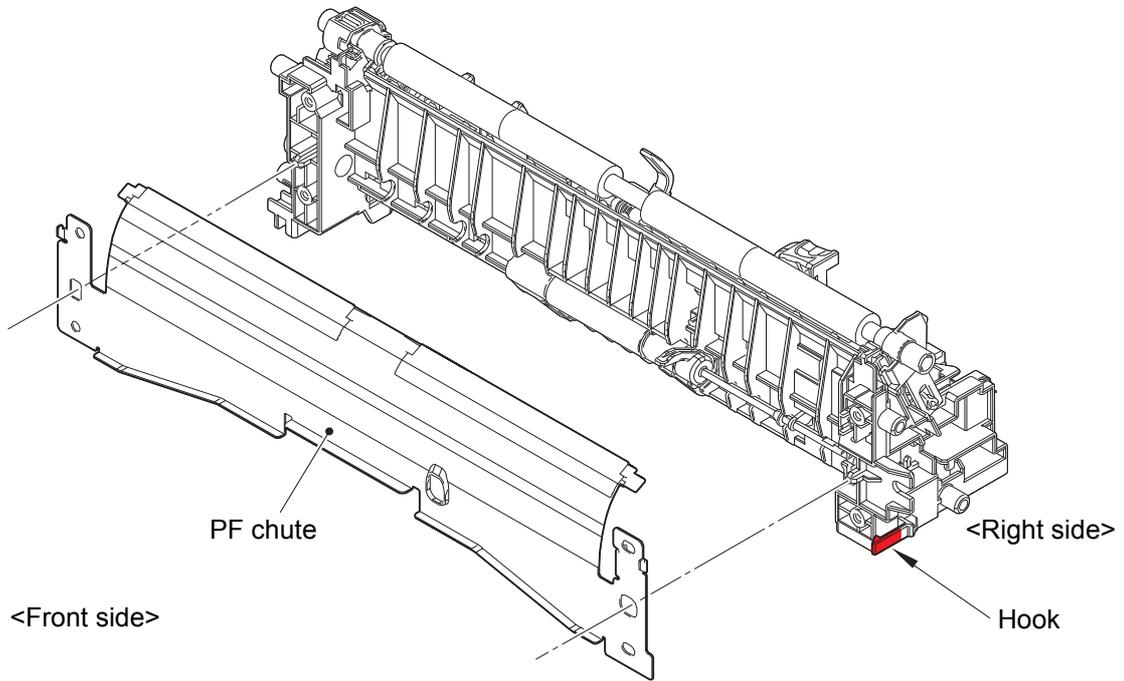


Fig. 3-160

(7) **Remove** > PF REG roller

-  **Fixtures & Fittings**
- Hook (x 2)

 **Point:**
• Do not pinch the REG rear actuator with the PF REG roller.

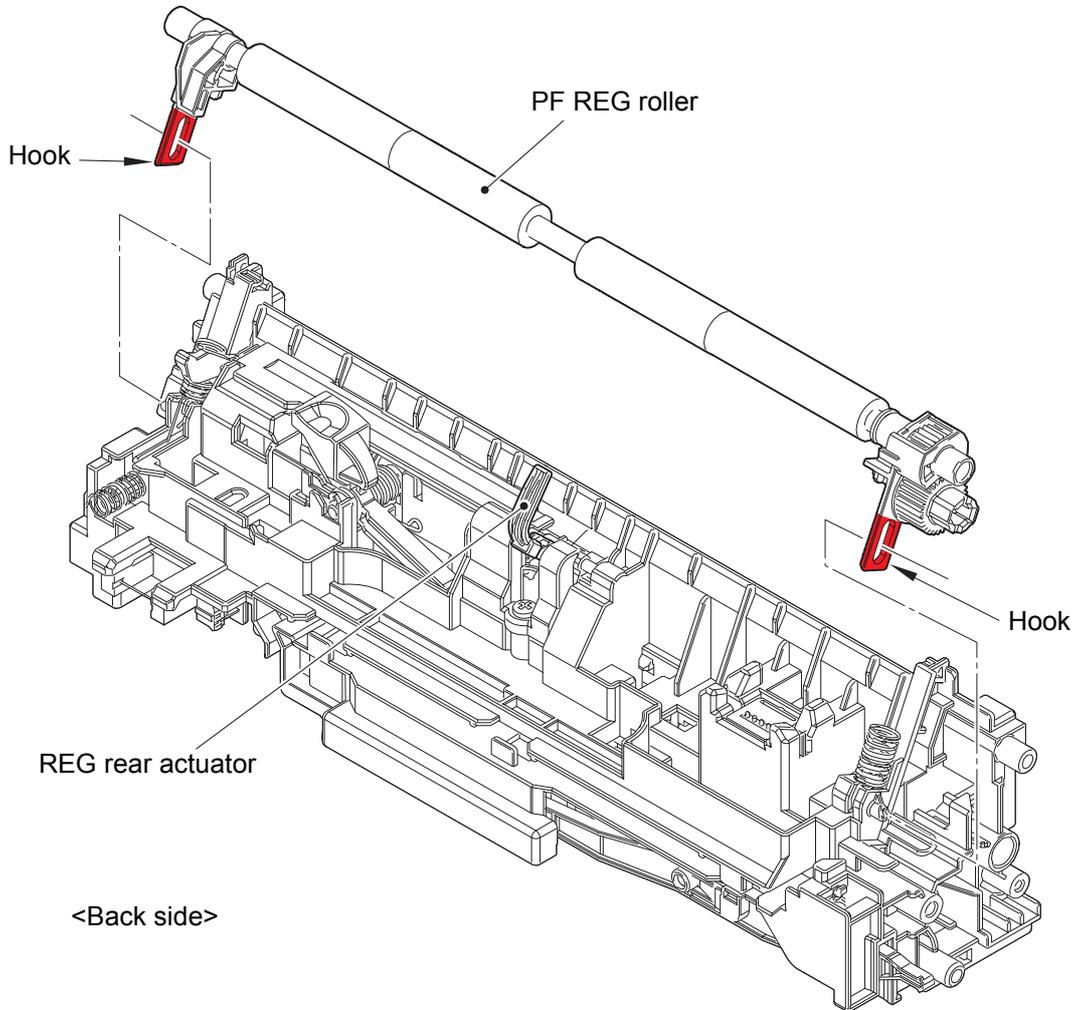


Fig. 3-161

(8) **Remove** > REG roller bushing R

(9) **Remove** > REG roller bushing L2

 **Fixtures & Fittings**

- Hook (x 1)

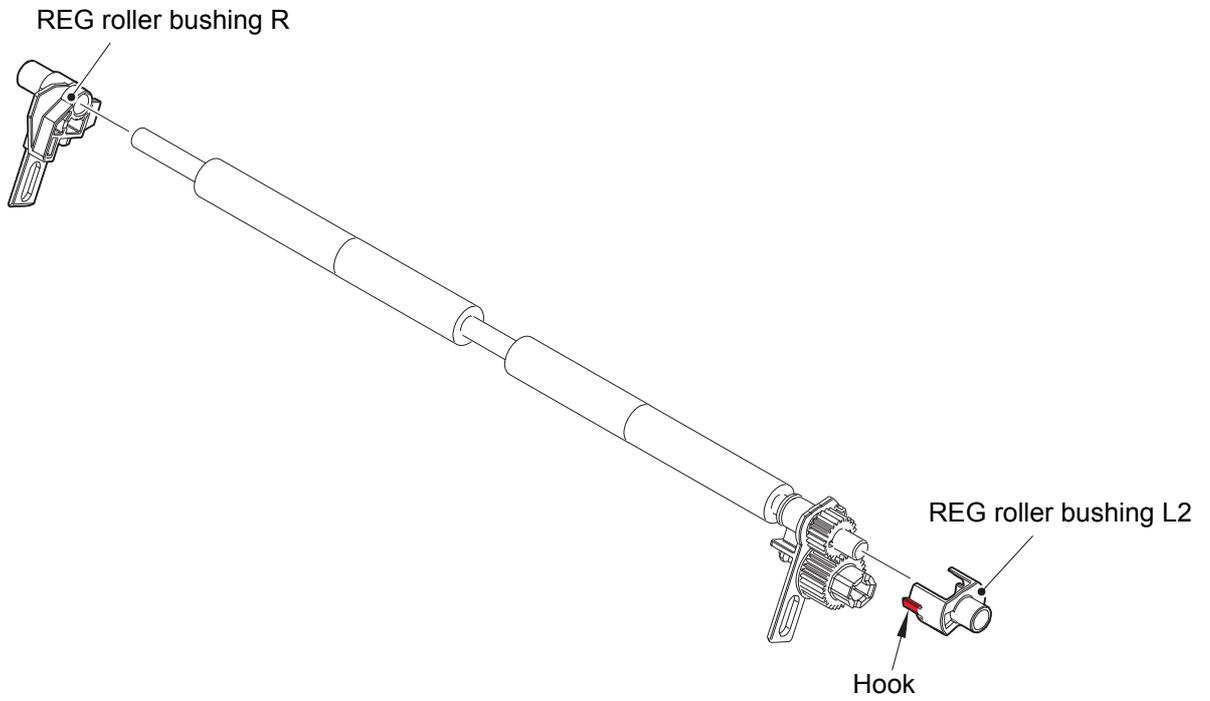


Fig. 3-162

(10) **Remove** > Collar 6

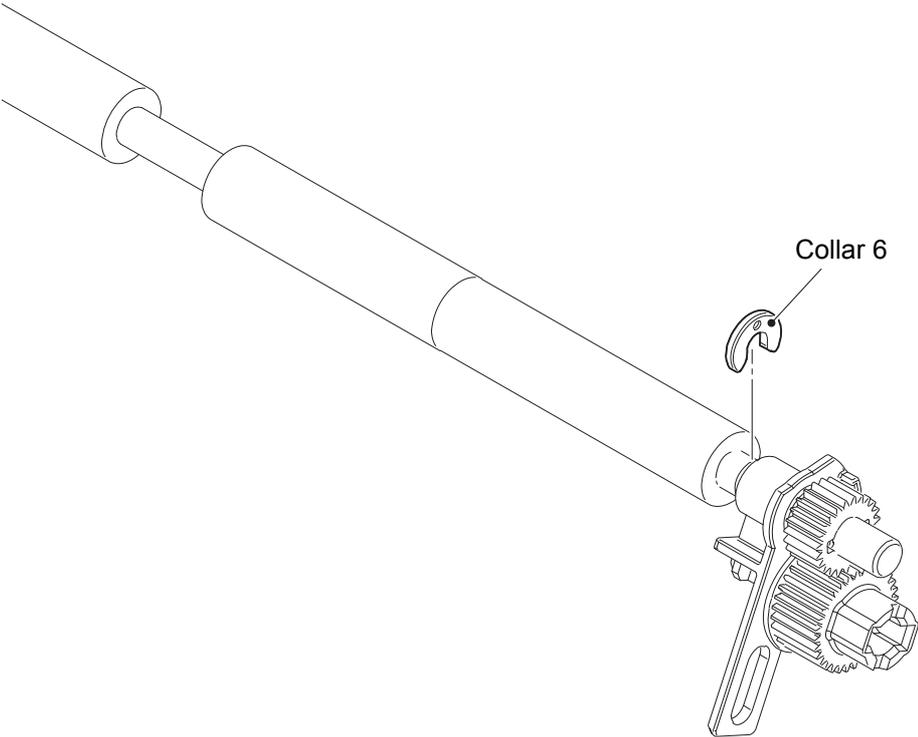


Fig. 3-163

(11) **Slide** > REG roller bushing L

(12) **Remove** > Joint pin 2x8

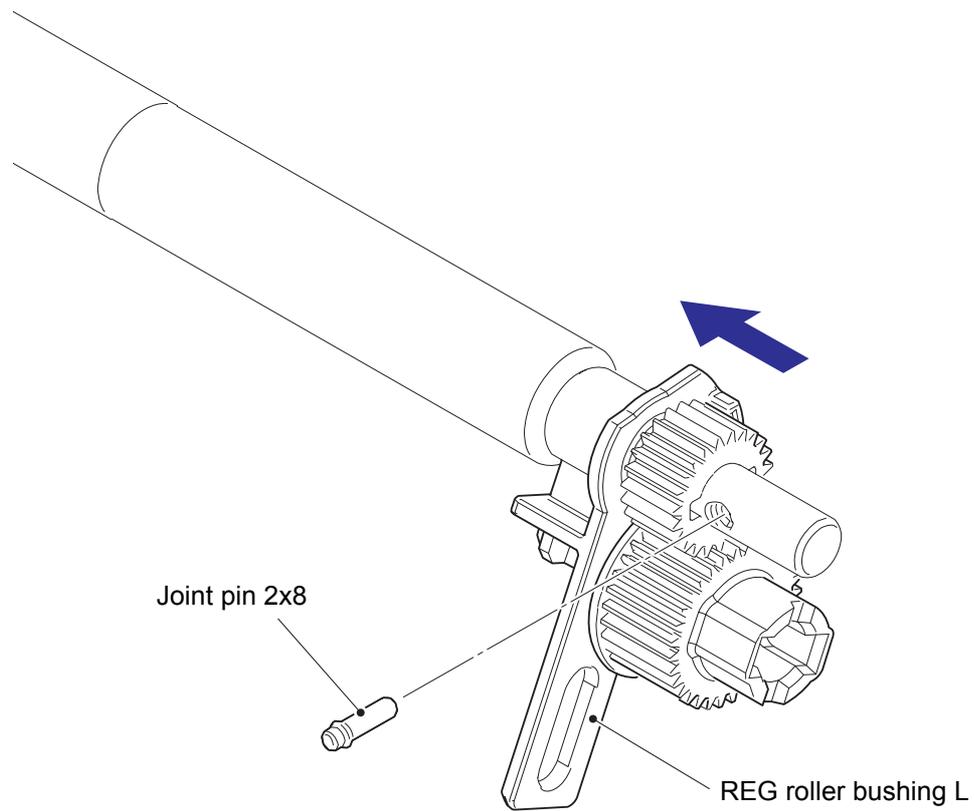


Fig. 3-164

7.71 MP REG/PE sensor PCB

(1) **Remove** > MP upper ASSY

-  **Fixtures & Fittings**
- Taptite bind B M3x8 (x 4)

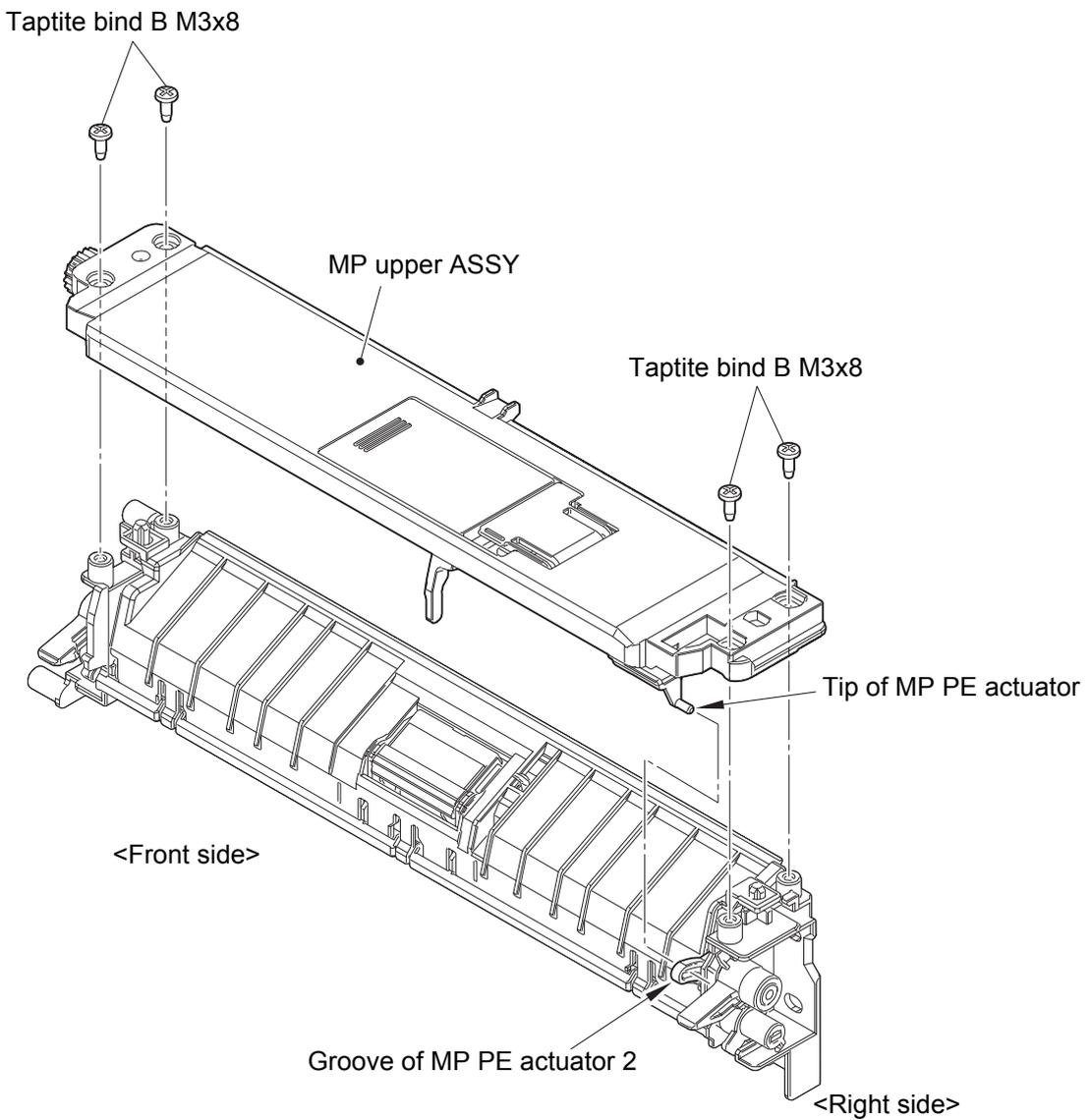


Fig. 3-165



Assembling note:

- Insert the tip of the MP PE actuator into the groove of the MP PE actuator 2.

(2) **Remove** > MP lower chute

-  **Fixtures & Fittings**
- Hook (x 5)

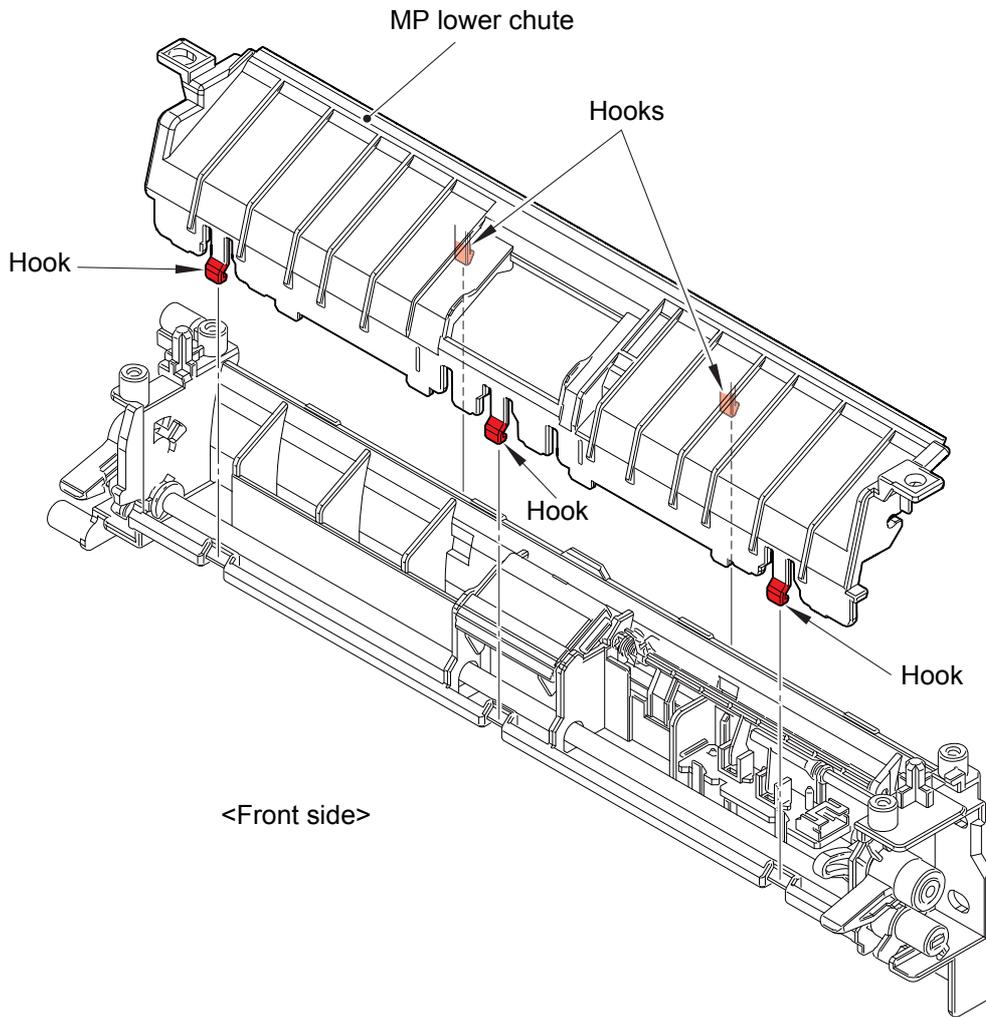


Fig. 3-166

- (3) **Wiring** > MP sensor harness
- (4) **Remove** > MP REG/PE sensor PCB

 **Fixtures & Fittings**

- Hook (x 3)

 **Point:**

- Turn the MP REG actuator in the direction of the arrow.

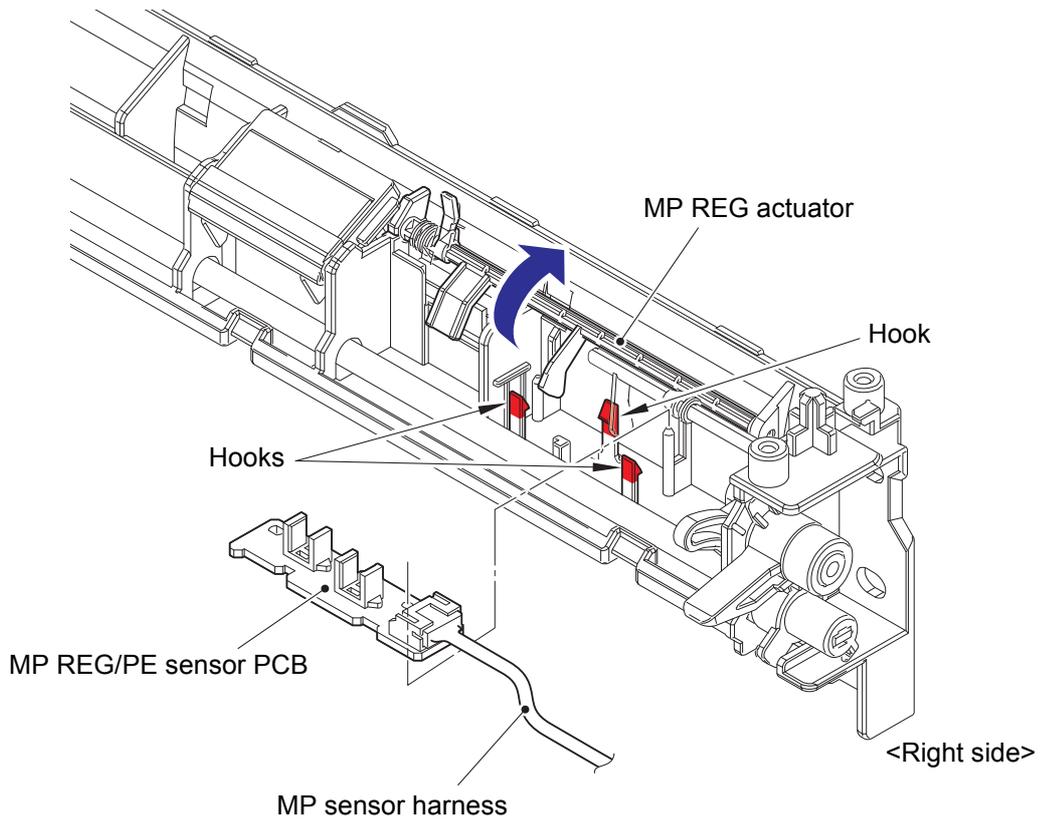


Fig. 3-167

Harness routing: Refer to "39. MP sensor harness".

 **Assembling note:**

- Make sure that the spring of the MP REG actuator does not come off.
- Check that the return function for the spring of the MP REG actuator works after assembling.

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)
- Setting the Serial Number (Function Code 80)
- 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)
- Adjusting Left-end and Upper-end Print Position (Function Code 45) (TT only)
- Resetting to Factory Shipping State (Function Code 03)

■ **What you need to prepare**

- Firmware (Sub Firmware, Main Firmware - djf file)
- Touch pen

<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.)
- SvSettingTool.exe (To check or download the machine information)

<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
-----------------------	----------------------------

<Operating Procedure>

The display on the right* appears on the LCD and the machine automatically enters “■■■MAINTENANCE■■■C■■” 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)”.

■■■MAINTENANCE■■■C■■							
1	2	3	A	B	C	Mono CopyS	Mono CopyD
4	5	6	D	E	F	Color CopyS	Color CopyD
7	8	9	◀	▶	▲		
*	0	#	Set	Clear	▼	Start	Stop

* 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 “1.3.26 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 Setting the Serial Number (Function Code 80)

<Operating Procedure>

- 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.****”
(3)	[Start], or [▼] (several times)	“USB:*****”
(4)	[9] [4] [7] [5]	The first digit of the serial number starts flashing.

- 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) | [Start] | The serial number is written. |
|-----|---------|-------------------------------|
- The machine returns to in the initial state of maintenance mode.

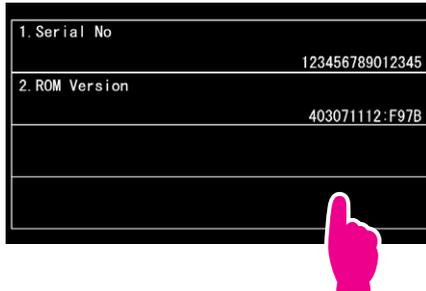
1.4 Installing Firmware (Sub Firmware, Main Firmware)

1.4.1 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>

- (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)	[2] [5]	Main firmware version
(6)	[Start], or [▼]	Sub firmware version
(7)	[X]	To the initial state of maintenance mode

Note:

- You can check the firmware version even in Function Code 77. (Refer to [“1.3.27 Print Maintenance Information \(Function Code 77\)”](#) in Chapter 5.)

1.4.2 Installing Firmware

Note:

- The TT or LT firmware is included in the main firmware of the machine. After connecting the TT or LT to the machine, the TT or 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.

1.4.2.1 (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. (Nothing is displayed on the LCD.) (Error display)
- Install the firmware according to “1.4.2.3 Firmware installation using a computer”.

1.4.2.2 (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.

1.4.2.3 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.

1.5 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.

1.6 Adjusting Touch Panel (Function Code 61)

Perform adjusting touch panel in accordance with “1.3.17 Adjust Touch Panel (Function Code 61)” in Chapter 5.

1.7 Continuous Adjustments of Density and Registration Sensor (Function Code 73)

Perform continuous adjustments of density and registration sensor in accordance with “1.3.25 Adjustment of Color Registration + Sensitivity Adjustment of Density Sensor + Developing Bias Voltage Correction (Function Code 73)” in Chapter 5.

1.8 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.

1.9 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.

1.10 Adjusting Left-end and Upper-end Print Position (Function Code 45) (TT only)

This function is to adjust the tray displacement happened in the TT.

Machine specifications for the displacement among trays: Acceptable displacement quantity against the T1 is 3.5 mm or less.

1.10.1 Print Test Pattern (Function Code 67)

<Operating Procedure>

- (1) Load paper in T1, 2, 3, 4 or 5. (Size: A4 or LETTER, Type: Plain paper)
- (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] [7]	"SELECT: K 100%"
(4)	Press the [▲] or [▼] to select Test Pattern.	"SELECT: Lattice"
(5)	[Set]	
(6)	Press the [▲] or [▼] to select Paper Size.	Shows the paper size.
(7)	[Set]	
(8)	Press the [▲] or [▼] to select Paper Type.	Shows the paper type.
(9)	[Set]	
(10)	Press the [▲] or [▼] to select Tray and 2-sided printing.	"SELECT:TRAY1 DX"
(11)	[Set]	
(12)	Press the [▲] or [▼] to select Print Method.	"SELECT: 1PAGE"
(13)	[Set]	Starts printing.
(14)	Repeat steps from (3) to (13) while changing the tray (T1, 2, 3, 4, or 5) in step (10).	
(15)	[X]	To the initial state of maintenance mode

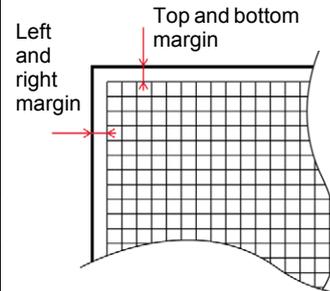
1.10.2 Measuring a Displacement of Each Paper Tray

<Operating Procedure>

- (1) Measure the left and top margin, and the top and bottom margin for the test pattern.
(See the figure below.)
- (2) Calculate the differences between the left and right margins, and the top and bottom margins of T1 and of T2, 3, 4, or 5.

(For example)

Unit (mm)	Left and right margin	Difference of L/R (-T1)	Top and bottom margin	Difference of T/B (-T1)
T1	4.2	—	4.2	—
T2	4.6	0.4	3.5	-0.7
T3	4.5	0.3	4.2	0
T4	3.8	-0.4	3.8	-0.4
T5	4.2	0	4.5	0.3



1.10.3 Adjust Print Position of Each Paper Tray (Function Code 45)

<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."
-----	---------	----------

<Adjustment of left/right print position>

(3)	[▲], or [▼]	"X Adjust"
(4)	[Set]	"XAdjust MP"
(5)	[▲], or [▼]	"XAdjust T2" (For T2)
(6)	[Set]	"XAdj. T2=0" (For T2)
(7)	[▲], or [▼]	"XAdj. T2=(Count)" (For T2)

1 count = 0.085 mm (Min. -50, Max. 50)

[▲] plus(+) count: The print position moves to the right.

[▼] minus (-) count: The print position moves to the left.

Since the difference of L/R of T2 in the example table is 0.4 mm, the print position is counted by -5, namely, it moves by 0.425 mm to the left.

(8)	[Set]	"Accepted" → "XAdjust T2"
(9)	[▲], or [▼]	"XAdjust T3" (For T3)

As needed, repeat steps from (5) to (9) for T3, 4, or 5 ("XAdjust T3", "XAdjust T4", or "XAdjust T5").

(10)	Press the [◀] to select Function Code 45	"X Ajust"
------	--	-----------

<Adjustment of top/bottom print position>

(11)	[▲], or [▼]	"Y Adjust"
(12)	For Y Adjust, repeat steps from (4) to (9). 1 count = 0.085 mm (Min.-50, Max.50) [▲] plus(+) count: The print position moves to the top. [▼] minus (-) count: The print position moves to the bottom.	
(13)	Press the [◀] to select Function Code 45	"Y Ajust"
(14)	[X]	To the initial state of maintenance mode

1.11 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>

<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?"
(3)	[▲], or [▼]	"8.PowerOnFunc ?"
(4)	[Set]	"FUNC ENABLE", or "FUNC DISABLE"
"FUNC ENABLE": Enables the function for manufacturing. "FUNC DISABLE": Disables the function for manufacturing.		
(5)	[▲], or [▼]	"FUNC DISABLE"
(6)	[Set]	To the initial state of maintenance mode

<Transfer to the shipping state>

(7)	[0] [3]	"1.LT1 MN LOAD?"
(8)	[▲], or [▼]	"9.ShippingStat?"
(9)	[Set]	"OFF: Change OK?", or "ON"
"OFF: Change OK?": Not in the factory shipping state. "ON": Already in the factory shipping state.		
(10)	[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.		

2. IF YOU REPLACE THE REG MARK SENSOR 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 “1.3.25 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
(Adjust Settings / 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 (Adjust Settings / Reset Counters after Parts Replacement (Function Code 88))

Perform resetting irregular power supply detection counter of the LVPS PCB in accordance with [“1.3.34 Adjust Settings / 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 “1.3.17 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.

5. IF YOU REPLACE THE LASER UNIT

■ What to do after replacement

- Continuous Adjustments of Density and Registration Sensor (Function Code 73)
- Resetting Printed Pages Counter of the Laser Unit
(Adjust Settings / Reset Counters after Parts Replacement (Function Code 88))

■ What you need to prepare

None

5.1 Continuous Adjustments of Density and Registration Sensor (Function Code 73)

Perform continuous adjustments of density and registration sensor in accordance with “1.3.25 Adjustment of Color Registration + Sensitivity Adjustment of Density Sensor + Developing Bias Voltage Correction (Function Code 73)” in Chapter 5.

5.2 Resetting Printed Pages Counter of the Laser Unit (Adjust Settings / Reset Counters after Parts Replacement (Function Code 88))

Perform resetting the printed pages counter of the laser unit in accordance with “1.3.34 Adjust Settings / Reset Counters after Parts Replacement (Function Code 88)” in Chapter 5.

6. IF YOU REPLACE THE ADF UNIT, 1ST SIDE CIS UNIT, 2ND SIDE CIS UNIT OR DOCUMENT SCANNER 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

6.1 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.

6.2 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.

6.3 Scanning and Printing Check

Copy the proper document on the 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 document scanner unit, the ADF unit and the performance of recording part.

7. IF YOU REPLACE THE FUSER

■ What to do after replacement

- Adjusting Settings / Resetting Printed Pages Counter for the Fuser
(Adjust Settings / Reset Counters after Parts Replacement (Function Code 88))

■ What you need to prepare

None

7.1 Adjusting Settings / Resetting Printed Pages Counter for the Fuser (Adjust Settings / Reset Counters after Parts Replacement (Function Code 88))

Perform adjusting settings or resetting the printed pages counter for the Fuser in accordance with [“1.3.34 Adjust Settings / Reset Counters after Parts Replacement \(Function Code 88\)”](#) in Chapter 5.

8. IF YOU REPLACE A PF KIT

■ What to do after replacement

- Adjusting Settings / Resetting Printed Pages Counter of a PF Kit
(Adjust Settings / Reset Counters after Parts Replacement (Function Code 88))

■ What you need to prepare

None

8.1 Adjusting Settings / Resetting Printed Pages Counter of a PF Kit (Adjust Settings / Reset Counters after Parts Replacement (Function Code 88))

Perform adjusting settings or resetting the printed pages counter of the appropriate PF kit in accordance with [“1.3.34 Adjust Settings / Reset Counters after Parts Replacement \(Function Code 88\)”](#) in Chapter 5.

9. IF YOU REPLACE TT / LT OR TT/LT CONTROL PCB

■ What to do after replacement

- Installing Main Firmware
(The TT or LT firmware is included in the main firmware.)
- Adjusting Left-end and Upper-end Print Position (Function Code 45) (TT only)

■ 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
-----------------------	----------------------------

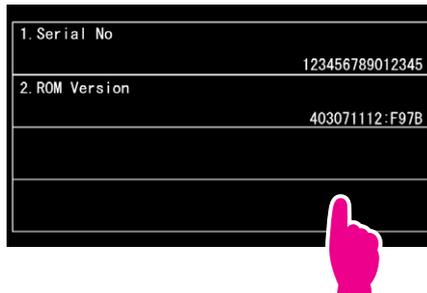
9.1 Installing Main Firmware

9.1.1 Checking Firmware Version

Check if the main firmware including the TT or 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>

- (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)	[2] [5]	Main firmware version
(6)	[X]	To the initial state of maintenance mode

Note:

- You can check the firmware version even in Function Code 77. (Refer to “[1.3.27 Print Maintenance Information \(Function Code 77\)](#)” in Chapter 5.)

9.1.2 Installing Main Firmware

Note:

- The TT or LT firmware is included in the main firmware of the machine.
After connecting the TT or LT to the machine, the TT or 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.

9.1.2.1 (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.
(Nothing is displayed on the LCD.) (Error display)
- Install the firmware in accordance with ["1.4.2.3 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.

9.1.2.2 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.

9.2 Adjusting Left-end and Upper-end Print Position (Function code 45) (TT only)

Perform adjusting left-end or upper-end print position in accordance with “1.10 Adjusting Left-end and Upper-end Print Position (Function Code 45) (TT only)” in this chapter.

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 (5-6)
10	Set Worker Switch (WSW)	1.3.5.1 (5-7)
11	Print WSW Setting Data	1.3.5.2 (5-9)
12	Check LCD Operation	1.3.6 (5-10)
18	Save NetConfig Information	1.3.7 (5-11)
25	Display Software Version	1.3.8 (5-11)
32	Check Sensor Operation	1.3.9 (5-12)
33	Display Wired LAN Connection Status	1.3.10 (5-17)
43	Set PC Print Functions	1.3.11 (5-18)
45	Switch USB No. Return Value / Switch ON/OFF Setting of Direct Print Color Mode-Improve Gray Color / Switch Timing to Execute Auto Registration / Adjust Left-end Print Position / Adjust Upper-end Print Position / Change Transfer Current Setting / Switch Ghost Reduction Setting / Switch Fogging Reduction Setting / Switch Density Adjustment for 2-sided Printing / Switch Density Adjustment for 1-sided Printing / Switch ON/OFF Setting of ReduceCurl 2side / Switch ON/OFF Setting of HEXDUMP-Mode / Disable SSW / Switch Firmware Downgrade Setting / Switch Spots Reduction Setting	1.3.12 (5-21)
46	Adjust Printing on Scale	1.3.13 (5-30)
53	Transfer Received Fax Data / Log Information (Models with FAX)	1.3.14 (5-32)
54	Fine-tune Scanning Position	1.3.15 (5-34)
55	Acquire and Optimize White/Black Level (CIS Scan)	1.3.16 (5-36)
61	Adjust Touch Panel	1.3.17 (5-36)
66	Adjustment of Color Registration (Adjustment of Inter-color Position Alignment)	1.3.18 (5-37)
67	Continuous Print Test	1.3.19 (5-40)
68	Laser Unit Test Pattern Print	1.3.20 (5-44)
69	Print Frame Pattern (1-sided Printing)	1.3.21 (5-45)
70	Print Frame Pattern (2-sided Printing)	1.3.22 (5-46)
71	Print Color Test Pattern	1.3.23 (5-47)
72	Sensitivity Adjustment of Density Sensor	1.3.24 (5-50)
73	Adjustment of Color Registration + Sensitivity Adjustment of Density Sensor + Developing Bias Voltage Correction	1.3.25 (5-51)
74	Setting by Spec	1.3.26 (5-52)
77	Print Maintenance Information	1.3.27 (5-54)
78	Check Fan Operation	1.3.28 (5-56)
79	Delete Fax Data	1.3.29 (5-56)
80	Display Machine Log Information	1.3.30 (5-57)
82	Display Machine Error Code	1.3.31 (5-61)
83	Developing Bias Voltage Correction	1.3.32 (5-61)
87	Send Error List (Telephone Line)	1.3.33 (5-61)
88	Adjust Settings / Reset Counters after Parts Replacement	1.3.34 (5-62)
91	Initialize EEPROM Parameters	1.3.1 (5-4)
99	Quit Maintenance Mode	1.3.35 (5-63)

* 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
-----------------------	----------------------------

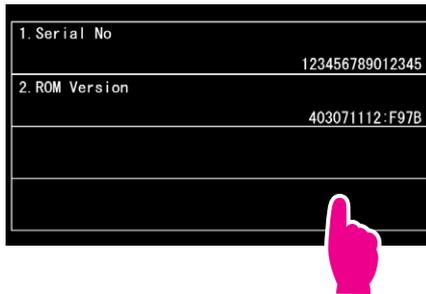
1.2.1 How to Enter Maintenance Mode for Service Personnel

<Operating Procedure>

(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

1	2	3	A	B	C	Mono CopyS	Mono CopyD
4	5	6	D	E	F	Color CopyS	Color CopyD
7	8	9	◀	▶	▲		
*	0	#	Set	Clear	▼	Start	Stop

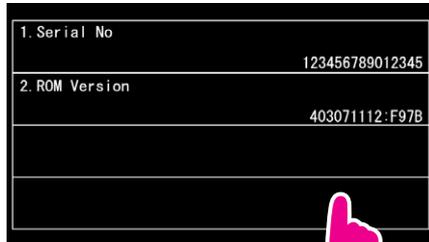
■■ MAINTENANCE ■■■							
1	2	3	A	B	C	Mono CopyS	Mono CopyD
4	5	6	D	E	F	Color CopyS	Color CopyD
7	8	9	◀	▶	▲		
*	0	#	Set	Clear	▼	Start	Stop

(5) Enter a function No. to use the function.

1.2.2 How to Enter the End User-accessible Maintenance Mode

<Operating Procedure>

- (1) The machine is in the ready state.
- (2) Press the [] for five seconds.
- (3) Press the blank field at the bottom.



- (4) [*] [0] [#] To the initial state of maintenance mode for end users

1	2	3	A	B	C	Mono CopyS	Mono CopyD
4	5	6	D	E	F	Color CopyS	Color CopyD
7	8	9	◀	▶	▲		
*	0	#	Set	Clear	▼	Start	Stop

- (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.

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>

- 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"

- The initialization is performed.
- 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)			
Telephone function registration/ Telephone book	These to be initialized	These not to be initialized	
Clock (RTC)			
Worker switches			
Password for control panel operation lock			
User switches (Items to be initialized when resetting to the factory default settings)			
Secure function lock		These to be initialized	
Function settings except user switches (settings not subject to "Factory Reset")			These to be initialized
• Language			
• 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 TT/LT, Check sum display function for soft switch.

1.3.2.1 Firmware Update Function for TT/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.
“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>

- 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?”
(3)	[▲], or [▼]	“8.PowerOnFunc ?”
(4)	[Set]	“FUNC ENABLE”, or “FUNC DISABLE”
		“FUNC ENABLE”: Enables the function for manufacturing. “FUNC DISABLE”: Disables the function for manufacturing.
(5)	[▲], or [▼]	“FUNC DISABLE”
(6)	[Set]	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>

(1)	[0] [3]	“1.LT1 MN LOAD?”
(2)	[▲], or [▼]	“9.ShippingStat?”
(3)	[Set]	“OFF: Change OK?”, or “ON”
		“OFF: Change OK?”: Not in the factory shipping state. “ON”: Already in the factory shipping state.
(4)	[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.

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 Fig. 5-1 below.)
(This print is available even Cyan, Magenta and Yellow toner cartridge is empty or "No toner" status.)

<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)	[0] [9]	"MAINTENANCE 09"
-----	---------	------------------

- (3) The test pattern printing is started.
- (4) The machine returns to the initial state of maintenance mode.

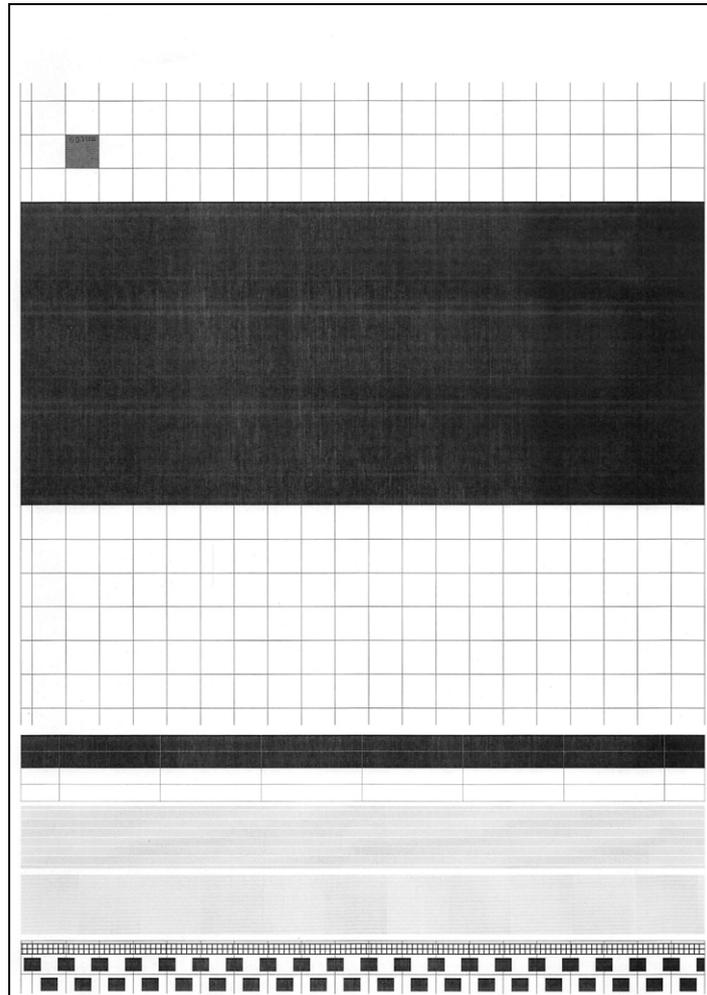


Fig. 5-1

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	WSW33	Function setting 11
WSW02	Tone signal setting	WSW34	Function setting 12
WSW03	PABX mode setting	WSW35	Function setting 13
WSW04	Transfer facility setting	WSW36	Function setting 14
WSW05	1st dial tone and busy tone detection	WSW37	Function setting 15
		WSW38	V.34 transmission settings
WSW06	[Redial/Pause] key and 2nd dial tone detection	WSW39	V.34 transmission speed
		WSW40	V.34 modem settings
WSW07	Dial tone setting 1	WSW41	ON-duration of the scanning light source
WSW08	Dial tone setting 2	WSW42	Internet mail settings
WSW09	Protocol definition 1	WSW43	Function setting 16
WSW10	Protocol definition 2	WSW44	Speeding up scanning-1
WSW11	Busy tone setting	WSW45	Speeding up scanning-2
WSW12	Signal detection condition setting	WSW46	PC power monitoring and parallel port settings
WSW13	Modem setting		
WSW14	AUTO ANS facility setting	WSW47	Switching between USB2.0 High-Speed and USB 1.1 Full-Speed
WSW15	Redial facility setting		
WSW16	Function setting 1	WSW48	USB setup latency
WSW17	Function setting 2	WSW49	End-of-copying beep
WSW18	Function setting 3	WSW50	SDAA setting
WSW19	Transmission speed setting	WSW51	Function setting 17
WSW20	Overseas communication mode setting	WSW52	Function setting 18
WSW21	TAD setting 1	WSW53	Function setting 19
WSW22	ECM and call waiting caller ID	WSW54	Function setting 20
		WSW55	Interval for regular developing bias value correction
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	WSW62	Scanning light intensity to judge to be stable 2
WSW30	Function setting 8	WSW63	Function setting 26
WSW31	Function setting 9	WSW64	Language / default paper size setting
WSW32	Function setting 10	WSW65	Paper support setting

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>

- (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 the initial state of maintenance mode.

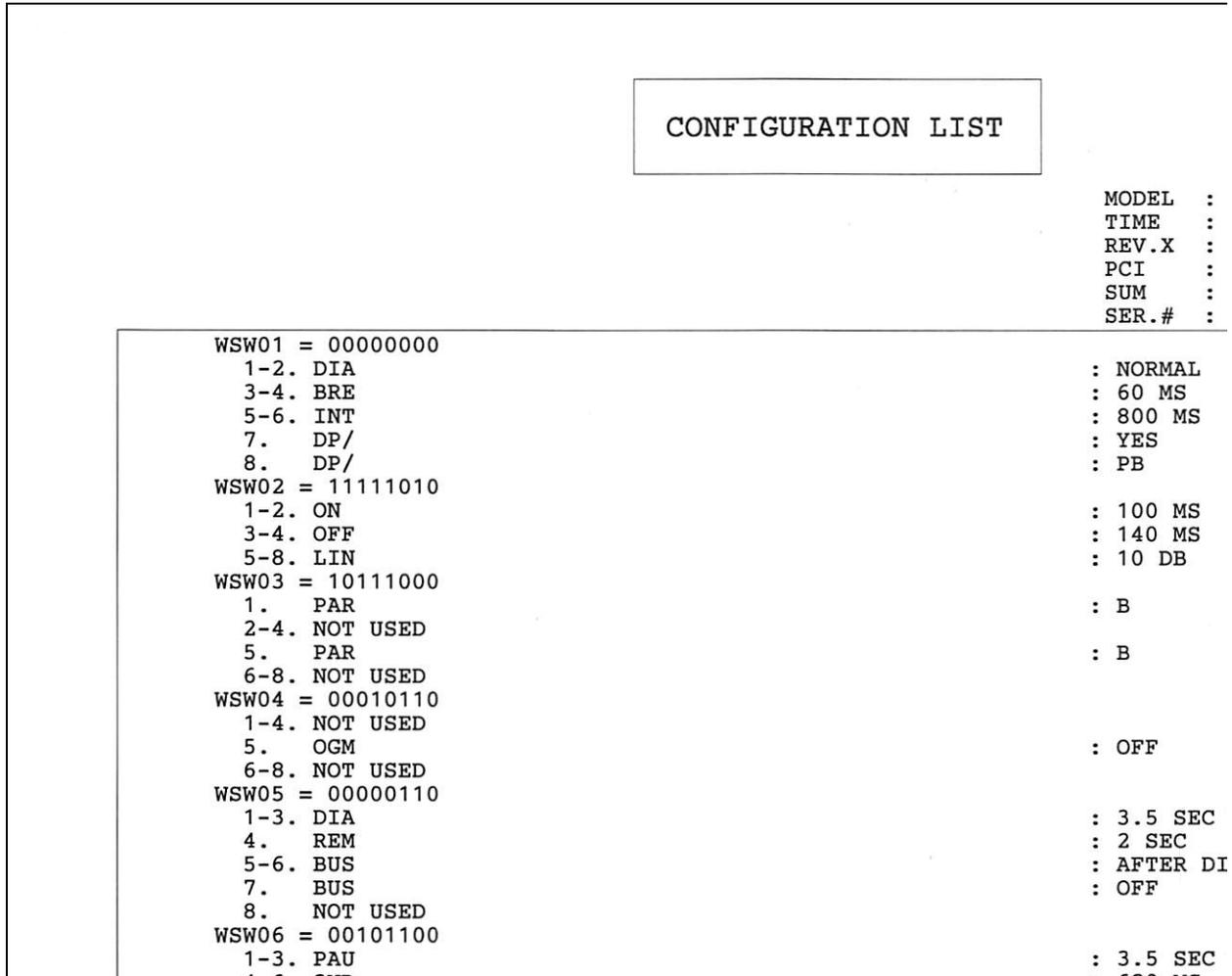


Fig. 5-2

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>

(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.)

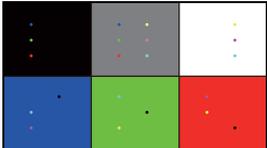
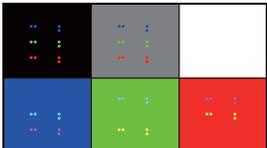
A<1> all white		B<1> bright point/ down point	
A<2> all black		B<2> bright point	
A<3> all gray		B<3> white gradual	
A<4> all red		B<4> red gradual	
A<5> all green		B<5> green gradual	
A<6> all blue		B<6> blue gradual	
A<7> picture data		B<7>	
A<8> white surrounded by a red frame		B<8> Displays BMP file in the Media by rotation	

Fig. 5-3

1.3.7 Save NetConfig Information (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.

1.3.8 Display Software Version (Function Code 25)

<Function>

- This function is used to check versions of firmware and program, or check sum information.

<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)	[2] [5]	"MAIN:Ver **"
-----	---------	---------------

(3)	[▲], or [▼]	To other items
-----	-------------	----------------

	[Set]	Switches between Ver and Check Sum
--	-------	------------------------------------

(4)	[X]	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
ENG :Ver1.00	N/A	Engine program version information
ENGS :1.00 (1.00a)	N/A	Engs firmware version information
LT1 :Ver1.00 *1	N/A	LT1 firmware version information
LT2 :Ver1.00 *1	N/A	LT2 firmware version information
LT3 :Ver1.00 *1	N/A	LT3 firmware version information
TT :Ver1.00 *1	N/A	TT firmware version information
B0612312359:1234	○	Boot program creation date
U0612312359:1234	○	Main firmware creation date
M0612312359:1234	○	SUB3 firmware creation date
i0801170900:0000	N/A	I-FAX version information
C1606021159:1234	N/A	UI custom data version information
c1906101530:1234	N/A	Color profile data version information
ROM Check Sum *2	N/A	Check sum self-diagnosis function

*1 Displays only when the LT/TT is installed.

*2 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.

1.3.9 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>

- 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 [3] [2] to display sensor status and the machine beeps. | For example “RCCVC1P1MPMRRMRA” |
|---|--------------------------------|

Note:

- To stop beeping, press the [Set].

- | | |
|---------|---|
| (3) [X] | 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	Front cover sensor	Cover closed	Cover open
C1	T1 PF sensor	Tray 1 cassette closed and No paper	Tray 1 cassette open or paper set
P1	T1 PE sensor	No paper	Paper set
MP	MP PE sensor	No paper	Paper set
MR	MP REG sensor	No paper	Paper set
RM	REG front sensor	No paper	Paper set
RA	REG rear sensor ^{*1}	No paper	Paper set
PO	Eject sensor (Also use: Fuser cover sensor)	No paper / Cover closed	Paper set / Cover open
ST	Eject stack sensor	Stack not full	Stack full
DX	DX sensor	No paper / w/ Tray	Paper set / w/o Tray
SB	Reverse eject sensor	No paper	Paper set
DW	Drum unit sensor	w/ Drawer	w/o Drawer
FW	Waste toner box sensor	w/ Waste toner	w/o Waste Toner
CT	Cover open trace sensor	Cover closed	Cover open
**	MX cover sensor ^{*2}	(Not used)	(Not used)
MACxx	Internal thermistor ^{*3}	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
DF	Document front sensor	No document	Document set
DR	Document rear sensor	No document	Document set
AC	ADF cover sensor	Cover closed	Cover open
FF	Flap tray PF sensor ^{*4}	Tray not detected at PF position	Tray detected at PF position
FH	Flap tray home sensor ^{*4}	Home position (The flap tray is fully lowered.)	Not at home position
FC	Document cover sensor	Cover closed	Cover open

Sensor Code	Sensor Name	Detection Status	
		ON	OFF
C2	T2(LT) PF sensor (When LT is in use)	T2 closed	T2 open
P2	T2(LT) PE sensor (When LT is in use)	No paper	Paper set
L2	T2 lift up sensor (When LT is in use)	T2 Plate down	T2 Plate up
C3	T3(LT) PF sensor (When LT is in use)	T3 closed	T3 open
P3	T3(LT) PE sensor (When LT is in use)	No paper	Paper set
L3	T3(LT) lift up sensor (When LT is in use)	T3 Plate down	T3 Plate up
C4	T4(LT) PF sensor (When LT is in use)	T4 closed	T4 open
P4	T4(LT) PE sensor (When LT is in use)	No paper	Paper set
E2	T2(TT) PF sensor	TT T2 closed and No paper	TT T2 open or paper set
D2	T2(TT) PE sensor	No paper	Paper set
E3	T3(TT) PF sensor	TT T3 closed and No paper	TT T3 open or paper set
D3	T3(TT) PE sensor	No paper	Paper set
E4	T4(TT) PF sensor	TT T4 closed and No paper	TT T4 open or paper set
D4	T4(TT) PE sensor	No paper	Paper set
E5	T5(TT) PF sensor	TT T5 closed and No paper	TT T5 open or paper set
D5	T5(TT) PE sensor	No paper	Paper set
J2	T2(TT) jam sensor	No paper	Paper set
J3	T3(TT) jam sensor	No paper	Paper set
J4	T4(TT) jam sensor	No paper	Paper set
J5	T5(TT) jam sensor	No paper	Paper set
AL	TT balance sensor L	w/ Attachment	w/o Attachment
AR	TT balance sensor R	w/ Attachment	w/o Attachment
TT	TT connection check *5	TT connected	-

*1 If the drawer is removed, the detection status is "OFF".

*2 It shows "ON" only when the mail box is connected. There is shown nothing if it is not connected.

*3 If the drawer is not connected, it cannot be correctly measured.

*4 FF and FH also have functioned as fully-loaded detection sensors for ADF. ("OFF" for both means fully loaded.)

*5 It shows "ON" only when the tower tray is connected. There is shown nothing if it is not connected. ("OFF" does not show.)

■ Locations of sensors

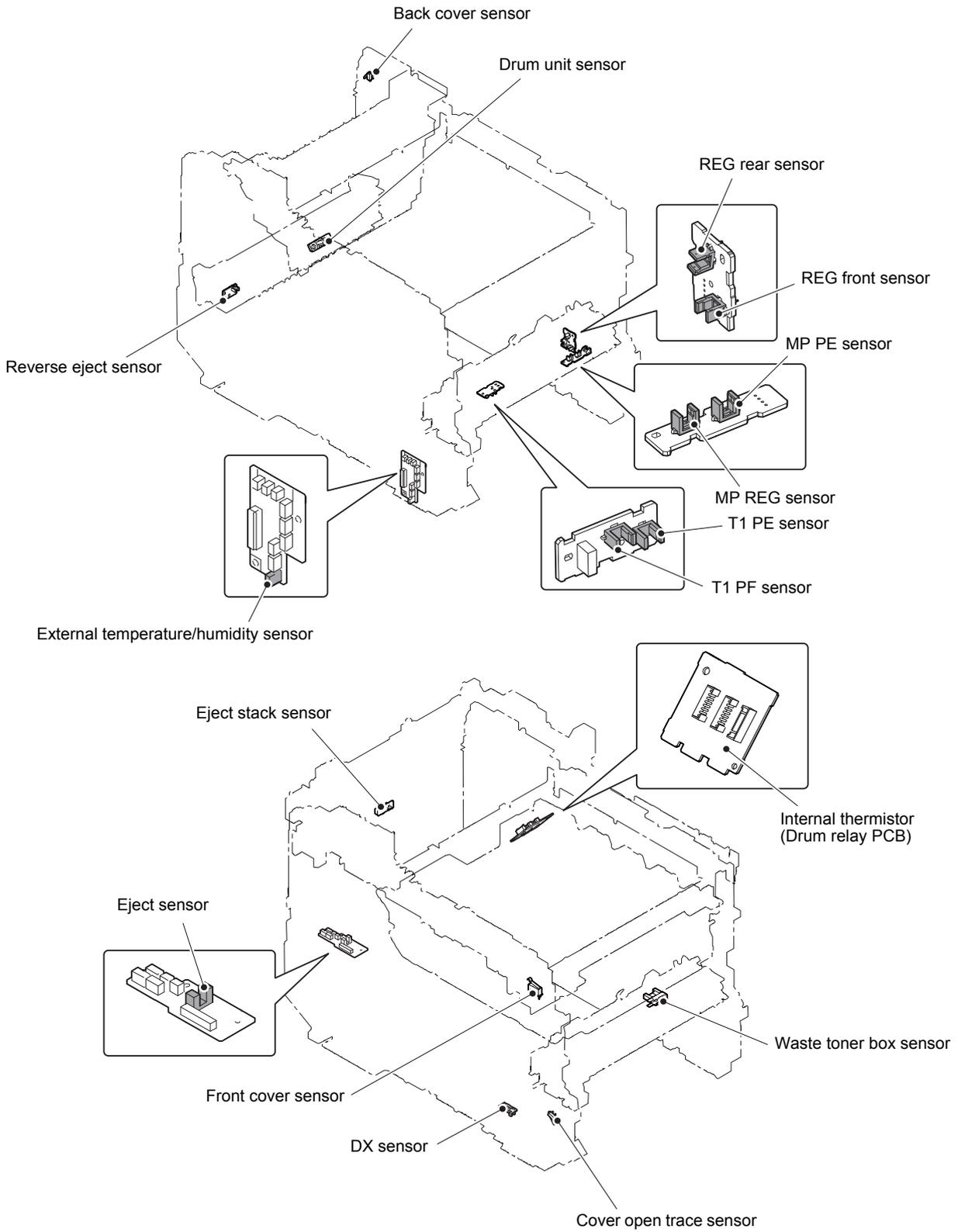


Fig. 5-4

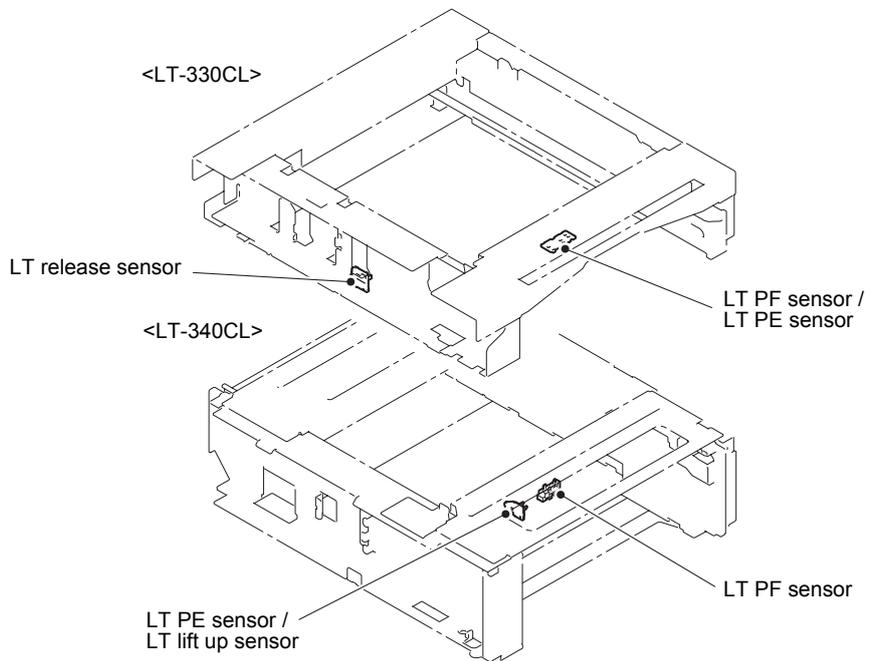
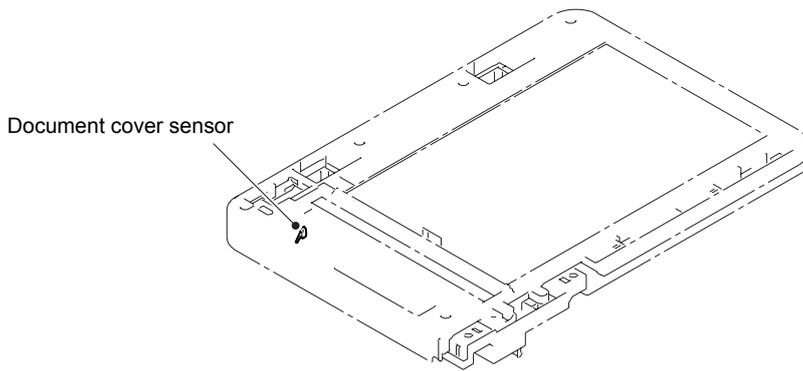
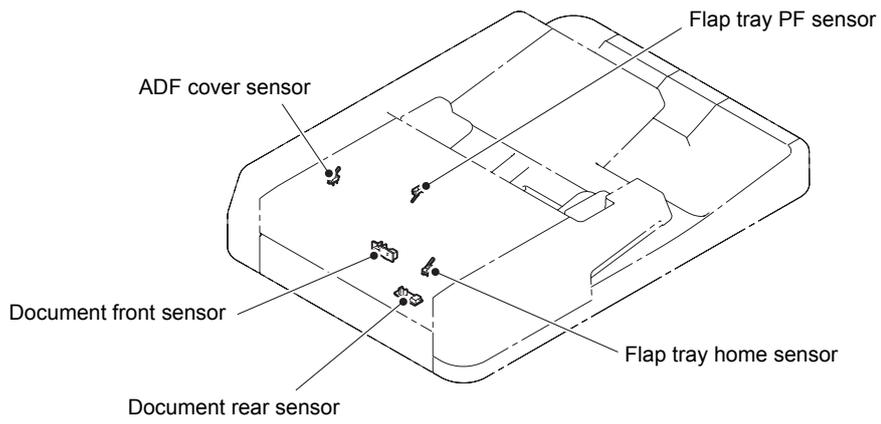


Fig. 5-5

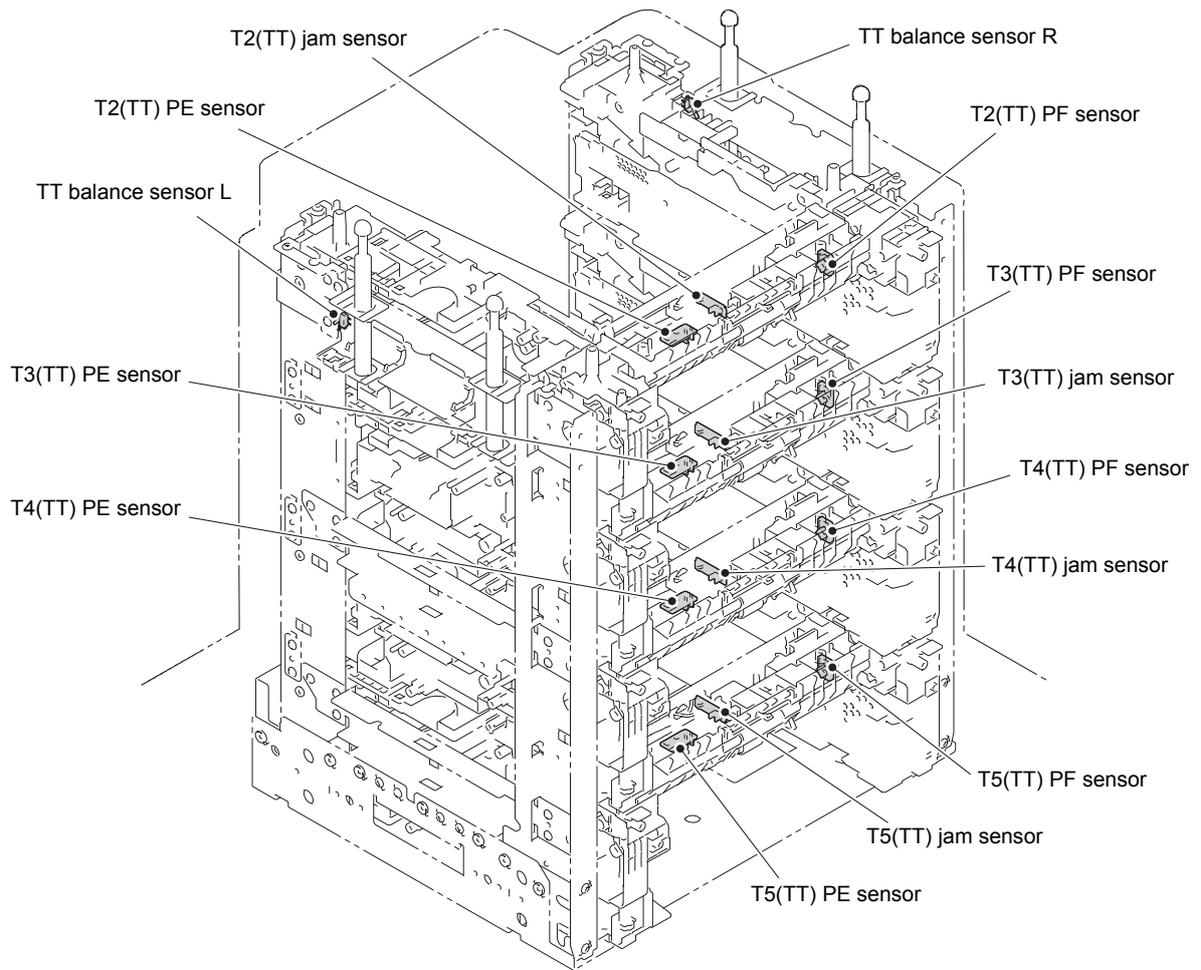


Fig. 5-6

1.3.10 Display Wired LAN Connection Status (Function Code 33)

<Function>

- This function is used to check the connection status of the wired LAN.

<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)	[3] [3]	Connection status (See the table below.)
(3)	[X]	To the initial state of maintenance mode.

LCD	Wired LAN connection status
Active 1000B-FD	1000Mbps-Full Duplex
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

1.3.11 Set PC Print Functions (Function Code 43)

<Function>

- This function is used to change the settings of print functions. (See the table below.)

<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] [3]	"Manual Feed"
(3)	[▲], or [▼]	(Selected value)
(4)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	
(5)	[▲], or [▼]	Change the set value.
(6)	Press the [Set] to complete the setting. (Press the [◀] to cancel the operation.)	
(7)	[X]	To the initial state of maintenance mode.

1.3.11.1 Setting functions

Note:

- The settings on the computer supersede the settings on the LCD.

LCD	Description	Set value	Default
Manual Feed	Manual feed setting	On/Off	Off
Resolution	Print resolution	300/600/HQ1200 dpi	600 dpi
Toner Save	Toner save mode setting	On/Off	Off
Density	Print density level	-6 to 6	0
JB-Can Time	Time until host timeout after a job is canceled	0 to 255 seconds	10 seconds
Sleep Time	Time until sleep mode is entered	0 to 99 minutes	1 minute
Page Protection	Page memory setting	Off/LTR/A4/LGL/Auto	Auto
Emulation	Emulation (print language) setting	Auto/PCL/PS	Auto
Auto I/F Time	Interface open time setting	1 to 99 seconds	5 seconds
Media Type	Paper type setting	Thin/Plain/Thick/Thicker/ *Trans/Recycled/Bond/Env/ EnvThin/EnvThick	Plain or Thin
Paper Size	Image development area setting	Letter/Legal/A4/Exec/ ISOB5/JISB5/A5/ISOB6/A6/ Monarch/C5/COM10/DL/ DLL/A4Long/Hagaki/Folio	Letter or A4
Copies	Number of copies	1 to 99 copies	1 copy
Orientation	Print direction setting	Portrait/Landscape	Port/Land
P-Pos X-Offset	Print position offset in X (landscape) direction	-500 to 500 (1/300 dpi)	0 (1/300 dpi)
P-Pos Y-Offset	Print position offset in Y (portrait) direction	-500 to 500 (1/300 dpi)	0 (1/300 dpi)
Auto FF	Auto Form Feed setting	On/Off	Off
Auto FF Time	Time until Auto Form Feed timeout	1 to 99 seconds	5 seconds
FF Suppress	Blank page skip setting	On/Off	Off

*When "Trans" is displayed on the menu, the setting is ignored because the paper is out of the specifications.

LCD	Description	Set value	Default
Auto LF	Auto linefeed (LF) setting	On/Off	Off
Auto CR	Auto carriage return (CR) setting	On/Off	Off
Auto WRAP	Auto CRLF by print width	On/Off	Off
Auto Skip	Back end / tip skip setting	On/Off	On
Left Margin	Left margin setting	0 to 145 columns	0 column
Right Margin	Right margin setting	10 to 155 columns	80 columns
Top Margin	Top margin setting	0 to 2.00 inches	0.5 inches
Bottom Margin	Bottom margin setting	0 to 2.00 inches	0.5 inches
Lines	Text lines per page	5 to 128 lines	60 lines
Error Print	Error Print setting of PostScript	On/Off	On

■ Detail description

LCD	Detail description
Manual Feed	Effective for the print from the computer, or for the print of the NetWorkConfig/TestPrint/FontList/Configuration from the panel. When the tray is selected on the computer, the setting becomes effective. And this setting is ignored.
Resolution	Effective only for the print from the computer. When the Resolution is set on the computer, the setting becomes effective. And this setting is ignored.
Toner Save	Effective for all print, and change the setting of the Function Menu. However, as for the Copy, this setting becomes invalid. When the Toner Save is set on the computer, the setting becomes effective. And this setting is ignored.
Density	Effective for the print from the computer, or for the print of the NetWorkConfig/TestPrint/FontList/Configuration from the panel. Linked with the Toner Save setting, and the density is determined based on both settings. When the Density is set on the computer, the setting becomes effective. And this setting is ignored.
JB-Can Time	Sets the time until the host timeout after a job is canceled. The setting unit is on the second time scale.
Sleep Time	Sets the time until the sleep mode is entered. The Function Menu setting will also be changed.
Page Protection	Sets the page memory to be secured for data processing before printing in the computer. As this is a setting in the PCL-Core, this does not affect the memory management of the machine.
Emulation	Changes the print language. The Function Menu setting becomes valid. When the data includes the ENTER LANGUAGE, the setting becomes effective. And this setting is ignored.
Auto I/F Time	Changes the interface open time. This setting becomes valid when PC-Print is instructed, and becomes invalid when PC-Scan or Remote-Setup is instructed.
Media Type	Effective only for the print from the computer. When the Media Type is set on the computer, the setting becomes effective. And this setting is ignored. The default varies depending on the country setting. "Thin" is the default for China and "Plain" is the default for other countries.
Paper Size	Changes the image development area. Sets the drawing size for PC-Print, instead of the setting for Paper Size in the menu. When the Paper size is set on the computer, the setting becomes effective. And this setting is ignored. The default varies depending on the country setting. "Letter" is the default for U.S.A. / Canada and "A4" is the default for other countries.
Copies	Effective only for the print from the computer. When the number of copies is set on the computer, the setting becomes effective. And this setting is ignored.
Orientation	Changes the printing direction. Effective only for the print from the computer.
P-Pos X-Offset	Sets the print position offset in the X (landscape) direction. Effective only for the print from the computer. When the X-Offset is set on the computer, the setting becomes effective. And this setting is ignored.
P-Pos Y-Offset	Sets the print position offset in the Y (portrait) direction. Effective only for the print from the computer. When the Y-Offset is set on the computer, the setting becomes effective. And this setting is ignored.

LCD	Detail description
Auto FF	Sets ON/OFF for Auto FF (automatic form feed). Effective for the print from the computer.
Auto FF Time	Sets the time until timeout after Auto FF is set to ON.
FF Suppress	Sets whether to skip blank pages. Effective for the print from the computer. ON/OFF setting of the blank data for copying or faxing cannot be changed in this setting.
Auto LF	Sets the auto linefeed.
Auto CR	Sets the auto carriage return. Adds CR to the LF code.
Auto WRAP	Sets the auto CRLF by the print width.
Auto Skip	Sets whether to skip at the back end / tip of paper. Adds a blank space.
Left Margin	Sets the column space at the left side.
Right Margin	Set the column space at the right side.
Top Margin	Sets the space at the top.
Bottom Margin	Sets the space at the bottom.
Lines	Sets the number of lines in the PCL.
Error Print	Sets the Error Print of the BR-Script 3.

1.3.12 Various Settings (Function Code 45)

- Switch Various USB No. Return Value
- Switch ON/OFF Setting of Improve Gray Color
- Switch Timing to Execute Auto Registration
- Adjust Left-end / Upper-end Print Position
- Change Transfer Current Setting
- Switch Ghost Reduction Setting
- Switch Fogging Reduction Setting
- Switch Density Adjustment for 2-sided Printing
- Switch Density Adjustment for 1-sided Printing
- Switch ON/OFF Setting of ReduceCurl 2side
- Switch ON/OFF Setting of HEXDUMP-Mode
- Disable SSW
- Switch Firmware Downgrade Setting
- Switch Spots Reduction Setting

1.3.12.1 Switch USB No. Return Value

<Function>

- This function is used to check the connection status of wired LAN.

<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)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	“USB No.=(Selected Value)”
(4)	[▲], or [▼]	Select the desired value.
(5)	[Set]	“Accepted”

- (6) 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

<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)	[▲], or [▼]	“DP.ImpGray”
(4)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	“DP.ImpGray=(Selected Value)”
(5)	[▲], or [▼]	Select the desired value.
(6)	[Set]	“Accepted”

- (7) 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 registration 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>

- (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)	[▲], or [▼]	“Regi Freq”
(4)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	“Regi Freq=(Selected Value)”
(5)	[▲], or [▼]	Select the desired value.
(6)	[Set]	“Accepted”

- (7) 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>

- (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)	[▲], or [▼]	"X Adjust"
(4)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	"XAdjust (Adjustment Option)"
(5)	[▲], or [▼] (See the table below.)	Select the desired value.
(6)	Press the [Set] to confirm.	"XAdj. (Adjustment Option)= (Set Value)"
(7)	Press the [▲], or [▼] to change the set value.	"XAdj. (Adjustment Option)= (Set Value)"
(8)	[Set]	"Accepted"

- (9) The machine returns 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
T3 1st side	XAdjust T3
T4 1st side	XAdjust T4
T5 1st side	XAdjust T5
N/A (disabled)	XAdjust DX
N/A (disabled)	XAdjust DXMP
N/A (disabled)	XAdjust DXT1
N/A (disabled)	XAdjust DXT2
N/A (disabled)	XAdjust DXT3
N/A (disabled)	XAdjust DXT4
N/A (disabled)	XAdjust DXT5

2-sided printing

Adjustment option	LCD
MP tray 2nd side	XAdjust MP
T1 2nd side	XAdjust T1
T2 2nd side	XAdjust T2
T3 2nd side	XAdjust T3
T4 2nd side	XAdjust T4
T5 2nd side	XAdjust T5
*1	XAdjust DX
MP tray 1st side	XAdjust DXMP
T1 1st side	XAdjust DXT1
T2 1st side	XAdjust DXT2
T3 1st side	XAdjust DXT3
T4 1st side	XAdjust DXT4
T5 1st side	XAdjust DXT5

*1 Adjusts 1st side print start position of all trays (T1, 2, 3, 4, 5 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.

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>

- (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)	[▲], or [▼]	"Y Adjust"
(4)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	"YAdjust (Adjustment Option)"
(5)	[▲], or [▼] (See the table below.)	Select the desired value.
(6)	Press the [Set] to confirm.	"YAdj. (Adjustment Option)= (Set Value)"
(7)	Press the [▲], or [▼] to change the set value.	"YAdj. (Adjustment Option)= (Set Value)"
(8)	[Set]	"Accepted"

- (9) The machine returns 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
T3 1st side	YAdjust T3
T4 1st side	YAdjust T4
T5 1st side	YAdjust T5
*1	YAdjust TRAY
N/A (disabled)	YAdjust DX
N/A (disabled)	YAdjust DXMP
N/A (disabled)	YAdjust DXT1
N/A (disabled)	YAdjust DXT2
N/A (disabled)	YAdjust DXT3
N/A (disabled)	YAdjust DXT4
N/A (disabled)	YAdjust DXT5

2-sided printing

Adjustment option	LCD
MP tray 2nd side	YAdjust MP
T1 2nd side	YAdjust T1
T2 2nd side	YAdjust T2
T3 2nd side	YAdjust T3
T4 2nd side	YAdjust T4
T5 2nd side	YAdjust T5
*2	YAdjust TRAY
*1	YAdjust DX
MP tray 1st side	YAdjust DXMP
T1 1st side	YAdjust DXT1
T2 1st side	YAdjust DXT2
T3 1st side	YAdjust DXT3
T4 1st side	YAdjust DXT4
T5 1st side	YAdjust DXT5

*1 Adjusts 1st side print start position of all trays (T1, 2, 3, 4, 5 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, 3, 4, 5 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>

- (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)	[▲], or [▼]	“Special Printing”
(4)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	“(Set Value)”
(5)	Press the [▲] or [▼] to change the set value.	“(Set Value)”
(6)	[Set]	“Accepted”

- (7) The machine returns to the initial state of maintenance mode.

1.3.12.7 Switch Ghost Reduction Setting

<Function>

- This function is used to reduce the level of ghost.
- 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>

- (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)	[▲], or [▼]	“Ghost Reduction”
(4)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	“(Set Value)”
(5)	Press the [▲], or [▼] to change the set value.	“(Set Value)”
(6)	[Set]	“Accepted”

- (7) The machine returns to the initial state of maintenance mode.

1.3.12.8 Switch Fogging Reduction Setting

<Function>

- This function corresponds to the case where the printed result has fog.

LCD	Description
OFF*	Fogging reduction OFF is selected. (default)
ON	Fogging reduction ON is selected.

<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)	[▲], or [▼]	"Smudge Reduction"
(4)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	"(Selected Value)"
(5)	[▲], or [▼]	Select the desired value.
(6)	[Set]	"Accepted"

- (7) The machine returns to the initial state of maintenance mode.

1.3.12.9 Switch Density Adjustment for 2-sided Printing

<Function>

- This function is used to adjust the print density on both the 1st and 2nd sides during 2-sided printing.

LCD	Description
Level+1	The larger the positive number, the higher the density.
Level+2	
Level+3	
Level-3	The larger the negative number, the lower the density.
Level-2	
Level-1	
Normal*	No adjustment (default)

<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)	[▲], or [▼]	"2-sided Density"
(4)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	"(Selected Value)"
(5)	[▲], or [▼]	Select the desired value.
(6)	[Set]	"Accepted"

- (7) The machine returns to the initial state of maintenance mode.

1.3.12.10 Switch Density Adjustment for 1-sided Printing

<Function>

- This function is used to adjust the print density during 1-sided printing.

LCD	Description
Level+1	The larger the positive number, the higher the density.
Level+2	
Level-2	The larger the negative number, the lower the density.
Level-1	
Normal*	No adjustment (default)

<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)	[▲], or [▼]	"1-sided Density"
(4)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	"(Selected Value)"
(5)	[▲], or [▼]	Select the desired value.
(6)	[Set]	"Accepted"

- (7) The machine returns to the initial state of maintenance mode.

1.3.12.11 MaxDXMode

<Function>

- Reserved (Change of the setting is prohibited.)
- * This mode will be deleted in future.

1.3.12.12 Switch ON/OFF Setting of ReduceCurl 2side

<Function>

- If the curl of 1-sided printed paper is severe, switch to 2-sided paper feeding to reduce curl.

LCD	Description
ReduceCurl=OFF	The 2-sided paper feeding is OFF. (For 1-sided printing, the 2-sided paper feeding is not performed. For 2-sided printing, the 2-sided paper feeding is performed.)
ReduceCurl=ON	The 2-sided paper feeding is ON. (For both 1-sided printing and 2-sided printing, the 2-sided paper feeding is performed.)

<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)	[▲], or [▼]	"ReduceCurl 2side"
(4)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	"ReduceCurl=(Selected Value)"
(5)	[▲], or [▼]	Select the desired value.
(6)	[Set]	"Accepted"

- (7) The machine returns to the initial state of maintenance mode.

1.3.12.13 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>

- (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)	[▲], or [▼]	"HEXDUMP Setting"
(4)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	"HEXDUMP (Set Value)"
(5)	Press the [▲], or [▼] to change the set value.	"HEXDUMP (Set Value)"
(6)	[Set]	"Accepted"

- (7) The machine returns to the initial state of maintenance mode.

1.3.12.14 Disable SSW

<Function>

- This function is used to disable any SSW.

<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)	[▲], or [▼]	"FUNC INVALID"
(4)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	"FUNC = 0"
(5)	Press the [▲] or [▼] to select the SSW No. (The digit of No.10)	"FUNC = (SSW No.)"
(6)	Press the [Set] to confirm the digit of the SSW No.10. (Press the [◀] to cancel the operation.)	"FUNC = (SSW No.)"
(7)	Press the [▲] or [▼] to select the SSW No. (The digit of No.1)	"FUNC = (SSW No.)"
(8)	Press the [Set] to confirm the digit of the SSW No.1. (Press the [◀] to cancel the operation.)	"FUNC = (SSW No.)"
(9)	[Set]	"Accepted"

- (10) The machine returns to the initial state of maintenance mode.

1.3.12.15 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>

- (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)	[▲], or [▼]	"FIRMDOWN"
(4)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	"FIRMDOWN = (Set Value)"
(5)	Press the [▲], or [▼] to change the set value.	"FIRMDOWN = (Set Value)"
(6)	[Set]	"Accepted"

- (7) The machine returns to the initial state of maintenance mode.

1.3.12.16 Switch Spots Reduction Setting

<Function>

- This function is used to reduce the Spots at the edge of the paper.

LCD	Description
ON	Turn ON the spots reduction function.
OFF	Turn OFF the spots reduction function. (default)

"**" 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)	[▲], or [▼]	"Dots Improved"
(4)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	"Dots Y"
(5)	[▲], or [▼]	Select the color (Y/M/C/K).
(6)	Press the [Set] to confirm. (Press the [◀] to cancel the operation.)	"(Set Value)"
(7)	Press the [▲], or [▼] to change the set value.	"(Set Value)"
(8)	[Set]	"Accepted"

- (9) The machine returns to the initial state of maintenance mode.

1.3.13 Adjust Printing on Scale (Function Code 46)

<Function>

- This function is used to enlarge/shrink the print in horizontal/vertical direction.
- Adjustable Range = -0.5% to +0.5% (-: Shrink, +: Enlarge)

<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] [6]	"MAIN SIZE SET"
(3)	[▲], or [▼]	"PRINT TEST PTN"
(4)	Press the [Set] to print the test pattern (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.

(5)	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)

(6)	Press the [Set] to confirm.	"SET: (Set Value) %"
(7)	Press the [▲], or [▼] to enter the set value.	"SET: (Set Value) %"
(8)	Press the [Set] to confirm the set value.	
(9)	[X]	To the initial state of maintenance mode

<Initialization for the set value>

Both the set values for the main size and the sub size are set to 0.0%.

(10)	[▲], or [▼]	"RESET PARAMETER"
(11)	[Set]	"MAIN SIZE SET"

■ Print adjustment test pattern

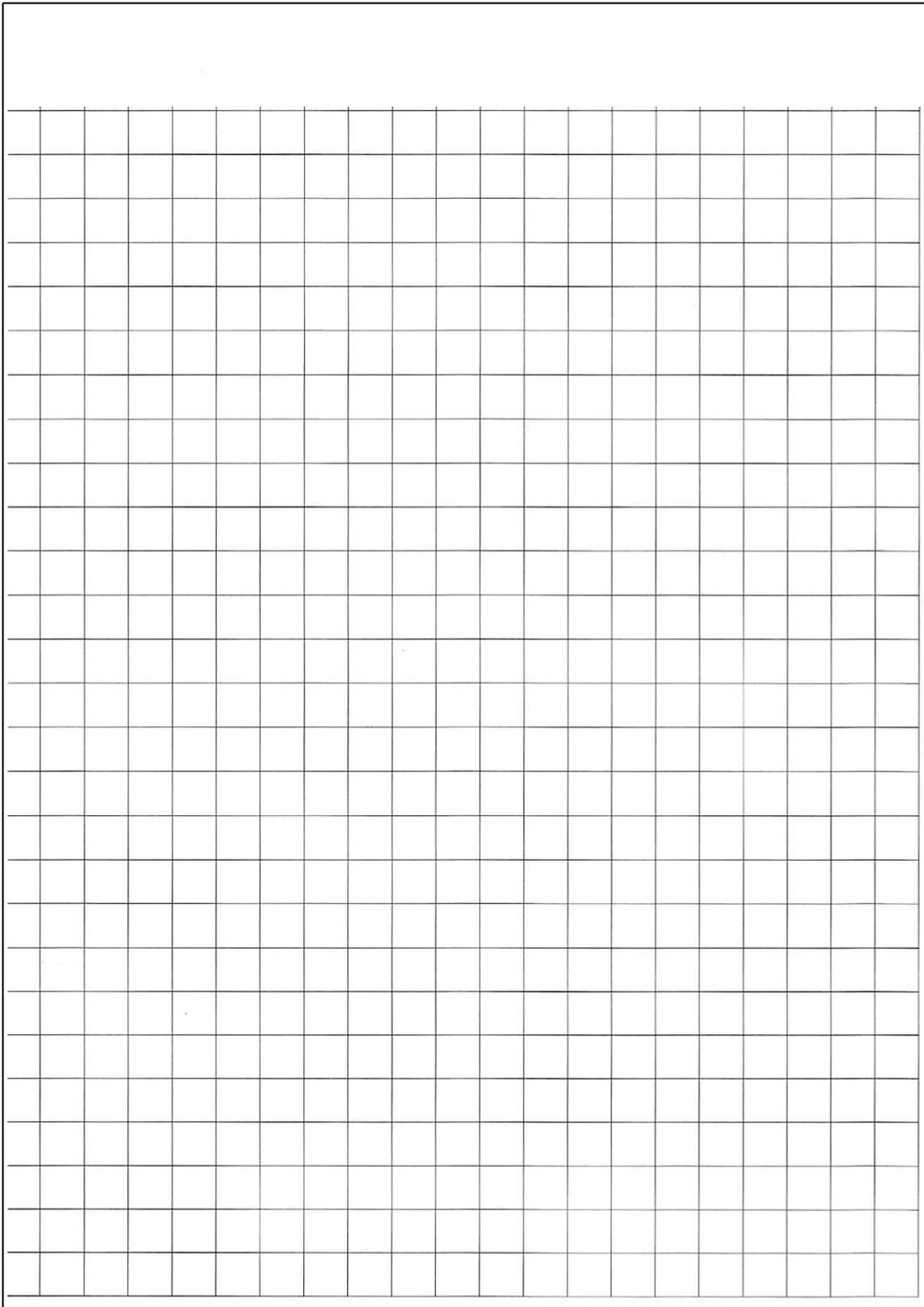


Fig. 5-7

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: (**)" ** 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)	Press the [Set] to confirm the item.	"ENTER NO. & SET"

<Transfer the received FAX data + the communication management report>

6)	[3]	"3.DOCUMENTS"
7)	Press the [Set] to confirm the item.	"ENTER NO. & SET"

<Transfer the communication list (latest communication information)>

8)	[4]	"4.COM.LIST (NEW)"
9)	Press the [Set] to confirm the item.	"ENTER NO. & SET"

<Transfer the communication list (information for the past three errors)>

10)	[5]	"5.COM.LIST (ERR3)"
11)	Press the [Set] to confirm the item.	"ENTER NO. & SET"

<Transfer the maintenance information (Function Code 77)>

12)	[6]	"6.MNT77 LIST"
13)	Press the [Set] to confirm the item.	"ENTER NO. & SET"

- (4) Enter the telephone number of the receiver machine. (Numeric keys)

(5)	Press the [Set] to confirm the entry.	"Accepted"
-----	---------------------------------------	------------

(6)	The data is transferred together with the data on the next page.	"DIALING #001"
-----	--	----------------

■ Cover page example

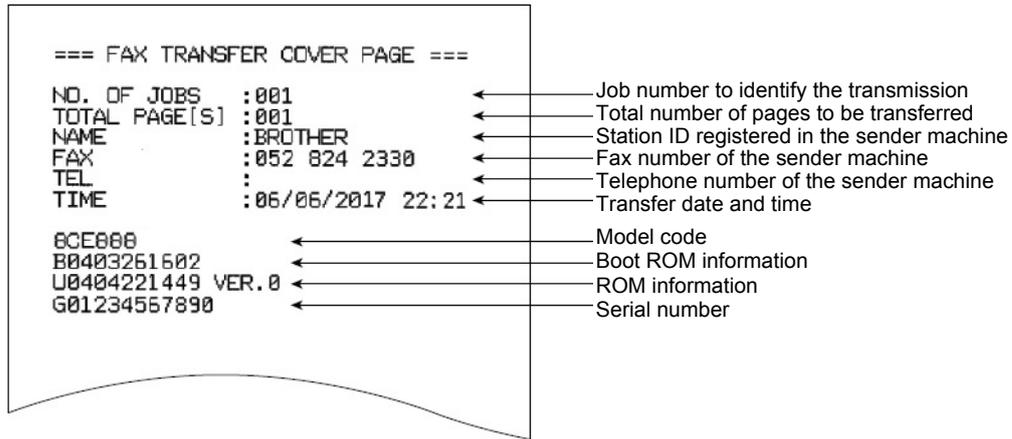


Fig. 5-8

■ End page example

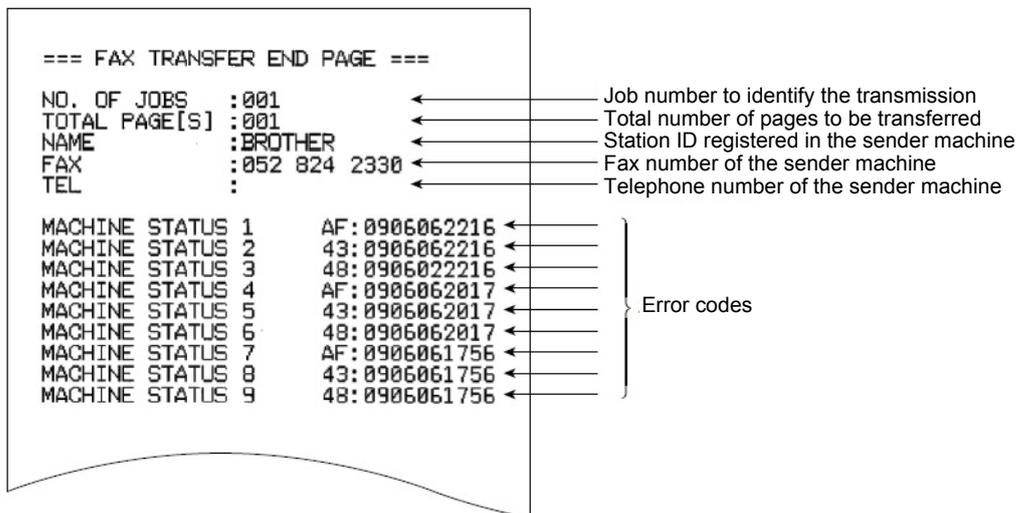


Fig. 5-9

1.3.15 Fine-tune Scanning Position (Function Code 54)

<Function>

- This function is used to adjust the scanning position.

<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] [4]	"SCAN START AD"
(3)	After two seconds.	"0: ADF 1: FB"

<Adjust the scanning position of ADF>

(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

<2-sided scanning models>

1)		"0:FRONT 1:BACK"
2)	[0], or [1]	Displays the set value.

[0]: 1st side
 [1]: 2nd side

<1-sided scanning models>

3)		Displays the set value.
----	--	-------------------------

<Adjust the scanning position of FB>

(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)	Press the [▲], or [▼] to change the set value. (Refer to the next page.)	Displays the set value.
-----	---	-------------------------

(9)	Press the [Set] to confirm the entry.	"SCANNING"
-----	---------------------------------------	------------

(10)		"OK"
------	--	------

(11)	[X]	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".

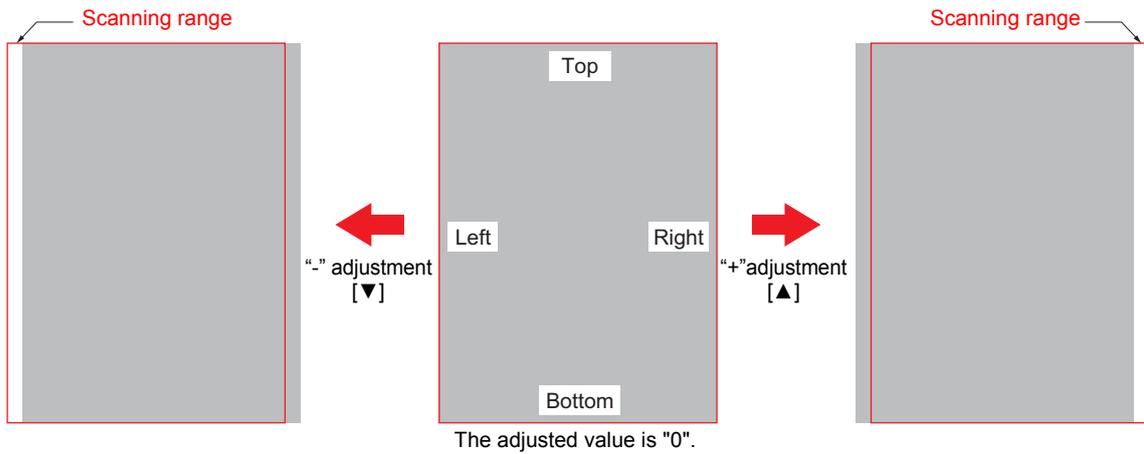


Fig. 5-10

■ **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".

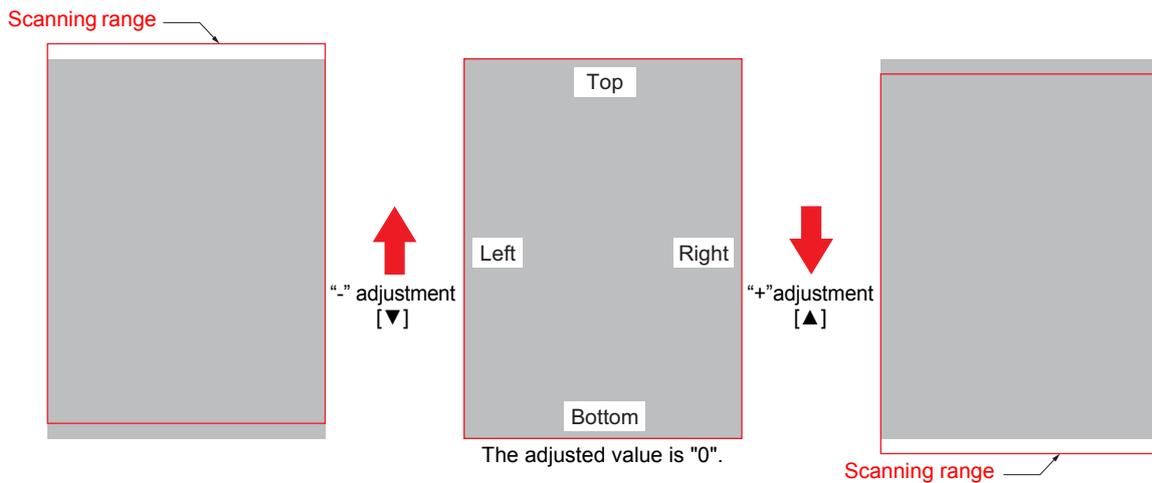


Fig. 5-11

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>

- (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)	[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.

1.3.17 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 Fig. 5-12 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.

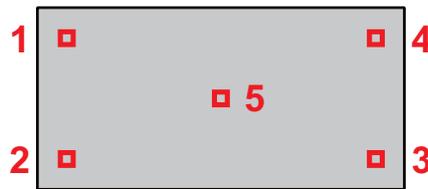


Fig. 5-12

- (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.

1.3.18 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

1.3.18.1 Adjustment of Inter-color Position Alignment without Registration Sensor Calibration (Auto)

<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] [6]	“REGISTRATION”
(3)	Press the [Set] to correct.	“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. (See the table below.)	The error appears.
(5)	[X]	To the initial state of maintenance mode

■ Details of errors

- Pressing the [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)” (1.3.18.2).

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.

1.3.18.2 Printing of Correction Chart and Adjustment of Inter-color Position Alignment (Manual)

<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] [6]	"REGISTRATION"
(3)	[▲], or [▼]	"PRINT CHART"
(4)	Press the [Set] to print the correction chart. (See Fig. 5-13 below.)	"PRINTING"
(5)	The printing is completed.	"PRINT CHART"
(6)	[X]	To the initial state of maintenance mode
(7)	[6] [6]	"REGISTRATION"
(8)	[▲], or [▼]	"SET REGISTRATION"
(9)	[Set]	"1. MAGENTA=0"
(10)	Identify the numeric value whose color is the darkest in the pattern of ①.	"1. MAGENTA=0"
(11)	Press the [▲], or [▼] to enter the numeric value of (10).	"1. MAGENTA=(Entered value)"
(12)	Press the [Set] to confirm the entered value.	
(13)	For the correction test pattern of ② to ⑨, repeat the steps from (10) to (12).	
(14)	The correction is completed.	"COMPLETED"
(15)	[X]	To the initial state of maintenance mode

■ Correction chart

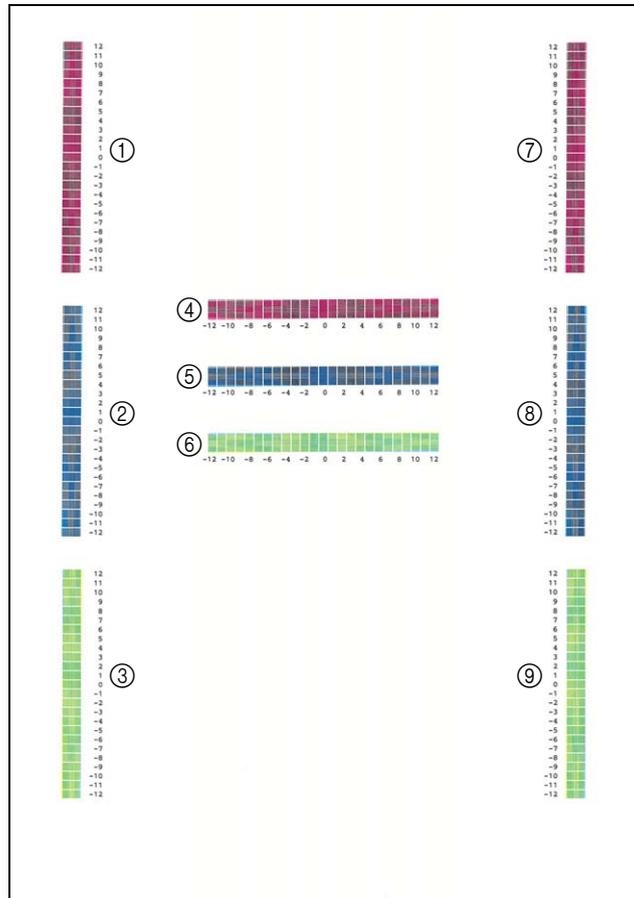


Fig. 5-13

1.3.18.3 Adjustment of Inter-color Position Alignment including Registration Sensor Calibration (Auto)

<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] [6]	"REGISTRATION"
(3)	[▲], or [▼]	"ADD REGISTRATION"
(4)	Press the [Set] to correct.	"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)	[X]	To the initial state of maintenance mode

1.3.19 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>

- (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)	Press the [▲], or [▼] to select the print pattern.	Refer to <Print pattern>.
(4)	Press the [Set] to confirm the item.	"SELECT: A4"
(5)	Press the [▲], or [▼] to select the print size.	Refer to <Paper size>.
(6)	Press the [Set] to confirm the item.	"SELECT: PLAIN"
(7)	Press the [▲], or [▼] to select the print specification.	Refer to <Print specification>.
(8)	Press the [Set] to confirm the item.	"SELECT: TRAY1 SX"
(9)	Press the [▲], or [▼] to select TRAY, DX.	Refer to <Print type>.
(10)	Press the [Set] to confirm the item.	"SELECT: 1PAGE"
(11)	Press the [▲], or [▼] to select the print page.	Refer to <Print page>.

<SELECT: 1PAGE, CONTINUE >

(12)	Press the [Set] to confirm the item and the printing is started.	"PAPER FEED TEST"
(13)	Press the [X], or the specified number of sheets is completed.	To the initial state of maintenance mode

<SELECT: JOB >

(12)	Press the [Set] to confirm the item.	"SELECT: 1P/JOB"
(13)	Press the [▲], or [▼] to select the number of pages per job.	Refer to <Number of pages per job>.
(14)	Press the [Set] to confirm the item.	
(15)	(SELECT: xxP(l)/JOB only) Press the [▲], or [▼] to select the xxP(l)/JOB. Enter the image number (Up to 3 digits).	
(16)	(SELECT: xxP(l)/JOB only) Press the [Set] to confirm the item.	
(17)	The printing is started.	"PAPER FEED TEST"
(18)	Press the [X], or the specified number of sheets is completed.	To the initial state of maintenance mode

<Print pattern>

LCD	Description
SELECT: K 100%	Black 100% solid print
SELECT: C 100%	Cyan 100% solid print
SELECT: M 100%	Magenta 100% solid print
SELECT: Y 100%	Yellow 100% solid print
SELECT: W 100%	White 100% solid print
SELECT: R 100%	Red 100% solid print
SELECT: G 100%	Green 100% solid print
SELECT: B 100%	Blue 100% solid print
SELECT: KCMY1%	Black/Cyan/Magenta/Yellow 1% intermittent pattern print *
SELECT: KCMY5%	Black/Cyan/Magenta/Yellow 5% intermittent pattern print *
SELECT: Lattice	Lattice print
SELECT: Total	Total pattern print (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.

<Print type>

LCD	Description
SELECT: TRAY1 SX	1-sided printing from T1
SELECT:TRAY2 SX ^{*1}	1-sided printing from T2
SELECT:TRAY3 SX ^{*1}	1-sided printing from T3
SELECT:TRAY4 SX ^{*1}	1-sided printing from T4
SELECT:TRAY5 SX ^{*1}	1-sided printing from T5
SELECT: MP SX	1-sided printing from MP tray
SELECT: TRAY1 DX ^{*2}	2-sided printing from T1
SELECT:TRAY2 DX ^{*2}	2-sided printing from T2
SELECT:TRAY3 DX ^{*2}	2-sided printing from T3
SELECT:TRAY4 DX ^{*2}	2-sided printing from T4
SELECT:TRAY5 DX ^{*2}	2-sided printing from T5
SELECT: MP DX ^{*2}	2-sided printing from MP 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%".

<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

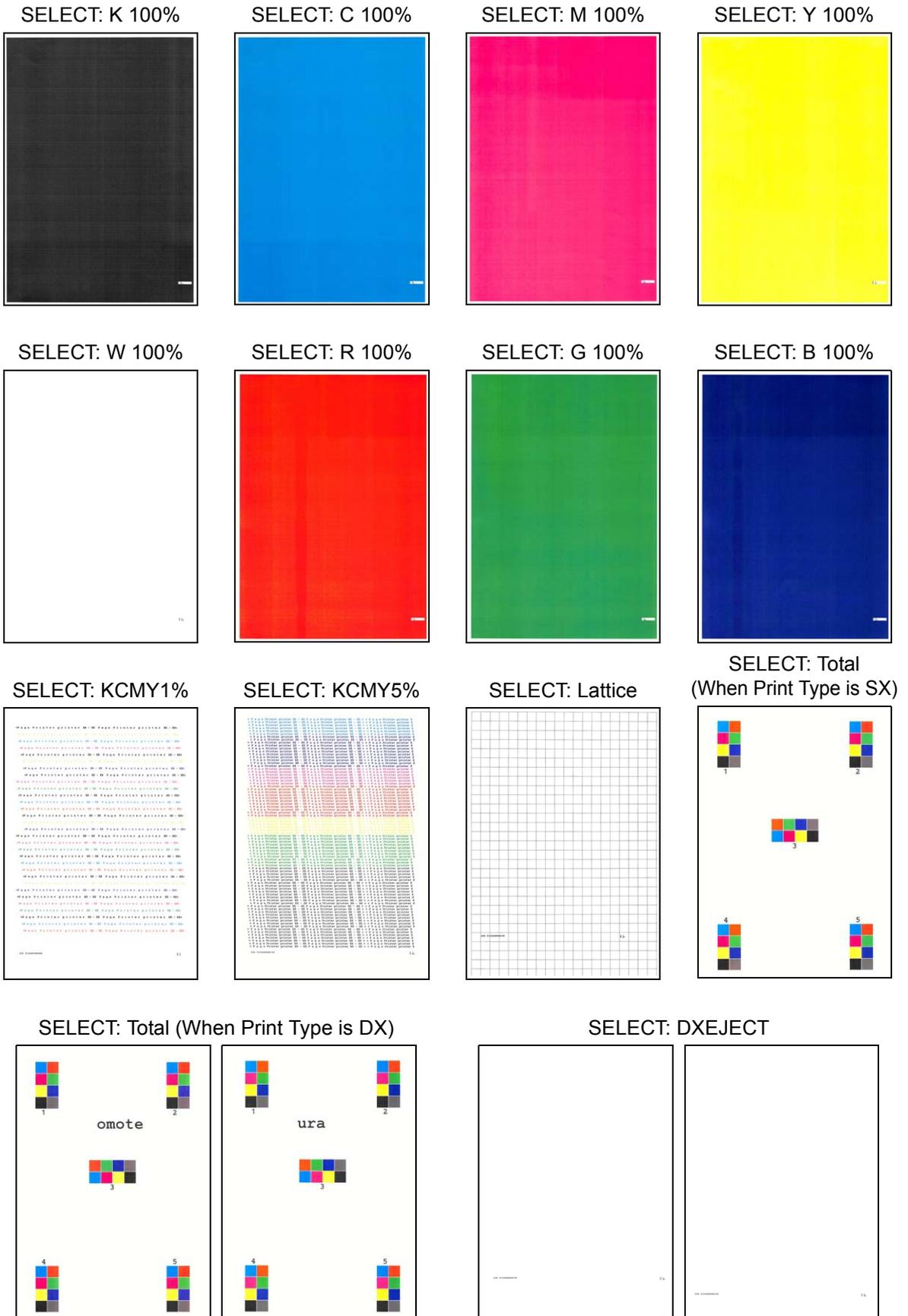


Fig. 5-14

1.3.20 Laser Unit Test Pattern Print (Function Code 68)

<Function>

- This function is used to print the laser unit test pattern.
- Test the print image quality or the print operation.

<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] [8]	"PRINTING"
(3)	The laser unit test pattern (see Fig. 5-15 below) is printed.	
(4)	The printing is completed.	"OK"
	1) At the time of an error	See the table below.
	2) Proceed to (3) after clearing the error.	"PRINTING"
(5)	[X]	To the initial state of maintenance mode

Error display	Remedy
Replace Toner # *	Replace the toner cartridge.
Cover is Open	Close the front cover.
No Paper	Refill the paper, 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.

■ Laser unit test pattern



Fig. 5-15

1.3.21 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>

- (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 (see Fig. 5-16 below) is printed.	
(5)	The printing is completed.	"WAKU SX"
	1) At the time of an error	See the table below.
	2) Proceed to (4) after clearing the error.	"PRINTING"
(6)	[X]	To the initial state of maintenance mode

Error display	Remedy
Replace Toner	Replace the toner cartridge.
Cover is Open	Close the front cover.
No Paper	Refill the paper, close the paper tray.
Jam Tray1	Remove the jammed paper, then close the paper tray and all covers.
Jam Rear	

■ Frame pattern

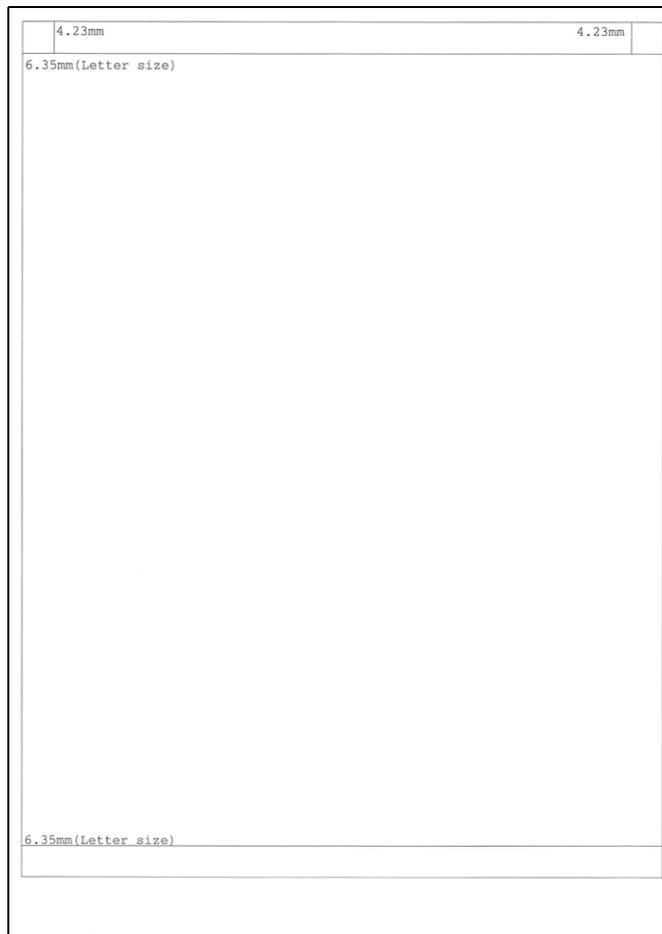


Fig. 5-16

1.3.22 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>

- (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 (see Fig. 5-17 below) is printed.	
(5)	The printing is completed.	"WAKU DX"
	1) At the time of an error	See the table below.
	2) Proceed to (4) after clearing the error.	"PRINTING"
(6)	[X]	To the initial state of maintenance mode

Error display	Remedy
Replace Toner	Replace the toner cartridge.
Cover is Open	Close the front cover.
No Paper	Refill the paper, 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



Fig. 5-17

1.3.23 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>

- (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]	“K”
(4)	Press the [▲], or [▼] to select the print pattern.	Refer to <Print pattern>.
(5)	Press the [Set] to confirm the item.	“SELECT: LETTER”
(6)	Press the [▲], or [▼] to select the print size.	Refer to <Paper size>.
(7)	Press the [Set] to confirm the item.	“SELECT: PLAIN”
(8)	Press the [▲], or [▼] to select the print specification.	Refer to <Print specification>.
(9)	Press the [Set] to confirm the item.	“SELECT: SX”
(10)	Press the [▲], or [▼] to select SX/ DX.	Refer to <Print type>.
(11)	Press the [Set] to confirm the item.	“SELECT: 1PAGE”
(12)	Press the [▲], or [▼] to select the print page.	Refer to <Print page>.
(13)	Press the [Set] to confirm the item and the printing is started.	“PRINTING”
(14)	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 [Start].

<Reprinting>

(15)	[Start]	“K”
(16)	[Start]	To (4)
(17)	[X]	To the initial state of maintenance mode

<Print pattern>

LCD	Description
K	Dither 26% black
MCYK V	4-color vertical band
MCYK H	4-color horizontal band
2d3s Y	Yellow
2d3s C	Cyan
2d3s K	Black
2d3s M	Magenta

* 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] to end the continuous printing.

<Error display>

LCD	Remedy
Replace Toner	Replace the toner cartridge.
Cover is Open	Close the front cover.
No Paper	Refill the paper, close the paper tray.
Jam Tray1	Remove the jammed paper, then close the paper tray and all covers.
Jam Rear	

■ Color test pattern

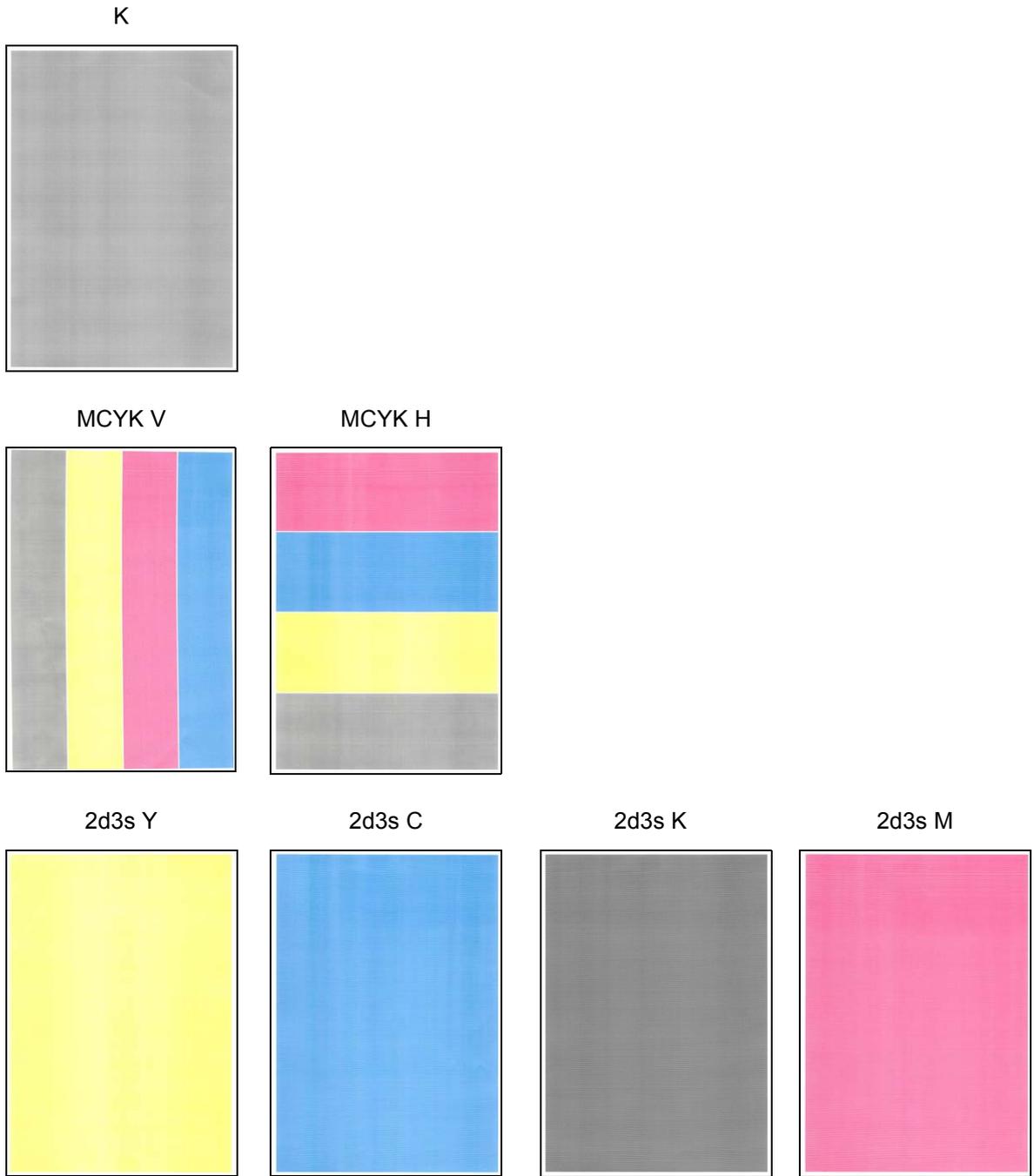


Fig. 5-18

1.3.24 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>

(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]	"PLS WAIT 72"
(3)	The correction is completed.	"OK"
1)	At the time of an error	"ERROR 72"
2)	Press the [▼] to see the details. (See the table below.)	The error appears.
	[Start]	Clear the error.
(4)	[X]	To the initial state of maintenance mode

Error display	Remedy
I_Dark_Err Belt_Meas Err Gsp_Patch_Err Gsp_Calc_Err LED_Adj_Err Sens_Belt_Err FAILED DEVBIAS	<ul style="list-style-type: none"> • Replace the belt unit. • Replace the waste toner box. • Reconnect the eject relay PCB harness. • Replace the REG mark sensor ASSY. • Replace the eject relay PCB. • Replace the Main PCB.
TONER EMPTY # *	Replace the toner cartridge.

* # indicates the toner color (Y, M, or C) of which cartridge became empty.

1.3.25 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>

- (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 table of Function Code 72.)	The error appears.
	[Start]	Clear the error and return.
(4)	Function Code 66 is started to execute 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.
(5)	All operations are completed.	"COMP"
(6)	Press the [▼] to proceed to (2).	"72/66-1"
(7)	[X]	To the initial state of maintenance mode

1.3.26 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>

(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 [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.

■ Setting by spec code list

MODEL	Country Code		Country Code (Detail)		
MFC-EX670W	Canada	0401	---	---	
	U.S.A	0401	---	---	
MFC-L9610CDN	Canada	0001	---	---	
	U.S.A	0001	---	---	
MFC-L9630CDN	Asia	0140	---	---	
	Australia	0156	Australia	0106	
	Brazil	0142	---	---	
	Canada	0101	---	---	
	EU-Regional		0154	Austria	0114
				Belgium	0108
				Bulgaria	0132
				Croatia	0181
				Czech	0137
				Denmark	0113
				Finland	0112
				France	0105
				Germany	0103
				Hungary	0138
				Italy	0116
				Netherlands	0109
				Norway	0107
				Poland	0139
				Portugal	0118
				Romania	0133
				Russia	0148
				Slovakia	0186
				Slovenia	0182
				Spain	0115
	Sweden	0126			
	Switzerland	0110			
	UK	0104			
	Others	0150			
	Gulf		0174	Gulf	0141
South Africa				0124	
Turkey				0125	
New Zealand	0156	New Zealand	0127		
Taiwan	0123	---	---		
U.S.A	0101	---	---		

MODEL	Country Code		Country Code (Detail)	
MFC-L9635CDN	EU-Regional	0054	Austria	0014
			Belgium	0008
			Bulgaria	0032
			Croatia	0081
			Czech	0037
			Denmark	0013
			Finland	0012
			France	0005
			Germany	0003
			Hungary	0038
			Italy	0016
			Netherlands	0009
			Norway	0007
			Poland	0039
			Portugal	0018
			Romania	0033
			Russia	0048
			Slovakia	0086
			Slovenia	0082
			Spain	0015
Sweden	0026			
Switzerland	0010			
UK	0004			
Others	0050			
MFC-L9670CDN	Australia	0356	Australia	0306
	Canada	0301	---	---
	China	0320	---	---
	EU-Regional	0354	Austria	0314
			Belgium	0308
			Bulgaria	0332
			Croatia	0381
			Czech	0337
			Denmark	0313
			Finland	0312
			France	0305
			Germany	0303
			Hungary	0338
			Italy	0316
			Netherlands	0309
Norway			0307	
Poland			0339	
Portugal	0318			
Romania	0333			
Russia	0348			
Slovakia	0386			
Slovenia	0382			
Spain	0315			
Sweden	0326			
Switzerland	0310			
UK	0304			
Others	0350			
New Zealand	0356	New Zealand	0327	
U.S.A	0301	---	---	

Note:

- The spec code list is current as of February 2022.
- Please contact Brother distributors for the latest information.

1	Model name	32	Total printed pages Color/Mono (Total/2-sided)
2	Serial number	33	Total copied pages Color/Mono (Total/2-sided)
3	Model code	34	Total PC printed pages Color/Mono (Total/2-sided)
4	Spec code	35	Total fax pages Color/Mono (Total/2-sided)
5	Switch check sum (Factory use) and comparison of default / current value	36	Total pages printed by other methods Color/Mono (Total/2-sided)
6	Main firmware version	37	Accumulated average coverage (Each toner)
7	Sub3 firmware version	38	Average coverage (Current toner)
8	Boot firmware version	39	Average coverage (Previous used toner)
9	Engine archive version	40	Latest job average coverage (Each toner)
10	ROM version for T2 control PCB	41	Drum page count / Rotations of drum
11	ROM version for T3 control PCB	42	Rotations of DEV roller (Current toner/Previous used toner)
12	ROM version for T4 control PCB	43	Total printed pages Per paper tray/paper size/paper type
13	ROM check sum	44	Printed pages per toner (Current/Previous)
14	RTC (Real Time Clock) check	45	Number of pages printed of waste toner box
15	RTC (Real Time Clock) check backup	46	Rotations of DEV roller used in printing (Current toner/Previous used toner)
16	RAM size	47	Total number of paper jams / Paper jams that have occurred in each section in the machine
17	Memory version	48	Machine error log / Total pages printed by the time of error occurrence / Temperature and humidity at the time of error occurrence
18	ROM version for TT control PCB	49	Number of times that consumables and periodical replacement parts have been replaced
19	USB ID code	50	Number of times that each toner has been replaced
20	Result of function code 05 / Result of function code 72 / Setting by wireless LAN spec / Wireless LAN output peak / WLAN Setup YES/NO setting / Toner type CMYK (Current) / Toner type CMYK (Previous)	51	Total pages of scanning
21	Main PCB inspection log / High voltage inspection log / The number of times that the discharge error / fuser error / scanner motor lock error / process status / irregular power supply detection error occurred	52	Number of faxes sent
22	Auto registration/developing bias voltage/gamma calibration / (User) Registration/Developing bias voltage/Gamma calibration / Registration calibration error / Auto color calibration flag	53	Communication error log
23	Not necessary for maintenance (Document front/rear sensor log)	54	Developing bias voltage value (Each toner)
24	The number of MPS replacement parts used (Toner C/M/Y/K drum) / Genuine toner identification information	55	Engine sensor log (Not necessary for maintenance)
25	Estimated remaining toner amount	56	Status log (Not necessary for maintenance)
26	Remaining life of drum unit	57	Home position detection / Home position error display
27	Remaining life of belt unit	58	Temperature / Highest and lowest temperature
28	Remaining life of fuser	59	Humidity / Highest and lowest humidity
29	Remaining life of laser unit	60	Total power distribution time / Number of times that the power is turned ON
30	Remaining life of PF kit MP	61	Start date for machine operation / Initial set date of RTC
31	Remaining life of PF kit 1	62	Latest paper type used

1.3.28 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 motor 80	Evacuates hot air of the fuser.
P	LVPS fan	Evacuates hot air of the LVPS PCB.
B	Blower	Intakes air to prevent a dirt on the corona wire.

<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] [8] All the fans rotate at 100% speed.	"F100 P100 B100"
(3)	[Start] All the fans rotate at 50% speed.	"F50 P50 B 50"
(4)	[Start] All the fans stop.	"F 0 P 0 B 0"
(5)	[X]	To the initial state of maintenance mode

■ Location of fans

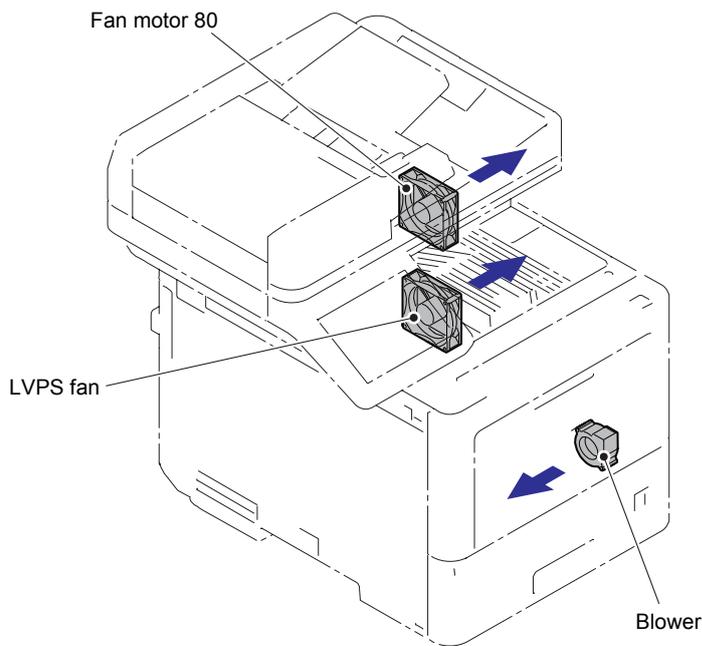


Fig. 5-20

1.3.29 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]	"BACKUP CLEAR"
	[X]	To the initial state of maintenance mode
(3)	[Start]	The deleting is started.

- (4) When deleting is completed, the machine returns to the ready state.

1.3.30 Display Machine Log Information (Function Code 80)

<Function>

- This function is used to display the current machine information on the LCD.

<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)	[8] [0]	"MACERR_01:(****)" **** represents an error code.
(3)	[▼]	To next item
	[▲]	To previous item
(4)	[X]	To the initial state of maintenance mode

■ **Maintenance information**

LCD	Description
MACERR_##:0000	Machine error log (last ten errors) *1
USB:000G8J000166	Serial number *2
MAC:008077112233	MAC address
PCB:911309123456	Main PCB serial number
CTN_ERM:78%	Amount of remaining cyan toner estimated from coverage
CTN_RRM:67%	Amount of remaining cyan toner estimated from the number of develop rotations
MTN_ERM:78%	Amount of remaining magenta toner estimated from coverage
MTN_RRM:67%	Amount of remaining magenta toner estimated from the number of develop rotations
YTN_ERM:78%	Amount of remaining yellow toner estimated from coverage
YTN_RRM:67%	Amount of remaining yellow toner estimated from the number of develop rotations
KTN_ERM:87%	Amount of remaining black toner estimated from coverage
KTN_RRM:67%	Amount of remaining black toner estimated from the number of develop rotations
DRUM_PG:00000000	Printed pages on drum unit
PFMP_PG:00000000	Pages fed from PF kit MP
PFK1_PG:00000000	Pages fed from PF kit 1
PFK2_PG:00000000	Pages fed from PF kit 2
PFK3_PG:00000000	Pages fed from PF kit 3
PFK4_PG:00000000	Pages fed from PF kit 4
PFK5_PG:00000000	Pages fed from PF kit 5
FUSR_PG:00000000	Printed pages on fuser
LASR_PG:00000000	Printed pages on laser unit
BELT_PG:00000000	Printed pages on belt unit
TTL_PG:00000000	Total number of pages printed
DX_PG:00000000	Pages fed from 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
TTLCPY: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 copied
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

LCD	Description
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 of cyan toner cartridge in use
CCVRGACC:3.47%	Accumulated average coverage of cyan toner cartridge
MCVRGUSI:4.32%*	Average coverage of magenta toner cartridge in use
MCVRGACC:3.47%	Accumulated average coverage of magenta toner cartridge
YCVRGUSI:4.32%*	Average coverage of yellow toner cartridge in use
YCVRGACC:3.47%	Accumulated average coverage of yellow toner cartridge
KCVRGUSI:4.32%*	Average coverage of black toner cartridge in use
KCVRGACC:3.47%	Accumulated average coverage of black toner cartridge
DRUM:00000000	Number of drum rotations
CTN_RND:00000000	Number of C DEV roller rotations
MTN_RND:00000000	Number of M DEV roller rotations
YTN_RND:00000000	Number of Y DEV roller rotations
KTN_RND:00000000	Number of K DEV roller rotations
MP_PG:00000000	Number of pages picked up from MP tray
TR1_PG:00000000	Number of pages picked up from T1
TR2_PG:00000000	Number of pages picked up from T2
TR3_PG:00000000	Number of pages picked up from T3
TR4_PG:00000000	Number of pages picked up from T4
TR5_PG:00000000	Number of pages picked up from T5
DX_PG:00000000	Number of pages picked up from 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
COLOR:00000000	Full-color printed pages
LTHD:00000000	Printed pages on letter head
TTL_JAM:00000000	Total of jammed sheets
MP_JAM:00000000	Number of sheets jammed in MP tray
TR1_JAM:00000000	Number of sheets jammed in T1
TR2_JAM:00000000	Number of sheets jammed in T2

LCD	Description
TR3_JAM:00000000	Number of sheets jammed in T3
TR4_JAM:00000000	Number of sheets jammed in T4
TR5_JAM:00000000	Number of sheets jammed in T5
IN_JAM:00000000	Number of sheets jammed inside the center of the machine
RE_JAM:00000000	Number of sheets jammed around the back cover
DX_JAM:00000000	Number of sheets jammed in the DX tray
POWER:00000375	Total power distribution time (Unit: H)
PWRCNT:00000001	Number of times that the power is turned ON
CTN_CH:0000	Number of times that the cyan toner cartridge has been replaced *3
MTN_CH:0000	Number of times that the magenta toner cartridge has been replaced *3
YTN_CH:0000	Number of times that the yellow toner cartridge has been replaced *3
KTN_CH:0000	Number of times that the black toner cartridge has been replaced *3
DRUM_CH:0000	Number of times that the drum unit has been replaced *3
WTNR_CH:0000	Number of times that the waste toner box has been replaced *3
BELT_CH:0000	Number of times that the belt unit has been replaced *3
FUSR_CH:0000	Number of times that the fuser has been replaced *3
LASR_CH:0000	Number of times that the laser unit has been replaced *3
PFMP_CH:0000	Number of times that the PF kit MP has been replaced *3 *4
PFK1_CH:0000	Number of times that the PF kit 1 has been replaced *3 *4
PFK2_CH:0000	Number of times that the PF kit 2 has been replaced *3 *4
PFK3_CH:0000	Number of times that the PF kit 3 has been replaced *3 *4
PFK4_CH:0000	Number of times that the PF kit 4 has been replaced *3 *4
PFK5_CH:0000	Number of times that the PF kit 5 has been replaced *3 *4
CTN_SWP:0000	Number of times that the cyan toner has been replaced *3
MTN_SWP:0000	Number of times that the magenta toner has been replaced *3
YTN_SWP:0000	Number of times that the yellow toner has been replaced *3
KTN_SWP:0000	Number of times that the black toner has been replaced *3
DRUM_SWP:0000	Number of times that the drum toner has been replaced *3
CTN_PG1:00000000	Number of pages printed from the currently installed cyan toner cartridge
CTN_PG2:00000000	Number of pages printed from the previous installed cyan toner cartridge
MTN_PG1:00000000	Number of pages printed from the currently installed magenta toner cartridge
MTN_PG2:00000000	Number of pages printed from the previous installed magenta toner cartridge
YTN_PG1:00000000	Number of pages printed from the currently installed yellow toner cartridge
YTN_PG2:00000000	Number of pages printed from the previous installed yellow toner cartridge
KTN_PG1:00000000	Number of pages printed from the currently installed black toner cartridge
KTN_PG2:00000000	Number of pages printed from the previous installed black toner cartridge
WTNR_PG:00000000	Number of pages printed from the waste toner box
SCN_PG:00000000	Number of sheets scanned (except for FAX and Copy)
ADTL_PG:00000000	Total pages of ADSX_PG and ADDX_PG
ADSX_PG:00000000	Number of sheets scanned in one-sided scanning with the ADF
ADDX_PG:00000000	Number of sheets scanned in two-sided scanning with the ADF
FB_PG:00000000	Number of sheets scanned with the FB
ADSX_JAM:000000	Number of documents jammed at one-sided scanning with the ADF
ADDX_JAM:000000	Number of documents jammed at two-sided scanning with the ADF (2-sided scanning models only)
FXTX_PG:00000000	Number of FAX pages sent
COMERR#:00000000	Communication error log (last three errors) *5
CDEV_BIAS:400V	Cyan developing bias voltage
MDEV_BIAS:400V	Magenta developing bias voltage

LCD	Description
YDEV_BIAS:400V	Yellow developing bias voltage
KDEV_BIAS:400V	Black developing bias voltage
ENGERR##:000000	Engine error log (last ten errors) *6
HODN_ER:0000	Number of discharge errors occurred
FUSR_ER:0000	Number of fuser errors occurred
MTLK_ER:0000	Number of scanner motor lock errors occurred in the laser scanner
DEVSTATUS_##:00	Log for design analysis *7
FUNC1=0000000000	SSW information

*1 01 to 10 will be displayed for “##” in chronological order. Pressing the [Set] 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] 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.

- 1) Press the [9], [4], [7], and [5] in this order while the serial number is displayed. The first digit of the serial number shown on the LCD starts flashing to indicate that it is editable.
- 2) Use the numeric key to enter the first digit of the serial number. Press the [▶], and the second digit starts flashing. Similarly, enter the second digit to the fifteenth digit (the last digit of the serial number) repeatedly.

<How to enter alphanumeric characters>

When the alphanumeric character is entered, see the table below and repeatedly 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

Note:

- In the initial products of touch panel models, if the characters do not change in the above procedure, the character is changed by pressing the [◀] followed by [▶] or pressing the [▶] followed by [◀].

- 3) Press the [Start]. The serial number is saved and the machine returns to the initial state of maintenance mode.

*3 Pressing the [Set] while the number of each consumable part had replaced is displayed shows “DATE_XX:000000” (XX: each consumable part) and the replaced date on the LCD.

*4 Pressing the [Set] two times while the number of each consumable part had replaced is displayed shows “TLPG_XX:00000000” (XX: each consumable part, and the total page count when each consumable part is replaced finally) on the LCD.

*5 Pressing the [Set] while the communication error is displayed shows “DATE:0000000000” and the replaced date on the LCD.

*6 01 to 10 will be displayed for “##” in chronological order. Pressing the [Set] 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] while log for design analysis is displayed shows “PGCNT:00000000” (total pages printed at the time of the error) on the LCD.

1.3.31 Display Machine Error Code (Function Code 82)

<Function>

- This function is used to display the last error code that occurred.

<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)	[8] [2]	"MACHINE ERR (****)" **** represents an error code.
(3)	[X]	To the initial state of maintenance mode

1.3.32 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>

- (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 table below.)	The error appears.
	[Start]	Clear the error.
(4)	[Set]	To the initial state of maintenance mode

Error display	Remedy
I_Dark_Err LED_Adj_Err Belt_Meas_Err Sens_Belt_Err FAILED DEVBIAS	<ul style="list-style-type: none"> • Replace the belt unit. • Replace the waste toner box. • Reconnect the eject relay PCB harness. • Replace the REG mark sensor ASSY. • Replace the eject relay PCB. • Replace the Main PCB.
TONER EMPTY # *	Replace the toner cartridge.

* # indicates the toner color (Y, M, or C) of which cartridge became empty.

1.3.33 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.

1.3.34 Adjust Settings / Reset Counters after Parts Replacement (Function Code 88)

<Function>

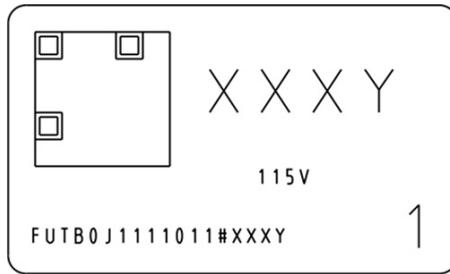
- This function is used to clear the counter of each consumable part and count up Replace Count by one.
- And set the motor speed correction value.

<Operating Procedure>

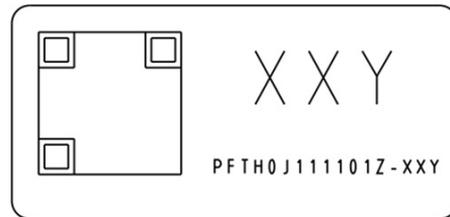
- (1) The machine enters into the initial state of maintenance mode.
(Refer to "1.2 How to Enter the Maintenance Mode" in Chapter 5.)

(2)	[8] [8]	"Reset-Laser Unit"
(3)	Press the [▲], or [▼] to select a part.	"Reset-(*****)", or "Adjust-(*****)" ***** represents the name of the selected part.
(4)	Press the [Start] to confirm the part.	"(*****) OK?" or "Adj. (*****) ? XX(X)Y"

For the motor speed correction value settings, enter the correction code written on the QR code label of each unit.



Fuser



PF unit

The set value of fuser: 0000 to 9999 (The first 3 digits (See XXX above) represent the speed correction value and the last 1 digit (See Y above) represents CheckSum.)
 The set value of PF unit: 000 to 999 (The first 2 digits (See XX above) represent the speed correction value and the last 1 digit (See Y above) represents CheckSum.)
 The correction code consists of the speed correction value and CheckSum.
 Ex) When setting 4002, 400 is the speed correction value, and 2 is CheckSum.

(5)	Press the [Start] to reset the counter, or set the motor speed correction value.	"(*****) OK?" or "Adjust-(*****)"
(6)	Proceed to (3).	"Reset-(*****)"
(7)	[X]	To the initial state of maintenance mode

LCD	Part name	Counter to be reset, or motor speed correction value to be set
Reset-Laser Unit	Laser unit	Printed pages counter
Adjust-PFUnit	PF unit	Motor speed correction value
Adjust-FuserUnit	Fuser	Motor speed correction value
Reset-LVPS *1	LVPS PCB	Irregular power supply detection counter
Reset-PF Kit MP	PF kit MP	Printed pages counter
Reset-PF Kit T5	PF kit 5	Printed pages counter
Reset-PF Kit T4	PF kit 4	Printed pages counter
Reset-PF Kit T3	PF kit 3	Printed pages counter
Reset-PF Kit T2	PF kit 2	Printed pages counter
Reset-PF Kit T1	PF kit 1	Printed pages counter
Reset-Fuser Unit	Fuser	Printed pages counter

*1 Resets the number of times of errors/warnings for square wave detection. (Zero Cross Error is cleared.)

Note:

- After replacing the fuser or the PF unit, enter Function Code 88 and execute Adjust-FuserUnit / Adjust-PFUnit to adjust the speed.

1.3.35 Quit Maintenance Mode (Function Code 99)

<Function>

- This function is used to restart the machine, and return it to the ready state.

<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)

[9] [9]	
---------	--

- (3) 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>

(1) The machine is in the ready state.

(2) 

(3)	[Printer]	A selection screen
(4)	[^], or [v]	
(5)	[Color Correction]	The selected screen
(6)	[Auto Correction]	[On], or [Off]

Return to (5).

(7)	[]	To the ready state
-----	---	--------------------

2.2 Print Communication List

<Function>

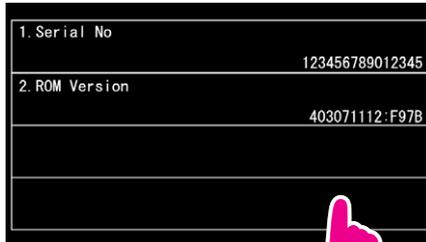
- This function is used to print Communication List.

<Operating Procedure>

(1) The machine is in the ready state.

(2) Press the [] for five seconds.

(3) Press the blank field at the bottom.



(4) [#] [1] [0] [4] [1] [4]

The Communication List is printed.

1	2	3	A	B	C	Mono CopyS	Mono CopyD
4	5	6	D	E	F	Color CopyS	Color CopyD
7	8	9	◀	▶	▲		
*	0	#	Set	Clear	▼	Start	Stop

(5) [X]

To the initial state of maintenance mode

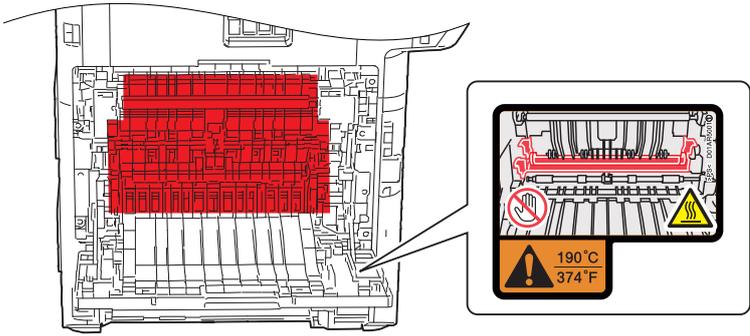
CHAPTER 6 PERIODICAL MAINTENANCE

1. SAFETY PRECAUTIONS

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

WARNING

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



- Be careful not to lose screws, washers, or other parts removed.
- Be sure to apply grease to the gears and applicable positions specified in [Chapter 3](#).
- When using soldering irons or other heat-generating tools, take care not to accidentally damage parts such as wires, PCBs and covers.
- Static electricity charged in your body may damage electronic parts. When transporting PCBs, be sure to wrap them in conductive sheets.
- When replacing the PCB and all the other related parts, put on a grounding wrist band and perform the job on a static mat. Also take care not to touch the conductor sections on the flat cables or on the wire harness.
- After disconnecting flat cables, check that each cable is not damaged at its end or short-circuited.
- When connecting flat cables, do not insert them at an angle. After insertion, check that the cables are not at an angle.
- When connecting or disconnecting harnesses, hold the connector body, not the cables. If the connector is locked, release it first.
- After a repair, check not only the repaired portion but also handling of harnesses. Also check that other related portions are functioning properly before operational checks.
- There must be no damage in the insulation sheet.
- After a repair, update the firmware to the latest version.
- Forcefully closing the front cover without mounting the toner cartridge and the drum unit can damage the machine.

2. PERIODICAL REPLACEMENT PARTS

2.1 Preparation

■ Disconnecting cables and removing accessories

Prior to proceeding with the disassembly procedure,

- (1) **Unplug** > AC cord,
USB cable, if connected,
LAN cable, if connected,
USB flash memory drive, if connected,
Line cord, if connected.
- (2) **Remove** > Toner cartridge,
Drum unit,
Belt unit,
Waste toner box,
Paper tray unit,
DX tray,
LAN port cap,
EXT cap,
WLAN module (NC-9000W) (Only for wireless network models)

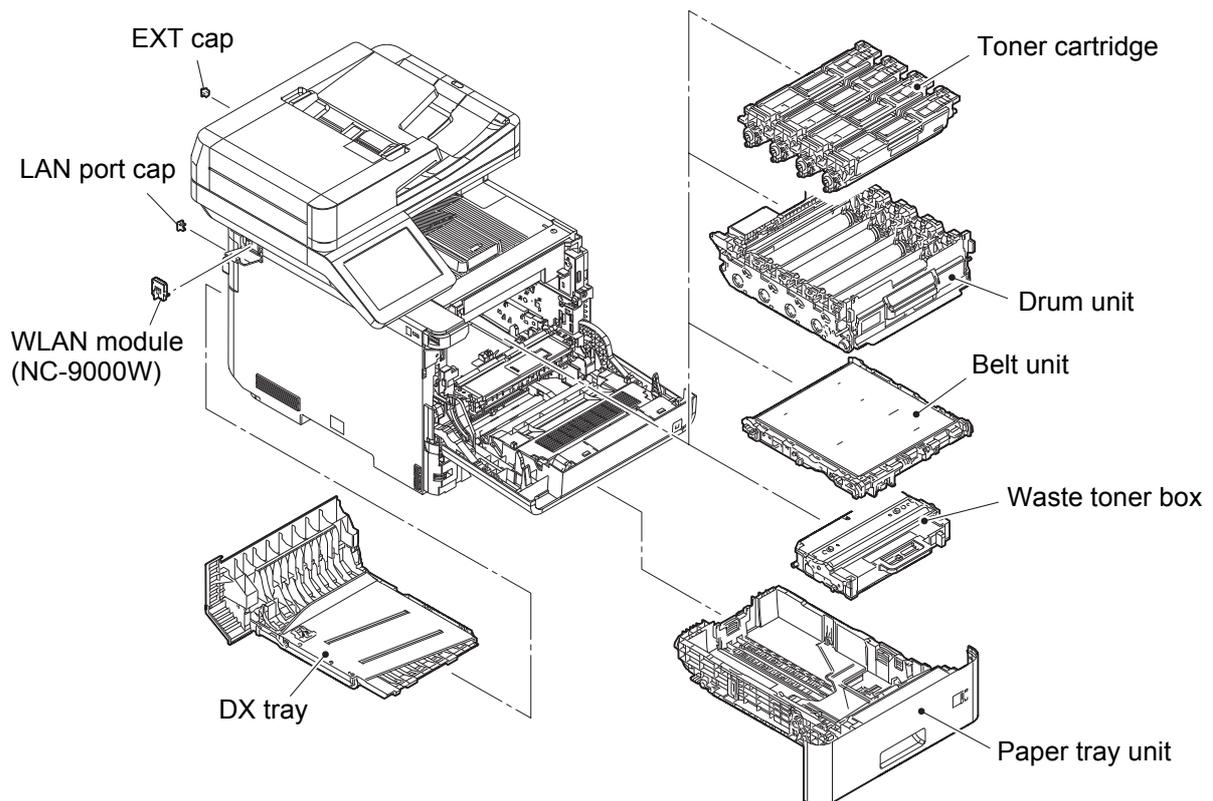


Fig. 6-1

2.2 Fuser

(1) Open > Back cover

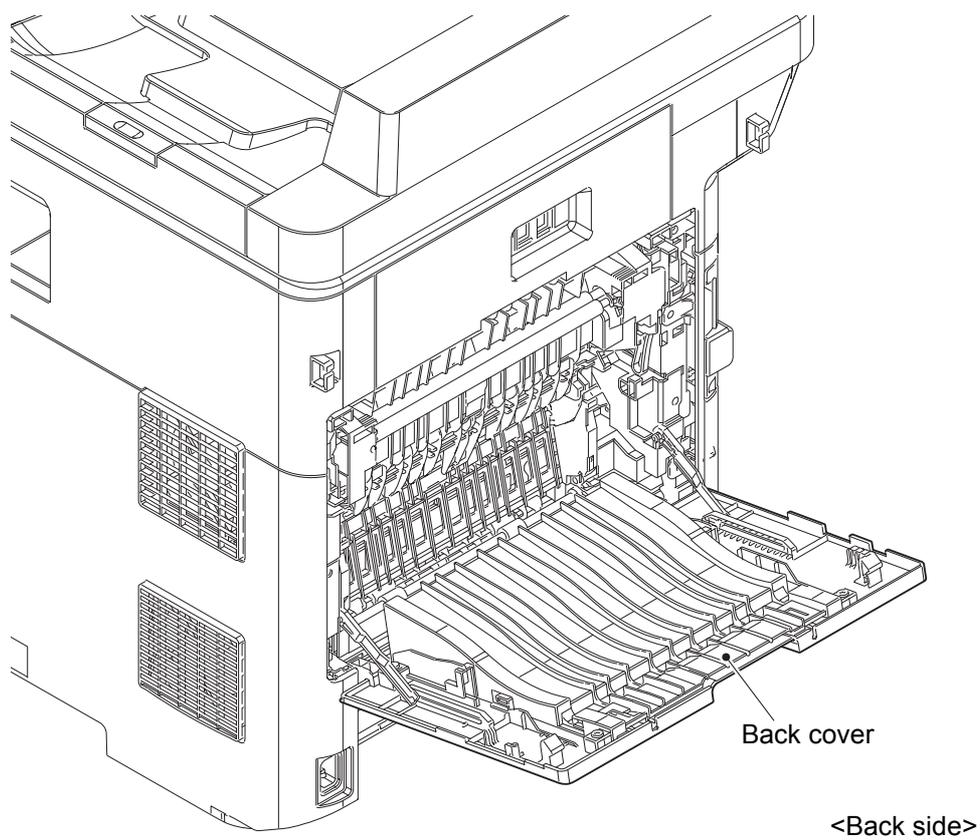


Fig. 6-2

(2) **Release** > Back cover stopper arm R, Back cover stopper arm L

 **Fixtures & Fittings**

- Hook of the Back cover stopper arm R
- Hook of the Back cover stopper arm L

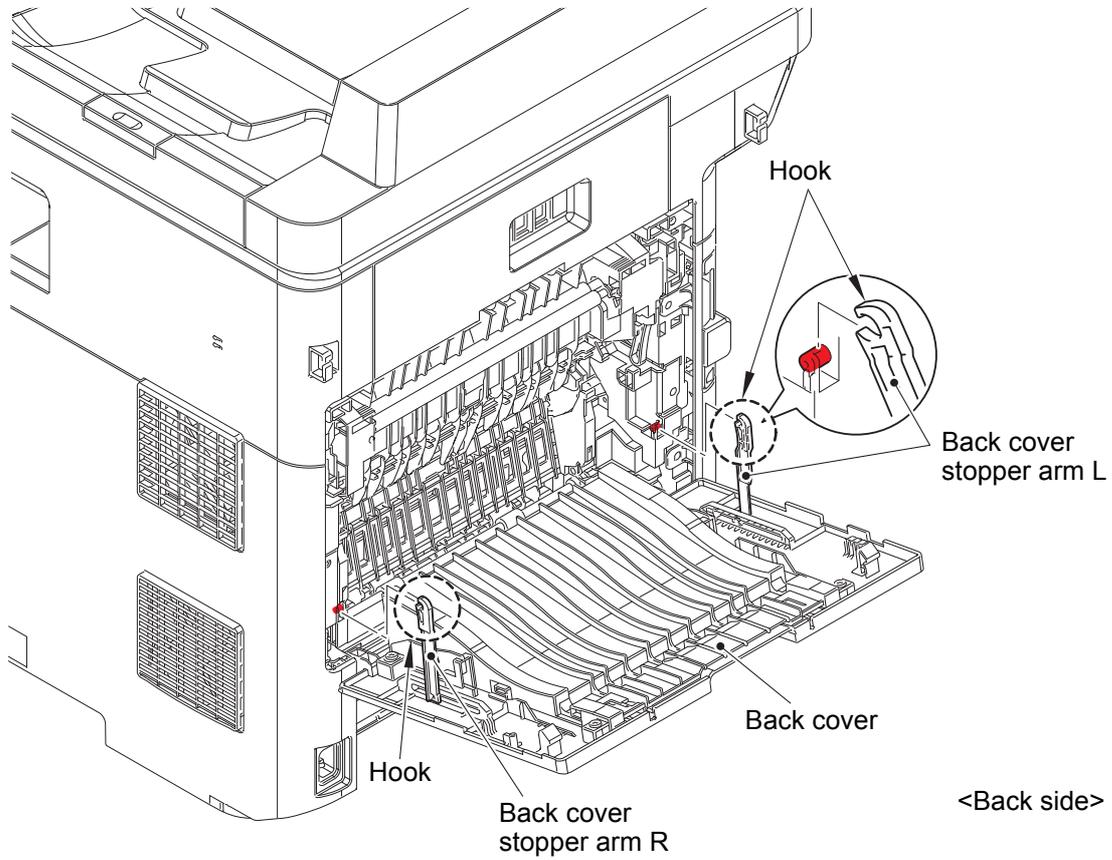


Fig. 6-3

(3) **Remove** > Back cover

 **Point:**

- Remove the Back cover in the order of the arrows.

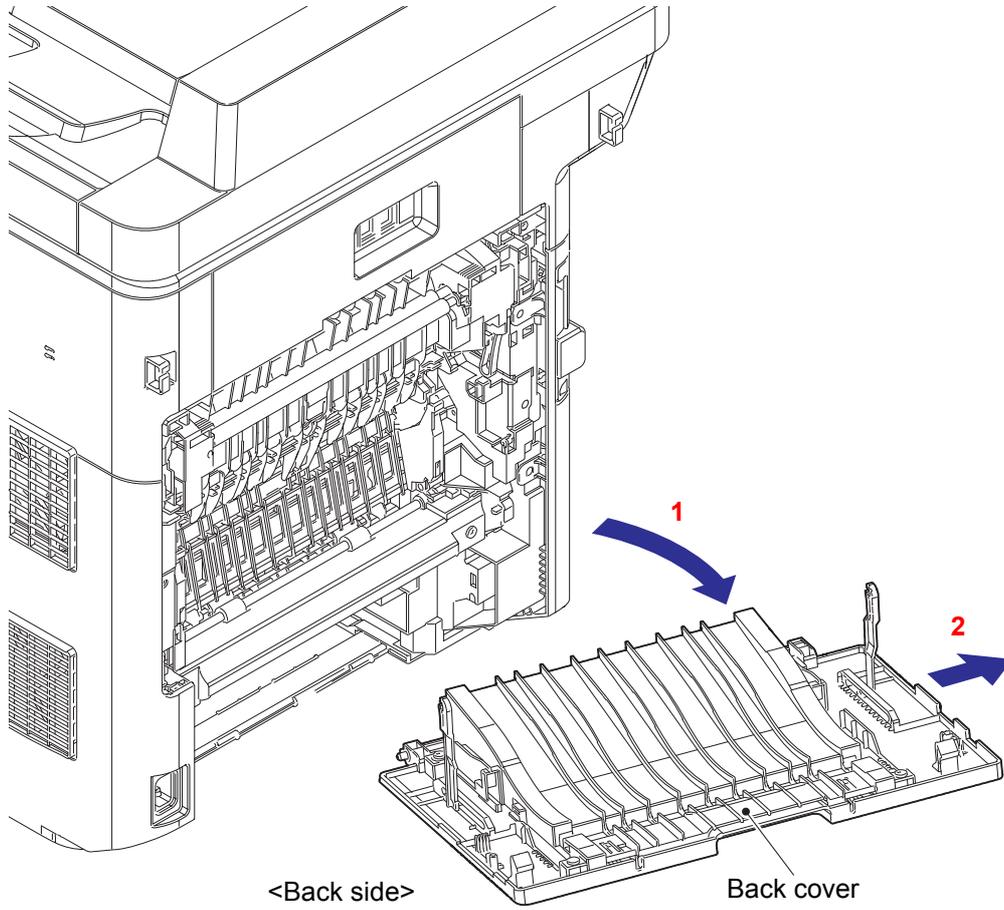


Fig. 6-4

(4) **Remove** > Fuser cover L

- Fixtures & Fittings**
- Taptite bind B M4x12 (x 2)

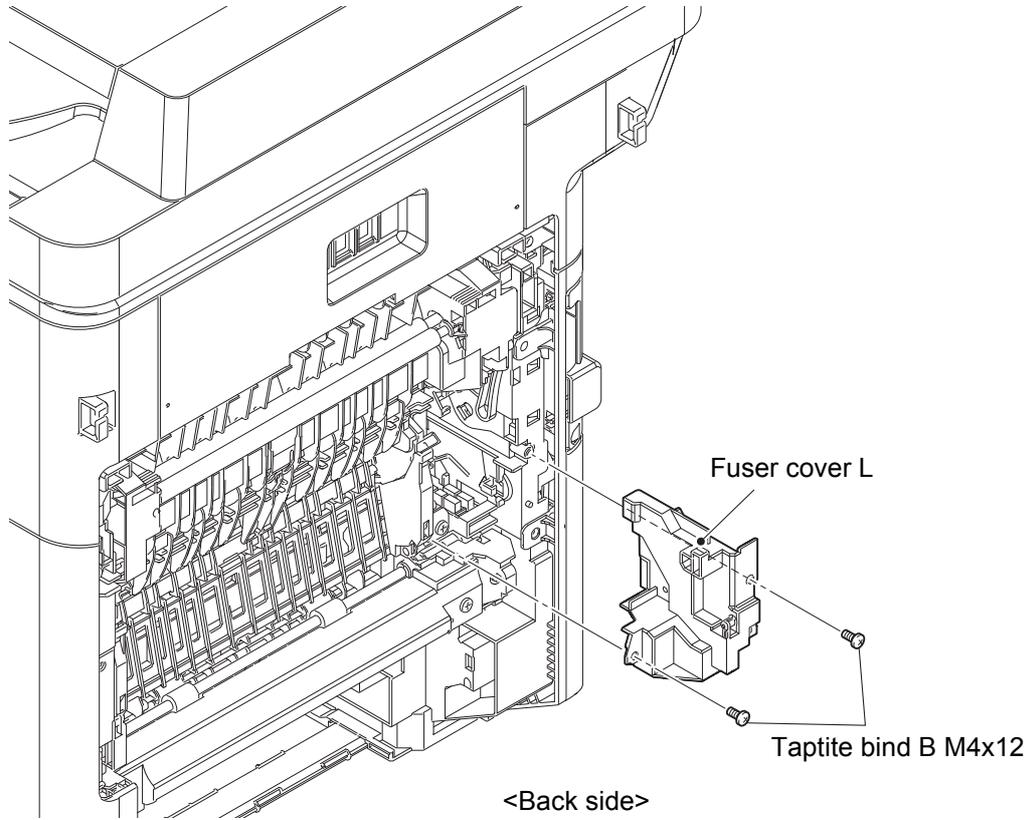


Fig. 6-5

(5) **Remove** > Fuser cover R

- Fixtures & Fittings**
- Taptite bind B M4x12 (x 2)

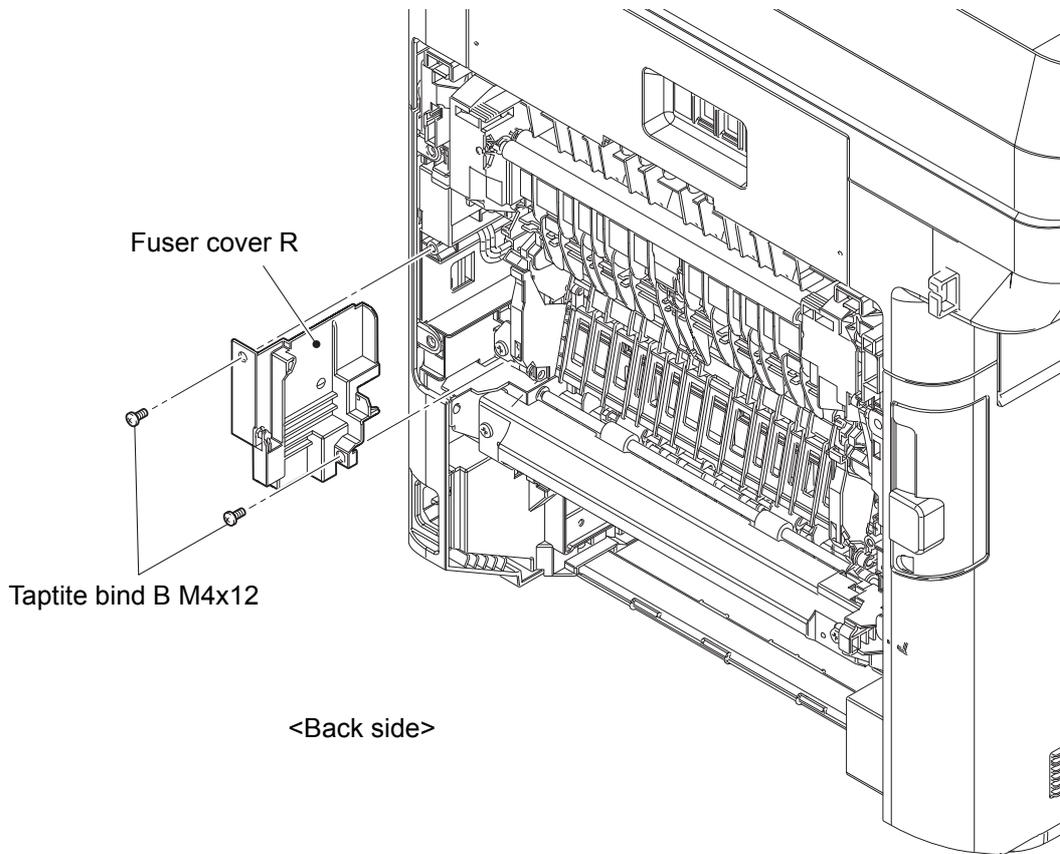


Fig. 6-6

(6) **Remove** > DX flapper ASSY

 **Fixtures & Fittings**
- Boss (x 2)

(7) **Remove** > Spring DX flapper holder L, Spring DX flapper holder R

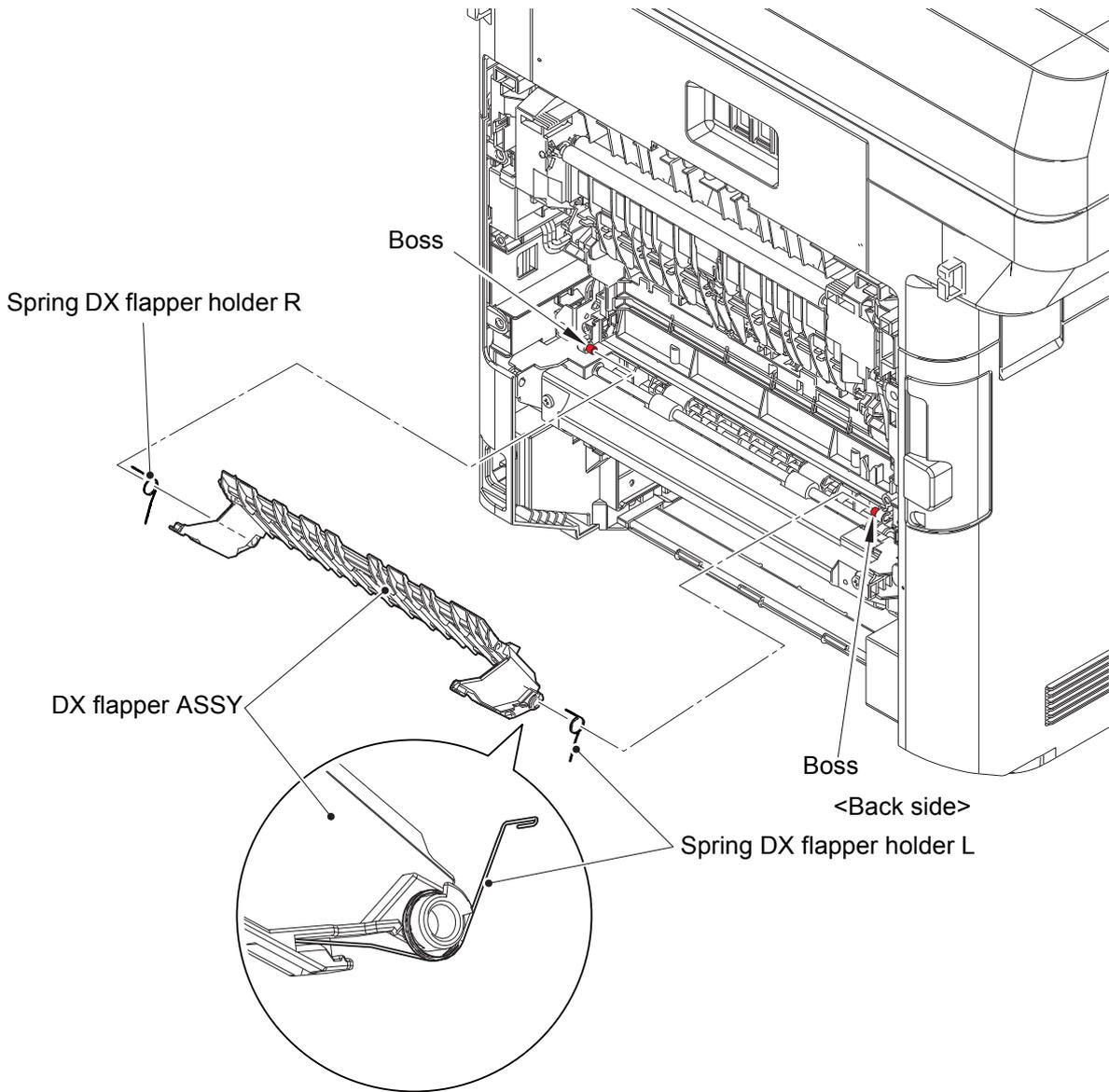


Fig. 6-7



Assembling note:

- Apply the Spring DX flapper holder L/R as shown in the figure above.

(8) **Open** > Fuser cover

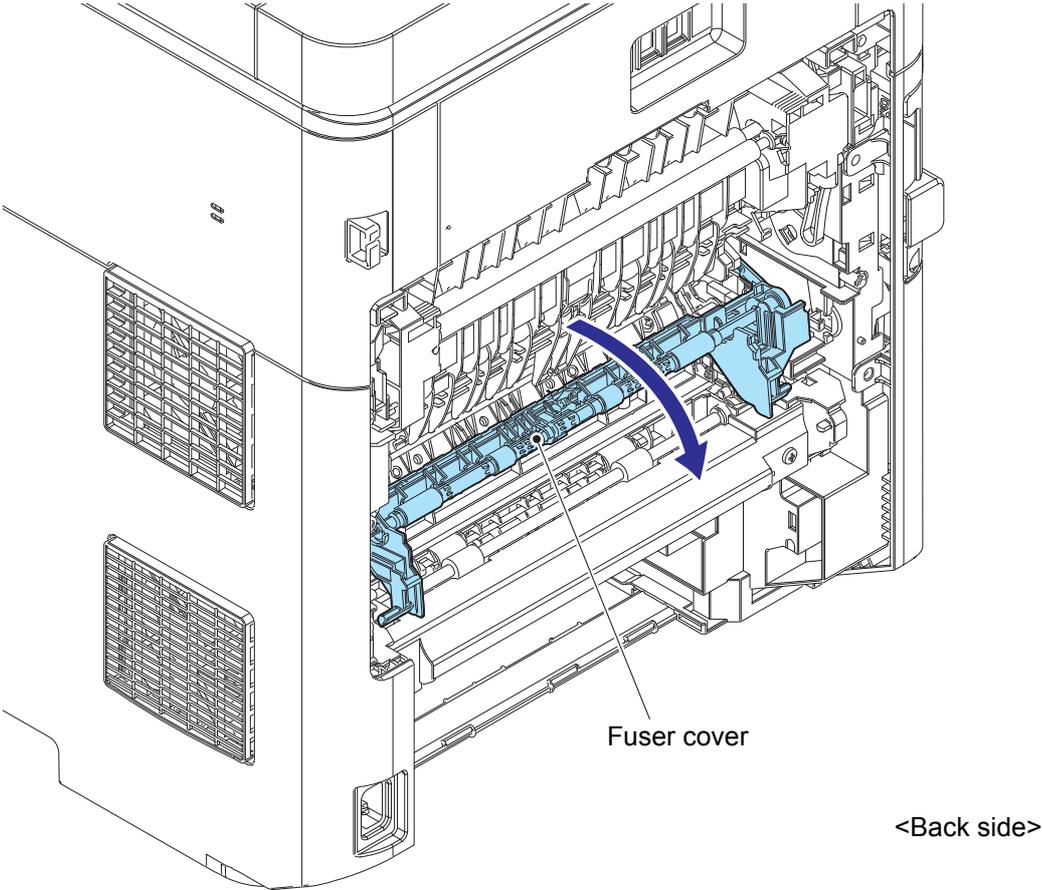


Fig. 6-8

(9) **Remove** > Fuser cover



Point:

- Remove the Fuser cover in the order of the arrows.

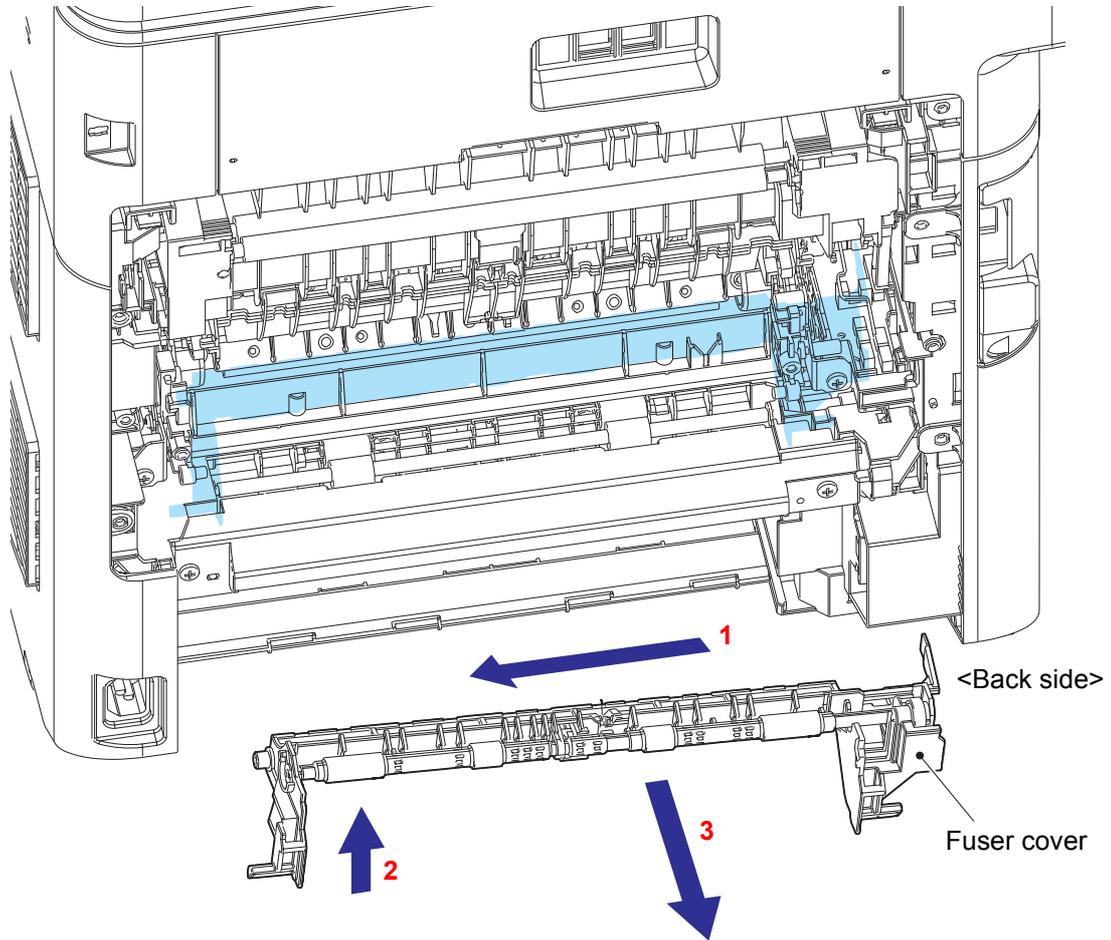


Fig. 6-9

(10) **Open** > DX2 unit

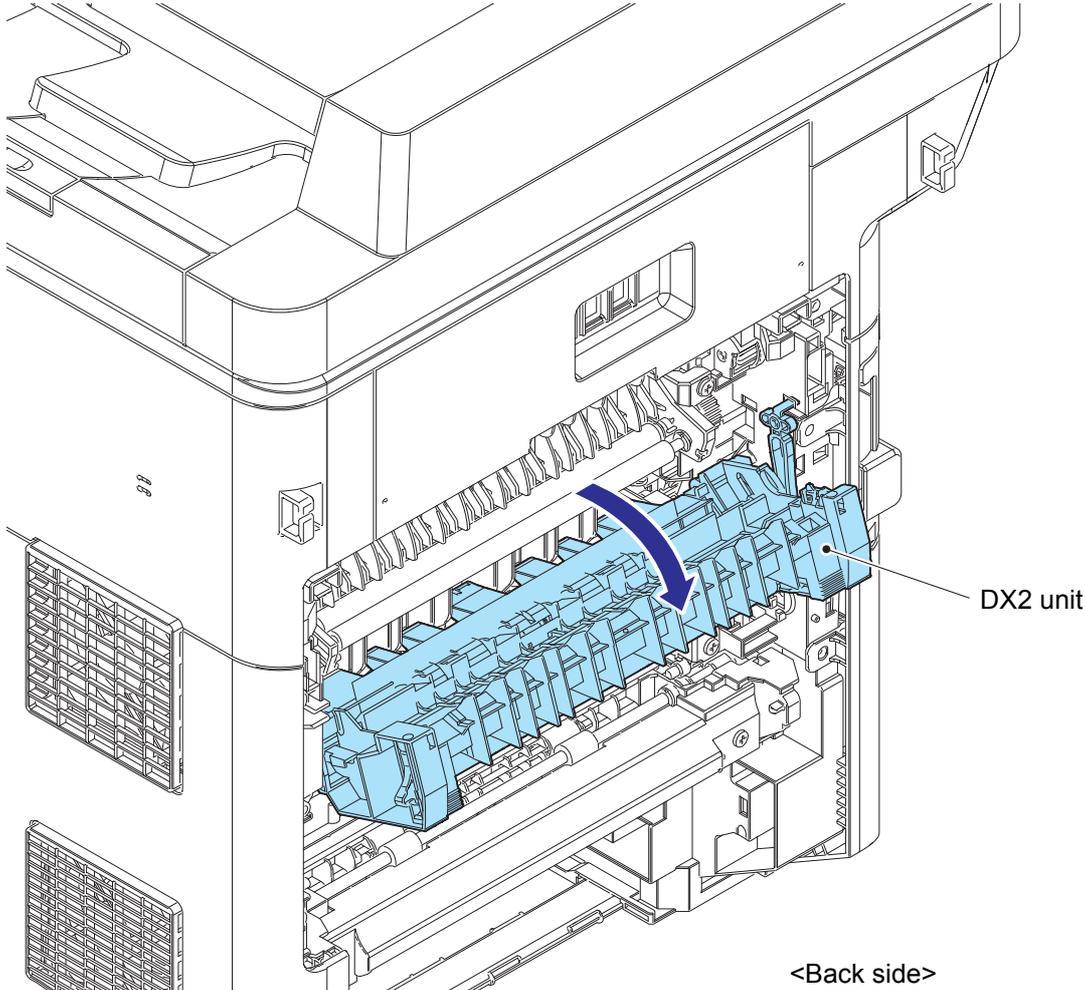


Fig. 6-10

(11) **Remove** > DX2 unit

 **Fixtures & Fittings**

- Hook of the DX2 hold arm (x 1)

 **Point:**

- Remove the DX2 unit in the order of the arrows.

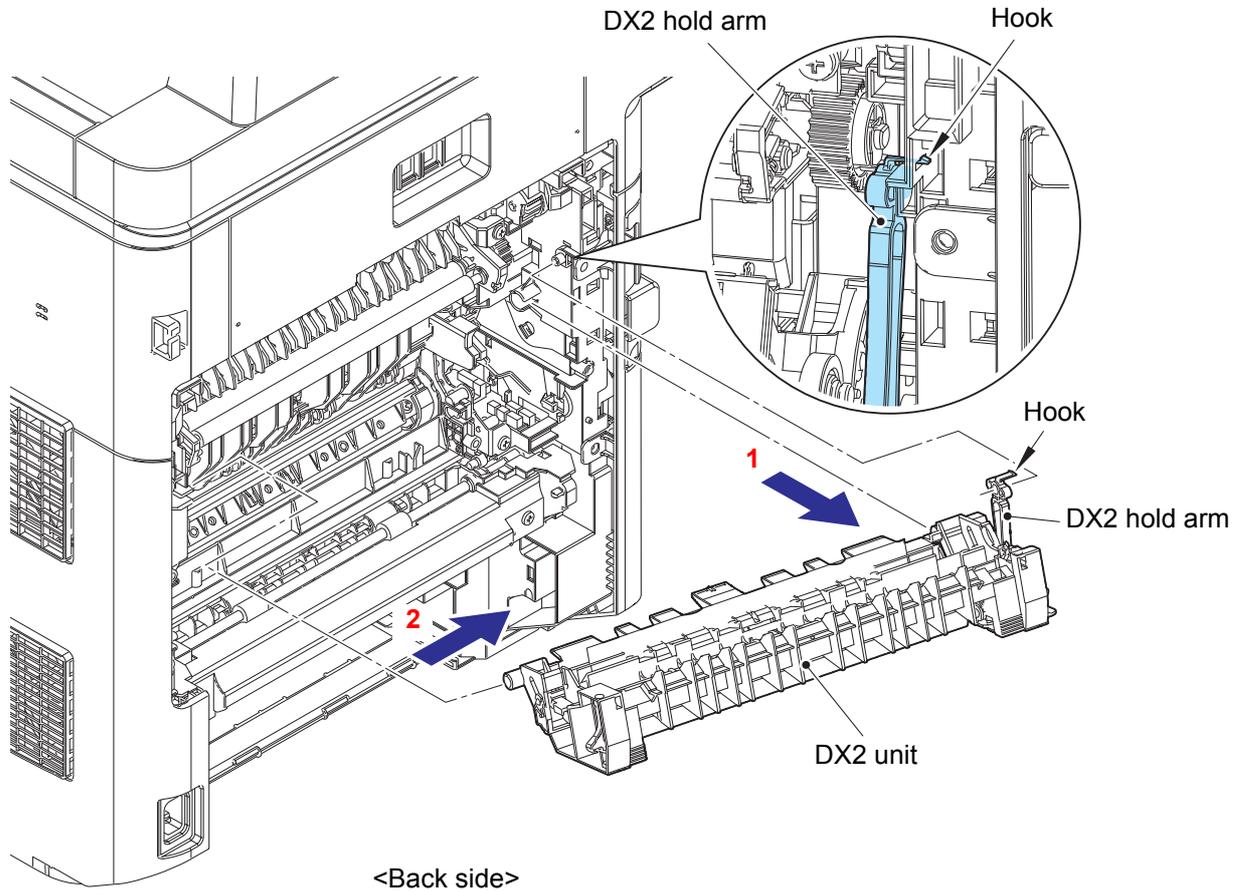
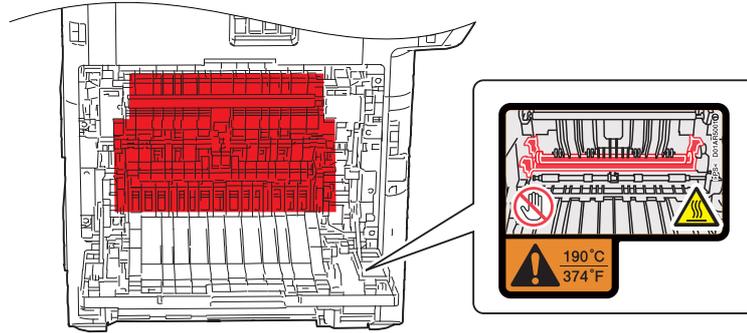


Fig. 6-11

WARNING

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



(12) Disconnect > Fuser heater harness

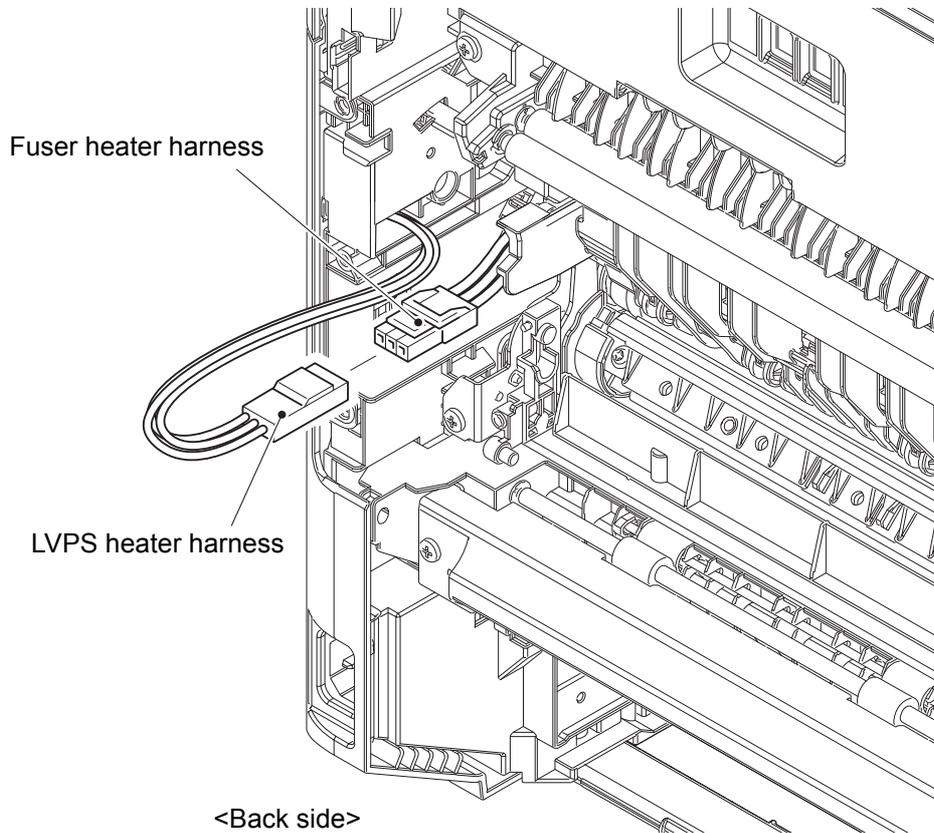


Fig. 6-12



Note:

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

(13) **Disconnect** > Nip release sensor harness, Center thermistor harness, Side thermistor harness

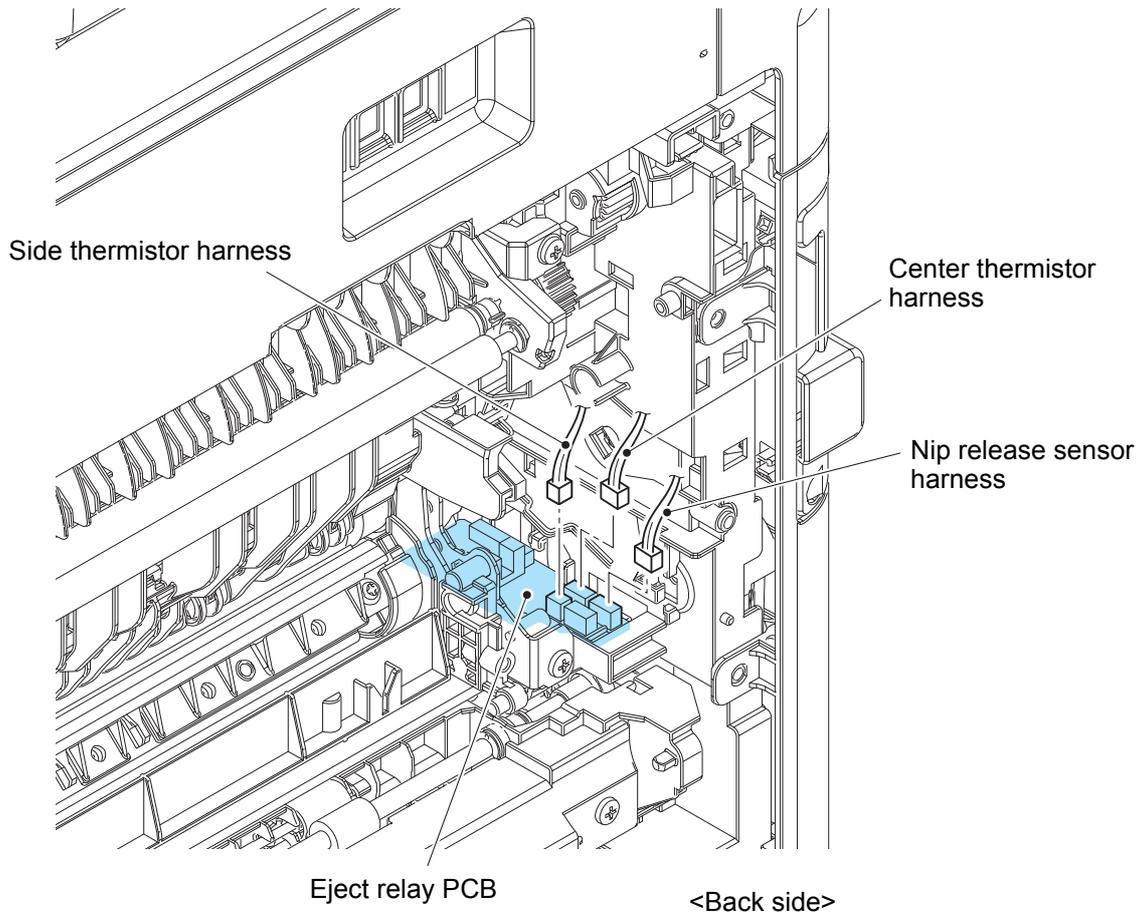


Fig. 6-13

(14) **Remove** > Fuser

Fixtures & Fittings

- Taptite bind B M4x12 (x 2)

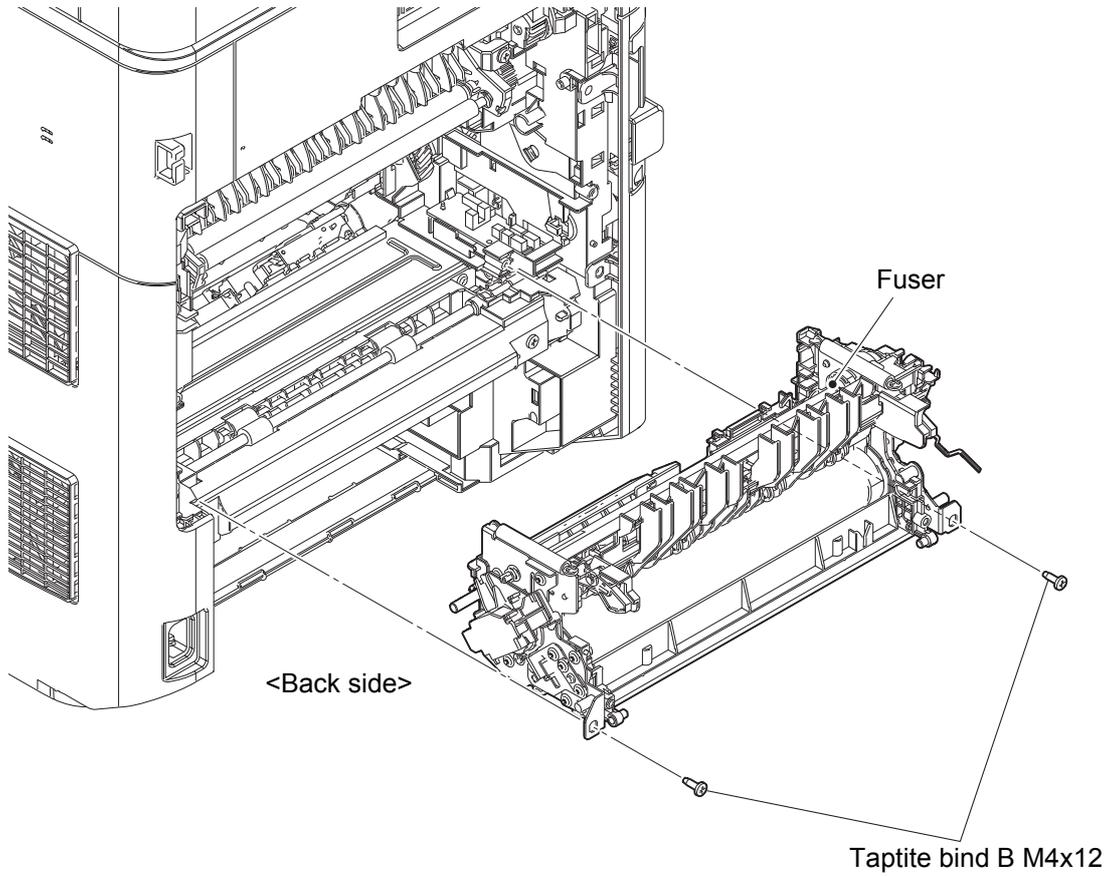


Fig. 6-14



Note:

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

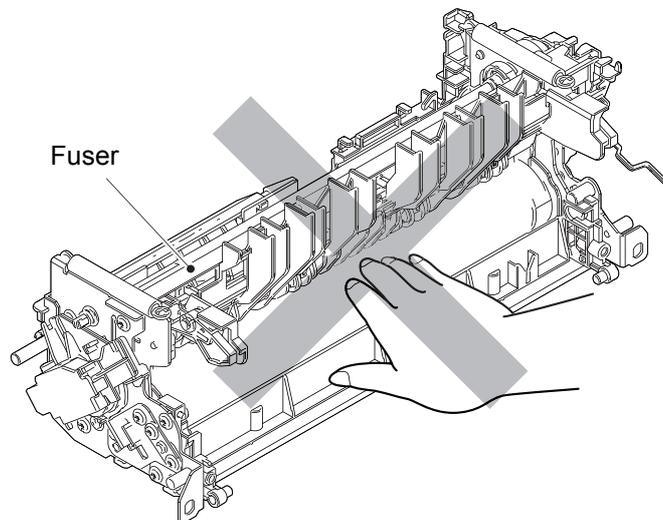


Fig. 6-15

2.3 Laser unit

(1) Open > Back cover

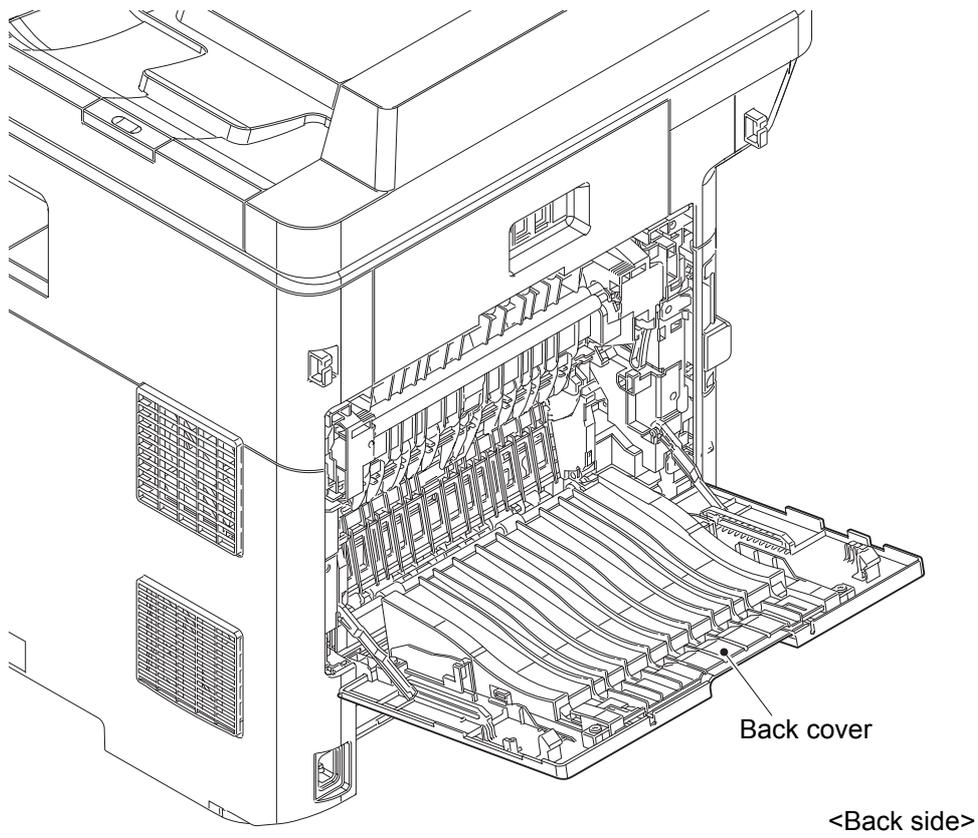


Fig. 6-16

(2) **Open** > Front cover ASSY

(3) **Open** > WLAN cover

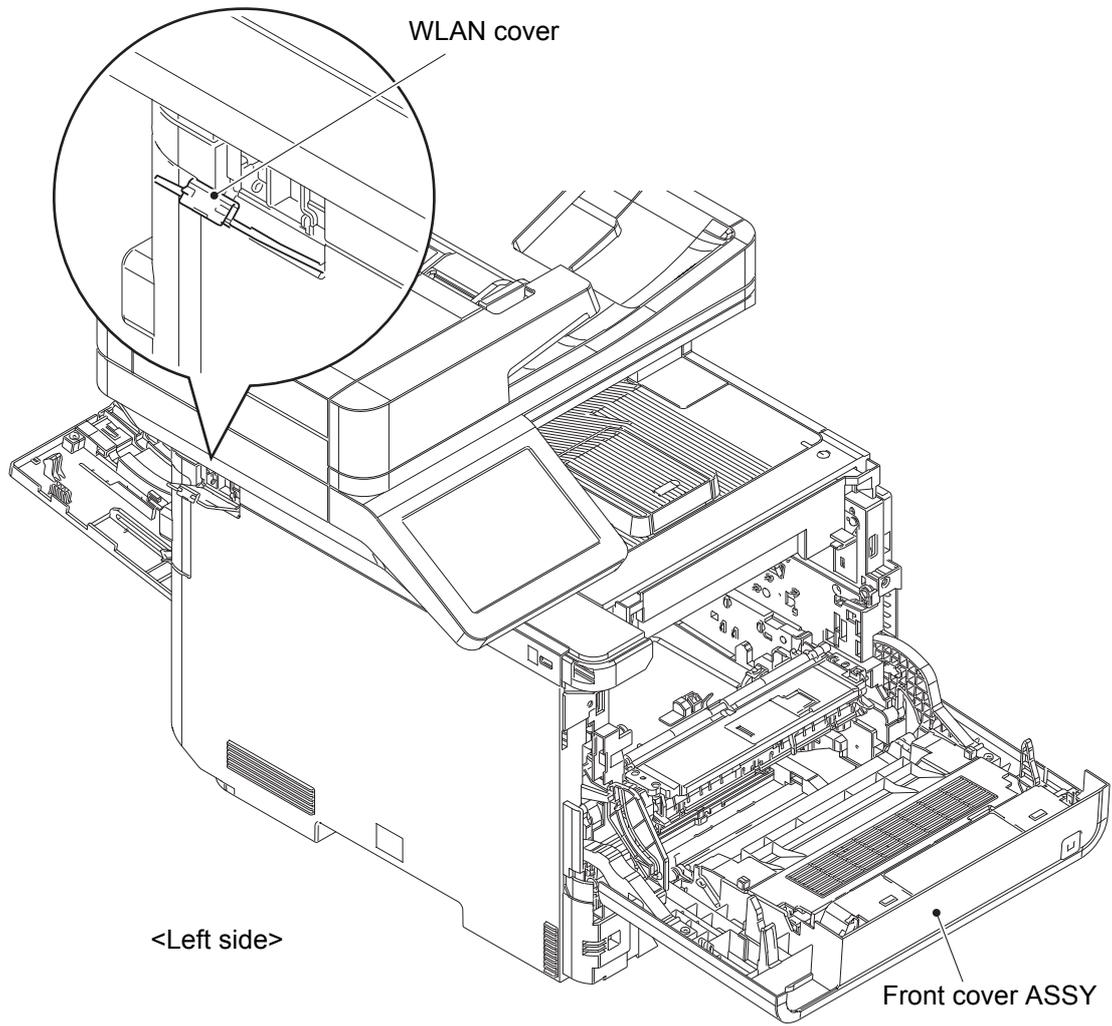


Fig. 6-17

(4) **Remove** > Screws

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 3)
- Taptite bind B M3x8 (x 1)
- Taptite cup B 3x8 (x 1)

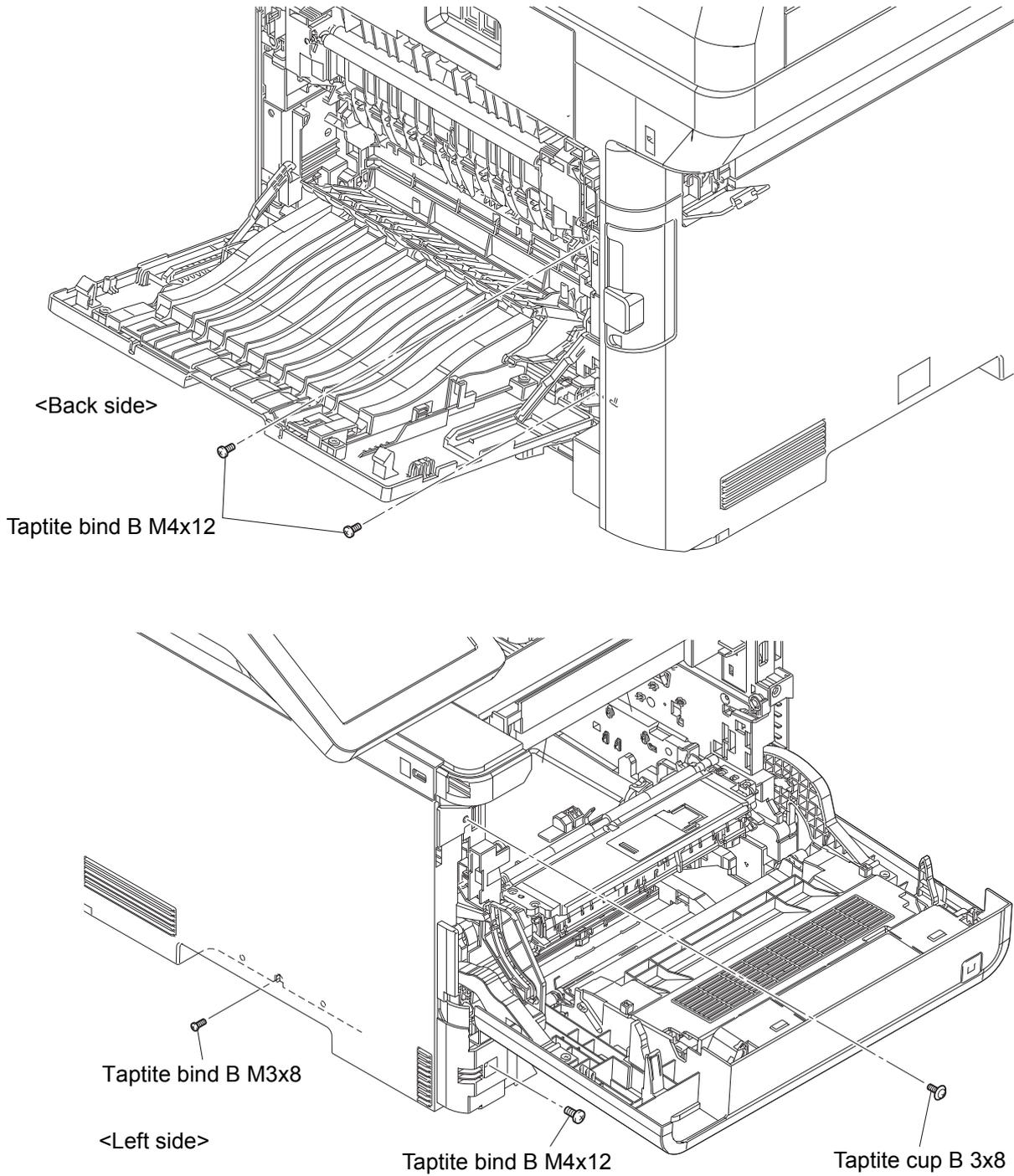


Fig. 6-18

(5) **Remove** > Side cover L

-  **Fixtures & Fittings**
- Hook (x 7)

 **Point:**

- Release the hooks in the order of the arrows.

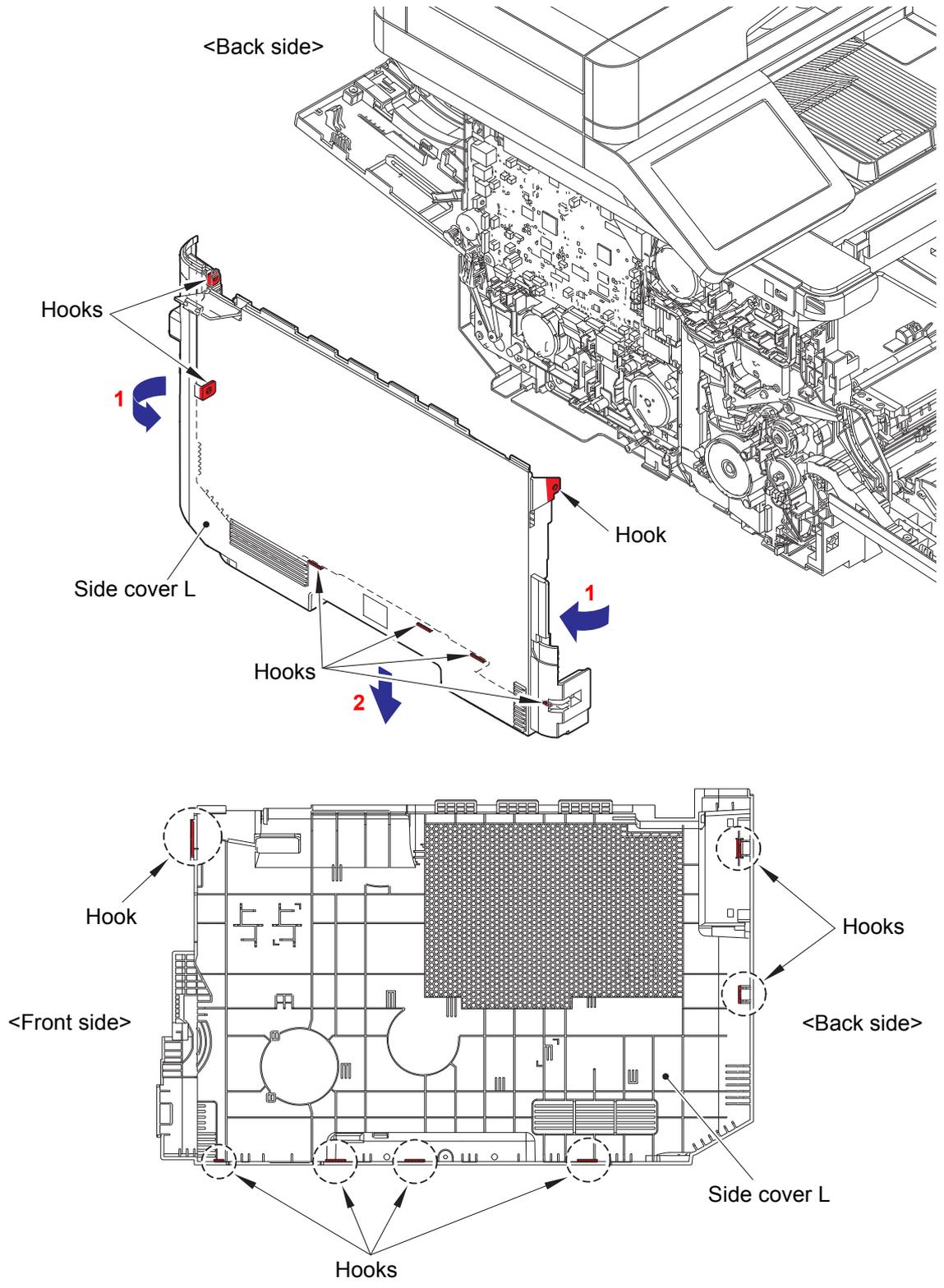


Fig. 6-19

(6) **Remove** > Screws

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 4)
- Taptite bind B M3x8 (x 1)

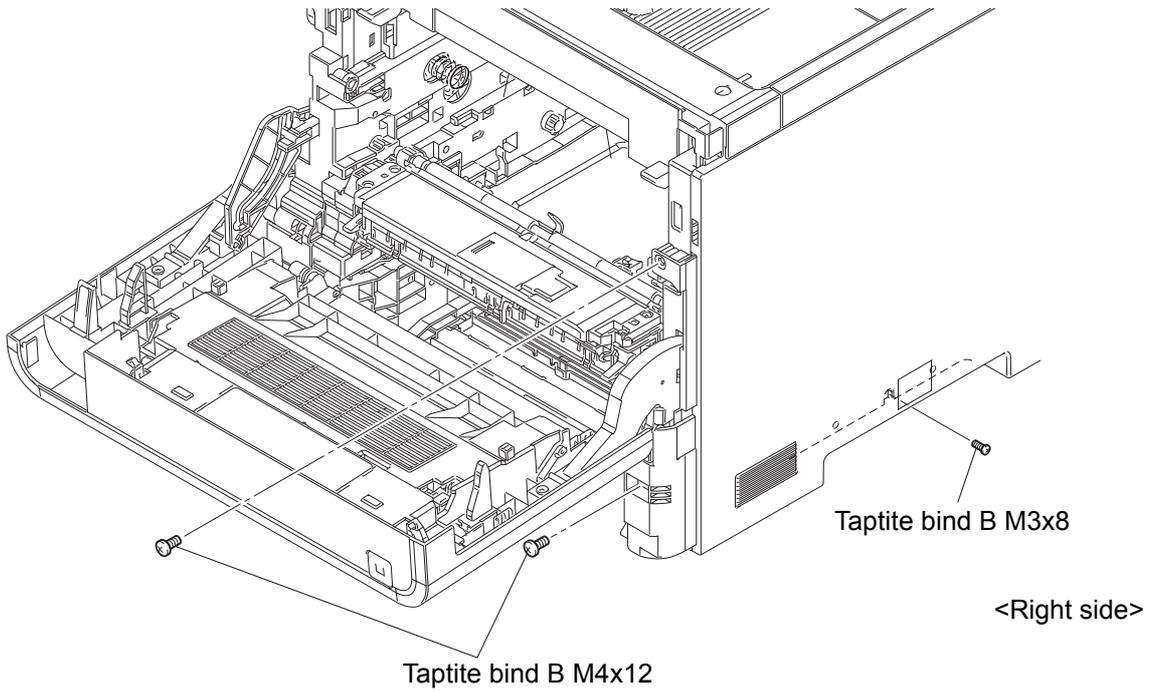
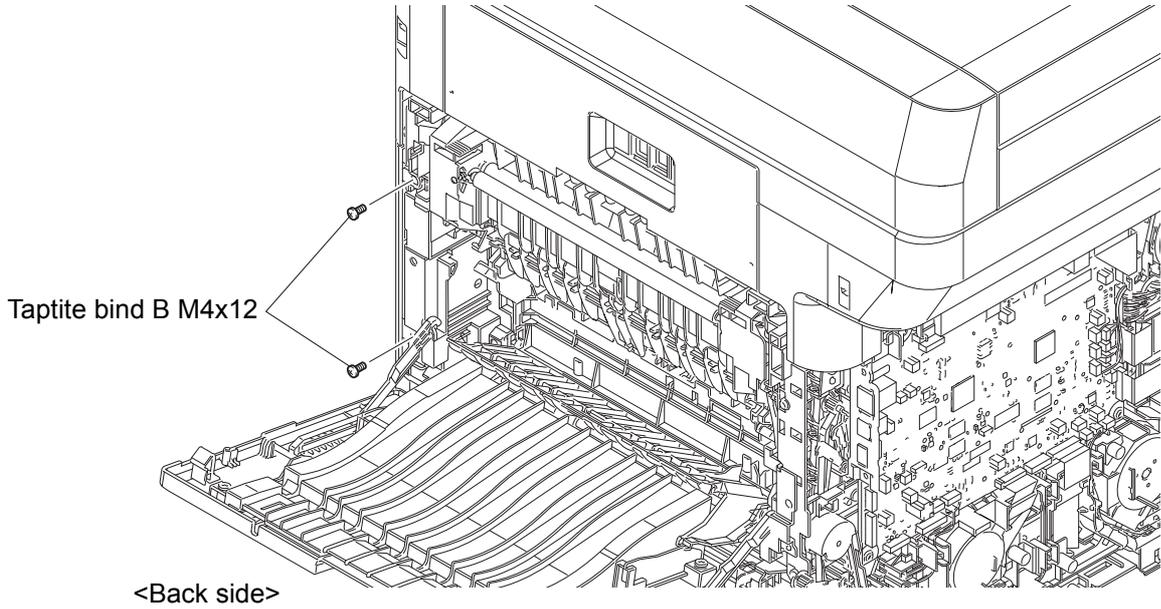


Fig. 6-20

(7) **Remove** > Side cover R

-  **Fixtures & Fittings**
- Hook (x 6)

 **Point:**

- Release the hooks in the order of the arrows.

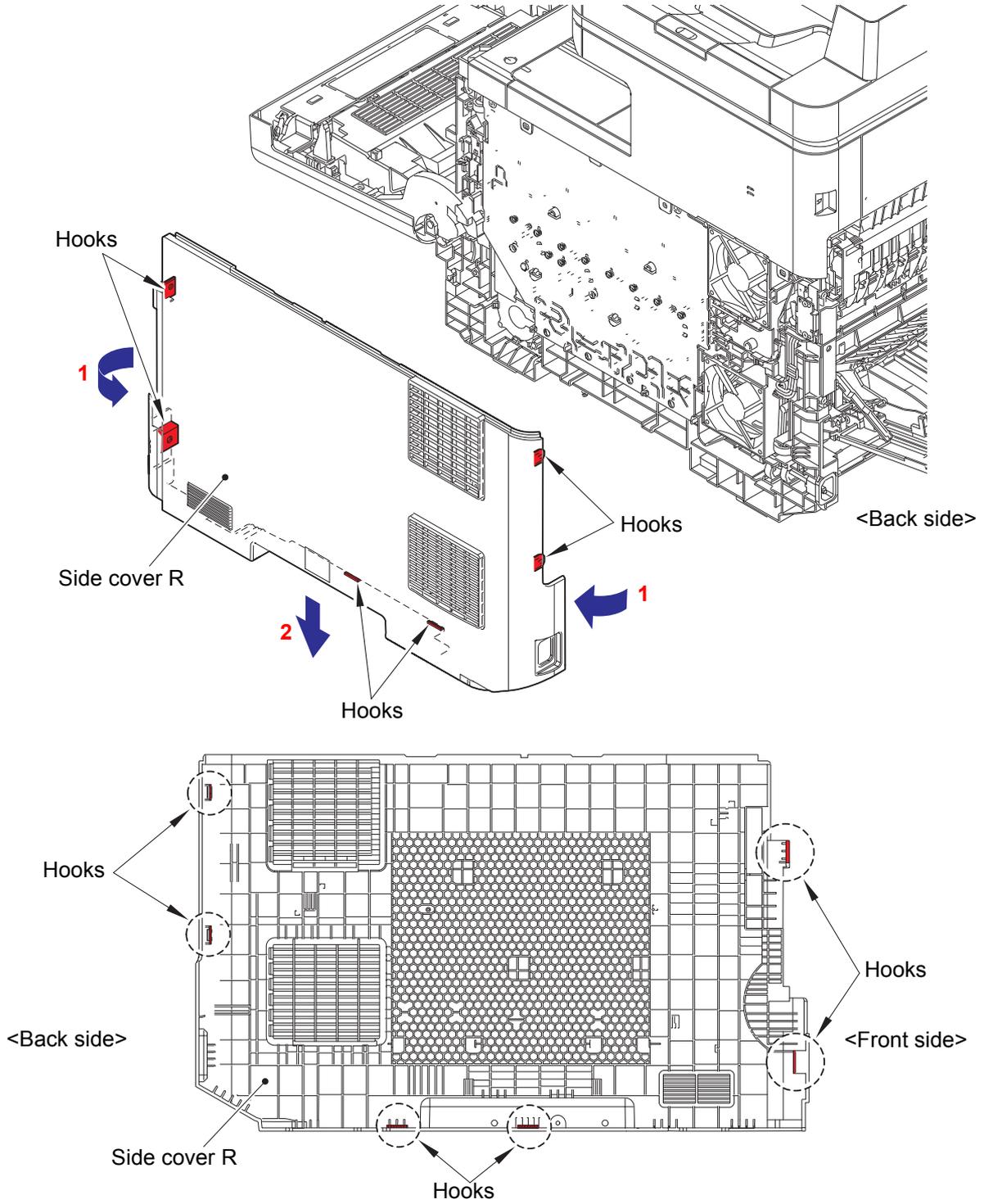


Fig. 6-21

(8) **Remove** > Side cover R top

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 3)
- Hook (x 7)

 **Point:**

- Release the hooks in the order of the arrows.

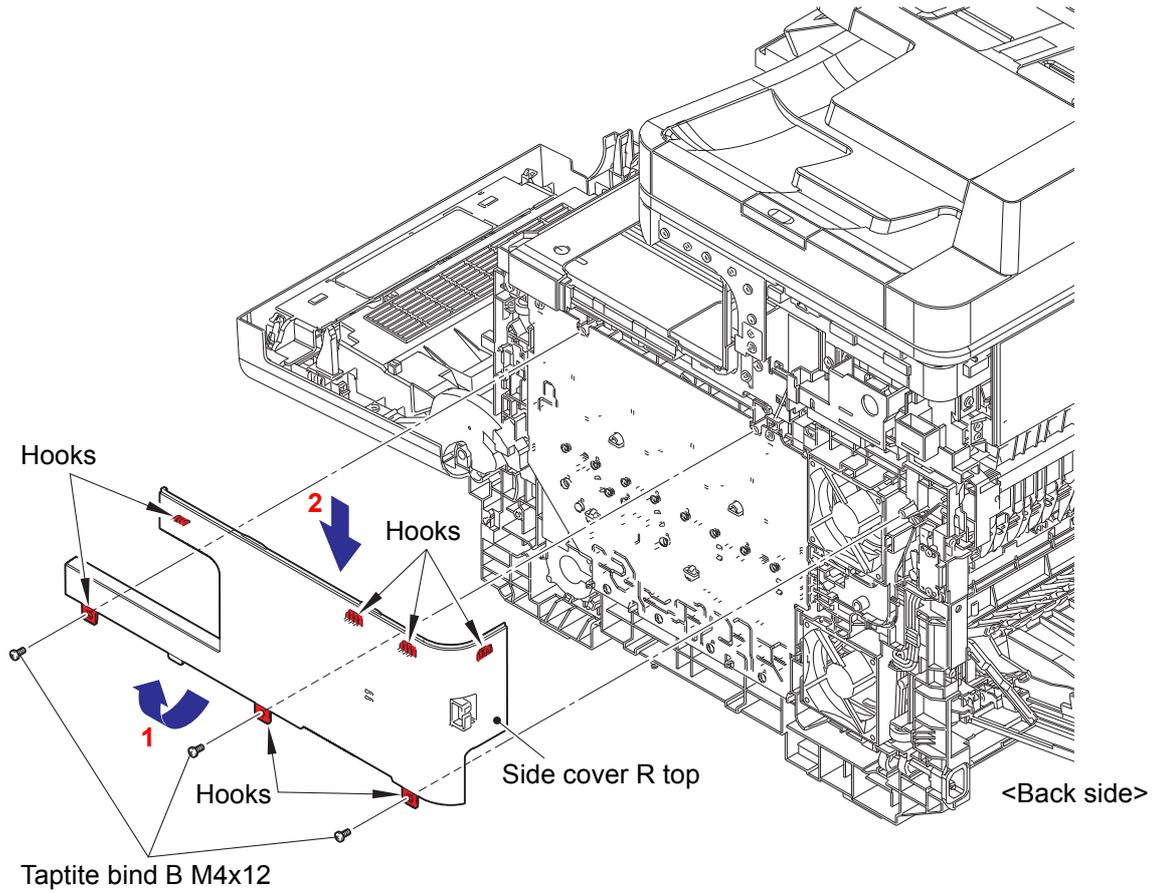


Fig. 6-22

(9) **Open** > ADF unit

(10) **Remove** > Panel top cover

 **Fixtures & Fittings**

- Hook (x 1)

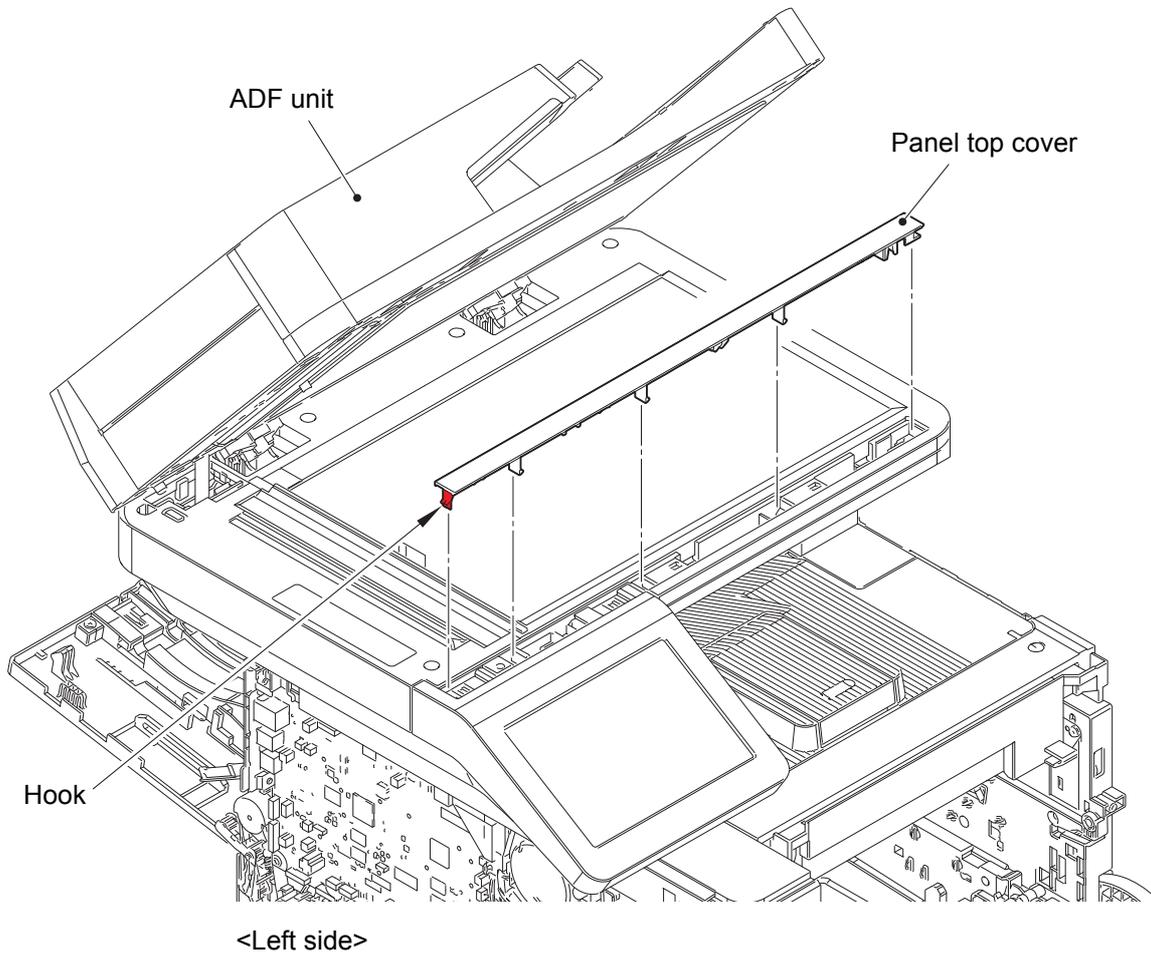


Fig. 6-23

(11) **Remove** > FG harness (OR)

- Fixtures & Fittings**
- Screw cup M3x8 SR (x 1)

(12) **Wiring** > FG harness (OR)

(13) **Remove** > Panel unit

- Fixtures & Fittings**
- Taptite bind B M4x12 (x 2)

Point:

- Do not pull the Panel unit strongly because the FFC is connected. Remove it in the direction of the arrow.
- Pull out the FG harness (OR) through the hole of the Joint cover ASSY.

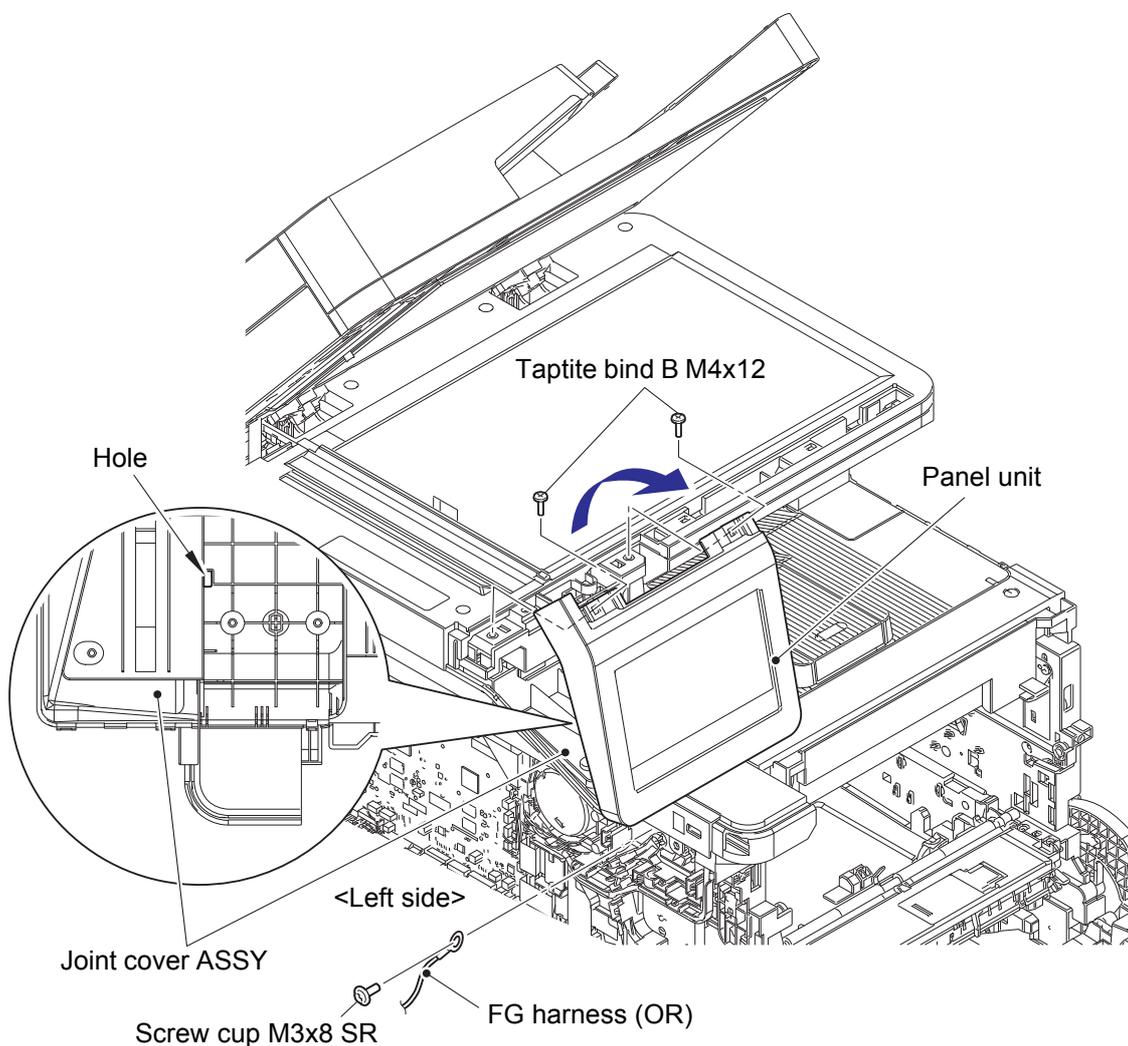


Fig. 6-24

Harness routing: Refer to "55. 7 PNL main FFC harness".

(14) **Disconnect** > 7 PNL main FFC harness

- Fixtures & Fittings**
- Lock (x 1)

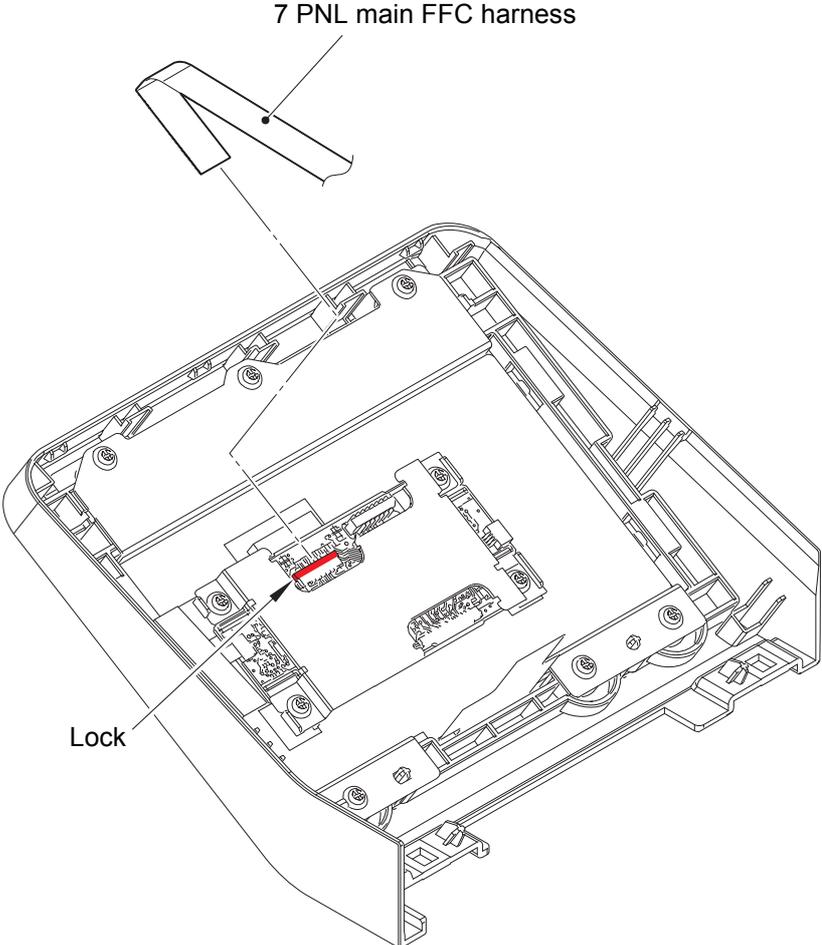


Fig. 6-25

(15) **Remove** > Side cover L top

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 4)
- Hook (x 4)

 **Point:**
• Remove the Side cover L top in the order of the arrows.

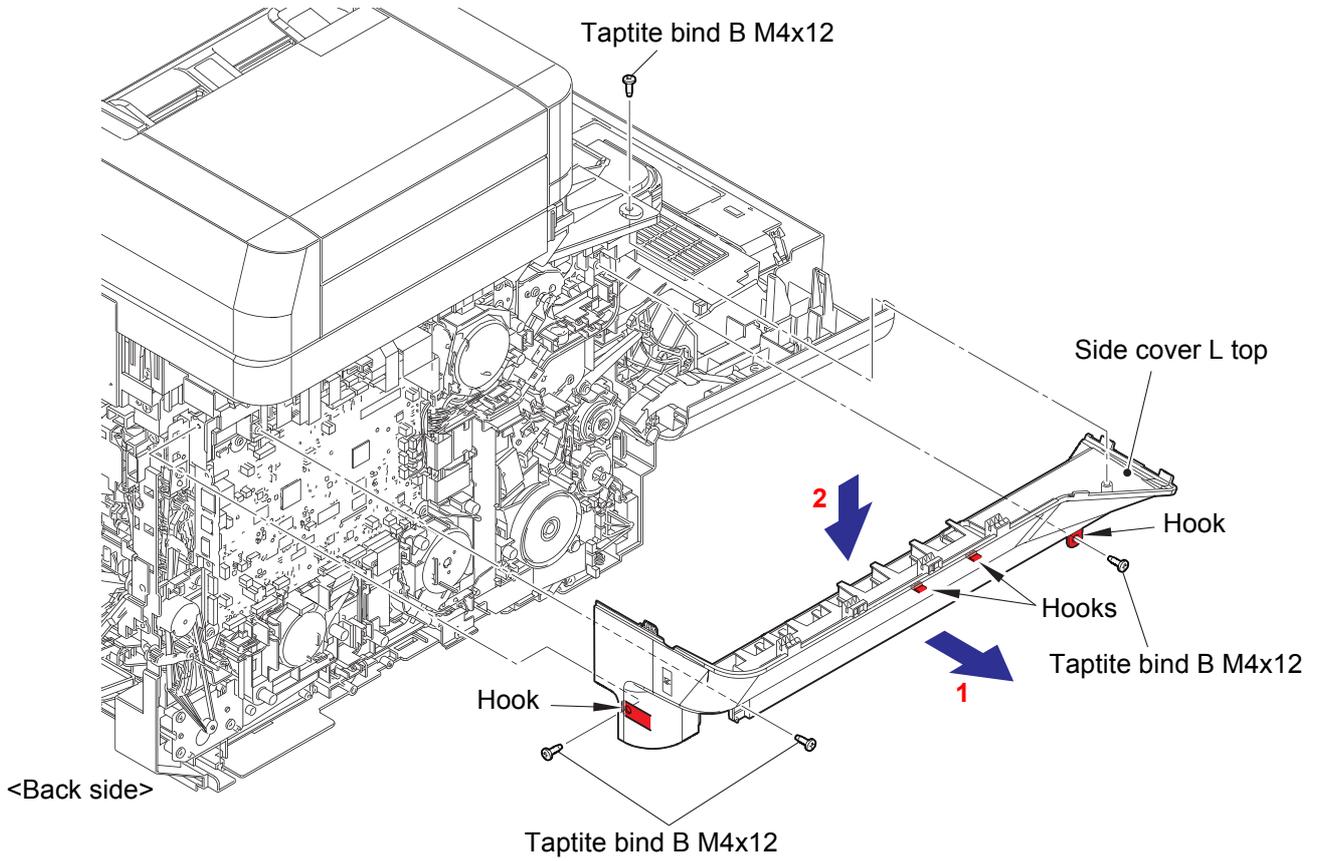


Fig. 6-26

(16) **Remove** > Back cover upper

- Fixtures & Fittings**
- Taptite bind B M4x12 (x 2)

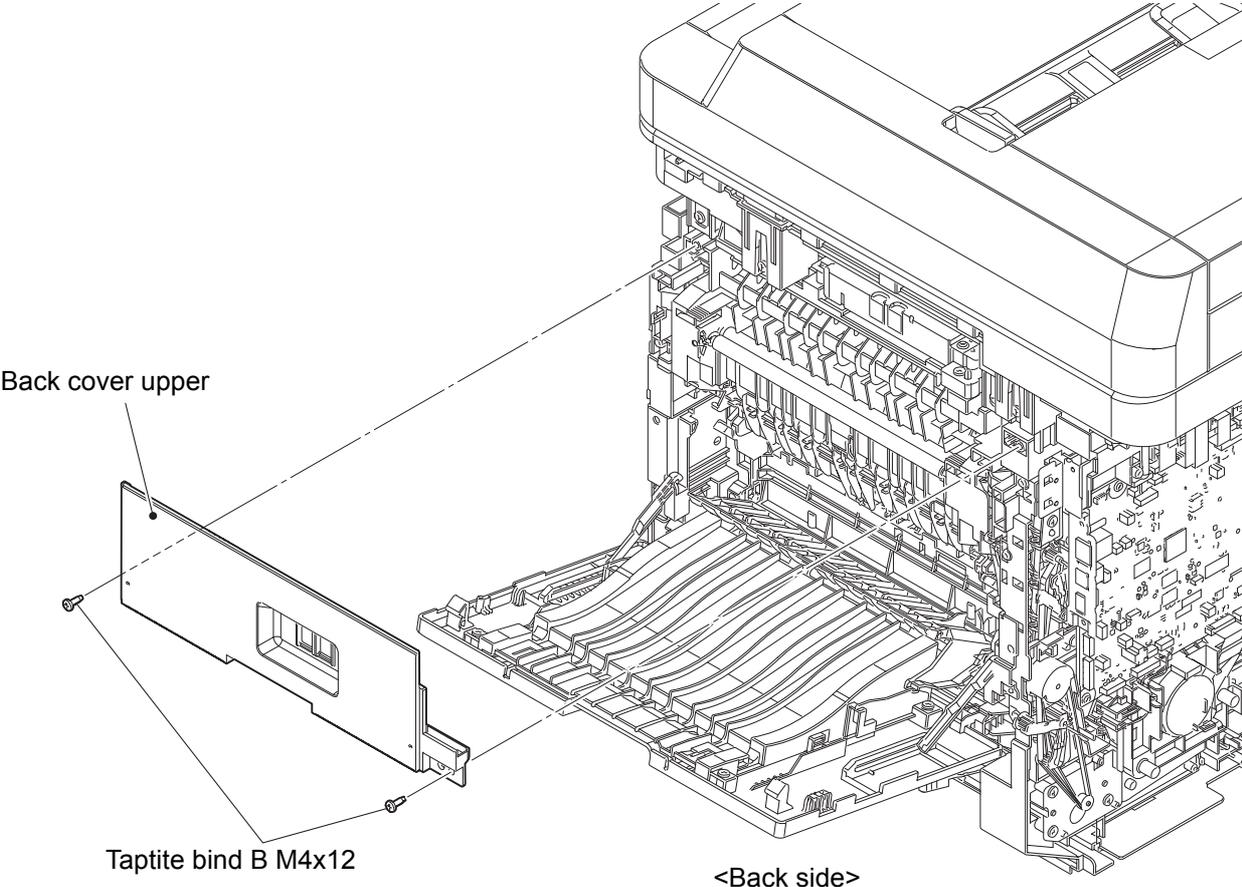


Fig. 6-27

(17) **Remove** > Earth plate R

- Fixtures & Fittings**
- Taptite pan B 3x10 (x 2)

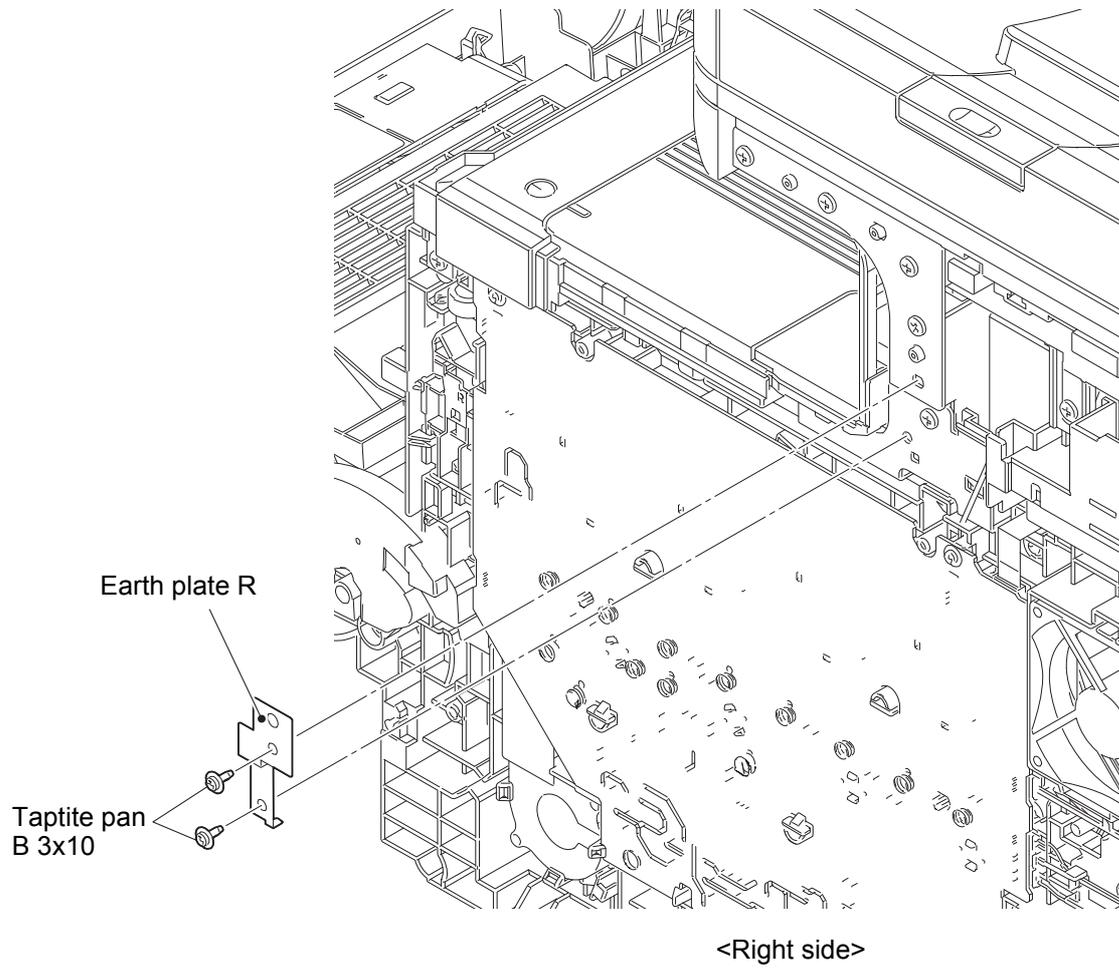


Fig. 6-28

(18) **Remove** > Reinforce plate R1

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 4)

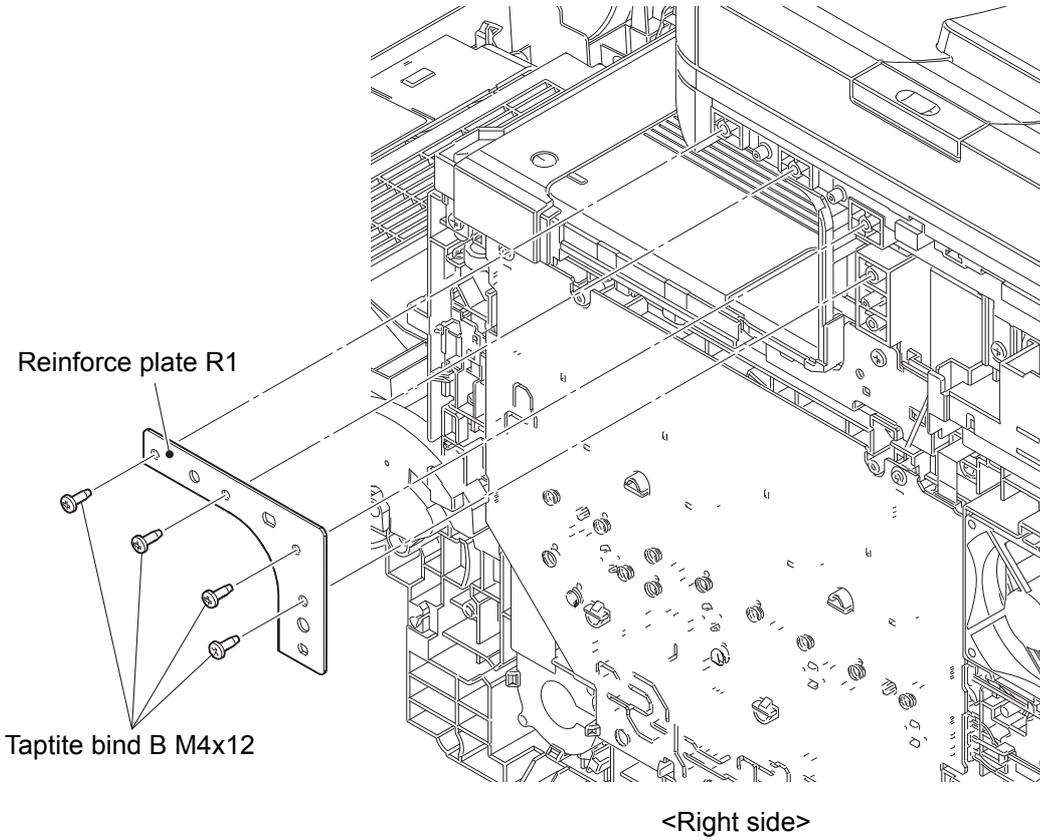


Fig. 6-29

(19) **Disconnect** > 2nd side CIS FFC, 1st side CIS FFC, FB motor harness, ADF motor harness ASSY, Flap tray relay harness

 **Fixtures & Fittings**

- Lock (x 1)

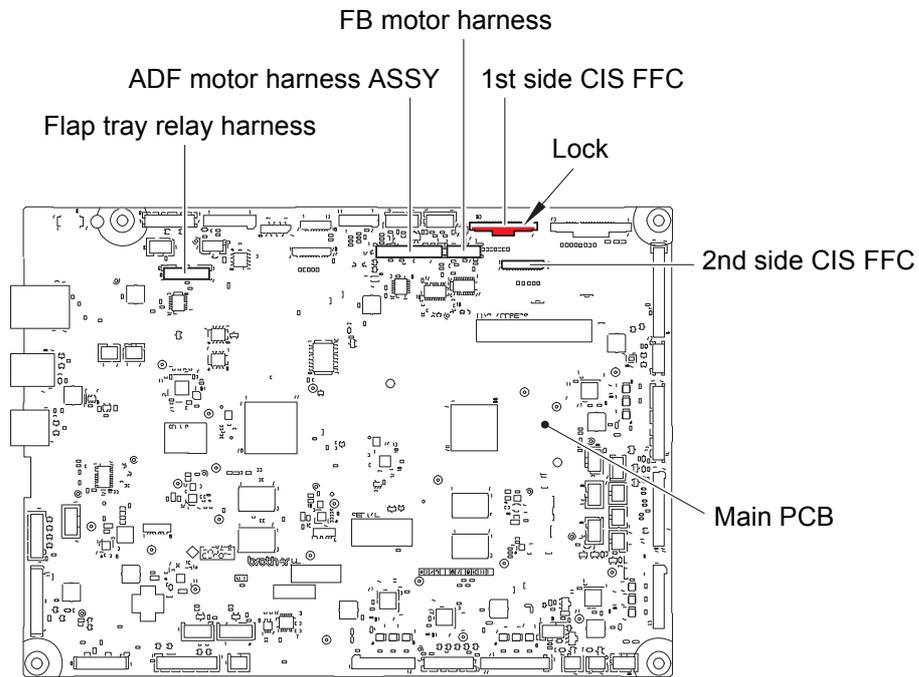


Fig. 6-30

(20) **Remove** > FG harness (RD), FG harness (BK)

 **Fixtures & Fittings**

- Screw cup M3x8 SR (x 2)

(21) **Remove** > Document scanner unit

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 5)
- Hook (x 5)

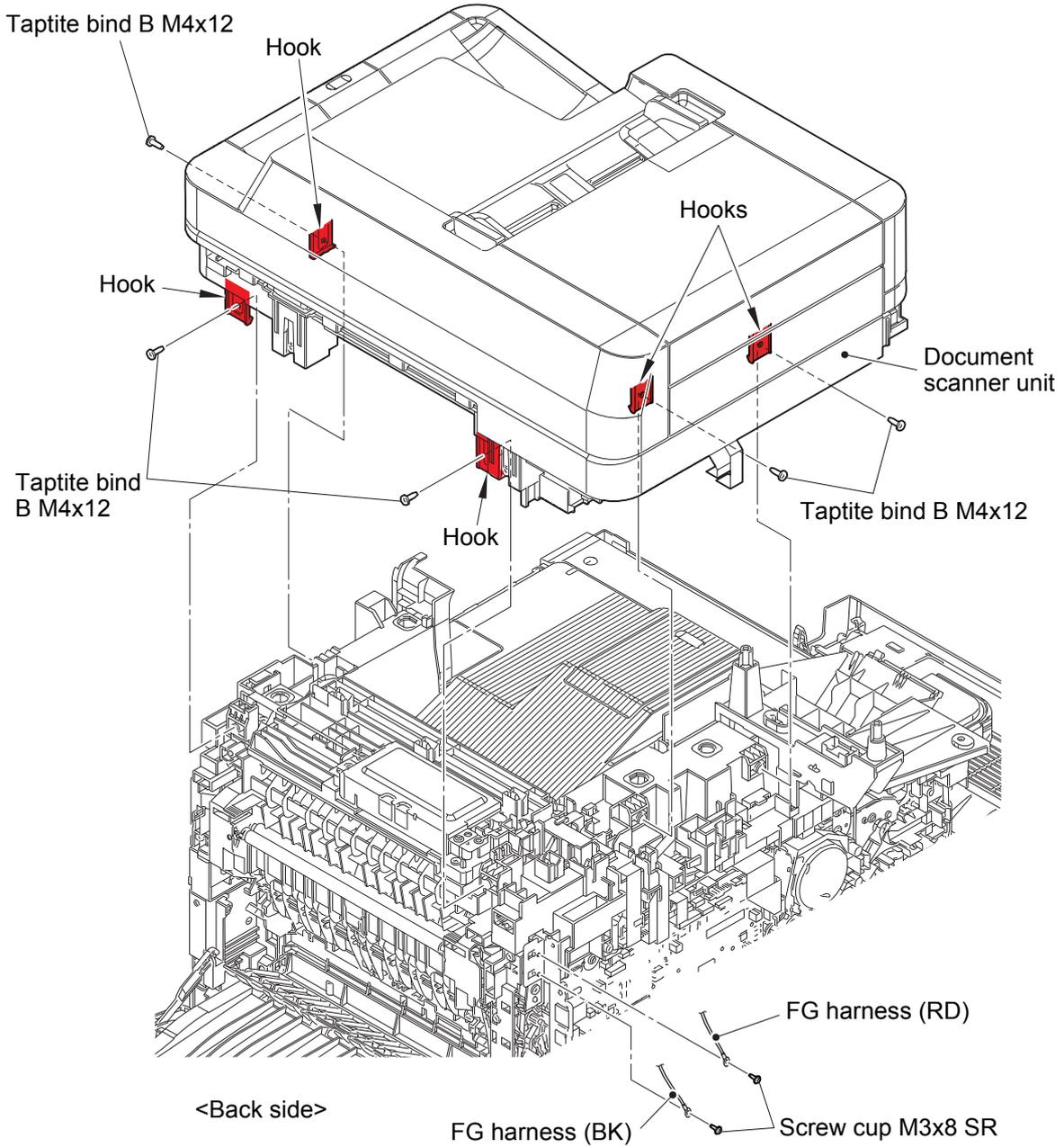


Fig. 6-31

(22) Disconnect > 7 PNL main FFC harness

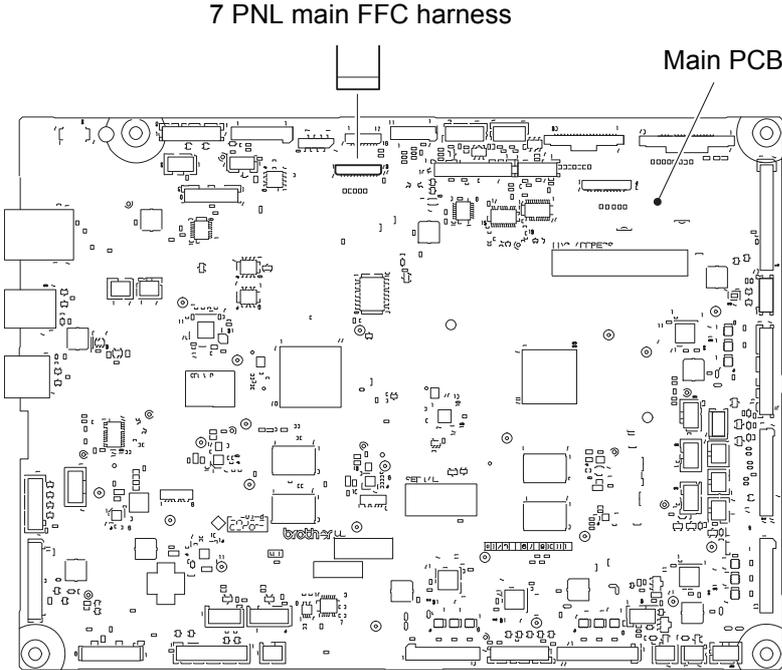


Fig. 6-32

(23) **Remove** > Panel base cover

- Fixtures & Fittings**
- Taptite bind B M4x12 (x 3)

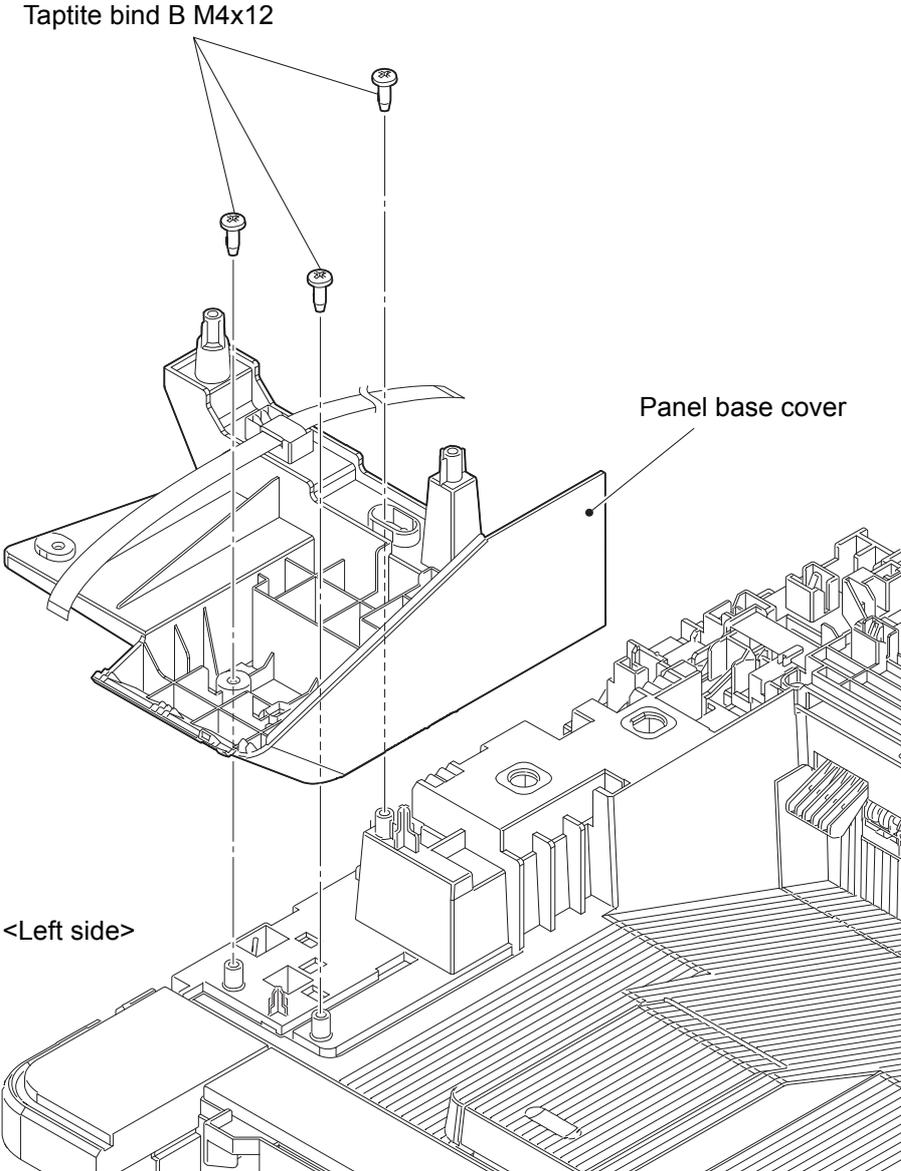


Fig. 6-33

(24) **Remove** > Dress cover B, Dress cover A

- Fixtures & Fittings**
- Taptite bind B M4x12 (x 1)

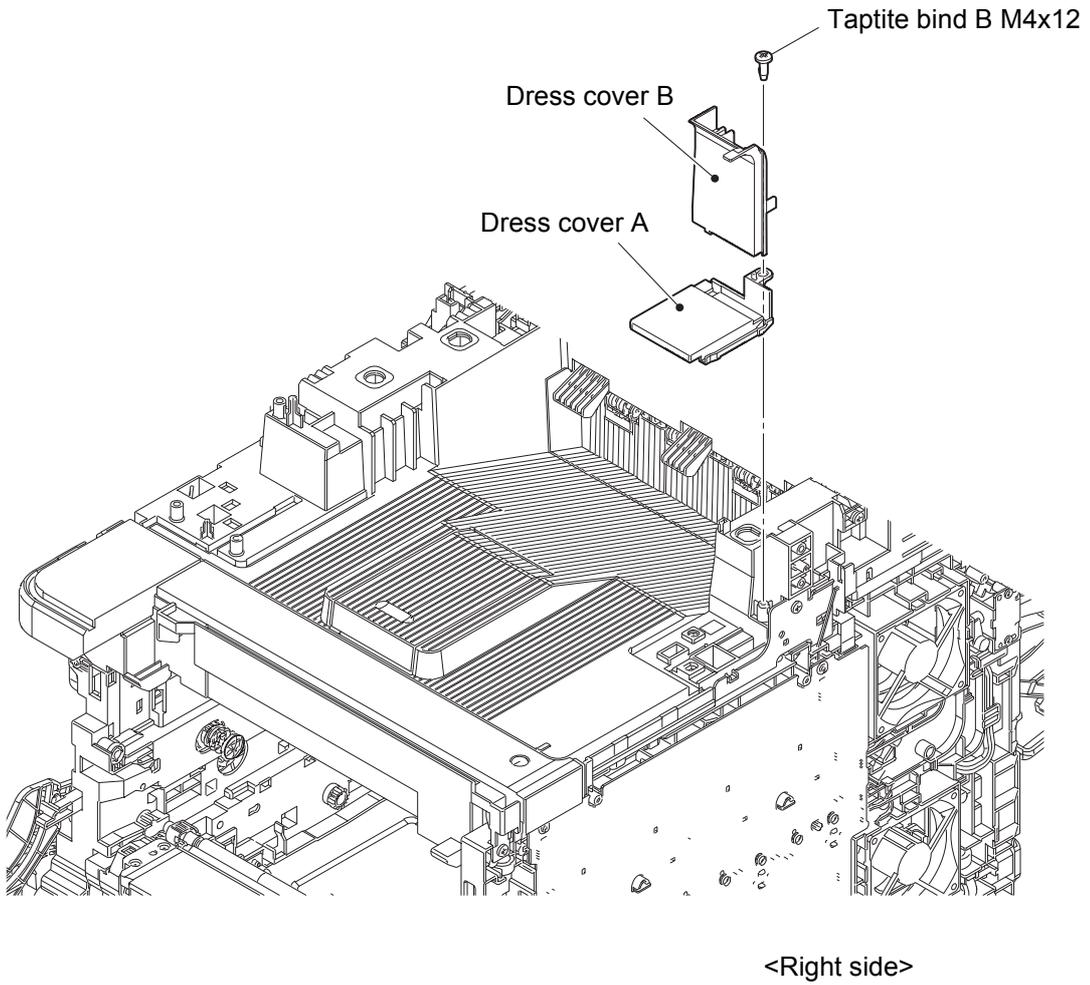


Fig. 6-34

(25) **Remove** > USB host FG harness

 **Fixtures & Fittings**

- Screw cup M3x8 SR (x 1)

(26) **Disconnect** > USB host PCB harness

(27) **Wiring** > USB host FG harness, USB host PCB harness

(28) **Remove** > FG harness modem-main

 **Fixtures & Fittings**

- Screw cup M3x8 SR (x 1)

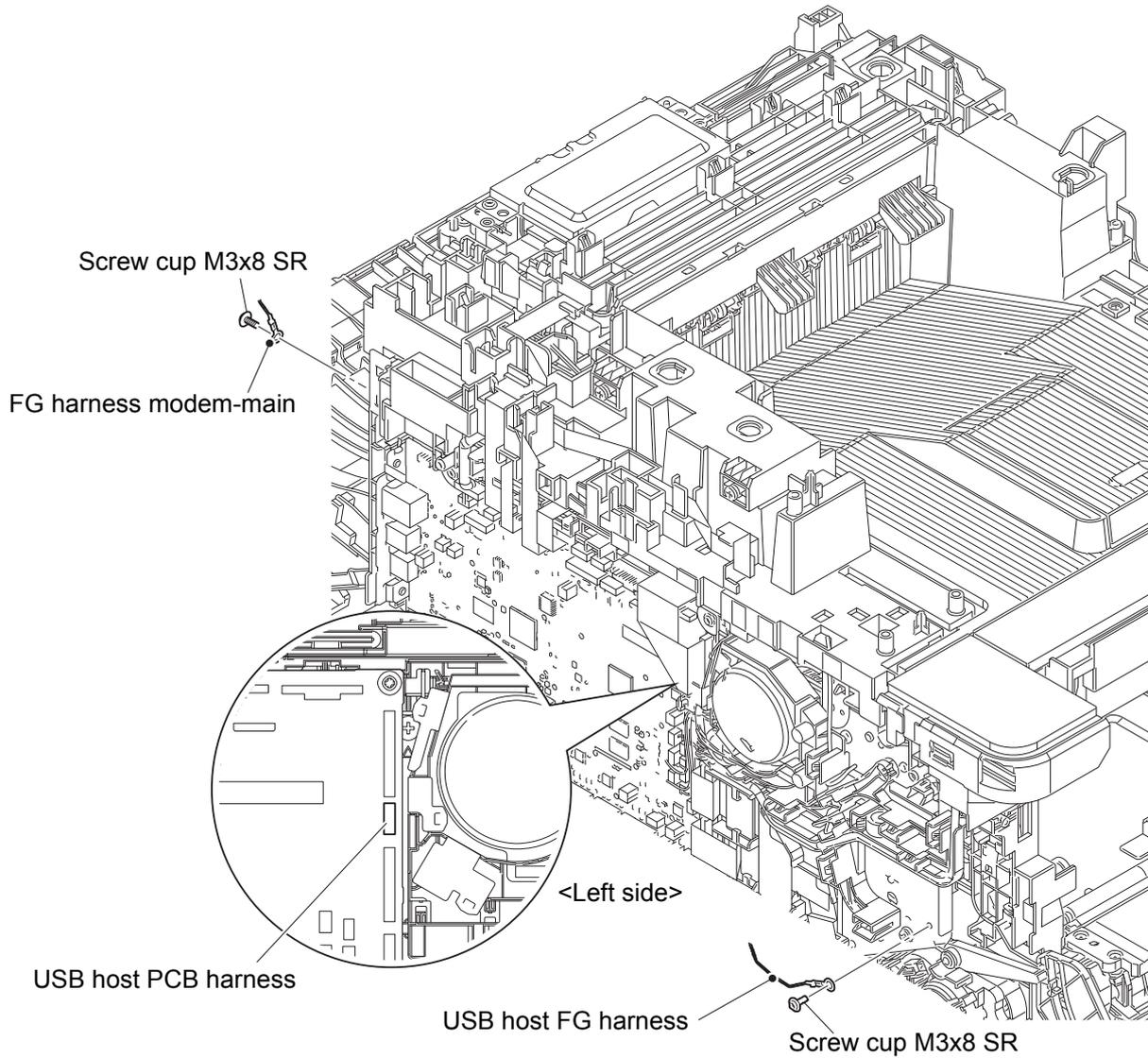


Fig. 6-35

Harness routing: Refer to "36. Main PCB (FB side), 51. USB host PCB harness".

(29) **Disconnect** > NFC FFC, Modem FFC, Speaker harness, Eject stack sensor harness

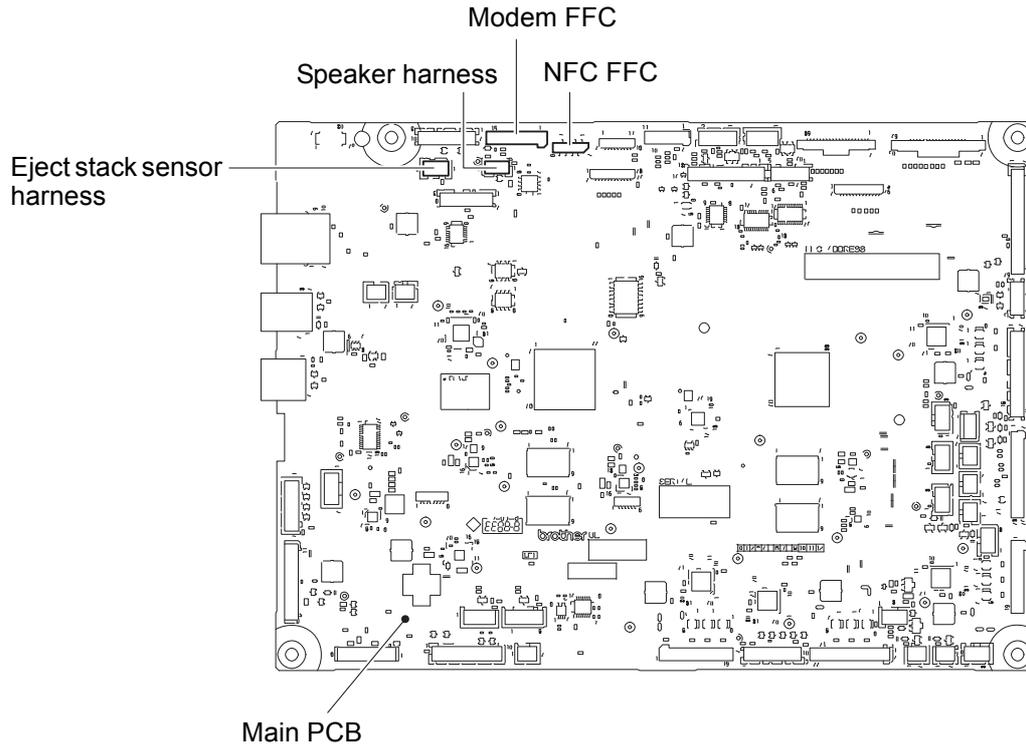


Fig. 6-36

(30) **Remove** > FG harness modem-HVPS

 **Fixtures & Fittings**

- Taptite pan B 3x10 (x 1)

(31) **Disconnect** > Power key harness

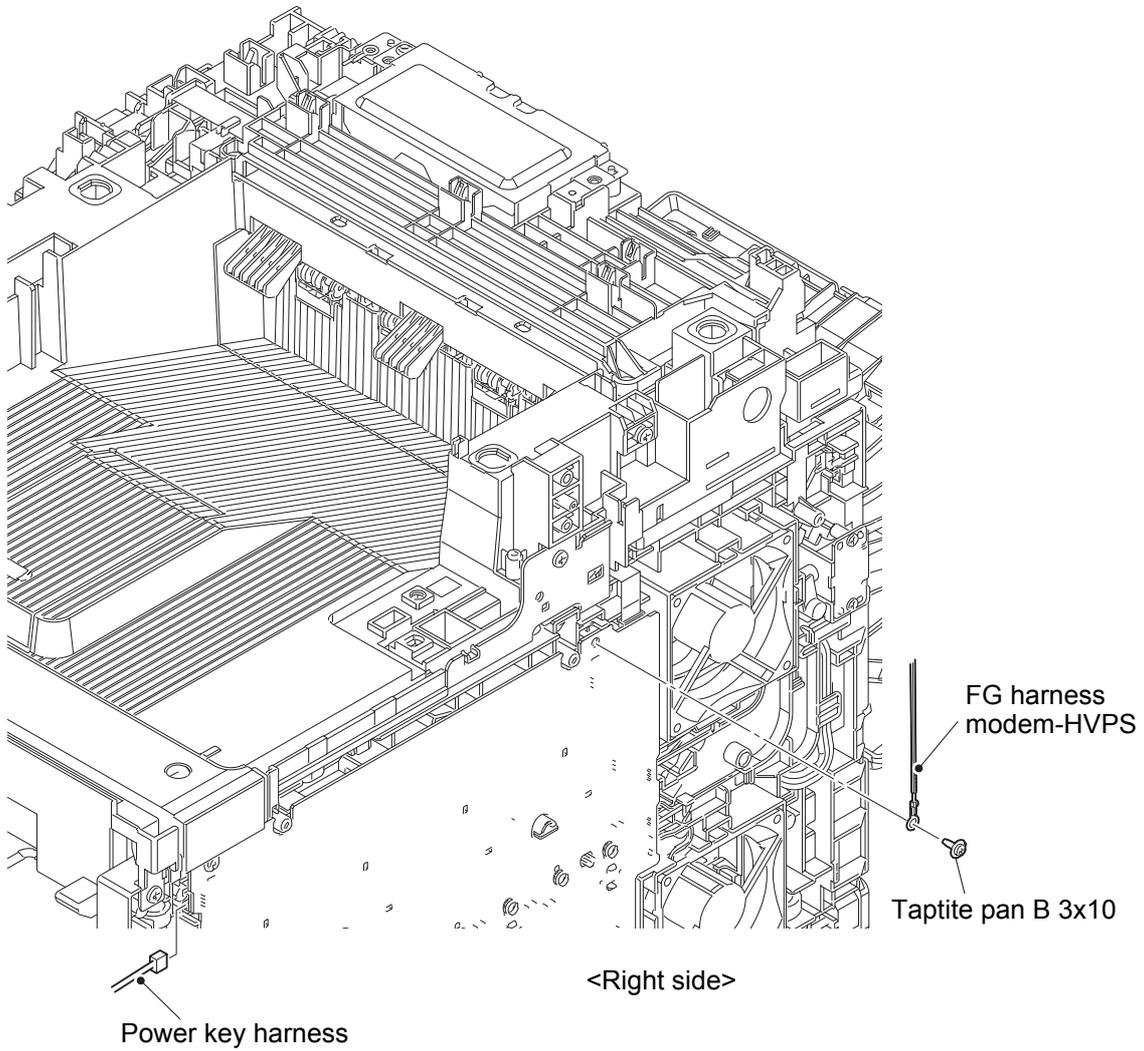


Fig. 6-37

Harness routing: Refer to "27. HVPS".

(32) **Remove** > Joint cover ASSY

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 10)
- Hook (x 6)

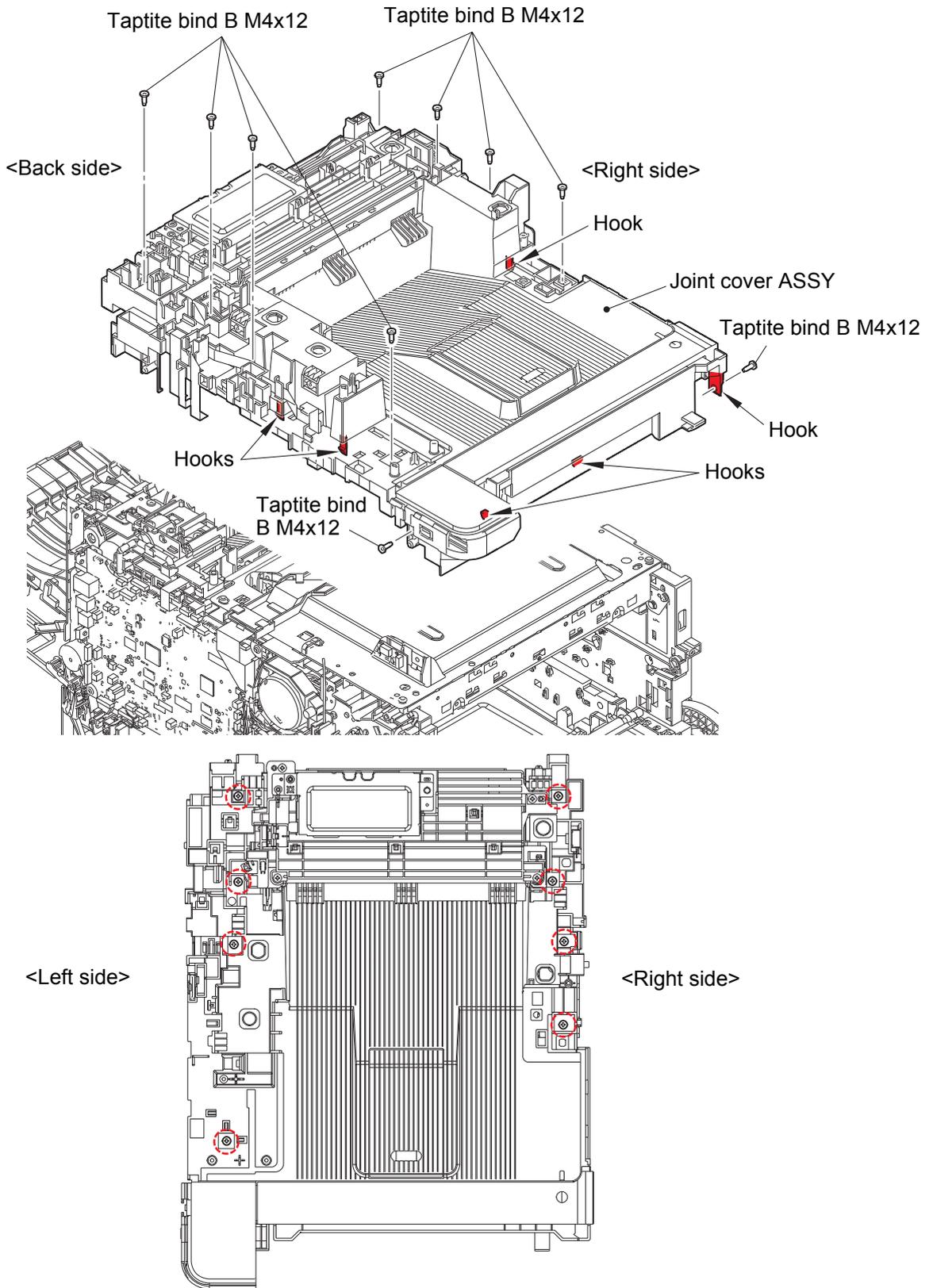


Fig. 6-38

(33) **Disconnect** > Laser unit FFC, HVPS FFC

 **Fixtures & Fittings**

- Lock (x 1)

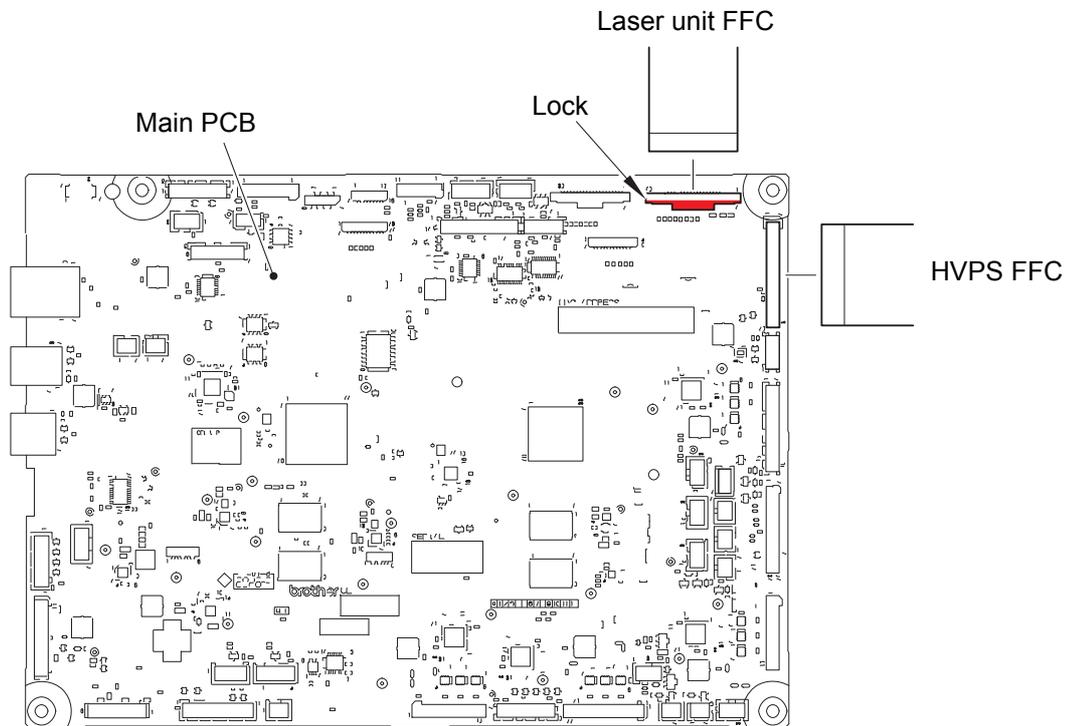


Fig. 6-39

Harness routing: Refer to **"37. Main PCB (Printer side)"**.



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.

(34) Remove > Spacer (x 4)

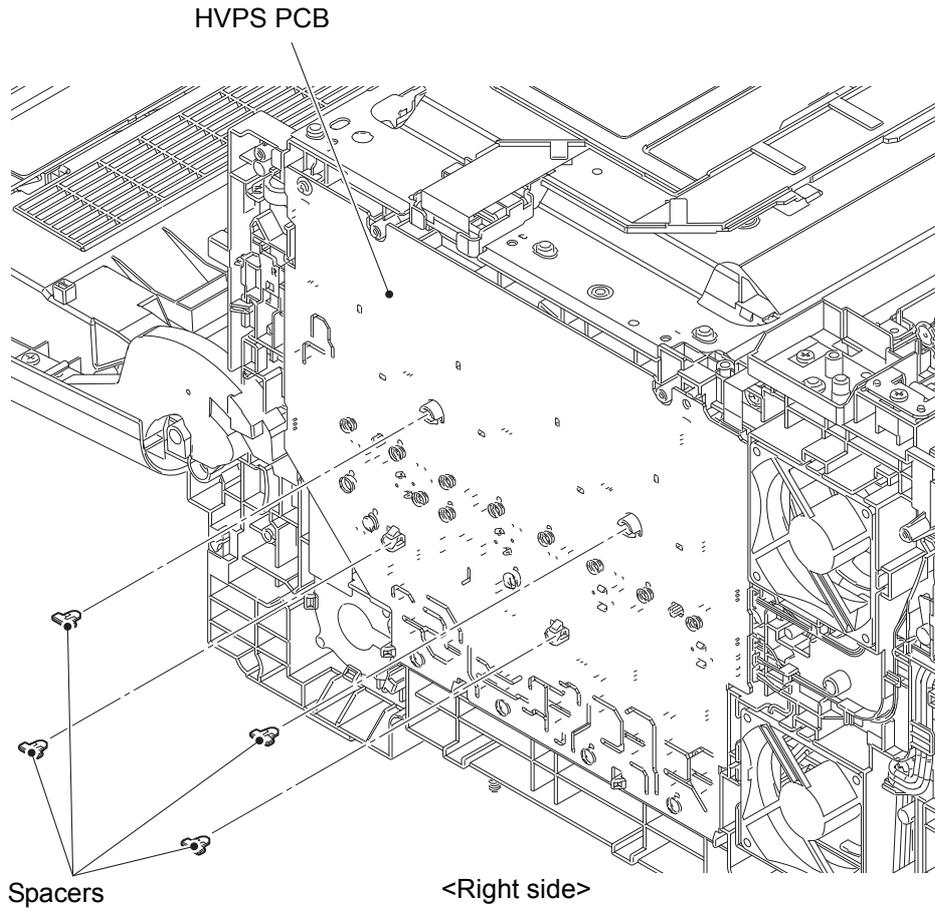


Fig. 6-40

(35) **Disconnect** > Fan motor 80 harness, LVPS fan harness, Back cover sensor harness, Blower harness, Flapper solenoid harness, HVPS2 FFC

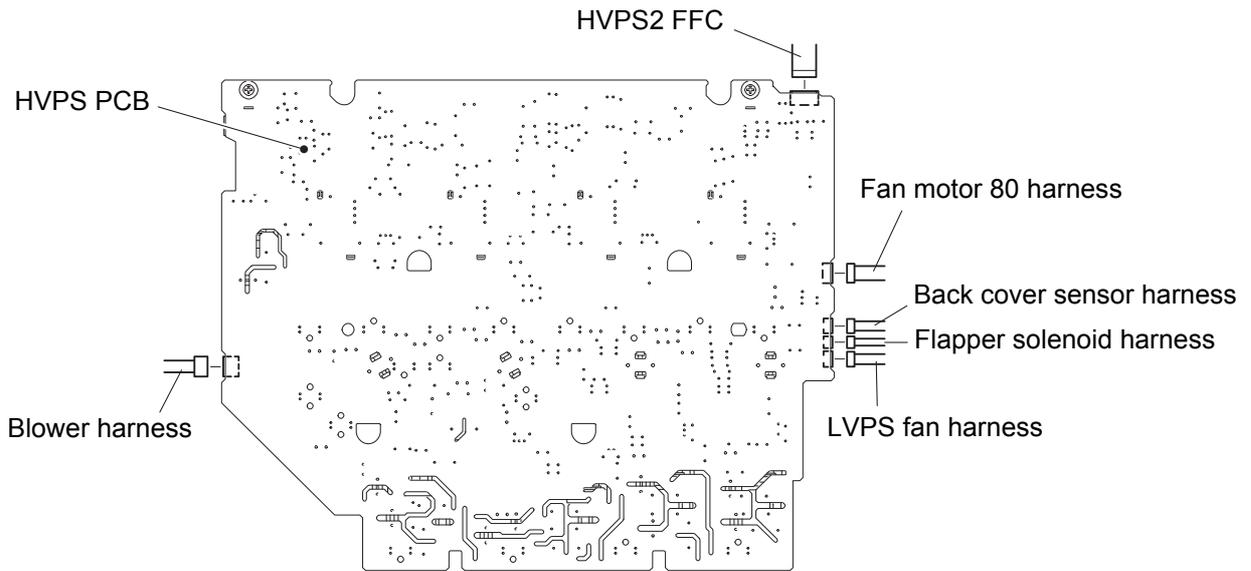


Fig. 6-41

Harness routing: Refer to "5. Blower harness, 23. Flapper solenoid harness, 29. HVPS2 FFC, 27. HVPS".

(36) **Remove** > HVPS PCB

 **Fixtures & Fittings**

- Taptite pan B 3x10 (x 1)
- Hook (x 8)

 **Point:**
• Do not pull the HVPS PCB strongly because the HVPS FFC is connected.

(37) **Disconnect** > HVPS FFC

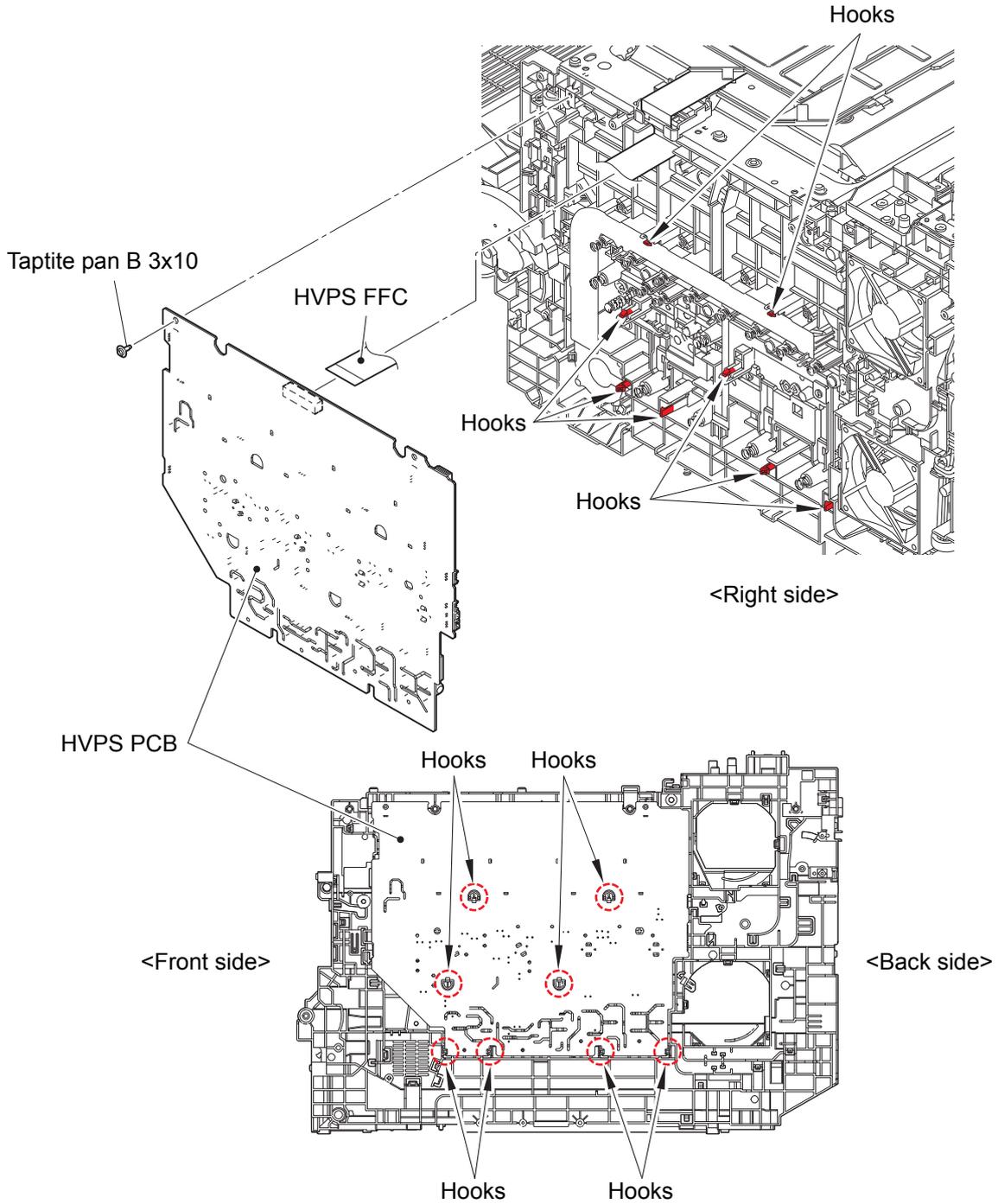


Fig. 6-42

(38) **Wiring** > HVPS FFC

(39) **Remove** > HVPS FFC holder

 **Fixtures & Fittings**

- Hook (x 1)

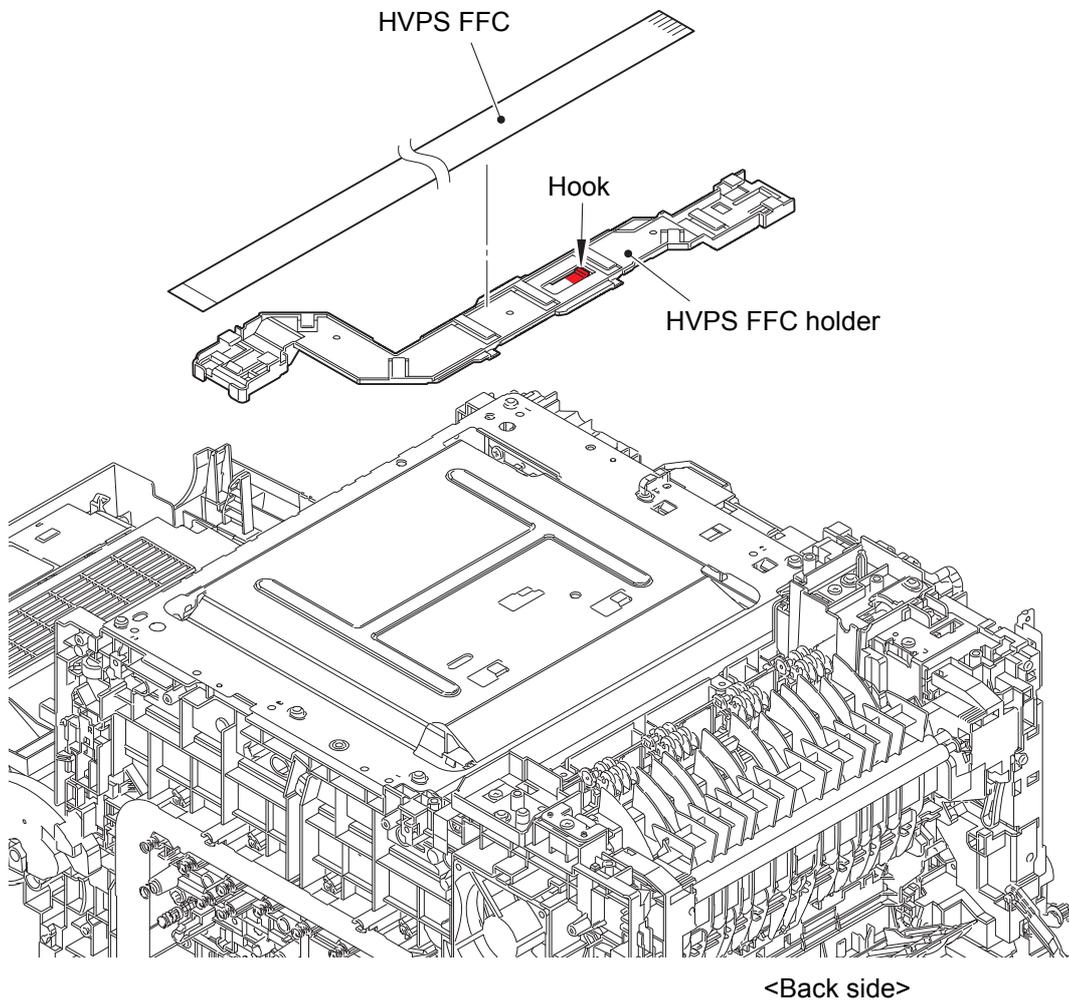


Fig. 6-43

Harness routing: Refer to "28. HVPS FFC".

(40) **Remove** > Scanner cover plate

 **Fixtures & Fittings**

- Taptite bind B M4x12 (x 6)
- Taptite cup S M3x6 SR (x 4)

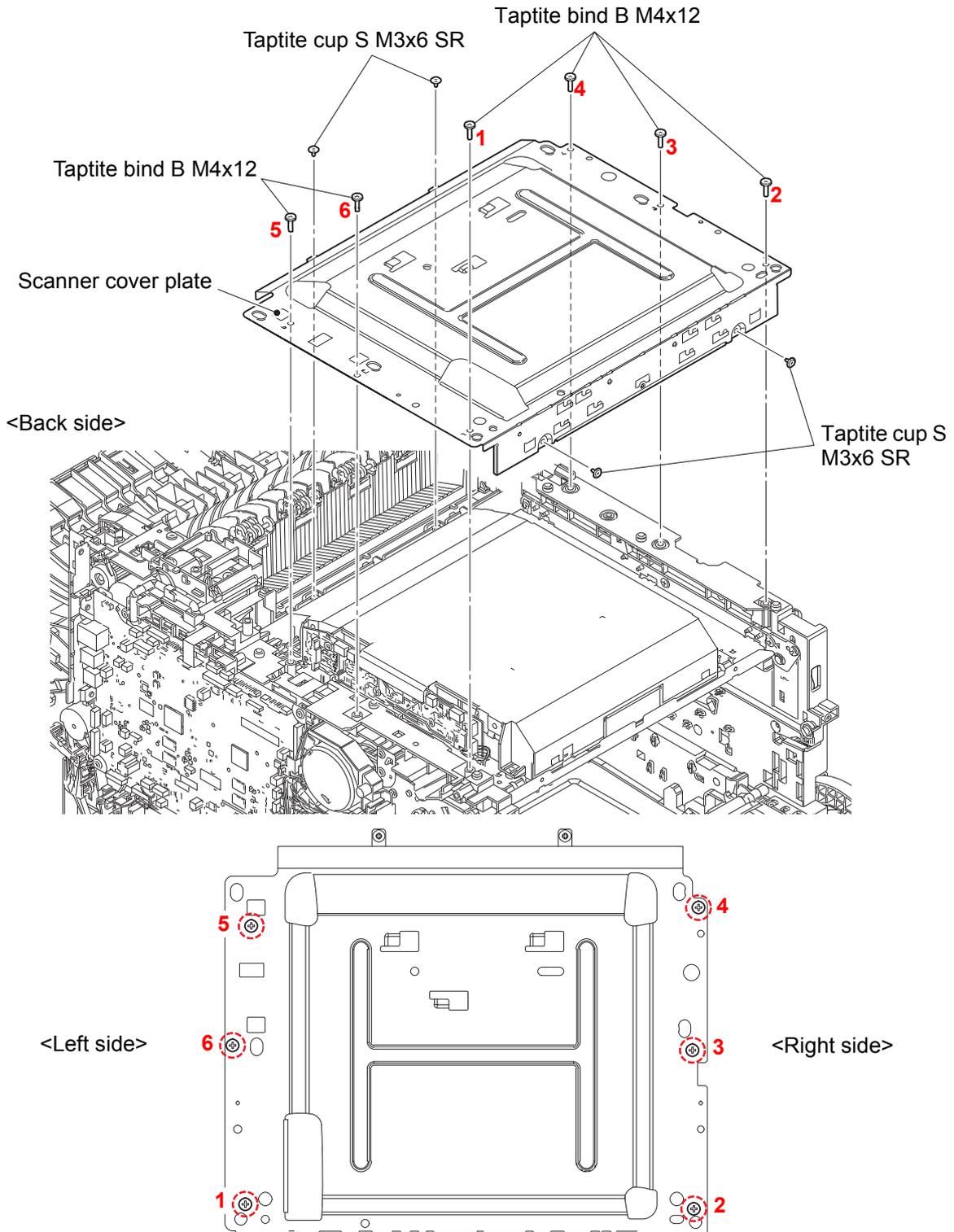


Fig. 6-44

 **Assembling note:**

- Tighten the six Taptite bind B M4x12 screws as the marked number orders.

(41) **Disconnect** > Laser unit FFC

-  **Fixtures & Fittings**
- Lock (x 1)

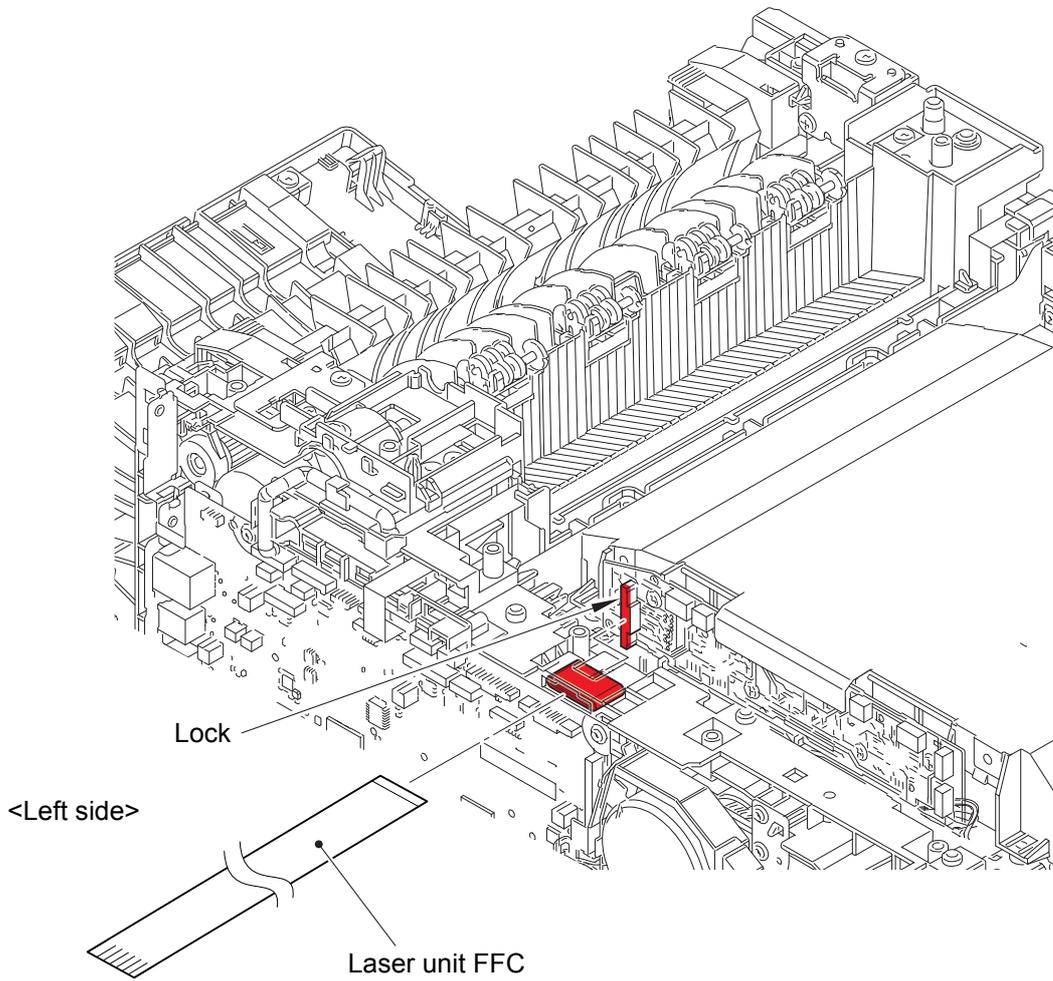


Fig. 6-45

Harness routing: Refer to "30. Laser unit FFC".

(42) Disconnect > Scanner motor harness

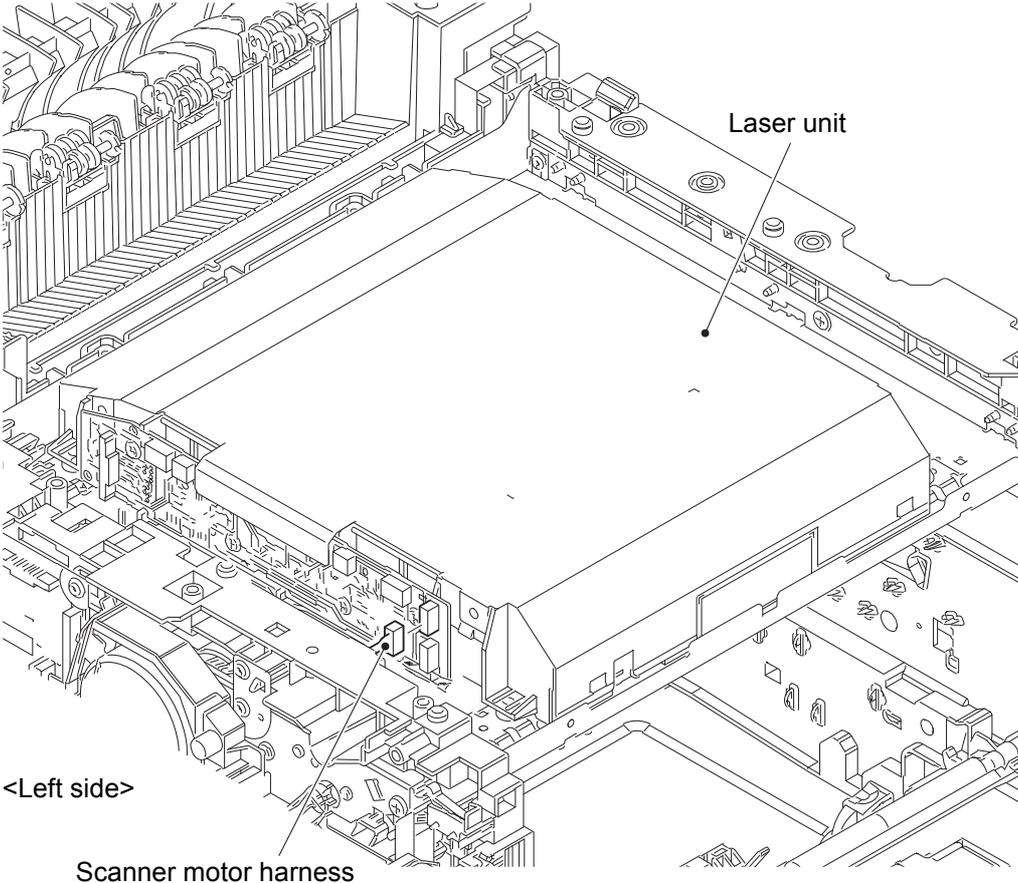


Fig. 6-46

(43) **Remove** > Scanner holder (x 4)

Fixtures & Fittings

- Taptite cup S M3x6 SR (x 5)

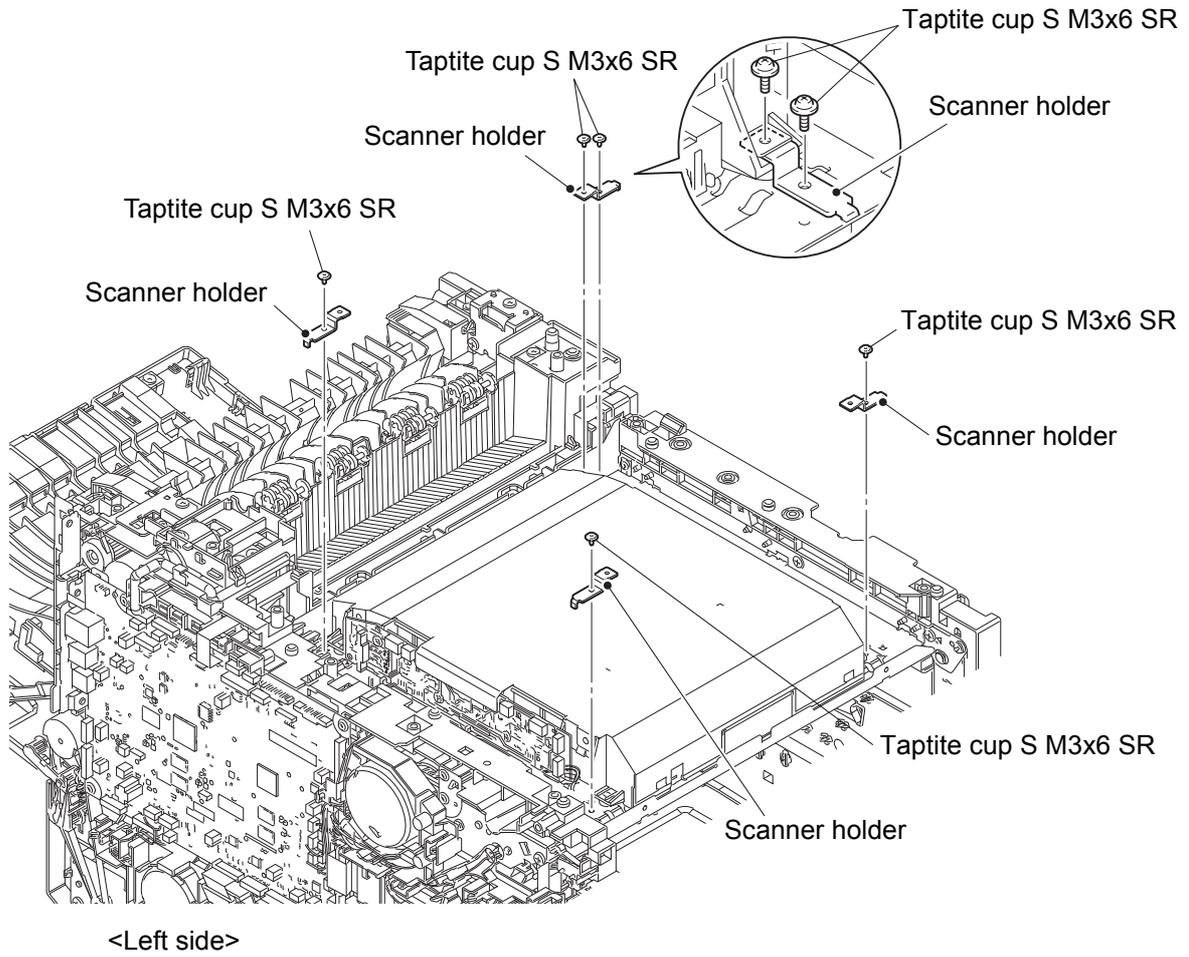
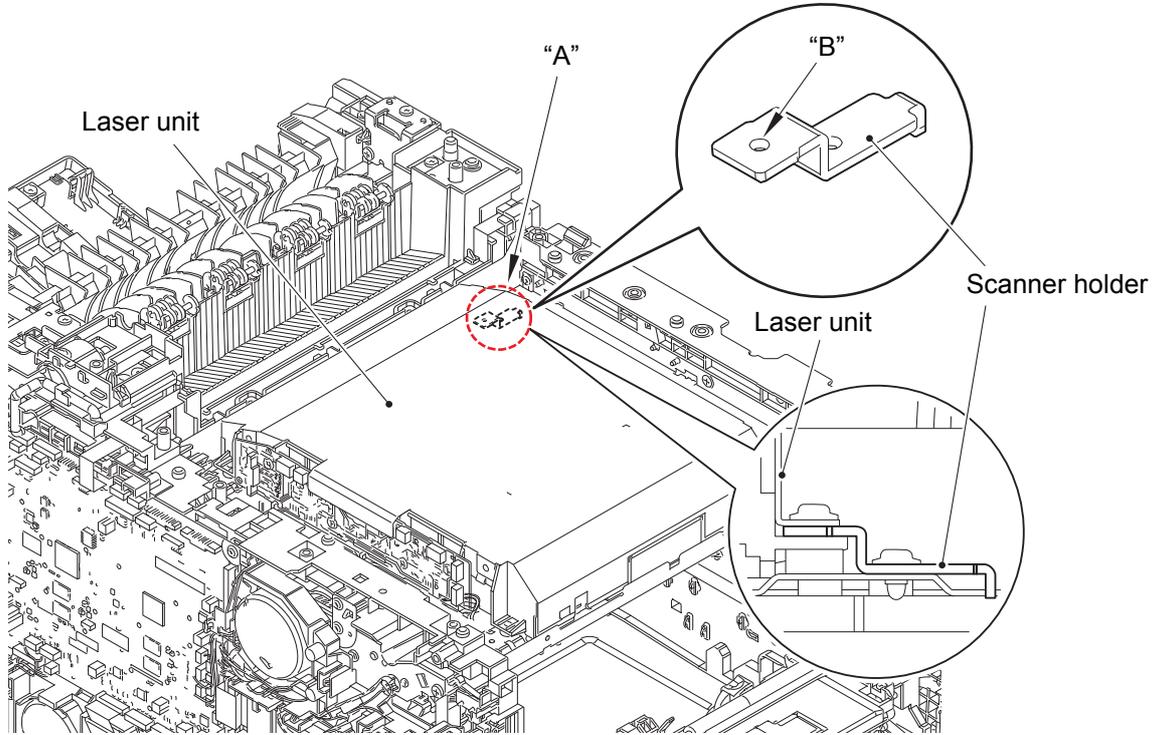


Fig. 6-47



Assembling note:

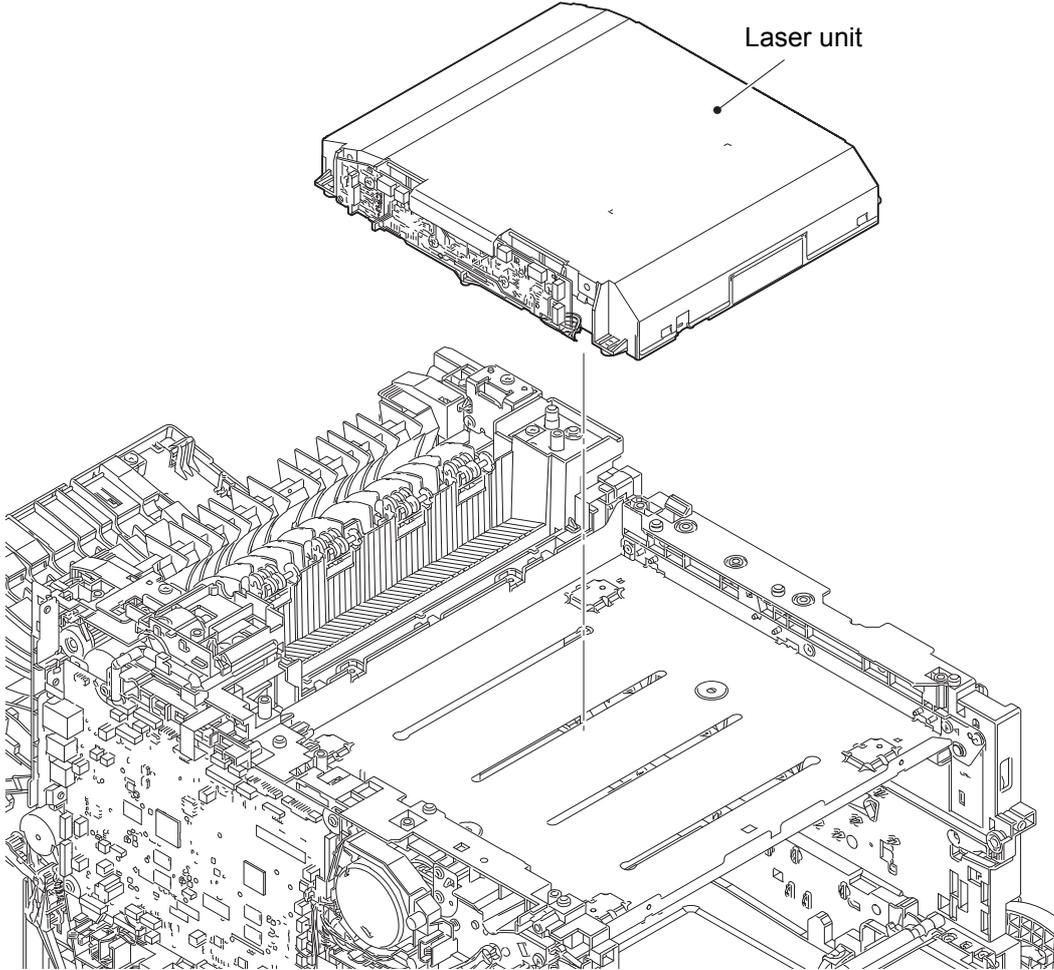
- When assembling the Scanner holder to “A” of the Laser unit, be sure to use the Scanner holder of which “B” is a screw and not to use other Scanner holders.
- When assembling the Scanner holder to “A” of the Laser unit, be sure that the Scanner holder is placed as shown in the figure.



<Left side>

Fig. 6-48

(44) Remove > Laser unit



<Left side>

Fig. 6-49

2.4 PF kit 1

(1) **Remove** > Separation pad ASSY

 **Fixtures & Fittings**

- Hook (x 2)

- Boss (x 2)

(2) **Remove** > Separation pad spring

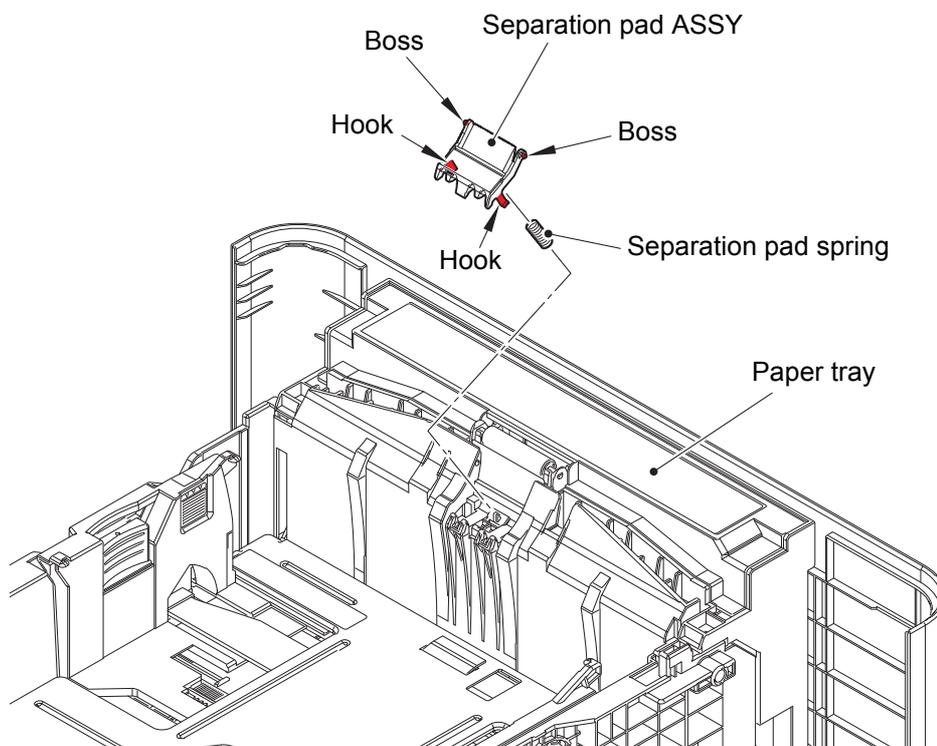


Fig. 6-50

(3) **Remove** > T1 pick up roller holder

-  **Fixtures & Fittings**
- Lift arm (x 1)

 **Point:**
• Remove the T1 pick up roller holder in the order of the arrows.

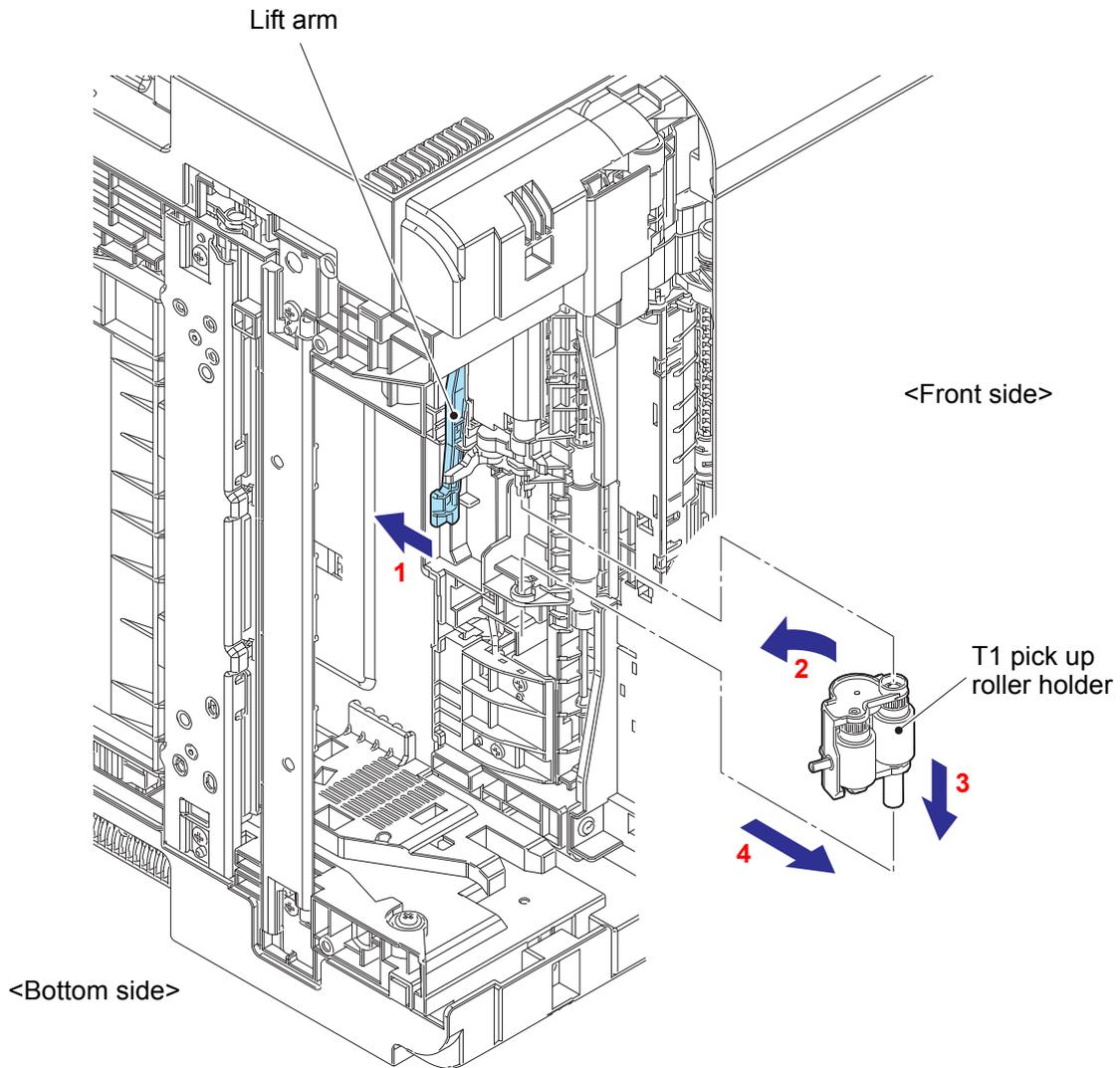


Fig. 6-51



Assembling note:

- Align the hole of the PF unit to the shaft of the T1 pick up roller holder and insert it into the hole.

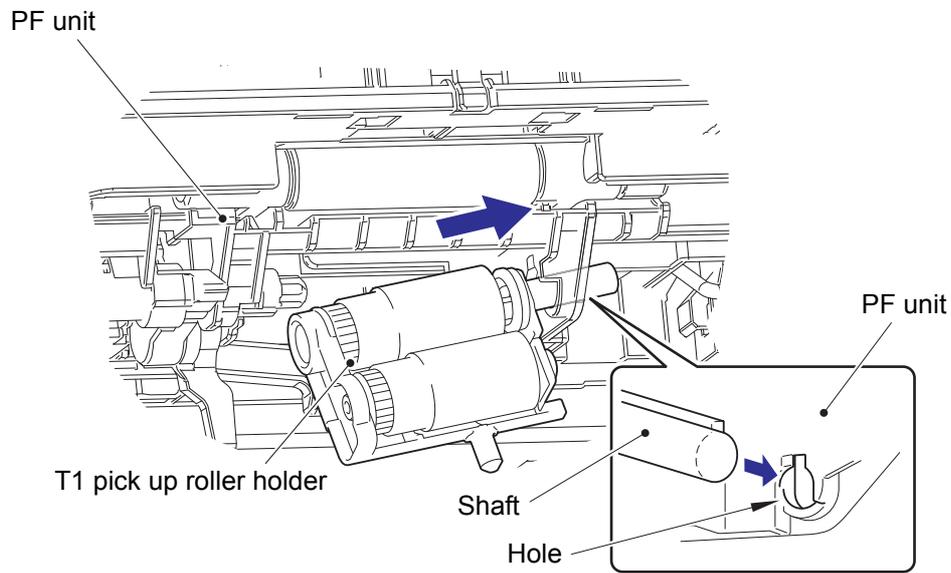


Fig. 6-52

- (4) After replacing the PF kit 1, reset the counter.
(Refer to “1.3.34 Adjust Settings / Reset Counters after Parts Replacement (Function Code 88)” in Chapter 5.)

2.5 PF kit 2

■ LT-330CL

(1) **Remove** > Separation pad ASSY

 **Fixtures & Fittings**

- Hook (x 2)

- Boss (x 2)

(2) **Remove** > Separation pad spring

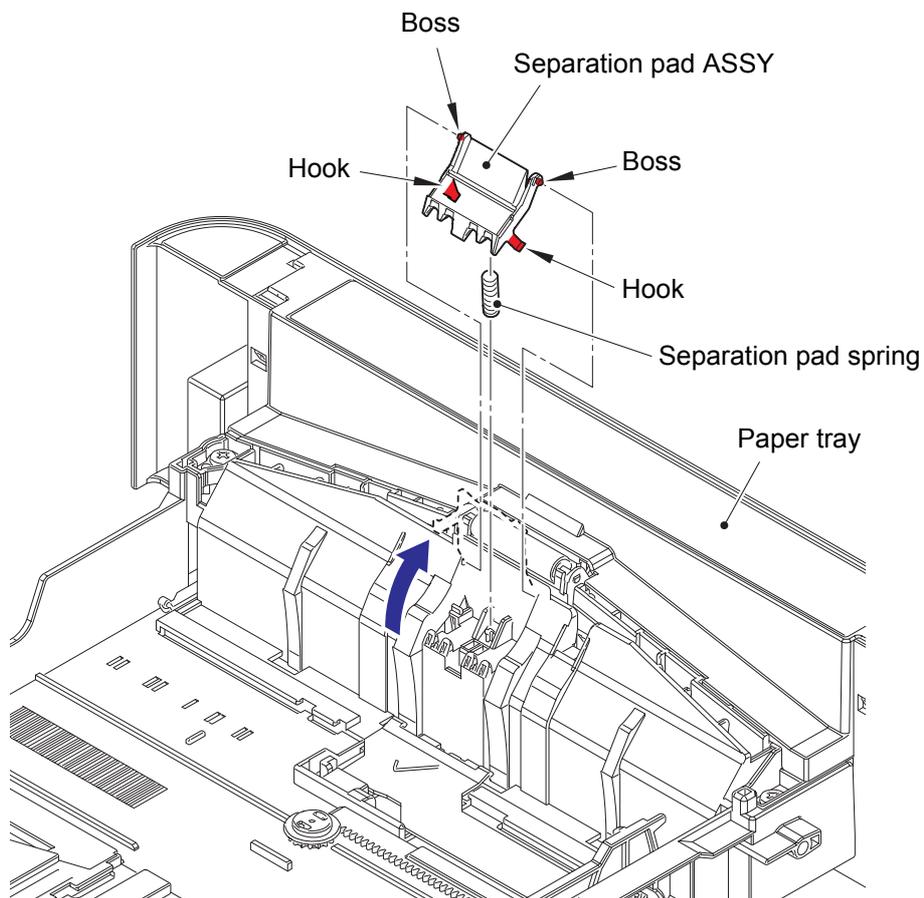


Fig. 6-53

(3) **Remove** > LT roller holder ASSY

-  **Fixtures & Fittings**
- Lift arm (x 1)

 **Point:**
• Remove the LT roller holder ASSY in the order of the arrows.

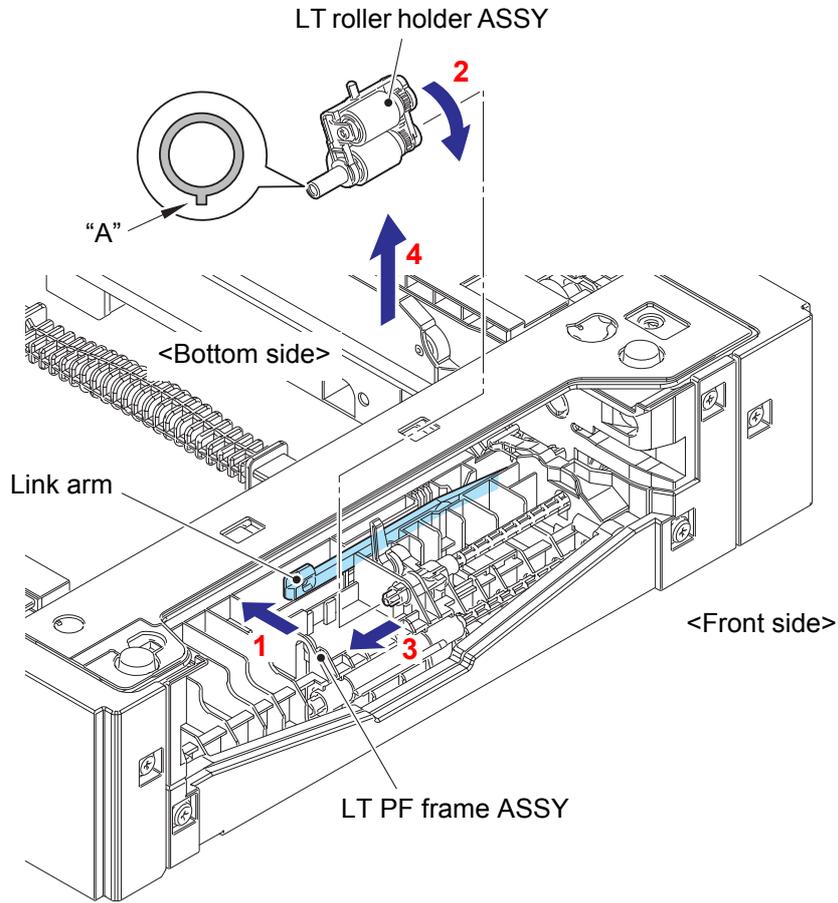


Fig. 6-54

 **Assembling note:**
• When attaching the LT roller holder ASSY, engage "A" on the shaft of the LT roller holder ASSY with the hole on the LT PF frame ASSY, and insert the shaft into the hole.

- (4) After replacing the PF kit 2, reset the counter.
(Refer to "1.3.34 Adjust Settings / Reset Counters after Parts Replacement (Function Code 88)" in Chapter 5.)

■ **LT-340CL**

(1) **Remove** > Separation pad ASSY

 **Fixtures & Fittings**

- Hook (x 2)

- Boss (x 2)

(2) **Remove** > Separation pad spring

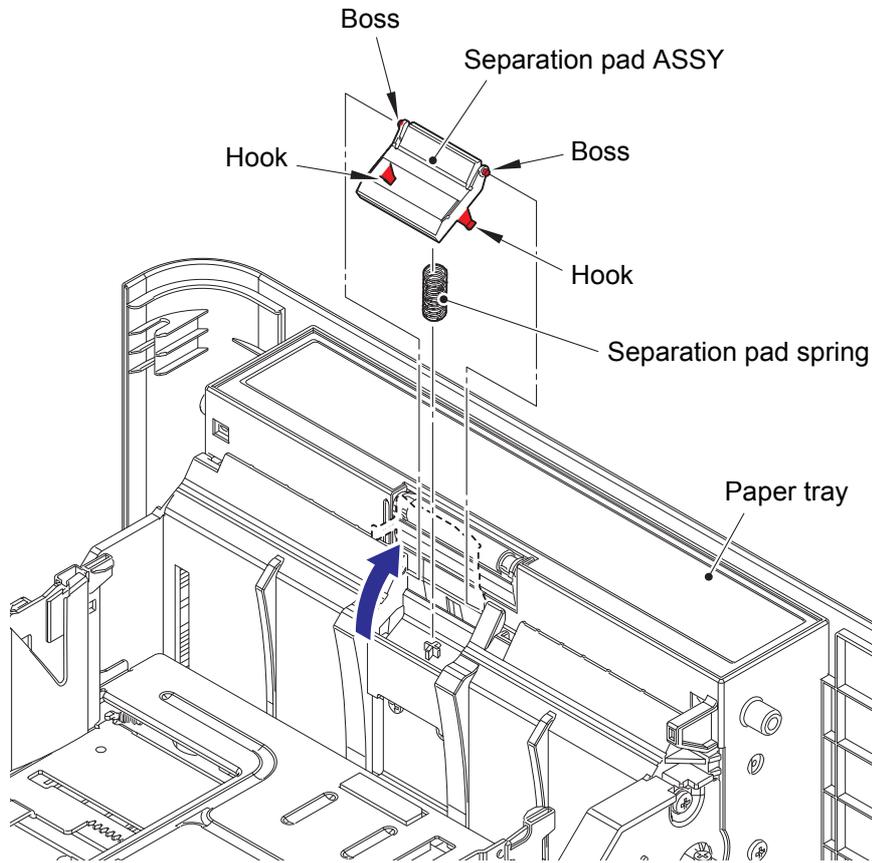


Fig. 6-55

(3) **Slide** > Separation roller ASSY

 **Fixtures & Fittings**

- Hook (x 1)

(4) **Remove** > Separation roller ASSY

 **Point:**

- Remove the Separation roller ASSY in the order of the arrows.

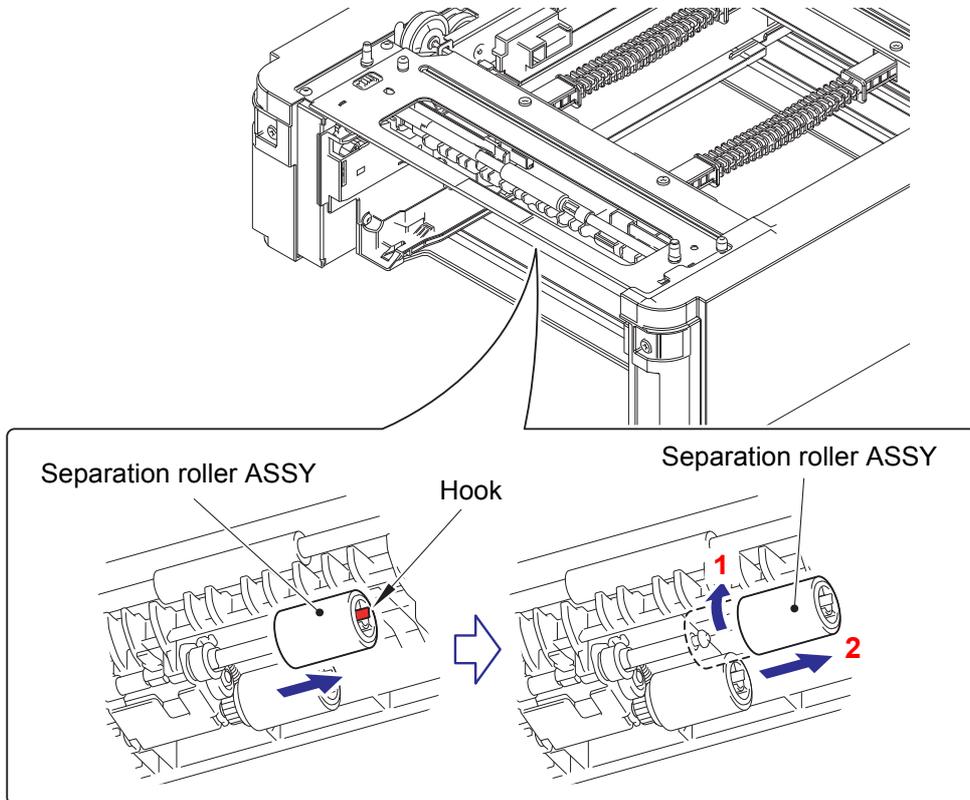


Fig. 6-56

 **Assembling note:**

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

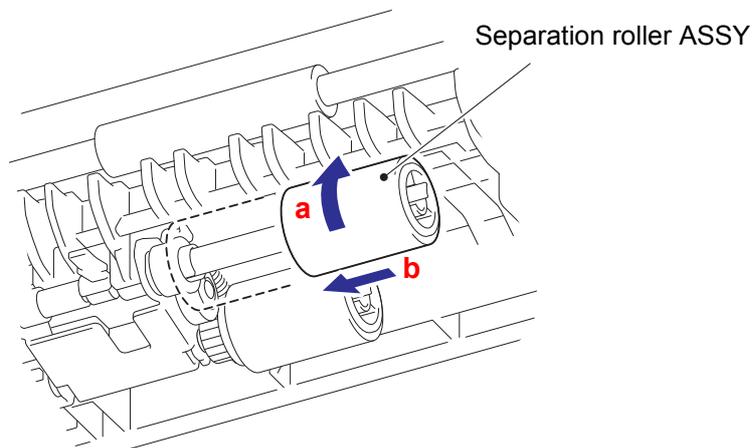


Fig. 6-57

(5) **Remove** > Separation roller ASSY

-  **Fixtures & Fittings**
- Hook (x 1)

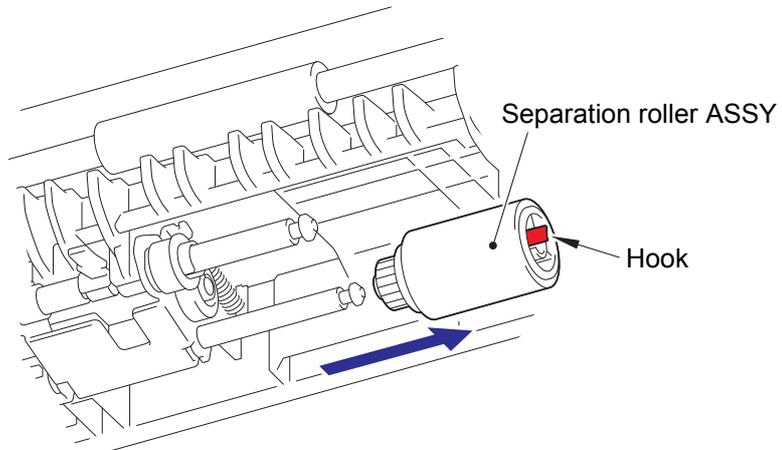


Fig. 6-58

(6) After replacing the PF kit 2, reset the counter.
(Refer to “1.3.34 Adjust Settings / Reset Counters after Parts Replacement (Function Code 88)” in Chapter 5.)

2.6 PF kit MP

- (1) **Open** > Front cover ASSY
- (2) **Open** > MP roller holder stop
- (3) **Remove** > MP roller holder ASSY

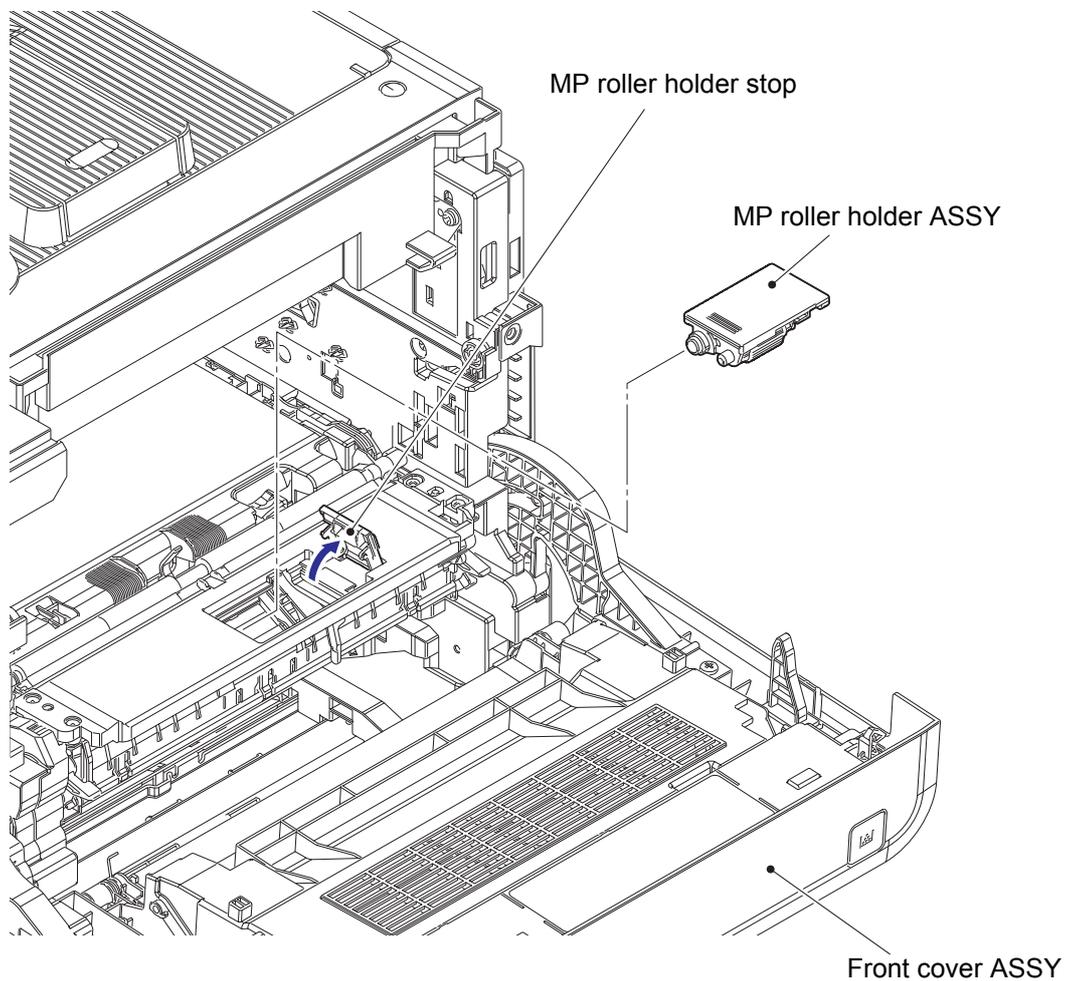


Fig. 6-59

(4) **Open** > MP separation pad

 **Fixtures & Fittings**
- Hook (x 2)

(5) **Remove** > MP separation pad spring

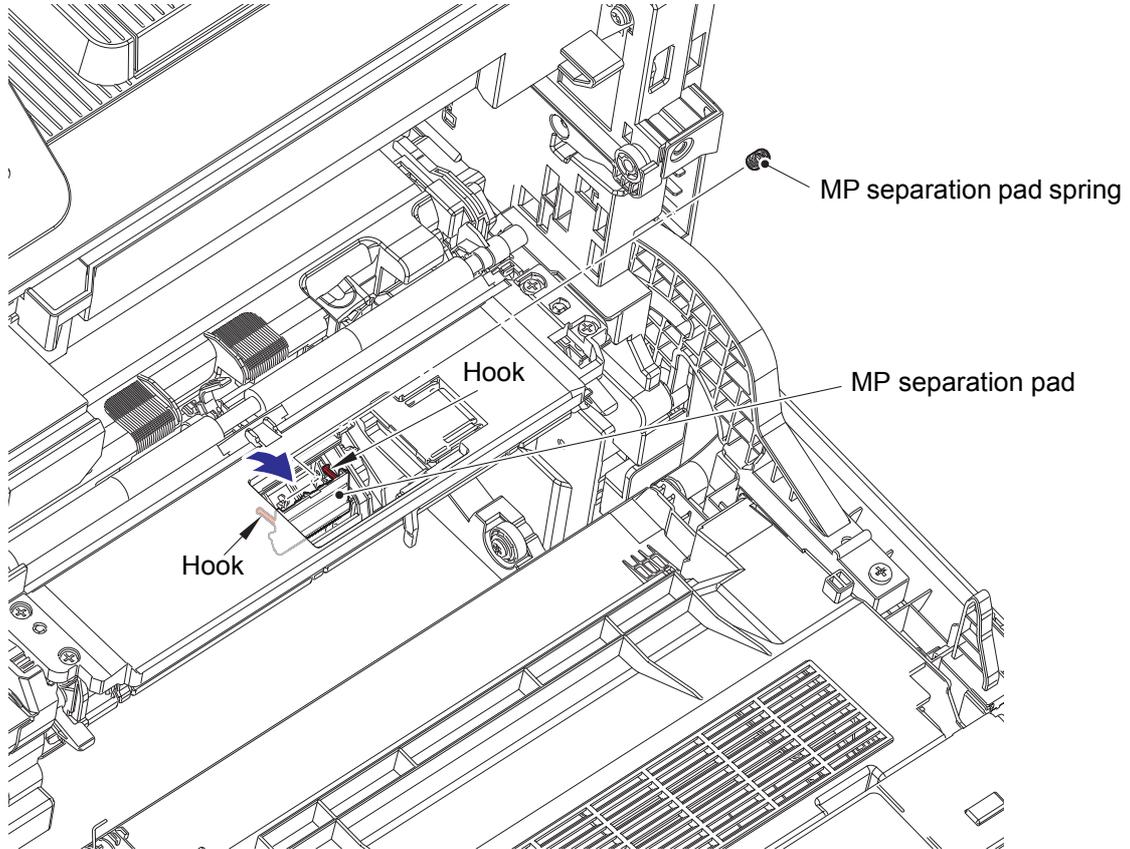


Fig. 6-60

(6) **Remove** > MP separation pad

- Fixtures & Fittings**
- Pin (x 2)

Point:
• Stand the MP separation pad up.

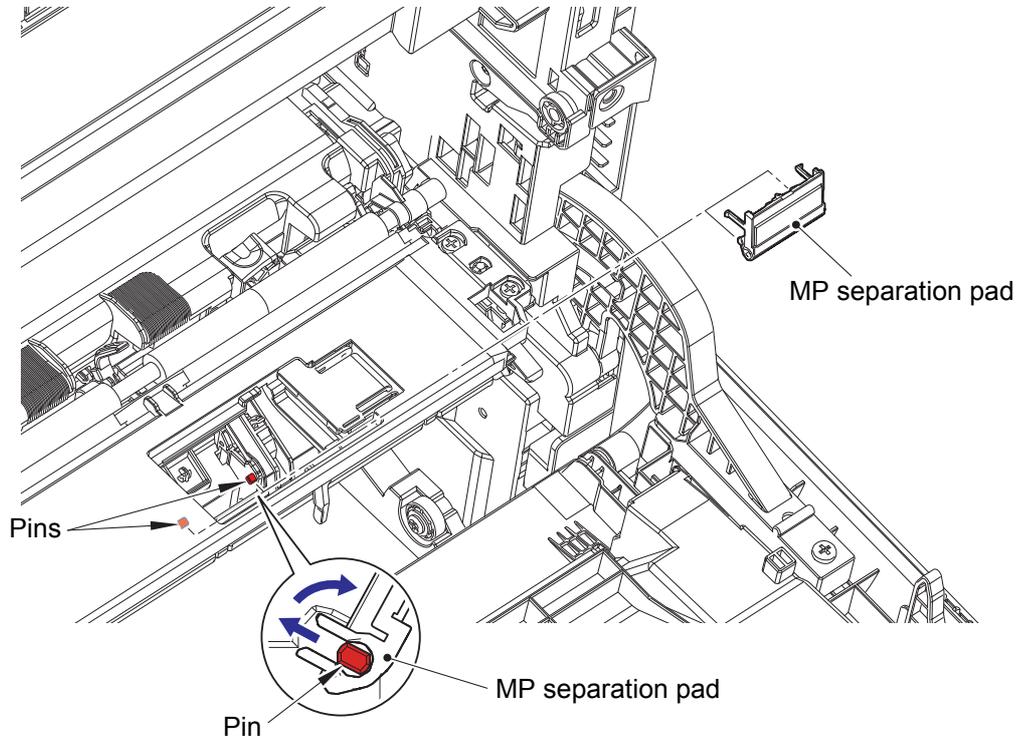


Fig. 6-61

- (7) After replacing the PF kit MP, reset the counter.
(Refer to "1.3.34 Adjust Settings / Reset Counters after Parts Replacement (Function Code 88)" in Chapter 5.)

APPENDIX 1 SERIAL NUMBERING SYSTEM

■ Serial number labels on the printer

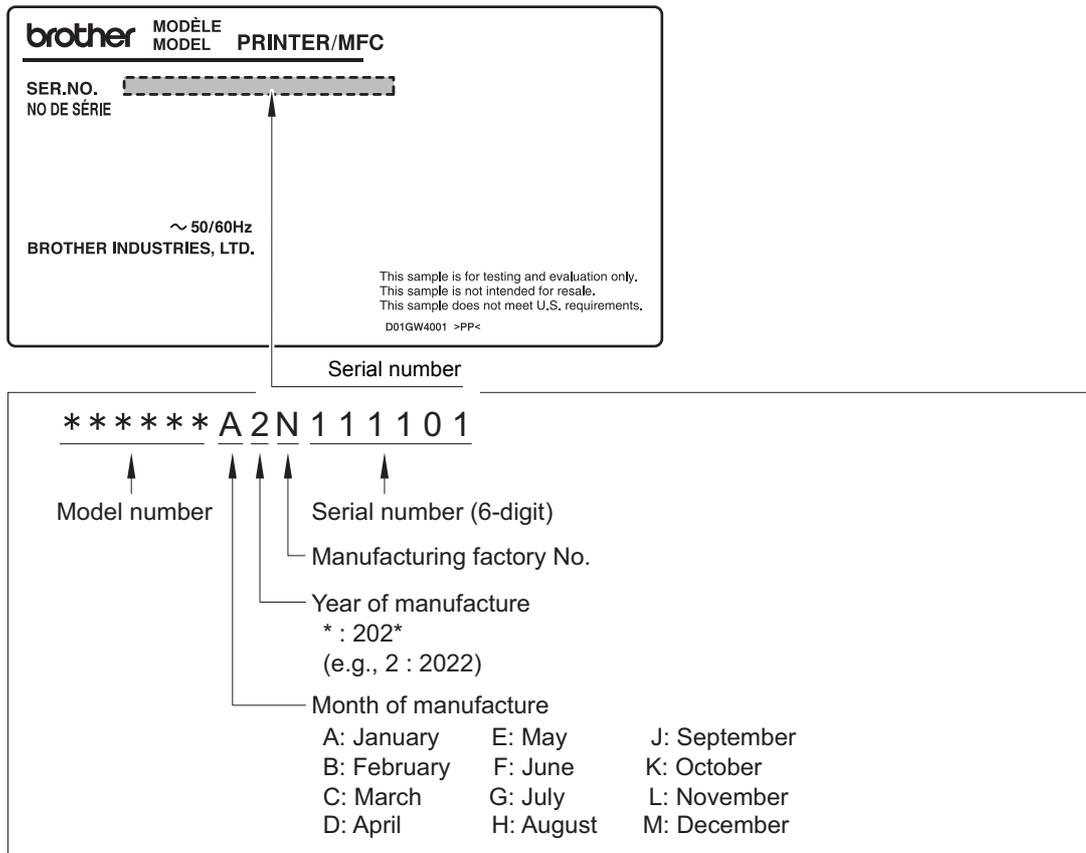


Fig. App 1-1

<Location>

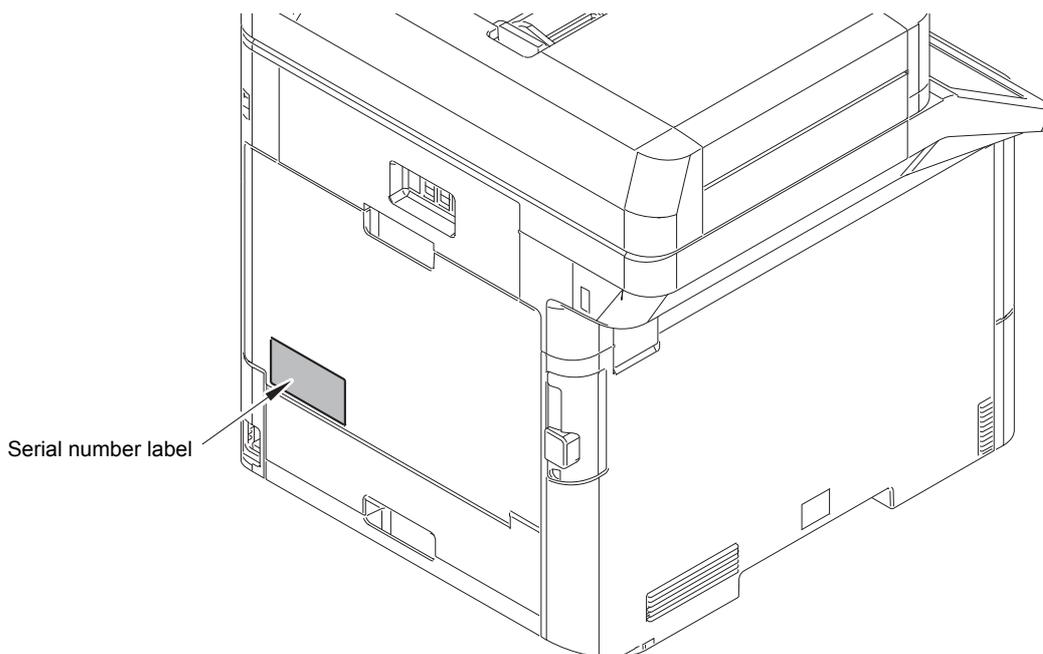


Fig. App 1-2

APPENDIX 2 DELETING USER SETTING INFORMATION

The user setting information for the machine is stored in the main PCB. You can return this to the default settings by following the procedure below.

<Operating Procedure>

- (1) Press the [Settings]  while the machine is in the ready state.

Note:

If your machine displays the [All Settings]  menu on the LCD, start operating from step (2).

- (2) Press the [ALL Settings] on the LCD.
- (3) Press the [Initial Setup] on the LCD.
- (4) Press the [Reset] on the LCD.
- (5) Press the [Factory Reset] on the LCD.
- (6) "Machine will reboot after resetting. Press [YES] for 2 seconds to confirm." appears on the LCD. Press and hold the [YES] for two seconds or longer to delete the user setting information and return the machine to the ready state.

APPENDIX 3 INSTALLING THE MAINTENANCE PRINTER DRIVER

To identify machines connected via USB direct interface, the computer requires the corresponding driver for the virtual USB device. If you connect any number of machines to your computer, the same number of virtual USB devices will be automatically configured on your computer. To prevent many virtual USB devices from being configured, use the unique driver installation procedure described below that enables your computer to identify terminals via one single virtual USB device.

Note:

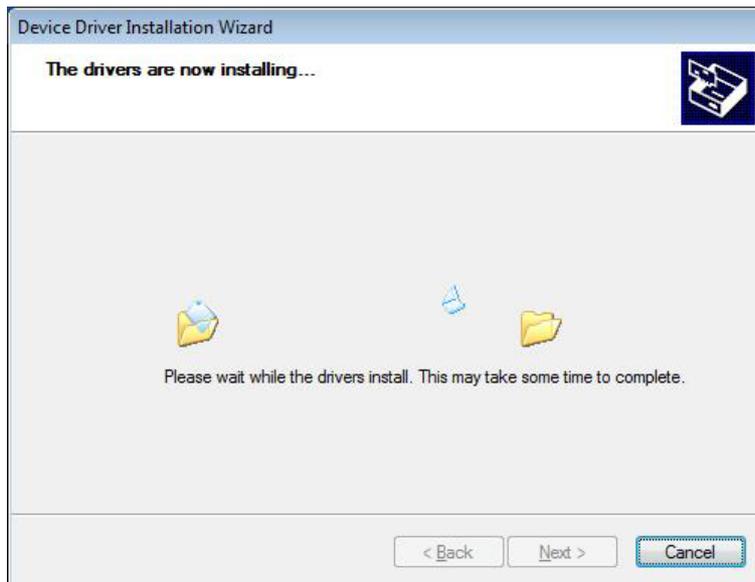
- Once this installation procedure is carried out for a computer, no more driver/software installation will be required for that computer to identify machines. If the Brother Maintenance USB Printer driver has been already installed to your computer according to this procedure, skip this section.
- Before proceeding to the procedure given below, make sure that the Brother Maintenance USB Printer driver is stored in your computer.

■ **Windows 7/Windows 8/Windows 8.1/Windows 10**

- (1) Check that the AC cord of the machine is unplugged from the electrical outlet. Disconnect the USB cable that connects the machine with your computer.
- (2) Turn ON your computer.
- (3) Double-click Setup.exe inside the Brother Maintenance USB Printer folder that was saved in a temporary folder. The following screen appears. Click the [Next].



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.