

# PRO8432WT

# Maintenance Manual

121118D

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## Disclaimer

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# PREFACE

This manual explains the maintenance methods for the C813/C823/C833/C843/ES8433/ES8443/Pro8432WT Series.

The manual has been prepared for use by the maintenance personnel. For operating methods of the C813/C823/C833/C843/ES8433/ES8443/Pro8432WT Series, refer to the corresponding user's manual.

The following notations may be used in this manual.

- C833n/C833dn/ES8433/Pro8432WT → C833
- C843n/C843dn/ES8443 → C843
- C823n/C823dn → C823
- C813n → C813

- Note!**
- The contents of this manual are subject to changes without prior notice.
  - Despite that exhaustive efforts were made in preparing the manual to make it accurate, it still may contain errors. Oki Data will not hold itself liable for any damage that results or is claimed to have resulted from repair, adjustment, or modification of the printer conducted by the user using this manual.
  - The parts employed in the C813/C823/C833/C843/ES8433/ES8443/Pro8432WT Series printer are so delicate that they may be damaged if not treated properly. Oki Data Corporation highly recommends that the maintenance of the printer is undertaken by ODC's registered maintenance personnel.
  - Work after eliminating static electricity.

## Warning



Risk of explosion if battery is replaced by an incorrect type. Battery of the printer need not to be replaced. Do not touch the battery.

Replace the whole board to replace the Main board (board-MEA). In the case of replacing batteries at board repairs, replace with the specified type ones. Installation of another type batteries may result in explosion.

Caution for used batteries are as follows; do not recharge, force open, heat or dispose of in fire.

# CONTENTS

<b>1. CONFIGURATION.....</b>	<b>1-1</b>		
1.1 System configuration .....	1-2		
1.2 Printer configuration .....	1-3		
1.3 Composition of optional items .....	1-4		
1.4 Specifications.....	1-5		
1.5 Interface specifications .....	1-8		
1.5.1 USB interface specifications .....	1-8		
1.5.1.1 USB interface overview .....	1-8		
1.5.1.2 USB interface connectors and cables .....	1-8		
1.5.1.3 USB interface signals .....	1-8		
1.5.2 Network interface specifications .....	1-9		
1.5.2.1 Outline of Network Interface .....	1-9		
1.5.2.2 Network Interface Connector and Cable .....	1-9		
1.5.2.3 Network Interface Signal .....	1-9		
1.5.3 ACC interface specifications .....	1-10		
1.5.3.1 ACC interface overview .....	1-10		
1.5.3.2 ACC interface connector and cable .....	1-10		
1.5.3.3 ACC interface signals .....	1-10		
<b>2. INSTALLATION.....</b>	<b>2-1</b>		
2.1 Cautions, and do's and don'ts.....	2-2		
2.2 Unpacking procedure.....	2-3		
<b>3. REPLACEMENT OF PARTS.....</b>	<b>3-1</b>		
3.1 Notes on replacement of parts.....	3-2		
3.2 Part replacement procedure .....	3-4		
3.2.1 Belt unit .....	3-4		
3.2.2 Fuser unit .....	3-5		
3.2.3 Cover side-L .....	3-6		
3.2.4 Cover side-R / Cover-WLAN.....	3-6		
3.2.5 Rear cover Assy.....	3-7		
3.2.6 LED Assy. ....	3-8		
3.2.7 Main board Assy. (board Assy-MEA) W-LAN Cable .....	3-10		
3.2.8 Top cover Assy.....	3-14		
3.2.9 600dpi/ 1200dpi Cable-Assy-Head/ Stackfull-Sensor .....	3-16		
3.2.10 Operator panel Assy. ....	3-19		
3.2.11 Front cove Assy. ....	3-21		
3.2.12 Guide Assy.-eject .....	3-23		
3.2.13 Post-fuser-lock .....	3-23		
3.2.14 Sensor Assy.-registration, relay board (P6Z),contact Assy., and fuser sensor Assy. ....	3-24		
3.2.15 High-voltage power supply board .....	3-27		
3.2.16 Frame Assy.-Front .....	3-28		
3.2.17 Roller Assy.-registration .....	3-30		
3.2.18 Roller-feed, roller-pickup, frame Assy.-pickup, and holder sensor Assy. ....	3-32		
3.2.19 Low-voltage power supply Assy.....	3-34		
3.2.20 Motor Assy.-belt and motor Assy-ID .....	3-36		
3.2.21 Motor DC-FU (fuser motor) .....	3-38		
3.2.22 Side-R Assy. and side-L Assy. ....	3-39		
3.2.23 Feed rollers (Tray 1/2/3/4) .....	3-42		
3.2.24 Paper feed rollers (MPT pick-up roller/MPT feed roller/ MPT retard roller) .....	3-43		
3.2.25 Fuser Connector .....	3-45		
3.2.26 Guide Assy.-Side-L/Rack-L .....	3-46		
3.2.27 Guide Assy.-Side-R/Rack-R .....	3-46		
3.2.28 Cover-Top-L / Cover-Top-R.....	3-47		
3.2.29 Cover-FaceUP-B .....	3-48		
<b>4. LUBRICATION .....</b>	<b>4-1</b>		
4.1 Portions Lubricated.....	4-2		

<b>5. MAINTENANCE MENUS .....</b>	<b>5-1</b>
5.1 Self-diagnostic mode .....	5-2
5.1.1 Switch scan test .....	5-2
5.1.2 Motor and clutch test .....	5-2
<b>6. CLEANING .....</b>	<b>6-1</b>
6.1 Cleaning .....	6-2
6.2 LED lens array cleaning .....	6-3
6.3 Paper feed roller cleaning .....	6-5
<b>7. TROUBLESHOOTING PROCEDURE .....</b>	<b>7-1</b>
7.1 Important notes to start the repair work .....	7-2
7.2 Confirmation items before taking corrective action against abnormalities .....	7-2
7.3 Precautions when taking corrective actions against abnormalities .....	7-2
7.4 Preparation for troubleshooting .....	7-2
7.5 Troubleshooting methods .....	7-2
7.5.1 Preparation for troubleshooting .....	7-3
7.5.1.(1) LCD display error .....	7-4
7.5.1.(2) Abnormal operations of the printer after the power is turned on .....	7-5
7.5.1.(3) Paper feed jam (Error 391: 1st Tray) .....	7-15
7.5.1.(4) Feed jam (Error 380) .....	7-17
7.5.1.(5) Paper feed jam (Error 390: MP Tray) .....	7-18
7.5.1.(6) Paper running jam (Error 381) .....	7-20
7.5.1.(7) Paper unloading jam (Error 382) .....	7-22
7.5.1.(8) Two-sided printing jam (Errors 370, 371, 372, 373 and 383) .....	7-24
7.5.1.(9) Paper size error (Errors 400 and 401) .....	7-25
7.5.1.(10) ID unit Up/Down error (Service call 142) .....	7-26
7.5.1.(11) Fuser unit error (Errors 167 to 177) .....	7-27
7.5.1.(12) Motor fan error (Service call 122, 127, 128, 918 and 051) .....	7-28
7.5.1.(13) Print speed is slow. (Performance is low.) .....	7-28
7.5.1.(14) Option unit cannot be recognized .....	7-29

7.5.1.(15) LED head cannot be recognized. (Service call 131, 132, 133 and 134) .....	7-30
7.5.1.(16) Toner cartridge cannot be recognized. (Errors 540, 541, 542 and 543) .....	7-30
7.5.1.(17) Fuse cut error (Service call 154 and 155) .....	7-32
7.5.1.(18) Humidity sensor error (Service call 123) .....	7-32
7.5.1.(19) Wiring diagram .....	7-34
7.5.2 Troubleshooting the abnormal images .....	7-35
7.6 Fuse check .....	7-36
7.7 Paper cassette switches and paper size correlation table .....	7-37
<b>8. OTHER .....</b>	<b>8-1</b>
8.1 Resistance value check .....	8-2
8.2 Parts location .....	8-6
8.3 Maintenance board indication stamp .....	8-16

# 1. CONFIGURATION

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1.1	System configuration .....	1-2
1.2	Printer configuration .....	1-3
1.3	Composition of optional items .....	1-4
1.4	Specifications .....	1-5
1.5	Interface specifications .....	1-8

# 1.1 System configuration

Figure 1-1 represents the system configuration of C813/C823/C833/C843/ES8433/ES8443.

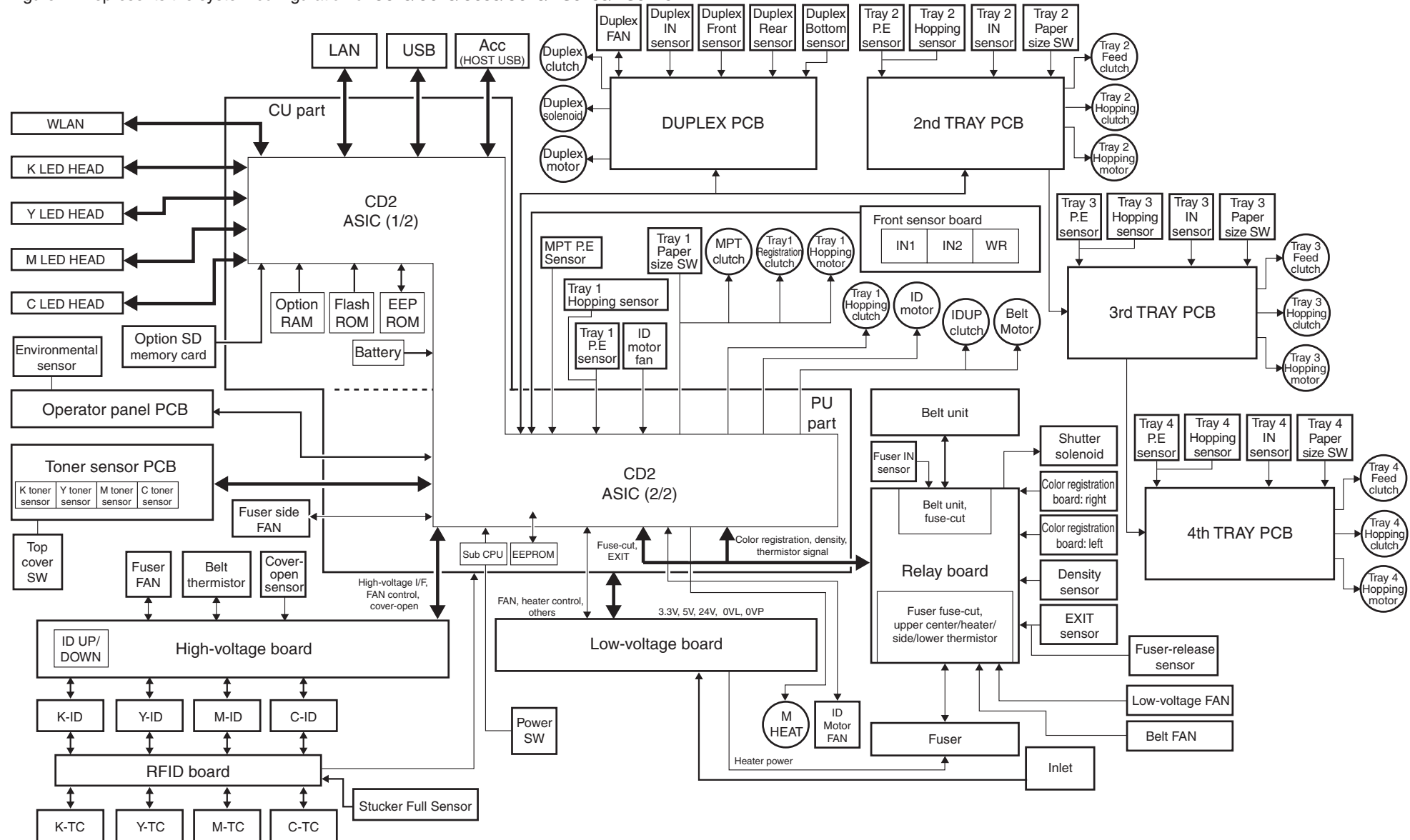


Figure 1-1

## 1.2 Printer configuration

The internal part of the C813/C823/C833/C843/ES8433/ES8443 printer is composed of the following sections:

- Electrophotographic processing section
- Paper paths
- Controller (a combination CU/PU board)
- Operator panel
- Power supplies (high-voltage power supply/low-voltage power supply)

Figure 1-2 represents the configuration of the printer.

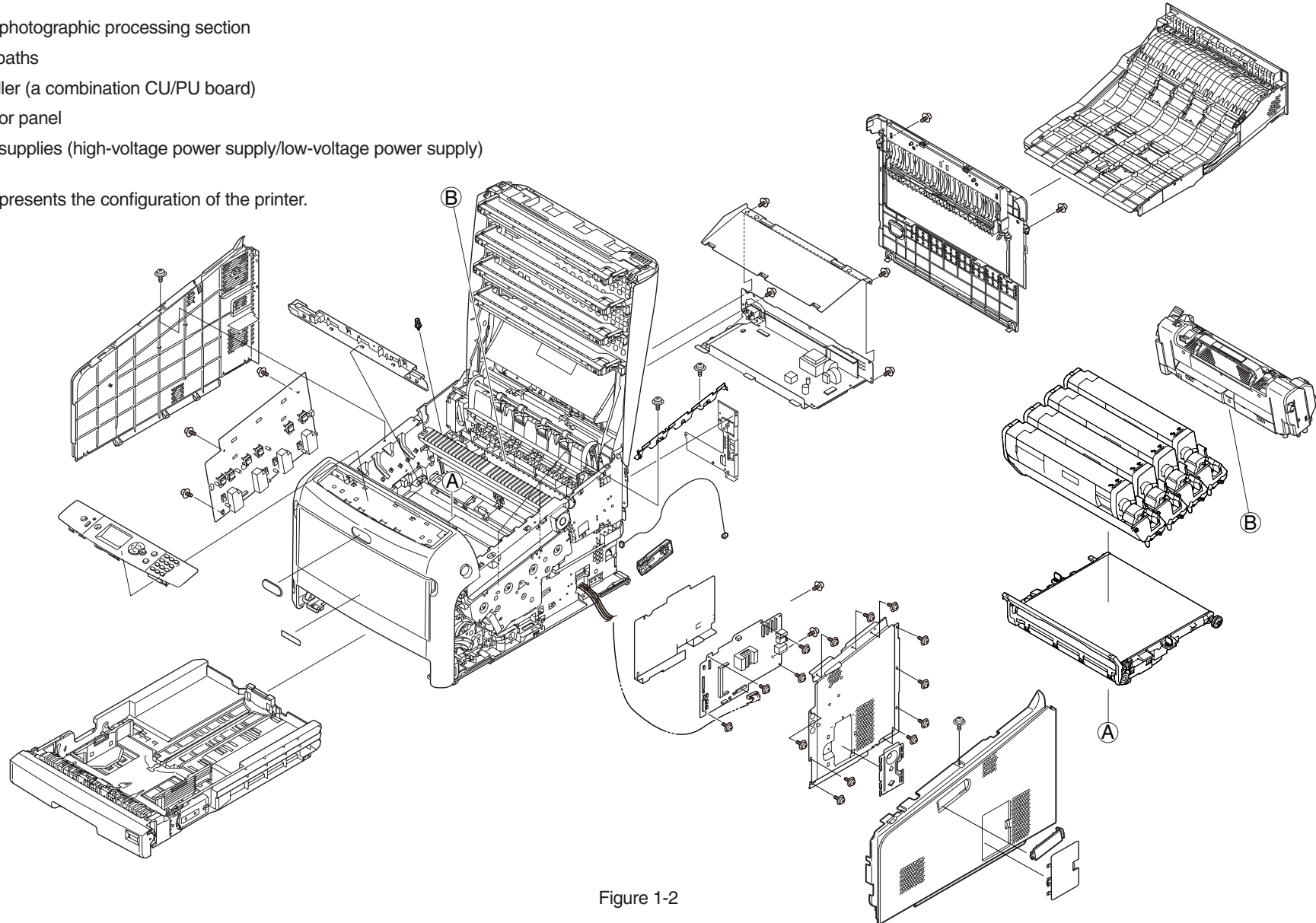


Figure 1-2

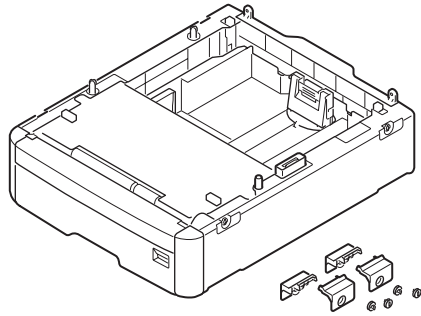


# 1.3 Composition of optional items

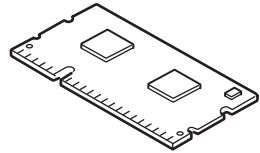
The following optional items are available for the C813/C823/C833/C843/ES8433/ES8443 printer:

**Note!** Refer to the instruction sheet of each option units.

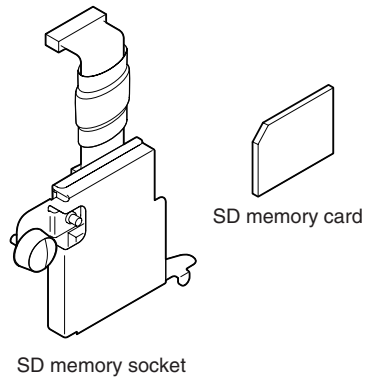
- (1) Additional tray unit



- (2) Additional RAM



- (3) SD memory card kit

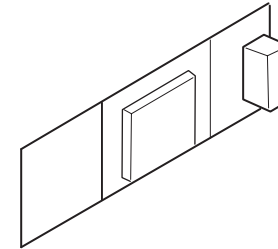


- (4) Duplex-Unit

- (5) Card authentication kit TWN4 (Elatec)

\*C813/C823 are not supported the Card authentication kit.

- (6) Wireless LAN module



## 1.4 Specifications

Classification	Item	Specification(s)		
		C813/C823	C833/ES8433	C843/ES8443
Dimension	Width	449mm		
	Depth	552mm		
	Height	360mm		
	Weight	Approx. 40 kg		
Line length	Line length	A4 LEF		
Print speed	Engine speed (A4 LEF)	23PPM (color/mono)	35PPM (color/mono)	
Print start	First print time	14sec. (color/mono) (A4 LEF)	9.5 sec. (color/mono) (A4 LEF)	
	Warm-up time	From power on: 32 seconds (at room temperature 25°C, rated voltage) From power save mode: 27 seconds (at room temperature 25°C, rated voltage)		
	Low-noise mode	Unavailable		
Resolution	LED head	600dpi	1200dpi	
	Maximum input resolution	600 × 1,200 dpi	1,200 × 1,200 dpi	
	Output resolution	True 600 × 1200 dpi True 600 × 600 dpi 600 × 600 dpi 2 bit	True 1,200 × 1,200 dpi True 600 × 600 dpi	
	Gradation	600 dpi, four gradations	1,200 dpi, two gradations	
	Toner save mode	Toner consumption saving by to decrease for printing density.		
CPU	Core	PowerPC464FP		
	Clock	800MHz		
	Bus width	128bit		

Classification	Item	Specification(s)		
		C813/C823	C833/ES8433	C843/ES8443
RAM	Resident	256 MB (768 MB max.)		512 MB [256MB(On board) + 256MB(DIMM)] (768 MB max.)
ROM	Program + font	128MB		
Power consumption	Power input	110 - 127 VAC (Range 99 - 140 VAC) 220 - 240 VAC (Range 198 - 264 VAC)		
	Off mode	110 - 127 VAC: 0.1W or less 220 - 240 VAC: 0.15W or less		
	Sleep mode	110 - 127 VAC: 0.7W or less 220 - 240 VAC: 1.0W or less		
	Power save mode	12W or less		
	Idle	100W (average)		
	Normal operation	700W (differs depending on the use environment)		
Operating environment (temperature)	Peak	1,400W		
	Operating	10°C to 32°C, 17°C to 27°C (temperature for full-color print quality guaranteed)		
	Non-operating	0°C to 43°C, power off		
	Storage (one year max.)	-10°C to 43°C, with drums and toner cartridges		
	Transportation (one month max.)	-29°C to 50°C, with drums but no toner cartridges		
	Transportation (one month max.)	-29°C to 50°C, with drums and toner cartridges		

Classification	Item	Specification(s)		
		C813/C823	C833/ES8433	C843/ES8443
Operating environment (humidity)	Operating	20% to 80%, 50% to 70% (humidity for full-color print quality guaranteed) Maximum wet-bulb temperature: 25°C		
	Non-operating	10% to 90%, maximum wet-bulb temperature: 26.8°C, power-off		
	Storage	10% to 90%, maximum wet-bulb temperature: 35°C		
	transportation	10% to 90%, maximum wet-bulb temperature: 40°C		
Service life	Printer life	600,000 pages (A4 LEF), five years		
	Print duty (M=L/12, A=L/12/5)	Max. 50,000 pages/month Average 10,000 pages/month		
	MTBF (2.3% duty)	Not applicable		
	MPBF	100,000 pages		
	MTTR	Within 20 minutes		
	Toner life (based on ISO/IEC 19798)	Starter toner: 2,500 pages (black/color)		
		C813 Standard: 5,000 pages (black/color)	C833/C843/ES8433(OEL)/ES8443 Standard: 10,000 pages (black/color)	
		C823 Standard: 7,000 pages (black/color)	ES8433 (OAU) Standard: 8,600 pages (black/color) in A4 one-sided printing at 5% area coverage and 3 pages per job.	
	Image drum life	30,000 pages (3 pages/job) 18,000 pages (1 page/job) 44,000 pages (when printed continuously) Drum counter automatic reset		
Transfer belt life	80,000 pages (A4 LEF, 3 pages/job), counter automatic reset			
Fuser unit life	100,000 pages (A4), counter automatic reset			

Classification	Item	Specification(s)		
		C813/C823	C833/ES8433	C843/ES8443
Operation noise	Operating	52 dBA (ISO 7779 Front) (without any optional unit)		
	Standby	32 dBA (ISO 7779 Front)		
	Power save mode	Background level		
Paper handling	Tray capacity (1st tray)	Legal/universal cassette: 300 sheets (80g/m <sup>2</sup> )		
	Tray capacity (2nd/3rd/4th tray)	Legal/universal cassette (option): 530 sheets (80g/m <sup>2</sup> ) *: C813/C823 be able to add only 2nd tray.		
	Tray capacity (manual/auto)	Standard multipurpose tray: 100 sheets (80g/m <sup>2</sup> ) or 10 envelopes		
	Paper ejection	250 sheets (80g/m <sup>2</sup> ) to the face down stacker, 100 sheets (80g/m <sup>2</sup> ) to the face-up stacker		
Duplex	64 to 220 g/m <sup>2</sup>			
	Paper size	A3, A4 [SEF/LEF], A5 [SEF/LEF], A6*, B4, B5 [SEF/LEF], B6*[SEF/LEF], B6 half**, Tabloid, Letter [SEF/LEF], Legal (13/13.5/14 inches), Executive, Statement*[SEF/LEF], 8.5"SQ, Folio, 8K (260×368mm, 270×390mm, 273×394mm), Statement, 16K (184×260mm, 196×270mm, 197×273mm [SEF/LEF]), Index card**, 4x6inch**, 5x7inch**, Custom***, Japanese envelope (Choukei 3, Choukei 4, Choukei 40, Youkei 0, Youkei 4, Kakugata 2, Kakugata 3)**, Envelope (Com-10, DL, C5, C4)**, postcard**, double-postcard**  *: These size paper cannot be printed from trays 2, 3 or 4. **: B6[LEF], Statement[LEF], Postcards, double-postcards, and envelopes can be printed only from the MPT. ***: As for Custom, the available size differs depending on trays.		
Minimum paper size	Tray 1	105 × 148mm/A6		
	Tray 2, Tray 3, Tray 4 (options)	148 × 182mm		
	MPT	64 × 90mm		

Classification	Item	Specification(s)		
		C813/C823	C833/ES8433	C843/ES8443
Media weight	Tray 1	64 g/m <sup>2</sup> to 220 g/m <sup>2</sup>		
	Tray 2, Tray 3, Tray 4 (options)	64 g/m <sup>2</sup> to 176 g/m <sup>2</sup> *: C813/C823 be able to add only 2nd tray.		
	MPT	64 g/m <sup>2</sup> to 256 g/m <sup>2</sup>		
Operator panel	LCD	Graphic panel with 128 × 64 dots, no display of paper size		
	LED (color)	3 LEDs (green × 2, dark amber × 1)		
	Button	18 buttons • Ten-key pad • Power Save button (green) • Operational buttons (7 buttons: ON LINE/CANCEL/ENTER/▲/▼/◀/▶/HELP)		
Status switch/sensor	Paper out	Provided		
	Paper low	Not provided		
	Toner low	Provided (Y, M, C, K)		
	Top/front open	Provided		
	Fuser temperature	Provided		
	Paper size	Provided (manual setting)		
	Stacker full	Provided		
Communication interface	Standard (on-board)	<ul style="list-style-type: none"> <li>• High-speed USB</li> <li>• Ethernet</li> <li>• Host USB</li> </ul> • Accessory port (for an optional IC card authentication kit)		
	Option	Wireless LAN (IEEE 802-11 a/b/g/n)		
Emulation	Standard	PCL6(XL3.0) / PCL5c / XPS / SIDM (IBM-PPR, EPSON-FX), Direct PDF Printing, PostScript 3 (Clone) * C813/ C823 is not supported the DirectPDF Printing and the PostScript3 (done).		
	Emulation switch	Automatic		

Classification	Item	Specification(s)		
		C813/C823	C833/ES8433	C843/ES8443
Font	Bit-map font	Provided		
	Scalable font	Provided		
	Barcode	Provided		
	OCR-A/B	Provided		
Option (removable)	RAM	256/512MB DIMM (C843/ES8443 are set the 256MB DIMM to the option slot at those standard composition.)		
	User-installable SD memory card kit	16 GB (OKI genuine product)		
	Tray configuration	Tray 2/ Tray 3/ Tray 4 *: C813/C823 be able to add only 2nd tray.		
	Cassette	Universal (530 sheets, 80g/m <sup>2</sup> )		
	Duplex Unit	Standard: (C833dn, ES8433, C843dn, C823dn) Option: (C833n, C843n, ES8443, C823n, C813n)		
	Long-sheet supporter	N/A		
	Base on casters	Provided		
	Others	N/A	Card authentication kit	
Factory setting	OEL	PCL model (supports PCL6(XL3.0)/ PCL5c/XPS/ SIDM(IBM-PPR, EPSON-FX, 600 dpi LED Head model)	PCL + PS model (supports all PDLs, 600 dpi LED Head model)	PCL + PS model (supports all PDLs, 1,200 dpi LED Head model)
Other	USB-IF logo	Provided		
	Windows logo	Provided		
	Operation with UPS or inverter	Proper operation by use of a UPS (uninterruptible power supply) or an inverter is not guaranteed. Do not use a UPS or an inverter.		

# 1.5 Interface specifications

## 1.5.1 USB interface specifications

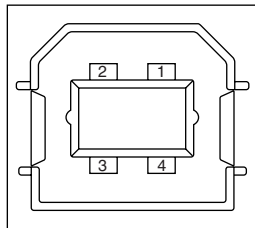
### 1.5.1.1 USB interface overview

- (1) Basic specifications  
USB (Hi-Speed USB supported)
- (2) Transmission mode  
Full speed (Max. 12 Mbps ± 0.25%)  
High speed (Max. 480 Mbps ± 0.05%)
- (3) Power control  
Self-powered device

### 1.5.1.2 USB interface connectors and cables

- (1) Connector
  - Printer side: B-receptacle (female)  
Upstream port  
Product equivalent to UBR24-4K5C00 (Made by ACON)

Connector pin arrangement



- Cable side: B-plug (male)

### (2) Cables

Length: USB 2.0 cables no more than five meters long (two meters or less recommended)  
(Shielded USB 2.0 cables shall be used.)

### 1.5.1.3 USB interface signals

	Signal name	Function
1	Vbus	Power (+5V)
2	D-	For data transfer
3	D+	For data transfer
4	GND	Signal ground
Shell	Shield	

## 1.5.2 Network interface specifications

### 1.5.2.1 Outline of Network Interface

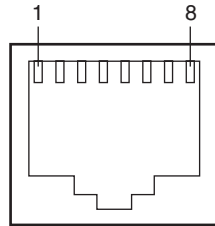
Refer to the contents of 1.4 Specifications.

### 1.5.2.2 Network Interface Connector and Cable

(1) Connector

1000Base-T/100 BASE-TX/10 BASE-T

(automatic switch, no simultaneous use)



Connector pin arrangement

(2) Cable

Unshielded twist pair cable with RJ-45 connector

(Category 5e or higher-order is recommended.)

### 1.5.2.3 Network Interface Signal

Pin No.	Signal name	Functions
1	TRD+(0)	Transmit and receive Data 0 (+)
2	TRD-(0)	Transmit and receive Data 0 (-)
3	TRD+(1)	Transmit and receive Data 1 (+)
4	TRD+(2)	Transmit and receive Data 2 (+)
5	TRD-(2)	Transmit and receive Data 2 (-)
6	TRD-(1)	Transmit and receive Data 1 (-)
7	TRD+(3)	Transmit and receive Data 3 (+)
8	TRD-(3)	Transmit and receive Data 3 (-)

### 1.5.3 ACC interface specifications

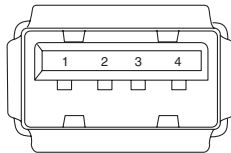
#### 1.5.3.1 ACC interface overview

- (1) Basic specifications  
USB (only ODC-approved card readers/writers)
- (2) Transmission mode  
Low speed (Max. 1.5 Mbps  $\pm$  1.5%)
- (3) Supply current  
Max. 500mA

#### 1.5.3.2 ACC interface connector and cable

- (1) Connector
  - Printer side: USB A-receptacle (female)  
Downstream port  
Product equivalent to DUSBARA42-T11A (DDK Ltd.)
  - Cable side: USB A-plug (male)

Connector pin arrangement



- (2) Cable  
Length: The cable supplied with a card reader shall be used.  
(Do not place a hub between a card reader and the printer.)

#### 1.5.3.3 ACC interface signals

	Signal name	Function
1	Vbus	Power (+5V)
2	D-	For data transfer
3	D+	For data transfer
4	GND	Signal ground
Shell	Shield	

# 2. INSTALLATION

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2.1	Cautions, and do's and don'ts .....	2-2
2.2	Unpacking procedure .....	2-3



## 2.1 Cautions, and do's and don'ts

### Warning

- Do not install the printer in any high-temperature location or a near heat source.
- Do not install the printer in a location where chemical reaction may occur (laboratory and the like).
- Do not install the printer in the proximity of inflammable solvents, such as alcohol and paint thinner.
- Do not install the printer within reach of children.
- Do not install the printer on an unstable surface (e.g., on a rickety bench or on a slanting place).
- Do not install the printer in a location with moisture or heavy dust, or in direct sun.
- Do not install the printer in an environment with sea wind or corrosive gas.
- Do not install the printer in a location with heavy vibration.
- In the event that the printer is inadvertently dropped or its cover is damaged, remove the power plug from the power outlet and contact the customer information center.  
Such mishap could lead to an electric shock, fire or injury.
- Do not connect any power cord, printer cable or grounding wire in any other manner than the way specified in the manual. Failure to observe the above could result in fire.
- Do not stick in an object into the vent hole.  
Such action could lead to an electric shock, fire or injury.
- Do not place a glass filled with water or the like on the printer.  
Such action could lead to an electric shock or fire.
- When the printer cover is opened, be careful not to touch the fuser unit.  
It may cause burns.
- Do not throw the toner cartridges or the image drum cartridges into fire.  
Dust explosion could cause burns.
- Do not use a highly combustible spray near the printer.  
It may cause a fire because the printer contains parts that get extremely hot.
- In the event that the cover becomes unusually hot, emits smoke, bad smell, or abnormal noise, remove the power plug from the power outlet and contact the customer information center.  
It may lead a fire.

### Warning

- If water or any other liquid enters the inside of the printer, remove the power plug from the power outlet and contact Customer Center.  
Fire could break out.
- If someone drops foreign objects such as a clip in the printer, remove the power plug from the outlet and take out the foreign objects.  
It may cause an electric shock, fire, or injury.
- Do not operate or disassemble the printer in any other manner than the way specified in the manual.  
Failure to observe this warning could result in an electric shock, fire or injury.

### Caution

- Do not install the printer in a location where its vent hole is blocked.
- Do not install the printer directly on a shag carpet or rug.
- Do not install the printer in a sealed room or other location with poor ventilation or permeability.
- Make sure to ventilate sufficiently when continuously using the printer in a small room for a long time.
- Install the printer away from a strong magnetic field or noise source.
- Install the printer away from a monitor or TV.
- To move the printer, hold both sides of the printer.
- This printer, which weighs approximately 40 kg, should be lifted by two or more people.
- While the printer power is on or the printer is printing, do not come close to the paper exit. Such action could lead to injury.

When the precautionary notes concerning the installation and operation are explained, the user should be referred to the precautionary notes given in the user's manual. Especially, give thorough explanation on the power cord and the grounding wire.

## 2.2 Unpacking procedure

### **Warning**

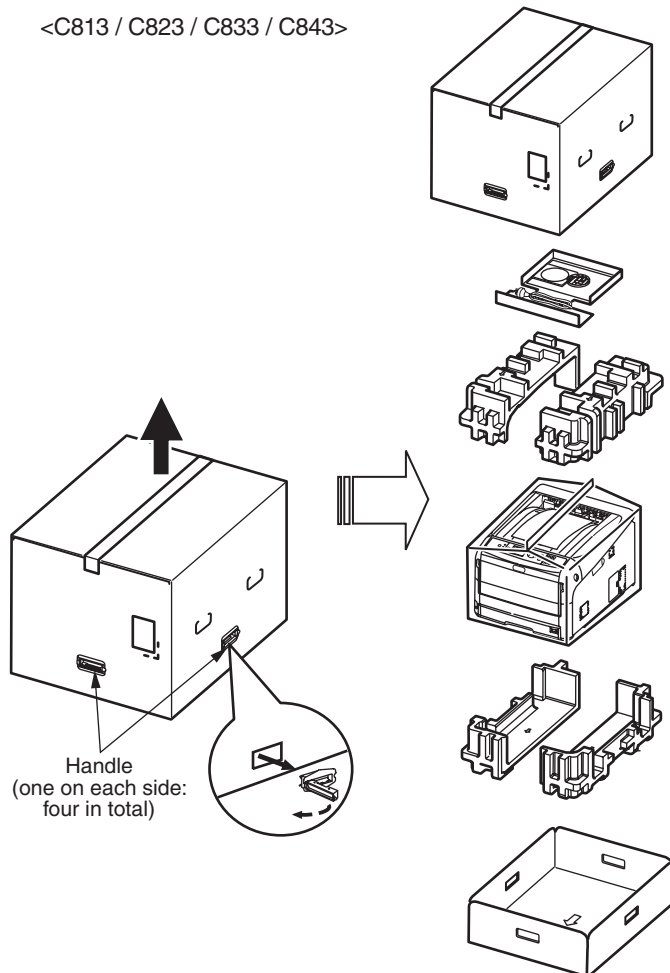
Personal injury may occur.



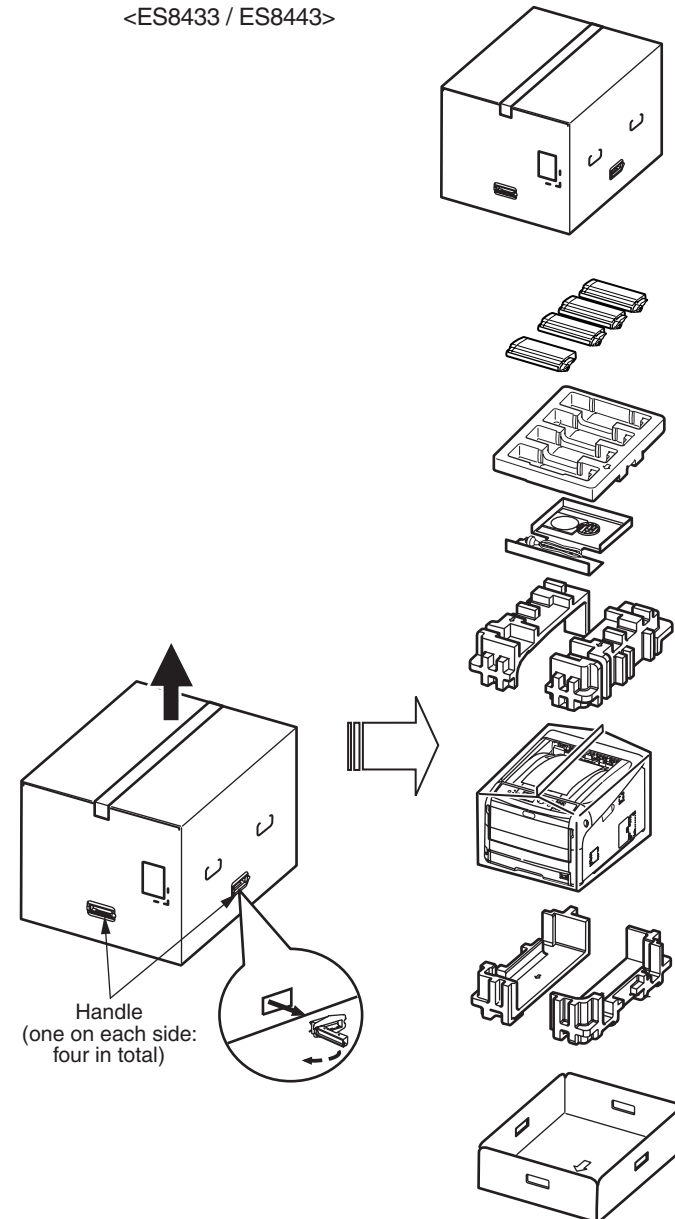
Since the printer weights approximately 40 kg, it should be lifted by two or more people.

- Remove the four handles from the sides of the box, as illustrated below, and lift the corrugated fiberboard box.

<C813 / C823 / C833 / C843>



<ES8433 / ES8443>



# 3. REPLACEMENT OF PARTS

---

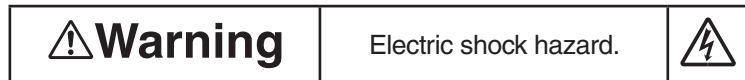
This chapter describes the procedures of the field replacement of parts, assemblies and units. The procedures are to detach them. Reverse the procedures to attach them.

The reference part numbers used in this manual (such as ① and ② ) do not identical to the part numbers in the maintenance disassembly configuration diagram 46396601TL and the RSPL 46396601TR.

3.1	Notes on replacement of parts .....	3-2
3.2	Part replacement procedure .....	3-4

## 3.1 Notes on replacement of parts

- (1) Prior to replacing a part, unplug the AC cord and the interface cable.
- (a) Be sure to use the following procedure to unplug the AC cord:
- ① Turn off the printer, then the LED indicator goes out.
  - ② Pull out the AC plug of the AC cord from the AC power source.
  - ③ Unplug the AC cord and the interface cable.



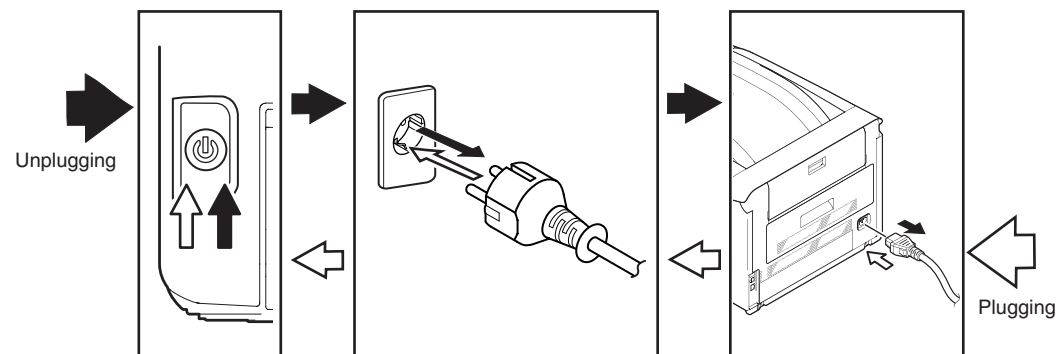
Be sure to unplug the AC cable as some circuits keep working while the power cable is connected even after the power is turned off.

When replacing the low-voltage power supply, due to potential electric shock, wear insulated gloves or be careful not to touch the conductors or terminals of the power supply directly.

After the AC cord is unplugged, the capacitor may take about one minute to discharge completely, or could not discharge due to PCB breakdown. Use caution about electric shock.

- (b) Be sure to use the following procedure to reconnect the printer:
- ① Connect the AC cord and the interface cable to the printer.
  - ② Turn on the printer.
  - ③ **S** Turn on the printer, then the LED indicator lights up.



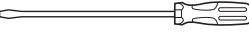
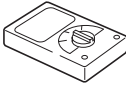
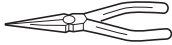


- (2) Do not disassemble the printer so long as it operates properly.
- (3) Minimize disassembly. Do not detach the parts not shown in the part replacement procedure.
- (4) Use the replacement tools specified.
- (5) Conduct disassembly in the order instructed, or part damage may occur.
- (6) Removed small parts, such as screws or collars, should be tentatively installed in their original positions.
- (7) Do not use static-prone gloves when handling integrated circuits (ICs) or circuit boards, including microprocessors, and ROM and RAM chips.
- (8) Do not place printed-circuit boards (PCBs) directly on the printer or a floor.



**Maintenance Tools:**

Table 4-1-1 shows the tools necessary to replace printed-circuit boards and units.



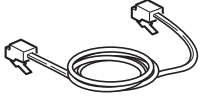
Table 4-1-1: Maintenance Tools

No.	Maintenance Tool	Quantity	Use	Remarks
1	 No. 2-200 screwdriver with magnetic tip	1	3- to 5-mm screws	
2	 Screwdriver No. 3-100	1		
3	 Screwdriver No. 5-200	1		
4	 Digital multimeter	1		In this document, this tool name is witten as 'VOM', too.
5	 Pliers	1		
6	 Handy vacuum cleaner (toner vacuum)	1		See note.
7	 E-ring pliers	1	E-shaped ring removal	

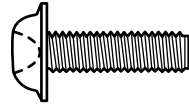
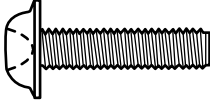
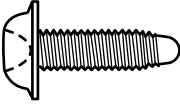
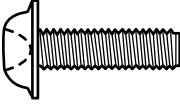
**Note!** Use a toner vacuum. Using a general-purpose vacuum may cause toner to catch fire.

Table 4-1-2 shows the tools necessary to use Maintenance Utility software.

Table 4-1-2: Maintenance Tools

No.	Maintenance Tool	Quantity	Use	Remarks
1	 Notebook personal computer (with Maintenance Utility software installed)	1	3- to 5-mm screws	See section 5.2 for Maintenance Utility.
2	 USB cable	1		
3	 Ethernet cable (crossover cable)	1		

**Screws in use:**

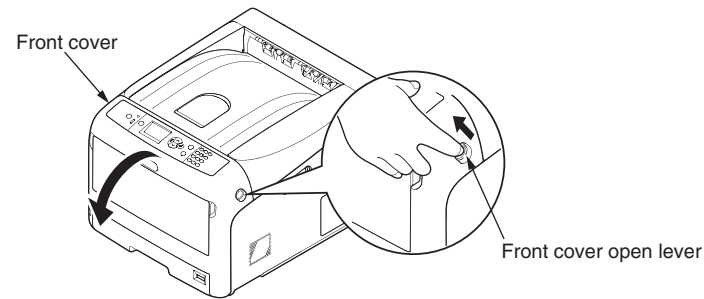
Shape	Designation
	Screw (silver) (6mm)
	Screw (silver/8mm)
	Round-head screw (black)
	Screw (black)

## 3.2 Part replacement procedure

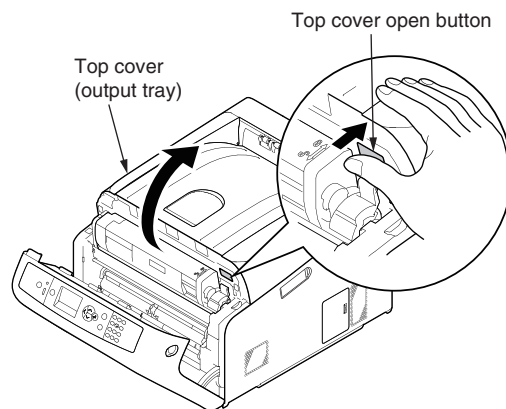
This section describes the procedure for replacing the parts and assemblies shown in the disassembly diagram.

### 3.2.1 Belt unit

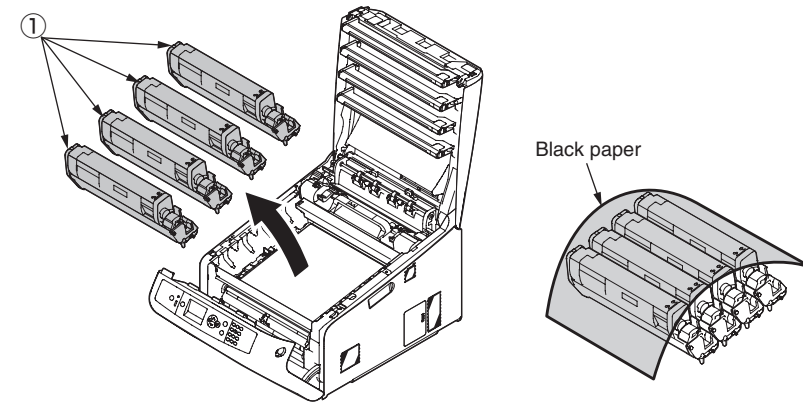
- (1) Pull the front cover open lever to open the front cover forward.



- (2) Press the Top cover open button and open the Top cover (output tray).

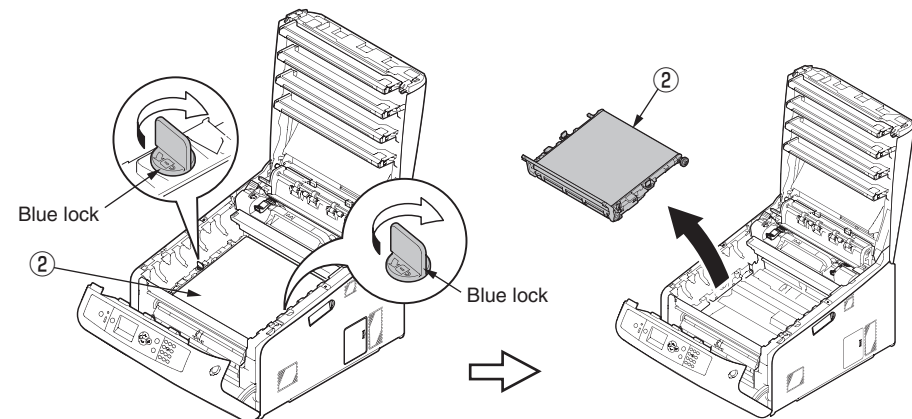


- (3) Remove the four image drums ①.



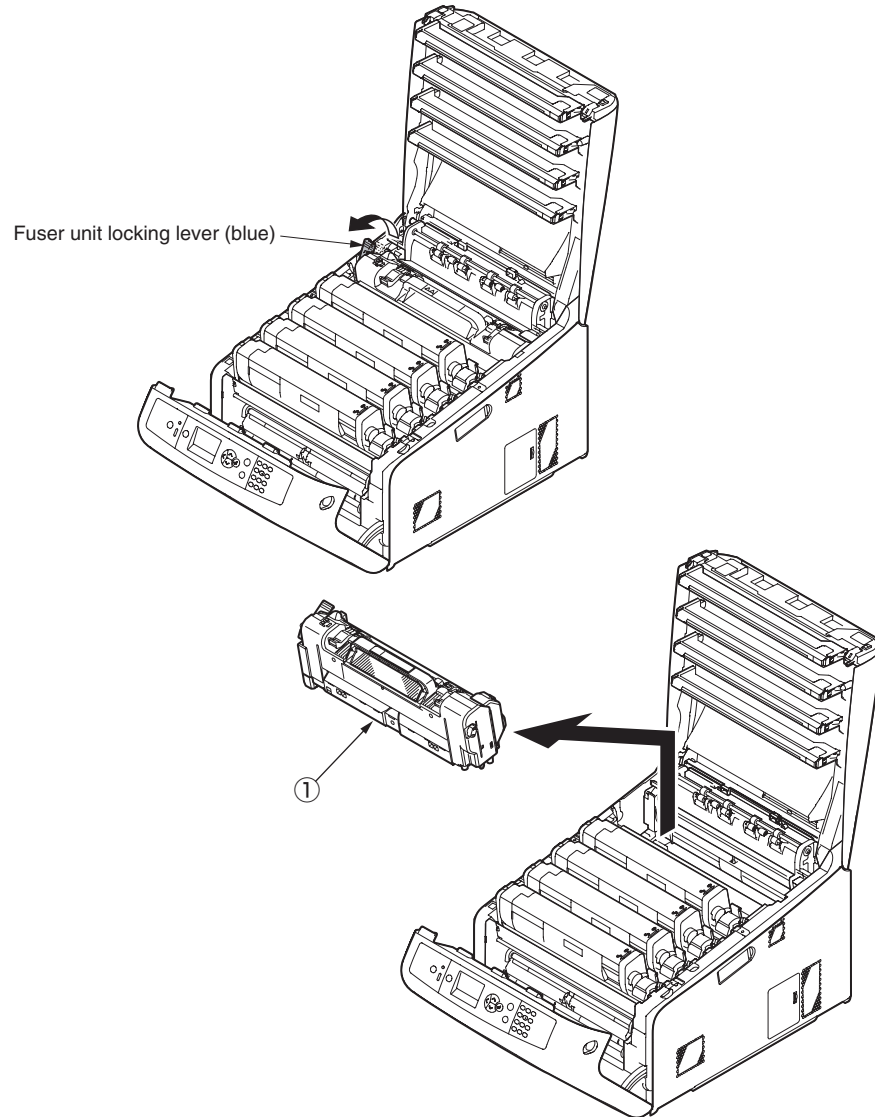
**Note!** Cover the image drums with a piece of black paper.

- (4) Turn the two locks (blue) of the belt unit ② in the direction of the arrow, and remove the belt unit ② by holding the lever (blue).



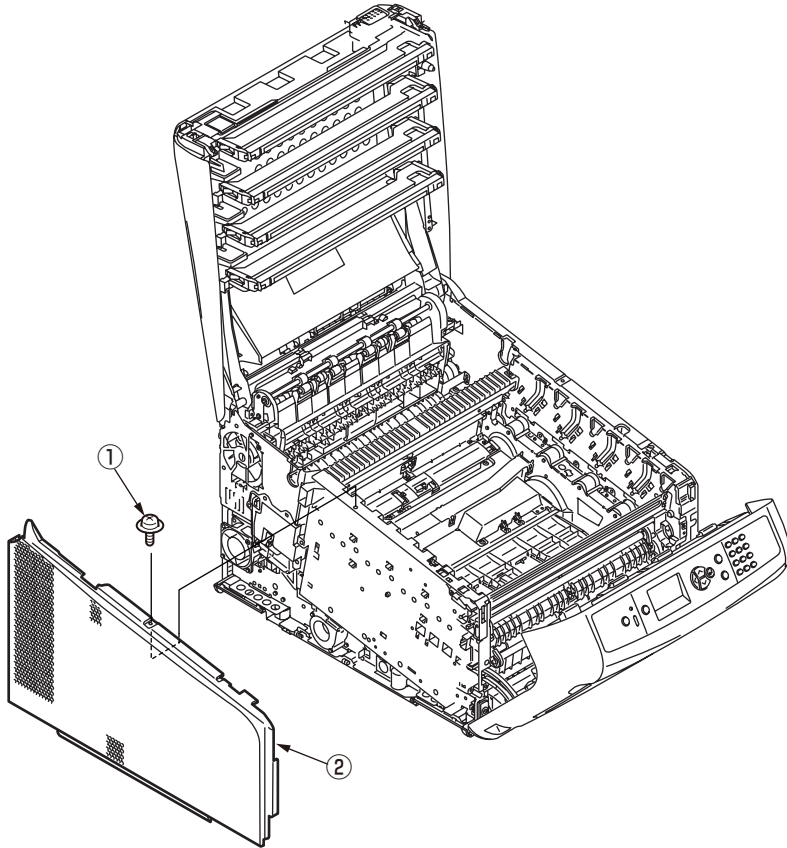
### 3.2.2 Fuser unit

- (1) Open the front cover and the top cover. (Refer to section 3.2.1 (1) and (2).)
- (2) Pull the fuser unit locking lever (blue) in the direction of the arrow and detach the fuser unit ①.



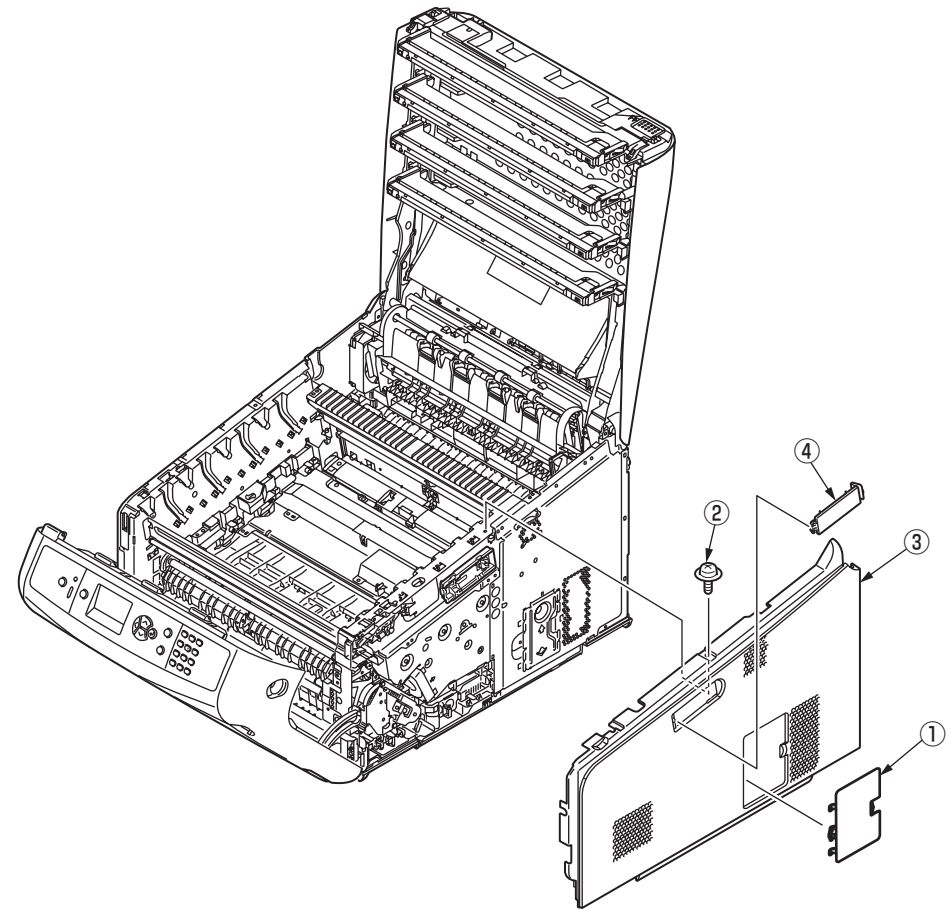
### 3.2.3 Cover side-L

- (1) Remove the image drum unit/belt unit. (Refer to section 3.2.1.)
- (2) Detach the fuser unit. (Refer to section 3.2.2.)
- (3) Remove the screw (silver) ① and detach the cover side-L Assy. ②.



### 3.2.4 Cover side-R/ Cover-WLAN

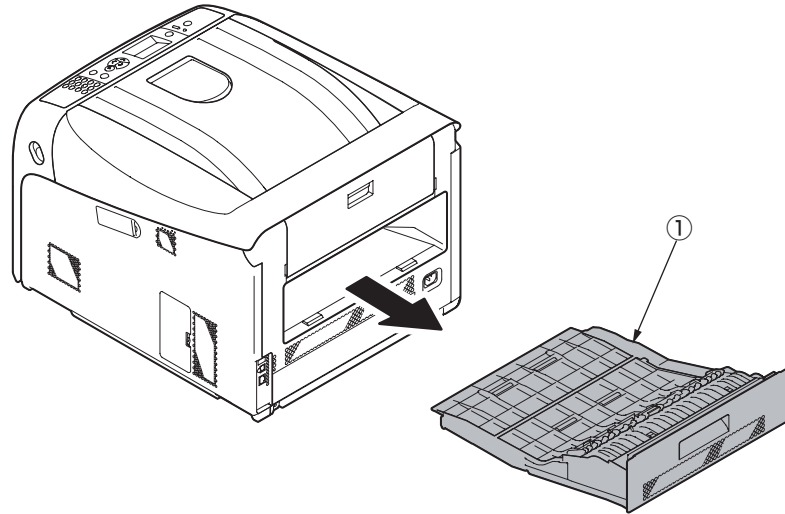
- (1) Remove the image drum unit/belt unit. (Refer to section 3.2.1.)
- (2) Detach the fuser unit. (Refer to section 3.2.2.)
- (3) Remove the cover side-R-Sub ①.
- (4) Remove the screw (silver) ② and detach the cover side-R ③.
- (5) Open and remove the Cover-WLAN ④ from the cover side-R ③.



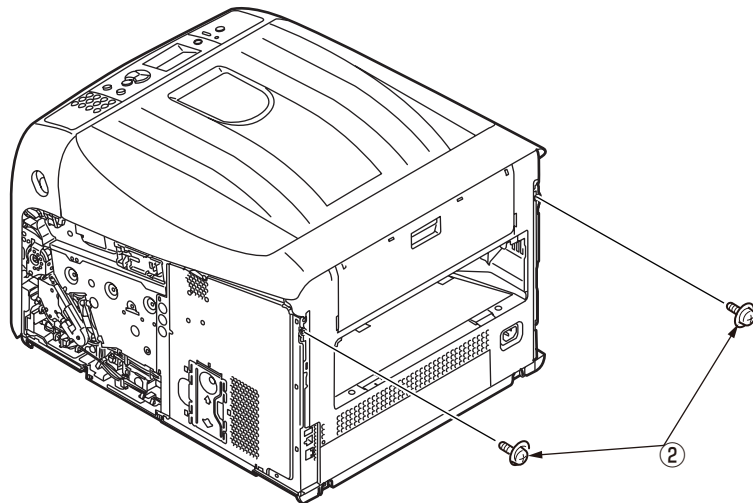


### 3.2.5 Rear cover Assy.

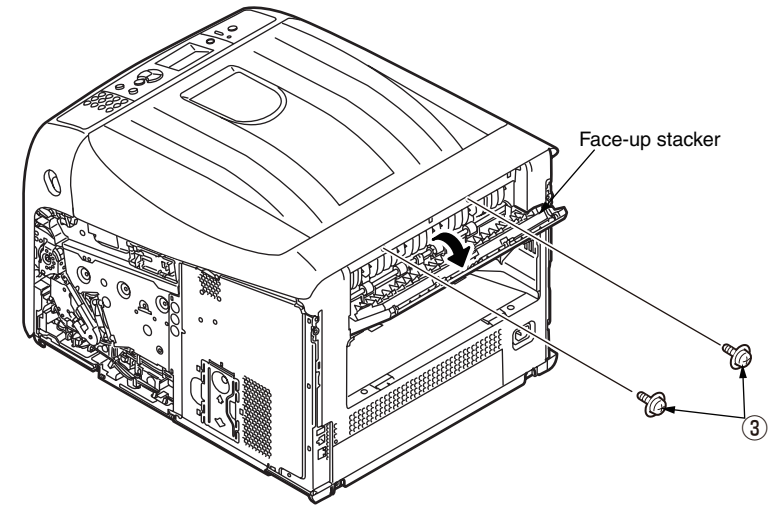
(1) If the duplex unit ① is installed, pull out it.



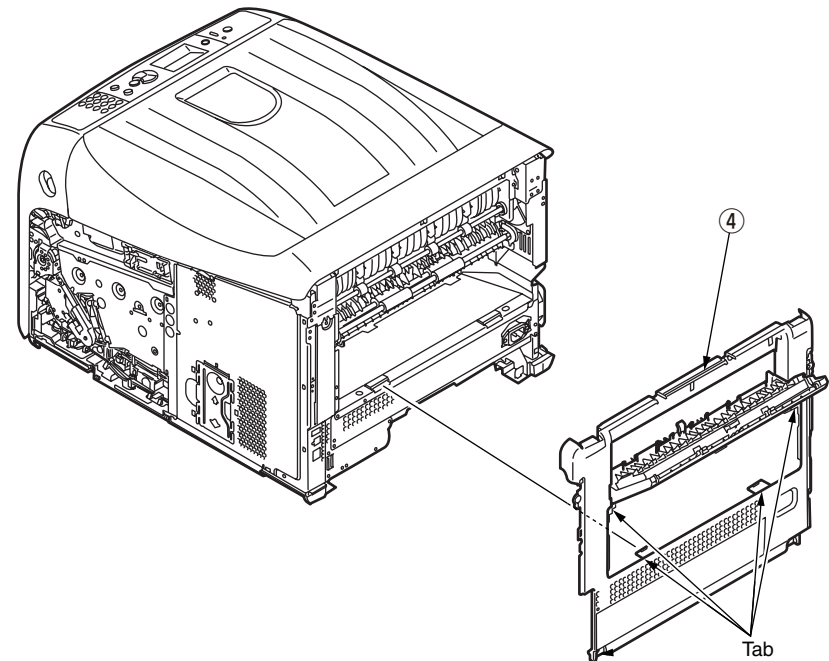
- (2) Remove the belt unit. (Refer to section 3.2.1.)
- (3) Detach the cover side-L Assy. (Refer to section 3.2.3.)
- (4) Detach the cover side-R. (Refer to section 3.2.4.)
- (5) Remove the two screws (silver) ② .



(6) Open the face-up stacker cover and remove the two screws (black) ③ .

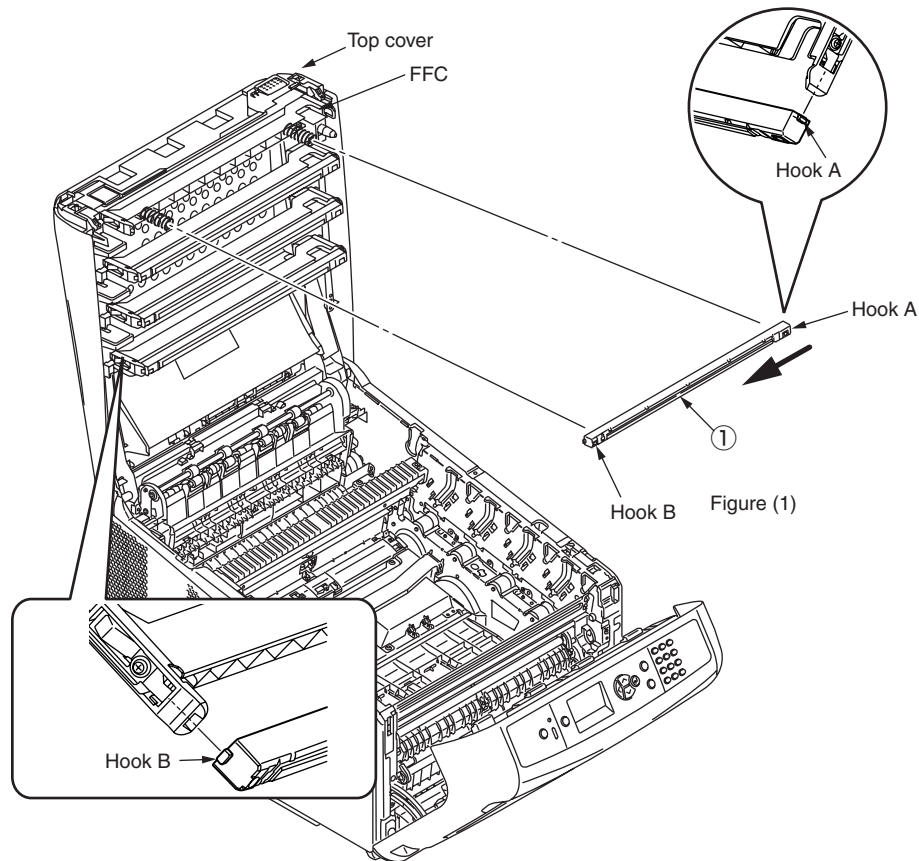


(7) Release the four tabs and detach the rear cover Assy. ④ .

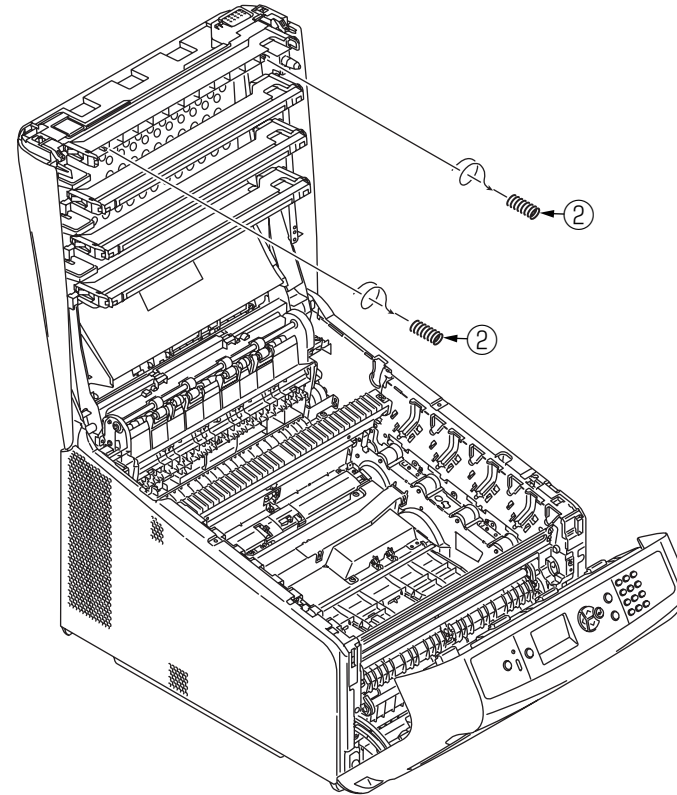


### 3.2.6 LED Assy.

- (1) Open the front cover. (Refer to section 3.2.1 (1).)
- (2) Open the top cover. (Refer to section 3.2.1 (2).)
- (3) Remove the image drum unit/belt unit. (Refer to section 3.2.1.)
- (4) Remove the FFC cable, and as shown in figure (1), unhook the part A by applying force in the direction of the arrow and then the portion B to detach the LED Assy. ①.



- (5) Remove the two Spring-Heads ② with twisting to right turn.



#### Notes on assembling:

When assembling the Spring-Head ②, press it to post with twisting to right turn.

**Note!** The shape of the LED Assy is different from by the production term.  
Deal this assembly with checking the following descriptions in the replacing it.

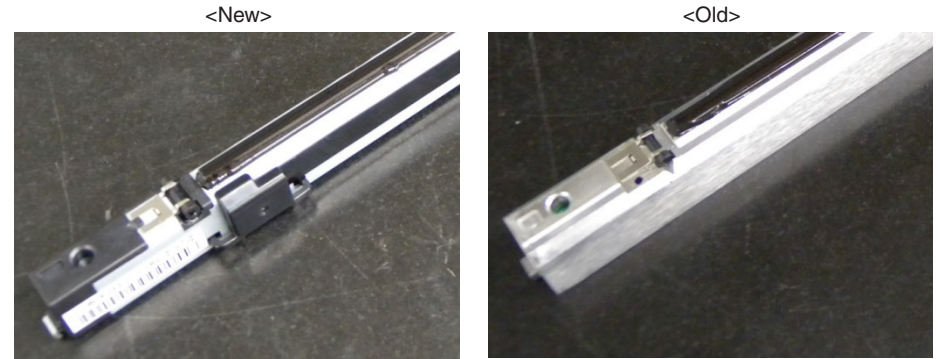
- 1) In the case of the changing the LED Assy to the new version from the old version  
--> · Replace the new LED Assy and the new Spring-Head (x2) in a set.
- 2) In the case of the changing the LED Assy to the old version from the new version  
--> · Replace the old Spring-Head (x2) in same time.

Version	Parts No.	Parts Name	Notes
New	46593301	LED Head Unit-600dpi_Maintenance	Set of a new LED Assy and two new Spring-Head
	46593302	LED Head Unit-1200dpi_Maintenance	Set of a new LED Assy and two new Spring-Head
Old	44811401	LED Head Unit-53TRG	Only an old LED Assy (600dpi)
	44811601	LED Head Unit-63TRG	Only an old LED Assy (1200dpi)
	43618501	Spring-Head	An old Spring-Head

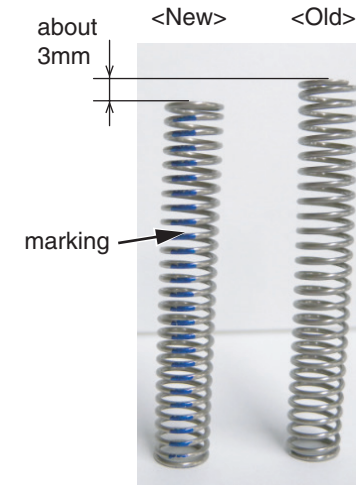
**Memo:** The intermingling of the old and new version in one apparatus is allowed in the replacing the each color LED Assys.

Refer the following pictures for the difference of the shape the each version.

**[LED Assy]**

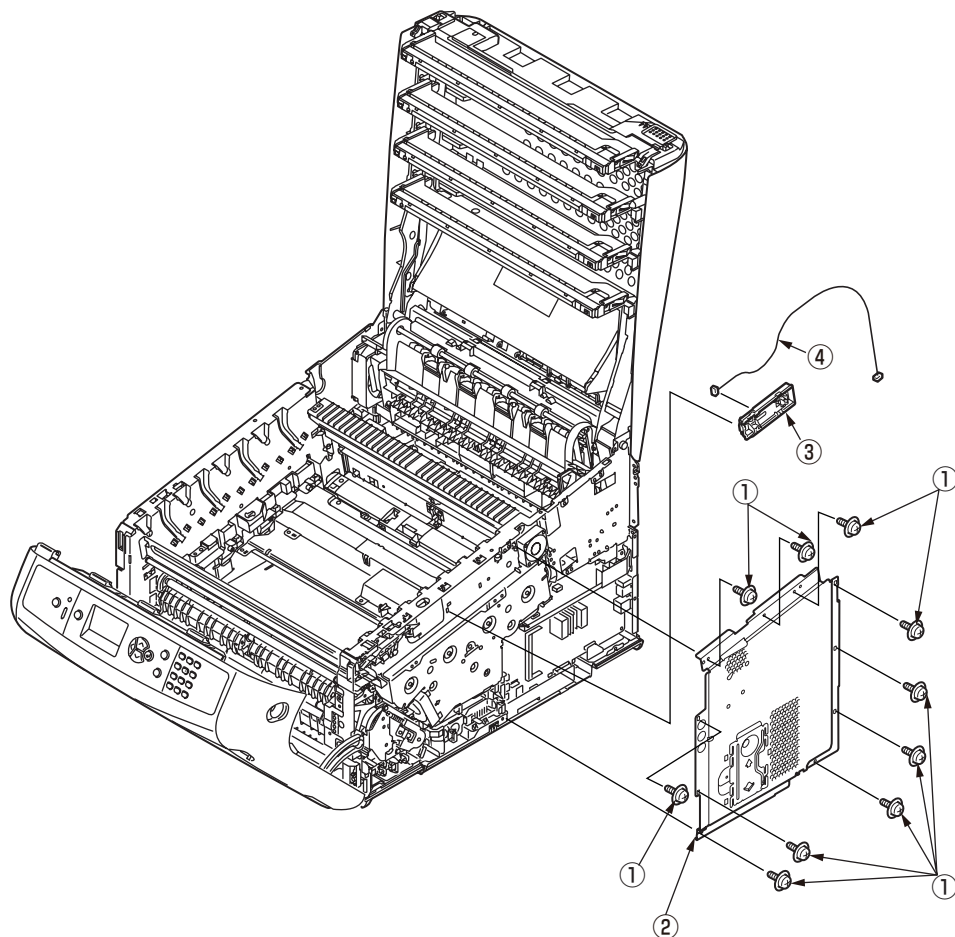


**[Spring-Head]**

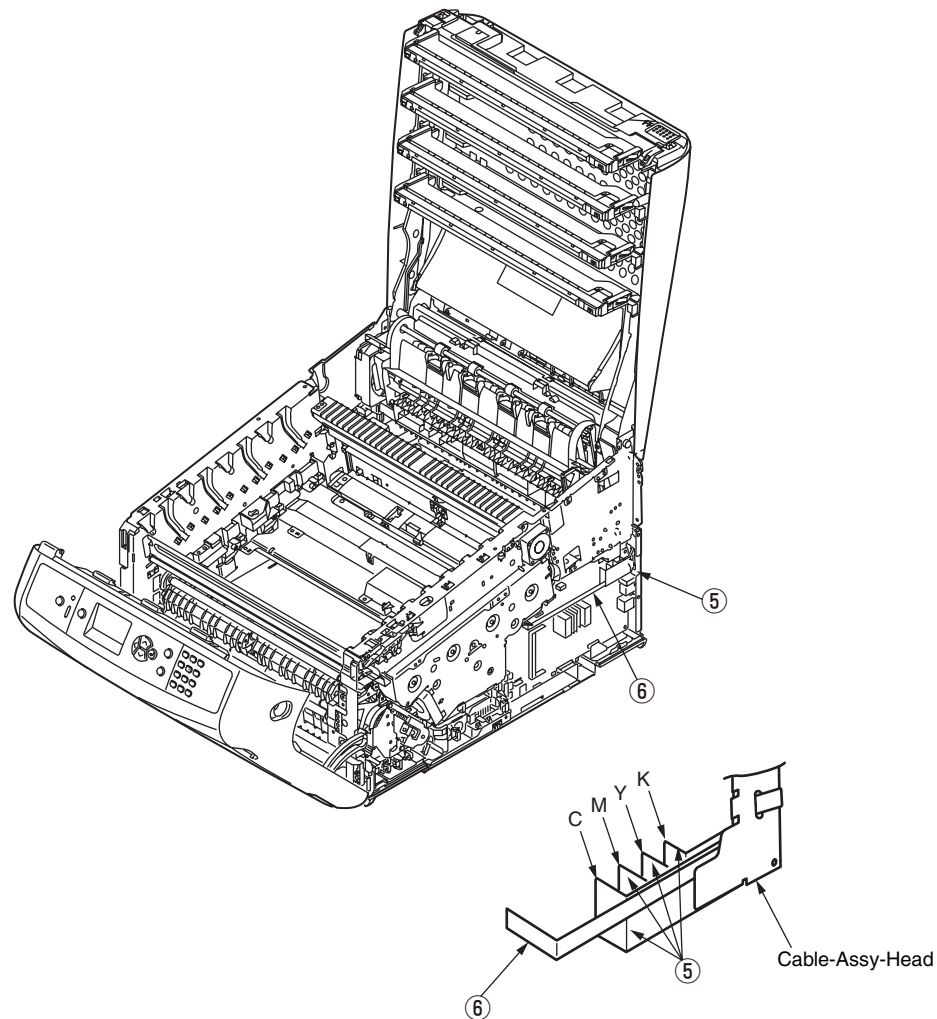


### 3.2.7 Main board Assy. (Board Assy-MEA)/ W-LAN Cable

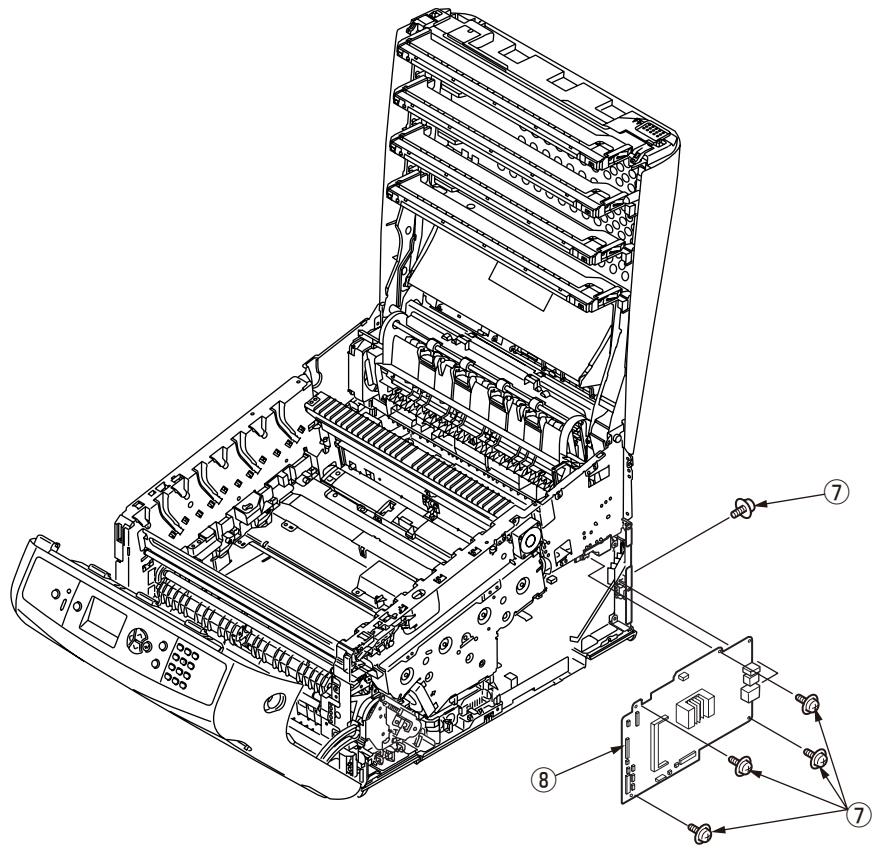
- (1) Remove the Image Drum unit / Belt unit. (Refer to section 3.2.1.)
- (2) Detach the cover side-R. (Refer to section 3.2.4.)
- (3) Remove the ten screws (silver) ① and the plate shield ② .
- (4) Remove the Holder-W-LAN ③ and remove the W-LAN Cable ④ .



- (5) Detach the Cable-Assy-Head, and disconnect the four head FFC cables (5) and the RFID-FFC cable (6) .
- (6) Disconnect each connector.



(7) Remove five screws (silver) ⑦ and the Board Assy-MEA ⑧ .



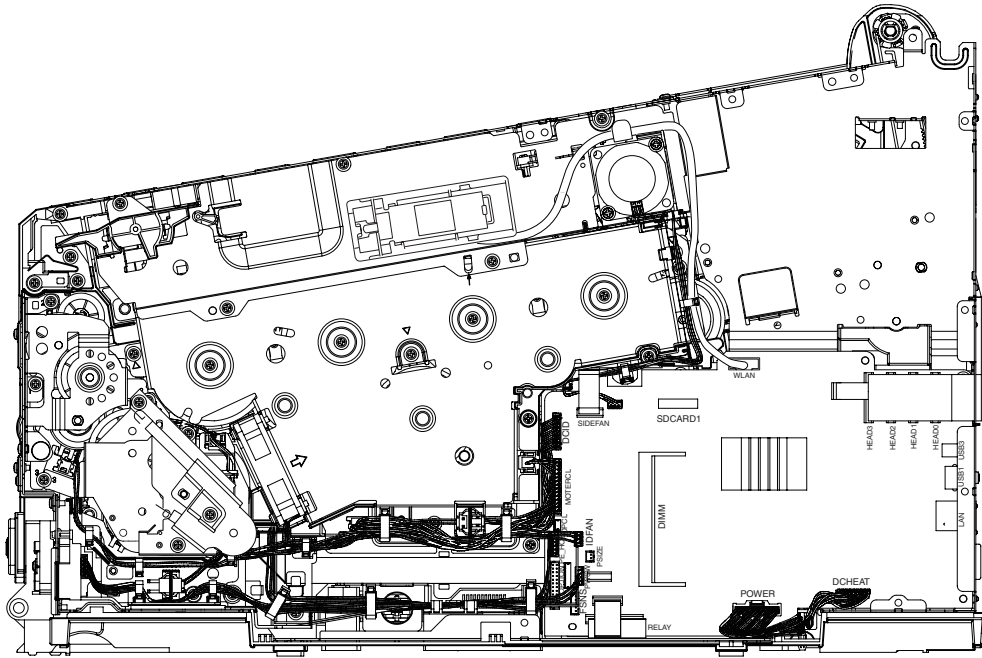


Figure 4-2-7-1 Main Board, Cable Route Diagram

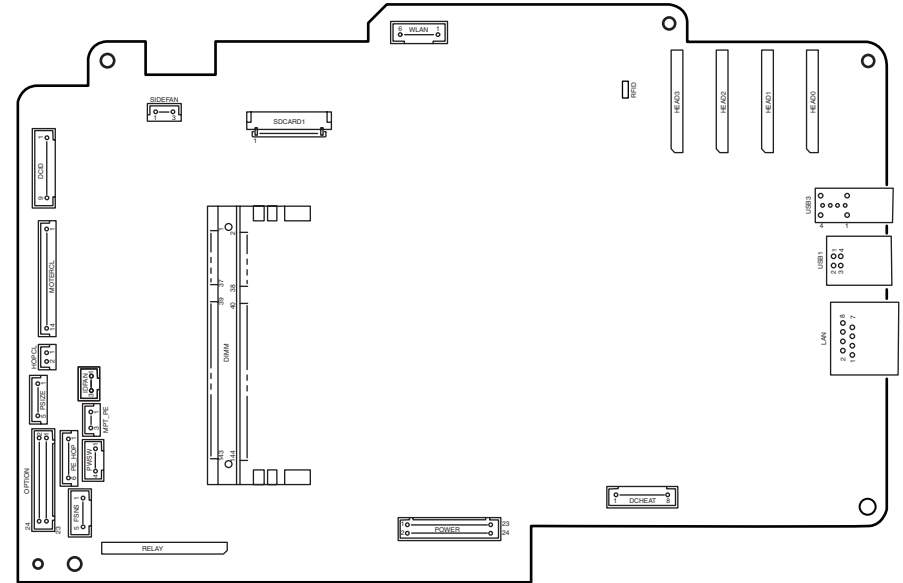
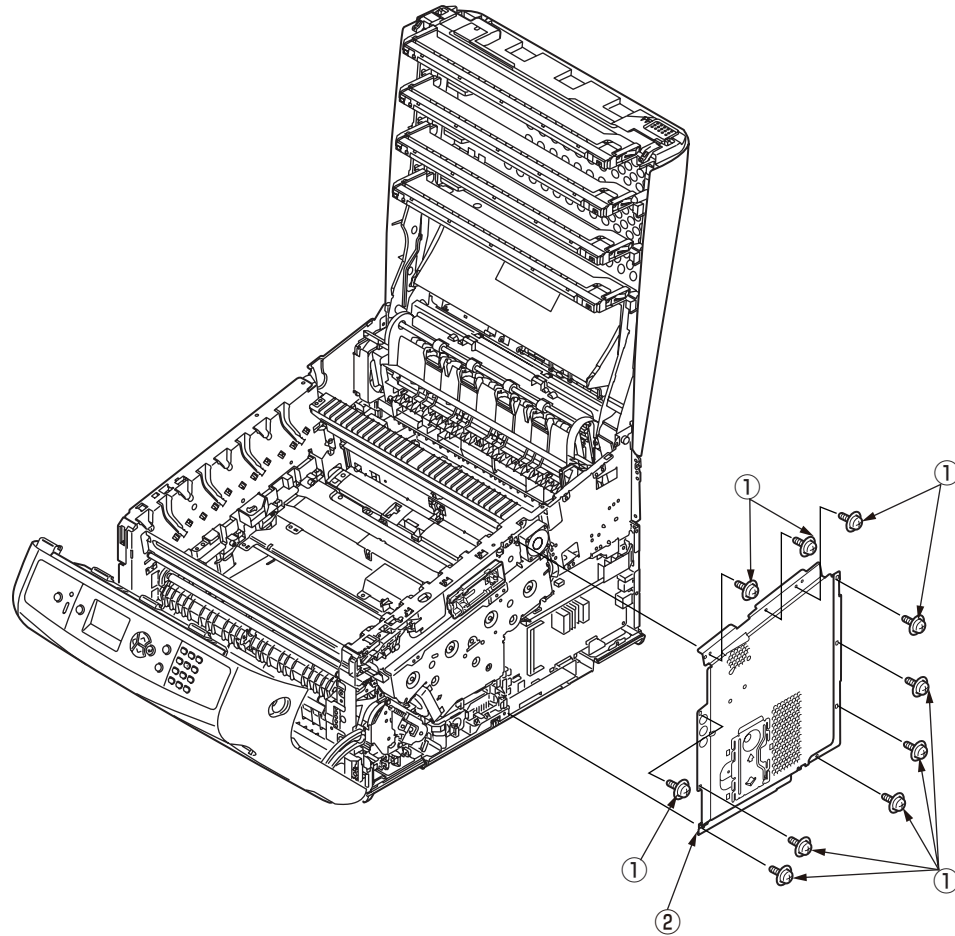


Figure 4-2-7-2 Main Board, Outline Drawing

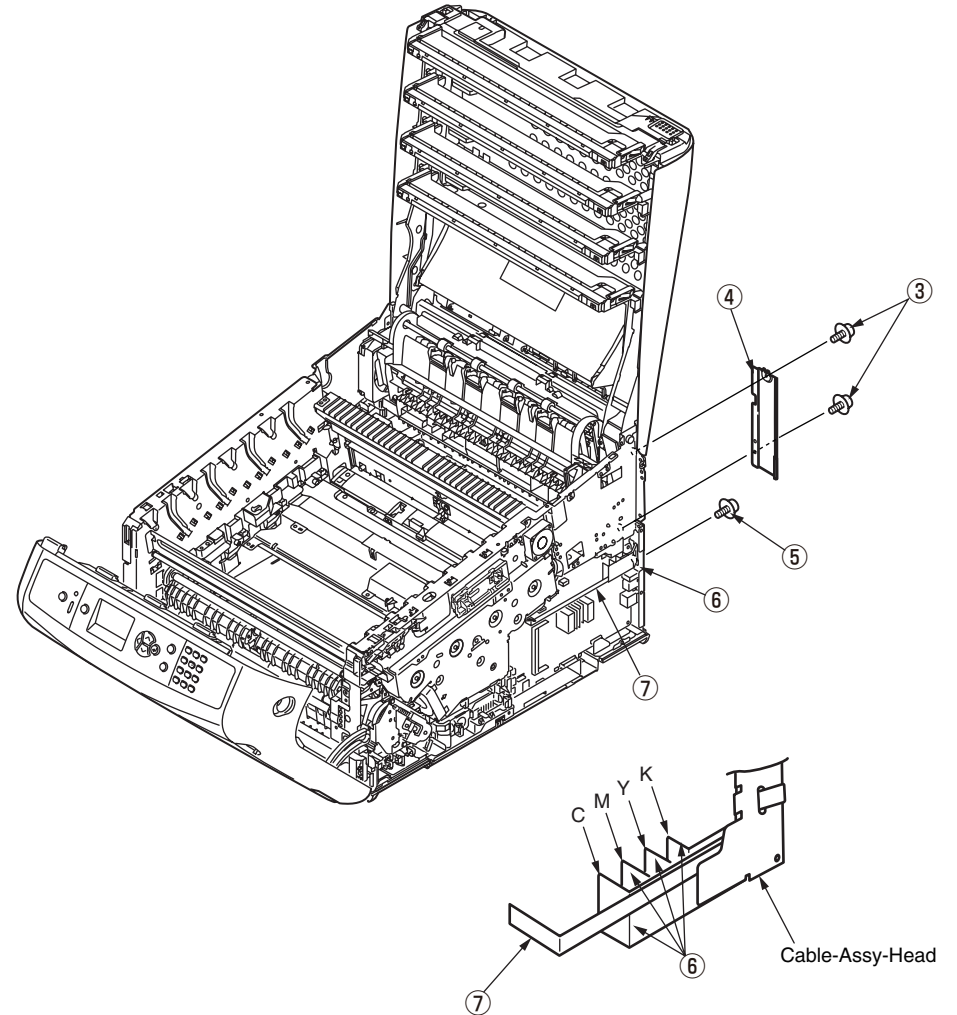


### 3.2.8 Top cover Assy.

- (1) Remove the image drum unit/belt unit. (Refer to section 3.2.1.)
- (2) Detach the cover side-L Assy. (Refer to section 3.2.3.)
- (3) Detach the cover side-R. (Refer to section 3.2.4.)
- (4) Detach the rear cover Assy. (Refer to section 3.2.5.)
- (5) Remove the ten screws (silver) ① and the plate shield ②.

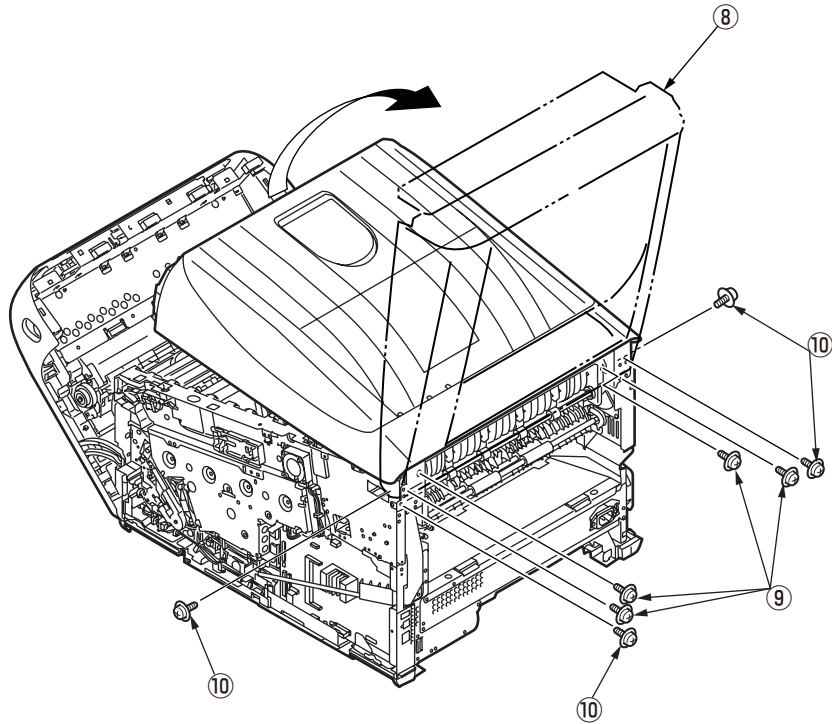


- (6) Remove two screws (silver) ③ and the plate ④
- (7) Remove a screw (silver) ⑤ to detach the Cable-Assy-Head, and disconnect the four head FFC cables ⑥ and the RFID-FFC cable ⑦.

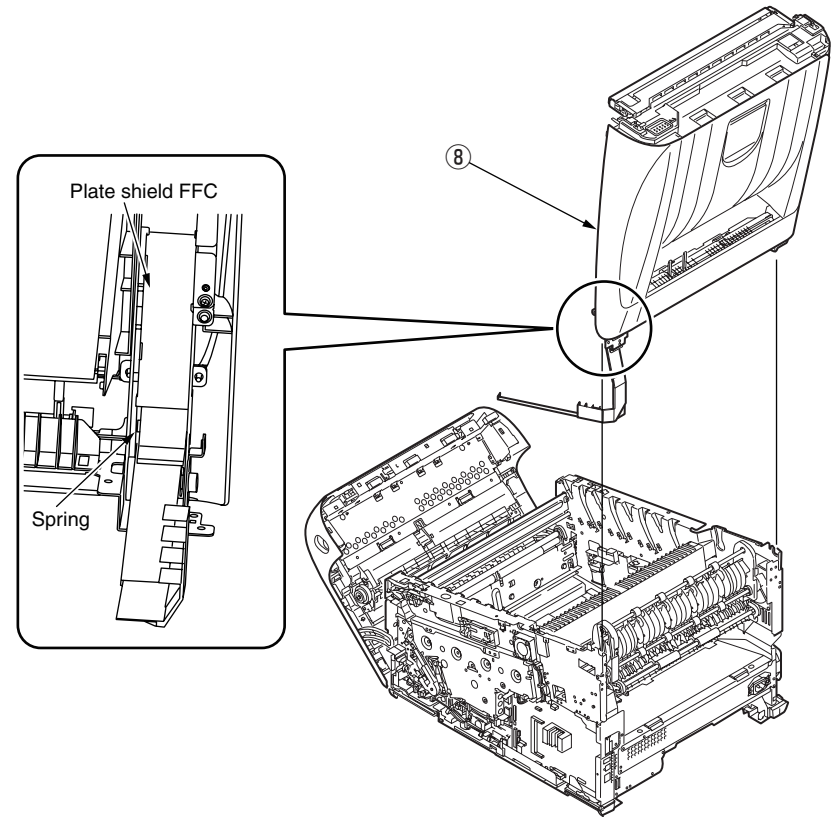




- (8) Tilt the top cover Assy ⑧ and remove the four screws (silver) ⑨ .
- (9) Open the top cover Assy ⑧ fully again and remove the four screws (silver) ⑩ .



- (10) Hold the top cover Assy ⑧ and lift it to detach.

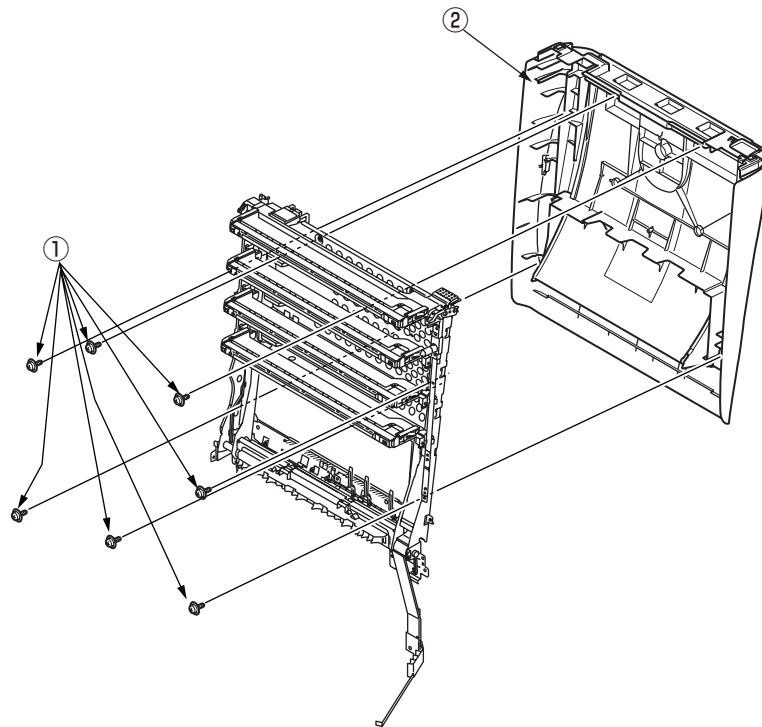


**Notes on assembling:**

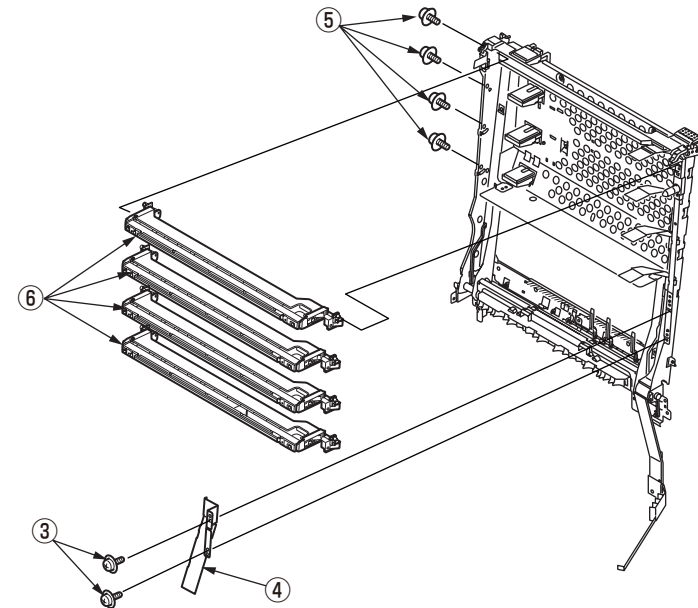
The plate shield FFC must be placed at the outer side of the spring.

### 3.2.9 600dpi/ 1200dpi Cable-Assy-Head/ Stackfull-Sensor

- (1) Detach the top cover Assy. (Refer to section 3.2.8.)
- (2) Disconnect the head FFC from the connector of the LED head. (Refer to section 3.2.6.)
- (3) Remove the seven screws (black) ① and detach the top cover ② .

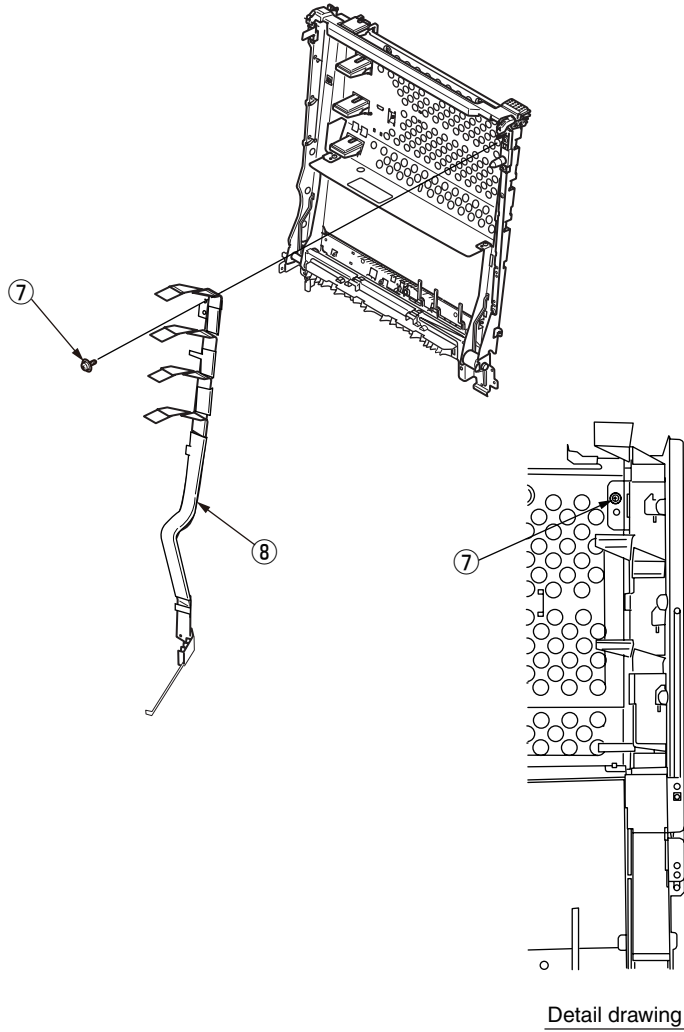


- (4) Remove the two screws (silver) ③ and the plate shield FFC ④ .
- (5) Remove the four screws (black) ⑤ and the head holder Assy. ⑥ .



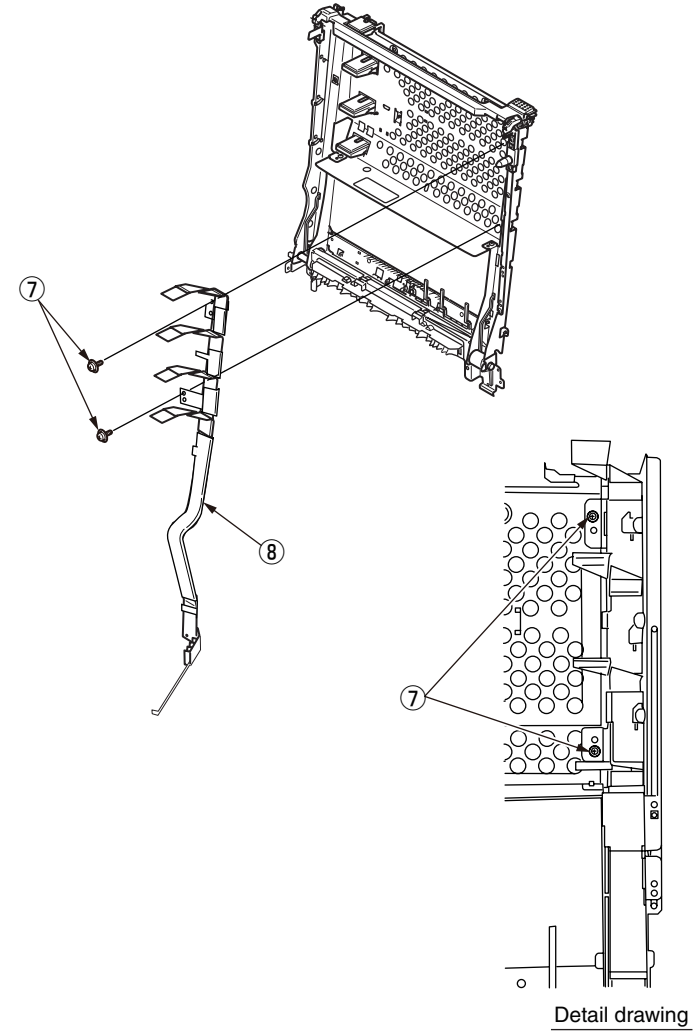
<600dpi>

(6) Remove the screw (silver) ⑦ and the 600dpi Cable-Assy-Head ⑧ .

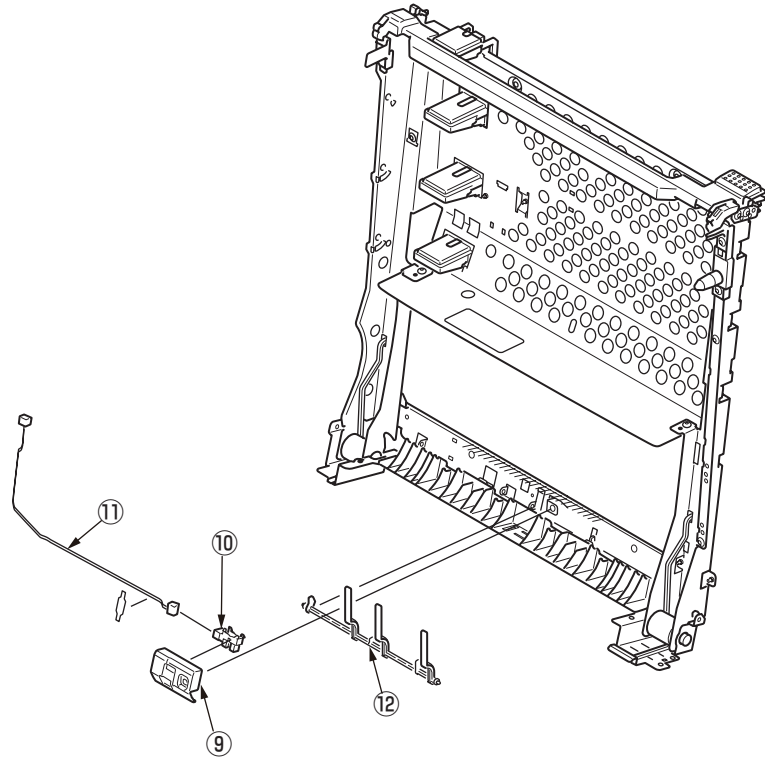


<1200dpi>

(6) Remove the two screws (silver) ⑦ and the 1200dpi Cable-Assy-Head ⑧ .

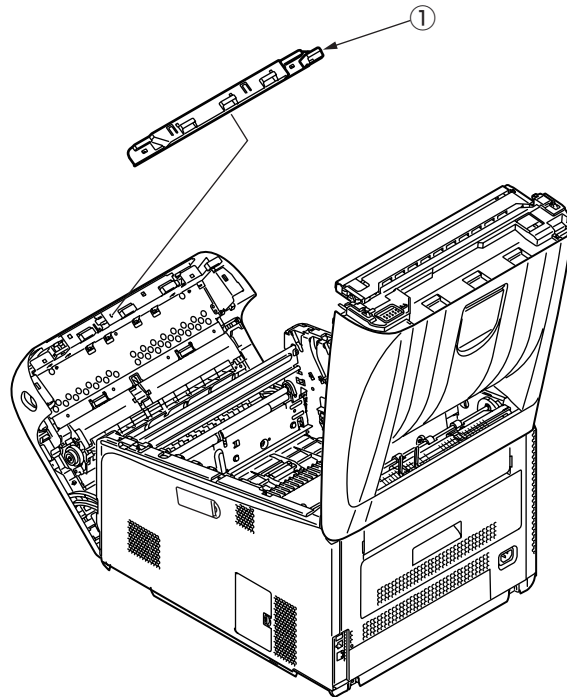


- (7) Remove the Holder-stackfull-sensor ⑨ , and remove the Stackfull-Sensor ⑩ , cable ⑪ and the lever ⑫

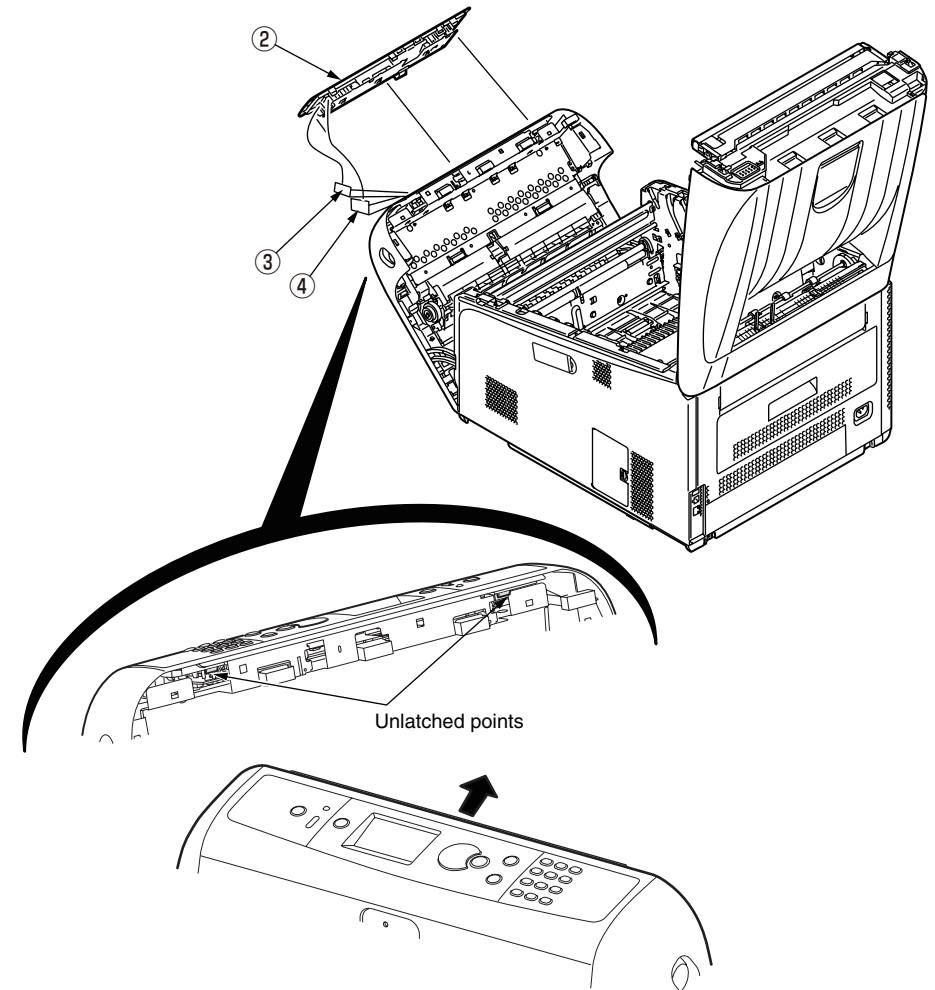


### 3.2.10 Operator panel Assy.

- (1) Open the front cover.
- (2) Remove the cover-gasket ①.

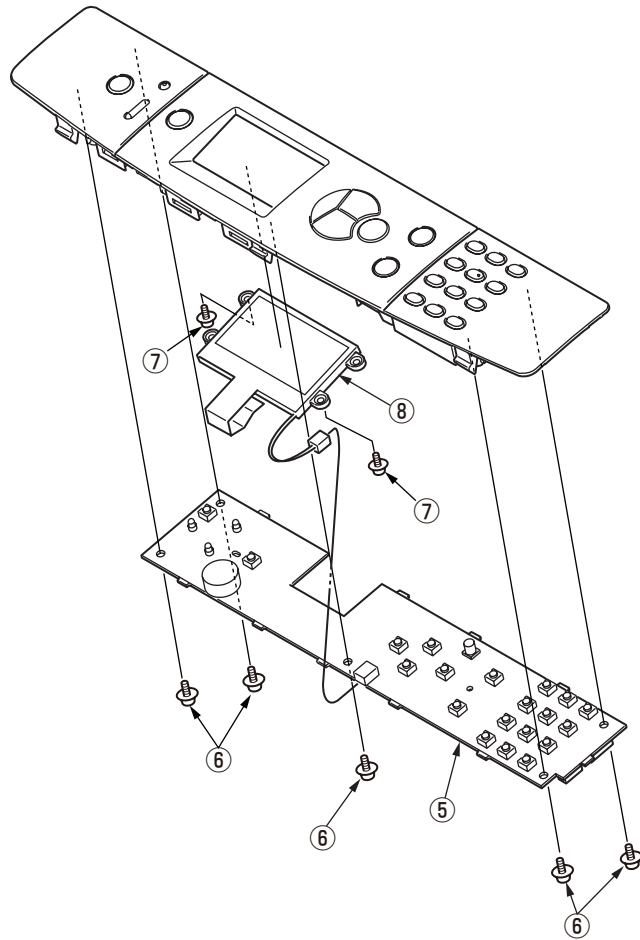


- (3) Unlatch the operator panel Assy. at two points and remove the operator panel Assy. ② while bending the cover at the center outward.
- (4) Disconnect the operator panel FFC cable ③ and the environment sensor FFC cable ④.



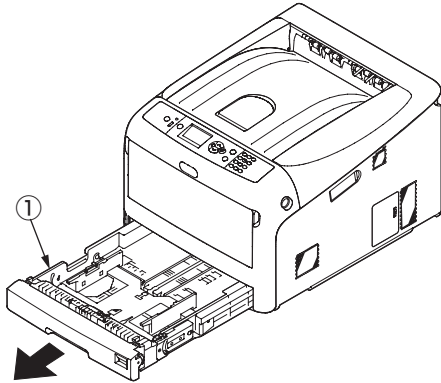
- (5) Disconnect the cable from the board ⑤ of the operator panel Assy. ② , remove the four screws ⑥ and detach the board ⑤ .
- (6) Remove the two screws ⑦ and detach the LCD panel ⑧ .

**Memo** To remove the environment sensor, refer to section 3.2.16.

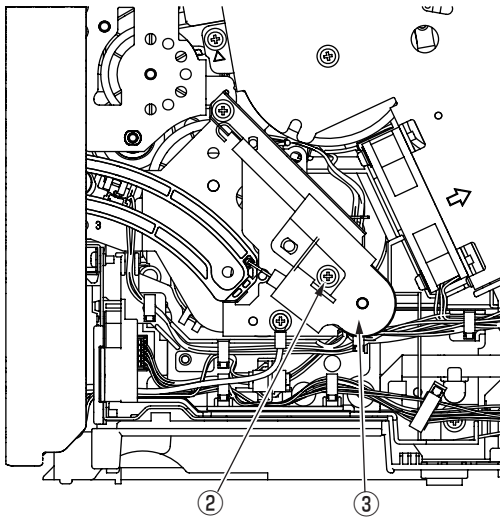


### 3.2.11 Front cove Assy.

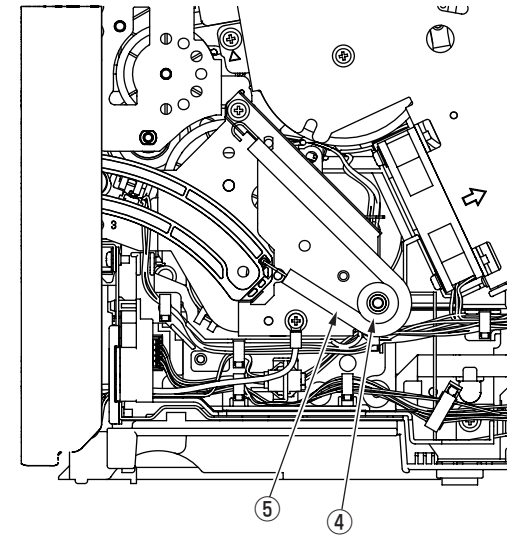
- (1) Pull the cassette ① out of the printer.



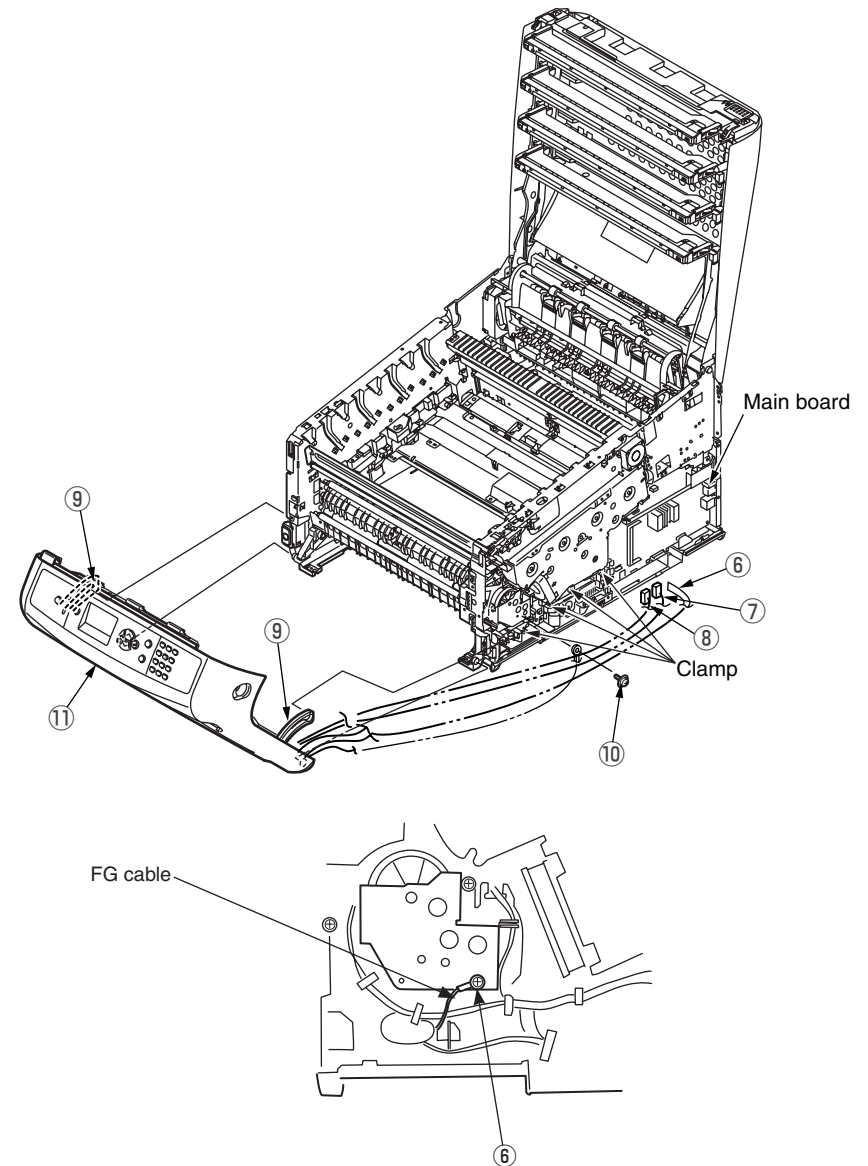
- (2) Remove the image drum unit/belt unit. (Refer to section 3.2.1.)  
 (3) Detach the cover side-L Assy. (Refer to section 3.2.3.)  
 (4) Detach the cover side-R. (Refer to section 3.2.4.)  
 (5) Detach the rear cover Assy. (Refer to section 3.2.5.)  
 (6) Remove the ten screws (silver) and the plate shield.  
 (7) Remove the screw (silver) ②, and remove the Cover-Pulley-SP ③.



- (8) Remove the Pulley-SP ④ and Spring-Damper ⑤.



- (9) Disconnect the FFC cable ⑥ from the main board Assy., release the clamp that is holding the FFC cable ⑥, and disconnect the FFC cable ⑥ from the main unit.
- (10) Disconnect the Cable ⑦ and the Cable ⑧.
- (11) Release the two stays ⑨.
- (12) Remove the screw (silver) ⑩ to estrange the FG cable from the main unit.
- (13) Pull the support of the front covert Assy. ⑪ out of the post of the main unit and detach the front cover Assy. ⑪.





### 3.2.12 Guide Assy.-eject

(1) Detach the top cover Assy. (Refer to section 3.2.8.)

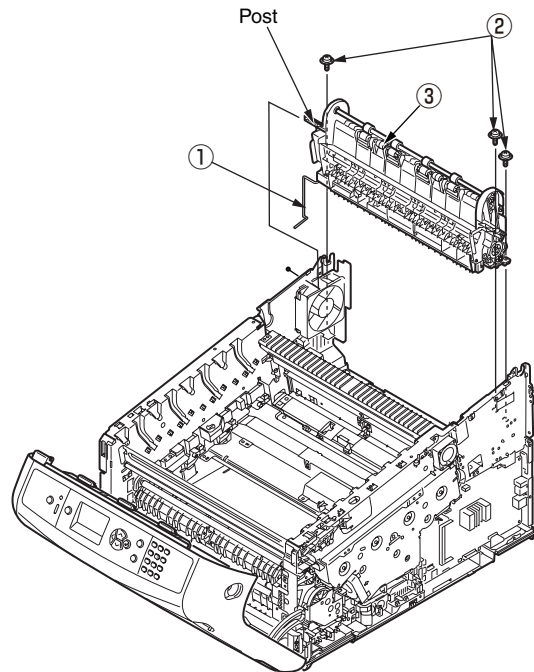
**Note!** If perform the procedure 3.2.9(3), it can exclude the Guide Assy.-Eject even if do not take off the Top cover Assy.

(2) Disconnect the eject cable ① .

(3) Remove the three screws (silver/8mm) ② .

(4) Pull the post out of the side-L Assy. and detach the guide Assy.-eject ③ .

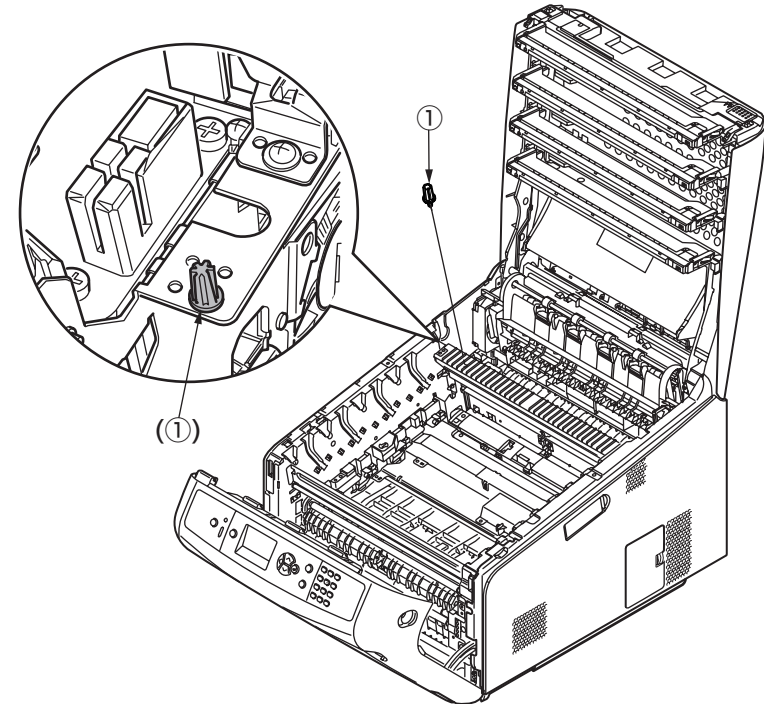
**Note!** Pay attention to the spacers of screws used for securing to the side-L Assy.



### 3.2.13 Post-fuser-lock

(1) Remove the fuser. (Refer to section 3.2.2.)

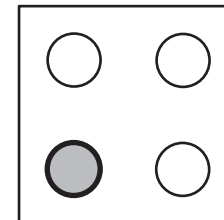
(2) Remove the post-fuser ① .



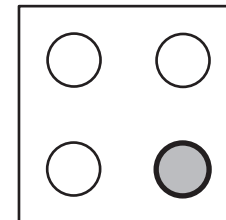
#### Notes on attaching:

Install the post-fuser ① with the following positions in mind.

Installation positions



For 100V/120V



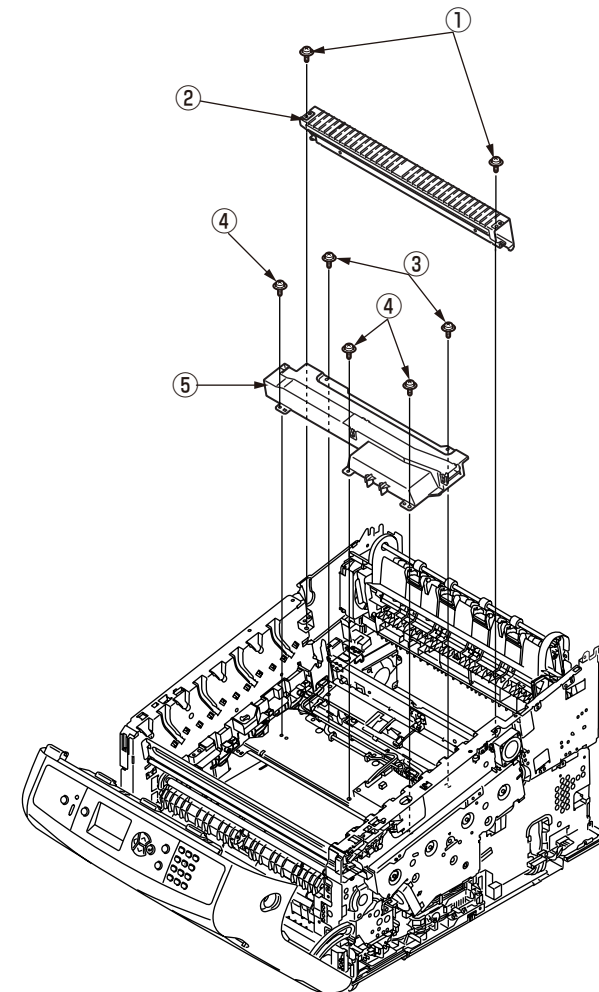
For 230V

### 3.2.14 Sensor Assy.-registration, relay board (P6Z), contact Assy., and fuser sensor Assy.

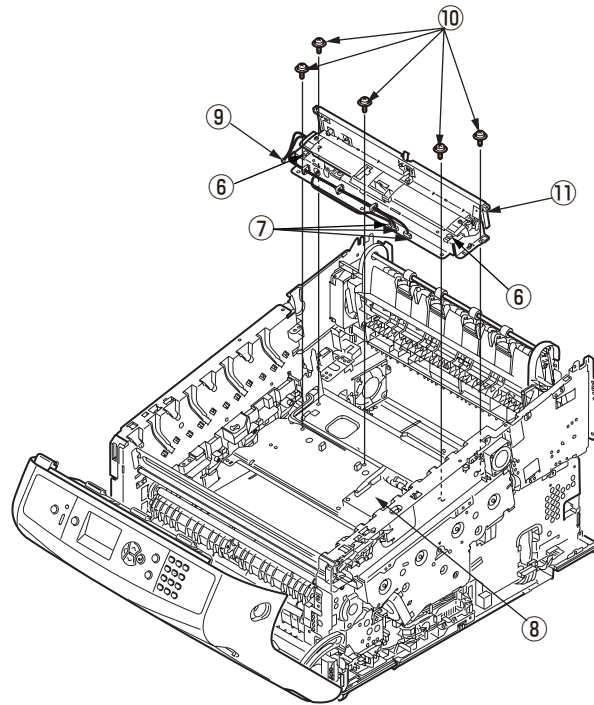
- (1) Remove the image drum unit/belt unit. (Refer to section 3.2.1.)
- (2) Detach the cover side-L Assy. (Refer to section 3.2.3.)
- (3) Detach the cover side-R. (Refer to section 3.2.4.)
- (4) Detach the rear cover Assy. (Refer to section 3.2.5.)
- (5) Detach the top cover Assy. (Refer to 3.2.8)
- (6) Remove the two screws (silver) ① and the plate beam FU ② .
- (7) Remove the two screws (silver) ③ , the three round-head screws (black) ④ and the cover Assy.-registration ⑤ .

#### Notes on attaching:

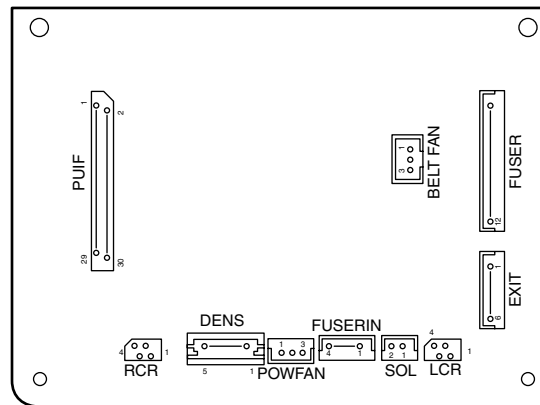
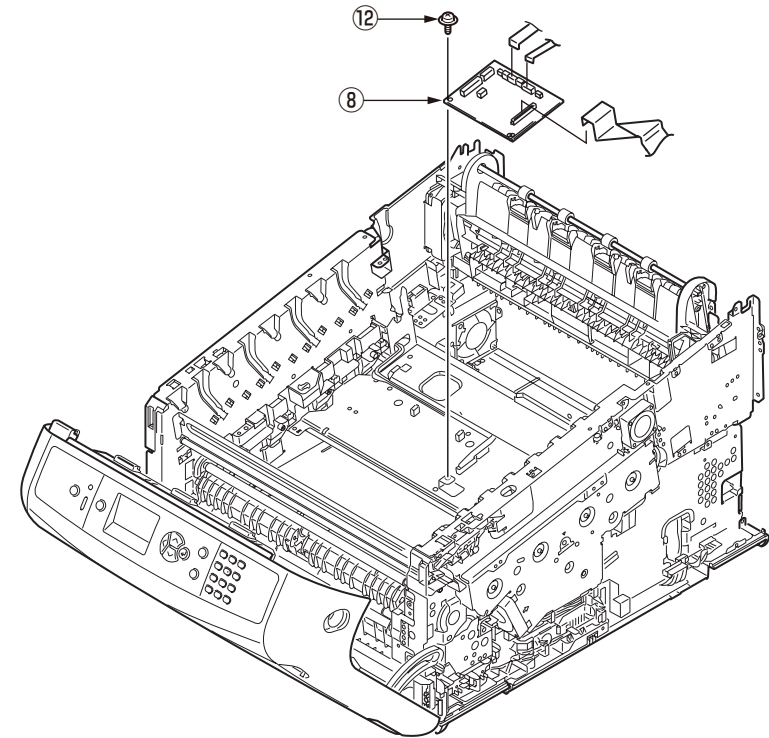
The metal plate retaining the cover Assy.-registration ⑤ is only 0.6mm thick, therefore, tighten the screw carefully.



- (8) Disconnect the right and left FFC connectors (6) and the three connectors (7) from the relay board (P6Z) (8) and the connector (9) from the high-voltage power supply board, and remove the five round-head screws (black) (10) and the color registration Assy. (11).

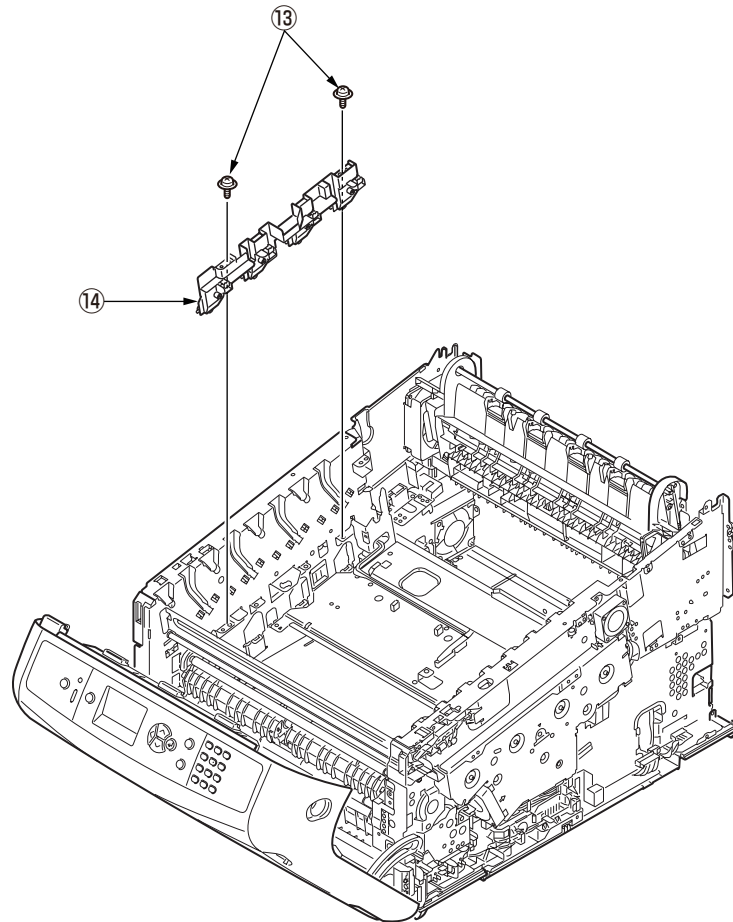


- (9) Disconnect each connector, remove the screw (silver) (12) and the relay board (P6Z) (8).

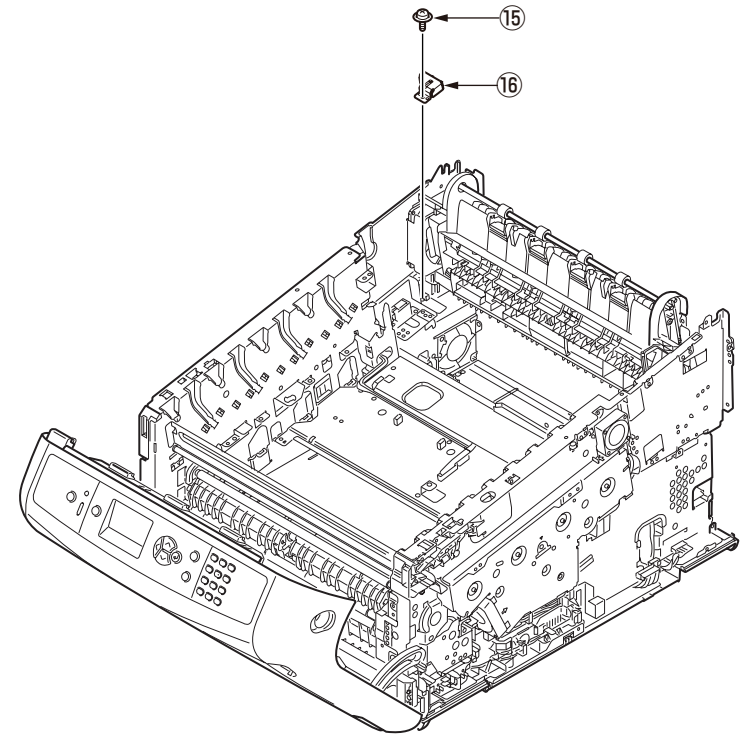


Relay board (P6Z)

(10) Remove the two screws (silver) ⑬ and the contact Assy. ⑭ .

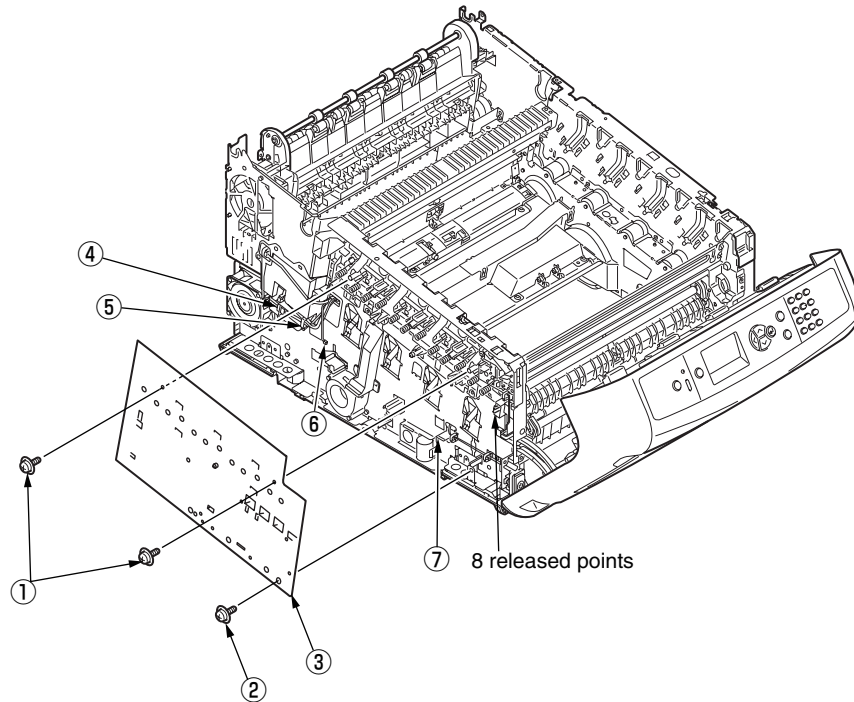


(11) Remove the screw (silver) ⑮ and the fuser sensor Assy. ⑯ .



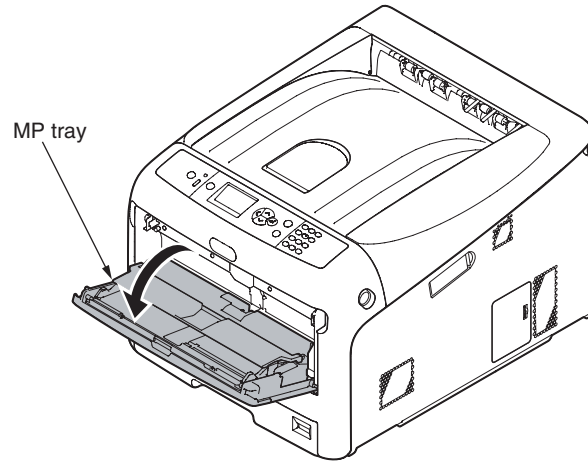
### 3.2.15 High-voltage power supply board

- (1) Remove the image drum unit/belt unit. (Refer to section 3.2.1.)
- (2) Detach the cover side-L Assy. (Refer to section 3.2.3.)
- (3) Remove the two screws (black) ① and the screw (silver) ②, release the high-voltage power supply board ③ at the eight points, disconnect the FAN (Fuser) connector ④, the belt thermistor connector ⑤, the cover-open sensor connector ⑥, and the FFC connector ⑦, and detach the high-voltage power supply board ③.

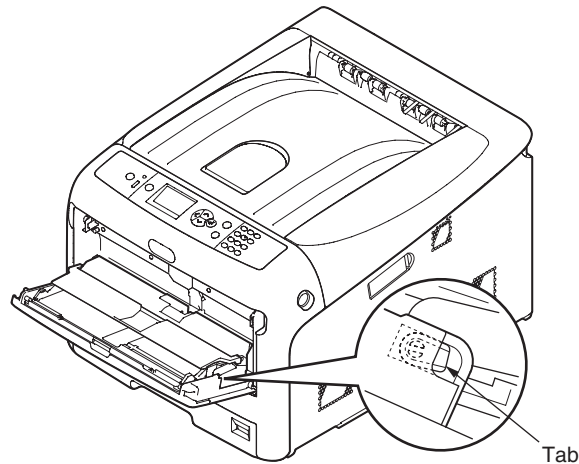


### 3.2.16 Frame Assy.-Front

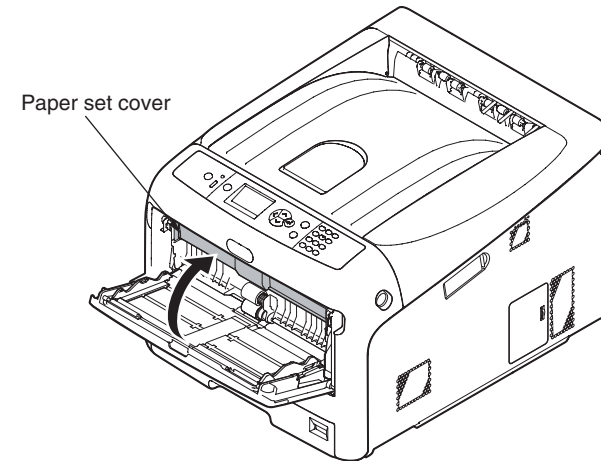
- (1) Turn off the printer and open the MP tray forward by inserting your fingers into the front recesses.



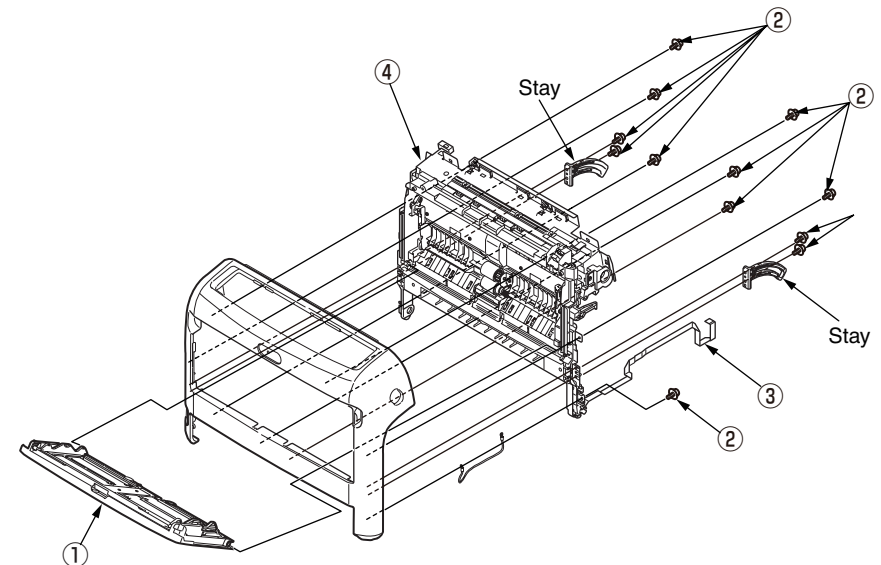
- (2) Release the tab of the paper feed roller cover by pressing the right arm inward while lifting up the MP tray lightly. (Release the tab on the left side in the same manner.)



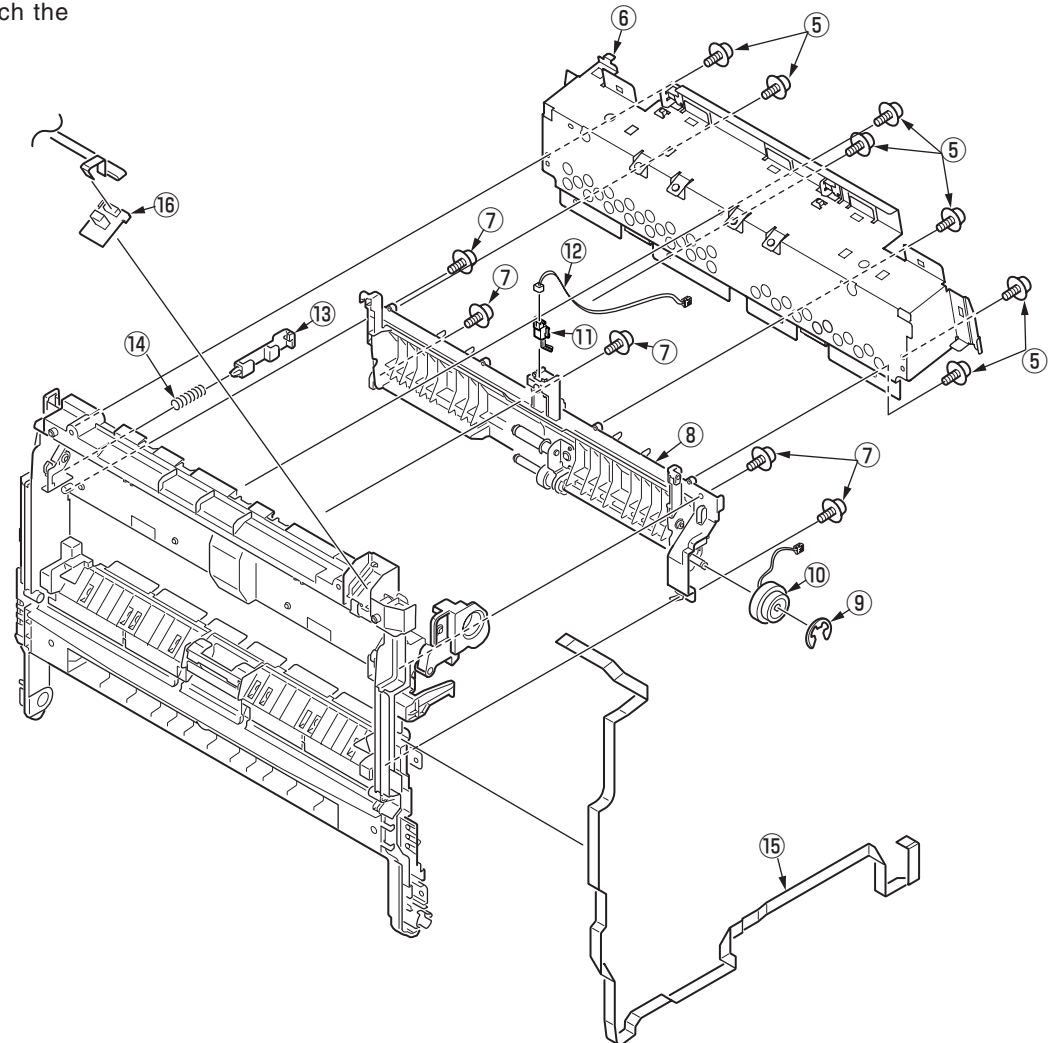
- (3) Open the paper set cover.



- (4) Raise the cover AssyMPT ① and pull up the left side and release the left side first. And then, slide it to the left side with raising its right side and release. (Be careful not to deform the spring.)
- (5) Detach the front cover Assy. (Refer to section 3.2.11.)
- (6) Remove the seven screws ②, disconnect the ground cable ③, and detach the frame Assy. front ④. (Two stays come off at the same time, too)

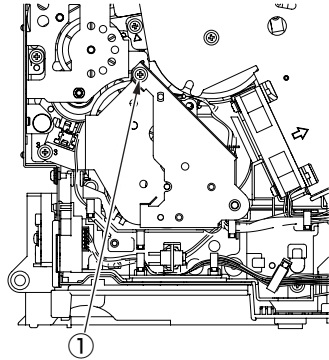


- (7) Remove the seven screws ⑤ and detach the plate-front-FG ⑥ .
- (8) Remove the five screws ⑦ and detach the guide Assy ⑧ .
- (9) Remove a E-ring ⑨ and detach the clutch ⑩ .
- (10) Remove the paper-end-switch ⑪ and detach the cable ⑫ .
- (11) Remove the slider-switch ⑬ and detach the spring ⑭ .
- (12) Remove the FFC-cable ⑮ .
- (13) Disconnect the FFC-cable from the environment sensor ⑯ and detach the environment sensor ⑯ .

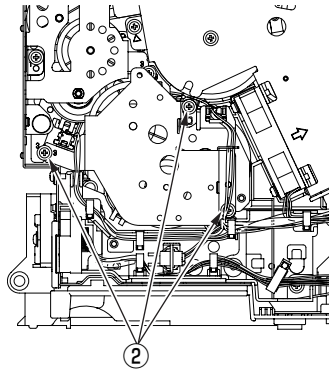


### 3.2.17 Roller Assy.-registration

- (1) Detach the front cover Assy. (Refer to section 3.2.11.)
- (2) Remove the screw ①, and remove Plate-Damper(Caulk).

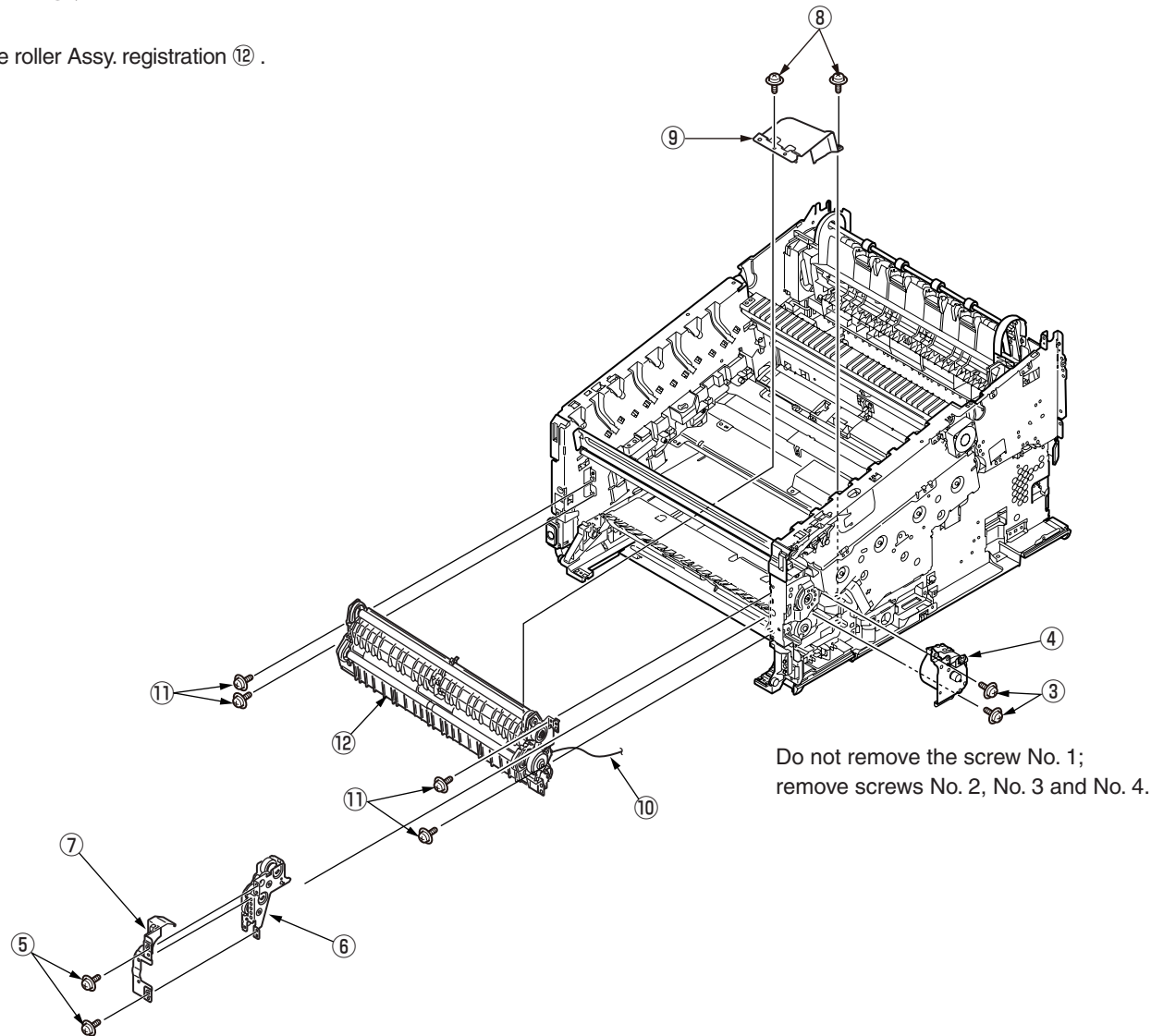


- (3) Remove the three screws ② and Plate-Hopping(Caulk), Gear-Hopping-A, Gear-Hopping-B.



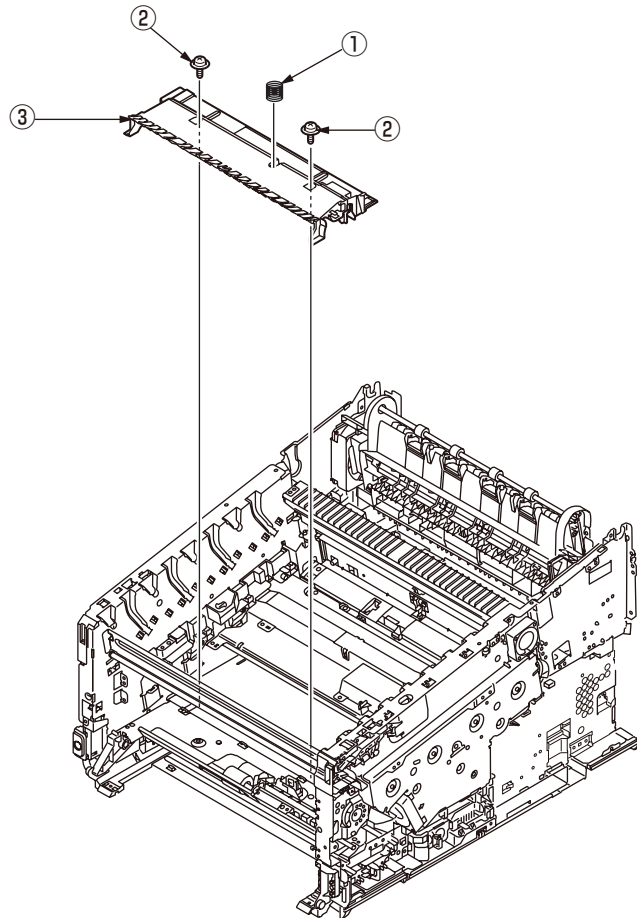


- (4) Remove the two screws (silver) ③ and pull out the gear Assy. hopping ④ .
- (5) After detaching the cover gear MPT ⑤ , remove the two screws (silver) ⑥ and detach the gear Assy. MPT ⑦ .
- (6) Remove the screw (silver) ⑧ , detach the cover Conn ⑨ , and disconnect the cable ⑩ from the clamp.
- (7) Remove the four screws (silver) ⑪ and detach the roller Assy. registration ⑫ .

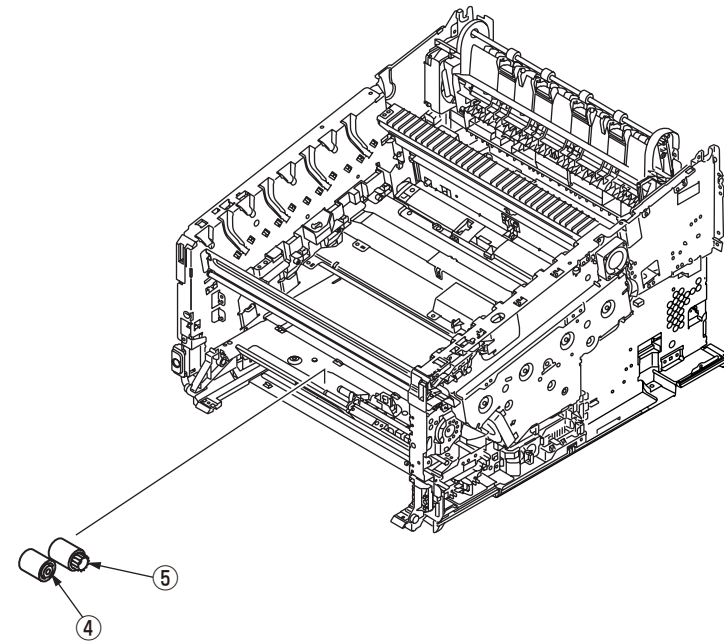


### 3.2.18 Roller-feed, roller-pickup, frame Assy.-pickup, and holder sensor Assy.

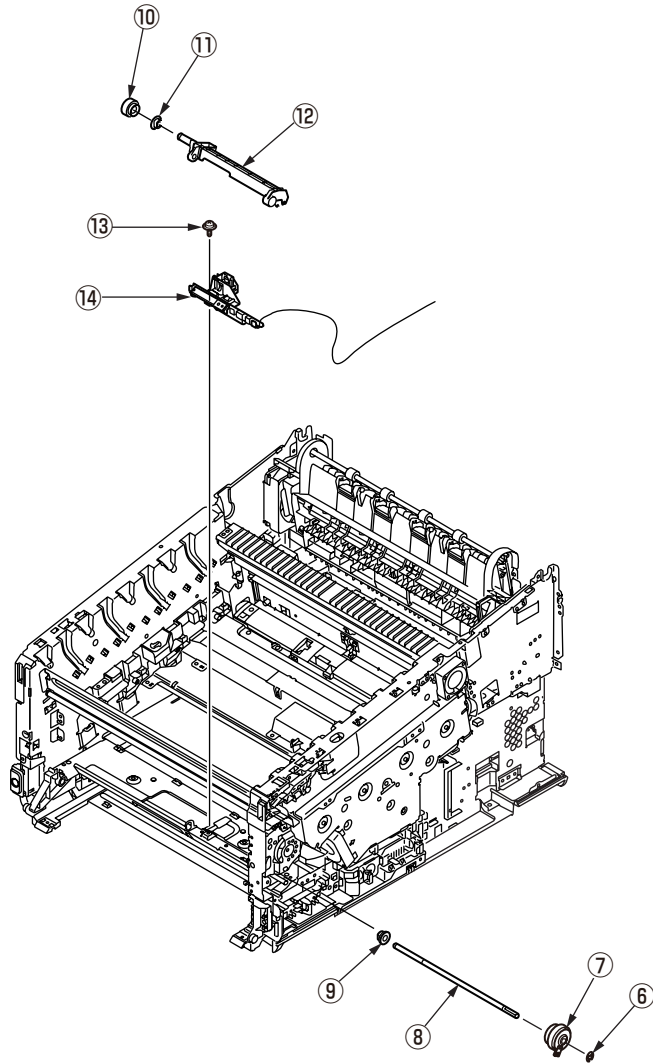
- (1) Remove the roller Assy.-registration. (Refer to section 3.2.17.)
- (2) Remove the spring-pickup ① .
- (3) Remove the two round-head screws (black) ② , disconnect the cable from the clamp, and detach the cover Assy. hopping ③ .



- (4) Remove the roller-feed ④ and the roller-pickup ⑤ .



- (5) Remove the E-ring ⑥, the clutch hopping ⑦, shaft hopping ⑧, and the gear-feed ⑨.
- (6) Remove the bearing ⑩, the gear ⑪, and the frame Assy-pickup ⑫.
- (7) Remove the round-head screw (black) ⑬ and the holder sensor Assy. ⑭.



### 3.2.19 Low-voltage power supply Assy.

#### ⚠ Warning

Electric shock hazard.

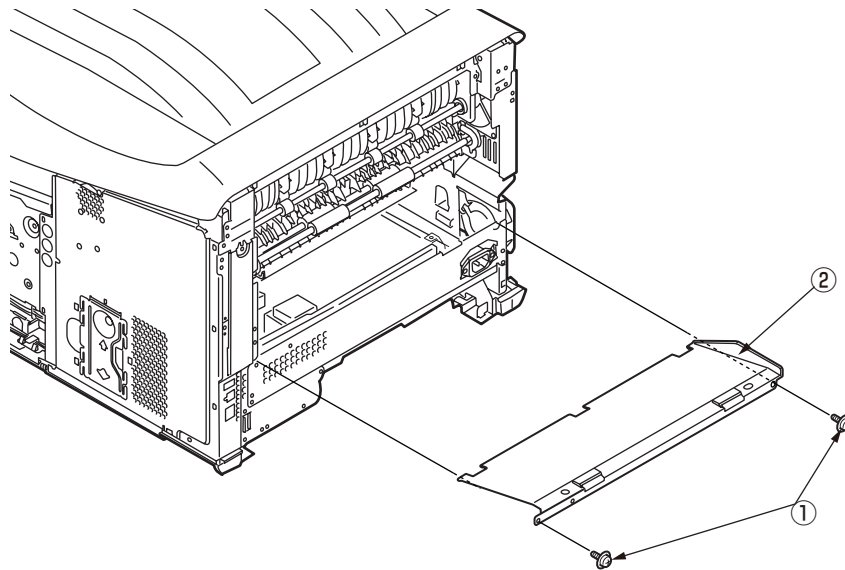


Be sure to unplug the AC cable as some circuits keep working while the power cable is connected even after the power is turned off.

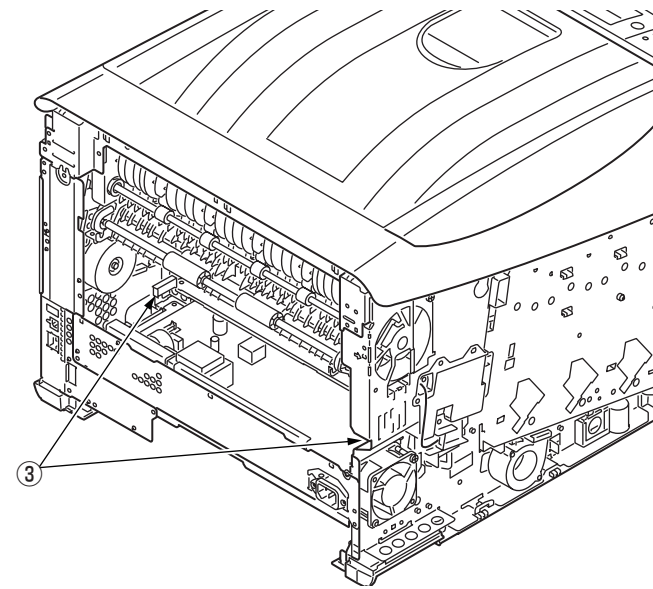
When replacing the low-voltage power supply, due to potential electric shock, wear insulated gloves or be careful not to touch the conductors or terminals of the power supply directly.

After the AC cord is unplugged, the capacitor may take about one minute to discharge completely, or could not discharge due to PCB breakdown. Use caution about electric shock.

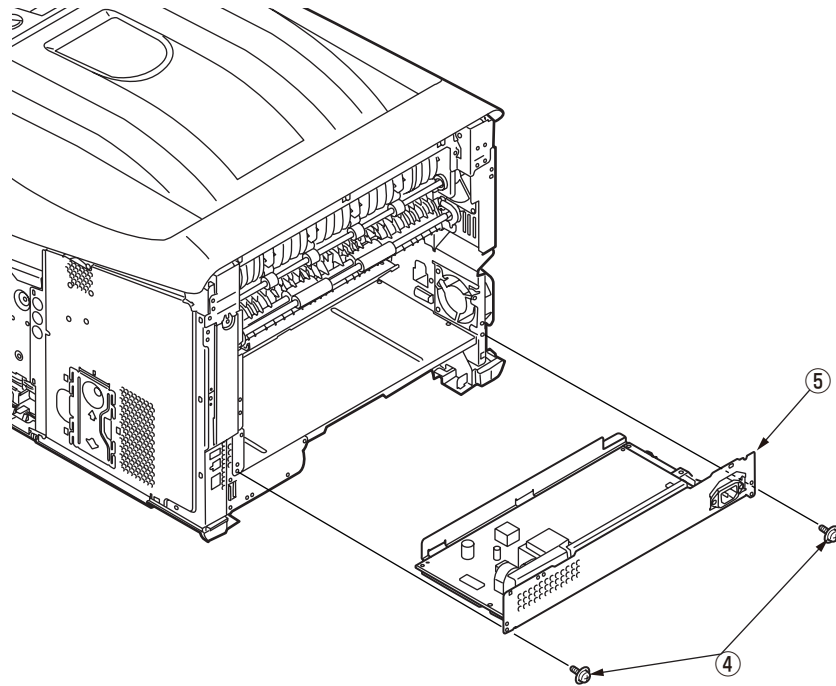
- (1) Detach the rear cover Assy. (Refer to section 3.2.5.)
- (2) Remove the two screws (silver) ① and detach the cover POW ② .



- (3) Disconnect the two cables ③ .

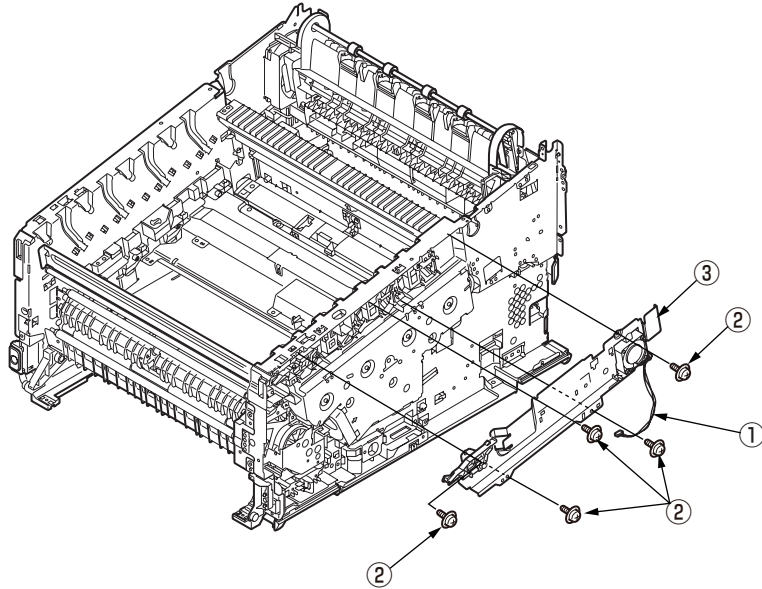


- (4) Remove the two screws (silver) ④ and detach the low-voltage power supply Assy. ⑤ .

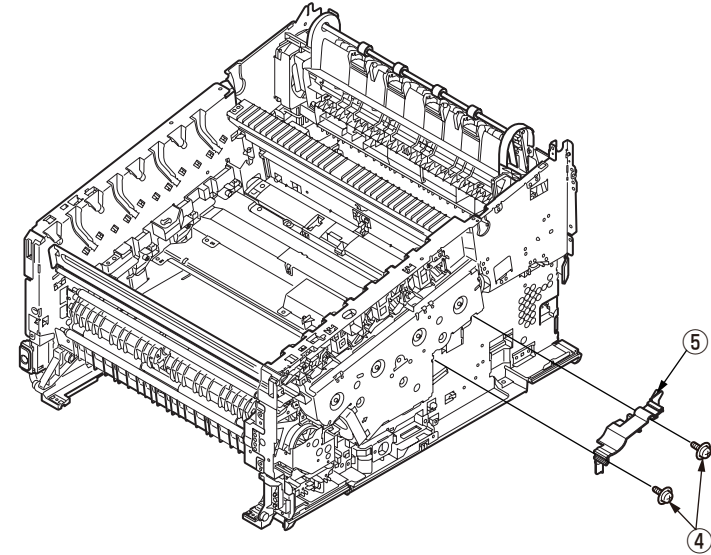


### 3.2.20 Motor Assy.-belt and motor Assy-ID

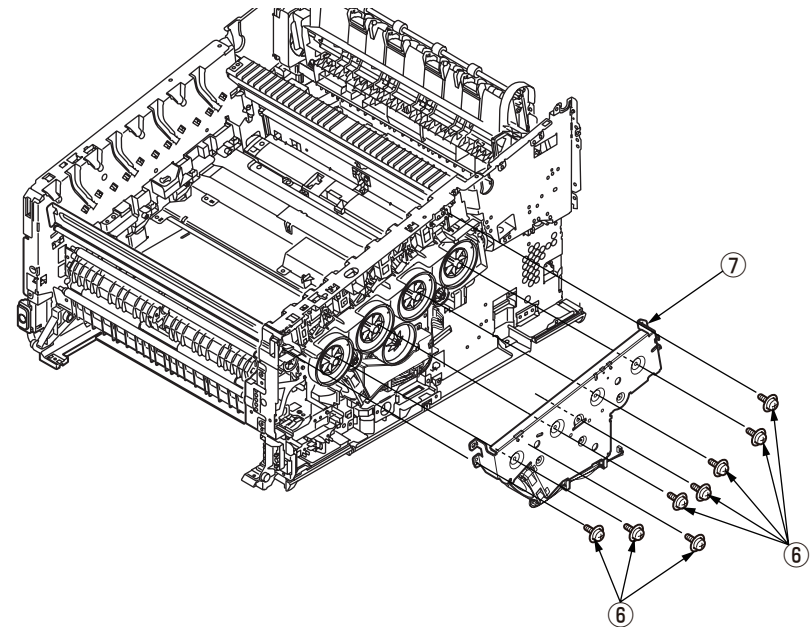
- (1) Remove the main board Assy. (board Assy-MEA). (Refer to section 3.2.7.)
- (2) Disconnect the cable ① from the clamp.
- (3) Remove the five screws (silver) ② and detach the plate Assy.-toner ③.



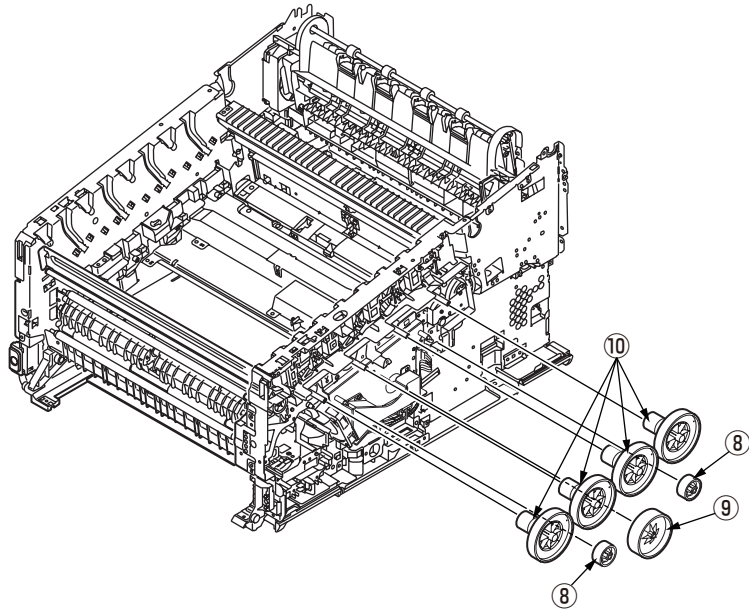
- (4) Remove the two screws (silver/8mm) ④ and detach the cover gear belt ⑤.



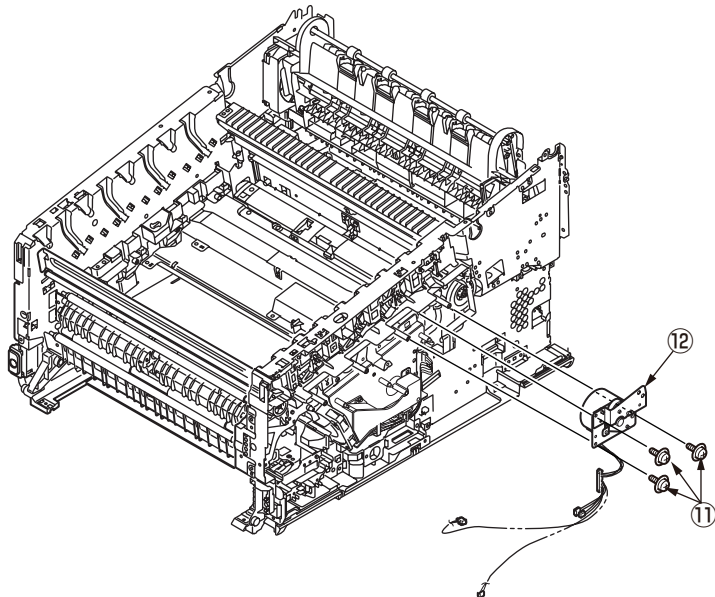
- (5) Remove the eight screws (silver) ⑥ and detach the plate Assy. ID gear ⑦.



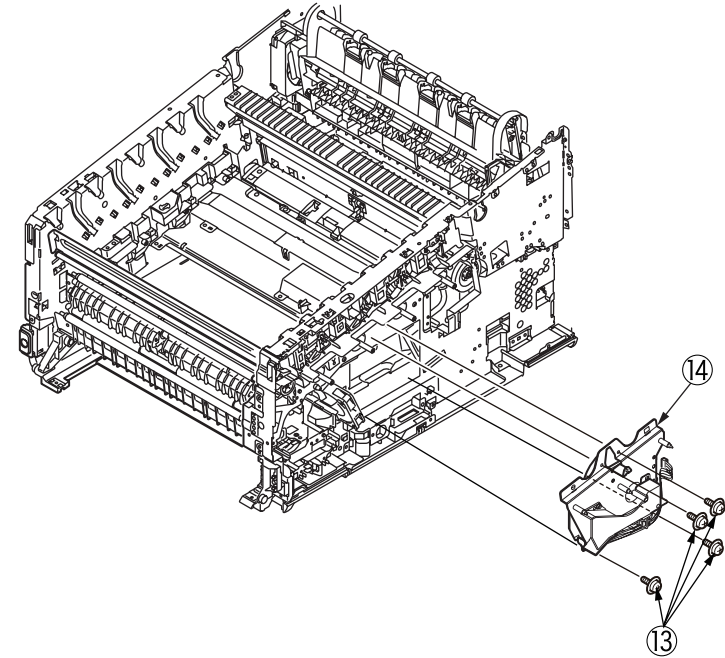
(6) Remove the gear-idler-A ⑧ , the gear-idler-B ⑨ , and the gear-reduction ID ⑩ .



(7) Remove the three screws (silver) ⑪ and the motor Assy. belt ⑫ .



(8) Remove the four screws (silver/8mm) ⑬ and detach the motor Assy-ID ⑭ .



**Notes on attaching:**

Adjust the phase between gears to assemble the gear-reduction ID.

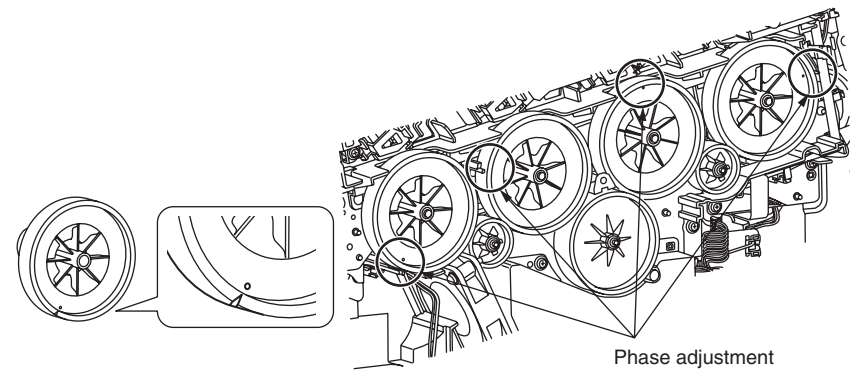
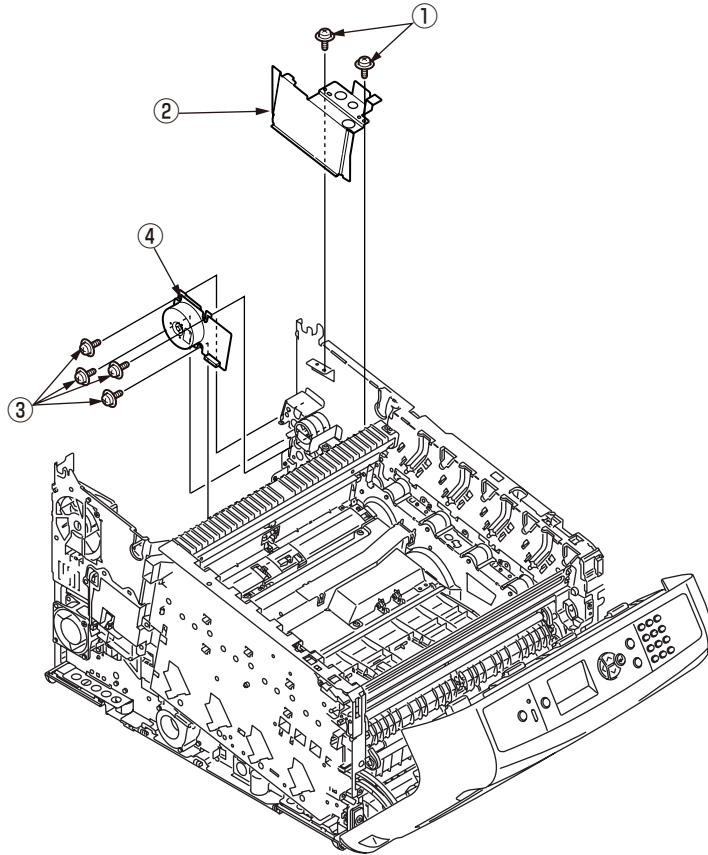


Illustration of phase adjustment of gear-reduction ID

### 3.2.21 Motor DC-FU (fuser motor)

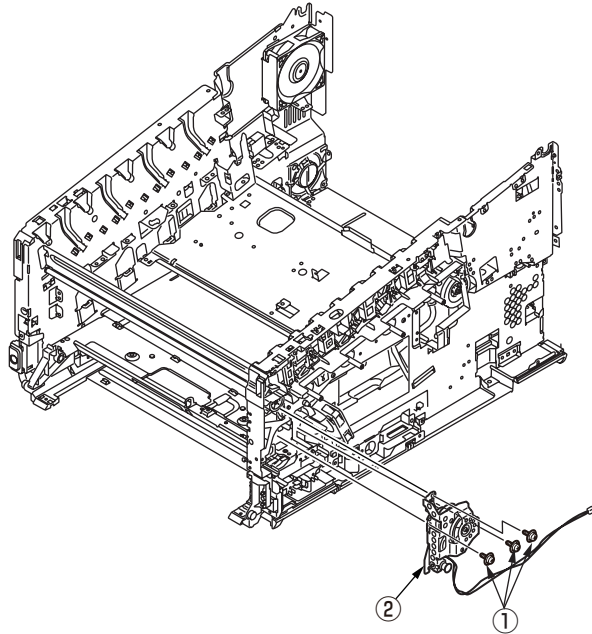
- (1) Detach the guide Assy.-eject. (Refer to section 3.2.12)
- (2) Remove the two screws (silver) ① and the plate cover FU ② .
- (3) Remove the four screws (black/8mm) ③ and the motor DC-FU ④ .



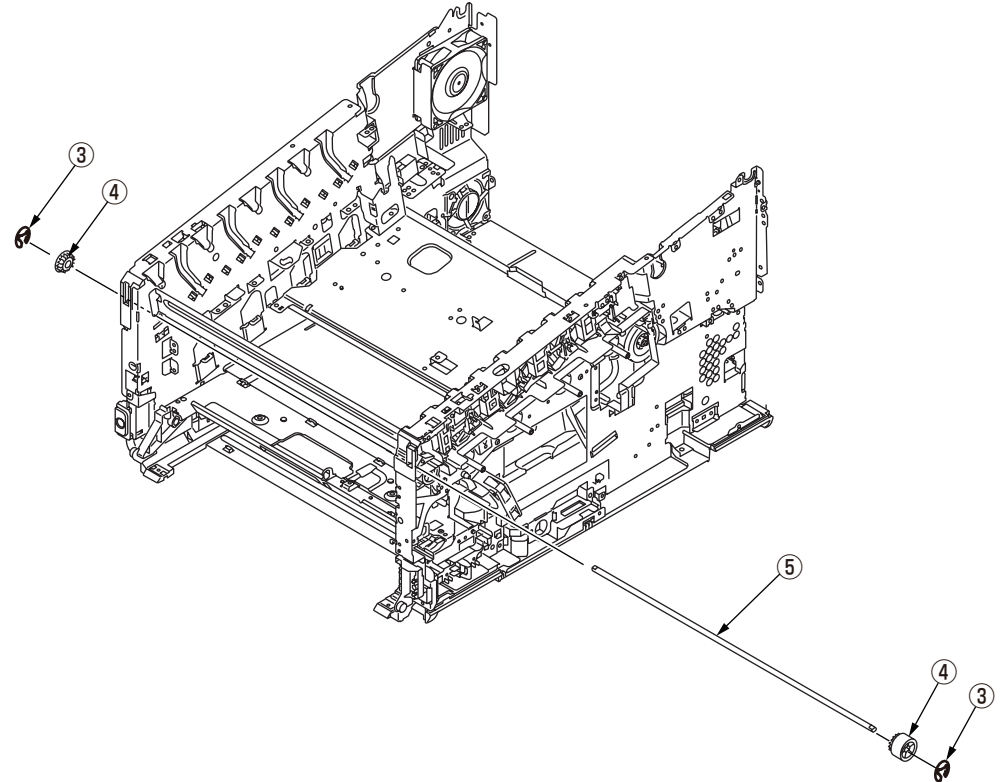


### 3.2.22 Side-R Assy. and side-L Assy.

- (1) See sections 3.2.1 to 3.2.20.
- (2) Remove the three screws (silver) ① and the gear Assy. image drum lift-up ② .



- (3) Remove the E-ring ③ , gear lift-up C/D ④ and the shaft lift-up ⑤ .



**Notes on attaching:**

To assemble the gear lift-up, match the phase of the right and left gears.

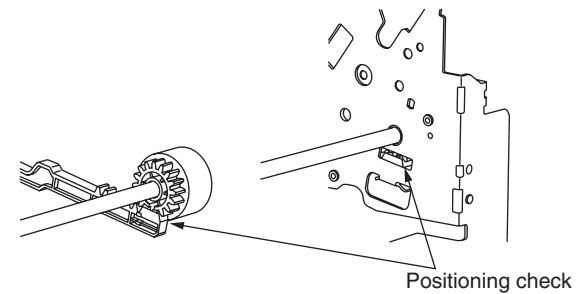
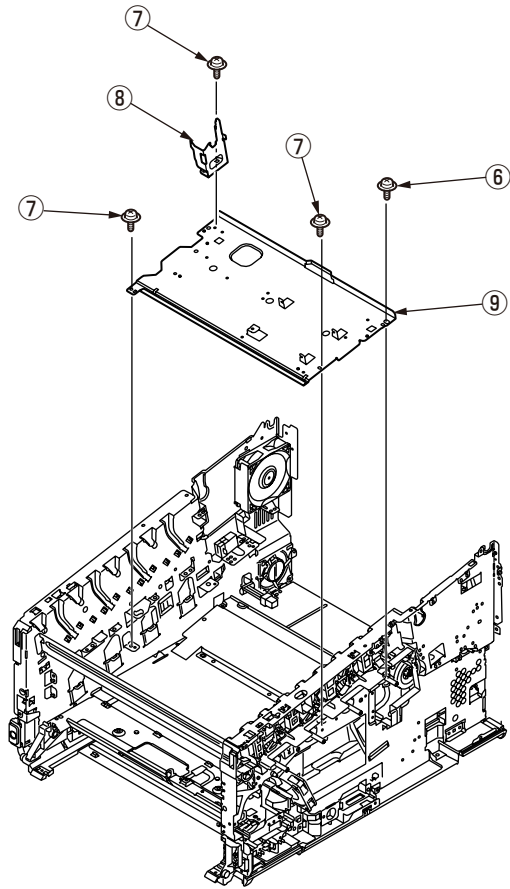
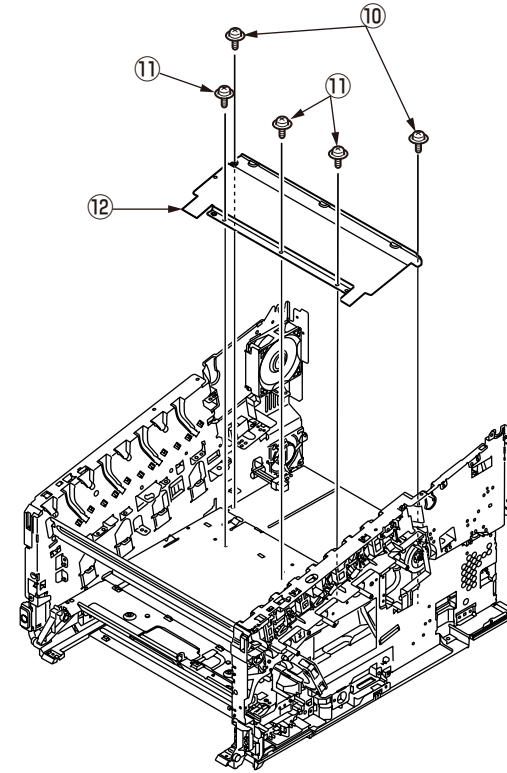


Illustration of (right and left) gear lift-up positioning

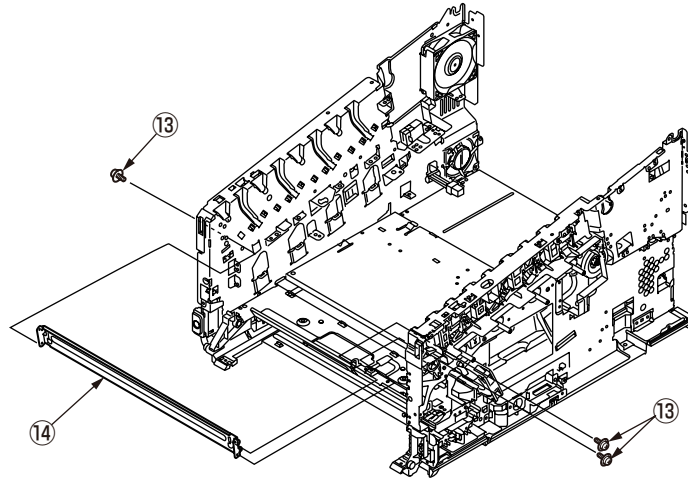
- (4) Remove the screw (silver) ⑥ and the three round-head screws (black) ⑦ and detach the plate guide belt ⑧ and the plate base registration ⑨.



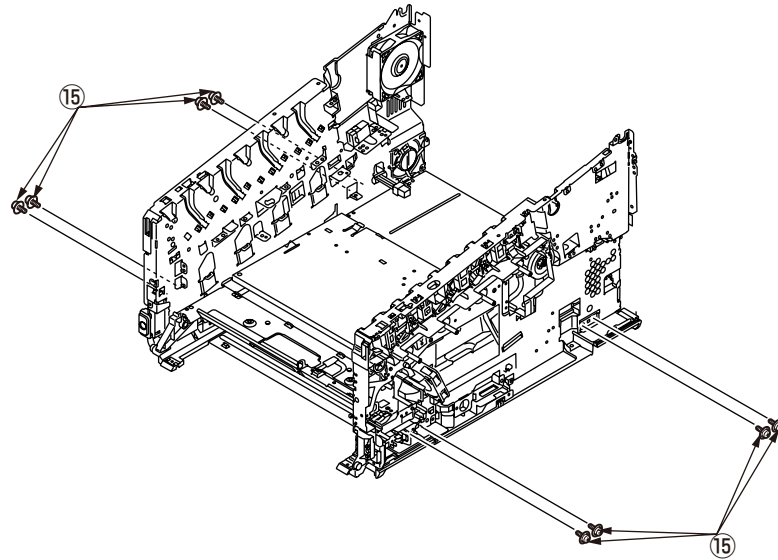
- (5) Remove the two screws (silver) ⑩ and the three round-head screws (black) ⑪ and detach the plate cover POW ⑫.



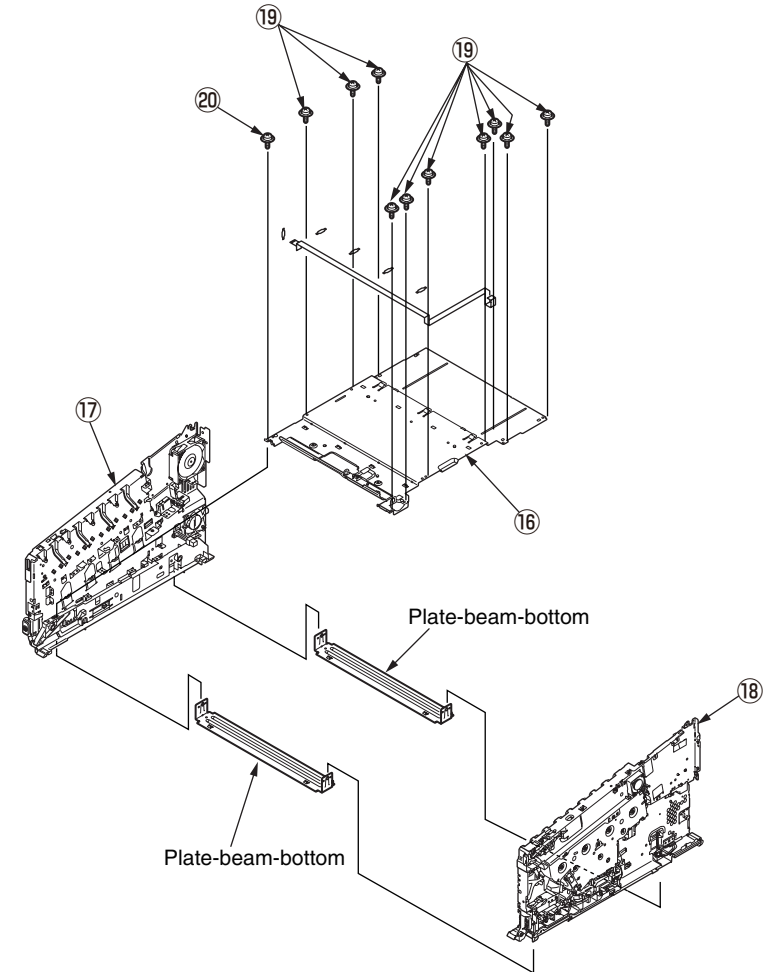
- (6) Remove the three screws (silver) ⑬ and detach the plate-beam-front ⑭ .



- (7) Remove the eight screws (silver) ⑮ that are fixing the plate-beam-bottom.



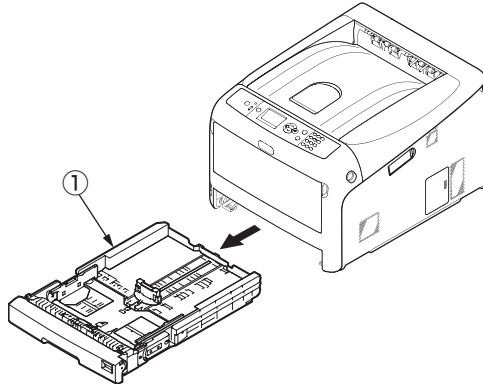
- (8) Remove the eleven screws, ten screws (silver) ⑲ and the screw (black) ⑳ that are fixing the plate base ⑯ and both of the plate Assy. side-L ⑰ and -R ⑱ , and detach the plate Assy. side-L ⑰ and -R ⑱ .



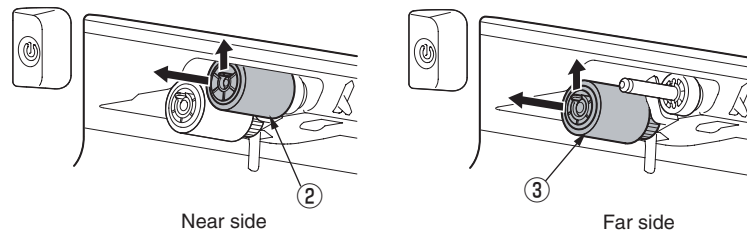
### 3.2.23 Feed rollers (Tray 1/2/3/4)

**Note!** Be sure to replace all of the three paper feed rollers.

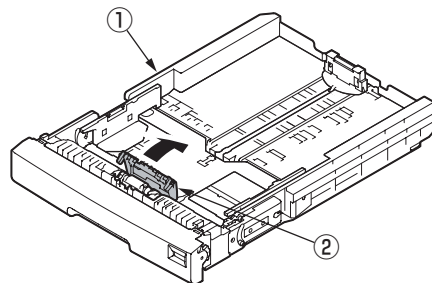
- (1) Turn off the printer and remove the paper cassette ①.



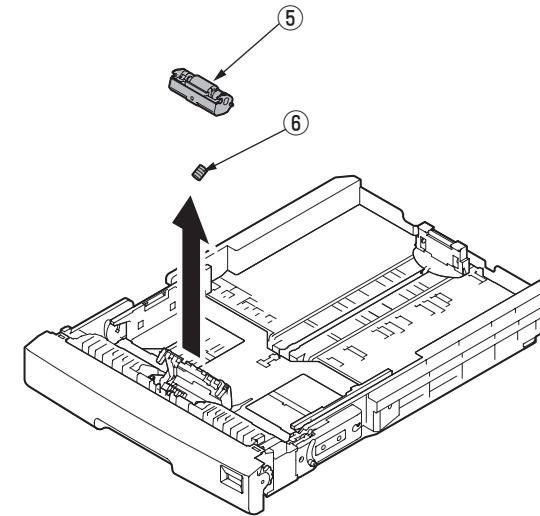
- (2) While pressing the protrusions of the two paper feed rollers ② and ③ outward, detach them from their shafts.



- (3) Bend the protrusion on each side of the cover on the paper cassette to detach the cover ④, and remove the cover ④ by turning the cover toward you.



- (4) Remove the separation roller ⑤ and the spring ⑥ while pressing the both ends of the separation roller ⑤ tray inward that are caught by the protrusions.



#### Notes on attaching paper feed rollers:

1. Insert a new paper feed roller (with a gear) ③ onto the inside shaft and turn it all the way in place.
2. Insert a new paper feed roller (with no gears) ② onto the outside shaft and turn all the way in place.

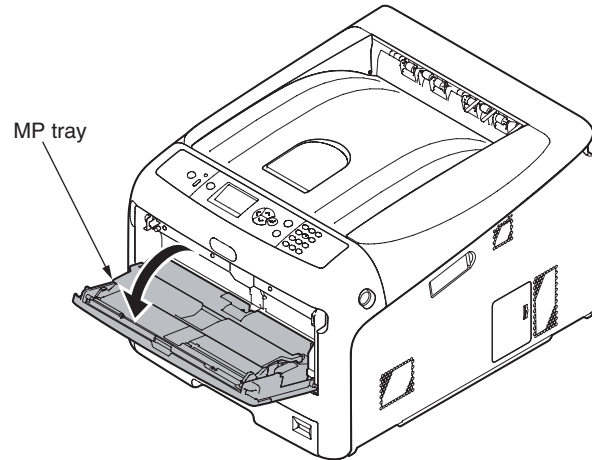
Check to make sure that the rollers do not come off.

#### Notes on attaching a separation roller:

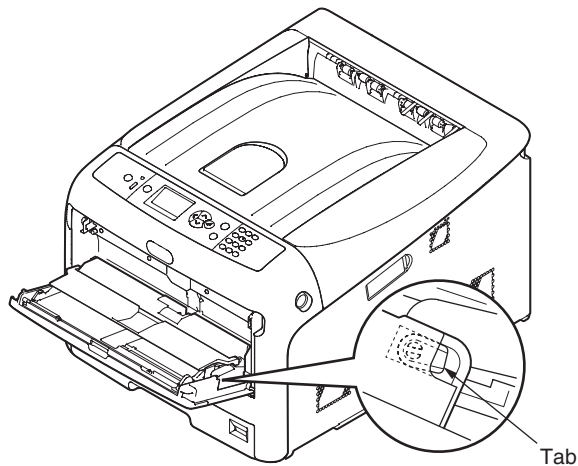
1. Put the spring ⑥ onto the boss on the rear of the separation roller ⑤, and push the bearing of the separation roller ⑤ obliquely from below onto the shaft on the side of the cassette.
2. Check to make sure that the separation roller ⑤ moves smoothly around the shaft and the roller rotates.

### 3.2.24 Paper feed rollers (MPT pick-up roller/MPT feed roller/MPT retard roller)

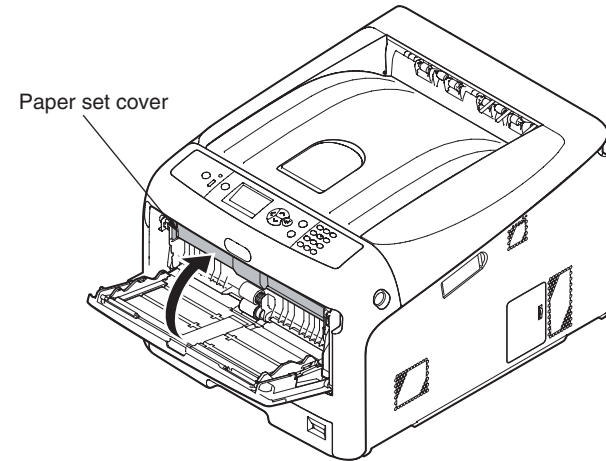
- (1) Turn off the printer and open the MP tray forward by inserting your fingers into the front recesses.



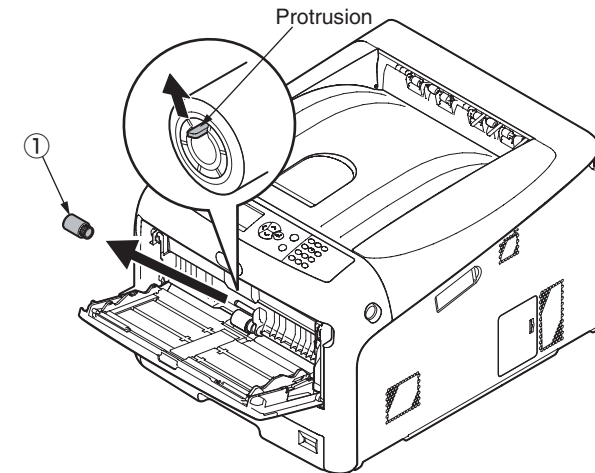
- (2) Release the tab of the paper feed roller cover by pressing the right arm inward while lifting up the MP tray lightly. (Release the tab on the left side in the same manner.)



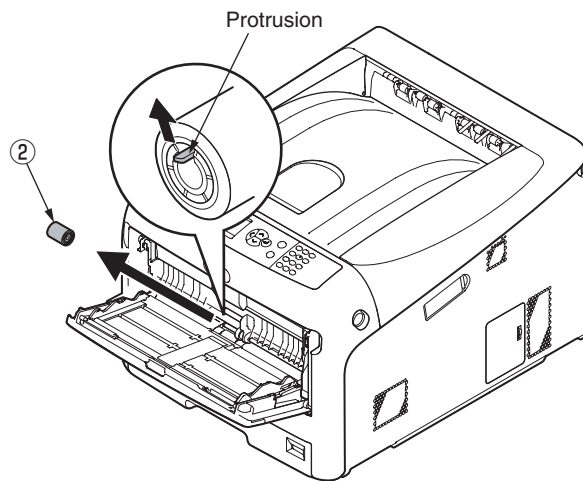
- (3) Open the paper set cover.



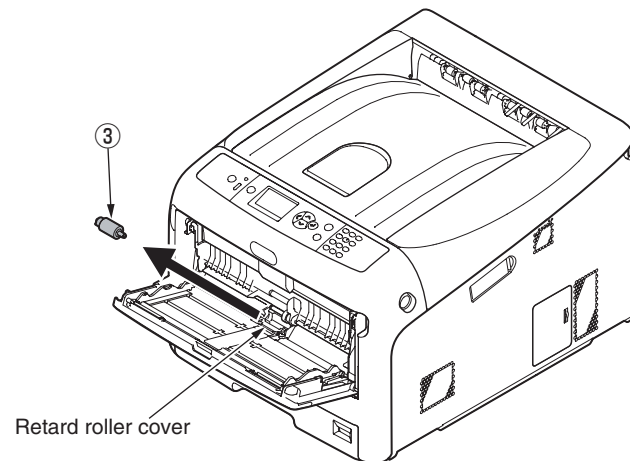
- (4) While pressing the protrusion of the upper MPT pickup roller ① outward, pull out the feed roller from its shaft.



- (5) While pressing both the separation roller cover and the protrusion of the lower MPT feed roller ② outward, slide the feed roller to the left hand side to remove.



- (6) Pull the retard roller cover to open while pressing the center part of the MP tray and remove the MPT retard roller ③.

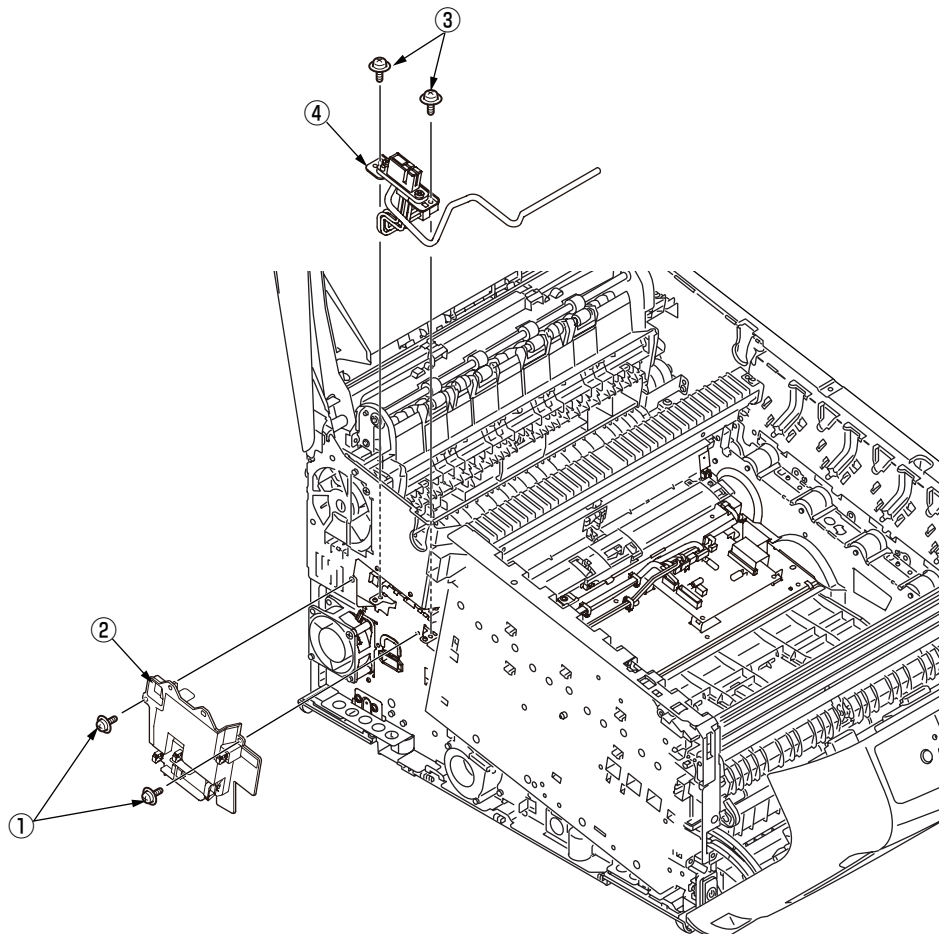


#### Notes on attaching paper feed rollers:

1. To attach a new MPT pickup roller ①, MPT feed roller ②, and MPT retard roller ③, insert them onto the shafts and turn them all the way. After attaching the rollers, make sure that they do not come off.
2. If closing the MP tray without returning the tab to the correct position, the paper set cover may be broken. Be sure to return the tab to the original position.
3. If the MP tray cannot be closed, return the paper set cover to the correct position by pressing the paper loading part on the MP tray downward.

### 3.2.25 Fuser Connector

- (1) Remove Image Drum Units, the Belt Unit and the Fuser Unit. (Refer to section 3.2.1 and 3.2.2)
- (2) Remove the Cover-Side-L Assy.(Refer to section 3.2.3)
- (3) Remove the cover Assy.-registration.(Refer to section 3.2.14)
- (4) Remove cables and two screws(silver) ① from the Cover-Assy-FU-Connector ② to detach Cover-Assy-FU-Connector ② .
- (5) Remove two screws(silver) ③ to detach the Fuser Connector ④ .

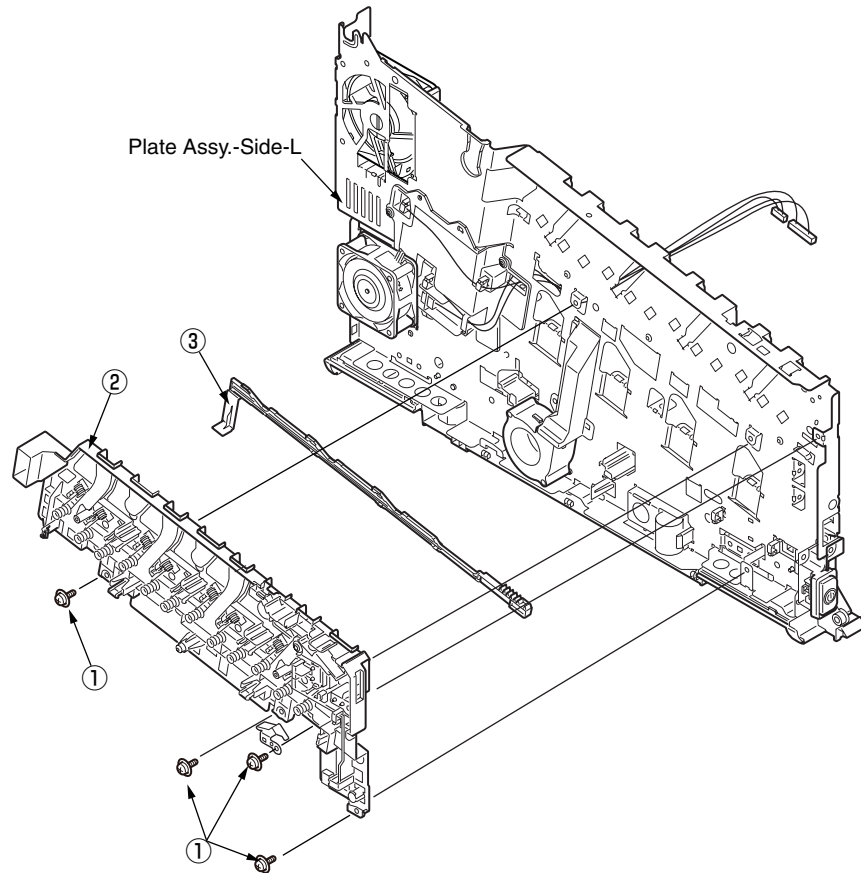


### 3.2.26 Guide Assy.-Side-L / Rack-L

- (1) Refer to section 3.2.22(3).
- (2) Remove four screws(silver) ① to detach Guide Assy.-Side-L ② and Rack-L ③ .

#### Notes on attaching:

To assemble the gear lift-up, match the phase of the right and left gears.(Refer to the 'Notes on attaching' in the section 3.2.22(3).)

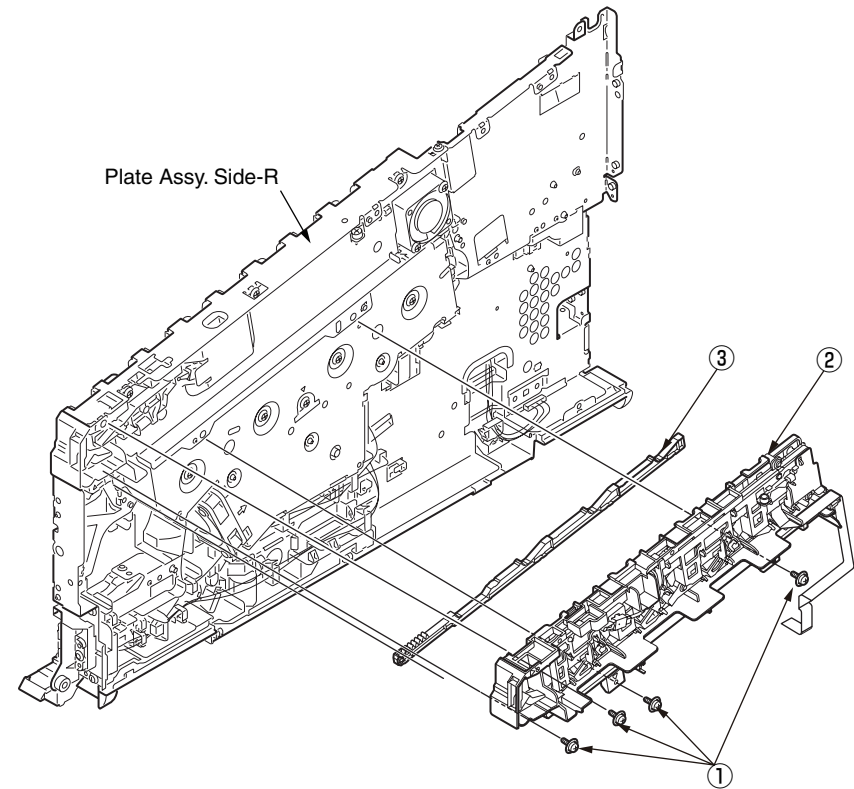


### 3.2.27 Guide Assy.-Side-R / Rack-R

- (1) Refer to section 3.2.22(3).
- (2) Remove four screws(silver) ① to detach Guide Assy.-Side-L ② and Rack-L ③ .

#### Notes on attaching:

To assemble the gear lift-up, match the phase of the right and left gears.(Refer to the 'Notes on attaching' in the section 3.2.22(3).)



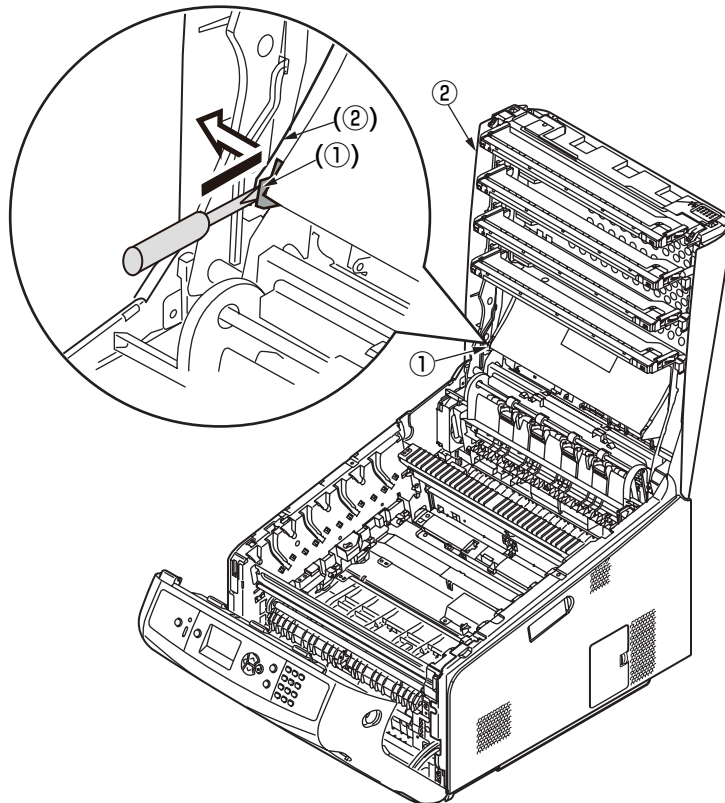


### 3.2.28 Cover-Top-L / Cover-Top-R

**Note!** This section is explained for the operation of the Cover-Top-L. For the operation of the Cover-Top-R, it is same as the operation for the Cover-Top-R to except these forms are symmetric.

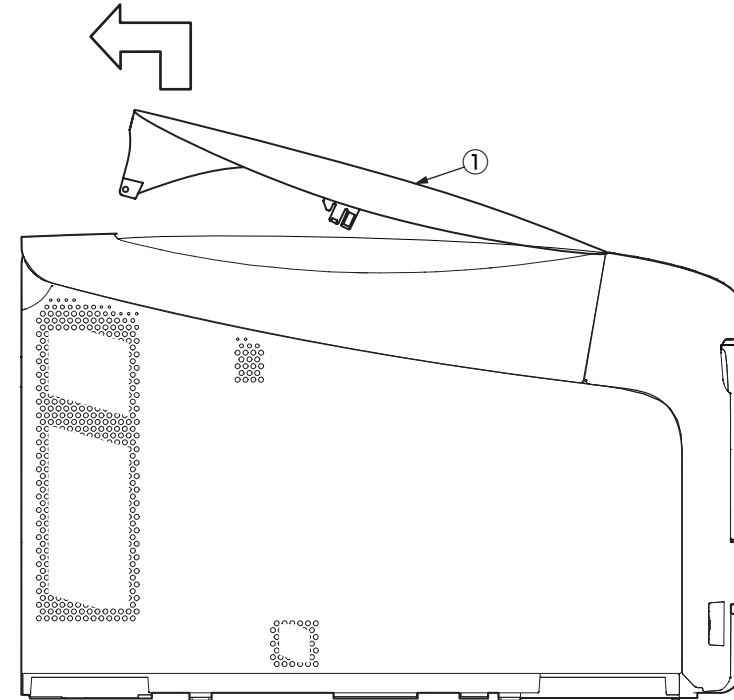
- (1) Remove Image Drum Units, the Belt Unit and the Fuser Unit. (Refer to section 3.2.1 and 3.2.2)
- (2) To detach the Cover-Top-L ①, insert the tool whose head is flat(ex. flat-blade screwdriver) to between the latch portion of the Cover-Top ② and the Cover-Top-L ①. And move the latch by the tool to the outside of the Cover-Top to release them.

**Memo** After the latch portion released, push the Cover-Top-L ① to the outside of the Cover-Top ② to keep the disengage the Cover-Top-L ① and the Cover-Top ②.



- (3) Move and detach the Cover-Top-L ① to the top side of the Cover-Top ② and to the back side of the mainbody.

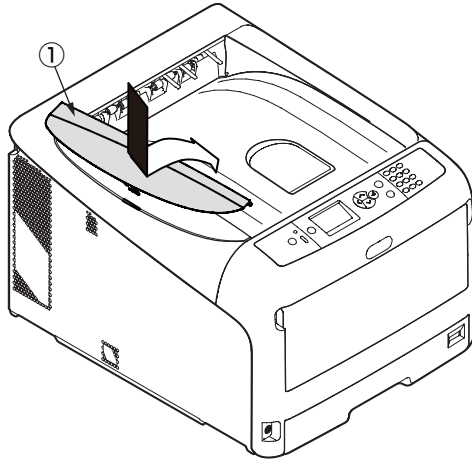
**Memo** This operation is easily by to close the Cover-Top ②.



**Notes on attaching:**

Assemble the Cover-Top-L ① by following steps.

Step1. Insert the center latch of the Cover-Top-L ① with it slanted to the outside of the side of the mainbody. And roll it to the inside of the mainbody.

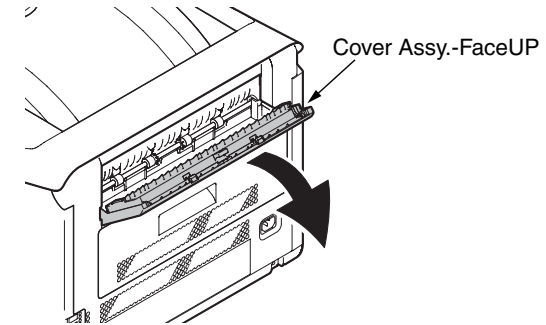


Step2. Lock the front side latch of the Cover-Top-L ① with sliding from back to front.

Step3. Insert the rear latch of the Cover-Top-L ① .

**3.2.29 Cover-FaceUP-B**

(1) Open the Cover Assy.-FaceUP.

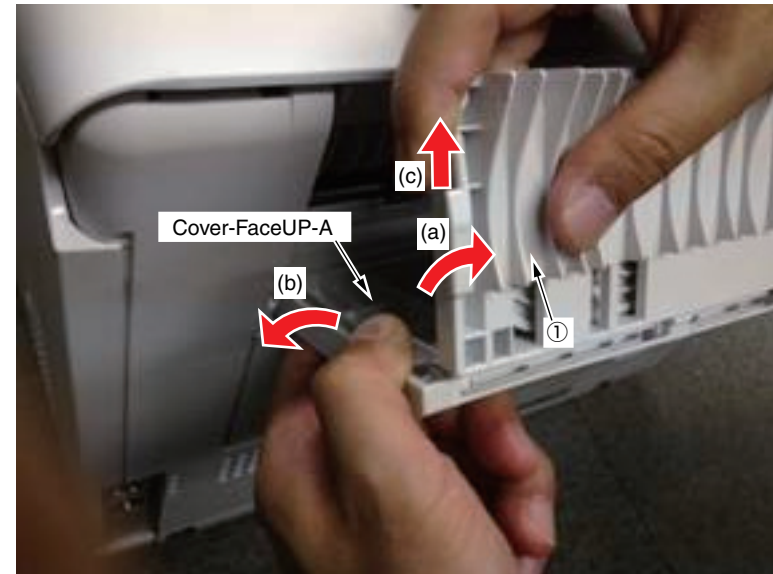


(2) To detach the Cover-FaceUP-B ① as following steps.

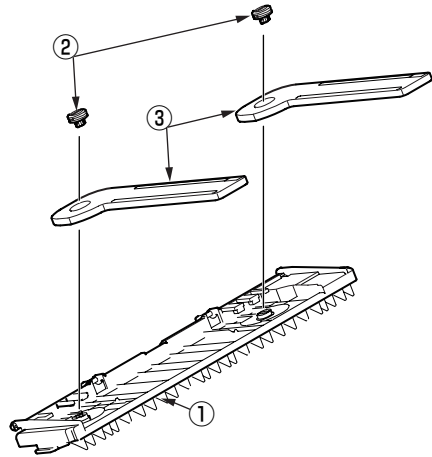
(a) : Turn around to about 90 degree the Cover-FaceUP-B ① as against the Cover-FaceUP-A.

(b) : Warp the Cover-FaceUP-A to out side as the following picture.

(c) : Pull up and detach the Cover-FaceUP-B ① from the Cover-FaceUP-A.



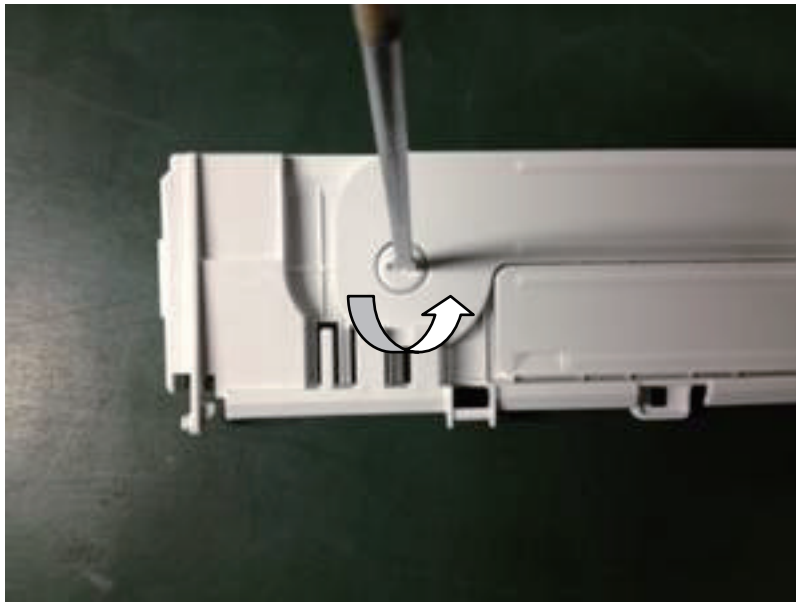
- (3) Detach the Shoulder-Lock ② from the Cover-FaceUP-B ① by using the tool whose head is flat(ex. flat-blade screwdriver), and remove two Support-Papers ③ .



**Notes!** The rotation direction of to detach Shoulder-Locks ② .

<Left Side>

The Shoulder-Lock ② of the left side is detached with to be rotated in a counterclockwise direction.



<Left Side>

The Shoulder-Lock ② of the left side is detached with to be rotated in a counterclockwise direction.



# 4. LUBRICATION

---

4.1 Portions Lubricated .....4-2

## 4.1 Portions Lubricated

Portions lubricated are shown in this section. The other portions must not be lubricated. Lubrication is not required during assembly or disassembly, except that the lubricant specified must be applied to portions from which lubricant was wiped.

### Lubrication work

(1) Lubricant names and their abbreviations

EM-30L: MOLYKOTE EM-30L

HP-300: MOLYKOTE HP-300

PM: Pan motor oil 10W-40 or ZOA 10W-30

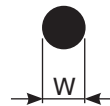
FL: FLOIL GE334C

HANARL: HANARL SF-133

C-9300: Tetra C-9300

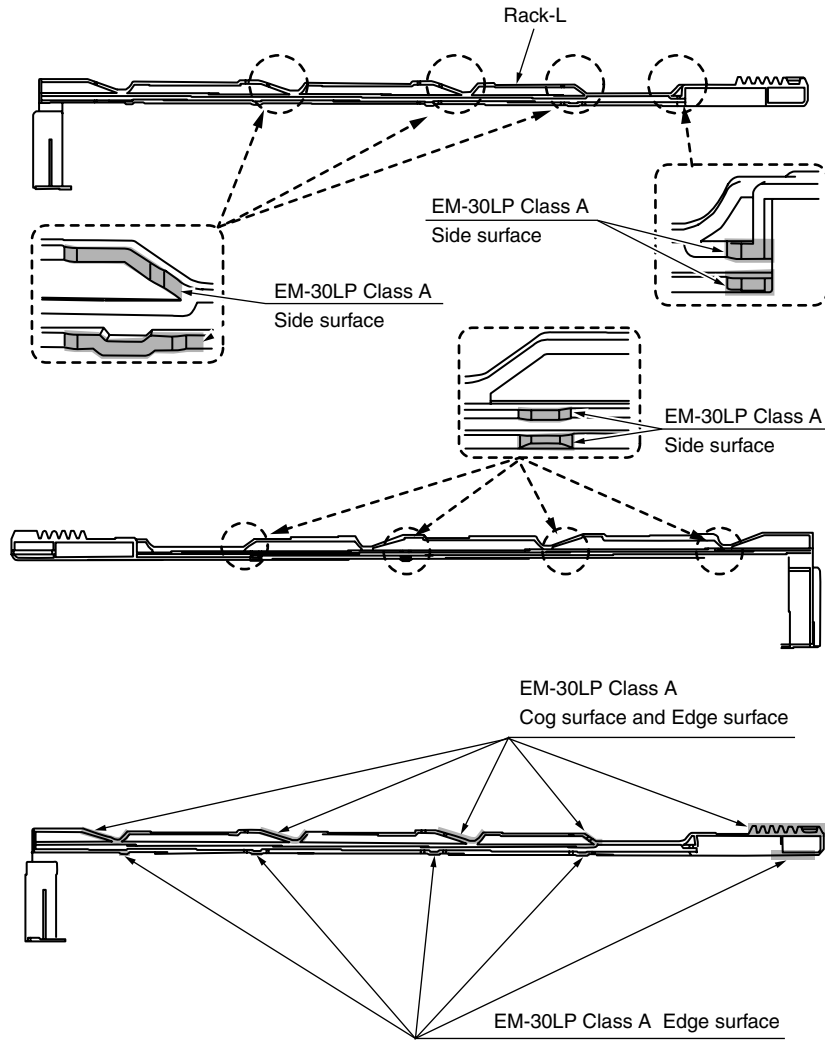
(2) Standard of amount of grease

Class	S	A	B	C	D	E	F
Amount of grease (cc)	0.0005	0.003	0.005	0.01	0.03	0.05	0.1
W(mm)	1.24	2.25	2.67	3.37	4.86	5.76	7.26
Sample	.	●	●	●	●	●	●

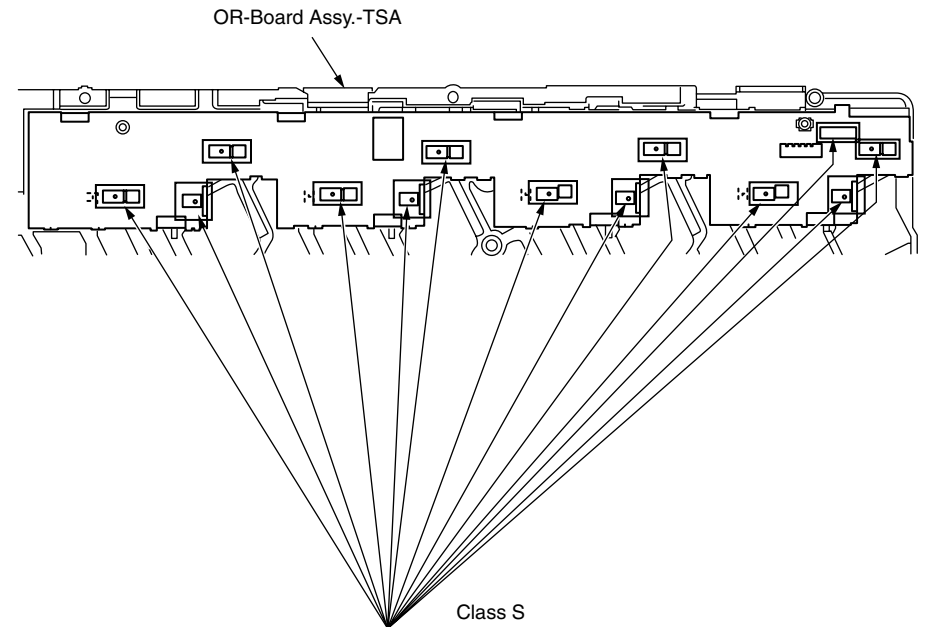


① Plate Assy.-Side-L

Apply a small amount of MOLYKOTE (EM-30LP) 26 positions

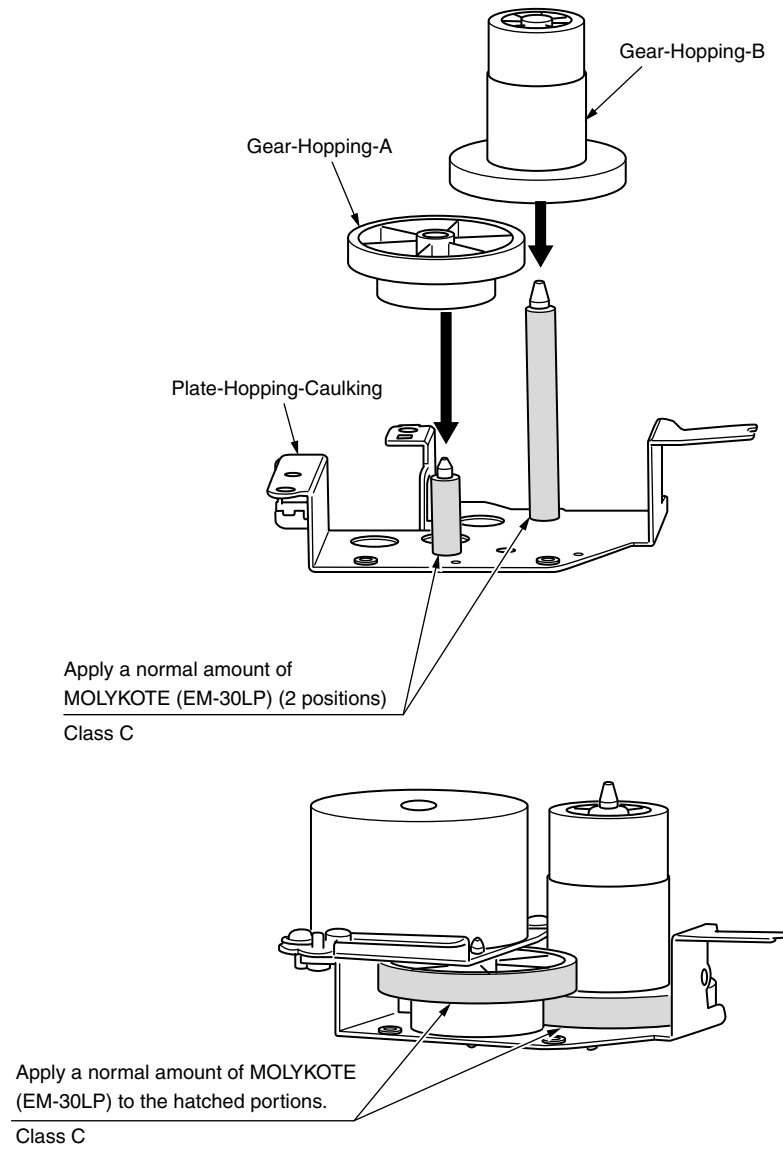


② Guide Assy.-Side-R

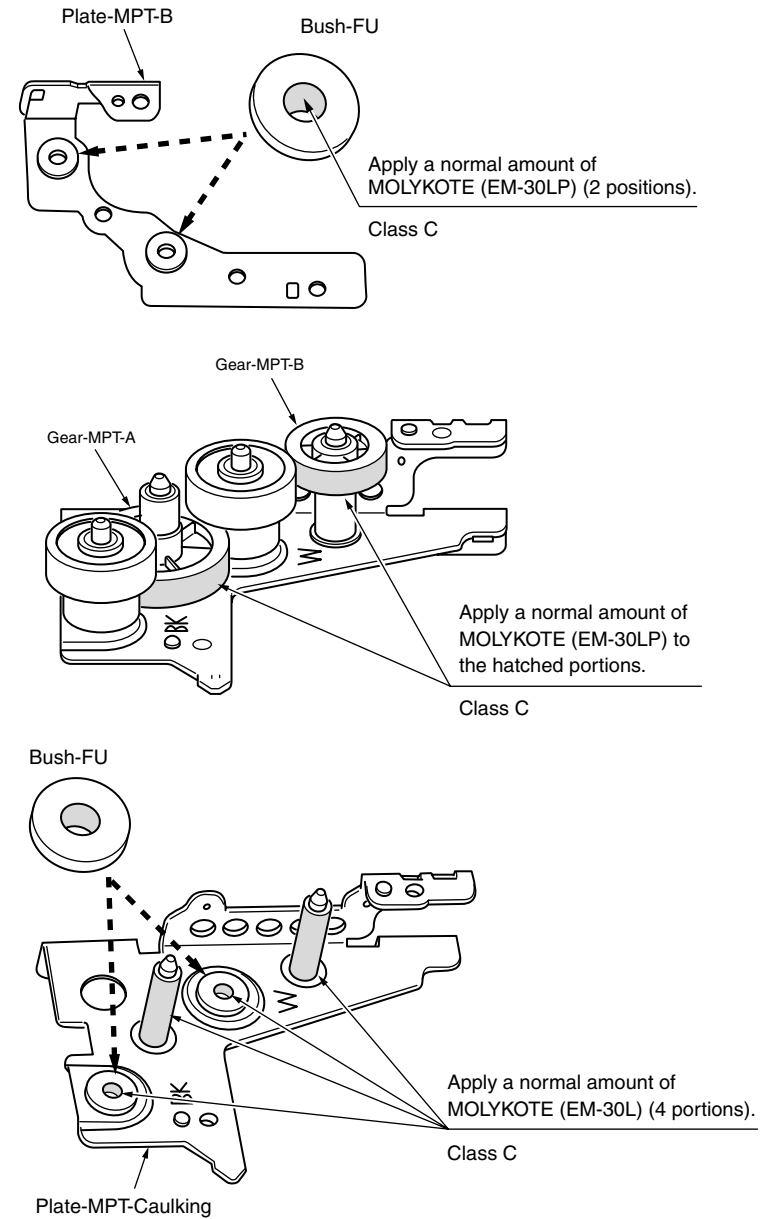


After polish the terminals to luster with BETCOM M-3, Tetra (C-9300) is soaked into cotton swab a little (Class S), and it coated on terminals. (13 positions)

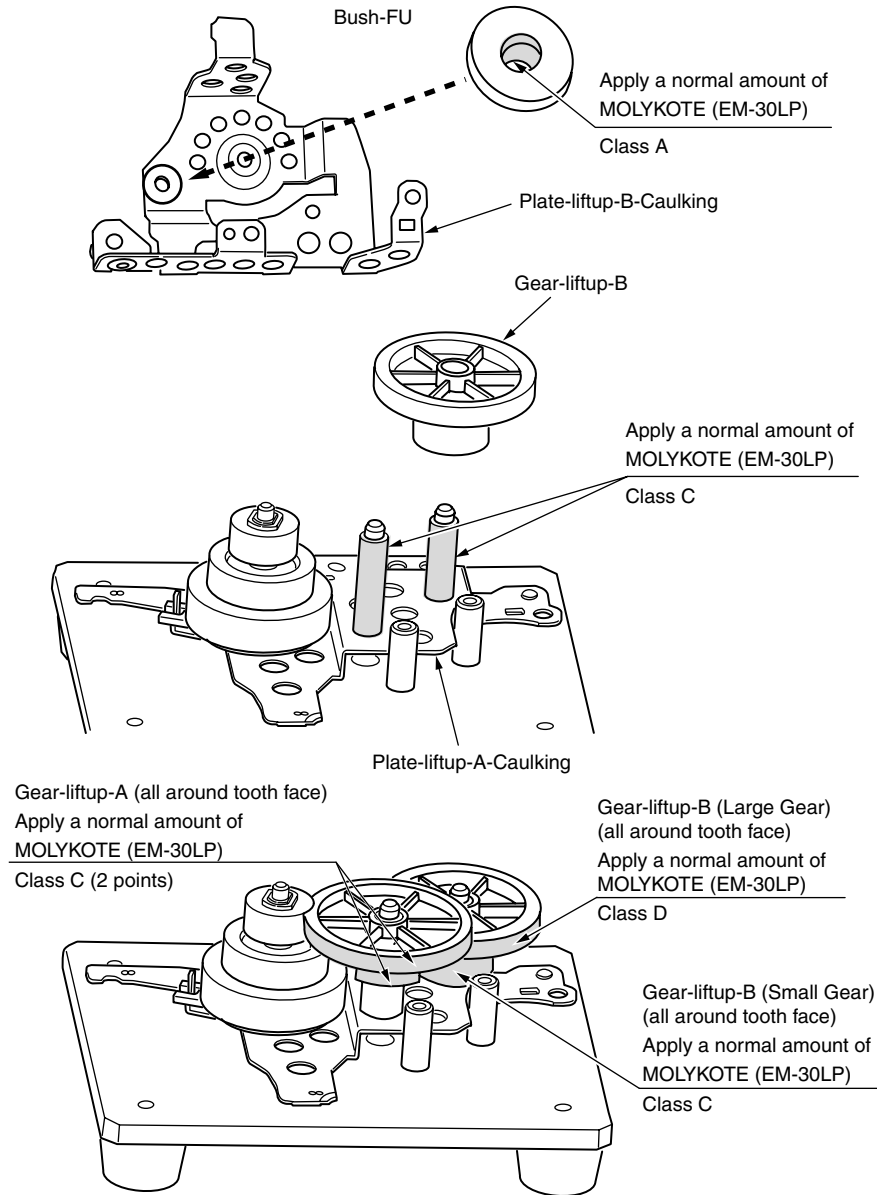
③ Gear Assy.-Hopping



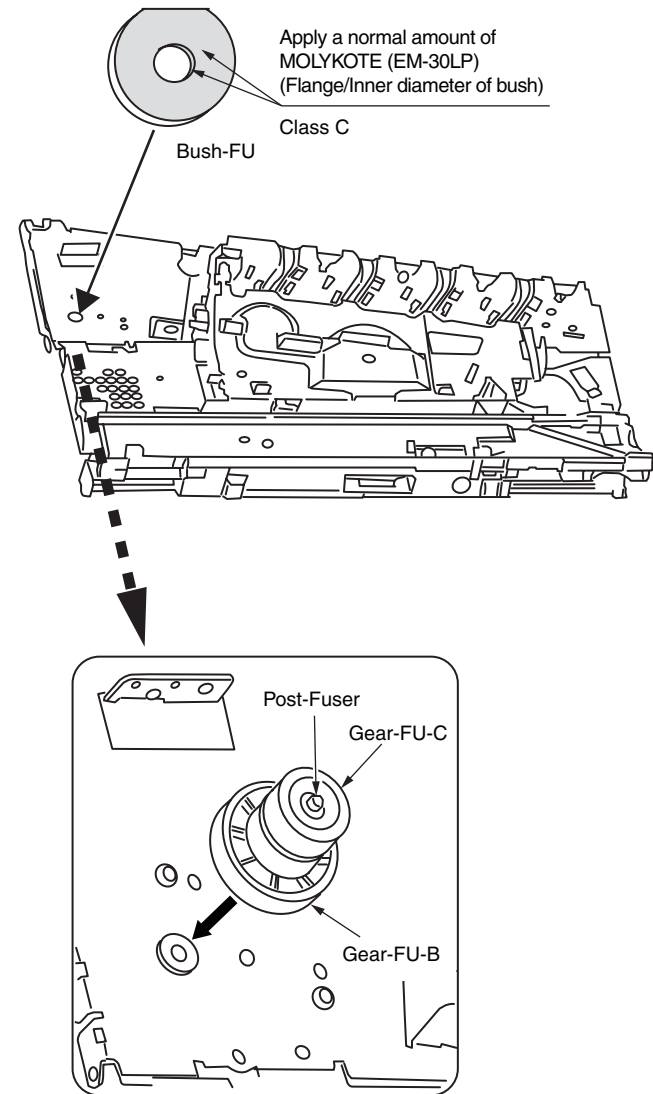
④ Gear Assy.-MPT



⑤ Gear Assy.-ID-Liftup

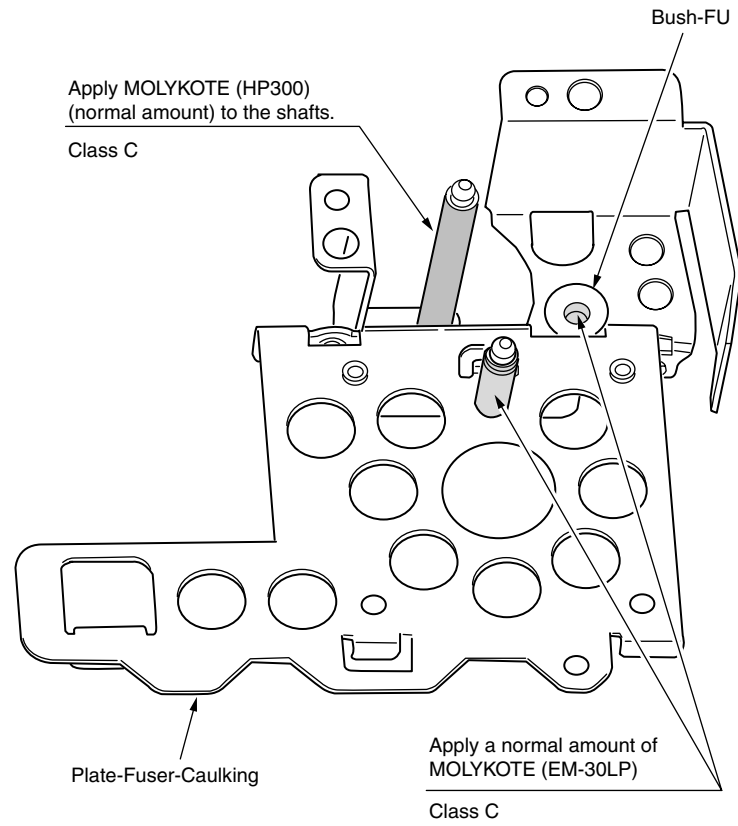


⑥ -1 Plate Assy.-Side-R

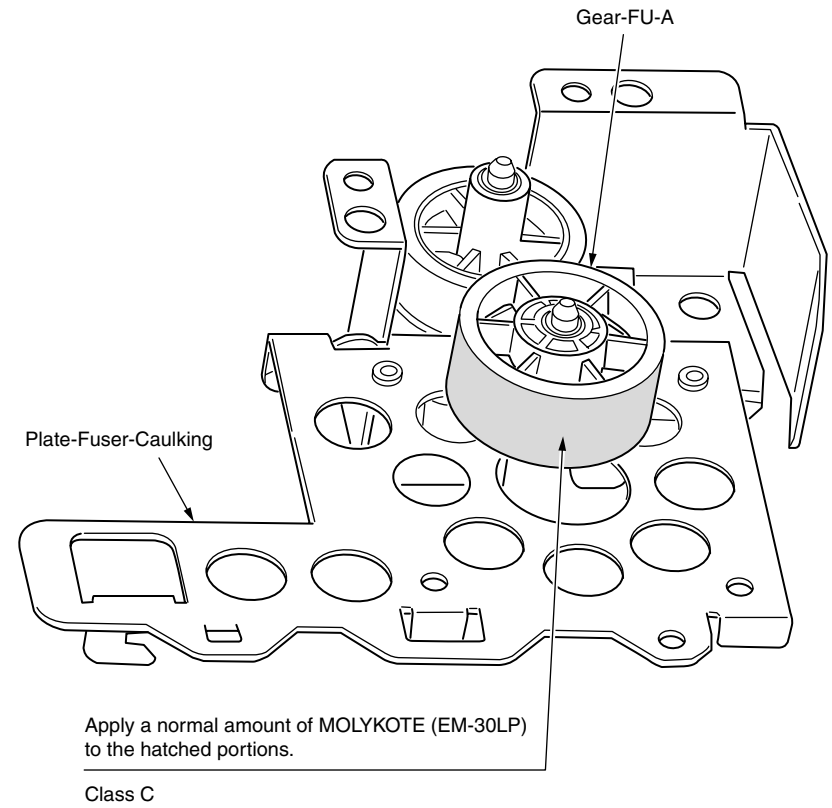




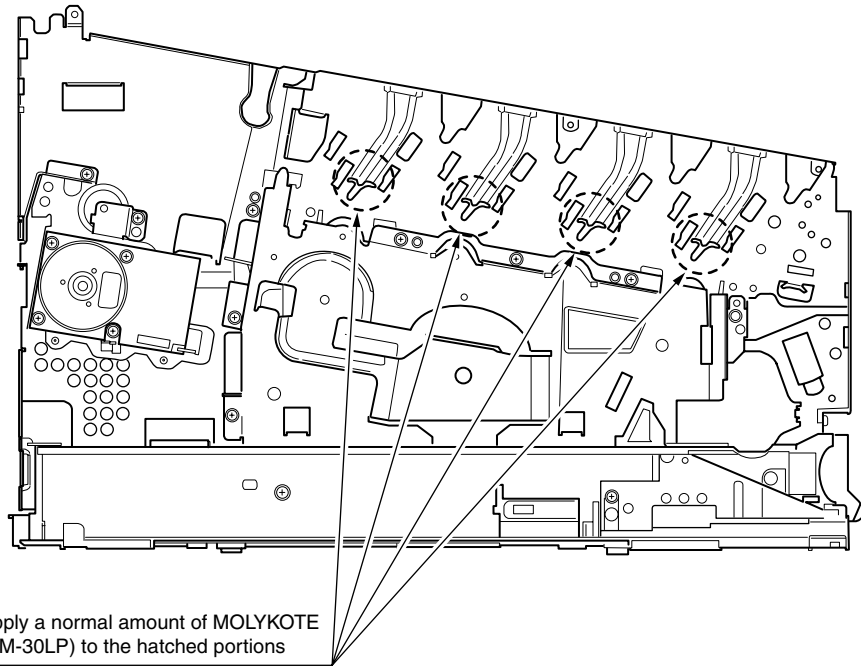
⑥ -2 Plate Assy.-Side-R



⑥ -3 Plate Assy.-Side-R



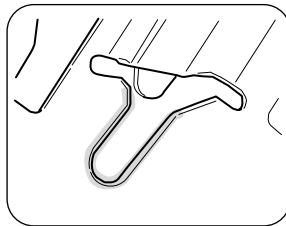
⑥ -4 Plate Assy.-Side-R



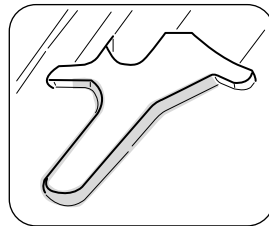
Apply a normal amount of MOLYKOTE (EM-30LP) to the hatched portions

Class C (4 positions)

Expanded view

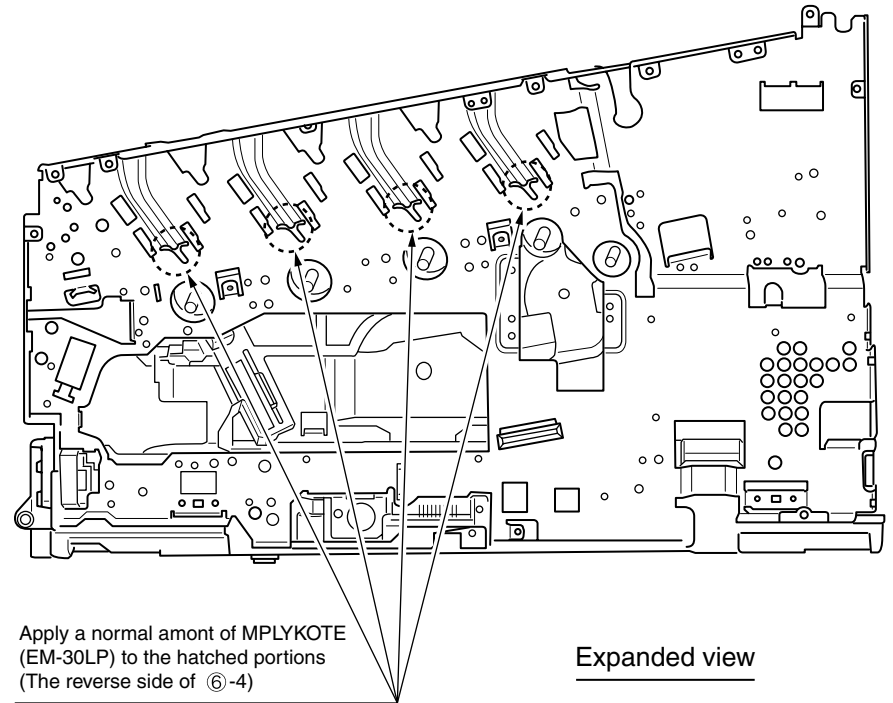


Apply EM-30LP (Class C) on the side surface. (4 positions)



Apply EM-30LP (Class C) on the edge surface. (4 positions)

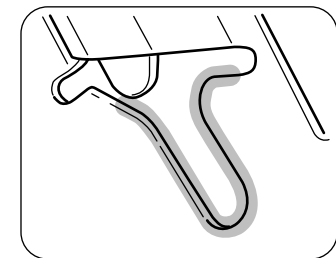
⑥ -5 Plate Assy.-Side-R



Apply a normal amount of MPLYKOTE (EM-30LP) to the hatched portions (The reverse side of ⑥-4)

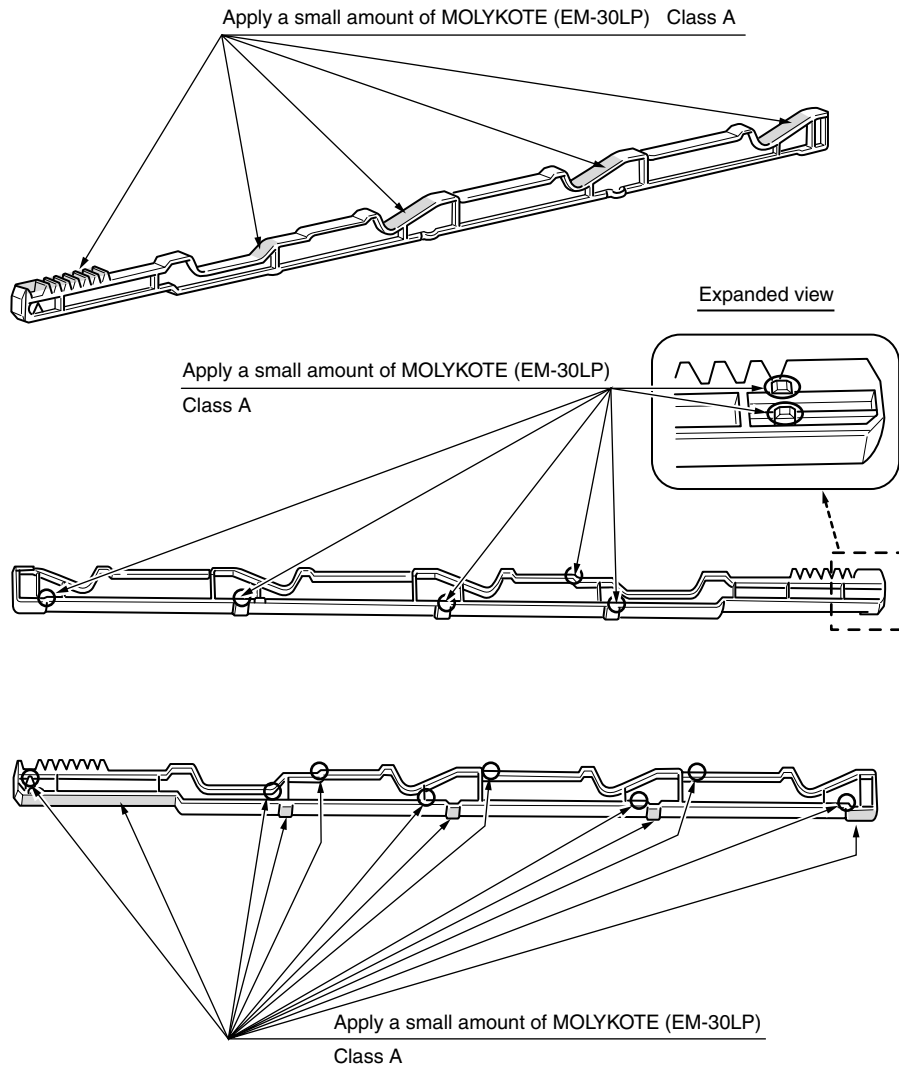
Class C

Expanded view

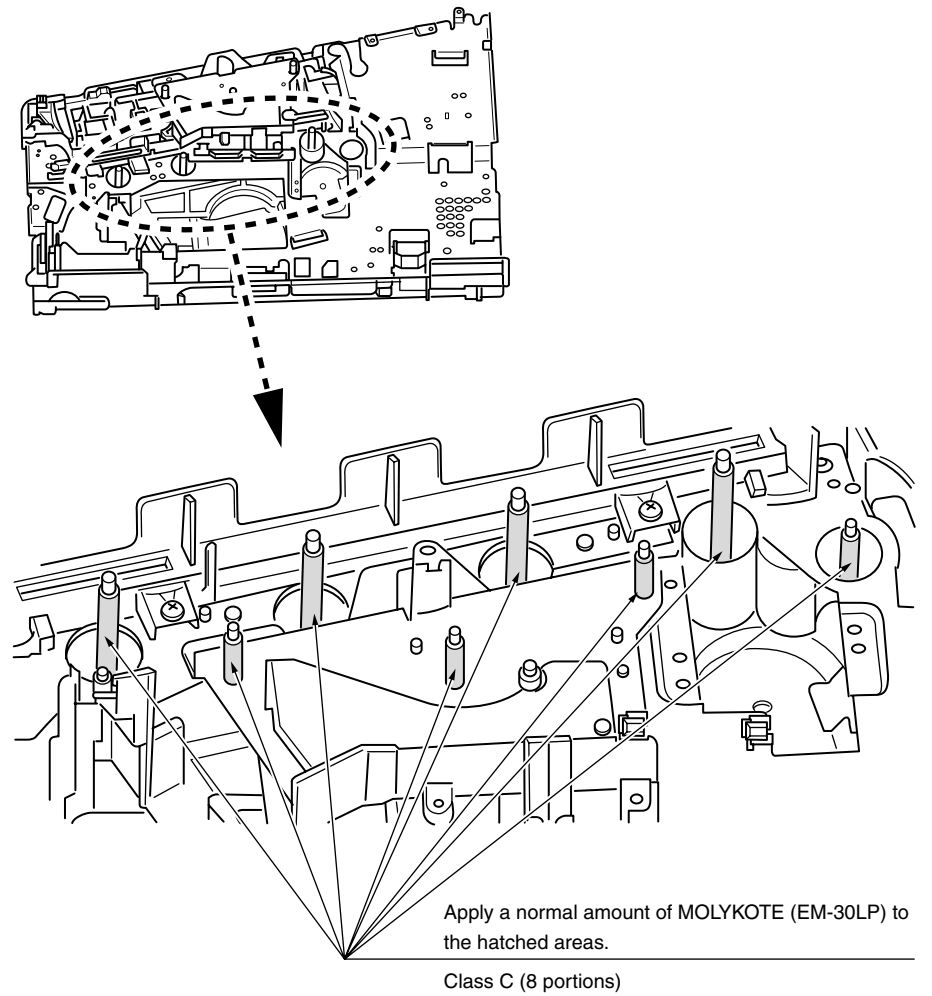


Apply EM-30LP (Class C) on the side surface. (4 positions)

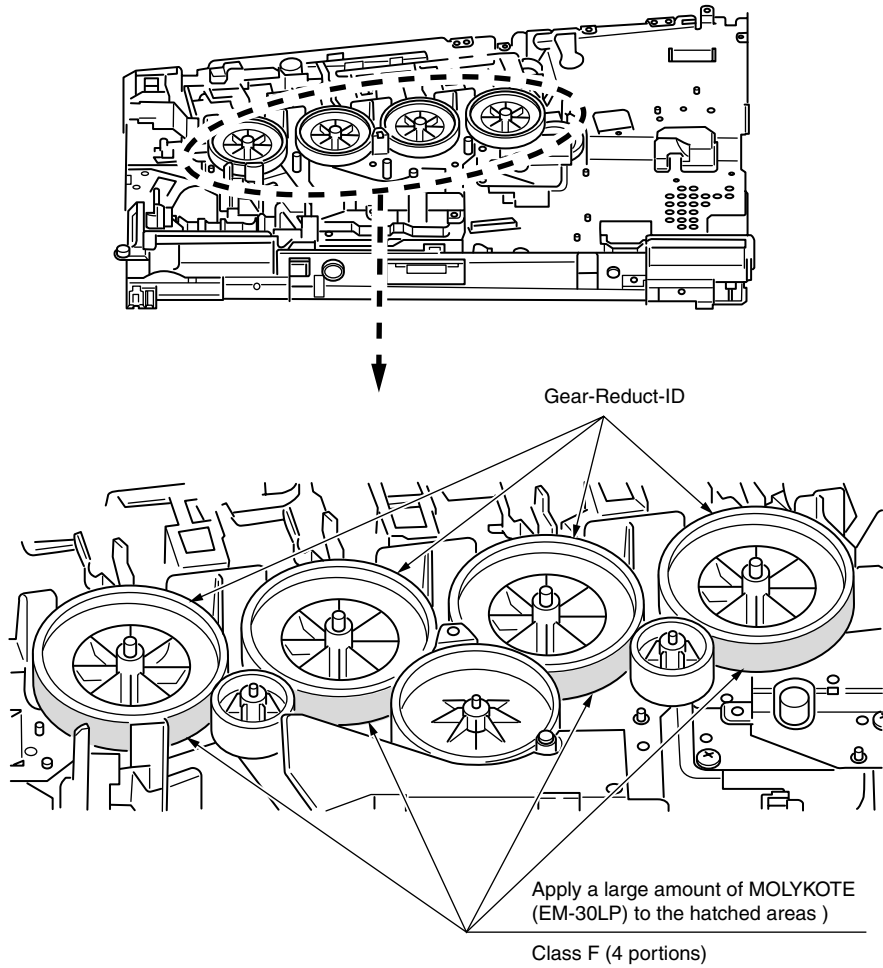
⑥ -6 Plate Assy.-Side-R



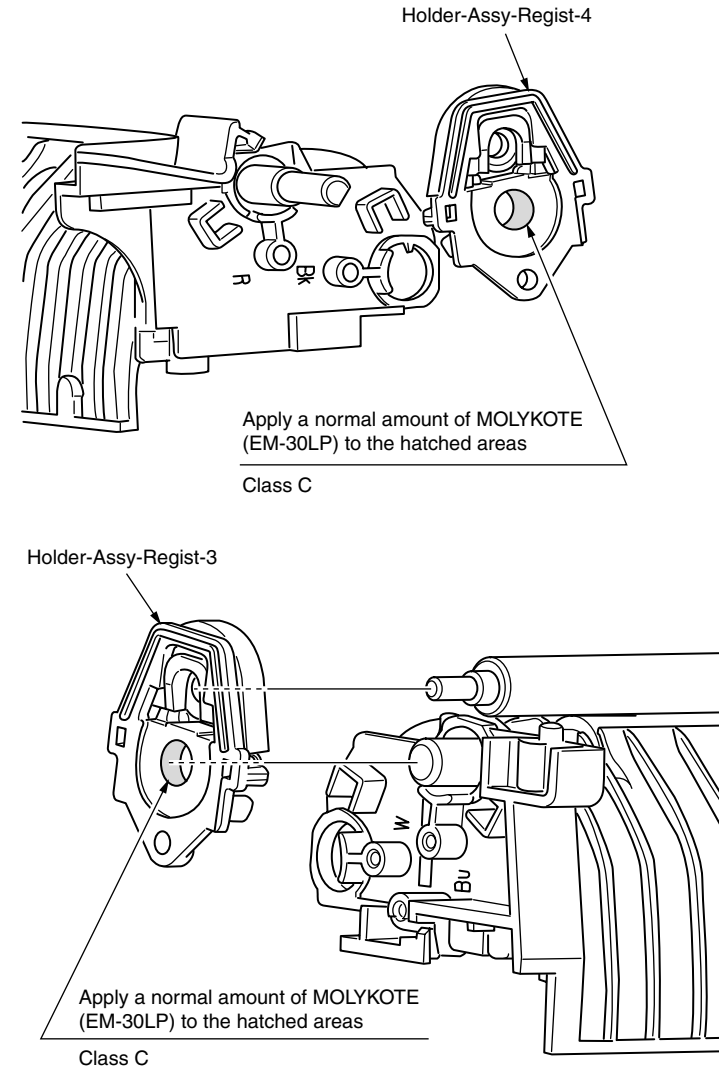
⑥ -7 Plate Assy.-Side-R



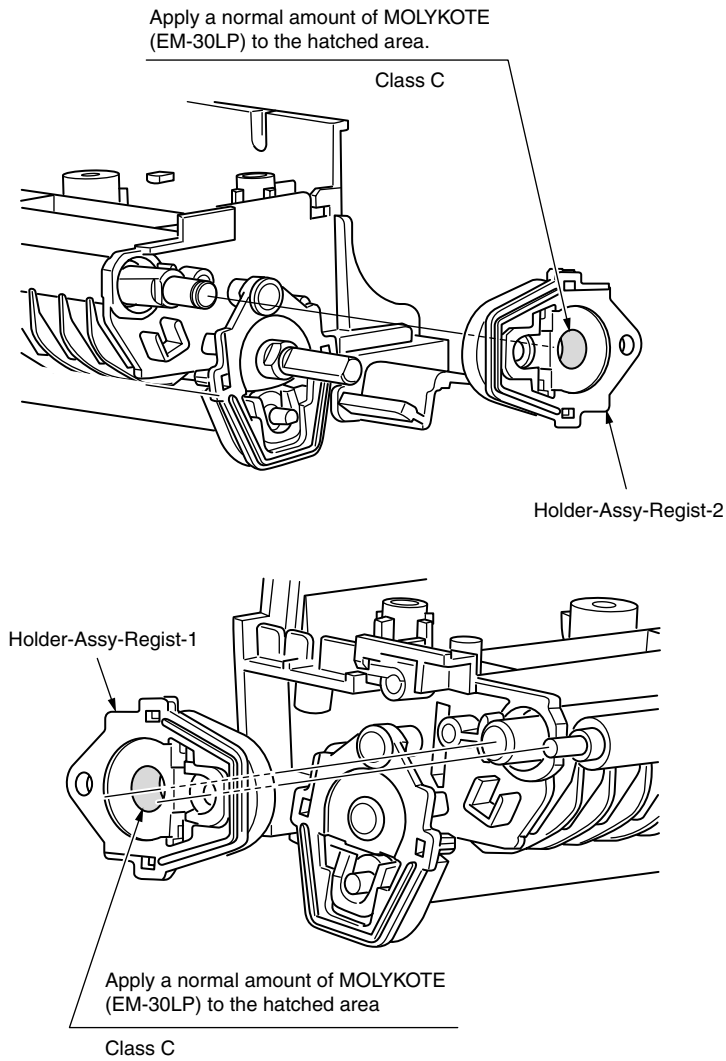
⑥ -8 Plate Assy.-Side-R



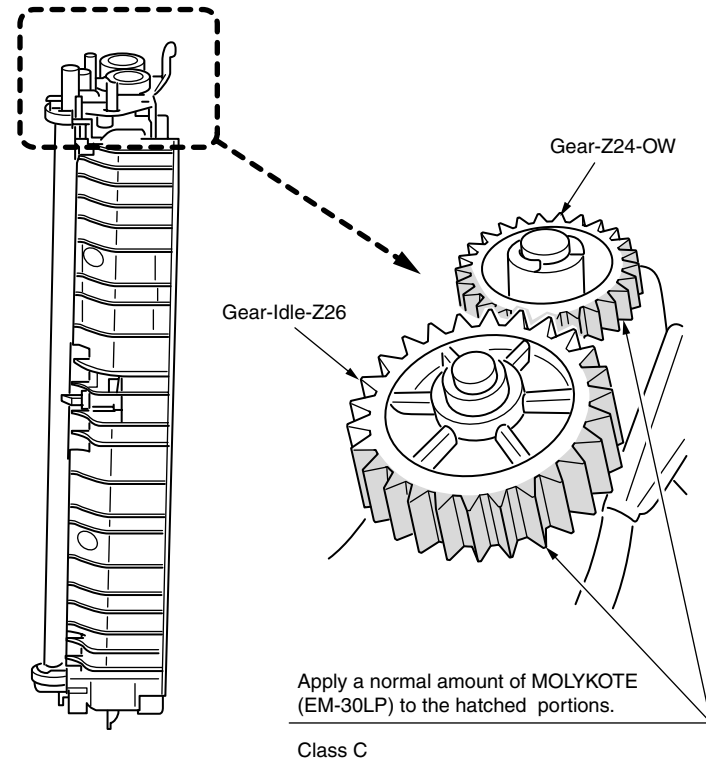
⑦ -1 Roller Assy.-Regist



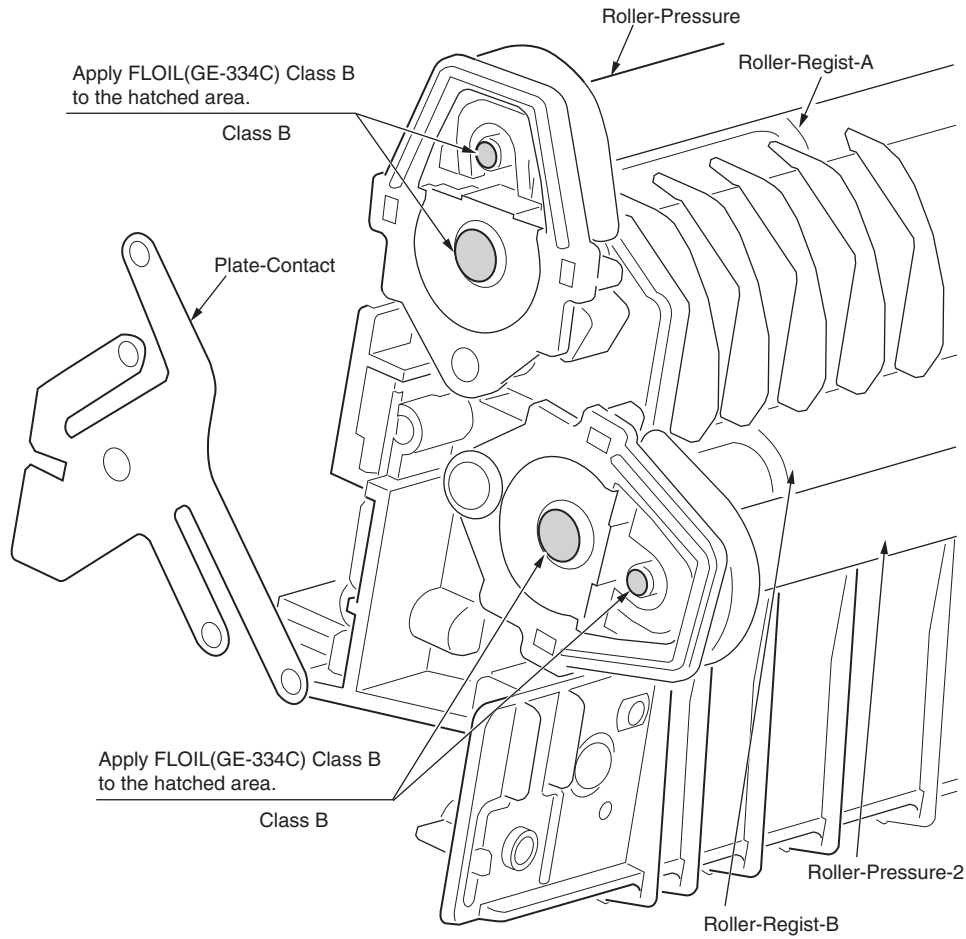
⑦ -2 Roller Assy.-Regist



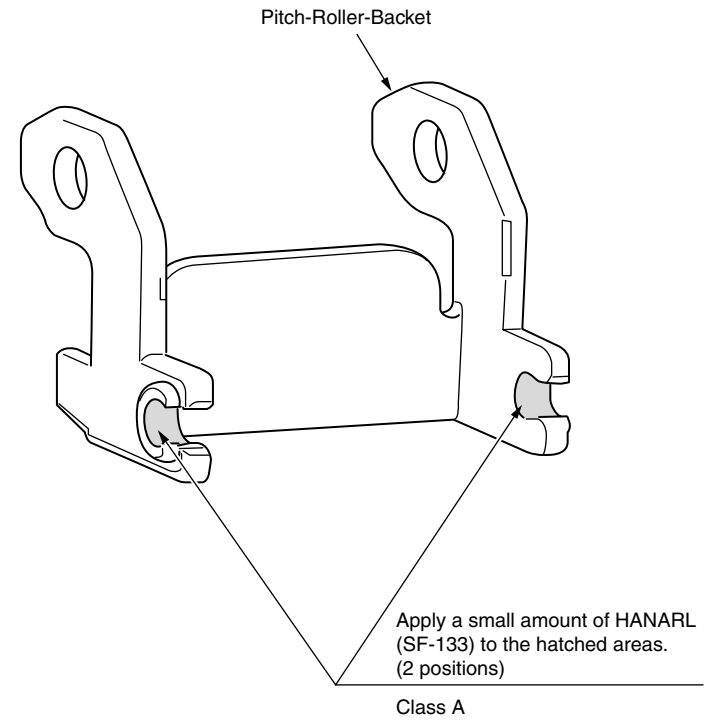
⑦ -3 Roller Assy.-Regist



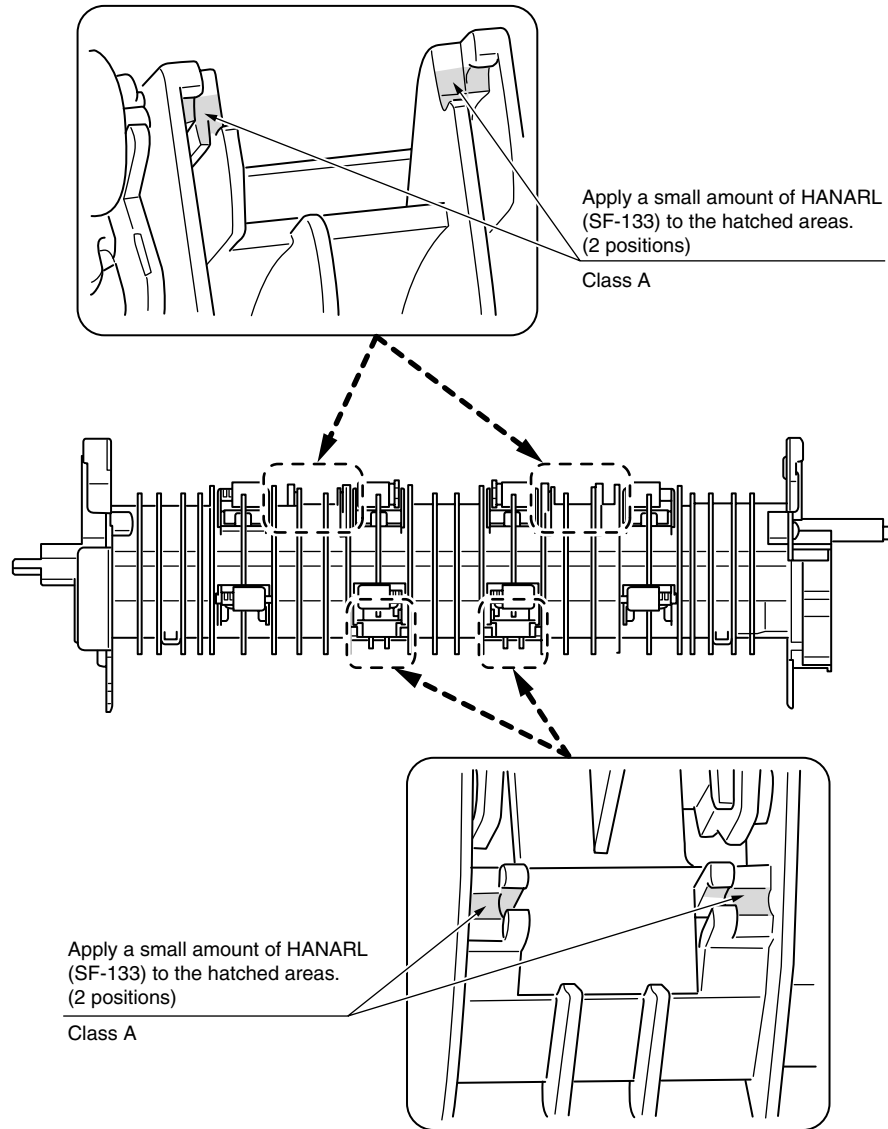
⑦ -4 Roller Assy.-Regist



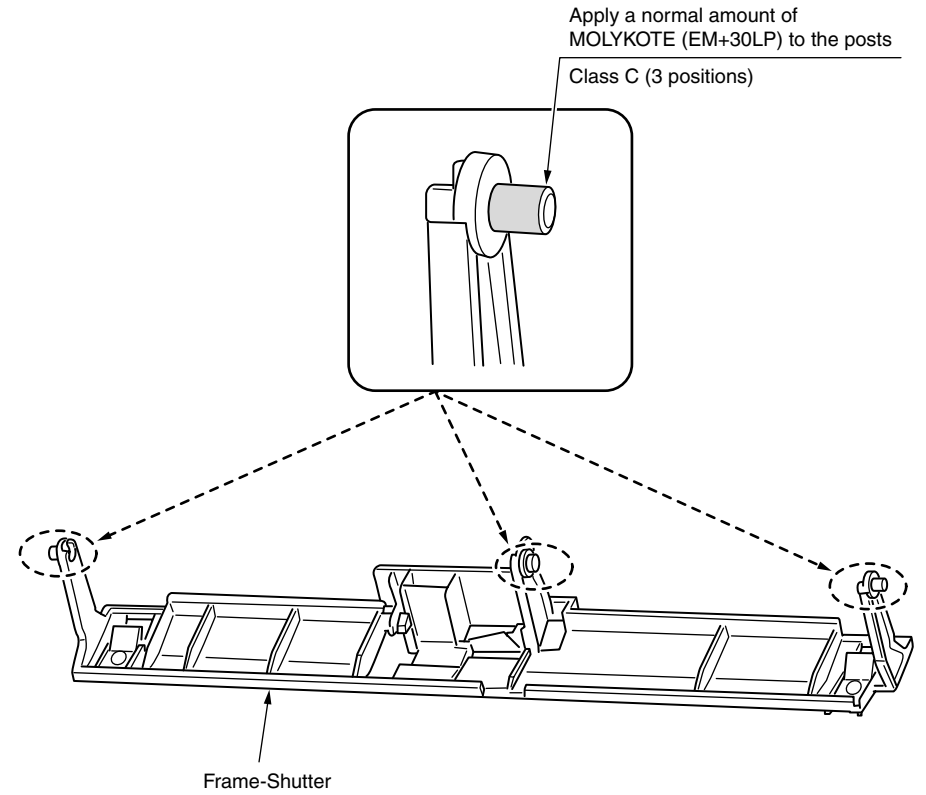
⑧ -1 Guide Assy.-Eject\_Upper



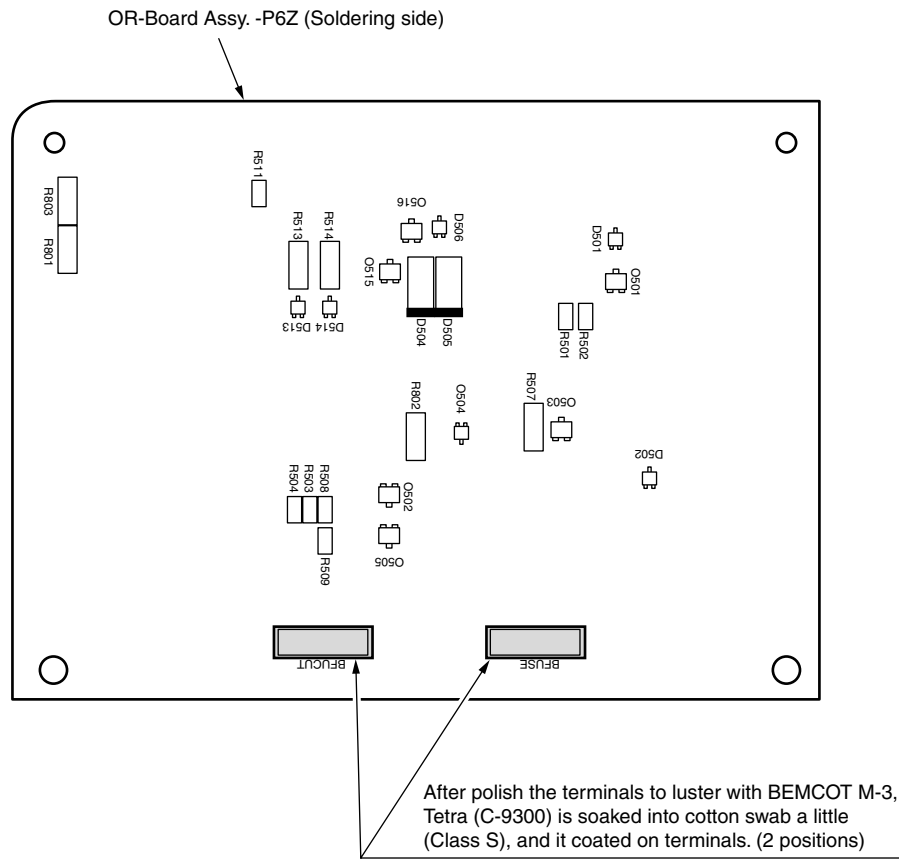
⑧ -2 Guide Assy.-Eject\_Upper



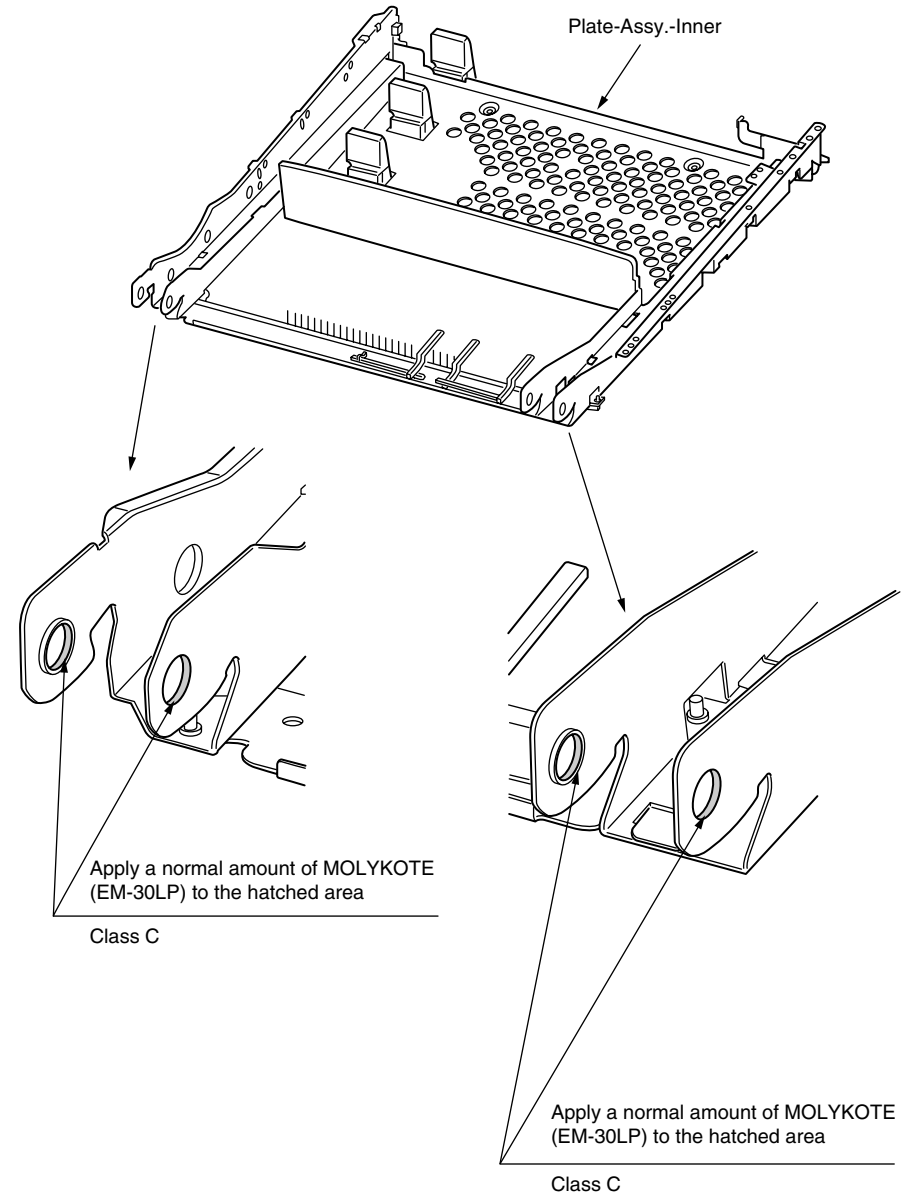
⑨ Sensor-Assy-Regist



⑩ Frame Assy

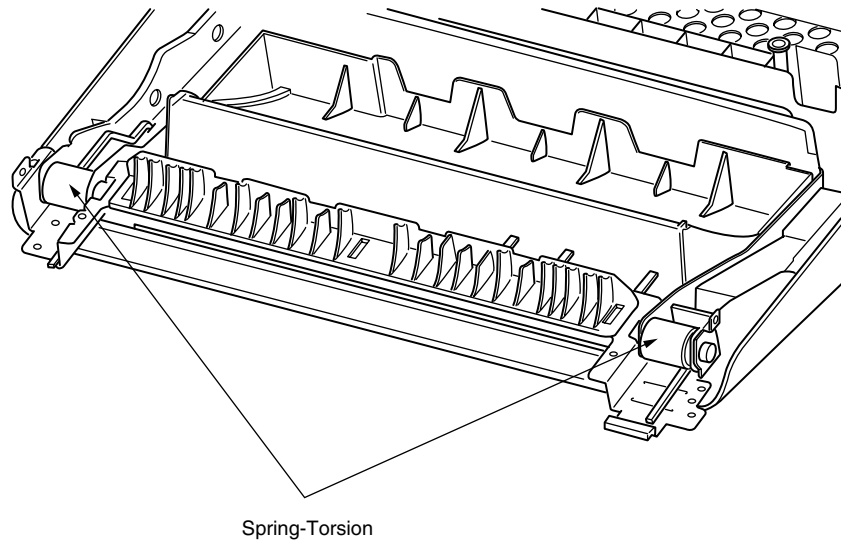


⑪ -1 Cover-Assy-TOP

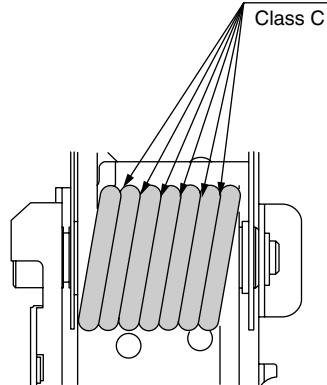




⑪ -2 Cover-Assy-TOP

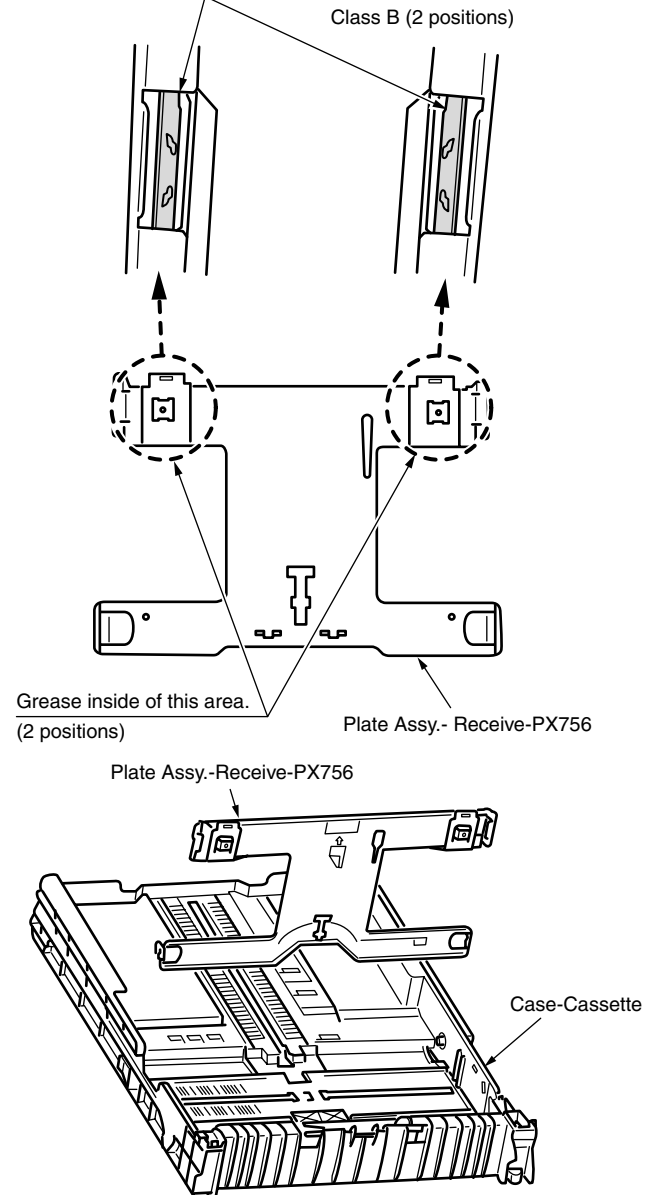


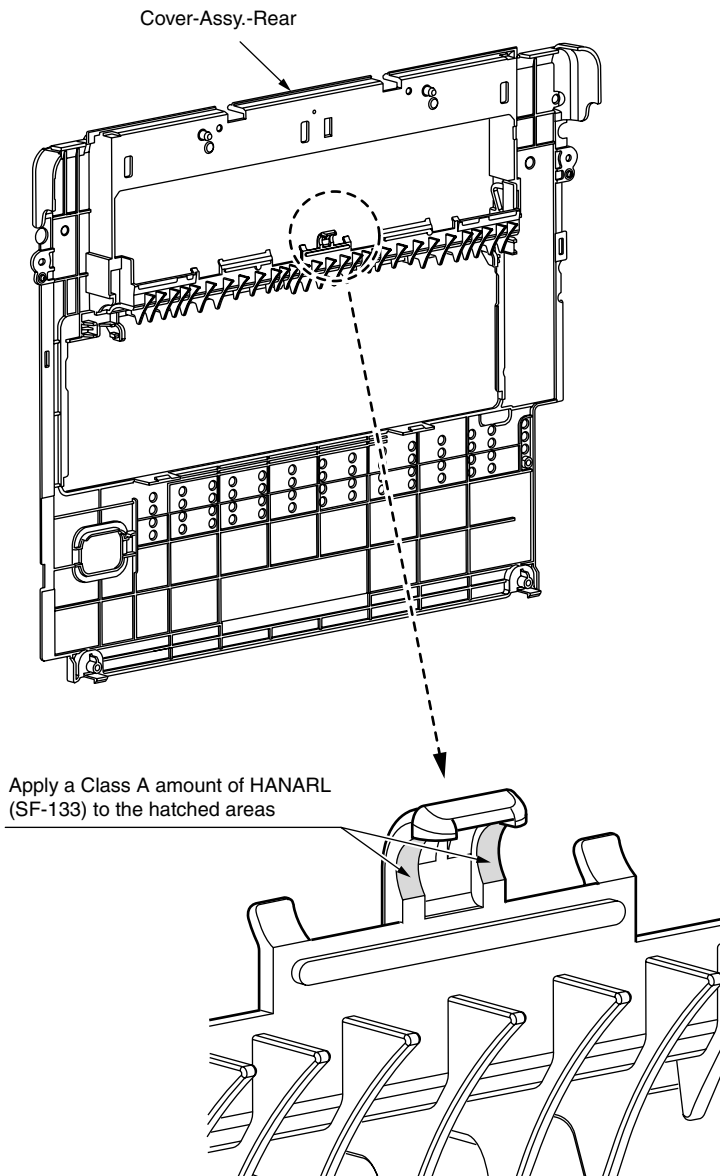
PM is applied to the portion of the slot of solidcoiling of this torsion springs using a brush. (Left and Right both)



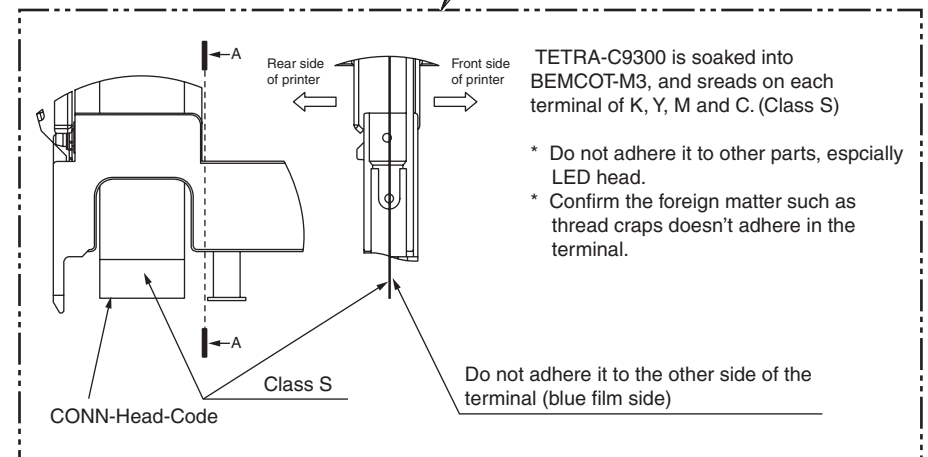
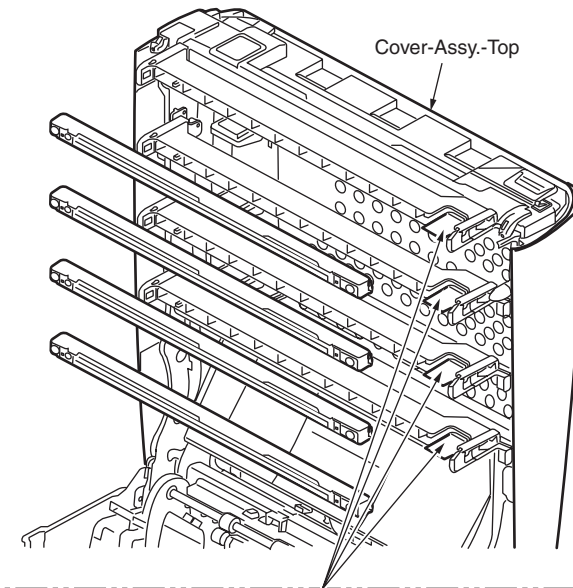
⑫ Cassette Assy.

Apply normal amount of MOLYKOTE (EM-30LP) to the hatched area.

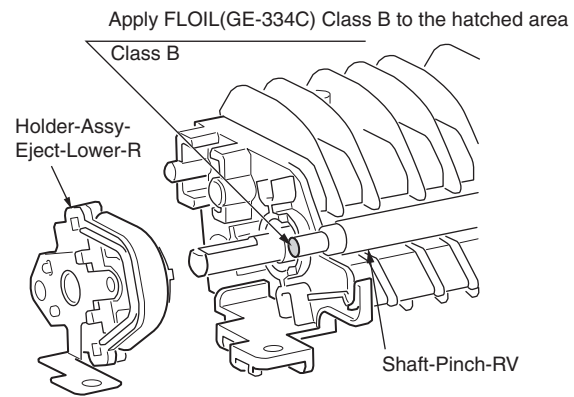
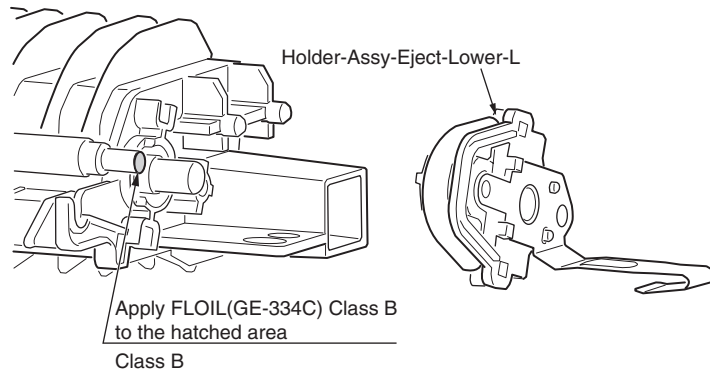




⑬ -2 Printer Unit



⑭ Guide Assy. -Eject-Lower



# 5. MAINTENANCE MENUS

---

The Printer can be adjusted by using Maintenance Utility, or button operation on its operator panel.

On the panel, maintenance menus are provided in addition to general menus. Select the menu intended for each adjustment purpose.

5.1 Self-diagnostic mode .....	5-2
--------------------------------	-----

## 5.1 Self-diagnostic mode

### 5.1.1 Switch scan test

Refer to the Printer(SFP) Maintenance Manual for common section (46470802TH) for the method of detailed Switch scan test.

See the following Figure 6-1 for the position of switches for this apparatus.

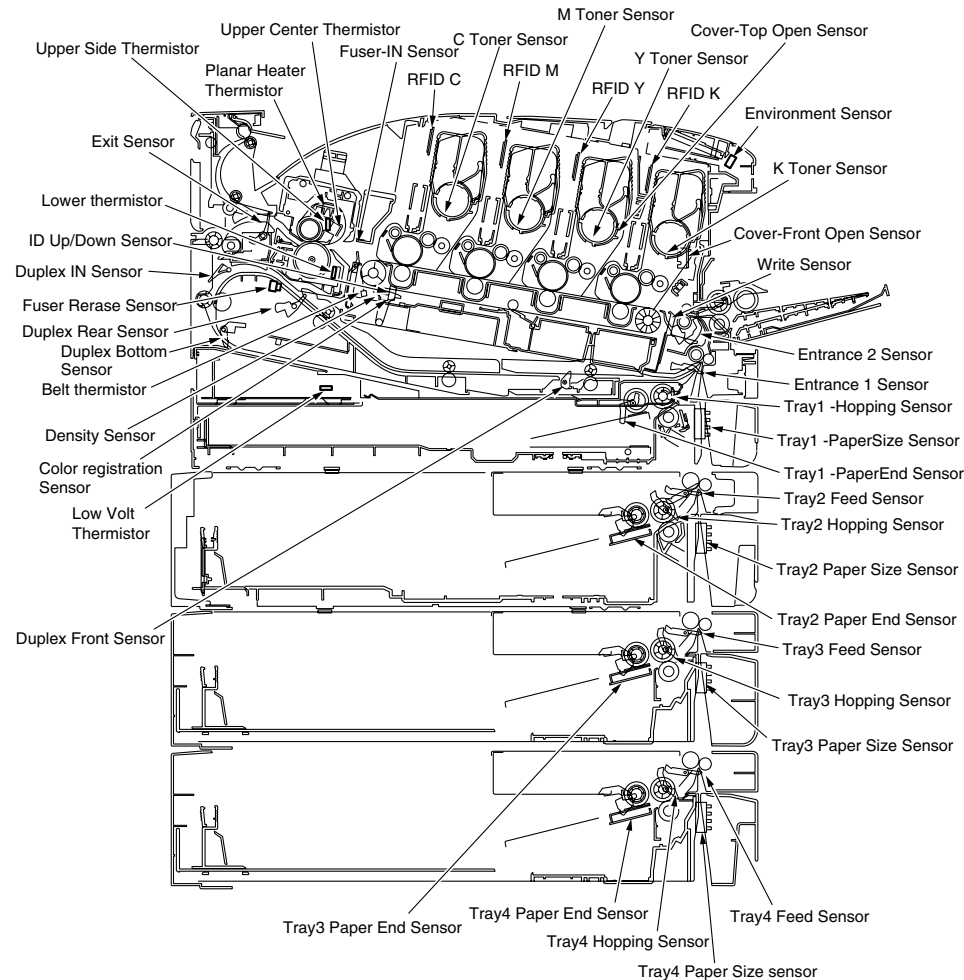


Figure 6-1

### 5.1.2 Motor and clutch test

Refer to the Printer(SFP) Maintenance Manual for common section (46470802TH) for the method of detailed Motor and clutch test.

See the following Figure 6-2 for the position of switches for this apparatus.

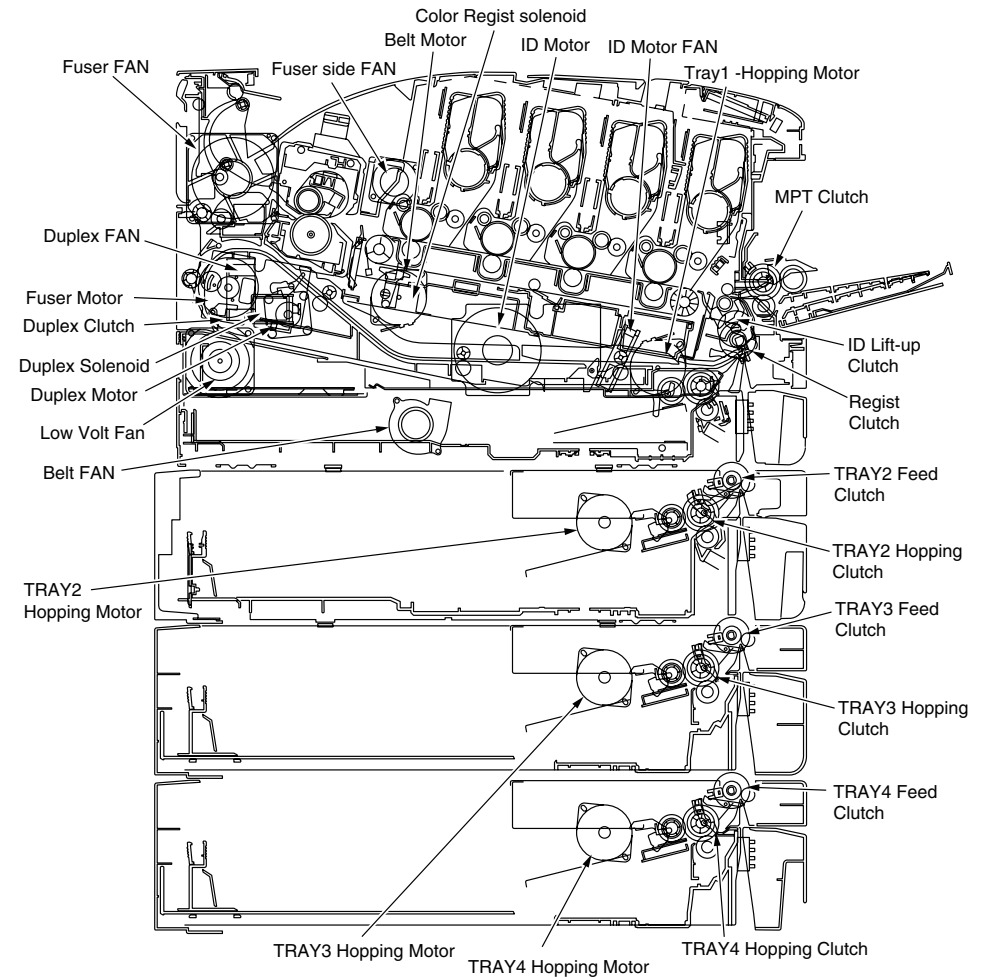


Figure 6-2

# 6. CLEANING

---

6.1	Cleaning .....	6-2
6.2	LED lens array cleaning .....	6-3
6.3	Paper feed roller cleaning.....	6-5

## 6.1 Cleaning

---

The inside and outside of the printer must be cleaned with a waste cloth and a handy vacuum cleaner when necessary.

**Note!** Do not directly touch the image drum terminals, LED lens array and the LED head connectors.

## 6.2 LED lens array cleaning

The LED lens array must be cleaned when a vertical white belt or line (void or light print) occurs on the printed side.

White belt or line  
(void or light print)



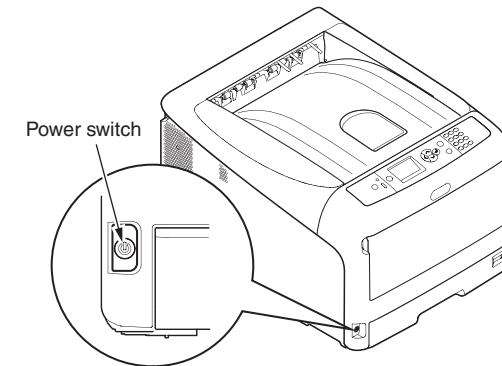
### LED head cleaning

When a white line or blurred text is printed, perform the following steps shown below.

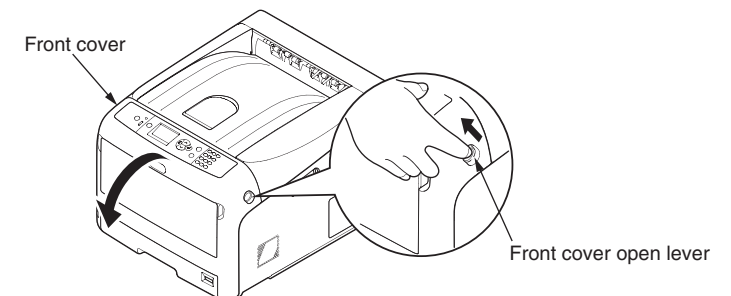
- (1) Press the power switch for about one second.

The message, "Shutting down... Please wait for a while. The printer will be automatically turned off.", is displayed, and the LED lamp of the power switch lights up at intervals of one second. Then, the printer is automatically turned off, and the LED lamp of the power switch is turned off.

Make sure to disconnect the power cable, Ethernet cable, and USB cable.




- (2) Insert your finger into the depressed area on the right side of the printer, and pull the front cover open lever to pull the front cover open.

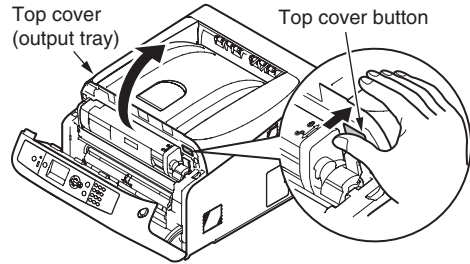




(3) Press the top cover button to open the top cover (output tray).

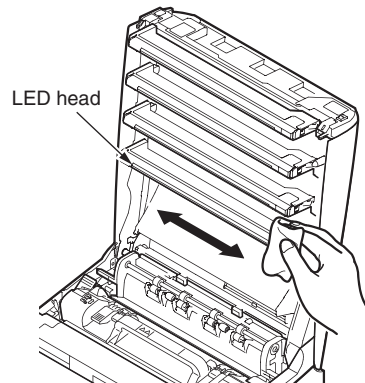
	<p><b>Caution</b> Burn injury hazard.</p>	
---	---	---

Do not touch the fuser unit. It is hot.



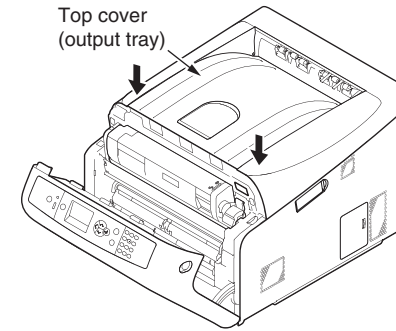
(4) Lightly wipe the (four) LED head lens surfaces with soft tissue paper.

**Note!** Solvents, such as methyl alcohol or thinner, damage the LED heads. Do not use them.



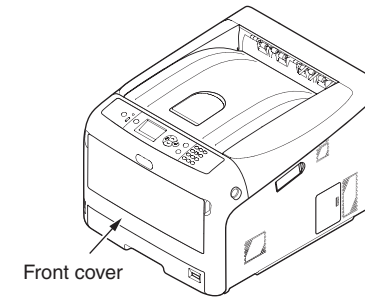
**Memo** Parts may be damaged due to static electricity. Make sure to remove the static electricity charged on you by touching the metals connected, before doing this task.

(5) Close the top cover and then, press the both sides firmly.



(6) Close the front cover.

**Note!** Note that the front cover cannot be certainly closed unless the top cover is closed.



## 6.3 Paper feed roller cleaning

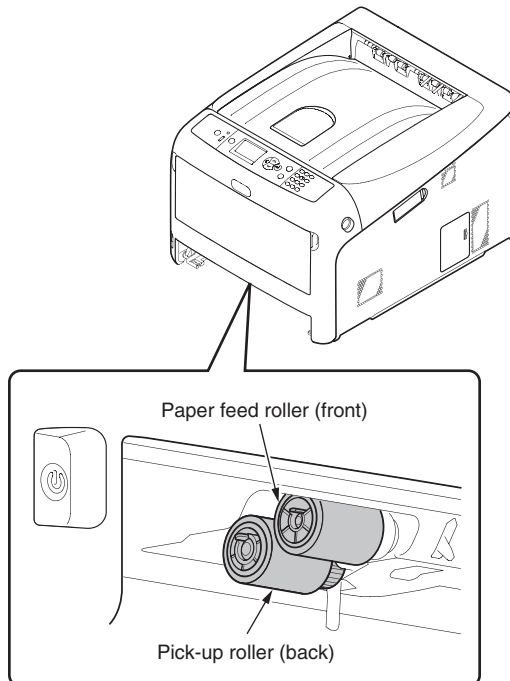
The paper feed rollers (three rollers) must be cleaned when a vertical line occurs on the printed side.

**Note!** Use a soft cloth to clean the paper feed rollers so as not to damage their surfaces.

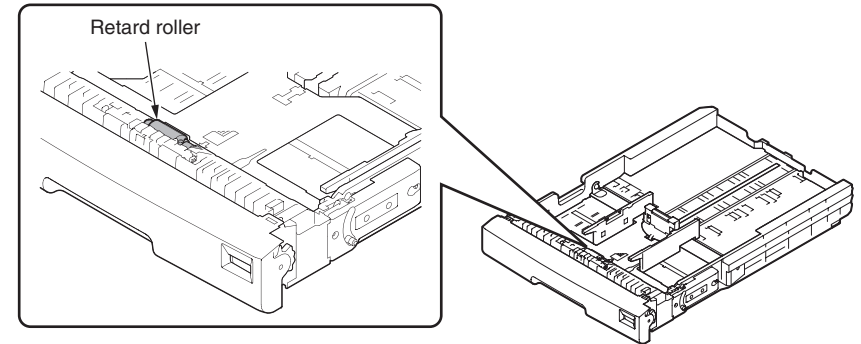
### Paper feed roller cleaning

When 'Open Cassette Paper Jam' messages occur frequently, perform the following steps shown below.

- (1) Pull out the paper cassette of the tray being displayed.
- (2) Wipe the paper feed rollers (front) and pick-up roller (back) with a cloth tightly wrung out with water.



- (3) Wipe the retard roller of the paper cassette with a cloth tightly wrung out with water.



**Note!** When 'Open Cover Paper Jam Front Cover' messages occur frequently, clean the paper feed roller of the multi-purpose tray in the same manner as described above.

# 7. TROUBLESHOOTING PROCEDURE

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7.1	Important notes to start the repair work .....	7-2
7.2	Confirmation items before taking corrective action against abnormalities .....	7-2
7.3	Precautions when taking corrective actions against abnormalities .....	7-2
7.4	Preparation for troubleshooting .....	7-2
7.5	Troubleshooting methods .....	7-2
7.6	Fuse check .....	7-36
7.7	Paper cassette switches and paper size correlation table .....	7-37

## 7.1 Important notes to start the repair work

---

- (1) Confirm the basic check/inspection points described in User's Manual.
- (2) Get the information/status from customers at the time when the trouble has occurred as much in details as possible.
- (3) Carry out checking under the conditions that are similar to those at occurrence of the problem.

## 7.2 Confirmation items before taking corrective action against abnormalities

---

- (1) The operation environment of the printer is appropriate.
- (2) Consumable items (toner cartridges and image drums) have been replaced properly.
- (3) Print media (paper) has no problem. Refer to paper specifications in User's Manual.
- (4) The image drums are installed correctly.

## 7.3 Precautions when taking corrective actions against abnormalities

---

- (1) Do not touch the OPC drum surface with your hand and do not allow any foreign materials to touch it.
- (2) Do not expose the OPC drum to the direct sunlight.
- (3) The fuser unit is extremely hot. Do not touch.
- (4) Do not expose image drums to any light for 5 minutes or longer at room temperature.

## 7.4 Preparation for troubleshooting

---

- (1) Display on the operator panel  
Error status of this printer is displayed on the LCD (Liquid crystal display) screen of the operator panel.  
Take appropriate troubleshooting actions by following the message displayed on the LCD screen.

## 7.5 Troubleshooting methods

---

Refer to the Printer(SFP) Maintenance Manual for common section (46470802TH) for the method of detailed troubleshooting.

### 7.5.1 Preparation for troubleshooting

(1) LCD display error .....	7-4	(8-3) Two-sided printing jam occurs during transporting paper inside the Duplex unit.....	7-25
(1-1) LCD does not display anything.....	7-4	(8-4) Paper is not supplied from the Duplex unit to the regist roller. ....	7-25
(1-2) Error message related to the control panel .....	7-5	(9) Paper size error (Errors 400 and 401) .....	7-25
(1-3) "RAM checking" or "Initializing" remains displayed. ....	7-5	(9-1) Jam occurs when paper end is located near the IN1 sensor.....	7-25
(2) Abnormal operations of the printer after the power is turned on.....	7-5	(10) ID unit Up/Down error (Service call 142) .....	7-26
(2-1) Any operation does not start at all.....	7-5	(10-1) Error occurs during the Up movement of the ID unit.....	7-26
(2-2) Abnormal sound is heard. ....	7-6	(10-2) Error occurs during the Down movement of the ID unit.....	7-26
(2-3) Bad odors are generated.....	7-7	(11) Fuser unit error (Service call 167 to 177) .....	7-27
(2-4) Rise-up time is slow.....	7-7	(11-1) Error occurs immediately after the power is turned on.....	7-27
(3) Paper feed jam (Error 391: 1st Tray).....	7-15	(11-2) Error occurs approx. 1 minute after the power is turned on.....	7-27
(3-1) Jam occurs immediately after the power is turned on. (1st tray) .....	7-15	(12) Motor fan error (Service call 122, 127, 128, 918 and 051) .....	7-28
(3-2) Jam occurs immediately after the paper feed is started. (1st tray) ...	7-15	(12-1) The low voltage power supply fan does not rotate immediately after the power is turned on.....	7-28
(4) Feed jam (Error 380).....	7-17	(12-2) Duplex fan does not rotate during the Duplex printing.....	7-28
(4-1) Jam occurs immediately after the power is turned on. ....	7-17	(12-3) All fans of the printer do not rotate. ....	7-28
(4-2) Jam occurs immediately after the paper feed is started.....	7-17	(13) Print speed is slow. (Performance is low.).....	7-28
(5) Paper feed jam (Error 390: MP Tray).....	7-18	(13-1) Print speed decreases.....	7-28
(5-1) Jam occurs immediately after the power is turned on. (Multipurpose tray) .....	7-18	(14) Option unit cannot be recognized. ....	7-29
(5-2) Jam occurs immediately after paper feed is started. (Multipurpose tray) .....	7-19	(14-1) Duplex unit cannot be recognized. ....	7-29
(6) Paper running jam (Error 381) .....	7-20	(14-2) Option try unit cannot be recognized.....	7-29
(6-1) Jam occurs immediately after the power is turned on. ....	7-20	(15) LED head cannot be recognized. (Service call 131, 132, 133 and 134) .....	7-30
(6-2) Jam occurs immediately after a paper is taken into printer. ....	7-20	(15-1) Service call 131 to 134 (LED HEAD Missing) .....	7-30
(6-3) Jam occurs in the middle of paper running path.....	7-21	(16) Toner cartridge cannot be recognized. (Errors 540, 541, 542 and 543) .....	7-30
(6-4) Jam occurs immediately after paper has reached the fuser.....	7-22	(16-1) Error caused by the consumable items. ....	7-30
(7) Paper unloading jam (Error 382).....	7-22	(16-2) Error caused by the toner sensor.....	7-30
(7-1) Paper unloading jam occurs immediately after the power is turned on. ....	7-22	(16-3) Error caused by the defective mechanism .....	7-31
(7-2) Paper unloading jam occurs after a paper is taken into printer.....	7-23	(17) Fuse cut error (Service call 154 and 155) .....	7-32
(7-3) Paper unloading jam occurs in the middle of paper running path. ..	7-24	(17-1) Fuse cut error .....	7-32
(8) Two-sided printing jam (Errors 370, 371, 372, 373 and 383) .....	7-24	(18) Humidity sensor error (Service call 123).....	7-32
(8-1) Two-sided printing jam occurs immediately after the power is turned on.....	7-24	(17-1) Humidity sensor error.....	7-32
(8-2) Two-sided printing jam occurs during taking in the paper into Duplex unit.....	7-24	(19) Wiring diagram.....	7-34
		<b>Note!</b> When replacing the CU/PU board, read the EEPROM chip contents of the old board first, and copy them to the new board upon completion of the replacement. (Refer to the Printer(SFP) Maintenance Manual for common section (46470802TH) when replacing the engine control board.)	

**7.5.1.(1) LCD display error**

*Memo* refer to section 8.5.2 (19) "Wiring diagram".

(1-1) LCD does not display anything.

Check item	Check work	Actions to be taken at NG
(1-1-1) Check the fuse.		
Fuse of the CU/PU board	Check if F3 or F5 has blown out.	Replace the CU/PU board.
(1-1-2) Check the system connection		
Connection between the low voltage power supply unit and the CU/PU board	Check if the cable from the low voltage power supply to the POWER connector of the CU/PU board is normally connected or not. Check if the connector is connected only in the half-way or not, and check if the connector is inserted in slanted angle or not.	Re-connect the cable normally.
Cable assembly connecting the low voltage power supply unit and the CU/PU board	Check if the cable is half-open circuit. Check if sheath of the cable has not peeled off or not. Check if the cable assembly is defective such as internal wires are disconnected or not.	Replace the cable with the normal cable.
Connection between the CU/PU board and the control panel board	Check if the 10-conductor FFC is connected to the OPE connector of the CU/PU board normally or not. Check if the 10-conductor FFC is connected to the OPE connector of the control panel board normally or not. Check if the connector is connected in the halfway only or not, and check if the connector is inserted in a slanted angle or not.	Re-connect the cable normally.
FFC connecting the CU/PU board and the control panel board	Check if the cable has open circuit or not with VOM. Check if sheath of the cable has not peeled off or not by visual inspection.	Replace the FFC with the normal FFC.

Check item	Check work	Actions to be taken at NG
(1-1-3) Check the peripherals of the power supplies		
AC power that is supplied to the printer	Check the supplied voltage of the AC power source.	Supply the AC power.
5V power that is supplied to the CU/PU board	Check for 5V power supply at pin-1, -3 and -4 of the POWER connector of the CU/PU board.	Replace the low voltage power supply unit.
3.3V power that is supplied to the CU/PU board	Check for 3.3V power supply at pin-22 of the POWER connector of the of the CU/PU board.	Replace the low voltage power supply unit.
3.3V power that is supplied to the control panel board	Check for 3.3V power supply at pin-4 of the OPE connector of the control panel board.	Replace the CU/PU board.
(1-1-4) Check that power supply circuit has no short-circuit.		
5V power and 24V power that are supplied to the CU/PU board.	Check that power supply circuit has no short-circuit at the POWER connector of the CU/PU board. The follow voltage must appear respectively. pin-9, -10, -11 and -12: 24V pin-1, -3 and -4: 5V pin-5, -6, -7 and -8: 0VL pin-13, -14, -15 and -16: 0VP If any voltage does not appear and short-circuit is detected, locate the source of the short-circuit as follows: Disconnect the cables that are connected to the CU/PU board one cable after another until location of the short-circuit is found out.	Replace the part causing short-circuit.

Check item	Check work	Actions to be taken at NG
(1-1-5) LSI operation check		
I/F signal supplied from the CU/PU board to the control panel board.	Check if signals are output to the OPE connector of the CU/PU board. Pin-5: Send data (Sending data from the CU/PU board)	Replace the CU/PU board.
I/F signal supplied from the CU/PU board to the control panel board.	Check if signals are output to the OPE connector of the CU/PU board. Pin-7: Send data (Sending data from the CU/PU board) If it is normal, signals are output always.	Replace the control panel board.

(1-2) Error message related to the control panel

Check item	Check work	Actions to be taken at NG
(1-2-1) Error message		
Error message	Check the error contents by referring to the Error Message List.	Follow the instruction.

(1-3) "RAM checking" or "Initializing" remains displayed.

Check item	Check work	Actions to be taken at NG
(1-3-1) Control panel displays freezes.		
Control panel display	The control panel keeps displaying "RAM checking" or "Initializing."	Replace the CU/PU board. If the problem remains unsolved after an optional RAM, replace the CU/PU board.

**7.5.1.(2) Abnormal operations of the printer after the power is turned on**

(2-1) Any operation does not start at all.

Check item	Check work	Actions to be taken at NG
(2-1-1) Check the peripherals of the power supplies		
AC power that is supplied to the printer	Check the supplied voltage of the AC power source.	Supply the AC power.
5V power and 24V power that are supplied to the CU/PU board	Check the power supply voltages at the POWER connector of the CU/PU board. Pin-9, -10, -11 and -12: 24V Pin-1, -3 and -4: 5V Pin-5, -6, -7 and -8: 0VL Pin-13, -14, -15 and -16: 0VP	Replace the low voltage power supply unit.
(2-1-2) Power switch LED check		
Power switch LED	Check if the LED light stays off.	Replace one of the following: low voltage power supply unit, CU/PU board, power SW board, the cable between the low voltage power supply unit and the CU/PU board, the cable between CU/PU board or the power SW board.  When blinking: Replace one of the following: low voltage power supply unit, CU/PU board, power SW board, or the cable between the low voltage power supply unit and the CU/PU board board.

Check item	Check work	Actions to be taken at NG
(2-1-3) Check the system connection		
Connection condition of the control panel	Check contents of (1-1). The printer will not start operation until the control panel is detected and its operation is started.	Follow the contents of (1-1).

## (2-2) Abnormal sound is heard.

Check item	Check work	Actions to be taken at NG
(2-2-1) Check loss of synchronization of motor (Driver error)		
Condition of the motor cable	Check for normal wiring conditions of the respective motors. Perform the visual check and measure resistance at open circuit with VOM as follows. Remove the motor cable at the board end. Measure resistance between the respective pins of the removed cable and FG with VOM.	Replace the motor cable. Re-connect the cable for normal conditions.
Operating conditions of the respective motors	Check if operations of the respective motors are normal or not by using the self-diagnostic mode. Check if any load exists or not. "Buzzer" sound when an error occurs.	Replace the CU/PU board.
(2-2-2) Check loss of synchronization of motor (Abnormal load of the consumable item)		
Operating conditions of the respective motors	Check if operations of the respective motors are normal or not by using the self-diagnostic mode. Check if any load exists or not. "Buzzer" sound when an error occurs.	Replace the corresponding consumable item.

Check item	Check work	Actions to be taken at NG
(2-2-3) Check the jumping phenomena of gear tooth. (Abnormal load of the consumable item)		
Operating conditions of the respective motors	Check if operations of the respective motors are normal or not by using the self-diagnostic mode. Check if any load exists or not. "Buzz buzz" sound is generated when an error occurs.	Replace the corresponding consumable item.
Installation condition of each consumable item	Check by visual inspection if the respective consumable items are installed in their normal positions in which gears of the consumable items engage accurately or not.	Replace an appropriate mechanical part as required, or adjust or repair
(2-2-4) Check the wiring conditions of cables		
Wiring conditions of the cables in the vicinity of the respective cooling fans	Check if the cable contacts with the fan blade because wiring conditions of the cables near fan is poor or not. "Clap, clap" sound is generated when an error occurs.	Correct the wiring conditions of the cable.
(2-2-5) Check the jumping phenomena of gear tooth. (Rotation direction of the motor is abnormal.)		
The rotational direction of ID motor (If abnormal noise is.)	Remove the ID unit, run the Motor and Clutch Test of self-diagnostic mode. Check the rotational direction of the gear is correct.	Replace the CU/PU board or the ID motor or cable.



(2-3) Bad odors are generated.

Check item	Check work	Actions to be taken at NG
<b>(2-3-1) Locating the exact position of generating bad odor</b>		
Fuser unit	Remove the fuser unit and check the odor.	Implement section (2-3-2).
Low voltage power supply unit	Remove the low voltage power supply unit and check the odor.	Replace the low voltage power supply unit
<b>(2-3-2) Check conditions of the fuser unit</b>		
Life count of fuser unit	Check the life count of the fuser unit by using the self-diagnostic mode.	The fuser close to the new fuser unit smells some odors.
Check that no foreign material exists in fuser unit.	Check that no foreign materials such as paper are stuck inside of the fuser unit.	Remove the foreign material.

(2-4) Rise-up time is slow.

Check item	Check work	Actions to be taken at NG
<b>(2-4-1) Check the fuser unit</b>		
Heater	Confirm the voltage specification on the label on the rear of the fuser unit.	Replace the fuser unit.
<b>(2-4-2) Check the optional parts <i>Note!</i></b>		
Add-on memory	Install the optional parts (add-on memory) again and re-check the operations.	Replace the optional part.
SD memory card	Install the optional part (SD memory card) again and recheck the operations.	Replace the optional part.

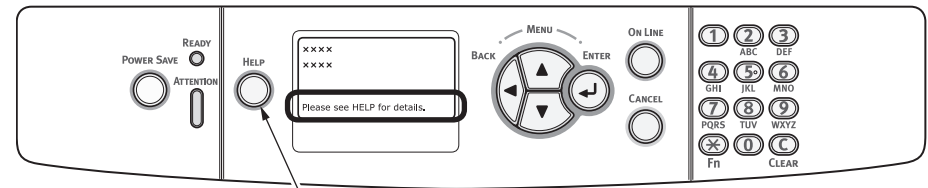
**Note!** If any troubles such as printer does not start up normally occurs, remove the CU options (RAM, SD memory card) and check if the trouble symptom changes or not.

(3) Error code numbers and locations of paper jams

When paper jams occur or paper remains in the printer, "Paper Jam", or "Paper Remain" is displayed on the operator panel.

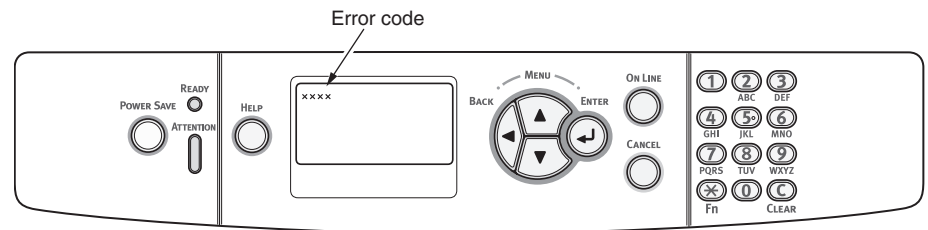
By pressing the Help button, a method to remove the paper is displayed, so remove the paper in the printer according to [Action].

In addition, refer to paper removal methods described on the reference pages given in the table on the right.



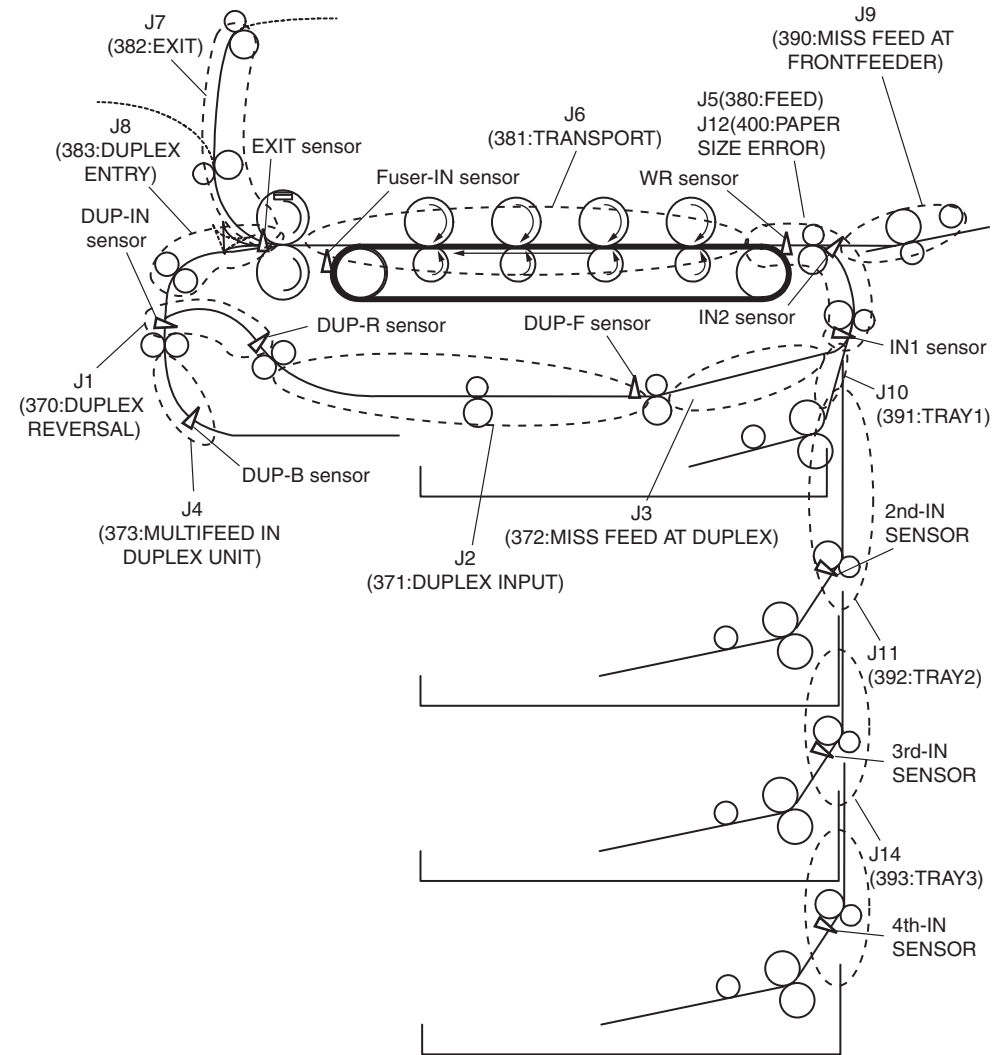
By pressing this button, a method to remove paper is displayed.

LCD message displayed when the HELP button is pressed



Message on the display screen	Error code(s)
Open Cassette Paper Jam %Tray%	391, 392, 393, 394
Open Cassette Paper Remain %Tray%	631, 632, 633, 634
Open Cover Paper Jam Front Cover	372, 380, 390
Open Cover Paper Remain Front Cover	637
Open Cover Paper Jam output tray	381
Open Cover Paper Remain output tray	638
Open Cover Paper Jam output tray	382, 383
Open Cover Paper Remain output tray	639, 640
Check Duplex Unit Paper Jam	370, 371, 373
Check Duplex Unit Paper Remain	641, 642

Outline drawing of jam locations



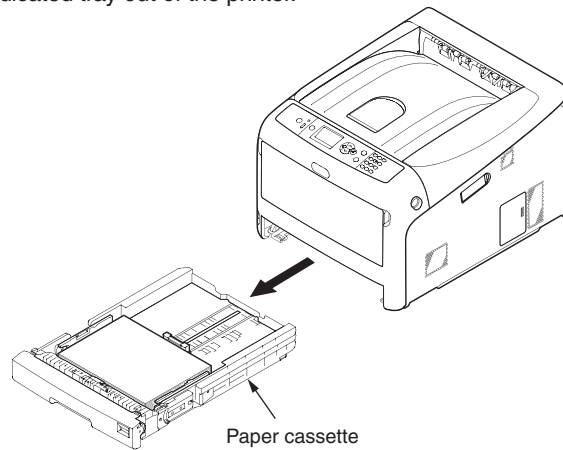
634, 632, 633, 634  
Open Cassette  
Paper Remain  
%Tray%

391, 392, 393, 394  
Open Cassette  
Paper Jam  
%Tray%

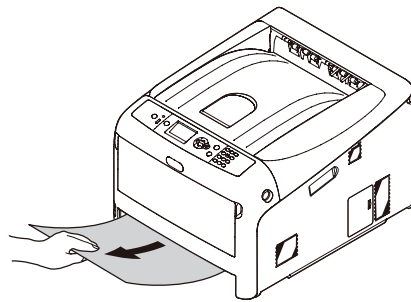
Remedy when the above messages are displayed

Tray1 is applied here as an example.

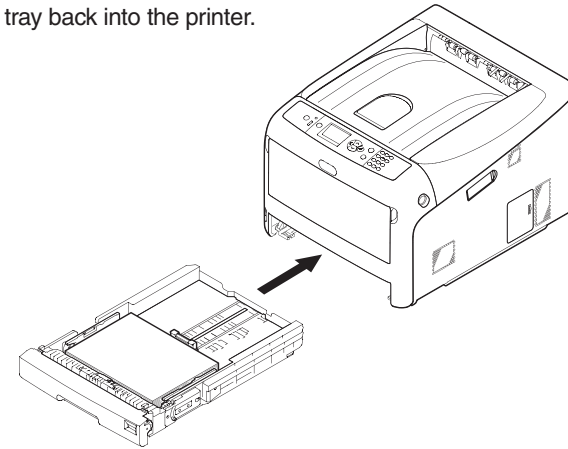
- (1) Pull the indicated tray out of the printer.



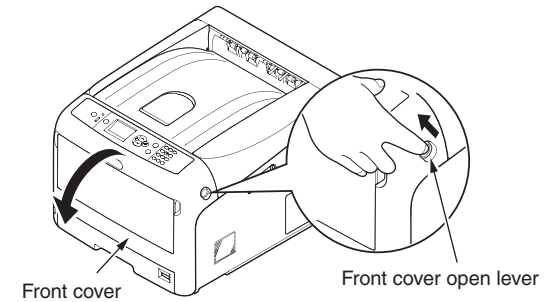
- (2) Remove the jammed paper.



- (3) Place the tray back into the printer.



- (4) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.



- (5) Close the front cover.

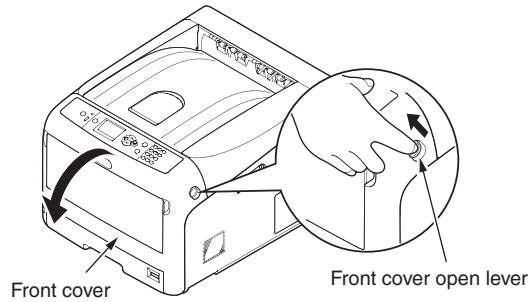
**Memo** Keep it in mind that the error message is not cleared unless the front cover is opened and closed following removal of the jammed paper.

372  
Open Cover  
Paper Jam  
Front Cover

637  
Open Cover  
Paper Remain  
Front Cover

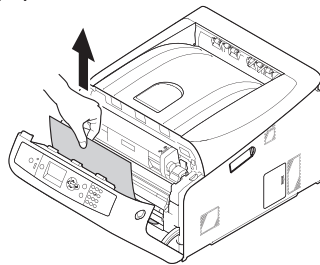
Remedy when the above messages are displayed

- (1) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.



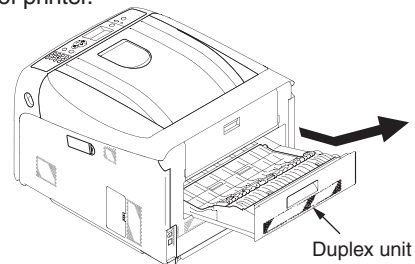
- (2) Remove the jammed paper gently.

- ① If an edge of jammed paper can be seen

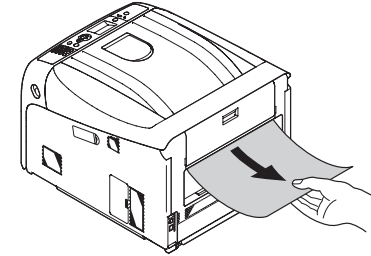


- ② If you cannot find the jammed paper

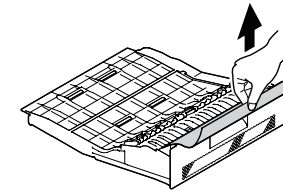
1. Take out the duplex unit by pulling it obliquely upward while holding the center recess on the back of printer.



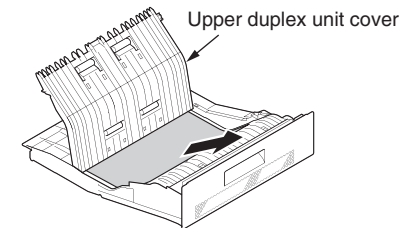
2. Check for jammed paper inside the printer. If jammed paper remains, remove it.



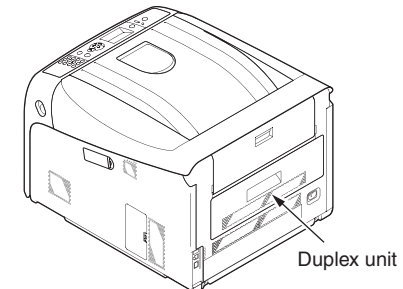
3. Check for jammed paper in the duplex unit. If jammed paper remains, pull it out gently.



4. Open the upper duplex unit cover and check for jammed paper. If jammed paper remains, pull it out gently and close the cover.



5. Replace the duplex unit into the printer.

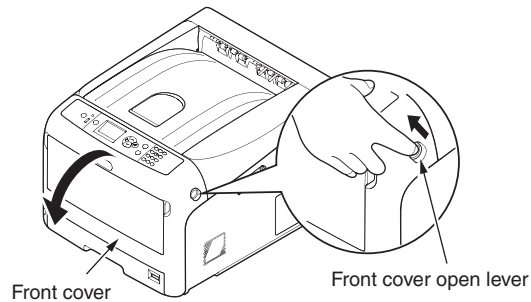


- (3) Close the front cover.

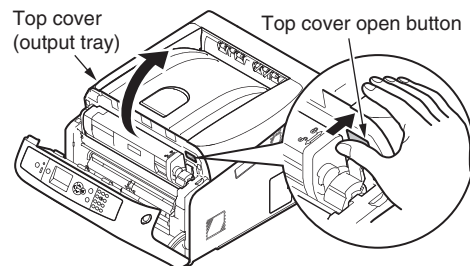
<p>381 Open Cover Paper Jam output tray</p>	<p>368 Open Cover Paper Remain output tray</p>
<p>382 Open Cover Paper Jam output tray</p>	<p>369 Open Cover Paper Remain output tray</p>

Remedy when the above messages are displayed

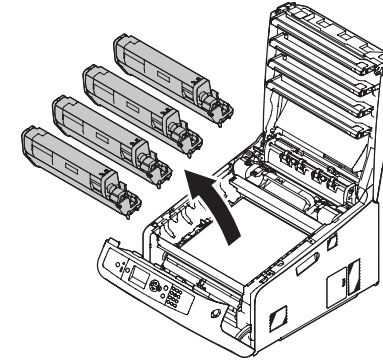
- (1) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.



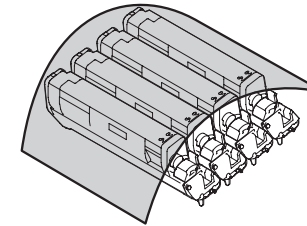
- (2) Press the top cover open button and open the top cover (output tray).



- (3) Remove all four image drums and place them on new paper etc. on a flat surface.

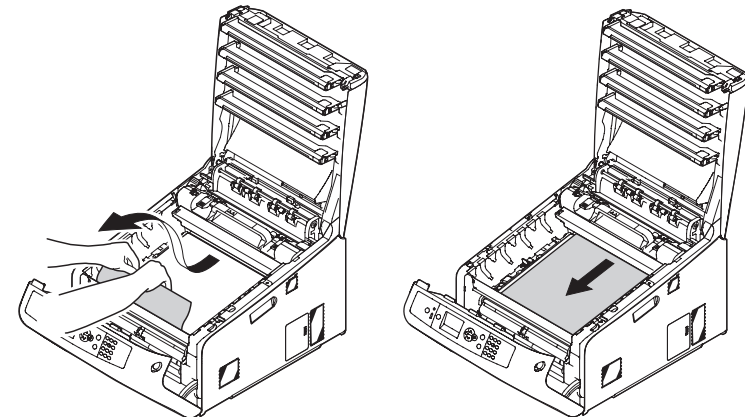


- (4) Cover the removed image drums with black paper so that the image drums are not exposed to light.

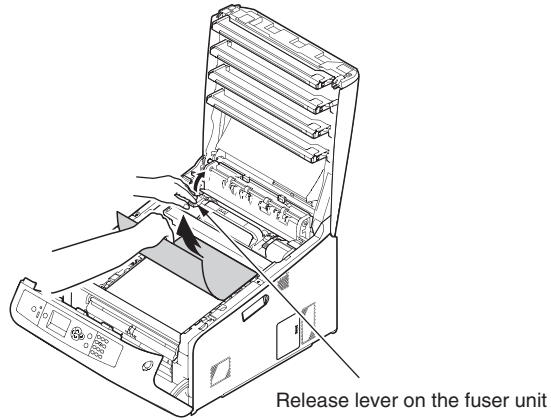


- (5) ① If an edge of jammed paper can be seen

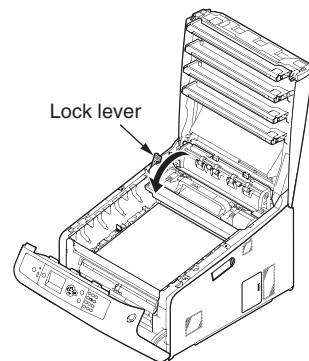
Pull out the jammed paper gently to the rear of the printer (the direction of the arrow).



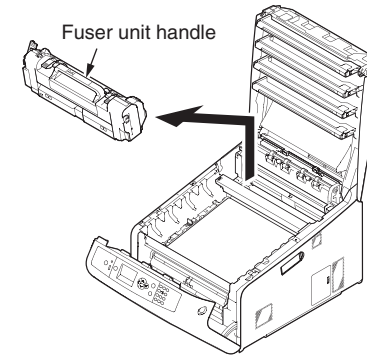
- ② If an edge of jammed paper cannot be seen  
 Pull out the jammed paper gently while lifting the release levers on the fuser unit.  
 If an edge of jammed paper still remains inside the unit, pull out the jammed paper gently to the rear of the printer.



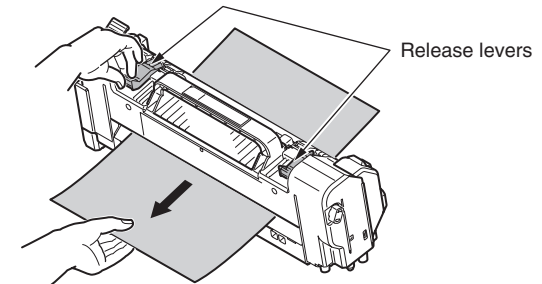
- ③ When paper jams in the fuser.  
 1. Lift the left lock lever of the fuser unit forward.



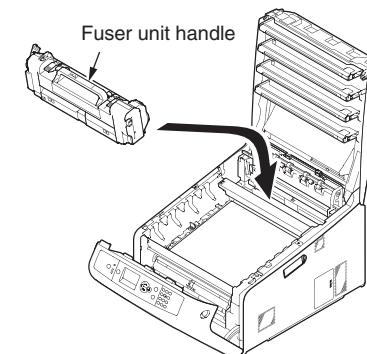
2. Hold the fuser unit handle and lift the fuser unit out of the printer.



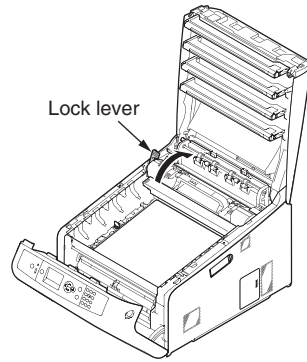
3. Lift the release levers on the fuser unit, and pull out the jammed paper forward gently.



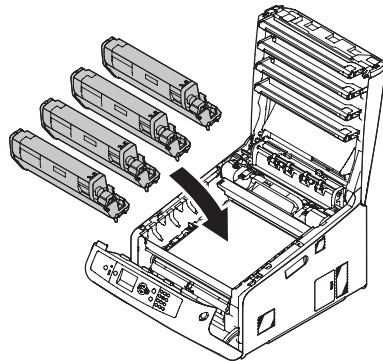
4. Hold the fuser unit handle and place the fuser unit into the printer.



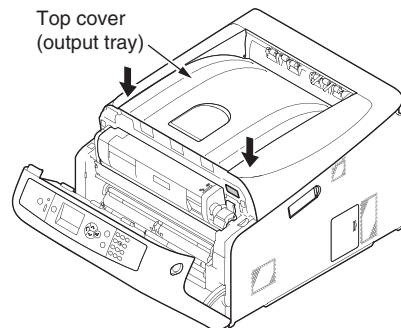
5. Push the left lock lever of the fuser unit backward.



(6) Return all four image drums into the printer carefully.



(7) Close the top cover (output tray) by pushing the both sides of the cover firmly.



(8) Close the front cover.

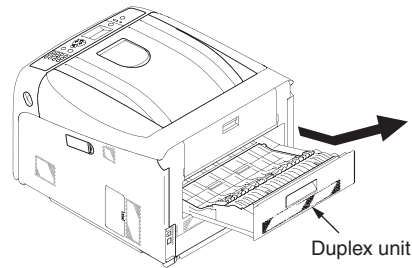
**Note!** Cannot close the front cover securely if the top cover is not closed.

370  
Check Duplex Unit  
Paper Jam

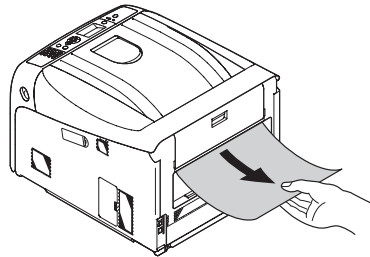
641  
Check Duplex Unit  
Paper Remain

Remedy when the above messages are displayed

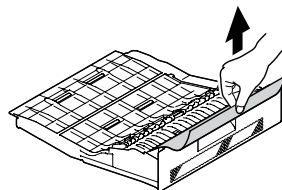
- (1) Take out the duplex unit by pulling it obliquely upward while holding the center recess on the back of printer.



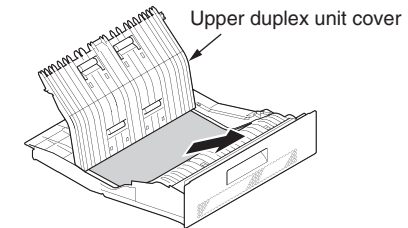
- (2) Check for jammed paper inside the printer. If jammed paper remains, remove it.



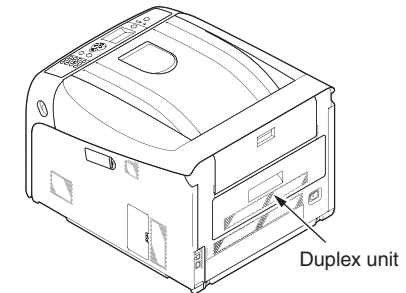
- (3) Check for jammed paper in the duplex unit. If jammed paper remains, pull it out gently.



- (4) Open the upper duplex unit cover and check for jammed paper. If jammed paper remains, pull it out gently and close the cover.



- (5) Replace the duplex unit into the printer.





**7.5.1.(3) Paper feed jam (Error 391: 1st Tray).**

(3-1) Jam occurs immediately after the power is turned on. (1st tray)

Check item	Check work	Actions to be taken at NG
(3-1-1) Check condition of the paper running path		
Paper running path of the front unit	Open the front cover check if paper is not jammed in the paper running path.	Remove the jammed paper.
(3-1-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 1 and the paper entrance sensor 2.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(3-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the Maintenance Menu SWITCH SCAN function.	Replace either the CU/PU board or the front sensor board (RSG PCB) or connection cable.
Check output signal level of the paper entrance sensor 1 and that of the paper entrance sensor 2.	Check for the following signals at the FSNS connector of the CU/PU board. Pin-4: Paper entrance sensor 1 Pin-3: Paper entrance sensor 2 Confirm that the above signal levels change when the sensor lever is operated.	Replace the front sensor board (RSG PCB)
Check the power voltages supplied to the front sensor board (RSG PCB)	Check the 5V power at the FSNS connector of the front sensor board (RSF PCB). Pin-1: 5V power supply Pin-5: 0VL	Replace the connection cable.

(3-2) Jam occurs immediately after the paper feed is started. (1st tray)

Check item	Check work	Actions to be taken at NG
(3-2-1) Check condition of the paper running path		
Paper running path of the front unit	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(3-2-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 1 and the paper entrance sensor 2.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor with the good sensor lever.
Check the feed roller, pickup roller and the retard roller assembly of the tray.	Check if any foreign materials such as paper dust on the surface of the feed roller or of the pickup roller or not.	Remove the foreign material.
	Check if the feed roller or the pickup roller has worn out or not.	Replace the feed roller, the pickup roller and the retard roller assembly of the tray.
(3-2-3) Motor operation check		
Paper feed motor	Confirm that the paper feed motor works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the CU/PU board or the paper feed motor.
Paper feed motor driver	Remove the MOTERCL connector of the CU/PU board and check the following at the connector side. Several MΩ between pin-5 – FG. Several MΩ between pin-6 – FG. Several MΩ between pin-7 – FG. Several MΩ between pin-8 – FG.	Replace the CU/PU board.

Check item	Check work	Actions to be taken at NG
<b>(3-2-4) Check the system connection</b>		
Paper feed motor drive cable	Check the connection condition of the cable. Check if the connector is connected in the half-way only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor drive cable	Check that any cable is not pinched during assembling of the printer. Remove the MOTERCL connector of the CU/PU board and check the following at the cable side. Short circuit between pin-5 – FG Short circuit between pin-6 – FG Short circuit between pin-7 – FG Short circuit between pin-8 – FG	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor	Remove the MOTERCL connector of the CU/PU board and check that approx. 3.4Ω can be measured between pin-5 -pin-6 and pin-7 -pin-8 respectively at the cable end.	Replace the paper feed motor.
<b>(3-2-5) Clutch operation check</b>		
Paper feed clutch, registration clutch	Check to make sure that the paper feed clutch or registration clutch works normally by using the Motor & Clutch Test of the self-diagnostic mode. Open the front cover so that the rollers can be seen to check.	Replace the CU/PU board, or replace the paper feed solenoid.

Check item	Check work	Actions to be taken at NG
<b>(3-2-6) Check the system connection</b>		
Clutch cable for paper feed	Check the connection condition of the cable. Check if the connector is connected in the half-way only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Replace the cable with the good cable that normalizes the connection condition.
Cable for paper feed clutch	Check that any cable is not pinched during assembling of the printer. Remove the HOPCL connector of the CU/PU board and check the following at the cable side. Short circuit between pin-1 – FG Remove the HOPCL connector of the CU/PU board and check that approx. 240Ω can be measured between pin-1 and pin-2.	Replace the clutch and assembly it again correctly.

**7.5.1.(4) Feed jam (Error 380)**

(4-1) Jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(4-1-1) Check condition of the paper running path		
Paper running path of the front unit	Open the front cover check if paper is not jammed in the paper running path.	Remove the jammed paper.
(4-1-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 1, that of the paper entrance sensor 2 and that of the WR sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor with the good sensor lever.
(4-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the Maintenance Menu SWITCH SCAN function.	Replace either the CU/PU board or the front sensor board (RSG PCB) or connection cable.
Check the output signal levels of the paper entrance sensor 1, that of the paper entrance sensor 2 and that of the WR sensor.	Check for the following signals at the FSNS connector of the CU/PU board. Pin-4: Paper entrance sensor 1 Pin-3: Paper entrance sensor 2 Pin-2: WR sensor Confirm that the above signal levels change when the sensor lever is operated.	Replace the front sensor board (RSG PCB)
Check the power voltages supplied to the front sensor board (RSG PCB)	Check the 5V power at the FSNS connector of the front sensor board (RSG PCB). Pin-1: 5V power supply Pin-5: 0VL	Replace the connection cable.

(4-2) Jam occurs immediately after the paper feed is started.

Check item	Check work	Actions to be taken at NG
(4-2-1) Check condition of the paper running path		
Paper running path of the front unit	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(4-2-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 1, that of the paper entrance sensor 2 and that of the WR sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor with the good sensor lever.
(4-2-3) Motor operation check		
Paper feed motor	Confirm that the paper feed motor works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the CU/PU board, or replace the paper feed motor.
Paper feed motor driver	Remove the MOTERCL connector of the CU/PU board and check the following at the connector side. Several MΩ between pin-5 – FG. Several MΩ between pin-6 – FG. Several MΩ between pin-7 – FG. Several MΩ between pin-8 – FG.	Replace the CU/PU board.

Check item	Check work	Actions to be taken at NG
(4-2-4) Check the system connection		
Paper feed motor drive cable	Check the connection condition of the cable. Check if the connector is connected in the half-way only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor drive cable	Check that any cable is not pinched during assembling of the printer. Remove the MOTERCL connector of the CU/PU board and check the following at the cable side. Short circuit between pin-5 – FG Short circuit between pin-6 – FG Short circuit between pin-7 – FG Short circuit between pin-8 – FG	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor	Remove the MOTERCL connector of the CU/PU board and check that approx. 3.4Ω can be measured between pin-5 -pin-6 and pin-7 -pin-8 respectively at the cable end.	Replace the paper feed motor.

**7.5.1.(5) Paper feed jam (Error 390: MP Tray)**

(5-1) Jam occurs immediately after the power is turned on. (Multipurpose tray)

Check item	Check work	Actions to be taken at NG
(5-1-1) Check condition of the paper running path		
Paper running path of the multipurpose tray	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(5-1-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 2 and the WR sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor with the good sensor lever.
(5-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode.	Replace either the CU/PU board or the front sensor board (RSG PCB) or connection cable.
Check the sensor output signal level of the paper entrance sensor 2 and the WR sensor.	Check for the following signals at the FSNS connector of the CU/PU board. Pin-2: WR sensor Pin-3: Paper entrance sensor 2 Confirm that the above signal levels change when the sensor lever is operated.	Replace the front sensor board (RSG PCB)
Check the power voltages supplied to the front sensor board (RSG PCB)	Check the 5V power at the FSNS connector of the front sensor board (RSG PCB). Pin-1: 5V power supply Pin-5: 0VL	Replace the connection cable.

(5-2) Jam occurs immediately after paper feed is started. (Multipurpose tray)

Check item	Check work	Actions to be taken at NG
<b>(5-2-1) Check condition of the paper running path</b>		
Paper running path of the multipurpose tray	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
Sheet Receive of the multipurpose tray	Confirm that the Sheet Receive has moved up normally. Confirm that the support spindle and spring of the Sheet Receive have been installed in the specified positions normally.	Correct installation of the above parts so that the Sheet Receive moves up to the specified position normally.
<b>(5-2-2) Check condition of the mechanical parts</b>		
Check the sensor levers of the paper entrance sensor 2 and the WR sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor with the good sensor lever.
Front cover	Confirm that the locks in the right and left of the front cover are locked normally.	Replace the front cover assembly
Check the feed roller, the pickup roller, and the retard roller.	Check if any foreign materials such as paper dust on the surface of the feed roller or of the pickup roller or not.	Remove the foreign material.
	Check if the feed roller has worn out or not.	Replace the feed roller.
<b>(5-2-3) Motor operation check</b>		
Paper feed motor	Confirm that the paper feed motor works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the CU/PU board, or replace the paper feed motor.
Paper feed motor driver	Remove the MOTERCL connector of the CU/PU board and check the following at the connector side. Several MΩ between pin-5 – FG. Several MΩ between pin-6 – FG. Several MΩ between pin-7 – FG. Several MΩ between pin-8 – FG.	Replace the CU/PU board.
MPT clutch	Carry out Motor & Clutch Test to check if the MPT clutch works normally.	

Check item	Check work	Actions to be taken at NG
<b>(5-2-4) Check the system connection</b>		
Paper feed motor drive cable	Check the connection condition of the cable. Check if the connector is connected in the half-way only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor drive cable	Check that any cable is not pinched during assembling of the printer. Remove the MOTERCL connector of the CU/PU board and check the following at the cable side. Short circuit between pin-5 – FG Short circuit between pin-6 – FG Short circuit between pin-7 – FG Short circuit between pin-8 – FG	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor	Remove the MOTERCL connector of the CU/PU board and check that approx. 3.4Ω can be measured between pin-5 -pin-6 and pin-7 -pin-8 respectively at the cable end.	Replace the paper feed motor.

**7.5.1.(6) Paper running jam (Error 381)**

(6-1) Jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(6-1-1) Check condition of the running path.		
Paper running path of the front unit	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(6-1-2) Check condition of the mechanical parts		
Check the sensor lever of the WR sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(6-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode.	Replace either the CU/PU board or the front sensor board (RSG PCB) or connection cable.
Check the sensor lever of the WR sensor.	Check for the following signals at the FSNS connector of the CU/PU board. Pin-2: WR sensor Confirm that the above signal levels change when the sensor lever is operated.	Replace the front sensor board (RSG PCB)
Check the power voltages supplied to the front sensor board (RSG PCB)	Check the 5V power at the FSNS connector of the front sensor board (RSG PCB). Pin-1: 5V power supply Pin-5: 0VL	Replace the connection cable.

(6-2) Jam occurs immediately after a paper is taken into printer.

Check item	Check work	Actions to be taken at NG
(6-2-1) Check condition of the paper running path		
Paper running path on the belt.	Remove the ID unit and check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(6-2-2) Check condition of the mechanical parts		
Check the sensor lever of the WR sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(6-2-3) Motor operation check		
Paper feed motor driver, belt motor driver and ID motor	Confirm that the paper feed motor, belt motor and ID motor work normally by using the Motor & Clutch Test of the self-diagnostic mode. Check if any load exists or not.	Replace the CU/PU board, or replace the defective motor among paper feed motor, belt motor and ID motor, or replace the ID unit or belt unit.
Paper feed motor, belt motor	Remove the MOTERCL connector of the CU/PU board and check the following at the connector side. Several MΩ between pin-1 – FG Several MΩ between pin-2 – FG Several MΩ between pin-3 – FG Several MΩ between pin-4 – FG Several MΩ between pin-5 – FG Several MΩ between pin-6 – FG Several MΩ between pin-7 – FG Several MΩ between pin-8 – FG	Replace the CU/PU board.

Check item	Check work	Actions to be taken at NG
(6-2-4) Check the system connection		
Paper feed motor drive cable, ID motor drive cable, belt motor drive cable, fuser motor drive cable	Check the connection condition of the cables. CU/PU board MOTERCL connector, DCID connector, DCHEAT connector, MOTERCL connector, RELAY connector. Check if the connector is connected in the halfway only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Normalize the connection condition. Replace the cable with the normal cable.
Paper feed motor drive cable, belt motor drive cable, hopping clutch drive cable	Check that any cable is not pinched during assembling of the printer. Remove the MOTERCL connector of the CU/PU board and check the following at the connector side. Short circuit between pin-1 – FG Short circuit between pin-2 – FG Short circuit between pin-3 – FG Short circuit between pin-4 – FG Short circuit between pin-5 – FG Short circuit between pin-6 – FG Short circuit between pin-7 – FG Short circuit between pin-8 – FG  Remove the HOPCL connector of the CU/PU board and check the following at the cable side. Short circuit between pin-1 – FG Short circuit between pin-2 – FG	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor, belt motor, hopping clutch	Remove the respective connectors from the board, and confirm that the following resistance exists between the corresponding pins, at the cable side. CU/PU board MOTERCL connector Between pin-1 - pin-2: Approx. 3.4Ω Between pin-3 - pin-4: Approx. 3.4Ω Between pin-5 - pin-6: Approx. 3.4Ω Between pin-7 - pin-8: Approx. 3.4Ω  CU/PU board HOPCL connector Between pin-1 - pin-2: Approx. 240Ω	Replace the paper feed motor or ID Up motor.

(6-3) Jam occurs in the middle of paper running path.

Check item	Check work	Actions to be taken at NG
(6-3-1) Motor operation check		
Paper feed motor driver, belt motor driver and ID motor	Confirm that the paper feed motor, belt motor and ID motor work normally by using the Motor & Clutch Test of the self-diagnostic mode. Check if any load exists or not.	Replace the CU/PU board, or replace the defective motor among paper feed motor, belt motor and ID motor, or replace the ID unit or belt unit.
Paper feed motor, belt motor	Remove the MOTERCL connector of the CU/PU board and check the following at the connector side. Several MΩ between pin-1 – FG Several MΩ between pin-2 – FG Several MΩ between pin-3 – FG Several MΩ between pin-4 – FG Several MΩ between pin-5 – FG Several MΩ between pin-6 – FG Several MΩ between pin-7 – FG Several MΩ between pin-8 – FG	Replace the CU/PU board.

(6-4) Jam occurs immediately after paper has reached the fuser.

Check item	Check work	Actions to be taken at NG
(6-4-1) Motor operation check		
Fuser motor	Confirm that the fuser motor works normally by using the Motor & Clutch Test of the self-diagnostic mode. Check if any load exists or not.	Replace the CU/PU board. Replace the fuser motor. Replace the fuser unit.
(6-4-2) Temperature control while fuser belt running		
Detected temperatures of the fuser belt and the backup roller	Check temperatures detected at the fuser belt and the backup roller in the self-diagnostic mode. Has abnormally low (lower than the room temperature) or high (250°C) temperature been detected?	Replace the fuser unit, relay board (P6Z PCB) or CU/PU board.
(6-4-3) Check the installation condition of fuser unit		
Fuser unit	Check that the fuser unit is installed normally. (Is it pushed in down to the bottom-most point?)	Install the fuser unit correctly in a printer.

### 7.5.1.(7) Paper unloading jam (Error 382)

(7-1) Paper unloading jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(7-1-1) Check condition of the paper running path		
Paper running path of the paper unloading unit	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(7-1-2) Check condition of the mechanical parts		
Check the sensor lever of the paper exit sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(7-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode.	Replace the CU/PU board or EXIT sensor or its cable or its connection cable.
Check the output signal level of the EXIT sensor.	Check for the following signals at the RELAY connector of the CU/PU board. Pin-11: EXIT sensor Confirm that the above signal levels change when the sensor lever is operated.	Replace the EXIT sensor.
Check the power voltages supplied to the relay board.	Check the 5V power voltage at the EXIT connector of the relay board. Pin-1: 5V power supply Pin-3: OVL	Replace the connection cable.
(7-1-4) Check the system connection		
Signal cable for relay board, EXIT sensor cable	Check that FFC is normally inserted at the RELAY connector of the CU/PU board and at the PU IF connector. Check that the relay board and the EXIT sensor are normally connected.	Normalize the connection condition.
Signal cable for relay board, EXIT sensor cable	Confirm that the cables are not pinched, sheathes are not peeled off, and they are assembled normally.	Replace the connecting cable and normalize the assembled condition.



(7-2) Paper unloading jam occurs after a paper is taken into printer.

Check item	Check work	Actions to be taken at NG
(7-2-1) Check condition of the paper running path		
Face Up Stacker Cover	Confirm that it is either fully opened or fully closed	Eliminate any in-between condition of the cover between the fully open position and fully closed position.
Duplex pull-in gate	Confirm that the Duplex pull-in gate works normally by using the Motor & Clutch Test of the self-diagnostic mode. Is it set to the paper unloading side normally?	Replace the Duplex pull-in gate or the Duplex solenoid
Rear panel	Check that the installation condition of the rear panel hampers smooth movement of a paper in the paper running path, or not.	Remove the rear panel and re-install it.
Paper running path of unloading unit	Check that any mechanical load does not exist that hampers the smooth movement of paper in the paper running path of the paper unloading unit, by the visual inspection. Check if the paper unloading motor becomes difficult to rotate or not.	Correct the portion that becomes mechanical load.
(7-2-2) Check condition of the mechanical parts		
Sensor lever of the paper exit sensor	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.

Check item	Check work	Actions to be taken at NG
(7-2-3) Motor operation check		
Fuser motor	Confirm that the fuser motor works normally by using the Motor & Clutch Test of the self-diagnostic mode. Check if any load exists or not.	Replace the CU/PU board or fuser motor or fuser unit.

Check item	Check work	Actions to be taken at NG
(7-2-4) Check the system connection		
Fuser motor drive cable	Check the connection condition of the cables. Visually check the CU/PU board DCHEAT connector ④ for half-way connection, slanted angle insertion, and abnormal cord assembly. Also check the connector connected with the fuser motor in the same manner.	Replace the cable with the good cable that normalizes the connection condition.

(7-3) Paper unloading jam occurs in the middle of paper running path.

Check item	Check work	Actions to be taken at NG
(7-3-1) Motor operation check		
Fuser motor	Confirm that the fuser motor works normally by using the Motor & Clutch Test of the self-diagnostic mode. Check if any load exists or not.	Replace the CU/PU board or fuser motor or fuser unit.

### 7.5.1.(8) Two-sided printing jam (Errors 370, 371, 372, 373 and 383)

(8-1) Two-sided printing jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(8-1-1) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode. For all sensors except the Dup-IN sensor, check the detection condition of the respective sensor in the two status: One is the status in which paper remains inside the Duplex unit. The other is the status in which paper is removed from the Duplex unit.	Replace the Duplex board (GOH PCB), or replace the defective sensor or connection cable.

(8-2) Two-sided printing jam occurs during taking in the paper into Duplex unit.

Check item	Check work	Actions to be taken at NG
(8-2-1) Solenoid operation check		
Duplex clutch	Confirm that the duplex clutch works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the GOH board or clutch.
Separator solenoid (Paper unloading/ DUP paper taking in switching gate located immediately after the fuser unit)	Check visually movement of the gate by using the Motor & Clutch Test of the self-diagnostic mode. Check if movement is unsmooth or not, if amount of open/close is abnormal or not.	Replace the separator solenoid.
(8-2-2) Sensor lever operation check		
Dup-IN sensor lever	Remove the duplex unit. Touch the Dup-IN sensor lever to check if its movement is unsmooth or not.	Replace the Dup-IN sensor lever
Dup-Bottom sensor lever	Remove the duplex unit and check the movement of the sensor lever.	Replace the sensor lever.
DUP-IN sensor Dup-Bottom sensor	Check the sensitivity of each sensor in the two conditions: one is the status in which paper remains in the duplex unit, and the other is the status in which no paper remains in the duplex unit. Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode.	Replace the Duplex board (GOH PCB), or replace the defective sensor or connection cable.

Check item	Check work	Actions to be taken at NG
(8-2-3) Check condition of the paper running path		
Paper inverting transport path	Check that any foreign materials such as paper chip or blue do not exist that hampers the smooth movement of paper in the paper inverting transport path.	Remove the foreign material.

(8-3) Two-sided printing jam occurs during transporting paper inside the Duplex unit.

Check item	Check work	Actions to be taken at NG
(8-3-1) Sensor lever operation check		
Dup-F sensor lever	Remove the Duplex unit and check movement of the Dup-F sensor lever.	Replace the Dup-F sensor lever.
Dup-R sensor lever	Remove the Duplex unit and check movement of the Dup-R sensor lever.	Replace the Dup-R sensor lever.
(8-3-2) Sensor check		
Check the detection condition of the sensor signal	Check the sensitivity of each sensor in the two conditions: one is the status in which paper remains in the duplex unit, and the other is the status in which no paper remains in the duplex unit. Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode.	Replace the Duplex board (GOH PCB), or replace the defective sensor or connection cable.

(8-4) Paper is not supplied from the Duplex unit to the regist roller.

Check item	Check work	Actions to be taken at NG
(8-4-1) Clutch operation check		
Duplex clutch	Confirm that the Duplex clutch works normally by using the Motor & Clutch Test of the self-diagnostic mode. Confirm it by listening to the sound.	Replace the GOH board or clutch.

**7.5.1.(9) Paper size error (Errors 400 and 401)**

(9-1) Jam occurs when paper end is located near the IN1 sensor.

Check item	Check work	Actions to be taken at NG
(9-1-1) Check paper feed condition		
Multifeed of papers	Open the front cover and check if multifeed of papers occurs or not.	If multi-feed occurs again after the jammed paper is removed, replace the retard roller of the tray in use.
Paper size	Does the paper size specified for print match the paper size of paper stuck in the tray.	Change the specified paper size or size of paper inside the tray.
Paper entrance sensor 1, paper entrance sensor 2	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.

**7.5.1.(10) ID unit Up/Down error (Service call 142)**

(10-1) Error occurs during the Up movement of the ID unit

Check item	Check work	Actions to be taken at NG
<b>(10-1-1) Check the mechanical load during the Up movement</b>		
Mechanical load during installation and removal of the ID unit	Check if abnormal heavy load is applied when removing the ID unit.	Replace the ID unit, or replace the right/left side plate.
Greasing to the right and left Up/Down link levers	Check if the slant surface of the link lever is coated by grease or not.	Apply grease.
Assembled condition of the right and left Up/Down link levers	Check if any part exists or not in the vicinity of link lever, that hampers movement of the link lever.	Assemble them correctly.
<b>(10-1-2) Up/Down mechanism</b>		
Assembled condition of the peripheral mechanism of the link lever	Is the mechanism assembled so that the link lever is connected to the planetary driving gear?	Assemble them correctly.
Right and left link levers	Check if the link lever is set in the correct position that enables the specified engagement of gears. (Check if the link lever is set in the wrong position that results in the wrong engagement of gears by several teeth.)	Assemble them correctly.

Check item	Check work	Actions to be taken at NG
<b>(10-1-3) Sensor check</b>		
Up/Down sensor lever (unified structure with the left link lever)	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the left link lever.
Up/Down sensor	Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode. Check if the SCAN state changes or not when the incoming light is interrupted/passed by using a piece of paper or the like for the transparent type sensor.	Replace the high voltage board.

(10-2) Error occurs during the Down movement of the ID unit

Check item	Check work	Actions to be taken at NG
<b>(10-2-1) Check the mechanical load during the Down movement</b>		
Mechanical load during installation and removal of the ID unit	Check if abnormal heavy load is applied when removing the ID unit.	Replace the ID unit, or replace the right/left side plate.
Greasing to the right and left Up/Down link levers	Check if the slant surface of the link lever is coated by grease or not.	Apply grease.
Assembled condition of the right and left Up/Down link levers	Check if any part exists or not in the vicinity of link lever, that hampers movement of the link lever.	Assemble them correctly.

**7.5.1.(11) Fuser unit error (Service call 167 to 177)**

(11-1) Error occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(11-1-1) Thermistor is defective Note)		
Upper thermistor, lower thermistor, side thermistor, heater thermistor	Check the respective thermistors if they are shorted or opened internally. Check the resistance value at the connector pins in the bottom of the fuser unit. (Refer to section 9.1 Resistance value (fuser unit).)	Replace the fuser unit.
Installed condition of fuser unit.	Check if the fuser nit is pressed in until the connector in the bottom of the fuser unit is surely connected.	Re-set the fuser unit.

**Note!** Service calls 171: Error and 175: Error can occur when the printer temperature is below 0°C. Turn on the power again after the printer temperature has increased.

(11-2) Error occurs approx. 1 minute after the power is turned on.

Check item	Check work	Actions to be taken at NG
(11-2-1) Temperature increase of fuser unit		
Thermostat, heater	Heater of the fuser unit is controlled of its temperature. Check if the fuser unit gets hot or not by touching it with hands. If the fuser unit temperature does not increase and remains cold, check that the resistance between pin-1 and pin-4 and between pin-3 and pin-4 is about 4 to 7Ω, between pin-1 and pin-2 and between pin-3 and pin-2 is about 1 to 3Ω respectively. (Refer to section 9.1 Resistance value (fuser unit).)	Replace the fuser unit.
(11-2-2) Temperature increase of fuser unit		
Installation position of the Lower thermistor	The Lower thermister must be installed while contacting with the fuser unit. Check if the lower thermister is installed in the far position from the specified position or not causing detection of the lower temperature than the actual temperature of fuser unit.	Replace the fuser unit.
(11-2-3) AC power input for the fuse		
AC power voltage from the low voltage power supply	Check if the AC voltage for heater is normally supplied or not. Power supply J2 connector, between pin-1 and pin-2, and between pin-3 and pin-4.	Replace the low voltage power supply.
Heater ON signal that is output from PU to the low voltage power supply	Check that the heater ON signal goes active at the warming up timing, or not. "L" active while ON. Power connector of the CU/PU board, between pin-18 and pin-19.	Replace the CU/PU board.

**7.5.1.(12) Motor fan error (Service call 122, 127, 128, 918 and 051)**

(12-1) The low voltage power supply fan does not rotate immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(12-1-1) Cable connection condition and wiring condition		
Cable connection condition and wiring condition of the low voltage power supply fan and those of the fuser fan	Check if the connectors are connected normally or not. Check if extra length of the cables does not touch the fan blade or not.	Correct the connection condition of the connectors. Correct the cable wiring route. Replace the fan.

(12-2) Duplex fan does not rotate during the Duplex printing.

Check item	Check work	Actions to be taken at NG
(12-1-2) Cable connection condition and wiring condition		
Cable connection condition and wiring condition of the Duplex fan	Check if the connectors are connected normally or not. Check if extra length of the cables does not touch the fan blade or not.	Correct the connection condition of the connectors. Correct the cable wiring route. Replace the fan.
24V fuse F501 of the Duplex board (GOH PCB)	Check if the fuse F501 has blown out or not.	Replace the Duplex board (GOH PCB).
24V power supplied to the Duplex board (GOH PCB).	Check if the fuse F503 of the CU/PU board has blown out or not.	Replace the CU/PU board.

(12-3) All fans of the printer do not rotate.

Check item	Check work	Actions to be taken at NG
(12-3-1) 24V power supply		
CU/PU board fuses F1, F503	Check if the fuses F1 and F503 are not open-circuit or not.	Replace the CU/PU board.
24V power that is supplied to the CU/PU board.	Check the power supply voltages at the POWER connector of the CU/PU board. The follow voltage must appear respectively. Pins-9, 10, -11 and -12: 24V Pins-13, -14, -15 and -16: 0VP	Replace the low voltage power supply.

**7.5.1.(13) Print speed is slow. (Performance is low.)**

(13-1) Print speed decreases.

Check item	Check work	Actions to be taken at NG
(13-1-2) Media Weight setting		
Media Weight that is specified for the print	Check if the wrong Media Weight has been specified or not.	Correct the Media Weight.

**7.5.1.(14) Option unit cannot be recognized.**

(14-1) Duplex unit cannot be recognized.

Check item	Check work	Actions to be taken at NG
(14-1-1) Duplex board		
Duplex unit	Check if the Duplex unit of the target apparatus apparatus specification is being used or not.	Replace the Duplex unit.
(14-1-2) Check the system connection		
Check the system connection from the CU/PU board to the Duplex board (GOH PCB).	Check that the cable between the CU/PU board option connector to the Duplex board is normally connected.	Correct the connections.
Square connector connecting the Duplex unit to the printer.	Check if any foreign material exists in the connecting portion of the square connector.	Remove the foreign material.
Square connector connecting the Duplex unit to the printer.	Is the terminals of the square connector damaged?	Replace the connector.
(14-1-3) Check the control signals.		
Check the control signal that is output from the CU/PU board to the Duplex board (GOH PCB).	Check the control signal that is output from the CU/PU board option connector. Pin-18: TXD (PU → DUP) Pin-20: RXD (DUP → PU)	Pin-18: Replace the CU/PU board. Pin-20: Replace the Duplex board.

(14-2) Option tray unit cannot be recognized.

Check item	Check work	Actions to be taken at NG
(14-2-1) Option tray board		
Option tray unit	Check if the option tray unit of the target apparatus apparatus specification is being used or not.	Replace the option tray unit.
(14-1-2) Check the system connection		
Check the system connection from the CU/PU board to the option tray board (GOH PCB).	Check that the cable between the CU/PU board option connector to the option tray board is normally connected.	Correct the connections.
Square connector connecting the option tray unit to the printer.	Check if any foreign material exists in the connecting portion of the square connector.	Remove the foreign material.
Square connector connecting the option tray unit to the printer.	Is the terminals of the square connector damaged?	Replace the connector.
(14-2-3) Check the control signals.		
Check the control signal that is output from the CU/PU board to the option tray board (GOH-2 PCB).	Check the control signal that is output from the PU board option connector. Pin-15: OPTCNT2 (PU → Option Tray) Pin-17: TXD (PU → Option Tray) Pin-19: RXD (Option Tray → PU)	Pin-17: Replace the CU/PU board. Pin-19: Replace the option tray board.

**7.5.1.(15) LED head cannot be recognized. (Service call 131, 132, 133 and 134)**

(15-1) Service call 131 to 134 (LED HEAD Missing)

Check item	Check work	Actions to be taken at NG
(15-1-1) Check the system connection		
Connecting condition at the CU/PU board connector and at the head connector.	Check the connecting condition of the FFC by the visual inspection.	Correct the connection to the normal connecting condition.
Head FFC	Remove the head FFC from the printer. Check if any open-circuit or peeling-off of sheath has occurred or not throughout the cable.	Replace the head FFC or the CU/PU board.
Conduction of the fuse on the CU/PU board.	Check that 5V is measured at the ends of the capacitors CP1 and CP2, and also check if the fuse F12, F15 or F16 is open-circuited.	Replace the CU/PU board.

**7.5.1.(16) Toner cartridge cannot be recognized. (Errors 540, 541, 542 and 543)**

(16-1) Error caused by the consumable items.

Check item	Check work	Actions to be taken at NG
(16-1-1) Consumable items installation condition		
ID unit and toner cartridge	Check that the ID unit is installed in the normal position. Check that the lock lever of the toner cartridge is locked.	Correct the installation to the normal installation condition.

(16-2) Error caused by the toner sensor

Check item	Check work	Actions to be taken at NG
(16-2-1) Toner sensor condition		
Toner sensor	Is the receptor of the toner sensor stained?	Wipe off the stain from the toner sensor.
Toner sensor	Confirm that the toner sensor works normally by using the SWITCH SCAN function of the self-diagnostic mode. Place a white paper in front of the toner sensor, and check if the SCAN state changes or not.	Replace the toner sensor board or the FFC between the toner sensor board and the CU/PU board.



**Note!** Toner sensor operation check method using the SWITCH SCAN function of the self-diagnostic mode.

(1) How to check operation of the toner sensor at the printer side.

1. Status change of the toner sensor can be checked from the control panel using the self-diagnostic mode. First, switch the display to the control panel display. For the method of switching the display to the control panel display, refer to section 6.3.2.3 Switch Scan Test
2. Remove the ID unit and the toner cartridge (TC) from a printer. There is a window inside a printer opposing the ID side when viewed from the front of a printer. The toner sensor is located inside the window.
3. Place a white paper 3 mm away from the sensor window. The white paper should be placed in the manner of opposing the toner sensor.
4. When light is reflected by a white paper so that incident light falls on the toner sensor, the control panel display shows "L". When the paper is moved so that any light is not reflected by the paper so that the incident light does not reach the toner sensor, "H" is displayed on the control panel.
5. If the control panel display toggles between "H" <-> "L" as a paper is flipped in front of the toner sensor, it indicates that the toner sensor and the related system of the printer are working normally.

Action to be taken at NG

- Clean surface of the toner sensor to remove the stains due to residual toner and paper dust.
- Check the connection condition of the FFC cable between the CU/PU board and the toner sensor board (TSA).
- Perform the operation check again. If the situation has not been improved and remains unchanged, replace the CU/PU board or the toner sensor board (TSA).

(2) How to check operation of the toner sensor at the toner cartridge (TC) side

1. To the position where the toner sensor is confirmed to be operating normally in the printer itself by the above paragraph (1), install the TC and the ID unit to check operations by observing display on the control panel.
2. If the ID unit works normally, the display on the control panel will toggle between "H" <-> "L" in synchronism with movement of the silver reflector plate that is located on the side of the ID.

Action to be taken at NG

- Check operation condition of the respective ID motors by using the Motor & Clutch Test of the self-diagnostic mode.
- Clean surface of the silver reflector plate on the side of ID to remove stains. (Stain due to toner or paper dust)
- Replace the TC of different color and the ID unit as a pair.

If a satisfactory operation is attained by using the a pair of TC of different color and the ID unit, replace the TC or replace the ID unit.

(16-3) Error caused by the defective mechanism

Check item	Check work	Actions to be taken at NG
<b>(16-3-1) Mechanical load applied to the ID unit</b>		
ID unit	Check if a heavy mechanical load is being applied to the ID unit due to breakage of the waster toner belt, or not.	Replace the ID unit.
<b>(16-3-2) Motor operating condition</b>		
ID motor	Confirm that the respective ID motors work normally or not by using the Motor and Clutch Test of the self-diagnostic mode. Check if any extra load exists or not.	Replace the CU/PU board or the ID motor.
The rotational direction of ID motor (If abnormal noise is.)	Remove the ID unit, run the Motor & Clutch Test of self-diagnostic mode. Check the rotational direction of the gear is correct.	Replace the CU/PU board or the ID motor or cable.

**7.5.1.(17) Fuse cut error (Service call 154 and 155)**

(17-1) Fuse cut error

Check item	Check work	Actions to be taken at NG
(17-1-1) Check the system connection		
FFC connecting the CU/PU board and the P6Z board (P6Z PCB)	Check if the RELAY connector of the CU/PU board or PUIF connector of P6Z board (P6Z PCB) is connected halfway, or inserted at an angle. Check if FFC has open-circuit or its sheath is peeled off.	Connect the FFC normally. Alternately, replace the FFC.
(17-1-2) Fuse cut circuit		
CU/PU board	Upon completion of the system connection check, turn off the power once and back on. The check if the error occurs or not.	Replace the CU/PU board.

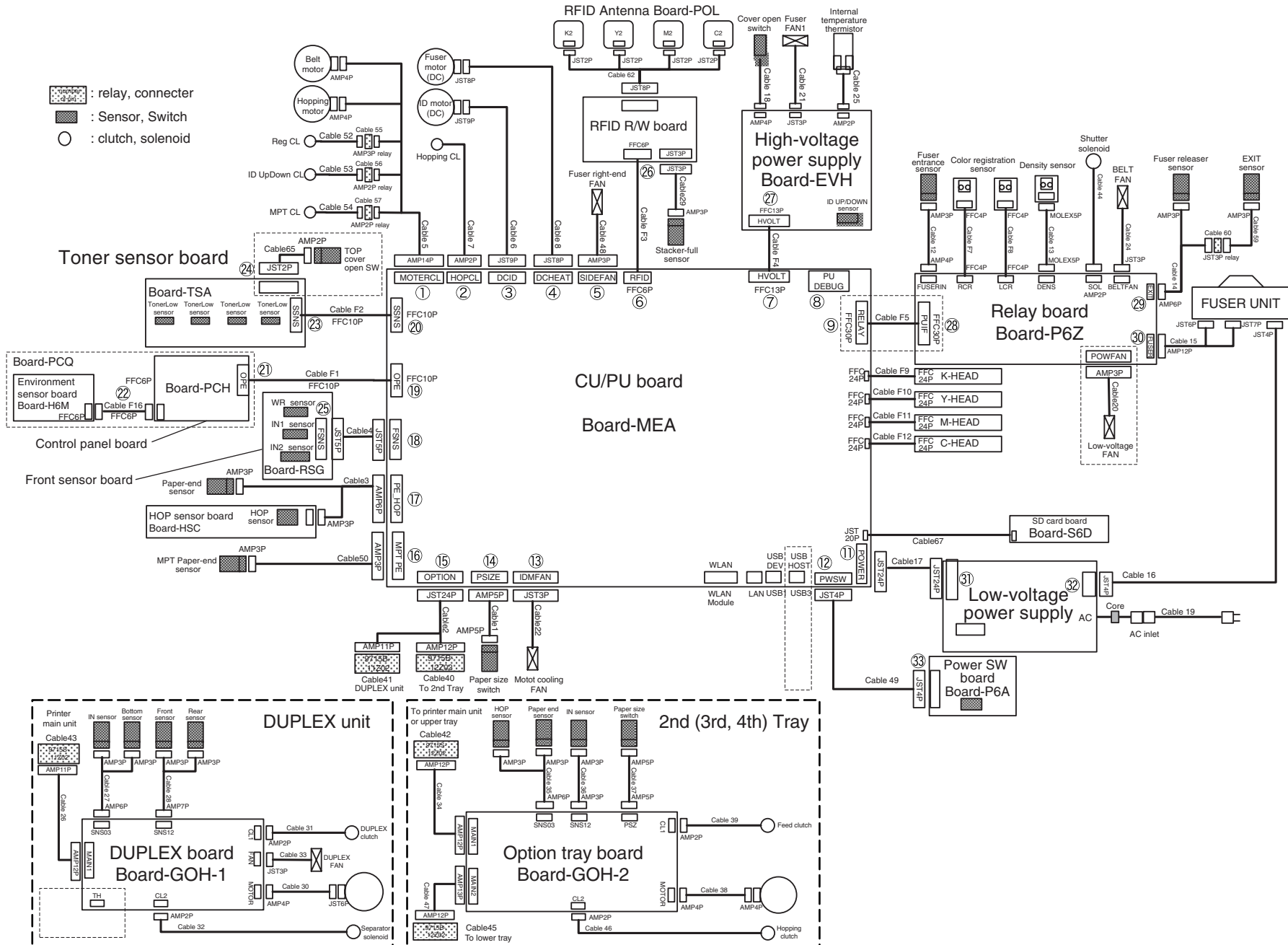
**7.5.1.(18) Humidity sensor error (Service call 123)**

(18-1) Humidity sensor error

Check item	Check work	Actions to be taken at NG
(18-1-1) Check the system connection		
Connection between the CU/PU board and the control panel board	Check if the 10-conductor FFC is connected to the OPE connector of the CU/PU board properly. Check if the 10-conductor FFC is connected to the CN501 connector of the control panel board properly. Check the connectors for half-way connection or angled connection.	Re-connect the cable normally.
FFC connecting the CU/PU board and the control panel board	Check for open-circuit with VOM. Visually check that the sheath for peeling.	Replace the FFC with a normal FFC.
FFC connecting the CU/PU board and the environment sensor board	Check for open-circuit with VOM. Visually check that the sheath for peeling.	Replace the FFC with a normal FFC.

Check item	Check work	Actions to be taken at NG
(18-1-2) Environment condition		
<p>Sharp change of environment condition</p>	<p>Is the environment condition changed sharply from a low temperature environment to a high environment condition within a short time? (Example is such a case that a printer is moved from storage condition of a cold area in winter to an office environment.)</p>	<p>Leave a printer for around one hour in the new environment to get used to the new environment. After that, turn on the power again. Before turn on the power, touch the metal panel of the controller panel and the metal plate inside a printer to feel temperature increase inside a printer with human hands. After confirmation that the printer temperature has increased close to the room temperature, turn on the power again.</p>

7.5.1.(19) Wiring diagram



## 7.5.2 Troubleshooting the abnormal images

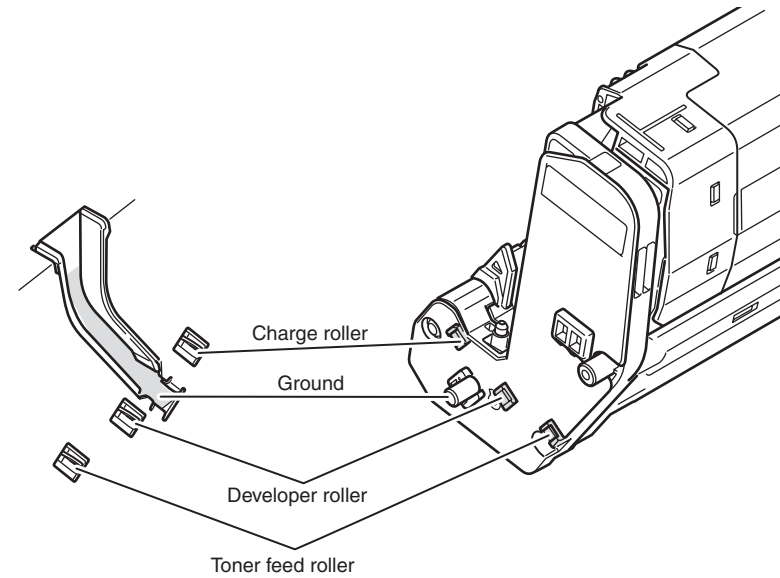
- Refer to the Printer(SFP) Maintenance Manual for common section (46470802TH) for troubleshooting the abnormal images.

### Information 1 : Periodic abnormalities

- (1) Periodic abnormality occurs in vertical direction

Check item	Check work	Actions to be taken at NG
(5-1-1) Cycle		
Image drum	Check that the cycle is 94.3 mm.	Replace the ID unit
Developing roller	Check that the cycle is 37.2 mm.	Replace the ID unit
Toner feed roller	Check that the cycle is 54.6 mm.	Replace the ID unit
Charge roller	Check that the cycle is 37.7 mm.	Replace the ID unit
Fuser belt	Check that the cycle is 142.6 mm.	Replace the fuser unit.
BU Roller of fuser	Check that the cycle is 113.1 mm.	Replace the fuser unit.
Transfer roller	Check that the cycle is 50.3 mm.	Replace the belt unit.

### Information 2 : ID contact positions



## 7.6 Fuse check

If any of the following errors occurs, check the corresponding fuse on the CU/PU control board or high voltage power supply board.

(Refer to Table 7-6.)

Table 7-6 Fuse error

Fuse Name	Error Description	Insert Point	Resistance	
CU/PU board	F1	Service call928, Service call128	Belt motor, ID motor FAN, fuser side FAN, ID motor, Fuser motor :24V	1Ω or less
	F3	Not displayed on the operator panel. Power SW LED blinks at a high speed.	CU part: 3.3V	
	F4	Paper jam in Tray 1 during printing. Service call 141 to 142	Hopping clutch, registration clutch, MPT clutch, ID UP clutch, hopping motor: 24V	
	F5	Not displayed on the operator panel. Power SW LED blinks at a high speed.	PU/CU part: 5V	
	F12	Service call 131 to 134	KYMC heads: 3.3V	
	F15	CM color missing	CM heads: 5V	
	F16	KY color missing	KY heads: 5V	
	F17	HOSTUSB error	HOSTUSB: 5V	
	F501	Cover open	High-voltage power supply unit, low-voltage FAN, belt FAN, shutter solenoid, belt fuse, discharging light, fuser FAN: 24V	
	F502	Paper jam in an option tray during printing	Option trays (2nd to 4th trays): 24V	
F503	Service call 918	Duplex unit: 24V		

Fuse Name	Error Description	Insert Point	Resistance	
Low-voltage power supply	F1	Shut off	Main power source	1Ω or less
	F2	Shut off	Main power source	
	F651	Shut off	Power source: 3.3V	
High-voltage power supply	F501	Cover open	High-voltage power supply: 24V	
DUPLEX control board	F501	Service call 918	Duplex unit: 24V	
Option tray control board	F501	Paper jam during printing in the tray concerned	Option tray: 24V	

## 7.7 Paper cassette switches and paper size correlation table

(1) Source tray

Switch Part No. 2052000P4000

Model No: HS12-001

Bit Number				Dial Indication Size	
1	2	3	4	TRAY1	TRAY2/TRAY3/TRAY4
H	H	H	H	No cassette	No cassette
H	L	H	L	A6	A4 LEF
L	H	L	L	Other	Other
H	L	L	H	Tabloid	Tabloid
L	L	H	H	Legal	Legal
L	H	H	L	Letter	Letter
H	H	L	H	Letter LEF	Letter LEF
H	L	H	H	Executive	Executive
L	H	H	H	B4	B4
H	H	H	L	B5	B5
H	H	L	L	B5 LEF	B5 LEF
H	L	L	L	A3	A3
L	L	L	L	A4	A4
L	L	L	H	A4 LEF	A4 LEF
L	L	H	L	A5	A5
L	H	L	H	A5 LEF	A3

Press of SW: L

- When "Legal" is selected, three options, "Legal 13", "Legal 13.5" and "Legal 14" are selectable.

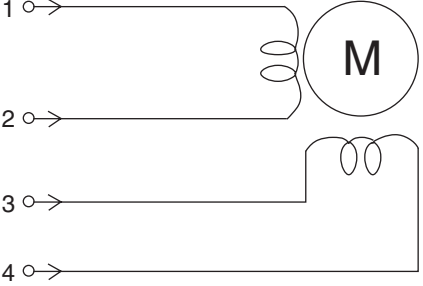
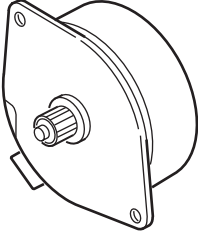
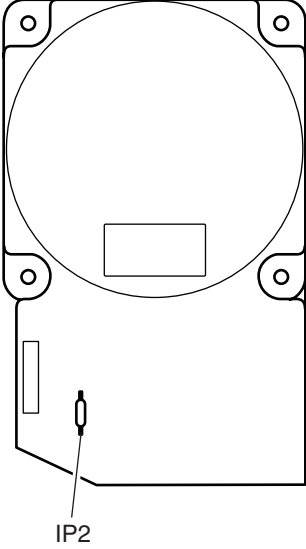
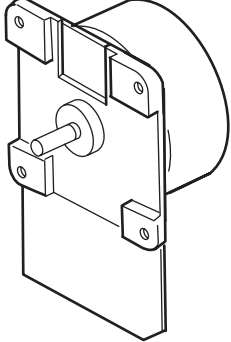
# 8. OTHER

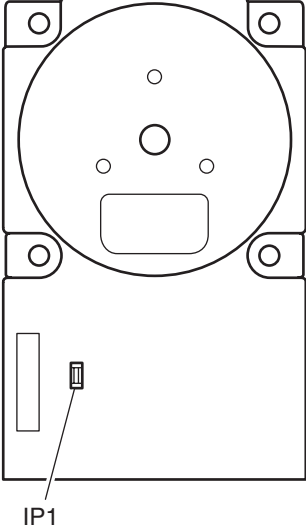
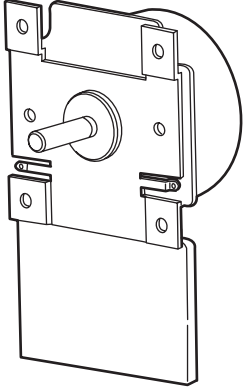
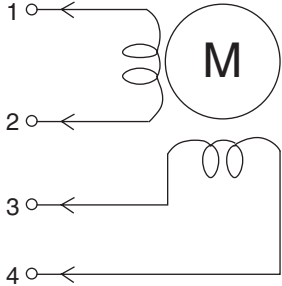
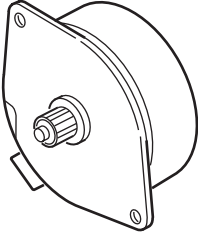
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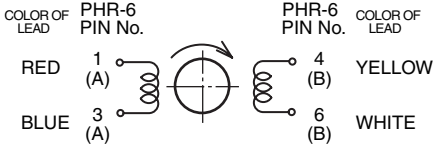
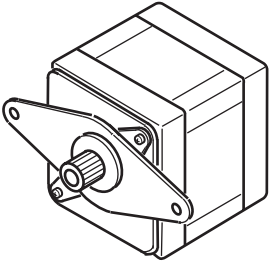
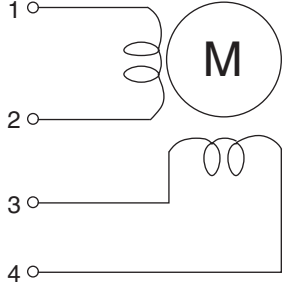
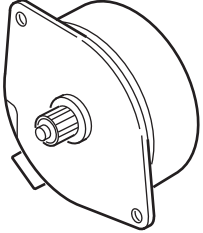
8.1	Resistance value check.....	8-2
8.2	Parts location.....	8-6
8.3	Maintenance board indication stamp.....	8-16



## 8.1 Resistance value check

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
<p>Transport belt motor</p>			<p>Between pin-1 and pin-2 : 3.4 Ω Between pin-3 and pin-4 : 3.4 Ω</p>
<p>ID motor</p>			<p>Across both ends of IP2 : 1 Ω or less</p>

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Fuser unit motor	 <p>IP1</p>		<p>Across both ends of IP1 : 1 Ω or less</p>
Paper feed motor			<p>Between pin-1 and pin-2 : 3.4 Ω                  Between pin-3 and pin-4 : 3.4 Ω</p>

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Duplex print motor	 <p>COLOR OF LEAD    PHR-6 PIN No.    PHR-6 PIN No.    COLOR OF LEAD</p> <p>RED    1 (A)    4 (B)    YELLOW</p> <p>BLUE    3 (A)    6 (B)    WHITE</p>		<p>PHR-6 connector</p> <p>Between pin-1 and pin-3 : 3.2 Ω</p> <p>Between pin-4 and pin-6 : 3.2 Ω</p>
2nd, 3rd and 4th tray paper feed motor			<p>Between pin-1 and pin-2 : 3.4 Ω</p> <p>Between pin-3 and pin-4 : 3.4 Ω</p>

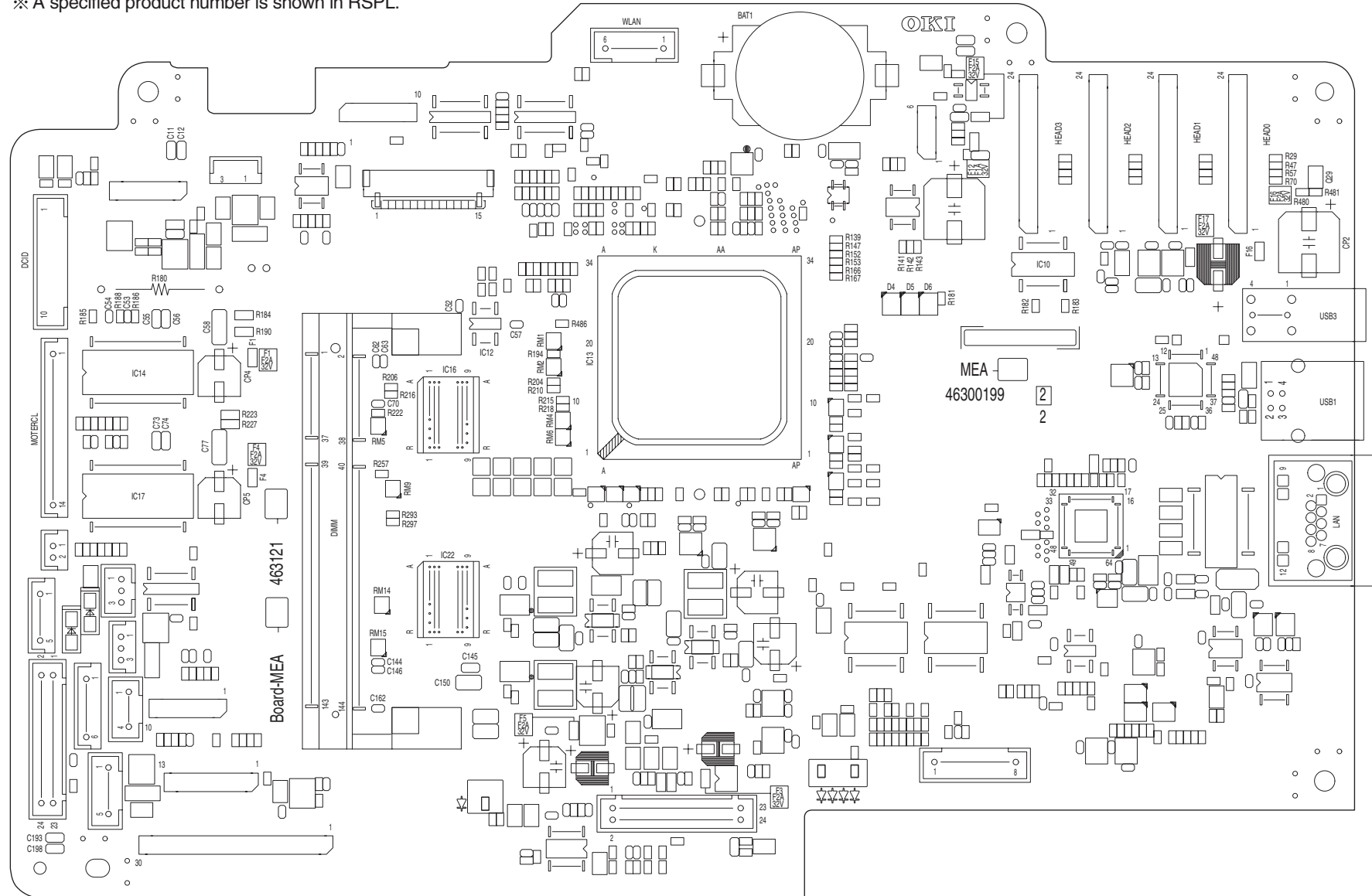
Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Fuser unit	<p>Thermostat Upper (Plate heater) 1200W Lower (Halogen heater) 500W Upper Lower 1 3 2 4 ← 13P-RWZV-K4GG-P4</p> <p>Planar Heater Thermistor (PM5-342) Upper Center Thermistor (PT5-312) CZHR-07V-S 1 A7 2 A6 3 A5 4 A4 5 A3 6 A2 7 A1 13P-RWZV-K4GG-P4</p> <p>Lower Thermistor (PTA7-312) Upper Side Thermistor (PTA7-312) Fuse CZHR-06V-S 1 B6 2 B5 3 B4 4 B3 5 B2 6 B1 13P-RWZV-K4GG-P4</p>	<p>7pin (A7) 6pin (B6) 1 2 3 4</p>	<p>Between pins A-6 and A-7 : Approx. 80.58 kΩ to 53.38 kΩ 0 to 93°C)</p> <p>Between pins A-4 and A-5 : Approx. 104.5 kΩ to 806.5 kΩ (0 to 43°C)</p> <p>Between pins B-5 and B-6 : Approx. 104.5 kΩ to 806.5 kΩ (0 to 43°C)</p> <p>Between pins B-3 and B-4 : Approx. 104.5 kΩ to 806.5 kΩ (0 to 43°C)</p>

# 8.2 Parts location

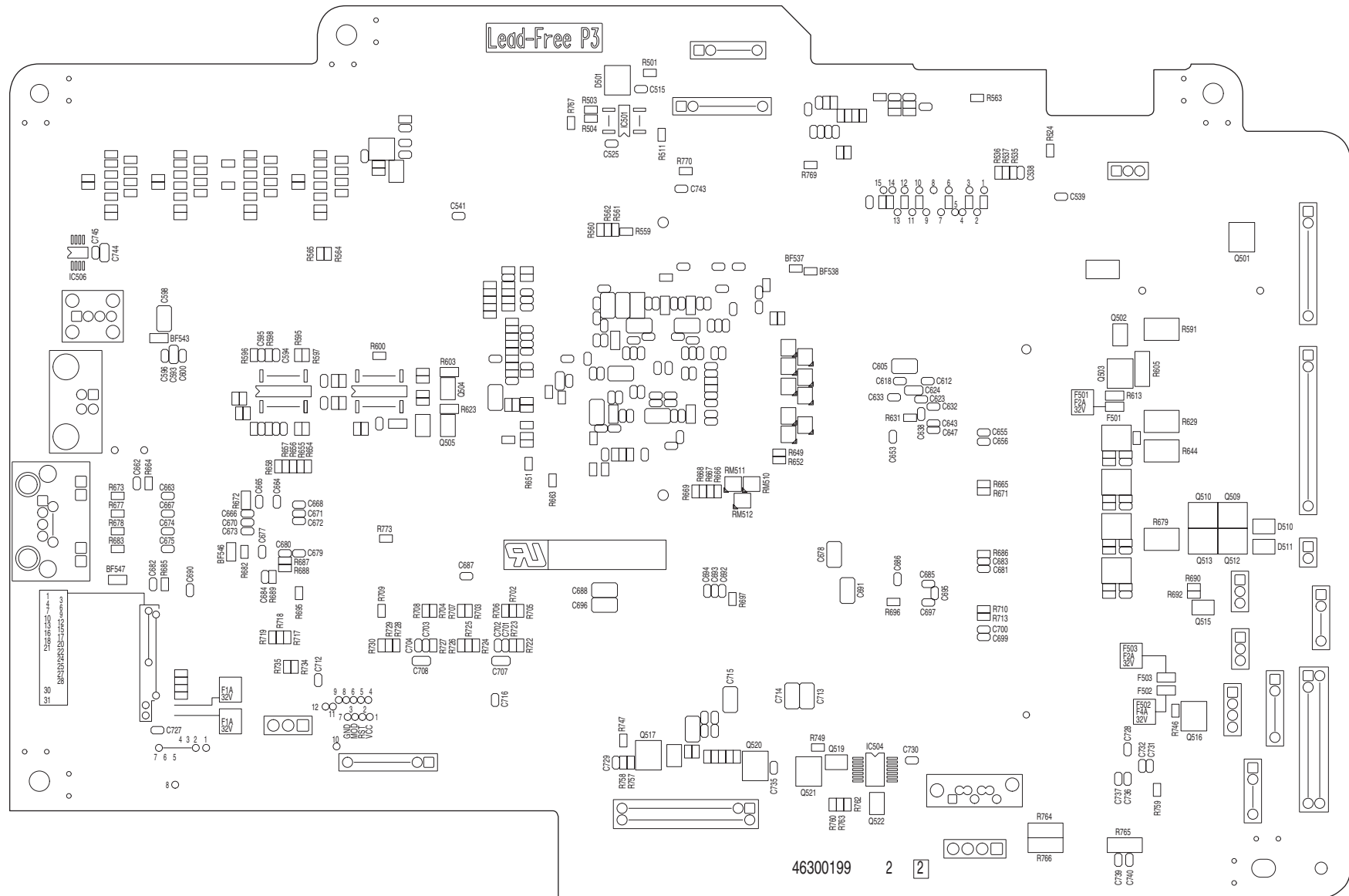
(1) Print Control PCB (PU/CU PCB)

※ A specified product number is shown in RSPL.

Component side

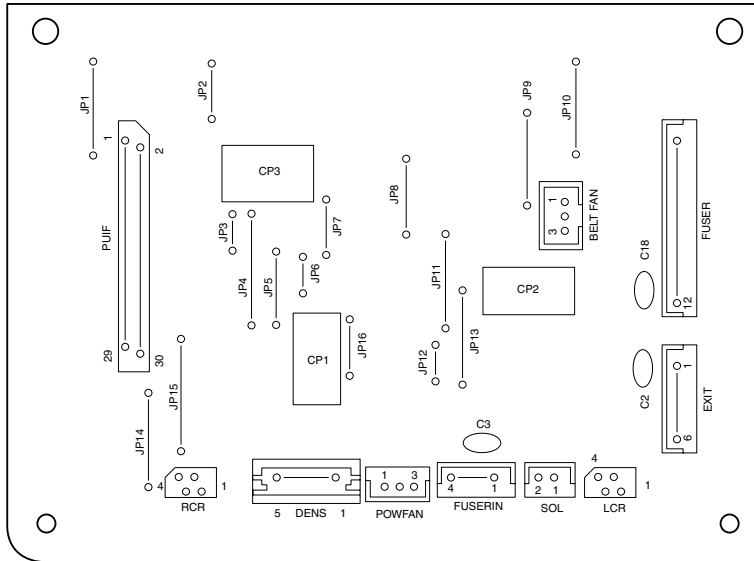


Soldering side

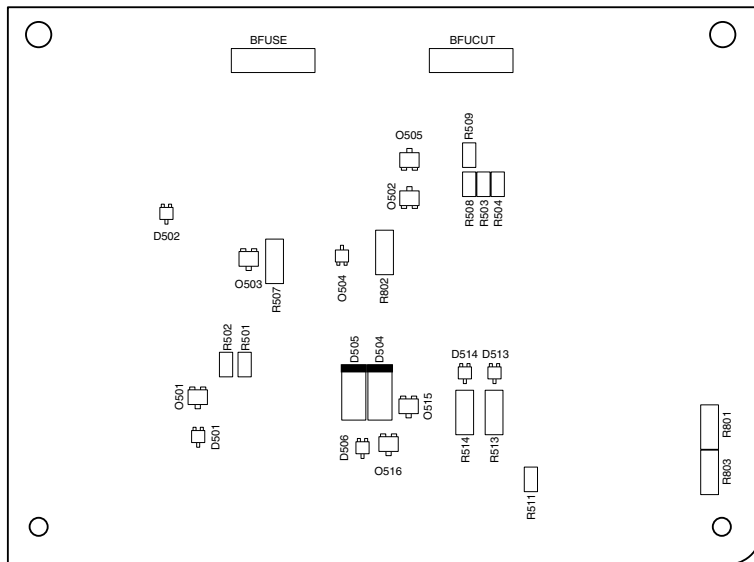


(2) Relay PCB (P6Z PCB)

Component side



Soldering side

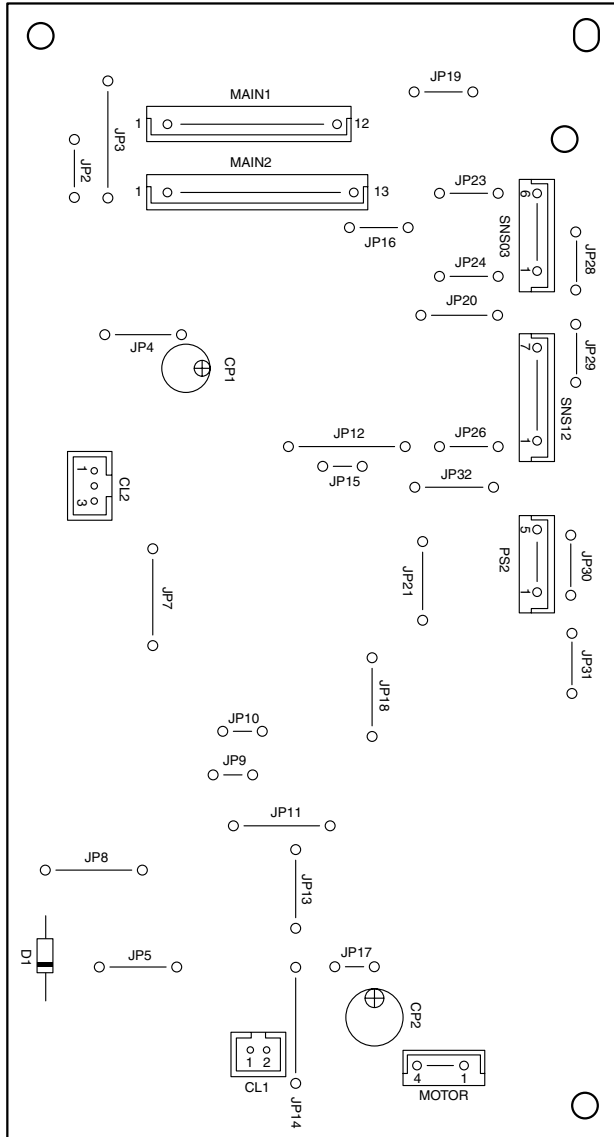




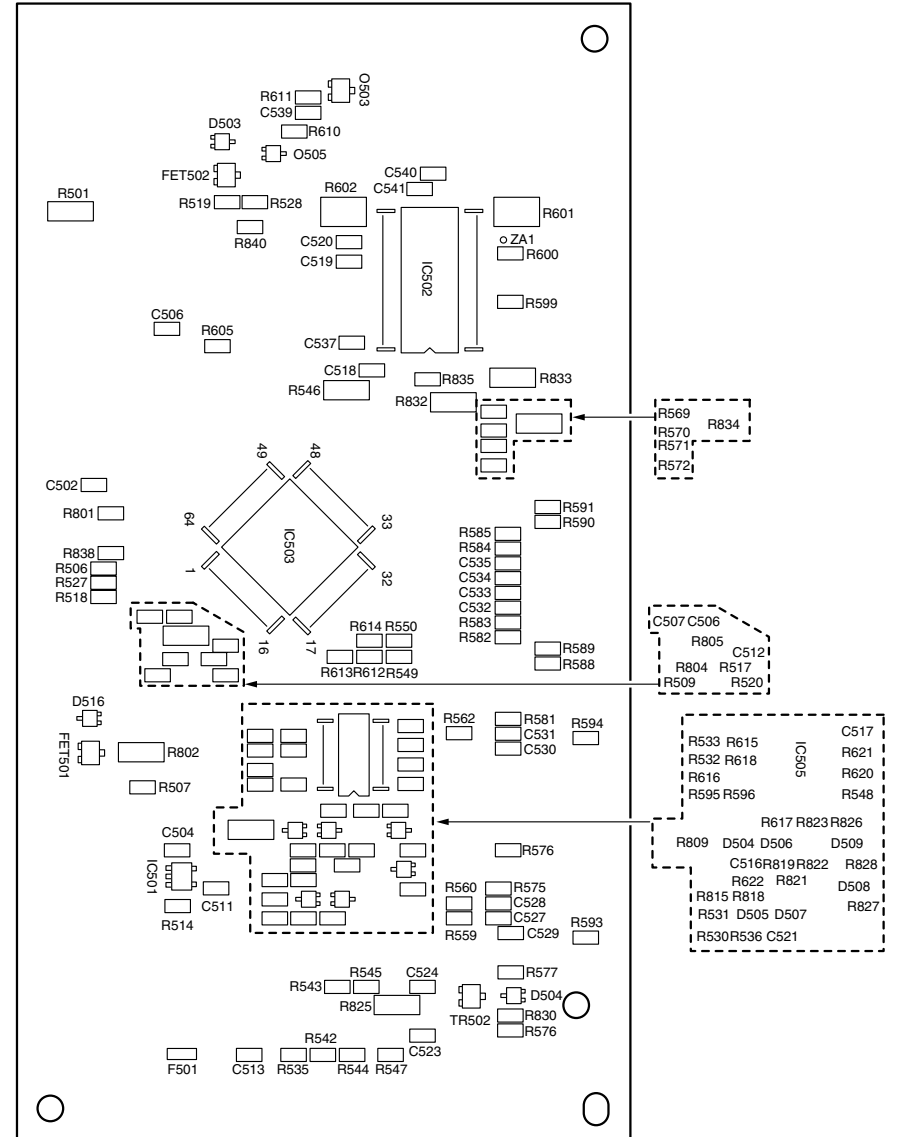


(4) Second tray control PCB (GOH-2PCB)

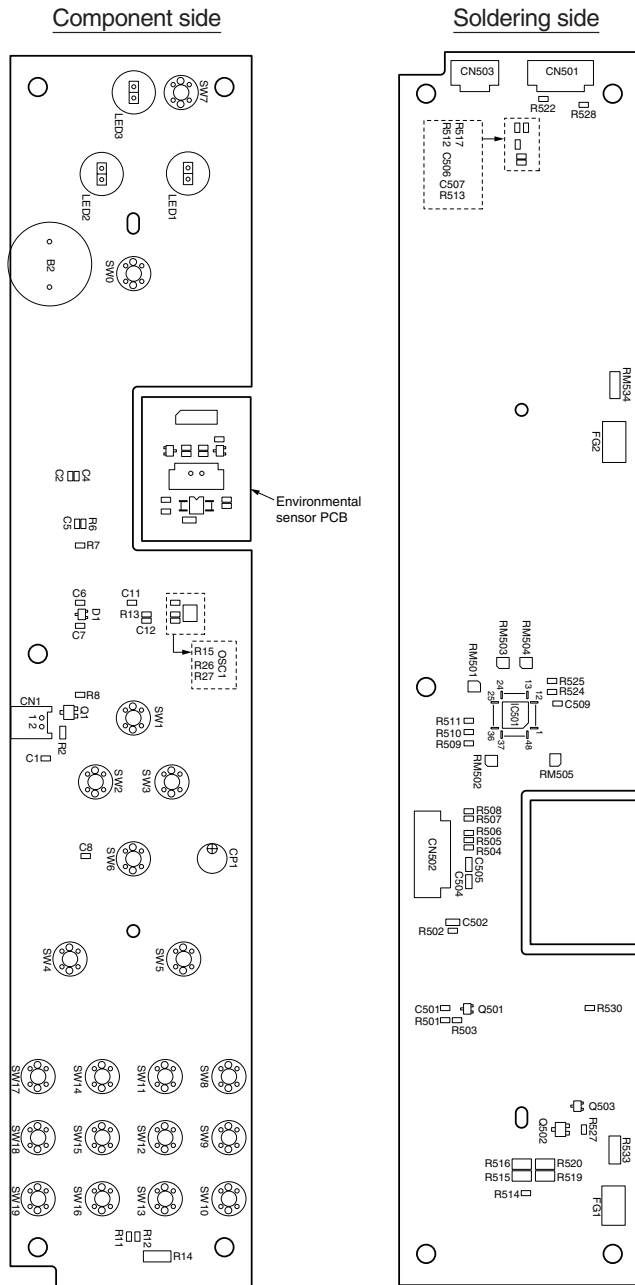
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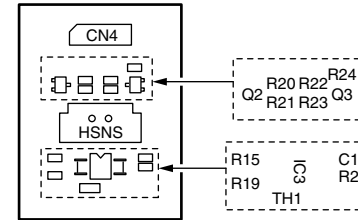
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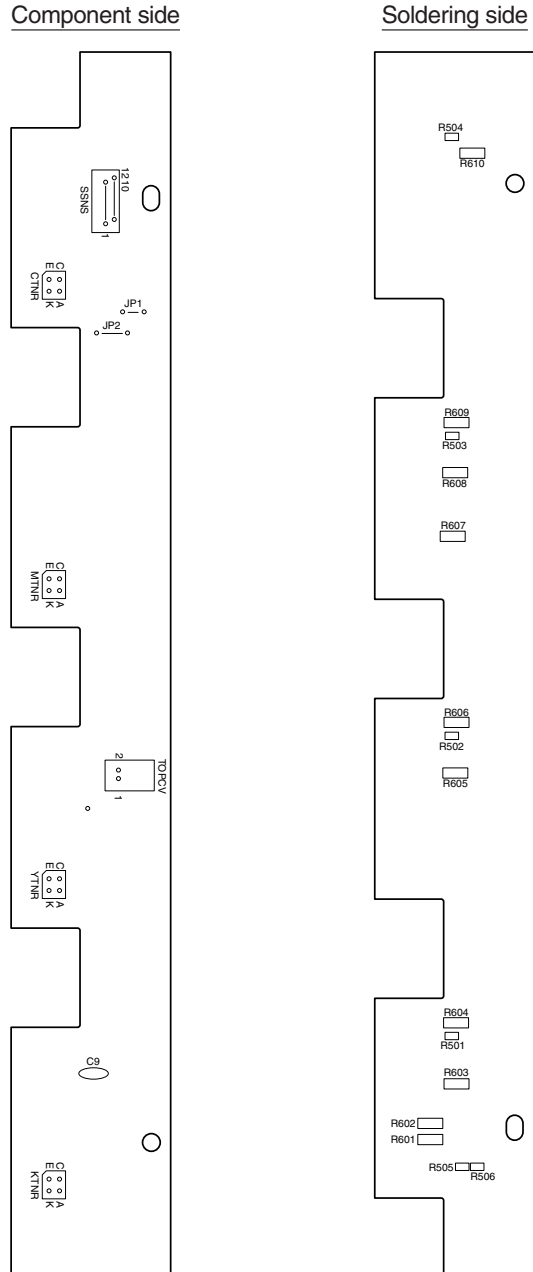
(5) Control panel PCB (PCQ PCB)



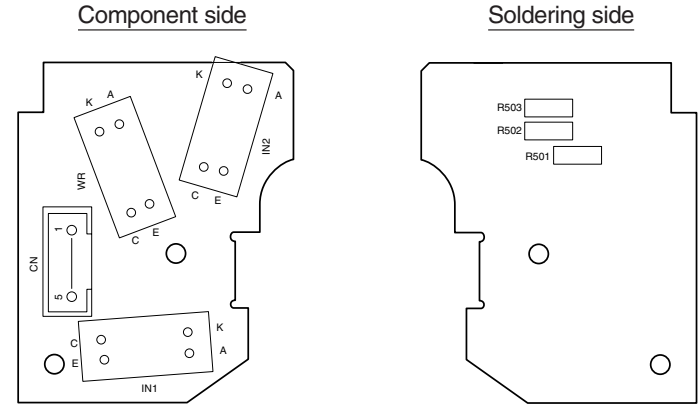
(6) Environmental sensor PCB (enlargement)



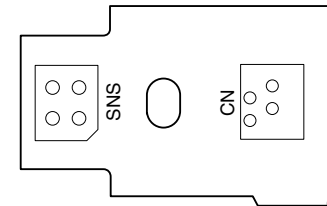
(7) Toner low sensor PCB (TSA PCB)



(8) Entrance sensor PCB (RSG PCB)

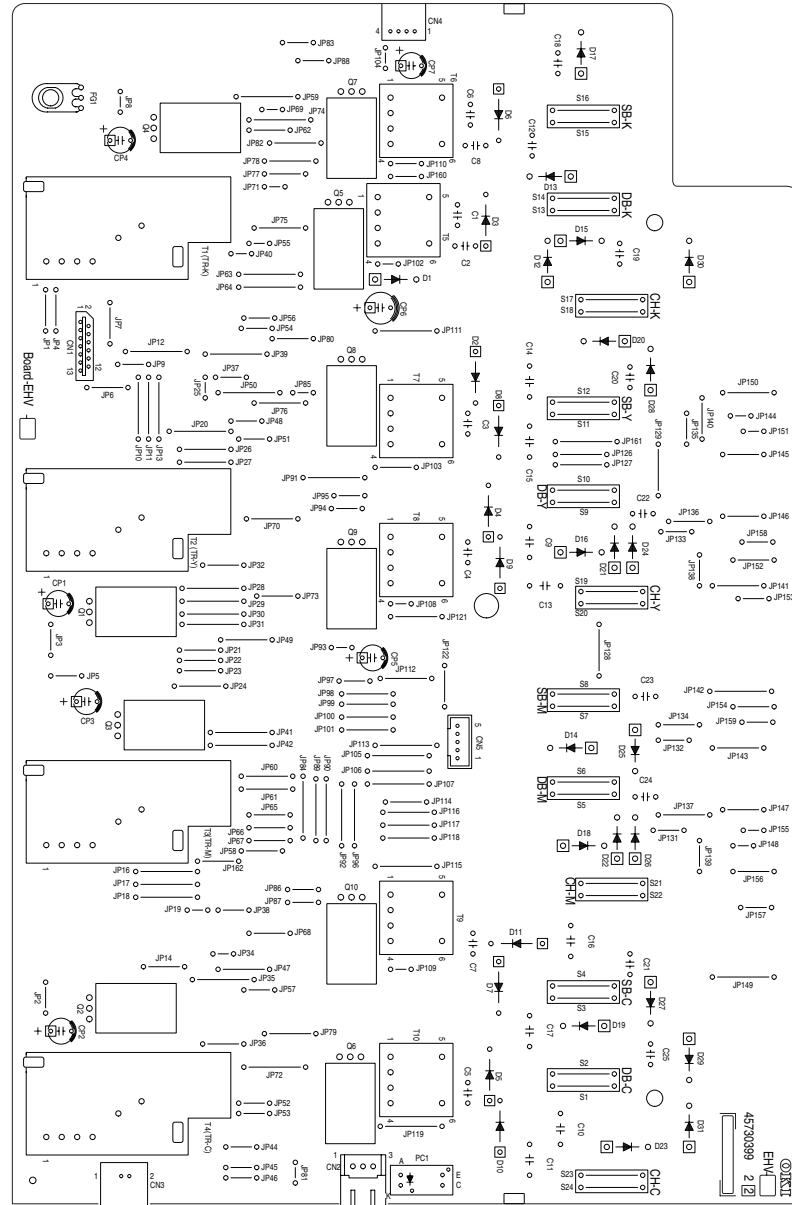


(9) Color adjustment sensor PCB (PRC PCB)

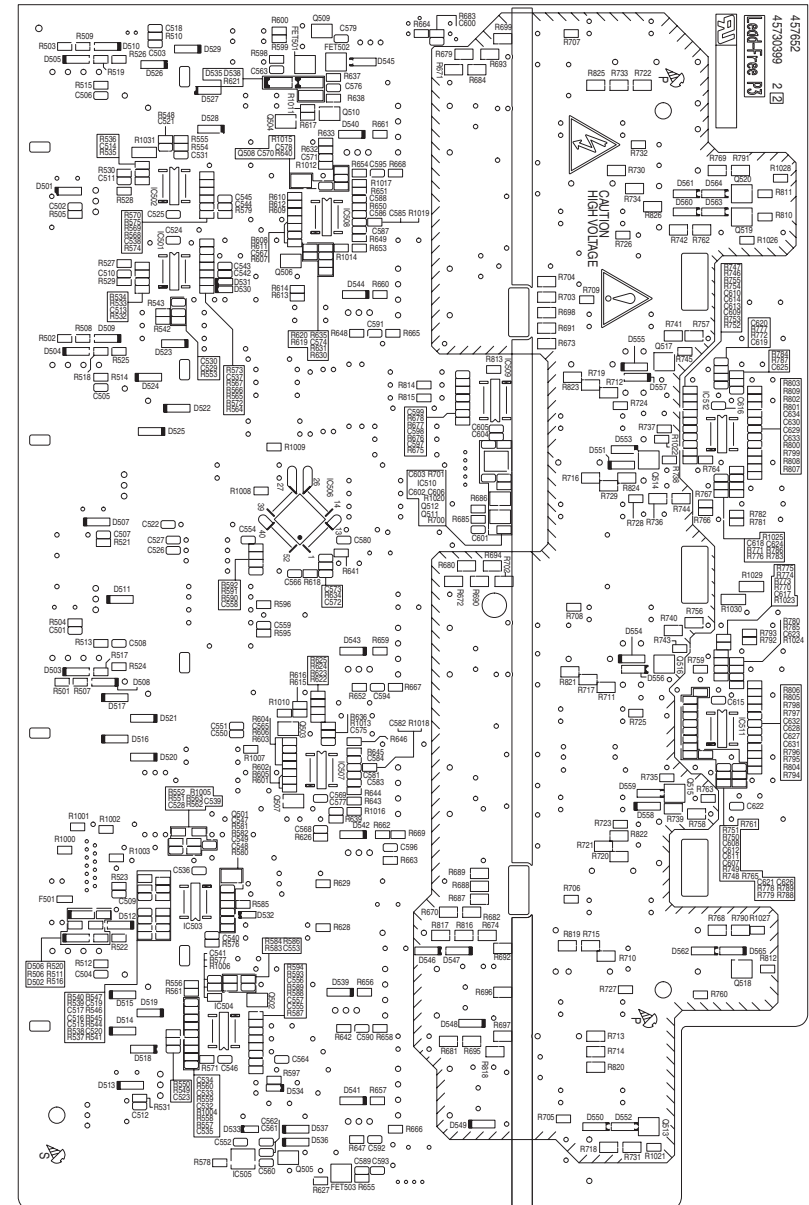


(10) High-Voltage Power Supply PCB

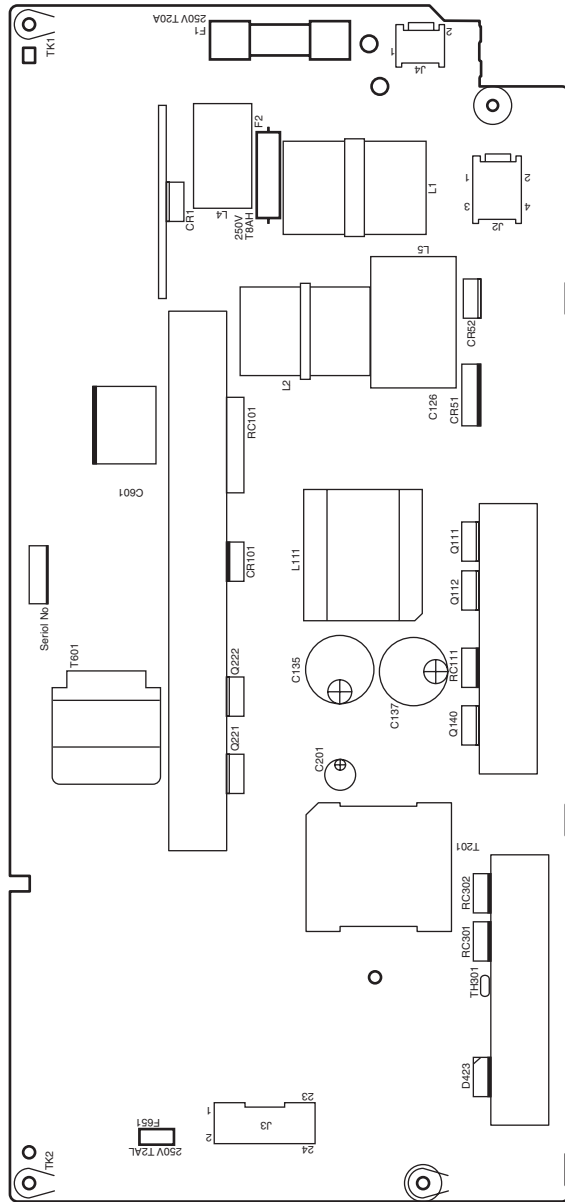
Component side



Soldering side

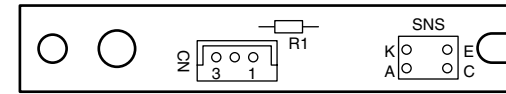


(11) Low-Voltage Power Supply PCB

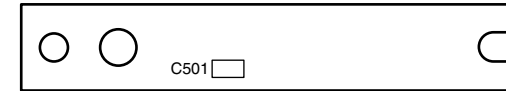


(12) Hopping sensor PCB (HSC PCB)

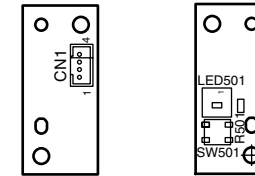
Component side



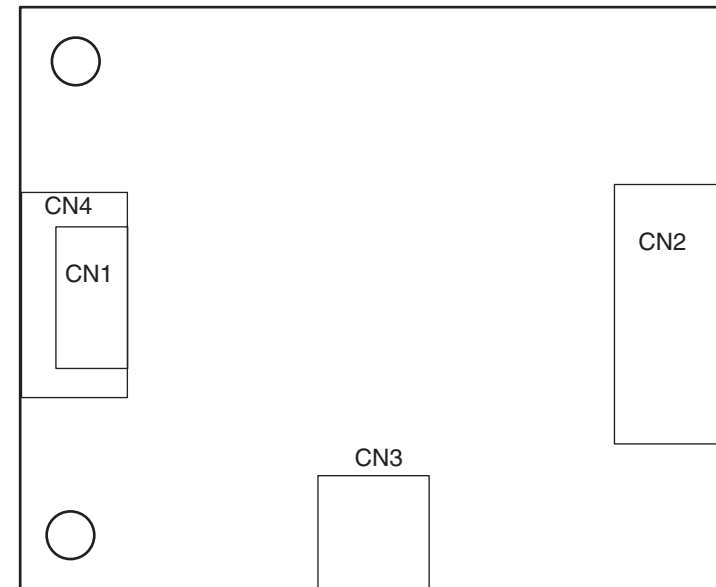
Soldering side



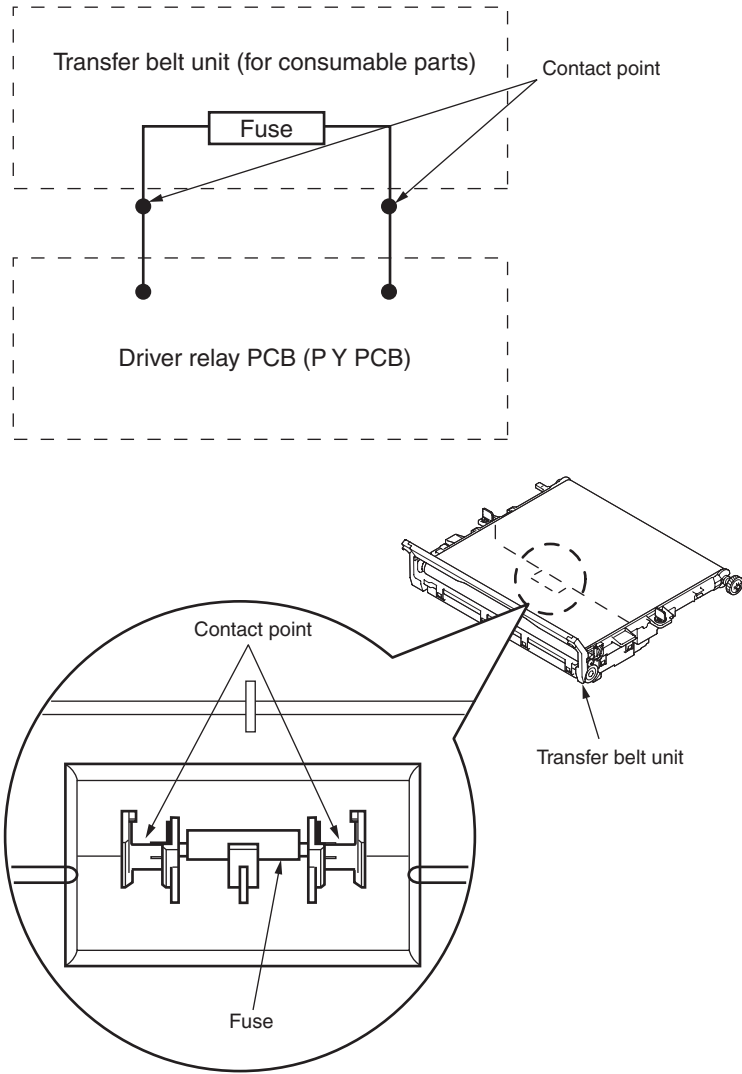
(13) Switch PCB (P6A PCB)



(14) RFID R/W PCB(RFID Read Write System)

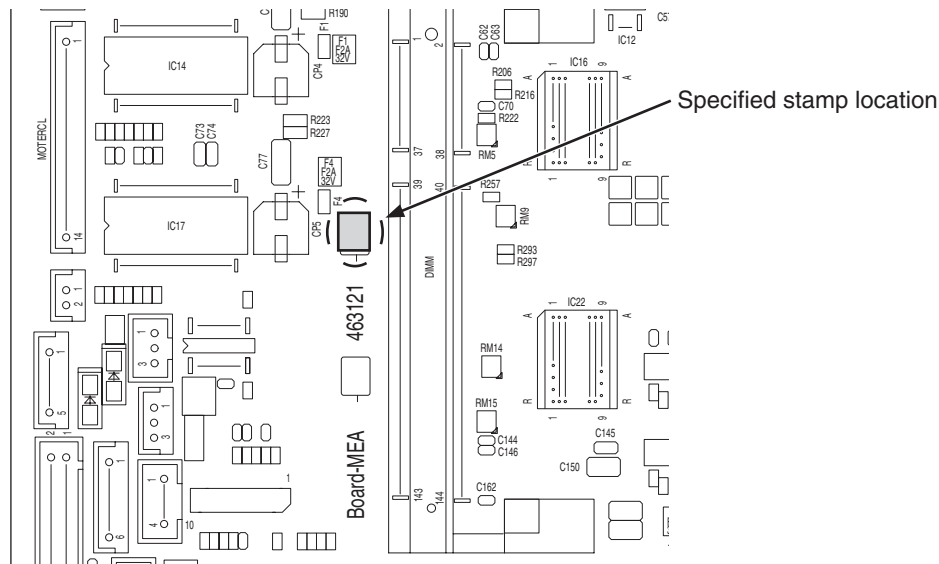


(15) Transfer belt unit



### 8.3 Maintenance board indication stamp

In accordance with the following list, a specified part number is stamped on the maintenance board indication field on CU/PU board.



Series No.	Stamp No. (Maintenance Board Series No.)	Board MEL (YU) Series No.	Use for
04	463121[04]	MEA-1(46300101)	OEL_PX756E(C833n/dn)
05	463121[05]	MEA-1(46300101)	OAU_PX756E(C833n)
06	463121[06]	MEA-1(46300101)	OAU_PX756E(ES8433)
07	463121[07]	MEA-1(46300101)	ODSP_PX756E(C833n)
09	463121[09]	MEA-1(46300101)	OEL_PX756E(ES8433)
12	463121[12]	MEA-1(46300101)	OEL_PX756E(C843n/dn)
16	463121[16]	MEA-1(46300101)	OEL_PX756E(C823n/dn)
18	463121[18]	MEA-1(46300101)	TAIWAN_PX756E(C843dn)
19	463121[19]	MEA-1(46300101)	TAIWAN_PX756E(ES8443)
20	463121[20]	MEA-1(46300101)	OSKR_PX756E(C843n)
22	463121[22]	MEA-2(46300102)	ODBJ_PX756E(C833dn)
23	463121[23]	MEA-2(46300102)	ODBJ_PX756E(C833dnl)
24	463121[24]	MEA-1(46300101)	OSKR_PX756E(C833n)
25	463121[25]	MEA-1(46300101)	OEL_PX756E(C813n)
26	463121[26]	MEA-3(46300103)	ODNA_PX756W(Pro8432WT)
27	463121[27]	MEA-3(46300103)	OEL_PX756W(Pro8432WT)