OKI
PRINTING SOLUTIONS

MC873dn / ES8473 MFP
Maintenance Manual

041315A

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http://www.okiprintingsolutions.com

PREFACE

This manual provides an overview of method for maintaining the MC853/MC873/ES8453/ES8473.

This manual is intended for maintenance staff. For more detail informations about how to operate these apparatus, please refer to each of these User 's manuals.

For the description of principle about these apparatus, refer to the document written in the table of the Related drawings on the cover of this document.

Note!
- Manual may be revised and updated at any time without notice.
- Unexpected mistakes may exist in the manual.
  OKI will not assume any responsibility whatsoever for damage to the equipmentrepaired/adjusted/changed by the user etc with this manual.
- The parts used for this apparatus may be damaged when handling inappropriately. We strongly recommend maintaining these apparatus by our registration maintenance staff.
- Please operate the machine after removing 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 Scanner board (Board-6SU). 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

1. CONFIGURATION

1.1 System configuration

System Configurations of the MFP Unit.

The system configuration of this product is shown in Figure 1-1

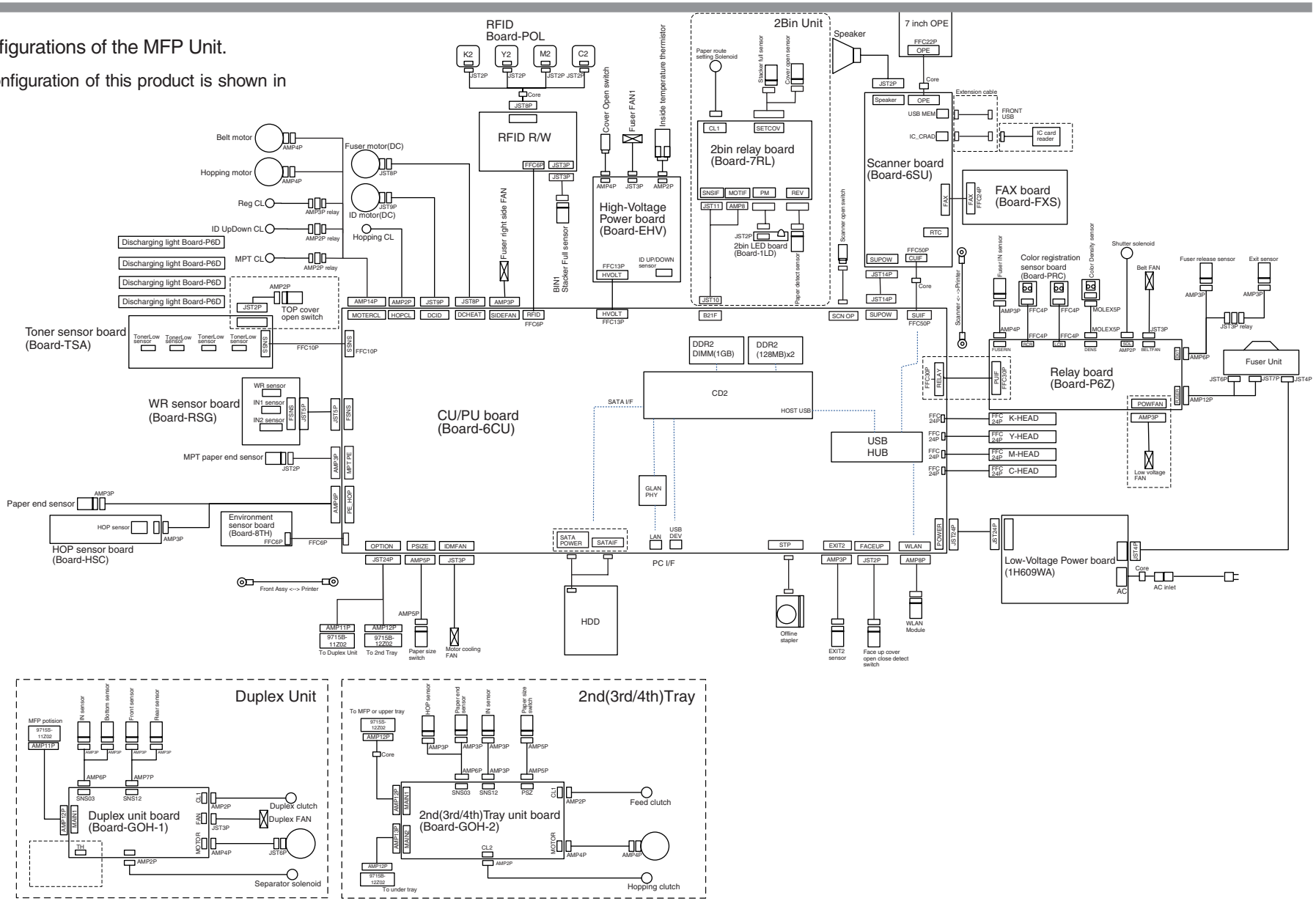


Figure 1-1-1 (Printing Section side)

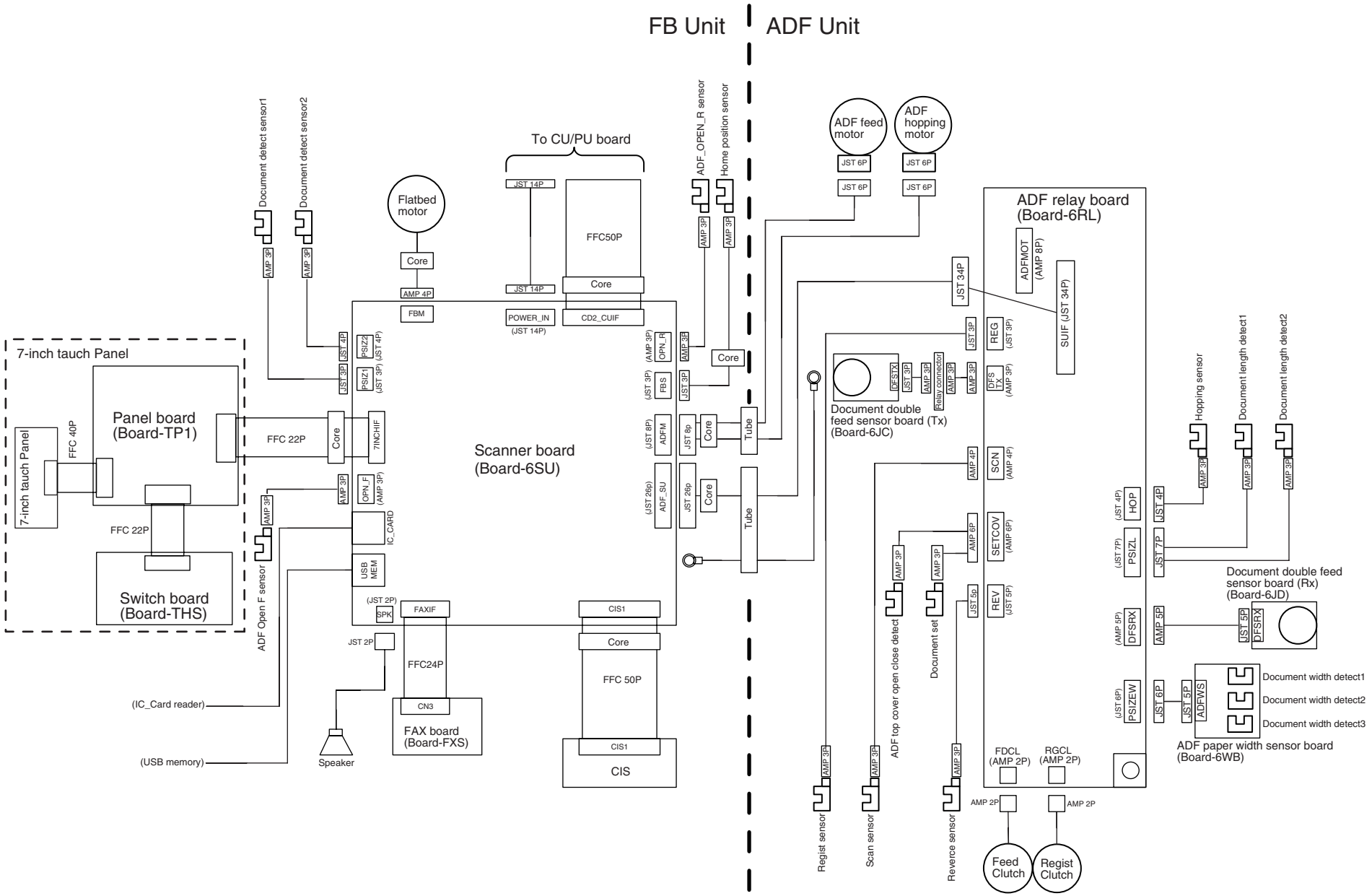


Figure 1-1-2 (Scanning Section side)

1.2 Structure of MFP

The insides of multi function printers are composed of the following parts.

- Scanner part
- Electronic photography process part
- Paper path
- Duplex part
- 2bin part
- Control part (CU part / PU part)
- Power supply parts (high voltage part/low voltage part)

Figure 1-2 shows the composition of the MFP.

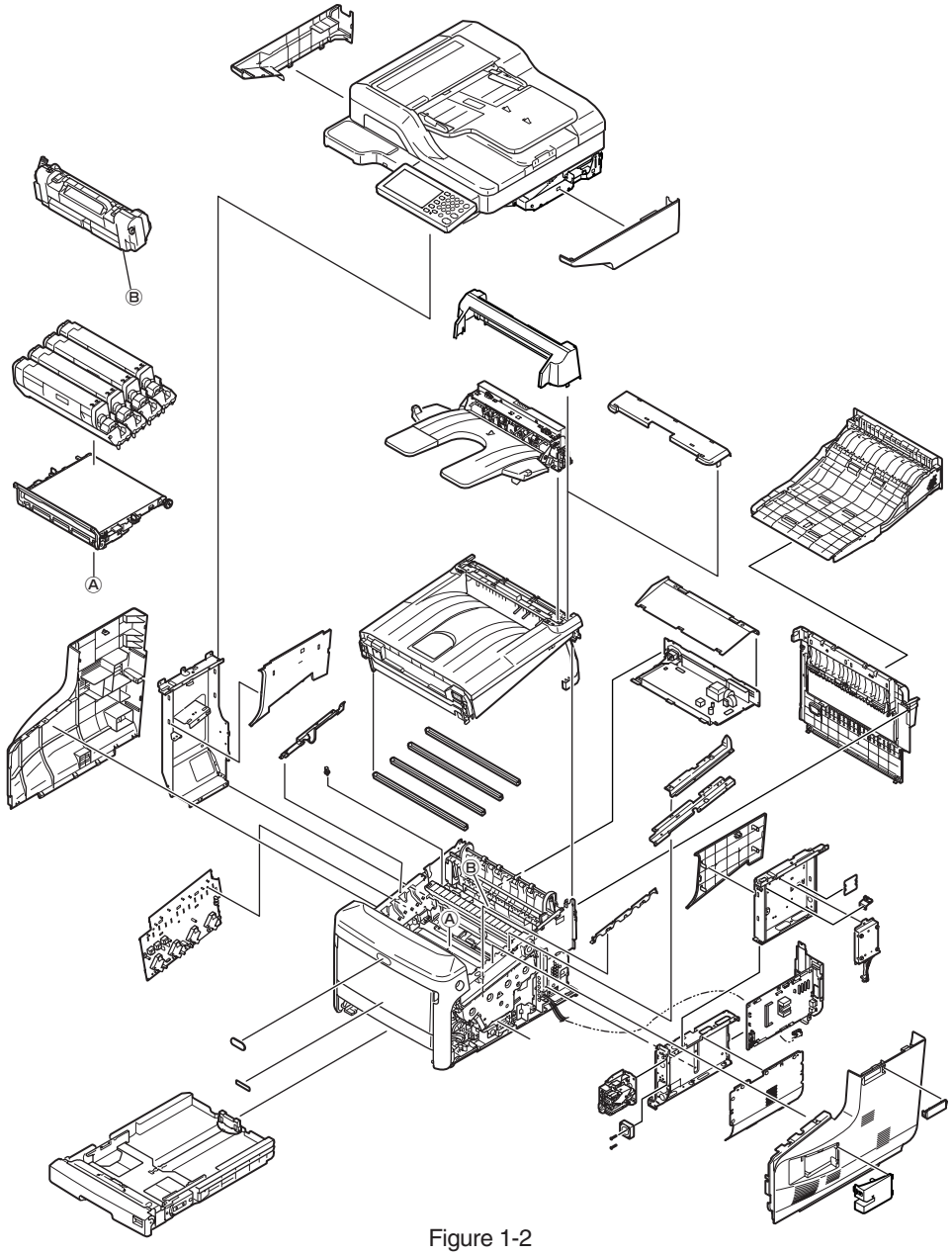


Figure 1-2

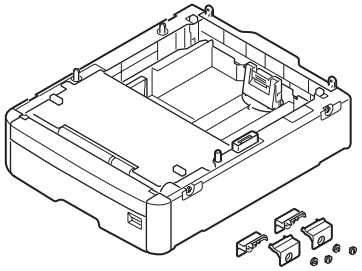
1.3 Offer of Options

This product can be installed with the following option.

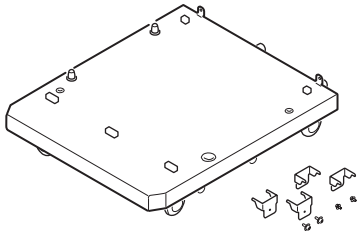
* Check the usable option unit at each setting locations, because those are different according to the sales location.

(1) Additionanl Tray

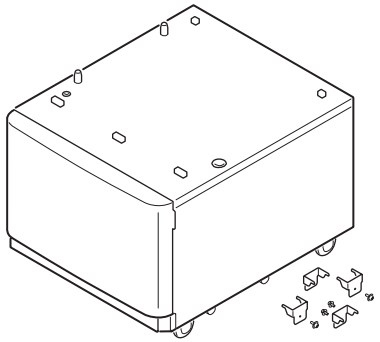
(1-1) Additionanl Tray Unit (max mountable number: 3)



(1-2) Caster Base



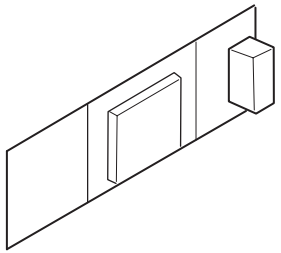
(1-3) Cabinet



*The assembling pattern of the Additional Tray, the caster base and the cabinet should be as the following table.

No.	Assemblable pattern (*: essential for to assemble)					Notes
	Additional Tray			Caster Base	Cabinet	
	2nd-Tray	3rd-Tray	4th-Tray			
1	—	—	—	—	✓	
2	✓	—	—	—	✓	
3	✓	✓	—	✓	—	
4	✓	✓	✓	✓	—	

(2) Wireless LAN module



Note! Refer to a set-up guide, that is packed together with the Wireless LAN module.

1.4 Specifications

Print specifications

Item		MC853/ES8453	MC873/ES8473
Segment		Small working Group	
Print speed (simplex)	A4 / Letter	23ppm	35ppm
Print speed (duplex)	A4 / Letter	19ppm	27ppm
Print Width		A3	
Time to First Print		14 sec.	9.5 sec.
Warm-up time from power on		35 sec. or less (w/o calibrations)	
Recovery time from power save	Panel / Scan	7 sec.	
	Print	approx. 27 sec. (DHC off, wireless LAN off)	
Resolution	Head	600dpi (4bit)	
	Maximum Input dpi	600 x 2400dpi	
	Output dpi	600 x 600 dpi x 2bit 600 x 1200 dpi x 1bit 600 x 600 dpi x 1bit	
CPU	Core	PPC464FP	
	Clock	800MHz	
RAM	Resident	DDR2 32bit 1.26GB (256MB(on Board) & 1GB(DIMM Slot)	
	Option	N/A	
ROM		Main 64MB (Program+Font) (I/F control 1MB)	
HDD (Data storage)		2.5" SATA 250GB (STD)	
Connectivity	Standard	10/100/1000Base Ethernet USB 2.0 Device USB 2.0 Host x2 RJ11x2 (Line/Tel)	
	Options	Wireless LAN (IEEE802.11 a/b/g/n)	
Printer Language		PostScript3, PCL5c, PCL6(XL), EPSON FX, IBM ProPrinter, XPS, PDF(v1.x)	

Item		MC853/ES8453	MC873/ES8473
Fonts	Scalable Typefaces	87 PCL fonts, 80 PostScript fonts	
	Bitmap Typefaces	4 PCL fonts (Line Printer, OCR-A/B, USPS ZIP Barcode)	
	Barcode	10 types of one dimension with 26 variations: UPC-A, UPC-E, EAN/JAN-8, EAN/JAN-13, Interleaved2of5, Code39, Code 128, EAN/UCC-128, CODABAR, ZIP+4POSTNET 2 types of two dimensions : PDF417, Qrcode	
Paper Handling		See the table of the paper handling of the print.	
2 Bin		Yes	
Job offset	1 Bin	No	
	2 Bin	No	
Acoustic noise	Operating	54 dBA or less	
	Operating (Quiet mode)	N/A	
	Standby	37dBA or less	
	Power save mode	Background level	
Power consumption	off mode	< 0.15W	
	Deep sleep mode	≦ 3W (Factory default without options)	
	Power save mode	≦ 30W (without options)	
	Idle	< 120W	
	Typical operation	< 850W	
	Peak	< 1400W	
Power Requirment		<Voltage> ODA, Taiwan : 120V AC +/-10% OEL, ODA230, AOS : 230V AC +/-10% <Frequency> 50/60Hz +/-2%	

Item			MC853/ES8453	MC873/ES8473
Operating tempature			10 to 32 (C degree)	
Operating humidity			20 to 80 %	
Operation panel		Type/Color	Color touch panel	
		Size	7 inches WVGA(800x480)	
		Back Light	Yes	
		LED	Power, Power save, Start, Status, Data in memory	
		Switches	Home, Copy, Scan, Print, Fax, Satatus, Numerical(0-9,*,#), Clear, Start, Stop, Power save, Power	
		Soft power switch	operation panel	
Buzzer			Yes (Speaker)	
Dimension (mm/inch)		Width	563mm/22.2"	
		Depth	600mm/23.6"	
		Height	700mm/27.6"	
Weight			Under 64kg	
Printer life			600,000 pages or 5 years	
Max. Monthly Printer duty			50,000 pages	
Recommended Duty Cycle			10,000 pages	
MTBF			5,000 hours	
MPBF			100,000 pages	
MTTR			20 minutes	
Toner life (@ISO/ IEC19798)	Starter		K	MC8x3 : 2,500 pages ES84x3 : 13,600 pages (@5%)
			C, M, Y	MC8x3 : 2,500 pages ES84x3 : 7,800 pages (@5%)
	Supplies	std.	K	MC8x3 : 7,000 pages ES84x3 : None
			C, M, Y	MC8x3 : 7,300 pages ES84x3 : None
		high cap.	K	MC8x3 : 15,000pages, 10,000pages(JPN/ODA only) ES84x3 : 14,600 pages (@5%)
			C, M, Y	MC8x3 : 10,000 pages ES84x3 : 8,800 pages (@5%)
Image drum life at simplex (w/o power save)			Continuous	44,000 pages
			3 pages per job	30,000 pages
			1 page per job	18,000 pages

Item			MC853/ES8453	MC873/ES8473
Image drum life at duplex (w/o power save)			Continuous	33,000pages(16,500sheets)
			6 pages per job	21,000pages(10,500sheets)
			2 pages per job	12,000pages(6,000sheets)
Transfer Belt life			80,000 pages	
Fuser life			100,000 pages	
Print Function		Quiet mode	No	
		Toner save mode	Yes	
		Override A4/Letter	Yes (for Printing)	
		AirPrint	Yes	
		Google Cloud Print	Yes	
		USB direct print	Yes (PDF, JPEG, TIFF, XPS)	
		Secure Print	Yes	
		Encrypt secure Print	Yes	
		IC card reader	Yes	
Remote Firmware update			Yes	
Print Complete Notification			No	
Certification			Energy star (ver.2), Blue Angel	

Copy specifications

Item			MC853/ES8453	MC873/ES8473
Copy Speed (A4 LEF)	Flatbed	Color	up to 23cpm	up to 35cpm
		Mono	up to 23cpm	up to 35cpm
	ADF simplex, multiple originals	Color	up to 23cpm	up to 35cpm
		Mono	up to 23cpm	up to 35cpm
	ADF duplex, multiple originals	Color	up to 17cpm	
		Mono	up to 17cpm	
Time to first copy			(Tray1, Simplex, A4LEF) (Color : 300x300dpi) (Mono : 600x600dpi) Flatbed Color : 14.5sec Flatbed Mono : 14.5sec	(Tray1, Simplex, A4LEF) (Color : 300 x 300dpi) (Mono : 600 x 600dpi) Flatbed Color : 10sec Flatbed Mono : 10sec
Copy resolution		Scan	300x600dpi, 600x600dpi	
		Print	600x600, 600x1200dpi @600dpi HEAD 600x600, 1200x1200dpi @1200dpi HEAD	
		Resolution selection	Normal, Extra Fine (color only)	
Original size			See the table of the paper handling of the scanner	
Copy Scaling			Auto, Manual : 25% to 400%, Preset : 100%, 64%(Tabloid->Letter), 70%(A3->A4,A4->A5,B4->B5), 78%(Legal14->Letter), 81%(B4->A4, B5->A5,Legal13.5->Letter), 84%(Legal13->Letter), 86%(A4->B5), 94%(A4->Letter), 97%(Letter->A4), 98%(Fit to page), 115%(B5->A4), 122%(A4->B4,A5->B5), 129%(Letter->Tabloid,HalfLetter->Letter), 141%(A4->A3,A5->A4,B5->B4)	
Copy Quantity Selectcion			up to 999	
Document type selection			Text, Photo/Text, Photo, Photo(Glossy)	

Item		MC853/ES8453	MC873/ES8473
Image quality adjustment		Density, Background removal [Auto, OFF, 1, 2, 3, 4, 5, 6], Show-Through Removal [OFF, Low, Middle, High], Contrast (7 levels for each menu)	
Copy function	Duplex copy	Yes (1 to 2, 2 to 1, 2 to 2)	
	ID card copy	Yes	
	Collate	Yes	
	Continuous scan	Yes	
	N in 1	Yes (2in1 / 4in1 / 8in1)	
	Repeart	Yes (x2 /x4 /x8)	
	Mixed originals	Yes (comibination of Letter and Legal 13/13.5/14) →(combination of LetterSEF and Legal13/13.5/14, LetterLEF and Tabloid, Statement and Letter/Legal, A4LEF and A3, B5LEF and B4, A5LEF and A4, A4SEF and Folio)	
	Edge erase	Yes (OFF, 2 to 50mm)	
	Center erase	Yes	
	Margin shift	Yes (OFF, -25 to +25mm from left / top)	
	Interrupt Copy(while print job)	Yes	
	Book copy	Yes	
	water mark	Yes	

Scan specifications

Item		MC853/ES8453	MC873/ES8473
Sensor	type	Color CIS	
	Optical resolution	600dpi	
Scan speed	Flatbed	2.0sec/page (A4, Color, 300 x 600dpi) 2.0sec/page (A4, Mono, 600 x 600dpi)	
	ADF Simplex	1.2sec/page (A4, Color, 300 x 600dpi) 1.2sec/page (A4, Mono, 600 x 600dpi)	
	ADF Duplex	3.2sec/page (A4, Color, 300 x 600dpi) 3.2sec/page (A4, Mono, 600 x 600dpi)	
Original size		See paper handling table	
Dual Scan		No	
Scan to Function		Email, Shared folder (CIFS/FTP/HTTP), USB, Computer (Local PC), Remote scan (only network), Inside folder	
Scan to email, network PC, USB	Mode	Color, Grayscale, Binary	
	Resolution	75, 100, 150, 200, 300, 400, 600dpi	
	File format	PDF, Secure PDF, S-TIFF/M-TIFF(RAW/G3/G4 Compressed), JPEG(color, grayscale only), XPS, Hi compression PDF	
	Document type selection	Text, Photo/Text, Photo, Photo(Glossy)	
	Duplex scan	Yes (OFF / Long edge bind/Short edge bind)	
	Continuous scan (Job build)	Yes	
	Image quality adjustment	Density, Background removal[Auto,OFF,1,2,3,4,5,6], Show-Through Removal[OFF,Low,Middle,High], Contrast, Hue, Saturation, RGB	
	Mixed originals	Yes (combination of LetterSEF and Legal13/ 13.5/ 14, LetterLEF and Tabloid, Statement and Letter/Legal, A4LEF and A3, B5LEF and B4, A5LEF and A4)	
	Edge erase	Yes (OFF, 5 to 50mm)	
	Center erase	Yes	
	Scanning Orientation	Yes	
	File compression level	Color / Grayscale : Low / Medium / High Binary : Raw / Medium / High	

Item		MC853/ES8453	MC873/ES8473
Scan to email, network PC, USB	Address book	1,000 locations, 32 group address	
	Scan profile	50 profiles	
	File system (scan to USB)	FAT12, FAT(FAT16), FAT32	
Scan to computer (with Actkey)	Mode	Color, Grayscale, Binary, Halftone	
	Resolution	75, 100, 150, 200, 300, 400, 600dpi	
	File format	PDF(Multi/Single), TIFF(Multi/Single), JPEG, BMP, PCX, GIF, TGA, PNG, WMF, EMF	
Remote scan	Mode	Color, Grayscale, Binary, Halftone	
	Resolution	75, 100, 150, 200, 300, 400, 600, 1200, 2400, 4800, 9600, 19200 dpi, Custom (50 to 600dpi)	
Communication data storage		Yes	
Scan Preview		Yes	

FAX specifications

Item		MC853/ES8453	MC873/ES8473
Connetivity		PSTN, PBX line	
Speed		ITU-T G3 (Super G3) up to 33.6kbps, Approx. 2seconds/page	
Coding method		MH, MR, MMR, JBIG	
Fax memory		8MB (approx. 400pages)	
One-touch dials		40 dials (8 x 5 using Scroll Button)	
Speed dials		1,000 locations, 32 group address	
On hook dial		Yes	
Redial		Yes	
Internet Fax		T.37 simple mode	
Original size		A3, A4, A5, B4, B5, Tabloid, Letter, Legal13/13.5/14, Statement, Folio	
Resolution		Std, Fine, Ex-fine, Photo	
Density control		Yes (7 levels)	
Duplex scan/print		Yes	
Continuous scan		Yes	
Image quality adjustment		Background removal	
FAX function	TEL/TAD/FAX auto switching	Yes	
	Distinctive Ring Detection	Yes	
	Automatic Tray select for Fax print	Yes (A3, A4, A5, B4, B5, Tabloid, Letter, Legal13/ 13.5/ 14, Statement, Folio)	
	Block junk FAX	Yes	
	PC FAX	Yes (sending only)	
	Automated delivery	Yes	
	Edge erase	Yes	
	FAX reception image preview	Yes	
	Multi Poring	No	
	Polling Receive	No	
	Rotation Transmission	Yes	
	F-code	Yes	
	Report	Communication management report (Only transmission / Only reception), Daily report	

Front End Installer specifications

Item	MC853/ES8453	MC873/ES8473
Driver Install	Yes	
Utility Install	Yes	
Language Setting	Yes	
Network Setting	Yes	
Scan To Setting	Yes	
FAX Setting	Yes	

Other specifications

Item		MC853/ES8453	MC873/ES8473
IC card reader for panel unlock & secure print		Yes	
Open-API support		Yes	
Audio Guide		No	
Scan to Box Function Support		Yes	
WiFi Direct Support		No	
Concurrent Connection of Wired & Wireless		No	
SD memory		No	
Additional tray		Yes (See the item 1.3 for the assembly pattern)	
Finisher		No	
Off-line Stapler		Yes	
LCF		No	
FDI		Not Standard (COC correspondence). This machine is prepared On-board (CU board).	
Default Setting	ID: Near Life Warning @A4 one-sided printing at 3 pages per job	MC8x3 model: Enable Near Life Warning, 3,000 pages before life ES84x3 model: Disable Near Life Warning, 500 pages before life when enable	
	Fuser: Near Life Warning @A4 one-sided printing at 3 pages per job	MC8x3 model: Enable Near Life Warning, 2,500 pages before life ES84x3 model: Disable Near Life Warning, 500 pages before life when enable	
	Belt: Near Life Warning @A4 one-sided printing at 3 pages per job	MC8x3 model: Enable Near Life Warning, 2,000 pages before life ES84x3 model: Disable Near Life Warning, 500 pages before life when enable	
Protocol		See the protocol table for detail	

Paper handling

Printer section

< Paper Input >

Tray		Standard			Option	Paper Size Detection/ (Tray1)
		MPT	1st tray	Duplex	2nd tray/ 3rd tray/ 4th tray	
paper input capacity		100 sheets (80gsm)/ 110 sheets (64gsm)	300 sheets (80gsm)/ 330 sheets (64gsm)	-	530 sheets (80gsm)/ 580 sheets (64gsm)	
size	A3 nobi					
	SR A3					
	A3	Yes	Yes	Yes	Yes	Auto
	A4 SEF	Yes	Yes	Yes	Yes	Auto
	A4 LEF	Yes	Yes	Yes	Yes	Auto
	A5 SEF	Yes	Yes	Yes	Yes	Auto
	A5 LEF	Yes	Yes			Auto
	A6 SEF	Yes	Yes			Auto
	A6 LEF					
	B4	Yes	Yes	Yes	Yes	Auto
	B5 SEF	Yes	Yes	Yes	Yes	Auto
	B5 LEF	Yes	Yes	Yes	Yes	Auto
	B6 SEF	Yes	Yes	Yes		Manual
	B6 LEF	Yes				
	B6 Half	Yes				
	Tabloid (11 x 17)	Yes	Yes	Yes	Yes	Auto
	Letter (8.5 x 11)	Yes	Yes	Yes	Yes	Auto
	Letter (11 x 8.5)	Yes	Yes	Yes	Yes	Auto
	Legal 13	Yes	Yes	Yes	Yes	Manual
	Legal 13.5	Yes	Yes	Yes	Yes	Manual
	Legal 14	Yes	Yes	Yes	Yes	Auto*
	Executive(7.25 x 10.5) SEF	Yes	Yes	Yes	Yes	Auto
	Executive(7.25 x 10.5) LEF					
	Statement SEF (5.5 x 8.5)	Yes	Yes			Manual
	Statement LEF (8.5 x 5.5)	Yes				
	8.5"SQ(8.5 x 8.5)	Yes	Yes	Yes	Yes	Manual
	Folio(210 x 330.2)	Yes	Yes	Yes	Yes	Manual
	China 8K(270 x 390)	Yes	Yes	Yes	Yes	Manual
	China 8K(273 x 394)	Yes	Yes	Yes	Yes	Manual
	China 8K(260 x 368)	Yes	Yes	Yes	Yes	Manual
	China 16K(197 x 273) SEF	Yes	Yes	Yes	Yes	Manual
	China 16K(195 x 270) SEF	Yes	Yes	Yes	Yes	Manual
	China 16K(184 x 260) SEF	Yes	Yes	Yes	Yes	Manual
	China 16K (197 x 273) LEF	Yes	Yes	Yes	Yes	Manual
	China 16K (195 x 270) LEF	Yes	Yes	Yes	Yes	Manual
	China 16K (184 x 260) LEF	Yes	Yes	Yes	Yes	Manual
	Index Card(3" x 5")	Yes				
	4" x 6"	Yes				
	5" x 7"	Yes				
	Custom Size	Yes	Yes	Yes	Yes	Manual
	Envelop	C4, C5, LEF, DL LEF, COM-10 LEF				
	Other					
minimum size		64 x 90mm 2.5" x3.5"	105 x 148mm (A6) / 4.1" x 5.8"	128 x 182mm / 5.0" x 7.2"	148 x 182mm / 5.8" x 7.2"	
maximum size		297 x 1,321 mm / 11.7" x 52"	297 x 431.8 mm / 11.7" x 17"	297 x 431.8 mm / 11.7" x 17"	297 x 431.8 mm / 11.7" x 17"	
wight		64 - 256 gsm / 17 - 68lb /	64 - 220 gsm / 17 - 58lb	64 - 220 gsm / 17 - 58lb	64 - 176 gsm / 17 - 47lb	
media type		Plain, Letterhead, Trans-parency, Labels, Bond, Recycled, Card Stock, Rough, Glossy, Usertype	Plain, Letterhead, Bond, Recycled, Card Stock, Rough, Glossy, Usertype			

* Default : Leagal

< Paper output >

Stacker		Face up	Face down	
			1st bin	2nd bin
Paper output Capacity		100 sheets (<80gsm)	200 sheets (<80gsm)	100 sheets (<80gsm)
size	A3 nobi			
	SR A3			
	A3	Yes	Yes	Yes
	A4 SEF	Yes	Yes	Yes
	A4 LEF	Yes	Yes	Yes
	A5 SEF	Yes	Yes	Yes
	A5 LEF	Yes	Yes	
	A6 SEF	Yes	Yes	
	A6 LEF			
	B4	Yes	Yes	Yes
	B5 SEF	Yes	Yes	Yes
	B5 LEF	Yes	Yes	Yes
	B6 SEF	Yes	Yes	
	B6 LEF	Yes		
	B6 Half	Yes		
	Tabloid (11 x 17)	Yes	Yes	Yes
	Letter (8.5 x 11)	Yes	Yes	Yes
	Letter (11 x 8.5)	Yes	Yes	Yes
	Legal13	Yes	Yes	Yes
	Legal13.5	Yes	Yes	Yes
	Legal14	Yes	Yes	Yes
	Executive(7.25 x 10.5) SEF	Yes	Yes	Yes
	Executive(7.25 x 10.5) LEF	Yes	Yes	Yes
	Statement SEF (5.5 x 8.5)	Yes	Yes	Yes
	Statement LEF (8.5 x 5.5)	Yes		
	8.5"SQ(8.5 x 8.5)	Yes	Yes	Yes
	Folio(210 x 330.2)	Yes	Yes	Yes
	China 8K(270 x 390)	Yes	Yes	Yes
	China 8K(273 x 394)	Yes	Yes	Yes
	China 8K(260 x 368)	Yes	Yes	Yes
	China 16K(197 x 273) SEF	Yes	Yes	Yes
	China 16K(195 x 270) SEF	Yes	Yes	Yes
	China 16K(184 x 260) SEF	Yes	Yes	Yes
	China 16K (197 x 273) LEF	Yes	Yes	Yes
	China 16K (195 x 270) LEF	Yes	Yes	Yes
	China 16K (184 x 260) LEF	Yes	Yes	Yes
	3" x 5"	Yes		
	4" x 6"	Yes	Yes	
	5" x 7"	Yes	Yes	
	Custom Size	Yes	Yes	Yes
	Envelop	Yes		
	Other	Postcard Banner up to 52"		
minimum size		64 x 90mm/ 2.5" x3.5"	105 x 148mm (A6)/ 4.1" x 5.8"	148 x 182mm/ 5.8" x 7.2"
maximum size		297 x 1,321mm / 11.7" x 52"	297 x 431.8mm/ 11.7" x 17"	297 x 431.8mm/ 11.7" x 17"
weight		64 - 256gsm/ 17 - 68lb	64 - 220gsm/ 17 - 58lb	64 - 220gsm/ 17 - 58lb
media type		Plain, Letterhead, Trans-parency, Labels, Bond, Recycled, Card Stock, Rough, Glossy, Usertype	Plain, Letterhead, Bond, Recycled, Card Stock, Rough, Glossy, Usertype	

Scanner section

< Document Paper Input >

		RADF			Flatbed	
		Simplex	Duplex	Paper Size Detection	on glass	Paper Size Detection
max inpput capacity		100 sheet (80gsm)	100 sheet (80gsm)		-	
size	A3 nobi					
	SR A3					
	A3	Yes	Yes	Auto	Yes	Auto
	A4 SEF	Yes	Yes	Auto	Yes	Auto
	A4 LEF	Yes	Yes	Auto	Yes	Auto
	A5 SEF	Yes	Yes	Auto	Yes	Auto
	A5 LEF	Yes		Auto	Yes	Auto
	A6 SEF	Yes		Auto	Yes	Auto
	A6 LEF					
	B4	Yes	Yes	Auto	Yes	Auto
	B5 SEF	Yes	Yes	Auto	Yes	Auto
	B5 LEF	Yes		Auto	Yes	Auto
	B6 SEF					
	B6 LEF					
	B6 Half					
	Tabloid (11 x 17)	Yes	Yes	Auto	Yes	Auto
	Letter (8.5 x 11)	Yes	Yes	Auto	Yes	Auto
	Letter (11 x 8.5)	Yes	Yes	Auto	Yes	Auto
	Legal13	Yes	Yes	Manual	Yes	Manual
	Legal13.5	Yes	Yes	Manual	Yes	Manual
	Legal14	Yes	Yes	Auto	Yes	Auto
	Executive(7.25 x 10.5) SEF	Yes	Yes	Manual	Yes	Auto
	Executive(7.25 x 10.5) LEF					
	Statement SEF (5.5 x 8.5)	Yes	Yes	Auto	Yes	Auto
	Statement LEF (8.5 x 5.5)	Yes		Manual	Yes	Manual
	8.5"SQ(8.5 x 8.5)	Yes	Yes	Manual	Yes	Manual
	Folio(210 x 330.2)	Yes	Yes	Auto	Yes	Auto
	China 8K(270 x 390)					
	China 8K(273 x 394)					
	China 8K(260 x 368)					
	China 16K(197 x 273)					
	China 16K(195 x 270)					

		RADF			Flatbed	
		Simplex	Duplex	Paper Size Detection	on glass	Paper Size Detection
size	China 16K(184 x 260)					
	China 16K (197 x 273) LEF					
	China 16K (195 x 270) LEF					
	China 16K (184 x 260) LEF					
	3" x 5"					
	4" x 6"					
	5" x 7"					
	Custom Size					
	Envelop					
	Others					
minimum size		105 x 148 mm (A6)/ 4.1" x 5.8"	148 x 210 mm (A5)/ 5.8" x 8.3"		No limitation	
maximum size		297 x 431.8mm/ 11.7" x 17"	297 x 431.8mm/ 11.7" x 17"		297 x 431.8mm/ 11.7" x 17"	
weight		60 - 120gsm/ 16 - 32lb	60 - 120gsm/ 16 - 32lb		Under 15kg weight on the platen glass	

Memo :Under the setting of 'detecting document size' is 'AUTO', the detectable document size is defferent by the set category setting for the species of the detecting document size.
In case of the setting is 'AB' descent: the auto detect function is able to detect the size of 'A3' to 'B5-LEF' and Folio.
In case of the setting is 'LT' descent: the auto detect function is able to detect the size of 'Tabloid' to 'Statement-LEF'.

< Protocol >

Protocol	for all
TCP/IPv4&v6	Yes
NetBEUI	No
NetBIOS over TCP	Yes
NetWare	No
EtherTalk	No
DHCP	Yes
DHCPv6	Yes
BOOTP	Yes
HTTP	Yes
HTTPS	Yes
DNS	Yes
DDNS	Yes
WINS	Yes
UPNP	Yes
Bonjour.	Yes
SMTP	Yes
POP3	Yes
SNMPv1&v3	Yes
SNTP	Yes
IPP	Yes
IPPS	Yes
WSD Print	Yes
WSD Scan	Yes
LLTD	Yes
IEEE802.1X	Yes
LPR	Yes
Port9100	Yes
Telnet	Yes
FTP	Yes
IPSec	Yes
Secure Protocol Server	Yes
LDAP	Yes
LDAPS	Yes
CIFS	Yes
FTP	Yes
FTPS	Yes

Protocol	for all
SMTP	Yes
SMTPS	Yes
AirPrint	Yes
Google Cloud Print	Yes
WLAN 802.11bgn	No
WLAN 802.11abgn	Yes
WEP	Yes*
WPA	Yes*
WPA2	Yes
Personal	Yes
Enterprise	Yes

* it is intended to release on web in October 2015 (included in FW update)

1.5 Interface specifications

1.5.1 USB Interface Specification

1.5.1.1 Outline of USB Interface

(1) Basic Specification

USB

(2) Transmission Mode

Hi speed (480Mbps±0.05% max.)

(3) Power Control

Self power device

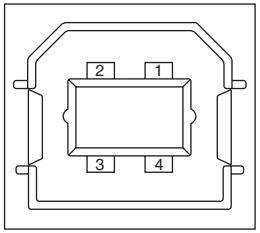
1.5.1.2 USB Interface Connector and Cable

(1) Connector (female)

• Printer side: B receptacle

Upstream port

Equivalent of UBR24-4K5C00 (made by ACON)



Connector pin arrangement

• Cable side: B plug (male)

(2) Cable

Cable length : Specification Cable of USB2.0 spec. of less than 5m.(less than 2m is recommended)

1.5.1.3 USB Interface Signal

	Name of Single	Function
1	Vbus	Power Supply (+5V)(red)
2	D -	Data transmission (white)
3	D +	Data transmission (green)
4	GND	Single ground (black)
Shell	Shield	

1.5.2 Network Interface Specification

1.5.2.1 Outline of Network Interface

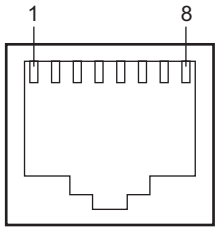
Refer to the contents of 1.4 Specifications.

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 Telephone Line Interface Specification

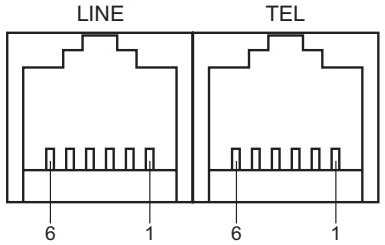
1.5.3.1 Outline of telephone Line Interface

The machine will reliably communicate with distant stations over voice-level telephone line.

1.5.3.2 Telephone Line Interface Connector and Cable

Connector Type : RJ-11
Cable Type : TEL Cable (With RJ-11 plug)

Connector contact arrengement



1.5.3.3 Telephone Line Interface signal

	Contact No.	Functions
TEL	1	Unspecified
	2	Unspecified
	3	TCP
	4	TCP
	5	Unspecified
	6	Unspecified
LINE	1	Unspecified
	2	Unspecified
	3	TCP
	4	TCP
	5	Unspecified
	6	Unspecified

TCP : Terminal Connection Point

1.5.4 USB Host Interface

1.5.4.1 Outline of USB Host Interface

(1) Basic Specification
USB

(2) Transmission Mode
Hi Speed (480Mbps±0.05% max.)

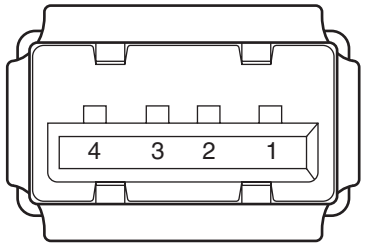
(3) Supply Power
Max. 500mA

(4) Connection devices
USB memory

1.5.4.2 USB Host Interface Connector

USB A plug connector

Equivalent of UBA-4R-D14-4DLF (JST Mfg. Co.,Ltd)



Connector pin arrangement

1.5.4.3 USB Host Interface Signal

	Name of Signal	Function
1	Vbus	Power Supply (+5V)(red)
2	D -	Data transmission (white)
3	D +	Data transmission (green)
4	GND	Single ground (black)
Shell	Shield	

1.5.5 Wireless LAN Interface

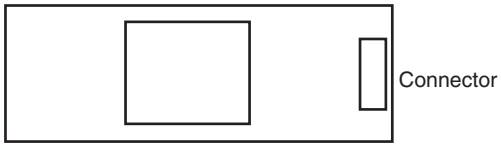
1.5.5.1 Outline of Wireless LAN

(1) Specification

IEEE 802.11 a/b/g/n conformity (2.4GHz / 5GHz)

(2) Power supply voltage

5V



Note! This product cannot connect to a wired LAN and wireless LAN at the same time.

2. TROUBLESHOOTING PROCEDURES

2.1 Precautions prior to repair

(1) Confirm the basic check items indicated in the User's Manual.

(2) Through hearing from the user, obtain information, as far in detail as possible, on the situation concerning the fault.

(3) Inspect the printer in a condition close to the actual situation in which the fault occurred.

2.2 Items to be checked prior to taking action on abnormal images

(1) Check to see if the printer is operated in an adequate environment.

(2) Check to see if the consumables (toner, drum cartridges) are replaced properly.

(3) Check to see if the right paper is used. See the paper specifications.

(4) Check to see if the drum cartridges are installed properly.

2.3 Precautions when taking action on abnormal images

(1) Do not bring your hand or any object in contact with the surface of the OPC drum.

(2) Do not expose the OPC drum to direct sun.

(3) Do not touch the fuser unit, which can be very hot.

(4) Do not expose the image drums to light for over five minutes at the room temperature.

2.4 Preparations for troubleshooting

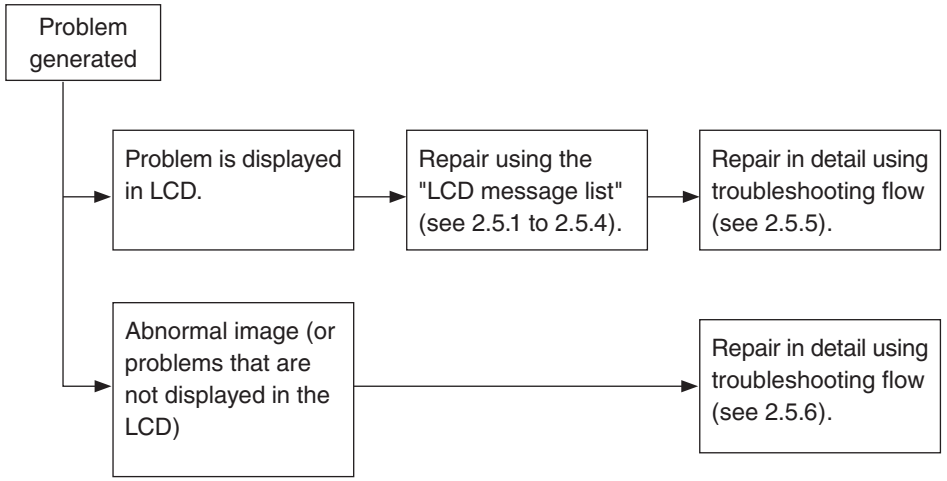
(1) Display of LCD

The breakdown situation of this machine is display in LCD.

Do an appropriate trouble repair based on information displayed in LCD.

2.5 Troubleshooting method

If a trouble occurs in the printer, search for it by the following procedure:



2.5.1 Panel messages list

Initializing & Information

No.	Category	PJL Status Code	Panel messages	Description
1	Initializing	-	Menu Resetting	Indicates that EEPROM of the controller side is being reset. The condition that EEPROM is reset includes the followings. - Changes of CU ROM (when disagreement of CU F/W version is detected) - Changes of destination channel - Compulsive initialization of EEPROM ("Service Menu"-"System Maintenance"-"ALL RESET") - OEM set of PJL command - Reset by a FactoryDefaults operator of PS
2	Initializing	-	Wait a moment. Network initializing ...	The network is in initializing. If this status occurred during the unit initialinzing the message is displayed by English.
3	Initializing	-	Flash Memory Format	Displays that Flash memory is being formatted. It is displayed it when Resident/Option Flash memory not fomented are detected, or "Service Menu"-"System Maintenance"-"Format Flash Memory" of a system maintenance menu is performed. The function mentioned above is secret to users. Therefore, this status does not occur in a user environment.
4	Initializing	-	Checking File System	Displays that HDD file system is being checked. Process Check of File System is valid to start from "Management"-"Storage Maintenance Setup" of Admin Setup Menu, or "Check File System" of Boot Menu.
5	Initializing	-	Erasing Disk %PERCENT%%	Indicates that the hard disk is being erased. Erase process of the hard disk is valid to start from "Management"-"Storage Maintenance Setup"-"Erase SD Memory Card " of Admin Setup Menu.

No.	Category	PJL Status Code	Panel messages	Description
6	Initializing	-	Inspection is required. PU Flash Error	It is shown that PU firmware has booted in Loader mode. If initialization is completed, it will change to the status of no.7. This status may occur also in a user environment. When it occurs, the maintenance by a maintenance member is required (equivalent to S/C). Communication error occurred between CU and PU. PU firmware may not be downloaded.
7	Initializing	-	Inspection is required. PU Communication Error	Displays that communication to PU firmware failed. This status may occur also in a user environment. When it occurs, the maintenance by a maintenance member is required (equivalent to S/C). If this status occurred during the unit initialinzing the message is displayed by English.
8	Initializing	-	Status Mode	Displays that normal Online mode starts. Data (Job) from an external portion is processed even though an error takes place after Online (ready) state once this mode starts. Displays Error or Warning on a panel. This function is secret to users. Therefore, this status does not occur in a user environment.
9	Initializing	-		Indicates that it is initializing of scanner. This message isdisplayed that mirror position initialization at the time of power-on scanner is starting.

No.	Category	PJL Status Code	Panel messages	Description
10	Initializing	-	%STORAGE% Error: %ERRCODE% To %STORAGE% format, select [Format] To shut down, select [Cancel]	%ERRCODE%: 0 Indicates that the unformated Storage is detected during the initializing. %ERRCODE%: 250 Indicates that machine detected broken file about secure print. Needs to format once again. [Format] pressed, Storage format is started and the unit is rebooted automalically. [Cancel] pressed, the unit is shut down. ---------- The following is changed by a status parameter. %STORAGE%: HDD %ERRCODE%: Error Code
11	Information	-	%TRADEMARK%	Indicates that the new consumable (toner). This status should be appeared at detecting the new consumable (toner), and be disappeared automatically after 3 seconds. %TRADEMARK% is contained in the consumable tag.
12	Information	-		Indicating that printer/MFP received the command for identifying printer from AirPrint device such as iPhone, This status is removed automatically in 10 seconds.
13	Information	-	Document glass cover is open. Please Close it.	Document glass cover is open. if document glass cover is open, scanning cannot be started.
14	Information	-	Finished changing language.	-
15	Initializing	-	Detected a abnormality of inside database. The data must be deleted. After press Close, the data will be deleted, and then reboot.	Indicating that it is in the state which the database cannot recover. [OK] pressed, the error database is to be deleted and the unit is rebooted automalically. [Cancel] pressed, the unit is shut down.
16	Information	-	#N/A!	Indicating that the IC card reader supported with a this machine is connected.

Normal

No.	Category	PJL Status Code	Panel messages	Description
1	Normal	10001	Online Mode Ready to print.	Shows Online status.
2	Normal	10002	Offline Mode	Shows Offline status.
3	Normal	10993	File accessing ...	The status showing FILE SYSTEM (HDD/FLASH) is being accessed.
4	Normal	10061	Data arrive.	Data receiving, process not started yet. Displayed mainly during PJL process without text print data or during job spooling.
5	Normal	10023	Processing ...	Data receiving or output processing
6	Normal	10096	Data present.	Un-printed data remains in Buffer. Waiting for data to follow.
7	Normal	10098	Print page %PAGES% No. of Copies %A%/%B%	Printing the following print job and reports. - PC Printing - Color Profile - Color Tuning Pattern - GL/2 Palette Sample - ID Check - Engine Status - Color Table - File System Error Report - T30 Monitor - Received Mail Data - MFP Usage Report ---------- "Print page" means the current number of printing page (%PAGES%). "No of Copies" is displayed as "%A%/%B%". %A%: The number of copy in printing. %B%: the total number of printing.
8	Normal	10014	Configuration printing ...	Printing Configuration. Indicates that printing of menu items and the current settings.
9	Normal	10056	File List printing ...	Printing File Lists. Indicates that printing of the stored File (except hidden files) list in File system(FLASH).
10	Normal	10057	Error Log printing ...	Printing Error Logs
11	Normal	10099	Print page %PAGES% No. of Copies %A%/%B%	Collate printing. "Print page" means the current number of printing page (%PAGES%). "No of Copies" is displayed as "%A%/%B%". %A%: The number of copy in printing. %B%: the total number of printing. The unit of "Print page" is "Impression". In simplex printing, "Print page" counter is increased by 1 when the paper exited from fuser. In duplex printing, "Print page" counter is increased by 2 when the paper exited from fuser (after the back side printed out).
12	Normal	10099	Print page %PAGES% No. of Copies %A%/%B%	Copy printing. "Print page" means the current number of printing page (%PAGES%). "No of Copies" is displayed as "%A%/%B%". %A%: The number of pages in printing. %B%: The total number of printing. The unit of "Print page" is "Impression". In simplex printing, "Print page" counter is increased by 1 when the paper exited from fuser. In duplex printing, "Print page" counter is increased by 2 when the paper exited from fuser (after the back side printed out).
13	Normal	10897	Verifying data.	Indicates that the integrity of print data for encrypted authentication is being verified (for corruption and tampering).
14	Normal	10007	Deleting data.	Indicates that job cancellation has been instructed and data is being ignored until the job completion.
15	Normal	10007	Deleting data.	Indicates if JAM occurs when Jam Recover is OFF, that job cancellation has been instructed and data is being ignored until the job completion.
16	Normal	10007	Deleting data.	Indicates a job being cancelled due to no print permit. (Related to JobAccount) 1. A job received from a user who is denied printing. 2. A color job received from a user who is denied color printing.
17	Normal	10007	Deleting data.	Indicates that a job is being cancelled because the printer area where the logs are stored has been used up and also "Cancel job" is specified as an operation at the time of Log Full. (Related to JobAccount)
18	Normal	10989	Warming Up.	Shows cooling down status. It is cautious of a period following "Warming Up".

No.	Category	PJL Status Code	Panel messages	Description
19	Normal	10003	Warming up	Warming up.
20	Normal	10963	Warming up.	Indicates that printing has been suspended for a while due to high temperature of the drum, or the printer is in a wait state to cope with heat at the time of switching narrow paper to wide paper.
21	Normal	10094		The MFP in power save mode. LCD back light is turned off. Green LED is turned on.
22	Normal	10058	Preparing ...	Executing Auto Color Adjusting
23	Normal	10994 10988	Preparing ...	Executing Auto Density Adjustment. Status code 10988 corresponds to density reading , thereto 10994 corresponds to density adjusting.
24	Normal	40988	PU downloading ...	Downloading PU F/W (This is not user-level error) This function is secret to users. Therefore, this status does not occur in a user environment. It occurs during downloading firmware of option tray.
25	Normal	10881	Updating firmware. Do not turn OFF the power.	Downloading scanner unit (Scanner, Fax, Panel) FW.
26	Normal	30956	Wait a moment. Network Configuration writing ...	This appears during the NIC configuration data is storing into the flash memory, as the setting was changed.
27	Normal	30993	Wait a moment. Network initializing ...	This appears when the NIC initialization is occurred, as the setting was changed.
28	Normal	10894	Cancelling ...	Indicates that copy job is cancelling.

No.	Category	PJL Status Code	Panel messages	Description
29	Normal	10863	Scanning ...	Indicates that it is scanning of documents. The unit of "Page" is "Impression". In duplex scanning, "Page" counter is increased by 1 when the front side of sheet scanning started, and the counter is increased by 1 when the back side scanning started. %LOCATION_INFO%: Location Information ((Scan To E-mail, Scan To Network PC only) %SCAN_PAGE%: the number of current scanning page. %DOC_SIZE%: Document size Scan Size setting is "Auto": the detected document size. Scan Size setting isn't "Auto": the selected scan size. ---------- Indicates that it is scanning of documents by Scan To USBMemory. The unit of "Page" is "Impression". In duplex scanning, "Page" counter is increased by 1 when the front side of sheet scanning started, and the counter is increased by 1 when the back side scanning started. %SCAN_PAGE%: the number of current scanning page. %DOC_SIZE%: Document size Scan Size setting is "Auto": the detected document size. Scan Size setting isn't "Auto": the selected scan size. ---------- Indicates that it is scanning of documents by Push Scan/PC Scan. %AP_INFO%: Selected application setting. While a document is scanned by FAX memory transmission, status LED does not illuminate because this status is not raise.

No.	Category	PJL Status Code	Panel messages	Description
30	Normal	10896	Scanning ... Print page %PAGES% No. of Copies %A%/%B%	Indicates that it is copying. sss: the number of current scanning page. ppp: the number of current printing page. aa: the number of current printing. bb: the total number of printing. The unit of "Scanned pages" is "Impression". For example, in duplex scanning, "Scanned pages" counter is increased +1 at the front side of sheet scanning started, and the counter is increased +1 at the back side scanning started. The unit of "Print pages" is "Impression". In simplex printing, "Print page" counter is increased by 1 when the paper exited from fuser. In duplex printing, "Print page" counter is increased by 2 when the paper exited from fuser (after the back side printed out).
31	Normal	10863	Print page %PAGES% No. of Copies %A%/%B%	Indicates that it is scanning in ScanTo USB Memoy. The unit of "Page" is "Impression". For example, in duplex scanning, "Paget" counter is increased +1 at the front side of sheet scanning started, and the counter is increased +1 at the back side scanning started. %SCAN_PAGE%: the number of current scanning page. %DOC_SIZE%: Document size Scan Size setting is "Auto": the detected document size. Scan Size setting isn't "Auto": the selected scan size.
32	Normal	10863	Scanning ...	Indicates that it is scanning in Push Scan, PC Scan.
33	Normal	-	Please set next document.	This screen is displayed at the time of the scanning completed in Job Build = ON.
34	Normal	10861	Cancelling ...	Indicates that the scanning for Scan To is cancelling by the pressing Stop key.

No.	Category	PJL Status Code	Panel messages	Description
35	Normal	10859	Data writing to USB Memory.	Indicates that it is wrighting the image file to USB memory after the scanning completed. The cancel operation by STOP key pressing is unsupported during the writing to USB memory.
36	Normal	-	Please set document and press Start key.	Indicates that it is waiting Scan To Local PC started by user. The selected function will be started by start key pressed. This message is displayed when the application button ([Application], [Folder], [E-mail], [PC-FAX]) is selected in Scan To Local PC stand-by screen.
37	Normal	10797	Connecting to PC ...	Indicates that it is connecting to PC. This message will be displayed at Start key pressed after the orignal document set.
38	Normal	10851	Telephone	Indicates that tha fax receiving started.
39	Normal	10850	Fax Receiving ... Page: %RXPAGE% %RXFAXNUMBER%	Indicates that it is receiving fax data. %RXPAGE% : number of the current receiving page %RXFAXNUMBER% : sender Fax no.（※ F-code PollingRX only） In the case that the F-code PollingRX is done by using speed dial, display field is the following... A dial number is displayed during dialing An entry name is displayed in fax no. field during fax receiving.
40	Normal	-	Fax Receiving ... Page: %RXPAGE% %RXFAXNUMBER%	Indicates that it is receiving fax data. %RXPAGE% : number of the current receiving page %RXFAXNUMBER% : sender Fax no.（※ F-code PollingRX only） In the case that the F-code PollingRX is done by using speed dial, display field is the following... A dial number is displayed during dialing An entry name is displayed in fax no. field during fax receiving.
41	Normal	10856	Fax calling ... %TXFAXNUMBER%	Indicates that it is calling. %TXFAXNUMBER%: fax number of the calling.
42	Normal	-	Fax calling ... %TXFAXNUMBER%	Indicates that it is negotiating. %TXFAXNUMBER%: fax number of the calling.

No.	Category	PJL Status Code	Panel messages	Description
43	Normal	10855	Fax Sending ... No. of pages: %TXPAGE% %TXFAXNUMBER%	Indicates that it is sending fax data. %TXPAGE% : number of the current receiving page %TXFAXNUMBER% : recipient Fax no.(Not display on F-code PollingTX) In the case of manual fax sending, "Manual Fax sending: Sending ..." is displayed on LCD. Scan page count and document size are displayed in the left bottom. Page number, Fax no. are not displayed. In the case that the fax sending is done by using speed dial, fax no. is displayed during both dialing and sending.
44	Normal	10855	Fax Sending ... No. of pages: %TXPAGE% %TXFAXNUMBER%	Indicates that it is sending fax data. %TXPAGE% : number of the current receiving page %TXFAXNUMBER% : recipient Fax no.(Not display on F-code PollingTX) In the case of manual fax sending, "Manual Fax sending: Sending ..." is displayed on LCD. Scan page count and document size are displayed in the left bottom. Page number, Fax no. are not displayed. In the case that the fax sending is done by using speed dial, fax no. is displayed during both dialing and sending.
45	Normal	10861	Cancelling ...	Indicates that the scanning for fax senfing is cancelling by pressing Stop key.
46	Normal	10878 10868	Network communicating ... Sending ...	Indicates that the details of network communication. %STATUS% E-mail transmission in progress. Transmission in progress. E-mail transmission in progress: indicates that E-mail data is sending to Mail Server. Transmission in progress: indicates that data sending via network. The cancel operation by STOP key pressing is unsupported during E-mail and fail sending.
47	Normal	10879	Connecting to server ...	Indicates that connecting to mail server. The cancel operation by STOP key pressing is unsupported during the connecting to mail server.
48	Normal	10875	Cancelling sending ...	Indicates that E-mail sending is cancelling. This massage is displayed when an error is occurred during E-mail sending. When E-mail is being sent, user cannot cancel the sending by pressing "STOP" key. The key operation is disableed during this message displayed.
49	Normal	10845		Indicates that connecting to LDAP server. nnnnnnnnnn: LDAP server name or IP address of LDAP server.
50	Normal	10873		Indicates that searcing addresses by LDAP server.
51	Normal	10872		Indicates that address search is cancelled by the pressing Stop key.
52	Normal	10869	Connecting to server ...	Indicates that connecting to file server. The cancel operation by STOP key pressing is unsupported during the connecting to file server.
53	Normal	10865	Cancelling sending ...	Indicates that file sending is cancelling. This message is displayed when an error is occurred during file sending. When file is being sent to server, user cannot cancel the sending by pressing "STOP" key. The key operation is disableed during this message displayed.
54	Normal	10798	SIP update in progress.	Indicates that downloading the SIP firmware data.
55	Normal	10803	Receipt Journal printing ...	Indicates that printing of fax receiving result list.
56	Normal	10805	Daily Journal printing ...	Indicates that printing of fax comunication (sending and receiving) result list that was executed within 24 hours.
57	Normal	10794	Please insert USB Memory.	Indicates that Scan to USB memory / PrintFromUSBMemory is selected without USB memory connection.
58	Normal	10793	Data transmission in progress.	Indicates that scanned image data sending to PC. Cannot see the message at broadband network environment.
59	Normal	-		This status is for confirming the number of copy job. It is controlling status and used for judging if copy job can be started. It does not have relation with a change of indication.

No.	Category	PJL Status Code	Panel messages	Description
60	Normal	-		This status is for confirming the number of print job. It is controlling status and used for judging if copy job can be started. It does not have relation with a change of indication.
61	Normal	10894	Cancelling ...	Indicates that copy job is cancelling. This message displayed when the copy is cancelled by printer unit status (paper empty, Jam, printer cover opened).
62	Normal	10893	N/A	Indicates that copy job is cancelling. This message displayed when the copy is cancelled by printer unit status (paper empty, Jam, printer cover opened). This message is displeayed until [Enter] button pressed.
63	Normal	10839	Preparing ...	Indicate that the unit is preparing to be able to use the replaced expendable supplies. This message is displayed at the time of toner cartriges replaced.
64	Normal	10795	%RDYMSG%	Indicates that the unit date is being updated by using PJL command.
65	Normal	10796	%RDYMSG%	Indicates that the requested process is finished. "Passed" is displayed, if the process is completed correctly. "Failed" is displayed, if the process is finished with an error. This indication disappear automatically after it displayed for three seconds.
66	Normal	10838	Cancelling ...	Indicates that the image data writing to USB memory is cancelling. This massage is displayed when an error is occurred during the data writing to USB memory. The key operation is disableed during this message displayed.
67	Normal	-	Fax Rx Doc. printing ...	Printing fax Received Data.
68	Normal	-	Fax Store Doc. printing ...	Printing Stored fax sending data.
69	Normal	-	Do you wish to resume scanning?	Indicates to resume the ADF scanning for copy. The message is displayed when occurring some printer related errors and clearing the error conditions. If all sheets are scanned correctly and no remained before stopping the scanning, the message is not displayed.

No.	Category	PJL Status Code	Panel messages	Description
70	Normal	-	Cancelling ...	Indicates that cancellation of PushScan (by panel operation) is accepted and being processed. The status falls when the processing is complete.
71	Normal	10007	Deleting data.	It occurs when color data is received while a color toner is empty. Job cancellation is requested. The printer keeps discarding all the data it receives until the job is complete.
72	Normal	-	File loading from USB.	Indicates that a file is being read from a USB memory. Pressing Stop key will cancel the job.
73	Normal	-	Cancelling ...	Indicates that reading from a USB memory is being cancelled.
74	Normal	-	An error occurred. Scanning is pending.	Indicates that scanning has been suspended.
75	Normal	10759	Wait a moment. Executing maintenance.	Executing maintenance. While this status occurs, panel is locked.
76	Normal		Cancelling ...	This appears when scanning is cancelled in ScanToFax mode.
77	Normal			
78	Normal			
79	Normal	-	System received LOCK signal.	
80	Normal	-		
81	Normal	-		
82	Normal	-	Registering with Google Cloud Print. Don't turn off the power until registration is complete.	Indicating that it is processing registration of the printer to Google cloud print service. Printer communicates with the Google Cloud Print service over the Internet.
83	Normal	-	Deleting from Google Cloud Print.	Indicating that it is processing deleting of the printer to Google cloud print service. Printer communicates with the Google Cloud Print service over the Internet.
84	Normal	-		Indicating that printer/MFP received local registration request from GoogleCloudPrint device
85	Normal	10772		Indicates the printer goes into the Sleep Mode.

Warning

No.	Category	PJL Status Code	Panel messages	Description
1	Warning	10082 (Y) 10083 (M) 10084 (C) 10081 (K)	%COLOR% Toner Low. Press the [Details] button for help.	Toner amount is low. Moreover, when set as "Admin Setup"-"Management"-"System Setup"-"Near Life LED"=Disable, Alarm LED is switched off. %COLOR% Y M C K
2	Warning	10960 (M) 10961 (C)	%COLOR% Waste Toner Full Replace with new Toner Cartridge. Press the [Details] button for help.	This warning is displayed at Cover Open/ Close or Power OFF/ON after a waste-toner full error (Error No.15) occurs. (occur in Magenta/ Cyan only.) Displayed in a combination of other message in the first line. As long as this warning is being displayed, a waste toner full error occurs , the printer shifts to Offline and stops each time it has printed about 20 copies.
3	Warning	10925 (Y) 10926 (M) 10927 (C) 10924 (K)	%COLOR% NON RECOMMENDED TONER Press the [Details] button for help.	It shows the toner cartridge of authorized 3rd party. (RFID Licensed to 3rd party) %COLOR% Y M C K
4	Warning	10955 (Y) 10956 (M) 10957 (C) 10954 (K)	%COLOR% NON RECOMMENDED TONER. Press the [Details] button for help.	The Region ID of toner cartridge is not proper to the distribution channel. %COLOR% Y M C K
5	Warning	10951 (Y) 10952 (M) 10953 (C) 10950 (K)	%COLOR% Non Recommended Toner Press the [Details] button for help.	The chip of RFID is not compatible. %COLOR% Y M C K
6	Warning	40090	Error Postscript	Interpreter detects an error due to the following reason. Receive data after this is ignored until the job completion. - The job has a grammatical error. - The page is complicated, and VM was used up.
7	Warning	10077 (Y) 10078 (M) 10079 (C) 10076 (K)	%COLOR% Image Drum Near Life. Press the [Details] button for help.	The life of the drum (warning). Displayed in a combination of other message in the first line. The printer stops at the point when it reaches the drum life (Shifts to error, OFF-LINE.) Moreover, when set as "Admin Setup"-"Management"-"System Setup"-"Near Life LED"=Disable, Alarm LED is switched off. %COLOR% Y M C K
8	Warning	10979	Fuser Near Life.	Notifies the fuser unit is near its life. Moreover, when set as "Admin Setup"-"Management"-"System Setup"-"Near Life LED"=Disable, Alarm LED is switched off.
9	Warning	10978	Belt Unit Near Life.	Notifies the belt unit is near its life. This is a warning; thus, printing will not stop. Moreover, when set as "Admin Setup"-"Management"-"System Setup"-"Near Life LED"=Disable, Alarm LED is switched off.
10	Warning	10091	Fuser Unit Life. Install New Fuser Unit. Press the [Details] button for help.	Notifies the life of the fuser unit (warning). This appears when the cover was opened and closed just after the fuser life error occurred.
11	Warning	10080	Belt Unit Life. Please replace the belt unit.	Notifies the life of the belt unit (warning). This appears when the cover was opened and closed just after the belt life error occurred.
12	Warning	10966 (Y) 10967 (M) 10968 (C) 10965 (K)	%COLOR% Toner empty. Replace with new Toner Cartridge. Press the [Details] button for help.	Notifies the toner is empty. This is a warning only. This appears when the cover was opened and closed just after the toner empty error occurred. %COLOR% Yellow Magenta Cyan Black
13	Warning	10939 (Y) 10940 (M) 10941 (C) 10938 (K)	%COLOR% Toner cartridge not installed. Press the [Details] button for help.	Notifies the toner cartridge is not installed. This is a warning only. %COLOR% Y M C K

No.	Category	PJL Status Code	Panel messages	Description
14	Warning	10970 (Y) 10971 (M) 10972 (C) 10969 (K)	%COLOR% Please install new Image Drum Unit. Image Drum Life. Press the [Details] button for help.	Notifies the life of the drum. This is a warning only. This appears when the cover was opened and closed just after the drum life error occurred. %COLOR% Y M C K
15	Warning	10692 (Y) 10693 (M) 10694 (C) 10691 (K)	%COLOR% Replace the image drum. %PAGES% Pages Left. Press the [Details] button for help.	Notifies the prolonged period of the image drum life, after reached its limitation, by the operator's requirement.
16	Warning	10686 (Y) 10687 (M) 10688 (C) 10685 (K)	%COLOR% Replace the image drum. Print Quality Not Guaranteed. Press the [Details] button for help.	Notifies the last prolonged period of the image drum life. This appears after the hidden operation was done at the life limitation.
17	Warning	10053	Belt Reflex Error	Belt Reflex Check Error. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment.
18	Warning	10887	Density Shutter Error2	Density Adjustment Shutter Error 2.Error that does not occur at user level.Displayed only in FactoryMode. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment.
19	Warning	10886	Density Shutter Error1	Density Adjustment Shutter Error 1.Error that does not occur at user level.Displayed only in FactoryMode. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment.
20	Warning	10885	Density Color Calibration	Density Adjustment Color Calibration Error.Error that does not occur at user level.Displayed only in FactoryMode. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment.
21	Warning	10884	Density Color Sensor Error	Density Adjustment Color Sensor Error.Error that does not occur at user level.Displayed only in FactoryMode. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment.
22	Warning	10883	Density Black Calibration	Density Adjustment Black Calibration Error.Error that does not occur at user level.Displayed only in FactoryMode. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment.
23	Warning	10882	Density Black Sensor Error	Density Adjustment Black Sensor Error.Error that does not occur at user level.Displayed only in FactoryMode. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment.
24	Warning	10976	%COLOR% Image Drum Smear Error	Density Adjustment ID ERROR 2; smear due to ID failure. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment. %COLOR% Y M C K
25	Warning	10975	%COLOR% Low Density Error	Density Adjustment ID ERROR; LED out of focus is assumed. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment. %COLOR% Y M C K
26	Warning	10054	Sensor Calibration Error	When output of color registration sensor is below reference value. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment.

No.	Category	PJL Status Code	Panel messages	Description
27	Warning	10051	Registration Error	When a color registration error is detected with coarse adjustment, or with the main-scan line adjustment. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment. %CODE% 2 = Yellow 3 = Magenta 4 = Cyan 5 = Black
28	Warning	10052	Registration Sensor Error	When a color registration error is detected with the fine control of registration adjustment, or with the sub-scan line adjustment. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment. %CODE% 2 = Yellow 3 = Magenta 4 = Cyan 5 = Black
29	Warning	16012 (Tray1) 16013 (Tray2) 16015 (Tray3) 16016 (Tray4) 16010 (FrontTray)	%TRAY% Empty. Press the [Details] button for help.	%TRAY%: The tray is empty. Treated as Warning until printing to the empty tray is designated. %TRAY% Tray1 Tray2 Tray3 Tray4
30	Warning	32002	Disk Memory Full Please see Help for Details	Disk-full is occurring. Because this is a temporary warning, it remains until the end of the job and disappears.
31	Warning	32026	File System is write protected. Please see Help for details.	An attempt to write in a read-only file was done. Because this is a temporary warning, it remains until the end of the job and disappears.

No.	Category	PJL Status Code	Panel messages	Description
32	Warning	40994	Insufficient page memory to collate. Please see Help for details.	Memory Overflow was occurred in the collate print.
33	Warning	10982 10830	Unauthorized user, job cancelled.	Notifies users that jobs have been cancelled because they are not permitted for printing. (Related to JobAccount). Notifies users that jobs have been cancelled because they are not permitted for PC-Fax. (Related to JobAccount).
34	Warning	10898	File erasing ...	Indicates that a secret file is being erased.
35	Warning	30961	Deleting encrypted authentication print data.	It indicates the deletion of encrypted authentication print job and saving of deletion request of file.
36	Warning	10899	Erased Data Full Please see Help for details.	Indicates that a secret file waiting to be erased is full.
37	Warning	30962	Secure job storage period exceeded. This job has been deleted. Please see Help for details.	Indicates that an applicable job has been automatically deleted as the retention period for authentication printing has expired.

No.	Category	PJL Status Code	Panel messages	Description
38	Warning	32000 ~ 32026	Disk Read/Write Error %FS_ERR% Please see Help for Details	A disk error is occurred, which is other than the file system fill or the disk write protected. Operation that does not involve a disk is available. This message is cleared by OK key pressed. %FS_ERR% = 0 … GENERAL ERROR = 1 … VOLUME NOT AVAILABLE = 3 … FILE NOT FOUND = 4 … NO FREE FILE DESCRIPTORS = 5 … INVALID NUMBER OF BYTES = 6 … FILE ALREADY EXISTS = 7 … ILLEGAL NAME = 8 … CANT DEL ROOT = 9 … NOT FILE = 10 … NOT DIRECTORY = 11 … NOT SAME VOLUME = 12 … READ ONLY = 13 … ROOT DIR FULL = 14 … DIR NOT EMPTY = 15 … BAD DISK = 16 … NO LABEL = 17 … INVALID PARAMETER = 18 … NO CONTIG SPACE = 19 … CANT CHANGE ROOT = 20 … FD OBSOLETE = 21 … DELETED = 22 … NO BLOCK DEVICE = 23 … BAD SEEK = 24 … INTERNAL ERROR = 25 … WRITE ONLY
39	Warning	40978	%PUFLASH% Flash Error	PU flush error (Error occurs during the alteration of PU farm or it failed in the alteration in PU flush of such as LED Head information.) %PUFLASH% PU TRAY2 TRAY3 TRAY4 DUPLEX IM
40	Warning	30963	Invalid print data received. Please see Help for details.	Indicates that a job has been deleted because corruption of data has been detected by the integrity verification in authentication printing.

No.	Category	PJL Status Code	Panel messages	Description
41	Warning	30114 10827	Invalid print data received. Please see Help for details.	Invalid data was received. Press the OK key and eliminate the warning. Displayed when unsupported PDL command is received or a spool command is received without HDD.
42	Warning	30114	Invalid print data received. Please see Help for details.	
43	Warning	30947		Indicates that it does not find out the target addresses from LDAP Server.
44	Warning	10871		Indicates that search results of LDAP server exceeded the upper limit value.
45	Warning	10902 (Tray1) 10903 (Tray2) 10905 (Tray3) 10906 (Tray4)	%TRAY% missing. Please see Help for details.	Indicates that paper trays are not installed. %TRAY% Tray1 Tray2 Tray3 Tray4
46	Warning	10825	Access Limitation Error Monochrome printing was performed due to the color printing limitation.	Notifies users that color print jobs were printed by monochrome because they are not permitted for color printing. (Related to JobAccount Color Access Contorl.).
47	Warning	10824	Access Limitation Error Data was deleted due to the color printing limitation.	Notifies users that color print jobs were cancelled because they are not permitted for color printing. (Related to JobAccount Color Access Contorl.).
48	Warning	10823	Restricted access error Data deleted due to printing restrictions. Please see Help for details.	Notifies users that jobs were cancelled because they are not permitted for printing. (Related to JobAccount Color Access Contorl.).

No.	Category	PJL Status Code	Panel messages	Description
49	Warning	10821	Incompatible USB device connected. Remove the connected USB device.	Indicates that the unsupported USB device was connected. This message will be displayed until the unsupported USB device disconnected.
50	Warning	10648	Please remove the connected USB device. USB device has not been recognized.	Indicates that the USB device has not been recognized. This message will be displayed until the USB device disconnected.
51	Warning	10819	Please remove the USB Hub. USB Hub is connected.	Indicates that the unsupported USB Hub was connected. This message will be displayed until the unsupported USB Hub disconnected.
52	Warning	10814	Accounting Log buffer is near full. Please see Help for details.	It indicates the Job Accounting log buffer is near full.
53	Warning	10815	Accounting Log Writing Error Please see Help for details.	The Job Accounting log is not registered correctly because of thr disc access error is occurred during accounting log writing into HDD (Related to Logging). This message is displayed until OK key pressed.
54	Warning	10818	Job log write error Please see Help for details.	The log is not registered correctly because of thr disc access error is occurred during system job log writing into HDD. This message is displayed until OK key pressed.
55	Warning	10787	Accounting Log Buffer Full (Delete old logs)	The function isn't accepted because log buffer is full. (Related to JobAccount). This message is displayed, if the log buffer is full and "Operation at Log Full" in Job Accounting Server Software is set to "Delete old logs". The new jobs will be able to execute after the following operations. 1. The log in the unit must be got by Job Accounting Server Software. 2. The setting of "Operation at Log Full" must be changed to "Does not acquire logs".

No.	Category	PJL Status Code	Panel messages	Description
56	Warning	30937	Access Limitation Error Data was deleted due to the printing limitation.	Notifies the user that the color toner is empty and that the received color data job is cancelled.
57	Warning		Error PDF	It appears when a PDF file contains a syntax error.
58	Warning	-	This PDF file is password protected.	Notifies that the entered password does not match the password set to encrypted PDF. The file will not be printed unless the passwords match.
59	Warning	-	Valid password required to print document.	PDF is print-restricted. The file will not be printed unless the owner password is entered.
60	Warning	10758	No communication with the SNTP server.	Notifies that the system has attempted to obtain the current time from the SNTP server and failed.
61	Warning	10072(Y) 10073(M) 10074(C) 10071(K)	%COLOR% Image Drum Sensor Error. Press the [Details] button for help.	Something is wrong with the toner sensor during printing. %COLOR% Y M C K
62	Warning	10966 (Y) 10967 (M) 10968 (C) 10965 (K)	%COLOR% Toner empty. Replace with new Toner Cartridge. Press the [Details] button for help.	Indicates that a toner is empty and that there is no data (idle state). LED indication: ・When K is empty, both Color and Mono Start key LEDs go out. ・When any toner except K is empty, Mono Start key LED is on (Color Start key LED go out). %COLOR% Y M C K === This will occur only during a job that requires printing.

No.	Category	PJL Status Code	Panel messages	Description
63	Warning	10756	Wait Timeout in menu is disabled. Printing is disabled except by USB. Clear page buffer and enable time out in menu.	
64	Warning			
65	Warning		PDF Cache Write Error	
66	Warning	-		Indicates that Email receiving has been canceled. It has the following possibilities. - The format of email that has received is illegal or not supported. - The attached file is illegal or not supported. - The attached file that has received is too large, for example, file size exceeds 8MB. - network connection has disconnected.
67	Warning	10962	Printer Life	
68	Warning	-	E-mail receiving has been cancelled. Please see Help for details.	Indicates that Email receiving has been canceled. It has the following possibilities. - The format of email that has received is illegal or not supported. - The attached file is illegal or not supported. - The attached file that has received is too large, for example, file size exceeds 8MB. - network connection has disconnected.
69	Warning	-	Please Call Service. Fax Combination Error Please see Help for details.	Indicates that machine has combination problems between existence of the fax modem board and model of the machine. This status displays when system cannot detect the fax modem on fax model. Or, this status displays when system detect the fax modem unnecessarily on non-fax model.
70	Warning	30927	PDL Error	Indicating that it has been occured an internal processing error into the PDL emulation . It's a clearable warning. User should press OK button for clearing the warning.
71	Warning	-	Use genuine %COMPANY_ NAME% consumables for max performance.	This should be appeared after the toner/drum/ print cartridge low/empty warning messages when the OKIORIGINALCONSUMABLEDISPLAY is ON to display this.

No.	Category	PJL Status Code	Panel messages	Description
72	Warning	10692 (Y) 10693 (M) 10694 (C) 10691 (K)	%COLOR% Replace the image drum. %PAGES% Pages Left. Press the [Details] button for help.	Notifies the prolonged period of the image drum life, after reached its limitation, by the operator's requirement.
73	Warning	10686 (Y) 10687 (M) 10688 (C) 10685 (K)	%COLOR% Replace the image drum. Print Quality Not Guaranteed. Press the [Details] button for help.	Notifies the last prolonged period of the image drum life. This appears after the hidden operation was done at the life limitation.
74	Warning	10651	IPv4 address is conflicted. Please change IPv4 address.	IPv4 address is conflicted.
75	Warning	10696(Y) 10697(M) 10698(C) 10695(K)	Incompatible %COLOR% Image Drum. Press the [Details] button for help.	It shows the image drum of authorized 3rd party. (RFID Licensed to 3rd party) %COLOR% Y M C K
76	Warning	10702(Y) 10703(M) 10704(C) 10701(K)	Incompatible %COLOR% Image Drum. Press the [Details] button for help.	The Region ID of image drum is not proper to the distribution channel. %COLOR% Y M C K
77	Warning	10706(Y) 10707(M) 10708(C) 10705(K)	Incompatible %COLOR% Image Drum. Press the [Details] button for help.	The chip of RFID is not compatible. %COLOR% Y M C K
78	Warning	10647	All page(s) of document has been detected as blank.	All set manuscript was detected as blank pages.

No.	Category	PJL Status Code	Panel messages	Description
79	Warning	10646	Output error.	For the paper setting that a paper cannot be ejected in 2nd Bin, the paper ejected in 1st Bin. A message disappears by pressing CLOSE button.
80	Warning	40963	Duplex print error.	For the paper setting that a duplex printing is not possible, it was printed in simplex.
81	Warning	10665	Multi-purpose tray has not been configured properly, verify multi-purpose tray settings. Multiple copies printed. Press Close Button	Rotate sort printing was selected, but the function didn't work because MP Tray Usage setting was not set as it can be used as Tray.. The message continues to be displayed until an OK button is pressed.
82	Warning	10666	Hard disk is not installed. Multiple copies printed. Press Close Button	Rotate sort printing was selected, but the function didn't work because HDD was not attached. The message continues to be displayed until an OK button is pressed.
83	Warning	10644(2nd Bin) 10645(1st Bin)	Output Tray (or Upper Output Tray) Full.	1st Bin or 2nd Bin is stacked full. Remove the paper.
84	Warning	-	Check the sensor of the automatic document feeder (ADF) on the scanner. Press [Details] to continue with measures.	At the time of device start, a sensor for overlapped feeding is checked. In the case of the sensor output level that paper powder attached to, the status is raised. After the cleaning and closed ADF cover by the customer, the status is resumed when the sensor output level becomes normal.
85	Warning	-	Connot change language during printing.	During the printing, an operation to change the language is invalid. The message is displayed and beep sounds. It is resumed by pressing CLOSE key or wait 3[s].

Error

No.	Category	PJL Status Code	Panel messages	Description
1	Error	40778	Insufficient memory. Please see Help for details.	Display that Memory Overflow is occurred during PC Fax Job receiving. Return to Mode Selection screen by the pressing OK key.
2	Error (ONLINE)	411yy yy: paper size	Feed print job manually. Press the [Details] button for help.	Manual paper feed is required. Manually insert the paper shown by %MEDIA_SIZE%. The unit of paper size in Custom: The unit specified for MP Tray (menu setting) is used if no unit is specified by the driver. When the driver specifies a unit, the unit is used for display. Paper size displays in Custom mode: "<width>x<length><unit>" ex.) 210x297mm 8.5x11.0inch %TRAY% MP Tray
3	Error 461 462 463 464	482yy 483yy 485yy 486yy	Please change %TRAY% paper. Set %MEDIA_ SIZE%, %MEDIA_ TYPE%. Press the [Details] button for help.	The media type in the tray and the print data do not match. Load paper that was set in %MEDIA_SIZE% and %MEDIA_TYPE% in tray. Error 461:Tray1 Error 462:Tray2 Error 463:Tray3 Error 464:Tray4 Paper size displays in Custom mode: "<width>x<length><unit>" ex.) 210x297MM 8.5x11.0INCH The unit of paper size in Custom: The unit specified for MP Tray (menu setting) is used if no unit is specified by the driver. When the driver specifies a unit, the unit is used for display.
4	Error 460	480yy	Please change %TRAY% paper. Set %MEDIA_ SIZE%, %MEDIA_ TYPE%. Press the [Details] button for help.	The media type in the tray and the print data do not match. Load paper that was set in %MEDIA_SIZE% and %MEDIA_TYPE% in tray. %TRAY% MP Tray Paper size displays in Custom mode: "<width>x<length><unit>" ex.) 210x297MM 8.5x11.0INCH The unit of paper size in Custom: The unit specified for MP Tray (menu setting) is used if no unit is specified by the driver. When the driver specifies a unit, the unit is used for display.
5	Error 461 462 463 464	482yy 483yy 485yy 486yy	Please change %TRAY% paper. Set %MEDIA_ SIZE%, %MEDIA_ TYPE%. Press the [Details] button for help.	The size of paper or media type in the tray does not match the print data. Load paper that was set in %MEDIA_SIZE% and %MEDIA_TYPE% in tray. (It takes a while until the status disappears after you have closed the tray and the lever lifted.) Error 461:Tray1 Error 462:Tray2 Error 463:Tray3 Error 464:Tray4 The paper size displaying form of the custom mode is the same as above.
6	Error 460	480yy	Please change %TRAY% paper. Set %MEDIA_ SIZE%, %MEDIA_ TYPE%. Press the [Details] button for help.	The size of paper or media type in the tray does not match the print data. Load paper that was set in %MEDIA_SIZE% and %MEDIA_TYPE% in tray. %TRAY% MP Tray The paper size displaying form of the custom mode is the same as above.
7	Error (ONLINE)	40825	Wait a moment. Message Data processing ...	Indicates that message data to be updated is being processed.
8	Error (ONLINE)	40826	Wait a moment. Message Data writing ...	Indicates that message data to be updated is being written.

No.	Category	PJL Status Code	Panel messages	Description
9	Error (ONLINE)	40827	Power OFF/ON Message Data written OK.	Indicates that message data to be updated has been written successfully.
10	Error (ONLINE)	40828	Please check data. Message Data Write Error %CODE%	Indicates that writing of message data to be uploaded has been failed. %CODE% is a decimal value (one digit) and represents the cause of failure in writing. = 1 … FAIL: Other errors. = 2 … DATA_ERROR: Hash check error in data reading/writing, or abnormal FLASH = 3 … OVERFLOW: Downloading failure due to FLASH memory full at starting or during writing in a language file = 4 … MEMORYFULL: Memory reservation failure = 5 … UNSUPPORTED_DATA: Downloading data unsupported on the MFP
11	Error 491 492 493 494 490	472yy 473yy 475yy 476yy 470yy	Paper %TRAY% is empty. Set %MEDIA_ SIZE%. Press the [Details] button for help.	Printing request is issued to an empty tray. Load paper that was set in %MEDIA_SIZE%. (It takes a while until the status disappears after you have closed the tray and the lever lifted.) Error 491:Tray1 Error 492:Tray2 Error 493:Tray3 Error 494:Tray4 Error 490:MP Tray The unit of paper size in Custom: The unit specified for MP Tray (menu setting) is used if no unit is specified by the driver. When the driver specifies a unit, the unit is used for display.
12	Error 440 441 442	4600x 46002(Tray1) 46003(Tray2) 46005(Tray3)	%TRAY% cassette is missing. Open and Close the indicated cassette. Press the [Details] button for help.	Indicates removal of the paper cassette of Tray 1/2/3 that is a paper path in attempting to print from Tray 2/3/4. Error 440:Tray1 Error 441:Tray2 Error 442:Tray3

No.	Category	PJL Status Code	Panel messages	Description
13	Error 430 431 432 433	46012(Tray1) 46013(Tray2) 46015(Tray3) 46016(Tray4)	%TRAY% cassette is missing. Open and Close the indicated cassette. Press the [Details] button for help.	Indicates that paper feed is unavailable in attempting to print from Tray 1/2/3/4 due to removal of the paper cassette of Tray 1/2/3/4. Error 430:Tray1 Error 431:Tray2 Error 432:Tray3 Error 433:Tray4 Note: If the paper cassette of the tray is removed during displaying paper request (no.124, 125), system will display that tray is removed (this display)
14	Error 420	30097	Insufficient memory. Please see Help for details.	Memory capacity overflows due to the following reason. Install expansion RAM or decrease the data amount. - Too much print data in a page. - Too much Macro data. - Too much DLL data. - After frame buffer compression, over flow occurred.
15	Error 415 416	40957 (M) 40958 (C)	%COLOR% Waste Toner Full Replace with new Toner Cartridge. Press the [Details] button for help.	Indicates that a waste toner box represented by Magenta and Cyan has become full and needs to be replaced. Warning status takes effect at Cover Open/ Close and printing of about 20 copies becomes available.
16	Error 410 411 412 413	40029 (Y) 40030 (M) 40031 (C) 40028 (K)	%COLOR% Toner empty. Replace with new Toner Cartridge. Press the [Details] button for help.	Toner ends. Error 410 : Y Error 411 : M Error 412 : C Error 413 : K Warning status takes effect at Cover Open/Close.

No.	Category	PJL Status Code	Panel messages	Description
17	Error 554 555 556 557	40948 (Y) 40949 (M) 40950 (C) 40947 (K)	%COLOR% Non Recommended Toner. Press the [Details] button for help.	The signature ID of toner cartridge is not proper to the distribution channel, but the group of signature ID is proper (OKI regional mismatch). As probable missing to measure the amount of toner, the printer notifies error status and stop printing. Error 554 : Y Error 555 : M Error 556 : C Error 557 : K When this error occurs in more than one color toners, the all tonners that have this error status and a high most priolity error code are displayed. Example) When this error occurs in all toners: YMCK Toner Regional Mismatch: 554 When this error occurs in MC toners: MC Toner Regional Mismatch: 555
18	Error 614 615 616 617	40911 (Y) 40912 (M) 40913 (C) 40910 (K)	%COLOR% Non Recommended Toner. Press the [Details] button for help.	The signature ID of toner cartridge is not proper to the distribution channel, and the group of signature ID is not proper (OEM channel mismatch). Error 614 : Y Error 615 : M Error 616 : C Error 617 : K When this error occurs in more than one color toners, the all tonners that have this error status and a high most priolity error code are displayed. Example) When this error occurs in all toners: YMCK Toner Regional Mismatch: 614 When this error occurs in MC toners: MC Toner Regional Mismatch: 615

No.	Category	PJL Status Code	Panel messages	Description
19	Error 620 621 622 623	40907 (Y) 40908 (M) 40909 (C) 40906 (K)	%COLOR% Non Recommended Toner. Press the [Details] button for help.	The signature ID of toner cartridge is not proper to the distribution channel, and the group of signature ID is protected (OEM mismatch). Error 620 : Y Error 621 : M Error 622 : C Error 623 : K When this error occurs in more than one color toners, the all tonners that have this error status and a high most priolity error code are displayed. Example) When this error occurs in all toners: YMCK Toner Regional Mismatch: 620 When this error occurs in MC toners: MC Toner Regional Mismatch: 621
20	Error 550 551 552 553	40944 (Y) 40945 (M) 40946 (C) 40943 (K)	%COLOR% Non Recommended Toner. Press the [Details] button for help.	The signature ID of toner cartridge can not be recognized (Unauthorized third party). As probable missing to measure the amount of toner, the printer notifies error status and stop printing. Error 550 : Y Error 551 : M Error 552 : C Error 553 : K Four following behavior is carried out by mode of operation. 1.Only warning display .(This error is not displayed). 2.Warning status takes effect at Cover Open/ Close. 3.With no automatic concentration compensation . 4.This error is displayed and it stops. When this error occurs in more than one color toners, the all tonners that have this error status and a high most priolity error code are displayed. Example) When this error occurs in all toners: YMCK Toner Regional Mismatch: 550 When this error occurs in MC toners: MC Toner Regional Mismatch: 551

No.	Category	PJL Status Code	Panel messages	Description
21	Error 610 611 612 613	40903 (Y) 40904 (M) 40905 (C) 40902 (K)	%COLOR% Toner cartridge not installed. Press the [Details] button for help.	The toner cartridge is not installed. Error 610 : Y Error 611 : M Error 612 : C Error 613 : K Four following behavior is carried out by mode of operation. 1.Only warning display .(This error is not displayed). 2.Warning status takes effect at Cover Open/ Close. 3.With no automatic concentration compensation . 4.This error is displayed and it stops.
22	Error 540 541 542 543	40960 (Y) 40961 (M) 40962 (C) 40959 (K)	Image Drum Sensor Error %COLOR% Check Image Drum. Press the [Details] button for help.	Something is wrong with the toner sensor. This status is indicated in Shipping Mode only. If the same error is detected in FACTORY Mode, it is indicated as service call of 163. Error 540 : Y Error 541 : M Error 542 : C Error 543 : K
23	Error 401	30089	Multiple sheets of paper have been fed. Reset Paper in %TRAY%. Press the [Details] button for help.	Warns that inappropriate long paper has been fed from the tray. Check whether Multi-feed has happened. Recovery Print takes place at Cover Open/Close, allowing the operation to continue.
24	Error 400	30034	Paper Size Error. Reset Paper in %TRAY%. Press the [Details] button for help.	Inappropriate size paper was fed from a tray. Check the paper in the tray or check for Multiple-feed. Open and close the cover to perform recovery printing, and continue.
25	Error 390	40077	Paper jam has occurred. Open the front cover and remove the paper. Press the [Details] button for help.	Paper Jam occurred during paper feeding from tray. Error 390 : MP Tray

No.	Category	PJL Status Code	Panel messages	Description
26	Error 391 392 393 394	40077	Paper jam has occurred. Pull out the %TRAY% cassette and then remove the paper. Press the [Details] button for help.	Paper Jam occurred during paper feeding from tray. Error 391 : Tray1 Error 392 : Tray2 Error 393 : Tray3 Error 394 : Tray4
27	Error 380	40982	Paper jam has occurred. Open the front cover and remove the paper. Press the [Details] button for help.	Jam has occurred in paper path. Error 380 : Feed
28	Error 381 382 383 385 389 384	 40078 40079 40051 40820 40819 40918	A paper jam has occurred under the image drum. Remove Paper. Press the [Details] button for help.	Jam has occurred in paper path. Error 381 : Transport Error 382 : Exit Error 383 : Duplex Entry Error 385 : Paper Around Fuser Error 389 : Printing Page Lost Error 384 : Upper Output Tray
29	Error 370 371 373	40052 40053 40055	A Paper Jam has occurred and paper remains near the Duplex Unit. Remove Paper. Press the [Details] button for help.	Jam has occurred nearby DUPLEX unit. Error 370 : Duplex Reversal Error 371 : Duplex Input Error 373 : Duplex Multifeed
30	Error 372	40054	Paper jam has occurred. Open the front cover and remove the paper. Press the [Details] button for help.	Jam has occurred nearby DUPLEX unit. Error 372 : Misfeed from Duplex Refer to 2.5.5
31	Error 360	40980	The 2-Sided Printing unit is not set correctly. Press the [Details] button for help.	Duplex unit is open (removed). This message is displayed the duplex unit is removed under the error status (Paper Jam, cover opend e.t.c.) occurred. If the duplex unit is removed without error status, "Inspection is required. 181:Fatal Error" is displayed.

No.	Category	PJL Status Code	Panel messages	Description
32	Error 350 351 352 353	40997 (Y) 40998 (M) 40999 (C) 40996 (K)	%COLOR% Please install new Image Drum Unit. Image Drum Life. Press the [Details] button for help.	The life of the image drum (Alarm) Error 350 : Y Error 351 : M Error 352 : C Error 353 : K Warning status takes effect at Cover Open/Close.
33	Error 560 561 562 563	40937 (Y) 40938 (M) 40939 (C) 40936 (K)	%COLOR% Please install new Image Drum Unit. Image Drum Life. Press the [Details] button for help.	The toner empty error is occurred after the image drum reached its life. Error 560 : Y Error 561 : M Error 562 : C Error 563 : K This is displayed until a user exchanges the image drum.
34	Error 564 565 566 567	40476 (Y) 40477 (M) 40478 (C) 40475 (K)	%COLOR% Please install new Image Drum Unit. Image Drum Life. Press the [Details] button for help.	Notifies the life of the drum. The operator can prolong the life temporarily by pressing the OK button. Error 564 : Y Error 565 : M Error 566 : C Error 567 : K
35	Error 680 681 682 683	40482 (Y) 40483 (M) 40484 (C) 40481 (K)	%COLOR% Install New Image Drum. Image Drum Life. Press the [Details] button for help.	Notifies the life of the drum absolutely. This status is appeared after the end of the prolonged period (see also Error 564~567). Error 680 : Y Error 681 : M Error 682 : C Error 683 : K
36	Error 354	40971	Fuser Unit Life. Install New Fuser Unit. Press the [Details] button for help.	Notifies the fuser has reached its life. This is the error displayed based on the counter to indicate that the fuser has reached its life, and printing will stop. Warning status takes effect at Cover Open/Close. This error will occur on some user setting mode.
37	Error 355	40970	Belt Unit Life. Install New Belt Unit. Press the [Details] button for help.	Notifies the transfer belt has reached its life. This is the error displayed based on the counter to indicate that the belt has reached its life, and printing will stop. Warning status takes effect at Cover Open/Close.
38	Error 348	40926	The Fuser Unit is not installed correctly. Reset Fuser Unit. Press the [Details] button for help.	The engine detects the fuser unit error. It recovers, when a value is able to be normally read by re-reading after cover closing. When not recovering, exchange of a fuser unit is needed.

No.	Category	PJL Status Code	Panel messages	Description
39	Error 356	40964	Waste Toner Full. Install New Belt Unit. Press the [Details] button for help.	Indicates waste toner full. Warning status takes effect only once at Cover Open/Close, and the error occurs again when about 500 copies have been printed.
40	Error 544 545 546 547	40915 (Y) 40916 (M) 40917 (C) 40914 (K)	%COLOR% Toner cartridge not properly installed. Press the [Details] button for help.	Shows that the toner is not supplied (the toner cannot be detected). The lever of toner cartridge may not be locked, or toner cartridge may be set with protection tape. Shows that the toner cartridge lever has not been locked. Error 544 : Y Error 545 : M Error 546 : C Error 547 : K
41	Error 340 341 342 343	40034 (Y) 40035 (M) 40036 (C) 40033 (K)	Image Drum not properly installed. %COLOR% Check Image Drum. Press the [Details] button for help.	The image drum is not correctly installed. Error 340 : Y Error 341 : M Error 342 : C Error 343 : K
42	Error 320	40992	The Fuser Unit is not installed correctly. Reset Fuser Unit. Press the [Details] button for help.	The fuser unit is not correctly installed.
43	Error 330	40037	Belt Unit not installed correctly. Re-set the Belt Unit. Press the [Details] button for help.	The belt unit is not correctly installed.
44	Error 310 311 587	40021 40991 40720	%COVER% Open. Press the [Details] button for help.	The cover is open. Error 310 : Top Cover Error 311 : Front Cover Error 587 : Rear Cover
45	Error	40967		Indicates that receiving the NIC download data.
46	Error	40967		Indicates that finished receiving the NIC download data.

No.	Category	PJL Status Code	Panel messages	Description
47	Error	40967		An error has happened while the printer is receive-processing the NIC download data. %DLCODE% 1: File size error 2: Check-sum error 3: Invalid printer model number 4: Invalid module I/F version 5: Invalid FAT version
48	Error	40967		The printer is writing the NIC download data.
49	Error	40967		The printer finished writing the NIC download data.
50	Error	40967	Please check data. Program Data Write Error <%DLCODE%>	An error has happened while the printer is writing the NIC download data. %DLCODE% 1: Memory allocation error 2: Download file error 3: Device allocation error 4: No device space 5: File writing failure 6: CU-F/W mismatch
51	Error	-	Shutdown in progress.	It is shown that a unit is shutting down.
52	Error	-		Indicates that the printer has completed shutting down.
53	Error	-		It is shown that the printer completed shutdown processing.
54	Fatal 126	40057 -	Power Off and Wait for a while 126:Condensing Error	A dew is formed. The message of fatal error is specified by English only.
55	Fatal <nnn>	40057 -	Power OFF/ON %ERRCODE%:Error	A fatal error occurred. For more information, see "Service Calls List." %ERRCODE%: specifies 3 digits (decimal) error code. The message of fatal error is specified by English only.
56	Fatal <nnn>	40057 -	Inspection is required. %ERRCODE%:Error	A fatal error occurred. For more information, see "Service Calls List." %ERRCODE%: specifies 3 digits (decimal) error code. The message of fatal error is specified by English only.
57	Fatal 096 231 128 168 169	40057 -	Inspection is required. %ERRCODE%:Error %CODE%	A fatal error occurred. For more information, see "Service Calls List." %ERRCODE%: specifies 3 digits (decimal) error code. '%CODE%' specifies error code that is the detailed error cause. (2 digits, hexadecimal) The message of fatal error is specified by English only.
58	Fatal 002~011 F0C F0D FFE FFF	40057 -	Power OFF/ON %ERRCODE%:Error	A fatal error occurred. For more information, see "Service Calls List." %ERRCODE%: specifies 3 digits (decimal) error code. F0C, F0D, FFE, and FFF are hexadecimal code. The message of fatal error is specified by English only.
59	Fatal 9xx	40057 -	Power OFF/ON %ERRCODE%:Error	A fatal error occurred. For more information, see "Service Calls List." %ERRCODE%: specifies 3 digits (decimal) error code. The message of fatal error is specified by English only.
60	Error	40735 40759 40748 40591 40710	Insufficient memory. Please see Help for details.	Indicates that Memory Overflow is occurred during the following functions executing. - Memory Overflow is occurred during the executing of copy. - Memory Overflow is occurred during the executing of Scan To mail. - Memory Overflow is occurred during the executing of Scan To Network PC. - Memory Overflow is occurred during the executing of Scan To USB memory. - Memory Overflow is occurred during the executing of Fax sending.
61	Error	40788	Automatic document feeder (ADF) cover is open. Press the [Details] button for help.	Indicates that ADF cover of scanner unit is opened. Indicates that inter-lock cover of scanner unit is lifted up. Notes: If inter-lock cover is lifted up during scanning from document feeder, system will display document jam.

No.	Category	PJL Status Code	Panel messages	Description
62	Error	40789	Document jam has occurred. Open the automatic document feeder (ADF) cover on the scanner to check. <%CODE%> Press the [Details] button for help.	Indicates that the document jam occurred during the scanning.
63	Error	40779	Scanner lamp error check the lamp. <%CODE%> Press the [Details] button for help.	Indicates that the lamp error is occurred. This message is displayed because of the light intensity of lamp is weaker. %CODE% : details =1:Calibration defective (device) =2:Calibration defective (LED) =3:Calibration defective (timewise deterioration)
64	Error	40780	Power OFF/ON Carriage Error <1> Please see Help for details.	Indicates that the mirror caridge error is occurred. This message is displayed because of the calidge of scanner doesn't work normally. n : details =2:the calidge of scanner doesn't return to Home Position =3:Defective detecting reading start position
65	Error	40734	Unable to save as USB memory is full. Please see Help for details.	Indicates that the file saving is failed bacause of USB memory doesn't have enough free space. The file saving is aborted.
66	Error	40731	Writing to USB memory failed. Please see Help for details.	Indicates that the file saving is failed for the reasons of being in a write-protected state.
67	Error	30941	Unable to save as USB memory is not connected. Please see Help for details.	Indicates that the USB memory was extracted. When a USB memory is extracted all over ScanToMemory execution, the file saving of image file is stopped.
68	Error	40716	Connect to PC failed. Please see Help for details.	Indicates that it is failed to connect to PC. If the OK key is pressed, it shift to stand-by screen.

No.	Category	PJL Status Code	Panel messages	Description
69	Error	40787		Indicates that it is carriage error. %CODE% : details =2:Home position error (carriage connection error) =3:Defective detecting black edge
70	Error	40725	Insufficient memory occurred during Rx.	Indicates that the fax Memory Overflow was occurred during fax receiving.
71	Error	30953 40728	Communication error Tx	Indicates that the fax sending was failed. The details of the fax sending errors are not displayed. The message is shown after the job was finished by communication error and it is kept until pressing a OK key. It is reset at new transmission. (When Country Code is Germany, it is not applied by DTS.)
72	Error	30954 40726	Communication error Rx	Indicates that the fax receiving was failed. The details of the fax receiving errors are not displayed. The message is shown after the job was finished by communication error and it is kept until pressing a OK key. It is reset at new transmission. (When Country Code is Germany, it is not applied by DTS.)
73	Error	30957 10847	Telephone Please see Help for details.	The screen that specified talking by telephone is displayed, when the handset hooked up.
74	Error	40593	File Transmission Error Please see Help for details.	Indicates that file sending was failed due to the file server problems, network cable discnnected or network trouble (Scan To Network PC). This message is cleared by the pressing OK key.
75	Error	40595 40727	E-mail Transmission Error Please see Help for details.	Indicates that E-mail sending was failed due to the mail server problems, network cable discnnected or network trouble (Scan To E-mail). This message is cleared by the pressing OK key.
76	Error	40765	Please check SMTP settings. Please see Help for details.	Indicates that failed to connect with SMTP server.

No.	Category	PJL Status Code	Panel messages	Description
77	Error	40764	Please check POP3 settings. Please see Help for details.	Indicates that failed to connect with POP3 server.
78	Error	40763	SMTP Login failed. Please see Help for details.	Indicates that failed to login in SMTP server.
79	Error	40762	SMTP Auth. Unsupported. Please see Help for details.	Indicates that authentification is unsupported by SMTP server.
80	Error	40761	POP3 Login failed. Please see Help for details.	Indicates that failed to login in POP3 server.
81	Error	40758		Indicates that LDAP Server connection is failed.
82	Error	40757		Indicates that failed to login in LDAP Server.
83	Error	40756		Indicates that the communication with LDAP Server was disconnected by the unknown reasons.
84	Error	40754		Indicates that the Serarch Root is not found out in LDAP Server.
85	Error	40753		Indicates that the address search is failed by time-out error.
86	Error	40812	Getting target IP failed. Please check DHCP settings. Please see Help for details.	Indicates that DHCP server is not found out. Scan to E-mail, Scan to Network PC and Scan to Remote PC (WSD) are unusable during this status occurring. This message is displayed by the timing when "Mail", "Network PC" icons were pressed with a "Scan Menu" screen.
87	Error	40752	Failed to connect to DNS server. Please check DNS settings. Please see Help for details.	Indicates that failed to connect DNS Server. The same message is displayed, if name resoution is failed in DNS server.
88	Error	40751	Please check Server setting. Please see Help for details.	Indicates that failed to connect with file server.

No.	Category	PJL Status Code	Panel messages	Description
89	Error	40750	Server Login failed. Please see Help for details.	Indicates that failed to login in CIFS or FTP server.
90	Error	40718	Entering directory failed. Please see Help for details.	Indicates that failed to access in directory of FTP server.
91	Error	40744	Changing data Transfer Type failed. Please see Help for details.	Indicates that the data transfer type of FTP server is not supported by this unit. The file sending will be success by the changing of data transfer type in FTP serve.
92	Error	40592 40743	File writing failed. Please see Help for details.	Indicates that failed to make image file in file server during Scan To Network PC executing.
93	Error	40742	FTP destination Full. Please see Help for details.	Indicates that the file sending is failed because of FTP Server doesn't have enough free space in strage device. (FTP Server)
94	Error	40741	Please change File Name. Please see Help for details.	Indicates that the file sending is failed because of the file name is not permission. (FTP Server)
95	Error	40594 40740	Device communication protocol not supported. Please see Help for details.	Indicates that the server does not support CIFS/ FTP.
96	Error	40739	Please check Network Share Name. Please see Help for details.	Indicates that the network folder name is wrong. (CIFS Server)

No.	Category	PJL Status Code	Panel messages	Description
97	Error	-	Please check data. Program Data Write Error <%DLCODE%>	Indicates that an error has happened while writing the SIP download data. %DLCODE% 1: Data transfer error 2: No device space 3: Check sum error 4: Chip detection error 5: Chip erace error 6: Chip writing error 7: Chip verify error 8: Data error (Product code is wrong e.t.c.) 9: Data size error
98	Error	40712	Inspection is required. %ERRCODE%: SIP Error	Indicates that the processing of Scan Image Processing contller was failed. User must turn Off/ On the power supply, if this status occurred. %ERRCODE% 4 digit hex code
99	Error	40724	Please call service. Scanner unit failed to detect printer unit.	Indicates that scanner and printer is not connected. This message is displayed, if the communication between scanner and printer units could not be started. User must turn Off/ On the power supply, if this status occurred.
100	Error (ONLINE)	40714	SIP Firmware Missing	Indicates that the firmware in board can not be detected.
101	Fatal 070 073 075	40057	Power OFF/ON %ERRCODE%:Error %FATALSTRING1%	A fatal error occurred. For more information, see "Service Calls List." %ERRCODE%: specifies 3 digits (decimal) error code. '%FATALSTRING1%' specifies error code that is the detailed error cause. The message of fatal error is specified by English only.
102	Fatal 203 204	40057	%ERRCODE%:Error %FATALSTRING2%	A fatal error occurred. For more information, see "Service Calls List." %ERRCODE%: specifies 3 digits (decimal) error code. '%FATALSTRING2%' specifies error code that is the detailed error cause. The message of fatal error is specified by English only.
103	Fatal 072 057 058 231	40057	Power OFF/ON %ERRCODE%:Error %CODE%	A fatal error occurred. For more information, see "Service Calls List." %ERRCODE%: specifies 3 digits (decimal) error code. '%CODE%' specifies error code that is the detailed error cause. The message of fatal error is specified by English only.
104	Fatal 209	40057	Power OFF/ON %ERRCODE%:Download Error	Downloading Media Table to PU has failed. (Related to CustomMediaType.) %ERRCODE%: specifies 3 digits (decimal) error code. The message of fatal error is specifiedby English only. "Download Error" is specified by Japanease and English only.
105	Error	30938	A decoding error occurred. Check the image data.	Indicates that an error has occurred during analysis of image data input to the MFP from an external source. This appears when an error has occurred during analysis of TIFF or JPEG data in A05:DirectPrint, A07: InternetFAX, E-mailPrint, or FaxToPrint (saving sent/received data) mode.
106	Error	30930	Process has been cancelled as spooler is full. Please free up memory space by reducing use and try again.	
107	Error	30932	Process has been cancelled by a spooler device error. Please contact administrator.	
108	Error	-	Access denied to PC. Please check PC.	Indicates that PC rejects a PushScan request. (Select Close with the cursor and) press [OK] button, and the display will return to ScanTo standby screen. (At present, screens to return to after errors have been reset vary from function to function. It is desirable to return to the same screen.)

No.	Category	PJL Status Code	Panel messages	Description
109	Error	30936	Unauthorized Scan Error Code: X01	Notifies that a particular pattern is detected (banknote detection) during scanning for photocopy. The message shall be written in English even when the MFP is bound for Japan. The exact words shall be displayed and they shall not be shortened. The message shall not be translated into any other languages.
110	Error		A decoding error occurred. Check the image data.	
111	Error	-	USB Memory disconnected.	Indicates that the USB memory is disconnected while PrintFromUSBMemory is running. Reading of the image file is cancelled.
112	Error	-	Cannot open the file.	Notifies that the specified file cannot be opened.
113	Error	-	Cannot read the file.	Notifies that processing has failed, for instance, because of a fault in the equipment in which the data was to be stored.
114	Error	40565	Document jam has occurred. Open the automatic document feeder (ADF) cover on the scanner to check. <%CODE%> Press the [Details] button for help.	At machine initial time (power-on, restoration time from sleep), a manuscript was detected on a set sensor.
115	Error 409	40585	Printing was stopped. Rear Output Tray was opened during printing. Open the Output Tray. Error code: 409	Indicates that an error has occurred as the faceup stacker was operated during printing and printing stopped.
116	Error	-	Insufficient memory occurred during Fax Tx reservation.	The same type of status as STATUS_ID_FAX_S_MEMORY_OVERFLOW Indicates that memory overflow has occurred during ScanToFax.
117	Error	-	Insufficient memory.	Similar error to STATUS_ID_FAX_S_MEMORY_OVERFLOW Indicates that memory overflow has occurred while fax is being received.

No.	Category	PJL Status Code	Panel messages	Description
118	Error (ONLINE)	40596		
119	Error (ONLINE)	40597		
120	Error 517	-	Wireless startup failed. Please see Help for details.	
121	Error	-	This wireless firmware version does not operate on this device. Please see Help for details.	
122	Error	-	Wireless settings are incomplete. Please see Help for details.	
123	Error	-	Not connected to wireless access point. Please see Help for details.	
124	Error	40427	Firmware Update Error Please try again. If network doesn't work, please try firmware update over USB.	
125	Error 410 411 412 413 + Information	-	Use genuine %COMPANY_NAME% consumables for max performance.	This should be appeared after the toner empty error messages when OKIORIGINALCONSUMABLEDISPLAY is ON to display this.

No.	Category	PJL Status Code	Panel messages	Description
126	Error 350 351 352 353 + Information	-	Use genuine %COMPANY_ NAME% consumables for max performance.	This should be appeared after the drum life error messages when OKIORIGINALCONSUMABLEDISPLAY is ON to display this.
127	Error 560 561 562 563 + Information	-	Use genuine %COMPANY_ NAME% consumables for max performance.	This should be appeared after the drum life error messages when OKIORIGINALCONSUMABLEDISPLAY is ON to display this.
128	Error 709	40580	Caution, unknown Consumable detected Go to User Manual "Trouble Shooting" to restore operation	Unknown Consumable detected. Use a special startup(Press Cancel when power on) to start the printer to on-line, but a history will be recorded.
129	Error (ONLINE) 519	40364	Receiving data timeout.	When receiving data by Port9100, LPR, FTP, IPP, WSD, or Email, a timeout occurred in stream.
130	Error 690 691 692 693	40486(Y) 40487(M) 40488(C) 40485(K)	Incompatible %COLOR% Image Drum. Press the [Details] button for help.	The signature ID of image drum is not proper to the distribution channel, but the group of signature ID is proper. As probable missing to measure the amount of drum, the printer notifies error status and stop printing. Error 690 : Y Error 691 : M Error 692 : C Error 693 : K When this error occurs in more than one color drums, the all drums that have this error status and a high most priolity error code are displayed. (Example) When this error occurs in all drums: YMCK Drum Regional Mismatch: 690 When this error occurs in MC drums: MC Drum Regional Mismatch: 691

No.	Category	PJL Status Code	Panel messages	Description
131	Error 700 701 702 703	40492(Y) 40493(M) 40494(C) 40491(K)	Incompatible %COLOR% Image Drum. Press the [Details] button for help.	The signature ID of image drum is not proper to the distribution channel, and the group of signature ID is not proper. Error 700 : Y Error 701 : M Error 702 : C Error 703 : K When this error occurs in more than one color drums, the all drums that have this error status and a high most priolity error code are displayed. (Example) When this error occurs in all drums: YMCK Drum Regional Mismatch: 700 When this error occurs in MC drums: MC Drum Regional Mismatch: 701
132	Error 704 705 706 707	40496(Y) 40497(M) 40498(C) 40495(K)	Incompatible %COLOR% Image Drum. Please see HELP for details	The signature ID of image drum is not proper to the distribution channel, and the group of signature ID is protected. Error 704 : Y Error 705 : M Error 706 : C Error 707 : K When this error occurs in more than one color drums, the all drums that have this error status and a high most priolity error code are displayed. (Example) When this error occurs in all drums: YMCK Drum Regional Mismatch: 704 When this error occurs in MC drums: MC Drum Regional Mismatch: 705

No.	Category	PJL Status Code	Panel messages	Description
133	Error 684 685 686 687	40502(Y) 40503(M) 40504(C) 40501(K)	Incompatible %COLOR% Image Drum. Press the [Details] button for help.	The signature ID of image drum can not be recognized (Unauthorized third party). As probable missing to measure the amount of drum, the printer notifies error status and stop printing. Error 684 : Y Error 685 : M Error 686 : C Error 687 : K Four following behavior is carried out by mode of operation. 1.Only warning display .(This error is not displayed). 2.Warning status takes effect at Cover Open/ Close. 3.With no automatic concentration compensation . 4.This error is displayed and it stops. When this error occurs in more than one color drums, the all drums that have this error status and a high most priolity error code are displayed. (Example) When this error occurs in all drums: YMCK Drum Regional Mismatch: 684 When this error occurs in MC drums: MC Drum Regional Mismatch: 685

No.	Category	PJL Status Code	Panel messages	Description
134	Error 694 695 696 697	40506(Y) 40507(M) 40508(C) 40505(K)	%COLOR% Image Drum Not Installed. Press the [Details] button for help.	The image drum is not installed. Error 694 : Y Error 695 : M Error 696 : C Error 697 : K Four following behavior is carried out by mode of operation. 1.Only warning display .(This error is not displayed). 2.Warning status takes effect at Cover Open/ Close. 3.With no automatic concentration compensation . 4.This error is displayed and it stops.
135	Error 480 (FaceDown) 485 (2ndBIN)	40422(2nd Bin) 40075(1st Bin)	Output Tray (or Upper Output Tray) Full.	1st Bin or 2nd Bin is stacked full. Remove the paper.
136	Error	-	Changing Language. Please wait.	It is during a language change. Wait for a while. During this message indication, the operation except the shut down button becomes invalid
137	Error	-	Language Change Failed .Error num: %CODE%	Language change failed. It is necessary to Pow-Off and Pow-On.
138	Error		Cannot print because your account balance is 0. User name: %USERNAME% PC Print job: %DOCUMENTNAME% To continue the print job, add the balance and select [Restart Print]. For canceling the print job, select [Cancel Print].	Indicating that the job can't be printed because there are no balances of the account the job is using.
139	Error		#N/A!	Indicating that when reading by ADF, the ADF unit was opened.

2.5.2 Inspection List

Panel display	Cause	Check details	Result	Solution
Inspection is required. 001:Error	Machine Check Exception hardware fault detection (board failure or poor power supply)	Does this error message reappear?	Yes	Cycle the power. Replace the CU/PU board.
Power OFF/ON 002:Error xxxxxxxx xxxxxxxx xxxxxxx 003:Error xxxxxxxx xxxxxxxx xxxxxxx 004:Error xxxxxxxx xxxxxxxx xxxxxxx 005:Error xxxxxxxx xxxxxxxx xxxxxxx 006:Error xxxxxxxx xxxxxxxx xxxxxxx 007:Error xxxxxxxx xxxxxxxx xxxxxxx	Program detects the wrong process	Does this error message reappear?	Yes	Record the eight figures on the LCD, and cycle the power. Replace the CU/PU board.
Power OFF/ON 009:Error Power OFF/ON 010:Error Power OFF/ON 011:Error	Program detects the wrong process			Record the eight figures on the LCD, and cycle the power.
Power OFF/ON 012:Error	A watchdog timeout occurs due to no system timer interrupt for unknown reasons.	Does this error message reappear?	Yes	Cycle the power. Replace the CU/ PU board.
Power OFF/ON 024:Error	CU Program detects the error for hash on the DIMM slot			
Inspection is required. 030:Error	Detect the CU RAM Check error	Does this error message reappear?	Yes	Re-implement the RAM DIMM and turn on the MFP. Replace the CU/ PU board.
Inspection is required. 040:Error	Detect the CU EEPROM error	Does this error message reappear?	Yes	Cycle the power. Replace the CU/ PU board.
Inspection is required. 042:Error	Failed to access to the Flash ROM that is directly mounted on the CU/PU board	Does this error message reappear?	Yes	Cycle the power and format the Flash memory. Replace the CU/ PU board.
Inspection is required. 043:Error	The format varsion of the Flash differs from program supports			
Inspection is required. 045:Error	Failed to fomat the Flash memory			
Inspection is required. 049:Error	Incompatibility between the CU and the engine head type (resolution)			Replace with a head of proper resolution.
Inspection is required. 051:Error	Stopped or unusual movement the CU cooling FAN			Replace the CU cooling FAN.
Power OFF/ON 052:Error	A DMA Abort error was detected with the Image Processor.	Does this error message reappear?	Yes	Cycle the power. Replace the DIMM.
Power OFF/ON 054:Error xxx yyy zzz	Detect the communication error between the Controller unit and scanner unit			Record the figures on the LCD, and close the error display.
Power OFF/ON 055:Error	Controller unit cannot detect the scanner unit	Does this error message reappear? Does this error message reappear?	Yes Yes	Record the figures on the LCD, and close the error display and cycle the power. Check the connection between the scanner and printer. Replace the CU/PU board.

Panel display	Cause	Check details	Result	Solution
Inspection is required. 056:Error	Controller unit cannot detect the hard disk			Power off the MFP and attach the hard disk and power on the MFP.
Power OFF/ON 057:Error	Detect the time out between the Controller unit and scanner unit 01 : No ACK for read beginning command 02 : No ACK for read cancel command 03 : No ACK for SIP cancel command			Record the figures on the lower right side of the LCD, and cycle the power.
Power OFF/ON 058:Error	Detect the error at scanner control section 01 : SIP internal error 02 : S c a n Model internal error 03 : SPB internal error			Record the figures on the lower right side of the LCD, and cycle the power.
Power OFF/ON 059:Error	Detect the communication error between the Controller unit and scanner unit			Record the figures on the LCD, and close the error display.
Inspection is required. 067:Error	Detect the communication error with the Sleep Mode interface supervisor program.	Does this error recur?	Yes	Cycle the power. Replace the CU/PU board.
Inspection is required. 069:Error	Malfunction of the NIC chip was detected.	Does this error recur?	Yes	Cycle the power. Replace the CU/PU board.
Power OFF/ON 070:Error	A PSE firmware error was detected.			If display the address on the LCD, record the figures and close the error display and cycle the power.

Panel display	Cause	Check details	Result	Solution
Power OFF/ON 072:Error	I/F error between CU and PU			Record the figures on the lower right side of the LCD, and cycle the power.
Power OFF/ON 073:Error c/ xxxxxxxx	Detect the Video circuit over run.			Record the figures on the lower right side of the LCD, and cycle the power.
Power OFF/ON 075:Error c/ xxxxxxxx	Video error. An error was detected in expanding image data.			
Power OFF/ON 077:Error	VIC Illegal Decomp Error	Does this error recur?	Yes	Cycle the power. Replace the CU/PU board.
Inspection is required. 078:Error	Communication Error with Operator Panel Unit	Does this error recur?	Yes	Cycle the power. Replace the CU/PU board.
Power OFF/ON 080:Error	Failed to access to the parameter storage	Does this error recur?	Yes	Cycle the power. Replace the CU/PU board.
Inspection is required. 081:Error	Parameter matching check error			Format the EEPROM , Flash and need the initialize.
Inspection is required. 090:Error	Detect the error at stapler unit.			Replace the stapler unit or CU/PU Board,and cycle the power.
Inspection is required. 104:Error	An engine EEPROM read/ write error was detected at power on			
Inspection is required. 105:Error	Not detect the EEPROM at power on			
Inspection is required. 106:Error	Detect the error at engine control logic			Cycle the power.
Inspection is required. 111:Error	A duplex unit for another model was detected	Is a duplex unit provided for this model installed?	No	Install a correct duplex unit.
Inspection is required. 112:Error	A Tray2 for another model was detected.	Is a Tray2 provided for this model installed?	No	Install a correct Tray2.
Inspection is required. 113:Error	A Tray3 for another model was detected.	Is a Tray3 provided for this model installed?	No	Install a correct Tray3.

Panel display	Cause	Check details	Result	Solution
Inspection is required. 114:Error	A Tray4 for another model was detected.	Is a Tray4 provided for this model installed?	No	Install a correct Tray4.
Inspection is required. 120:Error	PU cooling FAN error	Is the FAN connector connected correctly?	No Yes	Check to make sure connection of the FAN connector. Replace the FAN motor.
Inspection is required. 121:Error	High voltage power supply interface error	Is the cable connecting the CU board to the high voltage power supply unit connected properly? Is there any defective contact point?	No Yes No	Re-connect them properly. Check for defective contact points of the high voltage system. Replace the high voltage power supply unit.
Inspection is required. 122:Error	Low voltage FAN error	Is the FAN of the low voltage power supply block working? Is the FAN connector connected correctly?	No Yes No Yes	Check to make sure connection of the FAN connector. Replace the low voltage power supply unit. Replace the FAN motor. Replace the low voltage power supply unit.
Inspection is required. 123:Error	Abnormal environment humidity or unconnected humidity sensor	Does this error recur?	Yes	Cycle the power. Replace the Environment sensor board.
Inspection is required. 124:Error	Abnormal environment humidity	Does this error recur?	Yes	Cycle the power. Replace the Environment sensor board.
Inspection is required. 126:Error	Dew condensation in the printer was detected.	This error tends to occur after a printer is carried in from the outsides. Leave the printer for 2 hours to half a day at room temperature, and turn on the power. Does this error recur?	 Yes	After leaving the printer at room temperature, turn on the power again. Replace the Environment sensor board.
Inspection is required. 127:Error	Fuser FAN error	Is the FAN connector connected properly? Does this error recur?	No Yes Yes	Re-connect it properly. Replace the FAN motor. Replace the CU/PU board.

Panel display	Cause	Check details	Result	Solution
Inspection is required. 128:Error xx	PU FAN error 04 : Belt Cooling Fan Error 05 : Fuser Side Fan Error 08 : Image Drum Motor Fan Error 0A : Fuser Intake Fan Error 0C : Duplex Fan Error 0D : Fuser Exhaust Fan2 Error	Is the FAN connector connected correctly?	No Yes	Check to make sure connection of the FAN connector. Replace the FAN motor.
Inspection is required. 131:Error	LED head detection error (131=Y, 132=M, 133=C, 134=K)			
Inspection is required. 132:Error				
Inspection is required. 133:Error				
Inspection is required. 134:Error				
Inspection is required. 142:Error	Cyan Image drum position detection error			
Inspection is required. 154:Error	The belt unit fuse blown out.			
Inspection is required. 155:Error	The fuser unit fuse blown out.			
Inspection is required. 160:Error	Toner sensor detection error (160=Y, 161=M, 162=C, 163=K) This error does not occur with the factory default settings.	Is the toner cartridge installed? Is the lock lever of the toner set? Does this error recur?	No No Yes	Install the toner cartridge. Move the lock lever of toner cartridge to the lock position. Replace the toner sensor assembly.
Inspection is required. 161:Error				
Inspection is required. 162:Error				
Inspection is required. 163:Error				

Panel display	Cause	Check details	Result	Solution
Inspection is required. 166:Error xx	An abnormality was detected with the power supply temperature thermistor. 01 : The power supply thermistor is detected as shorted. 02 : The power supply thermistor is detected as open. 03 : The power supply thermistor indicates high temperature error. 04 : The power supply thermistor indicates low temperature error.	01, 02: Does this error recur? Does this error recur? Does this error recur? 03: Does this error recur? Does this error recur? Does this error recur? 04: Does this error recur? Does this error recur? Does this error recur?	 Yes Yes Yes Yes Yes Yes Yes Yes Yes	Cycle the power. Replace the high voltage power supply unit. Replace the CU/PU board. Replace the cable between the high voltage power supply unit and the CU/PU board. Remove anything obstructing the ventilation slots if any and restore the power. Replace the high voltage power supply unit. Replace the CU/PU board. Replace the cable between the high voltage power supply unit and the CU/PU board. Raise the room temperature and restore the power. Replace the high voltage power supply unit. Replace the CU/PU board. Replace the cable between the high voltage power supply unit and the CU/PU board.
Inspection is required. 167:Error	An abnormality was detected with the thermistor.	Is the error message displayed? Does this error recur?	Yes Yes	Cycle the power. Replace the fuser unit.

Panel display	Cause	Check details	Result	Solution
Inspection is required. 168:Error xx	An abnormality was detected with the Compensation Thermistor 01 : The compensation thermistor is detected as shorted. 02 : The compensation thermistor is detected as open. 03 : The compensation thermistor indicates high temperature error. 04 : The compensation thermistor indicates low temperature error.	Is the error message displayed? Does this error recur?	Yes Yes	Cycle the power. Replace the fuser unit.
Inspection is required. 169:Error xx	An abnormality was detected with the Upper side Thermistor 01 : The upper side thermistor is detected as shorted. 02 : The upper side thermistor is detected as open. 03 : The upper side thermistor indicates high temperature error. 04 : The upper side thermistor indicates low temperature error.	Is the error message displayed? Does this error recur?	Yes Yes	Cycle the power. Replace the fuser unit.

Panel display	Cause	Check details	Result	Solution
Inspection is required. 170:Error	Short circuit of the heat roller Thermistor was detected.	Does this error recur?	Yes	Cycle the power. Replace the fuser unit.
Inspection is required. 171:Error	Open circuit of the heat roller Thermistor was detected.			
Inspection is required. 172:Error	Heat roller thermistor detected the high-temperature.	Does this error recur?	Yes	After leaving the printer, turn on the power again. Replace the fuser unit.
Inspection is required. 173:Error	Heat roller thermistor detected the low-temperature.	Does this error recur?	Yes	Cycle the power. Replace the fuser unit.
Inspection is required. 174:Error	Short circuit of the backup roller Thermistor was detected.	Does this error recur?	Yes	Cycle the power. Replace the fuser unit.
Inspection is required. 175:Error	Open circuit of the backup roller Thermistor was detected.	Does this error recur?	Yes	Cycle the power. Replace the fuser unit.
Inspection is required. 176:Error	Backup roller thermistor detected the high-temperature.	Does this error recur?	Yes	Cycle the power. Replace the fuser unit.
Inspection is required. 177:Error	Backup roller thermistor detected the low-temperature.	Does this error recur?	Yes	Cycle the power. Replace the fuser unit.
Inspection is required. 181:Error	Duplex unit I/F error	Does this error recur?	Yes	Cycle the power. Check to make sure the contact points of the connector and replace the Duplex unit.

Panel display	Cause	Check details	Result	Solution
Inspection is required. 182:Error	Tray2 I/F error	Does this error recur?	Yes	Cycle the power. Check to make sure the contact points of the connector and replace the Tray unit.
Inspection is required. 183:Error	Tray3 I/F error			
Inspection is required. 184:Error	Tray4 I/F error			
Power OFF/ON 190:Error	System memory overflow			Cycle the power.
Power OFF/ON 203:Error sssssssssssssss	CU program error			Record the figures on the lower side of the LCD, and cycle the power.
Power OFF/ON 204:Error				Cycle the power
Power OFF/ON 207:Error	CU program error			Cycle the power
Power OFF/ON 208:Error				
Power OFF/ON 209:Error	Custom Media Type table downloading failed.			Cycle the power
Power OFF/ON 213:Error	CU program error			Cycle the power
Power OFF/ON 214:Error	CU detected PU program error			Cycle the power
Inspection is required. 230:Error	Not detect RFID Reader	RFID read device error Does this error recur?	Yes Yes	Check the FFC connecting the RFID R/W board and the CU/PU board. Replace the CU/PU board and the RFID R/W unit

Panel display	Cause	Check details	Result	Solution
Inspection is required. 231:Error xx	An abnormality was detected with the RFID Reader 01 : communication error between the RFID reader and the engine PCB. 02 : the transceiver circuit error of the RFID reader. 03 : communication error between the RFID reader and the Tag chip. 04 : the RFID Tag detection error (more than 4 chips). 05 : K Reader ～ Tag Interface connection error. 06 : Y Reader ～ Tag Interface connection error. 07 : M Reader ～ Tag Interface connection error. 08 : C Reader ～ Tag Interface connection error. 11 : K Reader detecting other than K color Tag. 12 : Y Reader detecting other than Y color Tag. 13 : M Reader detecting other than M color Tag. 14 : C Reader detecting other than C color Tag.	Does this error recur?	Yes	Cycle the power. 01 to 03:Replace the RFID reader board. 04:Remove the extra Tag chip. 05/11:Replace the Black toner cartridge or image drum. 06/12:Replace the Yellow toner cartridge or image drum. 07/13:Replace the Magenta toner cartridge or image drum. 08/14:Replace the Cyan toner cartridge or image drum.

Panel display	Cause	Check details	Result	Solution
Inspection is required. 232:Error	More than one image drum tag of the same color was detected.	Is more than one image drum of the same color installed?	Yes	Cycle the power. Replace the image drum.
Inspection is required. 250:Error	Secure File Erasing Error			
Inspection is required. 251:Error	Secure disk Erasing Error			
Inspection is required. 254:Error	An unexpected error occurred during initialization in the Security mode.			
Inspection is required. 257:Error	An unexpected error occurred during initialization of the HDD.			
Power OFF/ON 815:Error	An unexpected error occurred at FAX control.			Cycle the power.
Power OFF/ON 901:Error	Short circuit with the belt thermistor was detected.	Is the belt thermistor cable connected properly? Does this error recur after power restoration?	No Yes	Re-connect the cable properly. Replace the belt thermistor.
Power OFF/ON 902:Error	Open circuit with the belt thermistor was detected.			
Power OFF/ON 903:Error	Belt thermistor detected the high-temperature.	Is the belt thermistor cable connected properly? Does this error recur?	No Yes	Re-connect the cable properly and restore the power. Replace the belt thermistor, after a lapse of 30 minutes, turn on the power.
Power OFF/ON 904:Error	Belt thermistor detected the low-temperature.			
Power OFF/ON 915:Error	Short circuit with the Duplex unit thermistor was detected.			Cycle the power.
Power OFF/ON 916:Error	Open circuit with the Duplex unit thermistor was detected.			

Panel display	Cause	Check details	Result	Solution
Power OFF/ON 918:Error	Detect the Duplex Unit Fan-0			
Power OFF/ON 923:Error	The Black drum is not running normally.			
Power OFF/ON 928:Error	The fuser motor is not running normally.			
Power OFF/ON 931:Error	Duplex unit CPU clock frequency error			
Power OFF/ON 933:Error	Tray 2 CPU clock frequency error			
Power OFF/ON 934:Error	Tray 3 CPU clock frequency error			
Power OFF/ON 935:Error	Tray 4 CPU clock frequency error			
Power OFF/ON 941:Error	A watch dog timer error was detected.	941:Error Turn off and on the MFP. When this error occurs again, replace the CU/PU board.		
Power OFF/ON 942:Error	An undefined interruption was detected.	942:Error Turn off and on the MFP. When this error occurs again, replace the CU/PU board.		
Power OFF/ON 943:Error	PU CPU ran away out of control due to noise etc.	943:Error Turn off and on the MFP. When this error occurs again, replace the CU/PU board.		
Power OFF/ON 944:Error	Dcon circuit access failed.	944:Error Turn off and on the MFP. When this error occurs again, replace the CU/PU board.		
Inspection is required. 980:Error	Winds paper to the fuser unit was detected or impossible to recovery error.			Replace the Fuser unit.
Inspection is required. 982:Error	Excessive trays beyond the specifi-cation are installed.	Are many trays beyond the specification installed?	Yes	Use trays as many as specified.
Inspection is required. 983:Error	More than one toner cartridge tag of the same color was detected.	Is more than one toner cartridge of the same color installed?	Yes	Replace the correct toner cartridge or image drum.
Inspection is required. 984:Error	A format tag not matching with the K position was detected.			Replace the correct toner cartridge.
Inspection is required. 985:Error	A format tag not matching with the Y position was detected.			Replace the correct toner cartridge.
Inspection is required. 986:Error	A format tag not matching with the M position was detected.			Replace the correct toner cartridge.
Inspection is required. 987:Error	A format tag not matching with the C position was detected.			Replace the correct toner cartridge.
Power OFF/ON 0xF0C:Error xxxxxxxx xxxxxxxx xxxxxxx	CU program error			Record the eight figures on the LCD, and cycle the power.
Power OFF/ON 0xF0D:Error xxxxxxxx xxxxxxxx xxxxxxx				
Power OFF/ON 0xFFE:Error xxxxxxxx xxxxxxxx xxxxxxx				Record the eight figures on the LCD, and cycle the power.
Power OFF/ON 0xFFF:Error xxxxxxxx xxxxxxxx xxxxxxx				

Note! With the MFP's temperature not more than 0ºC, the errors 168, 169, 171, 173, 175, 902, 904, 916 Error may occur. After turn off the MFP, turn on the MFP after the MFP warms.

2.5.3 Fax Error List

Termination Code List

No.	Value (Hex)	Description	Solution
1.	0	NORMAL (Ended normally)	-
2.	1	STOP (A user cancelled a job during sending.)	-
3.	2	An incoming call was received. The produdre ended unsuccessfully (T1 timeout).	In the case of connecting through IP-circuit, Set to 'OFF' for the setting of 'Super-G3'. Ohterwise, in the case of the non-starting the fax or the other side calls for to talk with this side, enquire to the other side.
4.	3	CANCEL for shutdown	Try again the fax.
5.	11	Document jam during real time sending	Recover the document-jam and try again the fax.
6.	14	Memory Full during RX / Memory Full (Insufficient avaialble memory at the time of receiving. Or exceeded a maximum number of received pages.)	Occurring the Memory Full. Delete the memory for unnecessary fax data.
7.	19	FAX ERROR_TX_JOB_DELETED (Cancellation of jobs waiting for sending: Redialing, calling again & resending, and programed sending, including delayed transmission)	-
8.	21	CONNECTION FAIL (A line wasn't connected or a dial tone wasn't detected at the time of dial calling.)	The LINE connector is connected by the wrong cable. The LINE connector should be connected by the TEL cable.
9.	22	Failed sending during ringing (Conflict between sending and receiving)	Try again the fax.
		Timeout of T0 timer in Phase-A	
		Timeout of T1 timer in Phase-B	
10.	23	Redial All Failed (when all of redialing was NG)	In the case of the other side fax no response, enquire to the other side. Otherwise, check the phone number is correct or not.
11.	24	Telephone Line Cable connected to the TEL Connector.	Connect the Telephone Line Cable to the LINE connector.
12.	25	Telephone Line Cable disconnected to the LINE Connector.	Connect the Telephone Line Cable to the LINE connector.
13.	26	Not detect Dial Tone when dialing	Check the connecting with the PBX or TA. Set to 'OFF' the setting for the detecting for the Dial Tone in the case of not detecting the Dial Tone.
14.	27	Detect Busy Tone when dialing	In possibly, the other side is connecting with someone. Wait a few minutes, and retry it. Otherwise, check the connecting with the PBX or TA. Set to 'OFF' the setting of the detecting for the Busy Tone, because possibly misdetect the Busy Tone.
15.	32	V8 negotiation Fail (Not compatible with a sender in V34 receiving)	Set to 'OFF' the setting of 'Super G3'.
16.	35	SUB discrepancy in confidential receiving	Designated to a wrong confidential receiving box. Check the other side and the box number.
17.	36	Box full in confidential receiving	Overfull the limit of the number of storing in the confidential receiving box. Print the receiving fax data stored in the box.
18.	37	SEP discrepancy in bulletin board polling sending	Designated to a wrong bulletin board box. Check the other side and the box number.
19.	38	The box was unavailabl in bulletin board polling sending.	Exit the operation of the box.
20.	39	The box was unavailabl in confidential receiving.	Exit the operation of the box.
21.	40	Retry Out (Sent DCS three times in fax sending and no resoponse.)	Set to 'OFF' the setting of 'Super G3'. Otherwise, the transmission state is poor quality. Wait a few minutes, and retry faxing. Or, enquire to the instituting dealer for the telephone line.
22.	41	Too Many FTT (Training failure)	The transmission state is poor quality. Wait a few minutes, and retry faxing. Or, enquire to the instituting dealer for the telephone line.
23.	43	T2 Time Out (A machine on the other end didn't respond and T2 timeout.)	Set to 'OFF' the setting of 'Super G3'. Otherwise, the transmission state is poor quality. Wait a few minutes, and retry faxing. Or, enquire to the instituting dealer for the telephone line.

No.	Value (Hex)	Description	Solution
24.	45	Phase-B Command Rec Error (Failed to receive a control signal at the time of receiving) (Including SEP discrepancy in bulletin board polling receiving)	Set to 'OFF' the setting of 'Super G3'. Otherwise, the transmission state is poor quality. Wait a few minutes, and retry faxing. Or, enquire to the instituting dealer for the telephone line.
25.	46	Phase-B Response Rec Error (Failed to receive a control signal at the time of sending) (Including SUB discrepancy in confidential sending)	Set to 'OFF' the setting of 'Super G3'. Otherwise, the transmission state is poor quality. Wait a few minutes, and retry faxing. Or, enquire to the instituting dealer for the telephone line.
26.	47	Phase-B Invalid Command/Response Rx (Received an invalid signal.)	In possibly, the other side fax no response. Wait a few minutes, and retya faxing. Otherwise, enquire to the other side.
27.	48	A machine on the other end was incapable of receiving.	In possibly, the other side fax no response. Wait a few minutes, and retya faxing. Otherwise, enquire to the other side.
28.	49	T1 timeout after EOM (T1 timeout after EOM receiving)	This side fax could not receive the signal of the sending side fax in specified term. Require of to resend the fax by the other side. Otherwise, in the case of connecting through IP-circuit, Set to off for the setting of the Super-G3. * setting changing process Set to 'OFF' for the category of [Device Settings]-[Admin Setup]-[User Install]-[Super G3].
29.	4A	Invalid CSI error (Dialing numbers didn't match with ID of the machin on the other end in confirmation sending.)	Abort the fax sending (error occured) by the function of the ID check sending. The fax number is defferent the information of the own registered phone number in the other side fax from the inputed destination fax number at this side fax. Send after change the setting to 'OFF' of the ID confirmation sending. Otherwise, require to the other side as to correct the information of the own registered phone number in the other side fax. * setting changing process Set to 'OFF' for the category of [Device Setting]-[Admin Setup]-[Fax Setup]-[Sequrity Function]-[ID Check Tx].
30.	4B	Invalid TSI error (matches number denied acceptance registered as nuisance fax)	Rejected receving by the function of the Block Junk Fax as nuisance fax. The destination information is not matched between the information of the own registered phone number in the other side fax from the information of the registered other side's phone number at this side fax. Otherwise, the information is matched with registered nuisance fax number in the registered list. --- In the case of allowing to receive the fax, set to any of following measure. In case of 'Mode 1' is the function mode: implement ① or ② . In case of 'Mode 2' is the function mode: implement ① or ③ . In case of 'Mode 3' is the function mode: implement ① or ② and ③ . ① : Set to 'OFF' the function of theBlock Junk Fax . ② : Register the fax number allowed to receive to 'Speed Dialing'. ③ : Delete the fax number allowed to receive from 'Registered List'. * setting changing process Set to 'OFF' for the category of [Device Setting]-[Admin Setup]-[Fax Setup]-[Other Settings]-[Block Junk Fax].
31.	4c	FIF:bit49 of a facing machine's DIS was 0 in confidential sending (A facing machine was incapable of confidential receiving).	The other side's fax is not arranged the confidential communication system with F-Cord. Check the confidential receiving box opened and to available in confidential receiving at other side's fax.
32.	4d	FIF:bit47 of a facing machine's DIS was 0 in bulletin board polling receiving (A facing machine was incapable of bulletin board polling sending).	The other side's fax is not arranged the bulletin board communication system with F-Cord. Check the bulletin board box opened and to available in bulletin board polling sending by F-Cord at other side's fax.

No.	Value (Hex)	Description	Solution
33.	51	Image Data not ready (Decoding or file system error in scanned or received images)	The transmission state is poor quality. Wait a few minutes, and require to retry faxing to the other side. Or, enquire to the instituting dealer for the telephone line.
34.	52	Phase-C Time Out (EOL (not in ECM) or Frame (in ECM) timeout occurred during data receiving)	The transmission state is poor quality. Wait a few minutes, and require to retry faxing to the other side. Or, enquire to the instituting dealer for the telephone line.
35.	60	Retry Out (A machine on the other end made no response in sending Phase-D. Retry error of post-command.)	The transmission state is poor quality. Wait a few minutes, and retry faxing. Or, enquire to the instituting dealer for the telephone line. In the case of the other side fax no response, wait a few minutes and retry it. Or, enquire to the other side. Otherwise, in the case of connecting through IP-circuit, Set to off for the setting of the Super-G3.
36.	65	RNR time out (Time out error of flow control of RR/RNR in sending)	This side fax could not receive the valid response signal in specified term at a fax sending. Check the state of the other side fax, and retry faxing.
37.	66	RTN/PIN Received, EOR/ERR/DCN (Received RTN/PIN (N-ECM) ERR (ECM))	The sending action is assessed that could not be continued according the poor transmission quality. The fax should be retry with decreasing the sheets of the sending documents. Otherwise, in the case of connecting through IP-circuit, Set to off for the setting of the Super-G3.
38.	67	Phase-D Invalid Command/Response Rx (Received an invalid signal.)	In the case of connecting through IP-circuit, Set to 'OFF' for the setting of 'Super-G3'.
39.	69	Phase-D Response Rec Error (Failed to receive a control signal at the time of sending)	In the case of connecting through IP-circuit, Set to 'OFF' for the setting of 'Super-G3'.
40.	6A	EOR error (Received EOR at the time of receiving)	In the case of connecting through IP-circuit, Set to 'OFF' for the setting of 'Super-G3'.
41.	80	MODEM hung-up (Couldn't control a modem)	The modem device is not under control. Check the connected state of the FXS board. Or, replace the FXS board.
42.	82	V34 t1 timeout, control channel error (T1 timeout with V34 control channel)	In the case of connecting through IP-circuit, Set to 'OFF' for the setting of 'Super-G3'.
43.	83	V34 t1 timeout, primary channel error (T1 timeout with V34 primary channel)	In the case of connecting through IP-circuit, Set to 'OFF' for the setting of 'Super-G3'.
44.	84	Data not sent until guard timer expire (Timeout at PH-C guard timer)	In case of sending: Set to more low resolution at this side fax, and retry the sending. In case of receiving: Require the resolution set to more low resolution and retry faxing to the other side.
45.	90	Exceeded the maximum number of digits of dial entry (A maximum of 80 digits after unfolding a dial symbol)	The dial digits number is over than 80 because the prefix (symbol: 'N') was inputted by many times. Check the destination number. In the case of the dial number digits needed over than 80, the calling with the on-hook dial function or the manual sending after the calling with a external telephone is needed.

2.5.4 Email/Internet FAX/FAX Server Error List

ErrorCode	Description
1	Connection failed. Please check "SMTP Server" settings.
2	Connection failed. Please check "SMTP Server Port" settings.
3	Authentication failed. "SMTP Auth" Unsupported.
4	Authentication failed. "SMTP Auth" Login failed. Be sure of the login name and password for the mail server.
5	Authentication failed. Please check "POP Server" settings.
6	Authentication failed. Please check "POP Server Port" settings.
7	Authentication failed. "POP" Login failed. Be sure of the login name and password for the POP server.
8	SMTP Transmission Error. Check network configuration, cable connection and status, and the server status.
9	POP Transmission Error. Check network configuration, cable connection and status, and the server status.
11	SMTP Transmission Error. Sending Data is biggest. Please Check for Mailbox quota at SMTP Server.
12	SMTP Transmission Error. Please wait and retry.
13	SMTP Transmission Panic. Contact the network administrator.
15	Email receiving has been cancelled. Canceled from SMTP Client or POP Server.
16	Email receiving has been cancelled from user.
19	Email receiving has been cancelled. MIME Error. The format of email or the attached file may be not supported.
20	Email receiving has been cancelled. Unsupported MIME. The format of email or the attached file may be not supported.
22	Email receiving has been cancelled. An attached file may have exceed its size limit(8M Byte). Large files cannot be printed.
24	Email receiving has been cancelled. Contact the network administrator.

2.5.5 Preparing for troubleshooting

Note! • When replacing the CU/PU board, please read the content on the EEPROM chip of the old board and copy it to the new board. (Refer to 3.5.1 when exchange the CU/PU board)

2.5.5.(1) LCD Display Trouble

(1-1) LCD displays nothing

Check item	Check work	Actions to be taken at NG
(1-1-1) Checking fuse		
Fuse on Scanner board (6SU)	Check whether F2 or F6 has blown.	Replace F2 or F6 or Scanner board (6SU).
(1-1-2) Checking connections		
Connection between low-voltage power supply unit and Scanner board (6SU)	Make sure the low-voltage power supply unit is connected to the POWER_IN connector on the Scanner board (6SU) properly. Check whether the cable connector is half-connected or tilted, or whether wires are broken. Check whether there is any fault in the cable assembly, e.g., missing wires.	Connect the cable properly.
Cable assembly connecting low-voltage power supply unit to Scanner board (6SU)		Replace the cable with a good cable.
Connection between Scanner board (6SU) and operation panel	Make sure the 22-pin FFC is connected to the 7 INCHIF connector on the Scanner board (6SU) properly. Make sure the 22-pin FFC is connected to the SUIF connector on Panel board (TP1) properly. Check whether the cable connector is half-connected or tilted.	Connect the cable properly.
FFC connecting Scanner board (6SU) to Panel board (TP1)	Check for broken wires using a tester. Check visually whether the sheath peels.	Replace the cable with a good cable.
(1-1-2) Checking connections		
Connection between Scanner board (6SU) and CU/PU board	Make sure the 50-pin FFC is connected to the CD2_CUIF connector on the Scanner board (6SU) properly. Make sure the 50-pin FFC is connected to the CD2_CUIF connector on the CU/PU board (6CU) properly. Check whether the cable connector is half-connected or tilted.	Connect the cable properly.
FFC connecting Scanner board (6SU) to CU/PU board (6CU)	Check for broken wires using a tester. Check visually whether the sheath peels.	Replace the cable with a good cable
(1-1-3) Checking power supplies		
AC power supplied to the printer	Check the supplied voltage from the AC power source.	Supply AC power.
3.3VS and 5V power supplied to Scanner board (6SU)	Check the 3.3VS power at 1 pin and 5V power at 3, 4 pin of the POWER_IN connector on the Scanner board (6SU).	Replace the low voltage power supply or CU/PU board (6CU)
5V and 3.3VS power supplied to Panel board (TP1)	Check the power at pin of the CN1 connector on the Panel board (TP1).	Replace the Scanner board (6SU).
(1-1-4) Checking for short circuit of power supply		
3.3VS, 5V and 24V power supplied to Scanner board (6SU)	Check for a short circuit using the POWER connector on the Scanner board (6SU). 1pin: 3.3VS 3,4pin: 5V 7,8pin: 24V 2,5,6,9,10pin 0V If there is a short circuit, locate it. Disconnect the cables from the Scanner board (6SU) one by one to locate the short circuit.	Replace the short-circuited component.

(1-2) Display of OKI logo

Check item	Check work	Actions to be taken at NG
(1-2-1) Operation panel display does not change.		
Operation panel display	OKI logo stays on.	Replace the Panel board (TP1).

(1-3) Error message display

Check item	Check work	Actions to be taken at NG
(1-3-1) Error message		
Error message display	Check the detail of the error on the error message list.	Follow the instructions.

2.5.5.(2) Abnormal MFP operation after powered 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. 1,3,4pin: 5V 9,10,11,12,25pin: 24V 22pin: 3.3VS 5,6,7,8pin: 0VL 13,14,15,16,23,26pin: 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, Scanner board, Panel board, the cable between the low voltage power supply unit and CU/PU board, the cable between CU/PU board and Scanner board, the cable between Scanner board and Panel board. When blinking: Replace one of the following: low voltage power supply unit, CU/PU 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. If any attempt of using new part as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

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. If any attempt of using new part as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
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.

(2-3) Bad odors are generated.

Check item	Check work	Actions to be taken at NG
(2-3-1) Locating the exact position of generating bad odor		
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
(2-3-2) Check conditions of the fuser unit		
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
(2-4-1) Check the fuser unit		
Heater	Confirm the voltage specification on the label on the rear of the fuser unit.	Replace the fuser unit.

(3)Paper Jams

This section explains how to clear paper jams.

Reference! • For details on the location of each component of the machine, refer to "Swich scan test" and "Motor clutch test".

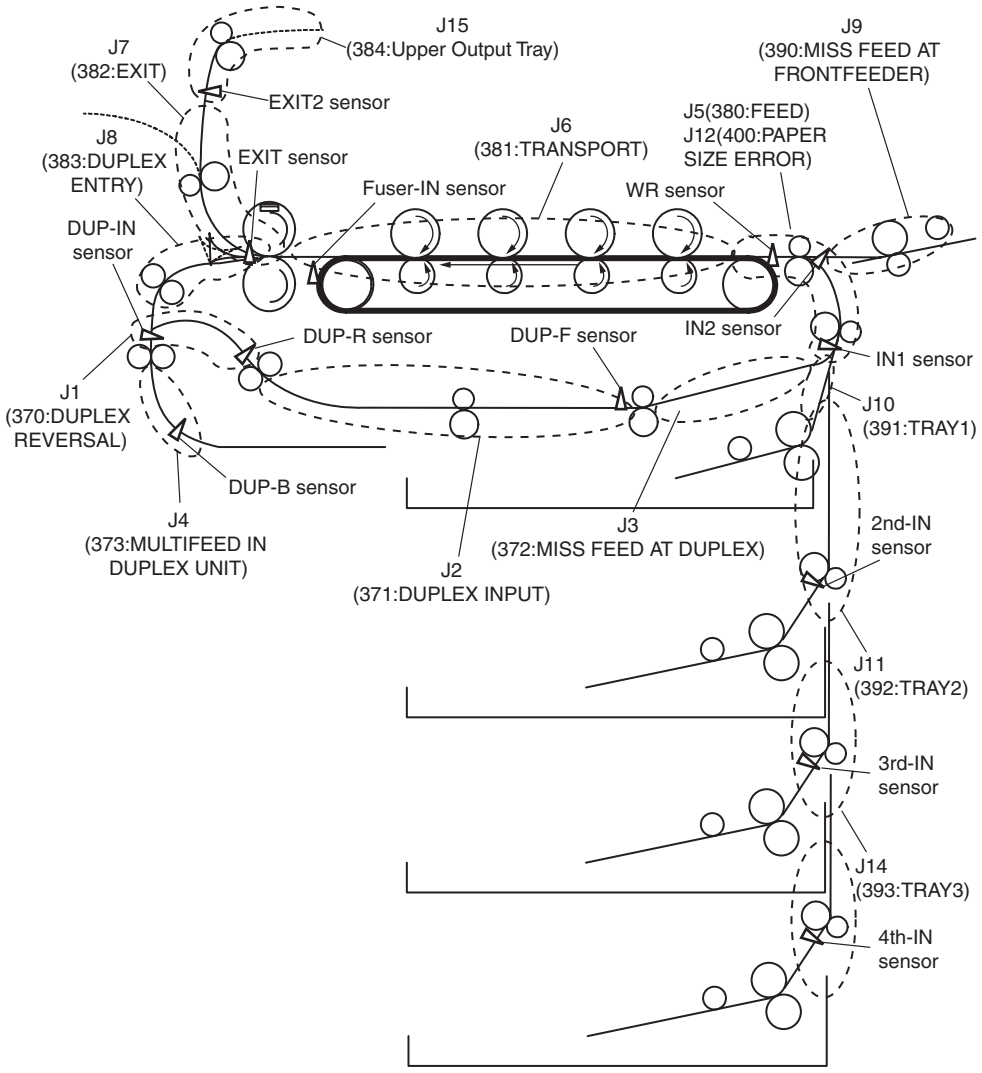
Checking Error Messages

When a paper jam occurs, the [Paper jam] or [Document jam] message appears on the display screen and the <STATUS> key on the operator panel blinks. The error code and description differ according to where the paper jam occurs.

Clearing Paper Jams

⚠Caution	Possible to get burned.	
Since the fuser unit right is extremely hot, perform the operation with care.		

Note! • The image drum (the green tube) is very delicate. Handle it carefully.
• Do not expose the image drum to direct sunlight or very bright interior light (approximately more than 1500 lux). Even under the normal interior light, do not leave it for more than 5 minutes.


J15
(384:Upper Output Tray)
J7
(382:EXIT)
EXIT2 sensor
J9
(390:MISS FEED AT
FRONTFEEDER)
J5(380:FEED)
J12(400:PAPER
SIZE ERROR)
J6
(381:TRANSPORT)
J8
(383:DUPLEX
ENTRY)
EXIT sensor
Fuser-IN sensor
WR sensor
DUP-IN
sensor
IN2 sensor
DUP-R sensor
DUP-F sensor
IN1 sensor
J1
(370:DUPLEX
REVERSAL)
J10
(391:TRAY1)
DUP-B sensor
J4
(373:MULTIFEED IN
DUPLEX UNIT)
J3
(372:MISS FEED AT DUPLEX)
2nd-IN
sensor
J2
(371:DUPLEX INPUT)
J11
(392:TRAY2)
3rd-IN
sensor
J14
(393:TRAY3)
4th-IN
sensor

2.5.5. (3-1) Paper feed jam

(Error code 391: Tray1 , 392: Tray2 , 393: Tray3 , 394: Tray4)

(3-1-1) Jam occurs immediately after the power is turned on. (Tray2, Tray3, Tray4)

Check item	Check work	Actions to be taken at NG
(3-1-1-1) Check condition of the paper running path		
Paper running path of the applicable tray.	Remove the applicable tray check if paper is not jammed in the paper running path.	Remove the jammed paper. (Refer to the following process)
(3-1-1-2) Check condition of the mechanical parts		
-Error code 392: Check the 2nd-IN sensor lever -Error code 393: Check the 3rd-IN sensor lever -Error code 394: Check the 4th-IN sensor lever	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(3-1-1-3) 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 the 2nd(3rd/4th) Tray unit board (Board-GOH-2) or connection cable.

(3-1-2) Jam occurs immediately after the paper feed is started. (Tray1, Tray2, Tray3, Tray4)

Check item	Check work	Actions to be taken at NG
(3-1-2-1) Check condition of the paper running path		
Paper running path of the front unit and applicable tray.	Check if paper is jammed or not in the paper running path. If there is no jammed paper, confirm the position of the paper guide of the paper cassette and the paper stopper, and confirm whether paper is loaded correctly.	Remove the jammed paper. (Refer to the following process)
(3-1-2-2) Check condition of the mechanical parts		
-Error code:391 Check the IN1 sensor lever. -Error code 392: Check the sensor levers of the 2nd-IN sensor and the IN1 sensor. -Error code 393: Check the sensor levers of the 3rd-IN sensor and the IN1 sensor. -Error code 394: Check the sensor levers of the 4th-IN sensor and the IN1 sensor.	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 applicable tray.	Check if any foreign materials such as paper dust on the surface of the feed roller or of the pickup roller or not of the applicable tray.	Remove the foreign material.
	Check if the feed roller or the pickup roller of the applicable tray has worn out or not.	Replace the feed roller, the pickup roller and the retard roller assembly of the tray.

Check item	Check work	Actions to be taken at NG
(3-1-2-3) Motor operation check		
Hopping motor of the applicable tray	Confirm that the hopping motor of the applicable tray works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the CU/PU board or the 2nd(3rd/4th) Tray unit board (Board-GOH-2) or the hopping motor.
-Error code:391 Hopping 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.
(3-1-2-4) Check the system connection of Tray1		
Hopping 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.
Hopping 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.
Hopping 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 hopping motor.

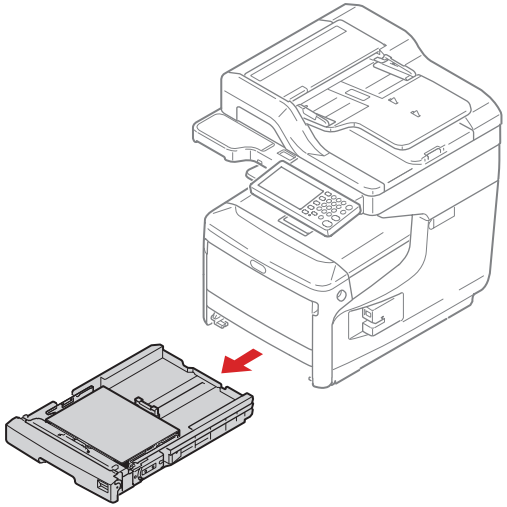
Check item	Check work	Actions to be taken at NG
(3-1-2-5) Clutch operation check		
-Error code:391 Tray1 Hopping Clutch -Error code 392: Tray2 Hopping Clutch, Tray2 Feed Clutch. -Error code 393: Tray3 Hopping Clutch, Tray3 Feed Clutch -Error code 394: Tray4 Hopping Clutch, Tray4 Feed Clutch	Check to make sure that the applicable 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 the 2nd(3rd/4th) Tray unit board (Board-GOH-2) or replace the applicable clutch.
(3-1-2-6) Check the system connection of Tray1		
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 HOPLC 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.

How to remove the paper

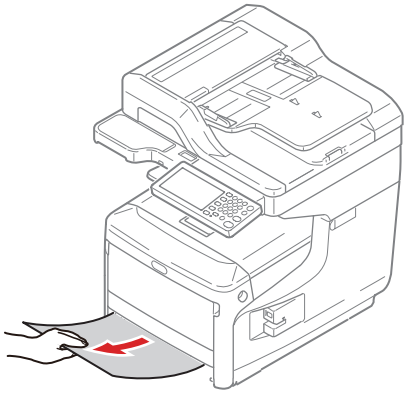
(Error code 391: Tray1 , 392: Tray2 , 393: Tray3 , 394: Tray4)

Memo! The following procedure uses tray 1 as an example.

(1) Pull out and remove the paper cassette of the indicated tray.



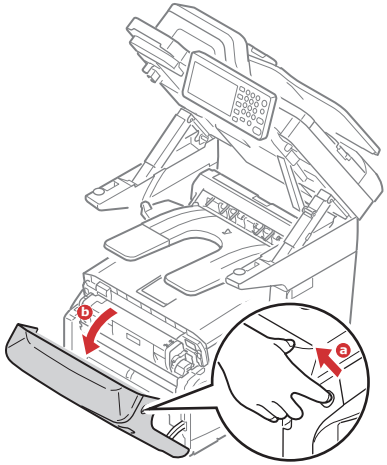
(2) Remove jammed paper.



Memo! If there is no jammed paper, confirm the position of the paper guide of the paper cassette and the paper stopper, and confirm whether paper is loaded correctly.

(3) Return the tray into the machine.

(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.

2.5.5. (3-2) Feed jam (Error code: 380, 381, 382, 383, 384, 385, 389)

(3-2-1) Jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(3-2-1-1) 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. (Refer to the following process)
(3-2-1-2) Check condition of the mechanical parts		
Check the sensor levers of the IN1 sensor, that of the IN2 sensor 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.
(3-2-1-3) 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 IN1 sensor, that of the IN2 sensor and that of the WR sensor.	Check for the following signals at the FSNS connector of the CU/PU board. Pin-4: IN1 sensor Pin-3: IN2 sensor 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.

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

Check item	Check work	Actions to be taken at NG
(3-2-2-1) 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. (Refer to the following process)
(3-2-2-2) Check condition of the mechanical parts		
Check the sensor levers of the IN1 sensor, that of the IN2 sensor 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.
(3-2-2-3) Motor operation check		
Hopping motor	Confirm that the hopping motor works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the CU/PU board, or replace the hopping motor.
Hopping 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
(3-2-2-4) Check the system connection		
Hopping 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.
Hopping 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.
Hopping 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 hopping motor.

(3-2-3) Paper unloading jam occurs after a paper is taken into printer.

Check item	Check work	Actions to be taken at NG
(3-2-3-1) 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.
(3-2-3-2) Check condition of the mechanical parts		
Sensor lever of the exit sensor and that of the exit2 sensor	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(3-2-3-3) 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. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

Check item	Check work	Actions to be taken at NG
(3-2-3-4) Check the system connection		
Fuser motor drive cable	Check the connection condition of the cables. Visually check the CU/PU board DCHEAT connector 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.

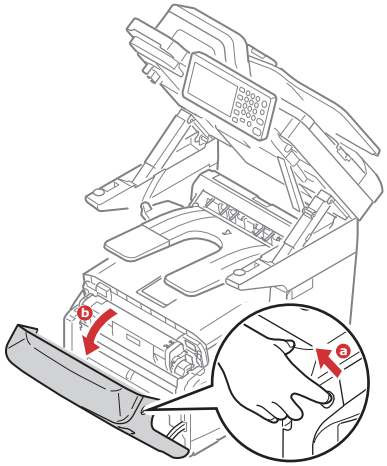
(3-2-4) Paper unloading jam occurs in the middle of paper running path.

Check item	Check operation	Actions for NG results
(3-2-4-1) 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 or fuser motor or fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

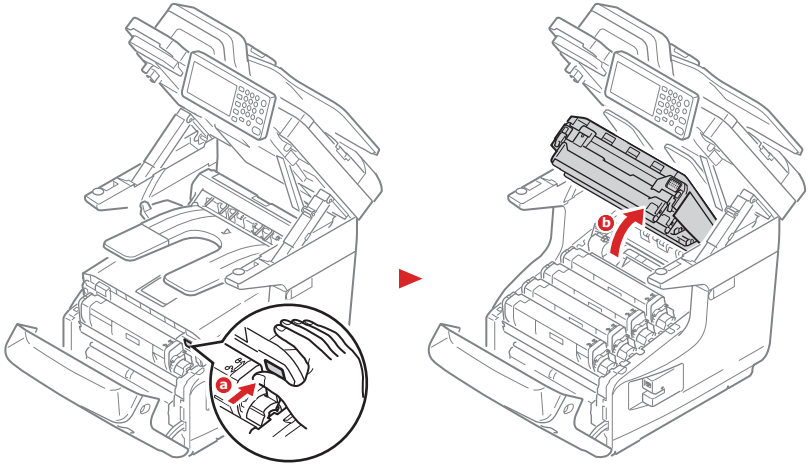
How to remove the paper

(Error code: 380, 381, 382, 383, 385, 389)

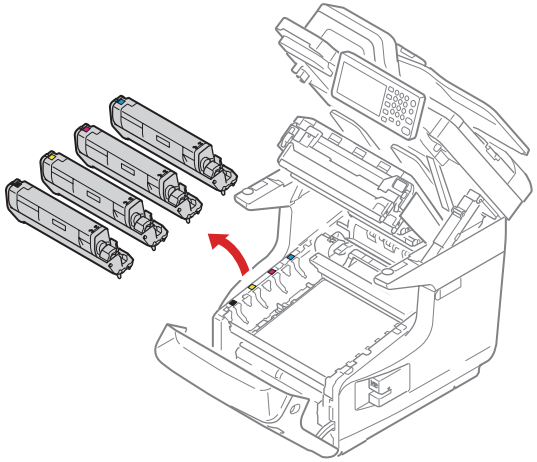
(1) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.



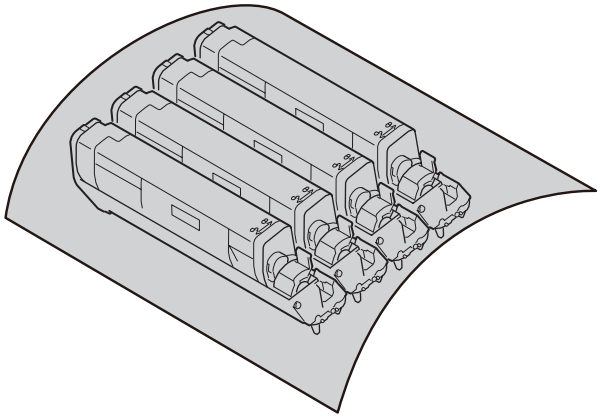
(2) Open the scanner and press the top cover open button and open the top cover.



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

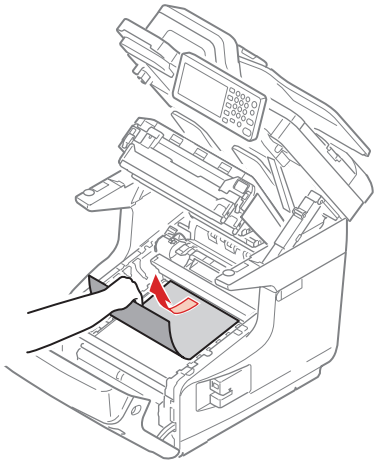


(4) Cover the removed image drums with black paper so that the image drums are not exposed to light.



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

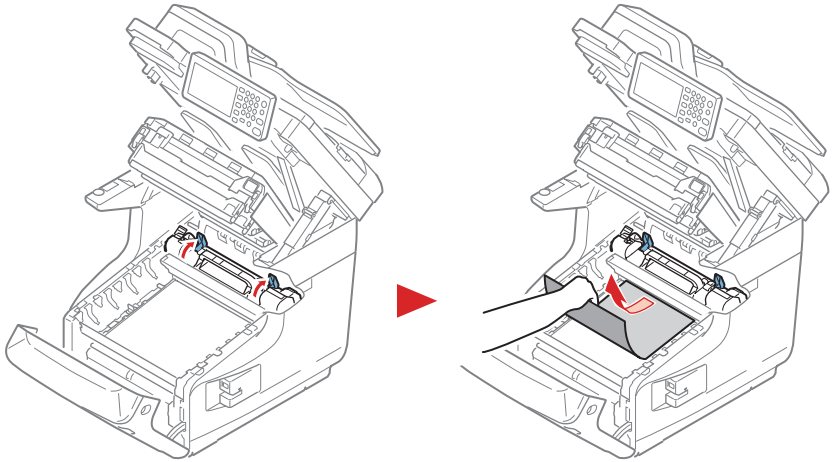
Pull out the jammed paper gently from the rear of the printer (the direction of the arrow).



② If an edge of jammed paper cannot be seen

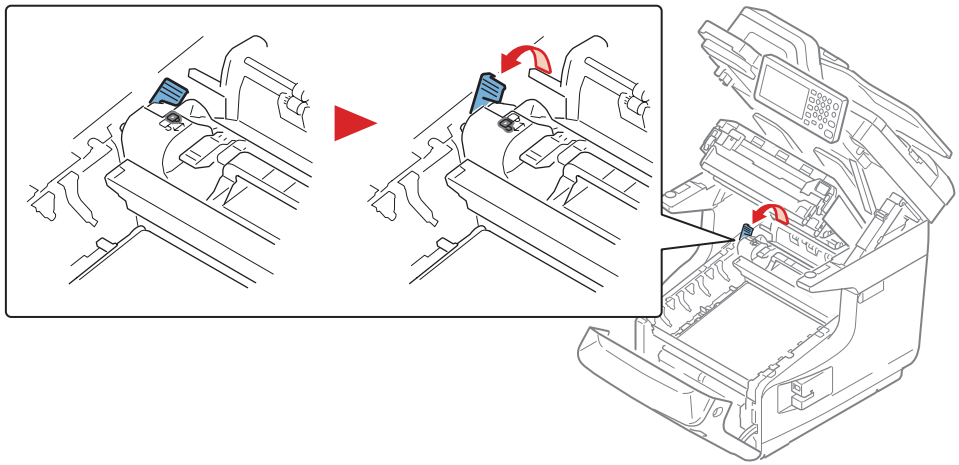
Pull out the jammed paper gently while lifting the release levers on the fuser unit.

If an edge of jammed paper still remains inside the unit, pull out the jammed paper gently to the rear of the printer.

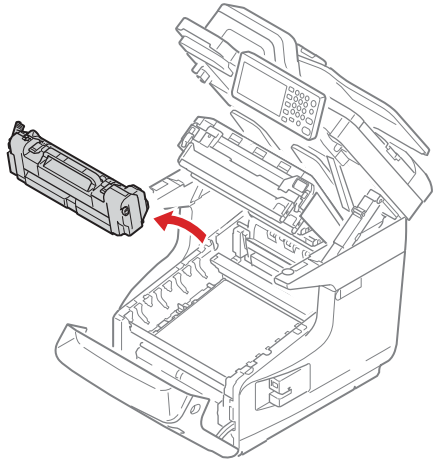


③ When paper jams in the fuser.

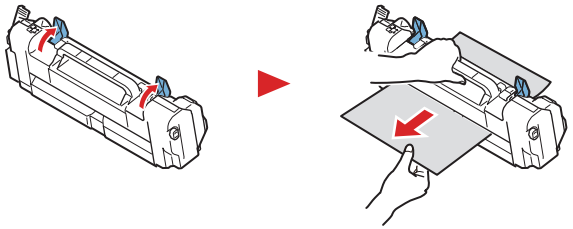
1. Lift the left lock lever of the fuser unit forward.



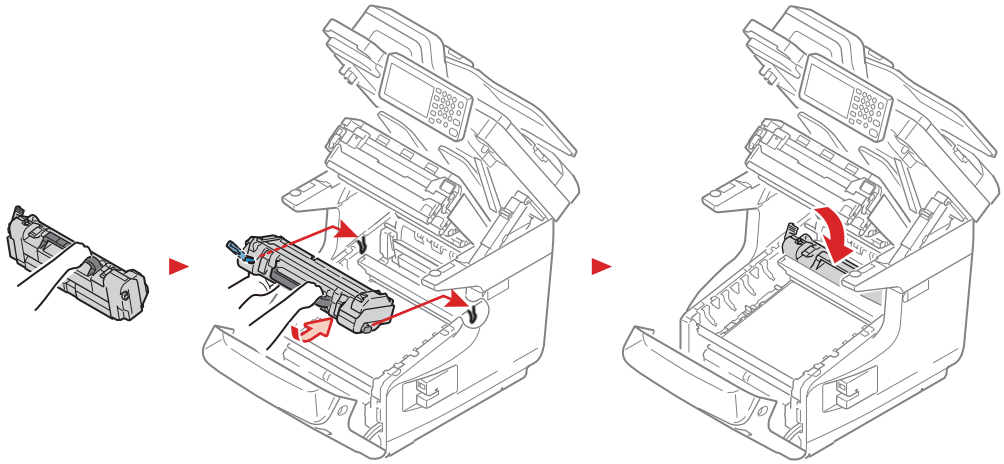
2. Hold the fuser unit handle and lift the fuser unit out of the printer.



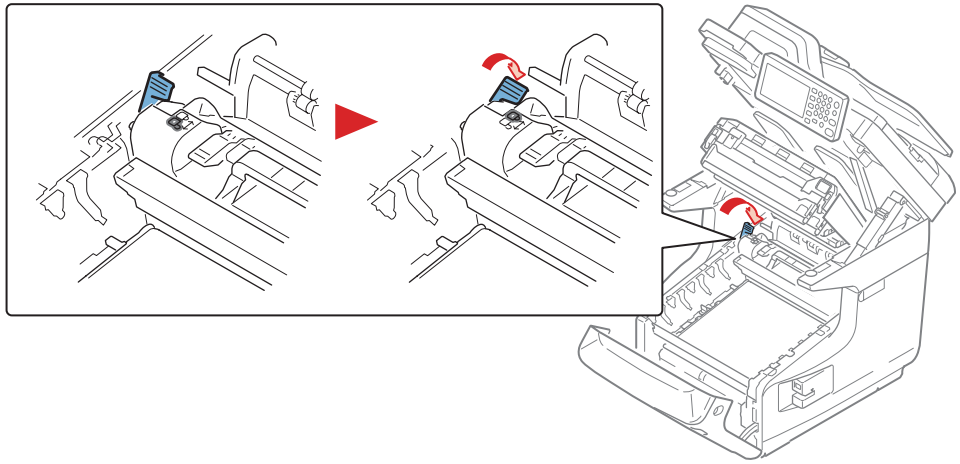
3. Lift the release levers on the fuser unit, and pull out the jammed paper forward gently.



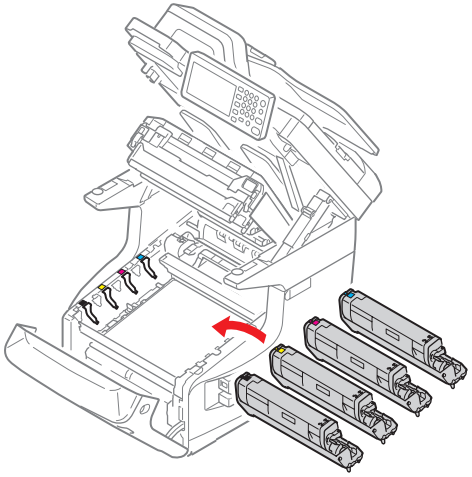
4. Hold the fuser unit handle and place the fuser unit into the printer.



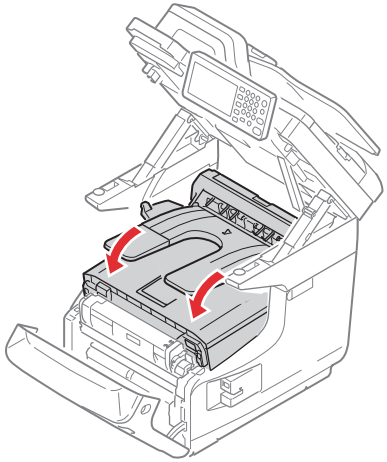
5. Push the left lock lever of the fuser unit backward.



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

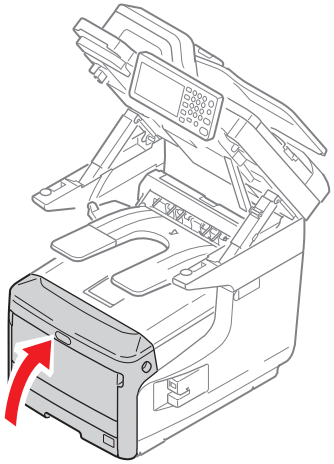


(7) Close the top cover by pushing the both sides of the cover firmly.



(8) Close the front cover.

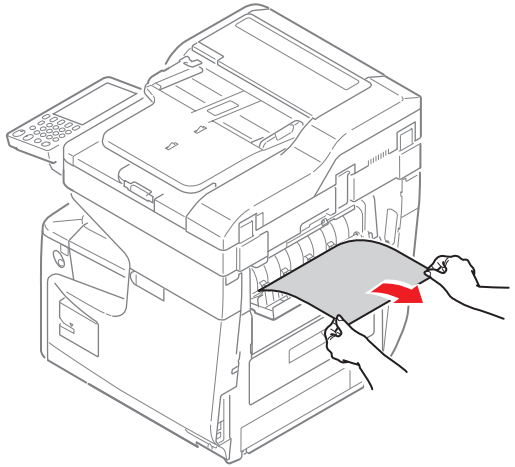
Note! Cannot close the front cover securely if the top cover is not closed.



How to remove the paper

(Error code: 384)

(1) Open the 2bin rear cover and pull out the jammed paper.



2.5.5. (3-3) Paper feed jam (Error code 390: Multipurpose tray)

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

Check item	Check work	Actions to be taken at NG
(3-3-1-1) 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. (Refer to the following process)
(3-3-1-2) Check condition of the mechanical parts		
Check the sensor levers of the IN2 sensor 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.
(3-3-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the 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 IN2 sensor and the WR sensor.	Check for the following signals at the FSNS connector of the CU/PU board. Pin-2: WR sensor Pin-3: IN2 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.

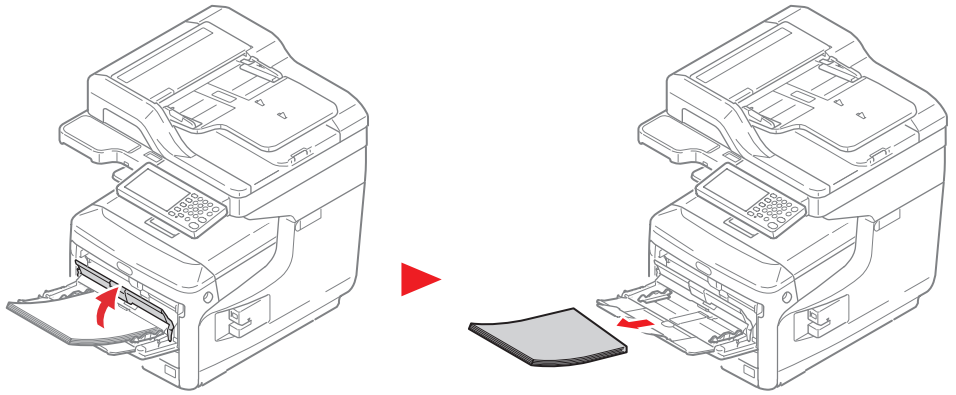
(3-3-2) Jam occurs immediately after paper feed is started. (Multipurpose tray)

Check item	Check work	Actions to be taken at NG
(3-3-2-1) 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. (Refer to the following process)
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.
(3-3-2-2) Check condition of the mechanical parts		
Check the sensor levers of the IN2 sensor 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 font 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.
(3-3-2-3) Motor operation check		
Hopping motor	Confirm that the hopping motor works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the CU/PU board, or replace the hopping motor.
Hopping 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.	

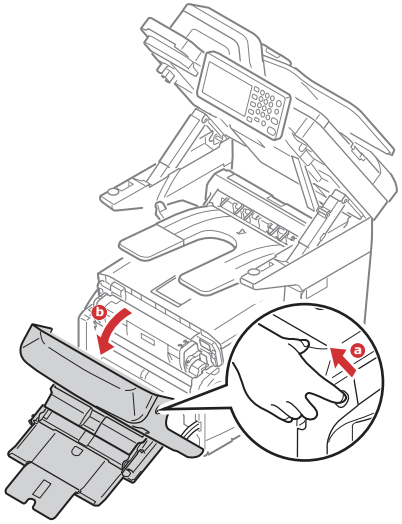
Check item	Check work	Actions to be taken at NG
(3-3-2-4) Check the system connection		
Hopping motor drive cable	Check the connection condition of the cable. Check if the connector is connected in the half-way only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Replace the cable with the good cable that normalizes the connection condition.
Hopping 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.
Hopping 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 hopping motor.

How to remove the paper (Error code 390: Multipurpose tray)

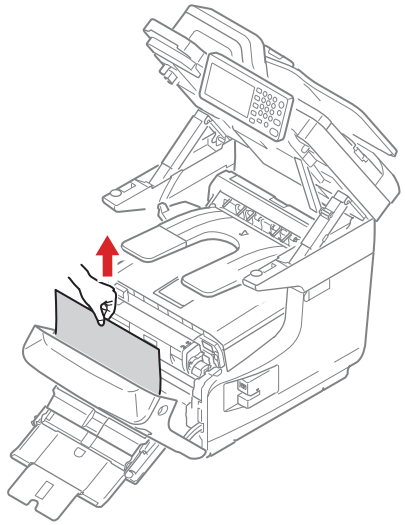
(1) If there is any papers on the MP Tray, lift the paper set cover and take the paper out.



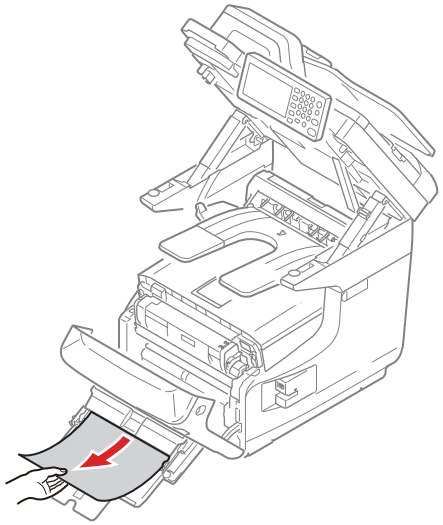
(2) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.



(3) If the top end of paper is visible , hold the paper top end and carefully pull out the paper.



If the bottom end of paper is visible, hold the paper by your hands and carefully pull out the paper.



(4) Close the front cover.

2.5.5. (3-4) Two-sided printing jam (Error code: 370, 371, 372, 373)

(3-4-1) Two-sided printing jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(3-4-1-1) 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-1 PCB), or replace the defective sensor or connection cable.

(3-4-2) Two-sided printing jam occurs during taking in the paper into Duplex unit.

Check item	Check work	Actions to be taken at NG
(3-4-2-1) 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-1 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.
(3-4-2-2) 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-B sensor lever	Remove the duplex unit and check the movement of the sensor lever.	Replace the sensor lever.
DUP-IN sensor Dup-B 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-1 PCB), or replace the defective sensor or connection cable.
(3-4-2-3) 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.

(3-4-3) Two-sided printing jam occurs during transporting paper inside the Duplex unit.

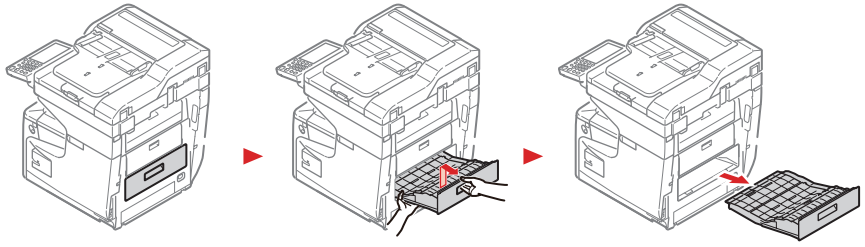
Check item	Check work	Actions to be taken at NG
(3-4-3-1) Sensor lever operation check		
Dup-F sensor lever	Remove the Duplex unit and check movement of the Dup-F sensor lever.	Replace the Dup-F sensor lever.
Dup-R sensor lever	Remove the Duplex unit and check movement of the Dup-R sensor lever.	Replace the Dup-R sensor lever.
(3-4-3-2) 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-1 PCB), or replace the defective sensor or connection cable.

(3-4-4) Paper is not supplied from the Duplex unit to the regist roller.

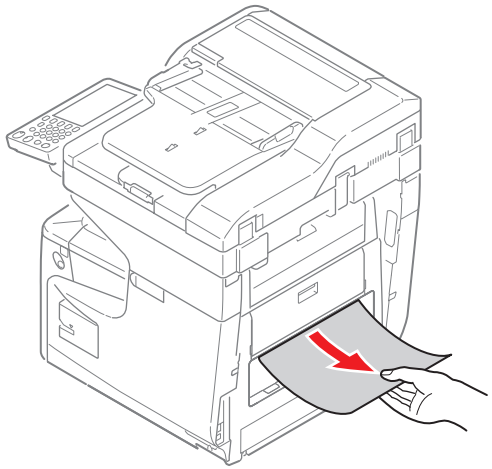
Check item	Check work	Actions to be taken at NG
(3-4-4-1) Clutch operation check		
Duplex clutch	Confirm that the Duplex clutch works normally by using the Motor & Clutch Test of the self-diagnostic mode.Confirm it by listening to the sound.	Replace the GOH-1 board or clutch.

How to remove the paper (Error code: 370, 371, 372, 373)

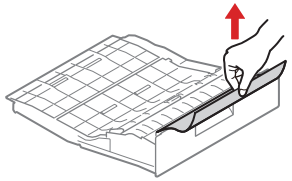
(1) Take out the duplex unit by pulling it obliquely upward while holding the center recess on the back of printer.



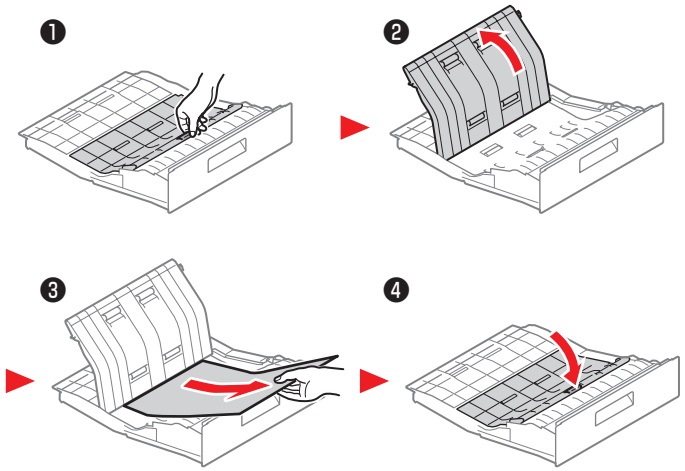
(2) Check for jammed paper inside the printer. If jammed paper remains, remove it.



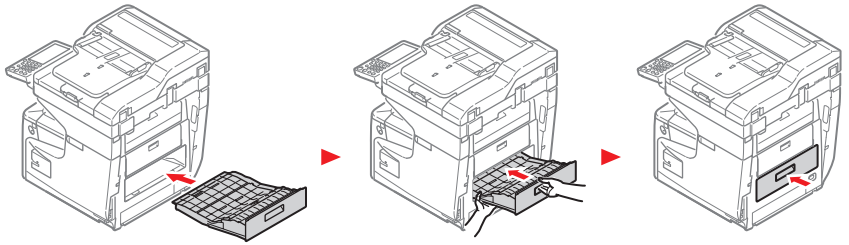
(3) Check for jammed paper in the duplex unit. If jammed paper remains, pull it out gently.



(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.



2.5.5. (3-5) Displayed「ADF Document Jam」

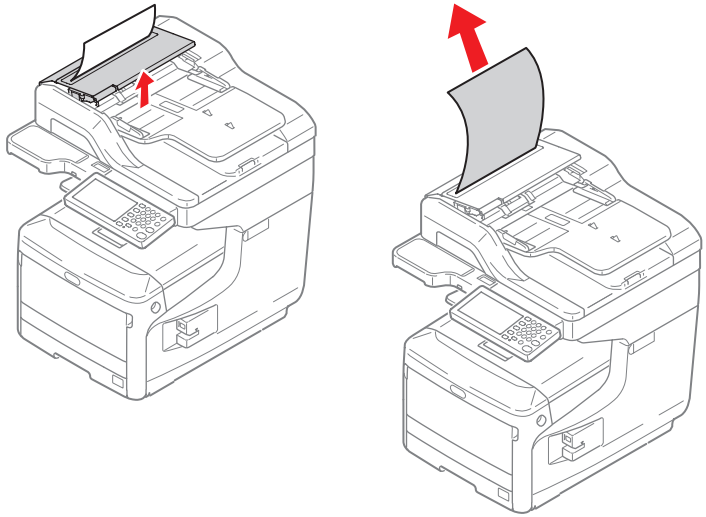
(3-5-1) Jam occurs at ADF unit.

Check item	Check work	Actions to be taken at NG
(3-5-1-1) Check condition of the paper running path		
Paper running path of the ADF Unit	Check if paper is jammed or not in the paper running path.	Remove the jammed paper. (Refer to the following process)
(3-5-1-2) Check condition of the mechanical parts		
Check the error code	0001:Check the Hopping sensor, Regist sensor, Scan sensor, Reverse sensor 0002:Check the Document set sensor	Replace the sensor with the good sensor lever.

How to remove the paper (Displayed「ADF Document Jam」)

■When you can see the document In the Duplex Paper Path

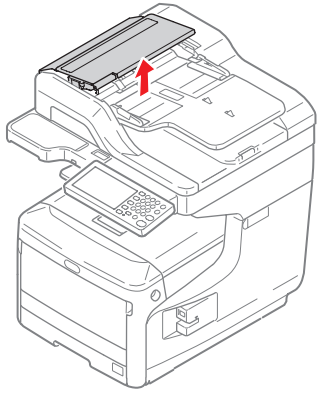
(1) Open the ADF cover, and pull out the document upward.



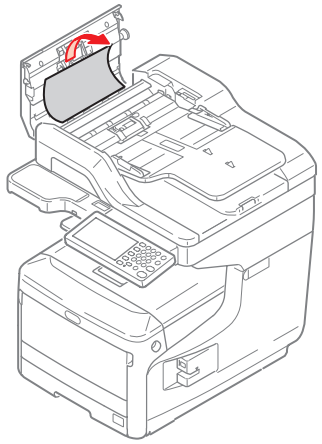
■When you can see the document Inside the ADF

(1) Remove any documents from the document tray if any.

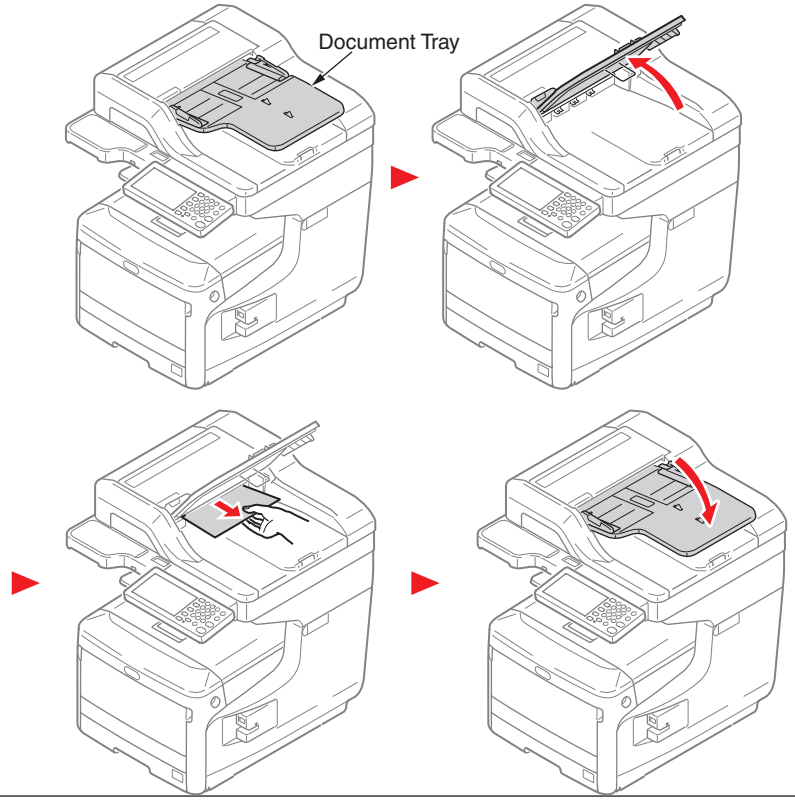
(2) Open the ADF cover.



(3) Hold jammed document by the top edge, and gently pull it out.



If the edge of the document cannot be seen in the ADF, lift the document tray and then pull out the document and pull down the document tray.



2.5.5. (3-6) Paper size error (Error code: 400 and 401)

(3-6-1) Printing was stopped when paper ejected after paper size error detected.

Check item	Check work	Actions to be taken at NG
(3-6-1-1) Check paper feed condition		
Multi-feed of papers	Check whether multi-feed paper ejected or not.	If multi-feed occurs again after the open and close the front cover, 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.
IN1 sensor, IN2 sensor	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.

2.5.5.(4) ID unit Up/Down error (Service call 142)

(4-1) Error occurs during the Up movement of the ID unit

Check item	Check work	Actions to be taken at NG
(4-1-1) Check the mechanical load during the Up movement		
Mechanical load during installation and removal of the ID unit	Check if abnormal heavy load is applied when removing the ID unit.	IReplace the ID unit, or replace the right/left side plate. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
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.
(4-1-2) Up/Down mechanism		
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
(4-1-3) Sensor check		
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.

(4-2) Error occurs during the Down movement of the ID unit

Check item	Check work	Actions to be taken at NG
(4-2-1) Check the mechanical load during the Down movement		
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.

2.5.5. (5) Fuser unit error (Error code: 167 to 177)

(5-1) Error occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(5-1-1) 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 6.3 Resistance value (fuser unit).)	Replace the fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
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! 168: Error, 169: Error, 171: Error, 173: Error, 175: Error, 177: Error can occur when the printer temperature is below 0˚C. Turn on the power again after the printer temperature has increased.

(5-2) Error occurs approx. 1 minute after the power is turned on.

Check item		Check work	Actions to be taken at NG
(5-2-1) 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 6.3 Resistance value (fuser unit).)	Replace the fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(5-2-2) 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. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

Check item		Check work	Actions to be taken at NG
(5-2-3) 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.

2.5.5. (6) Motor fan error (Error code: 122, 127, 128, 918)

(6-1) 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
(6-1-1) 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.

(6-2) Duplex fan does not rotate during the Duplex printing.

Check item	Check work	Actions to be taken at NG
(6-2-1) 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-1 PCB)	Check if the fuse F501 has blown out or not.	Replace the Duplex board (GOH-1 PCB).
24V power supplied to the Duplex board (GOH-1 PCB).	Check if the fuse F503 of the CU/PU board has blown out or not.	Replace the CU/PU board.

(6-3) All fans of the printer do not rotate.

Check item	Check work	Actions to be taken at NG
(6-3-1) 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.

2.5.5. (7) Print speed is slow. (Performance is low.)

(7-1) Print speed decreases.

Check item	Check work	Actions to be taken at NG
(7-1-1) 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.

2.5.5. (8) Option unit cannot be recognized.

(8-1) Option try unit cannot be recognized.

Check item	Check work	Actions to be taken at NG
(8-1-1) Option try board		
Option try unit	Check if the option try unit of this model specification is being used or not.	Replace the option tray unit.
(8-1-2) Check the system connection		
Check the system connection from the CU/PU board to the option tray board (GOH-1 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.
(8-1-3) Check the control signals.		
Check the control signal that is output from the CU/PU board to the option tray board (GOH-1-2 PCB).	Check the control signal that is output from the PU board option connector. Pin-15: OPTCNT2 (PU → 2nd) Pin-17: TXD (PU → 2nd) Pin-19: RXD (2nd → PU)	Pin-17: Replace the CU/PU board. Pin-19: Replace the option tray board.

2.5.5. (9) LED head cannot be recognized. (Error code: 131, 132, 133 and 134)

(9-1) Errors 131 to 134 (LED HEAD Missing)

Check item	Check work	Actions to be taken at NG
(9-1-1) 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 CP3 and CP4, and also check if the fuse F12, F15 or F16 is open-circuited.	Replace the CU/PU board.

2.5.5. (10) Toner cartridge cannot be recognized. (Error code: 540, 541, 542 and 543)

(10-1) Error caused by the consumable items.

Check item	Check work	Actions to be taken at NG
(10-1-1) 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.

(10-2) Error caused by the toner sensor

Check item	Check work	Actions to be taken at NG
(10-2-1) 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 3.4.3 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 bee 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.

(10-3) Error caused by the defective mechanism

Check item	Check work	Actions to be taken at NG
(10-3-1) Mechanical load applied to the ID unit		
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. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(10-3-2) Motor operating condition		
ID motor	Confirm that the respective ID motors work normally or not by using the Motor & Clutch Test of the self-diagnostic mode. Check if any extra load exists or not.	Replace the CU/PU board or the ID motor.

2.5.5. (11) Fuse cut error (Error code: 154 and 155)

(11-1) Fuse cut error

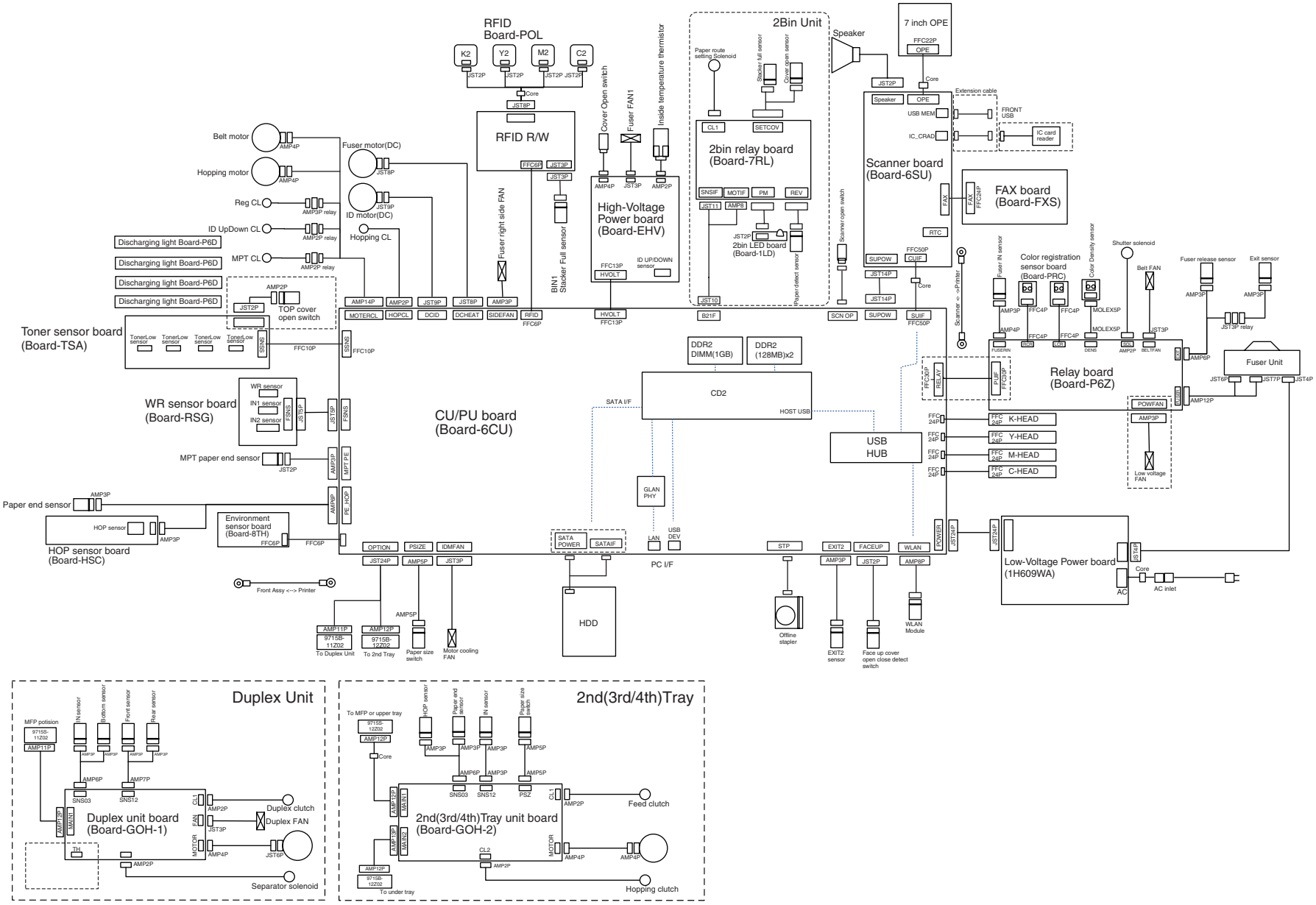
Check item	Check work	Actions to be taken at NG
(11-1-1) Check the system connection		
FFC connecting the CU/PU board and the P6Z board (P6Z PCB)	Check if the RELAY connector of the CU/PU board or PUIF connector of P6Z board (P6Z PCB) is connected halfway, or inserted at an angle. Check if FFC has open-circuit or its sheath is peeled off.	Connect the FFC normally. Alternately, replace the FFC.
(11-1-2) 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.

2.5.5. (12) Humidity sensor error (Error code: 123)

(12-1) Humidity sensor error

Check item	Check work	Actions to be taken at NG
(12-1-1) 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.
(12-1-2) Environment condition		
Sharp change of environment condition	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.)	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.

2.5.5. (13) Wiring diagram



2.5.6 Troubleshooting the abnormal images

Note! To replace a CU/PU board, data of the EEPROM chip on the old CU/PU board must be read beforehand copied to the new board after replacement.

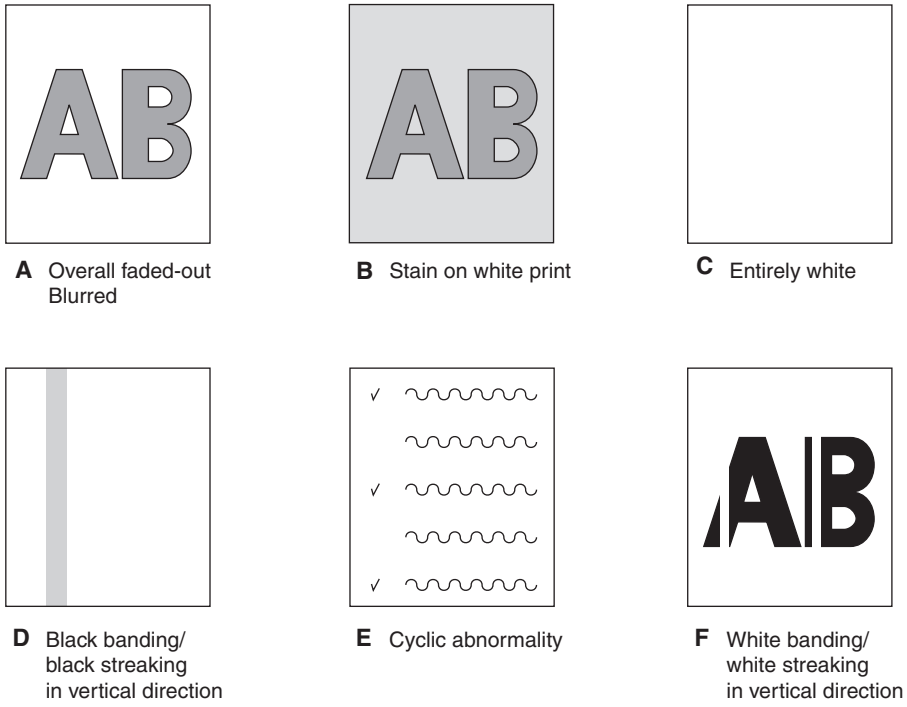


Figure 2-1

2.5.6.(1) Color has faded-out and blurred entirely. (Refer to Figure 2-1 A.)

(1-1) Color are faded-out and blurred.

Check item	Check work	Actions to be taken at NG
(1-1-1) Toner		
Remaining amount of toner	Check if the message "Prepare toner replacement." or "Replace the toner." appears or not.	Replace toner cartridge with new one.
Tape attached to the toner cartridge opening slot	Check to see that the tape attached to the toner cartridge opening slot has been peeled off.	Move the toner cartridge lever to CLOSE position and remove tape from opening slot.
(1-1-2) LED head		
Lens of the LED head	Check if surface of the lens of the LED head is stained or not by toner and paper dust.	Clean the lens with soft tissue paper.
Mounting condition of LED head	Check that the LED head is mounted on the LED head holder correctly. Check that the right and left tension springs are normally installed.	Correct for normal condition.
(1-1-3) Print media		
Media type	Check to see that the print media which is used for printing is not a specially thick media	Use the normal paper.
(1-1-4) High voltage terminal		
ID unit terminal	ICheck that the high voltage terminal of the ID unit is contacting with the Contact Assembly normally by visual inspection. (Refer to Figure 2-2.)	IReplace the ID unit or correct the high voltage terminal. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(1-1-5) ID unit installation condition		
ID unit DOWN position (Defective transfer)	Move the ID unit in and out with hand to confirm that any abnormal mechanical load does not exist, and the ID unit can be moved down to the DOWN position normally. If a piece of paper is inserted in between drum and belt, if top end of the paper can enter easily, it is NG (No Good).	Check the U-shaped groove of the side plate for any abnormality. If repair is found impossible, replace the equipment.

2.5.6.(2) Stain on white print. (Refer to Figure 2-1 B.)

(2-1) Stain on white print (Partial stain)

Check item	Check work	Actions to be taken at NG
(2-1-1) ID unit		
Exposure of drum to light	Is the drum left in a circumstance in which drum surface is exposed to direct light for a long time?	Replace the ID unit. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
Leakage of toner	Does toner leak out from either ID unit or from toner cartridge?	Replace the ID unit or toner cartridge. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(2-1-2) Fuser unit		
Offset toner of the fuser unit	Check if the offset toner of the previous printing is left adhered on the fuser unit or not, by visual inspection.	Repeat blind printing using unwanted media until offset toner is created on print media. Alternately replace the fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

(2-2) Stain on white print (overall stain)

Check item	Check work	Actions to be taken at NG
(2-2-1) Print media		
Type of print media	Check to see that the print media which is used for printing is not a specially thin media.	Use the normal paper.
(2-2-2) High voltage terminal		
ID unit terminal	Check that the high voltage terminal of the ID unit is contacting with the Contact Assembly normally by visual inspection. (Refer to Figure 2-2.)	Replace the ID unit or correct the high voltage terminal. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

2.5.6.(3) White print (Refer to Figure 2-1 C.)

(3-1) White print over entire page

Check item	Check work	Actions to be taken at NG
(3-1-1) Toner condition		
Remaining amount of toner	Confirm that sufficient amount of toner remains inside the ID unit.	Replace the toner cartridge.
(3-1-2) Exposure condition to light		
LED head	Confirm that the LED head is positioned in the normal position where the LED head opposes again the drum when the cover is closed. Check that no obstacle exists in front of the LED head, that hampers light emission from the illuminating surface of the LED head.	Correct the installation condition of the LED head.
Connecting condition of the LED head	Check that the LED head is normally connected.	Replace the LED head.
Drum shaft	Check that the drum shaft keeps contacting with the right and left side plates normally.	Replace the ID unit. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
F15, F16, fuse on the CU/PU board	Measure resistance of F15, F16. 1Ω or less: Normal Higher than 1Ω: NG	Replace the CU/PU board
(3-1-3) High voltage terminal		
ID unit terminal	Check that the high voltage terminal of the ID unit is contacting with the Contact Assembly normally by visual inspection. (Refer to Figure 2-2.)	Replace the ID unit or correct the high voltage terminal. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

2.5.6.(4) Black banding/black streaking in vertical direction

(4-1) Thin vertical line (with color) (Refer to Figure 2-1 D.)

Check item	Check work	Actions to be taken at NG
(4-1-1) ID unit condition		
Filming of the ID unit	Is print attempted without toner?	Replace toner cartridge with new one. If replacement does not solve the problem, replace the ID unit. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

(4-2) Thin vertical line (without color) (Refer to Figure 2-1 F.)

Check item	Check work	Actions to be taken at NG
(4-2-1) LED head condition		
LED head	Is any foreign material attached on the light emitting surface of the cell fox lens of the LED head?	Remove the foreign material.
(4-2-2) Condition of paper running path		
Paper running path	Check that any burr that may scatter the un-fused toner on the paper running path does not exist.	Remove the burr.

2.5.6.(5) Periodic abnormalities (Refer to Figure 2-1 E.)

(5-1) 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.
		If any attempt of using new consumable item as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

2.5.6.(6) Significant color misregistration

(6-1) Color misregistration occurs.

Check item	Check work	Actions to be taken at NG
(6-1-1) Result of color registration error correction		
Color registration error correction time (If a printer is normal, it is approx. 40 seconds.)	Use the self-diagnostic mode and execute the REG ADJUST TEST. Check the result. Error is issued but is not displayed on the ON LINE display.	Replace the sensor that causes the error. Clean the sensor to remove stain. Replace the shutter. Replace the CU/PU board.
(6-1-2) Toner		
Remaining amount of toner	Check if the message “Prepare toner replacement.” or “Replace the toner.” appears or not	Replace toner cartridge with new one.
(6-1-3) Color registration error detection sensor		
Sensor is dirty	Is toner or paper dust attached to the sensor?	Clean the sensor to remove stain
(6-1-4) Color registration error detection sensor shutter		
Shutter operation is faulty	Check the shutter operation by the self-diagnostic mode	Replace the shutter or tune the mechanism

(6-2) Thought REG ADJUST TEST of engine maintenance function results ok, color misregistration occurs.

Check item	Check work	Actions to be taken at NG
(6-2-1) Paper feed system		
Paper feed system of the paper running path	Check if any obstacle exists in the paper feeding path, that hampers smooth paper run.	Remove the obstacle

2.5.6.(7) Solid black printing.

(7-1) Solid black printing over the whole page

Check item	Check work	Actions to be taken at NG
(7-1-1) High voltage contacting condition		
CH terminal	Check that the terminal coming from the printer body contacts with the high voltage terminal that is located on the left side of the ID unit when viewed from the top by visual inspection.	Replace the terminal of printer side.
CH terminal	Check that the high voltage terminal keeps the normal contacting condition on the high voltage board. Open the left cover and remove the high voltage board. Then, check that the terminal is not installed in the abnormal installation condition.	Correct the installation condition of the terminal to the normal condition.
ID unit terminal	Check that the high voltage terminal of the ID unit is contacting with the Contact Assembly normally by visual inspection. (Refer to Figure 2-2.)	Replace the ID unit or replace the high voltage board or correct the high voltage terminal. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(7-1-2) High voltage output condition		
CH output	If high voltage probe is available as a maintenance tool, open the left cover, and check the CH output with the high voltage probe from the soldering side of the high voltage board. (The high voltage probe is not an ordinary maintenance tool.)	Replace the high voltage board.

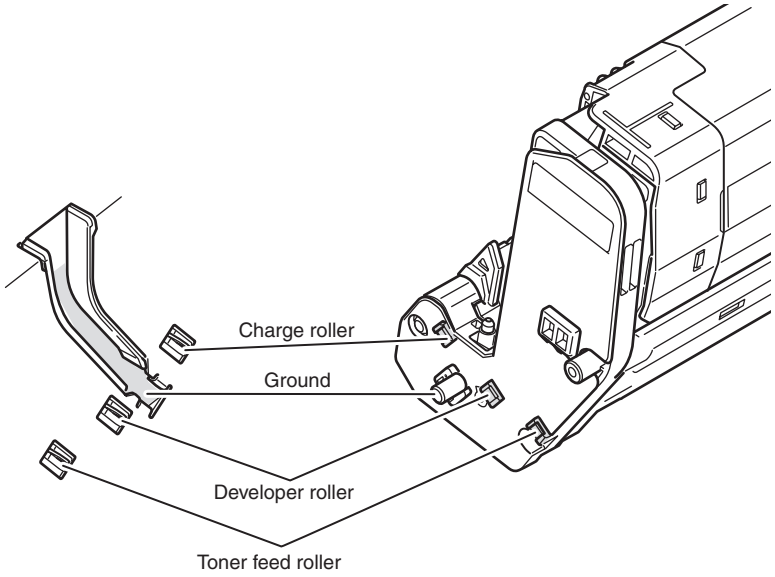


Figure 2-2

2.5.7 Response after Flash compulsive initialization

Explain the response after compulsive initialization is performed with trouble occurred in Flash.

(1) Flash compulsive initialization

If Flash compulsive initialization is performed, the following data would be deleted and the fax would not be available. The Network setting return to the factory setting.

- Log data
- Message data

It is necessary to write above Firmware and data into Flash by the Maintenance Utility.

Note! Do not carry it out usually.

2.5.8 Copy Image Abnormality Error Troubleshooting

- When the following symptom occurs in the copy image, implement the inspection and adjustment of the copy image.
  - ① Line appears on the copy image.
  - ② The copy image becomes slightly thin.
  - ③ The copy image becomes dark.
  - ④ The copy image becomes abnormal.

1. Identifying the problem.

   Perform section 2.5.6 to identify whether the problem is located in the printer or in the scanner.

   If the cause of the problem is in the scanner, go to the next item.

2. Cleaning

   Perform sections 5.5 "Cleaning Rollers in the ADF", 5.6 "Cleaning the rollers inside of the ADF", 5.7 "Cleaning the Document Glass" respectively.

2.5.9 Network Troubleshooting

(1) Cannot print from Utility.

Confirmation Items	Confirmation Tasks	Action at NG
(1) Check the LINK lamp.		
Check whether LINK lamp (green) is lighted.	Check whether HUB and printer are connected normally. (Check the network cable connection.)	Reconnect the network cable normally.
	Check whether straight cable is used.	Replace with straight cable.
	Try to insert the network cable into different HUB port.	Try to replace the HUB.
(2) Check the content of network information		
Check IP address, Subnet mask, Gateway address.	Print out the network information. Check IP address, Subnet mask, Gateway address.	Set the IP address, Subnet mask, Gateway address correctly.
(3) Check whether the communication on the network is normal.		
Send the Ping command from PC to printer to check	Send the Ping command from PC to printer, and check whether the response is correct.	Set the IP address, Subnet mask, Gateway address correctly.
(4) Check the utility		
Check the settings of OKI LPR utility.	Check the setting items of OKI LPR utility.	Set the setting items of OKI LPR utility correctly.
(5) Check the OS standard port.		
Check windows (Vista, 7, 8, 8.1) standard LPR port.	Set windows (Vista, 7, 8, 8.1) standard LPR port, and check whether print is normal.	Set windows (Vista, 7, 8, 8.1) standard LPR port correctly.

2.5.10 Wireless Troubleshooting

(1) Cannot print through Wireless Network.

Confirmation Items	Confirmation Tasks	Action at NG
(1) Check Network Connection setting.		
Check Network Connection is Wireless not Wired.	Print out the network information. Check Network Connection setting is Wireless.	Set Wireless setting by Manual Setup or Auto Setup (WPS) to connect to wireless access point. Network Connection setting switches from Wired to Wireless.
(2) Check the connection to the wireless LAN access point.		
Check that the wireless LAN setting is right and the device is connecting to the wireless LAN access point.	Check the panel of the device, and Check whether the status (“Not connected to wireless access point.”) has occurred.	*1
	Check the panel of the device, and Check whether the status (“Wireless settings are incomplete.”) has occurred.	The settings of SSID, the security setting, the encryption key, and the certificate, etc. are insufficient. Please set all necessary settings.
(3) Check whether it is possible to communicate by way of wireless LAN.		
Check whether it is possible to communicate via wireless LAN.	Please refer to Network Troubleshooting for Checkation Tasks and Action at NG. Moreover, when wireless security is set to "WEP", the connection to wireless LAN access point might not be able to be communicated though does. Set it to the security setting of wireless LAN access point additionally again.	

*1 : Check once again whether the SSID, security setting, and an encrypting key of the wireless LAN access point are same as the settings of this device. When any one of settings is different, the device cannot be connected to the wireless LAN access point.
Check that a WEP key index of the wireless LAN access point is 1 when the security settings of the wireless LAN access point are WEP. When a WEP key index of the wireless LAN access point is not 1, it can not communicate with this device.
When a time-out error is displayed after automatic setting (WPS-PBC/PIN) execution, the connection setting with the wireless LAN access point is not completed in time.
Start WPS of the wireless LAN access point as soon as you start WPS of this device. (It is no problem that you start WPS of the wireless LAN access point first.)
When an overlap error is displayed after automatic setting (WPS-PBC) execution, there is a device carrying out WPS in others. Carry out WPS again after a while.

2.6 Fuse Checking

If any of the following errors occurs, check the corresponding fuse on the CU/PU control board or or Scanner board aor high voltage power supply board. (Refer to following Table)

Fuse Name		Error Description	Insert Point	Resistance
CU/PU board (6CU)	F1	Paper jam in an option tray during printing.	Option trays (Tray2 to Tray4): 24V	1Ω or less
	F2	Service call 918	Duplex unit: 24V	
	F3	Service call 122	High-voltage power supply unit, low-voltage FAN, belt FAN, shutter solenoid, belt fuse, ID fuse, discharging light, fuser FAN: 24V	
	F4	Not displayed on the operator panel.	CU part: 3.3V	
	F5	Not displayed on the operator panel.	CU/PU part: 5V	
	F6	Paper jam in Tray 1 during printing. Service call 140	Hopping clutch, registration clutch, MPT clutch, ID UP clutch, hopping motor: 24V	
	F8	Service call 928	Belt motor, ID motor FAN, fuser side FAN:24V	
	F9	CM color missing	CM heads: 5V	
	F10	Service call 134	KYMC heads: 3.3V	
	F11	KY color missing	KY heads: 5V	
	F12	WLAN error	HOSTUSB: 5V	
	F13	Stapler error Service call 090	Stapler:24V	
	F14	Doesn't start-up. The hourglass-mark is displayed on the operator panel.	SATA:5V	
	F15	Not connected LAN. Not lighted Power LED.	CU/PU part: 5V	

Fuse Name		Error Description	Insert Point	Resistance
Scanner board (6SU)	F1	JAM <0103>	ADF Transfer Motor	1Ω or less
	F2	Doesn't start-up. The hourglass-mark is displayed on the operator panel.	CIS,USB-VBUS,Speaker,FAX	
	F3	JAM <0101>	ADF Feed Motor	
	F4	Doesn't start-up. The hourglass-mark is displayed on the operator panel.	SU part:3.3V	
	F5	Carriage Error <02>	ADF Clutch, FB Motor, FAX, Multi feed Sensor	
	F6	Not displayed on the operator panel.	SU part:3.3V,Operator Panel:3.3V	
	F7	Not displayed on the operator panel.	Paper size detect sensor,Operator Panel:5V	

Fuse Name		Error Description	Insert Point	Resistance
High-Voltage Power board (EHV)	F501	Cover open	High-voltage power supply: 24V	1Ω or less

2.7 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.

3. 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.

3.1 Maintenance Menu

Service Menu

When the equipment is in standby mode, access the password entry screen by pressing [Setting] → [#] → [0] → [1] → [0] → [3] → [*].

Note! The initial Password is set to "000000" (six zeros).

Item1	Item2	Item3	Item4	Item5	Value	Default value ODA	Default value OEL	Default value JP	Notes
Password					**********				Enter the password for accessing the maintenance menu. 6 to 12 characters (numerals and lower-case alphabetic characters) may be entered.
	System Maintenance	OKIUSER *MPS mode: MPS. Not shown during maintenance.			ODA OEL APS JP1 JPOEM1 OEMA OEML				Set the destination. JPOEM1 : OEM for Japan OEMA : OEM for overseas, with A4 as default size OEML : OEM for overseas, with Letter as default size Device reboots automatically after exiting the menu. Displayed under the following conditions: However, operation when JP1/JPOEM/OEMA/OEML is chosen is not guaranteed. The display condition of the menu is following two. ① "System Maintenance" - "OKIUSER" is other than JPOEM1, OEMA or OEML ② "Manufacturer" is "OKI DATA CORP".
		Format HDD							Formats HDD.
		Format Flash Memory							Formats flash memory. When this command is executed, the menu is exited and formatting of the resident(onboard) flash device begins. Use of this command is strictly prohibited (contact design before use)
		Reset Admin Password							Returns the administrator password to the factory default value.
		All Reset *MPS mode: MPS. Not shown during maintenance							Returns the content of EEPROM and Flash memory and HDD to their factory default values. When this command is executed, the following confirmation message is displayed: "This change will reboot the device automatically. Proceed?" When "No" has been selected, the system returns to the previous menu. When "Yes" has been selected, the menu is exited immediately and then, after rebooting, reset processing begins. See the "format scope" sheet for the scope of formatting.

Item1	Item2	Item3	Item4	Item5	Value	Default value ODA	Default value OEL	Default value JP	Notes
Password	System Maintenance	Test Print Menu			Enable Disable				Switches between displaying and not displaying the "ID Check Pattern" and "Engine Status" in the "Report" - "Print" category (default: Disable). If this item is set to "Disable" the "ID Check Pattern" and "Engine Status" will remain undisplayed at all times. The MFP will reboot after changing the settings and exiting the menu.
		Change Password	New Password						Set a new password for accessing the maintenance menu. 6 to 12 characters (numerals and lower-case alphabetic characters) may be entered.
			Verify Pass-word						Have the user enter the new password for accessing the maintenance menu, set using "NEW PASSWORD," for confirmation purposes. 6 to 12 characters (numerals and lower-case alphabetic characters) may be entered.
		Check RTC							Displays a snapshot of the current time. (The time does not change during display.)
		Save Syslog							Saves the network communication log (syslog) to nonvolatile memory.
		Print Syslog							Prints the network communication log (syslog).
		Power Setup	Power Save Enable		ON OFF	ON	ON		Setting Valid/Invalid of Save-power mode.
			Sleep		ON OFF	ON	ON		Setting Valid/Invalid of Sleep mode.
	Panel Maintenance	LED Test	LED Continuation						This mode is that LED turn on sequentially.
			LED Interval						Setting interval that LED turn on sequentially.
			LED Single						This mode is that LED turn on individually.
		LCD Test	LCD Continuation						This mode is that a pattern is displayed sequentially.
			LCD Interval						Setting interval that a pattern is displayed.
			LCD Single	Full-Screen Black					Selected pattern is displayed individually.
				Full-Screen White					
				Full-Screen Red					
				Full-Screen Green					

Item1	Item2	Item3	Item4	Item5	Value	Default value ODA	Default value OEL	Default value JP	Notes
Password	Panel Maintenance	LCD Test	LCD Single	Full-Screen Blue					
				Full-Screen Gray50					
				Full-Screen Gray75					
				Full-Screen Magenta					
				Full-Screen Cyan					
				Full-Screen Yellow					
				Standby Screen					
				H/M Pattern					
		Key Test	Key Continuation						Testing whether operation panel keys work.
			Key Time						Setting interval that a key name is displayed.
		Touch Panel Test							
		Sound Test			Low Middle High				Select the volume of the forced buzzer. For the buzzer pattern, use the error sound (three buzzes)
	Copy Maintenance	Color Copy			Enable Disable				
		Print Check Pattern							Starts printing from the panel using a copy evaluation test chart inside the FW.
	Scanner Maintenance	Scanner Calibration							Starts execution of scanner calibration. Instead of being conducted automatically after operating for a certain period of time, calibration is executed by the user as needed. During calibration, the fact that calibration is underway is displayed. Note: Also included under AdminSetting.
		Adjust Scan Position	FBS	Side Reg.	+30~ -17 mm	0	0	0	Adjusting the position of the scanning start pixel by one Step=4/600 dpi (= 0.17mm) at the book scanning.
				Front Edge	+30 ~ -30 mm	0	0	0	During book scanning, add a value for the basic value (= 5 mm) when reading the shadow of the front edge of the document. Adjust in intervals of one step = 4/600 dpi (= 0.17 mm).

Item1	Item2	Item3	Item4	Item5	Value	Default value ODA	Default value OEL	Default value JP	Notes
Password	Scanner Maintenance	Adjust Scan Position	ADF (Frontside)	Side Reg.	+30~ -17 mm	0	0	0	Adjusting the position of the scanning start pixel by one Step=4/600 dpi (= 0.17mm) at the book scanning. This Item use the adjustment of registration when ADF duplex scanning.
				Front Edge	+30 ~ -30 mm	0	0	0	When reading a document from the ADF, add a value for the basic value when reading the shadow of the front edge of the document. To skip the front edge of the document, add a negative value. Increase or decrease the number of motor pulses from detection by the sensor of the front edge of the media until actual reading starts. Adjust in intervals of one step = 4/600 dpi (= 0.17 mm).
				Back Edge	+30 ~ -30 mm	0	0	0	When reading a document from the ADF, add a value for the basic value when skipping the back edge of the document. To read the shadow of the back edge of the document, add a negative value. Increase or decrease the number of motor pulses from detection by the sensor of the back edge of the media until actual reading ends. Adjust in intervals of one step = 4/600 dpi (= 0.17 mm).
			ADF (Backside)	Side Reg.	+30~ -17 mm	0	0	0	Adjusting the position of the scanning start pixel by one Step=4/600 dpi (= 0.17mm) at the book scanning.This Item use the adjustment of registration when ADF duplex scanning.
				Front Edge	+30 ~ -30 mm	0	0	0	When reading a document from the ADF, add a value for the basic value when reading the shadow of the front edge of the document. To skip the front edge of the document, add a negative value. Increase or decrease the number of motor pulses from detection by the sensor of the front edge of the media until actual reading starts. Adjust in intervals of one step = 4/600 dpi (= 0.17 mm).
				Back Edg	+30 ~ -30 mm	0	0	0	When reading a document from the ADF, add a value for the basic value when skipping the back edge of the document. To read the shadow of the back edge of the document, add a negative value. Increase or decrease the number of motor pulses from detection by the sensor of the back edge of the media until actual reading ends. Adjust in intervals of one step = 4/600 dpi (= 0.17 mm).
			Adjust ADF Scan Position		+30 ~ -30 mm	0	0	0	Set the CIS reading position of the ADF for the focusing standard. Adjust in intervals of one step = 4/600 dpi (= 0.17 mm). This is correlated to adjustment of the ADF front edge position.
		Adjust Mech.	Adjust FB Motor	FB Drive Current	10 ~ 1400 [mA]	530 [mA]	530 [mA]		Only for engineering test Connect a panel or PC and set the electric current value of the scanner motor.
				FB H.P Drive Current	10 ~ 1400 [mA]	530 [mA]	530 [mA]		
				FB Keep Current	10 ~ 1400 [mA]	50 [mA]	50 [mA]		
			Adjust ADF Motor	ADF Hopping Drive Mono Current	10 ~ 1400 [mA]	960 [mA]	960 [mA]		
				ADF Transfer Drive Mono Current	10 ~ 1400 [mA]	1050 [mA]	1050 [mA]		

Item1	Item2	Item3	Item4	Item5	Value	Default value ODA	Default value OEL	Default value JP	Notes
Password	Scanner Maintenance	Adjust Mech.	Adjust ADF Motor	ADF Hopping Drive 300Color Current	10 ~ 1400 [mA]	960 [mA]	960 [mA]		
				ADF Transfer Drive 300Color Current	10 ~ 1400 [mA]	1050 [mA]	1050 [mA]		
				ADF Hopping Drive 600Color Current	10 ~ 1400 [mA]	1180 [mA]	1180 [mA]		
				ADF Transfer Drive 600Color Current	10 ~ 1400 [mA]	1200 [mA]	1200 [mA]		
				ADF Keep Current	10 ~ 1400 [mA]	200 [mA]	200 [mA]		
		Adjust CIS	Adjust CIS		simple R continuous G continuous B continuous All continuous				Only for engineering test Sequentially light the designated RGB colors and check them during calibration configuration duties. Move the CIS to the standard position. In the position moved to, sequentially light R, followed by G and B in the same manner. Light each color for approximately 3 seconds. Display "Testing" during execution? → On the panel, display "CIS light testing" and "Cancel."
			Check CIS		300dpi 600dpi ---Results Displayed--- CCD_SIG9_WID_H 0x000000 CCD_SIG2_WID_H 0x000000				Only for engineering test Check CIS maintenance displays the exposure time at each resolution. When resolution is set, scanner calibration is conducted at that resolution and the following results are displayed: Red-1 Red-2 Green-1 Green-2 Blue-1 Blue-2 Lsync Note : CIS exposure time varies with resolution.

Item1	Item2	Item3	Item4	Item5	Value	Default value ODA	Default value OEL	Default value JP	Notes
Password	Scanner Maintenance	Adjust GAIN	FB/ADF Initial GAIN	Red GAIN	0 ~ 1023	256	256	256	
				Green GAIN	0 ~ 1023	256	256	256	
				Bule GAIN	0 ~ 1023	256	256	256	
				Gray GAIN	0 ~ 1023	256	256	256	
			FB Scan GAIN	Red GAIN	0 ~ 1023	233	233	233	
				Green GAIN	0 ~ 1023	236	236	236	
				Bule GAIN	0 ~ 1023	230	230	230	
				Gray GAIN	0 ~ 1023	233	233	233	
			ADF Scan GAIN	Red GAIN	0 ~ 1023	234	234	234	
				Green GAIN	0 ~ 1023	237	237	237	
				Bule GAIN	0 ~ 1023	230	230	230	
				Gray GAIN	0 ~ 1023	233	233	233	
		AFE Parameter			Setup Register3 Offset DAC（RED） Offset DAC（GREEN） Offset DAC（BLUE） Offset DAC（RGB） PGA GAIN LSB（RED） PGA GAIN LSB（GREEN） PGA GAIN LSB（BLUE） PGA GAIN LSB（RGB） PGA GAIN MSB（RED） PGA GAIN MSB（GREEN） PGA GAIN MSB（BLUE） PGA GAIN MSB（RGB）				Only for engineering test Change AFE (IC) register settings (3 - 9 settings). Then, read the document using PC Scan. W : Display message showing that settings are complete. R : Display read value.

Item1	Item2	Item3	Item4	Item5	Value	Default value ODA	Default value OEL	Default value JP	Notes
Password	Scanner Maintenance	Mechanical Test	ADF Test	Simplex/ Duplex	Simplex Duplex				Conduct mechanical testing (without reading an image). ADF : Test moving original document (stops when set document has been moved) May choose from single- or double-sided feeding. FBS : CIS moving test (stops after designated number of operations) Use fastest read speed (30 cpm). On the panel, indicate current number of executions using the message "Test no. xxx underway."
				Speed	Color 300 x 600dpi Color 600 x 600dpi Mono 600 x 600dpi				
				Execute	--Results-- Test no. xxx underway				
			FBS Test	Speed	Color 300 x 600dpi Color 600 x 600dpi Mono 600 x 600dpi				Conduct mechanical testing (without reading an image). ADF : Test moving original document (stops when set document has been moved) May choose from single- or double-sided feeding. FBS : CIS moving test (stops after designated number of operations) Use fastest read speed (40 cpm). On the panel, indicate current number of executions using the message "Test no. xxx underway."
				Times	0~100,000				
				Execute	--results-- Test no. xxx underway				
			Sensor Test		Examples of this display are shown below: ① MEDIA H/L ② REGIST H/L ③ SCAN H/L ④ REVERSE H/L ⑤ ADF CVR H/L ⑥ FB HP H/L ⑦ FB SIZE1 H/L ⑧ FB SIZE2 H/L ⑨ ADF OPEN1 H/L ⑩ ADF OPEN2 H/L ⑪ ADF SIZE1 H/L ⑫ ADF SIZE2 H/L				Display sensor status (H/L) in real time. Change the content of the display as needed when the sensor status displayed changes. ① MEDIA H/L ② REGIST H/L ③ SCAN H/L ④ REVERSE H/L ⑤ ADF CVR H/L ⑥ FB HP H/L ⑦ FB SIZE1 H/L ⑧ FB SIZE2 H/L ⑨ ADF OPEN1 H/L ⑩ ADF OPEN2 H/L ⑪ ADF SIZE1 H/L ⑫ ADF SIZE2 H/L

Item1	Item2	Item3	Item4	Item5	Value	Default value ODA	Default value OEL	Default value JP	Notes
Password	Scanner Maintenance	Mechanical Test	ADF Hopping Motor Test		Forward Forward Continuous Reverse Reverse Continuous				Test the ADF Hopping motor ① After a short press of the button, rotate in the CW direction for 10 seconds and then stop. ② After a long press of the button, rotate in the CW direction continuously. Stop when the Stop button is pressed. ③ After a short press of the button, rotate in the CCW direction for 10 seconds and then stop. ④ After a long press of the button, rotate in the CCW direction continuously. Stop when the Stop button is pressed. Deemed successful at all times. No need to display results. Display "Testing" during execution? → Display a message on the panel showing that testing is underway.
			ADF Transfer Motor Test		Forward Forward Continuous Reverse Reverse Continuous				Test the ADF Transfer motor ① After a short press of the button, rotate in the CW direction for 10 seconds and then stop. ② After a long press of the button, rotate in the CW direction continuously. Stop when the Stop button is pressed. ③ After a short press of the button, rotate in the CCW direction for 10 seconds and then stop. ④ After a long press of the button, rotate in the CCW direction continuously. Stop when the Stop button is pressed. Deemed successful at all times. No need to display results. Display "Testing" during execution? → Display a message on the panel showing that testing is underway.
		Multi Feed Sensor Test	Display Result	Result	Min Ave Max				Display the Multi Feed Sensor detect voltage (Min/Ave/Max) of last page when reading from ADF.
			Sensor Test	Execute					Start the Multi Feed Sensor Test Confirm the result with "Display Result".
			Adjust Accuracy	Correction value	-10~20	0	0	0	Adjust the accuracy of Multi Feed detect level. (Value) 1=+0.05V (Decrease the value, the sensitivity has down)
			Adjust Cycle	Correction value	0~25	0	0	0	Adjust the cycle of Multi Feed detect length. (Value) 1=1cycle
	Fax Maintenance	Service Bit * When OKIUSER is set by JP1 or JPOEM1, this item is displayed.			ON OFF	-	-	OFF	If set OFF, some menu items are not displayed on the panel. When OKIUSER is set on except for JP1 or JPOEM1, this item is displayed in the top of a menu of 'Admin Setup'-'Fax Setup'-'Fax Setting'.

Item1	Item2	Item3	Item4	Item5	Value	Default value ODA	Default value OEL	Default value JP	Notes
Password	Fax Maintenance	Country Code * When OKIUSER is set by JP1 or JPOEM1, this item is displayed.			U.S.A. International United Kingdom Ireland Norway Sweden Finland Denmark Germany Hungary Czech/Slovakia Poland Switzerland Austria Belgium Netherlands France Portugal Spain Italy Greece Australia New Zealand Singapore Hong Kong Latin America Mexico China Russia Taiwan Japan Korea Thailand Malaysia Jordan Argentina Brazil South Africa Belarus Moldova Turkey Ukraine	-	-	Japan	When the desired country code is selected by this setting, the PTT parameters that are suited to the target country are set. When OKIUSER is set on except for JP1 or JPOEM1, this item is displayed in the top of a menu of 'Admin Setup'-'Fax Setup'-'Fax Setting'.
		Line Test	Tone Send Test		2100Hz 1850Hz 1650Hz 1100Hz				Tone send test conducted.
			DP Send Test		0 ~ 9, #, * Key				DP send test conducted.
			MF Send Test		0 ~ 9, #, * Key				MF send test conducted.

Item1	Item2	Item3	Item4	Item5	Value	Default value ODA	Default value OEL	Default value JP	Notes
Password	Fax Maintenance	Line Test	Modem Signal Send Test		V.34 (33.6Kbps) V.34 (28.8Kbps) V.17 (14.4Kbps) V.17 (12.0Kbps) V.17 (9.6Kbps) V.17 (7.2Kbps) V.29 (9.6Kbps) V.29 (7.2Kbps) V.27 (4.8Kbps) V.27 (2.4Kbps) V.21 (0.3Kbps)				Modem-signal send test conducted. 11 types available, including V. 34 (33.6 Kbps).
		T.30 Monitor							The unit keeps the last transmission log (Tx/Rx commands) on volatile memory, and print when select "Execute". If turn off the unit, the records will be lost.
	Print Maintenance	Personality	XPS		Enable Disable	Enable	Enable	Enable	
			IBM5577		Enable Disable	Disable	Disable	Enable	
			IBM PPR III XL		Enable Disable	Enable	Enable	Disable	
			EPSON FX		Enable Disable	Enable	Enable	Disable	
		Engine Diag Mode							

3.2 Service Bit Menu

Additional Fax Setting menu

(When setup ServiceBit=ON, the following items will be displayed at Admin Setup → Fax Setup → Fax Setting)

No.	Item	Settings	Description	ODA	OEL
1	Tone For Echo (For Transmission)	Enable Disable	When an Item is Enable: First DIS is ignored. Echo Protection Tone is sent with V.29. Interval of DIS and DCS is 1000ms When an Item is Disable: First DIS is not ignored. Echo Protection Tone is not sent with V.29. Interval of DIS and DCS is 0ms	Disable	Disable
2	Tone For Echo (For Reception)	Enable Disable	When an Item is Enable : Interval of CED and DIS is 1000ms When an Item is Disable : Interval of CED and DIS is 75ms	Disable	Disable
3	Attenuator	0~15 dB	Enter Attenuator.	Depends on Country Code	
4	MF Attenuator	0~15 dB	Enter MF (Tone) Attenuator.	Depends on Country Code	
5	Pulse Make Ratio	33% 39% 40%	Sets the make rate of DP (10 pps) during call. It only shows, when ServiceBit = ON and Tone/Pulse setting = PULSE.	Depends on Country Code	
6	Pulse Dial Type	N 10-N N+1	Setting the Dial Type of Pulse. It only shows, when ServiceBit = ON and Tone/Pulse setting = PULSE.	Depends on Country Code	
7	MF (Tone) Duration	75, 85, 100 m seconds	Enter MF (Tone) Duration. It only shows, when ServiceBit = ON and Tone/Pulse setting = TONE.	Depends on Country Code	
8	Calling Timer	1~255 second (s)	Sets the call connection wait time (TO timer).	Depends on Country Code	

3.3 Maintenance Utility

The adjustments described in table 3-1 should be made by using Maintenance Utility. Details on the utility are as follows:

(1) Maintenance Utility operation manuals:

42678821FU01 Rev.2 (Version 1.1.0) or higher (Japanese)

42678821FU02 Rev.2 (Version 1.1.0) or higher (English)

(2) Maintenance Utility program:

Applicable operating system	File name	Part number
Win XP/Vista/7/8	42678821FW01.zip	42678821FW01 Rev.2 (Version 2.1.0) or higher

Table 3-1 Maintenance Utility Adjustment Items

	Item	Adjustment	Section in Maintenance Utility Operation manual	Operation from operator panel (section in this maintenance manual)
1	Board Replace-ment	Copies the information from the EEPROM on the PU board, and copies the EEPROM setting value on CU board. Purpose: To copy the information stored on the EEPROM on the PU or CU board when the CU/ or PU board needs to be replaced with another one due to maintenance.	3.1.1	Unavailable
2	Serial number setting	Rewrites the serial number recorded on the PU, and Selects the printer serial number recorded on the CU, output mode, and rewrites the device serial number. Purpose: To configure a maintenance replacement board to which the information on the PU board cannot be copied (due to an interface error).	3.2.1	Unavailable
3	Factory/ Shipping Mode	Switches between Factory and Shipping modes. Purpose: To configure a maintenance replacement PU board to which the information on the EEPROM on the PU board cannot be copied (due to an interface error). The maintenance board is set to the Factory mode usually by default and, by using this function, must be set to the Shipping mode.	3.2.3	Section 3.4.10
4	Mac address setting	Sets the Mac address	3.2.2	Unavailable
5	Network log storage	Stores Network log files.	3.3.1	Unavailable
6	Send File	Transmits a specified file.	3.1.2	Unavailable
7	PU log storage	Stores PU log flies.	3.3.2	Unavailable
8	Test print	Executes the local print function and sends a specified file. Purpose: To check the printer on a stand-alone basis and send a download file.	3.4	Perform local printing (refer to System Specification
9	Local Print Data storage	Stores files of local print data	3.3.4	Unavailable
10	PU maintenance log storage	Stores self-diagnosis log files of printer paper running system.	3.3.3	Unavailable
11	Migrate Settings	Copy to another device by selecting any values of various settings.	3.1.3	Unavailable
12	FUSE KEEP mode setting	Sets the FUSE KEEP mode.	3.2.7	Unavailable

3.4 Self-diagnostic mode

This section describes LEVEL 0 and LEVEL 1.

3.4.1 Operator panel

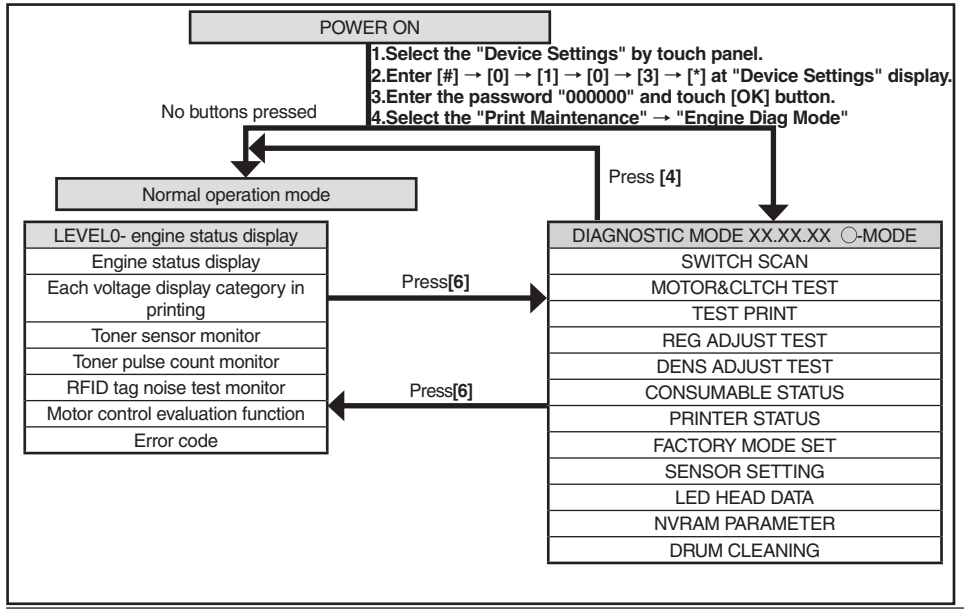
The following description on operating the self-diagnostic is provided, premised on the following operator panel layout:

Self-diagnostic mode layout (Overall)

(1) Menu option display switching

The level in a shaded area XXXXX can be displayed only from another one.

Use the **[2]** or **[8]** button to display the menu option shown in a non-shaded area XXXXX .

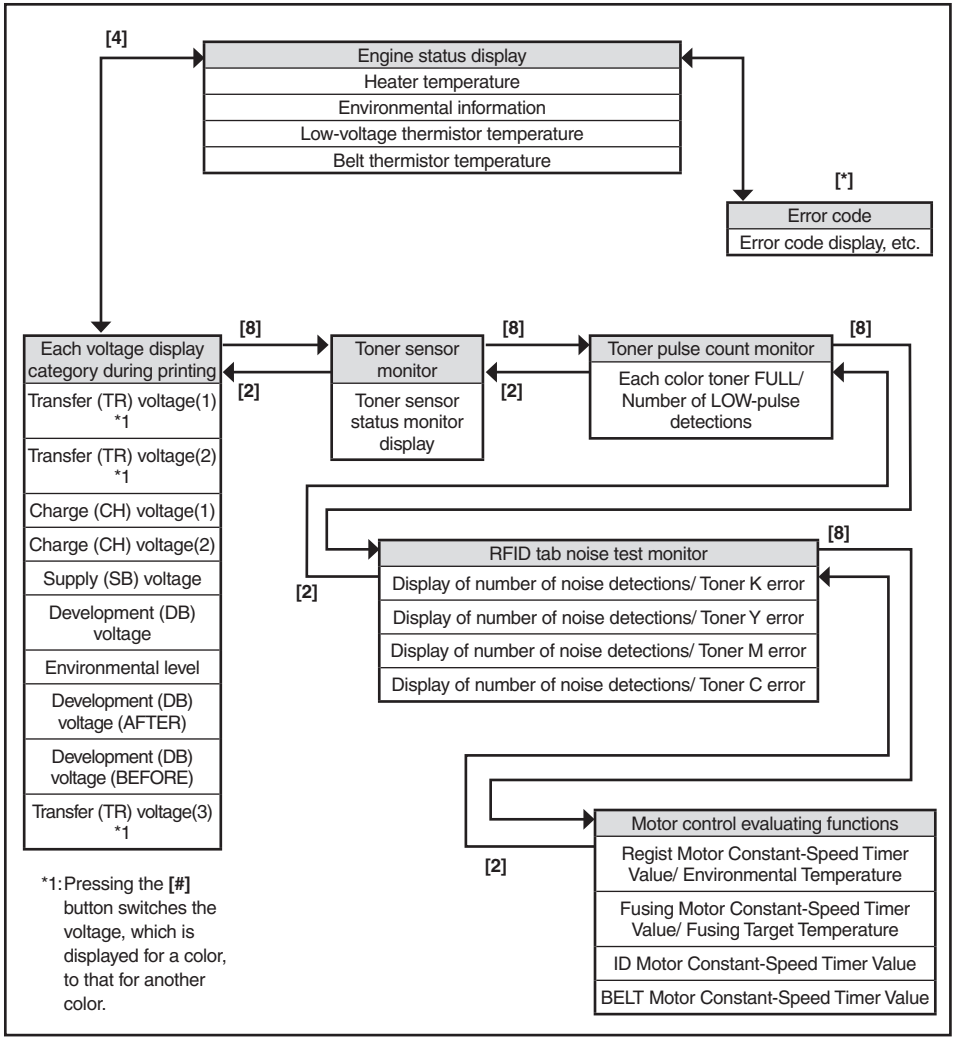


LEVEL0

(1) Menu option display switching

Use the **[4]** or **[*]** or **[2]** or **[8]** button to display the option shown in a shaded area XXXX .

Use the **[2]** or **[8]** button to display the menu option shown in a non-shaded area XXXX .



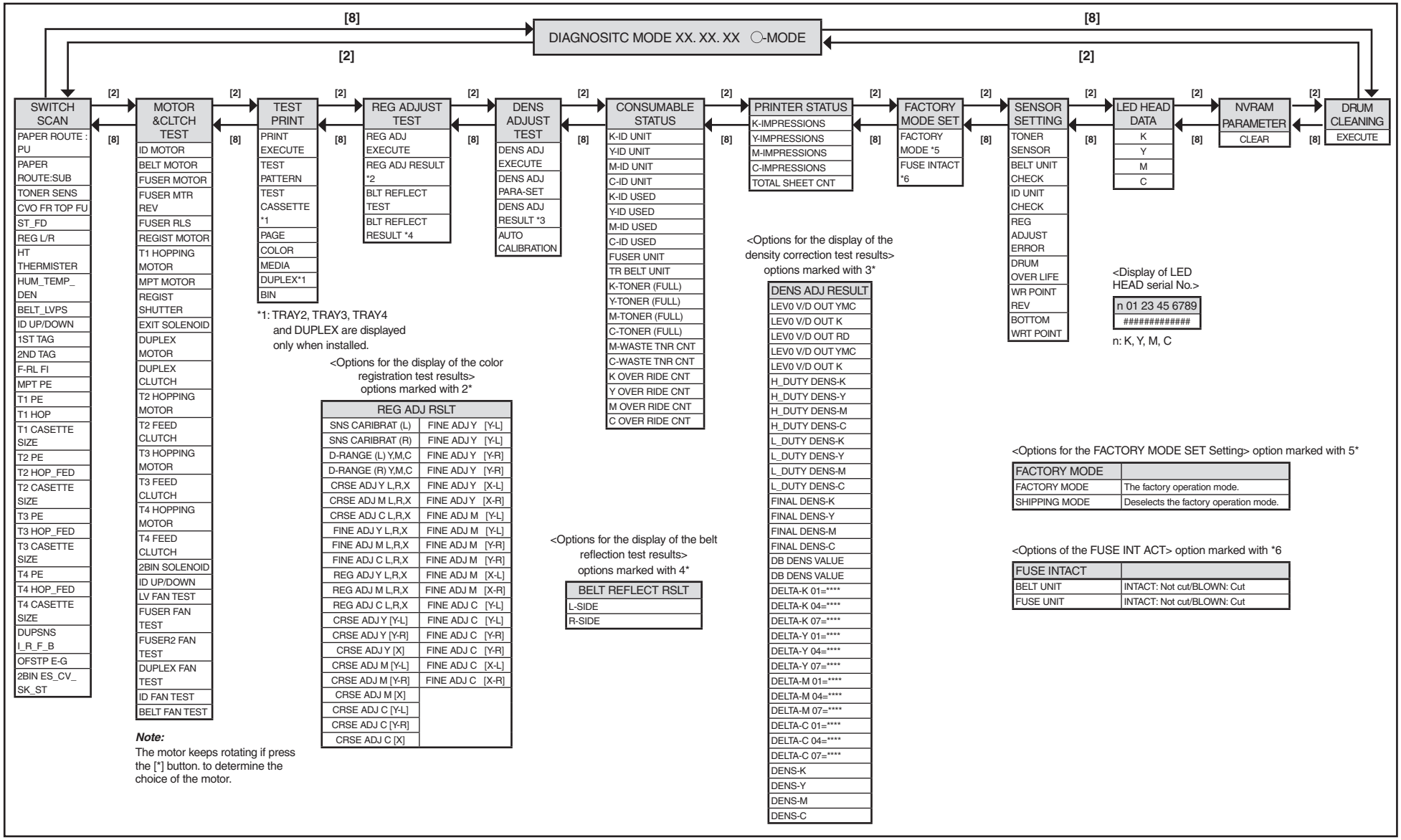
LEVEL1

(1) Menu option display switching

Use the **[2]** or **[8]** button to select the option shown in a shaded area (XXXXX), and press **[6]** to execute the option.

Use **[6]** or **[4]** to display the option shown in a non-shaded area (XXXXX), and use the **[2]** or **[8]** button to select the option.

Press **[6]** to execute a test, and **[4]** to end the test.



3.4.2 Normal self-diagnostic mode (Level 1)

The normal self-diagnostic mode menus are as follows:

	Option	Self-diagnosis Menu	Adjustment
1	Switch scan test	SWITCH SCAN	Checks input sensor and switch
2	Motor clutch test	MOTOR&CLTCH TEST	Tests the operation of a motor or clutch.
3	Test printing	TEST PRINT	Prints a test pattern stored in the PU.
4	Color registration adjustment test	REG ADJUST TEST	Judges the color registration adjustment mechanism as pass or fail.
5	Density adjustment test	DENS ADJ TEST	Judges the density adjustment mechanism as pass or fail.
6	Consumable counter display	CONSUMABLE STATUS	Displays the usage of a consumable.
7	Consumable life counter display	PRINTER STATUS	Displays the life counter of a consumable.
8	Factory/Shipping mode switching	FACTORY MODE SET	Switches between Factory and Shipping modes
9	Fuse status display		Displays the status of a fuse.
10	Engine parameter setting	SENSOR SETTING	Sets whether to enable or disable error detection performed by each sensor.
11	Display of LED head serial number	LED HEAD DATA	Displays the serial number of LED head data.
12	NVRAM parameter setting	NVRAM PARAMETER	Must not be used.
13	Drum Manual Cleaning	DRUM CLEANING	Cleans a drum manually.

3.4.2.1 Entering self-diagnostic mode (level 1)

Note! Entering the System Maintenance mode of MC853/MC873/ES8453/ES8473 requires a password. Refer to 3.1 Maintenance Menu for description on it.

1.Select the "Device Settings" by touch panel.

2.Enter [#] → [0] → [1] → [0] → [3] → [*] at "Device Settings" display.

3.Enter the password "000000" and touch [OK] button.

4.Select the "Print Maintenance" → "Engine Diag Mode"

3.4.2.2 Exiting self-diagnostic mode

1. Turn of the printer and, after ten seconds, turn it on.

3.4.3 Switch scan test

The switch scan test is used for checking entrance sensors and switches.

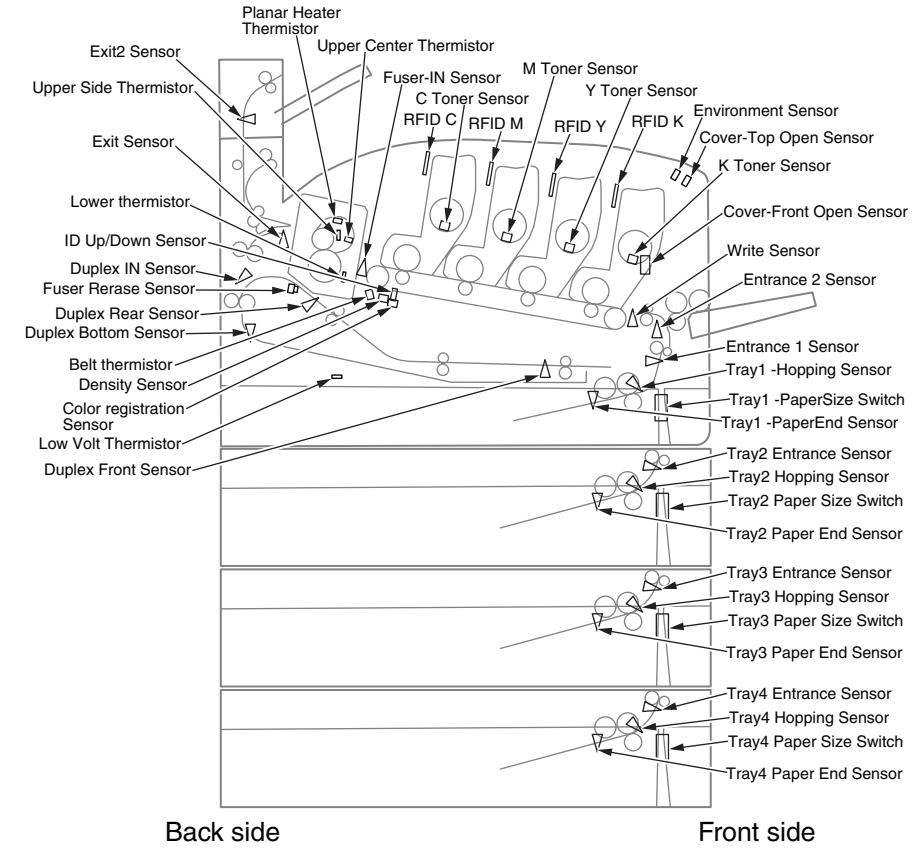
1. Enter the self-diagnostic mode (level 1) and, until SWITCH SCAN appears on the upper display, press the **[2]** or **[8]** button (the **[2]** button displays the next test option and the **[8]** button displays the preceding test option). Then press the **[6]** button.

SWITCH SCAN

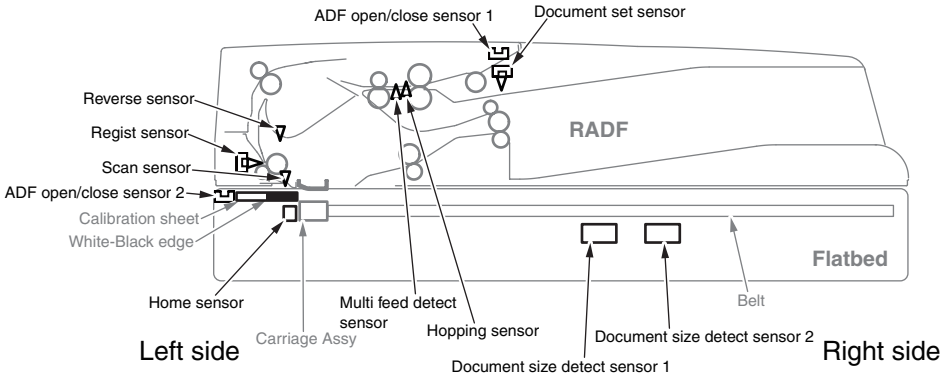
2. Press the **[2]** or **[8]** button until an option shown in table 3-3 for the unit to test appears on the lower display (the **[2]** button displays the next option and the **[8]** button displays the preceding option).
3. Press the **[6]** button. The switch scan test starts, the unit's name and current status being displayed

PAPER ROUTE:PU
1=H 2=L 3=H 4=L

   Operate the unit (figure 3-1). Display information on applicable LCD display (the information displayed vary depending on the sensor.
4. Press the **[#]** button. The state in step 2 is restored.
5. Repeat steps 2 through 4 when necessary.
6. Press the **[4]** button to end the test (the state in step 1 is restored.)



(1) printer section



(2) scanner section

Figure 3-1 Switch sensor locations

Table 3-3 SWITCH SCAN Detail

Lower display shows asterisk (*) when function on upper display is unavailable.

Upper display	1		2		3		4	
	Detail	Lower display	Detail	Lower display	Detail	Lower display	Detail	Lower display
PAPER ROUTE : PU	Entrance 1 Sensor	H: No paper exists. L: Paper exists.	Entrance 2 Sensor	H: No paper exists. L: Paper exists.	Write Sensor	H: No paper exists. L: Paper exists.	Exit Sensor	H: No paper exists. L: Paper exists.
PAPER ROUTE:SUB	Exit2 Sensor	H:No paper exists. L:Paper exists.						
TONER SENS	K Toner Sensor	H: Blocked L: Reflected	Y Toner Sensor	H: Blocked L: Reflected	M Toner Sensor	H: Blocked L: Reflected	C Toner Sensor	H: Blocked L: Reflected
CVO FR TOP FU	Front Cover Open Switch	H: Close L: Open	Top Cover Open Switch *1	H: Close L: Open	Faceup Cover Open Switch	H:Close L:Open		
ST_FD	Stack Full Sensor	H: No paper exists. L: Paper exists.						
REG L/R	Color registration L Sensor	AD value: **H	Color registration R Sensor	AD value: **H				
HT THERMISTER	Upper Center Thermistor	AD value: **H	Lower Thermistor	AD value: **H	Upper Side Thermistor	AD value: **H	Planar Heater Thermistor	AD value: **H
HUM_TEMP_DEN	Humidity Sensor	AD value: **H	Temperature Sensor	AD value: **H	Density Black Sensor	AD value: **H	Density Color Sensor	AD value: **H
BELT_LVPS	Belt Thermistor	AD value: **H	Low Volt Thermistor	AD value: **H				
ID UP/DOWN							ID Up/Down Sensor	H: Up. L: Down
1ST TAG	1st-TAG-K UID	UID:. ***H	1st-TAG-Y UID	UID:. ***H	1st-TAG-M UID	UID:. ***H	1st-TAG-C UID	UID:. ***H
2ND TAG	2nd-TAG-K UID	UID:. ***H	2nd-TAG-Y UID	UID:. ***H	2nd-TAG-M UID	UID:. ***H	2nd-TAG-C UID	UID:. ***H
F-RL FI	Fuser release Sensor	H: ON L: OFF	Fuser-In Sensor	H:ON. L:OFF				
MPT PE	MPT Paper End Sensor	H: No paper exists. L: Paper exists.						
T1 PE	TRAY1 Paper End Sensor	H: No paper exists. L: Paper exists.						
T1 HOP	TRAY1 Hopping Sensor	H: No paper exists. L: Paper exists.						
T1 CASETTE SIZE	Tray1 -PaperSize-1 Switch	Port level H, L	Tray1 -PaperSize-2 Switch	Port level H, L	Tray1 -PaperSize-3 Switch	Port Level H, L	Tray1 -PaperSize-4 Switch	Port Level H, L
T2 PE	TRAY2 Paper End Sensor	H: No paper exists. L: Paper exists.						
T2 HOP_LF_FED	TRAY2 Hopping Sensor	H: No paper exists. L: Paper exists.			TRAY2 Entrance Sensor	H: No paper exists. L: Paper exists.		
T2 CASETTE SIZE	Tray2 -PaperSize-1 Switch	Port level H, L	Tray2 -PaperSize-2 Switch	Port level H, L	Tray2 -PaperSize-3 Switch	Port Level H, L	Tray2 -PaperSize-4 Switch	Port Level H, L
T3 PE	TRAY3 Paper End Sensor	H: No paper exists. L: Paper exists.						
T3 HOP _FED	TRAY3 Hopping Sensor	H: No paper exists. L: Paper exists.			TRAY3 Entrance Sensor	H: No paper exists. L: Paper exists.		
T3 CASETTE SIZE	Tray3 -PaperSize-1 Switch	Port level H, L	Tray3 -PaperSize-2 Switch	Port level H, L	Tray3 -PaperSize-3 Switch	Port Level H, L	Tray3 -PaperSize-4 Switch	Port Level H, L

Upper display	1		2		3		4	
	Detail	Lower display	Detail	Lower display	Detail	Lower display	Detail	Lower display
T4 PE	TRAY4 Paper End Sensor	H: No paper exists. L: Paper exists.						
T4 HOP _FED	TRAY4 Hopping Sensor	H: No paper exists. L: Paper exists.			TRAY4 Entrance Sensor	H: No paper exists. L: Paper exists.		
T4 CASETTE SIZE	Tray4 -PaperSize-1 Switch	Port level H, L	Tray4 -PaperSize-2 Switch	Port level H, L	Tray4 -PaperSize-3 Switch	Port Level H, L	Tray4 -PaperSize-4 Switch	Port Level H, L
DUP SNS I_R_F_B	Duplex-In Sensor	H: No paper exists. L: Paper exists.	Duplex-rear Sensor	H: No paper exists. L: Paper exists.	Duplex-front Sensor	H: Paper exists. L: No paper exists.	Duplex-bottom Sensor	H: No paper exists. L: Paper exists.
OFSTP E-G	Stapler Mount Signal	H: Unmount L: Mount	Stapler Good Signal	H: Normal L: Abnormal				
2BIN ES_CV_SK_ST	Second Bin Mount Sensor	H: Unmount L: Mount	Second Bin Cover Open Switch	H: Close L: Open	Second Bin Stacker Sensor	H: No paper exists. L: Paper exists.	Second Bin Stacker Full Sensor	H: No Paper exists. L: Paper exists.

*1: L is displayed when the cover is open (including in the Sleep mode and power-off status), and H is displayed when the top cover and front cover is closed and warm-up is done.

3.4.4 Motor and clutch test

The motor and clutch test is used for testing motors and clutches.

1. Enter the self-diagnostic mode (level 1) and, until MOTOR & CLTCH TEST appears on the upper display, press the **[2]** or **[8]** button (the **[2]** button displays the next test option and the **[8]** button displays the preceding test option). Then press the **[6]** button.
2. Press the **[2]** or **[8]** button until an option shown in table 3-4 for the unit to test appears on the lower display (the **[2]** button displays the next option and the **[8]** button displays the preceding option).

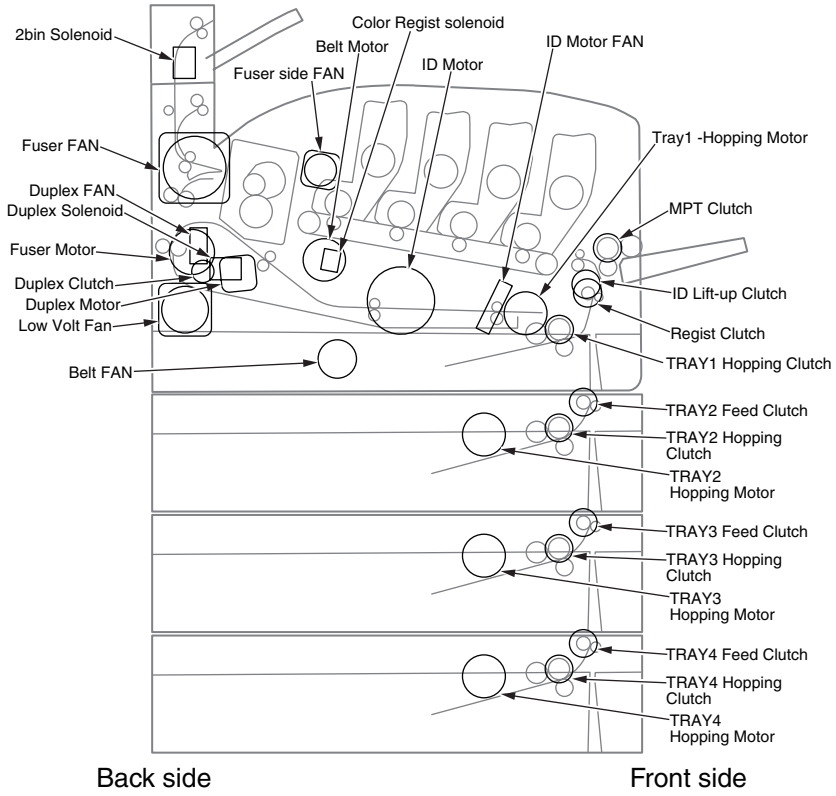
MOTOR&CLTCH TEST
ID MOTOR

3. Press the **[6]** button. The motor and clutch test starts, the unit's the name and current status starting to blink, and the unit being driven for ten seconds (refer to figure 3-2).

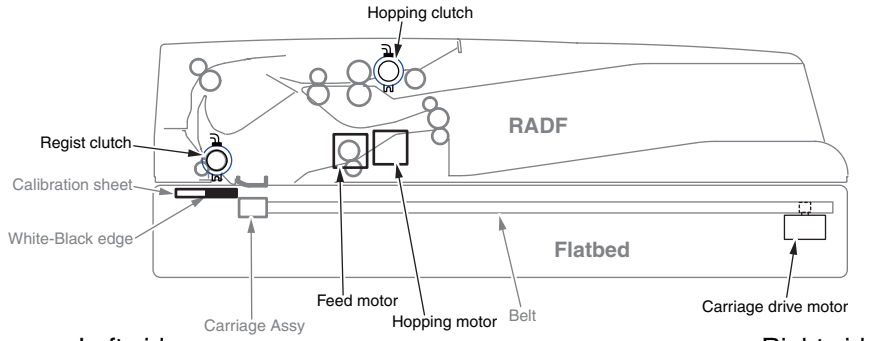
Note! The state in step 2 is restored after the unit is driven so. The unit is driven again by pressing an appropriate button.

- By usual printing driving, the clutch solenoid repeatedly is turned on and off (its motor is driven together with the solenoid when the solenoid cannot be driven solely for its mechanical structure). * Image drum up-and-down movement continues until the **[#]** button is pressed.
- The clutch solenoid is kept driven by holding down the **[*]** button for a motor to be accepted.

4. Press the **[#]** button. The state in step 2 is restored.
5. Repeat steps 2 through 4 when necessary.
6. Press the **[4]** button to end the test (the state in step 1 is restored).



(1) printer section



(2) scanner section

Figure 3-2

Table 3-4

Panel display	Driven unit	Condition
ID MOTOR	ID MOTOR Low Volt Fan ID motor Fan Belt FAN	All ID(K/Y/M/C) are removed
BELT MOTOR	Belt Motor Low Volt Fan ID Motor Fan Belt FAN	All ID(K/Y/M/C) are removed
FUSER MOTOR	Fuser Motor	-
FUSER MTR REV	Fuser Motor	-
FUSER RLS	Fuser Motor	Fuser unit is installed
REGIST MOTOR	Tray 1 Hopping Motor Tray1 Registration Clutch	-
T1 HOPPING MOTOR	Tray 1 Hopping Motor Tray1 Registration Clutch	-
MPT MOTOR	Tray 1 Hopping Motor MPT Clutch	-
REGIST SHUTTER	Color Registration Solenoid	-
EXIT SOLENOID	Duplex Solenoid	Duplex unit is installed
DUPLEX MOTOR	Duplex Motor	Duplex unit is installed
DUPLEX CLUTCH	Duplex Motor Duplex Clutch	Duplex unit is installed
T2 HOPPING MOTOR	Tray2 Hopping Motor Tray2 Hopping Clutch	Tray2 is installed
T2 FEED CLUTCH	Tray2 Hopping Motor Tray2 Feed Clutch	Tray2 is installed
T3 HOPPING MOTOR	Tray3 Hopping Motor Tray3 Hopping Clutch	Tray3 is installed
T3 FEED CLUTCH	Tray3 Hopping Motor Tray3 Feed Clutch	Tray3 is installed
T4 HOPPING MOTOR	Tray4 Hopping Motor Tray4 Hopping Clutch	Tray4 is installed
T4 FEED CLUTCH	Tray4 Hopping Motor Tray4 Feed Clutch	Tray4 is installed
2BIN SOLENOID	Second Bin Solenoid	Second Bin unit is installed
ID UP/DOWN	Tray1 Hopping Motor ID Lift-up clutch	TOP/FRONT Cover is closed
LV FAN TEST	Low Volt Fan	-
FUSER FAN TEST	Fuser FAN	-
FUSER2 FAN TEST	Fuser side FAN	-
DUPLEX FAN TEST	Duplex Fan	Duplex unit is installed
ID FAN TEST	ID Motor Fan	-
BELT FAN TEST	Belt Fan	-

Note! Display while ID UP/DOWN is in progress

```
MOTOR & CLTCH TEST
ID UP/DOWN      ***
```

***: Identifies the number of times

Display when the REGIST SHUTTER [*] button is pressed

```
MOTOR & CLTCH TEST
SHT             ***
```

***: Identifies the number of times

Display while FUSER RLS is in progress

```
MOTOR & CLTCH TEST
RLS             ***
```

***: Identifies the number of times

3.4.5 Test print

The test printing is used for printing test patterns stored in the PU. Other patterns are stored in the controller.

This test print cannot be used to check the print quality.

Diagnosis for the abnormal print image should be performed in accordance with section 2.

1. Enter the self-diagnostic mode (level 1) and, until TEST PRINT appears on the upper display, press the **[2]** or **[8]** button (the **[2]** button displays the next test option and the **[8]** button displays the preceding test option). Then press the **[6]** button.
2. A setting option used only in test printing appears on the lower display. Press the **[2]** or **[8]** button until the option to select appears (the **[2]** button displays the next option and the **[8]** button displays the preceding option). Then press the **[6]** button. (Go to step 4 when set to its default, the option does not need to be set).
3. Press the **[2]**, **[8]** button, and press the **[6]** button at the menu item set by step 2. Then, the setting item is displayed in the upper row of display area, and the setting value is displayed in the lower row of display area. Pressing the **[2]** button displays the next setting and pressing the **[8]** button displays the preceding setting (the setting last displayed takes effect. By pressing the **[4]** button, the setting is accepted, step 2 being restored. Repeat step 3 when necessary.

TEST PATTERN
1

Display	Settings	Default	Function
PRINT EXECUTE	-	-	Starts printing with the press of the [6] button, and ends printing with the press of the [#] button.
TEST PATTERN	0	0	0: Prints a blank page. 1 to 7: - See the next section (pattern printing) - 8 to 15: Print a blank page.
TEST CASSETTE	TRAY1	TRAY1	Select the paper feed source. Not displayed when the tray 2 is not installed. Not displayed when the tray 3 is not installed. Not displayed when the tray 4 is not installed.
	TRAY2		
	TRAY3		
	TRAY4		
	MPT		
PAGE	0000	0000	Sets the number of test copies printed
COLOR	ON	ON	Selects color or monochrome printing. * Each color setting is provided by setting ON.
	OFF		
MEDIA	MEDIA TYPE	PLAIN PAPER	Changes the setting of a TRAY selected in TEST CASSETTE. If CUSTOM SIZE is not selected in MEDIA SIZE, CUSTOM LEN, and CUSTOM WIDTH are not displayed.
	MEDIA WEIGHT	MEDIUM LIGHT	
	MEDIA SIZE	A4(LEF)	
	CUSTOM LEN	210	
	CUSTOM WIDTH	297	
	MEDIA CHECK	ENABLE	Sets ENABLE/ DISABLE of the paper size check.
DUPLEX	2 PAGES STACK	2 PAGES STACK	Prints duplex two pages stack layout printing. 2 PAGES STACK: Disables duplex printing OFF: Performs simplex printing. 1 PAGES STACK: Prints duplex one page stack layout printing. If DUPLEX is not installed, DUPLEX is not displayed.
	OFF		
	1 PAGE STACK		
BIN	1BIN	1BIN	Selects the output tray. 1BIN: Output Tray 2BIN: Upper Output Tray
	2BIN		

Notes! PAGE setting:

The input position is shifted with the **[*]** button or **[#]** button. This setting is incremented by pressing the **[2]** button, and decremented by pressing the **[8]** button. Note the setting 0000 endlessly prints pages.

COLOR setting:

ON displays, with the press of the **[6]** button, the information shown below.

Print setting for each color:

The input position is shifted with the **[*]** or **[#]** button. This setting is switched between ON and OFF by the press of the **[2]** or **[8]** button. The display for the setting restored to the previous one with the press of the **[4]** button.

CUSTOM size setting:

The input position is shifted with the **[*]** button or **[#]** button. This setting is incremented by pressing the **[2]** button, and decremented by pressing the **[8]** button.

* If a display value exceeds the settable range, the setting value is unavailable.

COLOR	→	Y:ON M:ON
ON		C:ON K:ON

MEDIA Setting Options

MEDIA TYPE

Category	Setting value		
MEDIA TYPE	PLAIN PAPER	LABELS	USERTYPE1
	TRANSPARENCY	BOUND	USERTYPE2
	LABEL	RECYCLED	USERTYPE3
	GLOSSY	CARDSTOCK	USERTYPE4
	LETTERHEAD	ROUGH	USERTYPE5

MEDIA WHIGHT

Category	Setting value	
MEDIA WEIGHT	LIGHT	HEAVY
	MEDIUM LIGHT	ULTRA HEAVY1
	MEDIUM	ULTRA HEAVY2
	MEDIUM HEAVY	ULTRA HEAVY3

MEDIA SIZE

Category	Setting value		
MEDIA SIZE	UNIVERSAL PLAIN	POST CARD	KAKUGATA 2(SEF)
	CUSTOM SIZE	RETURN POST CARD	KAKUGATA 3(SEF)
	A3	EXECUTIVE	INDEX CARD(3×5)
	A4(LEF)	LEGAL13	16K(184 × 260)mm (SEF)
	A4(SEF)	LEGAL13.5	16K(195 × 270)mm (SEF)
	A5(LEF)	LEGAL14	16K(197 × 273)mm (SEF)
	A5(SEF)	COM-10 (LEF)	16K(184 × 260)mm (LEF)
	A6(SEF)	DL(LEF)	16K(195 × 270)mm (LEF)
	B4	C5(LEF)	16K(197 × 273)mm (LEF)
	B5(LEF)	C4(LEF)	8K(260 × 368)mm (SEF)
	B5(SEF)	C4(SEF)	8K(270 × 390)mm (SEF)
	B6(SEF)	NAGAGATA 3(LEF)	8K(273 × 394)mm (SEF)
	B6-HALF(SEF)	NAGAGATA 4(LEF)	STATEMENT
	TABLOID	NAGAGATA 40(LEF)	Photo(4x6")
	LETTER(LEF)	YOUGATA 0(LEF)	Photo(5x7")
	LETTER(SEF)	YOUGATA 4(LEF)	

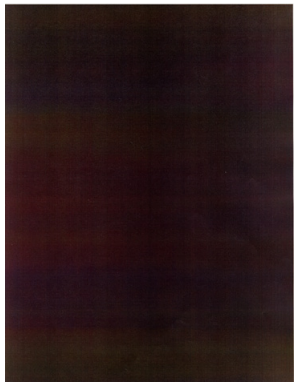
4. When the **[6]** button is pressed With PRINT EXECUTE on the lower display after the operation in step 2, test printing with the setting value set in the steps 2 to 3 is executed.

   The test printing is cancelled by pressing the **[#]** button.

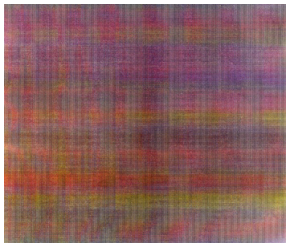
   When the printer detects any errors in alarm shown in initiating or running the test printing, it stops the printing and displays the error on the operation panel.

Print Patterns (Cannot be used for print quality check.)

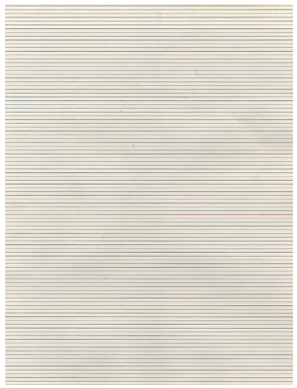
Patterns 0 and 8 to 15 ... Prints blank sheet.



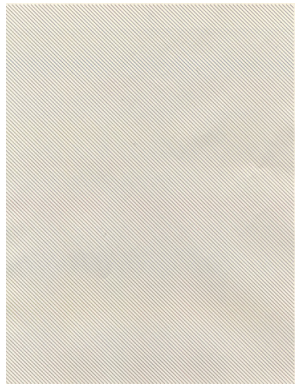
Pattern 1



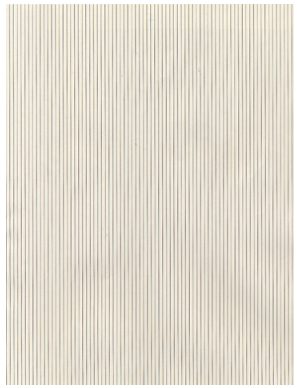
Pattern 2



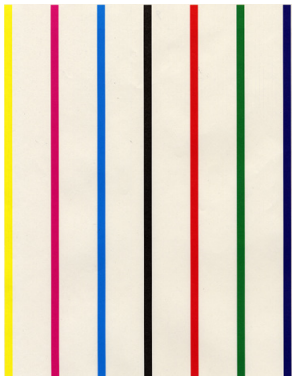
Pattern 3



Pattern 4



Pattern 5



Pattern 6

Pattern 7

Note! Printing 100% of solid black print (pattern 7) contained in the local printing functions causes an offset.
To prevent this, the colors to print concurrently to produce No. 7 solid print copies must be limited to two or less by making each print color settings as instructed in step 3 of Section 3.4.5.

- The following message appears when a test pattern is printed.

```
P=***
W=***
```

P: Number of test-print pages (Unit: sheets)

W: Belt temperature wait time (Unit: seconds)

- The displays are switched to the following by pressing the **[2]** button.

```
U=***[###] H=XXX
L=***[###] S=XXX
```

U: *** = Center thermistor target temperature [Unit: ˚C]
[###] = Center thermistor current temperature [Unit: ˚C]

H: XXX= Heater thermistor current temperature [Unit: ˚C]

L : *** = Lower thermistor target temperature [Unit: ˚C]
[###] = Lower thermistor target temperature [Unit: ˚C]

S: XXX= Site thermistor current temperature [Unit: ˚C]

- The displays are switched to the following by pressing the **[2]** button.

```
T=***
H=***%
```

T: A measured environment temperature [Unit: ˚C]

H: A measured environment humidity [Unit: %]

- The displays are switched to the following by pressing the **[2]** button.

```
KTR=*.** YTR=*.**
MTR=*.** CTR=*.**
```

YTR, MTR, CTR and KTR indicate set transfer voltages for colors, respectively (in kV).

- The displays are switched to the following by pressing the **[2]** button.

```
KR=*.** YR=*.**
MR=*.** CR=*.**
```

KR: BLACK transfer roller resistance value [Unit: uA]

YR: YELLOW transfer roller resistance value [Unit: uA]

MR: MAGENTA transfer roller resistance value [Unit: uA]

CR: CYAN transfer roller resistance value [Unit: uA]

- The displays are switched to the following by pressing the **[2]** button.

```
ETMP=***UTMP=***
REG=****EXT=***
```

ETMP: A parameter for correction of constant hopping motor speed (an environmental temperature) [Unit: DEC].

UTMP: A parameter for correction of constant fuser motor speed (a target fusing temperature) [Unit: DEC].

REG: A hopping motor constant-speed timer value (a set input/output value) [Unit: HEX].

EXT: A fuser motor constant-speed timer value (a set input/output value) [Unit: HEX].

- The displays are switched to the following by pressing the **[2]** button.

```
ID=**** BLT=****
LVTH=xxx(***)
```

ID: ID motor constant-speed timer value (I/O set value) [Unit: HEX]

BLT: Belt motor constant-speed timer value (I/O set value) [Unit: HEX]

LVTH : [xxx] = Low-voltage power temperature [Unit: ˚C]
([***]) = Low-voltage power thermistor scanning AD value [Unit: HEX]

- The displays are switched to the following by pressing the **[2]** button.

BELT=xxx(***)

BELT: xxx = Belt temperature [Unit: ˚C]

*** = Belt thermistor scanning AD value [Unit: HEX]

5. Repeat steps 2 and 4 when necessary.
6. Press the [#] button to end the test (the state if step 1 is restored).

3.4.6 Color registration adjustment test

The color registration adjustment test is used for adjusting color registration or investigating the cause(s) of color misregistration. Chapter 2 about description on color registration adjustment should be followed for recovery from an error caused by the test.

1. Enter the self-diagnostic-mode(Level1) and, until the following message appears, press the **[2]** or **[8]** button.

REG ADJUST TEST

2. Press the **[6]** button. The following message appears. Press the **[2]** or **[8]** button until the intended option appears.

REG ADJUST TEST
REG ADJ EXECUTE

3. Press the **[6]** button. The displayed option is performed:

   When the displayed option is REG ADJ EXECUTE:

   ① Color registration adjustment test (the ONLINE lamp starts blinking) is performed.

   ② When the test ends, the upper display shows the result of the test (OK or an error name), the lower display shows '****RESULT'.

OK
REG ADJ RESULT

   Pressing the **[2]** button displays the next test result.

   Pressing the **[8]** button displays the preceding test result.

   Press the **[4]** button to return to step 2.

Remark: The following message appears while the printer is initialized or issues an alarm or when the cover is open.

NG
REG ADJ RESULT

   ③ Pressing the [#] button during the test cancels the test (turning on the ONLINE lamp), restoring the state of step 2.

When the displayed option is REG ADJ RESULT:

Same as of REG ADJ EXECUTE

When the displayed option is BLT REFLECT TEST:

① Color registration adjustment belt reflection test (the ONLINE lamp starts blinking) is performed.

② When the test ends, the upper display shows the result of the test (OK or a error name), the lower display shows '****RESULT'.

OK
BLT REFLECT RSLT

Pressing the **[2]** button displays the next test result.

Pressing the **[8]** button displays the preceding test result.

Press the **[4]** button to return to step 2.

③ Pressing the [#] button during the test cancels the test, restoring the state of step 2.

When BLT REFLECT RSLT is executed:

Same as the button operation of (2) after execution of BLT REFLECT TEST.

Remark: The following message appears while the printer is initialized or issues an alarm or when the cover is open.

NG
REG REFLECT RSLT

4. Repeat steps 2 and 3 when necessary.
5. Press the **[4]** button to end the test (the state if step 1 is restored).

Color registration correction test items

Display	Function
REG ADJ EXECUTE	Executes color registration adjustment.
REG ADJ RESULT	Displays the result of color registration adjustment.
BLT REFLECT TEST	Judges whether color registration adjustment belt reflection is proper.
BLT REFLECT RSLT	Displays the result of color registration adjustment belt reflection judgment.

Panel display at the completion of color registration correction test

Upper display	Lower display	Details
OK / ERROR NAME	REG ADJ RESULT/ BLT REFLECT RSLT	Displays only "OK" in the upper display when no error occurs. Displays an error name when an error occurs. Displays "**** RESULT" corresponding to the test executed in the lower display

Color registration correction test errors

Displayed error name	Contents
CALIBRATION(L)	Abnormal end of calibration on the left sensor
CALIBRATION(R)	Abnormal end of calibration on the right sensor
DYNAMICRANGE(L)	Insufficient dynamic range of left sensor output
DYNAMICRANGE(R)	Insufficient dynamic range of right sensor output
Y-LEFT	Detects an abnormal color-registration correction value at the yellow left sub-scanning position.
Y-RIGHT	Detects an abnormal color-registration correction value at the yellow right sub-scanning correction position.
Y-HORIZONTAL	Detects an abnormal color-registration correction value in the yellow main scanning correction.
M-LEFT	Detects an abnormal color-registration correction value at the magenta left sub-scanning position.
M-RIGHT	Detects an abnormal color-registration correction value at the magenta right sub-scanning correction position.
M-HORIZONTAL	Detects an abnormal color-registration correction value in the magenta main scanning correction.
C-LEFT	Detects an abnormal color-registration correction value at the cyan left sub-scanning position.
C-RIGHT	Detects an abnormal color-registration correction value at the cyan right sub-scanning correction position.
C-HORIZONTAL	Detects an abnormal color-registration correction value in the cyan main scanning correction.
BELT REFLEX ERR	Fails in the judgment of the reflectance of the color registration correction belt.

Display Items of REG ADJUST RESULT

Upper display	Lower display	Details	Memory
SNS CARIBRAT(L)	DAC=*** Vmax=***	DAC: Luminescence current value [HEX] Vmax: Sensor voltage at DAC [HEX]	SRAM
SNS CARIBRAT(R)	DAC=*** Vmax=***	DAC: Luminescence current value [HEX] Vmax: Sensor voltage at DAC [HEX]	SRAM
D-RANGE(L) Y,M,C	***H,***H,***H	Result of left dynamic range measurement [HEX] Y, M, C, in order of the left.	SRAM
D-RANGE(R) Y,M,C	***H,***H,***H	Result of right dynamic range measurement [HEX] Y, M, C, in order of the left.	SRAM
CRSE ADJ Y L,R,X	***, ***, ***	Yellow LED coarse adjustment value [DEC:1/1200"]	SRAM
CRSE ADJ M L,R,X	***, ***, ***	Magenta LED coarse adjustment value [DEC:1/1200"]	SRAM
CRSE ADJ C L,R,X	***, ***, ***	Cyan LED coarse adjustment value [DEC:1/1200"]	SRAM
FINE ADJ Y L,R,X	***, ***, ***	Yellow LED fine adjustment value [DEC:1/1200"]	SRAM
FINE ADJ M L,R,X	***, ***, ***	Magenta LED fine adjustment value [DEC:1/1200"]	SRAM
FINE ADJ C L,R,X	***, ***, ***	Cyan LED fine adjustment value [DEC:1/1200"]	SRAM
REG ADJ Y L,R,X	***, ***, ***	Yellow LED adjustment value [DEC:1/1200"]	EEPROM
REG ADJ M L,R,X	***, ***, ***	Magenta LED adjustment value [DEC:1/1200"]	EEPROM
REG ADJ C L,R,X	***, ***, ***	Cyan LED adjustment value [DEC:1/1200"]	EEPROM
CRSE ADJ Y [Y-L]	***, ***, ***	Yellow LED coarse adjustment pattern detection value at the sub-scanning left position	SRAM
CRSE ADJ Y [Y-R]	***, ***, ***	Yellow LED coarse adjustment pattern detection value at the sub-scanning right position	SRAM
CRSE ADJ Y [X]	***, ***, ***	Yellow LED coarse adjustment pattern detection value at the main scanning position	SRAM
CRSE ADJ M [Y-L]	***, ***, ***	Magenta LED coarse adjustment pattern detection value at the sub-scanning left position	SRAM
CRSE ADJ M [Y-R]	***, ***, ***	Magenta LED coarse adjustment pattern detection value at the sub-scanning right position	SRAM
CRSE ADJ M [X]	***, ***, ***	Magenta LED coarse adjustment pattern detection value at the main scanning position	SRAM
CRSE ADJ C [Y-L]	***, ***, ***	Cyan LED coarse adjustment pattern detection value at the sub-scanning left position	SRAM
CRSE ADJ C [Y-R]	***, ***, ***	Cyan LED coarse adjustment pattern detection value at the sub-scanning right position	SRAM
CRSE ADJ C [X]	***, ***, ***	Cyan LED coarse adjustment pattern detection value at the main scanning position	SRAM
FINE ADJ Y [Y-L]	***, ***, ***,	Yellow LED fine adjustment pattern detection value at the sub-scanning left position	SRAM
FINE ADJ Y [Y-L]	***, ***		
FINE ADJ Y [Y-R]	***, ***, ***,	Yellow LED fine adjustment pattern detection value at the sub-scanning right position	SRAM
FINE ADJ Y [Y-R]	***, ***		
FINE ADJ Y [X-L]	***, ***	Yellow LED fine adjustment pattern detection value at the main scanning left position	SRAM
FINE ADJ Y [X-R]	***, ***	Yellow LED fine adjustment pattern detection value at the main scanning right position	SRAM
FINE ADJ M [Y-L]	***, ***, ***,	Magenta LED fine adjustment pattern detection value at the sub-scanning left position	SRAM
FINE ADJ M [Y-L]	***, ***		
FINE ADJ M [Y-R]	***, ***, ***,	Magenta LED fine adjustment pattern detection value at the sub-scanning right position	SRAM
FINE ADJ M [Y-R]	***, ***		
FINE ADJ M [X-L]	***, ***	Magenta LED fine adjustment pattern detection value at the main scanning left position	SRAM
FINE ADJ M [X-R]	***, ***	Magenta LED fine adjustment pattern detection value at the main scanning right position	SRAM
FINE ADJ C [Y-L]	***, ***, ***,	Cyan LED fine adjustment pattern detection value at the sub-scanning left position	SRAM
FINE ADJ C [Y-L]	***, ***		
FINE ADJ C [Y-R]	***, ***, ***,	Cyan LED fine adjustment pattern detection value at the sub-scanning right position	SRAM
FINE ADJ C [Y-R]	***, ***		
FINE ADJ C [X-L]	***, ***	Cyan LED fine adjustment pattern detection value at the main scanning left position	SRAM
FINE ADJ C [X-R]	***, ***	Cyan LED fine adjustment pattern detection value at the main scanning right position	SRAM

- Results will be stored as described in memory filed.
- The contents in SRAM are deleted when the test starts, and values detected at the normal competition or until the machine stops due to errors are written.
- The contents in EEPROM are updated only at the normal competition of the test.

Display Items of REG BELT REFLECT RESULT

Upper display	Lower display	Details	Memory
L-SIDE= ** AV= ***	MAX=*** MIN=***	Upper display: Displays a test result on the left side (OK or NG). Displays the average of the sensor output ADC scanning values [HEX] Lower display: Displays the maximum or minimum of the sensor output ADC scanning values [HEX]	SRAM
R-SIDE= ** AV= ***	MAX=*** MIN=***	Upper display: Displays a test result on the right side (OK or NG). Displays the average of the sensor output ADC scanning values [HEX] Lower display: Displays the maximum or minimum of the sensor output ADC scanning values [HEX]	SRAM

- Results will be stored as described in memory filed.
- The contents in SRAM are deleted when the test starts, and values detected at the normal competition or until the machine stops due to errors are written.

3.4.7 Density adjustment test

The density adjustment test is used for performing a density adjustment function test and displaying the result of it to judge whether the density adjustment mechanism is proper.

Chapter 2 about description on density adjustment should be followed for recovery from an error.

1. Enter the self-diagnostic-mode(Level1) and, until the following message appears, press the **[2]** or **[8]** button.

DENS ADJ TEST

2. Press the **[6]** button. The following message appears. Press the **[2]** or **[8]** button until the intended option appears.

DENS ADJ TEST
DENS ADJ EXECUTE

3. Press the **[6]** button. The displayed option is performed:

   When DENS ADJ EXECUTE is executed:

   ① Density adjustment test is performed, and the lower display starts blinking)

   ② When the test ends, the upper display shows the result of the test (OK or an error name), the lower display shows '****RESULT'.

OK
DENS ADJ RESULT

   Pressing the **[2]** button displays the next test result.

   Pressing the **[8]** button displays the preceding test result.

   Press the **[4]** button to return to step 2 ("DENS ADJ RESULT").

   ③ Pressing the **[#]** button during the test cancels the test, restoring the state of step 2.

   When DENS ADJ RESULT is executed:

   Same as of REG ADJ EXECUTE

   When DENS ADJ PAR-SET is executed:

   The setting for the density adjustment parameter is displayed.

   When AUTO CALIBRATION is executed:

   ① The density sensor sensitivity adjustment value is automatically set is performed, and the lower display starts blinking.

   ② When the test ends, the upper display shows the result of the test (OK or a error name), the lower display shows '****RESULT'.

OK
DENS ADJ RESULT

   Pressing the **[2]** button displays the next test result.

   Pressing the **[8]** button displays the preceding test result.

   Press the **[4]** button to return to step 2.

   ③ Pressing the **[#]** button during the test cancels the test, restoring the state of step 2.

   Note! The fixture specific for execution should be used.

Remark: The following message appears while the printer is initialized or issues an alarm or when the cover is open.

NG
DENS ADJ RESULT

4. Repeat step 3 when necessary.
5. Press the **[4]** button to end the test (the state if step 1 is restored).

Density adjustment test item

Display	Details
DENS ADJ EXECUTE	Executes density adjustment.
DENS ADJ PAR-SET	Sets a control value for auto density adjustment. ***Note)*** Must not use.
DENS ADJ RESULT	Displays the result of density adjustment.
AUTO CALIBRATION	Automatically sets a density sensor sensitivity correction value. ***Note)*** Must not use.

Display at the completion of density adjustment test

Upper display	Lower display	Details
OK / ERROR NAME	DEN ADJ RESULT	Displays only “OK” in the upper display when no error occurs. Displays an error name when errors occur. Displays “**** RESULT” corresponding to a test executed in the lower display.

Errors of the density adjustment test

Error name displayed	Contents
CALIBRATION ERR	Abnormal end of the calibration of a sensor
DENS SENSOR ERR	Detects an abnormal sensor output during the continuous density detection.
DENS SHUTTER ERR	Detects an abnormality when opening and closing the shutter during the continuous density detection.
DENS ID ERR	Detects the out of focus of the LED head or dirt due to ID failure.

Display Items of DENS ADJ RESULT

Upper display	Lower display	Details	Memory
LEV0 V/D OUT YMC	V1=***H V1DA=***H	V1=***H: Color density sensor output when the LED current of the density sensor is 0[A]. [HEX] V1DA=***:DA setting value of the LED current of the density sensor at the color density detection determined by the color calibration of the density sensor. [HEX]	SRAM
LEV0 V/D OUT K	V2=***H V2DA=***H	V2=***H: Black density sensor output when the LED current of the density sensor is 0[A]. [HEX] V1DA=***:DA setting value of the LED current of the density sensor at the black density detection determined by the black calibration of the density sensor. [HEX]	SRAM
LEV0 V/D OUT RD	V3=***H V3DA=***H	V3=***H: Detected voltage value when the LED current of YMC density sensor is 0[A]. [HEX] V3DA=***: DAC setting value at YMC multiple points [HEX]	SRAM
LEV0 V/D OUT YMC	V4=***H	Value after subtracting V1 from the CMY sensor output [HEX] If a value after subtracting is a negative value, it is regarded as ‘0’.	SRAM
LEV0 V/D OUT K	V5=***H	Value after subtracting V1 from the K sensor output [HEX] If a value after subtracting is a negative value, it is regarded as ‘0’.	SRAM
H_DUTY DENS-K	V1=***H S1=***H	Not used	SRAM
H_DUTY DENS-Y	V1=***H S1=***H	Not used	SRAM
H_DUTY DENS-M	V1=***H S1=***H	Not used	SRAM
H_DUTY DENS-C	V1=***H S1=***H	Not used	SRAM
L_DUTY DENS-K	V01=***HS01=***H	01-03:First processing for averaging density 04-06: Second processing for averaging density V0X: Density sense value [HEX] S0X: Density detection value [HEX]	SRAM
	V02=***HS02=***H		
	V03=***HS03=***H		
	V04=***HS04=***H		
	V05=***HS05=***H		
	V06=***HS06=***H		
L_DUTY DENS-Y	V01=***HS01=***H	01-03:First processing for averaging density 04-06: Second processing for averaging density V0X: Density sense value [HEX] S0X: Density detection value [HEX]	SRAM
	V02=***HS02=***H		
	V03=***HS03=***H		
	V04=***HS04=***H		
	V05=***HS05=***H		
	V06=***HS06=***H		

Upper display	Lower display	Details	Memory
L_DUTY DENS-M	V01=***HS01=***H	01-03:First processing for averaging density 04-06: Second processing for averaging density V0X: Density sense value [HEX] S0X: Density detection value [HEX]	SRAM
	V02=***HS02=***H		
	V03=***HS03=***H		
	V04=***HS04=***H		
	V05=***HS05=***H		
	V06=***HS06=***H		
L_DUTY DENS-C	V01=***HS01=***H	01-03:First processing for averaging density 04-06: Second processing for averaging density V0X: Density sense value [HEX] S0X: Density detection value [HEX]	SRAM
	V02=***HS02=***H		
	V03=***HS03=***H		
	V04=***HS04=***H		
	V05=***HS05=***H		
	V06=***HS06=***H		
FINAL DENS-K	VX=***H SX=***H	The same value as V06 and HS06 of L_DUTY DENS-K	SRAM
FINAL DENS-Y	VX=***H SX=***H	The same value as V06 and HS06 of L_DUTY DENS-Y	SRAM
FINAL DENS-M	VX=***H SX=***H	The same value as V06 and HS06 of L_DUTY DENS-M	SRAM
FINAL DENS-C	VX=***H SX=***H	The same value as V06 and HS06 of L_DUTY DENS-C	SRAM
DB DENS VALUE	VK=**** VY=****	Not used	SRAM
DB DENS VALUE	VM=**** VC=****	Not used	SRAM
DELTA-K 01=****	02=**** 03=****	01:Light adjustment value [DEC] 02: DB adjustment value (First)[DEC] 03: DB adjustment value (Second) [DEC]	SRAM
DELTA-K 04=****	05=**** 06=****	Not used	SRAM
DELTA-K 07=****	08=**** 09=****	Not used	SRAM
DELTA-Y 01=****	02=**** 03=****	01:Light adjustment value [DEC] 02: DB adjustment value (First)[DEC] 03: DB adjustment value (Second) [DEC]	SRAM
DELTA-Y 04=****	05=**** 06=****	Not used	SRAM
DELTA-Y 07=****	08=**** 09=****	Not used	SRAM
DELTA-M 01=****	02=**** 03=****	01:Light adjustment value [DEC] 02: DB adjustment value (First)[DEC] 03: DB adjustment value (Second) [DEC]	SRAM
DELTA-M 04=****	05=**** 06=****	Not used	SRAM
DELTA-M 07=****	08=**** 09=****	Not used	SRAM

Upper display	Lower display	Details	Memory
DELTA-C 01=****	02=**** 03=****	01:Light adjustment value [DEC] 02: DB adjustment value (First)[DEC] 03: DB adjustment value (Second) [DEC]	SRAM
DELTA-C 04=****	05=**** 06=****	Not used	SRAM
DELTA-C 07=****	08=**** 09=****	Not used	SRAM
DENS-K 100%=***H	OD= **.****	Result of Black detections at multiple points	SRAM
DENS-K 85%=***H			
DENS-K 70%=***H			
DENS-K 50%=***H			
DENS-K 30%=***H			
DENS-K 15%=***H			
DENS-Y 100%=***H	OD= **.****	Result of Yellow detections at multiple points	SRAM
DENS-Y 85%=***H			
DENS-Y 70%=***H			
DENS-Y 50%=***H			
DENS-Y 30%=***H			
DENS-Y 15%=***H			
DENS-M 100%=***H	OD= **.****	Result of Magenta detections at multiple points	SRAM
DENS-M 85%=***H			
DENS-M 70%=***H			
DENS-M 50%=***H			
DENS-M 30%=***H			
DENS-M 15%=***H			
DENS-C 100%=***H	OD= **.****	Result of Cyan detections at multiple points	SRAM
DENS-C 85%=***H			
DENS-C 70%=***H			
DENS-C 50%=***H			
DENS-C 30%=***H			
DENS-C 15%=***H			
BEFORE STD=***H	DET=***H ADJ=**H	Standard value before sensitivity adjustment, measured value, adjustment value	SRAM
AFTER STD=***H	DET=***H	Standard value after sensitivity adjustment, measured value,	SRAM

- Results will be stored as described in memory filed.
- The contents in SRAM are deleted when the test starts, and values detected at the normal competition or until the machine stops due to errors are written.

3.4.8 Consumable counter display

The consumable counter display is used for viewing the usage of consumables.

1. Enter the self-diagnostic mode and, until CONSUMABLE STATUS appears, press the **[2]** or **[8]** button (the **[2]** button displays the next test option and the **[8]** button displays the preceding test option). Then press the **[6]** button.
2. Pressing the **[2]** or **[8]** button displays the usage of each consumable (pressing the **[*]** or **[#]** button is disabled).
3. Press the **[4]** button to end the option (the state in step 1 is restored).

Upper Display	Lower Display	Format	Unit	Detail
K-ID UNIT	******** IMAGES	DEC	Images	Each displays the number of turns performed by each image drum unit from the first-time installation of it until present, *1
Y-ID UNIT	******** IMAGES	DEC	Images	
M-ID UNIT	******** IMAGES	DEC	Images	
C-ID UNIT	******** IMAGES	DEC	Images	
K-ID USED	******** %	DEC	%	Displays the usage of ID of each color.
Y-ID USED	******** %	DEC	%	
M-ID USED	******** %	DEC	%	
C-ID USED	******** %	DEC	%	
FUSER UNIT	******** PRINTS	DEC	Prints	Displays the number of prints made from the first-time installation of a fuser unit until present *2
TR BELT UNIT	******** IMAGES	DEC	Images	Displays the number of prints made to date from the first-time installation of a belt unit until present *3

*1 One third of the number of drum turns inA4 (A4 portrait) three-pages-per-job printing is regarded as one count.

*2 Based on the paper length of Legal 13, if the sheet is the legal 13 length or less, it is regarded as one count, and if the sheet length exceeds the Legal 13 length, the number of counts is determined by how many times as large is the Legal 13 length as that of the sheet. (the decimal is rounded out.)

*3 One third of the number of belt turns in A4 (A4 portrait) three-pages-per-job printing is regarded as one count.

Upper Display	Lower Display	Format	Unit	Detail
K-TONER (FULL)	******** %	DEC	%	Each displays the usage of toner of a color.
Y-TONER (FULL)	******** %	DEC	%	
M-TONER (FULL)	******** %	DEC	%	
C-TONER (FULL)	******** %	DEC	%	
M-WASTE TNR CNT	******** TIMES	DEC	Times	Each displays the amount of waste toner. Counts by the number of TC replacements of colors on the near side
C-WASTE TNR CNT	******** TIMES	DEC	Times	
K OVER RIDE CNT	******** TIMES	DEC	Times	Each displays the extension life counter value of a toner cartridge.
Y OVER RIDE CNT	******** TIMES	DEC	Times	
M OVER RIDE CNT	******** TIMES	DEC	Times	
C OVER RIDE CNT	******** TIMES	DEC	Times	

3.4.9 Print counter display

The print counter display is used for viewing print counter values.

1. Enter the self-diagnostic mode and, until PRINTER STATUS appears, press the **[2]** or **[8]** button (the **[2]** button displays the next test option and the **[8]** button displays the preceding test option). Then press the **[6]** button.
2. Pressing the **[2]** or **[8]** button displays each count printed (pressing the **[*]** or **[#]** button is disabled).
3. Press the **[4]** button to end the option (the state in step 1 is restored).

Upper Display	Lower Display	Format	Unit	Function
K-IMPRESSIONS	******** PRINTS	DEC	Prints	Each displays the number of each color's images printed.
Y-IMPRESSIONS	******** PRINTS	DEC	Prints	
M-IMPRESSIONS	******** PRINTS	DEC	Prints	
C-IMPRESSIONS	******** PRINTS	DEC	Prints	
TOTAL SHEET CNT	******** PRINTS	DEC	Prints	Displays the total number of images printed.

*1 Tow counts apply to duplex print.

3.4.10 Factory-Shipping mode switching

The Factory-Shipping mode switching is used for switching from the Factory to Shipping mode.

1. Enter the self-diagnostic mode and, until the following message appears, press the **[2]** or **[8]** button.

```
FACTORY MODE SET
```

2. Press the **[6]** button. The following message appears. Press the **[2]** or **[8]** button until the option to set (refer to the table shown below) appears

```
FACTORY MODE
SHIPPING MODE       *
```

3. A setting for the option can be selected by pressing the **[6]** button with the option on the display.
4. Press the **[6]** button with the setting on the display.
   The setting is stored in the EEPROM. The state in step 2 is restored.
5. Repeat steps 2 through 4 when necessary.
6. Press the **[4]** button to end the option (the state in step 1 is restored).

Option	Settings	Function
FACTORY MODE	FACTORY MODE	Establishes the Factory mode (a fuse-cut disabling mode).
	SHIPPING MODE	Deselects the Factory mode to enable the fuse-cut function.
FUSE INTACT ***Note:*** ****** is either INTACT or BLOWN.	BELT UNIT XXXXXX	Displays the fuse status of the transfer belt unit.
	FUSE UNIT XXXXXX	Displays the fuse status of the fuser.

3.4.11 Self-diagnostic function setting

The self-diagnostic function setting is used for enabling or disabling the error detection by sensors. The detection can be enabled or disabled temporarily for troubleshooting. Allowing for setting engine operation options for which expert knowledge is required to be handled. This self-diagnostic should be used carefully. Be sure to restore the default settings of used options of the self-diagnostic.

1. Enter the self-diagnostic mode and, until the following message appears, press the **[2]** or **[8]** button.

SENSOR SETTING

2. Press the **[6]** button. The following message appears. Press the **[2]** or **[8]** button until the option to set (refer to the table shown below) appears.

TONER SENSOR
ENABLE *

3. The setting on the lower display can be selected by pressing the **[6]** button. The **[2]** button displays the next setting and the **[8]** button displays the preceding setting.
4. Press the **[6]** button with the desired setting on the display. The setting is stored in the EEPROM. The state in step 2 is restored.
5. Repeat steps 2 through 4 when necessary.
6. Press the **[4]** button to end setting the option (except where not in step 4) (the state in step 1 is restored).

Option	Set Settings	Setting Operation	Function
TONER SENSOR	ENABLE	Enables detection.	Enables or disables toner sensor operation.
	DISABLE	Disables detection.	
BELT UNIT CHECK	ENABLE	Enable checking.	Enables or disables belt installation checking operation.
	DISABLE	Disables checking.	
ID UNIT CHECK	ENABLE	Enable checking.	Enables or disables image drum installation checking.
	DISABLE	Disables checking.	
REG ADJUST ERROR	ENABLE	Display	Sets whether to display or non-display the detected error from the control of auto registration control.
	DISABLE	Non-display	
DRUM OVER LIFE	STOP	Does not extend life.	Sets whether to enable or disable extending image drum life at the end of the life.
	CONTINUANCE	Extends life	
WR POINT REV TBL=**H± *.***mm	00H~FFH	A correction value.	Adds a correction value for the default writing point.
BOTTOM WRT POINT TBL=**H± *.***mm	00H~FFH	A tear-off position value.	Sets a tear-off length from the bottom edge of paper.

Default is in hatched area.

3.4.12 LED head serial number display

The LED head serial number display is used for viewing whether downloaded data about LED heads agrees with the serial numbers marked on the LED heads.

1. Enter the self-diagnostic mode and, until LED HEAD DATA appears, press the **[2]** or **[8]** button (the **[2]** button displays the next test option and the **[8]** button displays the preceding test option). Then press the **[6]** button.
2. Pressing the **[2]** or **[8]** button displays each of the K, Y, M and C LED head data serial numbers.
3. Press the **[4]** button to end the option (the state in step 1 is restored).

K ** ** ** ****
xxxxxxxxxxxxx

** ** ** **** : A revision number
① ② ③ ④

xxxxxxxxxxxxx : A serial number
④

① : Head type data
② : Light amount data
③ : Length data
④ : Head serial No.

Note! If the serial number of the LED head data is not ASCII code (0x3X/0x4X/0x5X), it is indicated by ' . '.

3.4.13 Drum Manual Cleaning

This function is used for cleaning drums by wiping with alcohol.

This function allows a drum to rotate by 1/6 cycle. By cleaning the drum exposure part under the ID by rotating in order, the filming of the entire drum can be deleted.

1. Enter the self-diagnostic mode and, until DRUM CLEANING appears, press the **[2]** or **[8]** button(The **[2]** button displays the next test option and the **[8]** button displays the preceding test option). Then press the **[6]** button.

DRUM CLEANING

2. Press the **[6]** button to display the following message. By pressing the **[6]** button under this condition, the rotation of 1/6 cycle is executed.

DRUM CLEANING
EXECUTE

3. The display of the number of executions on the lower line of the display (* part) is incremented after the operation. Then, open the front cover to remove the ID and clean from the exposure side of the drum.

DRUM CLEANING
EXECUTE * / 6

* : Number of executed operations
6 : Number of drum rotations (6 times at one cycle)

4. Return the ID and close the front cover. Repeat the step 2 and 3 until the number of drum rotation becomes 6/6, and then cleaning of the entire drum ends.
5. Press the **[4]** button to end the test. (The state is restored to the step 1.)

Note! During the selection of "Drum Manual Cleaning", the initial operation is not performed even by opening and closing the cover. The initial operation is automatically performed after exiting this menu.

3.4.14 Functions of buttons after power-on

After the printer is turned on, buttons on the operator panel of MC853/MC873/ES8453/ES8473 function as described below. When held down until the upper and lower displays on the panel show RAM CHECK and three or four asterisks (****), respectively, the following buttons are enabled:

(1) **[6]** button

Starts the Boot menu.

(2) **[1]** and **[6]** buttons

Ignoring all warnings and errors, start the printer, always placing it to an online mode.

(3) **[8]** and **[STOP]** buttons

Initialize NIC settings to Factory defaults.

When executing this initialize, all network settings will be returned to Factory

defaults.

It's not use in normal condition.

3.5 Setup after part replacement

The following describes the adjustments necessary after part replacement:

Replaced part	Adjustment
LED head	Not necessary.
Drum cartridge (yellow, magenta, cyan or black)	Not necessary.
Fuser unit	Not necessary.
Belt unit	Not necessary.
CU/ PU board (6CU)	Copying information stored in EEPROM, which requires utility software.
Scanner board (6SU)	After replaced, adjust the clock.
Panel board (TP1) , LCD	After replaced, to execute "Admin Menu"-"Panel Calibration".
HDD	After replaced, to need the HDD Format and install all language files. When install the language files, to need FW Update.

3.5.1 Notes on CU/ PU board replacement

1. When the EEPROM on a board to be removed can be accessed (when SERVICE CALL 104 (Engine EEPROM Error), or 40 (EEPROM Error) is not displayed):

   (1) Using the board replacement function of Maintenance Utility (Refer to Maintenance Utility Operating Manual.), take out the information of the EEPROM on PU and Information of the EEPROM settings on CU from the board to be removed, and temporarily store it onto an HDD of the computer.

   (2) Using the board replacement function of Maintenance Utility (Refer to Maintenance Utility Operating Manual.), copy the information of the EEPROM on PU stored in HDD of the computer and the information of EEPROM settings on CU onto the EEPROM of a board to be newly installed.

   (3) Even when either information of EEPROM on PU or information of the EEPROM settings on CU is taken out, using the board replacement function of Maintenance Utility (Refer to Maintenance Utility Operating Manual.), copy either information of EEPROM on PU or information of the EEPROM settings on CU which can be stored in the HDD of the computer onto EEPROM of a board to be newly installed.

   Information that cannot be taken out is separately set up in the same function.

   When the information of EEPROM on PU cannot be taken out, make a setting of the serial number on PU (Refer to Maintenance Utility Operating Manual.) and a setting of switching to the Shipping mode (Refer to Maintenance Utility Operating Manual.) on the setup screen.

   When the information of EEPROM settings on CU cannot be taken out, make a setting of the information about a serial number on CU (Refer to Maintenance Utility Operating Manual.) on the setup screen.

Note! When taking out or writing information from/into EEPROM by using Maintenance Utility, use the procedure shown below to place the printer to the Forced ONLINE mode before accessing the EEPROM. An error message is displayed even in the forced ONLINE mode when the printer has an error.

i. When turning on the printer, press and hold down the [1] Switch and [>] Switch in combination until all the function key LEDs are tuned off after being turned on.

ii. When the printer operates properly, the operator panel shows “Ready to Copy”(when the copy is the standby mode).However, when the printer has an error, it indicates an error, but the printer is internally online, being ready to communicate.

2. When the EEPROM on a board to be removed cannot be accessed:

   When SERVICE CALL 104 (Engine EEPROM Error), or 40 (EEPROM Error) is displayed, or data cannot be read from the EEPROM, after replacing the board to a new one, follow the following procedure to perform operation by using Maintenance Utility:

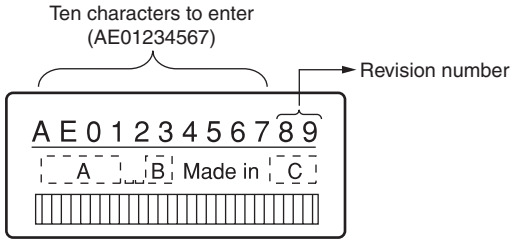
   (1) Serial number setting (Refer to Maintenance Utility Operating Manual.)

   A SAP serial number is assigned to the printer. The number is placed at the top of the serial number label of the printer, consisting of total twelve characters -- two characters that indicates a production place, two characters that indicates a month and year, six characters that indicates a manufacture number (sequence number) and two characters that indicates revision number.

   - For the printer serial number, “PU serial number2 should be selected, and for the output mode, “Display the serial number only” should be selected.
   - The PU serial number is ten characters from the SAP serial number. The rest two characters are the revision number.
   - The PU serial number is set in the Serial number setting window described in the Maintenance Utility operation manual.

- To assign a PU serial number to the printer, in the PU serial number setting window, enter ten characters. As shown in the following serial number label example, the ten characters are the printer's the SAP serial number excluding the revision number.

Serial number label example



- The PU serial number is shown at Printer Serial Number in the header of the printer's configuration report (a Menu Map) output from the printer. After the PU serial number is changed, it can be checked by printing the report from the printer.

(2) Switching to Shipping mode

When the CU/PU control board is replaced with a new one, the printer is placed in the Factory mode. Switch the printer to the Shipping mode.

- To switch, use the Factory/Shipping mode setting window described in the Maintenance Utility operation manual.

Note! Replacing the EEPROM (the PU control board) with a new one clears life information about consumables, including the belt, and toner. Note that, until the consumables are replaced, this makes differences between their displayed consumed and consumed lives. Such life information cleared is as shown below. Upon replacement of the consumables, the information (counts) except the total number of printed sheets are cleared, and differences between the counts and consumed lives of the consumables are cleared.

Option	Description	Count description
FUSER UNIT	A fuser life count.	The number of prints made from the first-time installation of a fuser unit until present *1
Belt Unit	A belt unit life count	The number of prints made to date from the first-time installation of a belt unit until present *2
Total number of printed sheets	A printer life count.	The total number of printed sheets from the beginning of use of the printer*3
Prints Black Prints Yellow Prints Magenta Prints Cyan	The total number of printed sheets in each color	The total number of printed sheets in each color from the beginning of use of the printer *3

*1 Based on the paper length of Legal 13, if the sheet is the legal 13 length or less, it is regarded as one count, and if the sheet length exceeds the Legal 13 length, the number of counts is determined by how many times as large is the Legal 13 length as that of the sheet. (The decimal is rounded out.)

*2 One third of the number of belt turns in A4 (A4 portrait) three-pages-per-job printing is regarded as one count.

*3 Tow counts apply to duplex print.

3.5.2 Notes on HDD replacement

1. When the HDD to be removed, after install the HDD and execute the [Password]-[System Maintenance]-[Format HDD] in "3.1 Maintenance Menu".
2. Update the firmware, for using the [FW Update Tool] . Install the all language files to HDD, when update the firmware.

3.6 Manual density adjustment setting

MC853/MC873/ES8453/ES8473 is shipped with the auto density adjustment mode enabled. When the mode is disabled by a user, the printer may print density out of adjustment while being used. Manually perform density adjustment setting when the printer prints an improper density.

Note! The setting must be performed with the printer in a static state. Do not perform it while the printer warms up.

(1) Enter the Admin Setup menu.

(2) Select and execute [Print Setup]-[Color Menu]-[Adjust Density] in the menu.

Auto density adjustment starts, the operator panel display providing a message stating that density is being adjusted.

4. 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 45850101TL and the RSPL 45850101TR.

4.1 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 MFP, 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.

⚠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.

(b) Be sure to use the following procedure to reconnect the MFP:

① Connect the AC cord and the interface cable to the MFP.

② Turn on the MFP.

③ Turn on the MFP, then the LED indicator lights up.

(2) Do not disassemble the MFP so long as it operates properly.

(3) Minimize disassembly. Do not detach the parts not shown in the part replacement procedure.

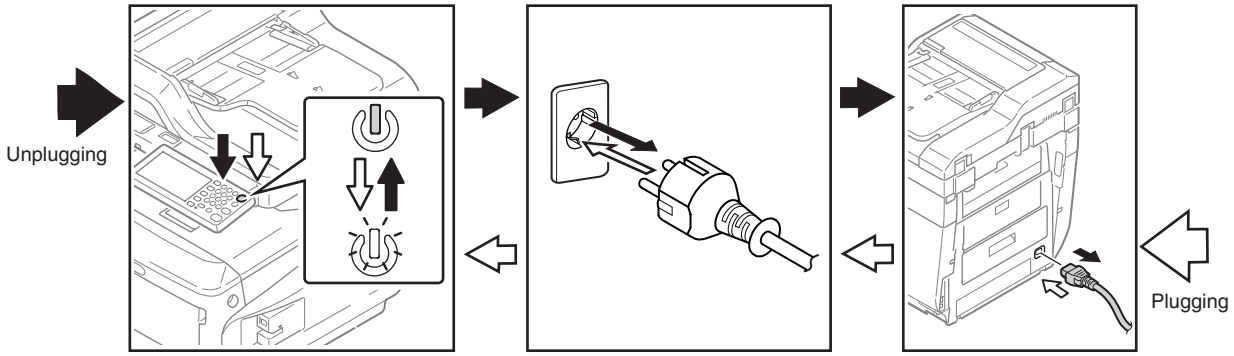
(4) Use the replacement tools specified.

(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.

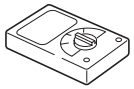
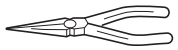
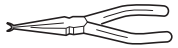
(8) Do not place printed-circuit boards (PCBs) directly on the MFP or a floor.



Maintenance Tools:

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

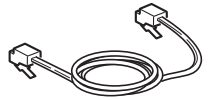
Table 4-1-1: Maintenance Tools

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		
5		Pliers	1		
6		Handy vacuum cleaner (toner vacuum)	1		See note.
7		E-ring pliers	1	E-shaped ring removal	

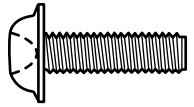
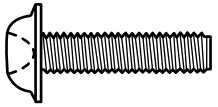
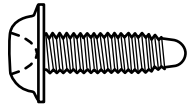
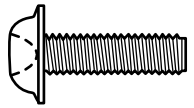
Note! Use a toner vacuum. Using a general-purpose vacuum may cause toner to catch fire.

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:

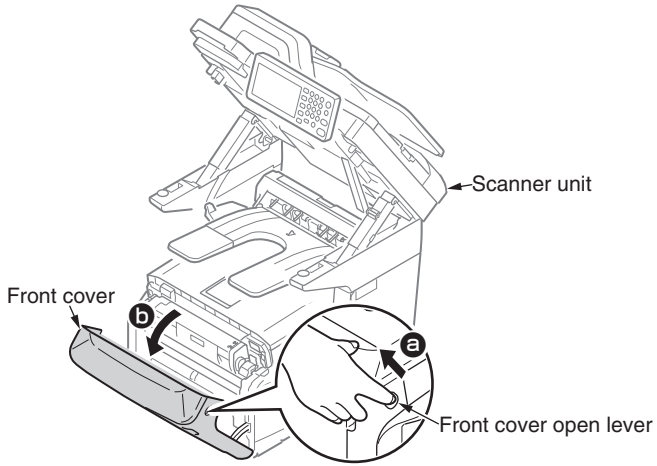
Shape	Designation
	Screw (silver) (6mm)
	Screw (silver/8mm)
	Round-head screw (black)
	Screw (black)

4.2 Part replacement procedure

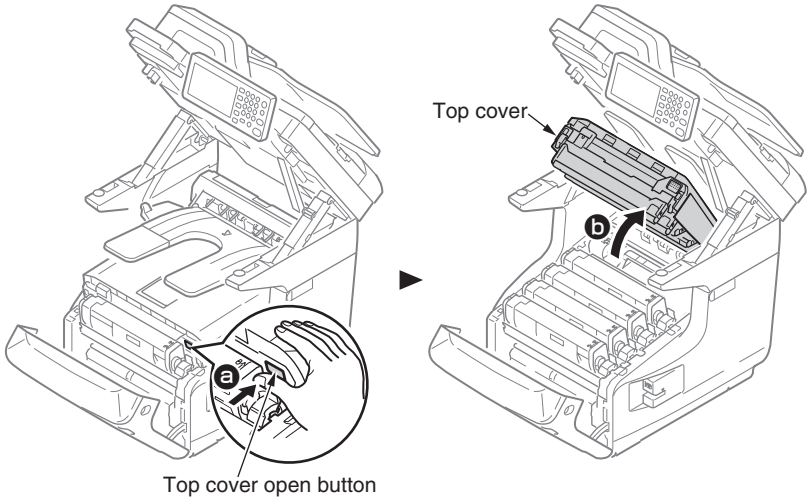
This section describes the procedure for replacing the parts and assemblies shown in the disassembly diagram.

4.2.1 Belt unit

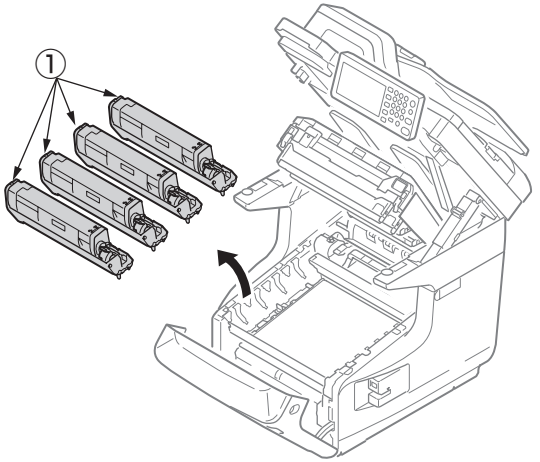
(1) Open the scanner unit and pull the front cover open lever to open the front cover forward.

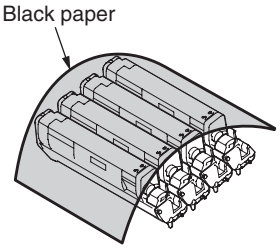


(2) Press the top cover open button and open the top cover.



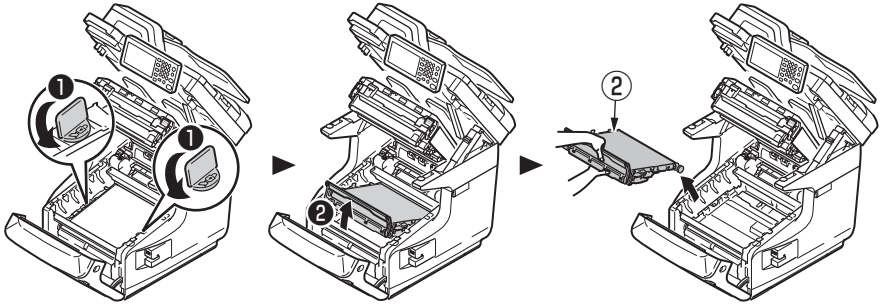
(3) Remove the four image drums ① .





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

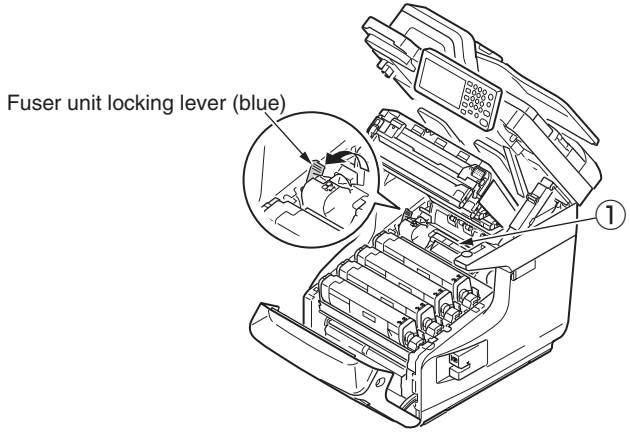
(4) Turn the two locks (blue) of the belt unit ② in the direction of the arrow, and remove the belt unit ② by holding the lever (blue).

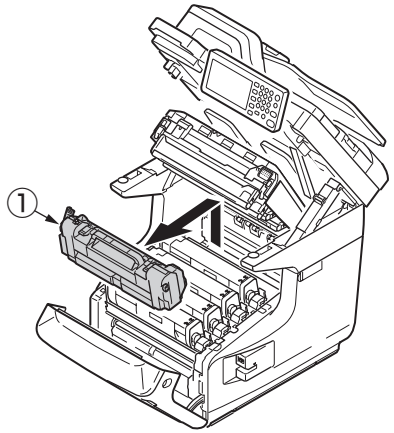


4.2.2 Fuser unit

(1) Open the front cover and the top cover. (Refer to section 4.2.1)

(2) Pull the fuser unit locking lever (blue) in the direction of the arrow and detach the fuser unit ① .





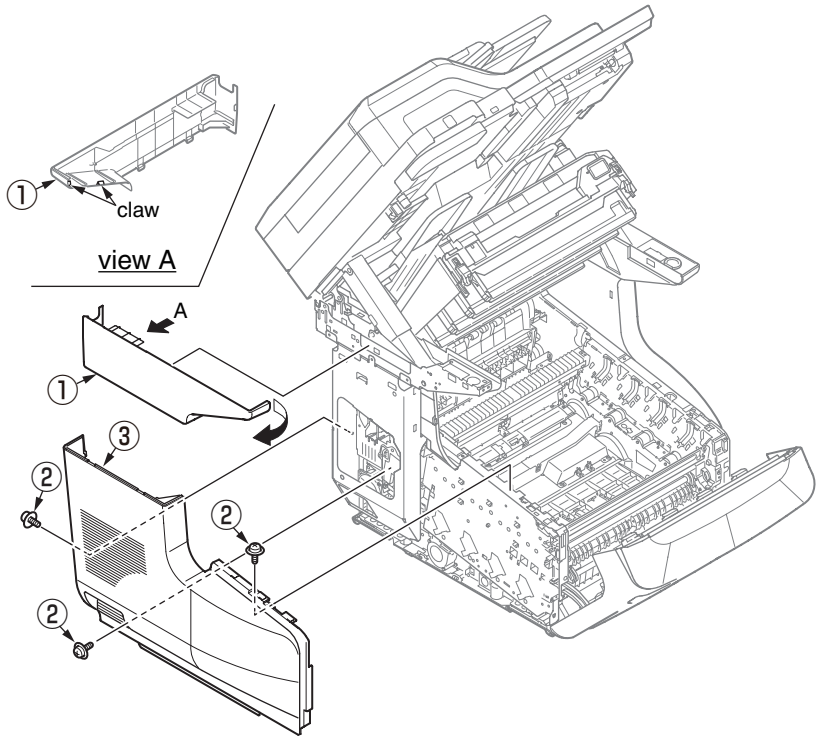
4.2.3 Cover side-L-upper / Cover side-L

(1) Remove the image drum unit/belt unit. (Refer to section 4.2.1)

(2) Detach the fuser unit. (Refer to section 4.2.2)

(3) Unlatch the two claws and remove the Cover side-L-upper ① .

(4) Remove the three screws (silver) ② and detach the cover side-L ③ .



4.2.4 Cover side-R-upper / Cover side-R

(1) Remove the image drum unit/belt unit. (Refer to section 4.2.1)

(2) Detach the fuser unit. (Refer to section 4.2.2)

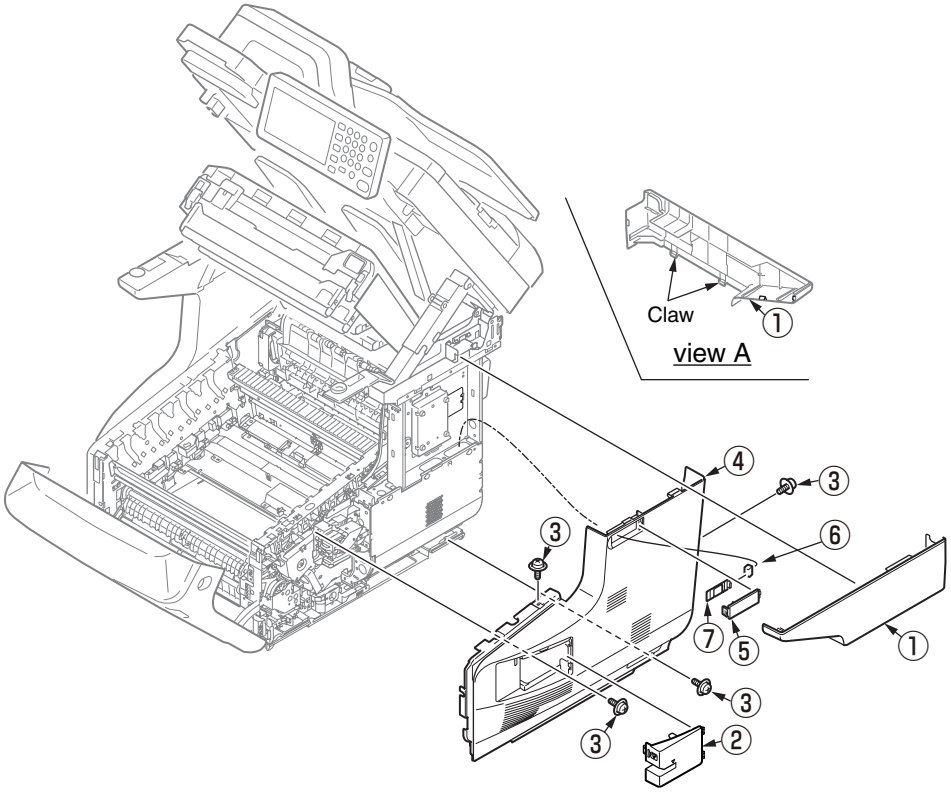
(3) Unlatch the two claws and remove the cover side-R-upper ① .

(4) Open and remove the Cover-stapler ② .

(5) Remove the four screws (silver) ③ and detach the cover side-R ④ .

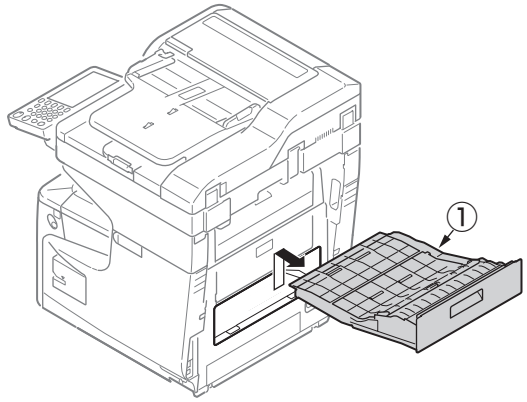
(6) Open and remove the Cover-WLAN ⑤ from the cover side-R ④ .

(7) Disconnect the WLAN-cable ⑥ from the board ⑦ to detach the board ⑦ .



4.2.5 Rear cover Assy.

(1) Slide out the Duplex unit ① from the Main body of MFP.

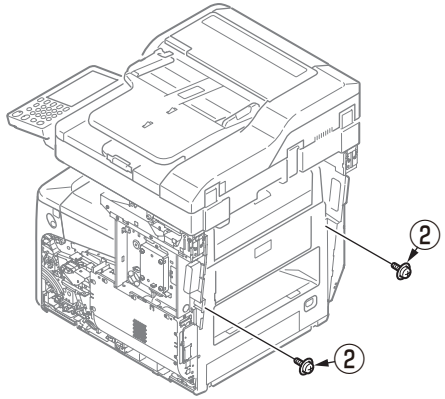


(2) Remove the belt unit. (Refer to section 4.2.1)

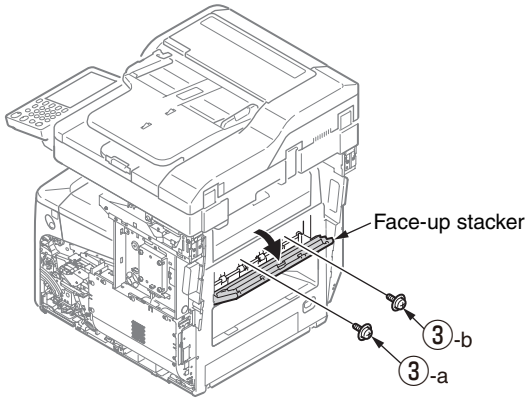
(3) Detach the cover side-L. (Refer to section 4.2.3)

(4) Detach the cover side-R. (Refer to section 4.2.4)

(5) Remove the two screws (silver) ② .



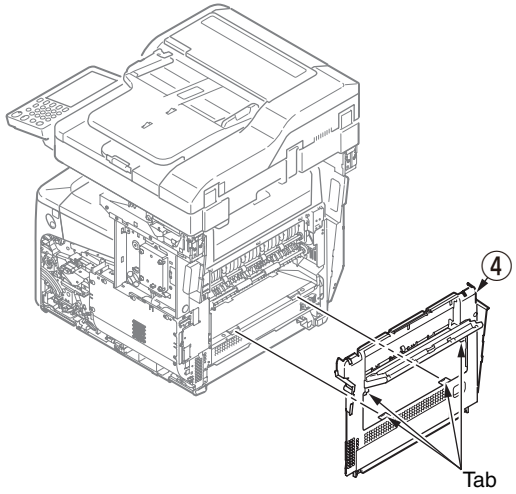
(6) Open the face-up stacker cover and remove the two screws (black) ③ .



Notes on assembling:

When assembling the Face-up stacker, tight the screws ③ in order of ③ -a to ③ -b.

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



4.2.6 Duplex Unit

(1) Slide out the Duplex unit from the Main body of MFP. (Refer to section 4.2.5)

(2) Turn over the Duplex unit.

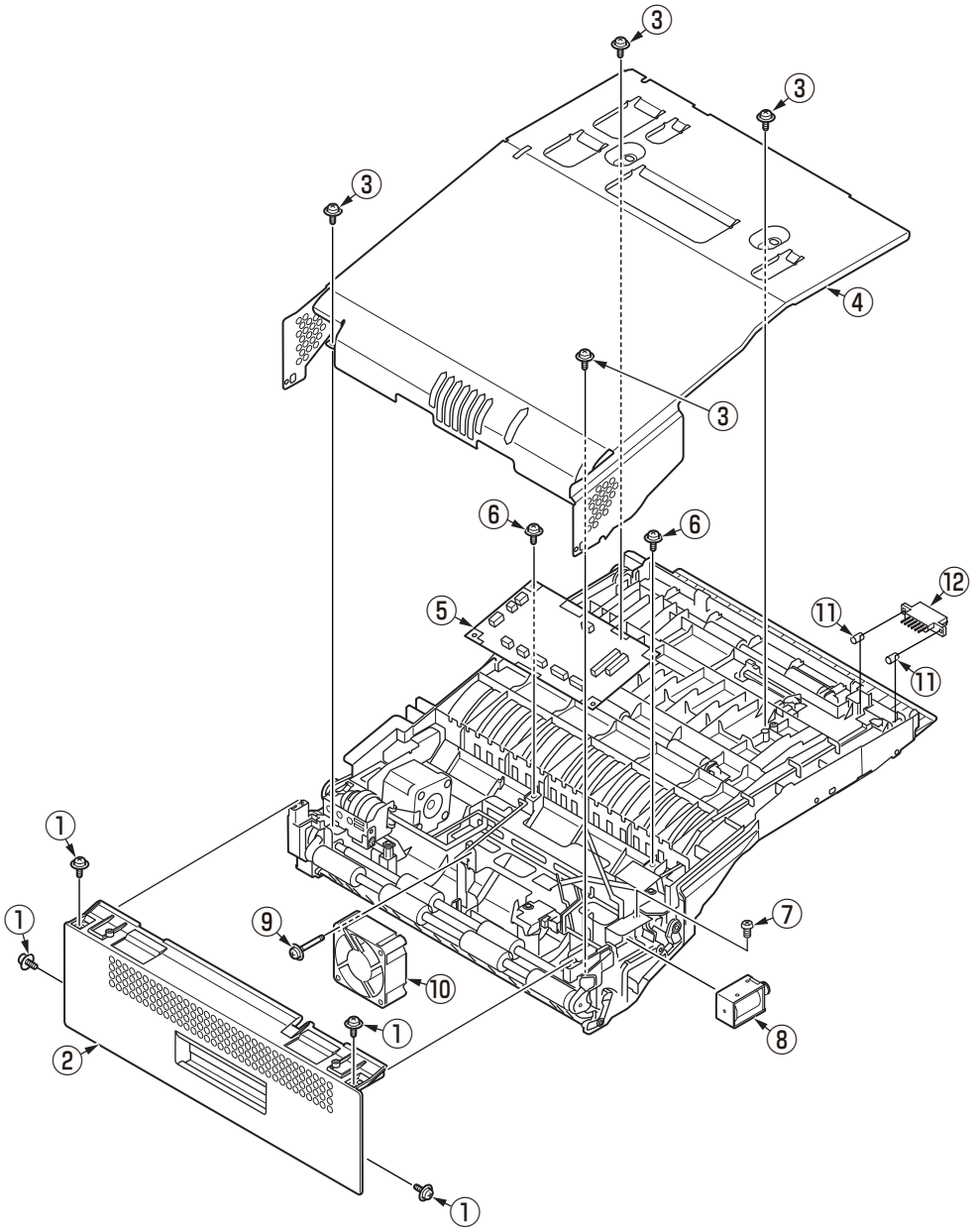
(3) Remove four screws(black) ① to detach the cover ② , and remove four screws(black) ③ to detach the plate ④ .

(4) Disconnect all connectors from the board ⑤ , and remove two screws(silver) ⑥ to detach the board ⑤ .

(5) Remove a screw(silver) ⑦ to detach the solenoid ⑧ .

(6) Remove a screw(silver) ⑨ to detach the FAN ⑩ .

(7) Remove two screws(silver) ⑪ to detach the connector ⑪ .



4.2.7 LED Assy. / Spring-Head

(1) Remove the image drum unit. (Refer to section 4.2.1)

(2) 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

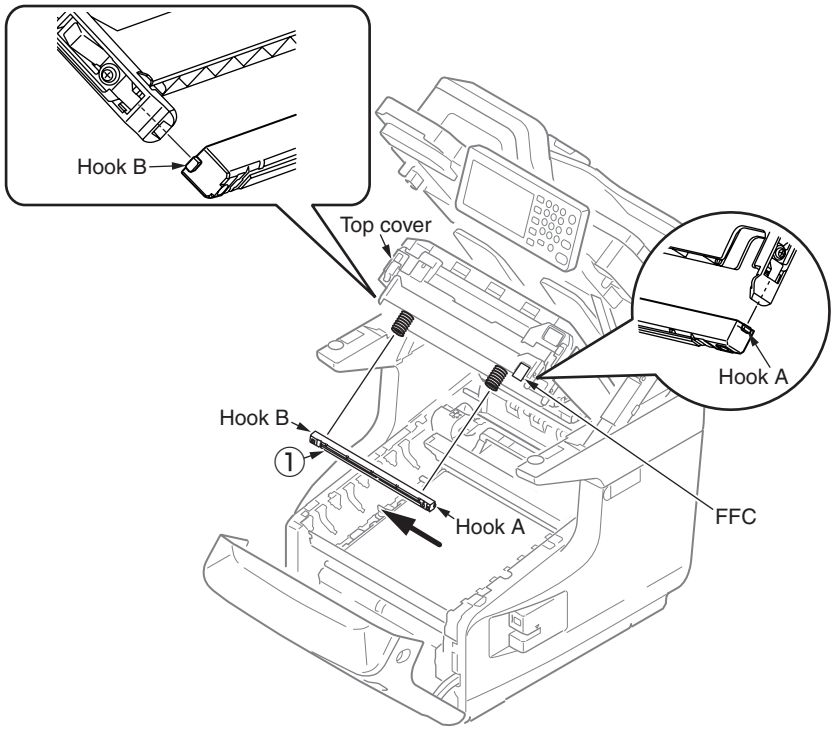
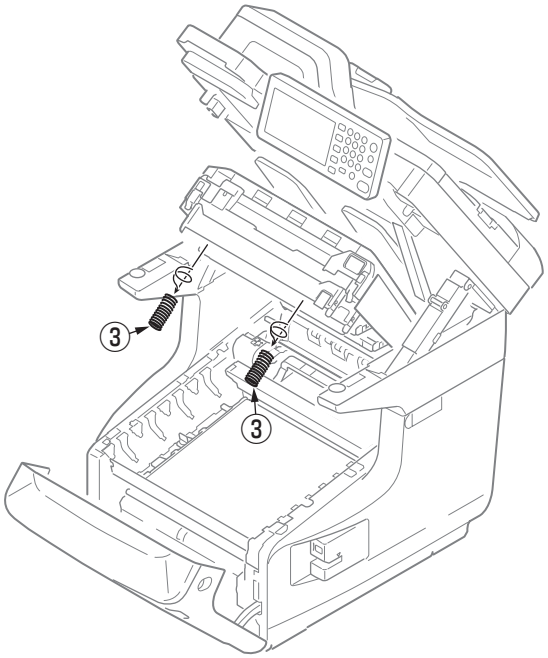


Figure (1)

(3) Remove the two Spring-Heads ③ with twisting to right turn.



Notes on assembling:

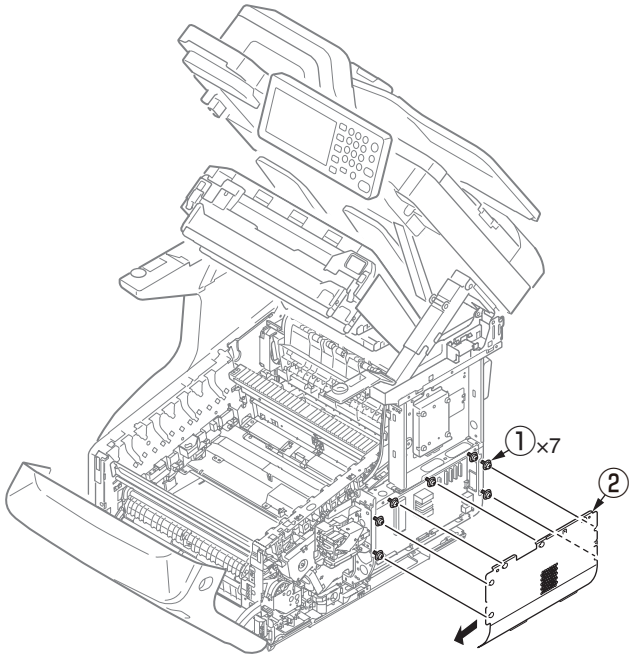
When assembling the spring ③ , puress it to post with twisting to right turn.

4.2.8 Main board (board Assy-6CU) / Board memory

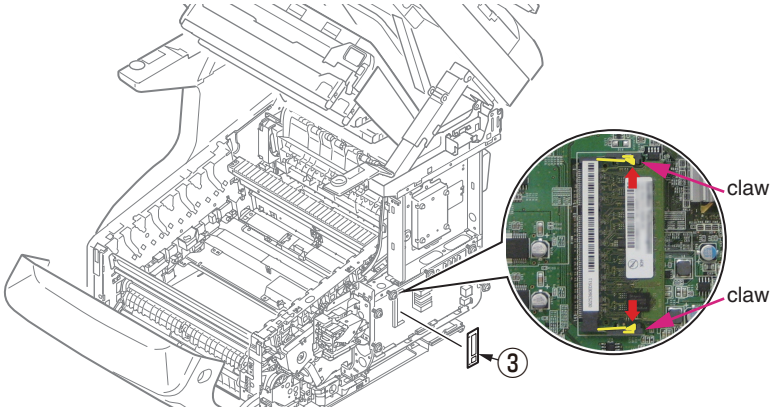
(1) Remove the image drum unit/belt unit. (Refer to section 4.2.1)

(2) Detach the cover side-R. (Refer to section 4.2.4)

(3) Loosen the seven screws (silver) ① and remove the plate shield ② .

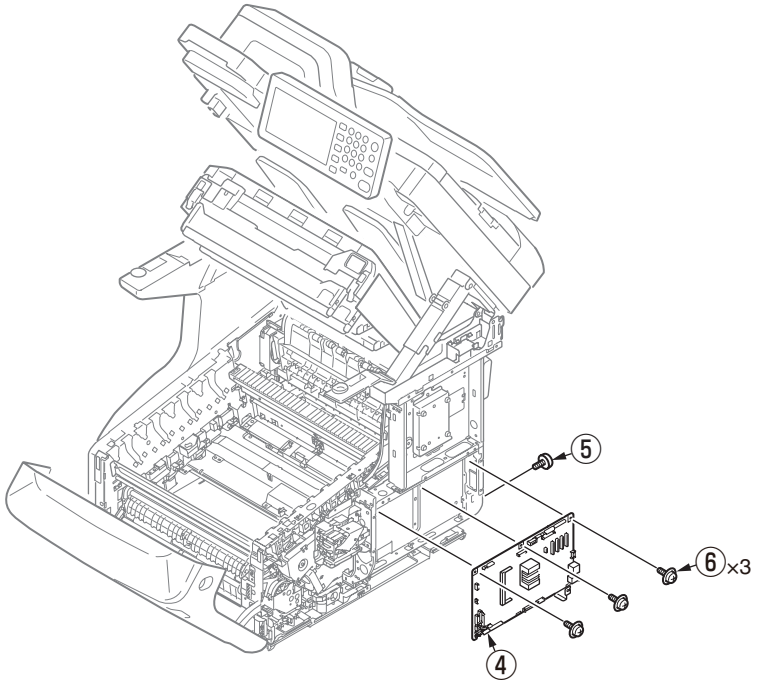


(4) Open the metal claws and remove the Board memory ③ .



(5) Disconnect each connector and FFC cable from the Main board ④ .

(6) Remove the screw (silver) ⑤ , three screws (silver) ⑥ , and Main board ④ .



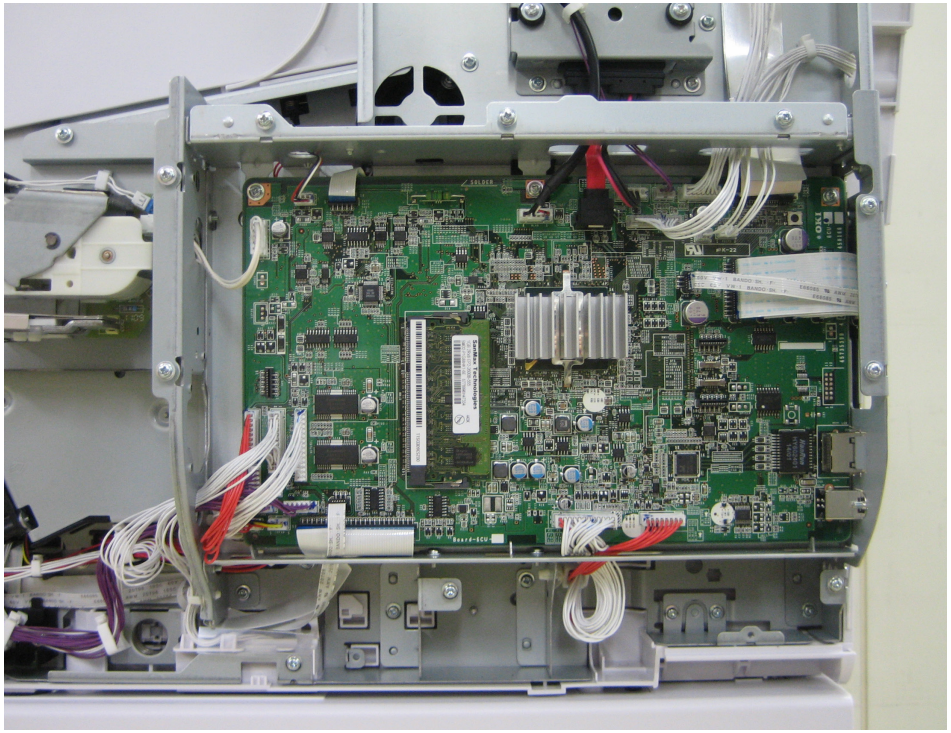


Figure 4-2-7-1 Main Board Assy., Cable Route Diagram

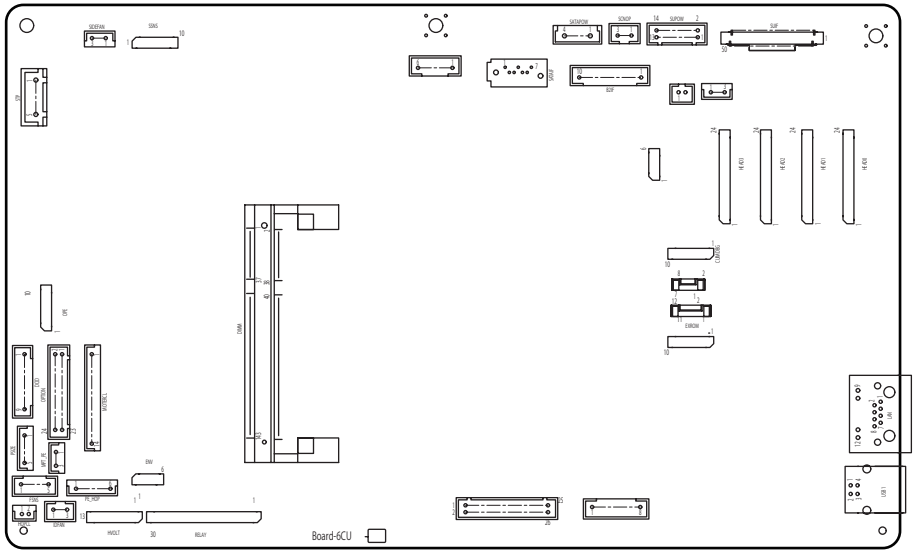


Figure 4-2-7-2 Main Board Assy., Outline Drawing

4.2.9 HDD Assy / Plate Assy.-Sensor / Stapler Unit

(1) Remove the plate shield (Refer to section 4.2.8).

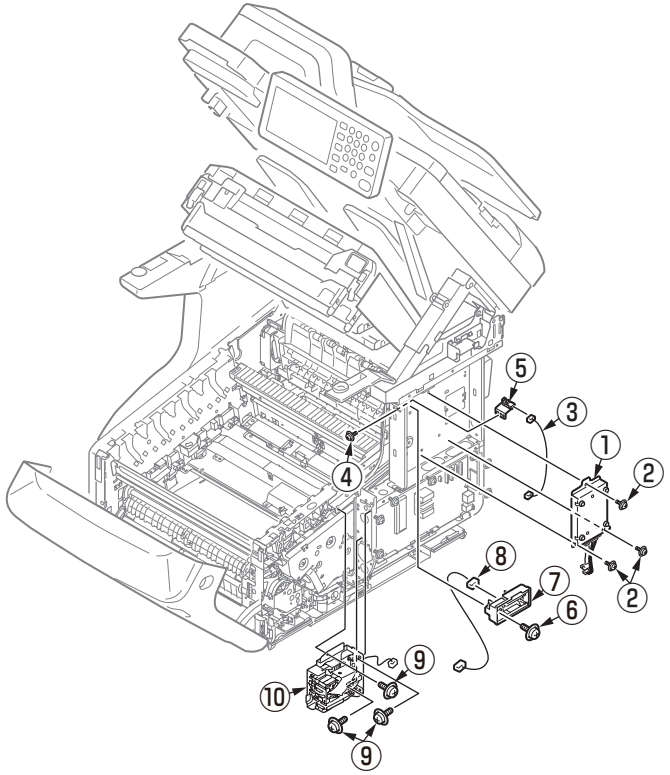
(2) Disconnect the cable of the HDD Assy ① from the Main board.

(3) Remove the three screws(silver) ② , and up slightly to detach the HDD Assy ① .

(4) Disconnect and remove the cord ③ , and remove a screw(silver) ④ to detach the Plate Assy.-Sensor ⑤ .

(5) Remove the screw (silver) ⑥ and detach the Holder-WLAN ⑦ with the WLAN-cable ⑧ .

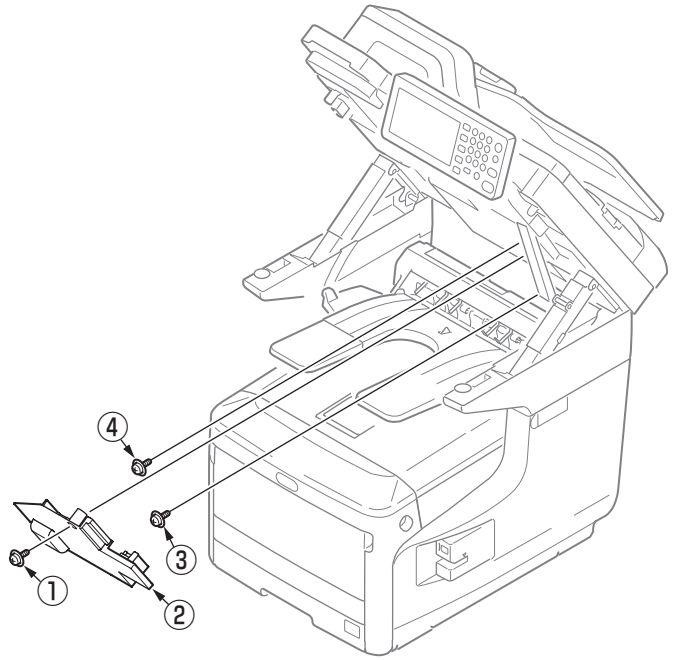
(6) Remove the three screws (silver) ⑨ and disconnect the cables from the Main board to detach the Stapler Unit ⑩ .



4.2.10 Scanner Unit / Cover-Hinge(L) / Cover-Hinge(R)

(1) Remove a screw (black) ① and detach the Cover-Bottom-Sub ② .

(2) Remove a screw (black) ③ , a screw (silver) ④ and disconnect the cable , FFC cable.

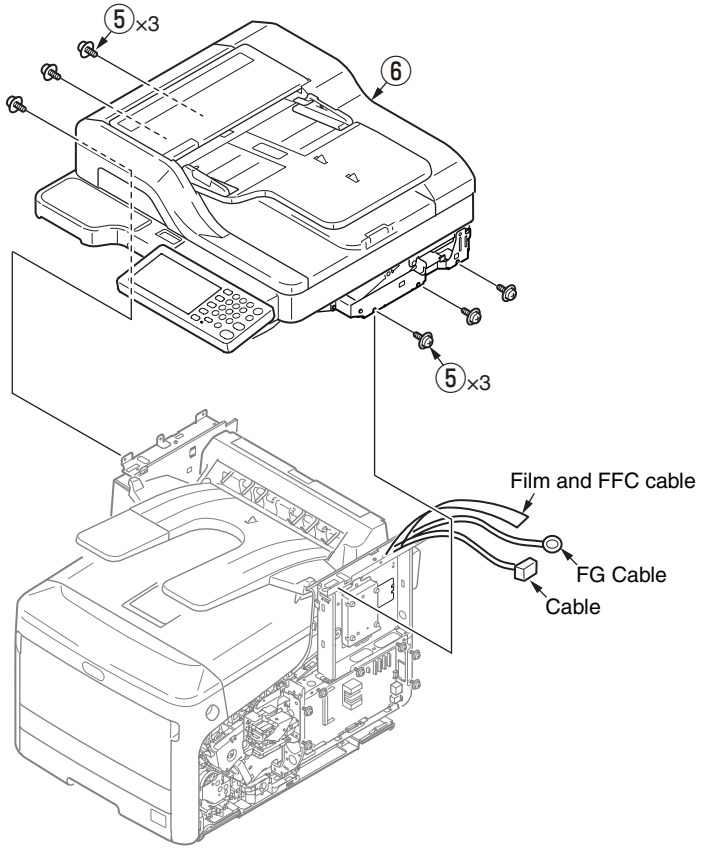


(3) Detach the plate shield. (Refer to section 4.2.8)

(4) Detach the Cover-side-L-upper. (Refer to section 4.2.3)

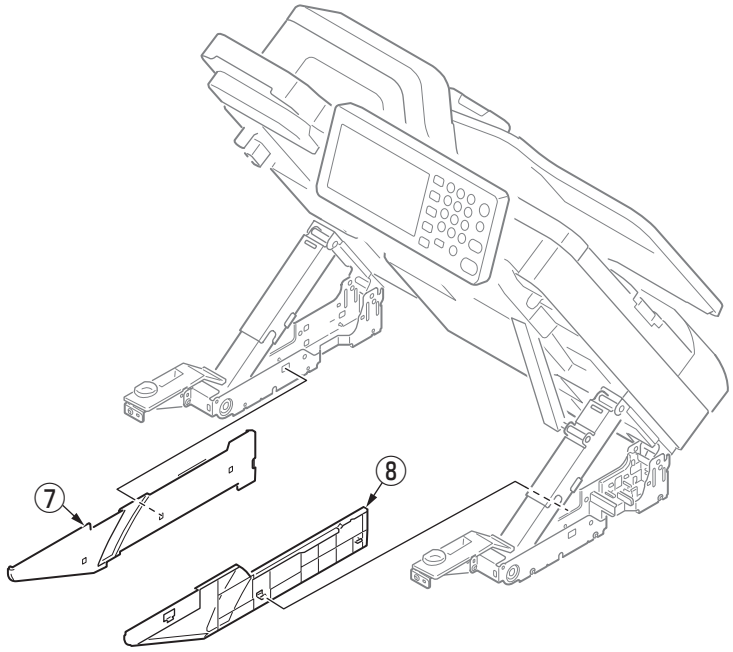
(5) Close the Front-cover and Cover-top.

(6) Remove the six screws (silver) ⑤ and remove the Scanner ⑥ .



(7) Slide the Cover-Hinge(L) ⑦ to forward of the machine and remove it.

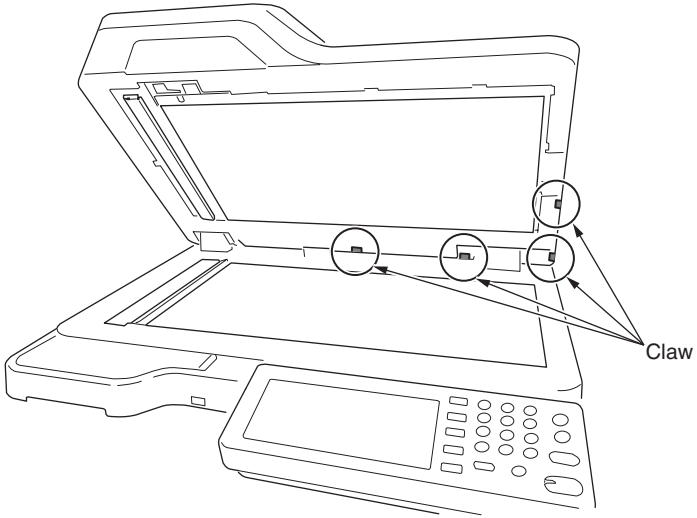
(8) Slide the Cover-Hinge(R) ⑧ to forward of the machine and remove it.



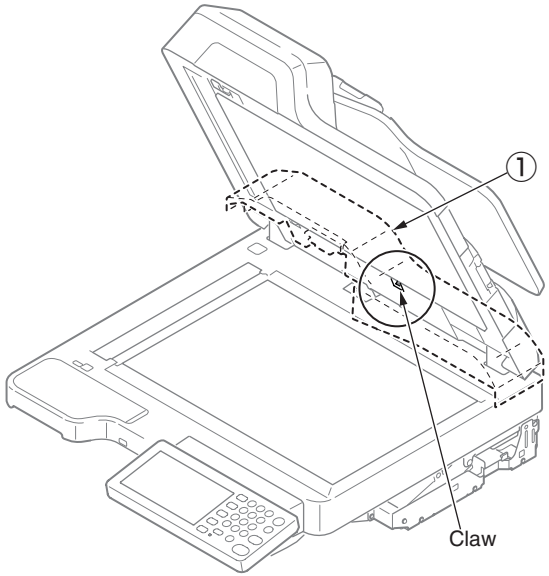
4.2.10.1 Tray-Assy-Document/Cover-ADF-R

(1) Open the ADF-Unit.

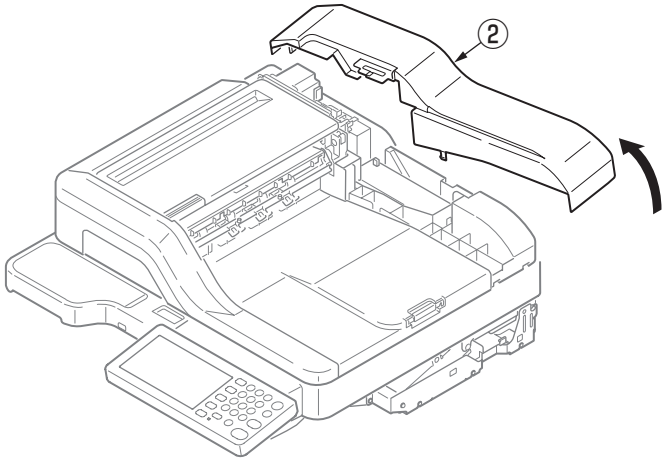
(2) Unlatch the four claws of cover-ADF-R ① .



(3) And push the claw of cover-ADF-R ① .



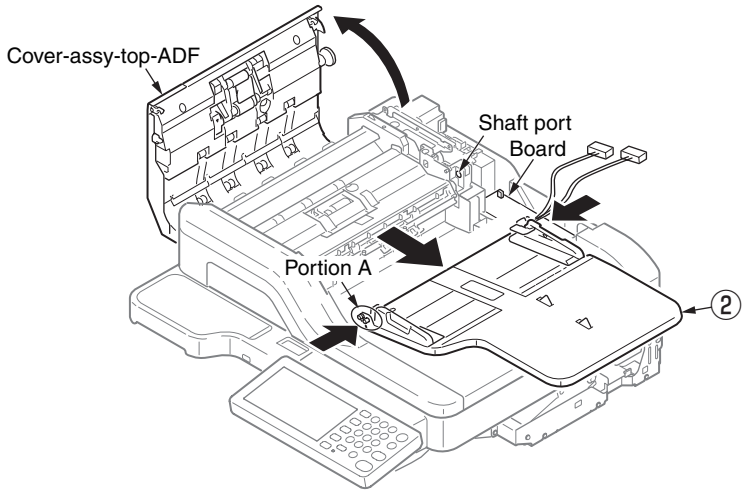
(4) Remove the cover-ADF-R ① in the direction of the arrow.



(5) Open the Cover-assy-top-ADF, and release the post of the portion A.

And, disconnect the cables of the Tray-Assy-Document ② from the Board.

Next, release the post of the opposite side of the portion A at the Tray-Assy-Document ② , and detach the Tray-Assy-Document ② with passing the cables through the shaft port.



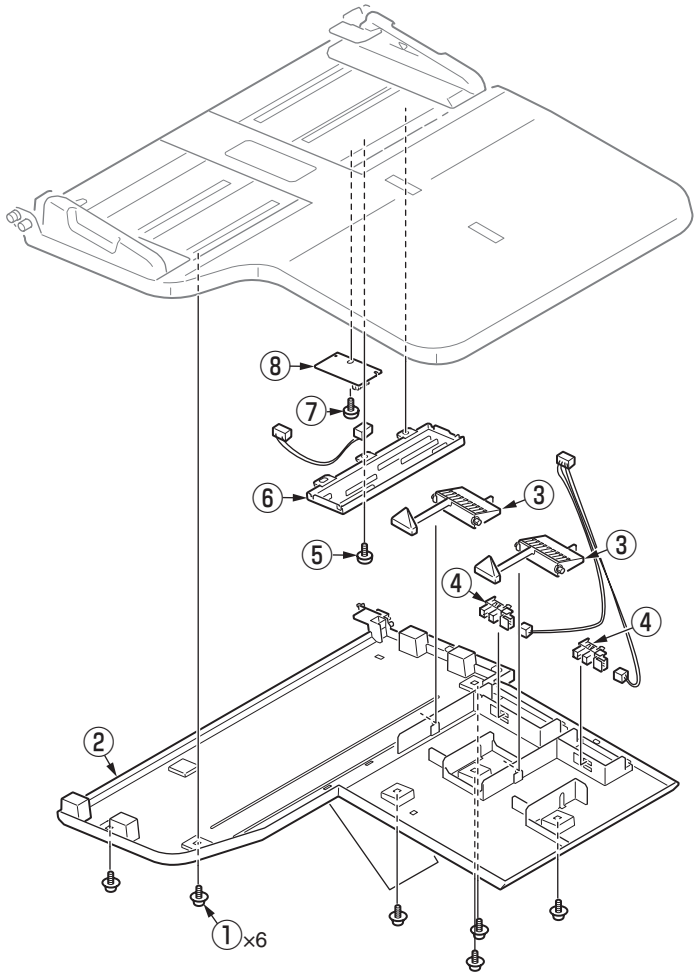
4.2.10.2 Tray-Assy-Document

(1) Remove the six screws (black, No:42932708) ① and Cover-Tray-document ② .

(2) Remove the Lever-Tray ③ and photo-sensor ④ .

(3) Remove a screw (silver, No:42933005) ⑤ and Plate-Detection(Tray) ⑥ .

(4) Remove a screw (silver, No:42933005) ⑦ and Board-tray ⑧ .



4.2.10.3Damper Assy-L/R

(1) Remove the scanner unit. (See to 4.2.10)

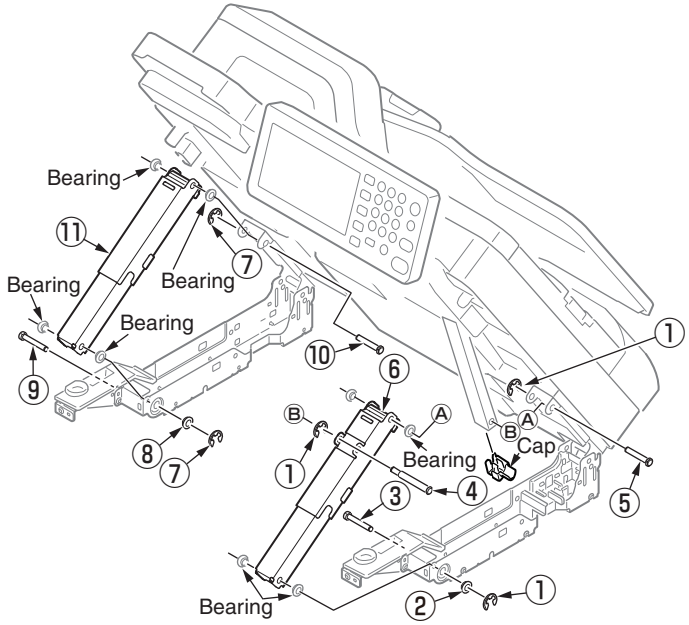
(2) Remove the three E-type retaining ring ① and bearing ② , and remove a Cap.

(3) Remove the shaft ③ , ④ , ⑤ and Damper Assy-R ⑥ .

(4) Remove the two E-type retaining ring ⑦ and bearing ⑧ .

(5) Remove the shaft ⑨ , ⑩ and Damper Assy-L ⑪ .

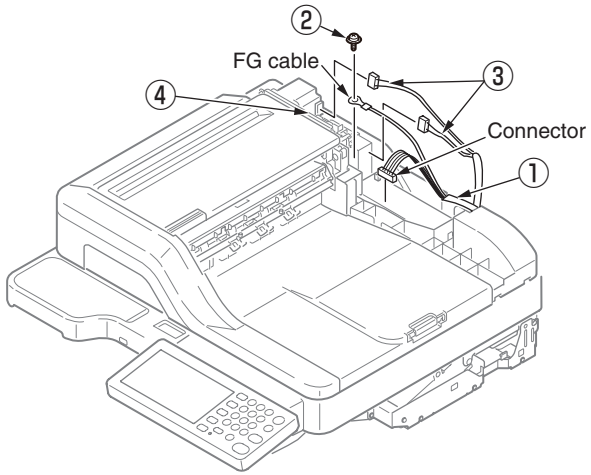
Note! When the shaft ③ , ⑤ , ⑨ , ⑩ would be removed from each the Damper Assy, note the any bearings not droppin. These bearings are arranged to the both side of Damper Assy at each shafts.



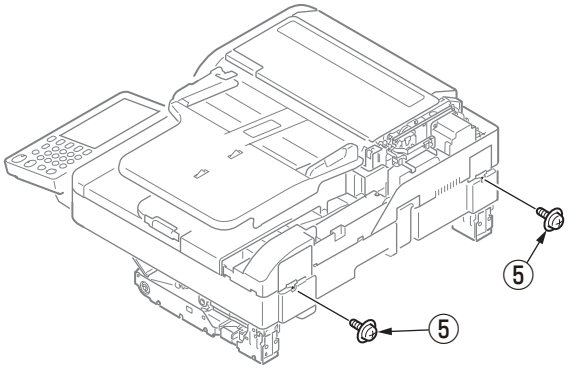
4.2.10.4 ADF-unit / CONN Cord / Film-Guard(L) / Film-Guard(R)

(1) Remove the cover-ADF-R. (See 4.2.10.1)

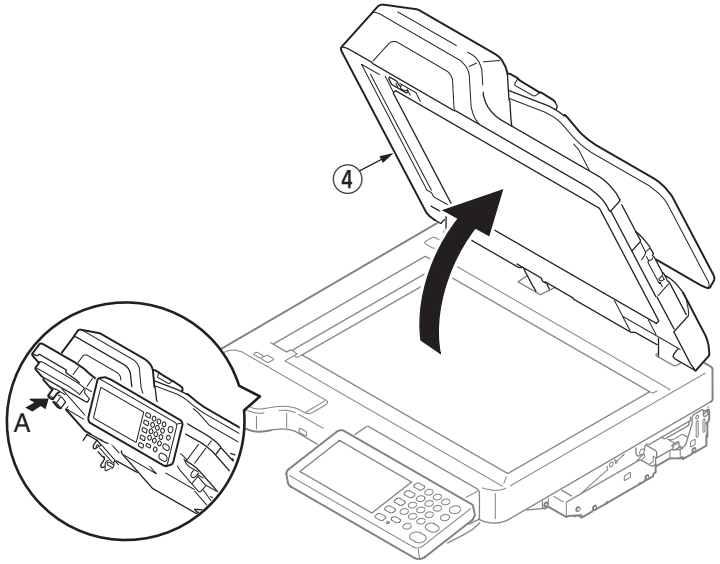
(2) Disconnect a connector of the CONN Cord ① from the ADF relation board(7RL), remove the screw (silver, No:42920406) ② and FG cable of the CONN Cord ① , and disconnect each cables ③ of two moters, and detach those cables from the groove of the ADF-unit ④ .



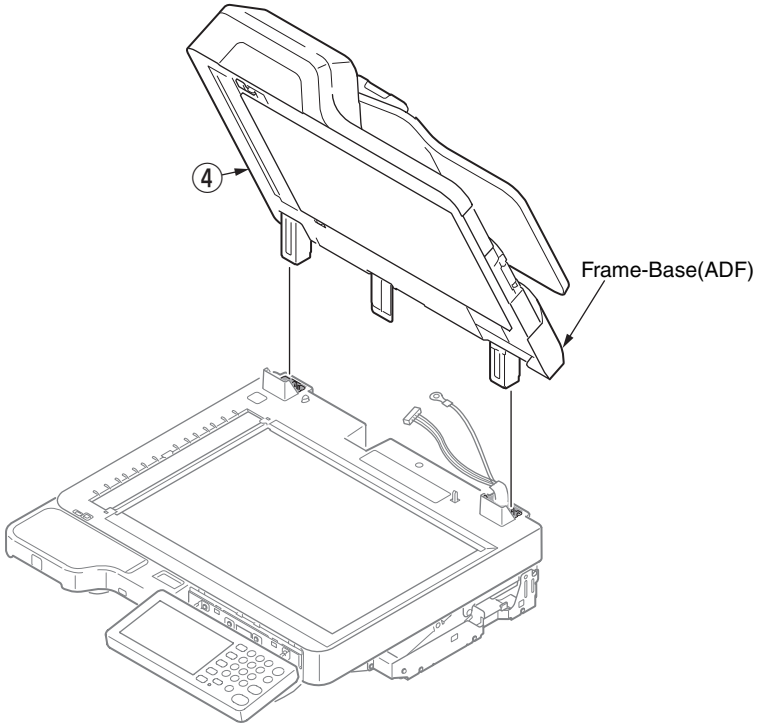
(3) Remove two screws (black: 42932710) ⑤ .



(4) Open the ADF-unit ④ while pushing the portion A.

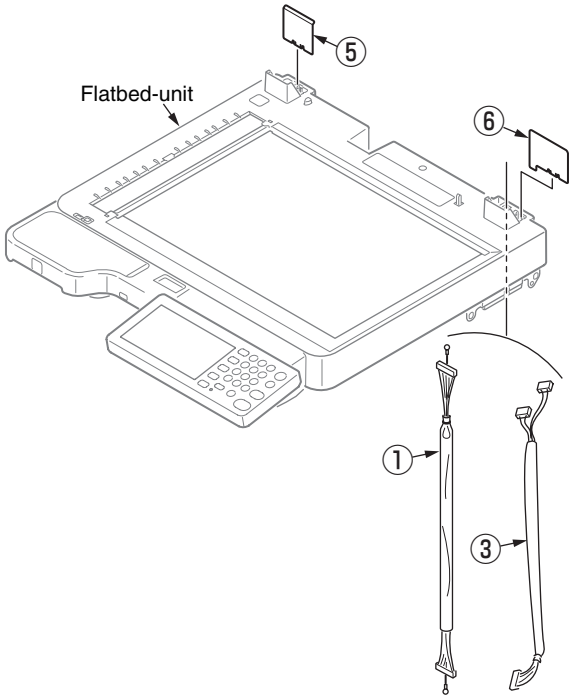


(5) Remove the ADF-unit ④ with pull the cables to out of the Frame-Base(ADF) and Hinge.



(6) Remove the CONN Cord ① and ③ from the Flatbed-unit.

(7) Remove the Film-Guard(L) ⑤ and the Film-Guard(R) ⑥ from the Flatbed-unit.

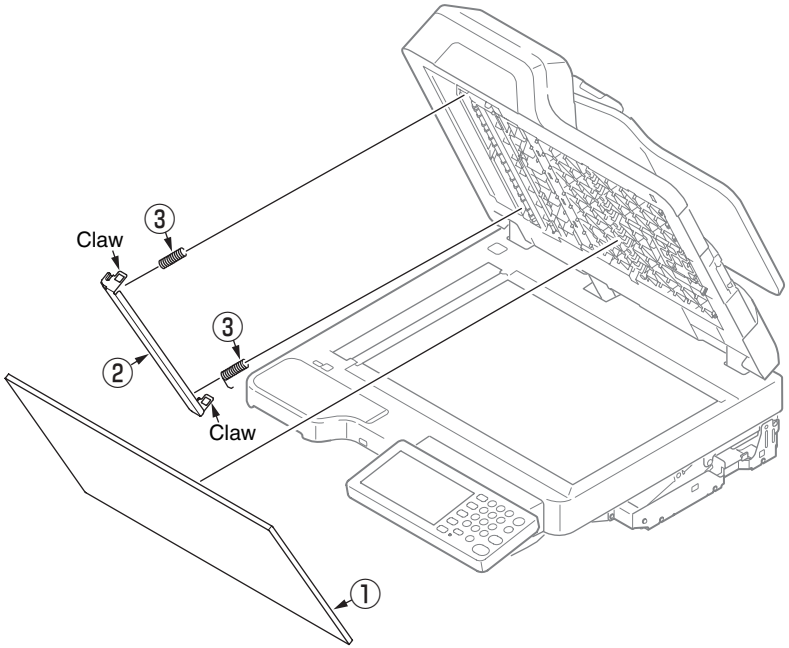


4.2.10.5 Sheet-document/Paper-weight-Assy/Spring-PW-ADF

(1) Open the ADF-unit.

(2) Remove the sheet-document ① .

(3) Remove two claws to remove the paper-weight-assy ② and two spring-PW-ADF ③.



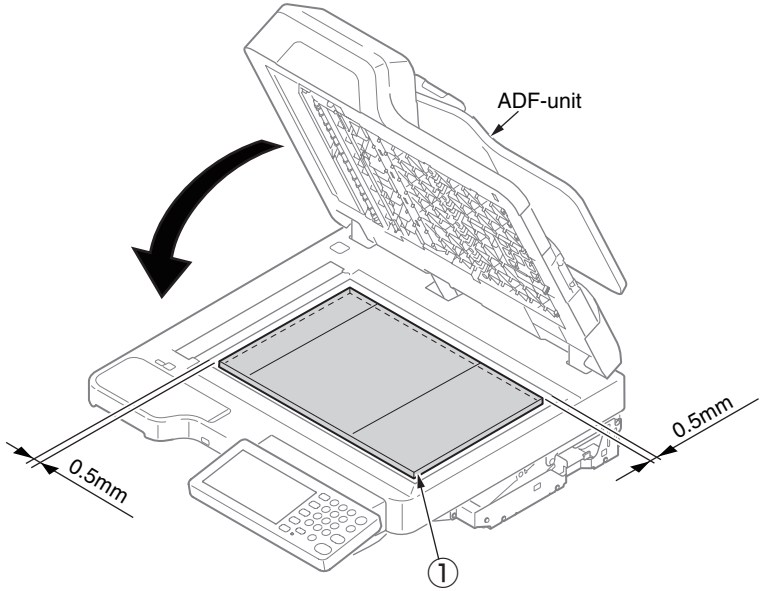
<Attention of fixing the sheet-document>

(1) Degrease the affix area of ADF-unit.

(2) Remove the release paper.

(3) Set the sheet-document ① (see the figure below).

(4) Close the ADF-unit.

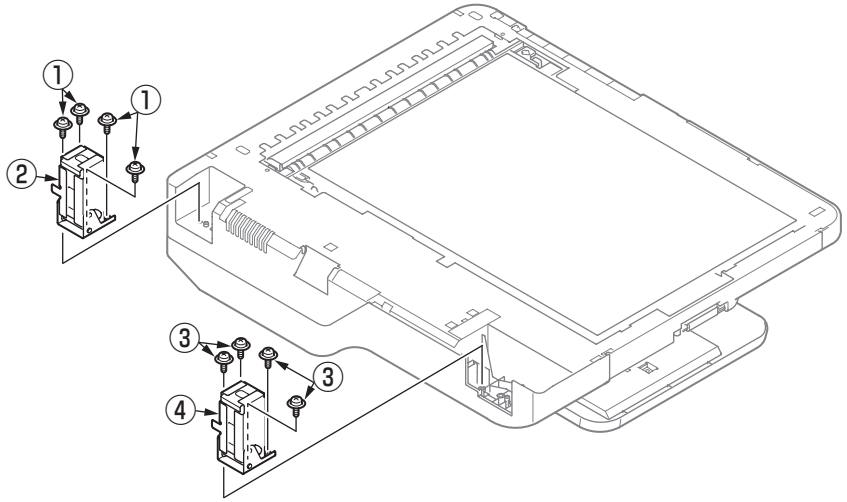


4.2.10.6Hinge-Assy-L / Hinge-Assy-R

(1) Remove the ADF-unit and turn over it. (See the section 4.2.10.4)

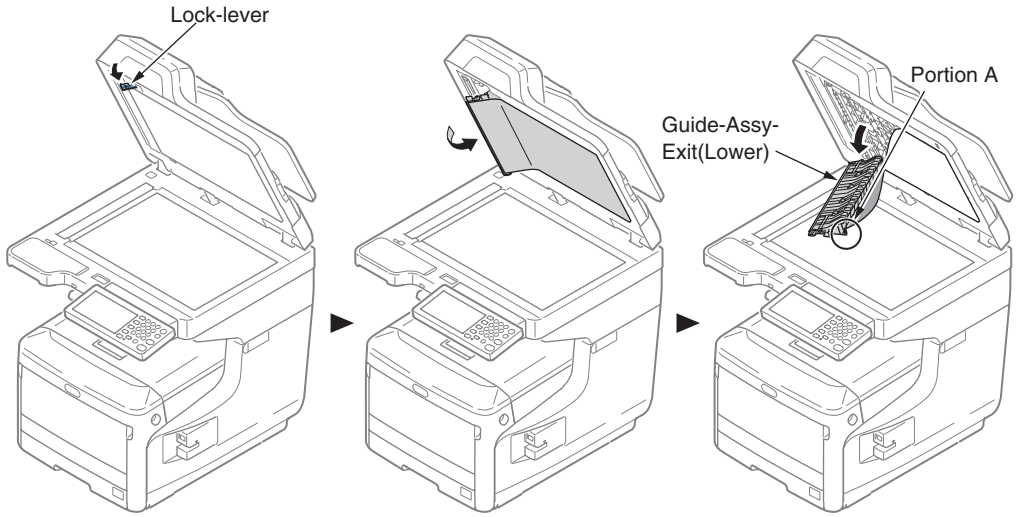
(2) Remove the three screws (black, No:42932708) ① and remove the hinge-Assy-L ② .

(3) Remove the three screws (black, No:42932708) ③ and remove the hinge-Assy-R ④.



4.2.10.7 ADF-Assy

(1) Open the ADF-unit, and open the Guide-Assy-Exit(Lower) by to rotate the lock lever. Subsequently, bent the post of the Guide-Assy-Exit(Lower) at portion A, and release the Guide-Assy-Exit(Lower).

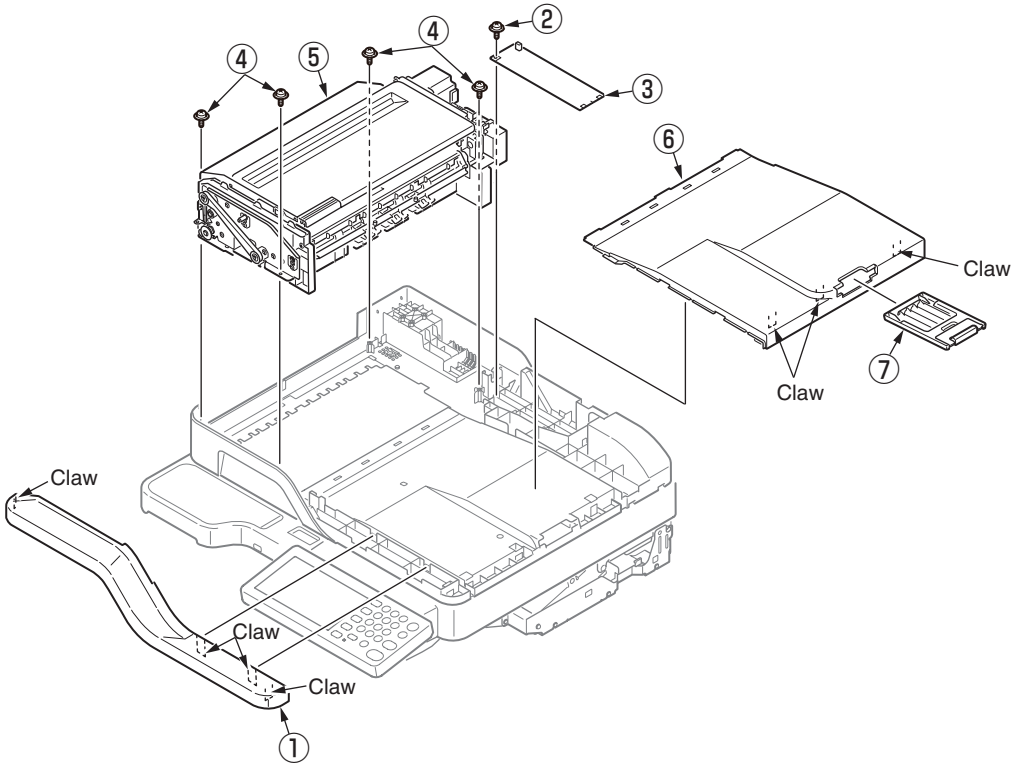


(2) Remove the four claws and remove the Cover-front(Upper) ① .

(3) Remove a screw (silver, No:42920406) ② and remove the ADF board ③ .

(4) Remove the four screws (black, No:42932706) ④ and remove the ADF-assy ⑤ .

(5) Remove the three claws and Remove the Cover-stacker(ADF) ⑥ and remove the Guide-assy-exit(Sub) ⑦ .



4.2.10.8 Guide-Retard / Cover-Assy-Top-ADF / Motor / CONN Coard / Clutch / Photo-sensor

(1) Remove all cables from Guide-Cable-ADF ① and remove it.

(2) Remove two screws(silver) ② and remove the plate-clutch ③ .

(3) Remove the Cluch Assy.

(4) Remove a E-type retaining ring ④ and remove a bearing ⑤ and clutch ⑥ from the Cluch Assy.

(5) Remove a E-type retaining ring ⑦ and remove a clutch ⑧ .

(6) Remove the five screws (silver, No:42920406) ⑨ and remove the plate-motor ⑩ .

(7) Remove the four screws (silver, No:42920406) ⑪ and remove the two motors ⑫ .

(8) Remove the two photo-sensors ⑬ and each of connectors of the CONN coard ⑭ .

(9) Open the Cover-Assy-Top-ADF ⑮ . And, remove a screw (black: 42932710) ⑯ to detach Stopper-Arm(ADF). Next, Bend the portion A with bending the Cover-Top(ADF-Sub) which is assembled to left side of ⑮ to outside, and unlatch the post at the portion A of the Cover-Assy-Top-ADF ⑮ . Subsequently, unlatch the post of the other side of the portion A at the Cover-Assy-Top-ADF ⑮ , and remove the Cover-Assy-Top-ADF ⑮ with passing the cables though the shaft hole.

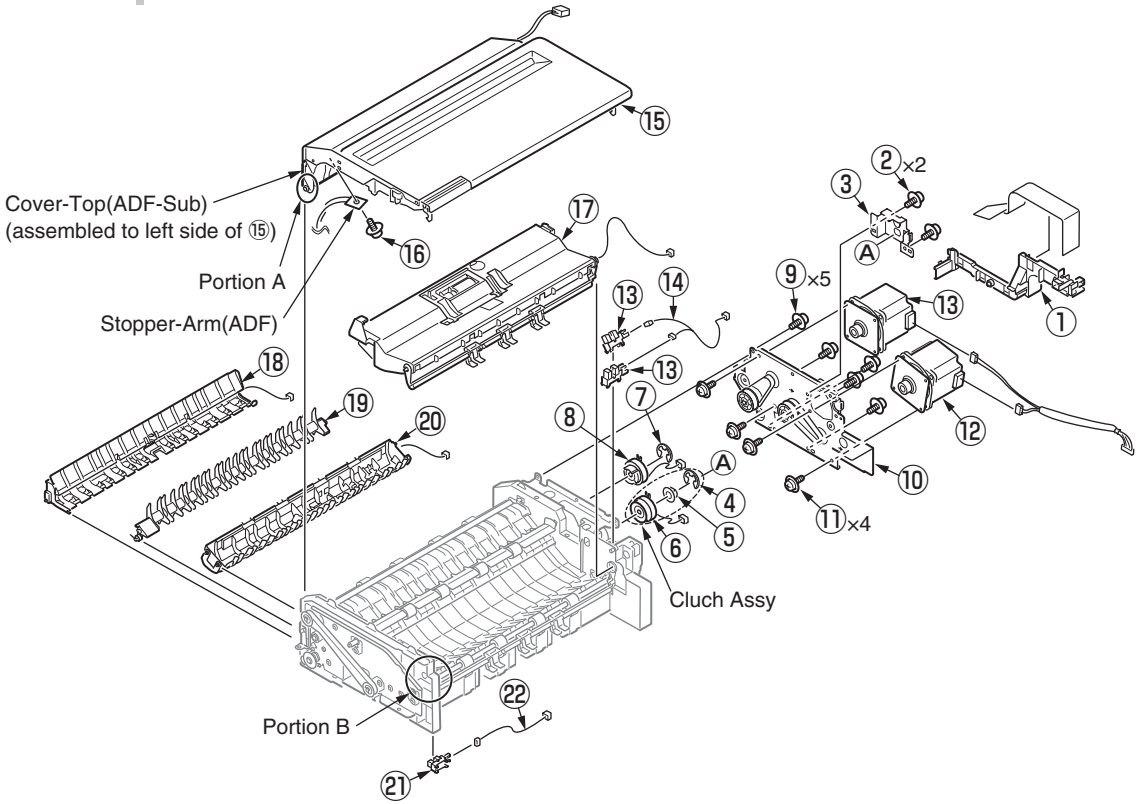
(10) Disconnect a cable of the Guide-Retard-A ⑰ , and bend around the post at the portion B. Subsequently, unlatch the post of the other side of the portion B at the Guide-Retard-A ⑰ , and remove the Guide-Retard-A ⑰ with passing the cables though the shaft hole.

(11) Remove the Guide-Assy-D ⑱ with disconnecting the cable.

(12) Remove the Guide-Separater-Revese ⑲ .

(13) Remove the Guide-Assy-C ⑳ with disconnecting the cable.

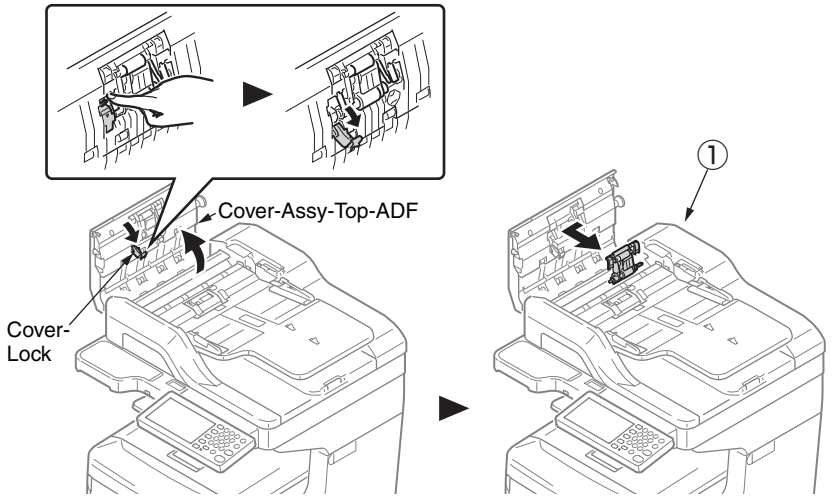
(14) Remove the photo-sensor ㉑ , cable ㉒ .



4.2.10.9 Frame Assy.-Hopping(ADF)

(1) Open the Cover-Assy-Top-ADF.

(2) Open the Cover-Lock and slide to left side the Frame Assy.-Hopping(ADF) ① and remove it.



Notes on assembling:

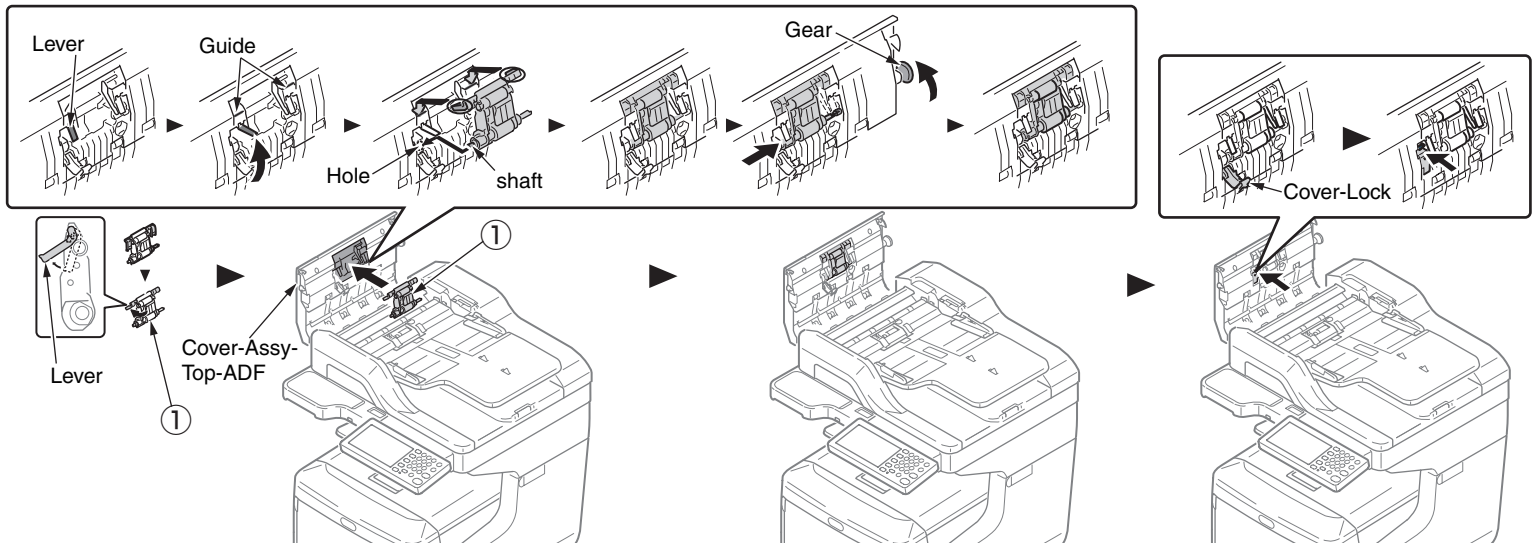
When assembling the Frame Assy.-Hopping(ADF) ① , refer the following steps.

1. Rotate the lever of the Frame Assy.-Hopping(ADF) ① to the back side.
2. Rotate up and keep the lever of the Cover-Assy-Top-ADF.

   And through the left and right tip of the lever of Frame Assy.-Hopping(ADF) ① to the each of guides of Cover-Assy-Top-ADF.

   Additionally, insert the the left end of the lower side shift of the Frame Assy.-Hopping(ADF) ① to hole of the Cover-Assy-Top-ADF.

   Next, push the shaft of Frame Assy.-Hopping(ADF) ① to right side with rotating the Gear of the right end of the Cover-Assy-Top-ADF until fit the D-cut face of the shaft to the D-depression of the Gear.
3. Close the Cover-Lock.



4.2.10.10 Guide Assy.-Top / Board Assy.-6JC

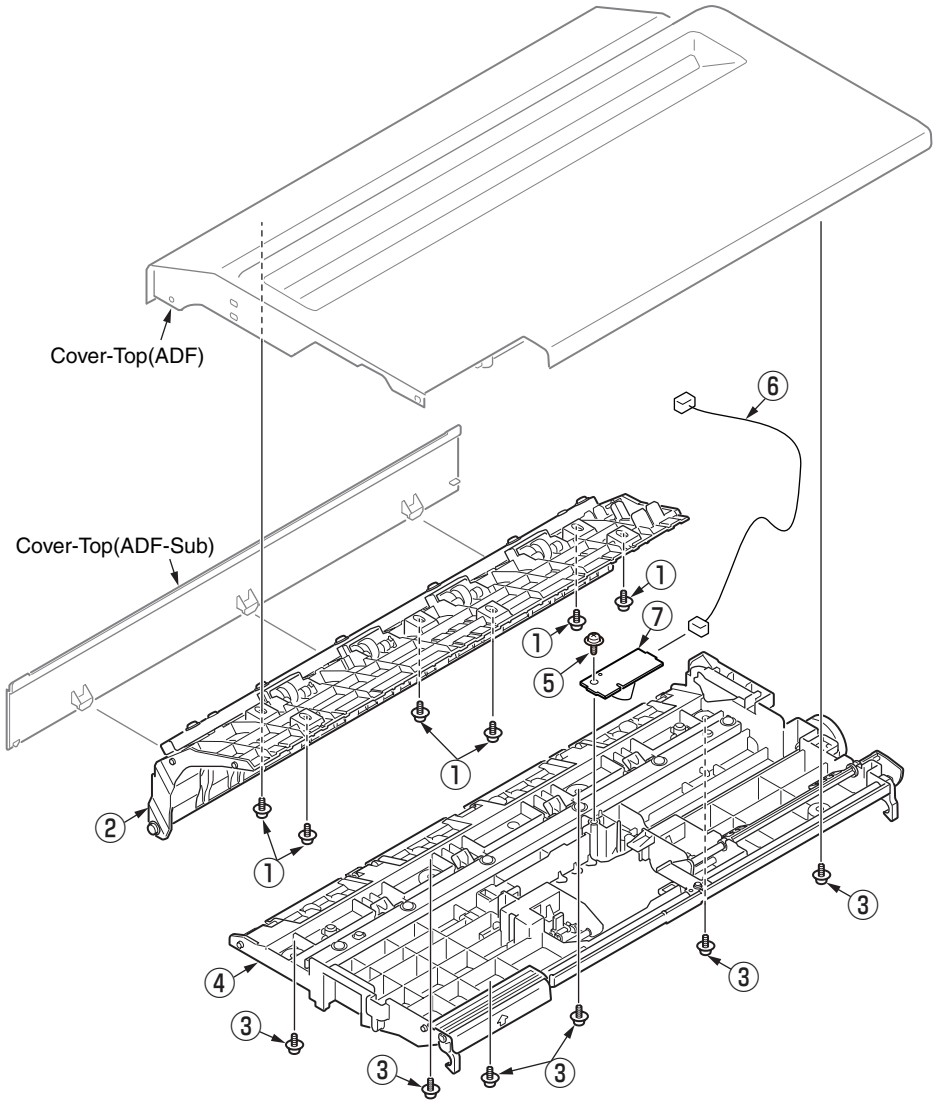
(1) Remove Cover-Assy-Top-ADF (See 4.2.10.8).

(2) Remove the six screws (black) ① , and remove Guide Assy.-Top(B) ② and Cover-Top(ADF-Sub) from Cover-Top(ADF) assembled to Cover-Assy-Top-ADF.

(3) Remove six screws (black) ③ and remove Guide Assy.-Top(A) ④ from Cover-Top(ADF).

(4) Remove a screw (black) ⑤ to detach the Board Assy. -6JC ⑦ with cable ⑥ from Guide Assy.-Top(A) ④ .

(5) Disconnect the cable ⑥ from the Board Assy.-6JC ⑦ .



4.2.10.11 Guide-Assy-Retard

(1) Remove the eight claws and remove the Guide-Retard(sub) ① .

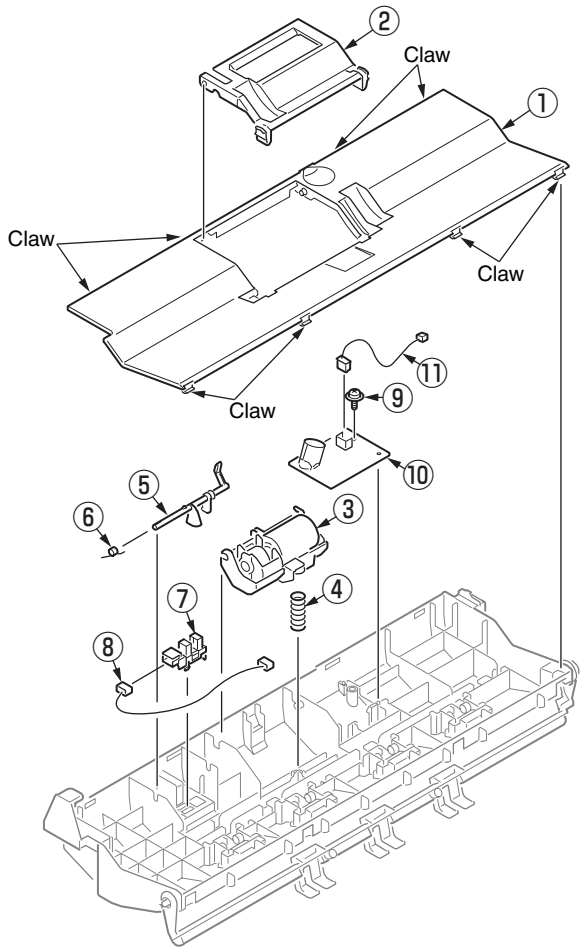
(2) Remove the Cover-Retard(ADF) ② .

(3) Remove the Frame-Assy Retard ③ and remove the spring Retard ④ .

(4) Remove the Lever-Hopping ⑤ and the spring-Hopping ⑥ .

(5) Remove the Photo-sensor ⑦ and remove the cable ⑧ .

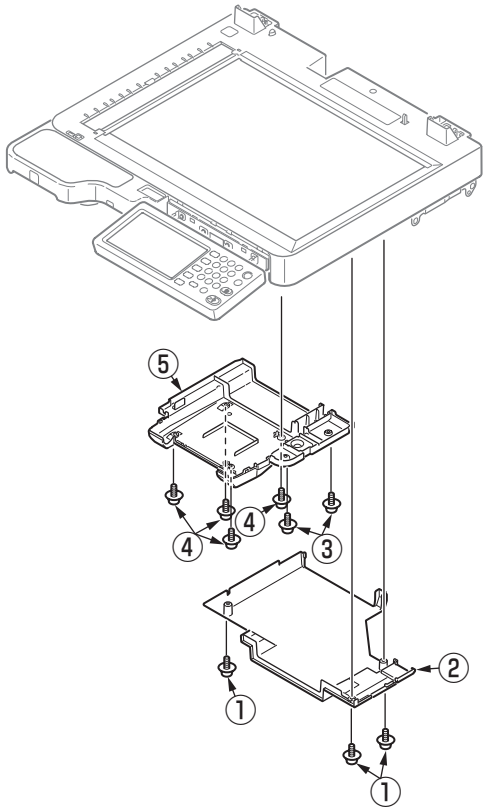
(6) Remove a screw(black, No:42932708) ⑨ and remove the Board-6JD ⑩ and cable ⑪.



4.2.10.12 Flatbed-Unit

(1) Remove the three screws (black, No:42932708) ① and remove the cover-Bottom ② .

(2) Remove the two screws (black, No:42932708) ③ and four screws (silver, No:42920406) ④ and remove the Cover-Support(OP) ⑤ .



4.2.10.13 Frame-assy-FB

(1) Remove the four screws (black, No:42932708) ① and remove the five screws (silver, No:42920406) ② , and remove the plate-shield(SU) ③ .

(2) Remove the all SU-board and FAX-board cables and FFC ④ .

(3) Remove the four screws (silver, No:42920406) ⑤ and remove the SU-board ⑥ .

(4) Remove the four screws (silver, No:42920406) ⑦ and remove the FAX-board ⑧ .

(5) Remove the two screws (black, No:42932708) ⑨ and remove the Plate-board(SU) ⑩ and remove the speaker ⑪ .

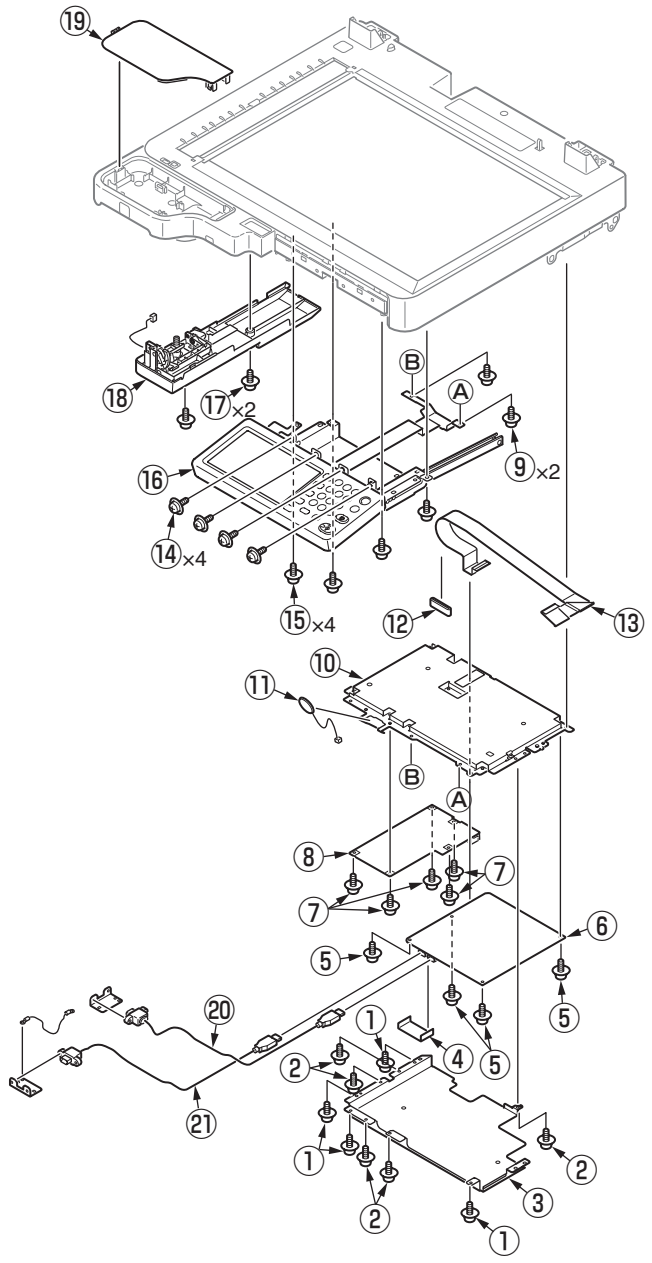
(6) Pull core ⑫ out of FFC cable ⑬ .

(7) Remove the four screws (silver, No:42920408) ⑭ and remove the four screws (black, No:42932708) ⑮ and remove the OP-panel-Assy ⑯ .

(8) Remove the two screws (black) ⑰ and Cover-side-LF ⑱ .

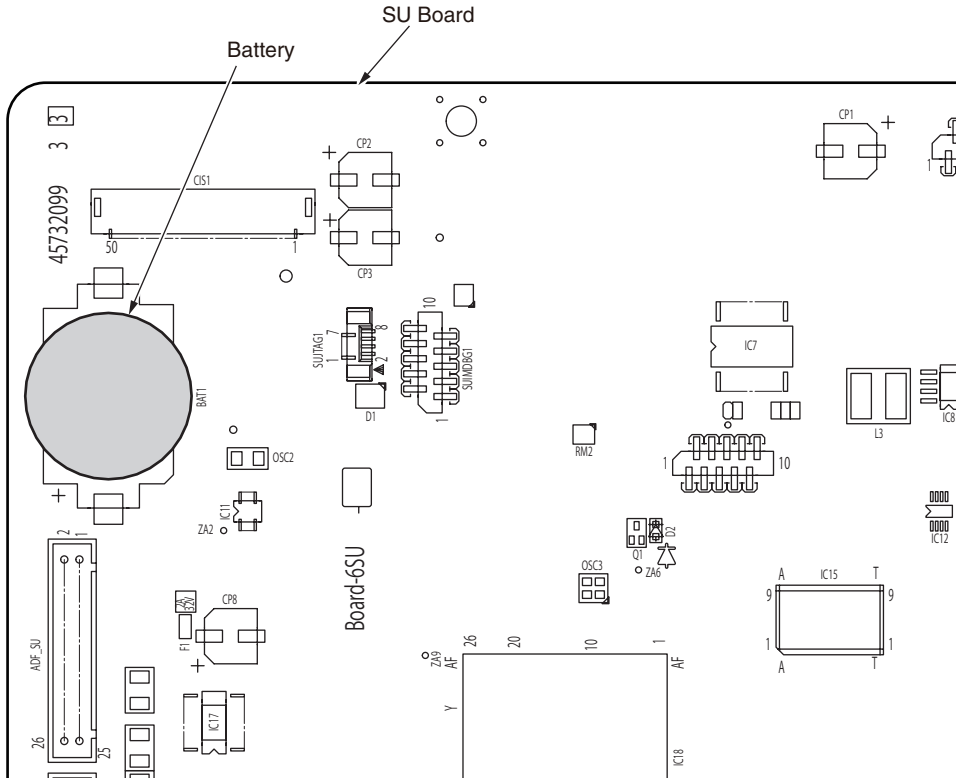
(9) Remove the Cover-IC-card ⑲ .

(10) Remove the cable ⑳ and ㉑ .



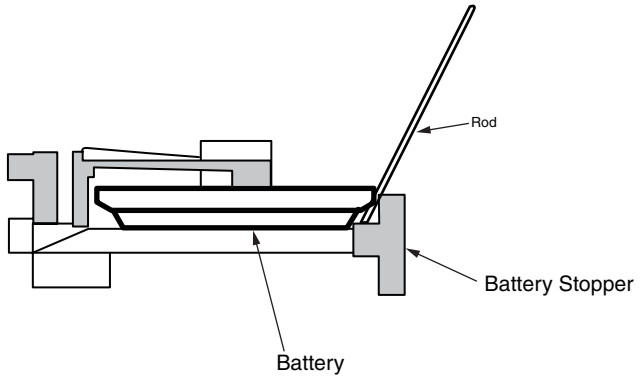
[How to remove Battery on SU-Board]

(1) The position of the battery is shown in the below figure.

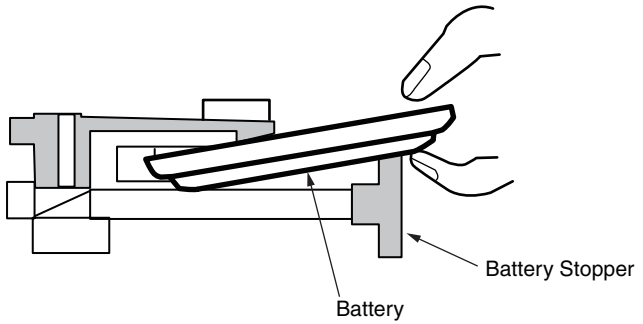


(2) How to remove the battery.

Insert finger, a needle or a rod in the gap between the battery and the its holder.



Raise the battery up so that it is put on the battery stopper, and remove it.



4.2.11 Frame-Assy.-OP

(1) Unlatch four claws to remove the Cover-Top-Base ① .

(2) Remove the four screws ② and rotate to remove the Plate-Base ③ with the Plate-Support and the Cover-Bottom-Base.

(3) Remove eight claws to remove the Cover-Sheet ④ and remove the Sheet-OP ⑤ .

(4) Remove the ten claws and remove the Cover-Bottom ⑥ .

(5) Remove the four screws ⑦ and the four screws ⑧ to detach the Cover-Top ⑨ , Plate-Shield(OP) and Plate-Hinge.

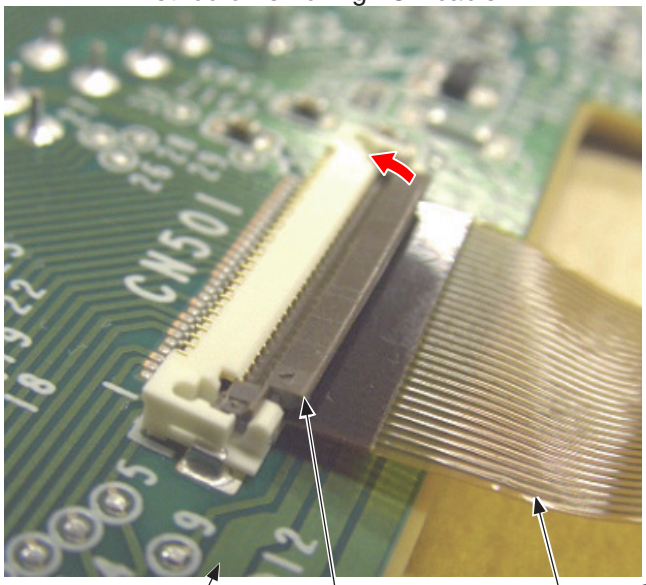
(6) Remove the Button-Assy ⑩ and Board ⑪ and remove the FFC Cable ⑫ .

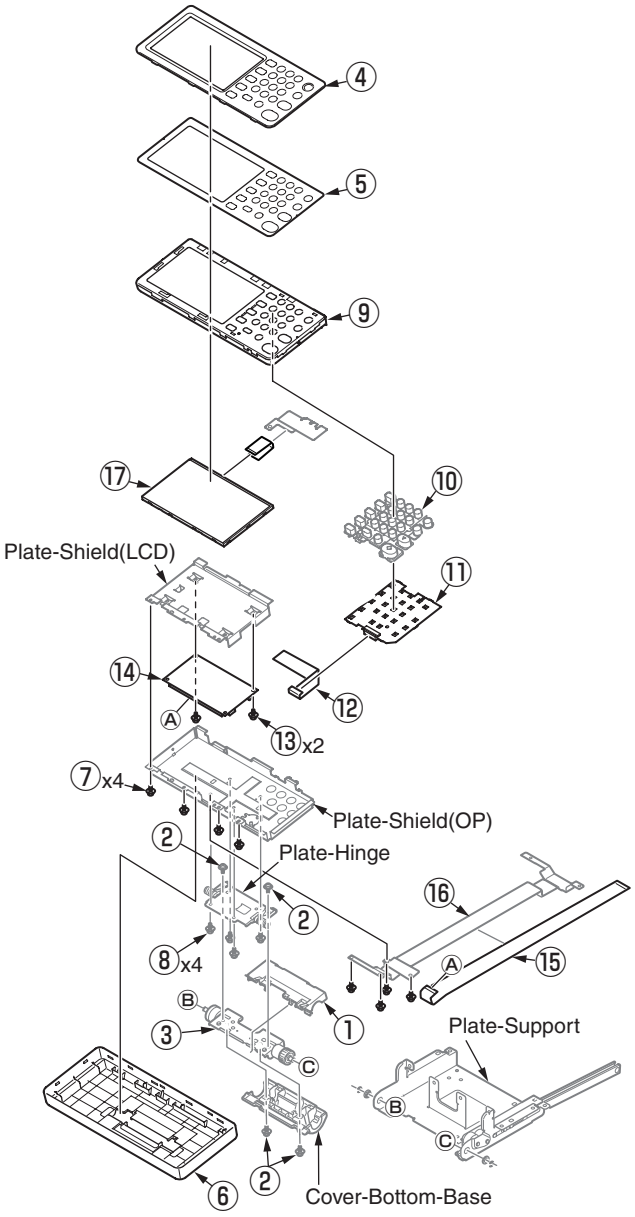
(7) Remove the two screws ⑬ and remove the board ⑭ .

(8) Remove the LCD-Cable ⑮ while 'Portion A' is raised in the direction of arrow and remove the Film ⑯ .

(9) Remove the LCD-Assy ⑰ .

<Method of removing LCD cable>

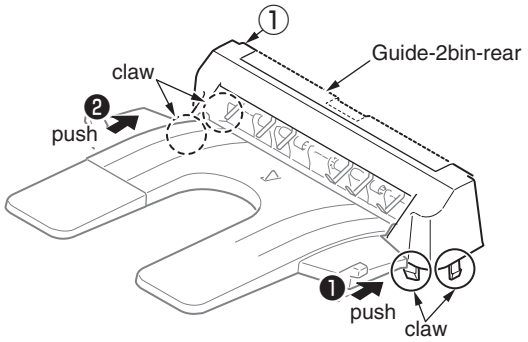




4.2.12 2bin Assy. / Guide Assy.-2Bin / Stacker Assy.-2Bin

(1) Remove the Cover-side-L, Cover-rear and Plate-shield. (Refer to section 4.2.8)

(2) Open the Guide-2bin-rear and remove the four claws and 2bin-Cover ① .



(3) Remove the five separators ② arrenged inside of the Guide-2bin-rear. (refer to fig.4.2.12(1))

(4) Disconnect the cable ③ .

(5) Remove the four screws ④ and 2bin-Assy ⑤ .

Notes on assembling:

When assembling the separators, pay attention to the position.(Refer to the following figure)

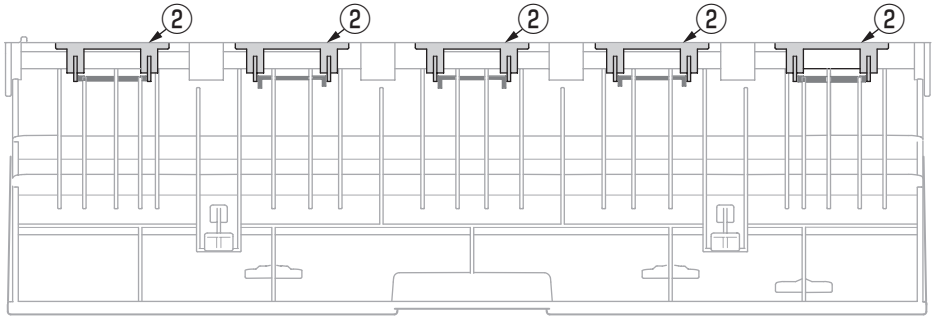
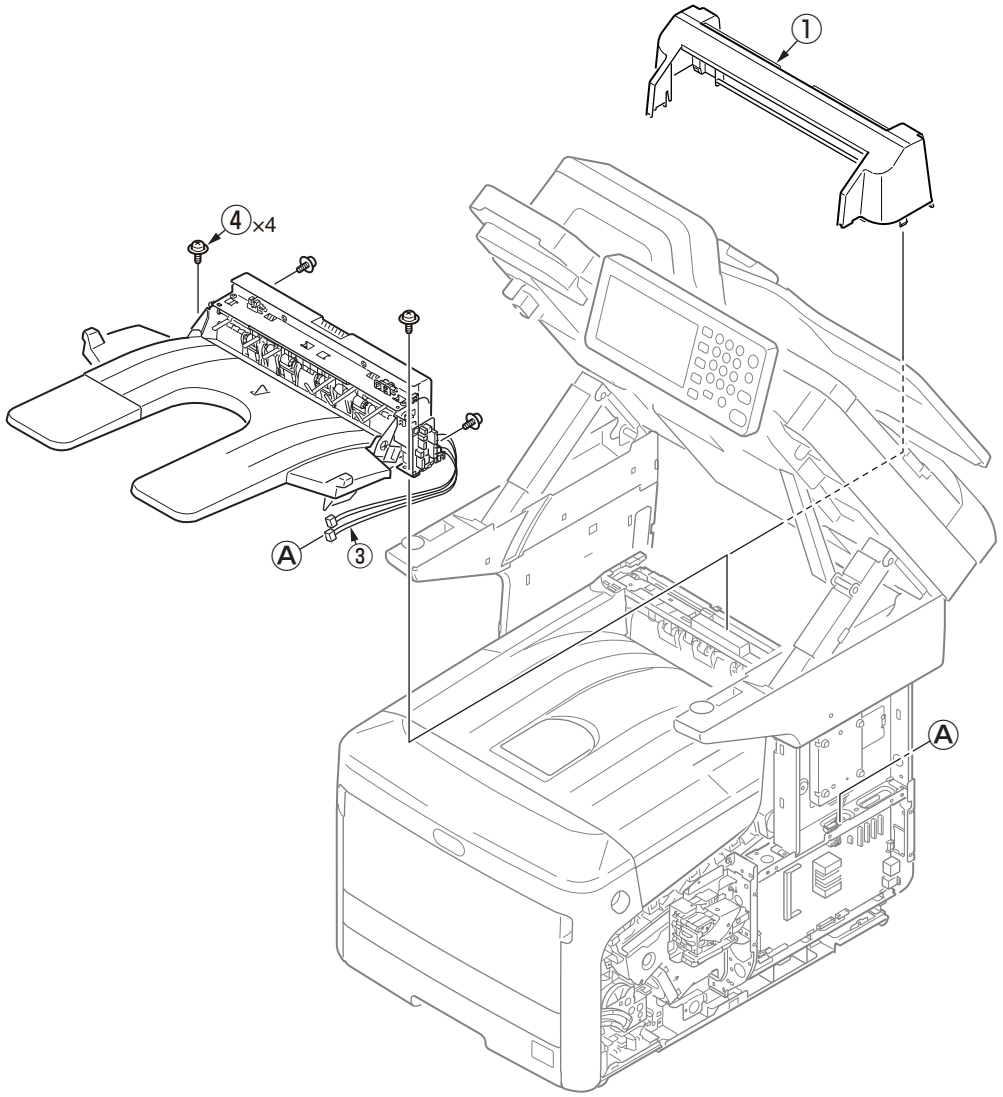
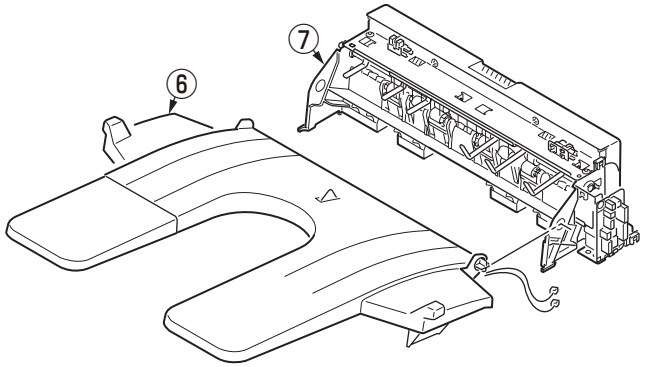


fig.4.2.12(1)



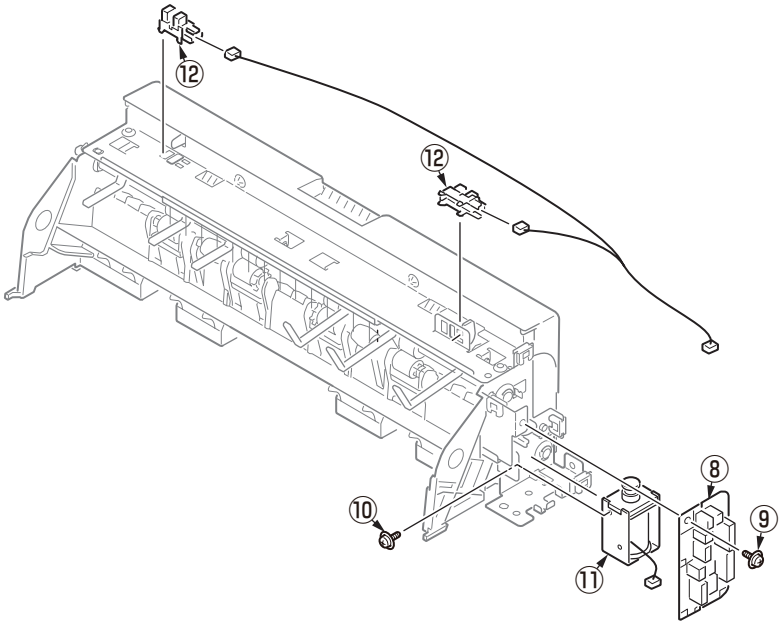
(6) Disconnect the cables from the Board 7RL-2 ⑧ , and remove the Stacker Assy.-2Bin ⑥ from Guide Assy.-2Bin ⑦ .



(7) Disconnect the cable from the Board 7RL-2 ⑧ and remove a screw(silver) ⑨ to detach the Board 7RL ⑧ .

(8) Remove a screw(silver) ⑩ to detach the Solenoid ⑪ .

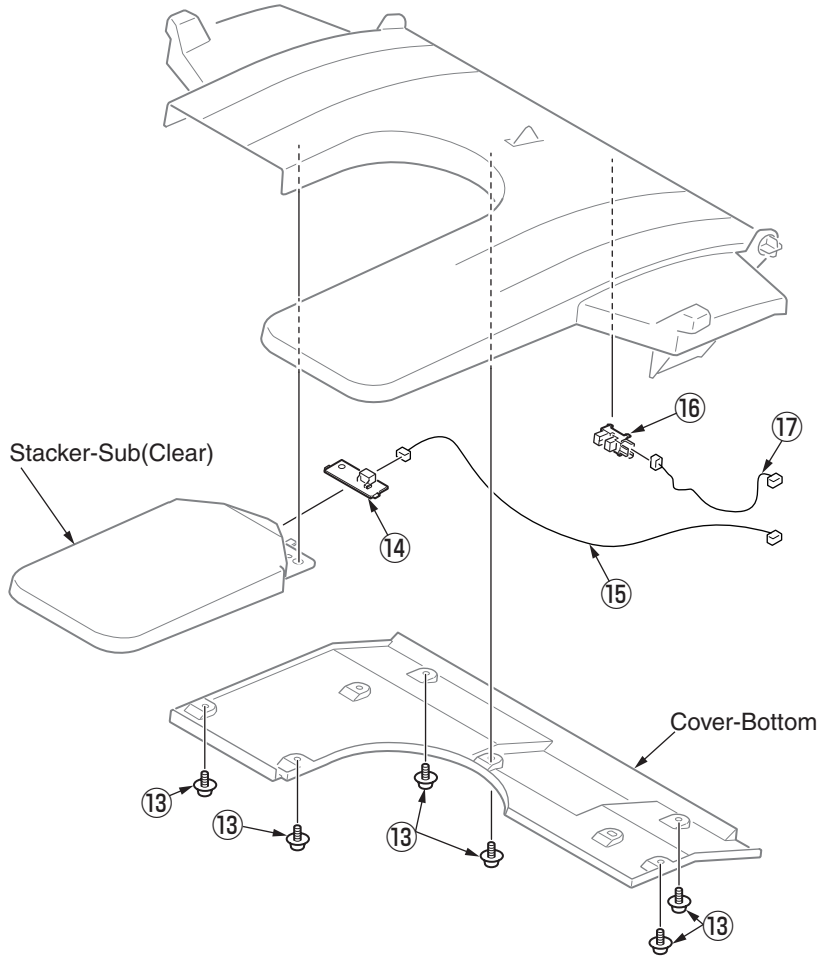
(9) Remove the two Photo-sensors ⑫ .



(10) Remove six screws(black 10mm) ⑬ to detach the Cover-Bottom.

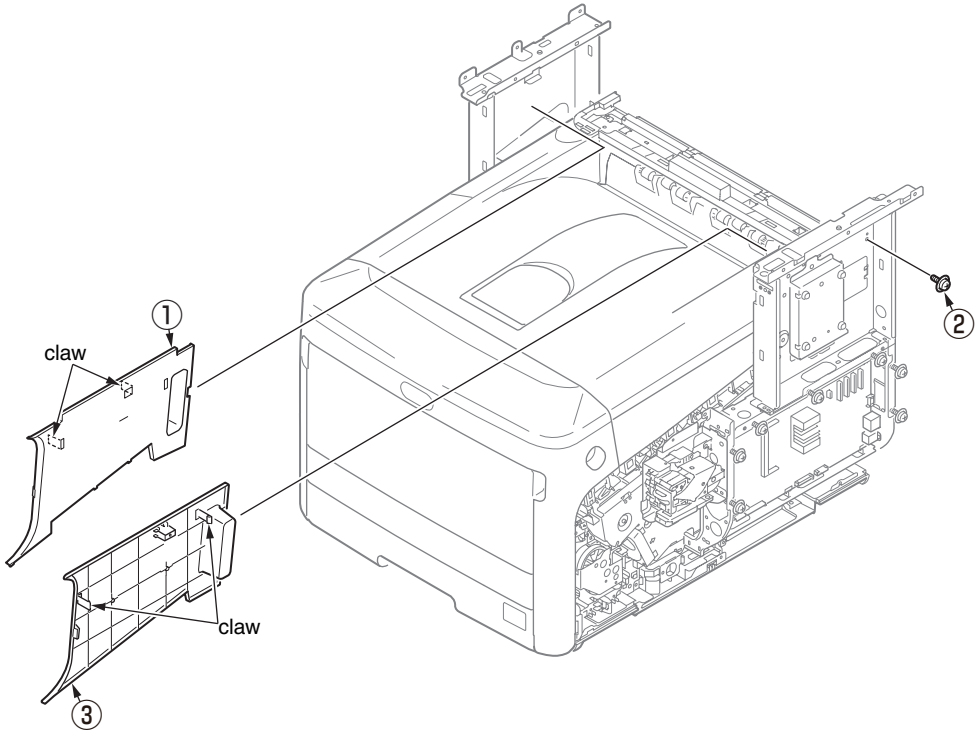
(11) Detach the Stacker-Sub(clear) to remove the Board Assy.-1LD ⑭ with a cable ⑮ .

(12) Remove a Photo-sensor ⑯ with a cable ⑰ .

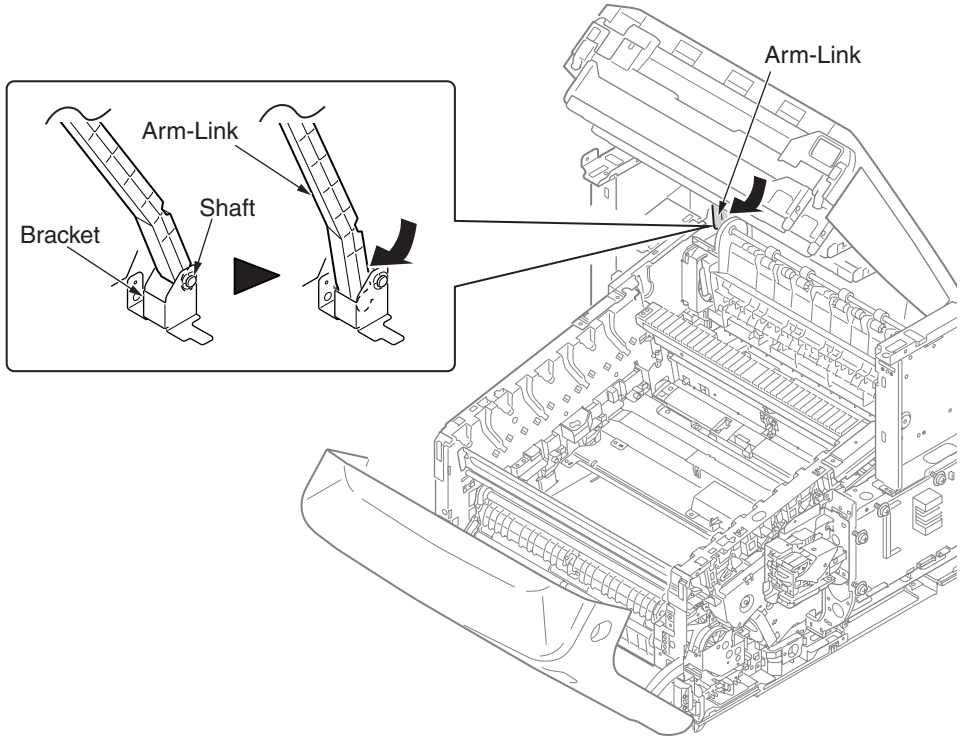


4.2.13 Top cover Assy.

(1) Remove the image drum unit/belt unit. (Refer to section 4.2.1)
(2) Remove the scanner unit. (See to 4.2.10)
(3) Detach the cover side-L . (Refer to section 4.2.3)
(4) Detach the Plate-shield. (Refer to section 4.2.8)
(5) Detach the rear cover Assy. (Refer to section 4.2.5)
(6) Remove the 2bin Assy. (See to 4.2.12)
(7) Detach the Cover-Stay-L ① .
(8) Remove a screw ② and detach the Cover-Stay-R ③ .



(9) Open the front cover and the top cover. (Refer to section 4.2.1)
(10) Pull and unlatch the end of the printer-section side of the Arm-Link from the Shaft of the Bracket to the direction of arrow.

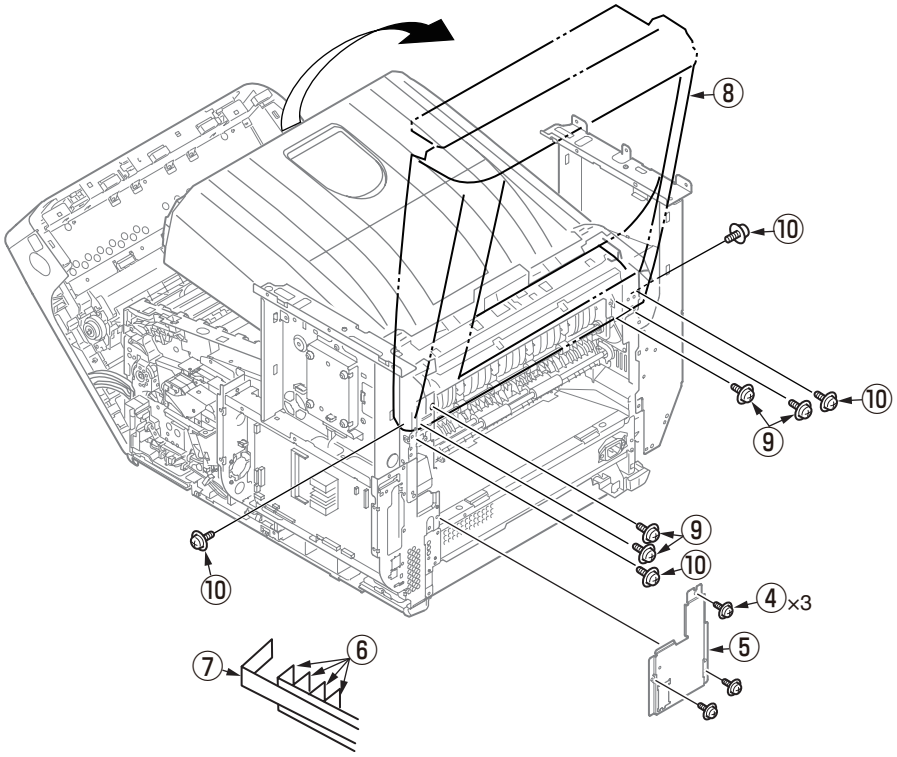


(11) Remove the three screws (silver) ④ and the plate FFC ⑤ .

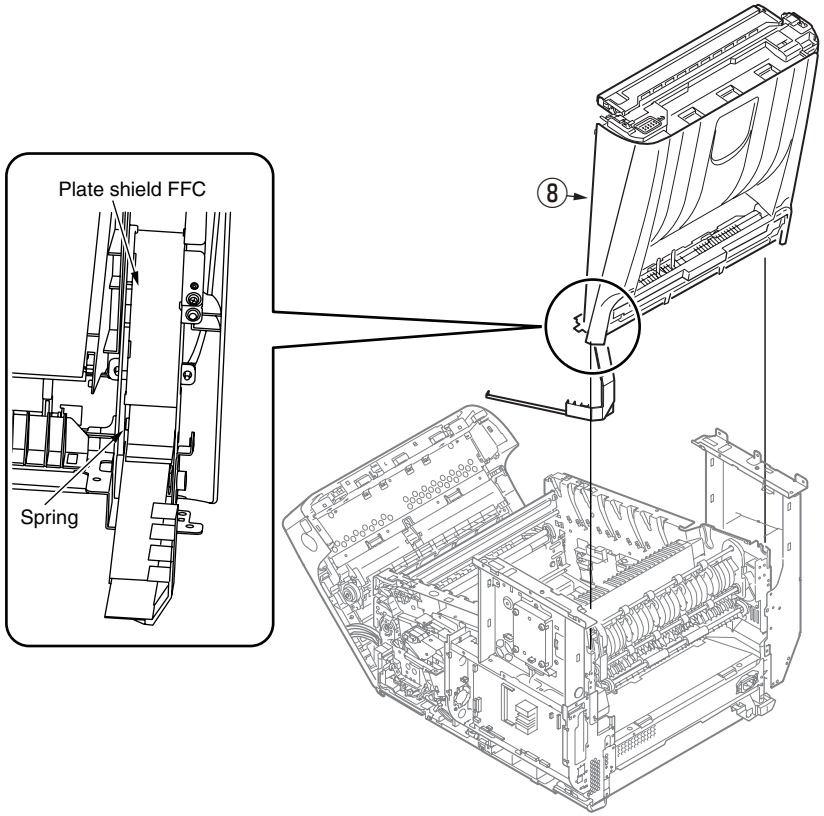
(12) Detach the Cable-Assy-Head, and disconnect the four head FFC cables ⑥ and the RFID-FFC cable ⑦ .

(13) Tilt the top cover Assy ⑧ and remove the four screws (silver) ⑨ .

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



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



Notes on assembling:

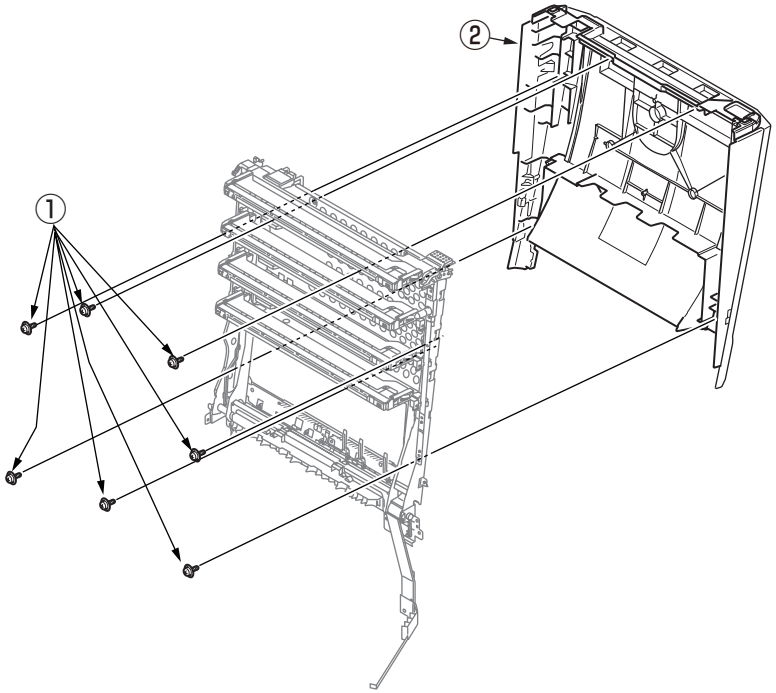
The plate shield FFC must be placed at the outer side of the spring.

4.2.14 Cable-Assy-Head / Lever-SNS / Photo Sensor

(1) Detach the top cover Assy. (Refer to section 4.2.13)

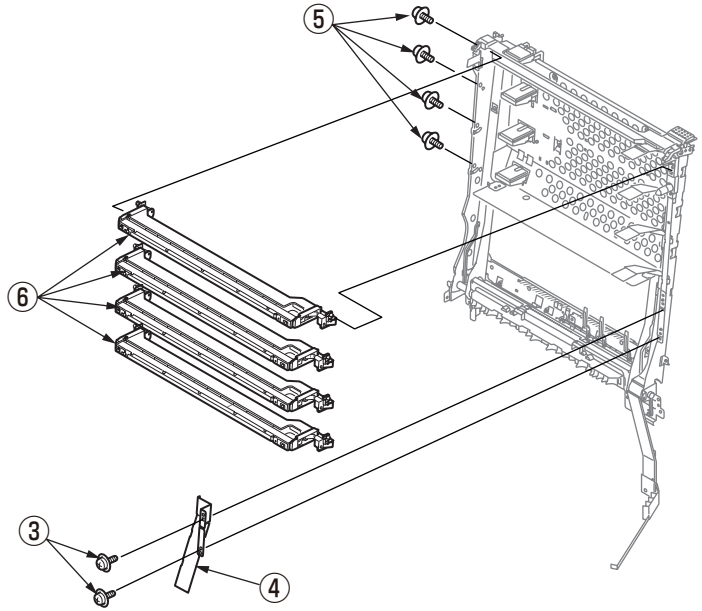
(2) Disconnect the head FFC from the connector of the LED head. (Refer to section 4.2.7)

(3) Remove the seven screws (black) ① and detach the top cover ② .

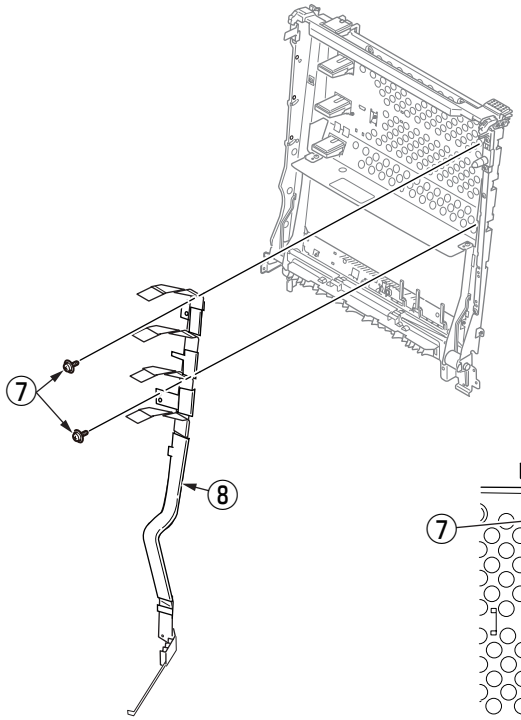


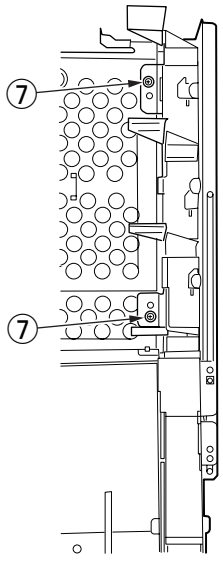
(4) Remove the two screws (silver) ③ and the plate shield FFC ④ .

(5) Remove the four screws (black) ⑤ and the head holder Assy. ⑥ .



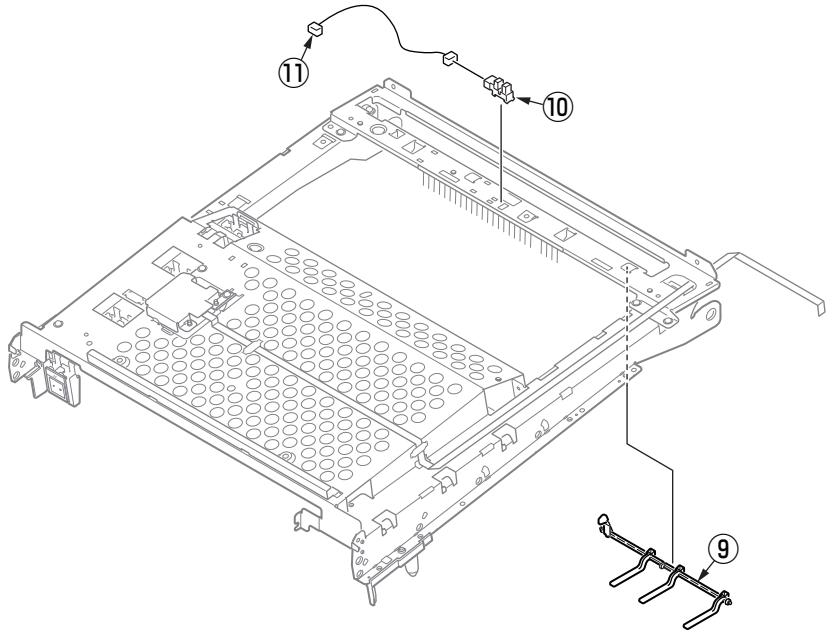
(6) Remove the two screws (silver) ⑦ and the Cable-Assy-Head ⑧ .





Detail drawing

(7) Remove a Lever-SNS ⑨ , and remove a Photo Sensor ⑩ and a cable ⑪



4.2.15 Plate-Stay(L)

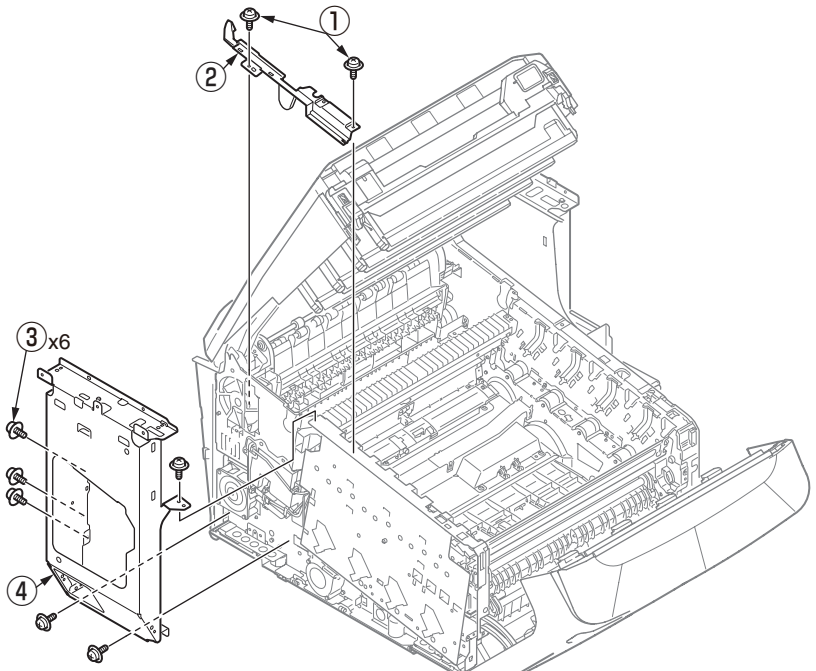
(1) Remove the scanner unit. (See to 4.2.10)

(2) Detach the Cover-Stay-L. (See to 4.2.13)

(3) Pull and unlatch the end of the printer-section side of the Arm-Link from the Shaft of the Bracket. (See to 4.2.13)

(4) Remove the two screws (silver) ① and detach the Cover-inner-L-sub ② .

(5) Remove the six screws (silver) ③ and detach the Stay-L ④ .



4.2.16 Plate-Stay(R) / Plate-Board-R-Assy / Plate-Support(Stay)

(1) Remove the scanner unit. (See to 4.2.10)

(2) Detach the Cover-Stay-R. (See to 4.2.13)

(3) Remove the Main board. (See to 4.2.8)

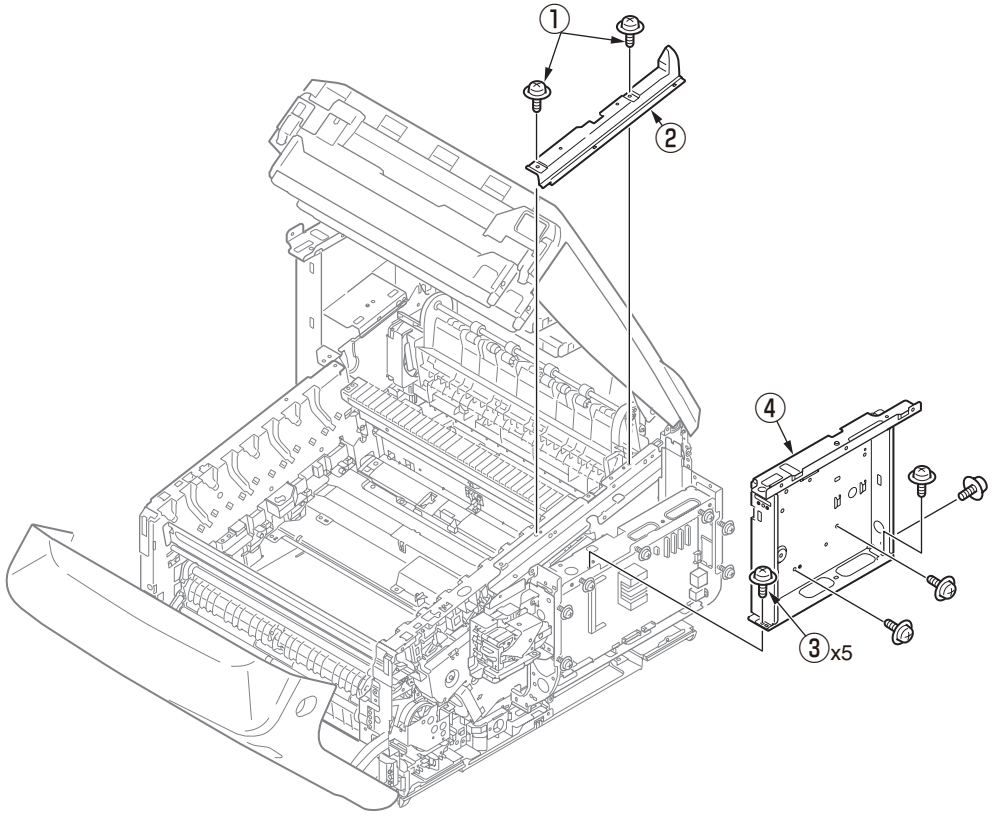
(4) Detach the HDD Assy and Plate Assy.-Sensor. (See to 4.2.8)

(5) Pull and unlatch the end of the printer-section side of the Arm-Link from the Shaft of the Bracket. (See to 4.2.13)

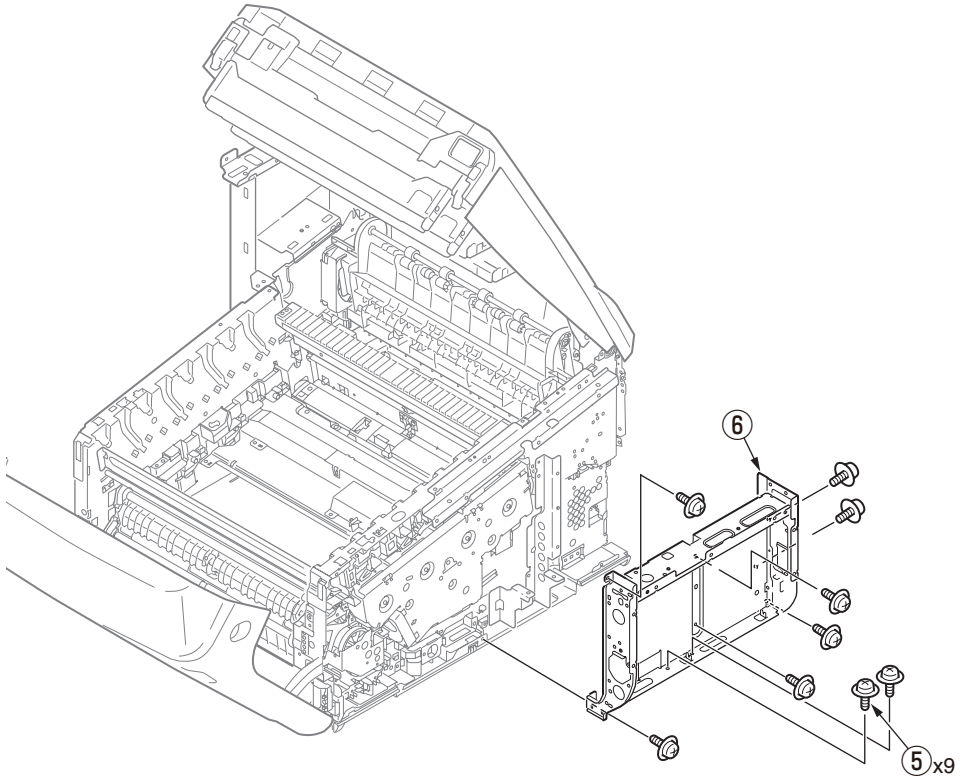
(6) Remove the two screws (silver) ① and detach the Cover-inner-R-sub ② .

(7) Remove the Stapler Unit. (See to 4.2.9)

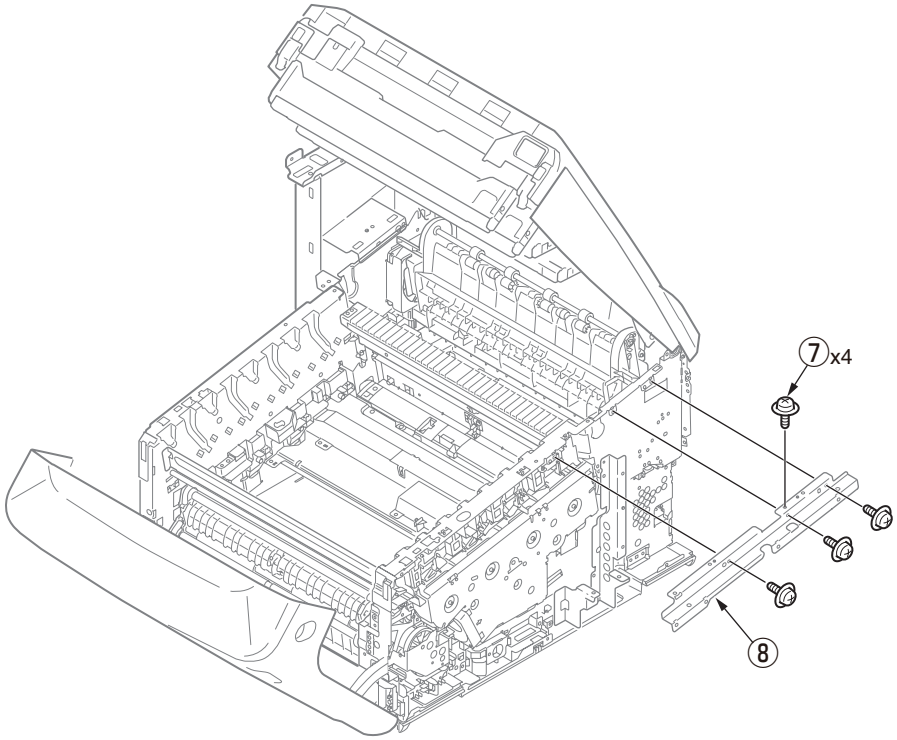
(8) Remove the five screws (silver) ③ and detach the Stay-R ④ .



(9) Remove the nine screws (silver) ⑤ and detach Plate-Board-R-Assy ⑥ .

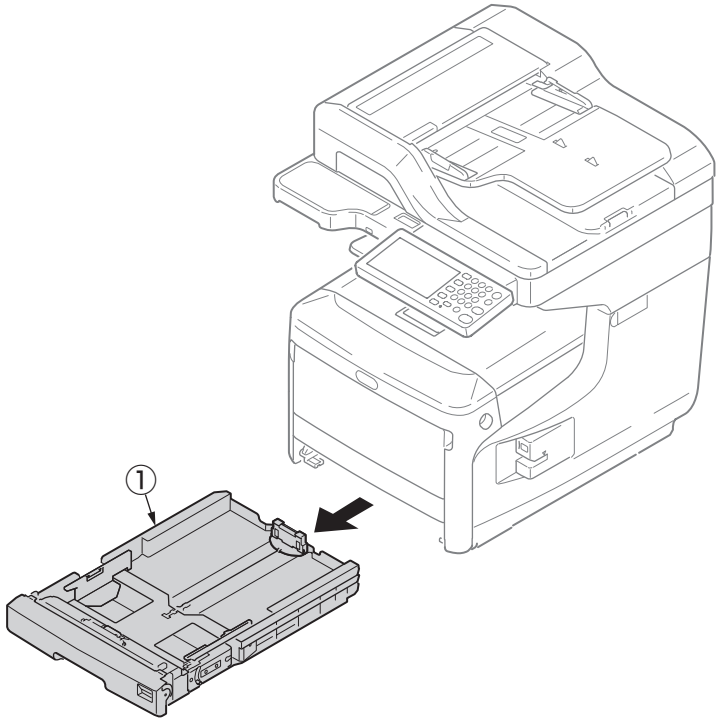


(10) Remove the four screws (silver) ⑦ and detach Plate-Support(Stay) ⑧ .



4.2.17 Front cover Assy.

(1) Pull the cassette ① out of the MFP.



(2) Remove the image drum unit/belt unit. (Refer to section 4.2.1)

(3) Detach the cover side-L Assy. (Refer to section 4.2.3)

(4) Detach the Plate-shield. (Refer to section 4.2.8)

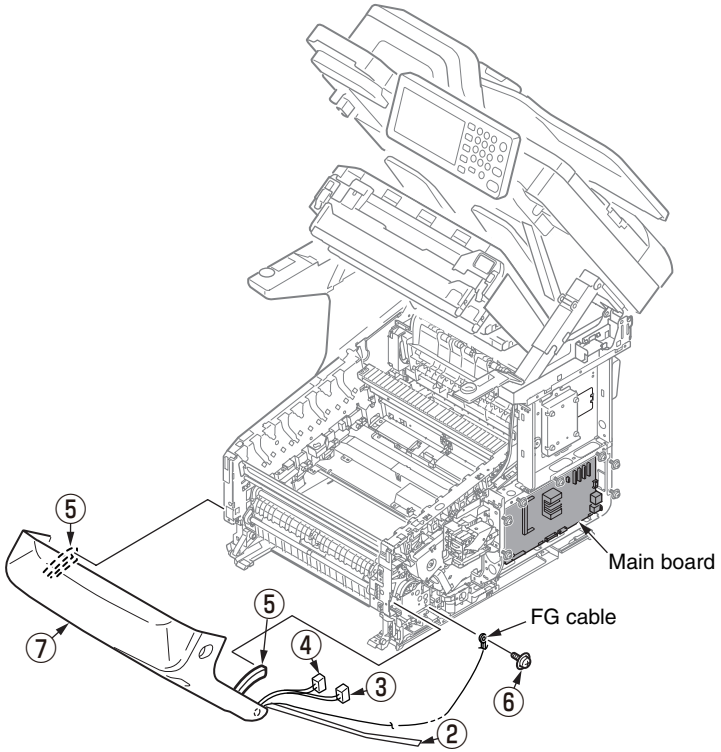
(5) Disconnect the FFC cable ② from the main board Assy., release the clamp that is holding the FFC cable ② , and disconnect the FFC cable ② from the main unit.

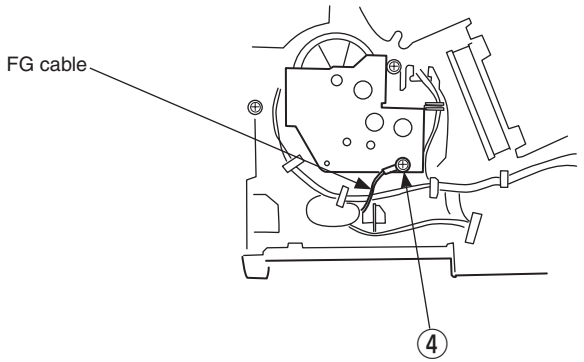
(6) Disconnect the Cable ③ and the Cable ④ .

(7) Release the two stays ⑤ .

(8) Remove the screw (silver) ⑥ to estrange the FG cable from the main unit.

(9) Pull the support of the front covert Assy. ⑦ out of the post of the main unit and detach the front cover Assy. ⑦ .





4.2.18 Guide Assy.-eject

(1) Detach the top cover Assy. (Refer to section 4.2.13)

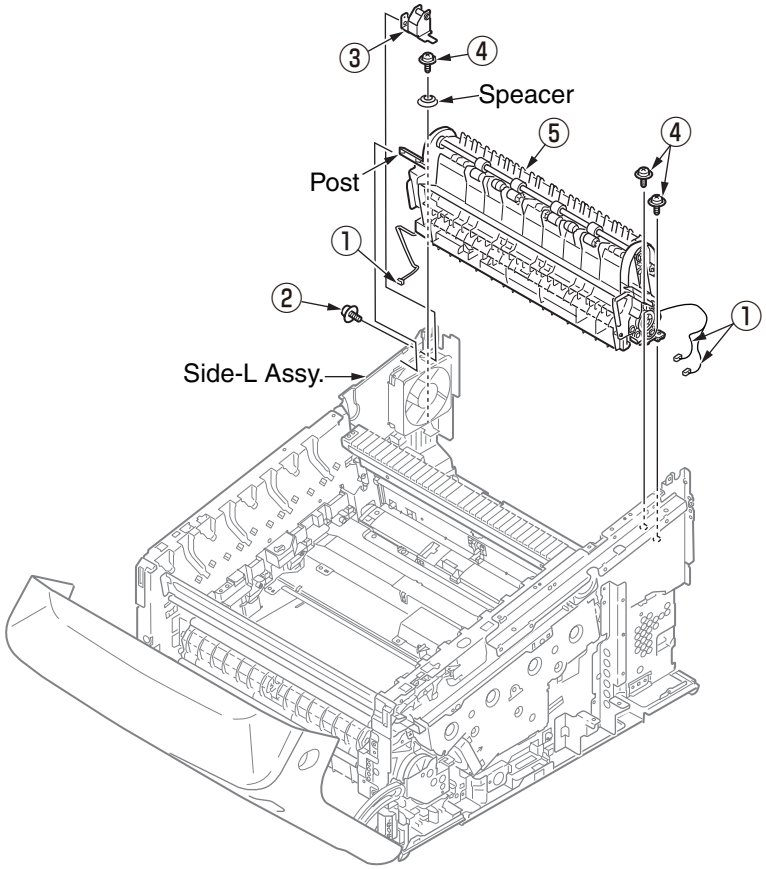
(2) Disconnect the eject three cables ① .

(3) Remove a screw (silver) ② to remove Plate-Bracket ③ .

(4) Remove the three screws (silver/8mm) ④ .

(5) Pull the post out of the side-L Assy. and detach the Guide Assy.-eject ⑤ .

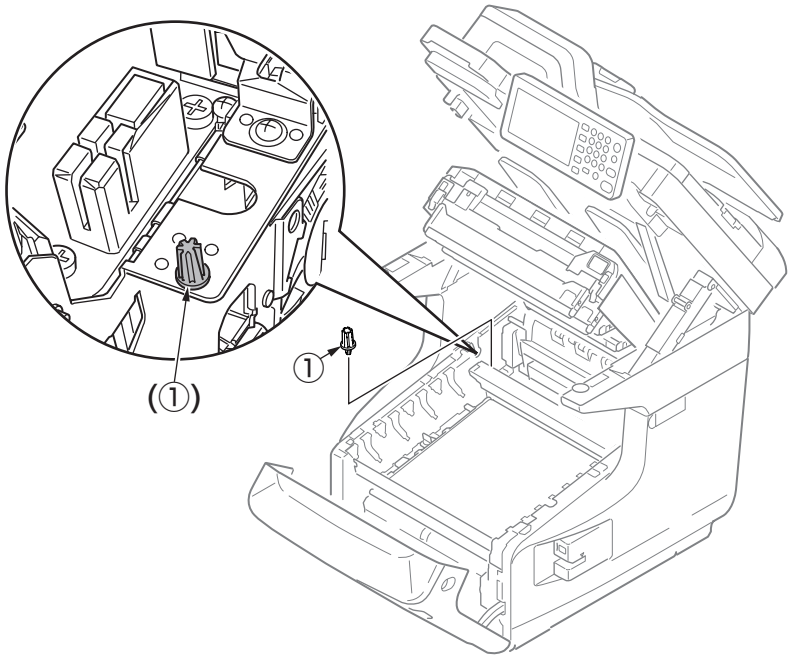
Note! Notice to deal of the spacer of screws to fasten the Guide Assy-eject ⑤ to the Side-L Assy.



4.2.19 Post-fuser-lock

(1) Remove the fuser. (Refer to section 4.2.2)

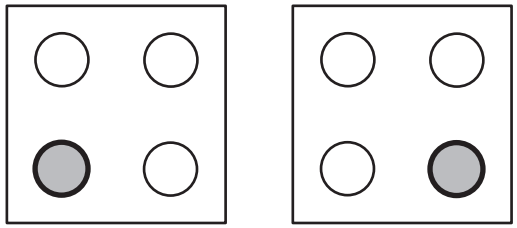
(2) Remove the post-fuser ① .



Notes on attaching:

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

Assembling positions



For 100V/120V

For 230V

4.2.20 Relay board (P6Z) / contact Assy. / Sensor Assy. Fuser-A

(1) Remove the image drum unit/belt unit. (Refer to section 4.2.1)

(2) Detach the cover side-L Assy. (Refer to section 4.2.3)

(3) Detach the cover side-R. (Refer to section 4.2.4)

(4) Detach the rear cover Assy. (Refer to section 4.2.5)

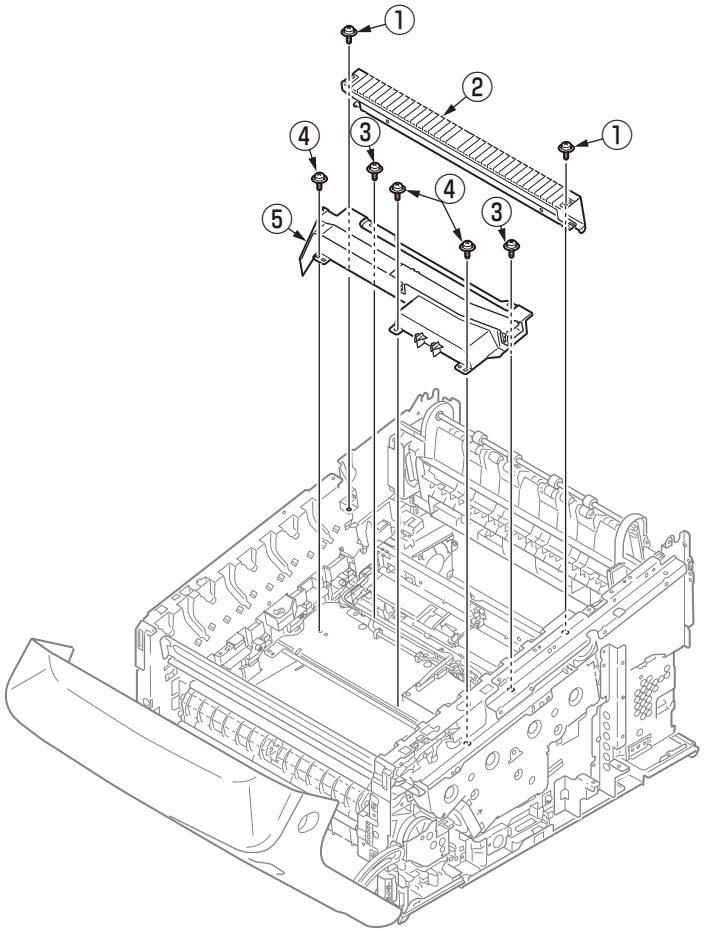
(5) Detach the top cover Assy. (Refer to 4.2.13)

(6) Remove the two screws (silver) ① and the plate beam FU ② .

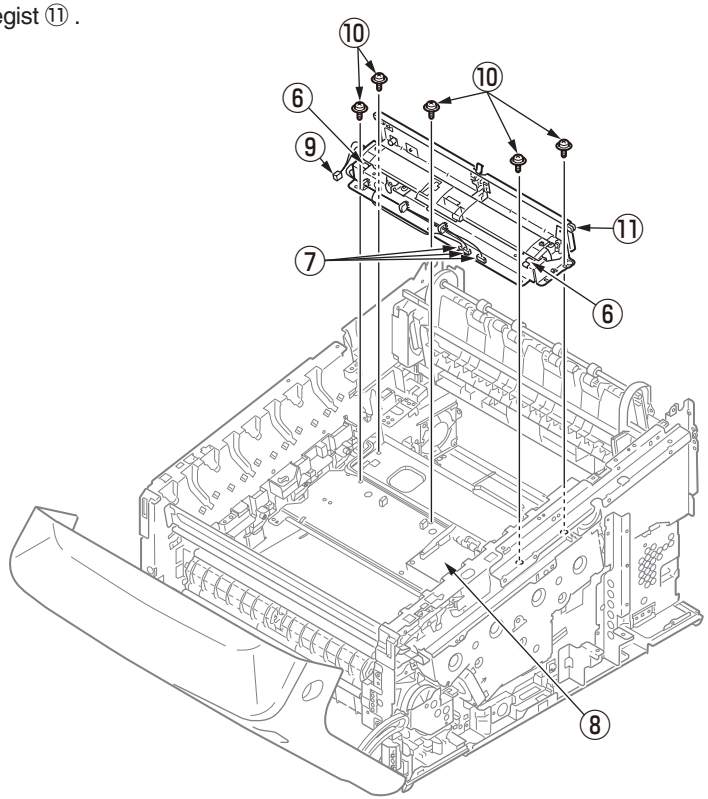
(7) Remove the two screws (silver) ③ , the three round-head screws (black) ④ and the cover Assy.-registration ⑤ .

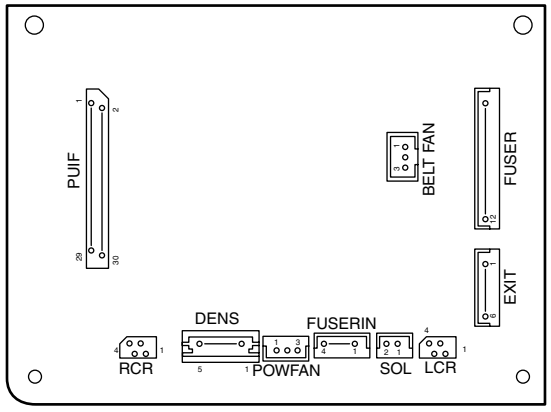
Notes on attaching:

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



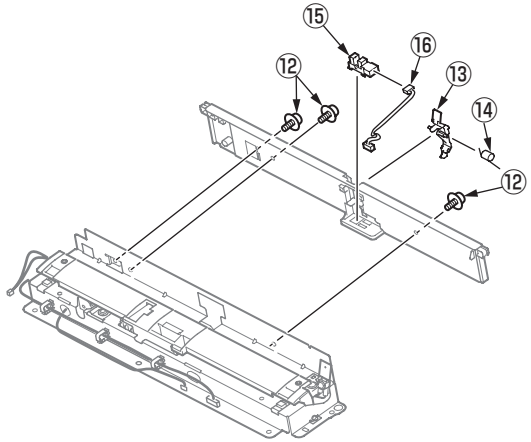
(8) Disconnect the right and left FFC connectors ⑥ and the three connectors ⑦ from the relay board (P6Z) ⑧ and the connector ⑨ from the high-voltage power supply board, and remove the five round-head screws (black) ⑩ and the Sensor-Assy.-Regist ⑪ .



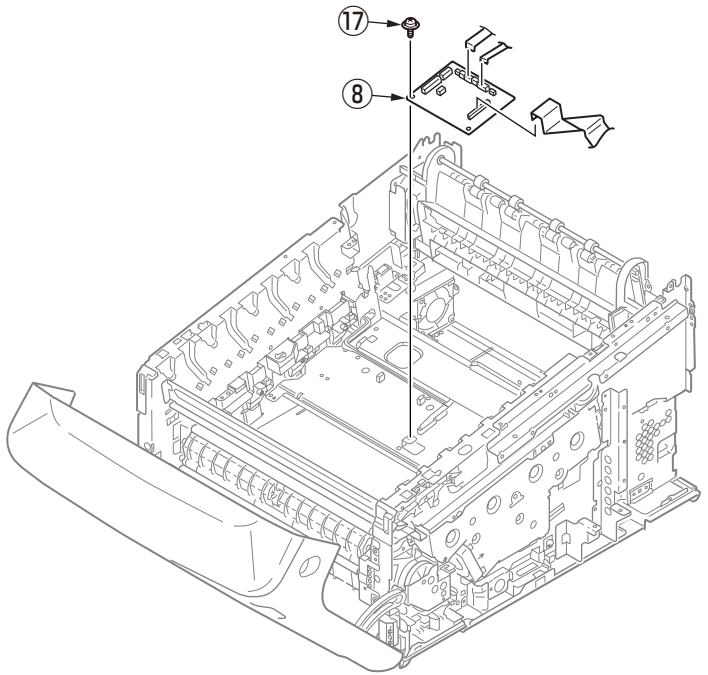


Relay board (P6Z)

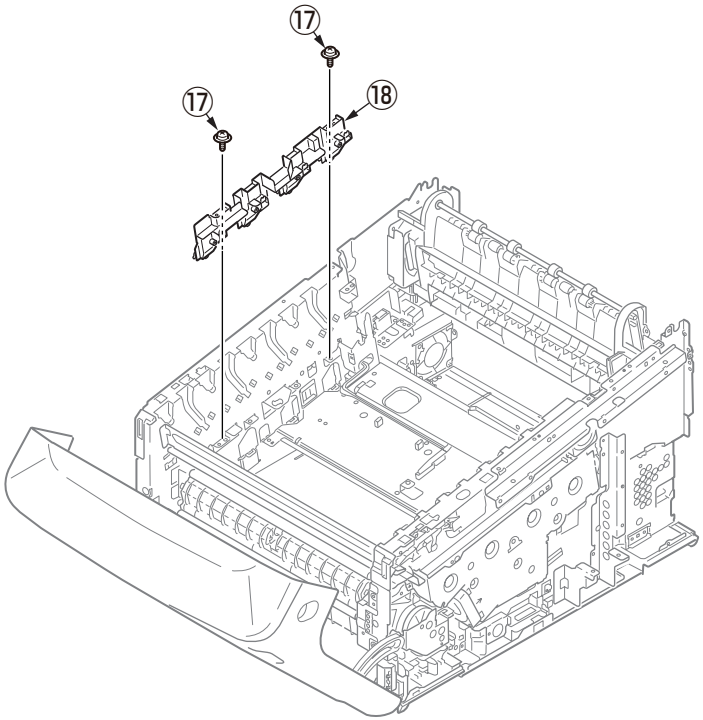
(9) Remove the three screws(silver) ⑫ to remove the Sensor-Assy.-Fuser-A from the Sensor-Assy.-Regist ⑪ , and remove the Lever-Sensor ⑬ with the Spring ⑭ , and remove the Photo Sensor ⑮ with the cable ⑯ .



(10) Disconnect each connector, remove the screw (silver) ⑰ and the relay board (P6Z) ⑧.

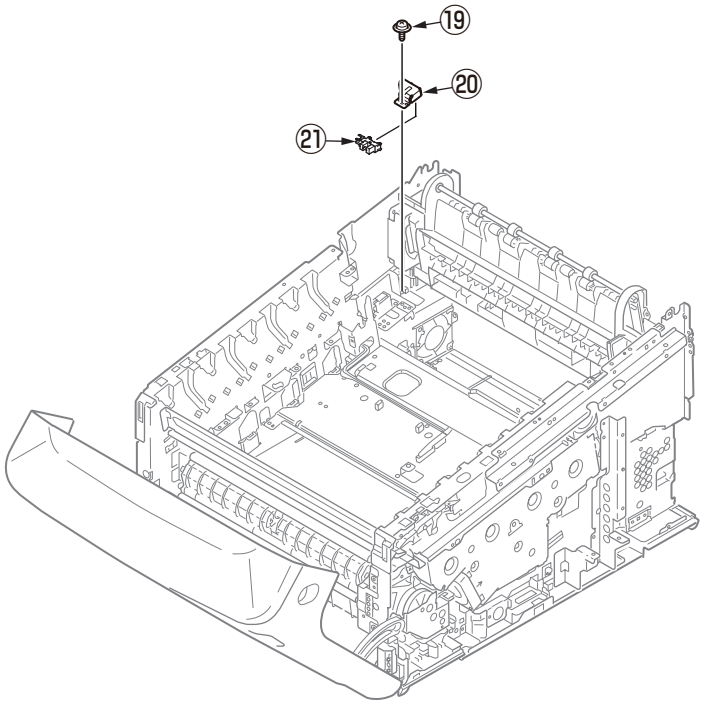


(11) Remove the two screws (silver) ⑰ and the contact Assy. ⑱ .



(12) Remove the screw (silver) ⑲ and the fuser sensor Assy. ⑳ .

(13) Remove the photosensor ㉑ .

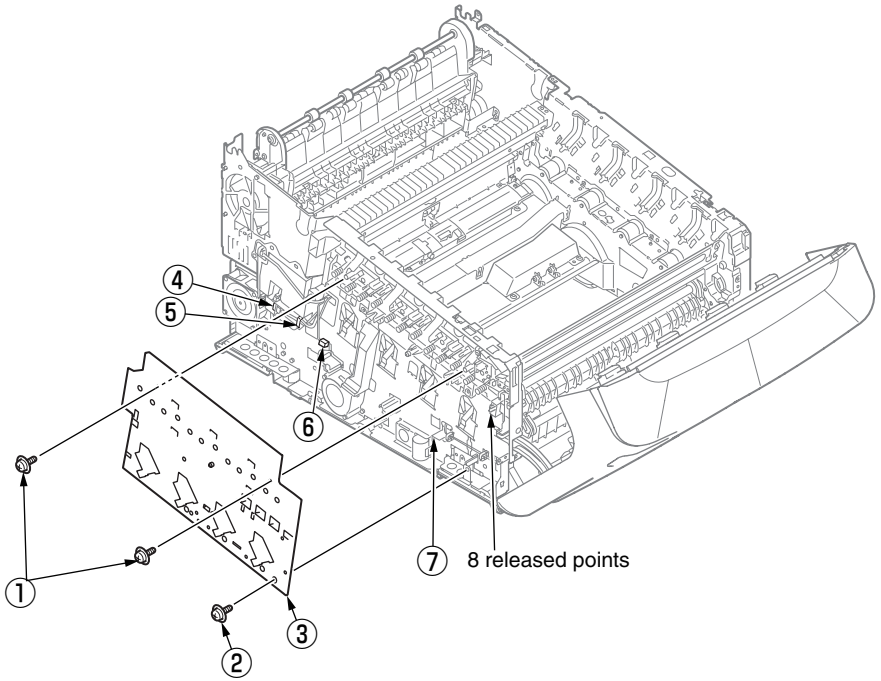


4.2.21 High-voltage power supply board

(1) Remove the image drum unit/belt unit. (Refer to section 4.2.1)

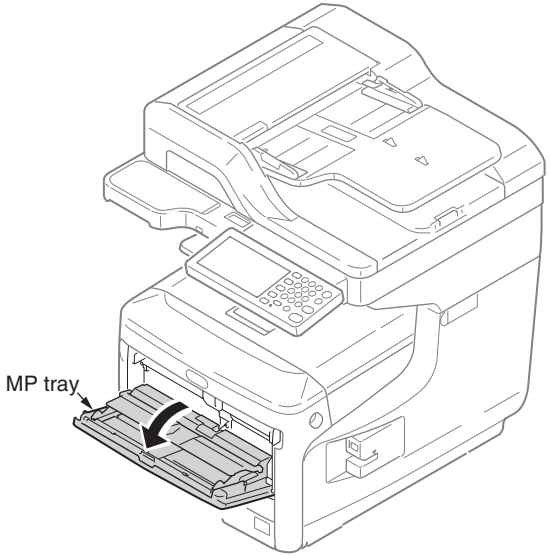
(2) Detach the cover side-L Assy. (Refer to section 4.2.3)

(3) Remove the three screws (black) ① and a screw (silver) ② , release the high-voltage power supply board ③ with unlatching the seven claws, 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 .

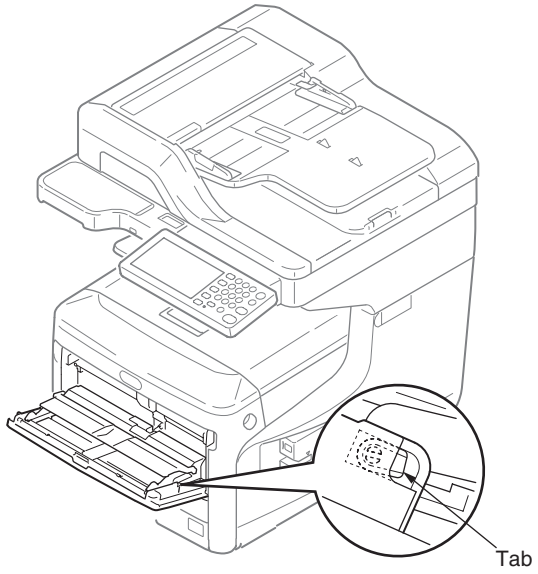


4.2.22 Frame Assy.-Front

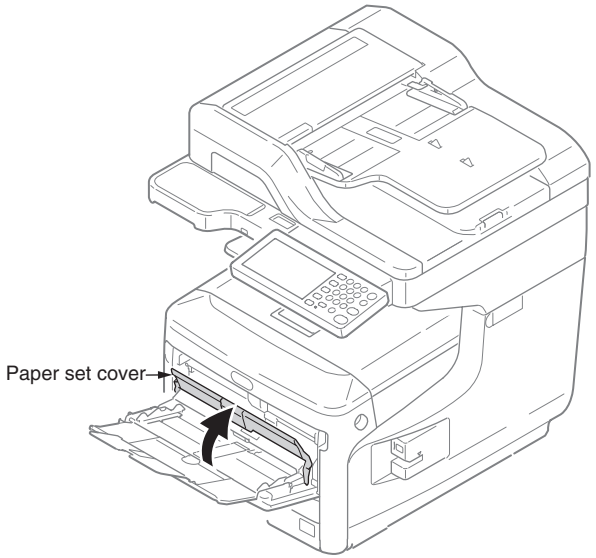
(1) Turn off the MFP and open the MP tray forward by inserting your fingers into the front recesses.



(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.)



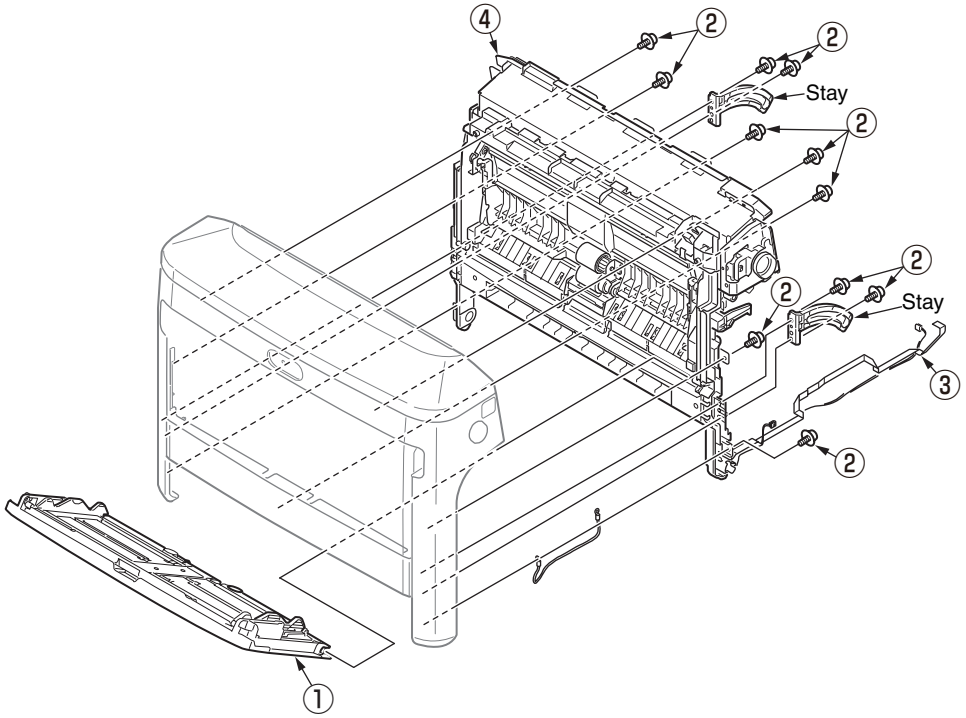
(3) Open the paper set cover.



(4) Release the cover AssyMPT ① at the left side first and then the right side. (Be careful not to deform the spring on the right-lower end side.)

(5) Detach the front cover Assy. (Refer to section 4.2.17)

(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 .

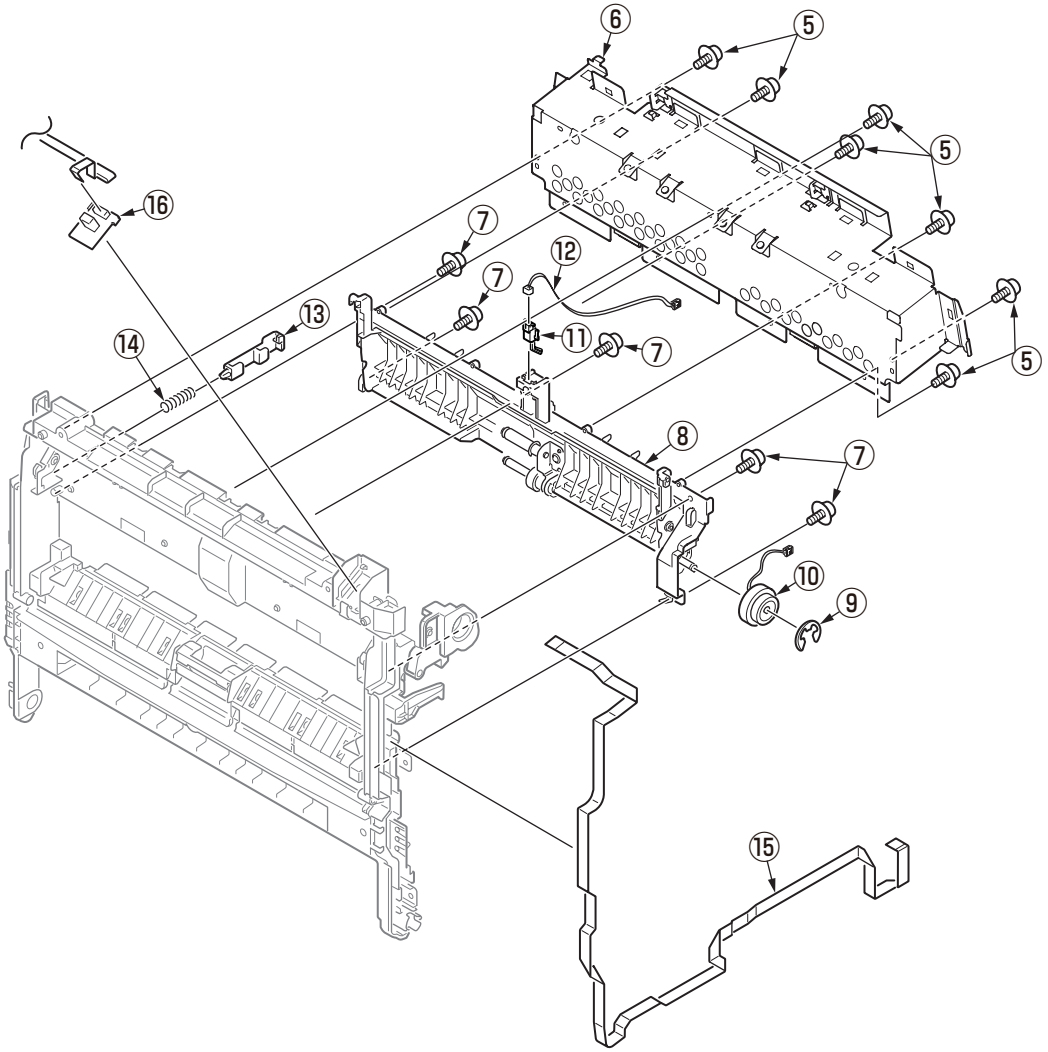
(9) Remove a E-ring ⑨ and detach the clutch ⑩ .

(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 .



4.2.23 Roller Assy.-registration

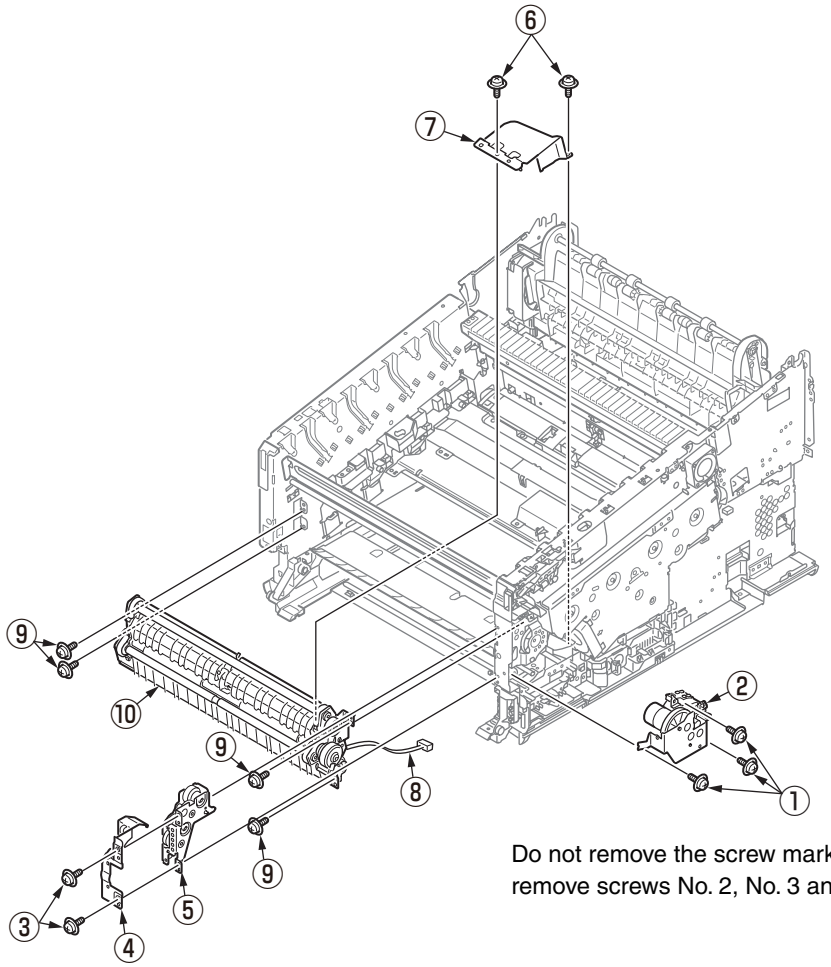
(1) Detach the front cover Assy. (Refer to section 4.2.17)

(2) Remove the three screws (silver) ① and pull out the gear Assy. hopping ② .

(3) After detaching the cover gear MPT ③ , remove the two screws (silver) ④ and detach the gear Assy. MPT ⑤ .

(4) Remove a screw (silver) ⑥ , detach the cover Conn ⑦ , and disconnect the cable ⑧ from the clamp.

(5) Remove the four screws (silver) ⑨ and detach the roller Assy. registration ⑩ .



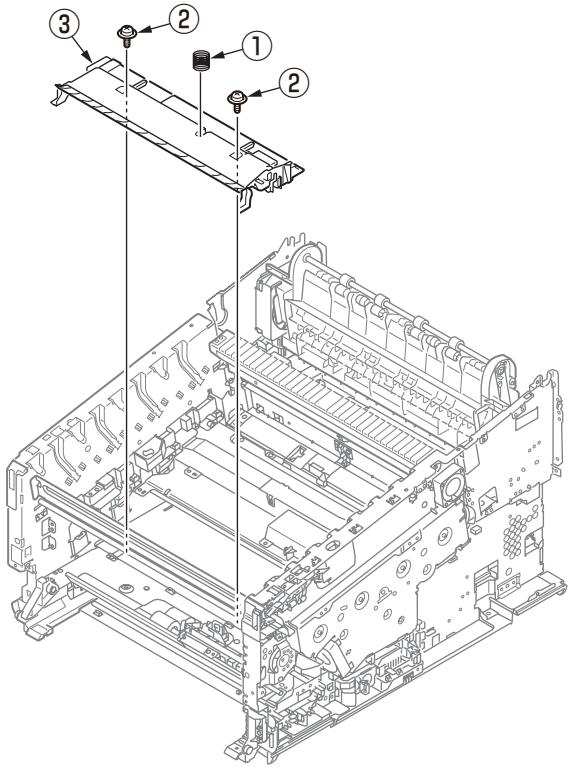
Do not remove the screw mark No. 1;
remove screws No. 2, No. 3 and No. 4.

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

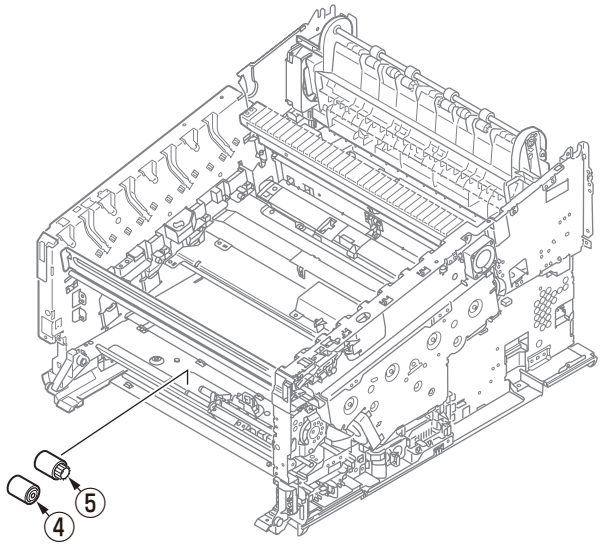
(1) Remove the roller Assy.-registration. (Refer to section 4.2.23)

(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 .

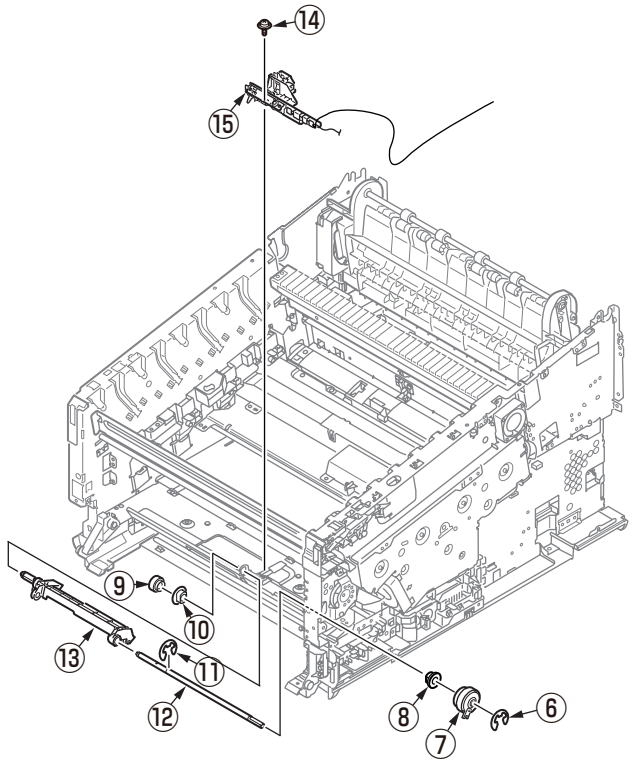


(5) Remove the E-ring ⑥ , the clutch hopping ⑦ , bearing ⑧ .

(6) Remove the gear-feed ⑨ , bearing ⑩ , E-ring ⑪ .

(7) Remove the shaft hopping ⑫ and frame-Assy.-pickup ⑬ .

(8) Remove the round-head screw (black) ⑭ and the holder sensor Assy. ⑮ .



4.2.25 Low-voltage power supply Assy.

⚠Warning	Electric shock hazard.	

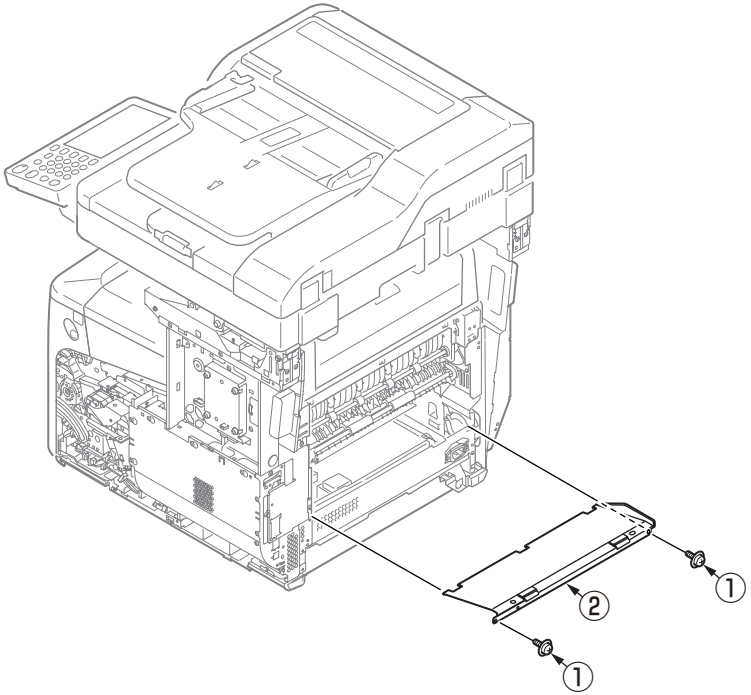
Be sure to unplug the AC cable as some circuits keep working while the power cable is connected even after the power is turned off.

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.

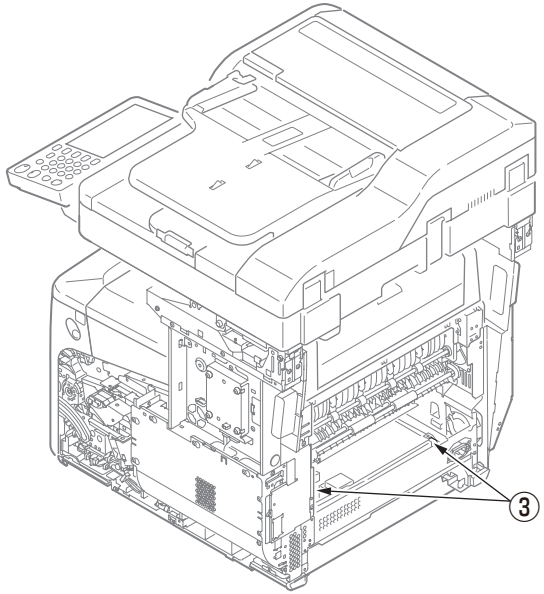
After the AC cord is unplugged, the capacitor may take about one minute to discharge completely, or could not discharge due to PCB breakdown. Use caution about electric shock.

(1) Detach the rear cover Assy. (Refer to section 4.2.5)

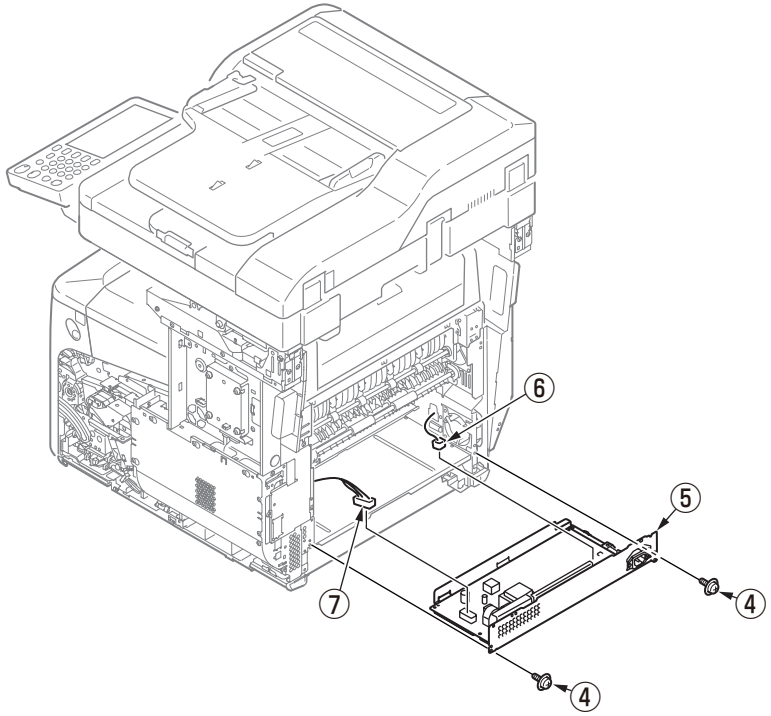
(2) Remove the two screws (silver) ① and detach the cover POW ② .



(3) Disconnect the two cables ③ .



(4) Remove the two screws (silver) ④ and detach the low-voltage power supply Assy. ⑤ with disconnecting of the cable ⑥ of Plate Assy.-Conecter and the cable ⑦ to the main board.



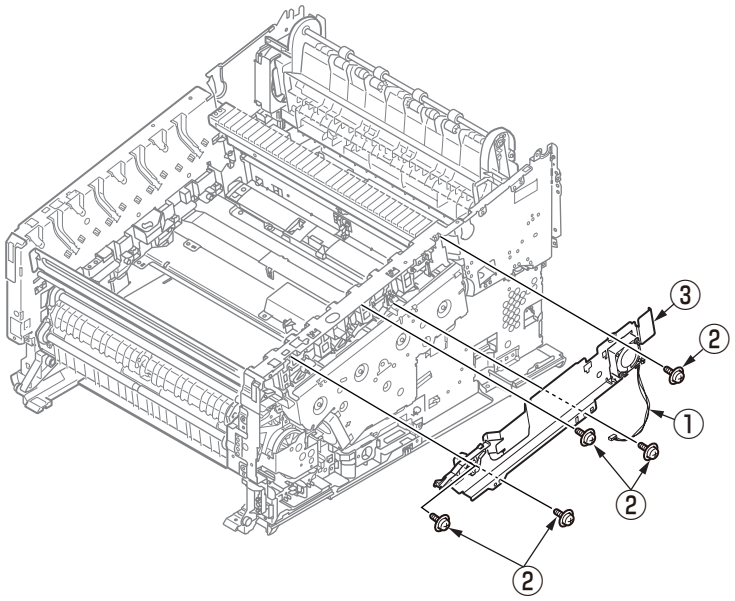
4.2.26 Motor Assy.-belt and motor Assy-ID

(1) Remove the main board Assy. (board Assy-6CU). (Refer to section 4.2.8)

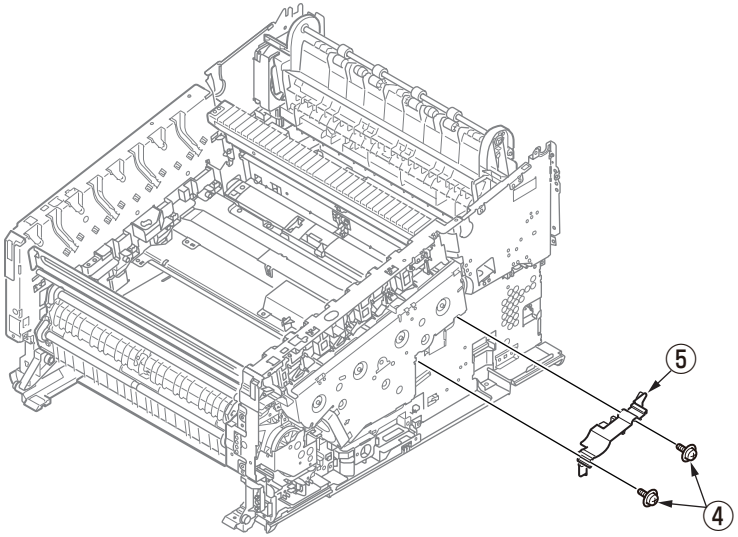
(2) Remove the Plate-Stay(R), Plate-Board-R-Assy and Plate-Support(Stay). (Refer to section 4.2.16)

(3) Disconnect the cable ① from the clamp.

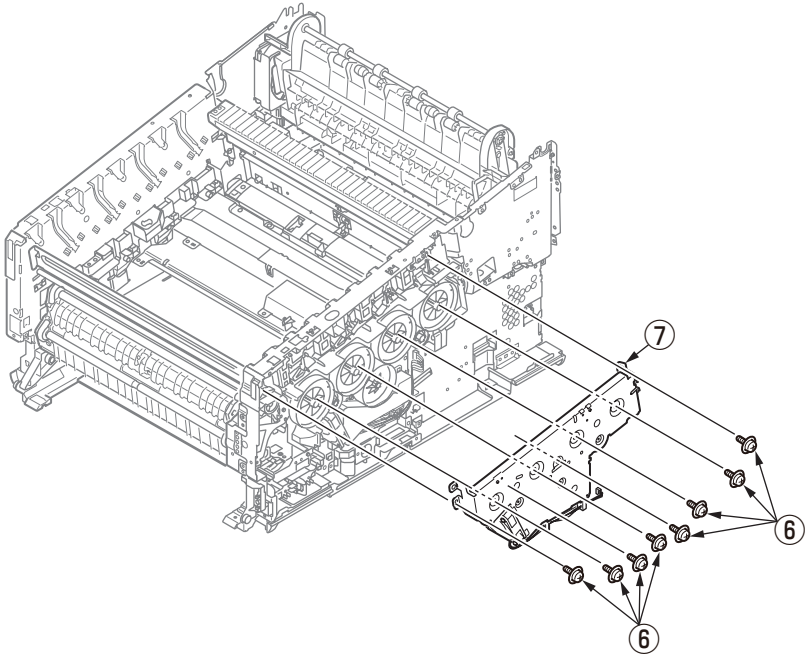
(4) Remove the five screws (silver) ② and detach the plate Assy.-toner ③ .



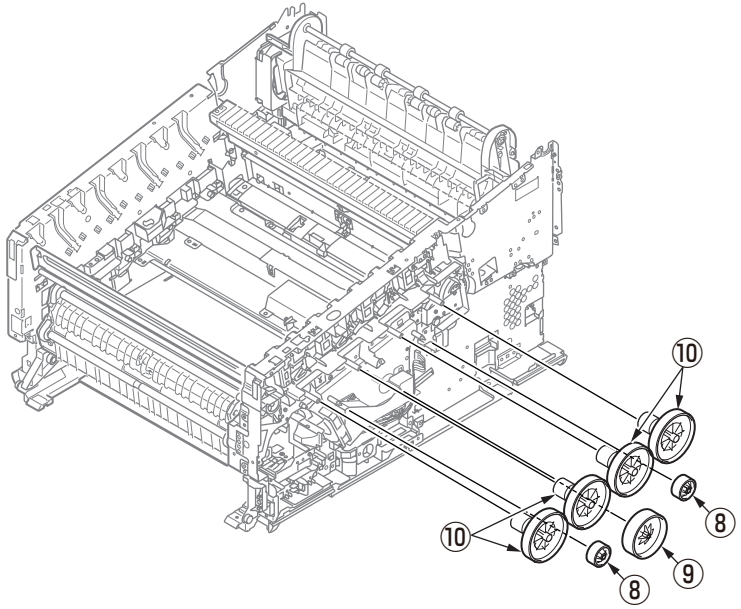
(5) Remove the two screws (silver/8mm) ④ and detach the cover gear belt ⑤ .



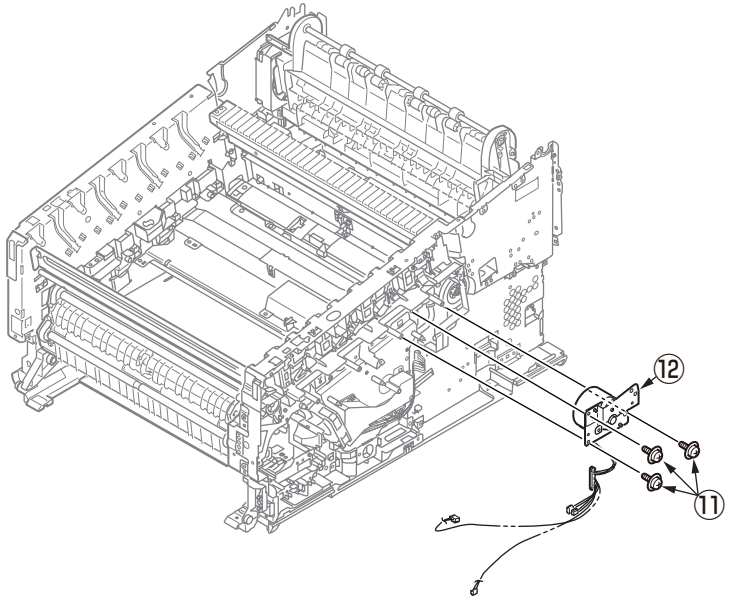
(6) Remove the eight screws (silver) ⑥ and detach the plate Assy. ID gear ⑦ .



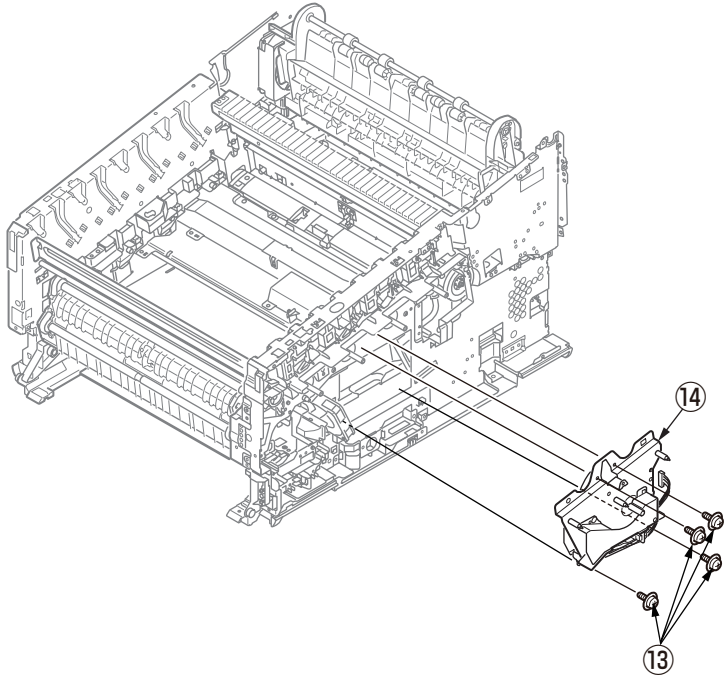
(7) Remove the gear-idler-A ⑧ , the gear-idler-B ⑨ , and the gear-reduction ID ⑩ .



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



(9) 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.

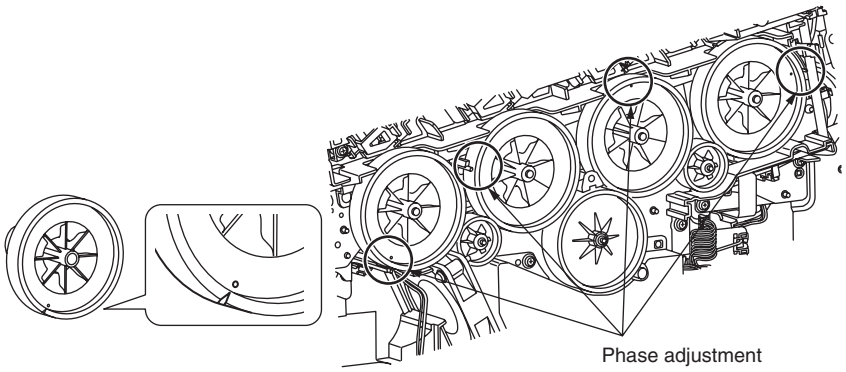


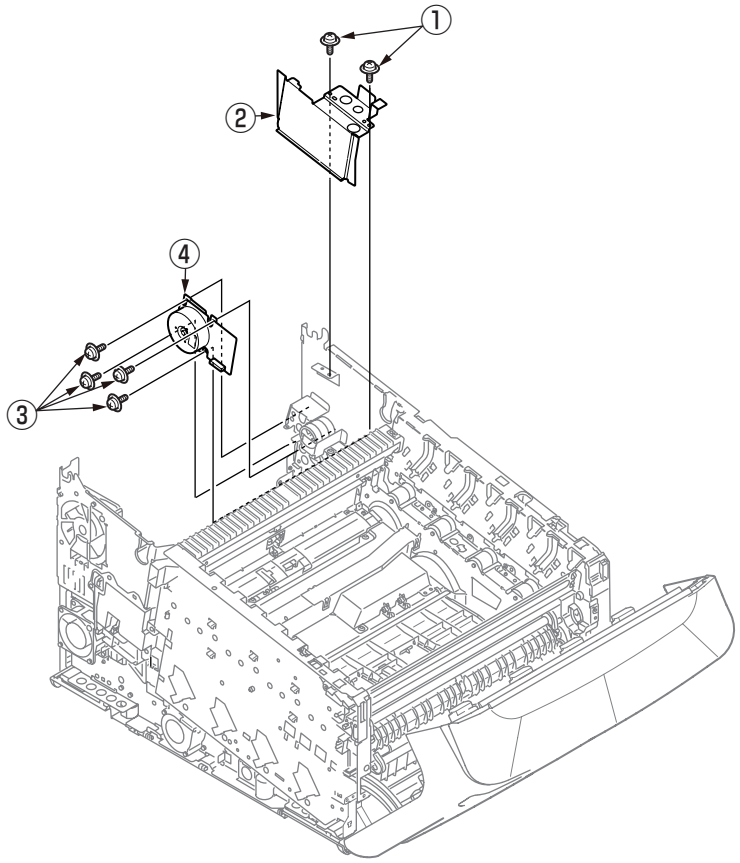
Illustration of phase adjustment of gear-reduction ID

4.2.27 Motor DC-FU (fuser motor) / Plate cover FU

(1) Detach the guide Assy.-eject. (Refer to section 4.2.14)

(2) Remove the two screws (silver) ① and the plate cover FU ② .

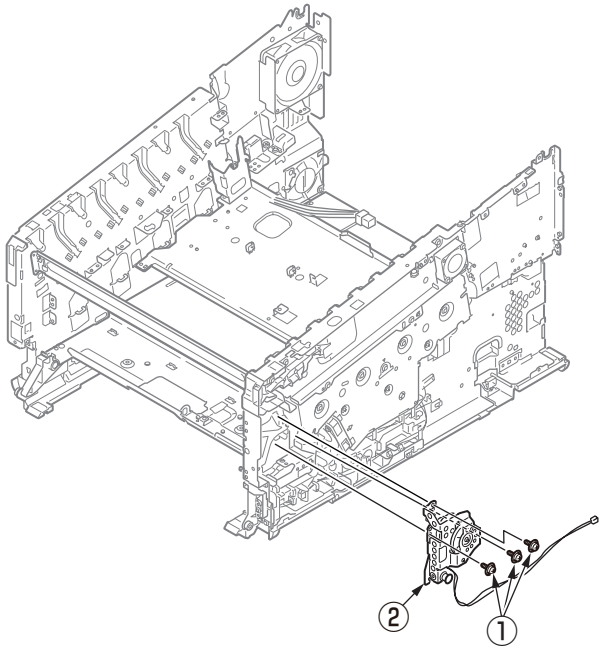
(3) Remove the four screws (silver/8mm) ③ and the motor DC-FU ④ .



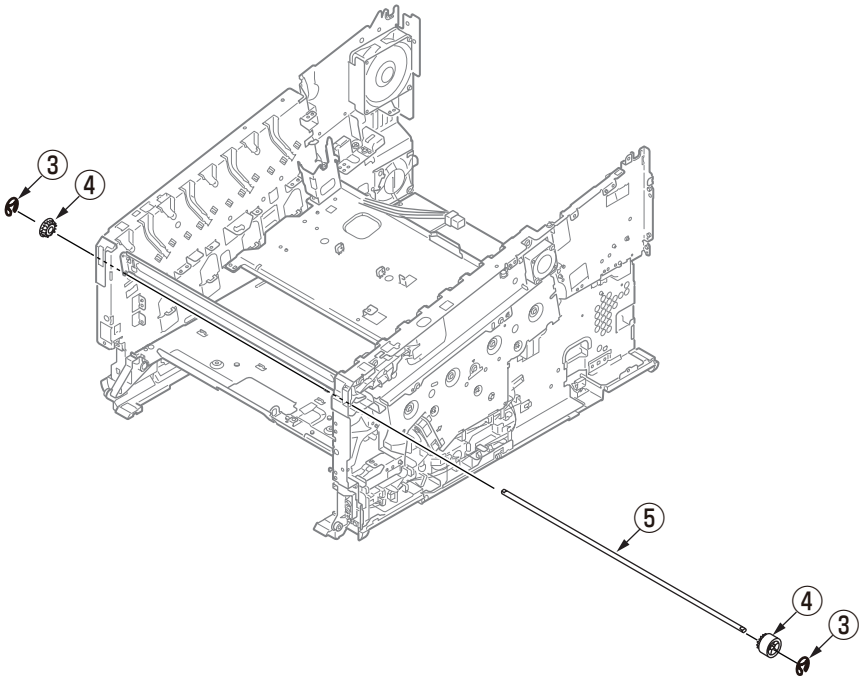
4.2.28 Side-R Assy. and side-L Assy.

(1) See sections 4.2.1 to 4.2.26.

(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.

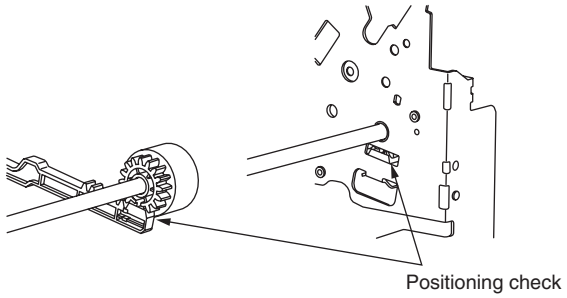
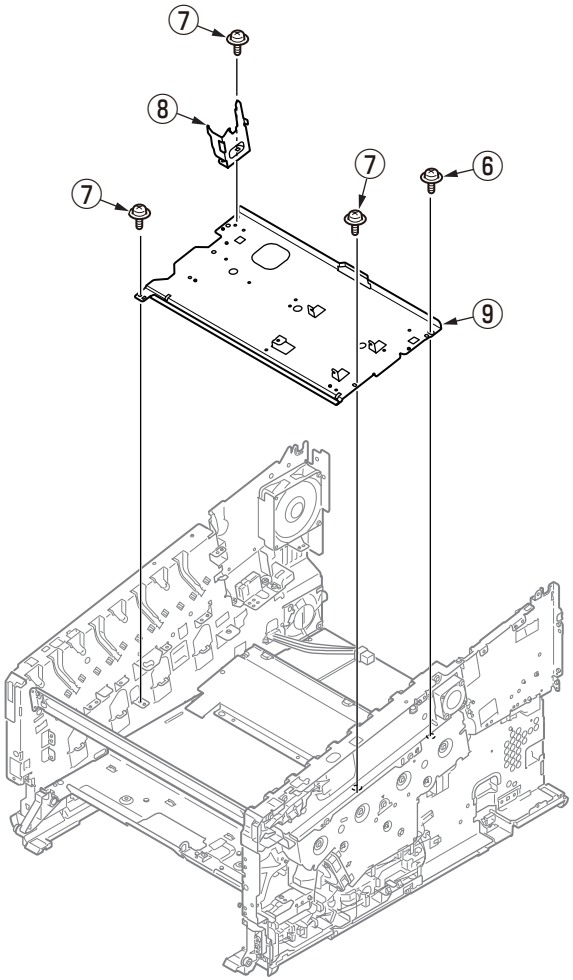
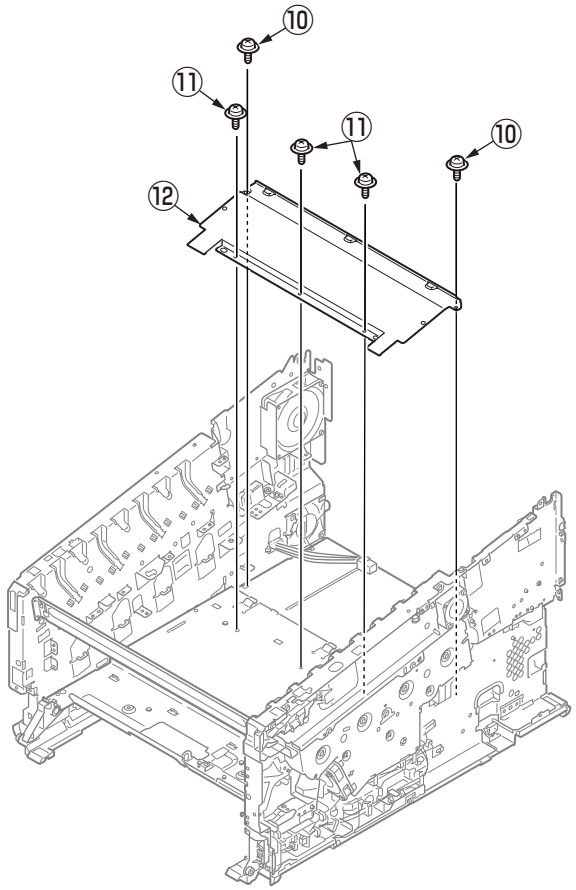


Illustration of (right and left) gear lift-up positioning

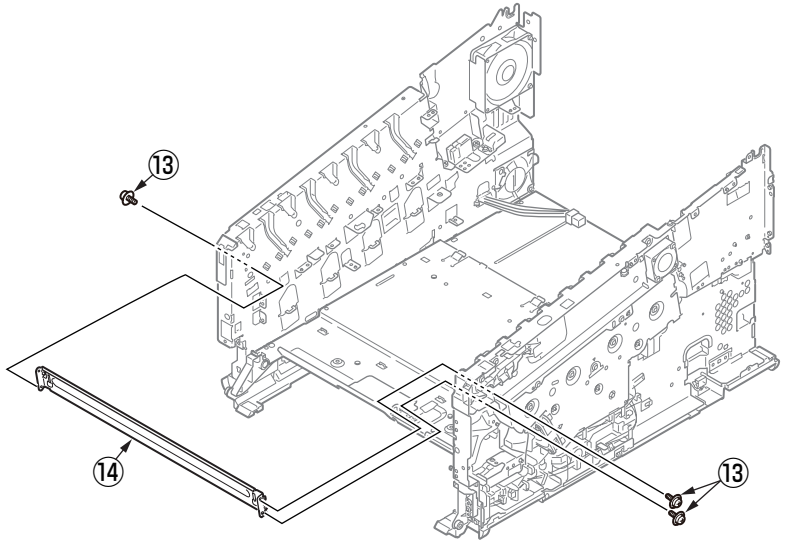
(4) Remove the screw (silver) ⑥ and the three round-head screws (black) ⑦ and detach the plate guide belt ⑧ and the plate base registration ⑨ .



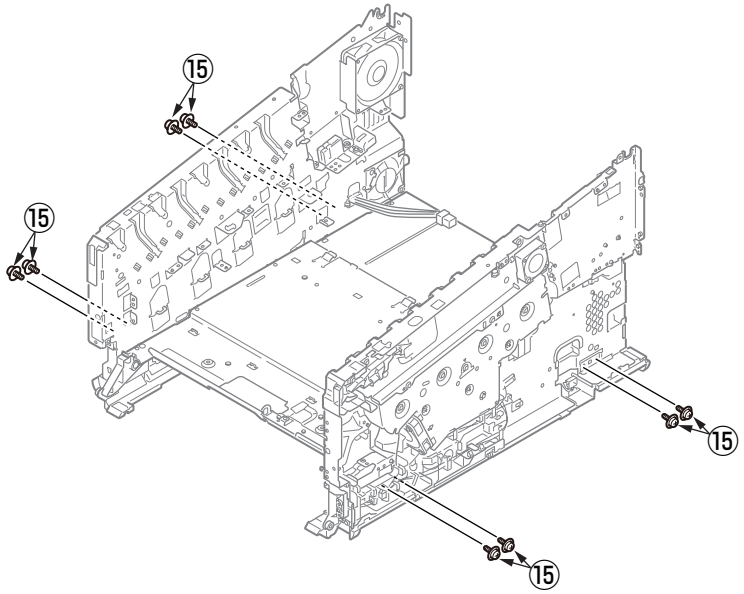
(5) Remove the two screws (silver) ⑩ and the three round-head screws (black) ⑪ and detach the plate cover POW ⑫ .



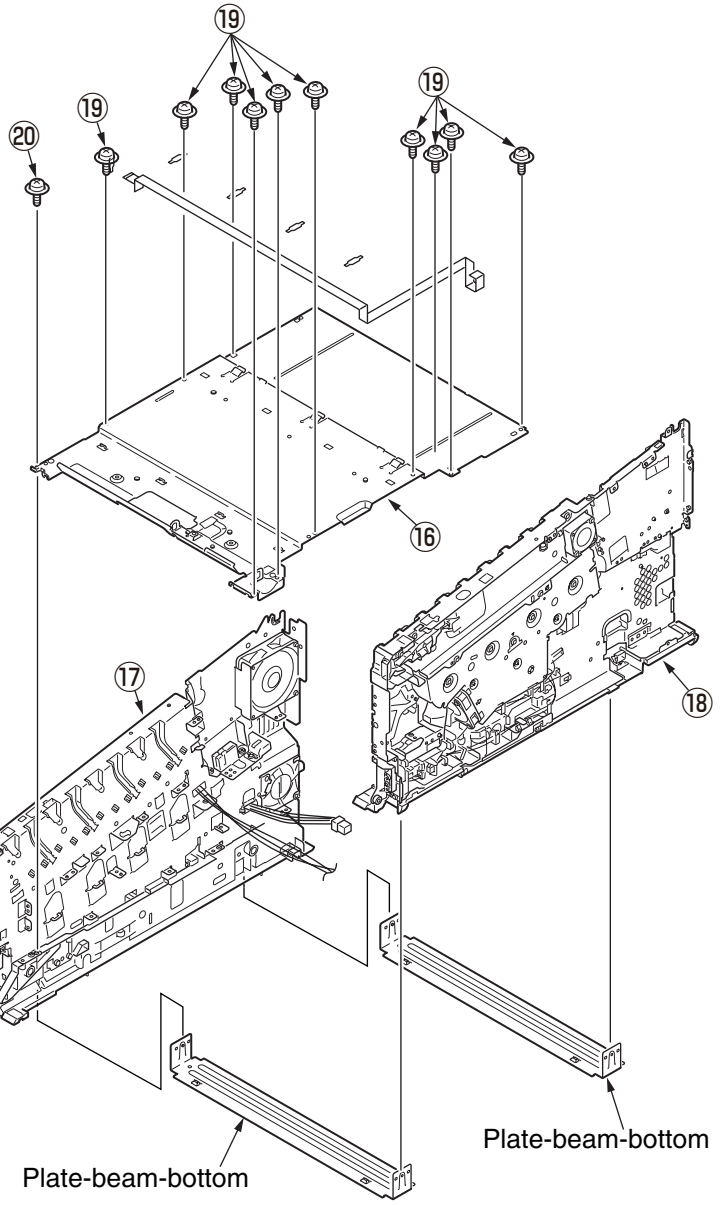
(6) Remove the three screws (silver) ⑬ and detach the plate-beam-front ⑭ .



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



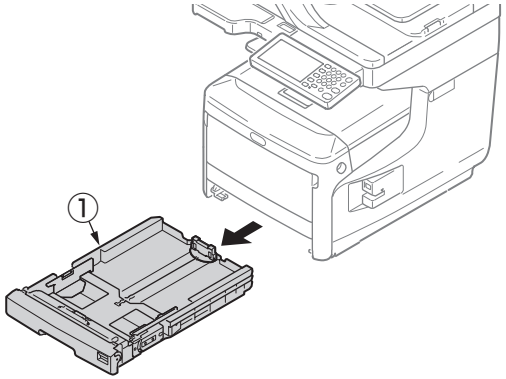
(8) Remove the eleven screws, ten screws (silver) ⑲ and the screw (black) ⑳ that are fixing the plate base ⑯ and both of the plate Assy. side-L ⑰ and -R ⑱ , and detach the plate Assy. side-L ⑰ and -R ⑱ .



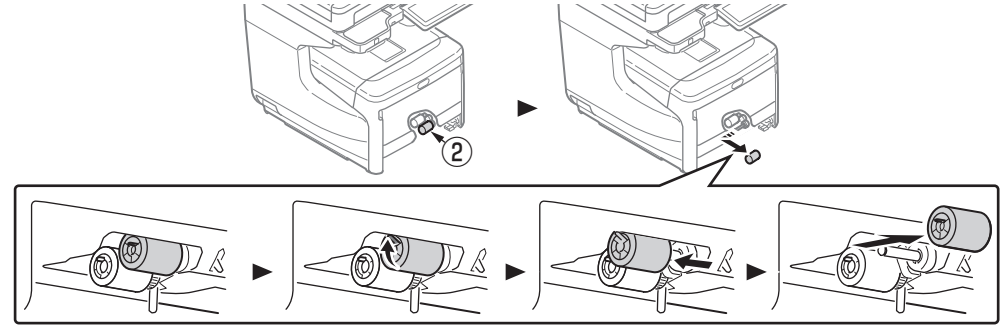
4.2.29 Feed rollers (Tray 1/2/3/4)

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

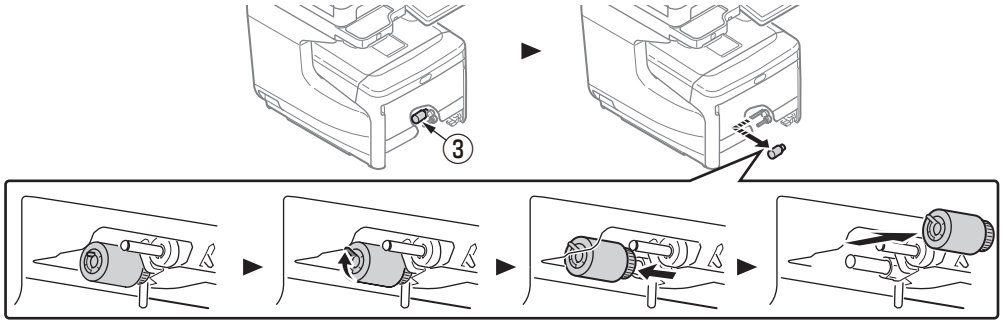
(1) Turn off the MFP and remove the paper cassette ① .



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

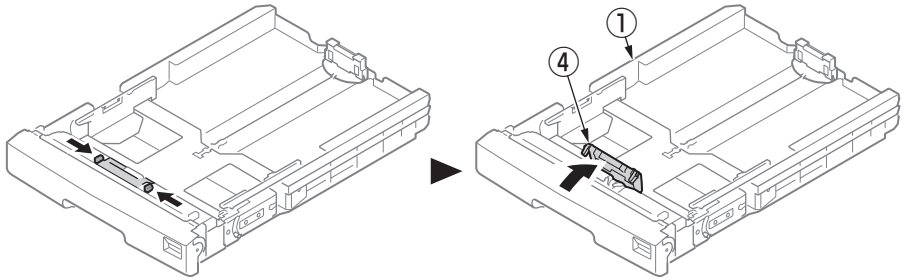


Near side

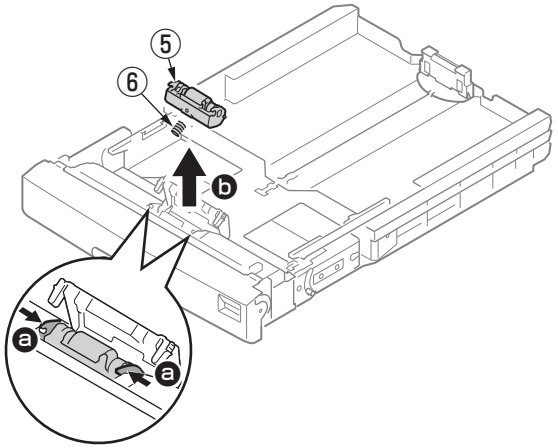


Far side

(3) Bend the protrusion on both side of the cover ④ on the paper cassette, and open the cover ④ by turning the cover ④ to the direction of in following figure.

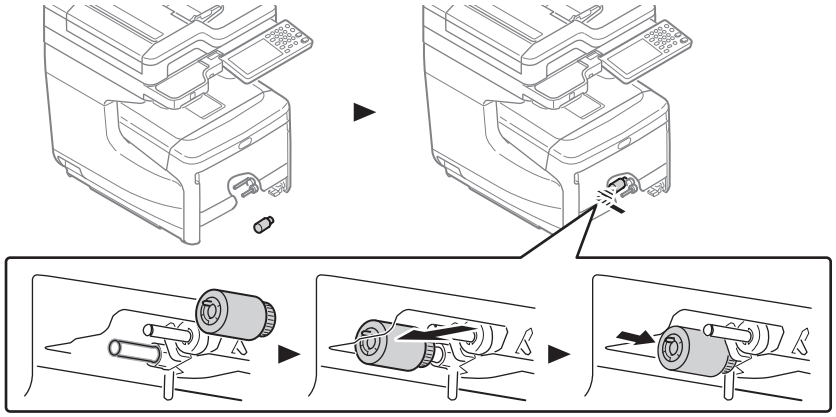


(4) Remove the separation roller ⑤ and the spring ⑥ while pressing the both ends of the separation roller ⑤ tray inward that are caught by the protrusions.



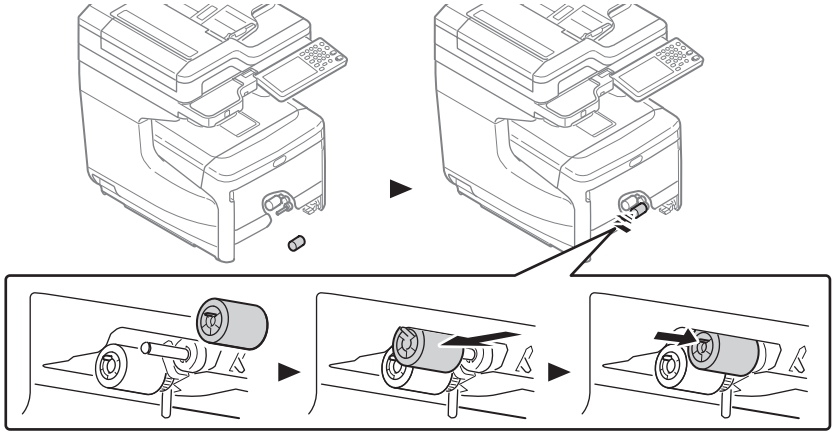
Notes on attaching paper feed rollers:

1. Insert a new paper feed roller (with a gear) ③ onto the inside shaft and turn it all the way in place.



Far side

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

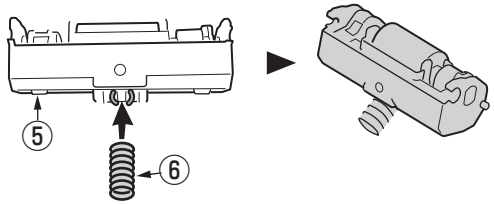


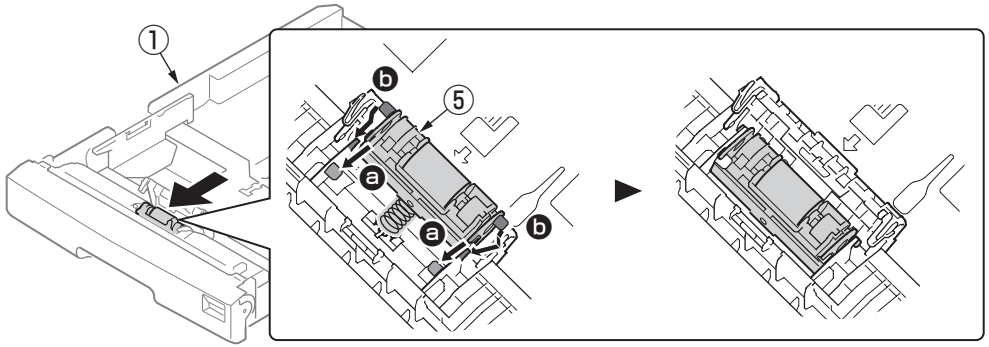
Near side

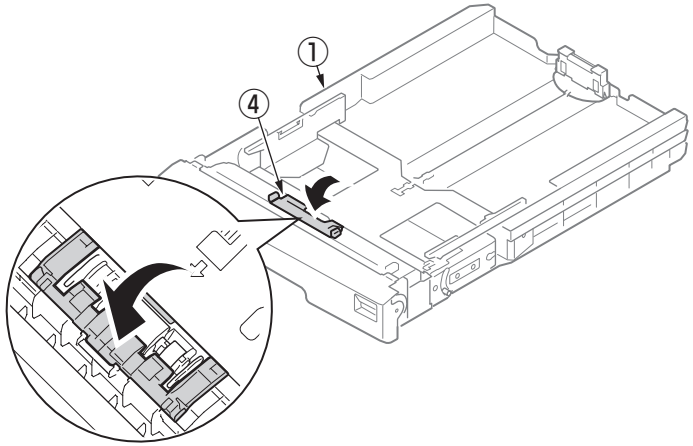
Check to make sure that the rollers do not come off.

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.

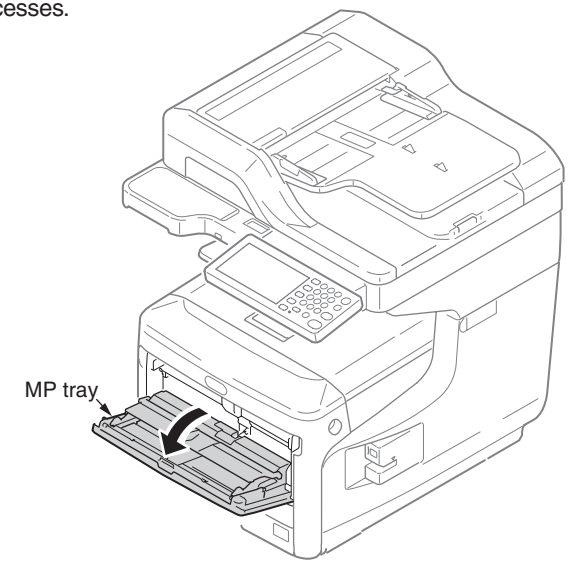




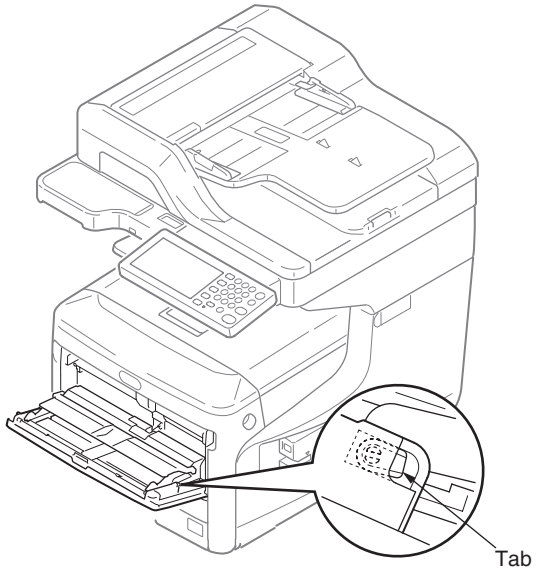


4.2.30 Paper feed rollers (MPT pick-up roller/MPT feed roller/MPT retard roller)

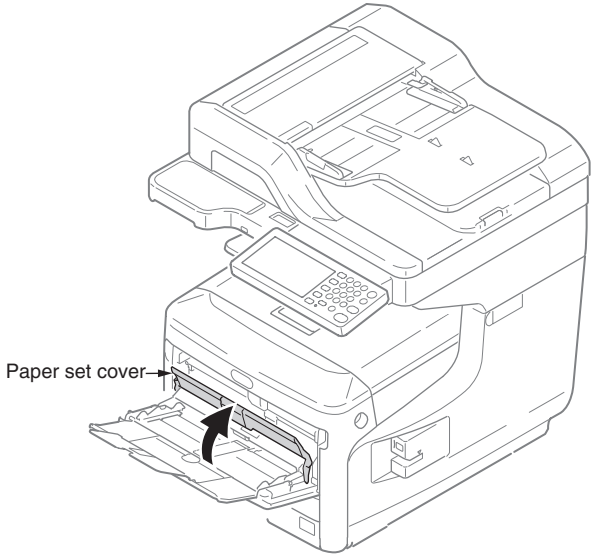
(1) Turn off the MFP and open the MP tray forward by inserting your fingers into the front recesses.



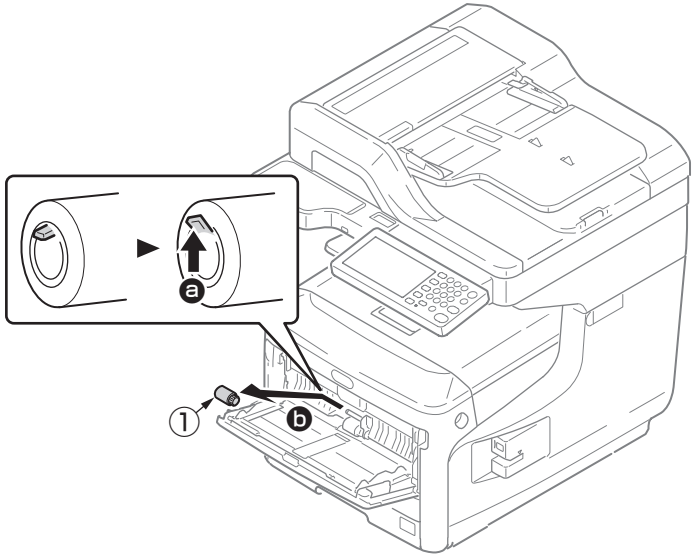
(2) Release the tab of the paper feed roller cover by pressing the right arm inward while lifting up the MP tray lightly. (Release the tab on the left side in the same manner.)



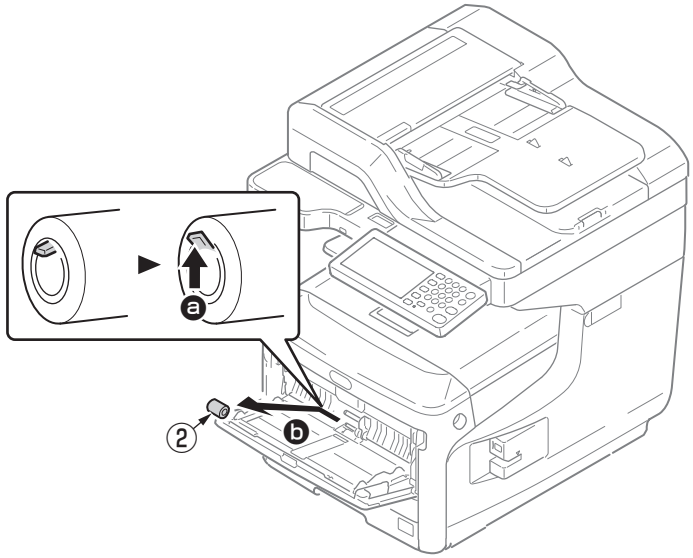
(3) Open the paper set cover.



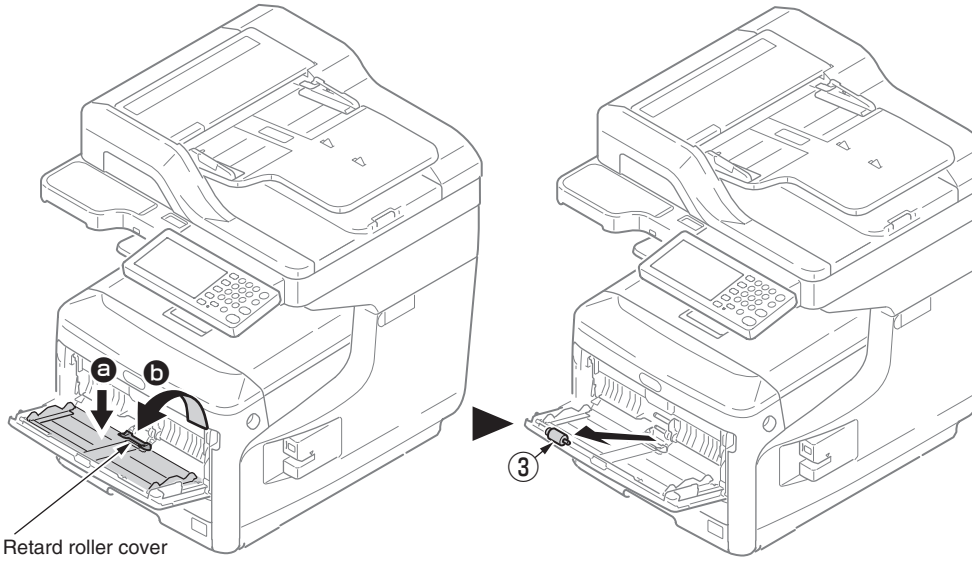
(4) While pressing the protrusion of the upper MPT pickup roller(without gear) ① outward, pull out the feed roller from its shaft.



(5) While pressing both the separation roller cover and the protrusion of the lower MPT feed roller (with gear) 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 (without gear) ①, MPT feed roller (with gear) 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.

4.2.31 Fuser Connector

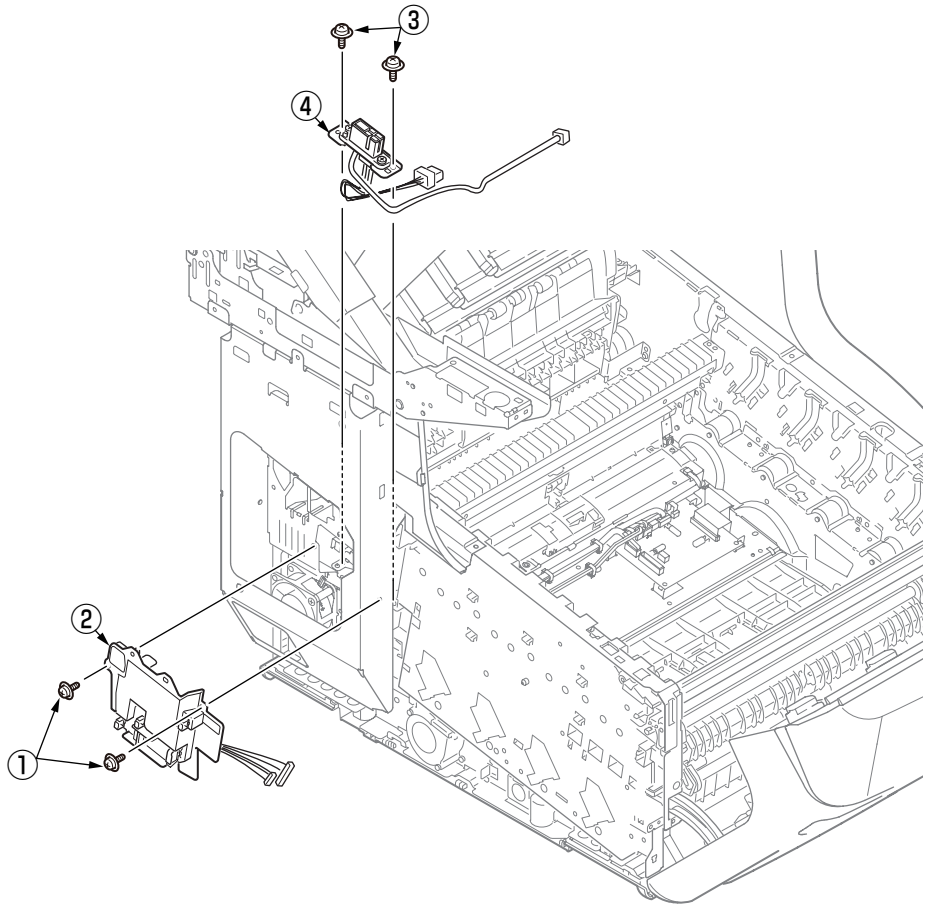
(1) Remove Image Drum Units, the Belt Unit and the Fuser Unit. (Refer to section 4.2.1 and 4.2.2)

(2) Remove the Cover-Side-L Assy.(Refer to section 4.2.3)

(3) Remove the cover Assy.-registration.(Refer to section 4.2.16)

(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 .



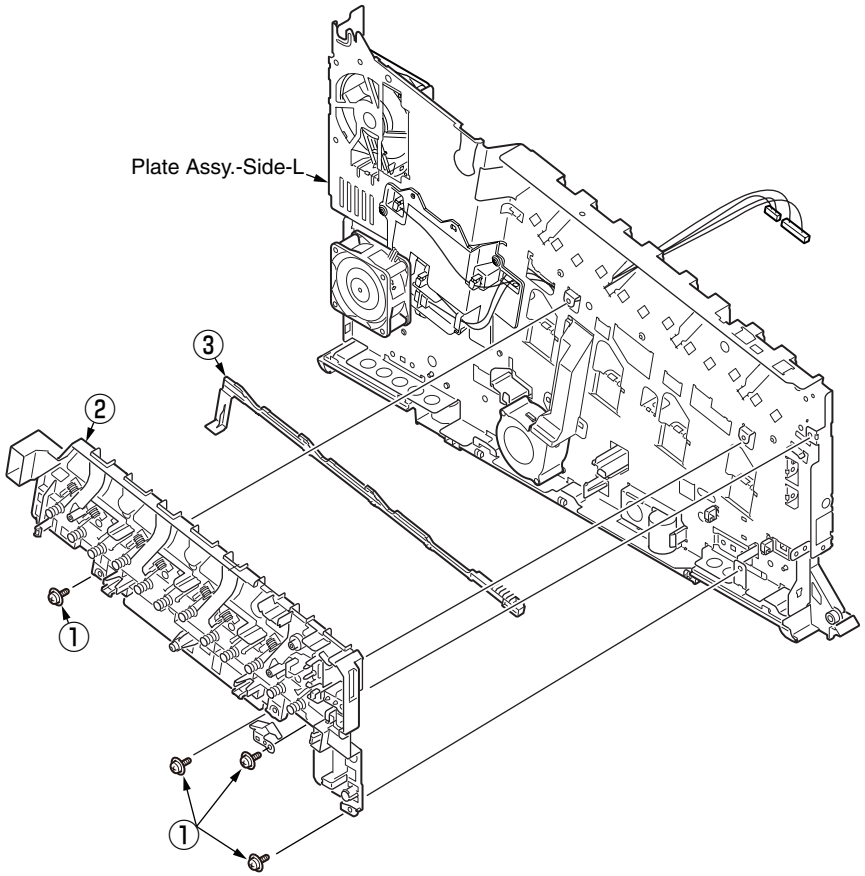
4.2.32 Guide Assy.-Side-L / Rack-L

(1) Refer to section 4.2.27.

(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 4.2.24.)



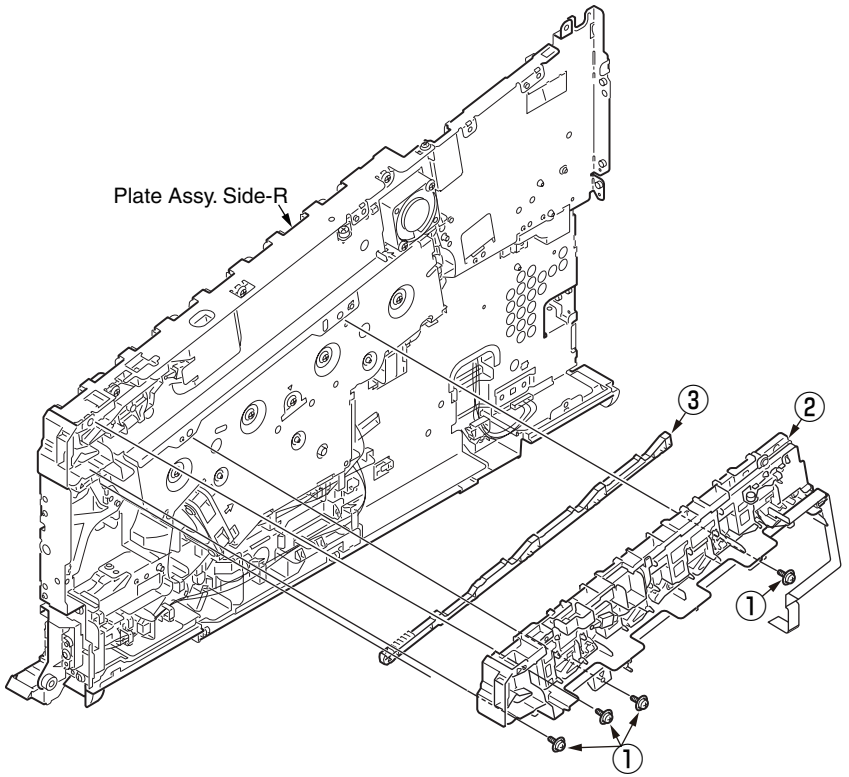
4.2.33 Guide Assy.-Side-R / Rack-R

(1) Refer to section 4.2.27.

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

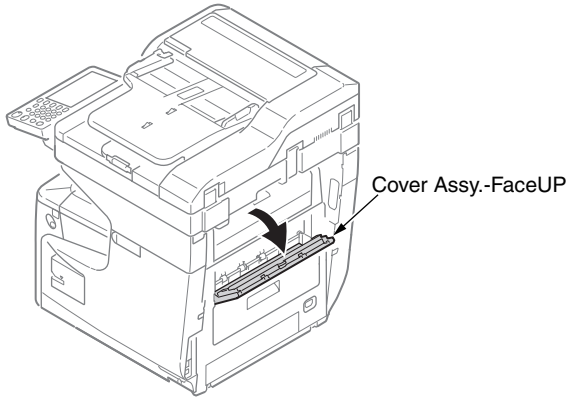
Notes on attaching:

To assemble the gear lift-up, match the phase of the right and left gears.(Refer to the 'Notes on attaching' in the section 4.2.24.)



4.2.34 Cover-FaceUP-B

(1) Open the Cover Assy.-FaceUP.

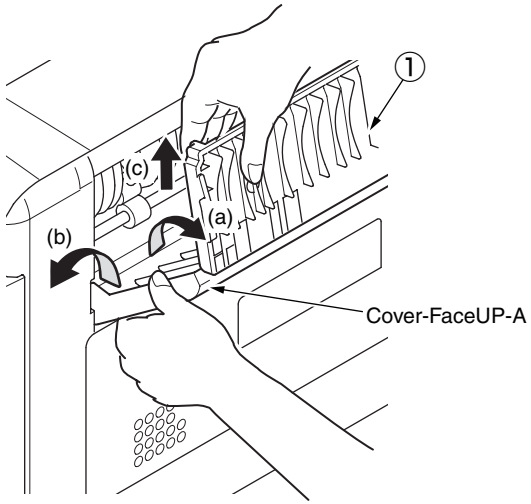


(2) To detach the Cover-FaceUP-B ① as following steps.

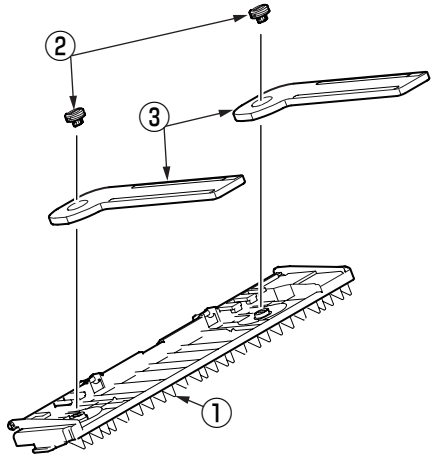
(a) : Turn around to about 90 degree the Cover-FaceUP-B ① as against the Cover-FaceUP-A.

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

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



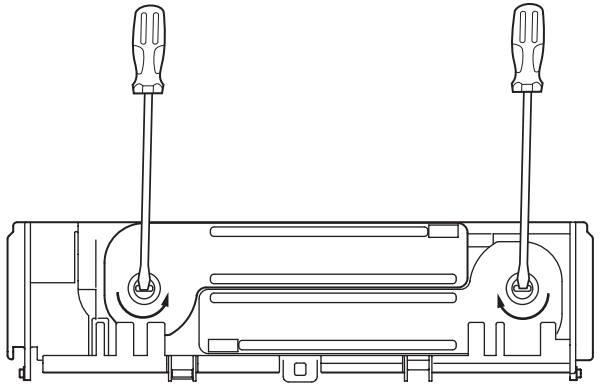
(3) Detach the Shoulder-Lock ② from the Cover-FaceUP-B ① by using the tool whose head is flat(ex. flat-blade screwdriver), and remove two Support-Papers ③ .



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

<Direction of to rotate for Shoulder-Locks ② >

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



4.3 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

EM-D110: MOLYKOTE EM-D110

HP-300: MOLYKOTE HP-300

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

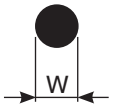
FL: FLOIL GE334C

HANARL: HANARL SF-133

C-9300: Tetra C-9300

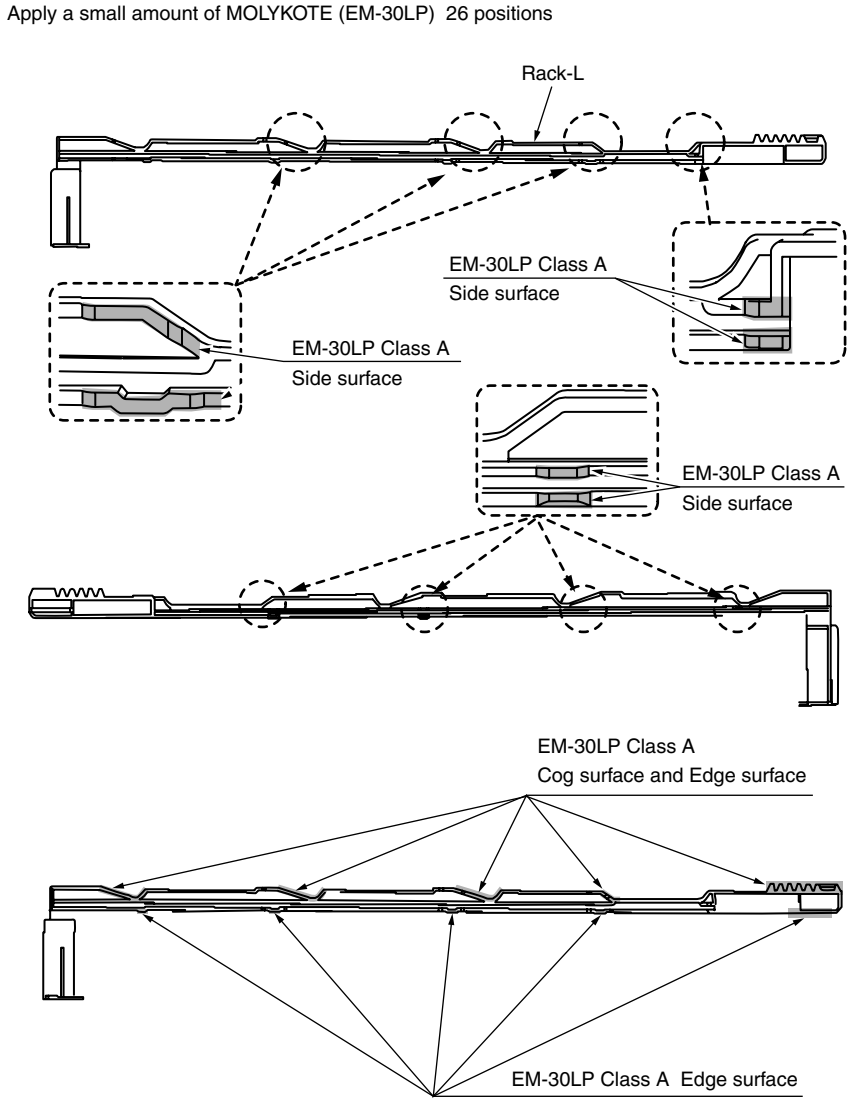
(2) Standard of amount of grease

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							

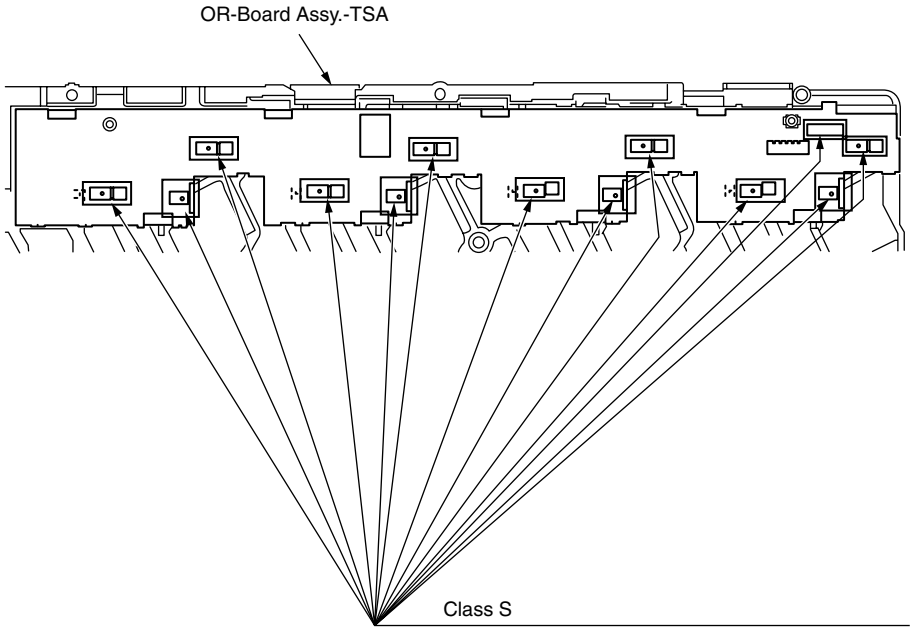


4.3.1 Printer section

① Plate Assy.-Side-L

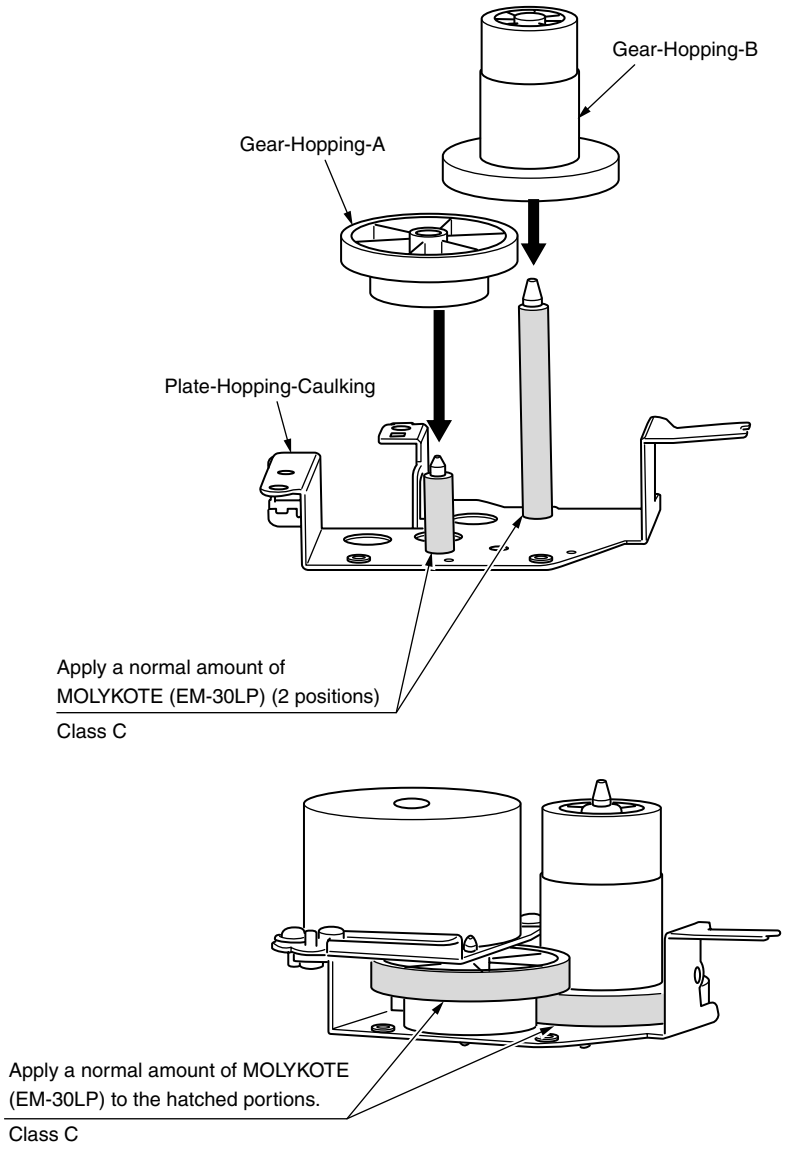


② Guide Assy.-Side-R

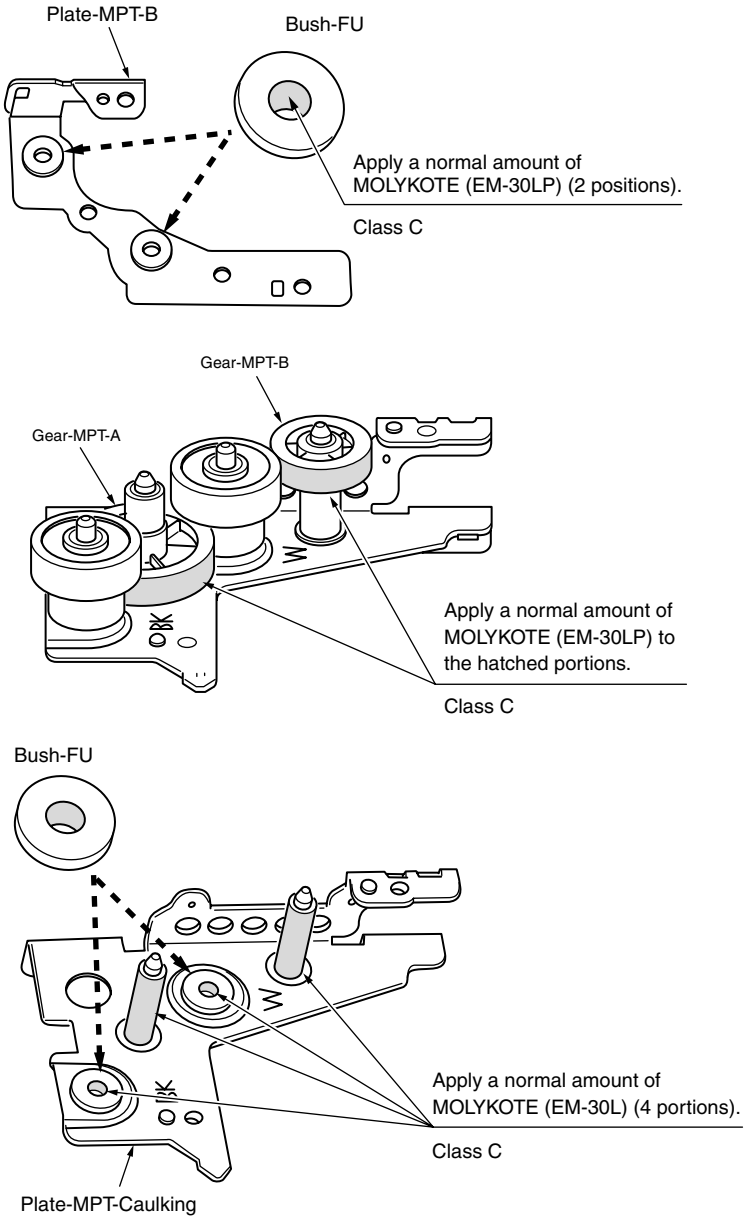


After polish the terminals to luster with BETCOM M-3, Tetra (C-9300) is soaked into cotton swab a little (Class S), and it coated on terminals. (13 positions)

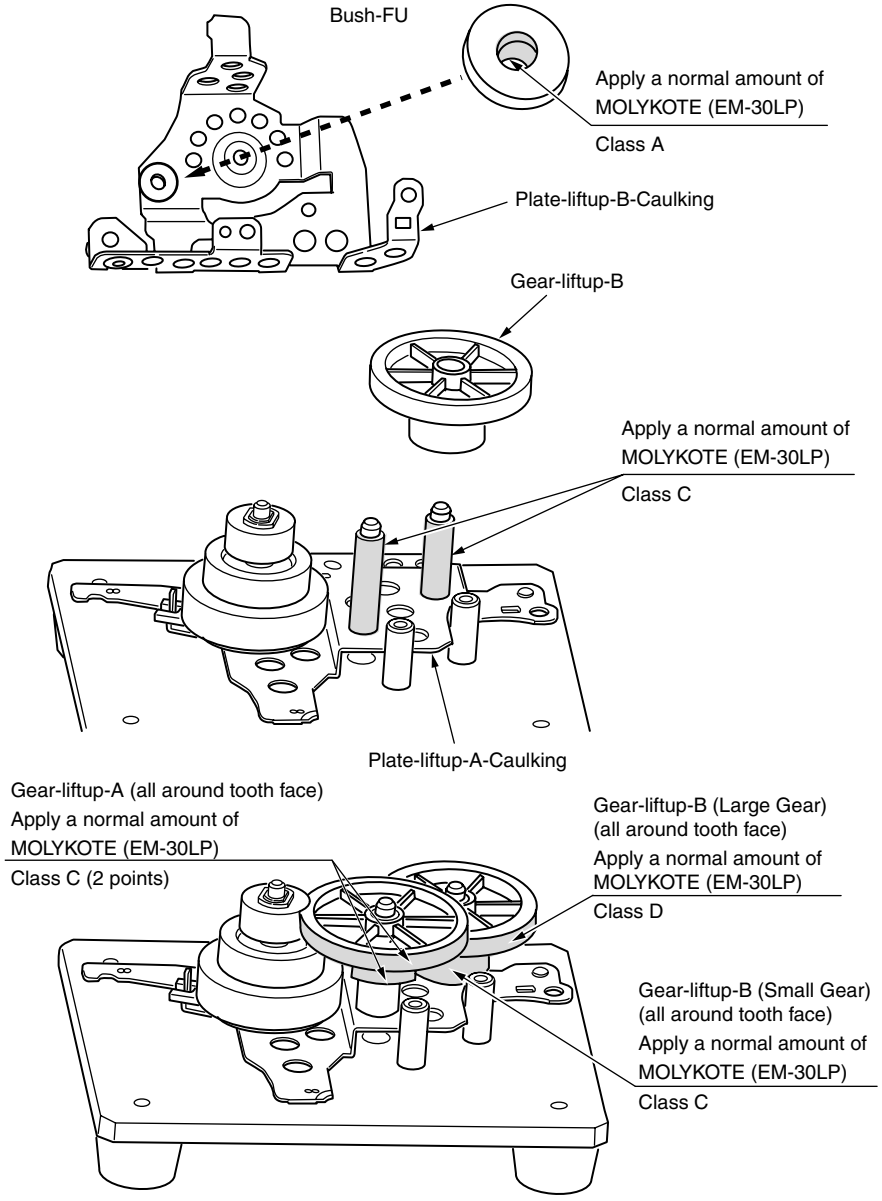
③ Gear Assy.-Hopping



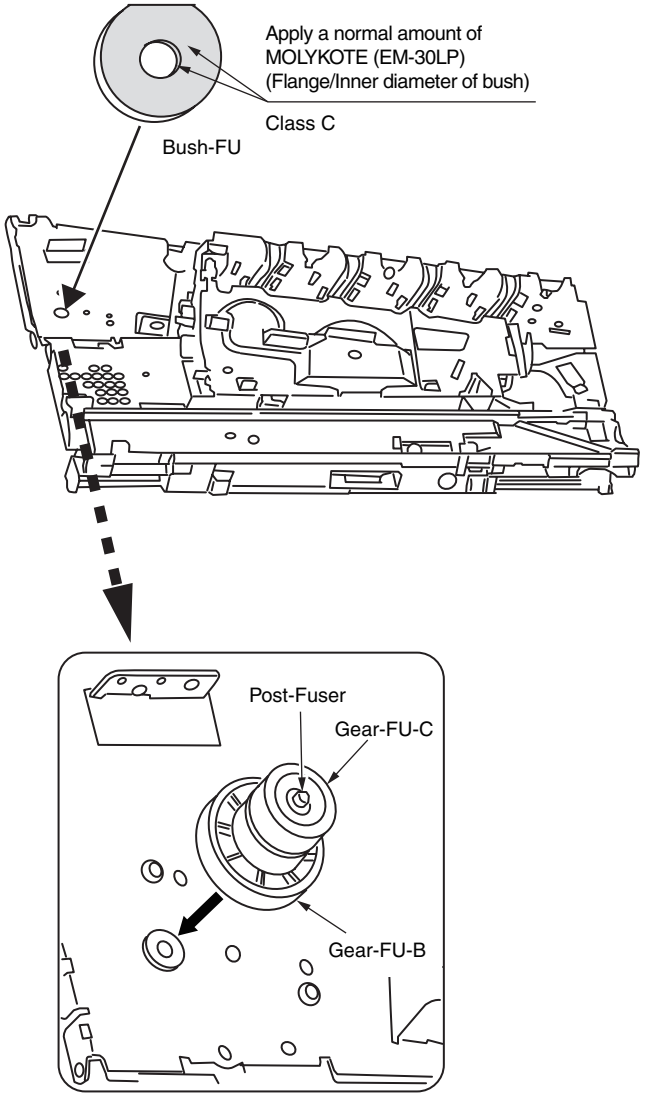
④ Gear Assy.-MPT



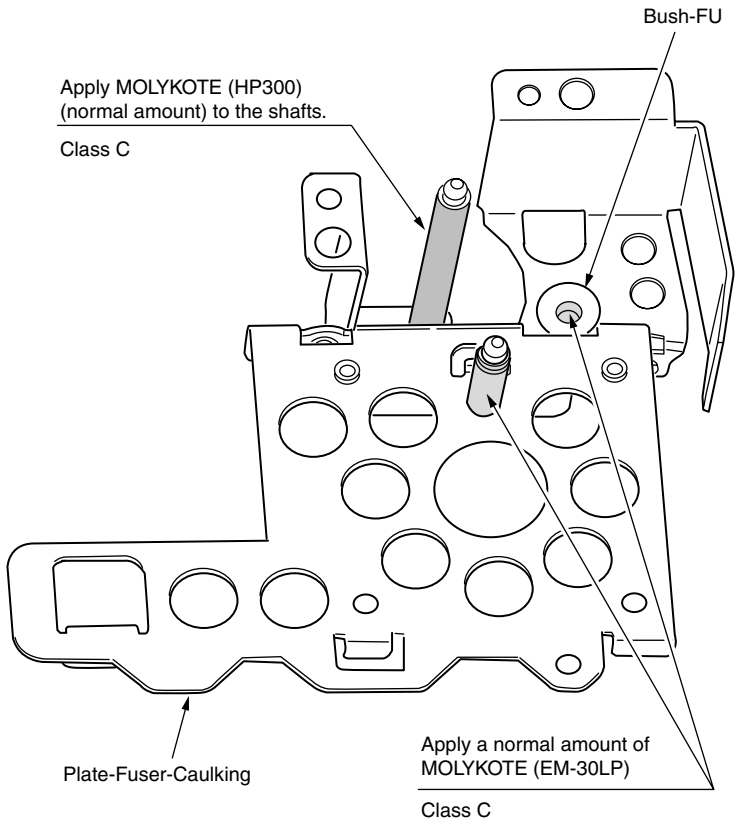
⑤ Gear Assy.-ID-Liftup



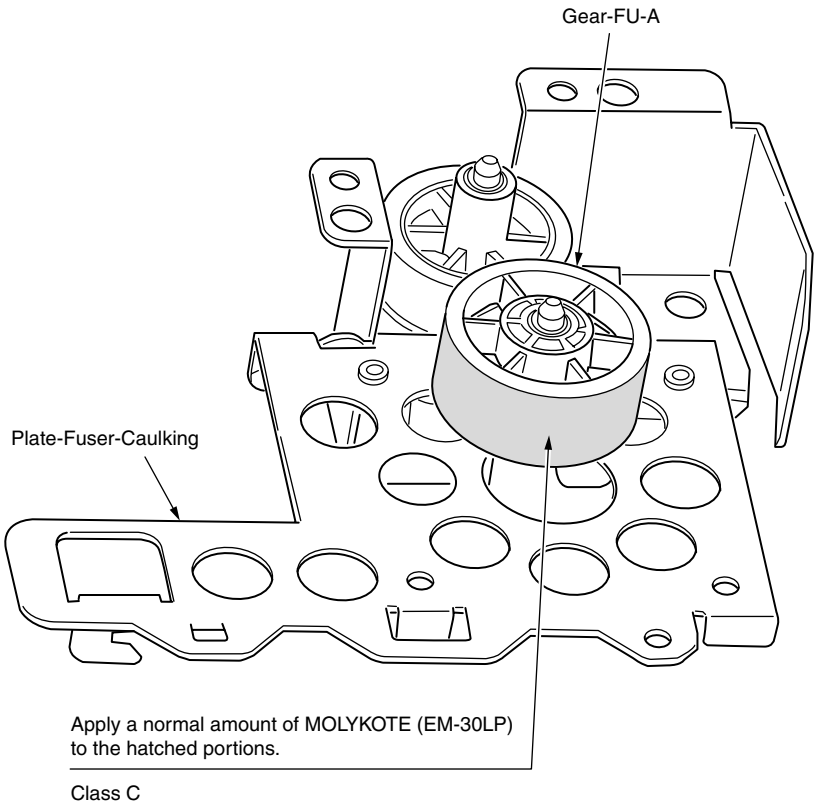
⑥ -1 Plate Assy.-Side-R



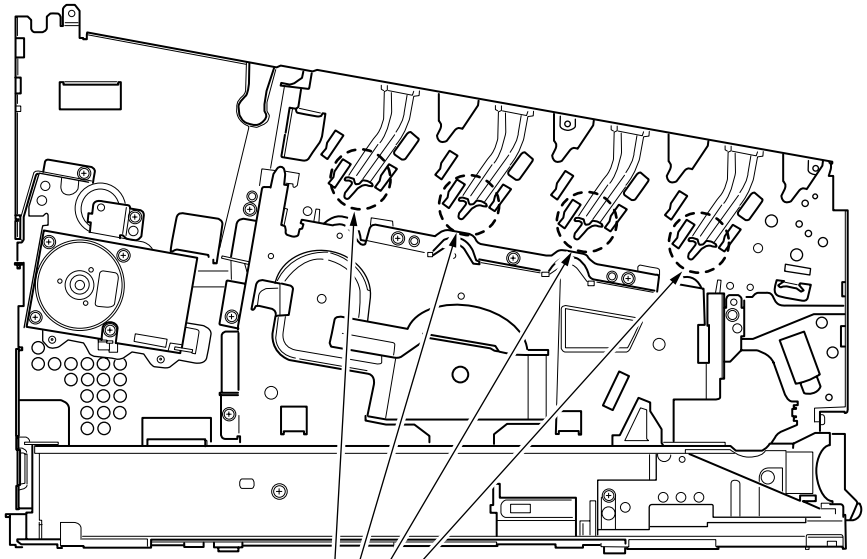
⑥ -2 Plate Assy.-Side-R



⑥ -3 Plate Assy.-Side-R



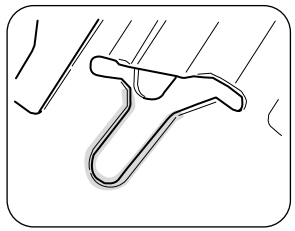
⑥ -4 Plate Assy.-Side-R



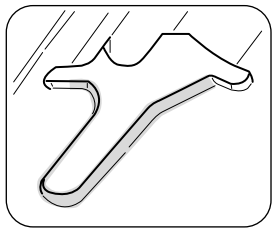
Apply a normal amount of MOLYKOTE (EM-30LP) to the hatched portions

Class C (4 positions)

Expanded view

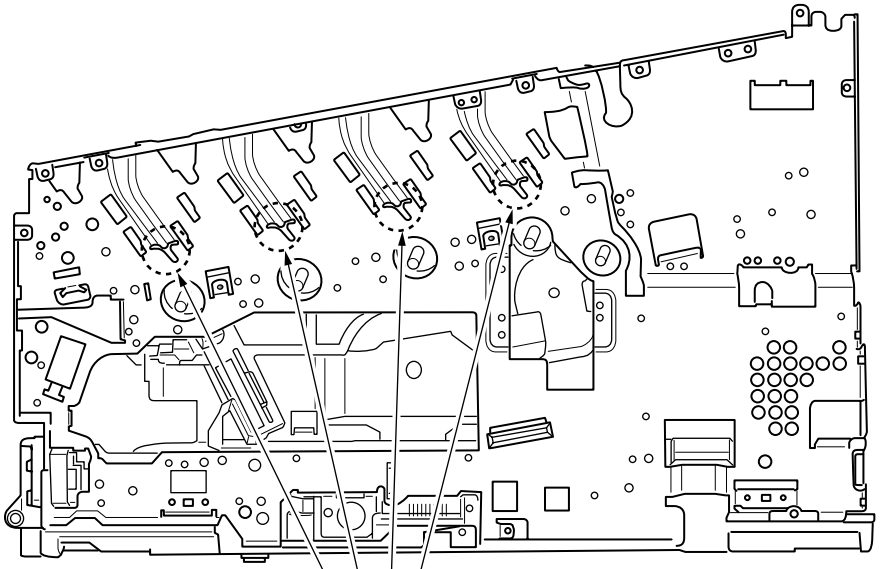


Apply EM-30LP (Class C) on the side surface. (4 positions)



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

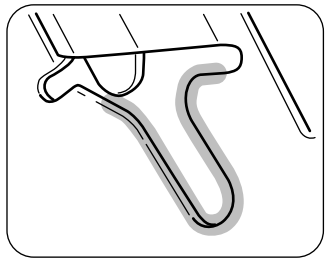
⑥ -5 Plate Assy.-Side-R



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

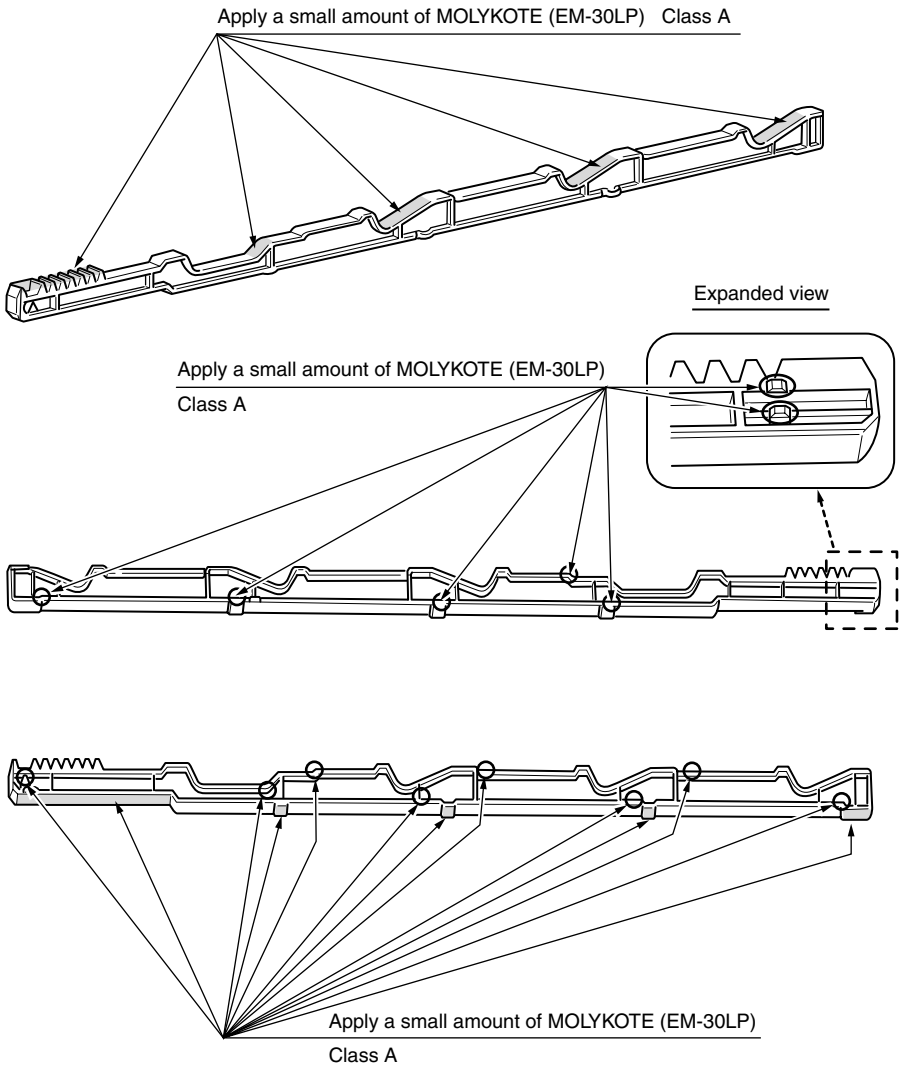
Class C

Expanded view

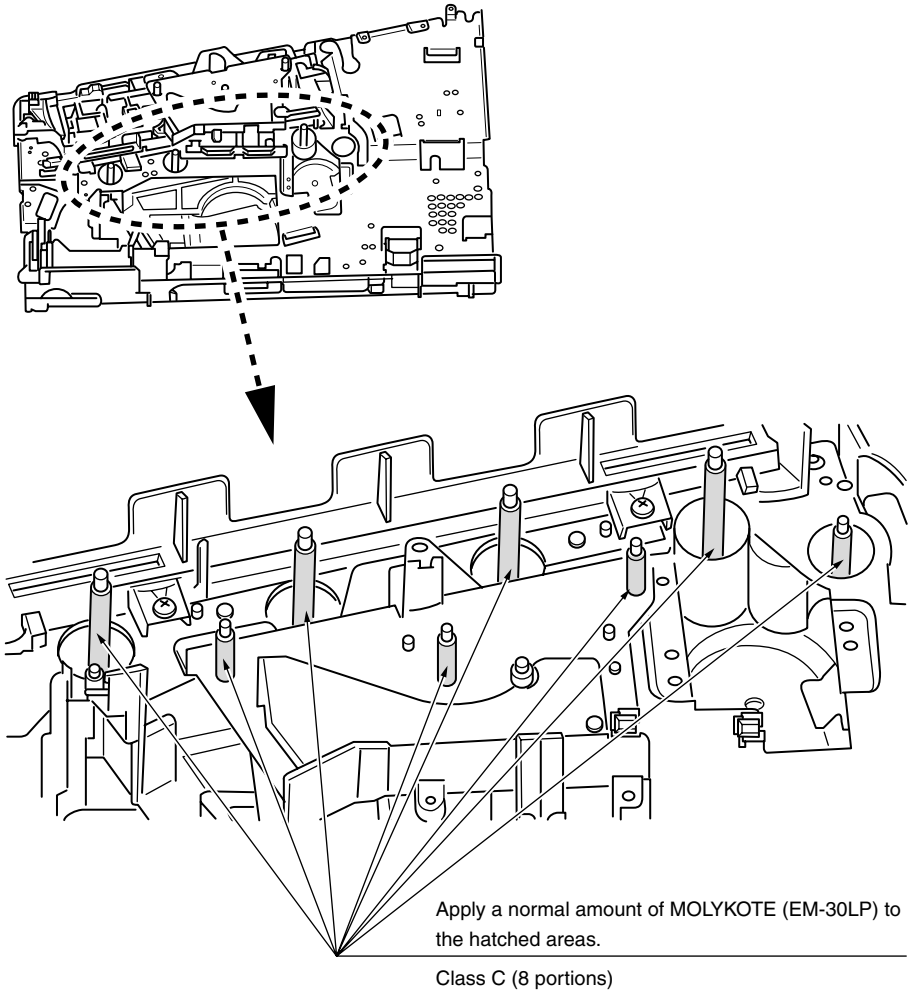


Apply EM-30LP (Class C) on the side surface. (4 positions)

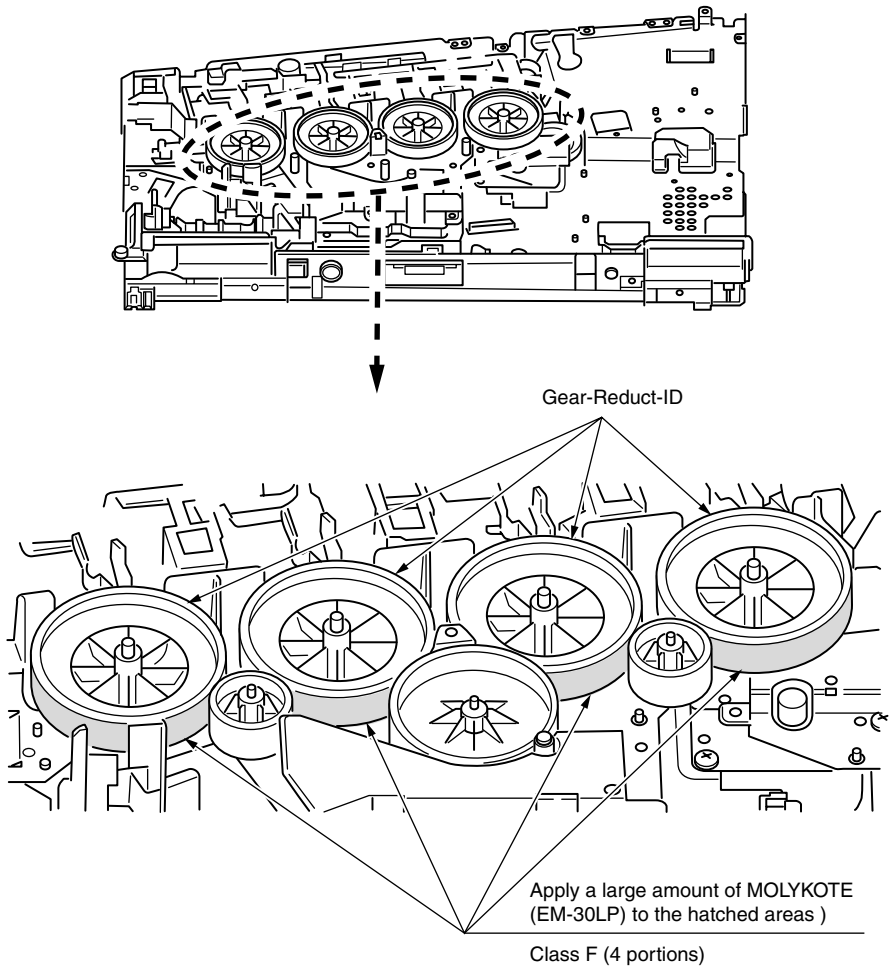
⑥ -6 Plate Assy.-Side-R



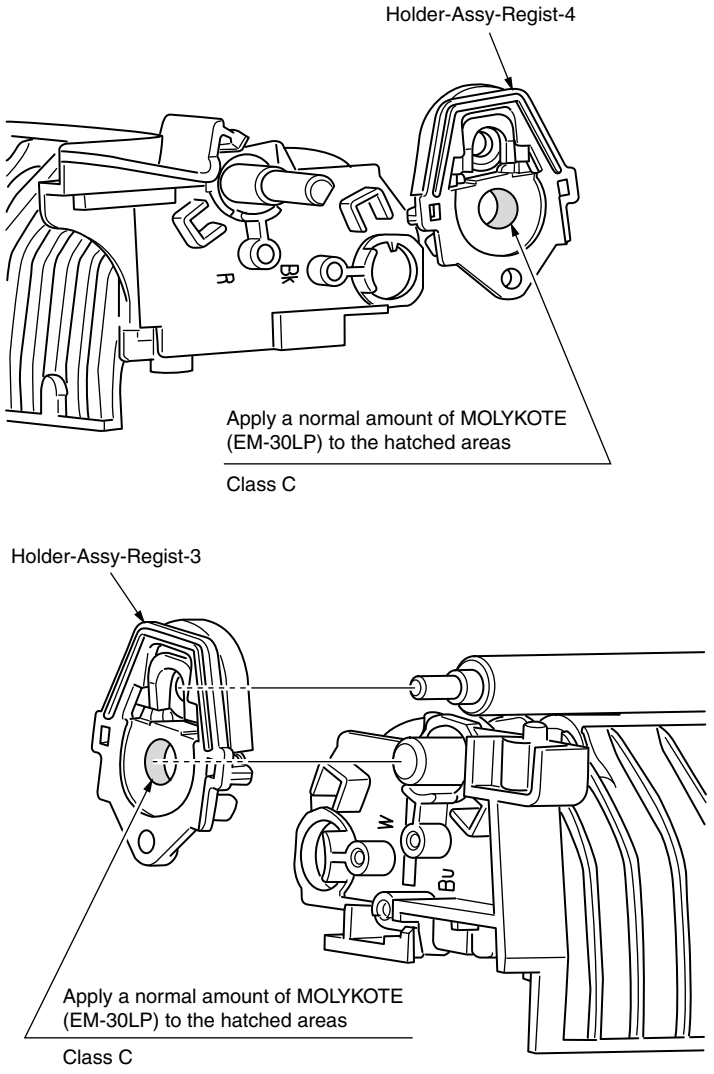
⑥ -7 Plate Assy.-Side-R



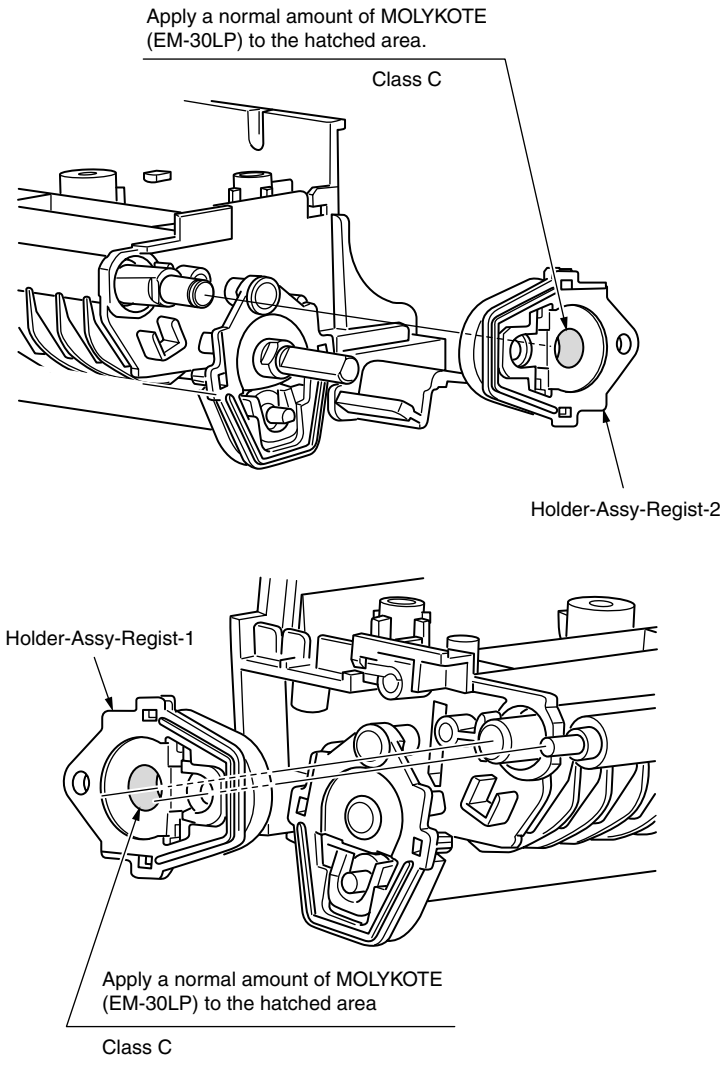
⑥ -8 Plate Assy.-Side-R



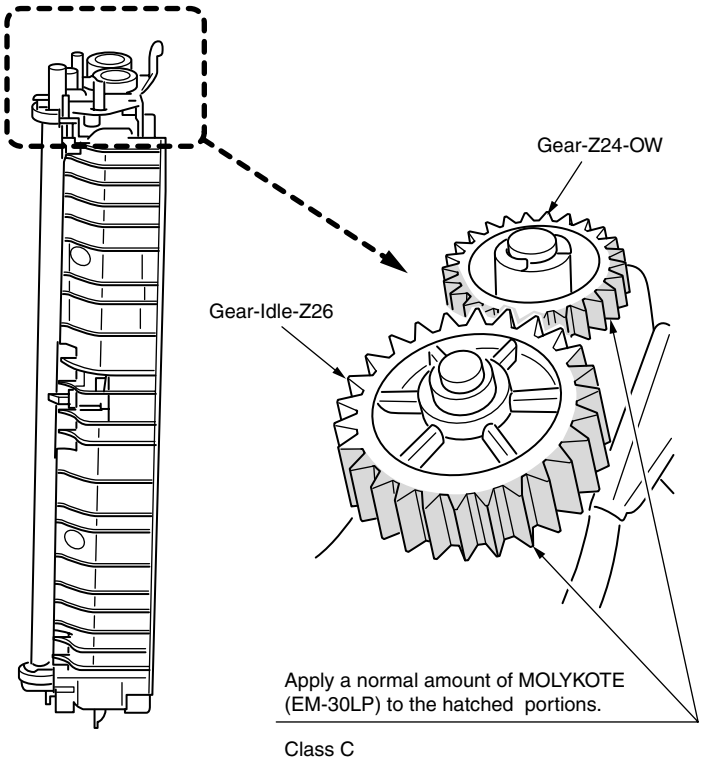
⑦ -1 Roller Assy.-Regist



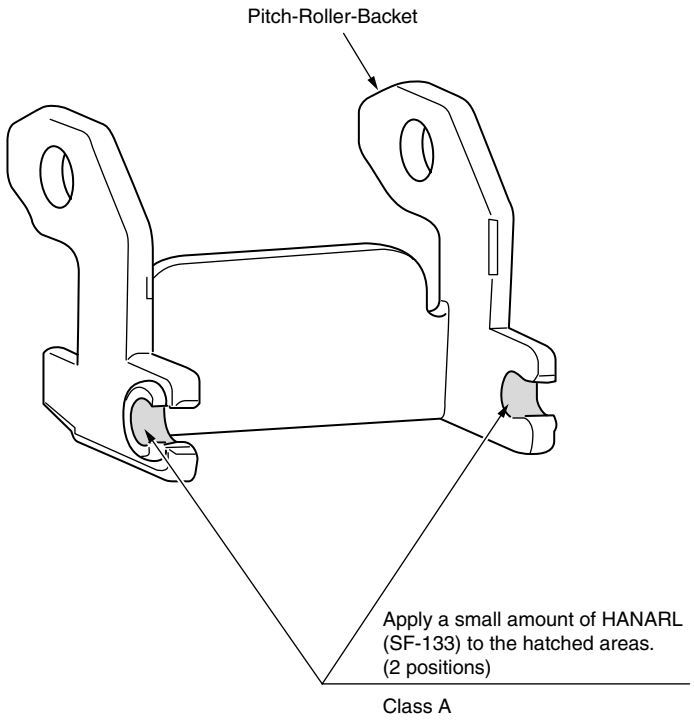
⑦ -2 Roller Assy.-Regist



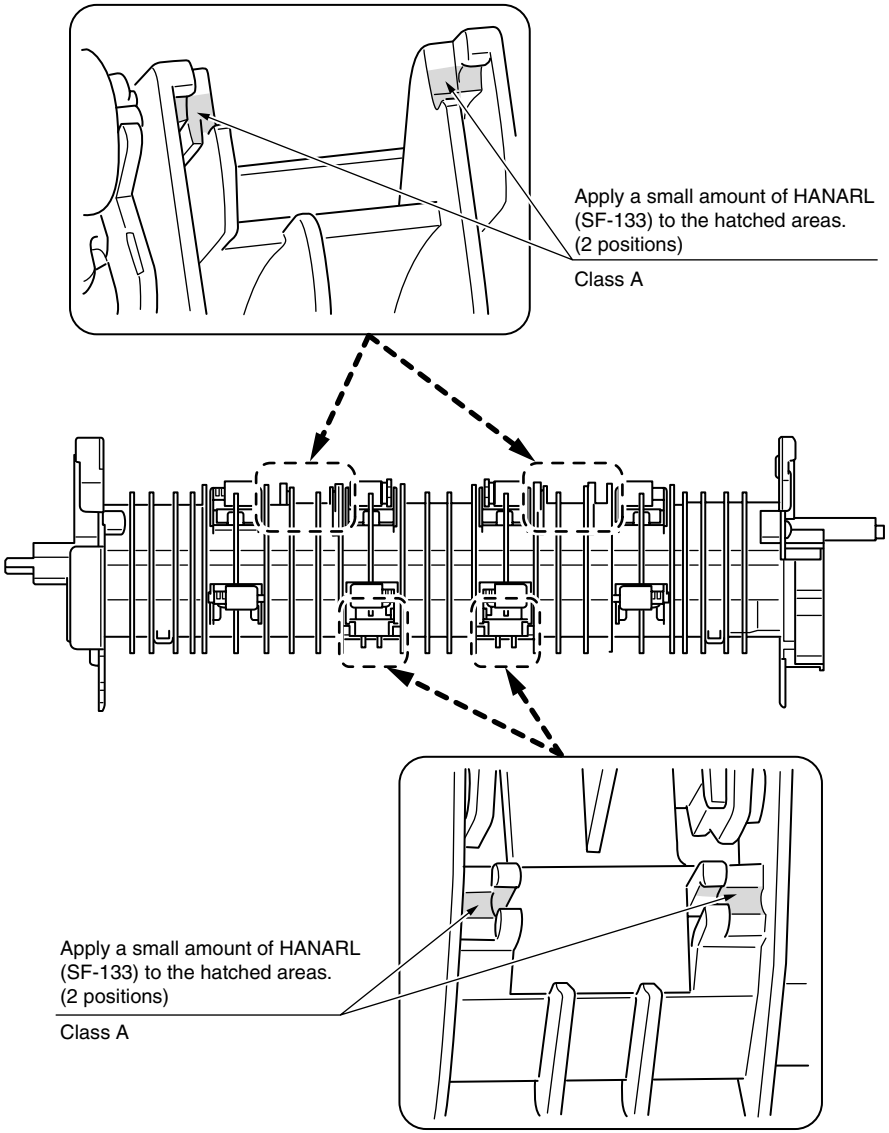
⑦ -3 Roller Assy.-Regist



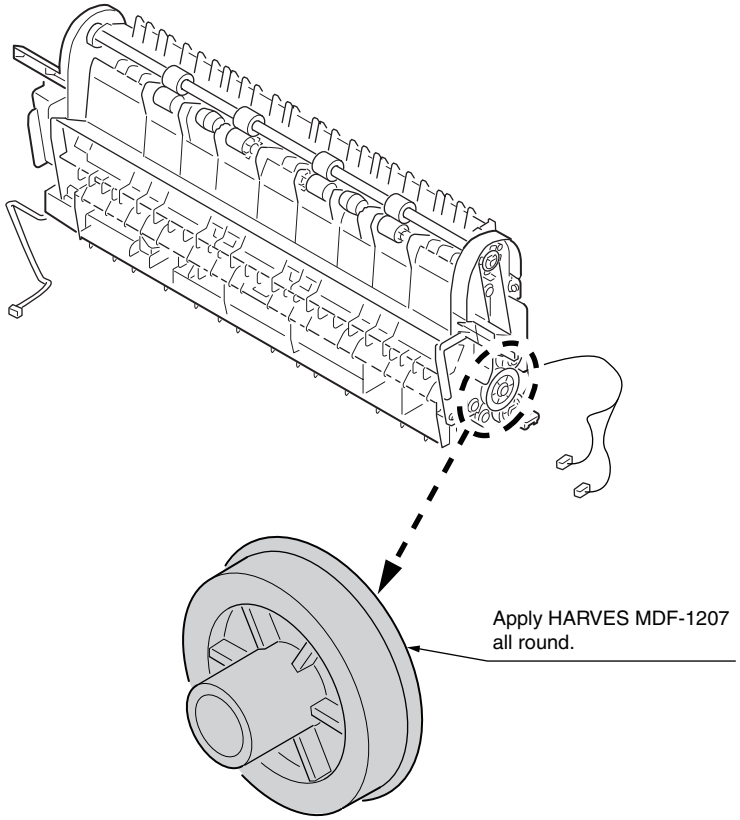
⑧ -1 Guide Assy.-Eject_Upper



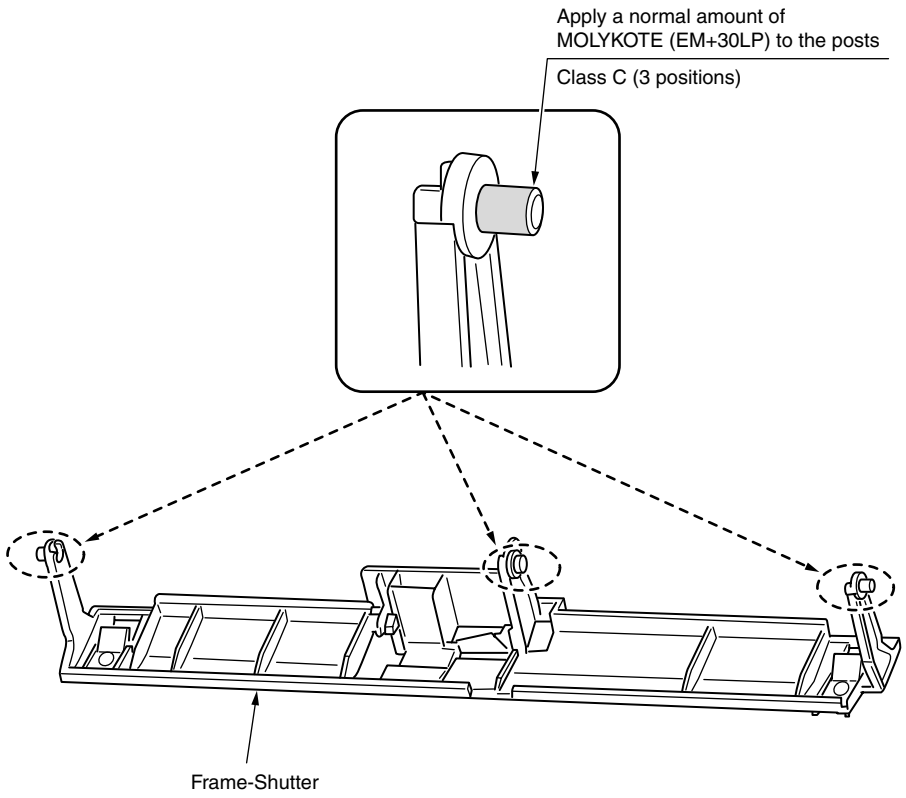
⑧ -2 Guide Assy.-Eject_Upper



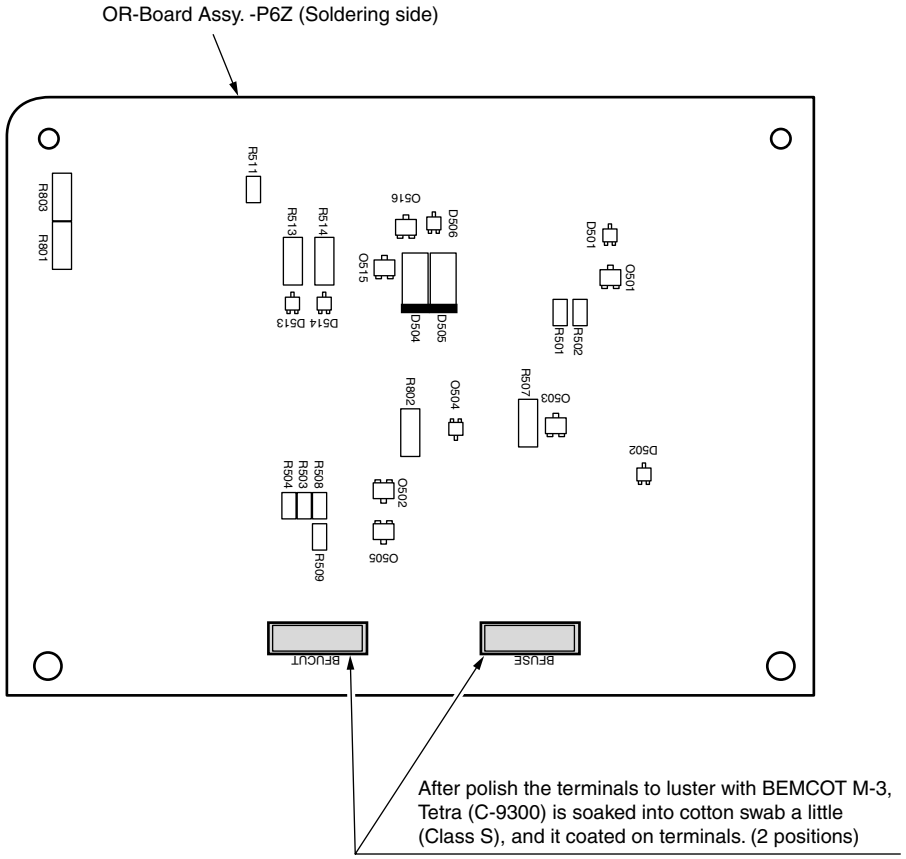
⑨ Guide Assy.-Eject



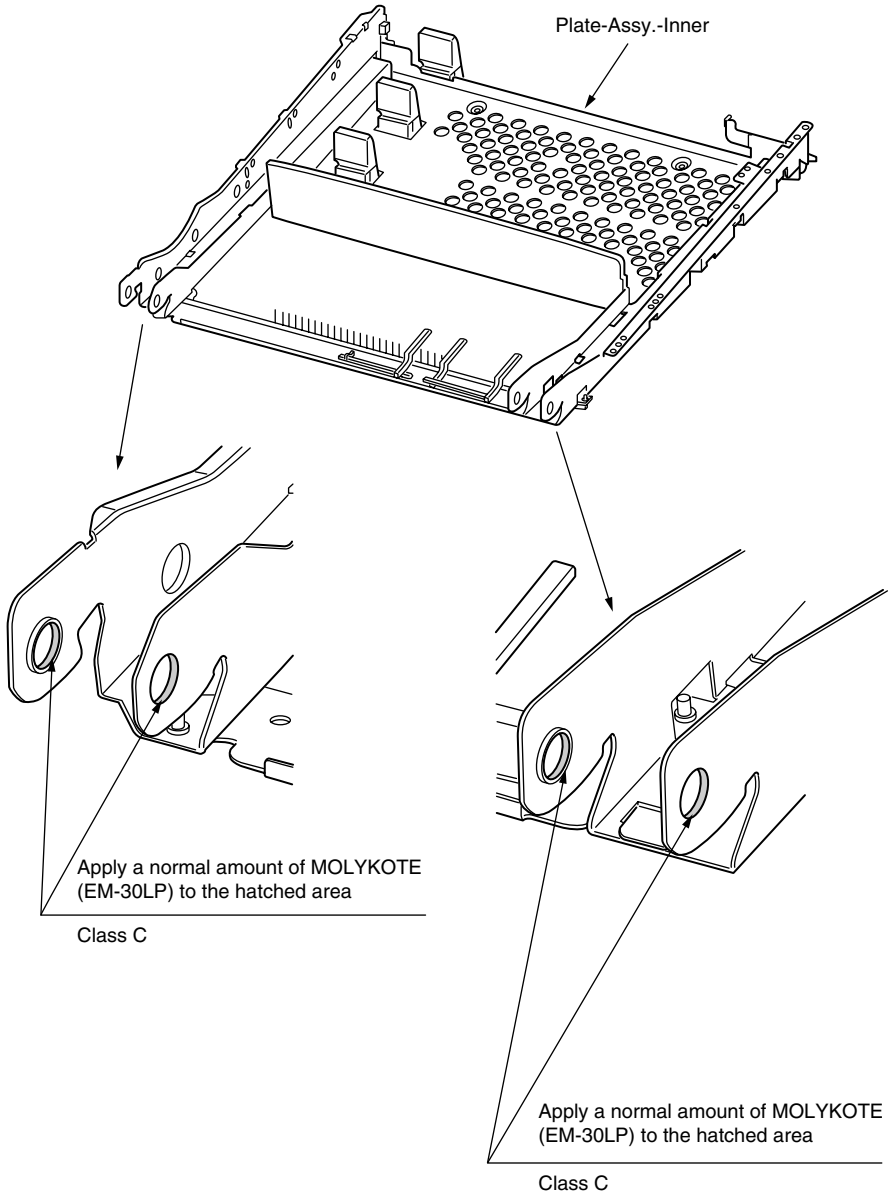
⑩ Sensor-Assy-Regist



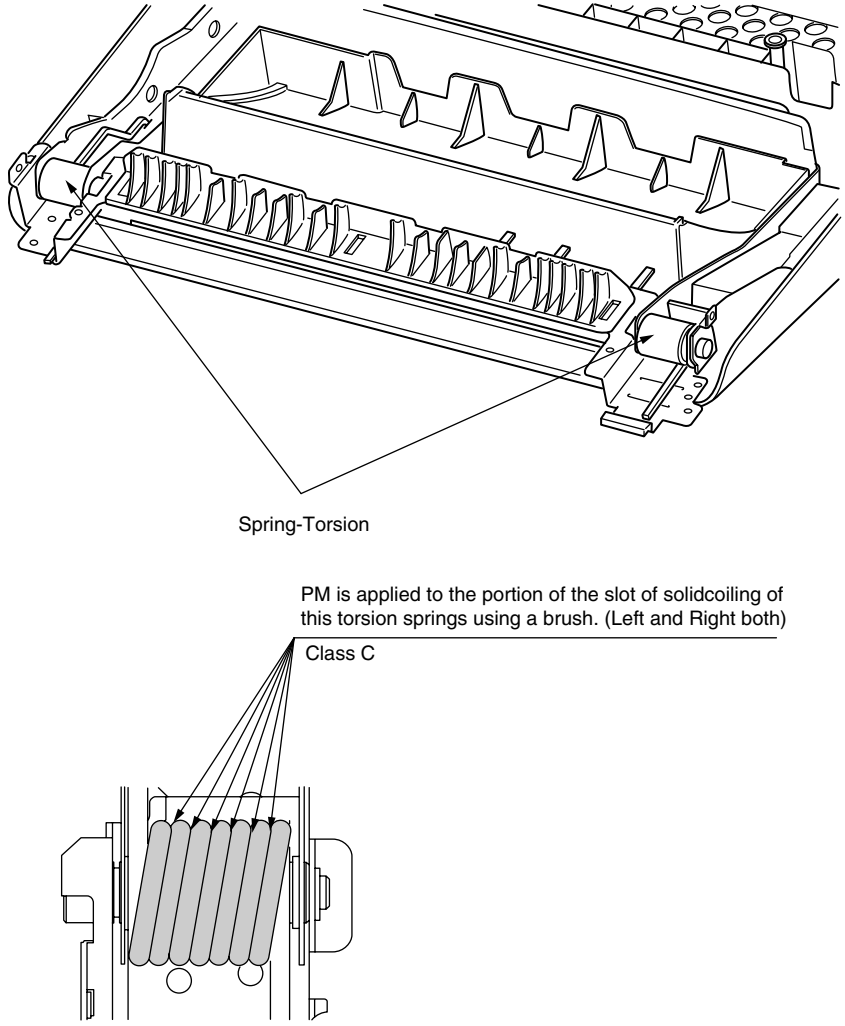
⑪ Frame Assy



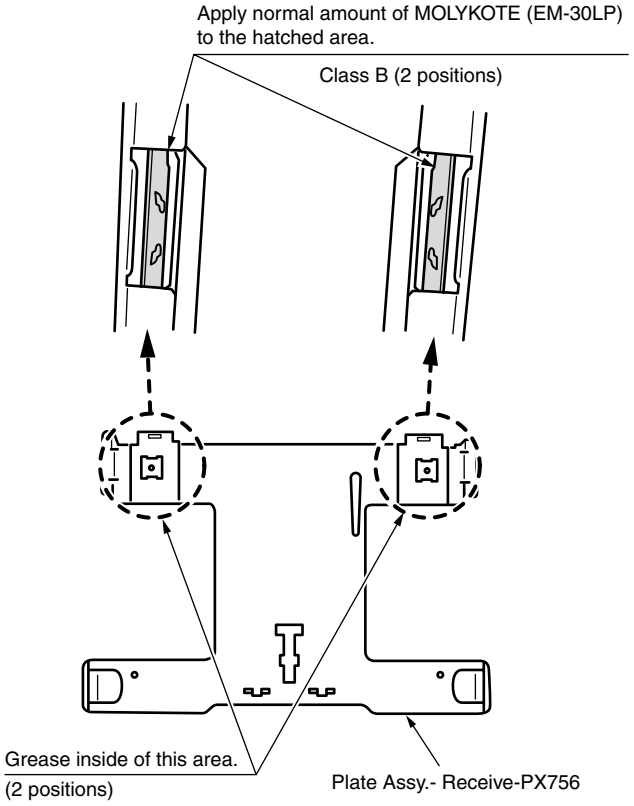
⑫ -1 Cover-Assy-TOP

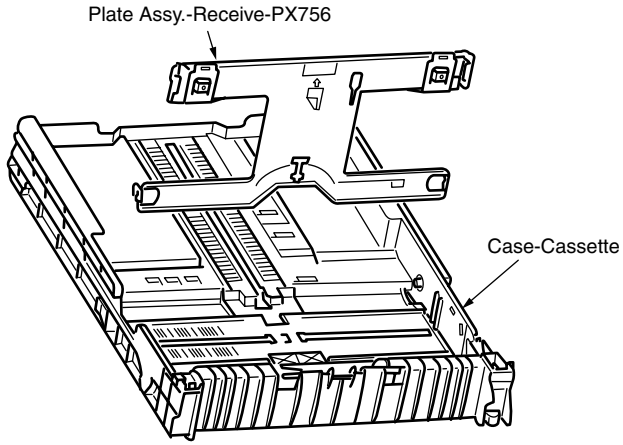


⑫ -2 Cover-Assy-TOP

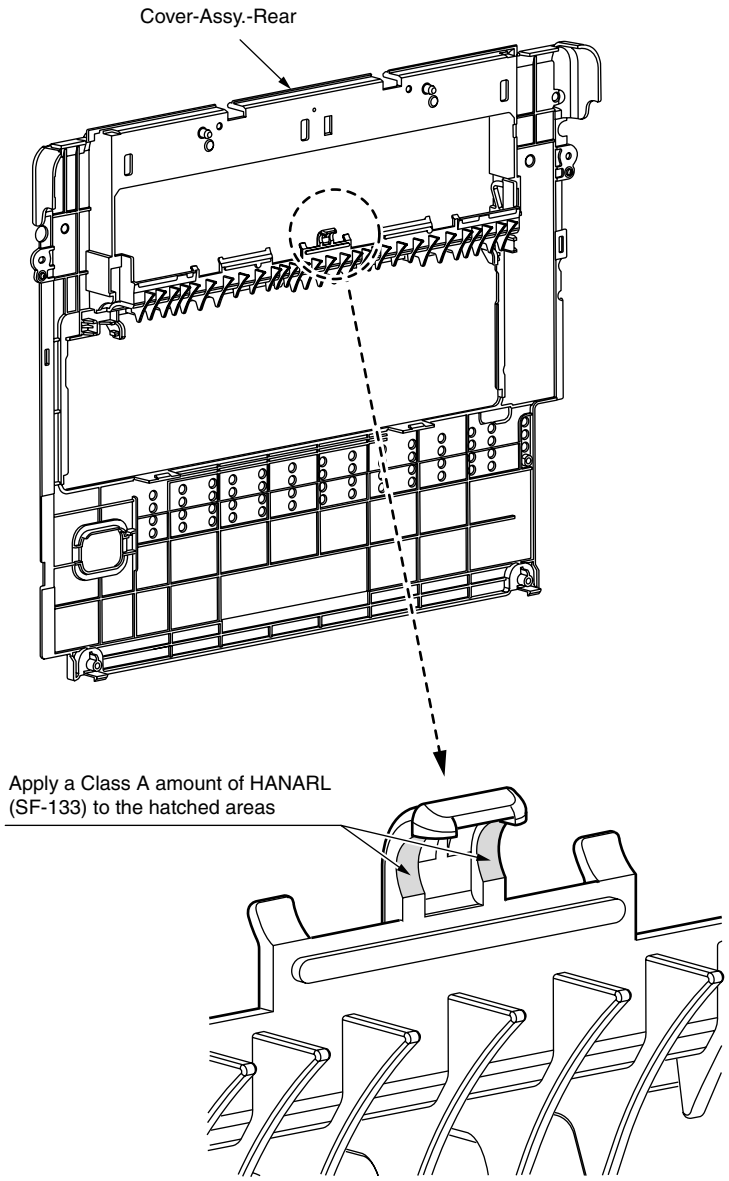


⑬ Cassette Assy.

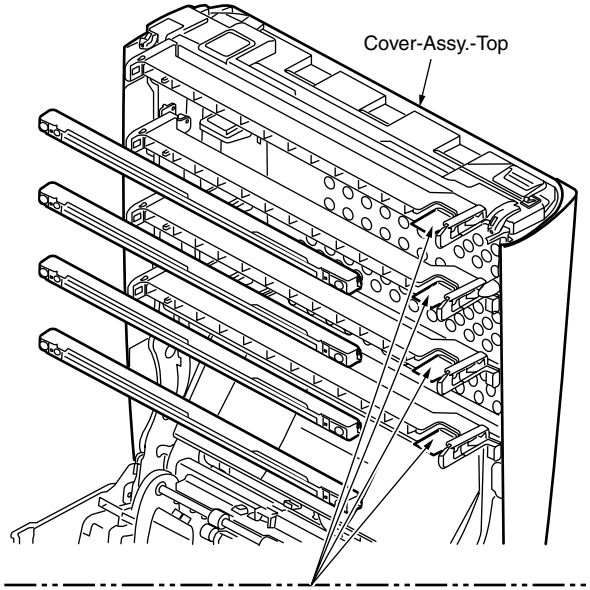


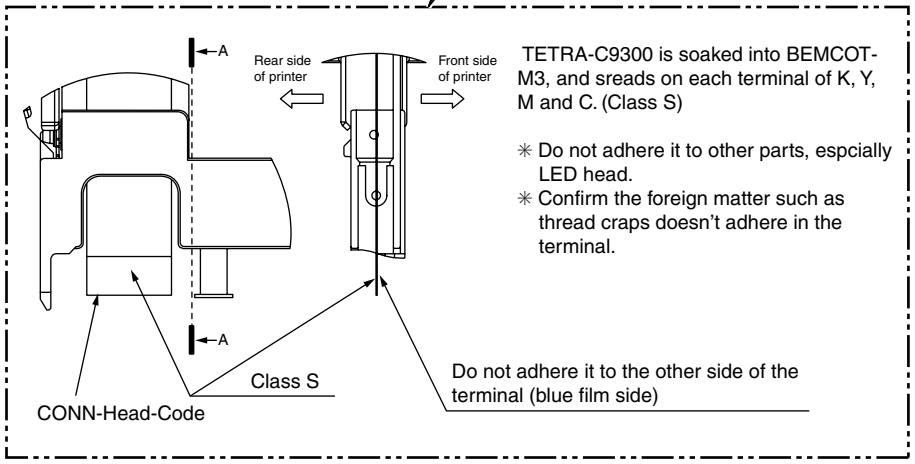


⑭ -1 Printer Unit



⑭ -2 Printer Unit



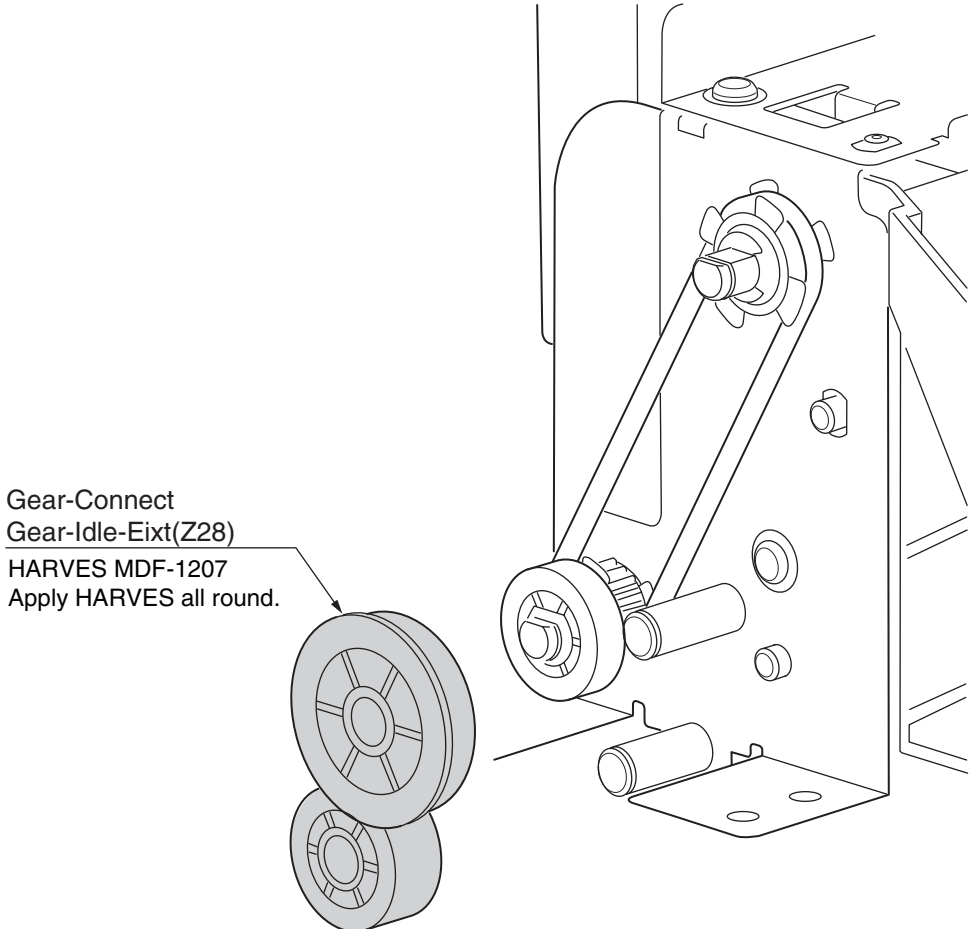


TETRA-C9300 is soaked into BEMCOT-M3, and sreads on each terminal of K, Y, M and C. (Class S)

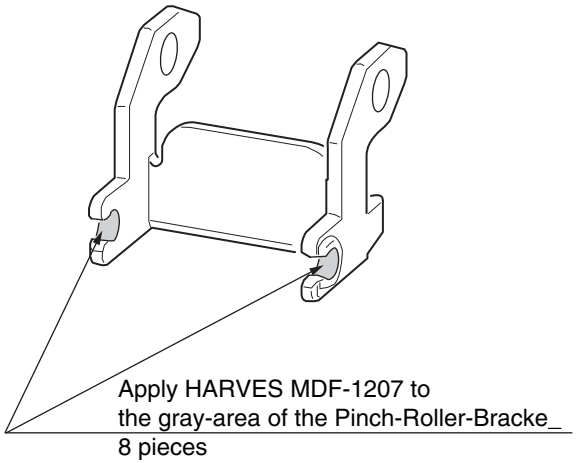
✳ Do not adhere it to other parts, espcially LED head.
✳ Confirm the foreign matter such as thread craps doesn't adhere in the terminal.

4.3.2 2bin section

① Guide Assy.-2Bin

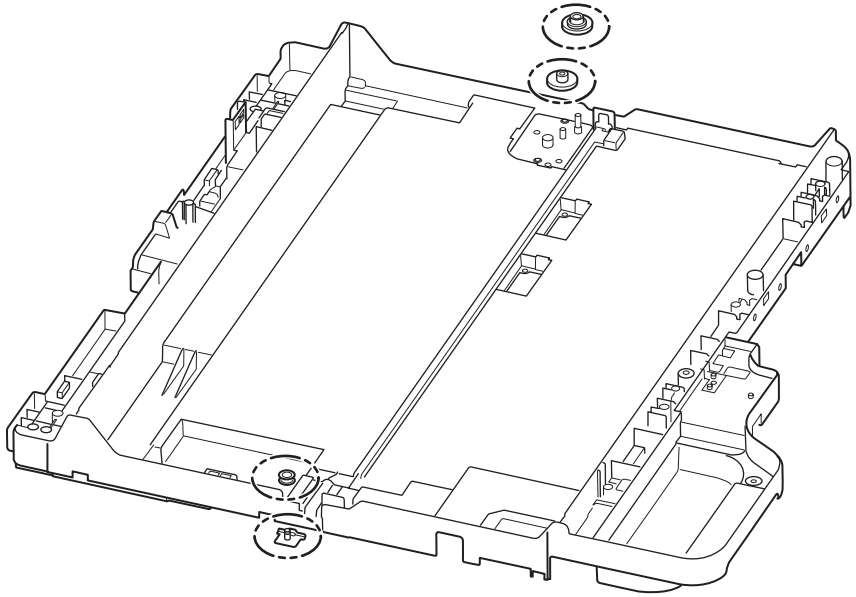


② Guide Assy.-2Bin



4.3.3 Scanner section

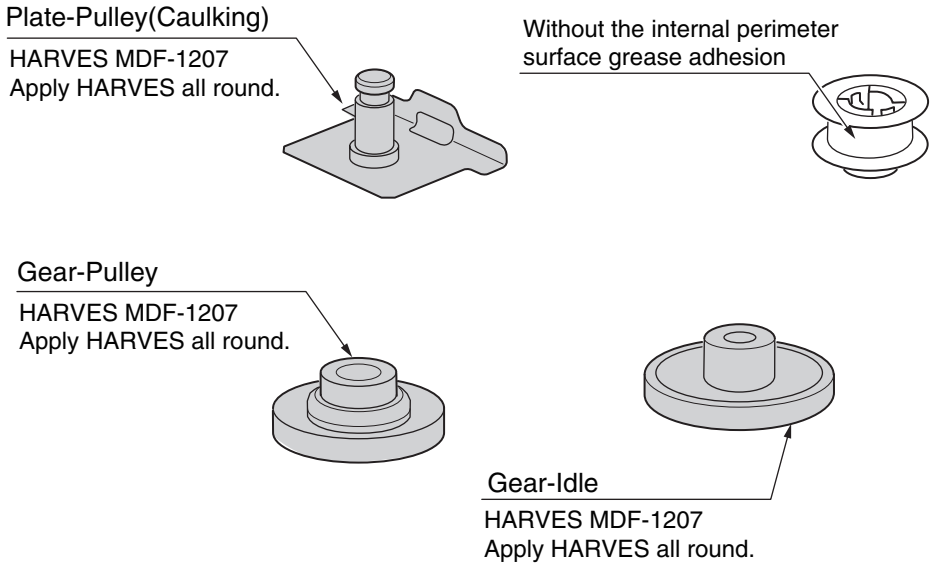
① -1 Frame Assy.-FB



1) Plate-Pulley(Caulking)

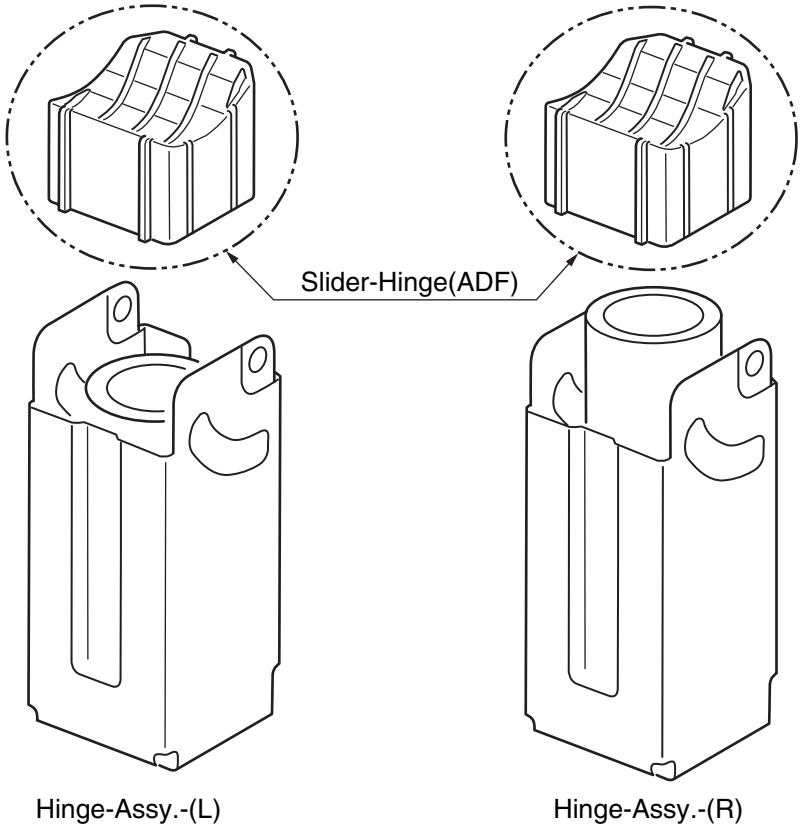
Gear-Idle

Gear-Pulley

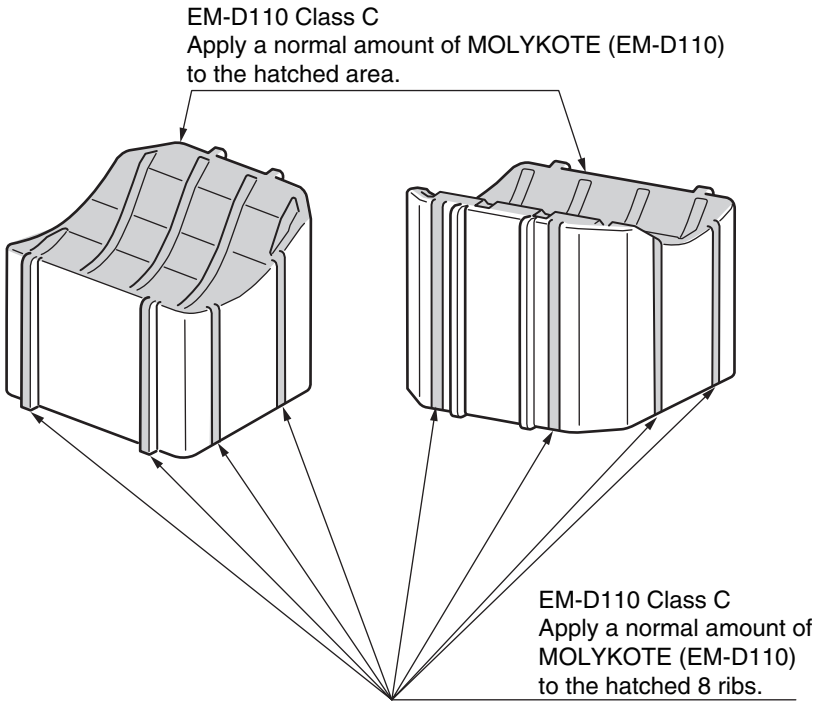


② Hinge-Assy.-(L)

Hinge-Assy.-(R)

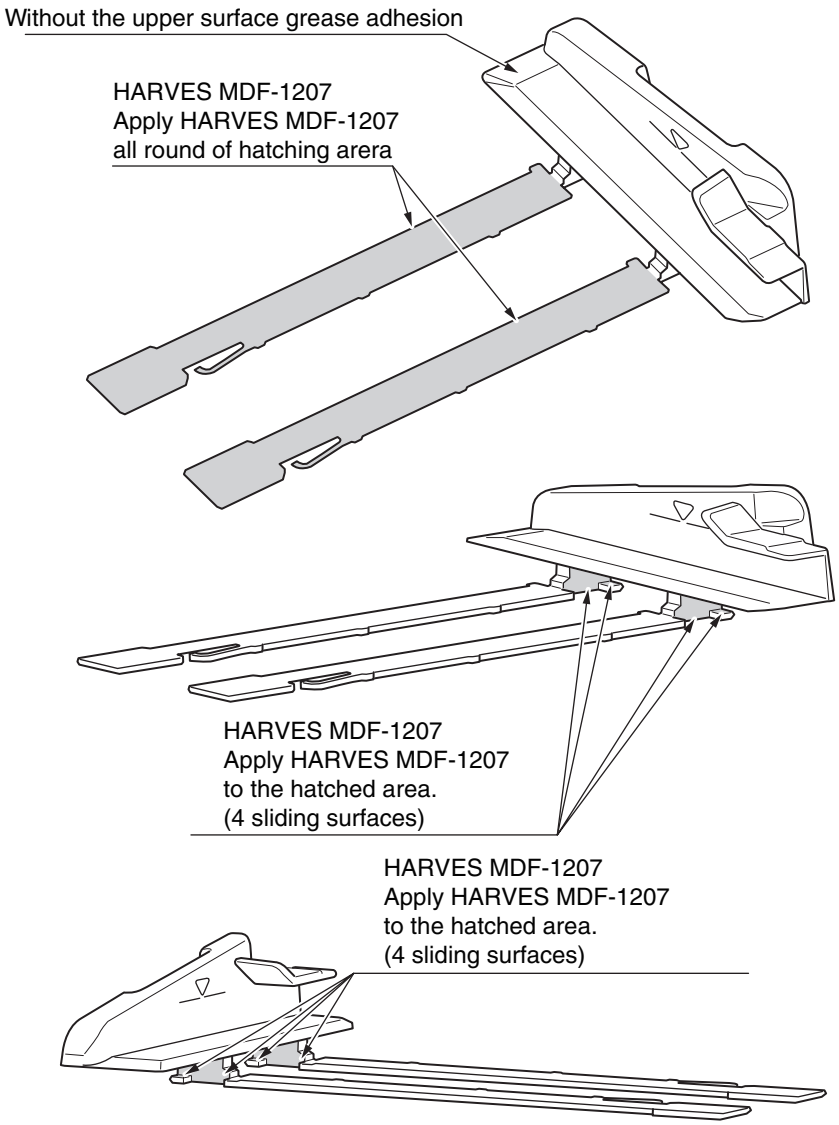


1) Slider-Hinge(ADF)



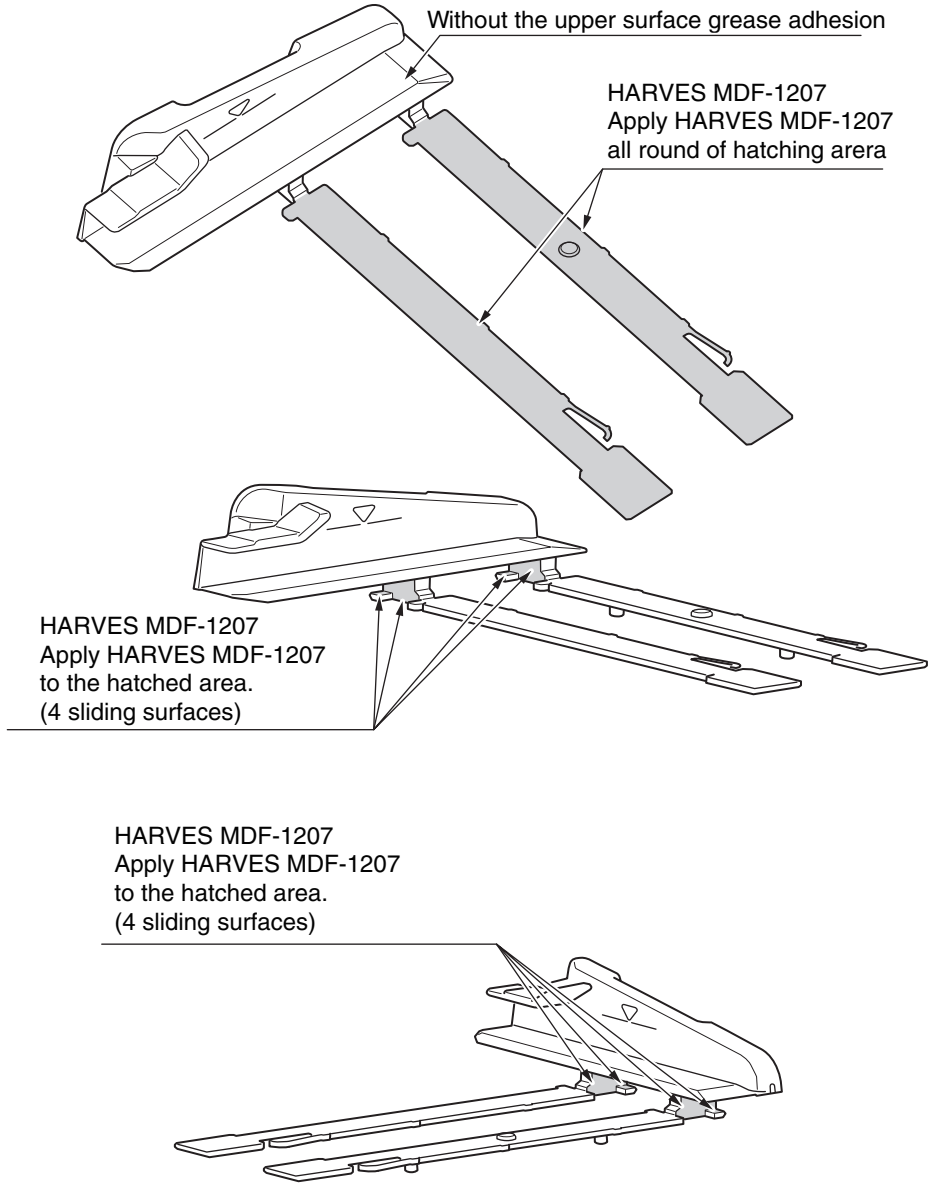
③ Tray-Assy-Document

1) Guide-Document-F



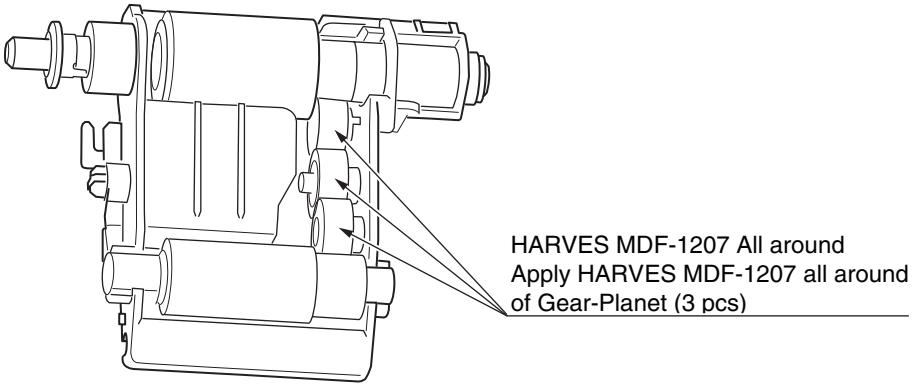
Leave it for about 3minutes (drying time) after painting HARVES MDF-1207, and then assemble the Tray-Assy-Document.

2) Guide-Document-R



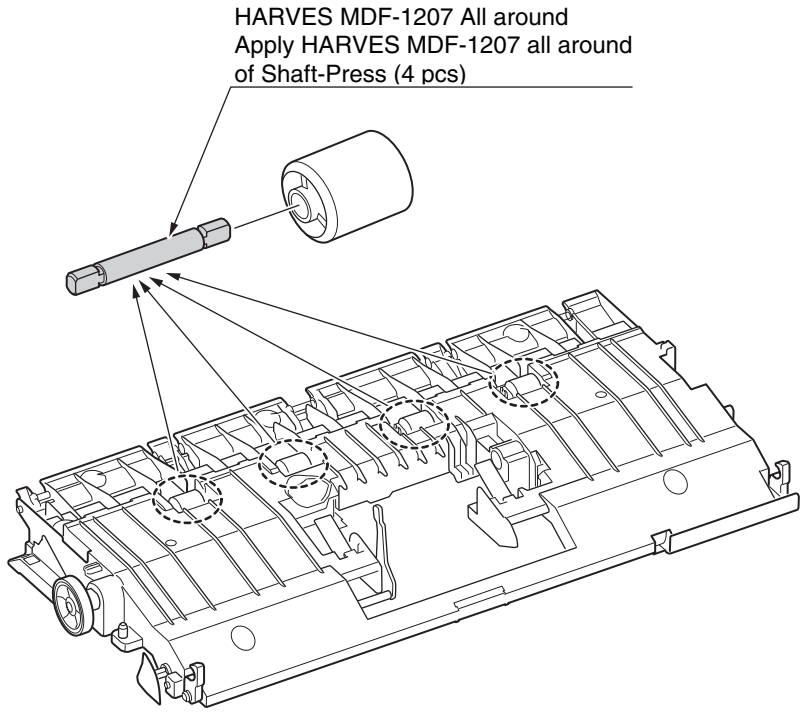
Leave it for about 3minutes (drying time) after painting HARVES MDF-1207, and then assemble the Tray-Assy-Document.

④ Frame-Assy.-Hopping(ADF)



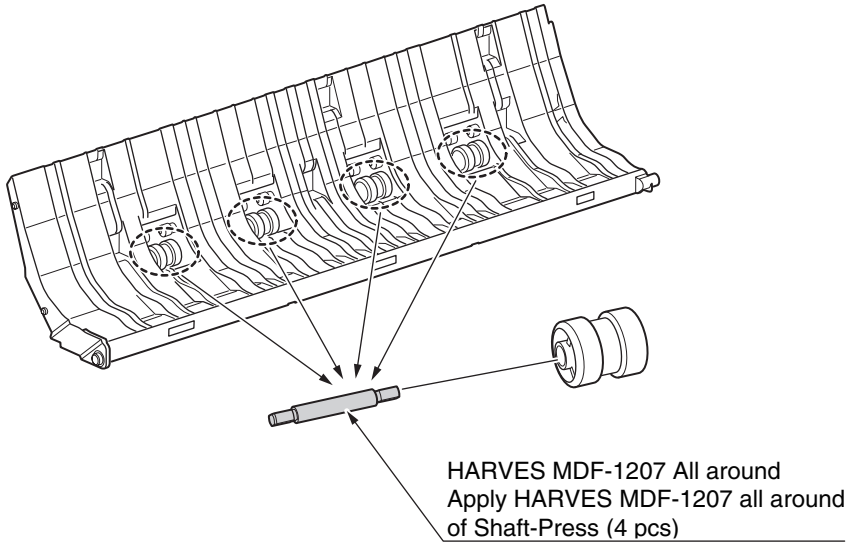
Leave it for about 3minutes (drying time) after painting HARVES MDF-1207, and then assemble the Gear-Planet.

⑤ Cover-Assy-Top(ADF)



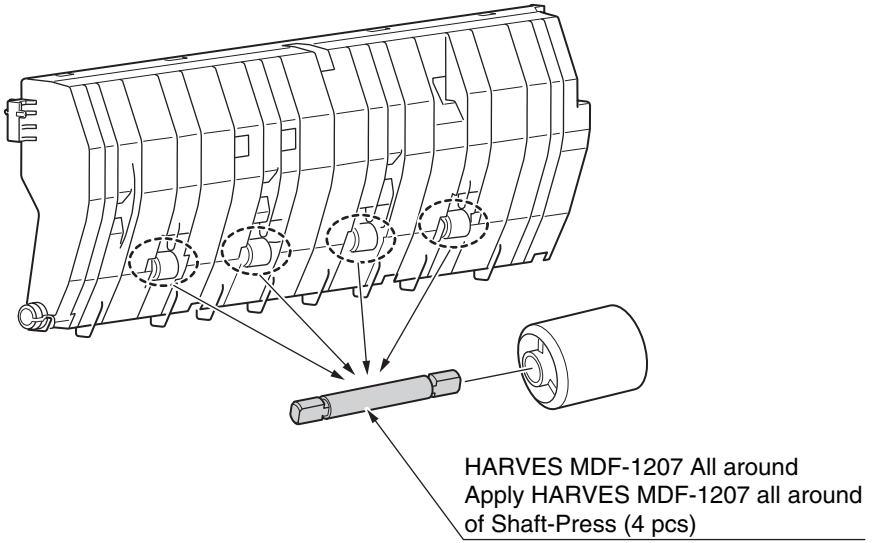
Leave it for about 3minutes (drying time) after painting HARVES MDF-1207, and then assemble the rollers.

⑥ Guide Assy.-Top(B)

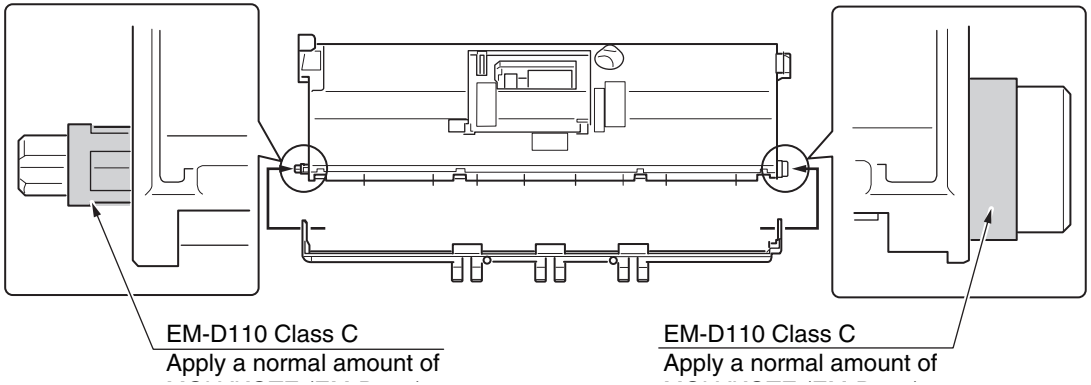


Leave it for about 3minutes (drying time) after painting HARVES MDF-1207, and then assemble the rollers.

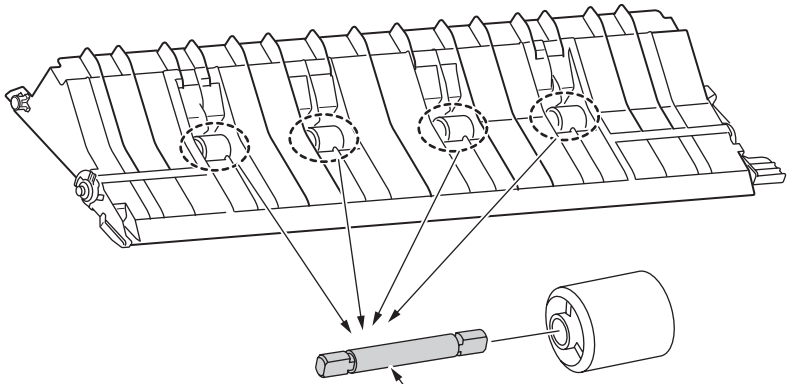
⑦ Guide Assy.-Retard

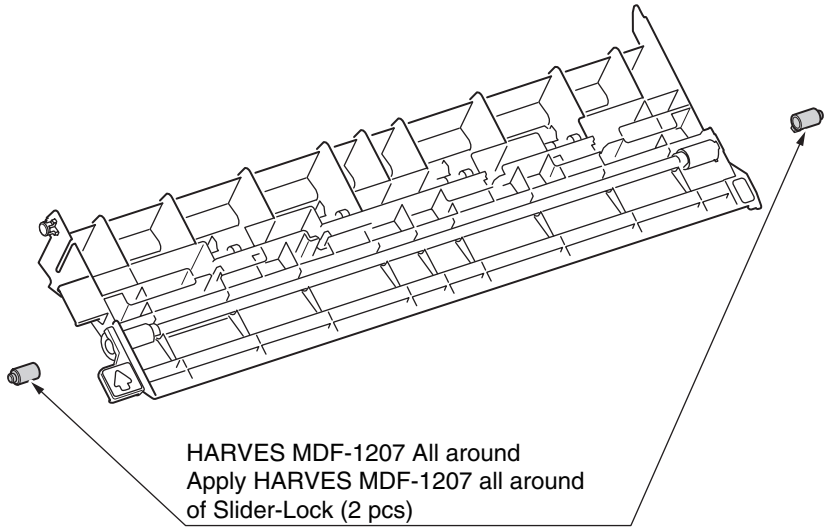


Leave it for about 3minutes (drying time) after painting HARVES MDF-1207, and then assemble the rollers.



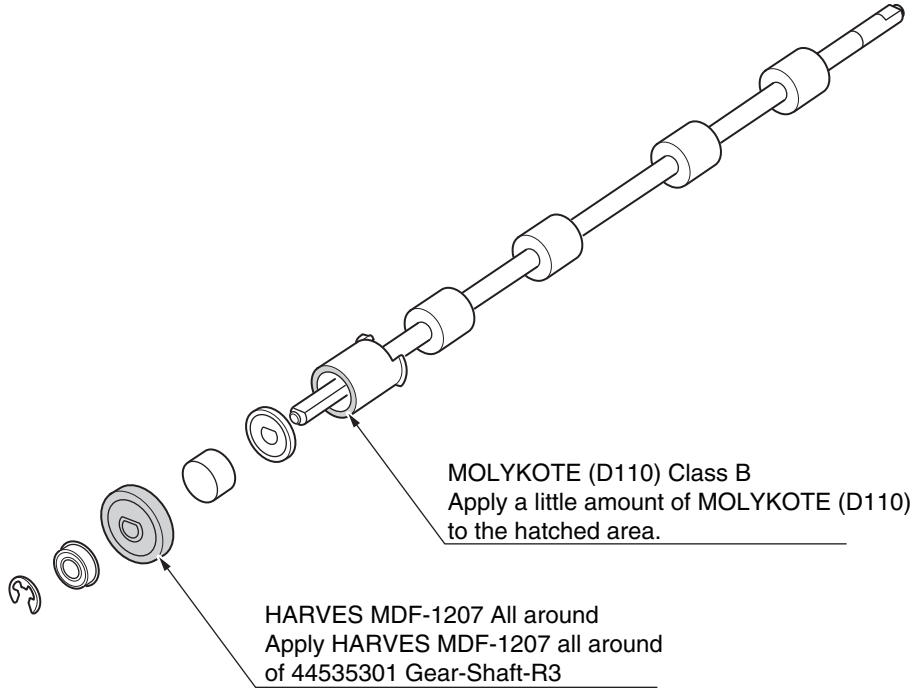
⑧ Guide Assy.-Exit(Lower)





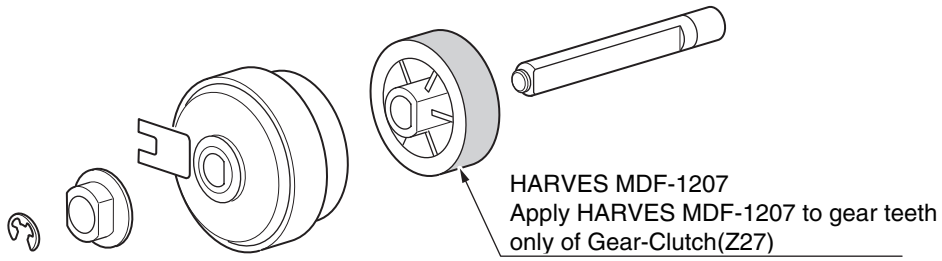
Leave it for about 3minutes (drying time) after painting HARVES MDF-1207, and then assemble the parts.

⑨ Roller-Assy-Eject(ADF)



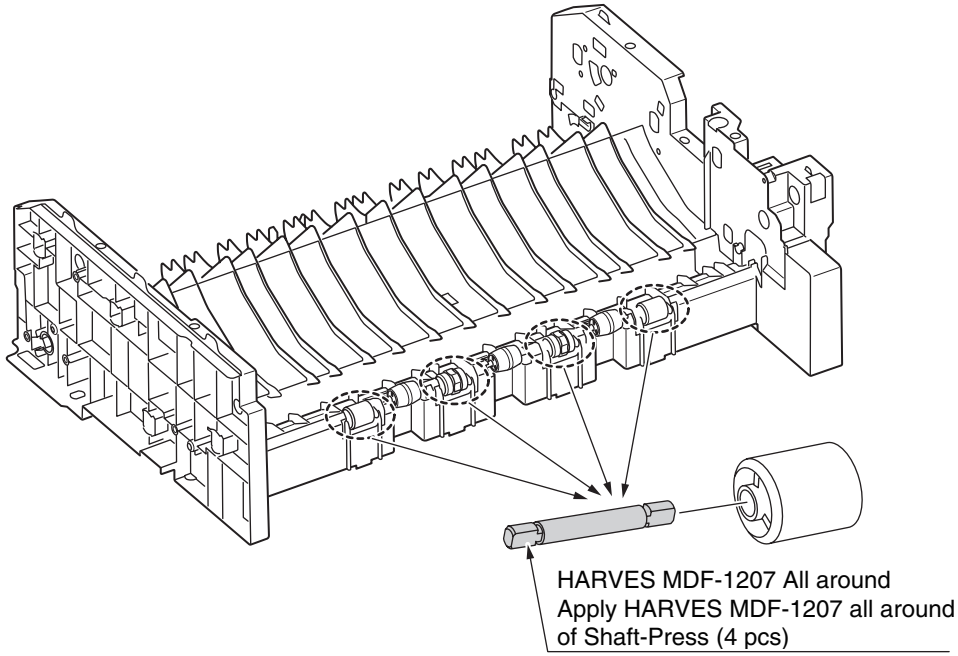
Leave it for about 3minutes (drying time) after painting HARVES MDF-1207, and then assemble Gear-Shaft-R3.

⑩ Clutch-Assy-Hop(ADF)



⑪ ADF-Assy

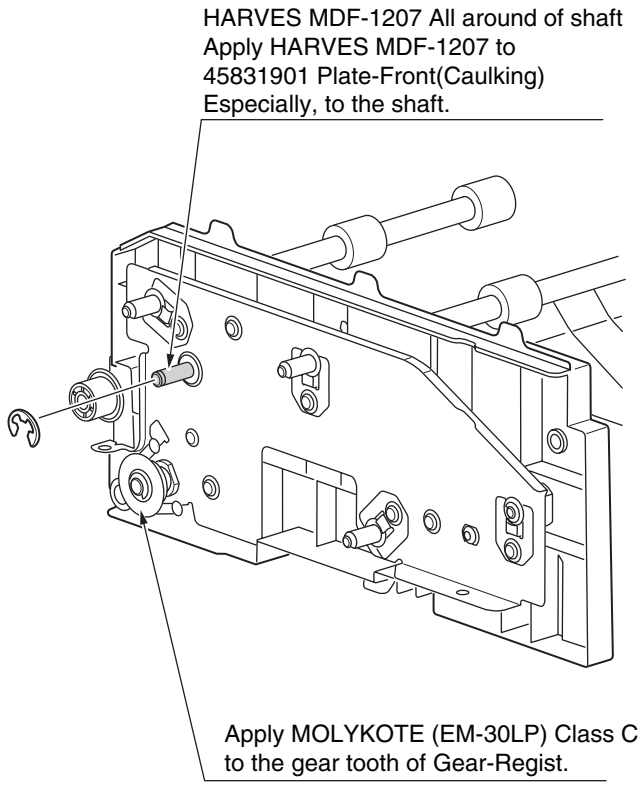
1) Shaft-Press



Leave it for about 3minutes (drying time) after painting HARVES MDF-1207, and then assemble the roller.

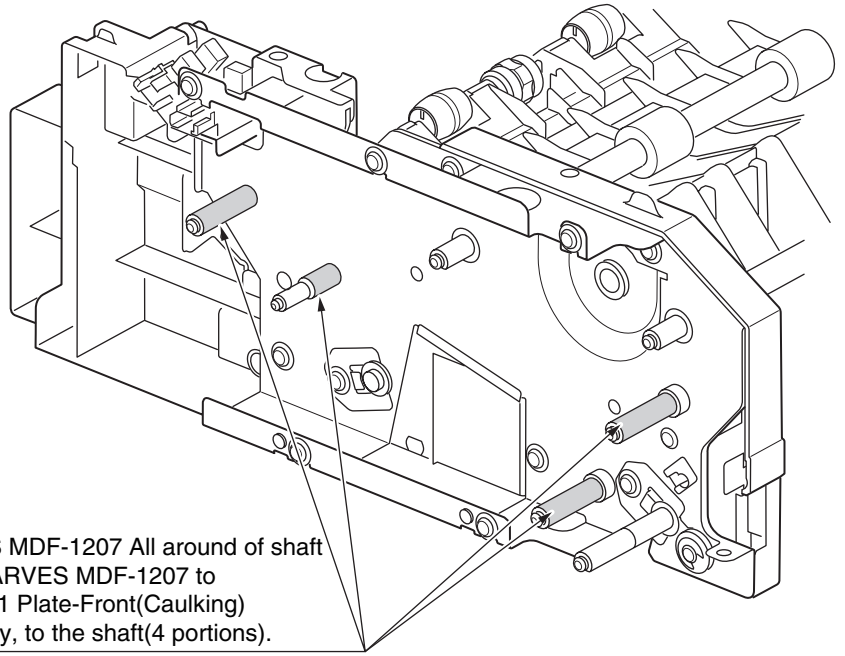
2) Plate-Front(Caulking)

Gear-Regist



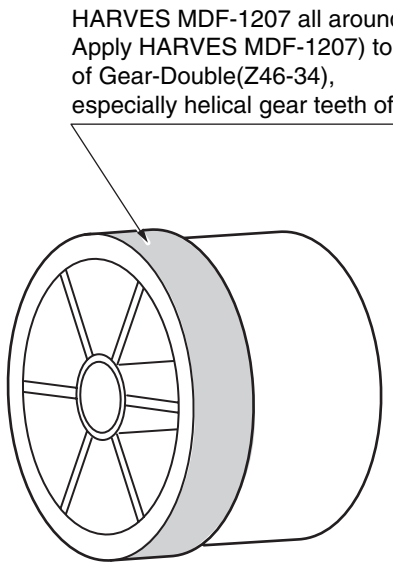
Leave it for about 3minutes (drying time) after painting HARVES MDF-1207, and then assemble.

3) Plate-Drive(Caulking)

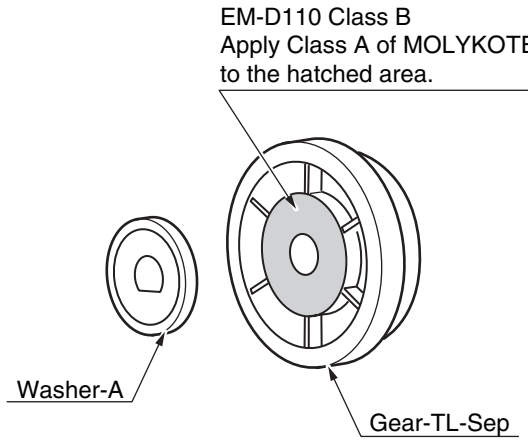


Leave it for about 3minutes (drying time) after painting HARVES MDF-1207, and then assemble gears.

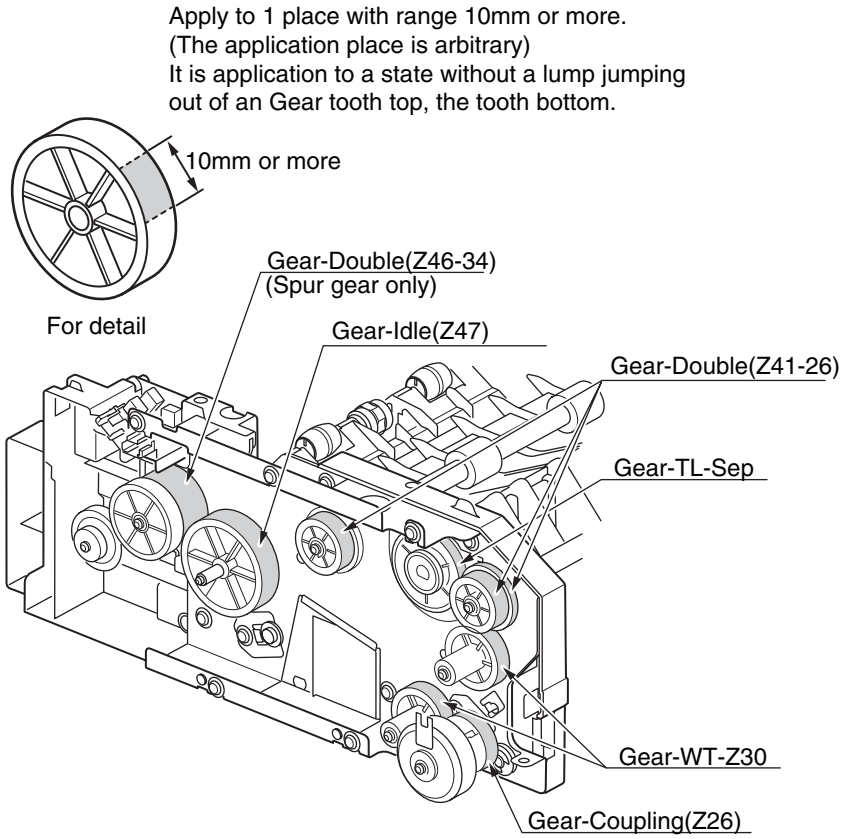
4) Gear-Double(Z46-34)



5) Gear-TL-Sep



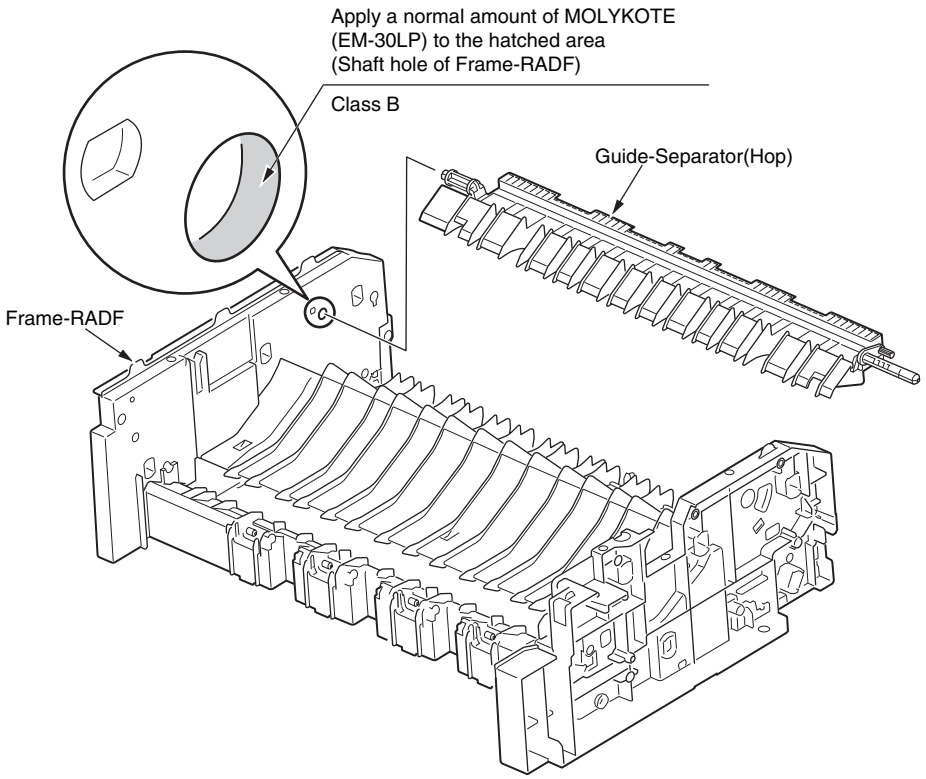
6) Gear



Apply Class C of MOLYKOTE (EM-30LP) to each gear of parts below.
(For 1 place on the gear tooth) (Refer to detail)

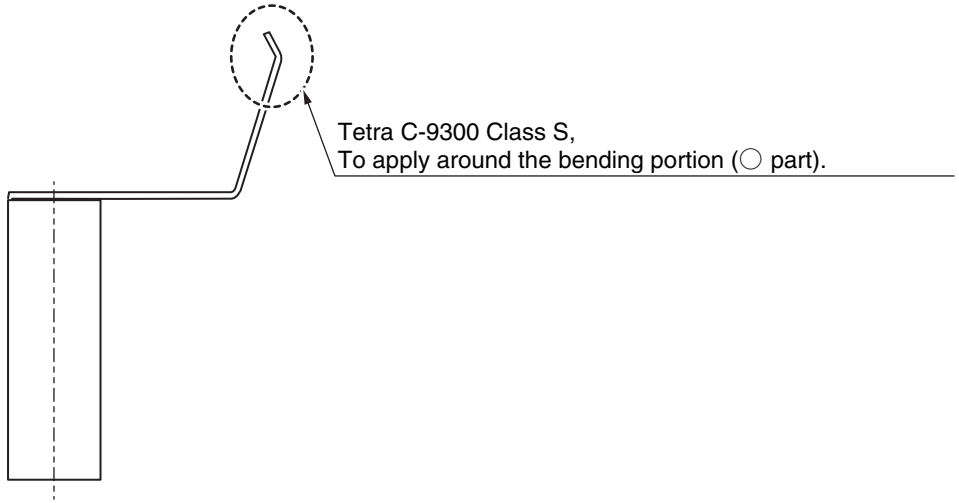
1. Gear-WT-Z30 x 2
2. Gear-Coupling(Z26)
3. Gear-Double(Z41-26) x 2
4. Gear-TL-Sep
5. Gear-Idle(Z47)
6. Gear-Double(Z46-34)

7) Frame-RADF



⑫ Scanner-Unit

1) Spring-PH(R)

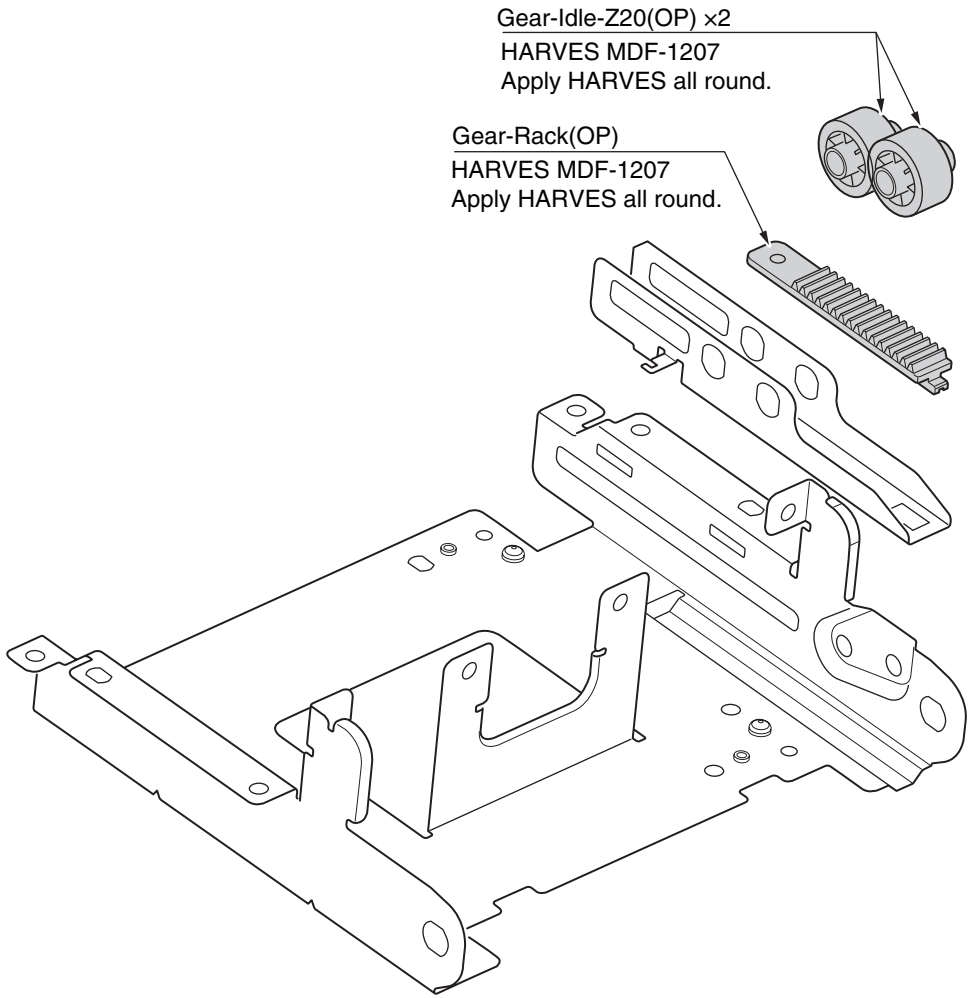


※Do not adhere it to other parts.
※Confirm the foreign matter such as thread craps doesn't adhere in the terminal.

⑬ OP-Panel Assy.

1) Gear-Idle-Z20(OP) ×2

2) Gear-Rack(OP)



5. REGULAR MAINTENANCE

5.1 Cleaning

Remove toner powder and dust in the MFP inner section. Clean the inside of and the periphery of the MFP with the cloth as needed. Clean the MFP inner section with the handy cleaner (maintenance tool).

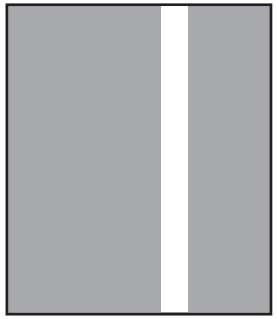
Note! Do not touch the image drum, LED lens array, and LED head terminal.

5.2 Cleaning of LED lens array

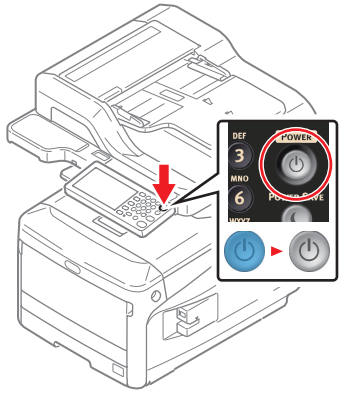
If the vertical white lines, and white belt (white spot, pale printing) occur in printing as shown below, the LED lens array should be cleaned or the toner cartridge should be replaced.

Note! As for the LED lens array, clean it with soft tissues or soft cloth after eliminating static electricity of a maintenance tool.

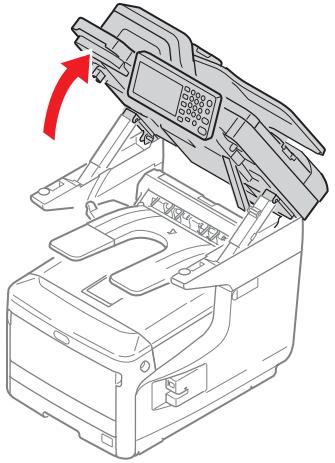
While lines or White belt
(White spot, pale printing)



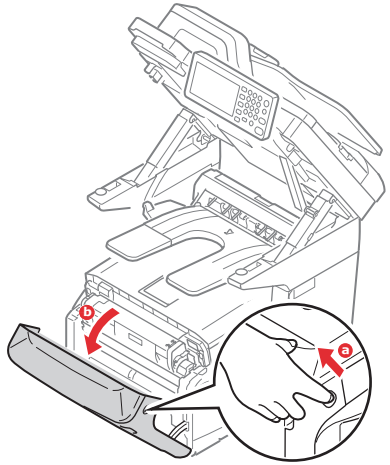
(1) Power off the MFP.



(2) Open the scanner unit.



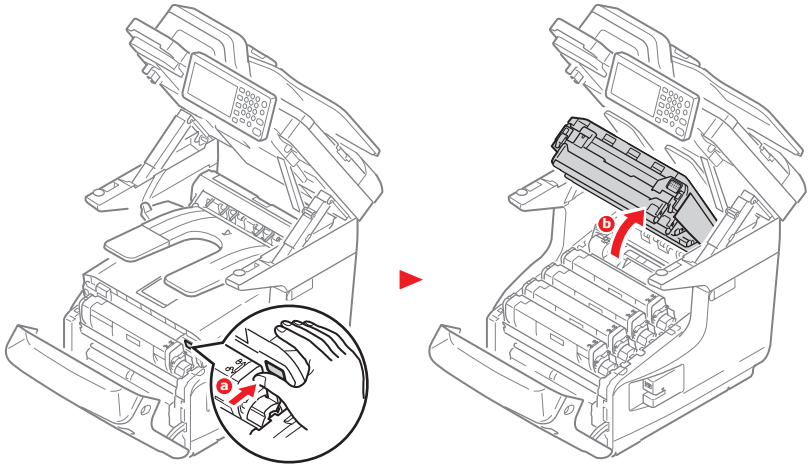
(3) Insert your finger into the recess (a) on the right side of the machine and pull the front cover open lever to open the front cover forward (b).



(4) Press the button (a) and open the Output Tray (b).

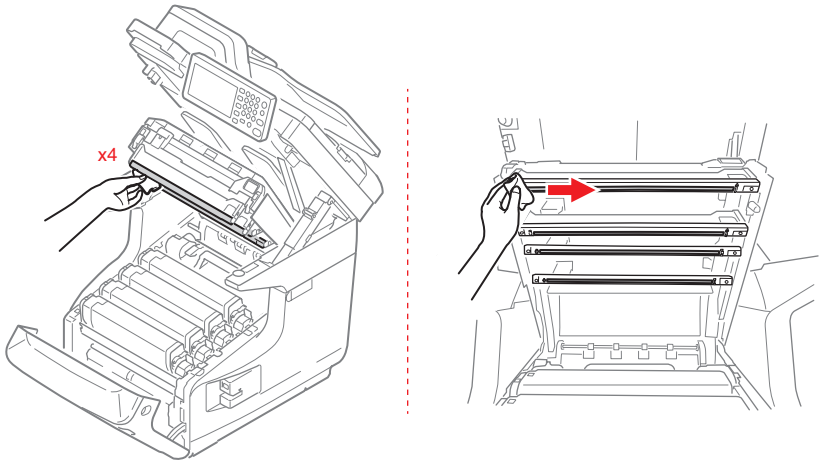
⚠Caution	Personal injuries may occur.	

Do not touch the fuser unit. It is hot.



(5) Wipe the whole LED head softly with the soft tissues or cloth.

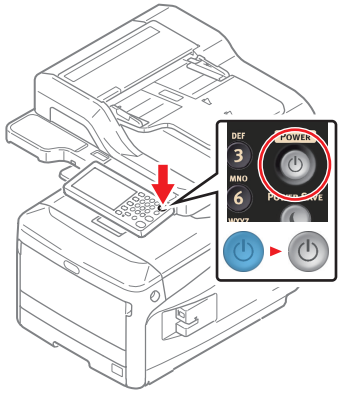
Note! Do not use solvents including methyl alcohol, and thinner.



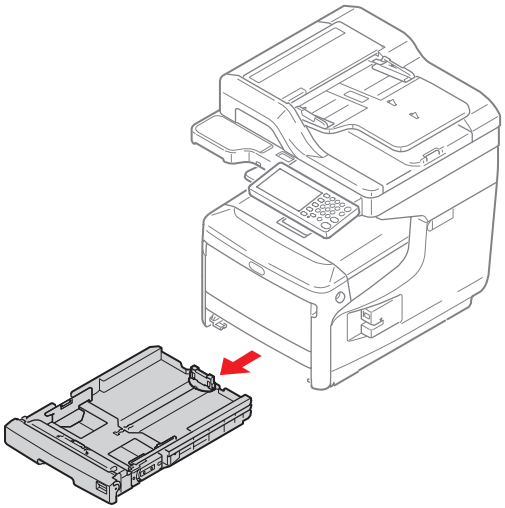
(6) Close the scanner unit and these covers are performed by the inverse procedure with opening.

5.3 Cleaning the Feed rollers and the Retard roller

(1) Power off the MFP.

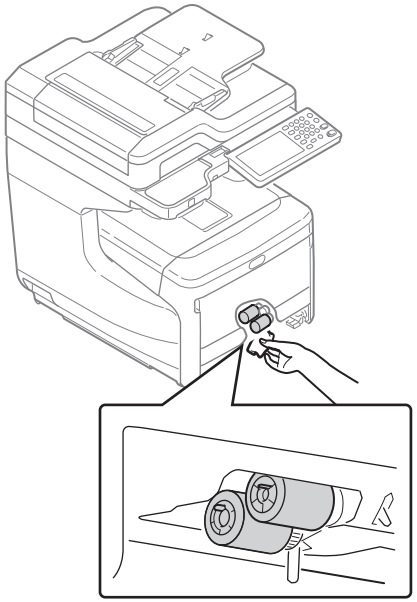


(2) Pull out the tray.



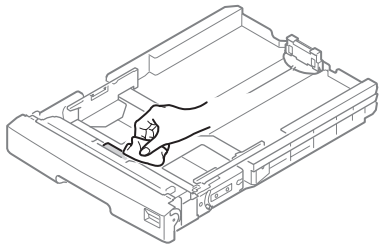
(3) Wipe two paper feed rollers inside the printer with a soft cloth that has been slightly moistened with water and then squeezed well.

Note! Use water only.

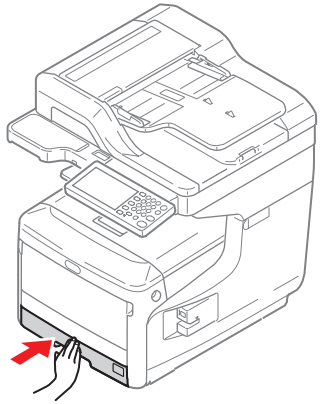


(4) Wipe two paper feed rollers in the tray with a soft cloth that has been slightly moistened with water and then squeezed well.

Note! Use water only.

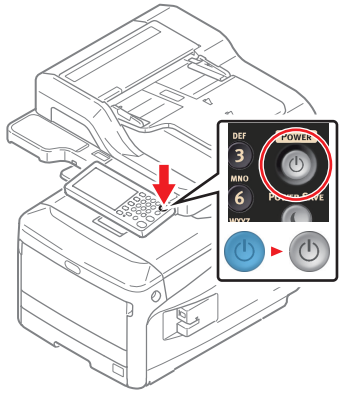


(5) Push the tray back into the MFP.

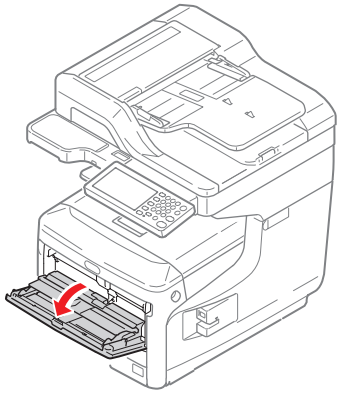


5.4 Cleaning the MPT Feed rollers

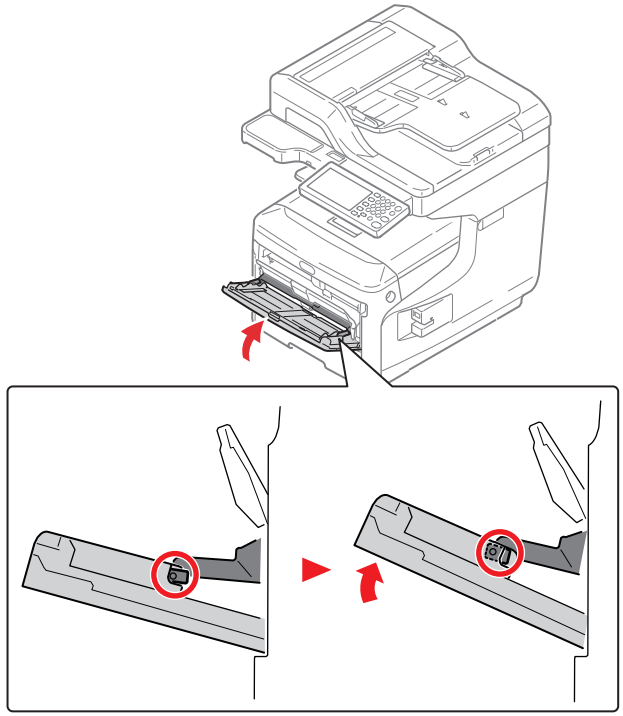
(1) Power off the MFP.



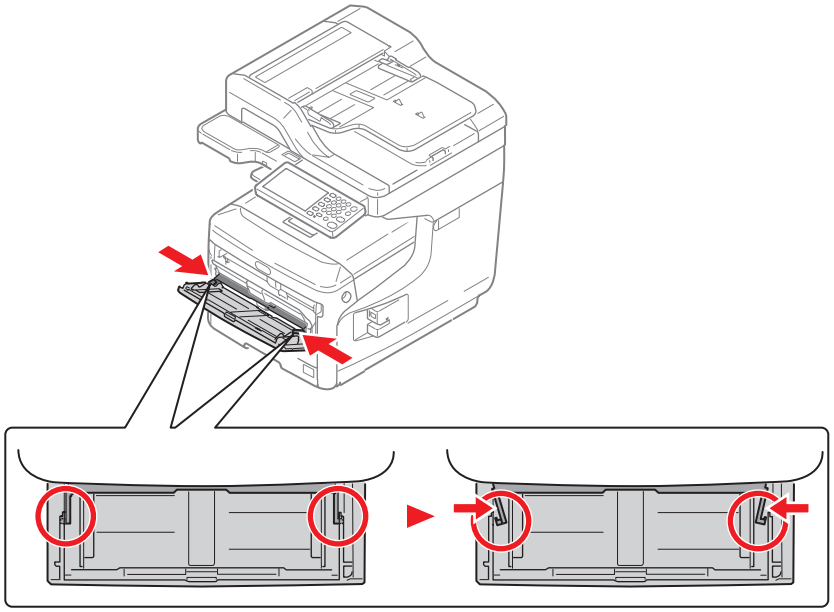
(2) Open the MPT.



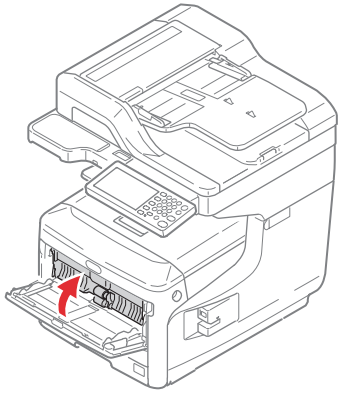
(3) Close the MPT gently to a position where the left and right tabs fit the arm grooves.



(4) Separate the tabs on the roller guide from the left and right arms by pushing the tabs to inside.

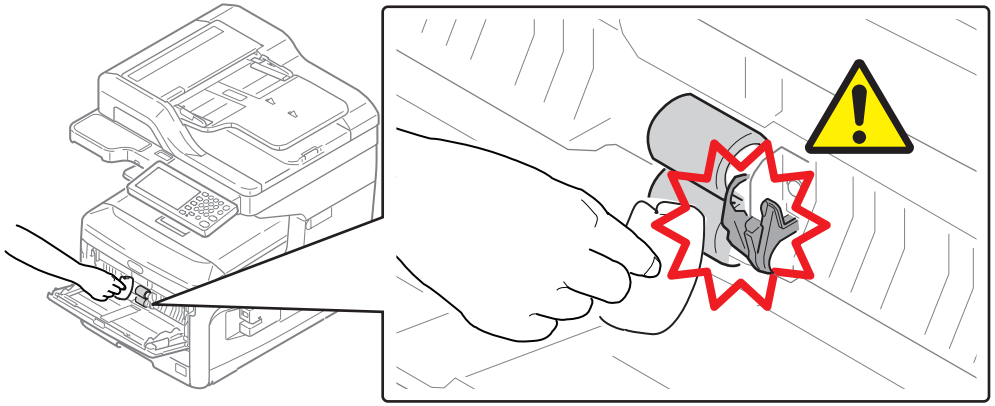


(5) Raise the roller guide until it comes in contact with the MFP.



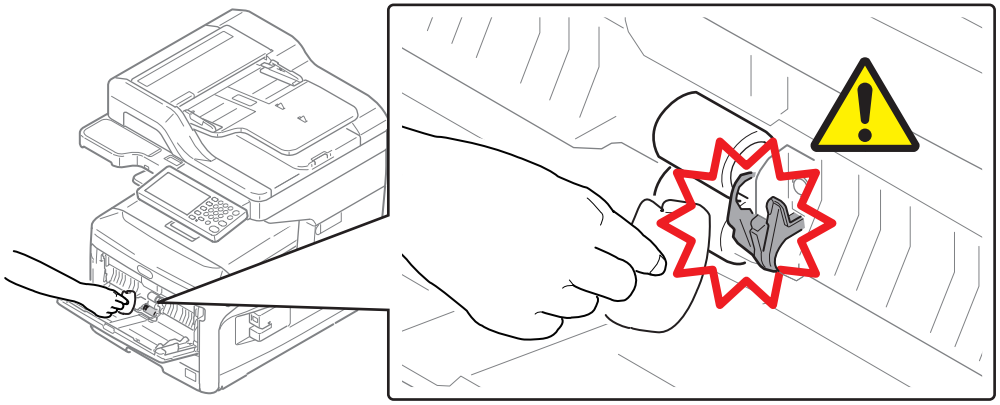
(6) Wipe the two feed rollers with a tightly wrung cloth soaked in water through the opening for MPT.

Note! 1. Use water only.
2. Do not bend the lever.



(7) Open the Retard Roller cover and wipe the retard roller with a tightly wrung cloth soaked in water through the opening for MPT.

Note! 1. Use water only.
2. Do not bend the lever.

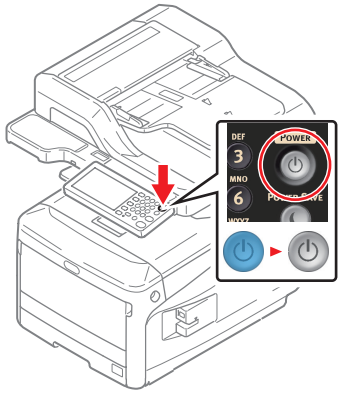


(8) Close the MPT is performed by the inverse procedure with opening.

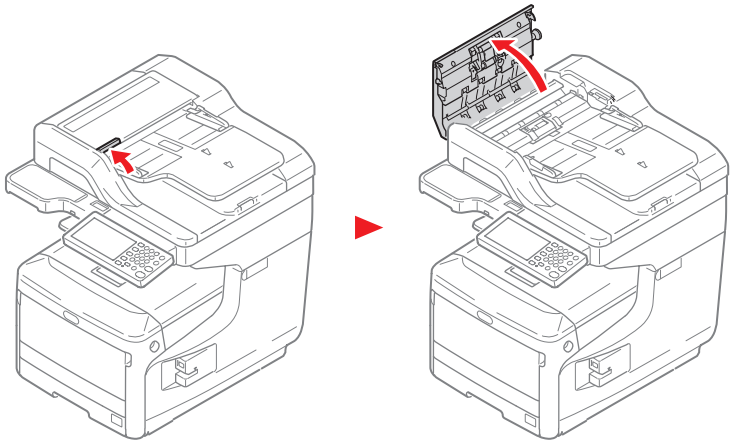
5.5 Cleaning Rollers in the ADF

If the document feeding rollers in the ADF are contaminated with ink, toner particles or paper dust, documents and outputs get dirty and a paper jam may occur. To prevent these problems, it is recommended to clean the rollers once a month.

(1) Power off the MFP.

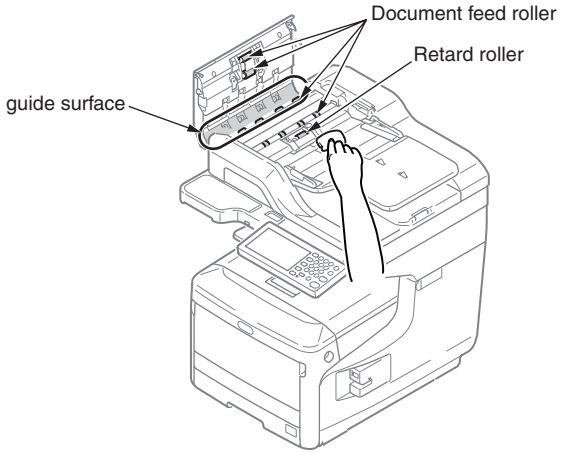


(2) Pull the open lever and open the ADF cover.

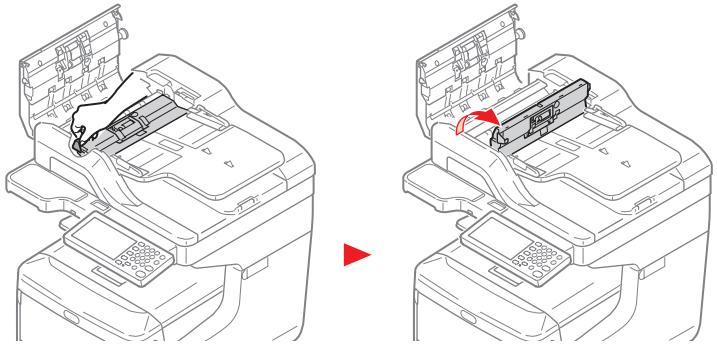


(3) Wipe the document feed roller, guide surface, and retard roller with a soft cloth that has been slightly moistened with water and squeezed well. Wipe the whole surface of the roller while turning it with your hand.

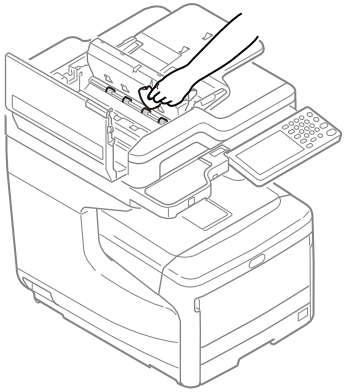
Note! If the rollers get too dirty, wipe them with a soft cloth lightly moistened with neutral detergent, and then wipe it again with a soft cloth lightly moistened with water.



(4) Open the inner Cover.



(5) Wipe the rollers with a soft cloth lightly moistened with water.

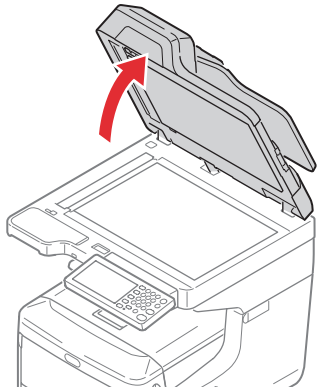


(6) Close the inner cover and the ADF Cover by the inverse procedure with opening.

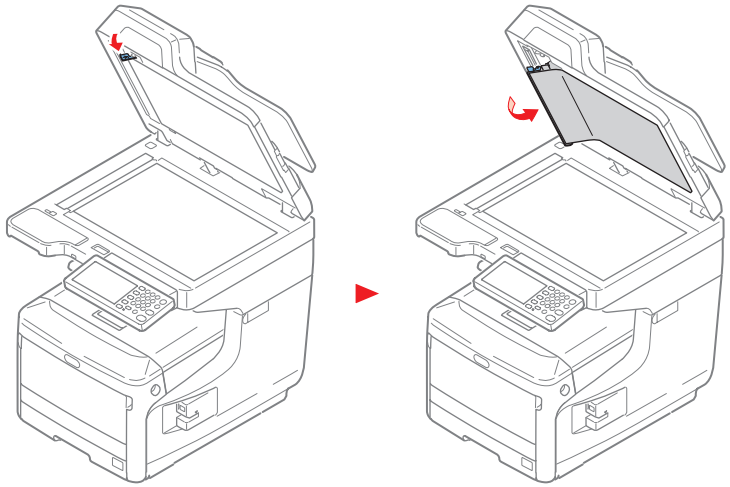
5.6 Cleaning the rollers inside of the ADF

This section is described of the cleanning method for the rollers arranged to inside of the document pad. It is recommended to clean these at same time with rollers in ADF (See clause 5.5).

(1) Open the document glass cover.

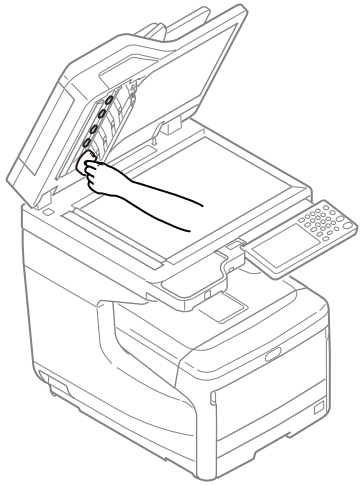


(2) Pull the lever and open the document hold pad.



(3) Wipe the rollers with a soft cloth lightly moistened with water.

Caution! Do not use benzine, thinners or alcohol as a cleaning agent. They may damage the plastic parts of the MFP.

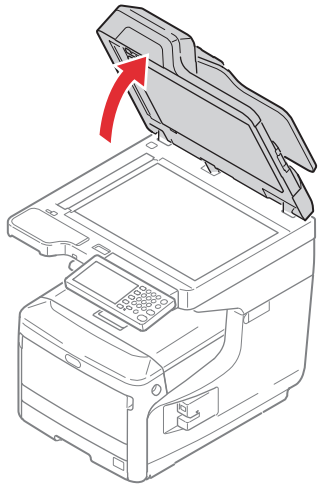


(4) Close the document hold pad and the ADF Cover.

5.7 Cleaning the Document Glass

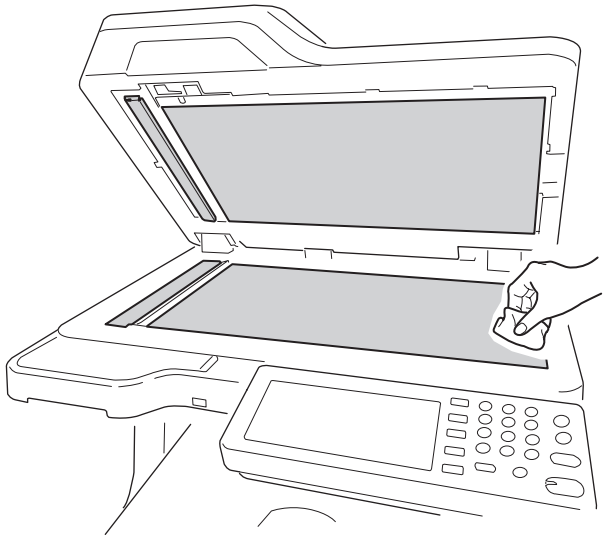
It is recommended to clean the document glass once a month to maintain image quality of the printouts.

(1) Open the document glass cover.



(2) Wipe the ADF document holding pads, document glass, and ADF document glass gently with a soft cloth that has been slightly moistened with water and squeezed well.

Caution! Do not use benzine, thinners or alcohol as a cleaning agent. They may damage the plastic parts of the MFP.

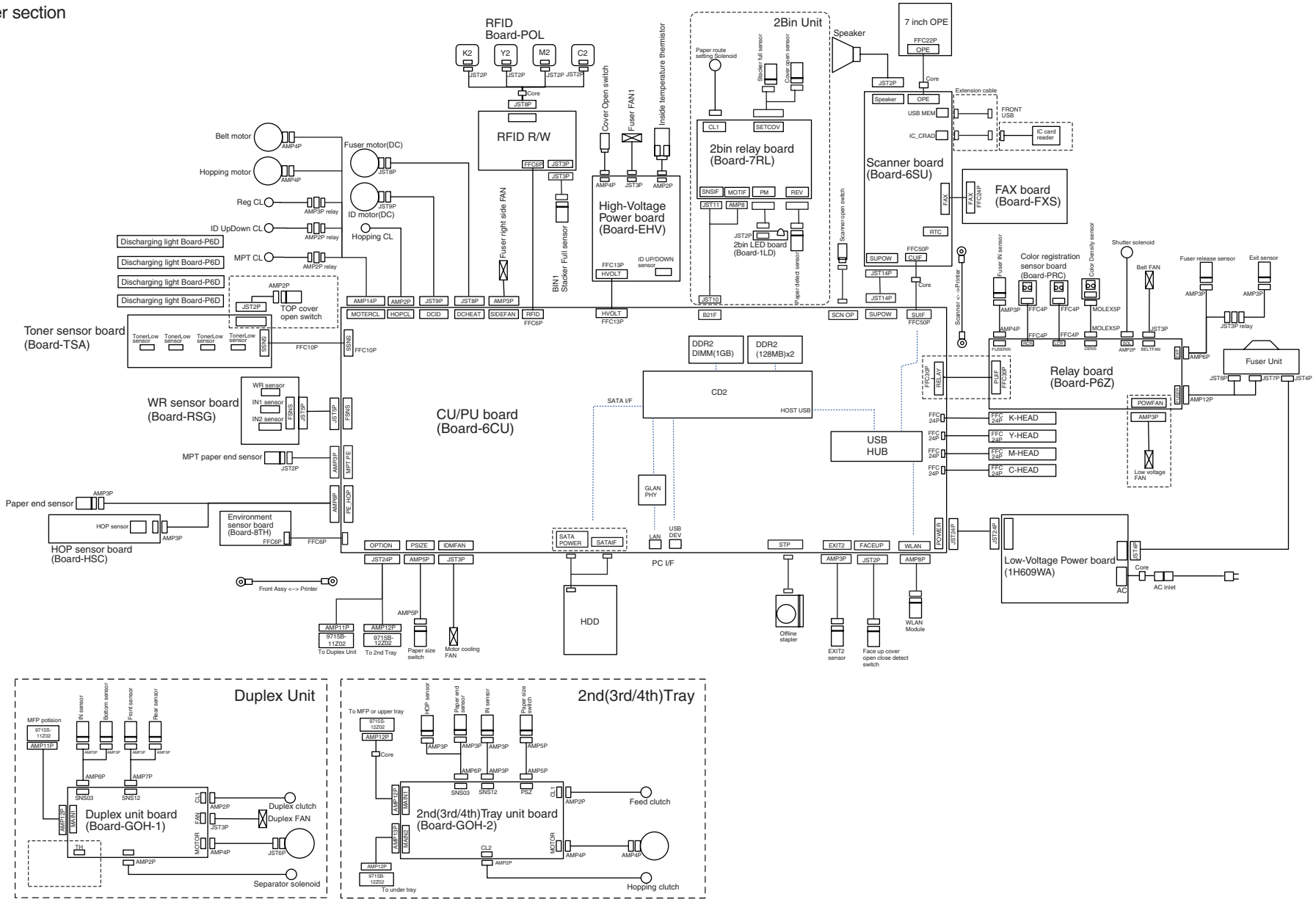


(3) Close the document glass cover.

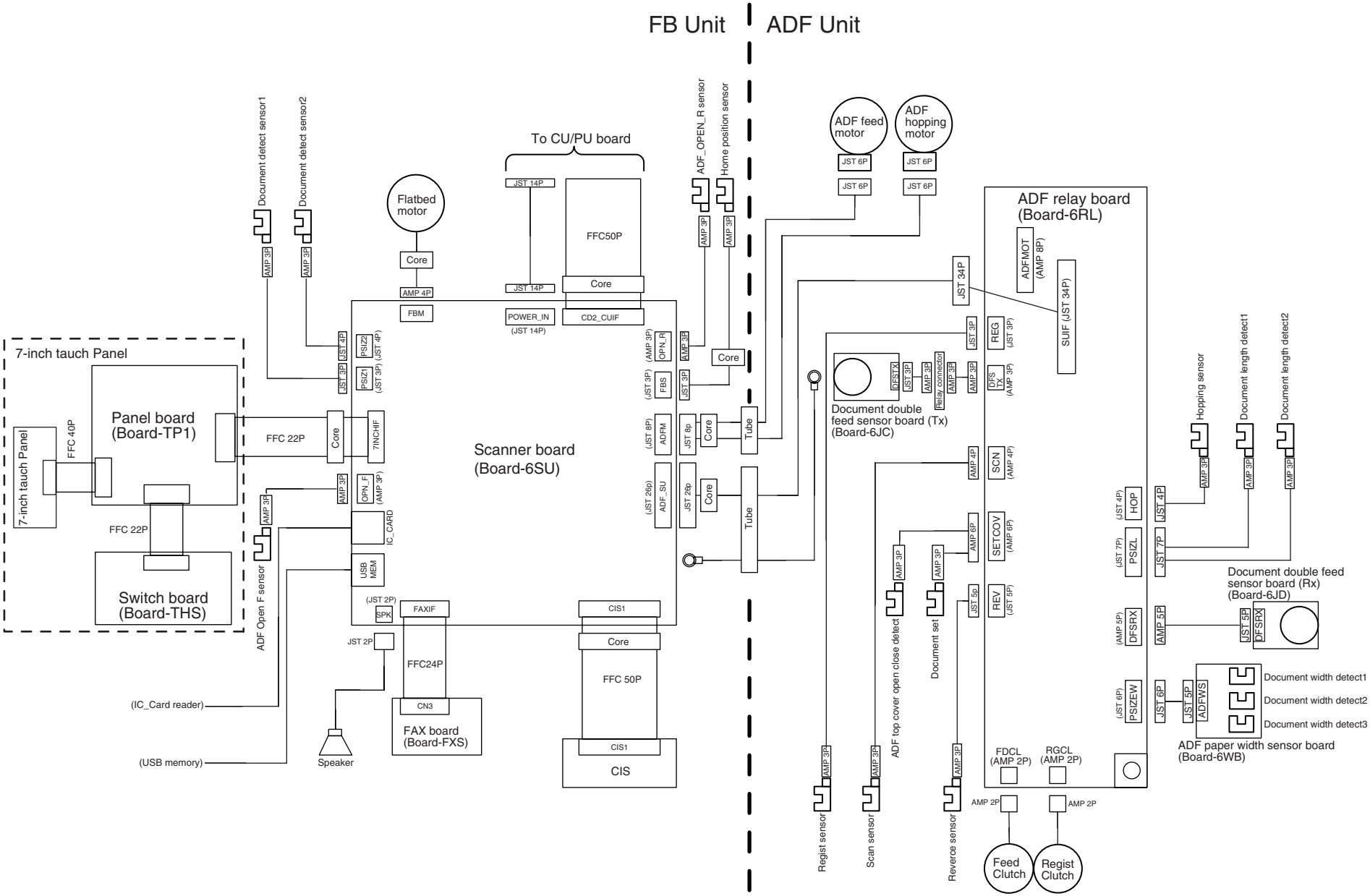
6. CONNECTION DIAGRAMS

6.1 Connection diagram

(1) Printer section



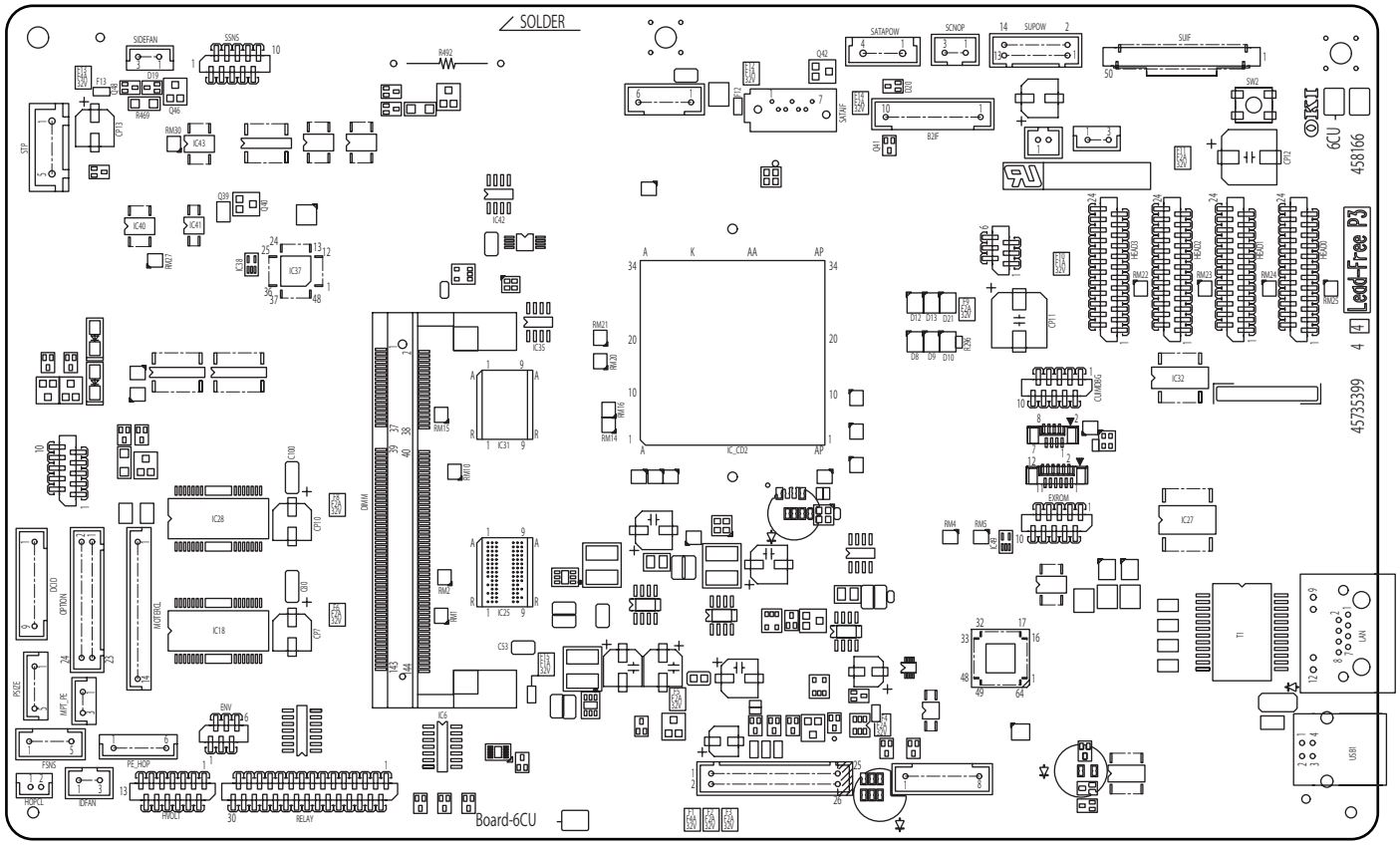
(2) Scanner section



6.2 Board Layout

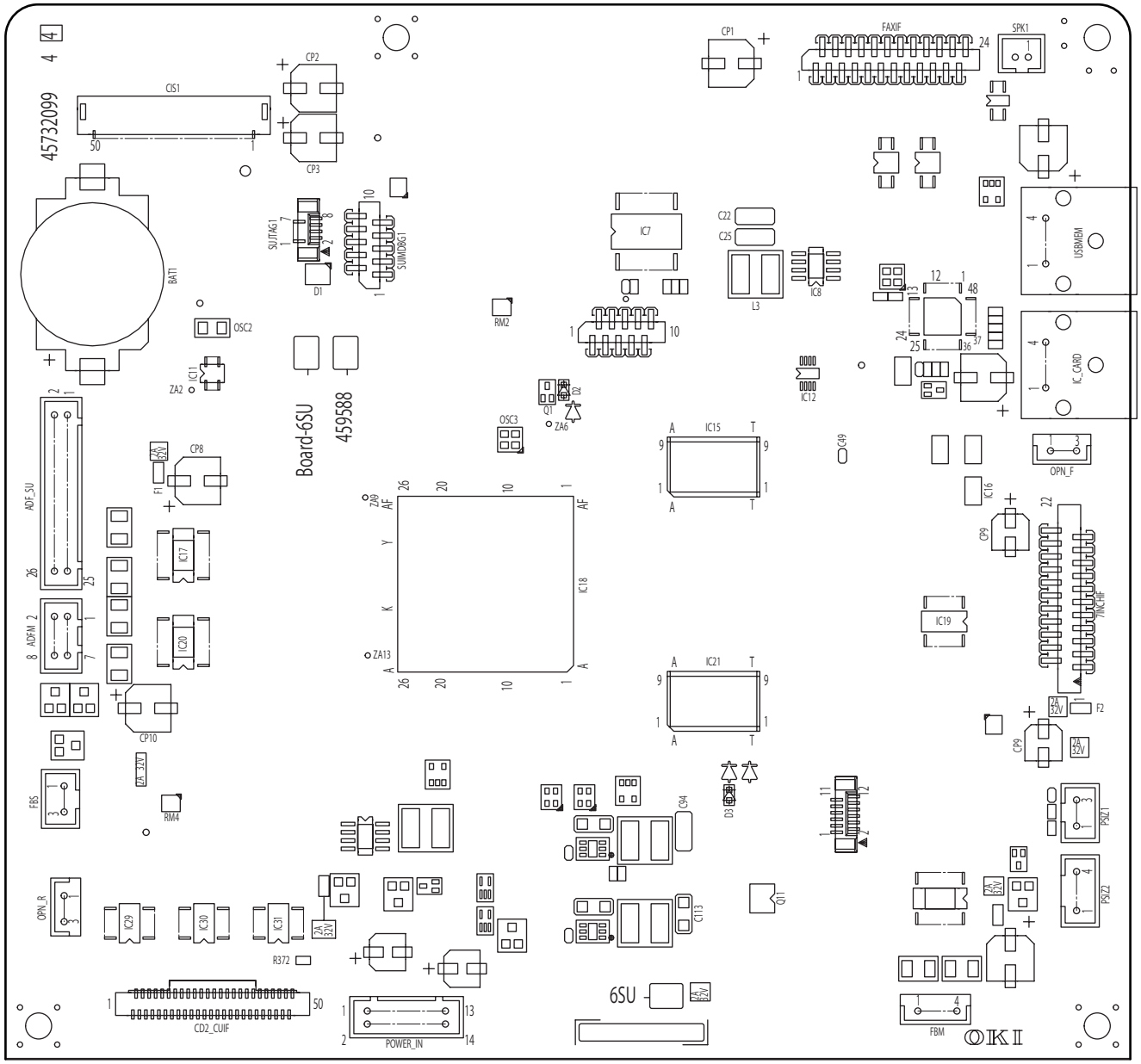
(1) CU/PU board (Board-6CU)

Component side



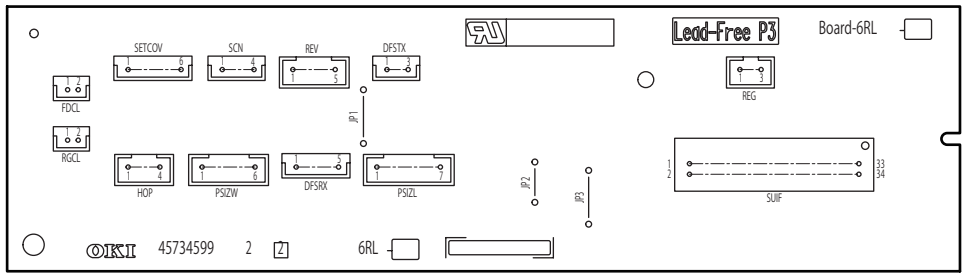
(2) Scanner board (Board-6SU)

Component side



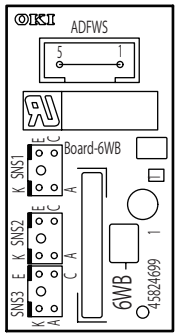
(3) ADF relay board (Board-6RL)

Component side



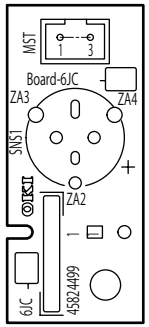
(4) ADF paper width sensor board (Board-6WB)

Component side



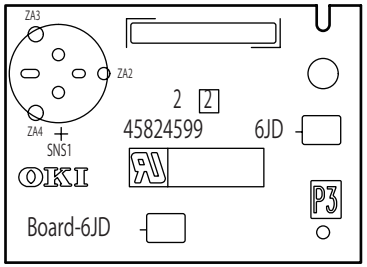
(5) Document double feed sensor board (Tx) (Board-6JC)

Component side



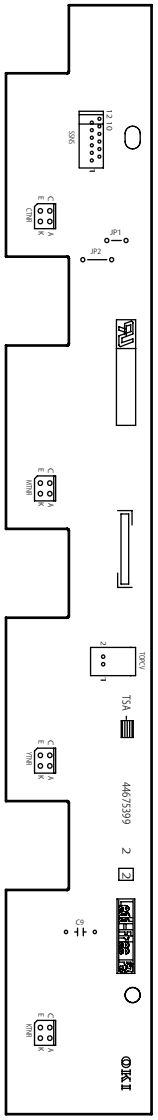
(6) Document double feed sensor board (Rx) (Board-6JD)

Component side



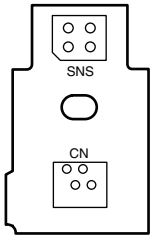
(7) Toner sensor board (Board-TSA)

Component side



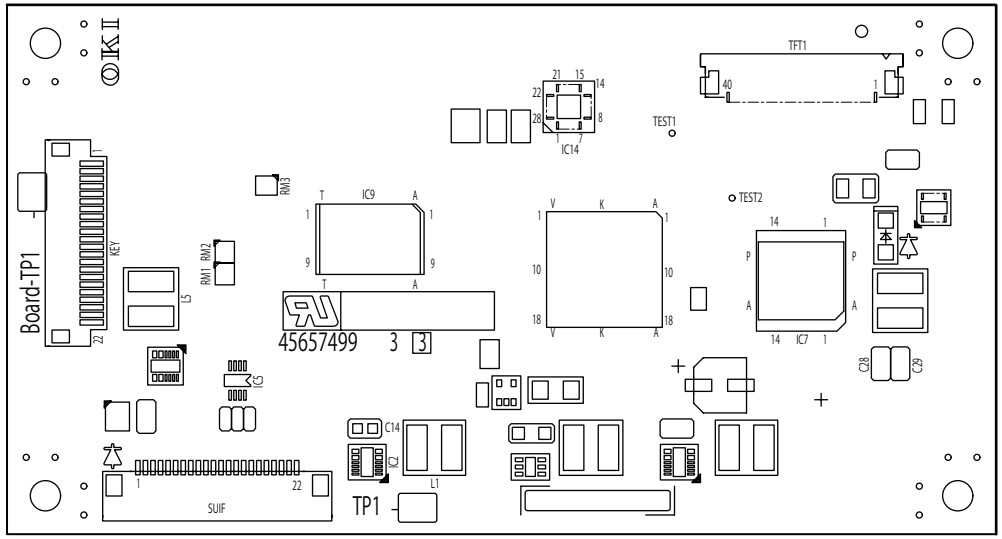
(8) Color registration sensor board (Board-PRC)

Component side



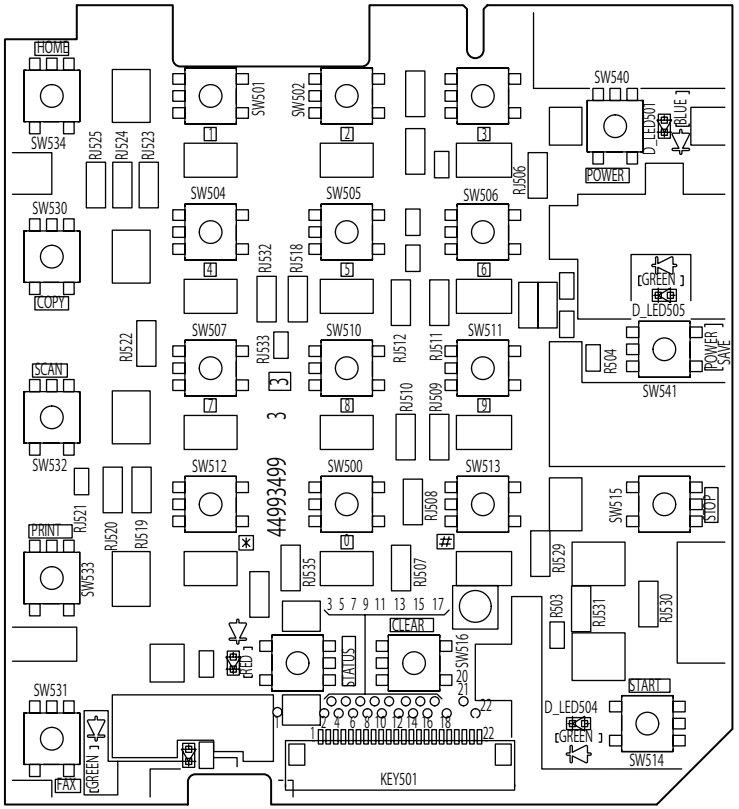
(9) Panel board (Board-TP1)

Component side



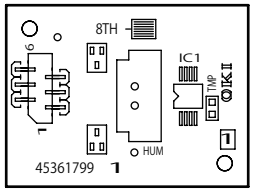
(10) Switch board (Board-THS)

Component side



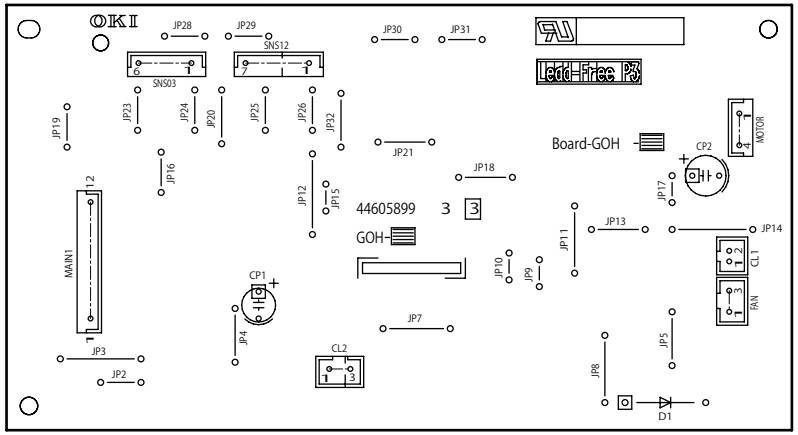
(11) Environment sensor board (Board-8TH)

Component side



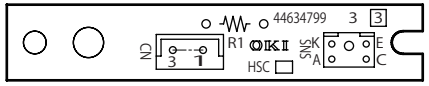
(12) Duplex unit board(Board-GOH) , 2nd(3rd/4th) unit board (Board-GOH-2)

Component side



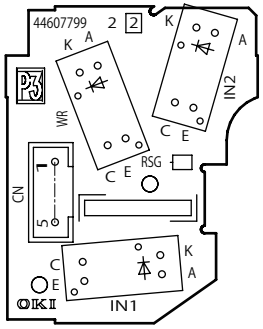
(13) HOP sensor board (Board-HSC)

Component side



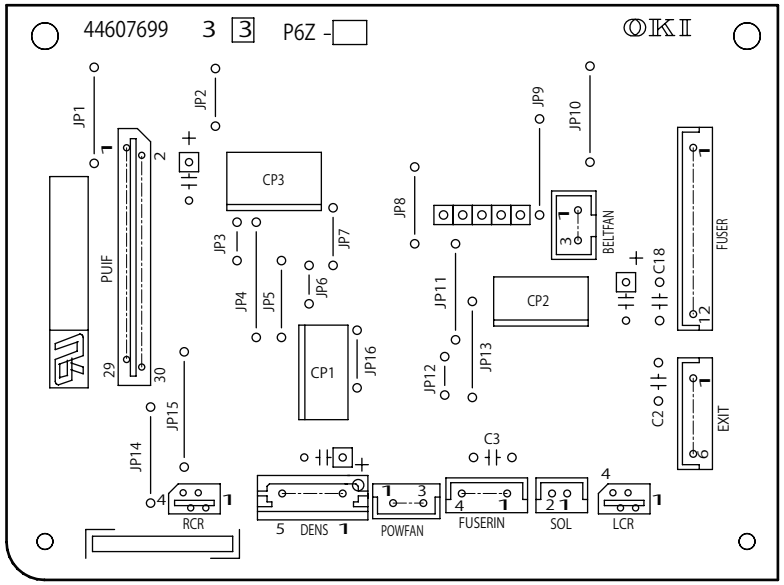
(14) WR sensor board (Board-RSG)

Component side



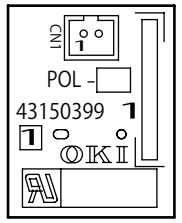
(15) Relay board (Board-P6Z)

Component side



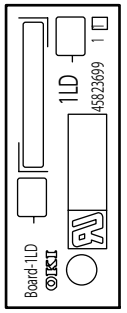
(16) Antena board (Board-POL)

Component side



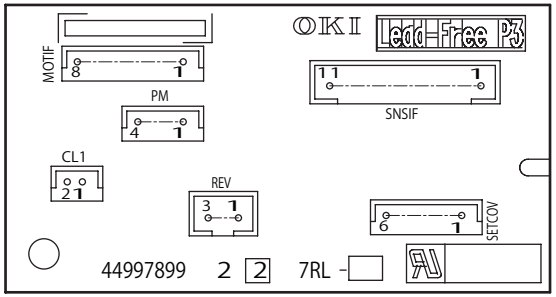
(17) 2bin LED board (Board-1LD)

Component side



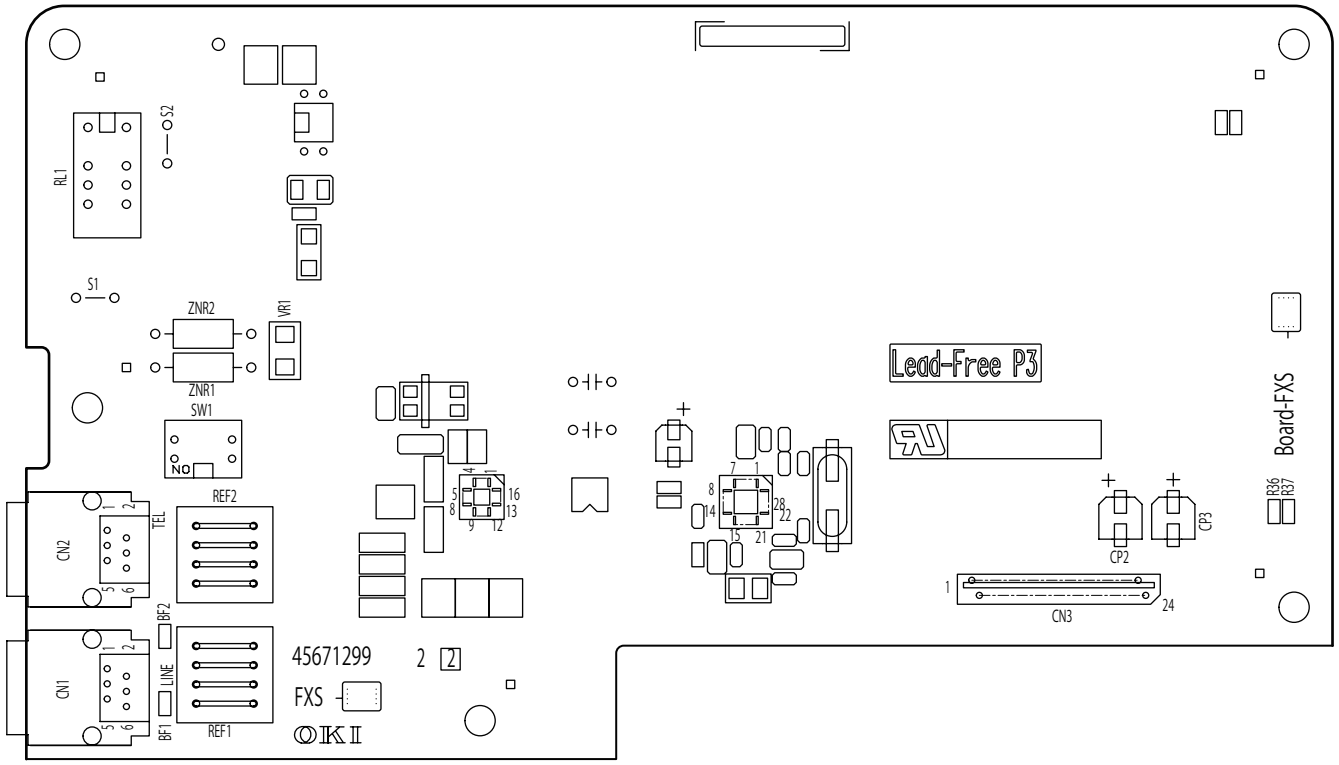
(18) 2bin relay board (Board-7RL)

Component side



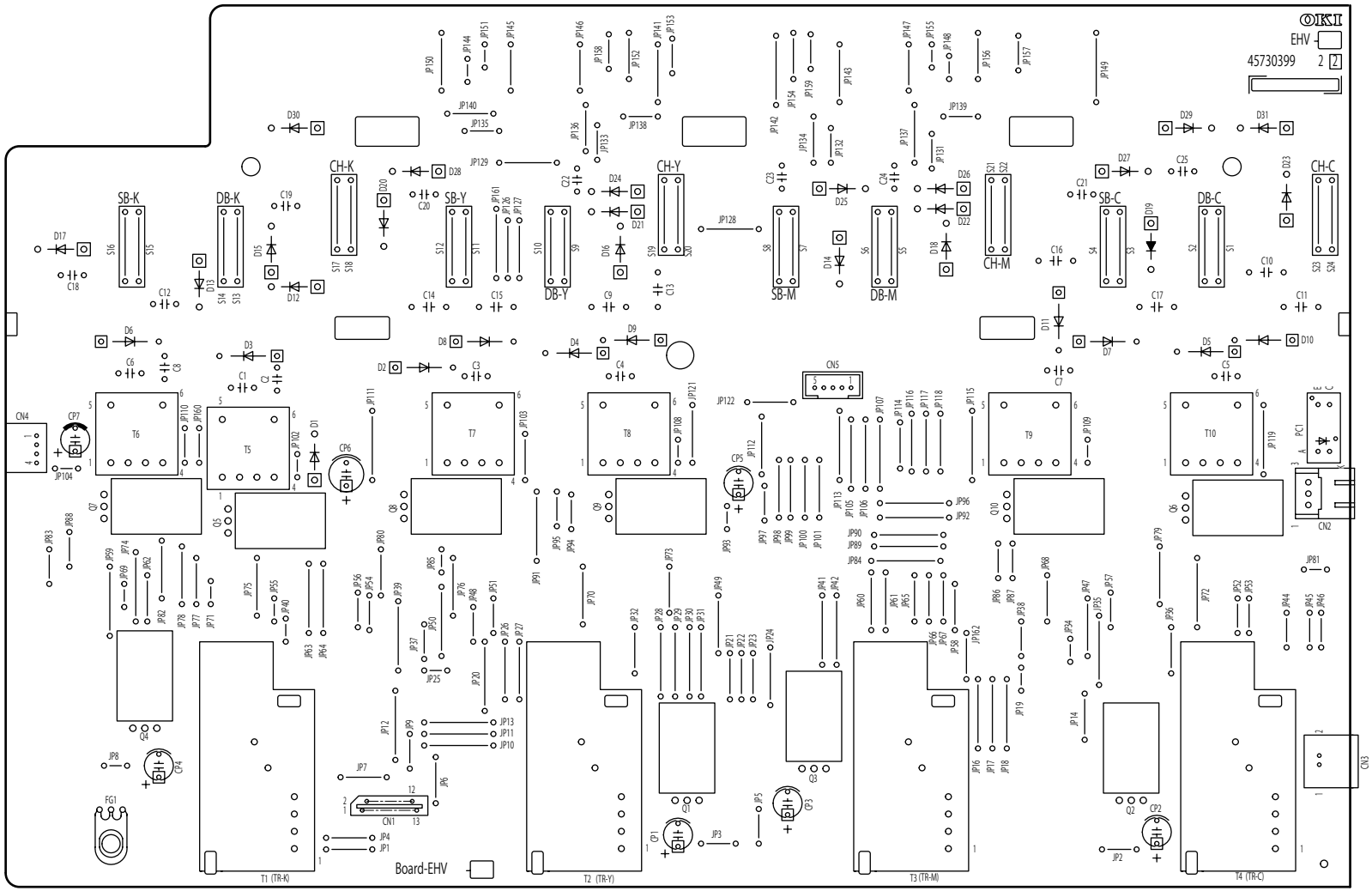
(19) FAX board (Board-FXS)

Component side



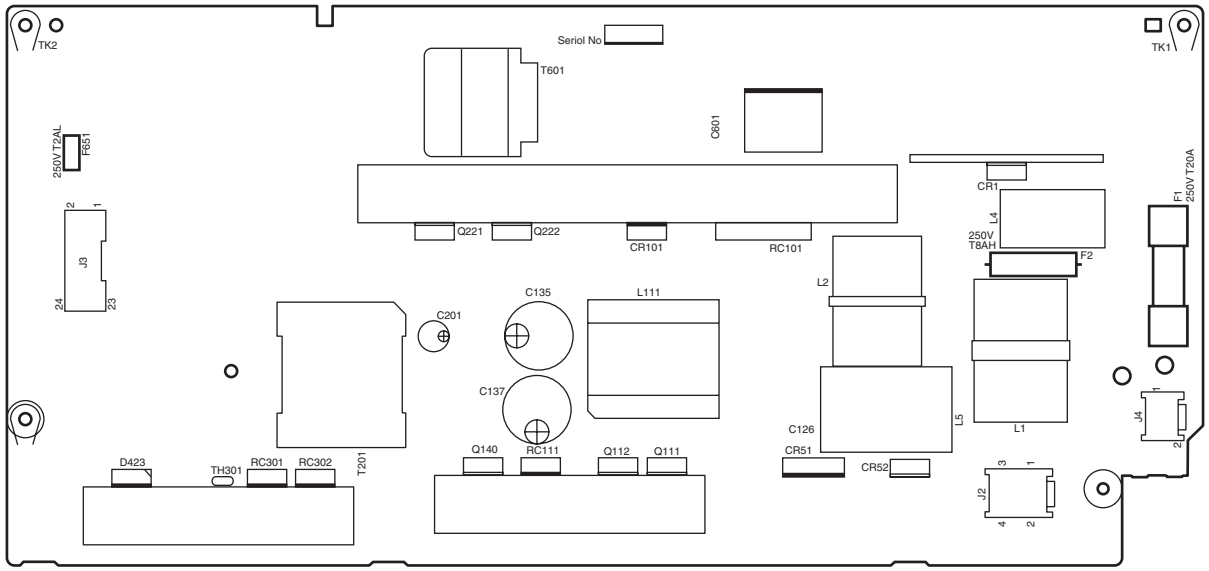
(20) High-Voltage Power board (Board-EHV)

Component side

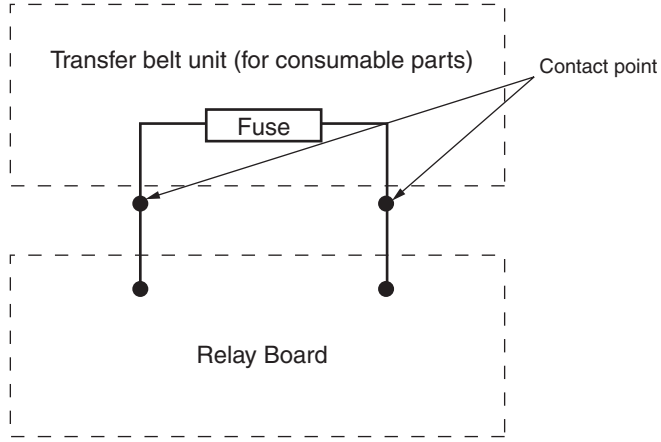


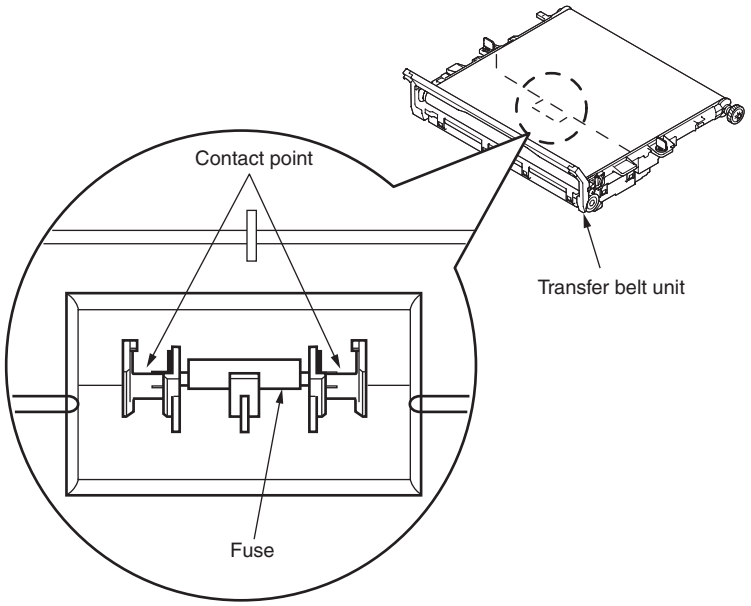
(21) Low-Voltage Power board (1H609WA)

Component side

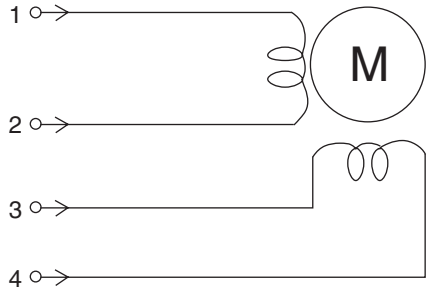
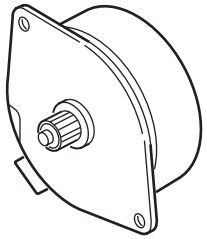
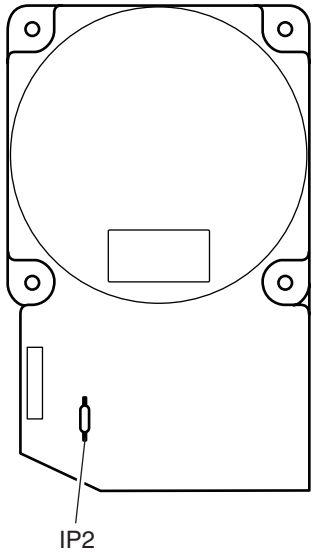
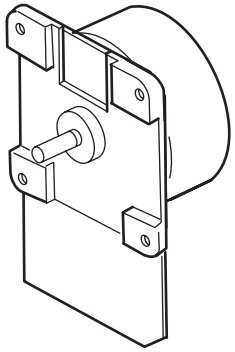


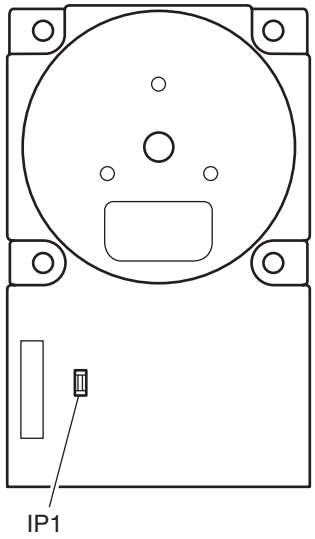
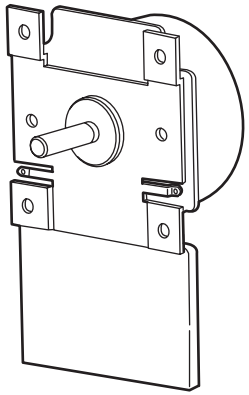
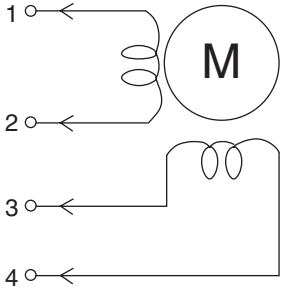
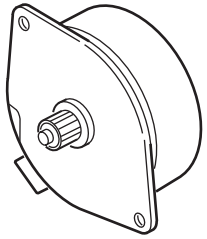
(22) Transfer Belt Unit

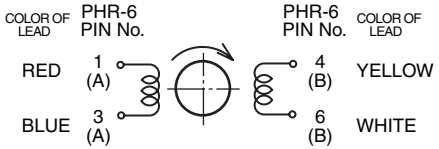
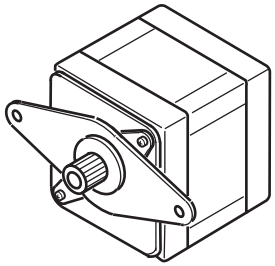
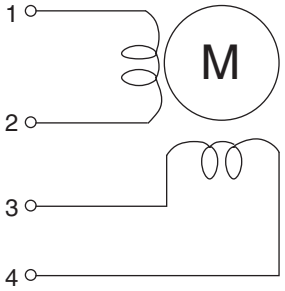
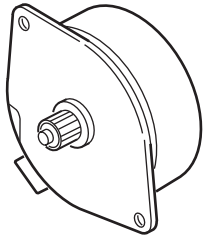


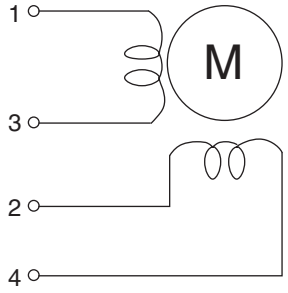
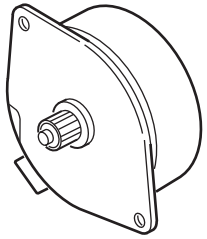
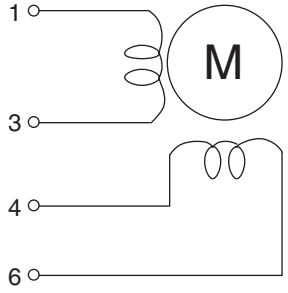
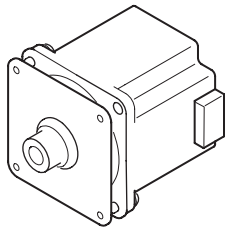


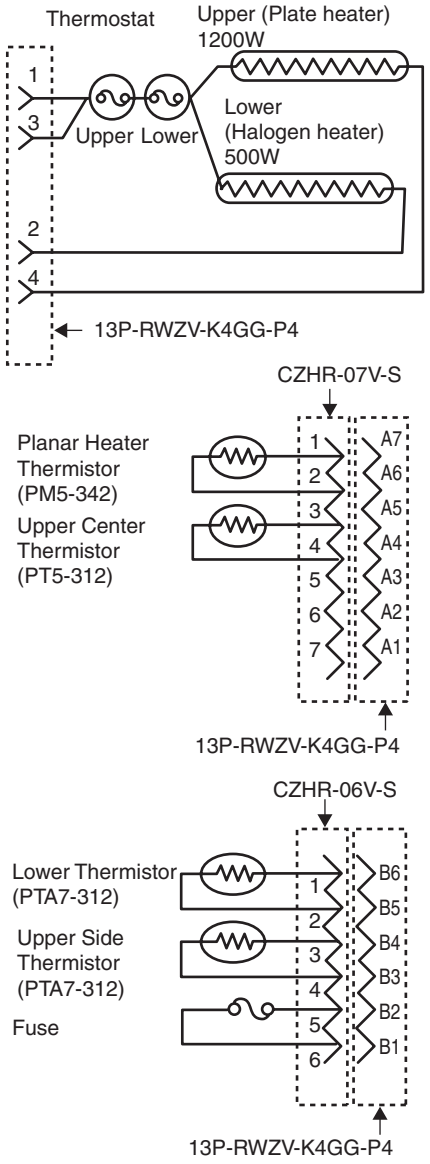
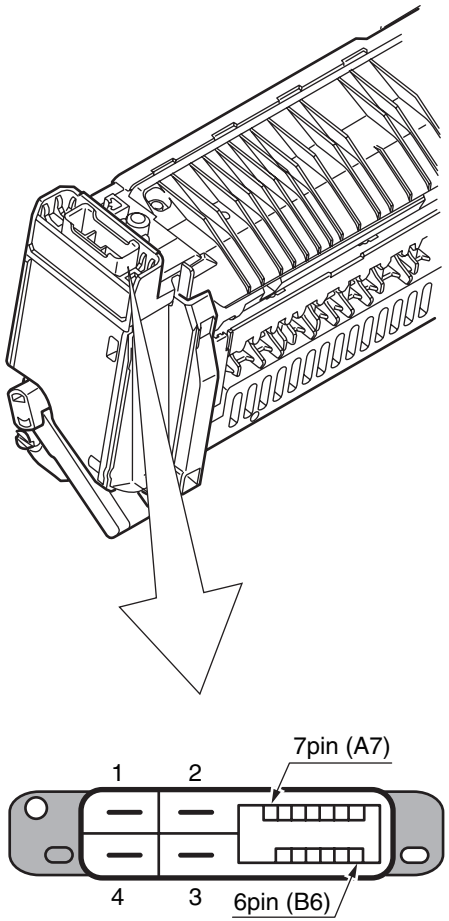
6.3 Resistance value

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

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Fuser motor			Across both ends of IP1 : 1 Ω or less
Hopping motor			Between pin-1 and pin-2 : 3.4 Ω Between pin-3 and pin-4 : 3.4 Ω

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Duplex print motor			PHR-6 connector Between pin-1 and pin-3 : 3.2 Ω Between pin-4 and pin-6 : 3.2 Ω
2nd, 3rd and 4th tray hopping motor			Between pin-1 and pin-2 : 3.4 Ω Between pin-3 and pin-4 : 3.4 Ω

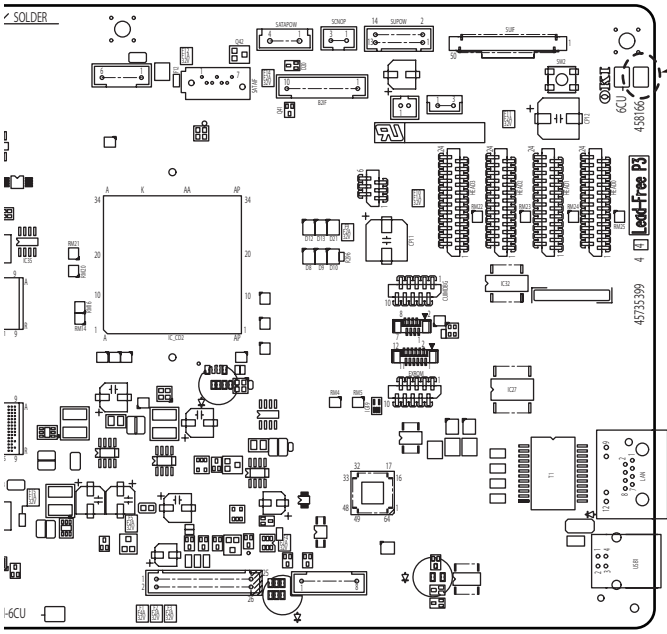
Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Flatbed motor			Between pin-1 and pin-3 : 7.4 Ω Between pin-2 and pin-4 : 7.4 Ω
ADF feed motor ADF hopping motor			Between pin-1 and pin-3 : 0.9 Ω Between pin-4 and pin-6 : 0.9 Ω

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Fuser unit			Between pins A-6 and A-7 : Approx. 80.58 kΩ to 53.38 kΩ 0 to 93°C) Between pins A-4 and A-5 : Approx. 104.5 kΩ to 806.5 kΩ (0 to 43°C) Between pins B-5 and B-6 : Approx. 104.5 kΩ to 806.5 kΩ (0 to 43°C) Between pins B-3 and B-4 : Approx. 104.5 kΩ to 806.5 kΩ (0 to 43°C)

6.4 Firmware Information

6.4.1 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 6CU (YU) Series No.	Use for
01	458166 [01]	6CU-1(45823501)	MC853_OEL
02	458166 [02]	6CU-1(45823501)	MC853_AOS
03	458166 [03]	6CU-1(45823501)	ES8453_OEL
11	458166 [11]	6CU-1(45823501)	MC863_JAPAN
12	458166 [12]	6CU-1(45823501)	ES8463_JAPAN
21	458166 [21]	6CU-1(45823501)	MC873_ODA
23	458166 [23]	6CU-1(45823501)	MC873_OEL
24	458166 [24]	6CU-1(45823501)	MC873_AOS
27	458166 [27]	6CU-1(45823501)	ES8473_ODA_ODM_ROLA
28	458166 [28]	6CU-1(45823501)	ES8473_OEL
29	458166 [29]	6CU-1(45823501)	ES8473_ODSP
30	458166 [30]	6CU-1(45823501)	ES8473_AOS
31	458166 [31]	6CU-1(45823501)	ES8473_ODB
41	458166 [41]	6CU-1(45823501)	MC883_JAPAN
42	458166 [42]	6CU-1(45823501)	ES8483_JAPAN
43	458166 [43]	6CU-1(45823501)	ES8483_KOREA