OKI
PRINTING SOLUTIONS

C844

Maintenance Manual

04092019
Rev. 3

PREFACE

This manual is described the maintenance methods for the C824 / C834 /C835 / ES8434 / C844 Series.

The manual has been prepared for to use by the maintenance personnel. For operating methods of the C824 / C834 /C835 / ES8434 / C844 Series, refer to the corresponding user's manuals.

The following notations may be used in this manual for each name of these apparatuses.

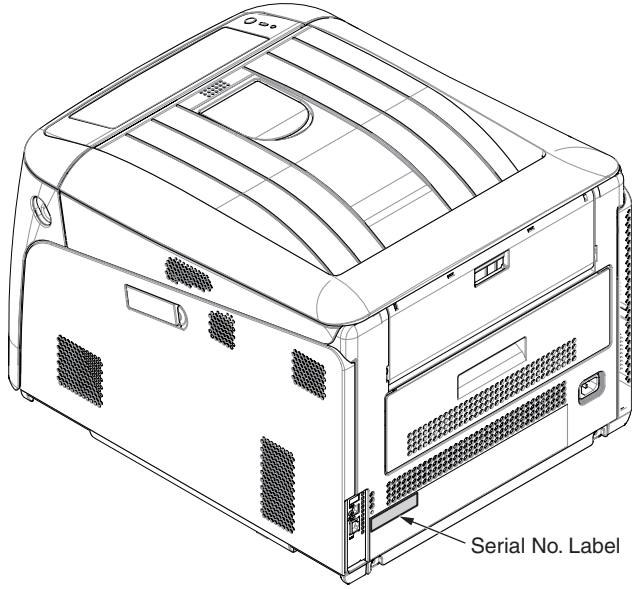
- C824n/C824dn → C824
- C834nw/C834dnw/C834dnw/C834dnwl/ES8434 → C834
- C835dnw/C835dnwt → C835
- C844dnw/C844dnwl→ C844

Note!
- The contents of this manual are subject to changes without notice.
- Despite that exhaustive efforts were made in preparing the manual to make it accurate, it still may contain errors. Oki Data will not hold itself liable for any damage that results or is claimed to have resulted from repair, adjustment or modification of the apparatus conducted by the user or anyone using this manual.
- The parts used in these apparatuses so delicate that they may be damaged if not treated properly. Oki Data Corporation highly recommends that the maintenance of the apparatus is undertaken by ODC's registered maintenance personnels.
- Work after eliminating static electricity.

⚠Warning

Risk of explosion if battery is replaced by an incorrect type.
The battery of the apparatus is not needed to be replaced. So, do not touch the battery.
Replace the whole board in replacing the CU/PU board (board-ME2).

The pasted position of the Serial No. Label



Contents

1. CONFIGURATION

1.1 System configuration

Figure 1-1 represents the system configuration of this apparatus.

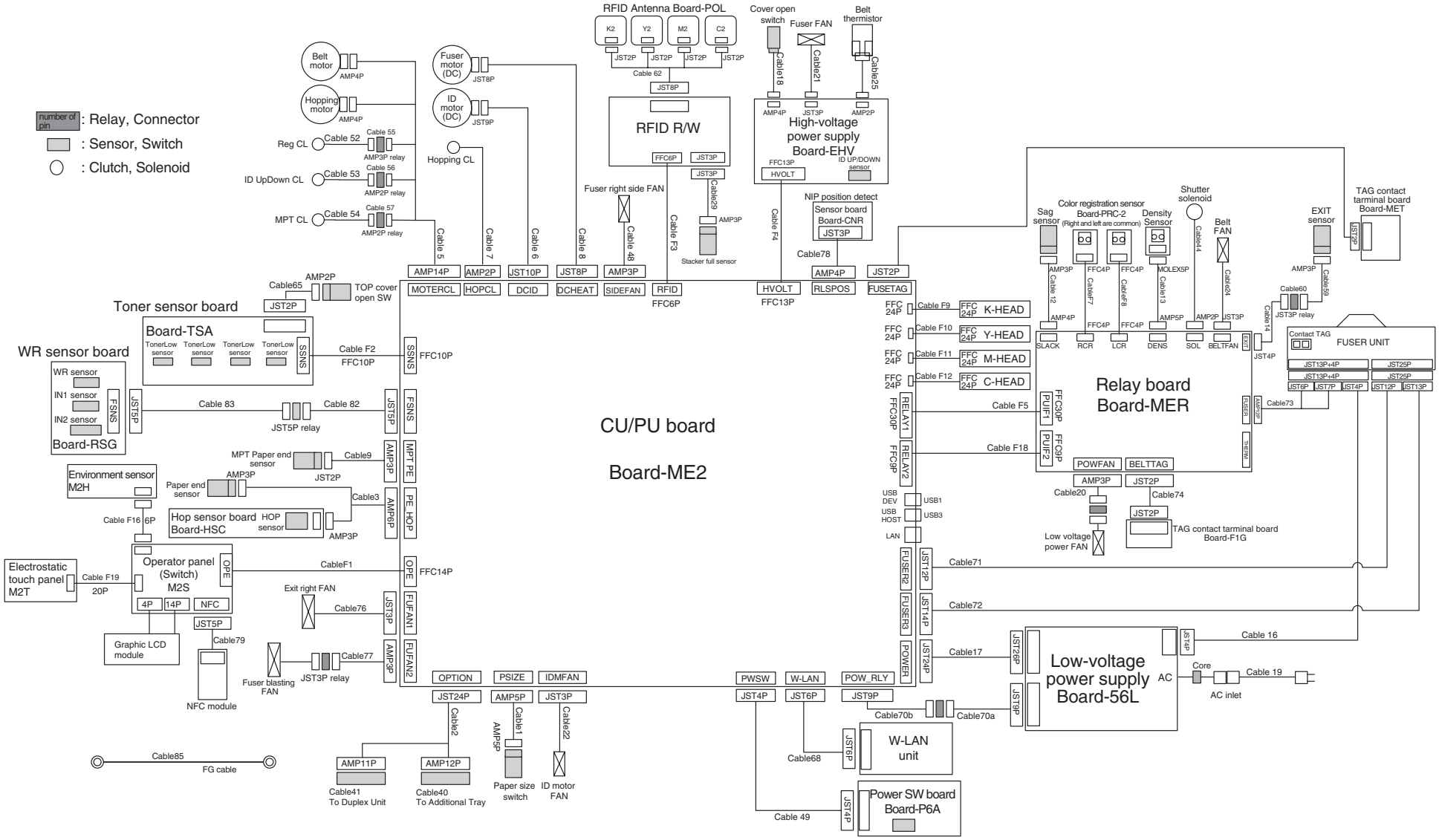
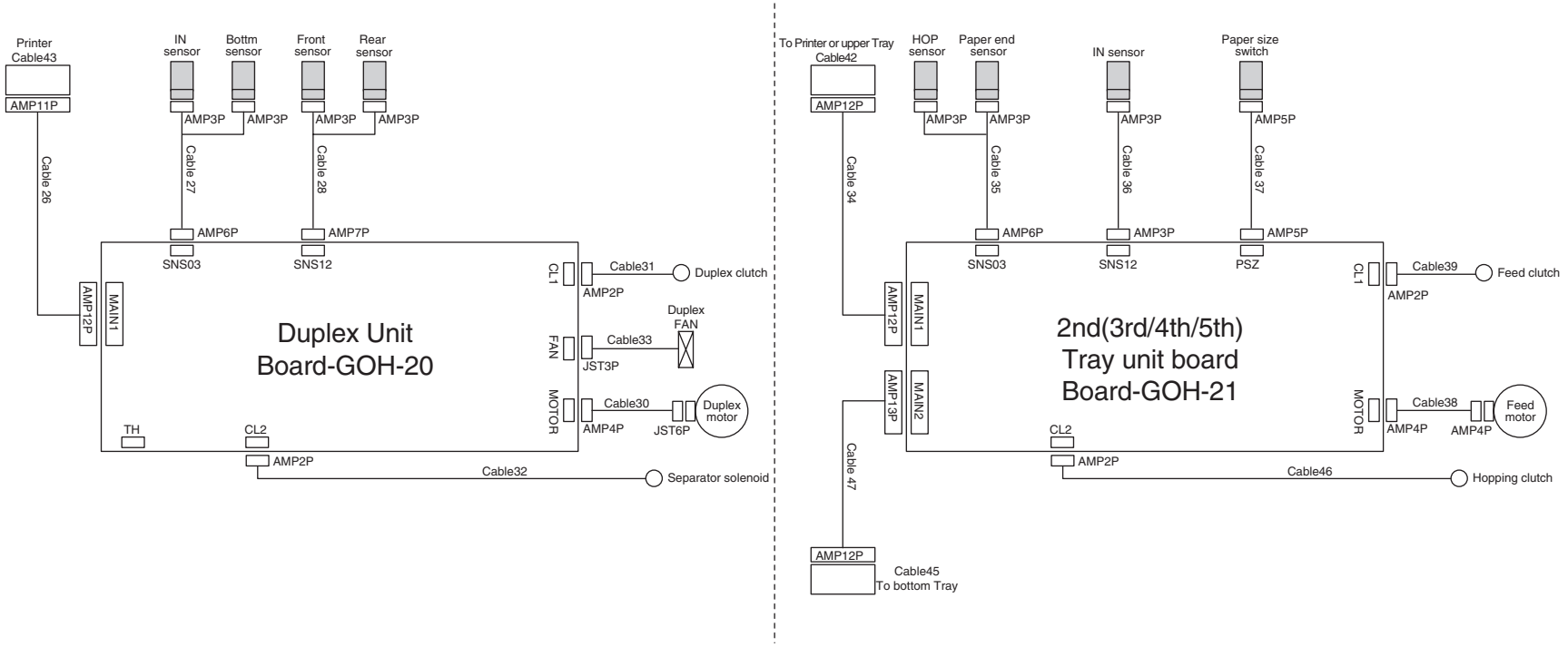


Figure 1-1


Printer
Cable43
AMP11P
Cable 26
IN sensor
Bottm sensor
Front sensor
Rear sensor
AMP3P
AMP3P
AMP3P
AMP3P
Cable 27
Cable 28
AMP6P
AMP7P
SNS03
SNS12
AMP12P
MAIN1
Duplex Unit
Board-GOH-20
CL1
Cable31
Duplex clutch
AMP2P
Duplex FAN
FAN
Cable33
JST3P
MOTOR
Cable30
Duplex motor
AMP4P
JST6P
TH
CL2
AMP2P
Cable32
Separator solenoid
To Printer or upper Tray
Cable42
AMP12P
HOP sensor
Paper end sensor
IN sensor
Paper size switch
AMP3P
AMP3P
AMP3P
AMP5P
Cable 34
Cable 35
Cable 36
Cable 37
AMP6P
AMP3P
AMP5P
SNS03
SNS12
PSZ
AMP12P
MAIN1
AMP13P
MAIN2
2nd(3rd/4th/5th)
Tray unit board
Board-GOH-21
CL1
Cable39
Feed clutch
AMP2P
MOTOR
Cable38
Feed motor
AMP4P
AMP4P
CL2
AMP2P
Cable46
Hopping clutch
Cable 47
AMP12P
Cable45
To bottom Tray

1.2 Apparatus configuration

The internal part of the this apparatus is composed of the following sections:

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

Figure 1-2 represents the configuration of this apparatus.

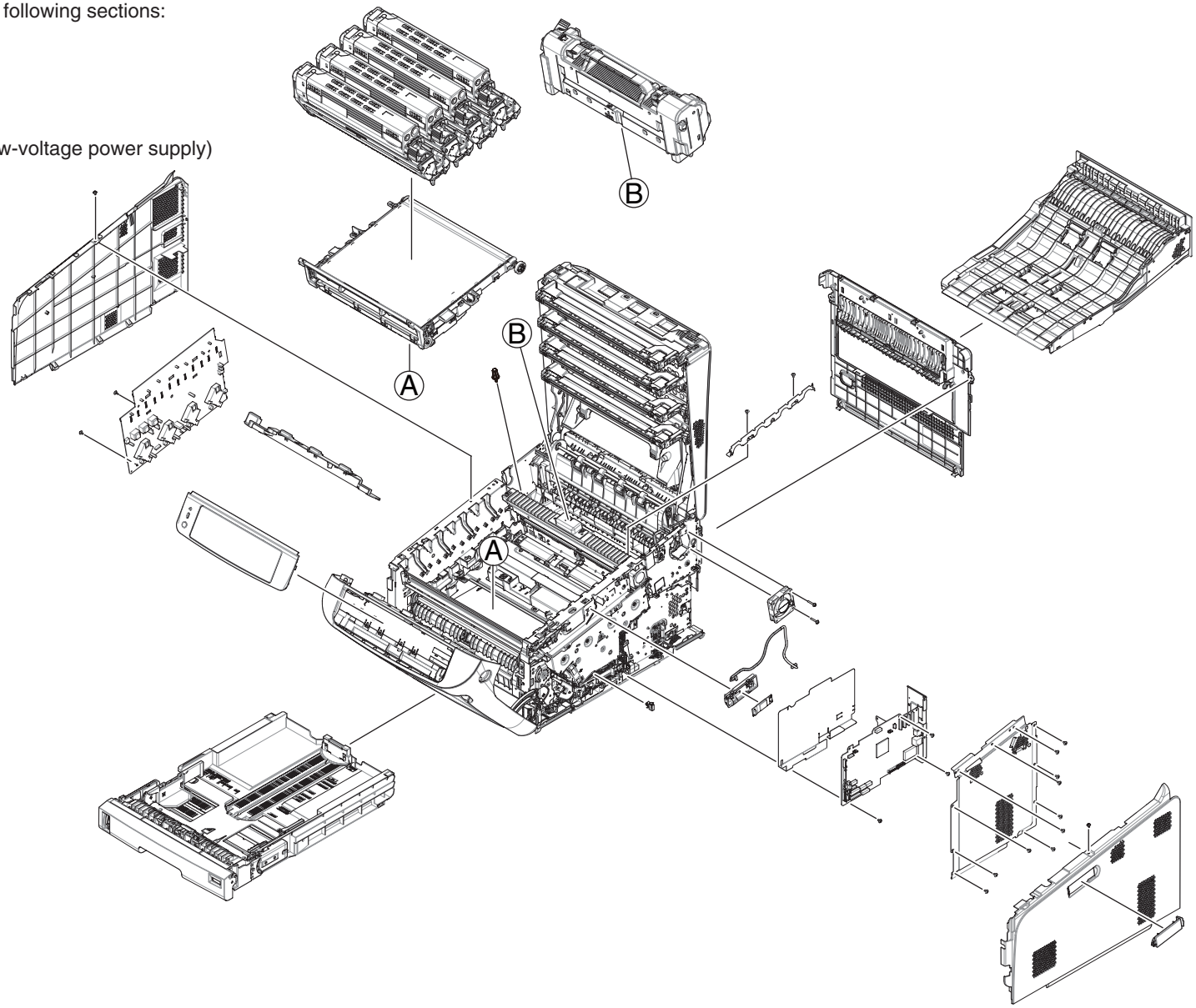
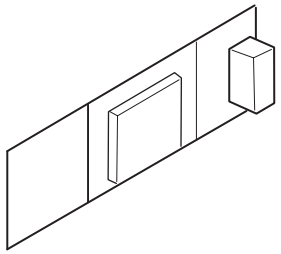


Figure 1-2

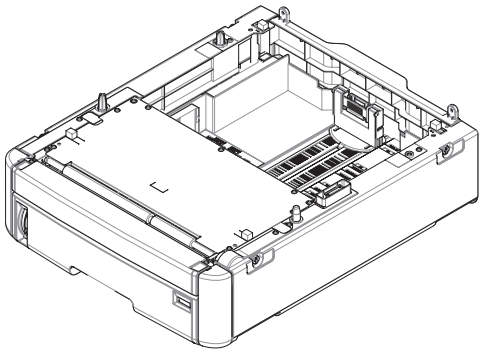
1.3 Composition of optional items

The following optional items are available for this apparatus:

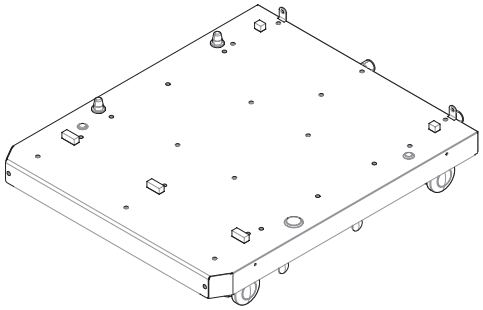
(1) Wireless LAN module



(2) Additional Tray



(3) Castor Base

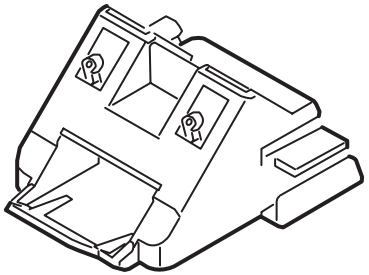


(4) IC card reader

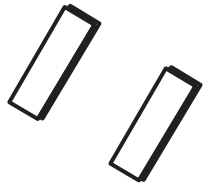
Recommended IC Card Reader : ELATEC ART15160 TWN4 MIFARE NFC Version P.

(5) Card Reader Holder

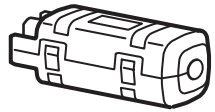
• Holder



• Surface Fastener



• Core



1.4 Specifications

Item			C824dn	C834dnw / C835dnw	ES8434	C844dnw
Segment			SWG			
Print speed (simplex)	Color	A4 LEF	26ppm	36ppm		
		Letter LEF	26ppm	36ppm		
	Mono	A4 LEF	26ppm	36ppm		
		Letter LEF	26ppm	36ppm		
	Color	A3 SEF	14ppm	20ppm		
		Tabloid SEF	-			
	Mono	A3 SEF	14ppm	20ppm		
		Tabloid SEF	-			
Print speed (duplex)	Color	A4 LEF	19ppm	27ppm		
		Letter LEF	19ppm	27ppm		
	Mono	A4 LEF	19ppm	27ppm		
		Letter LEF	19ppm	27ppm		
	Color	A3 SEF	12ppm	18ppm		
		Tabloid SEF	-			
	Mono	A3 SEF	12ppm	18ppm		
		Tabloid SEF	-			
Print Width			A3			
Time to First Print			Color / Mono : 8.5 sec.	Color / Mono : 6.3 sec.		
Warm-up time from power on			approx.20 sec. (w/o calibrations)			
Recovery time from power save	Panel/Scan		-			
	Print		equal or less than 9.9 sec (w/o calibrations)			
Resolution	Head		600dpi (4bit)			1200dpi
	Maximum Input dpi		600x2400dpi			1200dpi
	Output dpi		600 x 600 dpi x 2bit 600 x 1200 dpi x 1bit 600 x 600 dpi x 1bit			1200 x 1200 dpi 600 x 600 dpi

Item		C824dn	C834dnw / C835dnw	ES8434	C844dnw
CPU	Core	ARM Processor			
	Clock	667MHz			
RAM	Resident	DDR3 1GB			
	Option	N/A			
ROM		3.0GB (eMMC) Program + font area : 0.25GB Data storage area : 2.75GB			
Real Time Clock (RTC)		Yes			
HDD/SD card (Data storage)		HDD : N/A SD card : N/A			
Connectivity	Standard	10/100/1000 Base Ethernet USB 2.0 Device USB 2.0 Host x1 Wireless 802.11abgn (C834, C835, C844 only)			
	Options	Wireless 802.11abgn (C824, ES8434 only)			
Printer Language		PCL6(XL3.0), PCL5c, SIDM (IBM-PPR,EPSON-FX), PS3 Emulation* , PDF1.7* * : C834, C844, ES8434 only			
Fonts	Scalable Typefaces	87 PCL fonts, 80 PostScript fonts (C834, C844, ES8434 only)			
	Bitmap Typefaces	4 PCL fonts (Line Printer, OCR-A/B, USPS ZIP Barcode)			
Barcode	Barcode computational (PCL5c)	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, QR-code			
Paper Handling		See paper handling sheet for detail			
2 Bin		No			
Stacker Full Sensor		Yes			
Paper Empty Sensor (MPT)		Yes			
Job offset	1 Bin	No			
	2 Bin	No			
Acoustic noise	Operating	54dBA			
	Operating (Quiet mode)	-			
	Standby	less than 32dBA			
	Power save mode	Back ground level			

Item		C824dn	C834dnw / C835dnw	ES8434	C844dnw
Power consumption	Off mode	less than 0.15W (230V)			
	Deep sleep mode	less than 1.0W (230V)			
	Power save mode	less than 11 W			
	Idle	13 W (Ave.)			
	Typical operation	680W			
	Power Save transition time	1/ 2/ 3/ 4/ 5/ 10/ 15/ 30 min (Default: 1min)	1/ 2/ 3/ 4/ 5/ 10/ 15/ 30/ 60 min (Default: 1min)		
	Deep Sleep transition time	1/ 2/ 3/ 4/ 5/ 10/ 15/ 30 min (Default: 15min)	1/ 2/ 3/ 4/ 5/ 10/ 15/ 30/ 60 min (Default: 15min)		
	OFF mode transition time	1/2/3/4/8/12/18/24Hours (Default:4 Hours)			
	Peak	1118W			
Power Requirment		<Voltage> ODA, Taiwan : 120V AC +/-10% OEL, ODA230, AOS : 230V AC +/-10% <Frequency> 50/60Hz +/-2%			
Operating tempature		10 - 32 (C degree)			
Operating humidity		20 - 80 %			
Operation panel		Mono LCD (128 x 64 dots mono graphics)			
Buzzer		Yes (Default: On)			
Dimension (inch./mm)	Width	17.6 inch / 449mm			
	Depth	21.7 inch / 552 mm			
	Height	14.1 inch / 360 mm			
Weight		n model : less than 37kg dn model : less than 40kg			
Printer life		1,000,000 pages or 5 years (To maintain 1,000,000 pages of paper feed performance, the replace of maintenance parts by the member of maintenance may be necessary.			
Max. Monthly Printer duty		50,000 pages			
Recommended Duty Cycle		10,000 pages			
MTBF		6,000H (Reference only)			
MPBF		100,000 pages			
MTTR		less than 20 min.			

Item		C824dn	C834dnw / C835dnw	ES8434	C844dnw
Toner life (@ISO 19798)	Starter K	2,500 pages		10,000 pages	2,500 pages
	Starter CMY	2,500 pages		10,000 pages	2,500 pages
	Supplies K	Toner capacity varies by region. See brochure for the details.			
	Supplies CMY				
Image drum life at simplex (w/o power save)	Continuous	44,000 pages		50,000 pages (3pages per job)	44,000 pages
	3 pages per job	30,000 pages			30,000 pages
	1 page per job	18,000 pages			18,000 pages
Image drum life at duplex (sheets, w/o power save)	Continuous	33,000 pages			
	3 pages per job (6images per job)	21,000 pages			
	1 page per job (2images per job)	12,000 pages			
Transfer Belt life		80,000 pages (3 pages per job)			
Fuser life		100,000 pages (3 pages per job)			
Print Function	Quiet mode	Yes			
	Toner save mode	Yes			
	Override A4/Letter	Yes			
	AirPrint	Yes (C834, ES8434, C844 only)			
	Google Cloud Print	Yes			
	USB direct print	Yes			
	Secure Print	No			
	Encrypt secure Print	No			
	Private Job Print	Yes			
	Shared Job Print	Yes			
	IC card reader	Yes Support card reader OEL/ODNA/OAU/ODBJ/OSKR: ELATEC TWN4 MIFARE NFC Version P			
Remote Firmware update		Yes (monitoring tool)			
Print Complete Notification		Yes			
Front End Installer	Driver Install	Yes			
	Utility Install	Yes			
	Language Setting	Yes			
	Network Setting	Yes			

Item			C824dn	C834dnw / C835dnw	ES8434	C844dnw
Other	IC card reader for panel unlock & secure print		Yes (Optional)			
	Open-API support		No			
	Audio Guide		No			
	Software AP mode (Wireless direct mode)		Yes (WiFi Direct Certification : No)			
	Concurrent Connection of Wired & Wireless		Yes			
	Val-Code Print		No			
	Anoto		No			
	Grid Onput		No			
	Citrix		Yes (XenApp 7.6)			
	Print Fleet compatibility		Yes (DCA4.0)			
	Finisher		No			
	Off-line Stapler		No			
	LCF		No			
	FDI		No			
	Default (Near Life Warning @A4 simplex print 3 pages per job)	ID	3,000			
		Fuser	2,500			
		Belt	2,000			
	The number of the additional tray maximum steps		4			
	Option	2nd Tray	Yes			
		3rd Tray	Yes			
		4th Tray	Yes			
		5th Tray	Yes			
		Castor Base	Yes			
		Wireless module	Yes	No	Yes	No
		IC card reader	Yes			

1.5 Paper handling

<Paper input>

Note! **Refer to User Manual for a print method and the condition.**

input capacity / media size	standard			option	Paper Size Detection
	MPT	1st tray	Duplex	2nd - 5th tray	
	100 sheets (80gsm) 110 sheets (64gsm)	300 sheets (80gsm) 330 sheets (64gsm)	-	535 sheets (80gsm) 580 sheets (64gsm)	
A3 nobi					
SR A3					
A3	Yes	Yes	Yes	Yes	Yes
A4 SEF	Yes	Yes	Yes	Yes	Yes
A4 LEF	Yes	Yes	Yes	Yes	Yes
A5 SEF	Yes	Yes	Yes	Yes	Yes
A5 LEF	Yes	Yes			Yes(Tray1 Only)
A6 SEF	Yes	Yes			Yes (Tray1 Only)
A6 LEF					
B4	Yes	Yes	Yes	Yes	Yes
B5 SEF	Yes	Yes	Yes	Yes	Yes
B5 LEF	Yes	Yes	Yes	Yes	Yes
B6 SEF	Yes	Yes	Yes		(other size menu)
B6 LEF	Yes				
B6 Half	Yes				
B7 SEF	Yes				
B7 LEF	Yes				
B8 SEF	Yes				
Tabloid (11 x 17)	Yes	Yes	Yes	Yes	Yes
Letter (8.5 x 11)	Yes	Yes	Yes	Yes	Yes
Letter (11 x 8.5)	Yes	Yes	Yes	Yes	Yes
Legal13	Yes	Yes	Yes	Yes	Yes (menu-selected)
Legal13.5	Yes	Yes	Yes	Yes	
Legal14	Yes	Yes	Yes	Yes	
Executive(7.25 x 10.5) SEF	Yes	Yes	Yes	Yes	Yes
Executive(7.25 x 10.5) LEF					
Statement SEF (5.5 x 8.5)	Yes	Yes			(other size menu)
Statement LEF (8.5 x 5.5)	Yes				
8.5"SQ(8.5 x 8.5)	Yes	Yes	Yes	Yes	
Folio(210 x 330.2)	Yes	Yes	Yes	Yes	
China 8K(270 x 390)	Yes	Yes	Yes	Yes	
China 8K(273 x 394)	Yes	Yes	Yes	Yes	
China 8K(260 x 368)	Yes	Yes	Yes	Yes	
China 16K(197 x 273) SEF	Yes	Yes	Yes	Yes	(other size menu)
China 16K(195 x 270) SEF	Yes	Yes	Yes	Yes	

input capacity / media size		standard			option	Paper Size Detection
		MPT	1st tray	Duplex	2nd - 5th tray	
		100 sheets (80gsm) 110 sheets (64gsm)	300 sheets (80gsm) 330 sheets (64gsm)	-	535 sheets (80gsm) 580 sheets (64gsm)	
China 16K(184 x 260) SEF		Yes	Yes	Yes	Yes	
China 16K (197 x 273) LEF		Yes	Yes	Yes	Yes	
China 16K (195 x 270) LEF		Yes	Yes	Yes	Yes	
China 16K (184 x 260) LEF		Yes	Yes	Yes	Yes	
Index Card(3" x 5")		Yes				
4" x 6"		Yes				
5" x 7"		Yes				
Custom Size		Yes	Yes	Yes	Yes	
Envelope	Nagagata#3 Nagagata#4 Nagagata#40 Yougata#0 Yougata#4 Kakugata#2 Kakugata#3 C4 C5 LEF DL LEF COM-10 LEF	Yes				
Others	Hagaki Oufuku Hagaki	Yes				
minimum size		2.2" x 3.5" 55 x 90 mm	4.1" x 5.8" 105 x 148 mm (A6)	5.0" x 7.2" 127 x 182 mm	5.8" x 7.2" 148 x 182 mm	
maximum size		11.7" x 52" 297 x 1,321mm	11.7" x 17" 297 x 431.8mm			
thickness	A4 size or more	14 - 68lb (52 - 256gsm)	14 - 58lb (52 - 220gsm)	14 - 58lb (52 - 220gsm)	14 - 47lb (52 - 176gsm)	
thickness	Less than A4	17 - 68lb (64 - 256gsm)	17 - 58lb (64 - 220gsm)	17 - 58lb (64 - 220gsm)	17 - 47lb (64 - 176gsm)	
media type		Plain, Recycled, Letterhead, Bond, Card Stock, Rough, Labels, Glossy, OHP, Usertype	Plain, Recycled, Letterhead, Bond, Card Stock, Rough, Glossy, Usertype	Plain, Recycled, Letterhead, Bond, Card Stock, Rough, Usertype	Plain, Recycled, Letterhead, Bond, Card Stock, Rough, Glossy, Usertype	

<Paper output>

Paper Output Capability / media size	Face up 100 sheets (<80gsm) 110 sheets (<64gsm)	Face down 250 sheets (excellent white 80gsm) 270 sheets (<64gsm) 200 sheets (datacopy 80gsm, Xerox4200 80gsm)
A3 nobi		
SR A3		
A3	Yes	Yes
A4 SEF	Yes	Yes
A4 LEF	Yes	Yes
A5 SEF	Yes	Yes
A5 LEF	Yes	Yes
A6 SEF	Yes	Yes
A6 LEF		
B4	Yes	Yes
B5 SEF	Yes	Yes
B5 LEF	Yes	Yes
B6 SEF	Yes	Yes
B6 LEF	Yes	
B6 Half	Yes	
B7 SEF	Yes	
B7 LEF	Yes	
B8 SEF	Yes	
Tabloid (11 x 17)	Yes	Yes
Letter (8.5 x 11)	Yes	Yes
Letter (11 x 8.5)	Yes	Yes
Legal13	Yes	Yes
Legal13.5	Yes	Yes
Legal14	Yes	Yes
Executive(7.25 x 10.5) SEF	Yes	Yes
Executive(7.25 x 10.5) LEF		
Statement SEF (5.5 x 8.5)	Yes	Yes
Statement LEF (8.5 x 5.5)	Yes	
8.5"SQ(8.5 x 8.5)	Yes	Yes
Folio(210 x 330.2)	Yes	Yes
China 8K(270 x 390)	Yes	Yes
China 8K(273 x 394)	Yes	Yes
China 8K(260 x 368)	Yes	Yes

Paper Output Capability / media size		Face up 100 sheets (<80gsm) 110 sheets (<64gsm)	Face down 250 sheets (excellent white 80gsm) 270 sheets (<64gsm) 200 sheets (datacopy 80gsm, Xerox4200 80gsm)
China 16K(197 x 273) SEF		Yes	Yes
China 16K(195 x 270) SEF		Yes	Yes
China 16K(184 x 260) SEF		Yes	Yes
China 16K (197 x 273) LEF		Yes	Yes
China 16K (195 x 270) LEF		Yes	Yes
China 16K (184 x 260) LEF		Yes	Yes
Index Card(3" x 5")		Yes	
4" x 6"		Yes	Yes
5" x 7"		Yes	Yes
Custom Size		Yes	Yes
Envelope		Yes	
Other	Postcard Banner up to 52”	Yes	
minimum size		2.2" x3.5" 55 x 90mm	4.1" x 5.8" 105x148mm (A6)
maximum size		11.7" x 52" 297 x 1,321mm	11.7" x 17" 297 x 431.8mm
thickness	A4 size or more	14 - 68lb (52 - 256gsm)	14 - 58lb (52 - 220gsm)
thickness	Less than A4	17 - 68lb (64 - 256gsm)	17 - 58lb (64 - 220gsm)
media type		Plain, Recycled, Letterhead, Bond, Card Stock, Rough, Labels, Glossy, OHP, Usertype	Plain, Recycled, Letterhead, Bond, Card Stock, Rough, Glossy, Usertype

1.6 Interface specifications

1.6.1 USB interface specifications

1.6.1.1 USB interface overview

(1) Basic specifications

USB (Hi-Speed USB supported)

(2) Transmission mode

Full speed (Max. 12 Mbps ± 0.25%)

High speed (Max. 480 Mbps ± 0.05%)

(3) Power control

Self-powered device

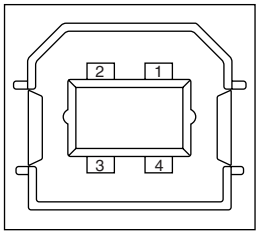
1.6.1.2 USB interface connectors and cables

(1) Connector

• Printer side: B-receptacle (female)

Upstream port

Product equivalent to UBB-4R-D14C-4D(LF)(SN) (JST Mfg.Co.,Ltd)



Connector pin arrangement

• Cable side: B-plug (male)

(2) Cables

Length: USB 2.0 cables no more than five meters long (two meters or less recommended)

(Shielded USB 2.0 cables shall be used.)

1.6.1.3 USB interface signals

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

1.6.2 Network interface specifications

1.6.2.1 Outline of Network Interface

(1) Basic specifications

Network Protocol

Protocol	Apply
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
SMTPS	Yes
POP3	Yes
POP3S	Yes
SNMPv1&v3	Yes
SNTP	Yes
IPP	Yes
IPPS	Yes
WSD Print	Yes
WSD Scan	No
LLTD	Yes
IEEE802.1X	Yes
LPR	Yes
Port9100	Yes
Telnet	Yes
FTP	Yes
FTPS	Yes
IPSec	Yes
Secure Protocol Server	Yes
LDAP	Yes

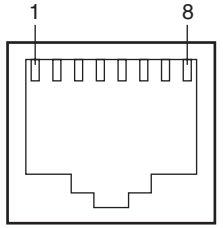
Protocol	Apply
LDAPS	Yes
CIFS	No
AirPrint	Yes
Google Cloud Print	Yes

1.6.2.2 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.)

1.6.2.3 Network Interface Signal

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

1.6.3 Wireless LAN Interface (User Install Option)

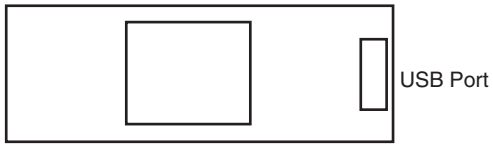
1.6.3.1 Outline of Wireless LAN

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

Protocol	Apply
WLAN 802.11a/b/g/n	Yes
WEP	Yes
WPA Personal (WPA-PSK)	Yes
WPA2 Personal (WPA2-PSK)	Yes
WPA Enterprise (WPA-EAP)	Yes
WPA2 Enterprise (WPA2-EAP)	Yes

(2) Power supply voltage
5V

(3) Printer side interfaces
USB



2. TROUBLESHOOTING PROCEDURE

2.1 Important notes to start the repair work

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

2.2 Confirmation items before taking corrective action against abnormalities

(1) The operation environment of the apparatus is appropriate.
(2) Consumable items (toner cartridges, Image Drum Unit (ID Unit) and etc.) have been replaced properly.
(3) The printing media (paper) has no problem. Refer to the paper specifications in User's Manual.
(4) The ID Units are set correctly.

2.3 Precautions when taking corrective actions against abnormalities

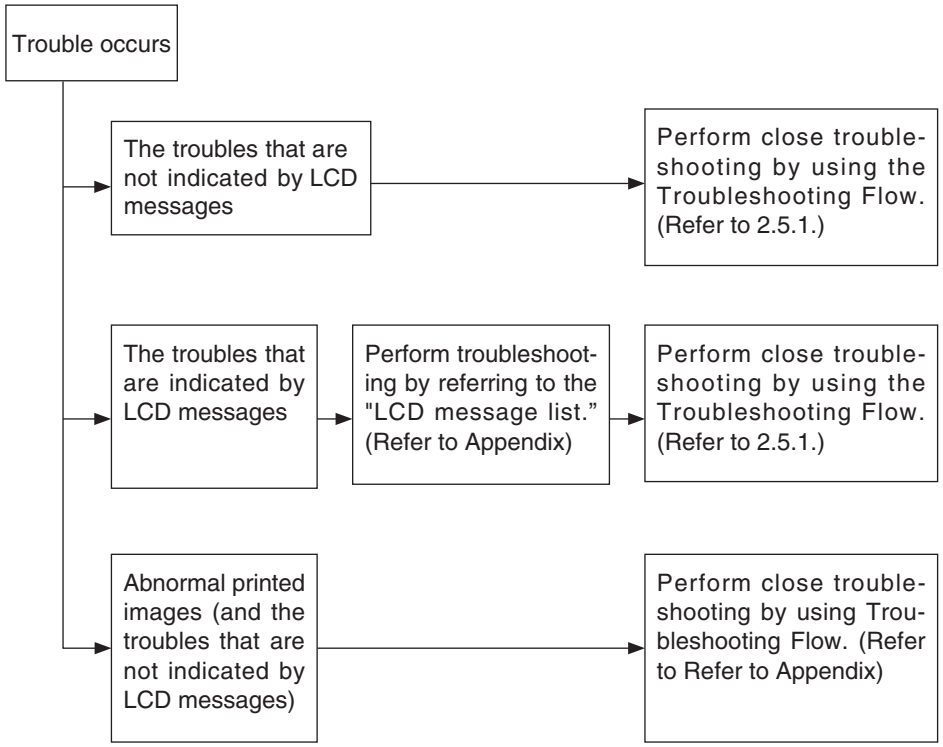
(1) Do not touch the image drum surface with your hand and do not allow any foreign materials to touch it.
(2) Do not expose the image drum to the direct sunlight.
(3) The fuser unit is extremely hot. Do not touch.
(4) Do not expose image drums to any light for 5 minutes or longer at room temperature.

2.4 Preparation for troubleshooting

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

2.5 Troubleshooting methods

When troubles occurs with this apparatus, perform troubleshooting by following the steps described below.



JAM clearing method

• The error number and the occurring position in the occurring JAM.

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

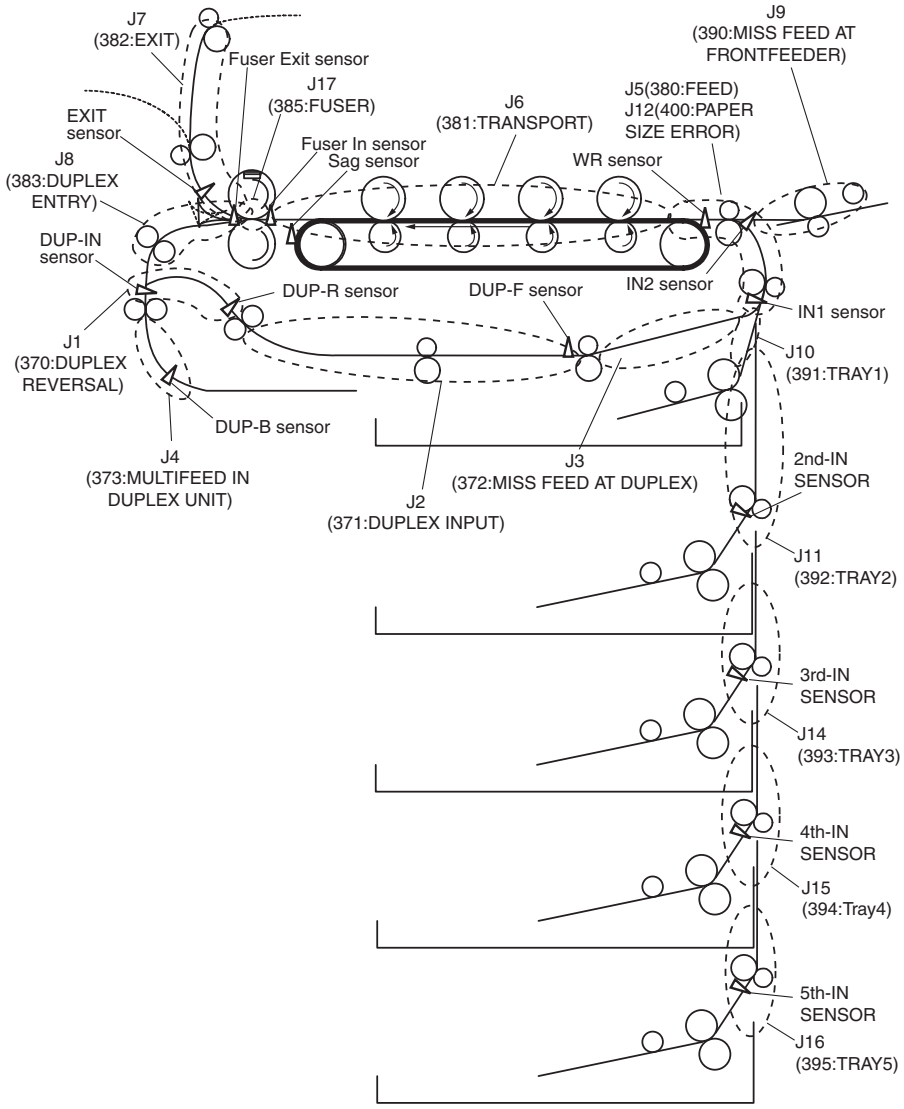
Note! • The image drum (the green tube) is very delicate. Handle it carefully.

• 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.

When paper jams occur or paper remains in the apparatus, “Paper Jam”, or “Paper Remain” is displayed on the operator panel.

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

In addition, refer to detailed paper jam clearing methods described on the user’s manual, too.



Outline drawing of jam locations

2.5.1 Preparation for troubleshooting

Trouble		State		Detail		Deal
(1)	Abnormal motion	(1)	LCD display error	(1)	LCD does not display anything after 2 minute when the power is turned on.	(1-1-1)
				(2)	Error message related to the operator panel	(1-1-2)
				(3)	“RAM checking” or “Initializing” remains displayed.	(1-1-3)
		(2)	Malfunctions of the apparatus after the power is turned on	(1)	Any function does not start at all.	(1-2-1)
				(2)	Abnormal sound is heard.	(1-2-2)
				(3)	Bad odors are generated.	(1-2-3)
				(4)	Start-up time is slow.	(1-2-4)
(2)	Related Jam	(1)	Paper feed jam (Error 391: 1st Tray).	(1)	Jam occurs immediately after the power is turned on. (1st tray)	(2-1-1)
				(2)	Jam occurs immediately after the paper feed is started. (1st tray)	(2-1-2)
		(2)	Feed jam (Error 380)	(1)	Jam occurs immediately after the power is turned on.	(2-2-1)
				(2)	Jam occurs immediately after the paper feed is started.	(2-2-2)
		(3)	Paper feed jam (Error 390: MP Tray)	(1)	Jam occurs immediately after the power is turned on. (MP tray)	(2-3-1)
				(2)	Jam occurs immediately after the paper feed is started. (MP tray)	(2-3-2)
		(4)	Paper jam (Error 381)	(1)	Jam occurs immediately after the power is turned on.	(2-4-1)
				(2)	Jam occurs immediately after a paper is fed into the apparatus.	(2-4-2)
				(3)	Jam occurs at the way of paper path.	(2-4-3)
				(4)	Jam occurs immediately after paper is reached the fuser.	(2-4-4)
		(5)	Paper exit jam (Error 382)	(1)	Paper exit jam occurs immediately after the power is turned on.	(2-5-1)
				(2)	Paper exit jam occurs after a paper is fed into the apparatus.	(2-5-2)
				(3)	Paper exit jam occurs at the way of paper path.	(2-5-3)
		(6)	Fuser unit jam (Error 385)	(1)	Fuser unit jam occurs immediately after the power is turned on.	(2-6-1)
				(2)	Fuser unit jam occurs at the way of paper path.	(2-6-2)
		(7)	Duplex printing jam (Errors 370, 371, 372, 373 and 383)	(1)	Duplex printing jam occurs immediately after the power is turned on.	(2-7-1)
				(2)	Duplex printing jam occurs during the paper is feeding into the Duplex unit.	(2-7-2)
				(3)	Duplex printing jam occurs during the paper transporting at inside of the Duplex unit.	(2-7-3)
				(4)	Paper is not supplied from the Duplex unit to the regist roller.	(2-7-4)
(3)	Related Error	(1)	Paper size error (Errors 400 and 401)	(1)	Jam occurs when paper end is located near the IN1 sensor.	(3-1-1)
		(2)	ID unit Up/Down error (Service call 142)	(1)	Error occurs during the Up movement of the ID unit	(3-2-1)
				(2)	Error occurs during the Down movement of the ID unit	(3-2-2)
		(3)	Fuser unit error (Service call 136, 167-177, 260-273)	(1)	Error occurs immediately after the power is turned on.	(3-3-1)
				(2)	Error occurs in approx. 1 minute after the power is turned on.	(3-3-2)
		(4)	FAN error (Service call 122, 127, 128 and 918)	(1)	Duplex FAN does not drive during the Duplex printing.	(3-4-1)
				(2)	Low voltage power FAN, Fuser FAN, Belt FAN does not drive.	(3-4-2)
				(3)	ID motor FAN, Exit right FAN, Fuser blasting FAN, Fuser right side FAN does not drive.	(3-4-3)

Trouble		State		Detail		Deal
		(5)	Humidity sensor error (Service call 123)	(1)	Humidity sensor error	(3-5-1)
(4)	cannot recognize	(1)	Option unit cannot be recognized.	(1)	Duplex unit cannot be recognized.	(4-1-1)
				(2)	Additional Tray unit cannot be recognized.	(4-1-2)
		(2)	LED head cannot be recognized. (Service call 131, 132, 133 and 134)	(1)	Service call 131 to 134 (LED HEAD Missing)	(4-2-1)
		(3)	Toner cartridge cannot be recognized. (Errors 540, 541, 542 and 543)	(1)	Error caused by the consumable items.	(4-3-1)
				(2)	Error caused by the toner sensor	(4-3-2)
				(3)	Error caused by the defective mechanism	(4-3-3)
(5)	Printing speed is slow. (Performance is low.)	(1)	Printing speed decreases.			
(6)	Wiring diagram					

Note! **When replacing the CU/PU board, read the EEPROM chip contents of the old board first, and copy them to the new board upon completion of the replacement. (Refer to Appendix when replacing the engine control board.)**

2.5.1.(1) Abnormal motion

(1-1) LCD display error

Memo The name of each the connectors are printed to its neighborhood on the board.

(1-1-1) LCD does not display anything after 4 minute when the power is turned on.

Check item	Check work	Actions to be taken at NG
(1-1-1-1) Check the fuse.		
Fuse of the CU/PU board	Check if F12 or F20 has blown out.	Replace the CU/PU board.
(1-1-1-2) Check the system connection		
Connection between the low voltage power supply unit and the CU/PU board	Check if the cable from the low voltage power supply to the POWER connector ⑪ of the CU/PU board is normally connected or not. Check if the connector is connected only in the half-way or not, and check if the connector is inserted in slanted angle or not.	Re-connect the cable normally.
Cable assembly connecting the low voltage power supply unit and the CU/PU board	Check if the cable is half-open circuit. Check if sheath of the cable has not peeled off or not. Check if the cable assembly is defective such as internal wires are disconnected or not.	Replace the cable with the normal cable.
Connection between the CU/PU board and the operator panel board	Check if the 14-conductor FFC is connected to the OPE connector ⑲ of the CU/PU board normally or not. Check if the 14-conductor FFC is connected to the OPE connector ㉑ of the operator panel board normally or not. 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.	Re-connect the cable normally.
FFC connecting the CU/PU board and the operator panel board	Check if the cable has open circuit or not with VOM. Check if sheath of the cable has not peeled off or not by visual inspection.	Replace the FFC with the normal FFC.
(1-1-1-3) Check the peripherals of the power supplies		
AC power that is supplied to the apparatus	Check the supplied voltage of the AC power source.	Supply the AC power.
5V power that is supplied to the CU/PU board	Check for 5VS power supply at pin-20 and pin-22 of the POWER connector ⑪ of the CU/PU board.	Replace the low voltage power supply unit.
3.3V power that is supplied to the operator panel board	Check for 3.3V power supply at pin-4 of the OPE connector ㉑ of the operator panel board.	Replace the CU/PU board.
(1-1-1-4) Check that power supply circuit has no short-circuit.		
5V power and 24V power that are supplied to the CU/PU board.	Check that power supply circuit has no short-circuit at the POWER connector ⑪ of the CU/PU board. The follow voltage must appear respectively. 3,5,6,7,8,10pin: 24V 20,22pin: 5VS 21,23pin: 0VL 1,4,9,11,12,14pin: 0VP If any voltage does not appear and short-circuit is detected, locate the source of the short-circuit as follows: Disconnect the cables that are connected to the CU/PU board one cable after another until location of the short-circuit is found out.	Replace the part causing short-circuit.
(1-1-1-5) LSI operation check		
I/F signal supplied from the CU/PU board to the operator panel board.	Check if signals are output to the OPE connector ⑲ of the CU/PU board. Pin-5: Send data (Sending data from the CU/PU board)	Replace the CU/PU board.
I/F signal supplied from the operator panel board to the CU/PU board.	Check if signals are output to the OPE connector ⑲ of the CU/PU board. Pin-7: Send data (Sending data from the CU/PU board) If it is normal, signals are output always.	Replace the operator panel board.

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

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

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

Check item	Check work	Actions to be taken at NG
(1-1-3-1) Operator panel display freezes.		
Operator panel display	The operator panel keeps displaying “RAM checking” or “Initializing.”	Replace the CU/PU board.

(1-2) Malfunctions of the apparatus after the power is turned on

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

Check item	Check work	Actions to be taken at NG
(1-2-1-1) Check the peripherals of the power supplies		
AC power that is supplied to the apparatus	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 ⑪ of the CU/PU board. 3,5,6,7,8,10pin: 24V 20,22pin: 5VS 21,23pin: 0VL 1,4,9,11,12,14pin: 0VP	Replace the low voltage power supply unit.
(1-2-1-2) Power switch LED check		
Power switch LED	Check if the LED light stays off.	Replace one each of cable by the following: between low voltage power supply unit, CU/PU board, power SW board and the CU/PU board, between CU/PU board and the power SW board. When blinking: Replace one each of cable by the following: between low voltage power supply unit, CU/PU board, power SW board and the CU/PU board board.
(1-2-1-3) Check the system connection		
Connection condition of the operator panel	Check contents of (1-1). The apparatus will not start operation until the operator panel is detected and its operation is started.	Follow the contents of (1-1).

(1-2-2) Abnormal sound is heard.

Check item	Check work	Actions to be taken at NG
(1-2-2-1) Check loss of synchronization of motor (Driver error)		
Condition of the motor cable	Check for normal wiring conditions of the each of motors. Perform the visual check and measure resistance without abnormal conditions as the short / open circuit with VOM as follows. Disconnect the motor cable of the board side. Measure resistance between the each of pins of the disconnected cable and FG with VOM.	Replace the motor cable. Re-connect the cable for normal conditions.
Driving conditions of the each of motors	Check if driving of the each of motors are normal or not by using the self-diagnostic mode. Check if any load exists or not. Check "Buzzer" sound when an error occurs.	Replace the CU/PU board.
(1-2-2-2) Check loss of synchronization of motor (Abnormal load of the consumable item)		
Driving conditions of the each of motors	Check if driving of the each of motors are normal or not by using the self-diagnostic mode. Check if any load exists or not. Check "Buzzer" sound when an error occurs.	Replace the corresponding consumable item.
(1-2-2-3) Check the jumping phenomena of gear tooth. (Abnormal load of the consumable item)		
Driving conditions of the each of motors	Check if driving of the each of motors are normal or not by using the self-diagnostic mode. Check if any load exists or not. Check "Buzz buzz" sound is generated when an error occurs.	Replace the corresponding consumable item.
Installation condition of each consumable item	Check by visual inspection if the each of the 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
(1-2-2-4) 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.
(1-2-2-5) Check the jumping phenomena of gear tooth. (Rotation direction of the motor is abnormal.)		
The rotational direction of ID motor (If abnormal noise is.)	Remove the ID unit, run the Motor and Clutch Test of self-diagnotic mode. Check the rotational direction of the gear is correct.	Replace the CU/PU board, the ID motor or cable.

(1-2-3) Bad odors are generated.

Check item	Check work	Actions to be taken at NG
(1-2-3-1) Locating the exact position of generating bad odor		
Fuser unit	Remove the fuser unit and check the odor.	Follow the contents of section (1-2-3-2).
Low voltage power supply unit	Remove the low voltage power supply unit and check the odor.	Replace the low voltage power supply unit
(1-2-3-2) 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.

(1-2-4) Start-up time is slow.

Check item	Check work	Actions to be taken at NG
(1-2-4-1) Check the fuser unit		
Heater	Confirm the voltage specification on the label on the rear of the fuser unit and it is suitable for the using region.	Replace the fuser unit.

2.5.1.(2) Related Jam

(2-1) Paper feed jam (Error 391: 1st Tray).

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

Check item	Check work	Actions to be taken at NG
(2-1-1-1) Check condition of the paper path		
Paper path of the front unit	Open the front cover check if paper is not jammed in the paper path.	Remove the jammed paper.
(2-1-1-2) Check condition of the mechanical parts		
Check the sensor levers of the paper IN1 sensor and the paper IN2 sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the normal sensor lever.
(2-1-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the [Self-diagnostic mode] - [SWITCH SCAN] function.	Replace either the CU/PU board, the front sensor board (RSG PCB) or connection cable.
Check the output signal level of the paper IN1 sensor and that of the paper IN2 sensor.	Check for the following signals at the FSNS connector ⑱ of the CU/PU board. Pin-4: Paper IN1 sensor Pin-3: Paper 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 ㉕ of the front sensor board (RSF PCB). Pin-1: 5V power supply Pin-5: 0VL	Replace the connection cable.

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

Check item	Check work	Actions to be taken at NG
(2-1-2-1) Check condition of the paper path		
Paper path of the front unit	Check if paper is jammed or not in the paper path.	Remove the jammed paper.
(2-1-2-2) Check condition of the mechanical parts		
Check the sensor levers of the paper IN1 sensor and the paper IN2 sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor with the normal sensor lever.
Check the feed roller, pickup roller and the retard roller assembly of the tray.	Check if any foreign materials such as paper dust on the surface of the feed roller or of the pickup roller or not.	Remove the foreign material.
	Check if the feed roller or the pickup roller has worn out or not.	Replace the feed roller, the pickup roller and the retard roller assembly of the tray.
(2-1-2-3) Motor driving check		
Paper Hopping motor	Confirm that the paper hopping motor works normally by using the [Motor & Clutch Test] of the self-diagnostic mode.	Replace the CU/PU board or the paper hopping motor.
Paper Hopping motor driver	Remove the MOTERCL connector ① 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
(2-1-2-4) Check the system connection		
Paper 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 normal cable that normalizes the connection condition.
Paper Hopping motor drive cable	Check that any cable is not pinched during assembling of the apparatus. Remove the MOTERCL connector ① of the CU/PU board and check the following at the connector 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 normal cable that normalizes the connection condition.
Paper Hopping motor	Remove the MOTERCL connector ① 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 connector side.	Replace the paper hopping motor.
(2-1-2-5) Clutch driving check		
Paper feed clutch, registration clutch	Check to make sure that the paper feed clutch or registration clutch works normally by using the [Motor & Clutch Test] of the self-diagnostic mode. Open the front cover so that the rollers can be seen to check.	Replace the CU/PU board, or replace the paper feed clutch or the registration clutch.
(2-1-2-6) Check the system connection		
Clutch cable of paper hopping	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 normal cable that normalizes the connection condition.
Paper Hopping clutch	Check that any cable is not pinched during assembling of the printer. Remove the HOPLC connector ② of the CU/PU board and check the following at the cable side. Short circuit between pin-1 – FG Remove the HOPCL connector ② 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.

(2-2) Feed jam (Error 380)

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

Check item	Check work	Actions to be taken at NG
(2-2-1-1) Check condition of the paper path		
Paper path of the front unit	Open the front cover check if paper is not jammed in the paper path.	Remove the jammed paper.
(2-2-1-2) Check condition of the mechanical parts		
Check the sensor levers of the paper IN1 sensor, that of the paper 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 normal sensor lever.
(2-2-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the [Self-diagnostic mode] - [SWITCH SCAN] function.	Replace either the CU/PU board or the front sensor board (RSG PCB) or connection cable.
Check the output signal levels of the paper IN1 sensor, that of the paper IN2 sensor and that of the WR sensor.	Check for the following signals at the FSNS connector ⑱ of the CU/PU board. Pin-4: Paper IN1 sensor Pin-3: Paper 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 ㉕ of the front sensor board (RSG PCB). Pin-1: 5V power supply Pin-5: 0VL	Replace the connection cable.

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

Check item	Check work	Actions to be taken at NG
(2-2-2-1) Check condition of the paper path		
Paper path of the front unit	Check if paper is jammed or not in the paper path.	Remove the jammed paper.
(2-2-2-2) Check condition of the mechanical parts		
Check the sensor levers of the paper IN1 sensor, that of the paper 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 normal sensor lever.
(2-2-2-3) Motor driving check		
Paper Hopping motor	Confirm that the paper hopping motor works normally by using the [Motor & Clutch Test] of the self-diagnostic mode.	Replace the CU/PU board, or replace the paper hopping motor.
Paper Hopping motor driver	Remove the MOTERCL connector ① 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.
(2-2-2-4) Check the system connection		
Paper 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 normal cable that normalizes the connection condition.
Paper Hopping motor drive cable	Check that any cable is not pinched during assembling of the printer. Remove the MOTERCL connector ① of the CU/PU board and check the following at the connector 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 normal cable that normalizes the connection condition.
Paper hopping motor	Remove the MOTERCL connector ① 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 connector side.	Replace the paper feed motor.

(2-3) Paper feed jam (Error 390: MP Tray)

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

Check item	Check work	Actions to be taken at NG
(2-3-1-1) Check condition of the paper path		
Paper path of the multipurpose tray	Check if paper is jammed or not in the paper path.	Remove the jammed paper.
(2-3-1-2) Check condition of the mechanical parts		
Check the sensor levers of the paper 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 normal sensor lever.
(2-3-1-3) 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 paper IN2 sensor and the WR sensor.	Check for the following signals at the FSNS connector ⑱ of the CU/PU board. Pin-2: WR sensor Pin-3: Paper 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 ㉕ of the front sensor board (RSG PCB). Pin-1: 5V power supply Pin-5: 0VL	Replace the connection cable.

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

Check item	Check work	Actions to be taken at NG
(2-3-2-1) Check condition of the paper path		
Paper path of the multipurpose tray	Check if paper is jammed or not in the paper path.	Remove the jammed paper.
Sheet Receive of the multipurpose tray	Confirm that the Sheet Receive has moved up normally. Confirm that the support spindle and spring of the Sheet Receive have been installed in the specified positions normally.	Correct installation of the above parts so that the Sheet Receive moves up to the specified position normally.
(2-3-2-2) Check condition of the mechanical parts		
Check the sensor levers of the paper 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 normal 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.
(2-3-2-3) Motor driving check		
Paper Hopping motor	Confirm that the paper hopping motor works normally by using the [Motor & Clutch Test] of the self-diagnostic mode.	Replace the CU/PU board, or replace the paper feed motor.
Paper Hopping motor driver	Remove the MOTERCL connector ① 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
(2-3-2-4) Check the system connection		
Paper Hopping motor drive cable	Check the connection condition of the cable. Check if the MOTERCL connector ① 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 normal cable that normalizes the connection condition.
Paper Hopping motor drive cable	Check that any cable is not pinched during assembling of the printer. Remove the MOTERCL connector ① of the CU/PU board and check the following at the connector 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 normal cable that normalizes the connection condition.
Paper Hopping motor	Remove the MOTERCL connector ① 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 connector side.	Replace the paper hopping motor.

(2-4) Paper jam (Error 381)

(2-4-1) Jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(2-4-1-1) Check condition of the paper path.		
Paper path of the front unit	Check if paper is jammed or not in the paper path.	Remove the jammed paper.
(2-4-1-2) Check condition of the mechanical parts		
Check the sensor lever of the WR sensor , Fuser IN sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the normal sensor lever.
(2-4-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the [SWITCH SCAN] function of the self-diagnostic mode.	Replace either the CU/PU board (ME2 PCB) or the front sensor board (RSG PCB) or connection cable.
Check the sensor lever of the WR sensor , Fuser IN sensor.	Check for the following signals at the FSNS connector ⑱ of the CU/PU board. Pin-2: WR sensor Check for the following signals at the FUSER2⑩ connector of the CU/PU board. Pin-8: Fuser IN sensor Confirm that the above signal levels change when the sensor lever is operated.	Replace the front sensor board (RSG PCB) or CU/PU board (ME2 PCB).
Check the power voltages supplied to the front sensor board (RSG PCB), CU/PU board (ME2 PCB)	Check the 5V power at the FSNS connector ㉕ of the front sensor board (RSG PCB). Pin-1: 5V power supply Pin-5: 0VL Check the 5V power at the FUSER2 ⑩ connector of the CU/PU board (ME2 PCB). Pin-9: 5V power supply Pin-7,10: 0V	Replace the connection cable.

(2-4-2) Jam occurs immediately after a paper is fed into the apparatus.

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

Check item	Check work	Actions to be taken at NG
(2-4-2-4) Check the system connection		
Paper hopping motor drive cable, ID motor drive cable, belt motor drive cable, fuser motor drive cable	Check the connection condition of the cables. CU/PU board (ME2 PCB) MOTERCL connector ① , DCID connector ③ , DCHEAT connector ④ , MOTERCL connector ① , RELAY connector ⑨ . 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.	Normalize the connection condition. Replace the cable with the normal cable.
Paper hopping motor drive cable, belt motor drive cable, hopping clutch drive cable	Check that any cable is not pinched during assembling of the printer. Remove the MOTERCL connector ① of the CU/PU board (ME2 PCB) and check the following at the connector side. Short circuit between pin-1 – FG Short circuit between pin-2 – FG Short circuit between pin-3 – FG Short circuit between pin-4 – FG Short circuit between pin-5 – FG Short circuit between pin-6 – FG Short circuit between pin-7 – FG Short circuit between pin-8 – FG Remove the HOPCL connector ② of the CU/PU board and check the following at the cable side. Short circuit between pin-1 – FG Short circuit between pin-2 – FG	Replace the cable with the normal cable that normalizes the connection condition.
Paper hopping motor, belt motor, hopping clutch	Remove the respective connectors from the board, and confirm that the following resistance exists between the corresponding pins, at the cable side. CU/PU board (ME2 PCB) MOTERCL connector ① Between pin-1 - pin-2: Approx. 3.4Ω Between pin-3 - pin-4: Approx. 3.4Ω Between pin-5 - pin-6: Approx. 3.4Ω Between pin-7 - pin-8: Approx. 3.4Ω CU/PU board HOPCL connector ② Between pin-1 - pin-2: Approx. 240Ω	Replace the paper feed motor or ID Up motor.

(2-4-3) Jam occurs at the way of paper path.

Check item	Check work	Actions to be taken at NG
(2-4-3-1) Motor driving check		
Paper hopping motor driver, belt motor driver and ID motor	Confirm that the paper hopping motor, belt motor and ID motor work normally by using the [Motor & Clutch Test] of the self-diagnostic mode. Check if any load exists or not.	Replace the CU/PU board, or replace the defective motor among paper hopping motor, belt motor and ID motor, or replace the ID unit or belt unit.
Paper hopping motor, belt motor	Remove the MOTERCL connector ① of the CU/PU board (ME2 PCB) and check the following at the connector side. Several MΩ between pin-1 – FG Several MΩ between pin-2 – FG Several MΩ between pin-3 – FG Several MΩ between pin-4 – FG Several MΩ between pin-5 – FG Several MΩ between pin-6 – FG Several MΩ between pin-7 – FG Several MΩ between pin-8 – FG	Replace the CU/PU board (ME2 PCB).
(2-4-3-2) Installed condition of fuser unit.		
Fuser unit	Check if the fuser nit is pressed in until the connector in the bottom of the fuser unit is completely connected.	Re-set the fuser unit.

(2-5) Paper exit jam (Error 382)

(2-5-1) Paper exit jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(2-5-1-1) Check condition of the paper path		
Paper path of the paper eject unit	Check if paper is jammed or not in the paper path.	Remove the jammed paper.
(2-5-1-2) Check condition of the mechanical parts		
Check the sensor lever of the fuser EXIT sensor / EXIT sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the fuser unit. Replace the sensor lever.
(2-5-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the [SWITCH SCAN] function of the self-diagnostic mode.	Replace the CU/PU board or relay board or its cable or its connection cable.
Check the output signal level of the fuser EXIT sensor / EXIT sensor.	Check for the following signals at the FUSER2 ⑩ connector of the CU/PU board (ME2 PCB). Pin-11: Fuser EXIT sensor Check for the following signals at the RELAY connector ⑨ of the CU/PU board (ME2 PCB). Pin-11: EXIT sensor Confirm that the above signal levels change when the sensor lever is operated.	Replace the fuser unit or EXIT sensor.
Check the power voltages supplied to the CU/PU board (ME2 PCB).	Check the 5V power voltage at the FUSER2 ⑩ connector of the CU/PU board. Pin-9: 5V power supply Pin-7, 10: 0VL Check the 5V power voltage at the EXIT connector of the relay board. Pin-1: 5V Pin-3: 0V	Replace the connection cable.
(2-5-1-4) Check the system connection		
Signal cable for relay board, EXIT sensor cable	Check that FFC is normally inserted at the RELAY connector ⑨ of the CU/PU board (ME2 PCB) and at the PU IF connector ㉘ . Check that the relay board and the EXIT sensor are normally connected.	Normalize the connection condition.
Signal cable for relay board, EXIT sensor cable	Confirm that the cables are not pinched, sheathes are not peeled off, and they are assembled normally.	Replace the connecting cable and normalize the assembled condition.

(2-5-2) Paper exit jam occurs after a paper is fed into the apparatus.

Check item	Check work	Actions to be taken at NG
(2-5-2-1) Check condition of the paper 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 eject 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 path, or not.	Remove the rear cover and re-assemble it.
Paper path of the eject unit	Check that any mechanical load does not exist that hampers the smooth transporting of paper in the paper path of the paper eject unit, by the visual inspection. Check if the paper eject motor becomes difficult to rotate or not.	Correct the portion that becomes mechanical load.
(2-5-2-2) Check condition of the mechanical parts		
Sensor lever of the paper exit sensor	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the normal sensor lever.
(2-5-2-3) Motor driving check		
Fuser motor	Confirm that the fuser motor works normally by using the [Motor & Clutch Test] of the self-diagnostic mode. Remove the fuser and visually check the rotate of roller and gear.	Replace the CU/PU board (ME2 PCB) or fuser motor or fuser unit.
(2-5-2-4) Check the system connection		
Fuser motor drive cable	Check the connection condition of the cables. Visually check the CU/PU board DCHEAT connector ④ for half-way connection, slanted angle insertion, and abnormal cables assembly. Also check the connector connected with the fuser motor in the same manner.	Replace the cable with the normal cable that normalizes the connection condition.

(2-5-3) Paper exit jam occurs at the way of paper path.

Check item	Check work	Actions to be taken at NG
(2-5-3-1) Motor driving check		
Fuser motor	Confirm that the fuser motor works normally by using the [Motor & Clutch Test] of the self-diagnostic mode. Remove the fuser and visually check the rotate of roller and gear.	Replace the CU/PU board (ME2 PCB), fuser motor or fuser unit.

(2-6) Fuser unit jam (Error 385)

(2-6-1) Fuser unit jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(2-6-1-1) Check condition of the paper path		
Paper path of the fuser unit	Check if paper is not jammed in the paper path.	Remove the jammed paper.
(2-6-1-2) Check condition of the mechanical parts		
Check the sensor levers of the fuser IN sensor and the fuser EXIT sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the fuser unit.
(2-6-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the [SWITCH SCAN] function of the self-diagnostic mode.	Replace the CU/PU board (ME2 PCB) or connection cable.
Check the output signal level of the fuser IN sensor and the fuser EXIT sensor.	Check for the following signals at the FUSER2 ⑩ connector of the CU/PU board. Pin-8: Fuser IN sensor Pin-11: Fuser EXIT sensor Confirm that the above signal levels change when the sensor lever is operated.	Replace the fuser unit.
Check the power voltages supplied to the fuser IN sensor, fuser EXIT sensor.	Check the 5V power voltage at the FUSER2 ⑩ connector of the CU/PU board (ME2 PCB). 9pin: 5V power supply 7,10pin: 0VL	Replace the CU/PU board (ME2 PCB)

(2-6-2) Fuser unit jam occurs at the way of paper path.

Check item	Check work	Actions to be taken at NG
(2-6-2-1) Motor driving check		
Fuser motor	Confirm that the fuser motor works normally by using the [Motor & Clutch Test] of the selfdiagnostic mode. Remove the fuser and visually check the rotate of roller and gear.	Replace the CU/PU board (ME2 PCB) or fuser motor or fuser unit.
(2-6-2-2) Temperature control while fuser belt rotating		
Detected temperatures of the fuser belt and the backup roller	Check temperatures detected at the fuser belt and the backup roller in the self-diagnostic mode. Has abnormally low (lower than the room temperature) or high (250°C) temperature been detected?	Replace the fuser unit, relay board (P6Z PCB) or CU/PU board.
(2-6-2-3) Check the system connection		
Fuser motor drive cable	Check the connection condition of the cables. Check if the DCHEAT connector ④ of the CU/PU board is connected in the halfway only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality. Also check the connector connected with the fuser motor in the same manner.	Replace the cable with the normal cable that normalizes the connection condition.

(2-7) Duplex printing jam (Errors 370, 371, 372, 373 and 383)

(2-7-1) Duplex printing jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(2-7-1-1) 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-20 PCB), or replace the defective sensor or connection cable.

(2-7-2) Duplex printing jam occurs during the paper is feeding into the Duplex unit.

Check item	Check work	Actions to be taken at NG
(2-7-2-1) Solenoid function check		
Duplex clutch	Confirm that the duplex clutch works normally by using the [Motor & Clutch Test] of the self-diagnostic mode.	Replace the Duplex board (GOH-20 PCB) or clutch.
Separator solenoid (Paper eject / 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 smooth or not, if amount of open / close is normal or not.	Replace the separator solenoid.
(2-7-2-2) Sensor lever movement check		
Dup-IN sensor lever	Remove the duplex unit. Touch the Dup-IN sensor lever to check if its movement is smooth or not.	Replace the Dup-IN sensor lever
Dup-Bottom sensor lever	Remove the Duplex unit and check the movement of the sensor lever.	Replace the sensor lever.
DUP-IN sensor Dup-Bottom sensor	Check the sensitivity of each sensor in the two conditions: One is the status in which paper remains in the Duplex unit, and the other is the status in which no paper remains in the Duplex unit. Confirm that the sensor signals are normally detected by using the [SWITCH SCAN] function of the self-diagnostic mode.	Replace the Duplex board (GOH-20 PCB), or replace the defective sensor or the connection cable.
(2-7-2-3) Check condition of the paper path		
Paper reversing 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 reversing transport path.	Remove the foreign material.

(2-7-3) Duplex printing jam occurs during the paper transporting at inside of the Duplex unit

Check item	Check work	Actions to be taken at NG
(2-7-3-1) Sensor lever movement 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.
(2-7-3-2) 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-20 PCB), or replace the defective sensor or connection cable.

(2-7-4) Paper is not supplied from the Duplex unit to the regist roller.

Check item	Check work	Actions to be taken at NG
(2-7-4-1) 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-20 board or clutch.

2.5.1.(3) Related Error

(3-1) Paper size error (Errors 400 and 401)

(3-1-1) Jam occurs when paper end is located near the IN1 sensor.

Check item	Check work	Actions to be taken at NG
(3-1-1-1) Check paper feed condition		
Multifeed of papers	Open the front cover and check if multifeed of papers occurs or not.	If multifeed occurs again after the jammed paper is removed, replace the retard roller of the tray in use.
Paper size	Does the paper size specified for printing matched with the paper size of paper set in the tray?	Change the specified paper size or size of paper inside the tray.
Paper IN1 sensor, paper IN2 sensor	Check if shape and movement of the sensor levers is normality or not.	Replace the sensor lever with the normal sensor lever.

(3-2) ID unit Up/Down error (Service call 142)

(3-2-1) Error occurs during the Up movement of the ID unit

Check item	Check work	Actions to be taken at NG
(3-2-1-1) Check the Fuse		
Fuse of CU/PU board	Check if the F23 is cutting or not.	Replace the CU/PU board.
(3-2-1-2) 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.	Replace the ID unit, or replace the right/left side plate.
Lubricating to the right and left Up/Down link levers	Check if the sloping surface of the link lever is lubricated or not.	Lubricate to there.
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.
(3-2-1-3) 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 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
(3-2-1-4) Sensor check		
Up/Down sensor lever (unified structure with the left link lever)	Check if shape and movement of the sensor levers is normality 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.

(3-2-2) Error occurs during the Down movement of the ID unit

Check item	Check work	Actions to be taken at NG
(3-2-2-1) Check the Fuse		
Fuse of CU/PU board	Check if the F23 is cutting or not.	Replace the CU/PU board.
(3-2-2-2) 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.
Lubricating to the right and left Up/Down link levers	Check if the sloping surface of the link lever is lubricated or not.	Lubricate to there.
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.

(3-3) Fuser unit error (Service call 136, 167-177, 260-273)

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

Check item	Check work	Actions to be taken at NG
(3-3-1-1) Thermistor is defective Note)		
NC sensor, lower 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 Resistance value (fuser unit) in chapter of 'Other' .)	Replace the fuser unit.
Installed condition of fuser unit.	Check if the fuser nit is pressed in until the connector in the bottom of the fuser unit is completely connected.	Re-set the fuser unit.

Note! Service calls 171: Error and 175: Error probably occur when the apparatus temperature is below 0˚C. Turn on the power again after the temperature of the apparatus has increased.

(3-3-2) Error occurs approx. 1 minute after the power is turned on.

Check item	Check work	Actions to be taken at NG
(3-3-2-1) 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 of the heater. (Refer to Resistance value check (fuser unit).)	Replace the fuser unit.
(3-3-2-2) AC power input for the fuser		
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 ㉜ , 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 ⑪ of the CU/PU board, between pin-15, pin-16 and pin-18.	Replace the CU/PU board.
(3-3-2-3) Setting of the paper		
Paper size	Confirm whether paper size set to the cassette matches the setting.	To match the setting of the paper size.
Paper weight	Confirm whether paper weight set to the cassette matches the setting.	To match the setting of the media weight.

(3-4) FAN error (Service call 122, 127, 128 and 918)

(3-4-1) Duplex FAN does not drive during the Duplex printing.

Check item	Check work	Actions to be taken at NG
(3-4-1-1) 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-20 PCB)	Check if the fuse F501 has blown out or not.	Replace the Duplex board (GOH-20 PCB).
24V power supplied to the Duplex board (GOH-20 PCB).	Check if the fuse F21 of the CU/PU board has blown out or not.	Replace the CU/PU board.

(3-4-2) Low voltage power FAN, Fuser FAN, Belt FAN does not drive.

Check item	Check work	Actions to be taken at NG
(3-4-2-1) Cable connection condition and wiring condition		
Cable connection condition and wiring condition of the each 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.
(3-4-2-2) 24V power supply		
CU/PU board (ME2 PCB) fuse F25 Relay board fuse F1	Check if the fuse F25 of the CU/PU board is not open-circuit or not. Check if the fuse F1 of the relay board is not open-circuit or not.	Replace the CU/PU board or relay board.
24V power that is supplied to the CU/PU board (ME2 PCB).	Check the power supply voltages at the POWER connector ⑪ of the CU/PU board. The follow voltage must appear respectively. 3,5,6,7,8,10pin:24V 1,4,9,11,12,14pin:0VP	Replace the low voltage power supply.

(3-4-3) ID motor FAN, Exit right FAN, Fuser blasting FAN, Fuser right side FAN does not drive.

Check item	Check work	Actions to be taken at NG
(3-4-3-1) Cable connection condition and wiring condition		
Cable connection condition and wiring condition of the each 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.
(3-4-3-2) 24V power supply		
CU/PU board fuse F24	Check if the fuse F24 of the CU/PU board is 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 ⑪ of the CU/PU board. The follow voltage must appear respectively. 3,5,6,7,8,10pin:24V 1,4,9,11,12,14pin:0VP	Replace the low voltage power supply.

(3-5) Humidity sensor error (Service call 123)

(3-5-1) Humidity sensor error

Check item	Check work	Actions to be taken at NG
(3-5-1-1) Check the system connection		
Connection between the CU/PU board and the operator panel board	Check if the 14-conductor FFC is connected to the OPE connector ⑲ of the CU/PU board properly. Check if the 14-conductor FFC is connected to the CN501 connector ㉒ of the operator 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 operator 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 half-way connection, slanted angle insertion, and abnormal cables assembly. Check for open-circuit with VOM. Visually check that the sheath for peeling.	Replace the FFC with a normal FFC.

Check item	Check work	Actions to be taken at NG
(3-5-1-2) 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 the apparatus is moved from storage condition of a cold area in winter to an office environment.)	Leave the apparatus to 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 the apparatus to feel temperature increase inside the apparatus with human hands. After confirmation that the apparatus temperature has increased close to the room temperature, turn on the power again.

2.5.1.(4) cannot recognize

(4-1) Option unit cannot be recognized.

(4-1-1) Duplex unit cannot be recognized.

Check item	Check work	Actions to be taken at NG
(4-1-1-1) Duplex board		
Duplex unit	Check if the Duplex unit of the target apparatus specification is being used or not.	Replace the Duplex unit.
(4-1-1-2) Check the Fuse		
Fuse of CU/PU board	Check if the F17 is cutting or not.	Replace the CU/PU board.
(4-1-1-3) Check the system connection		
Check the system connection from the CU/PU board to the Duplex board (GOH-20 PCB).	Check that the cable between the CU/PU board option connector ⑮ and the Duplex board is normally connected.	Correct the connections.
Square connector connecting the Duplex unit to the apparatus.	Check if any foreign material exists in the connecting portion of the square connector.	Remove the foreign material.
Square connector connecting the Duplex unit to the apparatus.	Is the terminals of the square connector damaged?	Replace the connector.
(4-1-1-4) Check the control signals.		
Check the control signal that is output from the CU/PU board to the Duplex board (GOH-20 PCB).	Check the control signal that is output from the CU/PU board option connector ⑤ . Pin-18: TXD (PU → DUP) Pin-20: RXD (DUP → PU)	Pin-18: Replace the CU/PU board. Pin-20: Replace the Duplex board.

(4-1-2) Additional Tray unit cannot be recognized.

Check item	Check work	Actions to be taken at NG
(4-1-2-1) Additional Tray board		
Additional Tray unit	Check if the Additional Tray unit of the target apparatus specification is being used or not.	Replace the Additional Tray unit.
(4-1-2-2) Check the Fuse		
Fuse of CU/PU board	Check if the F16 is cutting or not.	Replace the CU/PU board.
(4-1-2-3) Check the system connection		
Check the system connection from the CU/PU board to the Additional Tray board (GOH-21 PCB).	Check that the cable between the CU/PU board option connector ⑮ to the Additional Tray board is normally connected.	Correct the connections.
Square connector connecting the Additional Tray unit to the apparatus.	Check if any foreign material exists in the connecting portion of the square connector.	Remove the foreign material.
Square connector connecting the Additional Tray unit to the apparatus.	Is the terminals of the square connector damaged?	Replace the connector.
(4-1-2-4) Check the control signals.		
Check the control signal that is output from the CU/PU board to the Additional Tray board (GOH-21 PCB).	Check the control signal that is output from the PU board option connector ⑮ . Pin-15: OPTCNT2 (PU → Additional Tray) Pin-17: TXD (PU → Additional Tray) Pin-19: RXD (Additional Tray → PU)	Pin-17: Replace the CU/PU board. Pin-19: Replace the Additional Tray board.

(4-2) LED head cannot be recognized. (Service call 131, 132, 133 and 134)

(4-2-1) Service call 131 to 134 (LED HEAD Missing)

Check item	Check work	Actions to be taken at NG
(4-2-1-1) 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 apparatus. Check if any open-circuit or peeling-off of sheath has occurred or not throughout the cable.	Replace the head FFC.
Conduction of the fuse on the CU/PU board.	Check that 5V is measured at the ends of the capacitors CP12 and CP13.	Replace the CU/PU board.

(4-3) Toner cartridge cannot be recognized. (Errors 540, 541, 542 and 543)

(4-3-1) Error caused by the consumable items.

Check item	Check work	Actions to be taken at NG
(4-3-1-1) 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.

(4-3-2) Error caused by the toner sensor

Check item	Check work	Actions to be taken at NG
(4-3-2-1) Toner sensor condition		
Toner sensor	Is the receptor of the toner sensor dirtied?	Wipe off the dirty from the 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 CU/PU board or the FFC between the toner sensor board and the CU/PU board.
(4-3-2-2) Check the Fuse		
Fuse of CU/PU board	Check if the F11 is cutting or not.	Replace 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 apparatus side.

1. Status change of the toner sensor can be checked from the operator panel using the self-diagnostic mode. First, switch the display to the operator panel display. For the method of switching the display to the operator panel display, refer to section [Switch Scan Test] in the appendix.
2. Remove the Image Drum unit (ID) and the toner cartridge (TC) from the apparatus. There is a window inside the apparatus opposing the right side of the ID when viewed from the front of the apparatus. 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 to the position of opposing the toner sensor.
4. The light is reflected by the white paper and the toner sensor detected it, the operator panel displays "L" . On the other hand, the light is not reflected by the white paper, its panel displays "H".
5. If the operator panel displaying switches between "H" <-> "L" as a paper is flipped in front of the toner sensor, it means that the toner sensor and the related system of the apparatus are working normally.

   Action to be taken at NG

- Clean surface of the toner sensor to remove the dusts due to toner and paper dust.
- Check the connection condition of the FFC cable between the CU/PU board (ME2 PCB) and the toner sensor board (TSA PCB).
- Perform the operation check again. If the situation has not been improved and remains unchanged, replace the CU/PU board (ME2 PCB) or the toner sensor board (TSA PCB).

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

1. Mount the TC and ID to the position of the normal operating confirmed with above paragraph (1), and check the function with the operating panel display.
2. If the ID unit works normally, the display on the operator panel will switch 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 dust as toner or paper dust.
- Replace to other color TC and ID unit by a pair.

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

(4-3-3) Error caused by the defective mechanism

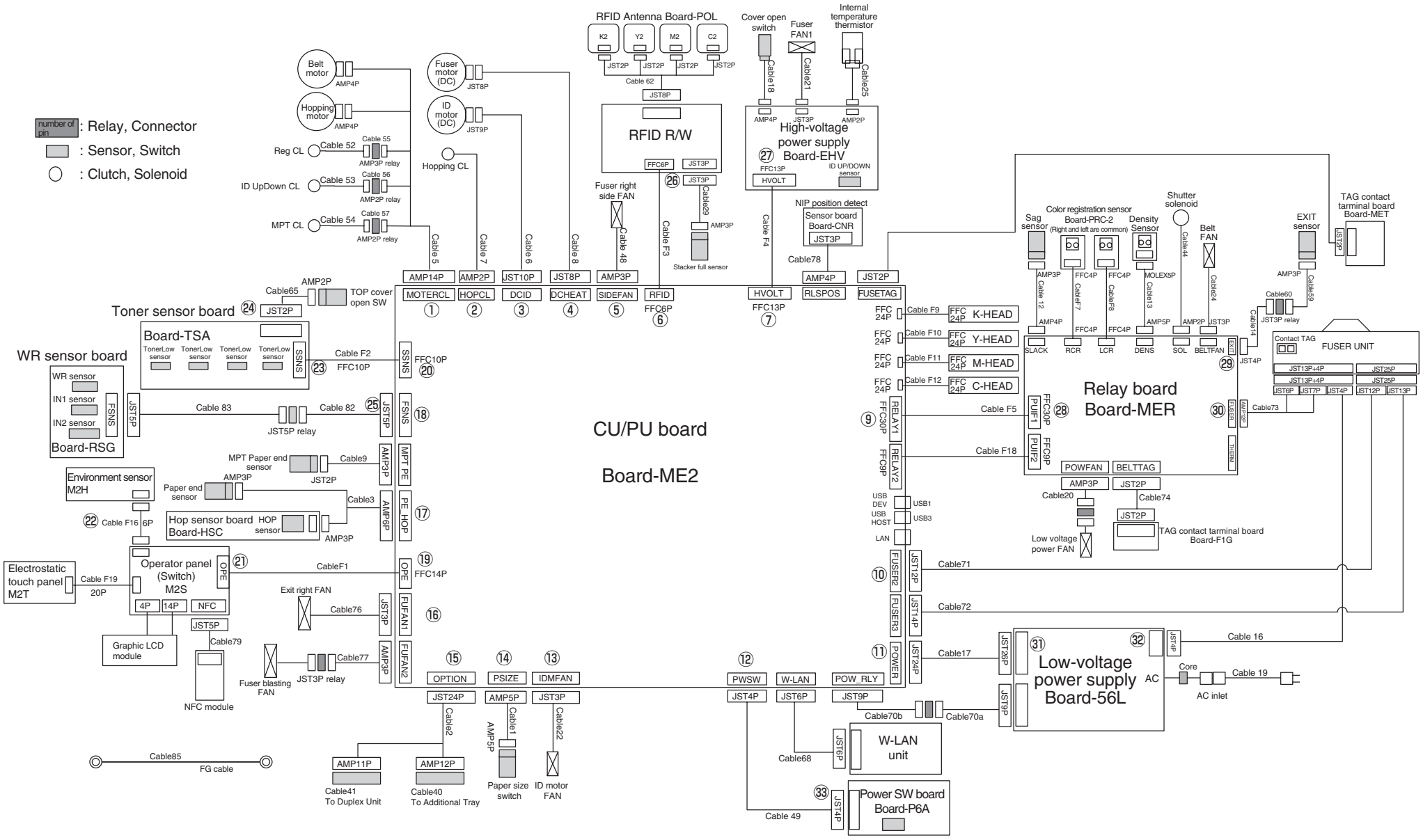
Check item	Check work	Actions to be taken at NG
(4-3-3-1) Mechanical load applied to the ID unit		
ID unit	Check if a heavy mechanical load is being applied to the ID unit due to breakage of the waste toner belt, or not.	Replace the ID unit.
(4-3-3-2) Motor operating condition		
ID motor	Confirm that the ID motors work normally or not by using the [Motor and Clutch Test] of the self-diagnostic mode. Check if any extra load exists or not.	Replace the CU/PU board or the ID motor.

2.5.1.(5) Print speed is slow. (Performance is low.)

(5-1) Print speed decreases.

Check item	Check work	Actions to be taken at NG
(5-1-1-1) Media Weight setting		
Media Weight that is specified for the printing	Check if the wrong Media Weight has been specified or not.	Correct the Media Weight.
(5-1-1-2) Print Adjust setting		
Setting of the [High Humid Mode]	Is either of the mode in [High Humid Mode] set or not?	Refer to the Advanced Manual.
Setting of the [Moisture Control]	Is either of the mode in [Moisture Control] set or not?	Refer to the Advanced Manual.
Setting of the [Narrow Paper Speed]	Is the setting that causes the printing speed to slow set in the [Narrow Paper Speed] or not?	Refer to the Advanced Manual.
Setting of the [Ultra Light Paper Care Mode]	Is the [Ultra Light Paper Care Mode] set to ON or not?	Refer to the Advanced Manual.

2.5.1.(6) Wiring diagram



2.6 Fuse check

If any of the following errors occurs, check the corresponding fuse on each of the boards or high voltage power supply board. Disconnect the AC cable before the Fuse check.
(Refer to Table 2-6 and Figures in Chapter [Other] - [Parts location].)

Table 2-6 Fuse error

Fuse Name		Error Description	Insert Point	Resistance
CU/PU board	F1	Displayed '108-13 Relay Control Error' and the apparatus does not start.	Relay system	1Ω or less
	F4	Displayed 'Ready To Print' normally but occur the following trouble • IC card reader cannot be recognized • USB memory cannot be recognized	HOST USB	
	F6	Displayed 'Ready To Print' normally but occur the following trouble • Back light cannot be lighting • Environment sensor doesn't work and environment temperature to be default value (60°C, 26%)	Operator panel back light	
	F7	Displayed 'Wireless startup failed' on the operator panel.	WLAN	
	F8	Cannot use the debug serial IF, but not a problem of normal using.	Debug serial IF	
	F10	Displayed Check 'Fuser Unit' on the operator panel and the apparatus does not start.	FUSER thermistor, NC sensor	
	F11	Displayed 'Toner Sensor Error / %COLOR%' on the operator panel and the apparatus does not start.	Toner sensor board	
	F12	Not displayed on the operator panel and not lighting back light, and the apparatus does not start.	Operator panel	
	F15	Displayed 'Service call / 121:Error' (Power Supply Error) and the apparatus does not start.	High-voltage power supply board	
	F16	Displayed 'Ready To Print' normally but additional tray cannot be recognized.	Additional Tray (control)	
	F17	Displayed 'Ready To Print' normally but Duplex cannot be recognized.	DUPLEX (control)	
	F18	Displayed 'Check Fuser Unit' and the apparatus does not start.	Release sensor	
	F19	Displayed 'Ready To Print' normally, but displayed 'Paper jam occurred / Paper jam / %PLACE_NUM% / place(s) / Remove the paper' in printing.	WR sensor, Hopping sensor	
	F20	Not displayed on the operator panel and the apparatus does not start. Repeat the Power SW blinking five times.	+5VDCDC power	
	F21	Displayed 'Power off/on / 918:Error' (Duplex FAN Error) and the apparatus does not start.	DUPLEX (Motor, Clutch)	
	F22	Displayed 'Ready To Print' normally, but displayed 'Paper jam occurred / Paper jam / %PLACE_NUM% / place(s) / Remove the paper' in printing.	Additional Tray (Motor, Clutch)	
	F23	Displayed 'Service call 142:Error' (ID Up/Down Error) and the apparatus does not start.	Clutch (ID UP/DOWN, Hopping, Regist, MPT)	

Fuse Name		Error Description	Insert Point	Resistance
	F24	Displayed 'Service call 128 Error 04' (Belt FAN Error) and the apparatus does not start.	Belt motor, FAN (ID motor, Exit right, Fuser blasting, Fuser right side)	
	F25	Displayed ' Output Tray Open.' / 'Front Cover Open.' and the apparatus does not start.	Relay board, FAN(Low voltage power, Fuser, Belt), Solenoid, High-voltage power supply board, Discharging light	
Low-voltage power supply	F1	Shut off	Main power source	1Ω or less
	F2	Shut off	Main power source	
	F501	Shut off	Power source 5V	
High-voltage power supply	F501	Cover open	High-voltage power supply 24V	1Ω or less
Duplex control board	F501	Service call 918	Duplex 24V	1Ω or less
Additional Tray control board	F501	Paper jam during printing in the tray concerned	Additional Tray 24V	1Ω or less
Relay board	F1	Displayed 'Service call / 128:Error 04' (Belt FAN Error) and the apparatus does not start.	Relay board 24V	1Ω or less

2.7 Paper cassette switches and paper size correlation table

(1) Paper supply 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. 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 Disassembly for Maintenance and the RSPL.

3.1 Notes on replacement of parts

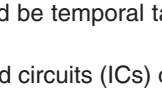
(1) Before to replacing parts, unplug the AC cord and the interface cable.

(a) Be sure to use the following procedure to unplug the AC cord:

① Turn off the apparatus, 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 from apparatus.

⚠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, be careful for the electric shock hazard.

So, wear insulated gloves or be careful not to touch the conductors or terminals of the power supply directly.

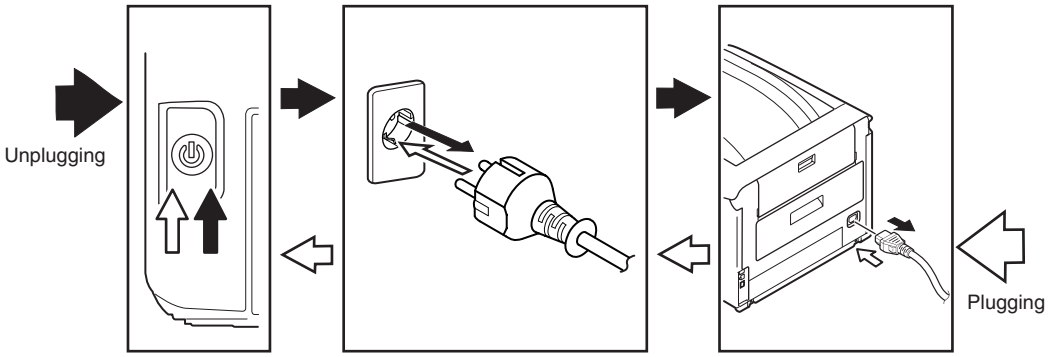
After the AC cord is unplugged, the capacitor may take about one minute to discharge completely, or could not discharge due to PCB breakdown. So, be careful about electric shock.

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

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

② Turn on the apparatus.

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



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

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

(4) Use the specified replacement tools.

(5) Disassemble in the order instructed, or part damage may occur.

(6) Removed small parts, such as screws or collars, should be temporal tacked in their original positions.

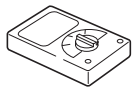
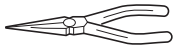
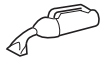
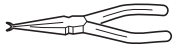
(7) Do not use static-prone gloves when handling integrated circuits (ICs) or circuit boards, including microprocessors, and ROM and RAM chips.

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

Maintenance Tools:

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

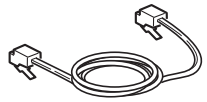
Table 4-1-1: Maintenance Tools

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

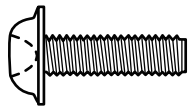
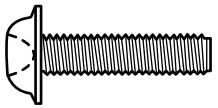
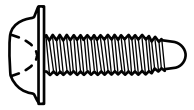
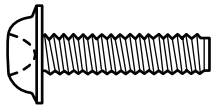
Note! Use a toner vacuum. Using a general-purpose vacuum may cause toner to catch fire.

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

Table 4-1-2: Maintenance Tools

No.	Maintenance Tool		Quantity	Use	Remarks
1		Notebook personal computer (with Maintenance Utility software installed)	1		See section [Appendix] for Maintenance Utility.
2		USB cable	1		
3		Ethernet cable (crossover cable)	1		

Screws in use:

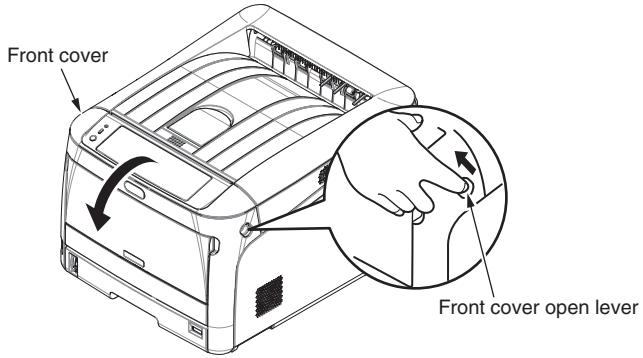
Shape	Designation
	Screw (silver) (6mm)
	Screw (silver/8mm)
	Round-head screw (black)
	Screw (black)

3.2 Part replacement procedure

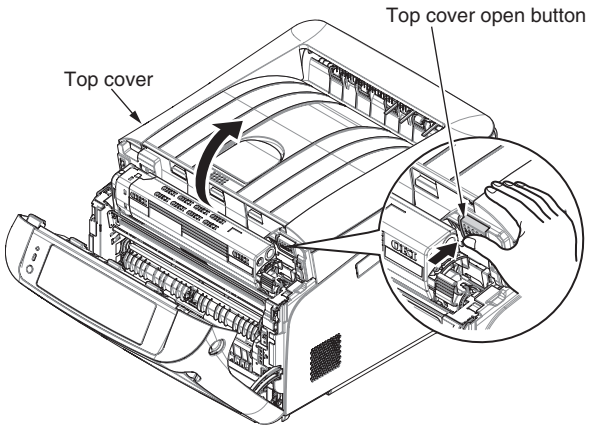
This section describes the procedure for replacing the parts and assemblies shown in the disassembly diagram.

3.2.1 Belt unit

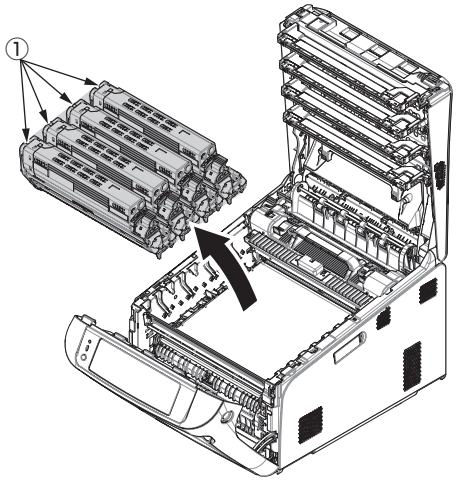
(1) Pull the front cover open lever and open the Front cover to forward.

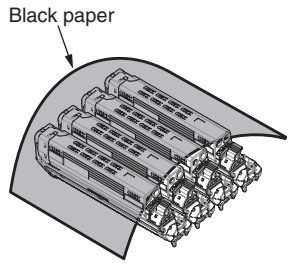


(2) Press the Top cover open button and open the Top cover.



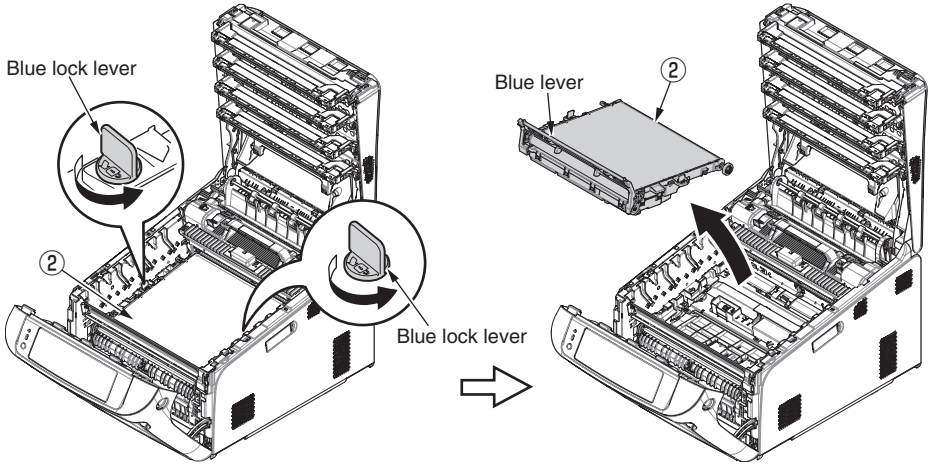
(3) Remove the four Image Drums ① .





Note! Cover the Image Drums with a sheet of Black paper.

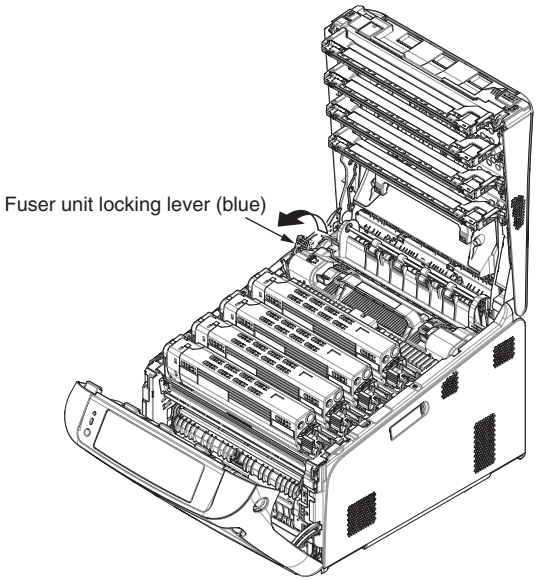
(4) Turn the two locks (blue) of the Belt unit ② in the direction of the arrow, and remove the Belt unit ② by holding the lever (blue).

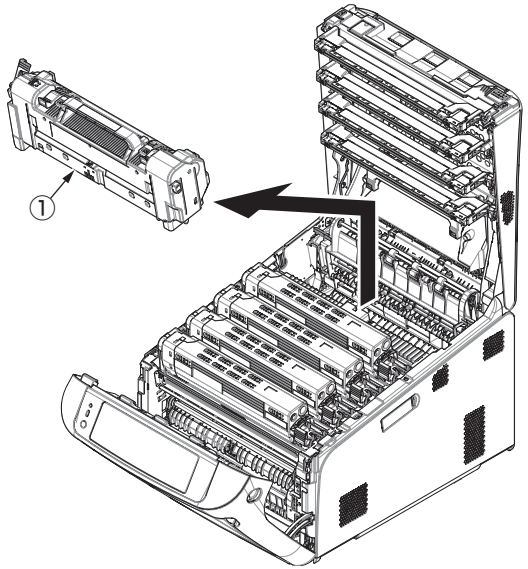


3.2.2 Fuser unit

(1) Open the Front cover and the Top cover. (Refer to section 3.2.1 (1) and (2).)

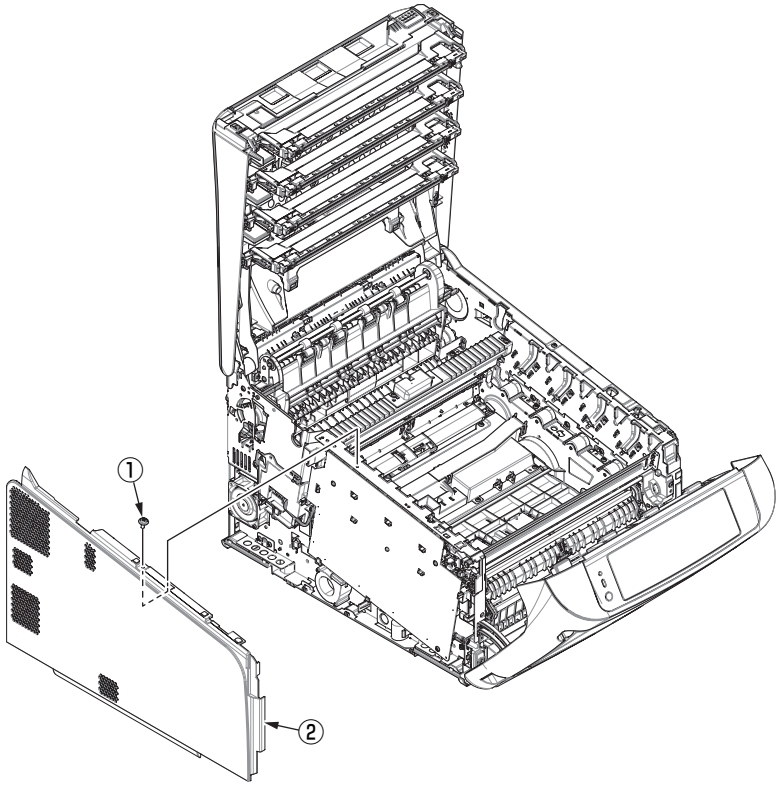
(2) Pull the Fuser unit locking lever (blue) in the direction of the arrow and detach the Fuser unit ① .





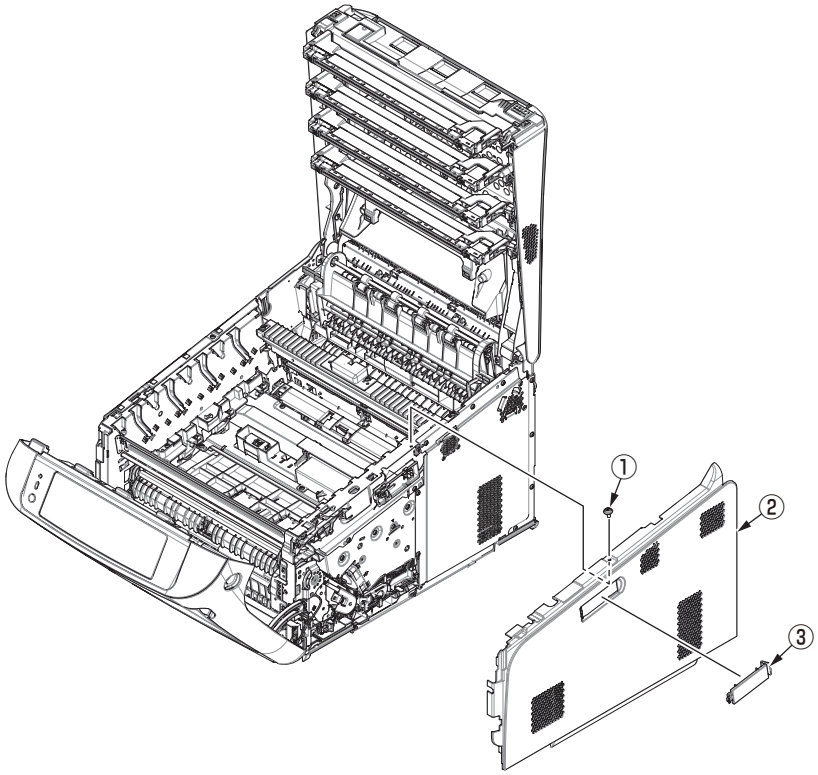
3.2.3 Cover side-L

(1) Remove the Image Drum unit / Belt unit. (Refer to section 3.2.1.)
(2) Detach the Fuser unit. (Refer to section 3.2.2.)
(3) Remove a screw (silver) ① to detach the Cover side-L ② .



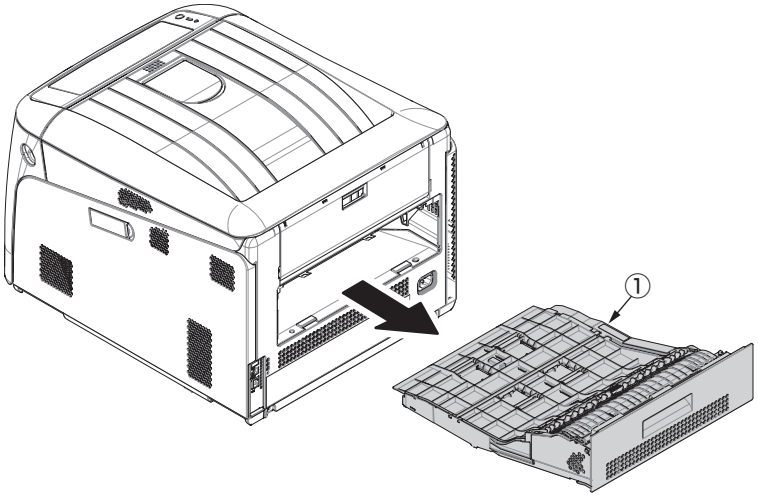
3.2.4 Cover side-R/ Cover-WLAN

(1) Remove the Image Drum unit / Belt unit. (Refer to section 3.2.1.)
(2) Detach the Fuser unit. (Refer to section 3.2.2.)
(3) Remove a screw (silver) ① to detach the Cover side-R ② .
(4) Open and remove the Cover-WLAN ③ from the Cover side-R ②



3.2.5 Rear cover Assy.

(1) If the Duplex unit ① is mounted, pull out it.

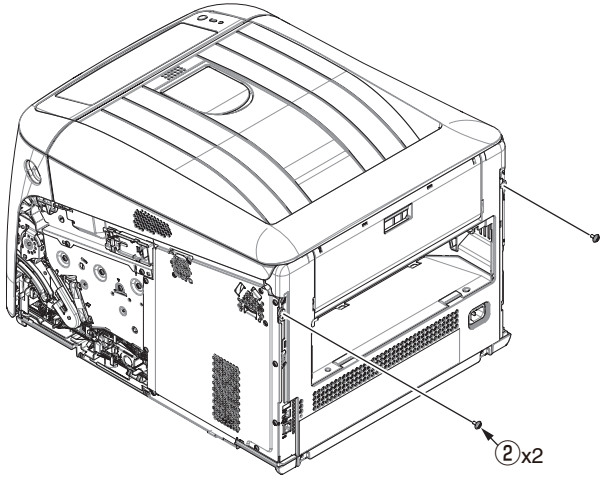


(2) Remove the Belt unit. (Refer to section 3.2.1.)

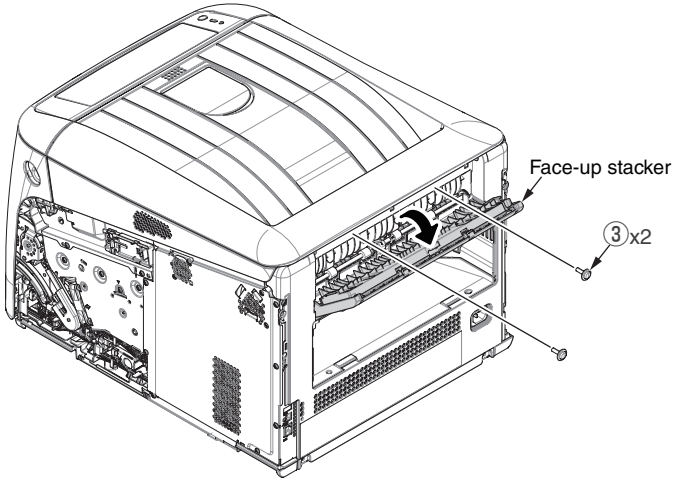
(3) Detach the Cover side-L. (Refer to section 3.2.3.)

(4) Detach the Cover side-R. (Refer to section 3.2.4.)

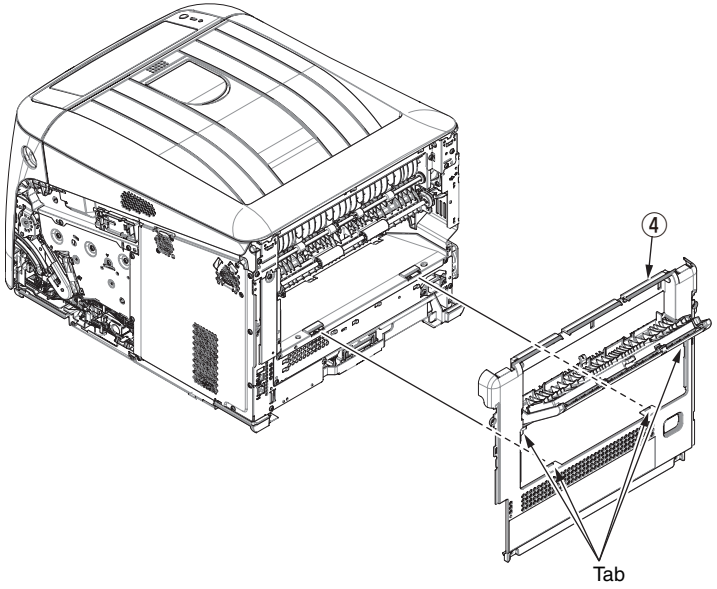
(5) Remove the two screws (silver) ② .



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



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



3.2.6 LED Assy.

(1) Open the Front cover. (Refer to section 3.2.1 (1).)

(2) Open the Top cover. (Refer to section 3.2.1 (2).)

(3) Remove the Image Drum unit / Belt unit. (Refer to section 3.2.1.)

(4) Remove the FFC cable, and as shown in figure (1), unhook the Hook A by applying force in the direction of the arrow, thereafter unhook the Hook B to detach the LED Assy. ① .

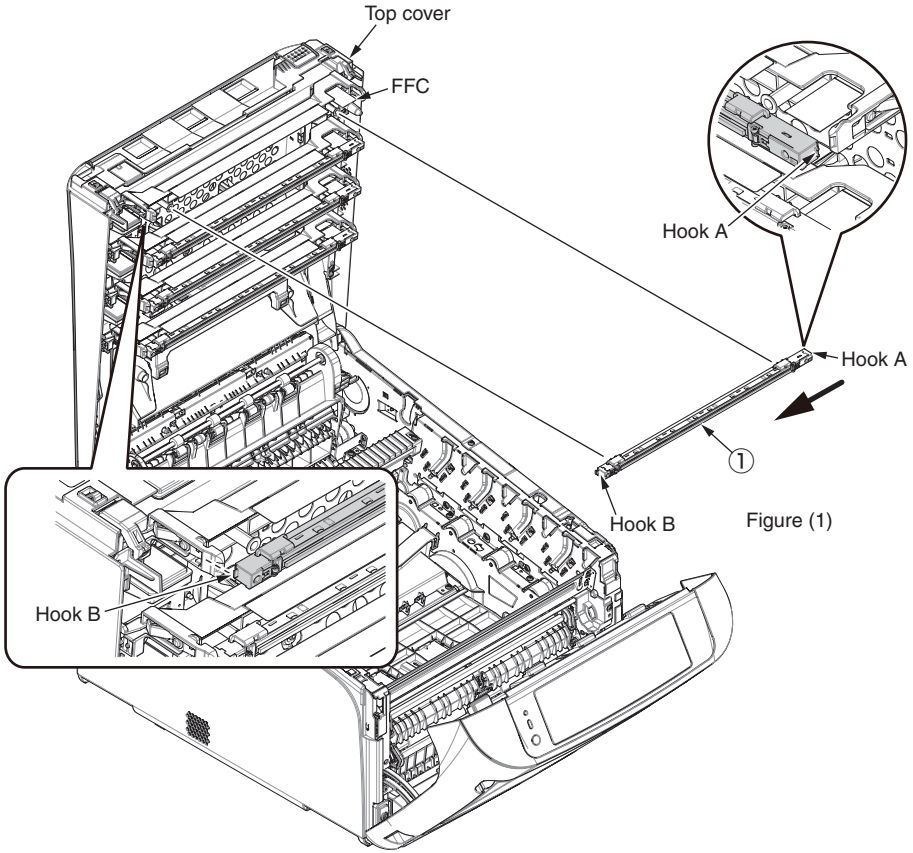
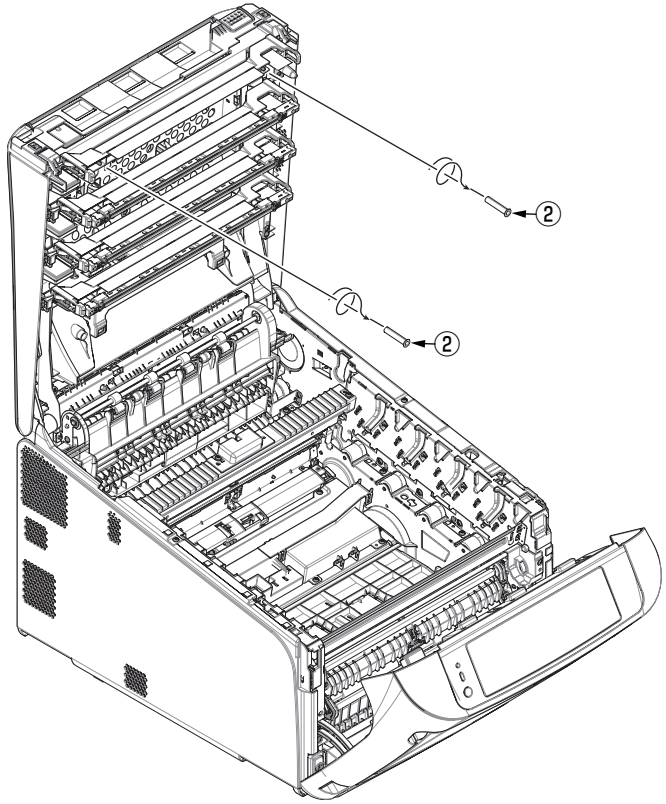


Figure (1)

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



Notes on assembling:

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

3.2.7 CU/PU board Assy. (Board Assy-ME2) / W-LAN Cable

(1) Remove the Image Drum unit / Belt unit. (Refer to section 3.2.1.)

(2) Detach the Cover side-L. (Refer to section 3.2.3.)

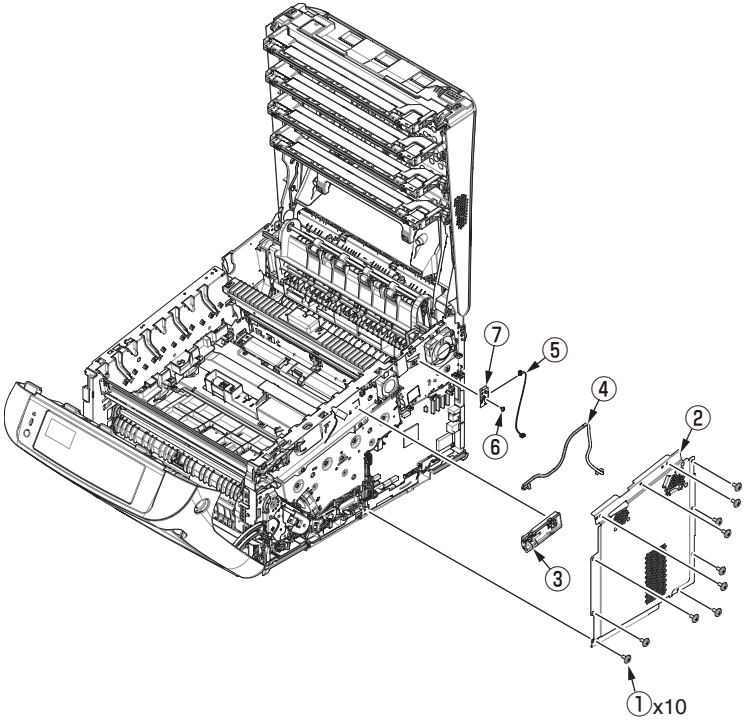
(3) Detach the Cover side-R. (Refer to section 3.2.4.)

(4) Detach the Rear cover Assy. (Refer to section 3.2.5.)

(5) Remove the ten screws (silver) ① to detach the plate shield ② .

(6) Remove the Holder-W-LAN ③ and remove the W-LAN Cable ④ .

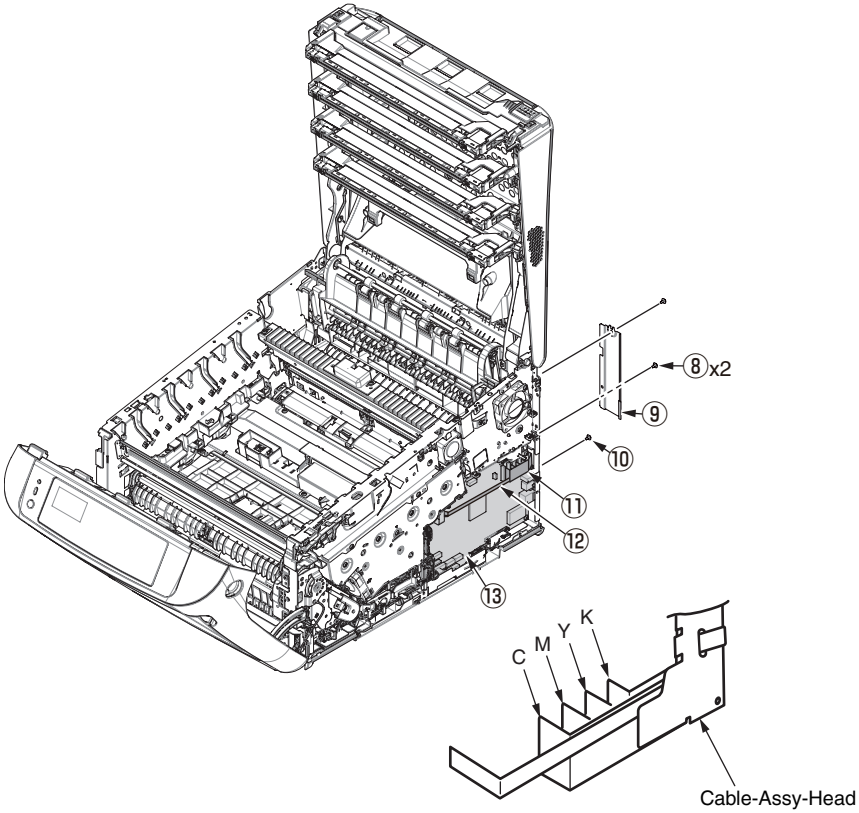
(7) Remove the sensor cable ⑤ and a screw (silver) ⑥ to detach the sensor Assy.- release ⑦ .



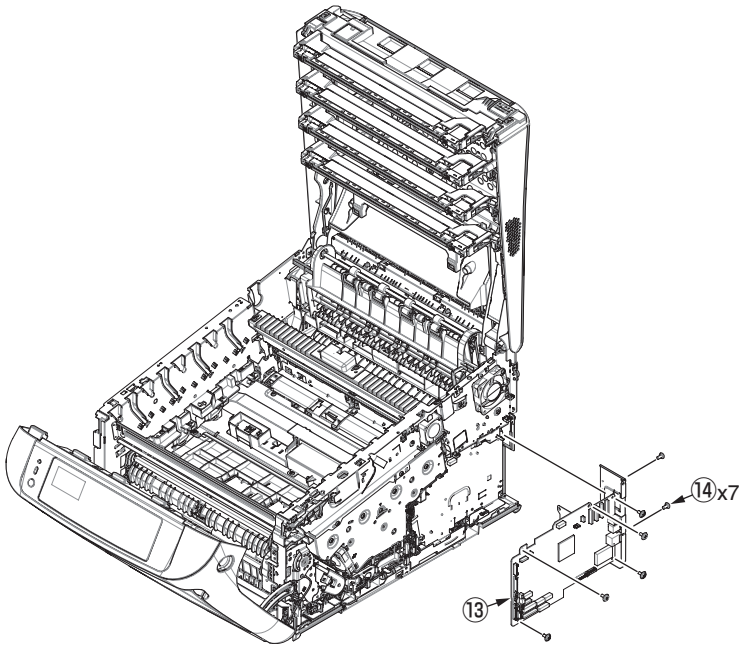
(7) Remove the two screws (silver) ⑧ and the plate FFC ⑨ .

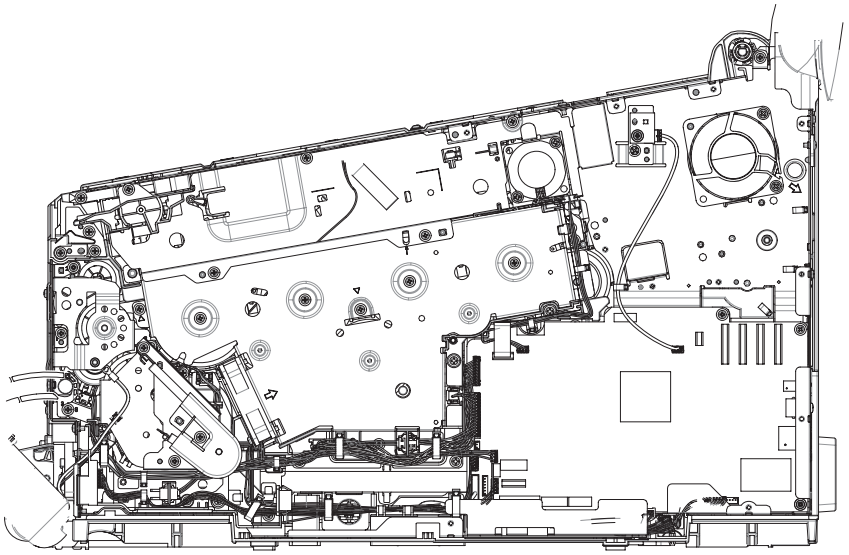
(8) Remove the screw (silver) ⑩ , detach the Cable-Assy-Head, and disconnect the four head FFC cables ⑪ and the RFID-FFC cable ⑫ .

(9) Disconnect each connector from Board Assy-ME2 ⑬ .



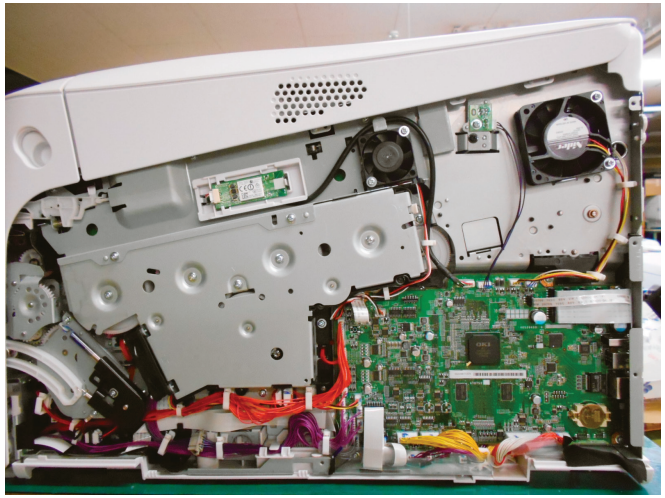
(10) Remove seven screws (silver) ⑭ and the Board Assy-ME2 ⑬ .



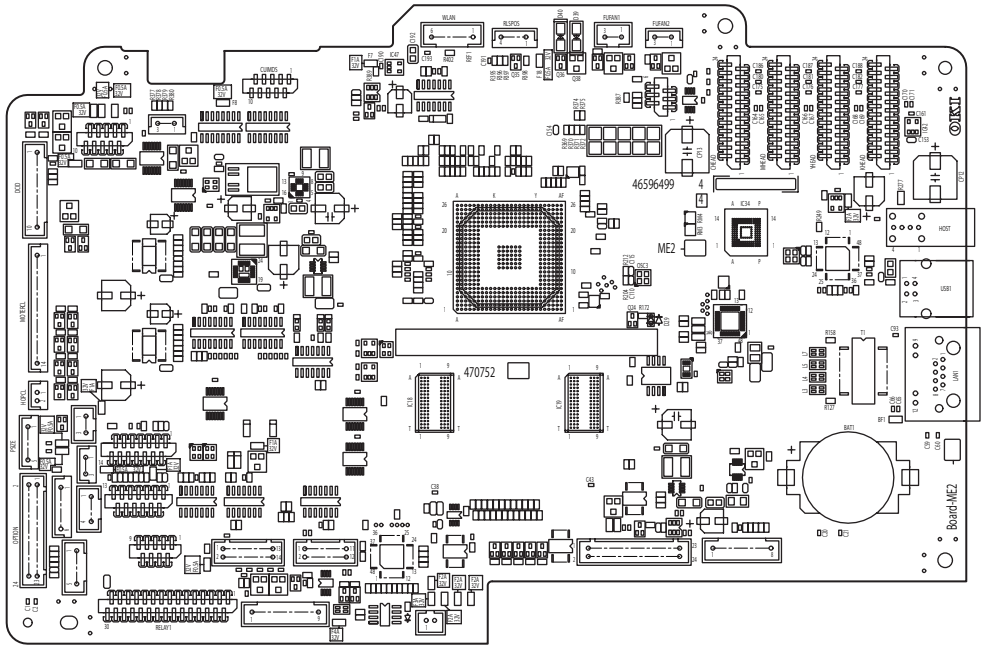


CU/PU Board, Cable Route Diagram

< Reference >



Cable Route picture of around of the CU/PU board.



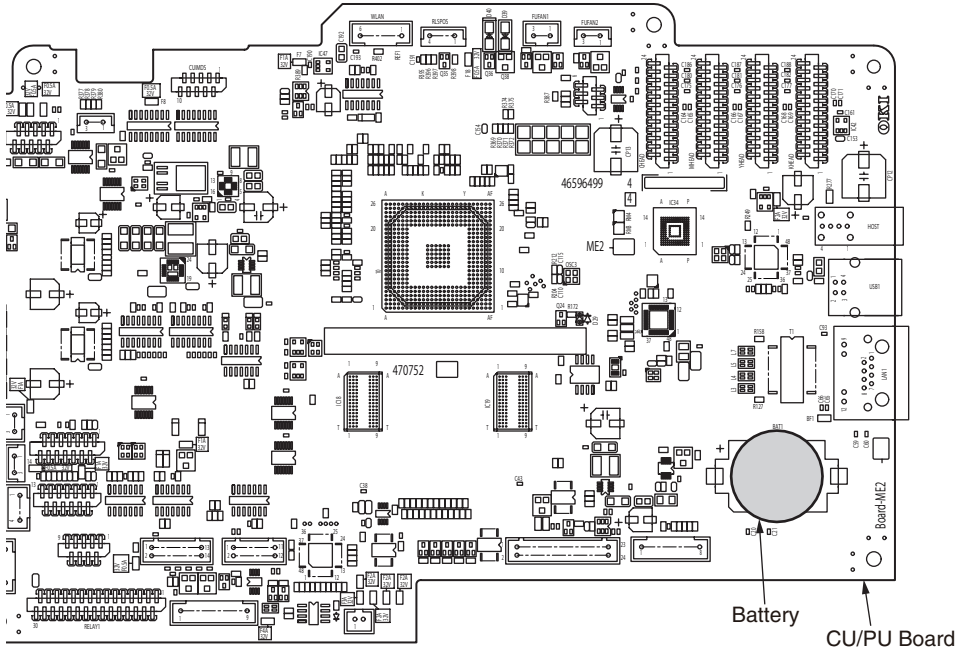
CU/PU Board, Outline Drawing

[How to remove Battery on CU/PU Board]

⚠Warning	
	Risk of explosion if battery is replaced by an incorrect type. The battery of the apparatus is not needed to be replaced. So, do not touch the battery. Replace the whole board in replacing the CU/PU board (board-ME2).

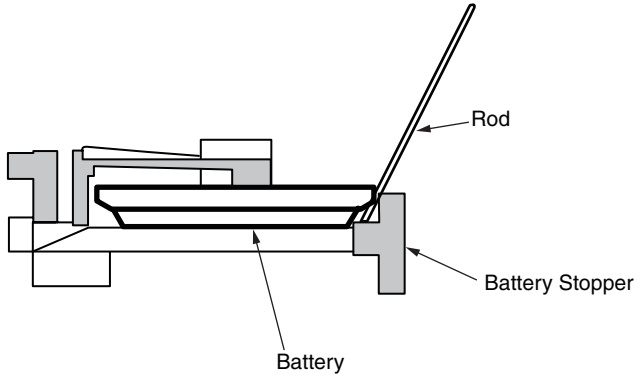
For to dispose the CU/PU Board, Remove the battery from it following method.

(1) The position of the battery on the CU/PU Board is shown in the below figure.

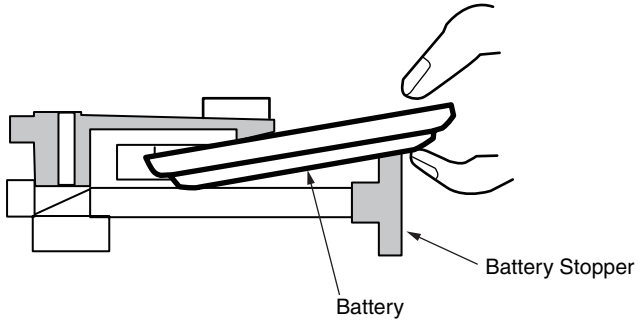


(2) How to remove the battery.

Insert finger or a rod to the gap between the Battery and the Battery Stopper.



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



3.2.8 Top cover Assy.

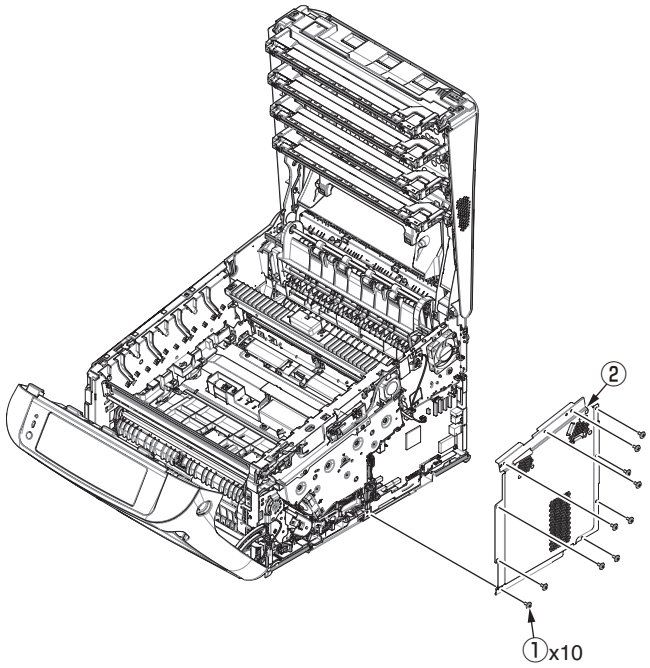
(1) Remove the Image Drum unit / Belt unit. (Refer to section 3.2.1.)

(2) Detach the Cover side-L. (Refer to section 3.2.3.)

(3) Detach the Cover side-R. (Refer to section 3.2.4.)

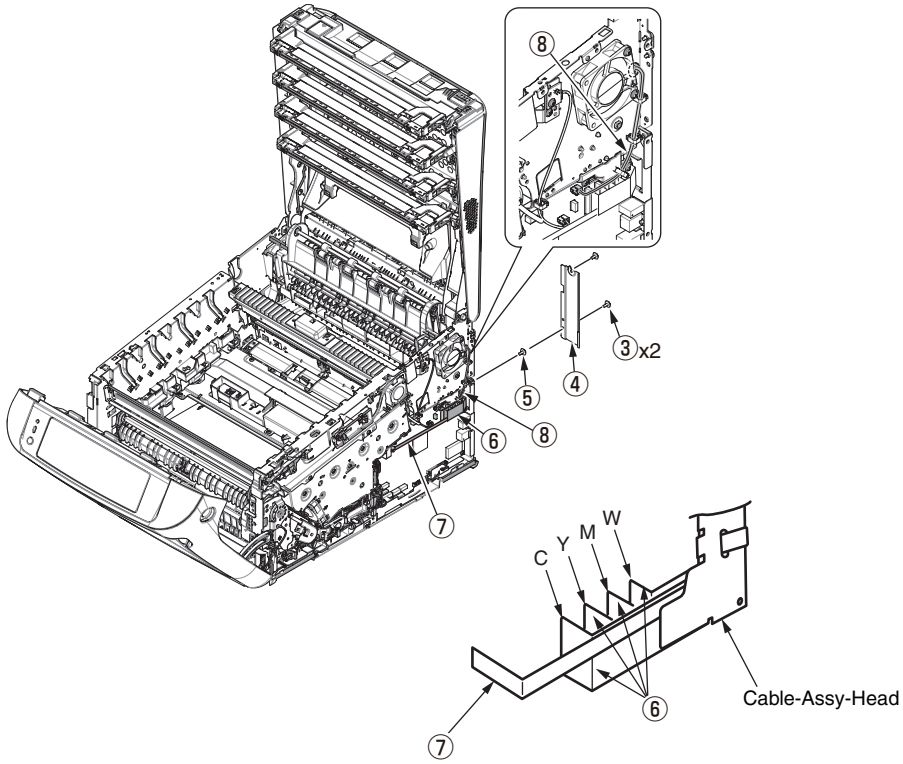
(4) Detach the Rear cover Assy. (Refer to section 3.2.5.)

(5) Remove the ten screws (silver) ① to detach the Plate shield ② .



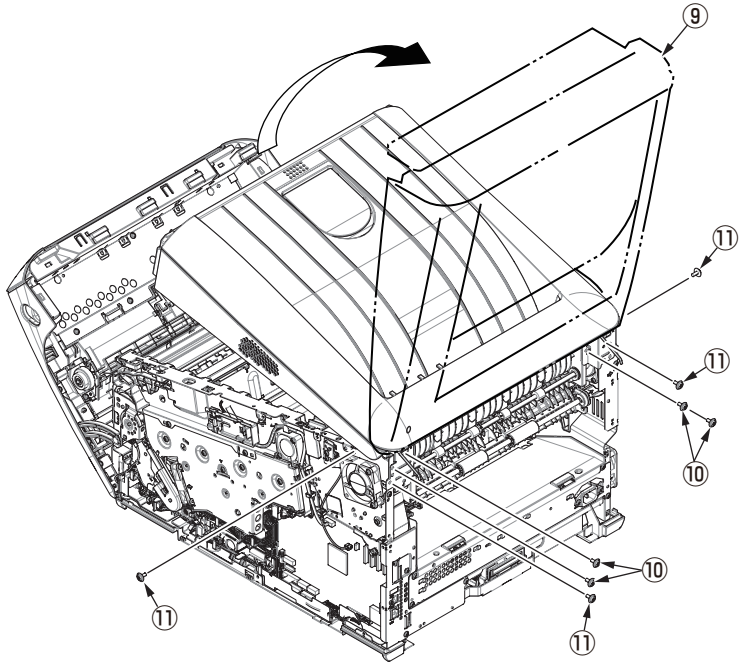
(6) Remove two screws (silver) ③ to detach the plate ④ , and remove a screw (silver) ⑤ .

(7) Disconnect the four head FFC cables ⑥ , the RFID-FFC cable ⑦ and FAN relay cable ⑧ from the CU/PU board Assy..

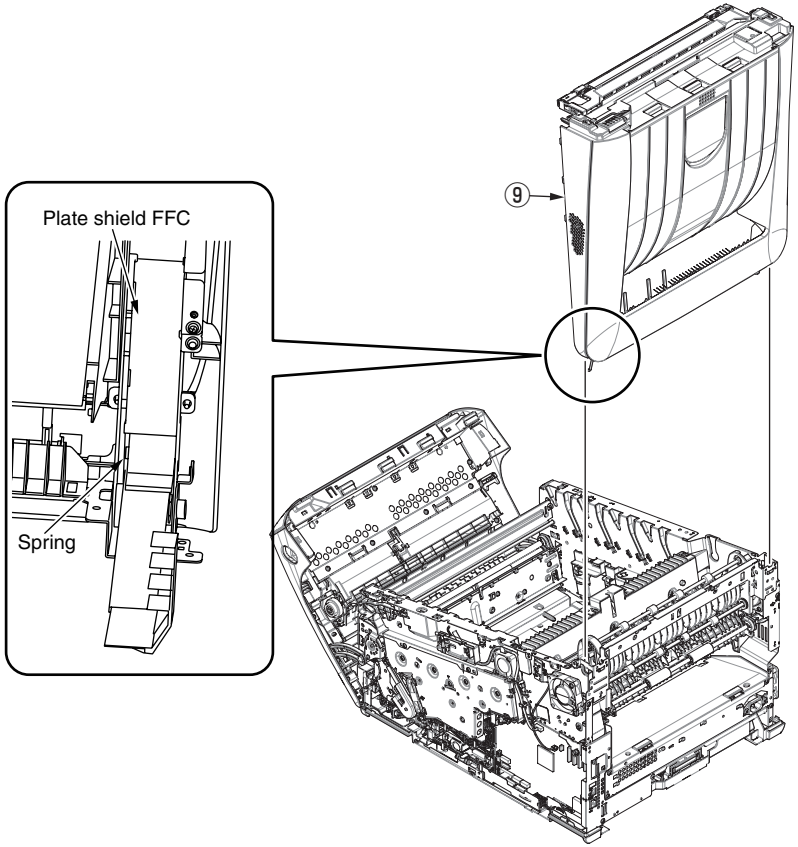


(8) Tilt the Top cover Assy ⑨ and remove the four Round-head screws (black) ⑩.

(9) Open the Top cover Assy ⑨ fully again and remove the four Round-head screws (black) ⑪.



(10) Hold the Top cover Assy ⑨ and lift it to detach.



Notes on assembling:

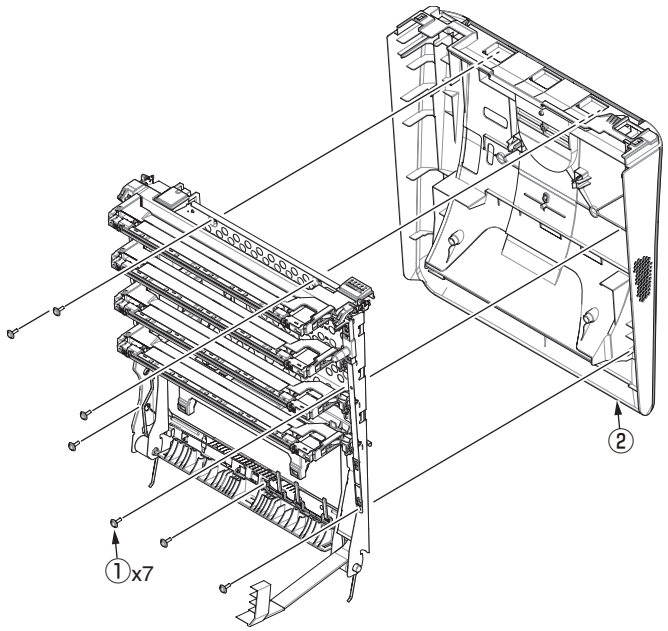
The Plate shield FFC should be assembled at the outer side of the spring.

3.2.9 Cable-Assy-Head / Stackfull-Sensor / Fuser blasting FAN

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

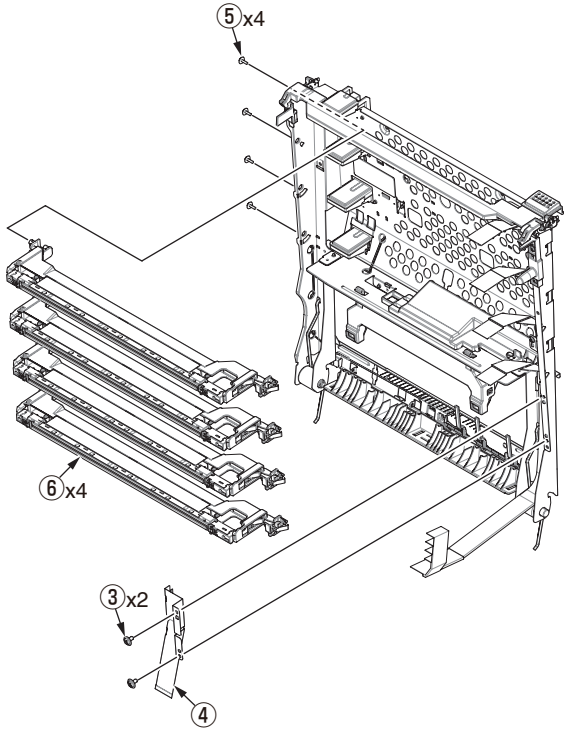
(2) Disconnect the Head FFC from the connector of the LED head. (Refer to section 3.2.6.)

(3) Remove the seven screws (black) ① to detach the Top cover ② .

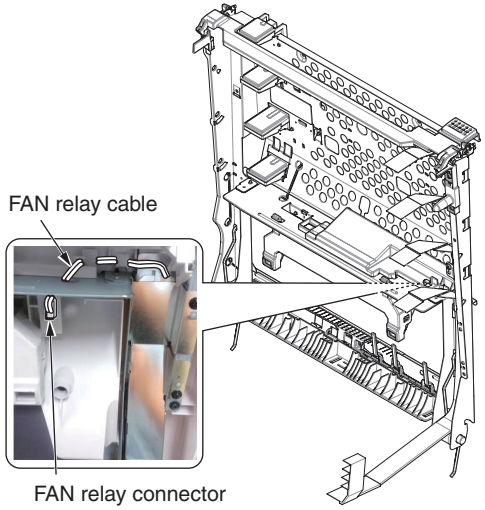


(4) Remove the two Round-head screws (black) ③ to detach the Plate shield FFC ④ .

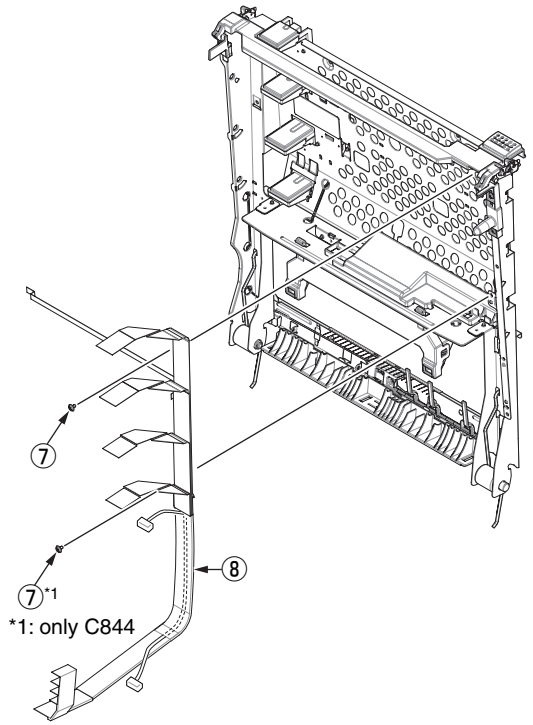
(5) Remove the four screws (black) ⑤ to detach each of four the Head holder Assy. ⑥ .

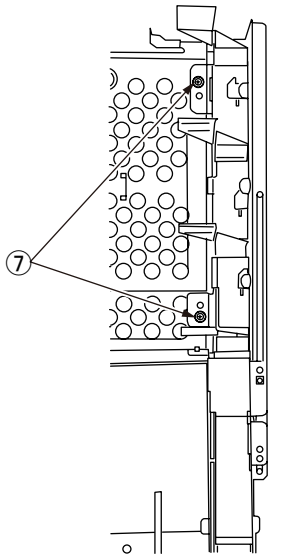


(6) Disconnect the FAN relay cable from the relay connecter.



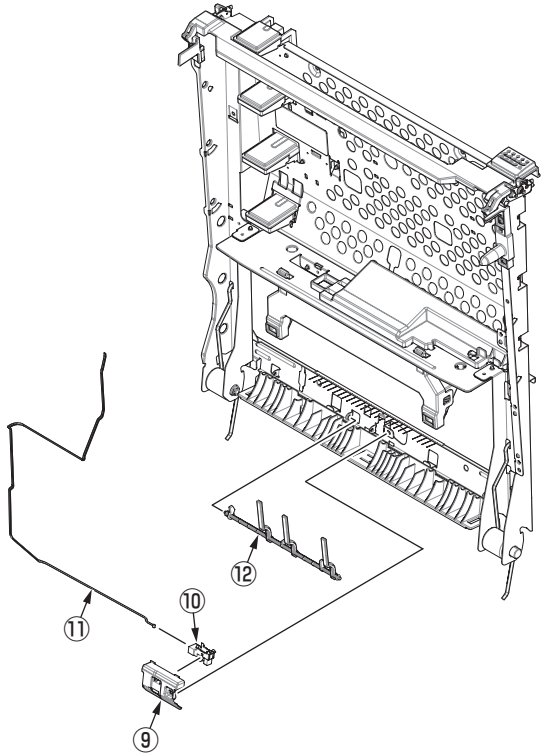
(7) Remove two Round-head screw (black) ⑦ *1 to detach the 600dpi Cable-Assy-Head ⑧ .
*1: C844 = 2 screws / Except C844 = 1 screw



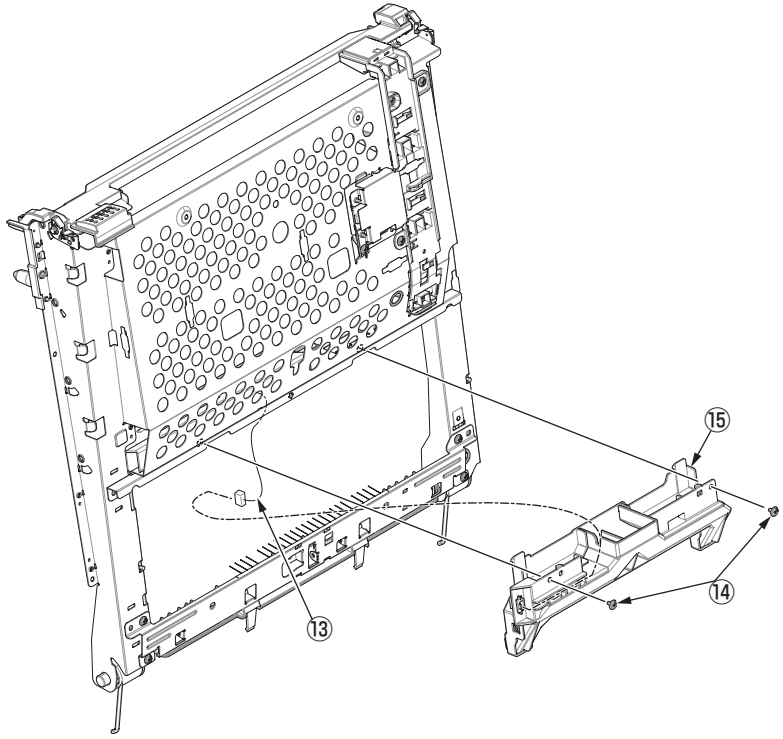


Detail drawing

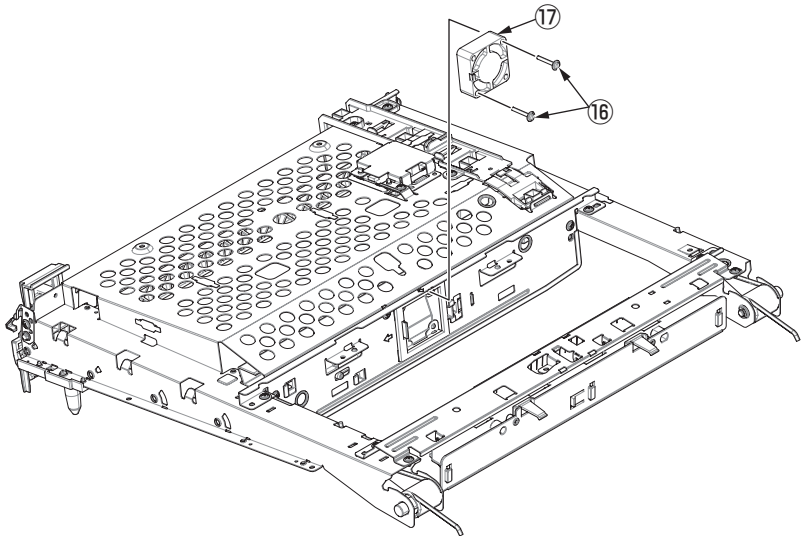
(8) Remove the Holder-stackfull-sensor ⑨ , and detach the Stackfull-Sensor ⑩ , cable ⑪ and the lever ⑫



(9) Disconnect the FAN cable ⑬ from the relay connector and remove the two Round-head screws (black) ⑭ to detach the Duct ⑮ .



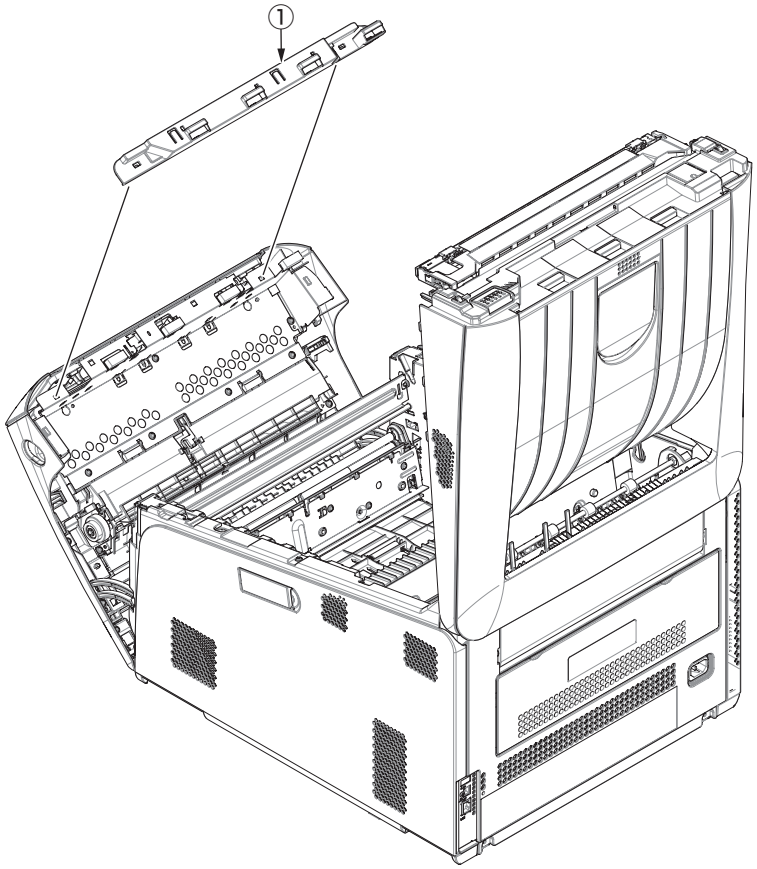
(10) Remove the two screws (silver) ⑯ to detach the Fuser blasting FAN ⑰ .



3.2.10 Operator panel Assy.

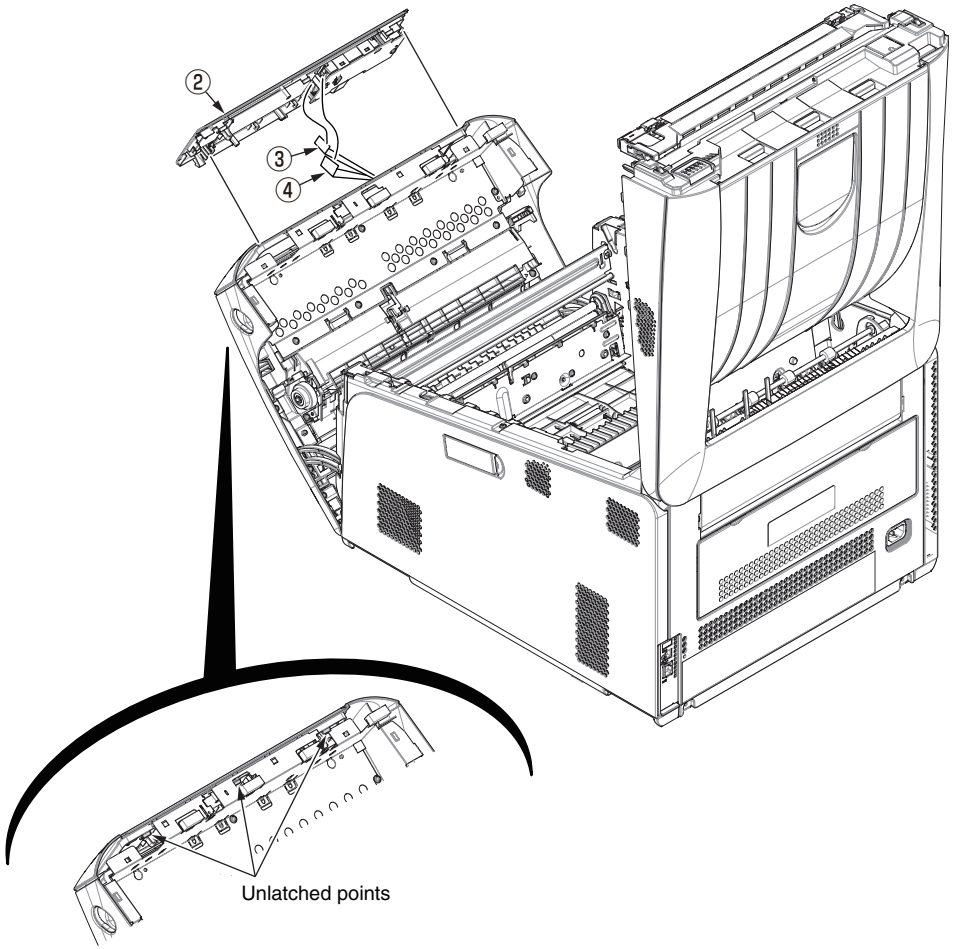
(1) Open the Front cover.

(2) Remove the Cover-gasket ① .



(3) Unlatch three points of the operator panel Assy. with the center latch should be unlatched last and remove the Operator panel Assy. ② with inclining it to front side.

(4) Disconnect the Operator panel FFC cable ③ and the Environment sensor FFC cable ④ .



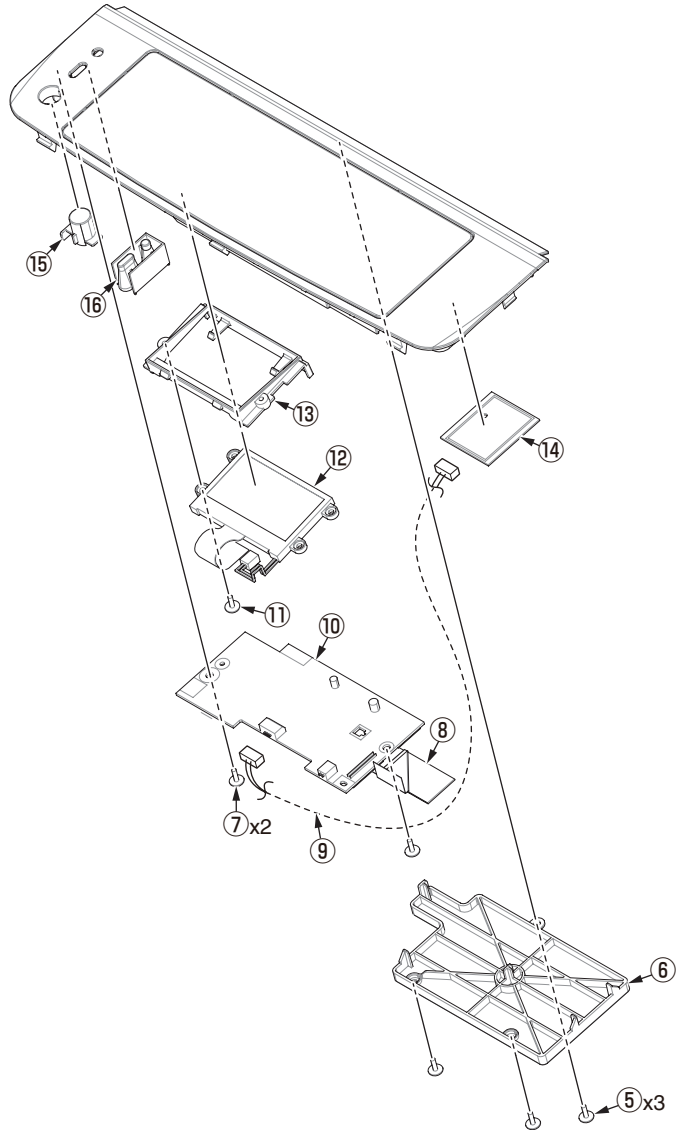
(5) Remove the three screws (black) ⑤ and remove the Cover-Touch ⑥ .

(6) Remove the two screws (black) ⑦ and disconnect the FFC cable ⑧ , cable ⑨ , the two cables of the LCD Panel ⑫ and board ⑩ .

(7) Remove the screw (black) ⑪ and remove the LCD Panel ⑫ and LCD Holder ⑬ .

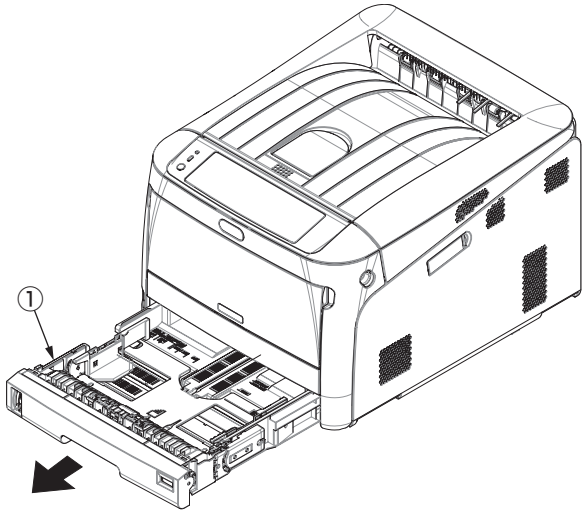
(8) Remove the NFC Board ⑭ , Button-LENS-B ⑮ , and Button-LENS-A ⑯ .

Memo To remove the Environment sensor, refer to section 3.2.16.



3.2.11 Front cover Assy.

(1) Pull out the cassette ① from the apparatus.



(2) Remove the Image Drum unit / Belt unit. (Refer to section 3.2.1.)

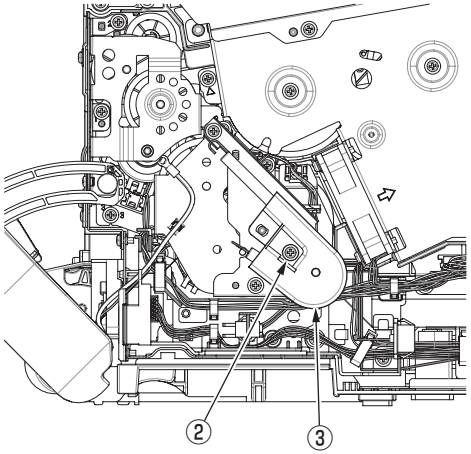
(3) Detach the Cover side-L. (Refer to section 3.2.3.)

(4) Detach the Cover side-R. (Refer to section 3.2.4.)

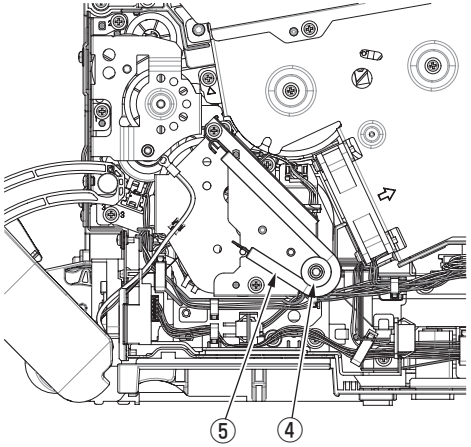
(5) Detach the Rear cover Assy. (Refer to section 3.2.5.)

(6) Remove the ten screws (silver) to detach the Plate shield.

(7) Remove the screw (silver) ② , and remove the Cover-Pulley-SP ③ .



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



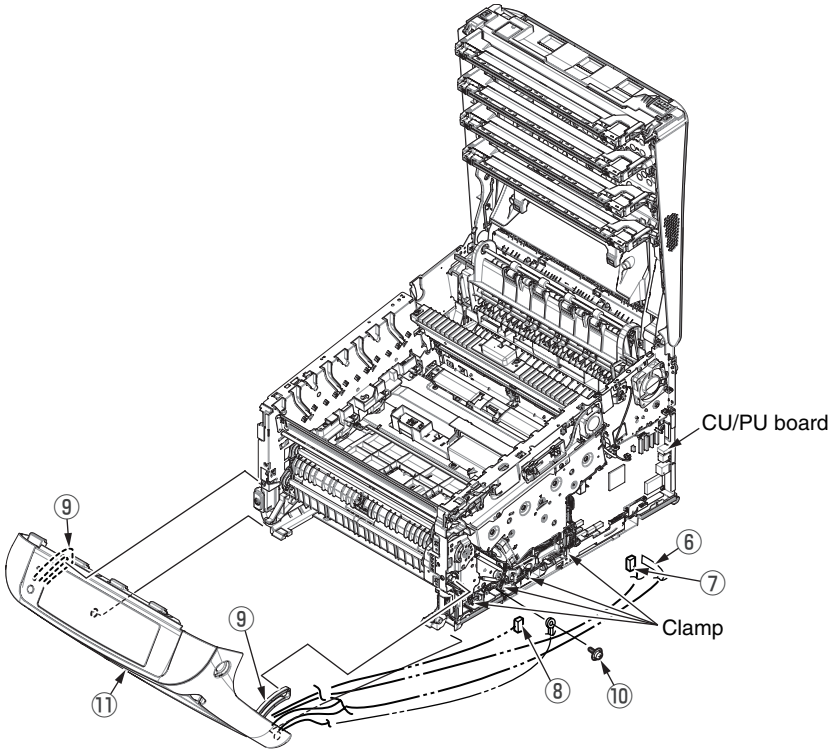
(9) Disconnect the FFC cable ⑥ from the CU/PU board Assy., release the clamp that is holding the FFC cable ⑥ , and disconnect the FFC cable ⑥ from the main unit.

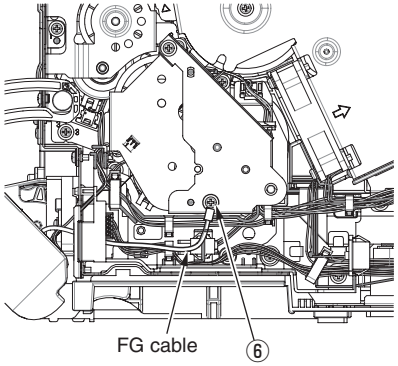
(10) Disconnect the Cable ⑦ and the Cable ⑧ .

(11) Release the two stays ⑨ .

(12) Remove the screw (silver) ⑩ to leave the FG cable from the main unit.

(13) Support and pull out the Front covert Assy. ⑪ from the post of the main unit, and detach the Front cover Assy. ⑪ .





3.2.12 Guide Assy.-eject

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

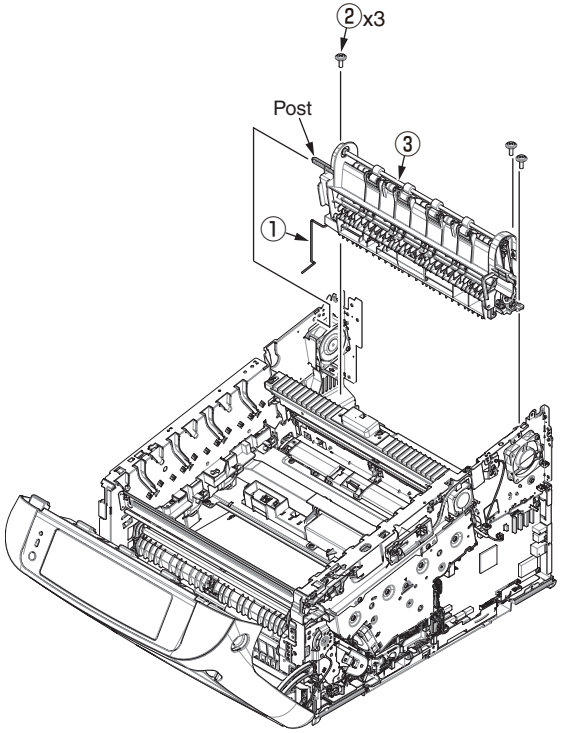
Note! If perform the procedure 3.2.9(3), it can exclude the Guide Assy.-eject even if do not take off the Top cover Assy.

(2) Disconnect the eject cable ① .

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

(4) Disengage the post from the Side-L Assy. to detach the Guide Assy.-eject ③ .

Note! Attention to lose the spacers of screws tightening the Side-L Assy.



3.2.13 Sensor Assy.-registration / Relay board (MER) / Contact Assy. / Fuser sensor Assy.

(1) Remove the Image Drum unit / Belt unit. (Refer to section 3.2.1.)

(2) Detach the Cover side-L. (Refer to section 3.2.3.)

(3) Detach the Cover side-R. (Refer to section 3.2.4.)

(4) Detach the Rear cover Assy. (Refer to section 3.2.5.)

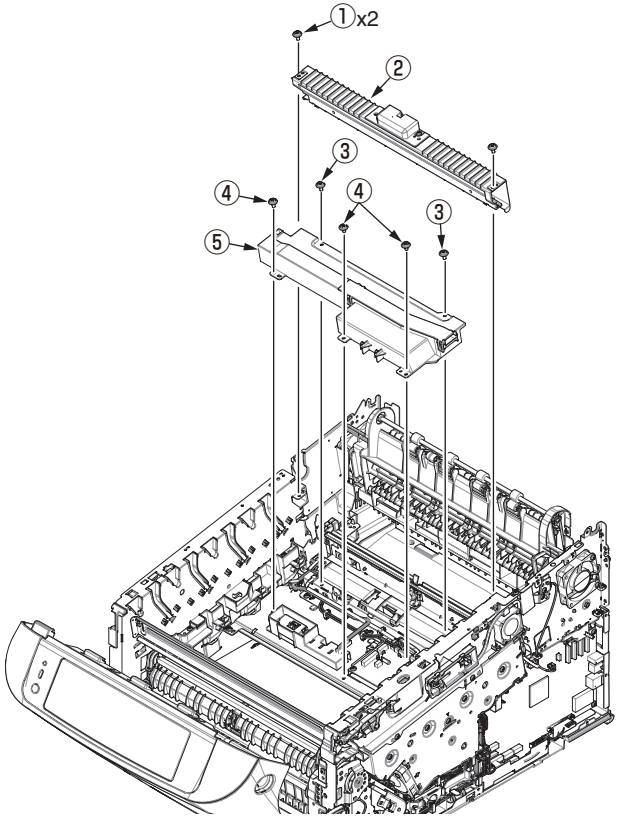
(5) Detach the Top cover Assy. (Refer to 3.2.8)

(6) Remove the two screws (silver) ① to detach the Plate beam FU ② .

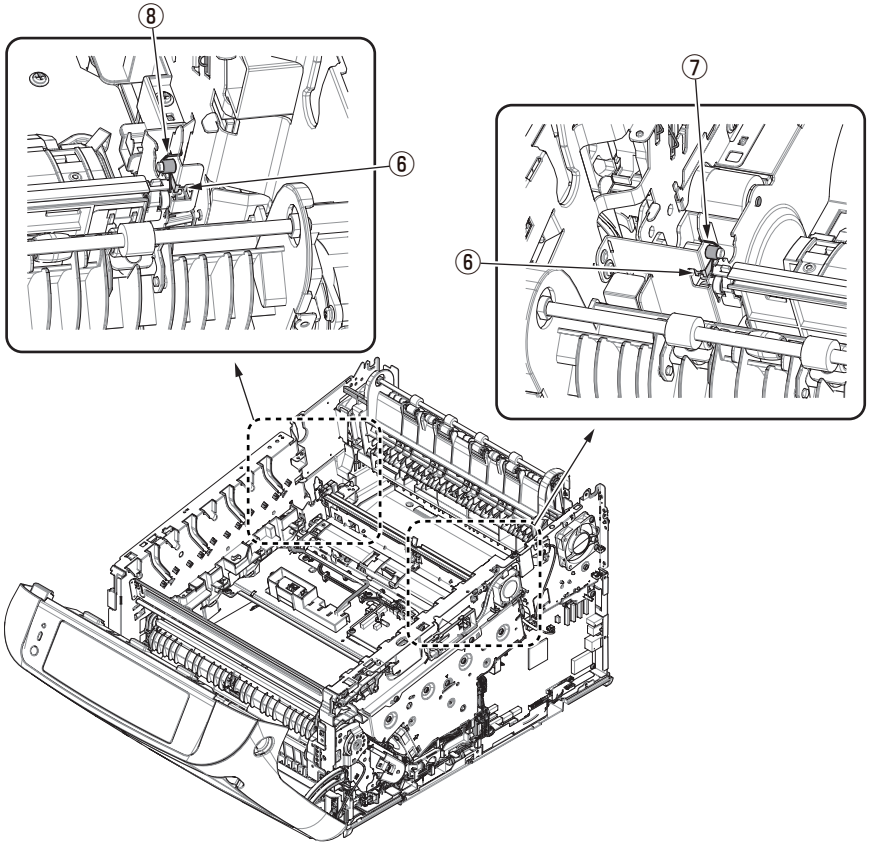
(7) Remove the two screws (silver) ③ and the three round-head screws (black) ④ to detach the Cover Assy.-registration ⑤ .

Notes on assembling:

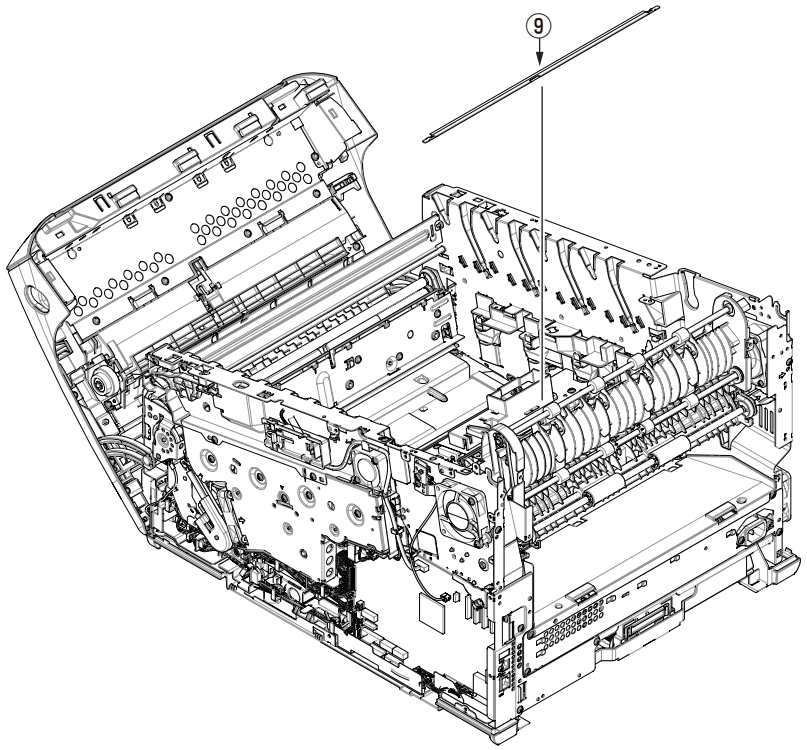
The thick of the metal plate fixing the cover Assy.-registration ⑤ is only 0.6mm. Therefore, tighten these screws with carefully.



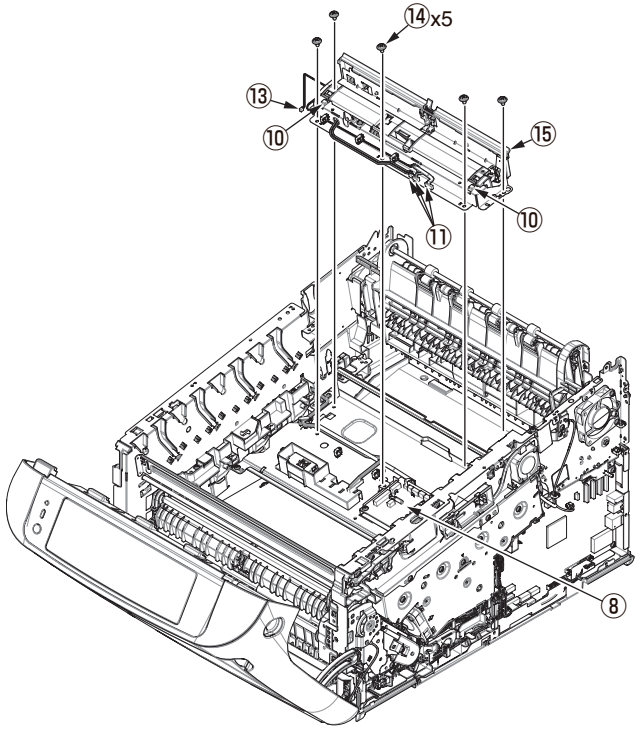
(8) Remove the Stopper-Sep ⑥ and Spring-Guide(Sep_R) ⑦ /Spring-Guide(Sep_L) ⑧ .



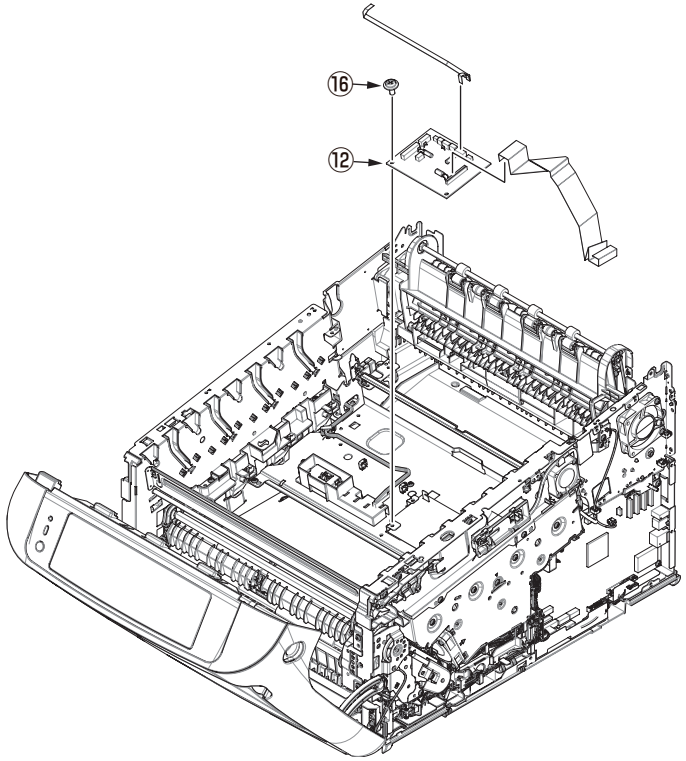
(9) Remove the PlateAssy.-Separator ⑨ .



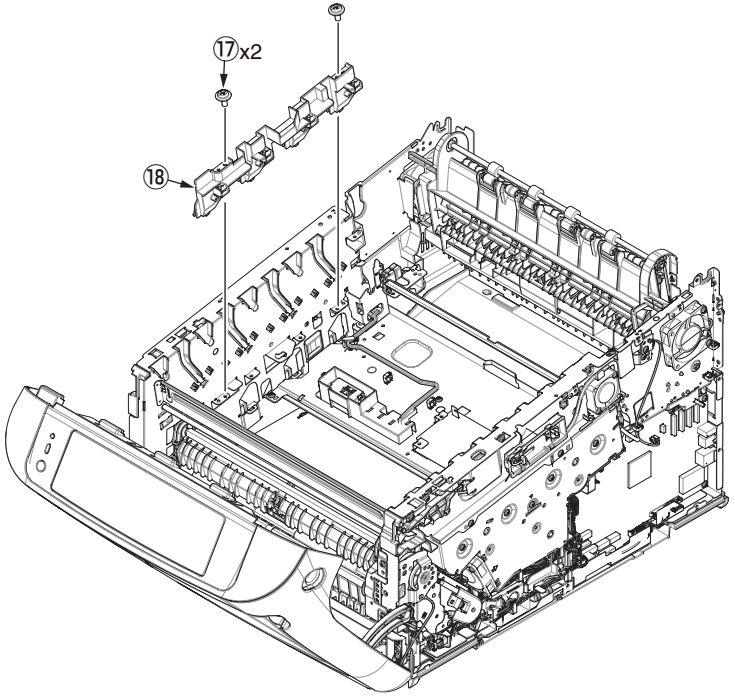
(10) Disconnect the right and left FFC connectors ⑥ and the three connectors ⑦ from the relay board (MER) ⑧ , and disconnect the connector ⑨ from the high-voltage power supply board, and remove the five round-head screws (black) ⑩ to detach the color registration Assy. ⑪ .



(11) Disconnect all connector and remove the screw (silver) ⑫ to detach the relay board (MER) ⑧ .



(12) Remove the two screws (silver) ⑬ to detach the contact Assy. ⑭ .

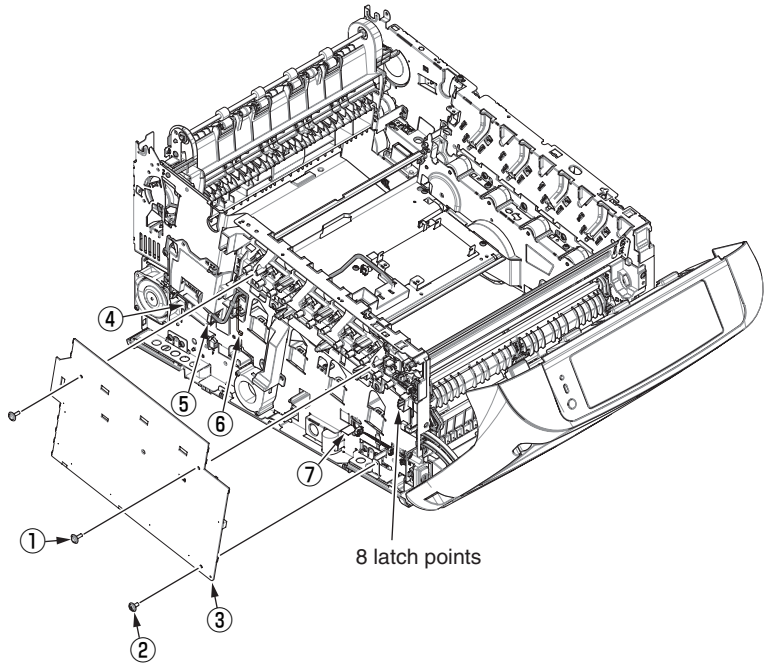


3.2.14 High-voltage power supply board

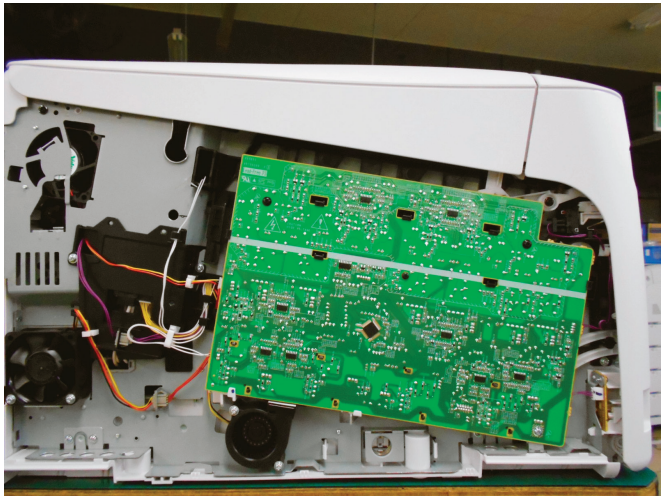
(1) Remove the Image Drum unit / Belt unit. (Refer to section 3.2.1.)

(2) Detach the Cover side-L. (Refer to section 3.2.4.)

(3) Remove the two screws (black) ① and the screw (silver) ② , unlatch the High-voltage power supply board ③ at the eight points, disconnect the FAN (Fuser) connector ④ , the Belt thermistor connector ⑤ , the cover-open sensor connector ⑥ , and the FFC connector ⑦ to detach the High-voltage power supply board ③ .



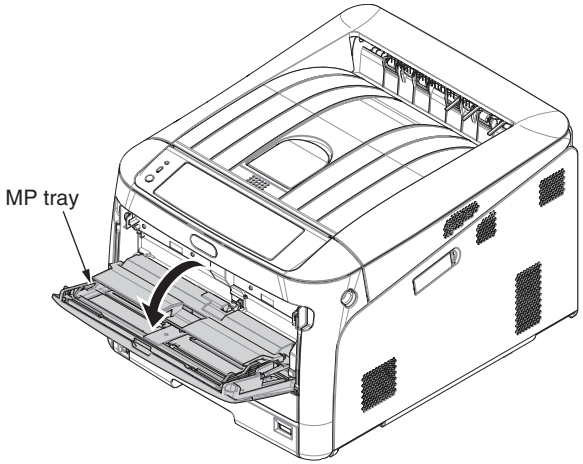
< Reference >



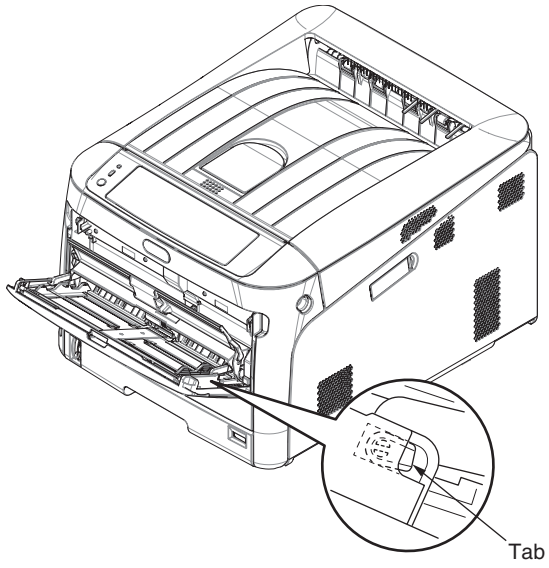
Cable Route picture of around of the High-voltage power supply board.

3.2.15 Frame Assy.-Front

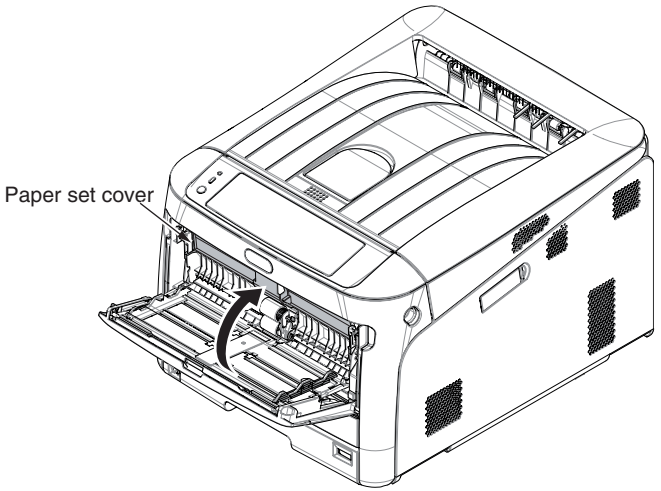
(1) Turn off the apparatus, and open the MP tray forward by inserting your fingers into the front recesses.



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



(3) Open the paper set cover.



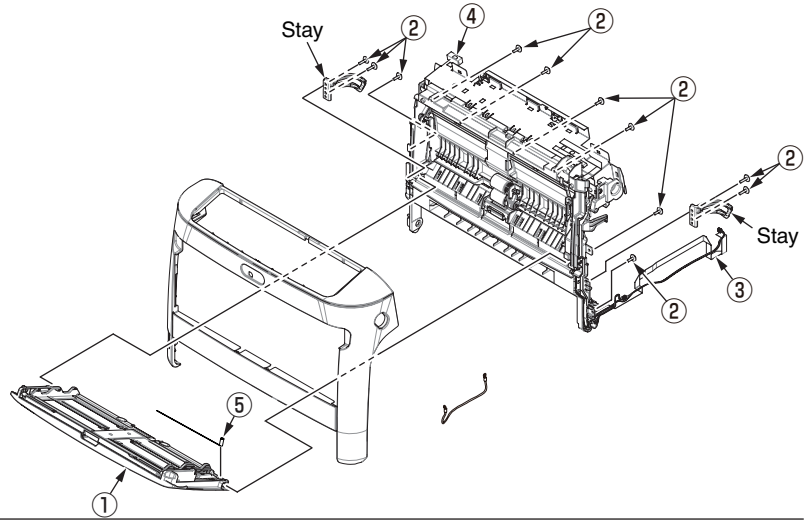
(4) Raise the cover Assy MPT ① and pull up the left side and release the left side first. And then, slide it to the left side with raising its right side and release. (Be careful not to deform the Spring-Hopper-FG ⑤ .)

(5) Detach the Spring-Hopper-FG ⑤ from the cover Assy MPT ① .

(6) Detach the Operator panel Assy. (Refer to section 3.2.10)

(7) Detach the front cover Assy. (Refer to section 3.2.11.)

(8) Remove the twelve screws ② , disconnect the ground cable ③ , and detach the frame Assy. front ④ . (Two stays come off at the same time, too)



(8) Remove the seven screws ⑤ to detach the Plate-front-FG ⑥ .

(9) Remove the five screws ⑦ to detach the Guide Assy ⑧ .

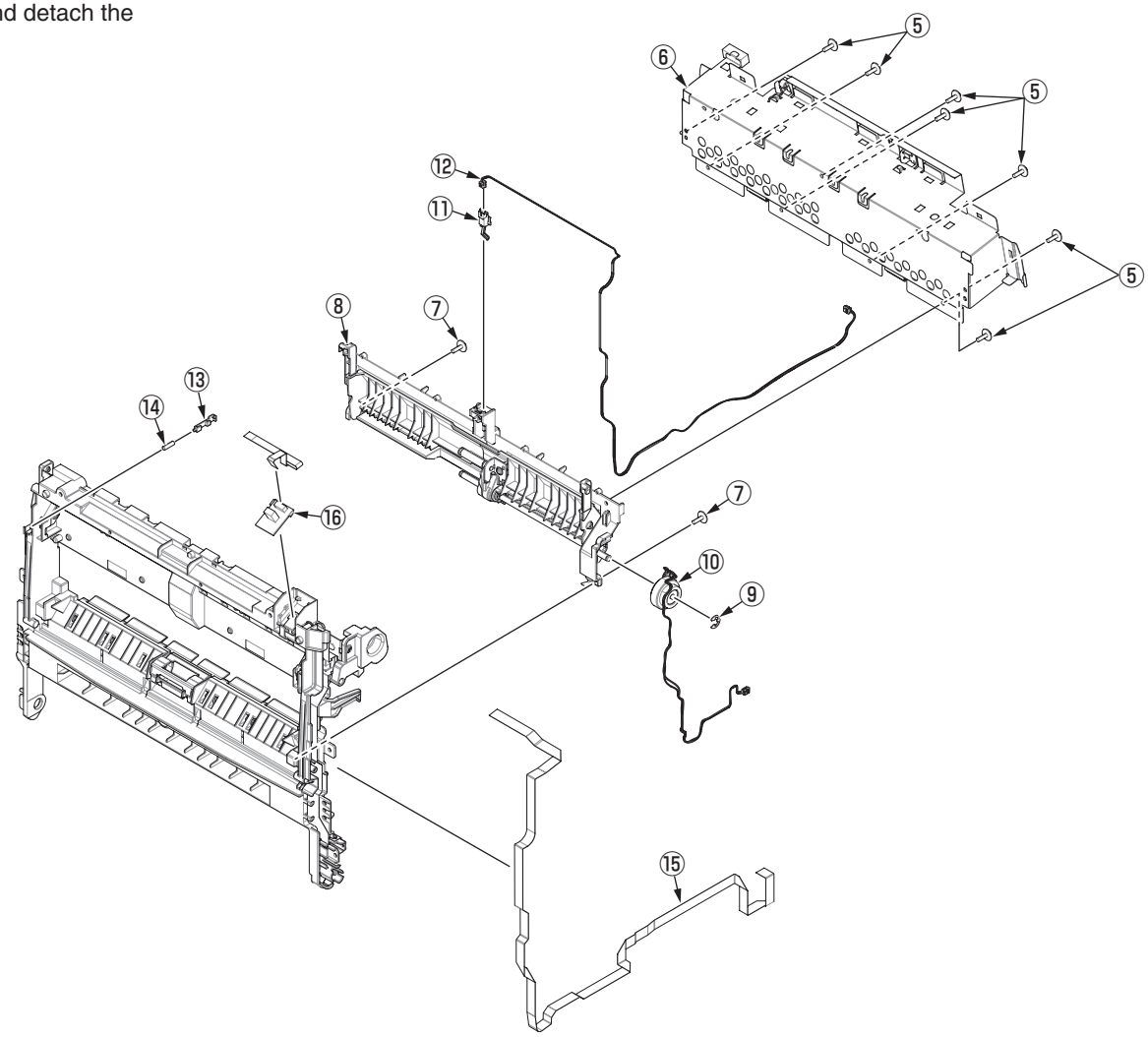
(10) Remove a E-ring ⑨ to detach the clutch ⑩ .

(11) Remove the Paper-end-switch ⑪ to detach the cable ⑫ .

(12) Remove the Slider-switch ⑬ to detach the spring ⑭ .

(13) Remove the FFC-cable ⑮ .

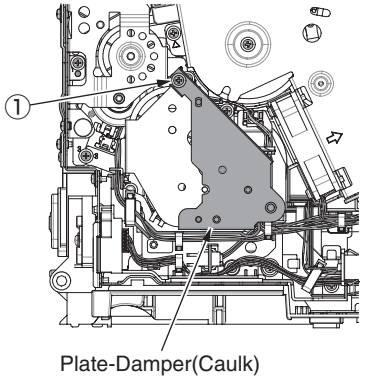
(14) Disconnect the FFC-cable from the Environment sensor ⑯ , and detach the Environment sensor ⑯ .



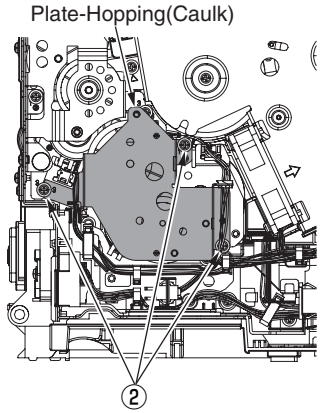
3.2.16 Roller Assy.-registration

(1) Detach the front cover Assy. (Refer to section 3.2.11.)

(2) Remove the screw ① to detach the Plate-Damper(Caulk).



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

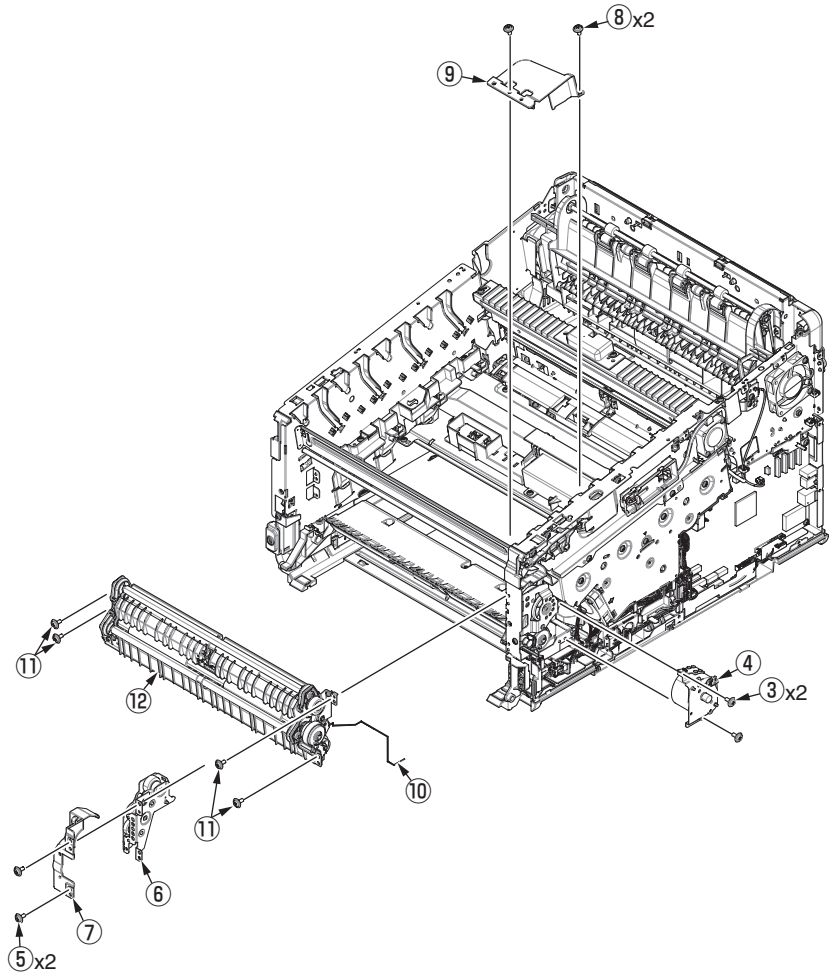


(4) Remove the two screws (silver) ③ to detach the Gear Assy. hopping ④ .

(5) Remove the two screws (silver) ⑤ , and remove the Cover Gear MPT ⑦ , and then remove the Gear Assy MPT ⑥ .

(6) Remove the screw (silver) ⑧ , detach the Cover Conn ⑨ , and disconnect the cable ⑩ from the relay connector and clamp.

(7) Remove the four screws (silver) ⑪ to detach the Roller Assy. registration ⑫ .

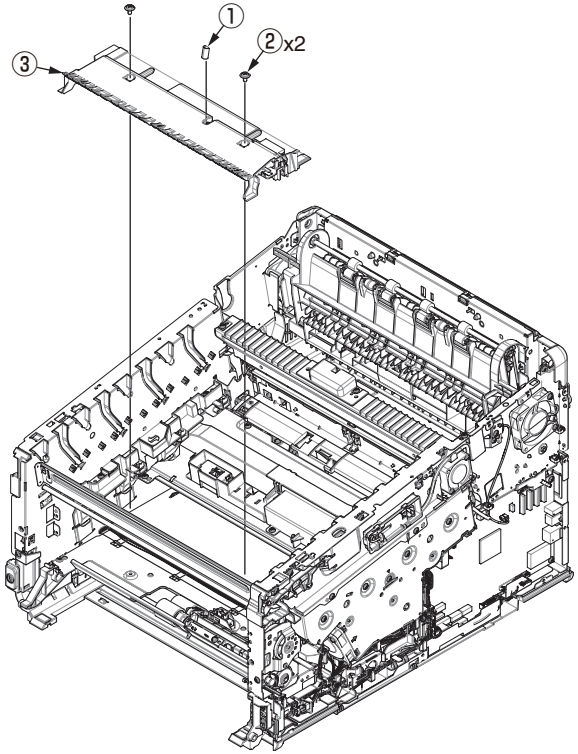


3.2.17 Roller-feed / Roller-pickup / Frame Assy.-pickup / Holder sensor Assy.

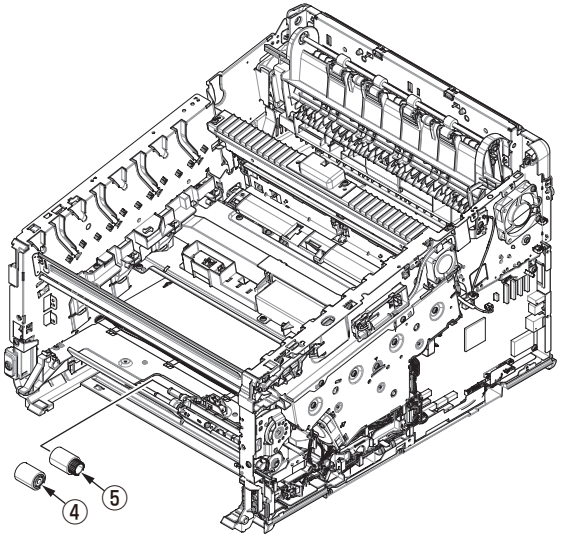
(1) Remove the Roller Assy.-registration. (Refer to section 3.2.16.)

(2) Remove the Spring-pickup ① .

(3) Remove the two round-head screws (black) ② , disconnect the cable from the clamp, and detach the Cover Assy. hopping ③ .



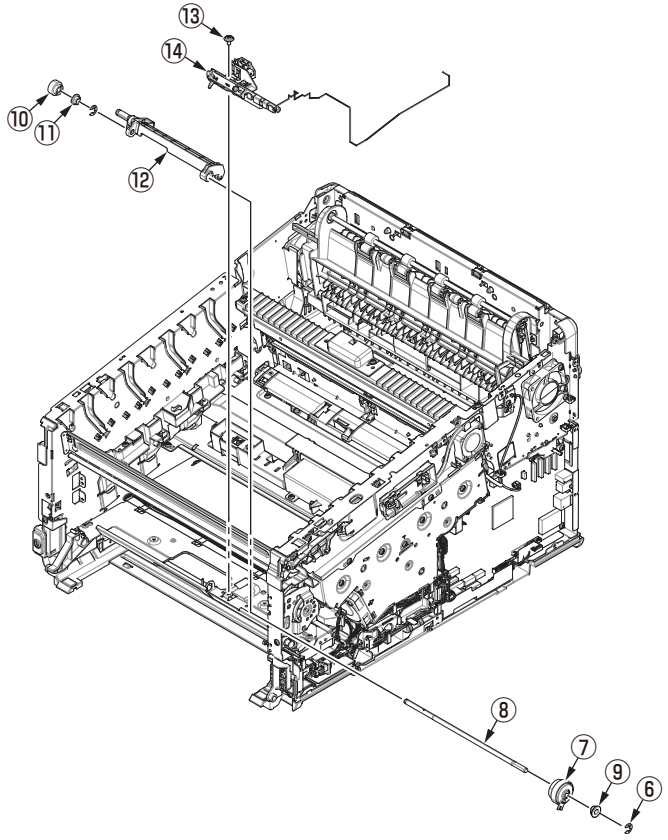
(4) Remove the Roller-feed ④ and the Roller-pickup ⑤ .



(5) Remove the E-ring ⑥ , the Clutch hopping ⑦ , Shaft hopping ⑧ , and the Gear-feed ⑨ .

(6) Remove the bearing ⑩ , the gear ⑪ , and the Frame Assy.-pickup ⑫ .

(7) Remove the round-head screw (black) ⑬ to detach the Holder sensor Assy. ⑭ .



3.2.18 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.

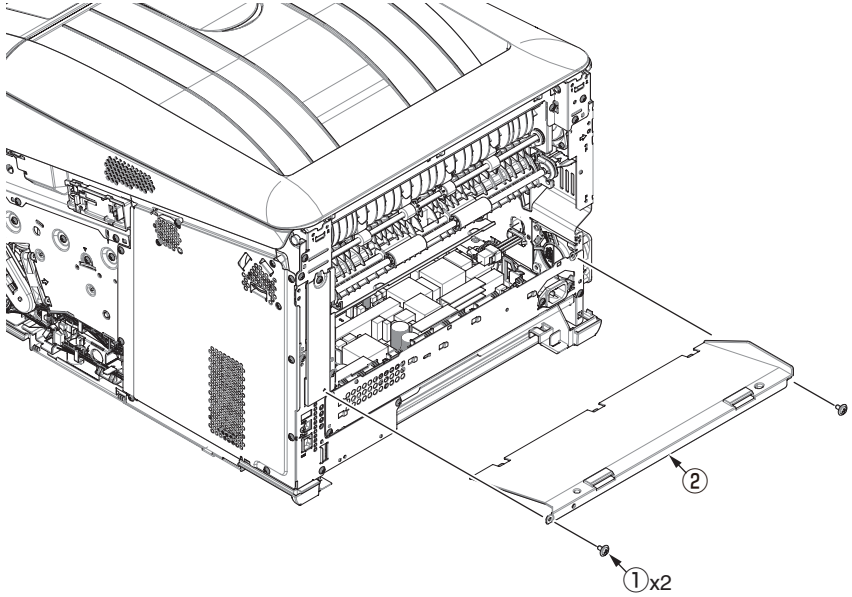
When replacing the low-voltage power supply, be careful for the electric shock hazard.

So, wear insulated gloves or be careful not to touch the conductors or terminals of the power supply directly.

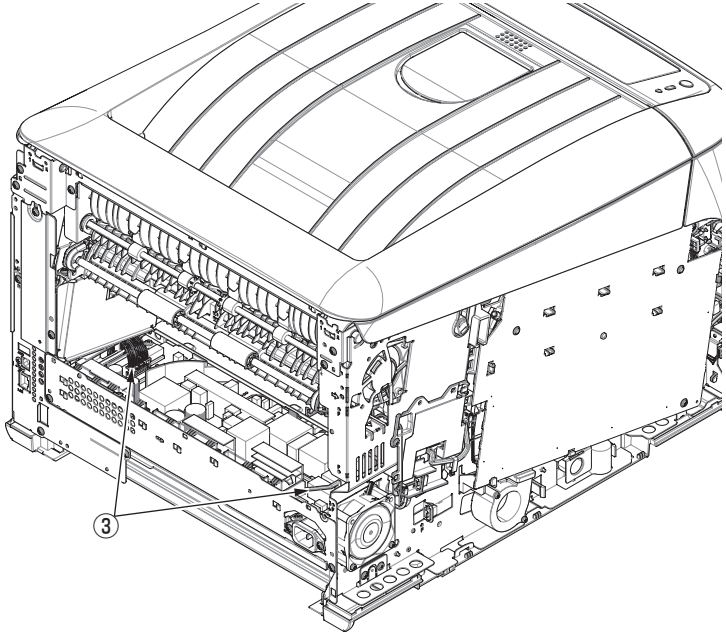
After the AC cord is unplugged, the capacitor may take about one minute to discharge completely, or could not discharge due to PCB breakdown. So, be careful about electric shock.

(1) Detach the Rear cover Assy. (Refer to section 3.2.5.)

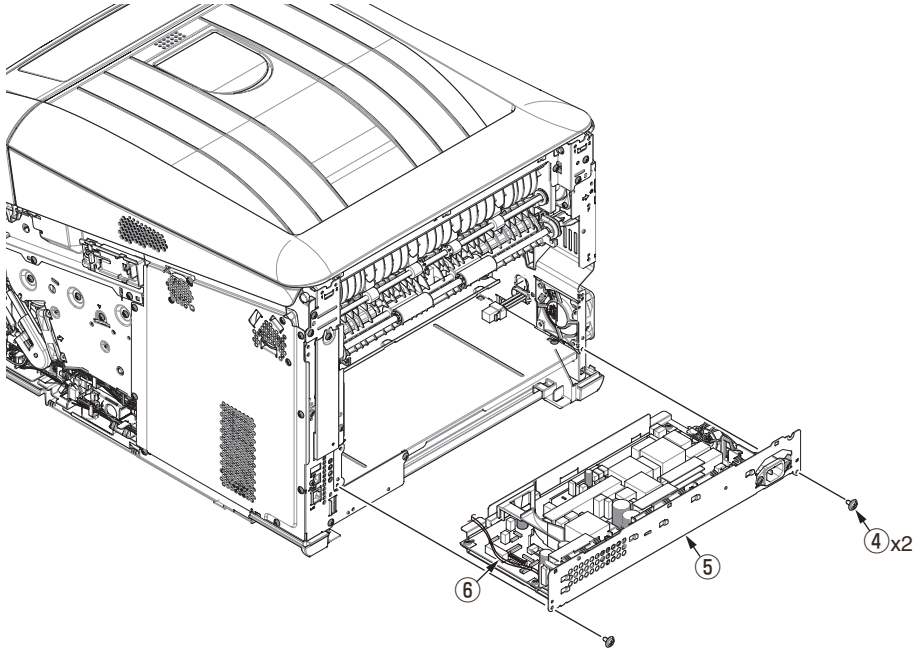
(2) Remove the two screws (black) ① to detach the Cover POW ② .



(3) Disconnect the two cables ③ .



(4) Remove the two screws (black) ④ and draw the Low-voltage power supply Assy. ⑤ halfway and disconnect the cable ⑥ from relay connector to detach the Low-voltage power supply Assy. ⑤ .

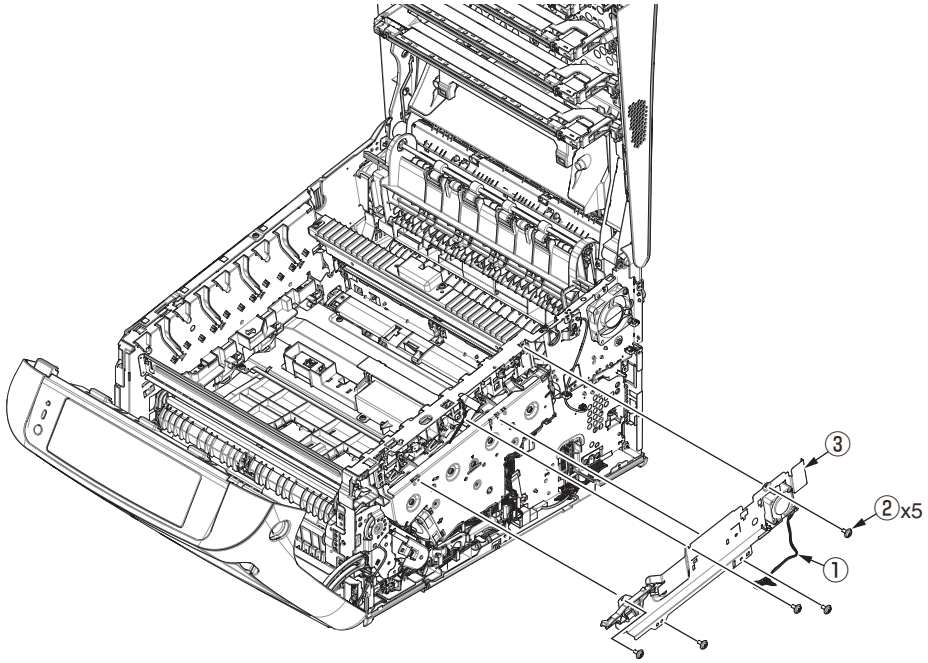


3.2.19 Motor Assy.-belt / Motor Assy-ID

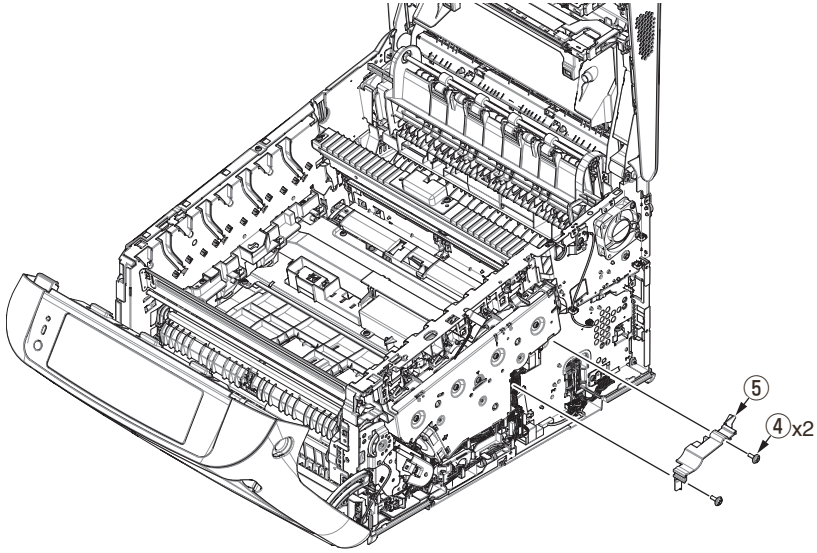
(1) Remove the CU/PU board Assy. (Board Assy-ME2). (Refer to section 3.2.7.)

(2) Disconnect the cable ① from the clamp.

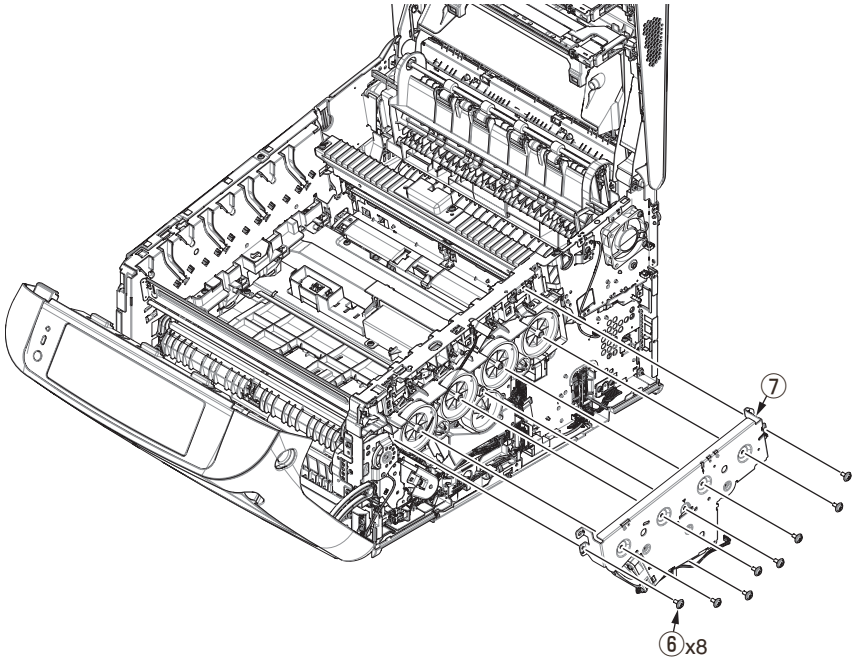
(3) Remove the five screws (silver) ② to detach the Plate Assy.-toner ③ .



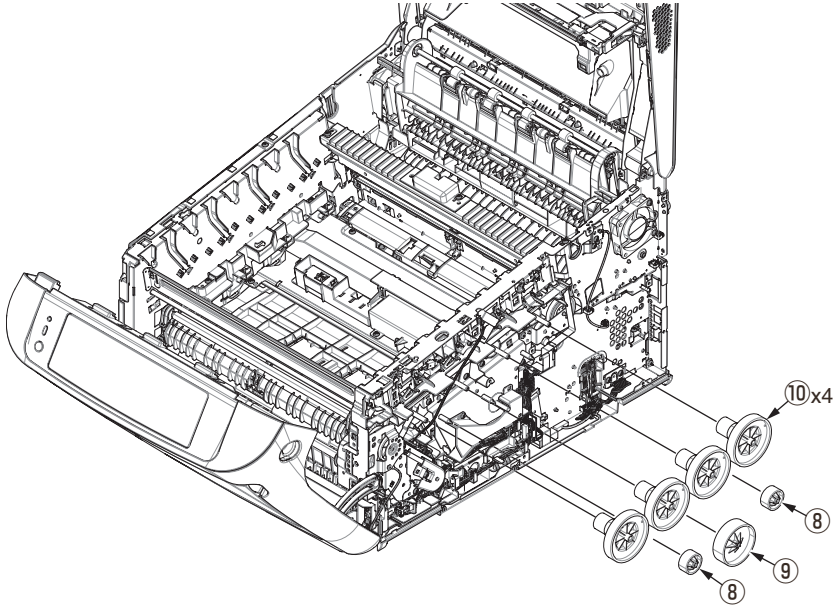
(4) Remove the two screws (silver/8mm) ④ and detach the Cover gear belt ⑤ .



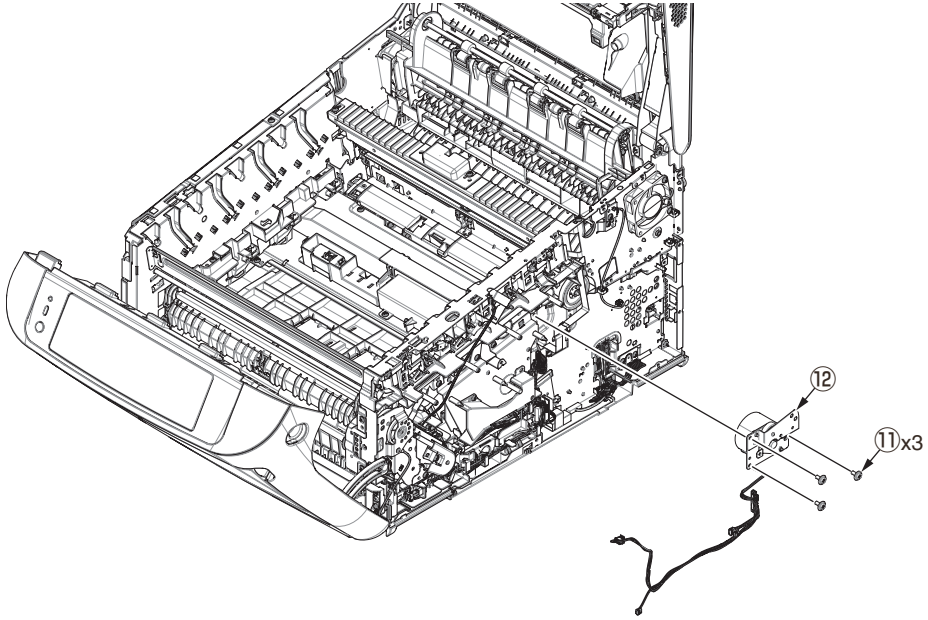
(5) Remove the eight screws (silver) ⑥ and detach the Plate Assy. ID gear ⑦ .



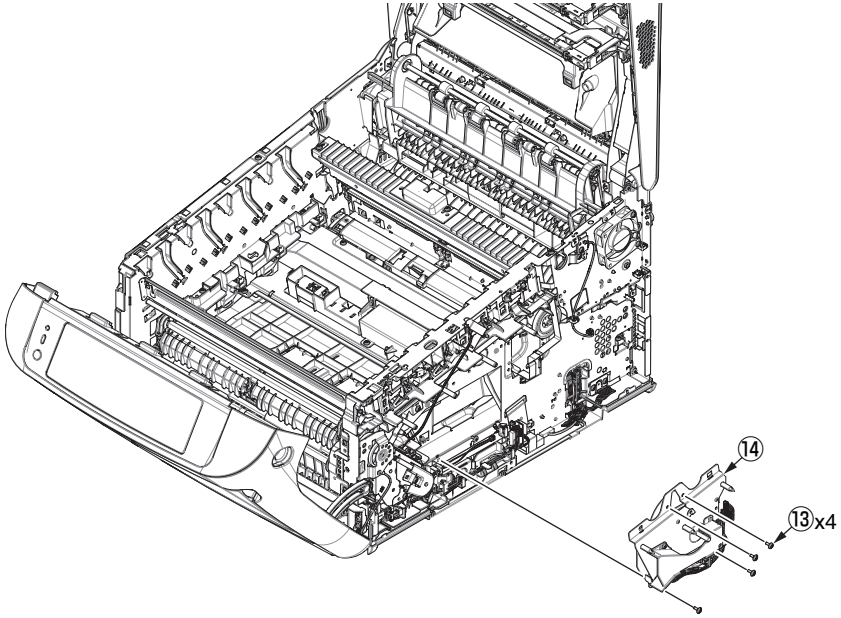
(6) Remove the Gear-idler-A ⑧, the Gear-idler-B ⑨, and the Gear-reduction ID ⑩.



(7) Remove the three screws (silver) ⑪ to detach the Motor Assy. belt ⑫.



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



Notes on assembling:

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

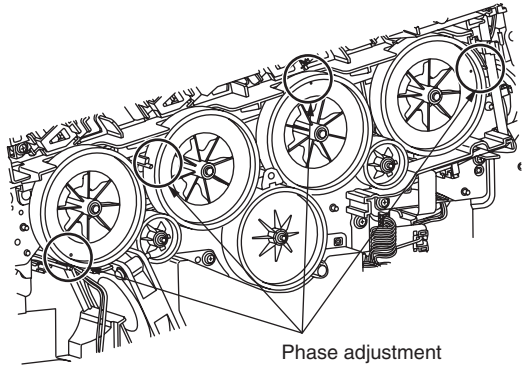


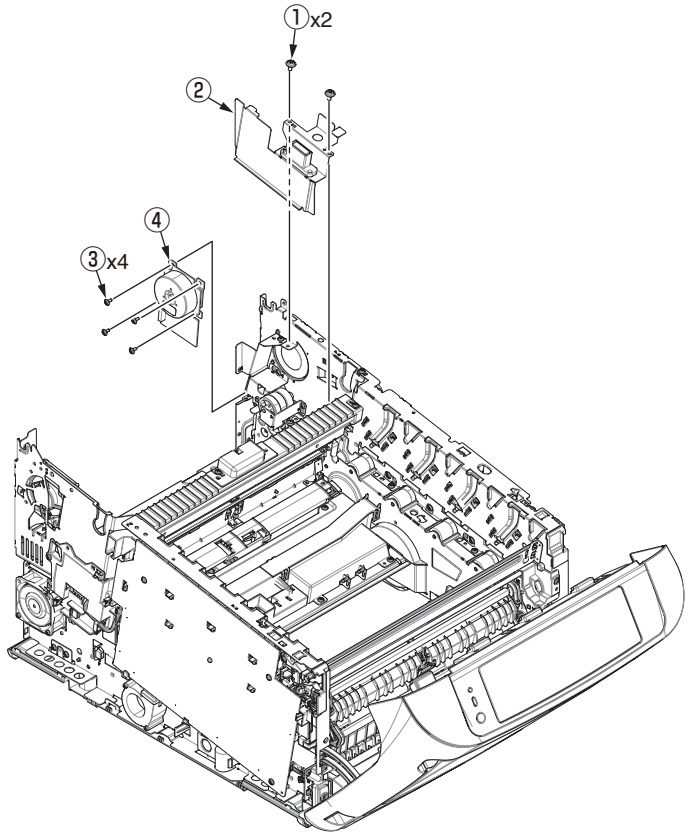
Illustration of phase adjustment of gear-reduction ID

3.2.20 Motor DC-FU (Fuser motor) / Fuser TAG contact terminal PCB (MET PCB)

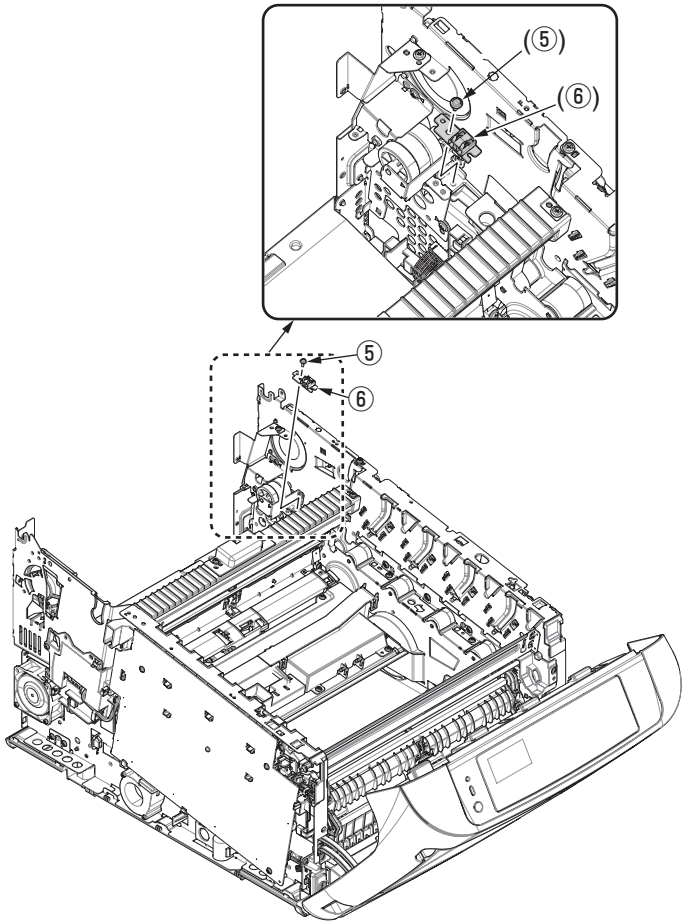
(1) Detach the Guide Assy.-eject. (Refer to section 3.2.12)

(2) Remove the two screws (silver) ① to detach the Plate cover FU ② .

(3) Remove the four screws (black/8mm) ③ to detach the Motor DC-FU ④ .



(4) Remove the a screws (black) ⑤ to detach the Fuser TAG contact terminal PCB (MET PCB) ⑥ with disconnecting the connector from the board.



(4) Remove the three Round-head screws (black) ⑦ to detach the Plate-Drive(Caulking) ⑧ and fuser drive gear ⑨ , ⑩ , ⑪ .

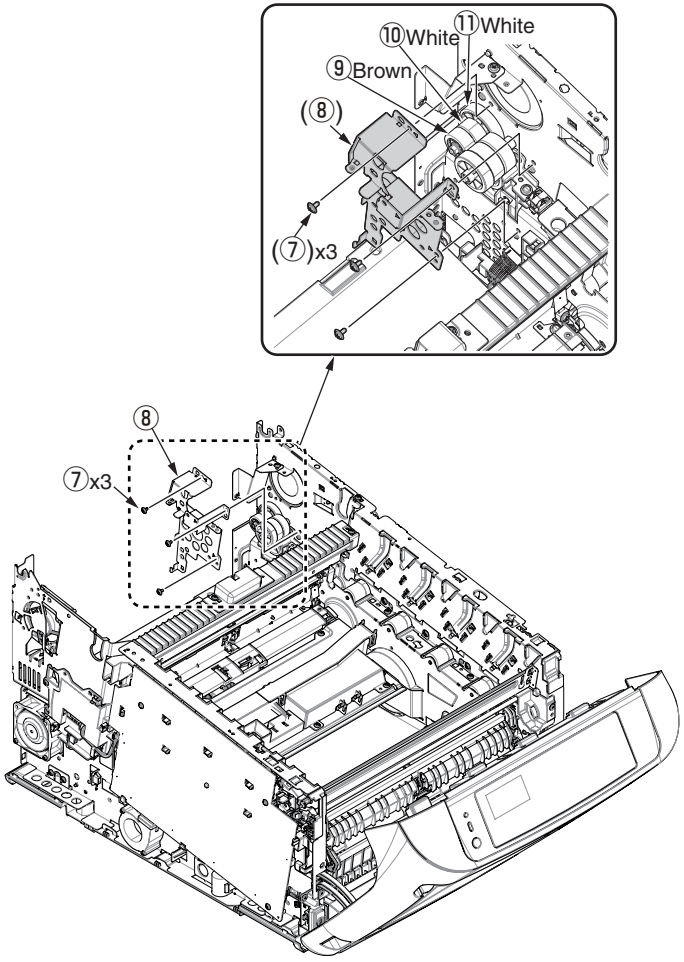
Notes on assembling:

When assemble them, be careful in order and direction of the color of the gear ⑨ , ⑩ , ⑪ .

For those gears directions with in looking from the front side of the apparatus, refer to following.

The one-way side of the gear ⑨ should be assembled toward left.

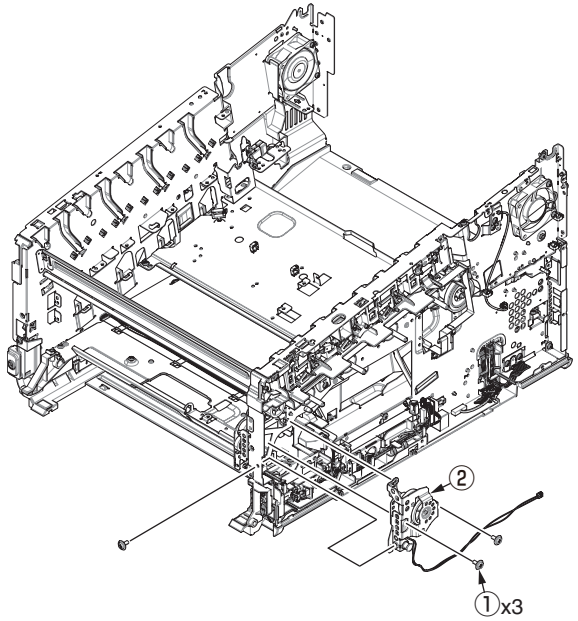
The one-way side of the gear ⑩ should be assembled toward right.



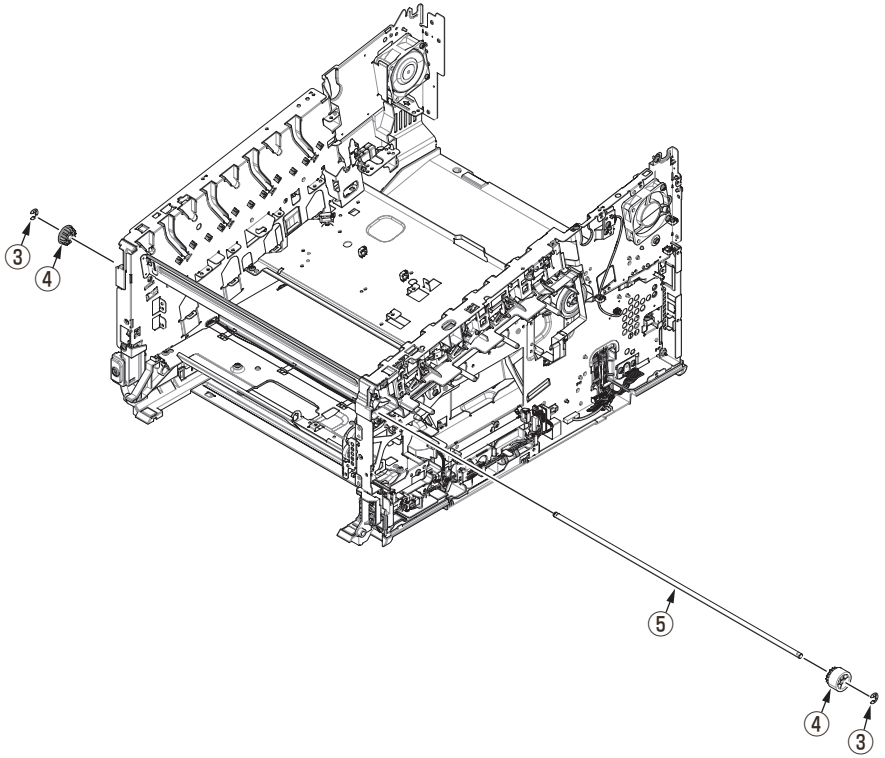
3.2.21 Side-R Assy. / Side-L Assy.

(1) See sections 3.2.1 to 3.2.19.

(2) Remove the three screws (silver) ① to detach the Gear Assy. ID lift-up ② .



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



Notes on assembling:

For to assemble the Gear lift-up, match the phase of the right and left gears.

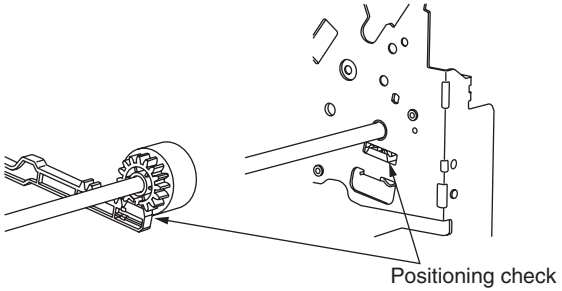
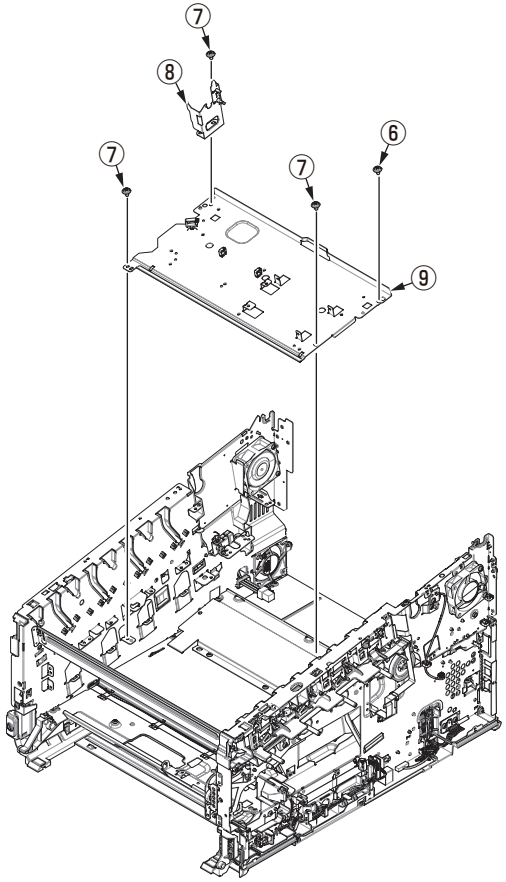
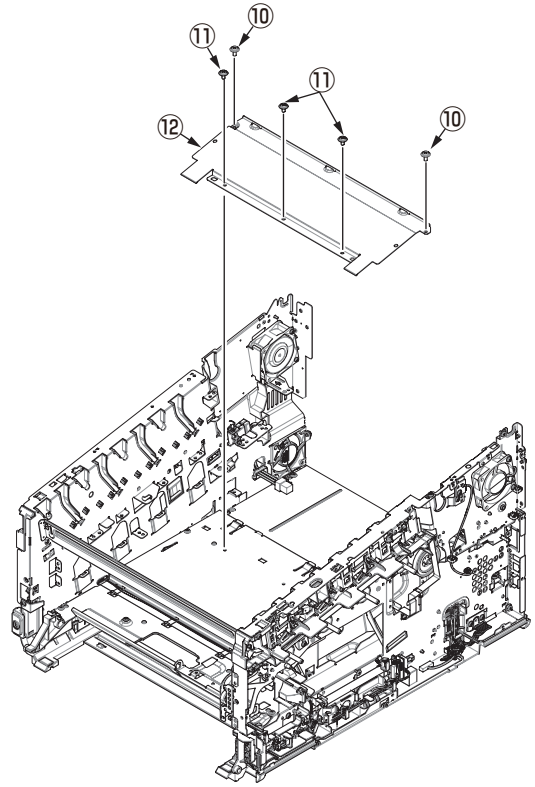


Illustration of (right and left) gear lift-up positioning

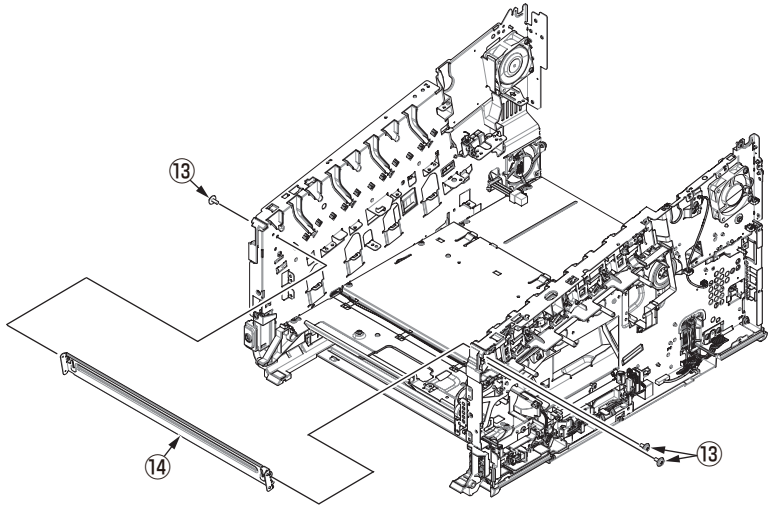
(4) Remove a screw (silver) ⑥ and the three round-head screws (black) ⑦ to detach the Plate guide belt ⑧ and the Plate base registration ⑨ .



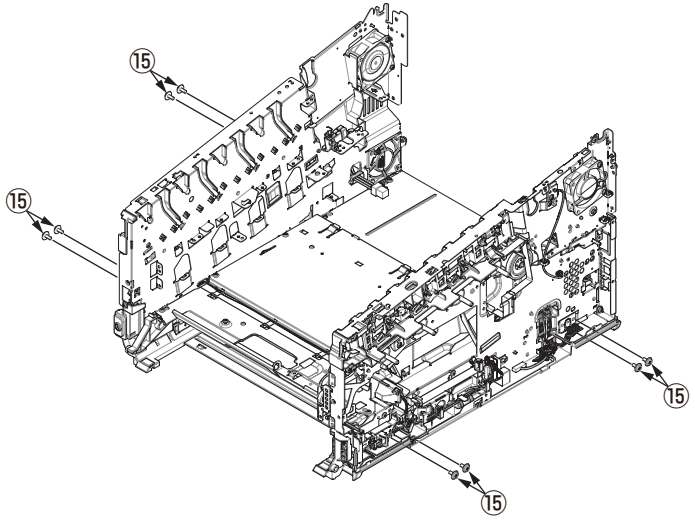
(5) Remove the two screws (silver) ⑩ and the three round-head screws (black) ⑪ to detach the Plate cover POW ⑫ .



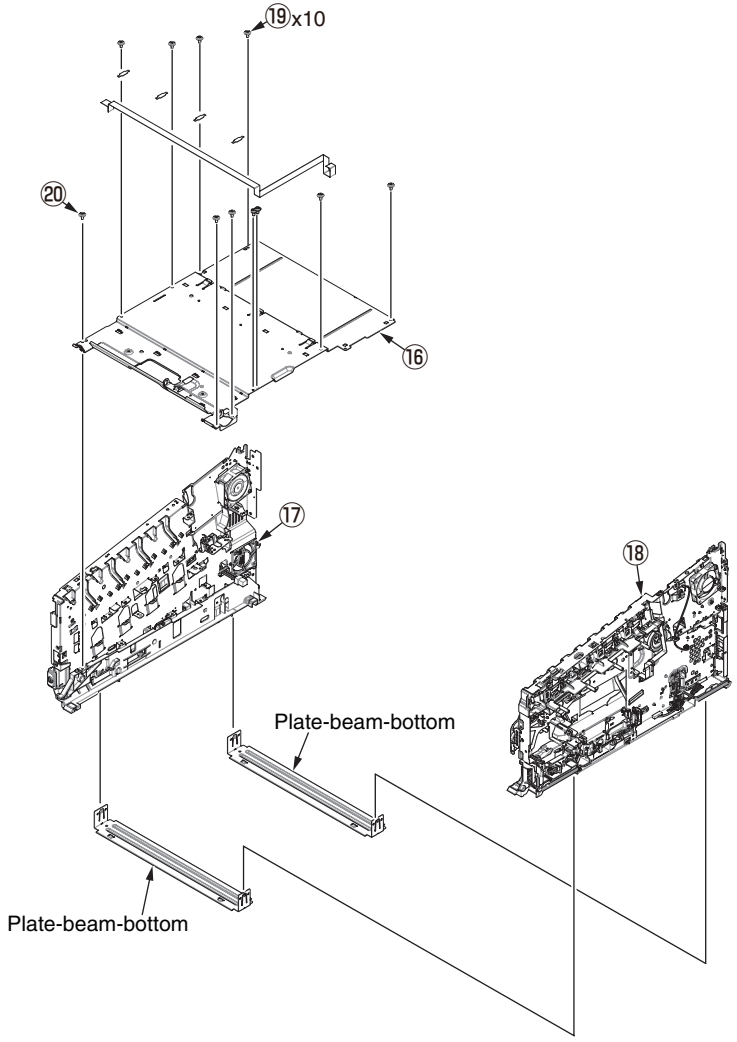
(6) Remove the three screws (silver) ⑬ to detach the Plate-beam-front ⑭ .



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



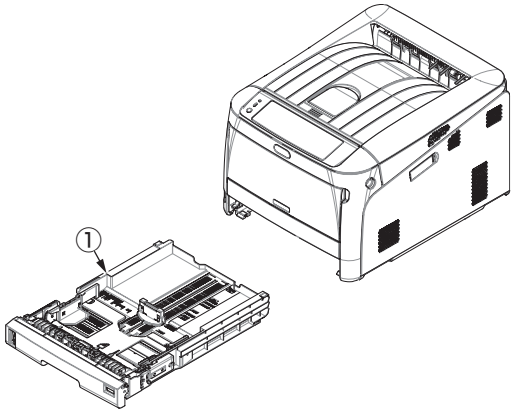
(8) Remove the eleven screws, ten screws (silver) ⑲ and the screw (black) ⑳ that are fixing the Plate base ⑯ and both of the Plate Assy. side-L ⑰ and -R ⑱ to detach the Plate Assy. side-L ⑰ and -R ⑱ .



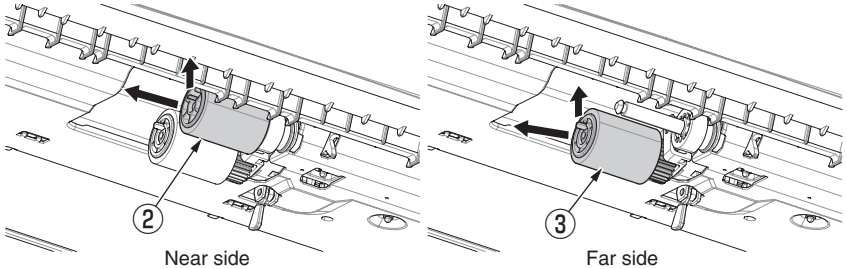
3.2.22 Feed rollers (Tray 1/2/3/4)

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

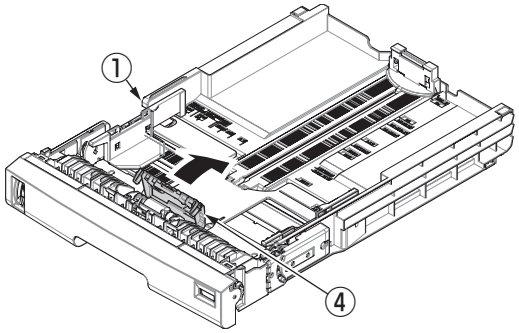
(1) Turn off the apparatus and pull out the cassette ① from it.



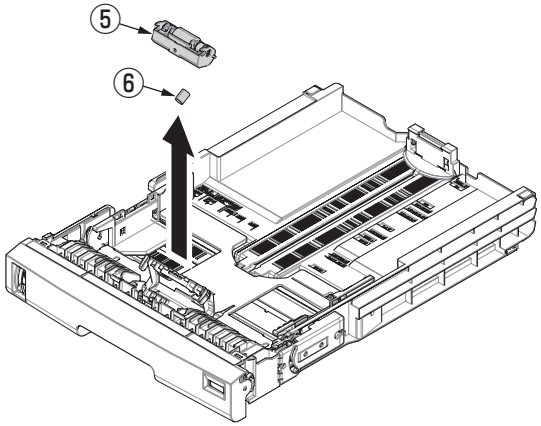
(2) While pressing the claw of the two Paper feed rollers ② and ③ outward, detach them from their shafts.



(3) Bend the claws on each side of the cover on the paper cassette to detach the cover ④ , and remove the cover ④ by turning the cover to the direction of the arrow.



(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.



(5) Clear the paper feed roller counter of the tray whose paper feed rollers were replaced.
From [Admin Setup] - [Others Setup] - [Paper Feed Roller Counter Clear], select the tray whose paper feed rollers were replaced and press the <ENTER> button.

Notes on assembling paper feed rollers:

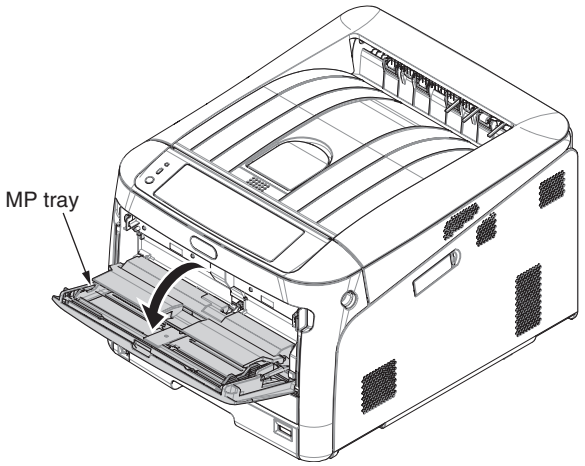
1. Insert a new Paper feed roller (with a gear) ③ onto the inside shaft and turn it all the way in place.
2. Insert a new Paper feed roller (with no gears) ② onto the outside shaft and turn all the way in place.
   Check to make sure that the rollers do not come off.

Notes on assembling a separation roller:

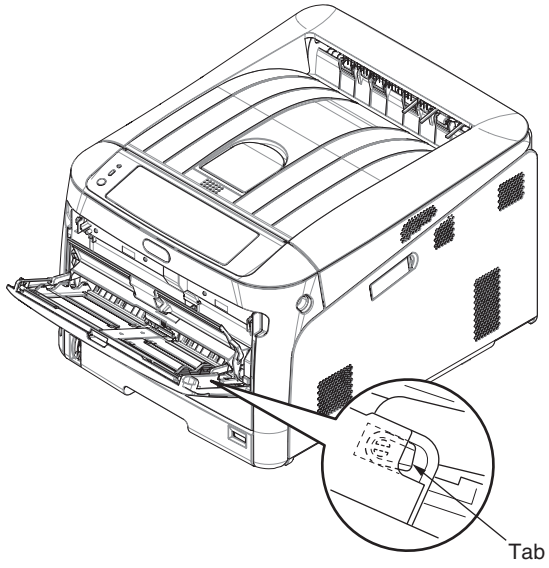
1. Put the spring ⑥ onto the boss on the rear of the Separation roller ⑤ , and push the bearing of the Separation roller ⑤ obliquely from below onto the shaft on the side of the cassette.
2. Check to make sure that the Separation roller ⑤ moves smoothly around the shaft and the roller rotates.

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

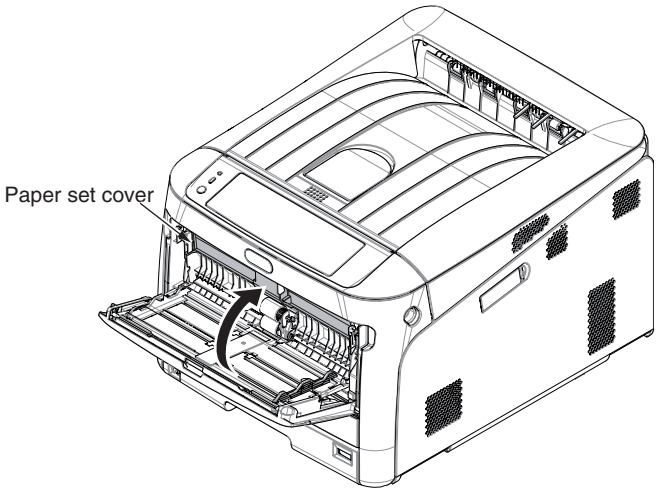
(1) Turn off the apparatus and open the MP tray forward by inserting your fingers into the front recesses.



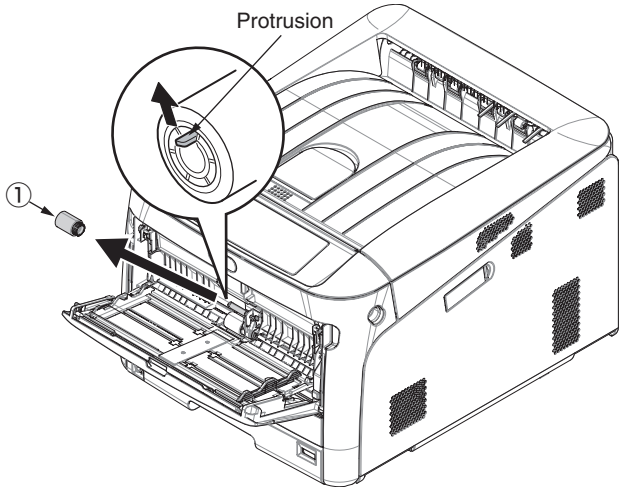
(2) Release the tab of the paper feed roller cover by pressing the right arm inward while lifting up the MP tray lightly. (Release the tab on the left side in the same manner.)



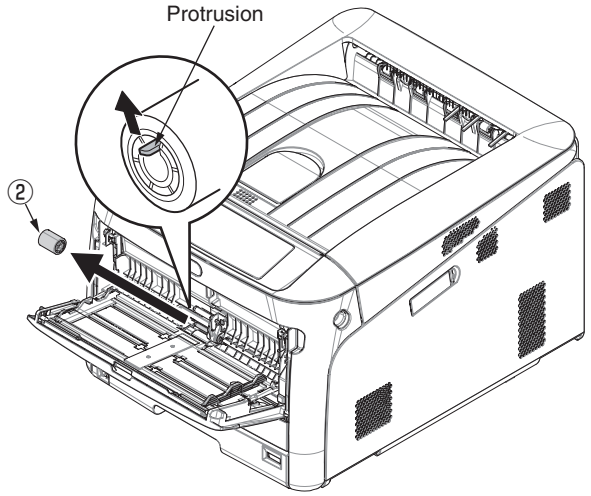
(3) Open the paper set cover.



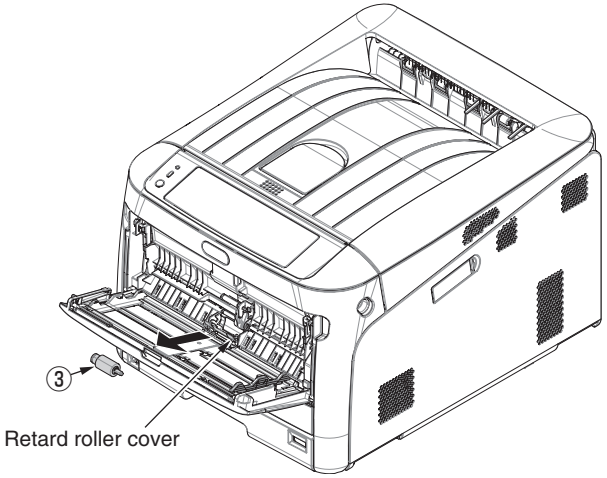
(4) While pressing the protrusion of the upper MPT pickup roller ① outward, pull out the feed roller from its shaft.



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



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



(7) Clear the paper feed roller counter of the MP Tray.
Select [Admin Setup] - [Others Setup] - [Paper Feed Roller Counter Clear] - [MP Tray Clear] on the display screen and press the <ENTER> button.

Notes on attaching these paper feed rollers:

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

3.2.24 Fuser Connector (Square Connector)

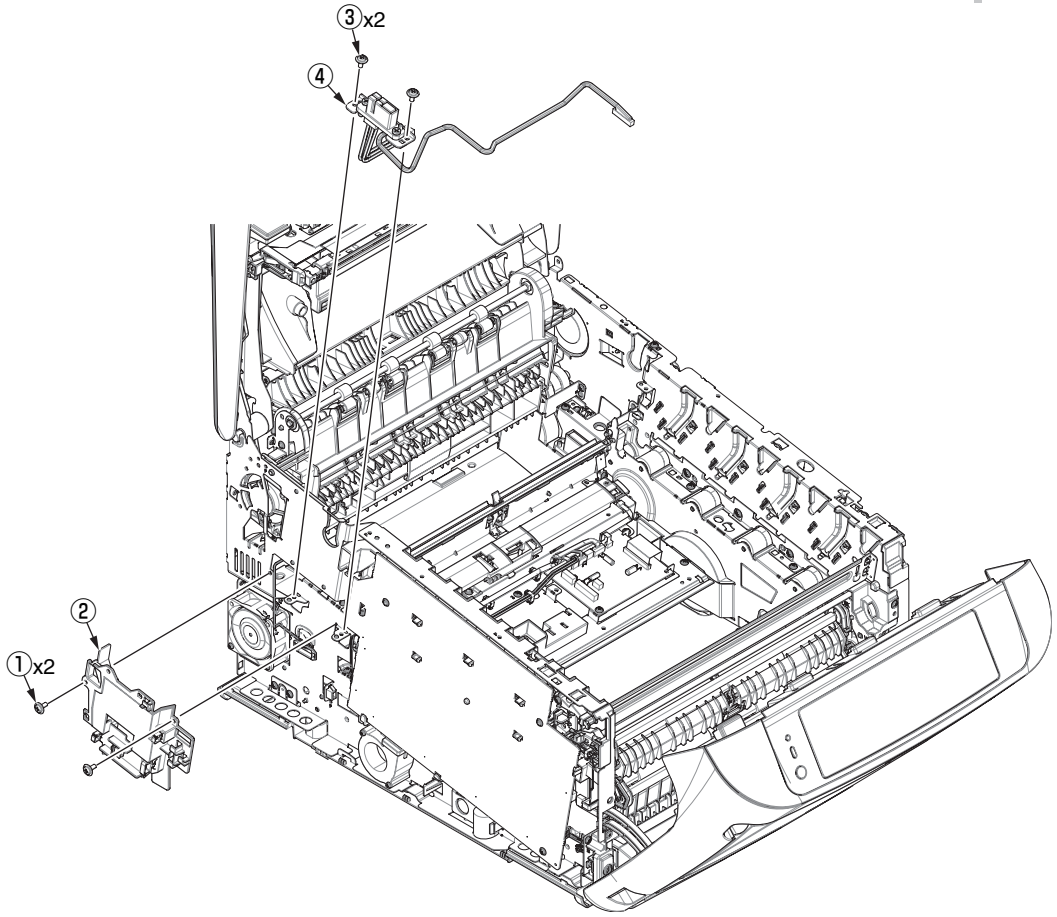
(1) Remove Image Drum units, the Belt unit and the Fuser unit. (Refer to section 3.2.1 and 3.2.2)

(2) Remove the Cover-Side-L Assy. (Refer to section 3.2.3)

(3) Remove the Cover Assy.-registration. (Refer to section 3.2.13)

(4) Remove cables and two screws(silver) ① from the Cover Assy.-Connector ② to detach the Cover Assy.-Connector ② .

(5) Remove two screws(silver) ③ to detach the Fuser Connector ④ .



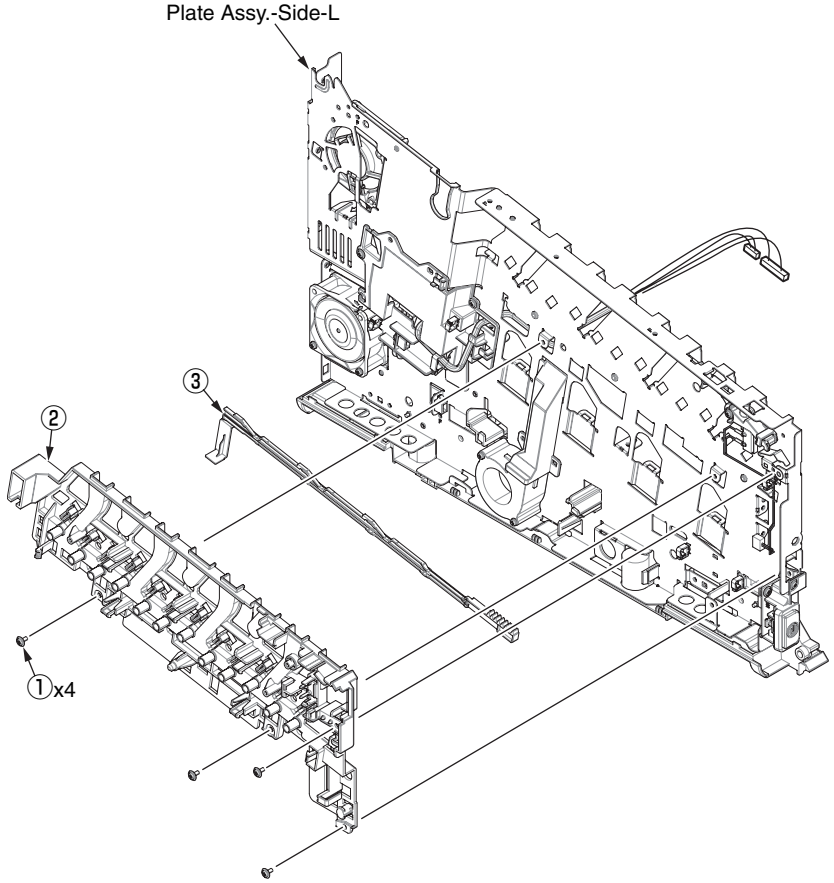
3.2.25 Guide Assy.-Side-L / Rack-L

(1) Refer to section 3.2.21(3).

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

Notes on assembling:

To assemble the gear lift-up, match the phase of the right and left gears.(Refer to the 'Notes on attaching' in the section 3.2.21(3).)



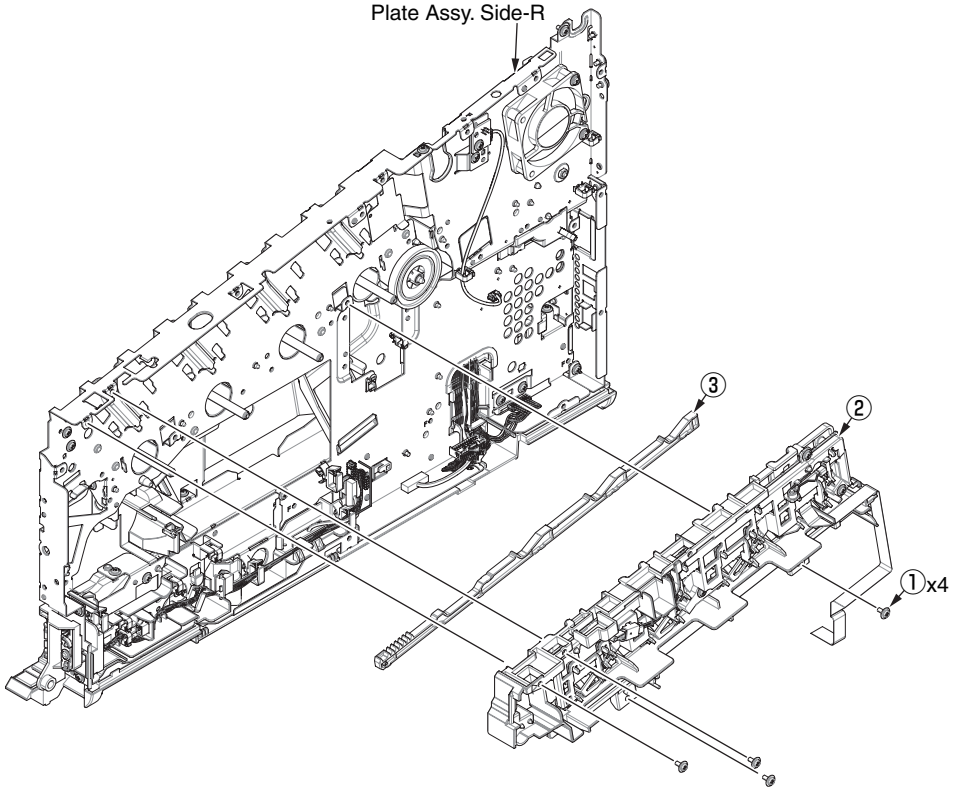
3.2.26 Guide Assy.-Side-R / Rack-R

(1) Refer to section 3.2.21(3).

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

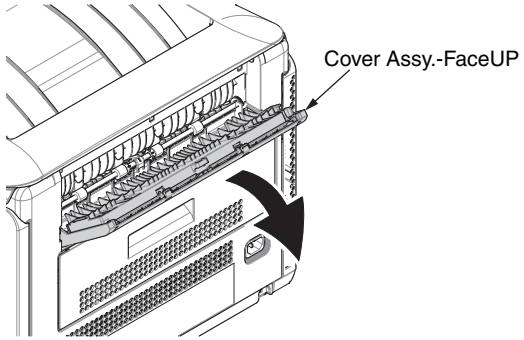
Notes on assembling:

To assemble the gear lift-up, match the phase of the right and left gears.(Refer to the 'Notes on attaching' in the section 3.2.21(3).)



3.2.27 Cover-FaceUP-B

(1) Open the Cover Assy.-FaceUP.

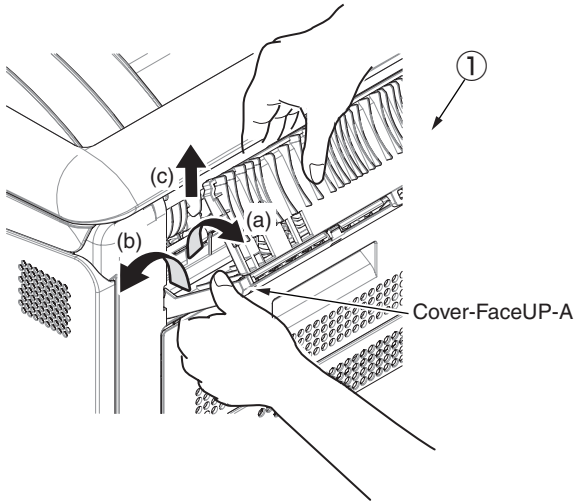


(2) To detach the Cover-FaceUP-B ① as following steps.

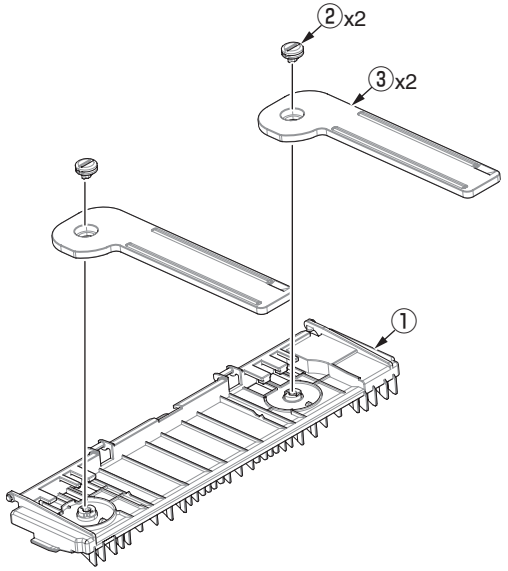
(a) : Turn around to about 90 degree the Cover-FaceUP-B ① as against the Cover-FaceUP-A.

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

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



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



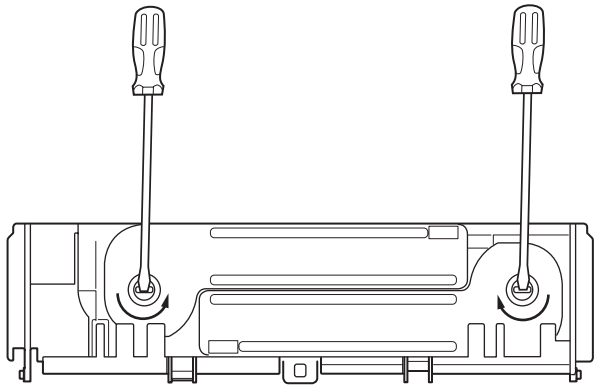
Notes! The rotation direction of to detach Shoulder-Locks ② .

<Left Side>

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

<Right Side>

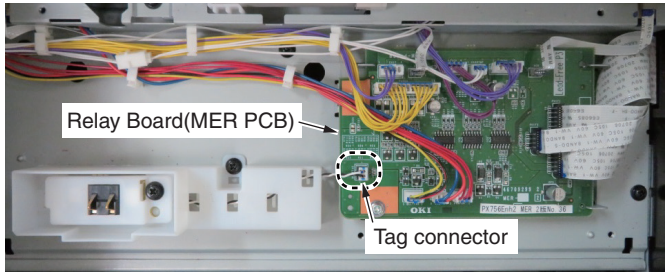
The Shoulder-Lock ② of the left side is detached with to be rotated in a clockwise direction.



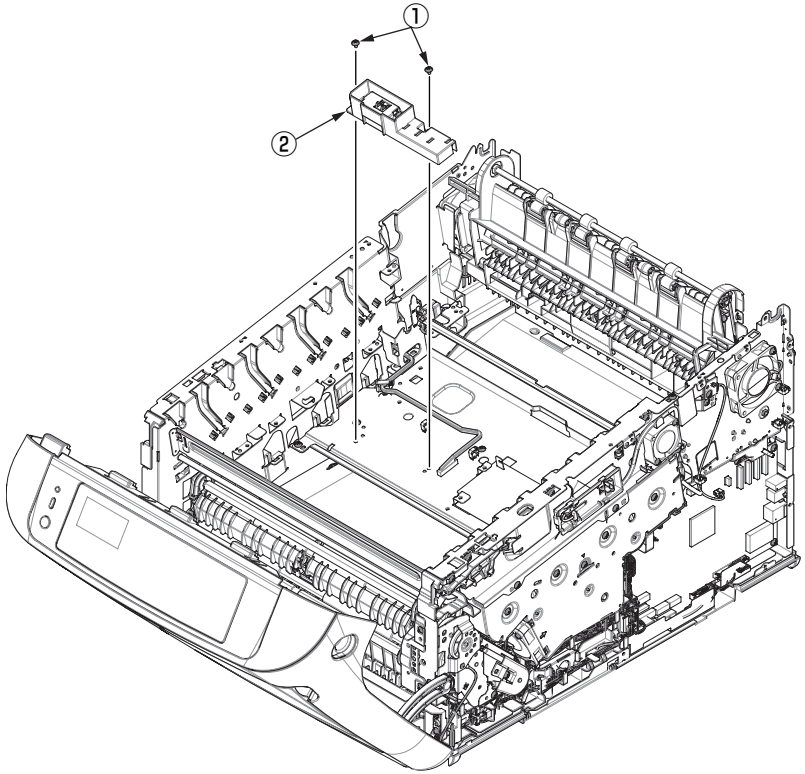
3.2.28 Belt TAG contact terminal PCB (F1G PCB)

(1) Remove the Cover Assy.-registration. (Refer to section 3.2.14)

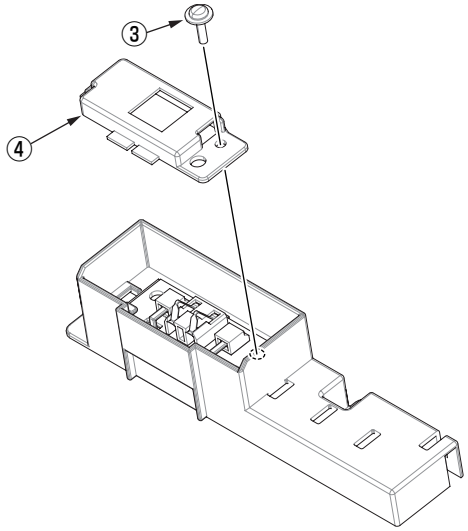
(2) Disconnect the tag connector from the Relay PCB (MER PCB).



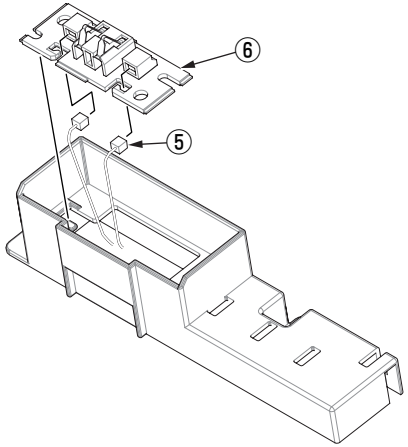
(3) Remove the two Round-head screws (black) ① to detach the Holder-Board-Assy.(Tag) ② .



(4) Remove a screw (black)(10mm) ③ to detach the Cover-Contact ④ .



(5) Disconnect the cable ⑤ to detach the Belt TAG contact terminal PCB (F1G PCB) ⑥ .



Notes on assembling:
The thick of the metal plate fixing the cover Assy.-registration and the Holder-Board(Tag) ⑤ are only 0.6mm. Therefore, tighten these screws with carefully.

4. LUBRICATION

4.1 Portions Lubricated

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

Lubrication work

(1) Lubricant names and their abbreviations

EM-30L: MOLYKOTE EM-30L

HP-300: MOLYKOTE HP-300

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

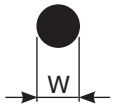
FL: FLOIL GE334C

HANARL: HANARL SF-133

C-9300: Tetra C-9300

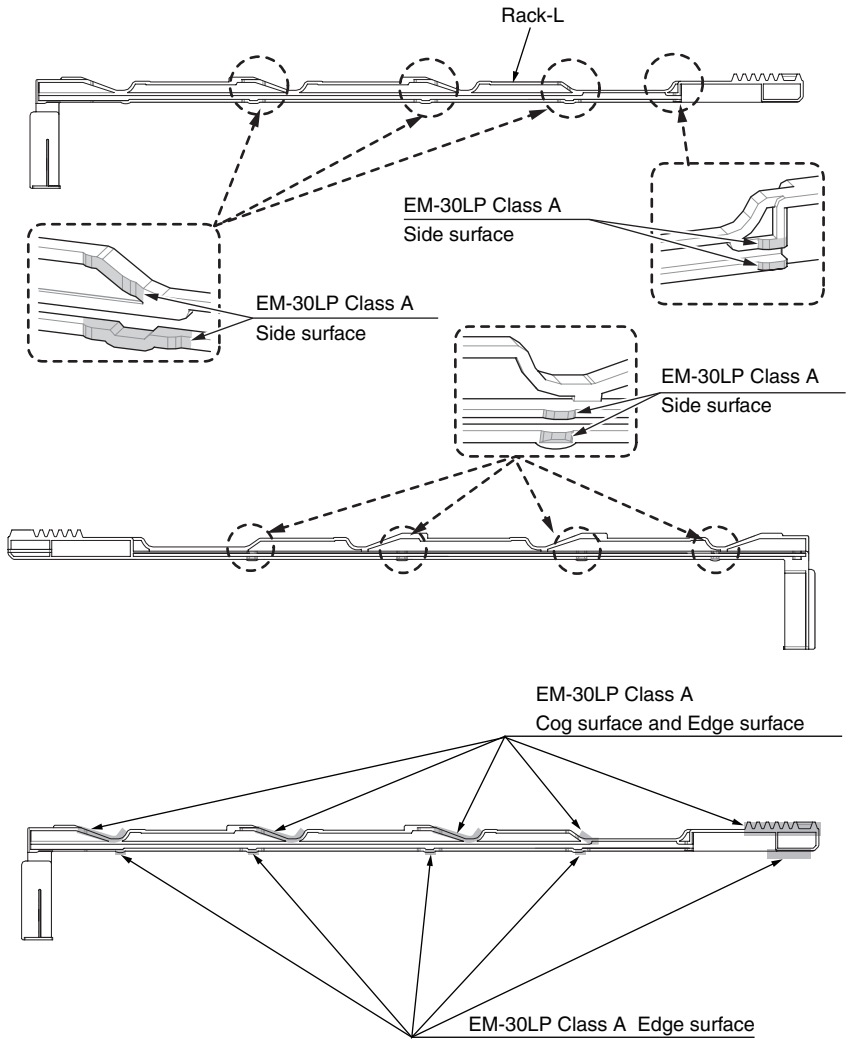
(2) Standard of amount of grease

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

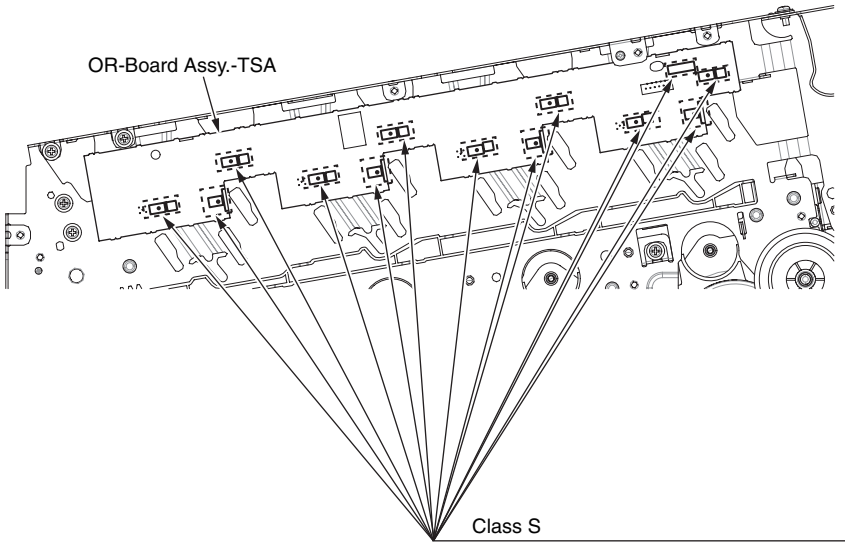


4.1.1 Plate Assy.-Side-L

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



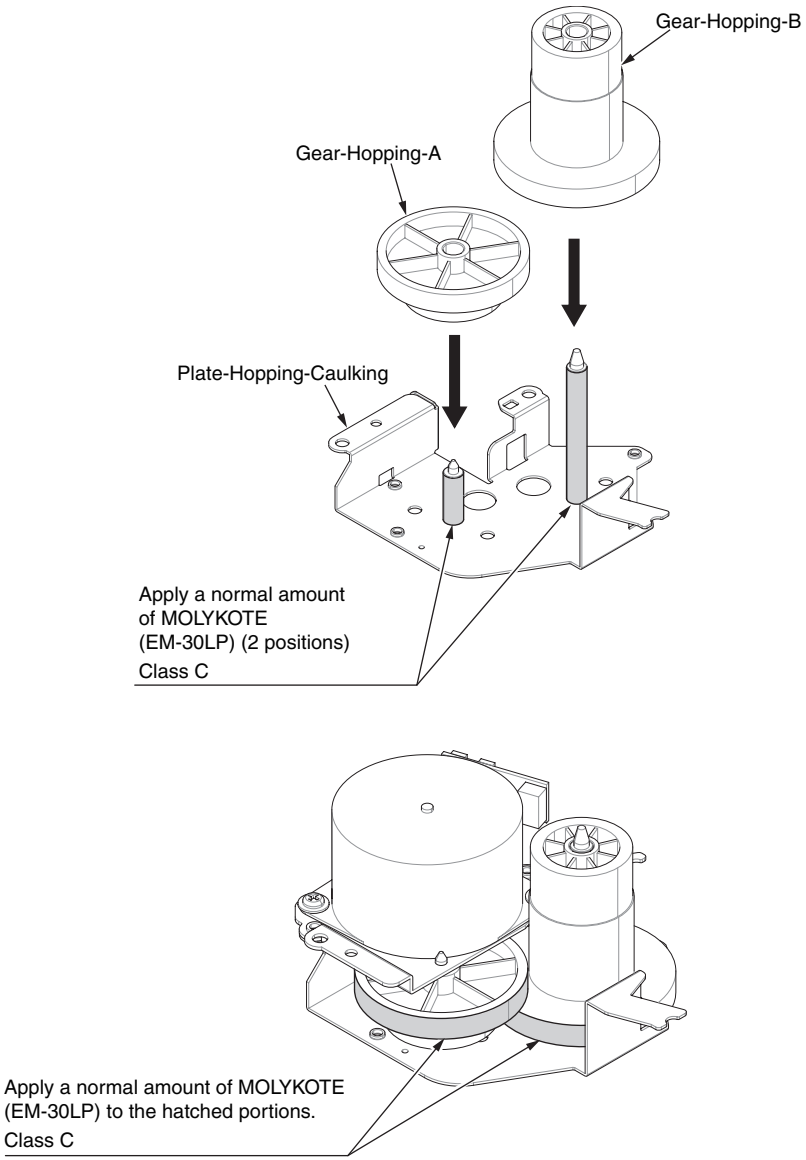
4.1.2 Guide Assy.-Side-R



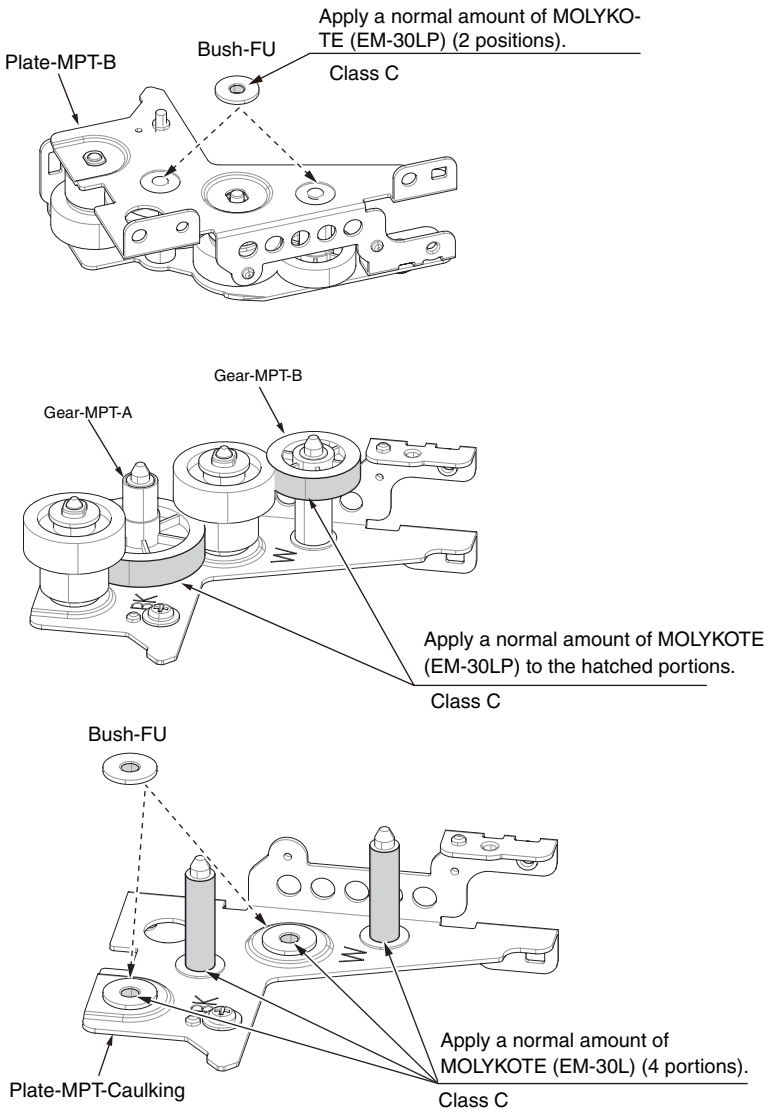
Class S

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

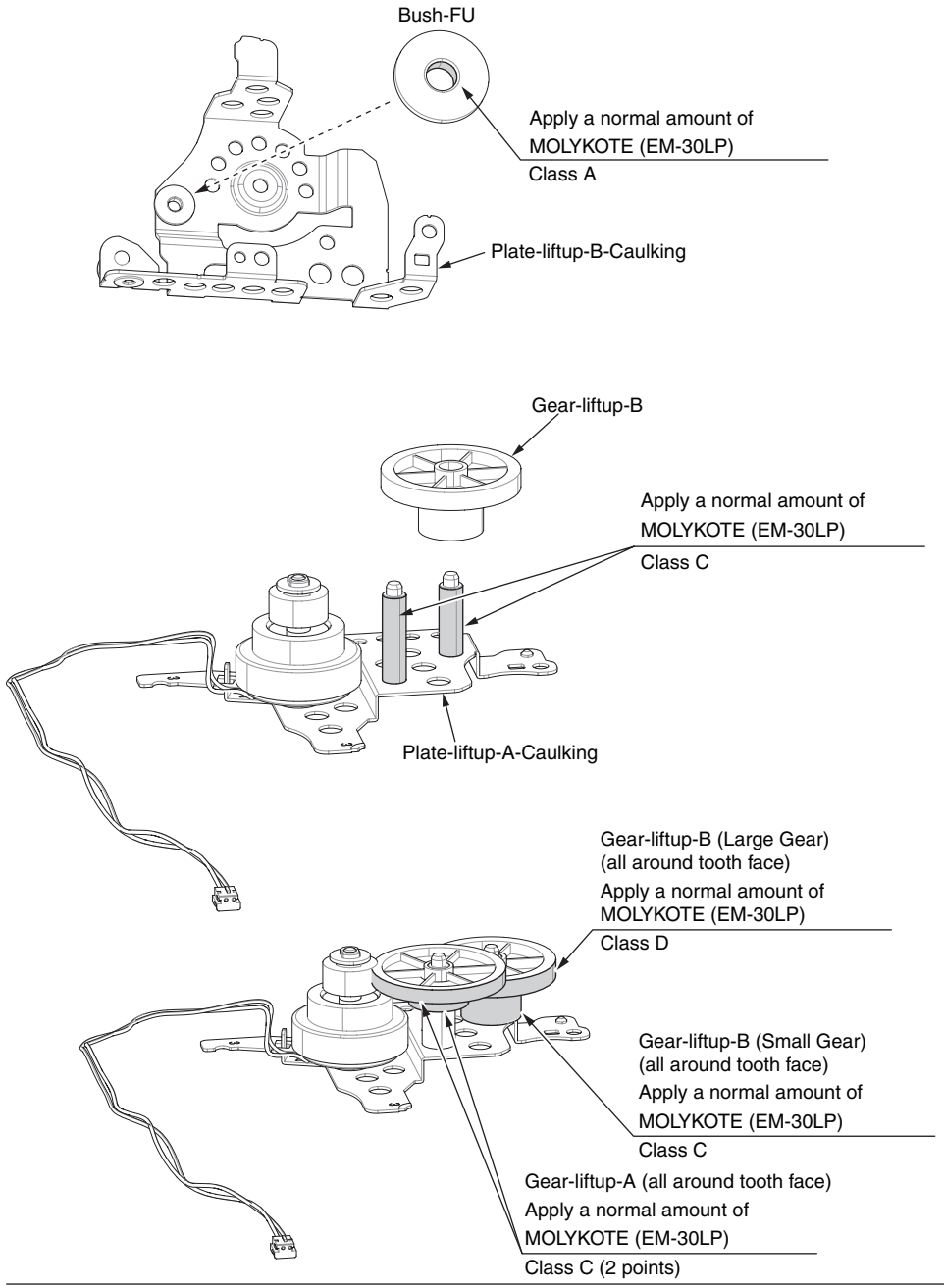
4.1.3 Gear Assy.-Hopping



4.1.4 Gear Assy.-MPT

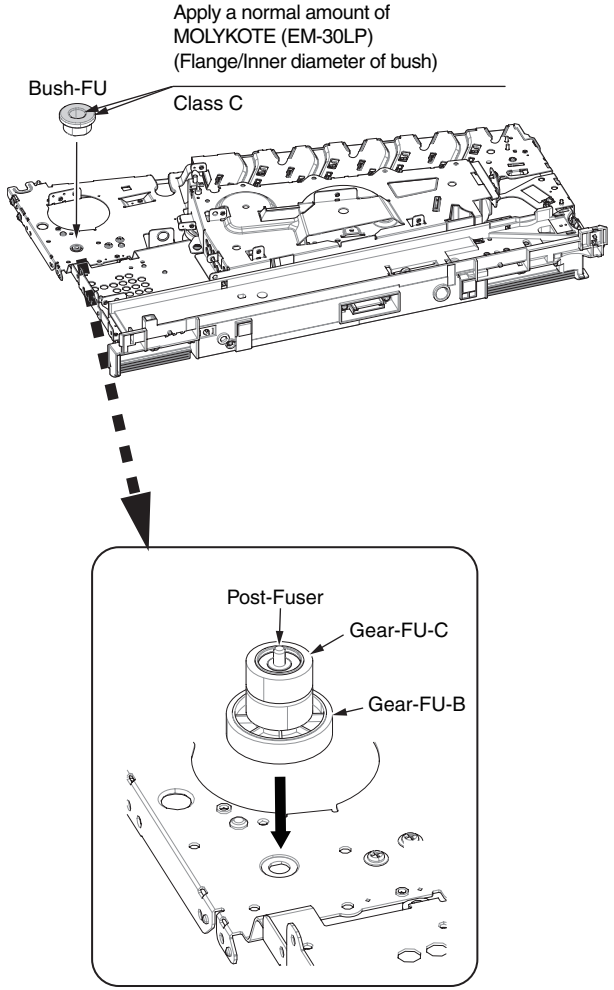


4.1.5 Gear Assy.-ID-Liftup

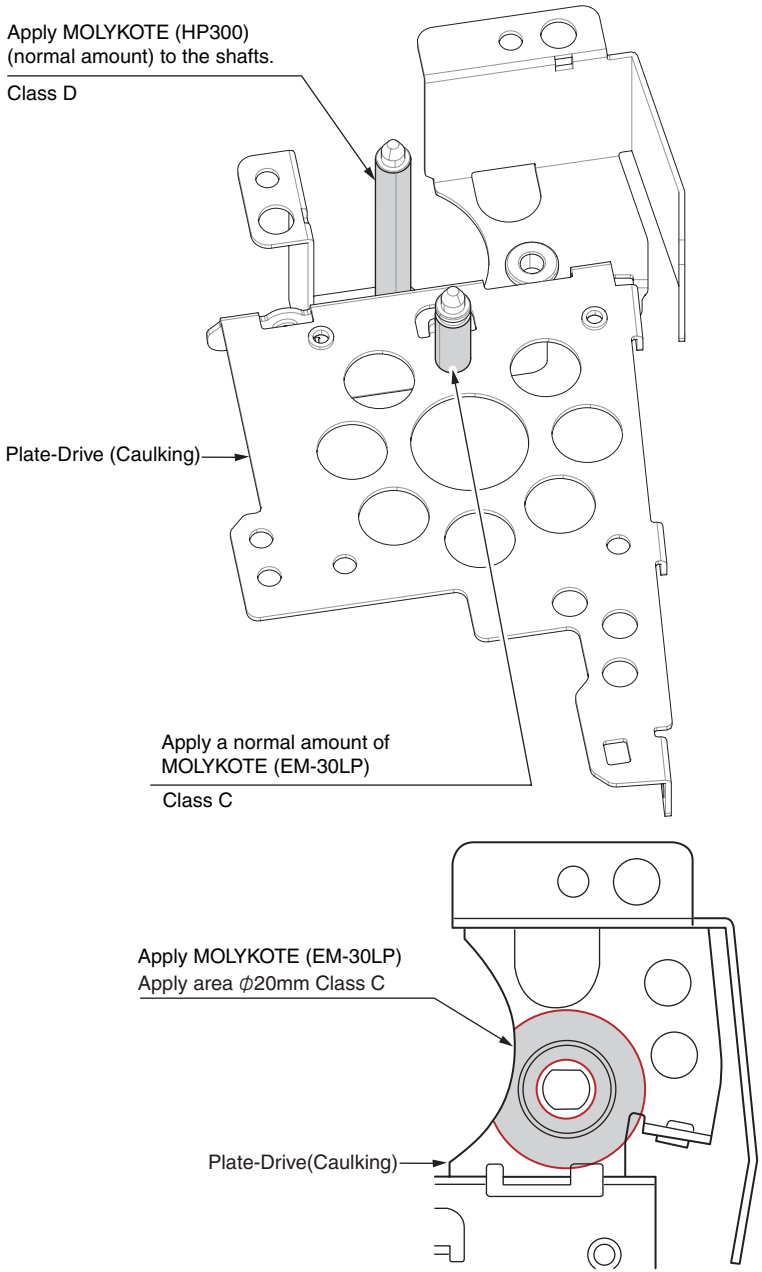


4.1.6 Plate Assy.-Side-R

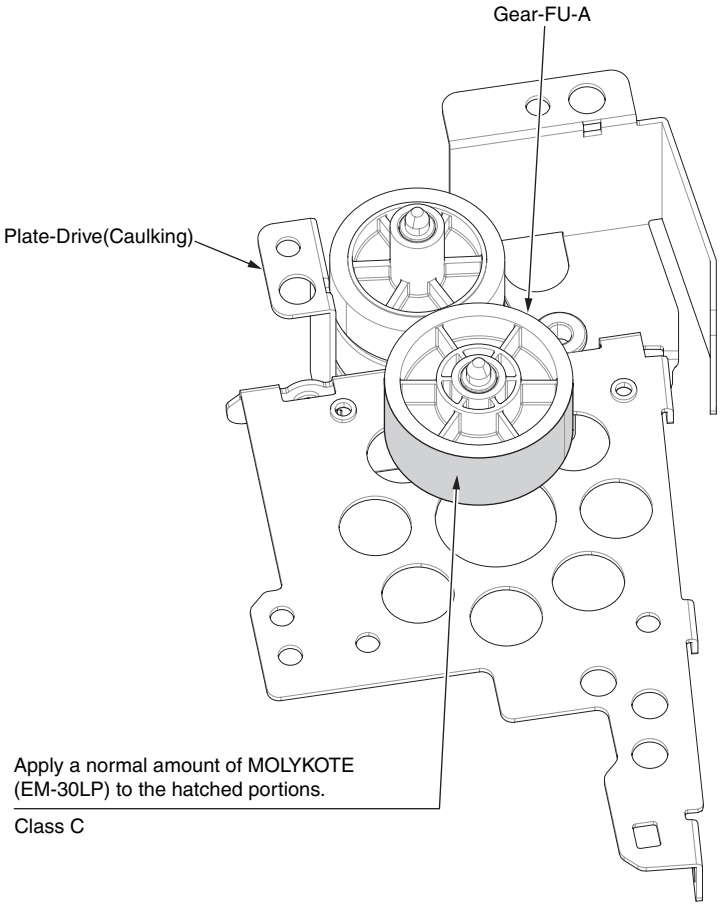
4.1.6.1 Plate Assy.-Side-R (1)



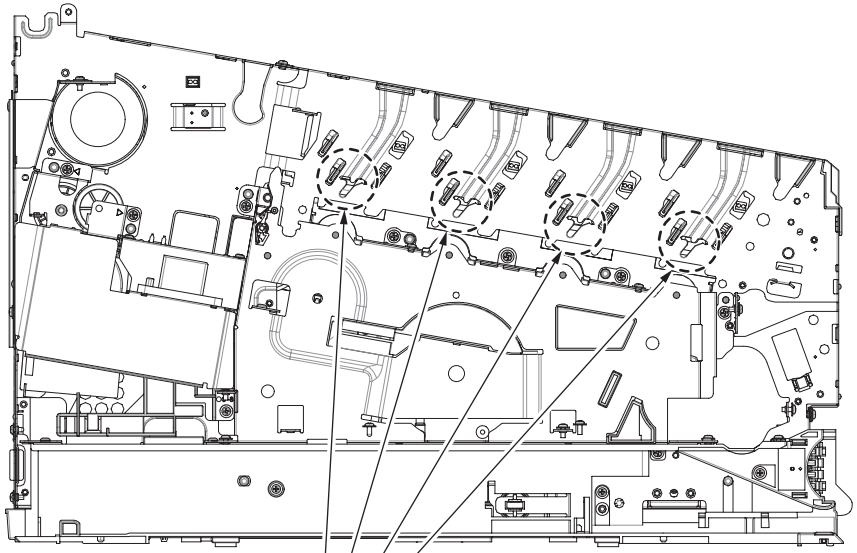
4.1.6.2 Plate Assy.-Side-R (2)



4.1.6.3 Plate Assy.-Side-R (3)



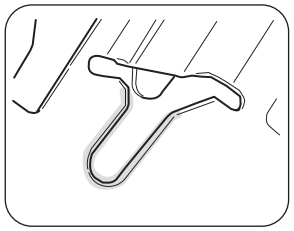
4.1.6.4 Plate Assy.-Side-R (4)



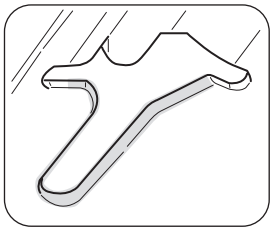
Apply a normal amount of MOLYKOTE (EM-30LP) to the hatched portions

Class A (4 positions)

Expanded view

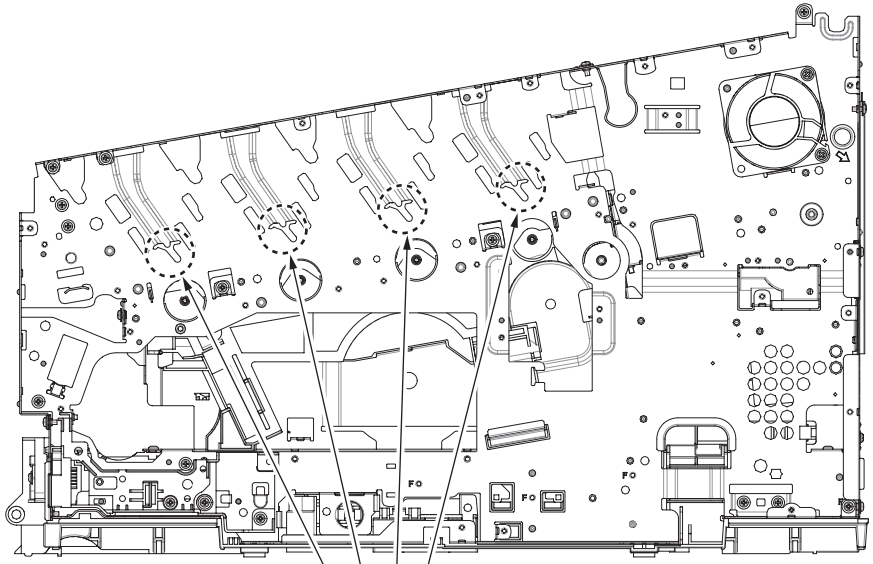


Apply EM-30LP (Class A) on the side surface. (4 positions)



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

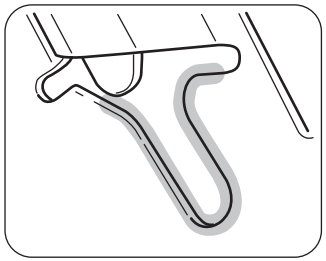
4.1.6.5 Plate Assy.-Side-R (5)



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

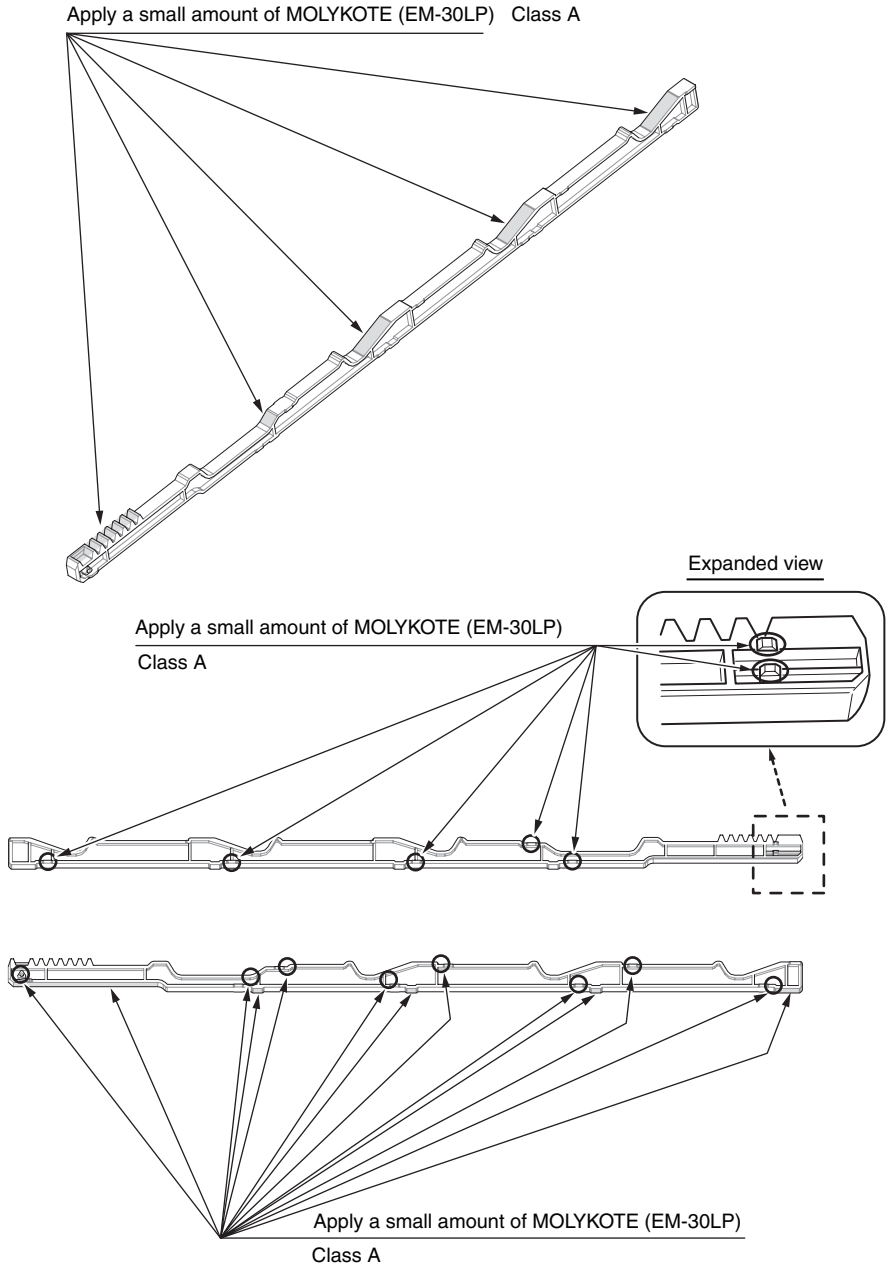
Class A

Expanded view

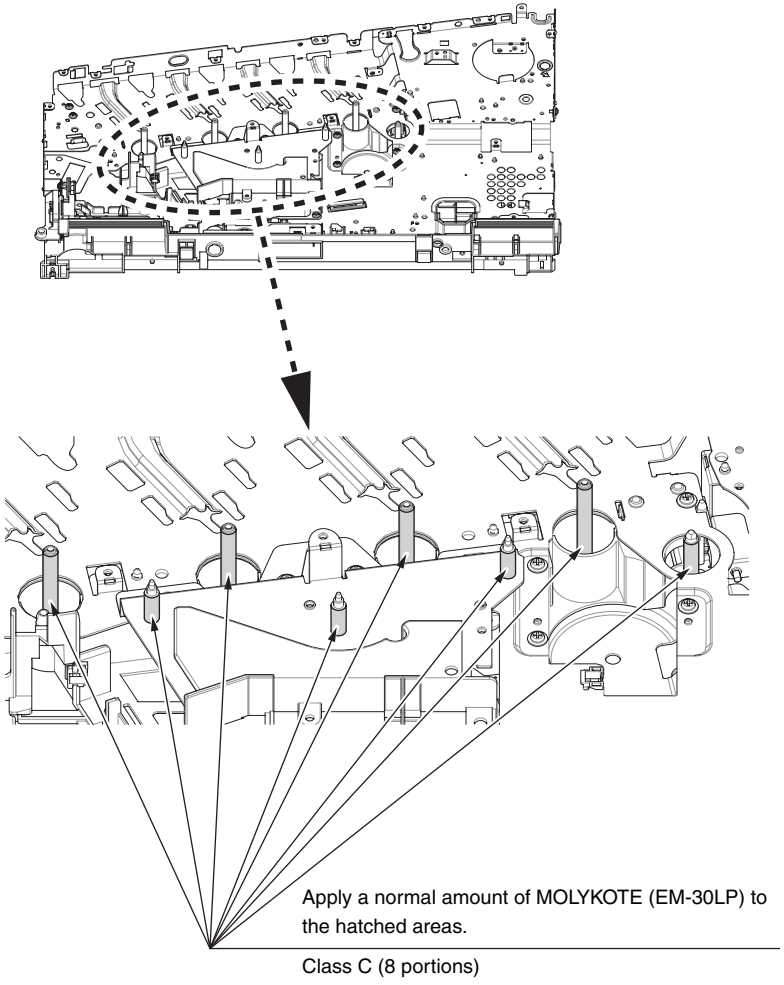


Apply EM-30LP (Class A) on the side surface. (4 positions)

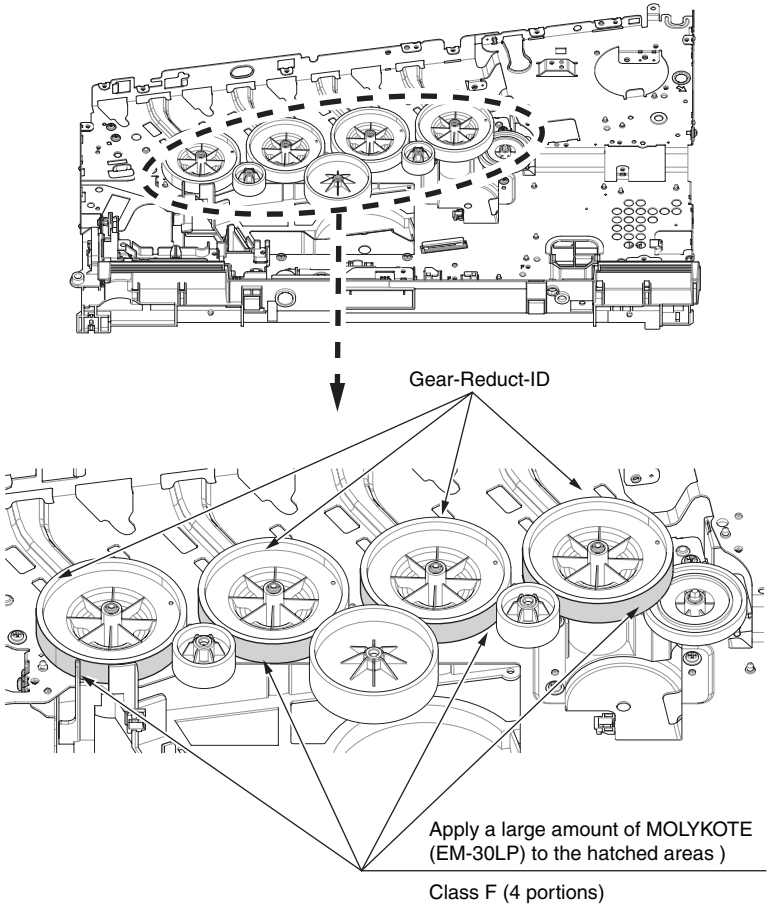
4.1.6.6 Plate Assy.-Side-R (6)



4.1.6.7 Plate Assy.-Side-R (7)

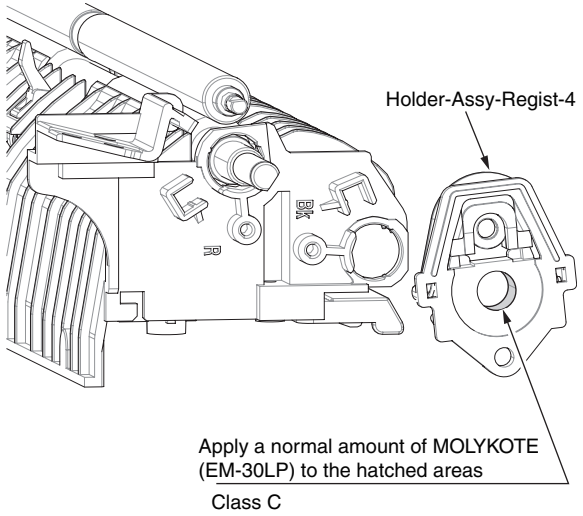


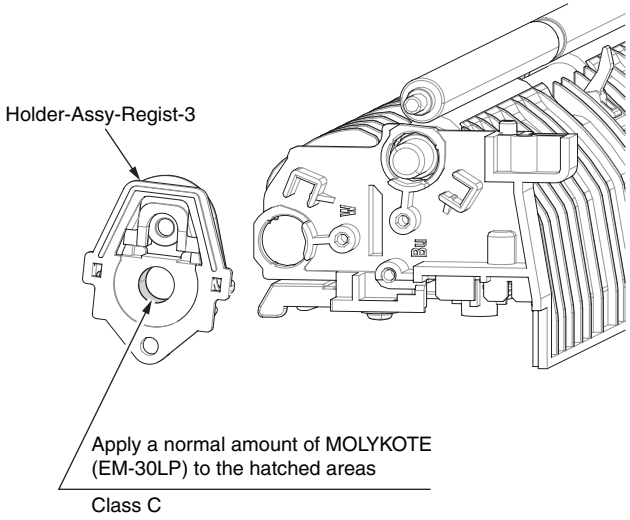
4.1.6.8 Plate Assy.-Side-R (8)



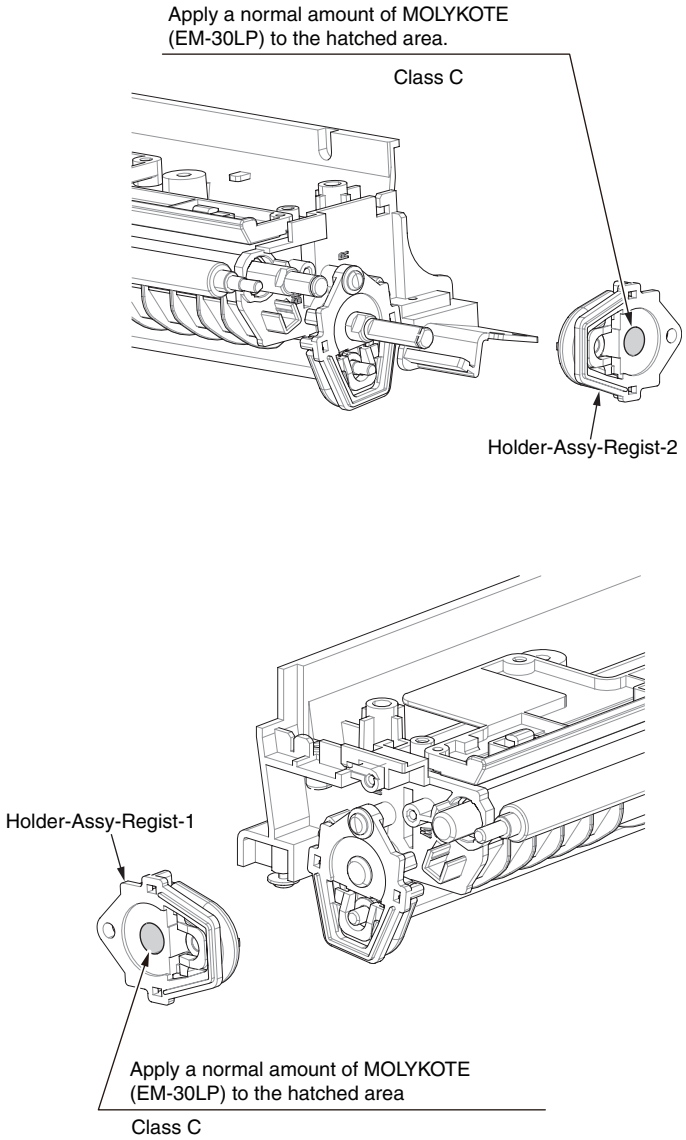
4.1.7 Roller Assy.-Regist

4.1.7.1 Roller Assy.-Regist (1)

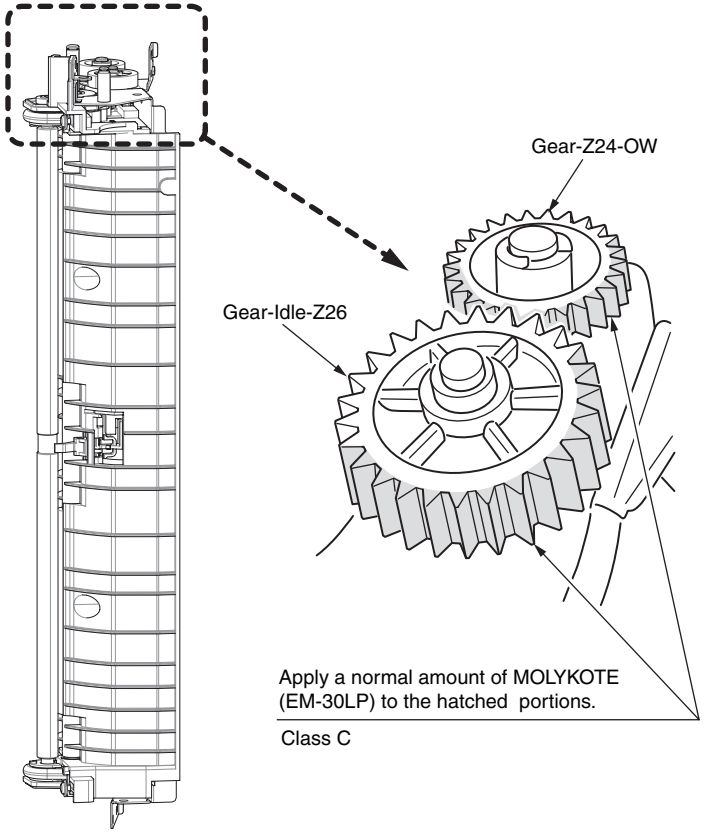




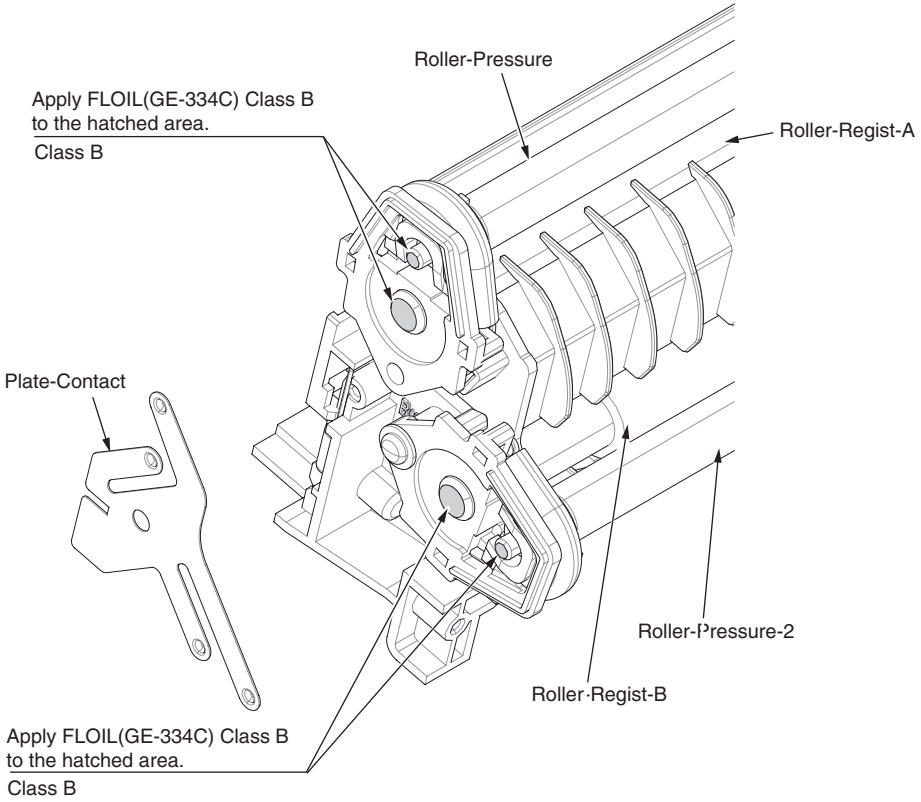
4.1.7.2 Roller Assy.-Regist (2)



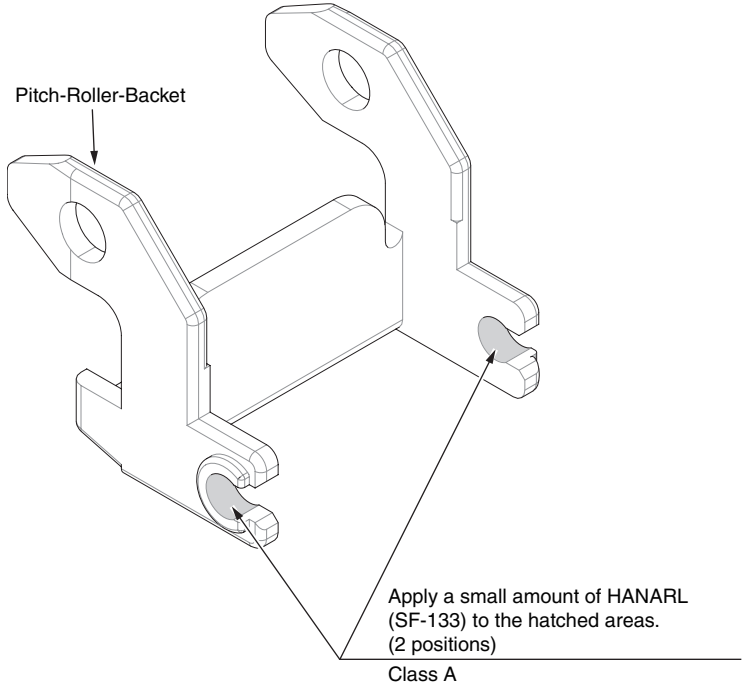
4.1.7.3 Roller Assy.-Regist (3)



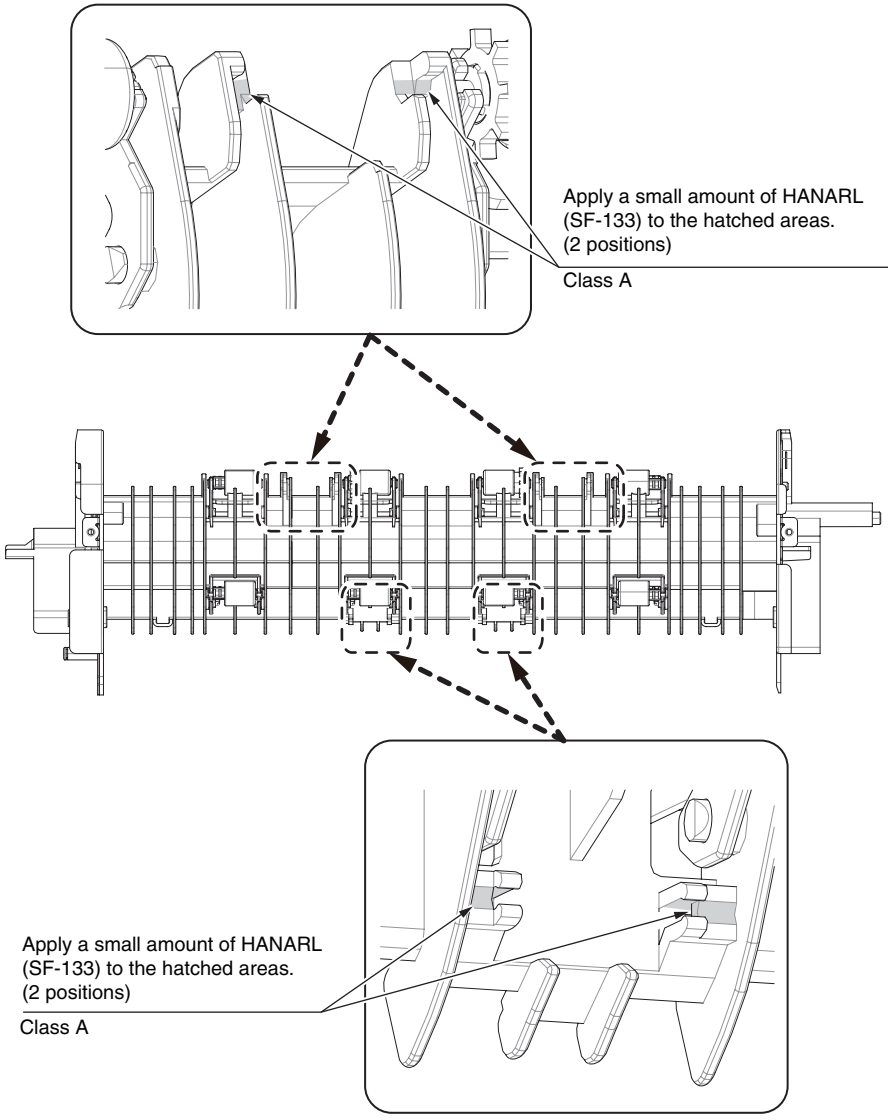
4.1.7.4 Roller Assy.-Regist (4)



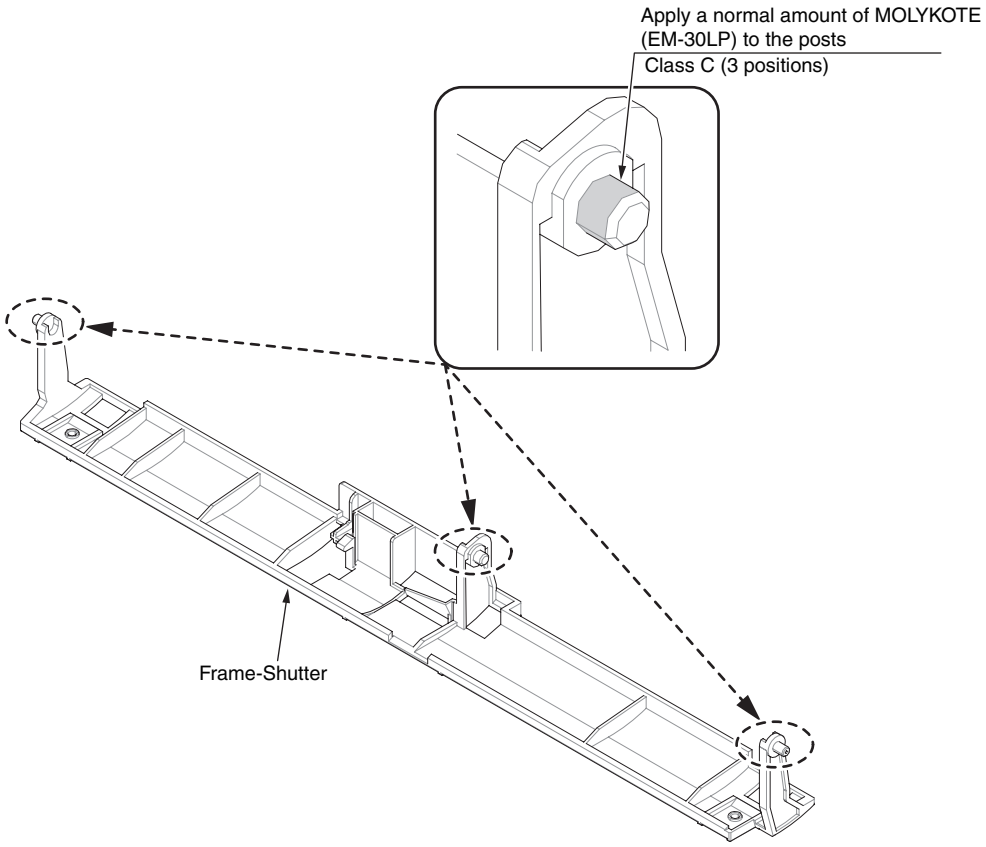
4.1.8.1 Guide Assy.-Eject_Upper (1)



4.1.8.2 Guide Assy.-Eject_Upper (2)

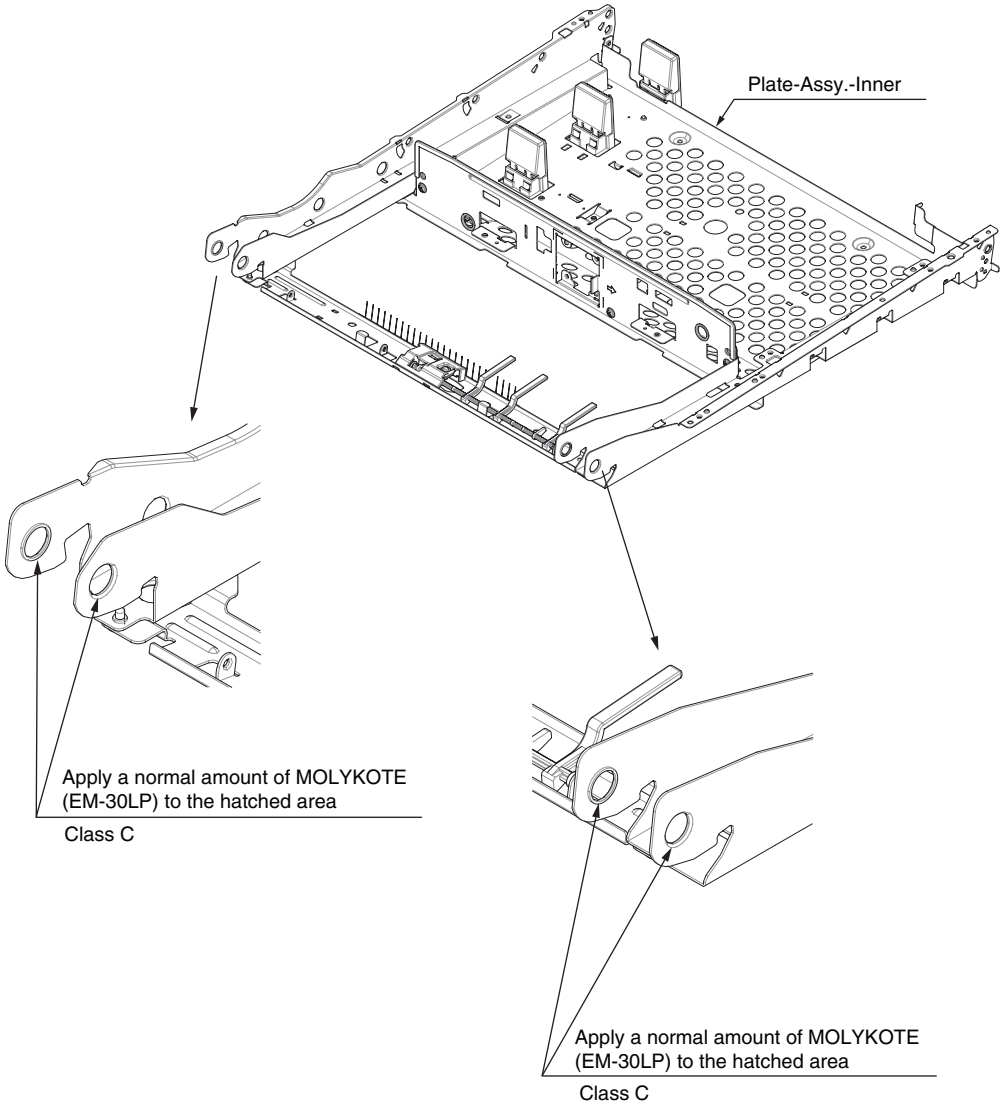


4.1.9 Sensor-Assy-Regist

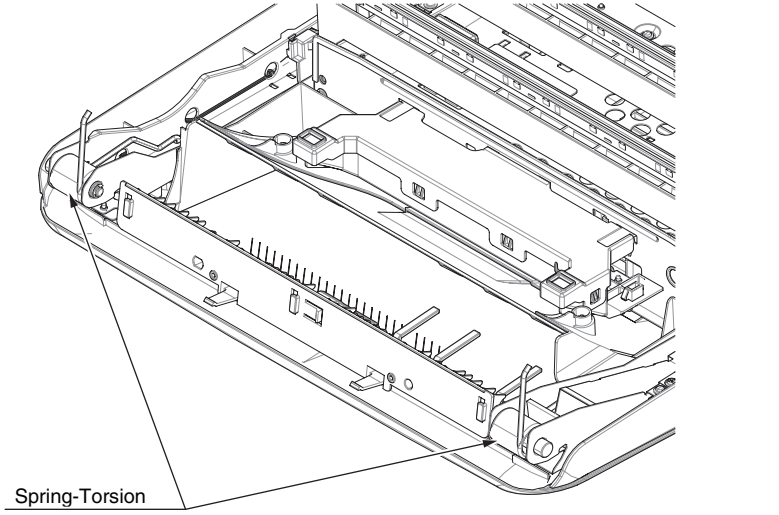


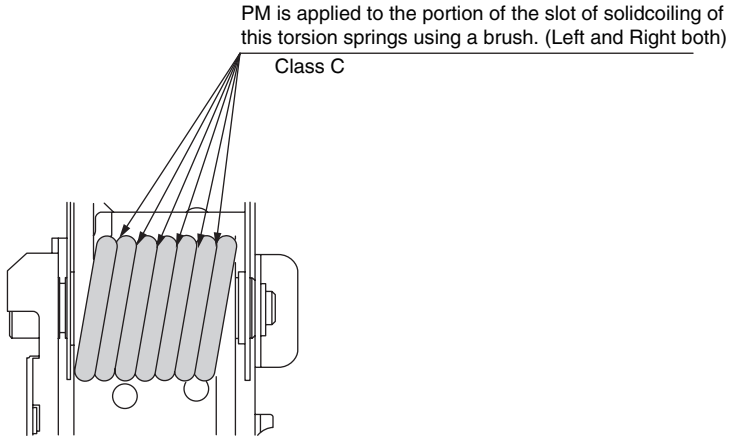
4.1.10 Cover-Assy-TOP

4.1.10.1 Cover-Assy-TOP (1)

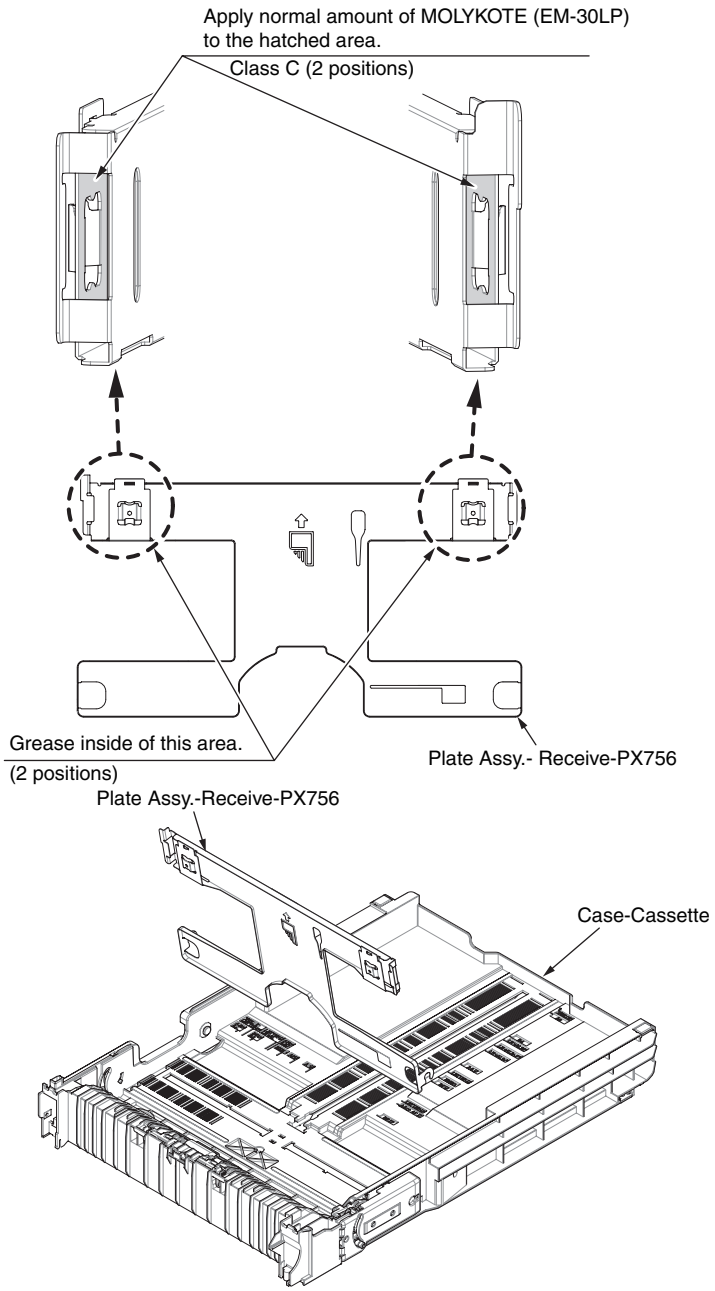


4.1.10.2 Cover-Assy-TOP (2)



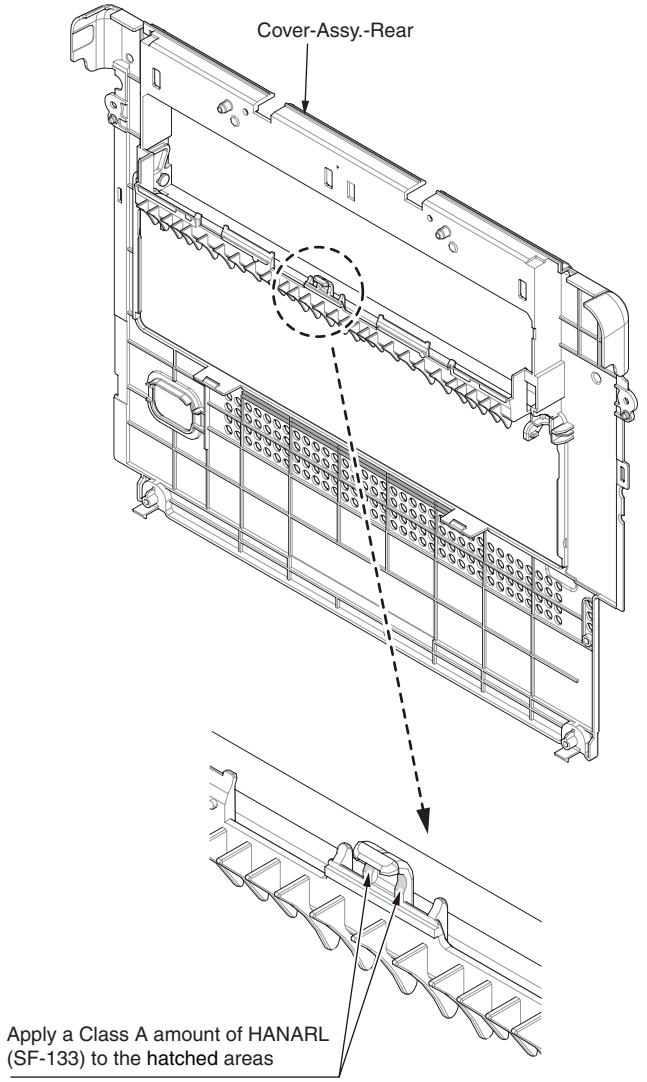


4.1.11 Cassette Assy.

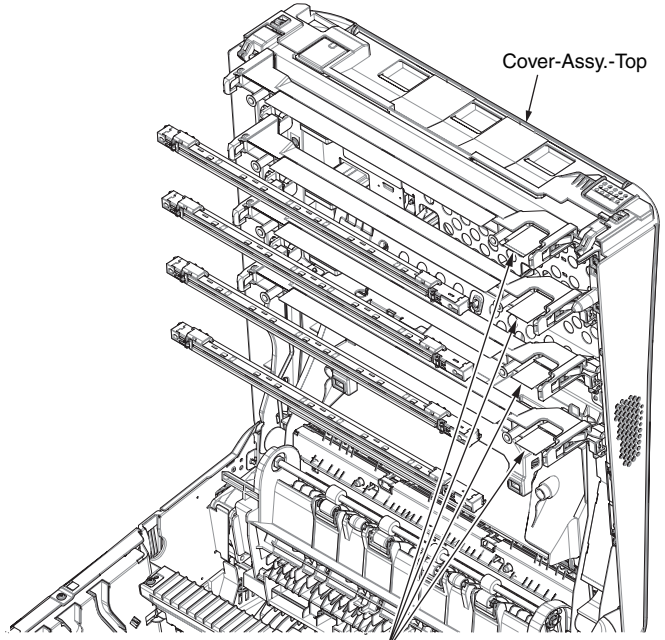


4.1.12 Printer Unit

4.1.12.1 Printer Unit (1)



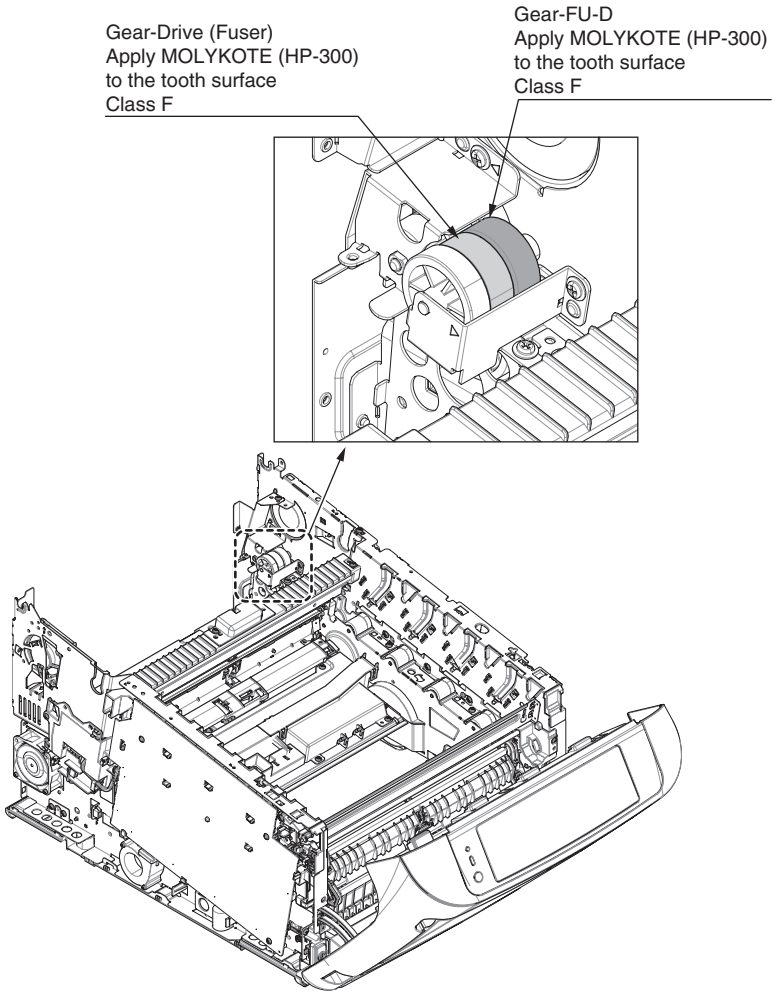
4.1.12.2 Printer Unit (2)



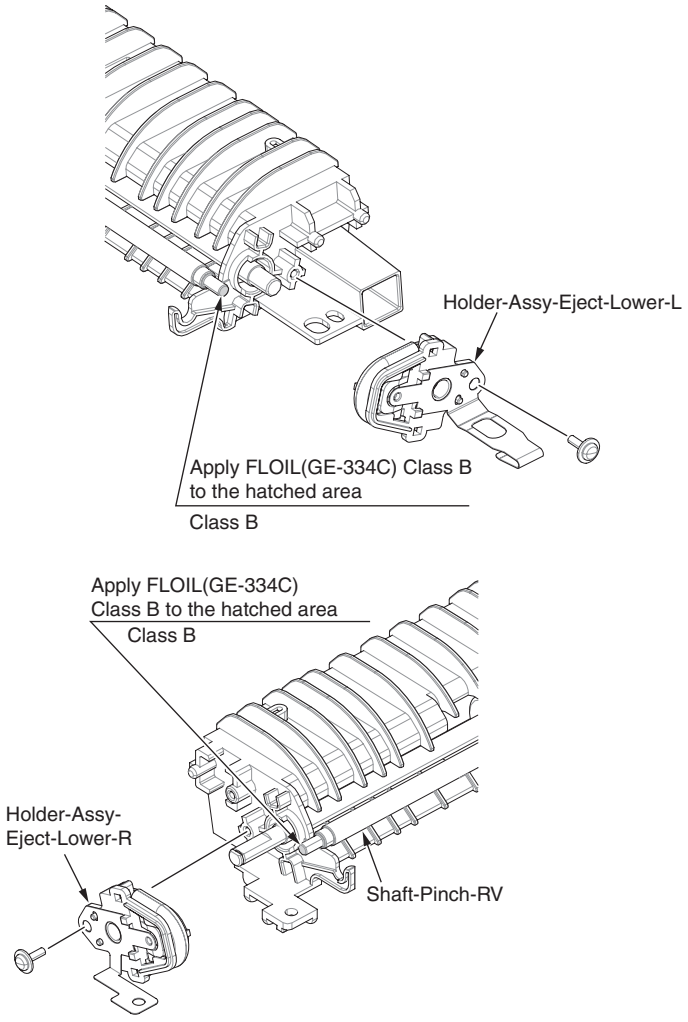
TETRA-C9300 is soaked into BEMCOT-M3, and sreads on each terminal of K, Y, M and C. (Class S)

* Do not adhere it to other parts, espcially LED head.
* Confirm the foreign matter such as thread craps doesn't adhere in the terminal.

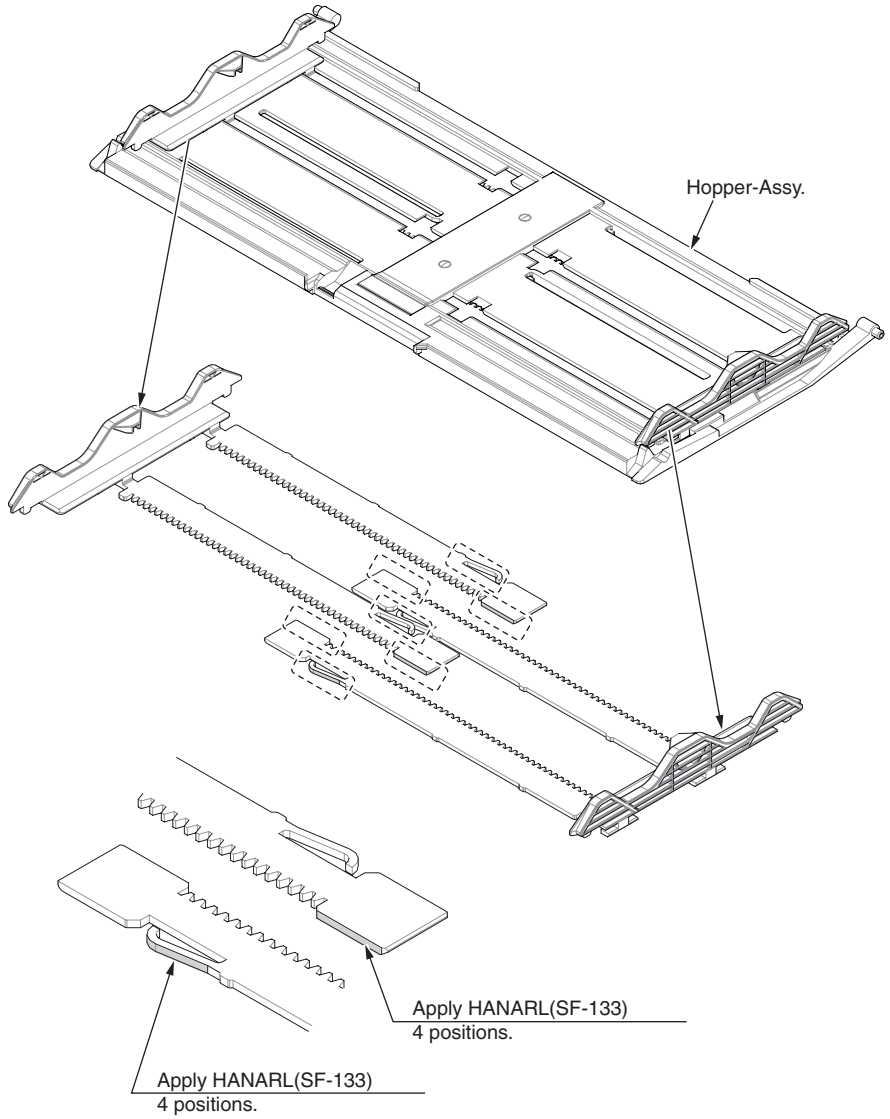
4.1.12.3 Printer Unit (3)



4.1.13 Guide Assy. -Eject-Lower



4.1.14 Hopper-Assy



5. CLEANING

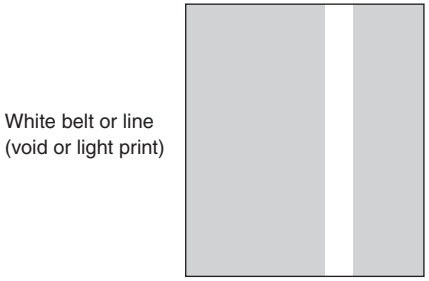
5.1 Cleaning

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

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

5.2 LED lens array cleaning

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



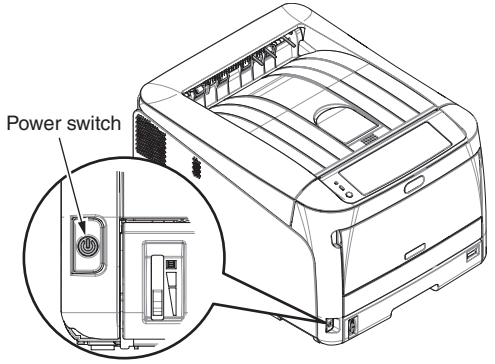
LED head cleaning

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

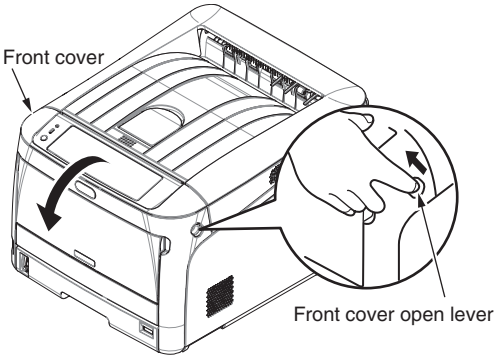
(1) Press and keep the power switch about one second.

The apparatus will be automatically turned off, and the LED lamp of the power switch puts the lights out.

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



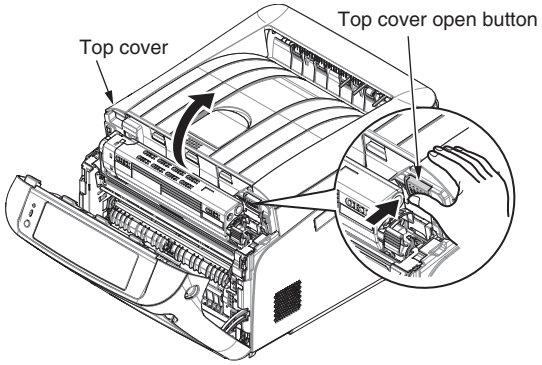
(2) Insert your finger into the depressed area on the right side of the apparatus, and pull the front cover open lever to pull the front cover open.



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

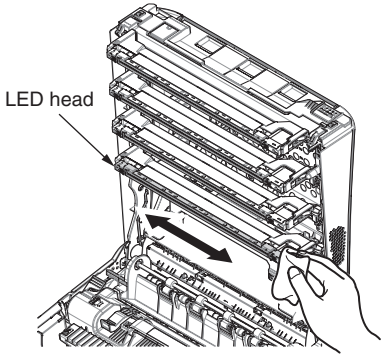
⚠Caution	Burn injury hazard.	

Do not touch the fuser unit. It is hot.



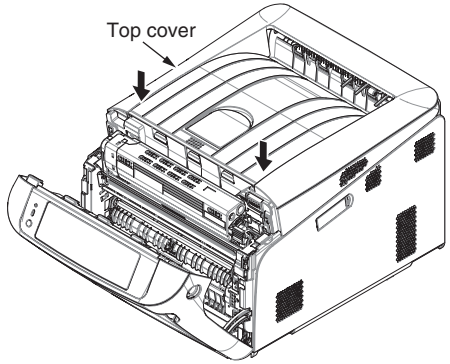
(4) Lightly wipe the (four) LED head lens surfaces with soft tissue paper.

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



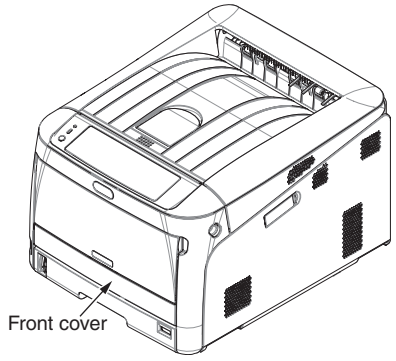
Memo Parts may be damaged due to static electricity. Make sure to remove the static electricity charged on you by touching the metals connected, before doing this task.

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



(6) Close the front cover.

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



5.3 Paper feed roller cleaning

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

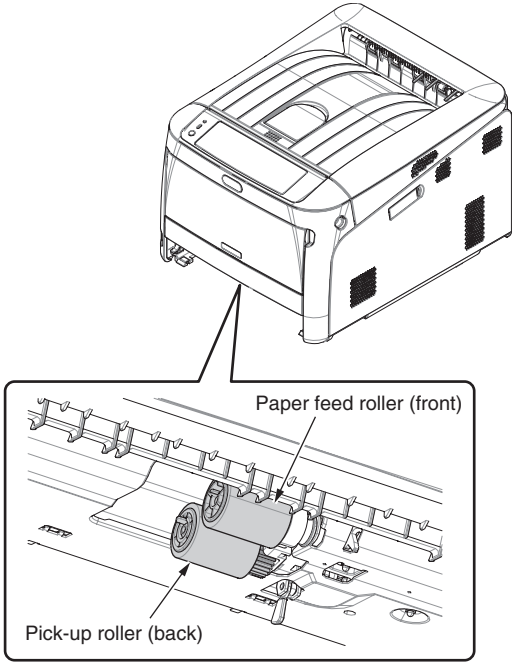
Note! Use a soft cloth to clean the paper feed rollers so as not to damage their surfaces.

Paper feed roller cleaning

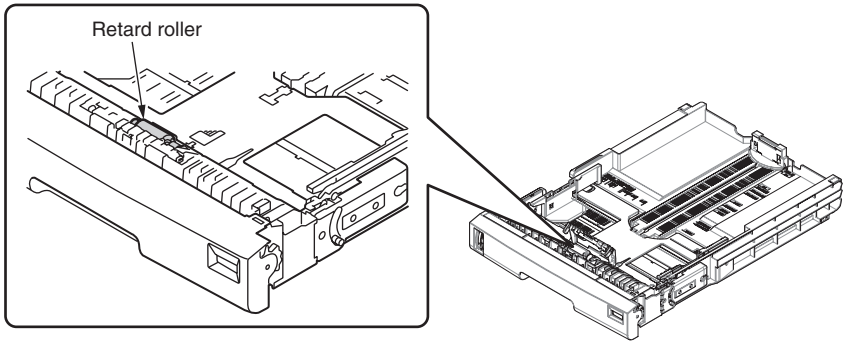
When 'Open Cassette Paper Jam ' messages occur frequently, perform the following steps shown below.

(1) Pull out the paper cassette of the tray being displayed.

(2) Wipe the paper feed rollers (front) and pick-up roller (back) with a cloth tightly wrung out with water.



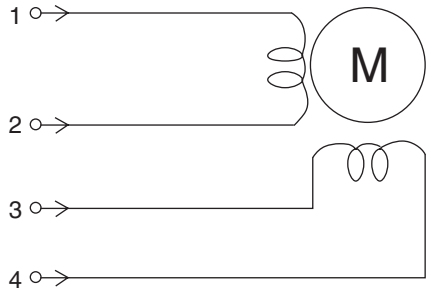
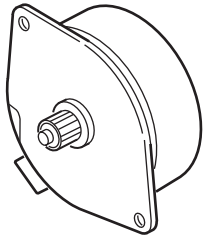
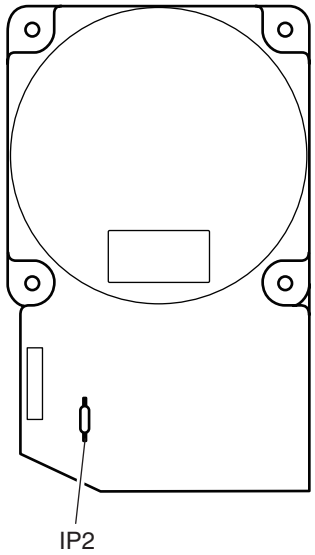
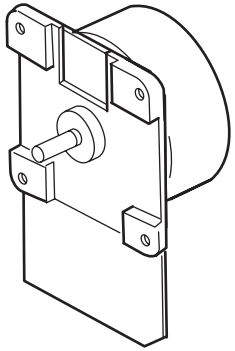
(3) Wipe the retard roller of the paper cassette with a cloth tightly wrung out with water.

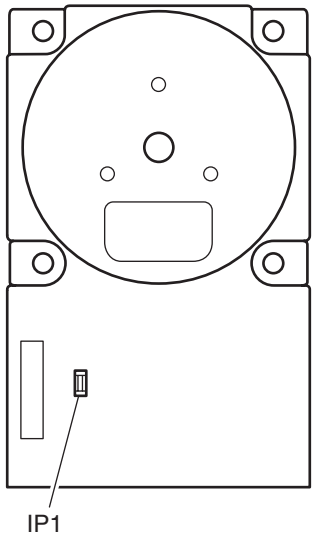
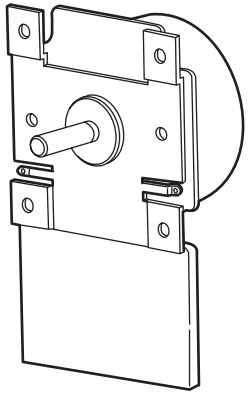
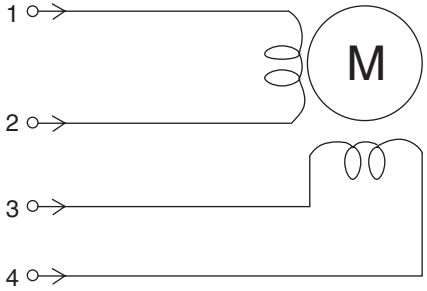
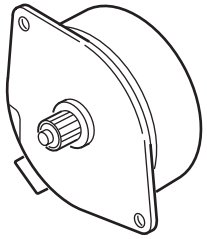


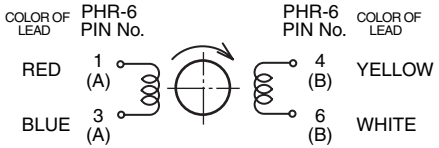
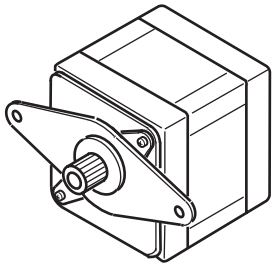
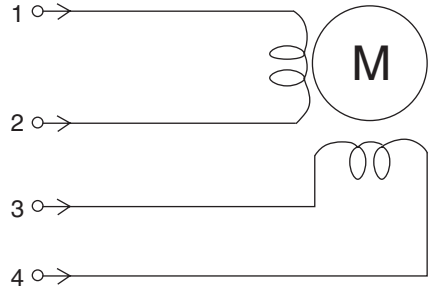
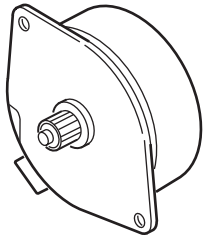
Note! When 'Open Cover Paper Jam Front Cover' messages occur frequently, clean the paper feed roller of the multi-purpose tray in the same manner as described above.

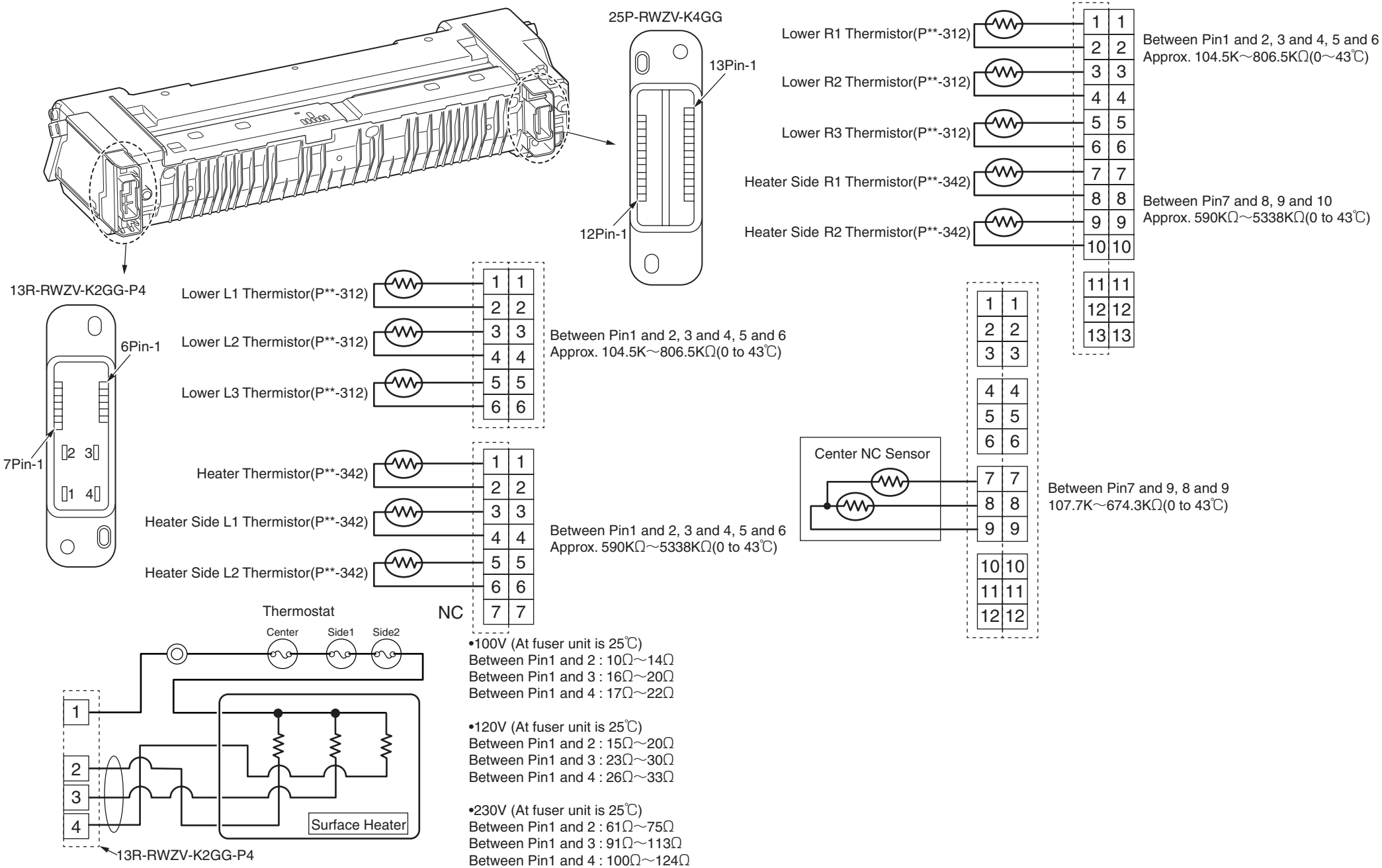
6. OTHER

6.1 Resistance value check

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Transport 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 unit motor			Across both ends of IP1 : 1 Ω or less
Paper feed 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 paper feed motor			Between pin-1 and pin-2 : 3.4 Ω Between pin-3 and pin-4 : 3.4 Ω
Fuser unit	Refer to Fig. 5.1	Refer to Fig. 5.1	Refer to Fig. 5.1



•100V (At fuser unit is 25℃)
Between Pin1 and 2 : 10Ω～14Ω
Between Pin1 and 3 : 16Ω～20Ω
Between Pin1 and 4 : 17Ω～22Ω

•120V (At fuser unit is 25℃)
Between Pin1 and 2 : 15Ω～20Ω
Between Pin1 and 3 : 23Ω～30Ω
Between Pin1 and 4 : 26Ω～33Ω

•230V (At fuser unit is 25℃)
Between Pin1 and 2 : 61Ω～75Ω
Between Pin1 and 3 : 91Ω～113Ω
Between Pin1 and 4 : 100Ω～124Ω

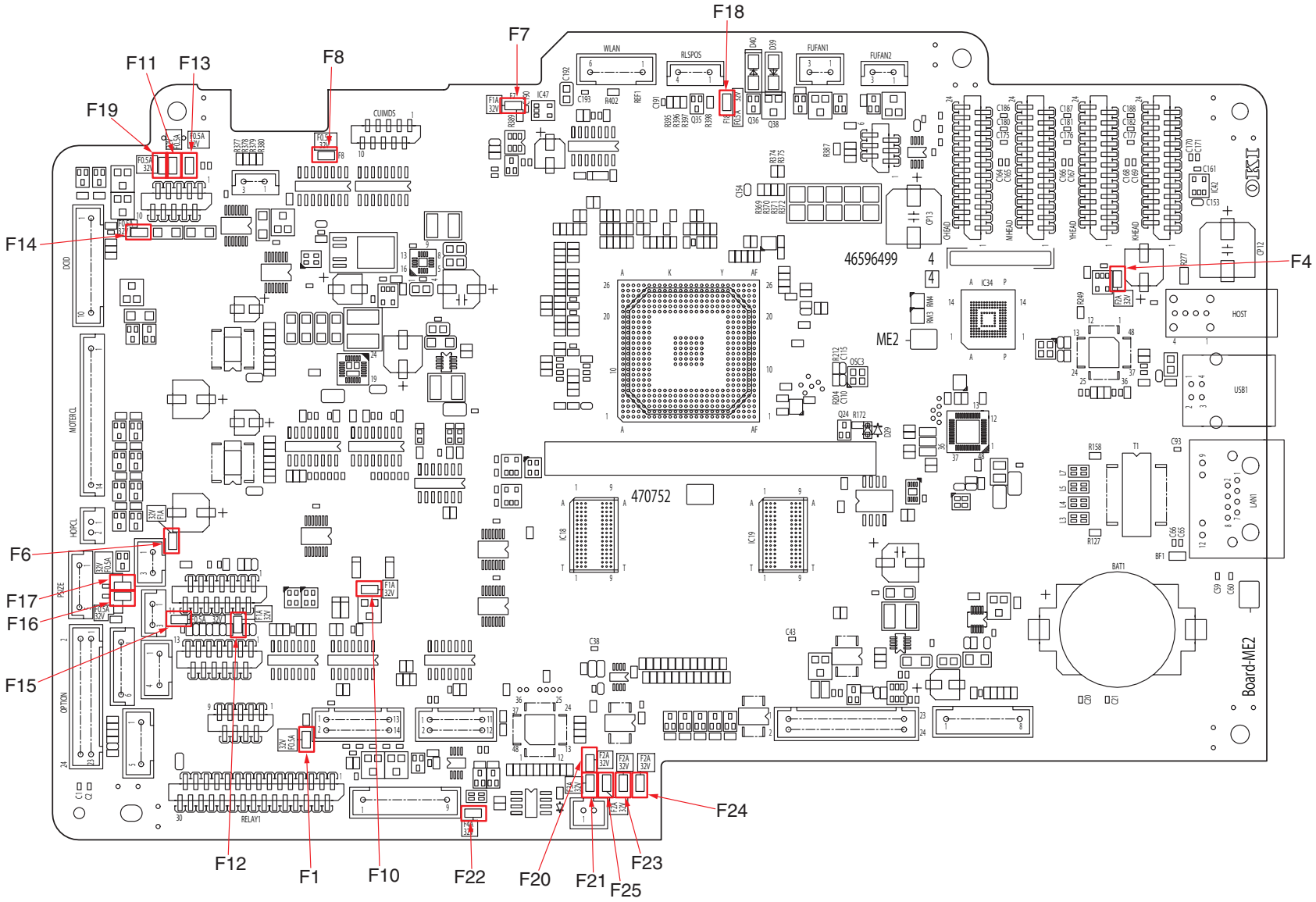
Fig. 5.1

6.2 Parts location

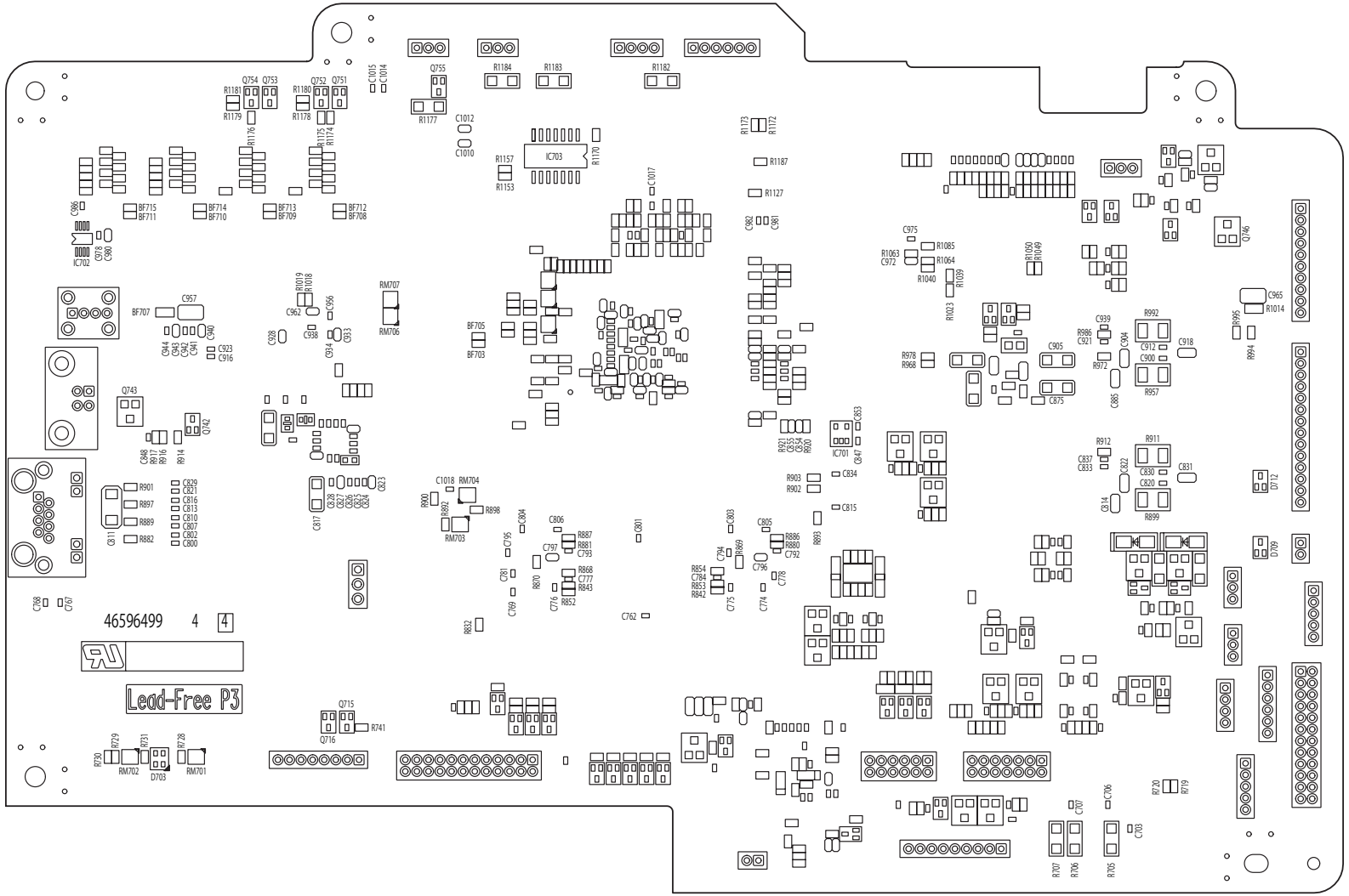
(1) CU/PU PCB (ME2 PCB)

Component side

* A specified product number is shown in RSPL.

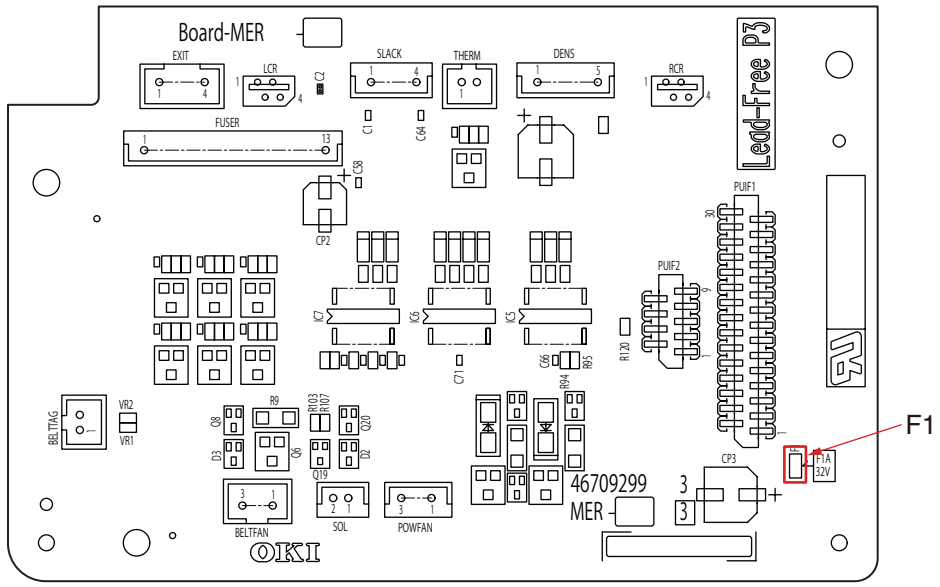


Soldering side

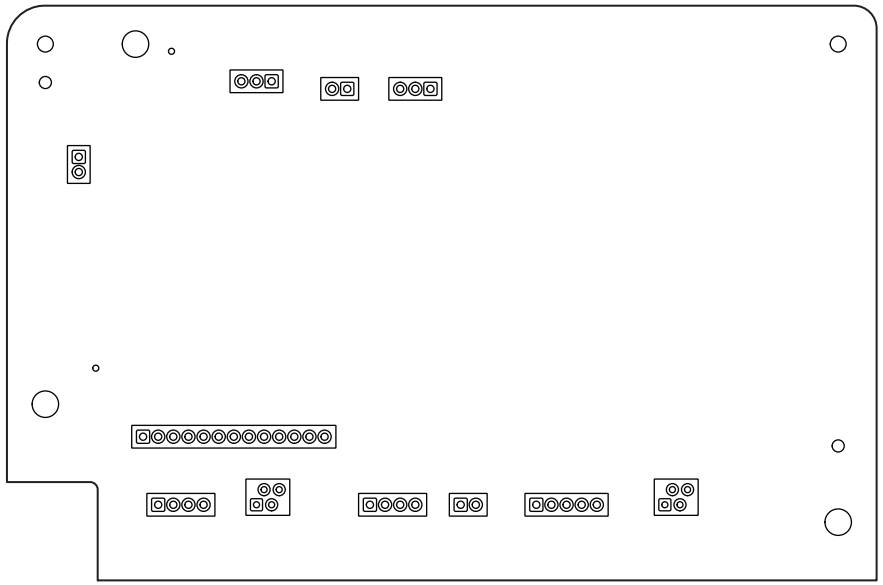


(2) Relay PCB (MER PCB)

Component side

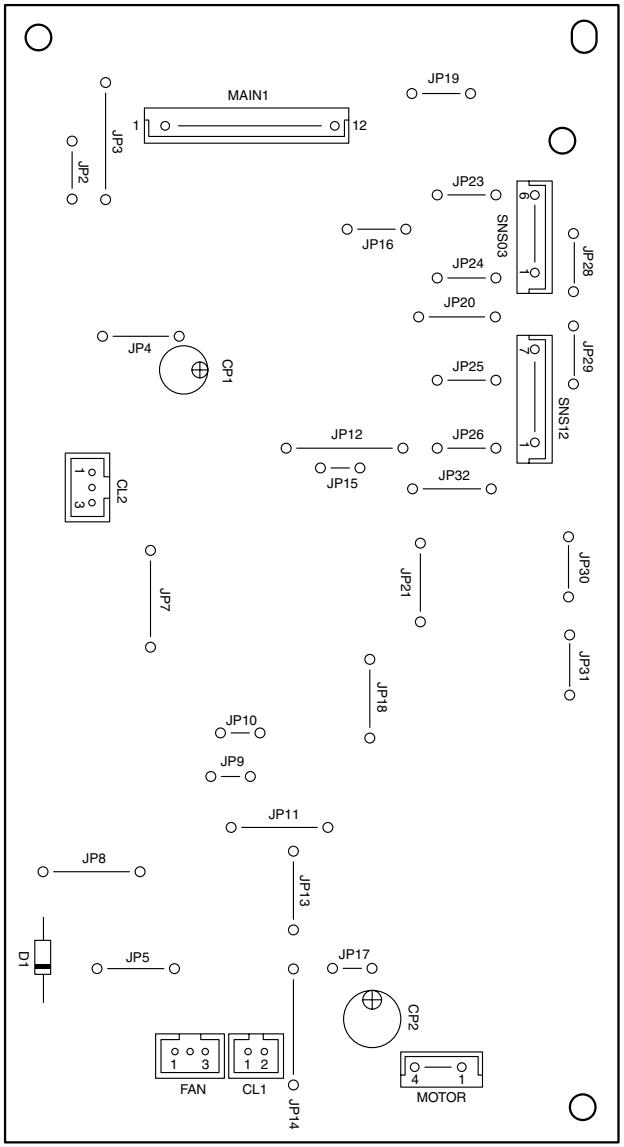


Soldering side

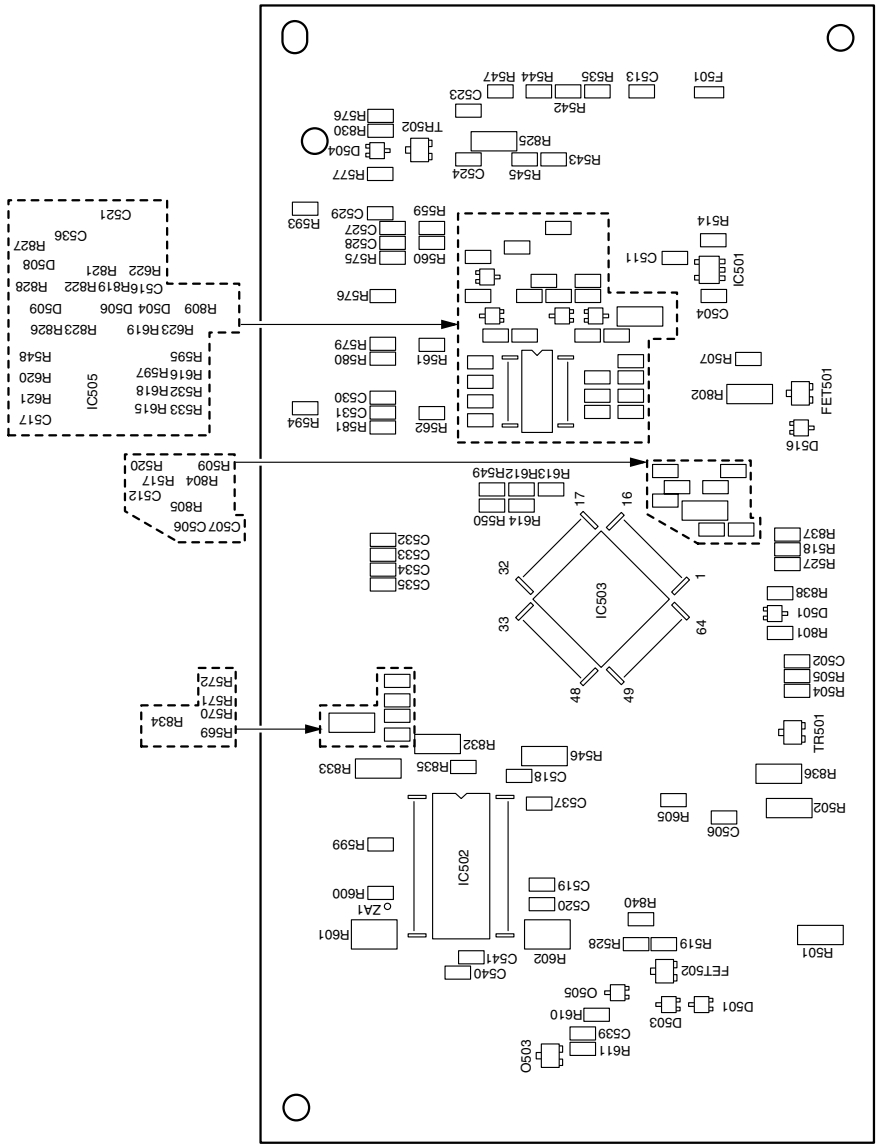


(3) Duplex unit PCB (GOH-20 PCB)

Component side

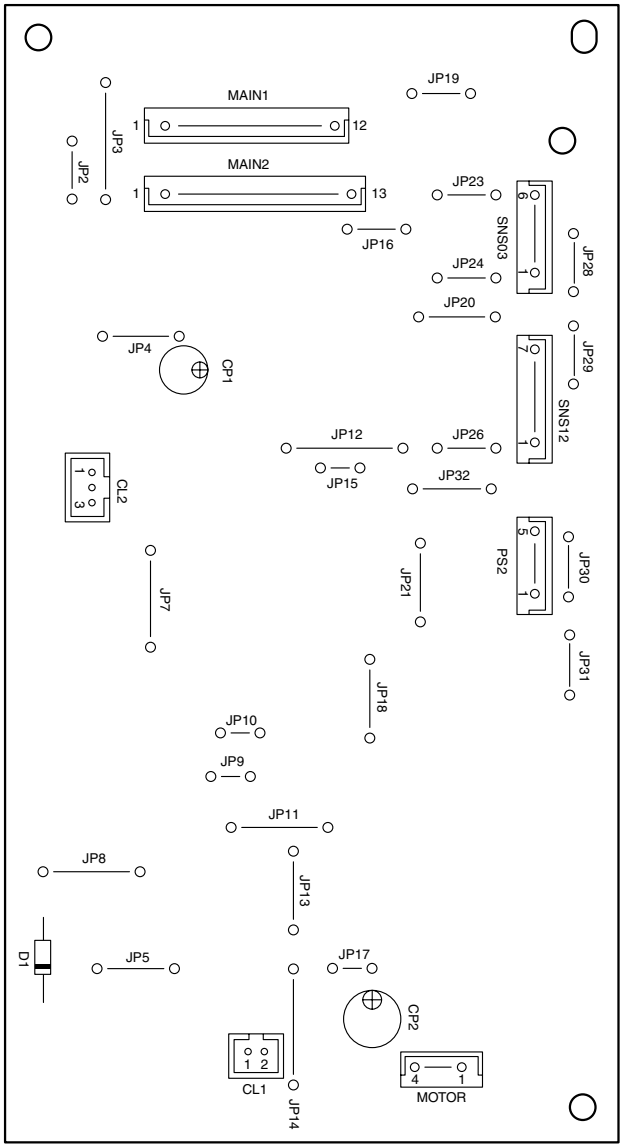


Soldering side

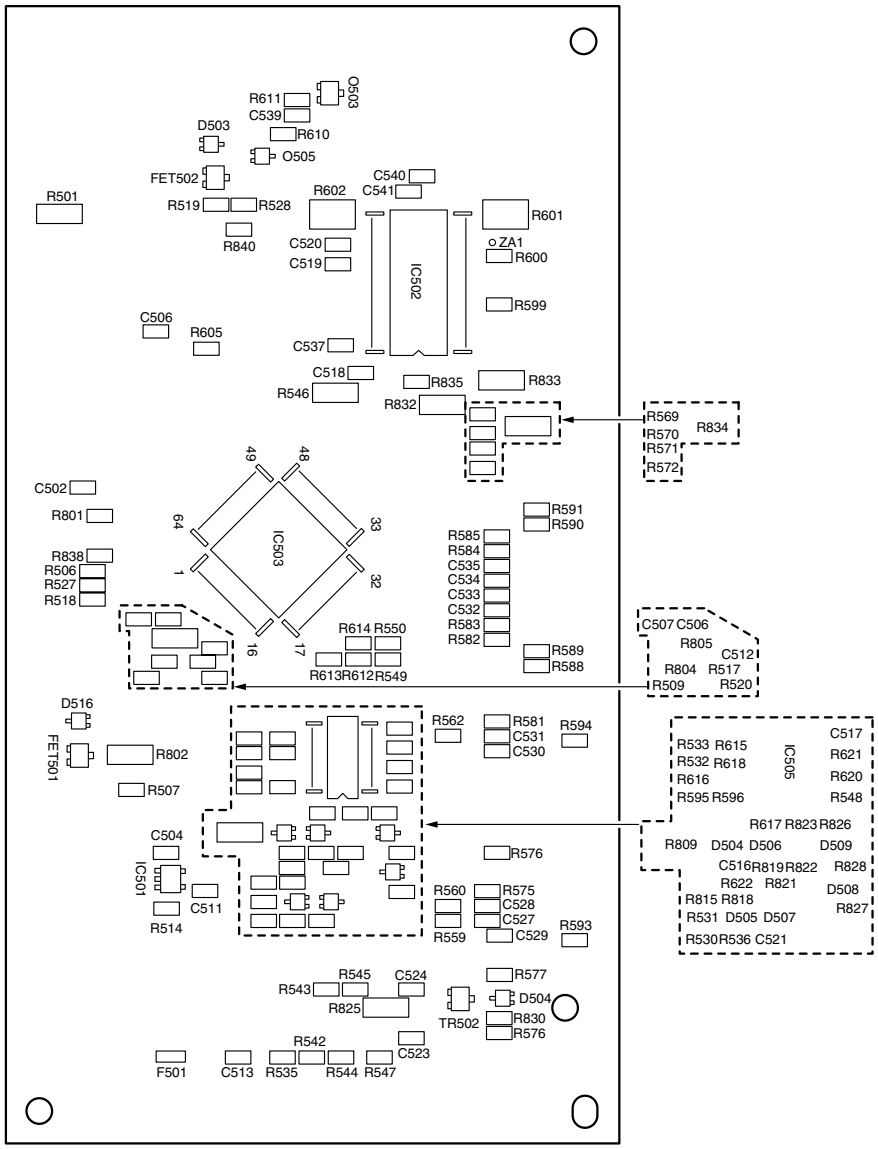


(4) 2nd(3rd/4th/5th) Tray PCB (GOH-21PCB)

Component side

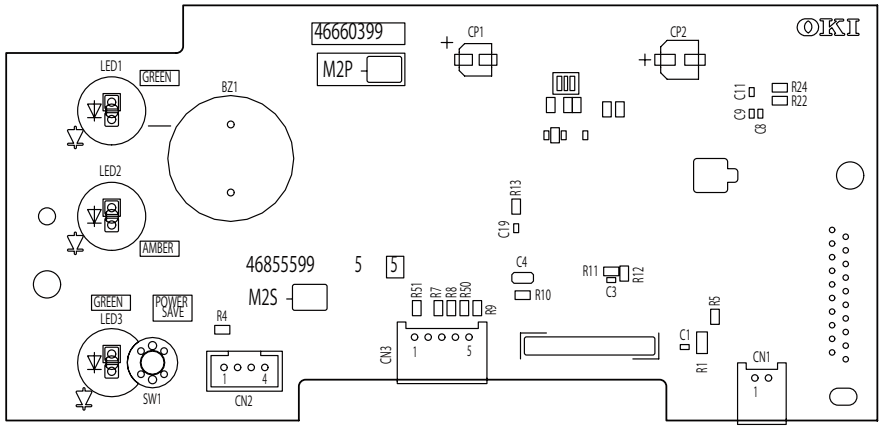


Soldering side

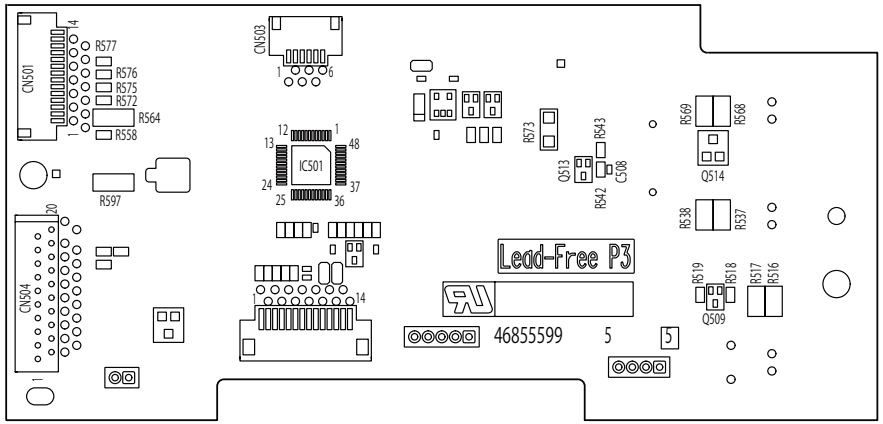


(5) Operator panel PCB (M2S PCB)

Component side

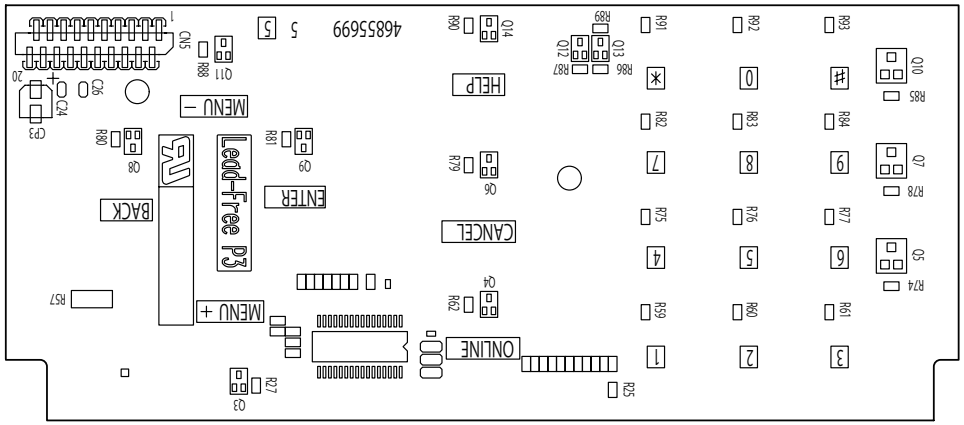


Soldering side

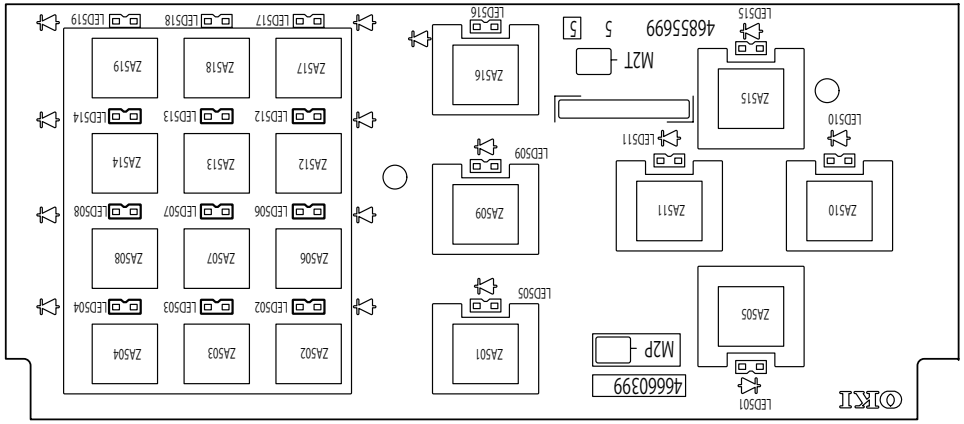


(6) Electrostatic touch panel (M2T PCB)

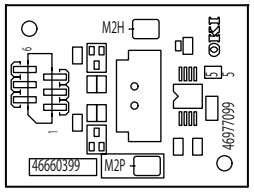
Component side



Soldering side

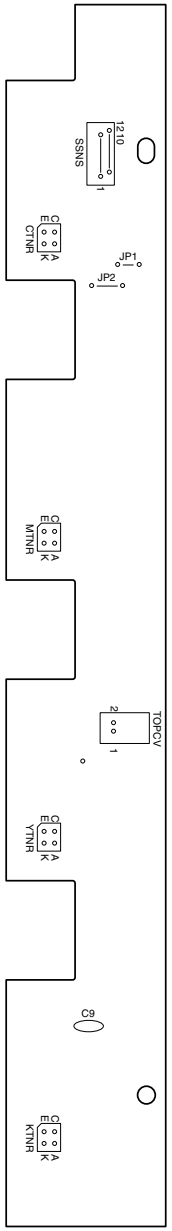


(7) Environmental sensor PCB

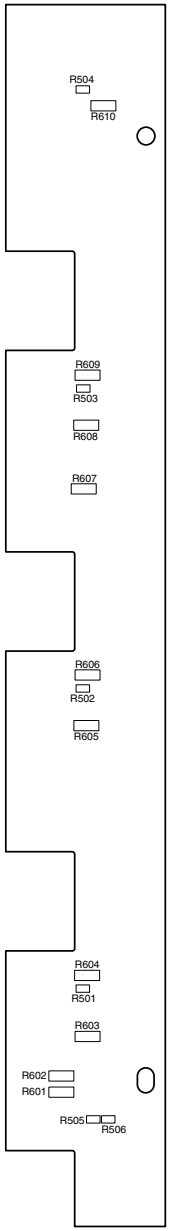


(8) Toner sensor PCB (TSA PCB)

Component side

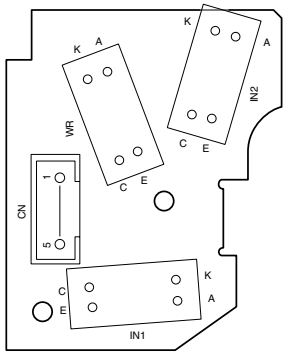


Soldering side

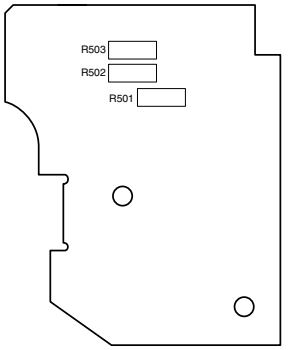


(9) WR sensor PCB (RSG PCB)

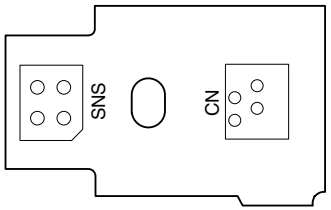
Component side



Soldering side

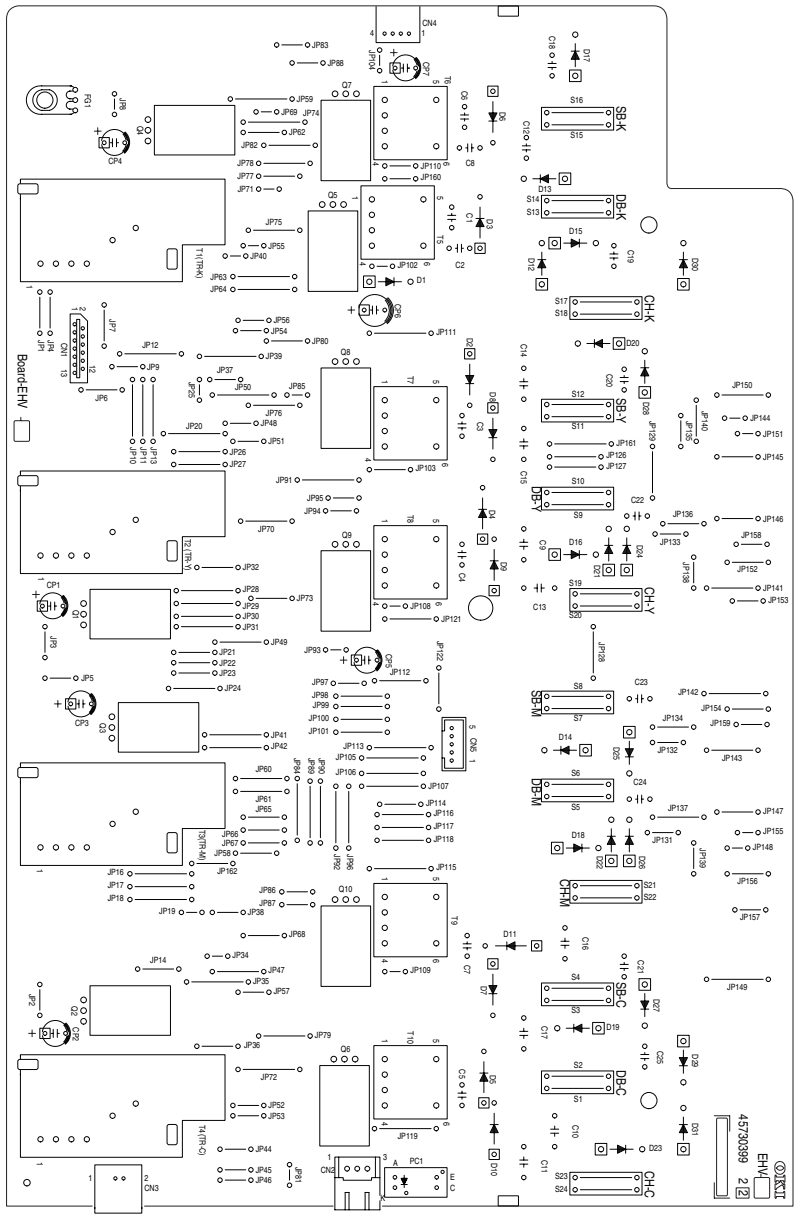


(10) Color registration sensor (PRC PCB)

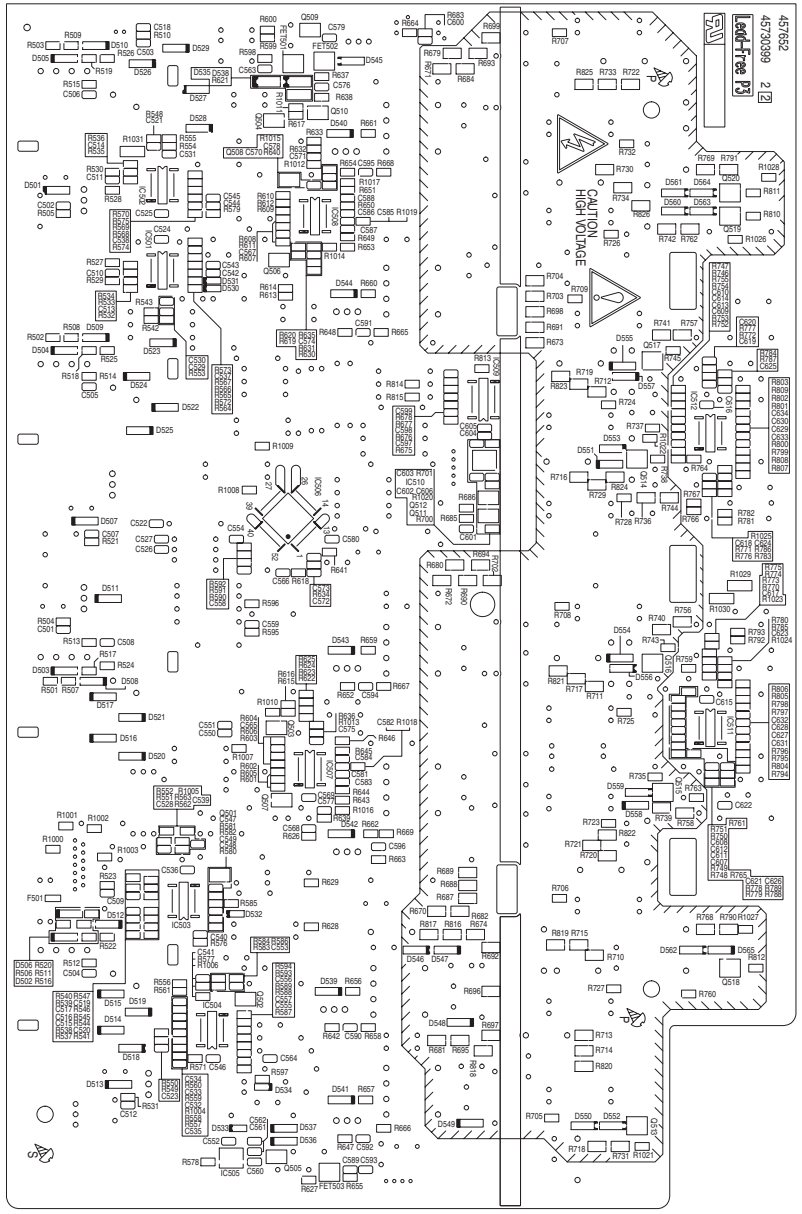


(11) High-Voltage Power Supply PCB (EHV PCB)

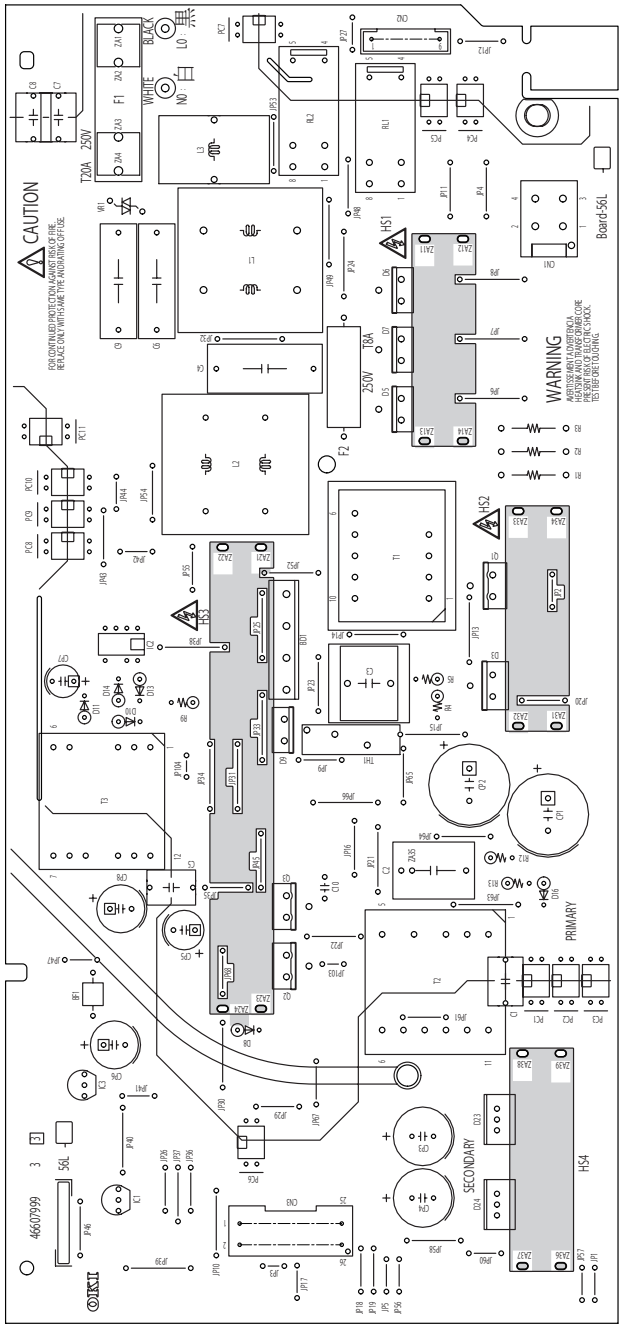
Component side



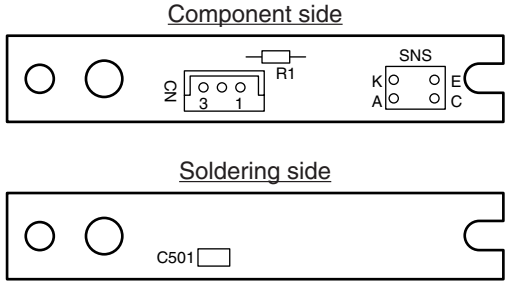
Soldering side



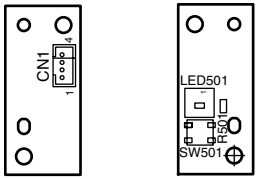
(12) Low-Voltage Power Supply PCB (56LPCB)



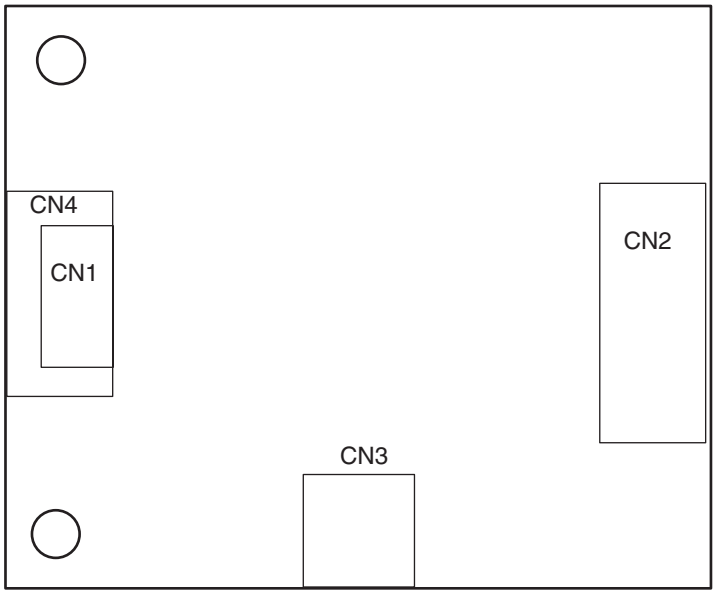
(13) Hop sensor PCB (HSC PCB)



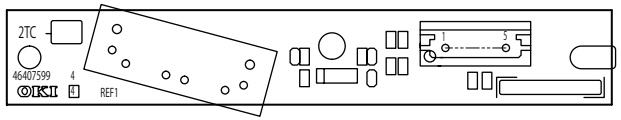
(14) Power switch PCB (P6A PCB)



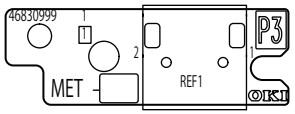
(15) RFID R/W PCB(RFID Read Write System)



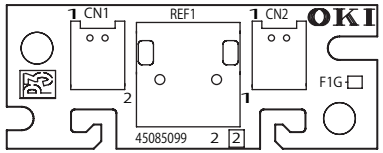
(16) Color Density Sensor PCB (2TC PCB)



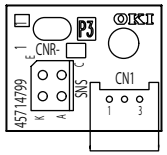
(17) Fuser TAG contact terminal PCB (MET PCB)



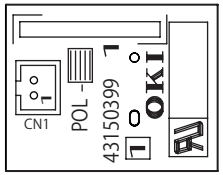
(18) Belt TAG contact terminal PCB (F1G PCB)



(19) NIP position detect sensor PCB (CNR PCB)

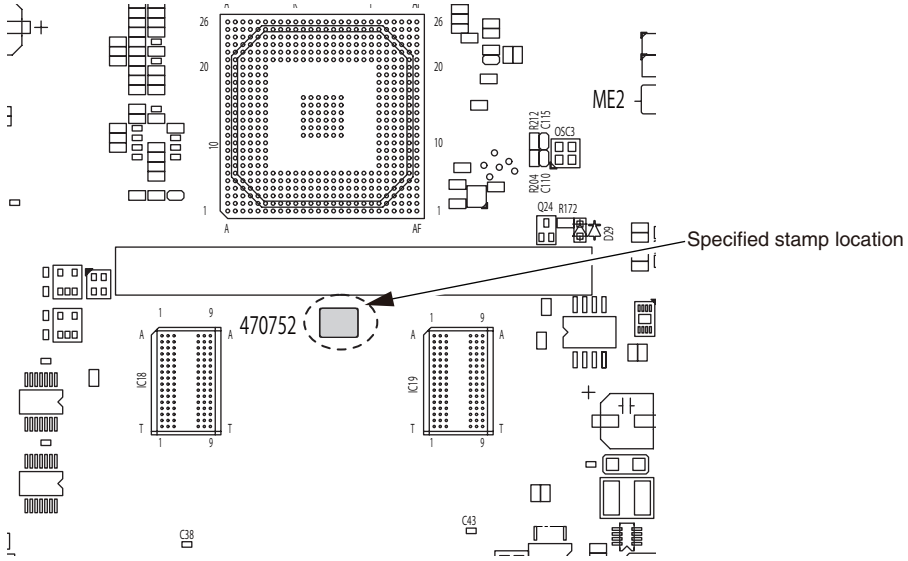


(20) Antenna PCB (POL PCB)



6.3 Maintenance board indication stamp

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



Series No.	Stamp No. (Maintenance Board Series No.)	Board ME2 (YU) Series No.	Use for
04	470752[04]	ME2-1 (46596401)	C824n 600dpi OEL
11	470752[11]	ME2-1 (46596401)	C834nw 600dpi OEL
12	470752[12]	ME2-1 (46596401)	C834nw 600dpi OAU
16	470752[16]	ME2-1 (46596401)	ES8434 600dpi OEL
17	470752[17]	ME2-1 (46596401)	ES8434 600dpi OAU
20	470752[20]	ME2-1 (46596401)	C844dnw 1200dpi ODNA
21	470752[21]	ME2-1 (46596401)	C844dnw 1200dpi OEL

[Appendix] Trouble shooting and Maintenance Menus

CONTENTS

A-1. TROUBLESHOOTING PROCEDURES

A-1.1 Important notes to start the repair work

(1) Confirm the basic check/inspection points described in User's Manual and Maintenance manual of this machine.

This repair working should be done confirmation the section [Confirmation items before taking corrective action against abnormalities], [Precautions when taking corrective actions against abnormalities] and [Preparation for troubleshooting] in advance.

A-1.2 Troubleshooting method

When a trouble occurs with this printer, perform troubleshooting by following the steps described below.

A-1.2.1 Panel messages list

Panel messages displayed on the operator panel are described in following tables.

Memo: The [□] mark indicates no message in the upper row.

Initializing

Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Description
Initializing	Off	Off	It displays, while not having determined the system display language immediately after turning on a power supply.
Initializing	Off	Off	The controller side is initializing.
EEPROM Reset	Off	Off	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 • OEM set of PJL command
RAM Check nnn%	Off	Off	RAM checking. The rate of checked capacity to the total capacity is displayed on the 2nd line.
Detected an abnormality of internal database. The data must be deleted. After pressing [Enter], the data will be deleted, and then reboot.	Varies	Varies	Indicating that it is in the state which the database cannot recover. [Enter] pressed, the error database is to be deleted and the unit is rebooted automatically.
Ready To Print PU Flash Error	On	Off	It is shown that the PU firmware could not be started normally. It might not update PU firmware normally, because power off during firmware update. Carry out the restoration procedure refer to A-2.6.
Communication Error	Off	Off	Displays that communication to PU firmware failed within the initializing phase. This status may not occur in a user environment. When it occurs, the maintenance by a maintenance member is required (equivalent to S/C).
Status Mode	Off	Off	Displays that coercive 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. Power on and after displayed 'PLEASE WAIT', push and hold the [MENU ▼] button, [ENTER] button + [BACK] button for a few seconds until it is displayed with "Status Mode". This function is secret to users. Therefore, this status are not occur in a user environment.

Information

Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Description
Finished changing language	Varies	Blink	-
□ □	Varies	Blink	Indicating that apparatus received the command for identifying printer from AirPrint device such as iPhone, This status is removed automatically in 10 seconds.
□ Auth by IC card avail	Varies	Varies	Indicating that the IC card reader supported with a this machine is connected.

Normal

Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Ready To Print	On	Off	Shows on-line status.
Ready To Print(Logged in)	On	Off	Indicates that a user logged in.
%RDYMSG%	Varies	Varies	Indicates that the unit date is being updated by using PJL command.
%RDYMSG%	Varies	Varies	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.
Offline	Off	Off	Shows off-line status. * Ready LED in off-line is always assumed to be Off.
File Accessing	Varies	Varies	The status showing FILE SYSTEM (FLASH) is being accessed.
Data Arrive	Varies	Varies	Data receiving, process not started yet. Displayed mainly during PJL process without text print data or during job spooling.
Processing	Blink	Varies	Data receiving or output processing
Data Present	Varies	Varies	Un-printed data remains in Buffer. Waiting for data to follow.
Printing(%TRAY%)	Varies	Varies	A printer is printing. %TRAY% Tray1 Tray2 Tray3 Tray4 Tray5 MPTray
Print Demo Page	Varies	Varies	Printing Demo Pages
Print Font	Varies	Varies	Printing Font Lists *PDL Only
Print Network Config	Varies	Varies	It is shown that a network setup is printing.
Print Configuration	Varies	Varies	Printing Menu Maps
Print File List	Varies	Varies	Printing File Lists *PDL Only
Print Error Log	Varies	Varies	Printing Error Logs *PDL Only
Print Usage	Varies	Varies	Printing Usage Report.

Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
□ □ Collate Copy iii/jjj	Varies	Varies	Collate printing. iii: The number of copy in printing. jjj: the total number of printing. When the total number of printing is 1, it is a normal printing display.
□ □ Copy kkk/lll	Varies	Varies	Copy printing. kkk: The number of pages in printing. lll: The total number of printing. When the number of copy is 1, it is a normal printing display.
Verifying Job	Blink	Varies	Indicates that the integrity of print data for Private Job Print is being verified (for corruption and tampering). *PDL Only
Cancelling Job	Blink	Varies	Indicates that job cancellation has been instructed and data is being ignored until the job completion.
Cancelling Job	Blink	Varies	Indicates if JAM occurs when Jam Recover is OFF, that job cancellation has been instructed and data is being ignored until the job completion.
Cancelling Job	Blink	Varies	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.
Cancelling Job	Blink	Varies	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)
Deleting data	Varies	Varies	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.
Cancelling ...	Blink	Varies	Indicates that reading from a USB memory is being cancelled.
□ Adjusting Temp.	Varies	Varies	Shows cooling down status. It is cautious of a period following "Adjusting Temp".
□ Adjusting Temp	Varies	Varies	Warming up.
□ Optimizing Temp	Varies	Varies	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.
□ Power Save	Varies	Varies	A printer is in power save mode. Displayed in a combination of other message in the first line. LCD back light extincts in the energy saving mode and brightens after exiting that mode. If the power is on during the energy saving mode, it lights up and extincts after 30 seconds. However, the energy saving mode remains. Also, it lights up in shut down process. From the power-saving mode, when the time going to Sleep mode is passed, printer enters Sleep mode.

Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
□ Sleep Mode	Varies	Varies	Indicates the printer goes into the Sleep mode. The printer goes into the mode immediately after this message appears, and in fact the message is hard to read.
□ Color Adjusting	Varies	Varies	Executing Auto Color Adjusting
□ Density Adjusting	Varies	Varies	Executing Auto Density Adjustment. Status code 10988 corresponds to density reading, thereto 10994 corresponds to density adjusting.
Flash Download	Varies	Varies	Downloading PU F/W (This is not user-level error) This function is secret to users. Therefore, this status are not occur in a user environment.
Please wait Executing Maintenance	Varies	Blink	Indicates that the printer is executing the remote maintenance mode. During this mode, users have no permission to operate the printer.
□ □	Varies	Varies	Indicates that PrintFromUSBMemory is selected without USB memory connection.
□ %C%: %INFO%	Varies	Varies	Indicates that the new consumable (toner or image drum). This status should be appeared at detecting the new consumable (toner or image drum), and be disappeared automatically after 3 seconds. %INFO% is contained in the consumable tag. %C% is a classification of toner / image drum and head letter of that color (ex. 'C' for cyan).
□ □ Getting file list ...	Varies	Varies	Indicates that a file is being read from a USB memory. Pressing Stop key will cancel the job.
Wait a Moment Network Initializing	Varies	Varies	This appears when the NIC initialization is occurred, as the setting was changed.
Wait a moment Network Configuration writing	Varies	Blink	This appears during the NIC configuration data is storing into the flash memory, as the setting was changed.
Wait a Moment Message Data Processing	Varies	Varies	Indicates that message data to be updated is being processed.
Wait a Moment Message Data Writing	Varies	Varies	Indicates that message data to be updated is being written.
Power Off/On Message Data Received OK	Varies	Varies	Indicates that message data to be updated has been written successfully.

Warning

Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
☐ Printer Life	Varies	Off	The life of printer go to the end. This status is activated by using the PJL command.
☐ %COLOR% Toner Low. Search keyword: P10081	Varies	On (Blink) (Off)	Toner amount is low. Displayed in a combination of other message in the first line. In case of MENU "Menus"-"System Adjust"-"Low Toner"=Stop , ATTENTION LED blinks and the printer shifts to OFF Line. It is possible to operate until "TONER EMPTY" by pressing "ONLINE switch". Moreover, when set as Admin Setup "System Setup"-"Near Life LED"=Disable, Attention LED is switched off. %COLOR% Yellow Magenta Cyan Black
☐ %COLOR% Waste Toner Full. Replace Toner. Search keyword: P40028	Varies	On	This warning indicates that Cover Open/Close or Power OFF/ON after the waste-toner full error occurred. (Not occur for Black/Yellow.) This is 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 the predetermined number of sheets. %COLOR% Magenta Cyan
☐ %COLOR% Non Recommended Toner Detected. Search keyword: P40947	Varies	On	This warning indicates that the toner cartridge are not conform to this apparatus. %COLOR% Yellow Magenta Cyan Black
☐ %COLOR% Non Recommended Toner. Search keyword: P40947	Varies	On	This warning indicates that the toner cartridge are not conform to this apparatus. This warning is cleared by replacing to the toner cartridge conforming to this apparatus. %COLOR% Yellow Magenta Cyan Black
☐ %COLOR% Toner Sensor Error. Search keyword: P40959	Varies	On	Something is wrong with the toner sensor. %COLOR% Yellow Magenta Cyan Black This is displayed only in the Shipping mode. Alternatively the errors 540/541/542/543 should be displayed depending on the toner sensor output pattern. When the Factory mode was set, it is indicated as service call of 160/161/162/163.
☐ Error Postscript	Blink	Varies	Interpreter detects an error due to the following reason. Receive data after this is ignored until the job completion. When the job is completely received, this is automatically cleared. - The job has a grammatical error. - The page is complicated, and VM was used up. *PDL Only
☐ PDL Error Occurred	Blink	Varies	This warning indicates that it has been occurred an internal processing error into the PDL emulation . It's a clearable warning. User should press OK button for clearing the warning.
☐ %COLOR% Image Drum Near Life. Search keyword: P10076	Varies	On (Off)	The life of the drum (warning). This is 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 "System Setup"-"NearLifeLED" = "Disable", Attention LED is switched off. %COLOR% Yellow Magenta Cyan Black
☐ Fuser Unit Near Life. Search keyword: P10979	Varies	On (Off)	This warning indicates that the Fuser Unit is near its life. Moreover, when set as Admin Setup "System Setup"-"NearLifeLED" = "Disable", Attention LED is switched off.
☐ Belt Unit Near Life. Search keyword: P10978	Varies	On (Off)	This warning indicates that the belt unit is near its life. This is a warning; thus, printing will not stop. Moreover, when set as Admin Setup "System Setup"-"NearLifeLED" = "Disable", Attention LED is switched off.
☐ Non Recommended Fuser Unit Detected. Search keyword: P40439	Varies	On	This warning indicates that detection of a Fuser Unit that is not optimal.
☐ Non Recommended Fuser Unit	Varies	On	This warning indicates that detection of a Fuser Unit that is not optimal.

Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
☐ Change Fuser Unit. Search keyword: P40971	Varies	On	This warning indicates that the life of the Fuser Unit (warning). Displayed in a combination of other message in the first line. Warning only (No Life error). This appears when the cover was opened and closed just after the Fuser Unit life error occurred.
☐ Non Recommended Belt Unit Detected. Search keyword: P40444	Varies	On	This warning indicates that detection of a belt unit that is not optimal.
☐ Change Belt Unit. Search keyword: P40970	Varies	On	This warning indicates that the transfer belt is end of its life (Warning). This status message is displayed when opening/closing a cover or turning power on again after the transfer belt life error or belt waste toner full error occurs.
☐ %COLOR% Toner Empty. Search keyword: P40028	Varies	On	This warning indicates that the toner is empty. This status message (warning) is displayed when opening/closing a cover or turning power on again after the toner empty error occurs. %COLOR% Yellow Magenta Cyan Black
☐ %COLOR% Toner Empty. Search keyword: P40028	Varies	On	This warning indicates that the toner cartridge is empty. When there are not print data, it is displayed. In the case of either of C, M or Y occurs this warning: When the apparatus receives the monochrome data, the apparatus prints the data. When it receives the color data, its state is changed to the Empty Error and it cannot print the data. On the other hand K occurs this warning: When this apparatus receives the data, its state is changed into the Empty Error and it can not print it. %COLOR% Yellow Magenta Cyan Black
☐ %COLOR% Toner Not Installed. Search keyword: P40902	Varies	On	This warning indicates that the toner cartridge is not installed. This is a warning only. %COLOR% Yellow Magenta Cyan Black

Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
☐ %COLOR% Non Recommended Image Drum Detected. Search keyword: P40485	Varies	On	This warning indicates that the Image Drum unit are not conform to this apparatus. This warning is cleared by replacing to the Image Drum unit conforming to this apparatus. %COLOR% Yellow Magenta Cyan Black
☐ %COLOR% Non Recommended Image Drum. Search keyword: P40485	Varies	On	This warning indicates that the Image Drum unit are not conform to this apparatus. This warning is cleared by replacing to the Image Drum unit conforming to this apparatus. %COLOR% Yellow Magenta Cyan Black
☐ %COLOR% Image Drum Life. Search keyword: P40936	Varies	On	This warning indicates that the life of the drum. This is a warning only. This status as warning is indicated with it recovered temporally by the cover was opened and closed after the drum life error occurred. %COLOR% Yellow Magenta Cyan Black
☐ %COLOR% Image Drum Life, %PAGES% Pages Left. Search keyword: P40936	Varies	On	This warning indicates that the temporally prolonged period of the Image Drum life after it reached to its life limitation. It can print up to %PAGES% pages left. Require to the user to replace the Image Drum, soon. %COLOR% Yellow Magenta Cyan Black %PAGES% 1~500

Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
☐ %COLOR% Image Drum Life, Print Quality Not Guaranteed. Search keyword: P40936	Varies	On	This warning indicates that the temporally prolonged period of the Image Drum life. This appears after the hidden operation was done at the life limitation. %COLOR% Yellow Magenta Cyan Black
☐ Density Color Calibration Error	Varies	Varies	Density Adjustment Color Calibration Error. Error that are not occur at user level. Displayed only in FactoryMode. PU firmware are not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status are not occur in a user environment.
☐ Density Black Calibration Error	Varies	Varies	Density Adjustment Black Calibration Error. Error that are not occur at user level. Displayed only in FactoryMode. PU firmware are not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status are not occur in a user environment.
☐ Density Black Sensor Error	Varies	Varies	Density Adjustment Black Sensor Error. Error that are not occur at user level. Displayed only in FactoryMode. PU firmware are not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status are not occur in a user environment.
☐ %COLOR% Image Drum Smear Error	Varies	Varies	Density Adjustment ID ERROR 2; smear due to ID failure. PU firmware are not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status are not occur in a user environment. %COLOR% Yellow Magenta Cyan Black
☐ %COLOR% Low Density Error	Varies	Varies	Density Adjustment ID ERROR; LED out of focus is assumed. PU firmware are not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status are not occur in a user environment. %COLOR% Yellow Magenta Cyan Black

Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
☐ Registration Error <n>	Varies	On	When a color registration error is detected with coarse adjustment, or with the main-scan line adjustment. PU firmware are not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status are not occur in a user environment. n 2 = Yellow 3 = Magenta 4 = Cyan
☐ Registration Sensor Error <n>	Varies	On	When a color registration error is detected with the fine control of registration adjustment, or with the sub-scan line adjustment. PU firmware are not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status are not occur in a user environment. n 2 = Yellow 3 = Magenta 4 = Cyan
☐ %TRAY% Empty	Varies	On	%TRAY%: The tray is empty. Treated as Warning until printing to the empty tray is designated. %TRAY% Tray1 Tray2 Tray3 Tray4 Tray5
☐ File System is Full	Varies	On	Disk-full is occurring. Because this is a temporary warning, it remains until the end of the job and disappears.
☐ File System is Write Protected	Varies	On	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.
☐ File Erasing	Varies	On	This warning indicates that a secret file is being erased. *PDL Only
☐ Deleting data	Varies	On	This warning indicates that the deletion of Private Job Print job and saving of deletion request of file. *PDL Only
☐ Erased Data Full	Varies	On	This warning indicates that a secret file waiting to be erased is full. *PDL Only
☐ Wait Timeout is Disabled	Varies	On	This warning indicates that time-out print setting is set for invalidity.

Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
☐ *** Flash Error	Varies	Varies	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 Tray5 Duplex IM
☐ Job Log Buffer Full(Delete old logs)	Varies	Varies	Because a buffer of the job log became full, notify a user that deleted the old log.
☐ NFC Unit Error. NFC function is not available. Press ONLINE Button	Varies	Varies	This warning indicates that failed in access (Read/Write) of the NFC module from firmware. Stays displayed until the ONLINE key is pressed. If this warning are not clear after rebooting the apparatus, it is caused by the failure of the NFC module or the short circuit. This message displaying is suppressed by set to [Disable] for the "Adimin Setup"-"Other Setup"-"NFC Setup".
☐ USB Hub Unsupported Please detach it	Varies	Varies	This warning indicates that the USB hub is connected, which is not supported by the printer. This status should be displayed until connection of that USB hub.
☐ Unsupported USB Device Detected Please detach it	Varies	Varies	This warning indicates that the USB device is connected, which is not supported by the printer. This status should be displayed until connection of that USB device.
☐ Incompatible USB device connected Please detach it	Varies	Varies	This warning indicates that the USB device has not been recognized. This message will be displayed until the USB device disconnected.
☐ No communication with the SNTP server.	Varies	Varies	This warning indicates that the system has attempted to obtain the current time from the SNTP server and failed.
☐ Getting target IP failed. Please check DHCP settings.	Varies	Varies	This warning indicates that DHCP server is not found out.

Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
☐ Collate Fail:Too Many Pages Press ONLINE Button	Varies	Varies	Memory overflow was occurred in the collate copy. Stays displayed until the ONLINE key is pressed.
☐ Duplex Print Failed Press ONLINE Button	Varies	On	For the paper setting that a duplex printing is not possible, it was printed in simplex. Stays displayed until the ONLINE button is pressed.
☐ Color Restricted. Mono Printed Press ONLINE Button	Varies	On	This warning indicates that notifying to users that jobs have been printed in monochrome because they are not permitted for color printing. (Related to JobAccount). Stays displayed until the ONLINE button is pressed.
☐ Color Restricted. Job Rejected Press ONLINE Button	Varies	On	This warning indicates that notifying to users that jobs have been cancelled because they are not permitted for color printing. (Related to JobAccount). Stays displayed until the ONLINE button is pressed.
☐ Print Restricted. Job Rejected Press ONLINE Button	Varies	On	This warning indicates that notifying to users that jobs have been cancelled because they are not permitted for printing. (Related to JobAccount). Stays displayed until the ONLINE button is pressed.
☐ Log Buffer is Full. Job Rejected Press ONLINE Button	Varies	On	This warning indicates that notifying to users that jobs have been cancelled because the log buffer is full. (Related to JobAccount.) Stays displayed until the ONLINE button is pressed.
☐ Expired saved files have been deleted Press ONLINE Button	Varies	On	This warning indicates that an applicable job has been automatically deleted as the retention period for Private Job Print has expired. *PDL Only
☐ E-mail receiving has been cancelled Press ONLINE Button	Varies	On	This warning indicates that E-mail receiving has been canceled. It has the following possibilities. - The format of E-mail 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.

Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
☐ File System Operation failed <nnn> Press ONLINE Button	Varies	On	A disk error is occurred, which is other than the file system fill or the disk write protected. Operation that are not involve a disk is available. nnn: An identifier to Error type (For details, see the overview chapter.) %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
☐ Invalid Print Data Received Press ONLINE Button	Varies	Varies	This warning indicates that a job has been deleted because corruption of data has been detected by the integrity verification in Private Job Print. *PDL Only
☐ Invalid Data Press ONLINE Button	Varies	Varies	Invalid data was received. Press the On-line switch and eliminate the warning. Displayed when unsupported PDL command is received or a spool command is received without SD Card. * Except GDI printer *PDL Only
☐ Job Log Database Error Contact the device administrator Press ONLINE Button	Varies	Varies	Database access error has occurred during system job log reading or writing. It may be recovered from the error with power off/on. This message is displayed until ONLINE Button pressed.

Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
☐ IPv4 Address is conflicted Change IPv4 Address	Varies	Varies	IPv4 address is conflicted.
☐ Error PDF Press ONLINE Button	Varies	Varies	It appears when a PDF file contains a syntax error.
☐ Invalid Password Press ONLINE Button	Varies	Varies	This warning indicates that the entered password are not match the password set to encrypted PDF. The file will not be printed unless the passwords match.
☐ PDF Cache Write Error Press ONLINE Button	Varies	Varies	This warning indicates that writing a PDF file to the cache has failed.
☐ Color toner empty. Job cancelled Press ONLINE Button	Varies	Varies	This warning indicates that notifying to the user that the color toner is empty and that the received color data job is cancelled.
☐ Job Type restricted Job rejected Press ONLINE Button	Varies	Varies	A job of a JobLimitation setting violation is received, and when discarding the job, it's indicated.

Error

If this machine detects an un-recoverable error, the following service call error is displayed on the LCD.

Service call
nnn: error

Note! nnn indicates an error code.

When a service call is displayed, the error code and the associated error information are displayed in the lower row of the LCD display at the same time.
Be sure to take note of this error information (numerals indicating address and others) and inform it to the related departments because the information is used for trouble analysis and solution. Meaning of error codes and remedial measures are shown in below Tables.

Code nnn	Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Error	Changing Language Please wait	Varies	Blink	It is during a language change. Wait for a while. During this message indication, the operation except the shut down button becomes invalid
Error	Language Change Failed Error num:%CODE%	Varies	Blink	Language change failed. It is necessary to Pow-Off and Pow-On.
-	□ For Maximum Performance Always Use %COMPANY_NAME% Original	-	Varies	This should be appeared after the toner low/empty warning messages.
Error	□ Decode error occurred Press ONLINE Button	Varies	Varies	This error 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.
Error	□ Can not read the file Press ONLINE Button	Varies	Varies	This error indicates that the USB memory is disconnected while PrintFromUSBMemory is running. Reading of the image file is cancelled.
Error	□ Can not read the file Press ONLINE Button	Varies	Varies	This error indicates that the specified file cannot be opened.
Error	□ Can not read the file Press ONLINE Button	Varies	Varies	This error indicates that processing has failed, for instance, because of a fault in the equipment in which the data was to be stored.
Error (ONLINE)	Install Paper MPTray %MEDIA_SIZE% Press ONLINE Button	On	Off	Manual paper feed is required. Manually insert the paper shown by %MEDIA_SIZE%. The unit of paper size in Custom: The unit specified for MPTray (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>" e.g.) 210x297 mm 8.5x11.0 inch The unit of paper size in Custom: The unit specified for MPTray (menu setting) is used if no unit is specified by the driver. When the driver specifies a unit, the unit is used for display. If Media_Size has both portrait and landscape, %MEDIA_SIZE% displays icon which indicate paper orientation after Paper Size.

Code nnn	Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Error 661 662 663 664 665	Change Paper in %TRAY% %MEDIA_SIZE% %MEDIA_TYPE% Press ONLINE Button Please see HELP for details	Off	Blink	The media type in the tray and the print data do not match. Load mmmmmmm/ pppppp paper in ttttt tray (It takes a while until the status disappears after you have closed the tray and the lever lifted.) (tt tttt:TrayName,mmmmmm:PaperName. pppppp:MediaTypeName) Error 661 : Tray1 Error 662 : Tray2 Error 663 : Tray3 Error 664 : Tray4 Error 665 : Tray5 Paper size displays in Custom mode: "<width>x<length> <unit>" e.g.) 210x297 mm 8.5x11.0 inch The unit of paper size in Custom: The unit specified for MPTray (menu setting) is used if no unit is specified by the driver. When the driver specifies a unit, the unit is used for display. As a user pressed ONLINE key, the printer could ignore this error at the just printing job. If Media_Size has both portrait and landscape, %MEDIA_SIZE% displays icon which indicate paper orientation after Paper Size.

Code nnn	Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Error 660	Change Paper in MPTray %MEDIA_SIZE% %MEDIA_TYPE% Press ONLINE Button Please see HELP for details	Off	Blink	The media type in the tray and the print data do not match. Load paper in tray (It takes a while until the status disappears after you have closed the tray and the lever lifted.) (%TRAY%:TrayName,%MEDIA_SIZE%:PaperName.%MEDIA_TYPE%:MediaTypeName) Error 660 : MPTray Paper size displays in Custom mode: "<width>x<length> <unit>" ex.) 210x297 mm 8.5x11.0 inch The unit of paper size in Custom: The unit specified for MPTray (menu setting) is used if no unit is specified by the driver. When the driver specifies a unit, the unit is used for display. A user needs to press ONLINE key after changing the paper. If Media_Size has both portrait and landscape, %MEDIA_SIZE% displays icon which indicate paper orientation after Paper Size.
Error 461 462 463 464 465	Change Paper in %TRAY% %MEDIA_SIZE% %MEDIA_TYPE% Press ONLINE Button Please see HELP for details	Off	Blink	The size of paper or media type in the tray are not match the print data. Load paper 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 Error 465 : Tray5 The paper size displaying form of the custom mode is the same as above. Paper size displays in Custom mode: "<width>x<length> <unit>" e.g.) 210x297 mm 8.5x11.0 inch As a user pressed ONLINE key, the printer could ignore this error at the just printing job. If Media_Size has both portrait and landscape, %MEDIA_SIZE% displays icon which indicate paper orientation after Paper Size.

Code nnn	Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Error 460	Change Paper in MPTray %MEDIA_SIZE% %MEDIA_TYPE% Press ONLINE Button Please see HELP for details	Off	Blink	The size of paper or media type in the tray are not match the print data. Load paper in tray (It takes a while until the status disappears after you have closed the tray and the lever lifted.) Error 460 : MPTray The paper size displaying form of the custom mode is the same as above. Paper size displays in Custom mode: "<width>x<length> <unit>" ex.) 210x297 mm 8.5x11.0 inch A user needs to press ONLINE key after changing the paper. If Media_Size has both portrait and landscape, %MEDIA_SIZE% displays icon which indicate paper orientation after Paper Size.
Error 480	Remove Paper Output Tray Please see HELP for details	Off	Blink	The printed paper is overfilled on the paper stacker of the printer unit. Error 480 : Output Tray
Error 420	Press ONLINE Button for Restoration Memory Overflow Please see HELP for details	Off	Blink	Memory capacity overflows due to the following reason. Press ON-LINE switch so that it continues. 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.
Error	Insufficient memory. If using multiple functions, finish the function being used before attempting another. If the problem are not improve, reduce the resolution. Press ONLINE Button	Off	Blink	

Code nnn	Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Error 517	Wireless startup failed Press ONLINE Button Please see HELP for details	Varies	Varies	An error occurred at the communication with wireless bridge. For example, response timeout, etc. This status only for wireless LAN printer.
Error 504	This wireless firmware version are not operate on this device Press ONLINE Button Please see HELP for details	Varies	Varies	The major version is not the same with wireless bridge. This status only for wireless LAN printer.
Error 505	Wireless settings are incomplete Press ONLINE Button Please see HELP for details	Varies	Varies	Wireless LAN can not startup. Some setting need to be re-configured. This status only for wireless LAN printer.
Error 506 (ONLINE)	Not connected to wireless access point Press ONLINE Button Please see HELP for details	Varies	Varies	Can not setup communication with an Access Point(there is not an usable AP). This status only for wireless LAN printer.
Error (ONLINE)	Check Data Message Data Write Error<%CODE%>	Varies	Varies	This error 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 printer

Code nnn	Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Error 519 (ONLINE)	Press ONLINE Button for Restoration Receiving Data Timeout Please see HELP for details	Varies	Blink	When receiving data by Port9100, LPR, FTP, IPP, WSD, or Email, a timeout occurred in stream.
Error (ONLINE)	Firmware Update Error Please try again If network doesn't work, please try firmware update over USB	Varies	Varies	This error indicates that firmware update has failed. In this case, firmware update needs to be executed again, so the printer must be online.
Error 491 492 493 494 495 490	Install Paper %TRAY% %MEDIA_SIZE% Please see HELP for details	Off	Blink	Printing request is issued to an empty tray. Load paper. (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 495 : Tray5 Error 490 : MPTray The paper size displaying form of the custom mode is the same as above. If Media_Size has both portrait and landscape, %MEDIA_SIZE% displays icon which indicate paper orientation after Paper Size.
Error 440 441 442 443	Install Paper Cassette %TRAY% Please see HELP for details	Off	Blink	This error indicates that removal of the paper cassette of Tray 1 that is a paper path in attempting to print from Tray 2(or Tray3, Tray4). Error 440 : Tray1 Error 441 : Tray2 Error 442 : Tray3 Error 443 : Tray4
Error 430 431 432 433 434	Install Paper Cassette %TRAY% Please see HELP for details	Off	Blink	This error indicates that paper feed is unavailable in attempting to print from Tray 1 due to removal of the paper cassette of Tray 1. (Occurs only when Tray 2 has been installed.) %TRAY% Tray1 Tray2 Tray3 Tray4 Tray5
Error 415 416	Replace Toner %COLOR% Waste Toner Full Please see HELP for details	Off	Blink	This error indicates that a waste toner box represented by %COLOR% has become full and needs to be replaced. Error 415 : Magenta Error 416 : Cyan (Are not occur for Black/Yellow) Warning status takes effect at Cover Open/Close and printing of about 50 copies becomes available.
-	Install Toner For Maximum Performance Always Use %COMPANY_NAME% Original	-	-	This should be appeared after the toner empty error messages.
Error 410 411 412	Install Toner %COLOR% Please see HELP for details	Off	Blink	Toner ends. Error 410 : Yellow Error 411 : Magenta Error 412 : Cyan Warning status takes effect at Cover Open/Close. When you did elimination of (cancelling) print data, it turns into warning status.
Error 413	Install Toner %COLOR% Please see HELP for details	Off	Blink	Toner ends. Error 413 : Black Warning status takes effect at Cover Open/Close. When you did elimination of (cancelling) print data, it turns into warning status.

Code nnn	Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Error 554 555 556 557	Non Recommend-ed Toner %COLOR% Please see HELP for details	Off	Blink	This error indicates that the Toner Cartridge are not conform to this apparatus. This error is cleared by replacing to the Toner Cartridge conforming to this apparatus. Error 554 : Yellow Error 555 : Magenta Error 556 : Cyan Error 557 : Black
Error 614 615 616 617	Non Recommend-ed Toner %COLOR% Please see HELP for details	Off	Blink	This error indicates that the Toner Cartridge are not conform to this apparatus. This error is cleared by replacing to the Toner Cartridge conforming to this apparatus. Error 614 : Yellow Error 615 : Magenta Error 616 : Cyan Error 617 : Black
Error 620 621 622 623	Non Recommend-ed Toner %COLOR% Please see HELP for details	Off	Blink	This error indicates that the Toner Cartridge are not conform to this apparatus. This error is cleared by replacing to the Toner Cartridge conforming to this apparatus. Error 620 : Yellow Error 621 : Magenta Error 622 : Cyan Error 623 : Black
Error 550 551 552 553	Non Recommend-ed Toner %COLOR% Please see HELP for details	Off	Blink	This error indicates that the Toner Cartridge are not conform to this apparatus. This error is cleared by replacing to the Toner Cartridge conforming to this apparatus. Error 550 : Yellow Error 551 : Magenta Error 552 : Cyan Error 553 : Black The engine is confirmed again by cover open/close. And, when the toner cartridges have not been exchanged, it shifts to Warning. And, it is possible to print up to 20.
Error 549	Non Recommend-ed Toner Black Please see HELP for details	Off	Blink	The toner cartridge is out of a standard. Restore by changing it for a right toner cartridge. Only as for the black. Error 549: Black

Code nnn	Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Error 610 611 612 613	Toner Not Installed %COLOR% Please see HELP for details	Off	Blink	The toner cartridge is not installed. Error 610 : Yellow Error 611 : Magenta Error 612 : Cyan Error 613 : Black The supplied starter toner cartridges are installed in consumable image drums. Install the consumable toner cartridges in the consumable image drums. The engine is confirmed again by cover open/close. And, when the toner cartridges have not been exchanged, it shifts to Warning. And, it is possible to print up to 20.
Error 690 691 692 693	Non Recommend-ed Image Drum %COLOR% Please see HELP for details	Off	Blink	This error indicates that the Image Drum are not conform to this apparatus. This error is cleared by replacing to the Image Drum conforming to this apparatus. Error 690 : Yellow Error 691 : Magenta Error 692 : Cyan Error 693 : Black
Error 700 701 702 703	Non Recommend-ed Image Drum %COLOR% Please see HELP for details	Off	Blink	This error indicates that the Image Drum are not conform to this apparatus. This error is cleared by replacing to the Image Drum conforming to this apparatus. Error 700 : Yellow Error 701 : Magenta Error 702 : Cyan Error 703 : Black
Error 704 705 706 707	Non Recommend-ed Image Drum %COLOR% Please see HELP for details	Off	Blink	This error indicates that the Image Drum are not conform to this apparatus. This error is cleared by replacing to the Image Drum conforming to this apparatus. Error 704 : Yellow Error 705 : Magenta Error 706 : Cyan Error 707 : Black
Error 684 685 686 687	Non Recommend-ed Image Drum %COLOR% Please see HELP for details	Off	Blink	This error indicates that the Image Drum are not conform to this apparatus. This error is cleared by replacing to the Image Drum conforming to this apparatus. Error 684 : Yellow Error 685 : Magenta Error 686 : Cyan Error 687 : Black

Code nnn	Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Error 694 695 696 697	Image Drum Not Installed %COLOR% Please see HELP for details	Off	Blink	The image drum unit can not be detected by the signature control system. Error 694 : Yellow Error 695 : Magenta Error 696 : Cyan Error 697 : Black
Error 709	Caution, unknown Consumable detected Go to User Manual "Trouble Shooting" to restore operation	Off	Blink	Unknown Consumable detected. Use a special startup (Push <CANCEL> button after displayed 'PLEASE WAIT' in power on.) to start the printer to on-line, but a history will be recorded.
Error 632	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Additional paper is detected when a paper jam has occurred. Error 632 : Tray2 Cassette %PLACE_NUM%: All point number of jam occurred
Error 633	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Additional paper is detected when a paper jam has occurred. Error 633 : Tray3 Cassette %PLACE_NUM%: All point number of jam occurred
Error 634	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Additional paper is detected when a paper jam has occurred. Error 634 : Tray4 Cassette %PLACE_NUM%: All point number of jam occurred
Error 635	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Additional paper is detected when a paper jam has occurred. Error 635 : Tray5 Cassette %PLACE_NUM%: All point number of jam occurred

Code nnn	Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Error 637	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Additional paper is detected when a paper jam has occurred. Error 637 : J0: Paper Feed Path %PLACE_NUM%: All point number of jam occurred
Error 638	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Additional paper is detected when a paper jam has occurred. Error 638 : J1: Paper Transport Path %PLACE_NUM%: All point number of jam occurred
Error 639 640	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Additional paper is detected when a paper jam has occurred. Error 639 : J2: Paper Exit Path Error 640 : J4: Duplex Entry Path %PLACE_NUM%: All point number of jam occurred
Error 641 642	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Additional paper is detected when a paper jam has occurred. Error 641 : J5: Duplex Reversal Path Error 642 : J3: Duplex Transport Path %PLACE_NUM%: All point number of jam occurred
Error 540 541 542 543	Toner Sensor Error %COLOR% Please see HELP for details	Off	Blink	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 : Yellow Error 541 : Magenta Error 542 : Cyan Error 543 : Black
Error 401	Check Paper Paper Multi Feed %TRAY% Please see HELP for details	Off	Blink	Warns that inappropriate long paper has been fed from the tray. Check whether Multi-feed has happened. Recovery by Cover Open/Close. %TRAY% Tray1 Tray2 Tray3 Tray4 Tray5

Code nnn	Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Error 400	Check Paper Paper Size Error %TRAY% Please see HELP for details	Off	Blink	Inappropriate size paper was fed from a tray. Check the paper in the tray or check for Multiple-feed. Recovery by Cover Open/Close. %TRAY% Tray1 Tray2 Tray3 Tray4 Tray5 MPTray
Error 390	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Paper jam occurred during paper feeding from tray. Error 390 : MP Tray %PLACE_NUM%: All point number of jam occurred
Error 391	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Paper jam occurred during paper feeding from tray. Error 391 : Tray1 %PLACE_NUM%: All point number of jam occurred
Error 392	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Paper jam occurred during paper feeding from tray. Error 392 : Tray2 %PLACE_NUM%: All point number of jam occurred
Error 393	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Paper jam occurred during paper feeding from tray. Error 393 : Tray3 %PLACE_NUM%: All point number of jam occurred
Error 394	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Paper jam occurred during paper feeding from tray. Error 394 : Tray4 %PLACE_NUM%: All point number of jam occurred

Code nnn	Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Error 395	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Paper jam occurred during paper feeding from tray. Error 395 : Tray5 %PLACE_NUM%: All point number of jam occurred
Error 380	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Jam has occurred in paper path. Error 380 : Feed %PLACE_NUM%: All point number of jam occurred
Error 381	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Jam has occurred in paper path. Error 381 : Transport %PLACE_NUM%: All point number of jam occurred
Error 382 383 385	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Jam has occurred in paper path. Error 382 : Exit Error 383 : Duplex Entry Error 385 : Fuser Unit %PLACE_NUM%: All point number of jam occurred
Error 370 371 373	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Jam has occurred nearby DUPLEX unit. Error 370 : Duplex Reversal Error 371 : Duplex Input Error 373 : Multi-feed into Duplex (Duplex Remain Jam) %PLACE_NUM%: All point number of jam occurred
Error 372	Paper jam occurred Paper jam %PLACE_NUM% place(s) Remove the paper Press Help for details	Off	Blink	Jam has occurred nearby DUPLEX unit. Error 372 : Mis-feed from Duplex %PLACE_NUM%: All point number of jam occurred

Code nnn	Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Error 360	Install Duplex Unit Please see HELP for details	Off	Blink	Duplex unit is open (removed). When this error is detected, printing stops.
Error 350 351 352 353	Install New Image Drum Image Drum Life %COLOR% Please see HELP for details	Off	Blink	The life of the image drum (Alarm) Error 350 : Yellow Error 351 : Magenta Error 352 : Cyan Error 353 : Black Warning status takes effect at Cover Open/ Close.
Error 560 561 562 563	Install New Image Drum Image Drum Life %COLOR% Please see HELP for details	Off	Blink	The toner empty error is occurred after the image drum reached its life. Error 560 : Yellow Error 561 : Magenta Error 562 : Cyan Error 563 : Black This is displayed until a user exchanges the image drum.
Error 564 565 566 567	Install New Image Drum Image Drum Life %COLOR% To Exceed the Life, Press Online Button Please see HELP for details	Off	Blink	This error indicates that the life of the Image Drum. The operator can prolong the life temporarily by pressing the Online button. Error 564 : Yellow Error 565 : Magenta Error 566 : Cyan Error 567 : Black
Error 680 681 682 683	Install New Image Drum Printing disabled due to low threshold of Image Drum life. %COLOR% Please see HELP for details	Off	Blink	This error indicates that the life of the Image Drum absolutely. This status is appeared after the end of the prolonged period (see also Error 564 to 567). Error 680 : Yellow Error 681 : Magenta Error 682 : Cyan Error 683 : Black
Error 354	Install New Fuser Unit Fuser Unit Life Please see HELP for details	Off	Blink	This error indicates that the Fuser Unit has reached its life. This is the error displayed based on the counter to indicate that the Fuser Unit 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.

Code nnn	Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Error 355	Install New Belt Unit Belt Unit Life Please see HELP for details	Off	Blink	This error indicates that the Belt Unit 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.
Error 348	Check Fuser Unit Please see HELP for details	Off	Blink	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.
Error 356	Install New Belt Unit Belt Unit Life Please see HELP for details	Off	Blink	This error indicates that waste toner full. Warning status takes effect only once at Cover Open/Close.
Error 544 545 546 547	Check Toner Cartridge Improper Lock Lever Position %COLOR% Please see HELP for details	Off	Blink	This error indicates that no toner is supplied to (is detected in) the printer. This error is possibly caused by installing the toner cartridge with being unlocked with its lock lever, or its protective tape not removed. Error 544 : Yellow Error 545 : Magenta Error 546 : Cyan Error 547 : Black
Error 340 341 342 343	Check Image Drum %COLOR% Please see HELP for details	Off	Blink	The Image Drum is not correctly installed. Error 340 : Yellow Error 341 : Magenta Error 342 : Cyan Error 343 : Black
Error 320	Check Fuser Unit Please see HELP for details	Off	Blink	The Fuser Unit is not correctly installed. Remove and reinstall the Fuser Unit, and check this error be cleared or not.

Code nnn	Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Error 698-01	Non Recommended Fuser Unit Please see HELP for details	Off	Blink	This error indicates that the Fuser Unit are not conform to this apparatus. This error is cleared by replacing to the Fuser Unit conforming to this apparatus.
Error 698-02	Non Recommended Fuser Unit Please see HELP for details	Off	Blink	This error indicates that the Fuser Unit are not conform to this apparatus. This error is cleared by replacing to the Fuser Unit conforming to this apparatus.
Error 698-03	Non Recommended Fuser Unit Please see HELP for details	Off	Blink	This error indicates that the Fuser Unit are not conform to this apparatus. This error is cleared by replacing to the Fuser Unit conforming to this apparatus.
Error 698-04	Non Recommended Fuser Unit Please see HELP for details	Off	Blink	This error indicates that the Fuser Unit are not conform to this apparatus. This error is cleared by replacing to the Fuser Unit conforming to this apparatus.
Error 699	Fuser Unit Not Installed Please see HELP for details	Off	Blink	The Fuser Unit can not be detected by the signature control system. Remove and reinstall the Fuser Unit, and check this error be cleared or not.
Error 330	Check Belt Unit Please see HELP for details	Off	Blink	The Belt Unit is not correctly installed.
Error 688-01	Non Recommended Belt Unit Please see HELP for details	Off	Blink	This error indicates that the Belt Unit are not conform to this apparatus. This error is cleared by replacing to the Belt Unit conforming to this apparatus.
Error 688-02	Non Recommended Belt Unit Please see HELP for details	Off	Blink	This error indicates that the Belt Unit are not conform to this apparatus. This error is cleared by replacing to the Belt Unit conforming to this apparatus.
Error 688-03	Non Recommended Belt Unit Please see HELP for details	Off	Blink	This error indicates that the Belt Unit are not conform to this apparatus. This error is cleared by replacing to the Belt Unit conforming to this apparatus.
Error 688-04	Non Recommended Belt Unit Please see HELP for details	Off	Blink	This error indicates that the Belt Unit are not conform to this apparatus. This error is cleared by replacing to the Belt Unit conforming to this apparatus.
Error 689	Belt Unit Not Installed Please see HELP for details	Off	Blink	The Belt Unit can not be detected by the signature control system. Remove and reinstall the Belt Unit, and check this error be cleared or not.
Error 310 311	%COVER% Open. Please see HELP for details	Off	Blink	The cover is open. Error 310 : Output Tray Error 311 : Front Cover
Error	Wait a Moment Rebooting <n>	Off	On	Rebooting of the controller unit. %CODE% is a decimal value (one digit) and represents the reason to reboot. = 0 … Reboot due to a reason other than the followings. = 1 … Reboot due to PJLCommand. = 2 … Reboot in accordance with a menu change. = 3 … Reboot due to quit operator of PostScript Language. = 4 … reboot by Network Utility (including Web).
Error 698-07	Non Recommended Fuser Unit Please see HELP for details	Off	Blink	Detection of a 110V Fuser Unit installed in a 220V device or a 220V Fuser Unit installed in a 110V device.
Error	Shutting down Please wait. Printer will turn off automatically.	Off	Off	It is shown that a printer is shutting down. Shutdown processing is started when Power button is pressed. After the completion of initialization processing of a printer.

Code nnn	Panel messages	READY / ONLINE Lamp	ATTENTION Lamp	Details
Fatal 126	Power Off and Wait for a while 126:Condensing Error	Off	Blink	A dew is formed. *Fatal Error is not available in national language.
Fatal <nnn>	Power Off/On nnn:Error	Off	Blink	A fatal error occurred. For more information, see "Service Calls List." *Fatal Error is not available in national language. *"Status Code" and "USTATUS Message" can be acquired by MIB.
Fatal <nnn>	Service Call nnn:Error	Off	Blink	A fatal error occurred. For more information, see "Service Calls List." *Fatal Error is not available in national language. *"Status Code" and "USTATUS Message" can be acquired by MIB.
Fatal 70 73 75 203 204 096 231 128 166 168 169	Service Call nnn:Error *	Off	Blink	A fatal error occurred. '*' specifies the detailed error cause. *Fatal Error is not available in national language. *"Status Code" and "USTATUS Message" can be acquired by MIB.
Fatal 002~011 F0C F0D FFE FFF	Power Off/On nnn:Error PC:nnnnnnnn LR:nnnnnnnn FR:nnnnnnnn	Off	Blink	A fatal error occurred. For more information, see "Service Calls List." 'nnnnnnnn' specifies the detailed error cause. *Fatal Error is not available in national language.
Fatal 209	Power Off/On 209:Download Error	Off	Blink	Downloading Media Table to PU has failed. (Related to CustomMediaType.) *Fatal Error is not available in national language. *"Status Code" and "USTATUS Message" can be acquired by MIB.

A-1.2.2 Service call List

Error Code	Display	Cause	Remedial measure
002 003 005	Power Off/On nnn:Error PC:nnnnnnnn LR:nnnnnnnn FR:nnnnnnnn	The Program detects the unauthorized processing.	Record all of the hex that is composite by the each 8 digit that number displayed on LCD is maximum 3, and cycle the power. In the case of this error recurs after cycling power soon, replace the CU/PU board (ME2 PCB).
020	Service call nnn:Error	The CU loader could not detect the CU program.	If this error did not cleared by cycling the power, replace the CU/PU board (ME2 PCB).
030	Service call nnn:Error	Detecting the failure by the RAM operation confirmation.	Replace the device or the CU/PU board (ME2 PCB), in the case of this condition is not cleared after turning on again.
040	Service call nnn:Error	Detecting the failure of the operation confirmation of the EEPROM on the CU board. It is included the failure of the obtaining the FileDescriptor and the shortage of the memory allocation or the remaining the opening.	Replace the device or the CU/PU board (ME2 PCB), in the case of this condition is not cleared after turning on again.
042	Service call nnn:Error	Failing of the initializing as the DOS File System (TrueFFS) at the Flash memory.	Cycle the power and format the Flash memory. In the case of this condition is not cleared after turning on again, replace the CU/PU board (ME2 PCB).
043		The format version of the Flash is not supported by the program.	
049	Service call nnn:Error	The head resolution that supported by CU F/W is not matched with it detected by PU F/W.	Replace to the appropriate resolution head.
050	Service call nnn:Error	Detecting the failure of the LSI of the operator panel controller.	If this error did not cleared by cycling the power, replace the Operator panel PCB (M2S PCB).
052	Power off/on 052:Error	The Image Processor detects the DMA Abort Error.	Replace the CU/PU board (ME2 PCB), in the case of this condition is not cleared after turning on again.
067	Service call nnn:Error	Detecting the connection error between the Sleep Mode Interface Monitoring Program.	In the case of this condition is not cleared after turning on again, replace the CU/PU board (ME2 PCB).
069	Service call nnn:Error	Detecting the error of the NIC Chip.	Replace the CU/PU board (ME2 PCB), in the case of this condition is not cleared after turning on again.
070	Power off/on 070:Error xx	Detecting the error of the PostScript Internal.	Record the address in the case of the LCD displays it, and cycle the power.
072	Power off/on 072:Error	Occurring the communication error between the CU and the PU.	Record the 2 digits number address that is displayed on LCD displays it to lower low and right edge, and cycle the power.
073	Power off/on nnn:Error xxxxxxxx	Detecting the overrun by the video circuit.	Record the error information in the case it is displayed on LCD displays it to lower low and right edge, and cycle the power. And, keep the printed result in occurring the failure. In the case of this condition is not cleared after turning on again, replace the CU/PU board (ME2 PCB).
075	Power off/on nnn:Error xxxxxxxx	Out of the limit range by setting for the video by F/W.	
077	Power off/on 077:Error	Detecting the Decomp Error of the video.	In the case of this condition is not cleared after turning on again, replace the CU/PU board (ME2 PCB).
080	Power off/on nnn:Error	The inappropriate access to the parameter storage by the broken file and etc.	In the case of this condition is not cleared after turning on again, replace the CU/PU board (ME2 PCB).

Error Code	Display	Cause	Remedial measure
098	Service call nnn:Error	The error of the power control board. 01 : Power Control I/F Error (Communication error with the power board.) 02 : Power Control Software Error (The hash check error of the power board.) 03 : Power Control Timer Error (The time out error of the control inside of the power board.) 04 : Power Control Timeout Error 1 (Detecting the failure of the hardware.) 05 : Power Control Timeout Error 2 (Detecting the failure of the signal line / Impossible of stopping for the main power board.) 06 : Power Control Timeout Error 3 (Detecting the failure of the signal line / 5V fuse cut and etc.) 07 : Power Control Timeout Error 4 (Detecting the error of the ASIC operation)	Turn off, and check the conditions of cables connect the between the CU/PU board (ME2 PCB) and the Low-Voltage Power Supply board (56L PCB) are not the open circuit or the correctly connecting. In the case of this condition is not cleared after above checking, replace the Low-Voltage Power Supply PCB (56LPCB).
104	Service call nnn:Error	The error of the writing of the EEPROM is detected in the power on.	In the case of this condition is not cleared after turning on again, replace the CU/PU board (ME2 PCB).
105		The EEPROM is not detected in the power on.	
106		The error is detected at the Engine Control Error.	

Error Code	Display	Cause	Remedial measure
108	Service call nnn:Error xx	The error is detected at the CPU of the engine or the SubComponent. 12 : The Mutual Monitoring error with the power CPU. 13 : Relay Control Error	In the case of this condition is not cleared after turning on again, correspond as following. 12 : Replace the CU/PU board (ME2 PCB) 13 : Turn off, and check the conditions of cables connect the between the CU/PU board (ME2 PCB) and the Low-Voltage Power Supply board (56L PCB) are not the open circuit or the correctly connecting. In the case of above checking result is no problem, replace the Low-Voltage Power Supply PCB (56LPCB).
111	Service call nnn:Error	Detecting of the Duplex Unit for the another apparatus.	Check the unit is conformed with this apparatus. If the unit is conformed with this apparatus and it displays this error, correspond as following. Error 111 : Replace the Duplex unit PCB (GOH-20 PCB) Error 112 to 115 : Replace the 2nd(3rd/4th/5th) Tray PCB (GOH-21 PCB)
112		Detecting of the Tray2 Unit for the another apparatus.	
113		Detecting of the Tray3 Unit for the another apparatus.	
114		Detecting of the Tray4 Unit for the another apparatus.	
115		Detecting of the Tray5 Unit for the another apparatus.	

Error Code	Display	Cause	Remedial measure
118	Service call nnn:Error xx	The not supported unit is detected. Without branch number : Fuser Unit	Detach the Fuser Unit after turning off. If the Fuser Unit matches to this apparatus and it displays this error, replace the Fuser Unit.
121		Detecting the communication error with the high voltage LSI.	Turn off, and check the conditions of cables connect the between the CU/PU board (ME2 PCB) and the High-Voltage Power Supply board (EHV PCB) are not the open circuit or the correctly connecting. In the case of this condition is not cleared after above checking, replace the High-Voltage Power Supply board (EHV PCB).
122		Detecting the abnormality of the low voltage power temperature alarm / the Low voltage power FAN.	Check the normal function of the Low voltage power FAN. In the case of the error for the Low voltage power FAN function: Check the connector connecting is normal or not. In the case of the result is normal, replace the FAN. In the case of this condition is not cleared after above, replace the relay board (MER PCB). In the case of the normal for the Low voltage power FAN function: Check the conditions of cables connect the between the CU/PU board (ME2 PCB) and the Low-Voltage Power Supply board (56L PCB) are not the open circuit or the correctly connecting. In the case of above checking result is no problem, replace the Low-Voltage Power Supply PCB (56LPCB).
123		The sensor is detecting the abnormality of the environmental moisture. Or the moisture sensor is not connected.	Check the conditions of cables connect the between the Environmental sensor PCB (M2H PCB), the Operator panel PCB (M2S PCB) and the CU/PU board (ME2 PCB) are not the open circuit or the correctly connecting. In the case of above checking result is no problem, replace the Environmental sensor PCB (M2H PCB).
124		The sensor is detecting the abnormality of the environmental temperature.	

Error Code	Display	Cause	Remedial measure
126	Power Off and Wait for a while 126:Condensing Error	Detecting the dewing.	Turn off and leave in the room temperature a moment, and turn on again. In the case of this condition is not cleared after above countermeasure, replace the Environmental sensor PCB (M2H PCB).
127	Service call nnn:Error	Detecting the error of the Fuser FAN.	Check the connector connecting of the Fuser FAN is normal or not. In the case of the result is normal, replace the Fuser FAN. In the case of this condition is not cleared after above, replace the High-Voltage Power Supply board (EHV PCB).
128	Service call nnn:Error xx	The error for the cooling FAN error of the PU. (Displaying the factor at the sub number.) 04 : Belt FAN Error 05 : Fuser right side FAN Error 08 : ID motor FAN Error 0C : Duplex FAN Error 12 : Exit right FAN Error 13 : Fuser blasting FAN Error	Check the connector connecting of the each FANs is normal or not. In the case of the result is normal, replace the FAN. In the case of this condition is not cleared after above, replace the board.
131	Service call nnn:Error	The connection of the LED head of the Yellow is not detected.	Turn off, and check the conditions of cables connect the between the CU/PU board (ME2 PCB) and the LED Heads are not the open circuit or the correctly connecting. In the case of this condition is not cleared after above checking, replace the CU/PU board (ME2 PCB).
132		The connection of the LED head of the Magenta is not detected.	
133		The connection of the LED head of the Cyan is not detected.	
134		The connection of the LED head of the Black is not detected.	
136	Service call nnn:Error	Fuser Unit error	In the case of this condition is not cleared after turning on again, replace the Fuser Unit. In the case of this condition is not cleared after above, replace the CU/PU board (ME2 PCB).
142	Service call nnn:Error	The abnormally for the Image Drum Up/Down mechanism is detected.	Check the connecting of the ID Up/Down motor and sensor are normal or not. In the case of the results are normal, replace the CU/PU board (ME2 PCB).

Error Code	Display	Cause	Remedial measure
160	Service call nnn:Error	The Yellow toner sensor error is occurring. (only in Factory mode)	These errors are not able to occur in the user environment. So, in the case of this error occurs, replace the CU/PU board (ME2 PCB). In the case of this condition is not cleared after above, check the state of the Toner Cartridge mounting and its lock lever. And, if these are normal, replace the Toner sensor Assy.
161		The Magenta toner sensor error is occurring. (only in Factory mode)	
162		The Cyan toner sensor error is occurring. (only in Factory mode)	
163		The Black toner sensor error is occurring. (only in Factory mode)	
166	Service call 166:Error xx	Detecting abnormality for the temperature detection state of the power supply 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.	03:If there is a thing blocking up the air hole, to remove it and power OFF/ON. 04:To raise room temperature and power OFF/ON. Common 01 to 04: Power off and check the cable between the CU/PU board (ME2 PCB) and the Low-Voltage Power Supply board (56L PCB). In the case of above checking result is no problem, replace the CU/PU board (ME2 PCB) or Low-Voltage Power Supply PCB (56LPCB).
167	Service call 167:Error	Detecting abnormality for the temperature detection state of the thermistor.	Replace the Fuser Unit. In the case of this condition is not cleared after above, turn off, and check the conditions of cables connect the between the CU/PU board (ME2 PCB) and the relay board (MER PCB), and the between the CU/PU board (ME2 PCB) and the Fuser Unit are not the open circuit or the correctly connecting. In the case of above checking results are no problem, replace the CU/PU board (ME2 PCB).
169	Service call nnn:Error xx	Detecting the abnormality at the upper thermistor. 03 : The upper side thermistor indicates high temperature error.	In the case of this condition is not cleared after turning on again, replace the Fuser Unit.

Error Code	Display	Cause	Remedial measure
172	Service call nnn:Error	The heat roller thermistor is notifying the error of high temperature.	Turn off. And turn on after the temperature is down to the room temperature. In the case of this condition is not cleared, replace the Fuser Unit.
173		The heat roller thermistor is notifying the error of low temperature.	In the case of this condition is not cleared after turning on again, the replace the Fuser Unit.
177		The lower roller thermistor is notifying the error of low temperature.	In the case of this condition is not cleared after turning on again, replace the Fuser Unit.
181	Service call nnn:Error	Detecting the communication error with the Duplex unit.	Check the contact portion of the connector. And, in the case of this condition is not cleared after above, replace the Duplex Unit or Tray.
182		Detecting the communication error with the Tray2.	
183		Detecting the communication error with the Tray3.	
184		Detecting the communication error with the Tray4.	
185		Detecting the communication error with the Tray5.	
190		The System Memory is overflowing.	Cycle the power after record the text displayed at the lower step of the LCD.
203	Service call nnn:Error xx	The CU program failure	Record the character string that is displayed on LCD displays it to lower low, and cycle the power.
204			Cycle the power.
207	Power off/on 207:Error	The CU program failure	Cycle the power.
208	Power off/on 208:Error		
209	Power off/om 209:Download Error	The Media Table Downloading to PU is failed.	Cycle the power.
213	Power off/on 213:Error	The planes printing failure.	Cycle the power.
214	Power off/on 214:Error	The PU program failure is detected by the CU.	Cycle the power.

Error Code	Display	Cause	Remedial measure
230	Service call nnn:Error xx	The toner cartridge information reading sensor could not detected. 01: The ID/TC tag sensor board connection error 02: The Belt/Fuser tag sensor board connection error	In the case of this condition is not cleared after turning on again, check the conditions of FFC connects the between the CU/PU board (ME2 PCB) and the RFID R/W PCB are not the open circuit or the correctly connecting. In the case of this condition is not cleared after above checking, replace the the CU/PU board (ME2 PCB) or the RFID R/W PCB.

Error Code	Display	Cause	Remedial measure
231	Service call 231:Error xx	The abnormality is detected with the toner cartridge information reading sensor. 01 : communication error between the RFID reader and the engine PCB. 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. 21 : Belt/Fuser Tag detection error (multiple tags). 22 : Belt/Fuser Tag version error. 23 : Belt/Fuser Tag communication error.	01 : Check the conditions of cables connect the between the CU/PU board (ME2 PCB) and the RFID R/W PCB are not the open circuit or the correctly connecting. In the case of this condition is not cleared after above checking, replace the CU/PU board (ME2 PCB) or the RFID R/W PCB. 05 to 08, 11 to 14: In the case of the electronic equipment is put on this apparatus, take away it and cycle the power. In the case of this condition is not cleared after above checking, replace the Toner Cartridge or Image Drum for the target color. In the case of this condition is not cleared after above, check, correct connecting and set the antenna cable or the antenna for the target color. In the case of this condition is not cleared after above, replace the RFID R/W PCB. 21 and 22: Replace the Belt Unit or the Fuser Unit. 23 : Remove the belt unit, the fuser unit once and put it on again and confirm whether it is improved. Check the conditions of FFC connect the between the CU/PU board (ME2 PCB) and the relay board (MER PCB), the cables connect the between the CU/PU board (ME2 PCB) and the TAG contact terminal PCB (MET PCB) for the Fuser Unit and the cables connect the between the relay board (MER PCB) and the TAG contact terminal PCB (MET PCB) for the Belt Unit are not the open circuit or the correctly connecting. In the case of these conditions are not cleared after above checking, replace the Belt Unit or Fuser Unit. In the case of these conditions are not cleared after above checking, replace the CU/PU board (ME2 PCB).

Error Code	Display	Cause	Remedial measure
232	Service call 232:Error	Same color IDs are detected several.	In the case of this condition is not cleared after turning on again, check the same color IDs are mounted on this apparatus and replace these IDs.
242	Service call nnn:Error	Hardware error for the FLASH Memory of the Option Tray2	In the case of this condition is not cleared after turning on again, replace the Option Tray.
243		Hardware error for the FLASH Memory of the Option Tray3	
244		Hardware error for the FLASH Memory of the Option Tray4	
245		Hardware error for the FLASH Memory of the Option Tray5	
250	Power off/on 250:Error	Secure authentication printing; Detecting the error of the file in deleting / checking the file.	Replace the device or the CU/PU board (ME2 PCB), in the case of this condition is not cleared after turning on again.
251	Service call nnn:Error	Secure authentication printing; Detecting the error of the file in deleting / checking.	Replace the device or the CU/PU board (ME2 PCB), in the case of this condition is not cleared after turning on again.

Error Code	Display	Cause	Remedial measure
260	Service Call nnn:Error	Heater thermistor error	In the case of this condition is not cleared after cycling power again, replace the Fuser Unit. In the case of this condition is not cleared after above, turn off and check the conditions of cables connect the between the CU/PU board (ME2 PCB) and the relay board (MER PCB), and the between the CU/PU board (ME2 PCB) and the Fuser Unit are not the open circuit or the correctly connecting. In the case of above checking result is no problem, replace the CU/PU board (ME2 PCB) or the relay board (MER PCB).
261		Heater side1 thermistor error (L)	
262		Heater side2 thermistor error (L)	
263		Heater side1 thermistor error (R)	
264		Heater side2 thermistor error (R)	
265		Lower1 thermistor error (L)	
266		Lower2 thermistor error (L)	
267		Lower3 thermistor error (L)	
268		Lower1 thermistor error (R)	
269		Lower2 thermistor error (R)	
270		Lower3 thermistor error (R)	
271		Center NC sensor detecting error	
272		Center NC sensor compensating error	
273		Center NC sensor temperature after compensated error	
274		Detecting the error of the Fuser Unit cover temperature detecting thermistor.	In the case of this condition is not cleared after turning on again, turn off and check the conditions of cables connect the between the CU/PU board (ME2 PCB) and the relay board (MER PCB) are not the open circuit or the correctly connecting. In the case of above checking result is no problem, replace the CU/PU board (ME2 PCB) or the relay board (MER PCB).

Error Code	Display	Cause	Remedial measure
901	Power off/on nnn:Error	Error of the circuit shorting of the belt thermistor. (supposes that the inferior thermistor. over than 120 ℃ .)	In the case of this condition is not cleared after turning on again, turn off and check the conditions of the belt thermistor cables connect the between the CU/PU board (ME2 PCB) and the High-Voltage Power Supply board (EHV PCB) are not the open circuit or the correctly connecting. In the case of these conditions are not cleared after above checking, replace the belt thermistor.
902		Error of the circuit opening of the belt thermistor. (supposes that the inferior thermistor or the connection mistaking. lower than -10 ℃ .)	
903		Error of high temperature of the belt thermistor. (supposes that over than 70 ℃ .)	
904		Error of low temperature of the belt thermistor. (supposes that lower than 0 ℃ .)	
918		Detecting abnormality of FAN-0 for the Duplex Unit.	In the case of this condition is not cleared after cycling power, replace the CU/PU board (ME2 PCB).
919		Detecting the abnormal current value at the 24V power of the Duplex Unit.	
920		Detecting the inferior rotating of the Drum. (Yellow)	
921		Detecting the inferior rotating of the Drum. (Magenta)	
922		Detecting the inferior rotating of the Drum. (Cyan)	
923		Detecting the inferior rotating of the Drum. (Black)	
928		Detecting the inferior rotating of the Fuser motor.	
929		Detecting the inferior rotating of the waste toner transporting motor.	
931		Detecting abnormality of the clock frequency of the Duplex Unit.	
933		Detecting abnormality of the clock frequency of the Option Tray2.	

Error Code	Display	Cause	Remedial measure
934	Power off/on nnn:Error	Detecting abnormality of the clock frequency of the Option Tray3.	
935		Detecting abnormality of the clock frequency of the Option Tray4.	
936		Detecting abnormality of the clock frequency of the Option Tray5.	
941		The watchdog timer error is detected.	
942		The undefined interrupt is detected.	
943		The CPU of the PU is runaway.	
944		Accessing to the Dcon is failing.	
949		The read value as the F-Tag expiration date is out of expiration.	
950		The F-Tag expiration date information of the PU-EEP is abnormal.	
951		Failure of the color density sensor or the black density sensor.	In the case of this condition is not cleared after cycling power, perform the test of the shutter open/close by using [self-diagnostic mode] - [Motor and clutch test] - [REGIST SHUTTER]. In the case of these conditions are not cleared after above checking, check the conditions of cables connect the between the Color Density Sensor PCB (2TC PCB) and the relay board (MER PCB) and replace the Color Density Sensor PCB (2TC PCB).
952		Failure of opening the density sensor shutter	

Error Code	Display	Cause	Remedial measure
983	Service call nnn:Error	Same color Toner Cartridges are detected several.	Replace to the correct color Toner/ID.
984		Detecting the non-supported format tag at the K toner position.	Replace to the regular Toner.
985		Detecting the non-supported format tag at the Y toner position.	Replace to the regular Toner.
986		Detecting the non-supported format tag at the M toner position.	Replace to the regular Toner.
987		Detecting the non-supported format tag at the C toner position.	Replace to the regular Toner.
0xFFE 0xFFF	Power Off/On nnn:Error PC:nnnnnnnn LR:nnnnnnnn FR:nnnnnnnn	The CPU detects the wrong address reference.	Record the hex that is composite by the 8 digits that displayed on LCD, and cycle the power. In the case of this error recurs after cycling power soon , the maintenance is need by the customer engineer.

Note! Service calls 168 error, 171 error, 175 error and 904 error; These errors can occur when the printer temperature is below 0 ˚C. Turn on the power again after the printer temperature has increased.

A-1.2.3 Troubleshooting the abnormal images

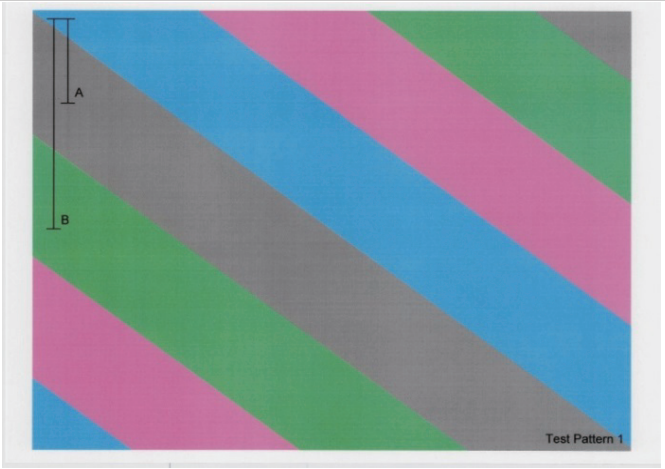
Search and deal for the cause with the printed result and Table A-1-1 in the case of the abnormal images were printed.

The cause of the abnormal images can be searched from the printed result and the test pattern. The test pattern has been stored in the apparatus.

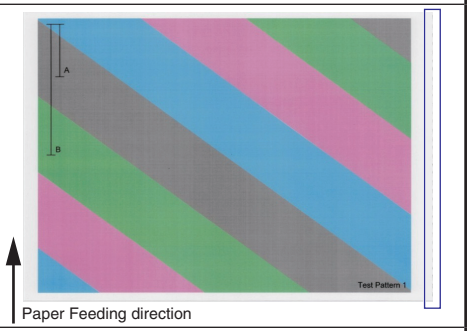
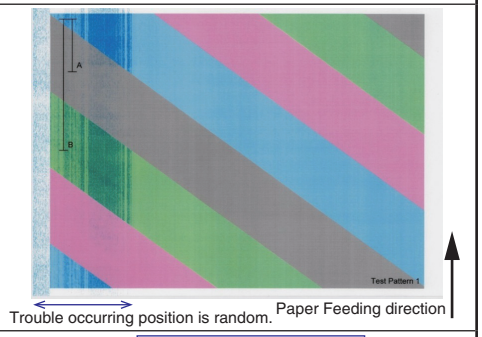
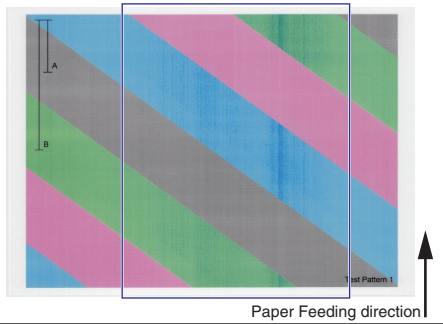
< The method of the test pattern printing from the operator panel>

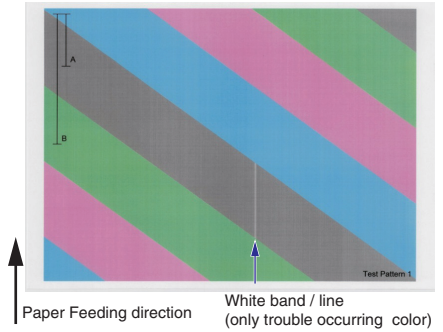
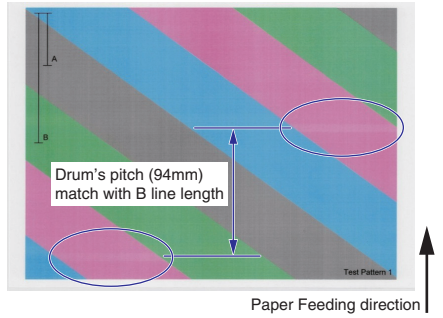
Select [Print Information] - [CMYK TEST 1] - [Execute] with the operator panel.

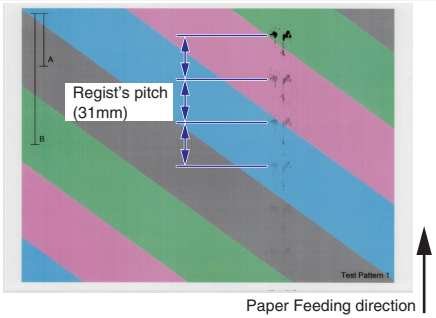
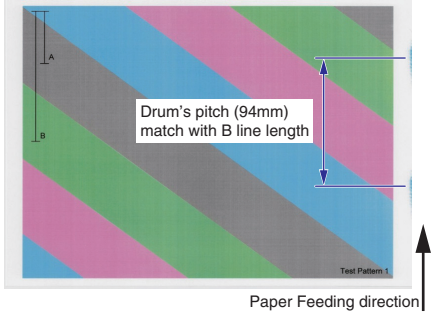
The requirement of the printing the test pattern is the following table.
Set the tray and paper in accordance with it, and print.

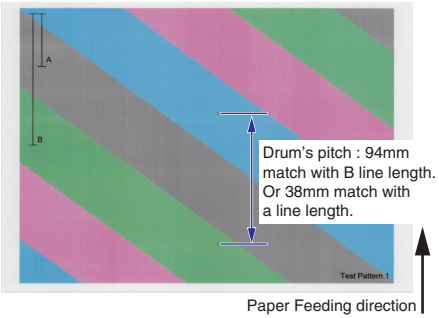
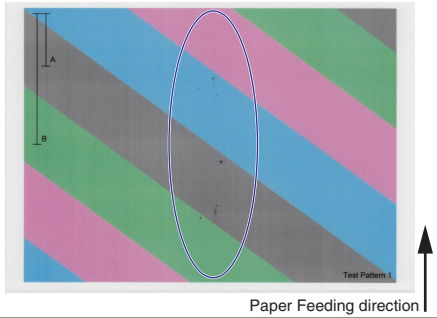
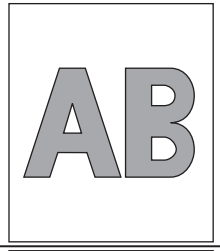
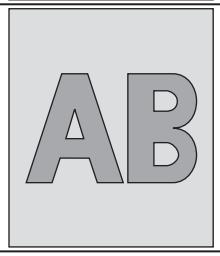
Test pattern	
Paper size	A4 LEF
Media Type	Plain paper
Media Weight	Medium
Paper feed tray	Multi Purpose Tray

<Table A-1-1>

No.	Detail of the trouble	Deal	Example of the Printed Result
1	**Color band / line in vertical direction for the paper feeding direction**		
1	The color band / line appeared at the paper edge.	(1-1)	
2	The color band / line of the trouble occurred		
	(e.g.1) The color band / line appeared at entirely with white back-ground.	(1-2)	
	(e.g.2) The color band / line appeared to the paper feeding direction.		

No.	Detail of the trouble	Deal	Example of the Printed Result
2	**Color band / line and white band / line in vertical direction for the paper feeding direction**		
1	The plural lines therof line width are about 1mm probable ap-pear.	(2-1)	
2	The white band / line appeared.	(2-2)	
3	**Color band or line as hori-zontal direction for the paper feeding direction**		
1	The color band / line printed to the horizontal direction with the 94mm pitch.	(3-1)	

No.	Detail of the trouble	Deal	Example of the Printed Result
4	**Printing with smear**		
1	Smearing to the vertical direction (the pitch is 31mm)	(4-1)	
2	Smearing to the vertical direction (the pitch is 94mm)	(4-2)	

No.	Detail of the trouble	Deal	Example of the Printed Result
5	**Printing with dots to the vertical direction.**		
1	The dots pitch is 94mm or 38mm.	(5-1)	
2	The dot printed at random as the toner dispersed.	(5-2)	
6	**Color has faded-out and blurred entirely.**		
1	Color has faded-out and blurred entirely.	(6-1)	
7	**Background is dirty.**		
1	Background is dirty. (Partial)	(7-1)	
2	Background is dirty. (Overall)	(7-2)	

No.	Detail of the trouble	Deal	Example of the Printed Result
8	**White print**		
1	White print over entire page	(8-1)	
9	**Cyclic abnormalities**		
1	Cyclic abnormality occurs for the paper feeding direction.	(9-1)	
10	**Significant color misregistration**		
1	Color misregistration occurs	(10-1)	
2	Thought REG ADJUST TEST of engine maintenance function results ok, color misregistration occurs.	(10-2)	
11	**Solid black printing**		
1	Solid black printing over the whole page	(11-1)	
12	**Getting only monochrome printing or no printing**		
1	Erroneous setting of the specific color print menu	(12-1)	
13	**White spot on the printing**		
1	The white spot printed at random	(13-1)	

A-1.2.3.(1) Color band / line in vertical direction of printing as the paper feeding direction

(1-1) The color band / line appeared at the paper edge.

Check item	Check work	Actions to be taken at NG
(1-1-1) State of the Paper Guide		
Paper Guide	Check the set position of the paper guide for the paper cassette.	Correct the position of the paper in the case of the paper is set to be biased to left or right side.
(1-1-2) State of the ID Unit		
ID Unit	Check the printing after replacing the ID Unit	Replace the ID Unit

(1-2) The color band / line of the trouble occurred

Check item	Check work	Actions to be taken at NG
(1-2-1) Trouble occurred toner		
Remain of the toner	Whether the OP panel is or not displaying "Toner low" or "Toner Empty" for the trouble occurring color.	Replace the trouble occurring toner cartridge to new one.
(1-2-2) SMR Setting		
SMR Setting	Decrement the SMR Setting. [Menus]-[Print Adjust]-[SMR Setting]-[*Color] *Color : Cyan, Magenta, Yellow, Black	If the trouble is not cleared by the SMR Setting changed, replace the ID Unit. *: Reset to '0' in the case of the ID unit replacing.

A-1.2.3.(2) Color band / line and white band / line in vertical direction of printing as the paper feeding direction

(2-1) Cause by LED head

Check item	Check work	Actions to be taken at NG
(2-1-1) State of the LED head		
LED head	Check if surface of the lens of the LED head is stained or not by dust or remains.	Remove the dust or remains and clean the lens.
(2-1-2) State of the ID Unit		
ID Unit	Check if the light shading film is stained or not by the dust.	Remove and wipe the dust

(2-2) Only the trouble occurred color band / line appeared to the cross direction as the vertical direction of the paper feeding direction.

Check item	Check work	Actions to be taken at NG
(2-2-1) State of the LED head		
LED head	Check if surface of the lens of the LED head is stained or not by dust or remains.	Remove the dust or remains and clean the lens.
(2-2-2) State of the ID Unit		
ID Unit	Check if the light shading film is stained or not by the dust.	Remove and wipe the dust
(2-2-3) ID unit condition		
Filming of the ID unit	Is print attempted without toner?	Replace toner cartridge with new one. If replacement are not solve the problem, replace the ID unit.
(2-2-4) Condition of paper transporting path		
Paper transporting path	Check that any burr that may scatter the un-fused toner on the paper transporting path are not exist.	Remove the burr.

A-1.2.3.(3) Color band or line as horizontal direction for the paper feeding direction

(3-1) The color band / line printed to the horizontal direction with the 94mm pitch.

Check item	Check work	Actions to be taken at NG
(3-1-1) State of the ID Unit		
ID Unit	Wether the ID Unit had been left or not to out of the apparatus.	Leave the ID Unit in the apparatus for a long interval. Replace the ID Unit in the case of the trouble is not solved after it left.

A-1.2.3.(4) Printing with smear

(4-1) Smearing to the vertical direction (the pitch is 31mm)

Check item	Check work	Actions to be taken at NG
(4-1-1) State of the regist roller		
Regist roller	Check the difference of the trouble reappearance between the Tray1 and the MPT.	Clean the regist roller of the trouble reappearing tray.

(4-2) Smearing to the vertical direction (the pitch is 94mm)

Check item	Check work	Actions to be taken at NG
(4-2-1) State of the ID Unit		
Life of the ID Unit	Whether the OP panel is or not displaying "Image Drum Near Life" or "ID Unit life".	Replace the new ID Unit.

A-1.2.3.(5) Printing with dots to the vertical direction

(5-1) The dots pitch is 94mm or 38mm.

Check item	Check work	Actions to be taken at NG
(5-1-1) The dots pitch		
The dots pitch is 94mm (It matches with the B line length printed to left-upper on the test pattern)	Check if the photosensitive drum of the ID Unit is stained or not by dust or remains.	Remove the dust or remains and clean the photosensitive. If it are not solve the trouble, replace the ID Unit.
	Check if the surface of the belt in the Fuser Unit is stained or not by dust or remains.	Remove the dust or remains. If it are not solve the trouble, re-place to the new Fuser Unit.
The dots pitch is 38mm (It matches with the A line length printed to left-upper on the test pattern)	(It possible that the charge roller is stained by dust.)* * Directly checking it is not able to perform.	Replace to the new ID Unit.

(5-2) The dot printed at random as the toner dispersed.

Check item	Check work	Actions to be taken at NG
(5-2-1) State of the paper dust		
Under the ID Unit	Whether the toner has dropping or not under the ID Unit.	Replace to the new ID Unit. Require the customer to wield well the paper before setting the paper.

A-1.2.3.(6)Color has faded-out and blurred entirely.

(6-1) Color are faded-out and blurred.

Check item	Check work	Actions to be taken at NG
(6-1-1) Toner		
Remaining amount of toner	Check if the message "Prepare toner replacement." or "Replace the toner." displays 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.
(6-1-2) 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.
(6-1-3) 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 A-1-2.)	Replace the ID Unit or correct the high voltage terminal.
Transfer unit terminal	Check that the high voltage terminal of the Trans-fer unit is contacting with the Contact Assembly normally by visual inspection.	Replace the Transfer unit or correct the high voltage terminal.
(6-1-4) 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 are 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.

A-1.2.3.(7)Background is dirtyt.

(7-1) Background is dirty. (Partial)

Check item		Check work	Actions to be taken at NG
(7-1-1) Fuser Unit			
	Offset toner of the Fuser Unit	Check the media setting matched with printed media.	Reset to the media setting to the printer media.
		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.

(7-2) Background is dirty. (Overall)

Check item		Check work	Actions to be taken at NG
(7-2-1) 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.
(7-2-2) 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 A-1-2.)	Replace the ID unit or correct the high voltage terminal.

A-1.2.3.(8)White print

(8-1) White print over entire page

Check item		Check work	Actions to be taken at NG
(8-1-1) Toner condition			
	Remaining amount of toner	Confirm that sufficient amount of toner remains inside the ID unit.	Replace the toner cartridge.
(8-1-2) 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.
	Fuse on the CU/PU board	Measure resistance of related the LED Heads. 1Ω or less: Normal Higher than 1Ω: NG	Replace the CU/PU board
(8-1-3) 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 A-1-2.)	Replace the ID unit or correct the high voltage terminal.

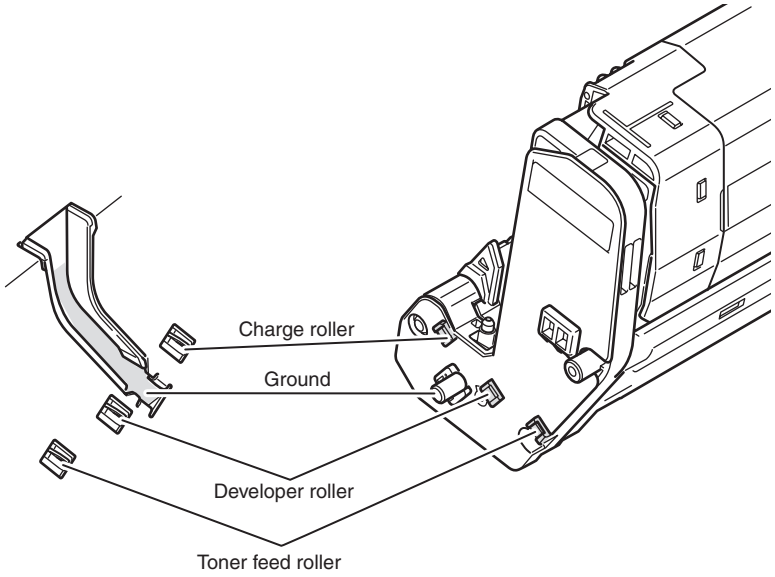


Figure A-1-2

A-1.2.3.(9)Cyclic abnormalities

(9-1) Cyclic abnormality occurs for the paper feeding direction.

Check item		Check work	Actions to be taken at NG
(9-1-1) Cycle			
	Image Drum	Check that the cycle is 94 mm.	Replace the ID Unit
	Fuser Unit	Check that the cycle is 94 mm.	Replace the Fuser Unit
	Transfer roller	Check that the cycle is 50 mm.	Replace the Belt Unit
	Toner feed roller	Check that the cycle is 58 mm.	Replace the ID Unit
	Developing roller	Check that the cycle is 40 mm.	Replace the ID Unit
	Charge roller	Check that the cycle is 37 mm.	Replace the ID Unit
	Regist roller	Check that the cycle is 31 mm.	Creaning the regist roller

A-1.2.3.(10) Significant color misregistration

(10-1) Color misregistration occurs.

Check item		Check work	Actions to be taken at NG
(10-1-1) Result of color registration error correction			
	Color registration error correction time (If a machine 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.
(10-1-2) Toner			
	Remaining amount of toner	Check if the message “Prepare toner replacement.” or “Replace the toner.” displays or not	Replace toner cartridge with new one.
(10-1-3) Color registration sensor			
	Sensor is dirty	Is toner or paper dust attached to the sensor?	Clean the sensor to remove stain
(10-1-4) Color registration sensor shutter			
	Shutter operation is faulty	Check the shutter operation by the self-diagnostic mode	Replace the shutter or tune the mechanism

(10-2) Thought REG ADJUST TEST of engine maintenance function results ok, color misregistration occurs.

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

A-1.2.3.(11) Solid black printing.

(11-1) Solid black printing over the whole page

Check item		Check work	Actions to be taken at NG
(11-1-1) High voltage contacting condition			
	CH terminal	Check that the terminal coming from the machine 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 machine 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. For to the contact position of ID unit, refer to refer to the [Information 2 : ID contact positions] in the maintenance manual of the machine to be repaired. (e.g. : Figure A-1-2)	Replace the ID unit or replace the high voltage board or correct the high voltage terminal.
(11-1-2) 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.

A-1.2.3.(12) Getting only monochrome printing or no printing

(12-1) Erroneous setting of the specific color print menu

Check item	Check work	Actions to be taken at NG
(12-1-1) Status of specific color print menu		
Admin Setup item	Check if the set value item of “Process Setup” of [Other Setup]-[Process Setup] is the setting of [Admin Setup].	Setting alteration for “Full Color”

A-1.2.3.(13) White spot on the printing

(13-1) The white spot printed at random

Check item	Check work	Actions to be taken at NG
(13-1-1) State of the paper feed roller		
Paper feed roller	Check if the paper feed roller is stained or not by dust remains.	Clean the paper feed roller.
(13-1-2) State of the regist roller		
Regist roller	Check if the regist roller is stained or not by dust remains.	Clean the regist roller.
(13-1-3) State of the print media		
Print media	Check if the surface of print media is stained or not dust remains.	Remove and wipe the dust.

A-1.2.4 Network troubleshooting

(1) Print cannot be activated from Utilities.

Check item	Check work	Action to be taken at NG
(1) Check the LINK lamp		
Check if the LINK lamp (green) is illuminating or not.	Check if the HUB and a printer are connected normally. (Check that the network cable is connected normally.)	Re-connect the network cable normally.
	Confirm that the straight network cable is being used.	Replace the cable with the straight cable.
	Make an attempt to change connection of the network cable to other port of a HUB.	Try to change the HUB.
(2) Check contents of the network information.		
Confirm the IP address, Subnet mask and Gateway address.	Confirm the IP address, Subnet mask and Gateway address that are printed on the network information.	Set the IP address, Subnet mask and Gateway address normally.
(3) Check if communication is possible or not through network		
Confirm if the Ping command can be sent or not from a PC to a printer.	Confirm if correct reply is returned from a printer to a PC when the PC sends the Ping to a printer.	Set the IP address, Subnet mask and Gateway address normally.
(4) Check the Utilities.		
Check setting of the OKI LPR Utilities.	Check the setting items of the OKI LPR Utilities.	Set the OKI LPR Utilities setting items correctly.
(5) Check the following from an OS standard port		
Confirm the standard LPR port of the WINDOWS standard.	Set the standard LPR port of the WINDOWS standard, and confirm if printing can be performed or not.	Set the standard LPR port of the WINDOWS standard correctly.

A-1.2.5 Wireless Troubleshooting

Refer to the [User's Manual] - [Troubleshooting] - [Network Connection Problems] for to the detail.

(1) Cannot print through Wireless Network.

Confirmation Items	Confirmation Tasks	Action at NG
(1) Check Network Connection setting.		
Check 'Wireless' (Infrastructure) is set to 'Enable'.	Print out the network information. Check 'Wireless' (Infrastructure) is set to 'Enable'.	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.

A-2. 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.

A-2.1 System maintenance menu

A-2.1.1 For maintenance personnel

Note! This menu is not disclosed to the end users.

Step of display for Service Menu	Initial Password	Note
This menu is activated by holding down [BACK], [ENTER] and [ONLINE] buttons at the apparatus status in standby and then enter the password.	000000	

For the setting items, refer to following tables.

Category	Item (1st Line)	Value (2nd Line)	DF	Functions
System Maintenance	Enter Password	**********	000 000	Enter a password to enter System Maintenance menu. The default value is "000000" From 6 to 12 digits of alphanumeric characters to input.
	Save Syslog	Execute	-	Save the network communication log(syslog) to nonvolatile memory
	Print Syslog	Execute	-	Print the network communication log(syslog)
	Condition Log size	**20** 50 100 500	*	Sets the number of errors per CSV error log to be returned using an HTTP. Sends back CSV error logs containing errors subsequent to the latest error by the number that is set with this menu. Default: 20 errors
	Adminpassword Reset	Execute	-	Resetting the administrator password to the factory default value "123456". Display the following confirmation message when push the [ENTER] button. ARE YOU SURE? YES/NO When NO is chosen, return to previous menu indication. When YES is chosen, execute initialization.
	New Parts Keep Mode	Execute	-	Check for the operation while changing the supplies during keeping the power ON. The check mode will finish and invalid if turning the power ON.
	Engine Status	Execute	-	Prints engine information.
	Engine Diag Mode		-	Enters self-diagnosis mode of the engine.
	Power Save	**Enable** Disable	*	Sets Enable/Disable of Power Save Mode.
	Sleep	**Enable** Disable	*	Sets Enable/Disable of Deep Sleep Mode.

Category	Item (1st Line)		Value (2nd Line)	DF	Functions
System Maintenance	Change Password				Displays menus to change a password.
		New Password	**********	-	Sets a new password to enter "System Maintenance" menu From 6 to 12 digits of alphanumeric characters can be enter.
		Verify Password	**********	-	Input the new password to enter "System Maintenance" menu which is set by "New Password" for confirmation. From 6 to 12 digits of alphanumeric characters can be enter.

A-2.2 Adjustment and Information acquisition

A-2.2.1 Maintenance Utility

The adjustments described in table A-2-1 should be made by using Maintenance Utility. Details on the utility are as follows:

(1) Maintenance Utility operation manuals:
42678823FU01 Rev.8 (Version 3.1.0) or higher (Japanese) Note6)
42678823FU02 Rev.8 (Version 3.1.0) or higher (English) Note6)

(2) Maintenance Utility program:

Applicable operating system	File name	Part number
Win 7 / 8 / 8.1 / 10	42678823FW01.zip	42678823FW01 Rev.8 (Version 3.1.0) or higher Note6)

Table A-2-1 Maintenance Utility Adjustment Items

No.	Item	Adjustment	Panel operation (section in this manual)
1	Board Replacement	Copies the information from the EEPROM on the CU/PU board. When it is necessary to change the other CU/PU board for maintenance, to use this function.	Unavailable
2	Send File	Transmits a specified file.	Unavailable
3	Migrate setting	Copy any setting item in the apparatus at other apparatus Refer to table A-2-2	Unavailable
4	Serial number setting	Change of the serial number of the CU/PU part and change the serial number choice and output mode	Unavailable
5	FUSE KEEP Mode	Shift to FUSE KEEP mode of the apparatus.	Unavailable
6	Network log storage	Store the network log of the apparatus in a file.	Unavailable
7	PU log storage	Store the PU log of the apparatus in a file.	Unavailable
8	PU maintenance log storage	Stores self-diagnosis log files of printer paper running system.	Unavailable
9	Local Print Data storage	Stores files of local print data	Perform local printing (refer to System Specification

Note) The apparatus and maintenance board are given an individual MAC address.
It is different from the former MAC address, when replace the apparatus or board. Therefore it may not print it depending on user environment.
Tell that an MAC address is changed before work to a user and work, and, please convey a new MAC address to a user after work, if necessary.
Because give an individual MAC address to Apparatus and maintenance board when the renewal of the MAC address is required by a user, please make a reply of the renewal being impossible.

TableA-2-2 Transfer item of the setting

The item which is selectable by the "Migrate setting", and the value which is possible to transfer, refer to the following figure.

Display item	Value which is possible to transfer
Supplies counter Note5)	Drum counter
	Toner counter
	Waste toner counter
	Belt counter
	Fuser counter
Print counter	Total page
	color / mono print number of sheet
	The paper feed number of sheets from each tray
Network information	Network information Note1)
	Web setting Note1)
Serial number	Serial number
Menu Settings	Menu setting value Note1)
OpenAPI setting Note2)	Security, JobLog, Quota, ID
Usage Report Note3)	Usage Report
Toner Coverage	Toner Coverage
User media type	Custom media information

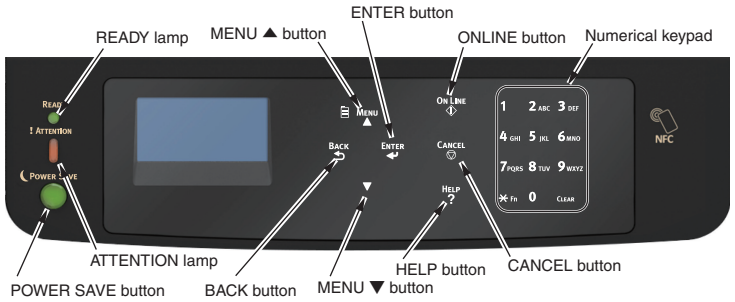
Note1) There is the value which is not transfered.
Note2) Use Configuration Tool to transfer the item.
Note3) See the notes on the Maintenance Utility operation manual.
Note4) The first power on date information of the apparatus is transfered by "Board Replacement".
Note5) The hopping roller counter (Tray1, MPT) is transfered by "Board Replacement". It can not be transfered by "Migrate Setting".
Note6) Version 3.1.1 can't be usable(different support model).

A-2.3 Self-diagnostic mode

This section describes LEVEL 0 and LEVEL 1.

A-2.3.1 Menu List by Operator panel operating

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



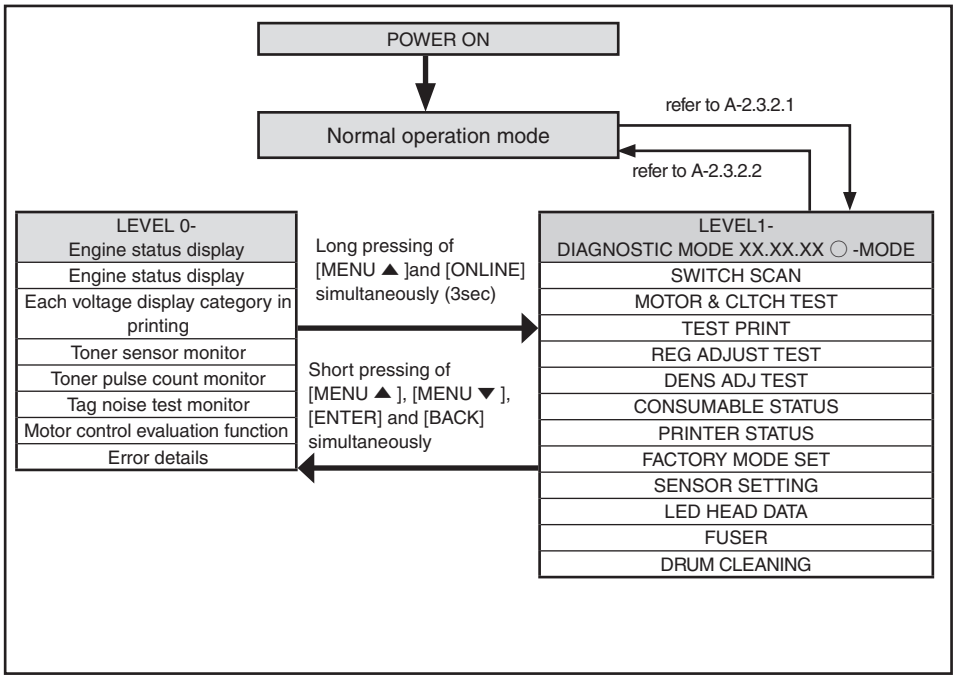
Note! Do not enter to the Self-diagnostic mode in printing or stopping the printing by occurring any errors.

Additionally, do not send the printing data to the apparatus in the case of the status of the apparatus is the self-diagnostic mode. Because, after exiting the self-diagnostic mode, it possibly cause the state of printing restart failed or the Fatal Error.

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 [MENU ▲] or [MENU ▼] button to display the menu option shown in a non-shaded area XXXXX .

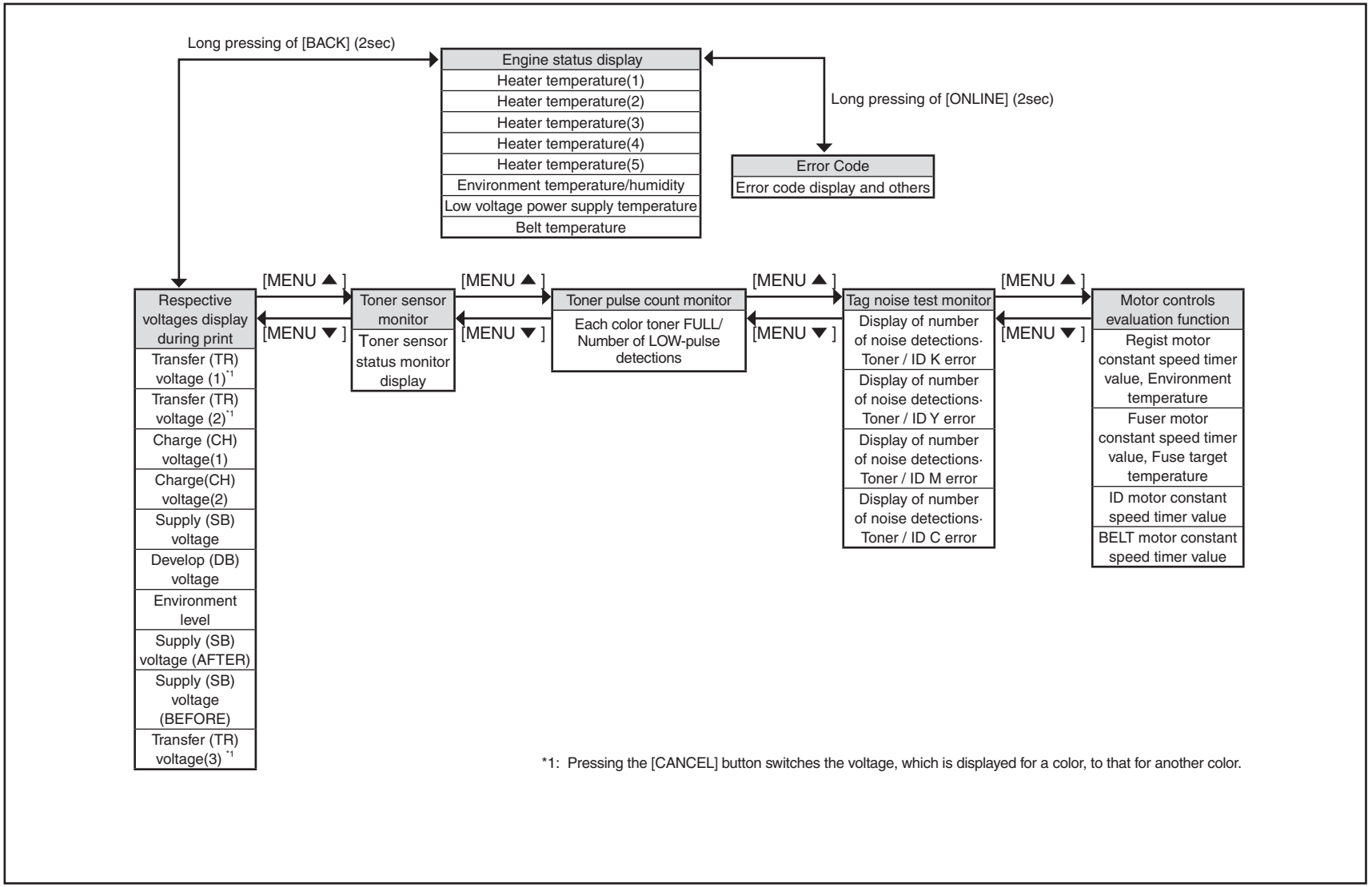


LEVEL0

(1) Menu option display switching

XXXX Menu items can be selected by long pressing of [BACK] or [ONLINE] button, or by short pressing of [MENU ▲] or [MENU ▼] button.

XXXX Menu items can be selected by pressing either [MENU ▲] or [MENU ▼] button.
Long pressing of [BACK] button returns the screen to the menu item selection screen.

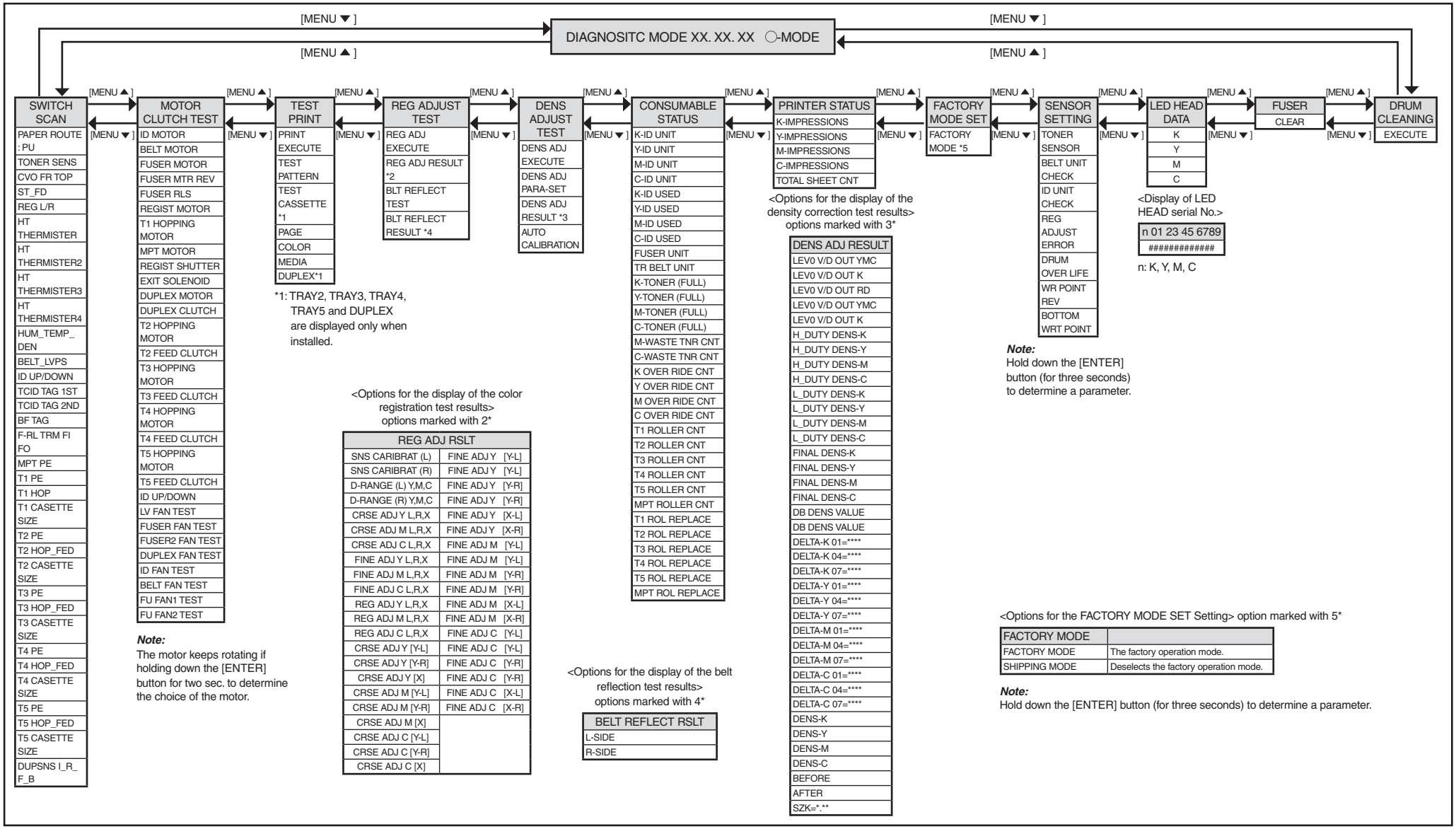


LEVEL1

Use the [MENU ▲] or [MENU ▼] button to select the option shown in a shaded area (XXXXX), and press [ENTER] to execute the option.

Use [ENTER] or [BACK] to display the option shown in a non-shaded area (XXXXX), and use the [MENU ▲] or [MENU ▼] button to select the option.

Press [ENTER] to execute a test, and [BACK] to end the test.



A-2.3.2 Ordinary self-diagnostic mode (level 1)

Menu items of the ordinary self-diagnostic mode are shown below.

No.	Item	Self-diagnostic menu	Adjustment contents
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 print execution	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 correction test	DENS ADJ TEST	Judges the density adjustment mechanism as pass or fail.
6	Consumable item counter display	CONSUMABLE STATUS	Displays the usage of a consumable.
7	Consumable item accumulative counter display	PRINTER STATUS	Displays the life counter of a consumable.
8	Factory/Shipping mode selection	FACTORY MODE SET	Switches between Factory and Shipping modes
9	Engine parameter setting	SENSOR SETTING	Sets whether to enable or disable error detection performed by each sensor.
10	Display of LED head serial number	LED HEAD DATA	Displays the serial number of LED head data.
11	Fuser Unit information setting	FUSER	Must not be used.
12	Drum Manual Cleaning	DRUM CLEANING	Executes manual cleaning of a drum surface

A-2.3.2.1 Entering self-diagnostic mode (level 1)

Note! Password is required to enter the system maintenance menu mode.

1. Enter the system maintenance menu. (refer to A-2.1.1.)
2. Press the [MENU ▲] button or [MENU ▼] button several times until the message "ENGINE DIAG MODE" is selected. Then, press the [ENTER] button to display "DIAGNOSTIC MODE".
3. XXX.XX.XX of the message "DIAGNOSTIC MODE XX.XX.XX" that is displayed on the LCD display area indicates the PU firmware version number. The FACTORY WORKING MODE setup value is displayed in the right of the lower row. S-MODE of "SHIPPING" is displayed normally.
4. Press the [MENU ▲] button or [MENU ▼] button to advance to the desired step of each self-diagnostic menu. (The menu items rotate when either the [MENU▲] button or [MENU ▼] button is pressed.)

A-2.3.2.2 Exiting self-diagnostic mode

1. Press the [BACK] button when "DIAGNOSTIC MODE" is displayed.

A-2.3.2.3 Switch scan test

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

1. Enter the self-diagnostic mode (level 1) and press the [MENU ▲], [MENU ▼] button until "SWITCH SCAN" is displayed in the upper row of the display area. (Pressing the [MENU ▲] button increments the test item and pressing the [MENU ▼] button decrements the test item.)
   Then press the [ENTER] button.

SWITCH SCAN

2. Press either the [MENU ▲] or [MENU ▼] button until the desired menu item corresponding to the unit to be tested in Table A-2-3 is displayed in the lower row of the display area. (Pressing the [MENU ▲] button increments the test item and pressing the [MENU ▼] button decrements the test item.)
3. Pressing the [ENTER] button starts the test. Name and present status of the corresponding unit are displayed.

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

   Activate the respective units. (Figure A-2-1) Status of the respective units are displayed on the corresponding areas of the LCD display. (Display changes depending on each sensor. Refer to Table A-2-3 for details.)

4. Press the [CANCEL] button to return to the status of step 2.
5. Repeat steps 2 to 4 as required.
6. Press the [BACK] button to exit the test. (Returns to the status of step 1.)

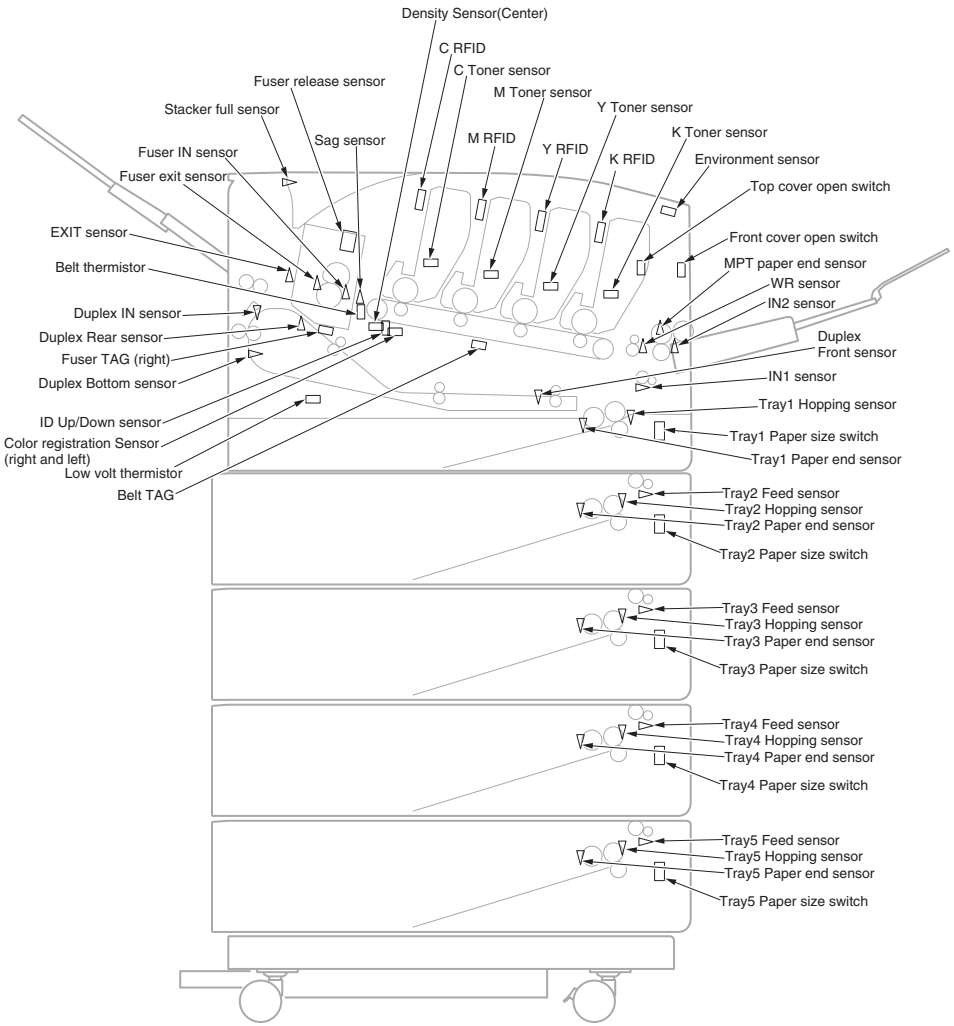


Figure A-2-1 Switch and sensor location diagram

Table A-2-3 SWITCH SCAN details

Upper display	1		2		3		4	
	Detail	Lower display	Detail	Lower display	Detail	Lower display	Detail	Lower display
PAPER ROUTE : PU	IN1 sensor	H:No paper exists. L:Paper exists.	IN2 sensor	H:No paper exists. L:Paper exists.	WR sensor	H:No paper exists. L:Paper exists.	EXIT1 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	Front Cover open switch	H:Close L:Open	Top cover open switch *1	H:Close L:Open				
ST_FD	Stacker full sensor	H:No paper exists. L:Paper exists.						
REG L/R	Color registration Sensor L	AD value: ***H	Color registration Sensor R	AD value: ***H				
HT THERMISTER	Center NC senser detecting	AD value: ***H	Center NC senser Compensation	AD value: ***H	Heater thermistor	AD value: ***H		
HT THERMISTER2	Side L1 thermistor	AD value: ***H	Side R1 thermistor	AD value: ***H	Side L2 thermistor	AD value: ***H	Side R2 thermistor	AD value: ***H
HT THERMISTER3	Lower L1 thermistor	AD value: ***H	Lower R1 thermistor	AD value: ***H	Lower L2 thermistor	AD value: ***H	Lower R2 thermistor	AD value: ***H
HT THERMISTER4	Lower L3 thermistor	AD value: ***H	Lower R3 thermistor	AD value: ***H				
HUM_TEMP_DEN	Environment humidity sensor	AD value: ***H	Environment temperature sensor	AD value: ***H	Density K Sensor	AD value: ***H	Density YMC 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
TCID TAG 1ST *2	TC line 1st TAG UID	UID: ***H	TC line 2nd TAG UID	UID: ***H	TC line 3rd TAG UID	UID: ***H	TC line 4th TAG UID	UID: ***H
TCID TAG 2ND *2	ID line 1st TAG UID	UID: ***H	ID line 2nd TAG UID	UID: ***H	ID line 3rd TAG UID	UID: ***H	ID line 4th TAG UID	UID: ***H
BF TAG *2	Belt/Fuser line 1st TAG UID	UID: ***H	Belt/Fuser line 2nd TAG UID	UID: ***H				
F-RL TRM FI FO	Fuser release sensor	H:ON L:OFF	Sag sensor	H:OFF L:ON	Fuser IN sensor	H:OFF L:ON	Fuser exit sensor	H:OFF L:ON
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 Paper size1 switch	Port Level H, L	Tray1 Paper size2 switch	Port Level H, L	Tray1 Paper size3 switch	Port Level H, L	Tray1 Paper size4 switch	Port Level H, L
T2 PE	Tray2 Paper end sensor	H:No paper exists. L:Paper exists.						
T2 HOP_FED	Tray2 Hopping sensor	H:No paper exists. L:Paper exists.			Tray2 Feed sensor	H:No paper exists. L:Paper exists.		

Upper display	1		2		3		4	
	Detail	Lower display	Detail	Lower display	Detail	Lower display	Detail	Lower display
T2 CASETTE SIZE	Tray2 Paper size1 switch	Port Level H, L	Tray2 Paper size2 switch	Port Level H, L	Tray2 Paper size3 switch	Port Level H, L	Tray2 Paper size4 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 Feed sensor	H:No paper exists. L:Paper exists.		
T3 CASETTE SIZE	Tray3 Paper size1 switch	Port Level H, L	Tray3 Paper size2 switch	Port Level H, L	Tray3 Paper size3 switch	Port Level H, L	Tray3 Paper size4 switch	Port Level H, L
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 Feed sensor	H:No paper exists. L:Paper exists.		
T4 CASETTE SIZE	Tray4 Paper size1 switch	Port Level H, L	Tray4 Paper size2 switch	Port Level H, L	Tray4 Paper size3 switch	Port Level H, L	Tray4 Paper size4 switch	Port Level H, L
T5 PE	Tray5 Paper end sensor	H:No paper exists. L:Paper exists.						
T5 HOP_FED	Tray5 Hopping sensor	H:No paper exists. L:Paper exists.			Tray5 Feed sensor	H:No paper exists. L:Paper exists.		
T5 CASETTE SIZE	Tray5 Paper size1 switch	Port Level H, L	Tray5 Paper size2 switch	Port Level H, L	Tray5 Paper size3 switch	Port Level H, L	Tray5 Paper size4 switch	Port Level H, L
DUPSNS 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.

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

*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.

*2: N is displayed when no tag is installed.

A-2.3.2.4 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 press the [MENU ▲], [MENU ▼] button until "SWITCH SCAN" is displayed in the upper row of the display area. (Pressing the [MENU ▲] button increments the test item and pressing the [MENU ▼] button decrements the test item.)
   Then press the [ENTER] button.
2. Press either the [MENU ▲] or [MENU ▼] button until the desired menu item corresponding to the unit to be tested is displayed in the lower row of the display area. (Pressing the [MENU ▲] button increments the test item and pressing the [MENU ▼] button decrements the test item.)

MOTOR & CLTCH TEST
ID MOTOR

3. Pressing the [ENTER] button starts the test. The unit name starts flashing and the corresponding unit is activated for 10 seconds. (Refer to Figure A-2-2.)

Note! After the corresponding unit has activated for 10 seconds, it returns to the status of step2, and is re-activated when the corresponding switch is pressed.

- The clutch solenoid repeats turning on and off during the normal print drive. (If a clutch solenoid cannot be activated independently, the motor is driven at the same time.) * "ID UP/DOWN" keeps activated until the [CANCEL] button is pressed.
- If [ENTER] is pressed long (2 sec) when selecting a motor, the motor keeps running.

4. When the [CANCEL] button is pressed, the corresponding unit stops activating. (Display of the corresponding unit keeps displayed.)
5. Repeat steps 2 to 4 as required.
6. Pressing the [BACK] button terminates the test. (Returns to the status of step 1.)

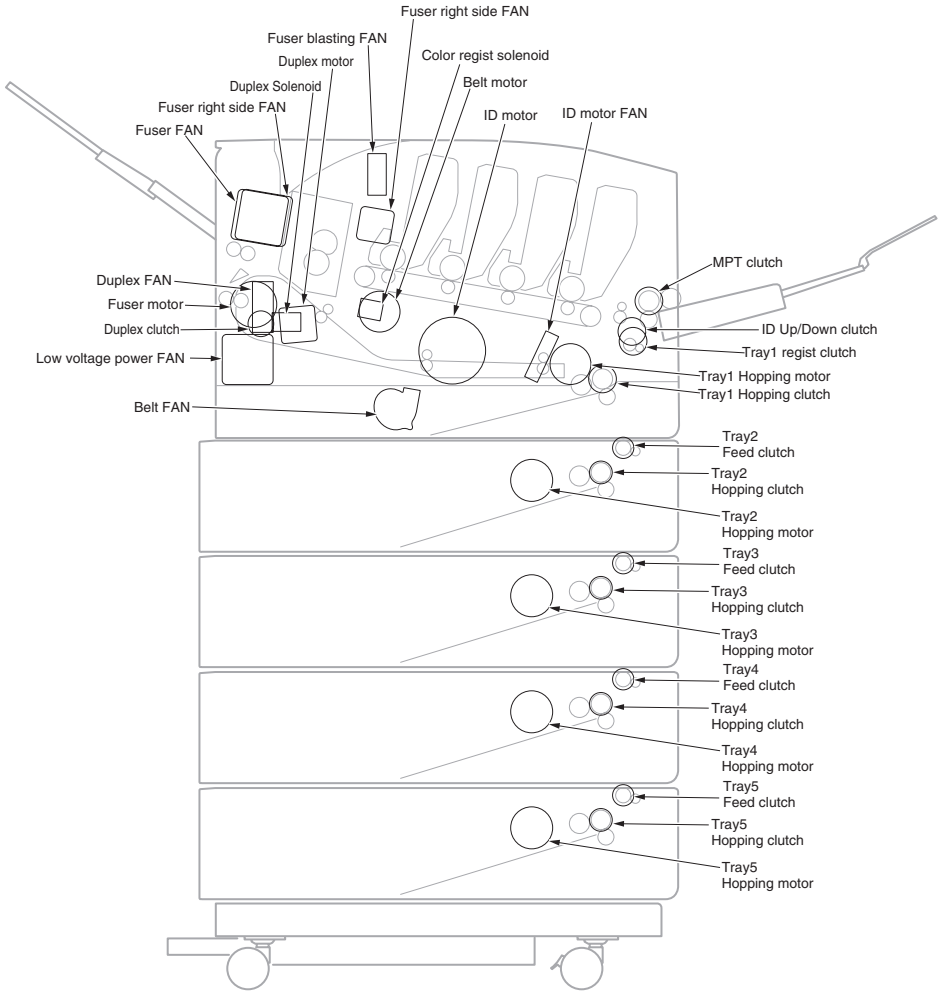


Figure A-2-2

Panel display	Driven unit	Condition
ID MOTOR	ID MOTOR Low voltage power FAN ID motor FAN Belt FAN	All ID(K/Y/M/C) are removed
BELT MOTOR	Belt Motor Low voltage power FAN ID Motor FAN Belt FAN	All ID(K/Y/M/C) are removed
FUSER MOTOR	Not drive (PU-FW ver 00.00.27 equal or lower) Fuser Motor (PU-FW ver 00.00.28 or higher)	*1
FUSER MTR REV	Fuser Motor	-
FUSER RLS	Fuser Motor	Fuser unit is installed
REGIST MOTOR	Tray1 Hopping Motor Tray1 Registration Clutch	-
T1 HOPPING MOTOR	Tray1 Hopping Motor Tray1 Hopping Clutch	-
MPT MOTOR	Tray1 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
T5 HOPPING MOTOR	Tray5 Hopping Motor Tray5 Hopping Clutch	Tray5 is installed
T5 FEED CLUTCH	Tray5 Hopping Motor Tray5 Feed Clutch	Tray5 is installed
ID UP/DOWN	Tray1 Hopping Motor ID Lift-up clutch	TOP/FRONT Cover is closed
LV FAN TEST	Low voltage power FAN	-
FUSER FAN TEST	Fuser FAN	TOP/FRONT Cover is closed
FUSER2 FAN TEST	Fuser right side FAN	-
DUPLEX FAN TEST	Duplex FAN	Duplex unit is installed
ID FAN TEST	ID motor FAN	-
BELT FAN TEST	Belt FAN	-
FU FAN1 TEST	Exit right FAN	-
FU FAN2 TEST	Fuser blasting FAN	-

*1: (PU-FW ver 00.00.27 equal or lower) If it is executed, 'FAILED' is displayed.
In addition, confirm it in FUSER MTR REV when confirm whether it is abnormal noise of the motor cause.
If confirm the clock wise of fuser motor, install the fuser unit and cover close, then confirm the exit roller by visual inspection at initial time.
(PU-FW ver 00.00.28 or higher) Motor test is possible to execute when remove the fuser unit and close the cover (Both of Top and Front).
When installed fuser unit and close the cover, then it is executed, 'FAILED' is displayed.
Fuser unit must remove when execute the Motor test.

Note! Display while ID Up/Down execution is in progress

MOTOR & CLTCH TEST
ID UP/DOWN ***

*** Number of times of execution

Display when the REGIST SHUTTER [ENTER] button is pressed long

MOTOR & CLTCH TEST
SHT ***

*** Number of times of execution

A-2.3.2.5 Test print

The test printing is used for printing test patterns stored in the PU. Other test 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 for "trouble shooting" of the maintenance manual of each target apparatus.

1. Enter the self-diagnostic mode (level 1) and pressing the [MENU ▲], [MENU ▼] button until "TEST PRINT" is displayed in the upper row of the display area. Then press the [ENTER] button. (Pressing the [MENU ▲] button increments the test item and pressing the [MENU ▼] button decrements the test item.)
2. The setting items that can be applied to the test print only is displayed in the lower row of display area. Pressing the [MENU ▲], [MENU ▼] button until the desired menu item is displayed. (Pressing the [MENU ▲] button increments the test item and pressing the [MENU ▼] button decrements the test item.) (If all setting items need no entry [Default setting], go to step 4.)
3. Press the [ENTER] 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 [MENU ▲] button increments the setting value. Pressing the [MENU ▲] button decrements the setting value. (The setting value that is displayed at last is applied.) Pressing the [BACK] button determines the entry value, and returns to step 2. Repeat step 3 as required.

TEST PATTERN
1

Display	Settings	Default	Function
PRINT EXECUTE	-	-	Starts printing with the press of the [ENTER] button, and ends printing with the press of the [CANCEL] 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. Not displayed when the tray 5 is not installed.
	TRAY2		
	TRAY3		
	TRAY4		
	TRAY5		
	MPT		
PAGE	0000	0001	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	LETTER	
	CUSTOM LEN	297	
	CUSTOM WIDTH	210	
	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		

- The menu item that is set here is valid in this menu item only.
  (The setting item is not saved in EEPROM.)

Note! PAGE setting

Pressing the [ONLINE] button or the [CANCEL] button shifts the digit. Pressing the [MENU ▲] button increments the setting value. Pressing the [MENU ▼] button decrements the setting value. If print is executed while the number of print copies remains in "0000", printing will continue infinitely.

COLOR setting

When the [ENTER] button is pressed while ON is set, the following contents are displayed on the panel.

Print setting for each color

Pressing the [ONLINE] button or the [CANCEL] button shifts the setting. Pressing the [MENU ▲] button or the [MENU ▼] button, the ON/OFF switch over will be set. Pressing the [BACK] button returns the panel display.

COLOR	→	Y:ON M:ON
ON		C:ON K:ON

CUSTOM size setting:

By pressing [0] to [9] on the numerical keypad, a number is inputted in the blinking line.

The input position is shifted with the [ONLINE] button or [CANCEL] button This setting is incremented by pressing the [MENU ▲] button, and decremented by pressing the [MENU ▼] button.

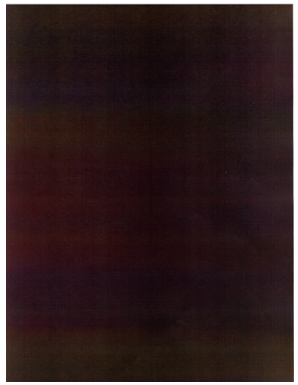
* If a display value exceeds the settable range, the setting value is unavailable.

4. While the message "PRINT EXECUTE" that is set by the operation specified in step 2 is being displayed, press the [ENTER] button and the test print is executed with the setting value that has been set by steps 2 and 3.

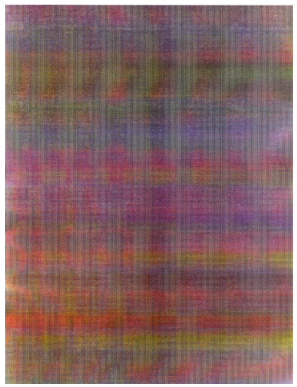
   Pressing the [CANCEL] button stops the test print.

Print pattern (It cannot be used for checking PQ.)

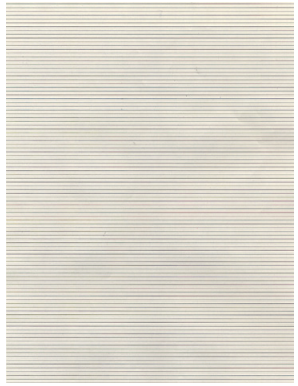
0, 8 to 15..... White paper print



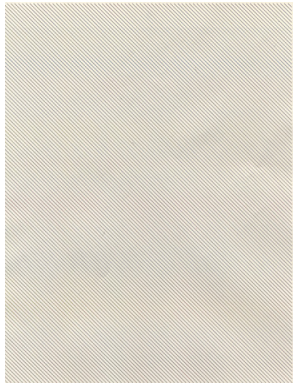
Pattern 1



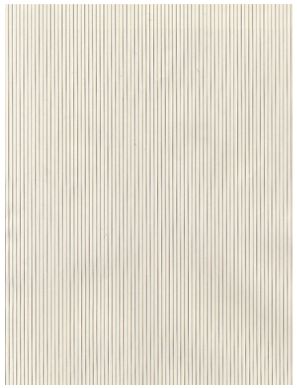
Pattern 2



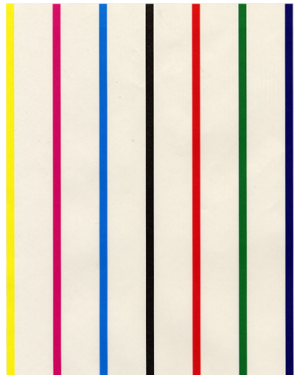
Pattern 3



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 A-2.3.2.5.

- During printing, the following messages are displayed.

P=***
W=***

P : Number of test print copies (unit: copies)
W : Print waiting time (unit: second)

- Displays are switched by pressing the [MENU ▲] button.

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

U : Reference is impossible.
H : Reference is impossible.
L : Reference is impossible.
S : Reference is impossible.

- Displays are switched by pressing the [MENU ▲] button.

T=***
H=***%

T : Environment temperature measurement value [unit: ℃]
H : Environment humidity measurement value [unit: %]

- Displays are switched by pressing the [MENU ▲] button.

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

YTR, MTR, CTR and KTR indicate the transfer voltage setting value for each color (unit: KV)

- Displays are switched by pressing the [MENU ▲] 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]

- Displays are switched by pressing the [MENU ▲] button.

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

ETMP : Hopping motor constant speed correction parameter (environment temperature) [unit: DEC]
UTMP : Fuser motor constant speed correction parameter (fuse target temperature) [unit: DEC]
REG : Hopping motor constant speed timer value (I/O setting value) [unit: HEX)
EXT : Fuse motor constant speed timer value (I/O setting value) [unit: HEX]

- Displays are switched by pressing the [MENU ▲] button.

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

ID : ID motor constant speed is the constant speed timer value [unit: HEX]
BLT : Belt motor constant speed timer value (I/O setting value) [unit: HEX]
LVTH : xxx = Low Power temperature[unit: HEX]
(***) = Low Power thermistor read-out AD value [unit: HEX]

- Displays are switched by pressing the [MENU ▲] button.

BELT =xxx(***)

BELT : xxx = Belt temperature [unit: ℃]

(***) = Belt thermistor read-out AD value [unit: HEX]

5. Repeat steps 2 to 4 as required.
6. Pressing the [CANCEL] button terminates the test. (Returns to the status of step 1.)

A-2.3.2.6 Color registration adjustment test

The color registration adjustment test is used for adjusting color registration or investigating the cause(s) of color misregistration.

1. Enter the self-diagnostic mode (level 1) and keep pressing the [MENU ▲] button or [MENU ▼] button until the following message is displayed.

REG ADJUST TEST

2. When the [ENTER] button is pressed, the following message is displayed. Keep pressing the [MENU ▲] button or [MENU ▼] button until the target item is displayed.

REG ADJUST TEST
REG ADJ EXECUTE

3. When the [ENTER] button is pressed, test of the item that is displayed on the panel is executed.

<<During execution of REG ADJ EXECUTE>>

① The color registration correction test is executed, and the lower display starts blinking.

② When the test is complete, the test result (OK or error name) is displayed in the upper row of the display area, and ****RESULT is displayed in the lower row of the display area.

OK
REG ADJ RESULT

When the [MENU ▲] button is pressed, the test results are displayed by incrementing them.

When the [MENU ▼] button is pressed, the test results are displayed by decrementing them.

Pressing the [BACK] button returns the screen to the state of step 2.

Remarks The following message is displayed during initialization, when the cover is opened and during alarm.

NG
REG ADJ RESULT

③ When the [CANCEL] button is pressed while test is in progress, the screen returns to the state of step 2.

<<During execution of REG ADJ RESULT>>

The same as the button operations of step 2. During execution of REG ADJ EXECUTE.

<<During execution of BLT REFLECT TEST>>

① The color registration correction test is executed, and the lower display starts blinking.

② When the test is complete, the test result (OK or error name) is displayed in the upper row of the display area, and ****RESULT is displayed in the lower row of the display area.

OK
BLT REFLECT RSLT

When the [MENU ▲] button is pressed, the test results are displayed by incrementing them.

When the [MENU ▼] button is pressed, the test results are displayed by decrementing them.

Pressing the [BACK] button returns the screen to the state of step 2.

③ When the [CANCEL] button is pressed while test is in progress, the screen returns to the state of step 2.

<<During execution of BLT REFLECT RSLT>>

The same as the button operations of step ②. During execution of BLT REFLECT TEST.

Remarks The following message is displayed during initialization, when the cover is opened and during alarm.

NG
REG REFLECT RSLT

4. Repeat steps 2 and 3 as required.
5. Pressing the [BACK] button terminates the test. (Returns to the status of step 1.)

Color registration correction test items

Display	Details
REG ADJ EXECUTE	Executing the color registration correction
REG ADJ RESULT	Referring to result of the color registration correction
BLT REFLECT TEST	Executing judgment of GOOD/BAD of reflectance rate of color registration correction belt
BLT REFLECT RSLT	Referring to result of the judgment of GOOD/BAD of reflectance rate of color registration correction belt.

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.

A-2.3.2.7 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.

1. Enter the self-diagnostic mode (level 1) and keep pressing the [MENU ▲] button or [MENU ▼] button until the following message is displayed.

DENS ADJ TEST

2. When the [ENTER] button is pressed, the following message is displayed. Keep pressing the the [MENU ▲] button or [MENU ▼] button until the target item is displayed.

DENS ADJ TEST
DENS ADJ EXECUTE

3. When the [ENTER] button is pressed, test of the item that is displayed on the panel is executed, and the lower display starts blinking.

<<During execution of DENS ADJ EXECUTE>>

① The density adjustment test is executed, and the lower display starts blinking.

② When the test is complete, the test result (OK or error name) is displayed in the upper row of the display area, and ****RESULT is displayed in the lower row of the display area

OK
DENS ADJ RESULT

When the [MENU ▲] button is pressed, the test results are displayed by incrementing them.

When the [MENU ▼] button is pressed, the test results are displayed by decrementing them.

Pressing the [BACK] button returns the screen to the state of step 2.

③ When the [CANCEL] button is pressed while test is in progress, the screen returns to the state of step 2.

<<During execution of DENS ADJ RESULT>>

The same as the button operations of step 2. During execution of DENS ADJ EXECUTE.

<<During execution of DENS ADJ PAR - SET>>

Setup of the density correction parameter is displayed.

<<During execution of AUTO CALIBRATION>>

① The automatic setting of the density sensor sensitivity adjustment value is executed, and the lower display starts blinking.

② When the test is complete, the test result (OK or error name) is displayed in the upper row of the display area, and ****RESULT is displayed in the lower row of the display area.

OK
DENS ADJ RESULT

When the [MENU ▲] button is pressed, the test results are displayed by incrementing them.

When the [MENU ▼] button is pressed, the test results are displayed by decrementing them.

Pressing the [BACK] button returns the screen to the state of step 2.

③ When the [CANCEL] button is pressed while test is in progress, the screen returns to the state of step 2.

Note! The special jig should be used for this test execution.

Remarks The following message is displayed during initialization, when the cover is opened and during alarm.

NG
DENS ADJ RESULT

4. Repeat step 3 as required.
5. Pressing the [BACK] button terminates the test. (Returns to the status of step 1.)

Density adjustment test items

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=***:DAC 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=***:DAC 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	Not used	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
SZK=*.**	AD=***H	Detected voltage value of Black	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 apparatus stops due to errors are written.

A-2.3.2.8 Consumable item counter display

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

1. Enter the ordinary self-diagnostic mode and press the [MENU ▲] button, [MENU ▼] button until "CONSUMABLE STATUS" is displayed in the display area. (Pressing the [MENU ▲] button increments the test item and pressing the [MENU ▼] button decrements the test item.) Then press the [ENTER] button.
2. When the [MENU ▲] button, [MENU ▼] button is pressed, consumption statuses of the consumable items are displayed in order. (Pressing the [ONLINE] or [CANCEL] button is invalid.)
3. Pressing the [BACK] button terminates the test. (Returns to the status of step 1.)

Display area, upper row	Display area, lower row	Format	Unit	Details
K-ID UNIT	********IMAGES	DEC	Images	The number of rotations from the time when the ID Units of respective colors are installed up to the present time is displayed after converting them to the units of A4-LEF 3Page/ Job.
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	The rotating length that is converted to the units of A4-LEF with 3Page/ Job for the time of installation of a new Fuser Unit up to the present time is displayed.
TR BELT UNIT*1	********IMAGES	DEC	Images	Number of copies from the time of installation of a new Belt Unit up to the present time is displayed.
K-TONER (FULL)	********%	DEC	%	Amount of consumption of the respective toners is displayed.
Y-TONER (FULL)	********%	DEC	%	
M-TONER (FULL)	********%	DEC	%	
C-TONER (FULL)	********%	DEC	%	

Display area, upper row	Display area, lower row	Format	Unit	Details
M-WASTE TNR CNT	********TIMES	DEC	Times	Amount of waste toner is displayed. * When the times reaches 32 times or more, the waste toner full is issued.
C-WASTE TNR CNT	********TIMES	DEC	Times	
K OVER RIDE CNT	********TIMES	DEC	Times	Number of times of continues of the toner cartridge of the respective colors are displayed.
Y OVER RIDE CNT	********TIMES	DEC	Times	
M OVER RIDE CNT	********TIMES	DEC	Times	
C OVER RIDE CNT	********TIMES	DEC	Times	
T1 ROLLER CNT	******** COUNTS	DEC	Counts	Number of the feeding for the feed rollers of each trays is displayed.
T2 ROLLER CNT	******** COUNTS	DEC	Counts	
T3 ROLLER CNT	******** COUNTS	DEC	Counts	
T4 ROLLER CNT	******** COUNTS	DEC	Counts	
T5 ROLLER CNT	******** COUNTS	DEC	Counts	
MPT ROLLER CNT	******** COUNTS	DEC	Counts	

Display area, upper row	Display area, lower row	Format	Unit	Details
T1 ROL REPLACE	******** TIMES	DEC	Times	Number of the replacing for the feed rollers of each trays is displayed.
T2 ROL REPLACE	******** TIMES	DEC	Times	
T3 ROL REPLACE	******** TIMES	DEC	Times	
T4 ROL REPLACE	******** TIMES	DEC	Times	
T5 ROL REPLACE	******** TIMES	DEC	Times	
MPT ROL REPLACE	******** TIMES	DEC	Times	

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

A-2.3.2.9 Print counter display

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

1. Enter the ordinary self-diagnostic mode and press the [MENU ▲] button, [MENU ▼] button until "PRINTER STATUS" is displayed in the display area. (Pressing the [MENU ▲] button increments the test item and pressing the [MENU ▼] button decrements the test item.) Then press the [ENTER] button.
2. When the [MENU ▲] button, [MENU ▼] button is pressed, statuses of the number of print copies are displayed in order.(Pressing the [ONLINE] or [CANCEL] button is invalid.)
3. Pressing the [BACK] button terminates the test. (Returns to the status of step 1.)

Display area, upper row	Display area, lower row	Format	Unit	Details
K-IMPRESSIONS	********IMAGES	DEC	Images	Number of print copies of the respective colors are displayed.
Y-IMPRESSIONS	********IMAGES	DEC	Images	
M-IMPRESSIONS	********IMAGES	DEC	Images	
C-IMPRESSIONS	********IMAGES	DEC	Images	
TOTAL SHEET CNT	********COUNTS	DEC	Prints	Total number of print copies are displayed.

A-2.3.2.10 Switching between the Factory mode and the Shipping mode

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

1. Enter the self-diagnostic mode (level 1) and keep pressing the [MENU ▲] button or [MENU ▼] button until the following message is displayed.

FACTORY MODE SET

2. When the [ENTER] button is pressed, the following message is displayed. Keep pressing the [MENU ▲] button or [MENU ▼] button until the target item (refer to the following table) is displayed.

FACTORY MODE
SHIPPING MODE *

3. While the desired item to set is being displayed, press the [ENTER] button that enables selection of the setting values.
4. While the desired setting value is being displayed, press the [ENTER] button for long period (3seconds) that registers the displayed value in EEPROM. (Returns to the status of step 2.)
5. Repeat steps 2 to 4 as required.
6. Pressing the [BACK] button terminates the test. (Returns to the status of step 1.)

Display	Setting value	Function
FACTORY MODE	FACTORY MODE	Sets the Factory working mode.
	SHIPPING MODE	Releases the Factory working mode.

A-2.3.2.11 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 (level 1) and keep pressing the [MENU ▲] button or [MENU ▼] button until the following message is displayed.

SENSOR SETTING

2. When the [ENTER] button is pressed, the following message is displayed. Keep pressing the [MENU ▲] button or [MENU ▼] button until the target item (refer to the table below) is displayed.

TONER SENSOR
ENABLE *

3. When the [ENTER] button is pressed, the following message is displayed.

   Pressing the [MENU ▲] button increments the setting value.

   Pressing the [MENU ▼] button decrements the setting value.
4. While the desired setting value is being displayed, press the [ENTER] button for long period (3seconds) that registers the displayed value in EEPROM. (Returns to the status of step 2.)
5. Repeat steps 2 to 4 as required.
6. Pressing the [BACK] button terminates (except the status of step 4) the setting. (Returns to the status of step 1.)

Display	Setting value	Operation at the setting value	Function
TONER SENSOR	ENABLE	Detects	Valid/Invalid of toner sensor operation
	DISABLE	Not to detect	
BELT UNIT CHECK	ENABLE	Checks	Valid/Invalid of belt installation check operation
	DISABLE	Not to check	
ID UNIT CHECK	ENABLE	Checks	Valid/Invalid of ID installation check operation
	DISABLE	Not to check	
REG ADJUST ERROR	ENABLE	Stops	Valid/Invalid of error stop by the color registration detection value
	DISABLE	Not to stop	
DRUM OVER LIFE	STOP	Not to continue	Setting of valid/invalid of continuance when drum comes to end of its life
	CONTINUANCE	To continue	
WR POINT REV TBL=**H±*.***mm	00H~FFH	Correction value	The correction value is added to the existing write-down position.
BOTTOM WRT POINT TBL=**H±*.***mm	00H~FFH	Cut value	Amount of cut at the rear end of a paper is set.

Hatched portion: Default is shown

A-2.3.2.12 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 (level 1) and press the [MENU ▲] button, [MENU ▼] button until "LED HEAD DATA" is displayed in the upper row of the display area. (Pressing the [MENU ▲] button increments the test item and pressing the [MENU ▼] button decrements the test item.)
2. When the [MENU ▲] button or the [MENU ▼] button is pressed, serial numbers of the K/Y/M/C LED head data are displayed in order.
3. Pressing the [BACK] button terminates the test. (Returns to the status of step 1.)

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 ' . '.

A-2.3.2.13 Drum Manual Cleaning

This function is used for cleaning drums by wiping with alcohol. This function should be implemented in case of an only method that be the Image drum changing.
This function allows a drum to rotate by 1/6 cycle. By cleaning the drum exposure part under the Image Drum by rotating in order, the filming and the dirt of the photoreceptor drum can be taken away.
The wiping with alcohol should be executed next phase after checking the drum surface dried enough and there is not an irregularity.

1. Enter the self-diagnostic mode and, until DRUM CLEANING appears, press the [MENU ▲] button or [MENU ▼] button (The [MENU ▲] button displays the next test option and the [MENU ▼] button displays the preceding test option). Then press the [ENTER] button.

DRUM CLEANING

2. Press the [ENTER] button to display the following message. By pressing the [ENTER] 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 [BACK] 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.
- The Cleaning tool should be used the soft cloth. (e.g. , the LED lens cleaner, BEMCOT)
- Do not touch and clean the area of 5mm from the edge of the gear of the drum because to prevent the cleaning tool be contaminated by the grease on the gear.

A-2.3.3 Various prints with the printer as a standalone unit

In the case of the target apparatus is stand alone, the apparatus can be printed the information of its setting and etc.

For the detail of the printable information and method of printing it, read the User's Manual of the each apparatuses.

Refer to following table for example.

Menu Map	Prints information, including printer menu settings, program versions and control block configuration.
Network	Prints network-related information, including a MAC address and IP address.
Demo page	Prints demo pages.
File list	Prints a list of files stored in a file system.
PostScript font list	Prints a PostScript fonts list.
PCL font list	Prints a PCL emulation fonts list.
Print statistic results	Prints a statistic usage result. * The result is displayed when Print Statistics Menu-User Report is set to Enable.
Error log	Prints an error log.
Color profiles list	Prints a color profiles list.

A-2.3.4 Button-pressed functions at power-on

Each button function when the printer is turned on is as follows. With the following buttons, which becomes effective by holding down the buttons until the the upper line of LCD shows "Initializing".

(1) coercive ONLINE MODE

The printer starts up in the mode that sets the printer in the on-line mode all the time by ignoring the warning/error. (Factory assistance function)

Power on and after displayed 'PLEASE WAIT', push and hold the [MENU ▼] button, [ENTER] button + [BACK] button for a few seconds until it is displayed with "Status Mode".

(2) The Boot Menu is started up

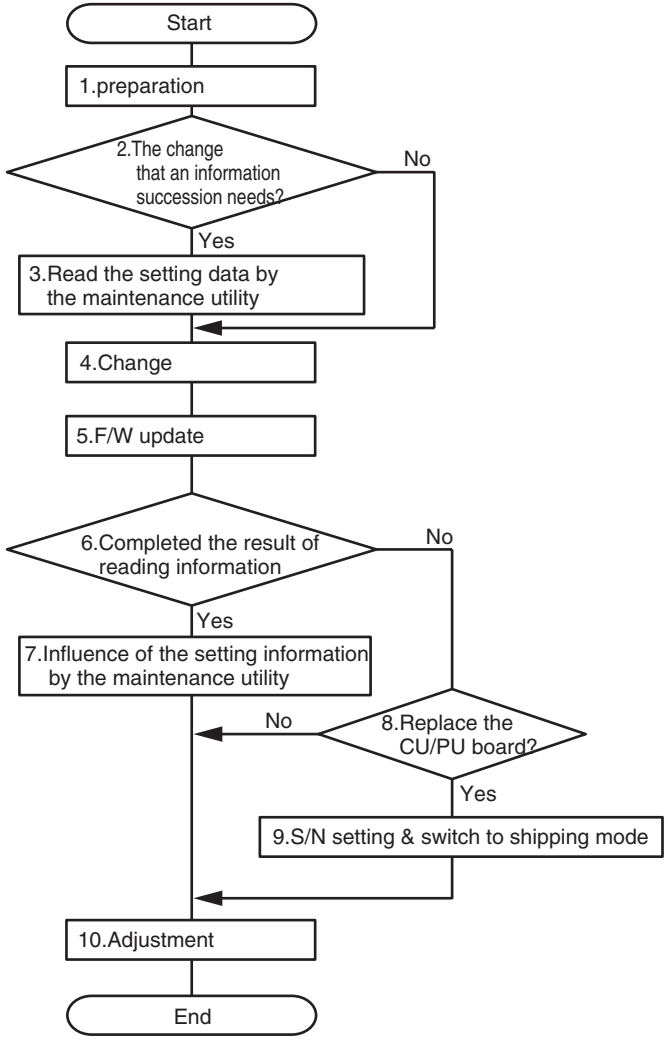
Power on and after displayed 'PLEASE WAIT' push the [ENTER] button until it is displayed with "Initializing".

A-2.4 Setups upon completion of part replacement

The following describes the adjustments necessary in 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	Copying information stored in EEPROM, which requires utility software.
LCD	Not necessary.
Other boards	Not necessary.

A-2.4.1 CU/PU Board, Panel Board, Low-voltage power supply Board changing order



1. Preparation

・Maintenance Utility 42678823FW01 Rev.8 (Version 3.1.0) or higher

Note! Version 3.1.1 can't be usable(different support model).

・FW Update Tool, F/W data (Firm Suite)

・Printed Menu Map or Memo that can be verified the F/W version

2. Check the this change be needed the setting information succession or not.

Items of necessary or unnecessary the setting information succession and corresponding item in the maintence utility are depends on the following table1.

In the case of the following messages displayed on the operation panel, do not execute the succession.

SERVICE CALL 104 [Engine EEPROM Error]
SERVICE CALL 40 [EEPROM Error]

3. Read the setting information by the maintenance utility

Turn on the machine with 'coercive ONLINE MODE', and read the setting information by the maintenance utility depending on the changed parts in table1.

< table1 >

Changing parts	Succession	Item in the maintenance utility	
		Menu	[Succession data]
CU/PU board	necessary	[Board Replacement]	-

4. Replace the board

Change the board or etc.

After replaceing, the F/W versions before and after replacing board are not match.

Note! Do not print the menu map on the morrow of replacing the board.

5. F/W update

Update the F/W by using the 'FirmSuite' of the F/W update tool.

Note! · Normally, F/W update should be execute by the newest FirmSuite at then.
· F/W version downgrade can not be applied.

6. Check the result of the read information

In the case of the setting information succession not executed in step3, go to step8.

7. Influence of the stored setting information at step3

Influence of the stored setting to the replaced machine by to select same as the item at step3 and follow the display on the maintenance utility.

8. Replace the CU/PU board?

9. Serial Number setting and switching to the Shipping mode

In the case of the CU board replaced and the setting information could not be read, set the Serial Number to the machine using Maintenance Utility.

Also check the printer information being connected with the maintenance utility and if the Factory / Shipping mode is Factory mode, switch to Shipping Mode following A-2.3.2.10.

10. Adjustment

Adjustment depending on the replaced parts.

CU/PU board: adjusting the clock

Note!

*1. In the case of reading or writing the information of the EEPROM by the maintenance utility, access to the EEPROM after set to 'coercive ONLINE MODE' by following step.

Incidentally, the error be displayed even in 'coercive ONLINE MODE' in error state at the apparatus.

1. Start the apparatus by 'coercive ONLINE MODE'

Power on and after displayed 'PLEASE WAIT', push and hold the [MENU ▼] button, [ENTER] button + [BACK] button for a few seconds until it is displayed with "Status Mode".

2. Afterward the apparatus becomes the wait screen.

*2. Require the user using MAC certification on network communication to reset by informing to user for the new MAC address of the replaced machine. Because, the MAC address could not be taken over.

*3. Require the user to reset for following setting because not allow following setting by the using constraint.

・ Font/Form registration data

Font: It resided in case of downloading of the PCL/PS external fonts.

Form: It resided in case of registered the form data.

These are able to be checked by the Configuration Tool.

*4. In the case of the above step3 fault, require the user to reset by manually.

Representative settings

・Menu setting value

・Network Information(IP/DNS/WINS/SMTP etc.)

・WEB setting

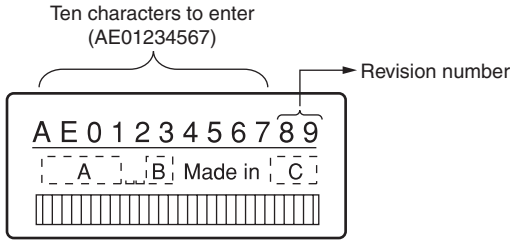
When the information of the current board could not be succeed to the replaced board:

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 number” 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.

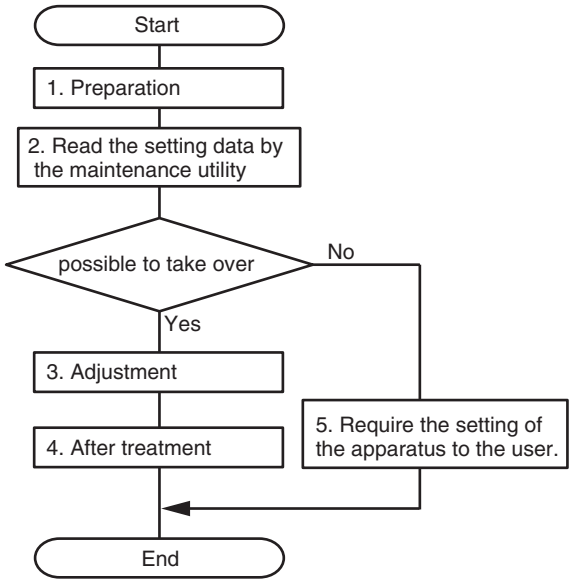
- To switch, use the Factory/Shipping mode setting window described in the Maintenance Utility operation manual.

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.

Item	Contents	Count contents
ID unit : Black ID unit : Yellow ID unit : Magenta ID unit : Cyan	Life count of respective ID units	Number of print copies after the new ID unit is installed, after the data is converted to equivalent number of A4 size paper counts.
Total number of papers fed	Printer life count	Total number of papers fed*
Print : Black Print : Yellow Print : Magenta Print : Cyan	Number of print copies of each ID	Number of print copies after the new ID unit is installed. *

*: Two counts apply to duplex print.

A-2.4.2 The apparatus replacing order



1. Preparation

・Maintenance Utility 42678823FW01 Rev.8 (Version3.1.0) or higher

Note! Version 3.1.1 can't be usable(different support model).

・Arrangement and shipping of the substitute

・USB cable (x1)

1.1 Arrangement and sending of the substitute

Send the substitute that is setup by the following method to the user.

1.1.1 Determination of the substitute

Check the apparatus stock equal with the user's apparatus.

* If the apparatus stock equal with the user's apparatus is none, this order is not apply because the information can not be taken.

1.1.2 Formatting the substitute

Execute the 'Erase Privacy Data' by using the operator panel.

[Admin Setup] - [Other Setup] - [Erase Privacy Data] - [Execute]

* Above step should be performed for the anterior user's data deleting completely.

2. Take over the setting information by the Maintenance Utility

The taking over method of the setting information by the Maintenance Utility is described in this term.

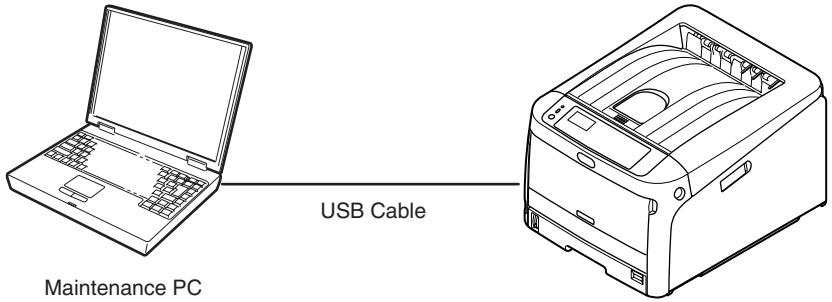
The setting information taking over is performed by the following steps.

1. Reading the user's apparatus setting information
2. Mounting the user's consumables to the substitute.
3. Writing the user's apparatus setting information to the substitute.

2.1 Reading the user's apparatus setting information

The reading method of the setting information from the user's apparatus to the maintenance PC by the maintenance utility is described in this term.

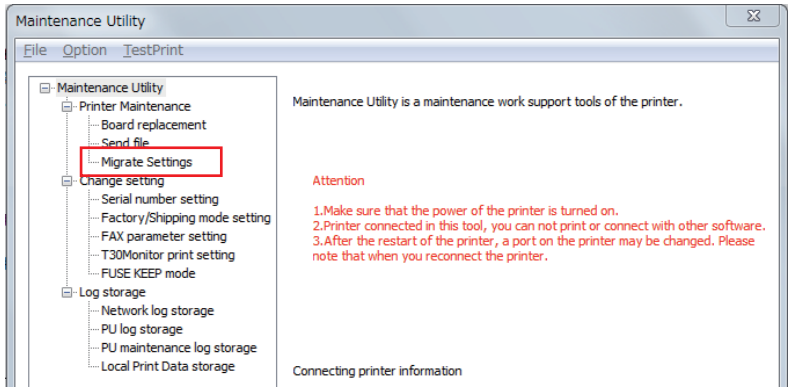
① Connect with the USB cable between the maintenance PC and the user's apparatus.



② Execute the Maintenance Utility (MainteUty.exe).

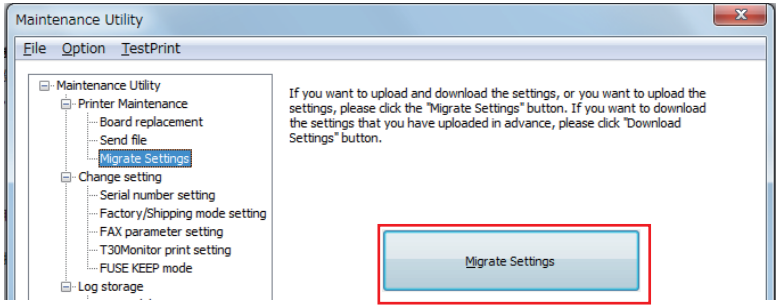
③ Load the following display by the ordered guidance.

* In the case of the search result of the apparatus is displayed 'Printer could not be found. Please confirm device and computer are connected by USB cable.' , retry the step ② after the apparatus is turned off and booted the apparatus with the 'coercive ONLINE MODE (Power on and after displayed 'PLEASE WAIT', push and hold the [MENU ▼] button, [ENTER] button + [BACK] button for a few seconds until it is displayed with "Status Mode".)'.



④ Select [「Printer Maintenance」-「Migrate Settings」].

⑤ Click the [Migrate Settings] button in the right side of the window after update of the displaying.



⑥ Input the any character string into the secure character string inputting displaying.

Note! Don't forget this character string because it is needed later.

⑦ Click the [Next] button with selecting following items in the selecting displaying for the taking over information.

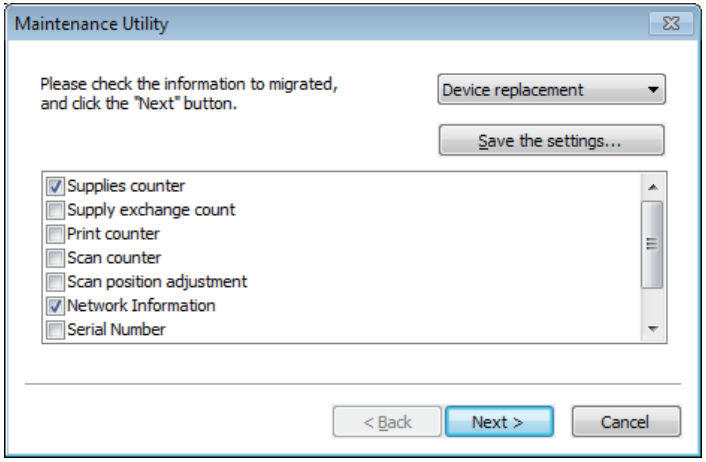
· [Supplies counter] ***Note!*** When no change the supplies of the user's apparatus to the substitute apparatus, exclude a check of [Supplies counter].

· [Network Information]

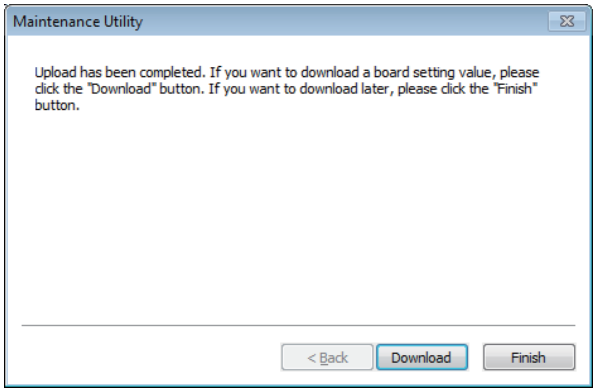
· [Menu Settings]

· [Usage Report]

· [Toner Coverage] ***Note!*** When no change the supplies of the user's apparatus to the substitute apparatus, exclude a check of [Toner Coverage].



⑧ The following window as informing the completed the uploading of the setting is displayed, and the user's apparatus setting uploading is complete.



2.2 Exchange the consumables

Mount the following consumables to from the user's apparatus the substitute in the case of mounting the user's consumables to the substitute.

① Belt unit

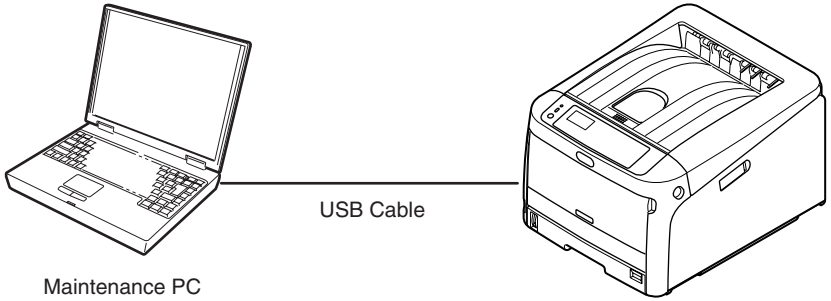
② Fuser unit

③ Image Drum and Toner Cartridge

2.3 Representing the user's apparatus setting to the substitute

The method of the representing the stored user's apparatus setting at the section 2.1 to the substitute by the maintenance utility is described in this term.

① Connect with the USB cable between the maintenance PC and the user's apparatus.



② Boot the substitute and check the apparatus is displaying the home screen.

③ In Maintenance Utility, select [Option] - [Research printer] and connect the substitute by the ordered guidance.

④ Select [Printer Maintenance] - [Migrate Settings].

⑤ Click the [Download Settings] button in the right side of the window after update of the displaying.

⑥ Select the character string that is entered on taking over the setting information, and click [Next].

3. Adjustment

Adjustment the clock.

4. After treatment

4.1 Initializing the user's apparatus

Execute the [Erase Privacy Data] by using the operator panel.

[Admin Setup] - [Other Setup] - [Erase Privacy Data] - [Execute]

5. Require the setting of the apparatus to the user.

In the case of the reading could not be performed at 2.1, require the user to reset by manually.

・Menu setting value

・Network Information(IP/DNS/WINS/SMTP etc.)

・WEB setting

A-2.5 Density control manual setting

When a printer is shipped from the factory, the automatic density correction mode has been set in "Automatic". If a printer is used after the density correction mode is set to "Manual", density may change during usage of a printer. Actions to be taken when density is not normal.

Note! Perform the followings while a printer is in the still state. Do not perform the followings during warm-up.

(1) Press the [MENU ▲] button or the [MENU ▼] button several times until the [Calibration] is displayed. Then, press the [ENTER] button.

(2) Press the [MENU ▲] button or the [MENU ▼] button to display [Adjust Density/ Execute].

(3) Press the [ENTER] button.

The automatic density correction starts.

A-2.6 About a restoration procedure of "Ready To Print/PU Flash Error"

PU firmware update may fail if "pull an AC power", "push the soft switch for a few seconds" during firmware update. When PU firmware update fails, carry out the following restoration procedure.

(1) Firmware update during the panel message "Ready To Print/PU Flash Error"
(2) Compulsory shutdown the apparatus by push the soft switch for a few seconds (more than five seconds) after confirmed that changed the panel message "Firmware Update Error/Please try again"
(3) Power on by the soft switch.
(4) Firmware update when display the "Firmware Update Error/Please try again ".
(5) Confirm that the panel message becomes "Ready To Print" after the apparatus reboots automatically.