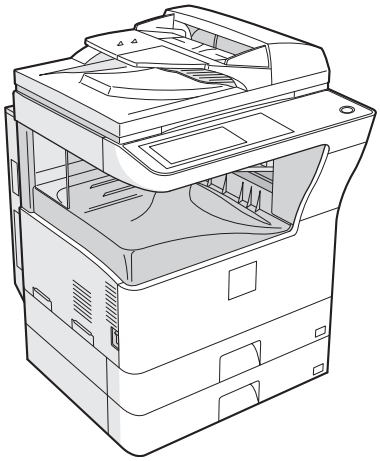
SHARP SERVICE MANUAL

CODE: 00ZMXM310/S2E



DIGITAL MULTIFUNCTIONAL SYSTEM

MX-M260/M310

MODEL MX-M260N/M310N

CONTENTS

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

CONTENTS

NOTE FOR SERVICING

This Service Manual uses some photographs to assure safe operation. Please understand the meanings of photographs before servicing.

⚠ WARNING: If this WARNING should be ignored, a serious danger to life or a serious injury may result.

⚠ CAUTION: If this CAUTION should be ignored, injury or damage to property could result.

1. Warning for servicing

1) Be sure to connect the power cord only to a power outlet that meets the specified voltage and current requirements.

   Avoid complex wiring, which may lead to a fire or an electric shock.

2) If there is any abnormality such as smoke or an abnormal smell, interrupt the job and disconnect the power plug.

   It may cause a fire or an electric shock.

3) Be sure the machine is properly grounded. Failure to ground the machine properly may result in an electric shock or fire.

   To protect the machine and the power unit from lightening, grounding must be made.

4) When connecting the ground wire, never connect it to the following points as it may cause an explosion, fire, or an electric shock:
   - Gas tube
   - Lightning conductor
   - A water pipe or a water faucet, which is not recognized as a grounding object by the authorities.
   - Grounding wire for telephone line

5) Do not damage, break, or stress the power cord. Do not put heavy objects on the power cord. Do not bend or pull the cord forcefully. It may cause a fire or electric shock.

6) Keep the power cable away from a heat source.

   Do not insert the power plug with dust on it into a power outlet.

   It may cause a fire or an electric shock.

7) Do not put a receptacle with water in it or a metal piece which may drop inside the machine.

   It may cause a fire or an electric shock.

8) Do not touch the power plug, insert a telephone jack, perform service or operate the machine with wet or oil hands. It may cause an electric shock.

2. Precautions for servicing

1) When servicing, disconnect the power plug, the printer cable, the network cable, and the telephone line from the machine, except when performing the communication test, etc.

   It may cause an injury or an electric shock.

2) There is a high temperature area inside the machine. Use extreme care when servicing.

3) There is a high voltage section inside the machine which may cause an electric shock . Be careful when servicing.

4) Do not disassemble the laser unit. Do not insert a reflective material such as a screwdriver in the laser beam path.

   It may damage eyes by reflection of laser beams.

5) When servicing the machine while operating, be careful not to make contact with chains, belts, gear, and any other moving parts.

6) Do not leave the machine with the cabinet disassembled.

   Do not allow any person other than a serviceman to touch inside the machine. It may cause an electric shock, a burn, or an injury.

7) When servicing, do not breathe toner, developer, and ink excessively. Do not get them in the eyes.

   If toner, developer, or ink enters you eyes, wash it away with water immediately, and consult a doctor if necessary.

8) The machine has got sharp edges inside. Be careful not to damage fingers when servicing.

9) Do not throw toner or a toner cartridge in a fire. Otherwise, toner may pop and burn you.

10) When replacing the lithium battery on the PWB, use only the specified battery. If a battery of different specification is used, it may not be compatible and cause breakdown or malfunction of the machine.

11) When carrying an electric unit or a PWB, use an anti-static (electricity) bag. Failure to do so may cause component failure or machine malfunction.

3. Note for installing site

Do not install the machine at the following sites.

1) Place of high temperature, high humidity, low temperature, low humidity, place under an extreme change in temperature and humidity.

   Paper may get damp and form dews inside the machine, causing paper jam or copy dirt.

   For operating and storing conditions, refer to the specifications described later.

2) Place of much vibrations

   It may cause a breakdown.

3) Poorly ventilated place

   An electro-static type copier will produce ozone inside it.

   The quantity of ozone produced is designed to a low level so as not to affect human bodies. However, continuous use of such a machine may produce a smell of ozone. Install the machine in a well ventilated place, and ventilate occasionally.

4) Place of direct sunlight.

   Plastic parts and ink may be deformed, discolored, or may undergo qualitative change.

   It may cause a breakdown or copy dirt.

5) Place which is full of organic gases such as ammonium

   The organic photoconductor (OPC) drum used in the machine may undergo qualitative change due to organic gases such as ammonium.

   Installation of this machine near a diazo-type copier may result in dirt copy.

6) Place of much dust

   When dusts enter the machine, it may cause a breakdown or copy dirt.

7) Place near a wall

   Some machine require intake and exhaust of air.

   If intake and exhaust of air are not properly performed, copy dirt or a breakdown may be resulted.

8) Unstable or slant surface

   If the machine drops or fall down, it may cause an injury or a breakdown.

   If there are optional paper desk and the copier desk specified, it is recommendable to use them.

   When using the optional desk, be sure to fix the adjuster and lock the casters.

4. Note for repairing/replacing the LSU

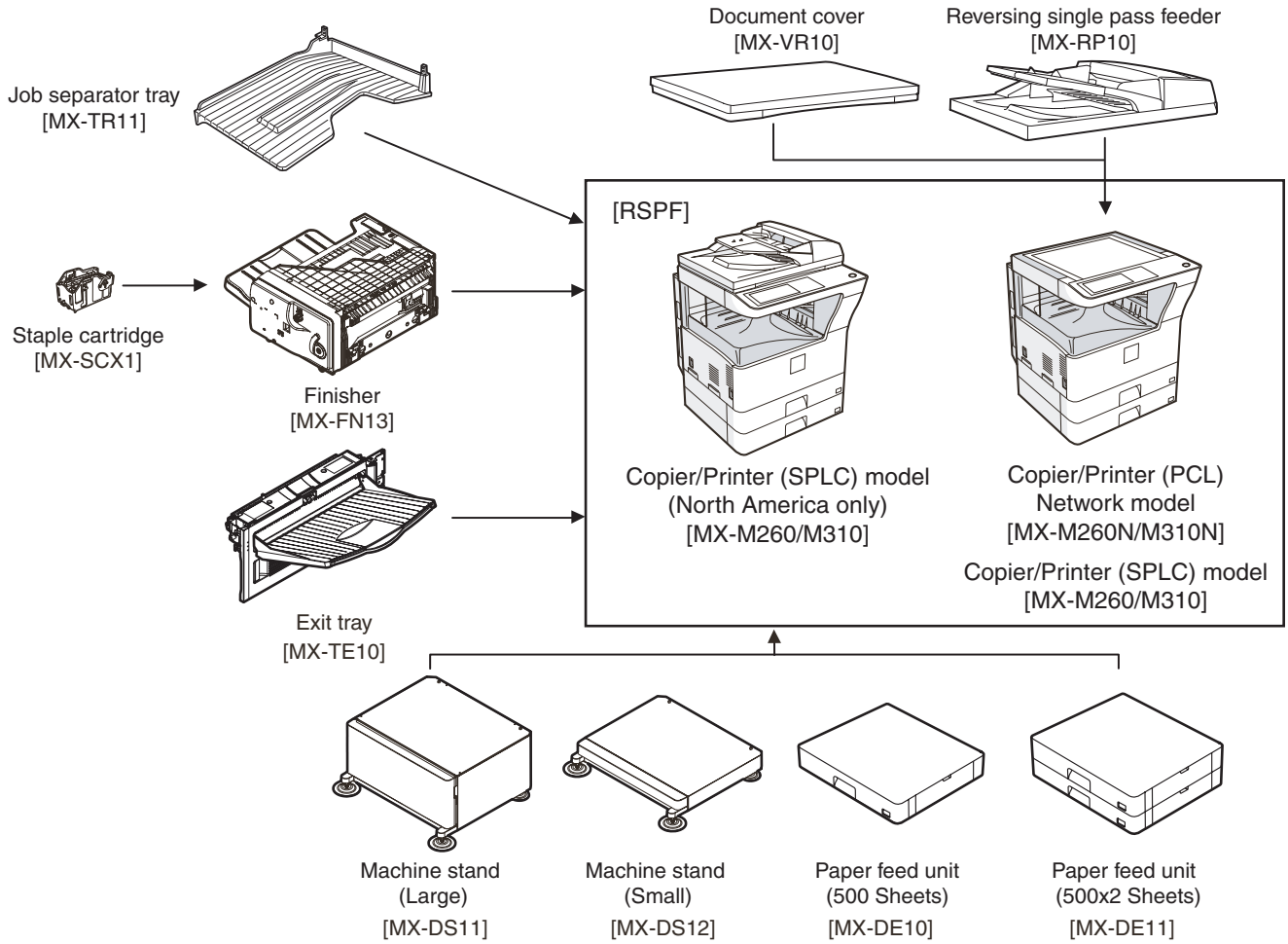
When repairing or replacing, be sure to observe the following items.

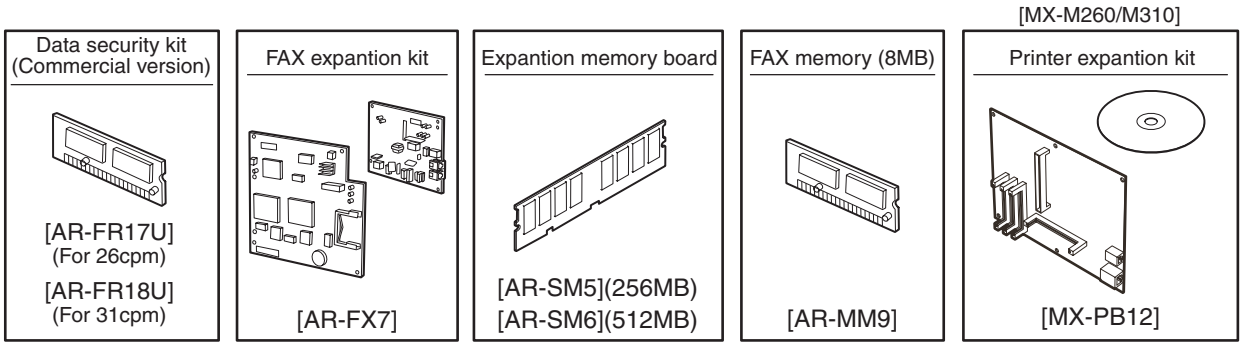
1) When repairing or replacing the LSU, be sure to disconnect the power plug from the power outlet.
2) When repairing or replacing the LSU, follow the procedures described in this Service Manual.
3) When checking the operations after repairing the LSU, keep all the parts including the cover installed and perform the operation check.
4) Do not modify the LSU.
5) When visually checking the inside of the machine for the operation check, be careful not to allow laser beams to enter the eyes.

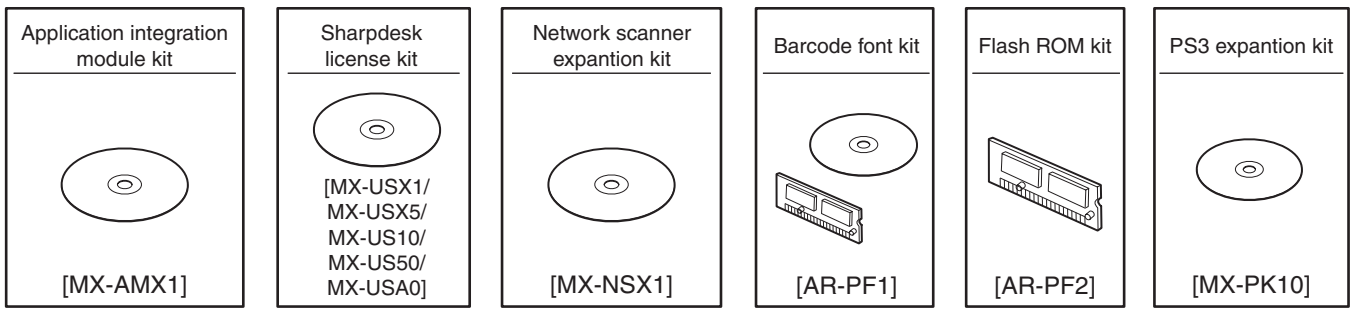
If the above precaution is neglected or an undesignated work is performed, safety may not be assured.

[1] PRODUCT OUTLINE

1. Line of machines and options







2. Combination of options list

○: Installable

×: Not available

Section	Option			Main unit Model		Note
	Item		Model	MX-M260/M310	MX-M260N/M310N	
Automatic document feeder and OC	Document feeder		MX-RP10	○	○	Standard for North America
	Document cover		MX-VR10	○	○	Unavailable for North America
Paper feed system	Paper feed unit (500 sheets)		MX-DE10	○	○	
	Paper feed unit (500 x 2 sheets)		MX-DE11	○	○	
Machine stand	Machine stand	(Large)	MX-DS11	○	○	
		(Small)	MX-DS12	○	○	
Paper exit system	Finisher		MX-FN13	○	○	
	Staple cartridge		MX-SCX1	○	○	
	Job separator tray		MX-TR11	○	○	
	Exit tray		MX-TE10	○	○	Requires installation of the MX-FN13.
FAX system	FAX expansion kit		AR-FX7	○	○	
	FAX memory (8MB)		AR-MM9	○	○	
Printer system	Printer expansion kit		MX-PB12	○	Standard	
	PS3 expansion kit		MX-PK10	○	○	
	Barcode font kit		AR-PF1	○	○	
	Flash ROM kit		AR-PF2	○	○	
Memory board	256MB expansion memory board		AR-SM5	○	○	
	512MB expansion memory board		AR-SM6	○	○	
Software	Network scanner expansion kit		MX-NSX1	○	○	
	Sharpdesk 1 license kit		MX-USX1	○	○	
	Sharpdesk 5 license kit		MX-USX5	○	○	
	Sharpdesk 10 license kit		MX-US10	○	○	
	Sharpdesk 50 license kit		MX-US50	○	○	
	Sharpdesk 100 license kit		MX-USA0	○	○	
	Application integration module kit		MX-AMX1	○	○	
Data security	Data security kit (Commercial version)		MX-FR17U	○	○	For 26cpm
			MX-FR18U	○	○	For 31cpm

[2] SPECIFICATIONS

1. Basic function

A. Base engine

(1) Type

Type	Desktop

(2) Engine composition

Photoconductor kind	OPC drum (Drum dia. 30mm)
Copying method	Electronic photo (Laser)
Developing system	Dry, 2-component magnetic brush development
Charging system	Sawtooth charging
Transfer system	Transfer roller system
Cleaning system	Contact blade system
Fusing system	Heat roller
Toner supply method	Toner supply by front cover open
Waste toner disposal	Toner cartridge collection

(3) Dimensions / Weight

External dimensions (W x D x H)	OC model: 623 x 628 x 668mm RSPF model: 623 x 628 x 788mm
Occupied dimensions (W x D) (when the manual paper feed tray is extended)	898 x 628mm

(4) Warmup

Warm-up time	23 sec or less (26-sheet model) 25 sec or less (31-sheet model)
Pre-heat	Yes
Jam recovery time	About 10sec, excluding fusing warmup, toner control, etc.

Conditions: Leaving for 60 sec after door open, standard conditions, polygon stop.

(5) First copy time

	26-sheet model	31-sheet model
Platen	4.8 sec or less	4.5 sec or less
RSPF	9.3 sec or less	

* Measuring conditions: When paper of A4 or 8.5" x 11" is fed from the machine tray, with the polygon rotating.

(6) Engine resolution

Writing resolution	600 x 600dpi
Smoothing (Print)	1200dpi (equivalent) x 600dpi
Gradation	Writing: Binary

(7) Printable range

Max. print size	AB series: 416 x 293mm (600dpi: 9826dot x 6920dot) Inch series: 428 x 275mm (600dpi: 10110dot x 6496dot)
Void area image loss	Lead edge 4.0mm or less Rear edge 4.0mm or less Total of lead/rear edges 4mm±1mm

(8) Engine speed (ppm)

Tray	Paper size	26-sheet model	31-sheet model
Tray 1-4	A3	15	17
	B4/8.5 x 13	17	20
	A4/B5/A5/8.5 x 11/ 5.5 x 8.5/16K	26	31
	A4R/8.5 x 11R/16KR	18	24
	B5R	21	
	11 x 17	14	17
	8.5 x 14	16	20
	8K		19
Manual paper feed	A3	14	17
	B4/8.5 x 13	17	20
	A4/B5/A5/8.5 x 11/ 5.5 x 8.5/16K	23	27
	A4R/8.5 x 11R/16KR	19	23
	11 x 17	14	16
	8.5 x 14	16	

(9) Power source

	Ex Japan in 100V system	Ex Japan in 200V system
Voltage/Current	110V 15A 120V±10% 15A 127V 12A	220 - 240V 8A
Frequency	50/60Hz	
Power source code	Fixed type	Inlet type
Power switch	1 power source	

(10) Power consumption

	Ex Japan in 100V system	Ex Japan in 200V system
Maximum rated power consumption	1.44kw	1.45kw
Shift time to sleep mode	Default (1 minute)	

B. Controller board

(1) Controller board

		SPLC board	PCL board
CPU		---	TMPR4937 (64bit, 300MHz)
Interface	Ethernet	No	10Base-T/100Base-TX
	USB 2.0 Device	Full Speed 1slot	
	Memory	No	64MB (Standard) + 256MB x 1
	Memory expansion slot	---	1 slot (144 pin DIMM compatible)

(2) Memory

Local Memory	Standard	32MB
	Expansion	512MB x 2
	Max.	1056MB

C. Operation panel

Type	Dot matrix LCD, touch panel
Size	Monochrome H-VGA 8.1"
Display dot number	640 x 240 (H-VGA)
LCD drive display area	192 x 72mm
LCD backlight	Fluorescent lamp backlight system
LCD contrast adjustment	Yes

D. Scanner section

(1) Resolution/Gradation

Reading resolution (dpi)	Copy mode				
	Platen	400 x 600dpi			
	RSPF	400 x 600dpi			
Transmission resolusion (dpi)	FAX transmission mode				
	Select mode	Normal text	Fine text	Super fine text	Ultra fine text
	Input resolution: OC	203.2 x 293.4	203.2 x 293.4	203.2 x 391.2	406.4 x 586.7
	Input resolution: RSPF	203.2 x 293.4	203.2 x 293.4	203.2 x 391.2	406.4 x 586.7
	Transmission resolution	203.2 x 97.8	203.2 x 195.6	203.2 x 391	406.4 x 391
	Half tone	No	Yes	Yes	Yes
	Scanner mode				
	Select mode	200 x 200	300 x 300	400 x 400	600 x 600
	Input resolution: OC	600 x 600	600 x 600	600 x 600	600 x 600
	Input resolution: RSPF	600 x 367	600 x 367	600 x 367	600 x 367
	Transmission resolution	200 x 200	300 x 300	400 x 400	600 x 600
Reading gradation	256 gradations				
Exposure lamp	Electrodeless xenon lamp				
Output gradation	Binary				

(2) Document table

Type	Document table fixed type (Flat bed)	
Scanning area	297 x 431.8mm	
Original standard position	Left bottom reference	
Detection	Yes	
Detection size	Inch series	Automatic setting 11 x 17, 8.5 x 14, 8.5 x 11, 8.5 x 11R, 5.5 x 8.5 Manual setting 11 x 17, 8.5 x 14, 8.5 x 13 (216 x 330), 8.5 x 11, 8.5 x 11R, 5.5 x 8.5, A3, A4, A4R
	AB series	Automatic setting A3, B4, A4, A4R, A5 Manual setting 11 x 17, 8.5 x 14, 8.5 x 13 (216 x 330), 8.5 x 11, 8.5 x 11R, A3, B4, A4, A4R, A5

(3) Automatic document feeder

Type	RSPF (Automatic duplex document feeder unit)	
Scan speed	When in single copy	When in duplex copy
Copy	31-sheet model: 27 sheets/min (400 x 600dpi) 26-sheet model: 26 sheets/min (400 x 600dpi)	31-sheet model: 17 side/min (400 x 600dpi) 26-sheet model: 14 side/min (400 x 600dpi)
Fax	40 sheets/min (Normal text, A4R)	17 sheets/min (Normal text, A4R)
Scanner	31 sheets/min (300 x 300dpi)	16 sheets/min (300 x 300dpi)
Document set direction	Face-up reference	
Document standard position	Center reference	
Document transport system	Sheet through system	
Document size	AB series: A3 - A5,0 Inch series: 11 x 17 - 5.5 x 8.5	
Document weight	Single face: 35 - 128g/m^2, 9 - 34 lbs, Duplex: 52 - 105g/m^2, 13.9 - 28 lbs	
Max. loading capacity of documents	100 sheets (90g/m^2) Paper thickness of 13mm or less can be set.	
Transport disable document	OHP, perforated documents, photo, catalogue, second original sheet, tracing paper, carbon paper, heat-sensitive paper, wrinkled paper, folded or broken paper, pasted or cut-away paper, documents of many perforated holes (2-hole, 3-hole documents can be used), document printed by an ink ribbon	
Detection	Yes	
Detection size	Inch series	Automatic setting 11 x 17, 8.5 x 14, 8.5 x 11, 8.5 x 11R, 5.5 x 8.5, A3, A4 Manual setting 11 x 17, 8.5 x 14, 8.5 x 13 (216 x 330), 8.5 x 11, 8.5 x 11R, 5.5 x 8.5, A3, A4, A4R
	AB series	Automatic setting 11 x 17, 8.5 x 11, A3, B4, A4, A4R, B5, B5R, A5 Manual setting 11 x 17, 8.5 x 14, 8.5 x 13 (216 x 330), 8.5 x 11, 8.5 x 11R, A3, B4, A4, A4R, A5
Multi copy	S-S, S-D, D-D, D-S	
Mixed paper feed	Enable (Same width only)	

E. Paper feed section

Type		Paper feed tray + Multi manual paper feed (Expanded up to 4 trays by installing options.)		
Paper feed method		Paper is fed from the above by the front loading system.		
Details of paper feed section		Tray1	Tray2	Manual paper feed tray
Paper capacity	Standard paper (80g/m^2)	500 sheets		100 sheets
Paper size		A3, B4, A4, A4R, B5, B5R, A5, 11 x 17, 8.5 x 14, 8.5 x 13, 8.5 x 11, 8.5x11R, 5.5 x 8.5, 8K, 16K, 16KR	A3, B4, A4, A4R, B5R, 11 x 17, 8.5 x 14 (216 x 356), 8.5 x 13 (216 x 330), 8.5 x 11, 8.5 x 11R, 8K, 16KR	A3, B4, A4, A4R, B5, B5R, A5R, A5, B6R, 11 x 17, 8.5 x 14 (216 x 356), 8.5 x 13 (216 x 330), 8.5 x 11, 8.5 x 11R, 7.25 x 10.5R, 5.5 x 8.5, 8K, 16K, 16KR, A6R, Envelope*1
Paper size detection		No		Yes
Allowable paper type and weight for paper feed		56 - 105g/m^2/15 - 28lbs Bond		Multi paper feed: Standard paper (56 - 128g/m^2) Special paper, heavy paper (max. 200g/m^2) Single paper feed: Standard paper, special paper, second original, heavy paper (max. 200g/m^2), 56- 200g/m^2 (14 - 54lbs)
Paper type		Standard paper (56 - 80g/m^2) Normal paper (60 - 105g/m^2) Letterhead Color paper		• Standard paper: 100 sheets (56 - 80g/m^2) • Recycled paper/coarse paper: 100 sheets • Postcard/Double postcard (without fold): 30 sheets • Heavy paper (max. 200g/m^2): 30 sheets • OHP/Label sheet/gift wrapping paper: 40 sheets • Label sheet: 40 sheets • Envelope (AB series: 10 sheets, Inch series: 5 sheets)
Paper size setting when shipping	Inch series	8.5 x 11		---
	AB series	A4		---
Paper remaining detection		No (paper presence only)		

* 1: Supported envelope kinds: Commercial10 (4 - 1/8" x 9 - 1/2"), International DL (110mm x 220mm), International C5 (162mm x 229mm)

F. Paper exit section

(1) Center tray of main unit

Paper exit position/ system	Main unit top surface face-down paper exit
Paper exit capacity	500 sheets (A4, 8.5 x 11, 80g/m^2 paper)
Paper exit paper size/ kind	All kinds of paper which can be fed
Shifter function	Yes (Except for North America)
Paper remaining detection for paper exit	Yes

G. Copy functions

(1) Copy magnification ratio

Copy magnification ratio	AB series	25%, 50%, 70%, 81%, 86%, 100%, 115%, 122%, 141%, 200%, 400%
	Inch series	25%, 50%, 64%, 77%, 100%, 121%, 129%, 200%, 400%
Zoom	25 - 400% (Restriction by the document feeder unit: 50 - 200%)	

(2) Density/copy image quality process

Exposure mode	Binary: Automatic, Text, Text/Photo, Photo
Number of manual steps	5 steps

(3) Duplex

System	Switchback system
Paper size	A3, B4, A4, A4R, B5, B5R, A5, 11 x 17, 8.5 x 14, 8.5 x 13, 8.5 x 11, 8.5 x 11R
Type and weight of paper which can be passed	56 - 105g/m^2/15 - 21.3 lbs Bond Duplex print from manual paper feed can be made. (Except for heavy paper, OHP sheet, and other special paper)

(4) Copy functions

Automatic paper selection
Automatic magnification ratio selection
Vertical/horizontal independent magnification ratio
Paper type selection
Auto tray switching
Rotation copy
Electronic sort
Job reservation (only during warm-up)
Tray installation priority
Program call-out/registration (10 items)
Preheat function
Auto power shut off function
User management (100 items)
Mixed documents feed (MIX only)
Binding margin (Left/Right/Upper)
Edge erase/Center erase (Center/Edge/Center + Edge)
1 set 2 copy
Cover paper/Insert paper/Tab insert paper (Cover/Back cover only)
Multi shot (2 in 1/4 in 1) (Centering available)
Card shot (Centering available)
Half binding (Centering available)
Duplex copy direction switching
Large volume document mode
Black/white reverse (except for UK)
Stream feeding mode (ON/OFF switch by the system setting)

H. Printer function

(1) Platform

- IBM PC/AT
- Macintosh

(2) Support OS

<table>
<tr><th colspan="2">OS</th><th>SPLC</th><th>Custom PCL6</th><th>Custom PCL5e</th><th>Custom PS</th><th>PPD</th></tr>
<tr><td rowspan="12">Windows</td><td>2000</td><td rowspan="3">Yes</td><td rowspan="8">Yes</td><td rowspan="2">Yes</td><td rowspan="8">Yes</td><td rowspan="14">Yes</td></tr>
<tr><td>XP</td></tr>
<tr><td>XP x64</td><td>No</td></tr>
<tr><td>Server 2003</td><td rowspan="2">No</td><td>Yes</td></tr>
<tr><td>Server 2003 x64</td><td>No</td></tr>
<tr><td>Vista</td><td rowspan="2">Yes</td><td>Yes</td></tr>
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<tr><td>Server 2008 x64</td><td rowspan="6">No</td></tr>
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<tr><td>X 10.4.11</td></tr>
<tr><td>X 10.5 - 10.5.6</td></tr>
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(3) PDL emulation/Font

Emulation	Built-in fonts	Option font
PCL5e compatible/ PCL6 compatible	European outline font = 80 typefaces Line printer font (BMP) = 1 typeface	Barcode font = 28 typefaces
ESC/P (VP-1100) compatible	European BMP font = 2 typefaces (Roman, San-serif)	
Postscript3 compatible		European outline font = 136 typefaces

(4) Print channel

Support print channel	• PSERVER/RPRINT for netware environment • LPR • IPP • PAP : EtherTalk (AppleTalk) • FTP • NetBEUI • Raw Port (Port 9100) • USB 2.0 • HTTP (Web Submit Print) • POP3 (E-Mail To Print) • HTTPS

(5) Environment setting

Setting item	Outline
Default setting	Basic setting for using the printer, such as the number of copies, the printing direction.
SPDL	Setting of SPDL symbol and fonts
PS	Setting of print Enable/Disable in case of PS error

I. Image send function

(1) Mode

Scanner	• Scan to e-mail • Scan to Desktop • Scan to FTP
Fax	• Fax

(2) Support system

Mode	Scanner	Fax
Corresponding server/protocol	SMTP FTP (TCP/IP)	---

(3) Support image

Mode	Scanner	Fax
File format	• TIFF • PDF	---
Compression system	• Non-compression • G3 = MH • G4 = MMR	• MH • MR • MMR • JBIG

(4) Number of registration items

Item	Scanner	Fax
One-touch/ Group	200 items (max. 100 items for one group)	500 items (max. 200 items for one group) * Max. 500 items in total with 200 items of groups
Program	No	8 items
Memory box	No	Bulletin Board/ Confidential/Relay broadcast, each 10 items
Sender registration	---	20 items
Sender list	200 items	No
Item name (Detailed setting of transmission)	Direct input only (Default or direct input)	No
File name (Detailed setting of transmission)	30 items	No
Meta data set list	10 items	No
Receive rejection number	No	50 items
Polling allow number	No	10 items
ID number	No	10 items
System number	No	1 item
Interface ID code	No	10 items
Confidential box number	No	10 items

(5) Image process

Mode	Scanner	Fax
Document scan color	Black/White only	
Half tone reproductions	Equivalent of 256 steps	
Density adjustment	Auto + 5 steps	

(6) Address specification

Mode	Scanner	Fax
Address specification	• Specified by one-touch, group, or direct address input. • Input from the soft keyboard • Selection from LDAP server • Resend	• Specified by one-touch, group, or direct address input.
Number of One-touch address key registration	Max. (number of keys): 200 items	500 items (including the group dial)
Number of addresses to be registered in a group (1 key)	Max. 100 items	Number of addresses registered to 1 group (1 key) : max. 200 items
Program	×	8 items
Direct address input	Input from the soft keyboard	Input with 10 key, # key, *key
Chain dial	×	❍ (Supported by the pause key)
Resend	×	The latest single destination is called out.

(7) Send function

Mode		Scanner	Fax
Memory send		×	❍
Onhook		×	❍
Quick online send		×	❍
Direct transmission		×	❍
Auto reductions end (Auto magnification ratio send)		×	❍ A3→B4, A3→A4, B4→A4
Rotation send		❍	
Recall mode	Error	×	❍
	Busy	×	❍
			No. of times and time are set by the system setting.
Long document send		×	❍ Max. 1000mm (except for ultra fine mode)
No. of registration items of senders		Max. 200 items	×

(8) Receive function

Mode	Scanner	Fax
Automatic reception	×	❍
Manual reception	×	❍
Memory reception	×	❍
Fixed size reduction reception	×	❍
Rotation reception	×	❍

(9) Report/List function

Mode	Scanner	Fax
Communication record table	×	❍
Communication reservation table	×	❍
Bulletin board check table	×	❍
ID sender table *	×	❍
Confidential reception check table	×	❍
One-touch dial list	×	❍
Group list	×	❍
Program list	×	❍
Telephone number list	×	❍
Interface group list	×	❍
System setting list (FAX)	×	❍
F code memory box list	×	❍
User management record table (Fax)	×	❍
Rejection number list	×	❍
Confidential ID table	×	❍
Web setting list	❍	×

* The sender table is printed as the ID sender table.

(10) Other functions

Mode	Scanner	Fax
Time specification	×	❍
Poling receive	×	❍
Cover paper adding function	×	❍
Page division	×	❍
Send message	×	❍
Program	❍	
Sender selection	×	❍
Thin film scan	❍	
Communication result table	×	❍

(11) Record size

Mode	Scanner	Fax
Max. record width	---	293mm
Record size	---	A3 - A5/ 11 x 17 - 5.5 x 8.5

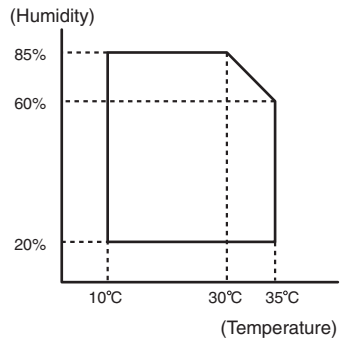
(12) Sound setting

Mode	Item	System setting
Onhook sound	Sound volume setting	❍
Call-out sound volume	Sound volume setting	❍
Line monitor sound	Sound volume setting	❍
Communication end sound	Sound volume	❍
	Sound pattern	❍
	Communication end sounding time	❍

(13) PC-FAX function

Operation	OS	• Windows 2000 • Windows XP/XP x64 • Windows Vista/Vista x64 • Windows Server 2003 */ Server 2003 x64* • Windows Server 2008 */ Server 2008 x64* * No support for PC-Fax on SPCL CD-ROM.
	PC	IBM PC/AT compatible machine
	CPU	Pentium Ⅱ 300MHz or above
	Monitor	Image resolution 640 x 480 pixel or above No. of colors 256 colors or above
	Memory	64MB or more
	HDD	Empty capacity of 50MB or above
	Interface	USB2.0 10/100BASE-TX
	Communication protocol	LPR/lp Port 9100 (RAW) IPP
Functions	PC-FAX send	❍ (When FAX is installed) Max. number of FAX number digits 40 digits (excluding the sub address and pass code)
	Resolution	200 x 100dpi/200 x 200dpi/200 x 400dpi/ 400 x 400dpi
	Send document size	A3/B4/A4/A5/B5/11 x 17/8.5 x 14/ 8.5 x 11/5.5 x 8.5/8.5 x 13/8k/16k
	Compression system	MH/MMR/MR
	Broadcast send	❍ (Max. 200 items)
	F-code send	❍ Sub address: ❍ Max. 20 digit Pass code: ❍ Max. 20 digit
	Telephone book registration, send function	❍
	Covering letter attachment function	❍ (Disable when broadcasting)
	Covering letter making function	❍
	Sender print	❍ (Editing senders is disabled.)
	Preview	❍

J. Environmental conditions



Standard environmental conditions	Temperature	20 - 25°C
	Humidity	65 ± 5%RH
Usage environmental conditions	Temperature	10 - 35°C
	Humidity	20 - 85%RH
	Atmospheric pressure	590 - 1013 hPa (height: 0 - 2000m)

[3] CONSUMABLE PARTS

1. Supply system table

A. SEC/ SECL/ LAG

No.	Item	Content		Life	Model name	Remarks
1	Toner cartridge (black)	Toner cartridge (With IC chip) (Toner; Net 700g)	×1	25K	MX-312NT	Life setting by A4 (8.5"×11") 6% document
2	Developer (black)	Developer (Developer; Net 300g)	×1	26cpm: 75K 31cpm: 100K	MX-312NV	
3	Drum	Drum	×1	26cpm: 75K 31cpm: 100K	MX-312NR	

B. Brazil

No.	Item	Content		Life	Model name	Remarks
1	Toner cartridge (black)	Toner cartridge (With IC chip) (Toner; Net 700g)	×1	25K	MX-312BT	Life setting by A4 (8.5"×11") 6% document
2	Developer (black)	Developer (Developer; Net 300g)	×1	26cpm: 75K 31cpm: 100K	MX-312NV	
3	Drum	Drum	×1	26cpm: 75K 31cpm: 100K	MX-312NR	

C. Europe/ East Europe/ Russia / Australia/ New Zealand

No.	Item	Content		Life	Model name	Remarks
1	Toner cartridge (black)	Toner cartridge (With IC chip) (Toner; Net 700g)	×1	25K	MX-312GT	Life setting by A4 (8.5"×11") 6% document
2	Developer (black)	Developer (Developer; Net 300g)	×1	26cpm: 75K 31cpm: 100K	MX-312GV	
3	Drum	Drum	×1	26cpm: 75K 31cpm: 100K	MX-312GR	

D. Asia affiliates

No.	Item	Content		Life	Model name	Remarks
1	Toner cartridge (black)	Toner cartridge (With IC chip) (Toner; Net 700g)	×1	25K	MX-312AT	Life setting by A4 (8.5"×11") 6% document
2	Developer (black)	Developer (Developer; Net 300g)	×1	26cpm: 75K 31cpm: 100K	MX-312AV	
3	Drum	Drum	×1	26cpm: 75K 31cpm: 100K	MX-312AR	

E. Hong Kong

No.	Item	Content		Life	Model name	Remarks
1	Toner cartridge (black)	Toner cartridge (With IC chip) (Toner; Net 700g)	×1	25K	MX-312AT	Life setting by A4 (8.5"×11") 6% document
2	Developer (black)	Developer (Developer; Net 300g)	×1	26cpm: 75K 31cpm: 100K	MX-312AV	
3	Drum	Drum	×1	26cpm: 75K 31cpm: 100K	MX-312AR	

F. SMEF/ Israel/ Philippines/ Taiwan/ Agent

No.	Item	Content		Life	Model name	Remarks
1	Toner cartridge (black)	Toner cartridge (With IC chip) (Toner; Net 700g)	×1	25K	MX-312FT	Life setting by A4 (8.5"×11") 6% document
2	Developer (black)	Developer (Developer; Net 300g)	×1	26cpm: 75K 31cpm: 100K	MX-312FV	
3	Drum	Drum	×1	26cpm: 75K 31cpm: 100K	MX-312FR	

2. Maintenance parts list

A. SIICA/ SECL/ LAG (MX-M260/M310)

No.	Item	Content		Life	Model name	Remarks
1	Upper heat roller kit	Upper heat roller Fuser gear Upper heat roller bearing Upper cleaning pad Fusing separation pawl (upper) Thermistor cleaning pad	×1 ×1 ×2 ×1 ×4 ×2	150K	AR-310UH	
2	Lower heat roller kit	Lower heat roller Fusing separation pawl (lower) Fuser bearing (lower)	×1 ×4 ×2	300K	MX-311LH	
3	150K maintenance kit	Drum separation pawl unit Transfer roller unit DV blabe DV side sheet F DV side sheet R Toner filter unit	×2 ×1 ×1 ×1 ×1 ×1	150K	MX-311KA	
4	MC unit	MC unit	×10	26cpm: 75K (×10) 31cpm: 100K (×10)	MX-311MC	
5	Cleaner blade	Cleaner blade	×10	26cpm: 75K (×10) 31cpm: 100K (×10)	MX-311CB	
6	Drum frame unit	Drum frame unit	×1	26cpm: 225K 31cpm: 300K	MX-311DU	* The life of the toner reception seat attached to the drum frame is 300K, and it can be used up to 3 times. (Supplied as a drum frame unit.)
7	Transfer roller unit	Transfer roller unit	×1	150K	MX-311TX	
8	Paper feed roller kit	Paper feed roller kit	×1	100K	MX-311RT	
9	Fusing unit	Fusing unit (120V heater lamp)	×1	150K	MX-311FU	
10	Staple cartridge	Staple cartridge	×3	5000 staples ×3	MX-SCX1	

* The other maintenance parts than the above are supplied as service parts.

B. SEGA/ SUK/ SCA/ SCNZ/ SEA/ SEES/ SEZ/ SEIS/ SEB/ SEN/ SEF/ SMEF/ Russia/ Special country (MX-M260/M310)

No.	Item	Content		Life	Model name	Remarks
1	Upper heat roller kit	Upper heat roller Fuser gear Upper heat roller bearing Upper cleaning pad Fusing separation pawl (upper) Thermistor cleaning pad	×1 ×1 ×2 ×1 ×4 ×2	150K	AR-310UH	
2	Lower heat roller kit	Lower heat roller Fusing separation pawl (lower) Fuser bearing (lower)	×1 ×4 ×2	300K	MX-311LH	
3	150K PM kit	Drum separation pawl unit Transfer roller unit DV blade DV side sheet F DV side sheet R Toner filter unit	×2 ×1 ×1 ×1 ×1 ×1	150K	MX-311KA	
4	MC unit	MC unit	×10	26cpm: 75K (×10) 31cpm: 100K (×10)	MX-311MC	
5	Cleaner blade	Cleaner blade	×10	26cpm: 75K (×10) 31cpm: 100K (×10)	MX-311CB	
6	Drum frame unit	Drum frame unit	×1	26cpm: 225K 31cpm: 300K	MX-311DU	* The life of the toner reception seat attached to the drum frame is 300K, and it can be used up to 3 times. (Supplied as a drum frame unit.)
7	Transfer roller unit	Transfer roller unit	×1	150K	MX-311TX	
8	Staple cartridge	Staple cartridge	×3	5000 staples ×3	MX-SCX1	

* The other maintenance parts than the above are supplied as service parts.

C. STCL/ SRH/ SRS/ SRSSC/ SBI/ Agent (MX-M260/M310/M260N/M310N)

No.	Item	Content	Life	Model name	Remarks
1	Upper heat roller kit	Upper heat roller ×1 Fuser gear ×1 Upper heat roller bearing ×2 Upper cleaning pad ×1 Fusing separation pawl (upper) ×4 Thermistor cleaning pad ×2	150K	AR-310UH	
2	Lower heat roller kit	Lower heat roller ×1 Fusing separation pawl (lower) ×4 Fuser bearing (lower) ×2	300K	MX-311LH	
3	150K PM kit	Drum separation pawl unit ×2 Transfer roller unit ×1 DV blade ×1 DV side sheet F ×1 DV side sheet R ×1 Toner filter unit ×1	150K	MX-311KA	
4	MC unit	MC unit ×10	26cpm: 75K (×10) 31cpm: 100K (×10)	MX-311MC	
5	Cleaner blade	Cleaner blade ×10	26cpm: 75K (×10) 31cpm: 100K (×10)	MX-311CB	
6	Drum frame unit	Drum frame unit ×1	26cpm: 225K 31cpm: 300K	MX-311DU	∗ The life of the toner reception seat attached to the drum frame is 300K, and it can be used up to 3 times. (Supplied as a drum frame unit.)
7	Staple cartridge	Staple cartridge ×3	5000 staples ×3	MX-SCX1	

∗ The other maintenance parts than the above are supplied as service parts.

3. Developer/Drum life end definition

When the developer/drum counter reaches the specified level.

When the developer/drum rpm reaches the specified level.

When either of the above reached the specified level, it is judged as life end.

In an actual case, when correction or warm-up operation is performed as well as output operation, the developer and the drum rotates.
Therefore, the developer/drum consuming level cannot be determined only by the copy/print quantity. When, therefore, the rpm reaches the specified level, it is judged as life end.

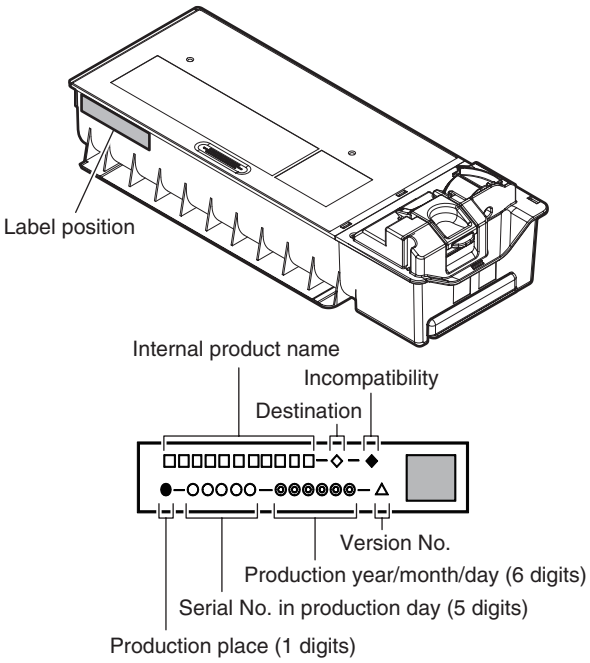
To check the drum and developer life, use SIM22-1.

	Developer/drum counter		Number of rotations (Rotations)
Developer/drum	26cpm model	31cpm model	550K
	75K	100K	

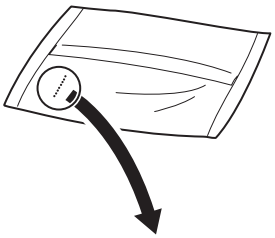
4. Production number identification

<Toner cartridge>

The label on the toner cartridge shows the date of production.



<Developer>



1	2	3	4	5	6	7	8

The lot number is of 8 digits. Each digit indicates the content as follows.

The number is printed on the right under side of the back surface of the developer bag.

1 Alphabet
Indicates the production factory.

2 Number
Indicates the production year.

3, 4 Number
Indicates the production month.

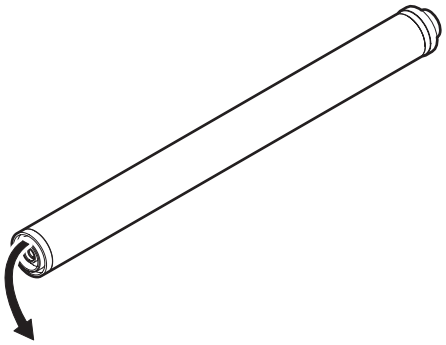
5, 6 Number
Indicates the production day.

7 Hyphen

8 Number
Indicates the production lot.

<Drum>

The laser print indicates the model conformity code and the date (year, month, day) of production.



1	2	3	4	5

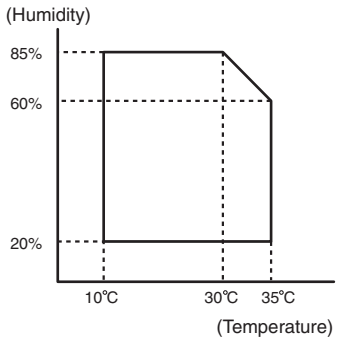
1 Alphabet
Indicates the model conformity code. L for this model.

2 Number
Indicates the end digit of the production year.

3 Number or X, Y, Z
Indicates the month of packing.
X stands for October, Y November, and Z December.

4, 5 Number
Indicates the day of the month of packing.

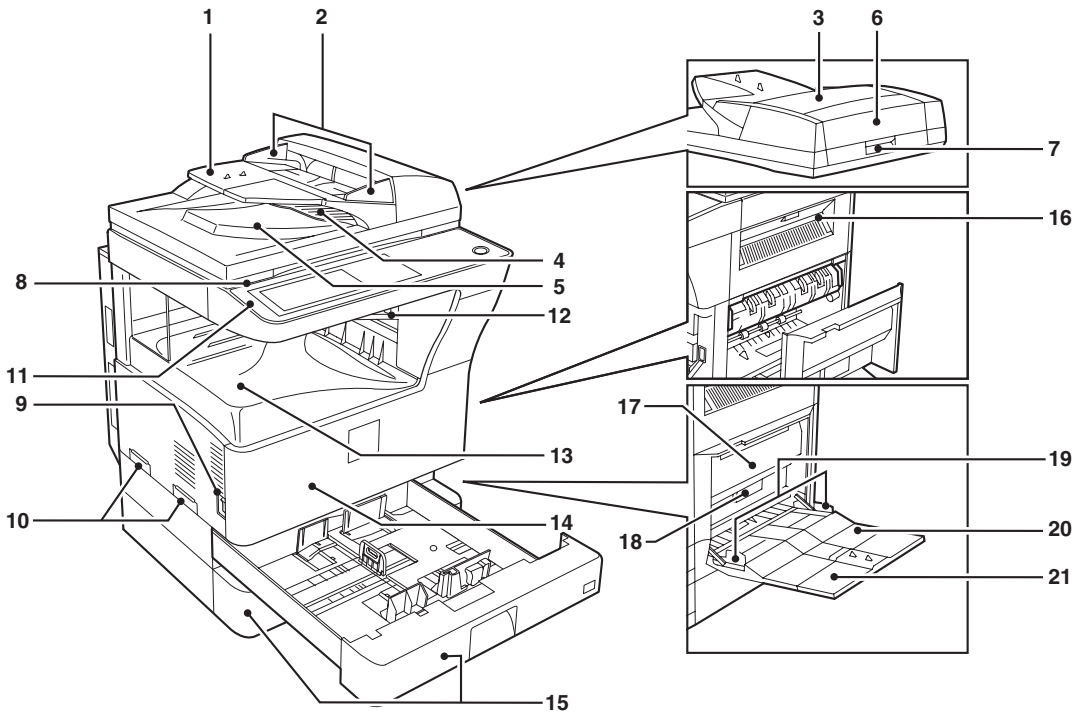
5. Environment conditions



Standard environmental conditions	Temperature	20 - 25°C
	Humidity	65 ± 5%RH
Usage environmental conditions	Temperature	10 - 35°C
	Humidity	20 - 85%RH
	Atmospheric pressure	590 - 1013 hPa (height: 0 - 2000m)
Storage period	Toner/Developer: 24 months from the manufactured month (Production lot) under unsealed state Drum: 36 months from the manufactured month under unsealed state	

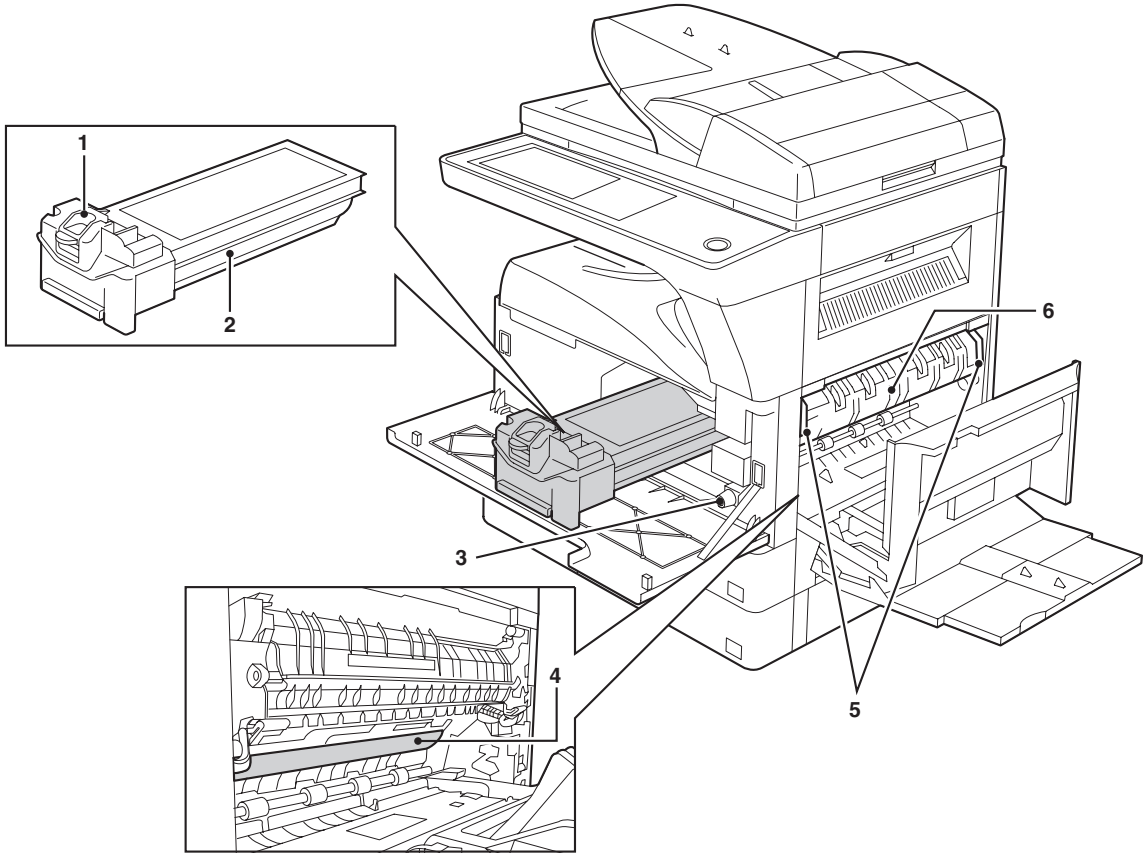
[4] EXTERNAL VIEW AND INTERNAL STRUCTURE

1. External view



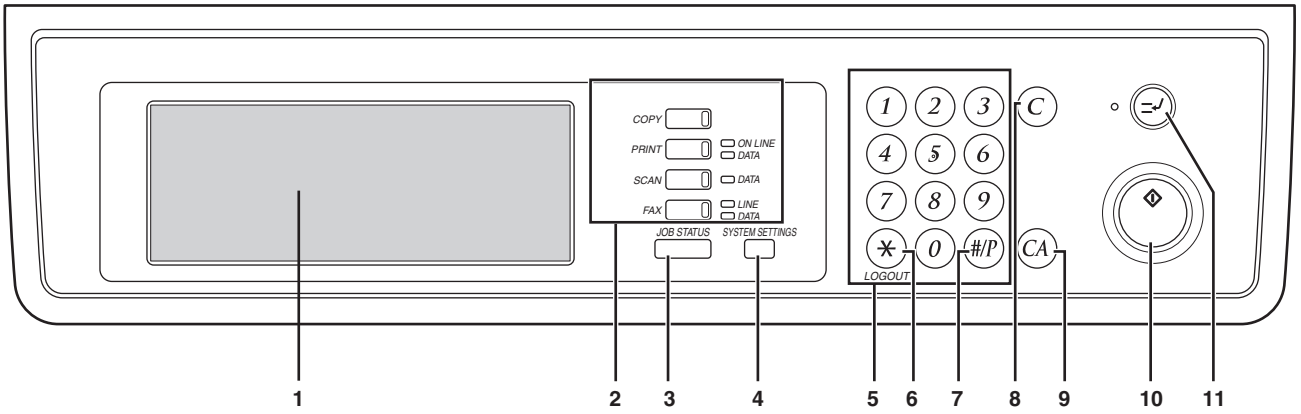
No.	Name	Function/Operation
1	Document feeder tray	Place the original(s) that you wish to scan face up here.
2	Original guides	Adjust to the size of the originals.
3	Document feeder cover	Open to remove misfed originals.
4	Reversing tray	Pull out to remove misfed originals.
5	Exit area	Originals exit the machine here after copying.
6	Document transport cover	Open to remove misfed originals.
7	Document transport cover knob	Pull to open the document transport cover.
8	Document glass	Place an original that you wish to scan face down here.
9	Power switch	Press to turn the machine power on and off.
10	Handles	Use to move the machine.
11	Operation panel	Contains operation keys and the touch panel.
12	Job separator tray (Upper tray) (optional)	Print jobs and received faxes are delivered to this tray.
13	Center tray	Finished copies are delivered to the center tray.
14	Front cover	Open to remove paper misfeeds and perform machine maintenance.
15	Paper trays	Each tray holds 500 sheets of copy paper.
16	Upper right side cover	Open to remove misfeeds when an optional job separator tray kit or a optional finisher is installed.
17	Side cover	Open to remove misfeeds.
18	Side cover handle	Pull to open the side cover.
19	Bypass tray paper guides	Adjust to the width of the paper.
20	Bypass tray	Regular paper and special paper (such as transparency film) can be fed from the bypass tray.
21	Bypass tray extension	Pull out the bypass tray extension before placing paper in the bypass tray.

2. Internal structure



No.	Name	Function/Operation	Note
1	Toner cartridge lock release lever	Use to unlock the toner cartridge.	
2	Toner cartridge	Contains toner.	
3	Roller rotating knob	Turn to remove misfed paper.	
4	Photoconductive drum	Copy images are formed on the photoconductive drum.	Do not touch the photoconductive drum (green portion). Doing so may damage the drum and cause smudges on copies.
5	Fusing unit release levers	To remove a paper misfeed in the fusing unit, push up on these levers and remove the paper.	The fusing unit is hot. Do not touch the fusing unit when removing misfed paper. Doing so may cause a burn or injury.
6	Fusing unit paper guide	Open to remove misfed paper.	

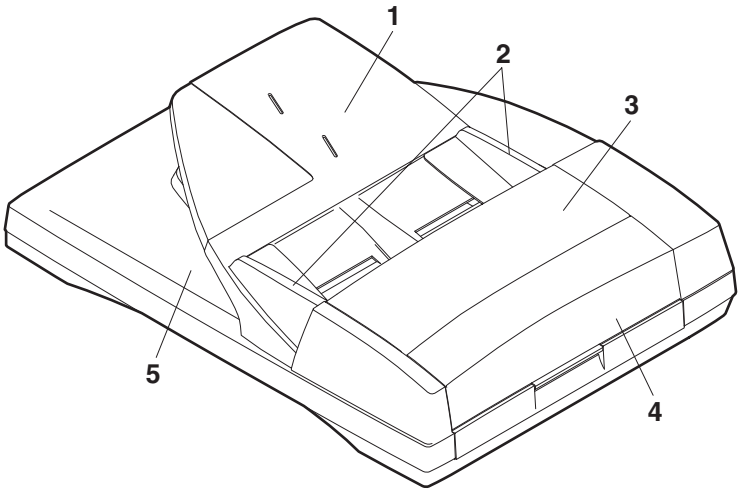
3. Operation panel



No.	Name	Function/Operation	Note
1	Touch panel	The machine status, messages and touch keys are displayed on the panel. The display will show the status of printing, copying or network scanning according to the mode that is selected. For details see the next page.	
2	Mode select keys and indicators	Use to change modes and the corresponding display on the touch panel.	
	[COPY] key	Press to select copy mode.	
	[PRINT] key/ONLINE indicator/ DATA indicator	[PRINT] key: Press to select print mode. • ONLINE indicator: Print jobs can be received when this indicator is lit. • DATA indicator: A print job is in memory. The indicator lights steadily while the job is held in memory, and blinks while the job is printed.	
	[SCAN] key/DATA indicator	[SCAN] key: Press to select network scan mode when the network scanner option is installed. • DATA indicator: Lights steadily or blinks while a scanned image is being sent.	When the network scanner option is installed.
	[FAX] key/LINE indicator/ DATA indicator	[FAX] key: Press to select fax mode when the fax option is installed. • LINE indicator : This lights up while faxes are being sent or received. • DATA indicator: Blinks when a fax has been received to memory and lights steadily when a fax is waiting in memory for transmission.	When the fax option is installed.
3	[JOB STATUS] key	Press to display the current job status.	
4	[SYSTEM SETTINGS] key	Use to adjust various settings of the machine including the contrast of the touch panel and administrator settings.	
5	Numeric keys	Use to enter numeric values for various settings.	
6	[LOGOUT] key (⊛)	When auditing mode is enabled, press this key after finishing a job to return the machine to account number entry standby.	
7	[#/P] key (#/P)	Use this key to execute a job program in copy mode. The key is also used to dial in fax mode.	
8	[CLEAR] key (C)	Press to clear a copy number setting or cancel a job.	
9	[CLEAR ALL] key (CA)	Resets the settings to the initial settings.	
10	[START] key (◈)	Press in copy mode, scanner mode, or fax mode to begin copying, network scanning, or faxing. This key blinks when auto power shut mode has activated. Press the key to return to normal operation.	
11	[INTERRUPT] key (⏎)	Use to perform an interrupt copy job.	

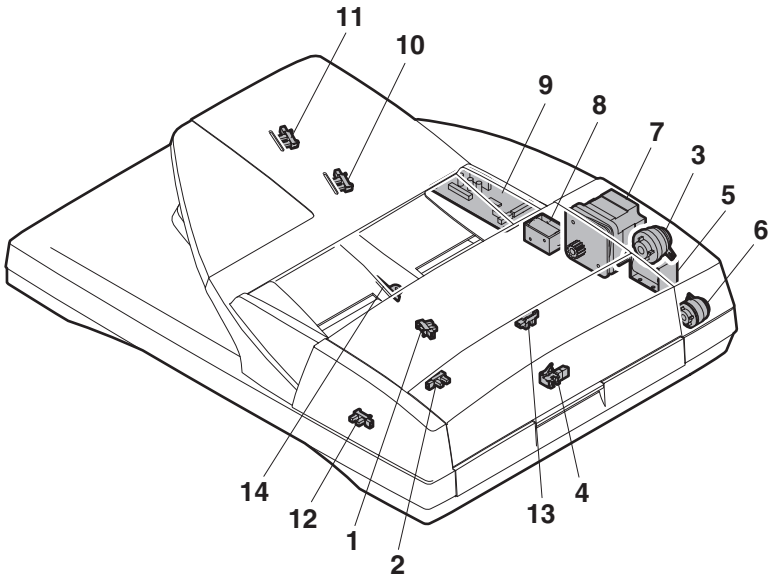
4. RSPF

A. External view



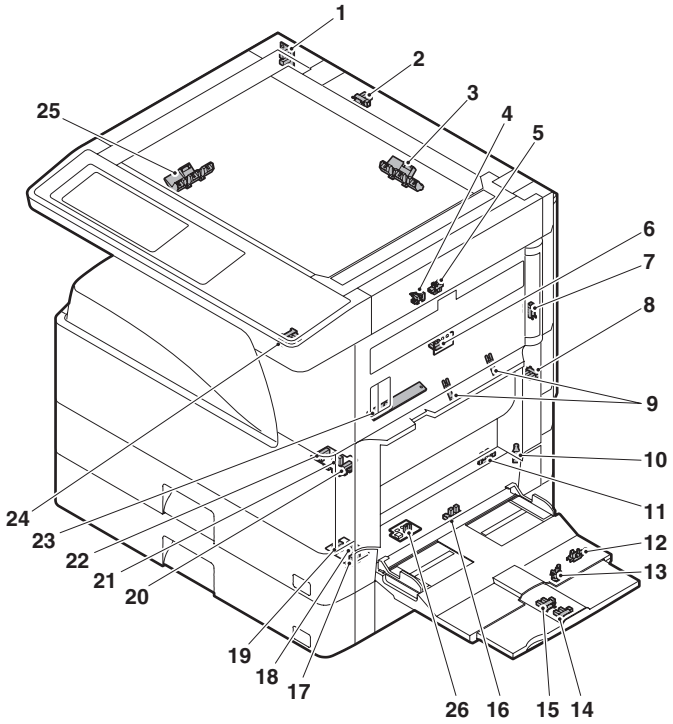
No.	Name
1	Document set tray
2	Document guide
3	Document feed section cover
4	Document transport section cover
5	Document exit section

B. Internal structure



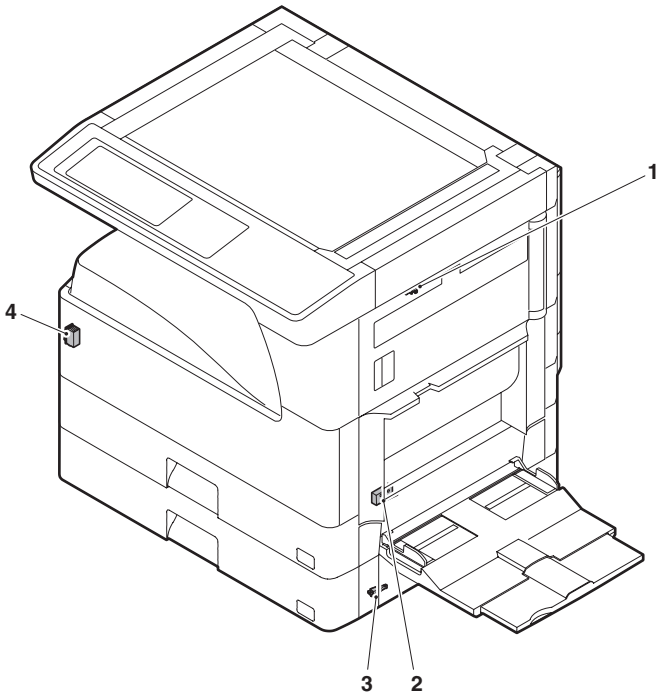
No.	Code	Name	Type	Function/Operation
1	EMPS	Document set sensor	Photo transmission	Detects presence of documents.
2	FGOD	Open/close sensor	Photo transmission	Detects open/close of the paper feed unit.
3	DFCL	Paper feed clutch	—	—
4	DFD	Paper entry sensor	Photo transmission	Detects presence of documents.
5	RSOL	Pressure release solenoid	—	—
6	CLH	Transport clutch	—	—
7	DTM	SPF motor	Stepping motor	Drives document feed on the tray, transport, and paper exit roller.
8	GSOL	Gate solenoid	—	—
9	—	Interface PWB	—	—
10	DLS1	Document length detection SW (Short)	Photo transmission	Detects the document length on the tray.
11	DLS2	Document length detection SW (Long)	Photo transmission	Detects the document length on the tray.
12	OPCLS	Book sensor	Photo transmission	Detects the SPF float.
13	RDD	Paper exit sensor	Photo transmission	Detects presence of documents.
14	SWD	Document width sensor	Volume	Detects the document width on the tray.

5. Sensor



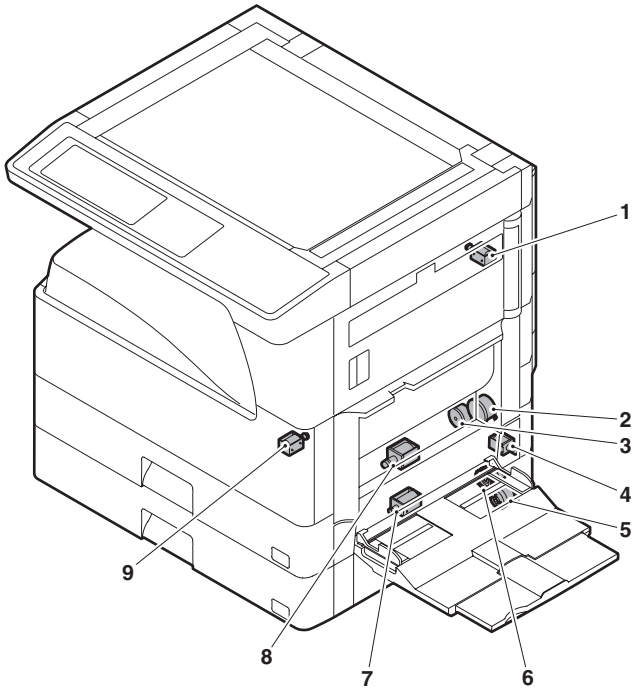
No.	Name	Code	Function and operation
1	Mirror home position sensor	MHPS	Mirror (scanner) home position detection
2	Document cover sensor	OCSW	Document cover open/close detection
3	Document size sensor	DSIN3	Document size detection (Inch series: PD3, 4) (AB series: PD4, 5)
4	2nd paper exit sensor (Option)	POD2	2nd paper exit detection
5	2nd paper exit full detection sensor (Option)	TOPF	2nd paper exit section full detection
6	1st paper exit sensor	POD1	1st paper exit detection
7	Shifter home position sensor (Except North America)	SFTHP	Shifter home position sensor detection
8	Paper exit sensor (DUP side)	PPD2	Paper exit detection
9	Thermistor		Fusing temperature detection
10	1st tray (paper tray) detection	CD1	1st tray (paper tray) empty detection
11	Manual feed paper entry sensor	PPD1L	Sensor of paper entry from the manual paper feed tray, the 2nd/multi-tray desk, or the DUP
12	Manual paper feed tray empty sensor 2	MPLS2	Manual feed tray position detection
13	Manual paper feed tray empty sensor 1	MPLS1	Manual feed tray position detection
14	Manual feed length detection sensor 1	MPLD1	Manual feed paper length detection
15	Manual feed length detection sensor 2	MPLD2	Manual feed paper length detection
16	Manual feed paper empty sensor	MPED	Manual feed paper empty detection
17	2nd tray paper pass sensor	PFD2	2nd tray paper pass
18	2nd tray paper upper limit detection sensor	LUD2	2nd tray paper upper limit detection
19	2nd tray paper empty sensor	PED2	2nd tray paper empty detection
20	1st tray paper pass sensor	PPD1H	1st tray paper pass
21	1st tray paper upper limit detection sensor	LUD1	1st tray paper upper limit detection
22	1st tray paper empty sensor	PED1	1st tray paper empty detection
23	Toner sensor		Toner density detection
24	Center tray paper YES/NO sensor	LOEMP	Center tray paper YES/NO detection
25	Document size sensor	DSIN0	Document size detection (Inch series: PD1, 2) (AB series: PD1 – 3)
26	Reverse pass paper detection sensor	DUP2	Reverse pass detection

6. Switch



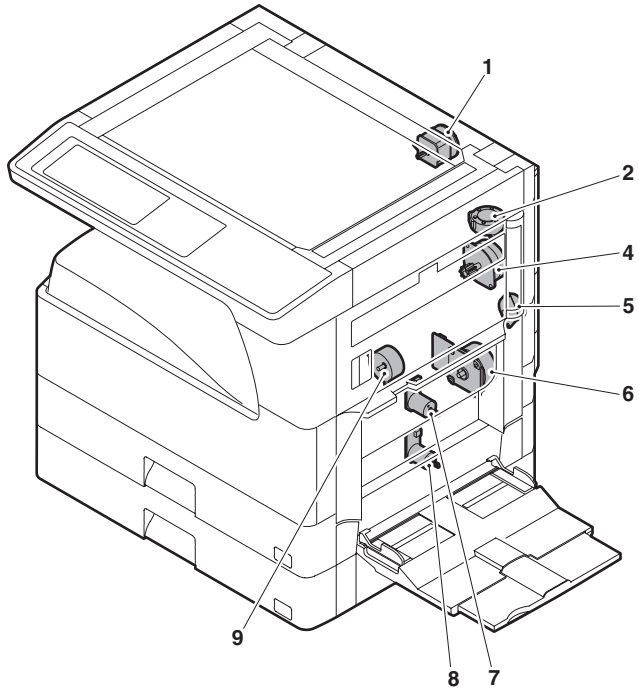
No.	Name	Code	Function and operation
1	Right cabinet door switch (Option)	DSWR0	Right cabinet door open/close detection
2	Door switch	DSWR1	Front door and side door open/close detection
3	2nd right door switch	DSWR2	Side door open/close detection
4	Main switch	PSSW	Main power switch

7. Solenoid/Clutch



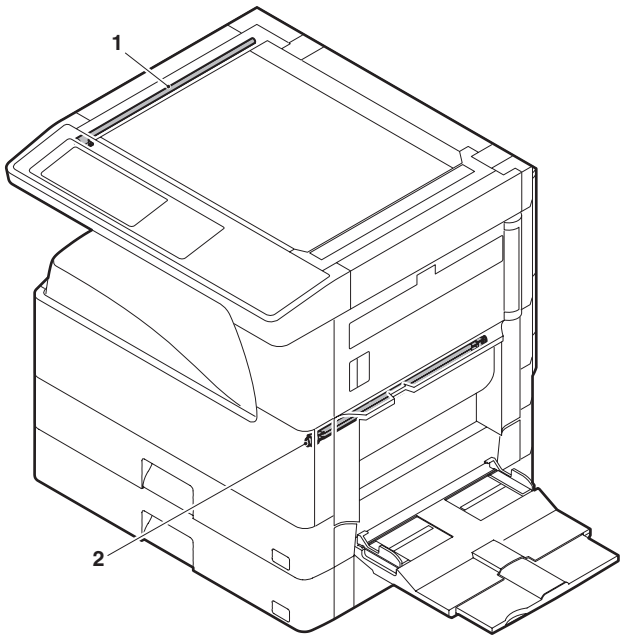
No.	Name	Code	Function and operation
1	Paper exit gate switching solenoid (Option)	OGS	Paper exit gate switcher
2	PS clutch	RRC	Main unit paper feed
3	Paper feed clutch	CPFS1	Paper feed roller drive
4	Manual paper feed solenoid	MPFS	Manual paper feed solenoid
5	Paper feed transfer clutch	TRC2	Paper feed transfer clutch
6	2nd tray paper feed clutch	CPFS2	
7	2nd tray paper feed solenoid	CPFC2	Solenoid for the paper feed from the tray
8	Paper feed solenoid	CPFC1	Solenoid for the paper feed from the tray
9	Separation pawl solenoid	PSPS	Separation pawl operation solenoid

8. Drive motor



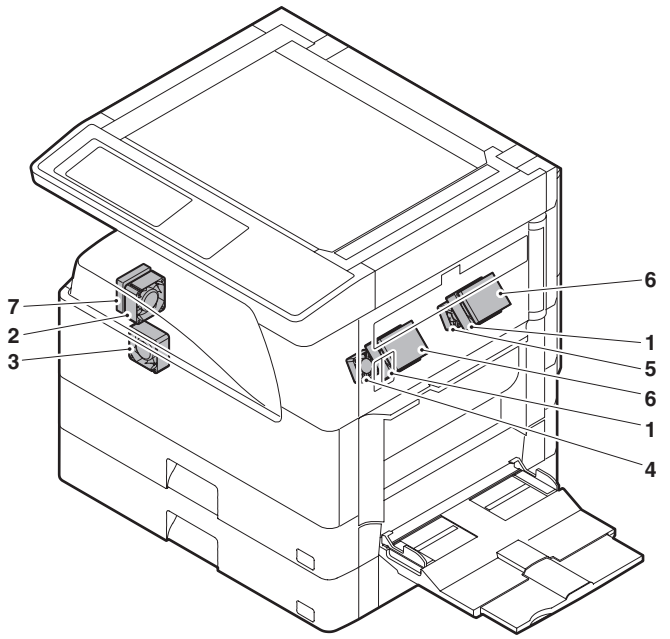
No.	Name	Code	Function and operation
1	Mirror motor	MIRM	Optical mirror base drive
2	Shifter motor (Except North America)	SFTM	Shifter drive
4	Duplex motor	DPXM	Duplex paper switching and exit motor
5	DUP-2 motor		Reverse pass for paper transport
6	Main motor	MM	Main drive
7	Tray lift-up motor	LUM1	Tray paper lift-up
8	Tray lift-up motor	LUM2	Tray paper lift-up
9	Toner motor	TM	Toner supply

9. Lamp



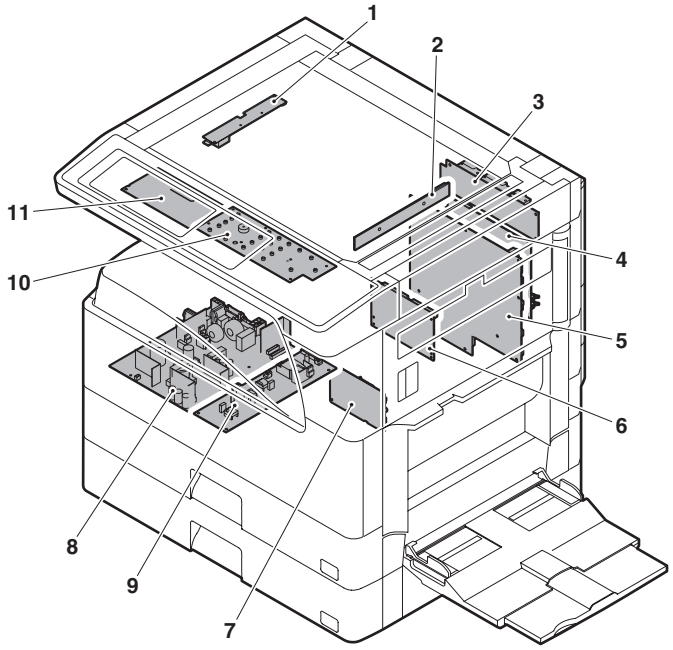
No.	Name	Function and operation
1	Copy lamp	Image radiation lamp
2	Heater lamp	Fusing heat lamp

10. Fan/Filter



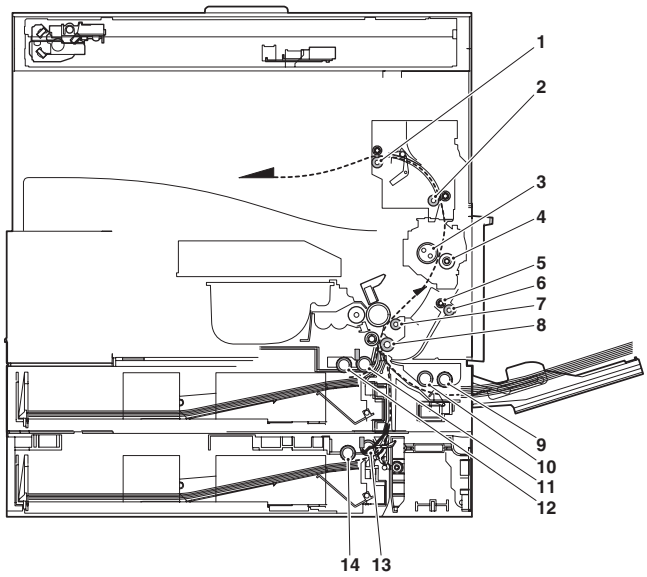
No.	Name	Code	Function and operation
1	Cooling fan	VFM	Cools the inside of the unit.
2	Exhaust fan motor	DCFM	Cools the inside of the unit.
3	Intake fan motor	DCFM2	
4	Fusing paper exit fan	VFM2	Cools the inside of the unit. (31 sheet model)
5	Fusing paper exit fan	VFM2	Cools the inside of the unit.
6	Ozon filter		
7	Ozon filter		

11. PWB



No.	Name	Function and operation
1	Inverter PWB	Copy lamp control
2	CCD PWB	For image scanning (read)
3	Option connector PWB	
4	IMC PWB	Image process
5	MCU PWB	Main unit control
6	Mother board	Connection with FAX PWB and PCL PWB
7	Tray interface PWB	2nd tray control
8	DC power supply PWB	DC voltage control
9	High voltage PWB	High voltage control
10	KEY PWB	
11	OPU PWB	Operation panel control

12. Roller



No.	Name	Function and operation
1	Paper exit roller	Paper exit roller
2	Transport roller	Paper transport roller
3	Upper heat roller	Fuses toner on paper. (with the Teflon roller)
4	Lower heat roller	Fuses toner on paper. (with the silicone rubber roller)
5	DUP transport follower roller	Duplex paper transport
6	DUP transport roller	Duplex paper transport
7	Transport roller	Transfer images on the drum onto paper.
8	Resist roller	Synchronize the paper lead edge with the image lead edge.
9	Manual paper feed roller	Picks up papers in manual paper feed port.
10	Manual feed transport roller	Transports paper from the manual paper feed port.
11	1st tray pick-up roller	Picks up paper from the tray.
12	1st tray paper feed roller	Transports the picked up paper to RESIST section.
13	2nd tray pick-up roller	Picks up paper from the tray.
14	2nd tray paper feed roller	Transports the picked up paper to RESIST section.

[5] ADJUSTMENTS

1. Adjustment item list

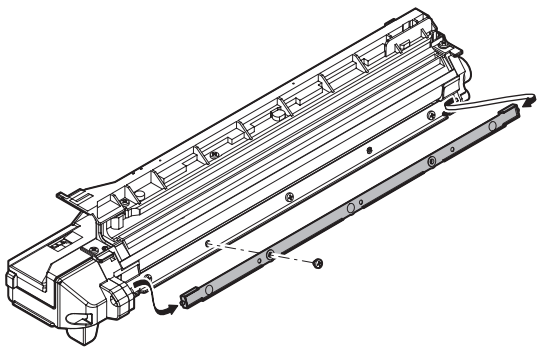
Section		Adjustment item		Adjustment procedure/SIM No.	
A	Process section	(1)	Developing doctor gap adjustment		Developing doctor gap adjustment
		(2)	MG roller main pole position adjustment		MG roller main pole position adjustment
		(3)	Developing bias voltage adjustment		SIM8-1
		(4)	Grid bias voltage adjustment		SIM8-2
B	Mechanism section	(1)	Print start position adjustment		SIM50-5
		(2)	RSPF image lead edge position adjustment		SIM50-6
		(3)	Rear edge void adjustment		SIM50-1
		(4)	Paper off center adjustment		SIM50-10
		(5)	Left edge void area adjustment		SIM50-1-8
		(6)	Main scanning direction (FR direction) distortion balance adjustment		No. 2/3 mirror base unit installing position adjustment
					Copy lamp unit installing position adjustment
		(7)	Sub scanning direction (scanning direction) distortion adjustment		Winding pulley position adjustment
		(8)	Main scanning direction (FR direction) distortion balance adjustment		Rail height adjustment
		(9)	Main scanning direction (FR direction) magnification ratio adjustment		SIM48-1-1
		(10)	Sub scanning direction (scanning direction) magnification ratio adjustment	a	OC mode in copying (SIM 48-1-2)
				b	RSPF sub scanning direction magnification ratio (SIM48-1-3, 48-1-4)
		(11)	Off center adjustment (RSPF mode)		SIM50-12
		(12)	OC (RSPF) open/close detection position adjustment		SIM41-3
		(13)	Original sensor adjustment		SIM41-2, 41-4 (41-1)
		(14)	RSPF white correction pixel position adjustment (required in an RSPF model when replacing the lens unit)		SIM63-7
		(15)	RSPF scan position auto adjustment		SIM53-8
C	Image density (exposure) adjustment	(1)	Copy mode		SIM46-2

2. Details of adjustment

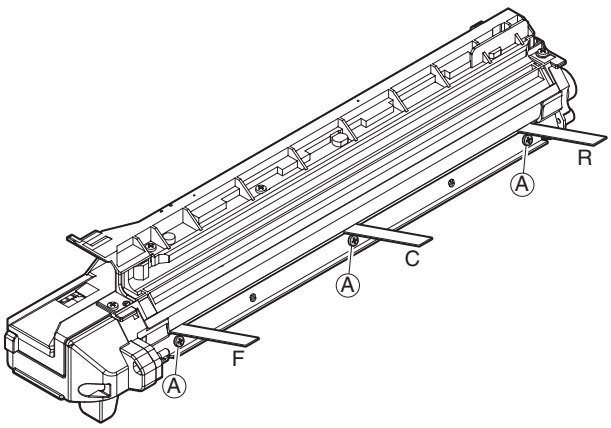
A. Process section

(1) Developing doctor gap adjustment

1) Remove the doctor cover.



2) Loosen the developing doctor fixing screw A.
3) Insert a thickness gauge of 1.5mm to the positions of three screws on the developing docter as shown.



4) Tighten the developing doctor fixing screw.
5) Check the clearance of the developing doctor. If it is within the specified range, then fix the doctor fixing screw with screw lock.

* When inserting a thickness gauge, be careful not to scratch the developing doctor and the MG roller.

<Adjustment specification>

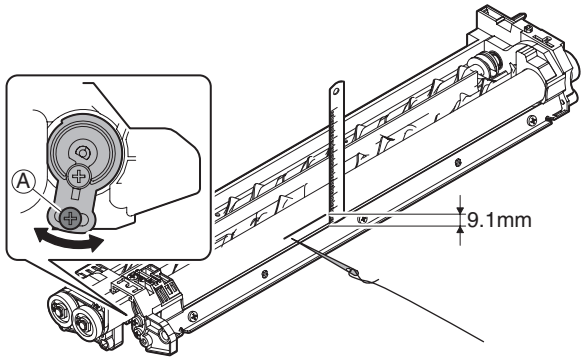
Developing doctor gap

F/C/R: $1.5^{+0.1mm}_{-0.15mm}$

(2) MG roller main pole position adjustment

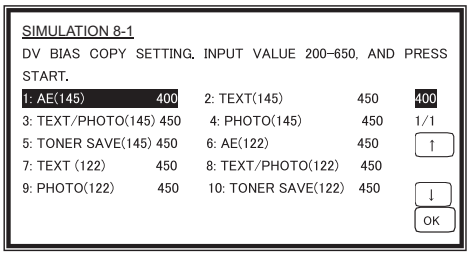
1) Put the developing unit on a flat surface.
2) Tie a needle or pin on a string.
3) Hold the string and bring the needle close to the MG roller horizontally. (Do not use paper clip, which is too heavy to make a correct adjustment.) (Put the developing unit horizontally for this adjustment.)
4) Do not bring the needle into contact with the MG roller, but bring it to a position 2 or 3mm apart from the MG roller. Mark the point on the MG roller which is on the extension line from the needle tip.
5) Measure the distance from the marking position to the top of the doctor plate of the developing unit to insure that it is 9.1mm.

   If the distance is not within the specified range, loosen the fixing screw A of the main pole adjustment plate, and move the adjustment plate in the arrow direction to adjust.



(3) Developing bias voltage adjustment (SIM 8-1)

1) Execute SIM 8-1.



2) Touch the exposure mode to be changed.
   The current set value is displayed.
3) Enter the set value with the 10-key.
4) Press the [START] key.

   Output is made with the entered value, and the display returns to the original state.

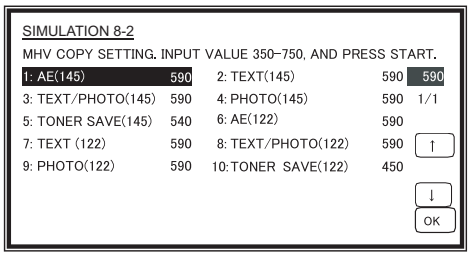
<Adjustment specification>

Item		Content	Setting range	Default
1	AE (145)	AE (145mm/s)	200-650	450
2	TEXT (145)	Character (145mm/s)		450
3	TEXT/PHOTO (145)	Character/Photo (145mm/s)		450
4	PHOTO (145)	Photo (145mm/s)		450
5	TONER SAVE (145)	Toner save (145mm/s)		400
6	AE (122)	AE (122mm/s)		450
7	TEXT (122)	Character (122mm/s)		450
8	TEXT/PHOTO (122)	Character/Photo (122mm/s)		450
9	PHOTO (122)	Photo (122mm/s)		450
10	TONER SAVE (122)	Toner save (122mm/s)		400

Min. unit: –10V increment

(4) Grid bias voltage adjustment (SIM 8-2)

1) Execute SIM 8-2.



2) Touch the exposure mode to be changed.
   The current set value is displayed.
3) Enter the set value with the 10-key.
4) Press the [START] key.

   Output is made with the entered value for 30sec, and the display returns to the original state.

<Adjustment specification>

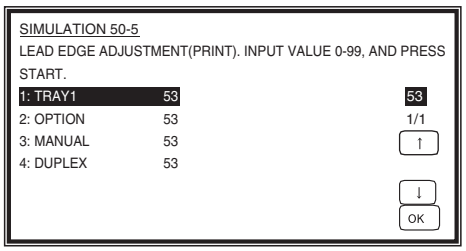
Item		Content	Setting range	Default
1	AE (145)	AE (145mm/s)	350-750	590
2	TEXT (145)	Character (145mm/s)		590
3	TEXT/PHOTO (145)	Character/Photo (145mm/s)		590
4	PHOTO (145)	Photo (145mm/s)		590
5	TONER SAVE (145)	Toner save (145mm/s)		540
6	AE (122)	AE (122mm/s)		590
7	TEXT (122)	Character (122mm/s)		590
8	TEXT/PHOTO (122)	Character/Photo (122mm/s)		590
9	PHOTO (122)	Photo (122mm/s)		590
10	TONER SAVE (122)	Toner save (122mm/s)		540

Min. unit: –10V increment

B. Mechanism section

(1) Print start position adjustment

1) Execute SIM 50-5.

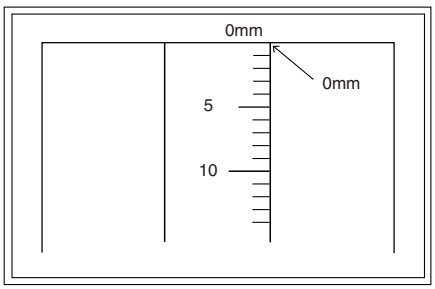


2) Touch the item to be adjusted.
   The item and the currently set value are highlighted.
3) Press the [P] key.
   The display is shifted to the copy menu.
4) Select the paper feed tray, the print density, and the duplex mode.
   Enter the adjustment value with the 10-key.
5) Press the [START] key.
   Copying is started.

Item		Content	Setting range	Default
1	TRAY1	1st tray	0-99	53
2	OPTION	Option tray	1-99	
3	MANUAL	Manual feed		
4	DUPLEX	Back print		

6) Measure the distance H between the paper lead edge and the image print start position. Set the image print start position set value again.
   - 1 step of the set value corresponds to about 0.127mm shift.
   - Calculate the set value from the formula below.

   99 – H/0.127 (mm) = Image print start position set value
   <H: Print start position measurement value (mm)>



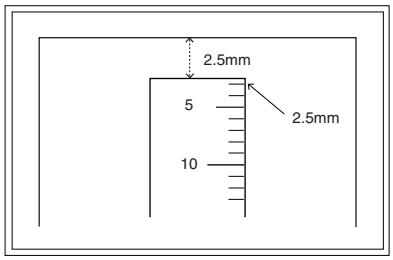
   * Fit the print edge with the paper edge, and perform the lead edge adjustment.

   Example:99 – 5/0.127 = 99 – 39.4 = about 59

   Note: FIf the set value is not obtained from the above formula, perform the fine adjustment.

7) Execute SIM 50-1-2 to adjust the main tray lead edge void.
   - 1 step of the set value corresponds to about 0.127mm shift.
   - Calculate the set value from the formula below.

   B/0.127 (mm) = Lead edge void adjustment value
   <B: Lead edge void (mm)>



   Example: When setting the lead edge void to 2.5mm:
   2.5 /0.127 = about 20

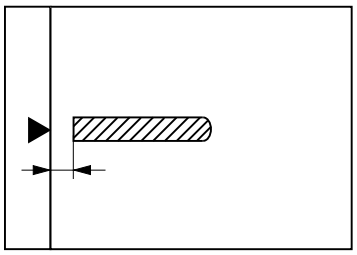
<Adjustment specification>

Adjustment mode	SIM	Set value	Spec value	Setting range
Main tray lead edge void	50-1 -2	B/0.127	Lead edge void: 1 – 4mm	1 – 99
Print start position	50-5	99 – H/0.127	Image loss: 3mm or less	

[H: Print start position measurement value (mm),
B: Lead edge void (mm)]

(2) RSPF image lead edge position adjustment

1) Set a scale on the OC table as shown below.



Note: Since the printed copy is used as a test chart, put the scale in paralleled with the edge lines.

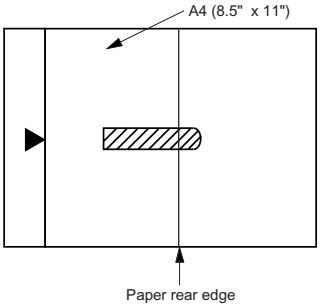
2) Make a copy, then use the copy output as an original to make an RSPF copy again.
3) Check the copy output. If necessary, perform the following adjustment procedures.
4) Execute SIM 50-6.
5) Set the RSPF lead edge position set value so that the same image is obtained as that obtained in the previous OC image lead edge position adjustment.

<Adjustment specification>

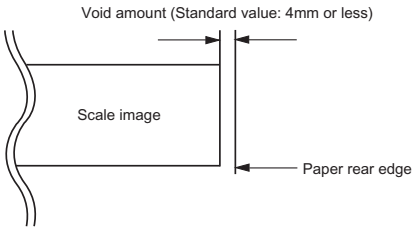
Adjustment mode	SIM	Set value	Spec value	Setting range
RSPF image lead edge position	50-6	1 step: 0.127mm shift	Lead edge void: 1 – 4mm Image loss: 3mm or less	1 – 99

(3) Rear edge void adjustment

1) Set a scale as shown in the figure below.



2) Set the document size to A4 (8.5" x 11"), and make a copy at 100%.
3) If an adjustment is required, follow the procedures below.



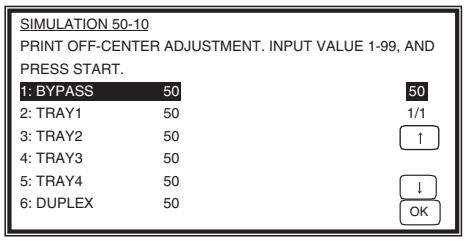
4) Execute SIM 50-1 and set the density mode to DEN-B. The currently set adjustment value is displayed.
5) Enter the set value and press the start key.
   The correction value is stored and a copy is made.

<Adjustment specification>

Adjustment mode	SIM	Set value	Spec value	Setting range
Rear edge void	50-1-6	1 step: 0.127mm shift	4mm or less	1 – 99

(4) Paper off center adjustment

1) Set a test chart (UKOG-0089CSZZ) on the document table.
2) Select a paper feed port and make a copy.
3) Execute SIM 50-10.



4) Touch the item to be adjusted.
   The item and the currently set value are highlighted.
5) Press the [START] key.
   The display is shifted to the copy menu.
6) Select the paper feed tray and the print density.
   Enter the adjustment value with the 10-key.
7) Press the [START] key.
   Copying is started.

Item		Content	Setting range	Default
1	BYPASS	Manual paper feed	1-99	50
2	TRAY1	1st tray		
3	TRAY2	2nd tray		
4	TRAY3	3rd tray		
5	TRAY4	4th tray		
6	DUPLEX	Back print		

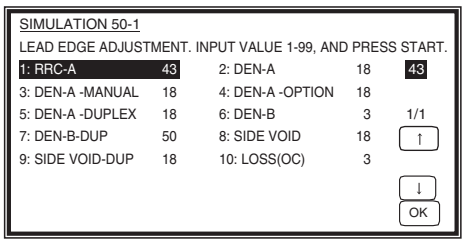
<Adjustment specification>

Adjustment mode	SIM	Set value	Spec value	Setting range
Paper off center	50-10 -2	Add 1: 0.127mm shift to R side. Reduce 1: 0.127mm shift to L side.	Single: Center ±2.0mm	1 – 99
Second print surface off-center	50-10 -6		Duplex: Center ±2.5mm	

(5) Left edge void area adjustment

Note: Before performing this adjustment, be sure to check that the paper off center adjustment (SIM 50-10) is completed.

1) Execute SIM 50-1.



2) Note down the adjustment value of SIM 50-5 (Items 1, 2, 3, 4), and change the value to 99.
3) Set SIM 50-1 (Items 2, 3, 4, 5) to 1. (By setting to 1, there is no void.)
4) Place a chart with a clear lead edge (or a ruler) on the OC document table.
5) Use SIM 50-1 (Item 1) to execute test print. Check the print out and adjust so that the lead edge image is printed. (1 – 99: About 0.127mm/Step)
6) Reset the adjustment values of SIM 50-5 (Items 1, 2, 3, 4) to the original values, and execute test print. Check the print out and adjust so that the lead edge image is printed on the lead edge of paper. (1 – 99: About 0.127mm/Step).
7) Adjust SIM 50-1 (Items 2, 3, 4, 5) so that the lead edge void on the print out is the specified value. (1 – 99: About 0.127mm/Step)
8) Similar to procedure 7, adjust SIM 50-1 (Item 6, 7) so that the rear edge void is the specified value. (1 – 99: About 0.127mm/Step)
9) Similar to procedure 7, adjust SIM 50-1 (Item 8, 9) so that the left edge void is the specified value. (1 – 99: About 0.127mm/Step)
10) Make an enlargement copy (400%), and check that there is no shade of the cabinet printed at the lead edge.
11) If there is a shade printed at the lead edge in procedure 9, adjust SIM 50-1 (Item 10). (1 – 5: About 0.677mm)
    * If there is no problem, set to 3.

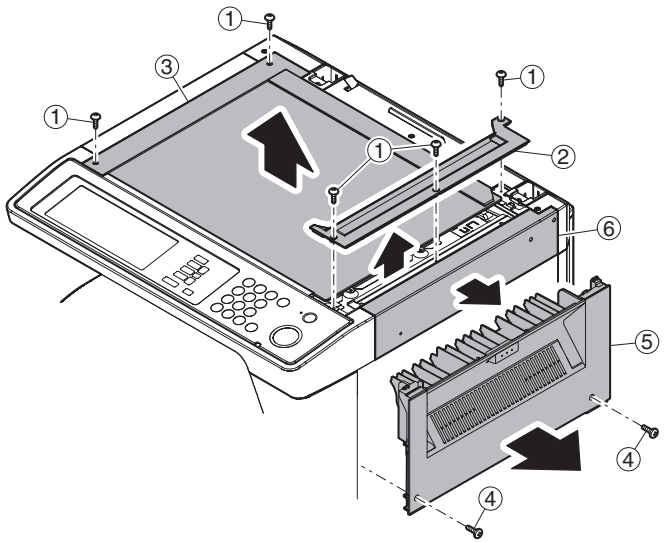
Item		Content	Setting range	Default
1	RRC-A	Original scan start position adjustment Lead edge position adjustment value (OC)	1-99	43
2	DEN-A	Lead edge cancel adjustment (Main tray)	1-99	18
3	DEN-A-MANUAL	Lead edge cancel adjustment (Manual feed tray)	1-99	18
4	DEN-A-OPTION	Lead edge cancel adjustment (Option tray)	1-99	18
5	DEN-A-DUPLEX	Lead edge cancel adjustment (back of the machine)	1-99	18
6	DEN-B	Rear edge void adjustment	1-99	30
7	DEN-B-DUP	Rear edge void adjustment (Duplex)	1-99	50
8	SIDE VOID	Left edge void adjustment (First print surface)	1-99	18
9	SIDE VOID-DUP	Left edge void adjustment (Duplex)	1-99	18
10	LOSS(OC)	Image loss amount adjustment (Lead edge image loss set value) (OC)	1-5	3

<Adjustment specification>

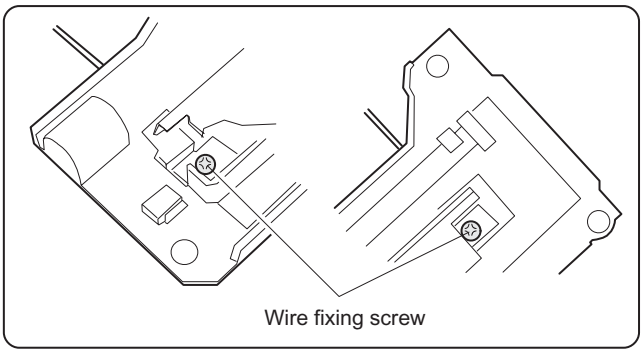
Adjustment mode	SIM	Set value	Spec value	Setting range
Left edge void	50-1 -8	1 step: 0.127mm shift	0.5 – 4mm	1 – 99

(6) Main scanning direction (FR direction) distortion balance adjustment

1) Remove the OC glass, the right cabinet and the upper right side cover.



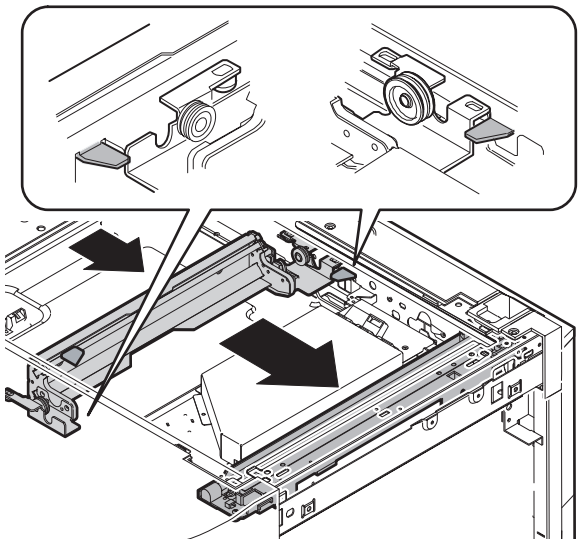
2) Loosen the copy lamp unit wire fixing screw.



3) Manually turn the mirror base drive pulley and bring No. 2/3 mirror base unit into contact with the positioning plate.

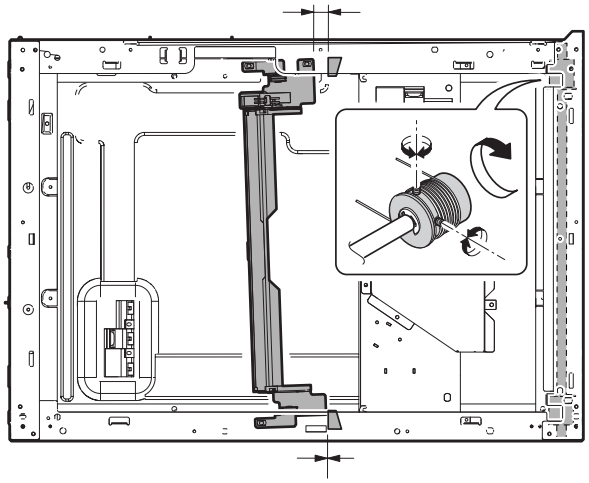
   At that time, if the front frame side and the rear frame side of No. 2/3 mirror base unit are brought into contact with the positioning plate at the same time, the mirror base unit parallelism is proper.

   If one of them is in contact with the positioning plate, perform the adjustment of 4).

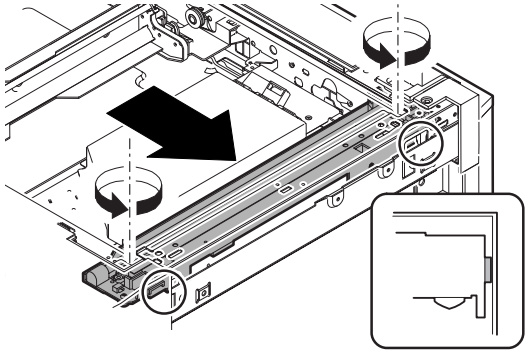


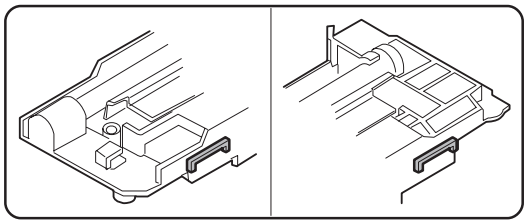
4) Loosen the set screw of the scanner drive pulley which is not in contact with No. 2/3 mirror base unit positioning plate.

5) Without moving the scanner drive pulley shaft, manually turn the scanner drive pulley until the positioning plate is brought into contact with No. 2/3 mirror base unit, then fix the scanner drive pulley.



6) Put No. 2/3 mirror base unit on the positioning plate again, push the projections on the front frame side and the rear frame side of the copy lamp unit to the corner frame, and tighten the wire fixing screw.

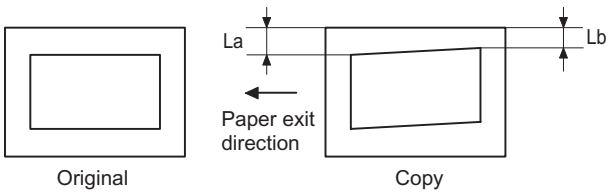




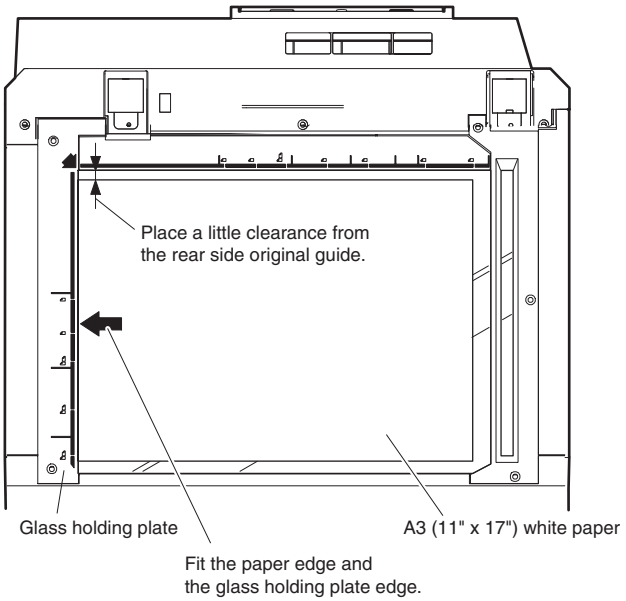
(7) Sub scanning direction (scanning direction) distortion adjustment (Winding pulley position adjustment)

This adjustment must be performed in the following cases:

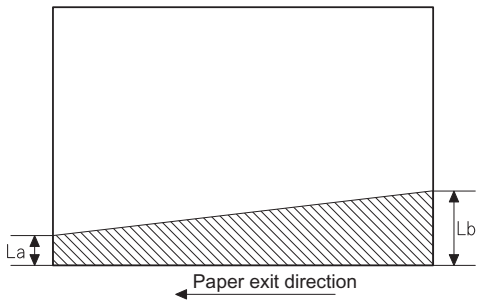
- When the mirror base drive wire is replaced.
- When the lamp unit, or No. 2/3 mirror holder is replaced.
- When a copy as shown is made.



1) Set A3 (11" x 17") white paper on the original table as shown below.



2) Open the original cover and make a normal (100%) copy.
3) Measure the width of the black background at the lead edge and at the rear edge.

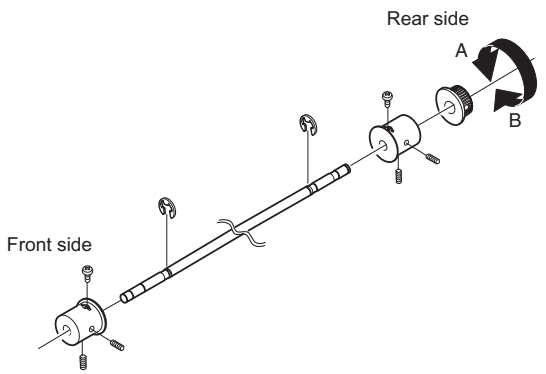


La: Lead edge black background width
Lb: Rear edge black background width

If the width (La) of the black background at the lead edge is equal that (Lb) at the rear edge, there is no need to execute the following procedures of 4) – 7).

4) Loosen the mirror base drive pulley fixing screw on the front frame side or on the rear frame side.

- When La < Lb
  Turn the mirror base drive pulley on the front frame side in the arrow direction A. (Do not move the mirror base drive pulley shaft.)
- When La > Lb
  Turn the mirror base drive pulley on the rear frame side in the arrow direction A. (Do not move the mirror base drive pulley shaft.)



5) Tighten the fixing screw of the mirror base drive pulley.

<Adjustment specification>

La = Lb

6) Execute the main scanning direction (FR) distortion balance adjustment previously described in 2) again.

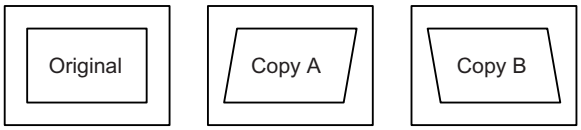
(8) Main scanning direction (FR direction) distortion balance adjustment (Rail height adjustment)

When there is no skew copy in the mirror base scanning direction and there is no horizontal error (right angle to the scanning direction), the adjustment can be made by adjusting the No. 2/3 mirror base unit rail height.

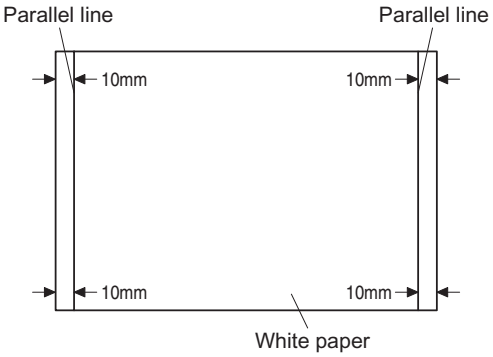
Before performing this adjustment, be sure to perform the horizontal image distortion adjustment in the laser scanner section.

This adjustment must be performed in the following cases:

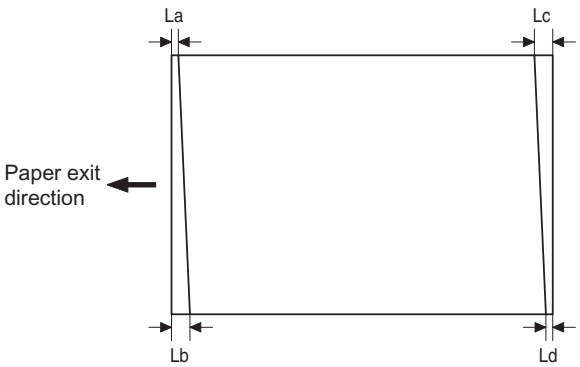
- When the mirror base wire is replaced.
- When the copy lamp unit and no. 2/3 mirror unit are replaced.
- When the mirror unit rail is replaced and moved.
- When a following copy is made.



1) Make an original for the adjustment.
   Make test sheet by drawing parallel lines at 10mm from the both ends of A3 (11" x 17") white paper as shown below. (These lines must be correctly parallel to each other.)

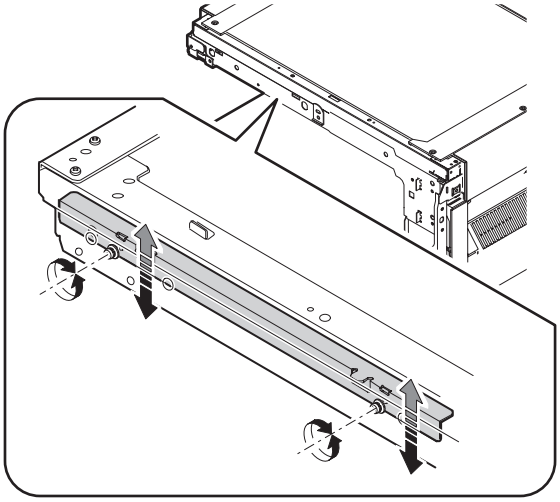


2) Make a normal (100%) copy of the test sheet on A3 (11" x 17") paper. (Fit the paper edge and the glass holding plate edge.)
3) Measure the distances (La, Lb, Lc, Ld) at the four corners as shown below.



When La = Lb and Lc = Ld, no need to perform the procedures 4) and 5).

4) Move the mirror base B rail position up and down (in the arrow direction) to adjust.



- When La > Lb
  Shift the mirror base B rail upward by the half of the difference of La–Lb.
- When La < Lb
  Shift the mirror base B rail downward by the half of the difference of Lb–La.
  Example: When La = 12mm and Lb = 9mm, shift the mirror base B rail upward by 1.5mm.
- When Lc >Ld
  Shift the mirror base B rail downward by the half of the difference of Lc–Ld.
- When Lc < Ld
  When Lc < Ld, move the mirror base B on the paper feed side upward.

* When moving the mirror base rail, hold the mirror base rail with your hand.

<Adjustment specification>

La = Lb, Lc = Ld

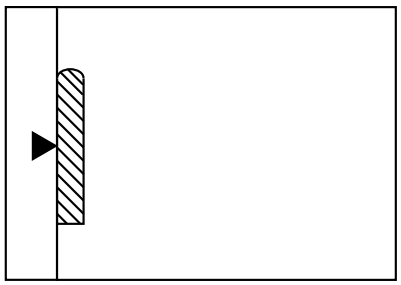
5) After completion of adjustment, manually turn the mirror base drive pulley, scan the mirror base A and mirror base B fully, and check that the mirror bases are not in contact with each other.

* If the mirror base rail is moved extremely, the mirror base may be in contact with the frame or the original glass. Be careful to avoid this.

(9) Main scanning direction (FR direction) magnification ratio adjustment (SIM 48-1)

Note: Before performing this adjustment, be sure to check that the CCD unit is properly installed.

1) Put a scale on the original table as shown below.



2) Execute SIM 48-1.
3) After warm-up, shading is performed and the current set value of the main scanning direction magnification ratio is displayed on the display section in 2 digits.
4) Manual correction mode (SIM48-1-1)
   Enter the set value and press the start key.
   The correction value is stored and a copy is made.

<Adjustment specification>

Note: A judgment must be made with 200mm width, and must not be made with 100mm width.

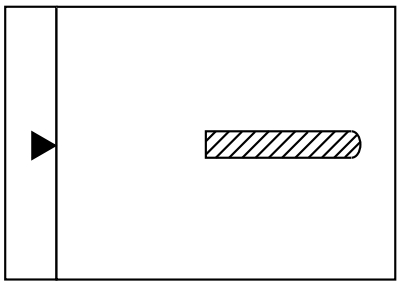
Adjustment mode	Spec value	SIM	Set value	Setting range
Main scanning direction magnification ratio	At normal: ±1.0%	48-1-1	Add 1: 0.1% increase Reduce 1: 0.1% decrease	1 – 99

(10) Sub scanning direction (scanning direction) magnification ratio adjustment (SIM 48-1-2, SIM 48-1-3)

a. OC mode in copying

Note: Execute the procedure after completion of SIM 48-1-1.

1) Put a scale on the original table as shown below, and make a normal (100%) copy.



2) Compare the scale image and the actual scale.
   If necessary, perform the following adjustment procedures.
3) Execute SIM 48-1-2.
4) Enter the set value and press the start key.
   The set value is stored and a copy is made.

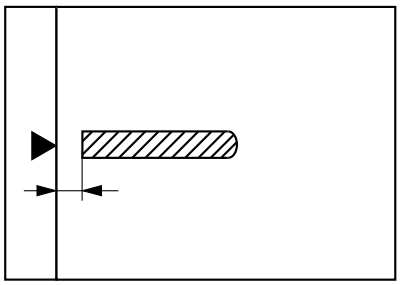
<Adjustment specification>

Adjustment mode	Spec value	SIM	Set value	Setting range
Sub scanning direction magnification ratio (OC mode)	At normal: ±1.0%	48-1-2	Add 1: 0.05% increase Reduce 1: 0.05% decrease	1 – 99

b. RSPF mode in copying

Note: Before performing this adjustment, be sure to check that the CCD unit is properly installed and that OC mode adjustment in copying has been completed.

1) Put a scale on the original table as shown below, and make a normal (100%) copy to make a test chart.



Note: Since the printed copy is used as a test chart, put the scale in parallel with the front side edge of the glass.

2) Set the test chart on the RSPF and make a normal (100%) copy.
3) Compare the scale image and the actual image.
   If necessary, perform the following adjustment procedures.
4) Execute SIM 48-1-3.
5) After warm-up, shading is performed.
   The current front surface sub scanning direction magnification ratio correction value is displayed in two digits on the display section.

6) Enter the set value and press the start key.
The set value is stored and a copy is made.

7) Execute SIM 48-1-4.
The current back surface sub scanning direction magnification ratio is displayed in two digits on the display section.

8) Enter the set value and press the start key.
The set value is stored and a copy is made.

<Adjustment specification>

Adjustment mode	Spec value	SIM	Set value	Setting range
Sub scanning direction magnification ratio (RSPF mode)	At normal: ±1.0%	48-1-3 48-1-4	Add 1: 0.05% increase Reduce 1: 0.05% decrease	1 – 99

(11) Off center adjustment (RSPF mode)

Note: Before performing this adjustment, be sure to check that the paper off center is properly adjusted.

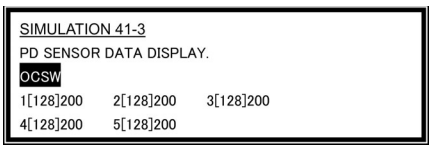
1) Place the center position adjustment test chart (sheet with a straight line in the scan direction at the center) on the RSPF.
2) Make a normal copy from the manual paper feed tray, and check the printed copy with the test chart.
If any adjustment is required, perform the following procedure.
3) Execute SIM 50-12.
4) After warm-up, shading is performed and the current set value of the off center adjustment is displayed on the display section in 2 digits.
5) Enter the set value and press the start key.
The set value is stored and a copy is made.

<Adjustment specification>

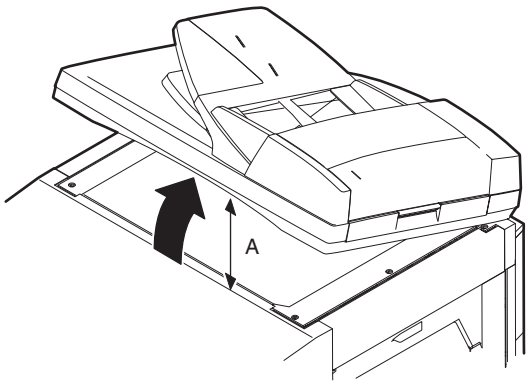
Adjustment mode	Spec value	SIM	Set value	Setting range
Original off center mode (RSPF mode)	Single: Center ± 3.0mm	50-12	Add 1: 0.1mm shift to R side	1 – 99
	Duplex: Center ±3.5mm		Reduce 1: 0.1mm shift to L side	

(12) OC (RSPF) open/close detection position adjustment

1) Execute SIM 41-3.
2) Gradually close the OC (RSPF) from the full open position, and measure distance A when the display on the operation panel changes. (See the figure below.)



Distance A = Table glass top - OC (RSPF) handle rib

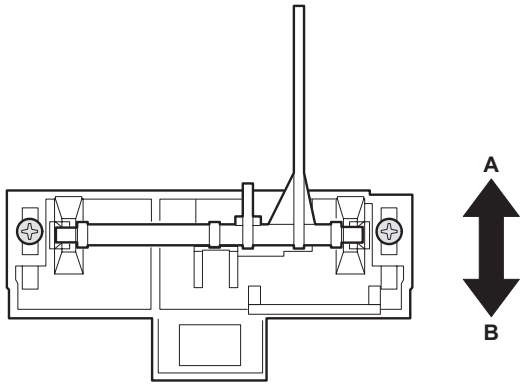


<Adjustment specification>

OC (SPF) open/close position A: 125 – 225mm

3) If the distance is outside the specified range, adjust the open/close sensor attachment plate position as shown below.

- Distance < 125mm: Shift toward A.
- Distance > 225mm: Shift toward B.



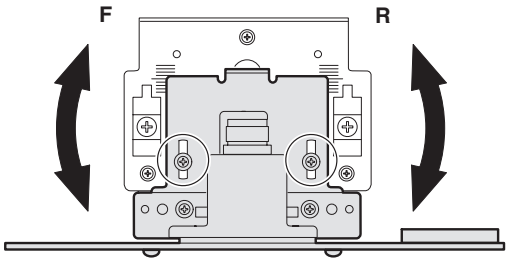
(13) Original sensor adjustment (SIM 41-2, 41-4)

1) Set A3 (11" x 17") paper on the OC table.
(Keep the SPF (OC cover) open.)
2) Execute SIM 41-2.
3) Keep A=125mm, and execute SIM 41-4. (Do not put paper on the table.)
4) Check the reaction with SIM 41-1.

(14) RSPF white correction pixel position adjustment (required in an RSPF model when replacing the lens unit) (SIM63-7)

1) Fully open the RSPF.
2) Execute SIM 63-7.
3) When the operation panel displays "COMPLETE," the adjustment is completed.
4) If the operation panel displays "ERROR," perform the following measures.

- When the display is 0:
Check that the SPF is open.
Check that the lamp is ON. (If the lamp is OFF, check the MCU connector.)
Check that the CCD harness is properly inserted into the MCU connector.
- When the display is 281 or above:
  1) Remove the table glass.
  2) Remove the dark box.
  3) Slide the lens unit toward the front side and attach it, then execute SIM.
- When the display is 143 or below:
  1) Remove the table glass.
  2) Remove the dark box.
  3) Slide the lens unit toward the rear side and attach it, then execute SIM.



* When the lens unit is moved, execute the OC main scanning magnification ratio auto adjustment, SIM 48-1-1.
* This adjustment is basically O.K. with SIM 63-7.

(15) RSPF scan position auto adjustment

[Function]

Used to adjust the RSPF scan position automatically.

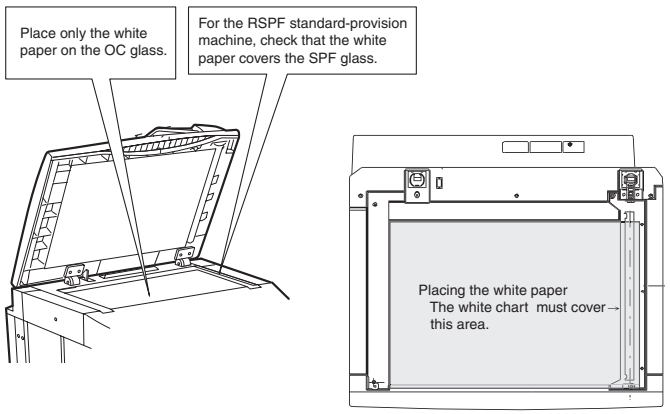
[Operation]

1) With the RSPF or the OC cover open, place a white paper background on the OC glass. (In the RSPF standard model, the RSPF glass surface is included.)
2) Enter SIM53-08, and press [START] button.
   Outline of SIM: The optical unit is shifted to recognize the boundary between the OC glass and the RSPF glass cover.
   With the same position as the reference, the RSPF scan position is automatically adjusted.

<Note>

- After completion of the RSPF scan position auto adjustment, the RSPF lead edge adjustment must be executed. (Both surfaces)
- There must be no other sheet than the black chart on the glass surface.
- Especially when in RSPF scan, the center area is scanned in the main scan direction. Be careful to prevent external light from entering the scan area.

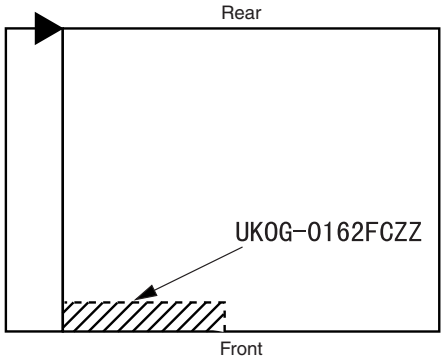
3) Check that the lead edge is not shifted. (Both surfaces)
   (If the original lead edge adjustment has been made properly, even when the scan position is shifted, it is followed automatically.)



C. Image density (exposure) adjustment

(1) Copy mode (SIM46-2)

1) Set a test chart (UKOG-0162FCZZ) on the OC table as shown below.



2) Place three or more sheets of A3 (11" x 17") paper on the test chart.
3) Execute SIM 46-2.
4) After warm-up, shading is performed and the current set value of the density (exposure) level is displayed on the display section in 2 digits.
   For mode selection, use the [10-key].
5) Change the set value with the [10-key] to adjust the copy image density.
6) Make a copy and check that the specification below is satisfied.

Note: Place originals in the rear reference, and the test chart in the front reference when adjusting the exposure.

<Adjustment specification>

Density mode	Exposure level	Sharp Gray Chart output	Set value	Setting range
AUTO	–	"3" is copied.	If too bright, increase the quantity displayed on the copy quantity display. If too dark, decrease the quantity displayed on the copy quantity display.	0 – 99
TEXT	3.0	"3" is copied.		
TEXT/PHOTO	3.0	"3" is copied.		
PHOTO	3.0	"2" is copied.		
AE (TONER SAVE)	–	"3" is copied.		
TEXT (TONER SAVE)	3.0	"3" is copied.		
TEXT PHOTO (TONER SAVE)	3.0	"3" is copied.		

[6] SIMULATION

1. General

A. Outline and purpose

The simulation has the following functions to grasp the machine operating status, identify the trouble position and causes in an earlier stage, and make various setups and adjustments speedily for improving the serviceability of the machine.

1) Various adjustments
2) Setup of specifications and functions
3) Canceling troubles
4) Operation check
5) Various counters check, setup, and clear
6) Machine operating status (operation history) data check, clear
7) Transfer of various data (adjustments, setup, operations, counters)

The operating procedures and the displays differ depending on the form of the operation panel of the machine.

B. Code-type simulation

(1) Operating procedures and operations

* Entering the simulation mode

1) #/P key (program) ON → Asterisk (*) key ON → CLEAR key ON → Asterisk (*) key ON → Ready for input of a main code of simulation
2) Entering a main code with the 10-key → START key ON
3) Entering a sub code with the 10-key → START key ON
4) Select an item with the scroll key and the item key.
5) The machine enters the mode corresponding to the selected item.
   Press START key to start the simulation operation.
   To cancel the current simulation mode or to change the main code and the sub code, press the SYSTEM SETTINGS key.

* Canceling the simulation mode to return to the normal mode

1) Press CLEAR ALL key.

(2) How to change the simulation adjustment value set by the touch panel in the adjustment value entry process

a. Target SIM list

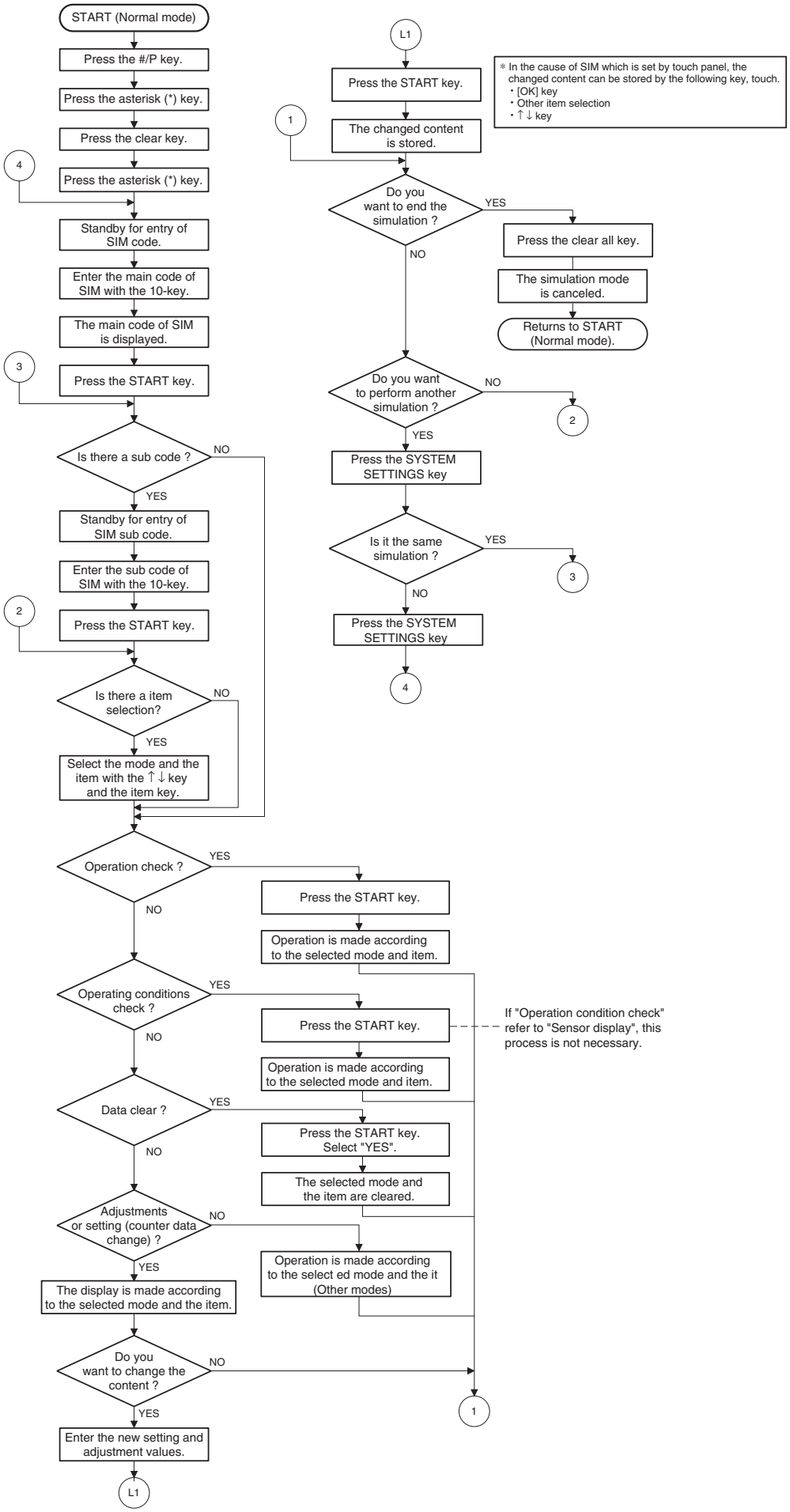
3-7, 8-1, 8-2, 8-3, 8-10, 8-11, 8-12, 9-5, 43-1, 44-34, 46-2, 46-9, 46-10, 46-11, 46-18, 46-20, 46-30, 46-31, 48-1, 48-2, 50-1, 50-5, 50-6, 50-10, 50-12, 51-1, 51-2, 51-9, 53-7

b. Touch panel operating procedure

- In the adjustment value setup menu, the selected item is highlighted. Change is made to the highlighted simulation adjustment value.
- If all the list of the adjustment items is not shown on one page, touch [↑] and [↓] button to shift the page.
- To change an adjustment value, touch the select the item to change the adjustment value. (The selected item is highlighted.) Enter the adjustment value and perform one of the following procedures, and the display of the adjustment value of the selected item is renewed as well as the adjustment value.

1) Touch [OK] button.
2) Touch another selected item to change the selection state.
3) If all the list of the adjustment items cover two or more pages, touch [↑] and [↓] button to shift the page.
4) Press [START] key.

* For simulations which allow confirmation print, copying is started after changing the adjustment value.
  (46-2, 46-9, 46-10, 46-11, 46-18, 48-1, 48-2, 50-1, 50-5, 50-6, 50-10, 50-12, 51-2, the bold-faced items in the above list.)
* If the entry value is outside the adjustable range, an error buzzer sounds and the adjustment value is not renewed. Page shift is not made, either.


START (Normal mode)
Press the #/P key.
Press the asterisk (*) key.
Press the clear key.
Press the asterisk (*) key.
Standby for entry of SIM code.
Enter the main code of SIM with the 10-key.
The main code of SIM is displayed.
Press the START key.
Is there a sub code ?
NO
YES
Standby for entry of SIM sub code.
Enter the sub code of SIM with the 10-key.
Press the START key.
Is there a item selection?
NO
YES
Select the mode and the item with the ↑ ↓ key and the item key.
Operation check ?
YES
NO
Press the START key.
Operation is made according to the selected mode and item.
Operating conditions check ?
YES
NO
Press the START key.
Operation is made according to the selected mode and item.
If "Operation condition check" refer to "Sensor display", this process is not necessary.
Data clear ?
YES
NO
Press the START key. Select "YES".
The selected mode and the item are cleared.
Adjustments or setting (counter data change) ?
NO
YES
Operation is made according to the select ed mode and the it (Other modes)
The display is made according to the selected mode and the item.
Do you want to change the content ?
NO
YES
Enter the new setting and adjustment values.
L1
L1
Press the START key.
The changed content is stored.
1
Do you want to end the simulation ?
YES
NO
Press the clear all key.
The simulation mode is canceled.
Returns to START (Normal mode).
Do you want to perform another simulation ?
NO
2
YES
Press the SYSTEM SETTINGS key
Is it the same simulation ?
YES
3
NO
Press the SYSTEM SETTINGS key
4
1
* In the cause of SIM which is set by touch panel, the changed content can be stored by the following key, touch.
• [OK] key
• Other item selection
• ↑ ↓ key
4
3
2

2. Simulation code list

Code		Function
Main	Sub	
1	1	Used to check the operation of the scanner unit and its control circuit.
	2	Used to check the operation of sensor and detector in the scanning (read) section and the related circuit.
2	1	Used to check the operation of the RSPF unit and the related circuit.
	2	Used to check the operation of sensors and detectors in the RSPF unit and the related circuit.
	3	Used to check the operation of the loads in the RSPF unit and the control circuits.
3	2	Used to check the operation of sensor and detector in the finisher and the related circuit.
	3	Used to check the operation of the load in the finisher and the control circuit.
	10	Used to make each adjustment of the finisher.
	11	Used to check the shifter operation. Reciprocating operations are continuously performed or the home position is checked. (The shifter is shifted to the home position or moved in one way by the specified steps.)
4	2	Used to check the operation of sensor and detector in the option tray and the related circuit.
	3	Used to check the operation of the load in the option tray and the control circuit.
5	1	Used to check the operation of the display (LED), LCD in the operation panel, and control circuit.
	2	Used to check the operation of the heater lamp and the control circuit.
	3	Used to check the operation of the copy lamp and the control circuit.
6	1	Used to check the operation of the loads (clutches and solenoids) in the paper transport system and the control circuit.
	2	Used to check the operation of each fan motor and its control circuit.
7	1	Used to set the aging operation conditions.
	6	Used to set the cycle of intermittent aging.
	8	Used to set the display of the warm-up time.
8	1	Used to check and adjust the operation of the developing bias voltage in each copy mode and the control circuit.
	2	Used to check and adjust the operation of the main charger grid voltage in each copy mode and the control circuit.
	10	Used to check and adjust the operation of the developing bias voltage in each printer mode and the control circuit.
	11	Used to check and adjust the operation of the main charger grid voltage in each printer mode and the control circuit.
	13	Used to check and adjust the operation of the developing bias voltage in FAX mode and the control circuit.
	14	Used to check and adjust the operation of the main charger grid voltage in FAX mode and the control circuit.
9	1	Used to check and adjust the operation of the load (motor) in the duplex section and the control circuit.
	4	Duplex motor RPM setting
	5	Used to adjust the timing of switching from normal rotation to reverse rotation or from reverse rotation to normal rotation of the duplex motor.
10	0	Used to check the operation of the toner motor and its control circuit.
14	0	Used to cancel excluding the self-diag U2/PF troubles.
16	0	Used to cancel the self-diag U2 trouble.
17	0	Used to cancel the self diag “PF” trouble.
21	1	Used to set the maintenance cycle.
22	1	Used to check the counter value of each section.
	2	Used to check the total numbers of misfeed and troubles. (When the number of misfeed is considerably great, it is judged as necessary for repair. The misfeed rate is obtained by dividing this count value with the total counter value.)
	3	Used to check the misfeed positions and the number of misfeed at each position. (When the number of misfeed is considerably great, it can be judged as necessary for repair.)
	4	Used to check the total trouble (self diag) history.
	5	Used to check the ROM version of each unit (section).
	6	Used to print each key operator setting, the account information, and the machine adjustment values.
	7	Used to display of the administrator password.
	8	Used to display the original, staple counter.
	9	Used to check the number of use of each paper feed section. (the number of prints)
	10	Used to check the system configuration.
	11	Used to display the FAX send/receive counter (FAX reception and print counter).
	12	Used to check the misfeed positions and the number of misfeed at each position. (When the number of misfeed is considerably great, it can be judged as necessary for repair.)
	13	Used to display the CRUM type.
	19	Used to display the scanner counter in the network scanner mode.
24	1	Used to clear the misfeed counter, the misfeed history, the trouble counter, and the trouble history. (The counters are cleared after completion of maintenance.)
	2	Used to clear the number of use (the number of prints) of each paper feed section.
	3	Used to clear the number usage data of the stapler, RSPF, and scanning.
	4	Used to reset the maintenance counter.
	5	Used to reset the developer counter. (The developer counter of the DV unit which is installed is reset.)
	6	Used to clear the copy counter.
	7	Used to clear the OPC drum (membrane decrease) correction counter. (This simulation is executed when the OPC drum is replaced.)
	9	Used to clear the printer counter and other counters.
	10	FAX counter data clear
	15	Used to clear the scanner counter in the network scanner mode.
25	1	Used to check the operation of the main drive (excluding the scanner section) and to check the operation of the toner concentration sensor. (The toner concentration sensor output can be monitored.)
	2	Used to make the initial setting of toner concentration when replacing developer.

Code		Function
Main	Sub	
26	1	Used to set whether the job separator is installed or not. (Since this cannot be detected by hardware detection, it is set in this simulation.)
	2	Used to set whether the automatic detection of paper size is made or not.
	3	Used to set the specifications of the auditor. Setting must be made depending on the use condition of the auditor.
	5	Used to set the count mode of the total counter and the maintenance counter.
	6	Used to set the specifications depending on the destination.
	10	Network scanner trial mode setting
	12	Used to input the Software Key for E-MAIL RIC.
	14	Used to input the Software Key for the PS extension kit.
	18	Used to set enable/disable of toner save operation.
	22	Used to set the specification (language display) for the destination.
	30	Used to set ON/OFF of the heater lamp slow-up control conforming to the CE mark control.
	35	Used to set whether the same continuous troubles are displayed as one trouble or the series of troubles with SIM 22-4 when the same troubles occur continuously.
	36	Used to set whether the machine is stopped or not when the maintenance counter life is expired.
	50	Used to set ON/OFF of the black and white reversion function.
	56	Gamma life correction setting
	57	Used to set the model code.
	60	Used to set enable/disable of the FAX mode key when FAX is not installed. (When FAX is installed, the FAX mode is enabled regardless of this setup.)
	69	Toner near end setting
	71	In the power save time setting, the pre-heat (pre-heat mode setting) and the auto power shut off time can be set to the short time setup (pre-heat: 1 min, auto power shut off: 4 min) and the long time setup (pre-heat: 15min, auto power shut off: 60min).
	72	The letterhead support is set. When “Letterhead paper setting” is selected, the set value of SIM 26-46 (Image output direction setting) is set to “Setting Enable” accordingly.
27	1	Used to set PC/MODEM communication trouble (U7-00) detection Yes/No.
	2	Sender’s registration number/HOST server TEL number.
	4	Function setting
	5	Used to set the tag number
	7	FSS function setting
	9	FSS function adjustment
	10	Trouble precognition history clear
	14	FSS connection test setting
	15	Displays status of FSS connection
30	1	Used to display the sensor status attached to the machine.
	2	Used to display the status of the sensors attached to the standard tray and the manual feed tray. (Use SIM 4-2 for the option trays.) The sensor of an uninstalled tray is not displayed.

Code		Function
Main	Sub	
40	1	Used to check the sensor of the machine manual feed tray.
	2	Used to adjust the manual paper feed tray paper width detector detection level.
	3	The AD conversion value of manual feed width detection is displayed.
41	1	Used to check the document size detection photo sensor.
	2	Used to adjust the detection level of the document size photo sensor.
	3	Used to check the light reception level and the detection level of the original size detection photo sensor.
	4	Used to adjust the detection level of OC 20 degrees.
43	1	Used to set the fusing temperature.
	10	Used to set the paper feed cycle timing when printing postcards.
44	1	Used to make various setups in each mode of process control.
	2	Drum life correction setting
	3	Used to set the DV count correction.
	9	Used to display the process control correction information.
	14	Used to display the environment (temperature, humidity) correction information.
	16	Used to set the toner density control correction value.
	17	Used to display the toner density control reference value.
	34	Used to set the transfer current value in each mode.
	40	Used to set the time from the start of the main motor rotation (Ready) to the start of toner supply in previous rotation after turning on the power.
46	2	Used to set the exposure level in each exposure mode.
	9	Used to adjust the shift amount and the inclination value for each level (1 to 5) of the exposure mode (Text).
	10	Used to adjust the shift amount and the inclination value for each level (1 to 5) of the exposure mode (Text/Photo).
	11	Used to adjust the shift amount and the inclination value for each level (1 to 5) of the exposure mode (Photo).
	12	FAX exposure level adjustment (1 mode automatic adjustment)
	13	FAX exposure level adjustment (Normal mode individual adjustment)
	14	FAX exposure level adjustment (Fine text mode individual adjustment)
	15	FAX exposure level adjustment (Super Fine mode individual adjustment)
	16	FAX exposure level adjustment (Ultra Fine mode individual adjustment)
	18	Used to adjust inclination for each exposure mode.
	19	Used to set the control method of the exposure mode.
	20	Used to set the exposure correction value of SPF/RSPF for OC exposure.
	30	Used to set the AE and the limit value in AE (Toner save).
	31	Used to set the AE and the limit value in AE (Toner save).
	39	Used to switch the FAX send image quality.

Code		Function
Main	Sub	
48	1	Used to adjust the copy mode magnification ratio (main scanning direction, sub scanning direction).
	2	Used to adjust the scanner mode magnification ratio (main/sub scanning direction).
	3	Used to adjust the print mode magnification ratio correction.
	8	FAX magnification adjustment (read)
	9	FAX magnification adjustment (print)
50	1	Used to adjust the copy lead edge position.
	5	Used to adjust the print image position (top margin) on the print paper in the print mode.
	6	Used to adjust the print image position (top margin) on print paper in the copy mode. (RSPF)
	8	FAX lead edge adjustment (read)
	9	FAX lead edge adjustment (print)
	10	Used to adjust the print image center position. (Adjustment can be made for each paper feed section.)
	12	Used to adjust the print image center position. (Adjustment can be made for each document mode.)
51	1	Used to adjust the OPC drum separation pawl ON time.
	2	Used to adjust the contact pressure of paper onto the resist roller in each section (copier paper feed section, duplex paper feed section, RSPF paper feed section). (When the print image position varies greatly for the paper or when a lot of paper jam troubles occur, the adjustment is required.)
	8	Used to set the OPC drum separation pawl operation inhibit. (ON/OFF)
	9	Used to adjust the OPC drum separation voltage ON/OFF timing.
53	6	Used to adjust the detection level of the RSPF width. The adjustment method is the 4-point system. Set the guide to Max. (A3/WLetter) position, A4R/Letter R position, A5R/Invoice R position, and Min. position for adjustment.
	7	Used to enter the RSPF width detection adjustment value.
	8	Used to adjust the RSPF scan position of the mirror unit automatically. For the RSPF scan position automatic adjustment, the mirror unit is shifted to 11mm before the RSPF glass cover edge, and is operated automatically to scan images by the unit of 1 step, detecting the position up to the glass cover automatically.
	9	RSPF read position adjustment
	10	RSPF exp adjustment
55	1	Used to set the soft switch.
61	1	Used to check the LSU (polygon motor) operation. Check speed can select 145mm/s or 122mm/s individually.
63	1	Used to check the result of shading correction. (The shading correction data are displayed.)
	7	Used to adjust the RSPF white correction start pixel position automatically. This adjustment is performed after the lens unit is replaced.
64	1	Used to check the operation of the printer function (auto print operation).
65	1	Used to adjust the touch panel (LCD display section) detection position.
	2	Used to check the touch panel (LCD display section) detection position adjustment result.
	5	Used to check the key inputs of the operation panel.

Code		Function
Main	Sub	
66	1	Used to change and check the FAX-related soft SW.
	2	Used to clear the FAX-related soft SW. (Except for the FAX adjustment values)
	3	FAX PWB memory check
	4	Signal send mode (Signal send level: Max.)
	5	Signal send mode (Signal send level soft SW setting)
	6	Printing the confidential password
	7	Print the screen memory contents
	10	Image data memory clear
	11	Used to send 300bps signals. (Signal send level: Max.)
	12	Used to send 300bps signals. (Signal send level: Set by soft SW)
	13	Used to register the dial numbers.
	14	Used to perform the dial test. (10 PPS send test)
	15	Used to perform the dial test. (20 PPS send test)
	16	Used to perform the dial test. (DTFM signal send test)
	17	Used to check the DTFM signal send operation. (Signal send level: Max.)
	18	Used to check the DTFM signal send operation. (Signal send level: Set by soft SW.)
	19	Used to write the SRAM data to the Flash ROM.
	20	Used to write the Flash ROM data to the SRAM.
	21	FAX information print
	22	Handset sound volume adjustment (Japan only)
	24	Used to clear the FAST storage data. (SEC only)
	30	Used to set the TEL/LIU.
	31	Used to set the TEL/LIU.
	32	Receive data check
	33	Signal detection check
	34	Communication time measurement display
	37	Speaker sound volume adjustment
	41	CI signal check
	52	Pseudo-ringer check
67	1	Used to execute read/write check of the RAM on the PCL board, and to display the result.
	14	Used to check write/comparison of flash programs.
	15	Used to check the validity of the ROM on the PCL board and the result is displayed.
	17	Used to clear the printer section setting. (NVRAM clear)
	18	Used to clear the data area for FLASH ROM Network Scanner Application.
	20	Used to check the network connection when the scanner option is installed.

3. Details of simulation

1

1-1

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the scanner unit and its control circuit.
Section	Optical (Image scanning)
Item	Operation

Operation/procedure

Enter the number of operations, and set the magnification ratio and the original size.

1. Select the desired item, and press the [START] key.
2. Enter the set value with the 10-key, and press the [START] key.

The scanner unit operates at the speed corresponding to the set value.

The scan counter is displayed during execution.

Set magnification ratio	25% to 400% (1% increment) (Default 100%)
Document size	Varies depending on the destination.
Set number of times	1 to 999 (0: Continuous operation)

1-2

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of sensor and detector in the scanning (read) section and the related circuit.
Section	Optical (Image scanning)
Item	Operation

Operation/procedure

The status of sensors and detectors in the scanner section is displayed. The active sensors and detectors are highlighted.

MHPS	Mirror home position sensor

2

2-1

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the RSPF unit and the related circuit.
Section	RSPF
Item	Operation

Operation/procedure

Enter the number of operations, and set the magnification ratio and the original size.

1. Select the desired item, and press the [START] key.
2. Enter the set value with the 10-key, and press the [START] key.

The RSPF unit operates at the speed corresponding to the set value.

The scan counter is displayed during execution.

Set magnification ratio	50% to 200% (1% increment) (Default 100%)
Document size	Varies depending on the destination.
Duplex	Selectable only when RSPF is installed.
Set number of times	1 to 999 (0: Continuous operation)

Note: Executable only when the RSPF is installed.

2-2

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of sensors and detectors in the RSPF unit and the related circuit.
Section	RSPF
Item	Operation

Operation/procedure

The operations of sensors and detectors in the RSPF section are displayed.

The active sensors and detectors are highlighted.
(For the original size, the detection result of the original size displayed on the copy menu is highlighted.)

EMPS	Original empty sensor
DLS1	Original length sensor (Small)
DLS2	Original length sensor (Large)
FGOD	RSPF paper feed cover open/close sensor
DFD	RSPF paper entry sensor
RDD	RSPF original exit sensor
OPCLS	Book sensor
SWD_LEN	Original detection width sensor (Unit of 0.1mm. “Width x 10” is displayed. Example: For 300mm, 3000 is displayed.)
SWD_A/D	Original detection width sensor A/D value

RSPF width detection size (One of the following is displayed.)

A4/A3, LT/WLT, B5/B4, INV/LTR, A5/A4R, B5R, EXTRA, 8K/16K, 16KR

Note: Executable only when the RSPF is installed.

2-3

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the loads in the RSPF unit and the control circuits.
Section	RSPF
Item	Operation

Operation/procedure

Select the load to be checked with the 10-key, and press the [START] key.

The motor for 10sec, the solenoid ON for 500msec, OFF for 500msec. (20 times)

	Item	Content
1	DTM-F	RSPF motor forward rotation
2	DTM-R	RSPF motor reverse rotation
3	DFCL	RSPF paper feed clutch
4	CLH	RSPF PS clutch
5	GSOL	Document exit gate solenoid
6	RSOL	Document exit pressure solenoid

Note: Executable only when the RSPF is installed.

3

3-2

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of sensor and detector in the finisher and the related circuit.
Section	Finisher
Item	Operation

Operation/procedure

Used to display the operations of sensors and detectors in the finisher section.

The active sensors and detectors are highlighted.

FDTPD	Paper delivery tray paper detector
FSTPD	Staple tray paper detector
FAPHPS-R	Paper alignment plate HP sensor R
FAPHPS-F	Paper alignment plate HP sensor F
FDRPS	Delivery roller position sensor
FPPD1	Paper pass detector
FDTLLS	Delivery tray lower limit sensor
FTPS	Tray position sensor
FPLD	Paper level detector
FSSW	Safety switch
FSLD	Staple lead edge detector
FSED	Staple empty detector
FSHPS	Staple HP sensor
FPRD	Process tray paper rear edge detection

Note: Executable only when the finisher is installed.

3-3

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the load in the finisher and the control circuit.
Section	Finisher
Item	Operation

Operation/procedure

Select the load to be checked with the 10-key, and press the [START] key.

The finisher main motor operates for 10sec, the staple motor 5 times, the tray lift-up motor one reciprocating operation, other motors max. 20 reciprocating operations from the home position, the solenoid repeats 500msec ON and 500msec OFF 20 times.

The staple operation motor operates only when there is no cartridge installed.

Item		Content
1	FTLM	Tray lift motor
2	FSM	Staple motor
3	FPAM-R	Paper alignment motor R
4	FPAM-F	Paper alignment motor F
5	FPDM	Paper delivery motor
6	FPS	Paddle solenoid
7	FPTM	Paper transport motor
8	FDRLM	Delivery roller lift motor
9	FPGS	Paper gate solenoid
10	FARLS	Alignment roller lift solenoid
11	FSL	Staple light

3-10

Purpose	Adjustment
Function (Purpose)	Used to make each adjustment of the finisher.
Item	Operation

Operation/procedure

1. Select an item to be adjusted with 10-key, and press [START] key.
2. Enter an adjustment value with 10-key, and press [START] key.

Item		Content	Installation range	Default
1	FPAM ADJUST	Paper alignment width adjustment	40-60	50
2	FDRLM ADJUST	Paper delivery roller descending position adjustment	40-60	50

3-11

Purpose	Operation test/check
Function (Purpose)	Used to check the shifter operation. Reciprocating operations are continuously performed or the home position is checked. (The shifter is shifted to the home position or moved in one way by the specified steps.)
Item	Operation

Operation/procedure

Select item “1,” and press the [START] key.

The shifter is reciprocated continuously at the specified interval.

Item		Content
1	F-R	Reciprocating operation
2	HP CHECK	Home position check

[Selection 2]

1. Select item “2,” and press the [START] key.
2. Move the shifter to the home position or in one way by the specified steps with the following keys.

[*] key	Shifts the position toward R side by the specified steps.
[0 key	Shifts the position toward HP side by the specified steps.
[#] key	Shifts to F.
SFTHP	Shifter home position (At detection, highlighted)

4

4-2

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of sensor and detector in the option tray and the related circuit.
Section	Paper feed
Item	Operation

Operation/procedure

The operating states of the sensor and the detector are displayed. (Only the installed option trays are displayed. For the standard tray, use SIM 30-2.)

The active sensors and detectors are highlighted.

PED2	2nd tray paper empty sensor
LUD2	2nd tray paper upper limit detection sensor
PFD2	2nd tray paper pass sensor
CD2	2nd tray empty sensor
PED3	3rd tray paper empty sensor
LUD3	3rd tray paper upper limit detection sensor
PFD3	3rd tray paper pass sensor
CD3	3rd tray empty sensor
PED4	4th tray paper empty sensor
LUD4	4th tray paper upper limit detection sensor
PFD4	4th tray paper pass sensor
CD4	4th tray empty sensor
DSWR2	2nd tray right door detection sensor
DSWR3	3rd tray right door detection sensor
DSWR4	4th tray right door detection sensor

Note: Execution is possible only when the option tray is installed.

4-3

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the load in the option tray and the control circuit.
Section	Paper feed
Item	Operation

Operation/procedure

Select the load to be checked with the 10-key, and press the [START] key.

The motor for 10sec, the solenoid ON for 500msec, OFF for 500msec.

The lift-up motor operates only when the tray is opened. (20 times)

Item		Content
1	LUM2	2nd tray lift-up motor
2	CPFC2	2nd tray pick-up solenoid
3	CPFS2	2nd tray paper feed clutch
4	TRC2	2nd tray transport roller clutch
5	DM	2nd tray paper transport motor (3rd tray paper transport motor)
6	LUM3	3rd tray lift-up motor
7	CPFC3	3rd tray pick-up solenoid
8	CPFS3	3rd tray paper feed clutch
9	TRC3	3rd tray transport roller clutch
10	LUM4	4th tray lift-up motor
11	CPFC4	4th tray pick-up solenoid
12	CPFS4	4th tray paper feed clutch

Note: Execution is possible only when the option tray is installed.

5

5-1

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the display (LED), LCD in the operation panel, and control circuit.
Section	Operation (screen/operation)
Item	Operation

Operation/procedure

The LCD is displayed as follows. (All LED's are ON.)

With the upper half highlighted and the lower half normally displayed, contrast changes "Standard → MAX → MIN." in every 2sec.

(6 sec later)

With the upper half normally displayed and the lower half highlighted, contrast changes "Standard → MAX → MIN." in every 2sec.

* When returning to the sub menu selection menu, the display of the standard contrast is displayed for an instant.

5-2

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the heater lamp and the control circuit.
Section	Fusing
Item	Operation

Operation/procedure

1. Select the lamp to be checked with the 10-key, and press the [START] key.

ON/OFF operation of the heater lamp is repeated 5 times in an interval of 100ms/900ms.

When completing the operation, the cooling fan is rotated at a low speed.

Item Content

Item		Content
1	HL1	Heater lamp 1 (Main) operation
2	HL2	Heater lamp 2 (Sub) operation

5-3

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the copy lamp and the control circuit.
Section	Optical (Image scanning)
Item	Operation

Operation/procedure

When the [START] key is pressed, the copy lamp is lighted for 10sec.

6

6-1

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the loads (clutches and solenoids) in the paper transport system and the control circuit.
Section	Paper transport (Discharge/Switchback/Transport)
Item	Operation

Operation/procedure

1. Select the load to be checked with the 10-key, and press the [START] key.

The motor for 10sec, the solenoid ON for 500msec, OFF for 500msec. (20 times)

When the [SYSTEM SETTINGS] is pressed, the operation is interrupted.

The lift-up motor operates only when the tray is opened.

Item		Content
1	LUM1	1st tray lift-up motor
2	CPFC1	1st tray pick-up solenoid
3	CPFS1	1st tray paper feed clutch
4	MPFS	Manual feed pick-up solenoid
5	RRC	Resist roller clutch
6	PSPS	Separation pawl solenoid
7	OGS	Paper exit gate switching solenoid
8	LUM2	2nd tray lift-up motor
9	CPFC2	2nd tray pick-up solenoid
10	CPFS2	2nd tray paper feed clutch
11	TRC2	2nd tray transport roller clutch
12	LUM3	3rd tray lift-up motor
13	CPFC3	3rd tray pick-up solenoid
14	CPFS3	3rd tray paper feed clutch
15	TRC3	3rd tray transport roller clutch
16	LUM4	4th tray lift-up motor
17	CPFC4	4th tray pick-up solenoid
18	CPFS4	4th tray paper feed clutch
19	ROGS	Right paper exit gate solenoid

The lift-up motor operates only when the tray is opened.

6-2

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of each fan motor and its control circuit.
Section	Others
Item	Operation

Operation/procedure

Select the load to be checked with the 10-key, and press the [START] key. The selected load is operated for 10sec.

Item		Content
1	VFM	Fusing fan operates
2	DCFM&DCFM2	Power cooling fan, power cooling fan 2 operations
3	VFM2	Fusing exit paper fan operates
3	VFM&DCFM&DCFM2 &VFM2	Fusing fan, power cooling fan, and power cooling fan 2 are operated at the same time.

7

7-1

Purpose	Setting/Operation test/check
Function (Purpose)	Used to set the aging operation conditions.
Item	Operation

Operation/procedure

1. Select the load to be set with the 10-key.
2. Press the [START] key.

When selected without setup, the selected value is registered and highlighted. When selected with previous setup, the previous setup is canceled and it is displayed normally.

Press [CA] key, and the simulation will be terminated and the machine goes into the aging standby mode with the set content.

This setting is canceled by power OFF.

Item		Content
1	AGING	Aging enable/disable setting
2	MISFEED	Jam detection enable/disable setting
3	FUSING*1	Fusing operation enable/disable setting The fusing temperature is not controlled. The heater is not turned ON.
4	INTERVL	Intermittent setting (Valid only when set to AGING.)
5	WARMUP	Warm-up save setting The machine goes into the ready state only by shading, disregarding fusing and process control. After going into the ready state, normal control is performed.
6	DV CHK.	Developing unit detection enable/disable setting

*1: When the machine exits from the fusing ignoring state, the roller may be cooled down. Therefore, reset the machine to warm up again. When, therefore, the simulation is canceled by pressing the [CA] key or when the copy mode display is shifted to the initial menu display in the simulation mode of one page copy, the machine is reset.

Note: In SIM 7-1, pressing [CA] key terminates the simulation and the machine enters the aging mode without resetting. Therefore, to perform "4. Intermittent setup," the intermittent cycle must be set with SIM 7-6 in advance.
Reset is not performed when the machine enters the aging mode.

7-6

Purpose	Setting/Operation test/check
Function (Purpose)	Used to set the cycle of intermittent aging.
Item	Operation

Operation/procedure

1. Enter the interval aging cycle time (sec) with the 10-key pad. Refer to SIM 7-1.
2. Press the [START] key.

When the [START] key is pressed in aging, copying is performed continuously. This simulation is used to set the time interval between copy operations in the unit of second.

This setting is valid when SIM 7-1 (Intermittent setting) is enabled.

Setting range	1-255
Default	3

7-8

Purpose	Setting/Operation test/check
Function (Purpose)	Used to set the display of the warm-up time.
Item	Operation

Operation/procedure

1. Warm-up starts by the cover open/close.
   (Can be performed repeatedly by open/close of the cover.)
2. The warm-up time is counted up and displayed in the unit of sec.
   If the [CA] key is pressed at this time, count-up is interrupted to terminate the simulation. (However, warm-up is continued.)
3. After completion of warming up, “WARM UP COMPLETED” is displayed and the control returns to the initial screen.

8

8-1

Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the developing bias voltage in each copy mode and the control circuit.
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
	Developer/Toner hopper

Operation/procedure

1. Touch the exposure mode to be changed.
   The current set value is displayed.
2. Enter the set value with the 10-key.
3. Press the [START] key.

Output is made with the entered value, and the display returns to the original state.

Item		Content	Setting range	Default
1	AE (145)	AE (145mm/s)	200-650	450
2	TEXT (145)	Character (145mm/s)		450
3	TEXT/PHOTO (145)	Character/Photo (145mm/s)		450
4	PHOTO (145)	Photo (145mm/s)		450
5	TONER SAVE (145)	Toner save (145mm/s)		400
6	AE (122)	AE (122mm/s)		450
7	TEXT (122)	Character (122mm/s)		450
8	TEXT/PHOTO (122)	Character/Photo (122mm/s)		450
9	PHOTO (122)	Photo (122mm/s)		450
10	TONER SAVE (122)	Toner save (122mm/s)		400

(*) Linked with the destinations of SIM 26-6.
Linked with the auto exposure mode of SIM 46-19-1.

The minimum increment is 10V.
The result of (Set value) -200/ 10 is stored in the EEPROM.
When reading a value from the EEPROM, the value of (EEP value *10+200) is used as the set value.

8-2

Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the main charger grid voltage in each copy mode and the control circuit.
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
	Photo conductor

Operation/procedure

1. Touch the exposure mode to be changed.
   The current set value is displayed.
2. Enter the set value with the 10-key.
3. Press the [START] key.

Output is made with the entered value for 30sec, and the display returns to the original state.

Item		Content	Setting range	Default
1	AE (145)	AE (145mm/s)	350-750	590
2	TEXT (145)	Character (145mm/s)		590
3	TEXT/PHOTO (145)	Character/Photo (145mm/s)		590
4	PHOTO (145)	Photo (145mm/s)		590
5	TONER SAVE (145)	Toner save (145mm/s)		540
6	AE (122)	AE (122mm/s)		590
7	TEXT (122)	Character (122mm/s)		590
8	TEXT/PHOTO (122)	Character/Photo (122mm/s)		590
9	PHOTO (122)	Photo (122mm/s)		590
10	TONER SAVE (122)	Toner save (122mm/s)		540

Min. unit: 10V increment

(*) Linked with the destinations of SIM 26-6.
Linked with the auto exposure mode of SIM 46-19-1.

8-10

Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the developing bias voltage in each printer mode and the control circuit.
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
	Developer/Toner hopper

Operation/procedure

1. Touch the exposure mode to be changed.
   The current set value is displayed.
2. Enter the set value with the 10-key.
3. Press the [START] key.

Output is made with the entered value for 30sec, and the display returns to the original state.

Item		Content	Installation range	Default
1	DENS1 (145)	Density1 (145mm/s)	200-650	300
2	DENS2 (145)	Density2 (145mm/s)		370
3	DENS3 (145)	Density3 (145mm/s)		420
4	DENS4 (145)	Density4 (145mm/s)		530
5	DENS5 (145)	Density5 (145mm/s)		600
6	TS (145)	Toner save (145mm/s)		250
7	DENS1 (122)	Density1 (122mm/s)		300
8	DENS2 (122)	Density2 (122mm/s)		370
9	DENS3 (122)	Density3 (122mm/s)		420
10	DENS4 (122)	Density4 (122mm/s)		530
11	DENS5 (122)	Density5 (122mm/s)		600
12	TS (122)	Toner save (122mm/s)		250

The minimum increment is 10V.
The result of (Set value) -200/ 10 is stored in the EEPROM.
When reading a value from the EEPROM, the value of (EEP value *10+200) is used as the set value.

8-11

Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the main charger grid voltage in each printer mode and the control circuit.
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
	Photo conductor

Operation/procedure

1. Touch the exposure mode to be changed.
   The current set value is highlighted.
2. Enter the set value with the 10-key.
3. Press the [START] key.

Output is made with the entered value for 30sec, and the display returns to the original state.

Item		Content	Installation range	Default
1	DENS1 (145)	Density 1 (145mm/s)	350-750	440
2	DENS2 (145)	Density 2 (145mm/s)		510
3	DENS3 (145)	Density 3 (145mm/s)		560
4	DENS4 (145)	Density 4 (145mm/s)		670
5	DENS5 (145)	Density 5 (145mm/s)		740
6	TS (145)	Toner save (145mm/s)		390
7	DENS1 (122)	Density 1 (122mm/s)		440
8	DENS2 (122)	Density 2 (122mm/s)		510
9	DENS3 (122)	Density 3 (122mm/s)		560
10	DENS4 (122)	Density 4 (122mm/s)		670
11	DENS5 (122)	Density 5 (122mm/s)		740
12	TS (122)	Toner save (122mm/s)		390

Min. unit: 10V increment

8-13

Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the developing bias voltage in FAX mode and the control circuit.
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
	Developer/Toner hopper

Operation/procedure

1. Enter the set value with the 10-key.
2. Press the [START] key.

Output is made with the entered value for 30sec. and the display returns to the original state.

Setting range	200-650
Default	450

The minimum increment is 10V.
The result of (Set value-200) / 10 is stored in the EEPROM.
When reading a value from the EEPROM, the value of (EEP value * 10 +200) is used as the set value.
Therefore, an even number must be entered. If not, the entered odd number +1 is displayed after pressing [START] key.

8-14

Purpose	Adjustment/Operation test/check
Function (Purpose)	Used to check and adjust the operation of the main charger grid voltage in FAX mode and the control circuit.
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
	Photo conductor

Operation/procedure

1. Enter the set value with the 10-key.
2. Press the [START] key.

Output is made with the entered value for 30sec. and the display returns to the original state.

Setting range	350-750
Default	590

9

9-1

Purpose	Operation test/check
Function (Purpose)	Used to check and adjust the operation of the load (motor) in the duplex section and the control circuit.
Section	Duplex
Item	Operation

Operation/procedure

1. Select the operation mode with the 10-key.
2. Press the [START] key.

The operation is performed for 30sec, and the display returns to the original state.

Item		Content
1	DMF145	Duplex motor/Duplex 2 motor forward rotation (145mm/s)
2	DMF122	Duplex motor/Duplex 2 motor forward rotation (122mm/s)
3	DMR145	Duplex motor/Duplex 2 motor reverse rotation (145mm/s)
4	DMR122	Duplex motor/Duplex 2 motor reverse rotation (122mm/s)

9-4

Purpose	Operation test/check
Function (Purpose)	Duplex motor RPM setting
Section	Duplex
Item	Operation

Operation/procedure

Enter the set value with the 10-key.

When the duplex motor setting is made, the duplex 2motor is also set accordingly.

Setting range	1-13
Default	5

9-5

Purpose	Adjustment
Function (Purpose)	Used to adjust the timing of switching from normal rotation to reverse rotation or from reverse rotation to normal rotation of the duplex motor.

Operation/procedure

1. Touch the item to set.
2. Enter the set value with the 10-key, and press the [START] key.

Item		Installation range	Default
1	145mm/s	18-76	18
2	122mm/s		18
3	RIGHT 145mm/s		50
4	RIGHT 122mm/s		50

10

10-0

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the toner motor and its control circuit.
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
	Developer/Toner hopper
Item	Operation

Operation/procedure

Press the [START] key and operate the toner motor for 30 sec.

14

14-0

Purpose	Clear/Cancel (Trouble etc.)	
Function (Purpose)	Used to cancel excluding the self-diag U2/PF troubles.	
Item	Trouble	Error

Operation/procedure

1. Press the [START] key.
2. When “1: YES” is selected, troubles other than U2 and PF are canceled. (When “2: NO” is selected, the simulation is canceled.)

16

16-0

Purpose	Clear/Cancel (Trouble etc.)	
Function (Purpose)	Used to cancel the self-diag U2 trouble.	
Item	Trouble	Error

Operation/procedure

1. Press the [START] key.
2. When “1: YES” is selected, U2 trouble is canceled. (When “2: NO” is selected, the simulation is canceled.)

17

17-0

Purpose	Cancel (Trouble, etc)	
Function (Purpose)	Used to cancel the self diag “PF” trouble.	
Item	Trouble	Error

Operation/Procedure

1. Press the [START] key.
2. When “1: YES” is selected, PF trouble is canceled. (When “2: NO” is selected, the simulation is canceled.)

21

21-1

Purpose	Setting	
Function (Purpose)	Used to set the maintenance cycle.	
Item	Specifications	Counter

Operation/procedure

1. Enter the set value with the 10-key.
2. Press the [START] key.

Item	Content	
	26cpm	31cpm
0	5K	5K
1	10K	10K
2	20K	50K
3	25K	75K
4	50K	100K
5	75K (Default)	150K (Default) *
6	FREE	FREE

* When selecting 150K, maintenance message is displayed by implementing the following conditions.

- Maintenance count = 150K.
- DV count = 100K
- DR count = 100K

* When maintenance message is displayed, replace consumption part reaching the number of sheets of maintenance, then clear the replaced part's counter only.

22

22-1

Purpose	Adjustment/setting/operation data output/check (display/print)
Function (Purpose)	Used to check the counter value of each section.
Item	Counter

Operation/procedure

Each counter is displayed.

TOTAL	Total counter
MAINTENANCE	Maintenance counter
DEVE	Developer counter
DRUM	Drum counter
COPY	Copy counter
PRINTER	Printer counter
IMC	IMC counter
DUPLEX	Duplex counter
OTHERS	The other counters
FAX SEND	FAX Send counter
FAX RCV	FAX receive counter
FAX OUTPUT	FAX print counter
DEVE RANGE	Developer traveling distance counter
DRUM RANGE	Drum traveling distance counter
DEVE ROLL	Developer rotation counter (K)
DRUM ROLL	Drum rotation counter (K)
DEVE LIFE	Developer life meter (%)
DRUM LIFE	Drum life meter (%)

22-2

Purpose	Adjustment/setting/operation data output/check (display/print)
Function (Purpose)	Used to check the total numbers of misfeed and troubles. (When the number of misfeed is considerably great, it is judged as necessary for repair. The misfeed rate is obtained by dividing this count value with the total counter value.)
Item	Trouble

Operation/procedure

Each counter data are displayed.

PAPER JAM	JAM counter
SPF JAM	RSPF JAM counter
TROUBLE	Trouble counter

The counter display is in 7 digits.

22-3

Purpose	Adjustment/setting/operation data output/check (display/print)	
Function (Purpose)	Used to check the misfeed positions and the number of misfeed at each position. (When the number of misfeed is considerably great, it can be judged as necessary for repair.)	
Item	Trouble	Mis-feed

Operation/procedure

The misfeed history is displayed in the sequence of recentness by the name of sensors and detectors. Max. 40 items of information can be stored in memory. (The old ones are deleted sequentially.) The trouble section may be determined by the data.

(Jam cause code)

Item	Jam contents
TRAY1	1st tray pick-up miss
TRAY2	2nd tray pick-up miss
TRAY3	3rd tray pick-up miss
TRAY4	4th tray pick-up miss
BPT	Multi manual feed pick-up miss
PPD1_ND	Paper-in sensor lead edge jam
PPD1_ST	Paper-in sensor rear edge jam
PPD1_DUP	Paper-in sensor reverse jam
PPD2_ND	Duplex sensor lead edge jam
PPD2_ST	Duplex sensor rear edge jam
POD2_ND	Upper tray paper exit lead edge jam
POD2_ST	Upper tray paper exit rear edge jam
POD1_ND	Lower tray paper exit lead edge jam
POD1_ST	Lower tray paper exit rear edge jam
PINT_SHORT	Abnormality between PS papers.
PFD2_ND	2nd paper pass lead edge jam
PFD2_ST	2nd paper pass rear edge jam
PFD3_ND	3rd paper pass lead edge jam
PFD3_ST	3rd paper pass rear edge jam
PFD4_ND	4th paper pass lead edge jam
PFD4_ST	4th paper pass rear edge jam
SIZE_SHORT	Duplex short scale error
FPPD1_N	Finisher entry port sensor not-reached jam
FPPD1_S	Finisher entry port sensor remaining jam
FSTPD_S	Finisher paper exit remaining jam
FSTPLJ	Finisher staple jam

22-4

Purpose	Adjustment/setting/operation data output/check (display/print)
Function (Purpose)	Used to check the total trouble (self diag) history.
Item	Trouble

Operation/procedure

The trouble error codes are displayed in the sequence of the latest one first. Max. 40 items of information are stored. (Older ones are deleted in sequence.) The machine condition can be estimated by this data.

22-5

Purpose	Adjustment/Setting/Check
Function (Purpose)	Used to check the ROM version of each unit (section).
Item	Software

Operation/procedure

Used to display the ROM version of each section.

[Display example]

ROM version 1.250 → [1.25] (up to 2 decimal places)

The display of the protocol monitor and the soft SW follows this display.

S/N	Machine serial number
MCU	Main Control Unit
IMC	IMC
OPE	Panel + Panel label code
PRINTER	PRINTER
NIC	NIC
FINISHER	FINISHER
FAX	FAX
PUNCH UNIT	Punch unit

If it is not installed, "- - - - - - - - - -" is displayed.

Panel display	Destination	Panel software support language
JPN	Japan	Japanese, American English, English

Panel display	Destination	Panel software support language
EFS	SEC	American English, English, French, Spanish, Brazilian Portuguese
	SECL	
	SUK	
	SCA/SCNZ	
	Distributor area	
EEU	SEEG/ SEA/East Europe, etc.	English, German, Polish, Czech, Hungarian, Greek, Turkish, Russian, French, Italian, Slovak
NEU	SEF/ SEES/ SEIS/SEN, etc.	English, German, French, Spanish, Dutch, Italian, Portuguese, Swedish, Norwegian, Finnish, Danish
CHN	SOCC	Simplified Chinese, American English, English
TWN	Taiwan	Traditional Chinese (Local support), American English, English
ARB	Saudi Arabia	American English, English, French, Spanish, Hebrew (Local support), Arabic
FAS	Iran	English, Arabic, Persian

22-6

Purpose	Adjustment/setting/operation data output/check (display/print)	
Function (Purpose)	Used to print each key operator setting, the account information, and the machine adjustment values.	
Item	Data	Setting/adjustment data

Operation/Procedure

(Initial screen)

The currently set value is highlighted beside the adjustment item.

1. Select the adjustment item with the 10-key.
2. Press the [START] key.
   The display is shifted to the copy menu and the set value is stored.
3. Select the paper feed tray and the print density.
4. Press the [START] key.
   Copying is started. (Printing at 1200dpi cannot be made.)

After canceling a jam (After picking up, the [C] key is invalid.)

When the other information is repeatedly printed, the display may show the message, “Remove original from original table.” However, the operation is performed normally.

Item		Content
1	ALL	All lists group print (Default)
2	KEY OPE	Key operator information list
3	ACCOUNTING COUNTERS	List of total number of prints
4	AUDITOR NO.	Department number list
5	MACHINE SIM SETTING	Machine simulation setting list
6	FAX SIM SETTING*1	FAX simulation setting list (Only when the FAX board is installed. The display does not go to the print data transfer display, but to the FAX SIM menu.)

* When the IMC board is not installed, key input is disabled.
* Duplex print cannot be made.
* For the FAX SIM setting list, the display and the operating procedures differ.

Note: When the simulation is canceled, the display returns to the original state but the machine is not reset.

22-7

Purpose	User data output/Check (Display/Print)	
Function (Purpose)	Used to display of the administrator password.	
Item	Data	User data

Operation/procedure

Used to display the administrator password.

22-8

Purpose	Adjustment/setting/operation data output/check (display/print)
Function (Purpose)	Used to display the original, staple counter.
Item	Counter

Operation/procedure

Each counter is displayed.

SPF	RSPF counter
SCAN	Scan counter
STAPLE	Stapler counter

The counter display is in 7 digits.

22-9

Purpose	Adjustment/setting/operation data output/check (display/print)
Function (Purpose)	Used to check the number of use of each paper feed section. (the number of prints)
Section	Paper feed
Item	Counter

Operation/procedure

Used to display each paper feed counter.

BYPASS	Manual feed counter
TRAY1	Tray 1 counter
TRAY2	Tray 2 counter
TRAY3	Tray 3 counter
TRAY4	Tray 4 counter

The counter display is in 7 digits.

22-10

Purpose	Adjustment/setting/operation data output/check (display/print)	
Function (Purpose)	Used to check the system configulation.	
Item	Specifications	Option

Operation/procedure

The detected machine composition is displayed.
(The job separator cannot be detected. Based on SIM 26-1 setting.)

Item	Display items
SPEED	26CPM/31CPM
DF	NONE/[1: RSPF]
OUTPUT	NONE/[2: Finisher]/[3: Job separator]
CASETTE1	NONE/[4: One-step paper feed unit]
CASETTE2	NONE/[5: Two-step paper feed unit]
IMC MEM	NONE/Expansion memory capacity (MB)
PRINTER	NONE/[6: PRINTER]
PS3	NONE/[7: PS3]
NIC	NONE/[8: NIC]
SCANNER	NONE/[9: SCANNER]
FAX	NONE/[10: FAX]
FAX MEM	NONE/Memory capacity (MB)
HAND SET	NONE/[11: Handset]
USB HOST	NONE/USB HOST

Item	Display items
ICCARDR/W	NONE/MX-ECX2

NONE: When it is not installed, "- - - - - - - - - -" is displayed.

[ ]: Shows the product code in the list below.

No.	Item	Model code
1	RSPF	MX-RP10
2	Finisher	MX-FN13
3	Job separator	MX-TR11
4	1 tray paper feed unit	MX-DE10 (*1)
5	2 tray paper feed unit	MX-DE11 (*1)
6	PRINTER	MX-PB12
7	PS3	MX-PK10
8	NIC	STANDARD (Only SoftNic)
9	SCANNER	MX-NSX1
10	FAX	AR-FX7
11	Handset	AR-HN4

*1: The number of installed units is displayed beside the model code.
For the tray, only the option tray is displayed.

22-11

Purpose	Adjustment/setting/operation data output/check (display/print)
Function (Purpose)	Used to display the FAX send/receive counter (FAX reception and print counter).
Section	FAX
Item	Counter

Operation/procedure

Used to display the FAX send/receive counter.

FAX SEND PAGE/TIME	FAX send page and time
FAX RECEIVE PAGE/TIME	FAX receive page and time
FAX OUTPUT	FAX output (number of print)

The counter display is in 8 digits.

Note: Executable only when the FAX is installed.

22-12

Purpose	Adjustment/setting/operation data output/check (display/print)	
Function (Purpose)	Used to check the misfeed positions and the number of misfeed at each position. (When the number of misfeed is considerably great, it can be judged as necessary for repair.)	
Section	RSPF	
Item	Trouble	Misfeed

Operation/procedure

Used to display the RSPF jam history data sequentially from the latest one.

Forty RSPF jam histories are displayed sequentially from the latest.

Error code	Name	Sensor name	Paper Reached/ Not Reached to the sensor
DFD_ND	RSPF paper in lead edge jam	SPF P-IN sensor	Not Reached
DFD_ST	RSPF paper in rear edge jam	SPF P-IN sensor	Reached
RDD_ND	RSPF paper out lead edge jam	SPF P-IN sensor	Reached, P_OUT Not Reached
RDD_ST	RSPF paper out rear edge jam	SPF P-OUT sensor	Reached, P_IN passed (OFF)
JAM_REV	RSPF duplex reverse jam	SPF P-IN sensor	Not Reached (Paper after reversing)
ORG_SHORT	RSPF short size error	SPF P-IN sensor	Passed (OFF at JAM)
ORG_LONG	RSPF long size error	SPF P-OUT sensor	Reached
		SPF P-IN sensor	Reached

22-13

Purpose	Adjustment/setting/operation data output/check (display/print)
Function (Purpose)	Used to display the CRUM type.
Item	Specifications

Operation/Procedure

Used to display the CRUM type.

Item	Content
00	Not fixed.
01	AR-A
02	AR-B
03	AR-C
04	China
05	Japan
99	Conversion completed.

22-19

Purpose	Adjustment/setting/operation data output/check (display/print)
Function (Purpose)	Used to display the scanner counter in the network scanner mode.
Section	Network scanner
Item	Counter

Operation/procedure

Used to display the scanner counter.

SCANMODE	Scanner mode counter

The counter display is in 7 digits.

24

24-1

Purpose	Data clear
Function (Purpose)	Used to clear the misfeed counter, the misfeed history, the trouble counter, and the trouble history. (The counters are cleared after completion of maintenance.)
Section	Memory
Item	Counter

Operation/procedure

Jam/trouble counter is cleared individually. (The history of each counter is deleted when clearing)

1. Select the counter to be cleared with the 10-key.
2. Press the [START] key.
   The confirmation menu is shown.
3. Select "1: YES."
   1: YES (Cleared)
   2: NO (Not cleared) (Default)

Item		Content
1	JAM	JAM counter/JAM history
2	SPF JAM	RSPF JAM counter/RSPF JAM history
3	TROUBLE	Trouble counter/Trouble history

24-2

Purpose	Data clear
Function (Purpose)	Used to clear the number of use (the number of prints) of each paper feed section.
Section	Paper feed
Item	Counter

Operation/procedure

Used to clear each paper feed counter individually.

1. Select the counter to be cleared with the 10-key.
2. Press the [START] key. The confirmation menu is shown.
3. Select "1: YES."
   1: YES (Cleared)
   2: NO (Not cleared) (Default)

Item		Content
1	BYPASS	Manual feed counter
2	TRAY1	Tray 1 counter
3	TRAY2	Tray 2 counter
4	TRAY3	Tray 3 counter
5	TRAY4	Tray 4 counter

24-3

Purpose	Data clear
Function (Purpose)	Used to clear the number usage data of the stapler, RSPF, and scanning.
Section	Transport/Finisher
Item	Counter

Operation/procedure

Used to clear the original and staple counters individually.

1. Select the counter to be cleared with the 10-key.
2. Press the [START] key.
   The confirmation menu is shown.
3. Select "1: YES."
   1: YES (Cleared)
   2: NO (Not cleared) (Default)

Item		Content
1	SPF	RSPF counter
2	SCAN	Scan counter
3	STAPLE	Stapler counter

24-4

Purpose	Data clear
Function (Purpose)	Used to reset the maintenance counter.
Item	Counter

Operation/procedure

1. Press the [START] key. The confirmation menu is shown.
2. Select "1: YES."
   1: YES (Cleared)
   2: NO (Not cleared) (Default)

24-5

Purpose	Data clear	
Function (Purpose)	Used to reset the developer counter. (The developer counter of the DV unit which is installed is reset.)	
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)	
	Developer/Toner hopper	
Item	Counter	Developer

Operation/procedure

1. Press the [START] key.
   The confirmation menu is shown.
2. Select "1: YES."
   1: YES (Cleared)
   2: NO (Not cleared) (Default)

24-6

Purpose	Data clear	
Function (Purpose)	Used to clear the copy counter.	
Item	Counter	Copier

Operation/procedure

1. Press the [START] key.
   The confirmation menu is shown.
2. Select "1: YES."
   1: YES (Cleared)
   2: NO (Not cleared) (Default)

24-7

Purpose	Data clear
Function (Purpose)	Used to clear the OPC drum (membrane decrease) correction counter. (This simulation is executed when the OPC drum is replaced.)
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
	Photo conductor
Item	Counter

Operation/procedure

1. Press the [START] key.
   The confirmation menu is shown.
2. Select "1: YES."
   1: YES (Cleared)
   2: NO (Not cleared) (Default)

24-9

Purpose	Data clear	
Function (Purpose)	Used to clear the printer counter and other counters.	
Section	Printer	
Item	Counter	Printer

Operation/procedure

1. Select the counter to be cleared with the 10-key.
2. Press the [START] key.
   The confirmation menu is shown.
3. Select "1: YES."
   1: YES (Cleared)
   2: NO (Not cleared) (Default)

Item		Content
1	PRINTER	Printer counter
2	IMC	IMC counter
3	DUPLEX	DUPLEX counter
4	OTHERS	The other counters

24-10

Purpose	Data clear
Function (Purpose)	FAX counter data clear
Section	FAX
Item	Counter

Operation/procedure

1. Select the “3: NUMBER OF PRINTS”, and press the [START] key. The confirmation menu is shown.
2. Select “1: YES.”
   1: YES (Cleared)
   2: NO (Not cleared) (Default)

Item		Content
1	FAX SEND (PAGE & TIME)	FAX send page and time
2	FAX RECEIVE (PAGE & TIME)	FAX receive page and time
3	FAX OUTPUT	FAX output (number of prints)

Note: Executable only when the FAX is installed.

24-15

Purpose	Data clear
Function (Purpose)	Used to clear the scanner counter in the network scanner mode.
Section	Scanner section
Item	Counter

Operation/procedure

1. Press the [START] key. The confirmation menu is shown.
2. Select “1: YES.”
   1: YES (Cleared)
   2: NO (Not cleared) (Default)

The scanner mode counter and the number of send of the scanner are cleared.

* The simulation to perform communication with the PCL is inhibited until Notice Page storing is completed. (Only when the serviceman call error occurs.)

* When in other than the serviceman call error, entering the simulation is not allowed from the system check display.

25

25-1

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the main drive (excluding the scanner section) and to check the operation of the toner concentration sensor. (The toner concentration sensor output can be monitored.)
Section	DRIVE
Item	Operation

Operation/procedure

1. Press the [START] key. The main motor rotates to start monitoring the toner density control sensor. (3min operation)

* Even in toner end error, if there is no other error (including cover open) after turning on the power, this simulation can be performed.

25-2

Purpose	Setting
Function (Purpose)	Used to make the initial setting of toner concentration when replacing developer.
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
	Developer/Toner hopper

Operation/procedure

1) Open the cover with the power OFF.
2) Turn on the power. (Since the cover is open, the machine does not perform initializing.)
3) Execute the simulation.
4) Enter SIM 25-2. ([25] → [START] key → [2] → [START] key)
5) Close the cover just before starting the simulation.
6) Press the [START] key.
   The main motor rotates. After stirring for 3 min, the toner density control sensor value is sampled 16 times, and the average value is stored.

When “EE-EU” or “EE-EL” after completion, an error display is shown.

Note: After completion of execution, be sure to press the [CA] key to cancel the simulation.

26

26-1

Purpose	Setting	
Function (Purpose)	Used to set whether the job separator is installed or not. (Since this cannot be detected by hardware detection, it is set in this simulation.)	
Item	Specifications	Option

Operation/procedure

1. Select the set value with the 10-key.
2. Press the [START] key.

Set value	Connection option
0	None (default)
1	Job separator provided.

26-2

Purpose	Setting
Function (Purpose)	Used to set whether the automatic detection of paper size is made or not.
Section	Paper feed
Item	Specifications

Operation/procedure

1. Select the item with the 10-key and press the [START] key. Used to set the automatic size detection.
2. Set whether automatic detection of paper size is made or not with the 10-key.

1:B4/LG,FC	Setting to detect B4/Legal as FC 0: B4 legal is detected as B4 legal. (Default) 1: B4 legal is detected as FC.
2:A4<->LT	This setup detects Letter as A4 in the inch series and A4 as Letter in the AB series. 0: Detection disable (Default) 1: Detection valid

8.5” x 13” detection valid/invalid setup

Set value	Setup	Remarks
0	Detection invalid	Default
1	Detection valid	

Detection size when 8.5” x 13” document/paper is used.

	Employed unit	Destination	Document size	Set value	
				0 (Invalid)	1 (Valid)
Document	Document table/ RSPF	AB series	FC (8.5” x 13”)	B4	FC (8.5” x 13”)
			LG (8.5” x 14”)	B4	FC (8.5” x 13”)
			B4	B4	FC (8.5” x 13”)
		Inch series	FC (8.5” x 13”)	LG (8.5” x 14”)	FC (8.5” x 13”)
			LG (8.5” x 14”)	LG (8.5” x 14”)	FC (8.5” x 13”)
			B4	WLT (11” x 17”)	WLT (11” x 17”)
Paper	Machine paper feed tray	All destinations	–	Set with key operations.	
	Manual paper feed tray	AB series	FC (8.5” x 13”)	LG (8.5” x 14”)	FC (8.5” x 13”)
			LG (8.5” x 14”)	LG (8.5” x 14”)	FC (8.5” x 13”)
			B4	B4	B4
		Inch series	FC (8.5” x 13”)	LG (8.5” x 14”)	FC (8.5” x 13”)
			LG (8.5” x 14”)	LG (8.5” x 14”)	FC (8.5” x 13”)
			B4	B4	B4

A4/LT (8.5” x 11”) detection enable/disable setup

In the inch series, Letter is detected as A4; in the AB series, A4 is detected as Letter.

Set value	Setup	Remarks
0	Detection invalid	Default
1	Detection valid	

Detection size when A4/LT (8.5” x 11”) document/paper is used.

	Employed unit	Destination	Document size	Set value	
				0 (Invalid)	1 (Valid)
Document	Document table/ RSPF	AB series	A4	A4	LT (8.5” x 11”)
			LT (8.5” x 11”)	A4	LT (8.5” x 11”)
		Inch series	A4	LT (8.5” x 11”)	A4
			LT (8.5” x 11”)	LT (8.5” x 11”)	A4
Paper	Machine paper feed tray	All destinations	–	Set with key operations.	
	Manual paper feed tray	All destinations	–	Regardless of the simulation setup.	

26-3

Purpose	Setting
Function (Purpose)	Used to set the specifications of the auditor. Setting must be made depending on the use condition of the auditor.
Section	Auditor
Item	Specifications

Operation/procedure

Select the mode corresponding to the auditor specification mode with the 10-key.

Item		Content	Setting range	Default
0	P10	Built-in auditor mode	0-2	0
1	VENDOR	Coin vendor mode		
2	OTHER	Others		

When “1: VENDOR (Coin vendor mode)” is set, the following three items of key operation setting are changed.

1) Set the LCD backlight change inhibit to “1: OFF (Enable).”
2) When SIM 26-6 destination setting is set to “0: Japan,” duplex copy inhibit setting must be set to “0: ON (Inhibit).”
3) Set the sort automatic selection to “0: OFF (Disable).”

26-5

Purpose	Setting	
Function (Purpose)	Used to set the count mode of the total counter and the maintenance counter.	
Item	Specifications	Counter

Operation/procedure

Used to set the count up number (1 or 2) when an A3/WLT paper passes through.

For the drum counter and the developer counter, double count is employed unconditionally.

(Target counter selection)

Item		Content
1	TOTAL COUNTER	Total counter
2	MAINTENANCE COUNTER	Maintenance counter

Used to set the count up number of the selected counter.

Item		Content	Setting range	Default
1	SINGLE COUNT	Single count	1-2	2
2	DOUBLE COUNT	Double count		

26-6

Purpose	Setting	
Function (Purpose)	Used to set the specifications depending on the destination.	
Item	Specifications	Destination

Operation/procedure

Select the destination with the 10-key.

By changing the destination, some other setting items may be changed.

Item		Content	Setting range	Default
0	JAPAN	Japan	0-14	0
1	SEC	SEC		
2	SECL	SECL		
3	SEEG	SEEG		
4	SUK	SUK		
5	SCA	SCA		
6	SEF	SEF		
7	INEG	EX inch series		
8	ABEG	EX AB series		
9	INEF	EX inch series (FC)		
10	ABEF	EX AB series (FC)		
11	CHINESE	China		
12	TAIWAN	Taiwan AB		
13	SEEG2	SEEG2		
14	TAIWAN2	Taiwan China		

26-10

Purpose	Setting
Function (Purpose)	Network scanner trial mode setting
Section	Scanner

Operation/procedure

Enter the set value with the 10-key and press the [START] key.

Item		Content	Default
0	END	Trail mode cancel	0
1	START	Trial mode start	

If the trial scanner counter value is less than 500, the trial mode setting can be repeatedly made. If the scanner trial counter value is 500 or more, the trial mode setting cannot be made.

When the scanner is not set and the scanner trial counter value is less than 500, if "1" is entered in SIM26-10, the trial mode setting is started. If "0" is entered in SIM26-10, the trial mode setting is canceled.

After recognition of the scanner, the trial mode setting cannot be made. (Entering "1" is invalid and a beep sound is produced.)

When this setting is made, the machine must be reset after canceling the simulation. When "1: Trial mode start" is selected, the scanner function is valid. If "0: Trial mode cancel" is selected, the scanner function is invalid.

When setting is invalid (when the scanner is recognized or the scanner trial counter value is 500 or more) in the key operations of the trail mode setting, an invalid sound (beep sound) is made. In the other case, a valid sound is made.

* When the scanner trial counter value is changed from 500 or more to less than 500, the trail setting is changed from "END" to "SETTING START."

Note: Executable only when the PCL/SCANNER is installed.

26-12

Purpose	Setting
Function (Purpose)	Used to input the Software Key for E-MAIL RIC.
Section	E-MAIL RIC
Item	Specifications

Operation/procedure

The current setup is displayed with ON or OFF.

Enter an input (20 digits) of the E-MAIL RIC soft key with the 10-key and press the [START] key, and the collating result is displayed with OK or NG.

After canceling the simulation, if OK, the E-MAIL RIC function is enable; if NG, the E-MAIL RIC function is disabled.

This setting must be reset after the simulation cancel.

* If recognition is OK, the E-Mail RIC can be set to Enable. If the FAX is installed, however, the operation cannot be made actually.

Note: Executable only when the PCL/NIC is installed.

26-14

Purpose	Setting
Function (Purpose)	Used to input the Software Key for the PS extention kit.
Section	Printer
Item	Specifications

Operation/procedure

The current setup is displayed with ON or OFF.

Enter an input (20 digits) of the PS expansion kit soft key with the 10-key and press the [START] key, and the collating result is displayed with OK or NG.

After canceling the simulation, if OK, the PS expansion kit function is enable; if NG, the PS expansion kit function is disabled.

This setting must be reset after the simulation cancel.

Note: Executable only when the PCL/PS3 is installed.

26-18

Purpose	Setting	
Function (Purpose)	Used to set enable/disable of toner save operation.	
Item	Specifications	Operation mode (Common)

Operation/procedure

Input the set value with the 10-key and press the [START] key.

Item		Content	Setting range	Default
0	OFF	Disable	0-1	0
1	ON	Enable		

Note: Setup is allowed only for Japan and UK.

26-22

Purpose	Setting
Function (Purpose)	Used to set the specification (language display) for the destination.
Item	Specifications

Operation/procedure

Select the display language with the 10-key, and press the [START] key.

This setup varies in connection with SIM 26-6 (Destination setup).

Item		Remarks
0	JAPANESE	
1	ENG.US	
2	ENG.UK	
3	FRENCH	
4	GERMAN	
5	ITALY	
6	DUTCH	
7	SWEDISH	
8	SPANISH	
9	PORTUGUESE	
10	TURKISH	
11	GREEK	
12	POLISH	
13	HUNGARIAN	
14	CZECH	
15	RUSSIAN	
16	FINNISH	
17	NORWEGIAN	
18	DANISH	
19	CHINESE	
20	TAIWANESE	Traditional Chinese supported locally
21	SLOVAK	
22	HEBREW	Supported locally
23	BRAZILIAN PORTUGUESE	
24	ARABIC	
25	FARSI	

26-30

Purpose	Setting	
Function (Purpose)	Used to set ON/OFF of the heater lamp slow-up control conforming to the CE mark control.	
Item	Specifications	Operation mode (Common)

Operation/procedure

Input the set value with the 10-key and press the [START] key.

This setup varies in connection with SIM 26-6 (Destination setup).

Item		Default	
		U.S.A, Canada, Australia, France, Taiwan	Others
0	OFF	0	1
1	ON		

26-35

Purpose	Setup
Function (Purpose)	Used to set whether the same continuous troubles are displayed as one trouble or the series of troubles with SIM 22-4 when the same troubles occur continuously.
Item	Specifications

Operation/procedure

Enter the set value with 10-key, and press [START] key.

Item		Content	Default
0	ONCE	When two or more troubles occur, only one is registered.	0
1	ANY	All the troubles occurred are registered.	

26-36

Purpose	Setting
Function (Purpose)	Used to set whether the machine is stopped or not when the maintenance counter life is expired.
Item	Operation

Operation/procedure

Input the set value with the 10-key and press the [START] key.

Item		Content	Default
0	STOP	Stop	1
1	NON STOP	Non stop	

Note: Executable only with SRU (AR models).

26-50

Purpose	Setting
Function (Purpose)	Used to set ON/OFF of the black and white reversion function.
Item	Operation

Operation/procedure

Enter the set value with the 10-key, and press the [START] key.

Item		Content	Default
0	ON	Enable	1 (U.K.)
1	OFF	Disable	0 (Others)

26-56

Purpose	Setting
Function (Purpose)	Gamma life correction setting
Item	Operation

Operation/procedure

Sets enable/disable of the gamma life correction function.

Item		Set value	Default
1	AE (Japan)	0: Disable 1: Enable	0
2	AE (Ex Japan)		0
3	Text		1
4	Text/Photo		1
5	Photo (Error diffusion)		1
6	Photo (Dither)		1
7	T/S AE (Japan)		0
8	T/S AE (Ex Japan)		0
9	T/S Text		1
10	T/S Text/Photo		1

26-57

Purpose	Setting
Function (Purpose)	Used to set the model code.
Item	Operation

Operation/procedure

Input the set value with the 10-key and press the [START] key.

Item		Default
1	MX-M260N	1
2	MX-M310N	
3	MX-M260	
4	MX-M310	
5	MX-M260FG	
6	MX-M260FP	
7	MX-M310FG	
8	MX-M310FP	

26-60

Purpose	Setting
Function (Purpose)	Used to set enable/disable of the FAX mode key when FAX is not installed. (When FAX is installed, the FAX mode is enabled regardless of this setup.)
Item	Operation

Operation/procedure

Input the set value with the 10-key and press the [START] key.

Item		Content	Default	
			U.S.A, Canada, U.K., Australia	Others
0	ON	Effective (The message with FAX uninstalled is displayed.)	0	1
1	OFF	Disable (Error Beep)		

This setup varies in connection with SIM 26-6 (Destination setup).

26-69

Purpose	Setting
Function (Purpose)	Toner near end setting
Item	Operation

Operation/procedure

	Item	Set value	Default
1	Toner preparation message display setting.	0: Displayed 1: Not displayed	0
2	Toner near end massage display setting.	0: Displayed 1: Not displayed	0
3	Toner end status operation setting.	1: Operate 2: Operate (However, if CRUM ID matches, not operates.) 3: Not operate	3
4	E-mail alert sending timing setting.	0: When the near near toner end, the toner low status is sent. 1: When the near toner end, the toner low status is sent.	1

26-71

Purpose	Setting
Function (Purpose)	In the power save time setting, the pre-heat (pre-heat mode setting) and the auto power shut off time can be set to the short time setup (pre-heat: 1 min, auto power shut off: 4 min) and the long time setup (pre-heat: 5min, auto power shut off: 30min).

Operation/procedure

Select the short time setup or the long time setup of the pre-heat time and the auto power shut off time with the 10-key, and press the [START] key.

Item	Content	Default
1	Preheat: 1min, auto power shut off: 4min	2
2	Preheat: 5min, auto power shut off: 30min	

Note: When the sub code 71 is entered to display the setting menu,the default values are always displayed. (However,the default time is not always set.)

26-72

Purpose	Setting
Function (Purpose)	The letterhead support is set. When “Letterhead paper setting” is selected, the set value of SIM 26-46 (Image output direction setting) is set to “Setting Enable” accordingly.

Operation/procedure

Input the set value with the 10-key and press the [START] key.

Item		Content	Setting range	Default
0	OFF	Letterhead paper is not set.	0-1	0
1	ON	Letterhead paper is set.		

27

27-1

Purpose	Setting	
Function (Purpose)	Used to set PC/MODEM communication trouble (U7-00) detection Yes/No.	
Section	Communication (RIC/MODEM)	
Item	Specifications	Operation mode (Common)

Operation/procedure

Input the set value with the 10-key and press the [START] key.

Item		Content	Default
0	OFF	In case of the communication trouble, U7-00 is not displayed.	0
1	ON	In case of the communication trouble, U7-00 is displayed.	

27-2

Purpose	Setting
Function (Purpose)	Sender’s registration number/HOST server TEL number.

Operation/procedure

1. The current setting value is displayed in PRESENT field.
2. Enter the number with 10-key, the setting value is saved and the display of PRESENT is updated.

27-4

Purpose	Setting
Function (Purpose)	Function setting

Operation/procedure

Enter the item number of setting with 10-key, press [START] key.

Display		Contents		Setting range	Default
1	RETRY BUSY	Recall number setting when busy (unit: times)		0-5	2
2	TIMER (MINUTES) BUSY	Recall interval setting when busy (unit:minute)		1-15	3
3	RETRY ERROR	Recall number setting when send error (unit: times)		0-15	1
4	TIMER (MINUTES) ERROR	Recall interval setting when send error (unit: minute)		1-15	1
5	TONER ORDER TIMING	Toner order auto send timing setting	Empty	0-5	3
			Near End		
			25% or less		
			25-49%		
			50-74%		
			75-100%		
6	FAX INIT RETRY	Retry number setting of initial connection (unit: times)		0-15	2

27-5

Purpose	Setting
Function (Purpose)	Used to set the tag number
Item	Data

Operation/procedure

1. The currently set number is displayed on the PRESENT column.
2. Enter the new tag number (Max. 8 digits) with the 10-key.
   The entered number is displayed on the NEW column.
3. Press the [START] key.
   The set value is stored and “PRESENT” is revised.

27-7

Purpose	Setting
Function (Purpose)	FSS function setting

Operation/procedure

Enter the item number of setting with 10-key, press [START] key.

Item		Set value
1	FUNCTION*	0: FSS function enable 1: FSS function disable (*) (Default)
2	ALERT	0: Alert call enable (Default) 1: Alert call enable
3	CONNECTION	0: FAX connect enable (Default) 1: E-MAIL connect enable

(*) The FSS function setting can be changed only from Disable to Enable. (Cannot be changed from Enable to Disable.)

27-9

Purpose	Setting
Function (Purpose)	FSS function adjustment

Operation/procedure

Display		Contents	Setting range	Default
1	FEED TIME1	Sensor distance transport time (main unit)	0-100	50
2	FEED TIME2	Sensor distance transport time (RSPF)		
3	JAM ALERT	Continuous JAM alert judgment	1-100	10

27-10

Purpose	Setting
Function (Purpose)	Trouble precognition history clear

Operation/procedure

Target of history that is cleared

- Scan gain retry times history
- Sensor distance paper transport history (main unit/RSPF)

27-14

Purpose	Setting
Function (Purpose)	FSS connection test setting

Operation/procedure

Input the set value with the 10-key and press the [START] key.

Item		Content
0	OFF	FSS connection test disable
1	ON	FSS connection test enable

27-15

Purpose	Operation test/check
Function (Purpose)	Displays status of FSS connection

Operation/procedure

Enter the set value with the 10-key.

Item		Content
0	OFF	Not connected
1	ON	Connected

30

30-1

Purpose	Operation test/check
Function (Purpose)	Used to display the sensor status attached to the machine.
Section	Others
Item	Operation

Operation/procedure

The active sensors and detectors are highlighted.

PPD1H	PS paper detection 1 sensor
PPD1L	PS paper detection 2 sensor
PPD2	Fusing paper sensor
POD1	1st paper exit paper out sensor
DVCH	Developing cartridge detection sensor
DRST	Drum intial detection sensor
DSWR1	Interlock switch (side door)
SFTHP	Shifter home position sensor
POD2	2nd paper exit paper out sensor
TOPF	2nd paper exit full detection sensor
DSWR0	2nd paper exit cover open/close detection sensor
LOEMP	1st paper exit empty detection sensor
DUP2	Reverse path paper sensor
POD3	Right paper exit sensor
PTOPF	Right paper exit full sensor

30-2

Purpose	Operation test/check
Function (Purpose)	Used to display the status of the sensors attached to the standard tray and the manual feed tray. (Use SIM 4-2 for the option trays.) The sensor of an uninstalled tray is not displayed.
Section	Paper feed
Item	Operation

Operation/procedure

The active sensors and detectors are highlighted.

PED1	1st tray paper empty sensor
LUD1	1st tray paper upper limit detection sensor
CD1	1st tray empty sensor
PED2	2nd tray paper empty sensor
LUD2	2nd tray paper upper limit detection sensor
CD2	2nd tray empty sensor
PFD2	2nd tray paper pass sensor
DSWR2	2nd tray right door detection sensor
MPED	Manual tray paper empty detection
MPLS1	Manual tray length detection 1
MPLS2	Manual tray length detection 2
MPLD1	Manual feed paper length detection 1
MPLD2	Manual feed paper length detection 2

Width detection size of the manual feed tray (one of them is displayed.)

A4/A3, LT/WLT, B5/B4, INV/LTR, A5/A4R, B5R, POSTCARD, EXTRA, 8K/16K

(At detection, highlighted)

40

40-1

Purpose	Operation test/check
Function (Purpose)	Used to check the sensor of the machine manual feed tray.
Section	Paper feed
Item	Operation

Operation/procedure

The active sensors and detectors are highlighted.

MPLS1	Manual tray length detection 1
MPLS2	Manual tray length detection 2
MPLD1	Manual feed paper length detection 1
MPLD2	Manual feed paper length detection 2

Width detection size of the manual feed tray (one of them is displayed.)

A4/A3, LT/WLT, B5/B4, INV/LTR, A5/A4R, B5R, POSTCARD, EXTRA, 8K/16K

40-2

Purpose	Adjustment
Function (Purpose)	Used to adjust the manual paper feed tray paper width detector detection level.
Section	Paper feed
Item	Operation

Operation/procedure

The adjustment method is of the 4-point system. Set the guide to Max. (A3/WLetter) position, A4R/Letter R position, A5R/Invoice R position, and Min. position for adjustment.

1) Set A3/W Letter and fit the guide, then press the [START] key.
2) Set A4R/LetterR and fit the guide, then press the [START] key.
3) Set to A5R/INVOICE R and fit the guide, then press the [START] key.
4) Narrow the guide at minimum, press the [START] key.
5) Set the paper detection width (+), and press the [START] key.
6) Set the paper detection width (–), and press the [START] key.

If “FAILED” is displayed in procedure 1), 2), 3), or 4), it is NG of adjustment. Repeat the adjustment.

Middle position adjustment L	Yes	MID-L ADJ.ON
	No	MID-L ADJ.OFF
Middle position adjustment S	Yes	NID-S ADJ.ON
	No	MID-S ADJ.OFF

40-3

Purpose	Adjustment
Function (Purpose)	The AD conversion value of manual feed width detection is displayed.
Section	Paper feed
Item	Operation

Operation/procedure

The AD conversion value of manual feed width detection is displayed.

41

41-1

Purpose	Operation test/check
Function (Purpose)	Used to check the document size detection photo sensor.
Section	Others
Item	Operation

Operation/procedure

The operation status of the sensors and detectors in the original size detection section are displayed. The active sensors and detectors are highlighted.

OCSW	Original cover state Open: Highlighted display Close: Normal display
PD1 to 5	Original sensor status Without original: Normal display With original: Highlighted display

For AB series, PD1 to 5 is displayed, for inch series, PD1 to 4.

41-2

Purpose	Adjustment
Function (Purpose)	Used to adjust the detection level of the document size photo sensor.
Section	Others
Item	Operation

Operation/procedure

Place an A3 (or WLT) document on the document table, and press [START] key with the OC cover open.

The adjustment is performed and the result is displayed.

OCSW	Original cover state Open: Highlighted display Close: Normal display
1 to 5	PD sensor detection level (Hexadecimal display)

The value in [ ] shows the threshold value. (Hexadecimal display)
For AB series, 1 to 5 is displayed, for inch series, 1 to 4.

During execution of the simulation, “EXECUTING” is displayed.

41-3

Purpose	Operation test/check
Function (Purpose)	Used to check the light reception level and the detection level of the original size detection photo sensor.
Section	Others
Item	Operation

Operation/procedure

The detection output level of each sensor is displayed in real time.

OCSW	Original cover state Open: Highlighted display Close: Normal display
1 to 5	PD sensor detection level (Hexadecimal display)

The value in [ ] shows the threshold value of 20 degree detection adjustment. (Hexadecimal display)

For AB series, 1 to 5 is displayed, for inch series, 1 to 4.

41-4

Purpose	Adjustment
Function (Purpose)	Used to adjust the detection level of OC 20 degrees.
Section	Others
Item	Operation

Operation/procedure

Set the OC cover at 20 degrees detection and press the [START] key.

The detection output level of each sensor is displayed in real time.

OCSW	Original cover state Open: Highlighted display Close: Normal display
1 to 5	PD sensor detection level (Hexadecimal display)

The value in [ ] shows the threshold value of 20 degree detection adjustment. (Hexadecimal display)

For AB series, 1 to 5 is displayed, for inch series, 1 to 4.

During execution, [EXECUTING] is highlighted.

43

43-1

Purpose	Setting
Function (Purpose)	Used to set the fusing temperature.
Section	Fixing (Fusing)
Item	Operation

Operation/procedure

1. Touch the item to be set.
2. Enter the set value with the 10-key.

Item		Content	Setting range	Default	
				(North America /Others)	(Europe)
1	Ready Temp Main (145)	Ready temperature Main (145mm/s)	150 - 220	185	190
2	Ready Temp Sub (145)	Ready temperature Sub (145mm/s)	150 - 220	180	185
3	Ready Temp Main (122)	Ready temperature Main (122mm/s)	150 - 220	175	180
4	Ready Temp Sub (122)	Ready temperature Sub (122mm/s)	150 - 220	170	175
5	WarmUp Target Main (145)	Warmup target temperature Main (145mm/s)	150 - 220	180	190
6	WarmUp Target Sub (145)	Warmup target temperature Sub (145mm/s)	150 - 220	180	190
7	WarmUp Target Main (122)	Warmup target temperature Main (122mm/s)	150 - 220	175	
8	WarmUp Target Sub (122)	Warmup target temperature Sub (122mm/s)	150 - 220	170	
9	WarmUp Temp Main (145)	Warmup complete temperature Main (145mm/s)	0 - 40	10	
10	WarmUp Temp Sub (145)	Warmup complete temperature Sub (145mm/s)	0 - 40	15	
11	WarmUp Temp Main (122)	Warmup complete temperature Main (122mm/s)	0 - 40	10	
12	WarmUp Temp Sub (122)	Warmup complete temperature Sub (122mm/s)	0 - 40	15	
13	600dpi Main (145)	600dpi Main (145mm/s)	150 - 220	190	195
14	600dpi Sub (145)	600dpi Sub (145mm/s)	150 - 220	190	195
15	POST CARD Main (145)	Postcard Main (145mm/s)	150 - 220	200	
16	POST CARD Sub (145)	Postcard Sub (145mm/s)	150 - 220	200	
17	CARDBOARD Main (145)	Thick paper Main (145mm/s)	150 - 220	200	
18	CARDBOARD Sub (145)	Thick paper Sub (145mm/s)	150 - 220	200	
19	600dpi Main (122)	600dpi Main (122mm/s)	150 - 220	175	185
20	600dpi Sub (122)	600dpi Sub (122mm/s)	150 - 220	175	185
21	CARDBOARD Main (122)	Postcard Main (122mm/s)	150 - 220	190	
22	POST CARD Sub (122)	Postcard Sub (122mm/s)	150 - 220	190	
23	POST CARD (122mm/s)	Thick paper Main (122mm/s)	150 - 220	190	
24	CARDBOARD Sub (122)	Thick paper Sub (122mm/s)	150 - 220	190	

43-10

Purpose	Setting
Function (Purpose)	Used to set the paper feed cycle timing when printing postcards.
Section	Paper feed
Item	Operation

Operation/procedure

Input the set value with the 10-key and press the [START] key.

Setting range	1-99
Default	50

44

44-1

Purpose	Setting
Function (Purpose)	Used to make various setups in each mode of process control.
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
Item	Operation

Operation/procedure

Enter the set value with the 10-key, and press the [START] key.

Item		Content	Default
1	ENVIRONMENT ADJ.	Environmental correction Allow/ Inhibit (0: Inhibit, 1: Allow)	1
2	DUPLEX PRINT ADJ.	Duplex print correction Allow/ Inhibit (0: Inhibit, 1: Allow)	0
3	ENVIROMENT ADJ (TC)	Transfer current enviroment correction Allow/Innibit (0: Inhibit, 1: Allow)	0

44-2

Purpose	Setting
Function (Purpose)	Drum life correction setting
Section	Image process (Photoconductor)
Item	Operation

Operation/procedure

1. Select an item with 10-key, and press [START] key.
2. Enter the setting value, and press [START] key.

Item		Content	Default
1	GRIDBIAS ADJUST	Drum life correction Disable/ Enable (0: Disable, 1: Enable)	1

44-3

Purpose	Setting
Function (Purpose)	Used to set the DV count correction.
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
Item	Operation

Operation/procedure

1. Select an item with 10-key, and press [START] key.
2. Enter the setting value, and press [START] key.

Item		Content	Default
1	PR_LIFE_ADJUST	DV count correction Disable/ Enable (0: Disable, 1: Enable)	1
2	TN_LIFE_ADJUST	Life of toner control DV correction Disable/Enable (0: Disable, 1: Enable)	1
3	RATE_ADJUST	Printing rate correction Disable/Enable (0: Disable, 1: Enable)	1
4	TONER_ADJUST	Toner unconditionally supply correction Disable/Enable (0: Disable, 1: Enable)	1

44-9

Purpose	Adjustment/Setup/Operation data output/Check (Display/Print)
Function (Purpose)	Used to display the process control correction information.
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
Item	Operation

Operation/procedure

Used to display the process control correction information.

44-14

Purpose	Adjustment/Setup/Operation data output/Check (Display/Print)
Function (Purpose)	Used to display the environment (temperature, humidity) correction information.
Item	Operation

Operation/procedure

The following data are displayed.

TH AREA	Current environment area
TMP DATA	Detection temperature of sensor (C°)
HUD DATA	Detection humidity of sensor (%)

* The value before entry of SIM is displayed. (It is not revised in real time.)
If sim entry is just after power turned on, the display value is all 0.

44-16

Purpose	Setting
Function (Purpose)	Used to set the toner density control correction value.
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
Item	Operation

Operation/procedure

Sets the toner density control correction value of the traveling distance count.

Item			Setting range	Default
1	0 - 93000	(31-sheet model)	1-99	50
2	93001 - 186000	(31-sheet model)	1-99	50
3	186001 - 279000	(31-sheet model)	1-99	50
4	279001 - 372000	(31-sheet model)	1-99	45
5	372001 - 465000	(31-sheet model)	1-99	45
6	465001 - 857313	(31-sheet model)	1-99	45
7	857314 - 1714625	(31-sheet model)	1-99	45
8	1714626 - 2571938	(31-sheet model)	1-99	45
9	2571939 - 3429250	(31-sheet model)	1-99	45
10	3429251 - 4286563	(31-sheet model)	1-99	45
11	4286564 - 5143875	(31-sheet model)	1-99	45
12	5143876 - 6001188	(31-sheet model)	1-99	45
13	6001189 - 6858500	(31-sheet model)	1-99	45
14	6858501 - 7715813	(31-sheet model)	1-99	45
15	7715814 - 8573125	(31-sheet model)	1-99	45
16	8573126 - 9430438	(31-sheet model)	1-99	45
17	9430439 - 10287750	(31-sheet model)	1-99	45
18	10287751 - 11145063	(31-sheet model)	1-99	45
19	11145064 - 12002375	(31-sheet model)	1-99	45
20	12002376 -	(31-sheet model)	1-99	45
21	0 - 93000	(26-sheet model)	1-99	50
22	93001 - 186000	(26-sheet model)	1-99	50
23	186001 - 279000	(26-sheet model)	1-99	50
24	279001 - 372000	(26-sheet model)	1-99	45
25	372001 - 465000	(26-sheet model)	1-99	45
26	465001 - 857313	(26-sheet model)	1-99	45
27	857314 - 1714625	(26-sheet model)	1-99	45
28	1714626 - 2571938	(26-sheet model)	1-99	45
29	2571939 - 3429250	(26-sheet model)	1-99	45
30	3429251 - 4286563	(26-sheet model)	1-99	45
31	4286564 - 5143875	(26-sheet model)	1-99	45
32	5143876 - 6001188	(26-sheet model)	1-99	45
33	6001189 - 6858500	(26-sheet model)	1-99	45
34	6858501 - 7715813	(26-sheet model)	1-99	45
35	7715814 - 8573125	(26-sheet model)	1-99	45

Item			Setting range	Default
36	8573126 - 9430438	(26-sheet model)	1-99	45
37	9430439 - 10287750	(26-sheet model)	1-99	45
38	10287751 - 11145063	(26-sheet model)	1-99	45
39	11145064 - 12002375	(26-sheet model)	1-99	45
40	12002376 -	(26-sheet model)	1-99	45

44-17

Purpose	Adjustment/Setup/Operation data output/Check (Display/Print)
Function (Purpose)	Used to display the toner density control reference value.
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
Item	Operation

Operation/procedure

The following data are displayed. (The displayed value is the previous print correction value.)

TARGET	Toner concentration control reference value
DEV REF	Developer adjustment value
LIFE	Toner container life correction value (SIM 44-16)
TH	Toner container environment correction value

TARGET = DEV REF+(LIFE-50)+(TH-50)

Developer adjustment value 128, life correction 60 (developer adjustment value plus 10), environment correction 45 (5 subtraction correction), rapid toner supply correction = 128+(60-50)+(45-50) = 133.)

44-34

Purpose	Setting
Function (Purpose)	Used to set the transfer current value in each mode.

Operation/procedure

1. Touch the item to be set.
2. Enter the set value with the 10-key.

To support an individual necessity in paper and the environment, it is variable in the range of 5 to 30uA in the increment of 1uA in each mode.

When changing +V2, check with +V1 unchanged. If there is any trouble in the half tone image of graphics, keep the relationship between +V1 and +V2 at the default and change it.

When the image quality is deteriorated because the user selects the OHP mode and use other than the recommended OHP, decrease the transfer current to adjust deterioration of black background picture quality. If some of characters are not printed, increase the transfer current.

This setting is changed in linkage with SIM 26-6 destination setting.

*1: SECL/SCA/SEF/EX inch series/EX AB series/EX inch series (FC)/ EX AB series (FC)/China/Taiwan/SEEG2

*2: SEC/SEEG/SUK

Item		Content	Setting range	Default *1	Default *2
1	+V1F (145)	145mm/s normal paper W +V1 single surface. Duplex (Front)	5-30	5	
2	+V1R (145)	145mm/s normal paper W +V1 Duplex (Back)	5-30	5	
3	+V2F (145)	145mm/s normal paper W +V2 single surface. Duplex (Front)	5-30	18	20
4	+V2R (145)	145mm/s normal paper W +V2 Duplex (Back)	5-30	14	18
5	+V1S-F (145)	145mm/s normal paper N1 +V1 single surface. Duplex (Front)	5-30	5	
6	+V1S-R (145)	145mm/s normal paper N1 +V1 Duplex (Back)	5-30	5	
7	+V2S-F (145)	145mm/s normal paper N1 +V2 single surface. Duplex (Front)	5-30	22	
8	+V2S-R (145)	145mm/s normal paper N1 +V2 Duplex (Back)	5-30	18	
9	+V1SS-F (145)	145mm/s normal paper N2 +V1 single surface. Duplex (Front)	5-30	5	
10	+V1SS-R (145)	145mm/s normal paper N2 +V1 Duplex (Back)	5-30	5	
11	+V1SS-F (145)	145mm/s normal paper N2 +V2 single surface. Duplex (Front)	5-30	5	
12	+V1SS-R (145)	145mm/s normal paper N2 +V2 Duplex (Back)	5-30	5	
13	+V1 THICK (145)	145mm/s thick paper > LTR +V1	5-30	5	
14	+V2 THICK (145)	145mm/s thick paper > LTR +V2	5-30	14	
15	+V1 THICK S (145)	145mm/s thick paper ≦ LTR +V1	5-30	5	
16	+V2 THICK S (145)	145mm/s thick paper ≦ LTR +V2	5-30	18	
17	+V1 THIN (145)	145mm/s thin paper > LTR +V1	5-30	5	
18	+V2 THIN (145)	145mm/s thin paper > LTR +V2	5-30	18	
19	+V1 THIN S (145)	145mm/s thin paper ≦ LTR +V1	5-30	5	
20	+V2 THIN S (145)	145mm/s thin paper ≦ LTR +V2	5-30	18	
21	+V1 LABEL (145)	145mm/s label paper > LTR +V1	5-30	5	
22	+V2 LABEL (145)	145mm/s label paper > LTR +V2	5-30	18	
23	+V1 LABEL S (145)	145mm/s label paper ≦ LTR +V1	5-30	5	
24	+V2 LABEL S (145)	145mm/s label paper ≦ LTR +V2	5-30	18	
25	+V1 OHP (145)	145mm/s OHP > LTR +V1	5-30	5	
26	+V2 OHP(145)	145mm/s OHP > LTR +V2	5-30	14	
27	+V1 OHP S (145)	145mm/s OHP ≦ LTR +V1	5-30	5	
28	+V2 OHP S (145)	145mm/s OHP ≦ LTR +V2	5-30	18	
29	+V1 POSTCARD (145)	145mm/s postcard/envelope > 100mm +V1	5-30	5	
30	+V2 POSTCARD (145)	145mm/s postcard/envelope > 100mm +V2	5-30	26	
31	+V1 POSTCARD S (145)	145mm/s postcard/envelope ≦ 100mm +V1	5-30	5	
32	+V2 POSTCARD S (145)	145mm/s postcard/envelope ≦ 100mm +V2	5-30	26	
33	+V1F (122)	122mm/s normal paper W +V1 single surface. Duplex (Front)	5-30	5	
34	+V1R (122)	122mm/s normal paper W +V1 Duplex (Back)	5-30	5	
35	+V2F (122)	122mm/s normal paper W +V2 single surface. Duplex (Front)	5-30	12	14
36	+V2R (122)	122mm/s normal paper W +V2 Duplex (Back)	5-30	10	
37	+V1S-F (122)	122mm/s normal paper N1 +V1 single surface. Duplex (Front)	5-30	5	
38	+V1S-R (122)	122mm/s normal paper N1 +V1 Duplex (Back)	5-30	5	

Item		Content	Setting range	Default	
				*1	*2
39	+V2S-F (122)	122mm/s normal paper N1 +V2 single surface. Duplex (Front)	5-30	14	
40	+V2S-R (122)	122mm/s normal paper N1 +V2 Duplex (Back)	5-30	12	
41	+V1SS-F (122)	122mm/s normal paper N2 +V2 Duplex (Back)	5-30	5	
42	+V1SS-R (122)	122mm/s normal paper N2 +V1 single surface. Duplex (Front)	5-30	5	
43	+V2SS-F (122)	122mm/s normal paper N2 +V1 Duplex (Back)	5-30	14	
44	+V2SS-R (122)	122mm/s normal paper N2 +V2 single surface. Duplex (Front)	5-30	12	
45	+V1 THICK (122)	122mm/s thick paper > LTR +V1	5-30	5	
46	+V2 THICK (122)	122mm/s thick paper > LTR +V2	5-30	10	
47	+V1 THICK S (122)	122mm/s thick paper ≦ LTR +V1	5-30	5	
48	+V2 THICK S (122)	122mm/s thick paper ≦ LTR +V2	5-30	12	
49	+V1 THIN (122)	122mm/s thin paper > LTR +V1	5-30	5	
50	+V2 THIN (122)	122mm/s thin paper > LTR +V2	5-30	12	
51	+V1 THIN S (122)	122mm/s thin paper ≦ LTR +V1	5-30	5	
52	+V2 THIN S (122)	122mm/s thin paper ≦ LTR +V2	5-30	12	
53	+V1 LABEL (122)	122mm/s label paper > LTR +V1	5-30	5	
54	+V2 LABEL (122)	122mm/s label paper > LTR +V2	5-30	12	
55	+V1 LABEL S (122)	122mm/s label paper ≦ LTR +V1	5-30	5	
56	+V2 LABEL S (122)	122mm/s label paper ≦ LTR +V2	5-30	12	
57	+V1 OHP (122)	122mm/s OHP > LTR +V1	5-30	5	
58	+V2 OHP (122)	122mm/s OHP > LTR +V2	5-30	8	
59	+V1 OHP S (122)	122mm/s OHP ≦ LTR +V1	5-30	5	
60	+V2 OHP S (122)	122mm/s OHP ≦ LTR +V2	5-30	12	
61	+V1 POSTCARD (122)	122mm/s postcard/envelope > 100mm +V1	5-30	5	
62	+V2 POSTCARD (122)	122mm/s postcard/envelope > 100mm +V2	5-30	16	
63	+V1 POSTCARD S (122)	122mm/s postcard/envelope ≦ 100mm +V1	5-30	5	
64	+V2 POSTCARD S (122)	122mm/s postcard/envelope ≦ 100mm +V2	5-30	16	

44-40

Purpose	Setting
Function (Purpose)	Used to set the time from the start of the main motor rotation (Ready) to the start of toner supply in previous rotation after turning on the power.

Operation/procedure

Enter the set value with the 10-key, and press the [START] key.

Set the toner supply previous rotation time.

Setting range	1-99 (sec)
Default	4 (sec)

46

46-2

Purpose	Adjustment	
Function (Purpose)	Used to set the exposure level in each exposure mode.	
Item	Picture quality	Density

Operation/procedure

1. Touch the item to be adjusted. (Automatic adjustment)
   The currently set value is highlighted beside the adjustment item.
2. Press the [START] key.
   The display is shifted to the copy menu.
3. Select the paper feed tray and the print density.
   Use the 10-key to set the exposure level.
4. Press the [START] key.
   Copying is started.

(Exposure mode)

Item		Content		Setting range	Default
1	AE	AE		1-99	50
2	TEXT	Character	Level 3.0		
3	TEXT/PHOTO	Character/Photo	Level 3.0		
4	PHOTO	Photo	Level 3.0		
5	AE(TS)	AE (TS)			
6	TEXT(TS)	Character (TS)	Level 3.0		
7	TEXT/PHOTO(TS)	Character/Photo (TS)	Level 3.0		

* Except for AE and AE (TS), only Level 3 can be set.

Note: When this simulation is canceled, the display returns to the initial menu but the machine is not reset.

46-9

Purpose	Adjustment	
Function (Purpose)	Used to adjust the shift amount and the inclination value for each level (1 to 5) of the exposure mode (Text).	
Item	Picture quality	Density

Operation/procedure

1. Touch the item to be adjusted.
   The adjustment item and the currently set value are highlighted.
2. Press the [START] key.
   The display is shifted to the copy menu.
3. Select the paper feed tray and the print density.
   Use the 10-key to set the exposure level.
4. Press the [START] key.
   Copying is started.

(Exposure mode (Text))

Item		Content	Setting range	Default
1	1.0 (SHIFT)	Character level 1.0 (shift q'ty)	1-99	22
2	1.0 (GAMMA)	Character level 1.0 (slant)	1-99	44
3	2.0 (SHIFT)	Character level 2.0 (shift q'ty)	1-99	36
4	2.0 (GAMMA)	Character level 2.0 (slant)	1-99	47
5	3.0 (SHIFT)	Character level 3.0 (shift q'ty)	1-99	50
6	3.0 (GAMMA)	Character level 3.0 (slant)	1-99	50
7	4.0 (SHIFT)	Character level 4.0 (shift q'ty)	1-99	61
8	4.0 (GAMMA)	Character level 4.0 (slant)	1-99	55
9	5.0 (SHIFT)	Character level 5.0 (shift q'ty)	1-99	72
10	5.0 (GAMMA)	Character level 5.0 (slant)	1-99	60
11	TS 1.0 (SHIFT)	Character (TS) level 1.0 (shift q'ty)	1-99	22
12	1TS 1.0 (GAMMA)	Character (TS) level 1.0 (slant)	1-99	44
13	TS 2.0 (SHIFT)	Character (TS) level 2.0 (shift q'ty)	1-99	36

Item		Content	Setting range	Default
14	TS 2.0 (GAMMA)	Character (TS) level 2.0 (slant)	1-99	47
15	TS 3.0 (SHIFT)	Character (TS) level 3.0 (shift q'ty)	1-99	50
16	TS 3.0 (GAMMA)	Character (TS) level 3.0 (slant)	1-99	50
17	TS 4.0 (SHIFT)	Character (TS) level 4.0 (shift q'ty)	1-99	61
18	TS 4.0 (GAMMA)	Character (TS) level 4.0 (slant)	1-99	55
19	TS 5.0 (SHIFT)	Character (TS) level 5.0 (shift q'ty)	1-99	72
20	TS 5.0 (GAMMA)	Character (TS) level 5.0 (slant)	1-99	60

Note: When this simulation is canceled, the display returns to the initial menu but the machine is not reset.

46-10

Purpose	Adjustment
Function (Purpose)	Used to adjust the shift amount and the inclination value for each level (1 to 5) of the exposure mode (Text/Photo).
Item	Picture quality

Operation/procedure

1. Touch the item to be adjusted.
   The adjustment item and the currently set value are highlighted.
2. Press the [START] key.
   The display is shifted to the copy menu.
3. Select the paper feed tray and the print density.
   Use the 10-key to set the exposure level.
4. Press the [START] key.
   Copying is started.

(Exposure mode (Text/Photo))

Item		Content	Setting range	Default
1	1.0 (SHIFT)	Character/Photo level 1.0 (shift q'ty)	1-99	30
2	1.0 (GAMMA)	Character/Photo level 1.0 (slant)	1-99	37
3	2.0 (SHIFT)	Character/Photo level 2.0 (shift q'ty)	1-99	40
4	2.0 (GAMMA)	Character/Photo level 2.0 (slant)	1-99	43
5	3.0 (SHIFT)	Character/Photo level 3.0 (shift q'ty)	1-99	50
6	3.0 (GAMMA)	Character/Photo level 3.0 (slant)	1-99	50
7	4.0 (SHIFT)	Character/Photo level 4.0 (shift q'ty)	1-99	57
8	4.0 (GAMMA)	Character/Photo level 4.0 (slant)	1-99	61
9	5.0 (SHIFT)	Character/Photo level 5.0 (shift q'ty)	1-99	64
10	5.0 (GAMMA)	Character/Photo level 5.0 (slant)	1-99	66
11	TS 1.0 (SHIFT)	Character/Photo (TS) level 1.0 (shift q'ty)	1-99	30
12	TS 1.0 (GAMMA)	Character/Photo (TS) level 1.0 (slant)	1-99	37
13	TS 2.0 (SHIFT)	Character/Photo (TS) level 2.0 (shift q'ty)	1-99	40
14	TS 2.0 (GAMMA)	Character/Photo (TS) level 2.0 (slant)	1-99	43
15	TS 3.0 (SHIFT)	Character/Photo (TS) level 3.0 (shift q'ty)	1-99	50
16	TS 3.0 (GAMMA)	Character/Photo (TS) level 3.0 (slant)	1-99	50
17	TS 4.0 (SHIFT)	Character/Photo (TS) level 4.0 (shift q'ty)	1-99	57
18	TS 4.0 (GAMMA)	Character/Photo (TS) level 4.0 (slant)	1-99	61
19	TS 5.0 (SHIFT)	Character/Photo (TS) level 5.0 (shift q'ty)	1-99	64
20	TS 5.0 (GAMMA)	Character/Photo (TS) level 5.0 (slant)	1-99	66

Note: When this simulation is canceled, the display returns to the initial menu but the machine is not reset.

46-11

Purpose	Adjustment	
Function (Purpose)	Used to adjust the shift amount and the inclination value for each level (1 to 5) of the exposure mode (Photo).	
Item	Picture quality	Density

Operation/procedure

1. Touch the item to be adjusted.
   The adjustment item and the currently set value are highlighted.
2. Press the [START] key.
   The display is shifted to the copy menu.
3. Select the paper feed tray and the print density.
   Use the 10-key to set the exposure level.
4. Press the [START] key.
   Copying is started.

(Exposure mode (Photo))

Item		Content	Setting range	Default
1	1.0(SHIFT)	Photo level 1.0 (shift q'ty)	1-99	16
2	1.0(GAMMA)	Photo level 1.0 (slant)		50
3	2.0(SHIFT)	Photo level 2.0 (shift q'ty)		33
4	2.0(GAMMA)	Photo level 2.0 (slant)		50
5	3.0(SHIFT)	Photo level 3.0 (shift q'ty)		50
6	3.0(GAMMA)	Photo level 3.0 (slant)		50
7	4.0(SHIFT)	Photo level 4.0 (shift q'ty)		56
8	4.0(GAMMA)	Photo level 4.0 (slant)		61
9	5.0(SHIFT)	Photo level 5.0 (shift q'ty)		62
10	5.0(GAMMA)	Photo level 5.0 (slant)		66

Note: When this simulation is canceled, the display returns to the initial menu but the machine is not reset.

46-12

Purpose	Adjustment
Function (Purpose)	FAX exposure level adjustment (1 mode automatic adjustment)
Section	FAX
Item	Image quality

Operation/procedure

1. Select "1: COPY START."
   The currently set value is displayed beside the item.
2. Enter the set value of the exposure level with the 10-key, and press the [#/P] key.
3. Press the [START] key.
   Copying is started and the set value is stored.

Normal display	NOW PRINTING
Error display	DOOR OPEN
	JAM
	PAPER EMPTY

There is no tray selection operation.

The optimum paper tray for the scanned size is selected.

	Item	Setting range	Default
1	COPY START	–	–
2	FAX EXP.LEVEL	0-99	50

Note: Executable only when the FAX is installed.

46-13

Purpose	Adjustment
Function (Purpose)	FAX exposure level adjustment (Normal mode individual adjustment)
Section	FAX
Item	Image quality

Operation/procedure

1. Select "1: COPY START."
   The currently set value is displayed beside the item.
2. Enter the set value of the exposure level with the 10-key, and press the [#/P] key.
3. Press the [START] key.
   Copying is started and the set value is stored.

Normal display	NOW PRINTING
Error display	DOOR OPEN
	JAM
	PAPER EMPTY

There is no tray selection operation.

The optimum paper tray for the scanned size is selected.

	Item	Content	Setting range	Default
1	COPY START	Copy start	–	–
2	EXP.LEVEL	Exposure level selection	0-99	50
3	AE	Normal text AE		
4	MANUAL	Normal text MANUAL		

Note: Executable only when the FAX is installed.

46-14

Purpose	Adjustment
Function (Purpose)	FAX exposure level adjustment (Fine text mode individual adjustment)
Section	FAX
Item	Image quality

Operation/procedure

1. Select "1: COPY START."
   The currently set value is displayed beside the item.
2. Enter the set value of the exposure level with the 10-key, and press the [#/P] key.
3. Press the [START] key.
   Copying is started and the set value is stored.

Normal display	NOW PRINTING
Error display	DOOR OPEN
	JAM
	PAPER EMPTY

There is no tray selection operation.

The optimum paper tray for the scanned size is selected.

	Item	Content	Setting range	Default
1	COPY START	Copy start	–	–
2	EXP.LEVEL	Exposure level selection	0-99	50
3	AE (PHOTO ON)	Fine text AE (Half tone)		
4	AE (PHOTO OFF)	Fine text AE		
5	MANUAL (PHOTO ON)	Fine text MANUAL (Half tone)		
6	MANUAL (PHOTO OFF)	Fine text MANUAL		

Note: Executable only when the FAX is installed.

46-15

Purpose	Adjustment
Function (Purpose)	FAX exposure level adjustment (Super Fine mode individual adjustment)
Section	FAX
Item	Image quality

Operation/procedure

1. Select "1: COPY START."
   The currently set value is displayed beside the item.
2. Enter the set value of the exposure level with the 10-key, and press the [#/P] key.
3. Press the [START] key.
   Copying is started and the set value is stored.

Normal display	NOW PRINTING
Error display	DOOR OPEN
	JAM
	PAPER EMPTY

There is no tray selection operation.

The optimum paper tray for the scanned size is selected.

	Item	Content	Setting range	Default
1	COPY START	Copy start	–	–
2	EXP.LEVEL	Exposure level selection	0-99	50
3	AE (PHOTO ON)	Super Fine AE (Half tone)		
4	AE (PHOTO OFF)	Super Fine AE		
5	MANUAL (PHOTO ON)	Super Fine MANUAL (Half tone)		
6	MANUAL (PHOTO OFF)	Super Fine MANUAL		

Note: Executable only when the FAX is installed.

46-16

Purpose	Adjustment
Function (Purpose)	FAX exposure level adjustment (Ultra Fine mode individual adjustment)
Section	FAX
Item	Image quality

Operation/procedure

1. Select "1: COPY START."
   The currently set value is displayed beside the item.
2. Enter the set value of the exposure level with the 10-key, and press the [#/P] key.
3. Press the [START] key.
   Copying is started and the set value is stored.

Normal display	NOW PRINTING
Error display	DOOR OPEN
	JAM
	PAPER EMPTY

There is no tray selection operation.

The optimum paper tray for the scanned size is selected.

	Item	Content	Setting range	Default
1	COPY START	Copy start	–	–
2	EXP.LEVEL	Exposure level selection	0-99	50
3	AE (PHOTO ON)	Ultra Fine AE (Half tone)		
4	AE (PHOTO OFF)	Ultra Fine AE		
5	MANUAL (PHOTO ON)	Ultra Fine MANUAL (Half tone)		
6	MANUAL (PHOTO OFF)	Ultra Fine MANUAL		

Note: Executable only when the FAX is installed.

46-18

Purpose	Adjustment
Function (Purpose)	Used to adjust inclination for each exposure mode.
Item	Picture quality

Operation/procedure

1. Touch the item to be adjusted.
   The adjustment item and the current set value are highlighted.
2. Press the [START] key.
   The display is shifted to the copy menu.
3. Select the paper feed tray and the print density.
   Set the exposure level with the 10-key.
4. Press the [START] key.
   Copying is started.

(Auto adjustment)

Item		Content		Setting range	Default
1	AE	AE		1-99	50
2	TEXT	Character	Level 3.0		
3	TEXT/PHOTO	Character/Photo	Level 3.0		
4	PHOTO	Photo	Level 3.0		
5	AE(TS)	AE(TS)			
6	TEXT(TS)	Character (TS)	Level 3.0		
7	TEXT/PHOTO(TS)	Character/Photo (TS)	Level 3.0		

Note: When this simulation is canceled, the display returns to the initial menu but the machine is not reset.

46-19

Purpose	Adjustment
Function (Purpose)	Used to set the control method of the exposure mode.
Item	Picture quality

Operation/procedure

1. Touch the item to be adjusted.
   The currently set value is highlighted beside the adjustment item.
2. Press the [START] key.
   The display is shifted to the adjustment value entry menu.
3. Enter the adjustment value with the 10-key, and press the [START] key.

When the [SYSTEM SETTINGS] key is pressed, the display returns to the original state (adjustment item selection menu).

Item		Content	Default
1	AE MODE (1:EXPOSURE 2:TONER)	Auto exposure mode* (1: Priority on Image quality, 2: Priority on toner consumption)	2
2	AE STOP(COPY) (0:FIXED 1:REAL TIME)	Auto exposure STOP mode (COPY) (0: Fixed, 1: Real-time)	0
3	AE STOP(FAX) (0:FIXED 1:REAL TIME)	Auto exposure STOP mode (FAX) (0: Fixed, 1: Real-time)	0
4	AE STOP(SCAN) (0:FIXED 1:REAL TIME)	Auto exposure STOP mode (SCANNER) (0: Fixed, 1: Real-time)	0
5	PHOTO MODE	Photo mode (1: ED (Error diffusion) , 2: DT (Dither))	2

* Auto exposure mode

- When SIM 26-6 (Destination setup) is changed from EX Japan to Japan, the setup value becomes 1 (Default: Japan). If, on the contrary, it is changed from Japan to EX Japan, the set value becomes 2 (Default: EX Japan)
- If the auto exposure mode setup value is changed, the setup value of SIM 46-30 (AE limit setup) is reset to the default value.

46-20

Purpose	Adjustment
Function (Purpose)	Used to set the exposure correction value of SPF/RSPF for OC exposure.
Item	Picture quality

Operation/procedure

1. Touch the item to be adjusted.
   The adjustment item and the currently set value are highlighted.
2. Enter the set value with the 10-key.

Item		Content	Setting range	Default
1	SPF EXPOSURE	SPF	1-99	53
2	RSPF EXPOSURE	RSPF		

46-30

Purpose	Setting
Function (Purpose)	Used to set the AE and the limit value in AE (Toner save).

Operation/procedure

1. Touch the item to be adjusted.
   The adjustment item and the currently set value are highlighted.
2. Enter the set value with the 10-key.

If SIM 26-6 (Destination setup) and SIM46-19 (Auto exposure mode) are changed, this setup is also changed to the default value accordingly.

Item		Setting range	Default
1	AE	0-31	0
2	AE(TS)		

46-31

Purpose	Setting
Function (Purpose)	Used to set the AE and the limit value in AE (Toner save).

Operation/procedure

1. Touch the item to be adjusted.
   The adjustment item and the currently set value are highlighted.
2. Enter the set value with the 10-key.

Item		Setting range	Default
1	AE	0-2	1
2	TEXT		
3	TEXT/PHOTO		
4	PHOTO		

46-39

Purpose	Setting
Function (Purpose)	Used to switch the FAX send image quality.

Enter the set value with the 10-key.

Item		Content	Setting range	Default
0	HAIRLINE	Original with pencil lines and thin lines	0-1	0
1	PRINTER	Printed original		

48

48-1

Purpose	Adjustment
Function (Purpose)	Used to adjust the copy mode magnification ratio (main scanning direction, sub scanning direction).
Section	Image processing
Item	Picture quality

Operation/procedure

1. Touch the item to be set.
   The item and the currently set value are highlighted.
2. Press the [START] key.
   The display is shifted to the copy menu.
3. Select the paper feed tray and the print density, and enter the adjustment value with the 10-key.
4. Press the [START] key.
   Copying is started.

Item		Content	Setting range	Default
1	F-R	Main scanning magnification ratio adjustment	1-99	50
2	SCAN	Sub scanning magnification ratio adjustment		60
3	SPF (SIDE1)	RSPF surface sub scan magnification ratio		50
4	SPF (SIDE2)	RSPF back surface sub scan magnification ratio		
5	DUPLEX	DUPLEX sub scanning magnification ratio adjustment		

Note: When this simulation is canceled, the display is shifted to the initial menu, but the machine is not reset.

48-2

Purpose	Adjustment
Function (Purpose)	Used to adjust the scanner mode magnification ratio (main/sub scanning direction).
Section	Image processing
Item	Picture quality

Operation/procedure

1. Touch the item to be set.
   The item and the currently set value are highlighted.
2. Press the [START] key.
   The display is shifted to the copy menu.
3. Select the paper feed tray and the print density, and enter the adjustment value with the 10-key.
4. Press the [START] key.
   Copying is started.

Item		Content	Setting range	Default
1	F-R	Main scanning magnification ratio adjustment	1-99	50
2	SCAN	Sub scanning magnification ratio adjustment		
3	SPF (SIDE1)	RSPF surface sub scan magnification ratio		
4	SPF (SIDE2)	RSPF back surface sub scan magnification ratio		

48-3

Purpose	Adjustment
Function (Purpose)	Used to adjust the print mode magnification ratio correction.
Section	Image processing
Item	Picture quality

Operation/procedure

1. The adjustment item and the currently set value are highlighted.
2. Enter the adjustment value with the 10-key.

Changes magnification ratio by changing speed of main motor.

The change of the paper transfer speed is 0.1% when changing value is 1.

Item		Content	Setting range	Default
1	145mm/s	Main motor speed (145mm/s)	45-55	50
2	122mm/s	Main motor speed (122mm/s)		

48-8

Purpose	Adjustment
Function (Purpose)	FAX magnification adjustment (read)
Section	FAX
Related soft SW	SW112-1 to 8, SW113-1 to 8

Operation/procedure

1. Select “1: COPY START.”
   The currently set value is highlighted beside the item.
2. Enter the set value of magnification with the 10-key, and press the [#/P] key.
3. Press the [START] key.
   Copying is started and the set value is stored.

Normal display	NOW PRINTING
Error display	DOOR OPEN
	JAM
	PAPER EMPTY

There is no operation of tray selection.

The optimum paper tray for the scanned size is selected.

Even when the SPF/RSPF is selected, if there is no original on the SPF/RSPF, the OC is scanned.

Even when the OC is selected, if there is any original on the SPF/RSPF, the SPF/RSPF is scanned. (Setting 2)

Item		Content	Setting range	Default
1	COPY START	Copy start	–	–
2	SCAN SELECT (OC/SPF/RSPF)	Scan selection (OC/ SPF/RSPF)	1-255*	128
3	OC(MAIN)	SCAN Main scanning magnification ratio adjustment (OC)	1-255*	128
4	OC(SUB)	SCAN Sub scanning magnification ratio adjustment (OC)	1-255*	128
5	SPF(MAIN)	SCAN Main scanning magnification ratio adjustment (SPF)	1-255*	128
6	SPF(SUB)	SCAN Sub scanning magnification ratio adjustment (SPF)	1-255*	128
7	RSPF(MAIN)	SCAN Main scanning magnification ratio adjustment (RSPF)	1-255*	128
8	RSPF(SUB)	SCAN Sub scanning magnification ratio adjustment (RSPF)	1-255*	128

* The adjustment can be made in the range of –12.7% - +12.7% by the increment of 0.1%.

Note: Executable only when the FAX is installed.

48-9

Purpose	Adjustment
Function (Purpose)	FAX magnification adjustment (print)
Section	FAX

Operation/procedure

1. Select "1: COPY START."
   The currently set value is displayed beside the item.
2. Press the [START] key.
   Copying is started and the set value is stored.

Normal display	NOW PRINTING
Error display	DOOR OPEN
	JAM
	PAPER EMPTY

There is no operation of tray selection.

The optimum paper tray for the scanned size is selected.

When two pages are scanned, duplex printing is made.

Item		Content	Setting range	Default
1	COPY START	Copy start	1-255	128
2	Horizontal	Print magnification ratio adjustment (Horizontal, vertical to paper passing)	1-255	128
3	Vertical	Print magnification ratio adjustment (Vertical, parallel to paper passing)	1-255	128
4	Horizontal (DUPLEX)	Print magnification ratio adjustment on the back surface (Horizontal, vertical to paper passing)	1-255	128
5	Vertical (DUPLEX)	Print magnification ratio adjustment on the back surface (Vertical, parallel to paper passing)	1-255	128

Note: Executable only when the FAX is installed.

50

50-1

Purpose	Adjustment	
Function (Purpose)	Used to adjust the copy lead edge position.	
Item	Picture quality	Image position

Operation/procedure

1. Touch the item to be adjusted.
   The item and the currently set value are highlighted.
2. Enter the adjustment value with the 10-key and press the [P] key., The display goes to the copy menu.
   When the [START] key is pressed, the display goes to the copying state and print is started.

(When the [P] key is pressed: Copy menu)

3. Select the paper feed tray and the print density.
   Enter the exposure level with the 10-key.
4. Press the [START] key.
   Copying is started.

Note: When this simulation is canceled, the display is shifted to the initial menu, but the machine is not reset.

(Adjustment procedure)

1. Note down the adjustment value of SIM 50-5 (Items 1, 2, 3, 4), and change the value to 99.
2. Set SIM 50-1 (Items 2, 3, 4, 5) to 1. (By setting to 1, there is no void.)
3. Place a chart with a clear lead edge (or a ruler) on the OC document table.
4. Use SIM 50-1 (Item 1) to execute test print. Check the print out and adjust so that the lead edge image is printed. (1 - 99: About 0.127mm/Step)
5. Reset the adjustment values of SIM 50-5 (Items 1, 2, 3, 4) to the original values, and execute test print. Check the print out and adjust so that the lead edge image is printed on the lead edge of paper. (1 - 99: About 0.127mm/Step).
6. Adjust SIM 50-1 (Items 2, 3, 4, 5) so that the lead edge void on the print out is the specified value. (1 - 99: About 0.127mm/Step)
7. Similar to procedure 6, adjust SIM 50-1 (Item 6, 7) so that the rear edge void is the specified value. (1 - 99: About 0.127mm/Step)
8. Similar to procedure 6, adjust SIM 50-1 (Item 8, 9) so that the left edge void is the specified value. (1 - 99: About 0.127mm/Step)
9. Make an enlargement copy (400%), and check that there is no shade of the cabinet printed at the lead edge.
10. If there is a shade printed at the lead edge in procedure 9, adjust SIM 50-1 (Item 10). (1 - 5: About 0.677mm)
    * If there is no problem, set to 2.

Item		Content	Setting range	Default
1	RRC-A	Original scan start position adjustment Lead edge position adjustment value (OC)	1-99	43
2	DEN-A	Lead edge cancel adjustment (Main tray)	1-99	18
3	DEN-A-MANUAL	Lead edge cancel adjustment (Manual feed tray)	1-99	18
4	DEN-A -OPTION	Lead edge cancel adjustment (Option tray)	1-99	18
5	DEN-A -DUPLEX	Lead edge cancel adjustment (back of the machine)	1-99	18
6	DEN-B	Rear edge void adjustment	1-99	30
7	DEN-B-DUP	Rear edge void adjustment (Duplex)	1-99	50
8	SIDE VOID	Left edge void adjustment (First print surface)	1-99	18
9	SIDE VOID-DUP	Left edge void adjustment (Duplex)	1-99	18
10	LOSS(OC)	Image loss amount adjustment (Lead edge image loss set value) (OC)	1-5	3

50-5

Purpose	Adjustment	
Function (Purpose)	Used to adjust the print image position (top margin) on the print paper in the print mode.	
Item	Picture quality	Print area

Operation/procedure

1. Touch the item to be adjusted.
   The item and the currently set value are highlighted.
2. Enter the adjustment value with the 10-key and press the [P] key., The display goes to the copy menu.
   When the [START] key is pressed, the display goes to the copying state and print is started.

(When the [P] key is pressed: Copy menu)

3. Select the paper feed tray and the print density.
   Enter the exposure level with the 10-key.
4. Press the [START] key.
   Copying is started.

Note: When this simulation is canceled, the display is shifted to the initial menu, but the machine is not reset.

Item		Content	Setting range	Default
1	TRAY1	1st tray	0-99	53
2	OPTION	Option tray	1-99	
3	MANUAL	Manual feed		
4	DUPLEX	Back print		

50-6

Purpose	Adjustment	
Function (Purpose)	Used to adjust the print image position (top margin) on print paper in the copy mode. (RSPF)	
Item	Picture quality	Image position

Operation/procedure

1. Touch the item to be adjusted.
   The item and the currently set value are highlighted.
2. Enter the adjustment value with the 10-key and press the [P] key., The display goes to the copy menu.
   When the [START] key is pressed, the display goes to the copying state and print is started.

(When the [P] key is pressed: Copy menu)

3. Select the paper feed tray and the print density.
   Enter the exposure level with the 10-key.
4. Press the [START] key.
   Copying is started.

Note: When this simulation is canceled, the display is shifted to the initial menu, but the machine is not reset.

Item		Content	Setting range	Default
1	SIDE1	Surface original scan start position adjustment	1-99	50
2	SIDE2	Back original scan start position set	1-99	50
3	END EDGE	Rear edge void adjustment (RSPF)	1-99	50
4	LOSS(SIDE1)	Surface image loss quantity set	1-5	3
5	LOSS(SIDE2)	Back image loss quantity set	1-5	3
6	REARLOS(SIDE1)	Surface rear edge image loss quantity set	1-5	3
7	REARLOS(SIDE2)	Back rear edge image loss quantity set	1-5	3

50-8

The adjustments on the machine side must have been normally completed.

Purpose	Adjustment
Function (Purpose)	FAX lead edge adjustment (read)
Section	FAX

Operation/procedure

1. Select “1: COPY START.”
   The currently set value is highlighted beside the item.
2. Enter the correction value with the 10-key, and press the [#/P] key.
3. Press the [START] key.
   Copying is started.

Normal display	NOW PRINTING
Error display	DOOR OPEN
	JAM
	PAPER EMPTY

There is no tray selection operation.
The optimum paper tray for the scanned size is selected.

4. Select the scanning method.

Even when the SPF/RSPF is selected, if there is no original on the SPF/RSPF, the OC is scanned.
Even when the OC is selected, if there is any original on the SPF/RSPF, the SPF/RSPF is scanned. (Setting 2)

Item		Content	Setting range	Default
1	COPY START	Copy start	–	–
2	SCAN SELECT (OC/SPF/RSPF)	Scan selection (1: OC, 2: SPF, 3: RSPF back)	1-3	1
3	LEAD	Scan lead edge position adjustment value of the selected method in 2.	43-57	50
4	LEFT	Scan left edge position adjustment value of the selected method in 2.	43-57	50
5	REAR	Scan rear edge position adjustment value of the selected method in 2.	43-57	50
6	RIGHT	Scan right edge position adjustment value of the selected method in 2.	43-57	50

Note: Executable only when the FAX is installed.

50-9

Purpose	Adjustment
Function (Purpose)	FAX lead edge adjustment (print)
Section	FAX

Operation/procedure

1. Select “1: COPY START.”
   The currently set value is highlighted beside the item.
2. Press the [START] key.
   Copying is started.

Normal display	NOW PRINTING
Error display	DOOR OPEN
	JAM
	PAPER EMPTY

There is no tray selection operation.

The optimum paper tray for the scanned size is selected.

When two pages are scanned, duplex print is made,

Item		Content	Setting range	Default
1	COPY START	Copy start	–	–
2	LEAD	Print lead edge void adjustment value (Front surface)	43-57	53
3	LEFT	Print left edge void adjustment value (Front surface)	43-57	53
4	REAR	Print rear edge void adjustment value (Front surface)	43-57	53
5	LEAD (DUPLEX)	Print lead edge void adjustment value (Back surface)	43-57	53
6	LEFT (DUPLEX)	Print left edge void adjustment value (Back surface)	43-57	53
7	REAR (DUPLEX)	Print rear edge void adjustment value (Back surface)	43-57	53

Note: Executable only when the FAX is installed.

50-10

Purpose	Adjustment	
Function (Purpose)	Used to adjust the print image center position. (Adjustment can be made for each paper feed section.)	
Section	Image processing (ICU)	
Item	Picture quality	Image position

Operation/procedure

1. Touch the item to be adjusted.
   The item and the currently set value are highlighted.
2. Enter the adjustment value with the 10-key and press the [P] key.,
   The display goes to the copy menu.
   When the [START] key is pressed, the display goes to the copying state and print is started.

(When the [P] key is pressed: Copy menu)

3. Select the paper feed tray and the print density.
   Enter the exposure level with the 10-key.
4. Press the [START] key.
   Copying is started.

Note: When this simulation is canceled, the display is shifted to the initial menu, but the machine is not reset.

Item		Content	Setting range	Default
1	BYPASS	Manual paper feed	1-99	50
2	TRAY1	1st tray		
3	TRAY2	2nd tray		
4	TRAY3	3rd tray		
5	TRAY4	4th tray		
6	DUPLEX	Back print		

50-12

Purpose	Adjustment	
Function (Purpose)	Used to adjust the print image center position. (Adjustment can be made for each document mode.)	
Section	Image processing	
Item	Picture quality	Image position

Operation/procedure

1. Touch the item to be adjusted.
   The item and the currently set value are highlighted.
2. Enter the adjustment value with the 10-key and press the [P] key.,
   The display goes to the copy menu.
   When the [START] key is pressed, the display goes to the copying state and print is started.

(When the [P] key is pressed: Copy menu)

3. Select the paper feed tray and the print density.
   Enter the exposure level with the 10-key.
4. Press the [START] key.
   Copying is started.

Note: When this simulation is canceled, the display is shifted to the initial menu, but the machine is not reset.

Item		Content	Setting range	Default
1	OC	OC document scan	1-99	50
2	SPF(SIDE1)	RSPF document front surface scan		
3	SPF(SIDE2)	RSPF document back surface scan		

51

51-1

Purpose	Adjustment
Function (Purpose)	Used to adjust the OPC drum separation pawl ON time.
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
Item	Operation

Operation/procedure

1. Touch the item to be adjusted.
   The item and the currently set value are highlighted.
2. Enter the adjustment value with the 10-key.

Item		Setting range	Default
1	145mm/s	1-99	50
2	122mm/s		

51-2

Purpose	Adjustment
Function (Purpose)	Used to adjust the contact pressure of paper onto the resist roller in each section (copier paper feed section, duplex paper feed section, RSPF paper feed section). (When the print image position varies greatly for the paper or when a lot of paper jam troubles occur, the adjustment is required.)
Section	Paper transport (Discharge/Switchback/Transport)
Item	Operation

Operation/procedure

1. Touch the item to be adjusted.
   The item and the currently set value are highlighted.
2. Press the [START] key.
   The display is shifted to the copy menu.
3. Select the paper feed tray and the print density.
   Enter the adjustment value with the 10-key.
4. Press the [START] key.
   Copying is started.

Note: When this simulation is canceled, the display is shifted to the initial menu, but the machine is not reset.

Item		Content	Setting range	Default
1	BYPASS	Manual feed	1-99	50
2	TRAY1	1st tray	1-99	50
3	TRAY2	2nd tray	1-99	50
4	TRAY3	3rd tray	1-99	50
5	TRAY4	4th tray	1-99	50
6	DUPLEX	Back print	1-99	70
7	SPF(SIDE1)	RSPF front surface	1-99	50
8	SPF(SIDE2)	RSPF back surface	1-99	50

51-8

Purpose	Setting
Function (Purpose)	Used to set the OPC drum separation pawl operation inhibit. (ON/OFF)
Section	Image process (Photoconductor/Developing/Transfer/Cleaning)
Item	Operation

Operation/procedure

Select the set value with the 10-key.

Item		Content	Setting range	Default
0	ON	Enable	0-1	0
1	OFF	Disable		

51-9

Purpose	Setting
Function (Purpose)	Used to adjust the OPC drum separation voltage ON/OFF timing.
Section	Process (OPC drum, developing, transfer, cleaning)
Item	Operation

Operation/Procedure

1. Touch the item to be adjusted.
   The item and the currently set value are highlighted.
2. Enter the set value with the 10-key.

Item		Content	Setting range	Default
1	SHV ON	Separation voltage ON timing * Transfer V2ON reference (Synchronized with the adjustment value of 50.)	25-90	50
2	SHV OFF	Separation voltage OFF timing * Transfer V2OFF reference (Synchronized with the adjustment value of 50.)	50-90	75

53

53-6

Purpose	Adjustment
Function (Purpose)	Used to adjust the detection level of the RSPF width. The adjustment method is the 4-point system. Set the guide to Max. (A3/WLetter) position, A4R/Letter R position, A5R/Invoice R position, and Min. position for adjustment.
Section	RSPF

Operation/Procedure

(Max. position setting)

1. Set the guide to the maximum position, and press the [START] key. Set WLetter and fit the guide, and press the [START] key.
2. Set A4R/Letter R and fit the guide, and press the [START] key.
3. Set A5R/Invoice R and fit the guide, and press the [START] key.
4. Set the guide to the minimum position, and press the [START] key.
5. Set the paper recognition width (+), and press the [START] key.
6. Set the paper recognition width (–),and press the [START] key.

If "FAILED" is displayed in the above procedure 1, 2, 3, or 4, repeat the adjustment.

(Middle position L/S setting)

If the middle position adjustment is not required, press the [START] key without changing the guide position.

Middle position adjustment L	YES	MID-L ADJ.ON
	NO	MID-L ADJ.OFF
Middle position adjustment S	YES	MID-S ADJ.ON
	NO	MID-S ADJ.OFF

53-7

Purpose	Adjustment
Function (Purpose)	Used to enter the RSPF width detection adjustment value.
Section	RSPF

Operation/Procedure

1. Touch the item to be adjusted.
   The item and the currently set value are highlighted.
2. Enter the RSPF original tray size adjustment value (specified on the back of the RSPF) with the 10-key.

Item		Content	Setting range	Default
1	MAX POSITION	Max. width	0-999	0
2	POSITION 1	Adjustment point 1		
3	POSITION 2	Adjustment point 2		
4	MIN POSITION	Min. width		

53-8

Purpose	Adjustment
Function (Purpose)	Used to adjust the RSPF scan position of the mirror unit automatically. For the RSPF scan position automatic adjustment, the mirror unit is shifted to 11mm before the RSPF glass cover edge, and is operated automatically to scan images by the unit of 1 step, detecting the position up to the glass cover automatically.

Operation/Procedure

With the RSPF or the OC cover open, put a black background chart on the OC glass (the RSPF glass surface is included for the RSPF standard model), and press the [START] key.

If the adjustment is executed normally, the adjustment value is displayed and saved in the EEPROM. If an error occurs, "ERR" is displayed and the value is not saved in the EEPROM.

If the adjustment is not performed because of abnormality, "---" is displayed.

During execution of the adjustment, the operation cannot be interrupted.

53-9

Purpose	Adjustment
Function (Purpose)	RSPF read position adjustment

Operation/Procedure

Press [START] key.

Item	Setting range	Default
Read position adjustment	1-99	50

53-10

Purpose	Adjustment
Function (Purpose)	RSPF exp adjustment

Operation/Procedure

1. Press [START] key.
2. Enter the adjustment value with the 10-key.

Item		Setting range	Default
1	SPF EXPOSURE	1-99	53
2	RSPF EXPOSURE		

55

55-1

Purpose	Setting
Function (Purpose)	Used to set the soft switch.
Section	Operation

Operation/Procedure

Used to enter the number of SW to be changed.

The bit to be changed is specified by 10-key. (The current value is highlighted.)

When [START] key is pressed, the entered value is set.

61

61-1

Purpose	Operation test/check
Function (Purpose)	Used to check the LSU (polygon motor) operation. Check speed can select 145mm/s or 122mm/s individually.
Section	LSU
Item	Operation

Operation/procedure

Press the [START] key, and the LSU test is performed.
Used to set the LSU to ON state and check that the sync signal (HSYNC/) is outputted or not.
After operation for 30 sec, the result is displayed. (Interruption cannot be made for 5 sec after starting the operation.)

63

63-1

Purpose	Adjustment/setting/operation data output/check (display/print)
Function (Purpose)	Used to check the result of shading correction. (The shading correction data are displayed.)
Section	Scanner (Exposure)
Item	Operation

Operation/procedure

Pressing the [START] key performs shading, and displays the result (center pixel).

63-7

Purpose	Adjustment
Function (Purpose)	Used to adjust the RSPF white correction start pixel position automatically. This adjustment is performed after the lens unit is replaced.
Section	Scanner
Item	Operation

Operation/procedure

Lift the RSPF unit to the fully open position, and press the [START] key.
[ ] indicates the order number of the pixel of the white sheet for RSPF exposure correction in the RSPF position.
If the adjustment is normally completed, “COMPLETE” is displayed and data are written into the EEPROM.
In case of an abnormality, “ERROR” is displayed and no data is written into the EEPROM.
The RSPF white correction start pixel = Displayed pixel position – 34
If the simulation is executed with the RSPF unit closed, an error will result.

64

64-1

Purpose	Operation test/check
Function (Purpose)	Used to check the operation of the printer function (auto print operation).
Section	Printer
Item	Operation

Operation/procedure

1. Select the print item with the 10-key.
2. Press the [START] key.
   The display is shifted to the copy menu.
3. Select the paper feed tray and the print density.
4. Press the [START] key.
   Copying is started.

During execution of the print test, the [SYSTEM SETTINGS] key and the [INTERRUPTION] key are invalid.

Item		Content	Setting range	Default
1	2 BY 4 MODE	Self print is made in 2 by 4 mode (printing 2 lines and not printing 4 lines). Since scanning is not performed, when the original is set on the RSPF, this cannot be performed. * Duplex print cannot be made.	1-2	1
2	LATTICE PRINT	Lattice print (1cm, 1dot width WLT, A3 print (A3 main scan, WLT sub scan)) is performed. * Duplex print can be made.		

* If the IMC board is not installed, the key inputs cannot be made.

65

65-1

Purpose	Adjustment
Function (Purpose)	Used to adjust the touch panel (LCD display section) detection position.
Section	Operation (Display, Operation)

Operation/Procedure

Press the keys displayed on the LCD sequentially.

Adjust the touch panel coordinates.

When the point of “+” on the LCD is pressed, it turns gray. Press all the four points of “+.”

65-2

Purpose	Adjustment/Setting/Operation data output check (Display, Print)
Function (Purpose)	Used to check the touch panel (LCD display section) detection position adjustment result.
Section	Operation (Display, Operation)

Operation/Procedure

Check the touch panel coordinates.

Press the keys displayed on the LCD sequentially.

When the touch panel is pressed, the X-coordinate and the Y-coordinate (dot conversion values) are displayed.

65-5

Purpose	Adjustment/Setting/Operation data output check (Display, Print)
Function (Purpose)	Used to check the key inputs of the operation panel.
Section	Operation (screen/operation)

Operation/procedure

Check the key input of the operation panel.
Press the keys displayed on the LCD sequentially.

After completion of all key entries, “COMPLETE” is displayed.

66

66-1

Purpose	Setting
Function (Purpose)	Used to change and check the FAX-related soft SW.
Section	FAX

Operation/procedure

1. Enter the soft SW number to be selected with the 10-key.
2. Check and change the setting content of the selected soft SW.
3. Press the [START] key to save the set content.

The FAX-related soft SW is displayed on the LCD, and changing can be made by monitoring it.

Note: Executable only when the FAX is installed.

66-2

Purpose	Adjustment
Function (Purpose)	Used to clear the FAX-related soft SW. (Except for the FAX adjustment values)
Section	FAX

Operation/procedure

1. Enter the country code with the 10-key, and press the [START] key.
2. When "1: (YES)" is selected, the soft SW corresponding to the country code is cleared. When "2: (NO)" is selected, the simulation is canceled.

Country code

Japan : 00000000
U.S.A. : 10110101
Australia : 00001001
U.K. : 10110100
France : 00111101
Germany : 00000100
Sweden : 10100101
New Zealand : 01111110
China : 00100110
Singapore : 10011100
Taiwan : 11111110
India : 01010011
Malaysia : 01101100
Hong Kong : 01010000
Middle east : 11111101
SouthAfrica : 10011111
Spain : 10100000
Portugal : 10001011
Russia : 10111000
Denmark : 00110001
Norway : 10000010
Switzerland : 10100110
Italy : 01011001
Belgium : 00001111
Luxembourg : 01101001
Netherlands : 01111011
Finland : 00111100

The codes other than the above are accepted as Japan.

Note: Executable only when the FAX is installed.

66-3

Purpose	Operation test/check
Function (Purpose)	FAX PWB memory check
Section	FAX
Item	Operation

Operation/procedure

Press the [START] key.

Read/write can be checked for FAX PWB memory.

The check result is displayed separately for each memory.

1. Memory to be checked

DRAM		
SRAM		
Flash ROM	Program area	SUM check only
	Memory area	
Option memory		The memory size follows the automatically detected value.
PAGE		
MODEM		

2. Detailed procedure

1	"55H" is written to all the addresses of each memory, and the address data are read in sequence to check that they were properly written.
2	"AAH" is written to all the addresses of each memory, and the address data are read in sequence to check that they were properly written.
3	"00H" is written to all the addresses of each memory, and the address data are read in sequence to check that they were properly written.
4	Perform checks 1 - 3 sequentially. If there is no abnormality, it is "OK." If there is any abnormality, "NG" is notified to the error address.
5	The check result is saved. New result is overwrited with each check.

Interruption cannot be made during operation.

Note: Executable only when the FAX is installed.

66-4

Purpose	Operation test/check
Function (Purpose)	Signal send mode (Signal send level: Max.)
Section	FAX
Item	Operation

Operation/procedure

Select the signal number with the 10-key, and press the [START] key. The signal is sent to the line and the machine speaker. (Sending the signal is continued until the [SYSTEM SETTINGS] key is pressed.)

By entering the signal number and pressing the [START] key during execution, the signal kind can be changed.

Item		Send signal
1	NO SIGNAL	Signal not sent
2	33.6 V34	33.6 V34
3	31.2 V34	31.2 V34
4	28.8 V34	28.8 V34
5	26.4 V34	26.4 V34
6	24.0 V34	24.0 V34
7	21.6 V34	21.6 V34
8	19.2 V34	19.2 V34
9	16.8 V34	16.8 V34
10	14.4 V34	14.4 V34
11	12.0 V34	12.0 V34
12	9.6 V34	9.6 V34
13	7.2 V34	7.2 V34

Item		Send signal
14	4.8 V34	4.8 V34
15	2.4 V34	2.4 V34
16	14.4 V33	14.4 V33
17	12.0 V33	12.0 V33
18	14.4 V17	14.4 V17
19	12.0 V17	12.0 V17
20	9.6 V17	9.6 V17
21	7.2 V17	7.2 V17
22	9.6 V29	9.6 V29
23	7.2 V29	7.2 V29
24	4.8 V27t	4.8 V27t
25	2.4 V27t	2.4 V27t
26	0.3 FLG	7EH Flag signal
27	CED2100	Tone signal
28	CNG1100	
29	0.3 V21	
30	ANSam	
31	RINGER	Pseudo-ringer sound ([ON HOOK] key ON)
32	No MSG	Voice message (no sound)
		Under the state where the ring back tone can be sent to the line, keep the sound composition IC volume to 0.
33	No RBT	Ring back tone (no sound)
		Under the state where the ring back tone can be sent to the line, keep the G/A volume to 0.
34	DP MAKE	Dial pulse (make)
		Maintain the make state with keeping the condition to be able to send to the dial pulse line.
35	DP BRK	Dial pulse (break)
		Maintain the break state with keeping the condition to be able to send to the dial pulse line.

Note: Executable only when the FAX is installed.

66-5

Purpose	Operation test/check
Function (Purpose)	Signal send mode (Signal send level soft SW setting)
Section	FAX
Item	Operation

Operation/procedure

Select the signal number with the 10-key, and press the [START] key.

By setting the signal number, signals are sent to the line and the machine speaker. (Sending signals is continued until interruption command is made (by pressing [SYSTEM SETTINGS] key.)

By entering the signal number and pressing the [START] key during execution, the signal kind can be changed.

Signal number		Send signal
1	NO SIGNAL	Signal not sent
2	33.6 V34	33.6 V34
3	31.2 V34	31.2 V34
4	28.8 V34	28.8 V34
5	26.4 V34	26.4 V34
6	24.0 V34	24.0 V34
7	21.6 V34	21.6 V34
8	19.2 V34	19.2 V34
9	16.8 V34	16.8 V34
10	14.4 V34	14.4 V34
11	12.0 V34	12.0 V34
12	9.6 V34	9.6 V34
13	7.2 V34	7.2 V34
14	4.8 V34	4.8 V34
15	2.4 V34	2.4 V34
16	14.4 V33	14.4 V33
17	12.0 V33	12.0 V33
18	14.4 V17	14.4 V17
19	12.0 V17	12.0 V17
20	9.6 V17	9.6 V17
21	7.2 V17	7.2 V17
22	9.6 V29	9.6 V29
23	7.2 V29	7.2 V29
24	4.8 V27t	4.8 V27t
25	2.4 V27t	2.4 V27t
26	0.3 FLG	7EH Flag signal
27	CED2100	Tone signal
28	CNG1100	
29	0.3 V21	
30	ANSam	
31	RINGER	Pseudo-ringer sound ([ON HOOK] key ON)
32	No MSG	Voice message (no sound)
		Under the state where the ring back tone can be sent to the line, keep the sound composition IC volume to 0.
33	No RBT	Ring back tone (no sound)
		Under the state where the ring back tone can be sent to the line, keep the G/A volume to 0.
34	DP MAKE	Dial pulse (make)
		Maintain the make state with keeping the condition to be able to send to the dial pulse line.
35	DP BRK	Dial pulse (break)
		Maintain the break state with keeping the condition to be able to send to the dial pulse line.

Note: Executable only when the FAX is installed.

66-6

Purpose	Data output, check	
Function (Purpose)	Printing the confidential password	
Section	FAX	
Item	Data	Confidential/Pass code

Operation/procedure

Press the [START] key.

The confidential ID table (confidential BOX numbers, confidential BOX names, and confidential password) is printed.

The confidential data of My company mode is printed separately.

Note: Executable only when the FAX is installed.

66-7

Purpose	Data output, check	
Function (Purpose)	Print the screen memory contents	
Section	FAX	
Item	Data	Image data

Operation/procedure

Press the [START] key.

Used to input all image data (including confidential reception data, remote send image, not-sent image) stored in image memory of the FAX section.

The output image is remained even after outputting.

Note: Executable only when the FAX is installed.

66-10

Purpose	Adjustment/Setting/Check	
Function (Purpose)	Image data memory clear	
Section	FAX	
Item	Data	Image data

Operation/procedure

Select “1: YES” with the 10-key and press the [START] key. (When “2: NO” is selected, the simulation is canceled.)

Used to clear all image data (including confidential reception data) stored in image memory of the FAX section.

The management table is also cleared (initialized) at the same time.

* IIf there is any print data, the power must be turned off after clearing.

Note: Executable only when the FAX is installed.

66-11

Purpose	Operation test/check
Function (Purpose)	Used to send 300bps signals. (Signal send level: Max.)
Section	FAX
Item	Operation

Operation/procedure

Select the signal number with the 10-key, and press the [START] key.

By setting the signal number, the specified signal is delivered to the line at the speed of 300bps. (The signal is continuously sent until the interruption command is provided by pressing the [SYSTEM SETTINGS] key.)

The signal send level can be selected from 0dB or the soft SW set value.

The signal send level is returned to the soft SW set value before execution of the mode after completion of the mode.

By entering the number and pressing the [START] key during execution, the signal kind can be changed.

Item	
1	NO SIGNAL
2	11111
3	11110
4	00000
5	010101
6	00001

Note: Executable only when the FAX is installed.

66-12

Purpose	Operation test/check
Function (Purpose)	Used to send 300bps signals. (Signal send level: Set by soft SW)
Section	FAX
Item	Operation

Operation/procedure

Select the signal number with the 10-key, and press the [START] key.

By setting the signal number, the specified signal is delivered to the line at the speed of 300bps. (The signal is continuously sent until the interruption command is provided by pressing the [SYSTEM SETTINGS] key.)

The signal send level can be selected from 0dB or the soft SW set value.

The signal send level is returned to the soft SW set value before execution of the mode after completion of the mode.

By entering the number and pressing the [START] key during execution, the signal kind can be changed.

Item	
1	NO SIGNAL
2	11111
3	11110
4	00000
5	010101
6	00001

Note: Executable only when the FAX is installed.

66-13

Purpose	Setting
Function (Purpose)	Used to register the dial numbers.
Section	FAX
Item	Operation

Operation/procedure

Enter the number with the 10-key, [*] key, and [#] key.

Press the [CLEAR] key to return to the initial state.

Press the [START] key to register the entered number.

Note: Executable only when the FAX is installed.

66-14

Purpose	Operation check/test
Function (Purpose)	Used to perform the dial test. (10 PPS send test)
Section	FAX
Item	Operation

Operation/Procedure

1. Select the item with the 10-key, and press the [START] key.
2. Set the make time with the 10-key.

The dial is sent with the set value + 26ms.

The sending dial cannot be interrupted.

Item		Content	Setting range
0	EXECUTE	Execution	–
1	MAKE TIME	Dial pulse make time setting	0-15

Note: Executable only when the FAX is installed.

66-15

Purpose	Operation check/test
Function (Purpose)	Used to perform the dial test. (20 PPS send test)
Section	FAX
Item	Operation

Operation/Procedure

1. Select the item with the 10-key, and press the [START] key.
2. Set the make time with the 10-key.

The dial is sent with the set value + 26ms.

The sending dial cannot be interrupted.

Item		Content	Setting range
0	EXECUTE	Execution	–
1	MAKE TIME	Dial pulse make time setting	0-15

Note: Executable only when the FAX is installed.

66-16

Purpose	Operation check/test
Function (Purpose)	Used to perform the dial test. (DTFM signal send test)
Section	FAX
Item	Operation

Operation/Procedure

1. Select the item with the 10-key, and press the [START] key.
2. Enter the set value with the 10-key.

The sending dial cannot be interrupted.

Item		Content	Setting range
0	EXECUTE	Execution	–
1	HIGH (SW)	High group	0-15
2	HIGH-LOW (SW)	High group, Low group	0-15

3. Select the soft SW reflection.

Item		Content
1	NO STORE TO SW	Not reflected.
2	STORE TO SW	Reflected. (Shift SW value changed.)

Note: Executable only when the FAX is installed.

66-17

Purpose	Operation check/test
Function (Purpose)	Used to check the DTFM signal send operation. (Signal send level: Max.)
Section	FAX
Item	Operation

Operation/procedure

Enter the DTFM signal (1 digit (1 to 9, 0, *, #)) and press the [START] key.

When the [SYSTEM SETTINGS] key is pressed during execution, the simulation is terminated.

Note: Executable only when the FAX is installed.

66-18

Purpose	Operation check/test
Function (Purpose)	Used to check the DTFM signal send operation. (Signal send level: Set by soft SW.)
Section	FAX
Item	Operation

Operation/Procedure

Enter the DTFM signal (1 digit (1 to 9, 0, *, #)) and press the [START] key.

When the [SYSTEM SETTINGS] key is pressed during execution, the simulation is terminated.

Note: Executable only when the FAX is installed.

66-19

Purpose	Back up
Function (Purpose)	Used to write the SRAM data to the Flash ROM.
Section	FAX
Item	Data

Operation/Procedure

Select “1: YES” with the 10-key, and press the [START] key. The data are backed up. (When “2: NO” is selected, the simulation is canceled.)

* The AR-FX5 data cannot be written into the AR-FX7. If it is executed, data are initialized and deleted. In addition, the AR-FX7 data cannot be used in the AR-FX5.

Note: Executable only when the FAX is installed.

66-20

Purpose	Back up
Function (Purpose)	Used to write the Flash ROM data to the SRAM.
Section	FAX
Item	Data

Operation/Procedure

Select “1: YES” with the 10-key, and press the [START] key. The Flash ROM data are read out and written into the SRAM. (When “2: NO” is selected, the simulation is canceled.)

* The AR-FX5 data cannot be written into the AR-FX7. If it is executed, data are initialized and deleted. In addition, the AR-FX7 data cannot be used in the AR-FX5.

Note: Executable only when the FAX is installed.

66-21

Purpose	Check
Function (Purpose)	FAX information print
Section	FAX
Item	Data

Operation/procedure

1. Select the item to be printed.
2. Press the [START] key.

The information of the selected item is printed.

Item		Content
1	USER SW.LIST	User setting list
2	SOFT SW.LIST	Soft SW list
3	SYSTEM ERROR	System error list Used to print the system error log (error number and time).
4	PROTOCOL	Protocol error list Regardless of soft SW38-1 status, the protocol monitor of the preceding communication is printed. (Printing is allowed at any time before starting the next communication.) For this operation, the protocol monitor of one communication is always buffered.
5	PARTIAL SRAM CLEAR	Used to clear the SRAM.

Note: Executable only when the FAX is installed.

66-22

Purpose	Setting
Function (Purpose)	Handset sound volume adjustment (Japan only)
Section	FAX
Item	Operation

Operation/procedure

1. Select the sound volume to be set.
   (MAX: Large, MIDDLE: Medium, MIN: Small)
2. Press [START] key.

Selection of 1, 2, and 3 can be made even during execution of the simulation.

A sound is generated during execution of the simulation.

Note: Execution is possible only when FAX is installed.

66-24

Purpose	Data clear	
Function (Purpose)	Used to clear the FAST storage data. (SEC only)	
Section	FAX	
Item	Data	Initializing

Operation/procedure

Select “1: YES” with the 10-key and press the [START] key. The FAST storage data are cleared. (When “2: NO” is selected, the simulation is canceled.)

Note: Executable only when the FAX is installed.

66-30

Purpose	Operation test/check
Function (Purpose)	Used to set the TEL/LIU.
Section	FAX
Item	Operation

Operation/procedure

When the relay state of the polarity reverse relay, the handset hook switch, or the external telephone hook switch is changed, the content of change is displayed regardless of the soft SW setup (real time). The display of change is kept until an interruption command is supplied by pressing the [SYSTEM SETTINGS] key.

Item	Notification contents	
	Signal low	Signal high
HS2	ON	OFF
HS1	ON	OFF
RHS	ON	OFF
EXHS	ON	OFF

Note: Executable only when the FAX is installed.

66-31

Purpose	Setting
Function (Purpose)	Used to set the TEL/LIU.
Section	FAX
Item	Operation

Operation/Procedure

1. Enter the set value. (Valid only 1 to 5)
2. The entered bit is alternatively switched between “0” and “1” and the target signal name is highlighted.
3. Press the [START] key to send the signal.

When the [CUSTUM SETTINGS] key is pressed, the output is terminated.

Note: Executable only when the FAX is installed.

66-32

Purpose	Operation test/check
Function (Purpose)	Receive data check
Section	FAX
Item	Operation

Operation/procedure

The fixed data received from the line are checked and the result is displayed.

When data are coincident, “OK” is displayed. When not, “NG” is displayed.

Note: Executable only when the FAX is installed.

66-33

Purpose	Operation test/check
Function (Purpose)	Signal detection check
Section	FAX
Item	Operation

Operation/Procedure

Signal detection is checked and the result is displayed.

Note: Executable only when the FAX is installed.

66-34

Purpose	Operation test/check
Function (Purpose)	Communication time measurement display
Section	FAX
Item	Operation

Operation/procedure

The send/receive test is performed, and the time required for send/receive of the image data in the test is measured and displayed.

Setup on the user side when executing communication		Communication means : Memory send Picture quality : Normal Character Density : Lighter ECM : ON Sender information : OFF
Measuring range	Send	From flag reception before sending of image data until sending of RCP frame
	Receive	From flag reception before reception of image data until reception of RCP frame
Mode when measuring		Used to make communication not in a simulation process but in the normal screen and measure the time.
How to check the time		Enter the simulation for communication time check and check the time.
Measuring unit		msec

When there are two or more send/receive operations of image data in one communication, only the time of the last send/receive data near the end is measured.

Note: Executable only when the FAX is installed.

66-37

Purpose	Adjustment/Setting/Check
Function (Purpose)	Speaker sound volume adjustment
Section	FAX

Operation/procedure

The following test sound is delivered to the line and the speaker to adjust the sound kind and volume.

The send level to the line is the set value of soft SW.

The set values of the selected sound kind and volume are written to each soft SW.

1. Sound kinds pattern

Sound kinds (Test sound)		Sound volume set value			
RINGER	Call sound	DEF.	LAR.	MED.	SMA.
LINE MONITO	Line monitor sound (Test sound: communication signal sound)	DEF.	LAR.	MED.	SMA.
ON HOOK	On-hook (Test sound, communication signal sound)	DEF.	LAR.	MED.	SMA.
SCAN FINISH	Scan finish sound	DEF.	LAR.	MED.	SMA.
TX/RX FINISH	Communication finish sound	DEF.	LAR.	MED.	SMA.
DTMF	DTFM send sound	DEF.	LAR.	MED.	SMA.

LAR: (MED. Value + 1)

MED: (SMA value +1) - (LAR value – 1)

SMA: 1 - (MED. Value + 1)

2. Sound volume pattern

Note: Executable only when the FAX is installed.

66-41

Purpose	Adjustment/Setting/Check
Function (Purpose)	CI signal check

Operation/procedure

When the [START] key is pressed, the call signal from CI pin is detected to deliver the call sound to the line and the speaker. The volume of call sound follows the soft SW.

Signal detection and delivery of pseudo-call sound at detection are executed until the interruption command is provided by pressing the [SYSTEM SETTINGS] key.

Note: Executable only when the FAX is installed.

66-52

Purpose	Operation test/check (Japan only)
Section	FAX
Item	Operation
Function (Purpose)	Pseudo-ringer check

Operation/procedure

Press [START] key.

The call sound of the machine and the pseudo-ring are generated.

67

67-1

Purpose	Operation test/check
Function (Purpose)	Used to execute read/write check of the RAM on the PCL board, and to display the result.
Section	Printer
Item	Operation

Operation/Procedure

Press the [START] key.

Read/write check of the RAM on the PCL board is performed and the result is displayed.

The presence of DIMM is detected. If there is no DIMM, "---" is displayed. If there is, read/write check is performed and the result is displayed.

The display of "---" is changed to "CHECKING," "OK," or "NG" according to the message number included in the continuation command.

When the simulation is completed normally, "COMPLETE" is displayed. (No display for abnormal completion.)

Since only the devices installed to the PCL board are checked when the simulation is started, the display may not be changed from "---." (No message is sent for an uninstalled device.)

Key operations on each display

(Initial display)

Pressing the [INTERRUPT] key shifts the display to the previous menu. Pressing the [CA] key leads to resetting. Pressing the [C] key, and the [SYSTEM SETTINGS] key is invalid. (Beep sound)

(Display during execution)

During execution, the [INTERRUPT] key, [C] key, and the [CA] key are invalid. (Beep sound). The [SYSTEM SETTINGS] key produces a valid sound only.

(Check end display)

After execution, the [INTERRUPT] key and the [C] key are invalid. (Beep sound). Pressing the [CA] key leads to resetting. The [SYSTEM SETTINGS] key produces a valid sound only.

After completion of the simulation, reset the machine.

67-14

Purpose	Flash ROM version up
Function (Purpose)	Used to check write/comparison of flash programs.
Section	Printer
Item	Operation

Operation/procedure

1. Press the [START] key.
   "PLEASE SEND DATA" is displayed.
2. Data are sent from the PC (MS-DOS) by use of "fcopy" command (FCOPY: file name). (Refer the "[7] FLASH ROM VERSION UP PROCEDURE")

   Used to overwrite and check the flash device while displaying its process status.

   After completion, the result is displayed.
3. Press the [CA] key to cancel the simulation and reset.

(Flash Device)
PROGRAM
BOOTROM
PS KANJI FONT
ESC/P KANJI FONT
OPTION FONT

(Processing state)
RECEIVE
ERASE
WRITE
VERIFY

* Execution of the simulation which performs communication with the PCL board is inhibited until Notice Page storage is completed. (Only when the serviceman call error occurs.)

* In the other case than the serviceman call error, entering the simulation is inhibited during the system check operation is displayed.

67-15

Purpose	Operation test/check
Function (Purpose)	Used to check the validity of the ROM on the PCL board and the result is displayed.
Section	Printer
Item	Operation

Operation/procedure

Press the [START] key.

Each ROM on the PCL board is checked and the result is displayed.

The display of "---" is changed to "CHECKING," "OK," or "NG" according to the message number included in the continuation command.

When the simulation is completed normally, "COMPLETE" is displayed. (No display for abnormal completion.)

Since only the devices installed to the PCL board are checked when the simulation is started, the display may not be changed from "---." (No message is sent for an uninstalled device.)

Key operations on each display

(Initial display)

Pressing the [INTERRUPT] key shifts the display to the previous menu. Pressing the [CA] key leads to resetting. The [C] key and the [CUSTOM SETTINGS] key are invalid. (Beep sound).

(Execution display)

During execution, the [INTERRUPT] key, the [C] key, and the [CA] key are invalid. (Beep sound). Pressing the [SYSTEM SETTINGS] key produces a valid sound only.

(Check end display)

After execution, the [INTERRUPT] key and the [C] key are invalid. (Beep sound). Pressing the [CA] key leads to resetting. Pressing the [SYSTEM SETTINGS] key produces a valid sound only.

After completion of the simulation, reset the machine.

67-17

Purpose	Data clear
Function (Purpose)	Used to clear the printer section setting. (NVRAM clear)

Operation/procedure

1. Press the [START] key.
   The confirmation dialogue is displayed.
2. Select "1: YES" with the 10-key and press the [START] key.
   1: YES (Cleared)
   2: NO (Not cleared) (Default)

If there is no abnormality after Clear operation, "COMPLETE" is displayed. If there is any abnormality, "ERROR" is displayed.

* Execution of the simulation which performs communication with the PCL board is inhibited until Notice Page storage is completed. (Only when the serviceman call error occurs.)

* In the other case than the serviceman call error, entering the simulation is inhibited during the system check operation is displayed.

Note: Executable only when the PCL is installed.

67-18

Purpose	Data clear
Function (Purpose)	Used to clear the data area for FLASH ROM Network Scanner Application.

Operation/procedure

1. Press the [START] key.
   The confirmation dialogue is displayed.
2. Select “1: YES” with the 10-key and press the [START] key.
   1: YES (Cleared)
   2: NO (Not cleared) (Default)

If there is no abnormality after Clear operation, “COMPLETE” is displayed. If there is any abnormality, “ERROR” is displayed.

* Execution of the simulation which performs communication with the PCL board is inhibited until Notice Page storage is completed. (Only when the serviceman call error occurs.)
* In the other case than the serviceman call error, entering the simulation is inhibited during the system check operation is displayed.

Note: Executable only when the PCL is installed.

67-20

Function (Purpose)	Used to check the network connection when the scanner option is installed.

Operation/procedure

The network scanner is checked.

1. Press the [START] key.
   “PLEASE SEND DATA” and “READY” are displayed. (When the PCL board is installed, it takes some time to display “READY.”)
2. Boot “ftp” from MS-DOS.
   Data are sent from the PC by the put file name.

The process is displayed. Check the display.

```
(TEST DATA)
TEST DATA

(Process status)
RECEIVE
TESTING
```

After completion, the result is displayed.

When the simulation is completed normally, “COMPLETE” is displayed. (No display for abnormal completion.)

Pressing [CA] key cancels the simulation resets the operation.

* Execution of the simulation which performs communication with the PCL board is inhibited until Notice Page storage is completed. (Only when the serviceman call error occurs.)
* In the other case than the serviceman call error, entering the simulation is inhibited during the system check operation is displayed.

Note: Executable only when PCL and NIC are installed.

[7] SELF DIAG AND TROUBLE CODE

1. Trouble code list

Trouble code		Trouble contents	Trouble detection
Main code	Sub code		
A0	01	Security incompatibility error	
E1	00	IMC PWB communication trouble	MCU
	10	IMC PWB trouble	
	11	IMC PWB ASIC error	
	12	IMC PWB CODEC IC error	
	13	IMC PWB flash ROM error	
	14	IMC PWB expaned memory module (DIMM) error	
	15	IMC PWB page memory error /SRAM error	
	16	IMC PWB standard compression memory error	
	17	IMC PWB smoothing IC error	
	80	IMC PWB communication trouble (protocol)	
	81	IMC PWB communication trouble (Parity)	
	82	IMC PWB communication trouble (Overrun)	
	84	IMC PWB communication trouble (Framing)	
	88	IMC PWB communication trouble (Time-out)	
E7	02	LSU trouble	
	10	CCD black level error	
	11	CCD white level error	
	12	Shading trouble	
F1	00	Finisher communication trouble	FIN
	03	Delivery roller lift motor trouble	
	10	Staple motor trouble	
	15	Tray lift motor trouble	
	19	Paper alignment motor F trouble	
	20	Paper alignment motor R trouble	
	37	RAM data trouble	
	50	Incompatible trouble	
	95	Paper exit option configuration error	
F2	02	Toner supply failure	
	04	Identification error	
		Model error	
		Type error	
		Destination error	
		Data abnormality	
		Misc error	
	05	CRUM chip communication error	
	58	Temperature humidity sensor abnormality	
F5	02	Copy lamp (xenon lamp) error	
F6	00	FAX control PWB communication trouble	MCU
	10	FAX control PWB trouble	
	80	FAX control PWB communication trouble (Protocol)	
	81	FAX control PWB communication trouble (Parity)	
	82	FAX control PWB communication trouble (Overrun)	
	84	FAX control PWB communication trouble (Framing)	
	88	FAX control PWB communication trouble (Time-out)	
	96	Combination error between the MCU and the FAX firmware.	
	99	FAX control PWB destination error	

Trouble code		Trouble contents	Trouble detection
Main code	Sub code		
F9	00	Printer PWB communication trouble	MCU
	10	Printer PWB trouble	
	80	Printer PWB communication trouble (Protocol)	
	81	Printer PWB communication trouble (Parity)	
	82	Printer PWB communication trouble (Overrun)	
	84	Printer PWB communication trouble (Framing)	
	88	Printer PWB communication trouble (Time-out)	
	96	MCU and PCL PWB communication versions discrepancy error	
	99	Printer PWB language error	
H2	00	Main heater lamp thermistor open hard detection	
	01	Sub heater lamp thermistor open hard detection	
H3	00	Main heater lamp abnormally high temperature hard detection trouble	
	01	Sub heater lamp abnormally high temperature hard detection trouble	
	10	Main heater lamp abnormally high temperature soft detection trouble	
	11	Sub heater lamp abnormally high temperature soft detection trouble	
H4	00	Main heater lamp abnormally low temperature detection	
	01	Sub heater lamp abnormally low temperature detection	
	20	Main heater lamp abnormally low temperature detection	
	21	Sub heater lamp abnormally low temperature detection	
H5	01	10 times of continuous detection of the lower paper exit sensor (POD1) lead edge jam or the upper paper exit sensor (POD2) lead edge jam or the duplex sensor (PPD2) rear edge jam	
L1	00	Scanner feed trouble	
L3	00	Scanner return trouble	
L4	01	Main motor trouble	
	11	Shifter motor trouble	
	31	Fusing fan lock trouble	
	32	Power (back up) fan lock trouble	
	33	Paper exit fan lock trouble	
L6	10	Polygon motor trouble	
L8	10	Power abnormality detection trouble	
U1	01	FAX battery error	
	02	PANEL LOW battery error	
U2	04	EEPROM communication error	
	20	Machine speed code data error	
U7	00	RIC communication trouble	

Trouble code		Trouble contents	Trouble detection
Main code	Sub code		
U9	00	Operation control PWB communication trouble	OPE
	80	Operation control PWB communication trouble (Protocol)	
	81	Operation control PWB communication trouble (Parity)	
	82	Operation control PWB communication trouble (Overrun)	
	84	Operation control PWB communication trouble (Framing)	
	88	Operation control PWB communication trouble (Time-out)	
	99	Operation panel destination error	
EE	EL	Developer adjustment trouble (Over-toned abnormality)	
	EU	Developer adjustment trouble (Under-toned abnormality)	
PF	00	PF trouble	

2. Details of trouble code

Trouble code		Details of trouble	
Main code	Sub code		
A0	01	Content	Security incompatibility error
		Details	When the PCL or the FAX control PWB is installed, it does not match with compatible/incompatible setup of the MCU PWB security.
		Cause	The security compatibility/incompatibility of the installed PCL or FAX control PWB does not match with that of the MCU PWB.
		Check and remedy	Cheek the security compatibility/ incompatibility of each board. Match the security compatibility/incompatibility of the boards.
E1	00	Content	IMC PWB communication trouble
		Details	Communication trouble between MCU and IMC PWB
		Cause	IMC PWB connector disconnection. Motherboard connector pin breakage. IMC PWB ROM defect, data failure.
		Check and remedy	Check the connectors of the IMC PWB and MCU PWB. Check the grounding of the copier. Check the ROM of the IMC PWB.
	10	Content	IMC PWB trouble
		Details	IMC PWB hardware abnormality
		Cause	IMC PWB abnormality
		Check and remedy	Replace the IMC PWB
	11	Content	IMC PWB ASIC error
		Details	ASIC abnormality on IMC PWB
		Cause	IMC PWB abnormality
		Check and remedy	Replace the IMC PWB
	12	Content	IMC PWB CODEC IC error
		Details	CODEC IC (JBIG chip) abnormality on IMC PWB
		Cause	IMC PWB abnormality
		Check and remedy	Replace the IMC PWB
E1	13	Content	IMC PWB flash ROM error
		Details	Flash ROM abnormality on IMC PWB
		Cause	IMC PWB abnormality
		Check and remedy	Replace the IMC PWB. When the program download is abnormally terminated, a error may occur. In this case, download the program again.
		Remarks	Program ROM abnormality
	14	Content	IMC PWB expanded memory module (DIMM) error
		Details	IMC extended compression memory module (DIMM) installation error. IMC extended compression memory module (DIMM) access error.
		Cause	IMC expanded memory module installation trouble. IMC expanded memory module trouble. IMC expanded memory contact trouble. IMC PWB abnormality.
		Check and remedy	Check installation of the expanded memory module. (Spec: Added to Slot 1.) Replace the expanded memory module. Replace the IMC PWB.
		Remarks	Extend memory abnormality for compressed image store (DIMM module)
	15	Content	IMC PWB page memory error /SRAM error
		Details	IMC PWB page memory or work SRAM access error
		Cause	IMC PWB abnormality
		Check and remedy	Replace the IMC PWB
		Remarks	Print buffer page memory or work SRAM abnormality
	16	Content	IMC PWB standard compression memory error
		Details	Access error of standard compression memory on IMC PWB
		Cause	IMC PWB abnormality
		Check and remedy	Replace the IMC PWB
		Remarks	Standard compression image store memory abnormality
	17	Content	IMC PWB smoothing IC error
		Details	IMC PWB smoothing IC abnormality
		Cause	IMC PWB abnormality
		Check and remedy	Replace the IMC PWB
	80	Content	IMC PWB communication trouble (protocol)
		Details	Communication trouble between MCU and IMC PWB (Protocol error)
		Cause	IMC PWB connector disconnection. Motherboard connector pin breakage. IMC PWB ROM defect, data failure.
		Check and remedy	Check the connectors of the IMC PWB and MCU PWB. Check the grounding of the copier. Check the ROM of the IMC PWB.

Trouble code		Details of trouble	
Main code	Sub code		
E1	81	Content	IMC PWB communication trouble (Parity)
		Details	Communication trouble between MCU and printer IMC (Parity error)
		Cause	IMC PWB connector disconnection. Motherboard connector pin breakage. IMC PWB ROM defect, data failure.
		Check and remedy	Check the connectors of the IMC PWB and MCU PWB. Check the grounding of the copier. Check the ROM of the IMC PWB.
	82	Content	IMC PWB communication trouble (Overrun)
		Details	Communication trouble between MCU and IMC PWB (Overrun error)
		Cause	IMC PWB connector disconnection. Motherboard connector pin breakage. IMC PWB ROM defect, data failure.
		Check and remedy	Check the connectors of the IMC PWB and MCU PWB. Check the grounding of the copier. Check the ROM of the IMC PWB.
	84	Content	IMC PWB communication trouble (Framing)
		Details	Communication trouble between MCU and IMC PWB (Framing error)
		Cause	IMC PWB connector disconnection. Motherboard connector pin breakage. IMC PWB ROM defect, data failure.
		Check and remedy	Check the connectors of the IMC PWB and MCU PWB. Check the grounding of the copier. Check the ROM of the IMC PWB.
	88	Content	IMC PWB communication trouble (Time-out)
		Details	Communication trouble between MCU and IMC PWB (Time-out error)
		Cause	IMC PWB connector disconnection. Motherboard connector pin breakage. IMC PWB ROM defect, data failure.
		Check and remedy	Check the connectors of the IMC PWB and MCU PWB. Check the grounding of the copier. Check the ROM of the IMC PWB.
E7	02	Content	LSU trouble
		Details	BD signal from LSU is not detected in a constant cycle (Kept OFF or ON)
		Cause	LSU connector or LSU inside harness trouble or disconnection. Polygon motor rotation abnormality. Laser does not illuminate. MCU PWB failure.
		Check and remedy	Check for disconnection of the LSU connector. Check the LSU operation with SIM 61-1. Check that the polygon motor rotates normally. Check laser LED lighting. Replace the LSU unit. Replace the MCU PWB.

Trouble code		Details of trouble	
Main code	Sub code		
E7	10	Content	CCD black level error
		Details	CCD black reference plate scan level abnormality when the copy lamp turns off.
		Cause	Flat cable installation failure to CCD unit. CCD unit error.
		Check and remedy	Check flat cable installation to the CCD unit. Check CCD unit.
	11	Content	CCD white level error
		Details	Improper CCD white reference plate reading level for copy lamp lighting
		Cause	Flat cable installation failure to CCD unit. Dirt on the mirror, lens, and reference white plate. Copy lamp lighting trouble. CCD unit abnormality. MCU PWB abnormality. (Occurred in the RSPF scan position)
		Check and remedy	Clean the mirror, the lens, and the reference white plate. Check the copy lamp light quantity and its operation. (SIM 5-3) Check CCD unit. Check MCU PWB.
	12	Content	Shading trouble
		Details	White correction is not completed in the specified number of times.
		Cause	Flat cable installation failure to CCD unit. Dirt on the mirror, lens, and reference. white plate. Copy lamp lighting trouble. CCD unit abnormality. MCU PWB abnormality.
		Check and remedy	Clean the mirror, the lens, and the reference white plate. Check the copy lamp light quantity and its operation. (SIM 5-3) Check CCD unit. Check MCU PWB.
F1	00	Content	Finisher communication trouble
		Details	Communication line test error occurs when power is turned on or after the exit of a simulation mode. Error in finisher communication
		Cause	Connection trouble or disconnection of the connector and harness between the body and the finisher. Finisher control PWB trouble. Control PWB failure. Malfunction by noises.
		Check and remedy	Canceled by turning OFF/ON the power. Check the connectors and the harness of communication line. Replace the finisher control PWB.
	03	Content	Delivery roller lift motor trouble
		Details	Paper exit roller lift-up motor operation abnormality
		Cause	Motor lock. Motor rpm abnormality. Overcurrent to the motor. Finisher control PWB trouble.
		Check and remedy	Use SIM3-3 to check the paddle motor operation

Trouble code		Details of trouble	
Main code	Sub code		
F1	10	Content	Staple motor trouble
		Details	Staple motor operation abnormality
		Cause	Motor lock. Motor rpm abnormality. Overcurrent to the motor. Finisher control PWB trouble.
		Check and remedy	Use SIM 3-3 to check the staple motor operation.
	15	Content	Tray lift motor trouble
		Details	The finisher lift-up motor does not reach the specified position
		Cause	Lift-up motor abnormality. Lift-up motor upper limit sensor abnormality. Finisher PWB abnormality.
		Check and remedy	Use SIM 3-3 to check the lift-up motor operation
	19	Content	Paper alignment motor F trouble
		Details	Alignment motor operation abnormality
		Cause	Motor lock. Motor rpm abnormality. Overcurrent to the motor. Finisher control PWB trouble.
		Check and remedy	Use SIM3-3 to check the alignment (F) motor operation.
	20	Content	Paper alignment motor R trouble
		Details	Alignment motor operation abnormality
		Cause	Motor lock. Motor rpm abnormality. Overcurrent to the motor. Finisher control PWB trouble.
		Check and remedy	Use SIM3-3 to check the alignment (R) motor operation
	37	Content	RAM data trouble
		Details	Backup RAM contents are disturbed
		Cause	Finisher control PWB trouble. Malfunction by noise.
		Check and remedy	Replace the finisher control PWB.
	50	Content	Incompatible trouble
		Details	Speed does not coincide between finisher and main unit
		Cause	Connection of a finisher incompatible with the machine is detected.
		Check and remedy	Connect the MX-FN13 to the machine.
	95	Content	Paper exit option configuration error
		Details	An improper option is installed.
		Cause	Configuration of the paper exit option is improperness.
		Check and remedy	Install a proper option.

Trouble code		Details of trouble	
Main code	Sub code		
F2	02	Content	Toner supply failure
		Details	The value judged from the actual toner supply hysteresis differs greatly from the toner sensor value
		Cause	Developing unit trouble. Toner supply abnormality caused by installation of unpacked toner cartridge.
		Check and remedy	Replace the developing unit. Use SIM 25-1 to perform DV stirring.
	04	Content	Identification error
			Model error
			Type error
			Destination error
			Data abnormality
			Misc error
		Details	(Identification error) When the CRUM trademark differs. When the CRUM company code differs.
			(Model error) When the boot program model code does not match with the CRUM model information
			(Type error) When the CRUM type is other than [Genuine/Conversion/Production rotation]
			(Destination error) The destination of the body differs from that of the CRUM
			(Data abnormality) The initial check information includes an erroneous value. When the max. toner supply time is 00. When the print hard stop is 00.
		Cause	CRUM chip failure. Erroneous TNCA.
		Check and remedy	Replace the CRUM chip. Replace the TNCA.
	05	Content	CRUM chip communication error
		Cause	CRUM chip failure. Developing unit contact trouble. MCU PWB failure.
		Check and remedy	Check installation of the developing unit. Replace the MCU PWB.
	58	Content	Temperature humidity sensor abnormality
		Details	Temperature humidity sensor abnormality
		Cause	Temperature humidity sensor connector disconnection. Short-circuit of the temperature humidity sensor was detected.
		Check and remedy	Check the connection of temperature humidity sensor. Replace the temperature humidity sensor.

Trouble code		Details of trouble	
Main code	Sub code		
F5	02	Content	Copy lamp (xenon lamp) error
		Details	The copy lamp does not light up
		Cause	Copy lamp abnormality. Copy lamp harness abnormality. CCD PWB harness abnormality.
		Check and remedy	Check the copy lamp. (SIM 5-3) When the lamp lights: Check the harnesses and connectors between the CCD unit and the MCU PWB. When the lamp does not light: Check the harness and connector between the copy lamp and the MCU PWB. Replace the copy lamp unit. Replace the MCU PWB.
F6	00	Content	FAX control PWB communication trouble
		Details	Communication trouble between MCU and FAX control PWB
		Cause	FAX control PWB connector disconnection. Harness trouble between FAX control PWB and MCU PWB. Motherboard connector pin breakage. FAX control PWB ROM defect/Data failure.
		Check and remedy	Check the connectors and the harness of FAX control PWB and MCU PWB. Check the grounding of the copier. Check FAX control PWB ROM.
	10	Content	FAX control PWB trouble
		Details	FAX control PWB abnormality
		Cause	FAX control PWB defect
		Check and remedy	Replate the FAX control PWB
	80	Content	FAX control PWB communication trouble (Protocol)
		Details	Communication trouble between MCU and FAX control PWB (Protocol error)
		Cause	FAX control PWB connector disconnection Harness trouble between FAX control PWB and MCU PWB. Motherboard connector pin breakage. FAX control PWB ROM defect/Data failure.
		Check and remedy	Check the connectors and the harness of FAX control PWB and MCU PWB. Check the grounding of the copier. Check FAX control PWB ROM.
	81	Content	FAX control PWB communication trouble (Parity)
		Details	Communication trouble between MCU and FAX control PWB (Parity error)
		Cause	FAX control PWB connector disconnection Harness trouble between FAX control PWB and MCU PWB. Motherboard connector pin breakage. FAX control PWB ROM defect/Data failure.
		Check and remedy	Check the connectors and the harness of FAX control PWB and MCU PWB. Check the grounding of the copier. Check FAX control PWB ROM.

Trouble code		Details of trouble	
Main code	Sub code		
F6	82	Content	FAX control PWB communication trouble (Overrun)
		Details	Communication trouble between MCU and FAX control PWB (Overrun error)
		Cause	FAX control PWB connector disconnection. Harness trouble between FAX control PWB and MCU PWB. Motherboard connector pin breakage. FAX control PWB ROM defect/Data failure.
		Check and remedy	Check the connectors and the harness of FAX control PWB and MCU PWB. Check the grounding of the copier. Check FAX control PWB ROM.
	84	Content	FAX control PWB communication trouble (Framing)
		Details	Communication trouble between MCU and FAX control PWB (Framing error)
		Cause	FAX control PWB connector disconnection. Harness trouble between FAX control PWB and MCU PWB. Motherboard connector pin breakage. FAX control PWB ROM defect/Data failure.
		Check and remedy	Check the connectors and the harness of FAX control PWB and MCU PWB. Check the grounding of the copier. Check FAX control PWB ROM.
	88	Content	FAX control PWB communication trouble (Time-out)
		Details	Communication trouble between MCU and FAX control PWB (Time-out error)
		Cause	FAX control PWB connector disconnection. Harness trouble between FAX control PWB and MCU PWB. Motherboard connector pin breakage. FAX control PWB ROM defect/Data failure.
		Check and remedy	Check the connectors and the harness of FAX control PWB and MCU PWB. Check the grounding of the copier. Check FAX control PWB ROM.
	96	Content	Combination error between the MCU and the FAX firmware.
		Details	The version of the FAX firmware is not changed “04.xx” or later.
		Cause	The version of the FAX firmware is not proper.
		Check and remedy	Change the version of the FAX firmware to “04.xx” or later.
	99	Content	FAX control PWB destination error
		Details	The machine destination setup does not coincide with the FAX control PWB destination setup.
		Cause	The machine destination setup (Sim 26-6) does not coincide with the FAX control PWB setup
		Check and remedy	Check the variety of FAX LIU PWB. Check the machine destination setup (Sim 22-6) and FAX country code (Soft SW table).

Trouble code		Details of trouble	
Main code	Sub code		
F9	00	Content	Printer PWB communication trouble
		Details	Communication trouble between MCU and printer PWB
		Cause	Printer PWB connector disconnection. Harness trouble between the printer PWB and the MCU PWB. Motherboard connector pin breakage. Printer PWB ROM defect/Data failure.
		Check and remedy	Check the connectors and the harness of the printer PWB and MCU PWB. Check the grounding of the copier. Check ROM on printer PWB.
	10	Content	Printer PWB trouble
		Details	Printer PWB abnormality
		Cause	Printer PWB defect
		Check and remedy	Replace the printer PWB
	80	Content	Printer PWB communication trouble (Protocol)
		Details	Communication trouble between MCU and printer PWB (Protocol error)
		Cause	Printer PWB connector disconnection. Harness trouble between the printer PWB and the MCU PWB. Motherboard connector pin breakage. Printer PWB ROM defect/Data failure.
		Check and remedy	Check the connectors and the harness of the printer PWB and MCU PWB. Check the grounding of the copier. Check ROM on printer PWB.
	81	Content	Printer PWB communication trouble (Parity)
		Details	Communication trouble between MCU and printer PWB (Parity error)
		Cause	Printer PWB connector disconnection. Harness trouble between the printer PWB and the MCU PWB. Motherboard connector pin breakage. Printer PWB ROM defect/Data failure.
		Check and remedy	Check the connectors and the harness of the printer PWB and MCU PWB. Check the grounding of the copier. Check ROM on printer PWB.
	82	Content	Printer PWB communication trouble (Overrun)
		Details	Communication trouble between MCU and printer PWB (Overrun error)
		Cause	Printer PWB connector disconnection. Harness trouble between the printer PWB and the MCU PWB. Motherboard connector pin breakage. Printer PWB ROM defect/Data failure.
		Check and remedy	Check the connectors and the harness of the printer PWB and MCU PWB. Check the grounding of the copier. Check ROM on printer PWB.

Trouble code		Details of trouble	
Main code	Sub code		
F9	84	Content	Printer PWB communication trouble (Framing)
		Details	Communication trouble between MCU and printer PWB (Framing error)
		Cause	Printer PWB connector disconnection. Harness trouble between the printer PWB and the MCU PWB. Motherboard connector pin breakage. Printer PWB ROM defect/Data failure.
		Check and remedy	Check the connectors and the harness of the printer PWB and MCU PWB. Check the grounding of the copier. Check ROM on printer PWB.
	88	Content	Printer PWB communication trouble (Time-out)
		Details	Communication trouble between MCU and printer PWB (Time-out error)
		Cause	Printer PWB connector disconnection. Harness trouble between the printer PWB and the MCU PWB. Motherboard connector pin breakage. Printer PWB ROM defect/Data failure.
		Check and remedy	Check the connectors and the harness of the printer PWB and MCU PWB. Check the grounding of the copier. Check ROM on printer PWB.
	96	Content	MCU and PCL PWB communication versions discrepancy error
		Details	Incompatible PCL PWB was installed to the copier
		Cause	Different PCL PWB was installed.
		Check and remedy	Install the MX-PB12 to the copier
	99	Content	Printer PWB language error
		Details	The machine language setup does not coincide with the PCL board language setup.
		Cause	PCL board connection error. SIM setup error.
		Check and remedy	Check combination between the firmware on PCL board and the panel screen data, and download the correct version, if necessary. Check the machine language information. (Machine language setup: SIM 26-22)

Trouble code		Details of trouble	
Main code	Sub code		
H2	00	Content	Main heater lamp thermistor open hard detection
		Details	Main heater lamp thermistor open detection. Fusing unit not installed.
		Cause	Main thermistor defect. Control PWB failure. Fusing section connector contact failure. Fusing unit not installed.
		Check and remedy	Check the harness and the connector of the thermistor and the MCU.
	01	Content	Sub heater lamp thermistor open hard detection
		Details	Fusing sub thermistor open detection. Fusing unit not installed.
		Cause	Sub thermistor defect. Control PWB failure. Fusing section connector contact failure. Fusing unit not installed.
		Check and remedy	Check the harness and the connector of the thermistor and the MCU.
H3	00	Content	Main heater lamp abnormally high temperature hard detection trouble
		Details	The fusing main heater thermistor causes abnormally high temperature
		Cause	Main thermistor defect. Control PWB failure. Fusing section connector contact failure.
		Check and remedy	Check the main heater lamp blinking with SIM 5-2-1. When the lamp blinks normally: Check the thermistor and the harness. Check the MCU PWB thermistor input circuit. If lamp lights and stays lit: Check the power circuit and the lamp control circuit on MCU PWB. Clear the display of self-diagnostics with SIM 14.
	01	Content	Sub heater lamp abnormally high temperature hard detection trouble
		Details	The fusing sub thermistor causes abnormally high temperature
		Cause	Sub thermistor defect. Control PWB failure. Fusing section connector contact failure.
		Check and remedy	Check the sub heater lamp blinking with SIM 5-2-2. When the lamp blinks normally: Check the thermistor and the harness. Check the MCU PWB thermistor input circuit. If lamp lights and stays lit: Check the power circuit and the lamp control circuit on MCU PWB. Clear the display of self-diagnostics with SIM 14.

Trouble code		Details of trouble	
Main code	Sub code		
H3	10	Content	Main heater lamp abnormally high temperature soft detection trouble
		Details	A/D value the fusing main thermistor causes abnormally high temperature (over 230°C).
		Cause	Main heater lamp thermistor defect. Control PWB failure. Fusing section connector contact failure.
		Check and remedy	Check the main heater lamp blinking with SIM 5-2-1. When the lamp blinks normally: Check the thermistor and the harness. Check the MCU PWB thermistor input circuit. If lamp lights and stays lit: Check the power circuit and the lamp control circuit on MCU PWB. Clear the display of self-diagnostics with SIM 14.
	11	Content	Sub heater lamp abnormally high temperature soft detection trouble
		Details	A/D value the fusing sub heater lamp thermistor causes abnormally high temperature (over 230°C).
		Cause	Sub heater lamp thermistor defect. Control PWB failure. Fusing section connector contact failure.
		Check and remedy	Check the sub heater lamp blinking with SIM 5-2-2. When the lamp blinks normally: Check the thermistor and the harness. Check the MCU PWB thermistor input circuit. If lamp lights and stays lit: Check the power circuit and the lamp control circuit on MCU PWB. Clear the display of self-diagnostics with SIM 14.
H4	00	Content	Main heater lamp abnormally low temperature detection
		Details	The setup temperature (about 90°C) is not reached within the specified time (about 17sec) from turning on the power. When the temperature of main heater lamp thermistor falls below 140°C in the standby mode or printing. When the temperature of main heater lamp thermistor falls below 50°C in the pre-heat mode.
		Cause	Main heater lamp thermistor defect Main heater lamp failure Main thermostat failure Control PWB failure
		Check and remedy	Check the heater lamp blinking with SIM 5-2. When the lamp blinks normally: Check the thermistor and the harness. Check the MCU PWB thermistor input circuit. If lamp lights and stays lit: Check for disconnection of the heater lamp and thermostat. Check the interlock switch. Check the power circuit and the lamp control circuit on MCU PWB. Clear the display of self-diagnostics with SIM 14.

Trouble code		Details of trouble	
Main code	Sub code		
H4	01	Content	Sub heater lamp abnormally low temperature detection
		Details	The setup temperature (about 90°C) is not reached within the specified time (about 17sec) from turning on the power. When the temperature of sub heater thermistor falls below 140°C in the standby mode or printing. When the temperature of sub heater lamp thermistor falls below 50°C in the pre-heat mode.
		Cause	Sub heater lamp thermistor defect. Sub heater lamp failure. Sub thermostat failure. Control PWB failure.
		Check and remedy	Check the sub heater lamp blinking with SIM 5-2-2. When the lamp blinks normally: Check the thermistor and the harness. Check the MCU PWB thermistor input circuit. If lamp lights and stays lit: Check the power circuit and the lamp control circuit on MCU PWB. Clear the display of self-diagnostics with SIM 14.
	20	Content	Main heater lamp abnormally low temperature detection
		Details	The setup temperature (about –25°C: Sim 43-1-1) is not reached within the specified time (about 32sec) from turning on the power. A/D value of fusing main thermistor is not reached within the specified temperature. (specified temperature : SIM43-1 (600dpi) –25°C)
		Cause	Main thermistor defect. Main heater lamp failure. Main thermostat failure. Control PWB failure.
		Check and remedy	Check the main heater lamp blinking with SIM 5-1. When the lamp blinks normally: Check the thermistor and the harness. Check the MCU PWB thermistor input circuit. If lamp lights and stays lit: Check the power circuit and the lamp control circuit on MCU PWB. Clear the display of self-diagnostics with SIM 14. Check that there is no foreign material in the contact section between the thermistor and the heat roller.

Trouble code		Details of trouble	
Main code	Sub code		
H4	21	Content	Sub heater lamp abnormally low temperature detection
		Details	The setup temperature (about –25°C: Sim 43-1-1) is not reached within the specified time (about 32sec) from turning on the power. A/D value of fusing sub thermistor is not reached within the specified temperature (specified temperature : SIM43-1 (600dpi) –25°C)
		Cause	Sub thermistor defect. Sub heater lamp failure. Sub thermostat failure. Control PWB failure.
		Check and remedy	Check the sub heater lamp blinking with SIM 5-2-2. When the lamp blinks normally: Check the thermistor and the harness. Check the MCU PWB thermistor input circuit. If lamp lights and stays lit: Check the power circuit and the lamp control circuit on MCU PWB. Clear the display of self-diagnostics with SIM 14. Check that there is no foreign material in the contact section between the thermistor and the heat roller.
H5	01	Content	10 times of continuous detection of the lower paper exit sensor (POD1) lead edge jam or the upper paper exit sensor (POD2) lead edge jam or the duplex sensor (PPD2) rear edge jam
		Details	After supplying the power, one of the above jams occurs 10 times continuously in printing Counting is started on supplying the power. When any one of the above jams occurs, one count is made. When paper entry to the POD1 or POD2 is detected, the counter is cleared.
		Cause	A paper jam (paper rounding, etc.) near the duplex sensor (PPD2) on the fusing unit is not canceled completely. POD1, POD2, PPD2 sensor breakdown or harness connection trouble Fusing unit installation failure
		Check and remedy	Check for jam paper in the fusing section. (paper winding, etc.) Check fusing unit installation. Check the POD1, POD2 or PPD2 sensor. Clear the trouble with SIM 14.

Trouble code		Details of trouble	
Main code	Sub code		
L1	00	Content	Scanner feed trouble
		Details	Scanner feed is not completed within the specified time.
		Cause	Mirror unit defect. Scanner wire disconnection. Origin detection sensor error. Mirror motor harness abnormality.
		Check and remedy	Check the scanning operation with SIM 1-1. When the mirror not feeds: Check for disconnection of the scanner wire. Check the harness and connector between the mirror motor and the MCU PWB. Replace the mirror unit. Replace the MCU PWB. When the mirror feeds: Check the mirror home position sensor with SiM 1-2.
L3	00	Content	Scanner return trouble
		Details	Scanner return is not completed within the specified time. When OC copying with the mirror at the home position, the mirror is not in the home position.
		Cause	Mirror unit defect. The scanner wire is disconnected. Origin detection sensor error. Mirror motor harness abnormality.
		Check and remedy	Check the scanning operation with SIM 1-1. When the mirror fails to return: Check for disconnection of the scanner wire. Check the harness and connector between the mirror motor and the MCU PWB. Replace the mirror unit. Replace the MCU PWB. When the mirror feeds: Check the mirror home position sensor with SiM 1-2.
L4	01	Content	Main motor trouble
		Details	The main motor does not rotate. The motor lock signal is detected for 1sec or more after the main motor rotates. The motor lock signal is detected for 1sec during rotation of the main motor.
		Cause	Main motor defect. Main motor connection, harness trouble or disconnection. MCU PWB failure.
		Check and remedy	Check the main motor operation with SIM 25-1. Check connection of the main motor harness and connector. Replace the main motor. Replace the MCU PWB.

Trouble code		Details of trouble	
Main code	Sub code		
L4	11	Content	Shifter motor trouble
		Details	The shifter home position detection signal is not detected when the shifter is operating.
		Cause	Shifter motor trouble or harnes connection trouble and disconnection. Shifter home position sensor trouble.
		Check and remedy	Check the shifter motor operation with SIM 3-11. Check connection of the shifter motor harness/connector. Replace the shifter motor. Replace the MCU PWB.
	31	Content	Fusing fan lock trouble
		Details	Fusing fan does not rotate. The fusing fan lock signal is detected for 1sec or more.
		Cause	Fusing fan connection trouble, harness disconnection. MCU PWB failure.
		Check and remedy	Check connection of the fusing fan. Replace the fusing fan. Replace the MCU PWB.
	32	Content	Power fan lock trouble
		Details	Exhaust/intake fan motor does not rotate. The fan lock signal is detected for 1sec or more.
		Cause	Fan connection trouble, harness disconnection. MCU PWB failure.
		Check and remedy	Check connection of the exhaust/intake fan. Replace the exhaust/intake fan. Replace the MCU PWB.
	33	Content	Paper exit fan lock trouble
		Details	Paper exit fan does not rotate. The paper exit fan lock signal is detected for 1sec or more.
		Cause	Paper exit fan connection trouble, harness disconnection. MCU PWB failure.
		Check and remedy	Check connection of the paper exit fan. Replace the paper exit fan. Replace the MCU PWB.
L6	10	Content	Polygon motor lock trouble
		Details	The polygon motor does not rotate. The motor lock signal is detected for 6sec or more after the polygon motor rotates. The motor lock signal is detected for 1sec during rotation of the polygon motor.
		Cause	Polygon motor unit failure Polygon motor connection, harness trouble or disconnection MCU PWB failure
		Check and remedy	Check the polygon motor operation with SIM 61-1. Check the connectors and the harness of polygon motor Replace the polygon motor. Replace the MCU PWB.

Trouble code		Details of trouble	
Main code	Sub code		
L8	10	Content	Power abnormality detection trouble
		Details	The power status monitoring signal keeps power OFF state after passing the specified time (2sec).
		Cause	Circuit around the power status monitoring signal (PSSTS) failure.
		Check and remedy	Check whether power status monitoring signal (PSSTS) on MCU PWB is OPEN or not. Replace MCU PWB.
U1	01	Content	FAX battery error
		Details	The SRAM backup battery voltage on FAX control PWB falls.
		Cause	The SRAM backup battery voltage on FAX control PWB falls.
		Check and remedy	Check voltage of the SRAM back up battery. Replace the battery.
	02	Content	PANEL LOW battery error
		Details	The voltage of the panel clock function battery falls.
		Cause	The voltage of the panel clock function battery falls.
		Check and remedy	Check voltage of panel clock function battery. Replace the battery.
U2	04	Content	EEPROM communication error
		Details	EEPROM communication error
		Cause	EEPROM defect. ICU PWB EEPROM access circuit failure.
		Check and remedy	Check that the EEPROM is properly set. Clear trouble with SIM 16. Replace the MCU PWB.
	20	Content	Machine speed code data error
		Details	The machine boot speed information is not identical to the model code speed information
		Cause	EEPROM defect. SIM operation error.
		Check and remedy	Check for matching of the machine and model information setting in SIM26-57.
U7	00	Content	RIC communication trouble
		Details	Error in communication with RIC. Error in communication test after turning on the power or canceling SIM.
		Cause	Connector harness contact trouble or disconnection. RIC control PWB trouble. MCU PWB failure. Malfunction by noises.
		Check and remedy	Check the communication cable, connectors from the RIC box to the main body.
U9	00	Content	Operation control PWB communication trouble
		Details	Communication trouble between MCU and the operation control PWB
		Cause	Operation control PWB connector disconnection Harness failure of the operation control PWB and the MCU PWB
		Check and remedy	Check the connectors and the harness of the operation control PWB and MCU PWB. Check the grounding of the copier. Check ROM on the operation control PWB.

Trouble code		Details of trouble	
Main code	Sub code		
U9	80	Content	Operation control PWB communication trouble (Protocol)
		Details	Communication trouble between MCU and the operation control PWB (Protocol error)
		Cause	Operation control PWB connector disconnection. Harness failure of the operation control. PWB and the MCU PWB.
		Check and remedy	Check the connectors and the harness of the operation control PWB and MCU PWB. Check the grounding of the copier.
	81	Content	Operation control PWB communication trouble (Parity)
		Details	Communication trouble between MCU and the operation control PWB (Parity error)
		Cause	Operation control PWB connector disconnection. Harness failure of the operation control PWB and the MCU PWB.
		Check and remedy	Check the connectors and the harness of the operation control PWB and MCU PWB. Check the grounding of the copier.
	82	Content	Operation control PWB communication trouble (Overrun)
		Details	Communication trouble between MCU and the operation control PWB (Overrun error)
		Cause	Operation control PWB connector disconnection. Harness failure of the operation control PWB and the MCU PWB.
		Check and remedy	Check the connectors and the harness of the operation control PWB and MCU PWB. Check the grounding of the copier.
	84	Content	Operation control PWB communication trouble (Framing)
		Details	Communication trouble between MCU and the operation control PWB (Framing error)
		Cause	Operation control PWB connector disconnection. Harness failure of the operation control PWB and the MCU PWB.
		Check and remedy	Check the connectors and the harness of the operation control PWB and MCU PWB. Check the grounding of the copier.
	88	Content	Operation control PWB communication trouble (Time-out)
		Details	Communication trouble between MCU and the operation PWB (Time-out error)
		Cause	Operation control PWB connector disconnection. Harness failure of the operation control PWB and the MCU PWB.
		Check and remedy	Check the connectors and the harness of the operation control PWB and MCU PWB. Check the grounding of the copier.
	99	Content	Operation panel destination error
		Details	An error occurred in checking the destination of the operation panel and the main body.
		Cause	Erroneous connection the operation panel unit. SIM setup error.
		Check and remedy	Check the destination information of the operation panel unit and the MCU. (Use SIM 26-6 for the destination of the body.)

Trouble code		Details of trouble	
Main code	Sub code		
EE	EL	Content	Developer adjustment trouble (Over-toned abnormality)
		Details	An abnormality occurred in execution of automatic developer adjustment. Sample data was detected over-toner.
		Cause	Toner concentration sensor abnormality. Toner concentration trouble. Developing unit trouble. MCU PWB failure.
		Check and remedy	Use SIM 25-2 to perform the auto developer adjustment.
	EU	Content	Developer adjustment trouble (Under-toned abnormality)
		Details	An abnormality occurred in execution of automatic developer adjustment. Sample data was detected under-toner.
		Cause	Toner concentration sensor abnormality. Toner concentration trouble. Developing unit trouble. MCU PWB failure.
		Check and remedy	Use SIM 25-2 to perform the auto developer adjustment.
PF	00	Content	PF trouble
		Details	The copy inhibit command from RIC is received.
		Cause	Judged by the host.
		Check and remedy	Inform to the host.

[8] MAINTENANCE

1. Maintenance list (For 26cpm)

×: Check (Check, clean, replace or adjust according to necessity.)

❍: Cleaning ▲: Replace ☆: Lubricate

Unit	Parts	75k	150k	225k	300k	375k	450k	525k	600k	Note
Process	Drum	▲	▲	▲	▲	▲	▲	▲	▲	
	Cleaner blade	▲	▲	▲	▲	▲	▲	▲	▲	
	Seal F/R	×	×	×	×	×	×	×	×	
	Drum frame unit (Toner reception sheet)	×	×	▲	×	×	▲	×	×	Usable for three PM cycles
	MC unit	▲	▲	▲	▲	▲	▲	▲	▲	
	Separation pawl unit	×	▲	×	▲	×	▲	×	▲	
	Star ring	▲	▲	▲	▲	▲	▲	▲	▲	
DV	Developer	▲	▲	▲	▲	▲	▲	▲	▲	
	Toner filter unit	▲	▲	▲	▲	▲	▲	▲	▲	
	DV blade	×	▲	×	▲	×	▲	×	▲	
	DV side sheet F	×	▲	×	▲	×	▲	×	▲	
	DV side sheet R	×	▲	×	▲	×	▲	×	▲	
	Toner sensor	×	×	×	×	×	×	×	×	
Fusing	Upper heat roller	❍	▲	❍	▲	❍	▲	❍	▲	
	Lower heat roller	❍	❍	❍	▲	❍	❍	❍	▲	
	Upper separation pawl	❍	▲	❍	▲	❍	▲	❍	▲	
	Upper cleaning pad	×	▲	×	▲	×	▲	×	▲	
	Lower separation pawl	❍	❍	❍	▲	❍	❍	❍	▲	
	Thermistor	❍	❍	❍	❍	❍	❍	❍	❍	
	Fuser gear	☆	▲	☆	▲	☆	▲	☆	▲	
	Upper heat roller bearing	×	▲	×	▲	×	▲	×	▲	
	Lower fuser bearing	×	×	×	▲	×	×	×	▲	
	Thermistor cleaning pad	×	▲	×	▲	×	▲	×	▲	
	Paper guide	❍	❍	❍	❍	❍	❍	❍	❍	
Paper feed	Pickup roller	×	×	×	×	×	×	×	×	Changing criteria for parts: 100k
	Paper feeding sheet	×	×	×	×	×	×	×	×	
	Pickup roller and feed roller (RSPF)	×	×	×	×	×	×	×	×	
Transport	Transport roller unit	❍	▲	❍	▲	❍	▲	❍	▲	
	Gear	×	–	×	–	×	–	×	–	
Others	Paper feed rollers	❍	❍	❍	❍	❍	❍	❍	❍	
	Gears	☆	☆	☆	☆	☆	☆	☆	☆	
	Ozone filter	▲	▲	▲	▲	▲	▲	▲	▲	

(For 31cpm)

×: Check (Check, clean, replace or adjust according to necessity.)

❍: Cleaning ▲: Replace ☆: Lubricate

Unit	Parts	100k	150k	200k	300k	400k	450k	500k	600k	Note
Process	Drum	▲	×	▲	▲	▲	×	▲	▲	
	Cleaner blade	▲	×	▲	▲	▲	×	▲	▲	
	Seal F/R	×	×	×	×	×	×	×	×	
	Drum frame unit (Toner reception sheet)	×	×	×	▲	×	×	×	▲	Usable for three PM cycles
	MC unit	▲	×	▲	▲	▲	×	▲	▲	
	Separation pawl unit	×	▲	×	▲	×	▲	×	▲	
	Star ring	▲	▲	▲	▲	▲	▲	▲	▲	
DV	Developer	▲	×	▲	▲	▲	×	▲	▲	
	Toner filter unit	▲	×	▲	▲	▲	×	▲	▲	
	DV blade	×	▲	×	▲	×	▲	×	▲	
	DV side sheet F	×	▲	×	▲	×	▲	×	▲	
	DV side sheet R	×	▲	×	▲	×	▲	×	▲	
	Toner sensor	×	–	×	×	×	–	×	×	
Fusing	Upper heat roller	❍	▲	❍	▲	❍	▲	❍	▲	
	Lower heat roller	❍	❍	❍	▲	❍	❍	❍	▲	
	Upper separation pawl	❍	▲	❍	▲	❍	▲	❍	▲	
	Upper cleaning pad	×	▲	×	▲	×	▲	×	▲	
	Lower separation pawl	❍	❍	❍	▲	❍	❍	❍	▲	
	Thermistor	❍	❍	❍	❍	❍	❍	❍	❍	
	Fuser gear	☆	▲	☆	▲	☆	▲	☆	▲	
	Upper heat roller bearing	×	▲	×	▲	×	▲	×	▲	
	Lower fuser bearing	×	×	×	▲	×	×	×	▲	
	Thermistor cleaning pad	×	▲	×	▲	×	▲	×	▲	
	Paper guide	❍	❍	❍	❍	❍	❍	❍	❍	
Paper feed	Pickup roller	×	×	×	×	×	×	×	×	Changing criteria for parts: 100k
	Paper feeding sheet	×	×	×	×	×	×	×	×	
	Pickup roller and feed roller (RSPF)	×	×	×	×	×	×	×	×	
Transport	Transport roller unit	❍	▲	❍	▲	❍	▲	❍	▲	
	Gear	×	–	×	–	×	–	×	–	
Others	Paper feed rollers	❍	❍	❍	❍	❍	❍	❍	❍	
	Gears	☆	☆	☆	☆	☆	☆	☆	☆	
	Ozone filter	▲	▲	▲	▲	▲	▲	▲	▲	

2. Details of Maintenance

Unit	Parts			
A. Process unit	(1)	Drum		
	(2)	Drum section	a.	Main charger
			b.	Cleaning blade
			c.	Drum frame unit
			d.	Moquette F/R
			e.	Separation pawl
B. Developing unit	(1)	Developer		
	(2)	Toner filter unit		
	(3)	DV side sheet F/ DV side sheet R		
	(4)	DV blade		
	(5)	Toner sensor		
C. Fusing section	(1)	Thermostat		
	(2)	Thermistor		
	(3)	Paper guide		
	(4)	Fusing separation pawl (lower)		
	(5)	Lower heat roller		
	(6)	Heater lamp		
	(7)	Upper cleaning pad		
	(8)	Fusing separation pawl (upper)		
	(9)	Upper heat roller		
	(10)	Thermistor cleaning pad		
D. Optical section	(1)	CCD unit		
	(2)	Lamp unit	a.	Lamp
			b.	PWB
			c.	Wire
			d.	Mirror motor
E. Paper feed section	(1)	Paper feed solenoid		
	(2)	Tray sensor PWB		
	(3)	Manual P-in sensor/Manual empty sensor		
	(4)	Multi manual paper feed	a.	Paper feed roller/ pickup roller
			b.	Reverse sensor
			c.	Separation sheet
			d.	Clutch/solenoid
	(5)	Upper 500 sheets tray paper feed	a.	Paper feed roller/ pickup roller
			b.	Separation sheet
	(6)	Lower 500 sheets tray paper feed	a.	Paper feed roller/ pickup roller
			b.	Separation sheet
			c.	Lift up unit
			d.	Transport clutch
			e.	Paper feed clutch
			f.	Transport clutch
			g.	Solenoid
			h.	Sensor PWB
F. Side door unit	(1)	Transport roller unit		
	(2)	Transport roller		
	(3)	DUP transport roller		
	(4)	DUP motor		
G. 1st paper exit unit	(1)	Cooling fan		
	(2)	Exit roller		
H. Laser unit	(1)	LSU		
I. Power unit	(1)	Power source		
J. PWB	(1)	Option CN PWB		
	(2)	IMC PWB		
	(3)	MCU PWB		
	(4)	Motherboard PWB		
	(5)	Second interface PWB		
K. Ozone filter				

Unit	Parts			
L. Drive section	(1)	DUP reverse motor		
	(2)	Main drive motor		
	(3)	Toner motor		
	(4)	PS transport clutch		
	(5)	Paper feed clutch		
	(6)	Drive unit		
	(7)	Lift up motor		
M. Transport section	(1)	Transport roller		
N. Operation section	(1)	Operation section		
	(2)	OPU PWB		
	(3)	Key PWB		
	(4)	LCD unit		
O. Switch	(1)	Power switch		
P. RSPF	(1)	Document tray section	a.	Document tray unit
			b.	Document length sensor
			c.	Document width resistor PWB
	(2)	Paper feed unit section	a.	Paper feed clutch
			b.	Pickup roller
			c.	Paper feed roller
			d.	Paper feed unit
			e.	Separation sheet
			f.	Sensor
	(3)	Transport section	a.	Transport unit
			b.	PS clutch
			c.	Pressure release solenoid
			d.	RSPF motor
			e.	Transport roller
			f.	Roller
			g.	Sensor
			h.	Roller
			i.	Roller
	(4)	Base section	a.	Interface PWB
			b.	Solenoid
			c.	Book sensor
			d.	Sensor

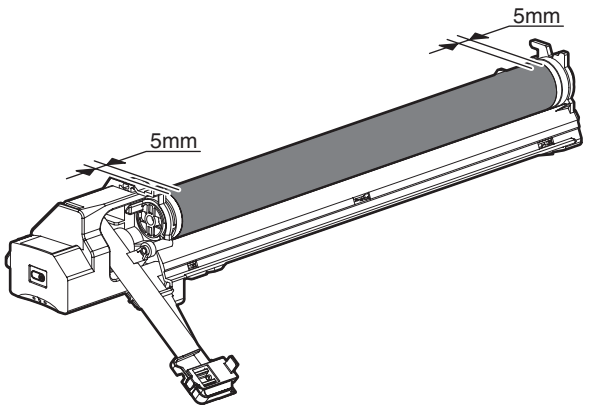
A. Process unit

(Note for servicing the OPC drums)

1. Prevention of oily dirt attachment

Note:

- Be careful not to attach fingerprints or oily dirt on the OPC drum surface. (Keep the unit away from oils and dust.)
- When replacing the OPC drum, cover the OPC drum with the protection sheet and hold the protection sheet.
  If it is required to hold the OPC drum directly, use enough care not to touch the cleaning blade area, 5mm inside from both edges of the OPC drum. (If a fingerprint or oily dirt is attached to the cleaning blade area of the OPC drum, the cleaning blade may flip.)



2 '14/Nov

[Countermeasures]

If a fingerprint is attached to the OPC drum surface erroneously, perform the following countermeasures.

1) Use dry cloth to clean and remove the dirt.

2 2) Apply Stearic acid powder to prevent blade flip.

[Check method]

Check to confirm that the OPC drum is free from fingerprints or oily dirt and that the cleaning blade is completely cleaned by the following method.

- Make a print of a half tone image on all the surface of A4 (11" x 8.5") paper, and check the printed paper for any abnormality in the image.

2. Prior exposure prevention

Note:

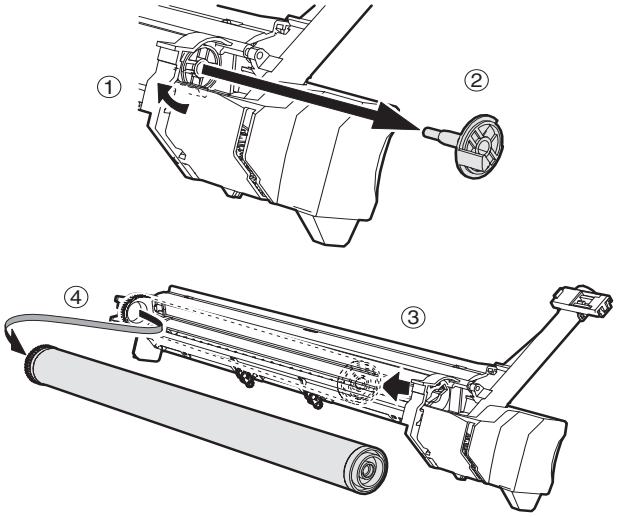
- Avoid servicing in a place where there is strong light.
- Do not expose the unit to light for a long time.
- Cover the OPC drum with light-blocking material. (When using paper, use about 10 sheets of paper to block light.)

[Countermeasures]

If the OPC drum is erroneously exposed to light too much (prior exposure), perform the following countermeasures.

1) Print half tone images on the whole surface of A4 (11" x 8.5") paper, and check to confirm that there is no irregular density area in the previously exposed section.
2) Damages due to prior exposure may be recovered by keeping the OPC drum for several hours. If, however, image are not recovered, replace the OPC drum.

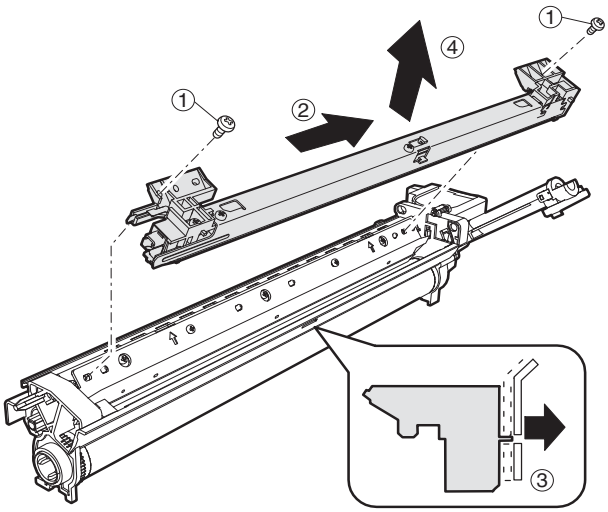
(1) Drum



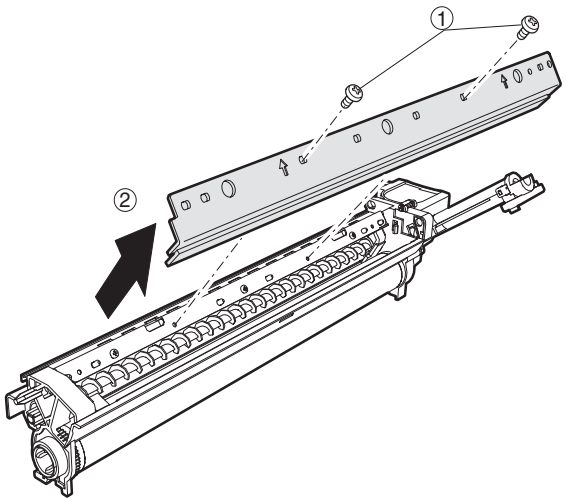
Note: When installing the process unit in the main unit after replacing the drum, process unit may not be able to install by reason of the drum drive coupling position.
In this case, rotate the drum about 45 degrees and install again.

(2) Drum section

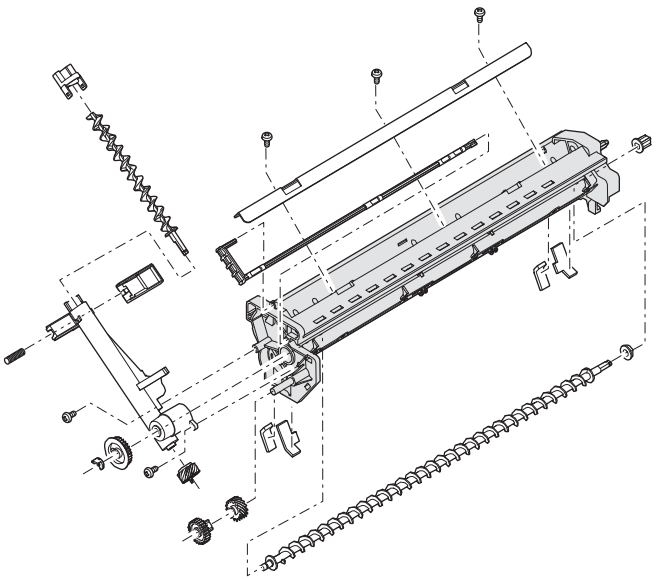
a. Main charger



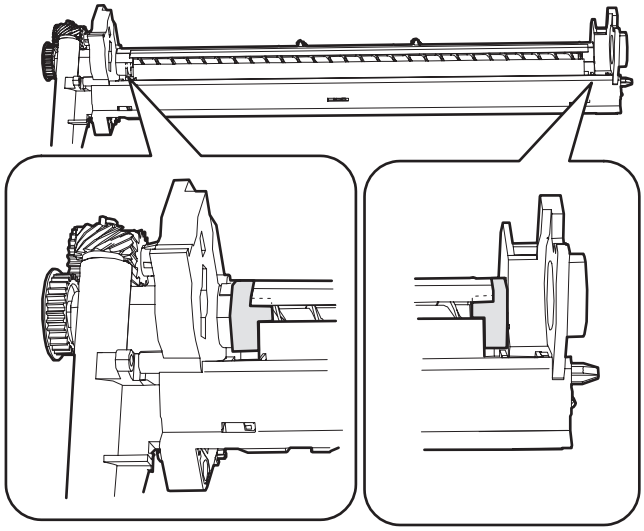
b. Cleaning blade



c. Drum frame unit



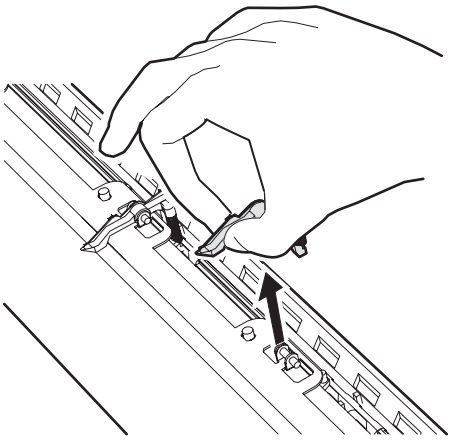
d. Moquette F/R



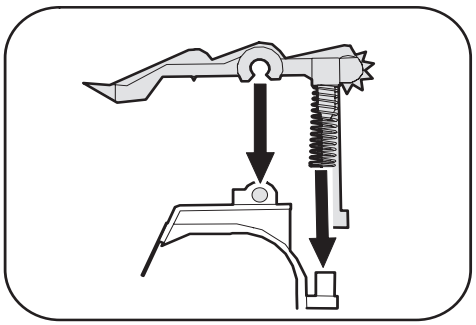
Note: If it disturbs the blade movement, replace it and attach new one.

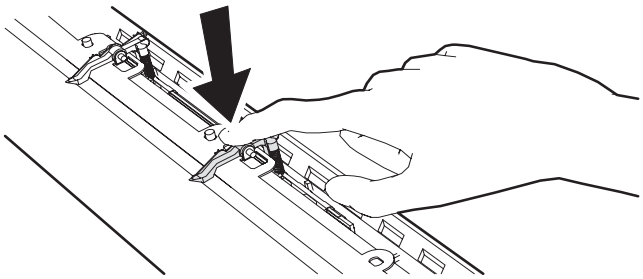
e. Separation pawl

Disassembly* Hold the tip of the separation pawl and remove it.



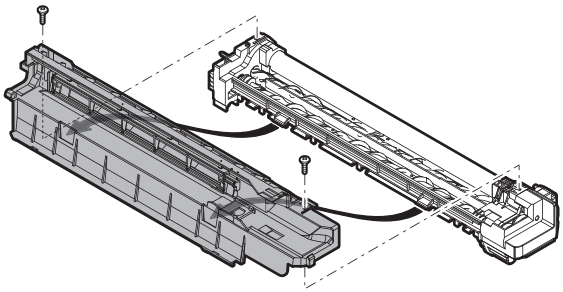
Assembly* Press the center of the separation pawl and install it.

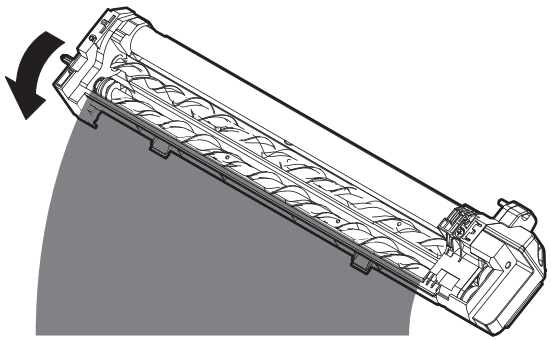


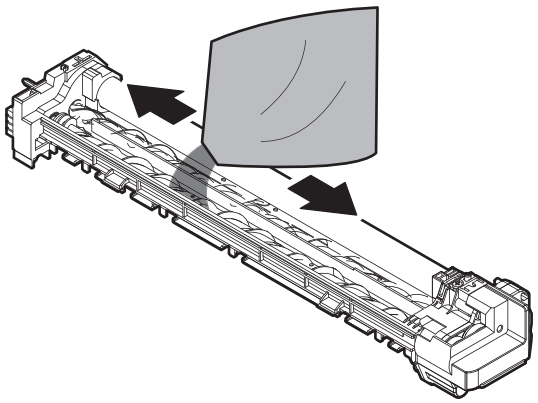


B. Developing section

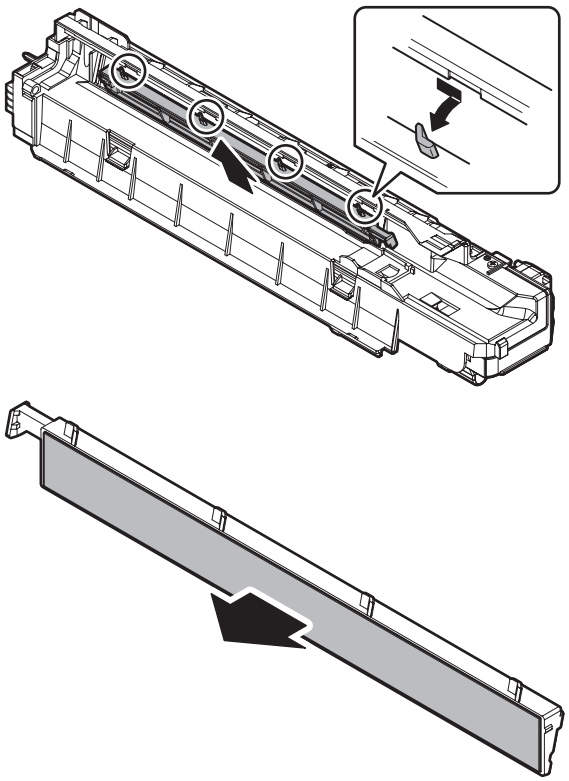
(1) Developer



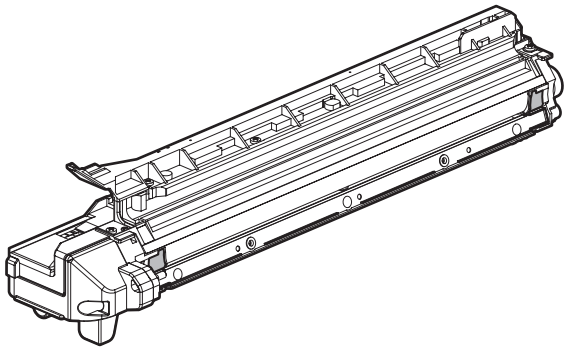




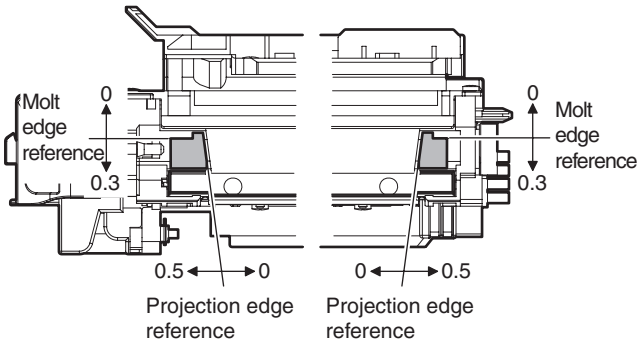
(2) Toner filter unit



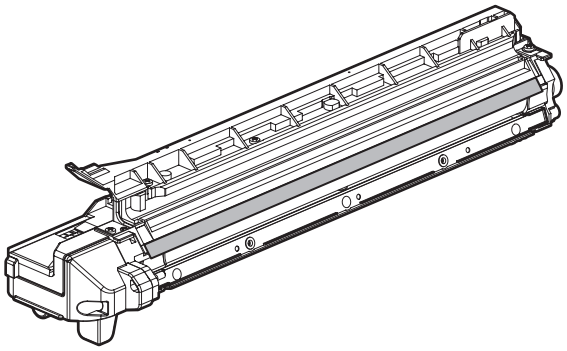
(3) DV side sheet F/ DV side sheet R



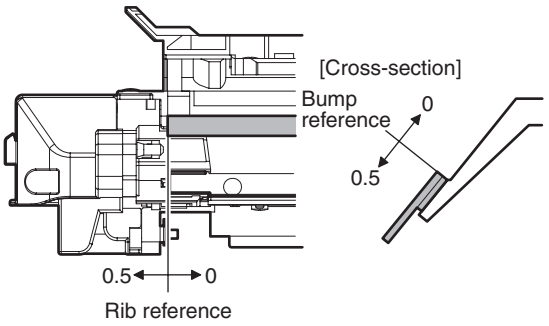
[DV side sheet F/ DV side sheet R attachment reference]



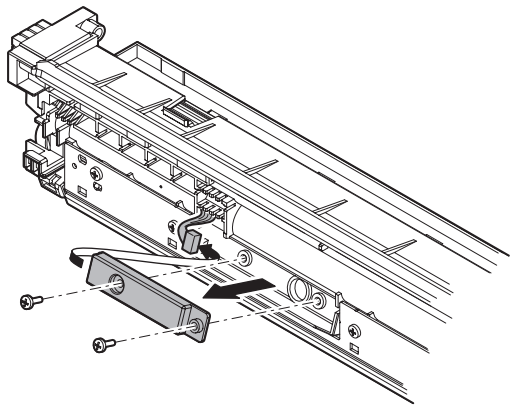
(4) DV blade



[DV blade attachment reference]

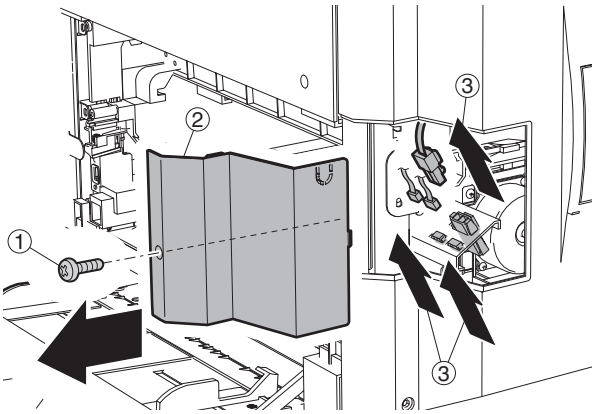


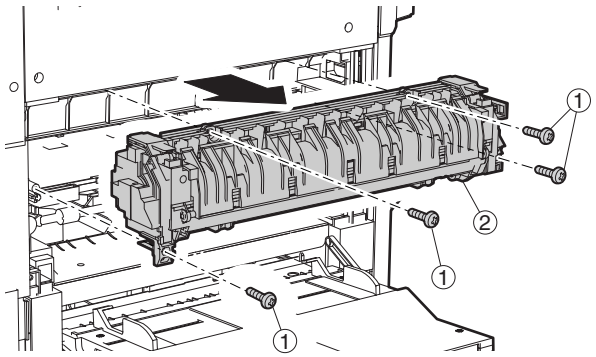
(5) Toner sensor



- Clean the sensor only after removing used DV when replacing DV.

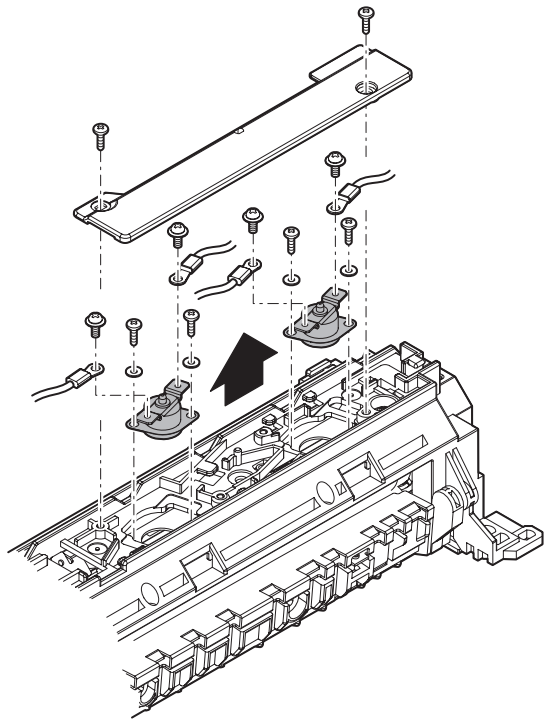
C. Fusing section



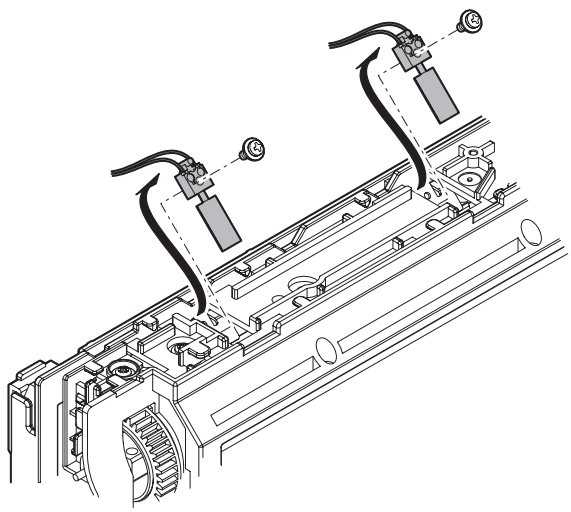


(1) Thermostat

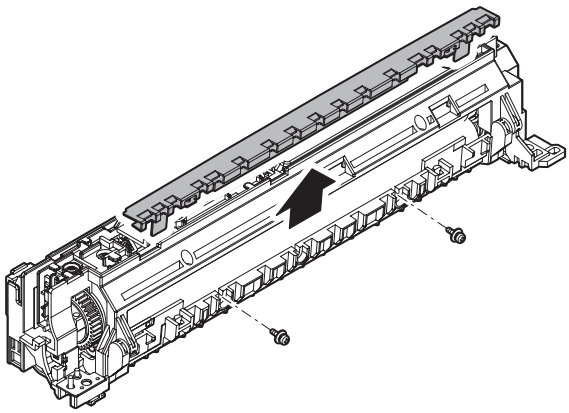
Note: When securing the lamp harness and the thermostat, the tightening torque of the screw (4 positions) is 6-9 kgs.



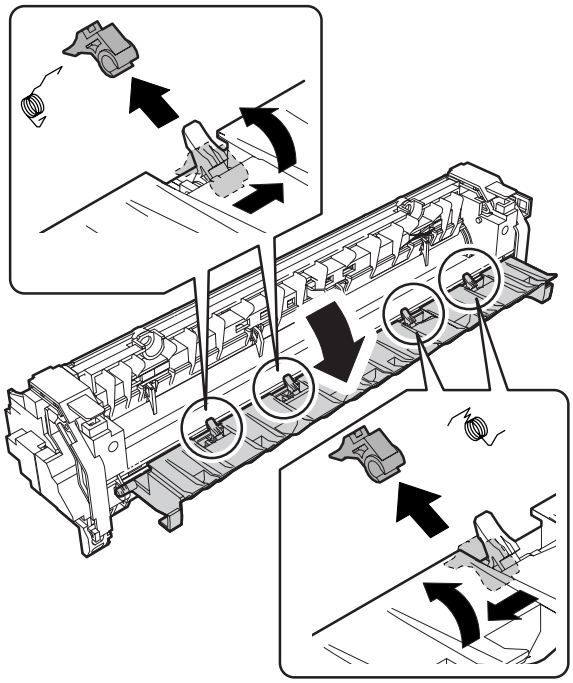
(2) Thermistor



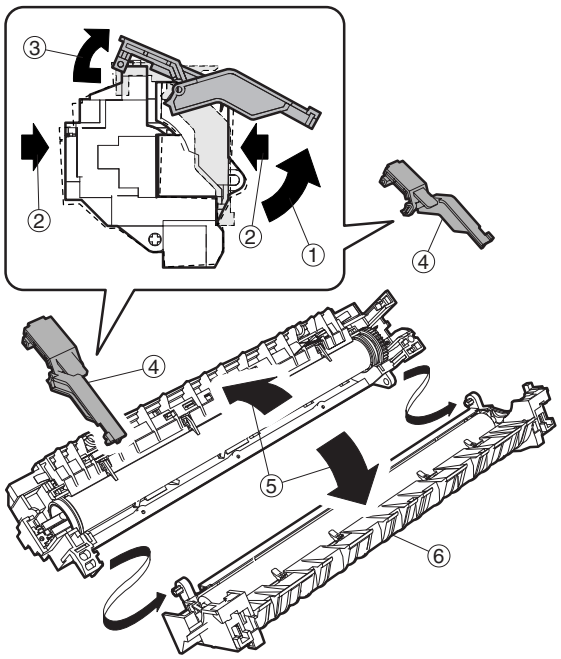
(3) Paper guide

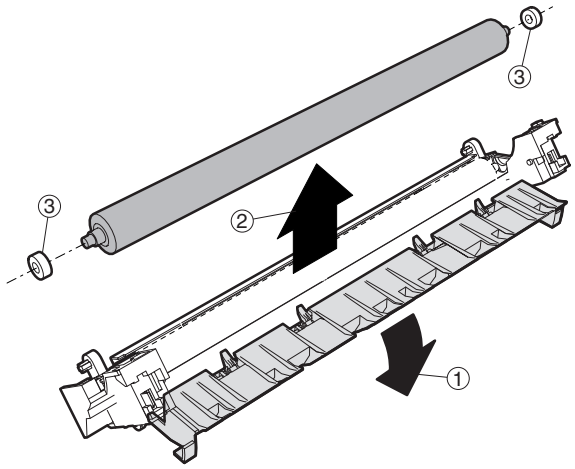


(4) Fusing separation pawl (lower)

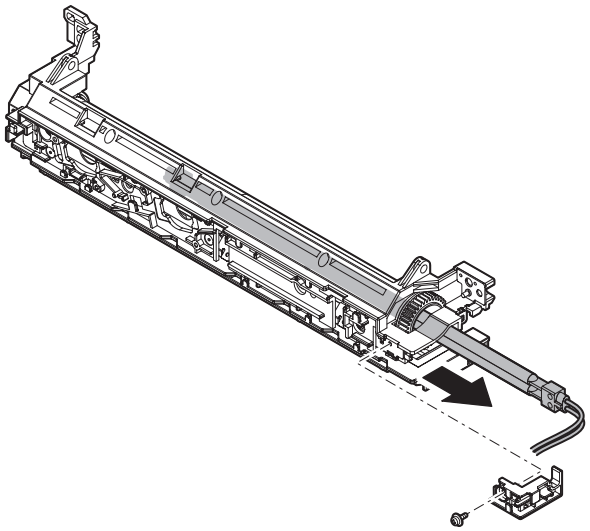


(5) Lower heat roller

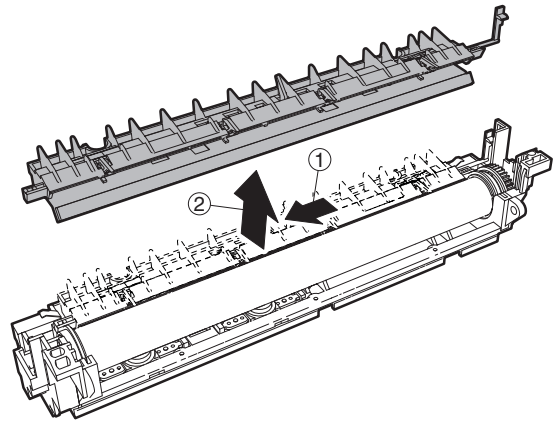


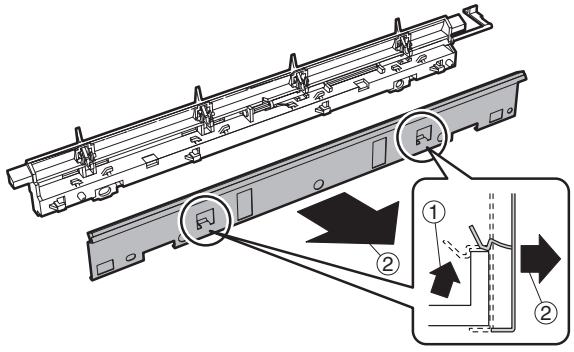


(6) Heater lamp

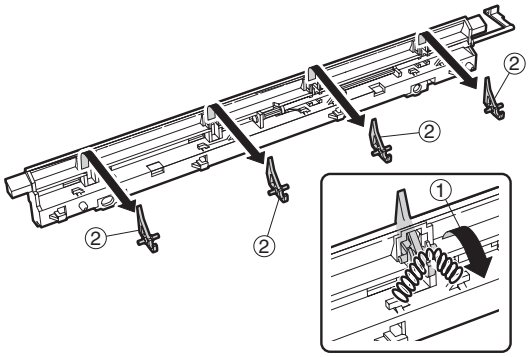


(7) Upper cleaning pad

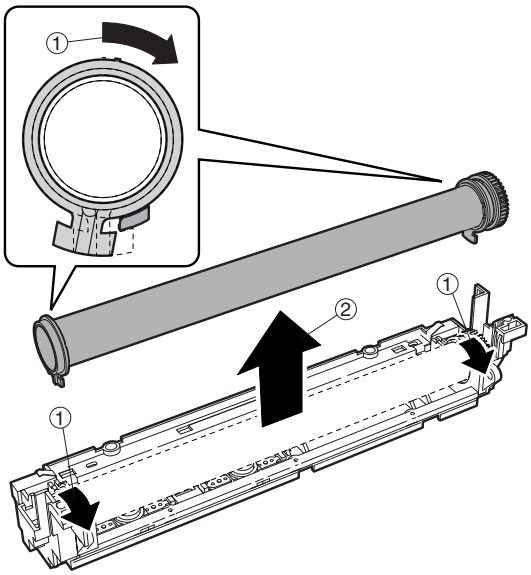


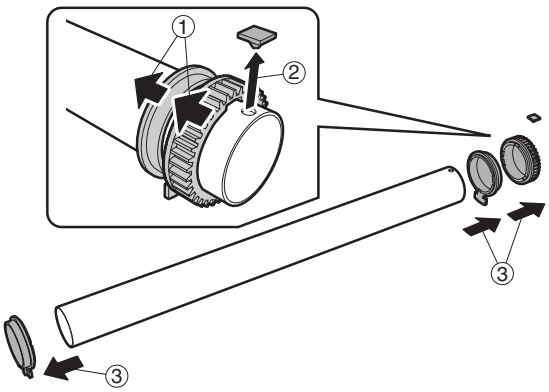


(8) Fusing separation pawl (upper)

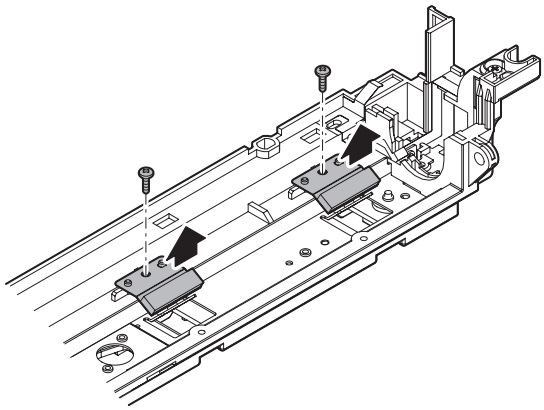


(9) Upper heat roller



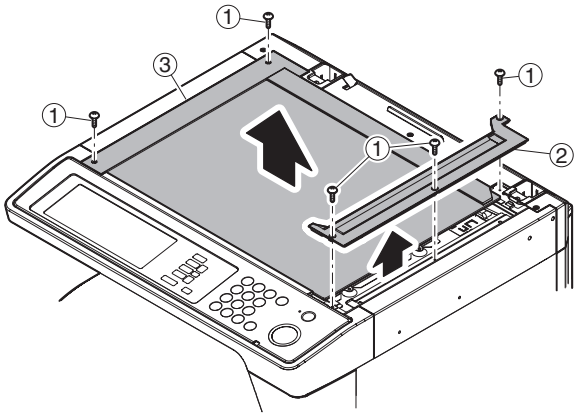


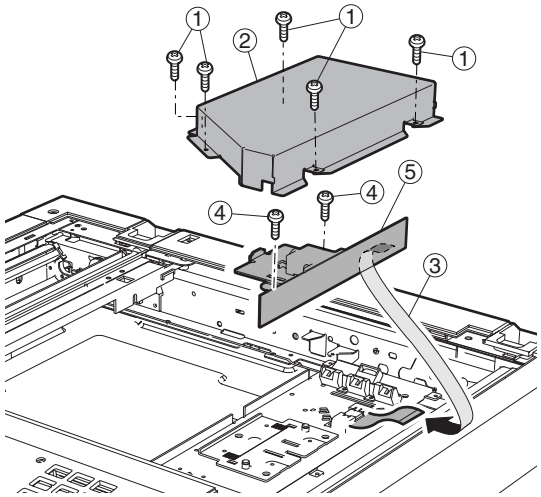
(10) Thermistor cleaning pad



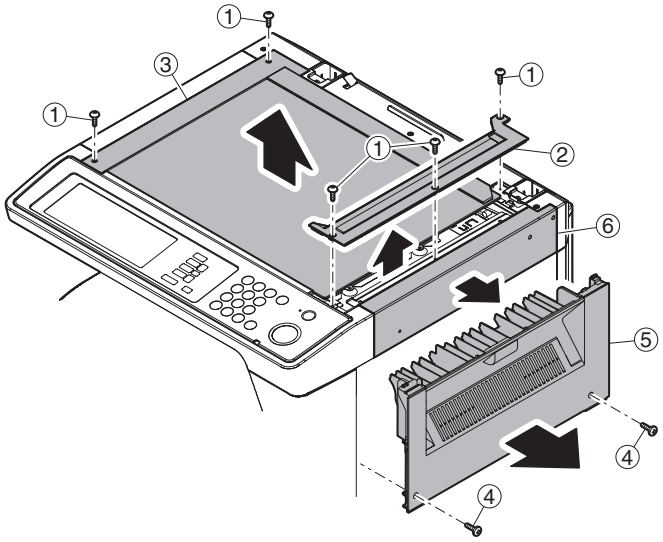
D. Optical section

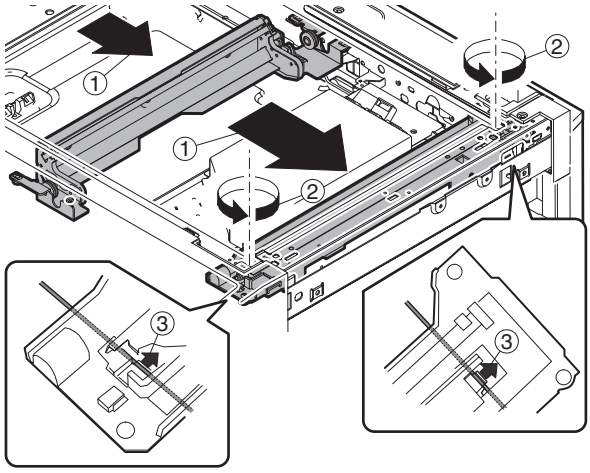
(1) CCD unit

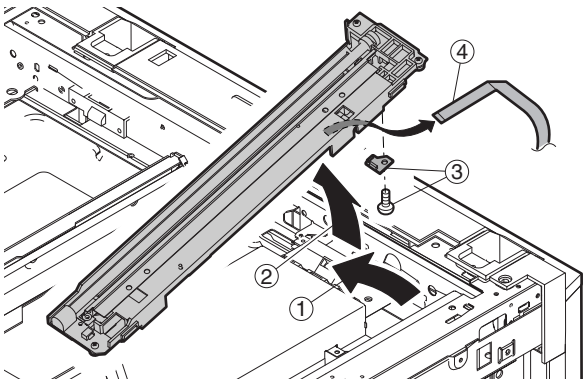




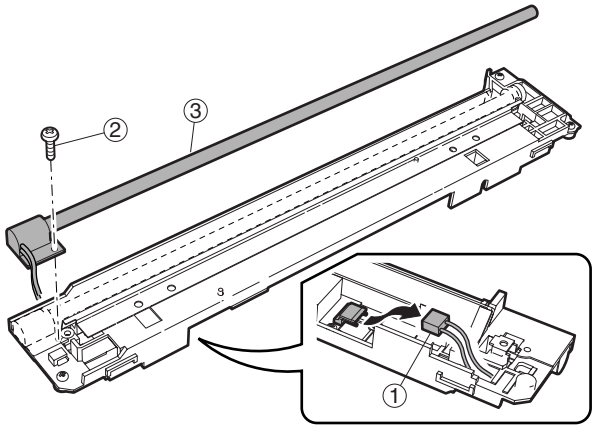
(2) Lamp unit



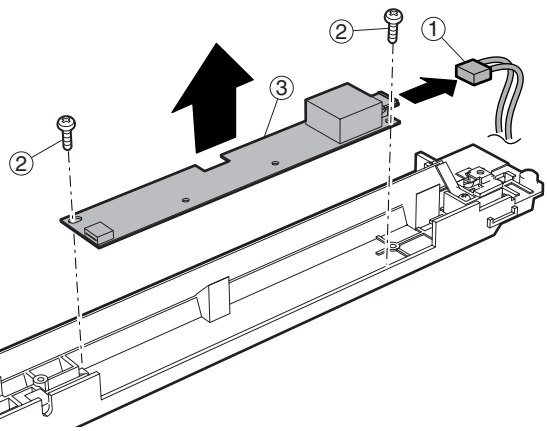




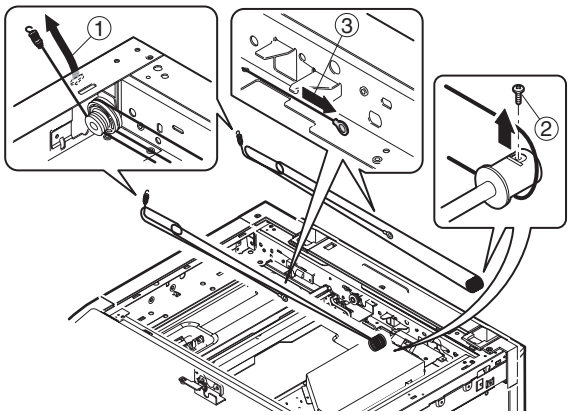
a. Lamp

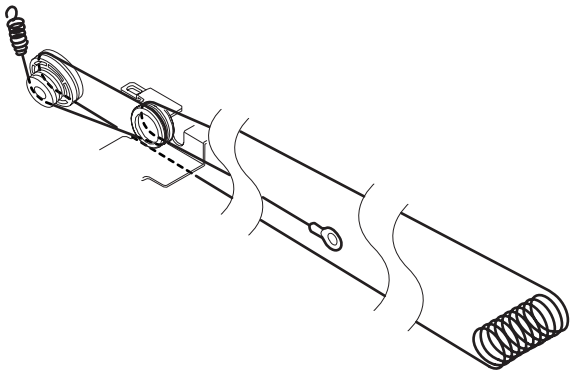


b. PWB

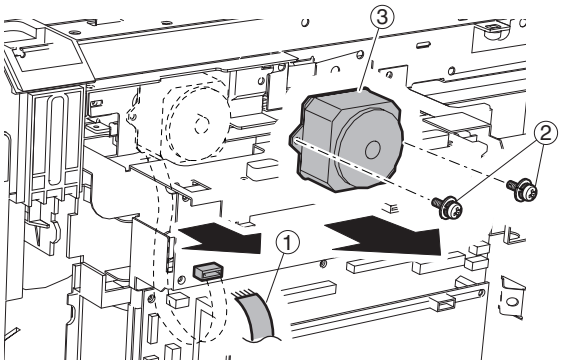


c. Wire

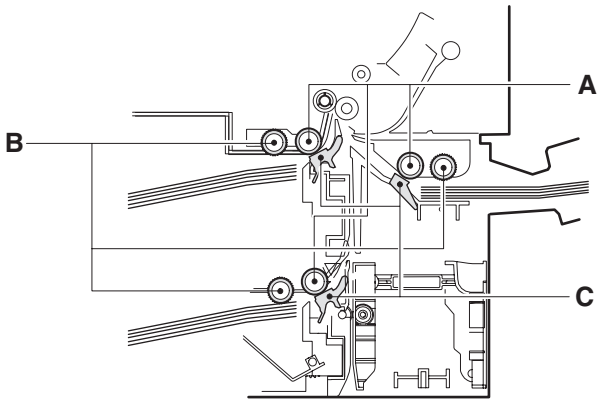




d. Mirror motor

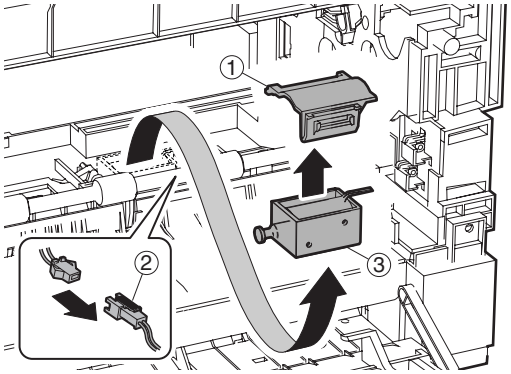


E. Paper feed section

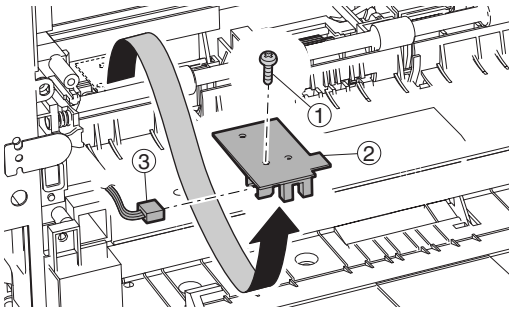


A	Paper feed roller
B	Pickup roller
C	Separation sheet

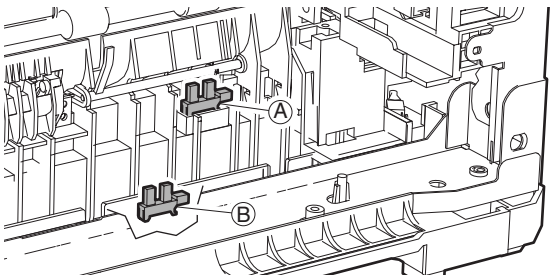
(1) Paper feed solenoid



(2) Tray sensor PWB

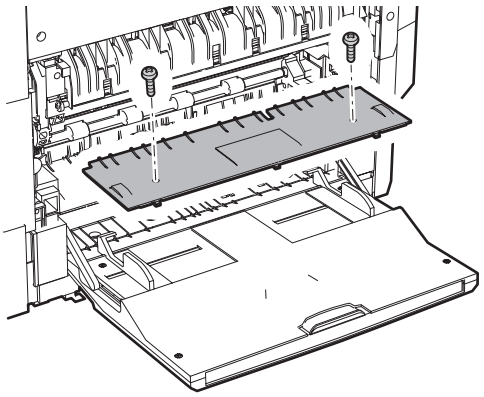


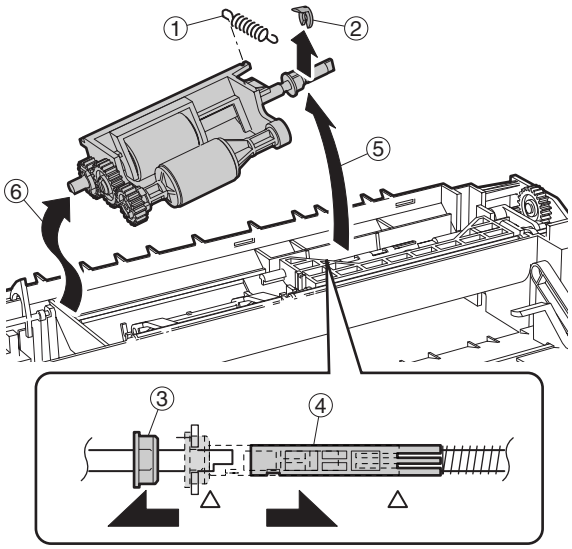
(3) Manual P-in sensor/Manual empty sensor



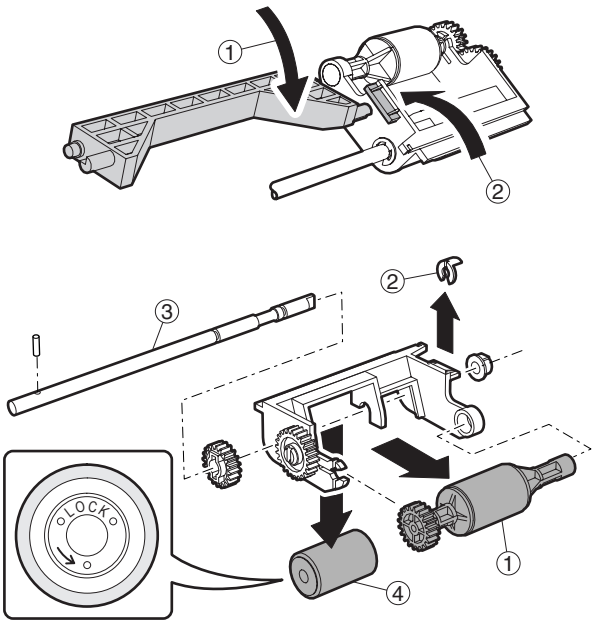
(4) Multi manual paper feed

a. Paper feed roller/pickup roller

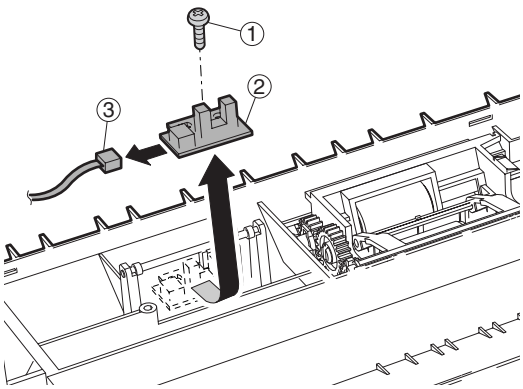




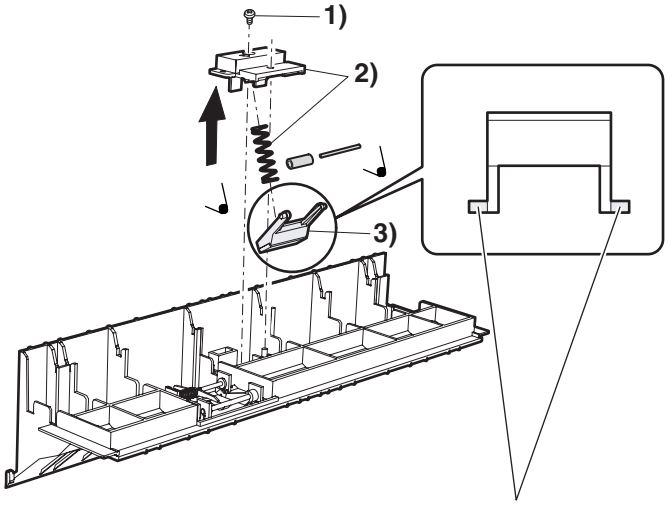
Installation*Install so that the cam transmit arm (1) comes under the roller arm (2).



b. Reverse sensor



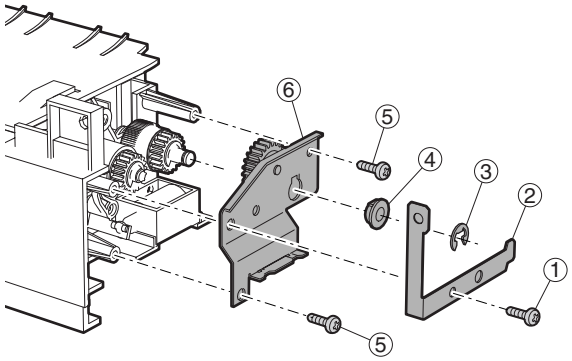
c. Separation sheet

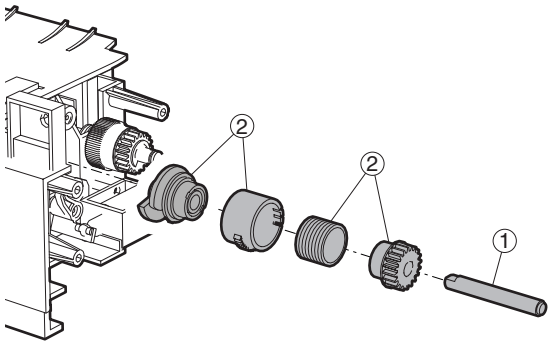


* Slightly apply grease GP501MR (UKOG-0012QSZZ) around the axis. One rice grain for each.

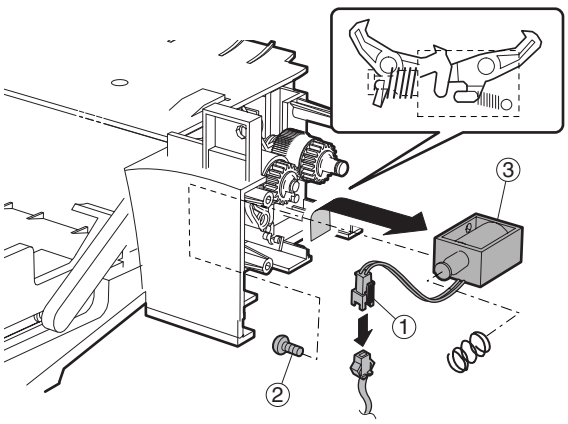
d. Clutch/solenoid

(Clutch)

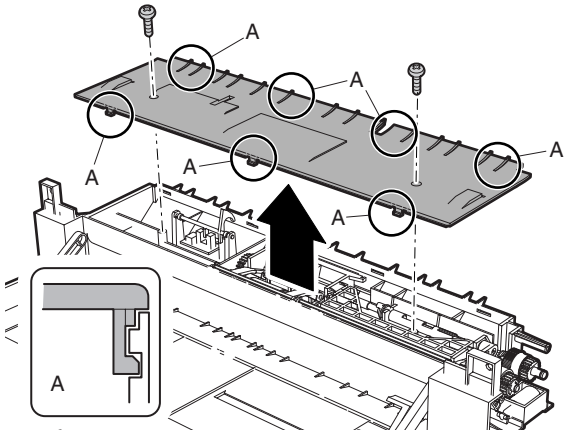


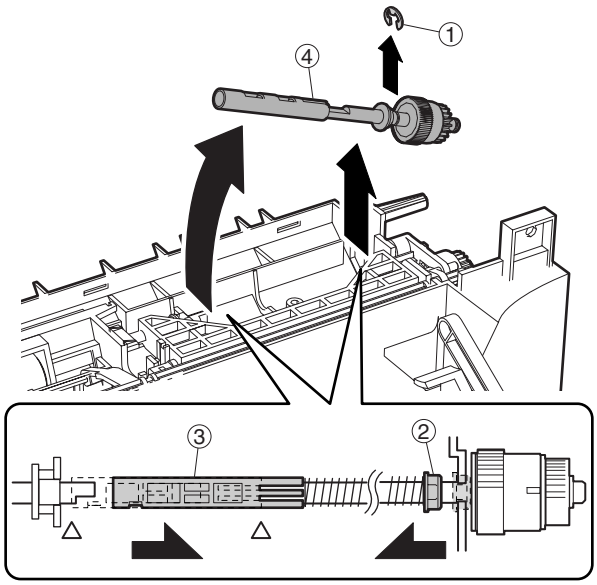


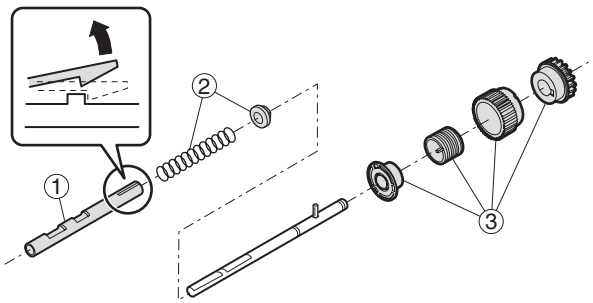
(Solenoid)



(Clutch)

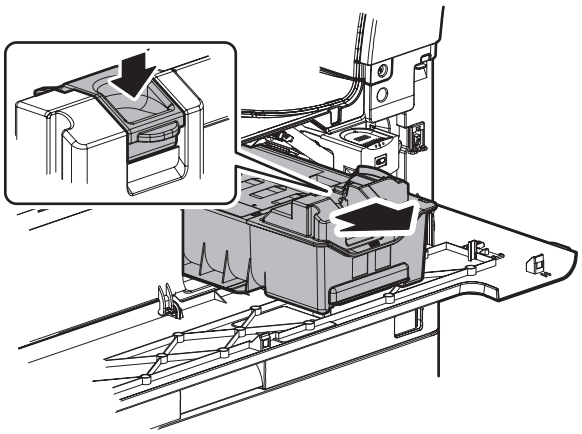


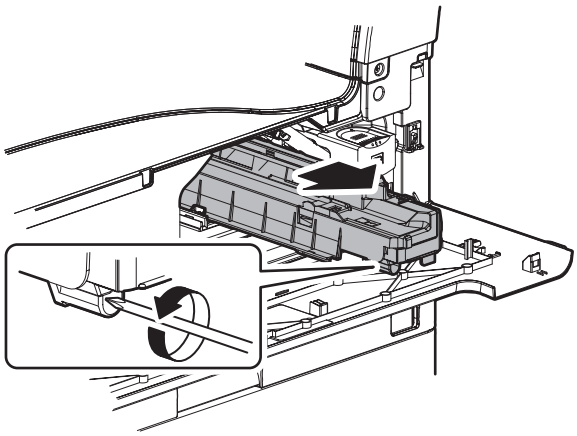


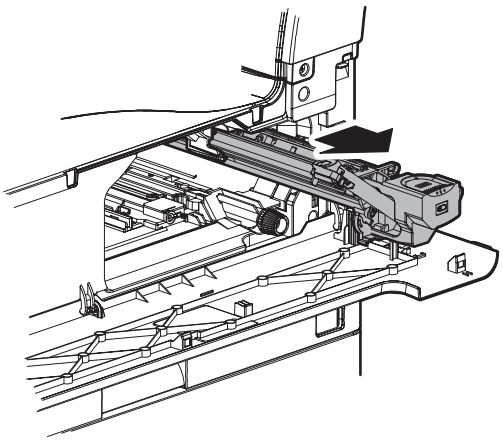


(5) Upper 500 sheets tray paper feed

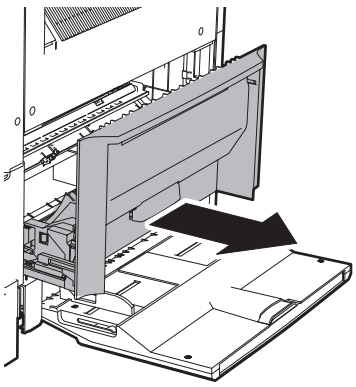
a. Paper feed roller/pickup roller

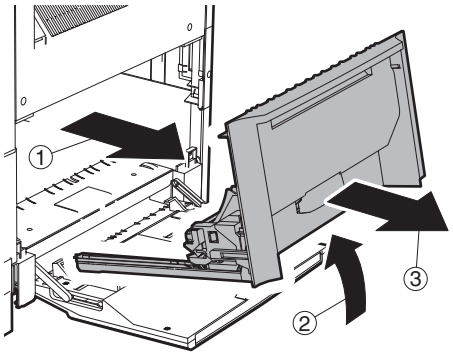


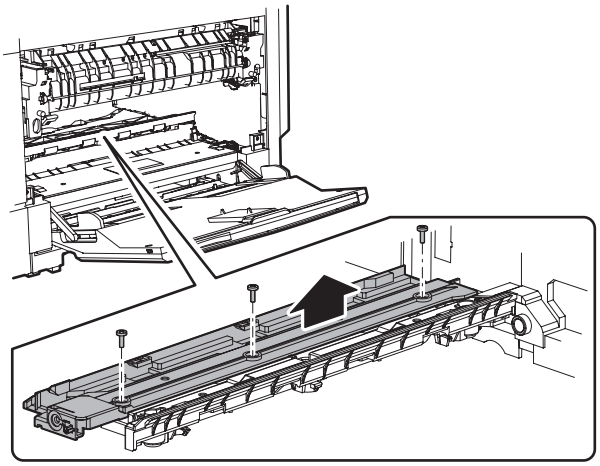


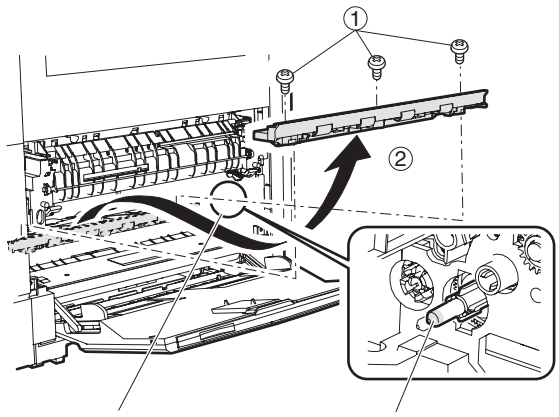


Note: With the toner cartridge installed, do not tilt or shake the developer cartridge.



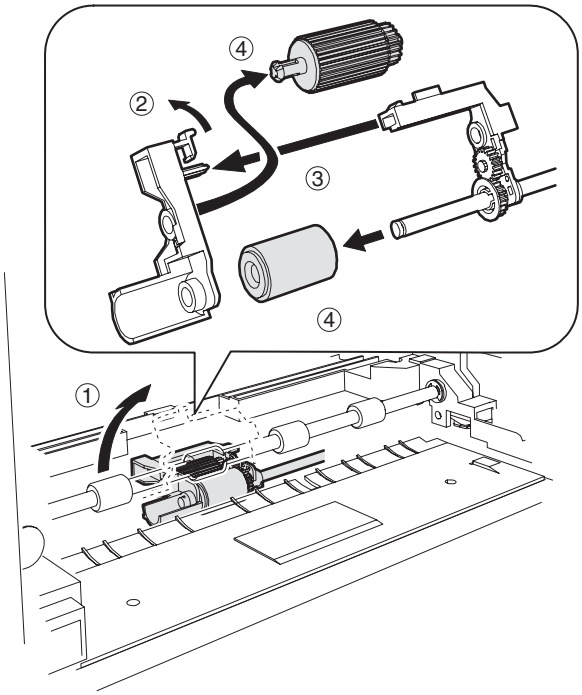




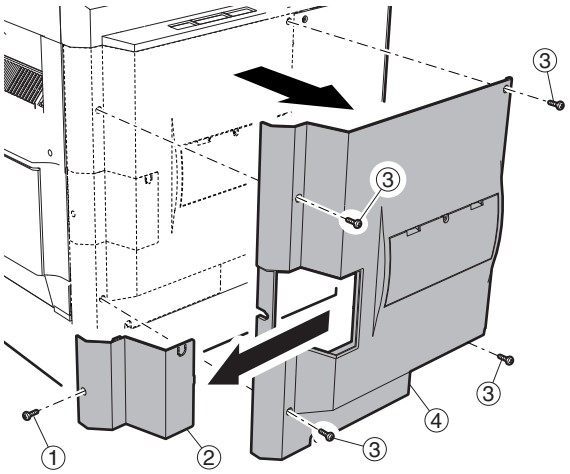


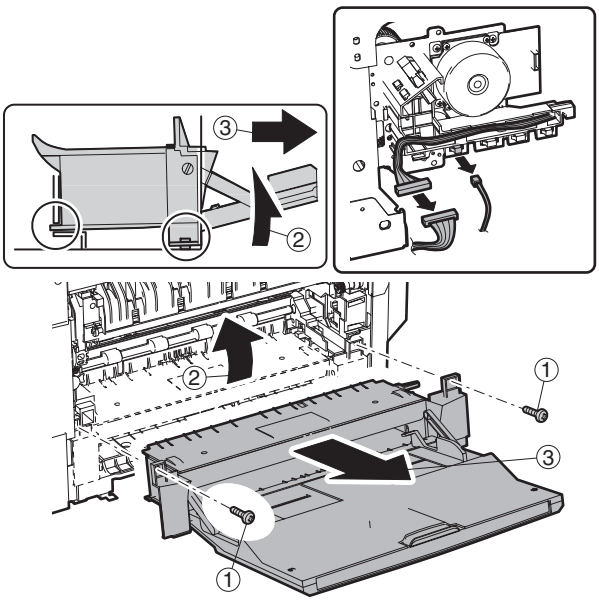
* When replacing, be careful not to adhere conduction grease (black) to the drive section.

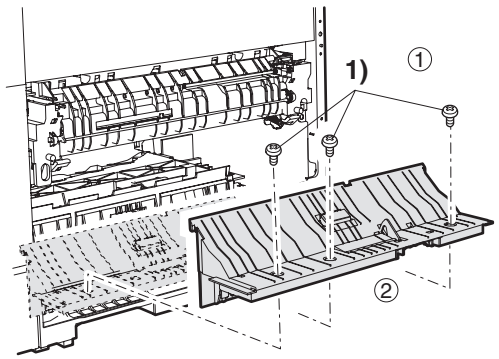
Slightly apply grease GE676 (UKOG-0013QSZZ) to the drum boss.

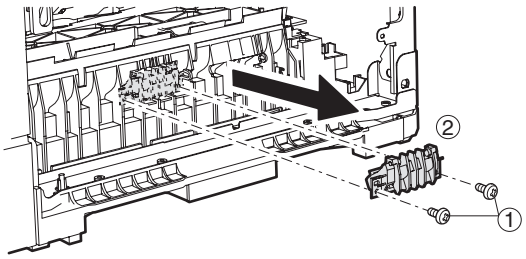


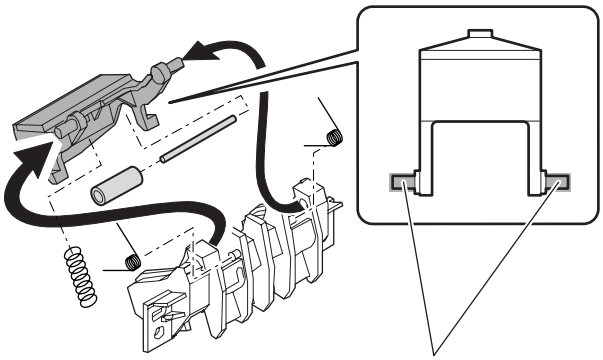
b. Separation sheet







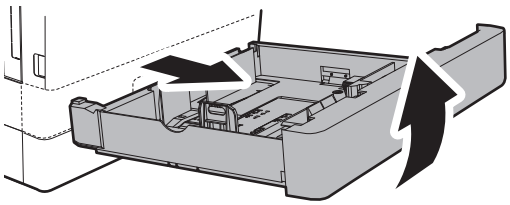


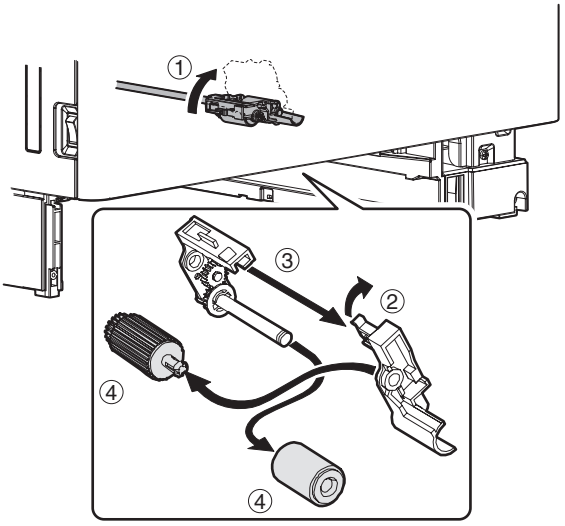


* Slightly apply grease GP501MR (UKOG-0012QSZZ) around the axis. One rice grain for each.
  Grease should not come out when assembling.

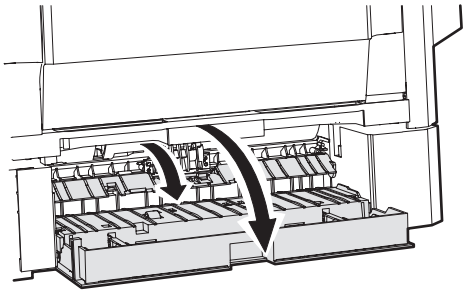
(6) Lower 500 sheets tray paper feed

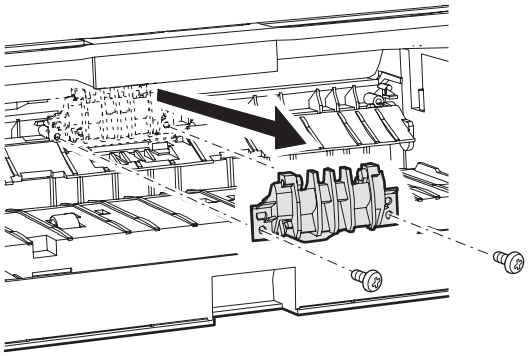
a. Paper feed roller/pickup roller

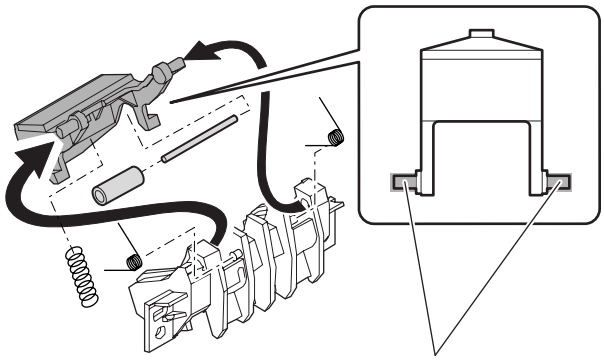




b. Separation sheet

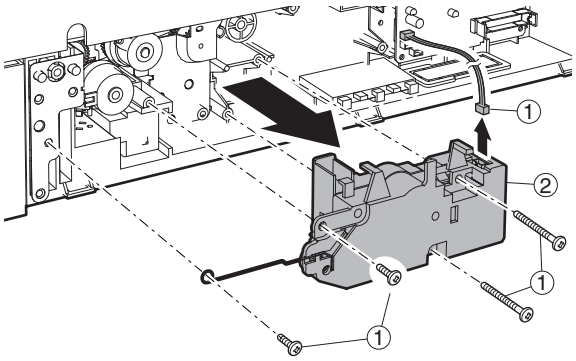




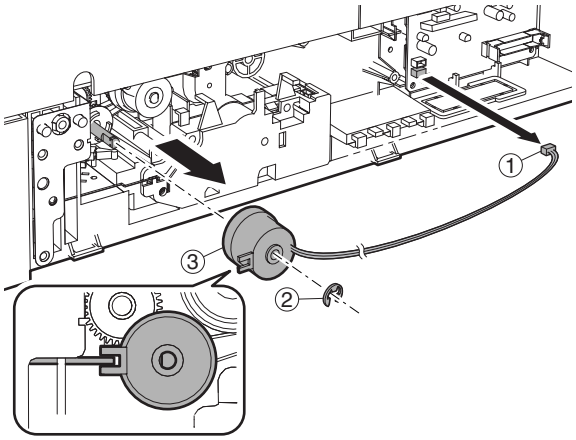


* Slightly apply grease GP501MR (UKOG-0012QSZZ) around the axis. One rice grain for each.
  Grease should not come out when assembling.

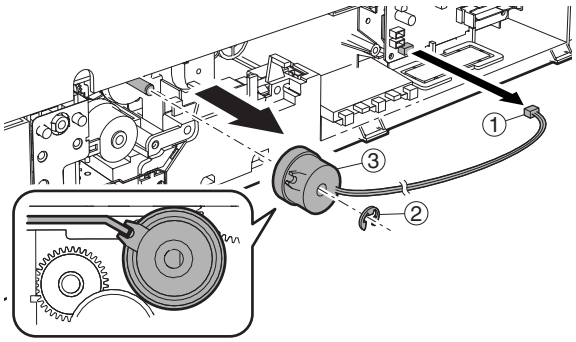
c. Lift up unit



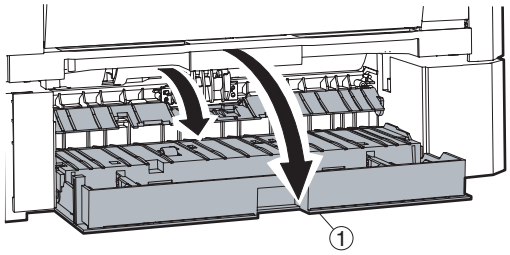
d. Transport clutch

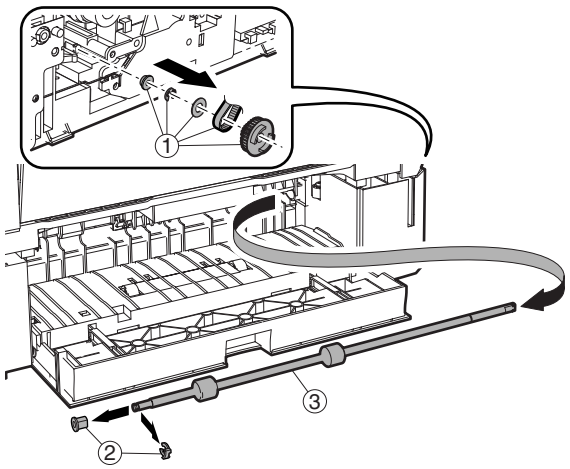


e. Paper feed clutch

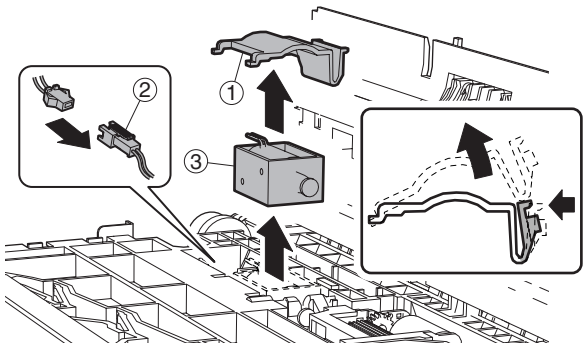


f. Transport clutch

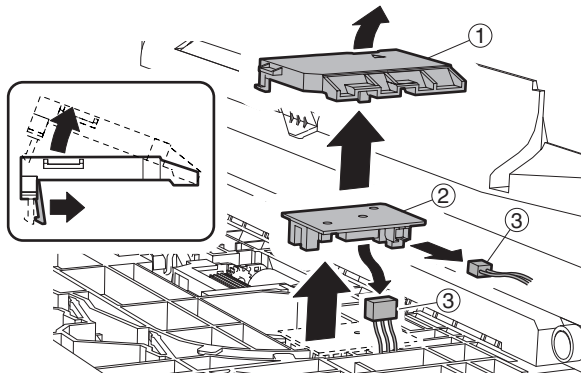




g. Solenoid

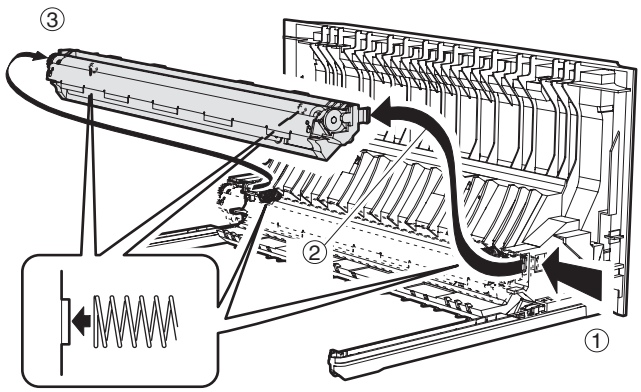


h. Sensor PWB



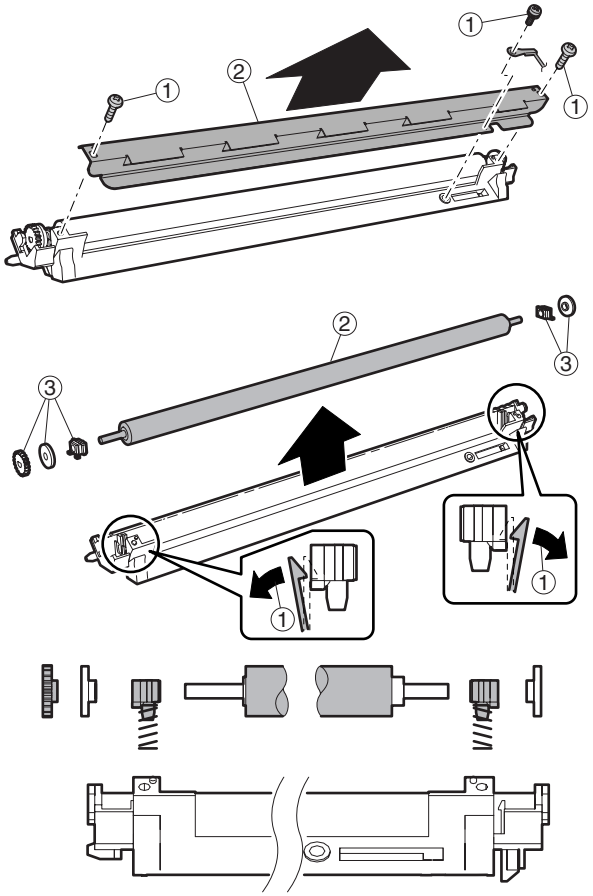
F. Side door unit

(1) Transport roller unit

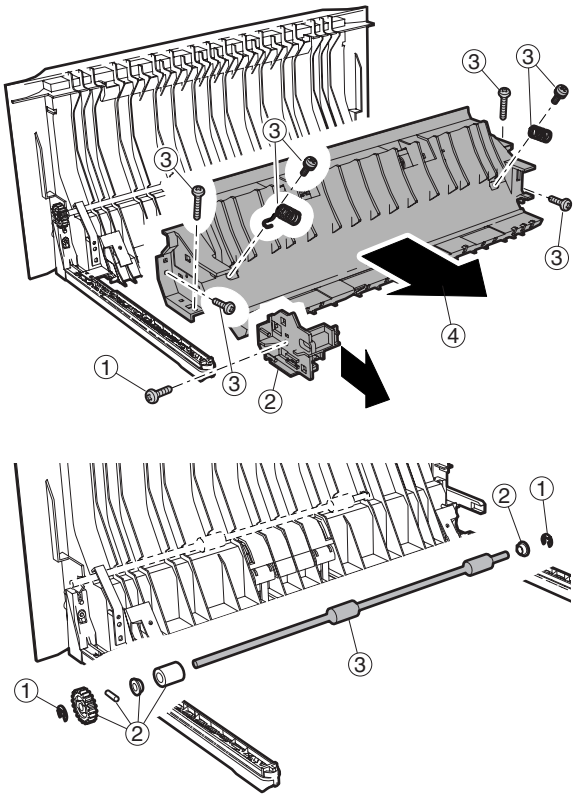


* Check that two springs are securely inserted into the transfer roller unit bosses.

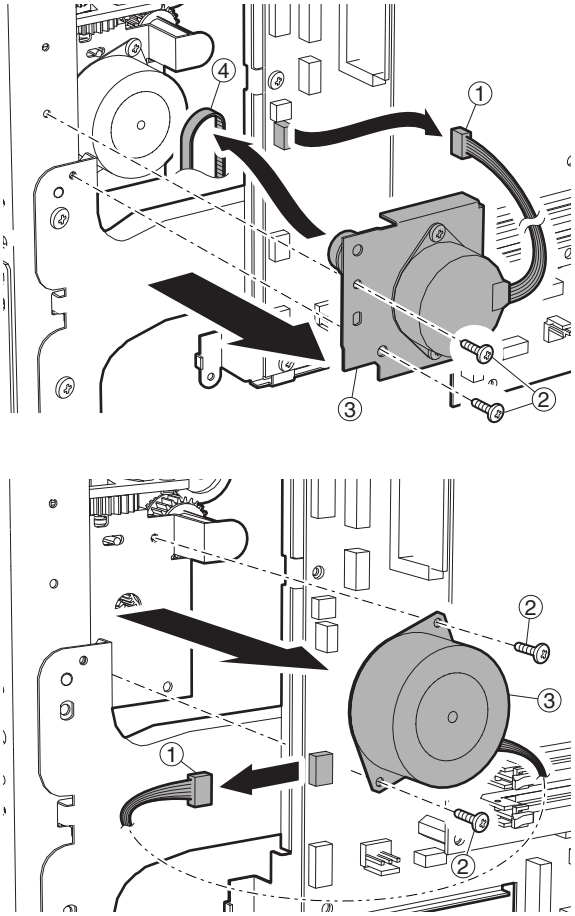
(2) Transport roller



(3) DUP transport roller

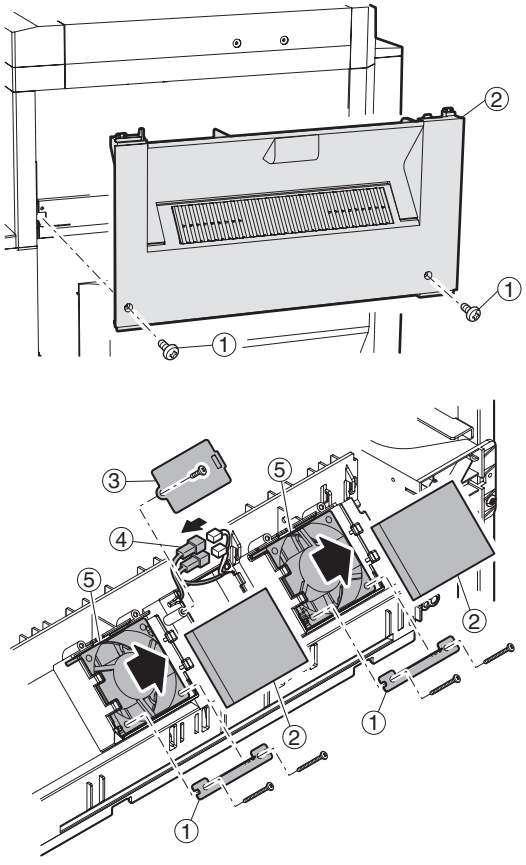


(4) DUP motor

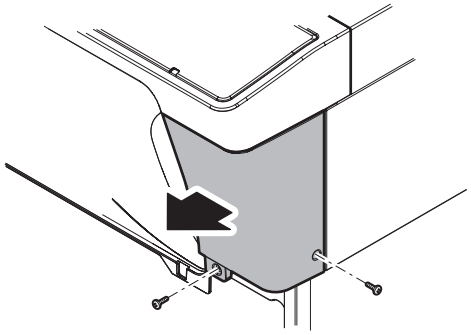


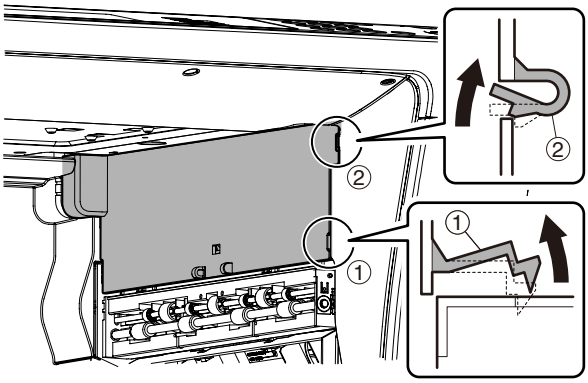
G. 1st paper exit unit

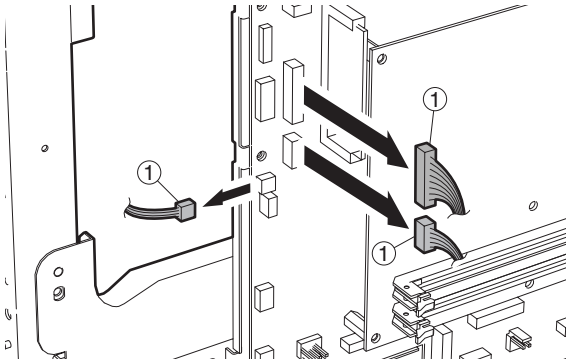
(1) Cooling fan

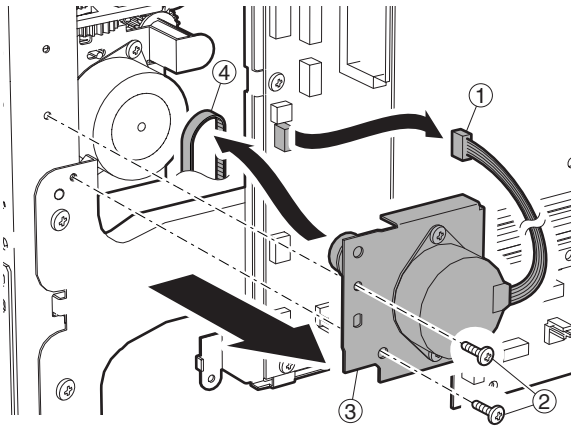


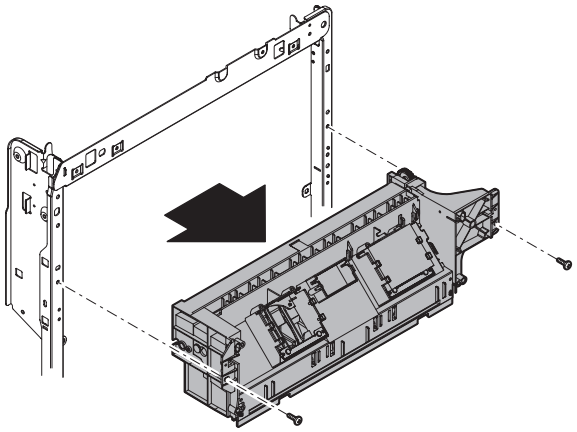
(2) Exit roller



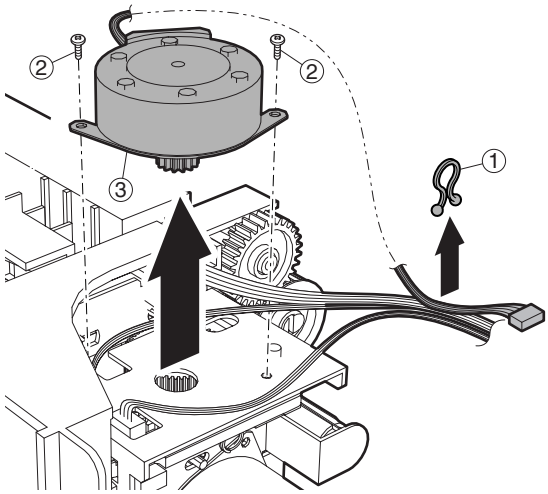


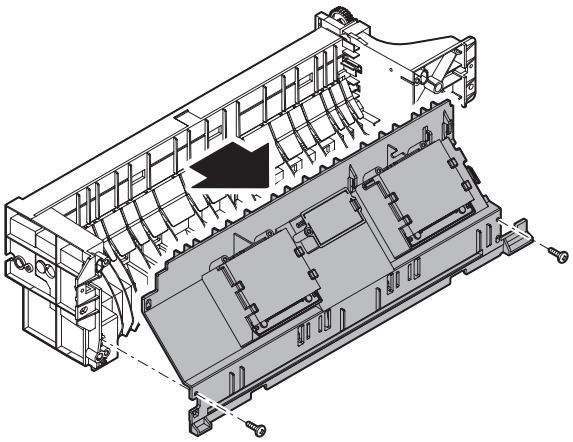


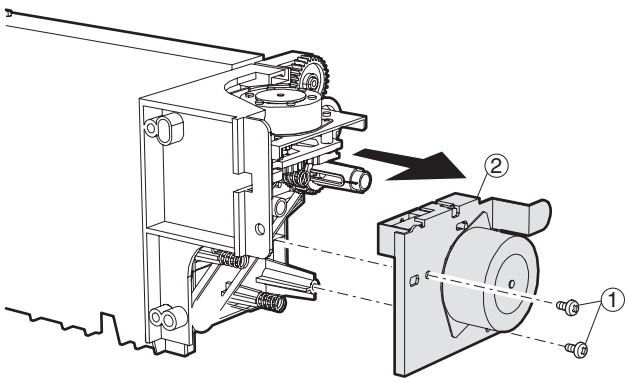


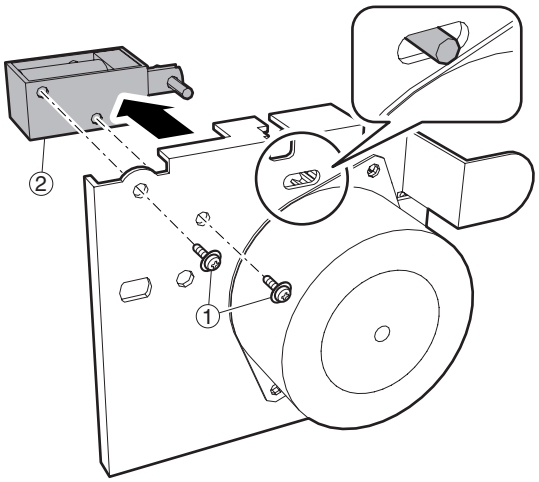


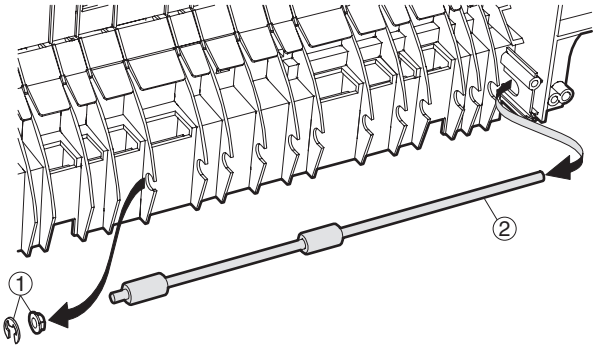
(Except North America)

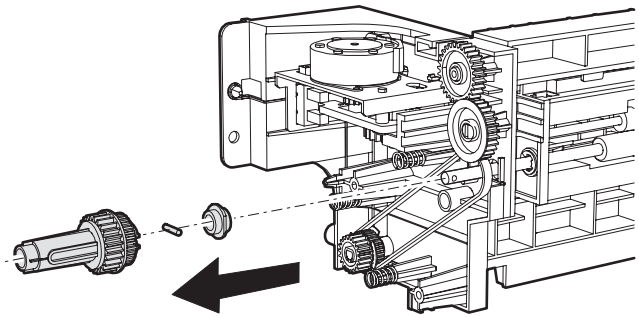




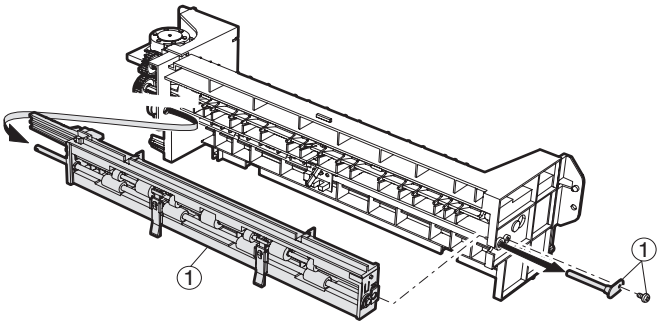


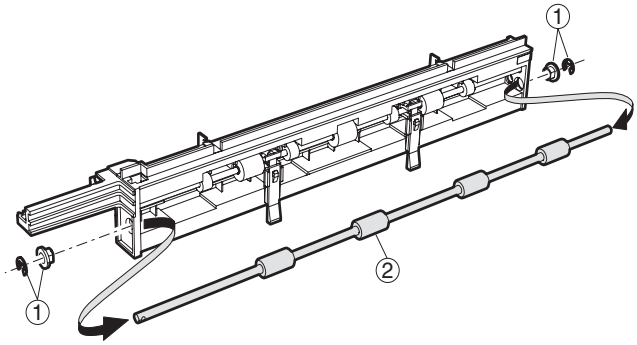






Note: Check to confirm that the solenoid shaft is in the gate bracket, and fix with the screw.



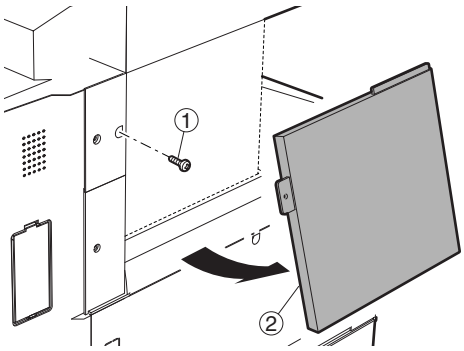


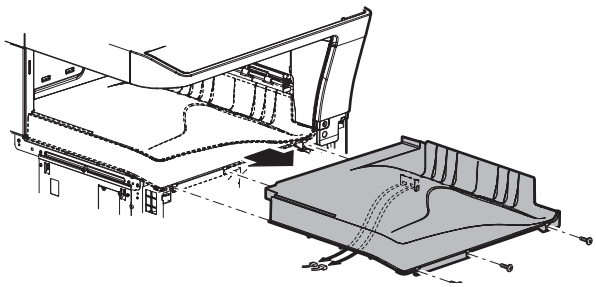
H. Laser unit

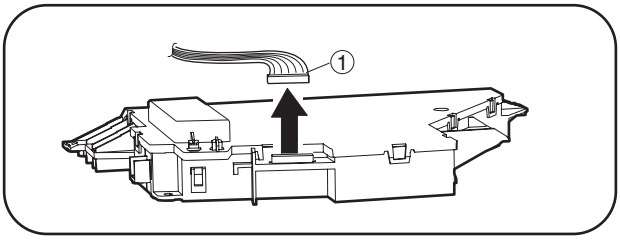
Note: Do not disassemble the LSU unit.

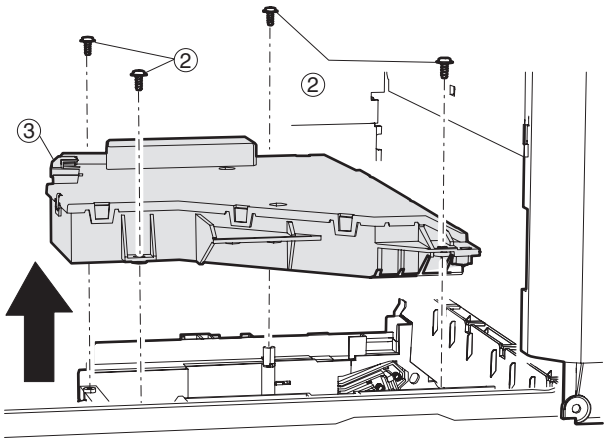
(1) LSU

1) Turn OFF the machine power, and disconnect the power plug from the power outtlet.
2) Remove the left cabinet and exit tray.
3) Disconnect the LSU connector, and remove the securing screws to remove the LSU.



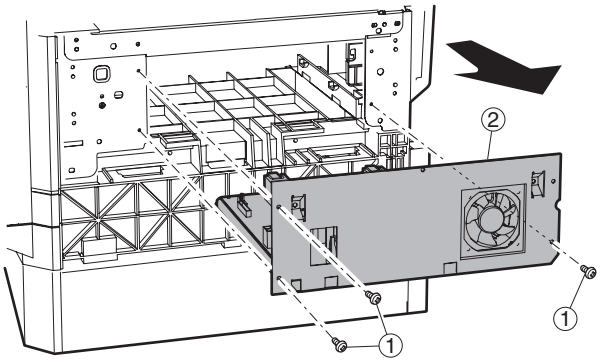


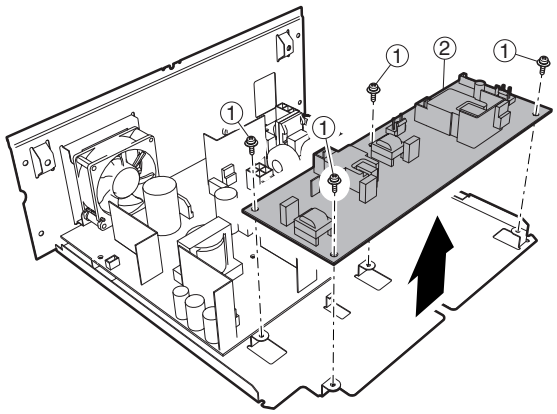


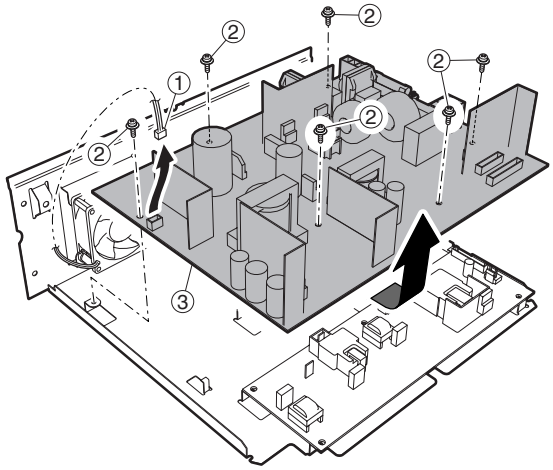


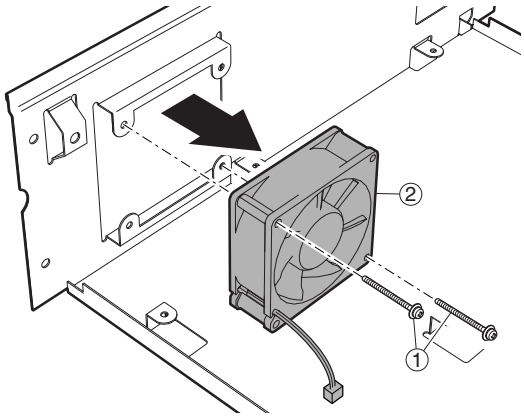
I. Power unit

(1) Power source



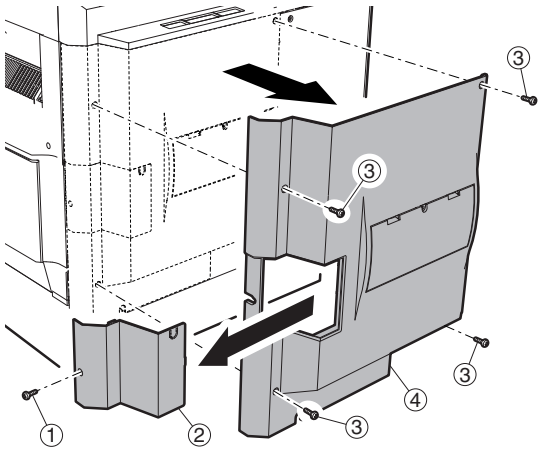


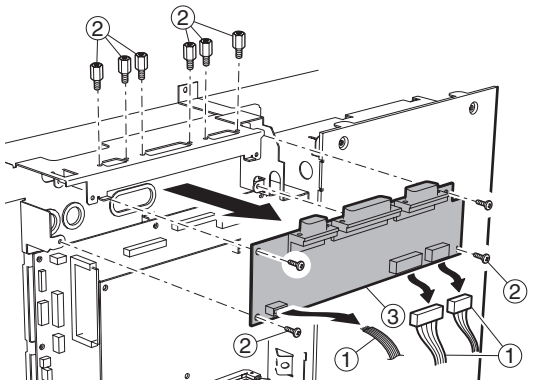




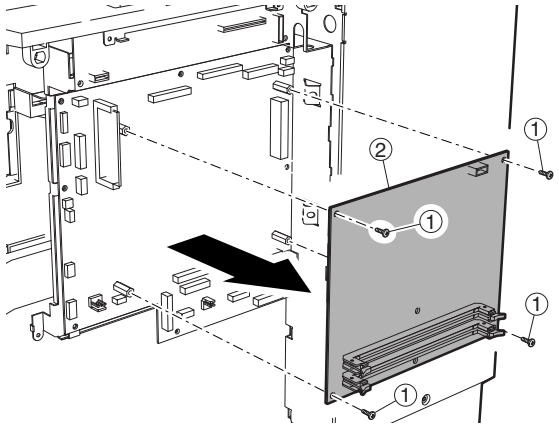
J. PWB

(1) Option CN PWB

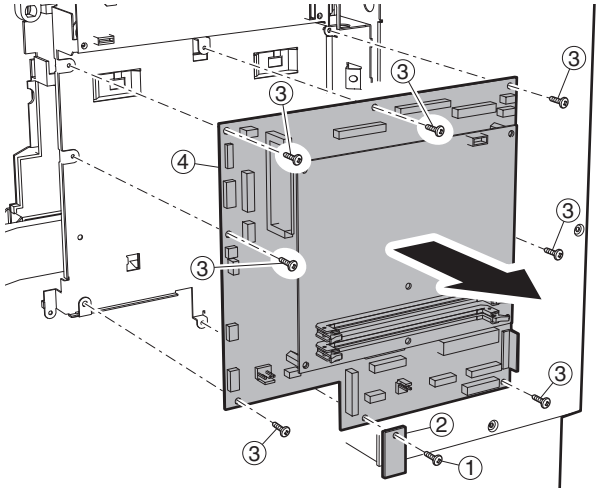


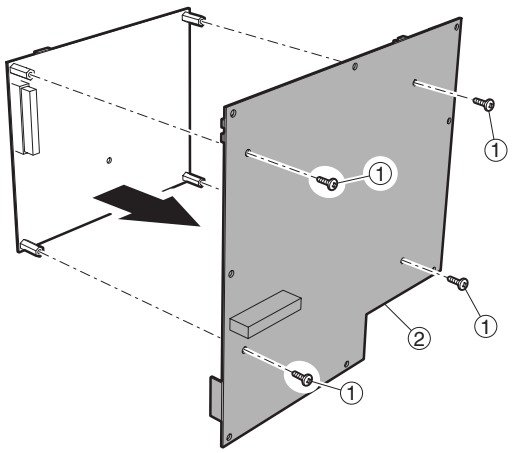


(2) IMC PWB

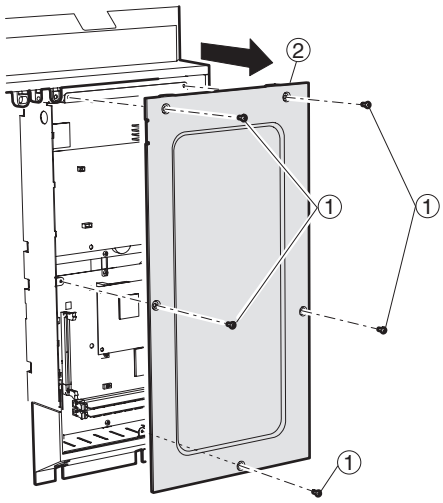


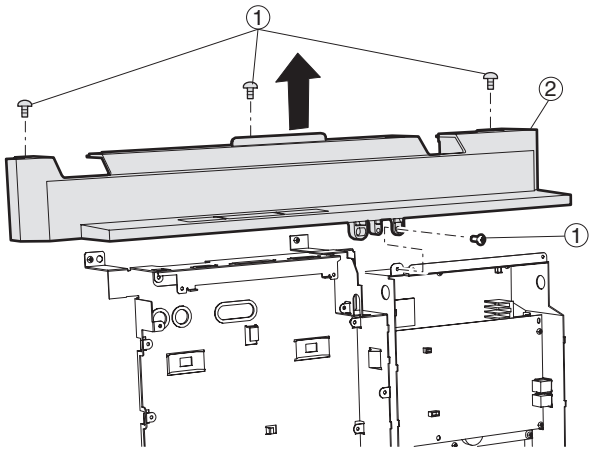
(3) MCU PWB

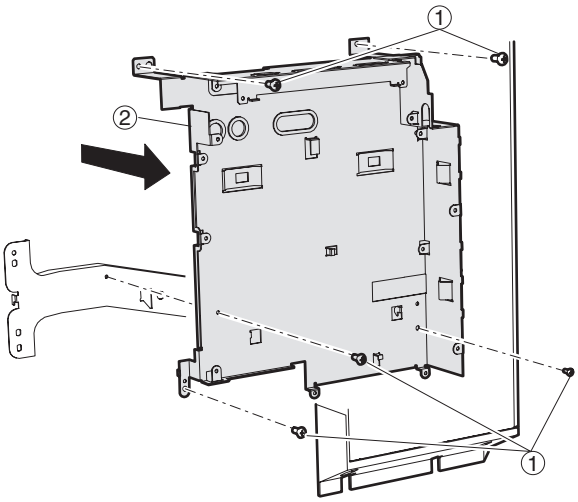


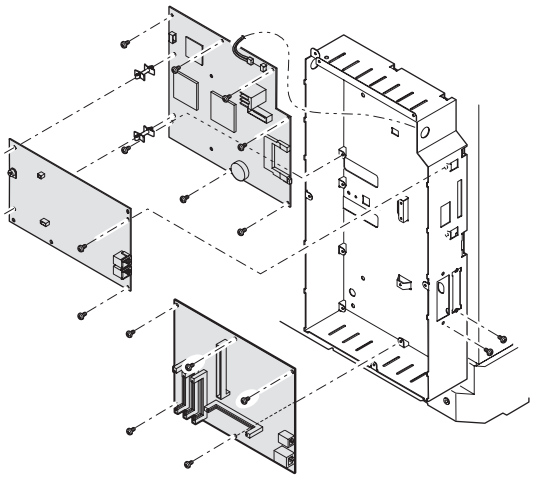


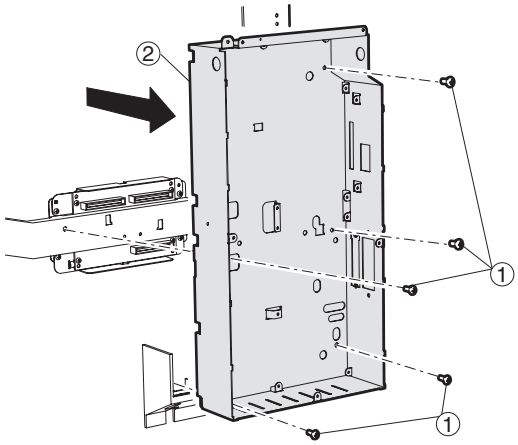
(4) Motherboard PWB

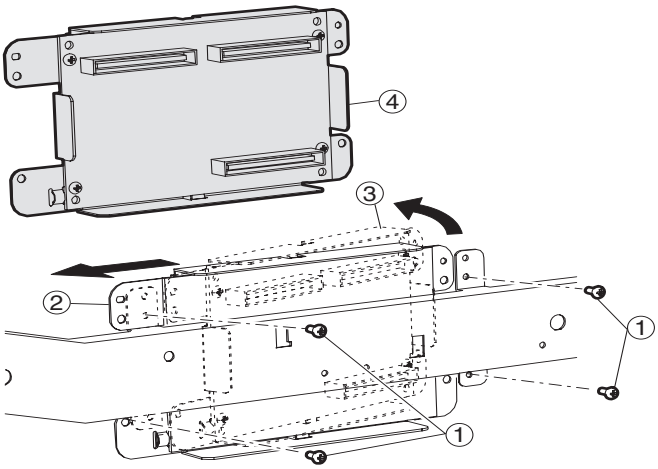


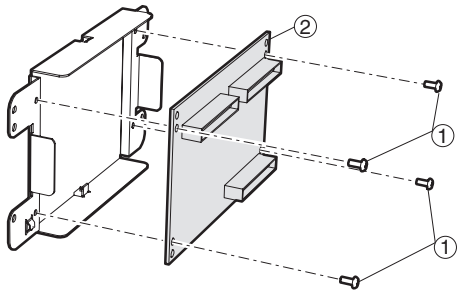




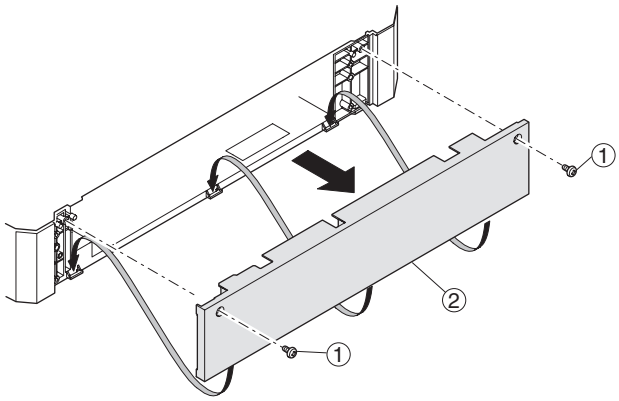


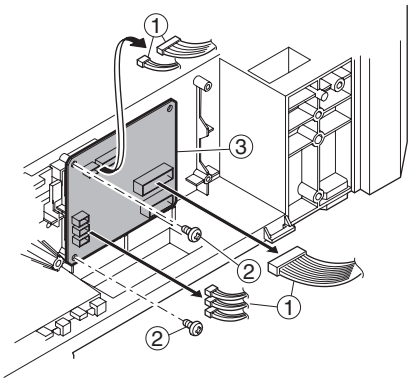




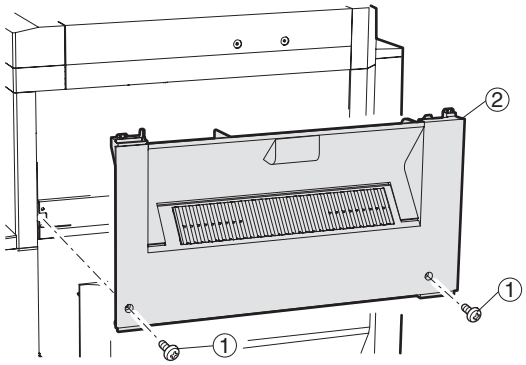


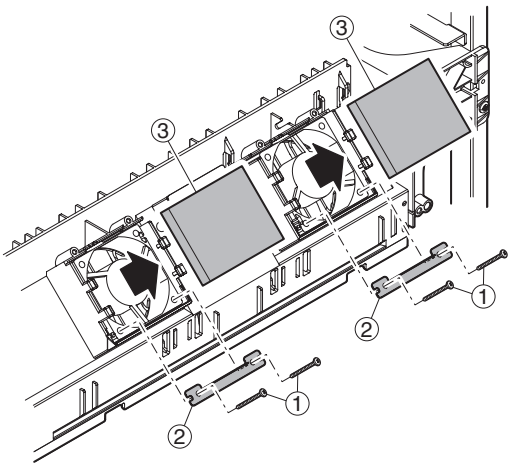
(5) Second interface PWB



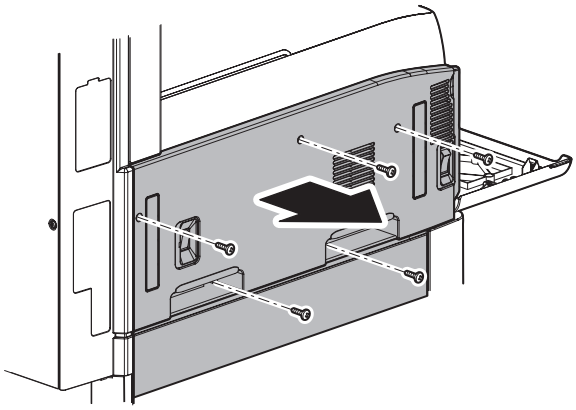


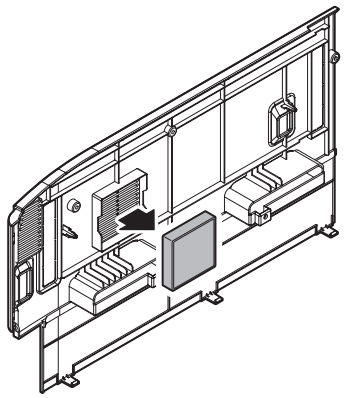
K. Ozone filter





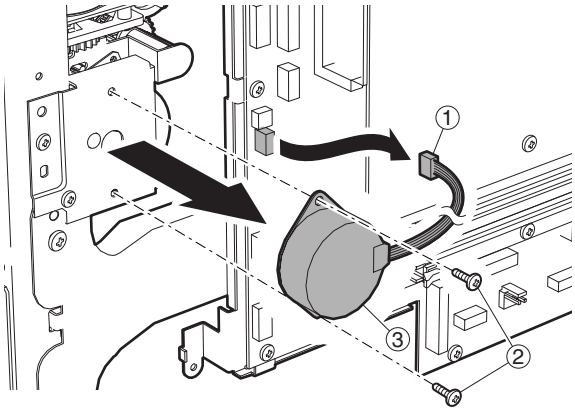
Note: Before removing the left cover, remove the No.1 tray in advance.



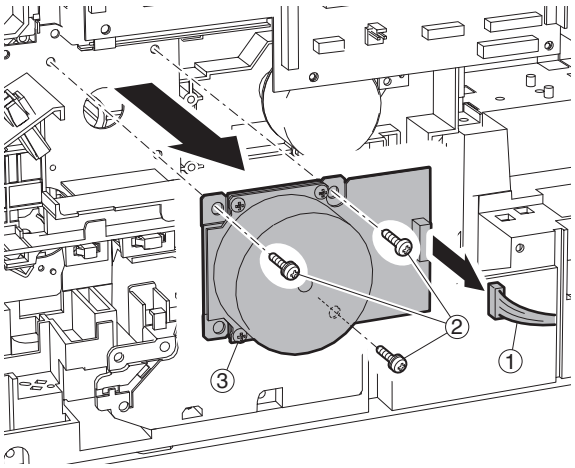


L. Drive section

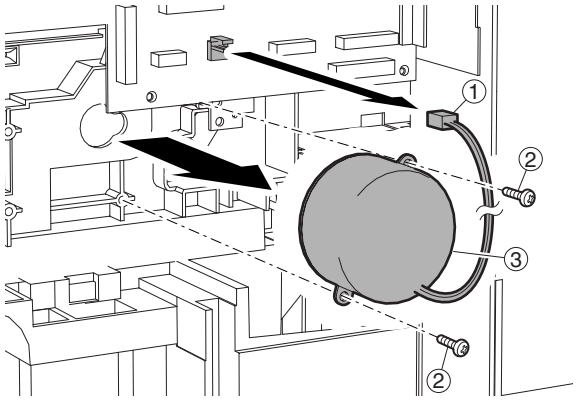
(1) DUP reverse motor



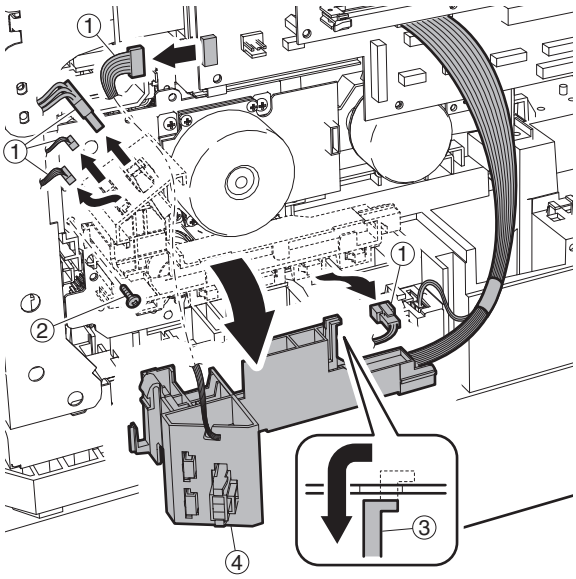
(2) Main drive motor

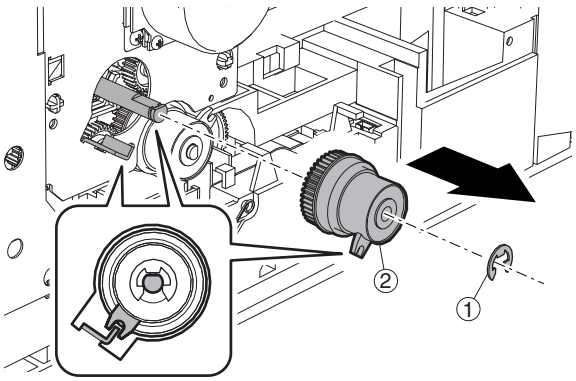


(3) Toner motor

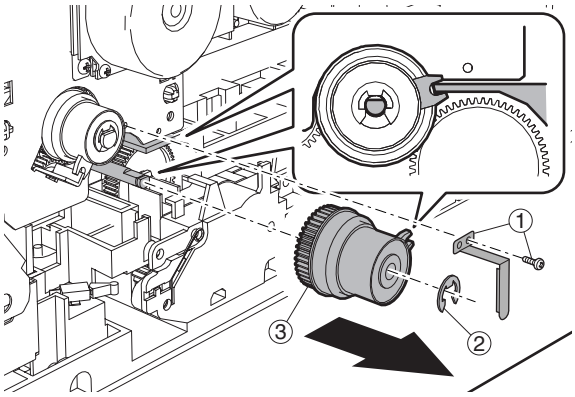


(4) PS transport clutch

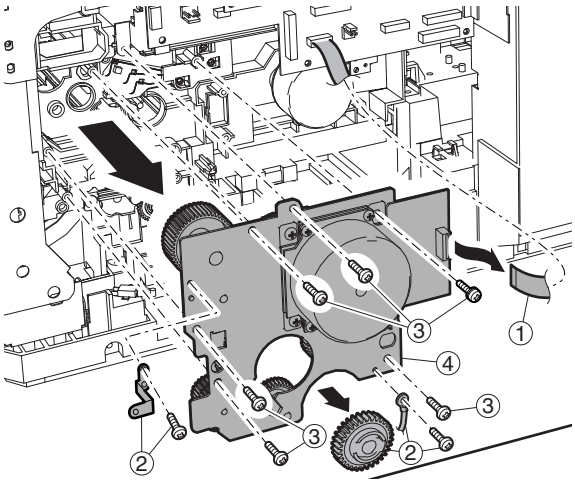




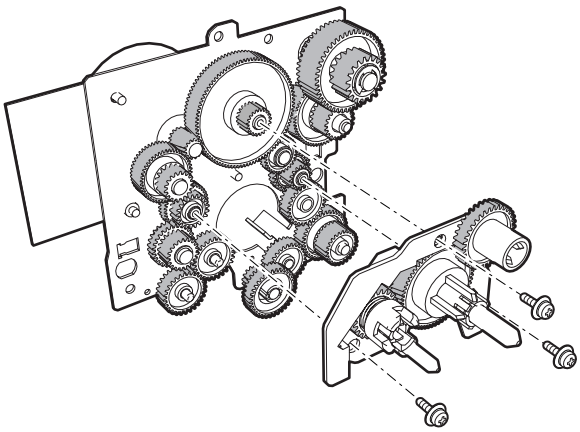
(5) Paper feed clutch



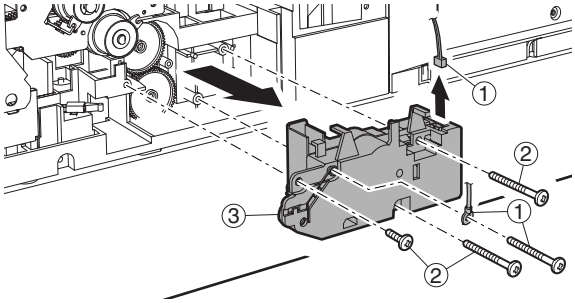
(6) Drive unit

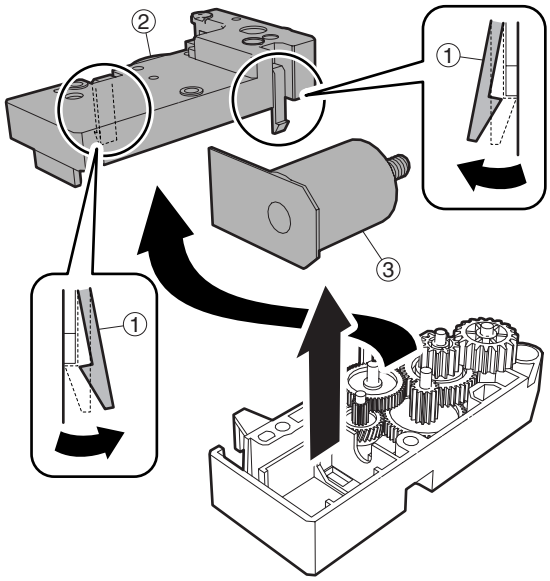


Drive unit (Grease application part)



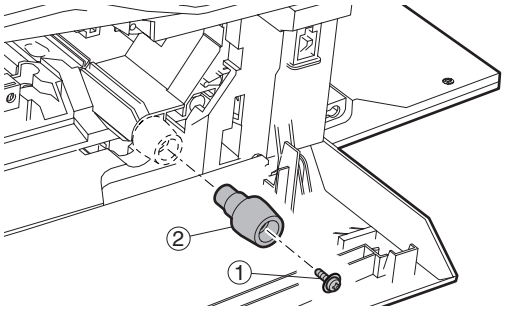
(7) Lift up motor

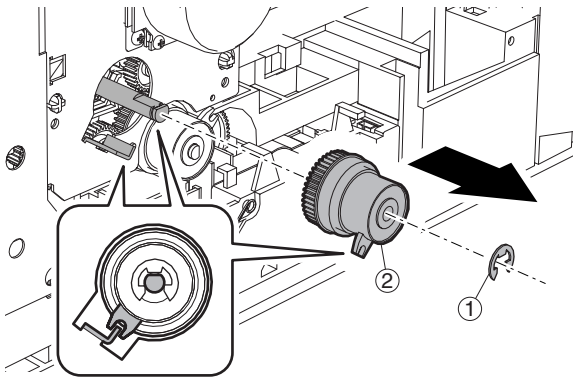


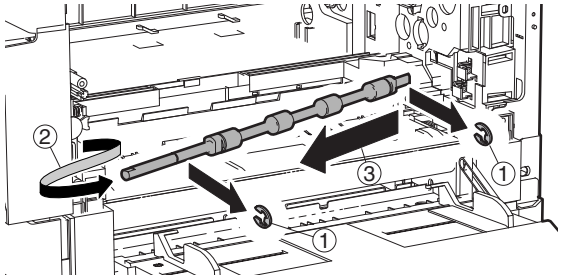


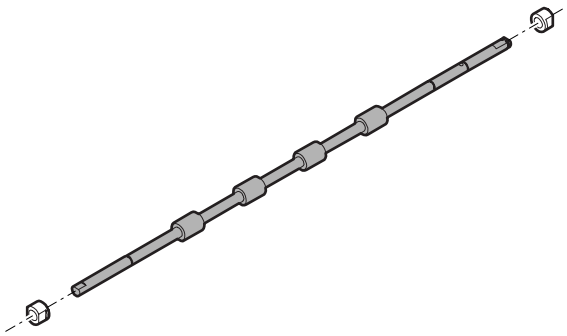
M. Transport section

(1) Transport roller

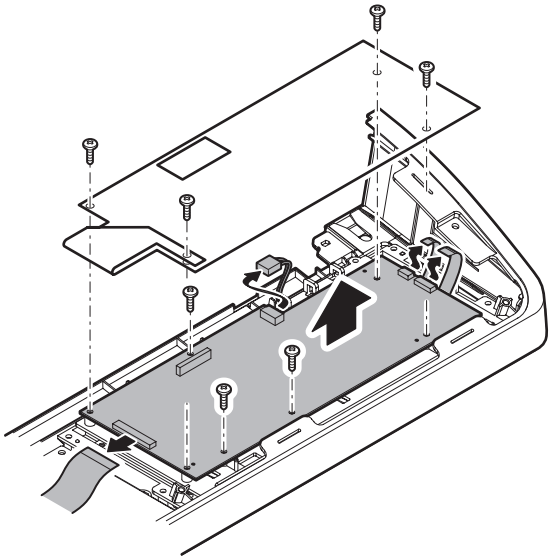






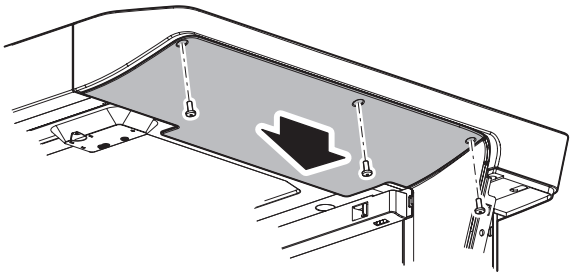


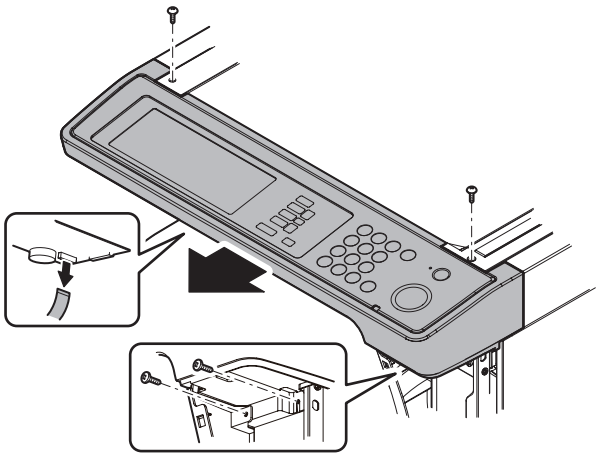
(2) OPU PWB



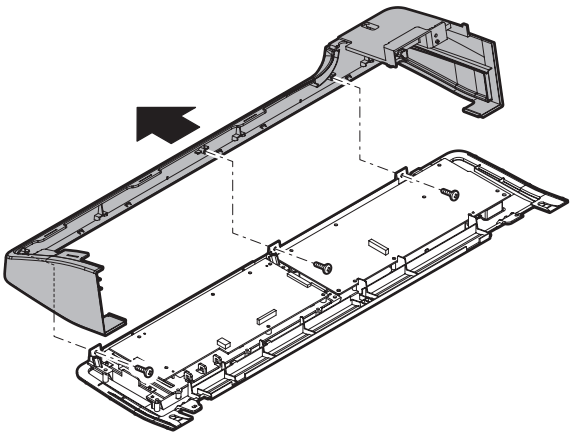
N. Operation section

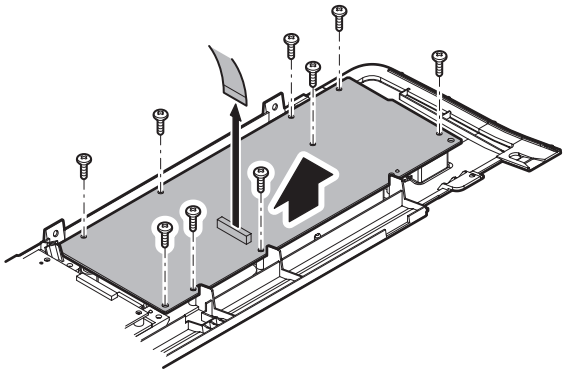
(1) Operation section



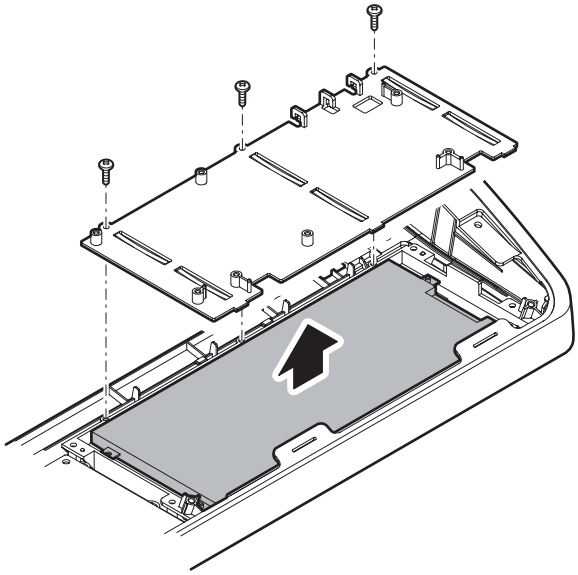


(3) Key PWB



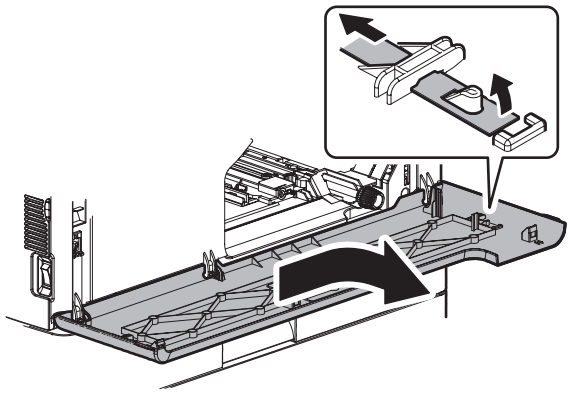


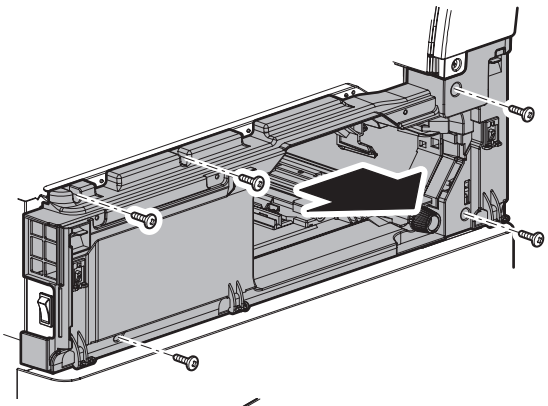
(4) LCD unit

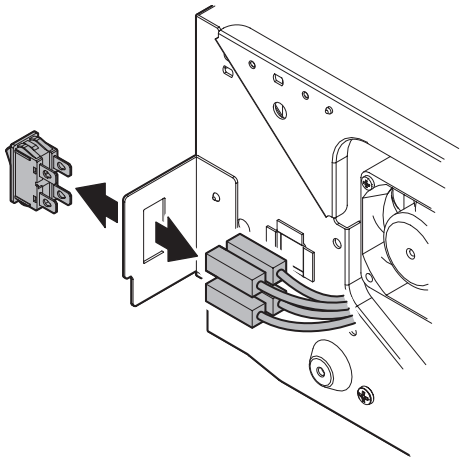


O. Switch

(1) Power switch



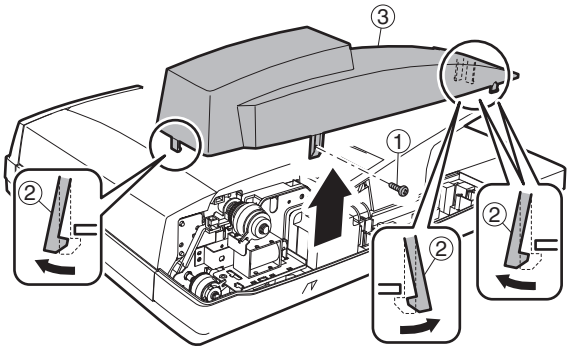


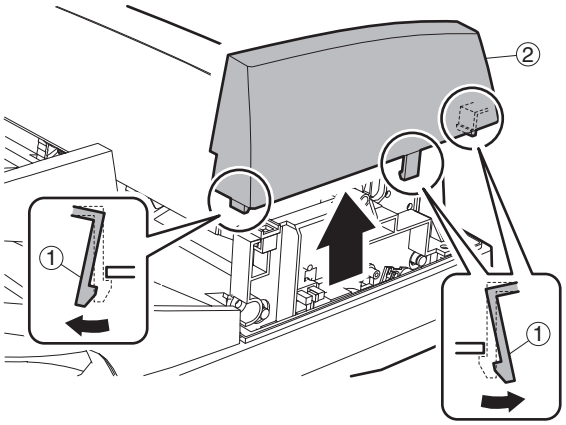


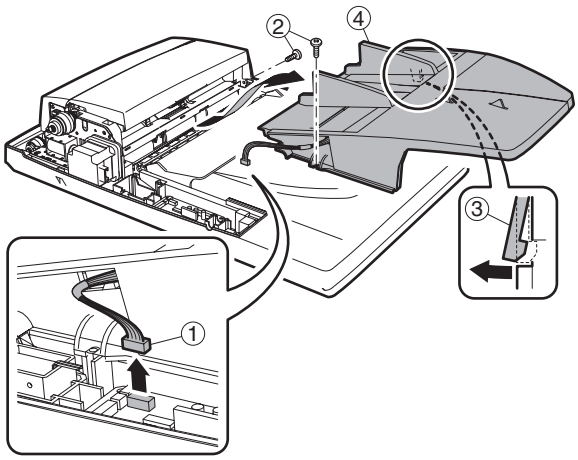
P. RSPF

(1) Document tray section

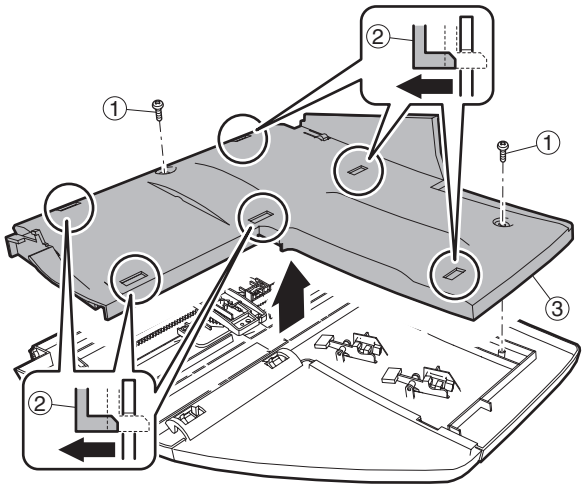
a. Document tray unit

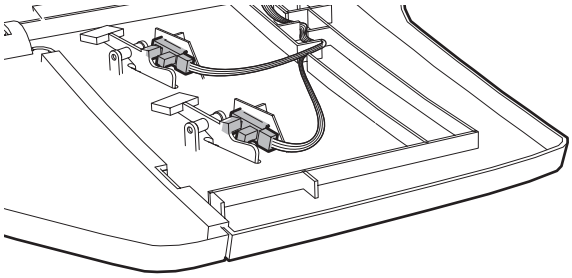




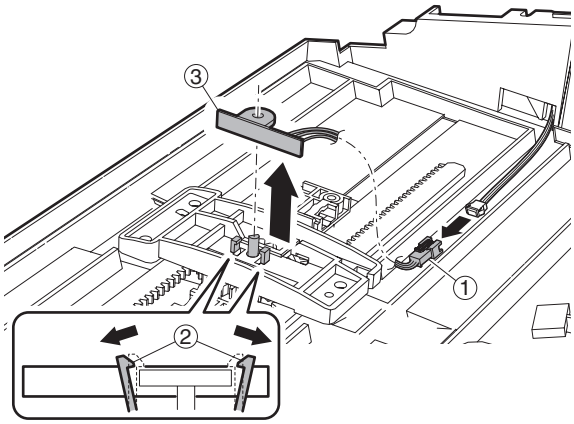


b. Document length sensor



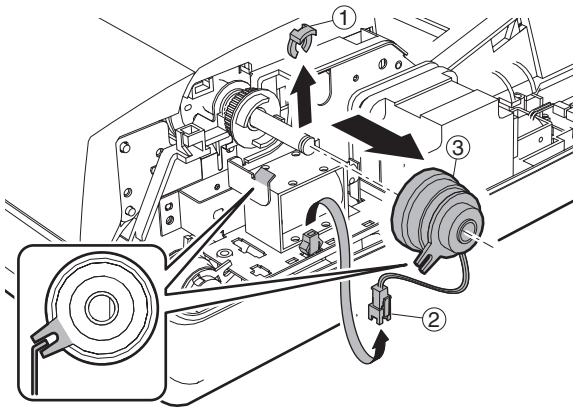


c. Document width resistor PWB

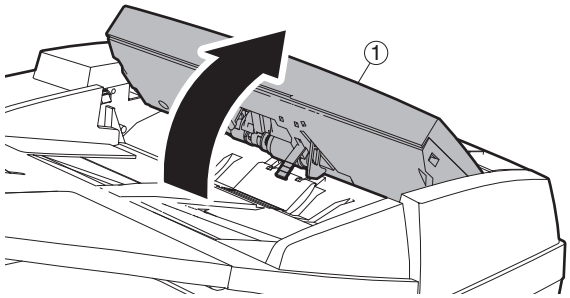


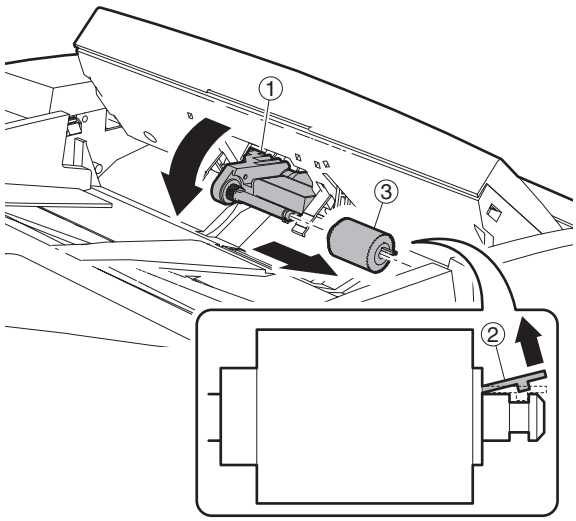
(2) Paper feed unit section

a. Paper feed clutch

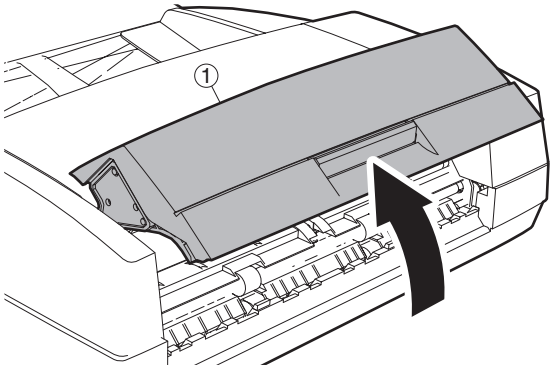


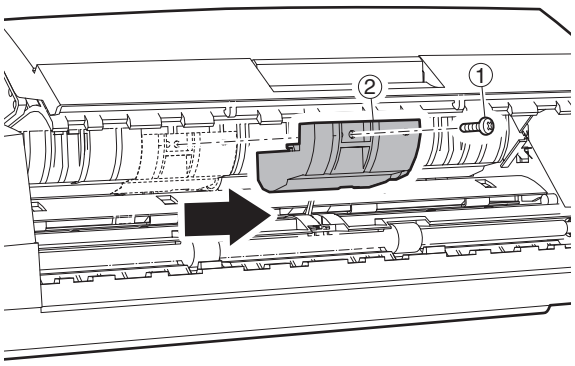
b. Pickup roller

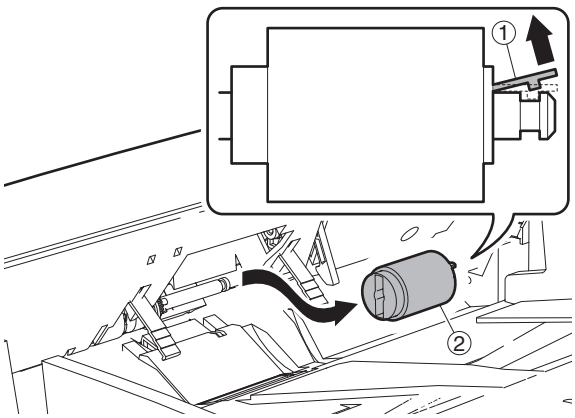




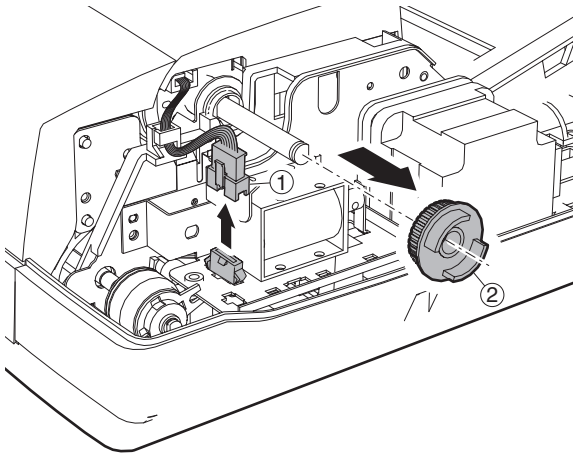
c. Paper feed roller

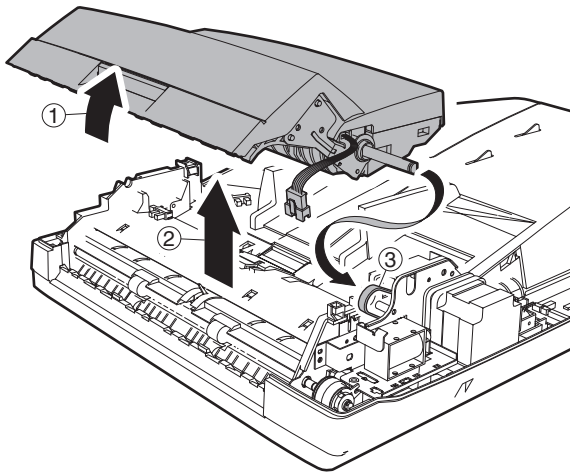




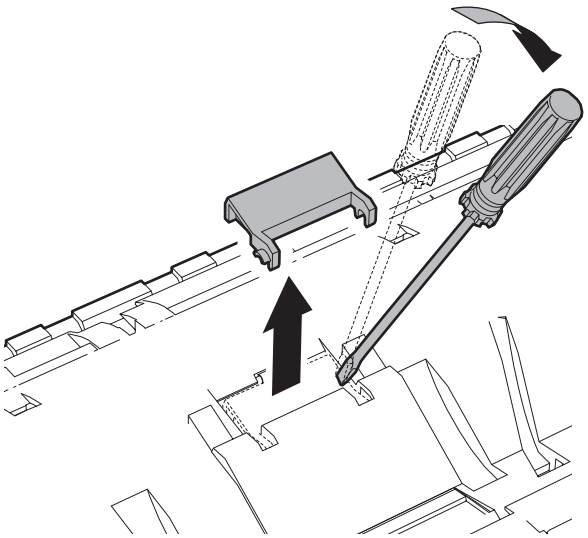


d. Paper feed unit

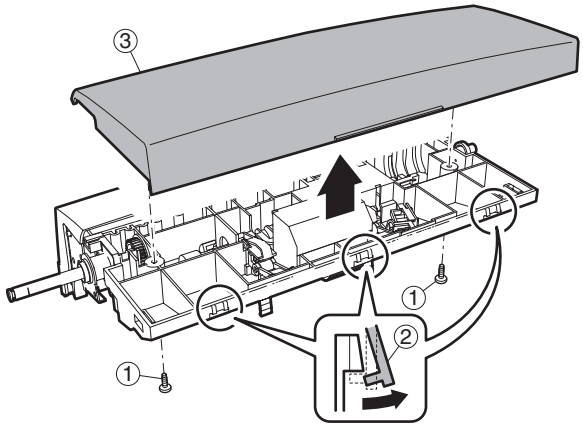


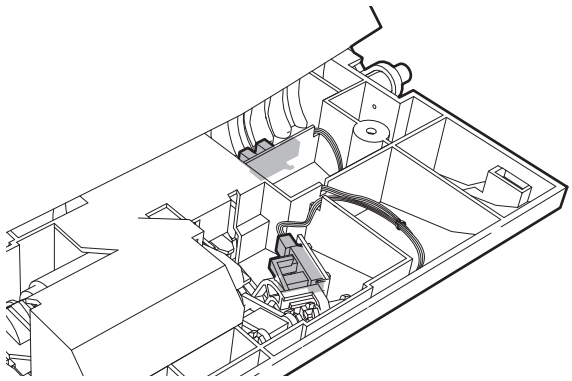


e. Separation sheet



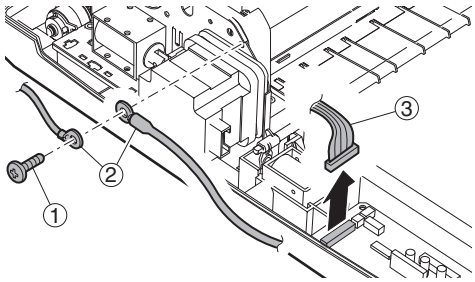
f. Sensor

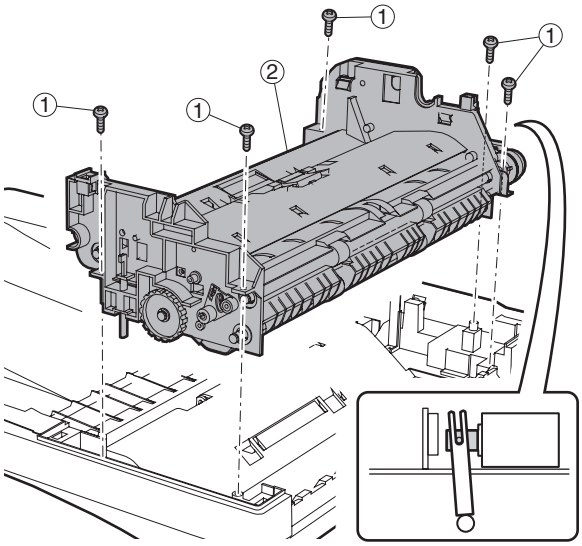




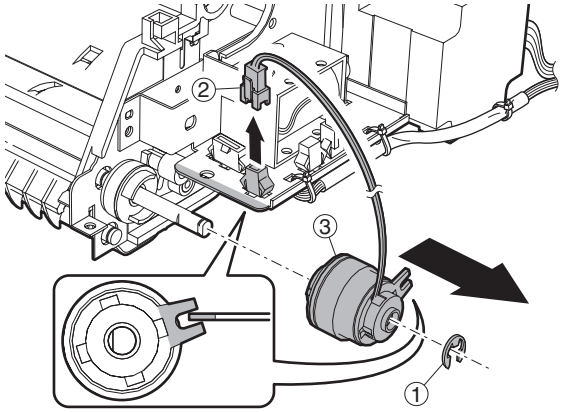
(3) Transport section

a. Transport unit

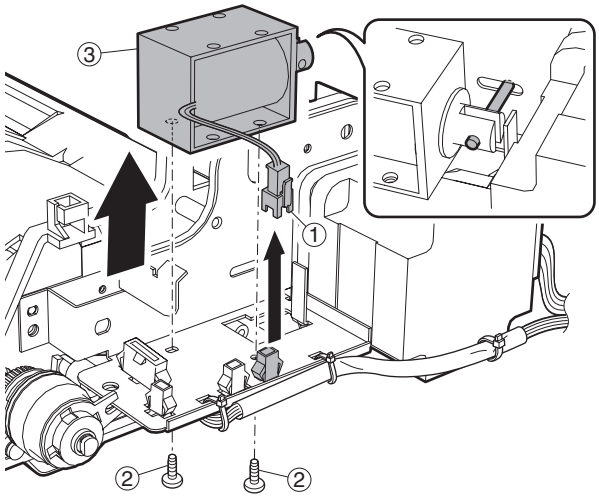




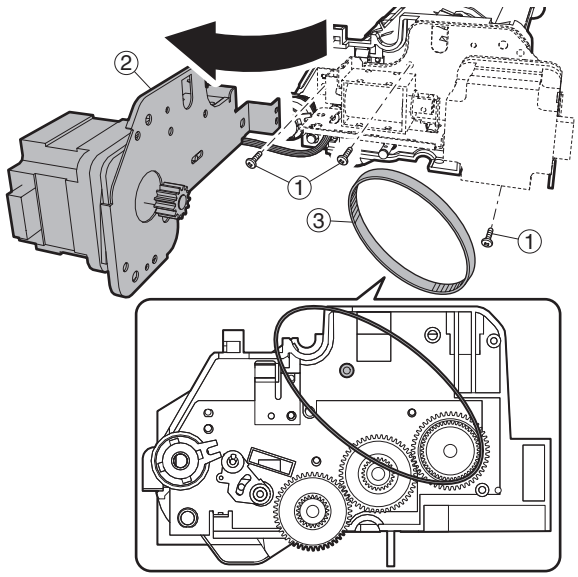
b. PS clutch

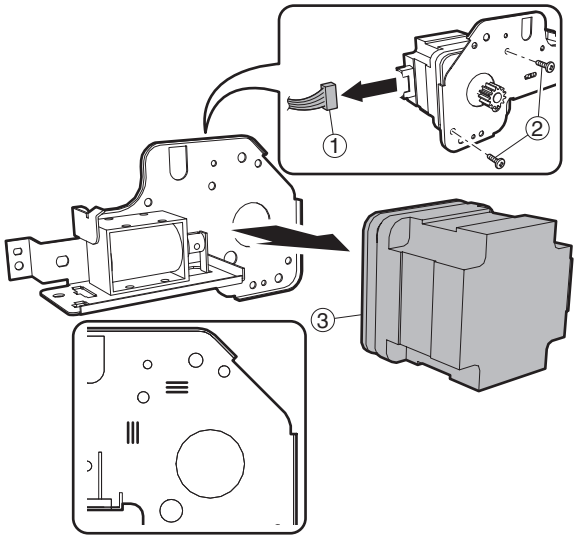


c. Pressure release solenoid



d. RSPF motor

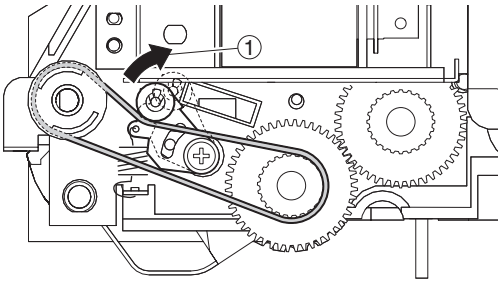


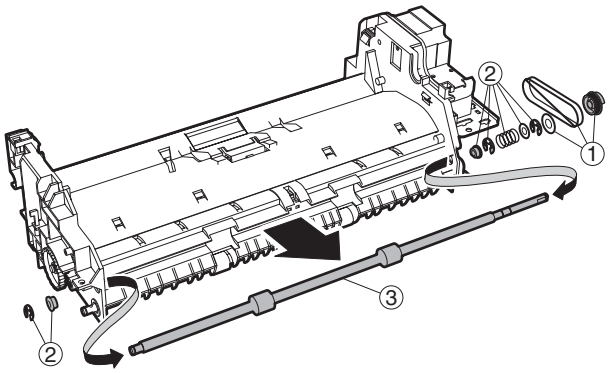


<Note for disassembling the motor>

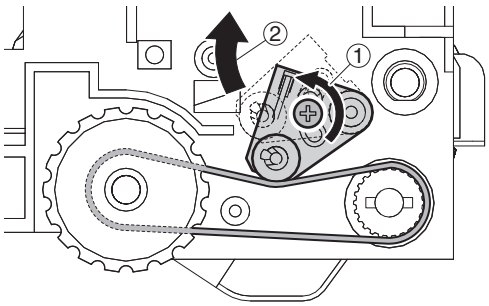
The motor is positioned by the jig. Use the mark when assembling it to the original position.

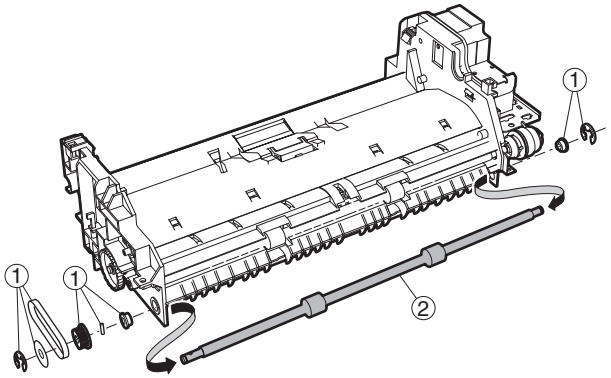
e. Transport roller



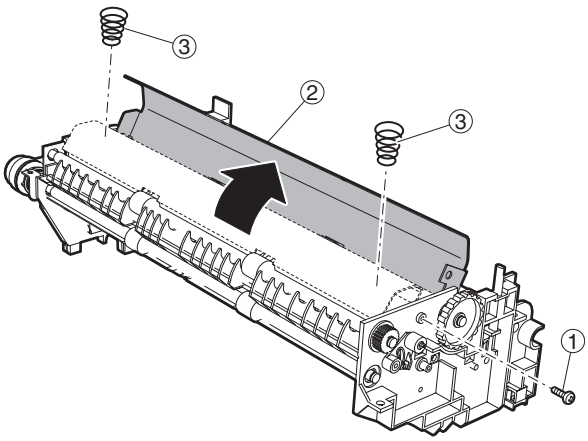


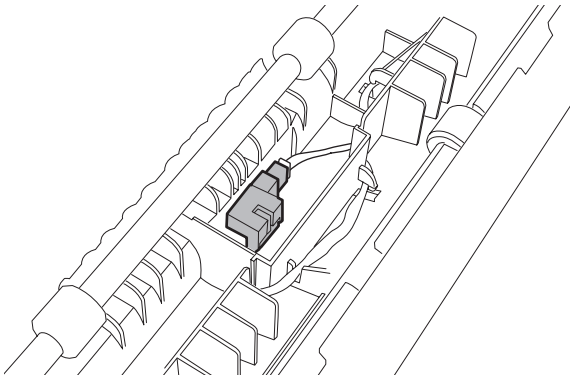
f. Roller



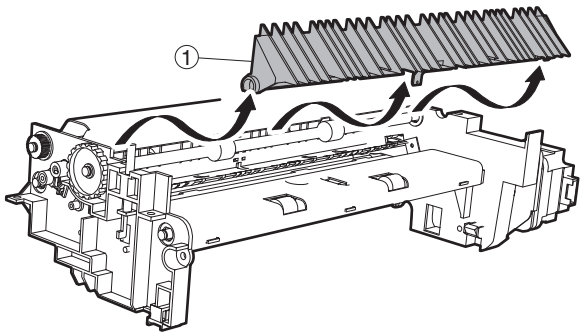


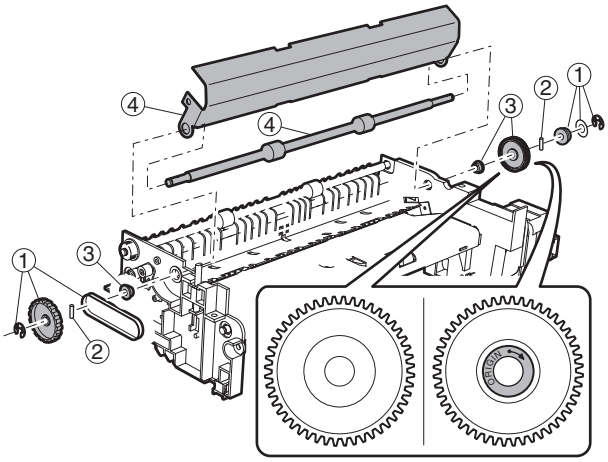
g. Sensor



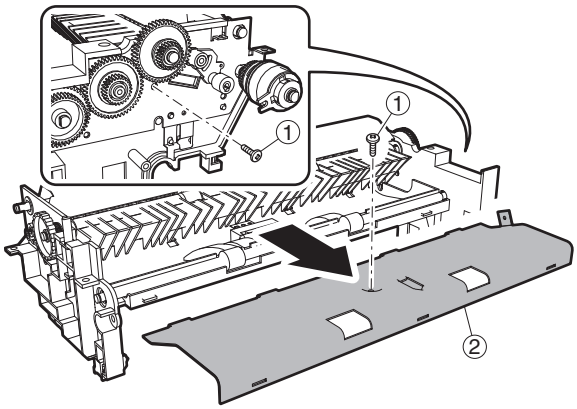


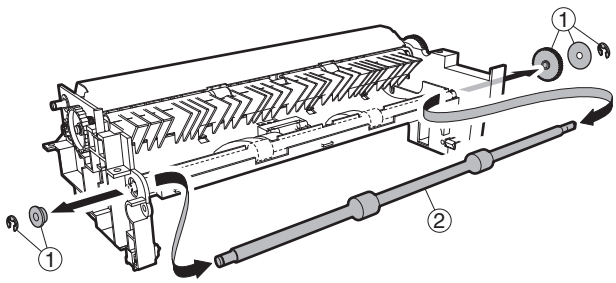
h. Roller





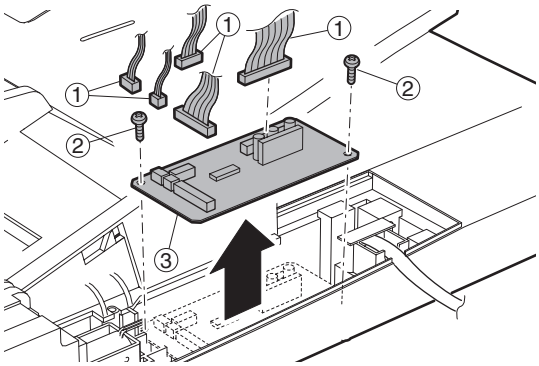
i. Roller



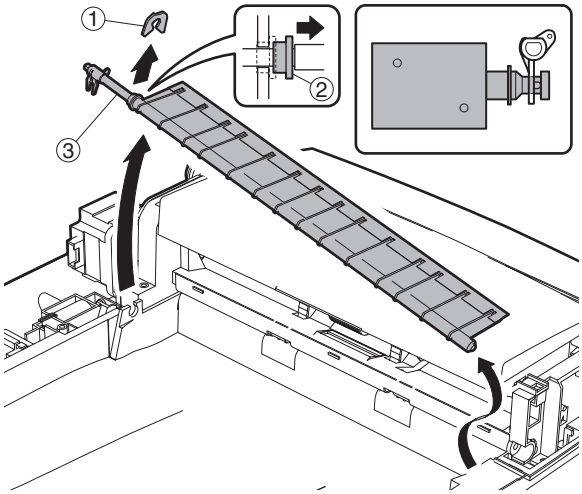


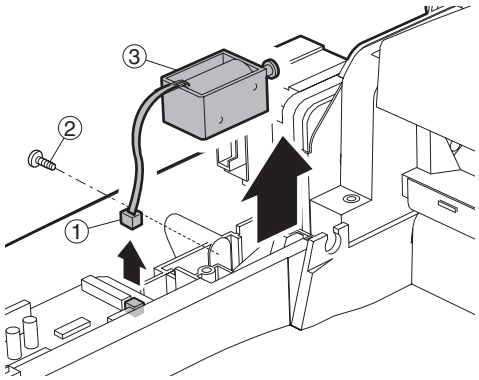
(4) Base section

a. Interface PWB

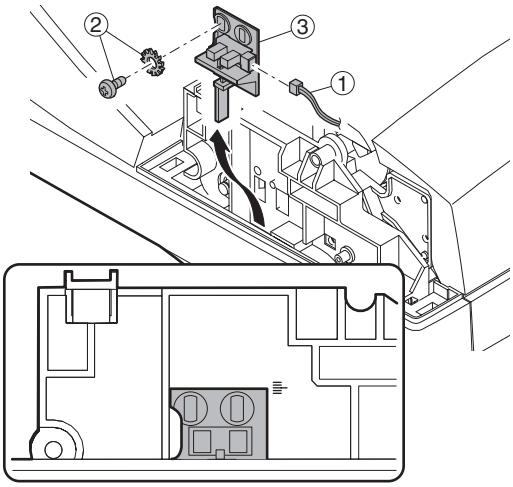


b. Solenoid

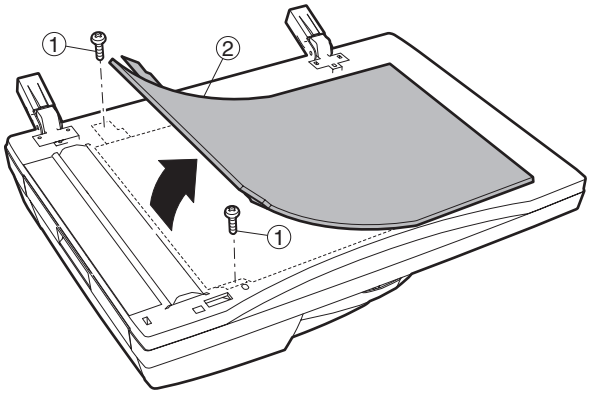


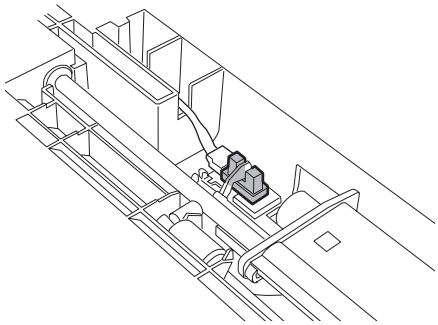


c. Book sensor



d. Sensor





3. Other related items

A. Counter clear

Item	SIM	Remarks
Maintenance cycle setting	SIM 21-1	
Jam/trouble counter clear	SIM 24-1	
Paper feed counter clear	SIM 24-2	
Scan/Stapler/Punch/Saddle stitch counter clear	SIM 24-3	
Maintenance counter clear	SIM 24-4	*
Developing counter clear	SIM 24-5	At developer replacement
Copy counter clear	SIM 24-6	
Drum counter clear	SIM 24-7	At drum replacement
Printer, IMC, Duplex, other counter clear	SIM 24-9	
FAX counter clear	SIM 24-10	
Scanner mode counter clear	SIM 24-15	

* 31 sheet model: When maintenance message is displayed, replace consumption part reaching the number of sheets of maintenance, then clear the replaced part's counter only.

[9] FIRMWARE UPDATE

1. Firmware update procedure

(Necessary items for update)

A Personal computer

B RS232C cross cable (D-sub 9pin to D-sub 9pin, or D-sub 25pin to D-sub 9pin)

C Software for version-up

(ROM type)

The flash ROM is directly installed to each PWB.

(Target PWB)

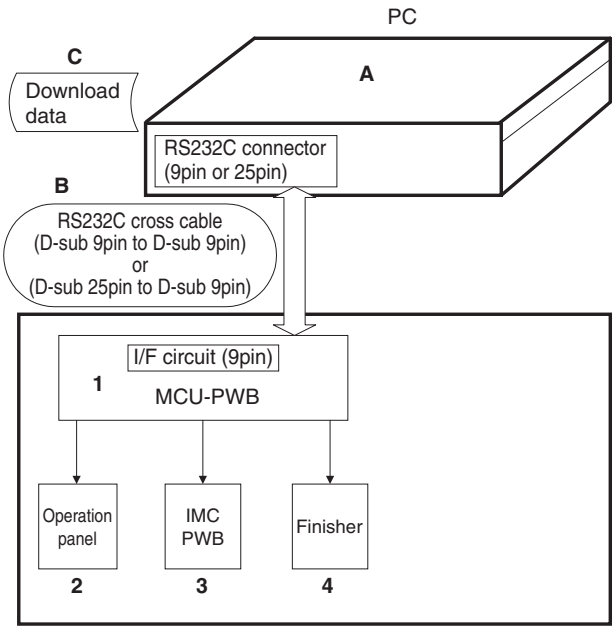
1 MCU PWB

2 Panel PWB

3 IMC PWB

4 Finisher PWB

Outline of Update Procedure



Prepare following files necessary for program update

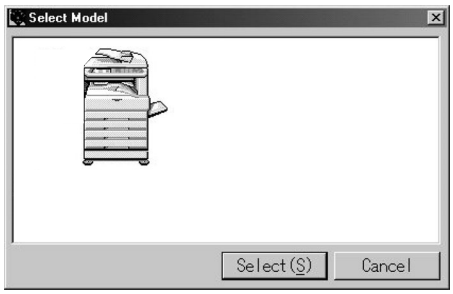
- Maintenance software: maintenance.exe
- Andromeda module file: ProcModelP.mdl
- USB communication program: JGRtoPRN.exe
- Maintenance tool driver: SFZEJENU.inf

A. Firmware update method (for Copier, and fax firm)

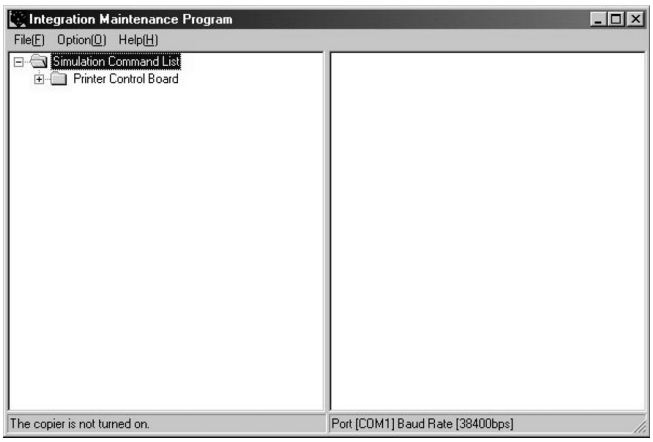
Following operational procedures are for:

- Copier firm
- fax firm

1) Make sure copier is off, and connect it to PC with download cable beforehand.
2) Start up the maintenance program on PC. Select the model name from the model selection dialogue box.

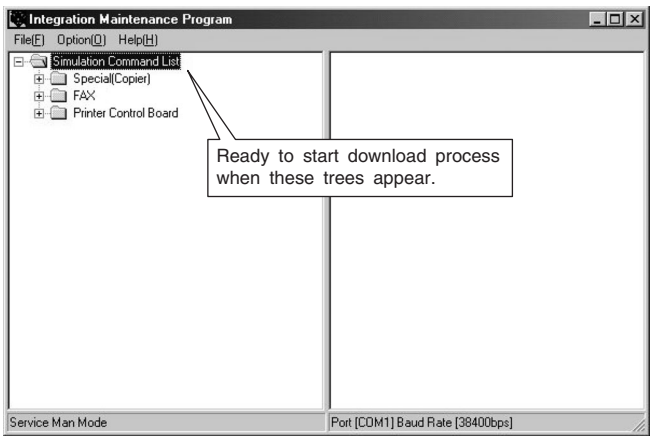


3) Make sure only "Printer Control Board" tree is visible under "Simulation Command List".

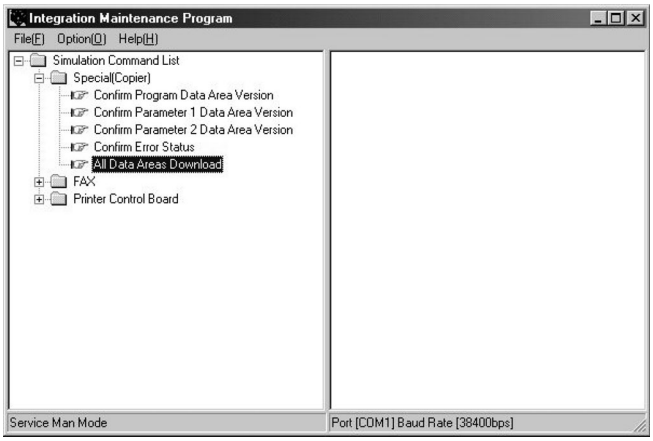


4) Turn on the copier. The machine starts up in the download mode.
5) Additional tree will be visible when downloading maintenance program on PC.

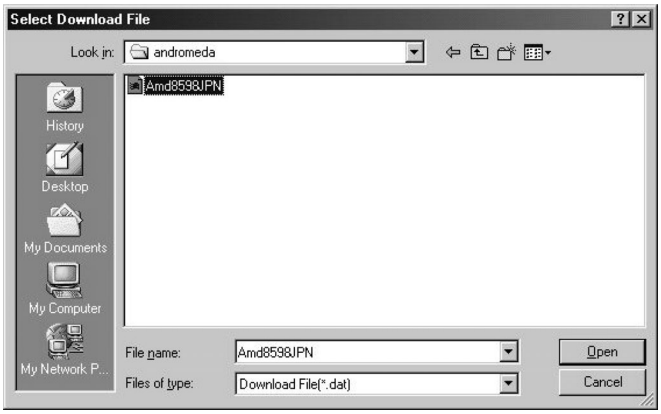
∗ Make sure to start up maintenance program before turn on the machine.



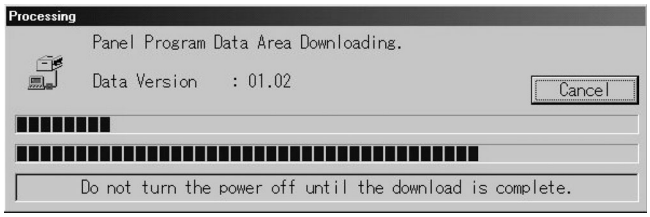
6) When downloading copier firm, expand "Special(Copier)", and double-click on "All Data areas Download".



7) Select download file(*.dat), and press "Open" button.



8) Download procedure starts automatically.



9) Notice message "Download is complete. Check the copier panel to make sure the download is complete." will appear on PC.

10) Close the maintenance program, and turn off the copier. Turn on the copier again after pulling the plug.

This is the end of download procedure.

* It is possible that download process somehow went wrong if the copier does not start up properly. In that case, start up the copier and maintenance program in download mode by repeating the step 1)-5) again. And then, Expand "Special", and double-click on "Confirm Error Status". If any of the message besides "No error has been occurred" appears, it means that download is incomplete, so please try again.

B. Printer Control Board firmware download method

Please follow the procedure below:

* Note: It is okay to use serial cable instead.

1) Turn on the copier.

2) Start up in copier test command mode, and execute Sim67-14 "FLASHDOWNLOAD".

3) Machine side, PC side: Connect the PC with the machine (printer board) with a USB cable.

4) And then, press OK key when notice message "PRESS OK KEY" appears on the panel. Another message "Please Send Data" will appear after a while.

5) PC side: The detection wizard of a new hardware is booted. Install the driver in the procedures below.

   a. Select [Install from the list or a certain position] on the detection wizard of a new hardware, and press [Next] button.

   b. Select [The following position is included], set the retrieval position to the same folder as the maintenance tool driver (sfzejenu.inf), and press [Complete] button.

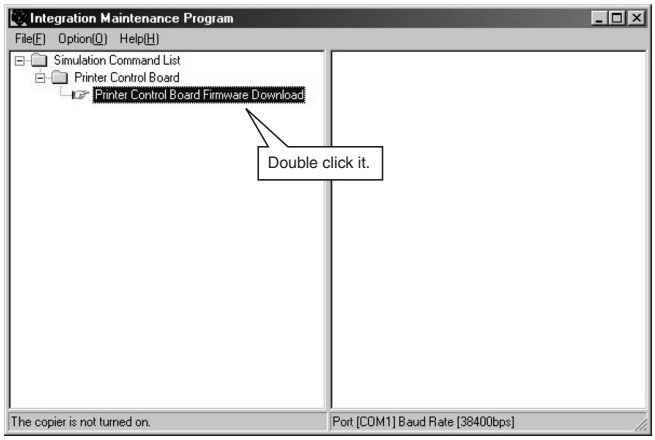
   c. Follow the directions on the screen, press [Continue] button, and press [Complete] button.

   d. If the menu urges rebooting the OS, reboot the OS.

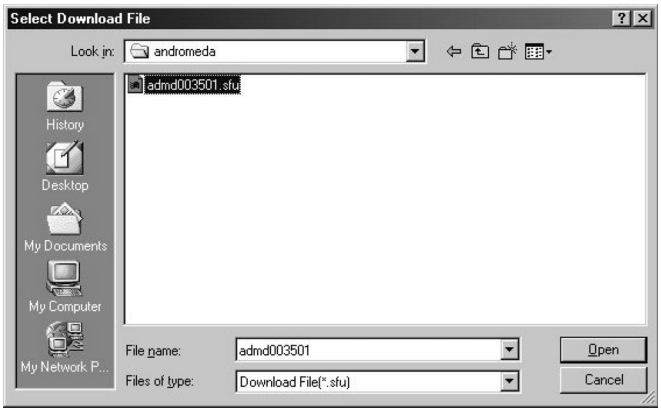
   e. After completion of installation, open [Printer and FAX] dialog, and set [Maintenance Program Driver] as the default printer.

6) Start up the maintenance program on PC. Select the model name from the model selection dialogue box.

7) Expand "Printer Control Board", and double-click on "Printer Control Board Firmware Download".



8) Dialog box will appear to select download file.



9) Select Download file(*.sfu) and press "Open" button.

10) Download procedure will starts automatically.

11) Notice message "Data Send Complete" will appear on PC.

12) Notice message "Download is complete. Check the copier panel to make sure the download is complete." will appear on PC.

13) Close maintenance program, and reset the machine by pressing CA key.

This is the end of the download procedure.

C. Others (Troubleshooting)

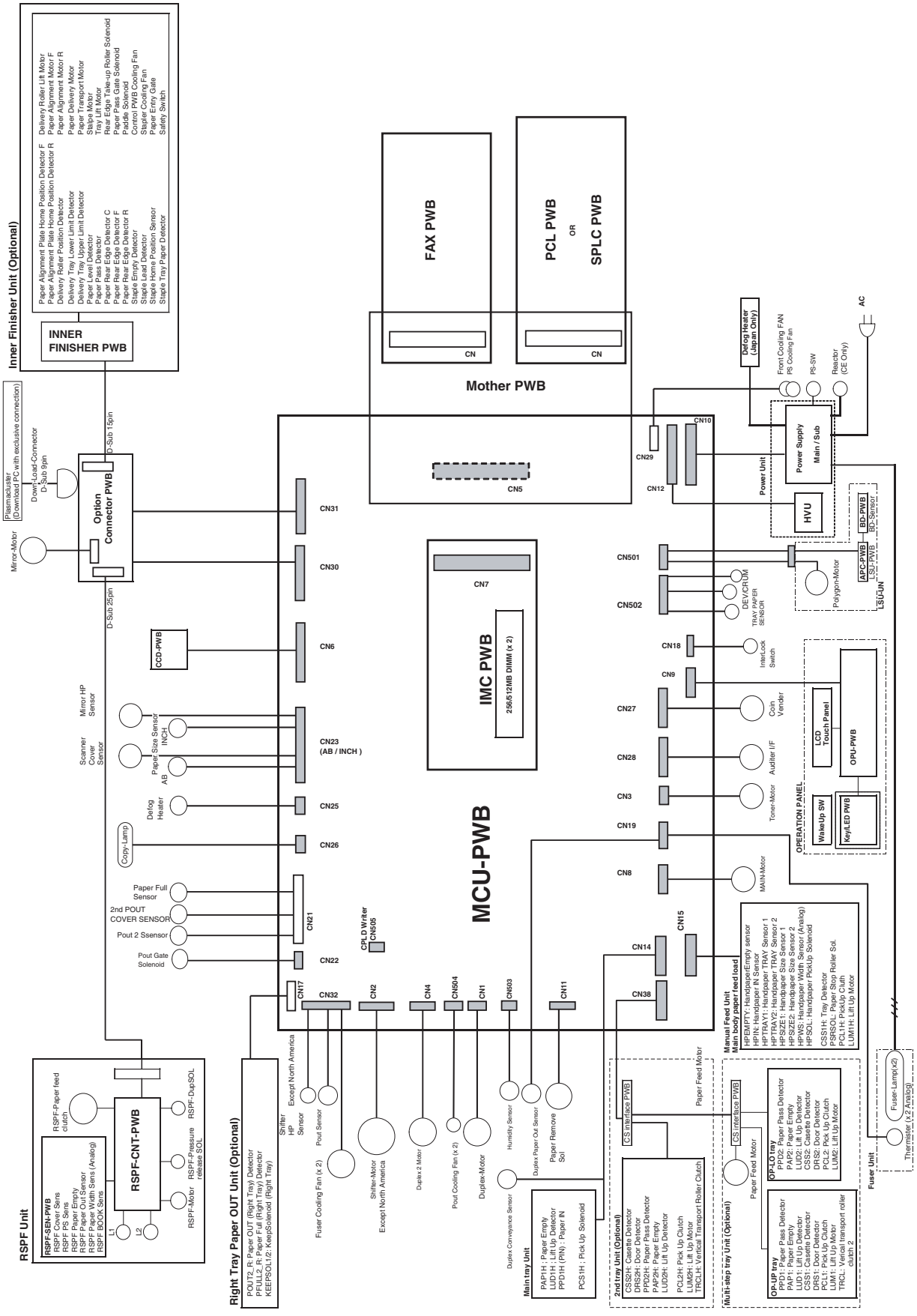
Followings are the error possibly occur during the download process and troubleshooting method.

No	Warning/error message	Detail
1	Incorrect destination. Continue with the download process?	Destination of download file and copier doesn't match. Possible to select either continue or cancel the job.
		[TROUBLESHOOTING] To change destination, select "Yes". If not, select "No" and cancel download process.
2	Incorrect download file.	Invalid download file for the machine is selected, or the file format is not correct.
		[TROUBLESHOOTING] Confirm the download file. Possibly the improper download file is selected.
3	No downloadable data included.	Unable to find appropriate data in selected download file.
		[TROUBLESHOOTING] Confirm the download file. Possibly the improper download file is selected.
4	This option not available.	Download procedure is executed on uninstalled optional kit.
		[TROUBLESHOOTING] Confirm installed optional kit. Confirm the download file. Possibly the improper download file is selected.
5	The data size exceeds the Flash ROM size. Try again with the appropriate size of data.	Panel flash ROM size is not enough to execute download procedure.
		[TROUBLESHOOTING] Confirm the download file. Possibly the improper download file is selected. Exchange the flash ROM to the one which has more capacity.
6	Time out error.	Transmission error Unable to receive data from the machine among the certain period of time.
		[TROUBLESHOOTING] Restart maintenance program after confirming communication port or communication cable.
7	Communication (incoming) error.	Incorrect download procedure. The machine did not proceed download procedure correctly.
		[TROUBLESHOOTING] Restart maintenance program after confirming communication port or communication cable. Make sure the communication device of PC(either COM or parallel) is under right condition.
8	Checksum error.	Transmission error The check sum value of the transmission data is mismatch.
		[TROUBLESHOOTING] Restart maintenance program after confirming communication device of PC (either COM or parallel) is under right condition.
9	Error during the download process. Error code: 0xXXXXXXXX	Download data file operation error.
		[TROUBLESHOOTING] Restart maintenance program after confirming the selected download file is not abnormal and not using other application.
10	An error. [0xXXXXXXXX]	The error occurred except the above errors.
		[TROUBLESHOOTING] Restart maintenance program after confirming communication device of PC(either COM or parallel) is under right condition.

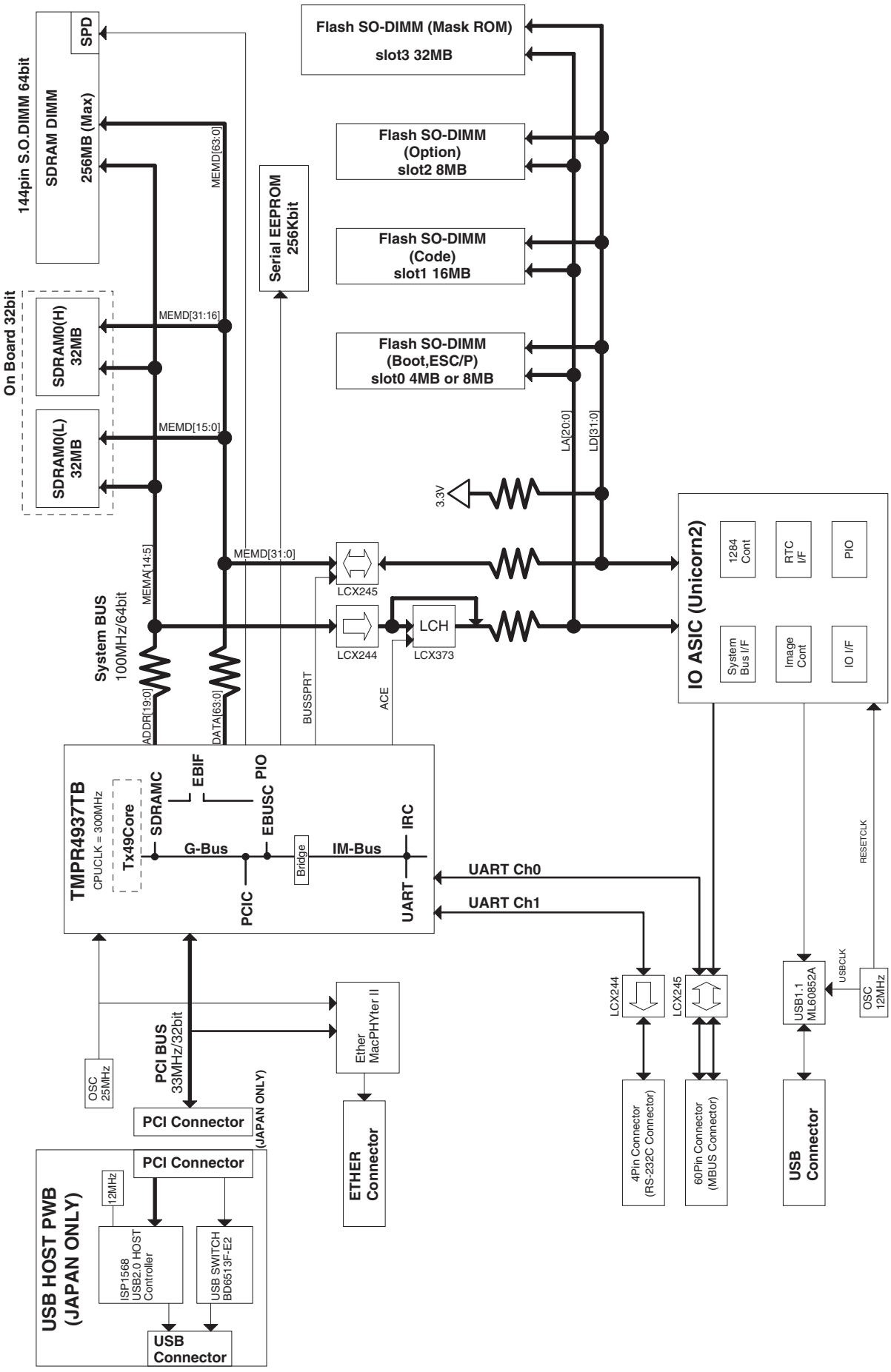
[10] ELECTRICAL SECTION

1. Block diagram

A. SYSTEM BLOCK DIAGRAM

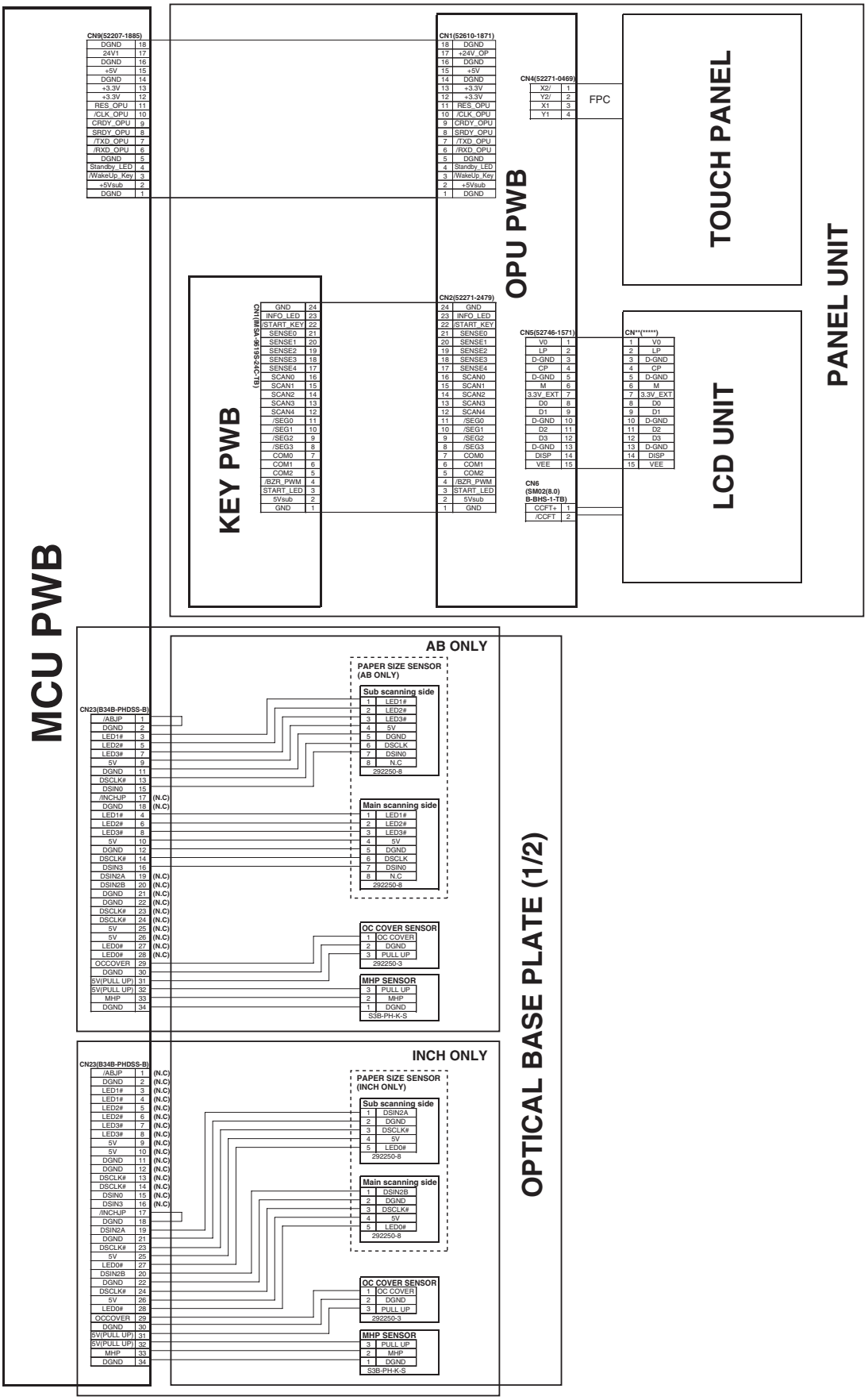


B. PCL PWB BLOCK DIAGRAM

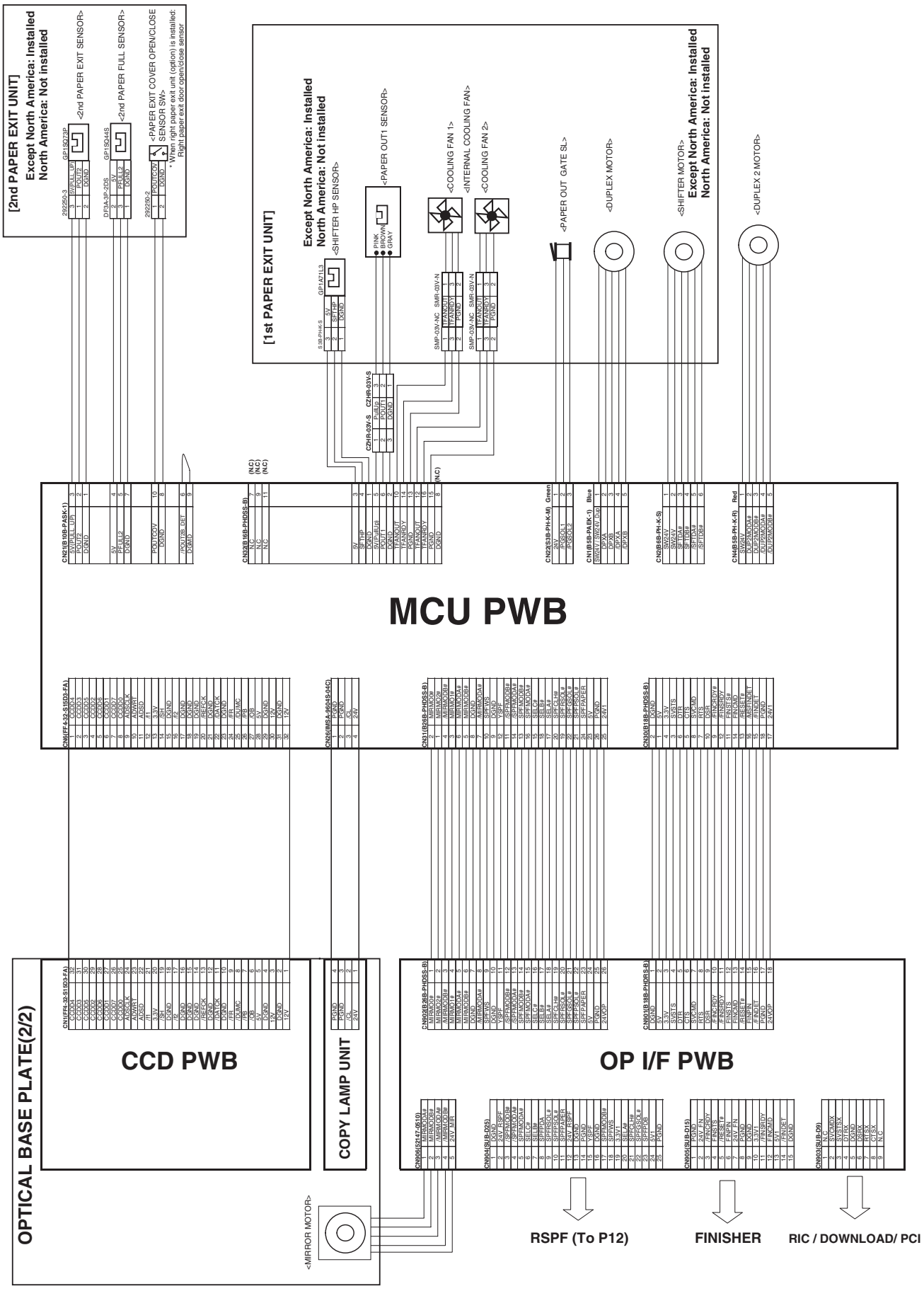


2. Actual wiring chart

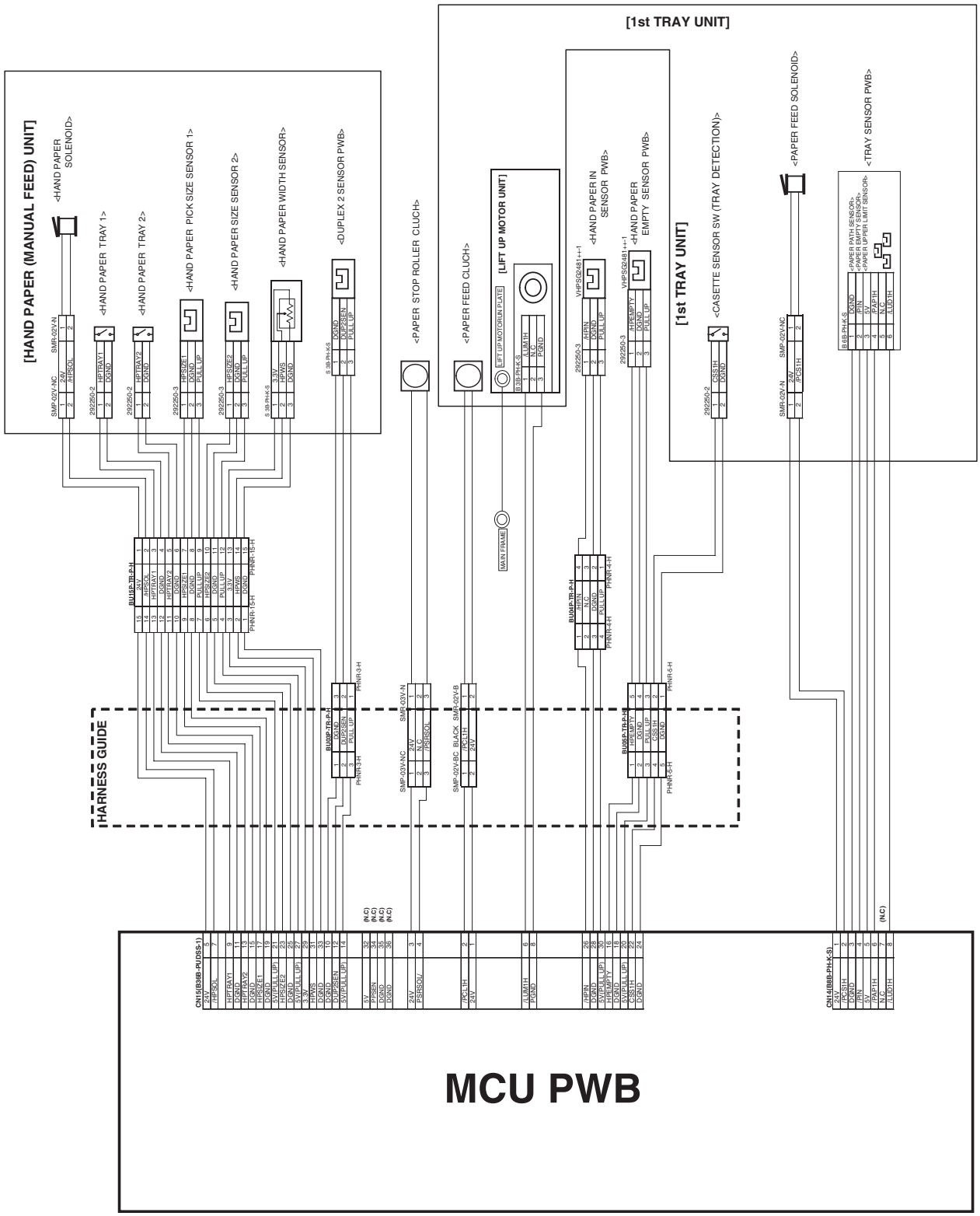
A. MCU - Panel unit, Optical base plate sensor section (P1)



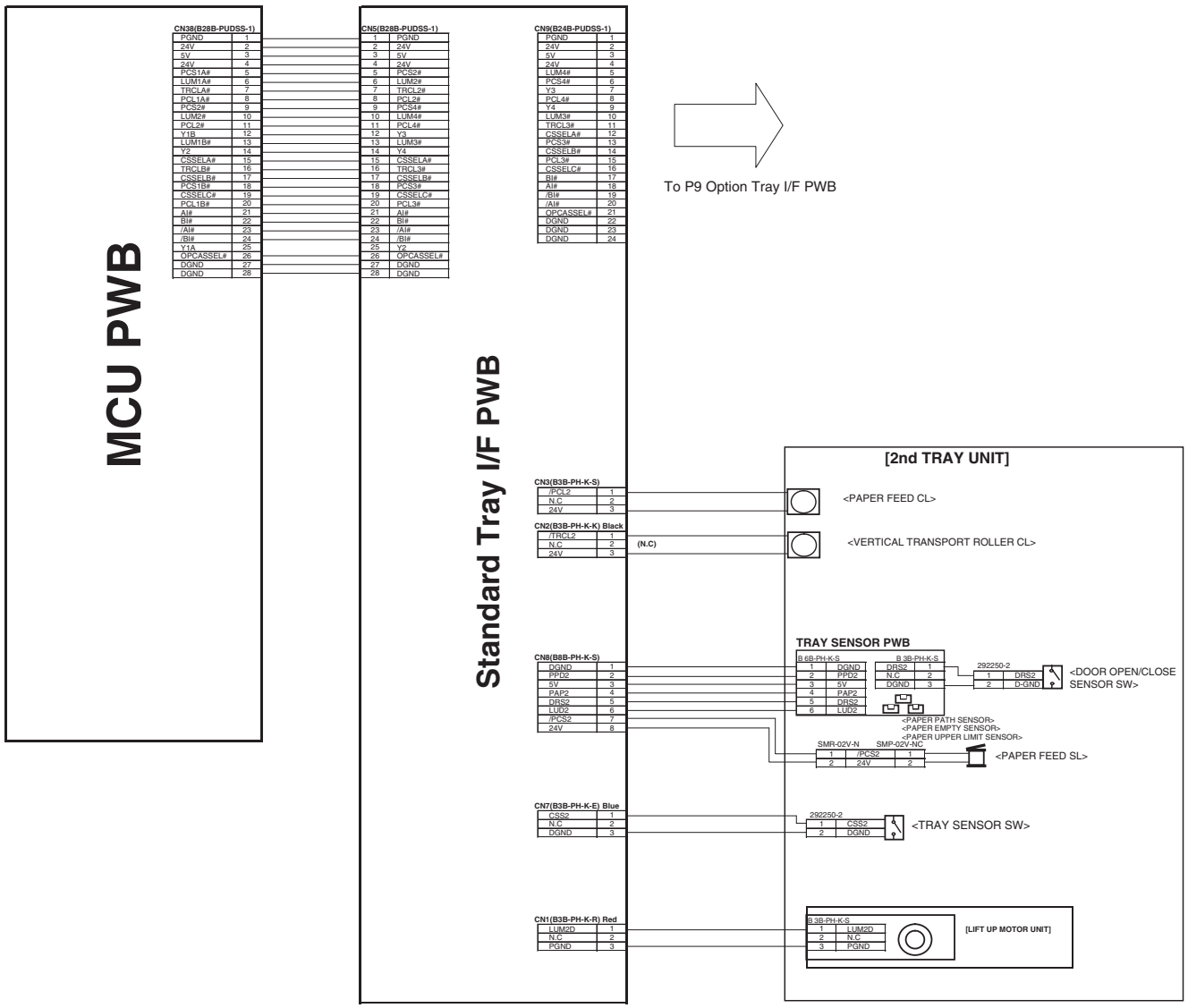
B. MCU - Optical base plate 2, OP I/F PWB, 1st paper exit unit, 2nd paper exit unit (P2)



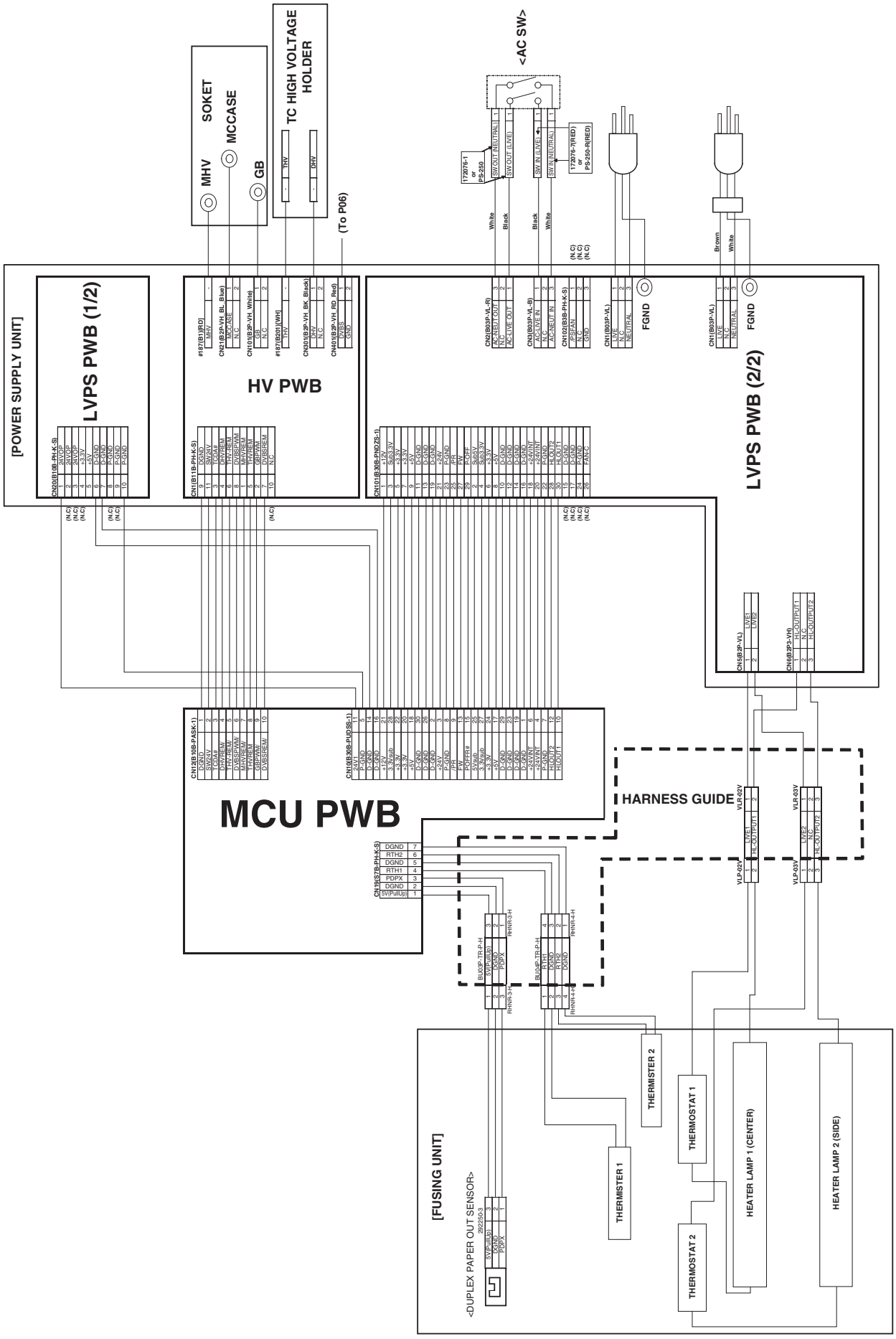
C. Manual feed, 1st tray unit section (P3)



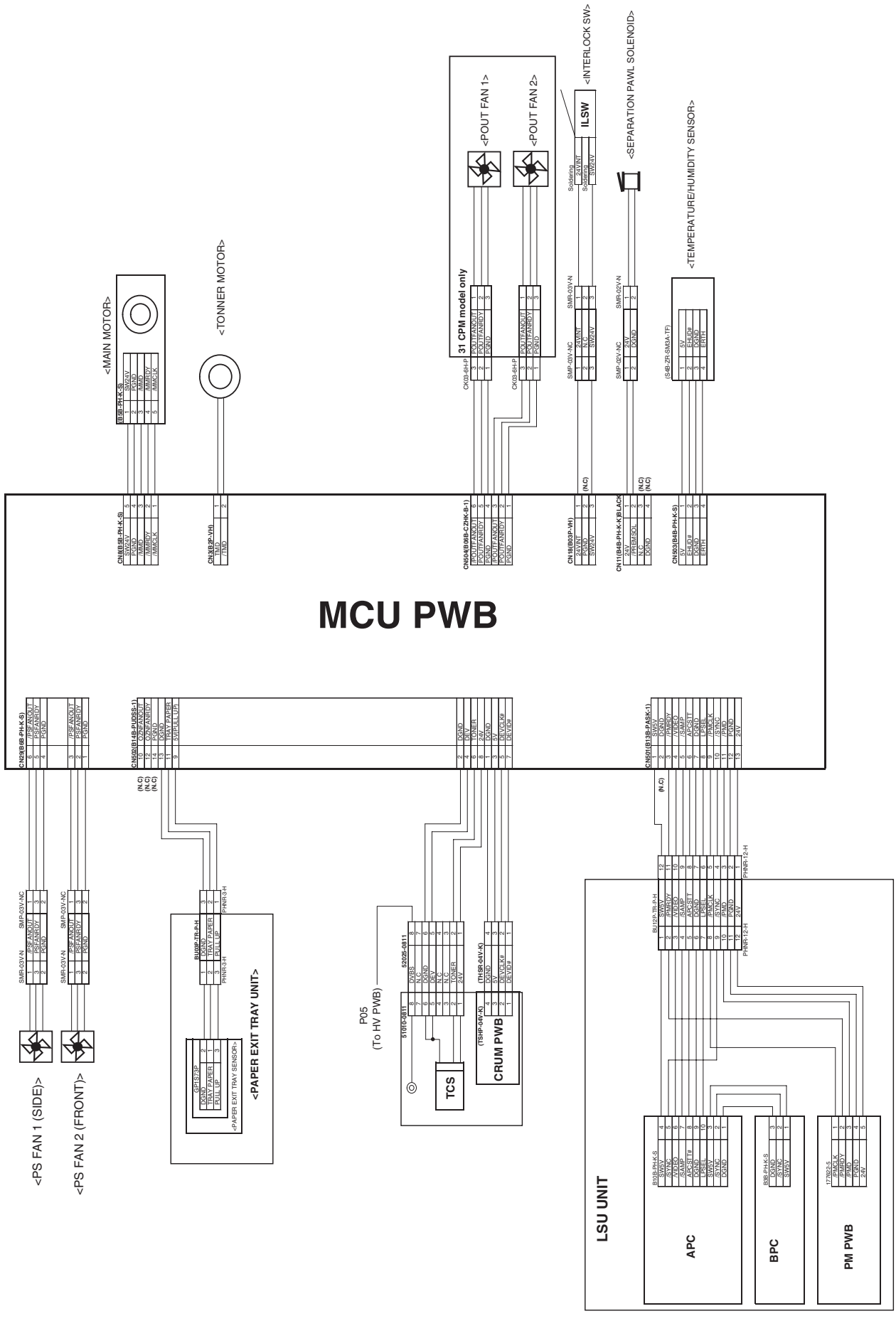
D. 2nd tray unit section (P4)



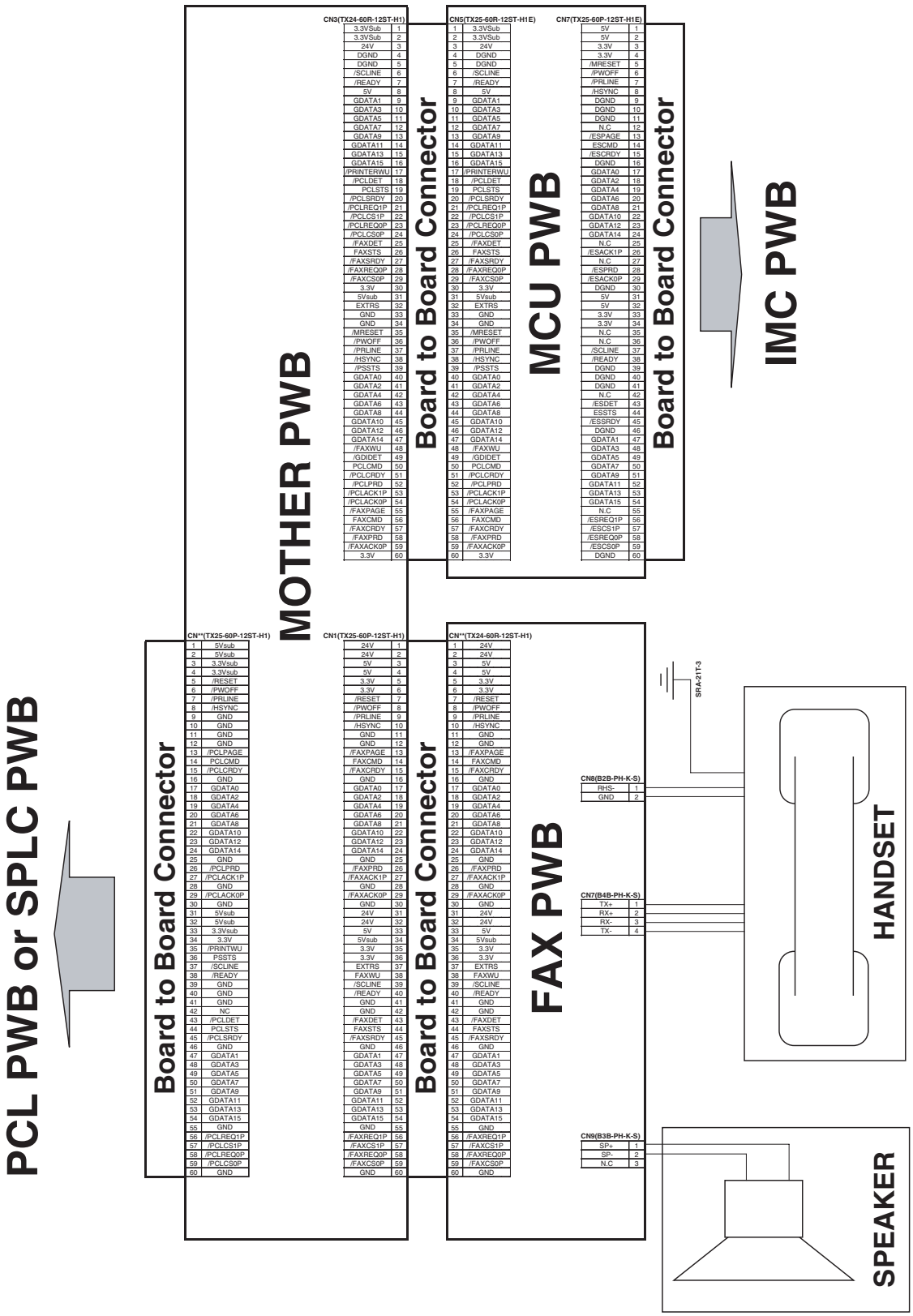
E. Fusing unit, Power supply unit section (P5)



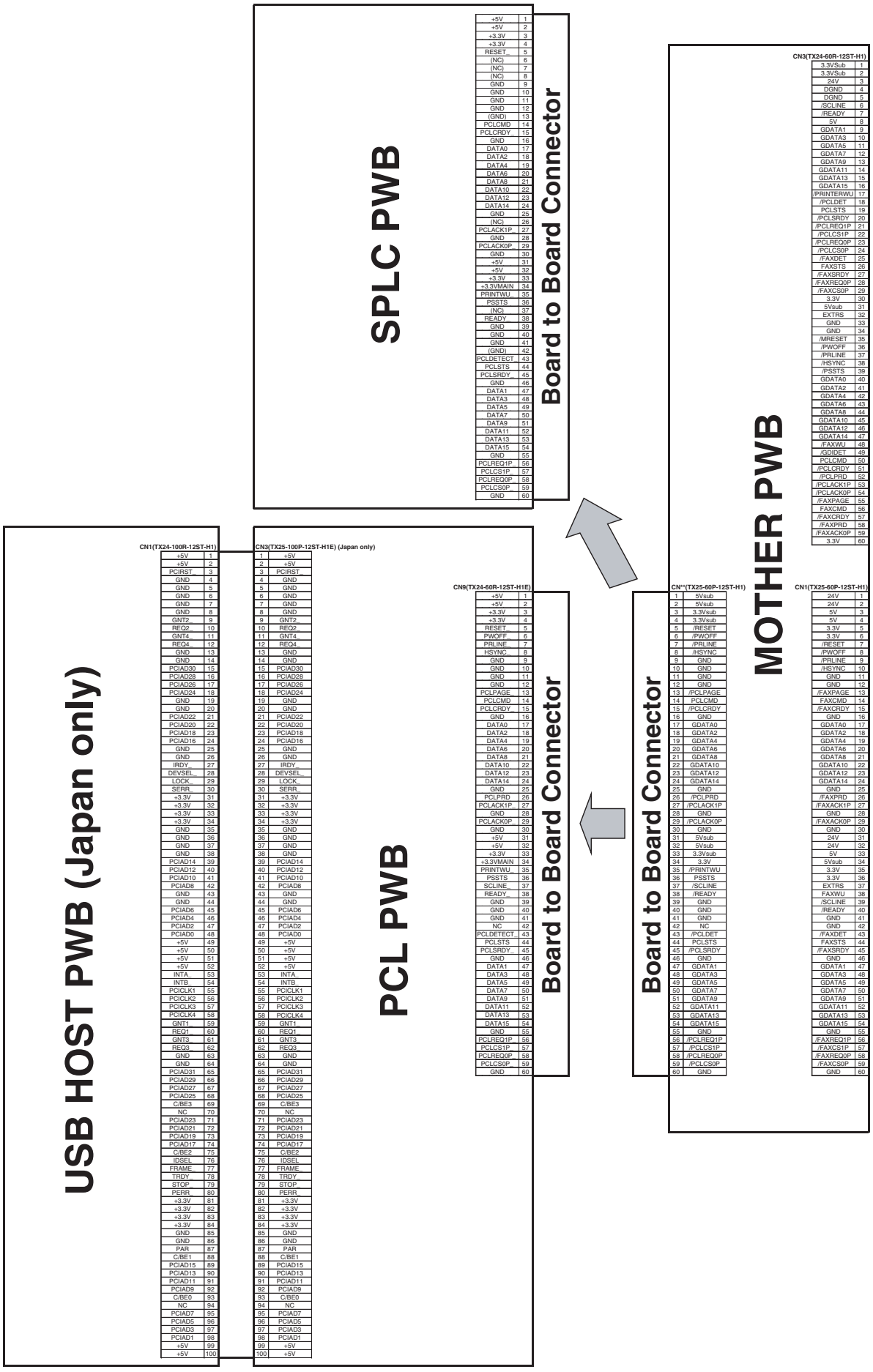
F. DV & LSU unit section (P6)



G. Board to board section (1/2) (P7)



H. Board to board section (2/2) (P8)



3. Signal list

Signal name	Name	Function/Operation	Connector level		Connector No.	Pin No.	PWB name	NOTE
			"L"	"H"				
CL	Copy lamp	Controls ON/OFF of the copy lamp.	ON	OFF	CN26	3	MCU	
CLH	RSPF clutch	Controls ON/OFF of the RSPF paper feed roller.	ON	OFF	CN5	13	RSPF interface	
COVER	RSPF cover open/close detection	Detects open/close of the RSPF cover.	OPEN	CLOSE	CN5	2	RSPF interface	
CSS1	Tray 1 installation detection	Detects installation of tray 1.	NO	YES	CN15	22	MCU	
CSS2	Tray 2 installation detection	Detects installation of tray 2.	NO	YES	CN7	1	Standard tray I/F	
CSS3	Tray 3 installation detection	Detects installation of tray 3.	NO	YES	CN7	1	Option tray I/F	
CSS4	Tray 4 installation detection	Detects installation of tray 4.	NO	YES	CN4	8	Option tray I/F	
DPX	Duplex motor	Controls the duplex motor.	–	–	CN1	2,3,4,5	MCU	
DRS2	Door open/close detection (Tray 2)	Detects door open/close.	OPEN	CLOSE	CN8	5	Standard tray I/F	
DRS3	Door open/close detection (Tray 3)	Detects door open/close.	OPEN	CLOSE	CN8	5	Option tray I/F	
DRS4	Door open/close detection (Tray 4)	Detects door open/close.	OPEN	CLOSE	CN4	5	Option tray I/F	
DUP2SEN	DUP2 paper delivery sensor	Detects paper delivery in the reverse path.	YES	NO	CN15	12	MCU	
EHUD	Humidity sensor	Senses the humidity.	–	–	CN503	2	MCU	Analog detection
ERTH	Temperature sensor	Senses the temperature.	–	–	CN503	4	MCU	Analog detection
GSOL	Gate solenoid	Reverses the paper exit gate in ON operation.	ON	OFF	CN4	2	RSPF interface	
HLOUT1	Heater lamp main	Turns ON/OFF the heater lamp main.	OFF	ON	CN10	10	MCU	
HLOUT2	Heater lamp sub	Turns ON/OFF the heater lamp sub.	OFF	ON	CN10	12	MCU	
HPEMPTY	Manual feed paper presence detection	Detects presence of paper for manual paper feed.	YES	NO	CN15	16	MCU	
HPIN	Manual feed paper entry detection	Detects paper entry for manual feed.	NO	YES	CN15	26	MCU	
HPSIZE1	Manual feed paper length detection	Detects the length of manual feed paper.	NO	YES	CN15	17	MCU	
HPSIZE2	Manual feed paper size detection (Longitudinal direction)	Detects the size of manual feed paper. (longitudinal direction)	NO	YES	CN15	23	MCU	
HPSOL	Manual paper feed solenoid	Controls the manual paper feed solenoid.	ON	OFF	CN15	7	MCU	
HPTRAY1	Manual paper feed tray length detection	Detects the length of manual feed tray paper.	LONG	SHORT	CN15	9	MCU	
HPTRAY2	Manual paper feed tray length detection	Detects the length of manual feed tray paper.	SHORT	LONG	CN15	13	MCU	
HPWS	Manual feed paper width detection	Detects the width of manual feed paper.	–	–	CN15	31	MCU	
KEEPSOL	Right paper exit gate solenoid	Drives the right paper exit gate solenoid.	ON	OFF	CN17	8,9	MCU	
LUD1H	Lift-up motor upper limit detection	Detects the upper limit of the lift-up motor.	Not detected	Detected	CN14	8	MCU	
LUD2	Lift-up motor upper limit detection (Tray 2)	Detects the upper limit of the lift-up motor.	Not detected	Detected	CN8	6	Standard tray I/F	
LUD3	Lift-up motor upper limit detection (Tray 3)	Detects the upper limit of the lift-up motor.	Not detected	Detected	CN8	6	Option tray I/F	
LUD4	Lift-up motor upper limit detection (Tray 4)	Detects the upper limit of the lift-up motor.	Not detected	Detected	CN4	6	Option tray I/F	
LUM1H	Lift-up motor	Drives the lift plate of the paper tray.	OFF	ON	CN15	6	MCU	

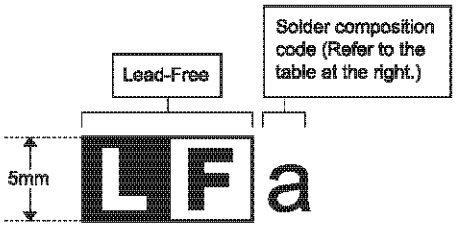
Signal name	Name	Function/Operation	Connector level		Connector No.	Pin No.	PWB name	NOTE
			"L"	"H"				
LUM2D	Lift-up motor	Drives the lift plate of the paper tray.	OFF	ON	CN1	1	Standard tray I/F	
LUM3D	Lift-up motor	Drives the lift plate of the paper tray.	OFF	ON	CN1	1	Option tray I/F	
LUM4D	Lift-up motor	Drives the lift plate of the paper tray.	OFF	ON	CN4	14	Option tray I/F	
MHP	Mirror home position sensor	Corrects the initial position of the scanner.	Other than home position.	Home position	CN23	33	MCU	
MIRMOD	Mirror motor	Controls the mirror operation.	–	–	CN906	1,2,3,4	OP I/F PWB	
MMD	Main motor	Controls the main motor.	ON	OFF	IC215	3	MCU	
MMRDY	Main motor lock	Detects lock of the main motor.	Rotation	Lock	IC215	2	MCU	
OCCOVER	OC cover open/close detection	Detects open/close of the OC cover.	OPEN	CLOSE	CN23	29	MCU	
OZNFANOUT	Ozone fan	Controls the ozone fan.	OFF	ON	CN502	10	MCU	
PAP1H	Paper pass sensor (Tray 1)	Detects paper pass.	YES	NO	CN14	6	MCU	
PAP2	Paper pass sensor (Tray 2)	Detects paper pass.	YES	NO	CN8	4	Standard tray I/F	
PAP3	Paper pass sensor (Tray 3)	Detects paper pass.	YES	NO	CN8	4	Option tray I/F	
PAP4	Paper pass sensor (Tray 4)	Detects paper pass.	YES	NO	CN4	4	Option tray I/F	
PAPER	Paper entry sensor	Detects paper entry.	YES	NO	CN5	18	SPF interface	
PCL1H	Paper feed clutch (Tray 1)	Controls ON/OFF of the paper feed roller.	ON	OFF	CN15	2	MCU	
PCL2	Paper feed clutch (Tray 2)	Controls ON/OFF of the paper feed roller.	ON	OFF	CN3	1	Standard tray I/F	
PCL3	Paper feed clutch (Tray 3)	Controls ON/OFF of the paper feed roller.	ON	OFF	CN3	1	Option tray I/F	
PCL4	Paper feed clutch (Tray 4)	Controls ON/OFF of the paper feed roller.	ON	OFF	CN4	10	Option tray I/F	
PCS1H	Paper feed solenoid (Tray 1)	Controls ON/OFF of the paper feed roller.	ON	OFF	CN14	2	MCU	
PCS2	Paper feed solenoid (Tray 2)	Controls ON/OFF of the paper feed roller.	ON	OFF	CN8	7	Standard tray I/F	
PCS3	Paper feed solenoid (Tray 3)	Controls ON/OFF of the paper feed roller.	ON	OFF	CN8	7	Option tray I/F	
PCS4	Paper feed solenoid (Tray 4)	Controls ON/OFF of the paper feed roller.	ON	OFF	CN4	12	Option tray I/F	
PDPX	Duplex sensor	Detects paper presence for duplex.	YES	NO	CN19	3	MCU	
PFULL2	No. 2 paper exit full sensor	Detects paper full in the No. 2 paper exit unit.	YES	NO	CN21	5	MCU	
PFULL2_R	Right paper exit full sensor	Detects paper full in the right paper exit unit.	YES	NO	CN17	5	MCU	
PGSOL	Paper exit gate solenoid	Controls the paper exit gate.	ON	OFF	CN22	2,3	MCU	
PIN	Paper entry sensor	Detects paper entry.	YES	NO	CN14	4	MCU	
POUT1	No. 1 paper exit sensor	Detects paper exit of the No. 1 paper exit unit.	NO	YES	CN32	6	MCU	
POUT2	No. 2 paper exit sensor	Detects paper exit of the No. 2 paper exit unit.	YES	NO	CN21	2	MCU	
POUT2_R	Right paper exit sensor	Detects paper exit of the right paper exit unit.	YES	NO	CN17	2	MCU	
POUTCOV	Paper exit cover open/close detection	Detects open/close of the paper exit cover.	OPEN	CLOSE	CN21	10	MCU	
POUTFANOUT	Paper exit cooling fan	Cools the fusing unit.	OFF	ON	CN504	3,6	MCU	
POUTFANRDY	Paper exit cooling fan lock detection	Detects lock of the paper exit cooling fan.	Rotation	Lock	CN504	2,5	MCU	
PPD2	Paper pass sensor (Tray 2)	Detects paper pass.	YES	NO	CN8	2	Standard tray I/F	

Signal name	Name	Function/Operation	Connector level		Connector No.	Pin No.	PWB name	NOTE
			"L"	"H"				
PPD3	Paper pass sensor (Tray 3)	Detects paper pass.	YES	NO	CN8	2	Option tray I/F	
PPD4	Paper pass sensor (Tray 4)	Detects paper pass.	YES	NO	CN4	2	Option tray I/F	
PREMSOL	Paper separation solenoid	Controls the paper separation solenoid.	ON	OFF	CN11	2	MCU	
PSFANOUT	PS fan	Drives the PS fan.	OFF	ON	CN29	3,6	MCU	
PSFANRDY	PS fan lock detection	Detects lock of the PS fan.	Rotation	Lock	CN29	2,5	MCU	
PSOL	PS solenoid	Controls ON/OFF of the PS roller.	ON	OFF	CN5	11	SPF interface	
PSRSOL	Resist roller solenoid	Controls the resist roller.	ON	OFF	CN15	4	MCU	
RSOL	Reverse solenoid	Reverses the paper exit gate in ON operation.	ON	OFF	CN5	15	SPF interface PWB	
RTH1	Thermister 1	Detects the fusing temperature.	–	–	CN19	4	MCU	
RTH2	Thermister 2	Detects the fusing temperature.	–	–	CN19	6	MCU	
SFTD	Shifter motor	Offsets paper.	–	–	CN2	3,4,5,6	MCU	
SFTHP	Shifter home position sensor	Detects the home position of the shifter.	Other than home position.	Home position	CN32	4	MCU	
SPFOPEN	SPF cover open/close sensor	Detects open/close of the SPF cover.	OPEN	CLOSE	CN5	24	SPF interface	
SPFOUT	SPF paper exit sensor	Detects paper exit of the SPF.	YES	NO	CN3	1	SPF interface	
SPFWS	SPF document width detection	Detects SFP documents.	–	–	CN2	9	SPF interface	Analog detection
TFANOUT	Fusing fan	Drives the fusing fan.	OFF	ON	CN32	10,12	MCU	
TFANRDY	Fusing fan lock detection	Detects lock of the fusing fan.	Rotation	Lock	CN32	14,16	MCU	
TMD	Toner motor	Controls the toner motor.	–	–	CN3	1,2	MCU	
TONER	Toner sensor	Detects the toner density.	–	–	CN502	6	MCU	Analog detection
TRCL2	Vertical transport clutch	Controls ON/OFF of the vertical transport roller.	ON	OFF	CN2	1	Standard tray I/F	
TRCL3	Vertical transport clutch	Controls ON/OFF of the vertical transport clutch.	ON	OFF	CN2	1	Option tray I/F	
W0	Paper empty sensor	Detects paper empty.	YES	NO	CN5	1	SPF interface	

LEAD-FREE SOLDER

The PWB's of this model employs lead-free solder. The "LF" marks indicated on the PWB's and the Service Manual mean "Lead-Free" solder.
The alphabet following the LF mark shows the kind of lead-free solder.

Example:



<Solder composition code of lead-free solder>

Solder composition	Solder composition code
Sn-Ag-Cu	a
Sn-Ag-Bi Sn-Ag-Bi-Cu	b
Sn-Zn-Bi	z
Sn-In-Ag-Bi	l
Sn-Cu-Ni	n
Sn-Ag-Sb	s
Bi-Sn-Ag-P Bi-Sn-Ag	p

(1) NOTE FOR THE USE OF LEAD-FREE SOLDER THREAD

When repairing a lead-free solder PWB, use lead-free solder thread.

Never use conventional lead solder thread, which may cause a breakdown or an accident.

Since the melting point of lead-free solder thread is about 40°C higher than that of conventional lead solder thread, the use of the exclusive-use soldering iron is recommendable.

(2) NOTE FOR SOLDERING WORK

Since the melting point of lead-free solder is about 220°C, which is about 40°C higher than that of conventional lead solder, and its soldering capacity is inferior to conventional one, it is apt to keep the soldering iron in contact with the PWB for longer time. This may cause land separation or may exceed the heat-resistive temperature of components. Use enough care to separate the soldering iron from the PWB when completion of soldering is confirmed.

Since lead-free solder includes a greater quantity of tin, the iron tip may corrode easily. Turn ON/OFF the soldering iron power frequently.

If different-kind solder remains on the soldering iron tip, it is melted together with lead-free solder. To avoid this, clean the soldering iron tip after completion of soldering work.

If the soldering iron tip is discolored black during soldering work, clean and file the tip with steel wool or a fine filer.

CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !
Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.

(Finnish) VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French) ATTENTION
Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type équivalent recommandé par
le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung
Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

CAUTION FOR BATTERY DISPOSAL

(For USA, CANADA)
"BATTERY DISPOSAL"
THIS PRODUCT CONTAINS A LITHIUM PRIMARY (MANGANESS DIOXIDE) MEMORY BACK-UP BATTERY THAT MUST BE DISPOSED OF PROPERLY. REMOVE THE BATTERY FROM THE PRODUCT AND CONTACT YOUR LOCAL ENVIRONMENTAL AGENCIES FOR INFORMATION ON RECYCLING AND DISPOSAL OPTIONS.

"TRAITEMENT DES PILES USAGÉES"
CE PRODUIT CONTIENT UNE PILE DE SAUVEGARDE DE MÉMOIRE LITHIUM PRIMAIRE (DIOXYDE DE MANGANÈSE) QUI DOIT ÊTRE TRAITÉE CORRECTEMENT. ENLEVEZ LA PILE DU PRODUIT ET PRENEZ CONTACT AVEC VOTRE AGENCE ENVIRONNEMENTALE LOCALE POUR DES INFORMATIONS SUR LES MÉTHODES DE RECYCLAGE ET DE TRAITEMENT.

SHARP

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