

SAMSUNG

DIGITAL LASER MFP

SCX-5312F

SCX-5112

***SERVICE* MANUAL**

DIGITAL LASER MFP



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1. Precautions

Follow these safety, ESD, and servicing precautions to prevent personal injury and equipment damage.

1-1 Safety Precautions

1. Be sure that all built-in protective devices are in place. Restore any missing protective shields.
2. Make sure there are no cabinet openings through which people-particularly children- might insert fingers or objects and contact dangerous voltages.
3. When re-installing chassis and assemblies, be sure to restore all protective devices, including control knobs and compartment covers.
4. Design Alteration Warning:Never alter or add to the mechanical or electrical design of this equipment, such as auxiliary connectors, etc. Such alterations and modifications will void the manufacturer's warranty.
5. Components, parts, and wiring that appear to have overheated or are otherwise damaged should be replaced with parts which meet the original specifications. Always determine the cause of damage or overheating, and correct any potential hazards.
6. Observe the original lead dress, especially near sharp edges, AC, and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board.
7. Product Safety Notice:Some electrical and mechanical parts have special safety-related characteristics which might not be obvious from visual inspection. These safety features and the protection they provide could be lost if a replacement component differs from the original. This holds true, even though the replacement may be rated for higher voltage, wattage, etc.
8. Components critical for safety are indicated in the parts list with symbols . ▲
Use only replacement components that have the same ratings, especially for flame resistance and dielectric specifications. A replacement part that does not have the same safety characteristics as the original may create shock, fire, or other safety hazards.

1-2 Precautions on Disassembly and Reassembly

Very careful precautions should be taken when replacing parts. Before replacing, please check cables because you cannot put the cables that you removed for replacing parts into the proper place if you would not make sure of where they were connected and in which condition.

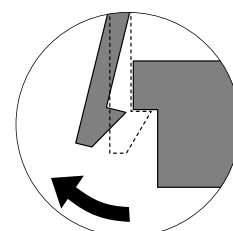
Please do the following before disassembling for a repair or replacement of parts.

1. Pull out paper cassette, printer cartridge installed. Especially careful not to be scratched by the surface of developer or not to expose them to light.
2. Turn the power switch off.
3. Take out the power plug, printer cable from the printer.
4. Use only the same type of part as original when replacing parts.

5. Do not force to open or fasten plastic material components.
6. Be careful that small parts such as screws should not get in the printer.
7. When disassembling, assembling, also observe small components are located in place.
8. If you uncover and turn the machine over to replace some parts, toner or paper particles may contaminate the LSU window. Protect the LSU window with clean paper.

Releasing Plastic Latches

Many of parts are held in place with plastic latches. The latches break easily : release them carefully. To remove such parts, press the hook end of the latch away from the part to which it is latched.



1-3 ESD Precautions

1. Certain semiconductor devices can be easily damaged by static electricity. Such components are commonly called “Electrostatically Sensitive (ES) Devices”, or ESDs. Examples of typical ESDs are: integrated circuits, some field effect transistors, and semiconductor “chip” components.

The techniques outlined below should be followed to help reduce the incidence of component damage caused by static electricity.

CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

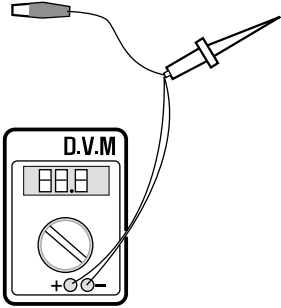
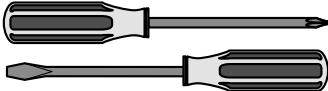
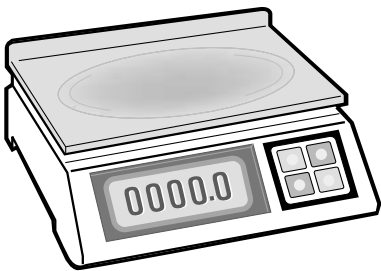


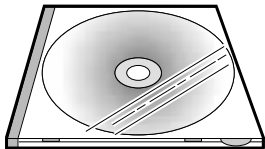
2. Immediately before handling a semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, employ a commercially available wrist strap device, which should be removed for your personal safety reasons prior to applying power to the unit under test.
3. After removing an electrical assembly equipped with ESDs, place the assembly on a conductive surface, such as aluminum or copper foil, or conductive foam, to prevent electrostatic charge buildup in the vicinity of the assembly.
4. Use only a grounded tip soldering iron to solder or desolder ESDs. Use only an “anti-static” solder removal device. Some solder removal devices not classified as “anti-static” can generate electrical charges sufficient to damage ESDs.
5. Do not use Freon-propelled chemicals. When sprayed, these can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective packaging until immediately before installing it. Most replacement ESDs are packaged with all leads shorted together by conductive foam, aluminum foil, or a comparable conductive material.
7. Immediately before removing the protective shorting material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
8. Maintain continuous electrical contact between the ESD and the assembly into which it will be installed, until completely plugged or soldered into the circuit.
9. Minimize bodily motions when handling unpackaged replacement ESDs. Normal motions, such as the brushing together of clothing fabric and lifting one's foot from a carpeted floor, can generate static electricity sufficient to damage an ESD.

1-4 Super Capacitor or Lithium Battery Precautions

1. Exercise caution when replacing a super capacitor or Lithium battery. There could be a danger of explosion and subsequent operator injury and/or equipment damage if incorrectly installed.
2. Be sure to replace the battery with the same or equivalent type recommended by the manufacturer.
3. Super capacitor or Lithium batteries contain toxic substances and should not be opened, crushed, or burned for disposal.
4. Dispose of used batteries according to the manufacturer's instructions.

1-5 Tools for Troubleshooting

The following tools are recommended for safe and smooth troubleshooting described in this service manual.

<p>1 DVM(Digital Volt Meter) Standard: Indicates more than 3 digits.</p> 	<p>3 Driver Standard: "-" type, "+" type (M3 long, M3 short, M2 long, M2 short).</p> 
<p>2 Electronic Scale Standard: Equipment to check the weight of consumables(toner cartridge) supplied by Samsung Electronics. (The gram unit can be measured.)</p> 	<p>4 Pinset Standard: For general home use, small type.</p> 
	<p>5 Cotton Swab Standard: For general home use, for medical service.</p> 
	<p>6 Cleaning Equipments a IPA(Isopropyl Alcohol)dry cloth or a soft stuff neutral detergent.</p>
	<p>7 Software(Driver) installation CD ROM</p> 

Note : Mind your hands not to be touched when you disassemble and reassemble PBA ASS'Y, such as the main board, SMPS, HVPS.

2. Specification

Specifications are correct at the time of printing. Product specifications are subject to change without notice. See below for product specifications.

2-1 General Specifications

Item	Description
Type of Unit	Desktop
Operation System	Win95/98/ME/ NT /2000/XP
Duplex Printing	Yes(Default)
Interface	IEEE1284(Nibbel/ECP)
	USB(without HUB mode)
CPU	66 MHz(KS32C61200)
Emulation	PCL6
Warming up Time	41 Sec (Stand-By), 25°C
Absolute Storage Condition	Temperature : -20°C ~ 40°C, Humidity : 10% RH ~ 95% RH
Operating Condition	Temperature : 10°C ~ 32°C, Humidity : 20% RH ~ 80 % RH
Recommended Operating Condition	Temperature : 16°C ~ 30°C, Humidity : 30% RH ~ 70% RH
Dimension(W X D X H)	560 X 433 X 459 mm
Weight	About 22.5 Kg(with CRU)
Acoustic Noise	Less than 56/47 dB(Copy/Printing mode)
Power Rating	AC 100VAC ~ 127VAC \pm 15 %, 50/60Hz \pm 3Hz AC 220VAC ~ 240VAC \pm 15 %, 50/60Hz \pm 3Hz
Power Consumption	Avg. 320Wh (No load Condition)
Power Save Consumption	Avg. 35Wh
Recommended System Requirement	Pentium II 233 Mhz, 64 MB RAM, 120MB(Hard Disk)
Minimum System Requirement	Pentium II 400Mhz, 128 MB RAM, 220MB(Hard Disk)
LCD	16 characters X 2 lines
Memory	4 Mbyte for flash Memory , 16 Mbyte for DRAM

2-2 Printer Specifications

Item	Description
Printing Method	Laser Scanning Unit + Electro Photography
Speed	Single Side : 12 PPM (Letter Size, 5% Character Pattern)
	Duplex : 7.5 IPM/Images/Min) (Letter Size, 5% Character Pattern)
Source of Light	LSU(Laser Scanning Unit)
Duplex Printing	Yes(Default)
Resolution(Horizontal X Vertical)	True 600 X600 DPI , 1200 DPI Class
Feed Method	Cassette Type , By Pass Tray, ADF(Automatic Document Feeder)
Feed Direction	FISO(Front-In Side-Out)
Paper Capacity(Input)	Cassette : 550 Sheets By Pass Tray : 100 Sheets(based on 75g/β≥, 20lb)
Paper Capacity(Output)	Face Down : 250 Sheets
Effective Print Width	203 ± 1mm (8 inch)


2-3 Facsimile Specification(SCX-5312F Only)

Item	Description
Standard Recommendation	ITU-T Group3(ITU : International Telecommunications Union)
Application Circuit	PSTN or behind PABX (PSTN : Public Switched Telephone Network. PABX : Private Automatic Branch Exchange)
Data coding(Compression)	MH/MR/MMR/JPEG(Transmission)
Modem speed	33600 /14400/12000/9600/7200/4800/2400 bps
Transmission Speed	Approximately 3 sec(33,600 bps)
Effective Scanning Width	8.2 inches(208 mm)
Halftone	256 Levels
Paper Capacity(Input)	ADF(Automatic Document Feeder) : 30Sheets(75g/β≥)
FAX Mode	Standard /Fine/Super Fine/Halftone
Memory	4MB

2-4 Scanner Specification

Item	Description
Type	Flatbed(with ADF)
Speed	Mono : 1.25 msec/line, Color : 5 msec/line
Device	Color CCD(Charge Coupled Device) Module
Interface	IEEE1284(ECP Support) USB(without HUB Mode)
Compatibility	TWAIN Standard , WIA
Optical Resolution(H X V)	600 X 600 dpi
Interpolation Resolution	Max. 4800 dpi
Halftone	256 Levels
Effective Scan width	8.2 inches(208 mm)

2-5 Copy Specification

Item	Description
Mode	B/W
Quality	Text/Photo/Mixed
Mono Copy Speed ⁽¹⁾	Platen(SDMP) : 12 cpm ADF (SDMP) : 12 cpm ADF (MDSP) : Text/mixed : Approx. 7 cpm : Photo : Approx. 3 cpm
Optical Resolution (H x V)	600 X 600 dpi
Multi Copy	99 pages 
Maximum Original Size	Legal
Maximum Page Size	Legal
Paper Type Selection	Plain , Legal , Cardstock , Transparency
Zoom Range	Platen : 25 ~ 400%(1% Step) ADF : 25~100 %(1% Step)

NOTE :

(1) Speed claims based on the test chart : Letter size.

SDMP : Single Document Multiple Printout

MDSP : Multiple Document Single Printout

2-6 Telephone Specification(SCX-5312F Only)

Item	Description
1Touch Dial	40EA(1~20 , shift key + 21~40)
Speed Dial	80EA
Tone/Pulse	Tone only user modeTone/Pulse selectable in tech mode.

2-7 Consumables

Item		Description
Type		Separate type (Toner Cartridge / Drum Cartridge)
Life	Toner Cartridge	6,000 sheets (5% coverage pattern, simplex normal mode)
	Drum Cartridge	15,000 sheets (simplex normal mode)

3. Disassembly and Reassembly

3-1 General Precautions on Disassembly

When you disassemble and reassemble components, you must use extreme caution.

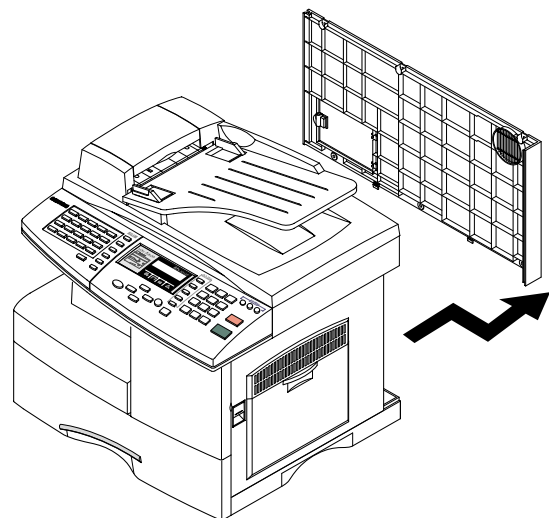
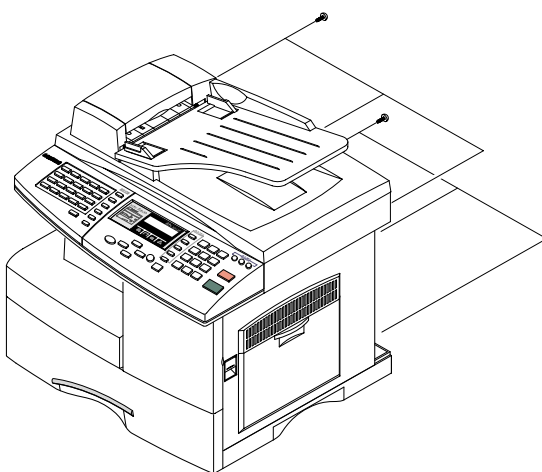
The close proximity of cables to moving parts makes proper routing a must. If components are removed, any cables disturbed by the procedure must be restored as close as possible to their original positions. Before removing any component from the machine, note the cable routing that will be affected.

Whenever servicing the machine, you must perform as follows:

1. Check to verify that documents are not stored in memory.
2. Unplug the power cord.
3. Use a flat and clean surface.
4. Replace only with authorized components.
5. Do not force to remove or planten plastic-material components.
6. Make sure all components are in their proper position.

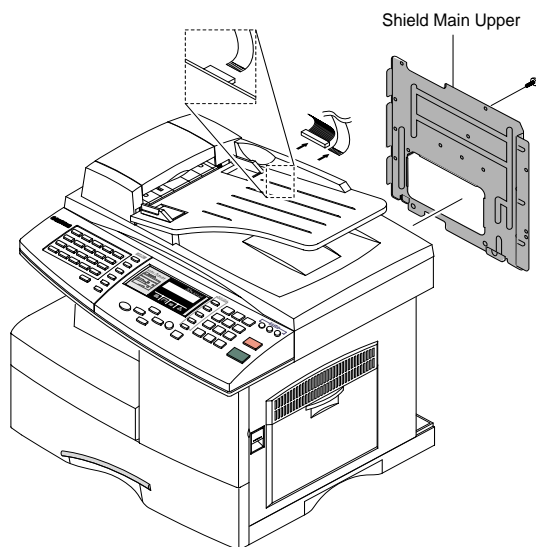
3-2 Rear Cover

1. Remove the six screws securing the Rear Cover.
2. Separate the rear cover from the base frame and Scanner Ass'y.



3-3 Scanner Ass'y

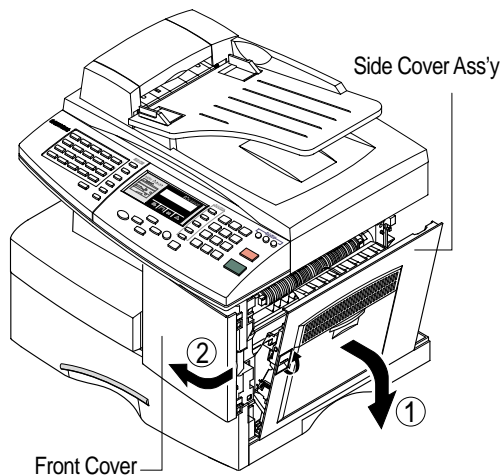
1. Before you remove the Scanner Ass'y, you should remove:
 - Rear Cover (see page 3-1)
2. Remove the six screws and take out the Shield Main Upper. Unplug the one connector and CCD cable.



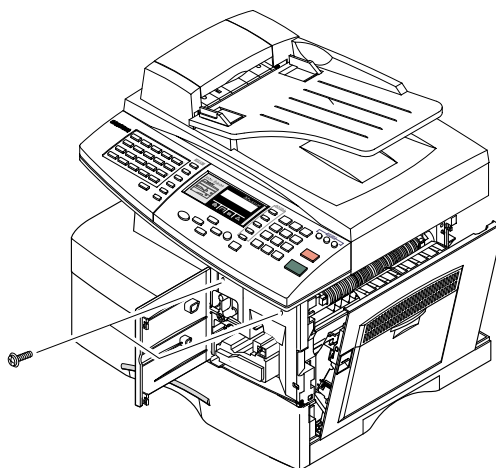
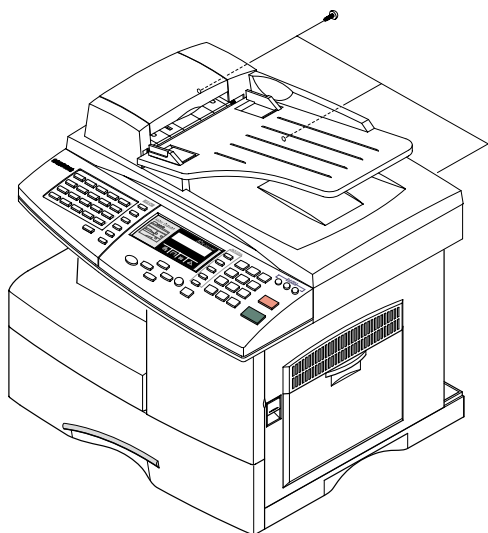
Notice :

You should connector remove the CCD cable vertically to avoid the CCD cable pin damage.

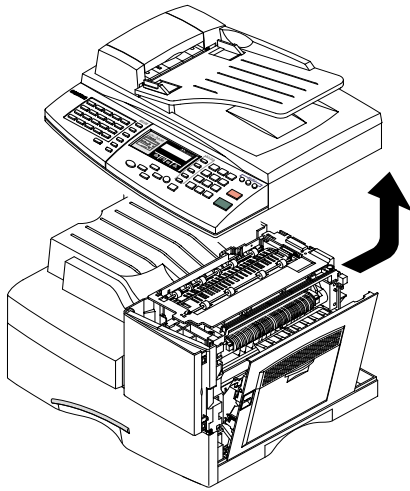
4. Open the Side Cover assembly first to open the Front cover. In the other words, close the front cover first to assembly it.



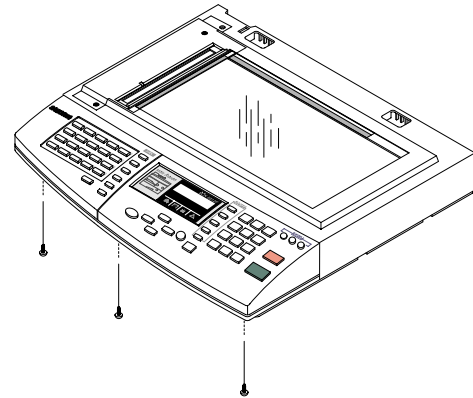
3. Remove the three screws, as shown below.



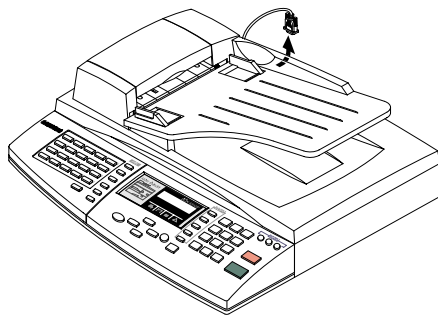
6. Pull up the Scanner Ass'y in the direction of arrow.



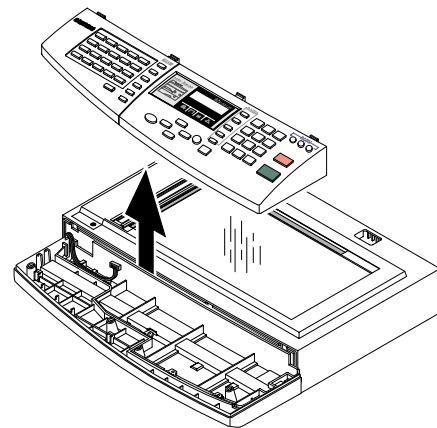
9. Remove the three screws securing the Platen Ass'y.



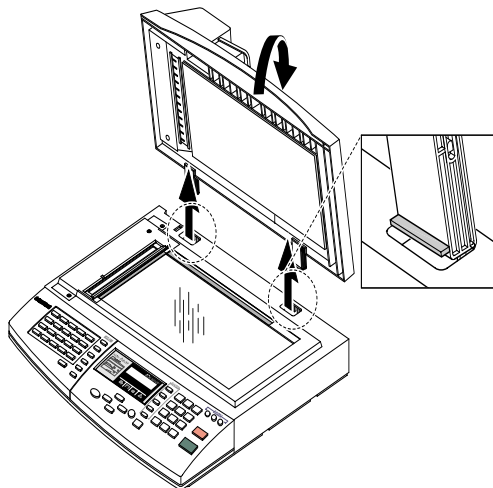
7. Remove the connector from the Platen Ass'y.



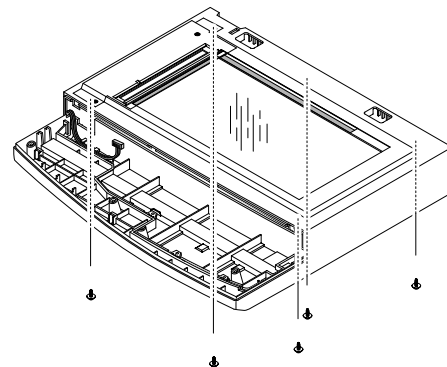
10. Pull the OPE Ass'y and unplug the one connector.



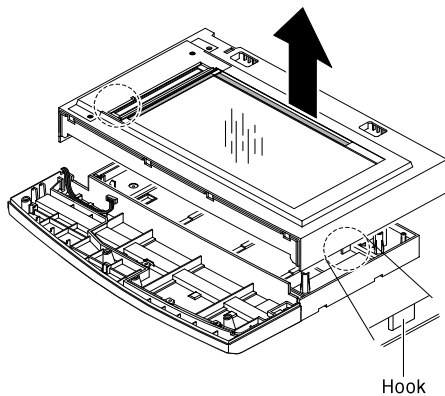
8. Open the ADF Ass'y in the direction of arrow.
Pull the ADF Ass'y upward and remove it.



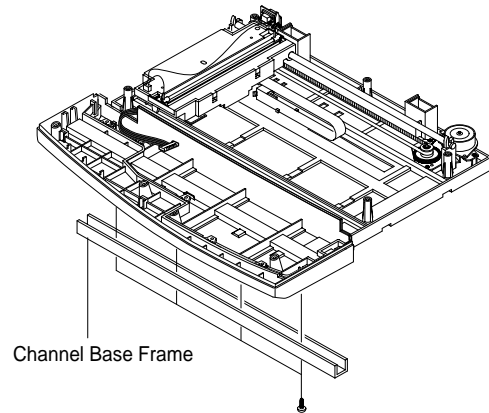
11. Remove the five screws securing the Platen Ass'y.



12. Unlatch the Scan Upper Ass'y securing the glass and remove it.



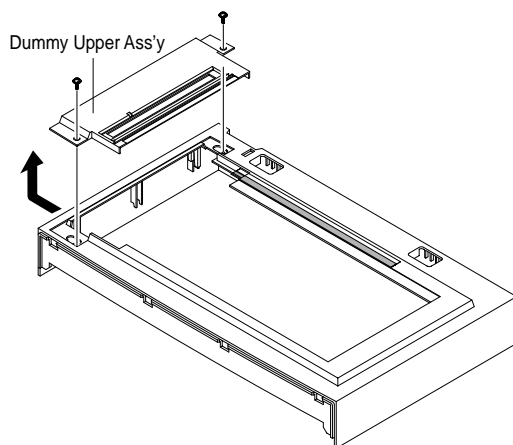
14. Remove the four screws and Channel Base Frame.



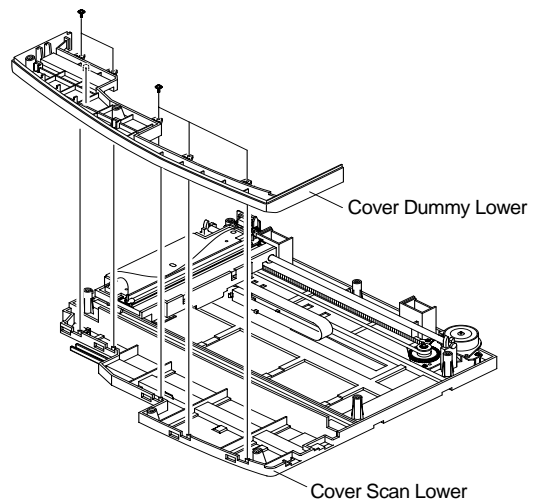
Notice :

When foreign material enters into the Scan Assy, it may cause problems in product performance and deteriorate scan image. Therefore, you should always dismantle or assemble it at a clean place.

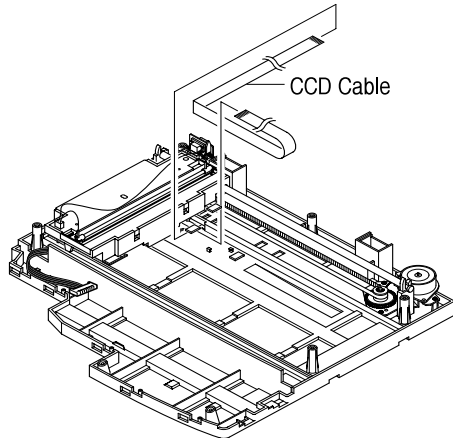
13. Remove the two screws and pull the Dummy Upper Ass'y.



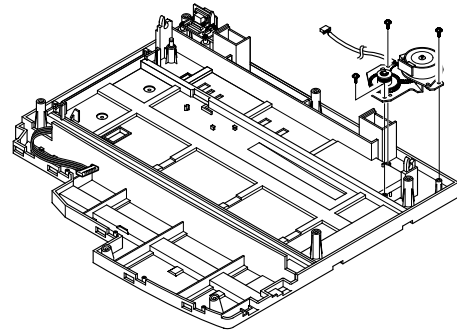
15. Remove the five screws and Dummy Scan-Lower.



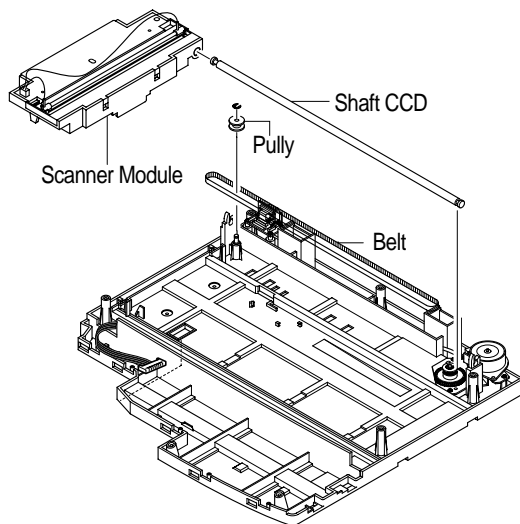
16. Remove the CCD cable.



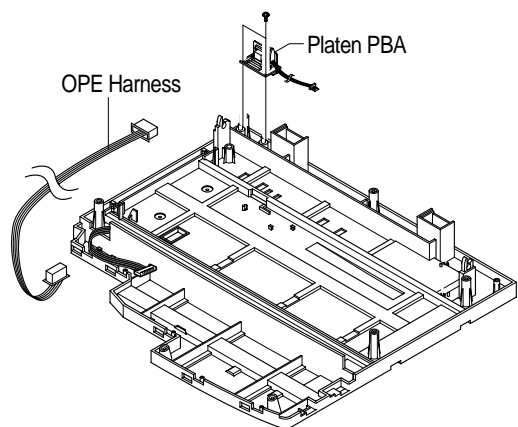
18. Remove three screws and take out the Motor Bracket.



17. Pull up the Shaft CCD and take out the Scanner Module.



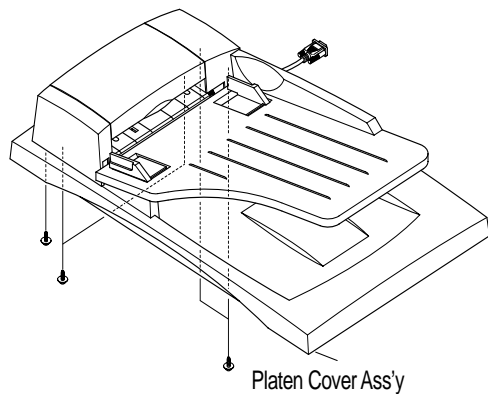
19. Remove the OPE Harness from the Platen PBA. Remove two screws and take out the Platen PBA.



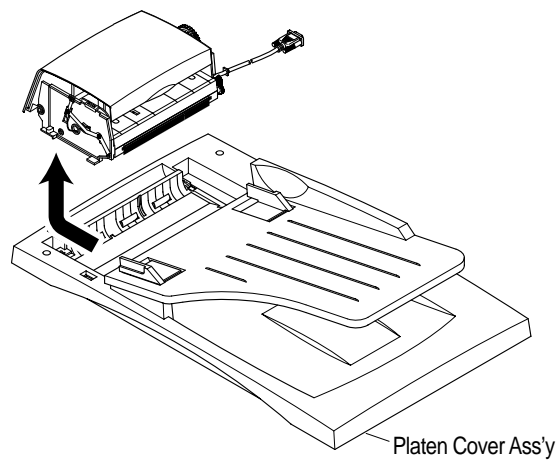
3-4 ADF Ass'y

1. Before you remove the ADF Ass'y, you should remove:
 - Rear Cover (see page 3-1)
 - Scanner Ass'y (see page 3-2)

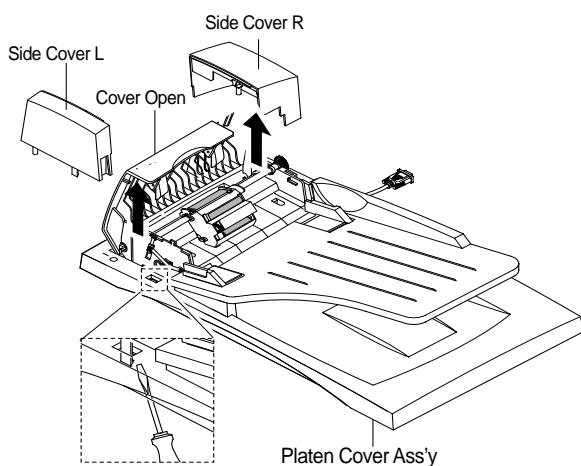
2. Remove the five screws from the Platen Cover.



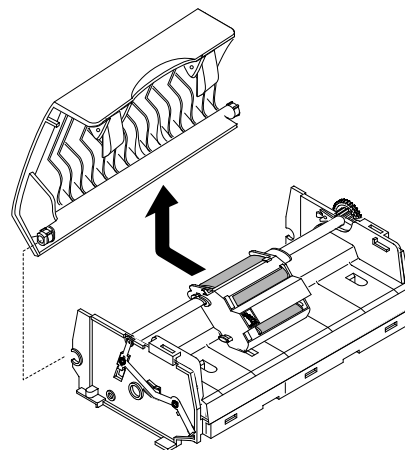
4. Pull the ADF Ass'y upward and remove it.



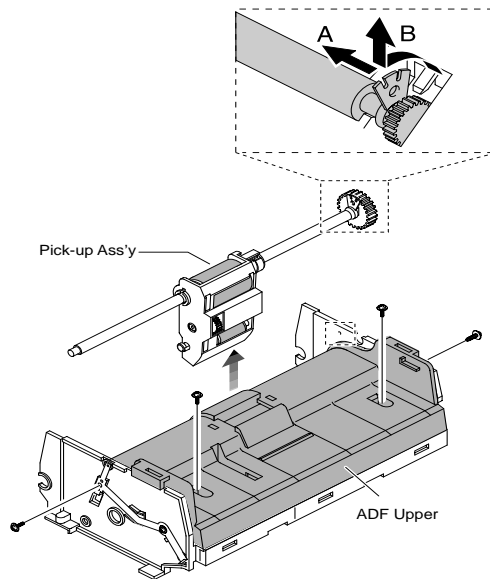
3. Open the Cover open and pull the Cover Side L and Cover Side R and unlatch the Side Cover L by pushing the part hooked the Platen Cover using a sharp tool.



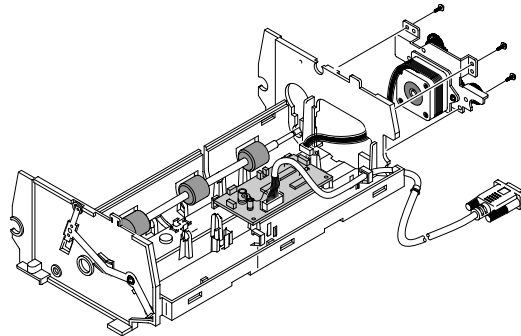
5. Tack out the Open Cover.



6. Take out the Pick-up Ass'y.
Remove the four screws and the ADF Upper.



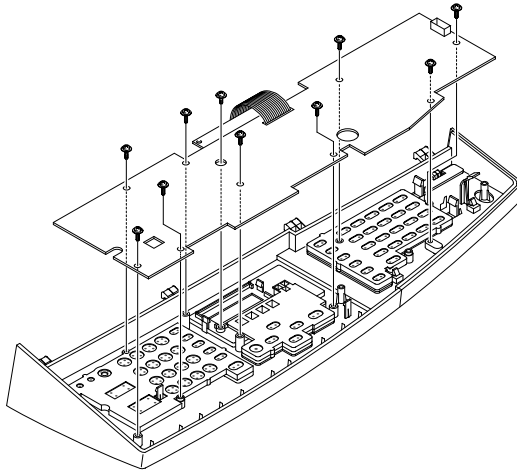
7. Remove three screws and take out the ADF Motor ass'y.



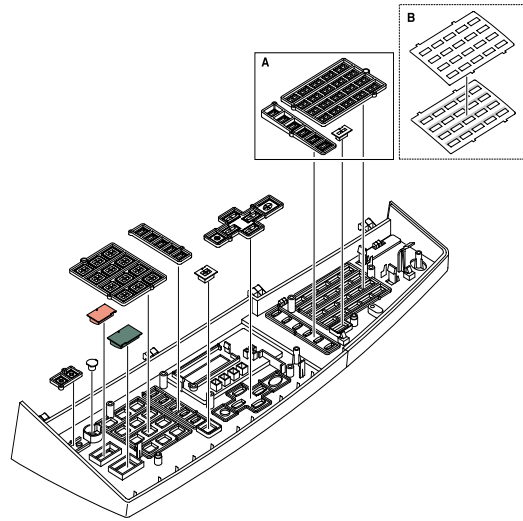
3-5 OPE Ass'y

1. Before you remove the OPE Ass'y, you should remove:
 - Rear Cover (see page 3-1)
 - Scanner Ass'y (see page 3-2)

2. Remove ten screws securing the OPE PBA and the LCD Module from the OPE Cover.



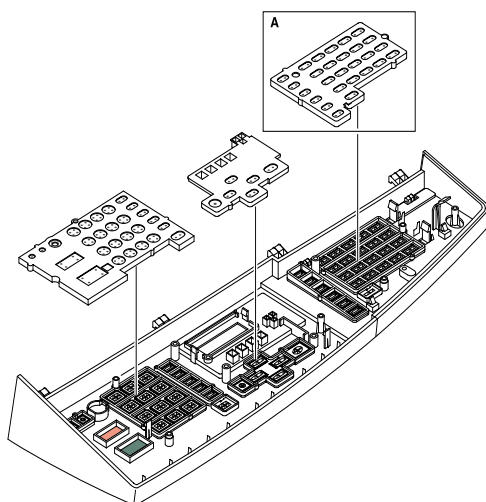
4. Remove the key pad from the unit.



Caution

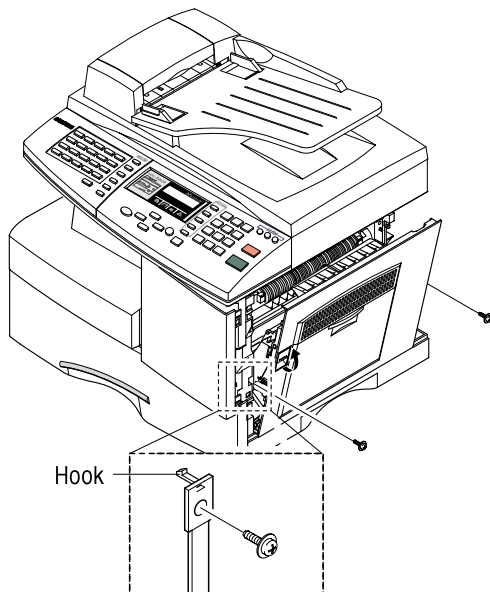
*The above information is for the SCX-5312 model.
For the SCX-5112 model, "A" parts is eliminated.*

3. Remove the contact rubbers from the unit.

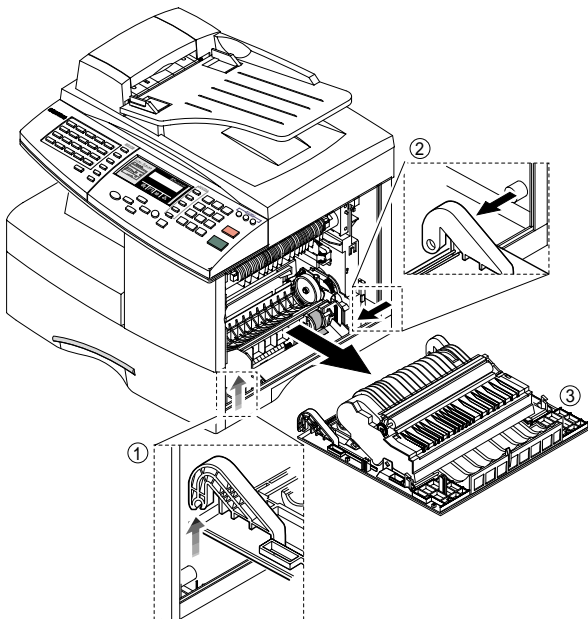


3-6 Side Cover Ass'y

1. Remove the two screws to release the Stopper(Main Frame side) securing the Side Cover to the Main Frame.

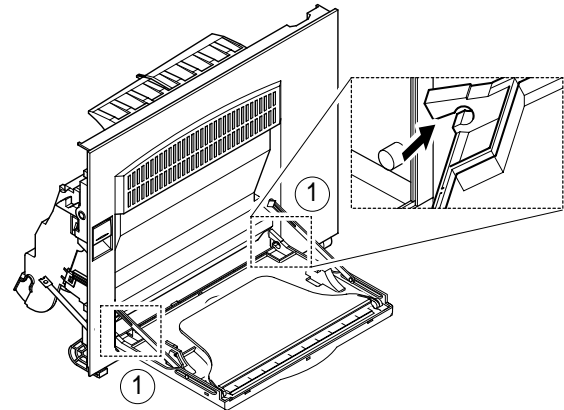


2. Completely open the Side Cover Ass'y, and after pull the ① part to the arrow direction (to the top), pull the ② part to the arrow direction (inner side).

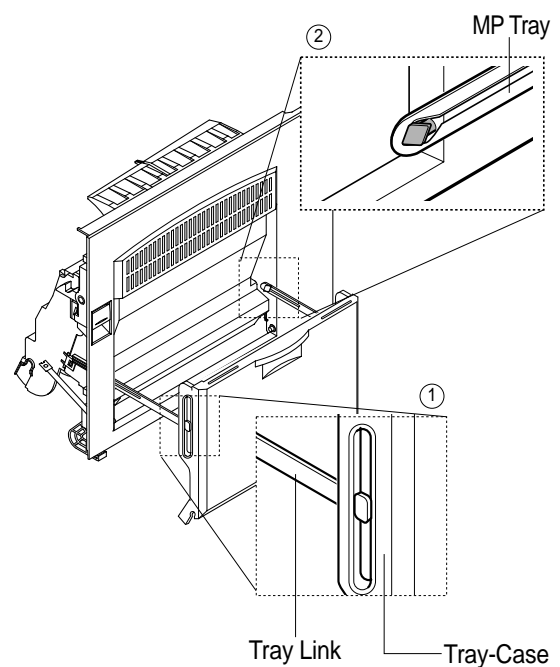


* MP-Tray

1. Pull the both side of the ① part to disassemble it.

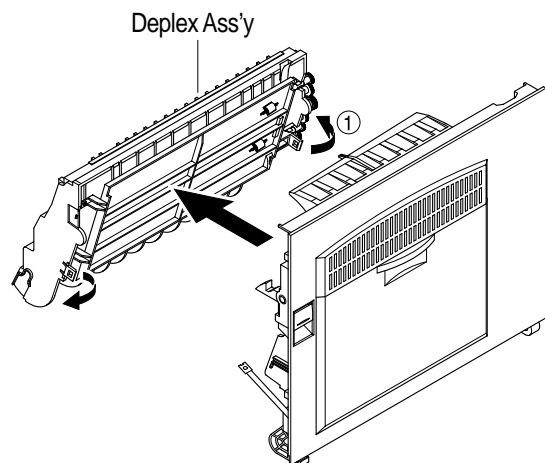


2. As the ① part, make the Tray-Case and the Tray-Link in rectangular position to disassemble the Tray-Case from the Tray Link. The Tray Link locates at an angle of 45° from the Side Cover Ass'y and then remove the Tray Link.



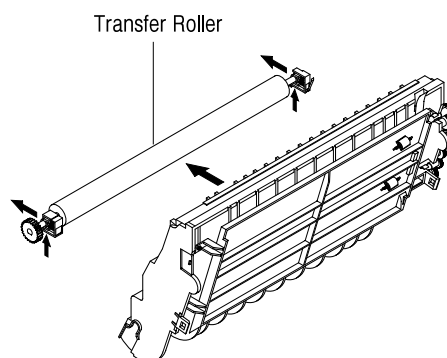
* Duplex Ass'y

1. Unite the ① part and home to the projection part of the Side Cover assembly, and widen them from each other to disassemble the Side Cover Ass'y.



* Transfer Roller Ass'y

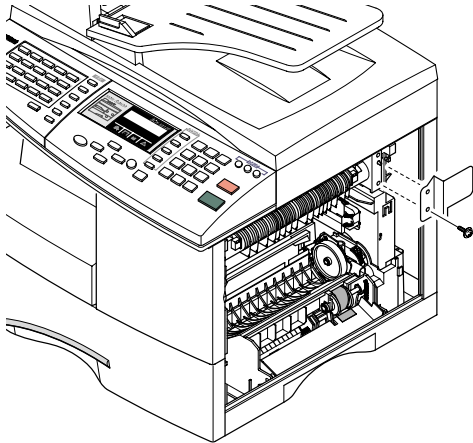
1. Take out the Transfer Roller, as shown below.



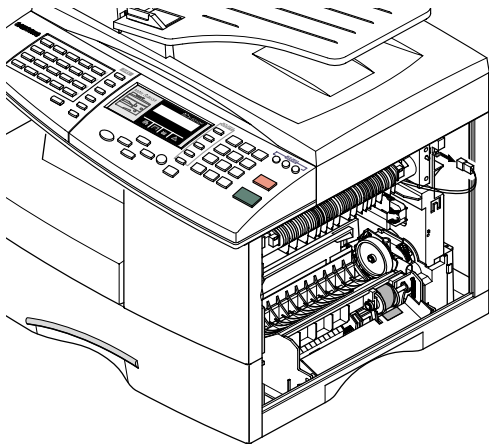
3-7 Fuser Ass'y

1. Before you remove the Fuser Ass'y, you should be power off and remove:
- Side Cover Ass'y (see page 3-9)

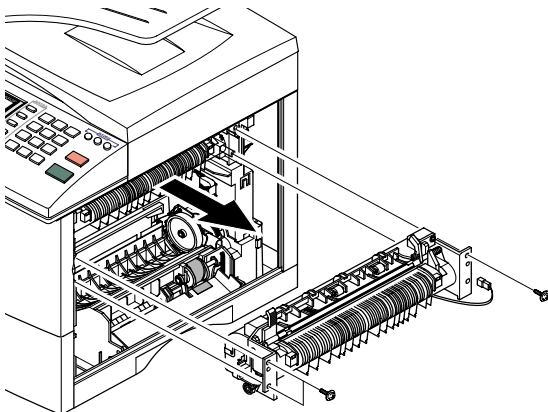
2. Remove the one screw and take out the Cover Sheet Connector.



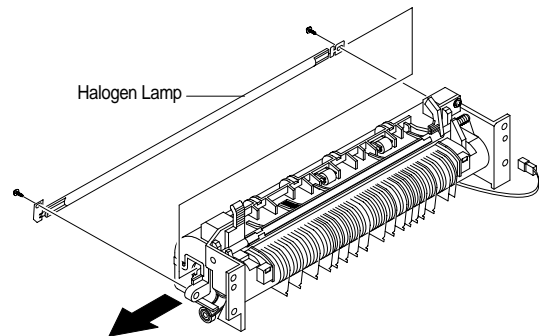
3. Unplug the one connector.



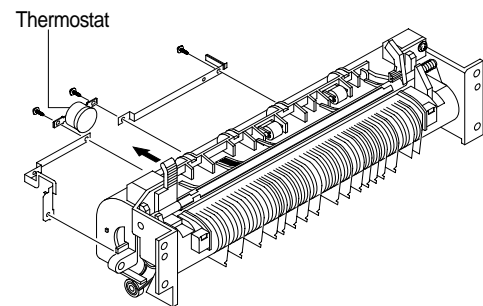
4. Remove the three screws and take out the Fuser Ass'y.



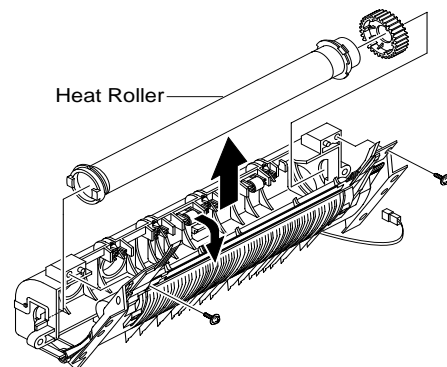
6. Remove the two screws and take out the Halogen Lamp.



5. Remove the four screws and take out the Thermostat.

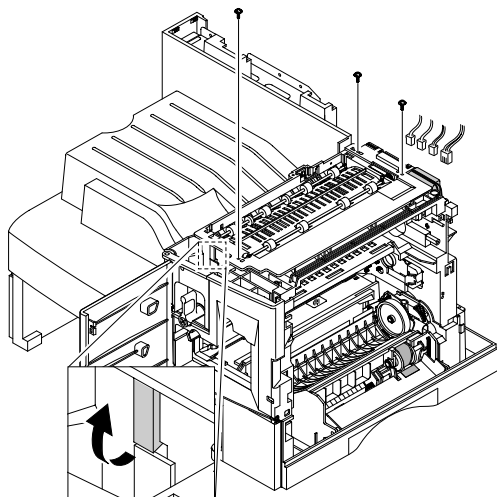


7. After remove the two screw and open the Lower Ass'y forward tack out the Heat Roller Ass'y from Upper Fuser Ass'y.

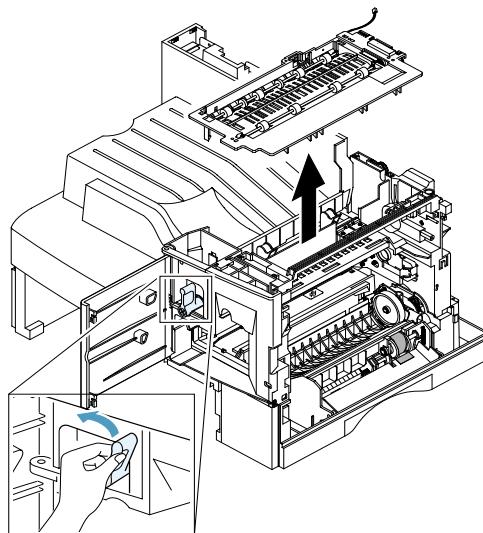


3-8 Exit Ass'y

1. Before you remove Exit Ass'y, you should remove:
 - Rear Cover (see page 3-1)
 - Scanner Ass'y (see page 3-2)
2. Remove four screws, and then untile the harness from the Exit Upper. Unplug four connectors and unlatch the Dummy Base Frame, as shown below.

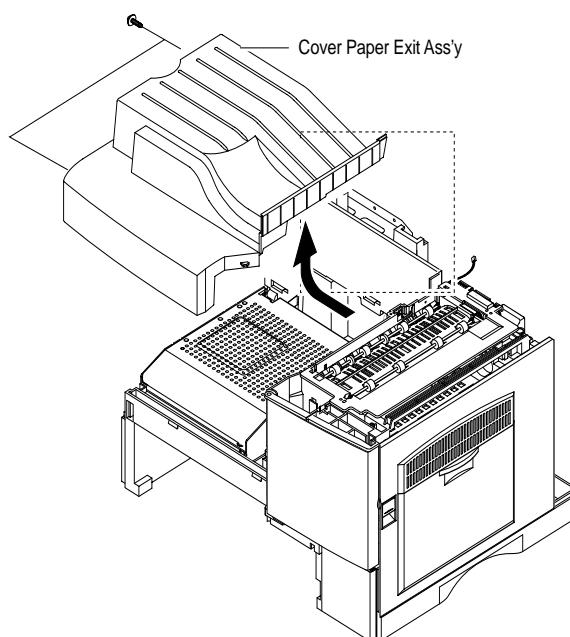


3. Pull the exit ass'y and remove it.



3-9 Cover Paper Exit Ass'y

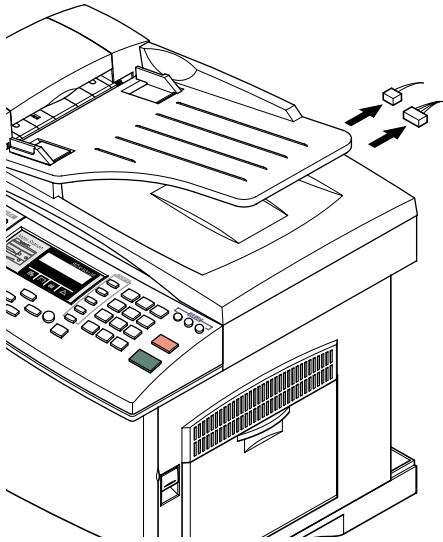
1. Before you remove the Cover Paper Exit Ass'y, you should remove:
 - Rear Cover (see page 3-1)
 - Scanner Ass'y (see page 3-2)
2. Remove two screws and Cover Paper Exit Ass'y, as shown below.



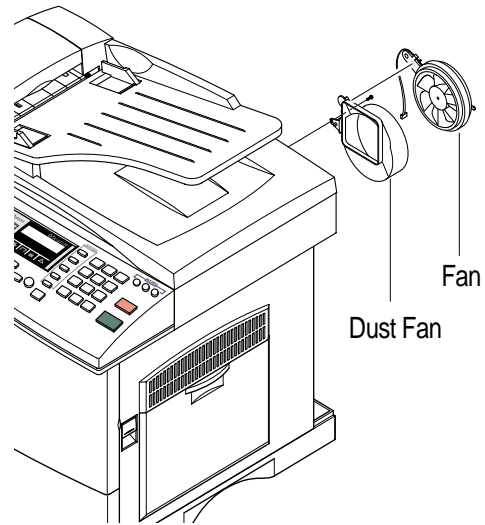
3-10 Drive Ass'y

1. Before you remove the Drive Ass'y, you should remove:
 - Rear Cover (see page 3-1)
 - Shield Main Upper (see page 3-2)

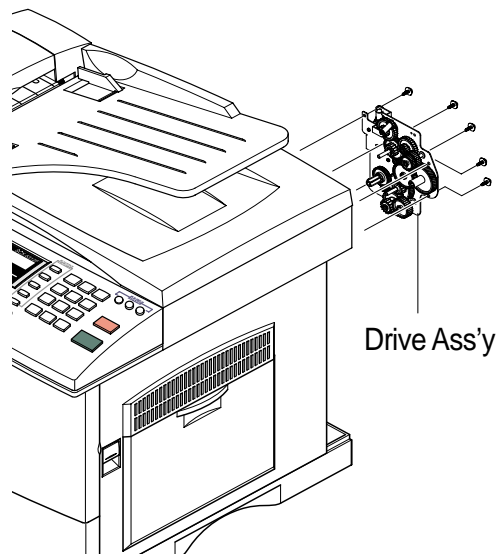
2. Unplug the two connectors.
(Main Motor:9pin, Duplex Solenoid : 2pin)



3. Remove the one screw and take out the Fan and Dust Fan.



4. Remove the five screws and take out the Drive Ass'y.

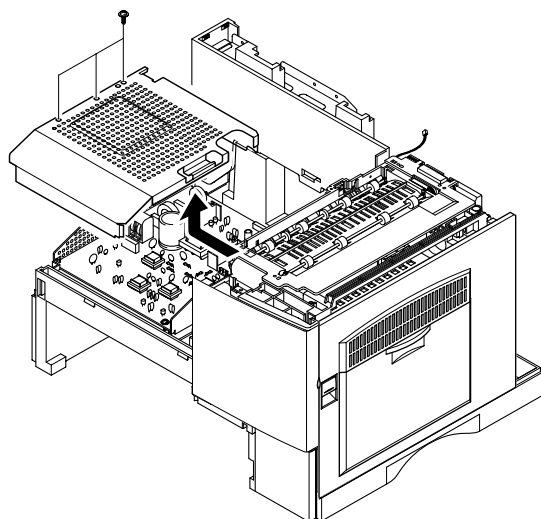


3-11 SMPS

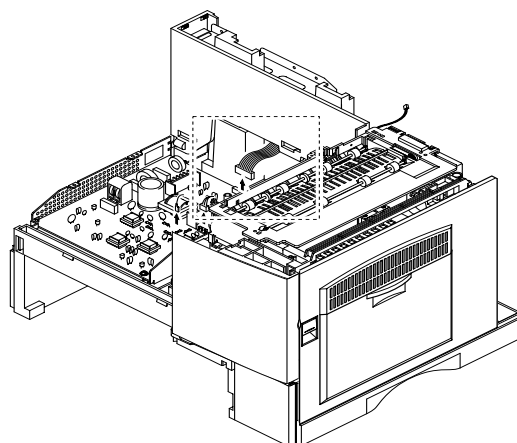
1. Before you remove the LSU, you should remove:

- Rear Cover (see page 3-1)
- Scanner Ass'y (see page 3-2)
- Cover Paper Exit Ass'y (see page 3-12)

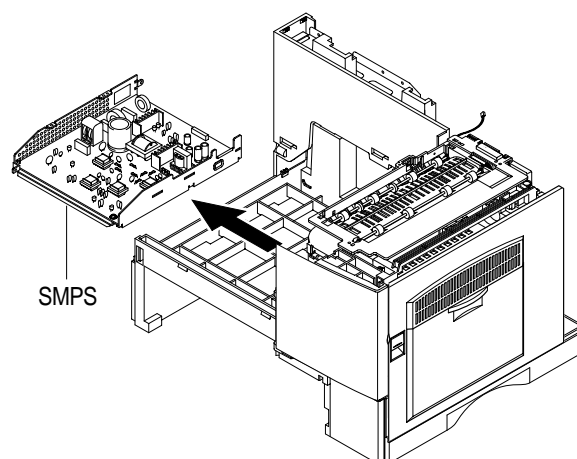
2. Remove three screws and take out the Shield SMPS Upper.



3. Unplug the all connectors.



4. Remove the SMPS, as shown below.

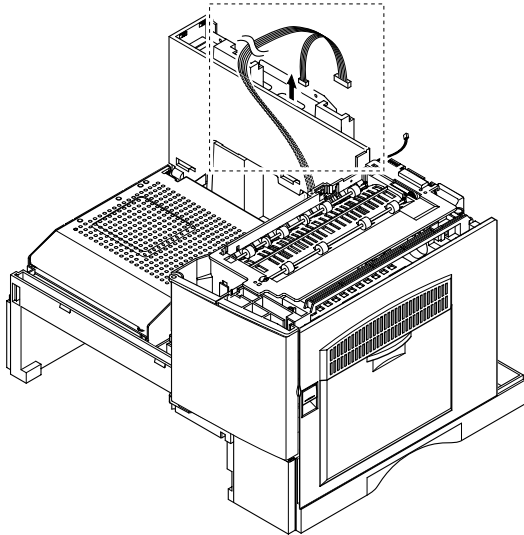


3-12 LSU (Laser Scanning Unit)

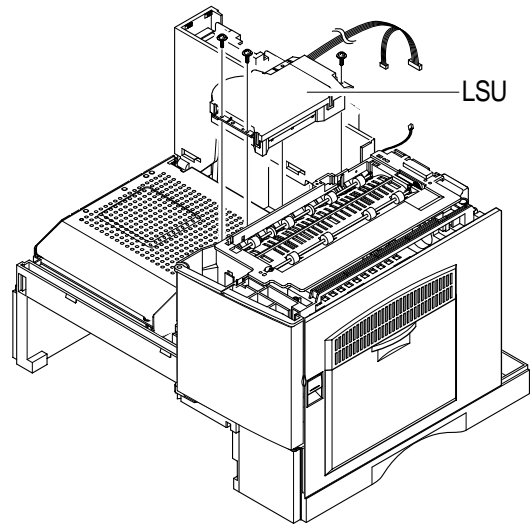
1. Before you remove the LSU, you should remove:

- Rear Cover (see page 3-1)
- Scanner Ass'y (see page 3-2)
- Cover Paper Exit Ass'y (see page 3-12)

2. Unplug the two connectors.



3. Remove the three screws and take out the LSU.



4. Maintenance & Troubleshooting

In this chapter, it was mentioned about the functions for maintaining the product, how to find the causes of the inferiority, and troubleshooting method.

The service manual is bound the SCX-5312F and SCW-5112 together in one volume.

The SCX-5312F has functions such as printer, copy, scanner, and fax. The SCX-5112 has all functions as the SCX-5312F but the fax function.

The contents of the manual are standardized for the SCX-5312F.

The information about the fax function is not applied for the SCX-5112.

The differences by each model are explained in a separate way.

4-1 Preventative Maintenance

The cycle period outlined below is a general guideline for maintenance.

The example list is for an average usage of 50 transmitted and received documents per day.

Environmental conditions and actual use will vary these factors.

The cycle period given below is for reference only.

COMPONENT	REPLACEMENT CYCLE
ADF Rubber	20,000 Pages
ADF Roller	50,000 Pages
Pick-up Roller	75,000 Pages
Transfer Roller	75,000 Pages
Fuser	75,000 Pages
Toner Cartridge	6,000 Pages
Drum Cartridge	15,000 Pages

4-2 Error Messages

Error Message	Description	Solution
RETRY REDIAL?	The machine is waiting for the programmed interval to automatically redial.	You can press START to immediately redial, or STOP to cancel the redial operation.
COMM. ERROR	A problem with the facsimile communications has occurred.	Try again.
DOCUMENT JAM	Loaded document has Jammed in the feeder When Document Jam occurred at ADF module	Clear the document Jam.
DOOR OPEN	The side cover is not securely latched.	Clear the cover until it clicks in place.
GROUP NOT AVAILABLE	You have tried to select a group location where only a single location number can be used, such as when adding locations for a multi-dial operation.	Try again, check location for group.
LINE ERROR	Your unit cannot connect with the remote machine, or has lost contact because of a problem on the phone line. When the machine has a problem in cause of fax data reception step	Try again. If failure persists, wait an hour or so for the line to clear then try again.
LOAD DOCUMENT	You have attempted to set up a sending operation with no document loaded.	Load a document and try again.
MEMORY FULL	The memory has become full.	Either delete unnecessary documents, or retransmit after more memory becomes available, or split the transmission into more than one operation.
NO ANSWER	The remote machine was not answered after all the redial attempts.	Try again. Make sure the remote machine is OK.
NO. NOT ASSIGNED	The speed dial location you tried to use has no number assigned to it.	Dial the number manually with the keypad, or assign the number.
NO PAPER [ADD PAPER]	The recording paper has run out. The printer system stops.	Load the recording paper in the paper feeder.
OVERHEAT	The printer part has overheated.	Your unit will automatically return to the standby mode when it cools down to normal operating temperature. If failure persists, call service.
PAPER JAM 0 OPEN/CLOSE DOOR	Recording paper has jammed in paper feeding area. Recording paper is jammed in pick-up unit	Press STOP and clear the jam.
PAPER JAM 1/2 OPEN/CLOSE DOOR	Recording paper has jammed inside the unit. Recording paper has jammed in paper exit unit.	Clear the jam.
TONER LOW	Toner may be low	Toner may be unevenly distributed. Remove the toner cartridge and shake it gently to evenly distribute the toner. Then replace the toner cartridge.
TONER EMPTY	When the machine has encountered the Toner Empty.	Replace the Toner Cartridge.
DRUM WARNING	When the machine has encountered the drum life, 14000 print pages.	Use little more change if "REPLACE DRUM" is marked in LCD window.
REPLACE DRUM	When the machine has encountered the out of from life, 15000 print pages.	Replace the Drum Cartridge.

Error Message	Description	Solution
NO CARTRIDGE	When the machine detected the toner cartridge has not been installed.	Install the Cartridge.
BYPASS JAM	When the machine detected the non-feeding from BYPASS Tray.	Open the side Cover and clear the jam.
DUPLEX JAM	When the machine detected the duplex jam in the middle of machine.	Clear the jam.
LINE BUSY	The remote FAX didn't answer	Try again.
OPEN HEAT EROR	Thermister does not connected to main board or contact point is not coupled tightly in power on.	Check thermister contact point, Heating Camp & Thermostat.
Heating Error	During operation, Temperature does not go up.	Check thermister contact point & Heating Lamp.
Scanner Locked	Scanner is locked by locker.	Check locker. Connect the Flat-Cable.

4-3 User Mode

The table in the bellow explains the possible setting functions by user. The details about the ways to use are explained in the user manual.

In the service manual, the items are about the possible set-up by user.

4-3-1 SCX-5312F

Function	Item	Content
SYSTEM DATA	CASSETTE PAPER	LETTER / A4 / LEGAL
	BYPASS PAPER	LETTER / A4 / LEGAL
	MESSAGE CONF.	ON / OFF / ERROR
	AUTO JOURNAL	ON / OFF
	RECEIVE CODE	0-9
	POWER SAVE	ON / OFF
	ECM MODE	ON / OFF
	RX REDUCTION	ON / OFF
	DISCARD SIZE	0-30mm
	REDIAL INTERVAL	1-15
	REDIALS	1-13
	ANSWER ON RING	1-7
	SEND FROM MEMORY	ON / OFF
	LOCAL ID	ON / OFF
	CLOCK MODE	12 / 24 HOUR
SYSTEM ID	FAX / ID	
DATE & TIME		
SYSTEM SETUP	PREFIX DIAL NO.	
	RINGER VOLUME	LOW / HIGH (10 STEPS)
	ALARM SOUND	ON / OFF
	KEY SOUND	ON / OFF
	SPEAKER CONTROL	COM / ON / OFF
	SELECT LANGUAGE	ENG/GER/FRE/ITA/SPA/POR/DUT
	USB MODE	FAST / SLOW
	FAX DUPLEX	OFF / LONG EDGE / SHORT EDGE
	IMAGE QUALITY	NORMAL / TEXT / IMAGE
MEMORY CLEAR	SYSTEM ID	
	SYSTEM DATA	
	PHONE BOOK / MEMORY	
	TX-RX JOURNAL	
DELAY TX		
MEMORY TX		
PRIORITY TX		
POLLING		
ADD/CANCEL	ADD / CANCEL	
GROUP DIAL		
MAINTENANCE	CLEAN DRUM	
	NEW DRUM	
	NOTIFY TONER LOW	ON / OFF

Function	Item	Content
TX CONFIRM		
SCHEDULE JOB		
PHONE BOOK		
SYSTEM LIST		
TX JOURNAL		
RX JOURNAL		
HELP LIST		HELP LIST

4-3-2 SCX-5112

Function	Item	Content
SYSTEM DATA	CASSETTE PAPER	LETTER / A4 / LEGAL
	BYPASS PAPER	LETTER / A4 / LEGAL
	POWER SAVE	ON / OFF
	SELECT LANGUAGE	ENG/GER/FRE/ITA/SPA/POR/DUT
	USB MODE	FAST / SLOW
HELP LIST	HELP LIST	PRINTOUT
MAINTENANCE	CLEAN DRUM	
	NEW DRUM	
REPORTS	SYSTEM DATA	
	HELP LIST	HELP LIST

4-4 Tech Mode

4-4-1 How to Enter Service Mode

In service mode (tech) mode, the technician can check the machine and perform various test to isolate the cause of a malfunction.

To enter the Tech mode, press **MENU, #, 1, 9, 3, 4** in sequence, and the LCD briefly displays 'T', the machine has entered service (tech) mode.

While in Tech mode, the machine still performs all normal operations.

To return to normal user mode, press **MENU, #, 1, 9, 3, 4** in sequence again, or turn the power off, then on by unplugging and plugging the power cord.

Options changed while in service mode do not remain changed unless you clear the machine's memory.

4-4-2 Setting-up System in Tech Mode

4-4-2-1 SCX-5312F(SETUP : #, 1, 9, 3, 4)

Function	Item	Content
SYSTEM DATA	DIAL MODE	TONE / PULSE
	MODEM SPEED	
	ERROR RATE	5% /10%
	SET TX LEVEL	09-15
	SILENCE TIME	12 / NU / OFF
SYSTEM ID	The same as User Mode	
DATE & TIME	The same as User Mode	
SYSTEM SETUP	The same as User Mode	
MEMORY CLEAR	CLEAR ALL MEMORY	
DELAY TX	The same as User Mode	
MEMORY TX	The same as User Mode	
PRIORITY TX	The same as User Mode	
POLLING	The same as User Mode	
ADD/CANCEL	The same as User Mode	
GROUP DIAL	The same as User Mode	
MAINTENANCE	CLEAN DRUM	
	NEW DRUM	
	NOTIFY TONER LOW	ON / OFF
	SWITCH TEST	
	MODEM TEST	
	SRAM TEST	
	DRAM TEST	
	ROM TEST	FLASH / ENGINE
	PATTERN TEST	PATTERN1-7, QAPATTERN1-4, ALL"1-7 , ALL"
	CLEAR COUNT	PASSWORD
		CRU PRINTS COUNT
		FLT SCAN COUNT
		ADF SCAN COUNT
		USED DRUM COUNT
		USED TONER COUNT
		TOTAL PAGE COUNT
	ANSWER ON CNG	1-4
	ADJUST SHADING	
	FLASH UPGRADE	LOCAL
		REMOTE : USER PROGRAM ,
		EMULATION ,BOOT PROGRAM
	PROGRAM DIAL	
TX CONFIRM	The same as User Mode	
SCHEDULE JOB	The same as User Mode	
PHONE BOOK	The same as User Mode	
SYSTEM LIST	USER MODE	
TX JOURNAL	The same as User Mode	
RX JOURNAL	The same as User Mode	

Function	Item	Content
REPORTS	MSG. CONFIRM	
	SCHEDULE JOB	
	PHONE BOOK	
	SYSTEM DATA	
	TRANSMISSION	
	RECEPTION	
	HELP LIST	
	PROTOCOL	
	ERROR CODE	

4-4-2-2 SCX-5112(SETUP : #, 1, 9, 3, 4)

Function	Item	Content
SYSTEM DATA	CASSETTE PAPER	LETTER / A4 / LEGAL
	BYPASS PAPER	LETTER / A4 / LEGAL
	POWER SAVE	ON / OFF
	SELECT LANGUAGE	ENG/GER/FRE/ITA/SPA/POR/DUT
	USB MODE	FAST / SLOW
MAINTENANCE	CLEAN DRUM	
	MODEM TEST	
	NEW DRUM	
	SWITCH TEST	
	SRAM TEST	
	DRAM TEST	
	ROM TEST	FLASH / ENGINE
	PATTERN TEST	PATTERN1-7, QAPATTERN1-4 , ALL
	CLEAR COUNT	PASSWORD
		CRU PRINTS COUNT
		FLT SCAN COUNT
		ADF SCAN COUNT
		USED DRUM COUNT
		USED TONER COUNT
		TOTAL PAGE COUNT
	ADJUST SHADING	
	FLASH UPGRADE	
REPORTS	SYSTEM DATA	
	HELP LIST	HELP LIST
	ERROR CODE	

4-4-3 SYSTEM DATA

DIALING MODE

Select the dialing mode according to the user's line status.

TONE: Electrical type of dial

PULSE: Mechanical type of dial

SILENCE TIME

In ANS/FAX mode, after a call is picked up by the answering machine, the machine monitors the line. If a period of silence is detected on the line at any time, the call will be treated as a fax message and the machine begins receiving.

Silence detection time is selectable between limited (about 12 seconds) and unlimited time.

When '12 sec' is selected, the machine switches to receiving mode as soon as it detects a period of silence.

When 'unlimited' is selected, the machine waits until the answering operation is concluded even though a period of silence is detected. After the answering operation is concluded, the machine switches to receiving mode.

SEND FAX LEVEL

You can set the level of the transmission signal. Typically, the Tx level should be under -12 dBm.

Caution: The Send Fax Level is set at the best condition in the shipment from factory. Never change settings arbitrarily.

ERROR RATE

When the error rate is about to be over the setting value, the Baud rate automatically lowers up to 2400 bps to make the error rate remain below the setting value.

You can select the rate between 5% and 10%.

MODEM SPEED

You can set the maximum modem speed.

Communication is done with modem speed automatically set at lower speed when communicating with the modem with lower speed since communication is done on the standard of the side where modem speed is low for transmission/reception. It is better set 33.6Kbps as default setting.

4-4-4 MEMORY CLEAR

CLEAR ALL MEMORY

The function resets the system as its very first condition as setting in at the factory.

This function is needed to operate to reset the system to the initial value when the product is abnormally operated or malfunction. All the values are returned to the default values, and all the information, which set in by user, will be erased.

< Method >

1. Select the [MEMORY CLEAR] at the TECH MODE.
2. Push the ENTER button.
3. Select you country.
4. Push the ENTER button then it will be all memory clear. .

NOTICE : Always perform the memory clear after replace the main board. Otherwise, the system may not operate properly.

4-4-5 MAINTENANCE

CLEAN DRUM

Use this feature to get rid of the toner remained in the development unit, so you can get a clean printout.

Perform this feature if stains or specks appear on the printing materials and print quality falls.

Perform this feature several times until a clean printing material appears.

The machine automatically pulls in a sheet of paper, and prints out. The toner particles on the OPC drum surface is fixed to the paper.

FLASH UPGRADE

It is Firmware Upgrade function and has two methods, Local and Remote.

More information can be found in the firmware upgrade items.

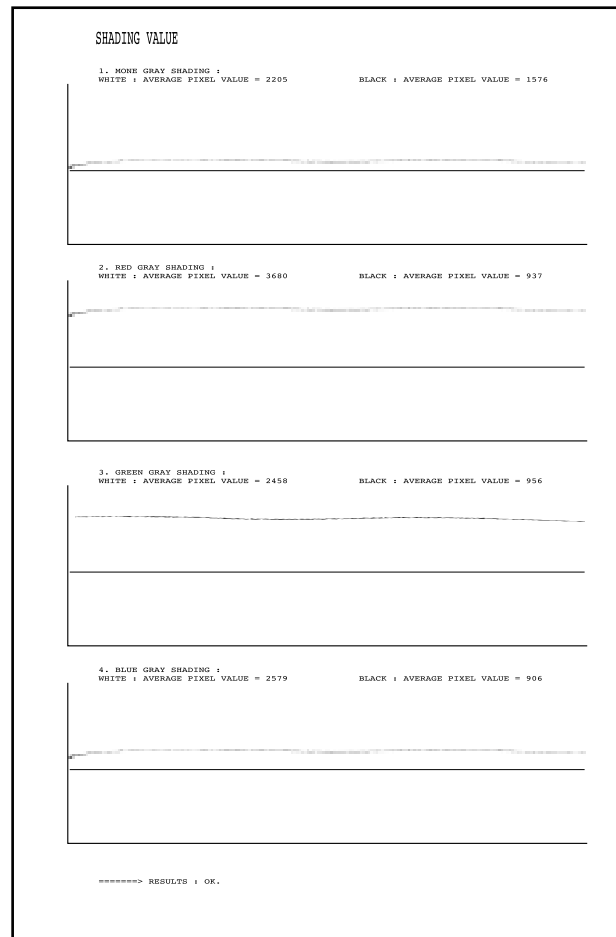
ADJUST SHADING

The function is to control to get the optimum scan quality by the specific character of the CCD (Charge Coupled Device). If the copy image quality is unsatisfied, perform the function to check the condition of the print out for checking whether or not having CCD trouble.

< Method >

1. Select the [ADJUST SHADING] at the TECH MODE.
2. Push the SET UP button then an image will be scanned.
3. After the scan, CCD SHADING PROFILE will be print out.
4. If the printed image is different to the image, the CCD is defect.

NOTICE : When you test CCD, make sure that the cover is closed.



ANSWER ON CNG

The function is to control the CNG TONE cognition times for entering receiving mode from the AUTO MODE or ANS/FAX MODE

CLEAR COUNT

This function erases information of history such as replacement times of Developing part and OPC drum, total printing pages, scan times, and etc.

- The items are in the below section of the System Data List, printed at TECH MODE.

- PASSWOEEED: 1934

- Current Drum Page Count cannot be erased.

It is possible to erase at NEW DRUM function (USER MODE ⇒ MINTENANCE ⇒ NEW DRUM)

FIRMWARE VERSION	:	1.00
ENGINE VERSION	:	1.00
EMULATION VERSION	:	PCL6 2.32 07-11-2001
	:	1.48 07-19-2001
TOTAL PAGE COUNTS	:	123
CRU PRINTS	:	123
REPLACED TONER COUNTS	:	1
REPLACED DRUM COUNTS	:	1
CURRENT DRUM COUNTS	:	112
PLATEN SCAN PAGE COUNTS	:	23
ADF SCAN PAGE COUNTS	:	10

< SYSTEM DATA LIST >

PATTERN TEST

Using this pattern printout, you can check if the printer mechanism is functioning properly.

It is needed in the production progress. Service person doesn't need to use it.

ROM TEST

Use this feature to test the machine'S ROM. The result and the software version appear in the LCD display.

- FLASH VER : 1.00 V
- ENGINE VER :1.00V

DRAM TEST

Use this feature to test the machine's DRAM. The result appears in the LCD display.

If all memory is working normally, the LCD shows << O K >>

SRAM TEST

Use this feature to test the machine's SRAM. The result appears in the LCD display.

If all memory is working normally, the LCD shows << O K >>

MODEM TEST

Use this feature to hear various transmission signals to the telephone line from the modem and to check the modem. If no transmission signal sound is heard, it means that the modem part of the main board is poor.

SWITCH TEST

Use this feature to test all keys on the operation control panel. The result is displayed on the LCD window each time you press a key.

RECEPTION

This journal shows a specific information concerning reception activities, the time and dates of up to 40 of the most recent receptions.

TRANSMISSION

This journal shows a specific information concerning transmission activities, the time and dates of up to 40 of the most recent transmissions.

SYSTEM DATA

This list provides a list of the user system data settings and tech mode settings.

PHONEBOOK

It lists all telephone numbers that have been stored in the machine.

SCHEDULE JOB

This list shows a specific information on the documents currently stored for delayed transmission. It provides the operation number, starting time, type of operation, etc.

ERROR CODE

It shows error history occurred using product.

4-4-7 Firmware Upgrade

It is a new Firmware, and there are two Upgrade methods by local and remote.

4-4-7-1 Local Machine

RCP(Remote Control Panel) mode

This method is for Parallel Port.or USB Port Connect to PC and activate RCP(Remote Control Panel) to upgrade the Firmware.

< Method >

How to Update Firmware using RCP

1. Connect PC and Printer with Parallel Cable or USB Cable.
2. Execute RCP and select Firmware Update. Current Firmware version and Emulation Version are displayed on Current version window.
3. Search Firmware file to update with Browse Icon.
4. Click Update icon, firmware file is transmitted to Printer automatically and printer is initialized when it finished.
5. Click Refresh icon and check what is updated.

DOS Command mode

This method is just for Parallel Port. Connect to PC with Parallel cable and enter DOS Command to upgrade the Firmware.

< Method >

- a). The first of all, need the files : **down.bat**, **down_com.bin**, **fprt.exe**, and **Rom File**: file name for upgrade. Save the files in the same folder.
- b). In the DOS, input as below and push the enter key. Then, it will be automatically upgraded.
- c) There are two commands for the conditions of product.
 - * When the product is in idle condition
down "rom file"
 - * When the product is in idle condition (TECH MODE → MAINTENANCE → FLASH UPGRADE → LOCAL)
fprt "rom file"
- d) Do not turn off the power while upgrading process.

4-4-7-2 Remote FAX

This is a function that a fax with the latest firmware sends files to a fax in long distance through telephone line.

< Method >

1. Operate a fax with the latest firmware to prepare it being upgrade.
(TECH MODE MAINTENANCE FLASH UPGRADE REMOTE)
2. Input the fax number, which needs to be upgraded.
(Several faxes can be upgrade at the same time. In this case, enter the each fax number.)
3. After push the enter button, send the firmware file by calling to the appointed number.
(Around 10~15 minutes needs to send the file.)

< Caution >

1. sending and receiving fax must be the same model.
2. A sending fax must be set up as ECM mode, and a receiving memory must be set up as 100%.
If not, the function operates abnormally.

4-4-8 Identify Sale Date(Only SCX-5312F)

This function confirms the date that consumer buys product and use product by first actually. If make consumer buy and operate the machine, the machine recognize the first Scan page count, Print page count etc.

The time is remembered to first machine use event.

< Method >

These contents are remembered continuously after memory delete (Clear All Memory).
Method : Press MENU, #, 1, 9, 3, # in sequence. Firmware version is displayed on LCD.

FLASH VER : 1.00

ENGINE VER : 1.00

Press 1(in the number keypad) : The LCD display shows "Updated date"

Press 2(in the number keypad) : The LCD display shows "Product first use date"

4-5 ENGINE TEST MODE

The Engine Tests Mode supplies useful functions to check conducting condition of engine. It tests the conducting condition of each device and displays the result of the test at the LCD. It is classified in 6. items (0~5), and the functions of items are as bellows.

4-5-1 To enter the Engine Test Mode

Press **MENU, #, 1, 9, 3, 1** in sequence, and the LCD briefly displays 'T', the machine has entered service (tech) mode.

4-5-2 Diagnostic

No.	Sub No.	Engine test	Remark
0	1	Motor Test	1: On, 2: Off
	2	PTL Test	1: On, 2: Off
	3	Fan Test	1: On, 2: Off
	4	Fuser Test	1: On, 2: Off If its temperature is lower than the Standby (160°C), the fuser is on, but if it is higher than the Standby, the fuser is off.
1	1	LSU Motor Test	1: On, 2: Off
	2	LSU Hsync Test	1: On, 2: Off
	3	LD On Test	1: On, 2: Off
	4	LSU Operation	1: On, 2: Off
2	1	Feed Sensor Test	Sensor On : FEED SENSOR ON Display
			Sensor Off : FEED SENSOR OFF Display
	2	Exit Sensor Test	Sensor On : EXIT SENSOR ON Display
			Sensor Off : EXIT SENSOR OFF Display
	3	Cover Sensor Test	Sensor On : COVER SENSOR ON Display
			Sensor Off : COVER SENSOR OFF Display
	4	1'st CAST Empty Test	Sensor On : 1'st PAPER Empty Display
			Sensor Off : 1'st PAPER No Empty Display
	5	MP Empty Sen Test	Sensor On : MP PAPER Empty Display
			Sensor Off : MP PAPER No Empty Display
	6	BIN FULL Sen TEST	Sensor On : BIN FULL SEN ON Display
			Sensor Off : BIN FULL SEN OFF Display
3	1	1'st CAST Solenoid Test	1: On, 2: Off
	2	MP Solenoid Test	1: On, 2: Off
	3	Duplex Solenoid Test	1: On, 2: Off
4	1	MHV Test	1: On, 2: Off (-1450v)
	2	DevBias Test	1: On, 2: Off (-450v)
	3	THV EN/NEG Test	1: On, 2: Off
	4	THV Test	1: On, 2: Off (1300v)
	5	THV Trigger Test	1: On, 2: Off
5	1	All Function Test	For SMD Test, Push up key : Next function All Function : No.0~4

4-5-3 ENGINE PRINT

When the function is on, sentence to explain the condition of engine is printed in the below section of the printing output.

It is needed in the development progress. Service person doesn't need to use it.

4-6 Troubleshooting

4-6-1 Scanner

4-6-1-1 COPY

PROBLEM	ITEMS TO BE CHECKED.	HOW TO SOLVE
White copy	• Check the Scan-Cover open.	• Room light can transit a thin original.
	• Check shading profile.	• Remake shading profile in the tech mode.
	• Check white/black reference voltage in Main PBA.	• Replace U16 if it is defective. - U16-97 = 2.5V - U16-98 = 3.3V - U16-99 = 1.5V
	• Check turning the CCD Lamp on when operating.	• If the CCD is defective, replace it. - CN3-19 is 5.8V when white original copying for R, B and 3.5V for G.
Black copy	• Check the CCD problem in Main PBA.	• Check the CCD harness contact.
	• Check shading profile.	• Remake shading profile in the tech mode.
	• Check the CCD problem in Main PBA.	• If the CCD is defective, replace it. - Cn3-19 is 7.3V when idle for R, B, and 5V for G.
Defective image quality	• Check shading profile.	• Remake shading profile in the tech mode.
	• Check the gap between original and scanner glass.	• The gap above 0.5mm can cause a blurred image.
	• Check printing quality.	• See "Print" troubleshooting.
Abnormal noise	• Check the Scanner Motor and any mechanical disturbance.	• Check the right position of the Scanner Motor, and check the any mechanical disturbance in the CCD carrying part.
	• Check the Motor Driver in Driver PBA.	• If any driver is defective, replace it. - U55-1 or U55-15 = 0V to 24V swing signal when operating.

4-6-1-2 PC-Scan

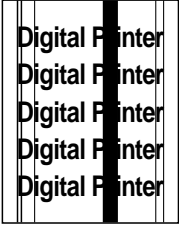
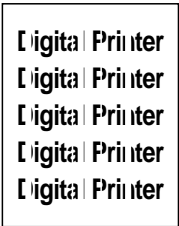
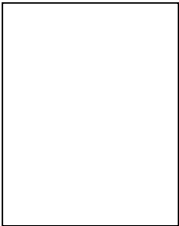


PROBLEM	ITEMS TO BE CHECKED.	HOW TO SOLVE
Scanning Error	• Check the printer cable installed.	• Check correct installation, and use standard IEEE1284 cable.
	• Check how TWAIN driver is installed.	• Remove any other scanner driver. • Reboot after reinstallation of the TWAIN driver.
	• Check the printer port(Parallel).	• Check the parallel-port-related items in the CMOS Setup. As a printer port, Select ECP among SPP(Normal), ECP, and EPP modes(increase print-ing speed)
	• Check harness contact.	• Check CN14 contact in Main PBA
	• Check the IEEE1284 signal level.	• If any signal level is defective, replace Driver PBA. - U36-66~74 in Main PBA = 0.8V to 2.4V TTL signal. • Otherwise, replace Main PBA.
	• Check the USB signal level.	• If USB signal level is defective, replace Main PBA.
Defective image Quality	• Check shading profile.	• Remake shading profile in the tech mode.
	• Check the gap between original and scanner glass.	• The gap above 0.5mm can cause a blurred image.
Abnormal noise	• Check the Scanner Motor and any mechanical disturbance.	• Check the right position of the Scanner Motor, and check the any mechanical disturbance in the CCD carrying part.
	• Check the motor driver in Driver PBA.	• If any driver is defective, replace it. - U55 or U56-1 = 0V to 24V swing signal when operating.

4-6-2 FAX(only SCX-5312F)



4-6-2-1 FAX/TELEPHONE Precautions

PROBLEM	ITEMS TO BE CHECKED.	HOW TO SOLVE
TEL LINE CANNOT BE ENGAGED (NO DIAL TONE)	<ul style="list-style-type: none"> • When you press "OHD" key: a) Check line cord connection. b) Check MAIN LIU harness, and CN1 (LIU PBA). c) Check relay operation of LIU PBA : Is the control signal of CN20-7(main) low? 	<ul style="list-style-type: none"> a) insert it correctly into the connection jack called "line". b) Replace defective parts. c) Replace main PBA IF the control signal of CN20-7(main) is high. Replace LIU PBA if high but phone line cannot be connected.
Cannot MF dial	<ul style="list-style-type: none"> • Check CN20 (main PBA), MAIN-LIU harness, and CN1 (LIU PBA) 	<ul style="list-style-type: none"> • Replace defective parts.
MF dial is possible but not DP dial.	<ul style="list-style-type: none"> • Check DP control signal of CN20-11 of MAIN PBA and the circuit around R15. U6 and Q2 of Liu PBA. 	<ul style="list-style-type: none"> • Replace LIU PBA.
Defective fax transmission	<ul style="list-style-type: none"> • Check CN20 (main PBA), MAIN LIU harness, and CN1(LIU PBA). • Is the external phone hooked off? • Check 'hook off' : Refer to 'TEL LINE CANNOT BE ENGAGED' above. • Check the control signals of CN20-11. • Check transmission path : Check output of CN20-3.4 and T2-4(LIU PBA). • Check reception path : Check output CN1-1 (LIU PBA) and input of CN20-1 (main PBA). 	<ul style="list-style-type: none"> • Replace defective parts. • Replace LIU PBA if low. • Refer to 'TEL LINE CANNOT BE ENGAGED' above. • Replace main PBA, if the signals of CN8-11 (MAIN PBA) is low. • Replace main PBA, if abnormal. • Replace LIU PBA if CN1-1(LIU PBA) is not confirmed. Replace main PBA if CN20-1(MAIN PBA) is not confirmed.
Defective automatic fax reception	<ul style="list-style-type: none"> • Is the ring checked? Check ring pattern at CN1-9 (LIU PBA). • Refer to 'Defective Transmission.' 	<ul style="list-style-type: none"> • Replace LIU PBA if it cannot be checked. • Refer to 'Defective Transmission'.

4-6-3 Print Quality

Error Status	Check	Solution
Vertical black line and band 	1. Bad blade of Toner cartridge 2. LSU	1. Change Toner cartridge 2. Replace LSU
Vertical white line 	1. LSU window contamination 2. Toner cartridge	1. Clean LSU window 2. If not LSU, change Toner cartridge.
No image 	1. Seal tape is removed? 2. GND OPC is well grounded? 3. LSU running well? 4. Bias voltage is normal? 5. Lower toner? 6. Is there video data from Main PBA	1. Removing seal tape 2. Measure the resistance between frame ground and the ground spring attached frame. Confirm stable ground. Unless bad ground, detach cabinet, check where is bad point 3. Adjust LSU or replace it 4. Normal Dev bias = -350V 5. Shake toner cartridge and print. If a little good, toner is empty 6. Test engine test pattern, replace Main PBA
Light image 	1. Check seal tape removing 2. LSU light power normal? 3. Enough toner? 4. High charger voltage? 5. Lower bias voltage 6. Contamination of high voltage contact. 7. Transfer voltage and roller.	1. Check and remove tape 2. LSU light power check is difficult. Compare with new one and check. 3. Check toner and developer counter 4~5. Measure all high voltage output. 6. Leakage toner cause bad contact and increase contact resistance. Clean contaminated area.
Dark image 	1. LSU light power normal? 2. Bias voltage output is high? 3. Video data is always supplied?	1. Check the rated level and replace. 2. Set to power rating. 3. Replace defected board.

Error Status	Check	Solution
Background <div> Digital Printer Digital Printer Digital Printer Digital Printer Digital Printer </div>	1. High voltage output is normal? 2. C/R of Toner cartridge is contaminated?	1. Adjust to the rated status. 2. Replace Toner cartridge.
Ghost <div> Digital Printer Digital Printer Digital Printer Digital Printer </div>	1. High voltage output. 2. Pre-Transfer Lamp. 3. Bad high voltage contact.	1. Check every high voltage. 2. Check the turn-on PTL, LED crash. 3. Clean the inside machine or replace toner cartridge.
Stains on back of paper	1. Contamination of transfer roller. 2. Stains of paper path. 3. Pressure roller's contamination.	1. Clean the transfer roller with vaccum cleaner. 2. Clean the area of paper path with cloth or air cleaner. 3. Remove fuser and replace it.
Poor Fusing	1. Use recommended paper? 2. Check fusing temperature. 3. The machine was under the low temperature for a long time?	1. Should use recommended paper. 2. Check engine controller board. If you have not thermometer, measure the thermistor voltage to CPU, If $2.3V \pm 5\%$ in printing CPU works well. Then, disassemble fuser and check the thermistor contact and thermistor. 3. Re-check after putting the machine in the warm place for certain period.
Partial blank image (not periodic)	1. Toner is low? 2. The toner cartridge is out of position?	1. Replace Toner cartridge. 2. Check and adjust.

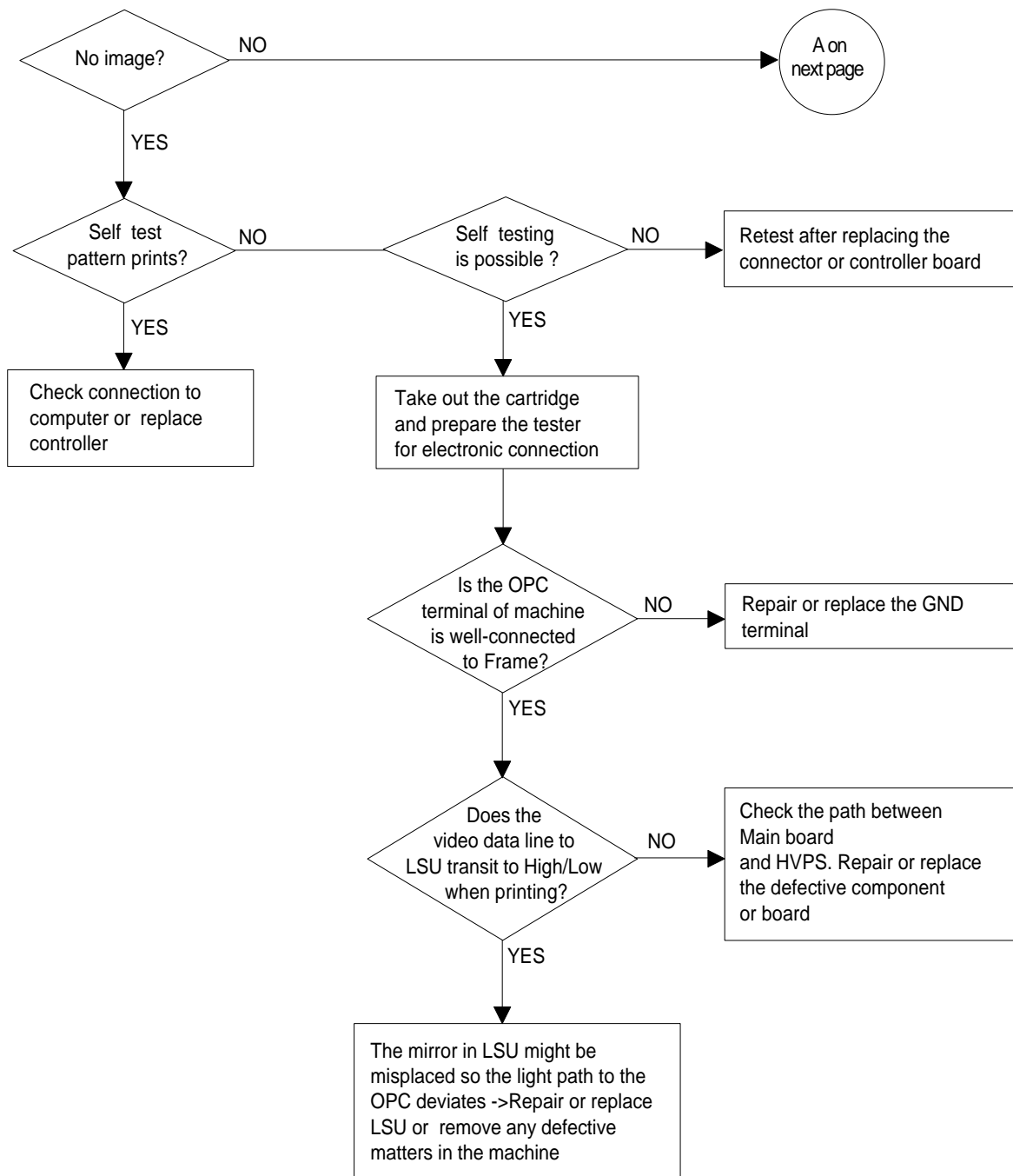
Error Status	Check	Solution
Partial blank image (periodic)	1. Develop roller scar or particle. 2. Scar or particle. (94 mm) 3. Transfer roller scar or particle . (47 mm)	1~2. Replace toner cartridge. 3. Replace transfer roller.
Different image density (left and right) 	1. Charge roller's pressure force unbalance 2. Dev. roller and OPC or Dev. roller and blade's pressure force unbalance 3. Transfer roller's pressure force unbalance of each side	1~2. Change toner cartridge 3. Check left and right spring of transfer roller and the spring pressing the developer inside the machine
Horizontal band 	1. Unstable high voltage contact 2. Charge roller's contamination 3. Contamination of heat roller 4. Malfunction of LSU	1. Clean each contact and check good contact 2. Clean charge roller 3. Replace fuser unit 4. Check Main PBA.

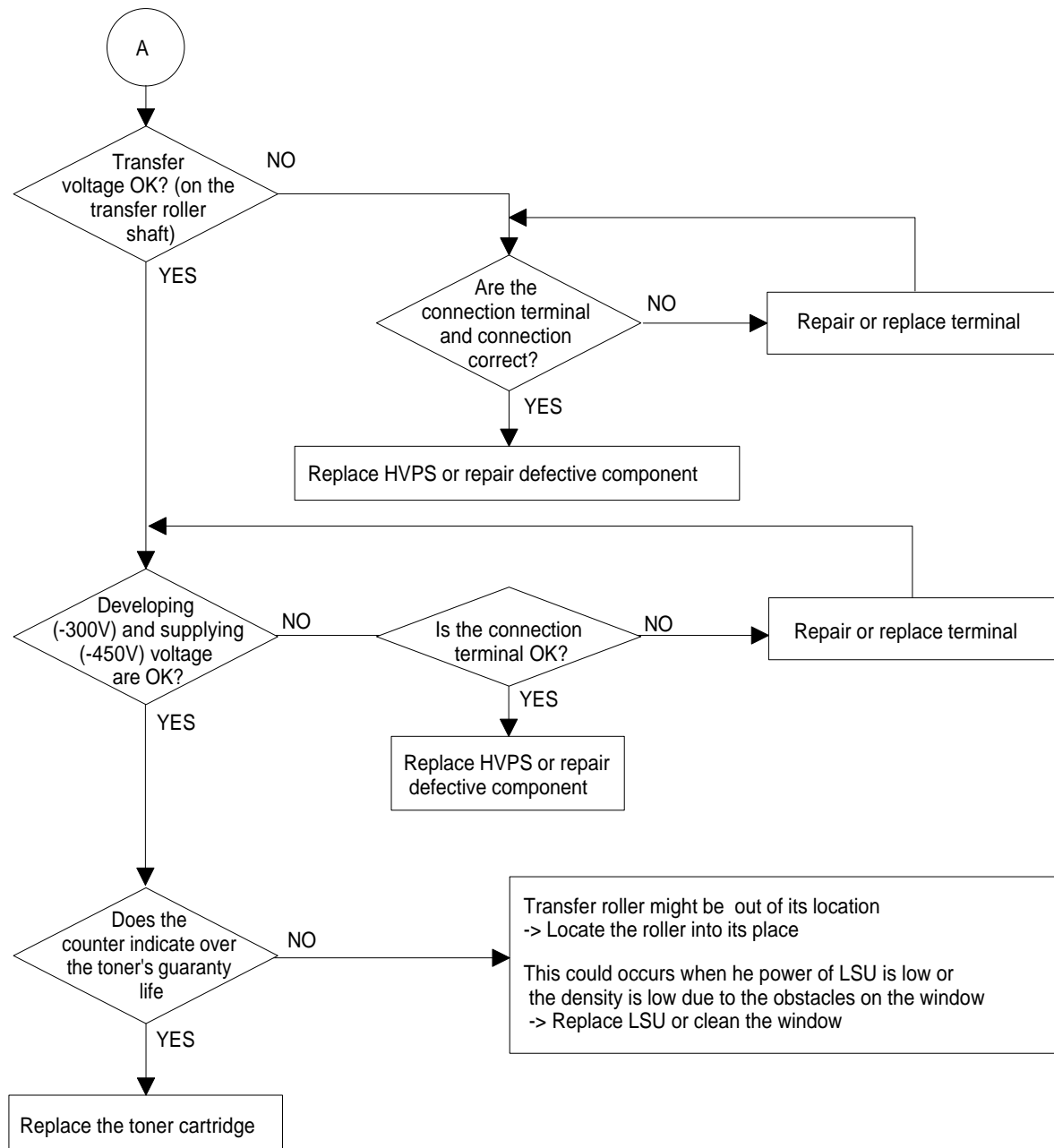
Abnormal Image Printing and Defective Roller

If abnormal image prints periodically, check the parts shown below.

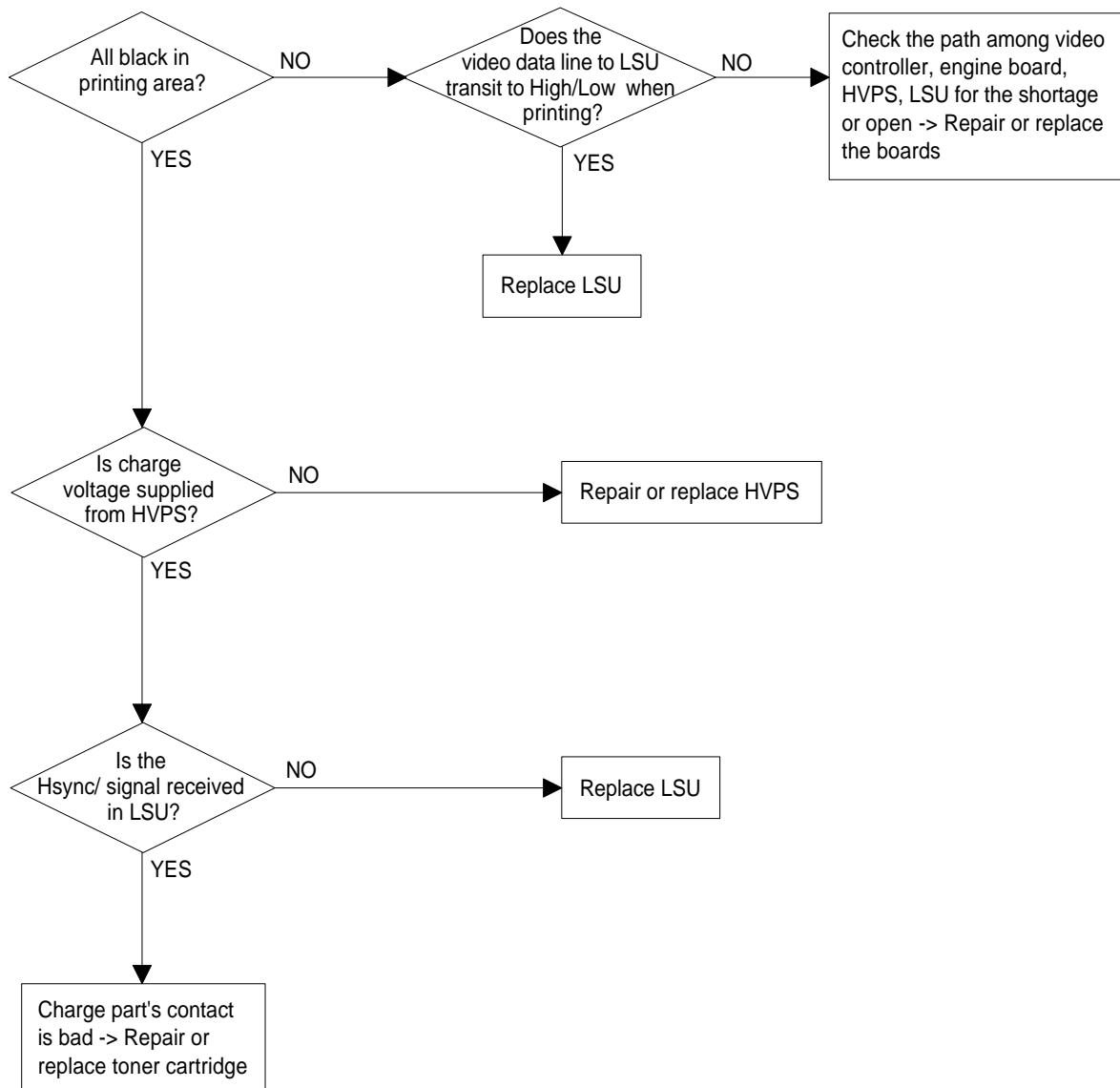
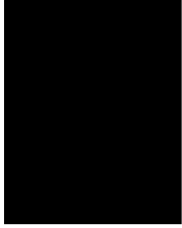
NO	Roller	Abnormal image period	Kind of abnormal image
1	OPC Drum	94.3 mm	White spot. Black spot
2	Charge Roller	37.7 mm	White spot. Black spot
3	Supply Roller	35.8 mm	Horizontal dark band
4	Develop Roller	44.8 mm	Horizontal dark band
5	Transfer Roller	57.8 mm	Black side contamination/transfer fault
6	Heat Roller	82.5 mm	Black spot, White spot
7	Pressure Roller	69.1 mm	Black side contamination

No Image



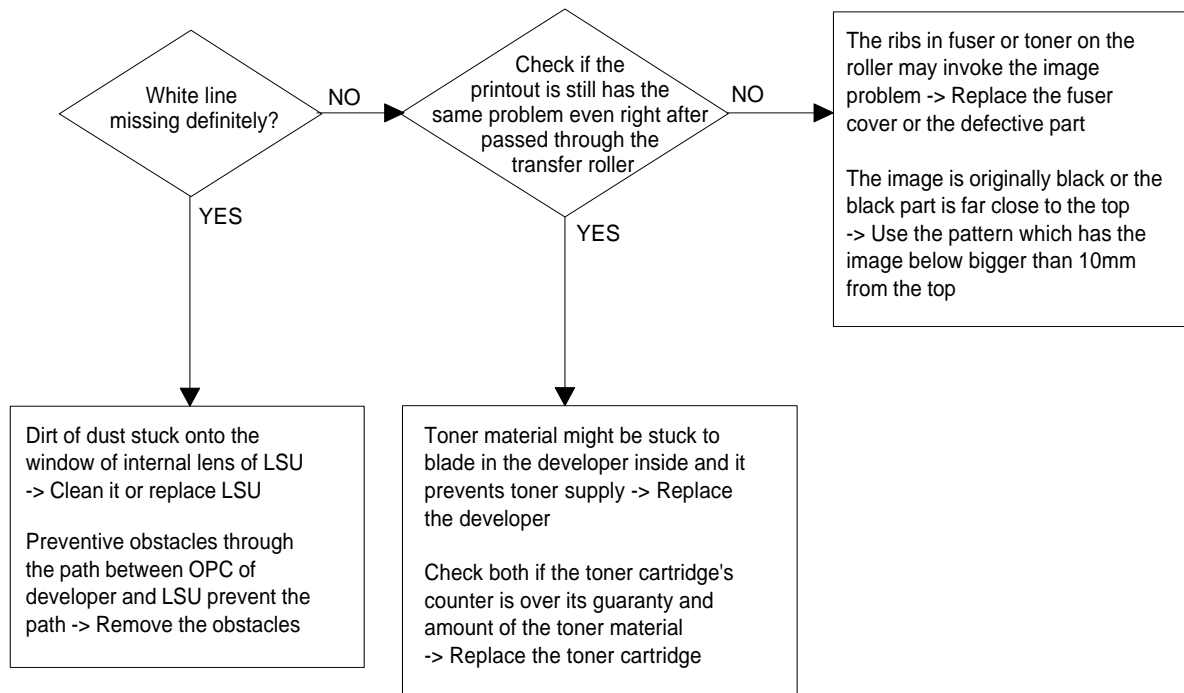


All Black

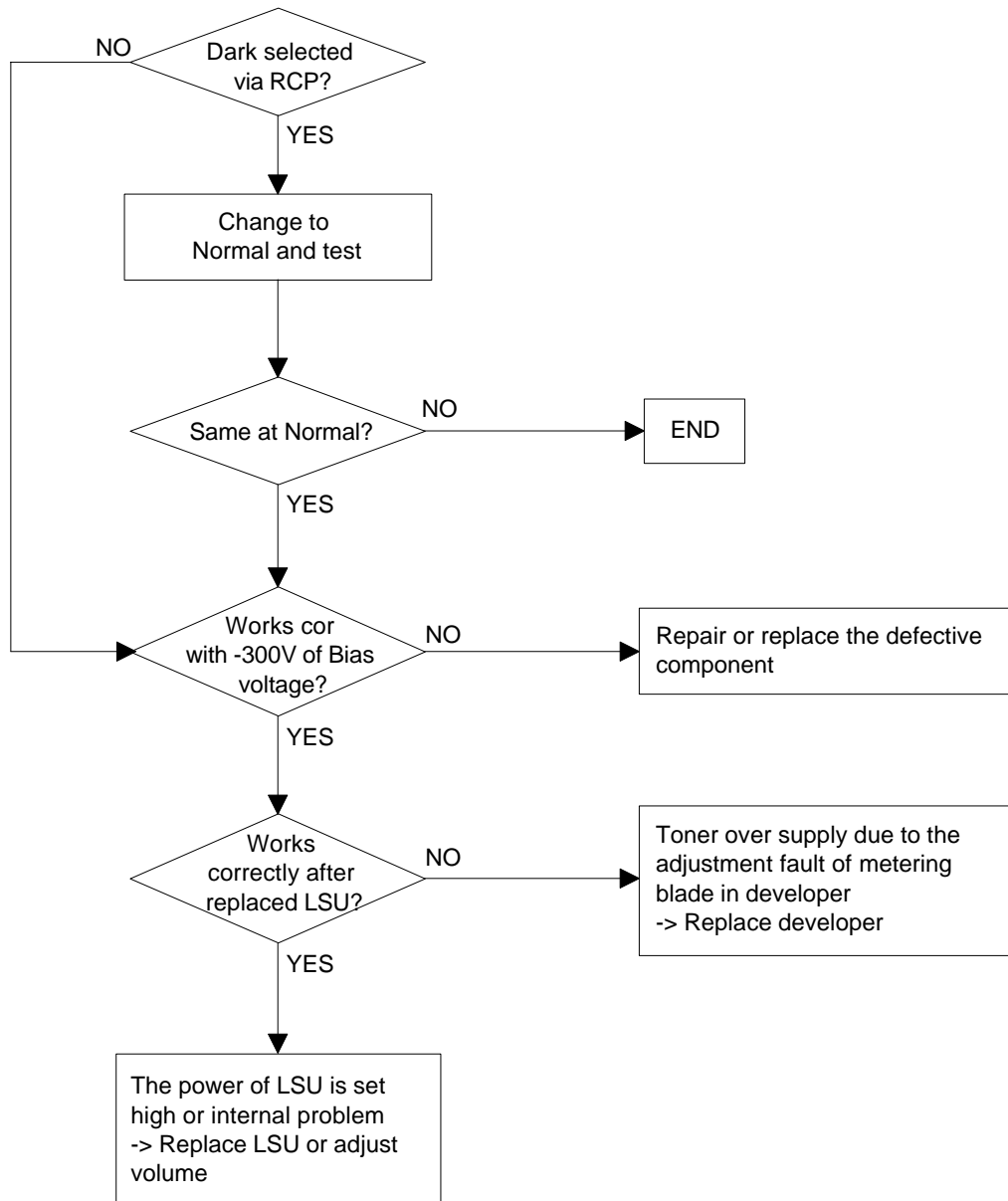
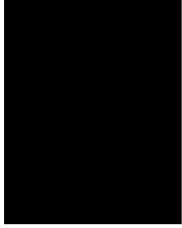


Vertical White Line (Band)

Digitizer Printer
Digitizer Printer
Digitizer Printer
Digitizer Printer
Digitizer Printer

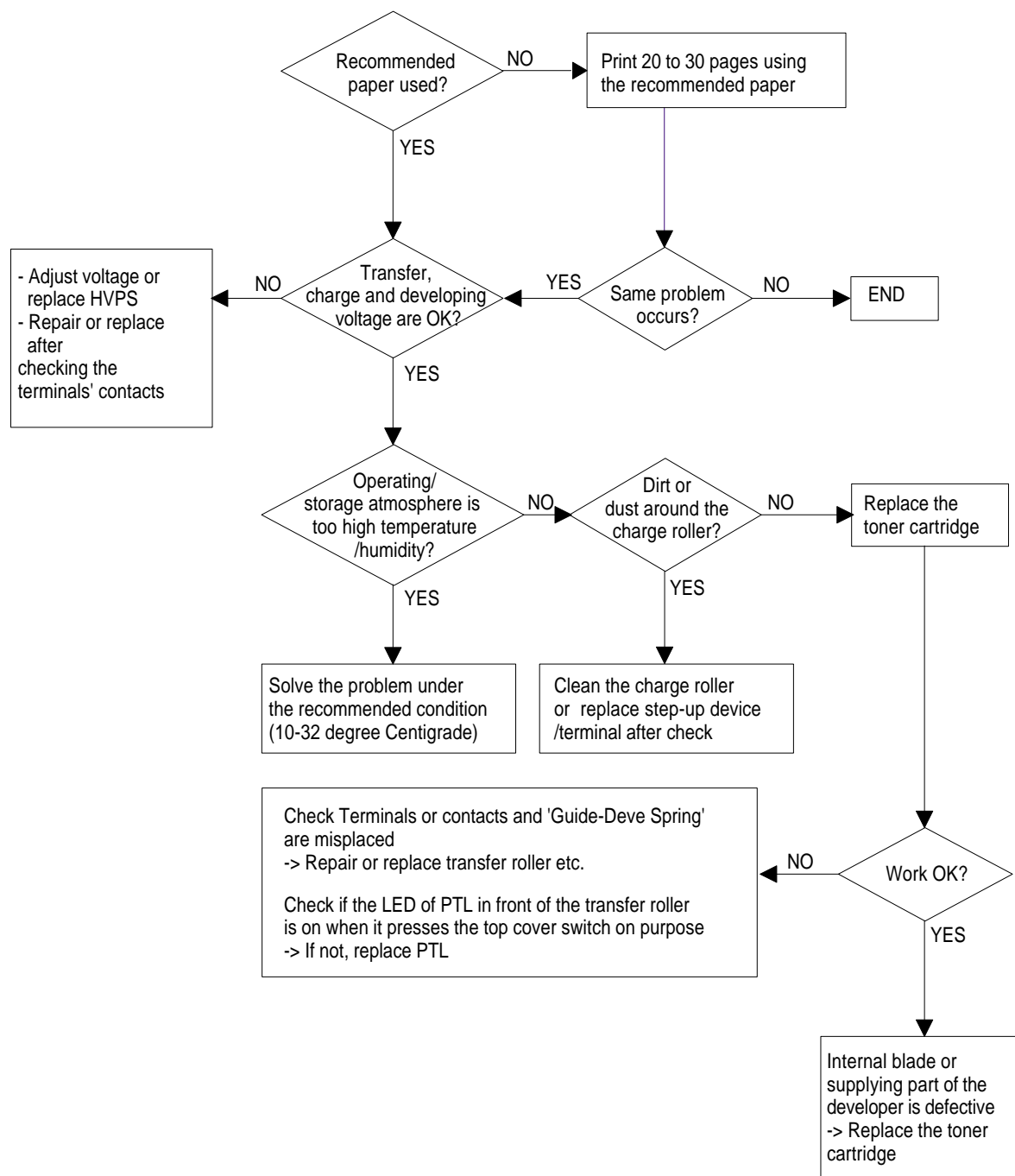


Dark Image



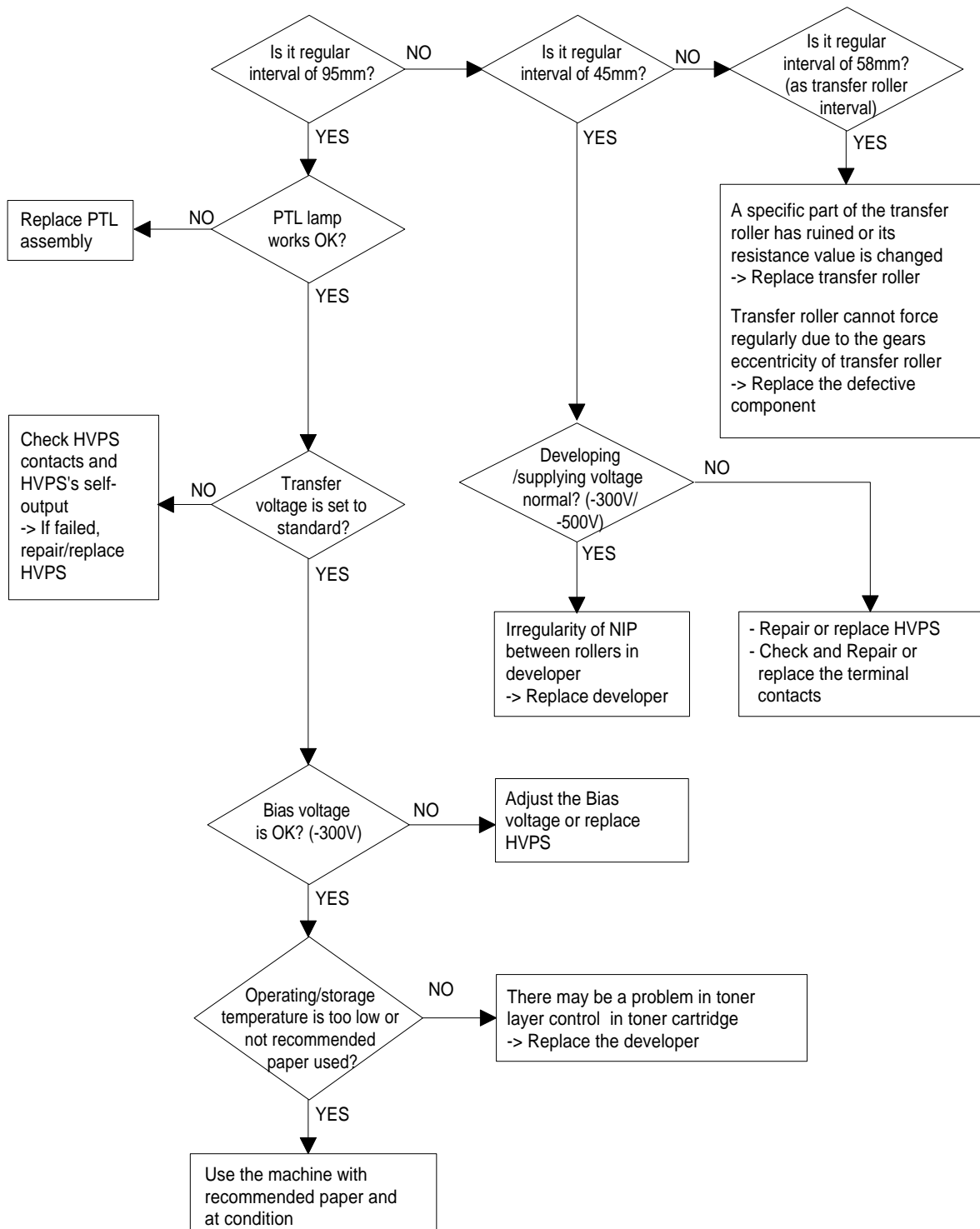
Background

Digital Printer
Digital Printer
Digital Printer
Digital Printer
Digital Printer

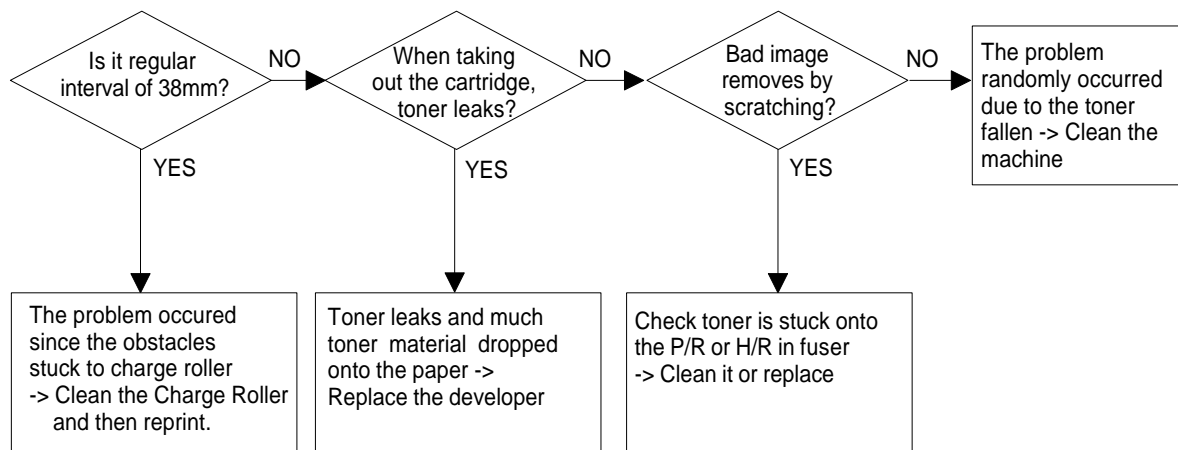


Ghost

Digital Printer
Digital Printer
Digital Printer
Digital Printer

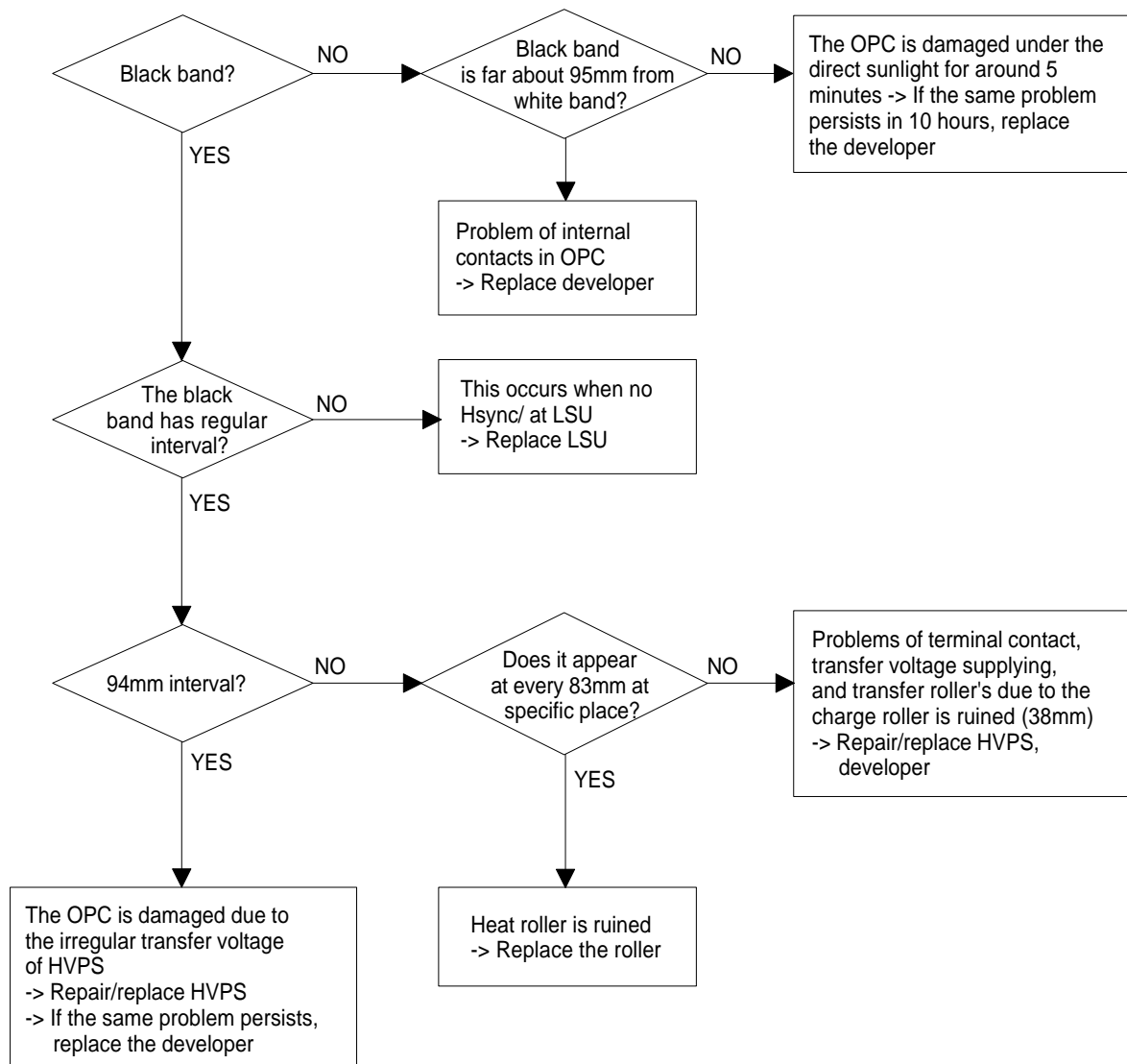


Black Spot



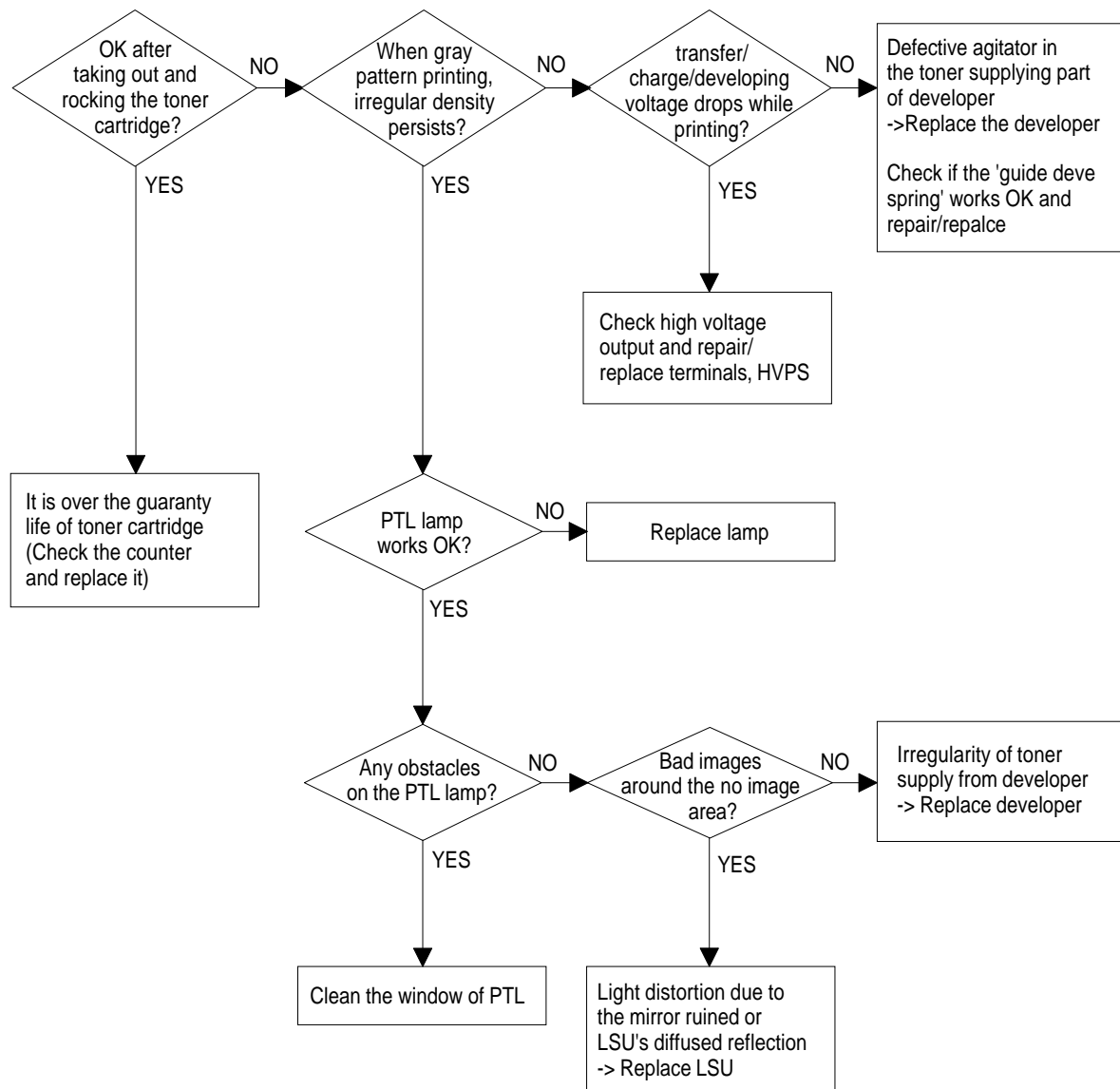
Horizontal Band

Digital Printer	Digital Printer
Digital Printer	Digital Printer
Digital Printer	Digital Printer
Digital Printer	Digital Printer
Digital Printer	Digital Printer



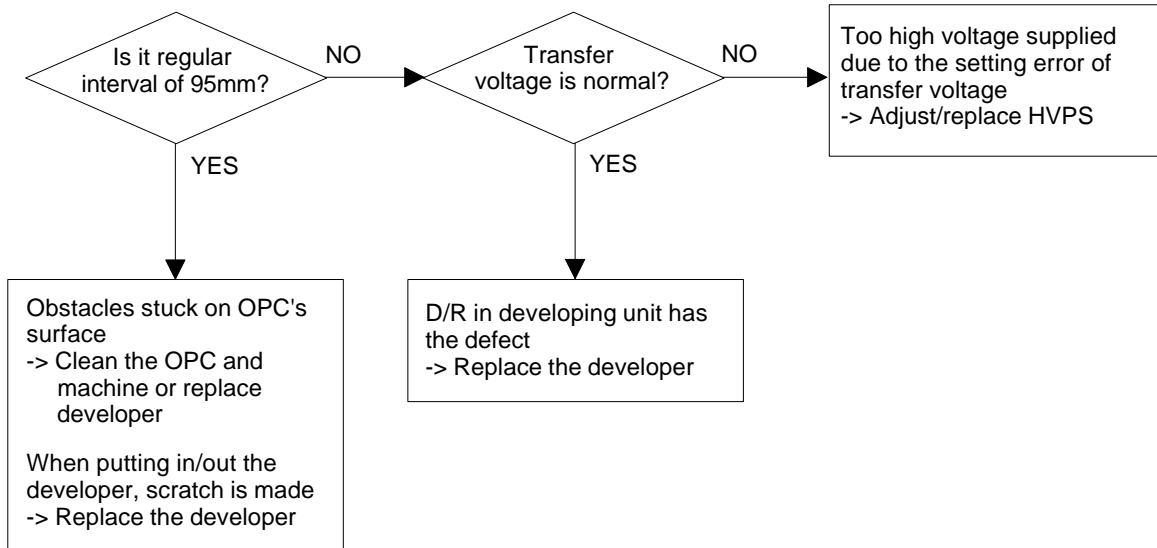
Irregular Density

Digital Printer
Digital Printer
Digital Printer
Digital Printer
Digital Printer

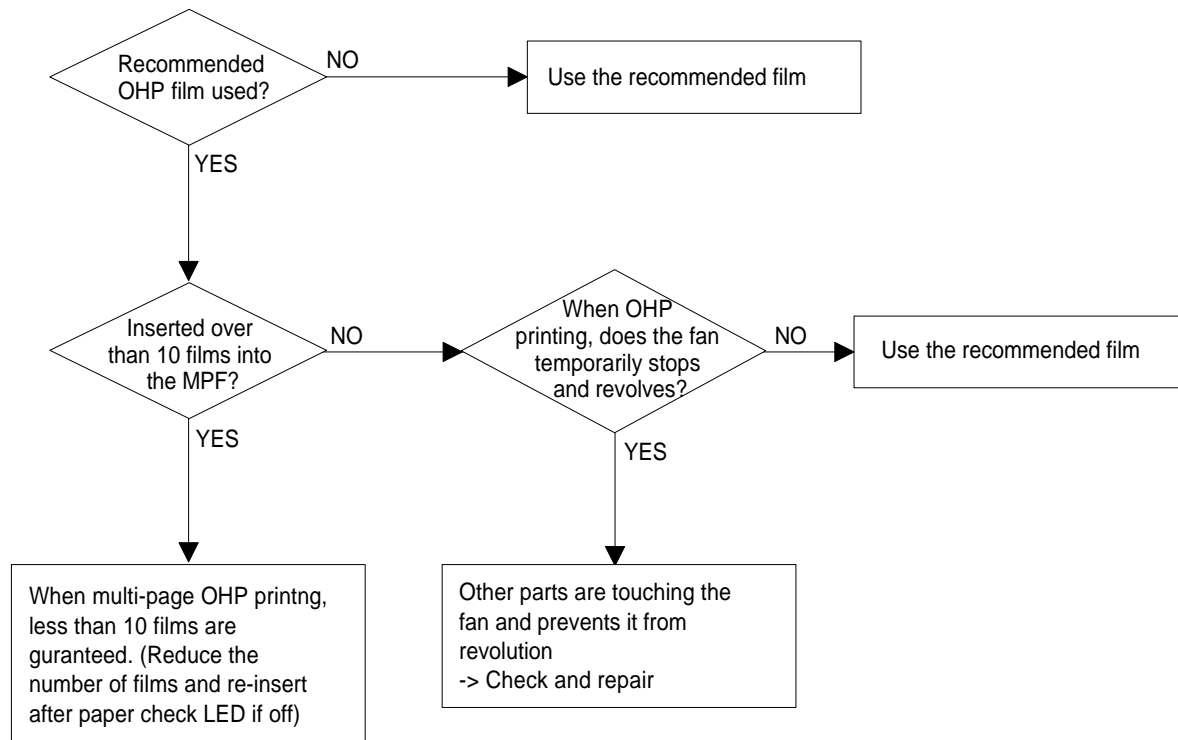


White Spot

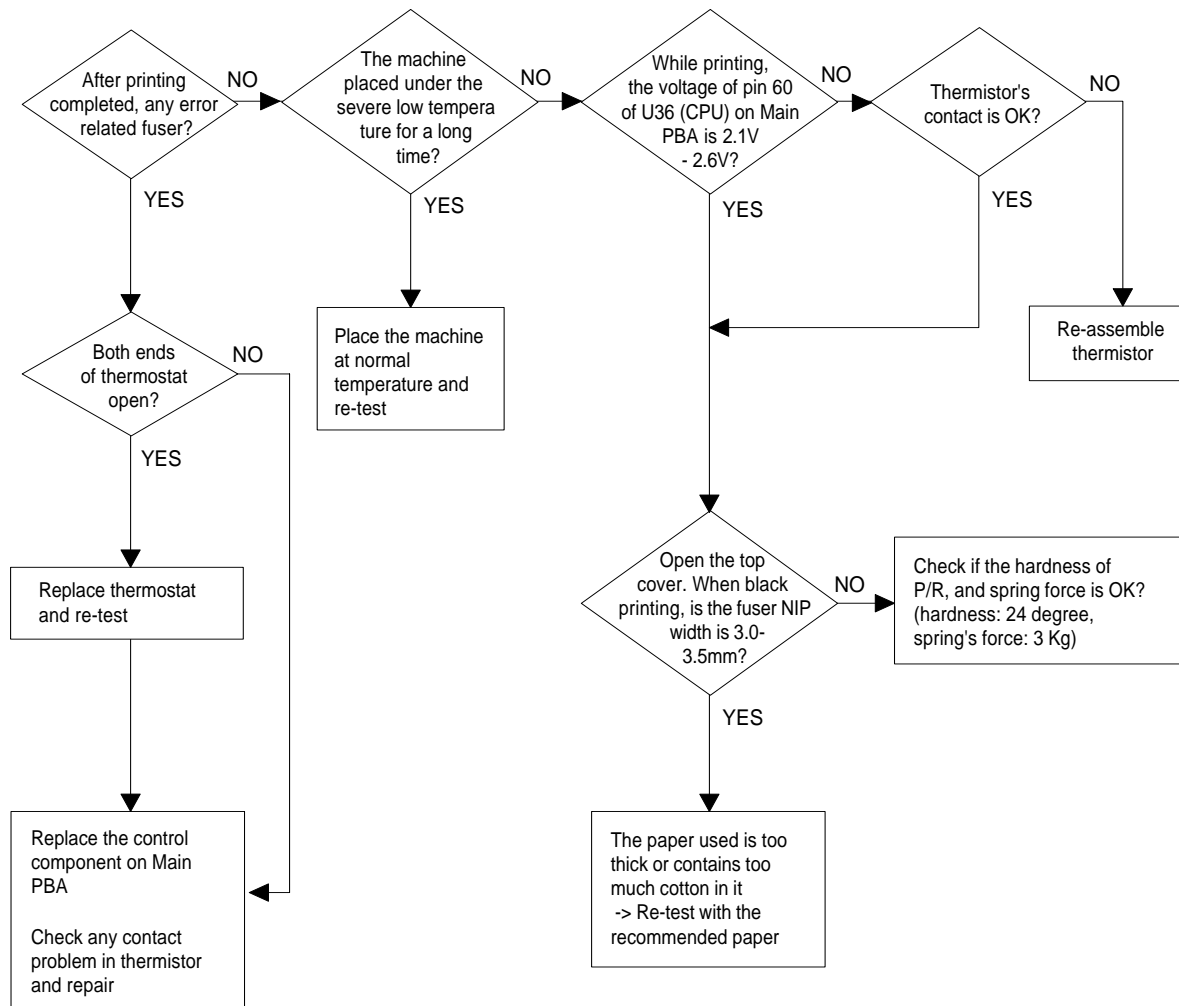
Digital Printer
Digital Printer
Digita. Printer
D.gi.a. Printer
Digital Printer



Trembling at the End When OHP Printing



Poor Fusing Grade

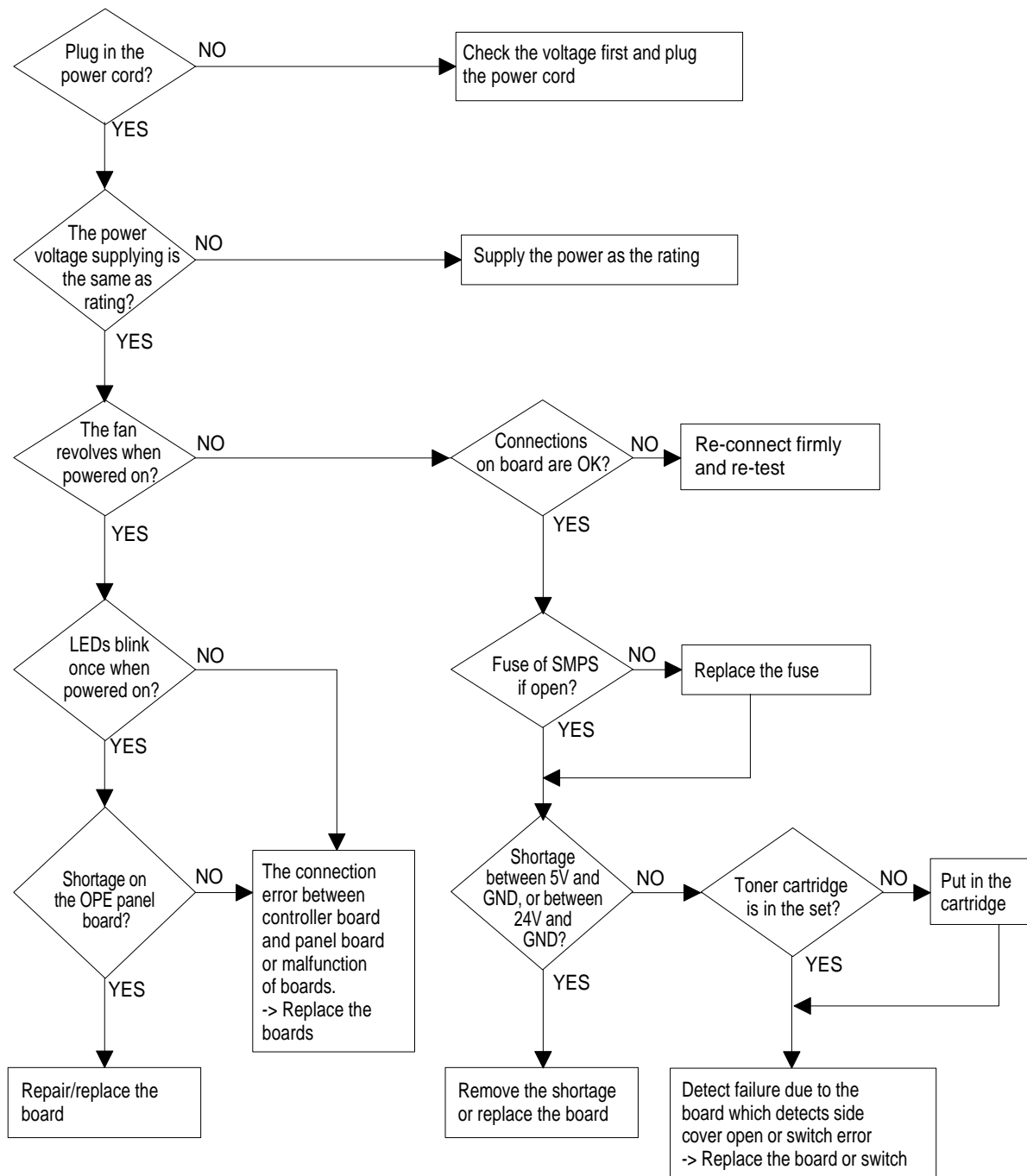


4-6-4 Malfunction

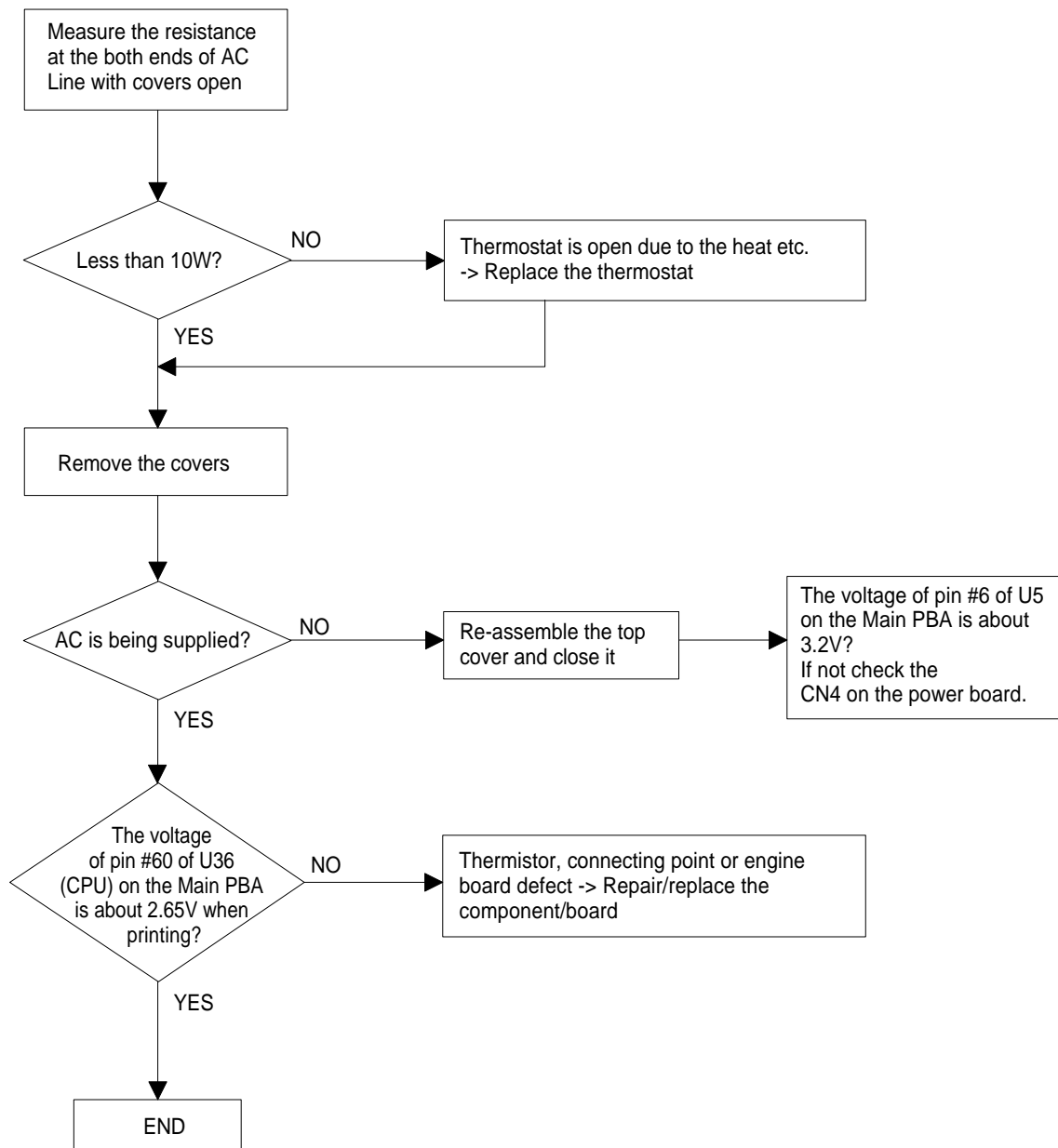
Error Status	Check	Solution
No power	<ol style="list-style-type: none"> 1. Check power is supplying 2. Check fuse F1 open 	<ol style="list-style-type: none"> 1. If supplying power differs from machine's power rating, replace the machine. 2. Replace it.
Fuser Error	<ol style="list-style-type: none"> 1. Thermostat open 2. AC wire open 3. Thermistor wire open 4. Main PBA 	<ol style="list-style-type: none"> 1. Detach AC connector and measure the resistance between pin 1 and 2. If it is megohm, thermostat is open, Replace it. 2. Check bad connector contact or wire is cut. 3. Check thermistor wire and its connection. 4. Replace Main PBA
Cover open	<ol style="list-style-type: none"> 1. When close Side cover, check the lever is pressed 2. Micro switch's contact 3. CPU and related circuit 	<ol style="list-style-type: none"> 1. Open Side cover and press the lever with pen. If Controller detects cover close, there is some mechanical trouble in Side cover and lever's assembly. If not so there is electrical problem.
Jam 0	<p>Check where Jam 0 happens</p> <ol style="list-style-type: none"> 1. Paper is not picked up 2. Paper is located in feed sensor 3. Happened when inserting specific papers such as envelope into the MPF (Multipurpose Paper Feeder)? 4. Happened when inserting specific papers such as envelope into the Manual Feeder? 5. Is the Stacker Extender is folded out? 6. Does not the Guide Adjust distort the papers 	<ol style="list-style-type: none"> 1. Check whether solenoid is working or not by using Engine test mode 2. Check feed sensor malfunction. 3. Re-try inserting a few papers. <ul style="list-style-type: none"> •fan the papers and align •take out the loaded papers and insert them reverse direction 4. Take out the loaded papers and insert them reverse direction <ul style="list-style-type: none"> •inserted papers as recommended for Manual Feeding? <ul style="list-style-type: none"> •When loading, tap the papers until paper detect sensor senses loading 5. When using long papers, use the Stacker Extender 6. Adjust Guide to fit the paper width
Jam 1	Paper is stopped in just after of fuser unit.	<ol style="list-style-type: none"> 1. It is mostly resulted from double feeding. Check paper is well stocked in feeder. 2. Check feed actuator position and actuator's operating. There may be stiff moving or double reflection. If not so, check the operation of feed sensor by Engine test mode. 3. Check exit lever operation. Remove jam and check actuator moving by hand. If actuator is too stiff, paper is wrapped around the heat roller. Remove obstacles or replace.
Jam 2	<p>Check where Jam 2 happens</p> <ol style="list-style-type: none"> 1. Paper is curled and cannot exit. 2. Paper is curled in the exit cover?. 	<ol style="list-style-type: none"> 1. Remove paper using pinset or some tool and watch if separate claws have any trouble. Clean around fuser. 2. Check locking works well. Watch whether the ribs of exit cover have any burr or resistive edge. If they do, remove obstacles or replace.

Error Status	Check	Solution
Jam 2 at face-down tray	<ol style="list-style-type: none"> 1. Then paper is not drawn in because of the stack of papers in the Out tray. 2. Does it curl while coming out? 	<ol style="list-style-type: none"> 1. Load recommended quantity of papers 2. Open the Cover Front and check whether roller or spring, which are related to paper out, is not out of position. If so, re-locate or replace.
Clutch error	<ol style="list-style-type: none"> 1. Check the spring of solenoid 2. Check the armature assembly/cushion 3. Electrical check 	<ol style="list-style-type: none"> 1. Check whether the spring is expanded or not. 2. Check armature is well installed. It may be unstable assemble. 3. Remove the Main PBA.
High voltage error	<ol style="list-style-type: none"> 1. Check the terminal output voltage 2. Check HVPS 	<ol style="list-style-type: none"> 1. Remove the Toner cartridge and open the cover and press cover open switch lever and measure the voltage with high voltage probe and sending printing data. If the voltage is normal, change the toner cartridge. 2. Disassemble the left side cover, and check HV of the solder side of HVPS and change it.
Feeding obstacles	Does the Plate-knockup prevent the paper loading?	<p>MPF :</p> <p>Turn the power off and on. Open and close the Side cover to return to the original state.</p> <p>Cassette :</p> <p>Adjust Guide to fit the paper width.</p>
Skew	Is the Guide adjust set to the paper width?	Fit the paper width using the Guide adjust.
Stacking	<ol style="list-style-type: none"> 1. Took out the Stacker extender to support long papers? 2. Stacked too many papers more than Stacker can hold? 	<ol style="list-style-type: none"> 1. Use extender as per the paper length. 2. The Face-up stacker normally can hold 100 pages when using 75g/m2, however, stacking capacity can be lowered depending on the type of papers.
Engine Error	Check CBF Harness_CN7. (Main PBA to LSU)	Refer to troubleshooting "ENGINE ERROR".
Document Jam	Document is not picked up(in ADF).	<ol style="list-style-type: none"> 1. Check document is well stocked in ADF. 2. Check whether document was been fastened together by staple or clip. 3. Load recommended quantity of papers.
	Document is stopped after it has fed into the ADF.	<ol style="list-style-type: none"> 1. Check whether the Reg. sensor is working or not. 2. Check whether the Feed Roller is working or not.
	Does it curl while coming out?	<ol style="list-style-type: none"> 1. Check the Open Cover whether there are bosses. 2. Check the ADF ass'y is well assemble.

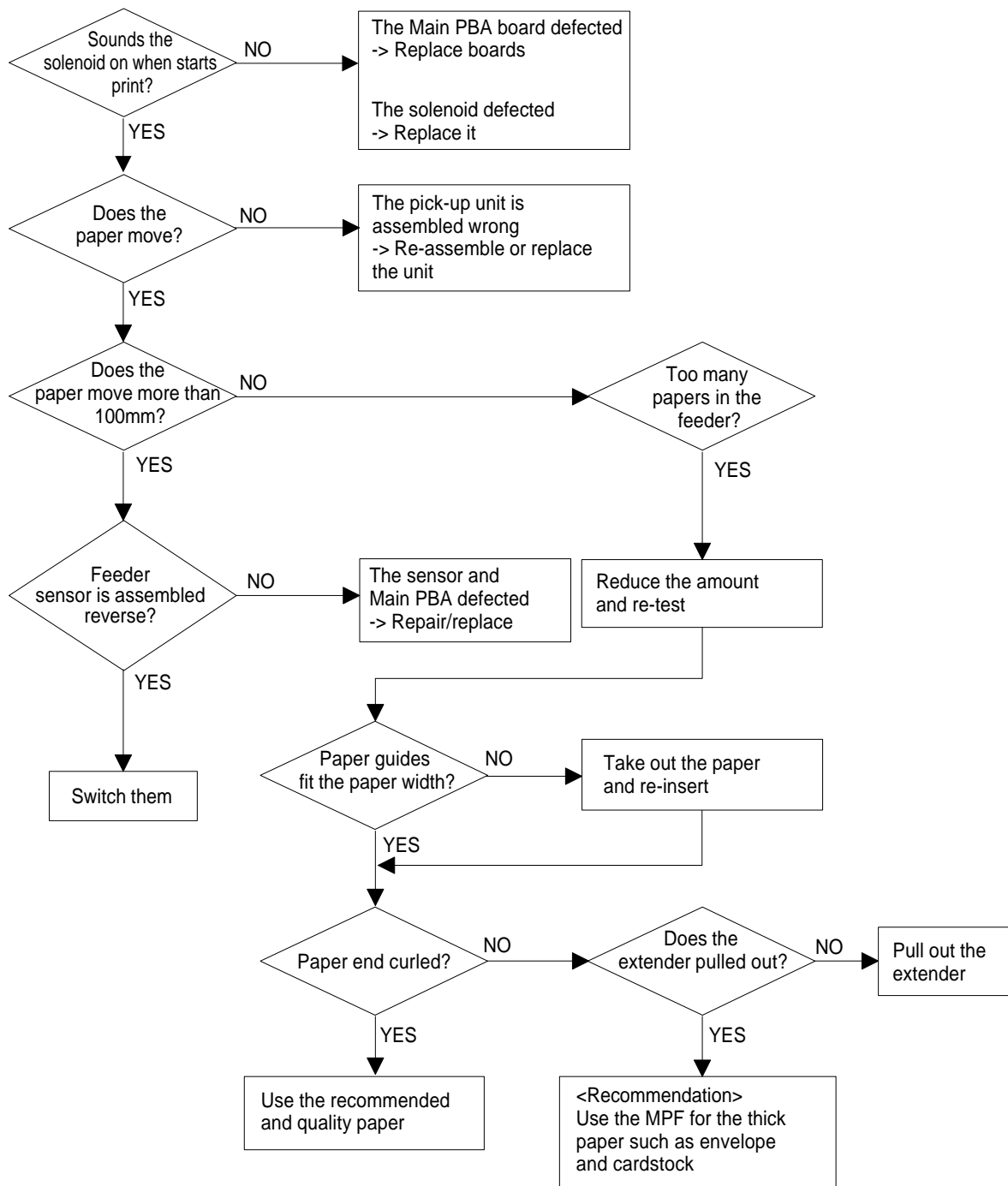
No Power (LCD NO display LED Off)



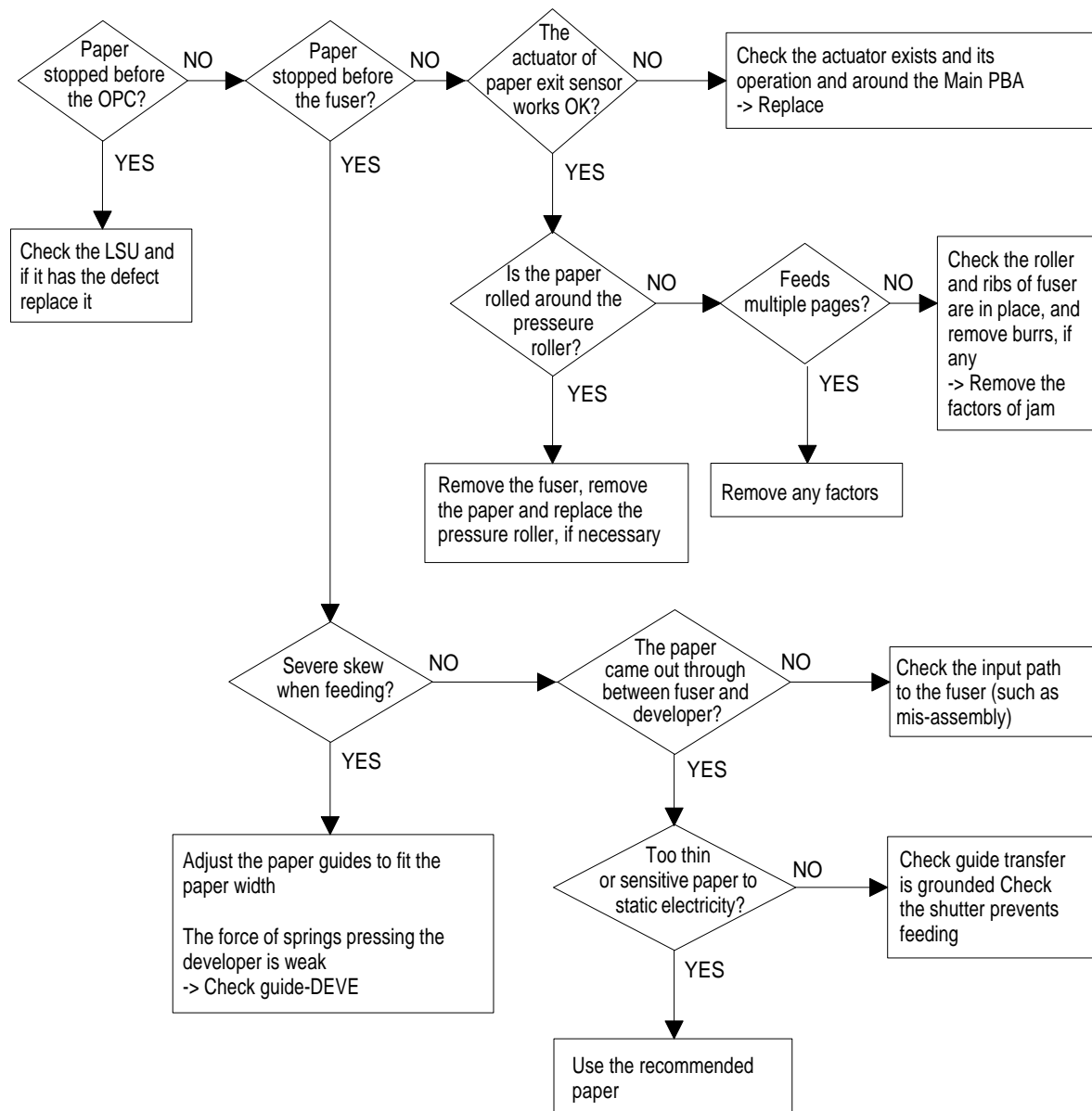
Fuser Error



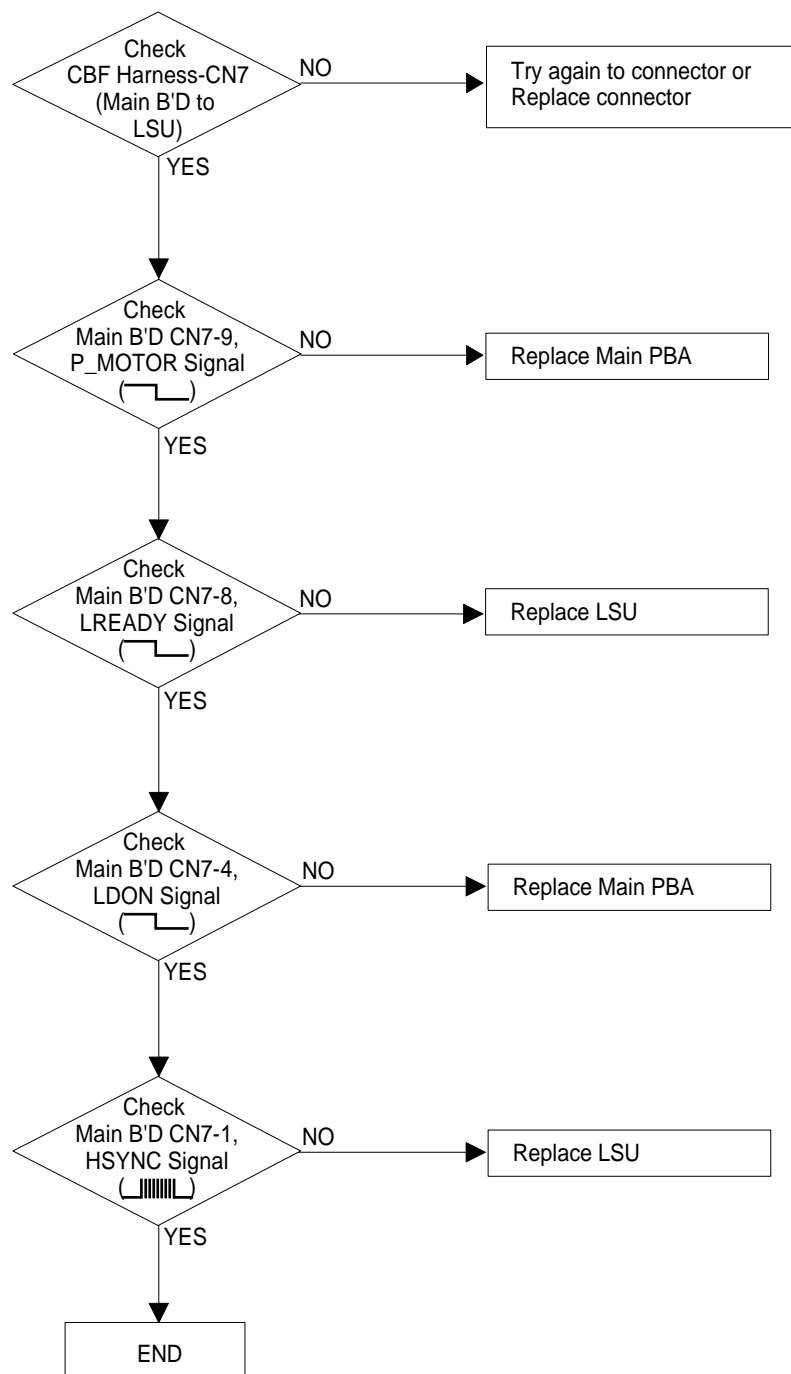
Paper Jam (Mis-Feeding)



Paper Jam(Jam 1)



Engine Error



4-6-5 Toner Cartridge and Drum Cartridge Service

It is not guaranteed for the default caused by using other toner and Drum Cartridge cartridge other than the cartridge supplied by the Samsung Electronic or caused by non-licensed refill production.

Precautions on Safe-keeping of the Drum Cartridge

Excessive exposure to direct light more than a few minutes may cause damage to the cartridge.

Service for the Life of Toner Cartridge


If the printed image is light due to the life of the toner, you can temporarily improve the print quality by redistributing the toner(Shake the toner cartridge), however, you should replace the toner cartridge to solve the problem thoroughly.

Service for Judgement of Inferior Expendables and the Standard of Guarantee

Please refer to User's Manual or Instructions on Fax/Printer Expendables SVC for the judgement of inferior expendables and the standard of guarantee besides this service manual.

4-6-5-1 Signs and Measures at Poor toner cartridge

Fault	Signs	Cause & Check	Solution
<p>Light image and partially blank image (The life is ended.)</p> <div> <p>Digital Printer</p> <p>Digital Printer</p> <p>Digital Printer</p> <p>Digital Printer</p> <p>Digital Printer</p> </div>	<ul style="list-style-type: none"> The printed image is light or unclean and untidy. Some part of the image is not printed. Periodically a noise as "tick tick" occurs. 	<ol style="list-style-type: none"> If the image is light or unclean and untidy printed image - Shake the developer and then recheck. (1)NG: Check the weight of the developer (2)OK: Lack of toner, so the life is nearly closed. Some part of image is not printed - Shake the developer and then recheck. (1)NG: Check the weight of the developer and clean the LSU window with a cotton swab, then recheck. (2)OK: Lack of toner, so the life is nearly closed. Periodically a noise as "tick tick" occurs - Measure the cycle and the weight of the developer. White vertical stripes on the whole screen or partly : Check the weight of the developer. 	<ol style="list-style-type: none"> All of 1, 2, 3 above- If it become better by shaking, replace with a new developer after 50-100 sheets in the closing state of the life span. In case of 2- If it becomes better after cleaning the LSU window, then the developer is normal. (Because of foreign substance on the LSU window, the image has not been printed partly.) In case of 3- If the cycle of noise is about 2 seconds, the toner inside the developer has been nearly exhausted. (Purchase and replace with a new developer after using about 200 sheets at the point of occurrence) In case of 3- This is a phenomenon caused by lack of toner, so replace with a new developer.
Toner Contamination	<ul style="list-style-type: none"> Toner is fallen on the papers periodically. Contaminated with toner on prints partly or over the whole surface. 	<ol style="list-style-type: none"> Toner is fallen on the paper periodically. (1)Check the cycle of the falling of the toner. (2)Check the appearance of both ends of the developer OPC drum. The center of the printed matter is contaminated with toner. (1)Check whether foreign substances or toner are stuck to the terminal (contact point) of the developer. (2)Check whether the state of the terminal assembly is normal. 	<ol style="list-style-type: none"> If both ends of the OPC drum are contaminated with toner: Check the life of the developer. Check whether it could be recycled.

Fault	Signs	Cause & Check	Solution
White Black spot 	<ul style="list-style-type: none"> • Light or dark black dots on the image occur periodically. • White spots occur in the image periodically. 	<ol style="list-style-type: none"> 1. If light or dark periodical black dots occur, this is because the developer rollers are contaminated with foreign substance or paper particles. (1) 37.7mm interval : Charged roller (2) 94.3mm interval : OPC cycle 2. If white spots occur in a black image at intervals of 94, 29mm, or black spots occur elsewhere, the OPC drum is damaged or foreign substance is stuck to the surface. 3. If a black and white or graphic image is partially broken at irregular intervals, the transfer roller's life has been expired or the transfer voltage is abnormal. 	<ol style="list-style-type: none"> 1. In case of 1 above - Run OPC Cleaning Mode Print 4-5 times repeatedly to remove. Especially check foreign substance on the OPC surface, then remove them with a clean gauze moistened with IPA (Isopropyl Alcohol) not to damage OPC if necessary. Caution : Never use usual alcohol. 2. In case of 2 If they are not disappeared by running OPC Cleaning Mode Print 4-5 times. : at intervals of 94.3mm - Replace the developer. : at intervals of 37.7mm - Remove foreign substance, Clean the Charged Roller : Broken image - Replace the developer according to carelessness. 3. In case of 3 - Exchange the transfer roller because the life of the transfer roller in use has been expired. (Check the transfer voltage and readjust if different.)
Recycled product	<ul style="list-style-type: none"> • Poor appearance of the developer. • Unclean and rough printouts. • Bad background in the image. 	<ol style="list-style-type: none"> 1. Poor appearance of the developer. (1) Check the damage to label and whether different materials are used. (2) Check the appearance of parts of the developer, such as frame, hopper. 2. Unclean and rough printouts. (1) Check whether foreign substance or toner are stuck to the terminal (contact point) of the developer. (2) Check whether the state of the terminal assembly is normal. 	<ol style="list-style-type: none"> 1. In case of 1 - (1) If there is an evidence of disassembling the developer. (2) If materials other than normal parts of the developer are added or substituted. 2. In case of 2 - If there are any abnormalities in connection with the situation of 1. (1) It occurs when the developer is recycled over 2 times. (2) If toner nearly being expired are collected to use, it is judged as the recycled developer.

Fault	Signs	Cause & Check	Solution
Ghost & Image Contamination	<ul style="list-style-type: none"> • The printed image is too light or dark, or partially contaminated black. • Totally contaminated black. (Black image printed out) 	<p>1. The printed image is too light or dark, or partially contaminated black.</p> <p>(1) Check whether foreign substance or toner are stuck to the terminal (point of contact) of the developer.</p> <p>(2) Check whether the terminal assembly is normal.</p> <p>2. Totally contaminated black. (Black image printed out)</p> <p>(1) Check whether foreign substances are stuck to the terminal (point of contact) of the developer and the state of assembly. (Especially check the charged roller terminal.)</p>	<p>1. All of 1, 2, 3 above</p> <p>(1) Remove toner and foreign substances adhered to the contact point of the developer.</p> <p>(2) The contact point of the unit facing that of the developer also must be cleaned.</p> <p>(3) If the terminal assembly is unsafe:</p> <ul style="list-style-type: none"> • Fully stick the terminal to or reassemble it after disassembling. • Disassemble the side plate and push the terminal to be stuck, then reassemble it. <p>2. In case of 2</p> <p>It is a phenomenon when the OPC drum of the developer is not electrically charged. Clean the terminals of the charged roller, then recheck it.</p>

4-6-6 The cause and solutions of bad environment of the software

4-6-6-1 The printer is not working (1)

- **Description** : While Power turned on, the printer is not working in the printing mode.

Check and Cause	Solution
1. Check if the PC and the printer is properly connected and the toner cartridge installed. 2. Printing is nor working in the Windows. 3. Check if the printer cable is directly connected to peripheral devices	1. Replace the printer cable. If the problems not solved even after the cable replaced, check the amount of the remaining tone. 2. Check if the connection between PC and printer port is proper. If you use windows, check if the printer driver in the controller is set up. If the printer driver is properly set up, check in which program the printing is not working. The best way to find out is to open the memo pad to check the function of printing. If it is not working in a certain program, adjust the setup the program requires. Sometimes, the printout is normal within the Windows basic programs, but it's not working in a particular program. In such case, install the new driver again. If not working in the Windows basic program, Check the setup of the port of CMOS is on ECP. And check the address of IRQ 7 and 378 3. If the scanner needs to be connected to the printer, first the remove the scanner from the PC to see if the printer is properly working alone.

4-6-6-2 The printer is not working (2)

- **Description** : After receiving the printing order, no response at all or the low speed of printing occurs due to wrong setup of the environment rather than malfunction of the printer itself.

Check and Cause	Solution
1. Secure more space of the hard disk. 2. Printing error occurs even if there is enough space in the hard disk. 3. Check the parallel-port-related items in the CMOS Setup. 4. Reboot the system to print.	1. Not working with the message 'insufficient printer memory' means hard disk space problem rather than the RAM problem. In this case, provide more space for the hard disk. Secure more space using the disk utilities program. 2. The connection of the cable and printer port is not proper. Check if the connection is properly done and if the parallel port in CMOS is rightly set up. 3. As a printer port, Select ECP or SPP among SPP(Normal), ECP, and EPP modes(increase printing speed) SPP normal mode support 8-bit data transfer, while ECP Mode transfer the 12-bit data. 4. If the regular font is not printing, the cable or the printer driver may be defective. Turn the PC and printer off, and reboot the system to print again. If not solved, double-click the printer in my computer. If the regular fonts are not printed this time again. the cable must be defective so replace the cable with new one.

4-6-6-3 Abnormal Printing

- **Description :** The printing is not working properly even when the cable has no problem. (even after the cable is replaced) If the printer won't work at all or the strange fonts are repeated, the printer driver may be defective or wrong setup in the CMOS Setup.

Check and Cause	Solution
1. Set up the parallel port in the CMOS SETUP.	1. Select SPP(Normal) or ECP LPT Port the among ECP, EPP or SPP in the CMOS Setup.
2. Printer Driver Error.	2. Check the printer in My Computer.(to see if the printer driver is compatible to the present driver or delete the old driver, if defective and reinstall the new driver)
3. Error message from insufficient memory. (The printing job sometimes stops or due to insufficient virtual memory, but it actually comes from the insufficient space of the hard disk.)	3. Delete the unnecessary files to secure enough space of the hard disk and start printing job again.

4-6-6-4 SPOOL Error

- **Description :** To spool which stands for "simultaneous peripheral operations online" a computer document or task list (or "job") is to read it in and store it, usually on a hard disk or larger storage medium so that it can be printed or otherwise processed at a more convenient time (for example, when a printer is finished printing its current document).

Check and Cause	Solution
1. Insufficient space of the hard disk in the directory assigned for the basic spool.	1. Delete the unnecessary files to provide more space to start printing job.
2. If the previous printing error not solved.	2. If there are some files with the extension name of ****.jnl, Delete them and Reboot the Windows to restart printing job.
3. When expected to collide with other program.	3. Shut down all other programs except the current one, if possible.
4. When an application program or the printer driver is damaged.	4. Delete the printer driver completely and reinstall it.
5. When some files related to OS are damaged or virus infected.	5 After rebooting the computer, check for viruses, restore the damaged files and reinstall the program to do the printing job.
6. Memory is less than suggested one.	6. Add up enough memory to the PC.

How to delete the data in the spool manager.

In the spool manager, the installed drivers and the list of the documents waiting to be printed are shown. Select the document to be deleted and check the delete menu.

If you intend to delete the current document being printed, the data being transferred to the printer will be put out and then the document is removed. Before choosing the document, the menu is still inactive.

Or put the document out of the list and repeat the routine as in the above or finish the spool manager.

Appendix information

The following list shows different materials by model.

The material codes mentioned in the manual are subject to change without prior notice.

For the latest exact information, see ITSELF SYSTEM. (<http://itself.sec.samsung.co.kr>)

•SCX-5312F/XAA

DESCRIPTION	SEC.CODE
AS-SCANNER ASS'Y(FRU)	JC81-00691A
AS-PLATEN ASS'Y(FRU)	JC81-00690A
AS-OPE COVER ASS'Y(FRU)	JC81-00689A
PMO-COVER OPE(C)	JC72-00796A
PCT-ONETOUCH PAPER	JC72-00872A
PCT-LCD WINDOW	JC72-00870A
PMO-COVER DUMMY OPE(M)	JC72-00858A
PBA SUB-LIU	JC92-01355A

•SCX-5312F/XEU

DESCRIPTION	SEC.CODE
AS-SCANNER ASS'Y(FRU)	JC81-00691A
AS-PLATEN ASS'Y(FRU)	JC81-00690A
AS-OPE COVER ASS'Y(FRU)	JC81-00689A
PMO-COVER OPE(C)	JC72-00796A
PCT-ONETOUCH PAPER	JC72-00872A
PCT-LCD WINDOW	JC72-00870A
PMO-COVER DUMMY OPE(M)	JC72-00858A
PBA SUB-LIU	JC92-01355G

•SCX-5312F/XEG

DESCRIPTION	SEC.CODE
AS-SCANNER ASS'Y(FRU)	JC81-00691B
AS-PLATEN ASS'Y(FRU)	JC81-00690F
AS-OPE COVER ASS'Y(FRU)	JC81-00689F
PMO-COVER OPE(C)	JC72-00796C
PCT-ONETOUCH PAPER	JC72-00872C
PCT-LCD WINDOW	JC72-00870C
PMO-COVER DUMMY OPE(M)	JC72-00858C
PBA SUB-LIU	JC92-01355E

•SCX-5312F/XEF

DESCRIPTION	SEC.CODE
AS-SCANNER ASS'Y(FRU)	JC81-00691C
AS-PLATEN ASS'Y(FRU)	JC81-00690E
AS-OPE COVER ASS'Y(FRU)	JC81-00689E
PMO-COVER OPE(C)	JC72-00796D
PCT-ONETOUCH PAPER	JC72-00872D
PCT-LCD WINDOW	JC72-00870D
PMO-COVER DUMMY OPE(M)	JC72-00858D
PBA SUB-LIU	JC92-01355E

•SCX-5112/XAA

DESCRIPTION	SEC.CODE
AS-SCANNER ASS'Y(FRU)	JC81-00742A
AS-PLATEN ASS'Y(FRU)	JC81-00745A
AS-OPE COVER ASS'Y(FRU)	JC81-00748A
PMO-COVER OPE(C)	JC72-00944A
PCT-LCD WINDOW	JC72-00945A

•SCX-5112/XEU

DESCRIPTION	SEC.CODE
AS-SCANNER ASS'Y(FRU)	JC81-00742A
AS-PLATEN ASS'Y(FRU)	JC81-00745A
AS-OPE COVER ASS'Y(FRU)	JC81-00748A
PMO-COVER OPE(C)	JC72-00944A
PCT-LCD WINDOW	JC72-00945A

•SCX-5112/XEG

DESCRIPTION	SEC.CODE
AS-SCANNER ASS'Y(FRU)	JC81-00742B
AS-PLATEN ASS'Y(FRU)	JC81-00745B
AS-OPE COVER ASS'Y(FRU)	JC81-00748B
PMO-COVER OPE(C)	JC72-00944C
PCT-LCD WINDOW	JC72-00945C

•SCX-5112/XEF

DESCRIPTION	SEC.CODE
AS-SCANNER ASS'Y(FRU)	JC81-00742C
AS-PLATEN ASS'Y(FRU)	JC81-00745C
AS-OPE COVER ASS'Y(FRU)	JC81-00748C
PMO-COVER OPE(C)	JC72-00944D
PCT-LCD WINDOW	JC72-00945D

•SCX-5312F/XEC

DESCRIPTION	SEC.CODE
AS-SCANNER ASS'Y(FRU)	JC81-00691E
AS-PLATEN ASS'Y(FRU)	JC81-00690C
AS-OPE COVER ASS'Y(FRU)	JC81-00689C
PMO-COVER OPE(C)	JC72-00796E
PCT-ONETOUCH PAPER	JC72-00872E
PCT-LCD WINDOW	JC72-00870E
PMO-COVER DUMMY OPE(M)	JC72-00858E
PBA SUB-LIU	JC92-01355E

•SCX-5312F/XET

DESCRIPTION	SEC.CODE
AS-SCANNER ASS'Y(FRU)	JC81-00691D
AS-PLATEN ASS'Y(FRU)	JC81-00690D
AS-OPE COVER ASS'Y(FRU)	JC81-00689D
PMO-COVER OPE(C)	JC72-00796F
PCT-ONETOUCH PAPER	JC72-00872F
PCT-LCD WINDOW	JC72-00870F
PMO-COVER DUMMY OPE(M)	JC72-00858F
PBA SUB-LIU	JC92-01355E

•SCX-5312F/XIL

DESCRIPTION	SEC.CODE
AS-SCANNER ASS'Y(FRU)	JC81-00691F
AS-PLATEN ASS'Y(FRU)	JC81-00690B
AS-OPE COVER ASS'Y(FRU)	JC81-00689B
PMO-COVER OPE(C)	JC72-00796G
PCT-ONETOUCH PAPER	JC72-00872G
PCT-LCD WINDOW	JC72-00870G
PMO-COVER DUMMY OPE(M)	JC72-00858G
PBA SUB-LIU	JC92-01355A

•SCX-5312F/XSA

DESCRIPTION	SEC.CODE
AS-SCANNER ASS'Y(FRU)	JC81-00691A
AS-PLATEN ASS'Y(FRU)	JC81-00690A
AS-OPE COVER ASS'Y(FRU)	JC81-00689A
PMO-COVER OPE(C)	JC72-00796A
PCT-ONETOUCH PAPER	JC72-00872A
PCT-LCD WINDOW	JC72-00870A
PMO-COVER DUMMY OPE(M)	JC72-00858A
PBA SUB-LIU	JC92-01355F

•SCX-5112/XEC

DESCRIPTION	SEC.CODE
AS-SCANNER ASS'Y(FRU)	JC81-00742E
AS-PLATEN ASS'Y(FRU)	JC81-00745E
AS-OPE COVER ASS'Y(FRU)	JC81-00748E
PMO-COVER OPE(C)	JC72-00944E
PCT-LCD WINDOW	JC72-00945E

•SCX-5112/XET

DESCRIPTION	SEC.CODE
AS-SCANNER ASS'Y(FRU)	JC81-00742D
AS-PLATEN ASS'Y(FRU)	JC81-00745D
AS-OPE COVER ASS'Y(FRU)	JC81-00748D
PMO-COVER OPE(C)	JC72-00944F
PCT-LCD WINDOW	JC72-00945F

•SCX-5112/XIL

DESCRIPTION	SEC.CODE
AS-SCANNER ASS'Y(FRU)	JC81-00742F
AS-PLATEN ASS'Y(FRU)	JC81-00745F
AS-OPE COVER ASS'Y(FRU)	JC81-00748F
PMO-COVER OPE(C)	JC72-00944G
PCT-LCD WINDOW	JC72-00945G

5. Exploded View & Parts List

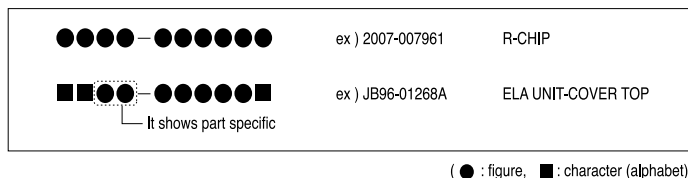
5-1. Main Exploded View & Parts List.....	page(5-2)
5-2. Platen Ass'y Exploded View & Parts List.....	page(5-5)
5-3. ADF ASS'Y Exploded View & Parts List.....	page(5-9)
5-4. Side Cover Ass'y Exploded View & Parts List.....	page(5-12)
5-5. Cassette Ass'y Exploded View & Parts List.....	page(5-14)
5-6. Exit Ass'y Exploded View & Parts List.....	page(5-16)
5-7. Feeder Ass'y Exploded View & Parts List.....	page(5-18)
5-8. MP Ass'y Exploded View & Parts List.....	page(5-20)
5-9. Base Frame Exploded View & Parts List.....	page(5-22)
5-10. Pick-up Ass'y Exploded View & Parts List.....	page(5-24)
5-11. Drive Ass'y Exploded View & Parts List.....	page(5-26)
5-12. Main Frame Ass'y Exploded View & Parts List.....	page(5-28)
5-13. Fuser Ass'y Exploded View & Parts List.....	page(5-30)
5-14. Screw	page(5-32)

- Deal drawings and service parts are declared for the items with higher rate of inferiority and replaceable in the level of service description only.
- If inferiority occurs, you can replace the parts by the unit declared in deal drawings and service items.

Way to observe Part Code & Description

Part code and Description is quoted and controlled by determined standard. Refer to this determined standard, it will help with ordering Part.

- There are two kinds of Part code inscription type.



Type 1 : Controlled by Company : It can be commonly used for all kinds of product SEC produce. Mostly, electronics Parts.

Type 2 : Controlled by Division : It is used or one produce. Mostly, Mostly, mechanical Parts.

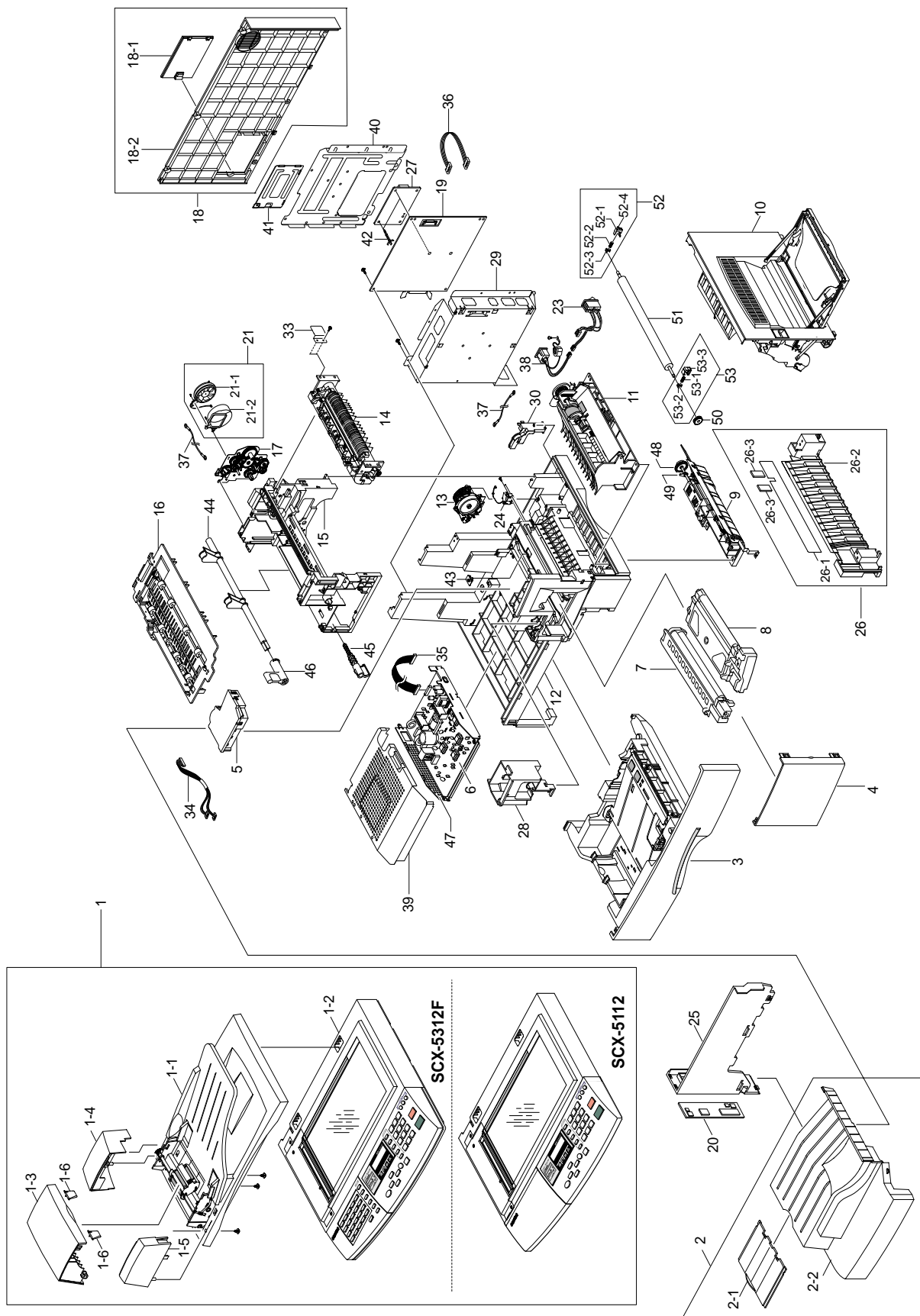
- **A/S privately used part** : It is only used for A/S .

- **Ass'y part** : Assembled by more than 2 Parts. If necessary part is not A/S Part, Ass'y part including necessary par can be used. It is shown in the diagram and drawing of SVC manual.

- Ass'y part and A/S privately used Part is distinguished by part Code and Description. The are inscription type 2. It is recognized by Part character and front side of description.

DIVISION	PART CODE	DESCRIPTION
A/S Private	**81-***** (JB81-00039A)	AS-***** (AS-USE)
ASS'Y Part	**75-***** (JB75-00068A)	MEC-***** (MEC-CHUTE)
ASS'Y Part	**92-***** (JB92-01131A)	PBA ***** (PBA MAIN-CONTROLLER)
ASS'Y Part	**97-***** (JB97-01089A)	MEA ***** (MEA UNIT-PULLEY IDLE)

5-1. Main Exploded View & Parts List



Main Parts List

(SA. : Service Available)

NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
1	SCANNER ASS'Y(FRO)	refer to the table	1	O	
1-1	ELA HOU-ADF ASS'Y	JC81-00429A	1	O	
1-2	ELA HOU-PLATEN ASS'Y	refer to the table	1	O	
1-3	PMO-COVER OPEN	JC72-00737A	1	O	
1-4	PMO-COVER SIDE L	JC72-00739A	1	O	
1-5	PMO-COVER SIDE R	JC72-00740A	1	O	
1-6	PMO-GUIDE PAPER	JB72-00843A	2	O	
2	MEA UNIT-COVER PA EXIT ASS'Y	JC97-01556A	1	O	
2-1	PMO-TRAY EXTENTION MP NE	JC72-00354B	1	O	
2-2	PMO-COVER PAPER EXIT	JC72-00786A	1	O	
3	MEC-CASSETTE ASS'Y(LETTER)	JC97-01642A	1	O	LETTER/A4
4	MEA UNIT-COVER FRONT ASS'Y	JC97-01572A	1	O	
5	UNIT-LSU	JC59-00014A	1	O	
6	SMPS-SMPS(V1)+HVPS	JC44-00039A	1	O	110V
	SMPS-SMPS(V2)+HVPS	JC44-00035A	1	O	220V
7	ELA-OPC UNIT SET	*	1	X	
8	ELA-TONER UNIT SET	*	1	X	
9	ELA HOU-PICKUP ASS'Y	JC96-02180A	1	O	
10	ELA HOU-SIDE COVER ASS'Y	JC96-02183A	1	O	
11	ELA HOU-MP ASS'Y	JC96-02182A	1	O	
12	ELA HOU-BASE FRAME ASS'Y	*	1	X	
13	MEC-FEED ASS'Y	JC75-00143A	1	O	
14	ELA HOU-FUSER(110V)ASS'Y	JC96-02194A	1	O	110V
	ELA HOU-FUSER(220V)ASS'Y	JC96-02178A	1	O	220V
15	ELA HOU-FRAME MAIN ASS'Y	JC96-02184A	1	O	
16	MEC-EXIT ASS'Y	JC97-01643A	1	O	
17	ELA HOU-DRIVE ASS'Y	JC96-02181A	1	O	
18	MEA UNIT-COVER REAR ASS'Y	JC97-01557A	1	O	
18-1	PMO-COVER SIMM,XRX	JC72-41224B	1	O	
18-2	PMO-COVER REAR	JC72-00788A	1	O	
19	PBA MAIN-MAIN	JC92-01354A	1	O	SCX-5312F
19	PBA MAIN-MAIN	JC92-01399A	1	O	SCX-5112
20	PMO-CONNECT PAPER MFP	JC72-00782A	1	O	SCX-5312F
	PMO-CONNECT PAPER MFP	JC72-00782B	1	O	SCX-5112
21	ELA HOU-DUCT FAN	JC96-02311A	1	O	
21-1	FAN-DC	JC31-00012A	1	O	
21-2	PMO-DUCT FAN	JC72-00807A	1	O	
23	CBF POWER STITCH GRAY	JC39-00055B	1	O	
24	SOLENOID-PICK UP	JC33-00007A	1	O	
25	PMO-COVER EXIT REAR	JC72-00790A	1	O	
26	MEA UNIT GUIDE CST PA ASS'Y	JC97-01575A	1	O	
26-1	PMO-SHEET GUIDE PAPER	JC72-00836A	1	O	
26-2	PMO-GUIDE CASSETTE RAIL	JC72-00791A	1	O	
26-3	SHEET FEED	JC72-00078A	2	O	

O : Service available X : Service not available

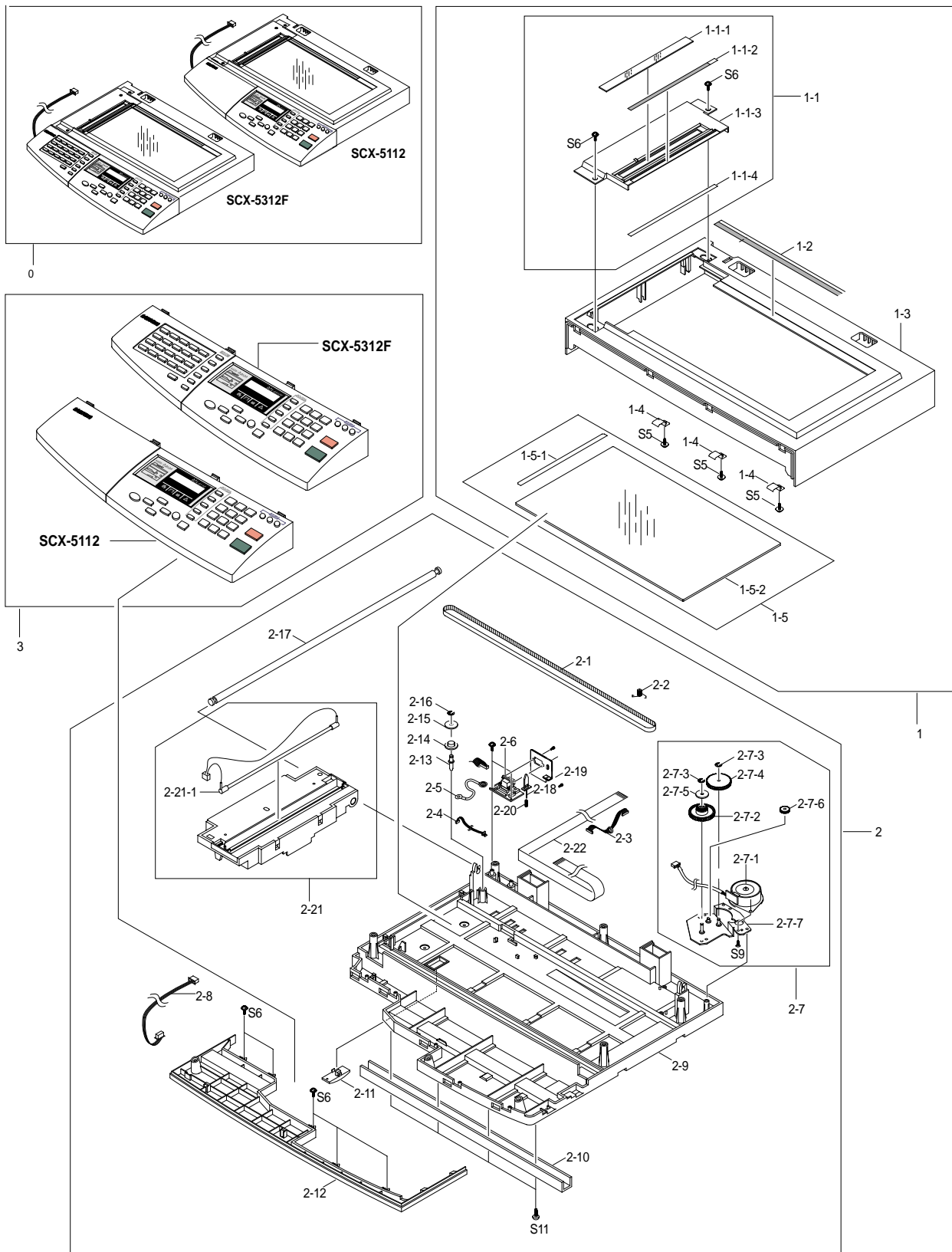
Main Parts List (Cont.)

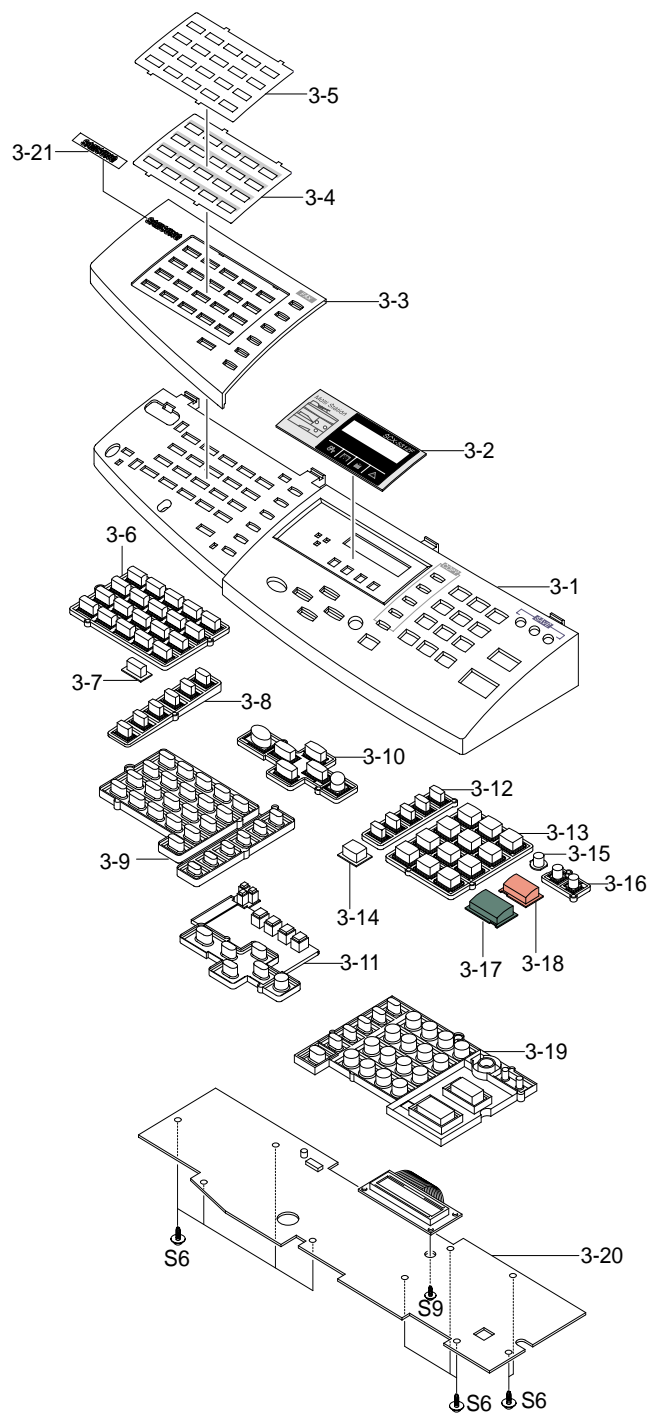
(SA. : Service Available)

NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
27	PBA SUB-LIU	JC92-01355A	1	O	ONLY SCX-5312F
28	PMO-DUMMY BASE FRAME	JC72-00789A	1	O	
29	IPR-SHIELD MAIN LOWER	JC70-00245A	1	O	
30	PMO-COVER FEED AY	JC72-00801A	1	O	
31	PMO-COVER BRKT MOTER	JC72-00834A	1	O	
32	PMO-GUIDE PAPER OUT	JC72-00835A	1	O	
33	SHEET-CONNECTOR	*	1	X	
34	CBF HARNESS-LSU	*	1	X	
35	CBF HARNESS-POWER+HVPS	*	1	X	
36	CBF HARNESS-LIU	*	1	X	ONLY SCX-5312F
37	CBF HARNESS-LIU GND	*	2	X	
38	CBF HARNESS-INLET(KOR)	*	1	X	
39	IPR-SHIELD SMPS UPPER	*	1	X	
40	IPR-SHIELD MAIN UPPER	*	1	X	
41	IPR-SHIELD SIMM	*	1	X	
42	SUPPORTER	*	2	X	ONLY SCX-5312F
43	PMO-WINDOW SENSOR DEVE	*	1	X	
44	PMO-CAM JAM REMOVE	JC72-00799A	1	O	
45	PMO-LOCKER DEVE	JC72-00805A	1	O	
46	PMO-LEVER JAM REMOVE	JC72-00804A	1	O	
47	IPR-SHIELD SMPS LOWER	JC70-00247A	1	O	
48	GEAR-PICK-UP	JC66-00335A	1	O	
49	PMO-BEARING SHAFT	JC72-41191A	1	O	
50	GEAR-TRANSFER	JC66-40947A	1	O	
51	MEC-ROLLER TRANSFER	JC75-00148A	1	O	
52	MEA UNIT-HOLDER GEAR ASS'Y	JC97-01573A	1	O	
52-1	SPRING ETC-PLATE TR	*	1	X	
52-2	SPRING ETC-TR_L	*	1	X	
52-3	PMO-BUSH	*	1	X	
52-4	PMO-HOLDER GND TR	*	1	X	
53	MEA UNIT-HOLDER GND ASS'Y	JC97-01574A	1	O	
53-1	SPRING ETC-TR_R	*	1	X	
53-2	PMO-BUSH	*	1	X	
53-3	PMO-HOLDER GEAR TR	*	1	X	

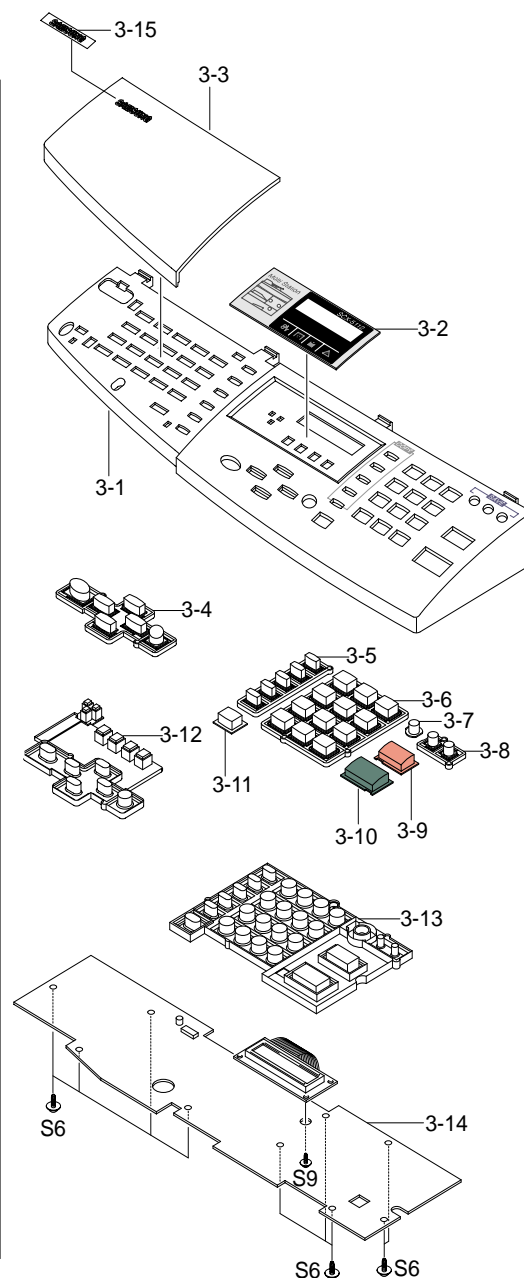
O : Service available X : Service not available

5-2. Platen Ass'y Exploded View & Parts List





SCX-5312F



SCX-5112

Platen Ass'y Parts List

(SA : Service Available)

NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
0	ELA HOU-PLATEN ASS'Y	refer to the table	1	O	
1	MEA UNIT-SCAN UPPER ASS'Y	JC97-01579A	1	O	
1-1	AS-DUMMY UPPER AS(FRV)	JC81-00426A	1	O	
1-1-1	MCT-GLASS ADF	*	1	X	
1-1-2	LABEL(L)-REGISTRATION EDGE (L)	*	1	X	
1-1-3	PMO-DUMMY UPPER	*	1	X	
1-1-4	SHEET-DUMMY UPPER	*	1	X	
1-2	PPR-REGISTRATION EDGE (F)	JC72-00809A	1	O	
1-3	PMO-COVER SCAN UPPER	JC72-00758A	1	O	
1-4	IPR-HOLDER GLASS	JB70-00148A	3	O	
1-5	MEA UNIT-GLASS PLATEN ASS'Y	JC97-01580A	1	O	
1-5-1	LABEL(P)-SHEET SHADING(B)	*	1	X	
1-5-2	MCT-GLASS SCANNER(LEGAL)	*	1	X	
2	ELA HOU-SCAN LOWER ASS'Y(SEC)	*	1	X	
2-1	BELT-TIMING GEAR	6602-001090	1	O	
2-2	SPRING ETC-BELT	JB61-00059A	1	O	
2-3	CBF HARNESS-SCAN MOTOR	JB39-00077A	1	O	
2-4	CBF HARNESS-MAIN-ENGINE	JC39-00030A	1	O	
2-5	CBF HARNESS-DRIVER GND	JB39-00065A	1	O	
2-6	PBA SUB-D-SUB	JC81-00781A	1	O	
2-7	ELA HOU-SCAN MOTOR ASS'Y	JC81-00431A	1	O	
2-7-1	MOTOR-SCAN	*	1	X	
2-7-2	GEAR-TIMING	*	1	X	
2-7-3	RING-E	*	3	X	
2-7-4	GEAR-REDUCTION	*	1	X	
2-7-5	PMO-HOLDER BELT	*	1	X	
2-7-6	GEAR-IDLE	*	1	X	
2-7-7	IPR-BRK MOTOR(PLATEN)	*	1	X	
2-8	CBF HARNESS-OPE	*	1	X	
2-9	PMO-COVER SCAN LOWER	JC72-00757A	1	O	
2-10	IPR-CHANNEL BASE FRAME	JC70-00239A	1	O	
2-11	PMO-HOLDER CCD	JB72-00759A	1	O	
2-12	PMO-COVER DUMMY LOWER (C)	JC72-00794A	1	O	
2-13	ICT-INSERT SHAFT	JB70-00154A	1	O	
2-14	PMO-PULLEY	JB72-00763A	1	O	
2-15	PMO-HOLDER BELT	JB72-00764A	1	O	
2-16	RING-E	6044-000125	1	O	
2-17	ICT-SHAFT CCD	JC70-00253A	1	O	
2-18	PMO-LEVER SENSOR	JC72-00755A	1	O	
2-19	IPR-BRK SCAN B'D	JC70-00228A	1	O	
2-20	SPRING ETC-EXIT	JB61-70939A	1	O	
2-21	ELEC/MECH-SCANNER MODULE	JC96-02105A	1	O	
2-21-1	AS-LAMP CCD	JC81-00783A	1	O	
2-22	CBF SIGNAL-CCD FFC	JC39-00188A	1	O	

O : Service available X : Service not available

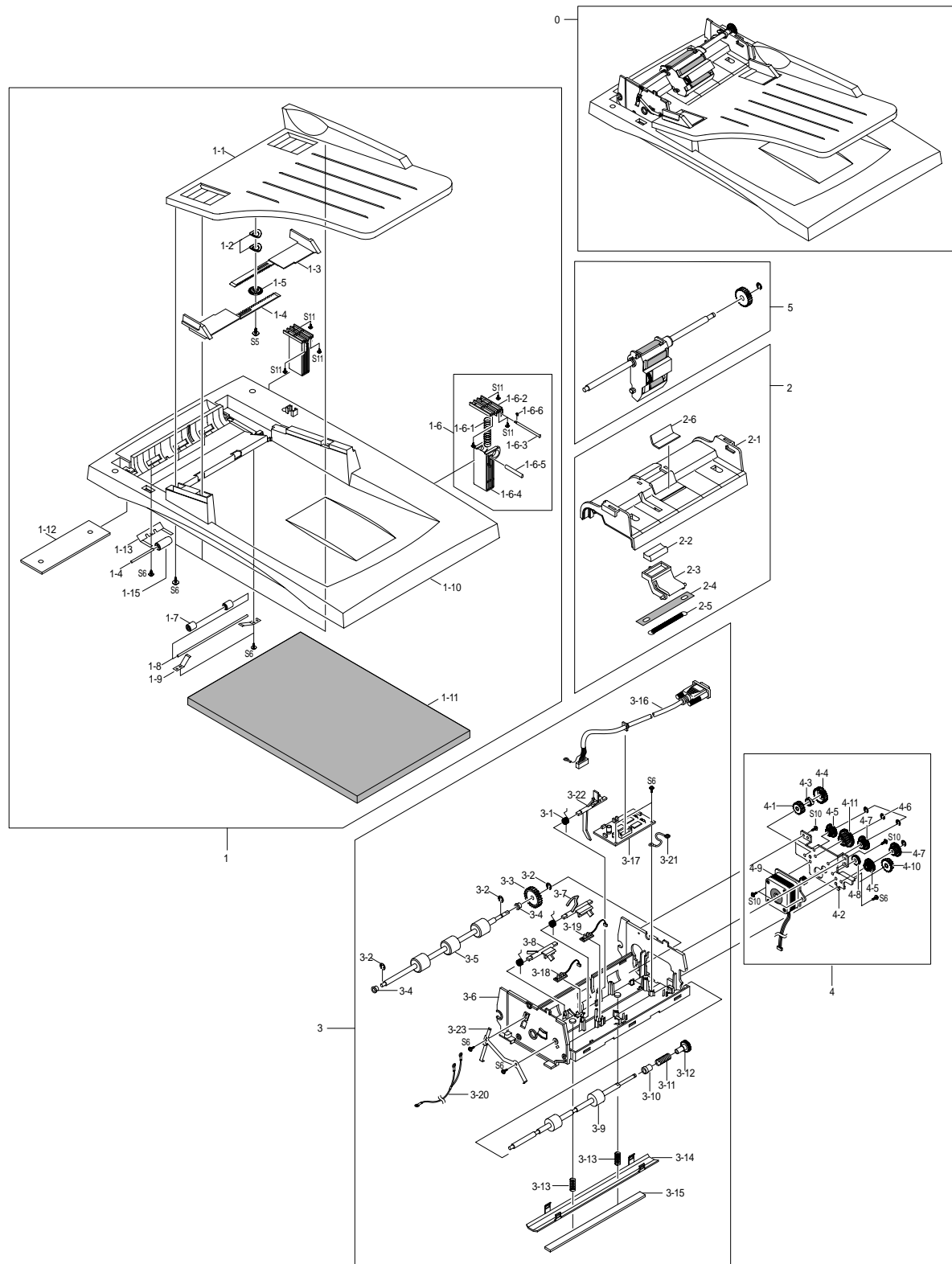
SCX-5312F (OPE)

NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
3	ELA HOU-OPE COVER ASS'Y	refer to the table	1	O	
3-1	PMO-COVER OPE(C)	refer to the table	1	O	
3-2	PCT-LCD WINDOW	refer to the table	1	O	
3-3	PMO-COVER DUMMY OPE(M)	refer to the table	1	O	
3-4	PCT-ONETOUCH PAPER	refer to the table	1	O	
3-5	PCT-ONETOUCH CARD	JC72-00871A	1	O	
3-6	PMO-KEY ONETOUCH	JC72-00860A	1	O	
3-7	PMO-KEY SHIFT	JC72-00861A	1	O	
3-8	PMO-KEY FAX	JC72-00862A	1	O	
3-9	RMO-RUBBER ONETOUCH	JC73-00104A	1	O	
3-10	PMO-KEY SCROLL	JC72-00866A	1	O	
3-11	RMO-RUBBER SCROLL	JC73-00106A	1	O	
3-12	PMO-KEY COPY	JC72-00863A	1	O	
3-13	PMO-KEY TEL	JC72-00865A	1	O	
3-14	PMO-KEY OHD	JC72-00864A	1	O	
3-15	PMO-KEY SAVE(T)	JC72-00923A	1	O	
3-16	PMO-KEY SAVE	JC72-00867A	1	O	
3-17	PMO-KEY START	JC72-00868A	1	O	
3-18	PMO-KEY STOP	JC72-00869A	1	O	
3-19	RMO-RUBBER TEL	JC73-00105A	1	O	
3-20	PBA SUB-OPE(KOR)	JC92-01380B	1	O	
3-21	NPR-BADGE	JC71-00008A	1	O	

SCX-5112 (OPE)

NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
3	ELA HOU-OPE COVER ASS'Y(C)	refer to the table	1	O	
3-1	PMO-OPE COVER	refer to the table	1	O	
3-2	PCT-LCD WINDOW	refer to the table	1	O	
3-3	PMO-COVER DUMMY OPE(C)	refer to the table	1	O	
3-4	PMO-KEY SCROLL	JC72-00866A	1	O	
3-5	PMO-KEY COPY	JC72-00863A	1	O	
3-6	PMO-KEY TEL	JC72-00865A	1	O	
3-7	PMO-KEY SAVE(T)	JC72-00923A	1	O	
3-8	PMO-KEY SAVE	JC72-00867A	1	O	
3-9	PMO-KEY STOP	JC72-00869A	1	O	
3-10	PMO-KEY START	JC72-00868A	1	O	
3-11	PMO-KEY OHD	JC72-00864B	1	O	
3-12	RMO-RUBBER SCROLL	JC73-00106A	1	O	
3-13	RMO-RUBBER TEL	JC73-00105A	1	O	
3-14	PBA SUB-OPE(KOR)	JC92-01380B	1	O	
3-15	NPR-BADGE	JC71-00008A	1	O	

5-3. ADF ASS'Y Exploded View & Parts List



ADF Ass'y Parts List

(SA. : Service Available)

NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
0	AS-ADF ASS'Y(FRU)	JC81-00429A	1	O	
1	MEC UNIT-PLATEN COVER ASS'Y	JC97-01585A	1	O	
1-1	PMO-TX STACKER	JC72-00745A	1	O	
1-2	IPR-WASHER SPRING CU	JF70-10616A	2	O	
1-3	PMO-DOC GUIDE L	JC72-00839A	1	O	
1-4	PMO-DOC GUIDE R	JC72-00838A	1	O	
1-5	PMO-GEAR PINION	JF72-41354A	1	O	
1-6	MEA UNIT-HINGE ASS'Y	JC97-01586A	2	O	
1-6-1	SPRING ETC-HINGE PLATE	*	1	X	
1-6-2	PMO-HINGE PLATEN	*	1	X	
1-6-3	ICT-BUSHING HINGE	*	1	X	
1-6-4	PMO-HSG HINGE	*	1	X	
1-6-5	ICT-SHAFT HINGE	*	1	X	
1-6-6	RING-C	*	1	X	
1-7	RPR-ROLLER EXIT IDLE	JC73-00091A	2	O	
1-8	IPR-SHAFT EXIT	JC70-00242A	1	O	
1-9	NPR-SPRING PINCH DRIVE	JB71-00038A	2	O	
1-10	PMO-COVER PLATEN	JC72-00738A	1	O	
1-11	PPR-SPONG SHEET	JC72-00751A	1	O	
1-12	PPR-SHEET PLATEN	JC72-00750A	1	O	
1-13	IPR-SPRING PINCH	JC70-00260A	3	O	
1-14	ICT-SHAFT PINCH	JC70-00265A	3	O	
1-15	PMO-ROLL PINCH	JG72-40663A	3	O	
2	MEA UNIT-ADF UPPER ASS'Y	JC97-01581A	1	O	
2-1	PMO-COVER ADF UPPER	*	1	X	
2-2	PMO-ADF RUBBER	*	1	X	
2-3	PMO-HOLDER ADF	*	1	X	
2-4	RPR-SPONGE ADF	*	1	X	
2-5	SPRING ETC-COIL ADF	*	1	X	
2-6	SHEET ADF	*	1	X	
3	AS-ADF LOWER ASS'Y(FRU)	JC81-00434A	1	O	
3-1	SPRING ETC-TORSION DOC(CC2-F)	JB61-00076A	3	O	
3-2	RING-C	6044-000159	4	O	
3-3	GEAR-ADF 38	JB66-00103A	1	O	
3-4	PMO-BUSH	JB72-00819A	2	O	
3-5	MEC-ROLLER DRIVER	JC75-00149A	1	O	
3-6	PMO-COVER ADF LOWER	JC72-00735A	1	O	
3-7	PMO-ACTUATOR SENSOR DOC.	JB72-00837A	1	O	
3-8	PMO-ACTUATOR SENSOR REGI	JC72-00747A	1	O	
3-9	MEC-ROLLER EXIT	JC75-00150A	1	O	
3-10	PMO-BUSHING HOLDER	JG72-40732A	1	O	

O : Service available X : Service not available

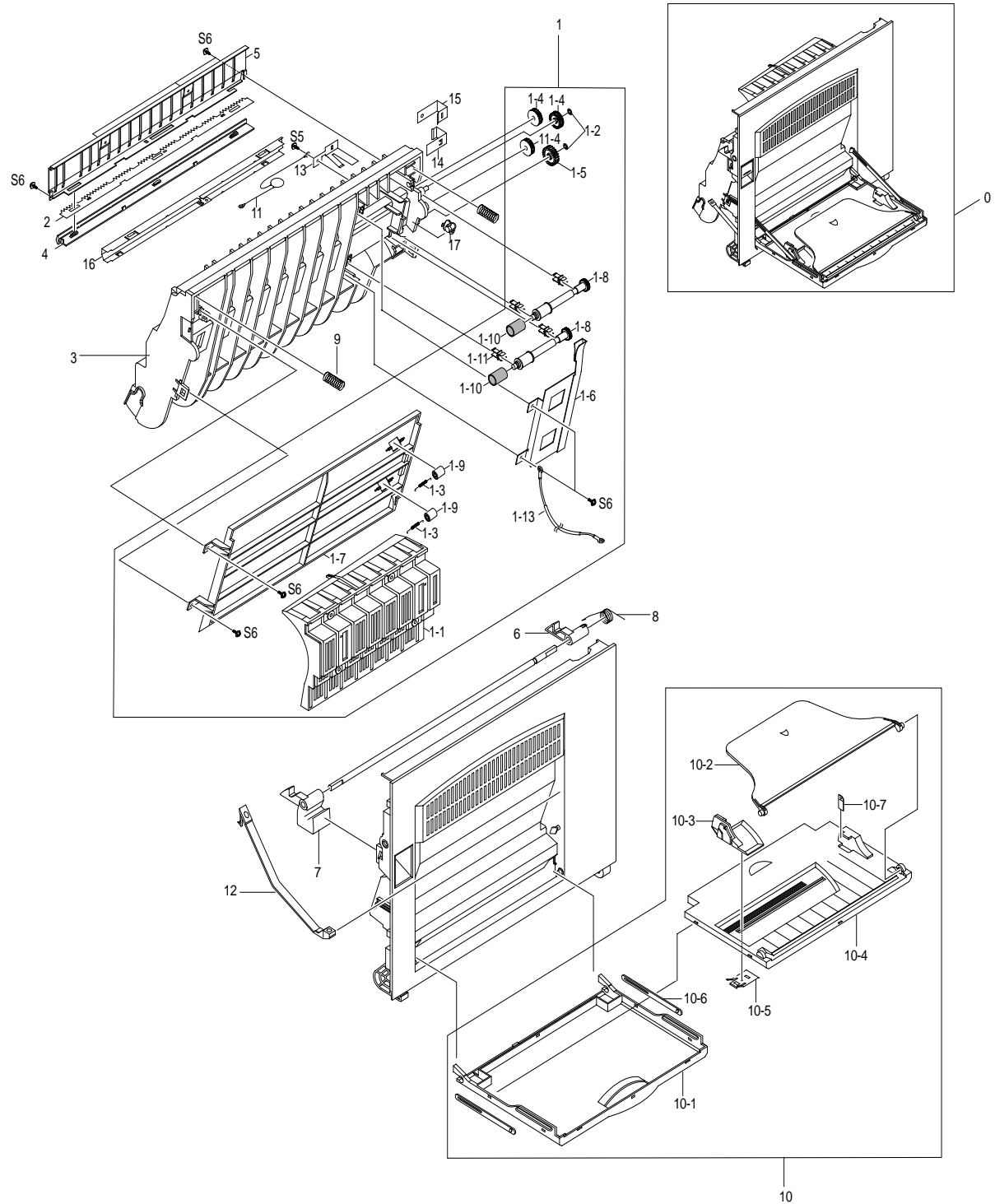
ADF Ass'y Parts List (Cont.)

(SA. : Service Available)

NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
3-11	SPRING ETC-CLUTCH	JC61-00062A	1	O	
3-12	GEAR-EXIT 23	JC66-00323A	1	O	
3-13	SPRING ETC-WHITE BAR	JC61-00548A	2	O	
3-14	IPR-BRKT WHITE BAR	JC70-00225A	1	O	
3-15	PPR-WHITE BAR SHEET	JC72-00752A	1	O	
3-16	CBF D SUB CBL-ADF_MAIN	JC39-00190A	1	O	
3-17	AS-PBA SUB-ADF(FRU)	JC81-00437A	1	O	
3-18	PBA SUB-ADF POSSEN	JC92-01365A	1	O	
3-19	PBA SUB-ADF DET SEN	JC92-01366A	1	O	
3-20	CBF HARNESS-ADF ROLLER GND	JC39-00187A	1	O	
3-21	CBF HARNESS-DRIVER GND	JB39-00065A	1	O	
3-22	PMO-ACTUATOR SENSOR SCAN	JC72-00746A	1	O	
3-23	NPR-SPRING GND	*	1	X	
4	AS-ADF MOTOR AS (FRU)	JC81-00435A	1	O	
4-1	GEAR CLUTCH 29	*	1	X	
4-2	IPR-BRKT ADF MOTOR	*	1	X	
4-3	PMO-WHITE CLUTCH SUB 29	*	1	X	
4-4	GEAR-CLUTCH 39	*	1	X	
4-5	GEAR-IDLE 20/33	*	2	X	
4-6	RING-C	*	7	X	
4-7	GEAR-IDLE 17/35	*	2	X	
4-8	GEAR IDLE 25	*	1	X	
4-9	MOTOR ADF	*	1	X	
4-10	GEAR-JAM REMOVE	*	1	X	
4-11	GEAR REDUCTION45/19	*	1	X	
5	MEC UNIT-PICK UP ASS'Y	JC97-01582A	1	O	

O : Service available X : Service not available

5-4. Side Cover Ass'y Exploded View & Parts List



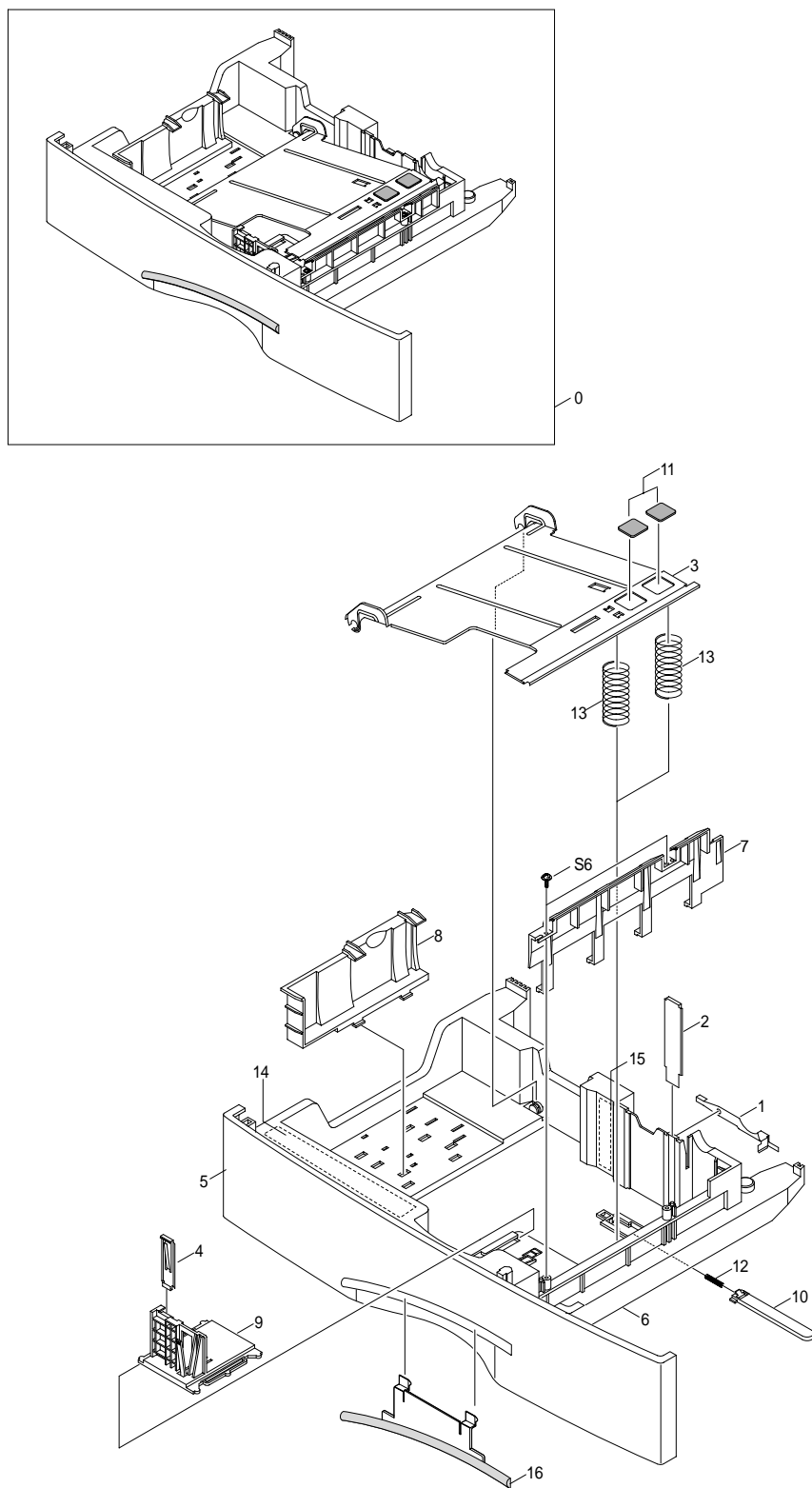
Side Cover Ass'y Parts List

(SA. : Service Available)

NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
0	ELA HOU-SIDE COVER ASS'Y	JC96-02183A	1	O	
1	MEA UNIT-DUPLEX ASS'Y	*	1	X	
1-1	PMO-GUIDE DP SIDE	JC72-00806A	1	O	
1-2	RING-CS	6044-000001	2	O	
1-3	SPRING-FUSER EXIT	JC61-70976A	2	O	
1-4	GEAR-DUP IDLER 17	JC66-00341A	3	O	
1-5	GEAR-MP/DUP DRV	JC66-00346A	1	O	
1-6	IPR-BRKT G DUP	JC70-00233A	1	O	
1-7	PMO-GP LOWER DP	JC72-00732A	1	O	
1-8	PMO-SHAFT DUP DRIVER	JC72-00764A	2	O	
1-9	PMO-ROLLER_EXIT	JC72-40361A	2	O	
1-10	RPR-RUBBER EXIT	JC73-10203A	2	O	
1-11	PMO-BUSHING TX(B4)	JG72-40744A	4	O	
1-12	PMO-TIE STOPPER	JC72-00766A	2	O	
1-13	CBF HARNESS-SCAN GND	JC39-00046A	1	O	
2	IPR-PLATE SAW	JC70-10232A	2	O	
3	PMO-FEED FRAME	JC72-00731A	1	O	
4	PMO-HOLDER SAW	JC72-41213A	1	O	
5	IPR-BRACKET GUIDE A	JC70-00229A	1	O	
6	PMO-LOCKER SIDE R	JC72-00763A	1	O	
7	PMO-LOCKER OPEN	JC72-00762A	1	O	
8	SPRING-LOCKER TORSION	JC61-00479A	1	O	
9	SPRING-FEED	JC61-00478A	2	O	
10	MEC UNIT-TRAY ASS'Y	JC97-01577A	1	O	
10-1	PMO-TRAY CASE, MP	*	1	X	
10-2	PMO-TRAY-EXT, MP	*	1	X	
10-3	PMO-SIDE GUIDE, MP	*	1	X	
10-4	PMO-TRAY COVER, MP	*	1	X	
10-5	IPR-GUIDE LATCH, MP	*	1	X	
10-6	PMO-TRAY LINK,MP	*	1	X	
10-7	LABEL(R)-HEIGHT,MP	*	1	X	
11	CBF HARNESS-OPE GND	JC39-00036A	1	O	
12	PMO-TIE STOPPER	JC72-00766A	2	O	
13	IPR-BRKT GROUND B	JC70-00230A	1	O	
14	IPR-BRKT GROUND TR	JC70-00231A	1	O	
15	IPR-BRKT GROUND A	JC70-00232A	1	O	
16	IPR-BRACKET GUIDE B	JC70-00234A	1	O	
17	PMO-BUSHING FEED	JC72-00730A	1	O	

O : Service available X : Service not available

5-5. Cassette Ass'y Exploded View & Parts List



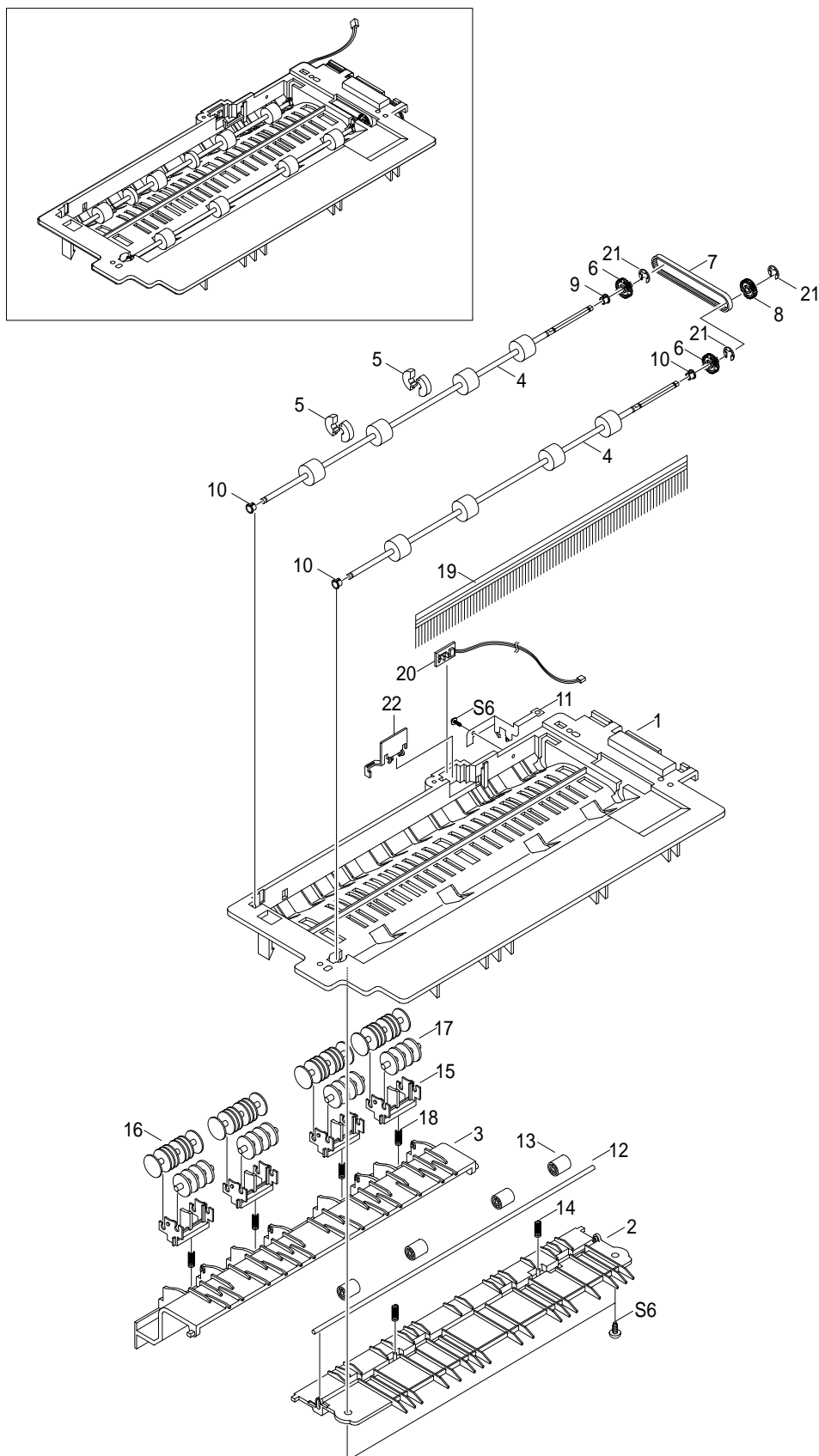
Cassette Ass'y Parts List

(SA. : Service Available)

NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
0	MEA UNIT-CASSETTE(A4) ASS'Y	JC97-01642A	1	O	
1	IPR-FINGE	*	1	X	
2	IPR-GUIDE PLT PAPER	*	1	X	
3	IPR-PLATE K/UP	JC70-00221A	1	X	
4	IPR-SPR PLT G/SIDE	JC70-10929A	1	O	
5	PMO-COVER CASSETTE(C)	*	1	X	
6	PMO-FRAME CASSETTE	*	1	X	
7	PMO-GUIDE FRONT CST	*	1	X	
8	PMO-GUIDE REAR	JC72-00717A	1	O	
9	PMO-GUIDE/SIDE CST	JC72-40967D	1	O	
10	PMO-LOCKER PLATE	JC72-41210A	1	O	
11	PRP-PAD CST	JC73-10910A	2	O	
12	SPRING-LOCKER PLATE	JG61-70531A	1	O	
13	SPRING-PLATE K/UP	JC61-00455A	2	O	
14	LABEL(R)-INSTRUCTION CST	*	1	X	
15	LABEL(R)-HEIGHT CST	*	1	X	
16	PMO-IMPACT CASSETTE	*	1	X	

O : Service available X : Service not available

5-6. Exit Ass'y Exploded View & Parts List



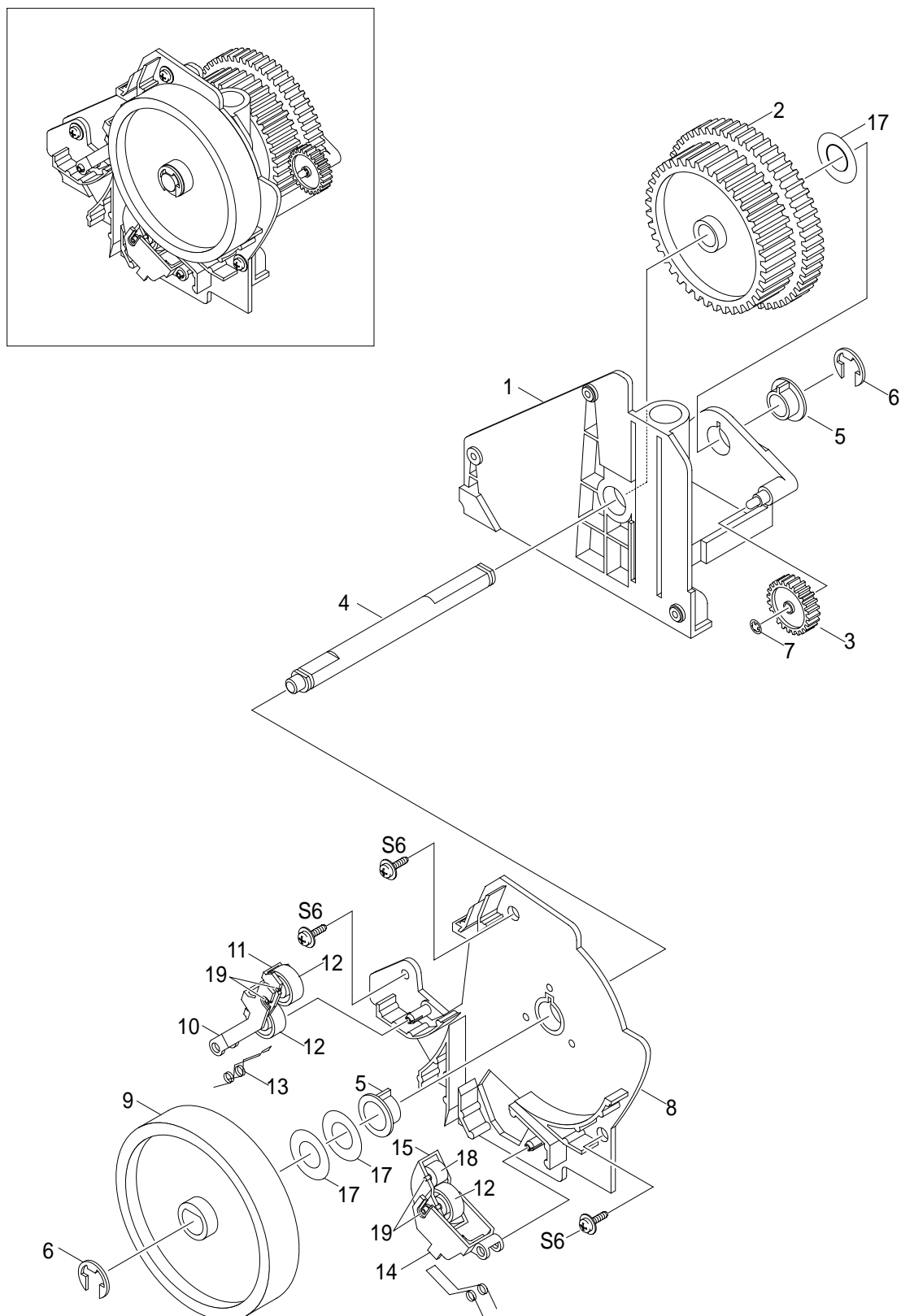
Exit Ass'y Parts List

(SA. : Service Available)

NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
0	MEC-EXIT ASS'Y	JC97-01643A	1	O	
1	PMO-GUIDE-EXIT UPPER	*	1	X	
2	PMO-GUIDE-EXIT LOWER	*	1	X	
3	PMO-GUIDE-JAM REMOVE	*	1	X	
4	MEC-ROLLER EXIT DRV	JC75-00127A	2	O	
5	PMO-ROLLER DECURL	JC72-00833A	4	O	
6	PMO-PULLEY DUPLEX	*	2	X	
7	BELT-TIMING GEAR	*	1	X	
8	GEAR-DUPLEX	*	1	X	
9	PMO-BEARING LARGE DP	*	1	X	BLACK
10	PMO-BEARING LARGE DP	JC72-40978A	3	O	
11	IPR-GROUND-EXIT	*	1	X	
12	ICT-SHAFT-EXIT LOWER ID	*	1	X	
13	PMO-ROLLER_EXIT	*	4	X	
14	SPRING-EXIT ROLL FD	*	2	X	
15	PMO-HOLDER EXIT ROLL	*	4	X	
16	PMO-ROLLER FD F	*	4	X	
17	PMO-ROLLER FD R	*	4	X	
18	SPRING-EXIT LOWER IDLE	*	4	X	
19	MEC- BRUSH ANTISTATIC	JC75-00095A	1	O	
20	PBA SUB-BIN-FULL SENSOR	*	1	X	
21	E-RING	*	3	X	
22	PMO-LEVER STACKING	JC72-00709A	1	O	

O : Service available X : Service not available

5-7. Feeder Ass'y Exploded View & Parts List



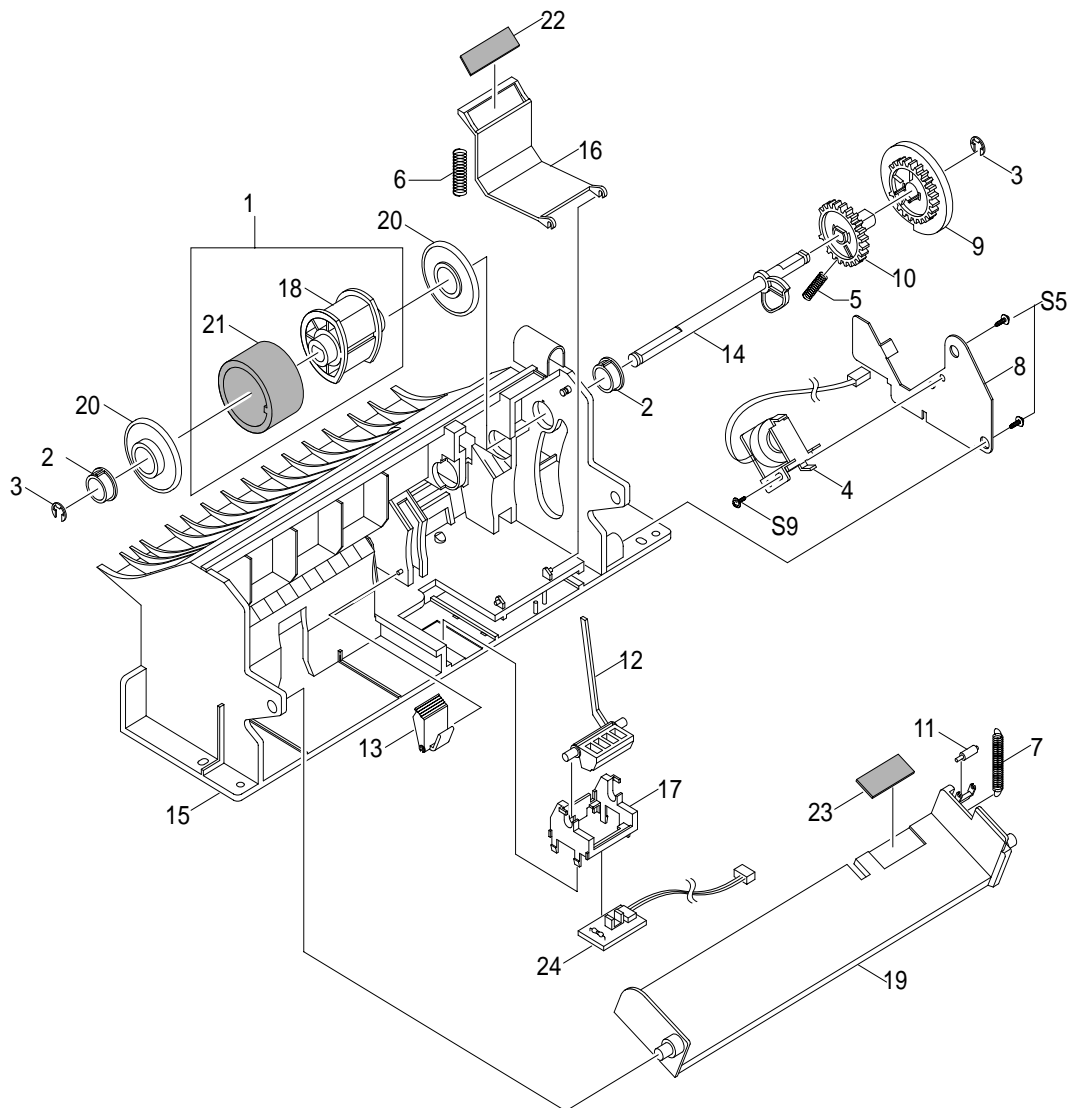
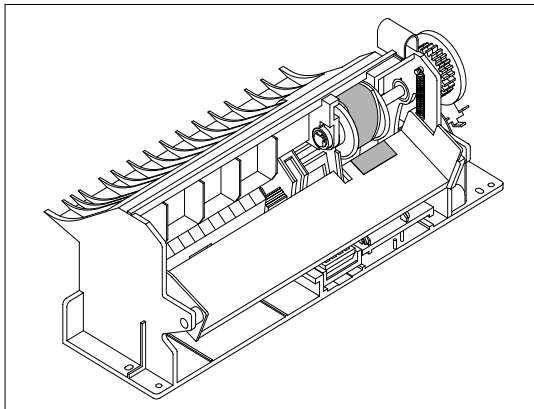
Feeder Ass'y Parts List

(SA. : Service Available)

NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
0	MEC-FEED ASS'Y	JC75-00143A	1	O	
1	PMO-FRAME FEED	*	1	X	
2	GEAR-FEED	*	1	X	
3	GEAR-MP/DUP DRV	*	1	X	
4	ICT-SHAFT FEED	*	1	X	
5	BEARING-PICKUP	*	2	X	
6	RING-E	*	2	X	
7	RING-CS	*	1	X	
8	PMO-BRKT FEED	*	1	X	
9	PMO-ROLLER FEED	JC72-00727A	1	O	
10	PMO-HOLDER PINCH C	*	1	X	
11	PMO-HOLDER PINCH SUB	*	1	X	
12	PMO-ROLLER FEED L	*	3	X	
13	SPRING-FEED CAST	*	1	X	
14	PMO-HOLDER PINCH M	*	1	X	
15	PMO-SUB HOLDER FEED	*	1	X	
16	SPRING-FEED MP	*	1	X	
17	WASHER-PLAIN	*	3	X	
18	PMO-ROLLER FEED S	*	1	X	
19	IPR-SHAFT FEED IDLER	*	4	X	

O : Service available X : Service not available

5-8. MP Ass'y Exploded View & Parts List



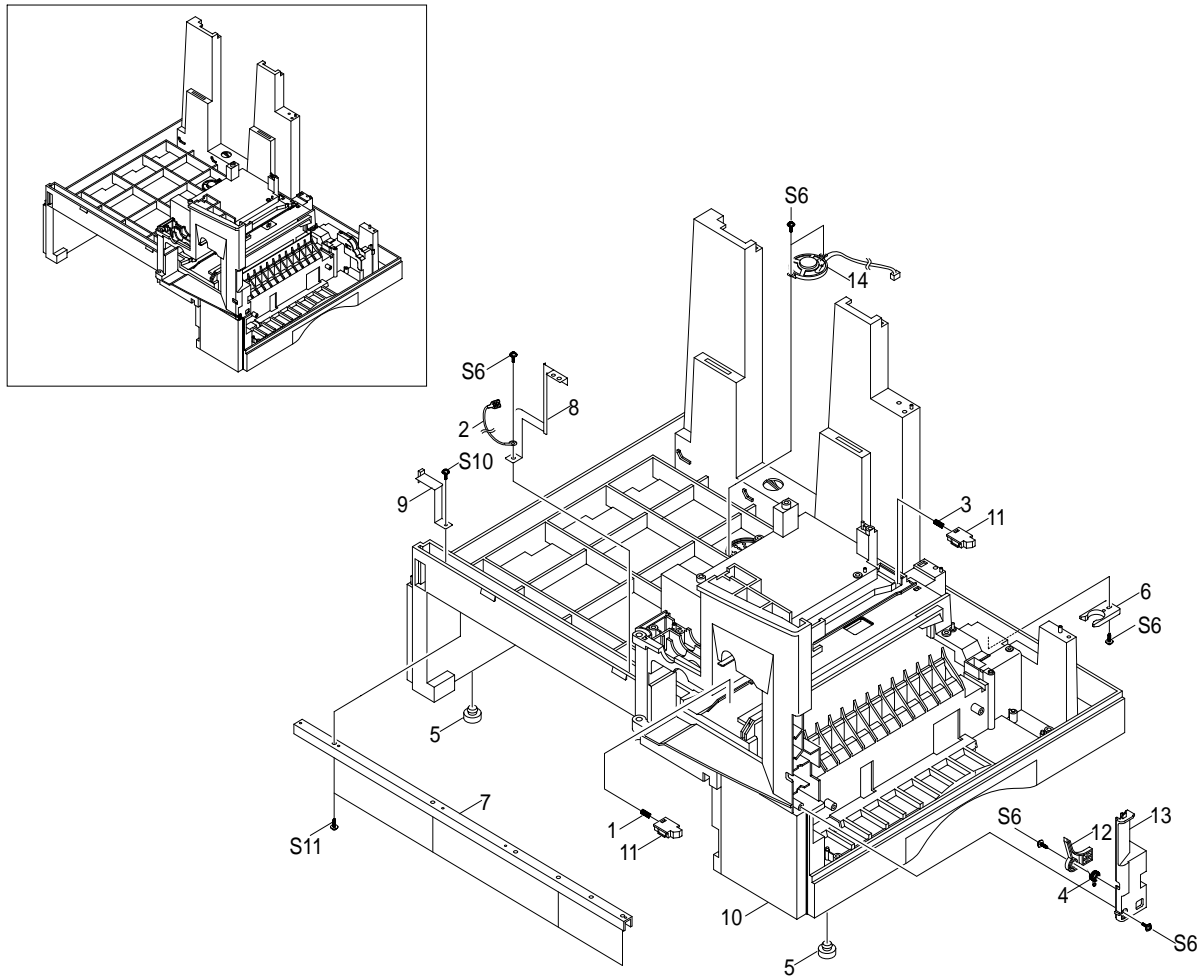
MP Ass'y Parts List

(SA. : Service Available)

NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
0	ELA HOU-MP ASS'Y	JC96-02182A	1	O	
1	A/S-PICK UP, MP AS(FRU)	JC81-00427A	1	O	
2	PMO-BUSHING PICKUP,MP	JC72-41364A	2	O	
3	RING-E	6044-000125	2	O	
4	SOLENOIDE,MP	JC33-00006A	1	O	
5	SPRING-CAM MP	JC61-00003A	1	O	
6	SPRING-PICK UP,MP	*	1	X	
7	SPRING-KNOCKUP,MP	JC61-00483A	1	O	
8	IPR-BRACKET SOLENOIDE	*	1	X	
9	PMO-HOLDER CAM MPF	*	1	X	
10	PMO-GEAR P/U MPF	*	1	X	
11	PMO-ROLLER CAM.MP	*	1	X	
12	PMO-ACTUATOR,MP	JC72-00767A	1	O	
13	PMO-ADJUSTER,MP	JC72-00768A	1	O	
14	PMO-CAM PICK UP,MP	JC72-00769A	1	O	
15	PMO-FRAME,MP	*	1	X	
16	PMO-HOLDER PAD,MP	JC72-00771A	1	O	
17	PMO-HOLDER SENSOR,MP	JC72-00772A	1	O	
18	PMO-HOUSING PICK UP,MP	*	1	X	
19	PMO-PLATE KNOCK UP,MP	*	1	X	
20	PMO-IDLE PICK UP,MP	JC72-41027A	2	O	
21	RPR-RUBBER PICK UP,MP	*	1	X	
22	RPR-RCT-PAD-PICKUP,MP	JC73-00090A	1	O	
23	RPR-PAD KNOCK UP,MP	JC73-10906A	1	O	
24	PBA SUB-MP SEN	JC92-01362A	1	O	

O : Service available X : Service not available

5-9. Base Frame Exploded View & Parts List



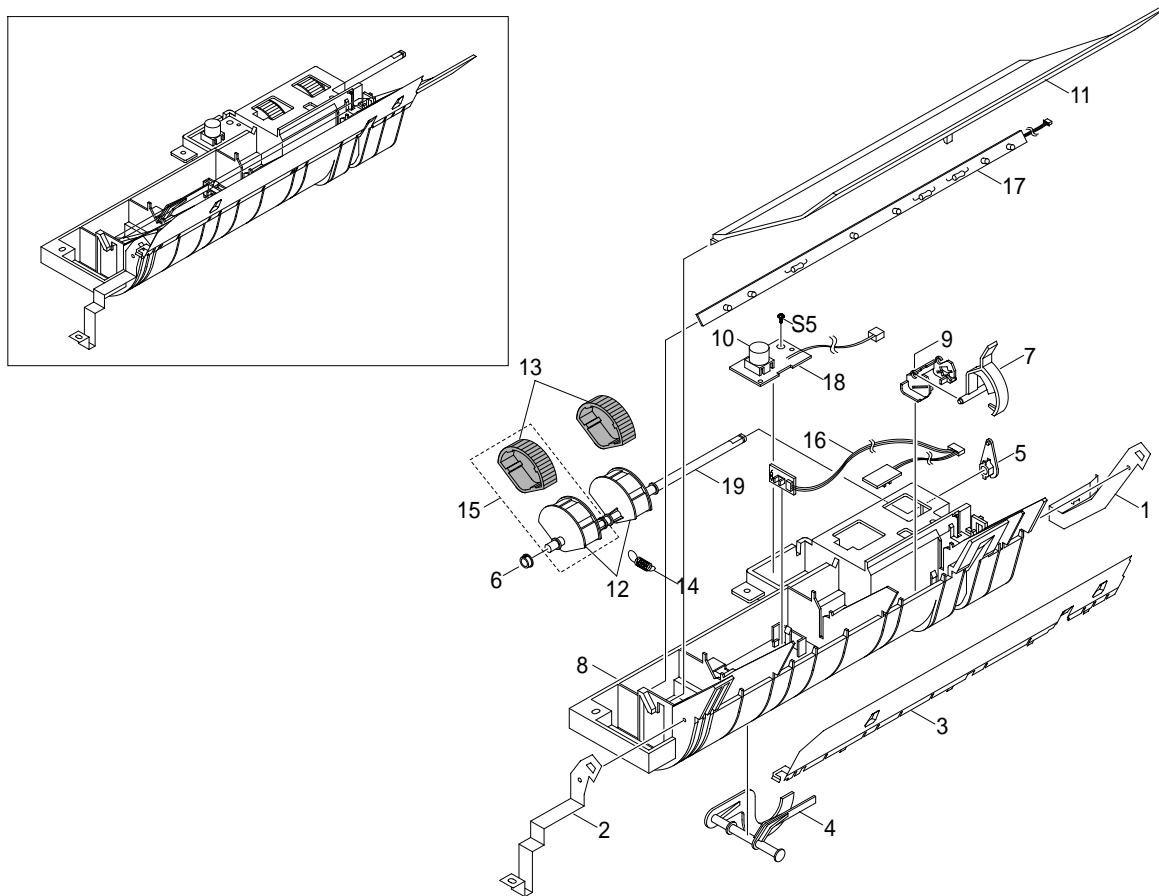
Base Frame Parts List

(SA. : Service Available)

NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
0	ELA HOU-BASE FRAME ASS'Y	JC96-02179A	1	O	
1	SPRING-DEVE FRONT	*	1	X	
2	CBF HARNESS-OPC GND	*	1	X	
3	SPRING-DEVE REAR	*	1	X	
4	SPRING-TORSION	*	1	X	
5	FOOT-RUBBER	JC61-40001A	2	O	
6	CAM-CATCH	*	1	X	
7	IPR-CHANNEL BASE FRAME	*	1	X	
8	IPR-GROUND PLATE A(OPC)	JC70-00240A	1	O	
9	IPR-GROUND PLATE B(BASE)	JC70-00241A	1	O	
10	PMO-BASE FRAME	*	1	X	
11	PMO-BRACKET PUSH DEVE	*	2	X	
12	PMO-BRACKET SIDE OPEN	JC72-00781A	1	O	
13	PMO-COVER FRONT DUMMY	*	1	X	
14	ELA M/MEDIO AUD-SPEAKER	JC96-01607A	1	O	Only SCX-5312F

O : Service available X : Service not available

5-10.Pick-up Ass'y Exploded View & Parts List



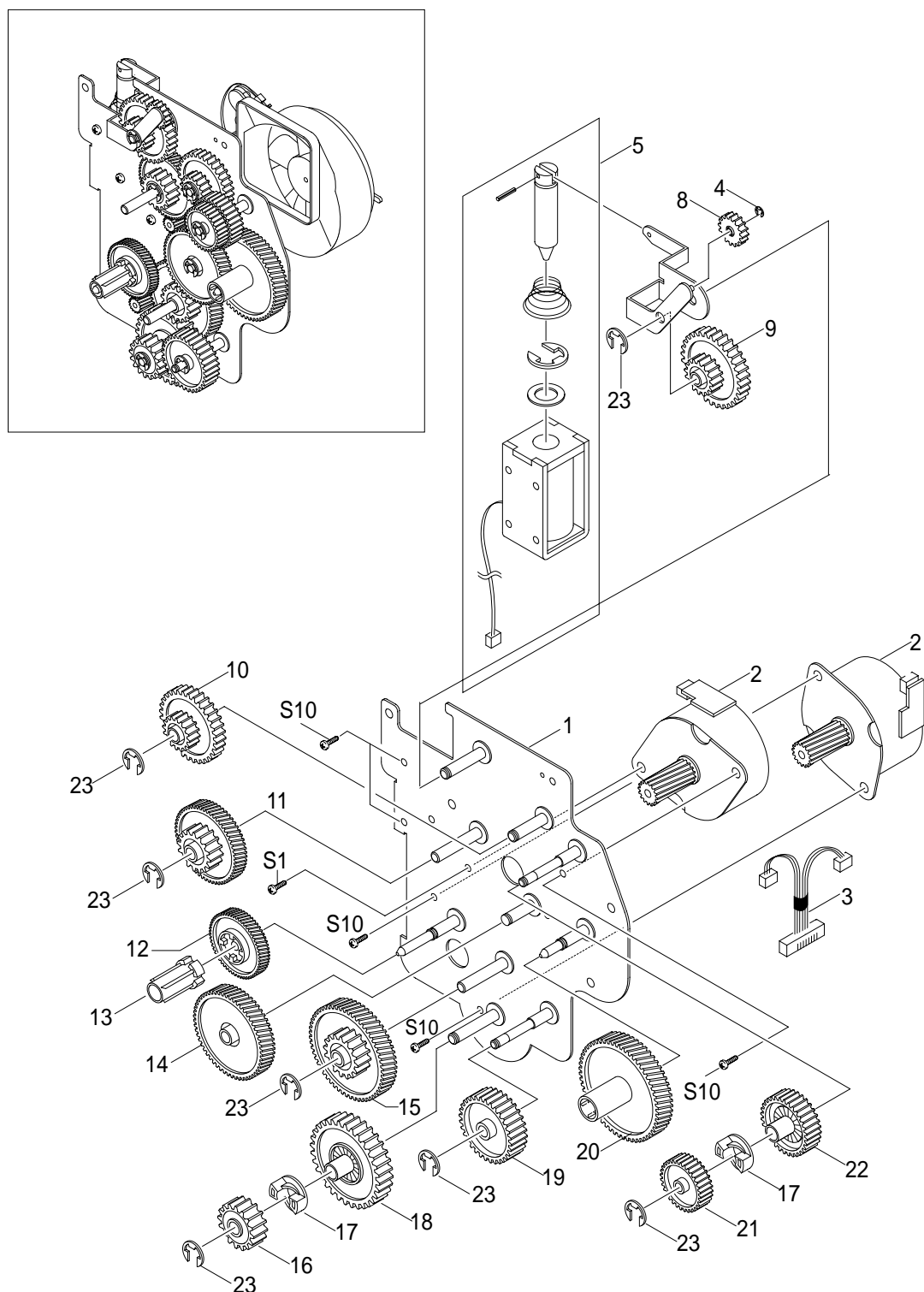
Pick-up Ass'y Parts List

(SA. : Service Available)

NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
0	ELA HOU-PICKUP ASS'Y	JC96-02180A	1	O	
1	IPR-GND FEED	*	1	X	
2	IPR-GND INPUT	JC70-00235A	1	O	
3	IPR-GUIDE INPUT	JC70-00222A	1	O	
4	PMO-ACTUATOR EMPTY	JC72-00719A	1	O	
5	PMO-BEARING SHAFT	JC72-41191A	1	O	
6	PMO-BUSHING_P/U, MP	*	1	X	
7	PMO-FEED SENSOR	*	1	X	
8	PMO-GUIDE PAPER	*	1	X	
9	PMO-HOLDER SENSOR FEED	*	1	X	
10	PMO-LENS TONER SENSOR	*	1	X	
11	PMO-PTL PATH	*	1	X	
12	PMO-SHAFT PICK UP	*	1	X	
13	RPR-RUBBER PICK UP	JC73-00086A	2	O	
14	SPRING-PICKUP	JC61-00482A	1	O	
16	PBA SUB-FEED+PEMP SEN.	JC92-01363A	1	O	
17	PBA SUB-PTL	JC92-01361A	1	O	
18	PBA SUB-TONER_TX	JC92-01359A	1	O	
19	A/S MATERIAL-PICKUP,CST	JC81-00428A	1	O	

O : Service available X : Service not available

5-11. Drive Ass'y Exploded View & Parts List



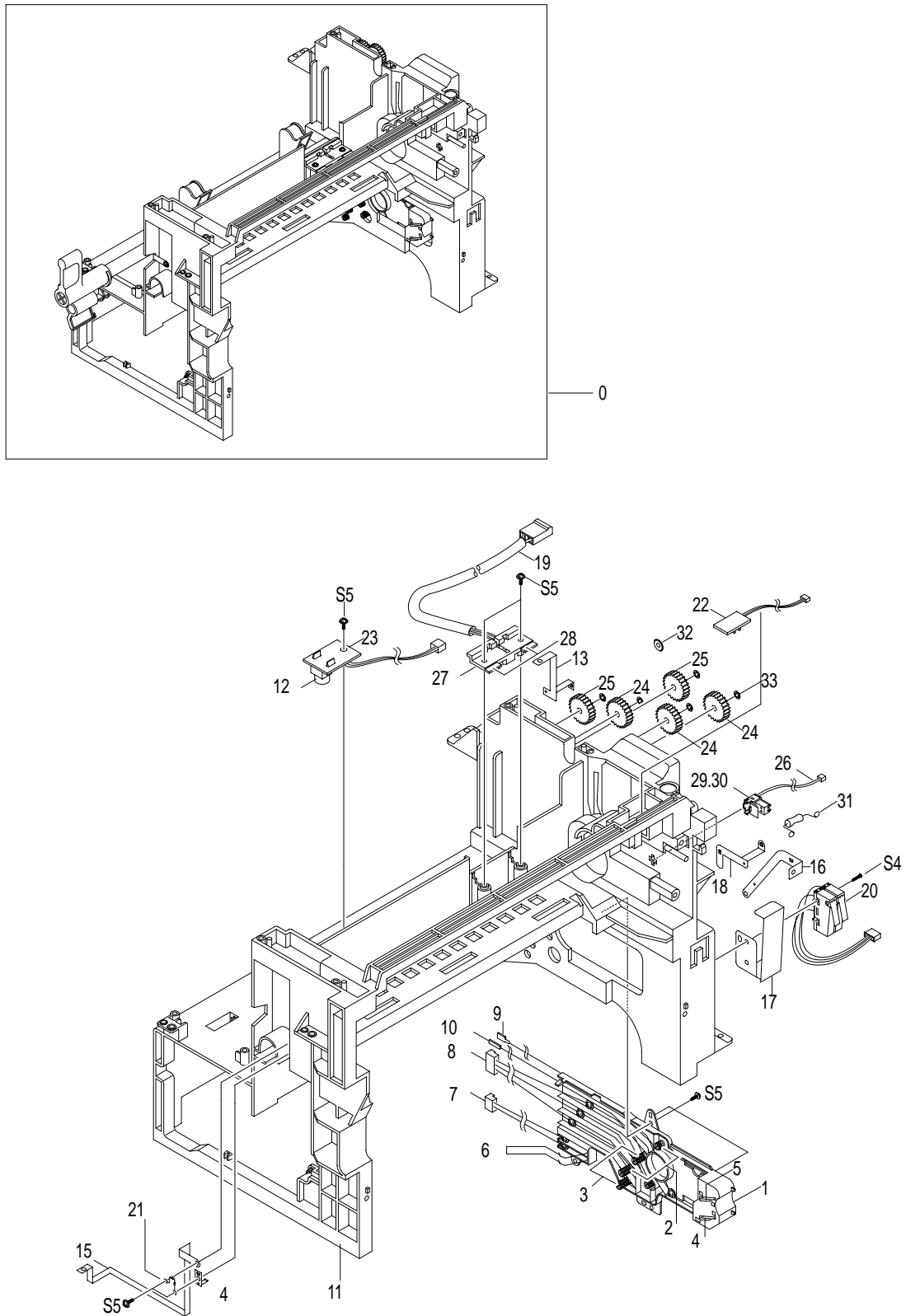
Drive Ass'y Parts List

(SA. : Service Available)

NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
0	ELA HOU-DRIVE ASS'Y	JC96-02181A	1	O	
1	IPR-BRKT MOTOR	*	1	X	
2	MOTOR-STEP	JC31-00002B	2	O	
3	CBF-HARNESS-MOTOR	*	1	X	
4	RING-E	*	1	X	
5	SOLENOID-DUPLEX	JC33-00008A	1	O	
6	SPRING SOLENOID DP	*	1	X	
7	IPR-LINK SOLENOID	*	1	X	
8	GEAR-EXIT/U,ID	*	1	X	
9	GEAR-SWING DRV	*	1	X	
10	GEAR-35/19	*	1	X	
11	GEAR-71/23	*	1	X	
12	GEAR-DEVE DRV	*	1	X	
13	PMO-DEV/COUPLING	*	1	X	
14	GEAR-RDCN,OPC	*	1	X	
15	GEAR-86/23	*	1	X	
16	GEAR-RDCN FEED OUTER	*	1	X	
17	GEAR-HUB CLUTCH	*	2	X	
18	GEAR-RDCN FEED INNER	*	1	X	
19	GEAR-FEED DRV	*	1	X	
20	GEAR-OPC DRV	*	1	X	
21	GEAR-GEAR FUSER DRV OUTER	*	1	X	
22	GEAR-FUSER DRV INNER	*	1	X	
23	RING-E	*	8	X	

O : Service available X : Service not available

5-12. Main Frame Ass'y Exploded View & Parts List



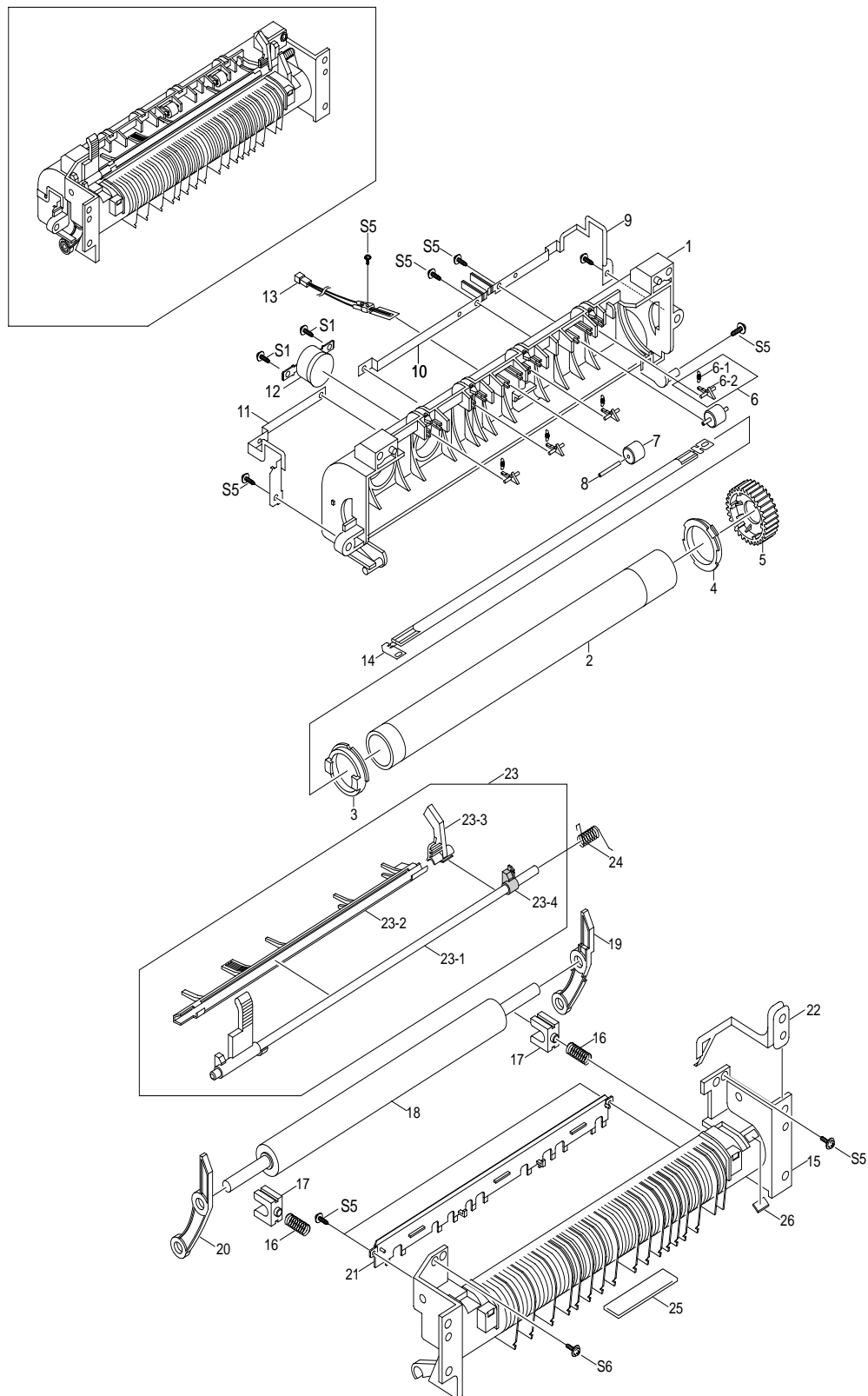
Main Frame Ass'y Parts List

(SA. : Service Available)

NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
0	ELA HOU-FRAME MAIN ASS'Y	JC96-02184A	1	O	
1	PMO-HOUSING TERMINAL	JC72-00802A	1	O	
2	IPR-TERMINAL BLADE	*	2	X	
3	IPR-TERMINAL SUPPLY	*	2	X	
4	IPR-TERMINAL TR	*	1	X	
5	IPR-TERMINAL GND	*	1	X	
6	IPR-TERMINAL DEVE KEY	*	2	X	
7	CBF-HARNESS-DEV-ID	*	1	X	
8	CBF-HARNESS-BLADE+SUPPLY+DEV	*	5	X	
9	CBF-HARNESS-THV WIRE	*	1	X	
10	CBF-HARNESS-MHV WIRE	*	1	X	
11	PMO-FRAME MAIN	*	1	X	
12	PMO-LENS TONER SENSOR	*	2	X	
13	IPR-GND EXIT	*	1	X	
14	IPR-GND OPC	*	1	X	
15	IPR-GND OPC BASE	*	1	X	
16	IPR-GND FUSER	*	1	X	
17	IPR-GUARD C/O S/W	*	1	X	
18	IPR-GND TERMINAL	*	1	X	
19	CBF HARNESS-AC WIRE	*	1	X	
20	AS-SWITCH MICRO(FRU)	JC81-00438A	1	O	
21	CBF-HARNESS-EARTH(TX MOTOR)	*	1	X	
22	PBA SUB-EXIT SENSOR	JC92-01364A	1	O	
23	PBA SUB-TONER_RX	JC92-01360A	1	O	
24	GEAR-EXIT/U,ID	*	3	X	
25	GEAR-EXIT,IDLE(Z17)	*	2	X	
26	CBF-HARNESS THERMISTOR_JOINT	JC39-00164A	1	O	
27	PMO-HOUSING TERMINAL	*	1	X	
28	IPR-TERMINAL FU	*	2	X	
29	PMO-CAP CONNECTOR L	JC72-00463A	1	O	
30	PMO-CAP CONNECTOR U	JC72-00465A	1	O	
31	ELA HOU-MOTOR GND	*	1	X	
32	SPRING-CLUTCH	*	2	X	
33	RING-CS	*	5	X	

O : Service available X : Service not available

5-13. FuserAss'y Exploded View & Parts List



FuserAss'y Parts List

(SA. : Service Available)

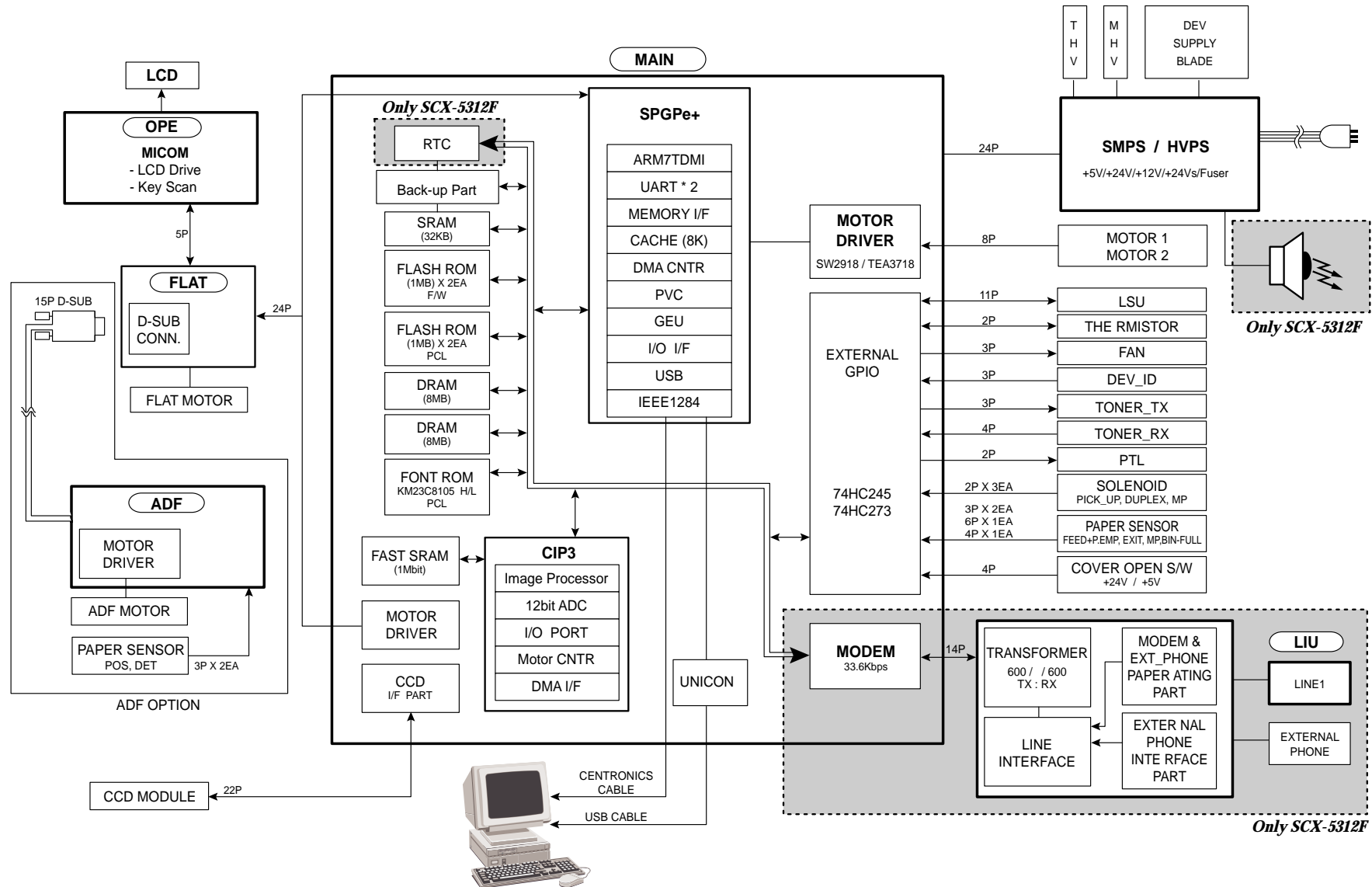
NO	DESCRIPTION	SEC CODE	Q'TY	SA	REMARK
0	ELA HOU-FUSER(110V)ASS'Y	JC96-02194A	1	O	110V
	ELA HOU-FUSER(220V)ASS'Y	JC96-02178A	1	O	220V
1	PMO-UPPER FUSER	*	1	X	
2	RMO-ROLLER HEAT	*	1	X	
3	PMO-BEARING H/R-F	*	1	X	
4	BEARING-H/R L	*	1	X	
5	GEAR-FUSER	JC66-40913A	1	O	
6	MEA UNIT-CLAW ASS'Y	*	1	X	
6-1	SPRING-SAPERATION	*	4	X	
6-2	PMO-GUIDE CLAW	*	4	X	
7	PEX-ROLLER EXIT F-UP	*	2	X	
8	IPR-PIN ROLLER EXIT	*	2	X	
9	NPR-ELECTRODE GEAR	*	1	X	
10	NPR-ELECTRODE M	*	1	X	
11	NPR-ELECTRODE F	*	1	X	
12	THERMOSTAT	4712-000001	1	O	
13	THERMISTOR-FUSER	JC14-00001A	1	O	
14	LAMP-HALOGEN (110V)	4713-001158	1	O	110V
	LAMP-HALOGEN(220V)	4713-001157	1	O	220V
15	PMO-LOWER FUSER	*	1	X	
16	SPRING-PR	*	1	X	
17	BEARING-PRESSURE/R	*	2	X	
18	RMO-ROLLER PRESSURE	*	1	X	
19	PMO-LEVER JAM R	*	1	X	
20	PMO-LEVER JAM F	*	1	X	
21	PMO-GUIDE INPUT	*	1	X	
22	IPR-GROUND FU	*	1	X	
23	MEA UNIT-ACTUATOR ASS'Y	JC97-01611A	1	O	
23-1	PMO-ACTUATOR EXIT	*	1	X	
23-2	PMO-GUIDE DUPLEX	*	1	X	
23-3	PMO-ARM ACTUATOR	*	1	X	
23-4	GUIDE REMOVE	*	1	X	
24	SPRING-ACTUATOR	*	2	X	
25	LABEL(R)CAV_HOT.FU	*	1	X	
26	LABEL(R)-LV FUSER	*	1	X	110V
	LABEL(R)-HV FUSER	*	1	X	220V

O : Service available X : Service not available

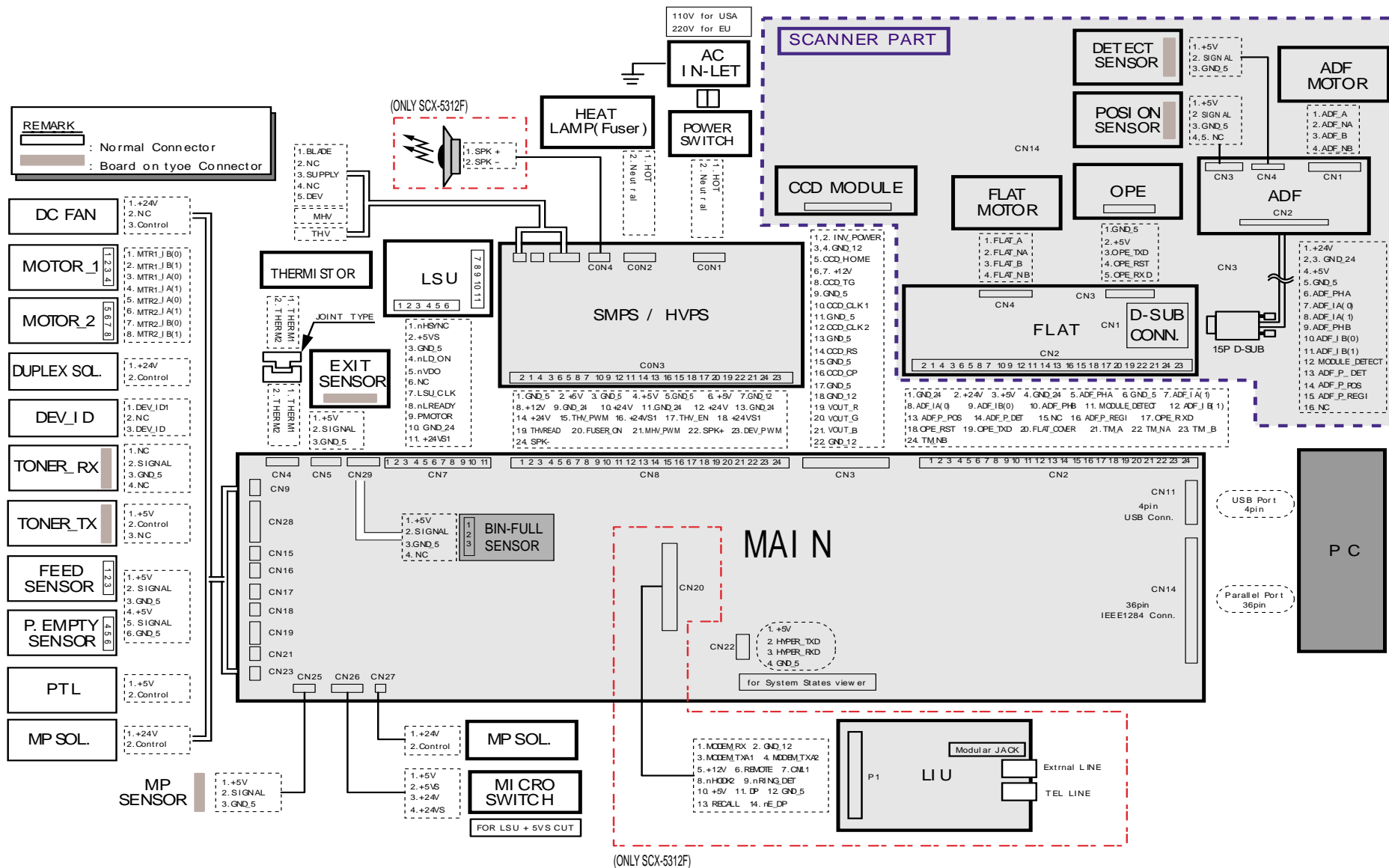
5-14. Screw

NO	SEC CODE	DESCRIPTION	SPEC	
S1	6006-000127	SCREW-ASS'Y MACH	"WS,PH,+,M3,L6,ZPC(YEL),MSWR15"	
S2	6001-000568	SCREW-MACHINE	"PH,+,M3,L8,NI PLT,SM20C,-"	
S3	6002-000175	SCREW-TAPPING	"PWH,+,2,M3,L8,ZPC(YEL),SM20C"	
S4	6002-000351	SCREW-TAPPING	"PH,+,2,M2,L8,ZPC(YEL),SM20C"	
S5	6003-000119	SCREW-TAPTITE	"BH,+,B,M3,L8,CBLACK,SWRCH18A"	
S6	6003-000196	SCREW-TAPTITE	"PWH,+,B,M3,L10,NI PLT,SWRCH18A"	
S7	6003-000198	SCREW-TAPTITE	"PWH,+,B,M3,L12,ZPC(YEL),SWRCH1"	
S8	6003-000221	SCREW-TAPTITE	"PWH,+,S,M4,L8,ZPC(YEL),SWRCH18"	
S9	6003-000266	SCREW-TAPTITE	"PWH,+,S,M3,L6,ZPC(YEL),SWRCH18"	
S10	6003-000269	SCREW-TAPTITE	"BH,+,S,M3,L6,ZPC(YEL),SWRCH18A"	
S11	6003-001256	SCREW-TAPTITE	"BH,+,B,M4,L10,NI PLT,SWRCH18A"	

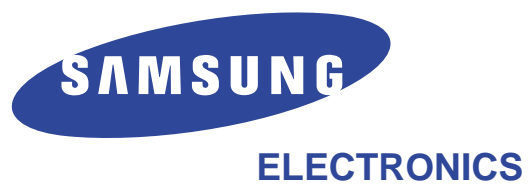
6. Block Diagrams



7. Connection Diagrams



Memo



This service manual is also provided on the web,
the ITSELF system Samsung Electronics Co., Ltd.
“<http://itself.sec.samsung.co.kr>”

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