



A3 Mono Copier

SCX-8123/8128 series

SCX-8123ND/NA,

SCX-8128ND/NA

SERVICE *MANUAL*

A3 Mono Copier

Contents



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1. Precautions

In order to prevent accidents and damages to the equipment please read the precautions listed below carefully before servicing the product and follow them closely.

1.1. Safety warning

1) Only to be serviced by a factory trained service technician.

High voltages and lasers inside this product are dangerous. This product should only be serviced by a factory trained service technician.

2) Use only Samsung replacement parts.

There are no user serviceable parts inside the product. Do not make any unauthorized changes or additions to the product as these could cause the product to malfunction and create an electric shocks or fire hazards.

3) Laser Safety Statement

The printer is certified in the U.S. to conform to the requirements of DHHS 21 CFR, chapter 1 Subchapter J for Class I(1) laser products, and elsewhere is certified as a Class I laser product conforming to the requirements of IEC 60825-1. Class I laser products are not considered to be hazardous. The laser system and printer are designed so there is never any human access to laser radiation above a Class I level during normal operation, user maintenance or prescribed service condition.


- Wavelength : 788 nm (-13/+12)
- Beam divergence
 - Parallel : 10.5 degrees (-3.5/+1.5)
 - Perpendicular : 31 degrees (-6/+4)
- Maximum power of energy output : 10 mW



WARNING

Never operate or service the product with the protective cover removed from Laser/Scanner assembly. The reflected beam, although invisible, can damage your eyes.

When using this product, these basic safety precautions should always be followed to reduce risk of fire, electric shock, and personal injury.



CAUTION - CLASS 3B LASER RADIATION WHEN OPEN
AVOID EXPOSURE TO THE BEAM.
DANGER - LASER RADIATION AVOID DIRECT
EXPOSURE TO BEAM.

DANGER - RADIATIONS INVISIBLES DU LASER EN CAS
D'OUVERTURE. EVITER TOUTE EXPOSITION
DIRECTE AU FAISCEAU.

VORSICHT - UNSICHTBARE LASERSTRAHLUNG, WENN
ABDECKUNG GEÖFFNET.
NICHT DEM STRAHL AUSSETZEN.

ATTENZIONE - RADIAZIONE LASER INVISIBILE IN CASO DI
APERTURA. EVITARE L'ESPOSIZIONE AL FASCIO.

PRECAUCIÓN - RADIACIÓN LASER INVISIBLE CUANDO SE ABRE.
EVITAR EXPONERSE AL RAYO.

PERIGO - RADIAÇÃO LASER INVISÍVEL AO ABRIR. EVITE
EXPOSIÇÃO DIRECTA AO FEIXE.

GEVAAR - ONZICHTBARE LASERSTRALEN BIJ GEOPENDE
KLEP. DEZE KLEP NIET OPENEN.

ADVARSEL - USYNLIG LASERSTRÅLNING VED ÅBNING.
UNDGÅ UDSÆTTELSE FOR STRÅLNING.

ADVARSEL - USYNLIG LASERSTRÅLNING NÅR DEKSEL
ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.

VARNING - OSYNLIG LASERSTRÅLNING NÅR DENNA DEL
ÅR ÖPPEN. STRÅLEN ÅR FARLIG.

VAROITUS - NÄKYMÄTÖNTÄ LASERSÄTELYÄ AVATTAESSA.
VARO SUORAA ALTISTUMISTA SÄTEELLE.

注意 - 严禁揭开此盖, 以免激光泄露灼伤
주의 - 이 덮개를 열면 레이저광에 노출될 수 있으므로
주의하십시오.

1.2. Caution for safety


1.2.1. Toxic material

This product contains toxic materials that could cause illness if ingested.

- 1) Please keep imaging unit and toner cartridge away from children. The toner powder contained in the imaging unit and toner cartridge may be harmful, and if swallowed, you should contact a doctor.

1.2.2. Electric shock and fire safety precautions

Failure to follow the following instructions could cause electric shock or potentially cause a fire.

- 1) Use only the correct voltage, failure to do so could damage the product and potentially cause a fire or electric shock.
- 2) Use only the power cable supplied with the product. Use of an incorrectly specified cable could cause the cable to overheat and potentially cause a fire.
- 3) Do not overload the power socket, this could lead to overheating of the cables inside the wall and could lead to a fire.
- 4) Do not allow water or other liquids to spill into the product, this can cause electric shock. Do not allow paper clips, pins or other foreign objects to fall into the product, these could cause a short circuit leading to an electric shock or fire hazard.
- 5) Never touch the plugs on either end of the power cable with wet hands, this can cause electric shock. When servicing the product, remove the power plug from the wall socket.
- 6) Use caution when inserting or removing the power cord. When removing the power cord, grip it firmly and pull. The power cord must be inserted completely, otherwise a poor contact could cause overheating leading to a fire.
- 7) Take care of the power cable. Do not allow it to become twisted, bent sharply around corners or power cable may be damaged. Do not place objects on top of the power cable. If the power cable is damaged it could overheat and cause a fire. Exposed cables could cause an electric shock. Replace the damaged power cable immediately, do not reuse or repair the damaged cable. Some chemicals can attack the coating on the power cable, weakening the cover or exposing cables causing fire and shock risks.
- 8) Ensure that the power sockets and plugs are not cracked or broken in any way. Any such defects should be repaired immediately. Take care not to cut or damage the power cable or plugs when moving the machine.
- 9) Use caution during thunder or lightning storms. Samsung recommends that this machine be disconnected from the power source when such weather conditions are expected. Do not touch the machine or the power cord if it is still connected to the wall socket in these weather conditions.
- 10) Avoid damp or dusty areas, install the product in a clean well ventilated location. Do not position the machine near a humidifier or in front of an air conditioner. Moisture and dust built up inside the machine can lead to overheating and cause a fire or cause parts to rust.
- 11) Do not position the product in direct sunlight. This will cause the temperature inside the product to rise possibly leading to the product failing to work properly and in extreme conditions could lead to a fire.
- 12) Do not insert any metal objects into the machine through the ventilator fan or other part of the casing, it could make contact with a high voltage conductor inside the machine and cause an electric shock.
- 13)  When replacing the SMPS board, please wait 5 minutes after unplugging the power cord, then replace it. You can get a shock by the electric discharge.

1.2.3. Handling precautions

The following instructions are for your own personal safety to avoid injury and so as not to damage the product.

- 1) Ensure the product is installed on a level surface, capable of supporting its weight. Failure to do so could cause the product to tip or fall.
- 2) The product contains many rollers, gears and fans. Take great care to ensure that you do not catch your fingers, hair or clothing in any of these rotating devices.
- 3) Do not place any small metal objects, containers of water, chemicals or other liquids close to the product which if spilled could get into the machine and cause damage or a shock or fire hazard.
- 4) Do not install the machine in areas with high dust or moisture levels, beside an open window or close to a humidifier or heater. Damage could be caused to the product in such areas.
- 5) Do not place candles, burning cigarettes, etc on the product, These could cause a fire.

1.2.4. Assembly and Disassembly precautions

- 1) Replace parts carefully and always use Samsung parts. Take care to note the exact location of parts and also cable routing before dismantling any part of the machine. Ensure all parts and cables are replaced correctly. Please carry out the following procedures before dismantling the product or replacing any parts.
- 2) Ensure that power is disconnected before servicing or replacing any electrical parts.
- 3) Disconnect interface cables and power cables.
- 4) Only use approved spare parts. Ensure that part number, product name, any voltage, current or temperature rating are correct.
- 5) When removing or re-fitting any parts do not use excessive force, especially when fitting screws into plastic.
- 6) Take care not to drop any small parts into the machine.
- 7) Handling of the OPC Drum
 - The OPC Drum can be irreparably damaged if it is exposed to light. Take care not to expose the OPC Drum either to direct sunlight or to fluorescent or incandescent room lighting. Exposure for as little as 5 minutes can damage the surface of the photoconductive properties and will result in print quality degradation. Take extra care when servicing the product. Remove the OPC Drum and store it in a black bag or other lightproof container. Take care when working with the Covers (especially the top cover) open as light is admitted to the OPC area and can damage the OPC Drum.
 - Take care not to scratch the green surface of the OPC Drum Unit. If the green surface of the Drum Cartridge is scratched or touched the print quality will be compromised.

1.2.5. Disregarding this warning may cause bodily injury

- 1) Be careful with the high temperature part.

The fuser unit works at a high temperature. Use caution when working on the printer. Wait for the fuser unit to cool down before disassembly.

- 2) Do not put fingers or hair into the rotating parts.

When operating a printer, do not put hand or hair into the rotating parts (Paper feeding entrance, motor, fan, etc.). If do, you can get harm.

- 3) When you move the printer, use safe lifting and handling techniques.

This printer is heavy. Use the lifting handles located on each side of the machine. Back injury could be caused if you do not lift carefully.

- 4) Ensure the printer is installed safely.

Ensure the printer is installed on a level surface, capable of supporting its weight. Failure to do so could cause the printer to tip or fall possibly causing personal injury or damaging the printer.

- 5) Do not install the printer on a sloping or unstable surface. After installation, double check that the printer is stable.

1.3. ESD precautions

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.

- 1) 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.
- 2) 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.
- 3) Use only a grounded tip soldering iron to solder or desolder ESDs.
- 4) 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.

2. Product Specifications and Description

2.1. Product Overview

	<ul style="list-style-type: none">• Printing Speed (Mono/Color)<ul style="list-style-type: none">• SCX-8128 series<ul style="list-style-type: none">- Up to 28 ppm in A4 (28 ppm in Letter)- Up to 14 ppm in A3 (14 ppm in 11x17)• SCX-8123 series<ul style="list-style-type: none">- Up to 23 ppm in A4 (23 ppm in Letter)- Up to 12 ppm in A3 (12 ppm in 11x17)• Processor<ul style="list-style-type: none">• Dual Core 1GHz• Memory<ul style="list-style-type: none">• 768 MB DDR3 SDRAM
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2.2. Specifications

Product Specifications are subject to change without notice.

2.2.1. General Specification

Item		Specification
Configuration		<ul style="list-style-type: none"> • ND model : Platen cover model • NA model : DADF model
Temperature	Operating	10 ~ 32 °C (50 ~ 90 °F)
	Storage	-20 ~ 40 °C (-4 ~ 104 °F)
Humidity	Operating	20~80% RH
	Storage	10~90% RH
Acoustic Noise Level (Sound Power / Pressure)	Printing Simplex / Duplex	<ul style="list-style-type: none"> • SCX-8128 series : 50/52 dB • SCX-8123 series : 49/51 dB
	Copying Simplex / Duplex	<ul style="list-style-type: none"> • SCX-8128 series : 53/55 dB • SCX-8123 series : 53/55 dB
	Standby	30 dB
	Sleep	27 dB
Power Supply	Input Voltage	Europe : AC 220-240V(-10%~6%) / 5A
		USA : AC 110~127V (-10%~6%) / 10A
		Korea : AC 220-240V(-10%~6%) / 5A
	Rated Frequency	50 / 60 Hz
Power Consumption	Ready	100 Watt
	AVG. (Normal Operation)	800 Watt
	Max/Peak	< 1500 Watt max
	Sleep/Power Off	3 Watt / 0 Watt
Dimension (W x D x H)	Set (mm)	<ul style="list-style-type: none"> • 560 x 600 x 737.3 mm (22 x 23.6 x 29 inches) (includes Platen Cover) • 560 x 600 x 794.3 mm (22 x 23.6 x 31.3 inches) (includes DADF) • 560 x 600 x 999.6 mm (22 x 23.6 x 39.2 inches) (includes Platen Cover, Stand) • 560 x 600 x 1053.6 mm (22 x 23.6 x 41.5 inches) (includes DADF, DCF)
		Weight

Item		Specification
Reliability & Service	Recommended Printing Volume (AMPV)	<ul style="list-style-type: none">• SCX-8128 series : 5,000 sheets/month• SCX-8123 series : 3,500 sheets/month
	Max. Monthly Print Volume	100,000 sheets/month

2.2.2. Print Specifications

Item		Specification
Engine Speed	Simplex	<ul style="list-style-type: none"> • SCX-8128 series <ul style="list-style-type: none"> • Up to 28 ppm in A4 (28 ppm in Letter) • Up to 14 ppm in A3 (14 ppm in 11X17) • SCX-8123 series <ul style="list-style-type: none"> • Up to 23 ppm in A4 (23 ppm in Letter) • Up to 12 ppm in A3 (12 ppm in 11X17)
	Duplex	<ul style="list-style-type: none"> • SCX-8128 series <ul style="list-style-type: none"> • Up to 20 ipm in A4 (20 ppm in Letter) • Up to 10 ipm in A3 (10 ppm in 11X17) • SCX-8123 series <ul style="list-style-type: none"> • Up to 16 ipm in A4 (16 ppm in Letter) • Up to 8 ipm in A3 (8 ppm in 11X17)
FPOT	From Ready	<ul style="list-style-type: none"> • SCX-8128 series : Less than 8 sec • SCX-8123 series : Less than 9 sec
	From Sleep	<ul style="list-style-type: none"> • SCX-8128 series : Less than 28 sec • SCX-8123 series : Less than 29 sec
	From Coldboot	Less than 60 sec
Resolution	Optical	600 x 600 dpi
	Enhanced	<ul style="list-style-type: none"> • Draft : 600 x 600dpi Output (600 x 600 x 1bit) • Normal : 2400 x 600dpi Effective Output (600 x 600 x 2bit) • Best : 9600 x 600dpi Effective Output (600 x 600 x 4bit)
Printer Languages		PCL5e, PCL6(XL), PostScript Level3, TIFF, PDF 1.4, JPEG
Fonts		PCL:93 scalable, 1 bitmap, OCR-A, OCR-B, PS:136
Downloadable Fonts		Yes (PCL & PS3 S/W Font)
Print Job (with HDD)	Secure Printing	No
	Proof printing	No
	Spool	No
	Stored Printing	No
	Form overlays	No
USB Memory Direct Print		Jpeg, Tiff, PDF, Samsung PRN, MTIFF, TXT

2.2.3. Controller and Software specification

Item		Specification
Processor	MPU	Chorus4N Dual Core 1GHz
	Image Processor	Embedded in Chorus4N
DRAM	Std.	768MB DDR3 SDRAM (512MB for System + 256MB for GUI)
	Max.	768MB DDR3 SDRAM (512MB for System + 256MB for GUI)
Memory Expansion		N.A.
Storage		320GB HDD (Optional)
Printer driver	Supporting OS	[Windows] <ul style="list-style-type: none"> Windows 2000/ XP(32/64bit)/ 2003(32/64bit)/ Vista(32/64bit)/ 2008/ Win7/ 2008 R2(64 only)
		[Linux] <ul style="list-style-type: none"> RedHat Enterprise Linux WS 4, 5 (32/64bit) Fedora 5, 6, 7, 8, 9, 10, 11, 12, 13 (32/64bit) SuSE Linux 10.1 (32bit) OpenSuSE 10.2 10.3, 11.0, 11.1, 11.2 (32/64bit) Mandriva 2007, 2008, 2009, 2009.1, 2010 (32/64bit) Ubuntu 6.06, 6.10, 7.04, 7.10, 8.04 8.10, 9.04, 9.10, 10.04 (32/64bit) SuSE Linux Enterprise Desktop 10, 11 (32/64bit) Debian 4.0, 5.0 (32/64bit)
		[Mac] <ul style="list-style-type: none"> Mac OS X 10.5 ~ 10.7
	Default Driver	PCL6 (For Windows), PS (for Mac, Linux)
	Driver feature	<ul style="list-style-type: none"> [Windows] <ul style="list-style-type: none"> Watermark, Overlay, N-up printing, Poster printing Duplex, Quality, Color mode (Color, Gray scale) Support Color spec., Device color, color management [Mac/Linux] <ul style="list-style-type: none"> N-up printing, Duplex, Quality Color mode (Color, Gray scale)
	WHQL (Windows Hardware Quality Labs)	Windows 2000/XP(include 64bit)/2003/Vista/2008/Win7/2008 R2(64 only)
	Language Localization	23 countries(Arabic/ Portuguese Brazilian/ Simplified Chinese / Traditional Chinese/ Czech/ Danish/ Dutch/ Greek/ English/ Finnish/ French/ German/ Hebrew/ Hungarian/ Italian/ Korea/ Norwegian/ Polish/ Portuguese / Russian/ Spanish / Swedish /Turkish)
	Status Monitor (Lite SM)	Yes (Windows Only)
	UPD (SSPD)	Yes

Item		Specification
Scan driver	TWAIN	Yes
	WIA	No
	Supporting OS	[Windows] <ul style="list-style-type: none"> Windows 2000/ XP(32/64bit)/ 2003(32/64bit)/ Vista(32/64bit)/ 2008(32/64bit)/ Win7/ 2008 R2(64 only)
		[Linux] <ul style="list-style-type: none"> RedHat Enterprise Linux WS 4, 5 (32/64bit) Fedora 5, 6, 7, 8, 9, 10, 11, 12, 13 (32/64bit) - SuSE Linux 10.1 (32bit) OpenSuSE 10.2 10.3, 11.0, 11.1, 11.2 (32/64bit) Mandriva 2007, 2008, 2009, 2009.1, 2010 (32/64bit) Ubuntu 6.06, 6.10, 7.04, 7.10, 8.04 8.10, 9.04, 9.10, 10.04 (32/64bit) SuSE Linux Enterprise Desktop 10, 11 (32/64bit) Debian 4.0, 5.0 (32/64bit)
[Mac] <ul style="list-style-type: none"> Mac OS X 10.5 ~ 10.6 		
Application	Scan Manager	Yes (Win, Mac)
	Scan Assistant	Yes (Win, Mac)
	PC-FAX	No
	Network-FAX	No
	Samsung Easy Printer Manager	Yes (Win, Mac)
	Network Management	Set IP, SWAS 5.0 & SWS 2.0 SWAS Plug-In : Job Accounting, Storage management, Cloning, Remote Install
	HDD File Management S/W	No
	AnyWeb Print	Yes
	SmarThru	Smarthru Office, SmarThru Workflow(Optional)

■ Interface

Item		Specification
Parallel (IEEE 1284)		No
USB	Type A, Host	High-Speed USB 2.0 Host (2-port)
	Type B, Device	Hi-Speed USB 2.0 Peripheral (1-port)
Wired LAN		Ethernet 10/100/1000 Base TX
Wireless LAN		No
Foreign Device Interface		Optional

■ Network Interface

Item	Specification	
Network OS	<ul style="list-style-type: none"> • Microsoft Windows 2000/ XP(32/64bits)/ 2003(32/64bits)/ Vista(32/64bits)/ Win7 [Mac] <ul style="list-style-type: none"> • Mac OS X 10.5 ~ 10.6 [Linux] <ul style="list-style-type: none"> • RedHat 8 ~ 9 • Fedora Core 1~4 • Madrake 9.2 ~ 10.1 • SuSE 8.2 ~ 9.2 [Novell] <ul style="list-style-type: none"> • Netware 5.x, 6.x(TCP/IP Only) [Others] <ul style="list-style-type: none"> • Unix(HP-UX,Solaris,SunOS, SCO) 	
Network Protocols	TCP/IP	TCP/IPv4, HTTP, SNMPv1/v2c/v3, LDAP, SMTP, SSL/TLS, IPSec, DNS,WINS, SLP, Bonjour, SSDP,DDNS, DHCP/BOOTP,IPv6
	IPX/SPX	No
	Ether Talk	No
	NetBIOS over TCP/IP	Yes
	Others	HTTPS, LDAPS, IPSec, 802.1x
IP Addressing	Static IP	Yes
	Auto IP	Yes
	BOOTP	Yes
	DHCP	Yes

2.2.4. Scan specification

Item		Specification
Scan method		Color CCDM-MMT
Compatibility		TWAIN(N/W)
Color Mode		Mono / Gray / Color
Scan Speed	B/W (Lineart, Halftone)	ScanToEmail/SMB/FTP : 45ipm @ 300dpi PC scan : 15sec @300dpi (@P4-3GHz, 1G, NW 100M, A4LEF)
	Gray	ScanToEmail/SMB/FTP : 45ipm @ 300dpi PC scan : 20sec @300dpi (@P4-3GHz, 1G, NW 100M, A4LEF)
	Color	ScanToEmail/SMB/FTP : 45ipm @ 300dpi PC scan : 30sec @300dpi (@P4-3GHz, 1G, NW 100M, A4LEF)
Resolution	Optical	600 x 600 ppi
	Enhanced	4,800 x 4,800 ppi
Halftone		256 levels
Scan Size	Max. Document Width	Max. 297mm (11.7")
	Effective Scan Width	Max. 291mm
	Max. Document Length	Max. 432mm
Scan Depth	Color	24 bits
	Mono	<ul style="list-style-type: none"> 1bit for Linearity & Halftone 8Bits for Gray scale
Scan Depth		<ul style="list-style-type: none"> NA: Platen & DADF ND: Platen Only
Scan-to	HDD	Yes (Optional)
	USB	Yes
	Email	Yes
	Client	Yes (N/W)
	SMB	Yes
	FTP	Yes
	HTTP(S)	No
	WebDAV	No
Multi Destination	No	
Address Book	Email, Fax, Server	User Based Individual (Fax+Email+Server) : 200
		Group : (Fax+Email) : 200
	Basic Feature	Searching
		Editing
		Deleting
		Grouping
		import, export

Item	Specification	
Scan Setting	Mixed Document	Yes
	Scan Preset	No
	Delayed Send	No
	Job Done notice	No
	Recent	Yes
	OCR	No
	Job Build	No
	Book Scan	No

2.2.5. Copy specification

Item		Specification
Copy Speed (DADF)	SDMC (Single Document Multiple Copy)	<ul style="list-style-type: none"> • SCX-8128 series <ul style="list-style-type: none"> • Simplex : up to 28 cpm in A4 & Letter • Duplex : up to 20 cpm in A4 & Letter • SCX-8123 series <ul style="list-style-type: none"> • Simplex : up to 23 cpm in A4 & Letter • Duplex : up to 16 cpm in A4 & Letter
	MDMC (Multiple Document Multiple Copy)	<ul style="list-style-type: none"> • SCX-8128 series <ul style="list-style-type: none"> • Simplex-to-Duplex(1-2): up to 20 cpm in A4 & Letter • Duplex -to-Duplex(2-2): up to 16 cpm in A4 & Letter • SCX-8123 series <ul style="list-style-type: none"> • Simplex-to-Duplex(1-2): up to 16 cpm in A4 & Letter • Duplex -to-Duplex(2-2): up to 16 cpm in A4 & Letter
FCOT	From Ready	<ul style="list-style-type: none"> • SCX-8128 series : Less than 5.7 seconds (from platen) • SCX-8123 series : Less than 6.7 seconds (from platen)
	From Sleep	<ul style="list-style-type: none"> • SCX-8128 series : Less than 26 seconds (from platen) • SCX-8123 series : Less than 27 seconds (from platen)
	From Coldboot	Less than 60 seconds (from platen)
Zoom Range		25% ~ 400% in 1% increments (Platen/DADF)
Multi Copy		1~9999
Original Type	Text	<ul style="list-style-type: none"> • Platen: Scan 600 x 600 dpi, Printing 600 x 600 x 2bit • DADF : Scan 600 x 600 dpi, Printing 600 x 600 x 2bit
	Text/Photo	<ul style="list-style-type: none"> • Platen: Scan 600 x 600dpi, Printing 600 x 600 x 2bit • DADF : Scan 600 x 600dpi, Printing 600 x 600 x 2bit
	Magazine	No
	Photo	<ul style="list-style-type: none"> • Platen: Scan 600 x 600 dpi, Printing 600 x 600 x 4bit • DADF : Scan 600 x 600 dpi, Printing 600 x 600 x 4bit
	Copied Original	<ul style="list-style-type: none"> • Platen: Scan 600 x 600 dpi, Printing 600 x 600 x 2bit • DADF : Scan 600 x 600 dpi, Printing 600 x 600 x 2bit
	Map	<ul style="list-style-type: none"> • Platen: Scan 600 x 600 dpi, Printing 600 x 600 x 2bit • DADF : Scan 600 x 600 dpi, Printing 600 x 600 x 2bit
	Light Original	<ul style="list-style-type: none"> • Platen: Scan 600 x 600dpi, Printing 600 x 600 x 2bit • DADF : Scan 600 x 600dpi, Printing 600 x 600 x 2bit
Original Type	Factory Default	Mono Copy Text/Photo (Mixed) Mode
Color Setting	Auto Color	No
	Full Color	No
	Twin Color	No
	Single Color	No
	B&W	Yes
Max. Original Size	Platen	297 x 432 mm (11.7" x 17")
	DADF	297 x 432 mm (11.7" x 17")

Item	Specification	
Basic Copy	Multi Copy	1~9999
	Automatic Paper Selection	Yes
	Manual Paper Selection	Yes
	Multi-page Copy	<ul style="list-style-type: none"> • NA: Platen & DADF • ND: Platen Only
	Duplex Copy	Using Platen <ul style="list-style-type: none"> • 1→1Sided • 1→2Sided (Output : Book, Calendar) Using DADF <ul style="list-style-type: none"> • 1→1Sided • 1→2Sided (Output: Book, Calendar) • 2→1Sided (Original: Book, Calendar) • 2→2Sided (Original: Book, Calendar, Output: Book, Calendar)
	Darkness Control	11 Levels
	Collation Copy	Yes (Limited)
	Reduce & Enlarge	* Zoom Range : 25% to 400% in Platen and DADF * Preset: [Original(100%)] [Auto Fit] ... 25%, 50%, 150%, 200%, 400% [Custom:25-400%]
Other Features	Proof Copy	No
	N-Up	2up ~ 32 up
	ID Card Copy	Yes (Platen only)
	Poster Copy	No
	Clone Copy (Image Repeat)	No
	Booklet	No
	Covers	Yes
	Transparencies	No
	Book Copy	Yes (Platen only)
	Scan to Document	No
Image	Erase Edge	No
	Margin Shift	No
	Book Center Erase	Yes
	Form Copy	No
	Watermark Copy	Yes
	Stamp	Yes
	Job Program	Yes
	Adjust Background	Auto, Erase(4 levels), Enhance(2 levels)
	Job Build	No
	Rotation Copy	No
	Mirror	No

2.2.6. Fax specification

Item		Specification
Compatibility		ITU-T G3, Super G3
Communication System		PSTN/PABX
Modem Speed		33.6Kbps
TX Speed		3 sec (Mono/Standard/ECM-MMR, ITU-T G3 No.1 Chart,A4)
Compression		MH/MR/MMR/JBIG
Color Fax		No
ECM		Yes
Resolution (Mono)	Std	203*98dpi
	Fine	203*196dpi
	S.Fine Photo	No
	S.Fine	300*300dpi
	Ultra Fine	600*600dpi
Scan speed	Std	1.5 sec/LTR
	Fine	4 sec/LTR
	S.Fine	Depends on Document
Telephone Features	Handset	No
	On hook Dial	Yes
	Search	Yes (Phone Book)
	Speed Dial	500 locations
	Group Dial	Max. 100 Groups (Max. locations per 1 Group : 100 locations)
	TAD I/F	Yes
	Tone/Pulse	Yes
	Pause	Yes
	Auto Redial	Yes
	Redial	Yes
	Distinctive Ring	No
	Caller ID	Yes
Functions	External Phone Interface	Yes
	Mail Box	No
	Voice Request	No
	TTI	Yes
	RTI	Yes
	Polling	No
	Earth/Recall	No
	Auto Reduction	Yes
	SMS	No
	Multi-send	up to 505 locations
	Delayed Send	Yes
	Memory RX	Yes

Item		Specification
	Secure Rx	Yes
	Time Secured Fax	Yes
	Relay Transmission (ITU-T Mail Box)	No
	Priority Transmission	No
	Batch Transmission	No
Address Book Basic Feature	Searching	Yes
	Storing	Yes
	Editing	Yes
	Deleting	Yes
	Grouping	Yes
	Chaining	No
	import, export	Yes
Address Book Advanced	Search condition	No
	Favorites Button	No
	Curent Sending , Receiving Tel number	Yes (Curent Sending)
	LDAP	Yes
Sending fax Management	Check the Success or Fail & Error	Yes
	Re-Faxing from memory in case of failed Fax	Yes
	Re-Faxing in case of failed page.	Yes
	Delete in memory after sending completely	Yes
Fax Receiving Feature/ Printing the Rx Document	Separator Sheet	No
	Insert the stamp	Yes (Option -On,Off) Rx Time ,ID, Page
	Number of Printing Copies	No
	Revers order printing	No
	tray selection	Yes
Report & List Print out	Tx/Rx Journal	Yes
	Confirmation	2 type (Image TCR or w/o Image TCR)
	Auto Dial List	No
	System Data List	No
Sound Control	Ring Volume	Yes (7 steps and mute)
	Key Volume	Yes (7 steps and mute)
	Speaker	Yes (7 steps and mute)
	Alarm Volume	Yes (7 steps and mute)
Junk Fax barrier	No	
Security Receive	Yes	
Battery Backup	Permanently stored on HDD	

2. Product Specifications and Description

Item		Specification
Duplex	Send	Yes
	Receive	Yes
Receive Mode		Fax, TEL, Ans/Fax
Battery Backup		HDD Store, 500 jobs
Fax Forward to FAX		No
Fax Forward to e-mail		Yes
Broadcasting		up to 505 locations
Cover page		No
Fax-to	HDD	Yes
	USB	No
	Fax	No
	Email	Yes
	Client	No
	SMB	Yes
	FTP	Yes
	HTTP(S)	No
	Multi-destination	No

2.2.7. Paper Handling specification

Item		Specification
Standard Capacity		<ul style="list-style-type: none"> 1,140 sheets @ 20 lb or 80 g/m² 520-sheet cassette Tray (20 lb or 80 g/m²) x 2 100-sheet MP tray (20 lb or 80 g/m²)
Max. Input Capacity	MP + Tray x 4	2,180 sheets @ 20 lb or 80 g/m ²
Printing	Max. Size	297 x 432 mm (11.7" x 17"), Banner
	Min. Size	98 x 148 mm (3.85" x 5.83")
	Margin(T/B/L/R)	4.2+/-1.5mm
MP Tray	Capacity	<ul style="list-style-type: none"> Plain Paper: 100 sheets @ 80 g/m² Envelopes: 10 sheets @ 75 g/m² Labels: 20 sheets @ 120~150 g/m² Thick Paper: 10 sheets @ 176 g/m²
	Media sizes	98 x 148 mm ~ 297 x 432 mm (3.87 x 5.8" ~ 11.7 x 17") Banner Size Printing : 297 mm x 1200 mm
	Media type	Printer Default, Plain Paper, Thick Paper, Thin Paper, Bond Paper, Color Paper, CardStock, Labels, Envelope, Preprinted, Letterhead, Recycled Paper, Cotton, Archive, Glossy
	Media weight	<ul style="list-style-type: none"> 16 ~ 47 lb (60 to 176 g/m²) : Simplex, Duplex
	Sensing	<ul style="list-style-type: none"> Paper Empty Detect : Yes Paper Size Detect : Yes
Standard Cassette Tray	Capacity	520 sheets @ 20 lb (80g/m ²) X 2
	Media sizes	Legder, A3, Letter, Legal, Oficio, Folio, A3, A4, JIS B5, ISO B5, Executive, A5, Statement, Custom
	Media types	Plain Paper, Thin Paper, Bond, Punched, Pre-Printed, Recycled, Label, CardStock, Letterhead, Thick, Cotton, Colored, Archive, Glossy
	Media weight	<ul style="list-style-type: none"> Plain Paper: 71~90g/m²(19~24 lb), (Duplex : 19~24lb) Thick Paper: 91~105g/m²(25~28 lb), (Duplex : 25~28lb) Heavy Weight 1 Paper : 106~120g/m² Heavy Weight 2 Paper : 121~175g/m² Extra Heavy Weight 1 Paper : 176 ~ 216g/m² Thin Paper: 60~70g/m²(16~18 lb) Bond Paper: 105~120g/m² (28~32 lb) Punched Paper: 71~90g/m² (19~24 lb) Pre-Printed : 75~90g/m² (20~24 lb) Recycled : 60~90g/m² (16~24 lb) CardStock : 105~163g/m² (28~43lb) Letterhead : 71~90g/m² (19~24lb) Cotton paper : 75~90g/m² (20~24lb) Label : 120~150g/m² (32~40 lb)
	Sensing	<ul style="list-style-type: none"> H/W Install Detect: Yes Paper Empty & Low Level Detect: Yes Paper Type Detect: No Paper Size Detect: Yes

2. Product Specifications and Description

Item		Specification
Optional Cassette Tray	Capacity	520 sheets @ 20lb (80g/m ²) x 2
	Media sizes	Ledger, A3, Letter, Legal, Oficio, Folio, A4, JIS B5, ISO B5, Executive, A5, Statement, Custom
	Media types	Plain Paper, Thin Paper, Bond, Punched, Pre-Printed, Recycled, Label, CardStock, Letterhead, Thick, Cotton, Colored, Archive, Glossy
	Media weight	<ul style="list-style-type: none"> • Plain Paper: 71~90g/m²(19~24 lb), (Duplex : 19~24lb) • Thick Paper: 91~105g/m²(25~28 lb), (Duplex : 25~28lb) • Heavy Weight 1 Paper : 106~120g/m² • Heavy Weight 2 Paper : 121~175g/m² • Extra Heavy Weight 1 Paper : 176 ~ 216g/m² • Thin Paper: 60~70g/m²(16~18 lb) • Bond Paper: 105~120g/m²(28~32 lb) • Punched Paper: 71~90g/m²(19~24 lb) • Pre-Printed : 75~90g/m²(20~24 lb) • Recycled : 60~90g/m²(16~24 lb) • CardStock : 105~163g/m² (28~43lb) • Letterhead : 71~90g/m² (19~24lb) • Cotton paper : 75~90g/m² (20~24lb) • Label : 120~150g/m² (32~40 lb)
	Sensing	<ul style="list-style-type: none"> • H/W Install Detect: Yes • Paper Empty & Low Level Detect: Yes • Paper Type Detect: No • Paper Size Detect: Yes
Optional High-Capacity Feeder(HCF)		N/A
Output Stacking	Capacity (FaceDown)	500 sheets @ 20lb (80g/m ²)
	Offset Stacking	No
	Output Full sensing	Yes
Standard Finisher	Capacity	50 sheets stapling / 350 (in total) sheets stacking, internal
	Staple Cartridge capacity	5000 staples / cartridge
	Stacking	<ul style="list-style-type: none"> • Top Tray : 50 sheets with 80g/m² sheet • Finishing Tray : 300 sheets with 80g/m² sheet
	Stapling	1 Corner (Single)
	Offline Stapling	No
	Offset at Non Staple job	No
	Offset at Staple job	Yes
Output Stacking	Face Down	
3250-sheet Booklet Finisher		N/A
Punch Kit		N/A

Item		Specification
Automatic Duplex	Supporting	Yes
	Media sizes	Legder, A3, Letter, Legal, Oficio, Folio, A3, A4, JIS B5, ISO B5, Executive, A5, Statement, Custom
	Media types	Plain Paper, Thin Paper, Bond, Punched, Pre-Printed, Recycled, Label, CardStock, Letterhead, Thick, Cotton, Colored, Archive, Glossy
	Media weight	60~175g/m ² (16~46 lb)
DADF	Capacity	100 sheets (20lb, 80 g/m ²)
	2-sided Document Scanning	Yes
	Document Size	<ul style="list-style-type: none"> • Width: 128~297mm • Length : 128 ~ 432mm
	Document Weight	<ul style="list-style-type: none"> • 42~163g/m² @simplex • 50~128g/m² @duplex
	Sensing	<ul style="list-style-type: none"> • Paper empty detect : Yes • Paper width detect : Yes • Paper length detect : Yes
	Auto Detected Size Sensing	A3, A4, A4 SEF, A5, A5 SEF, B4, B5, B5 SEF

2.2.8. Consumables

Item	Model Name	Average yield
Toner Cartridge	MLT-D709S	25,000 impressions
Drum Unit and Developer	MLT-R709	100,000 impressions
Waste Toner Container	MLT-W709	100,000 impressions



NOTE

- Declared yield value in accordance with 5% coverage.
- Depending on the print pattern and job mode used, the consumable's lifespan may differ.

2.2.9. Maintenance Parts

Item	Part Code	Life
Developer Unit	JC96-06208A	300,000 impressions
Transfer roller Assy	JC95-01520A	150,000 impressions
Fuser Unit	<ul style="list-style-type: none"> • JC91-01049A (110V) • JC91-01050A (220V) 	150,000 impressions
Pick-Up / Reverse / Forward roller (for Tray1,2,3,4, MP Tray)	JC93-00540A	200,000 impressions
DADF Pick-Up roller Assy	JC97-04009A	200,000 impressions
DADF Friction Pad	JC97-03097A	100,000 impressions
Ozone Filter	JC61-04861A	150,000 impressions



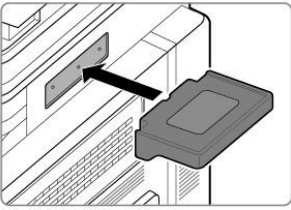

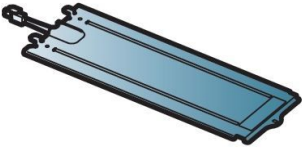


NOTE

Depending on the print patterns and job mode used, the lifespan may differ.

2.2.10. Option

Image	Item	Model	SCX-8123 series	SCX-8128 series
	DCF (Dual Cassette Feeder)	CLX-PFP100/SEE	Yes	Yes
	Finisher	CLX-FIN50S/SEE	Yes	Yes
	Job Separator	CLX-JST100/SEE	Yes	Yes
	Fax	CLX-FAX160/XXX  NOTE XXX : SEE, XEG, XEU, XIL	Yes	Yes
	Cabinet Stand	CLX-DSK20T	Yes	Yes
	FDI Kit	CLX-KIT10F	Yes	Yes

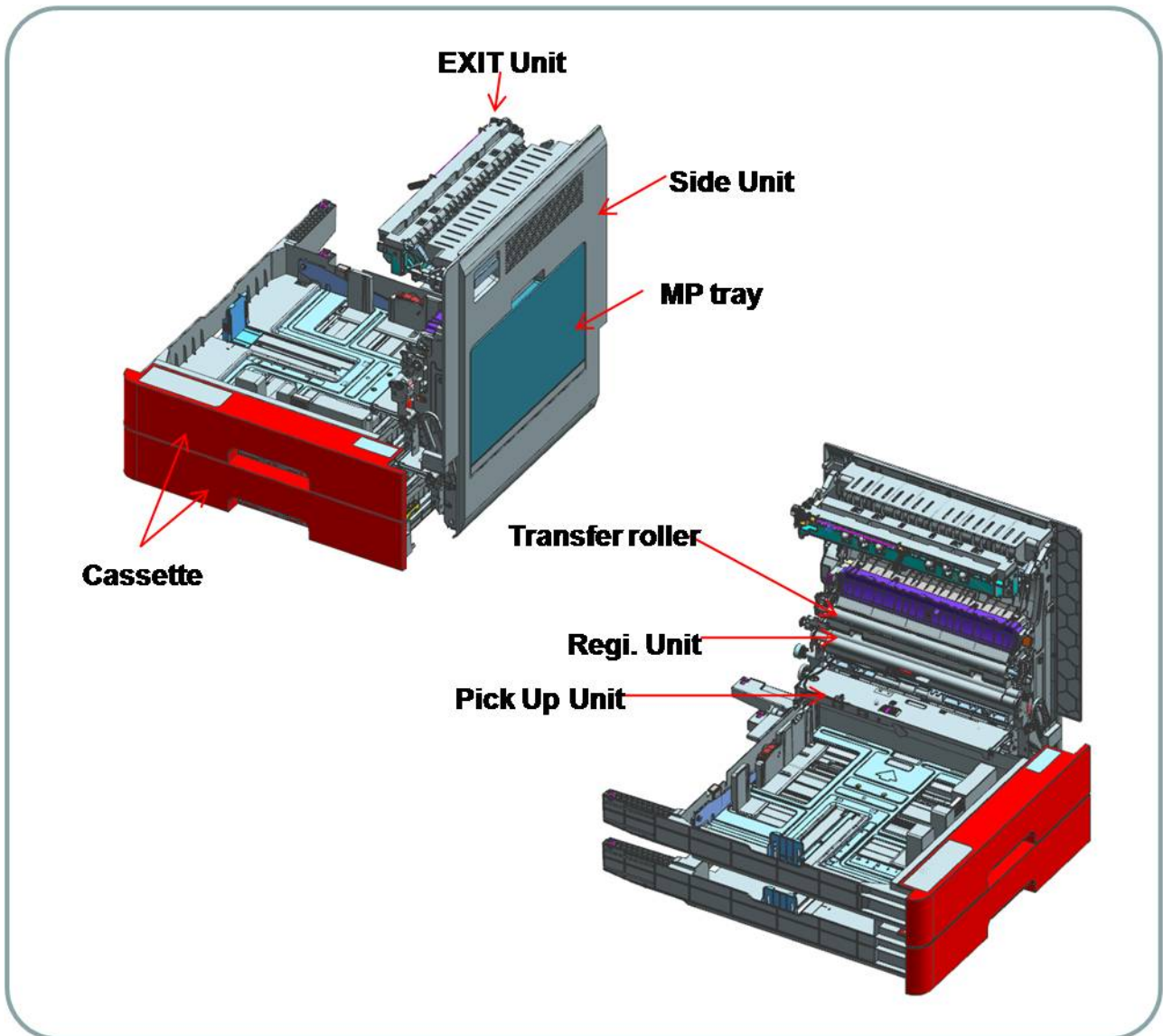
2. Product Specifications and Description

Image	Item	Model	SCX-8123 series	SCX-8128 series
	Working Table	CLX-WKT000	Yes	Yes
	Card Reader Cover Assy	CLX-CRH002	Yes	Yes
	Cassette Heater	CLX-DHK12C	Yes	Yes
	DADF unit (Duplex Automatic Document Feeder)	SCX-ADF61D	Yes	Yes
	HDD (Hard Disk Drive)	SCX-HDK471	Yes	Yes
	SmarThru Workflow V1.0		Yes	Yes

2.3. Feeding System

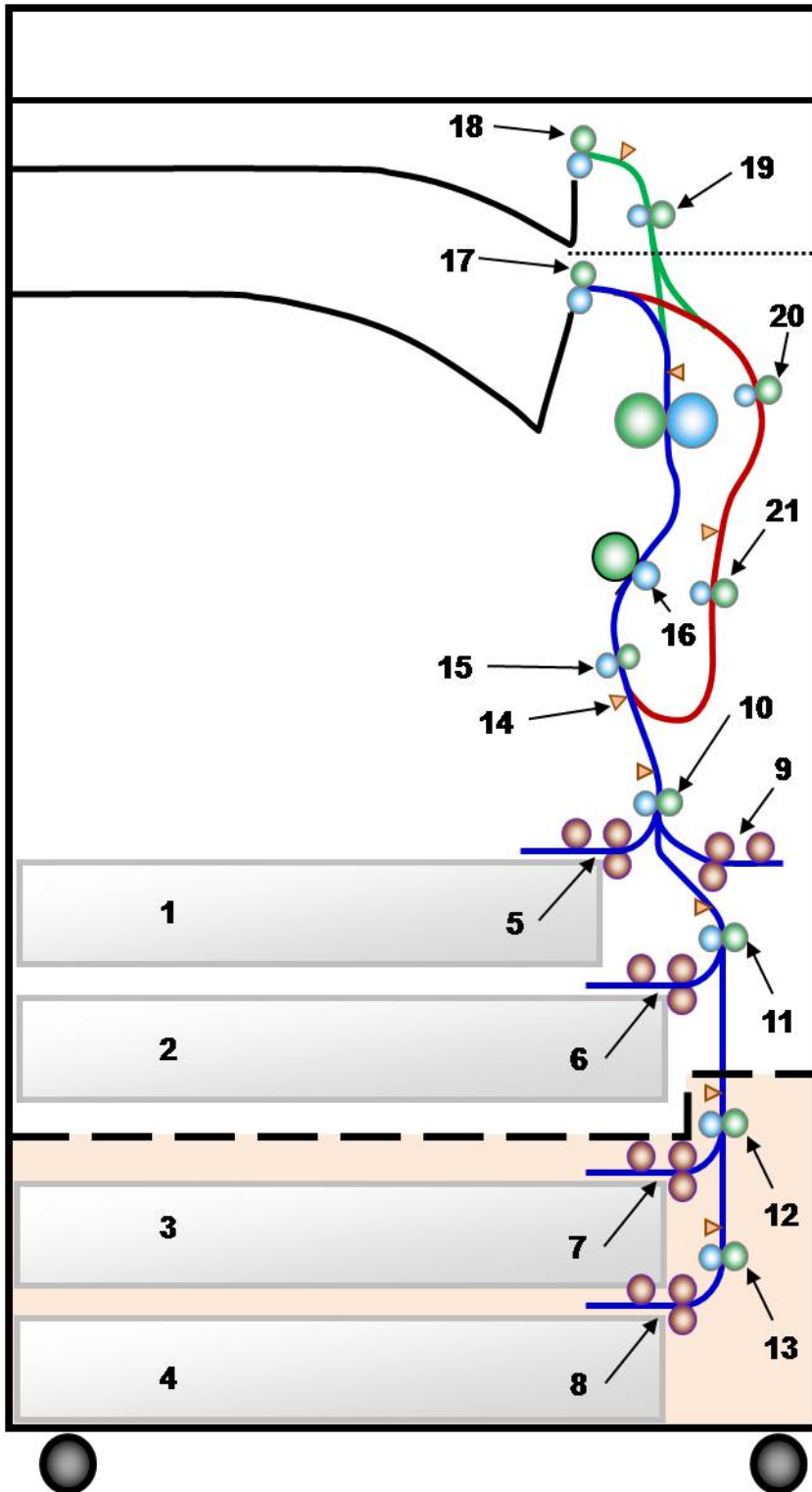
2.3.1. Feeding System Overview

The feeding system picks up a paper from the cassette or MP tray and transports it to the machine inside. It mainly consists of the pick up unit, registration unit, transfer roller Assy, Exit unit.



2.3.2. Main Components and functions

a) Rollers



1	Tray 1 Paper tray
2	Tray 2 Paper tray
3	Tray 3 Paper tray(Optional)
4	Tray 4 Paper tray(Optional)
5	Tray 1 pick up / reverse / forward rollers

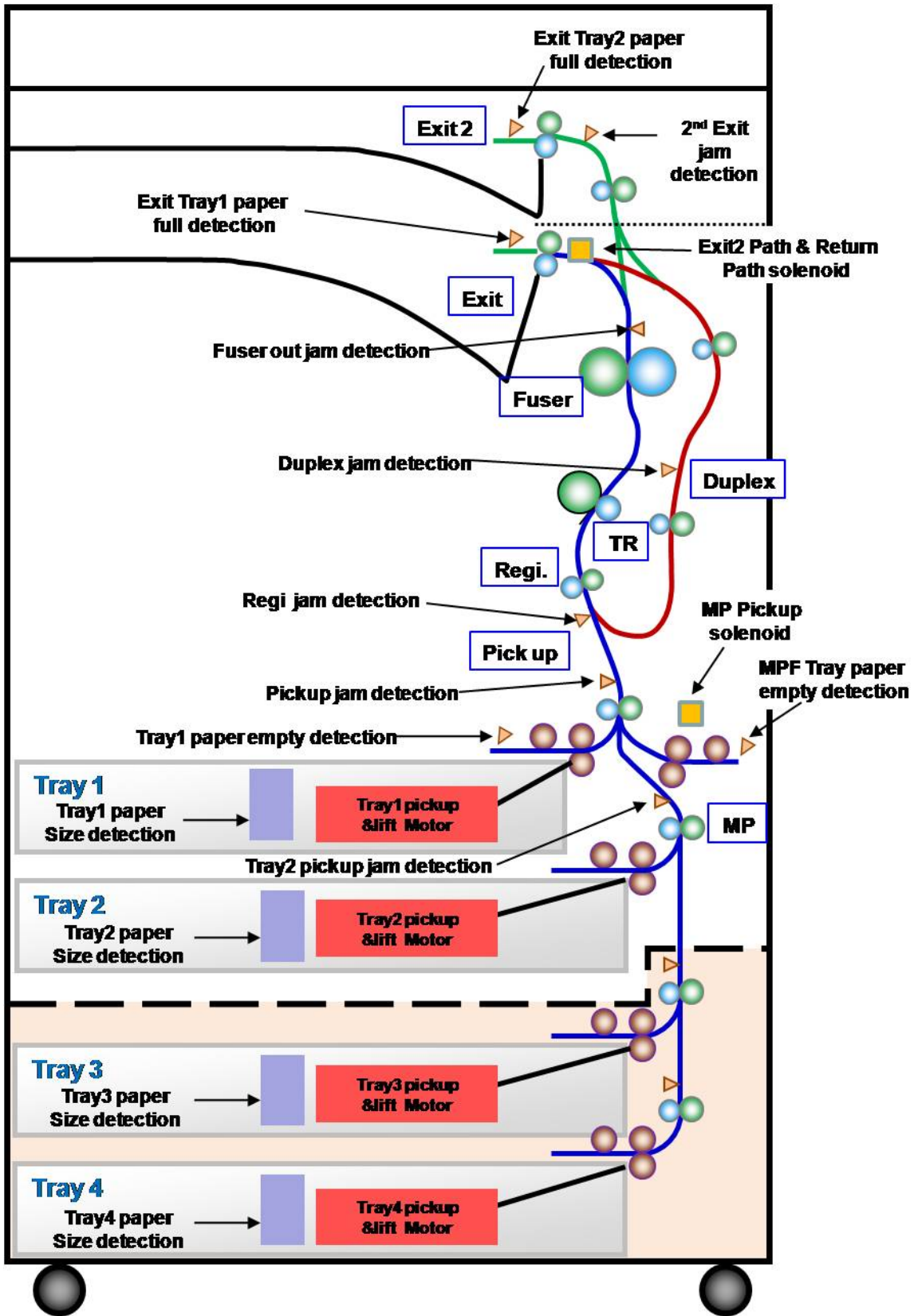
6	Tray 2 pick up / reverse / forward rollers
7	Tray 3 pick up / reverse / forward rollers (Option)
8	Tray 4 pick up / reverse / forward rollers (Option)
9	MP Tray pick up / reverse / forward rollers
10	Tray 1 feed roller


11	Tray 2 feed roller
12	Tray 3 feed roller (Option)
13	Tray 4 feed roller (Option)
14	Sensor registration
15	Roller registration
16	Roller transfer

17	Roller Exit 1st
18	Roller Exit 2nd (Option)
19	Roller Invert
20	Roller Duplex1
21	Roller Duplex2

- **Pick-Up roller (Tray 1,2,3,4 and MP Tray)**
 - This roller picks up the paper from the tray.
- **Forward roller (Tray 1,2,3,4 and MP Tray)**
 - This roller is placed against the reverse roller. It transports the paper from the pick up roller to feed roller.
- **Reverse roller (Tray 1,2,3,4 and MP Tray)**
 - This roller is placed against the forward roller and transports only one sheet to the feed roller. When two sheets of paper or more are transported from the pick up roller, the load of the torque limiter of the reverse roller is heavier than the frictional force between the sheets. As a result, the reverse roller is stopped and the lower paper does not advance any further.
- **Feed roller**
 - This roller transports the paper sent from the forward/reverse roller to the registration roller.
- **Registration roller**
 - This roller aligns the leading edge of the paper and transports the paper to the transfer roller Assy.

b) Sensor, Motor, Solenoid

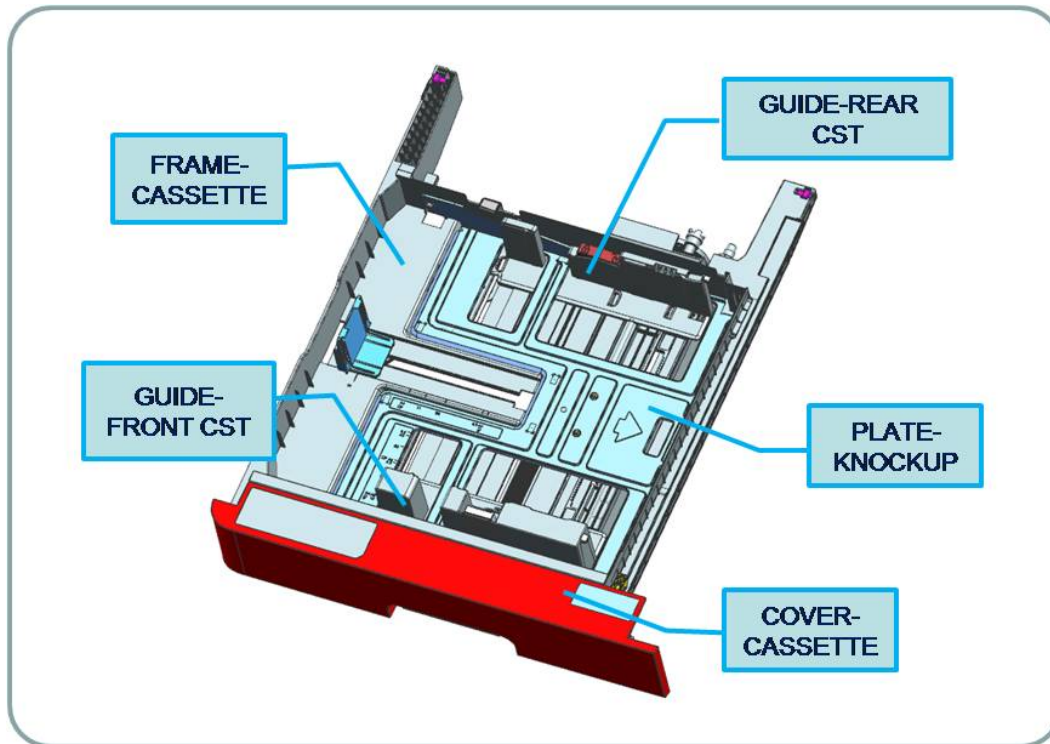


Name	Function	Connector & Pin information
Tray1 paper size detection sensor	Detects tray1 paper size	CN4@ MAIN PBA, 19Pin
Tray1 paper empty detection sensor	Detects tray1 paper empty	CN27@ MAIN PBA, 3Pin
Tray1 upper limit detection sensor	Detects tray1 upper limit	CN27@ MAIN PBA, 6Pin
Tray2 paper size detection sensor	Detects tray2 paper size	CN4@ MAIN PBA, 23Pin
Tray2 paper empty detection sensor	Detects tray2 paper empty	CN27@ MAIN PBA, 20Pin
Tray2 upper limit detection sensor	Detects tray2 upper limit	CN27@ MAIN PBA, 23Pin
Paper regi. jam detection sensor	Detects regi. jam	CN31@ MAIN PBA, 12Pin
Paper fuser-out jam detection sensor	Detects fuser unit jam	CN26@ MAIN PBA, 12Pin
Exit tray1 paper full detection sensor	Detects paper full on Exit tray1	CN19@ MAIN PBA, 6Pin
Exit2 tray path &Return path solenoid	Change paper path	CN19@ MAIN PBA, 11Pin
Duplex motor	Controls duplex driving	CN26@ MAIN PBA, 6Pin~9Pin
Duplex jam detection sensor	Detects duplex jam	CN26@ MAIN PBA, 24Pin
Exit tray 2 paper full detection sensor	Detects paper full on Exit tray2	CN19@ MAIN PBA, 18Pin
MPF Paper empty detection sensor	Detects MP tray paper empty  NOTE Paper on MP tray is taken priority over it on tray 1,2,3,4.	CN26@ MAIN PBA, 3Pin
MPF solenoid	Controls MPF pick up roller	CN26@ MAIN PBA, 4Pin
Tray1 Lift motor	Lifting Knock up plate	CN27@ MAIN PBA, 10Pin~13Pin
Tray2 Lift motor	Lifting Knock up plate	CN27@ MAIN PBA, 14Pin~17Pin

2.3.3. Cassette (Tray 1,2,3,4)

The Cassette stores papers.

Paper size is set using the Size Guides in each tray.



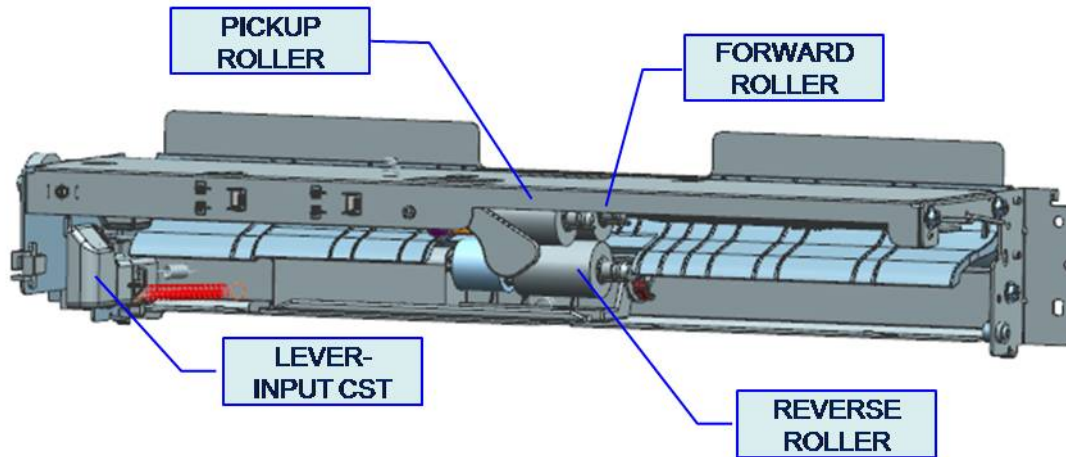
- **Specification**

- 1) Structure : Drawer Type
- 2) Capacity : 520 Sheets (80g/ paper standard)
- 3) Paper
 - Plain paper : A5, A4, A3, B5, B4, Letter, 11"×17"(Ledger), Statement, Legal
- 4) Weight : plain paper 60 ~ 216 g/m²
- 5) Plate knock up lift type : Lift Motor + Up Limit Sensor

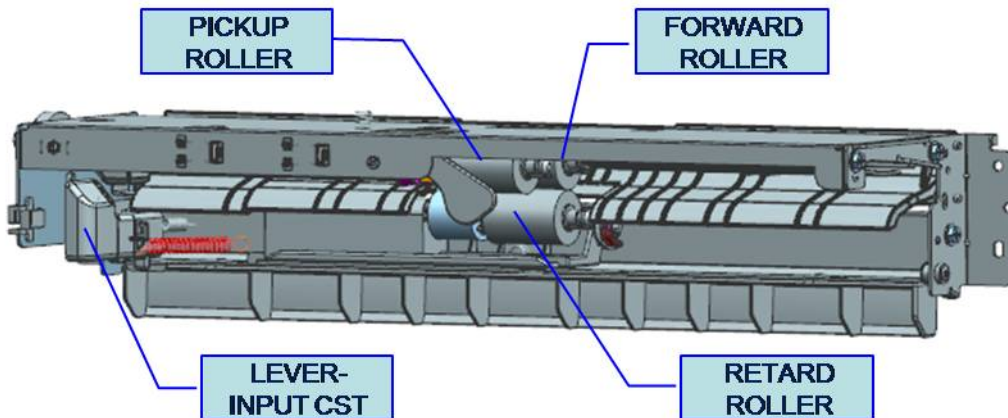
2.3.4. Pick-Up Unit

When pick-up takes place, the pickup roller moves down to come into contact with the surface of the paper. If the cassette is installed, the LEVER-INPUT CST is pushed and pick up roller moves down. The forward roller and the reverse roller serve to make sure that a single sheet of paper is moved to the paper path, and the paper is moved as far as the registration roller by the work of the feed roller.

Pick-Up Unit1

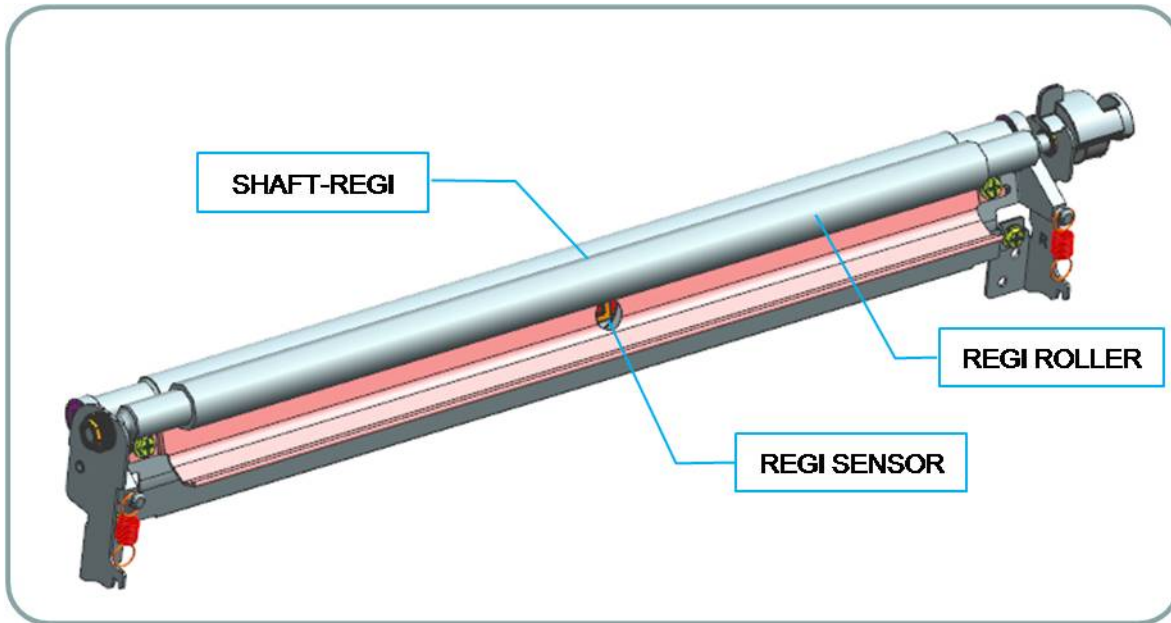


Pick-Up Unit2



2.3.5. Registration Unit

The registration(Regi.) roller is driven by the Regi./MP motor. The Regi. clutch is located between the Regi. clutch and Regi./MP motor, and it controls ON/OFF of the registration roller in order to match paper and an image on the drum at the predetermined registration point.

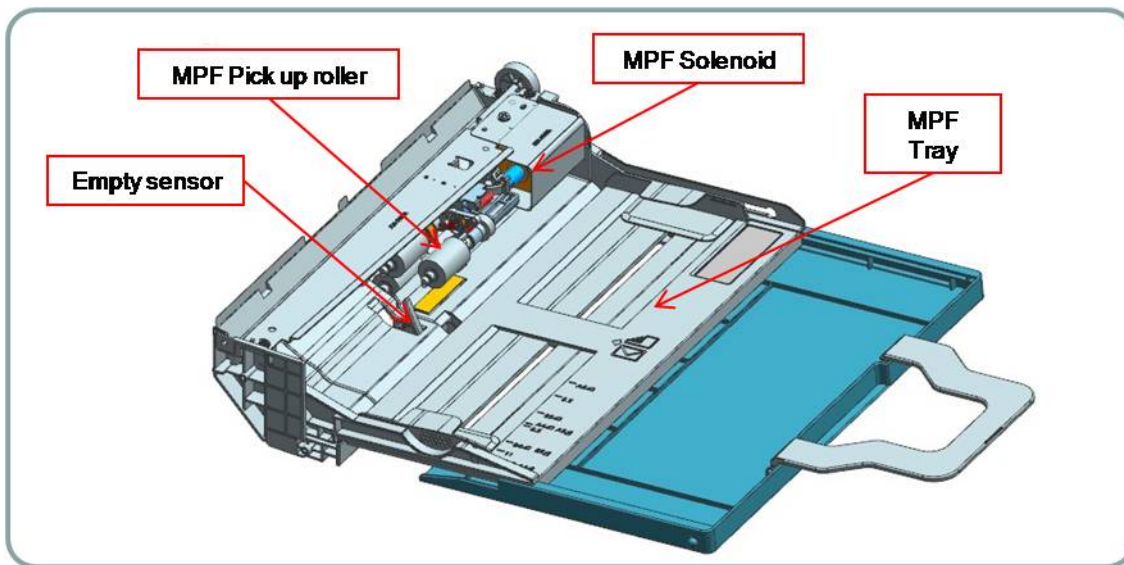


■ Specification

- 1) Skew in simplex
 - Top Skew : 1.5 mm
 - Side Skew : 2.0 mm
- 2) Dog Ear, Trees, Nicks, Wrinkling
 - Special Media : 1/500
- 3) Margin
 - Top Margin : 4.23 ± 1.5 mm (Tray3, 4 : 4.23 ± 2.0 mm)
 - Side Margin : 4.23 ± 1.5 mm (Tray3, 4 : 4.23 ± 2.0 mm)
 - Duplex Top Margin : 4.23 ± 2.0 mm (Tray3, 4 : 4.23 ± 2.0 mm)
 - Duplex Side Margin : 4.23 ± 2.0 mm (Tray3, 4 : 4.23 ± 2.0 mm)

2.3.6. MPF(Multi-Purpose Feeder) Unit

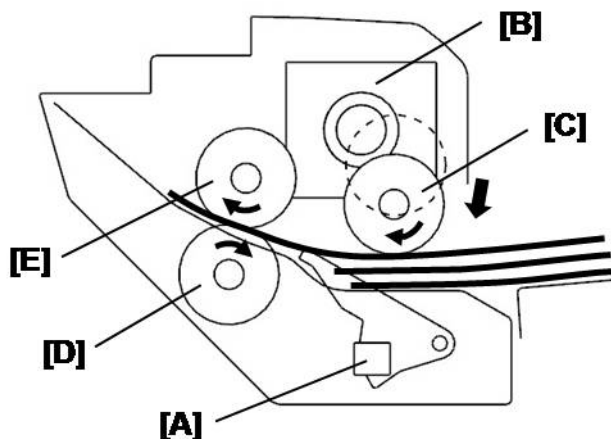
The MPF Unit allows feeding of special media cardstock, envelopes, and custom size paper.



■ Specification

- 1) Capacity : 100 sheets (80g/m² paper standard)
- 2) Media Size : Max 11. 7" ×17" (297×432) / Min 3.87"×5.8" (98×148)
- 3) Media Weight : Plain paper 60 ~ 176 g/m²
- 4) Feeding Speed : 28 ppm (SCX-8128 series), 23 ppm (SCX-8123 series) Letter/A4 LEF (Long Edge Feeding)

■ Paper Separation



When the MP paper detection[A] sensor detects paper and the machine gets a MP printing job, the MP solenoid[B] drops the pick-up roller[C] onto the top of the paper stack on the MP tray.

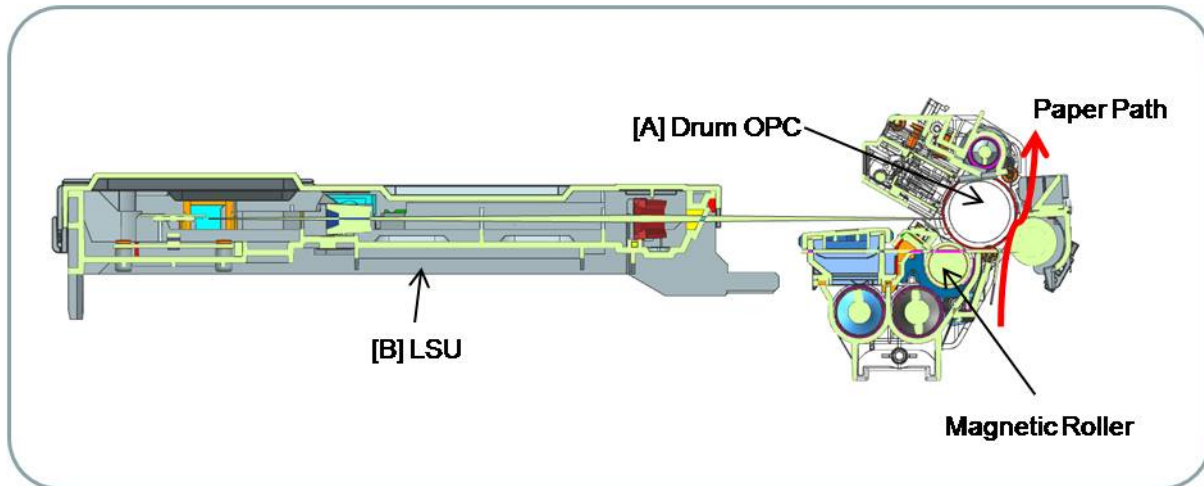
This machine uses an FRR (Feed and Reverse Roller) system for feeding paper. The friction between the reverse roller[E] and forward roller[D] separates the top sheet of paper from the stack.

2.4. Image Creation

2.4.1. Printing process overview

This machine uses one imaging unit and one laser beam for mono printing. Imaging unit consists of a Drum unit and Developer unit.

Drum unit has an OPC drum, Scorotron, Cleaning blade.



The OPC drum [A] is charged with a negative voltage and is exposed by the light from the LSU (Laser Scanning unit) [B]. The light produced by a laser creates a latent image by discharging on the surface of the OPC drum. The negatively charged toners are attracted to the latent image due to an electric field. The toners (real image) on the OPC drum are moved to the transfer media by the positive bias applied to the transfer roller.

- 1) **OPC drum charge** : The charge roller gives the drum a negative charge.
- 2) **Laser exposure** : Light produced by a laser diode hits the charged OPC through the lens and mirrors.
- 3) **Development** : The developing roller carries negatively charged toner to the latent image on the drum surface.
- 4) **Transfer** : The transfer roller opposite the OPC drum transfers toner from the drum to the paper.
- 5) **Cleaning for OPC drum** : The cleaning blade removes remaining toner on the drum surface after image transfer to the paper.
- 6) **Quenching for OPC drum** : Discharge cleaning is done by illuminating the whole area of the drum with the cleaning lamp at the end of every job.

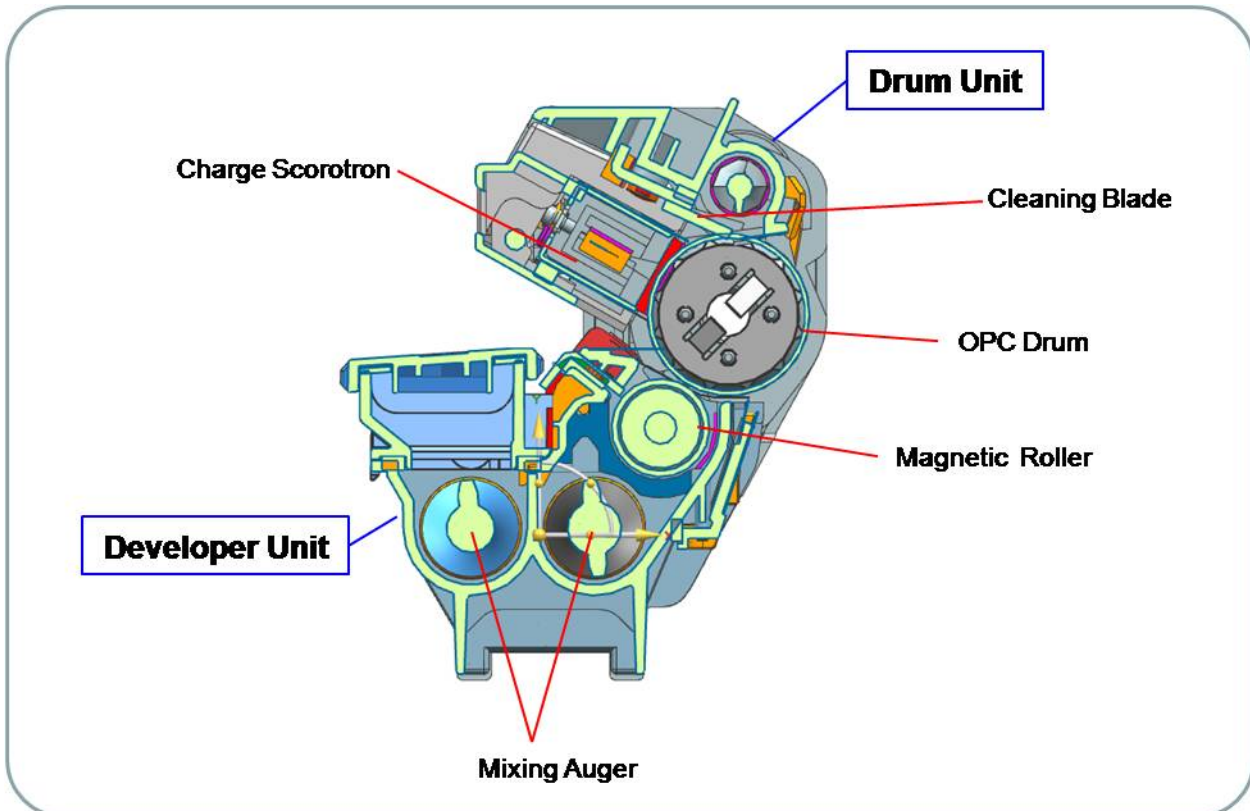
2.4.2. Imaging Unit

2.4.2.1. Imaging Unit overview

The Imaging Unit consists of the Drum unit and the Developer unit.

The diameter of the drum is 30 mm (circumference: about 94.2 mm).

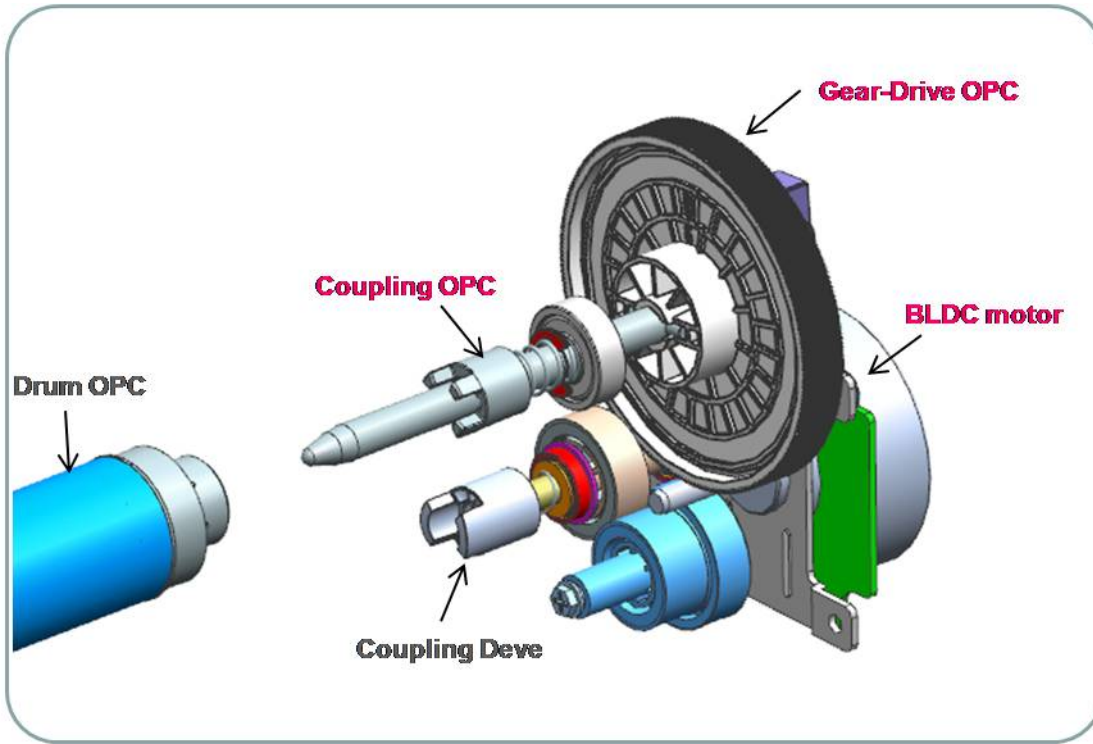
The developing gap between a drum and the corresponding magnetic roller cannot be adjusted. The ID chip is the sub part of the Drum unit. It stores the count information and several data.



2.4.2.2. Drum Drive

The OPC drum and magnetic roller are driven by one BLDC motor and supplied with power from the coupling.

The drive shaft is directly inserted to the OPC drum to fix the drum unit. This structure provides the stable printing quality.

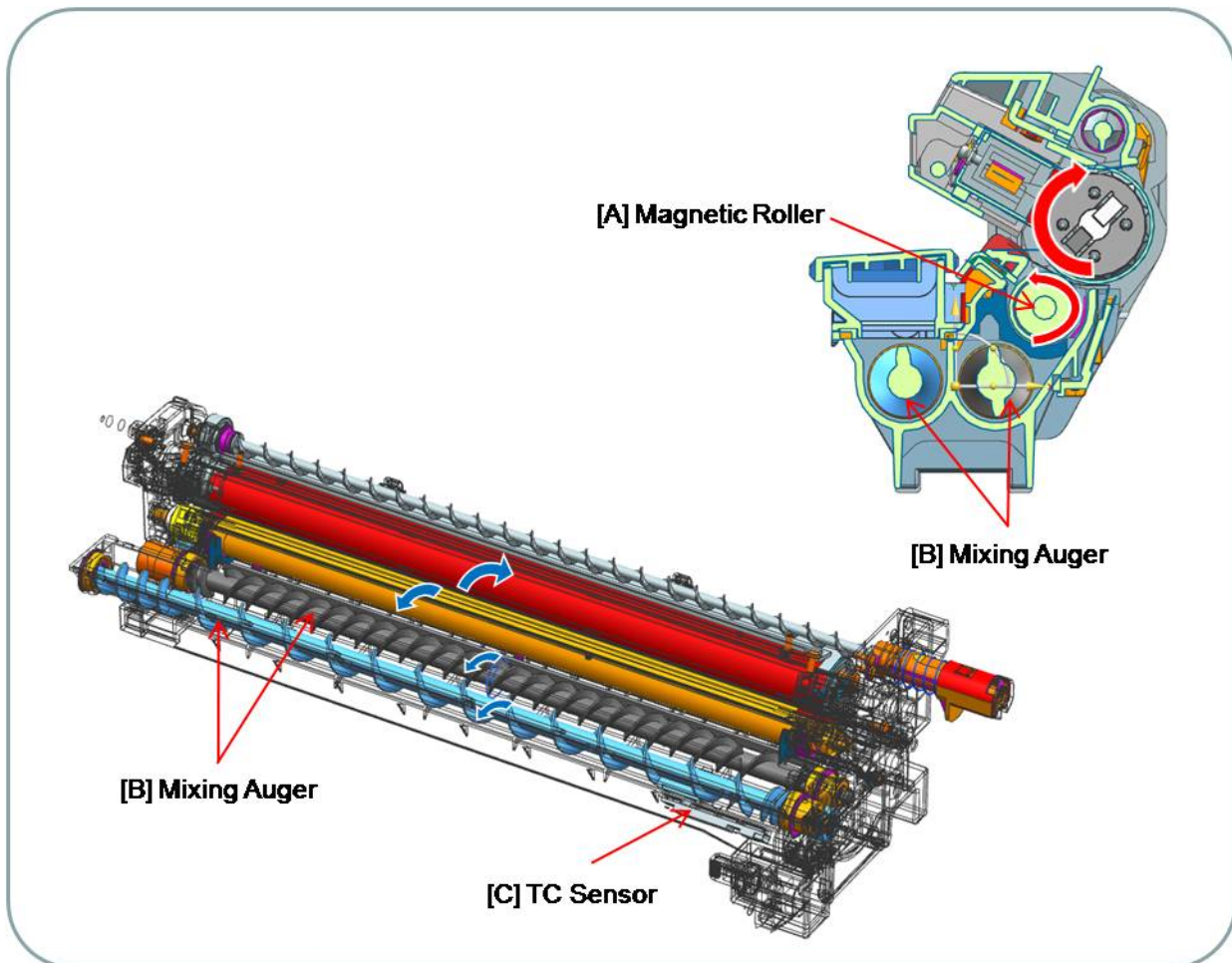


2.4.2.3. Developer Unit

This machine uses a dual-component development system

The developer unit contains 345g of magnetic toner carrier that is supplied to the magnetic(development) roller[A] by the two mixing augers[B]. The diameter of the magnetic roller is 18.2 mm.

The developer unit has a TC(Toner Concentration) sensor[C]. It is used for controlling the operating range of toner density.



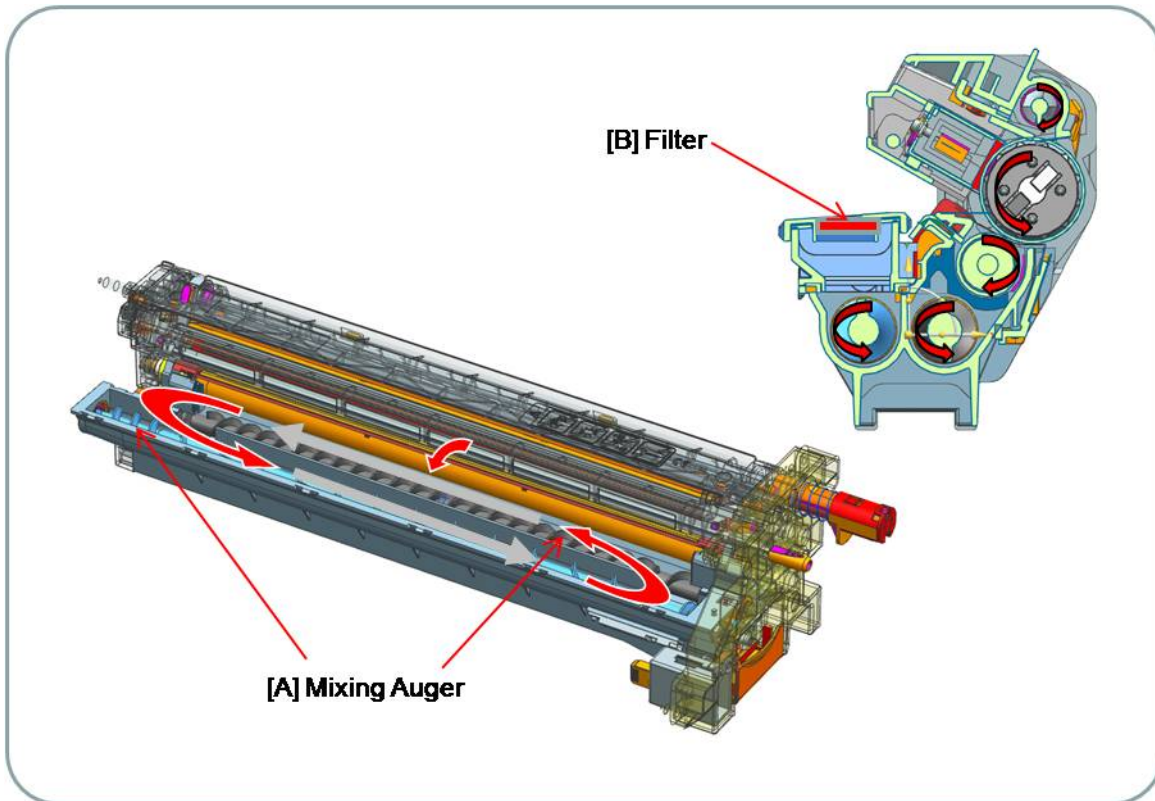
■ Developer Circulation

Two mixing augers[A] circulate the developer forward and backward to agitate the developer in order to mix the developer and toner well.

This occurs at the following times :

- During the process control self-checking
- During toner supply job
- During development job

If the developer unit is stored at temperature above 50 degrees C, it does not works normally. The toner in developer unit is easy to harden at temperature above 50 degrees C.

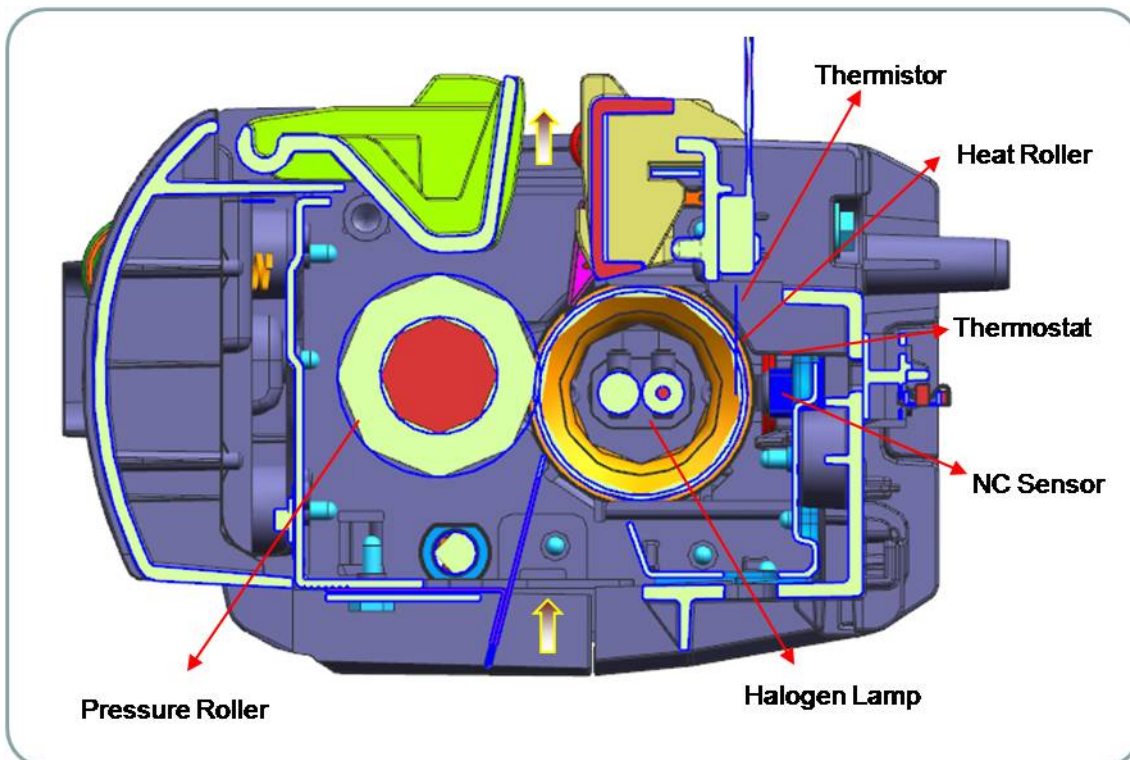


2.5. Fuser unit

This section describes the image fusing process used by the machine.

2.5.1. Fuser Unit overview

This unit fuses the toner that was transferred by the transfer roller onto the paper, by applying heat and pressure to complete fusing process. This machine applied the 2-Roller fusing system and used the thinner heat roller to improve the warm-up time.



1) Halogen Lamp

The fuser unit has two halogen lamps. One heats the center of the heat roller, the other heats the end of axial direction. These halogen lamps are lit alternately to heat the heat roller. Each lamp has its coil in a different location. The coil of the center heater lamp is in the center, those of the side heater lamp are on both sides. The lamps are fixed inside of the heat roller. When rotating the heat roller, these lamps do not rotate.

2) Heat Roller

The heat roller is made of aluminum and gets heat from the halogen lamp and transfers it to toner and paper. The thinner heat roller reduces the warm-up time and the mode switching time. To prevent the heat roller from adhering to the toner, its surface is coated with PFA. The gear located on the side of the heat roller rotates the roller.

3) Pressure Roller

The pressure roller is a rubber roller which ensures proper nip width between the pressure roller and heat roller. To adhere the toner on paper effectively, the pressure roller pushes the heat roller by using a spring.

4) NC sensor

NC sensors (non-contact type thermistors), located near the center of the heat roller, control the temperature.

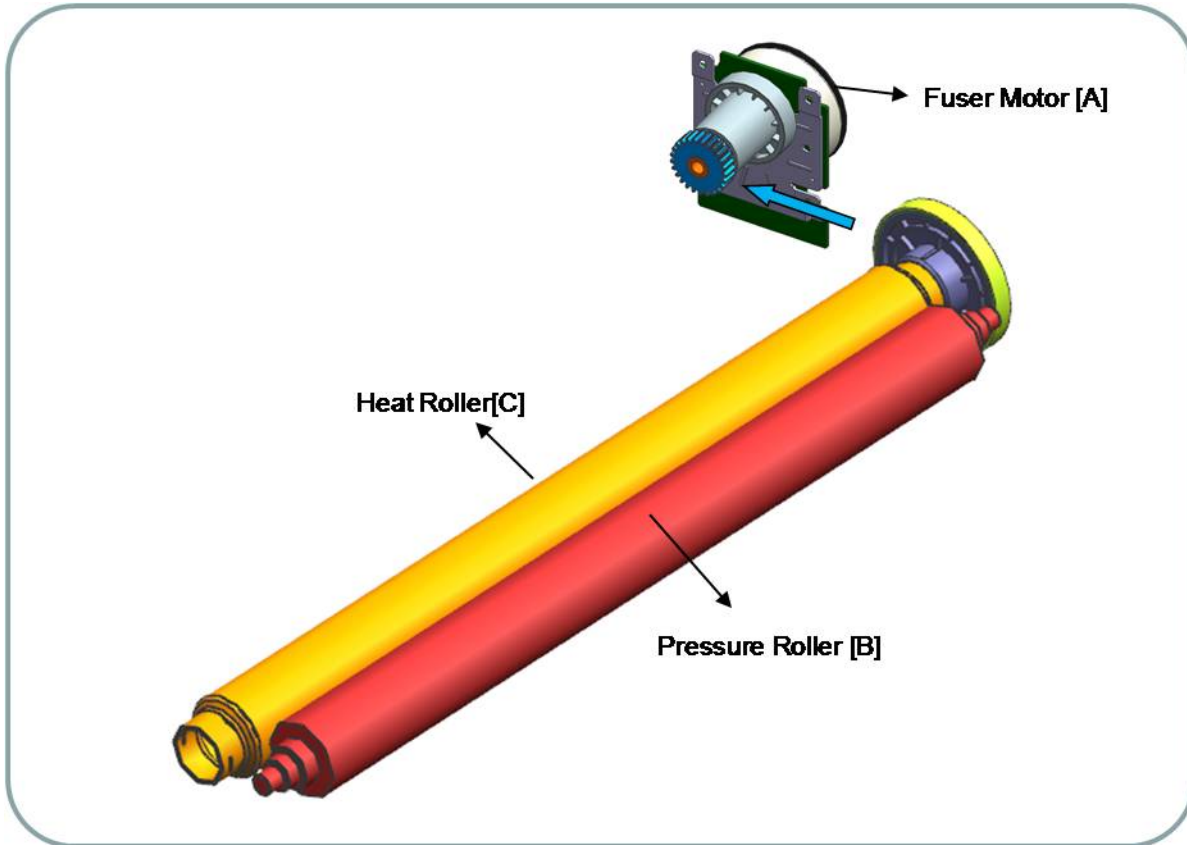
5) Thermistor

Thermistor detects the temperature on the surface of the heat roller and controls the halogen lamp.

6) **Thermostat**

Thermostats cut off the power supply to the halogen lamp by opening the circuit when the heat roller becomes abnormally hot as a result of problems such as NC sensor malfunction. These thermostats are used to prevent abnormal operation. When the thermostat is triggered, it must be replaced (as well as the other damaged parts in the fuser unit).

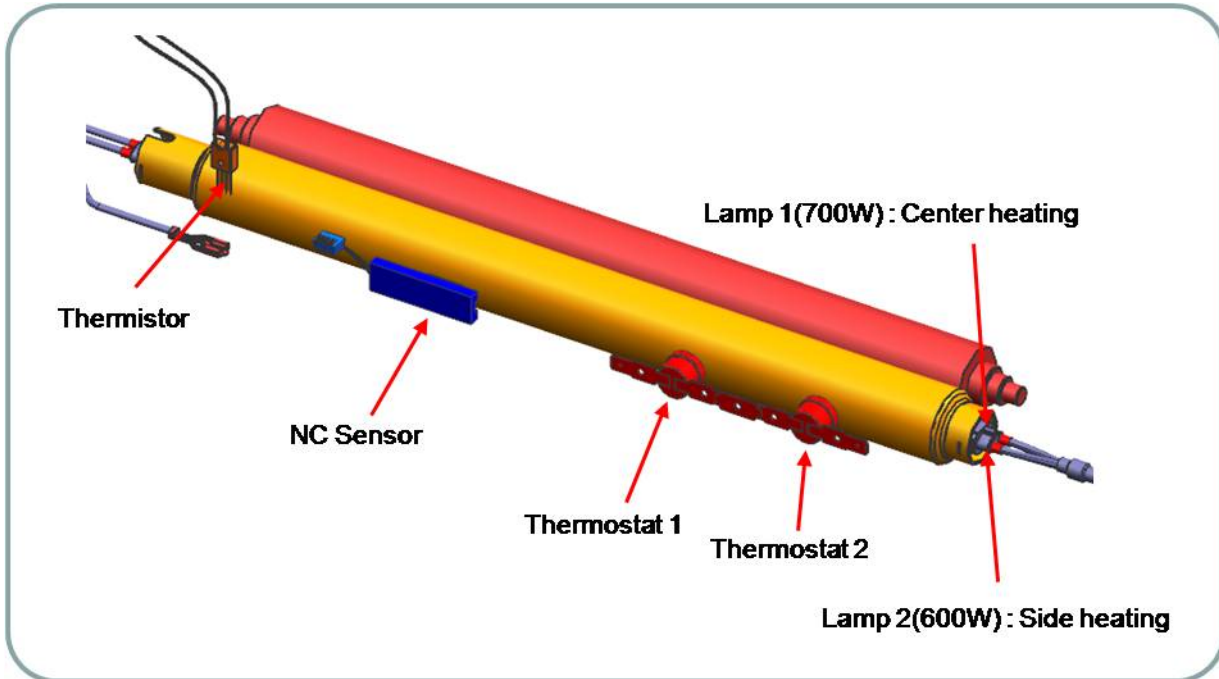
2.5.2. Fuser unit drive



The fuser motor[A] drives the heat roller[C] through the gear train. The pressure roller[B] is pressurized by the heat roller[C] and is rotated by driving it.

2.5.3. Fuser unit temperature control

When the main switch turns on, the CPU turns on the fusing lamp. The lamp stays on until the NC sensors detect the standby temperature. Then the CPU raises the temperature up to the printing temperature.



■ Overheat Protection

The CPU cuts power to the fusing lamp in the following cases :

- The temperature detected by the NC sensors keeps higher than 240°C for 20 sec.

The following components are used when thermistor overheat protection fails :

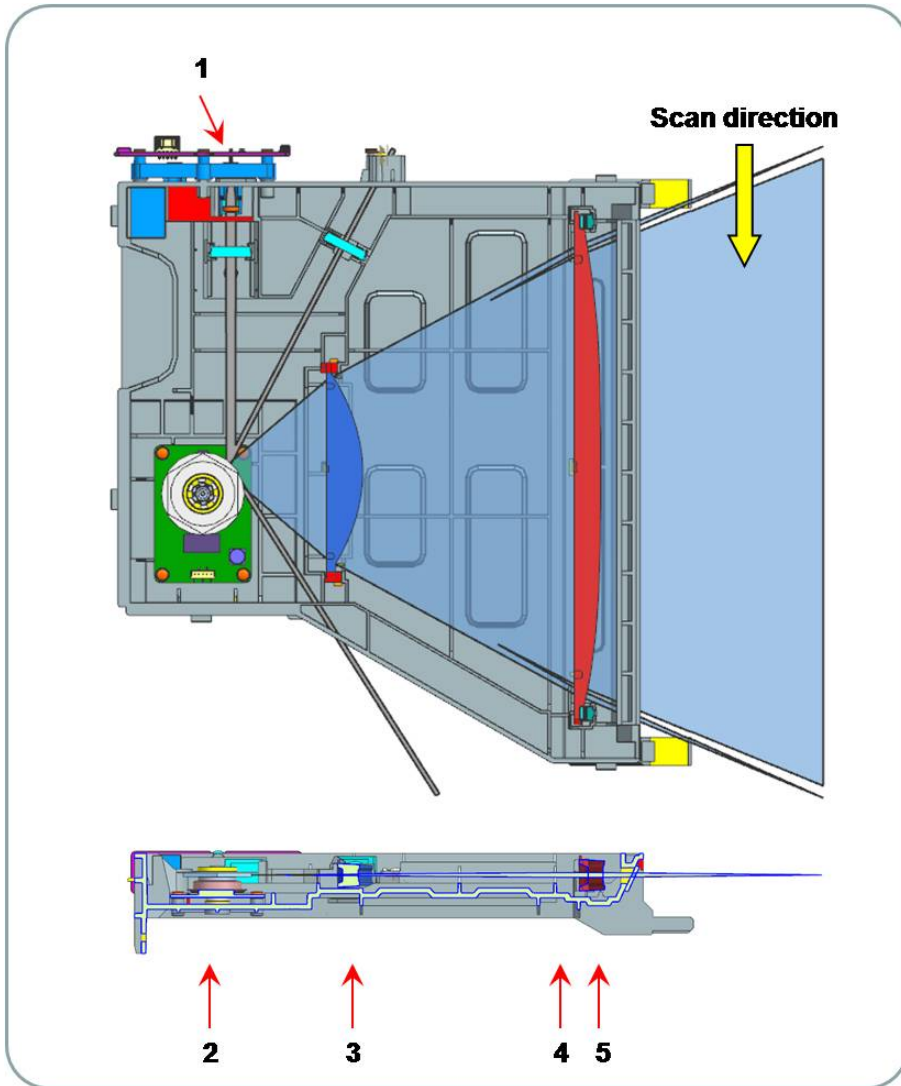
- Two thermostats get into line with the common ground wire of the fusing lamp.
- If one of the thermostat temperatures becomes higher than 195°C, it opens and cuts power to the fusing lamp. If the other thermostat temperature becomes higher than 195°C, it also opens and cuts power to the fusing lamp.

2.6. Laser Scanning Unit (LSU)

2.6.1. LSU overview

LSU consists of 1 polygon motor and 1 LD unit. It forms a latent image on the surface of the OPC drum. For this process, LSU has the collimating lens, cylindrical lens and F-Theta lens on optical path.

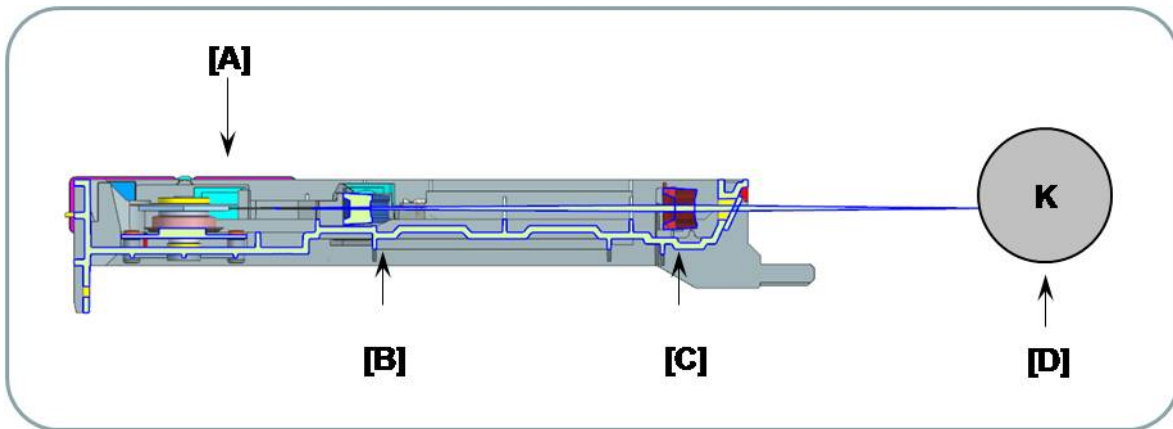
And LSU has the cover glass to protect the glass on the optical path from the contamination. The LD PBA interfaces with the machine.



1	LD PBA
2	P/Mirror Motor
3	F1 Lens
4	F2 Lens
5	Cover Glass

2.6.2. Laser Scanning Optical path

The laser beam moves from the polygon motor[A] to OPC drum[D]. The F1 lens[B] and F2 lens[C] determines the scanning line and the image position. This is adjusted at the factory.



The LSU has 2 types depending on printing speed. The difference between 2 types is shown in the table below.

	SCX-8123 series	SCX-8128 series	Remark
LD Unit	<ul style="list-style-type: none"> • Laser Diode : Single Beam • driving IC : for Single LD • PCB : 23/28ppm common use 	<ul style="list-style-type: none"> • Laser Diode : Single Beam • driving IC : for Single LD • PCB : 23/28ppm common use 	
P/Motor speed	27,874 rpm	33,307 rpm	
Process Speed	118 mm/sec	141 mm/sec	
H/W interface	Harness : 26 Pin (Interface with set)	Harness : 26 Pin (Interface with set)	FFC cable

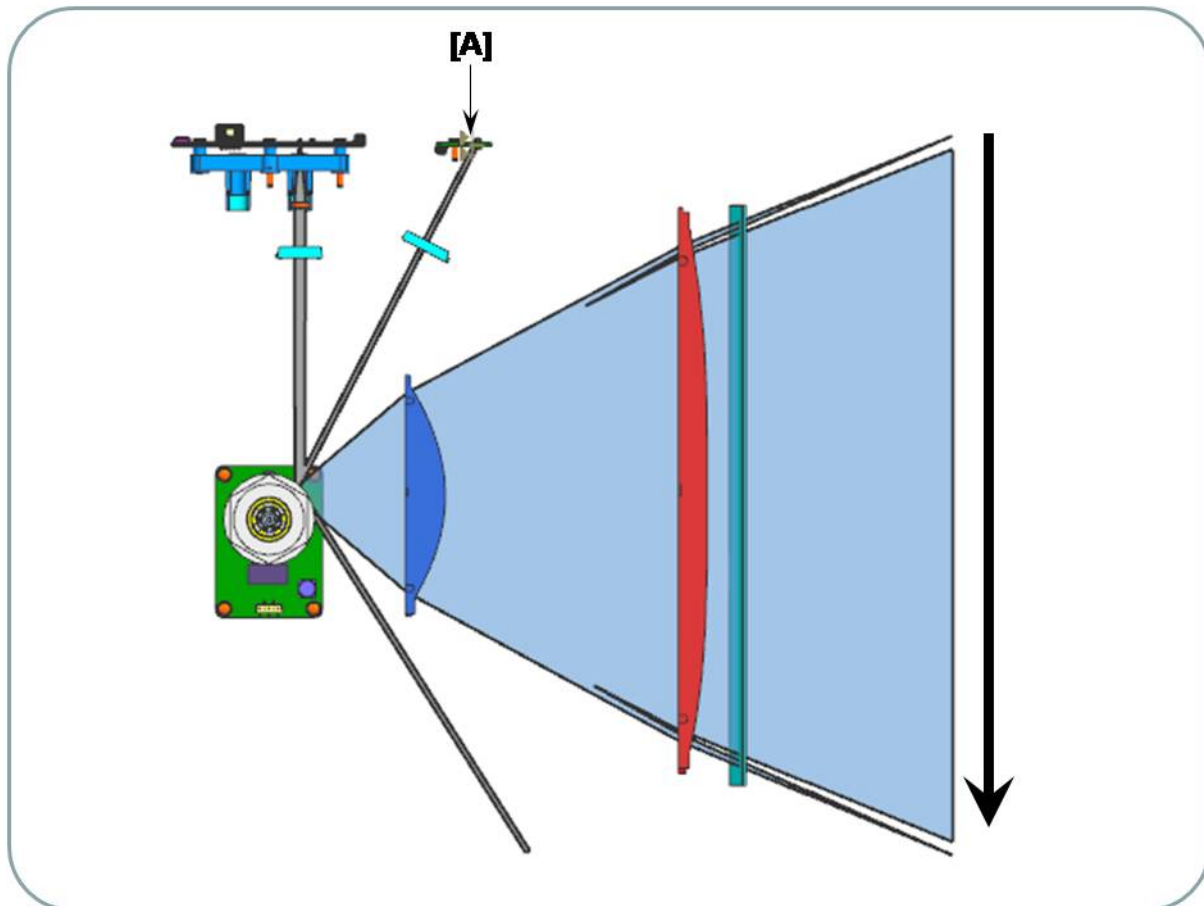
2.6.3. Laser synchronizing detectors

The LSU has the beam detector sensor board (PD PBA). It is located at [A] point and detects the scanning start point.

Main Scan Start Detection

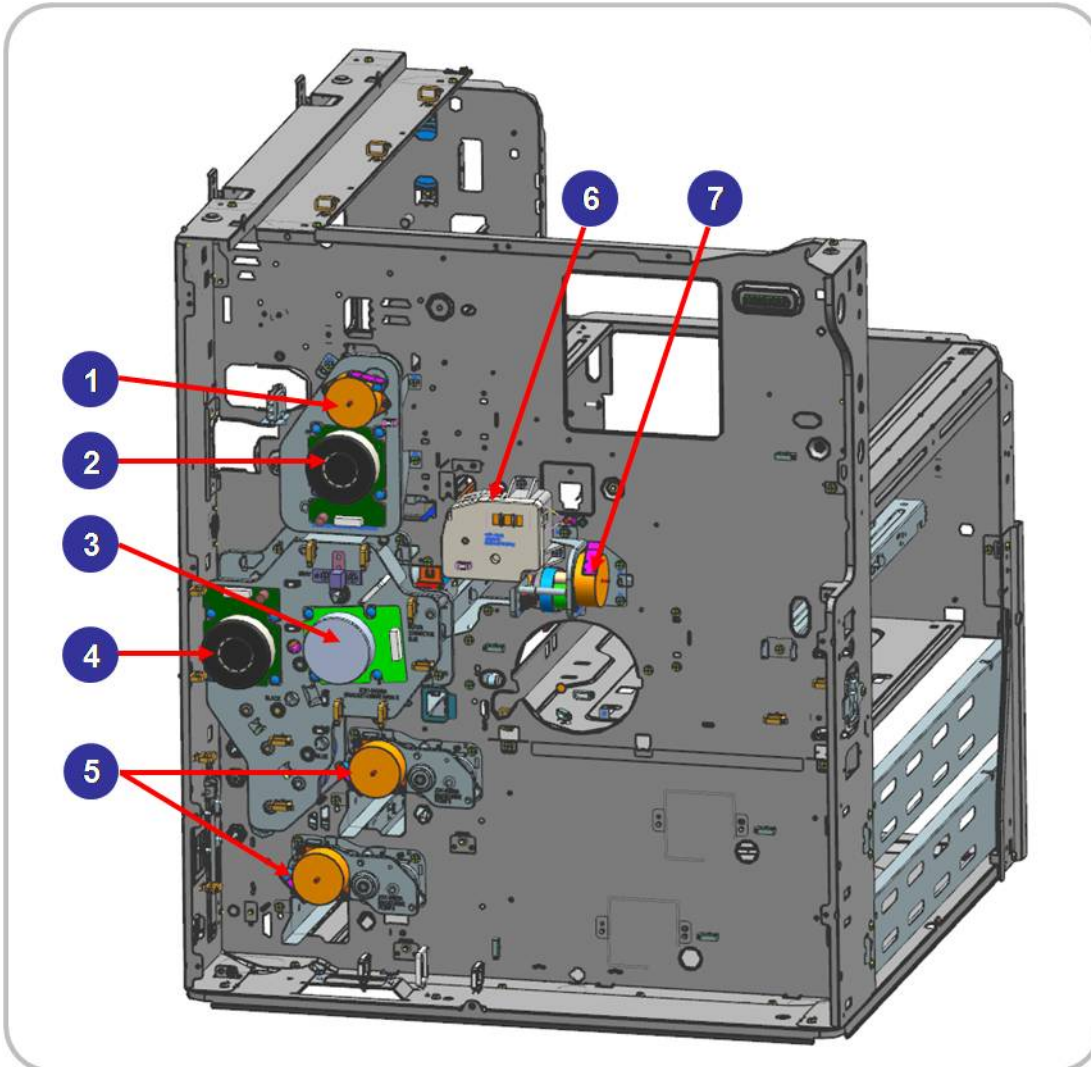
The beam is detected by the PD PBA at the scanning start point and creates the horizontal sync signal(Hsync).

The following diagram shows the data scanning direction.



2.7. Drive System

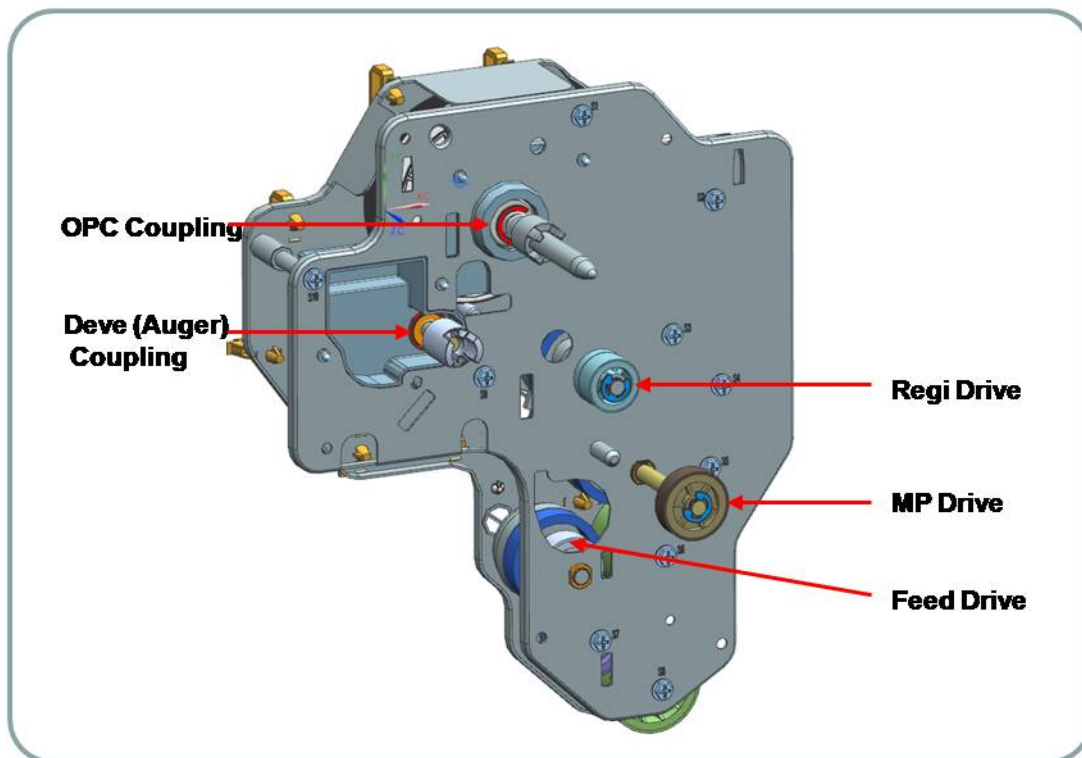
2.7.1. Drive Motors



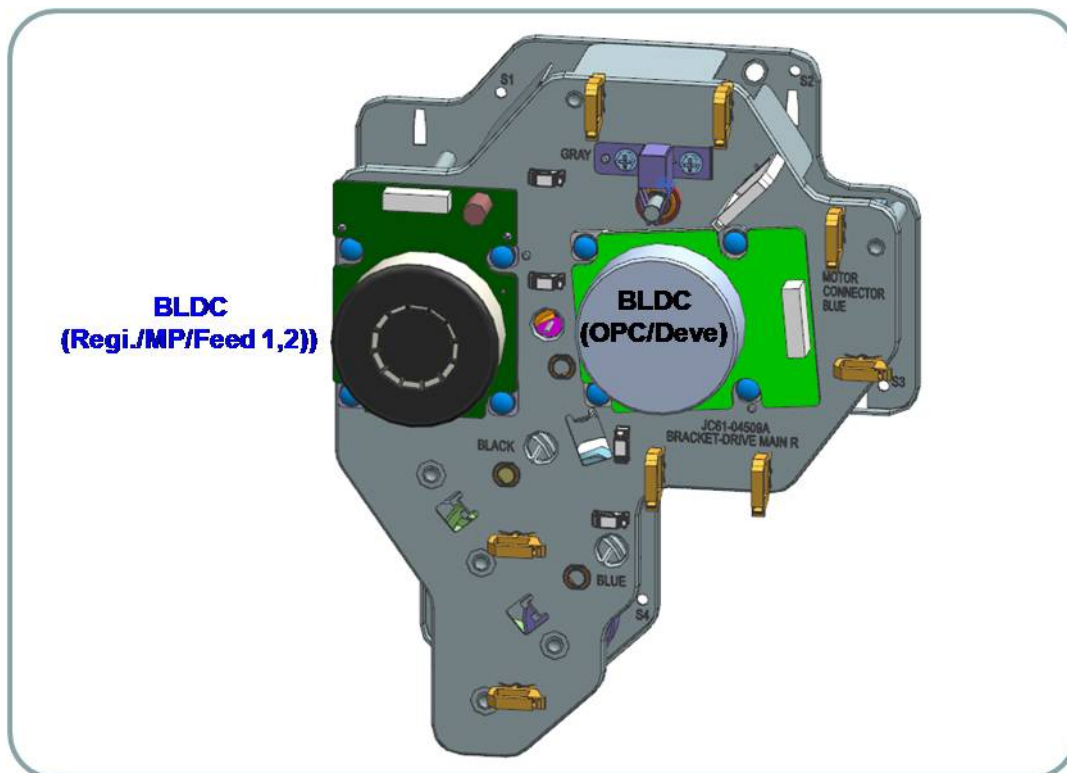
No.	Motor	Motor type	Qty	Function
1	Exit	PM-STEP	1	Exit driving (Reverse driving at Duplex job)
2	Fuser	BLDC	1	Fuser driving/Fuser pressure mode (Reverse driving at pressure mode)
3	OPC / DEVE	BLDC	1	OPC/DEVE driving
4	Regi./ MP Feed 1,2	BLDC	1	Regi / MP/ Feed 1,2 driving
		E-CLT	3	Regi / MP / Feed driving control
5	Pick-Up	PM-STEP	2	Pick-Up Roll / CST Lift driving (Reverse driving at CST Lift driving)
6	Toner Supply	DC	1	Toner cartridge driving
7	Toner Duct	PM-STEP	1	Toner transfer in toner cartridge driving Duct

2.7.2. Main Drive Unit (OPC_DEVE_Regi_MP_Feed)

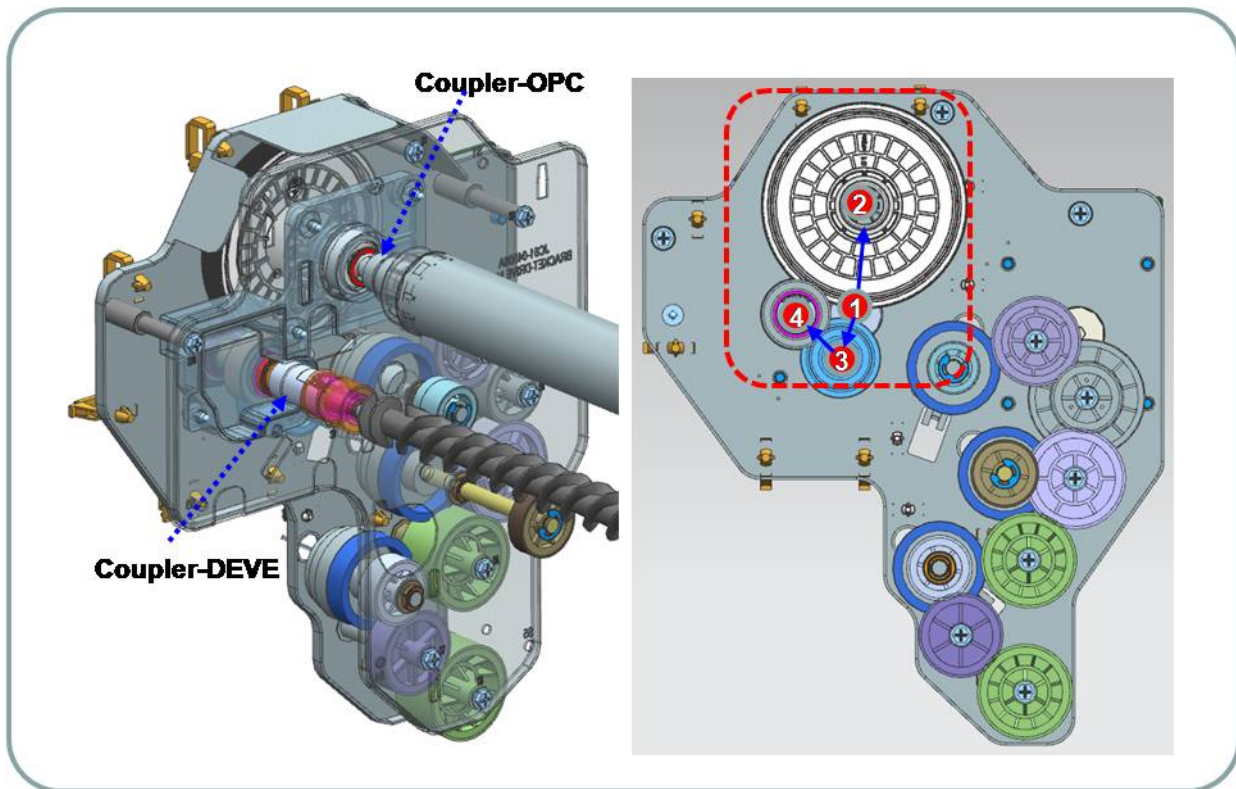
1) Front View



2) Rear View

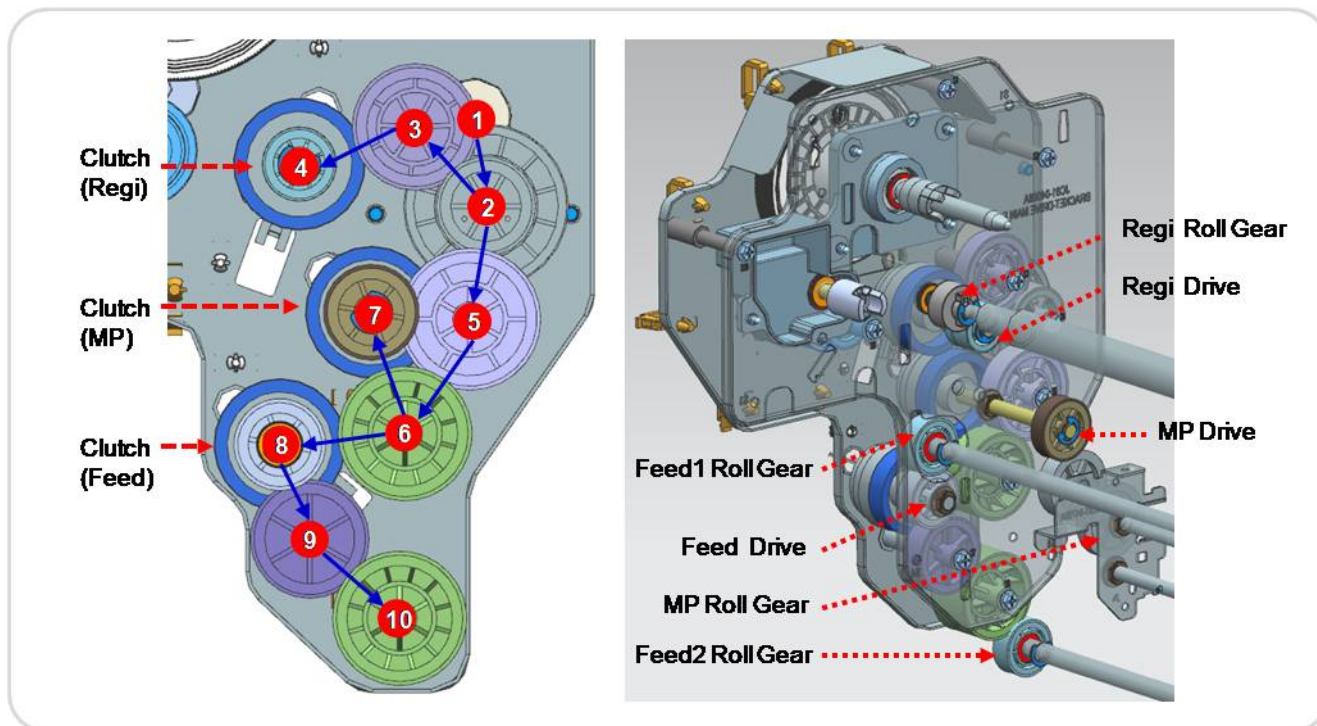


3) Main drive (OPC/ Deve)



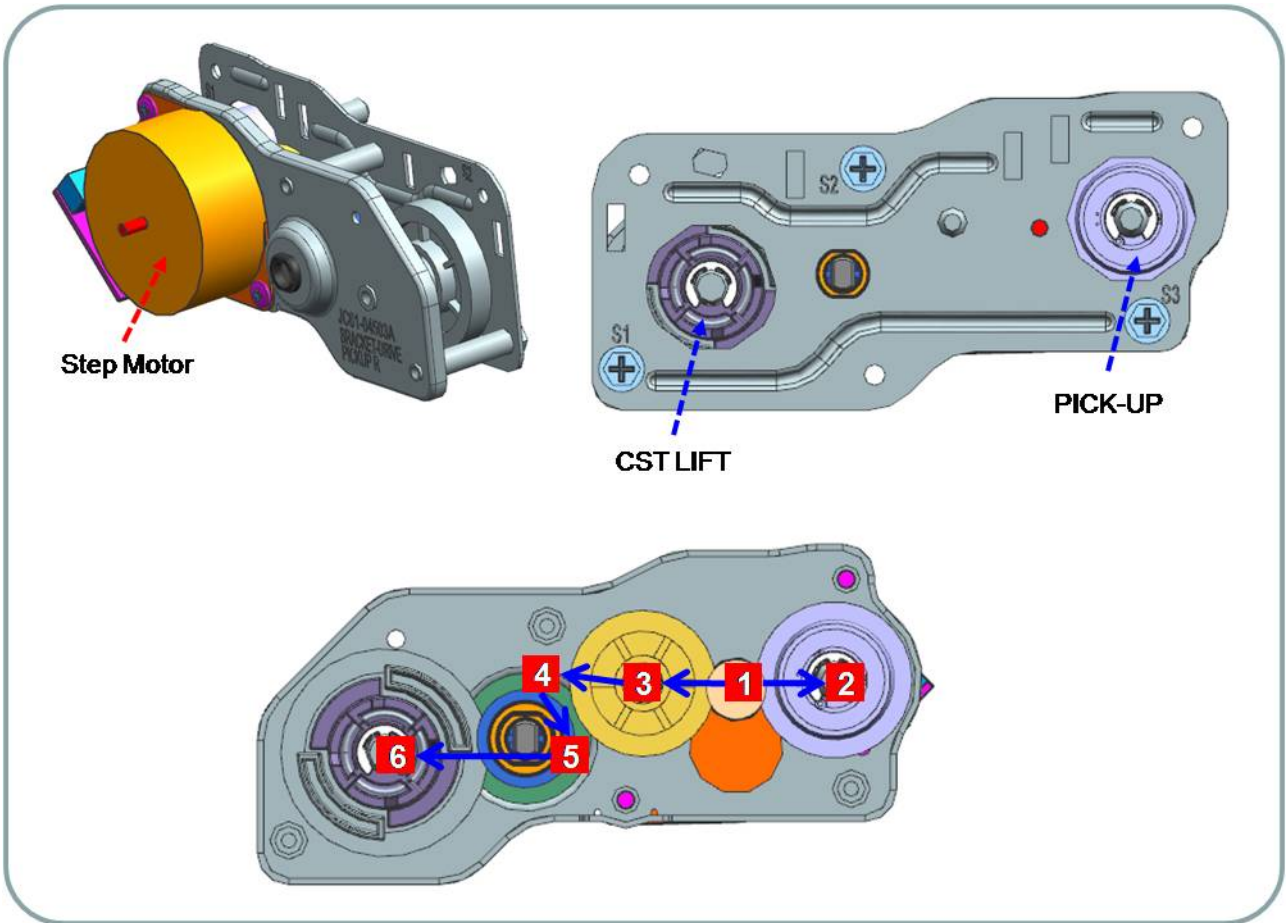
Power Train	OPC / DEVE : BLDC driving
<ul style="list-style-type: none">• 1 → 2 (OPC driving)• 1 → 3 → 4 (Mag. roller driving)	

4) Main drive (Regi./ MP/ Feed 1,2)



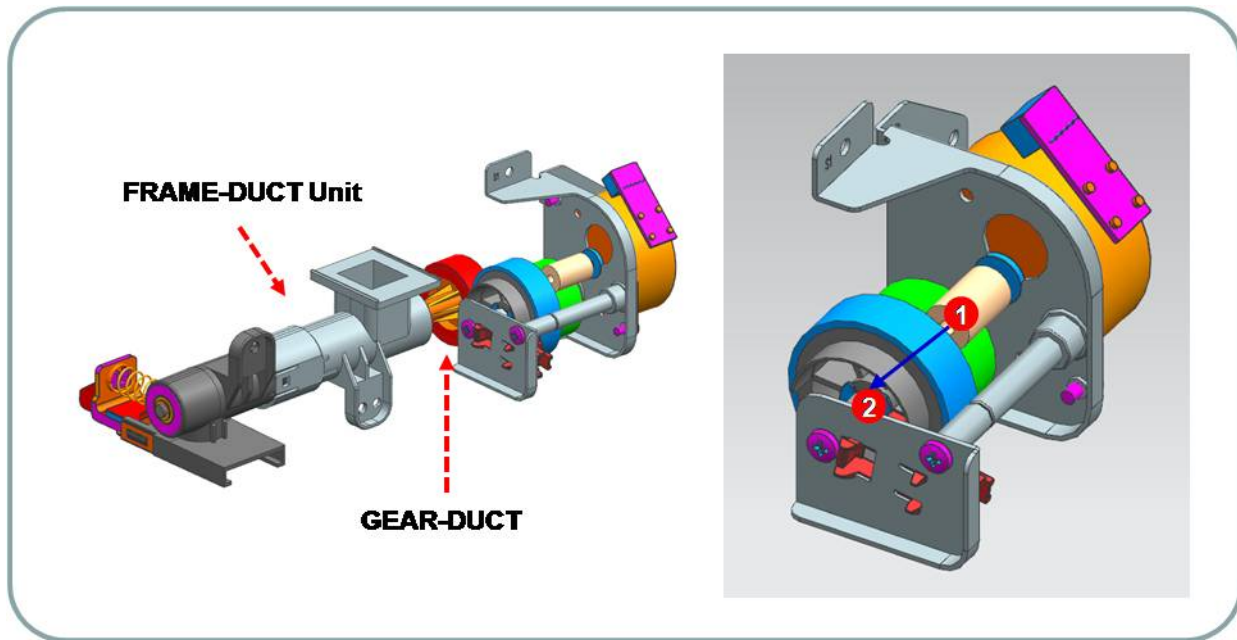
Power Train	Regi / MP / Feed 1,2 : BLDC driving, Clutch driving control
<ul style="list-style-type: none"> • 1 → 2 → 3 → 4 Clutch/Gear (Regi Input) • 1 → 2 → 5 → 6 → 7 Clutch/ Gear (MP Input) • 1 → 2 → 5 → 6 → 8 Clutch/ Gear (Feed1 Input) → 9 → 10 (Feed2 Input) 	

2.7.3. Pick Up Drive



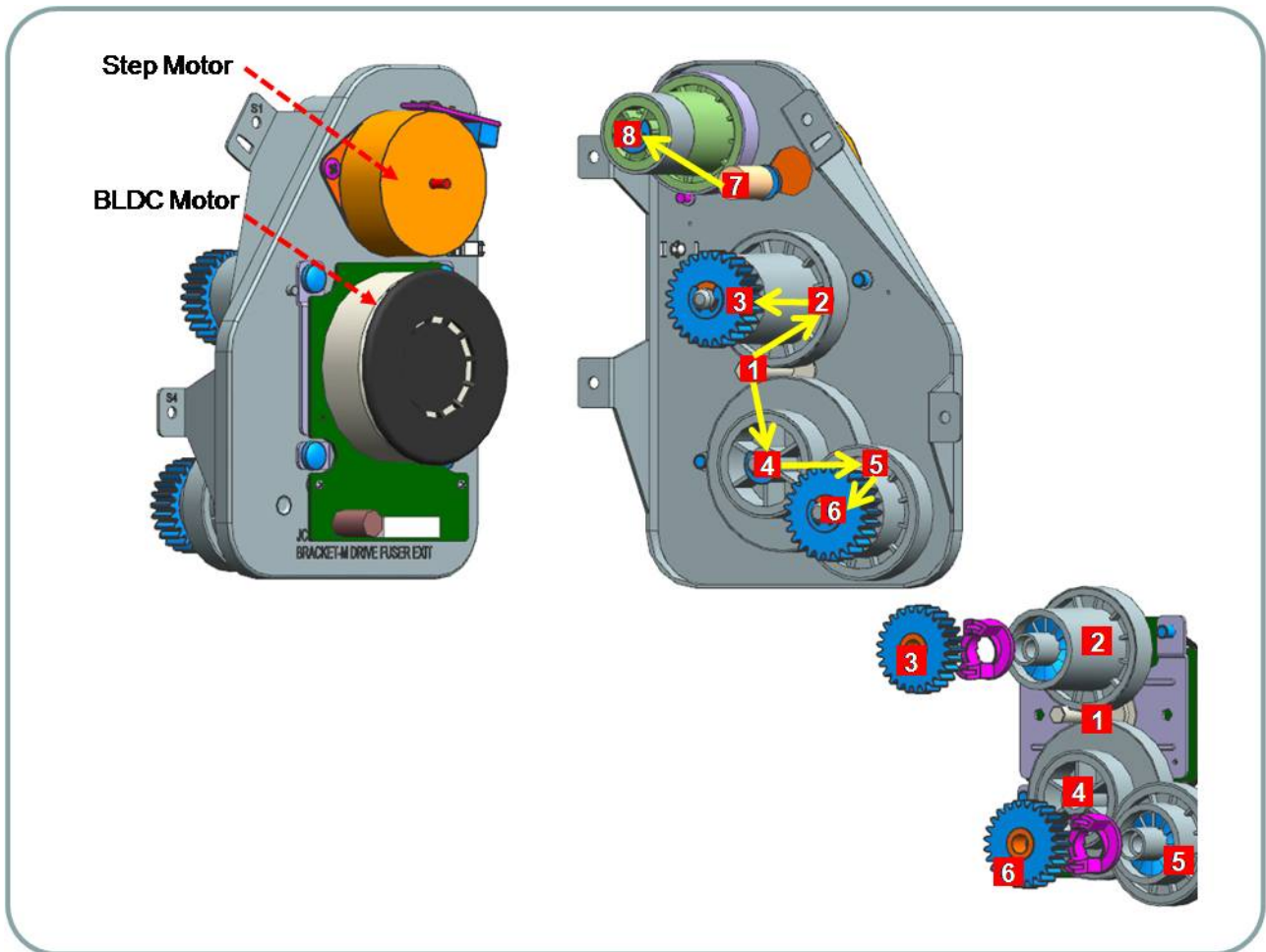
Power Train	Pick-Up : rotating (Pick-up input) / counter rotating (Cst Lift input)
<ul style="list-style-type: none"> • Step → → Gear 1 → Gear 2 (Pick-up) 	
<ul style="list-style-type: none"> • Step → → Gear 1 → Gear 3 → Gear 4 → Gear 5 → Gear 6 (CST Lift) 	

2.7.4. Duct Drive



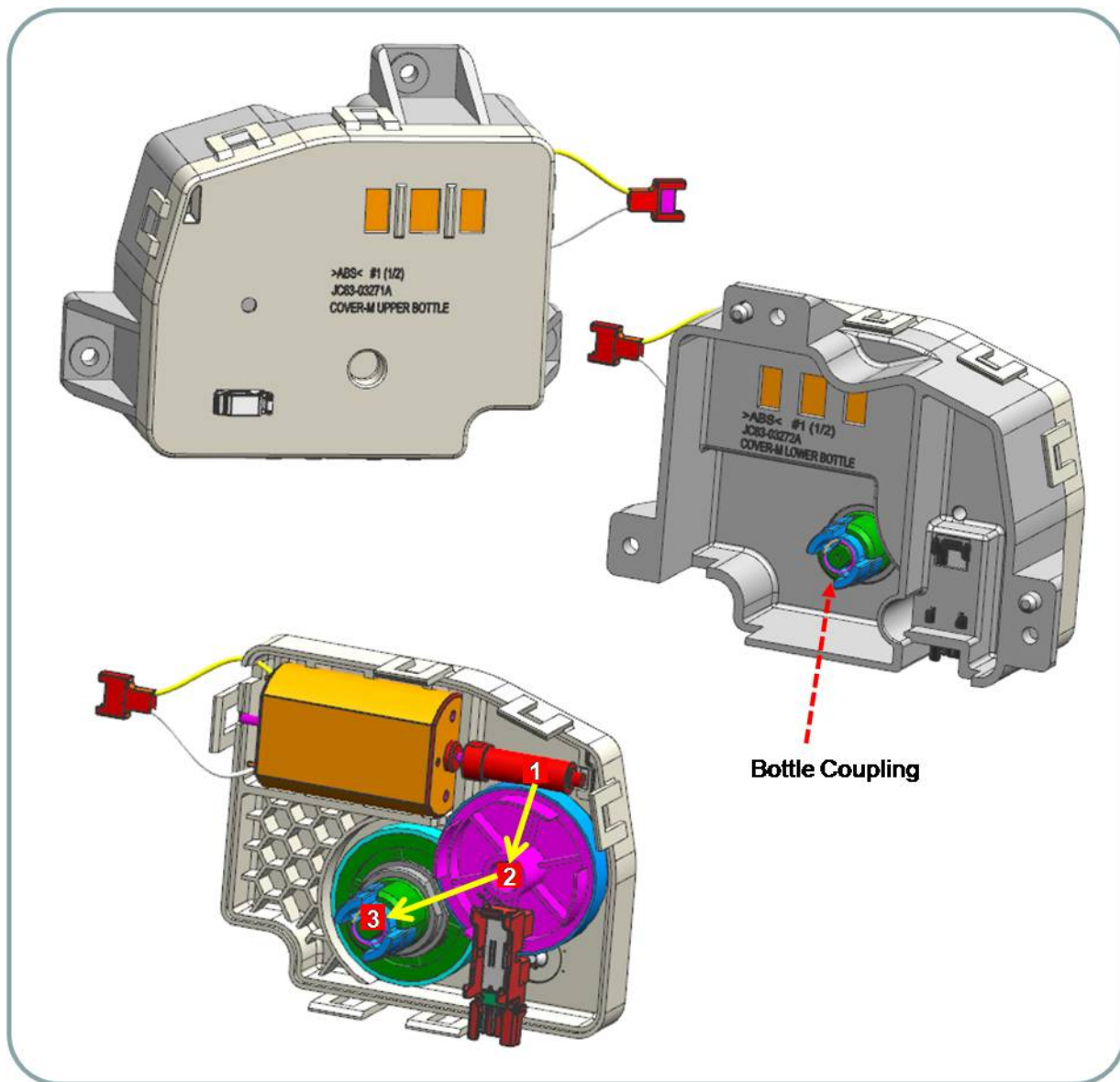
Power Train	Duct : PM-STEP driving
• 1 PM-Step → 2 Gear → Gear Duct driving	

2.7.5. Fuser/ Exit Drive



Power Train	<ul style="list-style-type: none"> • Fuser : BLDC Motor driving • Exit : Step Motor driving • Fuser and Fuser release One way gear are used.
<ul style="list-style-type: none"> • 1 BLDC Motor → counterclockwise rotation(ccw) → 2(cw) → 3(cw) (Fuser driving) • 1 BLDC Motor → clockwise rotation(cw) → 4(ccw) → 5(cw) → 6(cw) (Fuser Release driving) • 7 Step Motor → 8 RDCN Exit (Exit driving) 	

2.7.6. Toner Supply Drive



Power Train	Toner Cartridge driving
<ul style="list-style-type: none"> 1 DC Motor → 2 Gear-M RDCN SUPPLY → 3 Gear-M SUPPLY (Toner Cartridge driving) 	

2.8. Scanner System

This section describes the printer scanner system parts and functions.

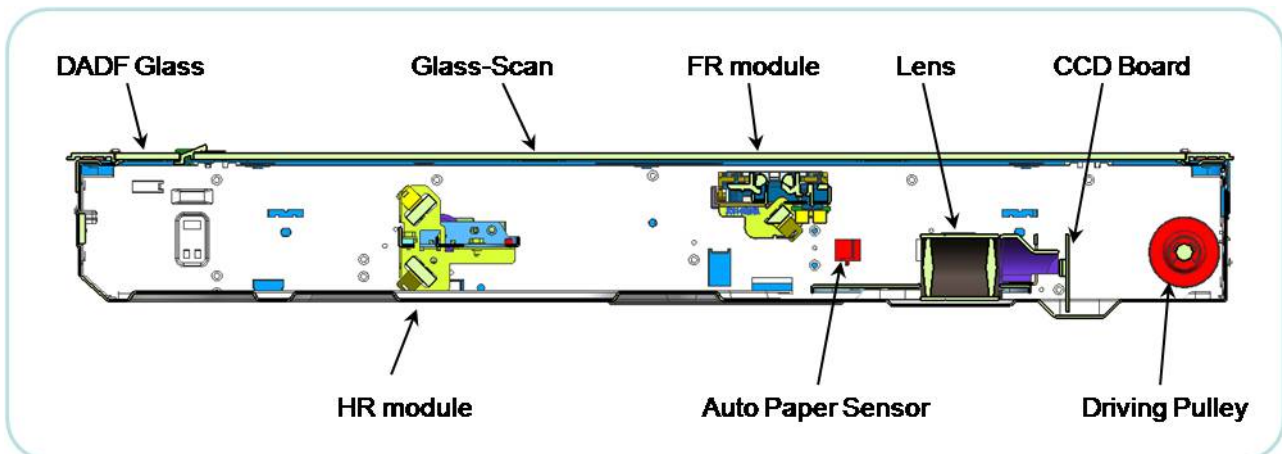
2.8.1. Scanner System Overview

During the scanning process, the surface of a document is exposed to FR module light.

The light reflected from the paper is led through mirrors, a lens, and a slit to a CCD where optical-to-electrical conversion is performed, converting the optical image data into an electrical (analog) signal.

This analog signal is changed to a digital signal, which then undergoes various corrective processes necessary for image formation. After that, arithmetic operations are performed on the digital signal, which is then transmitted to the data writing processor.

In this machine, a reduction-type CCD for color processing is used. CCD is arranged in 3 lines and covered with color filters (Red, Green, and Blue).



2.8.2. Scanning System Components

The following shows the construction and purpose of the scanning system :

1) DADF glass

The DADF glass is used when a document is read by the Automatic Document Feeder. The light from the WLED is illuminated on the Document through this glass.

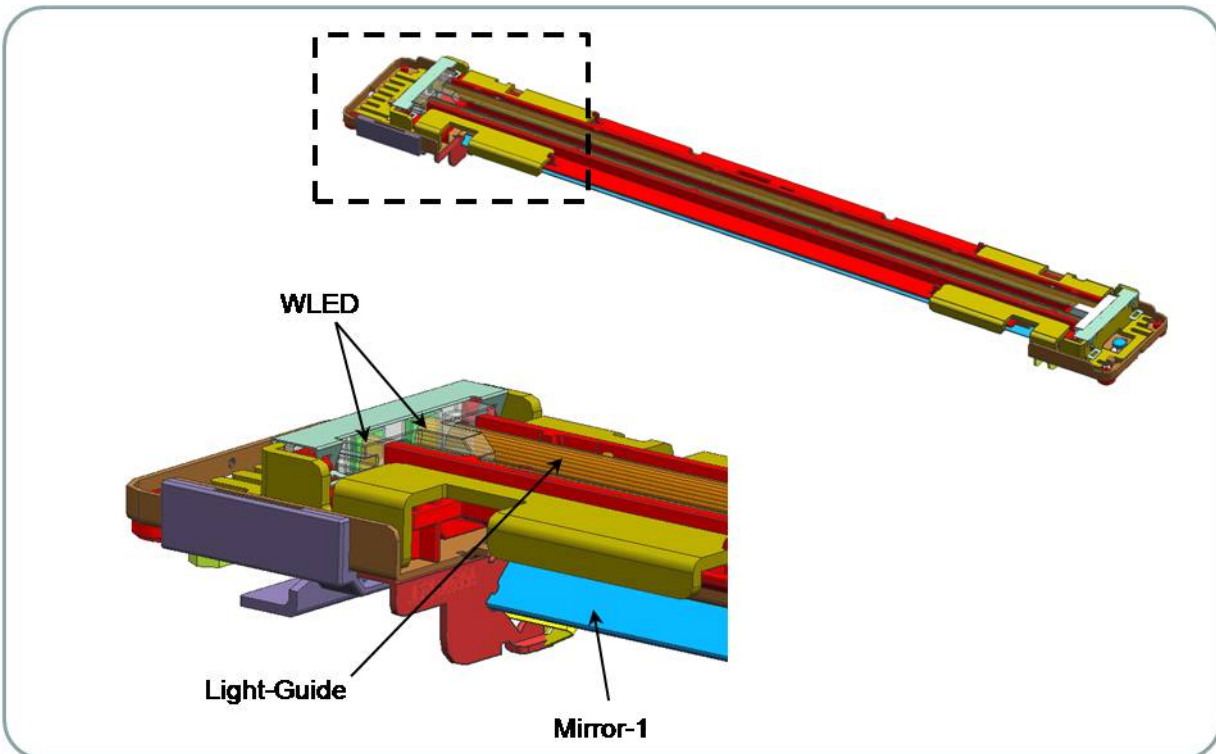
The document is transported on the DADF glass by the DADF operation.

Do not use such solvents, as alcohol when cleaning the surface of the DADF glass, as it is coated so as not to be scratched by Document.

2) **FR(Full Rate)-Module**

FR-Module is consists of the White-LED , Light-Guide, mirror-1 etc.

It is driven by the scan motor (HB Step Motor) and moves across the document on the glass



- **White-LED**

This is a light source for scanning the document on the glass. (There are 4 White-LEDs. (Front 2 EA, Rear 2 EA)

- **Light-Guide**

This is to efficiently transfer the light creating White-LED to the surface of the document . made of the transparent Plastic Regin.

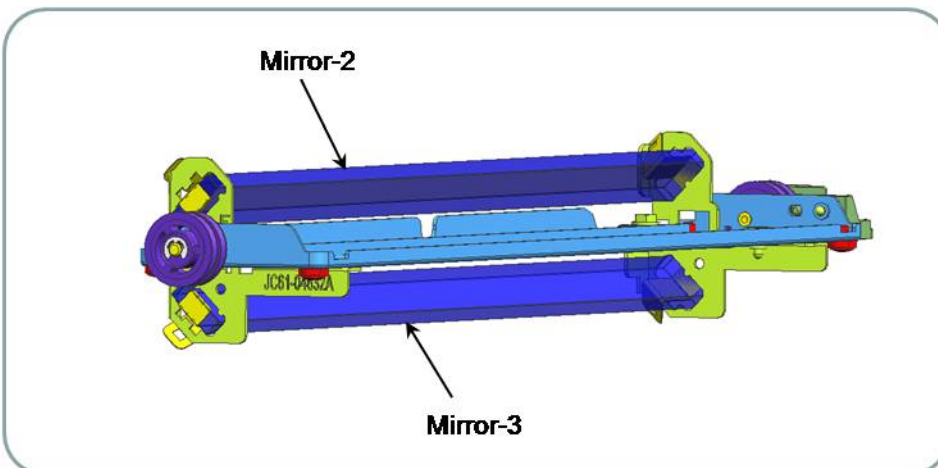
- **Mirror-1**

This mirror directs the light reflected from the Document to the mirror-2

3) **HR(Half Rate)-Module**

HR-Module mainly consists of the mirror-2, mirror-3, etc. The reflected light on document is passed from the mirror-1 through the mirrors-2 and -3 to the lens. HR module is driven by the same scan motor as that of the FR module.

The speed and distance are half that of the FR module.



4) **Lens**

The light reflected from the mirror-3 is focused to the CCD.

5) **CCD board**

Processes such as signal amplification, signal integration, and A/D conversion are applied on the electrical signal which was converted by the CCD.

6) **Auto Paper Sensor**

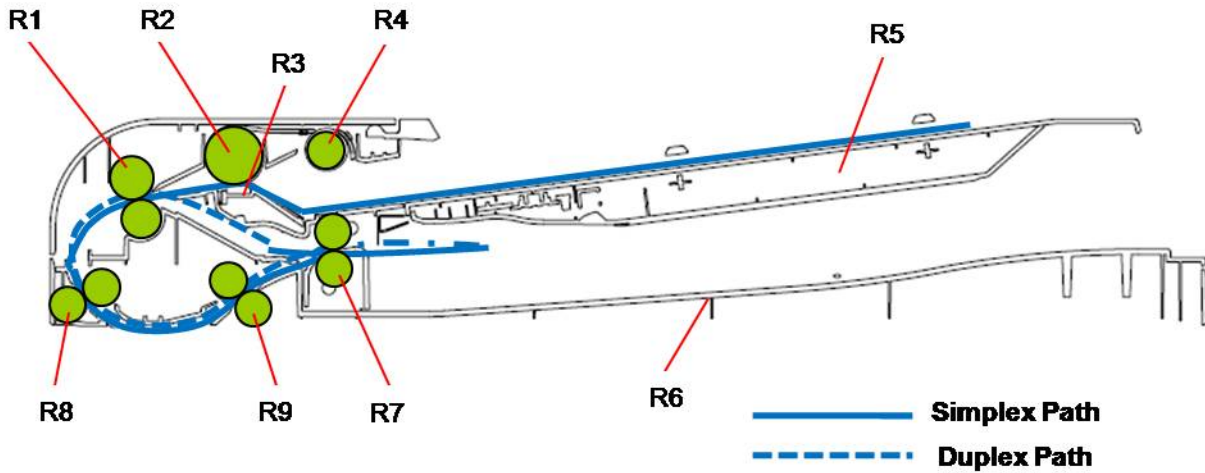
The size of an original placed on the glass is instantly detected using the Auto Paper Sensor fixed on the Align-frame.

7) **Pulley-Driving**

The Steel Wire is coiled to this part and rotated by the scan motor. This also transfers the power to move the FR/HR module.

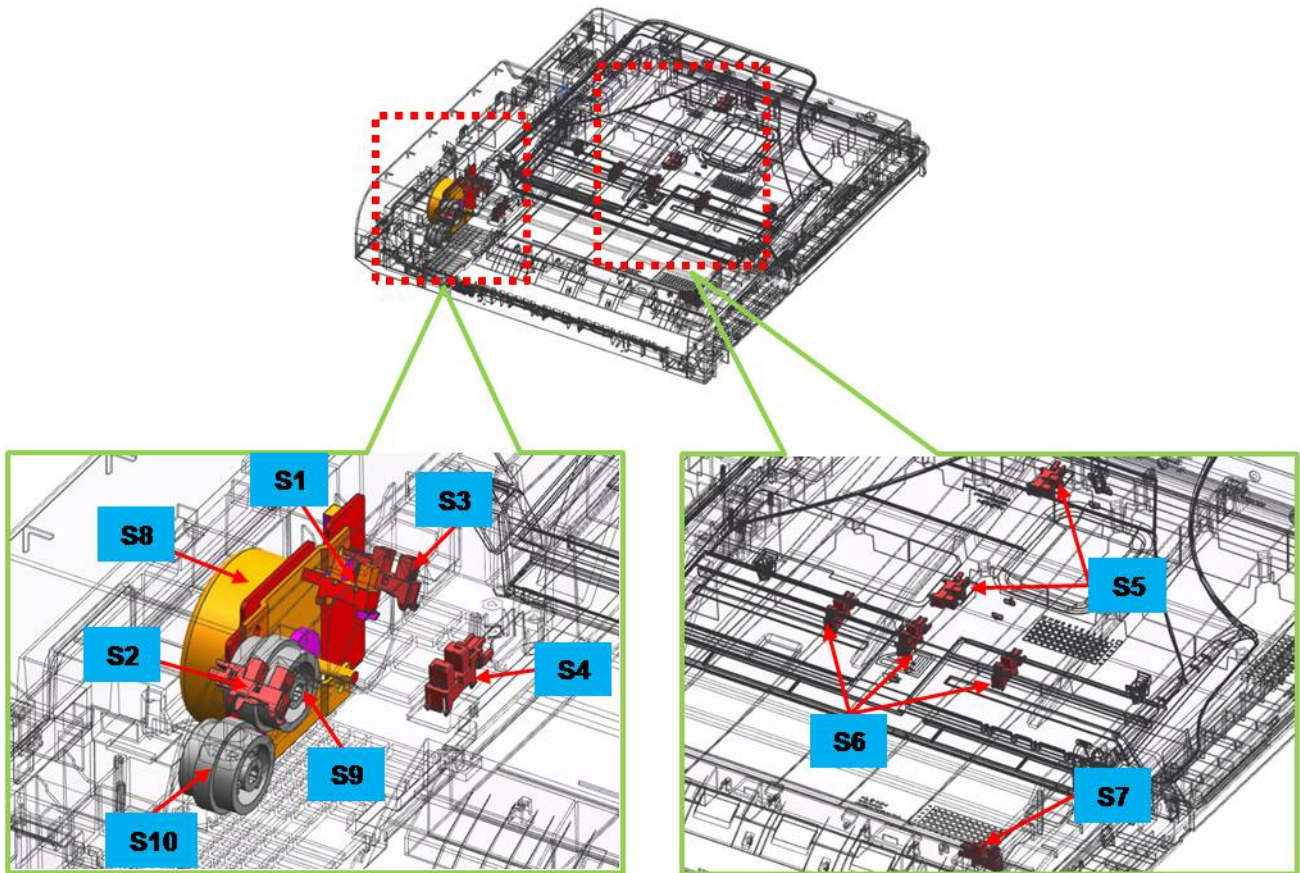
2.9. Duplex Automatic Document Feeder(DADF)

2.9.1. DADF overview



Symbol	Part	Function
R1	Simplex and Duplex Regi. roller	Aligns the leading edge of the paper for registration.
R2	DADF forward roller	Separates an original from the tray and transfers it to the paper path.
R3	DADF friction pad	Prevent the multi-feeding.
R4	DADF pick up roller	Picks up an original from the tray.
R5	Original document tray	Paper input tray
R6	Exit tray	Paper output tray
R7	Exit roller	Sends an original to the exit tray and forms the duplex reverse path.
R8	Feed in roller	Feeds an original before scanning.
R9	Feed out roller	Transfers a scanned original to the exit roller.

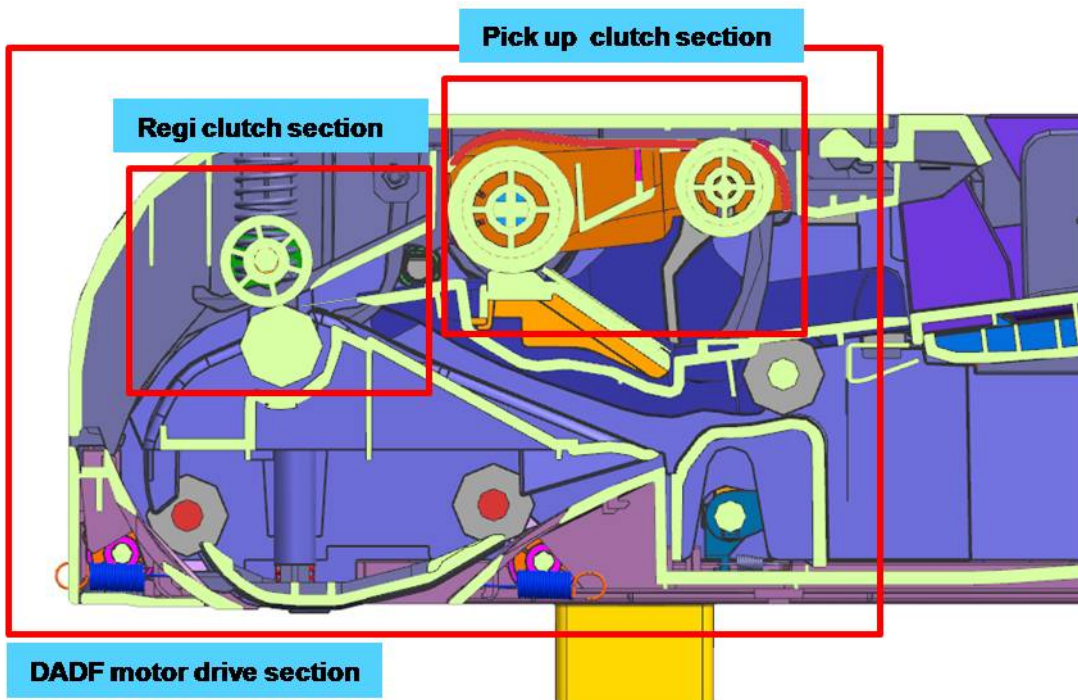
2.9.2. Electrical parts location



Symbol	Description	Part Code	Controller board
S1	PHOTO-INTERRUPTER (Cover)	0604-001415	PBA-ADF
S2	PHOTO-INTERRUPTER (Regi)	0604-001393	PBA-ADF
S3	PHOTO-INTERRUPTER (Detect)	0604-001393	PBA-ADF
S4	PHOTO-INTERRUPTER (Exit Idle)	0604-001393	PBA-ADF
S5	PHOTO-INTERRUPTER (Paper Length)	0604-001393	PBA-ADF
S6	PHOTO-INTERRUPTER (Paper Width)	0604-001393	PBA-ADF
S7	PHOTO-INTERRUPTER (Exit)	0604-001393	PBA-ADF
S8	BLCD MOTOR	0604-001393	PBA-ADF
S9	CLUTCH-ELECTRIC (Pick Up)	0604-001393	PBA-ADF
S10	CLUTCH-ELECTRIC (Regi)	0604-001393	PBA-ADF

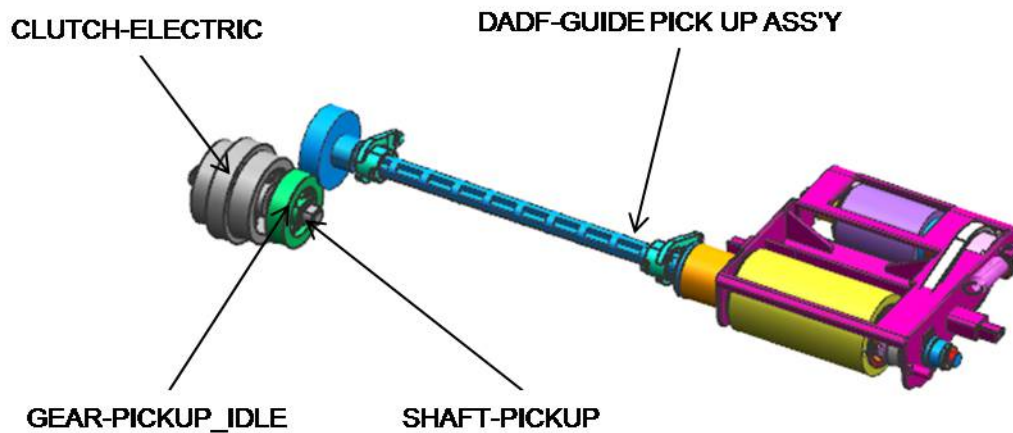
2.9.3. DADF Drive System

DADF consists of one motor and two clutch to transfer the paper.



- A BLDC motor drives the system for simplex and duplex job.
- The Pick up and Regi clutch controls the driving on/off.
- The Cam type gear and solenoid is used for duplex reverse.

2.9.3.1. DADF Original Drive Assembly



After detecting the paper, one motor controls the drive system totally.

The CLUTCH-ELECTRIC provides the power to pick up the paper.

The CLUTCH can't rotate inversely. The Spring that is included in DADF-GUIDE PICK UP ASS'Y is connected to COVER-OPEN. When the CLUTCH does not drive, it makes Stand-by status and fix the stopper operation.

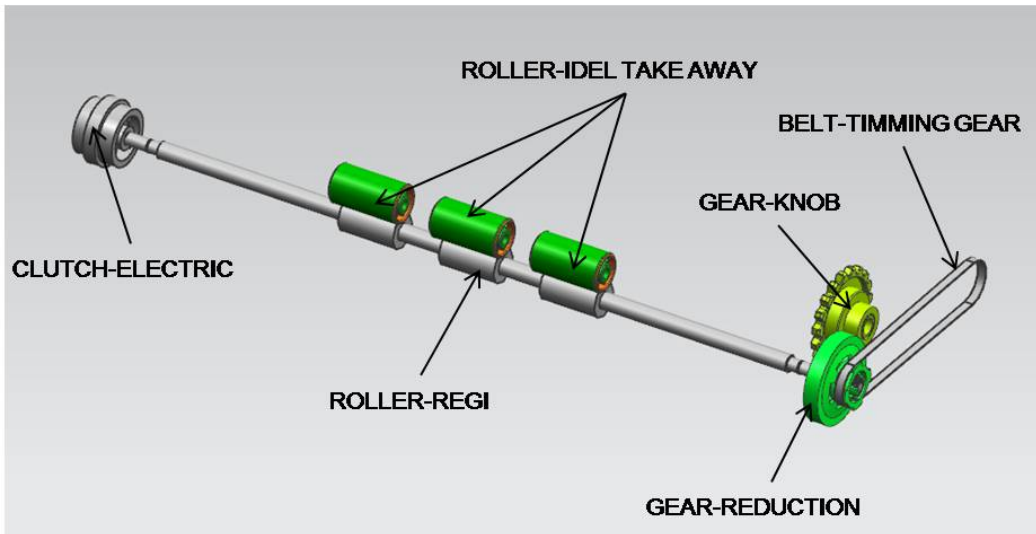
The ADF roller and Pick up Roller is connected by the belt.

The ADF roller is provided with the power while the paper is picked up and transferred to the Registration roller. When the pick up drive is stopped and Registration roller is driven, the ADF roller become idle.

The normal process is :

- When the original is setting up, the detect-sensor is activated, and printing job starts, the motor and pick up clutch work. Then, the pick-up roller moves down and contacts an original in the tray.
- When the Registration sensor detects the paper, the pick up clutch stops.
- When the Detect-Sensor detects that the tray is empty, the motor stops and the machine enters stand-by status.

2.9.3.2. DADF Original Registration (Regi) Drive Assembly



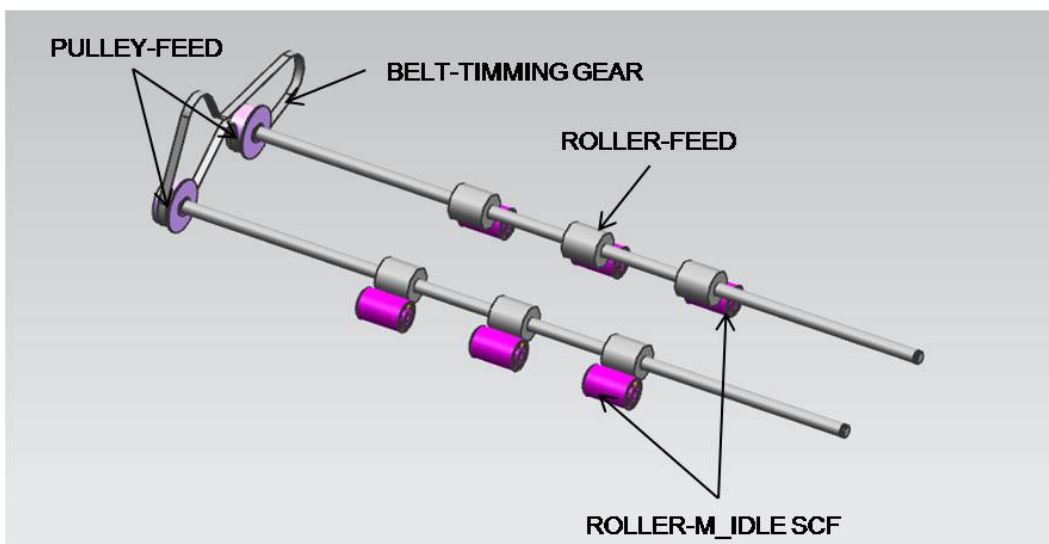
The Regi drive uses the CLUTCH-ELECTRIC to drive the Registration Roller and transfer the paper to ROLLER FEED.

The Registration Roller aligns the leading edge of the original. When original is placed in the Nip, the roller is rotated for alignment.

The CLUTCH-ELECTRIC repeats on/off to align each paper.

The GEAR-KNOB and GEAR-REDUCTION uses the BELT to provide the PULLEY connecting ROLLER-EXIT with the power. This structure makes the user remove the jammed paper easily.

2.9.3.3. DADF Feed Drive Assembly

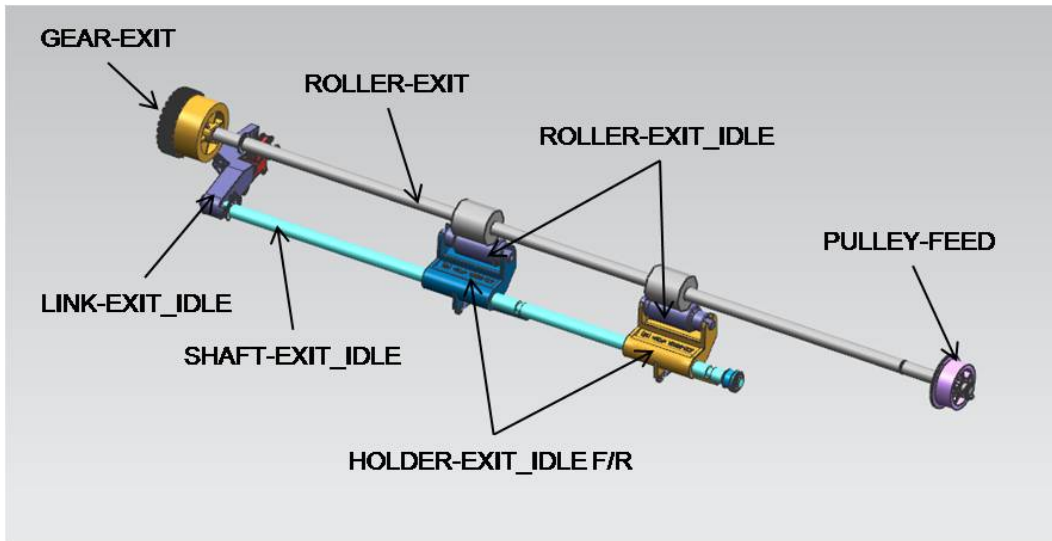


The ROLLER FEED is driven by the BELT-TIMMING that is connected to Motor.

The ROLLER-FEED and ROLLER-M IDLE SCF make the feeding force by using a spring pressure method.

The Motor transfers the paper through interlocking the Roller-Feed in and the Roller-Feed out. At scan, the Motor is driven continually to maintain stable paper transfer.

2.9.3.4. DADF Exit Drive Assembly

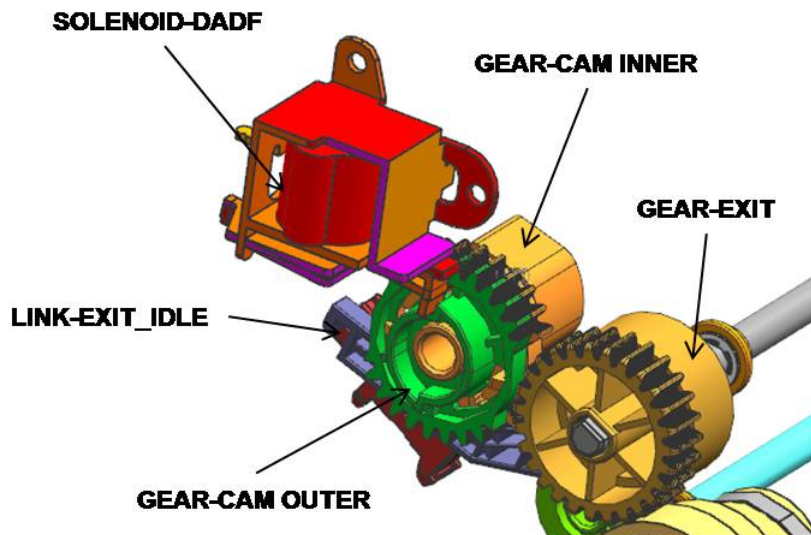


The power from the Motor is transferred to GEAR-EXIT and ROLER-EXIT. The paper is transferred to the exit. At duplex mode, counter rotation occurs.

To keep the pressure of the Exit Roller, the ROLLER-EXIT_IDLE is pressurized by spring. At duplex mode, when it is rotated inversely, it make the space between rollers to protect the jam.

The space between rollers is adjusted by LINK-EXIT_IDLE and SENSOR-EXIT_IDLE.

2.9.3.5. Original Return Drive



The solenoid works at only duplex mode.

At Duplex Mode, when the motor rotates inversely, the solenoid is on and the GEAR-CAM OUTER and GEAR-EXIT are driven.

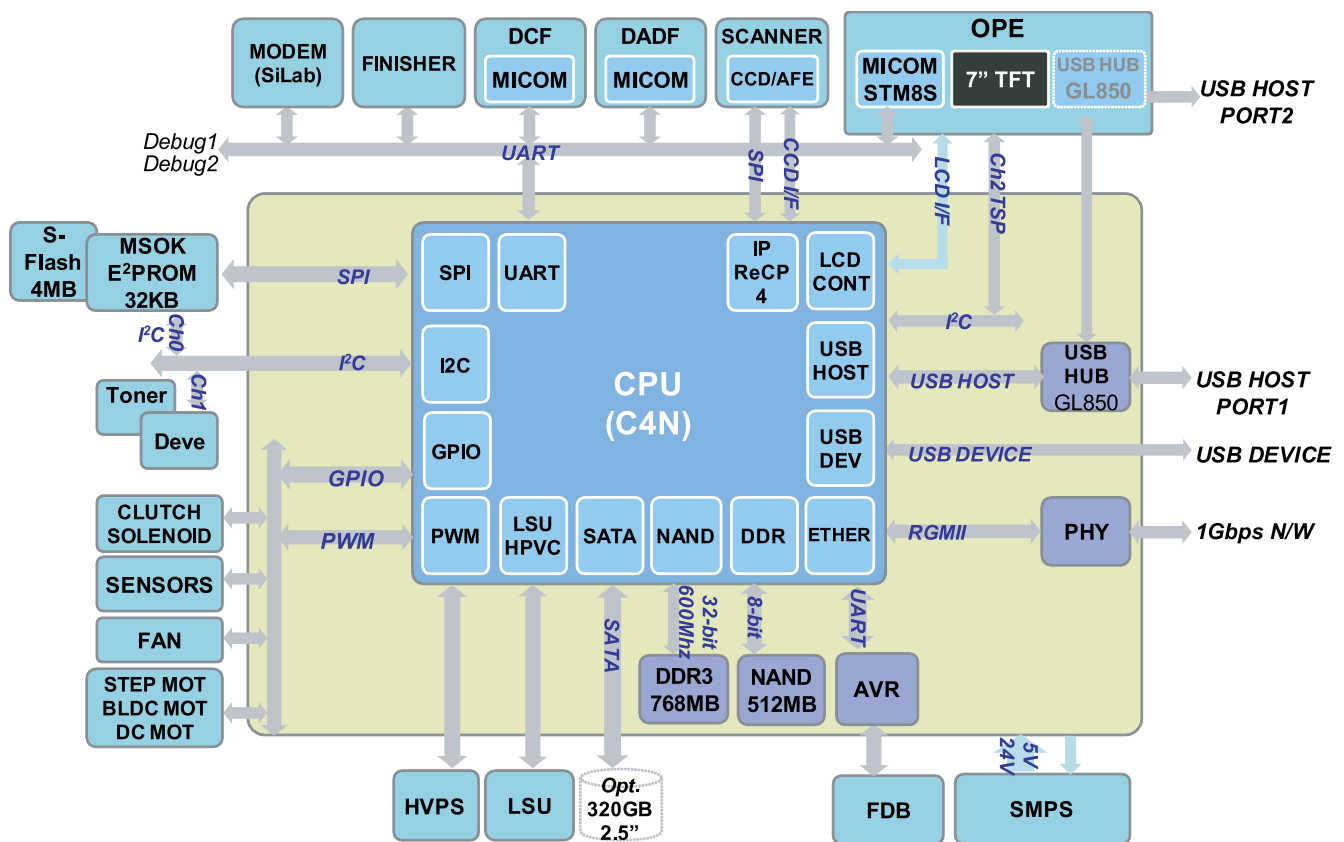
When the GEAR-EXIT rotates, the solenoid drives the GEAR-CAM and it makes the space between the Roller-Exit and Idle Roller.

2.10. Hardware Configuration

The SCX-8123/8128 Electrical Circuit System consists of the following :

- Main Controller (Main board)
- OPE Controller
- DADF Controller
- HVPS board
- SMPS board
- FDB board

Diagram of the SCX-8123/8128 Series Electrical Circuit



The main controller handles the video controller, engine controller and scan controller.

The main controller receives print data from the host through the network or USB port, and it receives copy data from the Scan Controller. It takes this information and generates printable video bitmap data. It controls all modules required to print, that is, LSU, HVPS, FAN, Fuser, etc.

The main controller communicates with the drive system and other devices through UART. It communicates with the toner cartridge and drum/developer unit through I2C to check their life.

The main controller adopted Dure Core CPU 1GHZ, DDR3 768MB memory, Flash NAND 512MB, 320GB SATA HDD(Optional) to control the engine driving, video signal processing, interface, etc. successfully.

A MICOM at the main controller controls the fuser lamp on/off and system power according to an optimized energy-saving algorithm for optimal efficiency.

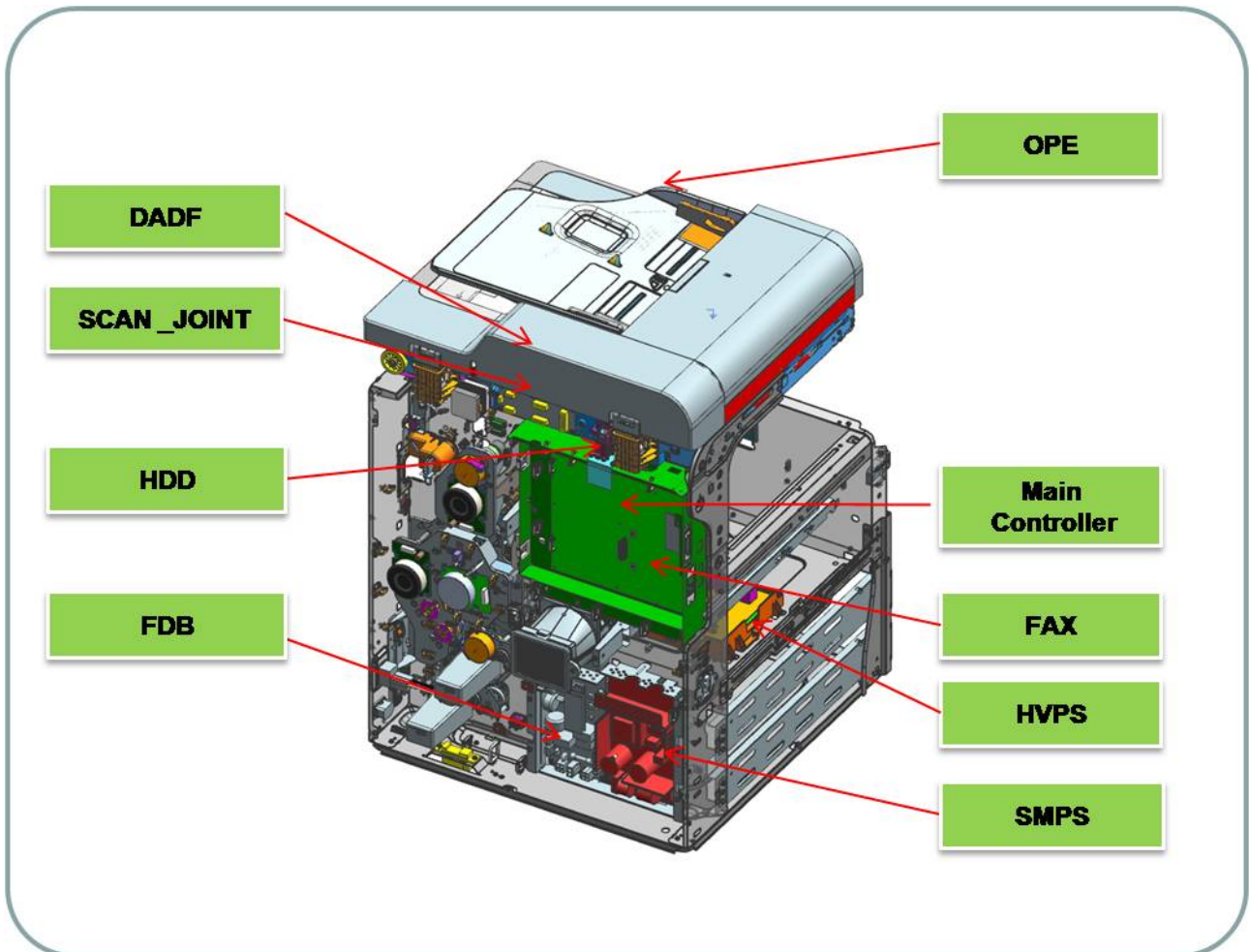
The OPE controller transfers the key value to the main controller through UART and adjusts the TFG 7"LCD brightness. The soft power switch in the KEY SUB BOARD is used to safely shut down the system power.

The DADF Controller controls some mechanisms required to scan by feeder continuously and communicates with the main controller to synchronize the scanning timing.

The HVPS board generates high-voltage channels and controls it. The FDB board controls the fuser lamp On/Off. The SMPS board generates the 5V, 24V for system power.

Circuit Board Locations

The following diagrams show the locations of the printer circuit boards:

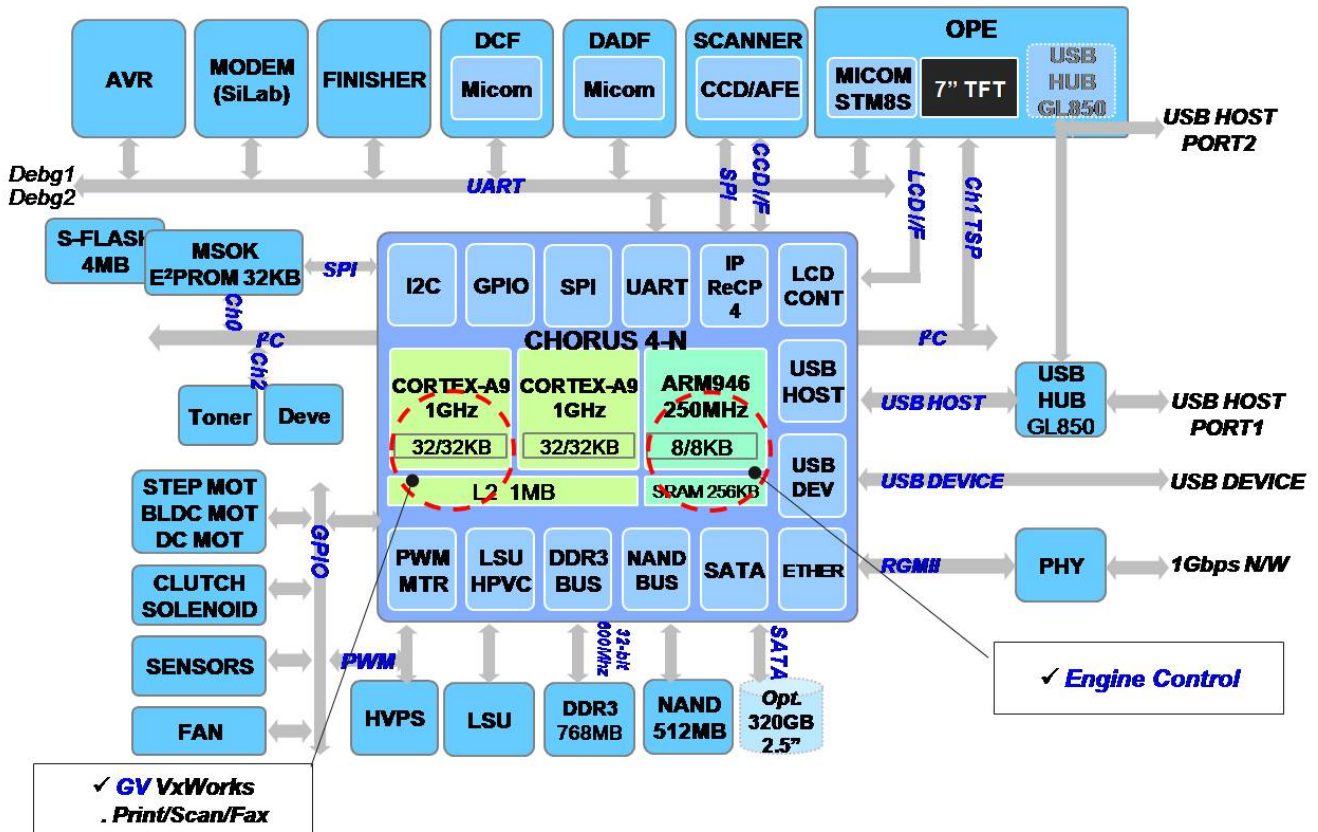


2.10.1. Main Controller

The main controller consists of the main processor(Chorus4N), memory(DDR3 768MB), flash(512MB), 1G Ethernet PHY, USB2.0 HUB, Micom(Power/Fuser control), Scan/Video/UI/FAX signal interface connection, motor driving IC, Engine signal interface connection, power interface.

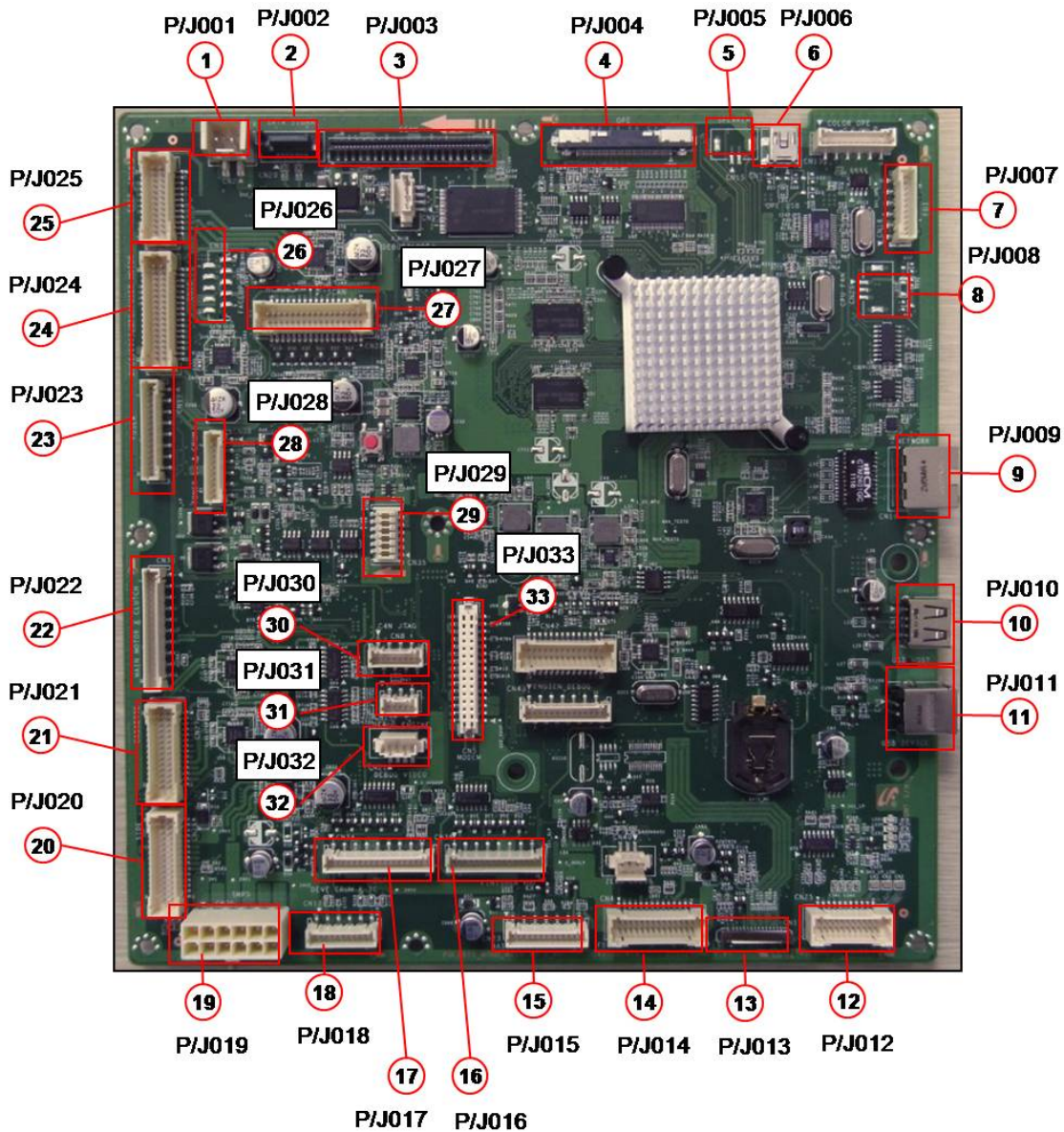
The main processor (Dual Core 1GHz CPU) controls video, engine, UI display and communicates the various devices. The HDD is connected to the main controller by SATA cable and to the other device (DADF, DCF, Finisher, Modem) by UART.

1) Main Controller Diagram



[Main Controller diagram]

2) Main Controller Connection Information



• Connection

1	SATA POWER
2	SATA SIGNAL
3	CCD
4	OPE INTERFACE
6	USB HOST (OPE)
7	FDI
8	CPU FAN
9	Giga RJ45
10	USB HOST JACK
11	USB DEVICE JACK
12	HVPS
13	LSU

14	FDB
15	WASTE
16	FINISHER
17	DCF
18	DEVE
19	SMPS
20	SIDE
21	CASSETTE
22	FUSER
23	MAIN MOTOR / CLUTCH

24	DUCT/OPC/FUSER MOTOR
25	EXIT
27	SCAN
28	TONER
29	MSOK
30	JTAG
31	ENGINE DEBUG
32	VIDEO DEBUG
33	FAX JOINT

• **Information**

- Part Code : JC92-02452A
- Part Name : PBA-MAIN

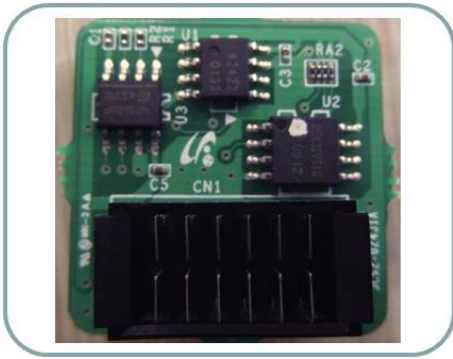
3) MSOK

MSOK PBA is used to store all system information and consists of serial flash memory, a EEPROM and a X-CRUM. The flash memory(4MByte), EEPROM(256Kbit) and X-CRUM are used for all system operation(system parameter, device status, tech information, and service information).



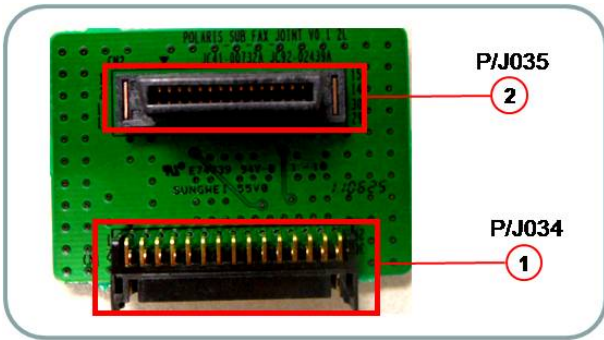
NOTE

When a main board needs to be exchanged, the MSOK PBA should be re-installed to the new main board to retain the system information.



4) FAX JOINT PBA

The FAX JOINT PBA is used for interfacing between the main board and modem PBA. It uses UART for interface.



• **Information**

- Part Code : JC92-02439A
- Part Name : PBA-FAX JOINT

• **Connection**

1	Main PBA I/F connector
2	Modem Card I/F connector

5) Modem Card (Optional)

The modem card is used to transfer and receive the fax data through a telephone line. This PBA is controlled by the main board and has two connectors, connectors, one for the telephone line connection and the other for an external phone connection.



• **Information**

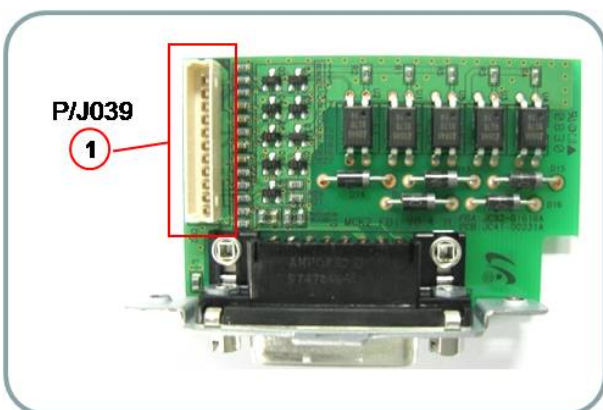
- Fax Kit model name : : CLX-FAX160
- Part Code : JC92-02558A
- PBA Name : PBA-FAX JOINT

• **Connection**

1	Fax JOINT I/F connector
2	TEL Line I/F connector
3	External Phone I/F connector

6) FDI (Optional)

The FDI Module as a option is used to track machine usage such as the number of print or copy pages for some special users. This module interfaces to the main board.



• **Information**

- Part Code : JC92-01616A
- PBA Name : PBA-SUB FDI

• **Connection**

1	Connector to Main controller
---	------------------------------

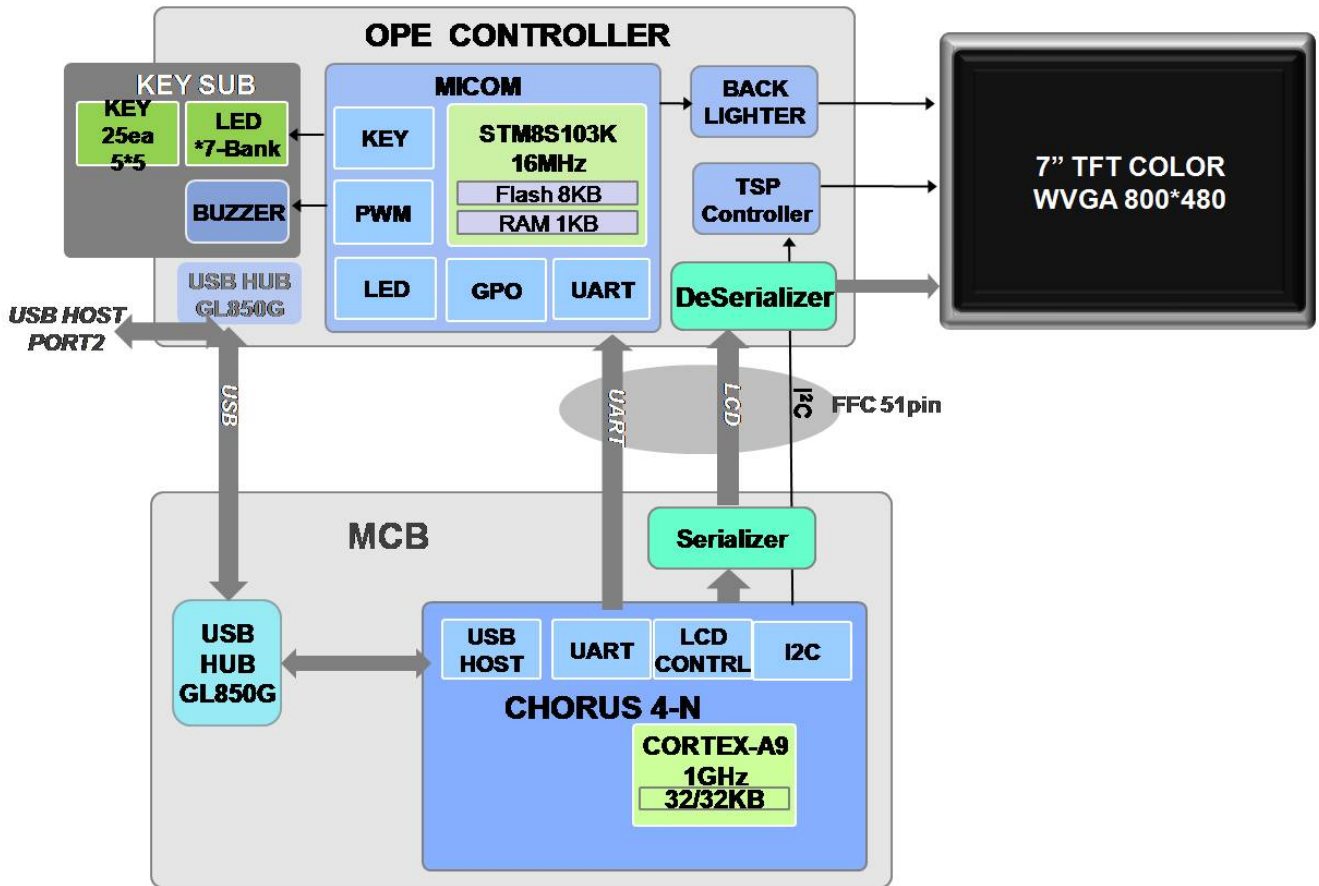
2.10.2. OPE controller

The MICOM (ST STM8) on OPE board controls the LED, Key, LCD back light. The LCD data and touch screen is controlled by the C4N SOC on main board.

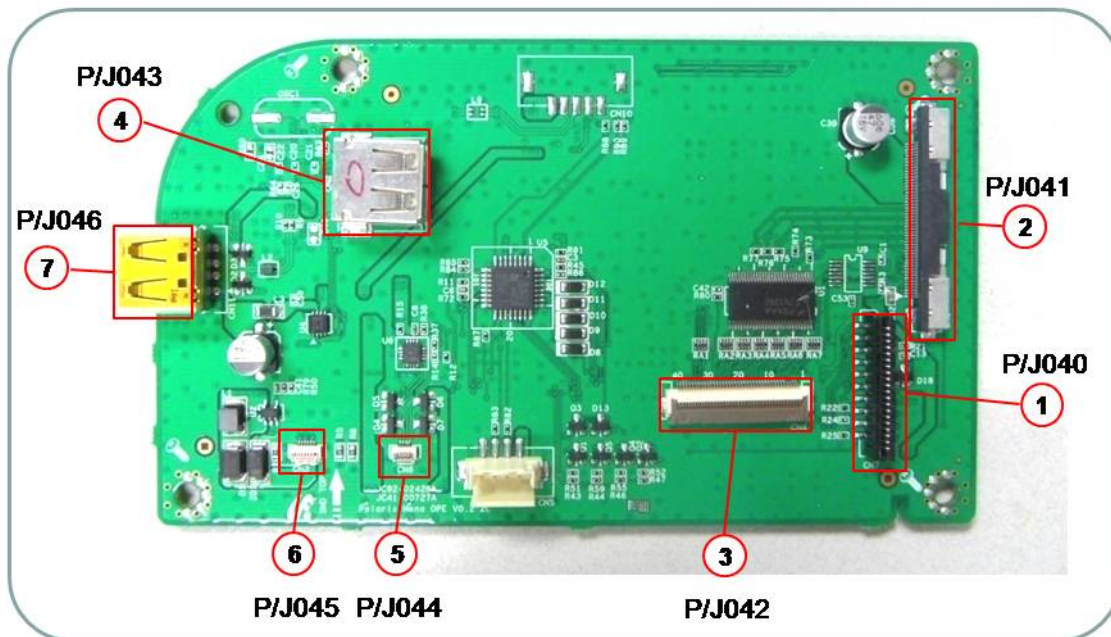
The MICOM and Main Controller use the UART for communication. The USB HOST PORT2 for USB HUB is on OPE board.

The LCD DATA R/G/B 28bit and Control signal is transferred by Serializer/Deserializer.

1) OPE controller diagram



2) OPE MAIN PBA



- **Information**

- Part Code : JC92-02428A
- Part Name : OPE MAIN

- **Connection**

1	KEY PBA Interface connector
2	MAIN PBA POWER Interface connector
3	LCD DATA Interface connector
4	USB Host Interface connector
5	LCD TSP Interface
6	LCD BACK LIGHT Interface
7	USB Host Port for Memory Stick

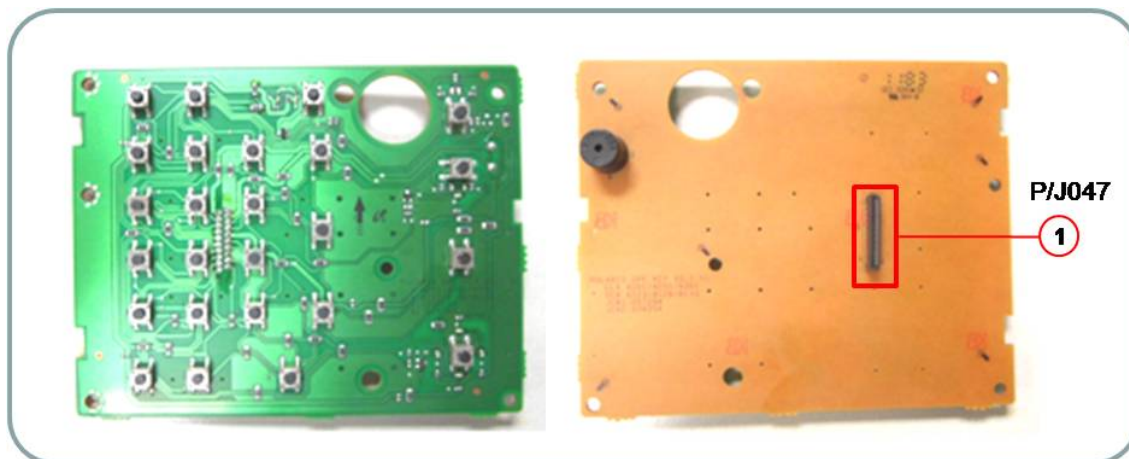
3) 7" TFT LCD, TOUCH SCREEN



Information

- Part Code : JC07-00021A
- Part Name : LCD/TSP

4) OPE KEY PBA



Information

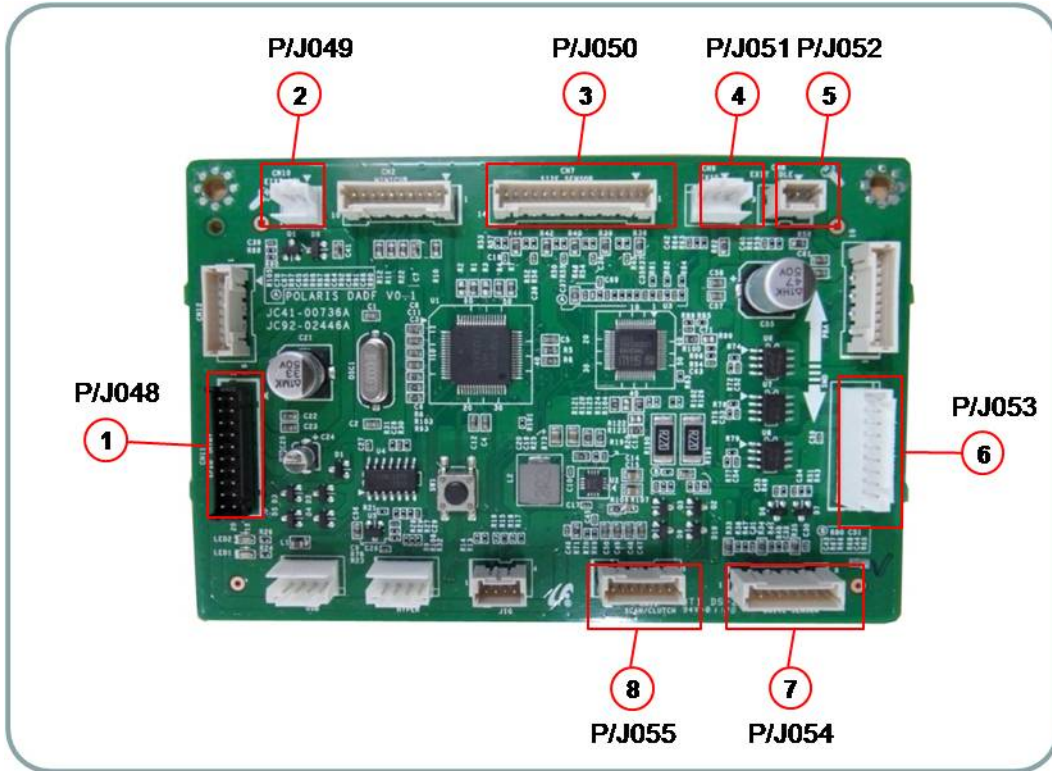
- Part Code : JC92-02435A
- Part Name : OPE KEY

Connection

1	Interface Connector to OPE Main
---	---------------------------------

2.10.3. ADF PBA

ADF PBA controls the DADF driving. It uses RENESAS's uPD70F3824(48MHz Main Clock, 256KB Flash memory, 24KB RAM) and interfaces with MAIN PBA through UART communication. It has one Motor Driver IC for motor driving and controls one BLDC motor, one solenoid, two clutch, ten sensors.



- Information**

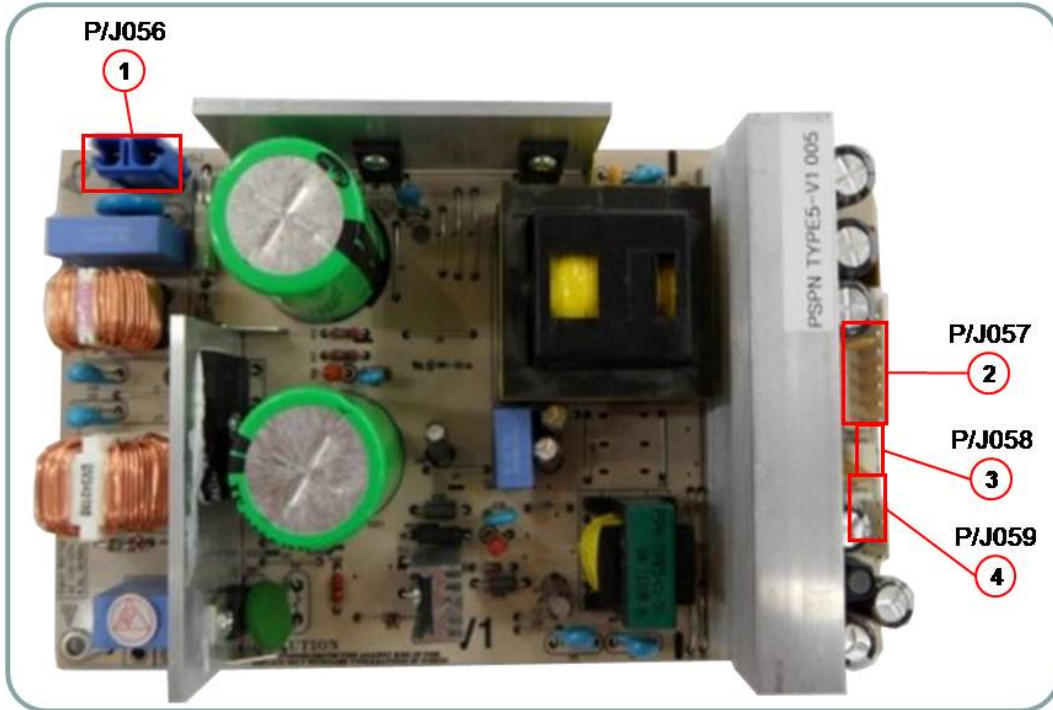
- SEC-CODE : JC92-02446A
- PBA Name : PBA-ADF

- Connection**

1	Scan Joint PBA
2	Exit Solenoid
3	Length Sensor 1,2,3 / Width Sensor 1,2
4	Exit Sensor
5	Exit Idle Sensor
6	BLDC Motor
7	Cover Open Sensor / Regi. Sensor / Detect Sensor
8	Pick up Clutch / Regi. Clutch / Scan Read Sensor

2.10.4. SMPS board

SMPS (Switching Mode Power Supply) board supplies electric power to the Main Board and other boards. The voltage provided includes +5V, and +24V from a 110V/220V power input. It has safety protection modes for over current and overload.



- Specification**

General Input/ Output Voltage

- 1) AC 110V (90V ~ 135V)
- 2) AC 220V (180V ~ 270V)
- 3) Input Current: 13.7A (110V) / 6.8A (220V)
- 4) Output Power: 1500W
 - DC 5V : 55W / DC 5VS : 30W / DC 24V : 432W

- Information**

	110V	220V
Part Code	JC44-00093A	JC44-00100C
Part Name	SMPS Type 5 V1	SMPS Type 5 V2

- Connection**

1	INPUT_AC
2	OUTPUT_24V1/2/3/4/5/6 (to DC POWER PBA)
3	SMPS Enable
4	OUTPUT_5V1/2/3/4/S1/S2 (to DC POWER PBA)

- **Input / Output connector**

- **AC Input Connector (CN1)**

PIN Assign	PIN NO	Description
1	AC_L	AC Input
2	AC_N	

- **AC Input Connector (CN2)**

PIN Assign	PIN Name	Description
1	GND	AC Input
2	24VOn_Off	
3	GND	

- **DC Output Connector (CN3)**

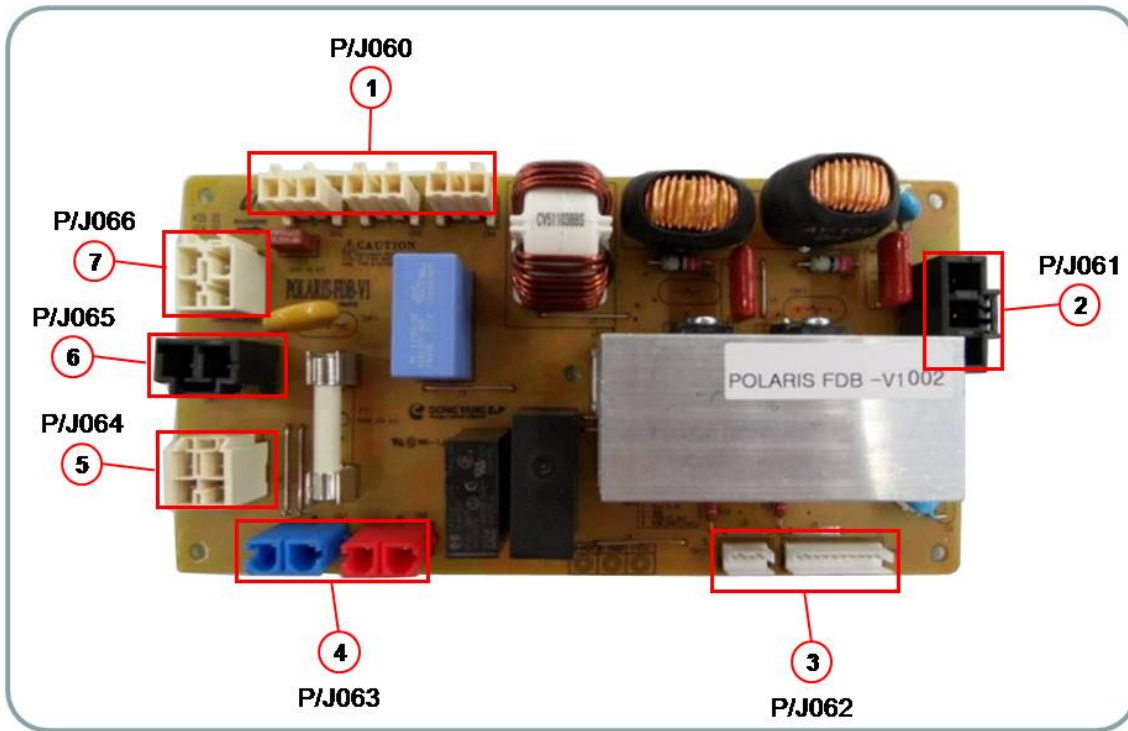
PIN Assign	PIN Name	Description
1	+24V1	Power
2	GND	24V Ground
3	+24V2	Power
4	+GND	24V Ground
5	+24V3	Power
6	GND	24V Ground
7	+24V4	Power
8	GND	24V Ground

- **DC Output Connector (CN4)**

PIN Assign	PIN Name	Description
1	+5V1	Power
2	GND	5V Ground
3	+5V2	Power
4	GND	5V Ground

2.10.5. Fuser Drive Board (FDB)

This board supplies the voltage to Fuser AC, Heater, Main board.



• **Information**

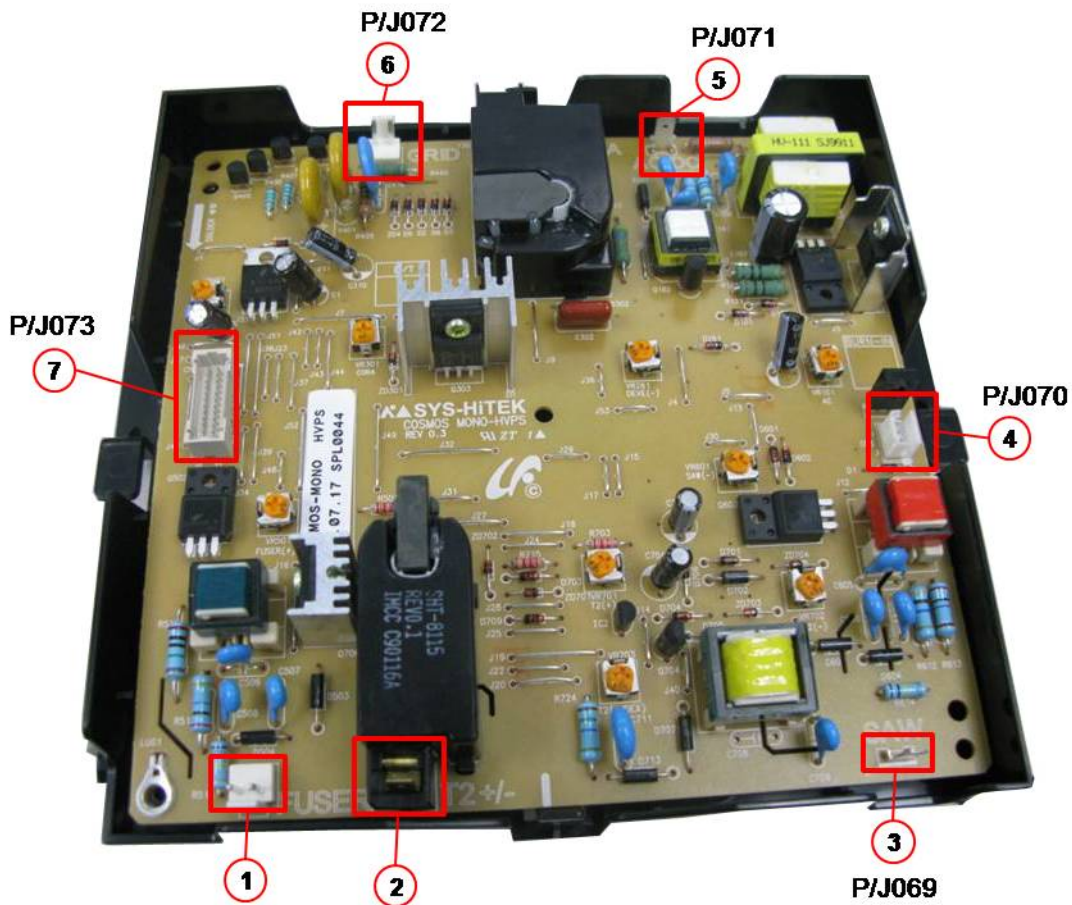
	110V	220V
SEC CODE	JC44-00210A	JC44-00211A
PBA NAME	FDB V1	FDB V2

• **Connection**

1	Heater I/F
2	Fuser AC
3	FDB I/F
4	Type 5
5	Main S/W
6	Inlet
7	Heater S/W

2.10.6. HVPS board

HVPS board generates 7 high-voltage channels, Fuser, T2 +/-, SAW, Grid, DEV DC/AC.



- **Information**

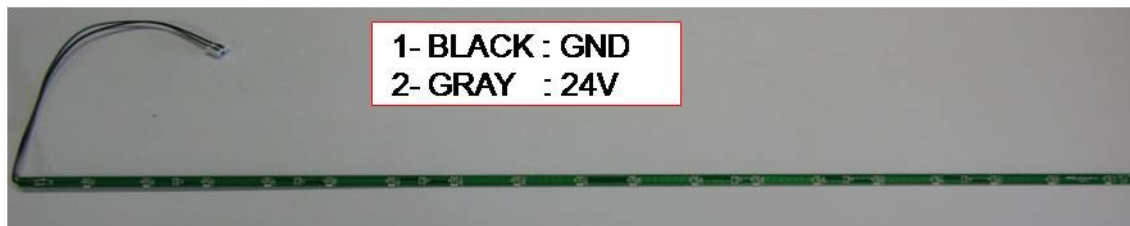
- Part Code : JC44-00182A
- Part Name : HVPS MONO

- **Connection**

1	Fuser
2	T2 +/-
3	SAW
4	Fan_ozone
5	Dev AC/DC
6	Grid
7	HVPS I/F

2.10.7. Eraser PBA

Eraser PBA consists of 18 LEDs. Each LED is used for erasing the negative charges on the surface of the drum after printing.

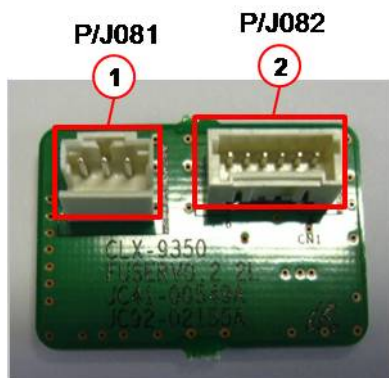


- **Information**

- Part Code : JC921-02551A
- Part Name : PBA-ERASER

2.10.8. Fuser PBA

The Fuser PBA includes CRU memory for Fuser Unit Life Cycle counting. It also provides a connection interface for the position detecting sensor.



- **Connection**

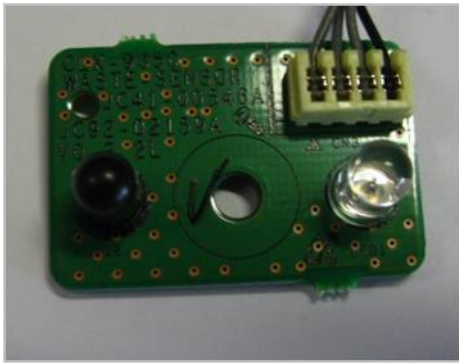
1	Fuser EEPROM, Pressure Sensor I/F
2	Pressure Sensor

- **Information**

- Part Code : JC92-02470A
- Part Name : FUSER PBA

2.10.9. Waste Sensor PBA

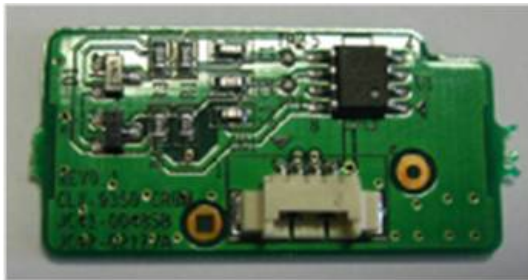
The Waste Sensor PBA detects the waste toner level inside the waste toner container.



- **Information**
 - Part Code : JC92-02471A
 - Part Name : WASTE SENSOR RX

2.10.10. CRUM PBA

The CRUM PBA includes CRU memory for developer unit, drum unit, toner cartridge life cycle counting.



- **Information**
 - Part Code : JC92-02456A
 - Part Name : TONER CRUM

2.10.11. Deve CRUM Joint PBA

The Deve Crum Joint PBA is the interface PBA between the imaging unit(drum unit and developer unit) and the machine.



- **Information**
 - Part Code : JC92-02163A
 - Part Name : DEVE CRUM JOINT

2.10.12. Toner CRUM Joint PBA

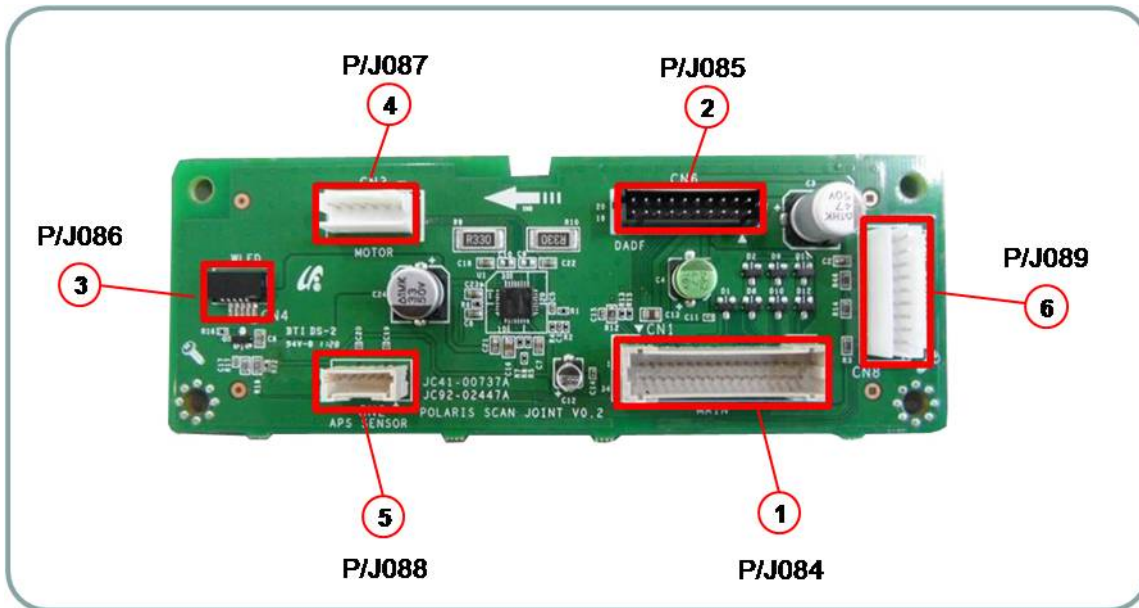
The Toner CRUM Joint PBA is the interface PBA between the toner cartridge and the machine.



- **Information**
 - Part Code : JC92-02164A
 - Part name : TONER CRUM I/F

2.10.13. Scan Joint PBA

The Scan Joint PBA has one bipolar step motor drive IC for driving the scanner motor. It functions as connection between WLED, APS Sensor1, APS Sensor2, Cover Open Sensor1, Cover Open Sensor2, Home Position Sensor and Main PBA. And it functions as the joint PBA for ADF I/F and 24V, 5V power connectors.



- **Information**
 - Part Code : JC92-02447A
 - Part Name : PBA-SCAN JOINT

• **Connection**

1	MAIN PBA
2	ADF PBA
3	WLED CTL PBA
4	Scan Motor
5	APS Sensor1,2
6	Home Position Sensor, Cover Open Sensor 1,2

2.10.14. CCDM PBA

The function of this board is to convert the reflected light from an original document to electrical signals. It includes the CCD, ADC, Logic IC, etc. The CCD converts the reflected light from an original document to three-color analog signals; red, green, blue. ADC converts each analog signal to digital. And for high speed data transmission, the digital data signal is converted to LVDS format with serialization.



• **Information**

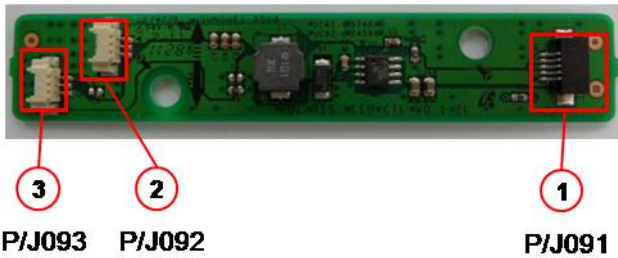
- Part Code : JC92-02458A
- Part Name : PBA-CCDM

• **Connection**

1	MAIN PBA
---	----------

2.10.15. WLED CTL PBA

The WLED CTL PBA has the LED DRIVER IC for WLED light drive.



• **Information**

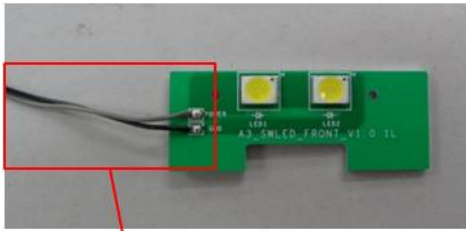
- Part Code : JC92-02459A
- Part Name : PBA-WLED CTL

• **Connection**

1	Scan Joint PBA
2	WLED AL Front
3	WLED AL Front

2.10.16. WLED AL FRONT PBA

The WLED AL FRONT consists of two WLED used as scanner light. The scanner unit has two WLED AL FRONT PBAs.



1

P/J094

- **Information**

- Part Code : JC92-02460A
- Part Name : PBA-WLED AL Front

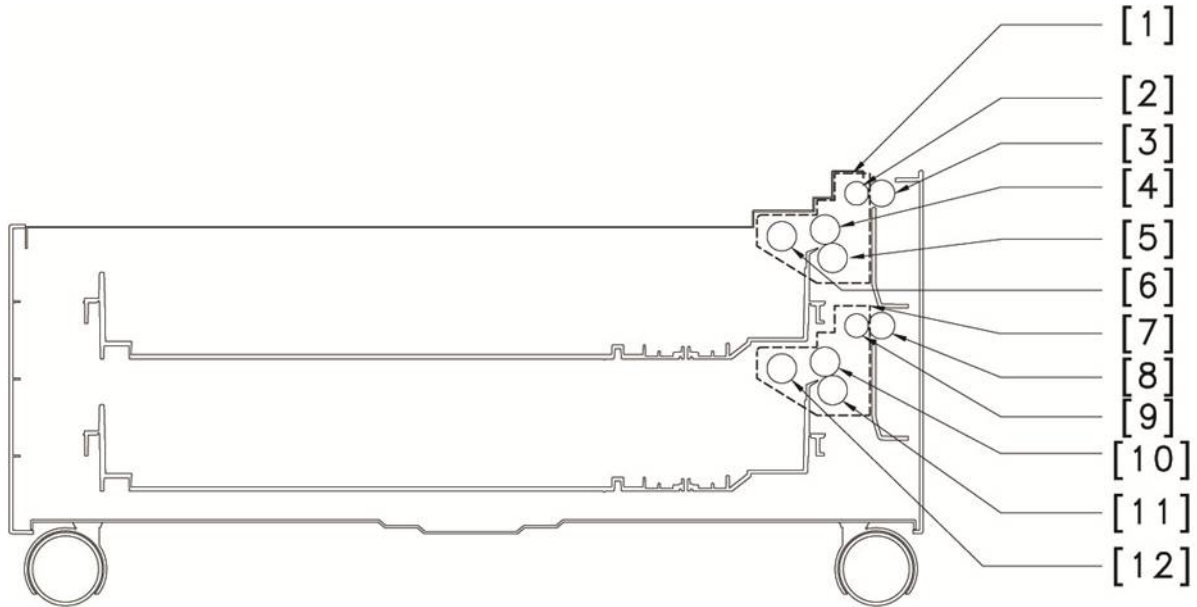
- **Connection**

1	WLED CTL PBA
---	--------------

2.11. DCF Unit

DCF (Double Cassette Feeder) is an optional device to store more papers.

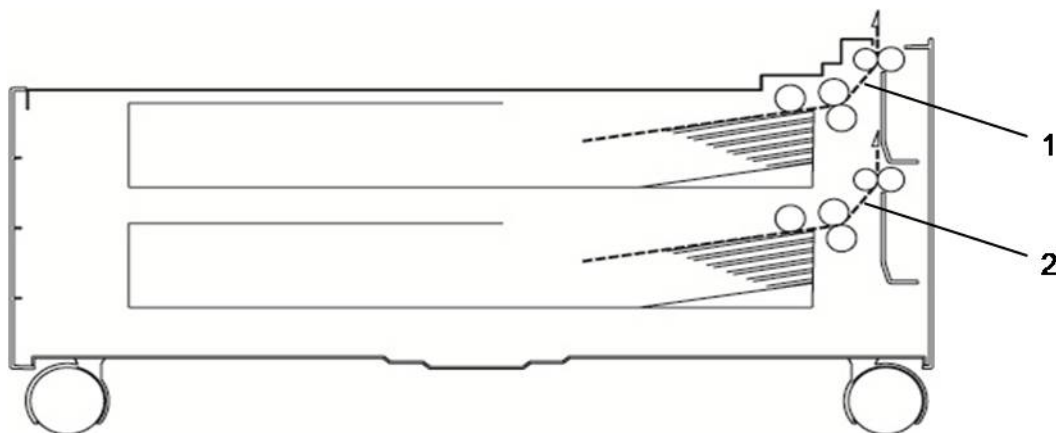
1) Front sectional view



1	Cassette 3 Pickup Assembly
2	Feed Roller (Cassette 3)
3	Idle Roller (Cassette 3)
4	Forward Roller (Cassette 3)
5	Retard Roller (Cassette 3)
6	Pickup Roller (Cassette 3)
7	Cassette 4 Pickup Assembly

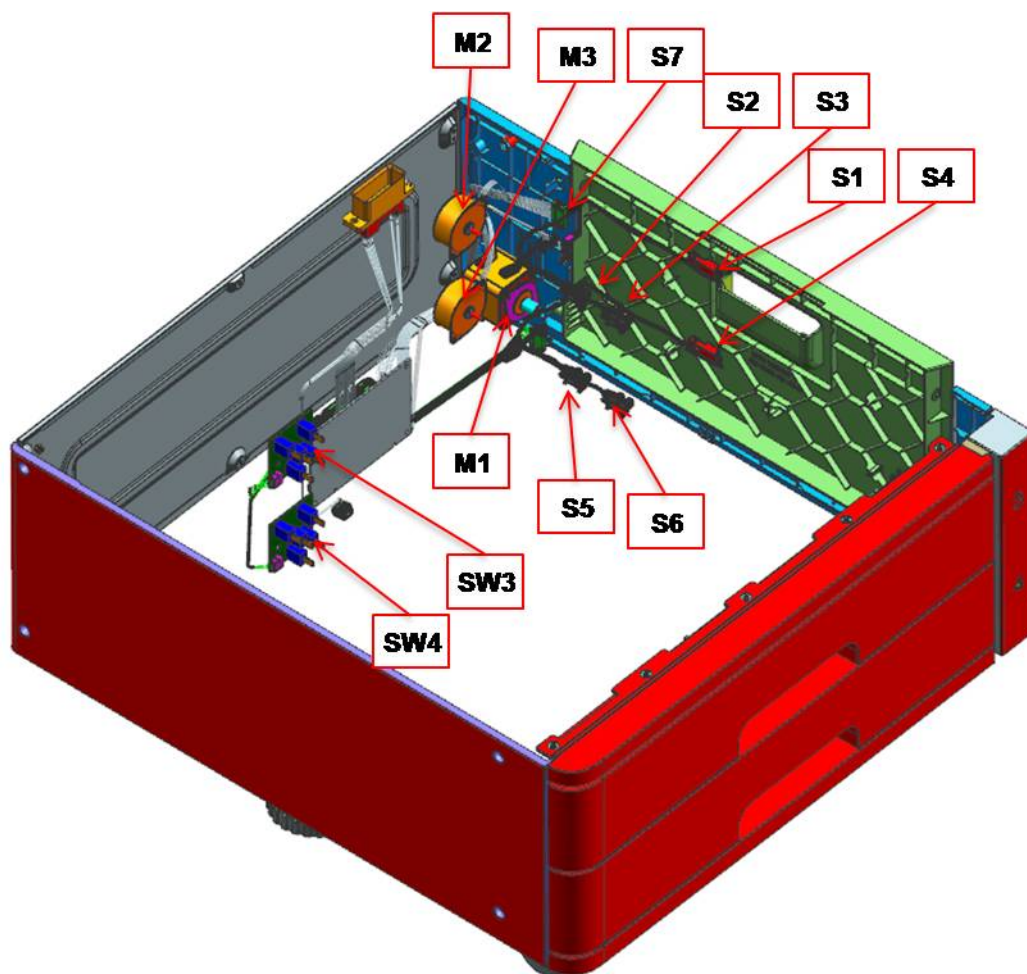
8	Feed Roller (Cassette 4)
9	Idle Roller (Cassette 4)
10	Forward Roller (Cassette 4)
11	Retard Roller (Cassette 4)
12	Pickup Roller (Cassette 4)

2) Paper path



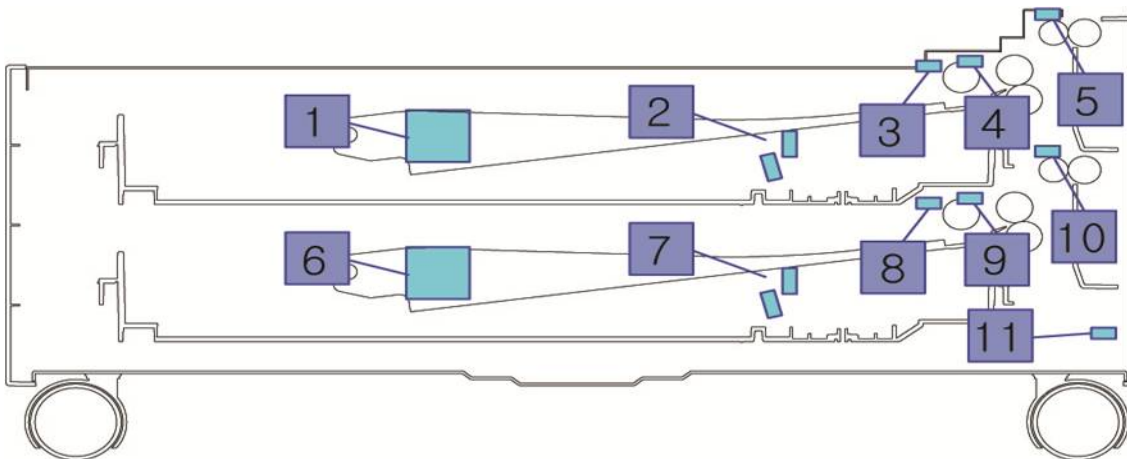
1	Tray3 paper path
2	Tray4 paper path

3) Layout of electrical parts



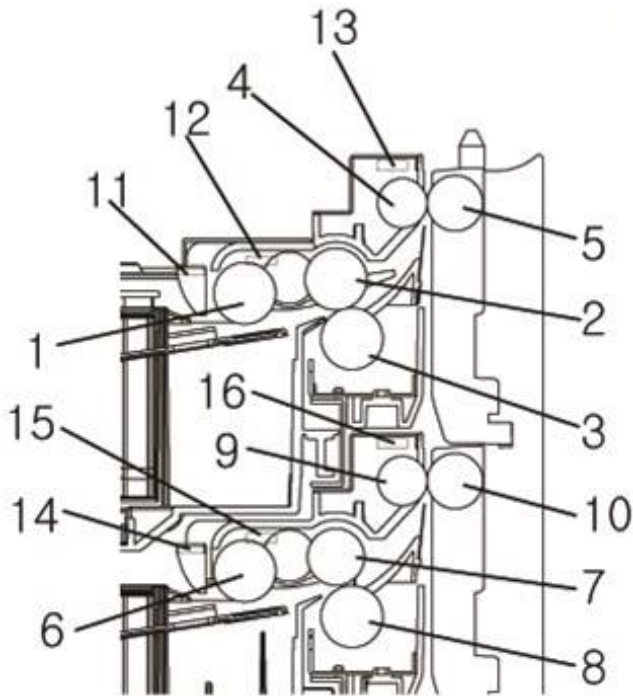
Ref.	Description	Parts number	DC controller PCB
M1	Feed motor	JC31-00033B	CN5 3 to 6
M2	Tray3 Pick up motor	JC31-00149A	CN5 9 to 12
M3	Tray4 Pick up motor	JC31-00149A	CN5 13 to 16
SW1	Tray3 auto size switch	JC32-00013A	CN9 1 to 4
SW2	Tray4 auto size switch	JC32-00013A	CN9 5 to 8
S1	Tray3 feed sensor	0604-001381	CN6 7 to 9
S2	Tray3 limit sensor	0604-001393	CN6 4 to 6
S3	Tray3 paper empty sensor	0604-001393	CN6 1 to 3
S4	Tray4 feed sensor	0604-001381	CN6 16 to 18
S5	Tray4 limit sensor	0604-001393	CN6 13 to 15
S6	Tray4 paper empty sensor	0604-001393	CN6 10 to 12
S7	Door open sensor	JC39-01696A	CN3 1 to 2

4) Sensor and signal



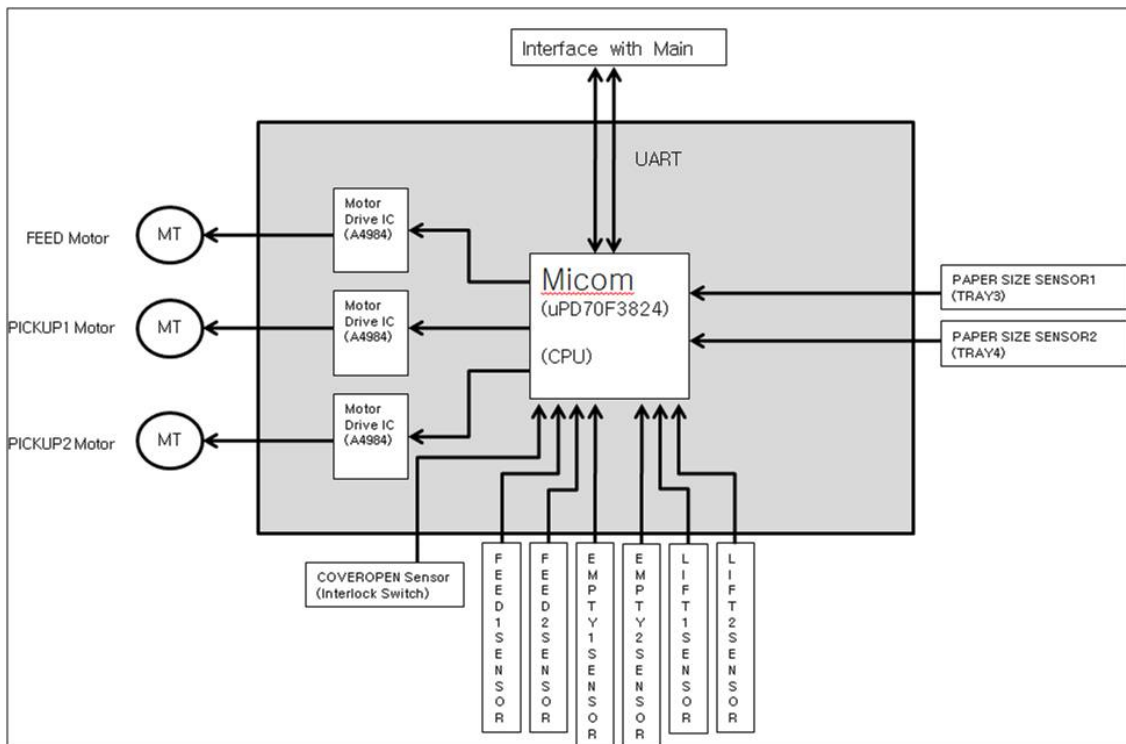
No.	Sensor	Signal
1	P_Size_DCF1	Tray3 Paper Size analog signal
3	nP_Empty_DCF1_IHCF	Tray3 Paper Empty signal
4	Limit_DCF1_IHCF	Tray3 Paper Limit signal
5	Feed_DCF1_IHCF	Tray3 Feed signal
6	P_Size_DCF2	Tray4 Paper Size analog signal
8	nP_Empty_DCF2	Tray4 Paper Empty signal
9	Limit_DCF2	Tray4 Paper Limit signal
10	Feed_DCF2	Tray4 Feed signal
11	nDoor_open	Door open signal

5) Paper feeding system



No.	Name	Description
1	Pickup Roller (Cassette 3)	This roller transports the paper from the cassette3 or 4.
6	Pickup Roller (Cassette 4)	
2	Forward Roller (Cassette 3)	This roller transports the paper from the pickup roller to the feed roller.
7	Forward Roller (Cassette 4)	
3	Retard Roller (Cassette 3)	When two sheets of paper or more are transported from the pickup roller, the torque limit load is bigger than the resistance between the sheets. As the result, retard roller is stopped and the lower paper is not advanced any further. When the last sheet is transported from the pick up roller, the retard roller rotates following the feed roller.
8	Retard Roller (Cassette 4)	
4	Feed Roller (Cassette 3)	This roller transports the paper from the forward roller to the basic machine.
9	Feed Roller (Cassette 4)	
5	Idle Roller (Cassette 3)	When the paper is passed at the feed roller, this roller makes paper transporting be smooth.
10	Idle Roller (Cassette 4)	
11	nP_Empty_DCF1	This sensor detects the paper in the cassette3 or 4.
14	nP_Empty_DCF2	
12	Limit_DCF1_IDCF	This sensor detects whether the paper is at pickup position or not.
15	Limit_DCF2_DCF	
13	Feed_DCF1_IDCF	This sensor detects the leading edge of the paper that is passing on the feed roller.
16	Feed_DCF2_DCF	

6) Block Diagram



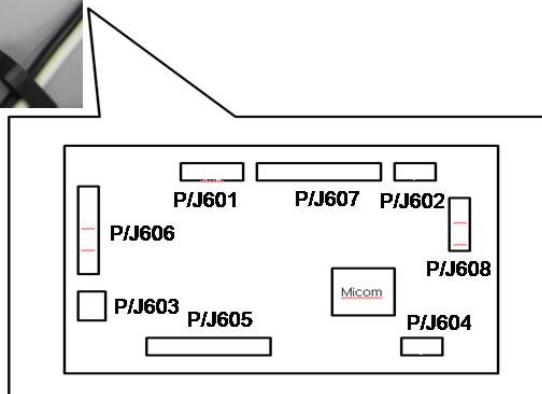
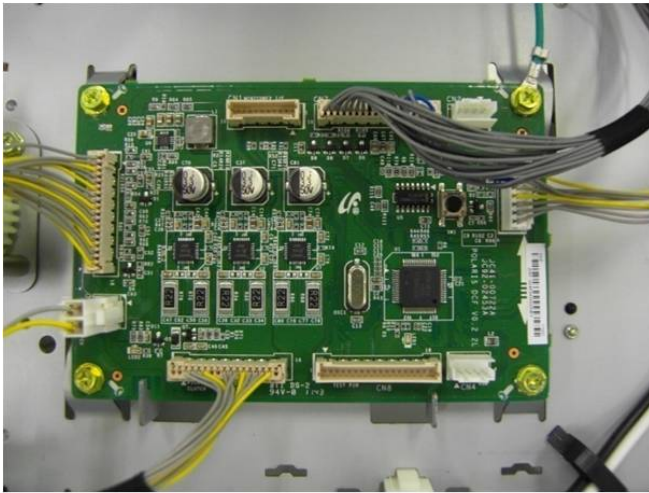
The DCF board controls all functions for DCF Assy. It consists of CPU, Motor drive IC.

The Micom in the board receives the information from the paper size sensor, empty sensor, feed sensor etc. and communicates with the copier main board through the UART.

When being received the print job command from the interface connector (CN7) through UART, DCF board drives the feed motor and pick up motor to pick up a paper.

This board has 2 LEDs. The left LED is for checking 5V power supply and the right LED is checking the micom operation.

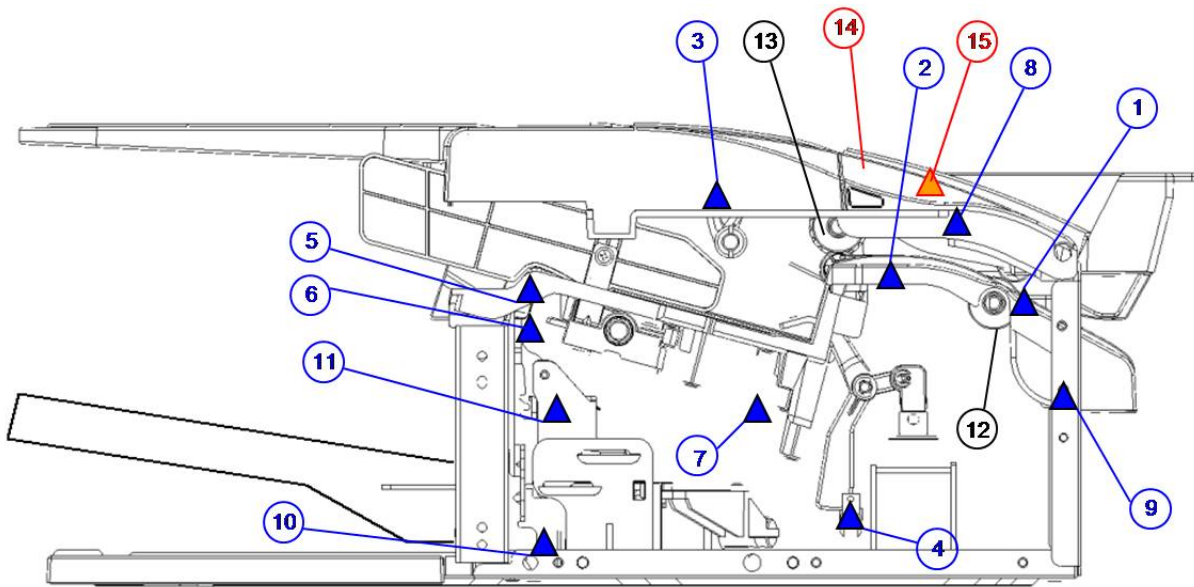
7) Plug and jack location list



Connector Number	Connection
P/J601	Download tool I/F(Minicube)
P/J602	Debug I/F
P/J603	Cover open Switch (24V interlock Switch)
P/J604	USB I/F
P/J605	EMPTY/LIFT/FEED(Tray3,4) Sensor
P/J606	FEED / PICKUP3,4 Motor
P/J607	Interface with Main
P/J608	Papersize sensor(Tray3,4)

2.12. Finisher

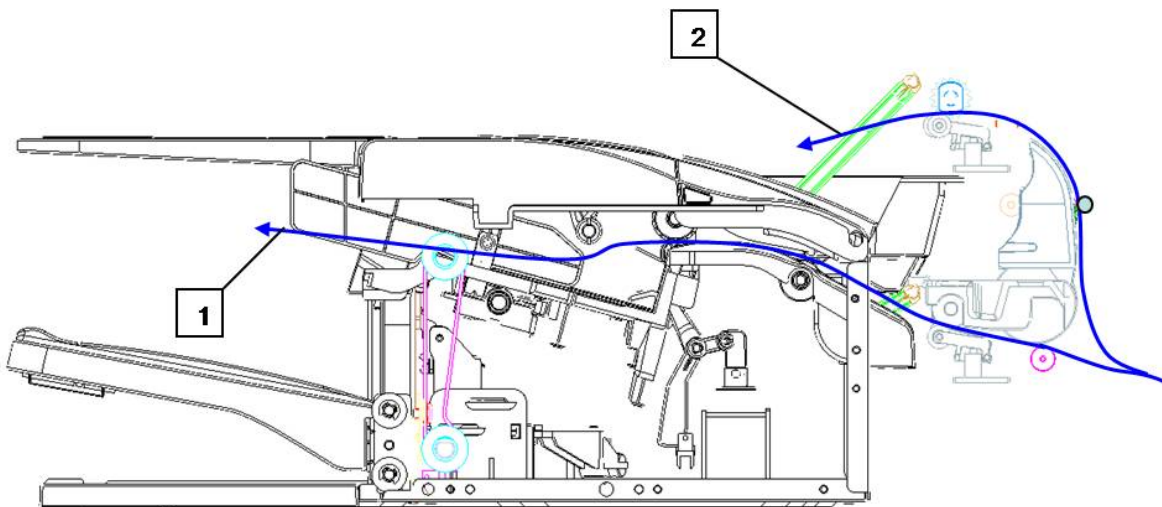
1) Front Section View



1	Entrance Sensor
2	Passthru Sensor
3	Paddle Home Sensor
4	Media Height Sensor
5	Tamper Home_R Sensor
6	Tamper Home_F Sensor
7	Eject Home Sensor
8	Jam Door Open Sensor

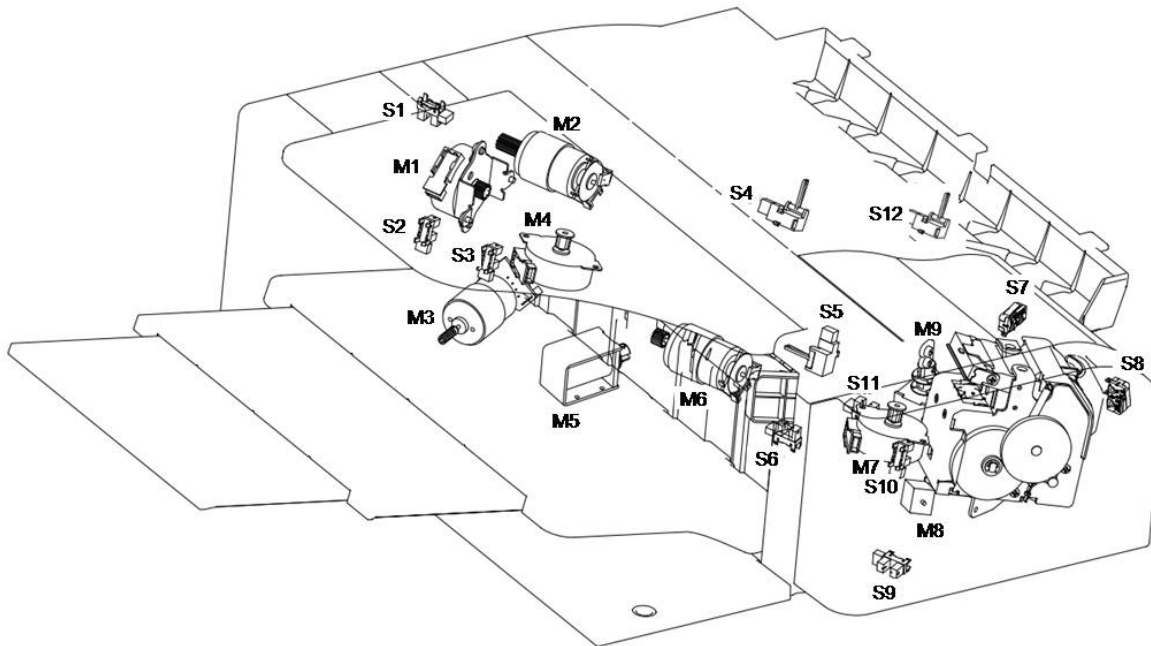
9	Front Door Open Sensor
10	Stacker Tray STB Sensor
11	Stacker Tray Home Sensor
12	Paper Feed roller
13	Paper Exit roller
14	Jam door
15	Turning Knob

2) Paper Path



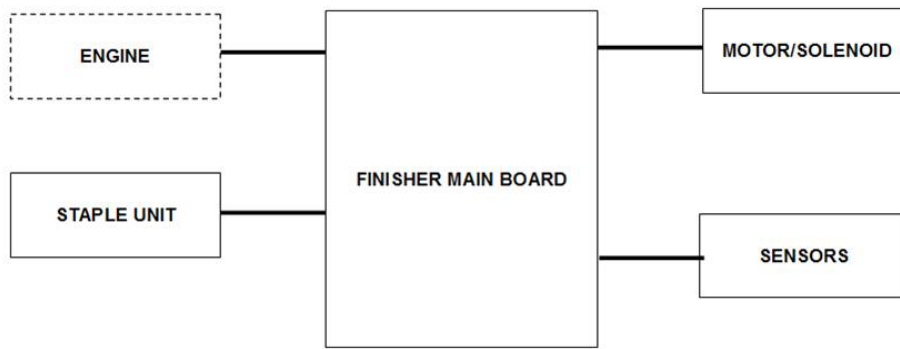
1	Finisher Main Tray - Staple / Offset
2	Finisher Top Tray – None Staple

3) Layout of electrical parts

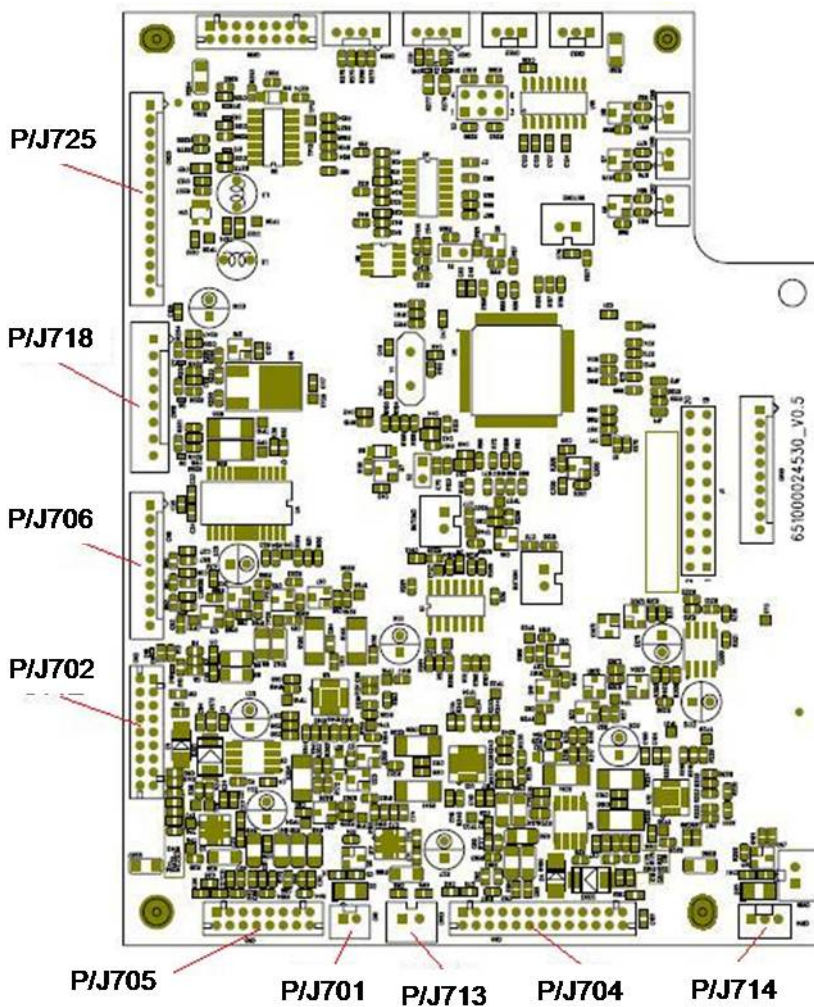


Ref.	Part Name	Function
S1	SENSOR_TOSHIBA TLP1243(C8)	Paddle Home Sensor
S2	SENSOR_TOSHIBA TLP1243(C8)	Rear Tamper Home Sensor
S3	SENSOR_TOSHIBA TLP1243(C8)	Rear Tamper Home Sensor-LET
S4	AS Sensor_KIA0005C	Pass- thru Sensor
S5	AS Sensor_KIA0005C	Ejector Home Sensor
S6	SENSOR_TOSHIBA TLP1243(C8)	Tray STB Sensor
S7	SM5-108N2-80S-C5	Jam Door Open Sensor
S8	SM5-108N2-80S-C5	Front Cover Open Sensor
S9	SENSOR_TOSHIBA TLP1243(C8)	Tray Home Sensor
S10	SENSOR_TOSHIBA TLP1243(C8)	Front Tamper Home Sensor
S11	SENSOR_TOSHIBA TLP1243(C8)	Media Height Sensor
S12	AS Sensor_KIA0005C	Entrance Sensor
M1	ASSY:HB MOTOR:S2M19T	Paddle Motor
M2	ASSY:HB MOTOR:S2M19T	Feed Motor
M3	ASSY:PM MOTOR:S2M12T	Stacker Moving Motor
M4	ASSY:PM MOTOR:S2M12T	Rear Tamper Motor
M5	ASSY:PM MOTOR:S2M20T	SCU Solenoid
M6	AS-MOTOR DC EJECTOR	Ejector Motor
M7	AS-MOTOR PM:Z18:HELICAL	Front Tamper Motor
M8	AS-MOTOR PM:STAPLER	Stapler Cover Solenoid
M9	AS-MOTOR PM:STAPLER	Push Holder Solenoid

4) Block Diagram



5) Plug and jack location list



Connector	Connection
P/J725	ENGINE Interface
P/J718	Door and Cover Switch
P/J706	Stapler unit
P/J702	Feeder/Paddle motors and sensors
P/J705	Main tray motor and sensors

Connector	Connection
P/J701	Push holder solenoid
P/J713	Stapler cover solenoid
P/J704	Tamper/Ejector motors and sensors
P/J714	SCU solenoid

3. Disassembly and Reassembly

3.1. Precautions when replacing parts

3.1.1. Precautions when assembling and disassembling

- Use only approved Samsung spare parts. Ensure that part number, product name, any voltage, current or temperature rating are correct. Failure to do so could result in damage to the machine, circuit overload, fire or electric shock.
- Do not make any unauthorized changes or additions to the printer, these could cause the printer to malfunction and create electric shock or fire hazards.
- Take care when dismantling the unit to note where each screw goes. There are 19 different screws. Use of the wrong screw could lead to system failure, short circuit or electric shock.
- Do not disassemble the LSU unit. Once it is disassembled dust is admitted to the mirror chamber and will seriously degrade print quality. There are no serviceable parts inside.
- Regularly check the condition of the power cord, plug and socket. Bad contacts could lead to overheating and fire. Damaged cables could lead to electric shock or unit malfunction.

3.1.2. Precautions when handling PBA

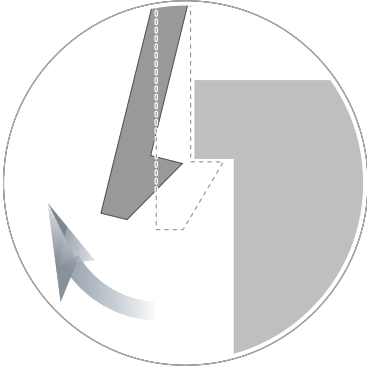
Static electricity can damage a PBA, always used approved anti-static precautions when handling or storing a PBA.

- **Precautions when moving and storing PBA**
 - 1) Please keep PBA in a conductive case, anti-static bag, or wrapped in aluminum foil.
 - 2) Do not store a PBA where it is exposed to direct sunlight.
- **Precautions when replacing PBA**
 - 1) Disconnect power connectors first, before disconnecting other cables.
 - 2) Do not touch any soldered connections, connector terminals or other electronic parts when handling insulated parts.
- **Precautions when checking PBA**
 - 1) Before touching a PBA, please touch other grounded areas of the chassis to discharge any static electrical charge on the body.
 - 2) Take care not to touch the PBA with your bare hands or metal objects as you could create a short circuit or get an electric shock. Take extra care when handling PBAs with moving parts fitted such as sensors, motors or lamps as they may get hot.
 - 3) Take care when fitting, or removing, screws. Look out for hidden screws. Always ensure that the correct screw is used and always ensure that when toothed washers are removed they are refitted in their original positions.

3.1.3. Releasing Plastic Latches

Many of the parts are held in place with plastic latches. The latches break easily; release them carefully.

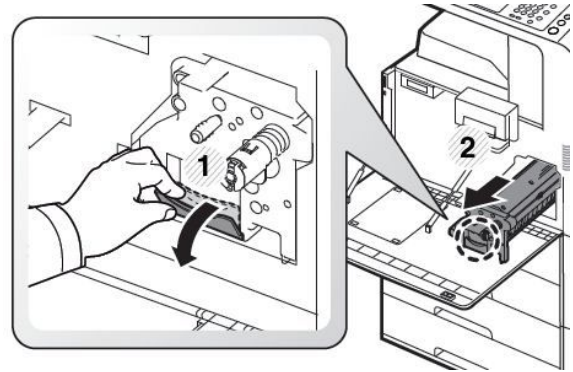
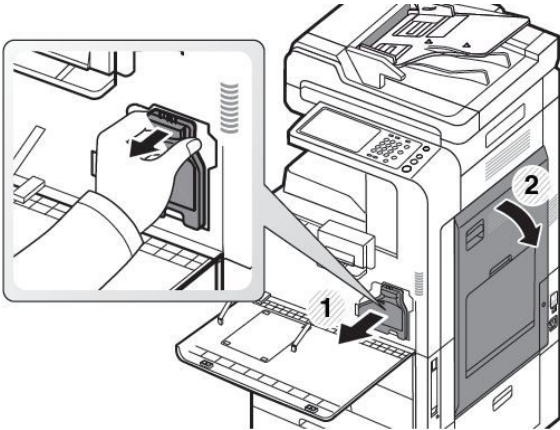
To remove such parts, press the hook end of the latch away from the part to which it is latched.



3.2. Replacing the maintenance part

3.2.1. Developer_Drum Unit_Developer Unit

1. Open the front cover. Open the side cover. And remove the waste toner container.
2. Remove the Imaging Unit.

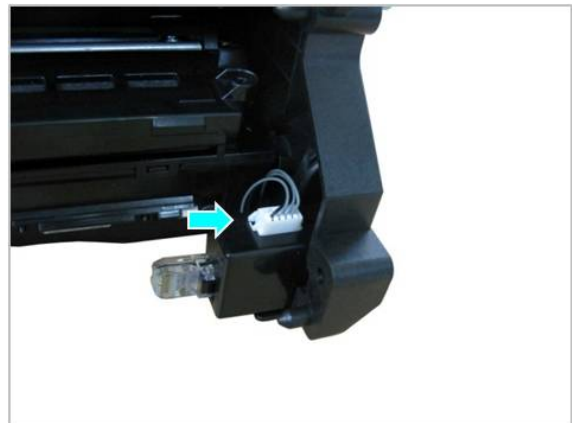


NOTE

For replacing these parts, refer to the life table below. (R : Replacement)

	100K	200K	300K	400K	500K	600K
Developer	R	R	R	R	R	R
Drum Unit	R	R	R	R	R	R
Developer Unit			R			R

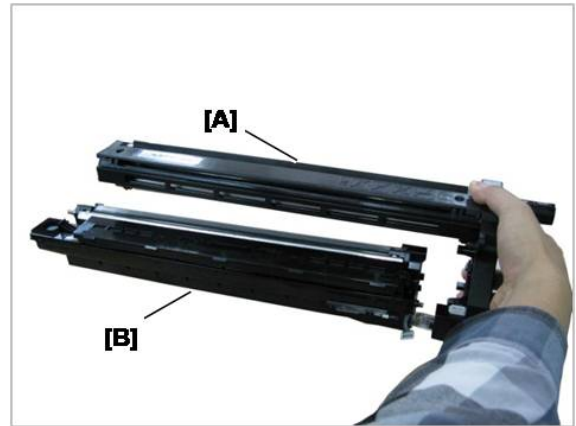
3. Unplug the connector.



4. Remove 2 screws from the right side.



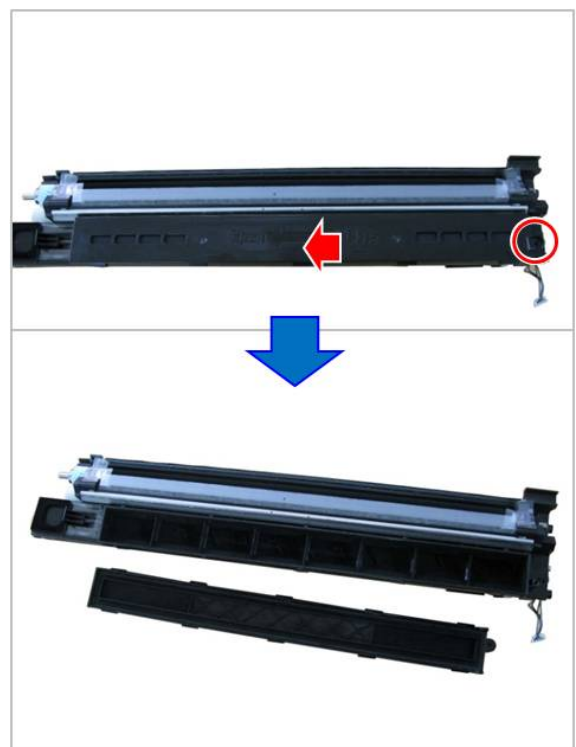
7. Separate the Developer Unit[B] from the Drum Unit[A].



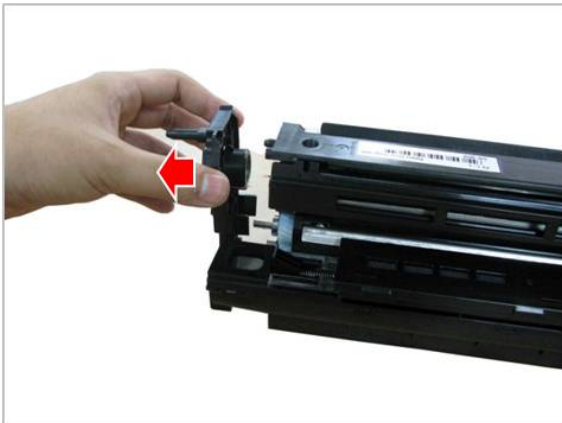
5. Remove 3 screws from the left side.



8. Open the developer cover after removing 1 screw.



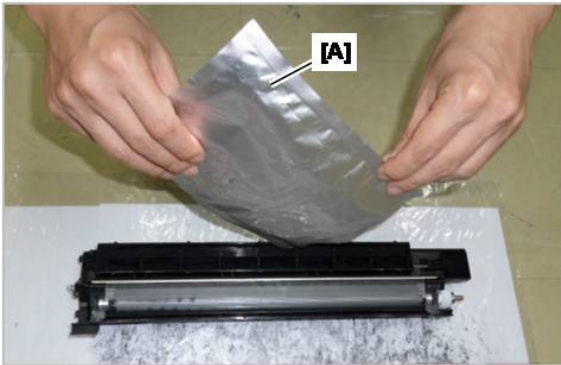
6. Remove the left cover.



9. Pour the developer on the protection sheet[A]. Remove the developer on the surface of the developer roller while you turn the developer roller.



10. Fill the developer from the refill bag[A]. Close the developer cover. And assemble the Imaging Unit.



11. The assembly is reverse order of disassembly.

12. Open the front cover.

 **NOTE**

If you turn on the machine after closing the front cover, toner will be supplied without TC calibration. It may affect the image quality.

13. If the developer unit window is enable, push the OK button.

 **NOTE**

When replacing the developer, not a developer unit, select the “Developer” (Information > supply Status > Field Replacement Unit > Developer)

14. Close the front cover.

 **NOTE**

- 1) The TC calibration will start after closing the front cover.
- 2) When completing the TC calibration, the motor operation will stop and the machine will be ready status.

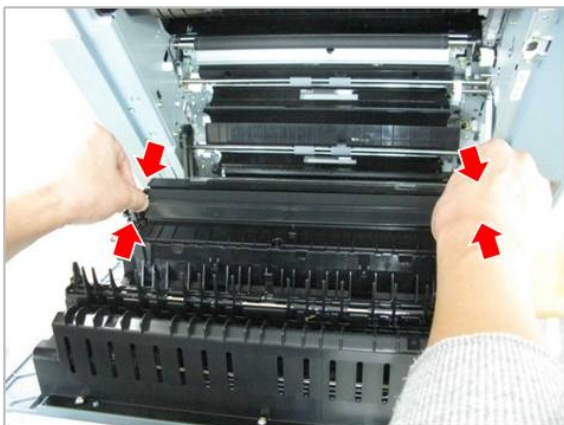
3.2.2. Fuser Unit

1. Open the side cover.
2. Remove the cover[A] after removing 3 screws.
3. Unplug the connector. Remove the Fuser Unit.



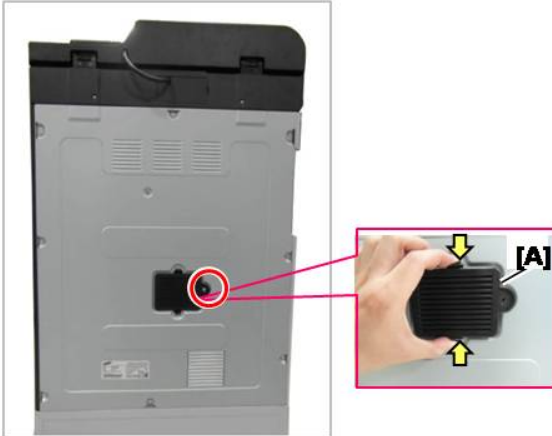
3.2.3. Transfer roller

1. Open the side cover.
2. Hold and release the both sides of the transfer roller.



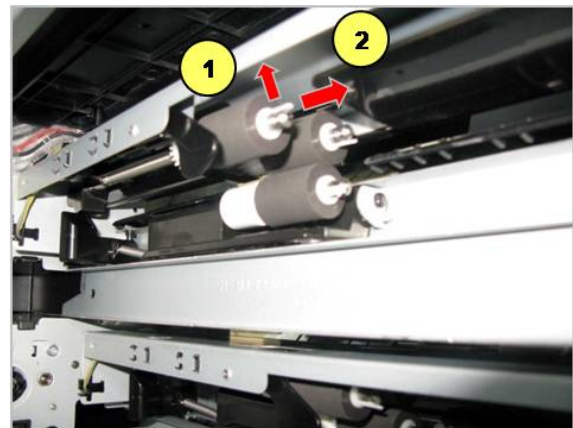
3.2.4. Ozone Filter

1. Remove 1 screw.
2. Hold and release the Ozone Filter.



3.2.5. Pick Up_Reverse_Forward Roller

1. Open the side cover. Remove the tray1 and tray2.
2. Lift small tap, remove the pick up/ reverse/ forward roller.

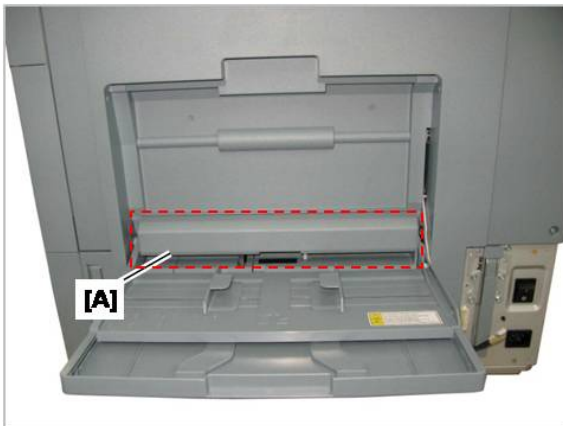


 **NOTE**

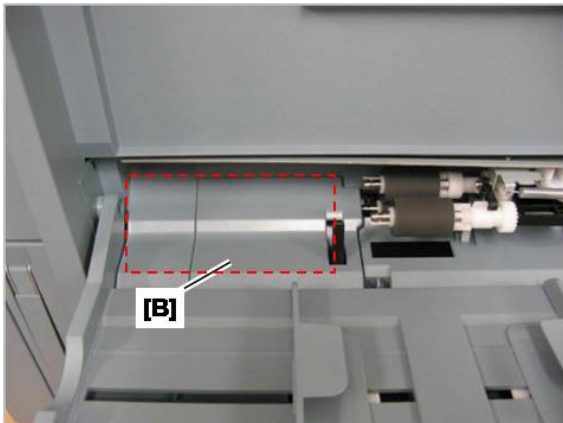
When replacing these rollers, it is recommended that you replace all three rollers at the same time.

3.2.6. MP Pick Up_Reverse_Forward

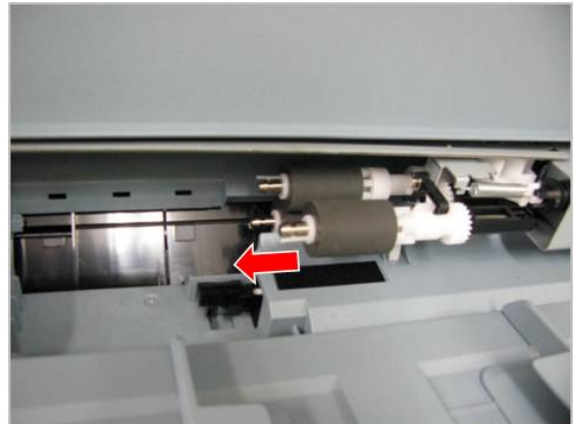
1. Open the MP Tray. Remove the cover[A].



2. Remove the cover[B].



3. Lift small tap, remove the pick up/ reverse/ forward roller.

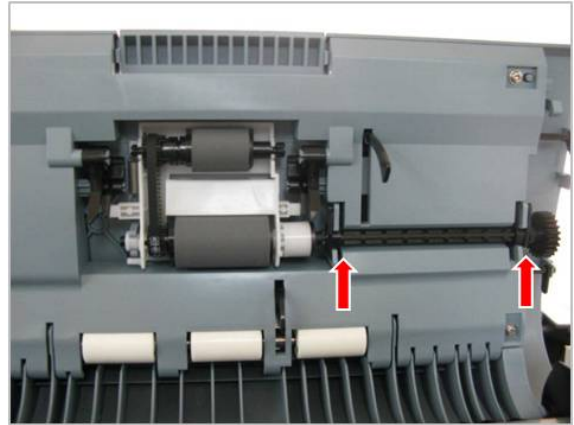


 **NOTE**

When replacing these rollers, it is recommended that you replace all three rollers at the same time.

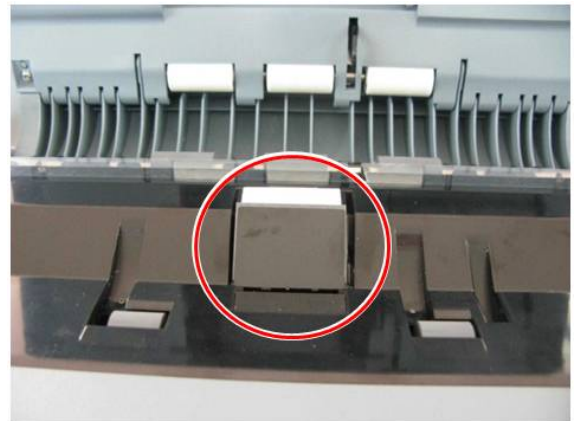
3.2.7. DADF Pick-up roller Assy

1. Open the DADF-open cover.
2. Remove the spring.
3. Remove the DADF Pick-up roller Assy after releasing 2 hooks.



3.2.8. DADF friction pad

1. Open the DADF-open cover.
2. Remove the DADF friction pad.



3.3. Replacing the main SVC part

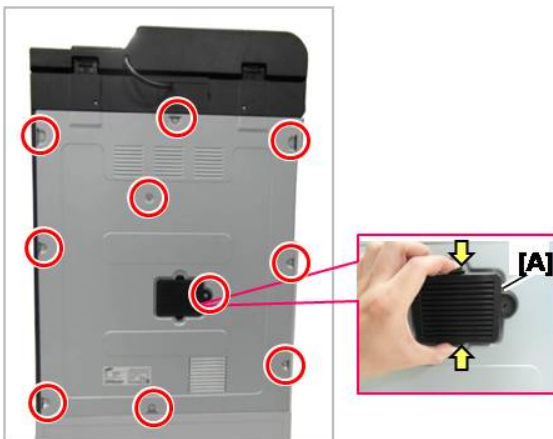
3.3.1. Left cover

1. Remove the left cover after removing 9 screws.



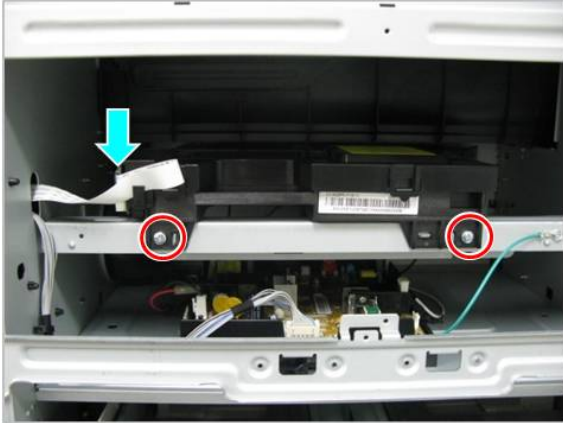
3.3.2. Rear Cover

1. Remove 10 screws.
2. Remove the rear cover after removing the ozone filter [A].

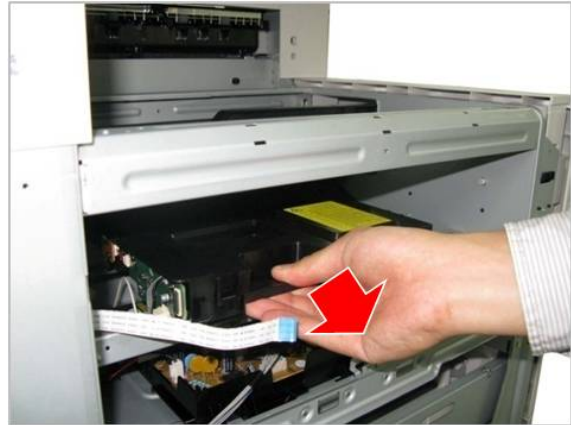


3.3.3. LSU

1. Remove the left cover. (Refer to 3.3.1)
2. Remove 2 screws. Unplug the flat cable.



3. Remove the LSU.



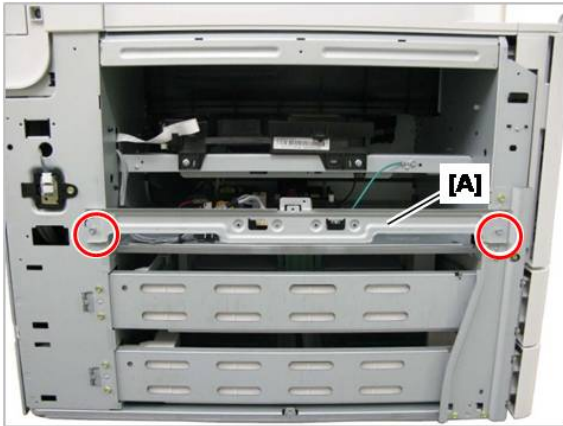
3.3.4. Temperature Sensor

1. Remove the left cover. (Refer to 3.3.1)
2. Remove the temperature sensor after unplugging the connector.



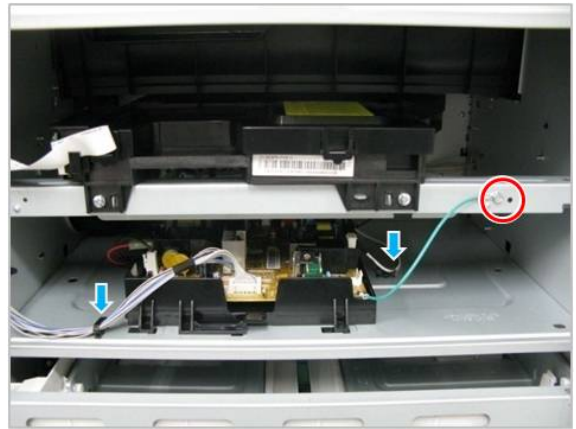
3.3.5. HVPS board

1. Remove the left cover. (Refer to 3.3.1)
2. Remove the bracket [A] after removing 2 screws.



3. Remove 1 screw connecting the ground wire. Open the harness saddle.

4. Unplug all connectors on the HVPS board. Take out the HVPS board holder.



! NOTE

If you remove the LSU, you can unplug the connector easily.

5. Release the HVPS board after removing 1 screw.

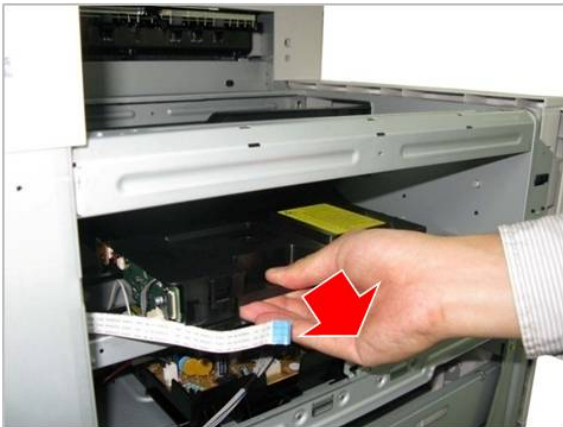


3.3.6. OPC Blow-In Fan

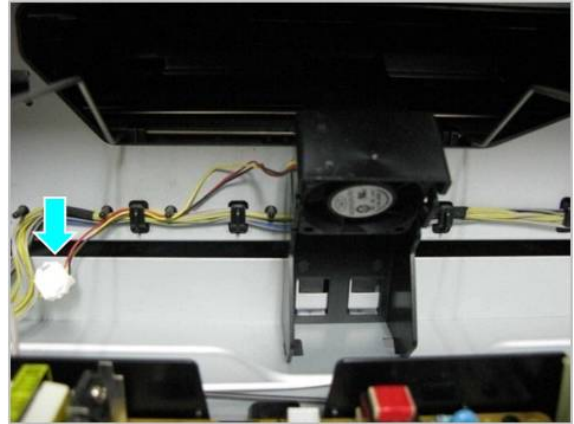
1. Remove the Exit cover after removing 1 screw.



2. Remove the LSU after removing the left cover. (Refer to 3.3.3)



3. Remove the OPC Blow-In Fan unplugging the connector.



3.3.7. OPE Unit

1. Remove the OPE overlay cover.



2. Remove the sticker covering the screw hole.



3. Remove the cover[A] after removing 2 screws.



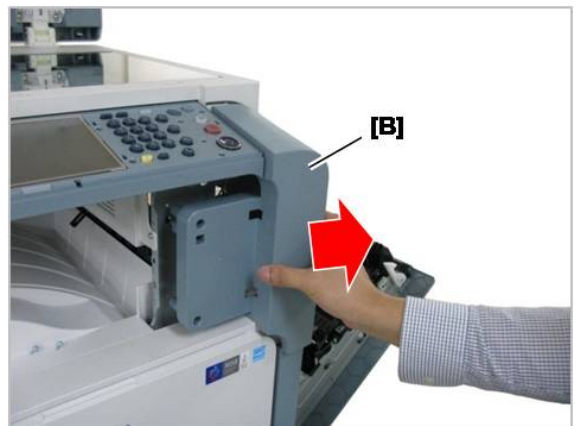
4. Remove 2 screws from the front.



5. Open the side cover. Remove 2 screws.



6. Remove the cover[B].



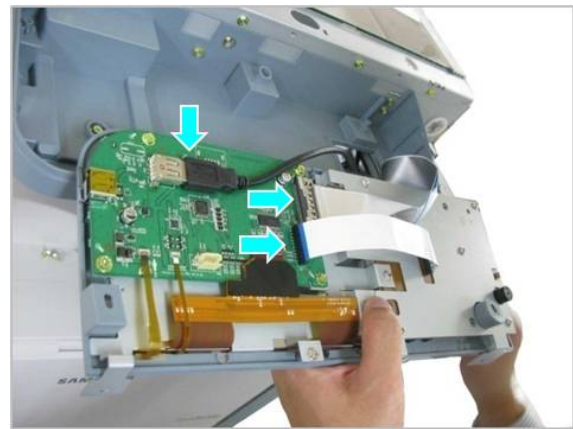
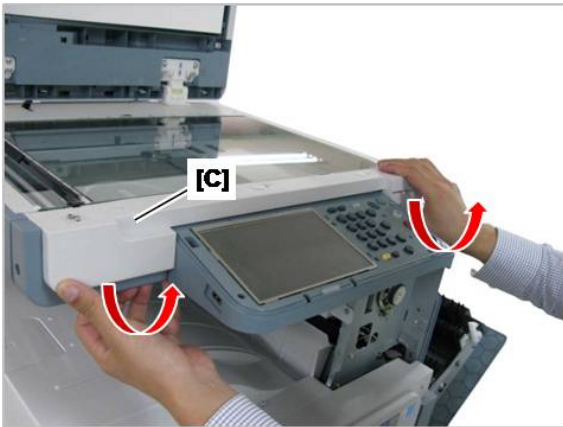
3. Disassembly and Reassembly

7. Open the DADF unit. Remove 6 screws.



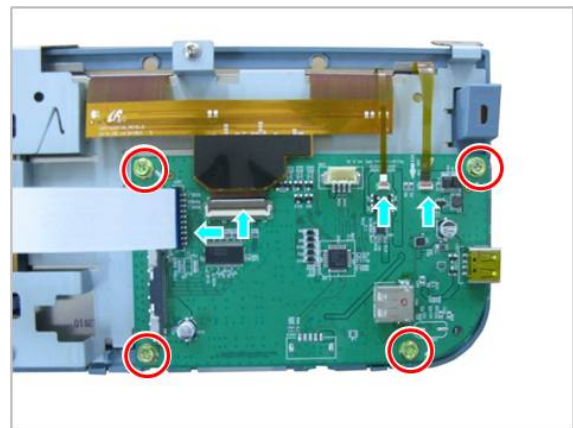
11. Turn the OPE unit. Unplug all connectors connecting the machine.

8. Remove the cover [C].



12. Unplug all connectors on OPE Main PBA. Remove 4 screws. And then remove the OPE Main PBA.

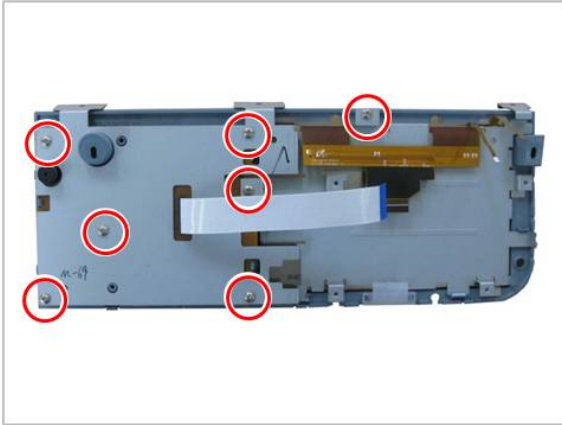
9. Remove 3 screws.



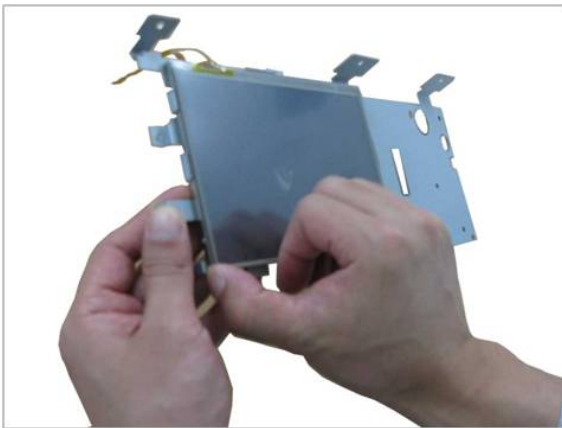
10. Lift up the OPE unit.

 **CAUTION**
Be careful not to damage in flat cables.

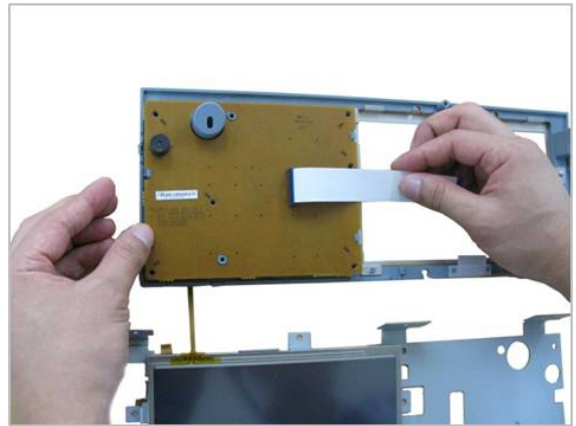
13. Remove 7 screws. Lift up the OPE bracket.



14. Remove the LCD.

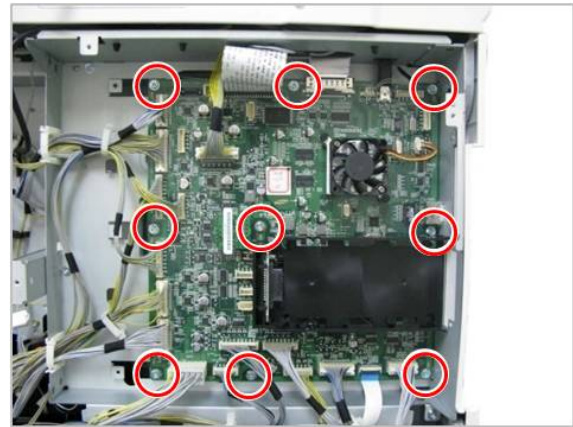


15. Remove the OPE key PBA.



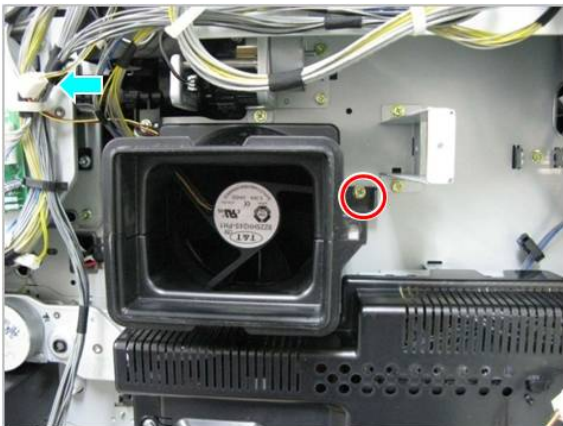
3.3.8. Main board

1. Remove the rear cover. (Refer to 3.3.2)
2. Unplug all connectors on the main board.
3. Remove the main board after removing 9 screws.



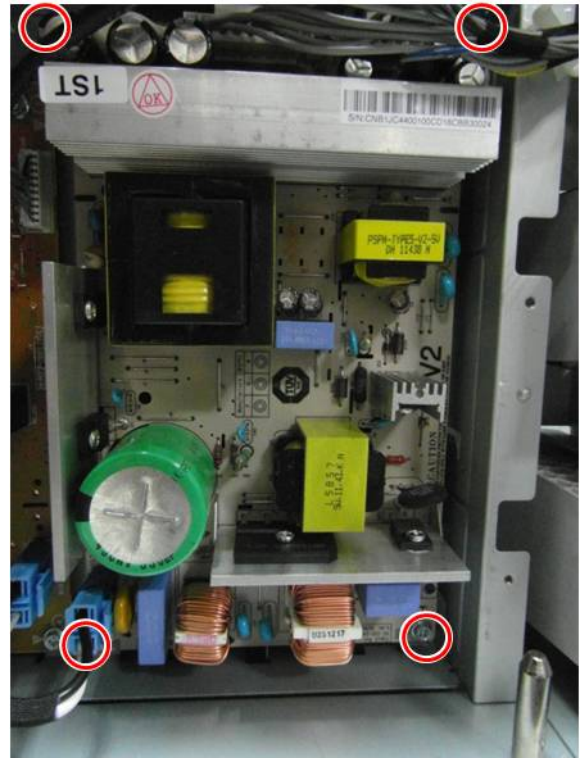
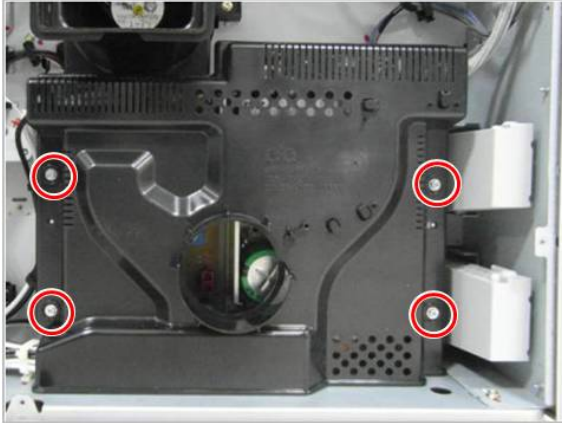
3.3.9. Ozone Suction Fan

1. Remove the rear cover. (Refer to 3.3.2)
2. Unplug the connector. Remove 1 screw. And remove the fan.



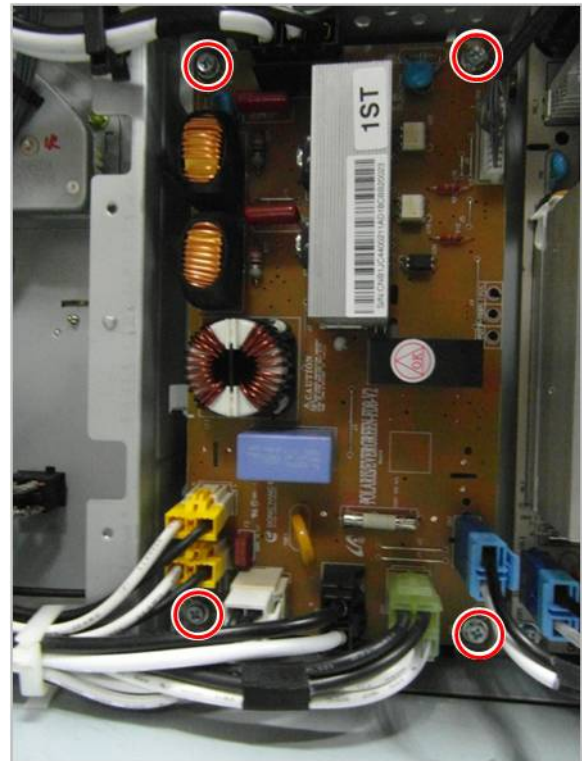
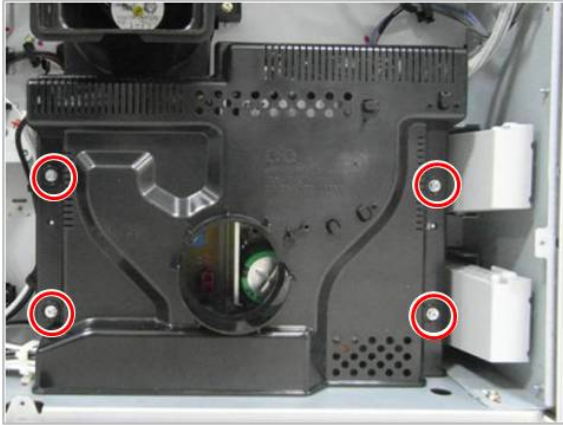
3.3.10. SMPS board

1. Remove the rear cover. (Refer to 3.3.2)
2. Remove 4 screws. And remove the SMPS cover.
3. Unplug all connectors. Remove 4 screws. And remove the SMPS board.



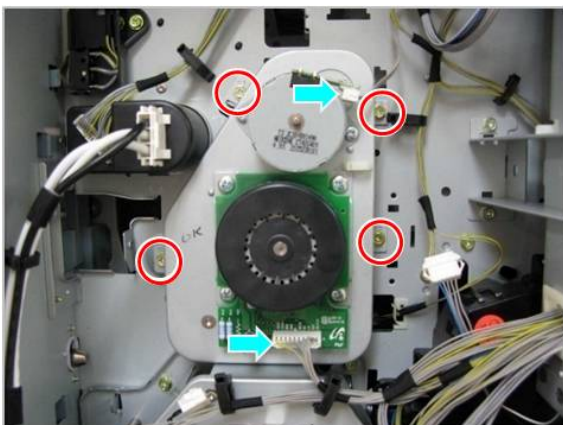
3.3.11. FDB board

1. Remove the rear cover. (Refer to 3.3.2)
2. Remove the SMPS cover after removing 4 screws.
3. Unplug all connectors on FDB board. Remove 4 screws. And remove the FDB board.



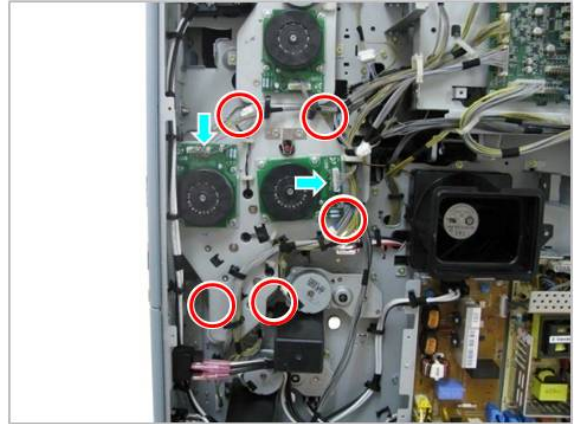
3.3.12. Fuser_Exit Drive Unit

1. Remove the rear cover. (Refer to 3.3.2)
2. Unplug 2 connectors. Remove 4 screws. And remove the Fuser/Exit Drive unit.



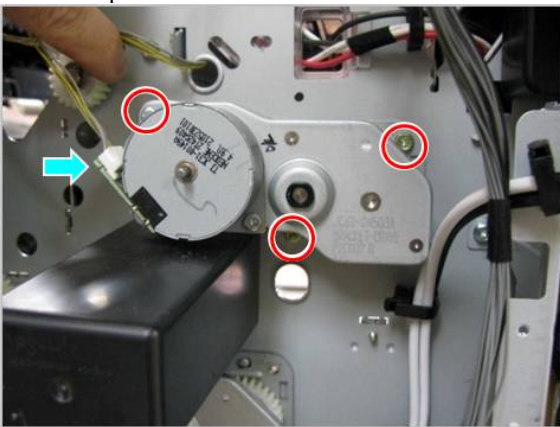
3.3.13. Main Drive Unit

1. Remove the Imaging Unit.
2. Remove the rear cover. (Refer to 3.3.2)
3. Open the side cover.
4. Unplug 2 connectors. Remove 5 screws. And remove the Main Drive unit.



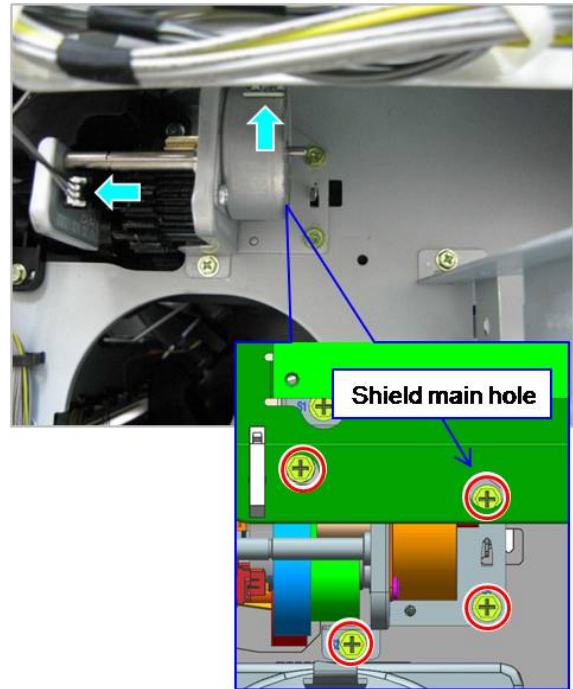
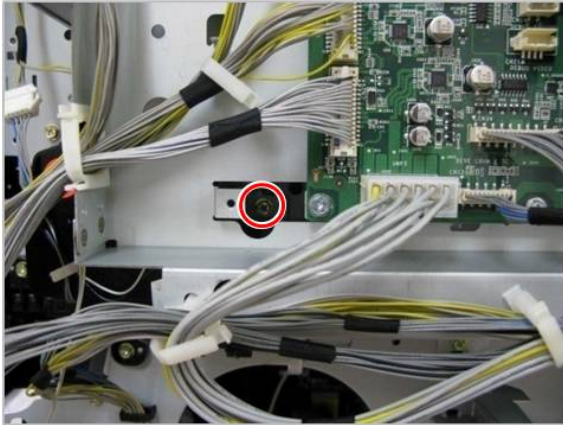
3.3.14. Pick-up Drive unit

1. Remove the rear cover. (Refer to 3.3.2)
2. Unplug the connector. Remove 3 screws. And remove the Pick-up Drive unit.



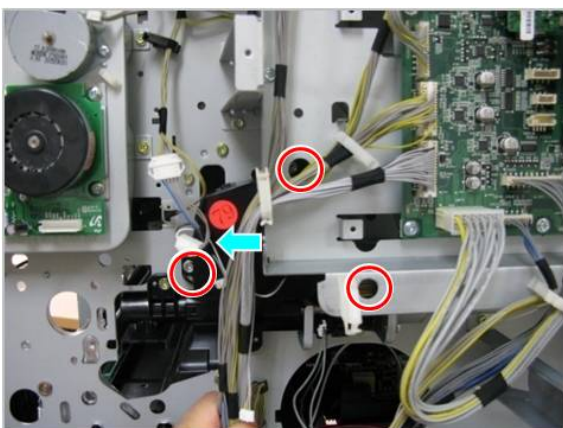
3.3.15. Toner Duct Drive Unit

1. Remove the rear cover. (Refer to 3.3.2)
2. Remove 1 screws.
3. Unplug 2 connectors. Remove 4 screws. And remove the Toner Duct Drive unit.



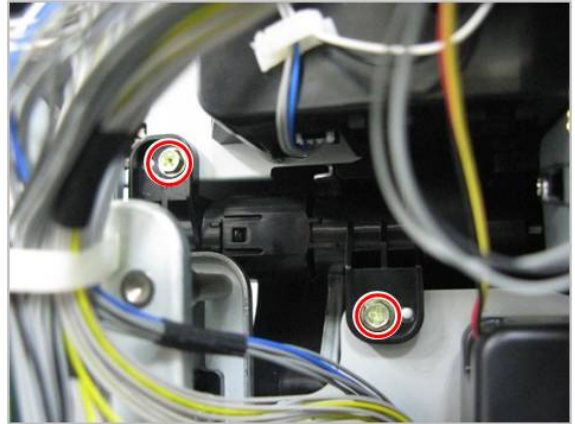
3.3.16. Toner Supply Drive Unit

1. Remove the rear cover. (Refer to 3.3.2)
2. Unplug the connector. Remove 3 screws. And remove the Toner Supply Drive unit.



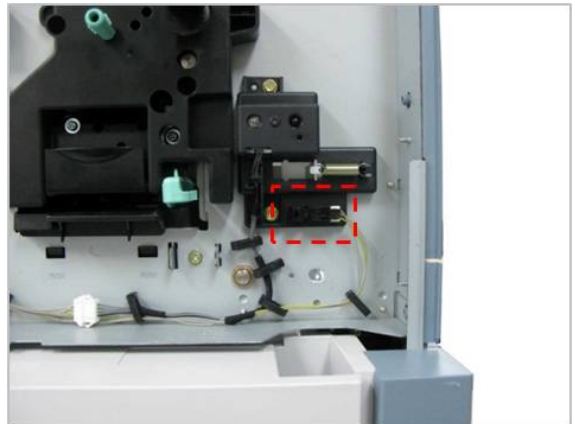
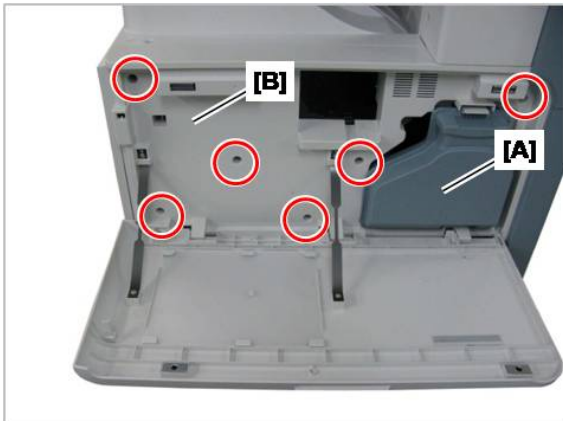
3.3.17. Toner Duct

1. Remove the toner cartridge and imaging unit.
2. Remove the rear cover. (Refer to 3.3.2)
3. Remove the Main Drive unit and Toner Drive unit. (Refer to 3.3.14 and 3.3.17)
4. Remove the Toner Duct after removing 2 screws.



3.3.18. Waste Toner Container sensor

1. Open the front cover. Remove the waste toner container[A].
2. Remove the inner cover[B] after removing 6 screws.
3. Unplug the connector. Remove the sensor.

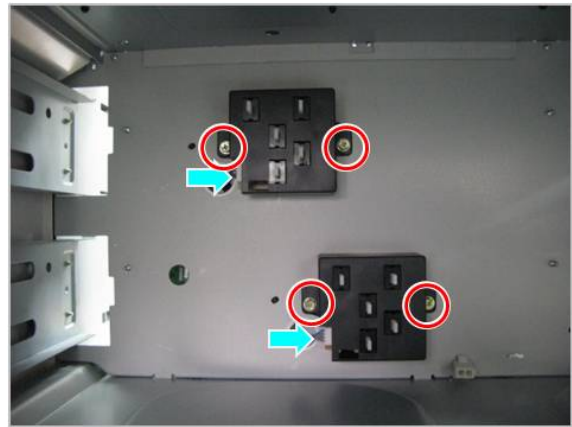


3.3.19. Auto Size Sensor

1. Remove the tray1 and tray2.



2. Unplug the connector. Remove 2 screws. And then remove the sensor.

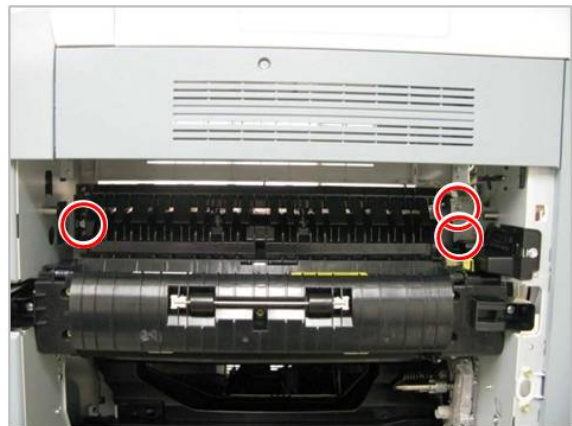


3.3.20. Exit Unit

1. Open the side cover. Unplug the Exit unit connector.



2. Remove the Exit unit after removing 3 screws.



3.3.21. Eraser PBA

1. Open the front cover. Remove the waste toner container and imaging unit.

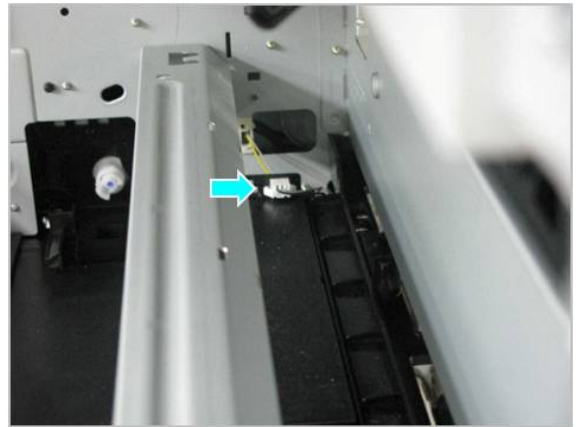
2. Remove 1 screw.



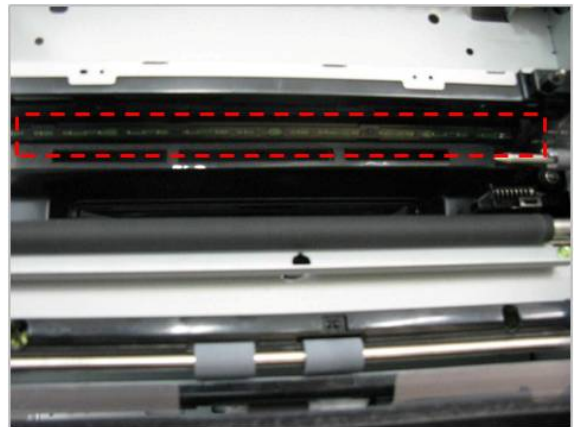
3. Remove the Exit cover after removing 1 screw.



4. Unplug the connector.

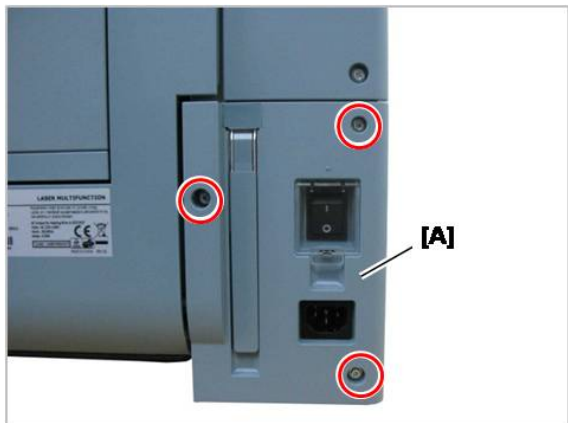


5. Remove the Eraser sensor.

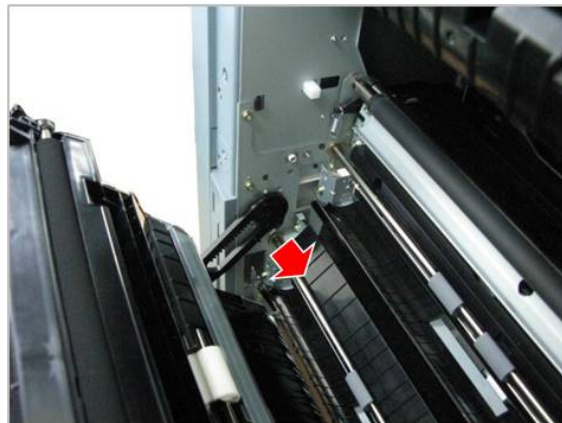


3.3.22. Side Unit

1. Remove the cover [A] after removing 3 screws.



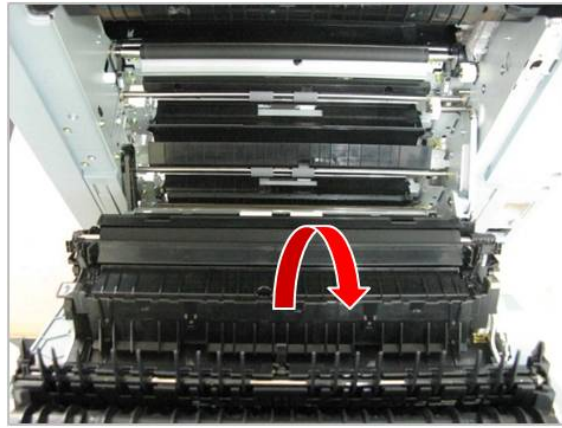
4. Release the left stopper.



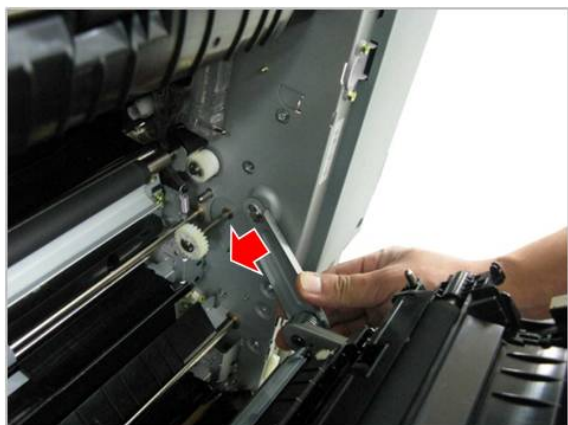
2. Unplug the side unit connector.



5. Remove the Side Unit.

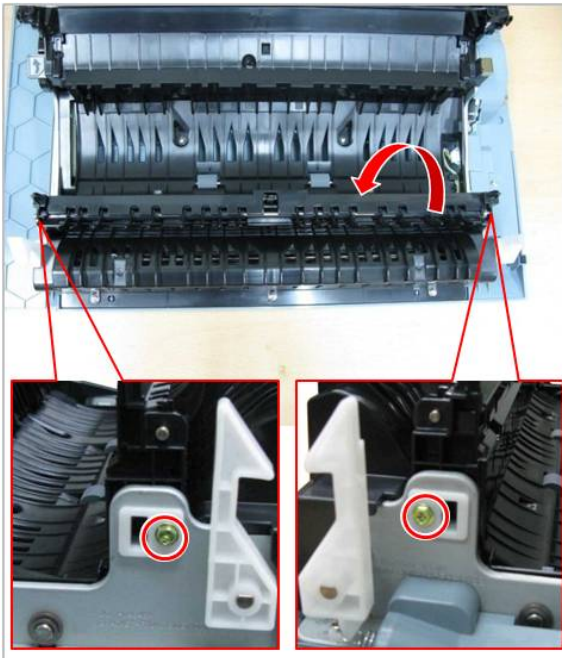


3. Release the right stopper.

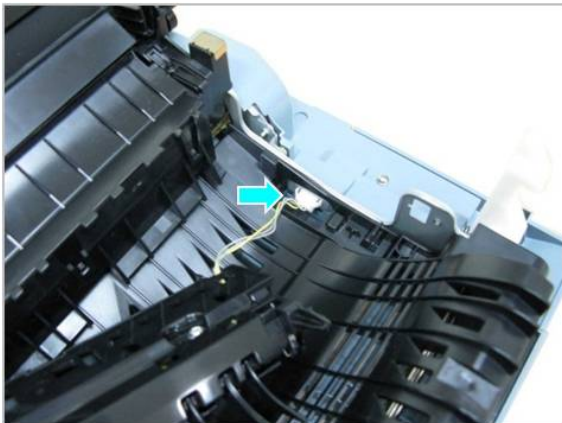


3.3.22.1. Fuser out sensor

1. Remove 2 screws from the both sides. Lift up the Cover-side exit.



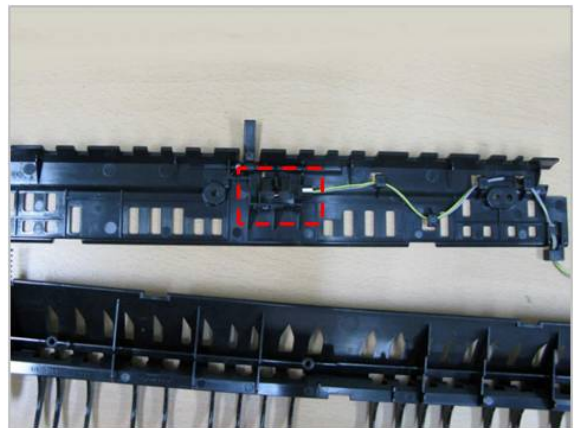
2. Remove the Cover-side exit after unplugging the connector.



3. Separate the Cover-side exit after removing 3 screws.



4. Unplug the connector. Remove the Fuser out sensor.

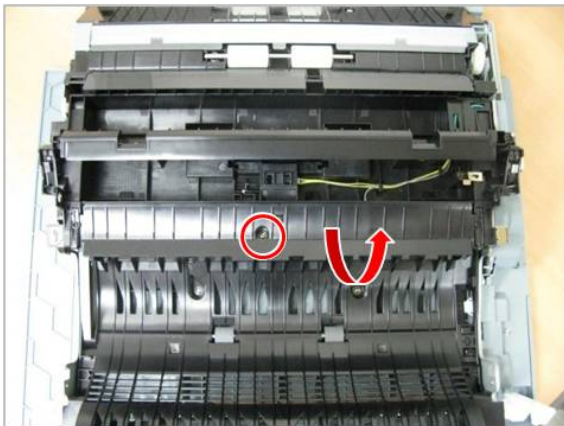


3.3.22.2. Temperature sensor and Duplex sensor

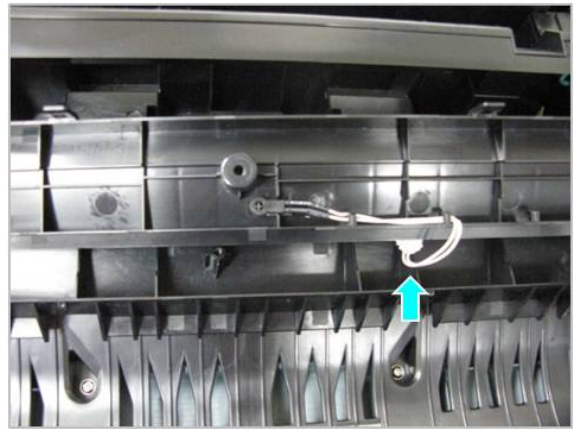
1. Remove the Transfer roller Assy.



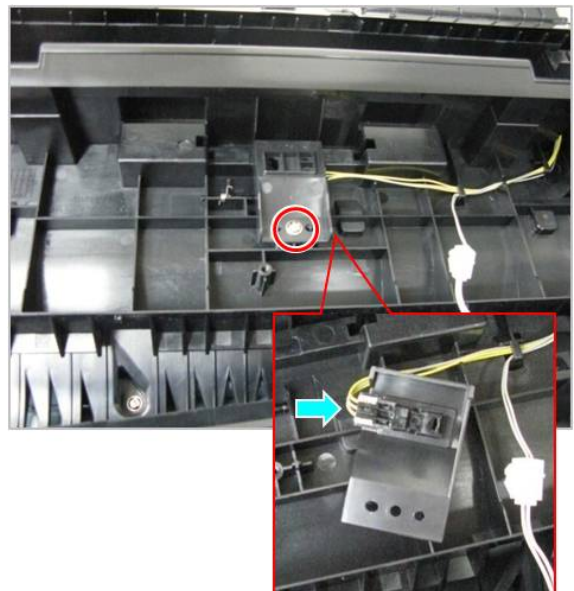
2. Turn up the Guide-TR Upper after removing 1 screw.



3. Remove the temperature sensor after unplugging the connector.

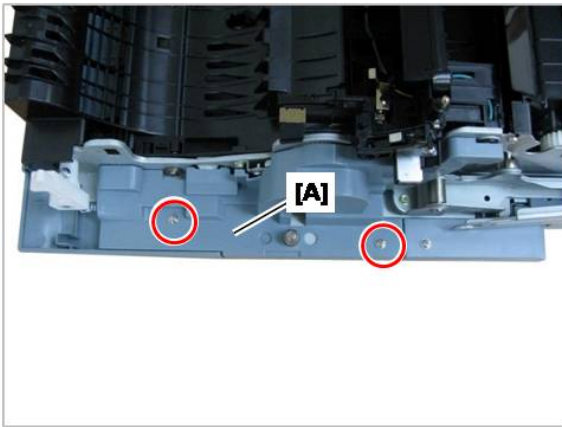


4. Remove 1 screw. Turn up the Holder-DUP SNR. And remove the duplex sensor after unplugging connector.

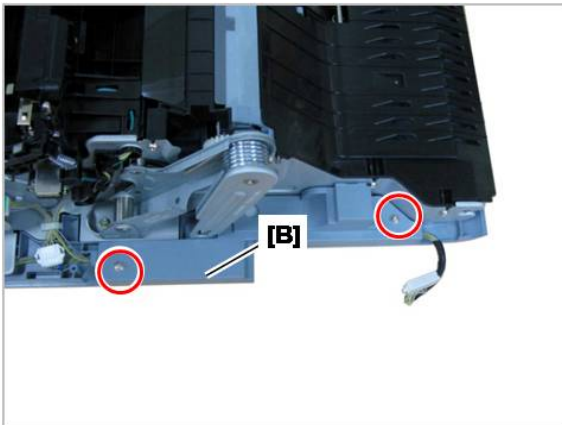


3.3.22.3. MP unit

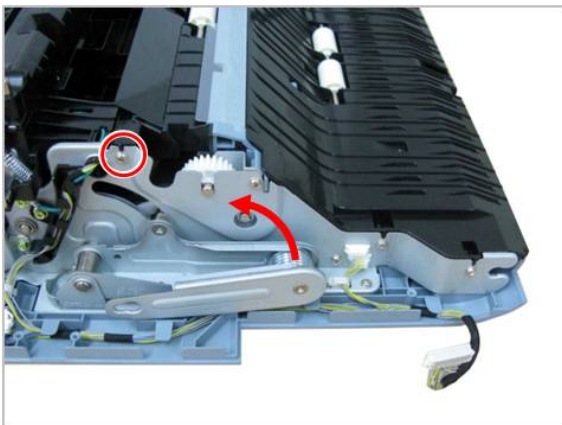
1. Remove the Harness-Cover Mono[A] after removing 2 screws.



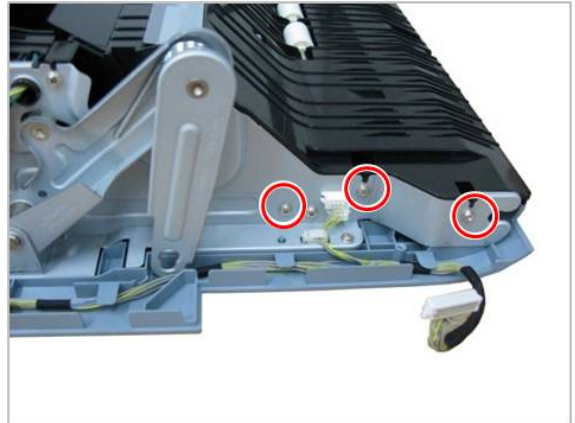
2. Remove the Harness-Cover Lower [B] after removing 2 screws.



3. Remove 1 screw. Stand the stopper.



4. Remove 3 screws.



5. Remove 1 screw.

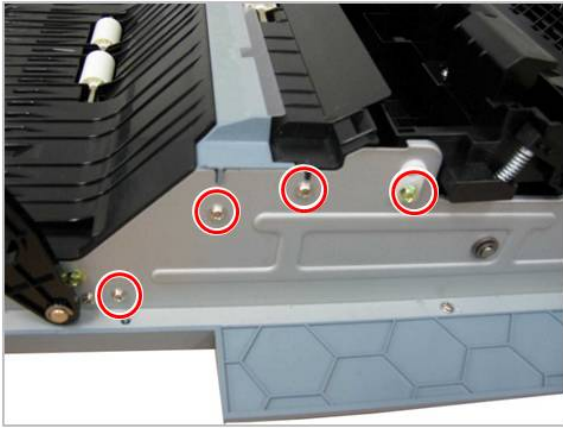


6. Remove 2 screws.

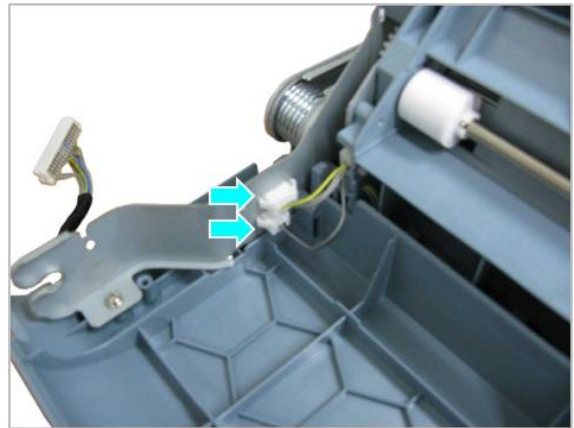


3. Disassembly and Reassembly

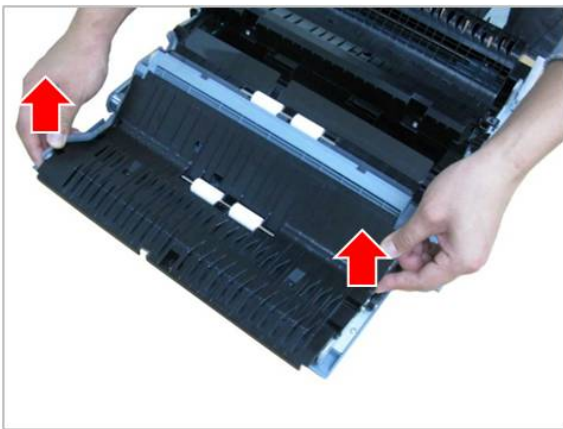
7. Remove 4 screws.



10. Unplug the connectors.



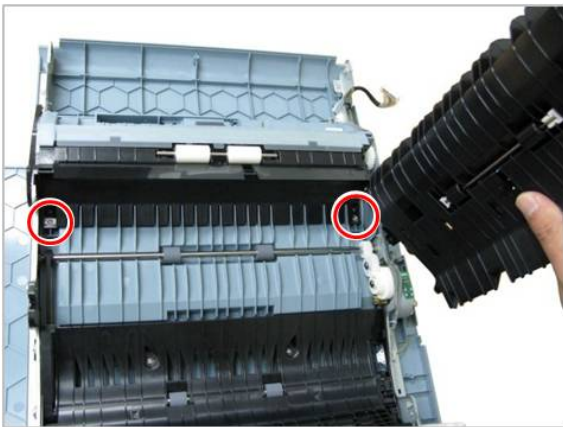
8. Lift up the Cover-Side Duplex Lower.



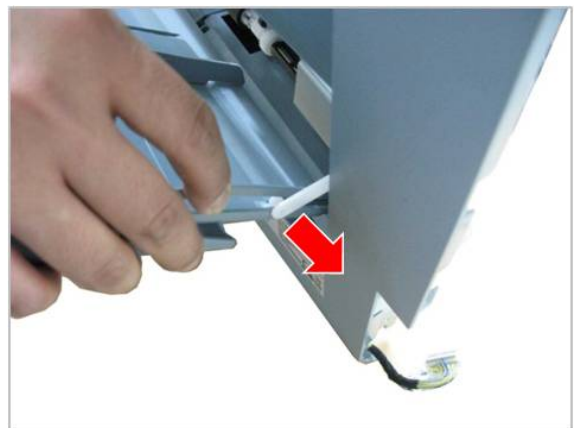
11. Remove the Cover-MP Front.



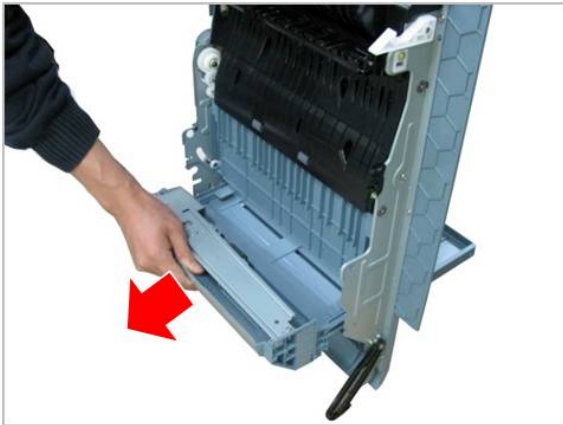
9. Remove 2 screws while you lift the Cover-Side Guide Feed.



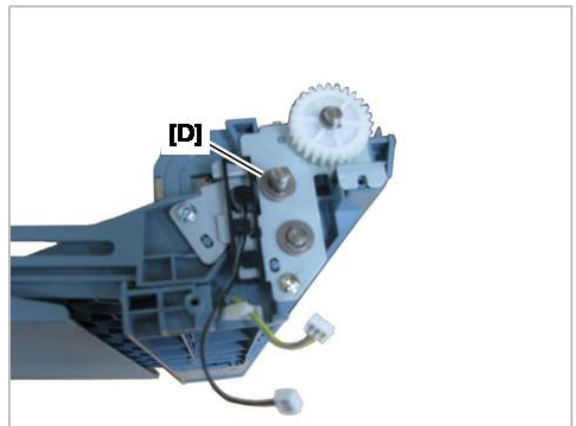
12. Release the Linker from the right of the MP tray.



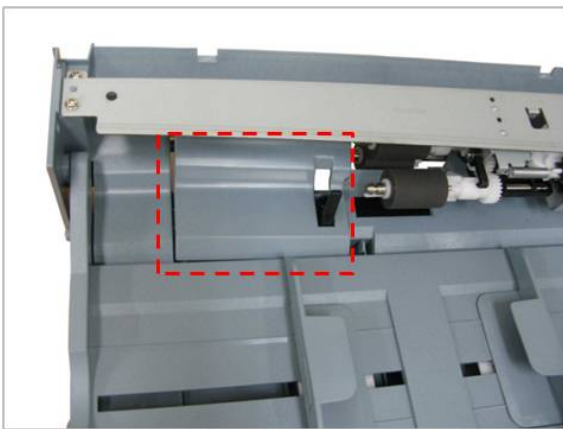
13. Remove the MP Unit.



16. Remove the Bush[D] after removing the E-ring.



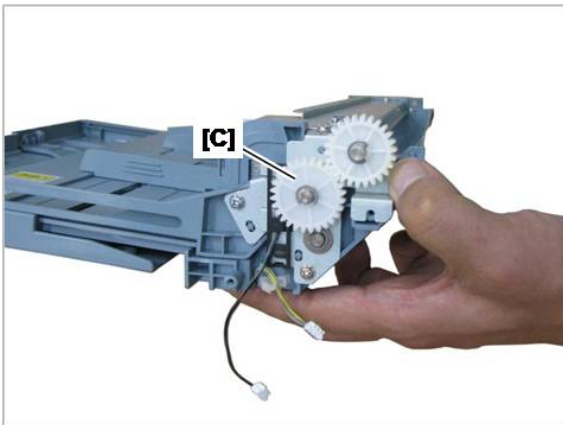
14. Remove the MP-cover base.



17. Remove the Bracket-Solenoid after removing 1 screw.



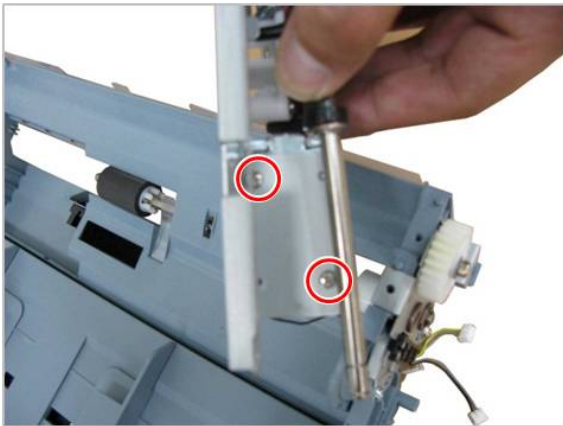
15. Remove the gear [C] after removing the E-ring.



18. Release the MP bracket pick-up after removing 4 screws.



19. Remove the MP solenoid after removing 2 screws.



3.3.23. Fuser unit

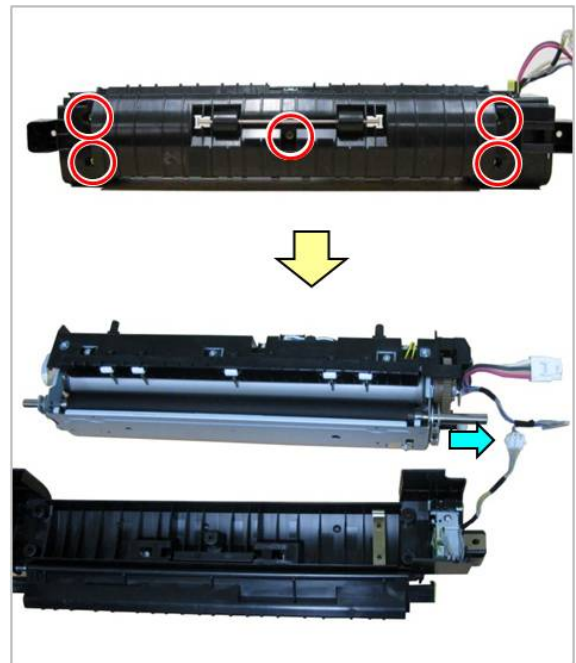
1. Remove 3 screws. Remove the cover[A]. And remove the fuser unit after unplugging the connector.



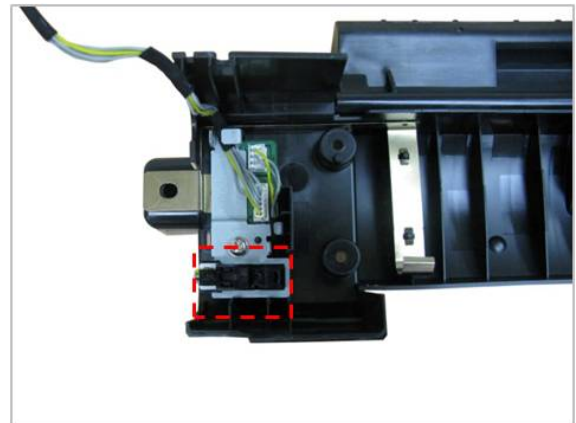
2. Remove 2 screws from the both sides. Remove both side covers.



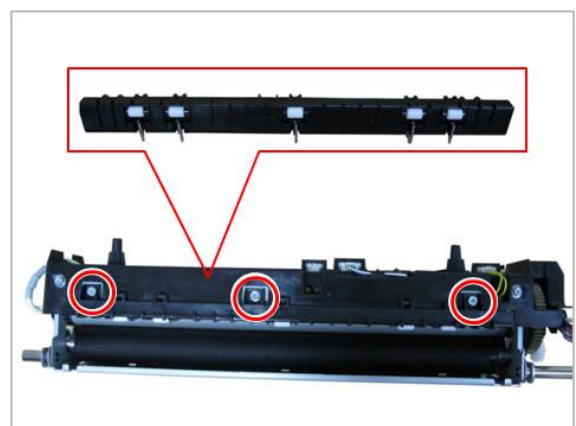
3. Remove 5 screws. Separate the Frame-Upper from the Frame-Lower. Unplug the connector.



4. Remove the Fuser-Pressure sensor after unplugging the connector.



5. Remove the Fuser Output HR after removing 3 screws.

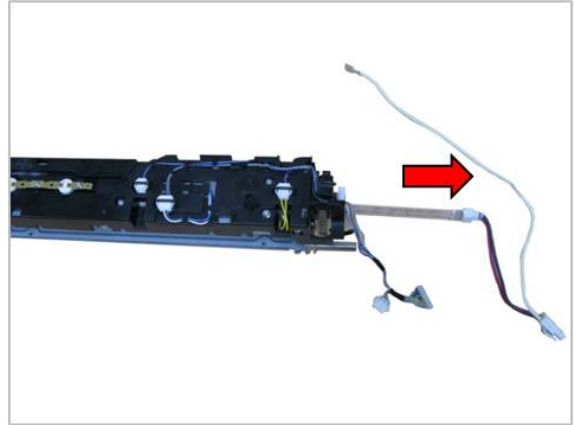


3. Disassembly and Reassembly

6. Remove the Lamp bracket after removing 1 screw.



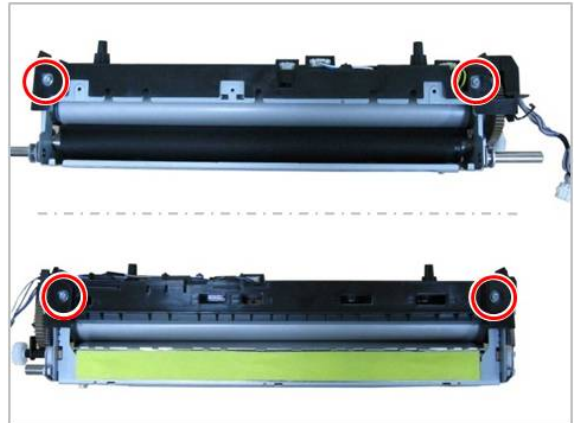
9. Pull the halogen lamp to the direction of arrow.



7. Unplug the thermostat connector. Remove 1 screw. And remove the Lamp bracket.



10. Remove 4 screws from the front and rear of the Frame lower.



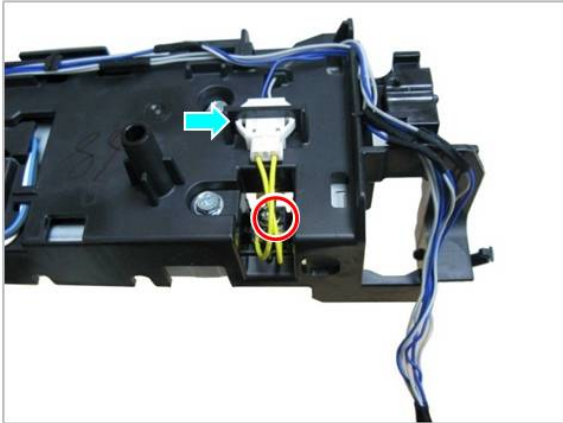
8. Unplug the opposite thermostat connector.



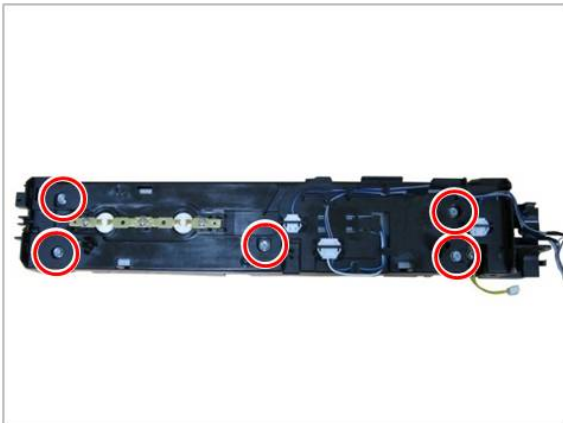
11. Lift and release the Frame lower.



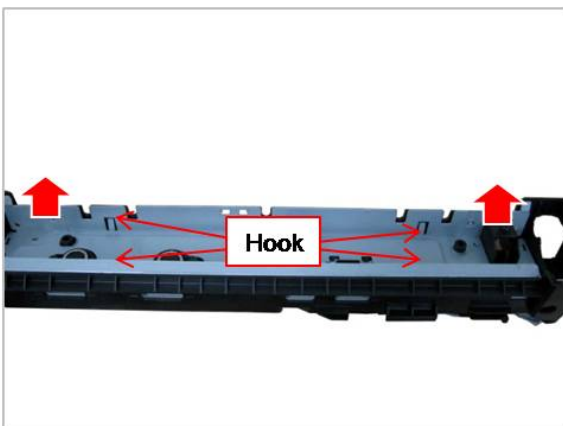
12. Unplug the connector. Remove 1 screw. And remove the thermistor.



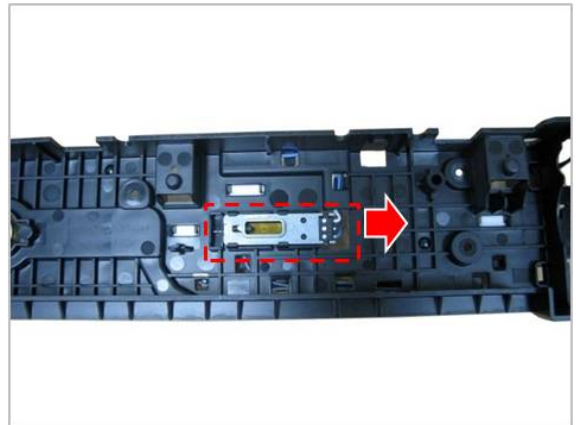
13. Remove 5 screws.



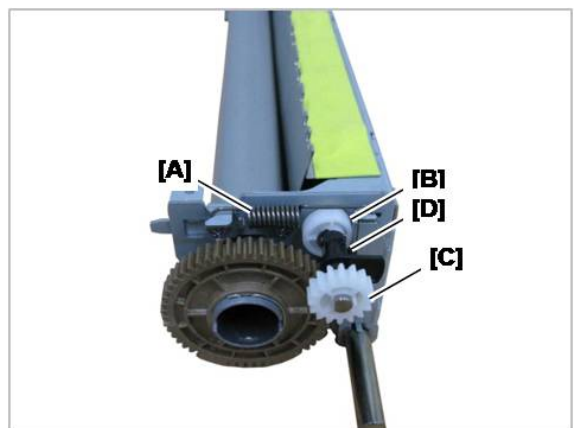
14. Lift and release the bracket after releasing 4 hooks.



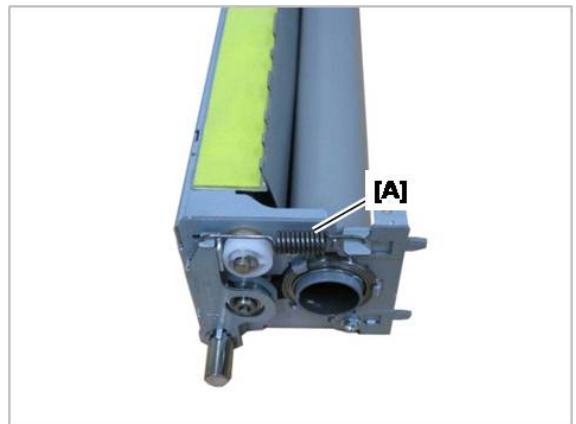
15. Release the NC sensor.



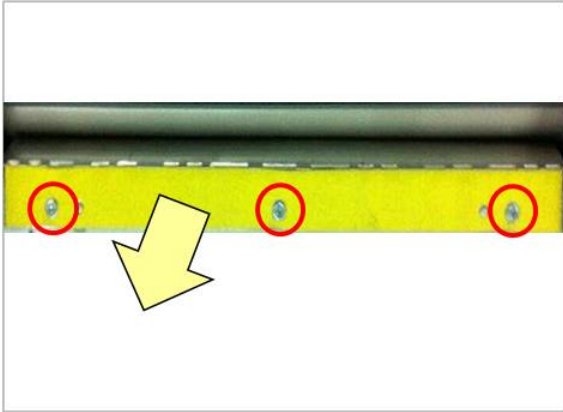
16. Remove the Spring[A], Cam[B], and Gear[C].



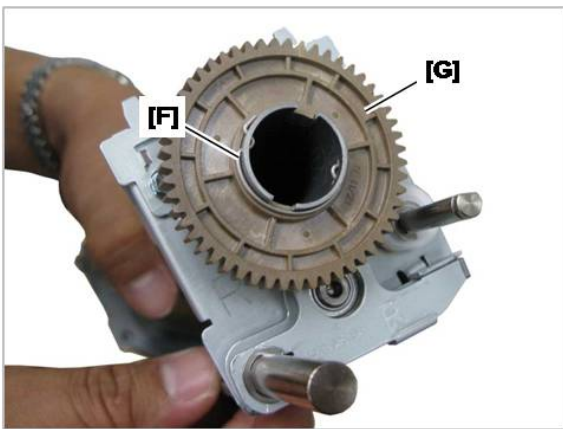
17. Remove the opposite spring[A].



18. Take off the yellow tape. Remove 3 screws.



19. Remove the gear[G] after removing the C-ring[F].



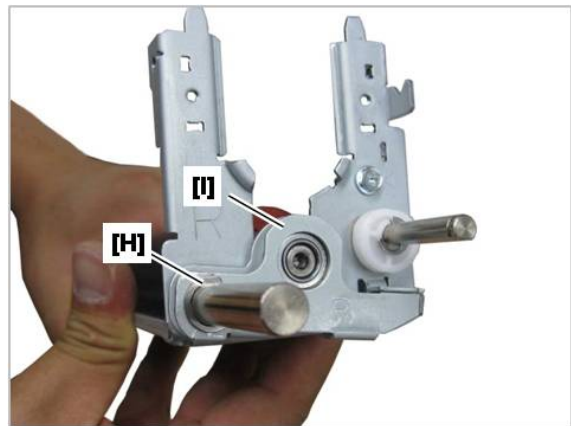
20. Remove 2 screws.



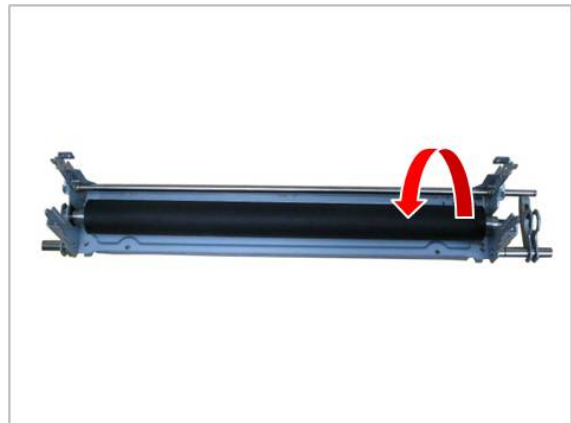
21. Remove 2 screws from the opposite side. Lift up the heat roller.



22. Remove the Spring bracket[I] after removing the E-ring [H].

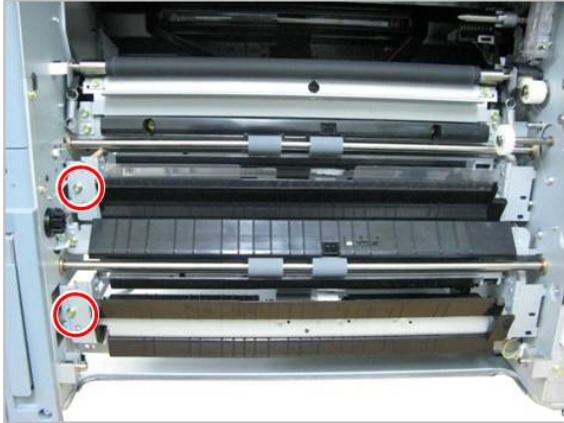


23. Remove the Pressure roller.

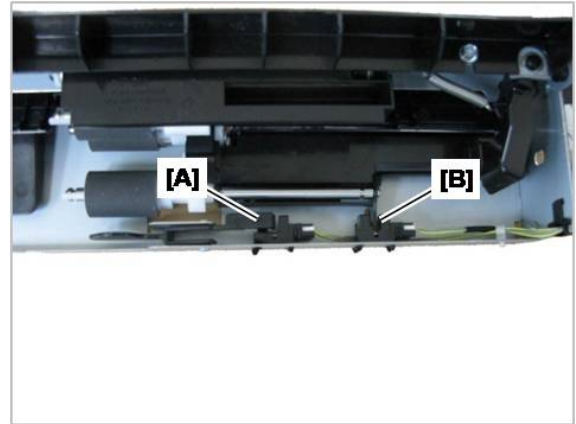


3.3.24. Pick-Up Unit and sensor

1. Remove the Side Unit. (Refer to 3.3.23)
2. Remove the Pick-up Unit1,2 after removing 2 screws.

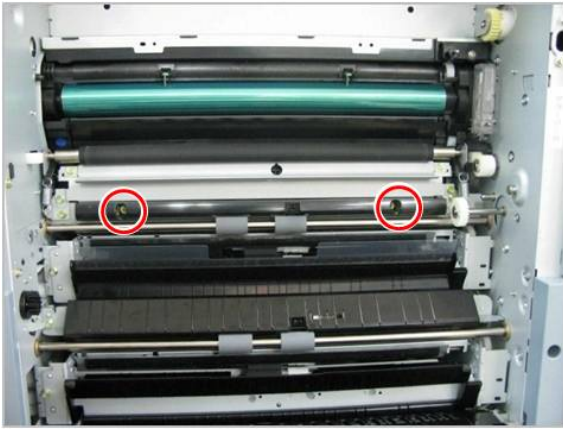


3. Release the sensor after unplugging the connector.
(Empty sensor[A], Level sensor[B])

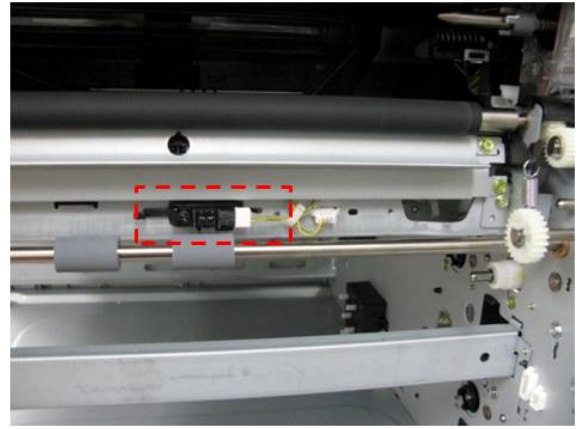


3.3.25. Pick-Up sensor

1. Remove the sensor cover after removing 2 screws.



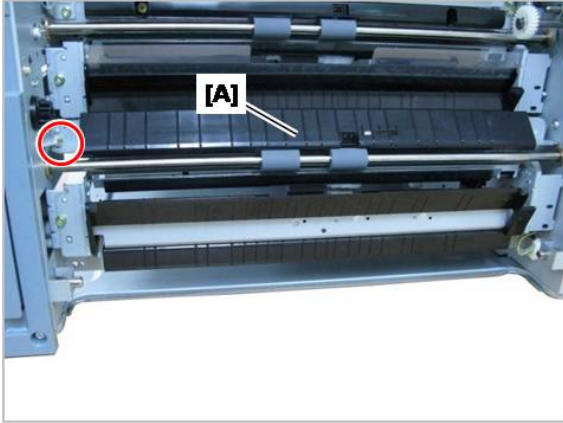
3. Remove the Pick-Up sensor after unplugging connector.



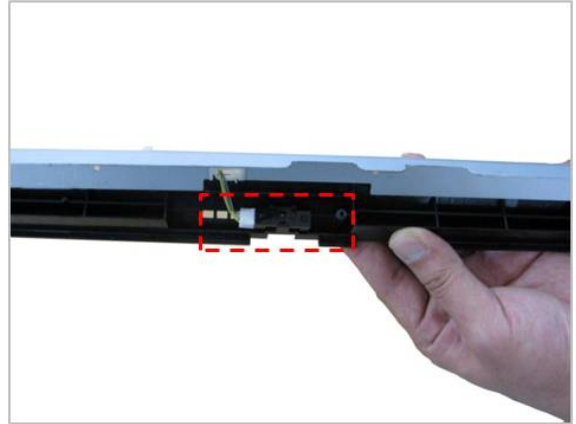
2. Release the sensor holder after removing 1 screw.

3.3.26. Feed Unit

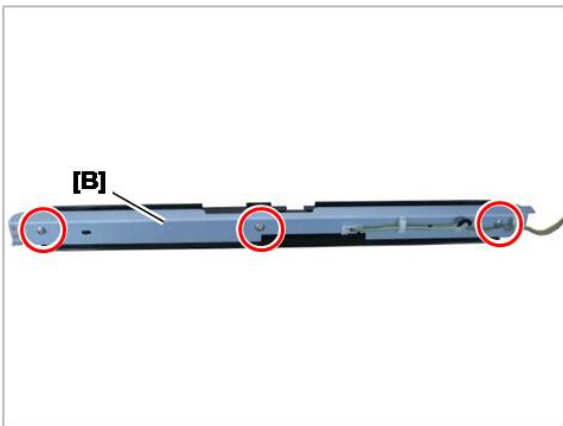
1. Remove the Side Unit. (Refer to 3.3.23)
2. Remove the Feed Unit[A] after removing 1 screw.



4. Remove the feed sensor after unplugging the connector.

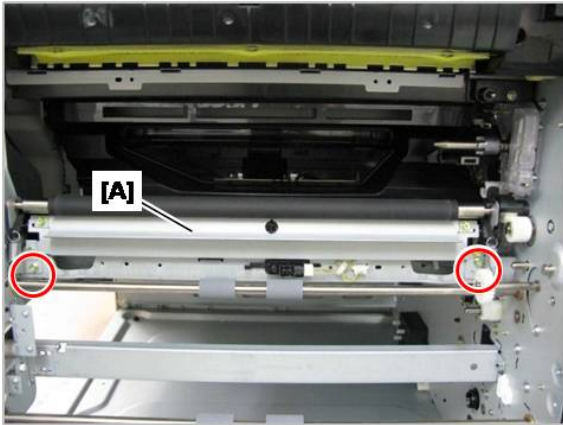


3. Remove the bracket[B] after removing 3 screws.



3.3.27. Registration(Regi.) Unit

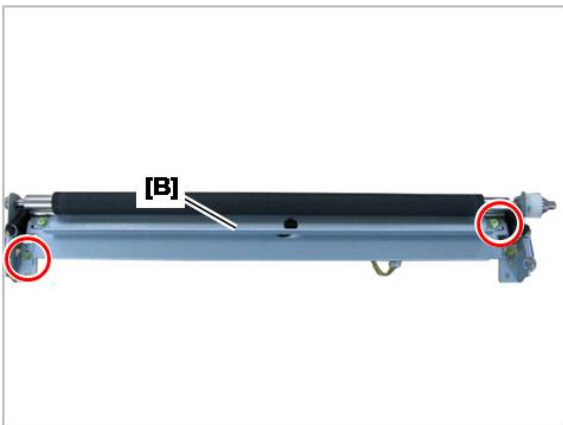
1. Remove the Side Unit. (Refer to 3.3.23)
2. Remove the Regi.unit [A] after removing 2 screws.



4. Remove the Regl. sensor after unplugging the connector.

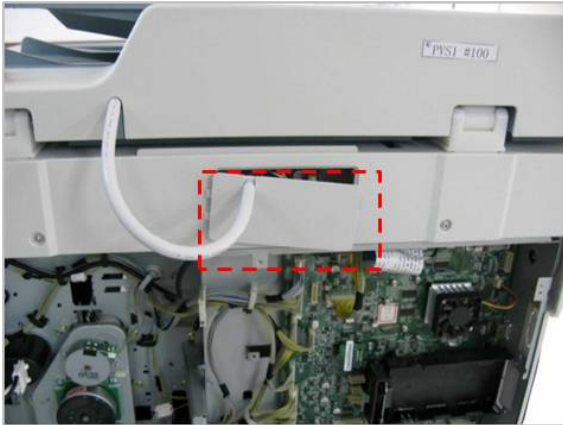


3. Remove the bracket[B] after removing 3 screws.



3.3.28. DADF Unit

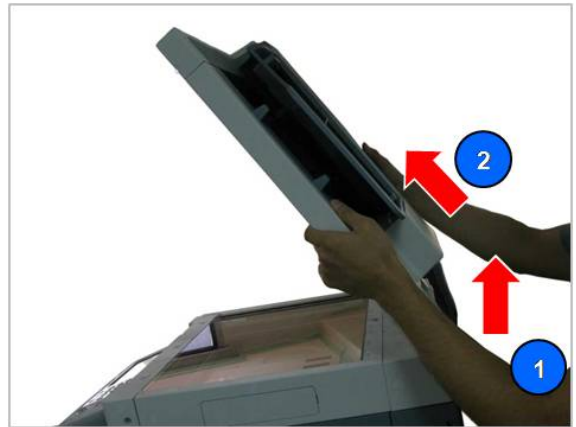
1. Remove the DADF connector cover.



2. Remove 1 screw. Unplug the connector.

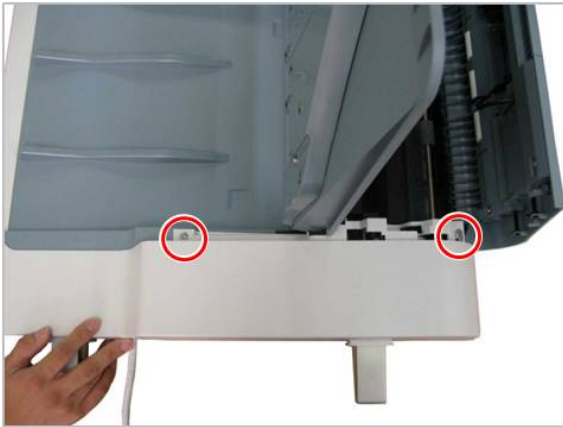


3. Lift up the DADF unit and release it to diagonal direction.



3.3.28.1. DADF Cover

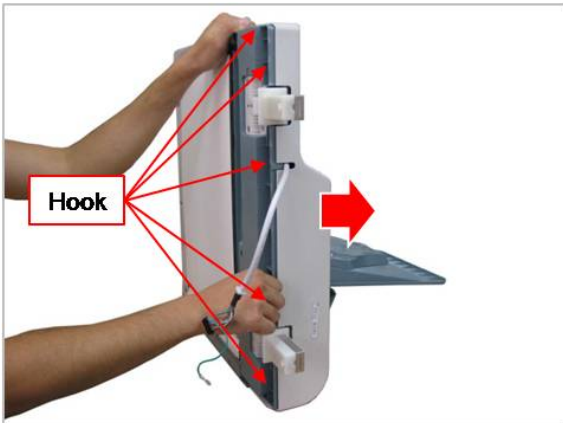
1. Open the Stacker and Cover-Open. Remove 2 screws.



4. Remove the Cover-Deco F.



2. Remove the Cover-Side R by releasing the bottom hooks.



5. Remove 2 screw.



3. Remove 3 screws.



6. Release the hook from the bottom.

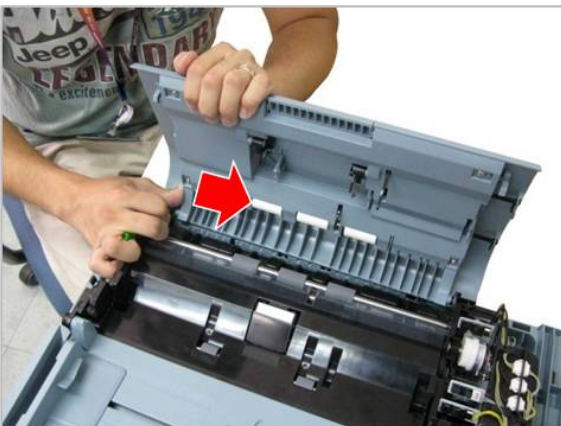


7. Remove the Cover-Side F.



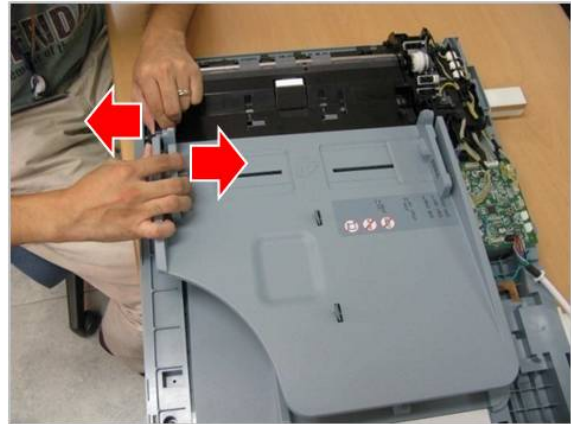
3.3.28.2. DADF Open Cover

1. Remove the DADF cover. (Refer to 3.3.29.1)
2. Release the DADF Open Cover by pushing it to the direction of arrow.



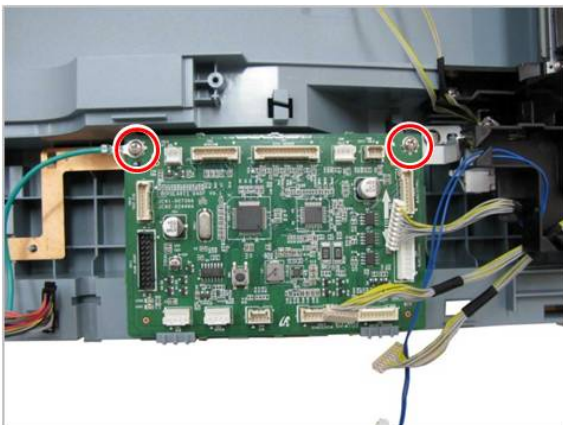
3.3.28.3. DADF Stacker

1. Remove the DADF cover. (Refer to 3.3.29.1)
2. Release the Stacker by pushing it and its holder in the opposite direction.



3.3.28.4. DADF Main board

1. Remove the Cover-Side R. (Refer to 3.3.29.1)
2. Unplug all connectors on the board.
3. Remove the DADF main board after removing 2 screws.

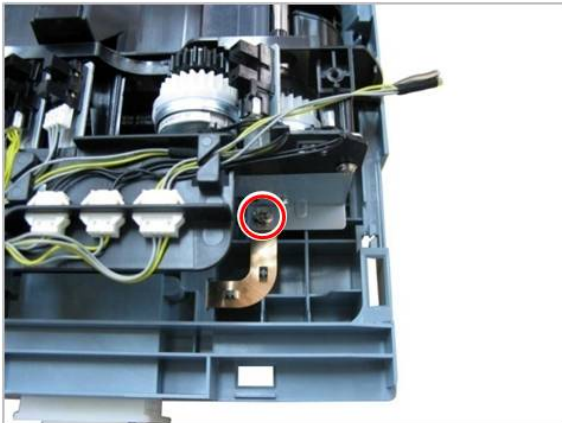


3.3.28.5. DADF motor_solenoid_clutch

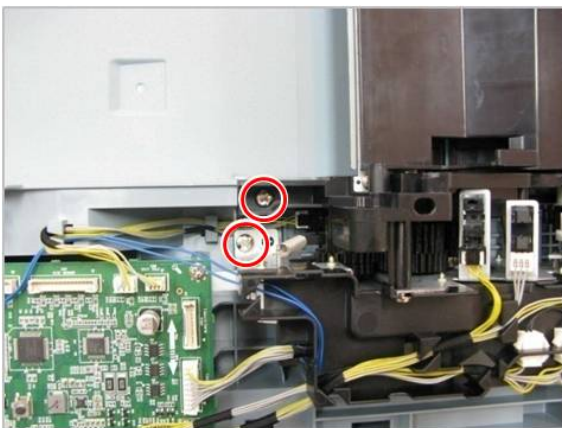
1. Remove the DADF cover. (Refer to 3.3.29.1~3)
2. Unplug all connectors on the DADF board.



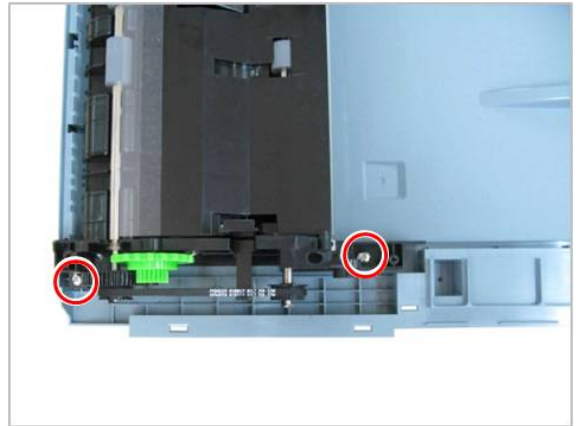
3. Remove 1 screw.



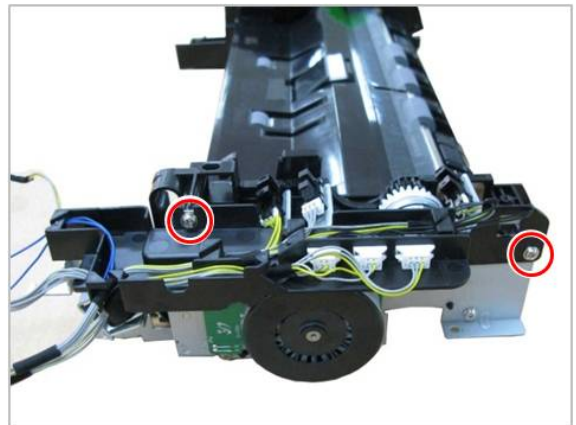
4. Remove 2 screws.



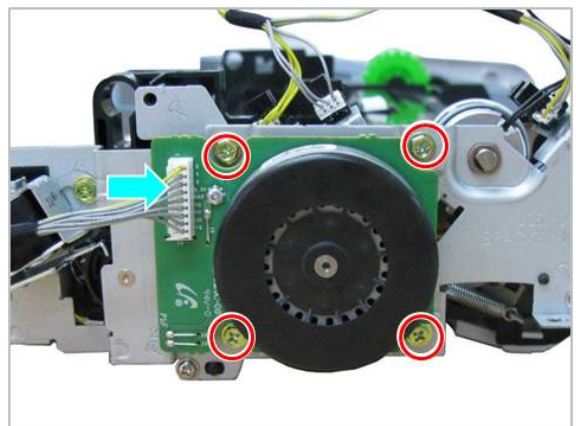
5. Lift up and release the DADF Frame Main after removing 2 screws.



6. Release the harness holder after removing 2 screw.

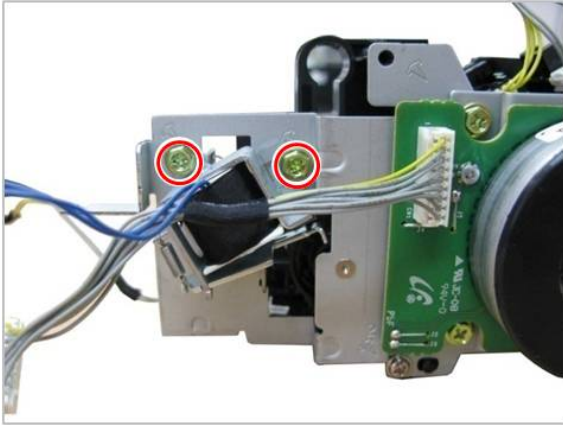


7. Unplug the connector. Remove 4 screws. And release the motor.

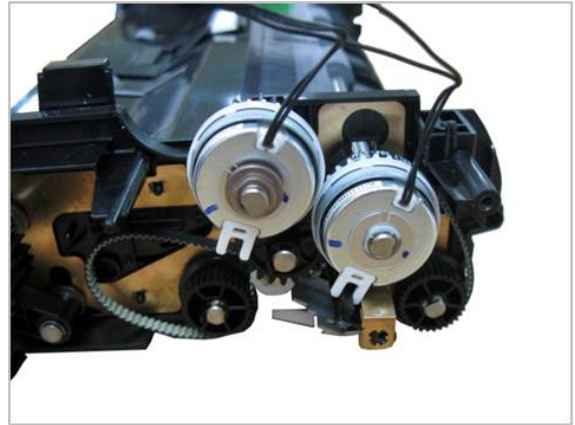


3. Disassembly and Reassembly

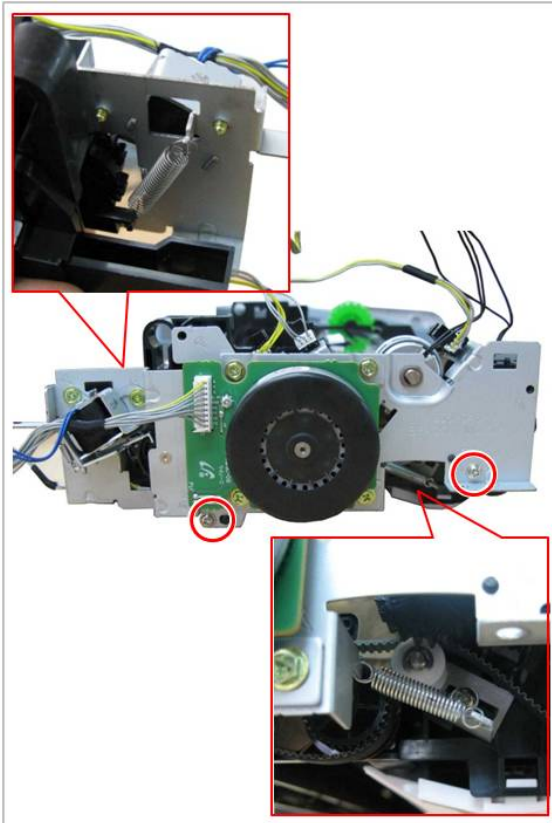
8. Release the solenoid after removing 2 screws.



10. Remove the clutch.

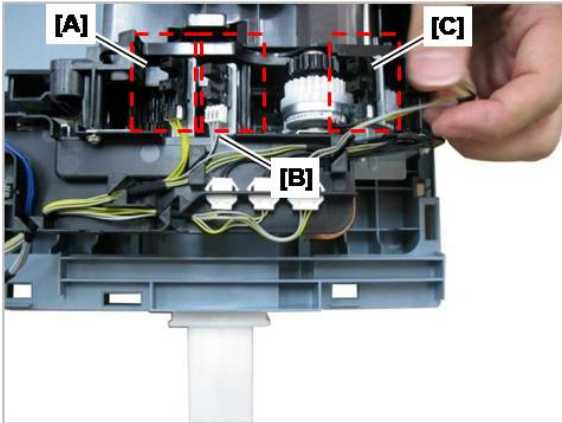


9. Remove 2 springs. Remove 2 screws. And release the bracket.



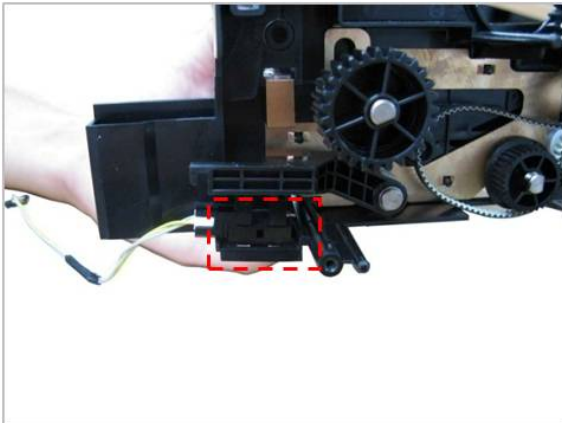
3.3.28.6. DADF Regi_Cover_Detect sensor

1. Release the corresponding sensor after unplugging connector.
 - A : Detect Sensor
 - B : Cover Sensor
 - C : Registration Sensor



3.3.28.7. DADF Exit Idle sensor

1. Remove the motor bracket. (Refer to 3.3.29.4)
2. Remove the sensor after unplugging the connector.



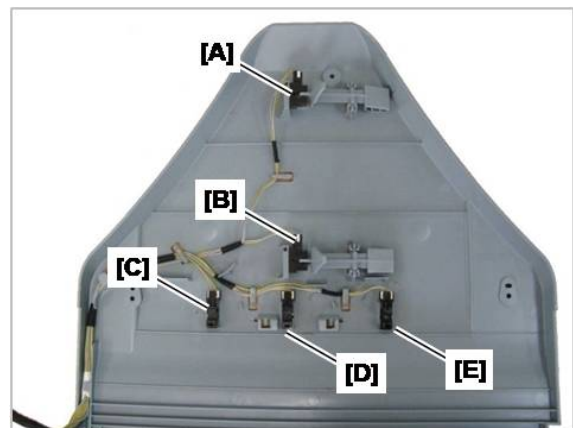
3.3.28.8. DADF Exit sensor

1. Remove the DADF Frame-Main. (Refer to 3.3.29.4)
2. Remove the sensor after unplugging the connector.



3.3.28.9. DADF Length_Width sensor

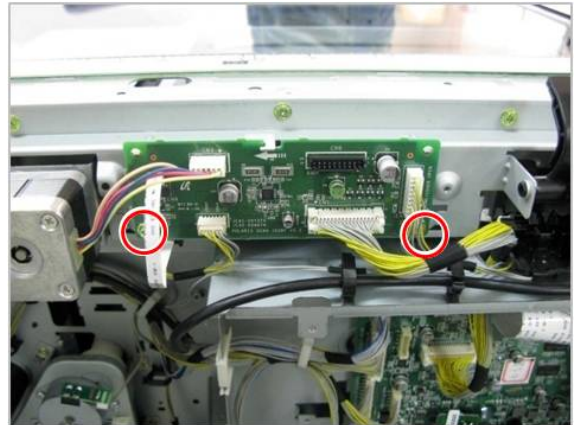
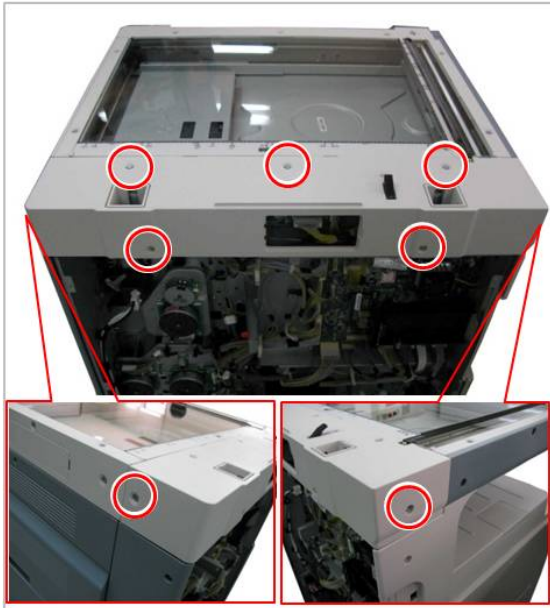
1. Remove the DADF Stacker. (Refer to 3.3.29.3)
2. Release the sensor cover after removing 3 screws.
3. Remove the defective sensor after unplugging the connector.
 - A, B : Paper Length Sensor
 - C, D, E : Paper Width Sensor



3.3.29. Scanner Unit

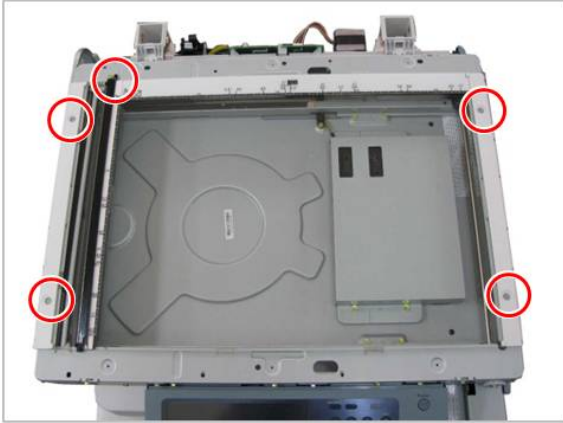
3.3.29.1. Scanner joint board

1. Remove the DADF unit. (Refer to 3.3.29)
2. Remove the Scan-Rear cover after removing 7 screws.
3. Unplug all connector. Remove 2 screws. And release the scanner joint board.

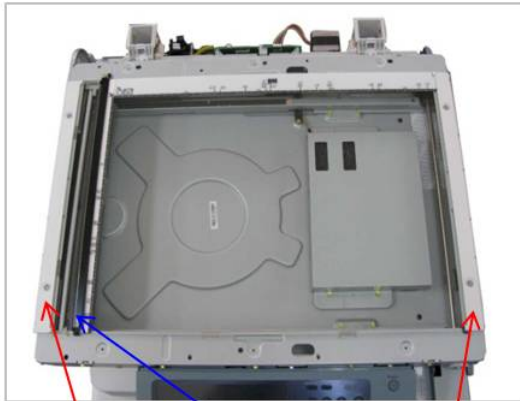


3.3.29.2. Scan glass

1. Open and stand the DADF unit at 90 degree angle.
2. Remove 5 screws.



3. Remove 2 COVER-GLASS and ADF GLASS.



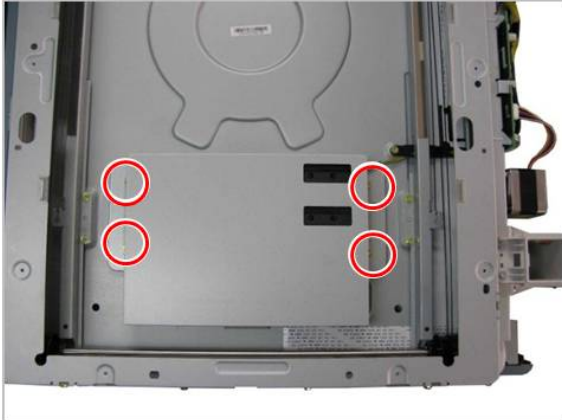
ADF-GLASS
Cover-GLASS **Cover-GLASS**

4. Lift up and release the scan glass.

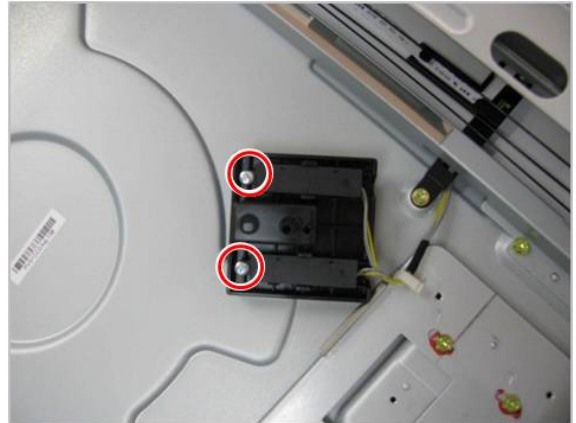


3.3.29.3. APS sensor

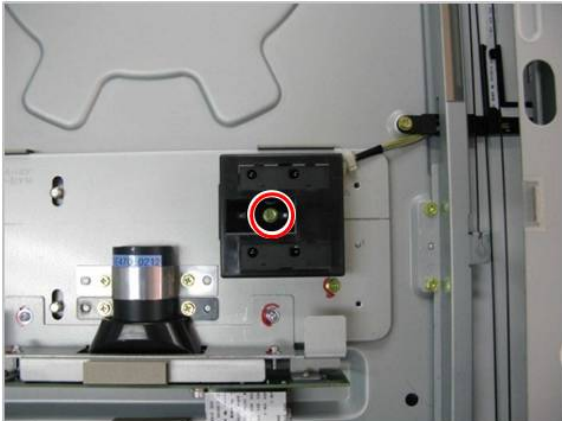
1. Remove the scan glass. (Refer to 3.3.30.2)
2. Remove the align cover after removing 4 screws.



4. Release the APS sensor after remove 2 screws.

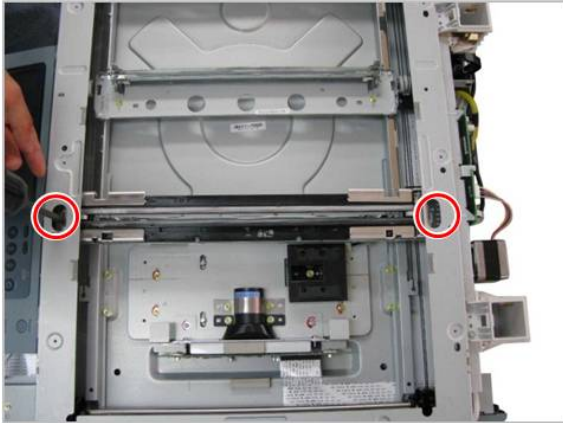


3. Remove 1 screw. Turn over the holder.



3.3.29.4. FR module

1. Remove the scan glass. (Refer to 3.3.30.2)
2. Remove 2 screws.



4. Unplug the harness.

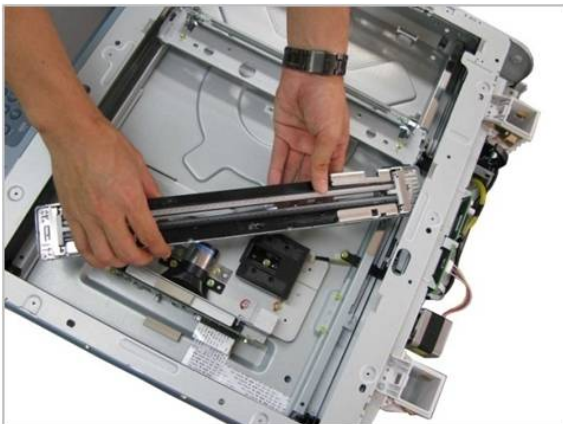


 **NOTE**

Before removing the below screw, mark the current gradation position to tighten the screw in the same position.



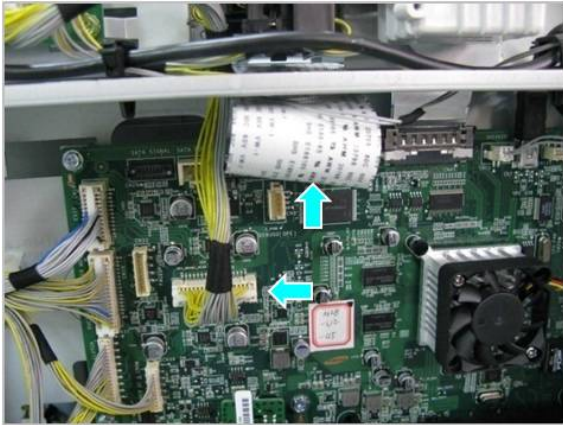
3. Release the FR module.



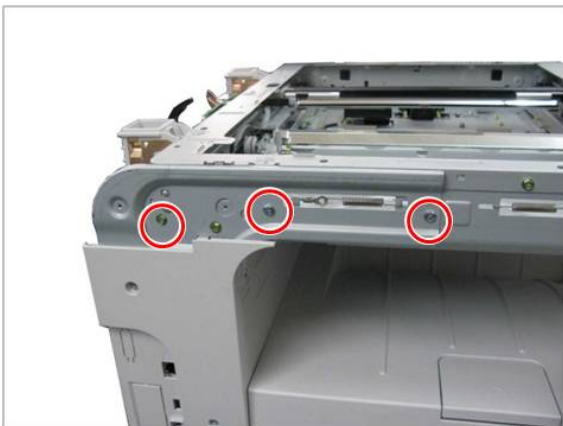
3.3.29.5. Scanner Assy

1. Remove the DADF unit and OPE unit. (Refer to 3.3.7 and 3.3.29)

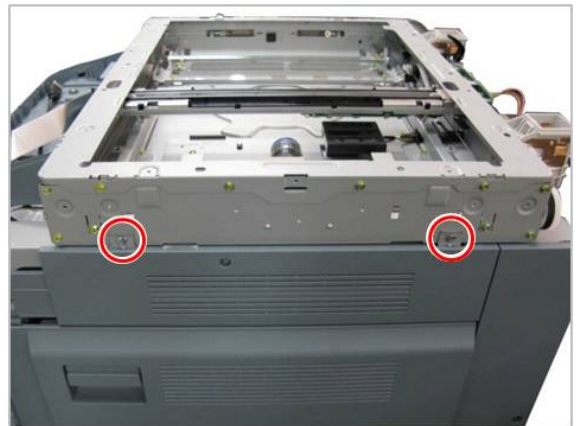
2. Unplug all connectors on the main board.



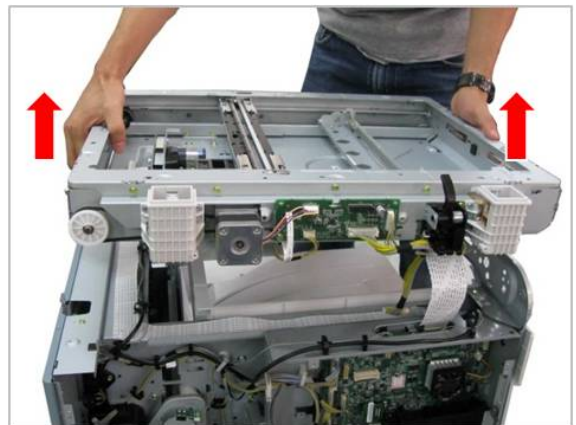
3. Remove 3 screws from the left.



4. Remove 2 screws from the right.

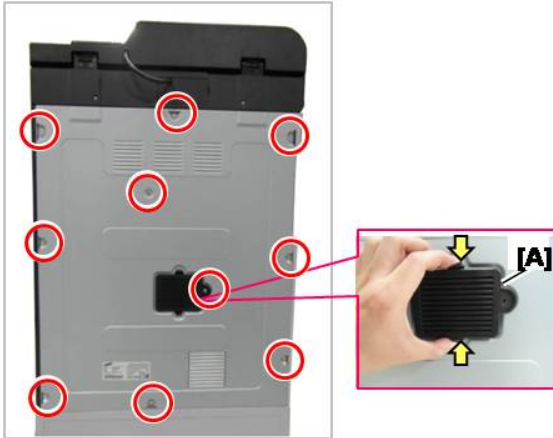


5. Lift up and release the scanner Assy.

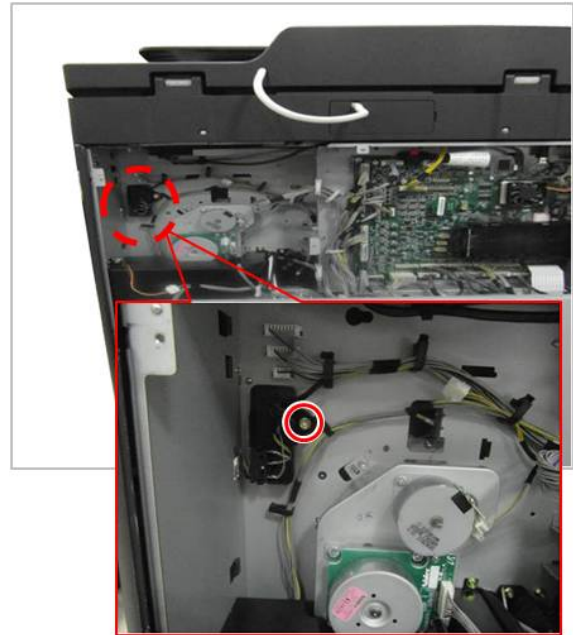


3.3.30. Side Cover Open Switch

1. Remove 10 screws.
2. Remove the rear cover after removing the ozone filter[A].

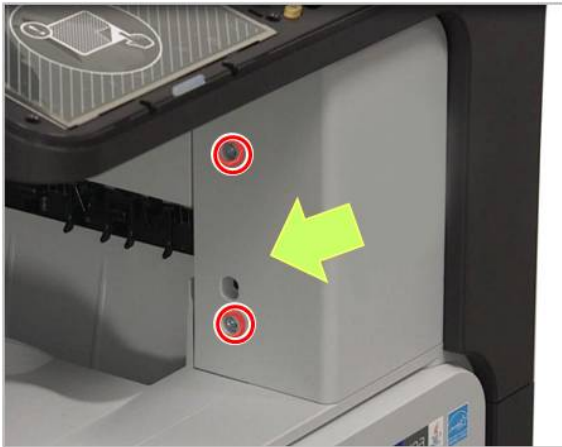


3. Release the side cover open switch after removing 1 screw.



3.3.31. Front Cover Open Switch

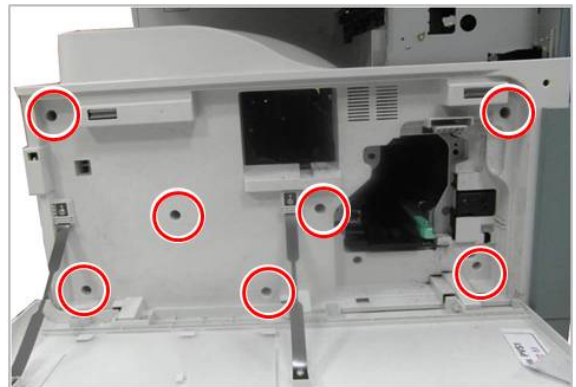
1. Remove the COVER FRONT TOP after removing 2 screws.



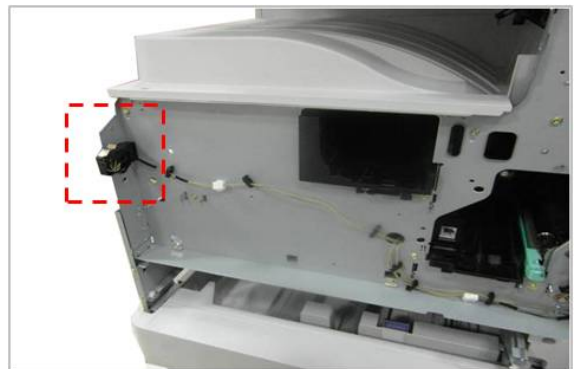
2. Remove the COVER FRONT TOP DECO after removing 2 screws.



3. Remove the inner cover after removing 7 screws.



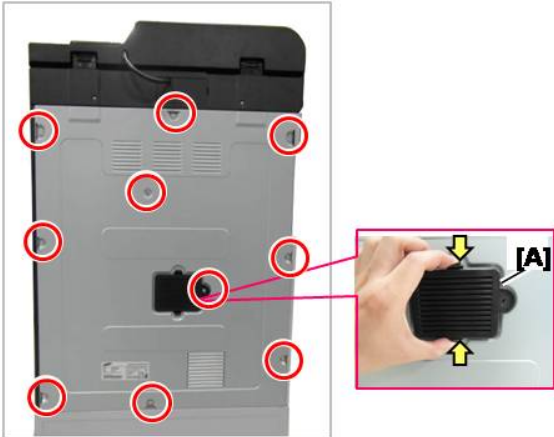
4. Remove the front cover open switch.



3.3.32. Hard Disk Drive (HDD)

3.3.32.1. Installing the HDD

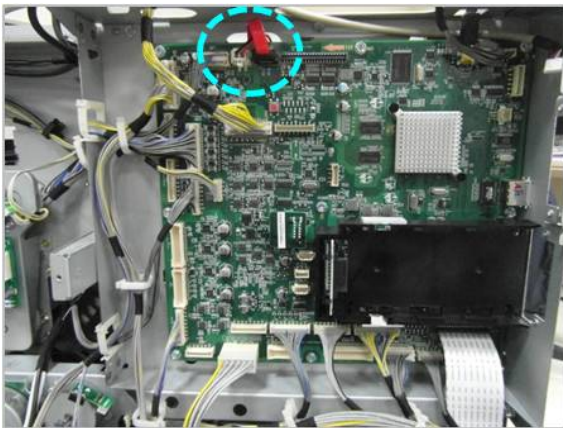
1. Remove 10 screws. Remove the ozone filter[A]. And remove the rear cover.



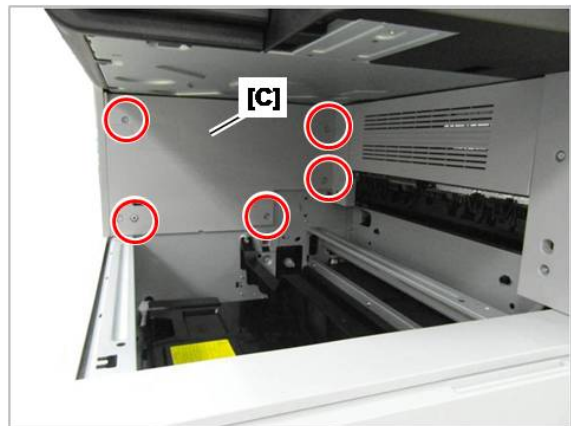
4. Remove the Exit-Cover[B] after removing 1 screw.



2. Connect 2 cables to the main board.



5. Remove the COVER-EXIT REAR [C] after removing 5 screws.



3. Remove the screw cover-sheet.



6. Prepare the HDD Assy.



7. Connect the cable. Tighten 4 screws.

3.3.32.2. Replacing the HDD

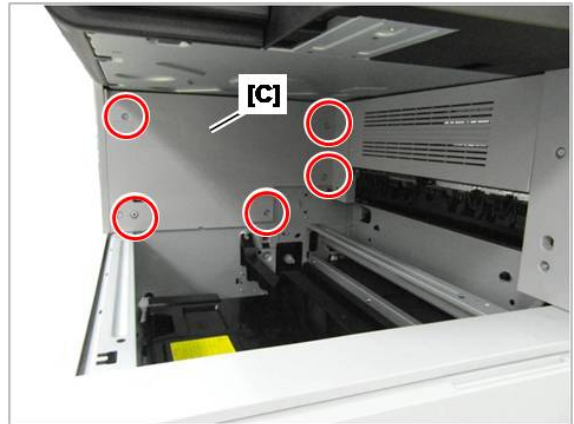
1. Remove the screw cover sheet.



2. Remove the Exit-Cover [B].



3. Remove the COVER-EXIT REAR [C] after removing 5 screws.



4. Remove 4 screws. Unplug the cable. And remove the HDD Assy.

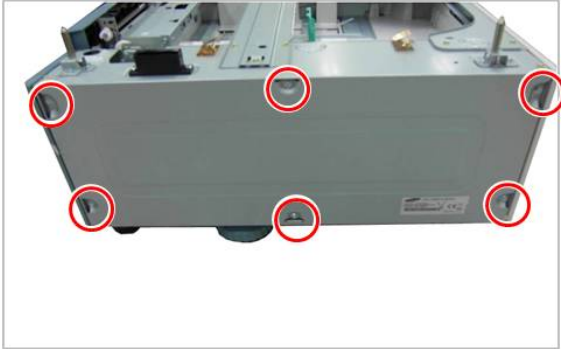


5. Install the new HDD Assy.

3.3.33. DCF (Double Cassette Feeder)

3.3.33.1. DCF main board

1. Remove the Bracket Rear Cover after removing 6 screws.

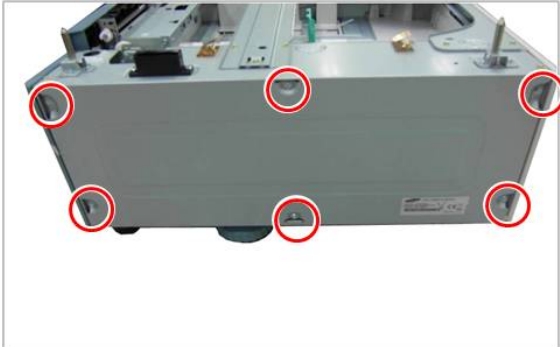


2. Unplug all connectors. Remove 4 screws. And release the DCF main board.

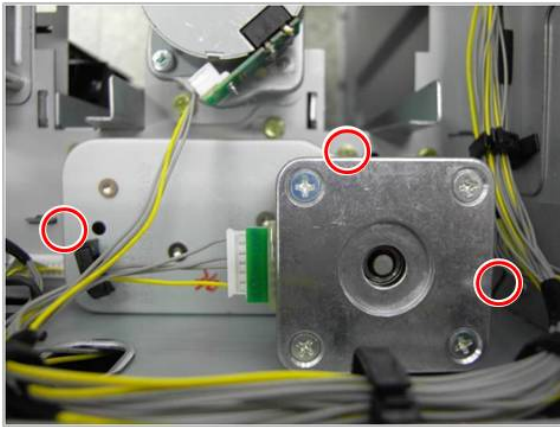


3.3.33.2. DCF Feed Motor

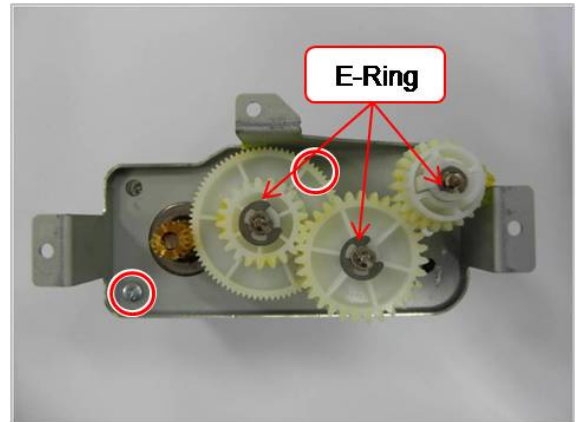
1. Remove the Bracket Rear Cover after removing 6 screws.



2. Unplug the connector. Remove 3 screws. And release the Feed Drive unit.

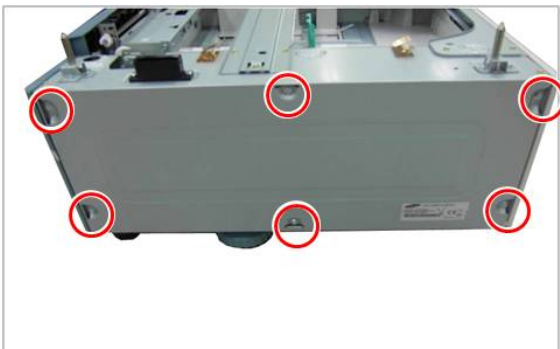


3. Remove 3 E-rings and 3 gears. Remove 2 screws. And release the feed motor.

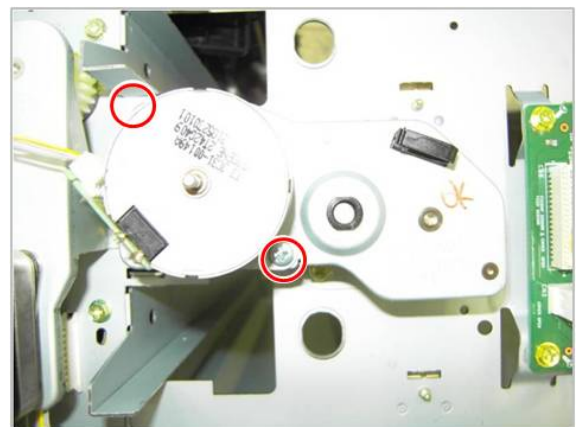


3.3.33.3. DCF Pick Up Motor

1. Remove the Bracket Rear Cover after removing 6 screws.



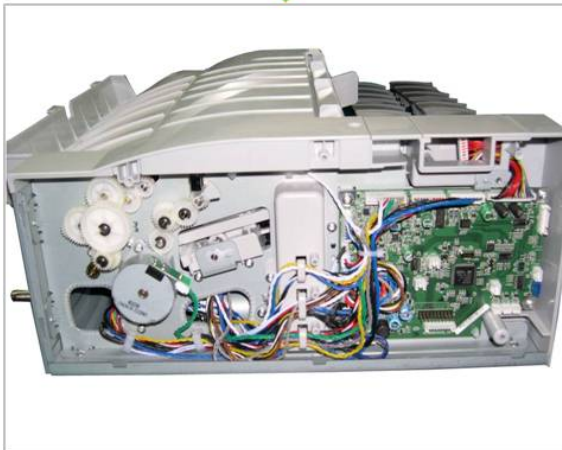
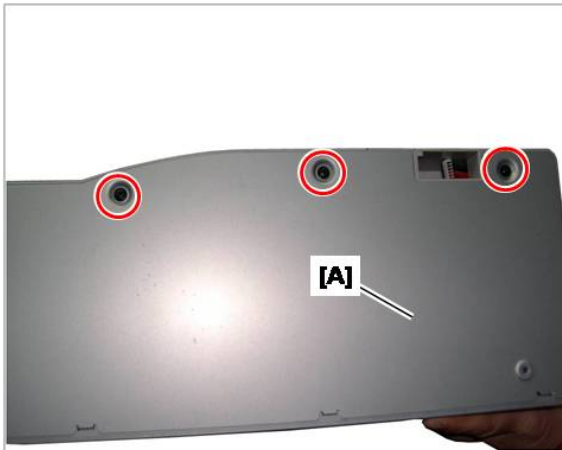
2. Unplug the pick up motor connector. Remove 2 screws. And release the DCF pick up motor.



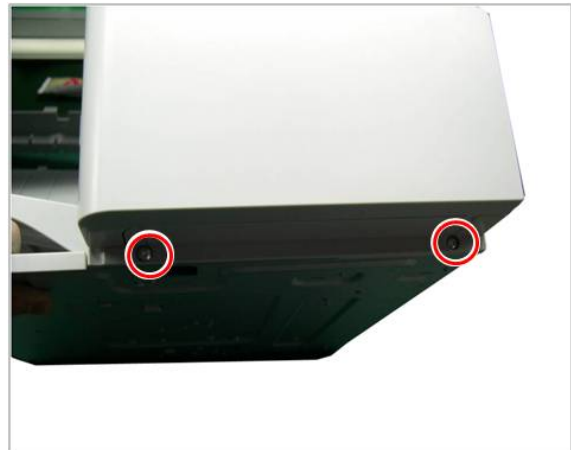
3.3.34. Finisher

3.3.34.1. Finisher Main Motor

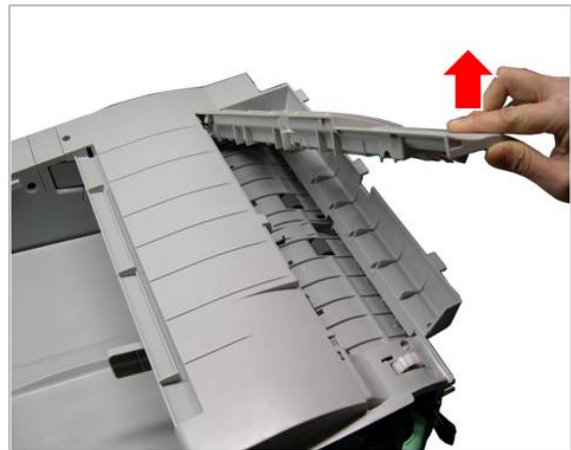
1. Remove the rear cover after 3 screws.



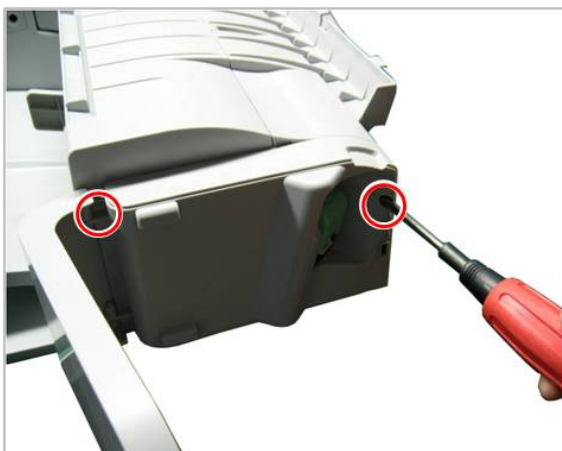
3. Remove 2 screws.



4. Remove the jam cover.



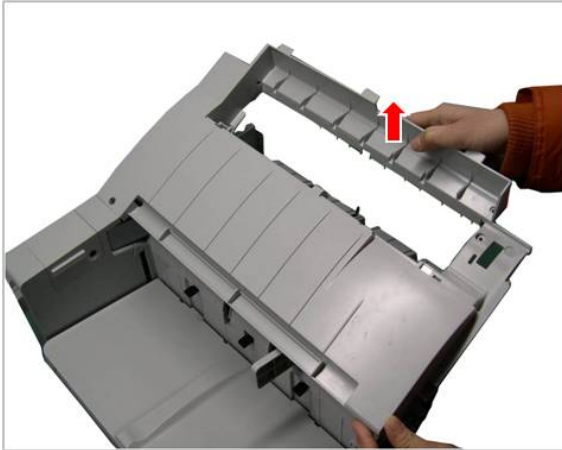
2. Remove 2 screws.



5. Remove 5 screws



6. Remove the Top-Tray.

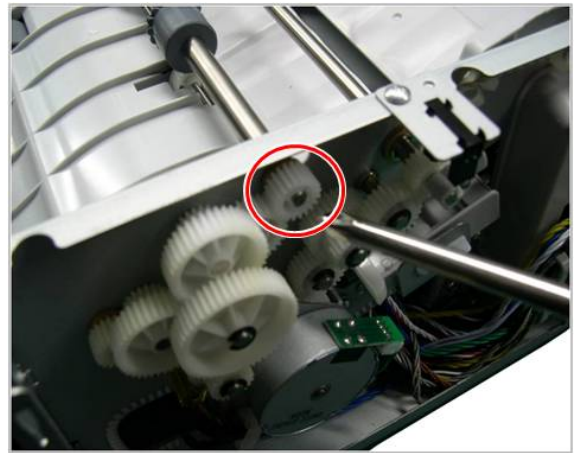


NOTE

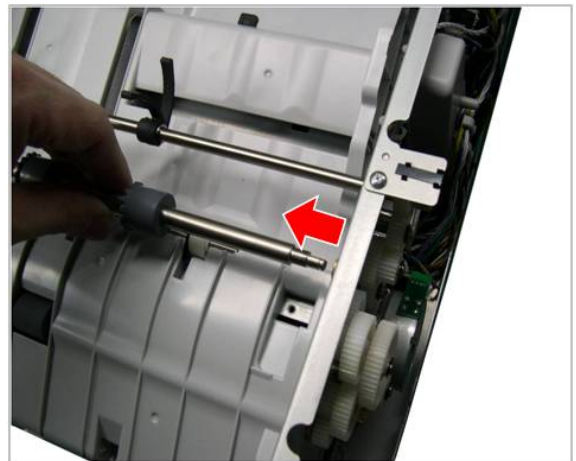
When reassembling the Top-Tray, check that the suppresser is in right position.



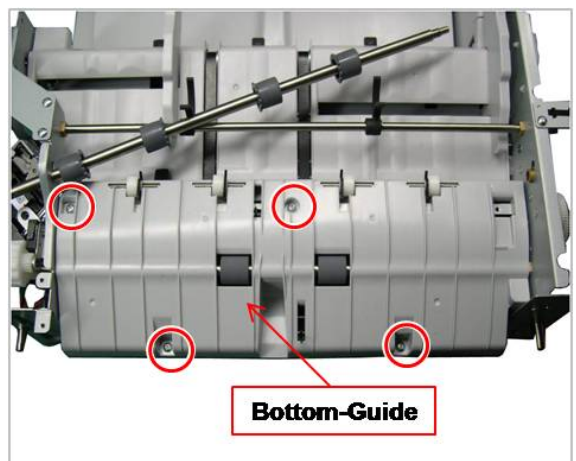
7. Remove the drive gear after removing the E-ring.



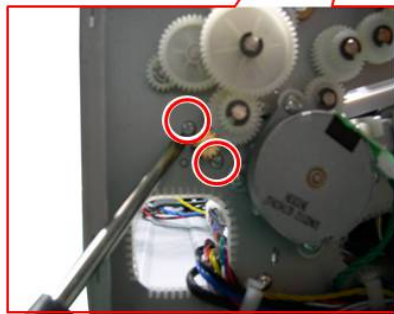
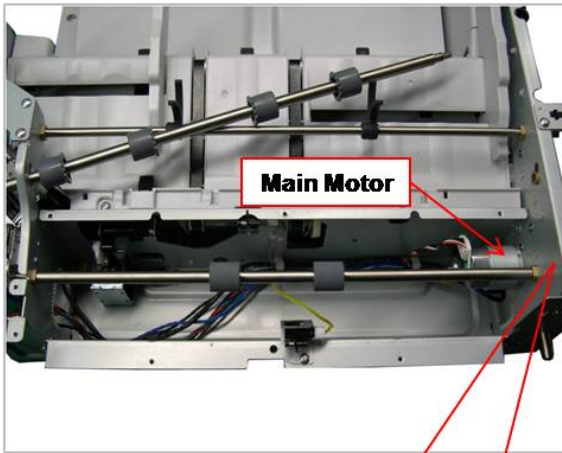
8. Release the exit roller.



9. Remove the Bottom-Guide after removing 4 screws.

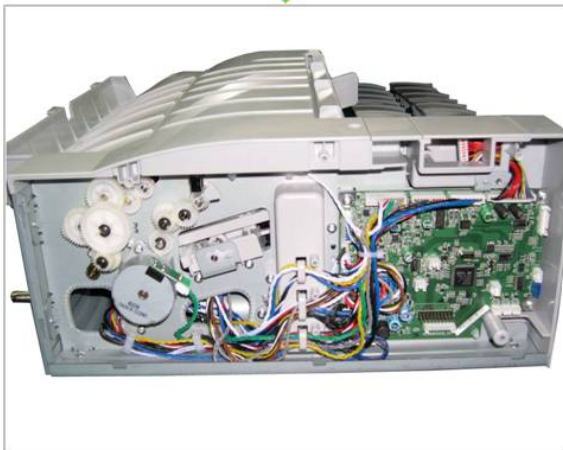
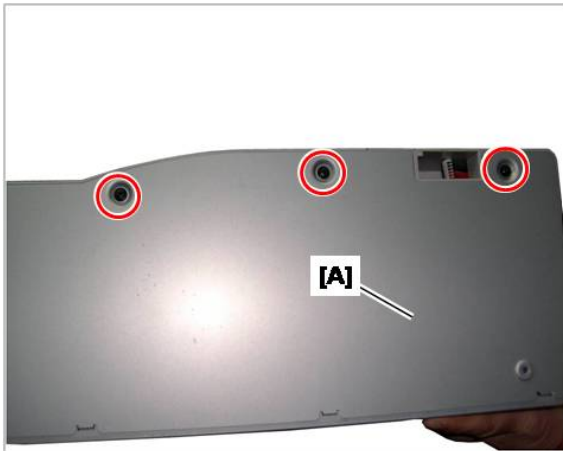


10. Remove the Main motor after removing 2 screws.

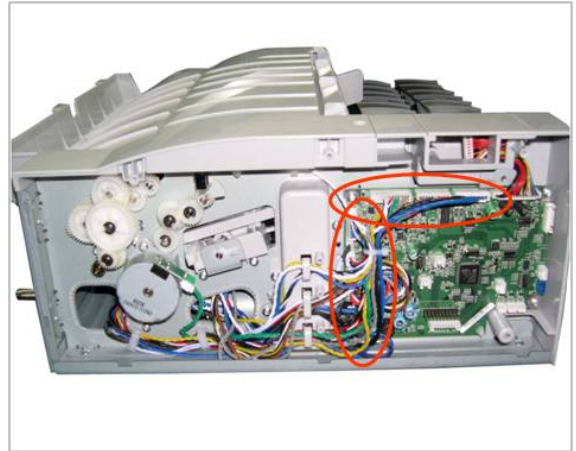


3.3.34.2. Finisher Board

1. Remove the rear cover after removing 3 screws.



2. Disconnect all cables on finisher board.

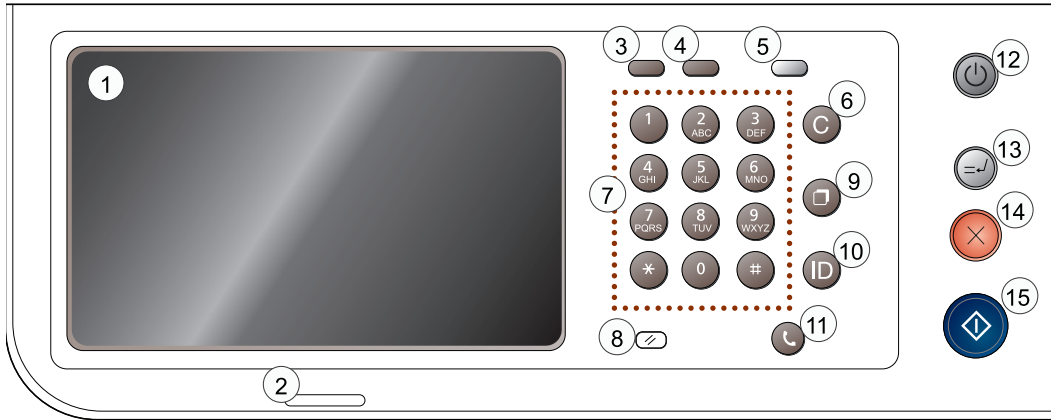


3. Remove the finisher board after removing 4 screws.



4. Troubleshooting

4.1. Control panel



1	Display screen	Shows the current machine status and prompts during an operation. You can set menus easily using the display screen.
2	Status LED	Shows the status of your machine
3	Job Status	Shows the jobs currently running, queued jobs, completed jobs, current error code or secured jobs.
4	Counter	Shows the amount of paper used.
5	Eco	Turn into Eco mode.
6	Clear	Deletes characters in the edit area.
7	Numeric keypad	Dials numbers and enters alphanumeric characters. You can also enter the number value for document copies or other options.
8	Reset	Resets the current machine's setup.
9	Redial/Pause	Redials the recently sent fax number or received caller ID in ready mode, or inserts a pause(-) into a fax number in edit mode.
10	Log in/Logout	Allows user to log in or log out.
11	On Hook Dial	When you press this button, you can hear a dial tone. Then enter a fax number. It is similar to making a call using speaker phone.
12	Power	Turn the power on or off. When the blue LED is on, the machine is powered on and you can use it. If you turn the machine off, press this button for more than three seconds. Press Yes when the confirmation window appears.
13	Interrupt	Stops a job in operation for urgent copying.
14	Stop	Stops an operation at any time. The pop-up window appears on the screen showing the current job that the user can stop or resume.
15	Start	Starts a job.



CAUTION

When you use the display screen, use your finger only. The screen may be damaged with a sharpened pen or anything else.

4.1.1. Introducing the display screen and useful buttons

Display screen



NOTE

For more information, refer to the user guide.

The display screen on the control panel allows user-friendly operation of the machine. Once you press the home icon on the screen, it shows the display screen. The display screen image in this user's guide may differ from your machine depending on its options or models.



- Copy : Enters the Copy menu.
- Fax : Enters the Fax menu. Fax is activated on the display screen by installing an optional fax kit.
- Stored Document : Enters the Stored Document menu.
- Shared Folder : Enters the Shared Folder menu.
- Scan to Email : Enters the Scan to Email menu.
- Scan to Server : Enters the Scan to Server menu.
- Scan to PC : Enters the Scan to PC menu.
- Scan to Shared Folder : Enters the Scan to Shared Folder menu.
- Quick Copy : Enters the Quick Copy menu.
- ID Copy : Enters the ID Copy menu.
- USB : Enters the USB menu. When a USB memory device is inserted into the USB memory port on your machine, USB is activated on the display screen.
- Scan to USB : Enters the Scan to USB menu. When a USB memory device is inserted into the USB memory port on your machine, Scan to USB is activated on the display screen
- Machine Setup : You can browse current machine settings or change machine values.

Counter button

When you press the Counter button on the control panel, You can see the number of impressions.

Total Usage	Print	Copy	Fax Print	Report	Total
Mono Simplex	0	4	0	1	5
Mono Duplex	48	0	0	0	48
Mono Total	48	4	0	1	53
Color Simplex	1	8	0	0	9
Color Duplex	0	2	0	0	2
Color Total	1	10	0	0	11
Total Impressions	49	14	0	1	64

- Total Usage : Displays the total number of impressions.
- Large Page : Displays the total number of impressions with large size paper.
- Send Usage : Displays the number of images sent via email, server, etc.
- Fax Send Usage(PSTN) : Displays the number of sent faxes.

Eco button

The eco feature allows you to save print resources and leads you to eco-friendly printing. When you press the Eco button, the machine turns eco mode on or off. If the eco mode is on, you can see the eco image on some features. Some options in the features are not available to use in the eco mode. For detailed information about the eco feature, refer to the Administrator’s Guide.

Job Status button

When you press the Job Status button, the screen lists the currently running, queued, and completed jobs.

4.2. Understanding the status LED

The color of the status LED indicates the machine's current status.

Status		Description	
Off		<ul style="list-style-type: none"> The machine is off-line. The machine is in power saver mode. When data is received, or any button is pressed, it switches to on-line automatically. 	
Green	On	The machine is on-line and can be used.	
	Blinking	Fax	The machine is sending or receiving faxes.
		Copy	The machine is copying documents.
		Scan	The machine is scanning documents.
		Print	<ul style="list-style-type: none"> When the status LED slowly blinks, the machine is receiving data from the computer. When the status LED blinks rapidly, the machine is printing data.
Red	On	<ul style="list-style-type: none"> The imaging unit is at the end of its lifespan. Remove the old imaging unit and install a new one. The toner cartridge is totally empty. Remove the old toner cartridge and install a new one. A paper jam has occurred. The door is open. Close the door. There is no paper in the tray. Load paper in the tray. The machine has stopped due to a major error. Check the display message. The waste toner container is not installed in the machine, or full waste toner container. 	
	Blinking	<ul style="list-style-type: none"> A minor error has occurred and the machine is waiting for the error to be cleared. Check the display message. When the problem is cleared, the machine resumes its original task. The toner cartridge, imaging unit, or waste toner container is near the end of its life. Order a new toner cartridge, imaging unit, or waste toner container. You can temporarily improve print quality by redistributing the toner. 	

4.3. Updating Firmware

This chapter includes instructions for updating the printer firmware. You can update the printer firmware by using one of the following methods :

- Update the firmware by using the printer control panel
- Update the firmware by using the network.

4.3.1. Updating from the Printer Control Panel

WARNING

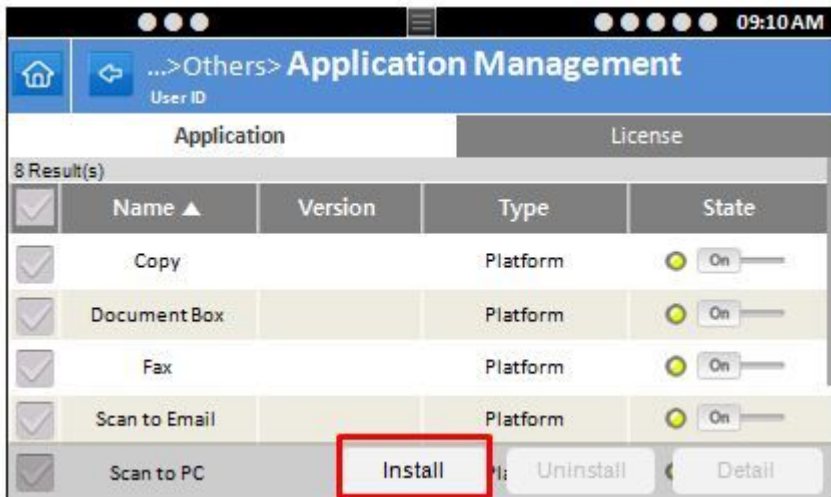
Failure to follow these instructions could lead to corruption issues and prevent the proper operation of this printer. Follow all of the instructions carefully.

- 1) Download the firmware file from the Global Service Partner Network (GSPN) website.
- 2) Unzip the firmware file to a folder on your PC.
- 3) Copy the firmware file (*.hds) to a USB flash drive.

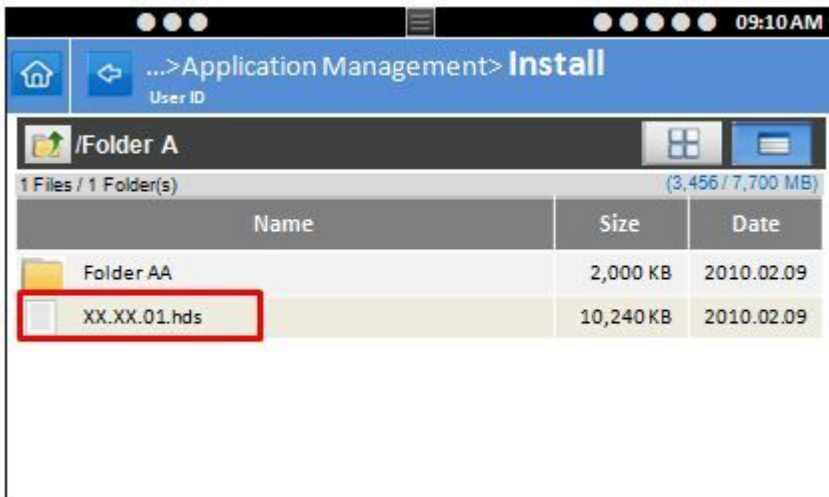
NOTE

The firmware files may be up to 500MB in size. USB flash drive size must be a minimum of 2 GB.

- 4) Press the button on control panel in this order. (**Others > Application Management > Application > Install**)
- 5) Plug the USB flash drive into the USB port. “Install” button will be activated on the Application tab. Press the “Install” button.



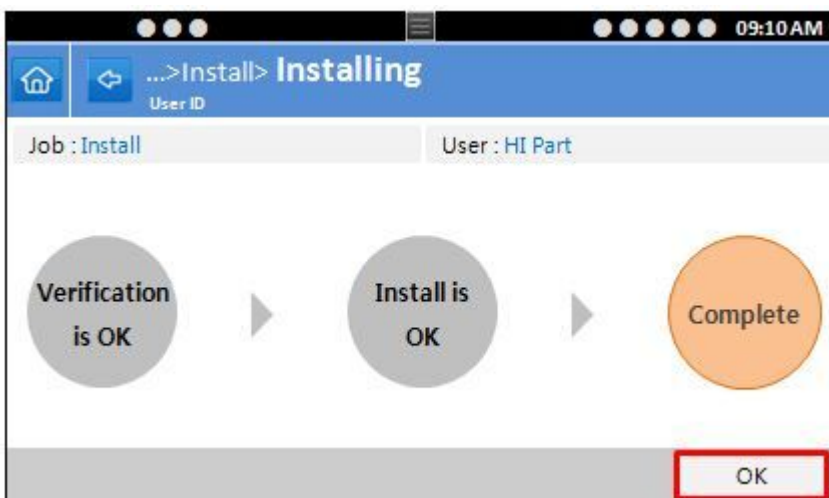
- 6) The installation window will list the files on the USB drive. Touch the name of the firmware file to select it.



- 7) Press the "OK" button after marking the check box.



- 8) Once the installation is complete, "OK" button will be activated. Press "OK" button.



- 9) After completing the update, you can find the updated versions at [Machine Setup] > [Machine Details] > [Software Versions].

4.3.2. Updating from the Network

WARNING

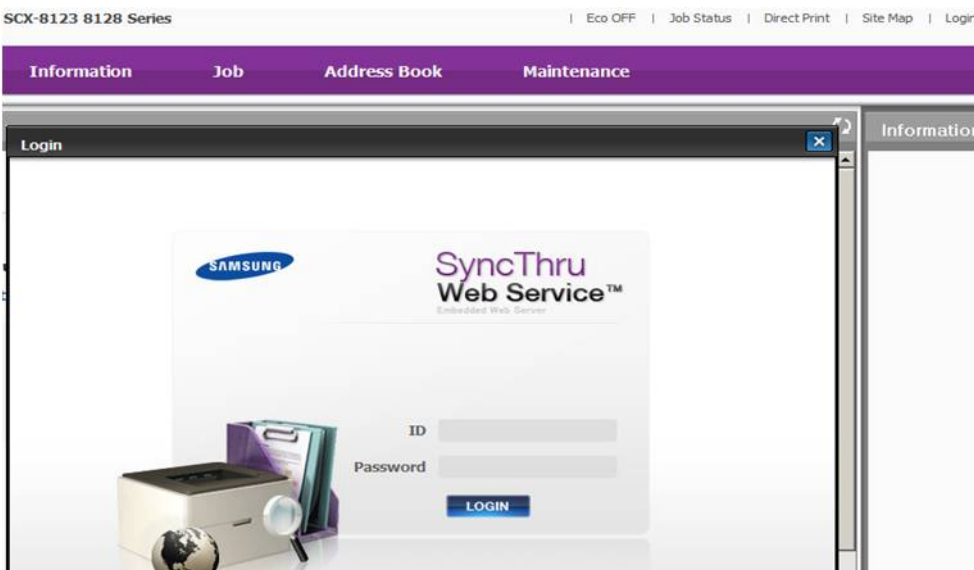
Failure to follow these instructions could lead to corruption issues and prevent the proper operation of this printer. Follow all of the instructions carefully.

Perform the following procedure to update the printer firmware from the network.

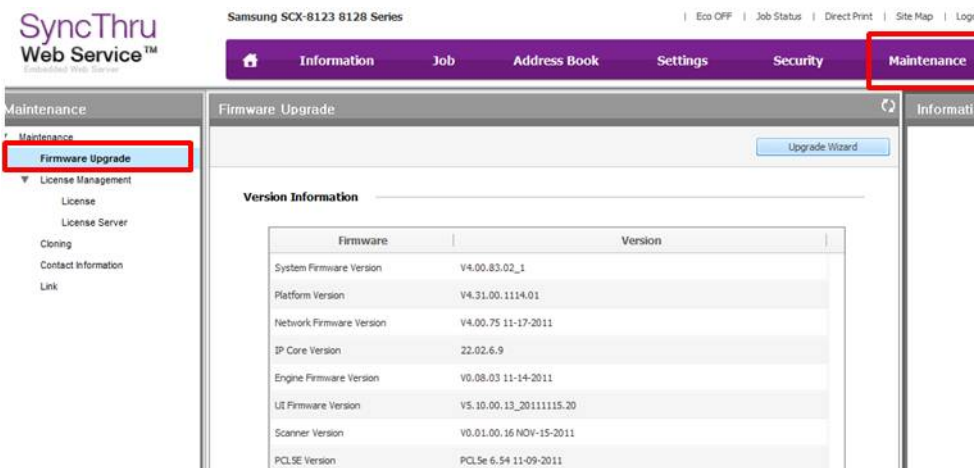
- 1) Go to the SyncThruWeb Service (SWS) main home page. Click [**Login**] to access as default administrator as shown below.

NOTE

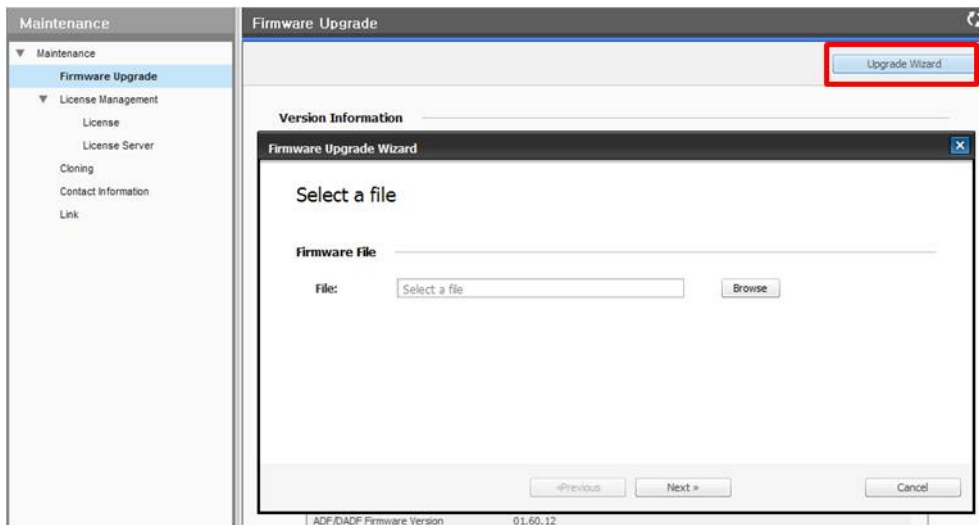
Login using the Administrator ID and Password established during initial machine setup.



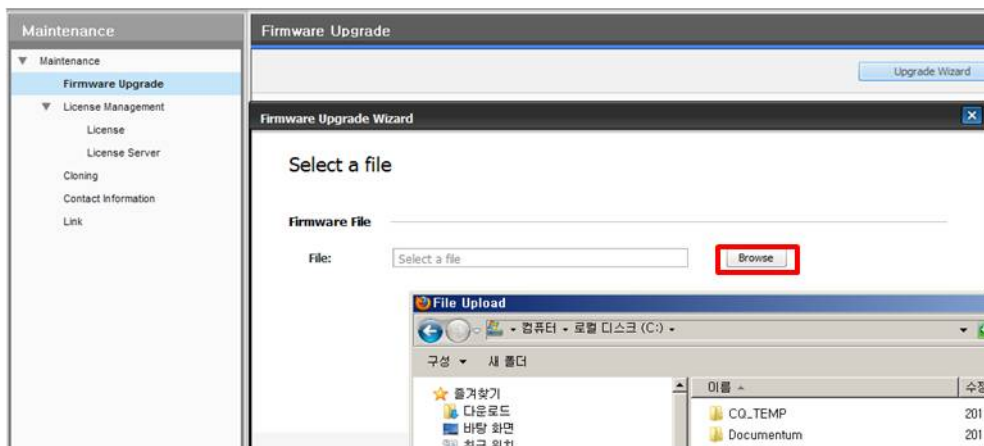
- 2) Click [**Maintenance**] on the top menu. And then click [**Firmware Upgrade**].



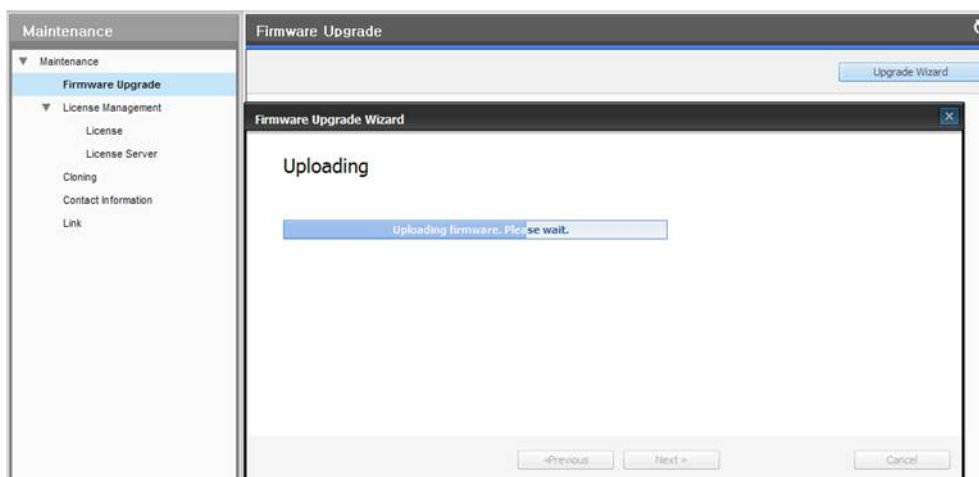
3) Click [Upgrade Wizard].



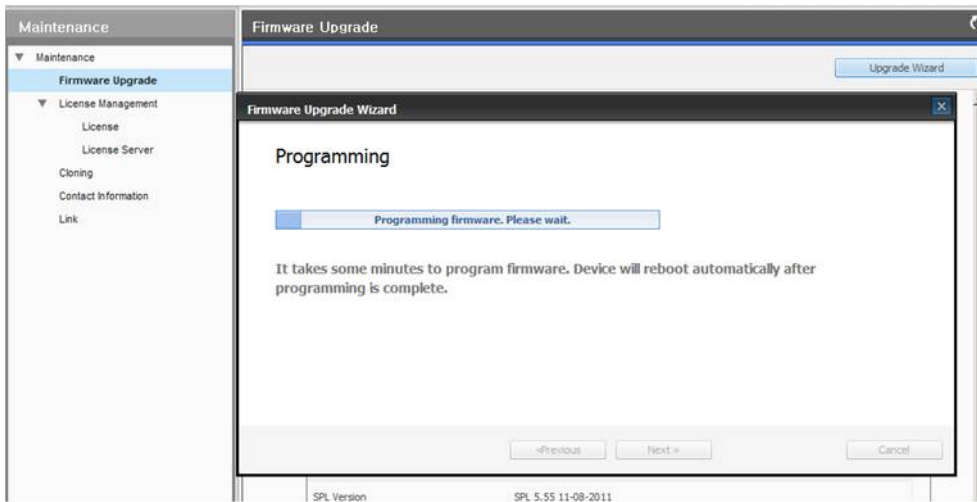
4) Click [Browse]. Choose installation file by browsing file system. And click [Next].



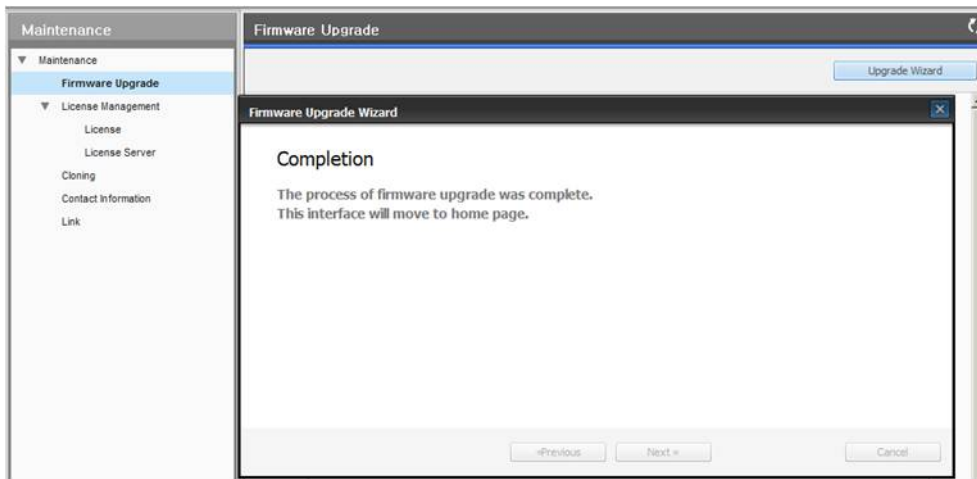
5) The uploading step will start. After this step, next step will be started automatically.



6) The firmware update will start.



7) Once the installation is complete, the machine power-off and power-on automatically.



4.4. Service Mode (Tech Mode)

4.4.1. Entering/Exiting Service Mode

To enter the service mode, press 1,2,3 number keys simultaneously. When the password dialog box appears, enter “1934” and press the “OK” button.

To exit the service mode, press the “Exit Service” button at the right upper corner of the display.

4.4.2. Service Mode Menu Tree

a) Information Tab

Level 1	Level 2	Level 3	Level 4	Page	
Information	General	Machine Serial Number		Page 4-15	
		Network IP Address			
		Total Printed Impressions			
		Machine Installed Date & Time			
	Supply Status	Customer Replacement Unit		Toner	Page 4-15
			Field Replacement Unit	OPC Unit	Page 4-16
		Developer Unit			
		Waste Toner Container			
		Finisher			
		Fuser			
		Roller			
		Filter			
	DADF Roller				
	Software Version			Page 4-16	
	Service Hours	Power On Hours		Page 4-16	
		Low Power Hours			
		Power Save(Sleep) Hours			
	Fault Log			Page 4-16	
	Print Reports	Supplies Information		Page 4-17	
		Fax Protocol Dump List			
		Maintenance			
Job Duty					
TRC Control History					
Usage Counter Report					
Error Information Report					
Diagnostics Page Report					
Export Reports	RTF Format		Page 4-17		
	XML Format				
	PDF Format				

b) Maintenance Counts Tab

Level 1	Level 2	Level 3	Level 4	Page	
Maintenance Counts	Fault Counts			Page 4-18	
	Jam Count	Print Jam		Pick-up Jam	Page 4-18
				Feed Jam	
				Duplex Jam	
				Exit Jam	
		Scan Jam		Feed Jam	
				Regi Jam	
				Scan Jam	
				Exit Jam	
				Duplex Regi Jam	
				Duplex Scan Jam	
		Duplex Exit Jam			
	Part Replacement Count		Toner Cartridge		Page 4-18
			OPC Unit		
			Developer Unit		
			Fuser		
			Roller		
		Ozone Filter			
		DADF Roller			
Finisher Handling Count				Page 4-20	

c) Diagnostics Tab

Level 1	Level 2	Level 3	Level 4	Page
Diagnostics	Engine Diagnostics	Engine NVM Initialization		Page 4-21
		Engine NVM Read/Write		Page 4-21
		Engine Test Routines		Page 4-23
	Fax Diagnostics	Fax NVM Read/Write		Page 4-26
		Fax Test Routines		Page 4-27
	Scanner Diagnostics	Shading Test	Shade and Print Report	Page 4-28
			Print Last Shade Report	
		Scanner/DADF NVM Read/Write	Page 4-28	
	Adjustment	Print Adjustment	Automatic Adjustment	Page 4-30
			Magnification	Page 4-31
			Image Position	Page 4-31
			Print Test Patterns	
		Copy Adjustment	Image Position	Page 4-32
		Scan Area Adjustment	Automatic Adjustment	Page 4-33
			Manual Adjustment	Page 4-34
		DADF Adjustment	Automatic Adjustment	Page 4-35
			Manual Adjustment	Page 4-36
		ACS	ACS Level Adjustment	
	Print Test Patterns	Skew Pattern		

d) Service Functions

Level 1	Level 2	Level 3	Level 4	Page
Service Functions	Main Memory Clear			Page 4-38
	Hard Disk Maintenance	Device Configuration Data Clear		Page 4-38
		Temporary & Spool Data Clear		
		User Saved Data & Log Clear		
		All Saved Data Clear		
	Hard Disk Check			
	Count Setting of Large Pages	1 Count Up		Page 4-38
		2 Count Up		
	Toner Save	Off/5/10/15/20/25/30 %		Page 4-38
	Debug Log	Off / Job Status / Details		Page 4-39
	Capture Log			Page 4-39
	System Recovery	SYS		Page 4-40
		ALL		
	TR Control Mode	T1 Control	Process Speed	Page 4-43
			Paper for Driver	
T1 PWM				
T2 Control		Paper Group		
		Paper Side		
		Paper Direction		
T2 PWM				
Enhanced Security	Off/On			

4.4.3. Information

4.4.3.1. General

- **Information > General**

This menu displays the machine's serial number, assigned IP address, total printed impressions, and the machine installed date.

4.4.3.2. Supply Status

Customer Replacement Unit (CRU)

- **Information > Supply Status > Customer Replacement Unit**

This menu displays the machine's customer replacement unit status. Users can select one item in the list to check the information of the selected unit.

Field Replacement Unit (FRU)

- **Information > Supply Status > Field Replacement Unit**

This menu displays the machine's field replacement unit status. Users can select one item in the list to check the information of the selected unit.

In the CRU and FRU list, there are four columns : items, status, current, max life.

- Item : Refer to the table below.
- Status : This shows the current status of the selected item.
 - OK : The current count is smaller than the default warning value
 - Check : The current count is bigger than default warning value
 - Off : The current count exceeds the max life.
- Count : This shows the current count of the selected item.
- Max. life : This shows the max capacity of the selected item.

Users can edit the default warning value within the given threshold.

Selecting some items will enable the reset button to reset the current count to 0 after replacing the unit.

Unit	Item	Max. Life	Default	Threshold
Toner	Black	25K	10%	1~ 30%
OPC Unit	Black	100K	10%	5 ~ 30%
Developer Unit	Black	300K	10%	5 ~ 30%
Waste Toner Container	Waste Toner Container	100K	Near Full	NA
Finisher	Finisher Stapler Cartridge	NA	Near Empty	NA
Fuser	Fuser	150K (PM Count)	10%	5% ~ 20%

Unit	Item	Max. Life	Default	Threshold
Roller	P/up Roller MP	200K (PM Count)	10%	5% ~ 20%
	P/up Roller Kit-tray1	200K (PM Count)	10%	5% ~ 20%
	P/up Roller Kit-tray2	200K (PM Count)	10%	5% ~ 20%
	P/up Roller Kit-tray3	200K (PM Count)	10%	5% ~ 20%
	P/up Roller Kit-tray4	200K (PM Count)	10%	5% ~ 20%
Filter	Ozone Filter	150K (PM Count)	10%	5% ~ 20%
DADF Roller	Assembly ADF Roller	200K (PM Count)	10%	5% ~ 20%
Side Unit	Transfer Roller Unit	150K (PM Count)	10%	5% ~ 20%

4.4.3.3. Software Version

- **Information > Software Version**

This menu displays all the version of the software installed in the system in detail.

4.4.3.4. Service Hours

- **Information > Service Hours**

This menu displays three items, “Power on Hours”, “Low Power Hours” and “Power Save Hours”.

- Power on Hours : It indicates the hours of system power on since the first booting of the system.
- Low Power Hours : It indicates the hours of system low power on since the first booting of the system.
- Power Save Hours : It indicates the hours of system power save since the first booting of the system.

4.4.3.5. Fault Log

- **Information > Fault Log**

This menu displays faults occurred while the system was operating.

Pressing clear button will clear all the save fault log of the system.

4.4.3.6. Print Reports

- **Information > Print Reports**

This menu displays reports which that can be printed from the system. The following reports will be available to print.

- Supplies Information
- Fax Protocol Dump List
- Maintenance
- Job Duty
- TRC Control History
- Usage Counter Report
- Error Information Report
- Diagnostics Page Report

4.4.3.7. Export Reports

- **Information > Export Reports**

This menu exports report to usb stick. Configuration, Error Information, Supplies Information, Usage Counter Reports are exported as the form of selected format.

4.4.4. Maintenance Counts

4.4.4.1. Fault Count

- **Maintenance Counts > Fault Count**

This menu displays the fault Counts of the system. Users can select one fault group and press “OK” to see detailed fault descriptions. The detailed fault description window displays engine diagnostic code and descriptions of the fault along with the number of occurrences.

The following list shows the group of the faults defined for the system.

A1 Motor	H1 Input (Trays) System	S2 Engine System
A2 Fan	H2 Output (Bins) System	S3 Scan System
A3 Sensor		S4 Fax System
C1 Toner Cartridge Unit	M1 Input (Trays) System	S5 UI System
C3 Imaging Unit	M2 Media Path System	S6 Network System
C4 Developer Unit	M3 Output (Bins) System	S7 HDD System
C6 iTB	M4 Auto Document Feeder System	U1 Fusing Unit
C7 Fusing unit	S1 Video System	U2 LSU Unit

4.4.4.2. Jam Count

- **Maintenance Counts > Jam Count**

This menu displays the jam Counts of the system. Users can select one jam group, which indicates the location of jams, and press “OK” to see a detailed jam location along with the occurrence of the jam.

The following table shows the jam groups defined for the system :

Level 1	Level 2	Level 3
Print Jam	Pick-up Jam	Jam Bypass
		Jam 0 Tray 1
		Jam 0 Tray 2
		Jam 0 Tray 3 (DCF)
		Jam 0 Tray 4 (DCF)
	Feed Jam	Jam Feed 1
		Jam Feed 2
		Jam Feed 3 (DCF)
		Jam Feed 4 (DCF)
		Jam Regi
		Jam Fuser Out
	Duplex Jam	Jam Duplex 1
		Jam Duplex 2
		Jam Duplex Regi
		Jam Duplex Return

Level 1	Level 2	Level 3
	Exit Jam	Jam Exit In (Face Down)
		Jam Exit Out (Face Down)
		Jam Exit In (Face Up)
		Jam Exit Out (Face Up)
		Jam Exit In (Inner)
		Jam Exit Out (Inner)
Scan Jam	Feed Jam	Feed In Jam
		Feed Out Jam
		Feed Idle Jam
	Regi Jam	Regi In Jam
		Regi Out Jam
		Regi Idle Jam
	Scan Jam	Scan In Jam
		Scan Out Jam
		Scan Idle Jam
	Exit Jam	Exit In Jam
		Exit Out Jam
		Exit Idle Jam
	Duplex Regi Jam	Duplex Regi In Jam
		Duplex Regi Out Jam
		Duplex Regi Idle Jam
	Duplex Scan Jam	Duplex Scan In Jam
		Duplex Scan Out Jam
		Duplex Scan Idle Jam
	Duplex Exit Jam	Duplex Exit In Jam
		Duplex Exit Out Jam
		Duplex Exit Idle Jam

4.4.4.3. Part Replacement Count

- **Maintenance Counts > Part Replacement Count**

This menu displays the replacement Counts for the system parts. Users can select one part group and press “OK” to see the exact name of the part along with the occurrence of the replacement.

The following table shows groups of the replaceable parts of the system.

Unit	Item	Sensing Method
Toner Cartridge	Toner (Black)	Auto Sensing
OPC Unit	OPC Unit (Black)	Auto Sensing
Developer Unit	Developer (Black)	Auto Sensing
Developer	Developer (Black)	Auto Sensing
Fuser	Fuser	Auto Sensing
Roller	P/up Roller MP	Count Clear
	P/up Roller Kit-tray1	Count Clear
	P/up Roller Kit-tray2	Count Clear
	P/up Roller Kit-tray3	Count Clear
	P/up Roller Kit-tray4	Count Clear
Filter	Ozone Filter	Count Clear
DADF Roller	Assembly ADF Roller	Count Clear
Side	Transfer Roller Unit	Count Clear

4.4.4.4. Finisher Handling Count

- Maintenance Counts > Finisher Handling Count

This menu displays the sheet counts delivered to finisher tray and finisher set count. Users can select one item and press “OK” to see a count information.

4.4.5. Diagnostics

4.4.5.1. Engine Diagnostics

Engine NVM Initialization

- Diagnostics > Engine Diagnostics > Engine NVM Initialization
This menu initializes all engine NVM value to the default.

NVM Read/Write

- Diagnostics > Engine Diagnostics > NVM Read/Write

Purpose	To change a configuration value for engine firmware.
Operation Procedure	When the main “NVM Read/Write” window displays, users can navigate through the list of codes with descriptions and saved values. Users can also input a code to the text box to find a configuration value directly. After selecting one value, pressing “Edit” button will open an interface for user input.
Verification	N/A
Specification	N/A
Reference	N/A

Code	NVM Description	Meaning	Default	Max/Min
103-0031	Regi Curl Length	Buckle Control : Regi On Curl	0	6 / -3
103-0032	Duplex Regi Curl Length	Buckle Control : Duplex Regi On Curl (x1)	0	6 / -3
103-0033	Double Speed Duplex Regi Curl Length	Buckle Control : Duplex Regi On Curl (x2)	0	6 / -3
109-0000	StandBy Temperature offset	Target Temperature during standby mode.	0	5 / -5
109-0010	Run Temperature offset	Target Temperature during run mode.	0	5 / -5
109-0050	60 gms Temperature offset	Media type offset for fuser roll temperature.	0	5 / -5
109-0060	90 gms Temperature offset	Media type offset for fuser roll temperature.	0	5 / -5
109-0070	Bond Temperature offset	Media type offset for fuser roll temperature.	0	5 / -5
109-0090	Cardstock Temperature offset	Media type offset for fuser roll temperature.	0	5 / -5
109-0100	Envelopes Temperature offset	Media type offset for fuser roll temperature.	0	5 / -5
109-0110	Labels Temperature offset	Media type offset for fuser roll temperature.	0	5 / -5
109-0130	Thick Temperature Offset	Media type offset for fuser roll temperature.	0	5 / -5
109-0131	Recycled Temperature offset	Media type offset for fuser roll temperature.	0	5 / -5
109-0132	Special Temperature offset	Media type offset for fuser roll temperature.	0	5 / -5

Engine Test Routines

- **Diagnostics > Engine Diagnostics > Engine Test Routines**

Purpose	To perform test routines for the engine.
Operation Procedure	When the main Engine Test Routines window displays, users can navigate through the list of routines that display along with their descriptions. Users can also directly input an EDC code to the text box to find a routine. Users can select a maximum of 3 routines at the same time. After selecting one or multiple routines, pressing the “OK” button will open the test window that lists selected routines. Users can start/stop a desired test routine.
Verification	N/A
Specification	N/A
Reference	N/A

Code	Displayed Name	Meaning
100-0010	Main BLDC Motor Ready	Detect if Main BLDC Motor runs at normal speed
100-0044	OPC Motor K	Black OpC BLDC Motor is On/Off
100-0049	K OPC Motor Ready	Detect if Black OPC BLDC Motor runs at normal speed
100-0074	OpC Fan Run	Start/Stop OpC Fan run
100-0075	OpC Fan Ready	Detects if OpC Fan1 runs at normal speed.
100-0076	Ozone Suction Fan Run	Start/Stop Ozone Suction Fan run
100-0077	Ozone Suction Fan Ready	Detects if Ozone Suction Fan runs at normal speed.
100-0120	Exit Motor Forward Fast	Exit Motor Forward Fast On/Off
100-0130	Exit Motor Forward Slow	Exit Motor Forward Slow On/Off
100-0131	Exit Motor Backward	Exit Motor Forward Backward On/Off
100-0132	Exit Motor Backward Slow	Exit Motor Forward Backward Slow On/Off
100-0140	Duplex Motor Forward	Duplex Motor Forward On/Off
100-0141	Duplex Motor Forward Slow	Duplex Motor Forward Slow On/Off
100-0160	Duplex Fan1 Run	Start/Stop Duplex Fan1 run
100-0180	Duplex Fan1 Run Ready	Detects if Duplex Fan1 runs at normal speed.
100-0200	T1 Elevating Motor	T1 Elevate Motor On/Off
100-0210	T2 Elevating Motor	T2 Elevate Motor On/Off (Optional)
100-0220	T3 Elevating Motor	T3 Elevate Motor On/Off (Optional)
100-0230	T4 Elevating Motor	T4 Elevate Motor On/Off (Optional)
100-0241	Waste Toner Led	Waste Toner Led On/Off
100-0250	Waste Toner Full Sensor	Detect if the waste toner is full or not.
100-0340	Feed Motor	Feed Motor is On/Off
100-0370	Tray1 Pickup Motor	Tray1 Motor is On/Off
100-0380	Tray2 Pickup Motor	Tray2 Motor is On/Off
100-0390	Tray3 Pickup Motor	Tray3 Motor is On/Off
100-0400	Tray4 Pickup Motor	Tray4 Motor is On/Off
100-0430	Exit2 Motor Forward	Exit2 Motor is On/Off
100-0440	Exit2 Motor Backward	Exit2 Motor is On/Off
100-0470	DCF Feed Motor	DCF Feed Motor is On/Off

4. Troubleshooting

Code	Displayed Name	Meaning
100-0480	Duct Motor	Duct Motor On/Off.
100-0481	Duct Motor Sensor	Duct Motor Rib Sensing.
101-0000	Bypass Feed Clutch	Engages drive to pick up a paper from bypass Tray(MP Tray).
101-0050	Registration Clutch	Engages drive to registartion rolls.
101-0190	Out-Bin Full Sensor	Detect when a paper is at Out-Bin Full Sensor
101-0191	Out-Bin2 Full Sensor	Detect when a paper is at Out-Bin2 Full Sensor
101-0270	MP Clutch	MPClutch On/Off
101-0271	MP Solenoid	MP Solenoid On/Off
101-0280	Return Gate Solenoid	Return Gate Solenoid On/Off
102-0000	Tray1 Home Position	Detect when tray1 is closed.
102-0010	T1 Paper Empty Sensor	Detect when paper is in Tray1.
102-0041	T1 Paper Size Read	Detects Paper Tray1 size.
102-0050	T1 Stack Height Sensor	Detects if paper in tray1 is elevated to the sensor.
102-0070	Tray2 Home Position	Detect when tray2 is closed.
102-0080	T2 Paper Empty Sensor	Detect when paper is in tray2.
102-0111	T2 Paper Size Read	Detects Paper Tray2 size.
102-0120	T2 Stack Height Sensor	Detects if paper in tray2 is elevated to the sensor.
102-0140	Tray3 Home Position	Detect when tray3 is closed.
102-0150	T3 Paper Empty Sensor	Detect when paper is in tray3.
102-0181	T3 Paper Size Read	Detects Paper Tray3 size.
102-0190	T3 Stack Height Sensor	Detects if paper in tray3 is elevated to the sensor.
102-0210	Tray4 Home Position	Detect when tray4 is closed.
102-0220	T4 Paper Empty Sensor	Detect when paper is in tray4.
102-0251	T4 Paper Size Read	Detects Paper Tray4 size.
102-0260	T4 Stack Height Sensor	Detects if paper in tray4 is elevated to the sensor.
102-0280	Bypass Paper Empty Sensor	Detects when paper is in Bypass Tray(MP Tray).
102-0290	Feed Sensor	Detect when a paper is at Feed sensor.
102-0300	T2 Feed Sensor (or Door Open)	Detect when a paper is at T2 Feed sensor. (optional)
102-0320	T3 Feed Sensor (or Door Open)	Detect when a paper is at T3 Feed sensor. (optional)
102-0340	T4 Feed Sensor (or Door Open)	Detect when a paper is at T4 Feed sensor. (optional)
102-0352	DCF Feed Cover Open	Detect DCF Cover is closed
102-0360	Regi. Sensor	Detect when a paper is at Regi. sensor.
102-0361	FuserOut Sensor	Detect when a paper is at FuserOut sensor.
102-0371	Exit2 Sensor	Detect when a paper is at Exit2 sensor.
102-0380	Duplex Jam1 Sensor	Detect when a paper is at Duplex Jam1 sensor.
104-0000	Waste Install Sensor	Detect if Waste is installed.
109-0030	Fuser Motor Forward	Fuser Motor Forward On/Off
109-0031	Fuser Motor Backward	Fuser Motor Backward On/Off
109-0034	Fuser Motor Ready	Detect if Fuser Motor runs at each speed
109-0140	Fuser Gap Home Sensor	Detect if the fuser press is located Home position.

Code	Displayed Name	Meaning
110-0000	LSU Motor1 Run Ready	Detects if LSU motor1 runs at normal speed.
110-0060	LSU Motor1 Run	LSU Motor1 On/Off
111-0030	Toner Dispense Motor Black	Toner Dispense(Supply) Motor On/Off
111-0070	Toner Sensor Black	TC sensor in developer tank.
113-0350	Finisher Entrance Sensor	Detect when a paper is at Entrance Sensor
113-0360	Finisher Exit Sensor	Detect when a paper is at Exit Sensor
113-0370	Finisher Paddle Home Sensor	Detect Paddle Home position
113-0380	Finisher Left Tamper Home Sensor	Detect Lift Tamper Home position
113-0390	Finisher Right Tamper Home Sensor	Detect Right Tamper Home position
113-0400	Finisher Media Height Sensor	Detect Main Tray level.
113-0410	Finisher Stapler Door Sensor	Detect Stapler Door Cover is closed
113-0420	Finisher Jam Cover Sensor	Detect Jam Door Cover is closed
113-0430	Finisher Stapler Home Sensor	Detect Stapler Home position
113-0440	Finisher Stapler Low Sensor	Detect Stapler level
113-0450	Finisher Stapler Selfpriming Sensor	Detect Stapler Selfpriming Sensor
113-0460	Finisher Ejector Home Sensor	Detect Ejector Home position
113-0470	Finisher Main Tray Home Sensor	Detect Main Tray Home position
113-0480	Finisher Stacker Height sensor	Detect Stacker Height sensor
113-0490	Finisher Letter Size Sensor	Detect Paper Size
113-0500	Finisher Transport Motor	Finisher Transport Motor On/Off
113-0510	Finisher Paddle Motor	Finisher Paddle Motor On/Off
113-0520	Finisher Left Tamper Motor	Finisher Left Tamper Motor On/Off
113-0530	Finisher Right Tamper Motor	Finisher Right Tamper Motor On/Off
113-0540	Finisher Media Height Solenoid	Finisher Media Height Solenoid On/Off
113-0550	Finisher Staple Unit Motor	Finisher Staple Unit Motor On/Off
113-0560	Finisher Ejector Motor	Finisher Ejector Motor On/Off
113-0570	Finisher Main Tray Motor	Finisher Main Tray Motor On/Off
113-0580	Finisher SCU Solenoid	Finisher SCU Solenoid On/Off
113-0590	Finisher Safety Cover Solenoid	Finisher Safety Cover Solenoid On/Off

4.4.5.2. Fax Diagnostics

Fax NVM Read/Write

- **Diagnostics > Fax Diagnostics Fax NVM Read/Write**

Purpose	To change a configuration value for fax firmware.
Operation Procedure	When the main “NVM Read/Write” window displays, users can navigate through the list of configuration values that display along with description. Users can also input a code to the text box to find a configuration value directly. After selecting one value, pressing “Edit” button will open an interface for user input.
Verification	N/A
Specification	N/A
Reference	N/A

Code (Line 1)	Displayed Name	Default
20-200	Pause Dial Time	1
20-210	Dial Pulse M/B ratio	0
20-220	Auto Dial Start Pause Time	1
20-300	Ring On Time	170
20-310	Ring Off Time	560
20-320	Ring Detection Freq	1
20-400	DTMF High-Freq Level	8
20-410	DTMF Low-Freq Level	11
20-420	DTMF Timing	5
20-520	Error Rate	2
20-530	Dial Tone Detect	0
20-540	Loop Current Detect	0
20-550	Busy Signal Detect	0
20-700	Line Monitor Setting	0
20-800	Modem Speed	7
20-810	Fax Transmission Level	12
20-830	Auto Dial Timeout	55
20-999	Fax Line Setting	

Fax Test Routines

- **Diagnostics > Fax Diagnostics > Fax Test Routines**

Purpose	To perform test routines for the fax machine.
Operation Procedure	When the main Fax Test Routines window displays, users can navigate through the list of routines that display along with description. Users can also input a code to the text box to find a routine directly. After selecting one routine, pressing “OK” button will open the test window that lists selected routine. Users can start/stop a desired test routine.
Verification	N/A
Specification	N/A
Reference	N/A

Code (Line 1)	Displayed Name
20-012	Single Tone 110 Hz
20-014	Single Tone 1650 Hz
20-015	Single Tone 1850 Hz
20-016	Single Tone 2100 Hz
20-020	DMTF # Line
20-021	DMTF * Line
20-022	DMTF 0 Line
20-023	DMTF 1 Line
20-024	DMTF 2 Line
20-025	DMTF 3 Line
20-026	DMTF 4 Line
20-027	DMTF 5 Line
20-028	DMTF 6 Line
20-029	DMTF 7 Line
20-030	DMTF 8 Line
20-031	DMTF 9 Line
20-040	V.21 300 bps
20-041	V.27ter 2400 bps
20-042	V.27ter 4800 bps
20-043	V.29 7200 bps

Code (Line 1)	Displayed Name
20-044	V.29 9600 bps
20-045	V.17 7200 bps
20-046	V.17 9600 bps
20-047	V.17 12000 bps
20-048	V.17 14400 bps
20-049	V.34 2400 bps
20-050	V.34 4800 bps
20-051	V.34 7200 bps
20-052	V.34 9600 bps
20-053	V.34 12000 bps
20-054	V.34 14400 bps
20-055	V.34 16800 bps
20-056	V.34 19200 bps
20-057	V.34 21600 bps
20-058	V.34 24000 bps
20-059	V.34 26400 bps
20-060	V.34 28800 bps
20-061	V.34 31200 bps
20-062	V.34 33600 bps

4.4.5.3. Scanner Diagnostics

Shading Test

- **Diagnostics > Scanner Diagnostics > Shading Test**

Purpose	To check quality of scanned images, especially defect in optical devices, including lens, mirror, lamp, and etc, are suspected.
Operation Procedure	Press "Share and Print report" to see if the current shading value is correct. Mono, red, green, blue gray shading values will be shown on the printed report. When the previous shading value is needed, press "Print Last Shade Report".
Verification	N/A
Specification	N/A
Reference	N/A

Scanner/DADF NVM Read/Write

- **Diagnostics > Scanner Diagnostics > Scanner/DADF NVM Read/Write**

Purpose	To read and/or write values in the scanner and DADF memory.
Operation Procedure	When the main "NVM Read/Write" window displays, users can navigate through the list of codes with descriptions and saved values. Users can also directly input a code to the text box to find a NVM. After selecting a code, the "Edit" button will be enabled only if the code is writable. If the selected code is writable and the "Edit" button is enabled, press the button to configure the desired value for the code.
Verification	N/A
Specification	N/A
Reference	N/A

Code	NVM Description	Meaning	Access
05-0000	Pick up Count	Pick up Roller Life Count	Read Only
05-0010	Document Duplex Reverse Point	Document Duplex Reverse Point	Read/Write
05-0020	Document Exit Turn Reverse Point	Document Exit Turn Reverse Point	Read/Write

Scanner/DADF Test Routines

- **Diagnostics > Scanner Diagnostics > Scanner/DADF Test Routines**


Purpose	To perform test routines for the scanner and DADF.
Operation Procedure	When the main scanner/DADF Test Routines window displays, users can navigate through the list of routines that display along with description. Users can also input a code to the text box to find a routine directly. After selecting one routine, pressing “OK” button will open the test window that lists selected routine. Users can start/stop a desired test routine.
Verification	N/A
Specification	N/A
Reference	Table below

Code	NVM Description	Meaning	Access
05-0000	Document Length .1 Sensor	Document Length .1 Sensor	High/Low
05-0001	Document Length .2 Sensor	Document Length .2 Sensor	High/Low
	Document Width1 Sensor	Document Width1 Sensor	High/Low
	Document Width2 Sensor	Document Width2 Sensor	High/Low
	Document Width3 Sensor	Document Width3 Sensor	High/Low
05-0020	Document Cover Open Sensor	Document Cover Open Sensor	High/Low
05-0040	Document Detect Sensor	Document Detect Sensor	High/Low
05-0060	Document Simplex Registration Sensor	Document Simplex Registration Sensor	High/Low
05-0070	Document Scan Read Sensor	Document Scan Read Sensor	High/Low
05-0080	Document Exit Sensor	Document Exit Sensor	High/Low
05-0210	Document Jig Test Low Speed Simplex	Document Jig Test Low Speed Simplex	
05-0220	Document Jig Test Low Speed Duplex	Document Jig Test Low Speed Duplex	
05-0230	Document Jig Test High Speed Simplex	Document Jig Test High Speed Simplex	
05-0240	Document Jig Test High Speed Duplex	Document Jig Test High Speed Duplex	
	Document Exit IDLE Sensor	Document Exit IDLE Sensor	High/Low
	Document Motor Forward	Document Motor Forward	Start/Stop
	Document Motor Backward	Document Motor Backward	Start/Stop
06-0000	Scanner Original Size Detecting Sensor 1	Scanner Original Size Detecting Sensor 1	High/Low
06-0001	Scanner Original Size Detecting Sensor 2	Scanner Original Size Detecting Sensor 2	High/Low
06-0010	Scanner Cover Open/Close Sensor 1	Scanner Cover Open/Close Sensor 1	High/Low
06-0011	Scanner Cover Open/Close Sensor 2	Scanner Cover Open/Close Sensor 2	High/Low
06-0020	Scanner Platen Motor Forward	Scanner Platen Motor Forward	Start/Stop
06-0030	Scanner Platen Motor Backward	Scanner Platen Motor Backward	Start/Stop
	Scanner home Sensor	Scanner home Sensor	High/Low

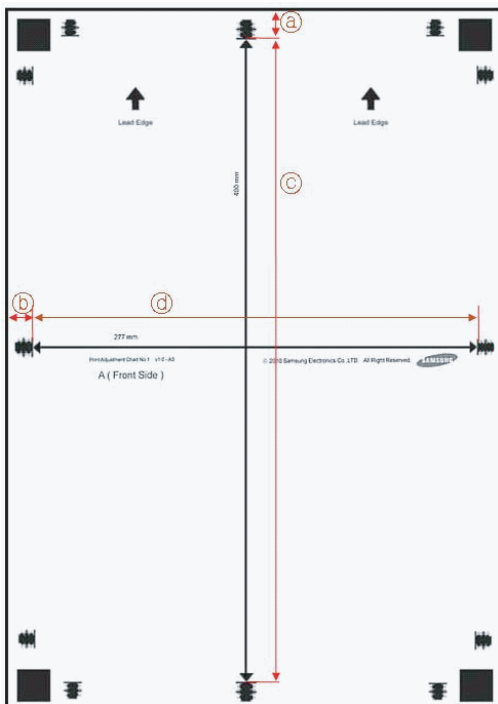
4.4.5.4. Adjustment

Print Adjustment

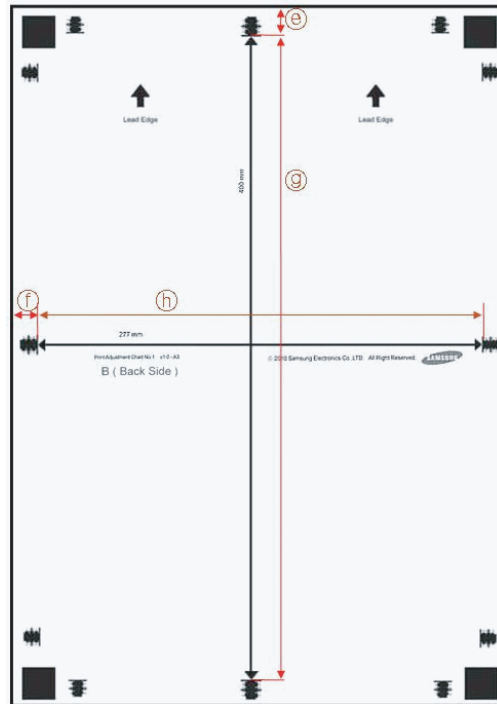
- Diagnostics > Adjustment > Print Adjustment > Automatic Adjustment

Purpose	To correct image position of print-outs automatically.
Operation Procedure	<ol style="list-style-type: none"> 1) Press “Paper Supply” button and select a tray. 2) Press “Paper Size” button and select a paper size of the previously selected tray. 3) Press “Print” button. A test pattern will be printed out. 4) Press “Next” button. The system ask to locate the test pattern. 5) Locate the front side of Scanner A/S Chart at the scanner glass . <div style="background-color: #cccccc; padding: 5px; margin: 10px 0;"> <p> NOTE ADF cannot be used.</p> </div> <ol style="list-style-type: none"> 6) Press “OK” button. Automatic scanning will occur . 7) Locate the back side of Scanner A/S Chart at the scanner glass again and press “OK” button once more. 8) The system will automatically calculate the proper value based on scanning result of the test pattern. 9) The new values are set to the system.
Verification	Print out and check if all the position of scale marks (a, b, e, f) in the image are located within the specified limit.
Specification	a, b, e, f : 10 mm, ± 1.5 mm
Reference	Scanner A/S Chart

■ Scanner A/S Chart



Front Side



Back Side

• **Diagnostics > Adjustment > Print Adjustment > Magnification**

Purpose	To correct magnification of print-outs manually.															
Operation Procedure	<ol style="list-style-type: none"> 1) Press “Vertical Magnification” or “Horizontal Magnification” 2) Vertical magnification (c,g) : If the current value is smaller than the specification, press “+”. Otherwise, press “-”. 3) Horizontal magnification (d,h) : If the current value is smaller than the specification, press “+”. Otherwise, press “-”. <table border="1" style="margin: 10px auto;"> <thead> <tr> <th>Example Cases</th> <th>Vertical Adjustment</th> <th>Horizontal Adjustment</th> </tr> </thead> <tbody> <tr> <td>Ⓒ or Ⓖ = 398.0 mm</td> <td>+20</td> <td></td> </tr> <tr> <td>Ⓒ or Ⓖ = 402.5 mm</td> <td>-25</td> <td></td> </tr> <tr> <td>Ⓓ or Ⓗ = 275.3 mm</td> <td></td> <td>+17</td> </tr> <tr> <td>Ⓓ or Ⓗ = 278.9 mm</td> <td></td> <td>-19</td> </tr> </tbody> </table>	Example Cases	Vertical Adjustment	Horizontal Adjustment	Ⓒ or Ⓖ = 398.0 mm	+20		Ⓒ or Ⓖ = 402.5 mm	-25		Ⓓ or Ⓗ = 275.3 mm		+17	Ⓓ or Ⓗ = 278.9 mm		-19
Example Cases	Vertical Adjustment	Horizontal Adjustment														
Ⓒ or Ⓖ = 398.0 mm	+20															
Ⓒ or Ⓖ = 402.5 mm	-25															
Ⓓ or Ⓗ = 275.3 mm		+17														
Ⓓ or Ⓗ = 278.9 mm		-19														
Verification	Print out and measure if the length of vertical (400 mm) and horizontal line (277 mm) in the print-out are correct.															
Specification	c, g : 400 mm, ± 1.5 mm (A3) d, h : 277 mm, ± 1.5 mm (A3)															
Reference	Scanner A/S Chart															

• **Diagnostics > Adjustment > Print Adjustment > Image Position**

Purpose	To correct image position of print-outs manually.																									
Operation Procedure	<ol style="list-style-type: none"> 1) Select a tray required adjustment. 2) Change the adjustment value with arrow button. “+” value will move to Tail-Edge while “-” value will move to Lead-Edge. <table border="1" style="margin: 10px auto;"> <thead> <tr> <th>Example Cases</th> <th>Simplex Leading Edge</th> <th>Simplex Side Edge</th> <th>Duplex Leading Edge</th> <th>Duplex Side Edge</th> </tr> </thead> <tbody> <tr> <td>Ⓐ = 8.5 mm</td> <td>+15</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Ⓑ = 11.6 mm</td> <td></td> <td>-16</td> <td></td> <td></td> </tr> <tr> <td>Ⓔ = 8.0 mm</td> <td></td> <td></td> <td>+20</td> <td></td> </tr> <tr> <td>Ⓕ = 13.0 mm</td> <td></td> <td></td> <td></td> <td>-30</td> </tr> </tbody> </table>	Example Cases	Simplex Leading Edge	Simplex Side Edge	Duplex Leading Edge	Duplex Side Edge	Ⓐ = 8.5 mm	+15				Ⓑ = 11.6 mm		-16			Ⓔ = 8.0 mm			+20		Ⓕ = 13.0 mm				-30
Example Cases	Simplex Leading Edge	Simplex Side Edge	Duplex Leading Edge	Duplex Side Edge																						
Ⓐ = 8.5 mm	+15																									
Ⓑ = 11.6 mm		-16																								
Ⓔ = 8.0 mm			+20																							
Ⓕ = 13.0 mm				-30																						
Verification	Print out and check if all the position of scale marks (,,,) in the image are located within the specified limit.																									
Specification	a, b, e, f : 10 mm, ± 1.5 mm																									
Reference	Scanner A/S Chart																									

Copy Adjustment

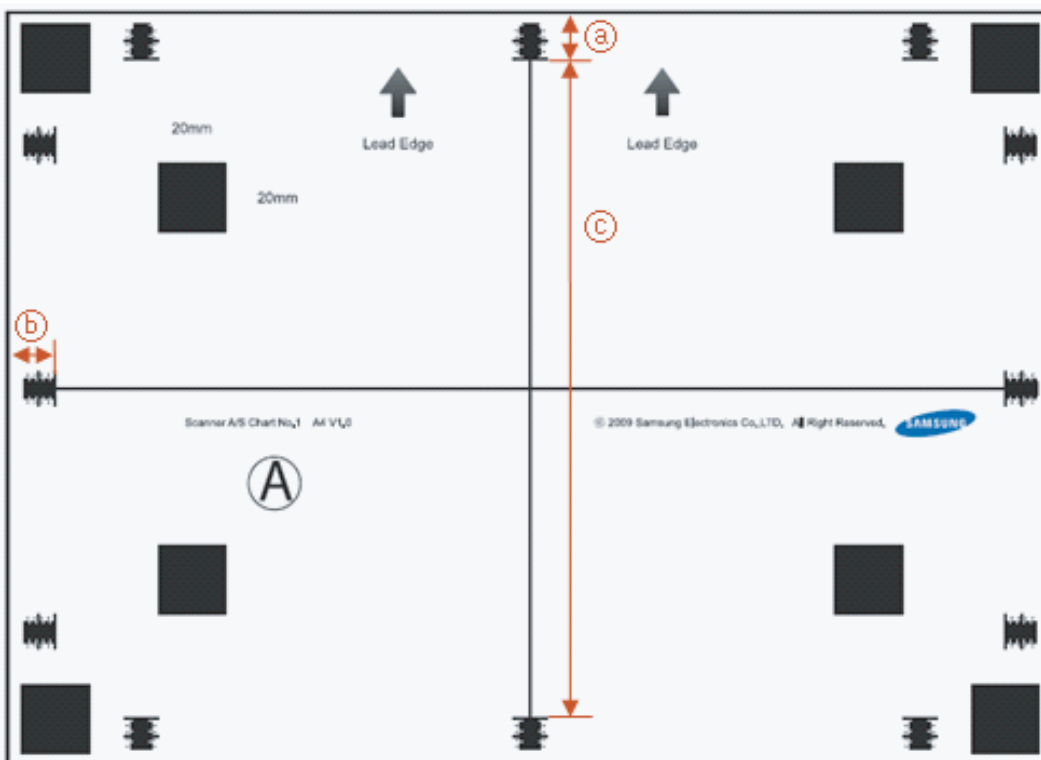
- **Diagnostics > Adjustment > Copy Adjustment > Image Position**

Purpose	To correct image position of copied images manually.																									
Operation Procedure	<p>1) Select a tray required adjustment.</p> <p>2) Change the adjustment value with arrow button. “+” value will move to Tail-Edge while “-” value will move to Lead-Edge.</p> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>Example Cases</th> <th>Simplex Leading Edge</th> <th>Simplex Side Edge</th> <th>Simplex Leading Edge</th> <th>Simplex Side Edge</th> </tr> </thead> <tbody> <tr> <td>Ⓐ = 11.5 mm</td> <td>-15</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Ⓑ = 8.4 mm</td> <td></td> <td>-16</td> <td></td> <td></td> </tr> <tr> <td>Ⓔ = 12.0 mm</td> <td></td> <td></td> <td>-20</td> <td></td> </tr> <tr> <td>Ⓕ = 7.0 mm</td> <td></td> <td></td> <td></td> <td>+30</td> </tr> </tbody> </table>	Example Cases	Simplex Leading Edge	Simplex Side Edge	Simplex Leading Edge	Simplex Side Edge	Ⓐ = 11.5 mm	-15				Ⓑ = 8.4 mm		-16			Ⓔ = 12.0 mm			-20		Ⓕ = 7.0 mm				+30
Example Cases	Simplex Leading Edge	Simplex Side Edge	Simplex Leading Edge	Simplex Side Edge																						
Ⓐ = 11.5 mm	-15																									
Ⓑ = 8.4 mm		-16																								
Ⓔ = 12.0 mm			-20																							
Ⓕ = 7.0 mm				+30																						
Verification	<p>1) Copy the Scanner A/S Chart . Scanning must be occur at the scanner glass .</p> <p>2) Check if all the position of scale marks (a, b, e, f) in the image are located within the specified limit.</p>																									
Specification	a, b, e, f: 10 mm, ± 1.5 mm																									
Reference	Scanner A/S Chart																									

Scan Area Adjustment


- **Diagnostics > Adjustment > Scan Area Adjustment > Automatic Adjustment**

Purpose	To correct image position and magnification of scanned images automatically.
Operation Procedure	<ol style="list-style-type: none"> 1) Locate the Scanner A/S Chart at the scan glass . Note that “Lead Edge” arrows need to head to the left side of scan glass and to be placed face down. Also note that the Scanner A/S Charts come in two sizes, A4 and Letter . Choose one size to meet your primary size of use. 2) Press “OK” button. Automatic scanning will occur, and the system will automatically calculate the proper value based on scanning result of the chart . 3) The new value set to the table.
Verification	<ol style="list-style-type: none"> 1) Scan the Scanner A/S Chart and send it to a PC. Scanning must be occur from the scan glass. 2) To check the image position, compare the position of scale marks (a, b) of the chart to the copy. 3) To check the magnification, compare the length of line “c” of the chart to the copy.
Specification	a, b: 10, \pm 1.5 mm c : 190, \pm 1.5 mm
Reference	A4 Scanner A/S Chart



A4 Scanner A/S Chart

• **Diagnostics > Adjustment > Scan Area Adjustment > Manual Adjustment**


Purpose	To correct image position and magnification of scanned images manually. This function is used when a result of automatic adjustment does not satisfy the expectation.																				
Operation Procedure	<p>1) Choose one item from the table. There are three items to choose.</p> <ul style="list-style-type: none"> • Image Position - Leading Edge • Image Position - Side Edge • Magnification - Vertical Direction <p>2) Select one item and press the “Edit” button.</p> <p>3) Change the adjustment value with arrow button.</p> <p>4) Image Position (a, b) : If the current value is smaller than the specification, press “+”. Otherwise, press “-”.</p> <p>5) Magnification (c) : If the current value is smaller than the specification, press “-”. Otherwise, press “+”.</p> <p>6) Press the “OK” button to apply the new value to the system.</p> <table border="1" style="margin: 10px auto;"> <thead> <tr> <th>Example Cases</th> <th>Leading Edge</th> <th>Side Edge</th> <th>Vertical Direction Adjustment</th> </tr> </thead> <tbody> <tr> <td>Ⓐ = 11.0 mm</td> <td>-10</td> <td></td> <td></td> </tr> <tr> <td>Ⓑ = 9.0 mm</td> <td></td> <td>+10</td> <td></td> </tr> <tr> <td>Ⓒ = 191.7 mm</td> <td></td> <td></td> <td>+0.8% (-3.4mm)</td> </tr> <tr> <td>Ⓒ = 188.1 mm</td> <td></td> <td></td> <td>-0.4% (near +1.8mm)</td> </tr> </tbody> </table> <div style="background-color: #e0e0e0; padding: 5px; margin-top: 10px;"> <p> NOTE The value of magnification adjustment needs to be calculated based on A3 size, 420mm ((190mm + 10mm*2)*2) if the used Scanner A/S Chart is A4 size.</p> </div>	Example Cases	Leading Edge	Side Edge	Vertical Direction Adjustment	Ⓐ = 11.0 mm	-10			Ⓑ = 9.0 mm		+10		Ⓒ = 191.7 mm			+0.8% (-3.4mm)	Ⓒ = 188.1 mm			-0.4% (near +1.8mm)
Example Cases	Leading Edge	Side Edge	Vertical Direction Adjustment																		
Ⓐ = 11.0 mm	-10																				
Ⓑ = 9.0 mm		+10																			
Ⓒ = 191.7 mm			+0.8% (-3.4mm)																		
Ⓒ = 188.1 mm			-0.4% (near +1.8mm)																		
Verification	<p>1) Scan the Scanner A/S Chart and send it to a PC. Scanning must be occur from the scan glass.</p> <p>2) To check the image position, compare the position of scale marks (a, b) of the chart to the copy.</p> <p>3) To check the magnification, compare the length of line “c” of the chart to the copy .</p>																				
Specification	<p>a, b: 10 , ± 1.5 mm</p> <p>c : 190 , ± 1.5 mm</p> <p>Image Position Unit : mm, Scale : 0.1, Min/Max : -6/+6</p> <p>Magnification Unit : %, Scale: 0.1(0.42mm), Min/Max: 99/101</p>																				
Reference	A4 Scanner A/S Chart																				

DADF Adjustment

- **Diagnostics > Adjustment > DADF Adjustment > Automatic Adjustment**

Purpose	To correct image position and magnification of scanned images via DADF automatically.
Operation Procedure	<ol style="list-style-type: none"> 1) Locate the Scanner A/S Chart at the DADF. Note that “Lead Edge” arrows need to head to feeding direction and to be placed face up. Also note that the Scanner A/S Charts come in two size, A4 and Letter . Choose one size to meet your primary size of use. 2) Press “OK” button. Automatic scanning will occur ,and the system will automatically calculate the proper value based on scanning result of the chart . 3) The new values are set to the table.
Verification	<ol style="list-style-type: none"> 1) Copy the Scanner A/S Chart. Scanning must be occur from the DADF. 2) To check the image position, compare the position of scale marks (a, b) of the chart to the copy. 3) To check the magnification, compare the length of line “c” of the chart to the copy.
Specification	<p>a, b: 10 ± 1.5 mm</p> <p>c : 190 ± 1.5 mm</p>
Reference	A4 Scanner A/S Chart

• **Diagnostics > Adjustment > DADF Adjustment > Manual Adjustment**

Purpose	To correct image position and magnification of scanned images via DADF manually. This function is used when a result of automatic adjustment does not satisfy the expectation.																				
Operation Procedure	<p>1) Choose one item from the table. There are three items to choose.</p> <ul style="list-style-type: none"> • Image Position - Simplex Leading Edge • Image Position – Simplex Side Edge • Magnification – Vertical Direction <p>2) Select one item and press the “Edit” button.</p> <p>3) Change the adjustment value with arrow button.</p> <p>4) Image Position (Simplex Leading Edge, a) : If the current value is smaller than the specification, press “+”. Otherwise, press “-”.</p> <p>5) Image Position (Simplex Side Edge, b) : If the current value is smaller than the specification, press “-”. Otherwise, press “+”.</p> <p>6) Magnification (c) : If the current value is smaller than the specification, press “-”. Otherwise, press “+”.</p> <p>7) Press the “OK” button to apply the new value to the system.</p> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th style="background-color: #ADD8E6;">Example Cases</th> <th style="background-color: #ADD8E6;">Leading Edge</th> <th style="background-color: #ADD8E6;">Side Edge</th> <th style="background-color: #ADD8E6;">Vertical Direction Adjustment</th> </tr> </thead> <tbody> <tr> <td>Ⓐ = 11.5 mm</td> <td>-15</td> <td></td> <td></td> </tr> <tr> <td>Ⓑ = 8.8 mm</td> <td></td> <td>-12</td> <td></td> </tr> <tr> <td>Ⓒ = 191.3 mm</td> <td></td> <td></td> <td>+0.6% (near -2.6mm)</td> </tr> <tr> <td>Ⓒ = 188.0 mm</td> <td></td> <td></td> <td>-0.5% (near +2.0mm)</td> </tr> </tbody> </table> <div style="background-color: #D3D3D3; padding: 5px; margin-top: 10px;"> <p> NOTE The value of magnification adjustment needs to be calculated based on A3 size, 420mm ((190mm + 10mm*2)*2) if the used Scanner A/S Chart is A4 size.</p> </div>	Example Cases	Leading Edge	Side Edge	Vertical Direction Adjustment	Ⓐ = 11.5 mm	-15			Ⓑ = 8.8 mm		-12		Ⓒ = 191.3 mm			+0.6% (near -2.6mm)	Ⓒ = 188.0 mm			-0.5% (near +2.0mm)
Example Cases	Leading Edge	Side Edge	Vertical Direction Adjustment																		
Ⓐ = 11.5 mm	-15																				
Ⓑ = 8.8 mm		-12																			
Ⓒ = 191.3 mm			+0.6% (near -2.6mm)																		
Ⓒ = 188.0 mm			-0.5% (near +2.0mm)																		
Verification	<p>1) Copy the Scanner A/S Chart. Scanning must be occur from the DADF.</p> <p>2) To check the image position, compare the position of scale marks (,) of the chart to the copy.</p> <p>3) To check the magnification, compare the length of line of the chart to the copy.</p>																				
Specification	<p>a, b : 10 ± 1.5 mm</p> <p>c : 190 ± 1.5 mm</p> <p>Image Position Unit : mm, Scale : 0.1, Min/Max : -6/+6</p> <p>Magnification Unit : %, Scale : 0.1(0.42mm), Min/Max : 99/101</p>																				
Reference	A4 Scanner A/S Chart																				

4.4.5.5. ACS (Auto Color Sensing)

- **Diagnostics > ACS**

Purpose	To set the color coverage ratio of auto color mode in copy function. <ul style="list-style-type: none"> • Color Coverage Ratio : The ratio of color contents in the original document. 												
Operation Procedure	Change the level from 1 to 5. <ul style="list-style-type: none"> • Classifies a document as color, if color coverage of the document is higher than predefined level. • Level 1 has higher probability of classifying documents to color, while level 5 has lower probability. 												
Verification	Copy the 'mono copied' original with auto color mode and check if print out is monochrome.												
Specification	<table border="1"> <thead> <tr> <th></th> <th>Level 1</th> <th>Level 2</th> <th>Level 3</th> <th>Level 4</th> <th>Level 5</th> </tr> </thead> <tbody> <tr> <td>Color Coverage</td> <td>0.01%</td> <td>0.05%</td> <td>0.1%</td> <td>0.25%</td> <td>0.5%</td> </tr> </tbody> </table>		Level 1	Level 2	Level 3	Level 4	Level 5	Color Coverage	0.01%	0.05%	0.1%	0.25%	0.5%
	Level 1	Level 2	Level 3	Level 4	Level 5								
Color Coverage	0.01%	0.05%	0.1%	0.25%	0.5%								
Reference	N/A												

4.4.6. Service Functions

4.4.6.1. Main Memory Clear

- **Service Functions > Main Memory Clear**

This function resets the main memory of the system to the factory default setting. It can be used to reset the system to the initial value when the product is functioning abnormally. All the user configured values return to the default values.

To clear the main memory, users need to select the country of the system locates, and rebooting of the system is required.

4.4.6.2. Hard Disk Maintenance

- **Service Functions > Hard Disk Maintenance > Device Configuration Data Clear**

- This function formats all device configuration data, for example, user profile, address book, and devices settings, on the hard disk.

- **Service Functions > Hard Disk Maintenance > Temporary and Spool Data Clear**

- This function formats all temporary and spool data saved on the hard disk.

- **Service Functions > Hard Disk Maintenance > User Saved Data and Log Data Clear**

- This function formats all the user data, for example, box data, pending secure jobs, font, form, macro, data related applications, and job log, on the hard disk.

- **Service Functions > Hard Disk Maintenance > All Saved Data Clear**

- This function formats all the data that can be erased with 3 functions above. The function will NOT format the hard disk entirely.

- **Service Functions > Hard Disk Maintenance > Hard Disk Check**

- This function checks a bad sector in the hard disk. If a bad sector is found, the system will display an error message and send an email notification to the system administrator.

4.4.6.3. Count Setting of Large Page

- **Service Functions > Count Setting of Large Page**

This function sets count of large page, such as A3 and ledger size, to 1 count or 2 count of the total count. For example, the total use of 100 A4 impressions and 100 A3 impressions will become 200 impressions if the configuration is set to “1 Count Up” while the total will be 300 impression if the configuration is set to “2 Count Up”.

4.4.6.4. Debug Log

- **Service Functions > Debug Log**

This function sets the system log message level. Users can select three options.

- Off : This option disables the logging option.
- Job Status: This option only enables the logging option of user created jobs.
- Details : This option enables all the logging options of the running tasks of the system. Note that this option might create a trade-off of performance in certain system operation. Use this option when the system behaves abnormally, and engineers need to investigate problems.

4.4.6.5. Capture Log

- **Service Functions > Capture Log**

This function copies all the saved log in the system to a UBS memory as a zip file. To use this function, a USB memory needs to be plugged into the system. Note that the size of system log could reach up to 1GB. If the system log size become considerably huge, it will take longer time to copy to the plugged memory.

4.4.6.6. System Recovery

- **Service Functions > System Recovery**

This function repairs or formats the HDD of the system. To use this function, a HDD image need to be saved in a USB memory, and that USB memory needs to be plugged in the system before the execution.

 **NOTE**

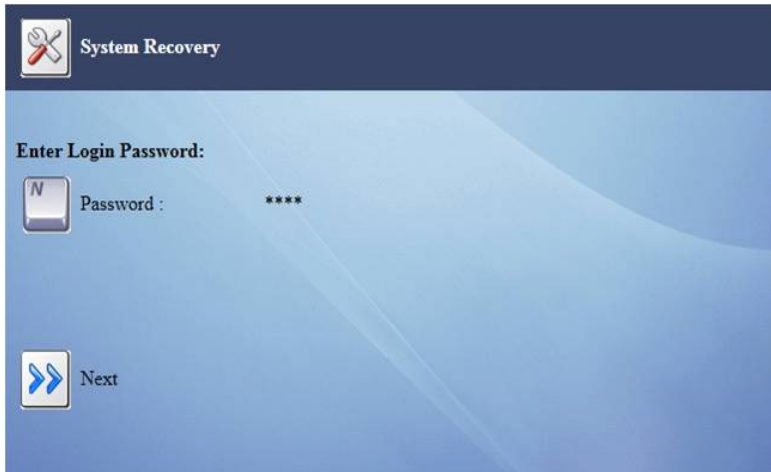
- Memory stick file system type : FAT16 or FAT32 not NTFS
- Memory stick must contain the following 3 files only.
 - **unix script files x 2**
 - **HDD image file x1**

- 1) From the system recovery UI, Choose “SYS” to recover only the system partition of the HDD or “ALL” to recover all the partition of the HDD.
- 2) When the system recovery UI is appeared after reboot, choose “HDD Repair” to repair any corrupted data in the selected partition or choose “HDD Format” to format the data in the selected partition.



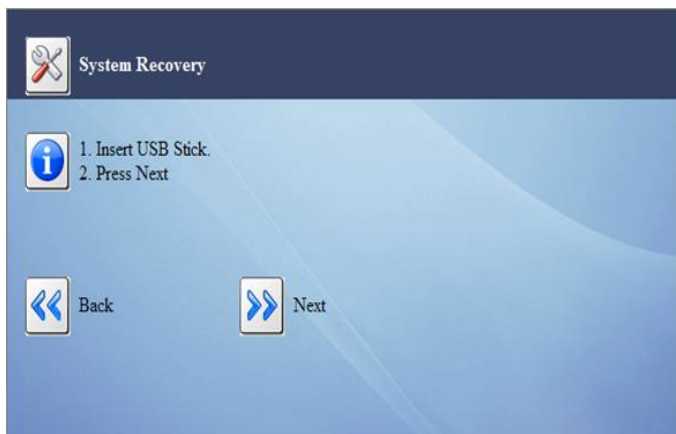
- a) HDD Format
 - Hidden Partition : This can format and reinstall the only System Binary in HDD. User data is not deleted.
 - USB : This can format the HDD using USB stick. All data except the stored in MSOK will be deleted.
 - Network : This can format the HDD using network. All data except the stored in MSOK will be deleted.
- b) HDD Repair : This can restore the internal system by checking the HDD error. This is for HDD recovery itself and irrelevant to the user data in device.

- 3) When pushing “Next” button, the login page for authentication will be displayed. The password will be **1934** as the factory setting password.



- 4) When pushing “Next” button, the following page will be displayed.

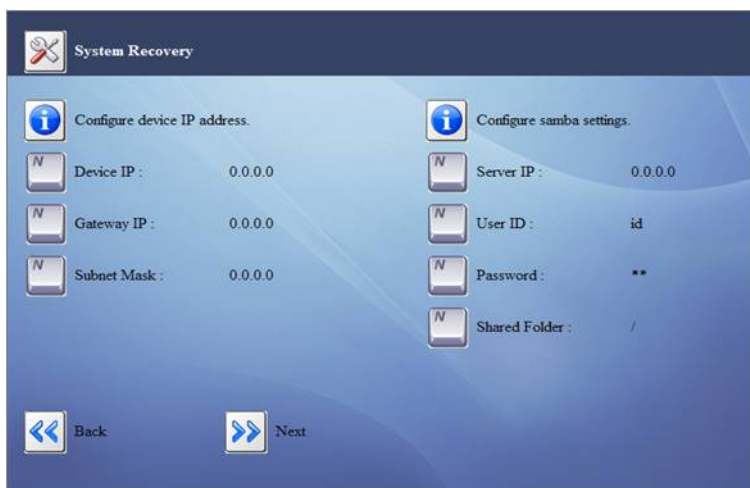
- In case of selecting USB option :



The Next button is pressed after inserting the USB stick.

The system will check for the required packages in the USB stick. If all the packages are present in the USB stick then the system will be directed to the confirmation page otherwise an Error page will be displayed with an appropriate error message.

- In case of selecting Network option :



This page contains two sections :

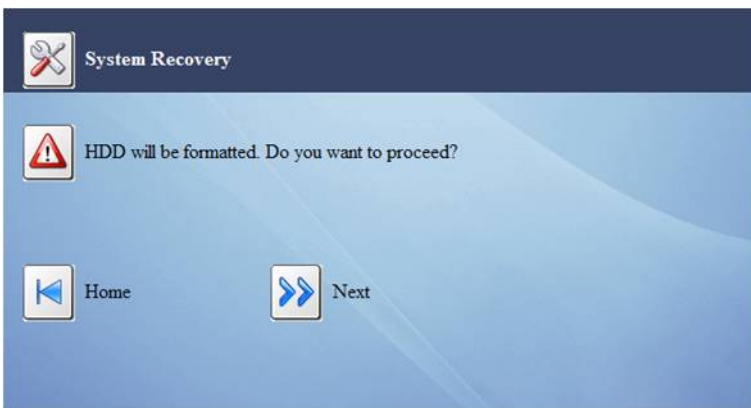
- **Configure device IP address**
 - a) Device IP: IP address for the device
 - b) Gateway IP: Gateway IP address for the device
 - c) Subnet Mask: Network Subnet Mask for the device
- **Configure samba settings**
 - a) Server IP : IP address of the server.
 - b) User ID : user ID of the server to login into the server system
 - c) Password : password of the server system
 - d) Shared folder : name of the shared folder on the server, where the packages for the system recovery are present.

The Next button is pressed after providing the above information.

The system will establish the provided IP to the device and try to connect to the server and check for the available packages on the server.

If Network is establish and all the packages are present in the shared folder of the server then the system will be directed to the Confirmation page otherwise an Error page will be displayed with an appropriate error message.

- 5) When pushing “Next” button on option selection page, the confirmation page will be displayed.



- 6) When pushing “Next” button, progress page will be displayed.



- 7) When completing HDD Recovery or HDD Repair successfully, reboot the machine.

- 8) After rebooting, the machine will start the system initialization.

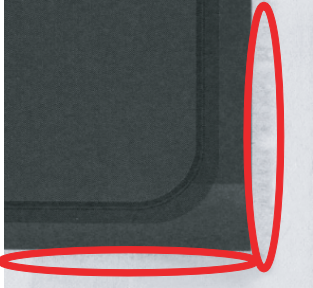
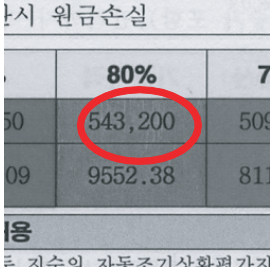
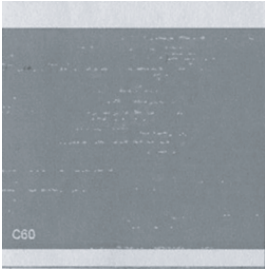
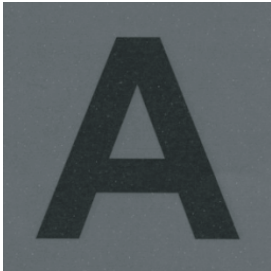

**NOTE**

If the system initialization is not executed, enter the svc mode and execute “Full memory clear”.
If not, the machine may not work normally.

- 9) Execute the firmware update using the one ROM FW file after system initialization. This work is a must for all FW module level.

4.4.6.7. TR Control Mode

• Service Functions > TR Control Mode

Purpose	To correct transfer related problems. This function can be used to change the transfer value to optimize image quality to a certain type of paper.
Operation Procedure	<p>1) TR Control Mode</p> <ul style="list-style-type: none"> • Choose the paper group, paper side, and paper direction. • Adjust PWM value based on the problem type. <ul style="list-style-type: none"> • Blur : Increase PWM value • Poor Transfer : Increase PWM value • Re-transfer : Decrease PWM value • White Spot : Decrease PWM value • OPC Cyclic Ghost : Decrease PWM value <div style="display: flex; justify-content: space-around; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p>Blur</p> </div> <div style="text-align: center;">  <p>Poor Transfer</p> </div> <div style="text-align: center;">  <p>Retransfer</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  <p>White Spot</p> </div> <div style="text-align: center;">  <p>OPC Cyclic Ghost</p> </div> </div>
Verification	Print out a test job and make sure the transfer problem has resolved.
Specification	N/A
Reference	N/A

4.5. Error Code and Troubleshooting

Messages appear on the control panel display to indicate the machine's status or errors.



NOTE

Some messages may not appear on the display depending on the options or models.

Error Code	Error Message	Troubleshooting Page
A1-1111	Motor Failure: #A1-1111. Turn off then on. Call for service if the problem persists	4-50
A1-1113	Motor Failure: #A1-1113. Turn off then on. Call for service if the problem persists	4-50
A1-1211	Motor Failure: #A1-1211. Turn off then on. Call for service if the problem persists	4-52
A1-1213	Motor Failure: #A1-1213. Turn off then on. Call for service if the problem persists	4-52
A1-2111	Motor Failure: #A1-2111. Turn off then on. Call for service if the problem persists	4-54
A1-2113	Motor Failure: #A1-2113. Turn off then on. Call for service if the problem persists	4-54
A1-5113	Motor Failure: #A1-5113. Turn off then on. Call for service if the problem persists	4-56
A1-5512	Motor Failure: #A1-5512. Turn off then on. Call for service if the problem persists	4-56
A1-5513	Motor Failure: #A1-5513. Turn off then on. Call for service if the problem persists	4-56
A1-5610	Motor Failure: #A1-5610. Turn off then on. Call for service if the problem persists	4-56
A2-2810	Fan Failure: #A2-2810. Turn off then on. Call for service if the problem persists	4-57
A2-2811	Fan Failure: #A2-2811. Turn off then on. Call for service if the problem persists	4-57
A2-2910	Fan Failure: #A2-2910. Turn off then on. Call for service if the problem persists	4-57
A2-2911	Fan Failure: #A2-2911. Turn off then on. Call for service if the problem persists	4-57
A3-3111	Sensor Failure: #A3-3111. Turn off then on. Call for service if the problem persists	4-58
A3-3112	Sensor Failure: #A3-3112. Turn off then on. Call for service if the problem persists	4-58
A3-3113	Sensor Failure: #A3-3113. Turn off then on. Call for service if the problem persists	4-58
A3-3114	Sensor Failure: #A3-3114. Turn off then on. Call for service if the problem persists	4-58
A3-3210	Sensor Failure: #A3-3210. Turn off then on. Call for service if the problem persists	4-60
A3-3211	Sensor Failure: #A3-3211. Turn off then on. Call for service if the problem persists	4-60
A3-3212	Sensor Failure: #A3-3212. Turn off then on. Call for service if the problem persists	4-60
A3-3310	Sensor Failure: #A3-3310. Turn off then on. Call for service if the problem persists	4-61
A3-3311	Sensor Failure: #A3-3311. Turn off then on. Call for service if the problem persists	4-61
A3-3312	Sensor Failure: #A3-3312. Turn off then on. Call for service if the problem persists	4-61
A3-3410	Sensor Failure: #A3-3410. Turn off then on. Call for service if the problem persists	4-61
A3-3411	Sensor Failure: #A3-3411. Turn off then on. Call for service if the problem persists	4-61
A3-3412	Sensor Failure: #A3-3412. Turn off then on. Call for service if the problem persists	4-61
C1-1110	Prepare new toner cartridge	4-62
C1-1130	Replace with new toner cartridge	4-63
C1-1140	End of life, Replace with new toner cartridge	4-63
C1-1311	Toner Cartridge Failure: #C1-1311. Install toner cartridge again	4-64
C1-1411	Toner cartridge is not installed. Install the cartridge	4-65
C1-1512	Toner cartridge is not compatible. Check users guide	4-66

4. Troubleshooting

Error Code	Error Message	Troubleshooting Page
C3-1110	Prepare new imaging unit	4-67
C3-1130	Replace with new imaging unit	4-67
C3-1140	End of life, Replace with new imaging unit	4-67
C3-1211	Imaging Unit Failure: #C3-1211. Please turn off then on	4-68
C3-1411	Imaging unit is not installed. Install the unit	4-69
C3-1422	Imaging unit requires chargers cleaning. Clean the unit.	4-70
C3-1512	Imaging unit is not compatible. Check users guide	4-71
C6-1310	Fuser unit is not installed. Install it	4-72
C7-1110	Waste toner container is almost full. Order new one	4-73
C7-1130	Waste toner container is full. Replace it	4-73
C7-1311	Waste toner container is not installed. Install it	4-74
C9-2110	Replace with new Transfer roller	4-75
C9-2120	Replace with new Transfer roller	4-75
C9-2220	TR Failure: #C9-2220. Install transfer roller again	4-76
H1-1311	Paper jam in Tray 3	4-77
H1-1312	Paper jam in Tray 3	4-77
H1-1313	Paper jam in Tray 3	4-77
H1-1314	Paper jam inside of machine	4-77
H1-1315	Paper jam in Tray 3	4-77
H1-1317	Paper jam in Tray 3	4-77
H1-1318	Paper jam in Tray 3	4-77
H1-1322	Tray 3 cassette is pulled out. Insert it properly	4-79
H1-1351	Paper is low in Tray 3. Load paper	4-80
H1-1352	Paper is empty in Tray 3. Load paper	4-80
H1-1353	Input System Failure: #H1-1353. Pull Tray 3 out and insert it	4-81
H1-1411	Paper jam in Tray 4	4-82
H1-1412	Paper jam in Tray 4	4-82
H1-1417	Paper jam in Tray 4	4-82
H1-1418	Paper jam in Tray 4	4-82
H1-1422	Tray 4 cassette is pulled out. Insert it properly	4-84
H1-1451	Paper is low in Tray 4. Load paper	4-85
H1-1452	Paper is empty in Tray 4. Load paper	4-85
H1-1453	Input System Failure: #H1-1453. Pull Tray 4 out and insert it	4-86
H1-5323	Tray door is open. Close the door	4-87
H1-5330	DCF Failure: #H1-5330. Check internal DCF connection	4-87
H2-6700	Paper jam in front of finisher (Display animation)	4-89
H2-6701	Paper jam inside of finisher (Display animation)	4-89
H2-6702	Paper jam inside of finisher (Display animation)	4-89
H2-6703	Paper jam inside of finisher (Display animation)	4-89

Error Code	Error Message	Troubleshooting Page
H2-6704	Paper jam at exit of finisher (Display animation)	4-89
H2-6705	Paper jam at exit of finisher (Display animation)	4-89
H2-6706	Finisher Failure: #H2-6706. Check finisher	4-90
H2-6707	Finisher Failure: #H2-6707. Check finisher	4-91
H2-6708	Finisher Failure: #H2-6708. Check finisher	4-91
H2-6709	Finisher Failure: #H2-6709. Check finisher	4-91
H2-6710	Finisher Failure: #H2-6710. Check finisher	4-91
H2-6711	Finisher Failure: #H2-6711. Check finisher	4-91
H2-6712	Finisher Failure: #H2-6712. Check finisher	4-91
H2-6713	Finisher Failure: #H2-6713. Check finisher	4-91
H2-6714	Finisher Failure: #H2-6714. Check finisher	4-91
H2-6715	Finisher Failure: #H2-6715. Check finisher	4-91
H2-6716	Finisher Failure: #H2-6716. Check finisher	4-91
H2-6717	Finisher Failure: #H2-6717. Check finisher	4-91
H2-6718	Finisher Failure: #H2-6718. Check finisher	4-91
H2-6719	Finisher Failure: #H2-6719. Check finisher	4-91
H2-6720	Finisher Failure: #H2-6720. Check finisher	4-91
H2-6721	Finisher Failure: #H2-6721. Check finisher	4-91
H2-6722	Finisher Failure: #H2-6722. Check finisher	4-91
H2-6723	Finisher Failure: #H2-6723. Check finisher	4-91
H2-6724	Finisher Failure: #H2-6724. Check finisher	4-91
H2-6725	Finisher Failure: #H2-6725. Check finisher	4-91
H2-6726	Finisher Stapler door is open. Close it (Display animation)	4-92
H2-6727	Finisher Jam door is open. Close it (Display animation)	4-92
H2-6728	Finisher Failure: #H2-6728. Check finisher	4-93
H2-6729	Finisher Failure: #H2-6729. Check finisher	4-93
H2-6730	Finisher Failure: #H2-6730. Check finisher	4-93
H2-6731	Finisher Failure: #H2-6731. Check finisher	4-93
H2-6732	Staple cartridge is low. Replace it	4-94
H2-6733	Staple cartridge is empty. Replace it	4-94
H2-6734	Finisher Failure: #H2-6734. Check finisher	4-95
H2-6735	Too much paper in finisher stacker. Remove printed paper	4-96
H2-6736	Finisher Failure: #H2-6736. Check finisher	4-98
H2-6737	Finisher Failure: #H2-6737. Check finisher	4-98
H2-6738	Finisher Failure: #H2-6738. Check finisher	4-98
H2-6739	Finisher Failure: #H2-6739. Check finisher	4-98
H2-6740	Finisher Failure: #H2-6740. Check finisher	4-98
H2-6741	Finisher Failure: #H2-6741. Check finisher	4-98
H2-6742	Finisher Failure: #H2-6742. Check finisher	4-98

4. Troubleshooting

Error Code	Error Message	Troubleshooting Page
H2-6743	Finisher Failure: #H2-6743. Check finisher	4-98
H2-6744	Staple Cartiridge not install. Install it	4-100
H2-6A50	Finisher Failure: #H2-6A50. Check finisher	4-101
M1-1113	Paper jam in Tray 1	4-102
M1-1213	Paper jam in Tray 2	4-104
M1-1610	Paper jam in MP Tray	4-106
M1-3122	Tray 1 cassette is pulled out. Insert it properly	4-108
M1-3222	Tray 2 cassette is pulled out. Insert it properly	4-109
M1-4111	Input System Failure: #M1-4111. Pull Tray 1 out and insert it	4-110
M1-4211	Input System Failure: #M1-4211. Pull Tray 2 out and insert it	4-111
M1-5111	Paper is low in Tray 1. Load paper	4-112
M1-5112	Paper is empty in Tray 1. Load paper	4-112
M1-5211	Paper is low in Tray 2. Load paper	4-113
M1-5212	Paper is empty in Tray 2. Load paper	4-113
M1-5612	Paper is empty in MP Tray. Load paper	4-114
M2-1121	Paper jam in Tray 1	4-102
M2-1124	Paper jam inside of machine	4-115
M2-1125	Paper jam inside of machine	4-115
M2-1131	Paper jam in Tray 2	4-104
M2-1134	Paper jam inside of machine	4-116
M2-1135	Paper jam inside of machine	4-116
M2-1211	Paper jam inside of machine	4-117
M2-1213	Paper jam inside of machine	4-117
M2-1214	Paper jam inside of machine	4-117
M2-1331	Paper jam inside of machine	4-118
M2-1333	Paper jam inside of machine	4-118
M2-1334	Paper jam inside of machine	4-118
M2-2111	Paper jam inside of machine	4-118
M2-2113	Paper jam at the top of duplex path	4-118
M2-2114	Paper jam at the top of duplex path	4-118
M3-1411	Paper jam in exit area	4-119
M3-1413	Paper jam in exit area	4-120
M3-1414	Paper jam in exit area	4-120
M3-2230	Output tray(face down) is full. Remove printed media	4-121
M3-2430	Inner output tray is full. Remove printed media	4-121
S1-1113	Video System Failure: #S1-1113. Turn off then on	4-122
S1-1114	Video System Failure: #S1-1114. Turn off then on	4-123
S1-1313	The clock became initial time. Set a time again	4-124
S1-1411	Video System Failure: #S1-1411. Turn off then on	4-125

Error Code	Error Message	Troubleshooting Page
S1-1413	Video System Failure: #S1-1413. Turn off then on	4-125
S1-2111	Video System Failure: #S1-2111. Turn off then on	4-126
S1-2411	HDD System Failure: #S1-2411. Turn off then on	4-127
S1-2421	HDD System Failure: #S1-2421. Turn off then on	4-127
S1-2422	HDD System Failure: #S1-2422. Turn off then on	4-127
S1-2510	MSOK System Failure: #S1-2510. Turn off then on	4-128
S1-2511	MSOK System Failure: #S1-2511. Turn off then on	4-128
S1-2521	MSOK Failure: #S1-2521. Call for service	4-128
S1-4111	Video System Failure: #S1-4111. Turn off then on	4-129
S1-4311	Video System Failure: #S1-4311. Turn off then on	4-130
S1-5521	FDI device is not installed. Install the device	4-131
S2-1211	Engine System Failure: #S2-1211. Turn off then on	4-132
S2-2311	Engine System Failure: #S2-2311. Turn off then on	4-133
S2-4210	Front door is open. Close it	4-134
S2-4410	Right door is open. Close it	4-135
S3-3111	Scan System Failure: #S3-3111. Turn off then on	4-136
S3-3121	Scanner locked or another problem occurred.(No Switch Case)Scanner is locked	4-137
S3-3211	Scan System Failure: #S3-3211. Turn off then on	4-138
S3-3213	Scan System Failure: #S3-3213. Turn off then on	4-138
S3-3214	Scan System Failure: #S3-3214. Turn off then on	4-138
S3-3215	Scan System Failure: #S3-3215. Turn off then on	4-138
S3-3216	Scan System Failure: #S3-3216. Turn off then on	4-138
S3-3217	Scan System Failure: #S3-3217. Turn off then on	4-138
S5-3111	UI System Failure: #S5-3111. Turn off then on	4-139
S6-3122	Network cable is disconnected. Check it	4-140
S6-3123	This IP address conflicts with that of other system. Check it	4-141
S6-3128	802.1x authentication failed. Please Contact the System Administrator	4-142
S7-2110	Fuser Failure: #S7-2110. Turn off then on	4-143
U1-2113	Fuser Unit Failure: #U1-2113. Turn off then on	4-144
U1-2115	Fuser Unit Failure: #U1-2115. Turn off then on	4-146
U1-2119	Fuser Unit Failure: #U1-2119. Turn off then on	4-146
U1-2132	Fuser Unit Failure: #U1-2132. Turn off then on	4-147
U1-2135	Fuser Unit Failure: #U1-2135. Turn off then on	4-147
U1-2141	Fuser Unit Failure: #U1-2141. Turn off then on	4-149
U1-2142	Fuser Unit Failure: #U1-2142. Turn off then on	4-149
U1-2316	Fuser Failure: #U1-2316. Turn off then on	4-150
U1-2317	Fuser Failure: #U1-2317. Turn off then on	4-150
U1-2335	Fuser Failure: #U1-2335. Turn off then on	4-151
U1-2337	Fuser Failure: #U1-2337. Turn off then on	4-153

4. Troubleshooting

Error Code	Error Message	Troubleshooting Page
U1-233A	Fuser Failure: #U1-233A. Turn off then on	4-151
U1-233D	Fuser Failure: #U1-233D. Turn off then on	4-153
U2-1111	LSU Failure: #U2-1111. Turn off then on	4-155
U2-1112	LSU Failure: #U2-1112. Turn off then on	4-155
U2-1113	LSU Failure: #U2-1113. Turn off then on	4-155
U2-1114	LSU Failure: #U2-1114. Turn off then on	4-155
U3-3113	Original paper jam in front of the scanner	4-157
U3-3211	Original paper jam in front of the scanner	4-157
U3-3212	Original paper jam in front of the scanner	4-157
U3-3213	Original paper jam inside the scanner	4-157
U3-3214	Original paper jam inside the scanner	4-157
U3-3311	Original paper jam inside the scanner	4-160
U3-3312	Original paper jam inside the scanner	4-157
U3-3313	Original paper jam inside the scanner	4-160
U3-3314	Original paper jam inside the scanner	4-157
U3-3411	Original paper jam inside the scanner	4-159
U3-3413	Original paper jam inside the scanner	4-159
U3-3414	Original paper jam inside the scanner	4-159
U3-3711	Original paper jam in the exit area of scanner	4-160
U3-3713	Original paper jam in the exit area of scanner	4-160
U3-3714	Original paper jam in the exit area of scanner	4-160
U3-4210	Top door of scanner is open	4-161

4.5.1. Ax-xxxx type error code

► **Error Code**

A1-1111

A1-1113

► **Error message**

Motor Failure: #A1-1111. Turn off then on. Call for service if the problem persists.

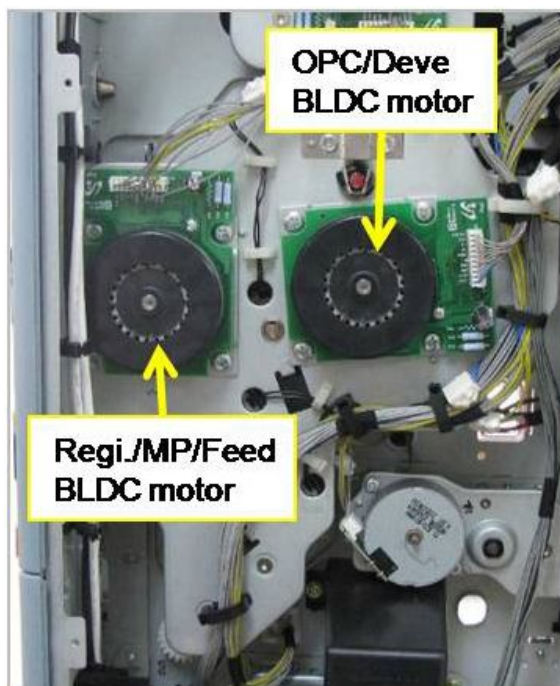
Motor Failure: #A1-1113. Turn off then on. Call for service if the problem persists.

► **Symptom**

Regi/MP motor does not operate. / Regi/MP motor is operational but registers status as stopped.

► **Troubleshooting method**

- 1) Turn the machine off then on. If the error persists, turn the machine off again.
- 2) Open the side cover. Check if there are any foreign substances or paper around Regi./MP unit.
(Refer to 3.3.22. Side unit)
- 3) Remove the Rear-cover.
(Refer to 3.3.2. Rear cover)
- 4) Check if the Regi/MP motor connector is connected correctly.



- 5) If the connection is OK, turn the machine on. Enter the SVC mode. Select the motor test.
(Diagnostics > Engine Diagnostics > Engine Test Routines >100-0000)
 - a) If the motor does not operate,

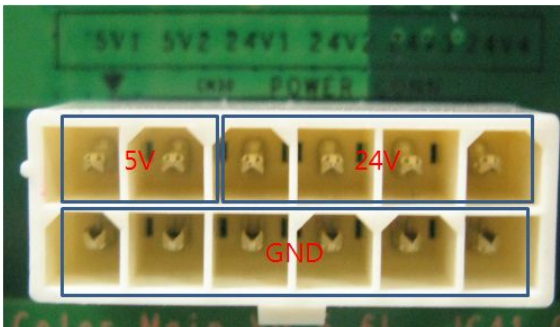
i) Check the signal and power with the DVM.

Pin Num	Name	Value (Measurement error $\pm 5\%$)
1, 2	24V	24V
3, 4	GND	0V
5	Brake	-
6	Gain	-
7	Enable	Operate : 0V, Stop : 3.3V
8	Ready	Operate : 0V, Stop : 3.3V
9	CLK	Operate : 1.5~ 1.8V, Stop : 0V or 3.3V
10	DIR	-

ii) If the checked result is normal, replace the BLDC motor([JC93-00448A](#)).

iii) If the checked result is abnormal, check the following.

- If 24V power is not generated, replace the SMPS board ([JC44-00100A \(220V\)](#) / [JC44-00093A \(110V\)](#))



- If the control signal is abnormal, replace the Main board([JC92-02452A](#)).

b) If the motor is operational, check the Pin Num 8.

i) If the value is abnormal, replace the Main board([JC92-02452A](#)).

ii) If the value is normal, replace the harness.

► **Error Code**

A1-1211

A1-1213

► **Error message**

Motor Failure: #A1-1211. Turn off then on. Call for service if the problem persists.

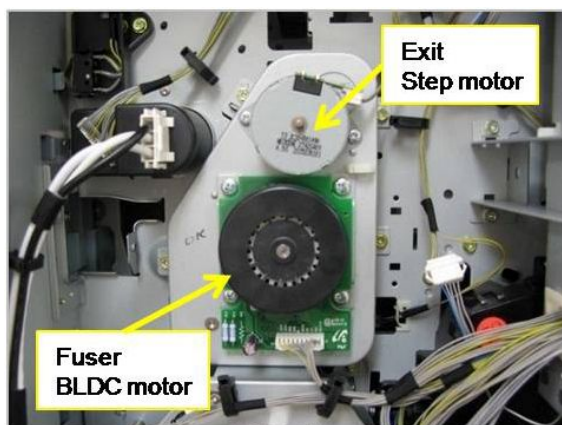
Motor Failure: #A1-1213. Turn off then on. Call for service if the problem persists.

► **Symptom**

Fuser motor does not operate. / Fuser motor is operational but registers status as stopped.

► **Troubleshooting method**

- 1) Turn the machine off then on. If the error persists, turn the machine off again.
- 2) Open the side cover. Check if there are any foreign substances or paper around fuser unit.
(Refer to 3.3.22. Side unit)
- 3) Remove the rear cover
(Refer to 3.3.2. Rear cover)
- 4) Check if the fuser motor connector is connected correctly.



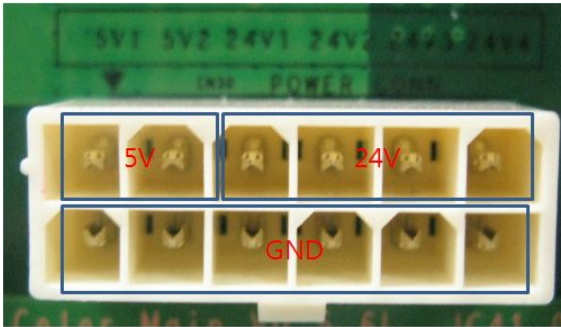
- 5) If the connection is OK, turn the machine on. Enter the SVC mode. Select the motor test.
(Diagnostics > Engine Diagnostics > Engine Test Routines > 100-0120)
 - a) If the motor does not operate,
 - i) Check the signal and power with the DVM.

Pin Num	Name	Value (Measurement error $\pm 5\%$)
1, 2	24V	24V
3, 4	GND	0V
5	Brake	-
6	Gain	-
7	Enable	Operate : 0V, Stop : 3.3V
8	Ready	Operate : 0V, Stop : 3.3V
9	CLK	Operate : 1.5~ 1.8V, Stop : 0V or 3.3V
10	DIR	-

- ii) If the checked result is normal, replace the BLDC motor([JC93-00448A](#)).

iii) If the checked result is abnormal, check the following.

- If 24V power is not generated, replace the SMPS board (*JC44-00100A (220V) / JC44-00093A (110V)*).



- If the control signal is abnormal, replace the Main board(*JC92-02452A*).

b) If the motor is operational, check the Pin Num 8.

i) If the value is abnormal, replace the Main board(*JC92-02452A*).

ii) If the value is normal, replace the harness.

► **Error Code**

A1-2111

A1-2113

► **Error message**

Motor Failure: #A1-2111. Turn off then on. Call for service if the problem persists.

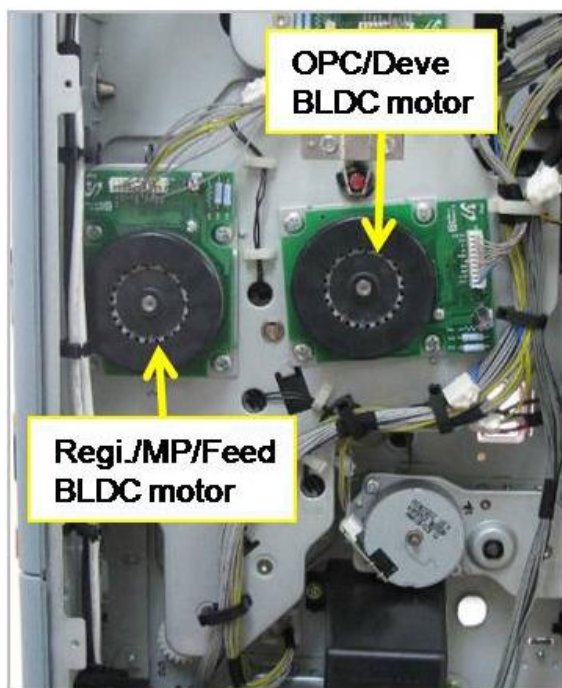
Motor Failure: #A1-2113. Turn off then on. Call for service if the problem persists.

► **Symptom**

OPC motor does not operate. / OPC motor is operational but registers status as stopped.

► **Troubleshooting method**

- 1) Turn the machine off then on. If the error persists, turn the machine off again.
- 2) Open the side cover. Check if there are any foreign substances or paper around drum drive unit.
(Refer to 3.3.22. Side unit)
- 3) Remove the rear cover
(Refer to 3.3.2. Rear cover)
- 4) Check if the OPC motor connector is connected correctly.



- 5) If the connection is OK, turn the machine on. Enter the SVC mode. Select the yellow OPC motor test.
(Diagnostics > Engine Diagnostics > Engine Test Routines > 100-0000)
 - a) If the motor does not operate,

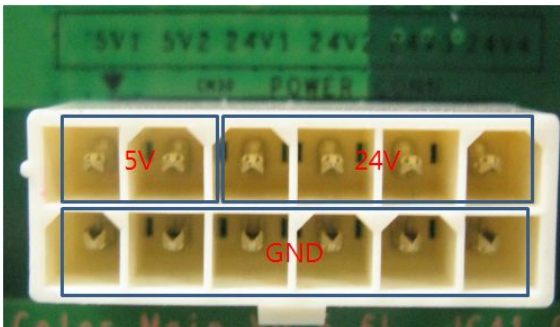
i) Check the signal and power with the DVM.

Pin Num	Name	Value (Measurement error $\pm 5\%$)
1, 2	24V	24V
3, 4	GND	0V
5	Brake	-
6	Gain	-
7	Enable	Operate : 0V, Stop : 3.3V
8	Ready	Operate : 0V, Stop : 3.3V
9	CLK	Operate : 1.5~ 1.8V, Stop : 0V or 3.3V
10	DIR	-

ii) If the checked result is normal, replace the BLDC motor([JC31-00123B](#)).

iii) If the checked result is abnormal, check the following.

- If 24V power is not generated, replace the SMPS board ([JC44-00100A \(220V\)](#) / [JC44-00093A \(110V\)](#)).



- if the control signal is abnormal, replace the Main board([JC92-02452A](#)).

b) If the motor is operational, check the Pin Num 8.

i) If the value is abnormal, replace the Main board([JC92-02452A](#)).

ii) If the value is normal, replace the harness.

► **Error Code**

A1-5113

A1-5512

A1-5513

A1-5610

► **Error message**

Motor Failure: #A1-5113. Turn off then on. Call for service if the problem persists.

Motor Failure: #A1-5512. Turn off then on. Call for service if the problem persists.

Motor Failure: #A1-5513. Turn off then on. Call for service if the problem persists.

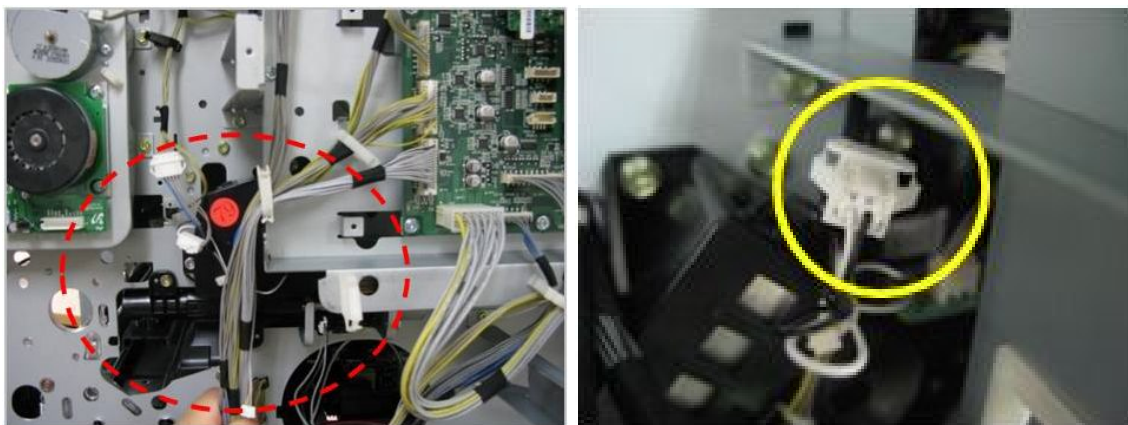
Motor Failure: #A1-5610. Turn off then on. Call for service if the problem persists.

► **Symptom**

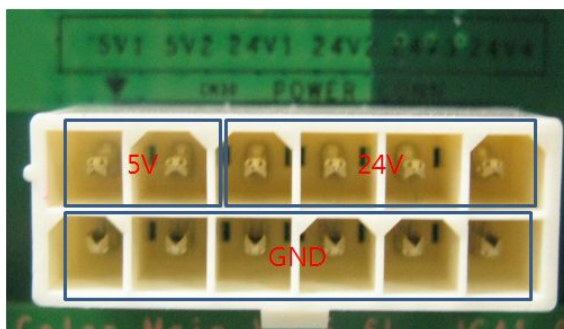
Toner is not supplied normally.

► **Troubleshooting method**

- 1) Open the front cover. If the toner pipe is blocked, open it.
- 2) Turn the machine off then on. If the error persists, check the following steps.
- 3) Enter the SVC mode. Select the toner supply motor test.
(Diagnostics > Engine Diagnostics > Engine Test Routines > 111-0040)
- 4) If the motor does not operate, measure the motor power with DVM.
- Measure 2points together.



- a) If 24V power is supplied, replace the Toner supply motor([JC31-00123B](#)).
- b) If 24V power is not supplied, check the SMPS and main board
 - i) If 24V power is not generated, replace the SMPS board([JC44-00100A \(220V\)](#) / [JC44-00093A \(110V\)](#)).



- ii) If the control signal is abnormal, replace the Main board([JC92-02452A](#)).

► **Error Code**

A2-2810

A2-2811

A2-2910

A2-2911

► **Error message**

Fan Failure: #A2-2810. Turn off then on. Call for service if the problem persists.

Fan Failure: #A2-2811. Turn off then on. Call for service if the problem persists.

Fan Failure: #A2-2910. Turn off then on. Call for service if the problem persists.

Fan Failure: #A2-2911. Turn off then on. Call for service if the problem persists.

► **Symptom**

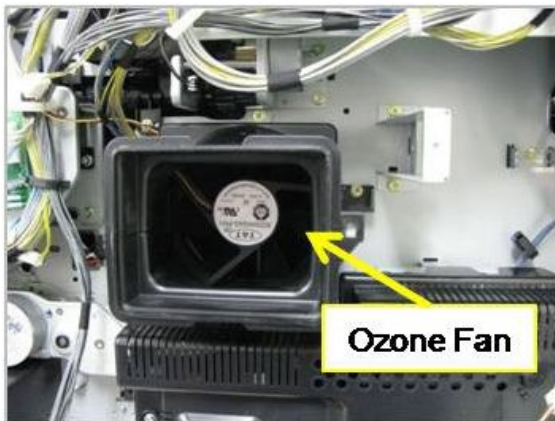
Ozone Fan or OPC In fan fan does not operate.

► **Troubleshooting method**

 **NOTE**

- Ozone fan error : A2-2810 / A2-2811
- OPC In fan error : A2-2910 / A2-2911

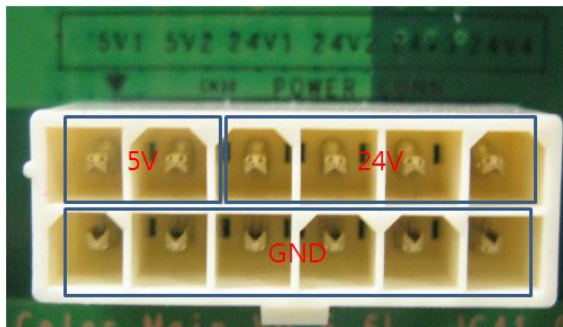
- 1) Turn the machine off.
- 2) Remove the rear cover.
(Refer to 3.3.2. Rear Cover)
- 3) Check if the corresponding fan connector is connected correctly.



- 4) If the connection is OK, enter the SVC mode and execute fan test.
(Diagnostics > Engine Dignostics > Engine Test Routines > 100-0260, 109-0040)
- 5) If the fan does not operate, measure the fan power. (Red line)
- Measure the Red line



- a) If 24V power is generated, replace the defective fan.
- b) If 24V power is not generated, check the SMPS and main board.
 - i) Measure 24V power on the SMPS board. If the SMPS board([JC44-00100A \(220V\)](#) / [JC44-00093A \(110V\)](#)) is defective, replace it.



- ii) If the SMPS board is normal, replace the Main board([JC92-02452A](#)).
- 6) If the fan operation is normal but the error persists,
 - a) Check the yellow line signal with DVM.

Pin Num	Name	Value (Measurement error $\pm 5\%$)
1, 2	24V	24V
3, 4	GND	0V
5	Brake	-
6	Gain	-
7	Enable	Operate : 0V, Stop : 3.3V
8	Ready	Operate : 0V, Stop : 3.3V
9	CLK	Operate : 1.5~ 1.8V, Stop : 0V or 3.3V
10	DIR	-

- b) Check fan operation as connection or disconnection.
 - i) If the Lock signal is 0V continually, check the harness.
 - ii) If the harness is OK, replace the Main board([JC92-02452A](#)).
 - iii) If the signal value is different from the table above, replace the Fan([JC93-00500A](#)).

▶ **Error Code**

- A3-3111
- A3-3112
- A3-3113
- A3-3114

▶ **Error message**

- Sensor Failure: #A3-3111. Turn off then on. Call for service if the problem persists.
- Sensor Failure: #A3-3112. Turn off then on. Call for service if the problem persists.
- Sensor Failure: #A3-3113. Turn off then on. Call for service if the problem persists.
- Sensor Failure: #A3-3114. Turn off then on. Call for service if the problem persists.

▶ **Symptom**

The NC sensor in the fuser unit is defective. / The sensor signal is abnormal due to a defective harness.

▶ **Troubleshooting method**

- 1) Enter the SVC mode. Execute the sensor test to check the sensor operation.
(Diagnostics > Engine Diagnostics > Engine Test Routines >)
 - 109-0000 : Fuser Temperature A
 - 109-0010 : Fuser Temperature B

- 2) Remove and disassemble the fuser unit.

(Refer to 3.2.2. Fuser Unit)
(Refer to 3.3.23. Fuser Unit)



- 3) Measure the resistance value of the Thermistor (*1404-001453*). If the measured value is out of 307KΩ~430KΩ @25°C, replace the thermistor.

Check	Resistance(Ω)
1-2 (Blue - Black)	307KΩ~430KΩ
1-3 (Blue -White)	307KΩ~430KΩ

- 4) If the error persists, replace the Fuser unit (*JC91-01049A(220V) / JC91-01050A (110V)*).
- 5) If the error persists after replacing fuser unit, replace the Main board(*JC92-02452A*).

► Error Code

A3-3210

A3-3211

A3-3212

► Error message

Sensor Failure: #A3-3210. Turn off then on. Call for service if the problem persists.

Sensor Failure: #A3-3211. Turn off then on. Call for service if the problem persists.

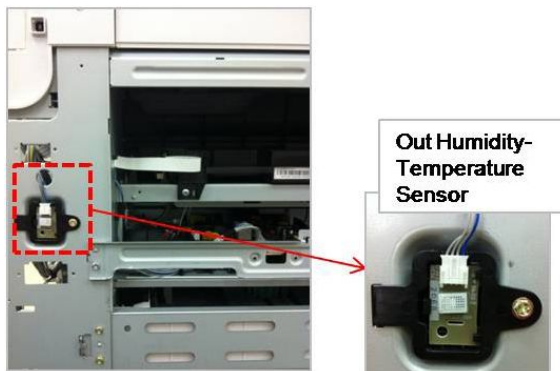
Sensor Failure: #A3-3212. Turn off then on. Call for service if the problem persists.

► Symptom

Inner temperature sensor is defective.

► Troubleshooting method

- 1) Turn the machine off.
- 2) Enter SVC mode. Execute sensor test to check the sensor operation.
(Diagnostics > Engine Diagnostics > Engine Test Routines > 109-0012)
- 3) Open the side cover. Measure the resistance value of the connector at both ends.
(Refer to 3.3.22. Side unit)
- If the values is not in $10K\Omega \pm 1\%$ (@ 25 °C), replace the Photo sensor ([1404-001417](#)).



- 4) If the sensor is normal, replace the Main board([JC92-02452A](#)).

► **Error Code**

A3-3310

A3-3311

A3-3312

A3-3410

A3-3411

A3-3412

► **Error message**

Sensor Failure: #A3-3310. Turn off then on. Call for service if the problem persists.

Sensor Failure: #A3-3311. Turn off then on. Call for service if the problem persists.

Sensor Failure: #A3-3312. Turn off then on. Call for service if the problem persists.

Sensor Failure: #A3-3410. Turn off then on. Call for service if the problem persists.

Sensor Failure: #A3-3411. Turn off then on. Call for service if the problem persists.

Sensor Failure: #A3-3412. Turn off then on. Call for service if the problem persists.

► **Symptom**

External temperature sensor is defective. / Humidity sensor is defective.

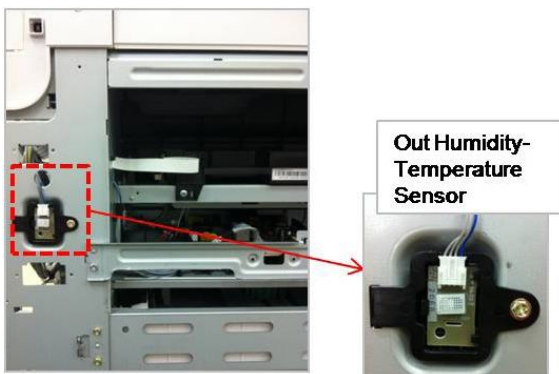
► **Troubleshooting method**

- A3-3310, A3-3311, A3-3312 : External temperature sensor
- A3-3410, A3-3411, A3-3412 : Humidity sensor

- 1) Turn the machine off.
- 2) Enter SVC mode. Execute sensor test to check the sensor operation.
(Diagnostics > Engine Diagnostics > Engine Test Routines > 109-0013)
- 3) Open the side cover. Measure the resistance value of the connector at both ends.

(Refer to 3.3.22. Side unit)

- If the values is not in $10K\Omega \pm 1\%$ (@ 25 °C), replace the Photo sensor ([JC93-00486A](#)).



- 4) If the sensor is normal, replace the Main board([JC92-02452A](#)).

4.5.2. Cx-xxxx type error code

▶ **Error Code**

C1-1110

▶ **Error message**

Prepare new yellow toner cartridge.

▶ **Symptom**

Toner remained is 5 ~ 30% of its life.

▶ **Troubleshooting method**

- 1) Open the front cover.
- 2) Remove the toner cartridge(*MLT-D709S*).
(Toner cartridge with level of “Low” will be exhausted soon.)



▶ **Error Code**

C1-1130

C1-1140

▶ **Error message**

End of life, Replace with new toner cartridge.

End of life, Replace with new toner cartridge.

▶ **Symptom**

The toner cartridge is at the end of its life.

▶ **Troubleshooting method**

- 1) Print the supply information report.
- 2) Check the life remaining of the toner cartridge.
- 3) If its life is at the end, turn the machine off and open the front cover.
- 4) Replace the toner cartridge with new one([MLT-D709S](#)).



► Error Code

C1-1311

► Error message

Imaging Unit Failure: #C3-1312. Install imaging unit again

► Symptom

Toner supply is inefficient or abnormal.

► Troubleshooting method

- 1) Turn the machine off. Open the front cover
- 2) Remove the toner cartridge. Shake the toner cartridge horizontally to distribute the toner evenly inside the cartridge.
- 3) If the problem persists, check the follows.
 - a) Check if the Toner Supply Drive Unit([JC93-00436A](#)) is defective.
(Refer to 3.3.16. Toner Supply Drive Unit)
 - b) Check if the Toner Duct Drive Unit([JC93-00451A](#)) is defective.
(Refer to 3.3.15. Toner Duct Druve Unit)
- 4) If the problem persists, replace the Toner cartridge([MLT-D709S](#)).



▶ **Error Code**

C1-1411

▶ **Error message**

Toner cartridge is not installed. Install it.

▶ **Symptom**

The toner cartridge is not installed. / The CRUM data is not detected.

▶ **Troubleshooting method**

- 1) Open the front cover. Check if the toner cartridge is installed.



- 2) Remove and reinstall the toner cartridge.
- 3) If the problem persists, check if the toner cartridge modular jack is contaminated or deformed.



- 4) Replace the toner cartridge with a new one([MLT-D709S](#)).

▶ Error Code

C1-1512

▶ Error message

Toner cartridge is not compatible. Check users guide.

▶ Symptom

Toner cartridge is not compatible.

▶ Troubleshooting method

- 1) Open the front cover. Remove the toner cartridge and re-install.
- 2) Print the supply information report. Check the toner cartridge information.
- 3) If the toner cartridge is not a Samsung genuine, replace it with a new one([MLT-D709S](#)).



▶ **Error Code**

C3-1110

C3-1130

C3-1140

▶ **Error message**

Prepare new imaging unit

Replace with new imaging unit.

▶ **Symptom**

The Imaging unit has almost reached the end of life.

▶ **Troubleshooting method**

1) Open the front door and remove the waste toner container.

2) Remove the drum unit.

(Refer to 3.2.1. Developer Toner cartridge Drum unit)

3)

4) If its life is at the end, turn the machine off and replace the imaging unit([MLT-R709](#)) with new one.



► Error Code

C3-1211

► Error message

Imaging Unit Failure:#C3-1211. Please turn off then on.

► Symptom

Sensor calibration error that detects the toner density for image stabilization control has occurred.

► Troubleshooting method

- 1) Open the front door and remove the waste toner container.
- 2) Remove the drum unit and reinstall.
(Refer to 3.2.1. Developer Toner cartridge Drum unit)
- 3)
- 4) If the problem persists, replace the imaging unit(*MLT-R709*) with new one.



▶ **Error Code**

C3-1411

▶ **Error message**

Imaging unit is not installed. Install the unit.

▶ **Symptom**

The imaging unit is not installed. / The data of CRUM is not detected.

▶ **Troubleshooting method**

- 1) Open the front door and remove the waste toner container.
- 2) Remove the drum unit and reinstall.

(Refer to 3.2.1. Developer Toner cartridge Drum unit)

- 3) If the problem persists, replace the imaging unit([MLT-R709](#)) with new one.



► Error Code

C3-1422

► Error message

Imaging unit is not installed. Install the unit.

► Symptom

The imaging unit need to clean.

► Troubleshooting method

- 1) Open the front door and remove the waste toner container.
- 2) Remove the drum unit and reinstall.
(Refer to 3.2.1. Developer Toner cartridge Drum unit)
- 3)
- 4) If the problem persists, clean the drum unit by charger cleaner.



- 5) If the problem persists, replace the drum unit. ([MLT-R709](#)).

▶ **Error Code**

C3-1512

▶ **Error message**

Imaging unit is not compatible. Check user's guide

▶ **Symptom**

Imaging unit is not compatible.

▶ **Troubleshooting method**

- 1) Open the front door and remove the waste toner container.
- 2) Remove the drum unit and reinstall.

(Refer to 3.2.1. Developer Toner cartridge Drum unit)

- 3) If the problem persists, replace the imaging unit([MLT-R709](#)) with new one.



▶ Error Code

C6-1310

▶ Error message

Fuser unit is not installed. Install it

▶ Symptom

Fuser unit is not detected.

▶ Troubleshooting method

- 1) Turn the machine off. Re-install the fuser unit. Then turn the machine on.
(Refer to 3.2.2. Fuser unit)
- 2) If the problem persists, Print the Supply Information Report and check whether fuser unit life is over.

**NOTE**

The fuser unit can print up to 150,000 pages.

- 3) If the problem persists, replace the Fuser unit (*110V : JC91-01049A, 220V : JC91-01050A*).

▶ **Error Code**

C7-1110

C7-1130

▶ **Error message**

Waste toner container is almost full. Order new one.

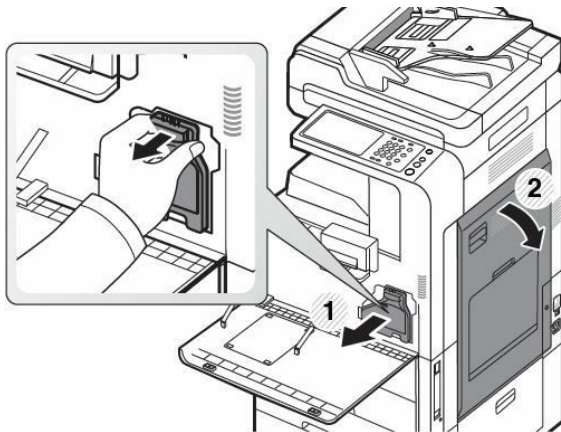
Waste toner container is full. Replace it.

▶ **Symptom**

The life of the waste toner container expires soon or has expired.

▶ **Troubleshooting method**

- 1) Open the front cover and remove the waste toner container.
- 2) Reinstall the waste toner container.
- 3) If the problem persists, remove the waste toner container.
(Refer to 3.2.1. Developer Toner cartridge Drum unit)
- 4) If the problem persists, replace the waste toner container([MLT-W709](#)).



► Error Code

C7-1311

► Error message

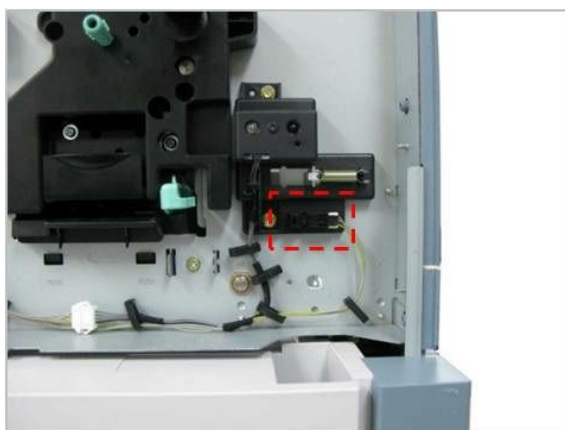
Waste toner container is not installed. Install it.

► Symptom

The waste toner container is not installed.

► Troubleshooting method

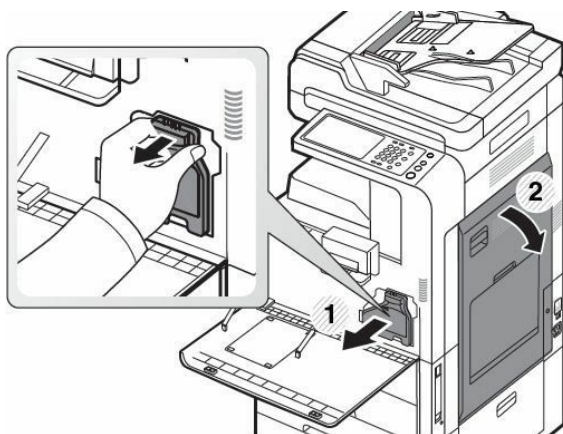
- 1) Open the front cover and check the waste toner container is installed correctly.
- 2) Check the waste toner container sensor operates correctly.

(Refer to 3.3.18. Waste toner container sensor)

- 3) If the problem persists, remove the waste toner container.

(Refer to 3.2.1. Developer Toner cartridge Drum unit)

- 4) If the problem persists, replace the waste toner container([MLT-W709](#)).



▶ **Error Code**

C9-2110

C9-2120

▶ **Error message**

Replace with new Transfer roller.

▶ **Symptom**

Transfer belt is at the end of its life.

▶ **Troubleshooting method**

- 1) Open the side-cover.
- 2) Replace the transfer roller(*JC95-01520A*).

(Refer to 3.2.3. Transfer roller)



► **Error Code**

C9-2220

► **Error message**

TR Failure: #C9-2220. Install transfer roller again.

► **Symptom**

The resistance value of the transfer roller is abnormal.

► **Troubleshooting method**

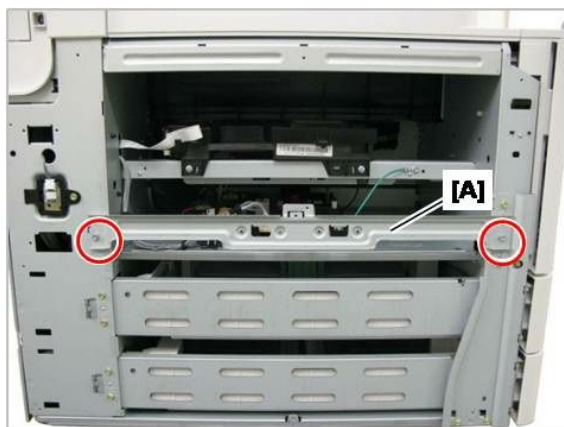
- 1) Open the side cover.
- 2) Replace the transfer roller(*JC95-01520A*).

(Refer to 3.2.3. Transfer roller)



- 3) If the problem persists, replace the HVPS board.

(Refer to 3.3.3. HVPS board)



4.5.3. Hx-xxxx type error code

► **Error Code**

H1-1311

H1-1312

H1-1313

H1-1314

H1-1315

H1-1317

H1-1318

► **Error message**

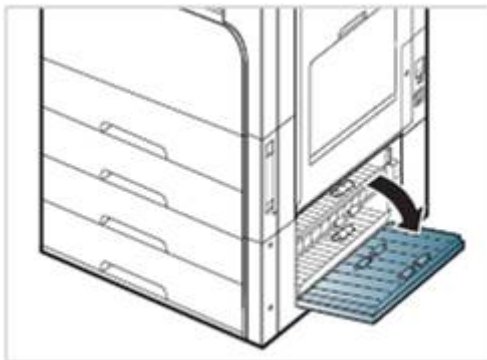
Paper jam in Tray 3.

► **Symptom**

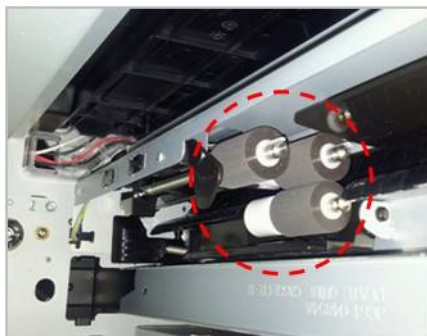
Paper jam has occurred in tray3. (Pick up unit connection is defective. / Pickup rollers are defective. / Feed sensor is defective.)

► **Troubleshooting method**

- 1) Open the DCF Take Away-Cover. Remove the jammed paper.



- 2) Remove tray3. Remove the jammed paper. Close the DCF Take Away-Cover and insert tray3.
- 3) If this jam error occurs frequently, check the rollers below.
 - a) Remove the tray3 and tray4.
 - b) Check if the pick up/ reverse/ forward rollers are assembled correctly.



- c) If the pick up/ reverse/ forward rollers are worn out or contaminated, replace the defective roller([JC93-00540A](#)).
- 4) If pick up/ reverse/ forward rollers have no problem, check the following.
 - a) Remove the DCF pick up unit1. Check if the feed sensor cable is connected correctly.
 - b) Check if the sensor cable on DCF board is connected correctly.

- c) If the connection is OK, replace the feed sensor([0604-001381](#)).
 - d) Install the DCF pick up unit1.
- 5) If the problem persists after checking step 3~4, check the following.
- a) Remove the DCF pick up unit1. Check if the sensor and actuator are assembled correctly.
 - b) When pushing the pickup lever, check if the pick up rollers are down.
 - c) Replace the DCF pick up unit1([JC93-00513A](#)) or defective part.
- 6) Check the DCF feed motor.
- a) Check if the DCF feed motor cable is connected correctly.
 - b) If the connection is OK, replace the DCF feed drive unit([JC93-00447A](#)).
- (Refer to 3.3.33.2 DCF Feed Motor)**
- 7) Check the DCF pick up motor.
- a) Check if the DCF pick up motor cable is connected correctly.
 - b) If the connection is OK, replace the DCF pick up drive unit([JC93-00442A](#)).
- (Refer to 3.3.33.3 DCF Pick Up Motor)**

▶ **Error Code**

H1-1322

▶ **Error message**

Tray 3 cassette is pulled out. Insert it properly.

▶ **Symptom**

Tray 3 is pulled out or the auto size sensor connector is not connected or broken.

▶ **Troubleshooting method**

- 1) Remove and insert tray3 correctly.
- 2) If the problem persists, remove tray3 and tray4. Look inside the machine.
- 3) Check if the auto size sensor cable is connected correctly. Unplug and reconnect it.



- 4) If the connection is OK, replace the auto size sensor([JC93-00018A](#)).
- 5) If the problem persists, replace the DCF board([JC92-02453A](#)).
(Refer to 3.3.33.1. DCF Main Board)

► Error Code

H1-1351

H1-1352

► Error message

Paper is low in Tray 3. Load paper.

Paper is empty in Tray 3. Load paper.

► Symptom

Paper in the tray is less than 10%. / The photo sensor is defective.

► Troubleshooting method

- 1) Remove tray3. Load the paper in the tray3.
- 2) If paper is loaded but error message has not disappeared, check the following.
 - a) Remove the DCF pick up unit1.
 - b) Check if the photo sensor in the DCF pick up unit1 is contaminated. If so, clean it.
 - c) If the photo sensor(*0604-001393*) is defective, replace it.
 - d) If the actuator(*JC66-03199A*) is defective, replace it.



► Error Code

H1-1353

► Error message

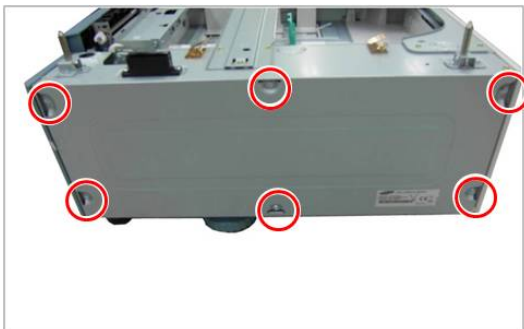
Input System Failure #H1-1353 : Pull Tray 3 out and insert it.

► Symptom

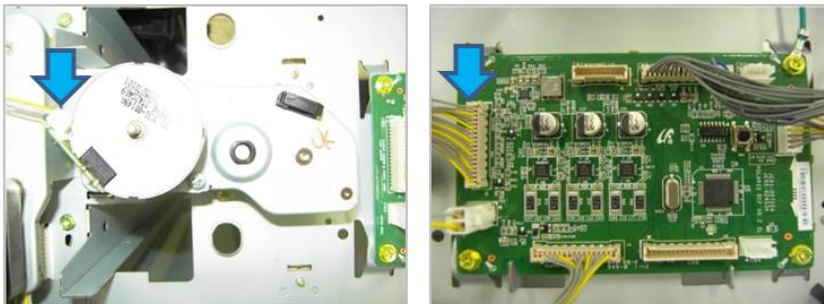
The paper is not fed from tray3.

► Troubleshooting method

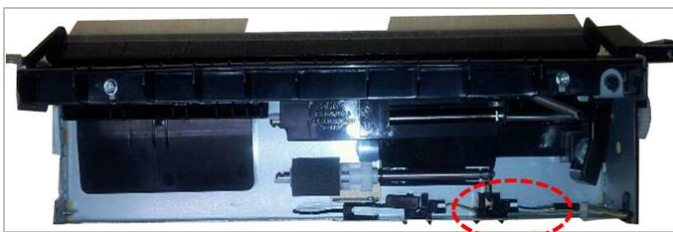
- 1) Remove and insert tray3 correctly.
- 2) Turn the machine off then on.
- 3) If the problem persists, turn the machine off.
- 4) Remove the Bracket Rear Cover after removing 6 screws.



- 5) Check if the connection between the DCF pick up drive and DCF board is correct.



- 6) If the connection is OK, replace the pick up drive unit(*JC93-00442A*).
(Refer to 3.3.33.3. DCF Pick Up Motor)
- 7) If the problem persists, check the following.
 - a) Remove the DCF pick up unit1.
 - b) Check if the photo sensor in the DCF pick up unit1 is contaminated, clean it.
 - c) If the photo sensor(*0604-001393*) is defective, replace it.



► **Error Code**

H1-1411

H1-1412

H1-1417

H1-1418

► **Error message**

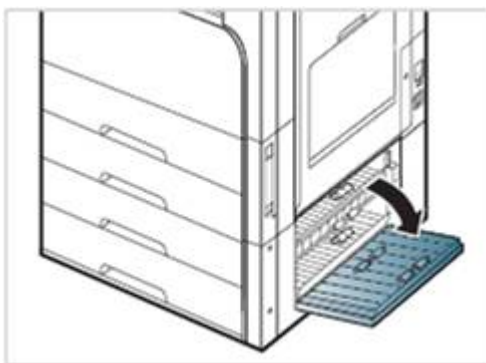
Paper jam in Tray 4.

► **Symptom**

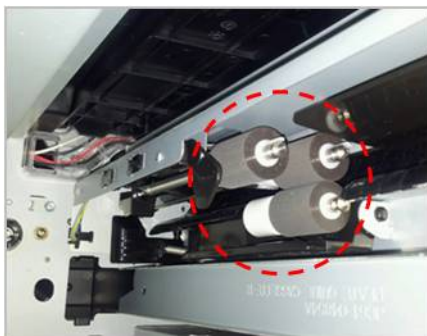
Paper jam has occurred in tray4. (Pick up unit connection is defective. / Pickup rollers are defective. / Feed sensor is defective.)

► **Troubleshooting method**

- 1) Open the DCF Take Away-Cover. Remove the jammed paper.



- 2) Remove tray4. Remove the jammed paper. Close the DCF Take Away-Cover and insert tray4.
- 3) If this jam error occurs frequently, check the follows.
 - a) Remove tray3 and tray4.
 - b) Check if the pick up/ reverse/ forward rollers are assembled correctly.



- c) If the pick up/ reverse/ forward rollers are worn out or contaminated, replace the defective roller([JC93-00540A](#)).
- 4) If pick up/ reverse/ forward rollers have no problem, check the following.
 - a) Remove the DCF pick up unit2. Check if the feed sensor cable is connected correctly.
 - b) Check if the sensor cable on DCF board is connected correctly.
 - c) If the connection is OK, replace the feed sensor([0604-001381](#)).
 - d) Install the DCF pick up unit2.
- 5) If the problem persists after checking step 3~4, check the following.
 - a) Remove the DCF pick up unit2. Check if the sensor and actuator are assembled correctly.
 - b) When pushing the pickup lever, check if the pick up rollers are down.

- c) Replace the DCF pick up unit2([JC93-00513A](#)) or defective part.
- 6) Check the DCF feed motor.
 - a) Check if the DCF feed motor cable is connected correctly.
 - b) If the connection is OK, replace the DCF feed drive unit([JC93-00447A](#)).
(Refer to 3.3.33.2 DCF Feed Motor)
- 7) Check the DCF pick up motor.
 - a) Check if the DCF pick up motor cable is connected correctly.
 - b) If the connection is OK, replace the DCF pick up drive unit([JC93-00442A](#)).
(Refer to 3.3.33.3 DCF Pick Up Motor)

► Error Code

H1-1422

► Error message

Tray 4 cassette is pulled out. Insert it properly.

► Symptom

Tray 4 is pulled out or the auto size sensor connector is not connected or is broken.

► Troubleshooting method

- 1) Remove and insert tray4 correctly.
- 2) If the problem persists, remove tray3 and tray4. Look inside the machine.
- 3) Check if the auto size sensor cable is connected correctly. Unplug and reconnect it.



- 4) If the connection is OK, replace the auto size sensor([JC93-00018A](#)).
- 5) If the problem persists, replace the DCF board([JC92-02453A](#)).
(Refer to 3.3.33.1. DCF Main Board)

▶ **Error Code**

H1-1451

H1-1452

▶ **Error message**

Paper is low in Tray 4. Load paper.

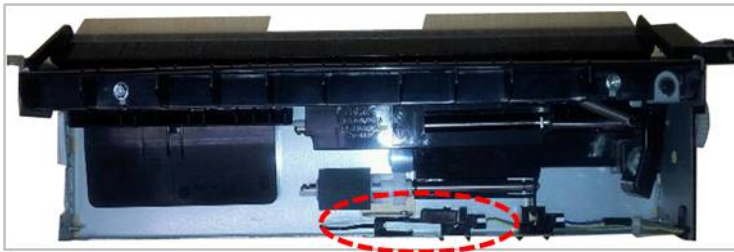
Paper is empty in Tray 4. Load paper.

▶ **Symptom**

Paper in tray4 is less than 10%. / The photo sensor is defective.

▶ **Troubleshooting method**

- 1) Remove the tray4. Load the paper in the tray4.
- 2) If paper is loaded but error message has not disappeared, check the following.
 - a) Remove the DCF pick up unit2.
 - b) Check if the photo sensor in the DCF pick up unit2 is contaminated. If so, clean it.
 - c) If the photo sensor([0604-001393](#)) is defective, replace it.
 - d) If the actuator([JC66-03199A](#)) is defective, replace it.



► **Error Code**

H1-1453

► **Error message**

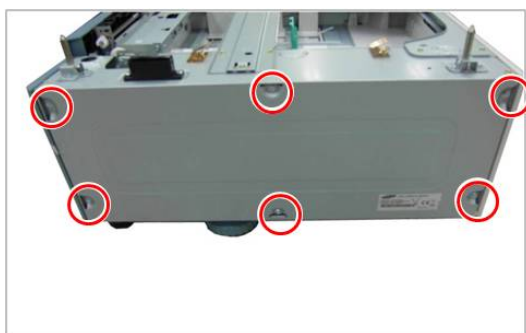
Input System Failure #H1-1453 : Pull Tray 4 out and insert it.

► **Symptom**

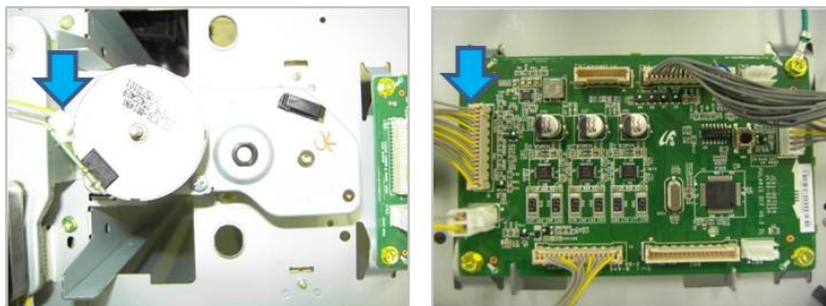
The paper is not fed from tray4.

► **Troubleshooting method**

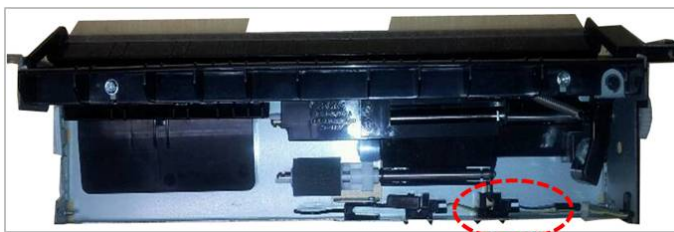
- 1) Remove and insert tray4 correctly.
- 2) Turn the machine off then on.
- 3) If the problem persists, turn the machine off.
- 4) Remove the Bracket Rear Cover after removing 6 screws.



- 5) Check if the connection between the DCF pick up drive and DCF board is correct.



- 6) If the connection is OK, replace the pick up drive unit(*JC93-00442A*).
(Refer to 3.3.33.3. DCF Pick Up Motor)
- 7) If the problem persists, check the following.
 - a) Remove the DCF pick up unit2.
 - b) Check if the photo sensor in the DCF pick up unit2 is contaminated. If so, clean it.
 - c) If the photo sensor(*0604-001393*) is defective, replace it.



▶ **Error Code**

H1-5323

▶ **Error message**

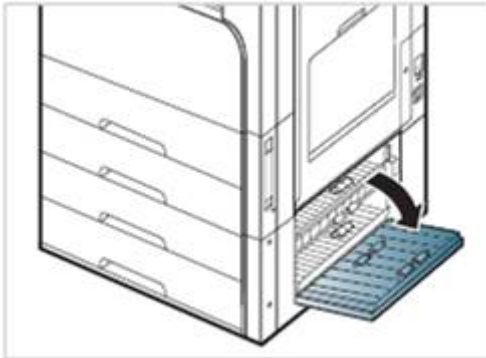
Tray door is open. Close the door

▶ **Symptom**

DCF Takeaway-Cover is open. / I/L-Switch harness or connector is defective.

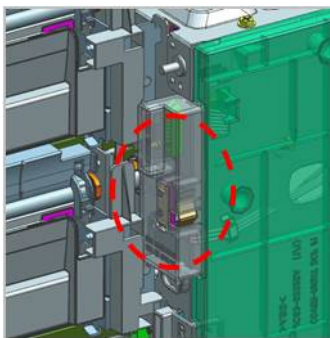
▶ **Troubleshooting method**

- 1) Open and close the DCF Take away-Cover correctly.



- 2) If the problem persists, check the following.

- a) Check if I/L-Switch(HARNESS-DCF COVER OPEN)([JC39-01696A](#)) is not operated. If it is defective, replace it.



- b) If the I/L Switch is OK, replace the DCF board([JC92-02453A](#)).
(Refer to 3.3.33.1. DCF Main Board)

► **Error Code**

H1-5330

► **Error message**

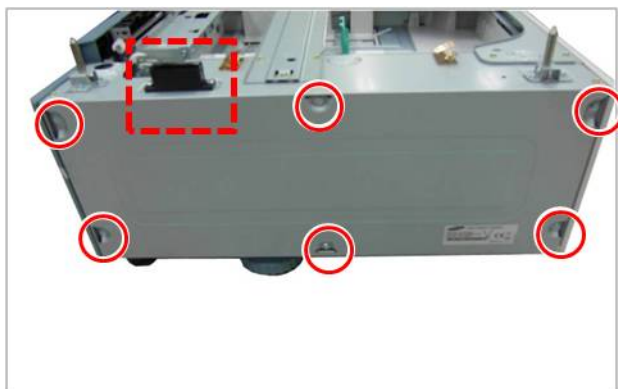
DCF Failure #H1-5330. Check internal DCF connection.

► **Symptom**

A communication error between the optional tray and the main machine has occurred.

► **Troubleshooting method**

- 1) Lift up and release the DCF unit from the machine.
- 2) Remove the Bracket Rear Cover after removing 6 screws.



- 3) Check if the interface connector is connected to the DCF board. If the interface connector(*JC39-01690A*) is defective, replace it.
- 4) If the problem persists, replace the DCF board.
(Refer to 3.3.33.1. DCF Main Board)

4.5.4. H2-xxxx (Finisher) type error code

► **Error Code**

H2-6700

H2-6701

H2-6702

H2-6703

H2-6704

H2-6705

► **Error message**

Paper jam inside of finisher

Paper jam at exit of finisher

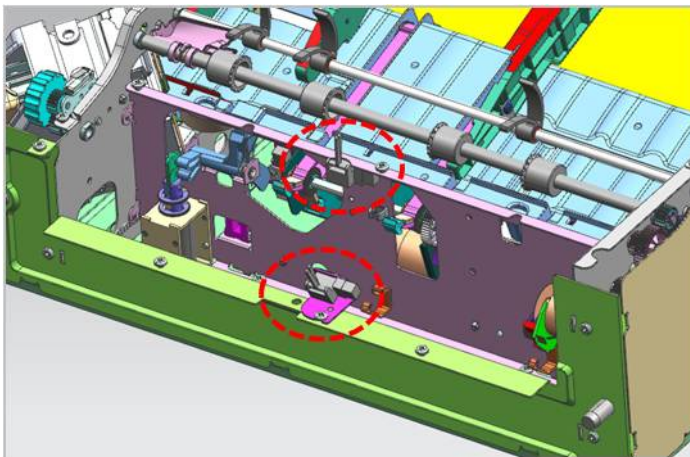
► **Symptom**

Paper failed to pass finisher's paper transportation path within the specified time.

► **Troubleshooting method**

- 1) Open finisher jam cover, and make sure that the paper is on the paper path. If there is paper, remove paper manually.
- 2) If the error does not disappear even after removing paper and closing finisher jam door, follow the instructions below:
 - a) Does finisher input sensor work well?
 - i) Make sure finisher input sensor cable is connected well to the sensor connector.
 - ii) Make sure finisher input sensor cable is connected well to the main board connector.
 - iii) Replace the finisher input sensor(*JC81-09686A*).

(Refer to 3.3.34.1 Finisher Main Motor)



- iv) Replace the finisher main board(*JC81-09692A*).

(Refer to 3.3.34.2. Finisher Board)

- b) Check if any debris is present. Please make sure to remove any debris.

► **Error Code**

H2-6706

► **Error message**

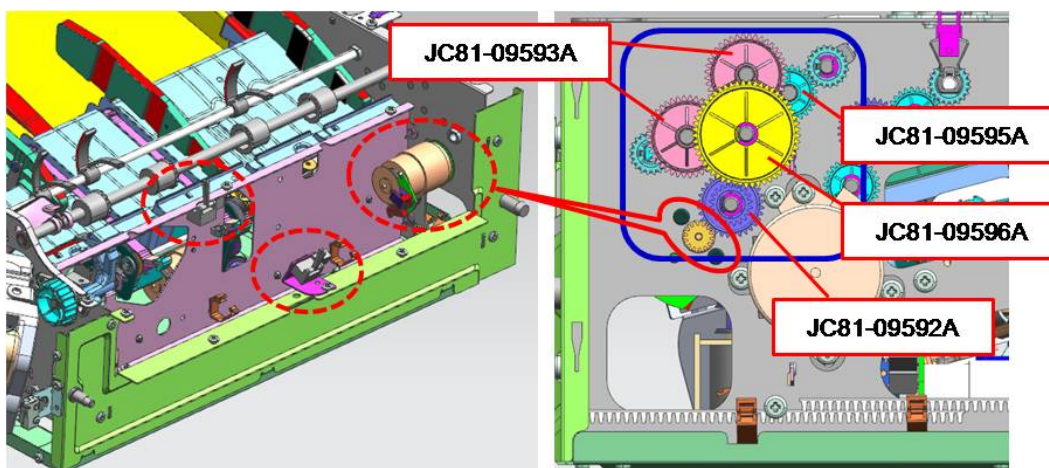
Finisher Failure: #H2-6706. Check finisher

► **Symptom**

Transport motor doesn't work.

► **Troubleshooting method**

- 1) Open finisher jam cover to check if there is a paper jam. If there is paper, remove paper manually. Then close door to do finisher initialization.
- 2) If transport motor is still not running and the error does not disappear, follow the instructions below:
 - a) Does finisher transport motor work well?
 - i) Make sure finisher transport motor cable is connected well to the transport motor connector.
 - ii) Make sure finisher transport motor cable is connected well to the main board connector.
 - iii) Replace the finisher transport motor(JC81-09677A).
(Refer to 3.3.34.1 Finisher Main Motor)
 - iv) Replace the finisher main board(JC81-09692A).
(Refer to 3.3.34.2. Finisher Board)
 - b) Does finisher input sensor work well?
 - i) Make sure finisher input sensor cable is connected well to the sensor connector.
 - ii) Make sure finisher input sensor cable is connected well to the main board connector.
 - iii) Replace the finisher input sensor(JC81-09686A).
(Refer to 3.3.34.1 Finisher Main Motor)
 - iv) Replace the finisher main board(JC81-9692A).
(Refer to 3.3.34.2. Finisher Board)
 - c) Does finisher motor gear set work well?
 - i) Make sure gear set can rotate smoothly.
 - ii) Make sure each gear is not broken.
 - iii) Replace the gear set(JC81-09592A / J81-09593A / JC81-09595A / JC81-09596A).
 - d) Check if any debris is present. Please make sure to remove any debris.



▶ **Error Code**

H2-6707 ~ H2-6725

▶ **Error message**

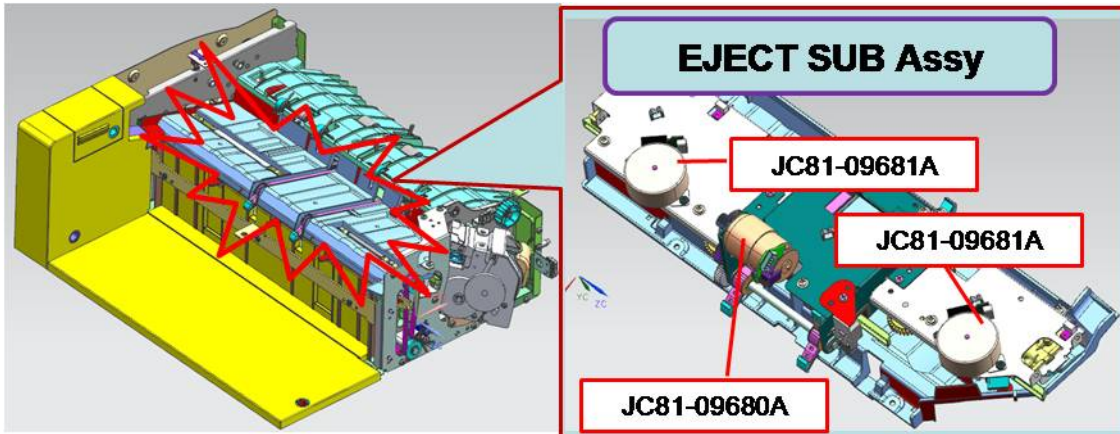
Finisher Failure: #H2-67xx. Check finisher

▶ **Symptom**

Component does not move to or leave home position.

▶ **Troubleshooting method**

- 1) If there is jammed paper on the paper path, remove paper manually. Open and close finisher stapler door or jam cover to check if finisher executes initialization process.
- 2) If component still doesn't go back to home position and error does not disappear, follow the instructions below:
 - a) Does finisher input sensor work well?
 - i) Make sure finisher input sensor cable is connected well to the sensor connector.
 - ii) Make sure finisher input sensor cable is connected well to the main board connector.
 - iii) Replace the finisher input sensor(JC81-09686A).
(Refer to 3.3.34.1 Finisher Main Motor)
 - iv) Replace the finisher main board(JC81-09692A).
(Refer to 3.3.34.2. Finisher Board)
 - b) Does finisher component motor work well?
 - i) Make sure finisher component motor cable is connected well to the motor connector.
 - ii) Make sure finisher component motor cable is connected well to the main board connector.
 - iii) Replace the finisher component motor(JC81-09680A / JC81-09681A).
 - iv) Replace the finisher main board(JC81-09692A).
(Refer to 3.3.34.2. Finisher Board)
 - c) Do finisher component parts work well?
 - i) Make sure component parts can move or rotate smoothly.
 - ii) Make sure there is no any mechanical interference to stop moving or rotating.
 - iii) Make sure the belt is tight on the correct position, if it has the belt.
 - d) Does finisher component motor gear set work well?
 - i) Make sure gear set can rotate smoothly.
 - ii) Make sure each gear is not broken.
 - iii) Replace the Eject-Sub Assy.
 - e) Check if any debris existed. Please make sure to remove any debris.



► **Error Code**

H2-6726

H2-6727

► **Error message**

Finisher Stapler door is open. Close it.

Finisher Jam door is open. Close it.

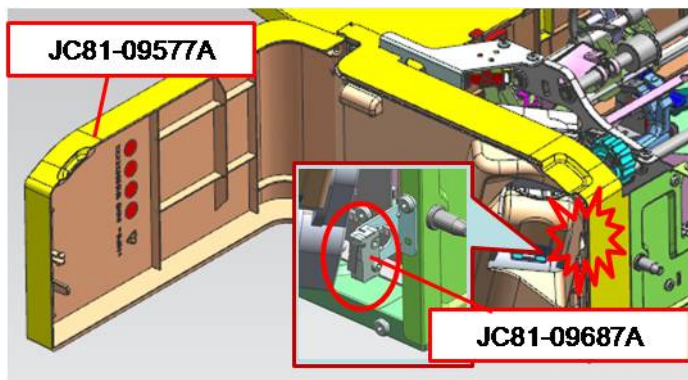
► **Symptom**

Finisher door is not closed.

► **Troubleshooting method**

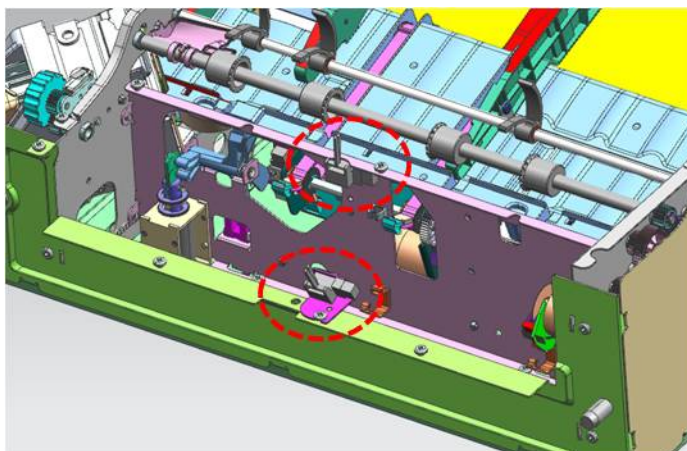
1) Close door to perform finisher initialization. If error does not disappear, follow the instructions below:

- a) Does finisher door cover close well?
 - i) The finisher door cover can close well.
 - ii) The finisher door cover can contact and push input sensor switch well.
 - iii) The finisher input sensor switch can be pushed well.
 - iv) Replace finisher cover door(JC81-09577A) or Switch(JC81-09687A).



- b) Does finisher input sensor work well?
 - i) Make sure finisher input sensor cable is connected well to the sensor connector.
 - ii) Make sure finisher input sensor cable is connected well to the main board connector.
 - iii) Replace the finisher input sensor(JC81-09686A).

(Refer to 3.3.34.1 Finisher Main Motor)



- iv) Replace the finisher main board(JC81-09692A).

(Refer to 3.3.34.2. Finisher Board)

- c) Check if any debris exists. Please make sure to remove any debris.

► **Error Code**

- H2-6728
- H2-6729
- H2-6730
- H2-6731

► **Error message**

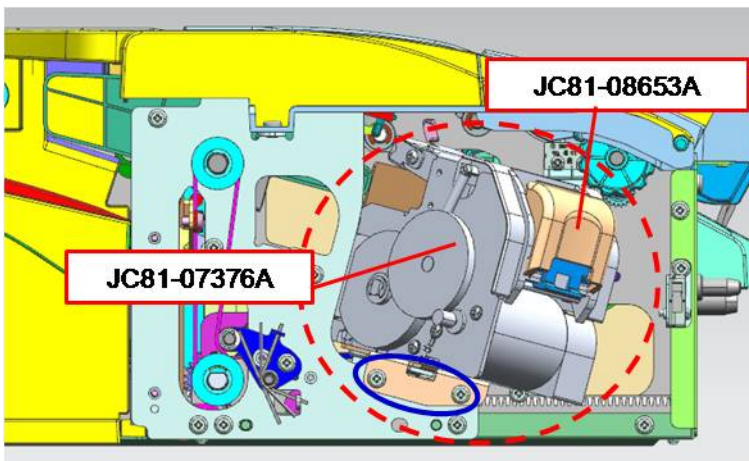
Finisher Failure: #H2-67xx. Check finisher.

► **Symptom**

Finisher stapler head does not move to or leave home position.

► **Troubleshooting method**

- 1) If there is jammed paper on the stapler, removing paper manually. Open and close finisher stapler door or jam cover to check if finisher executes initialization process.
- 2) If stapler still doesn't go back to home position and error does not disappear, follow the instructions below :
 - a) Can finisher stapler cartridge can be pulled out?
 - i) Rotate stapler gear manually to move stapler head back to home (top) position.
 - ii) Remove staple completely from stapler cartridge.
 - iii) Remove staples from inside stapler.
 - b) Does finisher stapler input sensor work well?
 - i) Make sure finisher input sensor cable is connected well to the sensor connector.
 - ii) Make sure finisher input sensor cable is connected well to the main board connector.
 - iii) Replace the finisher stapler(JC81-07376A).
 - iv) Replace the finisher main board(JC81-09692A).
(Refer to 3.3.34.2. Finisher Board)
 - c) Does finisher stapler motor work well?
 - i) Make sure finisher stapler motor cable is connected well to the stapler motor connector.
 - ii) Make sure finisher stapler motor cable is connected well to the main board connector.
 - iii) Replace the finisher stapler(JC81-07376A).
 - iv) Replace the finisher main board(JC81-09692A).
(Refer to 3.3.34.2. Finisher Board)
 - d) Check if any debris (staple) exists. Please make sure to remove any debris.



► Error Code

H2-6732

H2-6733

► Error message

Staple cartridge is low. Replace it.

Staple cartridge is empty. Replace it.

► Symptom

Finisher stapler cartridge is necessary to refill.

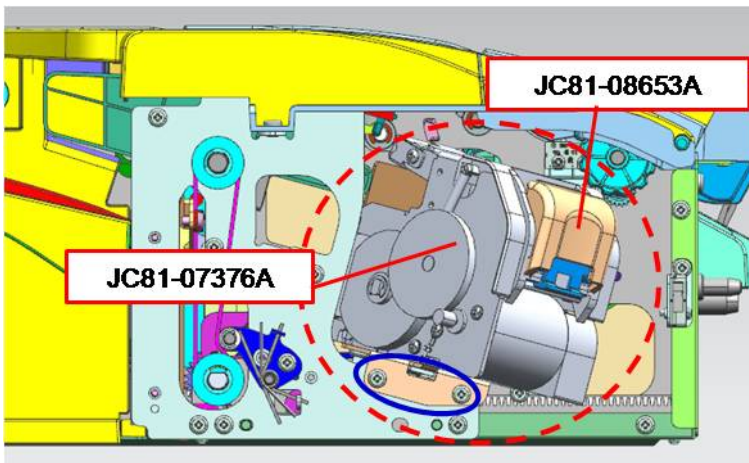
► Troubleshooting method

1) Open finisher stapler door to refill cartridge and then close door. Self-Priming will execute automatically if necessary. If stapler error or warning does not disappear, follow the instructions below :

- a) Does finisher stapler cartridge refill box fit well?
 - i) Make sure stapler refill box fit well into cartridge.
 - ii) Make sure staples do not jam near stapler head.
- b) Does finisher stapler input sensor work well?
 - i) Make sure finisher input sensor cable is connected well to the sensor connector.
 - ii) Make sure finisher input sensor cable is connected well to the main board connector.
 - iii) Replace the finisher stapler(*JC81-07376A*).
 - iv) Replace the finisher main board(*JC81-09692A*).

(Refer to 3.3.34.2. Finisher Board)

- c) Check if any debris (staple) is present. Please make sure to remove any debris.



► **Error Code**

H2-6734

► **Error message**

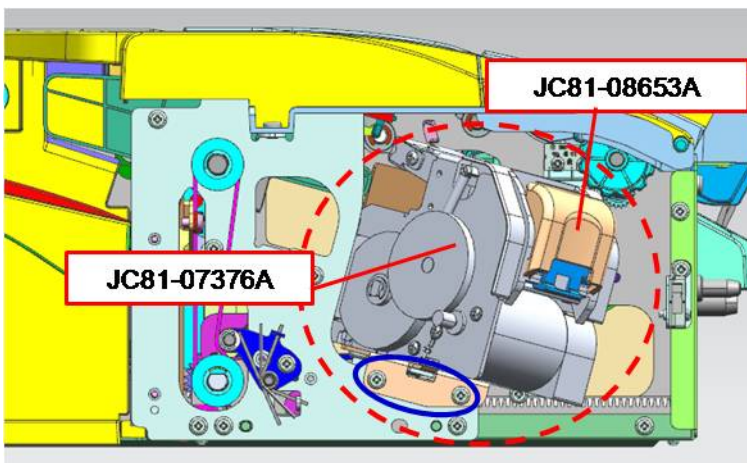
Finisher Failure: #H2-6734. Check finisher

► **Symptom**

Finisher stapler cartridge refill failed.

► **Troubleshooting method**

- 1) Open finisher stapler door to refill cartridge and then close door. Self-Priming will execute automatically if necessary. If stapler error or warning does not disappear, follow the instructions below :
 - a) Does finisher stapler cartridge refill box fit well?
 - i) Make sure stapler refill box fit well into cartridge.
 - ii) Make sure staples do not jam near stapler head.
 - b) Does finisher stapler input sensor work well?
 - i) Make sure finisher input sensor cable is connected well to the sensor connector.
 - ii) Make sure finisher input sensor cable is connected well to the main board connector.
 - iii) Replace the finisher stapler(JC81-07376A).
 - iv) Replace the finisher main board(JC81-09692A).
(Refer to 3.3.34.2. Finisher Board)
 - c) Does finisher stapler motor work well?
 - i) Make sure finisher stapler motor cable is connected well to the stapler motor connector.
 - ii) Make sure finisher stapler motor cable is connected well to the main board connector.
 - iii) Replace the finisher stapler(JC81-07376A).
 - iv) Replace the finisher main board(JC81-09692A).
(Refer to 3.3.34.2. Finisher Board)
 - d) Check if any debris (staple) is present. Please make sure to remove any debris.



► Error Code

H2-6735

► Error message

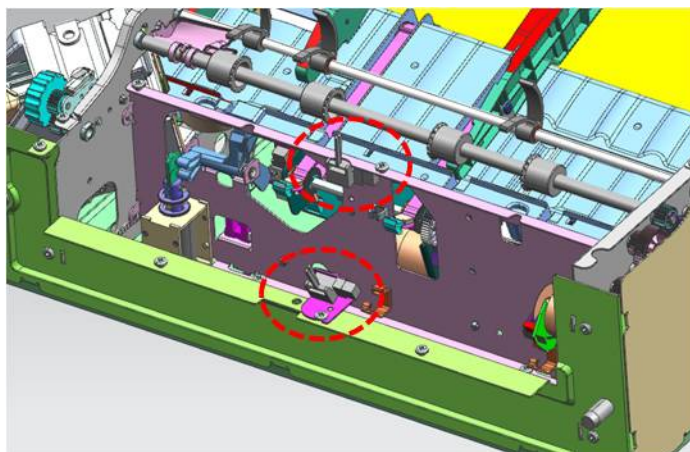
Too much paper in finisher stacker. Remove printed paper.

► Symptom

Finisher output tray is full.

► Troubleshooting method

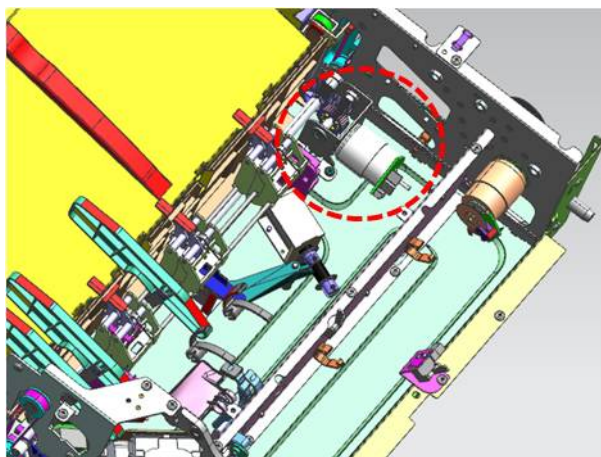
- 1) Remove paper from the finisher main tray. Main tray will move downward and upward to clear stack full warning.
- 2) If warning does not disappear, follow the instructions below :
 - a) Does finisher main tray input sensor (Standby & Home sensor) work well?
 - i) Make sure finisher input sensor cable is connected well to the sensor connector.
 - ii) Make sure finisher input sensor cable is connected well to the main board connector.
 - iii) Replace the finisher input sensor(*JC81-09686A*).

(Refer to 3.3.34.1 Finisher Main Motor)

- iv) Replace the finisher main board(*JC81-09692A*).

(Refer to 3.3.34.2. Finisher Board)

- b) Does finisher main tray motor work well?
 - i) Make sure finisher main tray motor cable is connected well to the main tray motor connector.
 - ii) Make sure finisher main tray motor cable is connected well to the main board connector.
 - iii) Replace the finisher main tray motor(*JC81-09679A*).

(Refer to 3.3.34.1 Finisher Main Motor)

iv) Replace the finisher main board([JC81-09692A](#)).

(Refer to 3.3.34.2. Finisher Board)

c) Check if any debris (staple) is present. Please make sure to remove any debris.

► **Error Code**

H2-6736 ~ H2-6743

► **Error message**

Finisher Failure: #H2-67xx. Check finisher

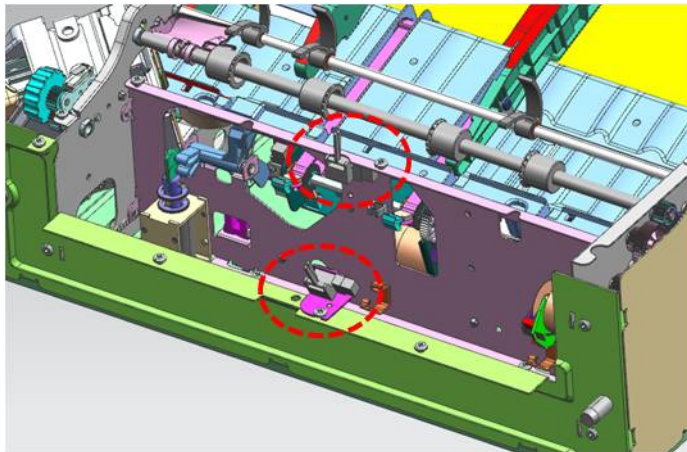
► **Symptom**

Main Tray does not move to or leave home position.

► **Troubleshooting method**

- 1) If there is jammed paper on the Main Tray, removing paper manually. Open and close finisher stapler door or jam cover to check if finisher executes initialization process.
- 2) If Main Tray still doesn't go back to home position and error does not disappear, follow the instructions below:
 - a) Does finisher input sensor (Standby & Home sensor) work well?
 - i) Make sure finisher input sensor cable is connected well to the sensor connector.
 - ii) Make sure finisher input sensor cable is connected well to the main board connector.
 - iii) Replace the finisher input sensor(*JC81-09686A*).

(Refer to 3.3.34.1 Finisher Main Motor)



- iv) Replace the finisher main board(*JC81-09692A*).

(Refer to 3.3.34.2. Finisher Board)

- b) Does finisher Main Tray motor work well?
 - i) Make sure finisher Main Tray motor cable is connected well to the motor connector.
 - ii) Make sure finisher Main Tray motor cable is connected well to the main board connector.
 - iii) Replace the finisher Main Tray motor(*JC81-09679A*).

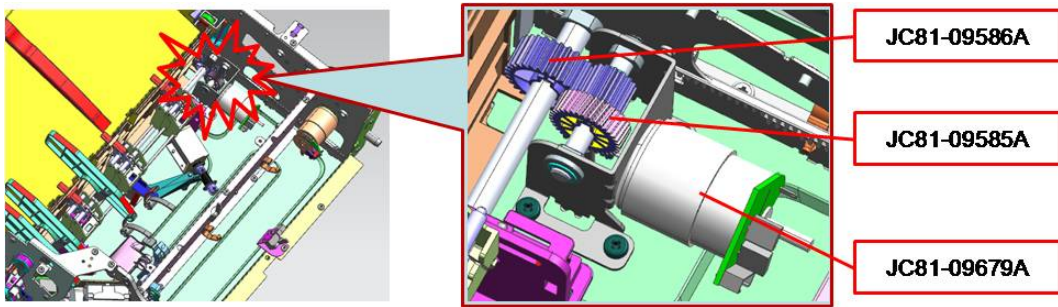
(Refer to 3.3.34.1 Finisher Main Motor)

- iv) Replace the finisher main board(*JC81-09692A*).

(Refer to 3.3.34.2. Finisher Board)

- c) Do finisher Main Tray parts work well?
 - i) Make sure Main Tray parts can move or rotate smoothly.
 - ii) Make sure there are no mechanical interference to stop moving or rotating.
 - iii) Make sure the belt is tight in the correct position, if it has a belt.
- d) Does finisher Main Tray motor gear set work well?
 - i) Make sure gear set can rotate smoothly.
 - ii) Make sure each gear is not broken.

iii) Replace the gear set(*JC81-9585A / JC81-09586A*).



e) Check if any debris is present. Please make sure to remove any debris.

► **Error Code**

H2-6744

► **Error message**

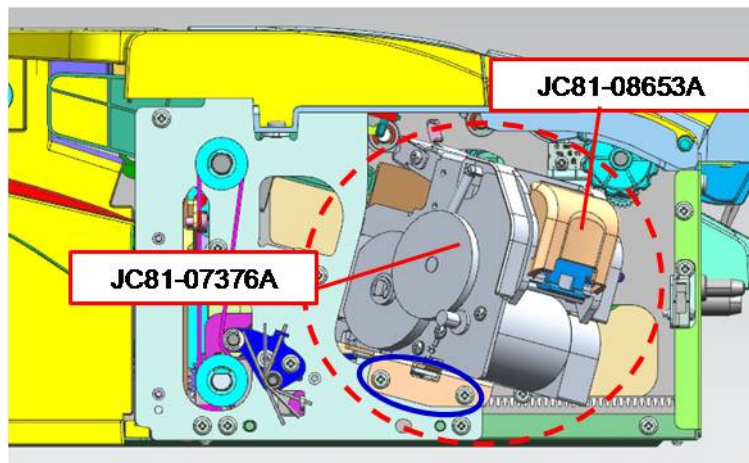
Staple Cartridge not install. Install it.

► **Symptom**

Finisher stapler cartridge is not installed into stapler.

► **Troubleshooting method**

- 1) Open finisher stapler door to put cartridge into stapler and then close door. Self-Priming will be execute automatically if necessary.
- 2) If stapler warning does not disappear, follow the instructions below :
 - a) Does finisher stapler input sensor work well?
 - i) Make sure finisher input sensor cable is connected well to the sensor connector.
 - ii) Make sure finisher input sensor cable is connected well to the main board connector.
 - iii) Replace the finisher stapler cartridge(*JC81-08653A*).



- iv) Replace the finisher stapler(*JC81-07376A*).
- v) Replace the finisher main board(*JC81-09692A*).

(Refer to 3.3.34.2. Finisher Board)

- b) Check if any debris is present. Please make sure to remove any debris.

▶ **Error Code**

H2-6A50

▶ **Error message**

Finisher Failure: #H2-6A50. Check finisher.

▶ **Symptom**

Communication error with finisher has occurred.

▶ **Troubleshooting method**

- 1) Copier power off and power on. If the error does not disappear, follow the instructions below:
- 2) Does finisher work well?
 - a) Make sure finisher interface cable is connected with main board.
 - b) Replace the finisher main board([JC81-09692A](#)).
(Refer to 3.3.34.2. Finisher Board)

▶ **Error Code**

H2-6A63

▶ **Error message**

Finisher Failure: #H2-6A63. Check finisher.

▶ **Symptom**

Finisher stapler cartridge is not installed into stapler or Staples are empty.

▶ **Troubleshooting method**

- 1) Replace the finisher stapler([JC81-07376A](#)).

4.5.5. Mx-xxxx type error code

► **Error Code**

M1-1113

M2-1121

► **Error message**

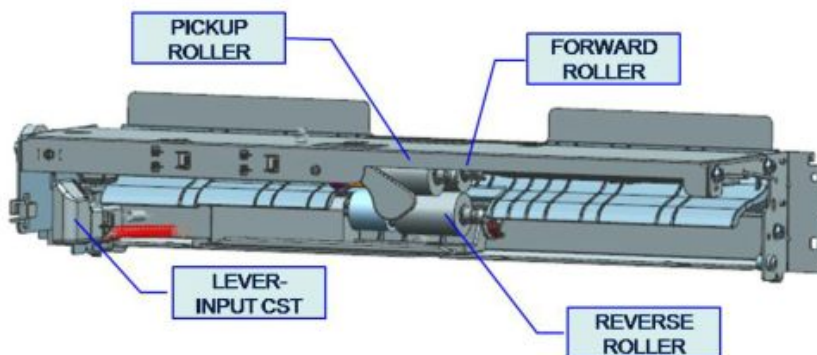
Paper jam in Tray 1.

► **Symptom**

Paper jam has occurred in tray1.

► **Troubleshooting method**

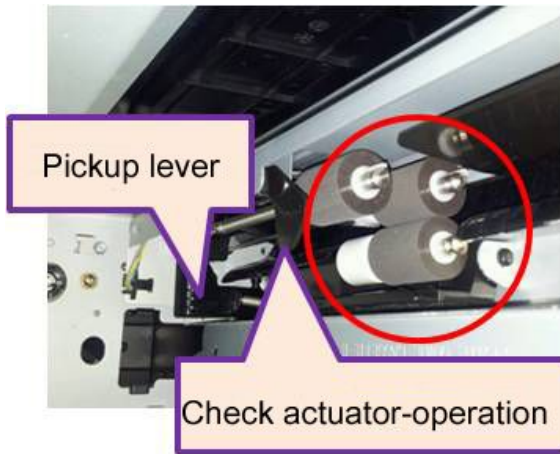
- 1) Open the side cover and check if a foreign substance or paper is jammed inside the unit.
- 2) Remove tray1 and remove the jammed paper.
- 3) If this jam error occurs frequently, check the rollers of the pickup-roller unit.



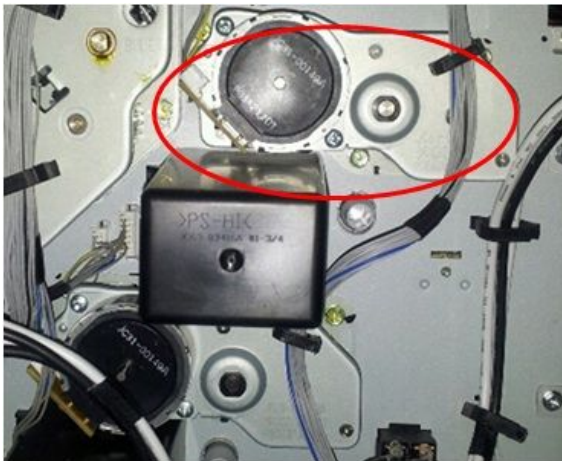
- a) Check if the pick up/ reverse/ forward rollers are assembled correctly.
- b) If the pick up/ reverse/ forward rollers are worn out or contaminated, replace the defective roller([JC93-00540A](#)).
(Refer to 3.2.5. Pickup Reverse Forward roller)
- 4) If the problem persists, check the pickup unit and feed sensor.
 - a) Check if the pickup unit and feed sensor operate correctly.
 - b) Check if the harness from pickup unit to main board is connected correctly.
 - c) Check if the connector of the fuide-feed assembly is connected correctly.
 - d) Check if the harness of pickup unit and feed sensor is disconnected.



- 5) If the problem persists, check the pickup unit.
 - a) Remove the pickup unit and check the connection of the actuator and actuator-sensor.
 - b) Push the pickup-lever and check if it operates correctly.



- 6) If the problem persists, replace the pickup drive unit([JC93-00422A](#)) or Pickup unit([JC93-00540A](#)).
(Refer to 3.3.14. Pick-up Drive unit)



(Refer to 3.3.24. Pick-up Unit and Sensor)

► **Error Code**

M1-1213

M2-1131

► **Error message**

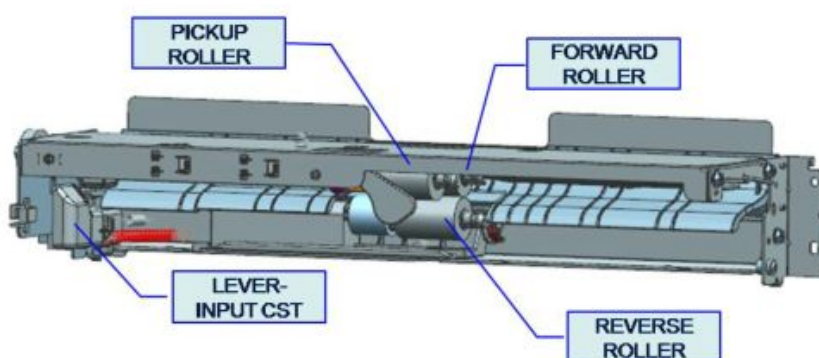
Paper jam in Tray 2.

► **Symptom**

Paper jam has occurred in tray2.

► **Troubleshooting method**

- 1) Open the side cover and check if a foreign substance or paper is jammed inside the unit.
- 2) Remove tray2 and remove the jammed paper.
- 3) If this jam error occurs frequently, check the rollers of the pickup-roller unit.



- a) Check if the pick up/ reverse/ forward rollers are assembled correctly.
- b) If the pick up/ reverse/ forward rollers are worn out or contaminated, replace the defective roller([JC93-00540A](#)).
(Refer to 3.2.5. Pickup Reverse Forward roller)
- 4) If the problem persists, check the pickup unit and feed sensor.
 - a) Check if the pickup unit and feed sensor operate correctly.
 - b) Check if the harness from pickup unit to main board is connected correctly.
 - c) Check if the connector of the fuide-feed assembly is connected correctly.
 - d) Check if the harness of pickup unit and feed sensor is disconnected.



- 5) If the problem persists, check the pickup unit.
 - a) Remove the pickup unit and check the connection of the actuator and actuator-sensor.

- b) Push the pickup-lever and check if it operates correctly.



- 6) If the problem persists, replace the pickup drive unit(*JC93-00422A*) or Pickup unit(*JC93-00540A*).
(Refer to 3.3.14. Pick-up Drive unit)



(Refer to 3.3.24. Pick-up Unit and Sensor)

► **Error Code**

M1-1610

► **Error message**

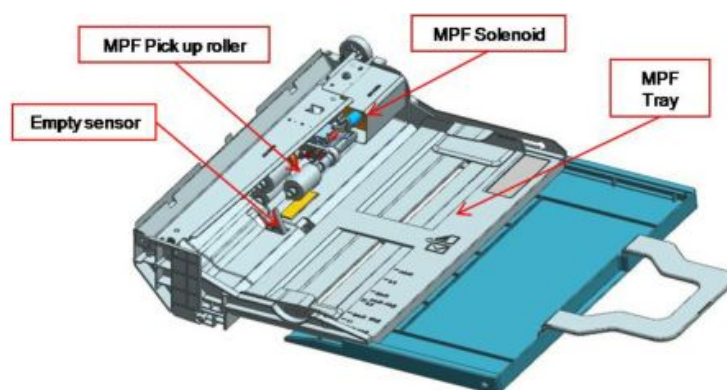
Paper jam in MP Tray.

► **Symptom**

Paper jam has occurred in MP tray.

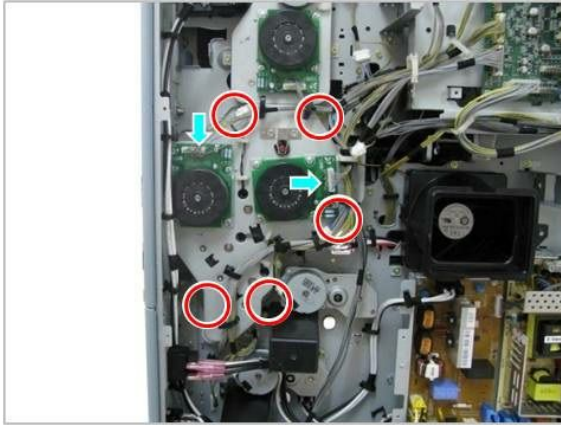
► **Troubleshooting method**

- 1) Open the side cover. Remove the jammed paper from the MP tray.
- 2) If this jam error occurs frequently, check the rollers of the MP unit.



- a) Check if the MP pick up/ reverse/ forward rollers are assembled correctly.
 - b) If the MP pick up/ reverse/ forward rollers are worn out or contaminated, replace the defective roller([JC93-00540A](#)).
(Refer to 3.2.6. MP Pickup Reverse Forward roller)
- 3) If the problem persists, check if the MP solenoid operates correctly.
- a) By Service-mode, Check the operation of solenoid.
(Diagnostics > Engine Diagnostics > Engine Test Routines > 101-0271)
 - b) If the MP solenoid is defective, check the connection of MP unit.
 - c) If the harness has no defects, replace the solenoid([JC33-00029B](#)).
- If the problem persists, check the main drive unit.
- a) Check the harness from Regi/MP drive unit to main board.
 - b) By service-mode, check if the drive motor and clutch operate correctly.
(Diagnostics > Engine Diagnostics > Engine Test Routines > 100-0010)
(Diagnostics > Engine Diagnostics > Engine Test Routines > 101-0270)

- c) If the problem occurs, replace the drive main (*JC93-00448A*).



(Refer to 3.3.13. Main Drive Unit)

► Error Code

M1-3122

► Error message

Tray 1 cassette is pulled out. Insert it properly.

► Symptom

Tray 1 is pulled out or the auto size sensor connector is not connected or broken.

► Troubleshooting method

- 1) Remove Tray1 .
- 2) Insert the corresponding cassette correctly.
- 3) If Tray1 is not locked or pulled out without holding the locking lever, remove Tray1.
- 4) Check if foreign substance or paper is inside Tray1. If so, please remove it.
- 5) If the problem persists, check that auto size sensor is connected properly.

(Refer to 3.3.19. Auto Size sensor)

- 6) If the problem persists, replace the main board([JC92-02430A](#)).

▶ **Error Code**

M1-3222

▶ **Error message**

Tray 2 cassette is pulled out. Insert it properly.

▶ **Symptom**

Tray 2 is pulled out or the auto size sensor connector is not connected or broken.

▶ **Troubleshooting method**

- 1) Remove Tray2.
- 2) Insert the corresponding cassette correctly.
- 3) If Tray2 is not locked or pulled out without holding the locking lever, remove Tray2.
- 4) Check if foreign substance or paper is inside the Tray2. If so, remove it.
- 5) If the problem persists, check that auto size sensor is connected properly.

(Refer to 3.3.19. Auto Size sensor)



- 6) If the problem persists, replace the main board([JC92-02430A](#)).

► Error Code

M1-4111

► Error message

Input System Failure #M1-4111 : Pull Tray 1 out and insert it.

► Symptom

The paper is not fed from tray1.

► Troubleshooting method

- 1) Remove Tray1 and re-install.
- 2) If the problem persists, Turn the machine off than on.
- 3) Check if the connection from pickup drive unit and main board is correctly.
- 4) Check the pickup drive unit operates correctly.
 - a) Check the harness connection from pickup drive unit to main board is correctly.
 - b) By service-mode, check the pickup drive unit operates correctly.
(**Diagnostics > Engine Diagnostics > Engine Test Routines > 100-0370**)
 - c) If the problem occurs, replace the pickup drive unit([JC93-00442A](#)).
(**Refer to 3.3.14. Pick-up Drive Unit**)
- 5) If the problem persists, check the pickup unit.
 - a) Check the photo sensor in the pickup unit is defective.



- b) Check the sensor operates correctly.
- c) If the problem occurs, replace the photo sensor([0604-001393](#))

► Error Code

M1-4211

► Error message

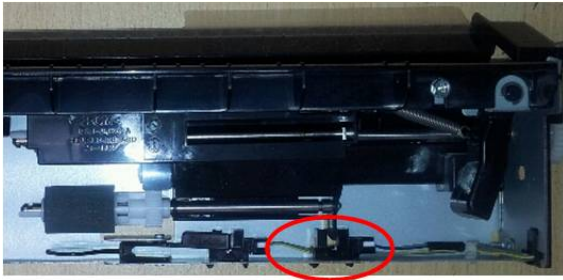
Input System Failure #M1-4211 : Pull Tray 2 out and insert it.

► Symptom

The paper is not fed from tray 2.

► Troubleshooting method

- 1) Remove Tray 2 and re-install.
- 2) If the problem persists, Turn the machine off than on.
- 3) Check if the connection from pickup drive unit and main board is correctly.
- 4) Check the pickup drive unit operates correctly.
 - a) Check the harness connection from pickup drive unit to main board is correctly.
 - b) By service-mode, check the pickup drive unit operates correctly.
(Diagnostics > Engine Diagnostics > Engine Test Routines > 100-0370)
 - c) If the problem occurs, replace the pickup drive unit([JC93-00442A](#)).
(Refer to 3.3.14. Pick-up Drive Unit)
- 5) If the problem persists, check the pickup unit.
 - a) Check the photo sensor in the pickup unit is defective.



- b) Check the sensor operates correctly.
- c) If the problem occurs, replace the photo sensor([0604-001393](#))

► Error Code

M1-5111

M1-5112

► Error message

Paper is low in Tray 1. Load paper.

Paper is empty in Tray 1. Load paper.

► Symptom

Paper in the tray is less than 10% of specification. / The photo sensor is defective.

► Troubleshooting method

- 1) Remove Tray 2 and re-install.
- 2) Load the paper in Tray 2.
- 3) If paper is loaded but error message has not disappeared, check the following.

(Refer to 3.3.24. Pick-Up Unit and Sensor)

- a) If the photo sensor is contaminated, clean it.



- b) If the photo sensor is defective, replace it([0604-001393](#)).
- c) If the actuator is defective, replace it([JC66-03199A](#)).

▶ **Error Code**

M1-5211

M1-5212

▶ **Error message**

Paper is low in Tray 2. Load paper.

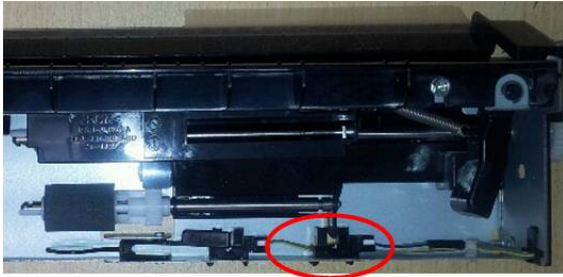
Paper is empty in Tray 2. Load paper.

▶ **Symptom**

Paper in the tray is less than 10% of specification. / The photo sensor is defective.

▶ **Troubleshooting method**

- 1) Remove Tray 2 and re-install.
- 2) Load the paper in Tray 2.
- 3) If paper is loaded but error message has not disappeared, check the following.
(Refer to 3.3.24. Pick-Up Unit and Sensor)
 - a) If the photo sensor is contaminated, clean it.



- b) If the photo sensor is defective, replace it([0604-001393](#)).
- c) If the actuator is defective, replace it([JC66-03199A](#)).

▶ Error Code

M1-5612

▶ Error message

Paper is empty in MP Tray. Load paper.

▶ Symptom

Paper in the MP tray is less than 10%. / The photo sensor is defective.

▶ Troubleshooting method

- 1) Remove MP Tray and re-install.
- 2) Load the paper in the tray.
- 3) If paper is loaded but error message has not disappeared, check the following.
(Refer to 3.3.22.3. MP unit)
 - a) If the photo sensor is contaminated, clean it.
 - b)



- c) If the photo sensor is defective, replace it([0604-001393](#)).



- d) If the actuator is defective, replace it([JC66-03217A](#)).

▶ **Error Code**

M2-1124

M2-1125

▶ **Error message**

Paper jam inside of machine.

▶ **Symptom**

Paper jam has occurred inside the machine. (Feed drive unit is defective / Feed 1 sensor is defective.)

▶ **Troubleshooting method**

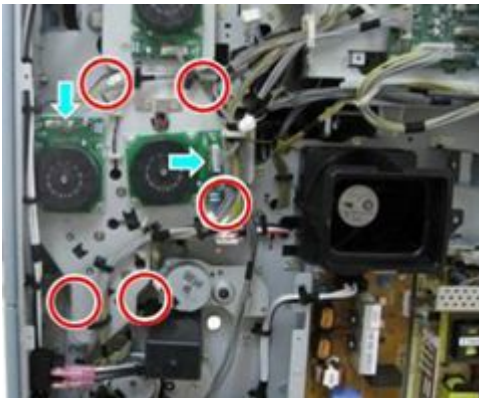
- M2-1124 : The leading edge of the paper has not reached the feed 1 sensor within the specified time.
- M2-1125 : The paper has not left from the feed 1 sensor within the specified time.

1) Open the side cover. Remove the jammed paper.

2) If jammed paper occurs continually, check the following.

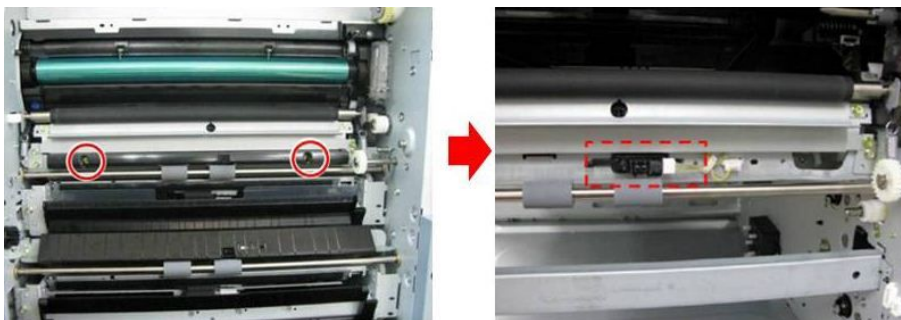
- a) Enter SVC mode. Execute feed motor test. If the motor operation is normal, go to step d).
- b) Remove the rear cover. Check if the feed motor cable is connected correctly.
- c) If the connection is OK, replace the feed drive unit([JC93-00448A](#)).

(Refer to 3.3.13. Main Drive Unit)



d) If the feed motor operation is normal, check the feed 1 sensor.

e) If the sensor operation is abnormal, check the harness.



f) If the connection is OK, replace the feed sensor([0604-001381](#)).

(Refer to 3.3.25. Feed sensor)

► **Error Code**

M2-1134

M2-1135

► **Error message**

Paper jam inside of machine.

► **Symptom**

Paper jam has occurred inside the machine. (Feed drive unit is defective / Feed 2 sensor is defective.)

► **Troubleshooting method**

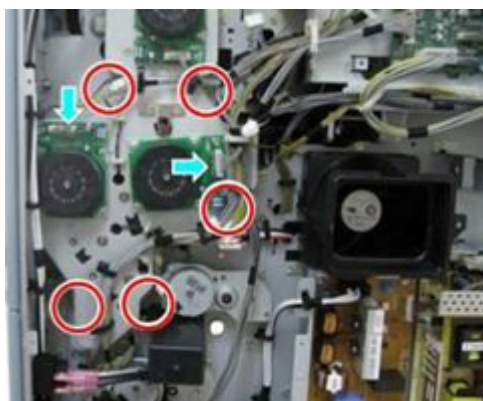
- M2-1134 : The leading edge of the paper has not reached the feed 2 sensor within the specified time.
- M2-1135 : The paper has not left from the feed 2 sensor within the specified time.

1) Open the side cover. Remove the jammed paper.

2) If jammed paper occurs continually, check the following.

- a) Enter SVC mode. Execute feed motor test. If the motor operation is normal, go to step d).
- b) Remove the rear cover. Check if the feed motor cable is connected correctly.
- c) If the connection is OK, replace the feed drive unit([JC93-00448A](#)).

(Refer to 3.3.13. Main Drive Unit)



d) If the feed motor operation is normal, check the feed 2 sensor.

e) If the sensor operation is abnormal, check the harness.



f) If the connection is OK, replace the feed sensor 2 ([0604-001381](#)).

(Refer to 3.3.26. Feed Unit)

▶ Error Code

M2-1211

M2-1213

M2-1214

▶ Error message

Paper jam inside of machine.

▶ Symptom

Paper jam has occurred inside the machine. (Regi. roller drive is defective / Regi. sensor is defective.)

▶ Troubleshooting method

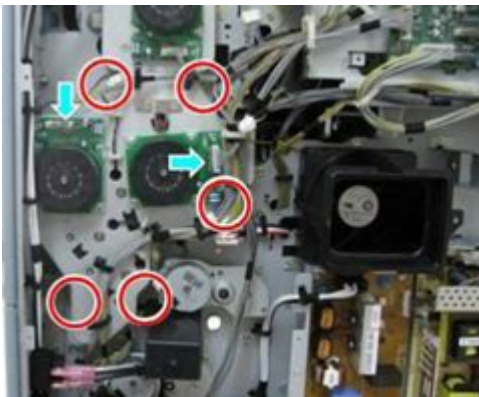
- M2-1211 : When the machine is warming-up, jammed paper inside machine is detected.
- M2-1213 : The leading edge of the paper has not reached the regi. sensor within the specified time.
- M2-1214 : The paper has not left the regi. sensor within the specified time.

1) Open the side cover. Remove the jammed paper.

2) If the jammed paper occurs continually, check the following.

- a) Enter SVC mode. Execute regi. motor test. If the motor operation is normal, go to step d).
- b) Remove the rear cover. Check if the Regi/MP motor cable is connected correctly.
- c) If the connection is OK, replace the feed drive unit([JC93-00448A](#)).

(Refer to 3.3.13. Main Drive Unit)



- d) If the motor operation is normal, check the regi. sensor.
- e) If the sensor operation is abnormal, check the harness.
- f) If the connection is OK, replace the regi. sensor ([0604-001381](#)).

(Refer to 3.3.27. Registration Unit)

▶ **Error Code**

M2-1331

M2-1333

M2-1334

M2-2111

M2-2113

M2-2114

▶ **Error message**

Paper jam inside of machine

Paper jam at the top of duplex path

▶ **Symptom**

Paper jam has occurred inside the machine.

▶ **Troubleshooting method**

- 1) Open the side cover. Remove jammed paper.
- 2) If the problem persists, check the following.
 - a) Check the Regi sensor harness. If the harness is normal, replace the Regi. sensor ([0604-001381](#)).
(Refer to 3.3.27. Registration Unit)
 - b) Check the sensors in the Side Unit. If the harness is normal, replace the defective sensor ([0604-001393](#)).
(Refer to 3.3.22.1. Fuser out sensor / 3.3.22.2. Duplex sensor and Curl sensor)

► **Error Code**

M3-1411

► **Error message**

Paper jam in exit area.

► **Symptom**

Paper jam has occurred around the fuser unit.(At power-on / warm up , the machine detected paper jam in Inner tray Exit Sensor.)

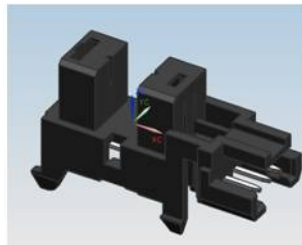
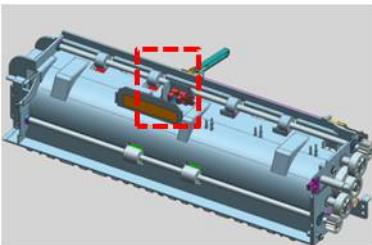
► **Troubleshooting method**

- M3-1413 : The leading edge of the paper has not reached the feed 1 sensor within the specified time.
- M3-1414 : The paper has not escaped from the feed 1 sensor within the specified time.

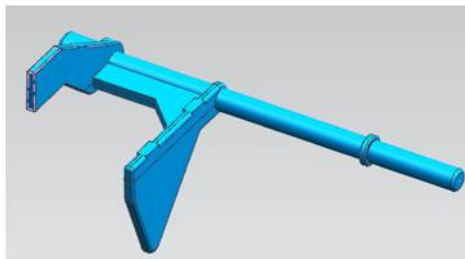
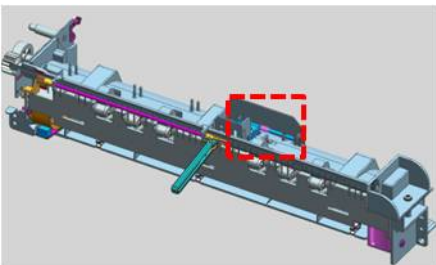
- 1) Open the side cover. Remove the jammed paper.
- 2) If the problem persists, check the following.
 - a) Open the side cover. Check if the connector is connected properly.



- b) Remove the JOB-SEPARATOR. Check if the photo sensor is assembled correctly.



- c) Check if ACTUATOR-EXIT is assembled correctly. If the ACTUATOR-EXIT ([JC66-02533A](#)) is deformed or broken, replace it.



- d) If the photo sensor([0604-001393](#)) is defective, replace it.

► **Error Code**

M3-1413

M3-1414

► **Error message**

Paper jam in exit area.

► **Symptom**

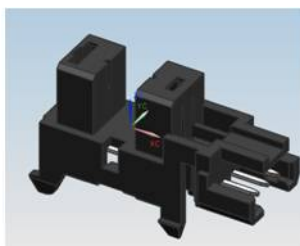
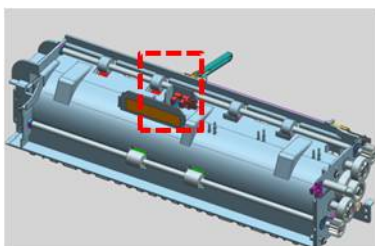
Paper jam has occurred around the fuser unit.(Job separator connection is defective. / Actuator-Exit is defective.)

► **Troubleshooting method**

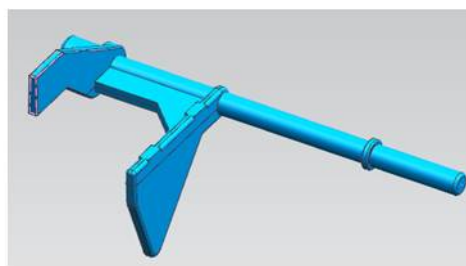
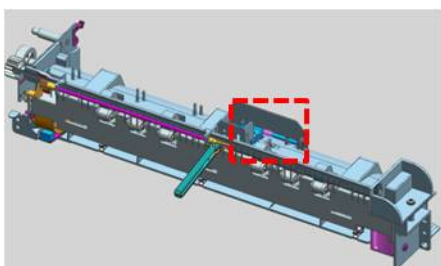
- 1) Open the side cover. Remove the jammed paper.
- 2) If the problem persists, check the following.
 - a) Open the side cover. Check if the connector is connected properly.



- b) Remove the JOB-SEPARATOR. Check if the photo sensor is assembled correctly.



- c) Check if ACTUATOR-EXIT is assembled correctly. If the ACTUATOR-EXIT (*JC66-02533A*) is deformed or broken, replace it.



- d) If the photo sensor(*0604-001393*) is defective, replace it.

▶ **Error Code**

M3-2230

M3-2430

▶ **Error message**

Output tray is full. Remove printed media.

▶ **Symptom**

There is too much paper in output bin tray or inner tray.

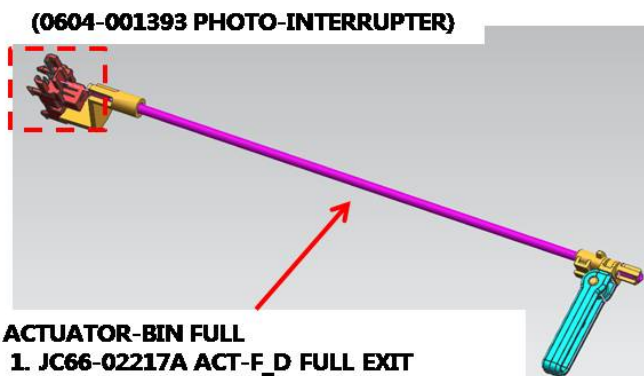
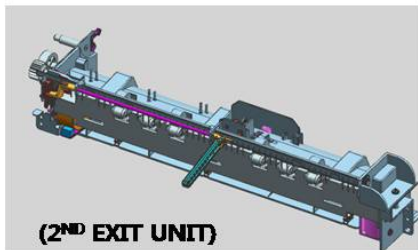
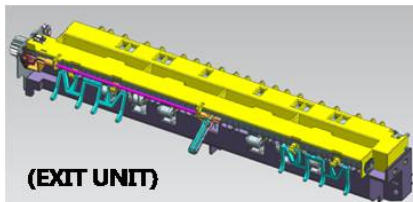
▶ **Troubleshooting method**

- M3-2230 : There is too much paper in output bin tray.
 - M3-2430 : There is too much paper in inner tray.
- 1) Remove the paper on output bin tray or inner tray.



2) If this error occurs continually, check the following.

a) Check if the bin-full sensor and actuator is assembled correctly.



- ACTUATOR-BIN FULL**
1. JC66-02217A ACT-F_D FULL EXIT
 2. JC66-02423A SHAFT-ACT F_D FULL EXIT
 3. JC66-02218A LEVER-ACT F_D FULL
 4. JC66-02278A LEVER-ACT FULL EXIT
 5. 6107-002654 SPRING-TS

b) Check if the bin-full sensor(0604-001393) is defective.

4.5.6. Sx-xxxx type error code

▶ **Error Code**

S1-1113

▶ **Error message**

Video System Failure #S1-1113: Turn off then on.

▶ **Symptom**

The system has some problems due to CPU overheating.

▶ **Troubleshooting method**

- 1) Turn the machine off.
- 2) Wait until the machine is cool, and then turn the machine on.
- 3) If the problem persists, replace the main board([JC92-02452A](#)).

(Refer to 2.11.1. Main Controller)

▶ **Error Code**

S1-1114

▶ **Error message**

Video System Failure #S1-1114: Turn off then on.

▶ **Symptom**

CPU fan is not working

▶ **Troubleshooting method**

- 1) Turn the machine off.
- 2) Wait until the machine is cool. And then turn the machine on.
- 3) If the problem persists, replace the CPU fan.

(Refer to 2.11.1. Main Controller)

► **Error Code**

S1-1313

► **Error message**

The clock became initial time. Set a time again.

► **Symptom**

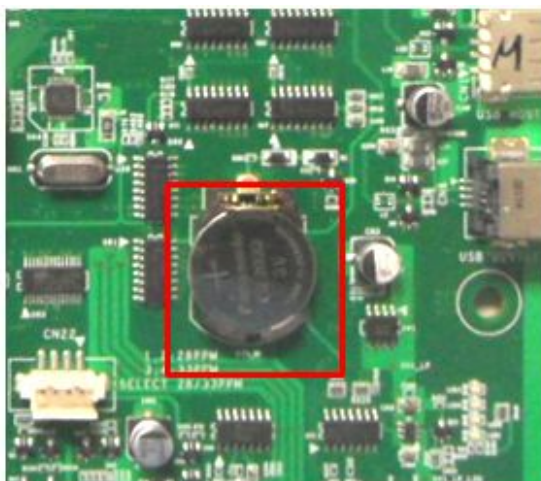
Saved time is invalid

► **Troubleshooting method**

- 1) Set up the time and reboot the machine.
(Machine Setup > General Setting > Date and Time)
- 2) if the problem persists, measure the battery voltage.
 - a) Remove the rear cover.
(Refer to 3.2.2. Rear Cover)
 - b) Remove cover from Main PBA.



-
-
- c) Measure the battery voltage. If value is under 3V, battery is abnormal.



-
-
-
- 3) If battery has no problem, replace the main board ([JC92-02452A](#)).

▶ **Error Code**

S1-1411

S1-1413

▶ **Error message**

Video System Failure #S1-1411: Turn off then on.

Video System Failure #S1-1413: Turn off then on.

▶ **Symptom**

SPGPv4-Chip is not working.

▶ **Troubleshooting method**

- 1) Turn the machine off then on.
- 2) If the problem persists, replace the main board([JC92-02452A](#)).
(Refer to 2.11.1. Main Controller)

▶ **Error Code**

S1-2111

▶ **Error message**

Video System Failure #S1-2111: Turn off then on.

▶ **Symptom**

The machine can't detect memory during booting.

▶ **Troubleshooting method**

- 1) Turn the machine off then on.
- 2) If the problem persists, replace the main board([JC92-02452A](#)).

(Refer to 2.11.1. Main Controller)

▶ **Error Code**

S1-2411

S1-2421

S1-2422

▶ **Error message**

HDD System Failure #S1-2411: Turn off then on.

HDD System Failure #S1-2421: Turn off then on.

HDD System Failure #S1-2422: Turn off then on.

▶ **Symptom**

Hard Disk is not installed in the machine. / Hard Disk is defective.

▶ **Troubleshooting method**

- 1) Check if the HDD is installed correctly.
 - a) Remove the rear cover
(Refer to 3.3.2. Rear Cover)
 - b) Check the cable connection.
(Refer to 2.11.1. Main Controller)
- 2) If the problem persists, replace the HDD([JC59-00035A](#)).

► Error Code

S1-2510

S1-2511

S1-2521

S1-2523

S1-2540

► Error message

MSOK System Failure #S1-2510: Turn off then on.

MSOK System Failure #S1-2511: Turn off then on.

MSOK Failure: #S1-2521. Call for service.

PPM data is incorrect. Call for service & change MSOK.

MSOK Failure: #S1-2540. Call for service & change MSOK.

► Symptom

Communication error between data storage device of MSOK and main board has occurred.

► Troubleshooting method

- 1) Check if the MSOK is inserted correctly. Remove and reinstall it..
 - a) Remove the rear cover
(Refer to 3.3.2. Rear Cover)
 - b) Check if the MSOK is correctly connected.



- c) Check if the connector and harness are correctly plugged.
(Refer to 2.11.1. Main Controller)
- 2) If the problem persists, replace the main board ([JC92-02452A](#)).

► **Error Code**

S1-4111

► **Error message**

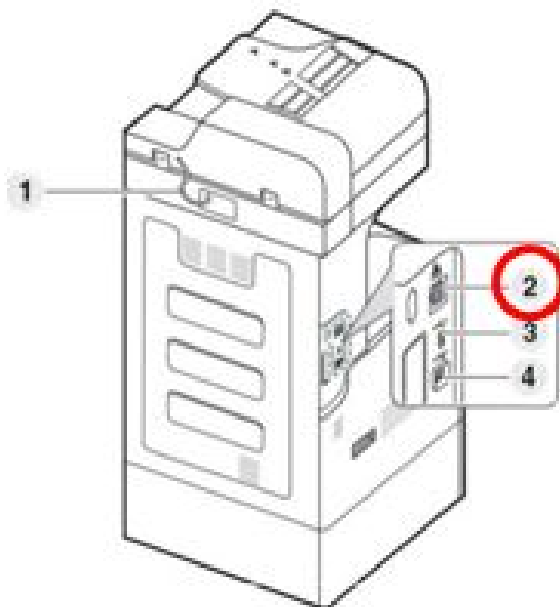
Video System Failure #S1-4111: Turn off then on.

► **Symptom**

The main board can't send the data through the network channel. Network cable is not connected.

► **Troubleshooting method**

- 1) Turn the machine off then on.
- 2) Check if the network harness and connector are correctly connected.
 - a) Insert the network harness to connector rightly.
 - b) Check the LED light near the network connector.
 - If it is connected correctly, green lamp is turn on.
 - If not, the orange lamp is flickers.



- 3) If the problem is persists, replace the main board([JC92-02452A](#)).

▶ **Error Code**

S1-4311

▶ **Error message**

Video System Failure #S1-4311: Turn off then on.

▶ **Symptom**

USB unit chip is abnormal.

▶ **Troubleshooting method**

- 1) Turn the machine off then on.
- 2) If the problem persists, replace the main board([JC92-02452A](#)).

(Refer to 2.11.1. Main Controller)

▶ **Error Code**

S1-5521

▶ **Error message**

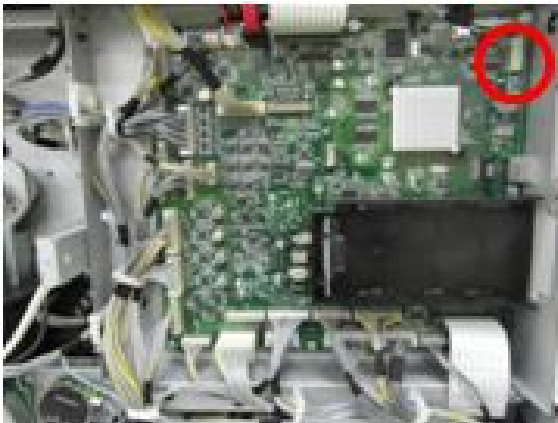
FDI device is not installed. Install the device.

▶ **Symptom**

The machine can't detect the FDI device.

▶ **Troubleshooting method**

- 1) Install the FDI device.
- 2) If the FDI device is already installed, update the firmware for main board.
(Refer to 4.3. Firmware Update)
- 3) Check the connection between FDI device and main board.
 - a) Remove the rear cover.
(Refer to 3.3.2. Rear Cover)
 - b) Check the connection between FDI unit and mainboard connection.
(Refer to 2.11.1. Main Controller)



- 4) If FDI unit has problem, replace FDI unit([CLX-KIT10](#)).
- 5) If the problem persists, replace the main board([JC92-02452A](#)).

▶ **Error Code**

S2-1211

▶ **Error message**

Engine System Failure #S2-1211: Turn off then on.

▶ **Symptom**

Power chip on main board is defective.

▶ **Troubleshooting method**

- 1) Turn the machine off then on.
- 2) If the problem persists, replace the main board.

(Refer to 2.11.1. Main Controller)

▶ **Error Code**

S2-2311

▶ **Error message**

Engine System Failure #S2-2311: Turn off then on.

▶ **Symptom**

EEPROM on main board is defective

▶ **Troubleshooting method**

- 1) Turn the machine off then on.
- 2) If the problem persists, replace the main board.

(Refer to 2.11.1. Main Controller)

► Error Code

S2-4210

► Error message

Front door is open. Close it.

► Symptom

Front cove is opened.

► Troubleshooting method

- 1) Close the front cover correctly.
- 2) Check if the cover open sensor connector is connected properly. Reconnect it.
- 3) If the sensor is defective, replace it.

(Refer to 3.3.31. Front Cover Open Switch)

► **Error Code**

S2-4410

► **Error message**

Right door is open. Close it.

► **Symptom**

Side cover is opened.

► **Troubleshooting method**

- 1) Close the side cover correctly.
- 2) Check if the cover open sensor connector is connected properly. Reconnect it.
- 3) If the sensor is defective, replace it.

(Refer to 3.3.30. Side Cover Open Switch)



► Error Code

S3-3111

► Error message

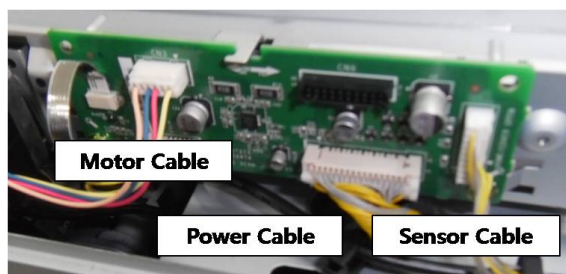
Scan System Failure #S3-3111: Turn off then on.

► Symptom

Error occurs at Scanner connection

► Troubleshooting method

- 1) Turn the power off then turn on.
- 2) If the problem persists, remove the DADF unit.
(Refer to 3.3.283 DADF Unit)
- 3) Open the scan rear cover.
(Refer to 3.3.29.1. Scanner Board)
- 4) Check if the connection on the Scanner board.



- 5) If there is no problem, replace the Main board([JC92-02452A](#)) or Scan joint board([JC92-02447A](#)).

▶ **Error Code**

S3-3121

▶ **Error message**

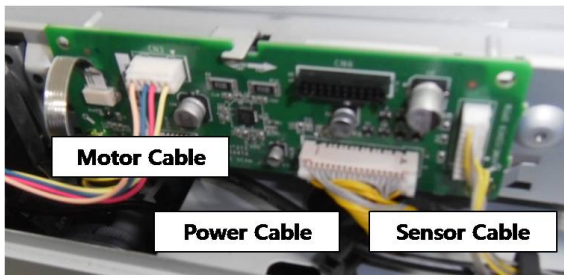
Scanner locked or another problem occurred.(No Switch Case)Scanner is locked.

▶ **Symptom**

Scanner module does not move.

▶ **Troubleshooting method**

- 1) Turn the power off then turn on.
- 2) If the problem persists, remove the DADF unit.
(Refer to 3.3.283 DADF Unit)
- 1) Press the cover-open sensor.
- 2) If the problem persists, Open the scanner glass and check the module
(Refer to 3.3.29.2 Scanner glass)
- 3) If the module is moved, check if the motor is connected correctly.



- 4) If the connection is OK, replace the Main board([JC92-02452A](#)) or Scan joint board([JC92-02447A](#)).

► **Error Code**

S3-3211

S3-3213

S3-3214

S3-3215

S3-3216

S3-3217

► **Error message**

Scan System Failure #S3-3211: Turn off then on.

Scan System Failure #S3-3213: Turn off then on.

Scan System Failure #S3-3214: Turn off then on.

Scan System Failure #S3-3215: Turn off then on.

Scan System Failure #S3-3216: Turn off then on.

Scan System Failure #S3-3217: Turn off then on.

► **Symptom**

DADF is not connected communication error occurs with CIP6 board.

► **Troubleshooting method**

- 1) Turn the power off then turn on.
- 2) If the problem persists, check the DADF unit connection.

(Refer to 3.3.283 DADF Unit)



- 3) If the problem persists, remove the DADF unit to find the defects.

(Refer to 3.3.28. DADF Unit)

- 4) Remove the DADF rear cover. Check if the connector on DADF board is connected correctly.

(Refer to 3.3.29.1. Scanner board)



- 5) If the connection is OK, replace the DADF board([JC92-02446A](#)).

▶ **Error Code**

S5-3111

▶ **Error message**

UI System Failure #S5-3111:Turn off then on.

▶ **Symptom**

Communication error between main board and OPE board has occurred.

▶ **Troubleshooting method**

- 1) Turn the power off then turn on.
- 2) If the problem persists, check the following.
- 3) Check the connection between main board and OPE board.
(Refer to 3.3.7. OPE Unit)
(Refer to 3.3.8. Main Board)
- 4) If the connection is OK, replace the main board([JC92-02452A](#)) or OPE board([JC97-04006B](#)).

► Error Code

S6-3122

► Error message

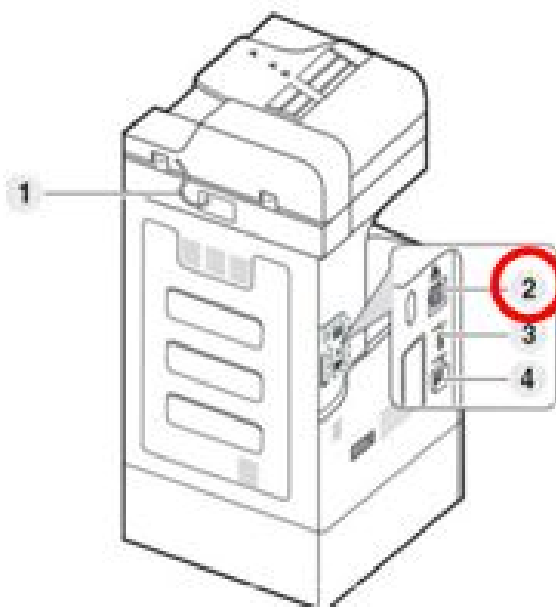
Network cable is disconnected. Check it.

► Symptom

Network cable is disconnected. .

► Troubleshooting method

- 1) Turn the machine off then on.
- 2) Check if the network harness and connector are correctly connected.
 - a) Insert the network harness to connector rightly.
 - b) Check the LED light near the network connector.
 - If it is connected correctly, green lamp is turn on.
 - If not, the orange lamp is flickers.



- 3) If the problem is persists, replace the main board([JC92-02452A](#)).

▶ **Error Code**

S6-3123

▶ **Error message**

This IP address conflicts with that of other system. Check it.

▶ **Symptom**

Network error. (IP address conflicts with that of another system or Communication error)

▶ **Troubleshooting method**

- Change the IP address

(Machine Setup > Network Setting > Login > TCP/IP > Select the network protocol > IP Setting)

▶ Error Code

S6-3128

▶ Error message

802.1x authentication failed. Please Contact the System Administrator

▶ Symptom

There is no response when checking the ping test. ID or Password is incorrect.

▶ Troubleshooting method

1) Change the IP address

(Machine Setup > Network Setting > Login > TCP/IP > Select the network protocol > IP Setting

2) Input the Network Login ID and Password correctly.

▶ **Error Code**

S7-2110

▶ **Error message**

Fuser Failure: #S7-2110. Turn off then on

▶ **Symptom**

The fuser unit is overheated.

▶ **Troubleshooting method**

- 1) Turn the machine off. Re-install the fuser unit. Then turn the machine on.
(Refer to 3.2.2 Fuser unit)
- 2) Remove the fuser unit. After open the jam cover, check jammed or wrapped paper is in the fuser unit.
(Refer to 3.3.23. Fuser unit)



- 3) Check if the contact type thermistor(1404-001567) or Non-contact type thermistor(1404-001453)is broken.



- 4) If the problem persists, replace the Fuser unit(110V : JC91-01049A / 220V : JC91-01050A).
- 5) If the problem persists, replace the Main board(JC92-02452A) or FDB board(110V : JC44-00210A, 220V : JC44-00211A), SMPS(110V : JC44-00093A, 220V : JC44-00100A)

4.5.7. Ux-xxxx type error code

▶ **Error Code**

U1-2113

U1-2119

▶ **Error message**

Fuser Unit Failure: #U1-2113.

Fuser Unit Failure: #U1-2119.

▶ **Symptom**

The thermistor can't measure temperature. The hear-roller will not heat-up.

▶ **Troubleshooting method**

- U1-2113 : Error occurs at non-contact type Thermistor
- U1-2119 : Error occurs at contact type Thermistor

1) Turn the machine off. Re-install the fuser unit, then turn the machine on.

(Refer to 3.2.2 Fuser unit)

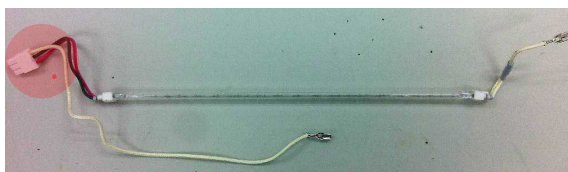
2) Remove the fuser unit. After opening the jam cover, check if jammed or wrapped paper is in the fuser unit.



3) If the problem persists, check the following:

(Refer to 3.3.23. Fuser unit)

- a) Check if the Halogen lamp (*110V : 4713-001632 / 220V : 4713-001633*) is broken or disconnected.
- b) Check if the AC connection of the Halogen lamp is disconnected or contaminated.



- c) Check if the thermistat (*4712-001098*) is disconnected.



- d) Check if the contact type thermistor([1404-001567](#)) or Non-contact type thermistor([1404-001453](#)) is broken.



- 4) If the problem persists, replace the Fuser unit([110V : JC91-01049A / 220V : JC91-01050A](#)).
- 5) If the problem persists, replace the Main board([JC92-02452A](#)) or FDB board([110V : JC44-00210A, 220V : JC44-00211A](#)), SMPS([110V : JC44-00093A, 220V : JC44-00100A](#))

► Error Code

U1-2115

► Error message

Fuser Unit Failure: #U1-2115. Turn off then on.

► Symptom

The pressure control unit(Cam unit)of the fuser is abnormal.

► Troubleshooting method

- 1) Turn the machine off. Re-install the fuser unit, then turn the machine on.

(Refer to 3.2.2. Fuser Unit)

- 2) If the problem persists, check the following:s

(Refer to 3.3.23. Fuser Unit)

- a) When the side-cover closes, check if the operation sound of the pressure control unit occurs.
- b) Check if the parts of the pressure control unit are abnormal.
 - Check if the shape of the CAM-REAR(*JC66-03178A*) is broken.
 - Check if there are abnormal parts of the pressure control unit.



- c) Check if the fuser-motor is abnormal via service-mode.

(Diagnostics > Engine Diagnostics > Engine Test Routines > 109-0140)

- 3) If the problem persists, replace the Fuser unit(*110V : JC91-01063A, 220V : JC91-01064A*)
- 4) If the problem persists, replace the pressure control unit or cam-motor or Main board(*JC92-02452A*).

► Error Code

U1-2132

U1-2135

► Error message

Fuser Unit Failure: #U1-2132.

Fuser Unit Failure: #U1-2135.

► Symptom

Temperature of the fuser rises abnormally.

► Troubleshooting method

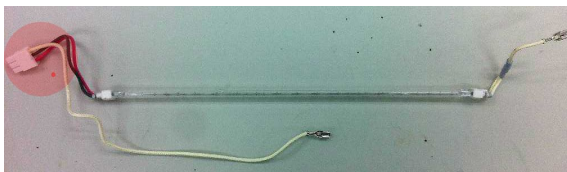
- U1-2132 : Error occurs at non-contact type Thermistor
 - U1-2135 : Error occurs at contact type Thermistor
- 1) Turn the machine off. Re-install the fuser unit, then turn the machine on.
(Refer to 3.2.2. Fuser unit)
 - 2) Check if the power voltage is normal. (Is the voltage during the operation $\pm 10\%$ of the rated voltage?)
 - 3) Remove the fuser unit. After opening the jam cover, check jammed or wrapped paper is in the fuser unit.



- 4) If the problem persists, Check the following:

(Refer to 3.3.23. Fuser unit)

- a) Check if the Halogen lamp (*110V : 4713-001632 / 220V : 4713-001633*) is broken or disconnected.
- b) Check if the AC connection of the Halogen lamp is disconnected or contaminated.



- c) Check if the thermistat (*4712-001098*) is disconnected.



- d) Check if the contact type thermistor(1404-001567) or Non-contact type thermistor(1404-001453) is broken.



- 5) If the problem persists, replace the Fuser unit(110V : JC91-01049A / 220V : JC91-01050A).
- 6) If the problem persists, replace the Main board(JC92-02452A) or FDB board(110V : JC44-00210A, 220V : JC44-00211A), SMPS(110V : JC44-00093A, 220V : JC44-00100A)

► Error Code

U1-2141

U1-2142

► Error message

Fuser Unit Failure: #U1-2141.

Fuser Unit Failure: #U1-2142.

► Symptom

Temperature of the thermistor is higher than the maximum allowable temperature.

► Troubleshooting method

- U1-2141 : Error occurs at non-contact type Thermistor
 - U1-2142 : Error occurs at contact type Thermistor
- 1) Turn the machine off. Re-install the fuser unit, then turn the machine on.
(Refer to 3.2.2. Fuser unit)
 - 2) Check if the power voltage is normal. (Is the voltage during the operation $\pm 10\%$ of the rated voltage?)
 - 3) Remove the fuser unit. After opening the jam cover, check if jammed or wrapped paper is in the fuser unit.



- 4) If the problem persists, Check the following:

(Refer to 3.3.23. Fuser unit)

- a) Check if the contact type thermistor(1404-001567) or Non-contact type thermistor(1404-001453) is broken.



- 5) If the problem persists, replace the Fuser unit(110V : JC91-01049A / 220V : JC91-01050A).
- 6) If the problem persists, replace the Main board(JC92-02452A) or FDB board(110V : JC44-00210A, 220V : JC44-00211A), SMPS(110V : JC44-00093A, 220V : JC44-00100A)

► **Error Code**

U1-2316

U1-2317

► **Error message**

Fuser Unit Failure: #U1-2316.

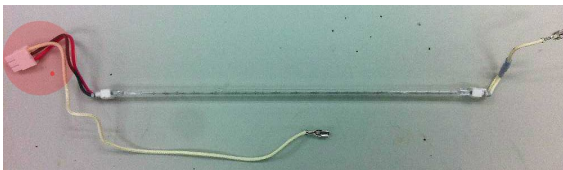
Fuser Unit Failure: #U1-2317.

► **Symptom**

Temperature of the fuser changes abnormally

► **Troubleshooting method**

- U1-2316 : Error occurs at non-contact type Thermistor
 - U1-2317 : Error occurs at contact type Thermistor
- 1) Turn the machine off. Re-install the fuser unit, then turn the machine on.
(Refer to 3.2.2. Fuser unit)
 - 2) Check if the power voltage is normal. (Is the voltage during the operation $\pm 10\%$ of the rated voltage?)
 - 3) If the problem persists, Check the following:
(Refer to 3.3.23. Fuser unit)
 - a) Check if the Halogen lamp (*110V : 4713-001632 / 220V : 4713-001633*) is broken or disconnected.
 - b) Check if the AC connection of the Halogen lamp is disconnected or contaminated.



- c) Check if the thermistor(*4712-001098*) is disconnected.



- d) Check if the contact type thermistor(*1404-001567*) or Non-contact type thermistor(*1404-001453*) is broken.



- 4) If the problem persists, replace the Fuser unit(*110V : JC91-01049A / 220V : JC91-01050A*).
- 5) If the problem persists, replace the Main board(*JC92-02452A*) or FDB board(*110V : JC44-00210A, 220V : JC44-00211A*), SMPS(*110V : JC44-00093A, 220V : JC44-00100A*)

► Error Code

U1-2335

U1-233A

► Error message

Fuser Unit Failure: #U1-2335.

Fuser Unit Failure: #U1-233A.

► Symptom

Temperature of the thermistor is abnormally low.

► Troubleshooting method

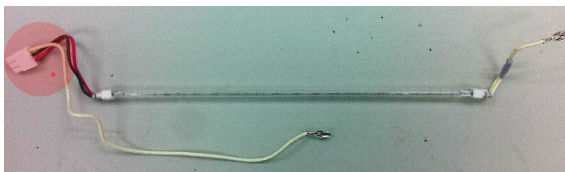
- U1-2335 : Error occurs at non-contact type Thermistor
 - U1-233A : Error occurs at contact type Thermistor
- 1) Turn the machine off. Re-install the fuser uni, then turn the machine on.
(Refer to 3.3.2. Fuser unit)
 - 2) Check if the power voltage is normal. (Is the voltage during the operation $\pm 10\%$ of the rated voltage?)
 - 3) Remove the fuser unit. After opening the jam cover, check if jammed or wrapped paper is in the fuser unit.



- 4) If the problem persists, Check the follows.

(Refer to 3.3.23. Fuser unit)

- a) Check if the Halogen lamp (*110V : 4713-001632 / 220V : 4713-001633*) is broken or disconnected.
- b) Check if the AC connection of the Halogen lamp is disconnected or contaminated.



- c) Check if the thermistat (*4712-001098*) is disconnected.



- d) Check if the contact type thermistor([1404-001567](#)) or Non-contact type thermistor([1404-001453](#)) is broken.



- 5) If the problem persists, replace the Fuser unit([110V : JC91-01049A / 220V : JC91-01050A](#)).
- 6) If the problem persists, replace the Main board([JC92-02452A](#)) or FDB board([110V : JC44-00210A, 220V : JC44-00211A](#)), SMPS([110V : JC44-00093A, 220V : JC44-00100A](#))

► Error Code

U1-2337

U1-233D

► Error message

Fuser Unit Failure: #U1-2337.

Fuser Unit Failure: #U1-233D.

► Symptom

When the fuser warms-up, the temperature of the thermistor is abnormally low.

► Troubleshooting method

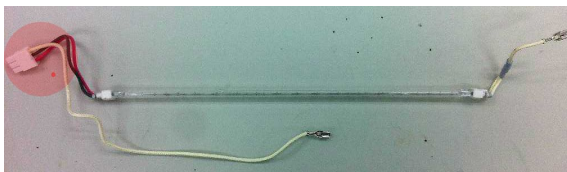
- U1-2337 : Error occurs at non-contact type Thermistor
 - U1-233D : Error occurs at contact type Thermistor
- 1) Turn the machine off. Re-install the fuser unit, then turn the machine on.
(Refer to 3.2.2 Fuser unit)
 - 2) Check if the power voltage is normal. (Is the voltage during the operation $\pm 10\%$ of the rated voltage?)
 - 3) Remove the fuser unit. After opening the jam cover, check if jammed or wrapped paper is in the fuser unit.



- 4) If the problem persists, Check the follows.

(Refer to 3.3.23. Fuser unit)

- a) Check if the Halogen lamp (*110V : 4713-001632 / 220V : 4713-001633*) is broken or disconnected.
- b) Check if the AC connection of the Halogen lamp is disconnected or contaminated.



- c) Check if the thermistat (*4712-001098*) is disconnected.



- d) Check if the contact type thermistor([1404-001567](#)) or Non-contact type thermistor([1404-001453](#)) is broken.



- 5) If the problem persists, replace the Fuser unit([110V : JC91-01049A / 220V : JC91-01050A](#)).
- 6) If the problem persists, replace the Main board([JC92-02452A](#)) or FDB board([110V : JC44-00210A, 220V : JC44-00211A](#)), SMPS([110V : JC44-00093A, 220V : JC44-00100A](#))

▶ **Error Code**

U2-1111

U2-1112

U2-1113

U2-1114

▶ **Error message**

LSU Failure: #U2-1111. Turn off then on.

LSU Failure: #U2-1112. Turn off then on.

LSU Failure: #U2-1113. Turn off then on.

LSU Failure: #U2-1114. Turn off then on.

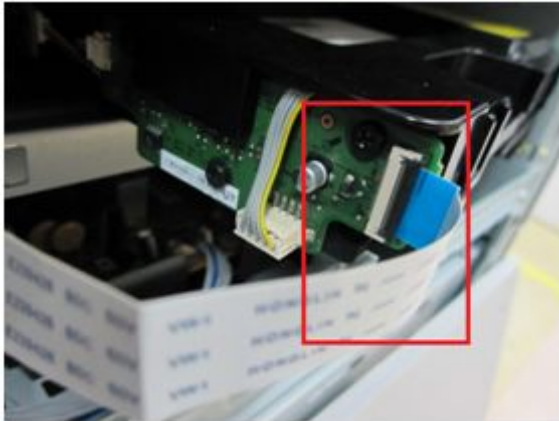
▶ **Symptom**

LSU motor does not operate or it operates abnormally. Motor ready signal is abnormal.

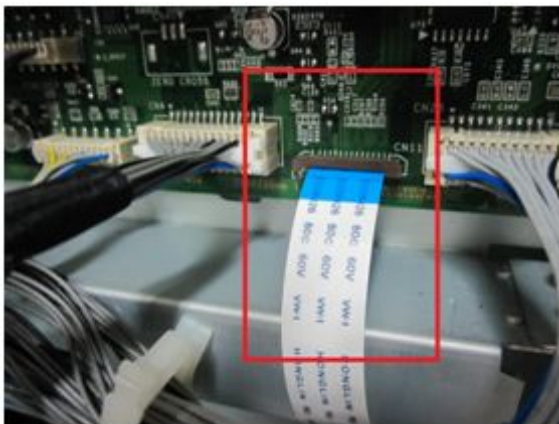
▶ **Troubleshooting method**

- 1) Turn the machine off then on. Check for the LSU motor operation sound during warm-up.
- 2) Print a Demo page and check the printout is normal.
- 3) If the problem persists, check the following:
(Refer to 3.3.3. LSU)

- If the LSU motor makes a sound,
 - a) By SVC mode, Check if the motor ready signal is occurred.
(Diagnostics > Engine Diagnostics > Engine Test Routines > 110-0000)
 - b) If not, open the side-cover and replace the LSU([JC97-04017A](#))
- If the LSU motor does not make a sound,
 - a) Unplug and reconnect the LSU flat cable connecting the LSU. Then check the operation sound of LSU.



- b) Unplug and reconnect the LSU flat cable on main board. Then check the operation sound of LSU.



- c) If the LSU flat cable is defective, replace FFC([JC39-01657A](#))
- d) If the LSU cable is OK, replace the LSU([JC97-04017A](#))

► **Error Code**

U3-3113

U3-3211

U3-3212

U3-3213

U3-3214

U3-3312

U3-3314

► **Error message**

Original paper jam inside of scanner

► **Symptom**

Jam has occurred inside the DADF unit.

► **Troubleshooting method**

- 1) Open the DADF cover. If there is jammed paper, remove it.

(Refer to 3.3.28.2. DADF Open Cover)

- 2) If this error occurs continually, check the DADF regi. sensor([0604-001393](#)) and regi actuator([JC66-03148A](#)). If their operation is abnormal, replace a defective part.



- 3) If the regi sensor is OK, check the scan sensor([0604-001393](#)) and scan actuator([JC66-03210A](#)). If their operation is abnormal, replace a defective part.



- 4) Check if the regi. clutch operates normally. Check if the clutch cable is connected correctly. If the clutch([JC47-00033A](#)) is defective, replace it.

► Error Code

U3-3411

U3-3413

U3-3414

► Error message

Original paper jam inside of scanner.

► Symptom

Jam has occurred inside the DADF unit.

► Troubleshooting method

1) Open the DADF cover. If there is jammed paper, remove it.

(Refer to 3.3.28.2. DADF Open Cover)

2) If this error occurs continually, check the following:

a) Check if the Regi. actuator(*JC66-03148A*) operates normally.

b) Check if the Regi. sensor cable is connected correctly.

c) If the connection is OK, replace the Regi. sensor(*0604-001393*).

▶ **Error Code**

U3-3311

U3-3313

▶ **Error message**

Original paper jam inside of scanner.

▶ **Symptom**

Jam has occurred inside the DADF unit.

▶ **Troubleshooting method**

- 1) Open the DADF cover. If there is jammed paper, remove it.
(Refer to 3.3.28.2. DADF Open Cover)
- 2) If this error occurs continually, check the following:
 - a) Check if the scan actuator([JC66-03210A](#)) operates normally.



- b) Check if the scan sensor cable is connected correctly.
- c) If the connection is OK, replace the scan sensor([0604-001393](#)).

► Error Code

U3-3711

U3-3713

U3-3714

► Error message

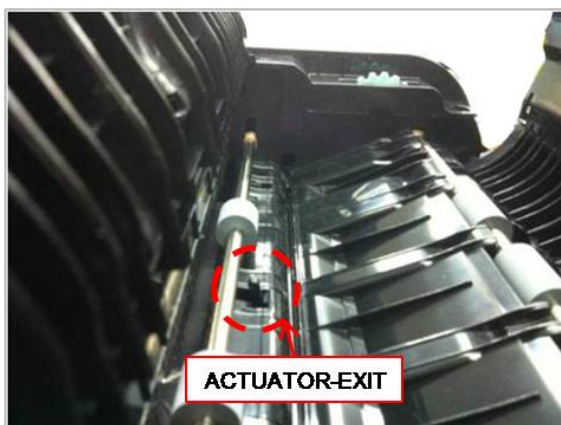
Original paper jam in the exit area of scanner

► Symptom

Original jam has occurred inside the DADF unit.

► Troubleshooting method

- 1) Open the DADF cover. If there is a jammed paper, remove it.
(Refer to 3.3.28.2. DADF Open Cover)
- 2) If this error occurs continually, check the followings.
 - a) Check if the exit actuator([JC66-03184A](#)) operates normally.



- b) Check if the exit sensor cable is connected correctly.
 - c) If the connection is OK, replace the exit sensor([0604-001393](#)).

▶ **Error Code**

U3-4210

▶ **Error message**

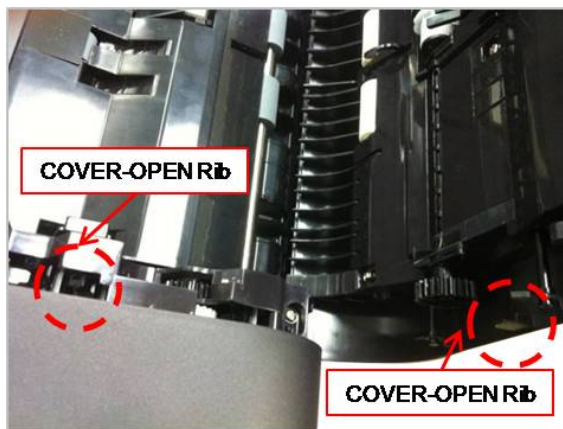
Top door of scanner is open.

▶ **Symptom**

DADF cover is opened.

▶ **Troubleshooting method**

- 1) Close the DADF cover perfectly.
- 2) If this error occurs continually, Check the followings.
 - a) Check the DADF cover open sensor([0604-001393](#)) and its harness. If there is a defective part, replace it.
 - b) If both of them are normal, check the Cover-Open Rib. If it is broken, replace the Cover-Open([JC63-03273A](#)).



4.6. Image quality problems and solutions

Print-quality defects can be attributed to printer components, consumables, media, internal software, external software applications and environmental conditions.

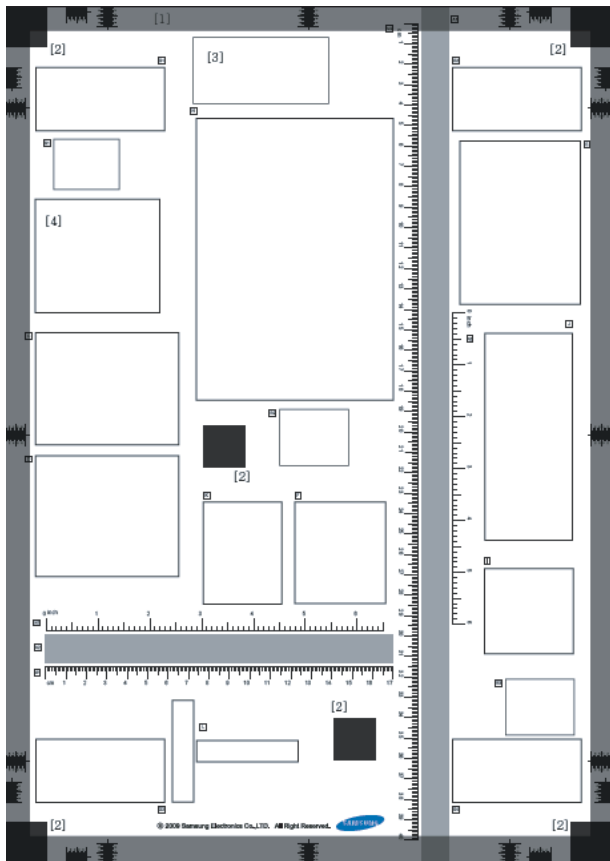
To successfully troubleshoot print-quality problems, as many variables as possible must be eliminated.

The first step is to generate prints using printable pages embedded in the printer on laser paper. The paper should be from an unopened ream that has been acclimated to room temperature and you should ensure that genuine Samsung Toner is installed in the printer.

Samsung A/S chart (A3)



4. Troubleshooting



[1]	Grid pattern	For adjusting margin and magnification
[2]	Black patches	For adjusting skew error
[3]	Barcode	For checking the reproduction of barcode
[4]	Note area	For recording the date, conditions, etc.
[A]	Halftone band	For checking banding and jitter (K 50%)
[B, L]	Resolution patterns	For checking resolution
[C, D, E]	Images	For checking color reproduction
[F]	Map image	For checking fine line reproduction
[G]	Color patches	For checking color reproduction and uniformity
[H]	Gradation pattern	For checking tone reproduction of 7 colors (C, M, Y, K, R, G, B/ 10~100%)
[I]	Color/Mono text	For checking the reproduction of color, mono text
[J]	Multilingual Feature	For checking the reproduction of small text
[K]	White Gap pattern	For checking color to color, color to mono white gap
[M]	Rulers	For checking the magnification error (unit : cm)
[N]	Rulers	For checking the magnification error (unit : inch)

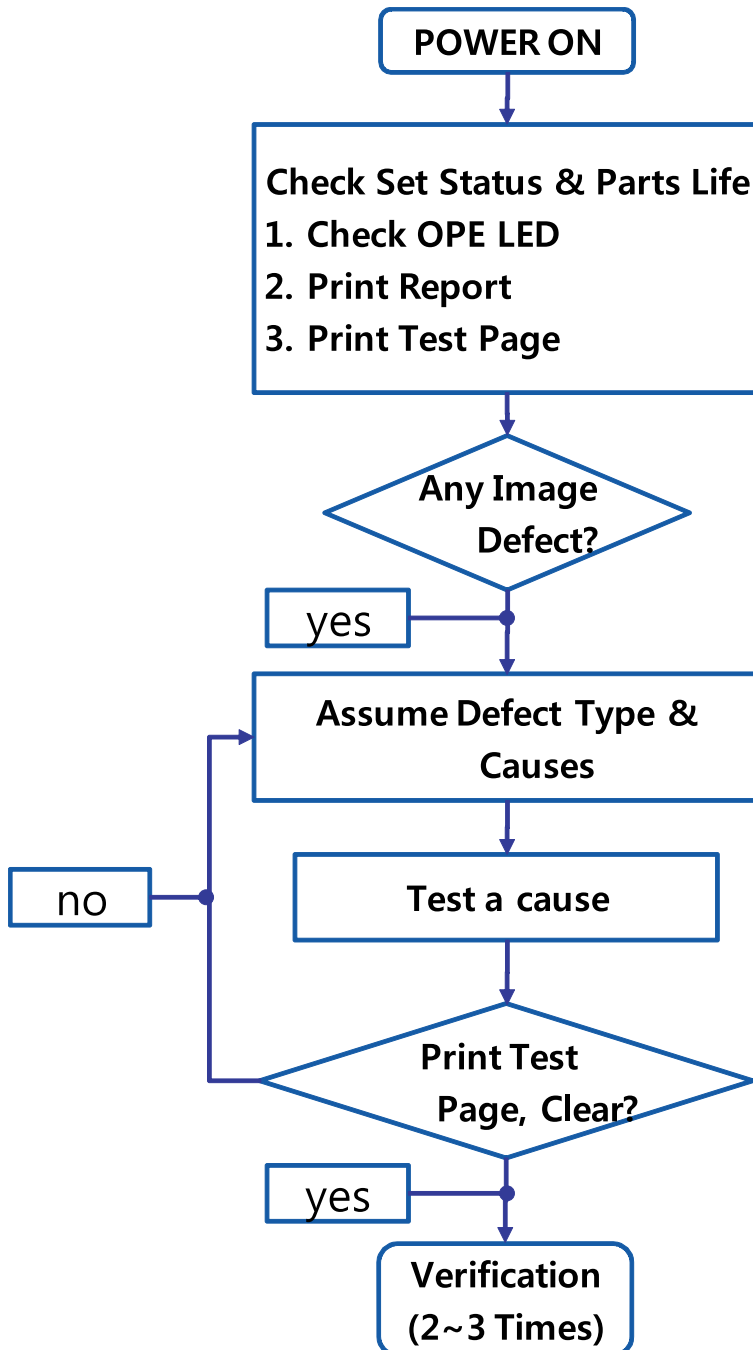
How to analysis the defect image

See the next flow chart.



TIP

- 1) According to the part remain life, cause can vary. Check the part remain life.
- 2) Check the defect whether periodic or not.

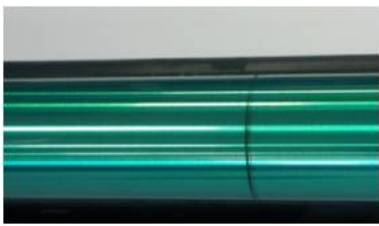

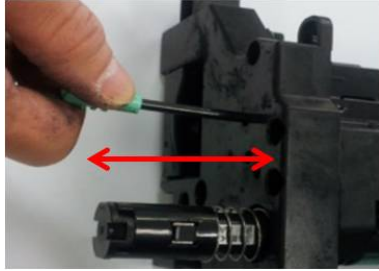
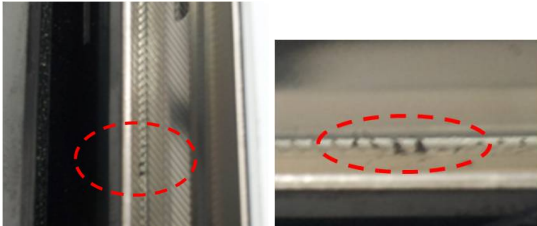


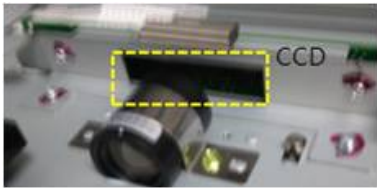
4.6.1. Vertical Black Lines

A. Typical faulty images



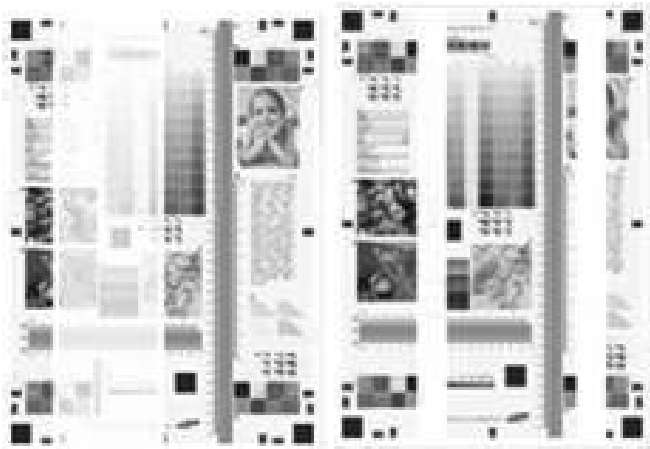
B. Troubleshooting procedure

Step	Check item	Action
1	<p>OPC is scratched or contaminated in the vertical direction.</p> 	<p>Replace Drum unit. (Refer to 3.2.1.)</p>
2	<p>If Charge Scorotron saw in Developer unit is contaminated?</p> 	<p>Clean the Scorotron with the Cleaning bar.</p> 
3	<p>If the Charge Scorotron saw is defected?</p> 	<p>Replace Drum unit. (Refer to 3.2.1.)</p>
4	<p>Scanner unit is contaminated. (ADF Glass / Mirror / CCD Sensor)</p>	<p>Wipe the surface of contaminated parts with a soft cloth.</p>

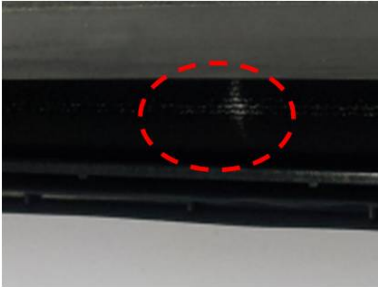
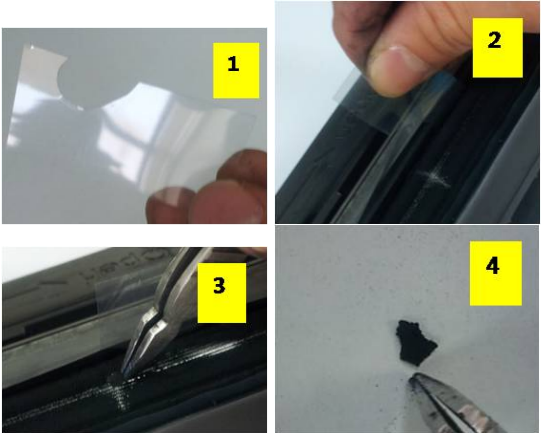
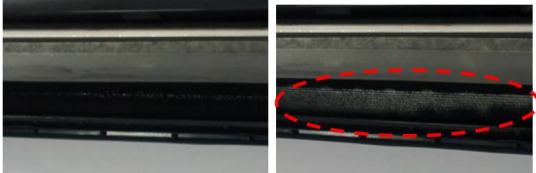
Step	Check item	Action
		<p><u>(Refer to 3.3.29.)</u></p>


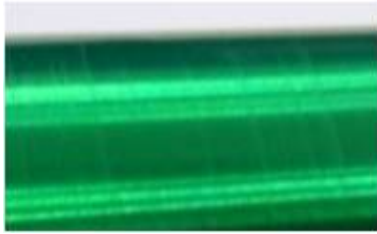
4.6.2. Vertical Light or White Lines

A. Typical faulty images



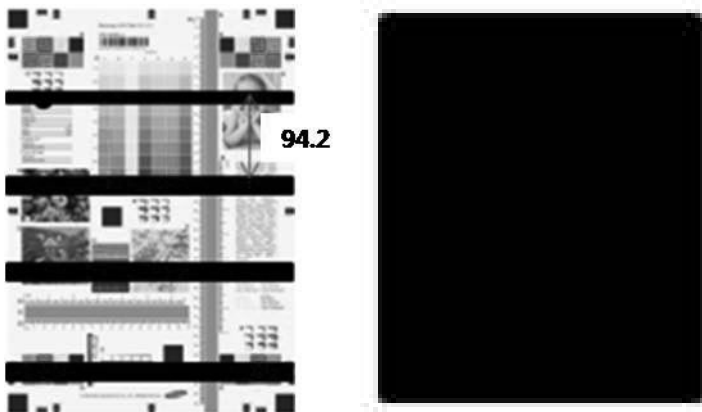
B. Troubleshooting procedure

Step	Check item	Action
1	Some foreign substance is stuck between DR and Blade. No toner on DR partially. 	Remove foreign substances.  <ul style="list-style-type: none"> – Make the hook (Transparency sheet is recommended.) – Put the hook into the gap between DR and Blade. – Pull out foreign substances.
2	Developer is empty	Replace Developer unit. Check the toner remain on Report page. Check the toner layer on Roller-Magnetic is uniform or not. (Refer to 3.2.2.2.)  <div style="display: flex; justify-content: space-around; margin-top: 5px;"> Normal Low Toner Layer </div>

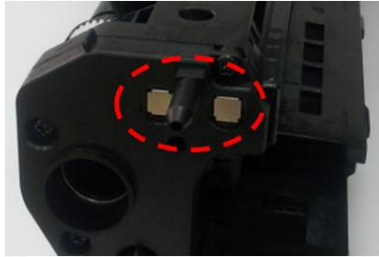
Step	Check item	Action
3	The path of Laser beam is blocked. (Foreign substance is on the LSU window.)	Clean the LSU window. 
4	OPC is scratched or contaminated in the vertical direction. 	Replace Drum unit. <u>(Refer to 3.2.1.)</u>

4.6.3. Horizontal Periodic Black Lines, Dots.

A. Typical faulty images



B. Troubleshooting procedure

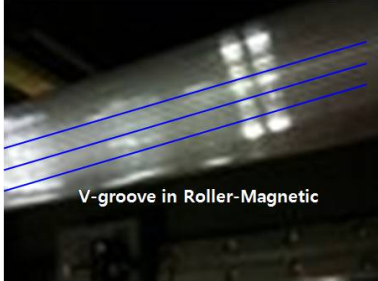
Step	Check item	Action
1	Poor connection between CR terminal and Set.	Wipe out the surface of contaminated CR terminal. 
2	Poor charge voltage of HVPS (MHV)	Check the connection between MHV terminal and connector. Replace HVPS. (Refer to 3.3.5.)

4.6.4. Horizontal Periodic Light/Dark Lines, Dots.

A. Typical faulty images

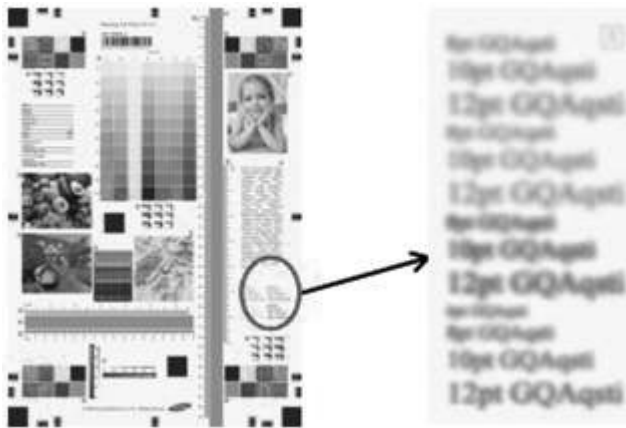


B. Troubleshooting procedure

Step	Check item	Action
1	Horizontal periodic bands (OPC, 94.2mm) – OPC was exposed for long hours. – Damaged by high voltage in a short time.	As some time passes, most of bands will disappear. Replace Drum unit. (Refer to 3.2.1.)
2	Horizontal periodic Light/Dark bands (Roller-Magnetic, 35.7mm) – Roller-Magnetic is inferior in quality. – V-groove of the surface of Roller-Magnetic is not uniform. 	Replace Deve unit. (Refer to 3.2.2.)

4.6.5. Blurred image

A. Typical faulty images

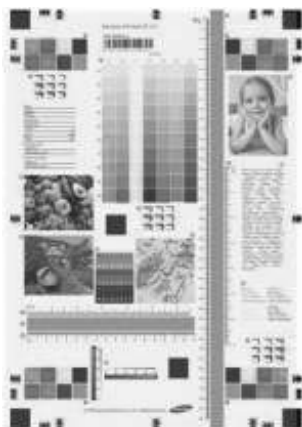


B. Troubleshooting procedure

Step	Check item	Action
1	Humidity of the circumstances and paper.	Change to the new and better grade paper.
2	Thv transfer voltage is low.	Turn up the THV transfer voltage. (Refer to 4.4.6.7.)
3	Connection between HVPS and THV is incorrect.	Check if the connection between THV high voltage terminal and HVPS THV terminal is correct. Check if the connection of HVPS and TR correct.

4.6.6. Foggy image

A. Typical faulty images



B. Troubleshooting procedure

Step	Check item	Action
1	Voltage of OPC is abnormally low.	Replace Drum unit. (Refer to 3.2.1.)
2	Toner is over supplied by abnormal TC sensor.	Replace the Toner cartridge. (Refer to 3.2.2.)
3	T1 Voltage is abnormally high	Check the connection in HVPS. – Connection of Transfer rollers in THV, TR Replace HVPS. (Refer to 3.3.5.)
4	HVPS operates abnormally. HVPS is damaged or broken.	Replace HVPS. (Refer to 3.3.5.)

4.6.7. Light image

A. Typical faulty images



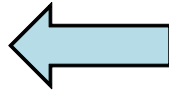
B. Troubleshooting procedure

Step	Check item	Action
1	Occur the poor Transfer.	Replace HVPS. (Refer to 3.3.5.)
2	Output voltage of HVPS is abnormally low. – Color density becomes low.	Replace HVPS. (Refer to 3.3.5.)
3	TC Sensor operates abnormally.	Replace Toner cartridge. (Refer to 3.2.1.)

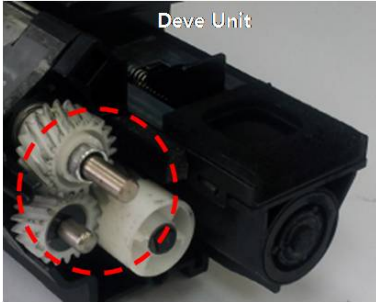
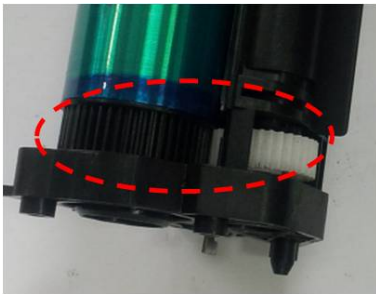
4.6.8. Uneven pitch and jitter image

A. Typical faulty images

Paper feeding
direction

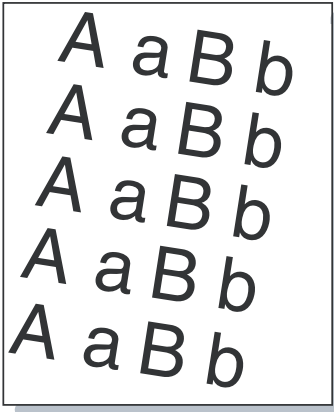


B. Troubleshooting procedure

Step	Check item	Action
1	Under 3mm periodic jitters or horizontal bands has occurred.	<p>Remove foreign substances at the drive gears. Apply grease.</p> <ul style="list-style-type: none"> - Toner cartridge gears.  <ul style="list-style-type: none"> - OPC unit gears.  <ul style="list-style-type: none"> - Main drive unit gears. <p>Replace the abnormal units.</p> <ul style="list-style-type: none"> - Toner cartridge. - Drum unit. - Main drive unit.
2	Under 1mm periodic jitter or horizontal bands has occurred.	<p>Check if the LSU is assembled incorrectly, replace the screws. Replace LSU (Refer to 3.3.3.)</p>

4.6.9. Skewed image

A. Typical faulty images



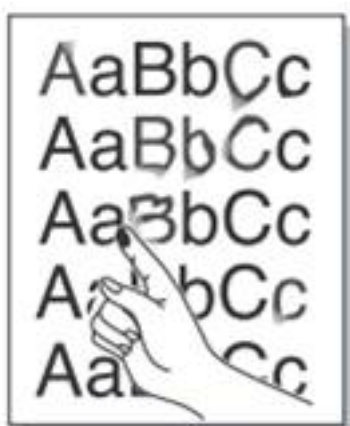
B. Troubleshooting procedure

Step	Check item	Action
1	Is the cassette properly installed?	Reinstall the cassette properly.
2	Is too much paper loaded in the cassettes?	Reduce paper.
3	Are the cassette side guides properly set?	Adjust the side guides.
4	Is the surface of pick up/ reverse/ forward roller dirty?	Clean or replace the contaminated roller. (Refer to 3.2.5.)
5	Is the transfer belt installed properly?	Reinstall ITB unit.
6	Is the DADF installed and adjusted properly?	Reinstall the DADF unit. Adjust DADF skew. (Refer to 4.7.)




4.6.10. Poor fusing performance

A. Typical faulty images

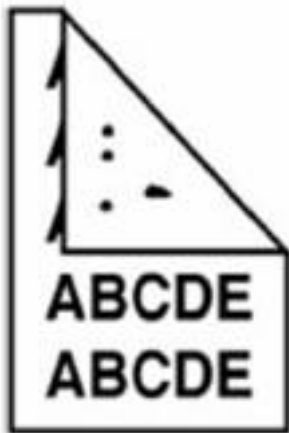


B. Troubleshooting procedure


Step	Check item	Action
1	<p>Check the paper type.</p> <p>Depending on what type of paper used, print speed will vary.</p> <p>(ex)</p> <ul style="list-style-type: none"> - Plain (71~90g/), Thick (91~105g/) : 100% - Heavy weight (106~175g/) : 50% - Envelope (75~90 g/), Label (120~150 g/) : 50% 	<p>Check the paper type on control panel is same as paper user uses.</p> <p>(Refer to 2.2.7.)</p>
2	The fuser unit is worn out.	Replace the fuser unit.
3	Check if the surface of the fuser belt & pressure roller is scratched.	Replace the fuser unit.
4	<p>Check if the temperature control system has problems.</p> <ul style="list-style-type: none"> - Thermistor is broken or operates abnormally - Halogen lamp is broken or operates abnormally. 	<p>Check the Non-contact thermistor sensor.</p>  <p>Check the Halogen lamp.</p> <p>(Refer to 4.5.7. U1-2113)</p> <p>If you find some problems, replace the broken parts or Fuser unit.</p>
5	Check if the pressure control system operates properly.	<p>Check the pressure control system.</p> <p>(Refer to 4.5.7. U1-2115)</p> <p>The problem persists, replace Fuser unit.</p>
6	Paper is wrapped on the Heating roller.	<p>Remove a wrapped paper and print the demo page.</p> <p>If there are some problems on the printout, replace Fuser unit.</p>

4.6.11. Stain on the paper back side

A. Typical faulty images



B. Troubleshooting procedure

Step	Check item	Action
1	Is the transfer roller dirty or worn out?	Clean or replace the Transfer roller Assembly. 
2	Are the fuser belt and pressure roller dirty?	Clean the fuser belt and pressure roller.
3	Check the pressure roller surface is damaged or scratched.	Replace Fuser unit. (Refer to 3.2.2.5.)

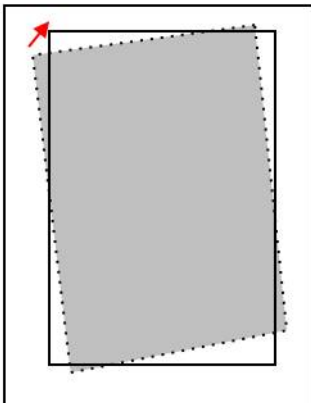
4.7. Adjusting the DADF skew

- 1) Stand the DADF unit. Loosen 4 screws securing the right hinge unit slightly.

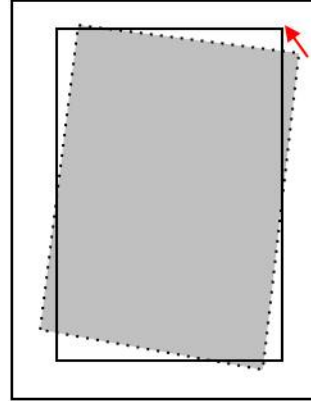


- 2) Adjust the position of the DADF hinge as the skew status.

- a) If the skew image is like a below sample, adjust the hinge unit upward. (1 scale => 0.9 mm skew adjustment)



- b) If the skew image is like a below sample, adjust the hinge unit down. (1 scale => 0.9 mm skew adjustment)



- 3) Detach the DADF sponge after adjusting the skew. Place the DADF sponge on platen glass. And then close the DADF unit to stick the sponge.



4.8. Other errors

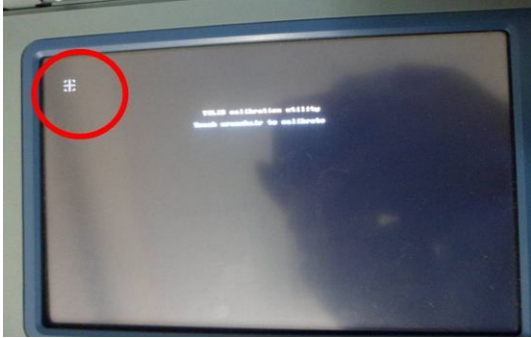
1) No-Power

- Description : When system power is turned on, LED and LCD on the operator panel do not come on.

Check and cause	Solution
The connection between main board and OPE board is bad.	Reconnect or replace the harness.
HVPS or SMPS output is abnormal.	Replace the HVPS or SMPS board.

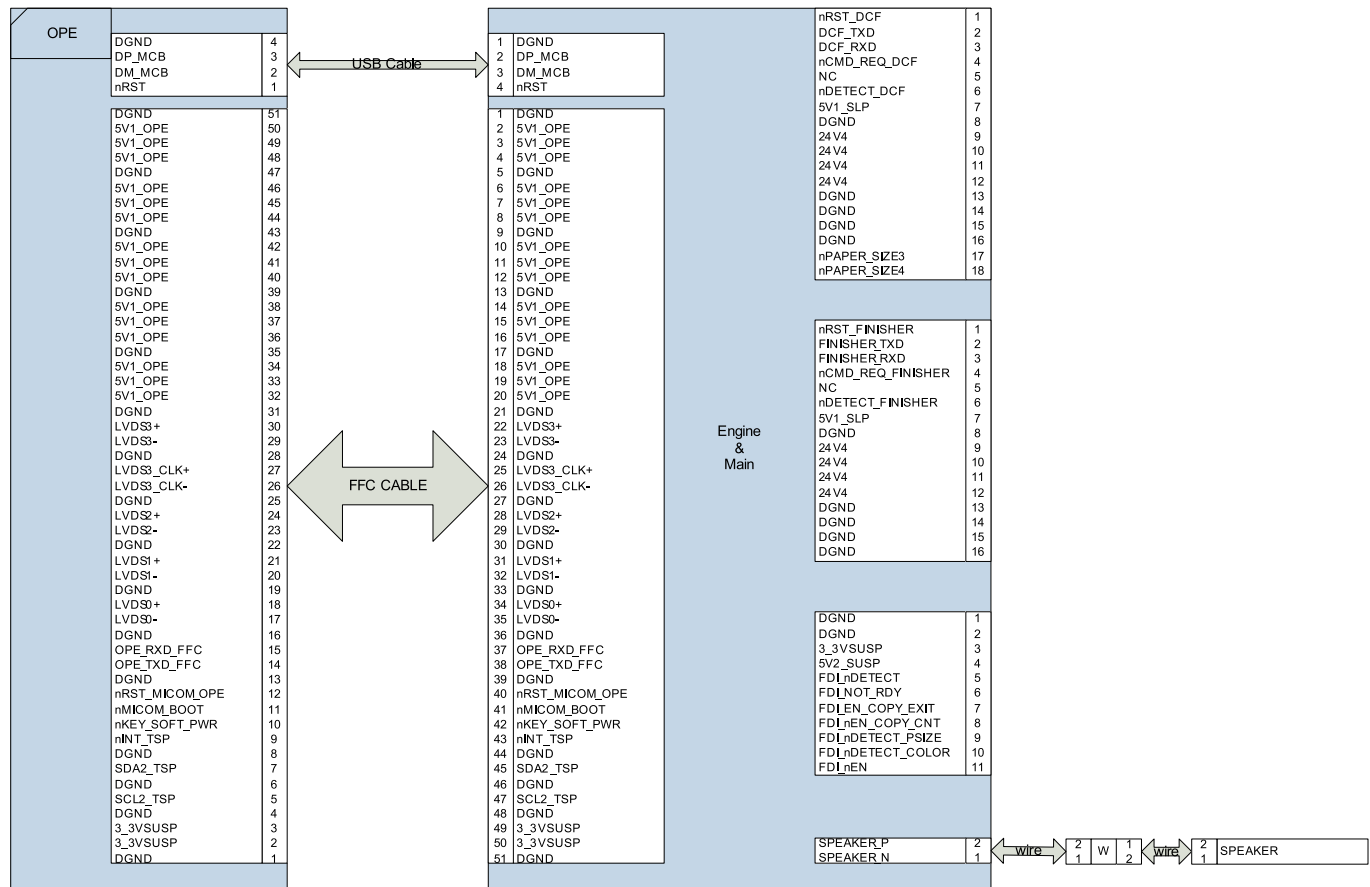
2) Calibrating the touch screen (Touch screen model only)

- Description : Touch screen does not operate properly.

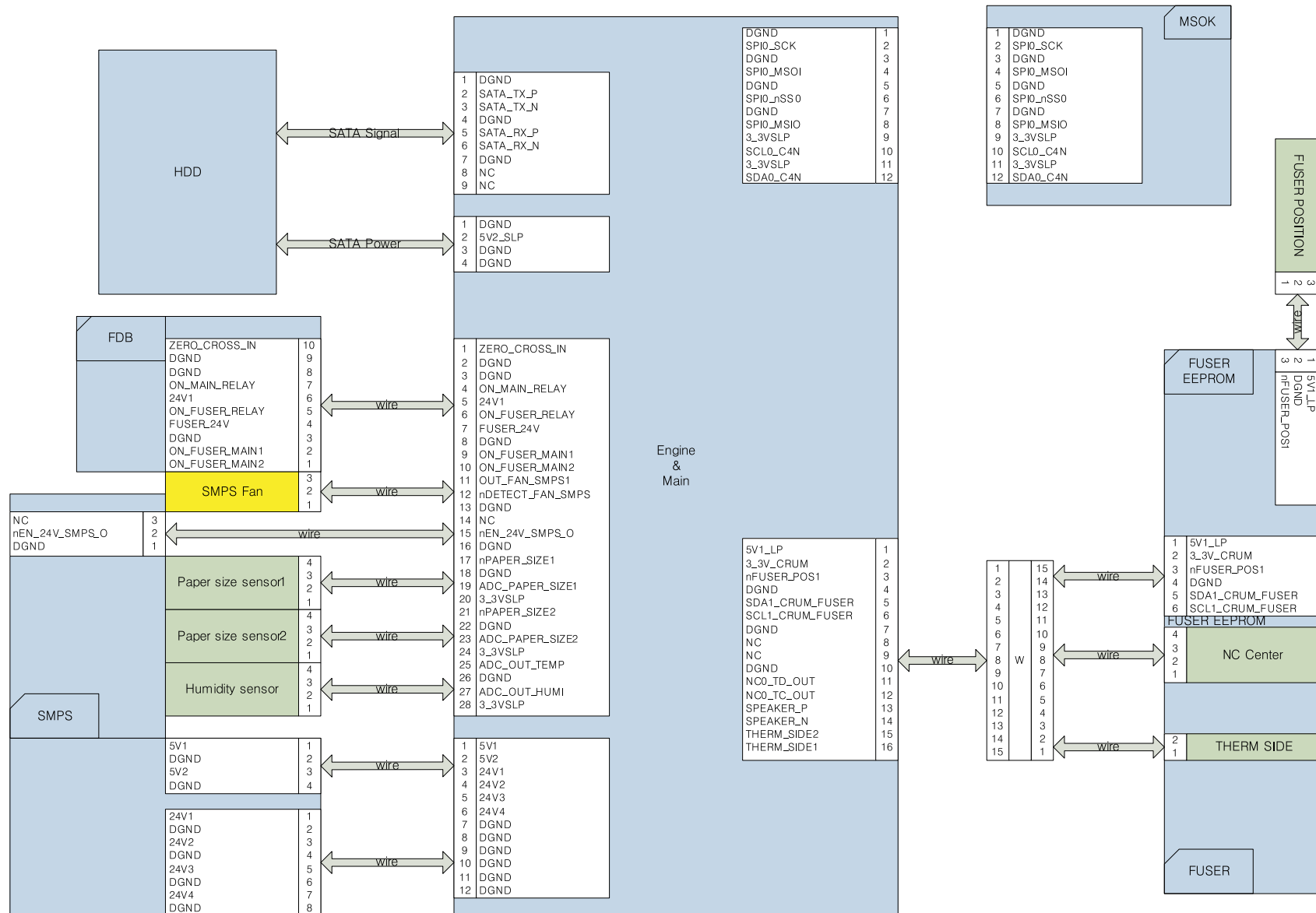
Check and cause	Solution
The linearity value for touch panel has changed due to using a machine long hours or surroundings.	<ol style="list-style-type: none"> 1) Turn off the machine. 2) While pressing the number 0 on numeric keys, turn the machine on. Wait until calibration screen appears. 3) Press centre of mark + following order 1~5. Use your finger. Perform 2 times.  <ol style="list-style-type: none"> 4) If there is no problem, "Complete" will appear on LCD and reboot the machine. When making a mistake, start again from the step 1.

5. System Diagram

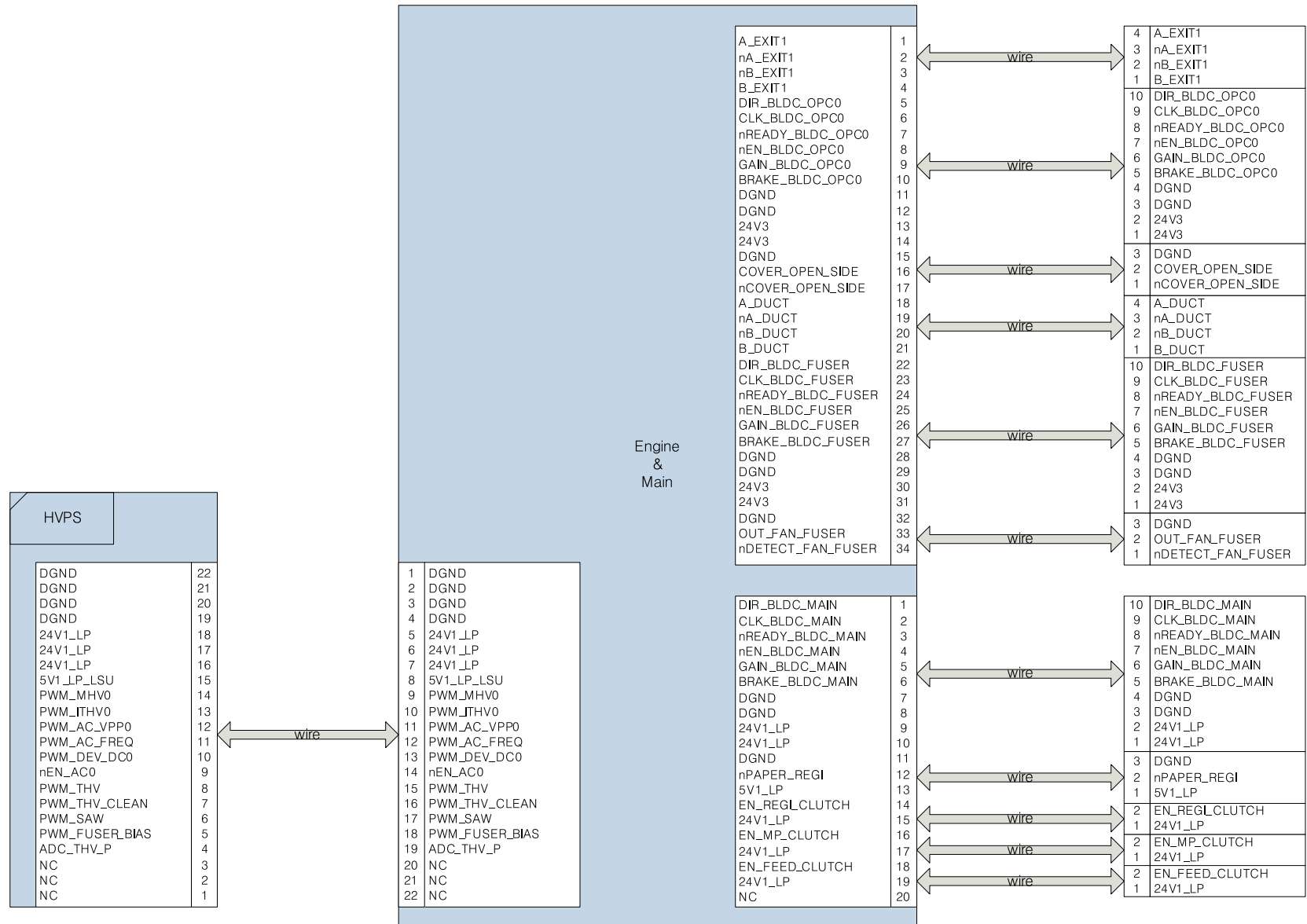
5.1. Connection Diagram1



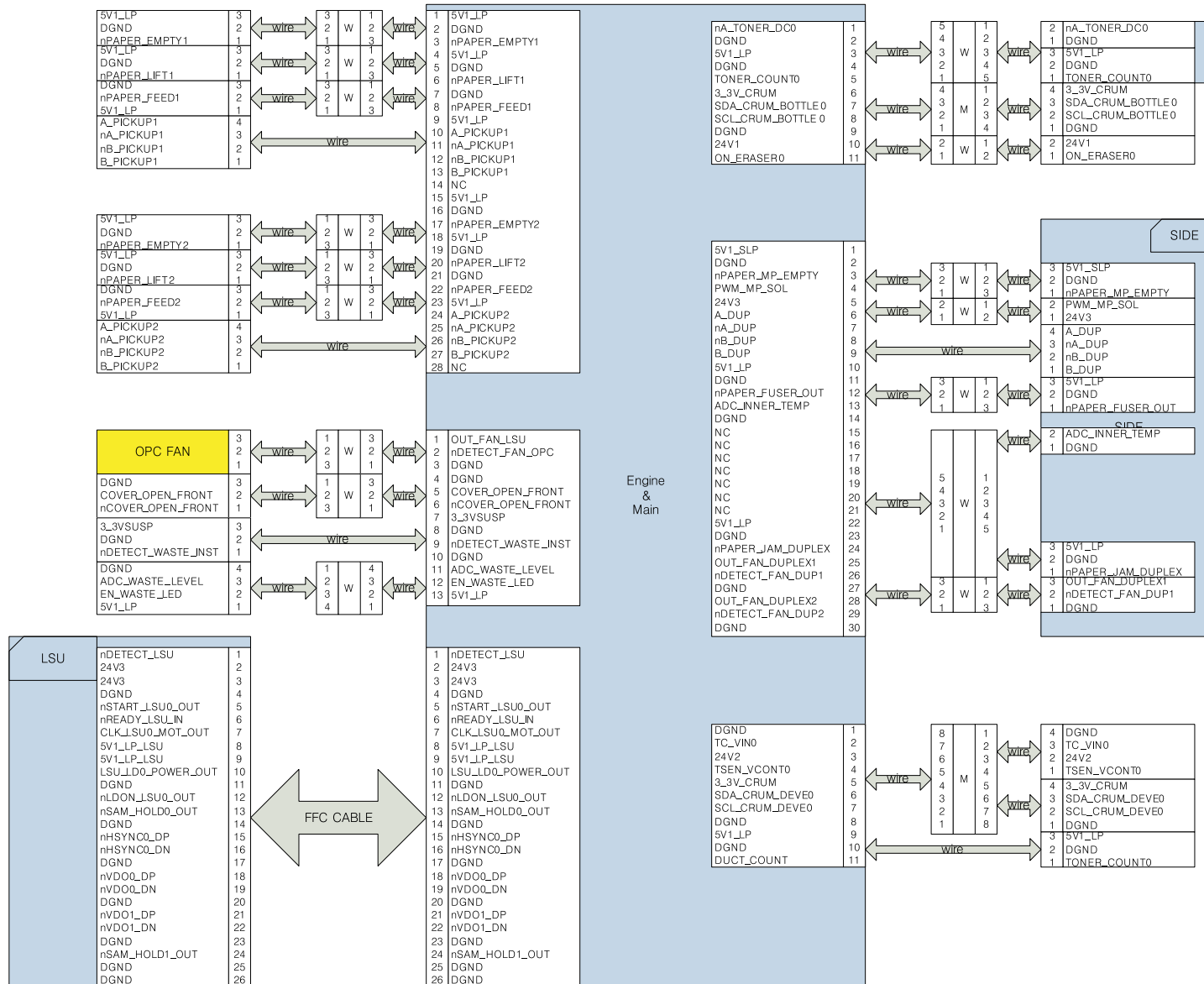
5.2. Connection Diagram2



5.3. Connection Diagram3



5.4. Connection Diagram4

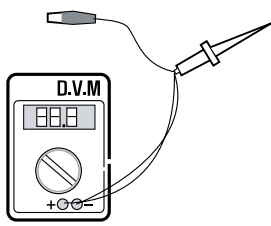

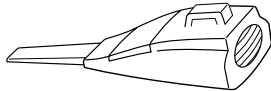
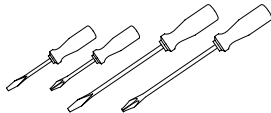




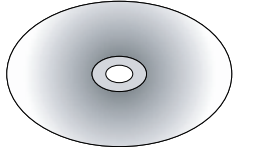


6. Reference Information

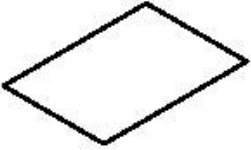

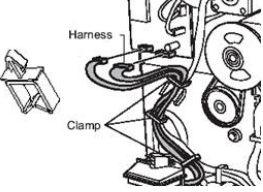
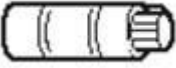
This chapter contains the tools list, list of abbreviations used in this manual, and a guide to the location space required when installing the printer. A definition of test pages and Wireless Network information definition is also included.

6.1. Tools for Troubleshooting

The following tools are recommended safe and easy troubleshooting as described in this service manual.

Tool	Image	Use	Remark
Hand DVM		Checking the fuser lamp. Checking the SMPS fuse.	Service
Spring hook		When disassembling the spring	Service
Small vacuum		To remove the toner and contamination inside of the machine.	Service
Driver		To tighten screws. To remove the hinge of the cover.	Service
Tweezers		To unplug the pin connector of the fuser unit. To remove the E-ring.	Service
Soft cloth		To clean the rollers To clean the frame and scan glass	Service
Black soft cloth		To cover the OPC drum	Service
Install guide, User guide, Admin guide		When installing the machine.	Installation
Software CD		When installing the machine.	Installation

6. Reference Information

Tool	Image	Use	Remark
Test Chart • A4 image, A3 image, Skew		To check the image quality	Service
Spare Kit • Screw, E-Ring		To fix the unit or parts	Service
Clamp		To form the harness	Service
Grease		To remove the noise by gear. • G-8050 : JC81-08663A (200g) • SPY272 : JC81-08664A (100g)	Service

6.2. Glossary

The following glossary helps you get familiar with the product by understanding the terminologies commonly used with printing as well as mentioned in this user's guide and service manual.

802.11	802.11 is a set of standards for wireless local area network (WLAN) communication, developed by the IEEE LAN/MAN Standards Committee (IEEE 802).
802.11b/g/n	802.11b/g/n can share same hardware and use the 2.4 GHz band. 802.11b supports bandwidth up to 11 Mbps, 802.11n supports bandwidth up to 150 Mbps. 802.11b/g/n devices may occasionally suffer interference from microwave ovens, cordless telephones, and Bluetooth devices.
Access point	Access Point or Wireless Access Point (AP or WAP) is a device that connects wireless communication devices together on wireless local area networks (WLAN), and acts as a central transmitter and receiver of WLAN radio signals.
ADF	An Automatic Document Feeder (ADF) is a scanning unit that will automatically feed an original sheet of paper so that the machine can scan some amount of the paper at once.
AppleTalk	AppleTalk is a proprietary suite of protocols developed by Apple, Inc for computer networking. It was included in the original Macintosh (1984) and is now deprecated by Apple in favor of TCP/IP networking.
BIT Depth	A computer graphics term describing the number of bits used to represent the color of a single pixel in a bitmapped image. Higher color depth gives a broader range of distinct colors. As the number of bits increases, the number of possible colors becomes impractically large for a color map. 1-bit color is commonly called as monochrome or black and white.
BMP	A bitmapped graphics format used internally by the Microsoft Windows graphics subsystem (GDI), and used commonly as a simple graphics file format on that platform.
BOOTP	Bootstrap Protocol. A network protocol used by a network client to obtain its IP address automatically. This is usually done in the bootstrap process of computers or operating systems running on them. The BOOTP servers assign the IP address from a pool of addresses to each client. BOOTP enables 'diskless workstation' computers to obtain an IP address prior to loading any advanced operating system.
CCD	Charge Coupled Device (CCD) is a hardware which enables the scan job. CCD Locking mechanism is also used to hold the CCD module to prevent any damage when you move the machine.
Collation	Collation is a process of printing a multiple-copy job in sets. When collation is selected, the device prints an entire set before printing additional copies.
Control Panel	A control panel is a flat, typically vertical, area where control or monitoring instruments are displayed. They are typically found in front of the machine.
Coverage	It is the printing term used for a toner usage measurement on printing. For example, 5% coverage means that an A4 sided paper has about 5% image or text on it. So, if the paper or original has complicated images or lots of text on it, the coverage will be higher and at the same time, a toner usage will be as much as the coverage.
CSV	Comma Separated Values (CSV). A type of file format, CSV is used to exchange data between disparate applications. The file format, as it is used in Microsoft Excel, has become a de facto standard throughout the industry, even among non-Microsoft platforms.
DADF	A Duplex Automatic Document Feeder (DADF) is a scanning unit that will automatically feed and turn over an original sheet of paper so that the machine can scan on both sides of the paper.
Default	The value or setting that is in effect when taking a printer out of its box state, reset, or initialized.
DHCP	A Dynamic Host Configuration Protocol (DHCP) is a client-server networking protocol. A DHCP server provides configuration parameters specific to the DHCP client host requesting, generally, information required by the client host to participate on an IP network. DHCP also provides a mechanism for allocation of IP addresses to client hosts.
DIMM	Dual Inline Memory Module (DIMM), a small circuit board that holds memory. DIMM stores all the data within the machine like printing data, received fax data.

DLNA	The Digital Living Network Alliance (DLNA) is a standard that allows devices on a home network to share information with each other across the network.
DNS	The Domain Name Server (DNS) is a system that stores information associated with domain names in a distributed database on networks, such as the Internet.
Dot Matrix Printer	A dot matrix printer refers to a type of computer printer with a print head that runs back and forth on the page and prints by impact, striking an ink-soaked cloth ribbon against the paper, much like a typewriter.
DPI	Dots Per Inch (DPI) is a measurement of resolution that is used for scanning and printing. Generally, higher DPI results in a higher resolution, more visible detail in the image, and a larger file size.
DRPD	Distinctive Ring Pattern Detection. Distinctive Ring is a telephone company service which enables a user to use a single telephone line to answer several different telephone numbers.
Duplex	A mechanism that will automatically turn over a sheet of paper so that the machine can print (or scan) on both sides of the paper. A printer equipped with a Duplex Unit can print on both sides of paper during one print cycle.
Duty Cycle	Duty cycle is the page quantity which does not affect printer performance for a month. Generally the printer has the lifespan limitation such as pages per year. The lifespan means the average capacity of print-outs, usually within the warranty period. For example, if the duty cycle is 48,000 pages per month assuming 20 working days, a printer limits 2,400 pages a day.
ECM	Error Correction Mode (ECM) is an optional transmission mode built into Class 1 fax machines or fax modems. It automatically detects and corrects errors in the fax transmission process that are sometimes caused by telephone line noise.
Emulation	Emulation is a technique of one machine obtaining the same results as another. An emulator duplicates the functions of one system with a different system, so that the second system behaves like the first system. Emulation focuses on exact reproduction of external behavior, which is in contrast to simulation, which concerns an abstract model of the system being simulated, often considering its internal state.
Ethernet	Ethernet is a frame-based computer networking technology for local area networks (LANs). It defines wiring and signaling for the physical layer, and frame formats and protocols for the media access control (MAC)/data link layer of the OSI model. Ethernet is mostly standardized as IEEE 802.3. It has become the most widespread LAN technology in use during the 1990s to the present.
EtherTalk	A suite of protocols developed by Apple Computer for computer networking. It was included in the original Macintosh (1984) and is now deprecated by Apple in favor of TCP/IP networking.
FDI	Foreign Device Interface (FDI) is a card installed inside the machine to allow a third party device such as a coin operated device or a card reader. Those devices allow the pay-for-print service on your machine.
FTP	A File Transfer Protocol (FTP) is a commonly used protocol for exchanging files over any network that supports the TCP/IP protocol (such as the Internet or an intranet).
Fuser Unit	The part of a laser printer that fuses the toner onto the print media. It consists of a heat roller and a pressure roller. After toner is transferred onto the paper, the fuser unit applies heat and pressure to ensure that the toner stays on the paper permanently, which is why paper is warm when it comes out of a laser printer.
Gateway	A connection between computer networks, or between a computer network and a telephone line. It is very popular, as it is a computer or a network that allows access to another computer or network.
Grayscale	A shades of gray that represent light and dark portions of an image when color images are converted to grayscale; colors are represented by various shades of gray.
Halftone	An image type that simulates grayscale by varying the number of dots. Highly colored areas consist of a large number of dots, while lighter areas consist of a smaller number of dots.
HDD	Hard Disk Drive (HDD), commonly referred to as a hard drive or hard disk, is a non-volatile storage device which stores digitally-encoded data on rapidly rotating platters with magnetic surfaces.

IEEE	The Institute of Electrical and Electronics Engineers (IEEE) is an international non-profit, professional organization for the advancement of technology related to electricity.
IEEE 1284	The 1284 parallel port standard was developed by the Institute of Electrical and Electronics Engineers (IEEE). The term "1284-B" refers to a specific connector type on the end of the parallel cable that attaches to the peripheral (for example, a printer).
Intranet	A private network that uses Internet Protocols, network connectivity, and possibly the public telecommunication system to securely share part of an organization's information or operations with its employees. Sometimes the term refers only to the most visible service, the internal website.
IP address	An Internet Protocol (IP) address is a unique number that devices use in order to identify and communicate with each other on a network utilizing the Internet Protocol standard.
IPM	The Images Per Minute (IPM) is a way of measuring the speed of a printer. An IPM rate indicates the number of single-sided sheets a printer can complete within one minute.
IPP	The Internet Printing Protocol (IPP) defines a standard protocol for printing as well as managing print jobs, media size, resolution, and so forth. IPP can be used locally or over the Internet to hundreds of printers, and also supports access control, authentication, and encryption, making it a much more capable and secure printing solution than older ones.
IPX/SPX	IPX/SPX stands for Internet Packet Exchange/Sequenced Packet Exchange. It is a networking protocol used by the Novell NetWare operating systems. IPX and SPX both provide connection services similar to TCP/IP, with the IPX protocol having similarities to IP, and SPX having similarities to TCP. IPX/SPX was primarily designed for local area networks (LANs), and is a very efficient protocol for this purpose (typically its performance exceeds that of TCP/IP on a LAN).
ISO	The International Organization for Standardization (ISO) is an international standard-setting body composed of representatives from national standards bodies. It produces world-wide industrial and commercial standards.
ITU-T	The International Telecommunication Union is an international organization established to standardize and regulate international radio and telecommunications. Its main tasks include standardization, allocation of the radio spectrum, and organizing interconnection arrangements between different countries to allow international phone calls. A -T out of ITU-T indicates telecommunication.
ITU-T No. 1 chart	Standardized test chart published by ITU-T for document facsimile transmissions.
JBIG	Joint Bi-level Image Experts Group (JBIG) is an image compression standard with no loss of accuracy or quality, which was designed for compression of binary images, particularly for faxes, but can also be used on other images.
JPEG	Joint Photographic Experts Group (JPEG) is a most commonly used standard method of lossy compression for photographic images. It is the format used for storing and transmitting photographs on the World Wide Web.
LDAP	The Lightweight Directory Access Protocol (LDAP) is a networking protocol for querying and modifying directory services running over TCP/IP.
LED	A Light-Emitting Diode (LED) is a semiconductor device that indicates the status of a machine.
MAC address	Media Access Control (MAC) address is a unique identifier associated with a network adapter. MAC address is a unique 48-bit identifier usually written as 12 hexadecimal characters grouped in pairs (e. g., 00-00-0c-34-11-4e). This address is usually hard-coded into a Network Interface Card (NIC) by its manufacturer, and used as an aid for routers trying to locate machines on large networks.
MFP	Multi Function Peripheral (MFP) is an office machine that includes the following functionality in one physical body, so as to have a printer, a copier, a fax, a scanner and etc.
MH	Modified Huffman (MH) is a compression method for decreasing the amount of data that needs to be transmitted between the fax machines to transfer the image recommended by ITU-T T.4. MH is a codebook-based run-length encoding scheme optimized to efficiently compress white space. As most faxes consist mostly of white space, this minimizes the transmission time of most faxes.
MMR	Modified Modified READ (MMR) is a compression method recommended by ITU-T T.6.

6. Reference Information

Modem	A device that modulates a carrier signal to encode digital information, and also demodulates such a carrier signal to decode transmitted information.
MR	Modified Read (MR) is a compression method recommended by ITUT T.4. MR encodes the first scanned line using MH. The next line is compared to the first, the differences determined, and then the differences are encoded and transmitted.
NetWare	A network operating system developed by Novell, Inc. It initially used cooperative multitasking to run various services on a PC, and the network protocols were based on the archetypal Xerox XNS stack. Today NetWare supports TCP/IP as well as IPX/SPX.
OPC	Organic Photo Conductor (OPC) is a mechanism that makes a virtual image for print using a laser beam emitted from a laser printer, and it is usually green or rust colored and has a cylinder shape. An imaging unit containing a drum slowly wears the drum surface by its usage in the printer, and it should be replaced appropriately since it gets worn from contact with the cartridge development brush, cleaning mechanism, and paper.
Originals	The first example of something, such as a document, photograph or text, etc, which is copied, reproduced or translated to produce others, but which is not itself copied or derived from something else.
OSI	Open Systems Interconnection (OSI) is a model developed by the International Organization for Standardization (ISO) for communications. OSI offers a standard, modular approach to network design that divides the required set of complex functions into manageable, self-contained, functional layers. The layers are, from top to bottom, Application, Presentation, Session, Transport, Network, Data Link and Physical.
PABX	A private automatic branch exchange (PABX) is an automatic telephone switching system within a private enterprise.
PCL	Printer Command Language (PCL) is a Page Description Language (PDL) developed by HP as a printer protocol and has become an industry standard. Originally developed for early inkjet printers, PCL has been released in varying levels for thermal, dot matrix printer, and laser printers.
PDF	Portable Document Format (PDF) is a proprietary file format developed by Adobe Systems for representing two dimensional documents in a device independent and resolution independent format.
PostScript(PS)	PostScript (PS) is a page description language and programming language used primarily in the electronic and desktop publishing areas. - that is run in an interpreter to generate an image.
Printer Driver	A program used to send commands and transfer data from the computer to the printer.
Print Media	The media like paper, envelopes, labels, and transparencies which can be used in a printer, a scanner, a fax or, a copier.
PPM	Pages Per Minute (PPM) is a method of measurement for determining how fast a printer works, meaning the number of pages a printer can produce in one minute.
PRN file	An interface for a device driver, this allows software to interact with the device driver using standard input/output system calls, which simplifies many tasks.
Protocol	A convention or standard that controls or enables the connection, communication, and data transfer between two computing endpoints.
PSTN	The Public-Switched Telephone Network (PSTN) is the network of the world's public circuit-switched telephone networks which, on industrial premises, is usually routed through the switchboard.
RADIUS	Remote Authentication Dial In User Service (RADIUS) is a protocol for remote user authentication and accounting. RADIUS enables centralized management of authentication data such as usernames and passwords using an AAA (authentication, authorization, and accounting) concept to manage network access.
Resolution	The sharpness of an image, measured in Dots Per Inch (DPI). The higher the dpi, the greater the resolution.
SMB	Server Message Block (SMB) is a network protocol mainly applied to share files, printers, serial ports, and miscellaneous communications between nodes on a network. It also provides an authenticated Interprocess communication mechanism.

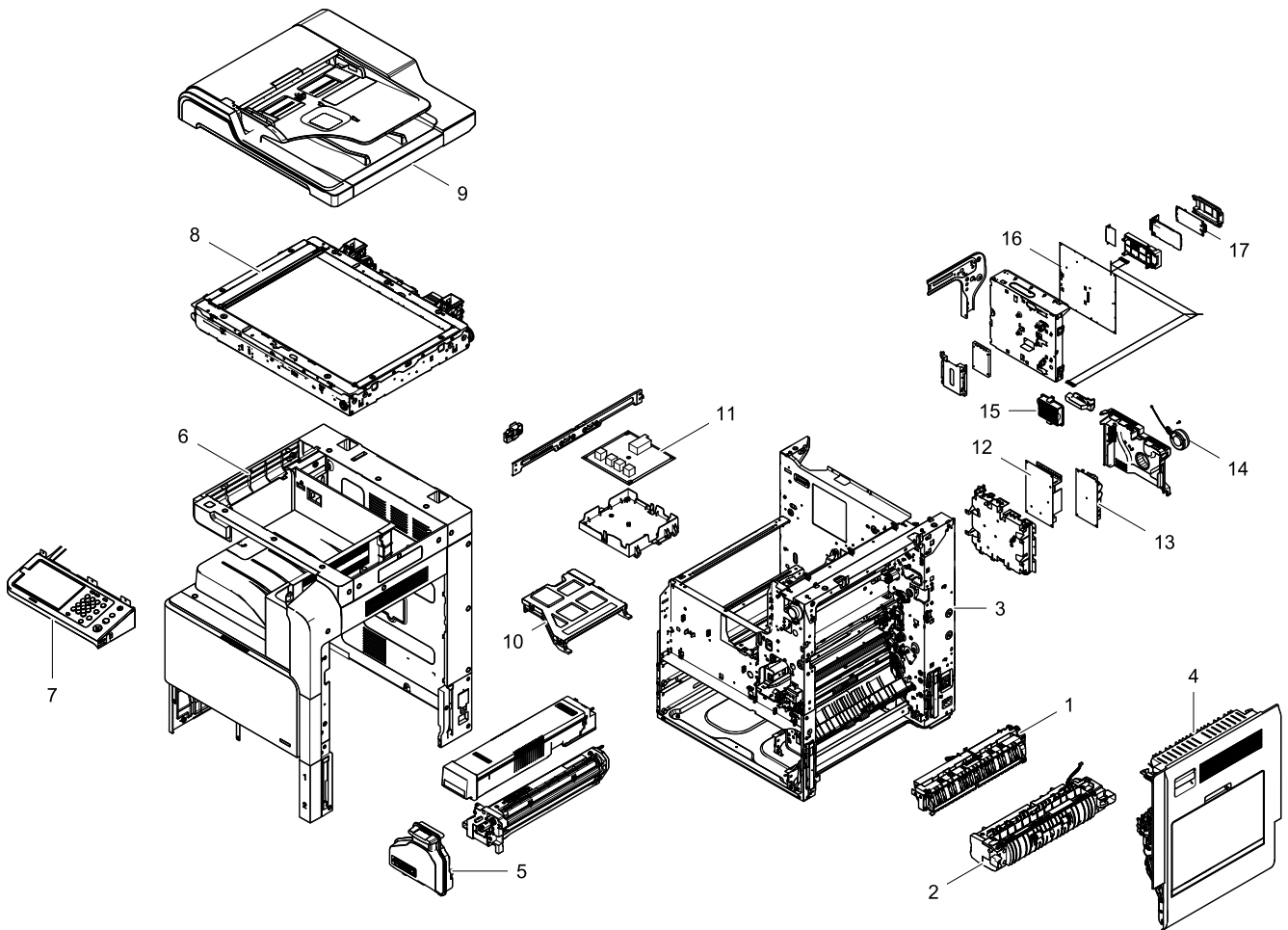
SMTP	Simple Mail Transfer Protocol (SMTP) is the standard for e-mail transmissions across the Internet. SMTP is a relatively simple, text based protocol, where one or more recipients of a message are specified, and then the message text is transferred. It is a client server protocol, where the client transmits an email message to the server.
SSID	Service Set Identifier (SSID) is a name of a wireless local area network (WLAN). All wireless devices in a WLAN use the same SSID in order to communicate with each other. The SSIDs are case-sensitive and have a maximum length of 32 characters.
Subnet Mask	The subnet mask is used in conjunction with the network address to determine which part of the address is the network address and which part is the host address.
TCP/IP	The Transmission Control Protocol (TCP) and the Internet Protocol (IP); the set of communications protocols that implement the protocol stack on which the Internet and most commercial networks run.
TCR	Transmission Confirmation Report (TCR) provides details of each transmission such as job status, transmission result and number of pages sent. This report can be set to print after each job or only after failed transmissions.
TIFF	Tagged Image File Format (TIFF) is a variable-resolution bitmapped image format. TIFF describes image data that typically come from scanners. TIFF images make use of tags, keywords defining the characteristics of the image that is included in the file. This flexible and platform-independent format can be used for pictures that have been made by various image processing applications.
Toner Cartridge	A kind of bottle or container used in a machine like a printer which contains toner. Toner is a powder used in laser printers and photocopiers, which forms the text and images on the printed paper. Toner can be fused by a combination of heat/pressure from the fuser, causing it to bind to the fibers in the paper.
TWAIN	An industry standard for scanners and software. By using a TWAIN-compliant scanner with a TWAIN-compliant program, a scan can be initiated from within the program. It is an image capture API for Microsoft Windows and Apple Macintosh operating systems.
UNC Path	Uniform Naming Convention (UNC) is a standard way to access network shares in Window NT and other Microsoft products. The format of a UNC path is: \\<servername>\<sharename>\<Additional directory>
URL	Uniform Resource Locator (URL) is the global address of documents and resources on the Internet. The first part of the address indicates what protocol to use, the second part specifies the IP address or the domain name where the resource is located.
USB	Universal Serial Bus (USB) is a standard that was developed by the USB Implementers Forum, Inc., to connect computers and peripherals. Unlike the parallel port, USB is designed to concurrently connect a single computer USB port to multiple peripherals.
Watermark	A watermark is a recognizable image or pattern in paper that appears lighter when viewed by transmitted light. Watermarks were first introduced in Bologna, Italy in 1282; they have been used by papermakers to identify their product, and also on postage stamps, currency, and other government documents to discourage counterfeiting.
WEP	Wired Equivalent Privacy (WEP) is a security protocol specified in IEEE 802.11 to provide the same level of security as that of a wired LAN. WEP provides security by encrypting data over radio so that it is protected as it is transmitted from one end point to another.
WIA	Windows Imaging Architecture (WIA) is an imaging architecture that is originally introduced in Windows Me and Windows XP. A scan can be initiated from within these operating systems by using a WIA-compliant scanner.
WPA	Wi-Fi Protected Access (WPA) is a class of systems to secure wireless (Wi-Fi) computer networks, which was created to improve upon the security features of WEP.
WPA-PSK	WPA-PSK (WPA Pre-Shared Key) is special mode of WPA for small business or home users. A shared key, or password, is configured in the wireless access point (WAP) and any wireless laptop or desktop devices. WPA-PSK generates a unique key for each session between a wireless client and the associated WAP for more advanced security.

6. Reference Information

WPS	The Wi-Fi Protected Setup (WPS) is a standard for establishing a wireless home network. If your wireless access point supports WPS, you can configure the wireless network connection easily without a computer.
XPS	XML Paper Specification (XPS) is a specification for a Page Description Language (PDL) and a new document format, which has benefits for portable document and electronic document, developed by Microsoft. It is an XML-based specification, based on a new print path and a vector-based device-independent document format.

1. Main

Exploded View



Parts List

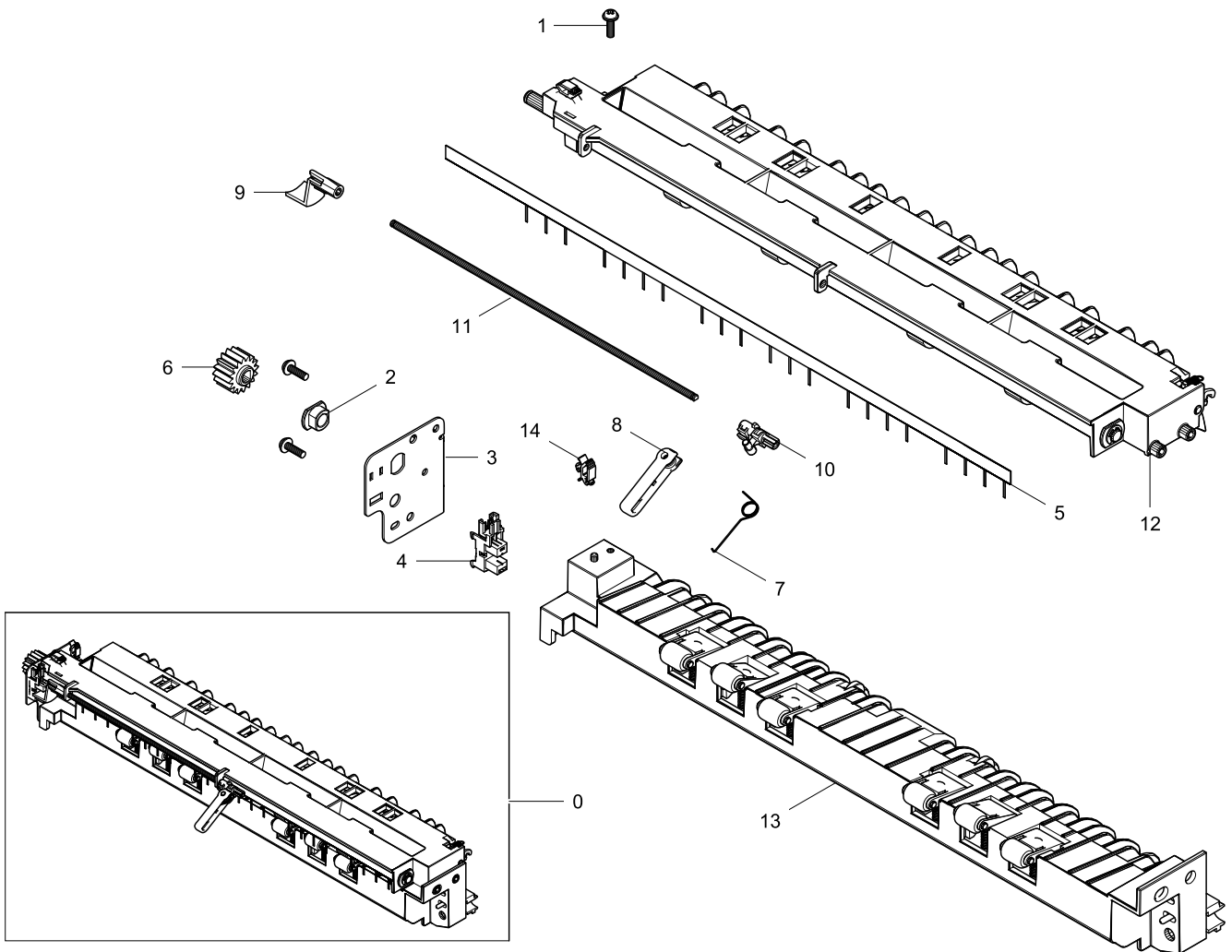
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1	SCX-8128NA/SEE	1		JC90-01118A	EXIT; CLX-9201	SA	
2	SCX-8128NA/SEE	1		JC91-01050A	FUSER; SCX-8128NA,SEC, WORLD,220V	SA	
3	SCX-8128NA/SEE	1		JC93-00439A	FRAME-MAIN ENGINE; SCX-8128NA, SEC, WORLD	SNA	
4	SCX-8128NA/SEE	1		JC95-01508A	COVER-SIDE MONO; CLX-9201	SA	
5	SCX-8128NA/SEE	1		JC96-06214A	CARTRIDGE-WTB; SCX-8128NA, SEC, WORLD	SNA	
6	SCX-8128NA/SEE	1		JC95-01495A	COVER; SCX-8128NA, WORLD, SEC	SNA	
7	SCX-8128NA/SEE	1		JC97-04006B	OPE; CLX-9201, WORLD, SEC	SNA	
8	SCX-8128NA/SEE	1		JC97-04020A	PLATEN FR HR; CLX-9201, SCANNER	SA	
9	SCX-8128NA/SEE	1		JC97-03989A	DADF; CLX-9201, SEC	SA	

Exploded Views and Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
10	SCX-8128NA/SEE	1		JC97-04017A	LSU; SCX-8123ND, SEC, single, A3, 600, Single Beam, 780nm single, CW, Straight	SA	
11	JC98-01889A	2		JC44-00182A	HVPS; 24V,21.6V~27.6V, MAX 8KV, MAX-8KV,600	SA	
12	JC98-01889A	2		JC44-00100C	SMPS-V2; CLX-9201, PSPN TYPE5-V2, AC-DC, 275W, 220V-240V, 50/60Hz,200*120*40, 85%,+5.1V / +24V,+5.1V; 7A / +24V; 10A,O,O,O,O	SNA	
13	JC98-01889A	2		JC44-00211A	FDB-POLARIS / EVERGREEN_V2; CLX-9201, POLARIS / EVERGREEN FDB-V2, AC/AC(PC)	SNA	
14	JC93-00500A	3		JC31-00160A	FAN-TYPE 5; Type5, 24,170mA, 4.0mmH20, 0.433m^3/mi	SA	
15	JC98-01889A	2		JC61-04861A	HOLDER-FILTER OZONE; SCX-8128NA, HIPS, 98,79, Split Brown Black(G32690), FG-1790	SNA	
16	JC98-01889A	2		JC92-02452A	PBA-MAIN; SCX-8128,SEC, FR-4, 6Layer	SA	
17	JC98-01889A	2		JC92-02439A	PBA-FAX JOINT; CLX-9201, SEC, CEM-3, 2Layer	SA	

2. EXIT

Exploded View



Parts List

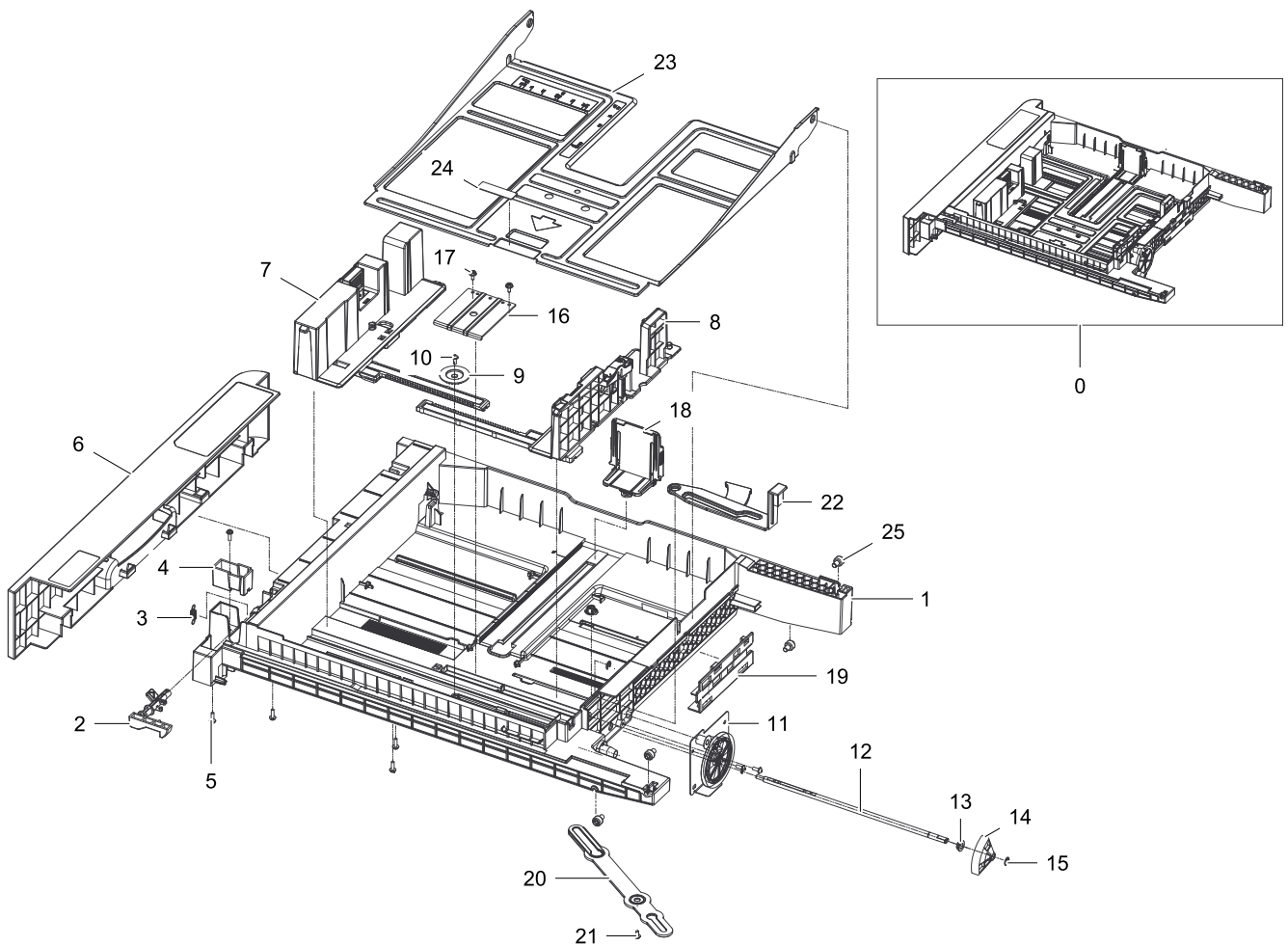
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0	SCX-8128NA/SEE	1		JC90-01118A	EXIT; CLX-9201	SA	
1	JC90-01118A	2		6003-000196	SCREW-TAPTYPE; CLX-9350, POM,1.0, 16,18.39	SA	
2	JC90-01118A	2		JC61-00423A	BUSH-6_D; CLX-9350, SUM24L, 187,3	SA	
3	JC90-01118A	2		JC61-04690A	BRACKET-REAR EXIT; CLX-9201	SNA	
4	JC90-01118A	2		0604-001393	PHOTO-INTERRUPTER; CLX-9201, SECC, T1.0,49, 52	SA	
5	JC90-01118A	2		JC67-00563A	BRUSH-EXIT; CLX-9350, PC, HAZE GRAY	SNA	
6	JC90-01118A	2		JC66-02163A	GEAR-EXIT; CLX-9201,SUS FIBER, 347.5, 15.9	SA	
7	JC90-01118A	2		6107-002654	SPRING-TS; DACS-2N, 6.2*2.8, Nylon66	SC	

Exploded Views and Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
8	JC90-01118A	2		JC66-02217A	ACTUATOR-F_D FULL EXIT; CLX-9201	SA	
9	JC90-01118A	2		JC66-02218A	LEVER-ACTURATOR F_D FULL; CLX-9201	SA	
10	JC90-01118A	2		JC66-02278A	LEVER-ACT FULL EXIT; CLX-9210, PET, 0.188, 8.8, 18.5	SA	
11	JC90-01118A	2		JC66-02423A	SHAFT-ACTUATOR F_D FULL EXIT; CLX-9201, UL10272,3p, 175mm,BLK/GREY, AWG26,173977-3, UL 10272, BOARD TO BOARD WIRE	SNA	
12	JC90-01118A	2		JC90-01133A	EXIT-GUIDE LOWER; SUS304, P10.45, ID6.5, OD7.4, RIGHT, 115	SA	
13	JC90-01118A	2		JC90-01132A	EXIT-GUIDE UPPER; CLX-9350, PC, Black	SA	
14	JC90-01118A	2		6502-001131	CABLE CLAMP; ML-9400W,NTR	SNA	

3. CASSETTE-1ST

Exploded View



Parts List

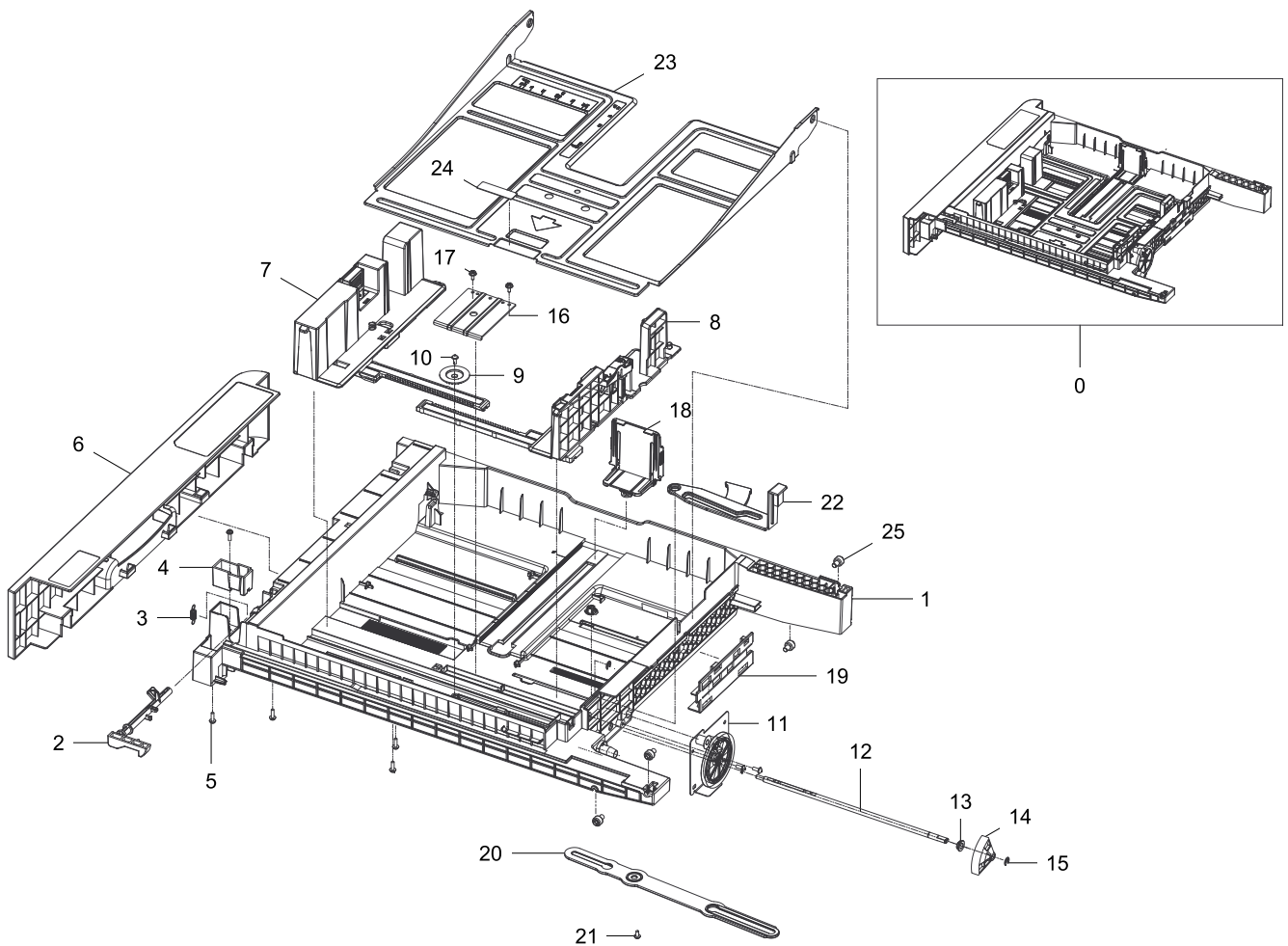
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0	SCX-8128NA/SEE	1		JC90-01140A	CASSETTE-1ST; CLX-9201, SEC	SA	
1	JC90-01140A	2		JC61-04712A	FRAME-CASSETTE 1ST; CLX-9201, POM,1,60	SNA	
2	JC90-01140A	2		JC64-00715A	LOCKER-CASSETTE 1ST; CLX-9350, POM, OD10, L16.5, GUIDE	SNA	
3	JC90-01140A	2		6107-001761	SPRING-ES; HWH,+,M3, L8, ZPC(WHT), SWRCH18A ,C TYPE	SA	
4	JC90-01140A	2		JC61-04886A	HOLDER-LOCKER; CLX-9201, Flocking, BLK, 0.5, 44,13	SNA	
5	JC90-01140A	2		6003-000196	SCREW-TAPTYPE; CLX-9201, SEC	SA	
6	JC90-01140A	2		JC90-01129A	CASSETTE-COVER; CLX-9201, POM, BLACK, 73.5X13X43.5	SA	

Exploded Views and Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
7	JC90-01140A	2		JC90-01130A	CASSETTE-GUIDE FRONT; CLX-9201, ABS, 3,21.5, 232, HF-0660i, BLACK, LINK	SA	
8	JC90-01140A	2		JC90-01131A	CASSETTE-GUIDE REAR; CLX-9201, SEC	SA	
9	JC90-01140A	2		JC66-01020A	GEAR-M_PINION 24; PWH,+2, M3, L8, ZPC(BLK), SWRCH18A	SA	
10	JC90-01140A	2		6002-000440	SCREW-TAPPING; PWH,+,-,B, M3, L6, ZPC(WHT), SWRCH18A,-	SNA	
11	JC90-01140A	2		JC90-01128A	CASSETTE-BRACKET LIFT; CLP-500, Fe+Cu+Zn-Slearate	SA	
12	JC90-01140A	2		JC66-03285A	SHAFT-LIFTING CST; CLX-9201, SECC, 1T, 360.2, 360.1	SNA	
13	JC90-01140A	2		JC61-00699A	BUSH-D6/L4; CLX-9201, SEC	SA	
14	JC90-01140A	2		JC66-03278A	GEAR-LIFTING CST; SCX-6345N/XRX, POM, 1,24, NTR, 26	SNA	
15	JC90-01140A	2		6044-000125	RING-E; SWP B,PI0.55, L27.9, ID4.35, OD4.55	SA	
16	JC90-01140A	2		JC61-03206A	PLATE-LEVER; CLX-9201, SEC	SNA	
17	JC90-01140A	2		6009-001664	SCREW-HEX; CLX-9201, EPE, 60, 360, 60, NATURE, SEC	SNA	
18	JC90-01140A	2		JC61-04718A	GUIDE-LEFT; CLX-9201, HIPS, G72797, 2.5, 419, 516, HR-1360T	SNA	
19	JC90-01140A	2		JC64-00704A	INDICATOR-SIZE REAR; CLX-9201, SEC	SNA	
20	JC90-01140A	2		JC66-03202A	LEVER-LINK SIZE 1ST; CLX-9201,HIPS, 62.2,30, ICE-GREEN, PAPER	SNA	
21	JC90-01140A	2		6003-000264	SCREW-TAPTYPE; ID4, OD9, T0.6, STSC	SNA	
22	JC90-01140A	2		JC64-00703A	INDICATOR-SIZE SIDE; PWH,+B, M3, L10, NI PLT, SWRCH18A	SNA	
23	JC90-01140A	2		JC61-04767A	PLATE-KNOCK UP; CLX-9350, SECC, 1.6T, 73,60	SNA	
24	JC90-01140A	2		JC62-00946A	SEAL-PAD CST; CLX-9201, ABS, G72797, 138X46X49, HF-0660i	SNA	
25	JC90-01140A	2		JC61-03331A	ROLLER-IDLE CST; CLX-9201, SUM22, 229,6	SA	

4. CASSETTE-2ND

Exploded View



Parts List

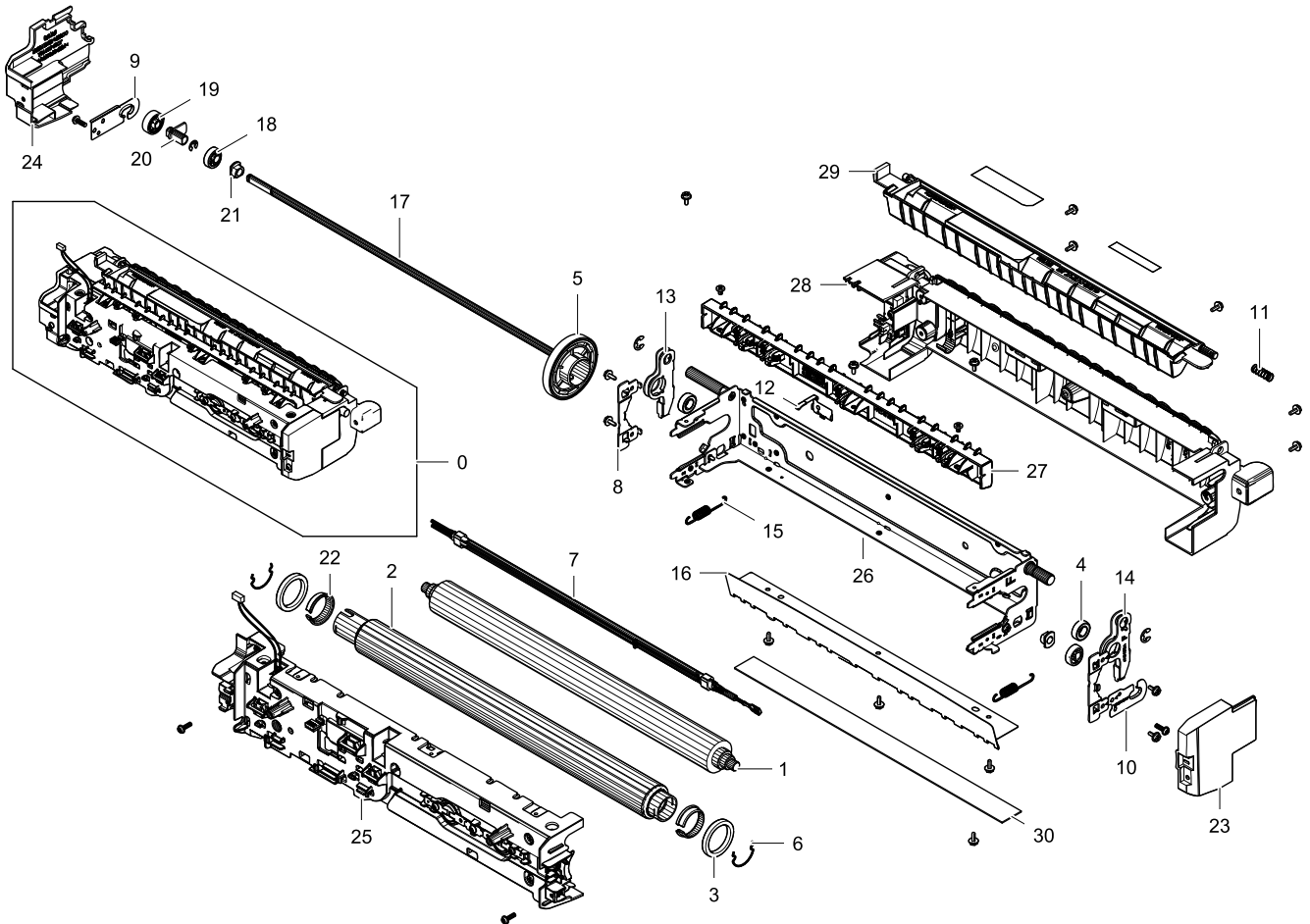
No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
0	SCX-8128NA/SEE	1		JC90-01141A	CASSETTE-2ND; CLX-9201,SEC	SA	
1	JC90-01141A	2		JC61-04713A	FRAME-CASSETTE 2ND; PWH,+B,M3,L10,NI PLT,SWRCH18A	SNA	
2	JC90-01141A	2		JC64-00716A	LOCKER-CASSETTE 2ND; PWH,+2, M3, L8, ZPC(BLK), SWRCH18A	SNA	
3	JC90-01141A	2		6107-001761	SPRING-ES; CLX-9201, ABS, 3, 21.5, 280, HF-0660i, BLACK, LINK	SA	
4	JC90-01141A	2		JC61-04886A	HOLDER-LOCKER; CLX-9201, Flocking, BLK,0.5, 44, 13	SNA	
5	JC90-01141A	2		6003-000196	SCREW-TAPTYPE; CLX-9201, SEC	SA	
6	JC90-01141A	2		JC90-01129A	CASSETTE-COVER; CLX-9350, POM, OD10, L16.5, GUIDE	SA	
7	JC90-01141A	2		JC90-01130A	CASSETTE-GUIDE FRONT; CLX-9201, HIPS, 62.2, 30, ICE-GREEN,PAPER	SA	

Exploded Views and Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
8	JC90-01141A	2		JC90-01131A	CASSETTE-GUIDE REAR; CLX-9201, SEC	SA	
9	JC90-01141A	2		JC66-01020A	GEAR-M_PINION 24; CLX-9201, POM, BLACK, 120. 5X13X43.5	SA	
10	JC90-01141A	2		6002-000440	SCREW-TAPPING; PWH,+,-,B, M3, L6, ZPC(WHT), SWRCH18A,-	SNA	
11	JC90-01141A	2		JC90-01128A	CASSETTE-BRACKET LIFT; CLP-500, Fe+Cu+Zn-Slearate	SA	
12	JC90-01141A	2		JC66-03285A	SHAFT-LIFTING CST; CLX-9201, SECC, 1T, 360.2, 360.1	SNA	
13	JC90-01141A	2		JC61-00699A	BUSH-D6/L4; CLX-9350, 45, 140	SA	
14	JC90-01141A	2		JC66-03278A	GEAR-LIFTING CST; SCX-6345N/XRX, POM,1,24, NTR, 26	SNA	
15	JC90-01141A	2		6044-000125	RING-E; SWP B,PI0.55, L27.9, ID4.35, OD4.55	SA	
16	JC90-01141A	2		JC61-03206A	PLATE-LEVER; CLX-9201, SEC	SNA	
17	JC90-01141A	2		6009-001664	SCREW-HEX; CLX-9201, EPE, 60, 360, 60, NATURE, SEC	SNA	
18	JC90-01141A	2		JC61-04718A	GUIDE-LEFT; CLX-9201, POM, 1,60	SNA	
19	JC90-01141A	2		JC64-00704A	INDICATOR-SIZE REAR; CLX-9201, SEC	SNA	
20	JC90-01141A	2		JC66-03201A	LEVER-LINK SIZE 2ND; HWH,+ M3, L8, ZPC(WHT), SWRCH18A, C TYPE	SNA	
21	JC90-01141A	2		6003-000264	SCREW-TAPTYPE; ID4,OD9,T0.6, STSC	SNA	
22	JC90-01141A	2		JC64-00703A	INDICATOR-SIZE SIDE; CLX-9201, HIPS, G72797, 464, 516, HR-1360T	SNA	
23	JC90-01141A	2		JC61-04767A	PLATE-KNOCK UP; CLX-9350, SECC, 1.6T, 73,60	SNA	
24	JC90-01141A	2		JC62-00946A	SEAL-PAD CST; CLX-9201, ABS, G72797, 138X46X49, HF-0660i	SNA	
25	JC90-01141A	2		JC61-03331A	ROLLER-IDLE CST; CLX-9201, SUM22, 229,6	SA	

5. FUSER

Exploded View



Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
0	SCX-8128NA/SEE	1		JC91-01050A	FUSER; SCX-8128NA, SEC, WORLD, 220V	SA	
1	JC91-01050A	2		JC66-03256A	ROLLER-PRESSURE; SWP B, CD0.45, L18.8, ID5.9, OD6.8	SA	
2	JC91-01050A	2		JC66-03257A	ROLLER-HEAT; SCX-8128ND, PET+GF, 1.6, 75.5, 100.9	SA	
3	JC91-01050A	2		6601-001479	BEARING-BALL; SCX-8128NA, STAINLESS-ST304, T0.8, L304	SA	
4	JC91-01050A	2		6601-002415	BEARING-BALL; SCX-8128NA, SEC, EXP	SNA	
5	JC91-01050A	2		JC66-03131A	GEAR-DRIVE; HWH,+, M3,L8, ZPC(WHT), SWRCH18A, C TYPE	SA	
6	JC91-01050A	2		6107-003005	SPRING-ETC; SCX-8128NA, SEC,EXP	SA	
7	JC91-01050A	2		4713-001633	LAMP-HALOGEN; SWP B,CD1.2, L44, OD7.3	SA	

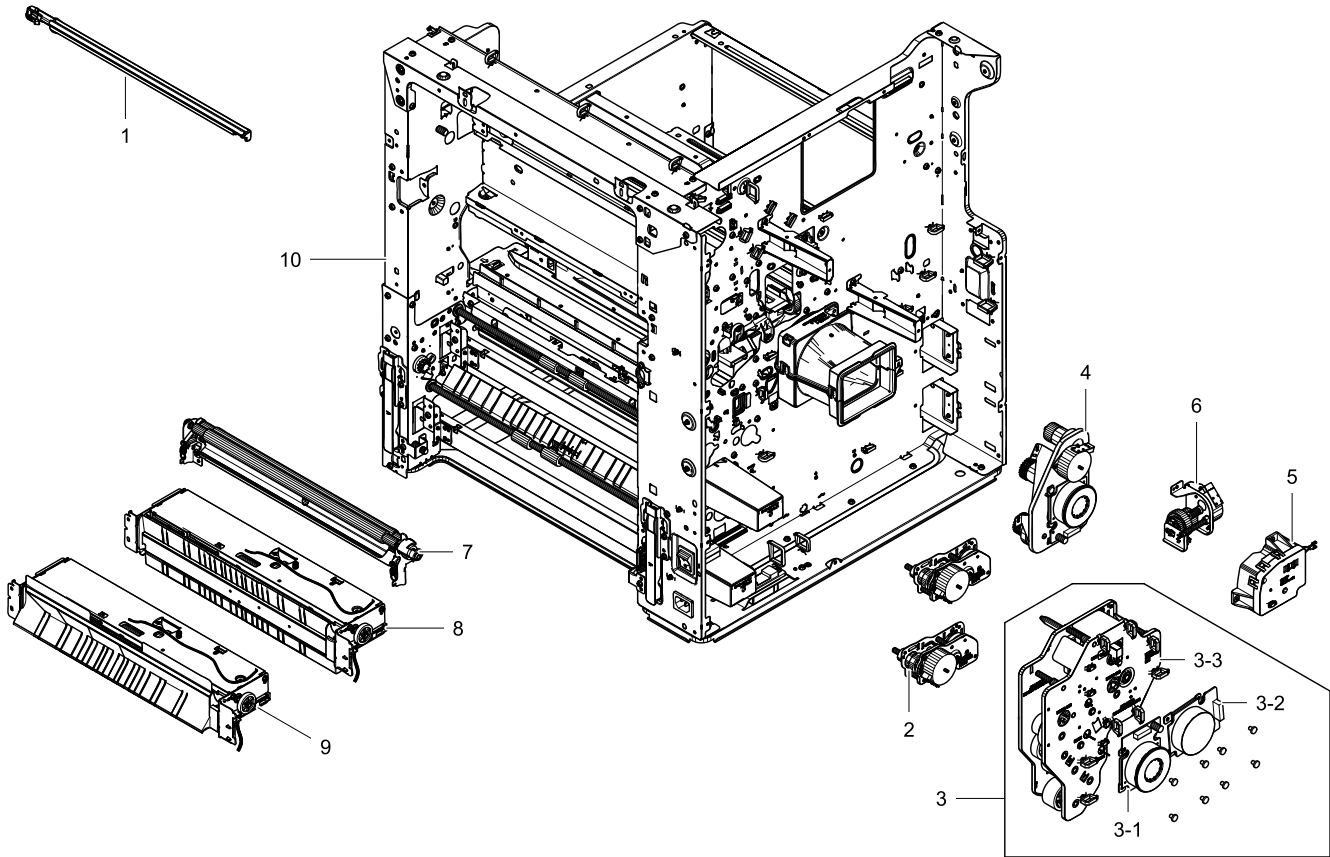
Exploded Views and Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
8	JC91-01050A	2		JC61-04515A	BRACKET-BEARING; SCX-8128ND, PET+GF, 2.0, 74.9, 75.6	SA	
9	JC91-01050A	2		JC61-04521A	BRACKET-LAMP FRONT; SCX-8128NA, SEC, WORLD, 220V	SA	
10	JC91-01050A	2		JC61-04522A	BRACKET-LAMP REAR; CLP-350N, SAMSUNG, PET,0.05, 17,65, YEL, COMMON, 220V	SA	
11	JC91-01050A	2		6107-003003	SPRING-CS; 230V, 1300W, 13*9.8*380.9	SA	
12	JC91-01050A	2		JC63-03277A	GROUND-BIAS PR; ID4,OD9, T0.6, STSC	SA	
13	JC91-01050A	2		JC61-04519A	BRACKET-SPRING REAR; SCX-8123ND, STKM+SPONGE, 28.5, BLACK, RUBBER 6t	SA	
14	JC91-01050A	2		JC61-04518A	BRACKET-SPRING FRONT; SCX-8128NA, EGI-SECC, T1.2, W22.7, L64	SA	
15	JC91-01050A	2		6107-003004	SPRING-ES; SUS304, CD1.0	SA	
16	JC91-01050A	2		JC61-04520A	BRACKET-INPUT PR; SCX-8128NA, Polyester Needle Felt, 1, W17.7, L300, YELLOW	SA	
17	JC91-01050A	2		JC66-03103A	SHAFT-CAM; SCX-8123ND, POM, 1.0, Z16, OD18.40	SA	
18	JC91-01050A	2		JC66-03178A	CAM-REAR; SCX-8123ND, AL3304-H34, 30, GRAY	SA	
19	JC91-01050A	2		JC66-03132A	GEAR-IDLE_M; PWH,+B,M3, L10, NI PLT, SWRCH18A	SA	
20	JC91-01050A	2		JC61-04533A	HOLDER-WHEEL POSITION; SCX-8128ND, POM, W17, D15.4, H6.4, WHITE	SA	
21	JC91-01050A	2		JC61-00423A	BUSH-6_D; SCX-8128NA, SEC, EXP	SA	
22	JC91-01050A	2		JC61-01958A	BUSH-HR; SCX-8128NA,EGI-SECC, T1.2, W28.6, L63.78	SA	
23	JC91-01050A	2		JC63-03316A	COVER-SIDE REAR; ML-9400W, bearing	SA	
24	JC91-01050A	2		JC63-03317A	COVER-SIDE FRONT; L-1680HHMTRLY13 ,ID8, OD16, 688ZZ	SA	
25	JC91-01050A	2		JC91-01051A	FUSER-FRAME LOWER; SCX-8128NA, SUS, 0.2, W21.7, L15.1, GROUND	SA	
26	JC91-01050A	2		JC91-01052A	FUSER-BRACKET PR; 6705ZZ, ID25.0, OD32.0, L4, CWB	SA	
27	JC91-01050A	2		JC91-01053A	FUSER-OUTPUT HR; SCX-8128NA, STAINLESS-ST304, T0.5, W22.25, L43.3	SA	
28	JC91-01050A	2		JC91-01054A	FUSER-FRAME UPPER; SCX-8128NA, SEC, EXP	SA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
29	JC91-01050A	2		JC91-01062A	FUSER-OUTPUT PR; SCX-8128ND, PC,T1.5, W17.35, BLACK	SA	
30	JC91-01050A	2		JC63-03275A	FELT-BOTTOM; SCX-8128NA, SEC, EXP	SA	

6. FRAME-MAIN ENGINE

Exploded View



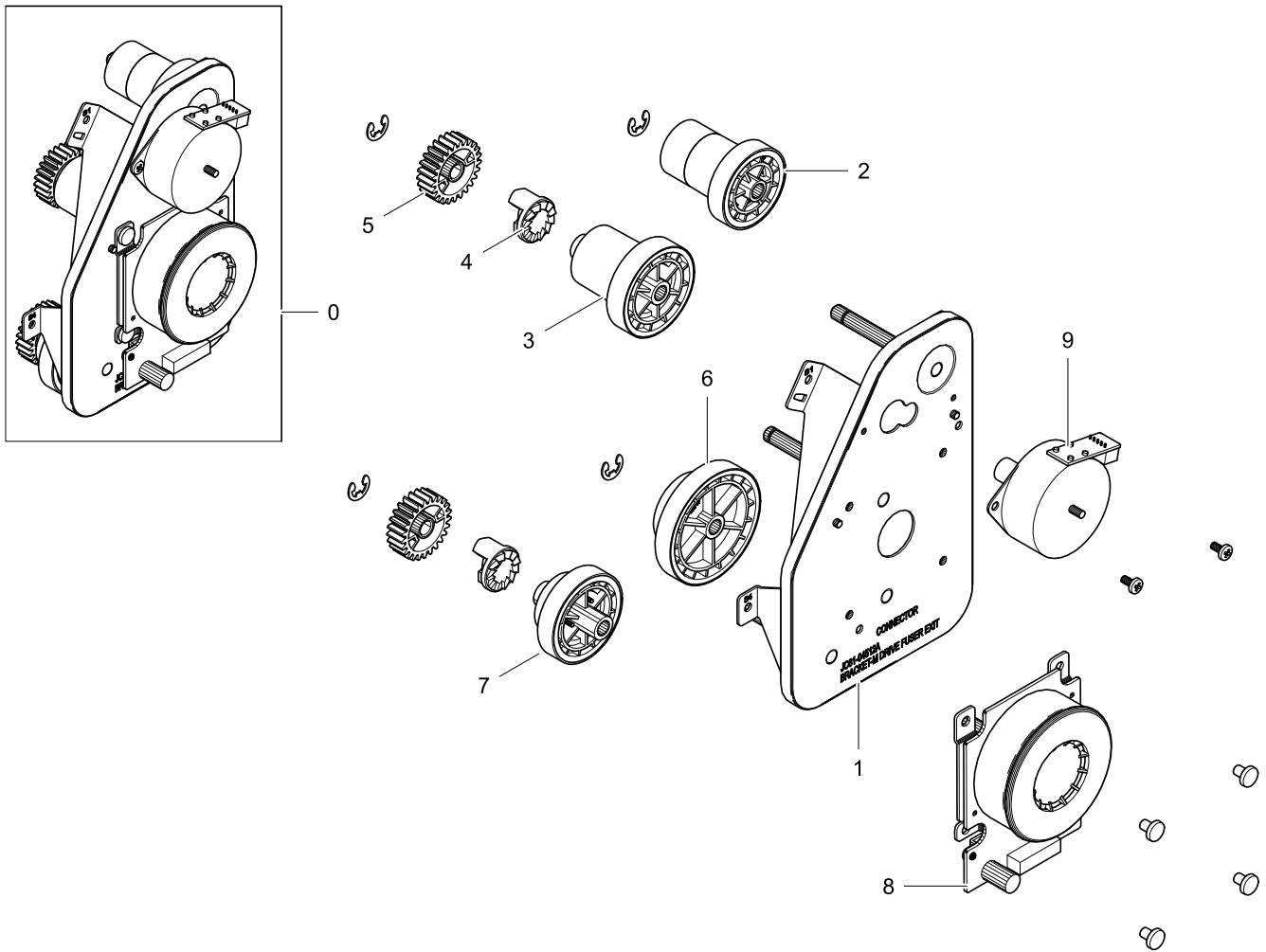
Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	JC93-00439A	2		JC93-00078B	FRAME-REGI HOLDER DUST; SCX-8040, SEC, WORLD	SA	
2	JC93-00436A	3		JC93-00442A	DRIVE-PICKUP; SCX-8128NA, SEC	SA	
3	JC93-00436A	3		JC93-00448A	DRIVE MAIN; CLX-9201NA, SEC	SA	
3-1	JC93-00448A	4		JC31-00123B	MOTOR BLDC; BH,+,S,M4, L6,ZPC(WHT), SWRCH18A	SA	
3-2	JC93-00448A	4		JC31-00123A	MOTOR BLDC; SCX-8128NA, SEC	SA	
3-3	JC93-00448A	4		JC93-00724A	DRIVE-MAIN SUB MONO; 2000rpm, 1200gfc, 24V, 2.8A, 1500gfc	SA	
4	JC93-00436A	3		JC93-00449A	DRIVE-M FUSER EXIT; SCX-8128NA, SEC	SA	
5	JC93-00436A	3		JC93-00450A	DRIVE-M TONER SUPPLY; SCX-8128NA, SEC	SA	
6	JC93-00436A	3		JC93-00451A	DRIVE-DUCT; SCX-8128NA, SEC	SA	
7	JC93-00439A	2		JC93-00508A	FRAME-MAIN REGI; CLX-9201	SA	
8	JC93-00439A	2		JC93-00511A	FRAME MAIN-PICKUP 1ST; CLX-9201, SEC	SA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
9	JC93-00439A	2		JC93-00512A	FRAME MAIN-PICKUP 2ND; CLX-9201, SEC	SA	
10	JC93-00439A	2		JC93-00684A	FRAME-MAIN; SCX-8128, SEC, WORLD	SA	

6.1. DRIVE FUSER-EXIT

Exploded View



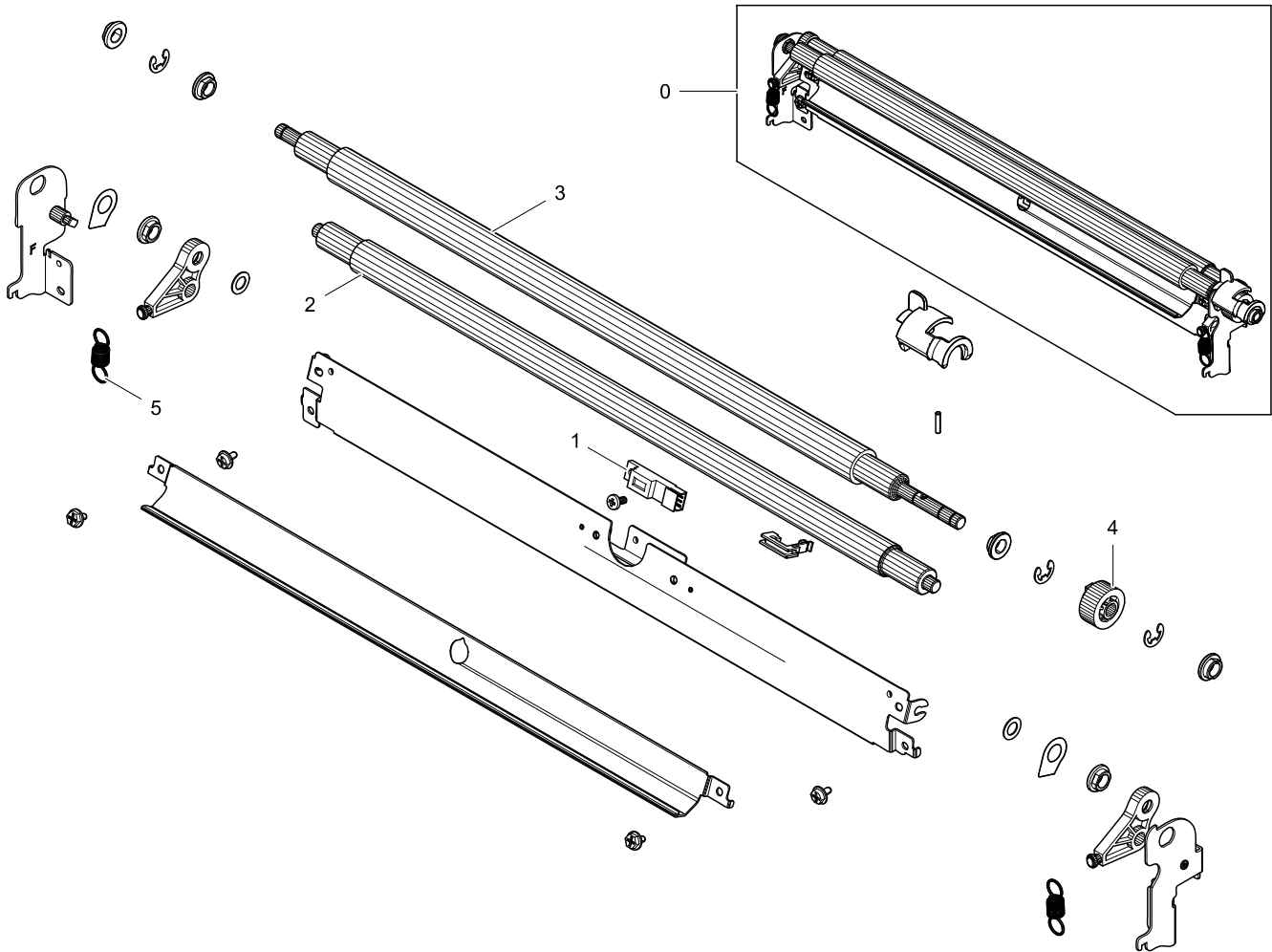
Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
0	JC93-00436A	3		JC93-00449A	DRIVE-M FUSER EXIT; SCX-8128NA, SEC	SA	
1	JC93-00449A	4		JC61-04512A	BRACKET-M DRIVE FUSER EXIT; ML-2150, NYLON, 1,25,8, NTR,27	SA	
2	JC93-00449A	4		JC66-03108A	GEAR-RDCN EXIT; POLYMIDE, ID6, OD13.5, T0.5, BLK	SA	
3	JC93-00449A	4		JC66-03141A	GEAR-M FUSER ONE WAY; SCX-8128NA, SEC	SA	
4	JC93-00449A	4		JC66-00340A	GEAR-HUB CLUTCH; BH,+,-,S, M3, L6, ZPC(WHT), SWRCH18A,-	SA	
5	JC93-00449A	4		JC66-00417A	GEAR-RDCN FUSER OUT; BH, +, S, M4, L6, ZPC(WHT), SWRCH18A	SA	
6	JC93-00449A	4		JC66-03106A	GEAR-RDCN FUSER RELEASE; PF262(HS), WHITE	SA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
7	JC93-00449A	4		JC66-03107A	GEAR-FUSER RELEASE; SCX-8128NA, POM, 0.5, 71, HELICAL(R)	SA	
8	JC93-00449A	4		JC31-00123B	MOTOR BLDC; SCX-8128NA, EGI-SECC, 1.0T	SA	
9	JC93-00449A	4		JC93-00452A	DRIVE-MOTOR STEP; ID5.0, OD11.0, T0.6, PASS, STS304	SA	

6.2. FRAME-MAIN REGI

Exploded View

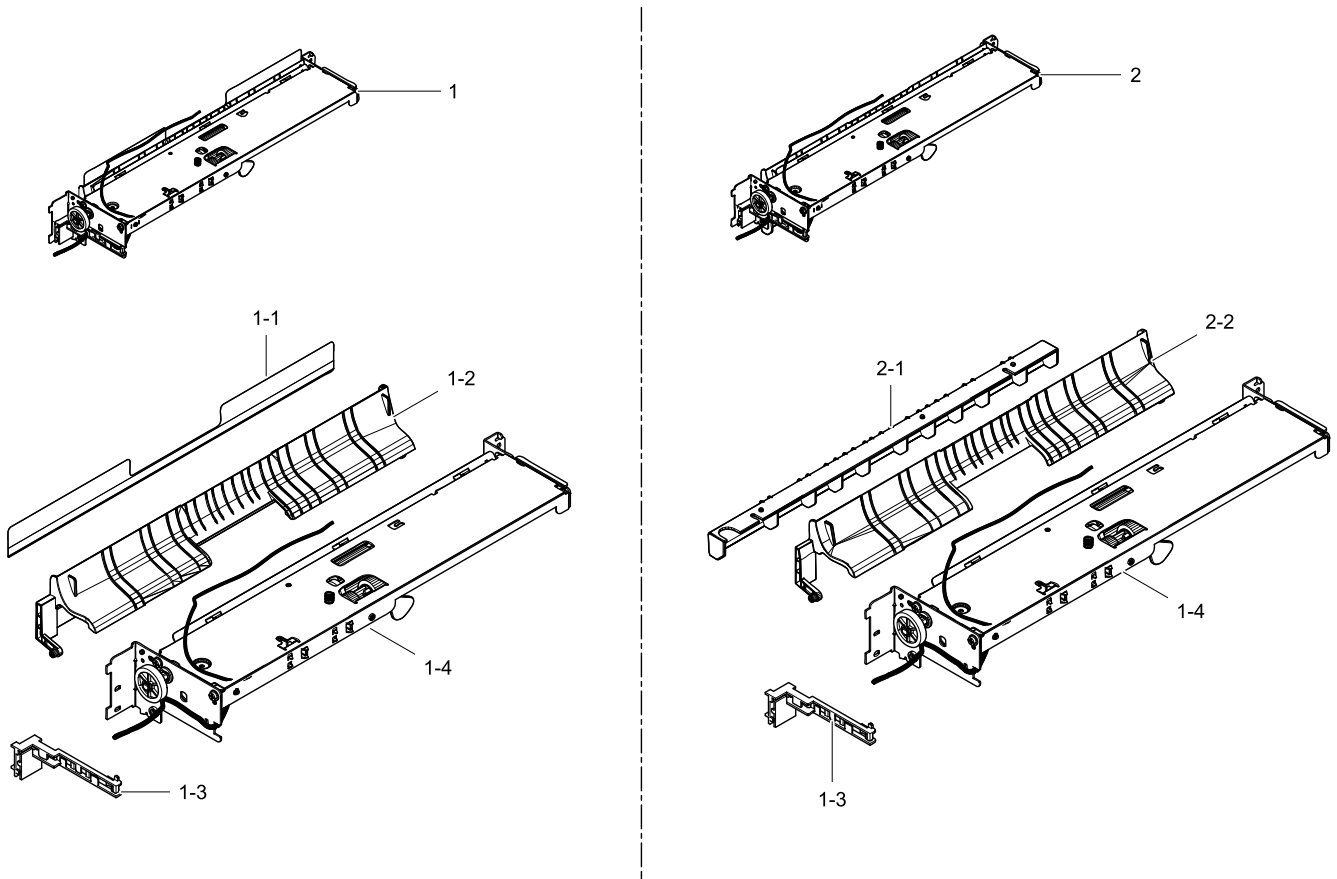


Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
0	JC93-00433A	2		JC93-00508A	FRAME-MAIN REGI; CLX-9201	SA	
1	JC93-00508A	3		0604-001381	PHOTO-INTERRUPTER; CLX-9201, SECC, T1, 63.5,34	SA	
2	JC93-00508A	3		JC66-03302A	SHAFT-REGI; CLP-500, Fe+Cu+Zn-Slearate	SNA	
3	JC93-00508A	3		JC66-03180A	ROLLER-REGI; CLX-9201, UL10272, 3p,75mm, BLK/GRAY, AWG26, 173977-3, UL 10272, BOARD TO BOARD WIRE	SNA	
4	JC93-00508A	3		JC66-03293A	GEAR-ROLLER REGI; CLX-9201	SNA	
5	JC93-00508A	3		6107-001759	SPRING-ES; CLX-9201, SUM22, 361.9,14.7, STEEL	SA	

6.3. FRAME MAIN PICKUP1_2

Exploded View

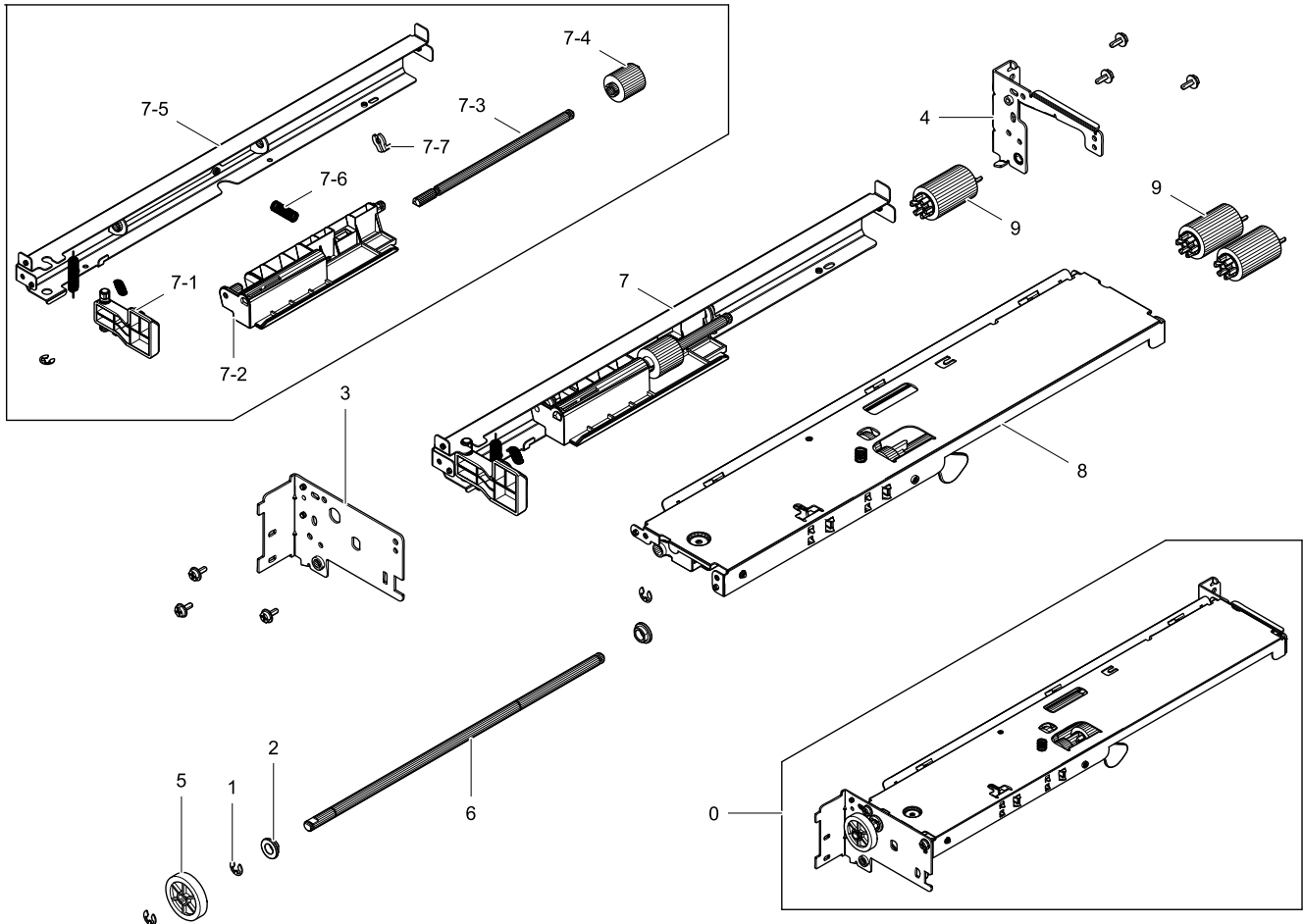


Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	JC93-00433A	2		JC93-00511A	FRAME MAIN-PICKUP 1ST; CLX-9201, SEC	SA	
1-1	JC93-00511A	3		JC63-03342A	SHEET-GUIDE PICKUP; CLX-9201	SNA	
1-2	JC93-00511A	3		JC61-04721A	GUIDE-PICKUP 1ST; CLX-9210, PET,0.188, 323,25	SNA	
1-3	JC93-00511A	3		JC61-04723A	GUIDE-HARNESS PICKUP; CLX-9201, SEC	SNA	
1-4	JC93-00511A	3		JC93-00510A	FRAME MAIN-PICKUP; CLX-9201, ABS, 327,43, HF-0660I, BLACK(K21441), PAPER	SA	
2	JC93-00433A	2		JC93-00512A	FRAME MAIN-PICKUP 2ND; CLX-9201, SEC	SA	
2-1	JC93-00512A	3		JC61-04735A	GUIDE-PICKUP BOTTOM; CLX-9201, SEC	SNA	
2-2	JC93-00512A	3		JC61-04717A	GUIDE-PICKUP 2ND; CLX-9201, ABS, 54,20, HF-0660I, BLACK(K21441), GUIDE	SNA	

6.3.1. FRAME MAIN PICKUP

Exploded View



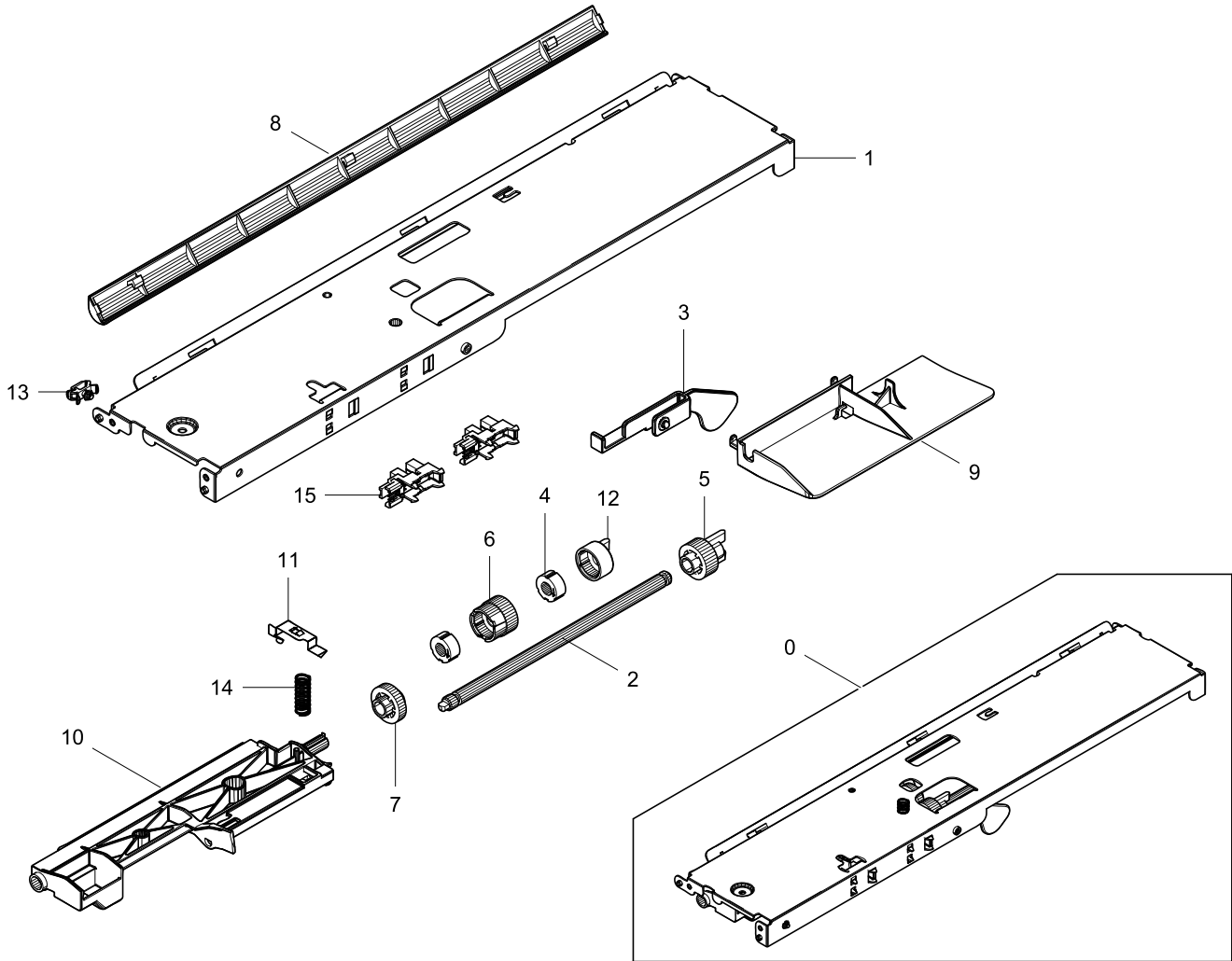
Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
0	JC93-00511A	3		JC93-00510A	FRAME MAIN-PICKUP; CLX-9201, SEC	SA	
1	JC93-00510A	4		6044-000125	RING-E; CLX-9201,SECC, 1.2T, 84, 42	SA	
2	JC93-00510A	4		JC61-00699A	BUSH-D6/L4; CLX-9201, SEC	SA	
3	JC93-00510A	4		JC61-04731A	BRACKET-PICKUP REAR; CLX-9201, SEC	SNA	
4	JC93-00510A	4		JC61-04730A	BRACKET-PICKUP FRONT; CLX-9201	SNA	
5	JC93-00510A	4		JC66-03281A	GEAR-PICKUP; CLX-9201, STAINLESS-ST303, 225. 3,6, STEEL	SNA	
6	JC93-00510A	4		JC66-03304A	SHAFT-FORWARD; CLX-9201, SEC	SNA	
7	JC93-00510A	4		JC93-00503A	FRAME MAIN-PICKUP LOWER; CLX-9201, SECC, 1.2T, 85,52	SNA	
7-1	JC93-00503A	5		JC66-03200A	LEVER-INPUT CST; SUS304, 0.55, 12.1, 4.3, FREE, CLOSED END	SNA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
7-2	JC93-00503A	5		JC61-04732A	HOLDER-RETARD; CLX-9201, SEC	SNA	
7-3	JC93-00503A	5		JC66-03283A	SHAFT-RETARD; SCX-6345N/XRX, POM, T1.5, NTR	SNA	
7-4	JC93-00503A	5		JC67-00455A	COUPLER-TORQUELIMITER; ID4, OD9, T0.6, STSC	SNA	
7-5	JC93-00503A	5		JC93-00438A	FRAME MAIN-PICKUP BRKT LOWER; CLX-9201, POM, 9,48, 28.7, M90-44, BLACK,GUIDE	SNA	
7-6	JC93-00503A	5		6107-003049	SPRING-CS; CLX-9350, WHITE, 350GF*CM	SA	
7-7	JC93-00503A	5		JC61-01367A	FIXER-M_E RING 4PI; CLX-9201, POM, 23, 97, 24, BLACK, M90-44	SA	
8	JC93-00510A	4		JC93-00504A	FRAME MAIN-PICKUP UPPER; ID4, OD9, T0.6, STSC	SNA	
9	JC93-00510A	4		JC93-00540A	FRAME-MAIN PICK UP ROLLER; CLP-500, Fe+Cu+Zn	SA	

6.3.1.1. FRAME MAIN PICKUP UPPER

Exploded View



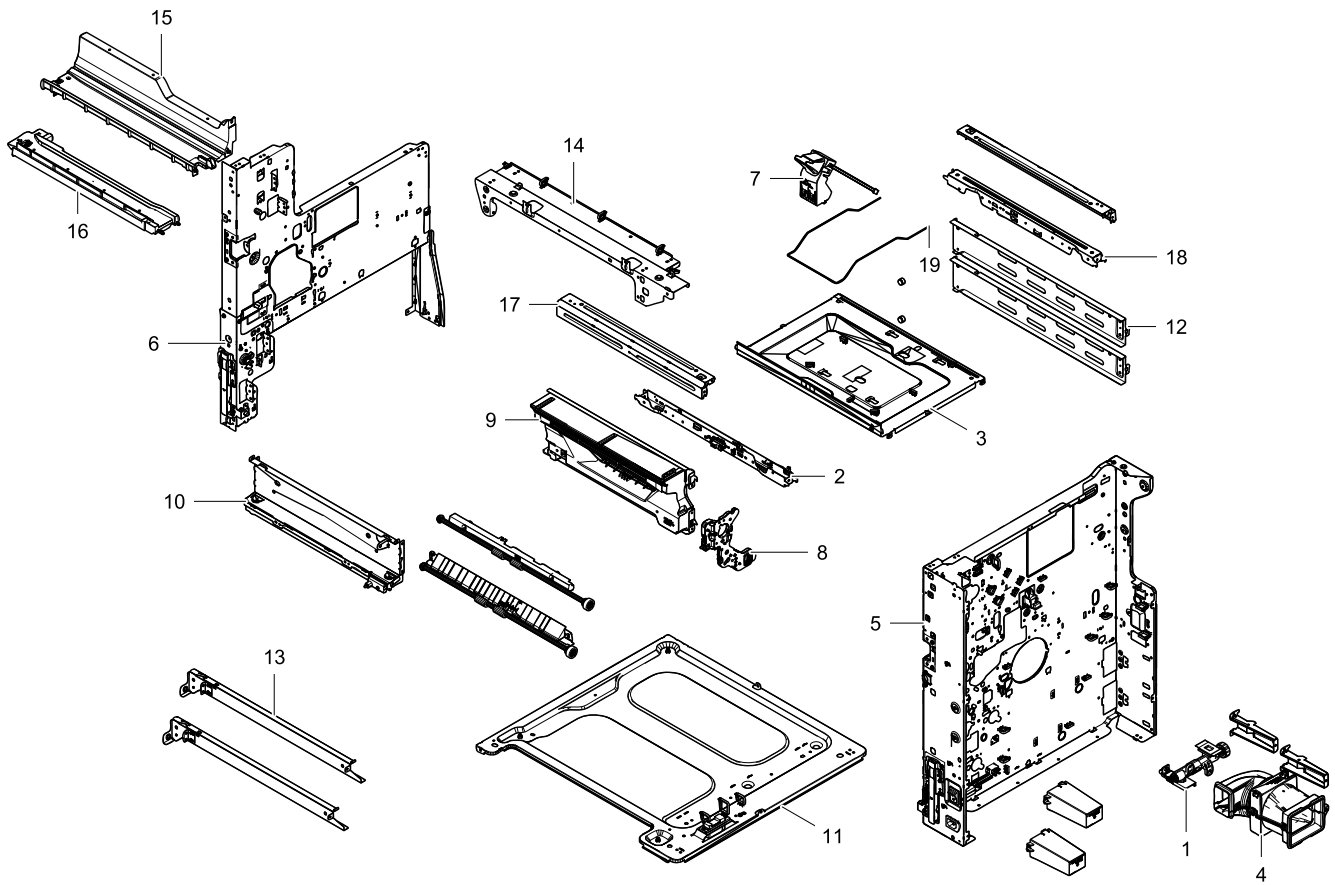
Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
0	JC93-00510A	4		JC93-00504A	FRAME MAIN-PICKUP UPPER; CLX-9201, SEC	SNA	
1	JC93-00504A	5		JC93-00437A	FRAME MAIN-PICKUP BRKT UPPER; CLX-9201, SEC	SNA	
2	JC93-00504A	5		JC66-03284A	SHAFT-PICKUP; CLX-PFP100, SUS304, 0.2T, 56, 21.23	SNA	
3	JC93-00504A	5		JC66-03199A	ACTUATOR-EMPTY PICKUP; SCX-6345N/XRX, POM, T1.8,15mm, 12,WHT	SNA	
4	JC93-00504A	5		JC66-00977A	CLUTCH-P_ONE WAY; CLX-9201, STAINLESS-ST303,129.5,6, STEEL	SA	
5	JC93-00504A	5		JC66-00943A	GEAR-M_PU JOINT; SUS304, 0.65,17, 6.45, RIGHT HAND, CLOSED END	SA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
6	JC93-00504A	5		JC66-00941A	GEAR-M_ONE WAY; CLX-9201, PET,0.125,12,25	SA	
7	JC93-00504A	5		JC66-00940A	GEAR-M_IDLE PU; CLX-9201, POM, 120,46, M90-44, BLACK,PAPER	SA	
8	JC93-00504A	5		JC61-04736A	GUIDE-PICKUP UPPER; CLX-9201, POM, 22,73,10, M90-44, BLACK, ACTUATOR-High Tem	SNA	
9	JC93-00504A	5		JC61-04722A	GUIDE-SLIDE PICKUP; SCX-6345N/XRX, POM, 0.7,21,WHT,16.1	SNA	
10	JC93-00504A	5		JC61-04716A	GUIDE-SUPPORT PICKUP; SCX-6345N/XRX, OWC612GXRZ, 0.8N.M,NTR	SNA	
11	JC93-00504A	5		JC61-04670A	BRACKET-GRN PICKUP; SCX-6345N/XRX, POM,0.7,22, WHT,16.8	SNA	
12	JC93-00504A	5		JC61-01288A	HOLDER-M_IDLE ONE WAY; DACS-2N, 6.2*2.8, Nylon66	SA	
13	JC93-00504A	5		6502-001131	CABLE CLAMP; SCX-6345N/XRX, POM, 0.7,21,WHT, 16.1	SNA	
14	JC93-00504A	5		6107-003046	SPRING-CS; CLX-9201, ABS,15, 305,23, HF-0660i, BLACK, PAPER	SA	
15	JC93-00504A	5		0604-001393	PHOTO-INTERRUPTER; CLX-9201, SEC	SA	

6.4. FRAME-MAIN

Exploded View



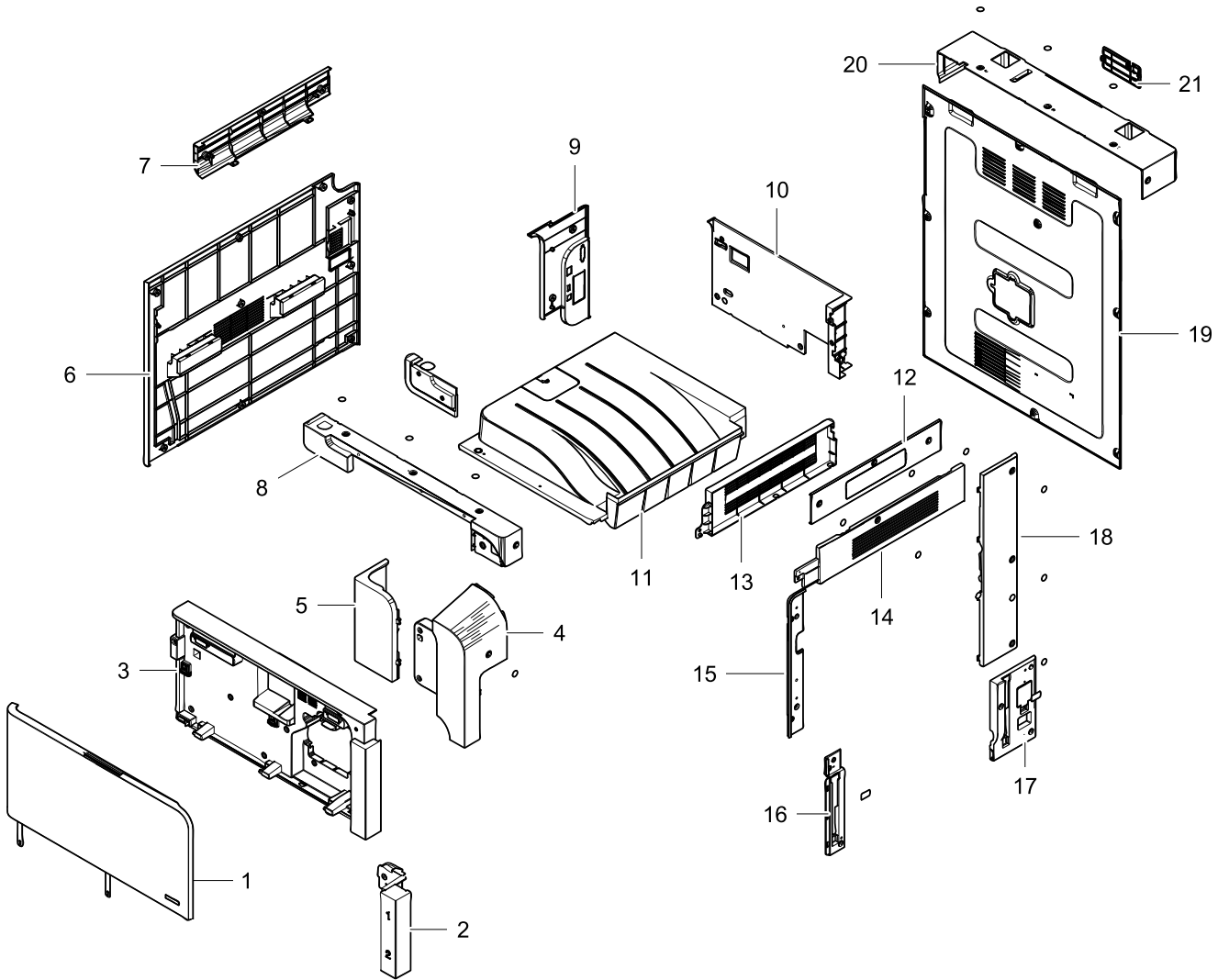
Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
12	JC93-00684A	3		JC93-00477A	FRAME MAIN-LEFT CST RAIL; CLX-9201, POM,1,21	SNA	
13	JC93-00684A	3		JC93-00478A	FRAME MAIN-RIGHT CST RAIL; SCX-6345N/XRX, OWC612GXRZ,0.8N.M,NTR	SNA	
14	JC93-00684A	3		JC93-00484A	FRAME MAIN-SUPPORT SCAN RIGHT; ML-9400W, bearing,	SNA	
15	JC93-00684A	3		JC61-04864A	GUIDE-TONER BOTTLE; CLX-9201, SEC, WORLD	SNA	
16	JC93-00684A	3		JC61-04863A	GUIDE-OPC; SCX-8128NA, SEC, WORLD	SNA	
17	JC93-00684A	3		JC61-04835A	PLATE-TOP EXIT MONO; CLX-9201, HIPS, 46.3, 109.5,61.4, BLACK, HR-1360T	SNA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
18	JC93-00684A	3		JC61-04834A	PLATE-LSU LOWER; CLX-9201, SEC, WORLD	SNA	
19	JC93-00684A	3		JC66-03274A	WIRE-GUIDE LSU; SCX-8128NA, ABS,260. 1,15.4, HF-0660i, BLACK,PATH	SNA	

7. COVER

Exploded View



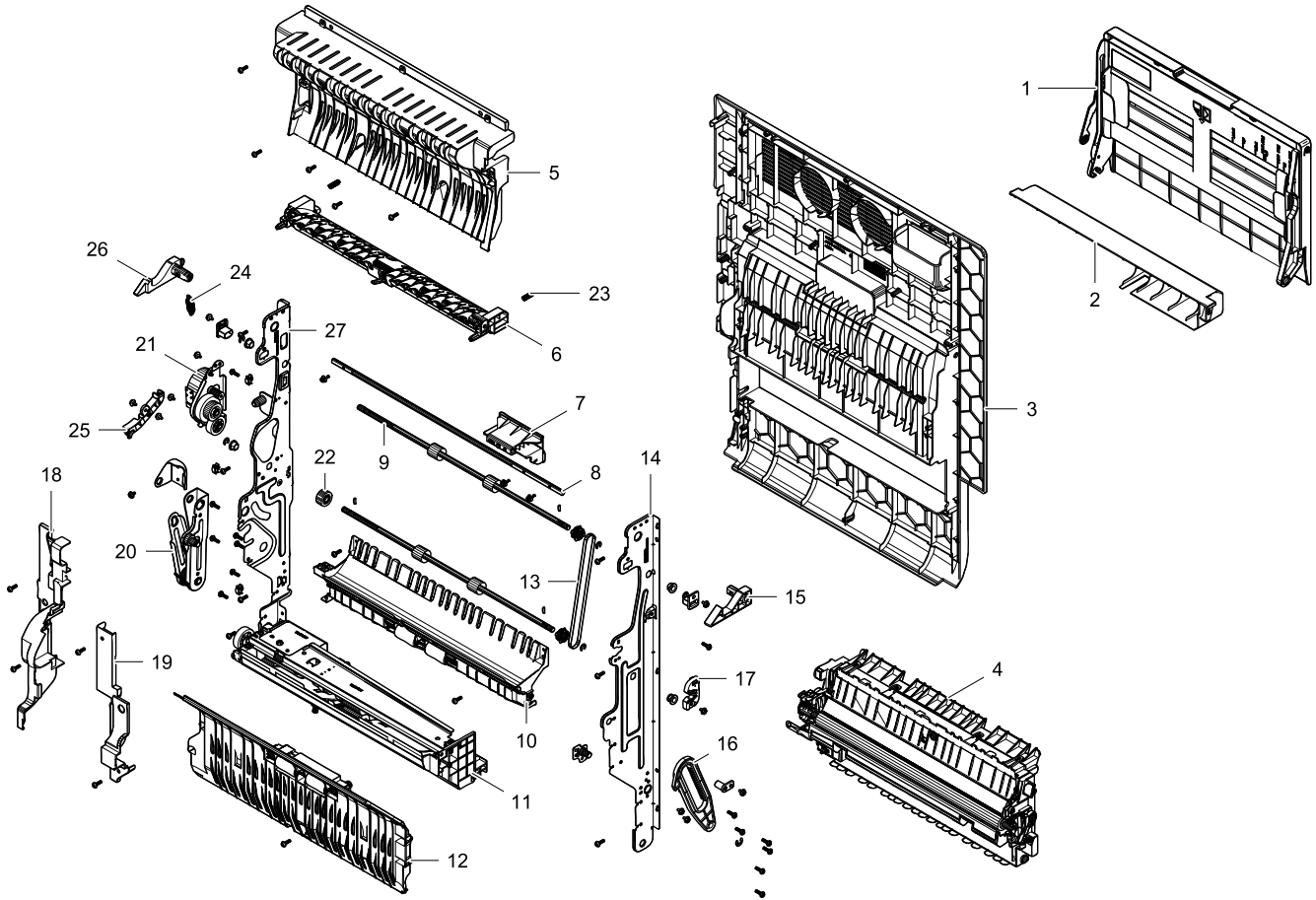
Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	JC95-01495A	2		JC95-01492A	COVER-FRONT MONO; SCX-8128NA, SECC, T0.6, W536, L649	SA	
2	JC95-01495A	2		JC63-03405A	COVER-FRONT LOWER; CLX-9201, WORLD, SEC	SA	
3	JC95-01495A	2		JC95-01494A	COVER-INNER MONO; CLX-9201, HIPS, T2, W103.5, L48.8, G32690, FG-1790	SA	
4	JC95-01495A	2		JC63-03404A	COVER-FRONT TOP DECO; SCX-8128NA, HIPS, T2, W95.6, L444, G32690, FG-1790	SA	
5	JC95-01495A	2		JC63-03403A	COVER-FRONT TOP; SCX-8128NA, HIPS, T2, W44, L323.5, G32690, FG-1790	SA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
6	JC95-01495A	2		JC95-01493A	COVER-LEFT MONO; CLX-9201, HIPS, 2.5, W550, L96.7, G32690, FG-1790	SA	
7	JC95-01495A	2		JC63-03396A	COVER-SCAN LEFT; SCX-8128NA, WORLD, SEC	SA	
8	JC95-01495A	2		JC95-01502A	COVER-SCAN FRONT; CLX-9201, PC, 0.38, W13,L13, G32690	SA	
9	JC95-01495A	2		JC63-03406A	COVER-LEFT UPPER; CLX-9201, WORLD, SEC	SA	
10	JC95-01495A	2		JC63-03389A	COVER-EXIT REAR; CLX-9201, WORLD, SEC	SA	
11	JC95-01495A	2		JC95-01499A	COVER-EXIT; SCX-8128NA, WORLD, SEC	SA	
12	JC95-01495A	2		JC95-01503A	COVER-SCAN RIGHT; CLX-9201, HIPS, T2.5, W165.6, L283.4, G32690, FG-1790	SA	
13	JC95-01495A	2		JC63-03391A	COVER-EXIT DUMMY; CLX-9201, PC, 0.38, W22,L13.4, G32690	SA	
14	JC95-01495A	2		JC63-03402A	COVER-RIGHT TOP; CLX-9201, HIPS, T2,W47.5, L223.9, G32690, FG-1790	SA	
15	JC95-01495A	2		JC63-03291A	COVER-RIGHT INNER MONO; CLX-9201, HIPS, T2,W360.4, L69, G32690, FG-1790	SA	
16	JC95-01495A	2		JC63-03398A	COVER-RIGHT HANDLE; SCX-8128NA, WORLD, SEC	SA	
17	JC95-01495A	2		JC95-01501A	COVER-RIGHT LOWER; CLX-9201, HIPS, T2, W85, L446.3, G32690, FG-1790	SA	
18	JC95-01495A	2		JC63-03292A	COVER-RIGHT MONO; CLX-9201, HIPS, T2,W383.5, L198.2, G72797, HR-1360T	SA	
19	JC95-01495A	2		JC61-04568A	BRACKET-COVER REAR MONO; SCX-8123NA, PC,0.125, W35,L7, G72797	SA	
20	JC95-01495A	2		JC63-03332A	COVER-SCAN REAR; CLX-9201, HIPS, T2, W365.7, L100, G72797, HR-1360T	SNA	
21	JC95-01495A	2		JC63-03333A	COVER-CONNECTOR DADF; SCX 8133NA, PC,0.125, W35, L7, G72797	SNA	

8. COVER-SIDE MONO

Exploded View



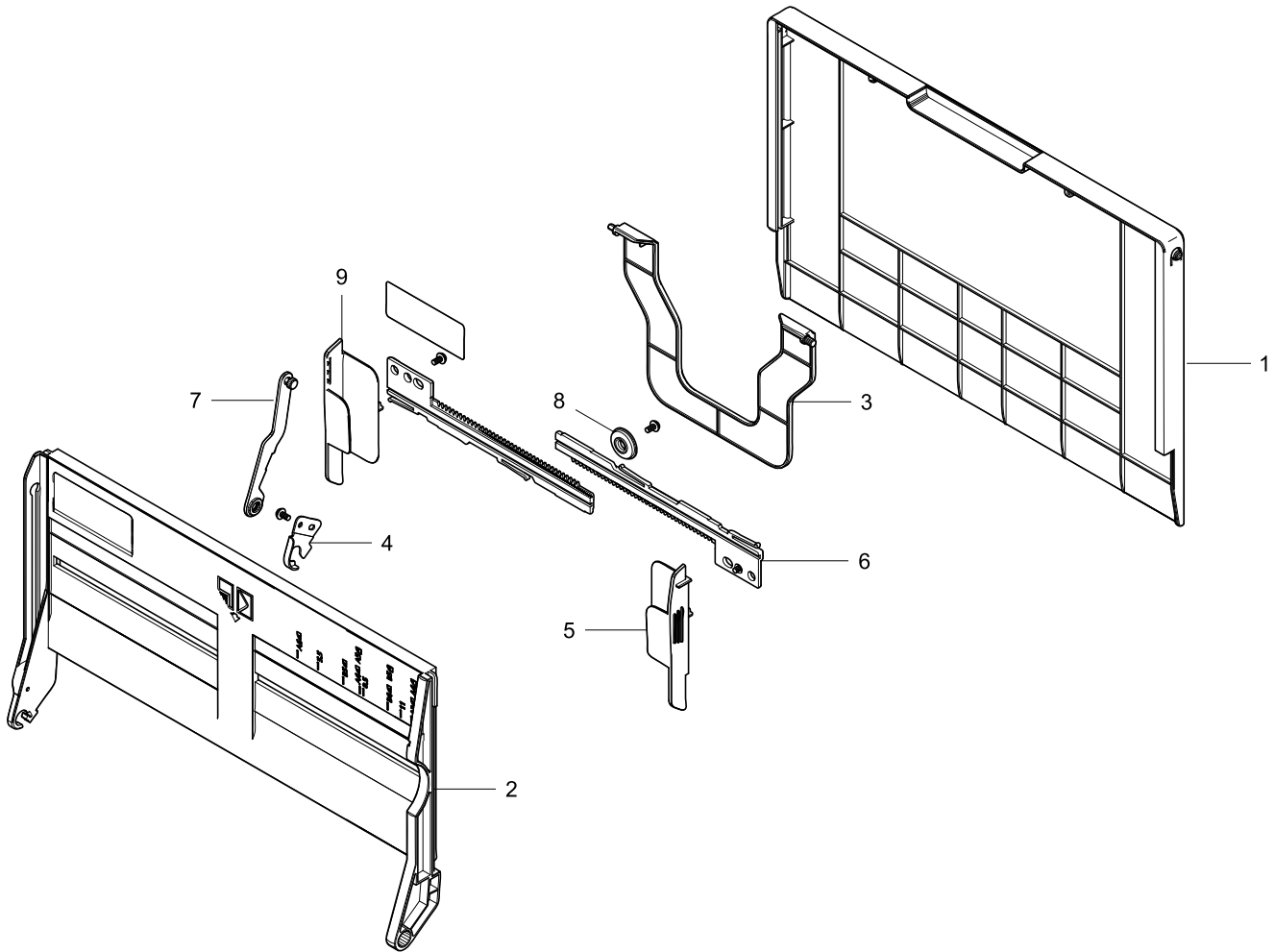
Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	JC95-01508A	2		JC90-01117A	MP-TRAY; W,OD2,L8,PASS,STS304	SA	
2	JC95-01508A	2		JC63-03356A	COVER-FRONT MP; CLX-9201,POM,BLACK,70.5,F20-02,U-Type	SNA	
3	JC95-01508A	2		JC63-03360A	COVER-SIDE MONO; PWH,+,-,B,M3,L6,ZPC(WHT),SWRCH18A,-	SNA	
4	JC95-01508A	2		JC95-01522A	COVER-SIDE DUPLEX; CLX-9201,SUM22,391,6	SA	
5	JC95-01508A	2		JC61-04795A	GUIDE-DUPLEX UPPER; ID4,OD9,T0.6,STSC	SNA	
6	JC95-01508A	2		JC95-01509A	COVER-SIDE EXIT; CLX-9201,PC,133.8,BLACK	SA	
7	JC95-01508A	2		JC64-00712A	HANDLE-SIDE; SCX-8128NA	SNA	
8	JC95-01508A	2		JC66-03301A	SHAFT-HANDLE; Type5,24,170mA,4.0mmH20,0.433m^3/mi	SNA	
9	JC95-01508A	2		JC66-03179A	ROLLER-DUPLEX; SUS304,PI0.6,L16.6,ID4.7,OD5.9	SNA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
10	JC95-01508A	2		JC95-01519A	COVER-SIDE DUPLEX LOWER; CLX-9201	SA	
11	JC95-01508A	2		JC90-01139A	MP; CLX-9201,ABS,50.2,335.6,G32690,38,HF-0660I	SA	
12	JC95-01508A	2		JC95-01516A	COVER-SIDE TAKE AWAY; SCX-8128NA,SEFC340,T0.8,490.1,86.5	SA	
13	JC95-01508A	2		6602-003299	BELT-TIMING GEAR; CLX-9201,EPDM,16,GRAY	SNA	
14	JC95-01508A	2		JC61-04648A	BRACKET-FRONT SIDE MONO; HWH,+,M3,L6,ZPC(WHT),SWRCH18A,C TYPE	SNA	
15	JC95-01508A	2		JC64-00710A	LOCKER-SIDE; SCX-8213ND, UL10272,30p,725mm, BLK, GREY, BLUE, AWG26,1-353293-5, 3-353294-0, UL 10272, BOARD TO BOARD WIRE	SNA	
16	JC95-01508A	2		JC66-03235A	LINK-D; CLX-9201	SNA	
17	JC95-01508A	2		JC64-00709A	LOCKER-GUIDE-FEED; SWP B,0.9, 6.5, 7.4, 28.7	SNA	
18	JC95-01508A	2		JC63-03361A	COVER-HARNESS MONO; CLX-9350, POM(M90-44), BLACK	SNA	
19	JC95-01508A	2		JC63-03379A	COVER-HARNESS LOWER; CLX-9201, ABS, 62.1,38.2, HF-0660i, BLACK, PART	SNA	
20	JC95-01508A	2		JC95-01518A	COVER-SIDE LINK REAR; SCX-8128NA, ABS,94.1,249.6, SPLIT BROWN BLACK(G32690), HF-0660i	SA	
21	JC95-01508A	2		JC95-01510A	COVER-SIDE DUPLEX MOTOR; S2M328, RUB(CR), L328	SA	
22	JC95-01508A	2		JC66-03292A	GEAR-EXIT; ID5.0,OD11.0,T0.6, PASS, STS304	SNA	
23	JC95-01508A	2		6107-001731	SPRING-CS; CLX-9201, POM, 19.1,16.1, M90-44, NATURAL	SA	
24	JC95-01508A	2		6107-003056	SPRING-ES; SCX-8128NA	SNA	
25	JC95-01508A	2		JC61-04872A	GUIDE-HARNESS; CLX-9350, Fe+Cu+Zn, ID6, OD9, L6	SNA	
26	JC95-01508A	2		JC64-00711A	LOCKER-SIDE REAR; CLX-9201	SNA	
27	JC95-01508A	2		JC61-04649A	BRACKET-REAR SIDE MONO; CLX-9201, SEFC340, T0.8,347. 2,36	SNA	

8.1. MP-TRAY

Exploded View



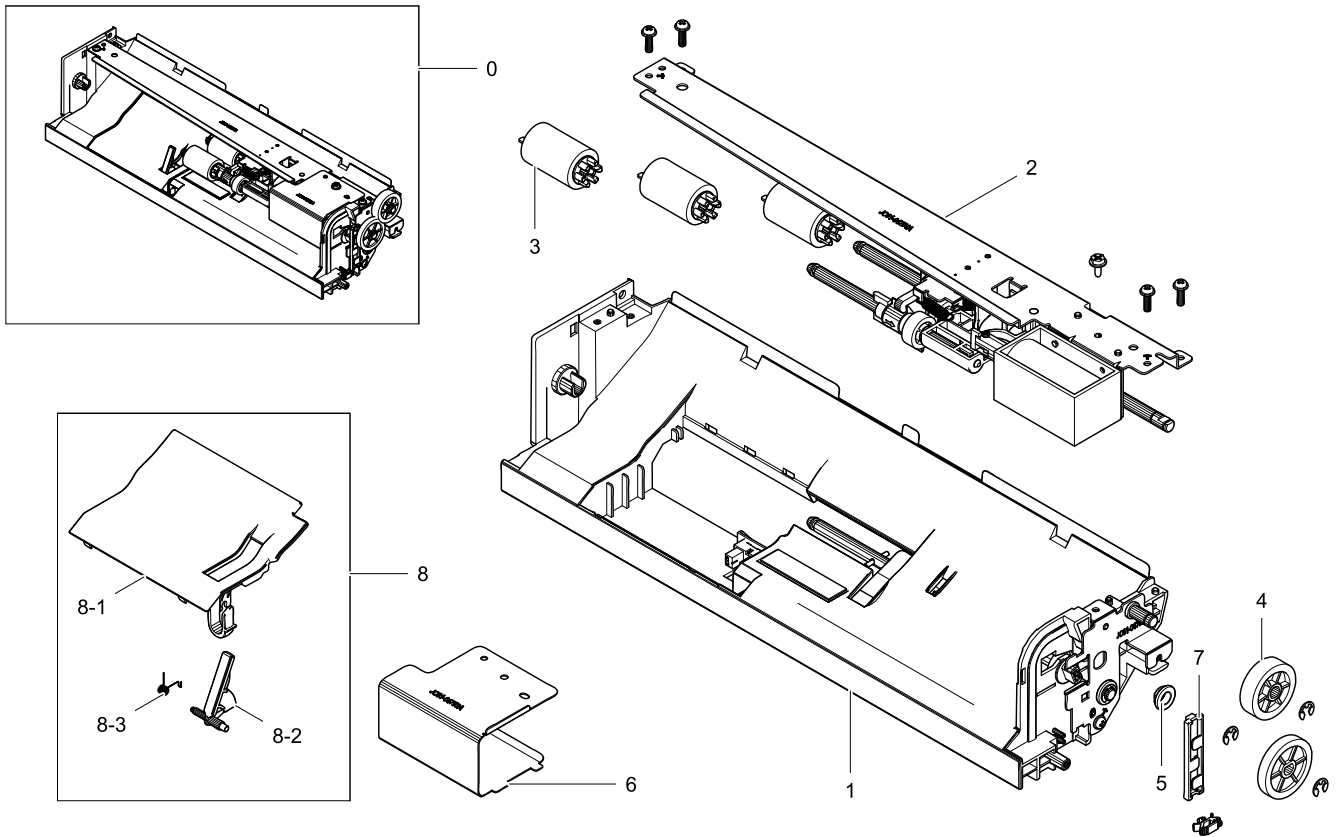
Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	JC90-01117A	3		JC61-04759A	FRAME-TRAY-LOWER; CLX-9201, HIPS, 31.5,105, 15.5, FG-1790, G32690, PAPER	SNA	
2	JC90-01117A	3		JC61-04758A	FRAME-TRAY-UPPER; CLX-9201, HIPS, 168, 116.7,12, FG-1790, G32690, PAPER	SNA	
3	JC90-01117A	3		JC61-04763A	GUIDE-TRAY PAPER; CLX-9201, SEC	SNA	
4	JC90-01117A	3		JC61-04757A	BRACKET-TRAY GUIDE; CLX-9201, POM,1, 170, NATURAL, DE500P, RACK	SNA	
5	JC90-01117A	3		JC61-04761A	GUIDE-SIDE R; CLX-9201, POM, 94.7,7, NATURAL	SNA	
6	JC90-01117A	3		JC66-03216A	GEAR-RACK; PWH,+,-,B,M3, L6, ZPC(WHT), SWRCH18A,-	SNA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
7	JC90-01117A	3		JC66-03220A	LINK-SIDE; COMMON,WHITE PET, 0.05T, 65,26,2 COLOR, TRAY STAMP, COMMON	SNA	
8	JC90-01117A	3		JG66-40003A	GEAR-PINION; CLX-9201, HIPS, NATURAL BLUE, 342.7, 213.5, HR-1360T	SA	
9	JC90-01117A	3		JC61-04760A	GUIDE-SIDE F; CLX-9201, ABS, G32690, 331, 187, HF-0660I	SNA	

8.2. MP

Exploded View



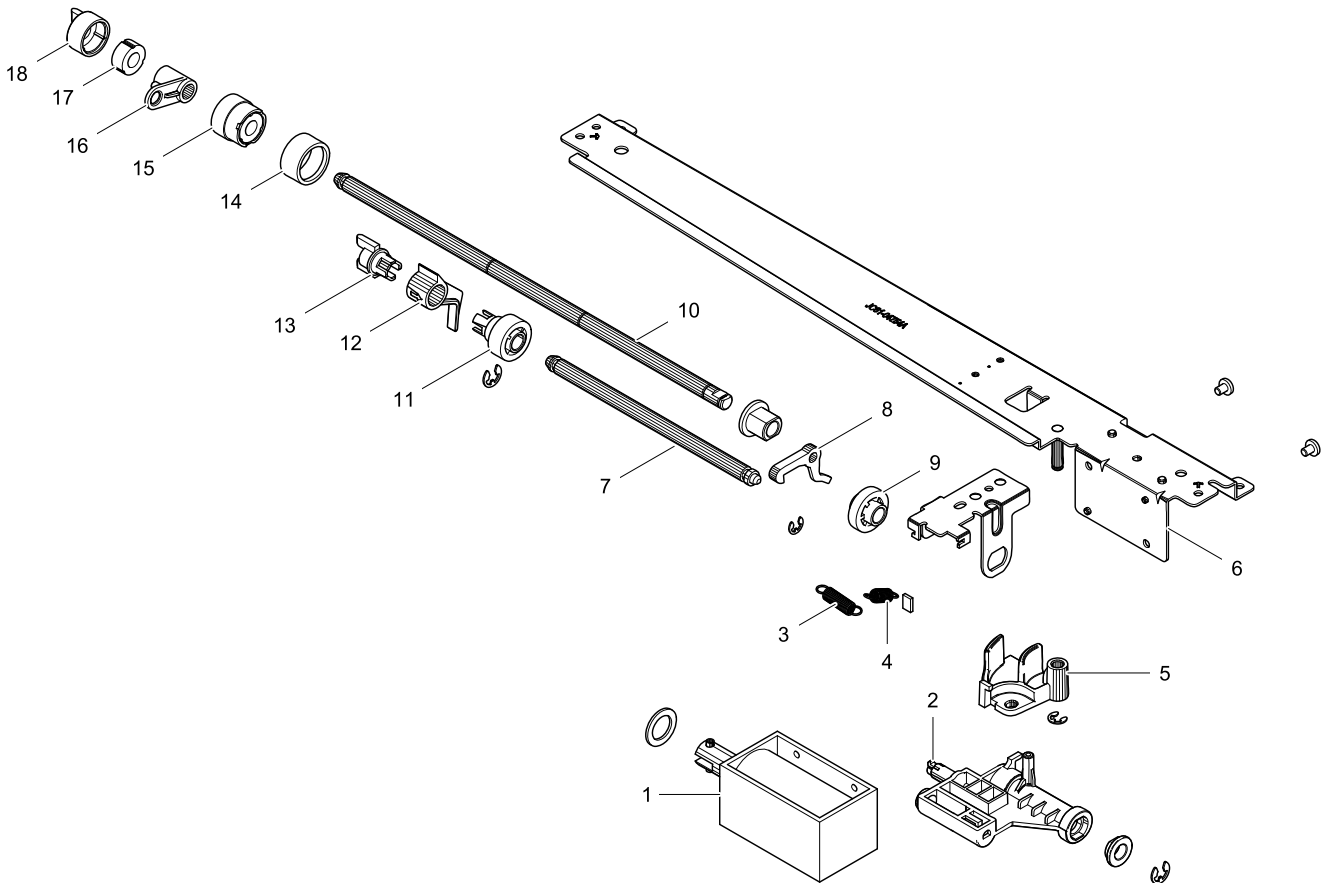
Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
0	JC95-01507A	2		JC90-01139A	MP; CLX-9201, SEC	SA	
1	JC90-01139A	3		JC90-01126A	MP GUIDE-MAIN; CLX-9201	SA	
2	JC90-01139A	3		JC90-01125A	MP-BRACKET PICK UP; CLX-9201, SECC, 0.6T, 67.4,53.1	SA	
3	JC90-01139A	3		JC93-00540A	FRAME-MAIN PICK UP ROLLER; CLX-9201, ABS, 10, 43.5, 4.5, HF-0660I, BLACK, GUIDE	SA	
4	JC90-01139A	3		JC66-03215A	GEAR-IDLE MP; SPY272, DAMPING GREASE	SNA	
5	JC90-01139A	3		JC61-00699A	BUSH-D6/L4; CLX-9201, SEC	SA	
6	JC90-01139A	3		JC61-04753A	BRACKET-SOLENOID; CLX-9201, POM,1, 26, 28	SNA	
7	JC90-01139A	3		JC61-04762A	GUIDE-HARNESS R; DACS-2N, 6.2*2.8, Nylon66	SNA	
8	JC90-01139A	3		JC90-01124A	MP-COVER BASE; ID4,OD9, T0.6, STSC	SA	
8-1	JC90-01124A	4		JC63-03357A	COVER-GUDIE BASE; CLX-9201, SEC	SNA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
8-2	JC90-01124A	4		JC66-03217A	LEVER-EMPTY PAPER; SUS304, PI0.25, ID3.3, OD3.8	SNA	
8-3	JC90-01124A	4		6107-001771	SPRING-TS; CLX-9201, ABS, 71, 100.5, G32690, HF-0660I	SA	

8.2.1. MP-BRACKET PICK UP

Exploded View



Parts List

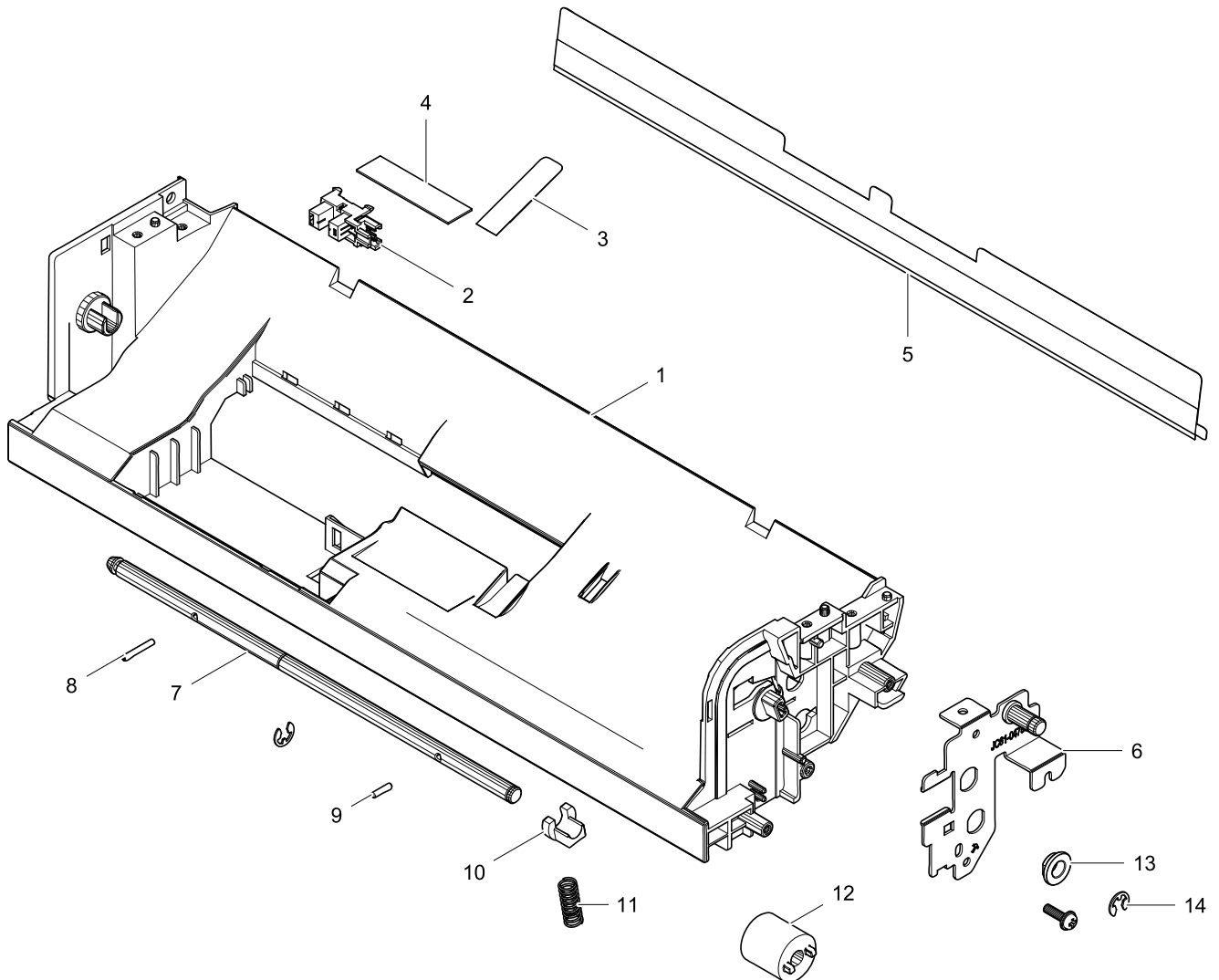
No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	JC90-01125A	4		JC33-00029B	SOLENOID-MP; CLX-9201, SEC	SA	
2	JC90-01125A	4		JC61-04876A	GUIDE-UPPER PU MP; CLX-9350, PORON LE-20, ID10, BLACK, PORON LE-20	SNA	
3	JC90-01125A	4		6107-003031	SPRING-ES; CLX-9201, POM, 9.8,34, M90-44, WHITE	SNA	
4	JC90-01125A	4		6107-003026	SPRING-ES; CLX-9201, POM, 28.9, 32.3, LZ750, WHITE, LINK	SNA	
5	JC90-01125A	4		JC66-03218A	LEVER-SOLENOID; CLX-9350, Poron, BLK,1,2,6,4	SNA	

Exploded Views and Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
6	JC90-01125A	4		JC90-01127A	MP-BRACKET UPPER; CLX-9350, POM, T8.5, OD17, GUIDE	SA	
7	JC90-01125A	4		JC66-03222A	SHAFT-PICK UP MP; SWP B,0.65,25.1,4.4,5.7	SNA	
8	JC90-01125A	4		JC64-00705A	LOCKER-STOPPER; CLX-9201,POM,9,24.2, M90-44, WHITE, LINK	SNA	
9	JC90-01125A	4		JC66-00940A	GEAR-M_IDLE PU; SWP B,0.5,16.9,4,5	SA	
10	JC90-01125A	4		JC66-03303A	SHAFT-FORWARD MP; CLX-9350, DC24V	SNA	
11	JC90-01125A	4		JC66-03213A	GEAR-M PU; SPY272, DAMPING GREASE	SNA	
12	JC90-01125A	4		JC61-04766A	STOPPER-PAPER; CLX-9201, POM, BLACK, 29.1,4	SNA	
13	JC90-01125A	4		JC66-03221A	JOINT-PU; ID4, OD9, T0.6, STSC	SNA	
14	JC90-01125A	4		JC61-03332A	ROLLER-IDLE FORWARD; ID3, OD7, T0.6, PASS, STSC	SNA	
15	JC90-01125A	4		JC90-00918A	MP-ONE WAY; SCX-6320F, BRONZE POWDER(KAB-23)	SA	
16	JC90-01125A	4		JC66-03219A	LEVER-HOOK; CLX-9201, POM,0.7,21, 16.1	SNA	
17	JC90-01125A	4		JC66-00977A	CLUTCH-P_ONE WAY; CLX-9201, POM, 1,1. 2,14, NATURAL	SA	
18	JC90-01125A	4		JC61-01288A	HOLDER-M_IDLE ONE WAY; PH,+,M3, L4,NI PLT, SWRCH18A, FP,-	SA	

8.2.2. MP GUIDE-MAIN

Exploded View



Parts List

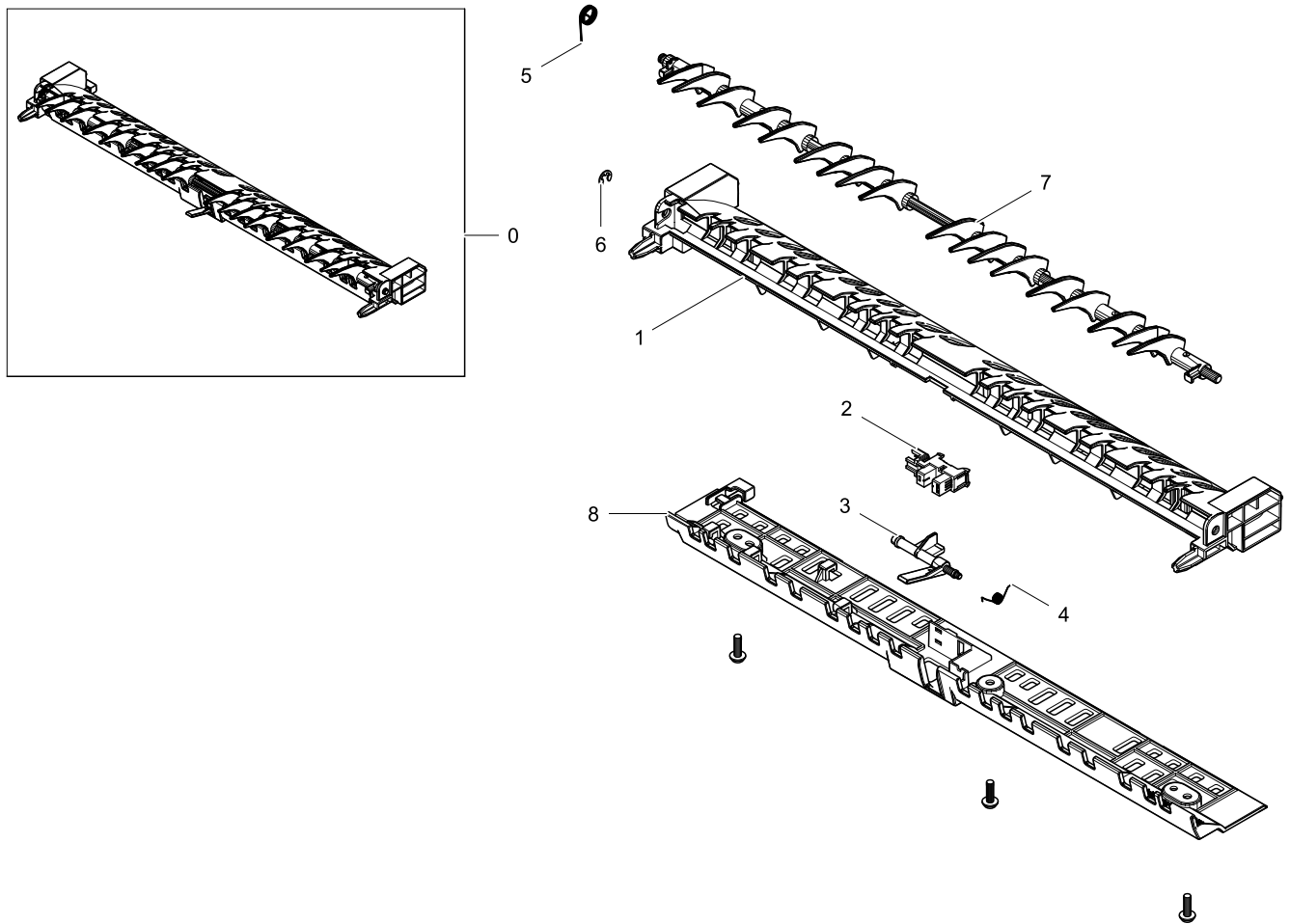
No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	JC90-01126A	4		JC61-04764A	FRAME-BASE MP; CLX-9201, SUM22, 194.6, 6	SNA	
2	JC90-01126A	4		0604-001393	PHOTO-INTERRUPTER; CLX-9201, SEC	SA	
3	JC90-01126A	4		JC63-03359A	SHEET-STOPPER; CLX-9201, POM, 6,13,10, BLACK, M90-44	SNA	
4	JC90-01126A	4		JC69-02047A	PAD-MP; SUS304,0.65,17,5.15,6.45	SNA	
5	JC90-01126A	4		JC63-03358A	SHEET-GUIDE MP; NYLON,CLX-9350, 0.7T, W11.4*L44, Flocking, BLK	SNA	
6	JC90-01126A	4		JC61-04755A	BRACKET-GEAR MP; ID4, OD9, T0.6, STSC	SNA	
7	JC90-01126A	4		JC66-03223A	SHAFT-RETARD MP; CLX-9201, PET, 0.188, 10, 40	SNA	

Exploded Views and Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
8	JC90-01126A	4		JC66-00591A	SHAFT-HUB IN; W,D2, L14, PB+Ni Plating, T0.3	SNA	
9	JC90-01126A	4		6043-001097	PIN-SPRING; CLP-500, Fe+Cu+Zn-Slearate	SA	
10	JC90-01126A	4		JC61-04765A	BUSH-RETARD MP; ML-2150, SUM 24L, 8.5, 1.9	SNA	
11	JC90-01126A	4		6107-003032	SPRING-CS; CLX-9201, PC+GF, G32690, 98.5, 350.7, NH-3204G	SNA	
12	JC90-01126A	4		JC67-00455A	COUPLER-TORQUELIMITER; CLX-9201, UL10272, 3p, 250mm, BLK/GREY, AWG26	SNA	
13	JC90-01126A	4		JC61-00699A	BUSH-D6/L4; CLX-9350, WHITE, 350GF*CM	SA	
14	JC90-01126A	4		6044-000125	RING-E; TR, 75mW, BGA, TR	SA	

8.3. COVER-SIDE EXIT

Exploded View

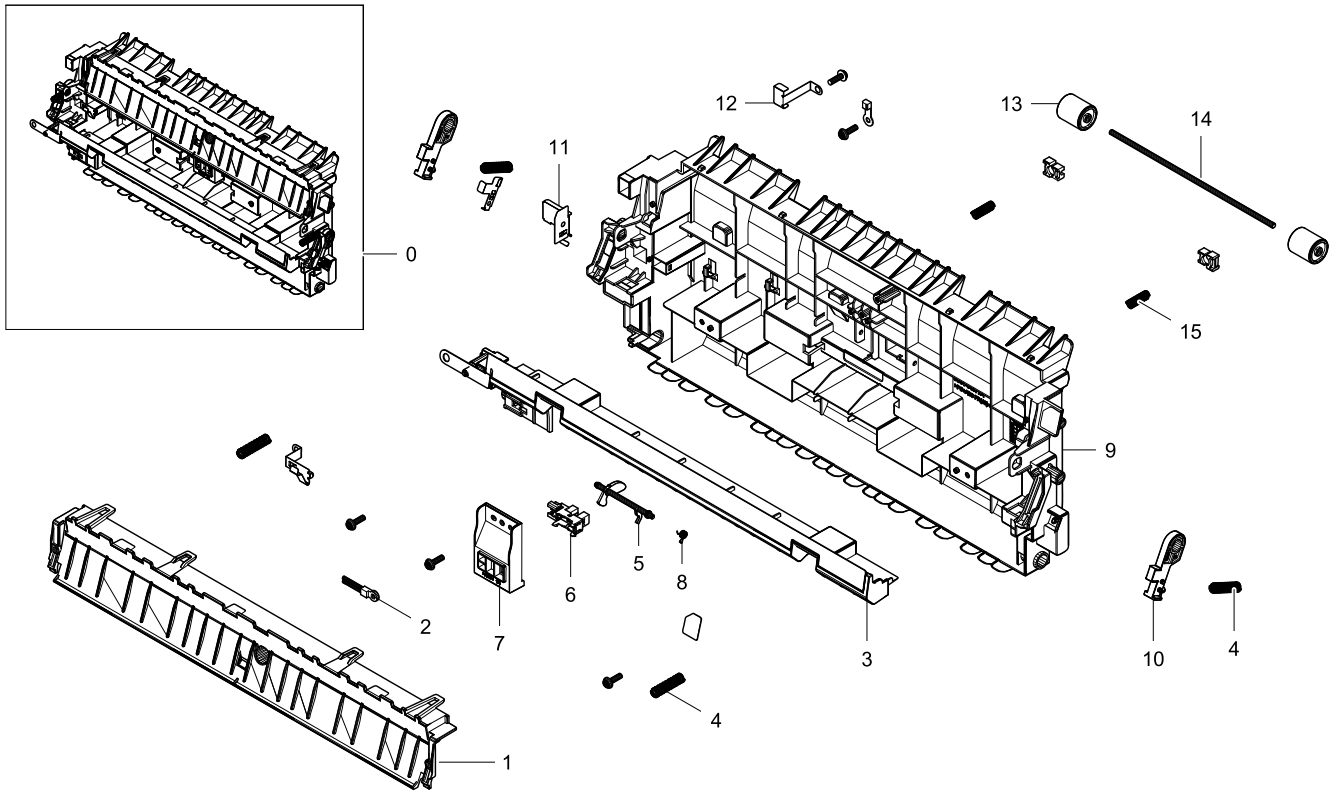


Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
0	JC95-01507A	2		JC95-01509A	COVER-SIDE EXIT; CLX-9201	SA	
1	JC95-01509A	3		JC61-04791A	GUIDE-SIDE EXIT; ID3, OD7, T0.6, PASS, STSC	SNA	
2	JC95-01509A	3		0604-001393	PHOTO-INTERRUPTER; CLX-9201	SA	
3	JC95-01509A	3		JC66-03307A	ACTUATOR-FUSER OUT; CLX-9201, MPPO, 340. 9,47.1,25.6, N300X, BLACK, PART	SNA	
4	JC95-01509A	3		6107-001737	SPRING-TS; CLX-9201, MPPO, 39. 9, 24.1, N300X, BLACK	SA	
5	JC95-01509A	3		6107-003055	SPRING-TS; TR, 75mW, BGA, TR	SA	
6	JC95-01509A	3		6044-000123	RING-E; CLX-9201, UL 10272,3p, 250mm, BLK/GREY	SNA	
7	JC95-01509A	3		JC61-04792A	GUIDE-GATE; SUS304, 0.4, 7.7, 8.1, 180	SNA	
8	JC95-01509A	3		JC61-04892A	HOLDER-EXIT-SENSOR; SUS304, PI0. 25 ,ID3.8, OD4.3, 105	SNA	

8.4. COVER-SIDE DUPLEX

Exploded View



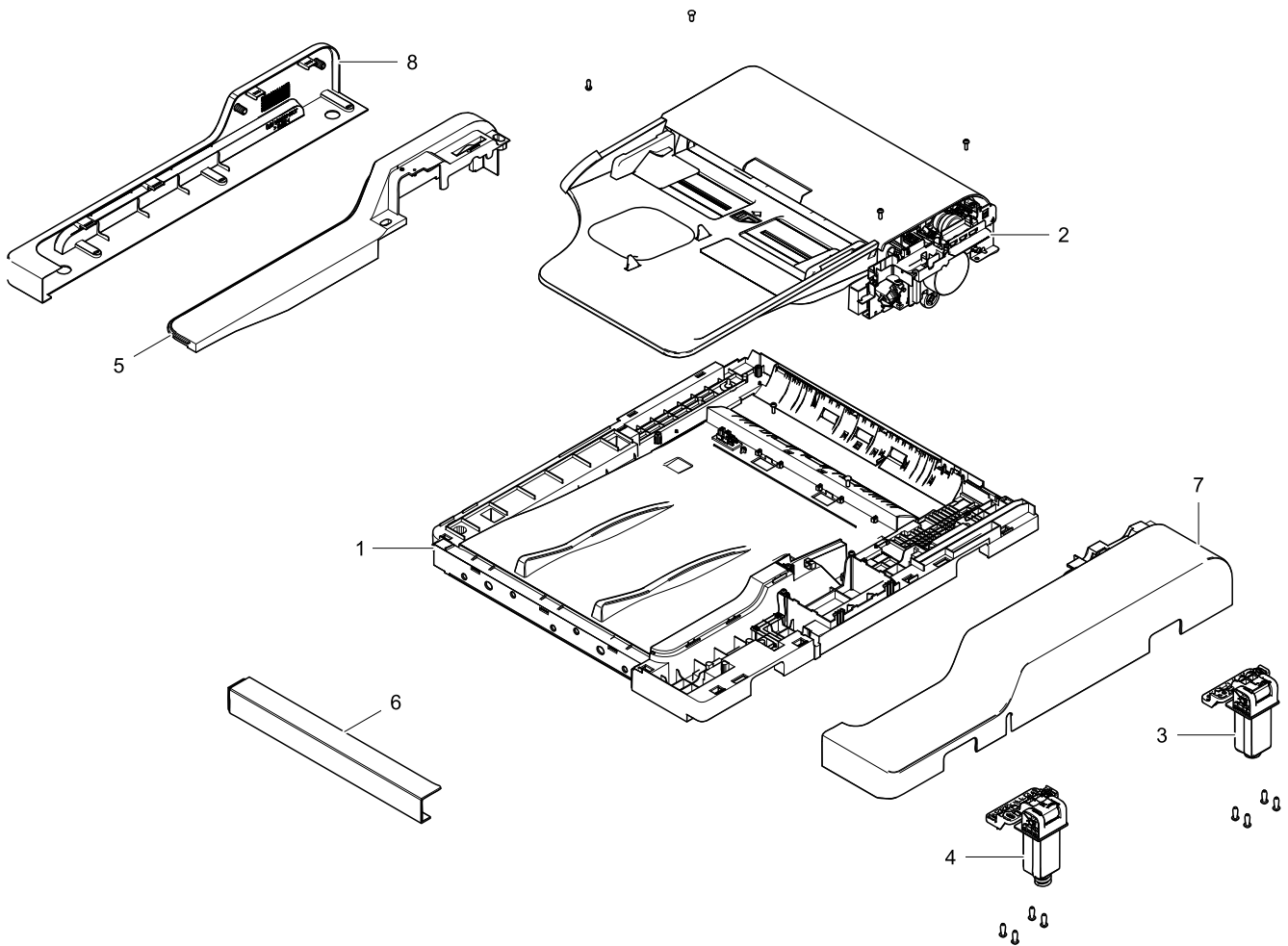
Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
0	JC95-01508A	2		JC95-01522A	COVER-SIDE DUPLEX; SCX-8128NA	SA	
1	JC95-01522A	3		JC61-04879A	GUIDE-TR UPPER; SWP B,0.8, 21.1, 4.5, 6.1	SNA	
2	JC95-01522A	3		JC39-01654A	HARNESS-SIDE DUPLEX_TEMP; SCX-8128NA	SNA	
3	JC95-01522A	3		JC95-01551A	COVER-SIDE TR LOWER; CLX-9350, PC HN-1064i, Black	SA	
4	JC95-01522A	3		6107-003021	SPRING-CS; CLX-9350, POM SW-01, NATURAL	SA	
5	JC95-01522A	3		JC66-02180A	ACTUATOR-DUPLEX 2; CLX-9350, SUM24L, 137.0, 3	SA	
6	JC95-01522A	3		0604-001393	PHOTO-INTERRUPTER; SCX-8213ND, UL10272, 5p, 325mm, BLK,GREY	SA	
7	JC95-01522A	3		JC61-04808A	HOLDER-DUP SNR; SUS304, PI0.25, ID3.8, OD4.3, 105	SNA	
8	JC95-01522A	3		6107-001737	SPRING-TS; SCX-8040, SUS,0.2T, 18.2, 13.4	SA	
9	JC95-01522A	3		JC61-04877A	GUIDE-FEED MONO; SCX-8128NA	SNA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
10	JC95-01522A	3		JC66-03277A	LINK-TR REAR; SCX-8128NA, ABS, 29.7, 46.3, BLACK, HF-0660i	SNA	
11	JC95-01522A	3		JC61-04651A	PLATE-GROUND_TR_B; SCX-8128NA, POM, 42.1, T2.0, BLACK	SNA	
12	JC95-01522A	3		JC61-03581A	PLATE-GROUND_SAW_C; SCX-8128NA, SUS 304, 0.8	SNA	
13	JC95-01522A	3		JC66-02289B	ROLLER-IDLE; SCX-8128NA, ABS+PC, 390.2, 135.3, NH-1000T, BLACK, GUIDE	SNA	
14	JC95-01522A	3		JC66-02354A	SHAFT-ROLLER IDLE L; SCX-8128NA, ABS+PC, 320.5, 36.5, NH-1000T, BLACK, GUIDE	SNA	
15	JC95-01522A	3		6107-001731	SPRING-CS; SCX-8128NA, STAINLESS-ST304, T0.2, 21.3, 11.9, GROUND	SA	

9. DADF

Exploded View

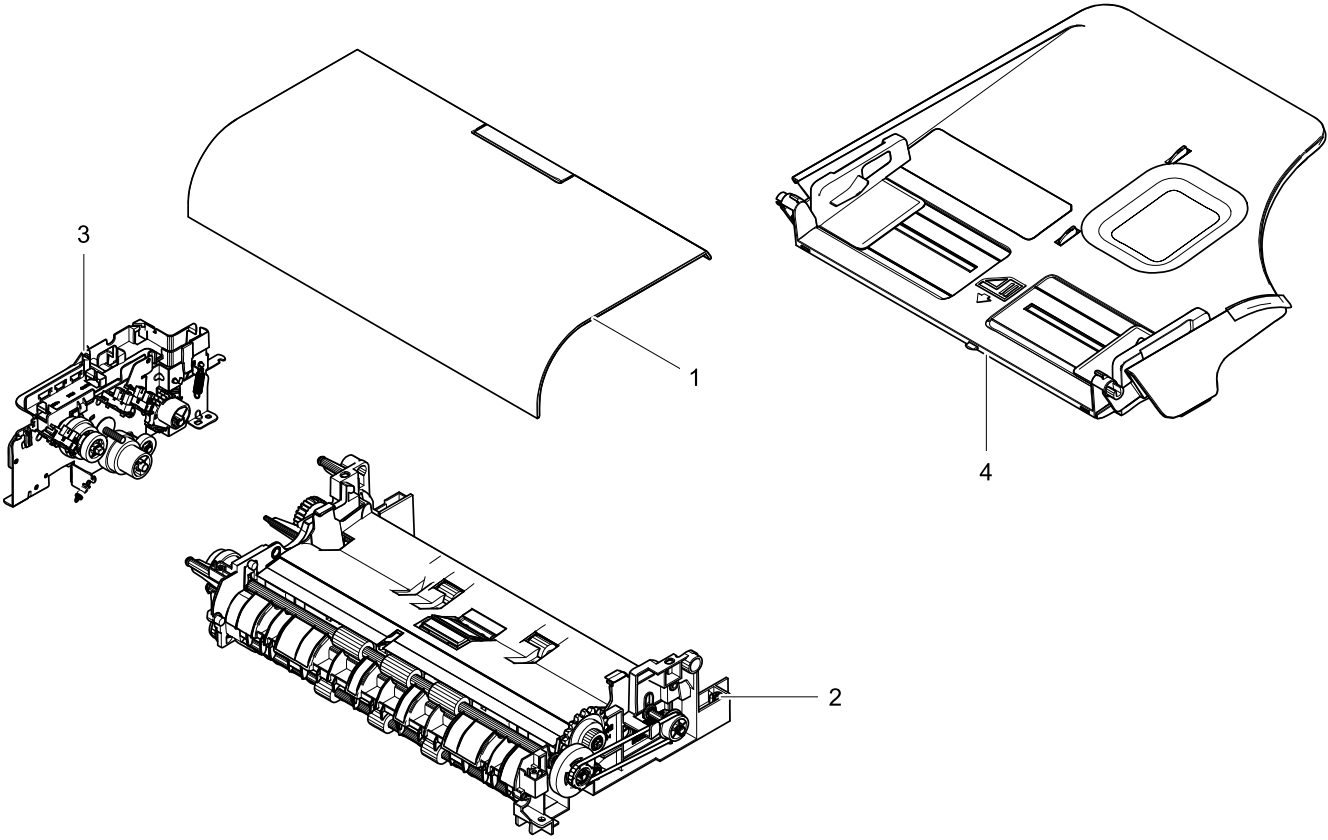


Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	JC97-03989A	2		JC97-03997A	DADF PLATEN; CLX-9201, SEC	SA	
2	JC97-03989A	2		JC97-03991A	DADF-SUB; CLX-9201, SEC	SA	
3	JC97-03989A	2		JC97-03995A	DADF-HINGE L; BH,+,B, M4,L16, NI PLT, SWRCH18A	SA	
4	JC97-03989A	2		JC97-03996A	DADF-HINGE R; BH,+,B,M4, L10,NI PLT, SWRCH18A	SA	
5	JC97-03989A	2		JC63-03345A	COVER-SIDE_F; CLP-500, ART PAPER, W62, L13, WHITE, COMMON	SNA	
6	JC97-03989A	2		JC63-03354A	COVER-DECO_R; CLX-9201, SEC	SNA	
7	JC97-03989A	2		JC63-03346A	COVER-SIDE_R; CLX-9201, HIPS, 2, 480, 75, Naoto Brown Black,166, HR-1360T	SNA	
8	JC97-03989A	2		JC63-03353A	COVER-DECO_F; CLX-9201, SEC	SNA	

9.1. DADF-SUB

Exploded View

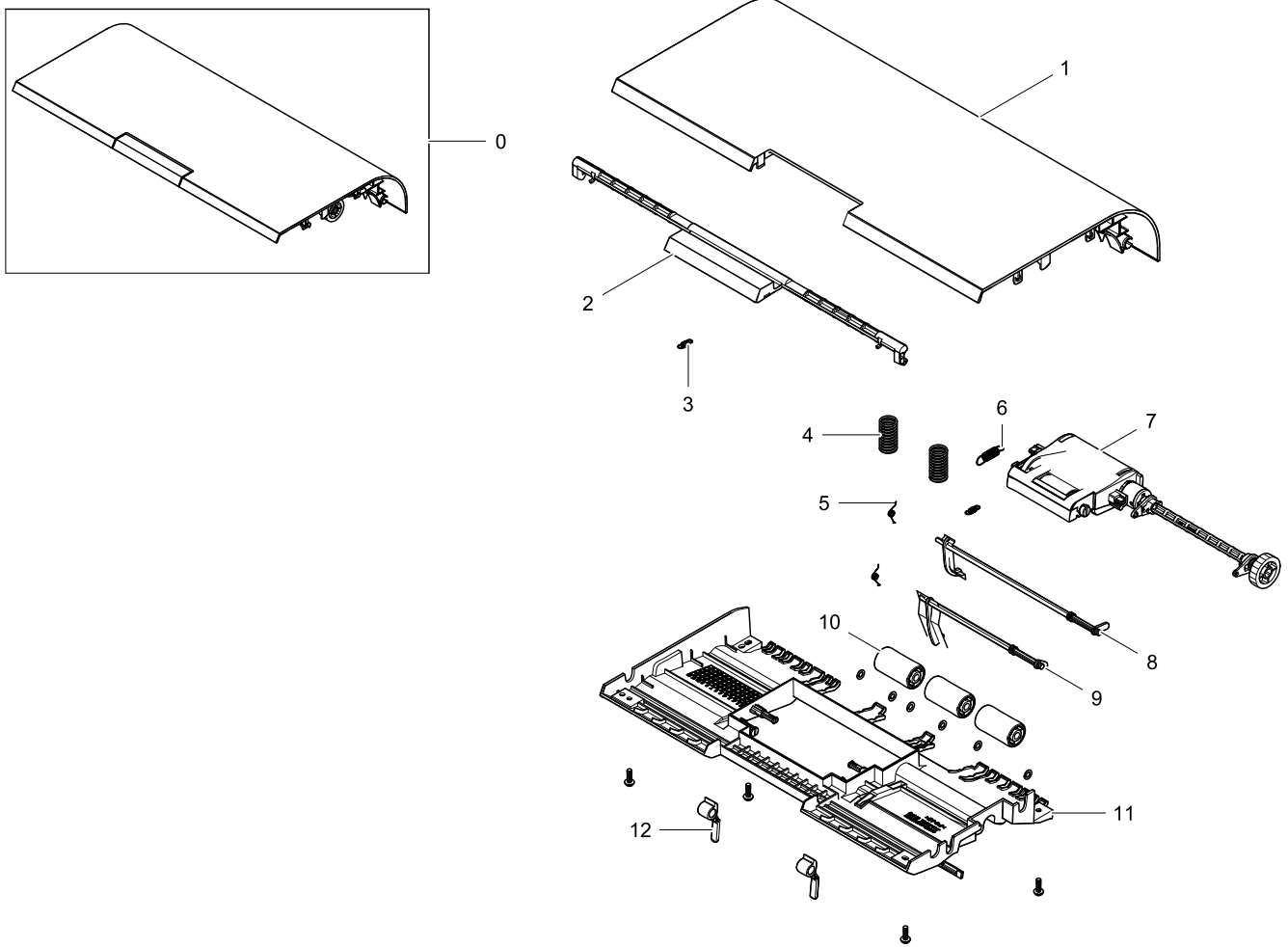


Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	JC97-03991A	3		JC97-03990A	DADF OPEN-COVER; CLX-9201, SEC	SA	
2	JC97-03991A	3		JC97-03992A	DADF FRAME-MAIN; CLX-9201, SEC	SA	
3	JC97-03991A	3		JC97-03993A	DADF-MOTOR; CLX-9201, SEC	SA	
4	JC97-03991A	3		JC97-03994A	DADF STACKER; PWH,+, B,M3, L10,NI PLT, SWRCH18A	SA	

9.1.1. DADF OPEN-COVER

Exploded View



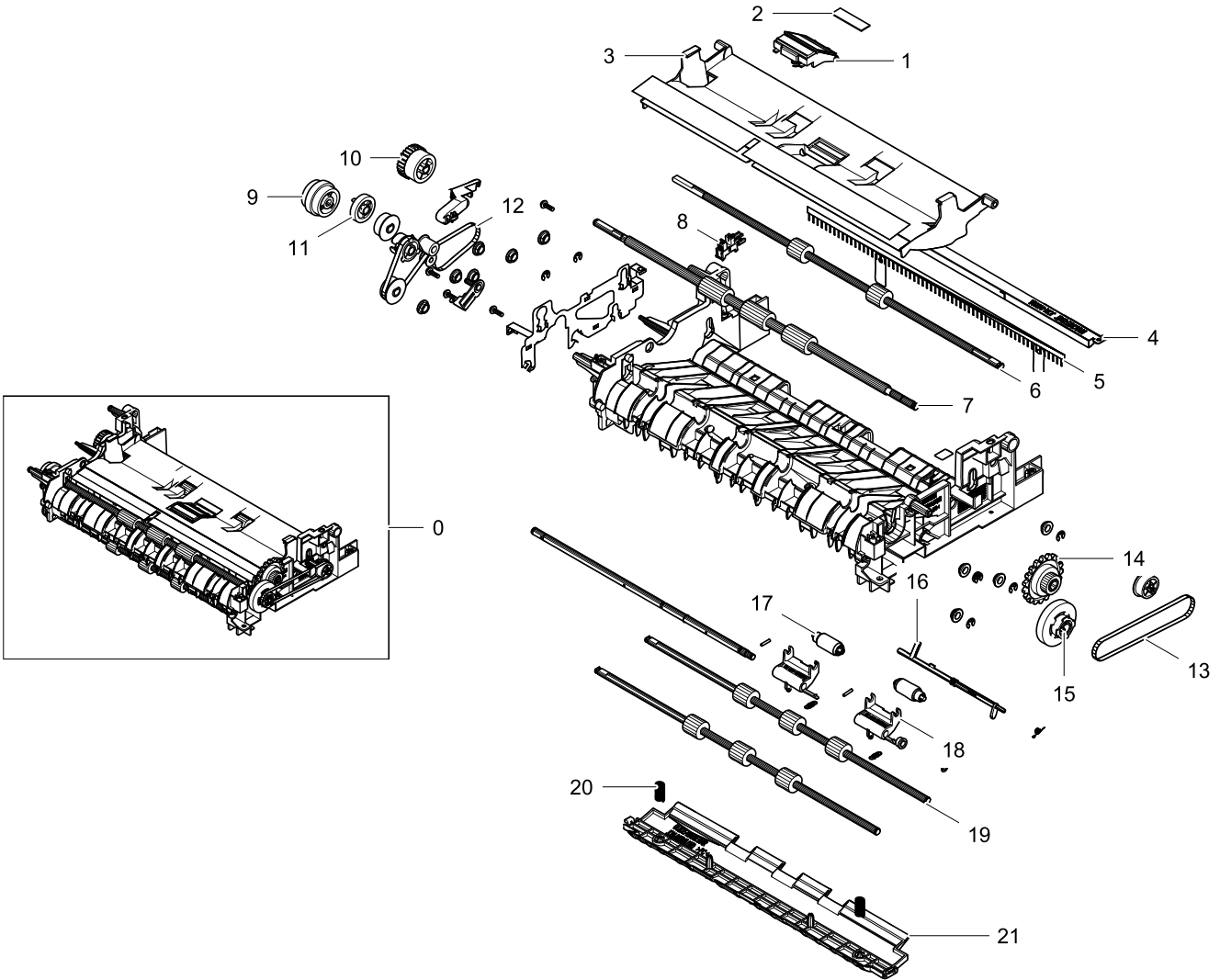
Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
0	JC97-03991A	3		JC97-03990A	DADF OPEN-COVER; CLX-9201, SEC	SA	
1	JC97-03990A	4		JC63-03273A	COVER-OPEN; CLX-9201, HIPS, 322, Naoto Brown Black	SNA	
2	JC97-03990A	4		JC64-00682A	HANDLE-COVER_OPEN; CLX-9201, POM, 33.7, WHITE	SNA	
3	JC97-03990A	4		6107-003033	SPRING-ES; CLX-6240FX, PORON, 1.0,7. 8,4, BLACK	SA	
4	JC97-03990A	4		6107-003022	SPRING-CS; CLX-9201, SEC	SA	
5	JC97-03990A	4		6107-001737	SPRING-TS; CLX-9201, SEC	SA	
6	JC97-03990A	4		JC61-00482A	SPRING ETC-PICKUP; CLX-9201, POM, BLACK	SA	
7	JC97-03990A	4		JC97-04009A	DADF GUIDE-PIKUP; CLX-9350, POM, 18	SA	
8	JC97-03990A	4		JC66-03148A	ACTUATOR-REGI; CLX-9201, SUM22, 169,4	SNA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
9	JC97-03990A	4		JC66-03147A	ACTUATOR-DETECT; SWP, 1.2,22, 10.2, 11.4,9, FREE	SNA	
10	JC97-03990A	4		JC66-02384A	ROLLER-IDLE TAKE AWAY; CLX-9201, HIPS, 2, 303.7, Naoto Brown Black, 35.7	SNA	
11	JC97-03990A	4		JC63-03274A	COVER-OPEN_INNER; SUS304, PI0.25 ,ID3.8, OD4.3, 105	SNA	
12	JC97-03990A	4		JC61-04647A	STOPPER-PAPER; CLX-9201, PC, 159.5	SNA	

9.1.2. DADF FRAME-MAIN

Exploded View

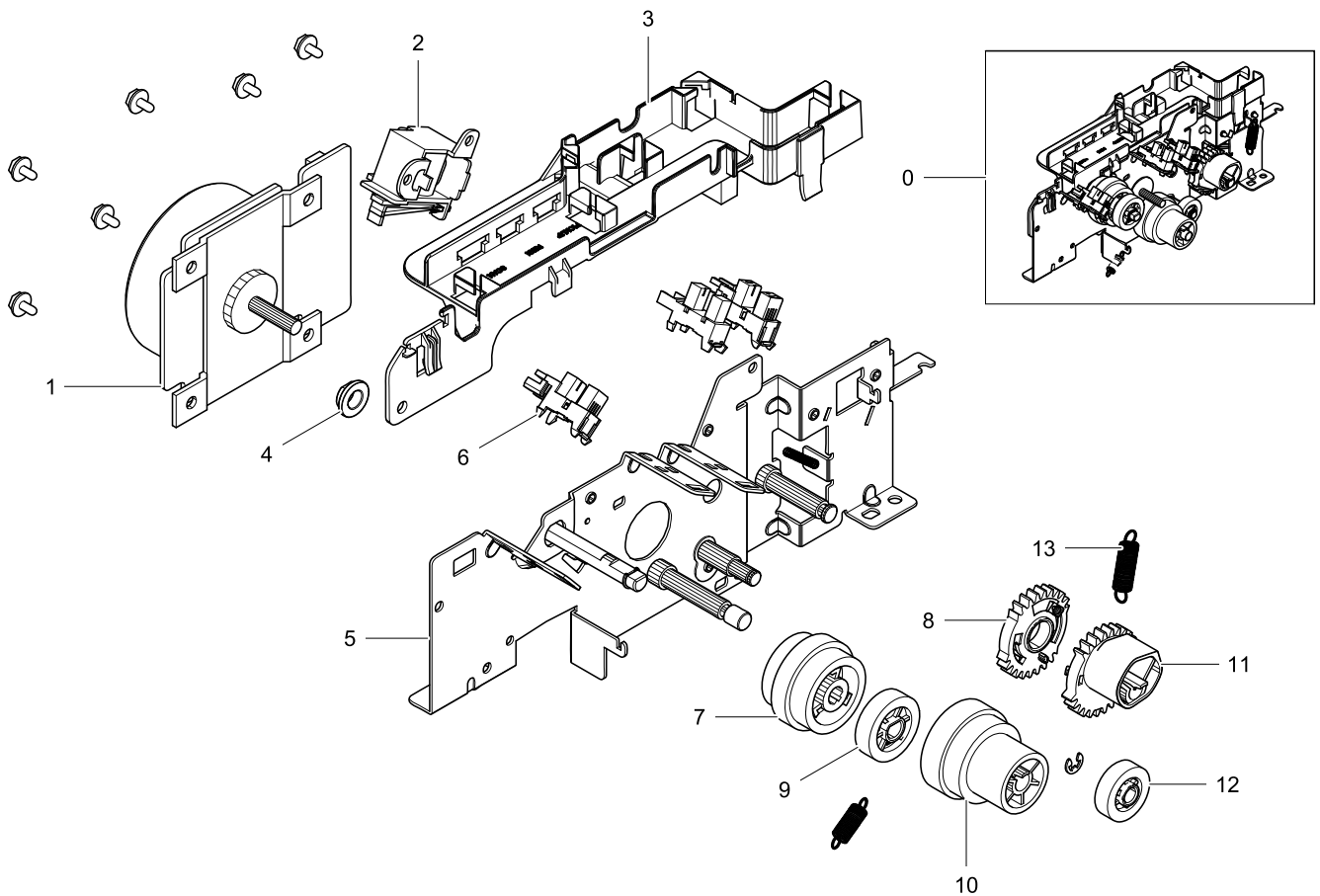


Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
0	JC97-03991A	3		JC97-03992A	DADF FRAME-MAIN; CLX-9201, SEC	SA	
1	JC97-03992A	4		JC97-03097A	MEA-HOLDER ADF RUBBER; CLX-9201, EPDM, 16, GRAY	SA	
2	JC97-03992A	4		JC69-02810A	PAD-GUIDE_PICKUP; SCX-1110F, STS303, L10.0, D2.0	SNA	
3	JC97-03992A	4		JC61-04583A	GUIDE-PICK_UP; M4,ID4.3, OD9, T0.8, ZPC(YEL), SCP	SNA	
4	JC97-03992A	4		JC61-04908A	BRACKET-EXIT; SCX-5312F, SUS304WPB, PI0.65, 6.4mm, 7.7mm	SNA	
5	JC97-03992A	4		JC67-00562A	BRUSH-ANTISTATIC; SUS304, 0.26, 4.05, 2.4,4.3,9.2, RIGHT HAND, 6.6, 6.6, 115	SNA	
6	JC97-03992A	4		JC66-03095A	ROLLER-EXIT; TR, 75mW, BGA, TR	SNA	
7	JC97-03992A	4		JC66-03094A	ROLLER-REGI; POLYIMIDE, ID8.1, OD12, T0.2,BLK	SNA	
8	JC97-03992A	4		0604-001393	PHOTO-INTERRUPTER; CLX-9201, POM, 12.0, BLACK	SA	
9	JC97-03992A	4		JC47-00033A	CLUTCH-ELECTRIC; CLX-9201, PU, 1.0, 10,35	SA	
10	JC97-03992A	4		JC66-03261A	GEAR-EXIT; ML-3200ND, DC24V, 125mA, Z24, M1, 2.5KGF, SLIM TYPE	SA	
11	JC97-03992A	4		JC66-02296A	ROLLER-TENSION IDLE; CLX-9201, UL10272, 3P, 200mm, GRAY/BLK, AWG26	SNA	
12	JC97-03992A	4		6602-003186	BELT-TIMING GEAR; CLX-9201, SUS, 0.2,143. 29, GROUND	SNA	
13	JC97-03992A	4		6602-003183	BELT-TIMING GEAR; CLX-9201, PC, 126.2	SNA	
14	JC97-03992A	4		JC66-03267A	GEAR-REDUCTION_KNOB; POLYSLIDER,ID4, OD7, T0.5, Black, side-Cutting	SA	
15	JC97-03992A	4		JC66-03264A	GEAR-IDLE_CLUTCH; CLX-9201, ABS, 2,344	SA	
16	JC97-03992A	4		JC66-03184A	ACTUATOR-EXIT; CLX-9201, POM, 0.8,20, BLACK, 17.6, JGMA3	SNA	
17	JC97-03992A	4		JC66-03177A	ROLLER-EXIT_IDLE; CLX-9201, POM, 37.5, BLACK	SNA	
18	JC97-03992A	4		JC61-04833A	HOLDER-EXIT IDLE_R; CLX-9201, PET, 0.125, 10,35	SNA	
19	JC97-03992A	4		JC66-03093A	ROLLER-FEED; CLX-9201, POM,6,19.864	SNA	
20	JC97-03992A	4		JC61-00548A	SPRING ETC-WHITE BAR; PWH,+,B, M3, L10,NI PLT, SWRCH18A	SA	
21	JC97-03992A	4		JC61-04584A	GUIDE-WHITE_BAR; 40S2M258, RUBBER, W4.0, L258, BLACK	SNA	

9.1.3. DADF-MOTOR

Exploded View



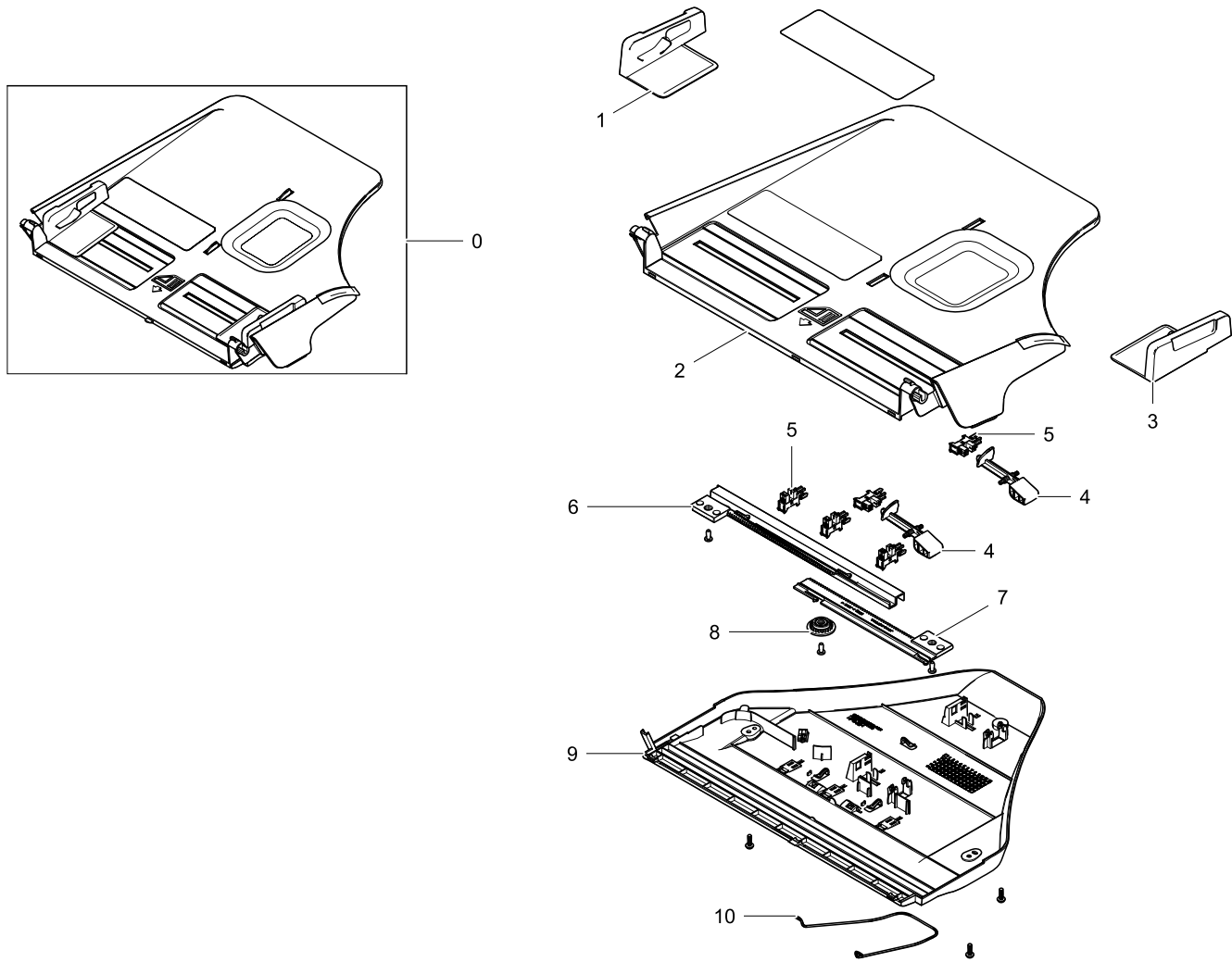
Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
0	JC97-03991A	3		JC97-03993A	DADF-MOTOR; CLX-9201, SEC	SA	
1	JC97-03993A	4		JC31-00156A	MOTOR BLDC-TYPE1; CLX-9201, POM, 0.5/1. 0,55/25, BLACK, 30.265/27, JGMA3	SA	
2	JC97-03993A	4		JC33-00007A	SOLENOID-PICK UP; TR,75mW, BGA, TR	SA	
3	JC97-03993A	4		JC61-04534A	HOLDER-HARNESS; ML-3200ND, DC24V, 125mA, Z24,M1,2.5KGF,SLIM TYPE	SNA	
4	JC97-03993A	4		JC61-00699B	BUSH-EXIT; CLX-9201,EGI-SECC, 1.0,60, 200, NATURAL	SA	
5	JC97-03993A	4		JC61-04627A	BRACKET-MOTOR; SWP, 0.16, 19,2.4,2.7,14, FREE	SNA	
6	JC97-03993A	4		0604-001393	PHOTO-INTERRUPTER; CLX-9201, HIPS, 197.5, BLACK	SA	
7	JC97-03993A	4		JC47-00033A	CLUTCH-ELECTRIC; CLX-9201, POM, 1.0,20, BLACK, 22, JGMA3	SA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
8	JC97-03993A	4		JC66-03260A	GEAR-CAM_OUTER; HWH,+, M3,L6, ZPC(WHT), SWRCH18A, C TYPE	SA	
9	JC97-03993A	4		JC66-03265A	GEAR-PICKUP_IDLE; CLX-9201, POM,1.0,16, BLACK,18.4, JGMA3	SA	
10	JC97-03993A	4		JC66-03263A	GEAR-REDUCTION; CLX-9201, POM, 1.0,28, BLACK,30.0, JGAM3	SA	
11	JC97-03993A	4		JC66-03259A	GEAR-CAM_INNER; CLX-9350, Fe+Cu+Zn-Slearate	SA	
12	JC97-03993A	4		JC66-03262A	GEAR-EXIT_IDLE; CLX-9201, SEC	SA	
13	JC97-03993A	4		6107-003036	SPRING-ES; SPY272, DAMPING GREASE	SA	

9.1.4. DADF STACKER

Exploded View

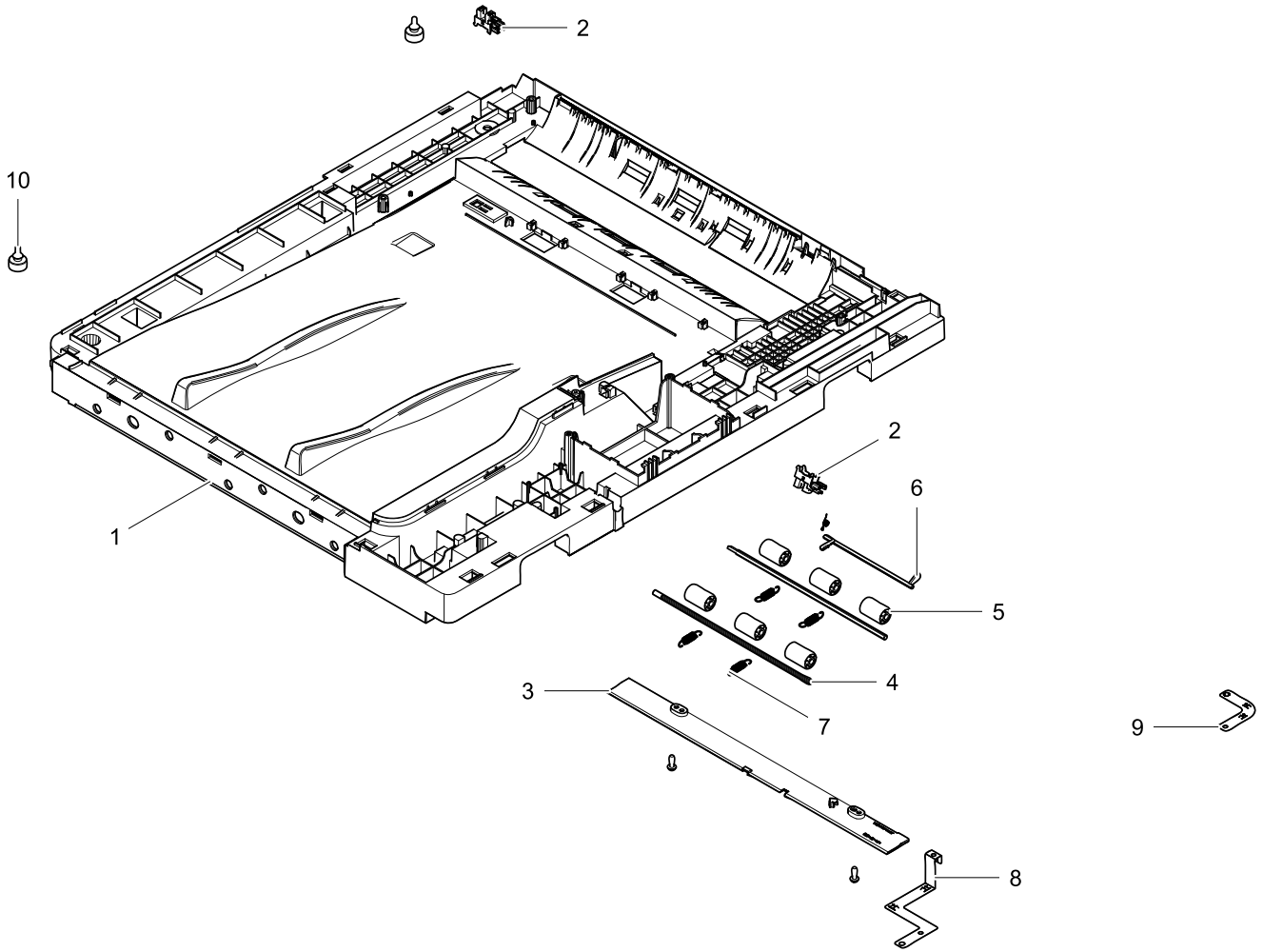


Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
0	JC97-03991A	3		JC97-03994A	DADF STACKER; CLX-9201, SEC	SA	
1	JC97-03994A	4		JC61-04748A	GUIDE-DOC_F; CLX-9201, ABS, 33.08, 158.53, HF-0660I, GUIDE	SNA	
2	JC97-03994A	4		JC61-04746A	GUIDE-STACKER_UPPER; CF4500, POM, NTR+WHT(DELIN500), HB	SNA	
3	JC97-03994A	4		JC61-04749A	GUIDE-DOC_R; CLX-9201, ABS, 37, 224.09, HF-0660i, GUIDE	SNA	
4	JC97-03994A	4		JC66-03209A	ACTUATOR-PAPER_LENGTH; CLX-9350, PC, 0.254, 29,22	SNA	
5	JC97-03994A	4		0604-001393	PHOTO-INTERRUPTER; CLX-9201, SEC	SA	
6	JC97-03994A	4		JC61-04751A	GUIDE-GEAR_RACK_R; CLX-9201, PC, 0.254, 47.7, 146.51	SNA	
7	JC97-03994A	4		JC61-04750A	GUIDE-GEAR_RACK_F; SCX-6345N/XRX, SUS, PI1.5,81.0,121.5, NTR, PAPER	SNA	
8	JC97-03994A	4		JF72-41354A	PMO-GEAR PINION; CLX-9201, HIPS,2, 125,50, 17.4, HR-1360T, Naoto Brown Black, GUIDE	SNA	
9	JC97-03994A	4		JC61-04747A	GUIDE-STACKER_LOWER; CLX-9201, PC, 80, 40, Naoto Brown Black	SNA	
10	JC97-03994A	4		JC61-01438A	GUIDE-STACKER WIRE; BH,+,-,B,M3, L8, ZPC(BLK), SWRCH18A,-	SNA	

9.2. DADF PLATEN_Mono

Exploded View



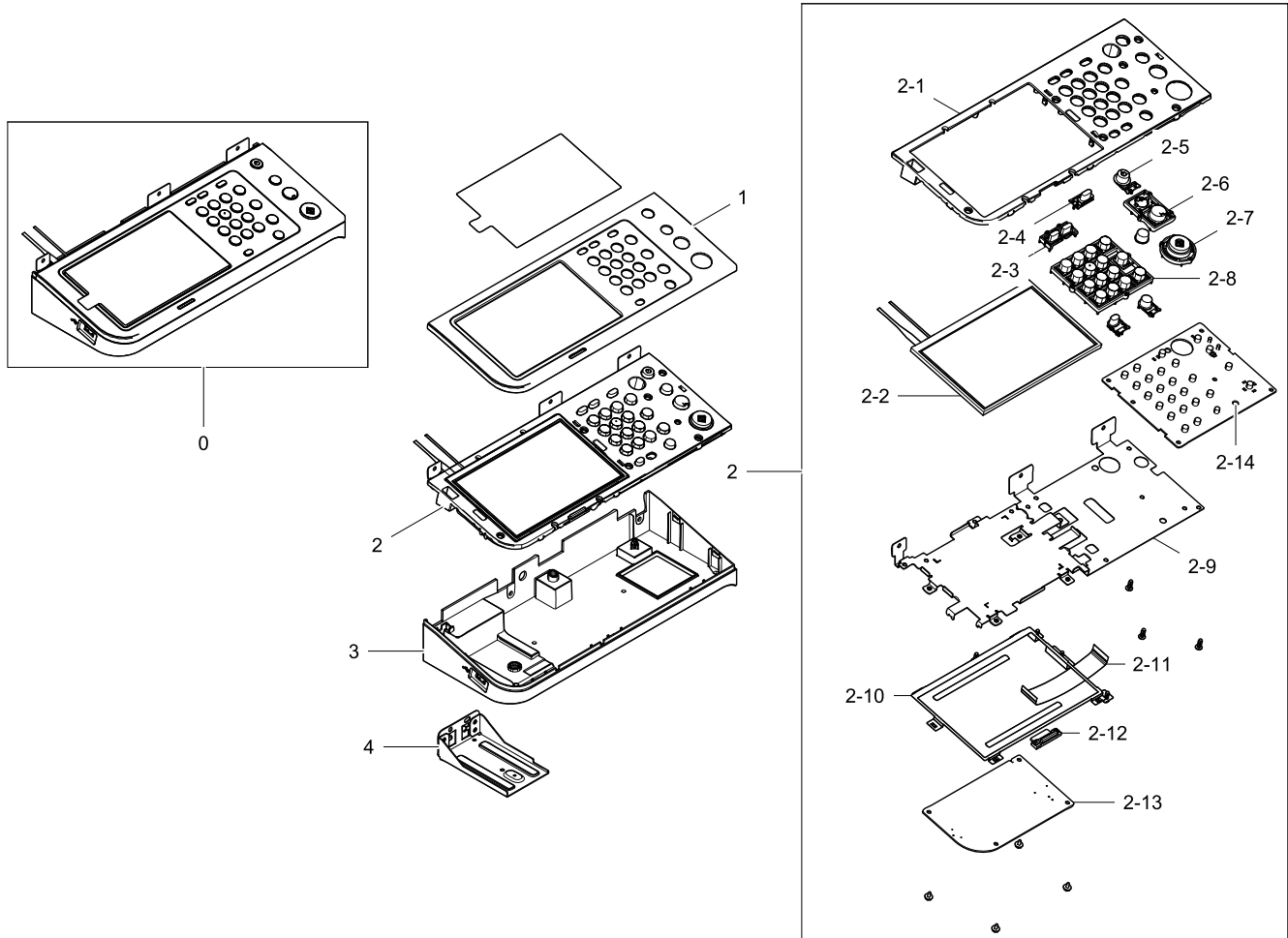
Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	JC97-03997A	3		JC63-03348A	COVER-PLATEN; SCX-6345N/XRX, POM, OD14, L23,WHT	SNA	
2	JC97-03997A	3		0604-001393	PHOTO-INTERRUPTER; CLX-9201, SEC	SA	
3	JC97-03997A	3		JC63-03347A	COVER-DUMMY_PLATEN; TR,75mW, BGA, TR	SNA	
4	JC97-03997A	3		JC66-03211A	SHAFT-IDLE_FEED; SUS304, 0.26, 4.05, 2.4,4.3,9.2, RIGHT HAND, 6.6,6.6, 115	SNA	
5	JC97-03997A	3		JC66-01022A	ROLLER-M_IDLE SCF; CLX-9201, PC, 145, 40, BLACK, ACTUATOR-High Tem	SA	
6	JC97-03997A	3		JC66-03210A	ACTUATOR-SCAN; CLX-9201, SUS,0.2,59, GROUND	SNA	
7	JC97-03997A	3		6107-002241	SPRING-ES; CLX-9201, SUM22, 172,4	SA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
8	JC97-03997A	3		JC63-03351A	GROUND-HINGE_RIGHT; SUS,PI0.5, L19.7, OD5.6	SNA	
9	JC97-03997A	3		JC63-03349A	GROUND-HINGE_FRAME; CLX-9201, SUS, 0.2, 80, GROUND	SNA	
10	JC97-03997A	3		JC61-40001A	FOOT-ML80; CLX-9201, HIPS,2,550, 480, Naoto Brown Black, 1080, HR-1360T	SNA	

10.OPE Mono

Exploded View



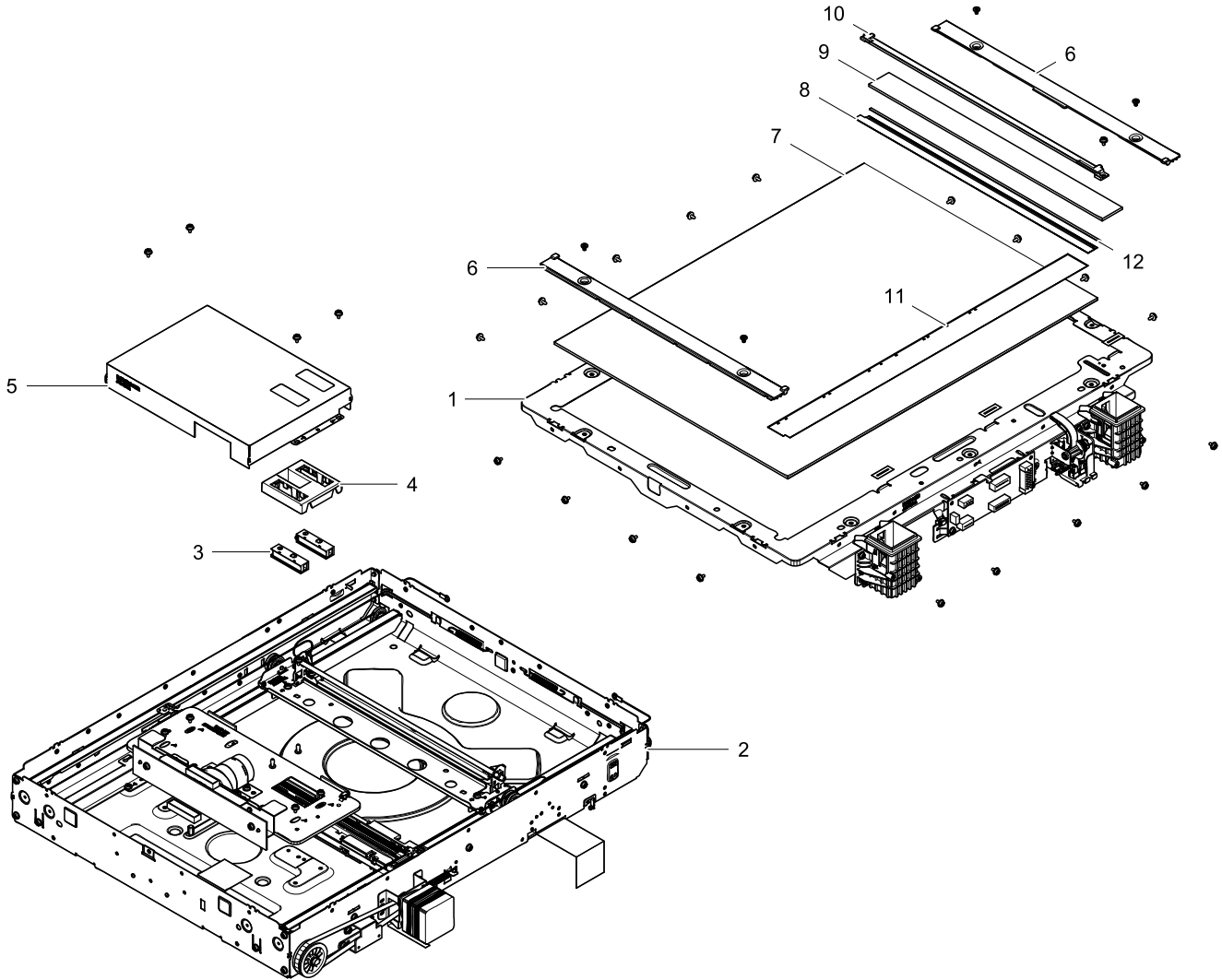
Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
0	SCX-8128NA/SEE	1		JC97-04006B	OPE; CLX-9201, WORLD, SEC	SNA	
1	JC97-04006A	2		JC63-03409A	COVER-FRONT DUMMY OPE; CLX-9201, WORLD, SEC	SA	
2	JC97-04006A	2		JC97-04007A	OPE-FRONT; CLX-9201, SECC,T0.8, W220, L150	SA	
2-1	JC97-04007A	3		JC63-03407A	COVER-FRONT OPE; CLX-9201, HIPS, 19*14, T2, C82824	SA	
2-2	JC97-04007A	3		JC07-00021A	LCD; CLX-9201, PMMA, 52*18, T2.0	SA	
2-3	JC97-04007A	3		JC64-00683A	KEY-JOB STATUS; CLX-9201, HIPS, 21*22, T2, C82824	SA	
2-4	JC97-04007A	3		JC67-00586A	LENS-ECO; DOUBLE TAPE,6, 100	SNA	
2-5	JC97-04007A	3		JC64-00691A	KEY-POWER; CLX-9201, WORLD, SEC	SA	
2-6	JC97-04007A	3		JC64-00685A	KEY-STOP; PWH,+B,M3, L10, NI PLT,SWRCH18A	SA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
2-7	JC97-04007A	3		JC64-00686A	KEY-START; CLX-9201, HIPS, 58*15, T2, C82824	SA	
2-8	JC97-04007A	3		JC64-00684A	KEY-M TEL; CLX-9201, PMMA, Milky, 18.6*14.1, T 2.0	SA	
2-9	JC97-04007A	3		JC61-04561A	BRACKET-LCD; CLX-9201, SUS, 0.3, W190, L120, GROUND	SA	
2-10	JC97-04007A	3		JC63-03310A	GROUND-TOUCH; CLX-9201, HIPS, T2.5, W327, L118, C82824	SA	
2-11	JC97-04007A	3		JC39-01575A	FLAT CABLE-KEY; CLX-9201/9251/9301, SEC, FR-4, 6LAYER	SNA	
2-12	JC97-04007A	3		JC67-00560A	LENS-STATUS; CLX-9201, 20P, 0.065, 135mm, AWM20624, 1.0mm, WHITE	SA	
2-13	JC97-04007A	3		JC92-02436A	PBA-OPE; HWH,+, M3, L8, ZPC(WHT), SWRCH18A, C TYPE	SA	
2-14	JC97-04006B	2		JC92-02435A	PBA-OPE KEY; CLX-9201/9251/9301, SEC, FR-1, 1LAYER	SA	
3	JC97-04006A	2		JC63-03408A	COVER-BOTTOM OPE; CLX-9201, WORLD, SEC	SA	
4	JC97-04006A	2		JC61-04567A	BRACKET-SUPPORT; PET, 0.125, 190, 110	SA	

11.PLATEN FR HR

Exploded View



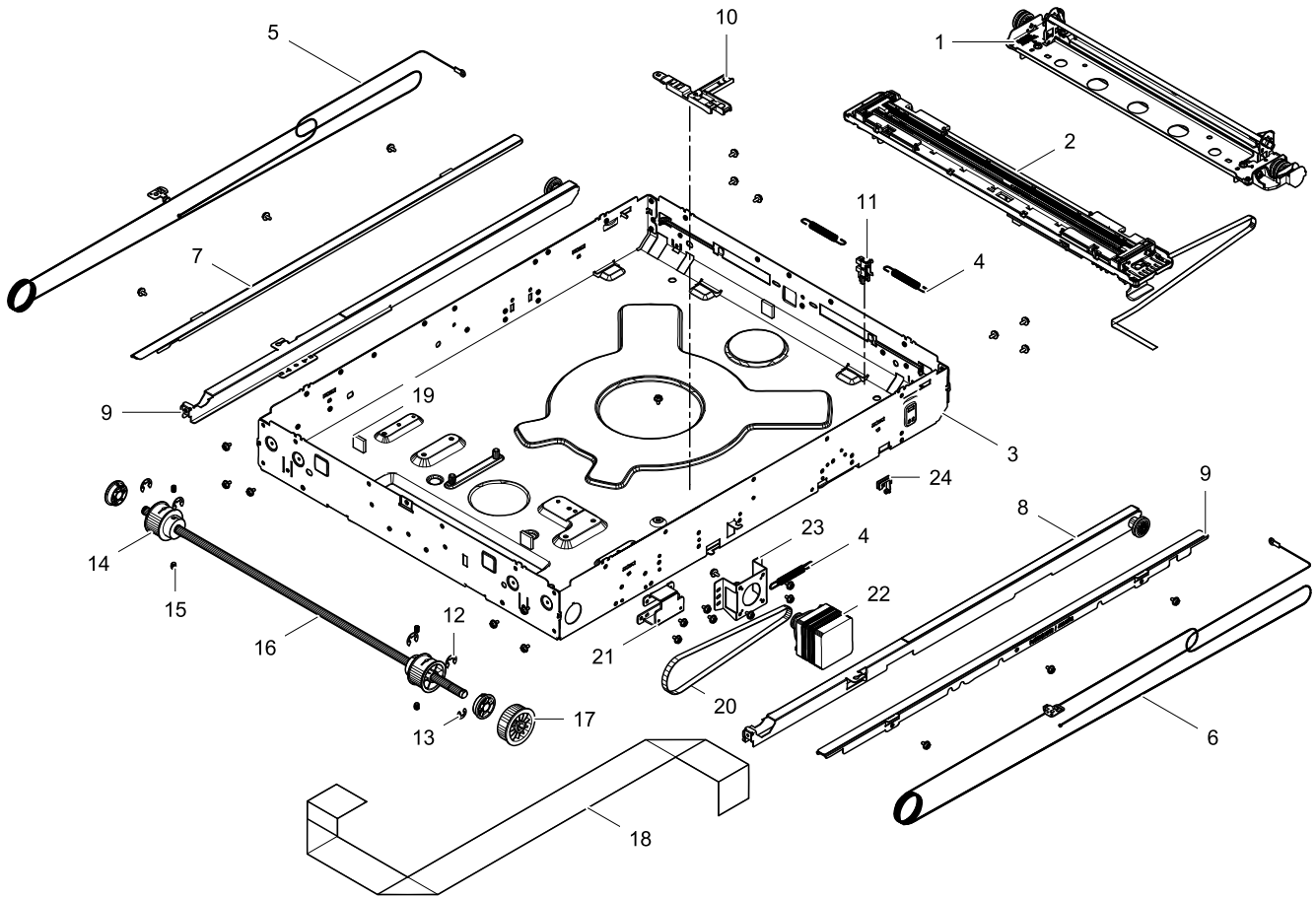
Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	JC97-04005A	3		JC97-04002A	PLATEN FR HR-UPPER; CLX-9201, SCANNER	SNA	
2	JC97-04005A	3		JC97-03985A	PLATEN FR HR-LOWER; CLX-9201, SCANNER	SA	
3	JC97-04020A	2		0604-001453	PHOTO-INTERRUPTER; CLX-9201, ABS, 60, 60, BLACK	SA	
4	JC97-04020A	2		JC61-04569A	HOLDER-APS; #8915, T0.15, W12, L55M, CLR,-	SNA	
5	JC97-04020A	2		JC61-04638A	PLATE-ALIGN COVER; 346*30, 3.2	SNA	
6	JC97-04020A	2		JC63-03296A	COVER-GLASS; 1401C, RED,-,BOND-LOCK SCREW	SNA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
7	JC97-04020A	2		JC01-00072A	GLASS-SCAN; PORON,1.0, 331, 2.5, BLACK	SA	
8	JC97-04020A	2		JC61-04814A	GUIDE-PAPER V; 459.4*346, 3.2	SNA	
9	JC97-04020A	2		JC01-00073A	GLASS-SCAN ADF; HWH,+, M3, L6, ZPC(WHT), SWRCH18A, C TYPE	SA	
10	JC97-04020A	2		JC61-04811A	GUIDE-ADF-PATH; CLX-9201, PC, 1,9.5, 339, PART	SNA	
11	JC97-04020A	2		JC61-04815A	GUIDE-PAPER H; CLX-9201, SCANNER	SNA	
12	JC97-04020A	2		JC63-03315A	SPONGE-GUIDE ADF; CLX-9201, PC, 1,30, 435, PART	SNA	

11.1. PLATEN FR HR-LOWER

Exploded View



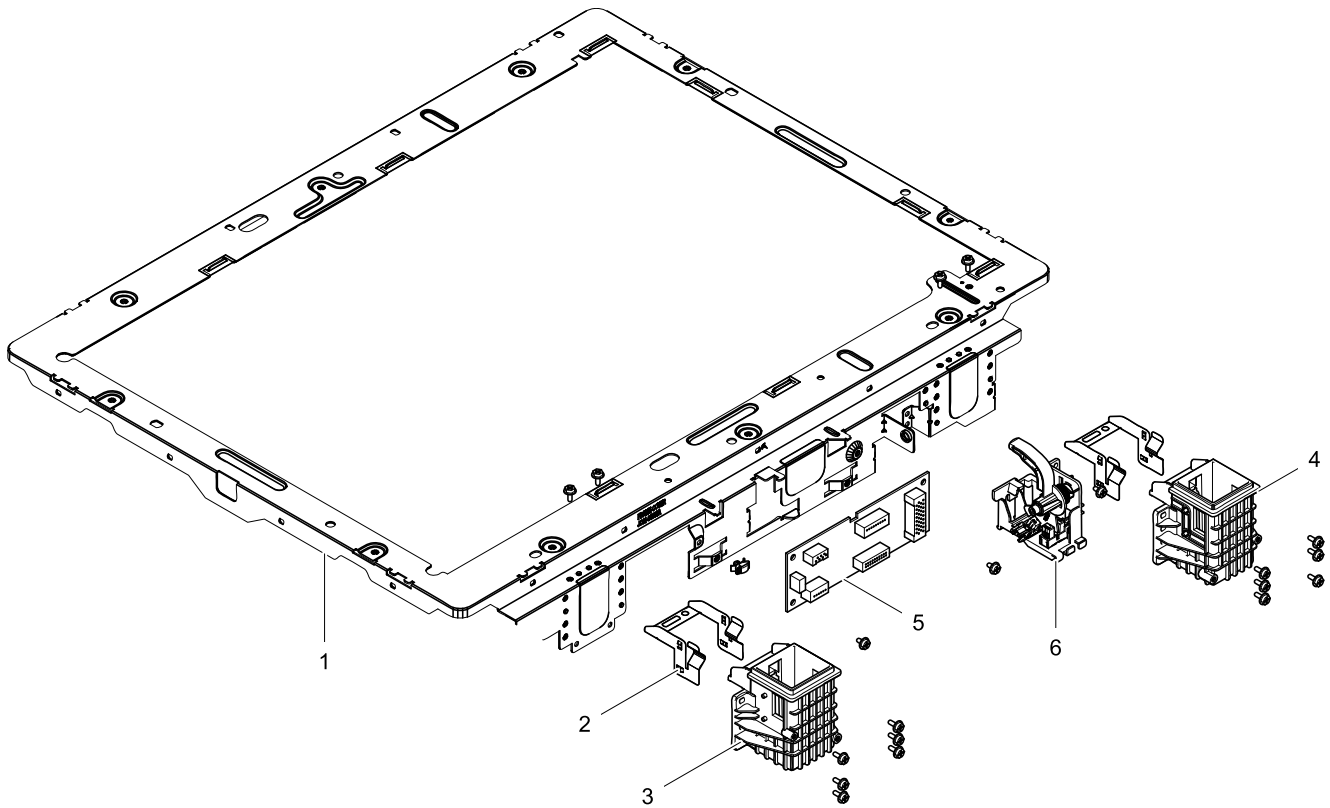
Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	JC97-03985A	4		JC97-03983A	PLATEN FR HR-CARRIAGE FR; ID5.0, OD11.0, T0.6, PASS, STS304	SA	
2	JC97-03985A	4		JC97-03984A	PLATEN FR HR-CARRIAGE HR; CLX-9201, SCANNER	SA	
3	JC97-03985A	4		JC61-04674A	FRAME-BASE; CLX-9201, SCANNER	SNA	
4	JC97-03985A	4		6107-001698	SPRING-ES; CLX-9201, ABS, 92,52, BLACK	SA	
5	JC97-03985A	4		JC97-03998A	PLATEN FR HR-STRING FRONT; SUS, PI0.8, L42, OD6.4	SNA	
6	JC97-03985A	4		JC97-03999A	PLATEN FR HR-STRING REAR; 17PM-K049-P6WS, 1.2A, 5.2W, 2.2V	SNA	
7	JC97-03985A	4		JC97-03986A	PLATEN FR HR-RAIL LOWER F; CLX-9201, SECC, 1,409, 532	SA	
8	JC97-03985A	4		JC97-03987A	PLATEN FR HR-RAIL LOWER R; CLX-9201, UL10272,6	SA	

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
9	JC97-03985A	4		JC97-03988A	PLATEN FR HR-RAIL UPPER; CLX-9201, SCANNER	SA	
10	JC97-03985A	4		JC61-04572A	HOLDER-CABLE; ML-9400W, bearing	SNA	
11	JC97-03985A	4		0604-001393	PHOTO-INTERRUPTER; CLX-9201, SCANNER	SA	
12	JC97-03985A	4		6044-000130	RING-E; CLX-9201, SECC, 1.0, 102,41	SNA	
13	JC97-03985A	4		6044-000231	RING-E; CLX-9201,SECC, 1.6, 80, 56	SNA	
14	JC97-03985A	4		JC66-03242A	PULLEY-DRIVING; ID7, OD14, T0.8, PASS, STSC	SNA	
15	JC97-03985A	4		JC64-00508A	HANDLE-SOCKET SET SCREW; CLX-9201, SUM22, 438, 8	SNA	
16	JC97-03985A	4		JC66-03186A	SHAFT-DRIVING; SF4000, CR RUBBER, W14XL14, BLK,3	SNA	
17	JC97-03985A	4		JC66-02257A	PULLEY-BELT; CLX-9201, SCANNER	SA	
18	JC97-03985A	4		JC39-01673A	FLAT CABLE-CCD IF; CLX-9201, SCANNER	SNA	
19	JC97-03985A	4		JG61-40001A	FOOT-SF4000; DAGM-15,10. 5X5.0, Nylon66	SA	
20	JC97-03985A	4		6602-001725	BELT-TIMING GEAR; CLX-9201, PC, BLACK,8,33	SA	
21	JC97-03985A	4		JC61-04629A	BRACKET-SUPPORT; CLX-9350, SWCH18A, 4,6	SNA	
22	JC97-03985A	4		JC31-00158A	MOTOR STEP; CLX-9201, SCANNER	SA	
23	JC97-03985A	4		JC61-04630A	BRACKET-MOTOR; CLX-9201, 40P, 600mm, AWM20624, 1.0mm	SNA	
24	JC97-03985A	4		6502-001152	CABLE CLAMP; HWH,+,M3, L6,ZPC(WHT), SWRCH18A, C TYPE	SNA	

11.2. PLATEN FR HR-UPPER

Exploded View



Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	JC97-04002A	4		JC61-04693A	FRAME-COVER; PC, 0.125, 24,9, TRANSPARENT	SNA	
2	JC97-04002A	4		JC63-03314A	GROUND-HINGE; CLX-9201, ABS, 59, 61, G61881	SNA	
3	JC97-04002A	4		JC61-04574A	HOLDER-HINGE-R; DACS-2N, 6.2*2.8, Nylon66	SNA	
4	JC97-04002A	4		JC61-04573A	HOLDER-HINGE-L; CLX-9201	SNA	
5	JC97-04002A	4		JC92-02447A	PBA-SCAN JOINT; CLX-9201, SCANNER	SNA	
6	JC97-04002A	4		JC97-04003A	PLATEN FR HR-OPEN SENSOR; CLX-9201, SUS, 0.2, 70, 50, GROUND	SNA	