

Phaser®
6280
Color
Laser
Printer



Phaser® 6280

Service Manual





Phaser[®]6280

Color Laser Printer

Warning

The following servicing instructions are for use by qualified service personnel only. To avoid personal injury, do not perform any servicing other than that contained in the operating instructions, unless you are qualified to do so.

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Service Terms

Manual Terms

Various terms are used throughout this manual to either provide additional information on a specific topic or to warn of possible danger present during a procedure or action. Be aware of all symbols and terms when they are used, and always read Note, Caution, and Warning statements.

Note

A note indicates an operating or maintenance procedure, practice or condition that is necessary to efficiently accomplish a task.

A note can provide additional information related to a specific subject or add a comment on the results achieved through a previous action.

Caution

A caution indicates an operating or maintenance procedure, practice or condition that, if not strictly observed, results in damage to, or destruction of, equipment.

Warning

A warning indicates an operating or maintenance procedure, practice or condition that, if not strictly observed, results in injury or loss of life.

Product Terms

Caution: A personal injury hazard exists that may not be apparent. For example, a panel may cover the hazardous area.

Danger: A personal injury hazard exists in the area where you see the sign.

Symbols Marked on the Product



Danger invisible laser radiation when open. Avoid direct exposure to beam.



Hot surface on or in the printer. Use caution to avoid personal injury.



Use caution (or draws attention to a particular component). Refer to the manual(s) for information.



It may take 30 minutes for the fuser to cool down.



Do not touch the item.



Do not expose the item to sunlight.



Do not expose the item to light.



Do not burn the Print Cartridge.



Do not expose the Print Cartridge to sunlight.



Recycle the item.

Power Safety Precautions

Power Source

For 115 VAC printers, do not apply more than 127 volts RMS between the supply conductors or between either supply conductor and ground. For 230 VAC printers, do not apply more than 254 volts RMS between the supply conductors or between either supply conductor and ground. Use only the specified power cord and connector. This manual assumes that the reader is a qualified service technician.

Plug the three-wire power cord (with grounding prong) into a grounded AC outlet only. If necessary, contact a licensed electrician to install a properly grounded outlet. If the product loses its ground connection, contact with conductive parts may cause an electrical shock. A protective ground connection by way of the grounding conductor in the power cord is essential for safe operation.

Disconnecting Power

Warning

Turning the power Off using the power switch does not completely de-energize the printer. You must also disconnect the power cord from the printer's Alternating Current (AC) inlet. Disconnect the power cord by pulling the plug, not the cord.

Disconnect the power cord in the following cases:

- if the power cord or plug is frayed or otherwise damaged,
- if any liquid or foreign material is spilled into the product,
- if the printer is exposed to any excess moisture,
- if the printer is dropped or damaged,
- if you suspect that the product needs servicing or repair,
- whenever you clean the product.

Electrostatic Discharge Precautions

Some semiconductor components, and the respective sub-assemblies that contain them, are vulnerable to damage by Electrostatic Discharge (ESD). These components include Integrated Circuits (ICs), Large-Scale Integrated circuits (LSIs), field-effect transistors, and other semiconductor chip components. The following techniques will reduce the occurrence of component damage caused by static electricity.

Be sure the power is Off to the chassis or circuit board, and observe all other safety precautions.

- Immediately before handling any semiconductor components assemblies, drain the electrostatic charge from your body. This can be accomplished by touching an earth ground source or by wearing a wrist strap device connected to an earth ground source. Wearing a wrist strap will also prevent accumulation of additional bodily static charges. Be sure to remove the wrist strap before applying power to the unit under test to avoid potential shock.
- After removing a static sensitive assembly from its anti-static bag, place it on a grounded conductive surface. If the anti-static bag is conductive, you may ground the bag and use it as a conductive surface.
- Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage some devices.
- Do not remove a replacement component or electrical sub-assembly from its protective package until you are ready to install it.
- Immediately before removing the protective material from the leads of a replacement device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
- Minimize body motions when handling unpacked replacement devices. Motion such as your clothes brushing together, or lifting a foot from a carpeted floor can generate enough static electricity to damage an electro-statically sensitive device.
- Handle IC's and Erasable Programmable Read-Only Memories (EPROM's) carefully to avoid bending pins.
- Pay attention to the direction of parts when mounting or inserting them on Printed Circuit Boards (PCB's).

Service Safety Summary

General Guidelines

For qualified service personnel only: Refer also to the preceding “Power Safety Precautions” on page v.

Avoid servicing alone: Do not perform internal service or adjustment of this product unless another person capable of rendering first aid or resuscitation is present.

Use care when servicing with power: Dangerous voltages may exist at several points in this product. To avoid personal injury, do not touch exposed connections and components while power is On. Disconnect power before removing the power supply shield or replacing components.

Do not wear jewelry: Remove jewelry prior to servicing. Rings, necklaces, and other metallic objects could come into contact with dangerous voltages and currents.

Warning Labels

Read and obey all posted warning labels. Throughout the printer, warning labels are displayed on potentially dangerous components. As you service the printer, check to make certain that all warning labels remain in place.

Safety Interlocks

Make sure all covers are in place and all Interlock Switches are functioning correctly after you have completed a printer service call. If you bypass an Interlock Switch during a service call, use extreme caution when working on or around the printer.

Class 1 Laser Product

The Phaser 6280 is certified to comply with Laser Product Performance Standards set by the U.S. Department of Health and Human Services as a Class 1 Laser Product. This means that this product does not emit hazardous laser radiation; which is possible only because the laser beam is totally enclosed during all modes of customer operation. When servicing the printer or laser unit, follow the procedures specified in this manual and there will be no hazards from the laser.

Servicing Electrical Components

Before starting any service procedure, switch the printer power Off and unplug the power cord from the wall outlet. If you must service the printer with power applied, be aware of the potential for electrical shock.

Warning

Do not touch any electrical component unless you are instructed to do so by a service procedure.

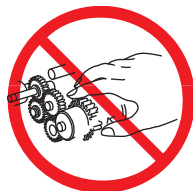


Servicing Mechanical Components

When servicing mechanical components within the printer, manually rotate the Drive Assemblies, Rollers, and Gears.

Warning

Do not try to manually rotate or manually stop the drive assemblies while any printer motor is running.



Servicing Fuser Components

Warning

This printer uses heat to fuse the toner image to paper. The Fuser is VERY HOT. Turn the printer power Off and wait at least 5 minutes for the Fuser to cool before attempting to service the Fuser or adjacent components.

Moving the Printer

Warning

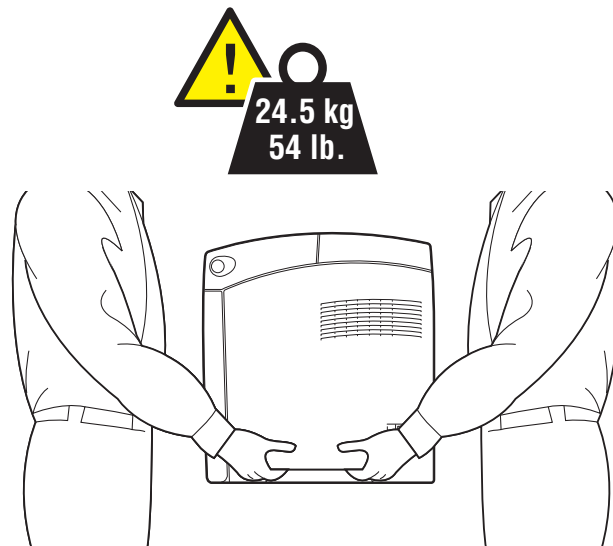
Parts of the printer are hot. Wait at least 30 minutes for the printer to cool before moving or packing the printer.

- Use the power switch to turn Off the printer, and unplug all cables and cords. Do not turn the printer Off by pulling the power cord or using a power-strip with an On/Off switch.

Warning

Back injury could result if you do not lift the printer properly.

- The printer can be lifted by one person. Use safety lifting and handling techniques when moving the printer.
- Always move the printer separately from Tray 2.



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When shipping the printer, repack the printer using the original packing material and boxes or a Xerox packaging kit. Instructions for repacking the printer are included in the kit. If you do not have all the original packaging, or are unable to repackage the printer, contact your local Xerox service representative.

Caution

Failure to repackage the printer properly for shipment can result in damage to the printer. Damage to the printer caused by improper packaging is not covered by the Xerox warranty, service agreement, or Total Satisfaction Guarantee.

Regulatory Information

Xerox has tested this product to electromagnetic emission and immunity standards. These standards are designed to mitigate interference caused or received by this product in a typical office environment.

United States (FCC Regulations)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the Federal Communications Commission (FCC) Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance with these instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment Off and On, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiver (device being interfered with).
- Increase the separation between the printer and the receiver.
- Connect the equipment into an outlet on a circuit different from that which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Any changes or modifications not expressly approved by Xerox could void the user's authority to operate the equipment. To ensure compliance with Part 15 of the FCC rules, use shielded interface cables.

Canada (Regulations)

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

European Union



The CE mark applied to this product symbolizes Xerox's declaration of conformity with the following applicable Directives of the European Union as of the dates indicated:

December 12, 2006: Low Voltage Directive 2006/95/EC

December 15, 2004: Electromagnetic Compatibility Directive 2004/108/EC

This product, if used properly in accordance with the user's instructions, is neither dangerous for the consumer nor for the environment.

To ensure compliance with European Union regulations, use shielded interface cables.

A signed copy of the Declaration of Conformity for this product can be obtained from Xerox.

Manual Organization

The Phaser 6280 Color Laser Printer Service Manual is the primary document used for repairing, maintaining, and troubleshooting the printer. Use this manual as your primary resource for understanding the operational characteristics of the printer and all available options. This manual describes specifications, theory, and the diagnosis and repair of problems occurring in the print engine and attached options. Also included are detailed replacement procedures, parts lists, and wiring diagrams.

The Phaser 6280 Color Laser Printer Service Manual contains these sections:

Introductory, Safety, and Regulatory Information: This section contains important safety information and regulatory requirements.

Section 1 - General Information: This section contains an overview of the printer's operation, configuration, specifications, and consumables.

Section 2 - Theory of Operation: This section contains detailed functional information on the print engine components.

Section 3 - Error Codes and Messages: This section provides detailed troubleshooting procedures for error messages and codes generated by resident diagnostics.

Section 4 - General Troubleshooting: This section contains the operation of Power On Self Test (POST) and Service Diagnostics. In addition, this section includes troubleshooting methods for situations where error indicator is not available.

Section 5 - Print-Quality Troubleshooting: This section focuses on techniques to correct image quality problems associated with the printer output.

Section 6 - Adjustments and Calibrations: This section provides procedures for the adjustment of the print engine components.

Section 7 - Cleaning and Maintenance: This section provides periodic cleaning procedures for the printer.

Section 8 - Service Parts Disassembly: This section contains removal procedures for spare parts listed in the Parts List. A replacement procedure is included when necessary.

Section 9 - Parts List: This section contains exploded views of the print engine and optional Field Replaceable Units (FRUs), as well as part numbers for orderable parts.

Section 10 - Plug/Jack and Wiring Diagrams: This section contains the plug/jack locations and the wiring diagrams for the printer.

Appendix A - Reference: This section provides an illustration of the printer's Control Panel menu structure, printer firmware update instructions, a list of printer error chain link codes, and a list of acronyms and abbreviations.

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General Information

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- Printer Introduction and Overview
- Printer Configurations
- Parts of the Printer
- Printer Options
- Maintenance Items
- Consumables
- Printer Specifications
- Controller Functions

Chapter 1

Printer Introduction and Overview

The Xerox Phaser 6280 Color Laser Printer has a single-pass color laser-design architecture, which offers color and mono print speed at 26/31-ppm, and resolutions up to 600 x 600 dots-per-inch (dpi). The printer supports Adobe PostScript 3, PCL6, USB 2.0, and 10/100 Base-TX Ethernet.

The Phaser 6280 printer provides one standard 150-Sheet Tray 1 (MPT) and one standard 250-Sheet Tray 2. Tray 1 (MPT) supports specialty media, card stock, and envelopes. The standard paper input is 400 sheets and the maximum input with options is 950 sheets. The Output Tray holds 300 sheets facedown.

The printer options add memory, paper capacity, hard drive, and functionality. Memory upgrades are available to increase the standard RAM from 256 MB up to 1280 MB maximum. A 550-Sheet Feeder is available as an option. Auto-duplexing is available and no tools are required to install the Duplex Unit. A Hard Disk Drive is available for Secure Print, Proof Print, collation, and for storing additional fonts/forms/macros.

Technical Support Information

The Xerox Phaser 6280 Color Laser Printer Service Manual is the primary document used for repairing, maintaining, and troubleshooting the printer.

To ensure complete understanding of this product, participation in Xerox Phaser 6280 Service Training is strongly recommended. To service this product, Xerox certification for this product is required.

For updates to the Service Manual, Service Bulletins, knowledge base, etc., go to:

- Xerox Global Service Net - <https://www.xrsgsn.com/secure/main.pl>
- Service Partners: <http://www.office.xerox.com/partners>

For further technical support, contact your assigned Xerox Technical Support for this product.

To help us improve our service documentation, please complete the survey located at:

http://www.surveymonkey.com/s.aspx?sm=kzFndf9Bad57bk5sABIHtA_3d_3d

Printer Configurations

The Phaser 6280 printer is available in two configurations.

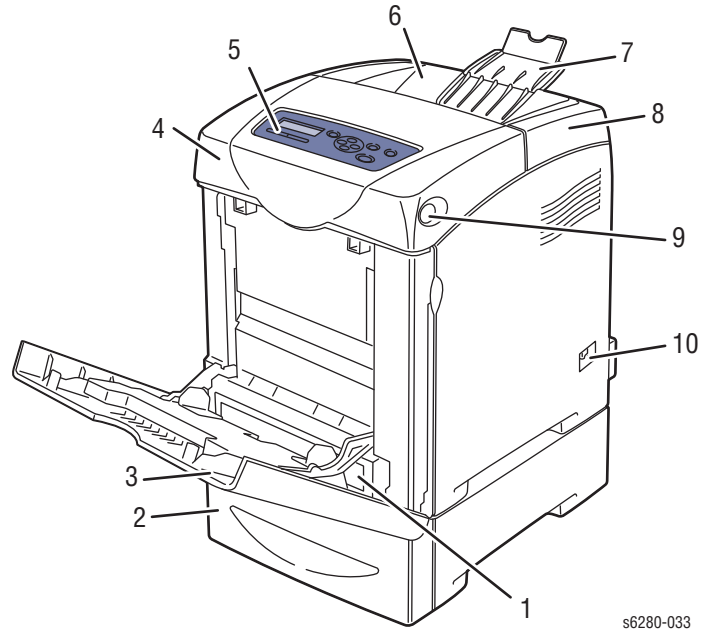
Phaser 6280 Configurations

Features	Printer Configuration	
	6280N	6280DN
Processor and Clock Speed	400 MHz	400 MHz
Memory Configuration *	256 MB	256 MB
Resolutions (dpi)		
■ Standard	600 x 600 x 1 bit	600 x 600 x 1 bit
■ Enhanced	600 x 600 x 4 bit	600 x 600 x 4 bit
Print Speed		
■ Color	26	26
■ Mono	31	31
Fonts		
■ Adobe PostScript 3 Fonts	Standard	Standard
■ PCL6 Fonts	Standard	Standard
Interface		
■ USB 2.0 Hi-Speed Support	Standard	Standard
■ Ethernet Interface	10/100 Base-TX	10/100 Base-TX
■ Wired Network (Protocol)	N/A	SNMPv 1,2,3, DHCP, BOOTP, HTTP, SLP, Bonjour, SMTP/POP3, RARP, AutoIP, SSL/ HTTPS, SSL/TSL, WINS, DDNS, FTP (FW Upgrade), TCP/IP (IPv4, IPv6 & Dual Stack), IPSec, WSD, and 802.1x
Tray		
■ Tray 1 (MPT) (150 Sheet)	Standard	Standard
■ Tray 2 (250 Sheet)	Standard	Standard
■ Tray 3 (550-Sheet Feeder)	Optional	Optional
Job Pipelining	Standard	Standard
Duplex Unit	Optional	Standard
Hard Disk Drive	Optional	Optional
Warranty	1 year onsite	1 year onsite

* All configurations have one memory slot supporting 512 MB/ 1 GB DDR2 DIMMs, to a maximum of 1280 MB. Standard memories are soldered on board.

Parts of the Printer

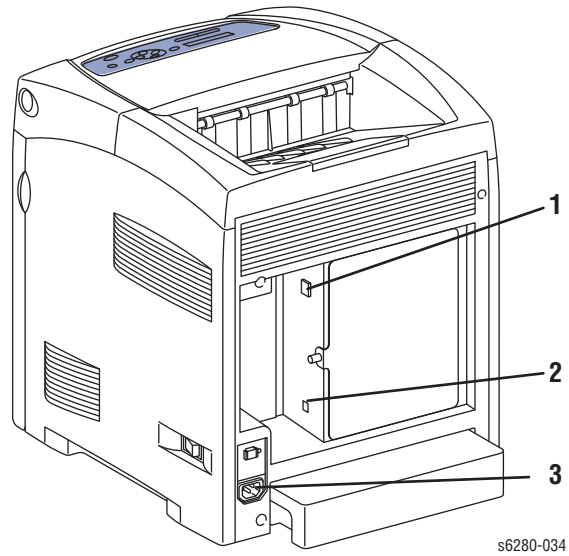
Front and Side Views



s6280-033

1. Tray 2
2. Tray 3
3. Tray 1 (MPT)
4. Front Cover (Door A)
5. Control Panel
6. Output Tray
7. Extender Cover
8. Top Cover
9. Front Cover Release Button
10. Power Switch

Rear View

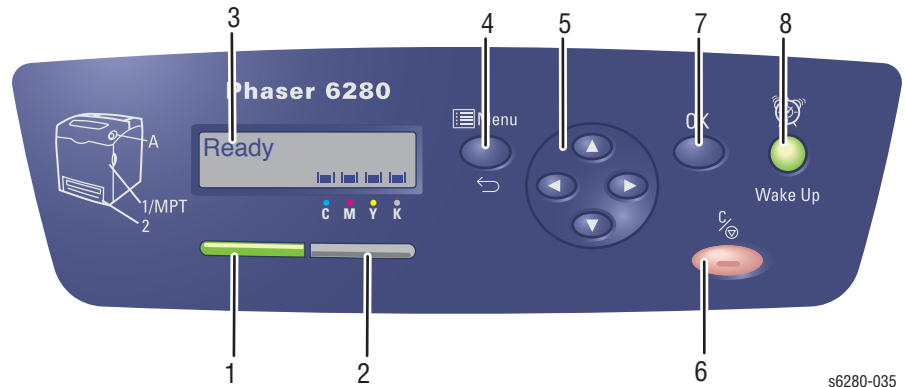


1. Ethernet Port
2. USB Port
3. Power Cord Connector

Control Panel

The Control Panel consists of 2 LEDs, 1 display window, and 8 functional buttons. These buttons are used to navigate the menu system, perform functions, and select modes of operation for the printer.

Control Panel Button Descriptions



- | | | |
|----|-------------------------------|---|
| 1. | Ready LED (Power/Status) | LED On - Ready to print or processing print job.
LED blinking - The printer is receiving data.
LED Off - An error has occurred and the printer is offline or in Sleep mode. |
| 2. | Error LED | Light On - Error with print job.
(blinking = not user fixable)
(On solid = user fixable) |
| 3. | Graphic Control Panel Display | Displays printer settings, status, and messages. |
| 4. | Menu Button | Changes display between Menu mode and Print mode. |
| 5. | 4 Way Cursor Buttons | Moves between the Menu levels. |
| | Up and Down arrows | Switches between Menus or Items on the same level. |
| | Right and Left arrows | Switches between the Menu levels. |
| 6. | Cancel Button | Cancels the current print job. |
| 7. | OK Button | Move to the next level, confirm setting, and print report. |
| 8. | Wake Up LED/Button | LED comes On when the printer is in Power Saver Mode. Press this button to exit the Power Saver Mode. |

LED Indicators

LED State	Printer State
Green	Ready to Print or in Power Saver mode
Flashing Green	Processing print job
Red	Error occurs, can be fixed by user
Flashing Red	Error occurs, cannot be fixed by user

Control Panel Shortcuts

Mode	Buttons Pressed at Power On
Service Diagnostics	Up + Down arrow buttons
Reset Password to 0000 (used when the Control Panel menus are locked)	Menu
Boot Download for Controller	Up + Down + Menu buttons

Printer Options

The Phaser 6280 printer options include:

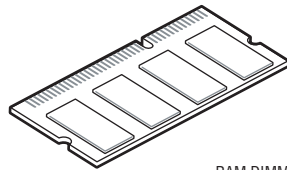
- Additional Memory (512 MB/ 1024 MB)
- Duplex Unit
- Hard Disk Drive
- Optional 550-Sheet Feeder (Tray 3)

Additional Memory

The printer features one slot that accepts 512 MB or 1024 MB of DDR2 DIMMs. Memory modules must meet the following characteristics:

- 200 Pin DDR2 DIMM (8 chip type)
- Unbuffered, Non-parity

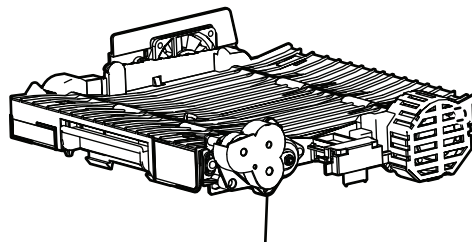
The printer Configuration page lists the amount of RAM installed in the printer.



RAM DIMM

Duplex Unit

User can install the Duplex Unit without using any tools and by simply removing the Transfer Unit.

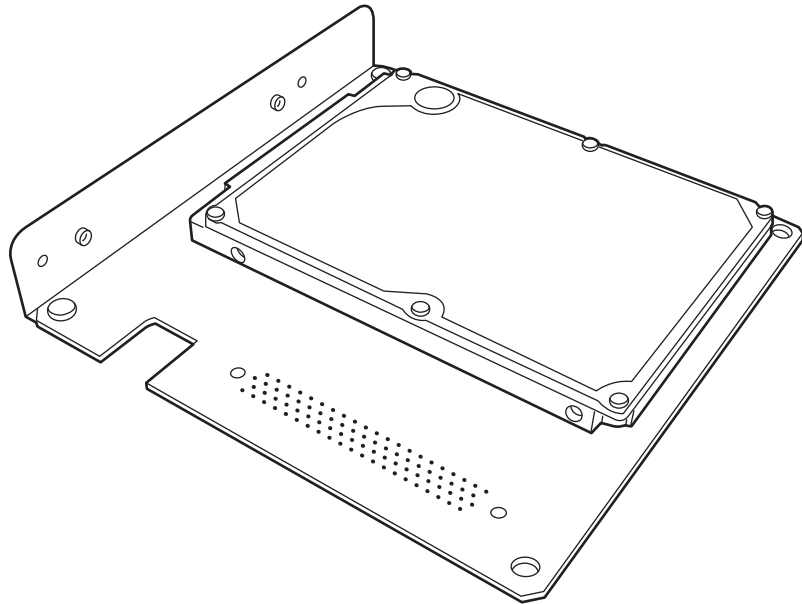


Duplex Unit

s6280-036

Hard Disk Drive

The Phaser 6280 supports a customer removable Hard Disk for Secure Print, Proof Print, collation, and for storing additional fonts/forms/macros.



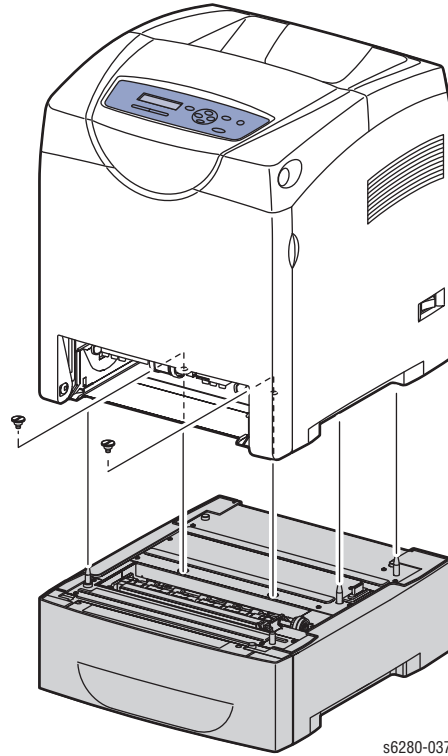
s6280-295

Optional 550-Sheet Feeder (Tray 3)

The Optional 550-Sheet Feeder increases the input capacity of the printer and can be attached to the printer underneath Tray 2 with 2 screws.

Note

Only one Optional 550-Sheet Feeder is supported.



s6280-037

Maintenance Items

An item is a printer part or assembly that has a limited life, and requires periodic replacement. The following routine maintenance items are customer replaceable.

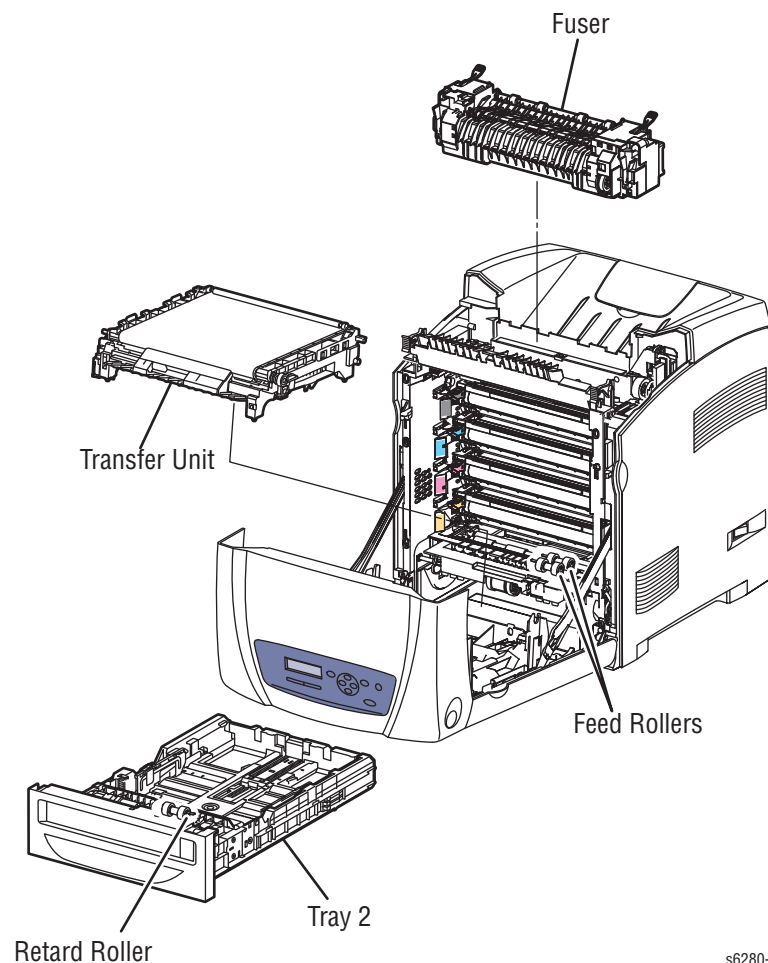
The listed items have limited life and require periodic replacement.

Phaser 6280 Maintenance Items

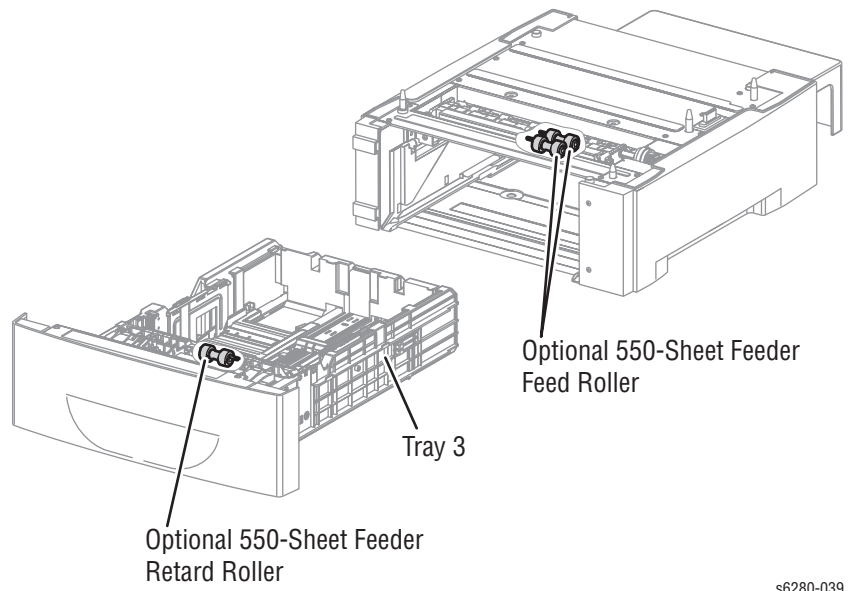
Item	Print Life
Transfer Unit	Up to 100,000 pages
Fuser Assembly	Up to 100,000 pages
Feed/Retard Roller	Up to 100,000 pages

Note

Print life is based on “typical” office printing and 5% coverage per color on 24 lb. paper. The 100,000 life is not guaranteed and varied depending on usage habits.



s6280-038



s6280-039

Consumables

Consumables consist of 4 Print Cartridges used in the printer.

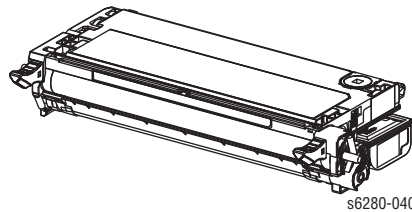
CMY Toner will not be consumed when printing in Mono mode or when printing a Grayscale job only. Internal counters track Consumables and Maintenance Items life usage.

Each Print Cartridge has a CRUM (Customer Replaceable Unit Meter) to record the information. CRUM counts the amount of remaining toner. When toner empty is detected, Life End status will be sent to indicate toner empty.

Life ratings are based on A-size sheets at 5% coverage.

Print Cartridge	Print Life	
	Color	Mono
Standard Capacity	2,000 pages	3,000 pages
High Capacity	6,000 pages	8,000 pages
Metered Prints *	11,000 pages	11,000 pages

(*) Metered prints Cartridges cannot be used in Standard configuration printer. Be sure the printer is configured for PagePack usage.



Printer Specifications

Functional Specifications

Characteristic	Specification	
Printing Technology	<p>Recording System: Tandem electro-photographic system using OPC Drum and direct transfer by the Transport Belt</p> <p>Developer: Double components trickle development</p> <p>Exposure System: 4 semiconductors laser beam scanning system</p> <p>Transfer System: Four-color finished toner image is transferred onto the paper</p> <p>Fusing System: Quick thermal fusing system by Free Belt Nip Fusing (FBNF)</p>	
Print Volume	<ul style="list-style-type: none"> ■ Average: 800 PV/month ■ Maximum: 60,000 PV/month <p>For Duplex prints, prints on the front and back sides of paper are counted as 2 PV. Maximum PV is 2,000 PV/day.</p>	
Color Medium	Cyan, Magenta, Yellow, and Black Print Cartridges	
Resolution / Addressability (dpi)	<ul style="list-style-type: none"> ■ Standard: 600 x 600 x 1 ■ Enhanced: 600 x 600 x 4 	
Print-Quality Mode	<ul style="list-style-type: none"> ■ 600 x 600 x 1bit (Standard) ■ 600 x 600 x 4bit (Enhanced) 	
Average Image Coverage	<ul style="list-style-type: none"> ■ Color: 5% each CMYK ■ Mono: 5% 	
Maximum Image Coverage	240% for all C, M, Y, K combined	
Printer Life	300,000 pages	
Maximum Duty Cycle	60,000 pages/month*	
Warm-Up Time	Less than 30 seconds from Power On	
Operating System	Windows	2000 SP3 or greater/ 2003/2008 Server/ XP Pro/ XP/ Vista Home SP1 or greater
	Macintosh	OS 10.3 or higher
	Linux	Redhat, SuSe, and TurboLinux 10 Desktop
* Assumes a 30 day month of printing.		

Memory Specifications

Characteristic	Specifications	
Memory	Minimum	256 MB On-Board memory
	Maximum	1280 MB
Supported RAM	Supports up to 1280 MB of DDR2 DIMM with one slot for 512 MB/ 1 GB	

Electrical Specifications

Characteristic	Specification	
Power Supply Voltage/Frequency		
Line Voltages	<ul style="list-style-type: none"> ■ 110-127 VAC \pm 10% ■ 220-240 VAC \pm 10% 	
Frequency Range	50/60 Hz \pm 3 Hz	
Current Capacity	<ul style="list-style-type: none"> ■ 110 V Engine: 8 A or less ■ 230 V Engine: 4 A or less 	
Power Consumption		
Power Saver Mode	9 W or less	<ul style="list-style-type: none"> ■ 110 V: 3.9 W ■ 220 V: 4.3 W
Standby Mode (Fuser On)	95 W or less	<ul style="list-style-type: none"> ■ 110 V: 64.3 W ■ 220 V: 68.4 W
Color Printing Duplex	460 W or less	<ul style="list-style-type: none"> ■ 110 V: 379.6 W ■ 220 V: 379.2 W
Color Printing Simplex	460 W or less	<ul style="list-style-type: none"> ■ 110 V: 443.6 W ■ 220 V: 428.6 W
B/W Printing Duplex	460 W or less	<ul style="list-style-type: none"> ■ 110 V: 371.8 W ■ 220 V: 370.1 W
B/W Printing Simplex	460 W or less	<ul style="list-style-type: none"> ■ 110 V: 426.1 W ■ 220 V: 423.3 W
Maximum Rated Value	890 W or less	
ENERGY STAR (Sleep Mode)	45 W or less	
In-rush Current		
Maximum at 1st 2.5 msec	<ul style="list-style-type: none"> ■ 50 Amp (Cold start) ■ 135 Amp (Hot start) 	
Within 10 msec	<ul style="list-style-type: none"> ■ 80 Amp (110 V/ 220 V/ 240 V) ■ 85 Amp (100 V) 	
Leakage Current	Power	Current
	1Khz (DC)	< 3.5 (UL) mA

Print Speed

	Simplex (ppm)		Duplex (ipm)	
	Color A/A4	Mono A/A4	Color A/A4	Mono A/A4
Resolution				
600 Standard	26/25	31/30	18/17	21/20
600 Enhanced	26/25	31/30	18/17	21/20
Paper Type (65 - 220 gsm)				
Letter	21	26	14	18
A4	21	25	14	17
A5	18	26	14	21
US Folio	18	23	13	16
Legal (custom)	18	21	12	15

Environmental Specifications

Characteristic	Specification		
Temperature			
Operating	10 to 32° C (50 to 90° F)		
Standby	-20 to 40° C (-4 to 104° F)		
Humidity (% RH)			
Operating	15 to 85% RH (no condensation)		
Standby	5 to 85% RH (no condensation)		
Altitude			
Operating	0 to 3,500 meters (11,482 feet)		
Acoustic Noise LWA(B)	Sound Power Level (B)	Sound Pressure dB(A)	
Engine			
Printing	6.55	53.0	
Standby	4.0	Less than 31.0	
Full Option			
Printing	7.07	56.0	
Standby	4.0	-----	

Operating Mode

Mode	Condition	Description
Running Mode		The printer is under operating condition such as running or recording.
	Fusing	The system keeps the operating temperature.
	Exposure	The Laser Unit Motor runs at the running speed.
	Recording	The system is under operating condition.
	Cooling Fan	The fan operates at high speed.
Control Panel Operation	<ul style="list-style-type: none"> ■ LCD - Backlight: On ■ LED - Ready LED is turned On. 	
Standby Mode		The printer is under standby condition.
	Fusing	The system keeps the standby temperature.
	Exposure	The system is at Pause.
	Recording	The system is at Pause.
	Cooling Fan	The fan operates at low speed.
Control Panel Operation	<ul style="list-style-type: none"> ■ LCD - Backlight: On ■ LED: If printer is online, Ready LED is turned On. 	
Power Saver Mode		<p>The printer enters into the Power Saver mode to reduce power consumption when it has not received print data for the specified time.</p> <p>The time to enter into the Power Saver mode can be selected from 5 to 60 minutes increment by 1 minute. The default Power Save mode is 30 minutes.</p>
	Fusing	The system is Off.
	Exposure	The system is at Pause.
	Recording	The system is at Pause.
	Cooling Fan	The system is Off.
	Control Panel Operation	<ul style="list-style-type: none"> ■ LCD: Off, LCD Backlight: Off ■ LED: Power Saver LED is turned On.
<p>Note: When the printer receives a print job or the Wake Up button is pressed, the printer exits the Power Saver mode and enters the Ready mode.</p>		

First Print Output Time (FPOT)

First Print Output Time is defined as a time from when the engine receives a Start signal in Ready state, until a single page is printed and delivered to the output tray.

The following conditions are applied:

- The Controller does not keep the print engine waiting
- The printer is at Standby mode (Laser Unit Motor Off, Fuser Ready)
- Paper is A size Short Edge Feed (SEF)
- Process control time is not included

Mode	FPOT (sec.)
Color	As fast as 10.0
Mono	As fast as 10.0
From Power On	30.0

Image Specifications

Note

The printer has 4 mm margins on all sides.

Refer to “Print-Quality Troubleshooting” on page 5-1 for detailed specifications.

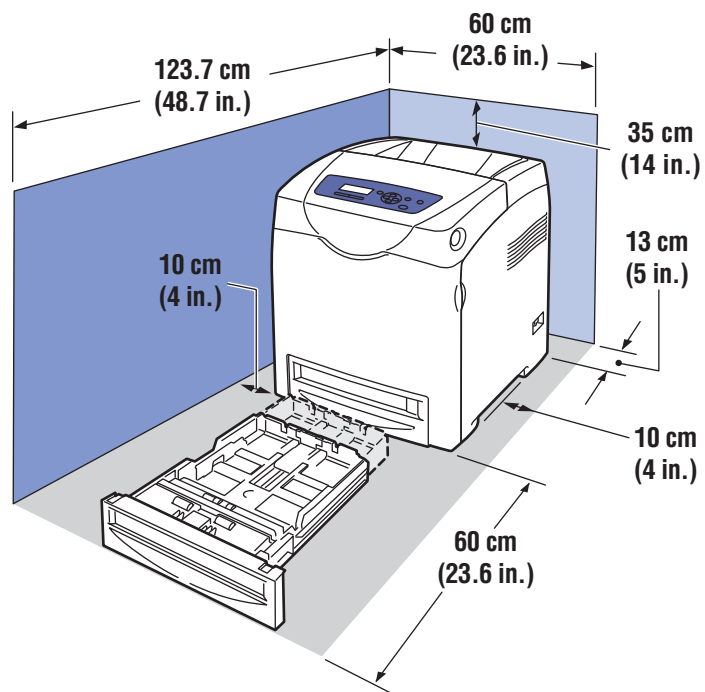
Characteristic	Specification
Maximum Print Area	210.9 mm (8.3 inches) x 351.6 mm (13.8 inches)
Guaranteed Print Area	207.9 mm (8.2 inches) x 347.6 mm (13.7 inches)
Skew	190 mm \pm 1.2 mm
Perpendicularity	114.5 mm \pm 0.8 mm
Parallelism	
Horizontal	180 mm \pm 1.2 mm
Vertical	234 mm \pm 1.2 mm
Linearity	
Horizontal	190 mm \pm 0.5 mm
Vertical	234 mm \pm 0.5 mm
Slant	269 mm \pm 1.2 mm
Magnification Error	
Horizontal Simplex	190 mm \pm 0.5%
Horizontal Duplex	190 mm \pm 0.8%
Vertical Simplex	234 mm \pm 0.5%
Vertical Duplex	234 mm \pm 0.8%
Registration	
Leading Edge	10.0 mm \pm 2.0 mm
Side Edge	8.5 mm \pm 2.5 mm

Physical Dimensions and Clearances

Printer Dimensions

Print Engine	6280N	6280DN
Height	473 mm (18.6 in.)	473 mm (18.6 in.)
Width	400 mm (15.7 in.)	400 mm (15.7 in.)
Depth	490 mm (19.3 in.)	490 mm (19.3 in.)
Weight (base printer with supplies)	24.5 kg (54.0 lb.)	29.25 kg (64.5 lb.)
Optional 550-Sheet Feeder		
Height	138 mm (5.4 in.)	138 mm (5.4 in.)
Width	400 mm (15.7 in.)	400 mm (15.7 in.)
Depth	490 mm (19.3 in.)	490 mm (19.3 in.)
Weight	7.7 kg (16.9 lb.)	7.7 kg (16.9 lb.)

Minimum Clearances

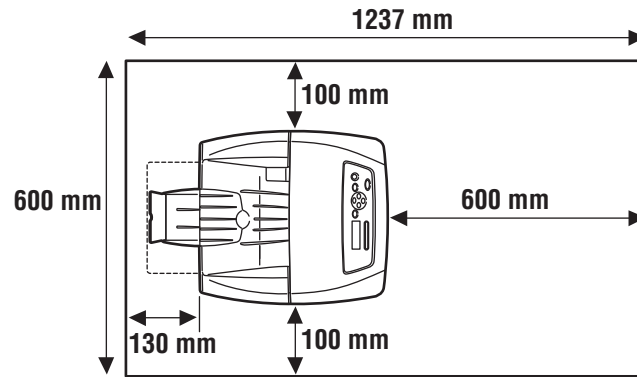


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Mounting Surface Specifications

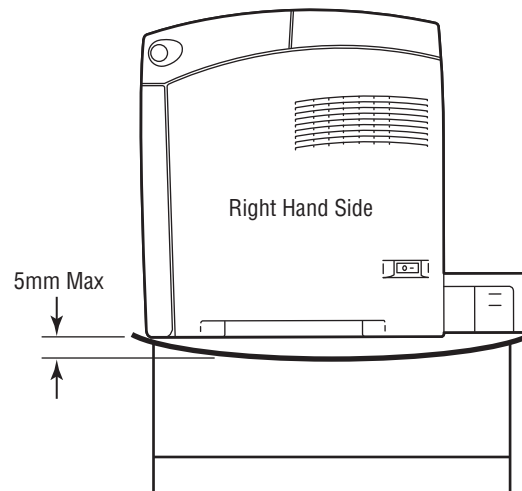
These specifications apply to any printer used as a table-top printer.

1. In order to function properly, the printer must be placed on a surface with the following minimum dimensions.



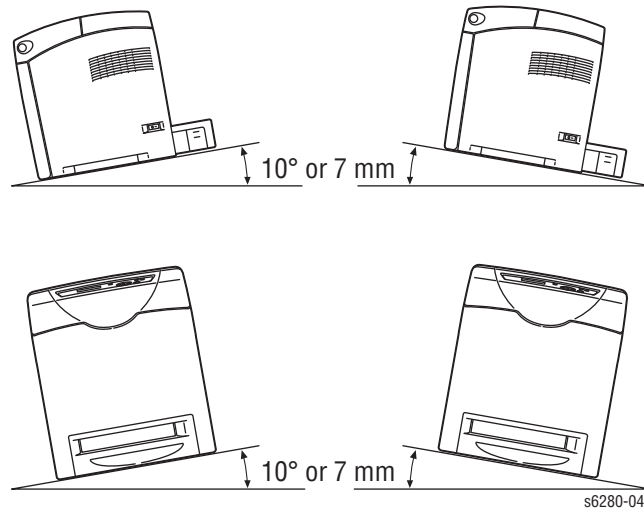
s6280-042

2. Mounting surface flatness must be within the specified range.



s6280-043

3. The printer must not be tipped or tilted more than 7 mm.



Failure to adhere to the specified mounting specifications will void all guarantees of print-quality and/or performance. Known problems that can occur as a result of exceeding the mounting surface specifications are:

- Color-to-Color mis-registration, primarily in the horizontal (laser scan) direction.
- A smear or line of toner approximately 40 mm from the training edge of the print.

Media and Tray Specifications

The following tables list the recommended Xerox paper for the printer.

Supported Paper Size

Paper Type	Dimension	Tray 1 (MPT)	Tray 2, 3	Duplex
Letter	8.5 x 11 in.	Yes	Yes	Yes
Legal	8.5 x 14 in.	Yes	Yes	Yes
US Folio	8.5 x 13 in.	Yes	Yes	Yes
Executive	7.25 x 10.5 in.	Yes	Yes	Yes
A4	210 x 297 mm	Yes	Yes	Yes
A5	148 x 210 mm	Yes	Yes	Yes
B5 JIS	182 x 257 mm	Yes	Yes	Yes
Custom Size*		Yes	Yes	Yes

* All trays support Custom sizes. Tray 1 supports a wider range of Custom size dimensions than trays 2 and 3.

Supported Paper Types and Weights

Paper Type	Paper Weight	Tray 1 (MPT)	Tray 2, 3	Duplex
Plain Paper	65-90 g/m ²	Yes	Yes	Yes
Letter Head	85-120 g/m ² (22-32 lb. Bond)	Yes	Yes	Yes
Glossy Paper	100-163 g/m ²	Yes	Yes	Yes
Thick Glossy Paper	164-216 g/m ²	Yes	Yes	Yes
Pre-Punched	65-90 g/m ² (17-24 lb. Bond)	Yes	Yes	Yes
Thin Card Stock	100-163 g/m ²	Yes	Yes	Yes
Thick Card Stock	170-216 g/m ²	Yes	No	No
Label	N/A	Yes	Yes	Yes
Transparency	N/A	Yes	No	No
Special	100-163 g/m ² (30-60 lb. Cover)	Yes	No	No

Supported Envelopes

Type	Dimension	Tray 1 (MPT)	Tray 2, 3	Duplex
Envelope #10	4.12 x 9.5 in.	Yes	No	No
Monarch Envelope	3.87 x 7.5 in.	Yes	No	No
C5 Envelope	162 x 229 mm	Yes	No	No
DL Envelope	110 x 220 mm	Yes	No	No

Note: Do not use envelopes with hot melt glue, windows, or metal clasps.

Controller Functions

Job Control

Auditron

Auditron specifies the availability of color print and to limit print volume per user. Only the administrators are allowed to configure the limitation settings using CentreWare IS.

User name and password are embedded in the print job in order to identify where the job is sent from. The user can enter the user name and password using the printer driver.

Auditron cannot be used together with the Print Volume Management function at the same time.

Cancel Print

User can cancel a print job while printing is in progress using the Cancel button on the printer's Control Panel. Job cancellation is not immediate. Depending on the job size, it may take a while to completely cancel.

Forced Output

This function forces the printer to print the received data when the printer is waiting for the remaining data during job processing.

IP Filter

User can accept or reject print jobs up to five specified IP addresses. IP filter is available only to LPD and Port9100 (IPv4 only).

Job Recovery

When a print job fails due to a paper jam, the printer automatically restarts the job after the jammed paper is removed. User does not have to reprint the entire job.

Job Timeout

When job transmission is interrupted for a certain period of time, the print data is deleted as an error. Timeout setting can be changed using the menu on the printer's Control Panel.

Print Volume Management

Print Volume (PV) Management manages print volume per user and can manage up to 50 users.

RAM Disk and Hard Disk

RAM Disk or Hard Disk functions when memory or Hard Disk is expanded, enabling Collation, Secure Print, Proof Print, Form Overlay, Font Download, and PostScript file system (Hard Disk only).

Functionality	RAM Disk	Hard Disk	Note
Collation	x	x	
Secure Print (Store Print)	x	x	RAM Disk: The data on the memory is cleared when the printer is turned Off.
Proof Print	x	x	Refer to Secure Print.
PCL5 Form Overlay	x	x	Refer to Secure Print.
PCL5 Font Download	x	x	Refer to Secure Print.
PostScript File System (i.e., PS font download)	----	x	

Collation

The job is stored in the memory and multiple copies are printed. When the entire job does not fit in the memory, the printer prints one copy up to the stored pages, and the remaining are discarded.

An error message will appear on the Control Panel: "Error xxxx Press set key."

Two options are available to ensure Job Collation will process effectively:

- Break large print job into multiple small print jobs
- Increase memory for the printer

Note

PCL6-Driver, Win PS Driver, XPS Driver, and Mac PS Driver do not have the check box of this function.

Secure Print (Store Print)

The printer holds print data, including a user password (12 digits) specified in the printer driver, user name and document name, in memory.

The data will not be printed until the same password, user name, and document name are provided via the printer menu on the Control Panel. User can remove or keep the data after printing the document. The data remains in the printer memory as long as it is not cleared.

- **User ID** – consists of a variable length from 1 to 24 byte characters (20H-FFH). The driver requests the User ID from the user when the Secure Print option is selected. A user ID cannot be blanked with only space characters.

- **User Password** – consists of a variable length from 0 to 11 digits. The password is an optional input and hidden from the user interface by displaying “*” for each digit. If a password is not specified, the driver will accept it as a zero-length string so that a password will not be required when requesting job output from the printer.
- **Document Name** – consists of a variable length from 0 to 24 characters (20H-FFH) that specifies the document name.

Proof Print

Proof Print can be selected when multiple sets of prints are specified in the printer driver. The printer prints only the first set of the print data including a user name and document name specified in the printer driver.

The user can keep or remove the data using the printer menu on the Control Panel. The data remains in the printer memory as long as it is not cleared. This function is not available for XPS Driver and Linux operating systems.

Form Overlay

The function for writing PCL6 forms are downloaded into RAM Disk.

Font Download

PCL6 fonts can be downloaded into RAM Disk.

PostScript File System (Hard Disk Only)

PostScript File System is supported. PostScript fonts can be downloaded.

ID Print

The user has the option whether or not to print the user name and where it is printed. The printing position can be placed on the upper right, upper left, lower right, and lower left (only for PCL6) of the page.

Non-Genuine Mode

When the Print Cartridge life has ended, the printer stops accepting print request (life of the Print Cartridge is counted by the counter in the CRUM). This mode can be changed so the printer will not stop at the end of the print cartridge rated life; however, the printer will display an end of life message on the Control Panel.

Print Cartridge Control Panel Display

Print Cartridge	Control Panel Display			Functionality
	Normal Status	Life Warning Error	End of Life Error	
Xerox	Xerox (TM) Print Cartridge	Replace Soon	Replace Print Cartridge	Prints with full functionality.
Xerox (refill Print Cartridge)	Xerox (TM) Print Cartridge	Replace Soon	Empty	Prints with full functionality up to 40% of the Print Cartridge life.
Other OEM (non-Xerox printer manufacturer)	Invalid Print Cartridge	Error	Error	Printer displays error and will not print.
Non-Xerox Print Cartridge Manufacturer	Invalid Print Cartridge	No Life Tracking	Replace Print Cartridge	Prints with full functionality.

CRUM Condition for Auto Region Switching

The Phaser 6280 supports CRUM for different regions including Xerox North America (NA), Xerox Europe (XE), and Developing Markets (DMO).

Toner Remaining Amount

The CentreWare Internet Services (IS) and PrintingScout allow the printer to display toner remaining amount.

Maintenance Function

Firmware Update

The Image Processor Board and Multi-Protocol Network Card firmware can be updated by customers and service technicians using Windows PC or Macintosh with dedicated utilities. Firmware updates are available at www.xerox.com/office/6280support.

Detailed procedures are available in the “Firmware Update” on page A-3.

Note

Boot Code can be updated via USB port only.

Updated Firmware	Windows	
	Via USB	Via Network (port 9100)
Image Processor Board	Available	Available
MCU Board	Available	Available

* MCU Board cannot be updated when ROM starts to be used for MCU Board.

Diagnostics

Two types of diagnostic functions are available:

1. Auto Diagnostics: The printer is checked when it is turned on. It is checked whether hardware (ROM, RAM, ASIC, etc...) operates properly.
2. Manual Diagnostics: Only qualified service personnel can perform manual diagnostics using the Service Mode in the Control Panel.

Information Pages

Demo Page

Demo Page provides sample of print for the Phaser 6280 Color Laser Printer. The Demo Page is printed in color from selected paper tray. The Demo page will be printed in duplex mode when a Duplex Unit is installed.

Phaser® 6280 Color Laser Printer




The Phaser 6280 is fast, affordable desktop laser printer with advanced color capabilities

- Fast printing speed
- EA-HG laser for superior color images
- Adobe® PostScript® 3™, PCL® 6 emulation
- Networking and USB 2.0 standard included
- PRINTONE™ Color approved solid color substrates, Color Correction, ICC Profile

L'imprimante Phaser 6280 est une imprimante laser de bureau performante aux fonctionnalités couleur avancées à un prix abordable

- Résolution de 600 x 600 à 4 ppj pour une qualité d'impression très précise
- Vitesses d'impression élevées
- Laser EA-HG pour des images couleur de qualité supérieure
- Adobe® PostScript® 3™, émulation PCL® 6
- Connectivité standard et interface USB 2.0 en standard
- Plateau d'appui homologués PRINTONE™, correction des couleurs, profil ICC

Phaser 6280 è una stampante desktop laser, veloce e dal costo contenuto, dotata di funzionalità avanzate per il colore

- Alta qualità di stampa (600 x 600 a 4 dpi)
- Alta velocità di stampa
- Laser EA-HG per immagini a colori di qualità superiore
- Adobe® PostScript® 3™, emulazione PCL® 6
- Collegamento di rete e interfaccia USB 2.0 standard
- Simulazioni colori per certificati di PRINTONE™, Correzione colori, Profilo ICC

Das Phaser 6280 ist ein schneller und preiswertes Desktop-Laserdrucker Drucker mit erweiterten Farbleistungen

- Hohe Bildgeschwindigkeit
- EA-HG-Laser für erstklassige Farbbilder
- Adobe® PostScript® 3™, PCL® 6-Emulation
- Netzwerk- und USB 2.0-Standard
- PRINTONE™ Solid Color Substrates, Farbkorrektur, ICC-Profile

La Phaser 6280 es una impresora laser de escritorio rápida y asequible con capacidades de color avanzadas

- Alta calidad de imagen de 600 x 600 a 4 ppj
- Impresión rápida
- Laser EA-HG que proporciona imágenes a color de gran calidad
- Adobe® PostScript® 3™, emulación PCL® 6
- Funcionamiento en red e interfaz USB 2.0 de serie
- Simulaciones de color sólido homologadas para el PRINTONE™, corrección de color y perfil ICC

A Phaser 6280 è una stampante di mesa rapida e asequible con recursos de color avanzados

- Alta calidad de imagen de 600 x 600 a 4 dpi
- Rapidez e velocidad de impresión
- Laser EA-HG para imprimir en cores de qualidade superior
- Emulação PCL® 6, Adobe® PostScript® 3™
- Conexão em rede e qualidade de interface USB 2.0
- Simulações de cores sólidas PRINTONE™ aprovadas, Correção de cores, Perfil ICC

Phaser 6280 — перочный и доступный настольный лазерный принтер с расширенными возможностями цветной печати

- Высокая скорость печати — 600 x 600 a 4 точек на дюйм
- Высокая скорость печати
- Laser EA-HG, обеспечивающий воспроизведение отличного изображения
- Дружествен Adobe® PostScript® 3™, PCL® 6
- Стандарт интерфейса USB 2.0 и стандартное подключение
- Homologация PRINTONE™, коррекция оттенков, профиль ICC

Color, Speed Affordability

Couleur, Vitesse Bon rapport qualité/prix

Colori, Velocità Convenienza

Farbe, Geschwindigkeit Günstiger Preis


Color, Velocidad Precio asequible

Em cores, Velocidade Visibilidade

Цвета, Скорость Доступная

Configuration Page

Phaser® 6280DN
Color Laser Printer



Configuration

General

Total Impressions	166Pages
Total Color Impressions	164Pages
Total Black Impressions	2Pages
Serial Number	00000000
Xerox Asset Number	
Customer Asset Number	
Memory Capacity	768MB
Printer Language	
PCL5	200803211041
PCL6	200803211041
PostScript	200804181100
Number of Fonts Available	
PCL	Roman:81Fonts
PostScript	Roman:136Fonts
PostScript Version	3017.104
PostScript Serial Number	37601d67
Firmware Version	200804181104
Boot Version	200803211033
Engine Version	05.02.00
PostScript CRD Version	200804181100
Default Paper	Letter
Default Language	English
Current Temperature	26°C / 78°F
Current Humidity	26%
Region	2

Printer Options

Duplex Unit	(02.10.00)
Hard Disk	
Paper Tray	Tray 1 (MPT) Tray 2

Print Volume

Letter - 8.5x11	164Pages
B5 - 182x257	0Pages
A5 - 148x210	0Pages
A4 - 210x297	2Pages
Executive	0Pages
US Folio - 8.5x13	0Pages
Legal - 8.5x14	0Pages
#10Env - 4.1x9.5	0Pages
Monarch Env	0Pages
DL Env - 110x220	0Pages
C5 Env - 162x229	0Pages
Others	0Pages

Network Setup

Firmware Version	13.32
MAC Address	08:00:37:60:1d:67
Ethernet	100base Full(Auto)
TCP/IP	
IP Mode	Dual Stack
IPv4	
Get IP Address	Panel


IP Address	13. 62. 70.235
Network Mask Address	255.255. 0. 0
Gateway Address	0. 0. 0. 0
Status	Ready
IPv6	
Address Manual Configu	Disable
ration	
Auto Configure	
Link-Local Address	fe80::a00:37ff:fe60:1d
67/0	
Stateless Address1	:::/0
Stateless Address2	:::/0
Stateless Address3	:::/0
Auto Gateway Address	:::/0
Status	Ready
IPsec	
IPsec Communication	Disable
Protocol	
LPR	
Port Status	Enable
Port 9100	
Port Status	Enable
IPP	
Port Status	Enable
SMB	
Port Status	Enable
TCP/IP	Enable
NetBEUI	Enable
Host Name	XRX080037601D67
Workgroup Name	WORKGROUP
WSD	
Port Status	Enable
FTP	
Port Status	Enable
SNMP	
Port Status	Enable
SNMP v1/v2c Protocol	Enable
s	
SNMP v3 Protocol	Disable
E-Mail Alert	Enable
Port Status	Enable
CentreWare IS	Enable
Port Status	Enable
Bonjour(mDNS)	Enable
Port Status	Enable
Host Name	XRX080037601D67
Printer Name	Xerox Phaser 6280N (60
:1d:67)	
DNS	
Get Address	Off
Primary Server	0. 0. 0. 0
Domain Name	
Dynamic Renewal	On
Telnet	
Port Status	Enable
HTTP SSL/TLS	
Port Status	Disable

The Startup page prints each time you power on the printer. To turn off this page:

- 1.) At the printer's control panel, press "Menu"
- 2.) Scroll to "Admin Menu" and then press "OK"
- 3.) Scroll to "System Setup" and then press "OK"
- 4.) Toggle "Start Up Page" setting to "off"


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Page:1



4.) toggle start up page setting to off

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configuration.ai

Phaser 6280 Color Laser Printer Service Manual

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User can print the Configuration Page from the Control Panel > **Menu** > **Information Pages** > **Configuration**. The Configuration Page is printed in from the default tray and includes the following information.

Configuration Page Information

General Description	Detail Description
Title	Prints Title of the document
Product Name (Logo)	Prints organization's logo
General	Total Impressions, Total Color Impressions, Total Black Impressions, Serial Number, Xerox Asset Number, Customer Asset Number, Memory Capacity, Printer Language, Number of Fonts Available, PostScript Version, PostScript Serial Number, Firmware Version, Boot Version, Engine Version, PostScript CRD Version, Default Paper, Default Language, Current Temperature, Current Humidity, Region
Printer Options	Duplex Unit: (00.00.00) (when installed) Hard Disk (when installed) Paper Tray: Tray 1 (MPT), Tray 2-3
Print Volume	Print Volume for each paper size
Network Setup	Firmware Version, MAC Address, Ethernet, TCP/IP, IPv4, IPv6, IPsec, Protocol, Host Access List, Adobe Protocol
USB Setup	Port Status, Adobe Protocol
System Setup	PowerSaver Time, Audio Tones, Fault Time-Out, Time-Out, Language, Auto Log Print, Print ID, Print Text, Banner Sheet, Size Mismatch, mm/inch, Start Up Page, Odd Page 2 Sided
Maintenance	Auto Reg Adj
PCL	Paper Tray, Paper Size, Orientation, 2-Sided, Font, Symbol Set, Font Size, Font Pitch, Form Line, Quantity, Image Enhance, Hex Dump, Draft Mode, LineTermination, Default Color
PostScript	PS Error Report, PS Job Time-Out, Paper Select Mode, Default Color
Control Panel	Panel Lock
Tray Settings	Tray 1 (MPT), Tray 2, Tray 3

Fonts List

User can print the PCL Font List or PostScript Font List on A size paper from default tray.

Y, M, C, and K color patterns are printed on the Font List (PCL driver only).

The PCL Font List contains:

- Number
- Fonts
- Escape Sequence
- Font ID
- Sample

The PostScript Fonts List contains:

- Print Fonts
- Fonts Sample

PCL Macro List

User can print the PCL Macro List default on A paper size from default tray.

Stored Document List (Memory or Hard Drive is needed)

User can print the Stored Document List using Secure Print/Proof Print feature. The list can be printed on A paper size from default tray.

Job History Report

The printer can retain up to 20 job logs. Job History can be manually or automatically printed when the number of the retained job logs has reached 20. User can print the Job History Report default on A paper size from default tray. The Job History Report contains:

- Date and Time (job sent)
- Input Port (USB, LPD,...etc.)
- Host/User Name
- Document Name (File Name)
- Output Color
- Paper Size
- Number of Printed Pages (Color/Mono)
- Number of Printed Sheets (Color/Mono)
- Result (successful, error,...etc.)

Error History Report

Phaser® 6280N Color Laser Printer		xerox	
Error History Report			
System Fail History			
No.	Total Print Count	Chain-Link	
1	0	010-002	
Paper Jam History			
No.	Total Print Count	Paper Jam Type	
1	95	101 Feeder1 Jam	
2	95	101 Feeder1 Jam	
3	95	101 Feeder1 Jam	

Page:1(Last Page)

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The printer can retain up to 42 jam errors and up to 42 fatal errors. User can print the Error History Report default on A paper size from default tray using the printer menu in the Control Panel.

Jam Error log includes the following information:

- Item No.
- Total Print Count
- Paper Jam Type

Fatal Error log includes the following information:

- Item No.
- Total Print Count
- Chain-Link

Print Meter (Print Volume Report)

User can print the Print Meter page default on A paper size from default tray. The Print Meter page contains:

- Date of Initialization
- Date/Time
- Job Accounting User Name
- Pages
- Sheets

Billing Meters

The Billing Print counter provides the number of pages printed properly (simplex print is counted as 1 and duplex print is counted as 2, including N up).

If an error has occurred after the one side printed properly during duplex printing, it is counted as 1.

Note

Same data is stored in two or more addresses in one IC. Data check is conducted.

When the Image Processor Board is replaced, IC can be transferred.

Counter	Description
Color Print Counter	Counts the number of pages printed in color (7 digits).
Mono Print Counter	Counts the number of pages printed in mono (7 digits).
Total Print Counter	Count the total number of pages printed in color and mono (7 digits).

Theory of Operation

In this chapter...

- Phaser 6280 Printer Operational Overview
- Printing Process
- Paper Path of the Printer
- Major Assemblies and Functions
- Printer Modes
- Printer Control
- Drive Transmission

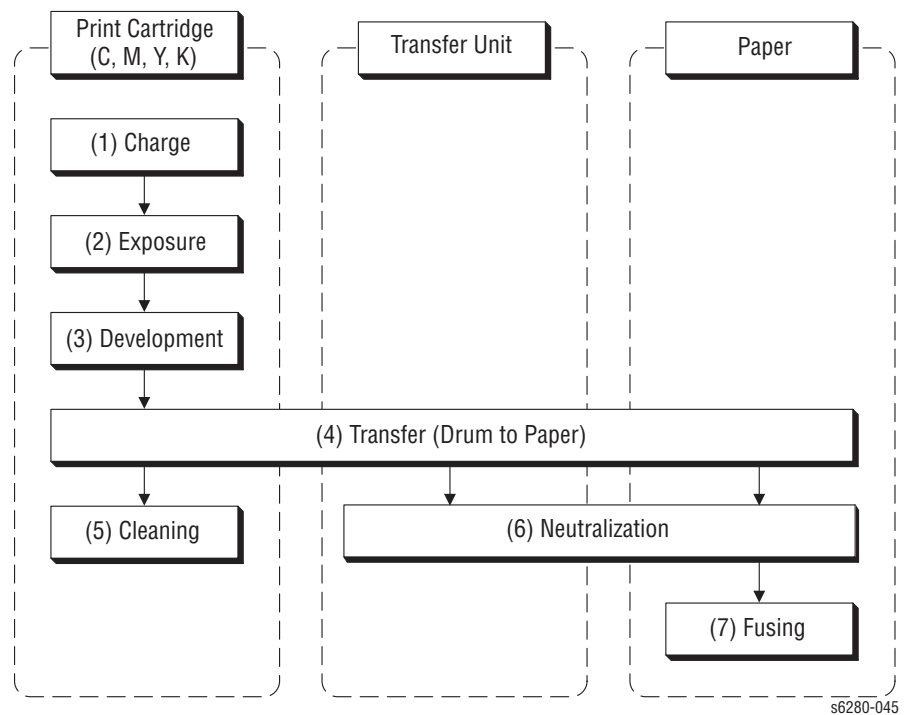
Chapter 2

Phaser 6280 Printer Operational Overview

The Phaser 6280 Color Laser Printer is a full-color laser printer that uses Raster Output Scanner (ROS) lasers with an electrophotographic four-color CMYK process. The tandem system consists of four color print cartridges (C, M, Y, and K) which creates the toner image.

The following block diagram provides the sequence of events for the xerographic process and the paper flow into and out of the Phaser 6280 Printer.

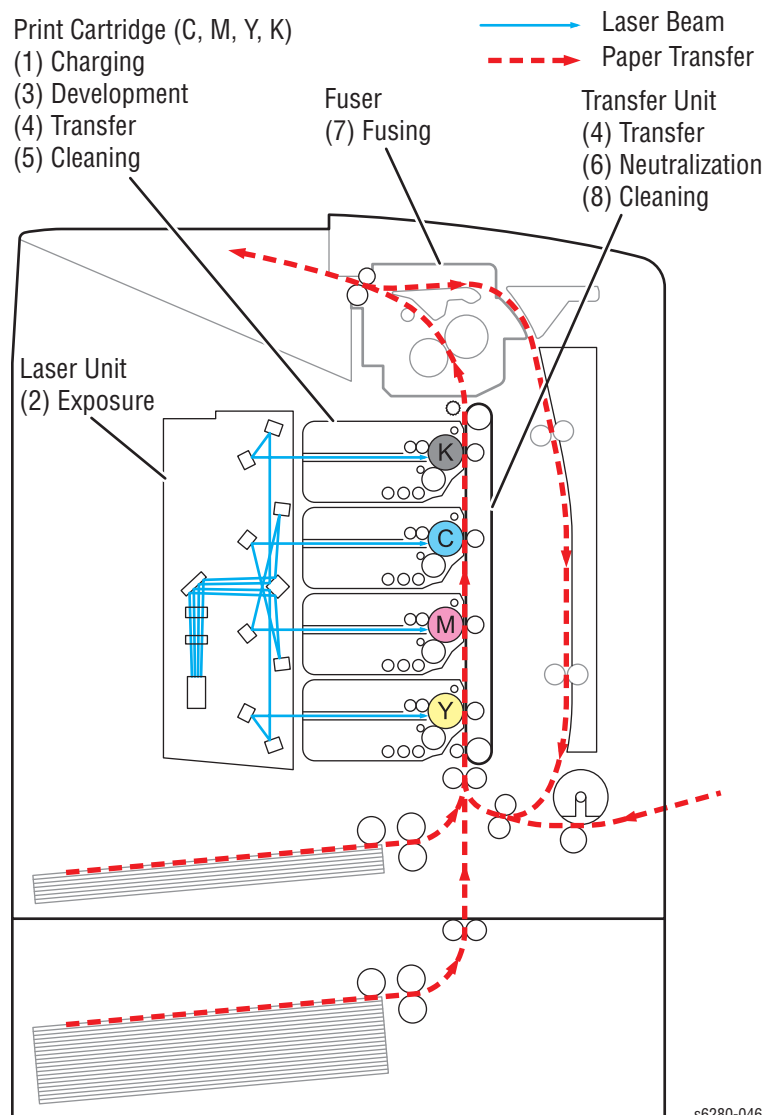
Print Process Block Diagram



Printing Process

The Phaser 6280 Printer print process consists of the following steps:

1. **Charging** – The Drum surfaces are charged with electricity.
2. **Exposure** – The Drums are exposed to laser beams.
3. **Development** – Image is developed with toner.
4. **Transfer (Drum ----> Paper)** – Four color finished toner image on the Drums is transferred onto the paper.
5. **Cleaning (Print Cartridge)** – Remaining toner on the drums is collected.
6. **Neutralization** – The Detack Saw neutralizes the charge on the paper via the Belt.
7. **Fusing** – The Fuser applies toner on to paper using heat and pressure.
8. **Cleaning** – Remaining toner on the Transfer Unit is collected.



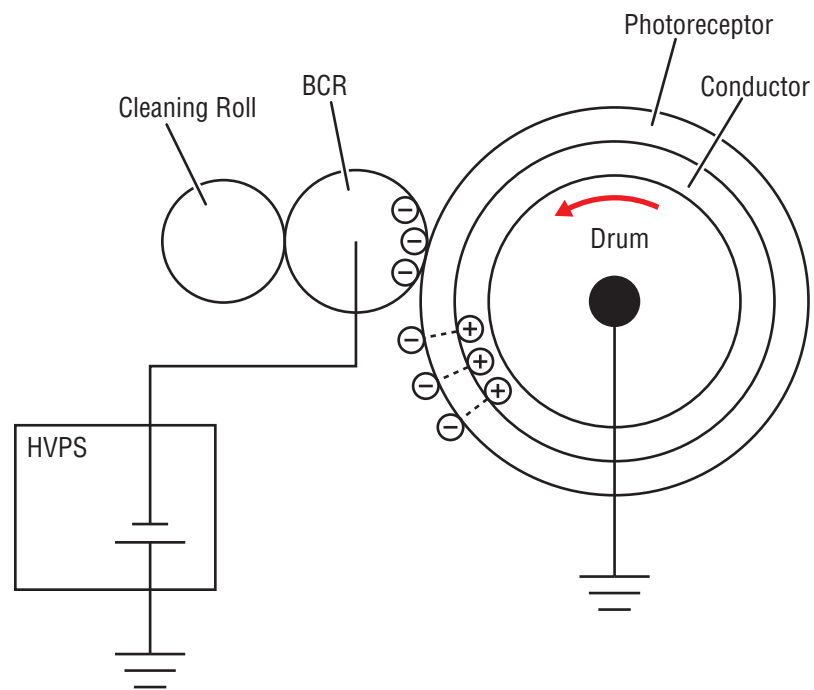
Charging

The Drum surface is charged with negative electricity by discharging of the Bias Charge Roll (BCR) while rotating at a constant speed. This process is performed in parallel for Cyan, Magenta, Yellow, and Black colors.

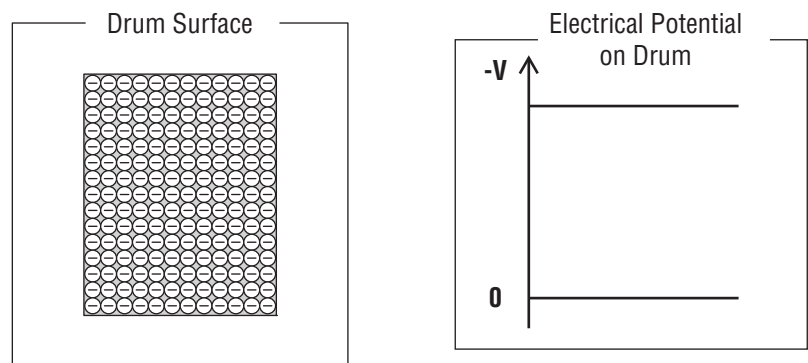
The BCR is kept in contact with the Drum and rotates following the rotations of the Drum. The BCR is a conductive roll, which receives negative voltage from the High-Voltage Power Supply (HVPS) and discharges a negative Direct Current (DC) voltage.

The Drum surface is uniformly and negatively charged with DC bias voltage. The Drum surface is a photoreceptor (which is an insulator in a dark area and a conductor when receiving light) and the Drum inside is composed of conductor.

The BCR Cleaner contacts with the BCR to catch the toner.



s6280-047

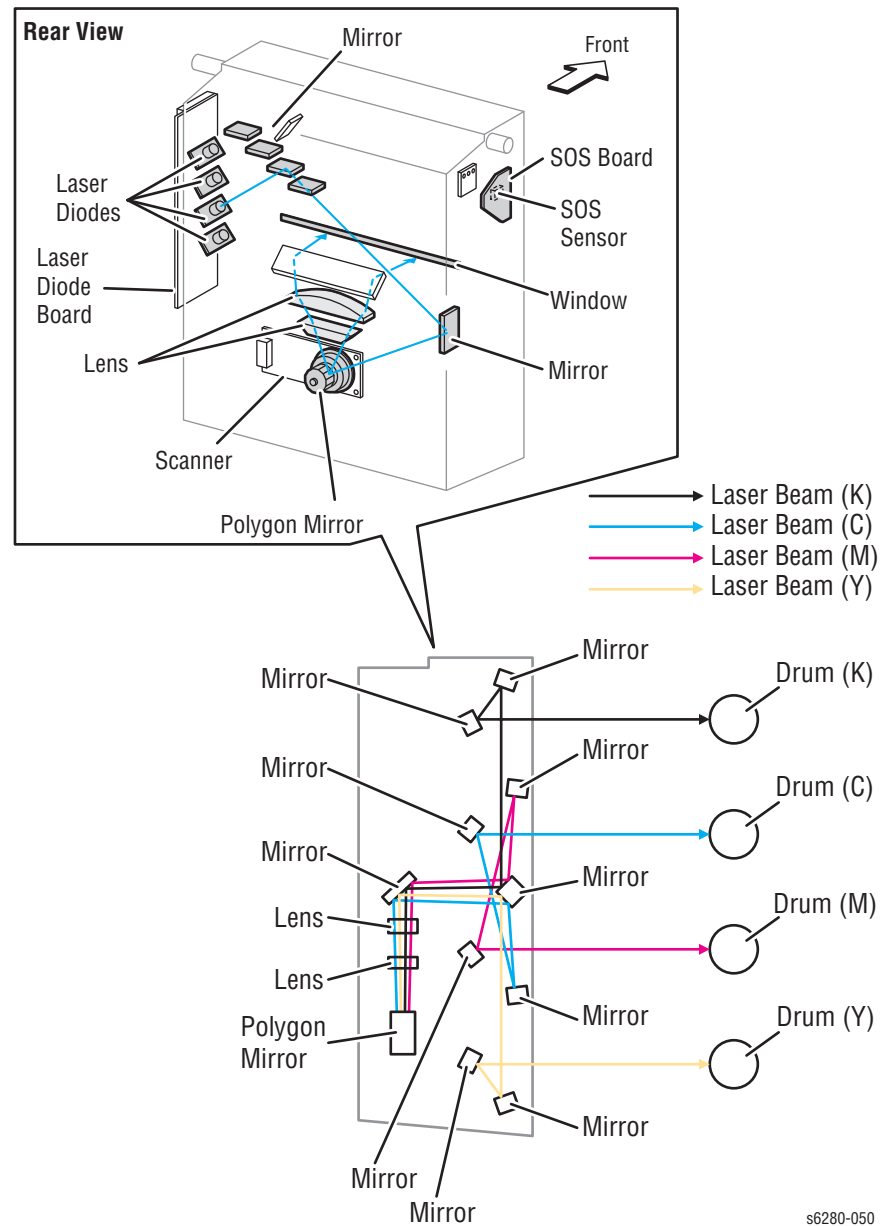


s6280-048

s6280-049

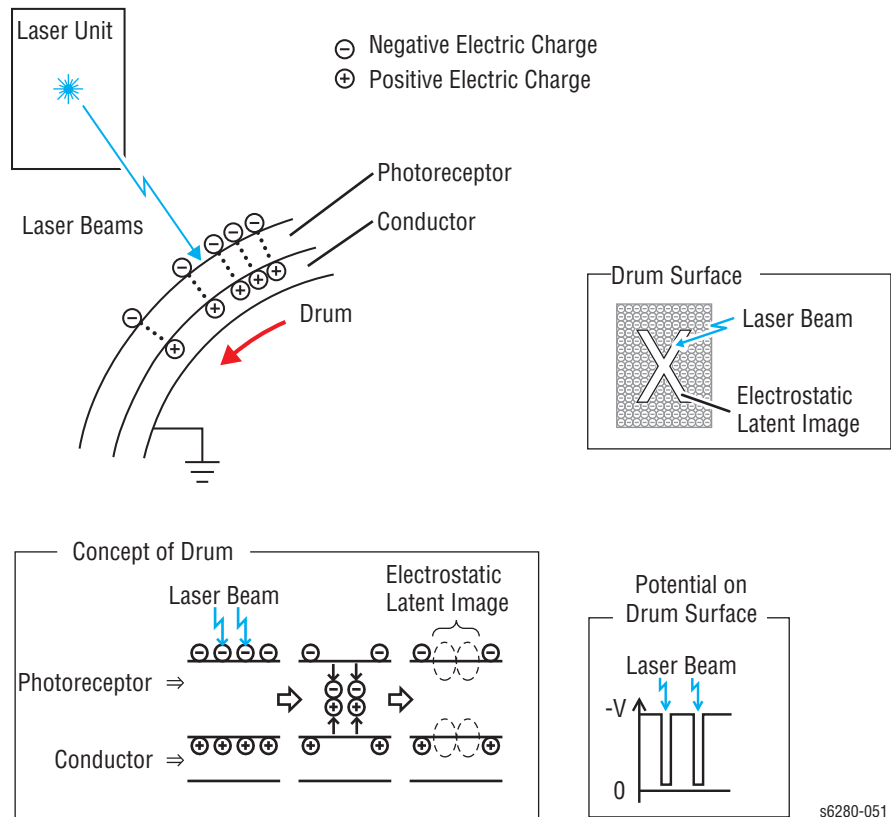
Exposure

Laser beams are emitted from the laser diodes in the Laser Unit. The Drum for each color is scanned from end to end in the axial direction as the polygon mirror rotates, which attaches the fixed mirror and lenses to the Scanner Motor of the Laser Unit.



The negative charged Drum surface is scanned by the laser beams to form an invisible electrostatic latent image on the drum surface. The process is performed in parallel for Cyan, Magenta, Yellow, and Black colors.

The area on the surface where the voltage potential drops due to exposure to the laser beam becomes the electrostatic latent image.



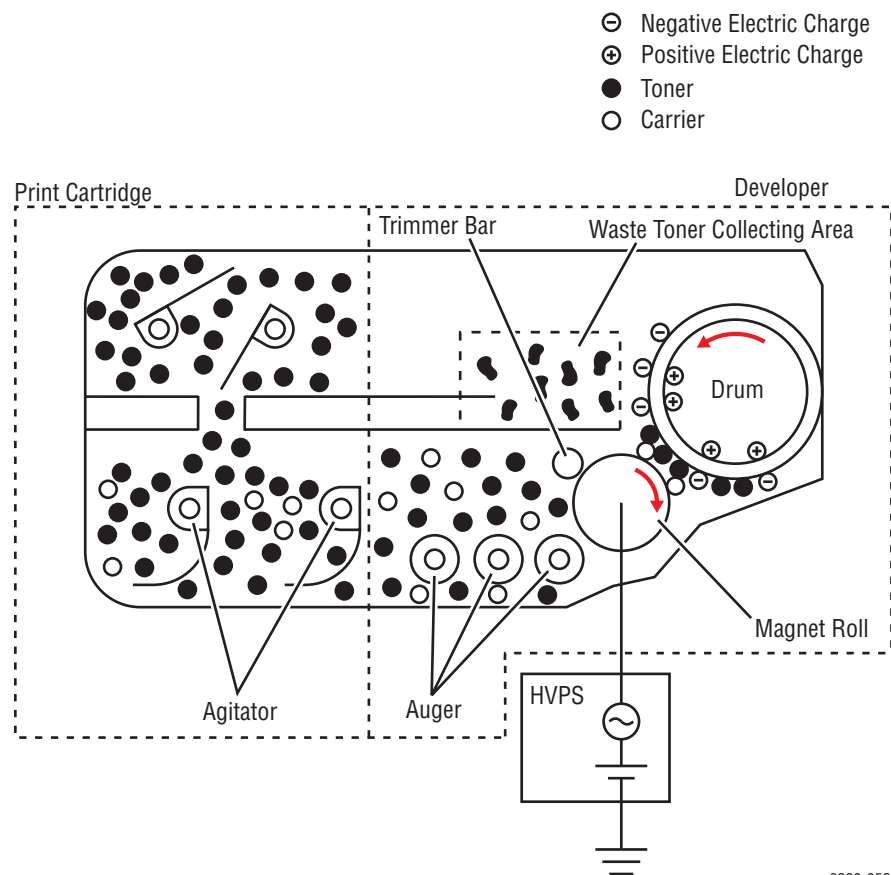
s6280-051

Development

Toner is electrically attached to the invisible electrostatic latent image on the drum surface to form the visible toner image on the Drum.

The toner in the Print Cartridge is agitated by the built-in Agitator and fed into the Developer part. The Augers are driven by the Toner Motor and the Developer Motor in the Main Drive. The toner to be consumed according to the print count is calculated and fed into the Developer. This process is called Toner Dispensation, which is controlled by two processes: Pixel Count Dispense Control (PCDC) and Automatic Density Control (ADC).

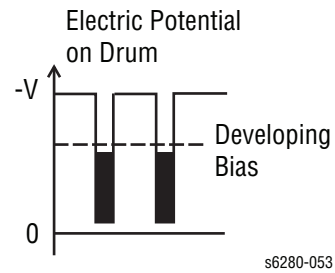
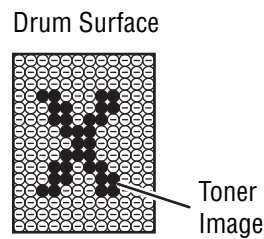
The toner fed into the Developer and the carrier in the Developer are agitated by the Auger, and supplied to the Magnet Roll arranged in the drum surface area. The toner and carrier are charged by friction due to agitation (toner in negative, carrier in positive), and they are absorbed electrically. A uniform layer is formed by the Trimmer Bar as the carrier magnetic substance is attracted to the Magnetic Roll.



s6280-052

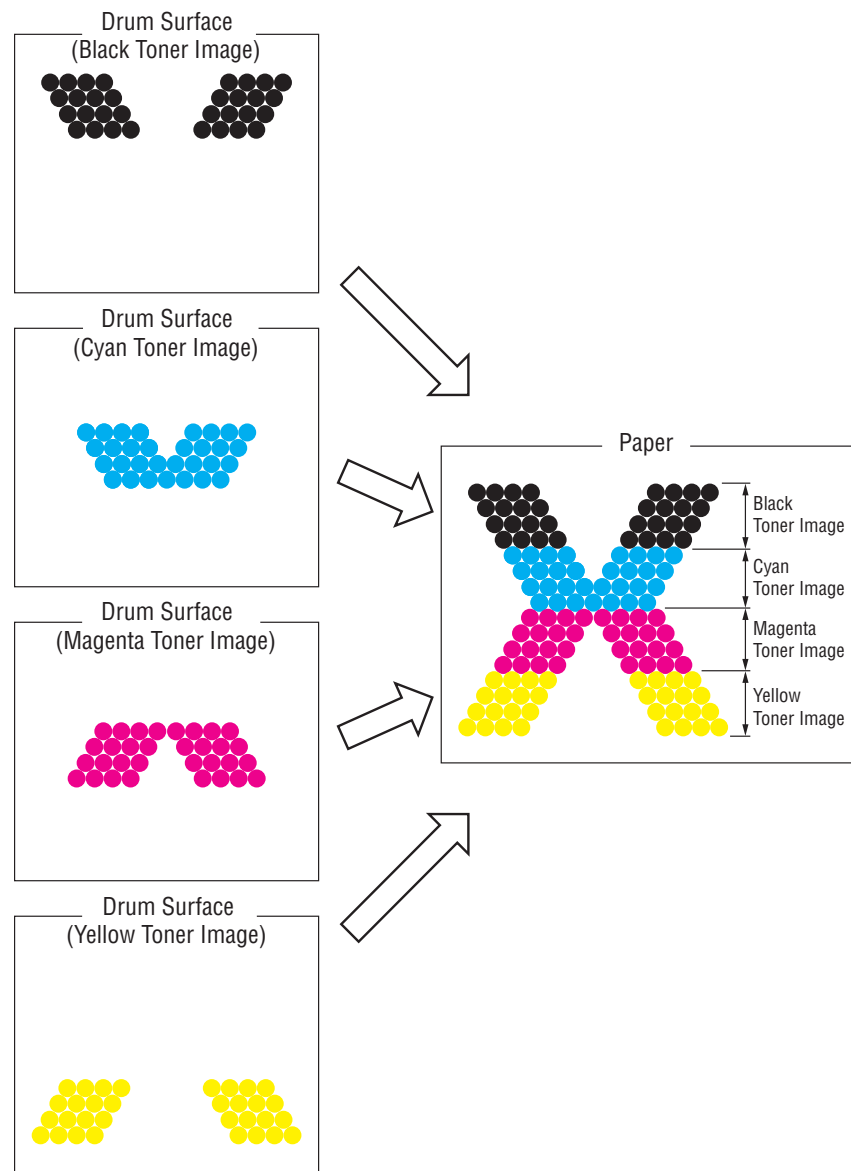
The Magnet Roll is covered by a thin semi-conductive sleeve over the surface. The Developer Bias voltage is supplied to this semiconductor sleeve from the High-Voltage Power Supply (HVPS). Developer Bias is negative Direct Current (DC) voltage combined with Alternating Current (AC) voltage. The Magnet Roll is kept at constant negative voltage against the photoreceptor layer of the drum by DC voltage. Therefore, at the area on the drum surface where the negative electric charge does not decrease, potential is lower than the magnet roll, while the potential is higher than the magnet roll at the area where the negative charge on the drum surface decreases. The AC voltage shakes the Developer on the Magnet Roll surface, causing the toner to transfer to the drum.

Thus, the negatively charged toner is attracted only by the area where the negative charge has decreased on the drum surface from the Magnet Roll (electrostatic latent image) and the toner image is formed on the drum. When the toner is attached, the negative charge at the portion of the drum increases where the toner is located increases, the potential decreases, and the force to attract the toner decreases.



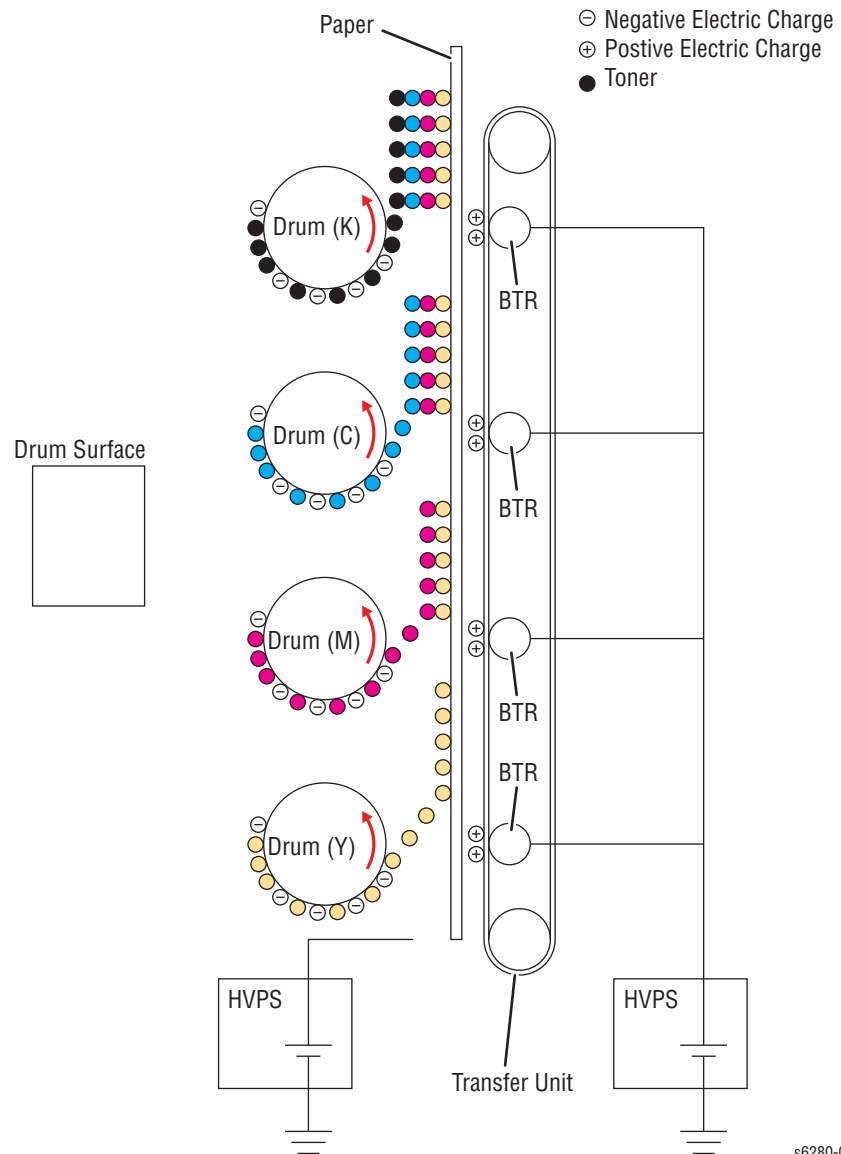
Transfer (Drum ---> Paper)

Toner image formed on the Drum surface is transferred onto the surface of the paper. The toner is transferred onto the paper in the order of Y, M, C, and K.



Transfer (Drum → Paper)

- **Bias Transfer Roll (BTR)** – The BTR is a conductive roll, which receives positive voltage from the HVPS. The BTR contacts the rear side of the Belt and applies the positive voltage to the Belt.
- **Transfer Unit (Belt)** – The Transfer Unit is a conductive unit, which receives positive voltage from the BTR. After the negative charged toner image on the Drum surface is drawn by the positive charge on the belt, it is transferred from the Drum to the paper. The Transfer Unit feeds the paper toward the direction of the Fuser.

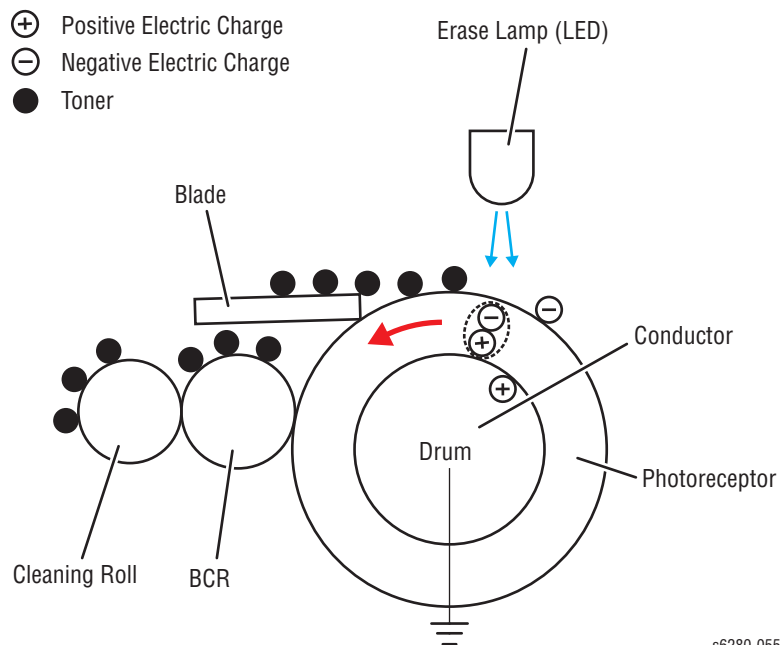


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Cleaning (Print Cartridge)

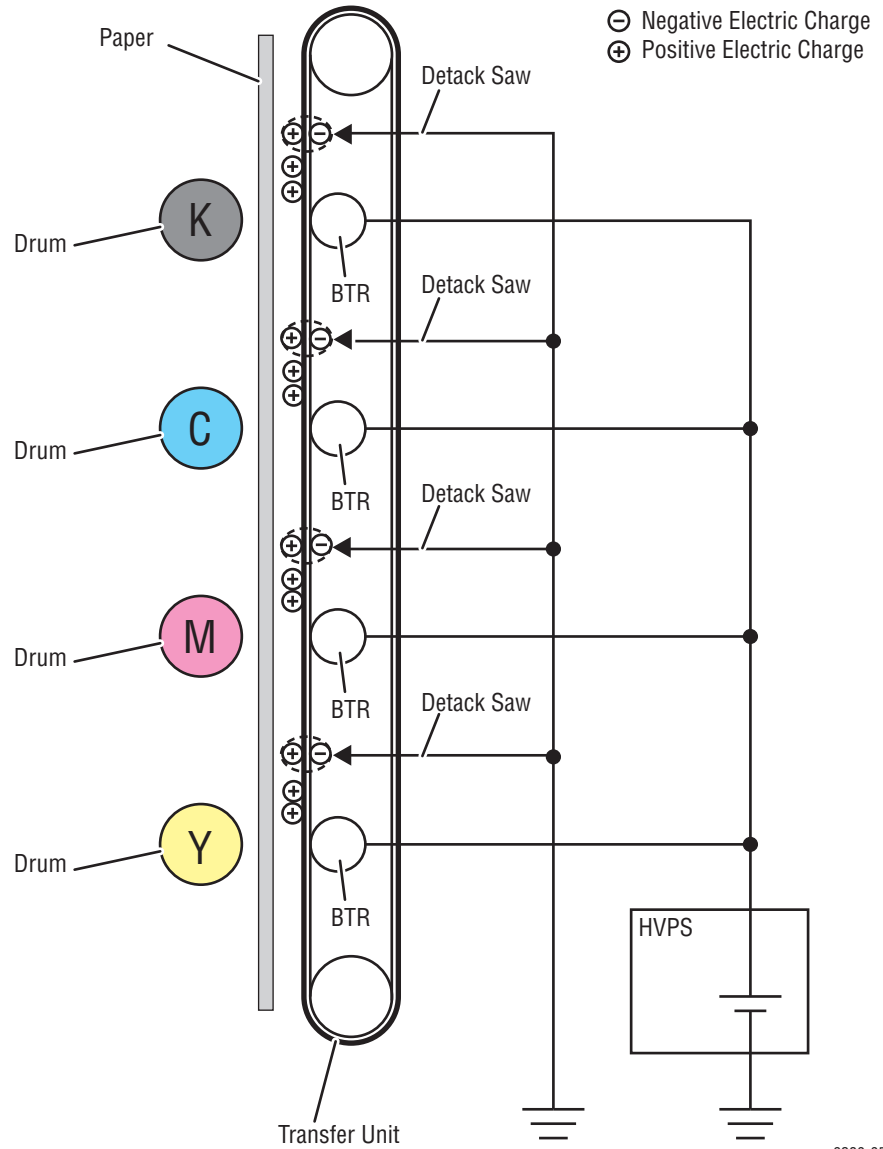
Excess toner is removed from the Drum and the BCR surfaces, while excess charge is also eliminated from the drum surface.

- **Drum Cleaning** – The cleaning blade contacts the surface of the drum collecting the excess toner by scraping off toner.
- **Cleaning Roll** – The Cleaning Roll contacts the surface of the BCR collecting the excess toner by scraping off toner.
- **Charge Cleaning** – When the Drum is charged by the BCR, any excess charge hinders the Drum surface from being uniformly charged, which may lead to print quality problems. The excess charge on the surface of the Drum is eliminated by irradiating the light of the Erase Lamp (LED).



Neutralization

The Detack Saw neutralizes the charge on the paper via the Belt. The Detack Saw, a metal sheet secured at the ground level, is installed at several millimeters away from the back side of the belt.

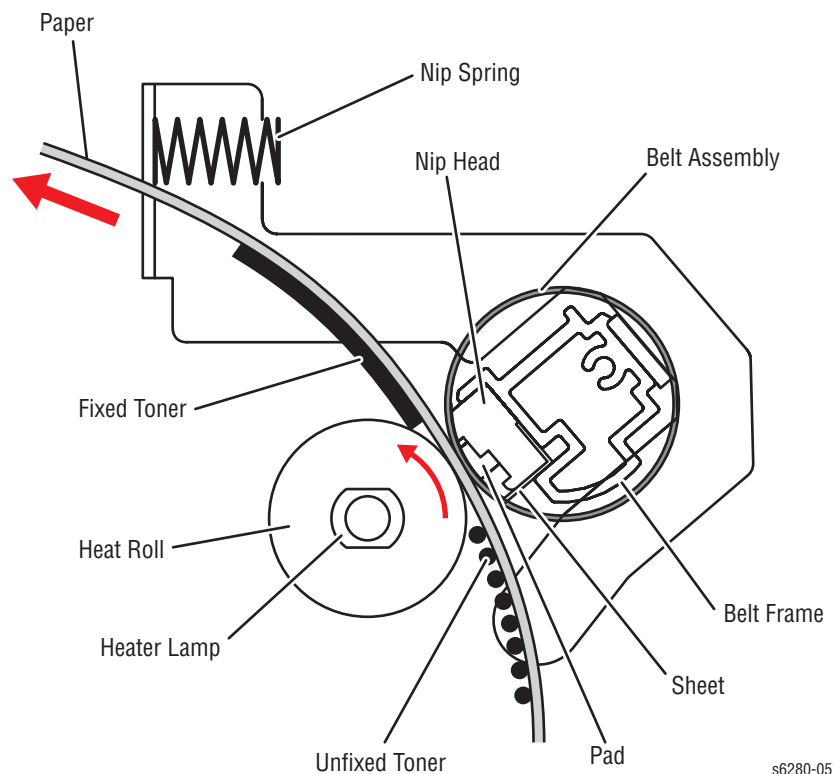


s6280-056

Fusing

Toner is applied by the BTR and the Developers. The toner image is applied on the paper with the Fuser (Fusing Unit) by the Free Belt Nip Fusing (FBNF) thermal fusing system. The Heat Roll with the Heater Lamp melts the toner particles. Toner is fused onto the paper by the combination of heat and pressure.

	Warm-Up	Stand By	Printing
Main Heater Lamp	On	On/Off	On



s6280-057

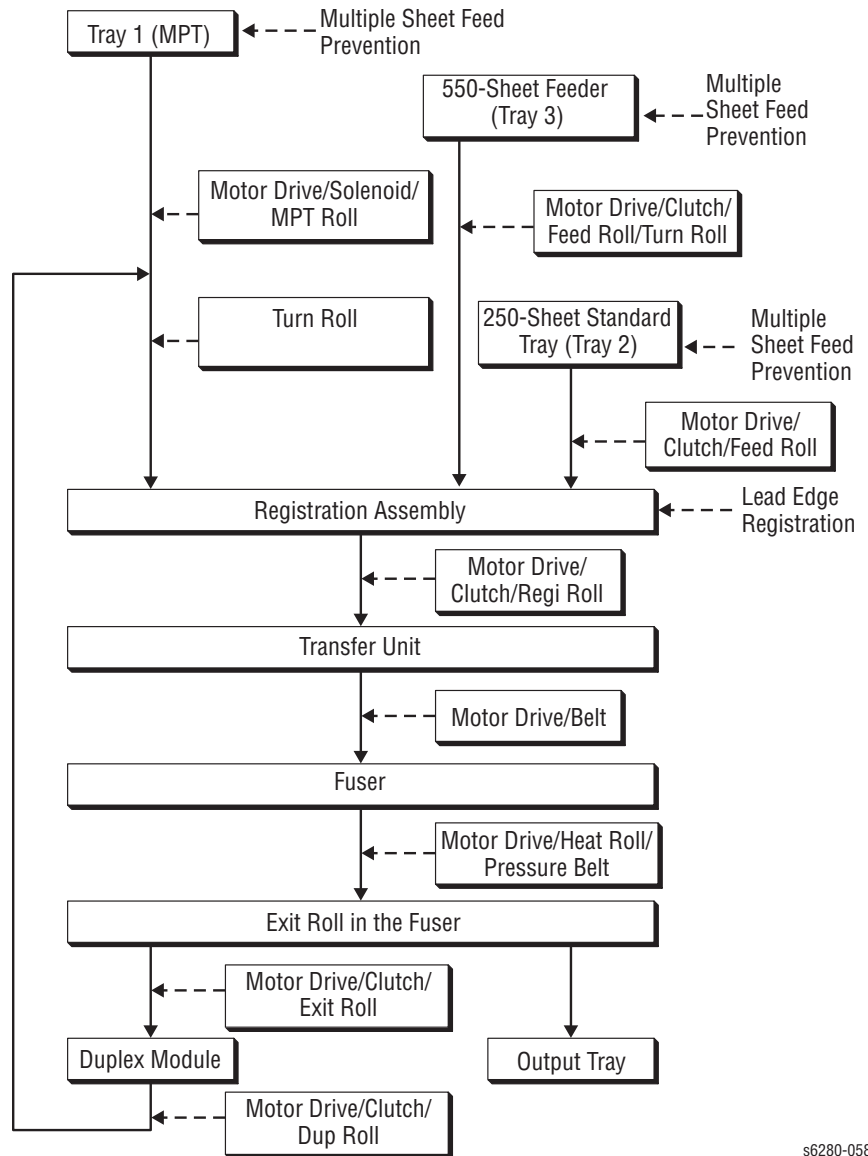
Cleaning

A cleaning blade in the Print Cartridge scrapes off toner remaining on the drum surface after transfer has occurred. Then, the latent charge pattern remaining on the photoconductive drum is neutralized by the Erase Lamp to prepare the drum for the next Exposure cycle.

Paper Path of the Printer

Paper Path Route

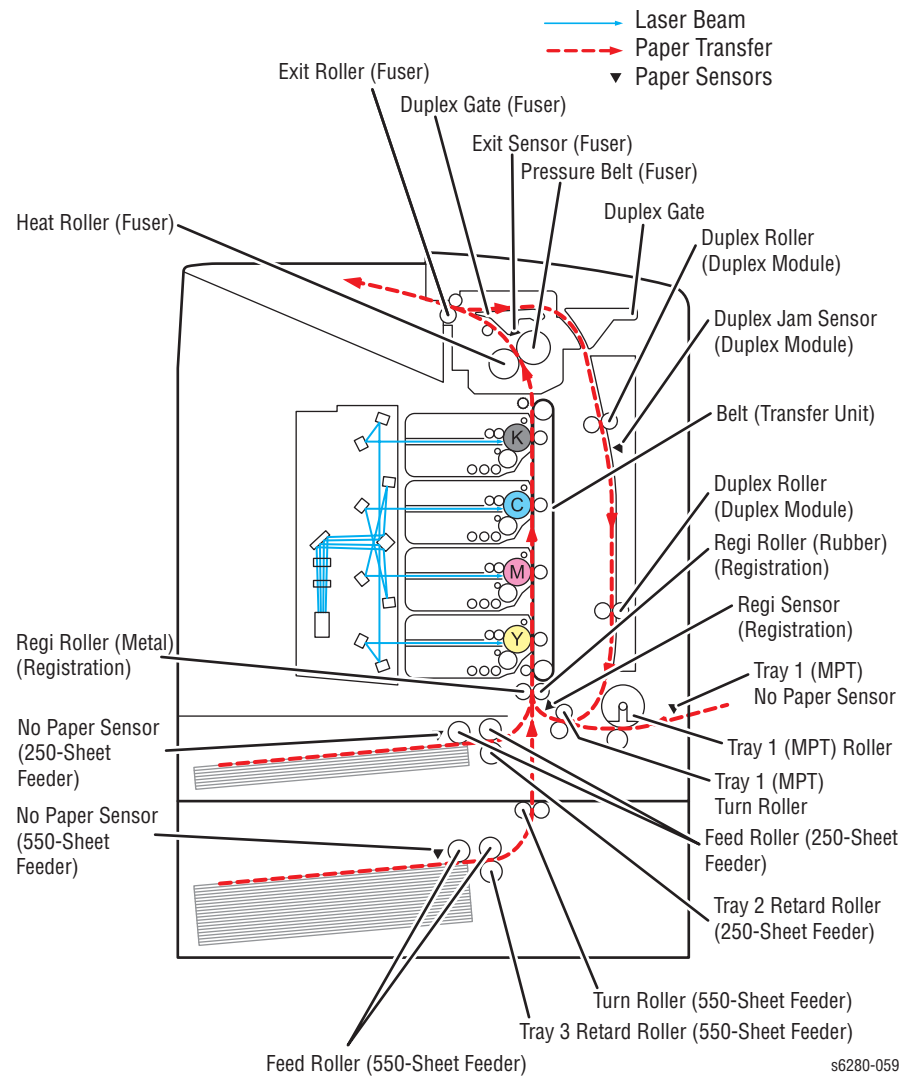
The paper is supplied from Tray 1, 2, or optional Tray 3, and is transported into the printer along the paper path as shown in the diagram.



s6280-058

Paper Path Components

Paper path components for the printer and the Optional 550-Sheet Feeder are shown in the following figure.

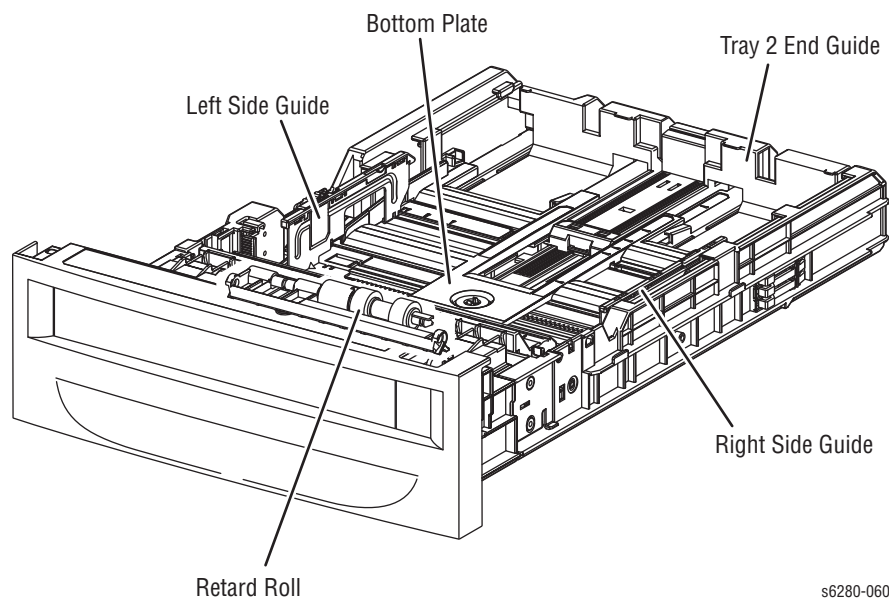


Major Assemblies and Functions

Major functional components for the printer are classified into the following categories based on the printer configuration.

- Tray 2
- Paper Feeder
- Tray 1 (MPT) & Registration
- Fuser
- Transfer Unit
- Laser Unit
- Print Cartridge
- Main Drive
- Electrical
- Duplex Unit
- Tray 3 - Optional 550-Sheet Feeder

Tray 2



s6280-060

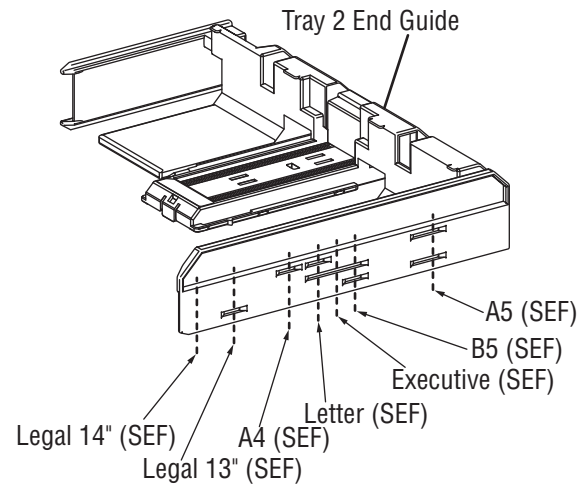
■ Tray 2 Left/Right Side Guide

The Side Guide moves at a right angle toward the paper transfer direction to align the paper width.

■ Tray 2 End Guide

The End Guide moves in toward the paper transfer direction to determine the paper size. The On/Off of the Size Switch adjusts according to the Tray End Guide position to detect the paper size.

The paper size is detected at the End Guide position.



All paper should be loaded SEF.

s6280-066

Note

Refer to "Paper Size Detection" on page 2-52 for detailed information on paper size switches and paper size.

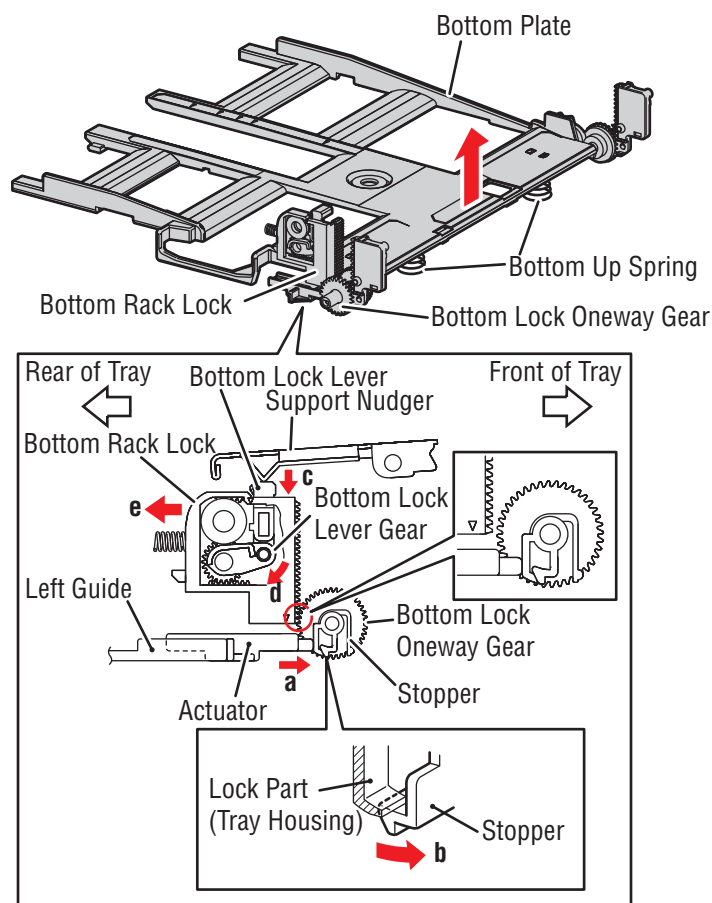
■ Tray 2 Retard Roll

The Retard Roll and Feed Roll pinch the paper to prevent multiple sheets of paper from feeding.

■ Tray 2 Bottom Plate

The Bottom Plate is locked to the bottom side when the Tray is pulled out from the paper feeder, and unlocked when the Tray is installed into the paper feeder. The Bottom Plate pushes the paper against the Feed Roll using a spring tension.

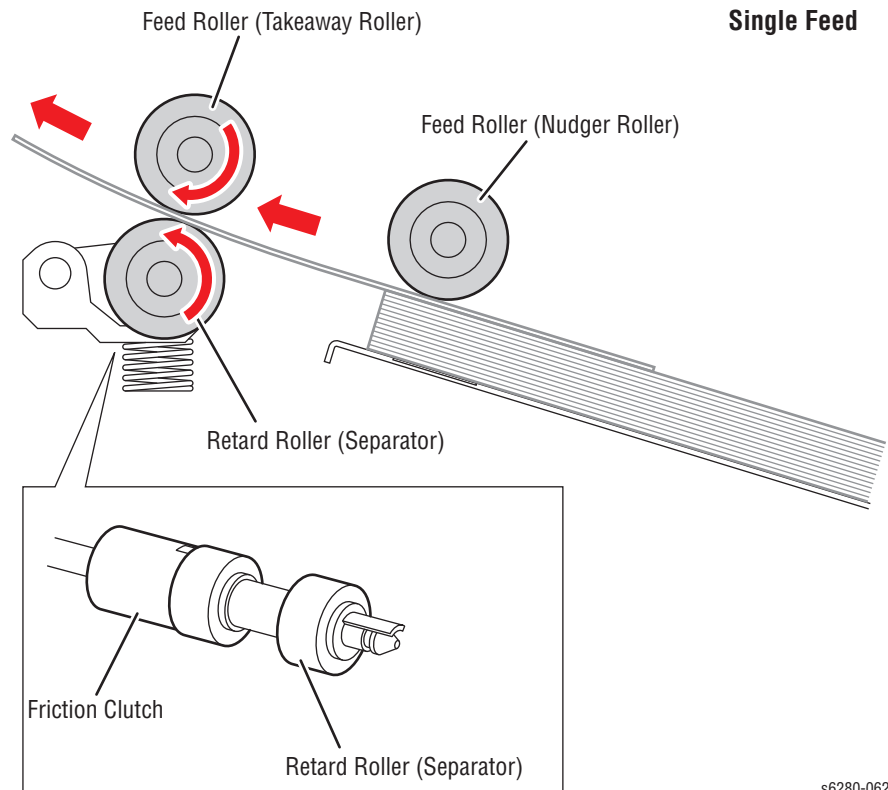
- a. When the tray is inserted into the Sheet Feeder, the Actuator is pushed toward the front by the Left Guide, which pushes the Stopper.
- b. The Stopper unlocks the Bottom Lock Oneway Gear.
- c. When the tray is pushed until it stops, the Bottom Lock Lever is pressed down by the Support Nudger in the Sheet Feeder.
- d. The Bottom Lock Lever actuates the Bottom Lock Lever Gear, which pushes the Bottom Rack Lock toward the rear.
- e. The gear on the Bottom Rack Lock is disengaged from the Bottom Lock Oneway Gear, which allows the Bottom Plate to raise up by the Bottom Up Springs.



s6280-061

Tray 2 Multiple Sheet Feed Prevention

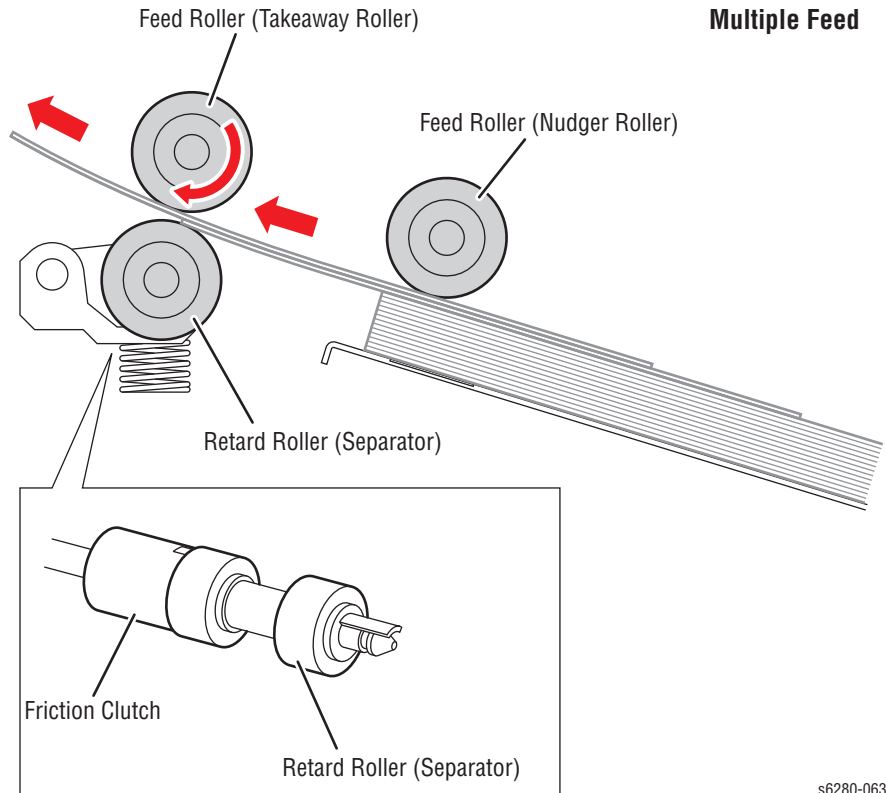
The sheets loaded into Tray 2 are occasionally stuck together along the edges, which can cause a multiple feed or a jam. The Nudger Roller feeds the sheets to a position between the Feed Roller and the Retard Roller. Normally, when only one sheet is fed, both the Feed Roller and Retard Roller rotate to allow the sheet to pass.



s6280-062

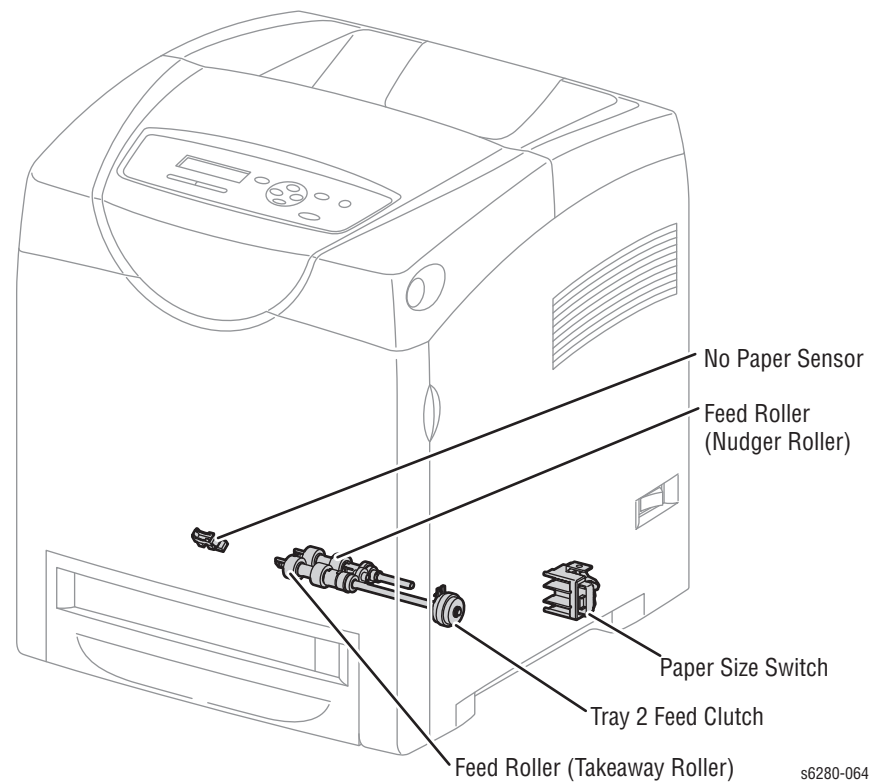
However, when two sheets are fed concurrently, only the Feed Roller rotates. The Retard Roller is coupled to a friction clutch that prevents the roller from rotating due to extra force from feeding two sheets; this process allows the upper sheet to pass by as the lower sheet is stopped by the friction with the Retard Roller at rest.

The Retard Roller is pushed toward the Feed Roller by spring pressure, and controlled by the Friction Clutch with which it is coupled.



s6280-063

Paper Feeder



■ Tray 2 Feed Roller

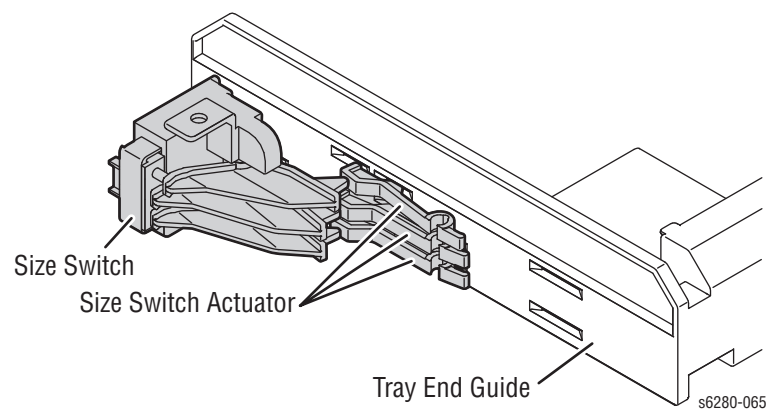
The Feed Roller (Takeaway Roller) feeds the paper when the Feed Clutch operates.

■ Tray 2 Feed Clutch

The Feed Clutch transmits drive energy from the PH Drive Assembly to the Feed Roller.

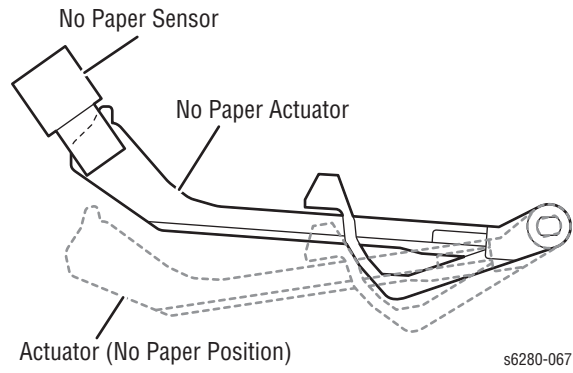
■ Tray 2 Size Switch

The Size Switch detects the presence and size of the paper in the tray.

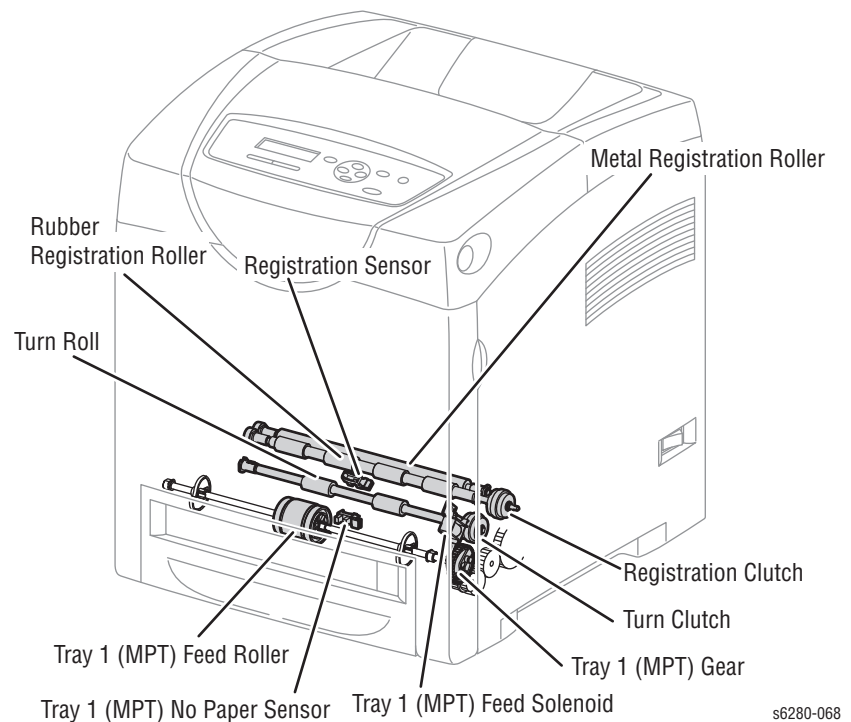


■ **Tray 2 No Paper Sensor**

The No Paper Sensor detects the presence of the paper in the tray based on the Tray 2 No Paper Actuator's position.



Tray 1 (MPT) & Registration



■ Tray 1 (MPT) Turn Clutch

The Turn Clutch transmits drive energy from the PH Drive Assembly to the Turn Roller.

■ Tray 1 (MPT) Turn Roller

The Turn Roller is rotated by the drive from the PH Drive Assembly through the Turn Clutch to feed paper from the Tray 1 (MPT) or duplex paper path to the Registration Chute.

■ Tray 1 (MPT) Registration Sensor

The Registration Sensor detects paper when the paper leading edge reaches the Registration Chute. When paper is fed from Tray 1 (MPT), the Registration Sensor measures the paper length. The On time of the Registration Sensor is converted into the paper length.

Note

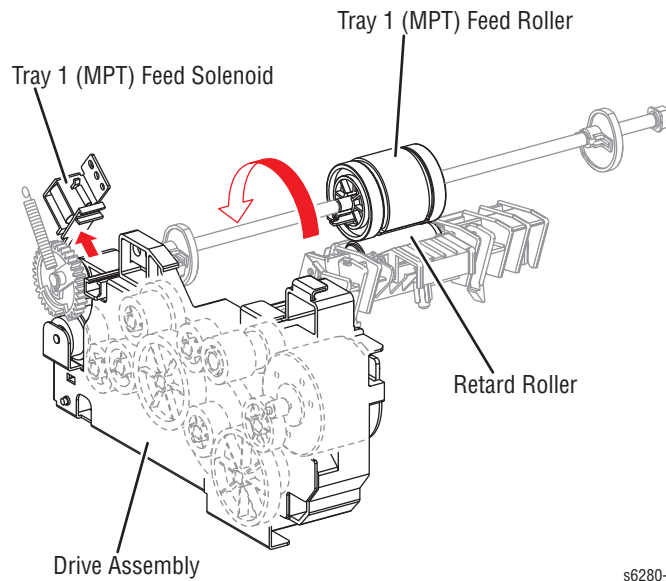
On: The paper activates the Actuator.

■ Tray 1 (MPT) Registration Clutch

The Registration Clutch transmits drive energy from the Main Drive to the Registration Rubber Roller, and transports paper from Tray 1 (MPT) and the duplex path to the Print Cartridge direction. The timing of sheets feeding from the Registration is adjusted by the duration of the Registration Clutch operation so that the toner image on the drum can be transferred to the appropriate position on the sheet.

■ **Tray 1 (MPT) Feed Solenoid**

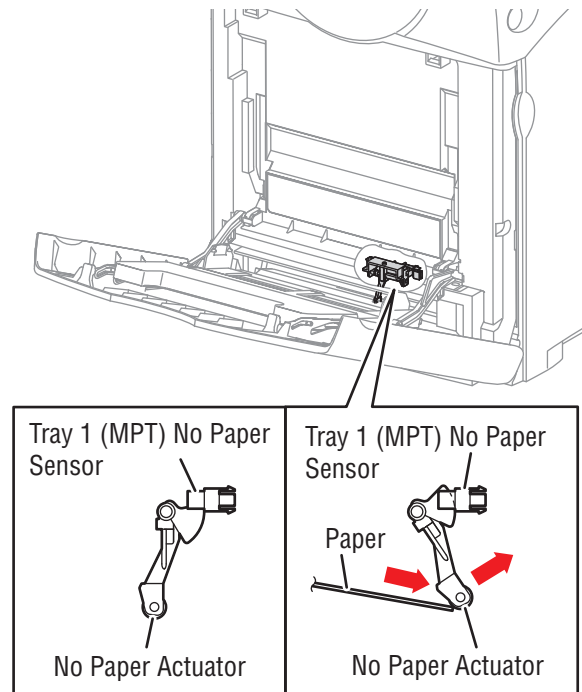
The Feed Solenoid controls drive energy from the PH Drive Assembly to the Tray 1 (MPT) Feed Roller.



s6280-069

■ **Tray 1 (MPT) No Paper Sensor**

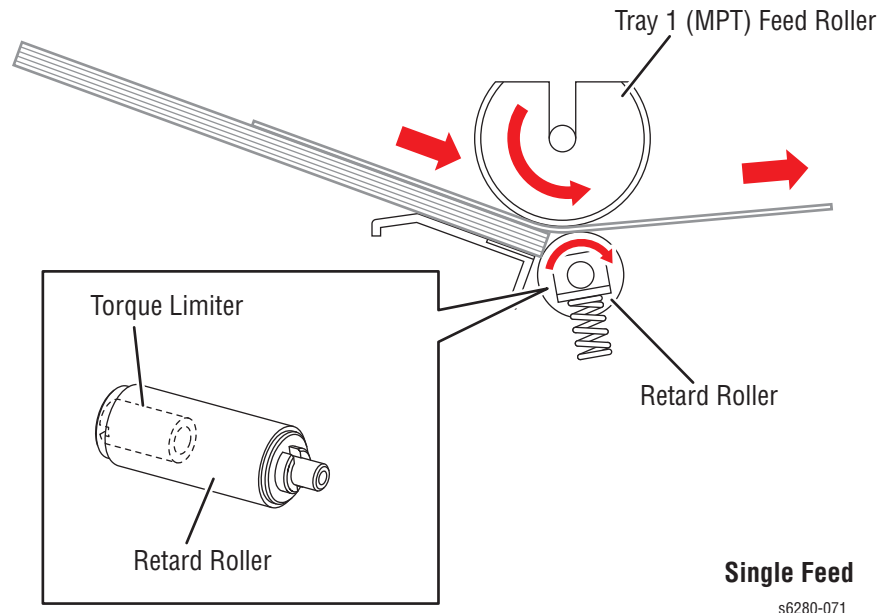
The No Paper Sensor detects the presence of paper in Tray 1 (MPT) based on the Actuator's position.



s6280-070

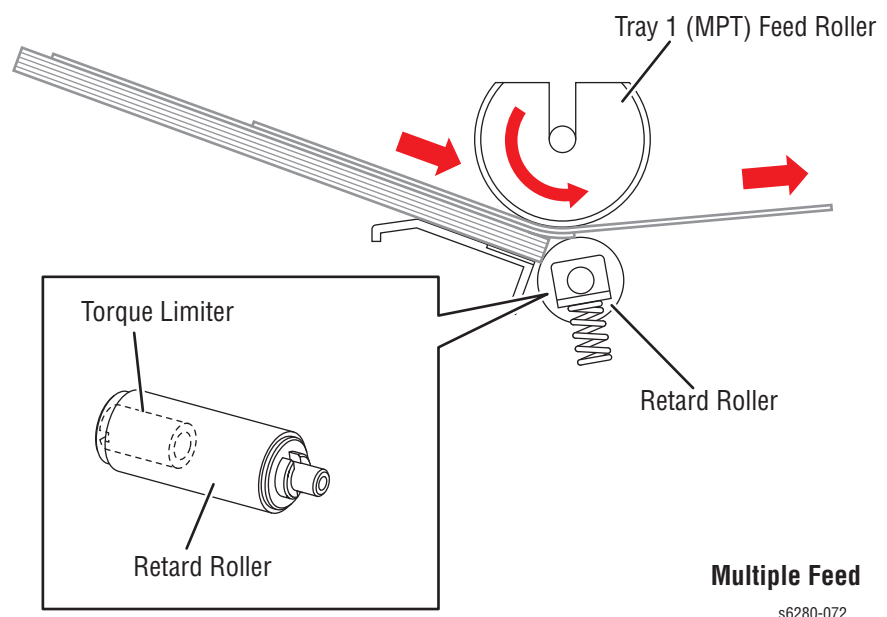
Tray 1 Multiple Sheet Feed Prevention

The sheets loaded in Tray 1 (MPT) are occasionally stuck together at the edges, which can cause a multiple sheet feed or a jam. Normally, when only one sheet is fed, both the Feed Roller and Retard Roller rotate to allow the sheet to pass.



However, when two sheets are fed concurrently, only the Feed Roller rotates. The Retard Roller is coupled to a friction clutch that prevents the roller from rotating due to the extra force from feeding two sheets; this process allows the upper sheet to pass by as the lower sheet is stopped by the friction with the Retard Roller at rest.

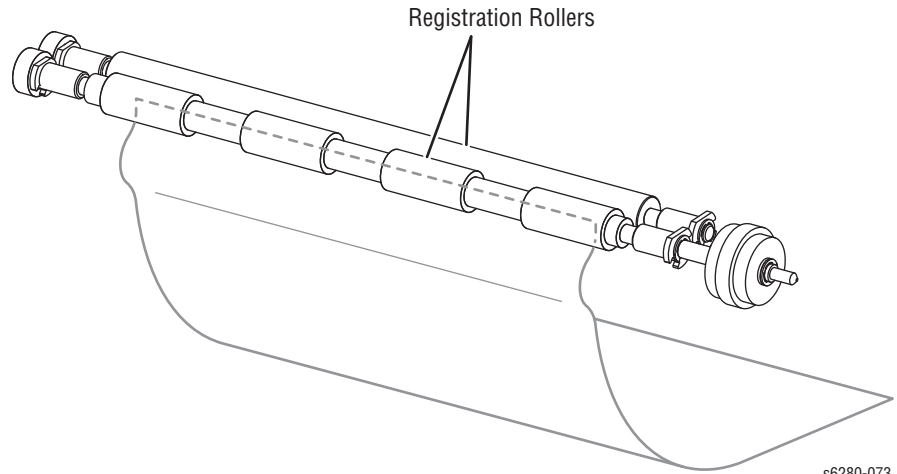
The Retard Roller is pushed toward the Feed Roller by spring pressure, and controlled by the Torque Limiter (Friction Clutch Retard) with which it is coupled.



Lead Edge Registration

When a sheet is fed from Tray 1 (MPT) to the toner transfer position, the registration of the sheet may not be correctly maintained due to misalignment of lead edges in the tray.

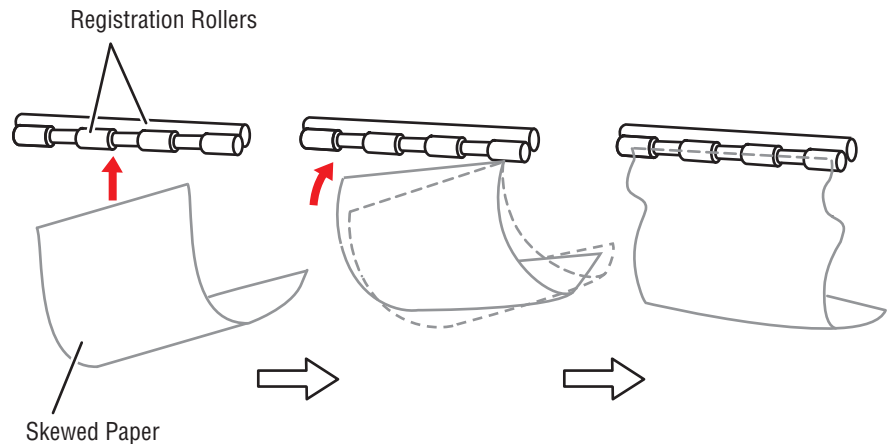
To avoid this problem, the lead edge position needs to be aligned at the Registration rollers before the sheet is fed in front of the Transfer Unit Belt, or in front of the BTR's.



s6280-073

Before the Registration rollers are energized, the paper is advanced from the tray to the rollers. This process aligns the leading edge as shown below.

By pushing the edge of the sheet coming out of Tray 1 (MPT) against the Registration Roller that is not turning, the lead edge of the sheet is registered.



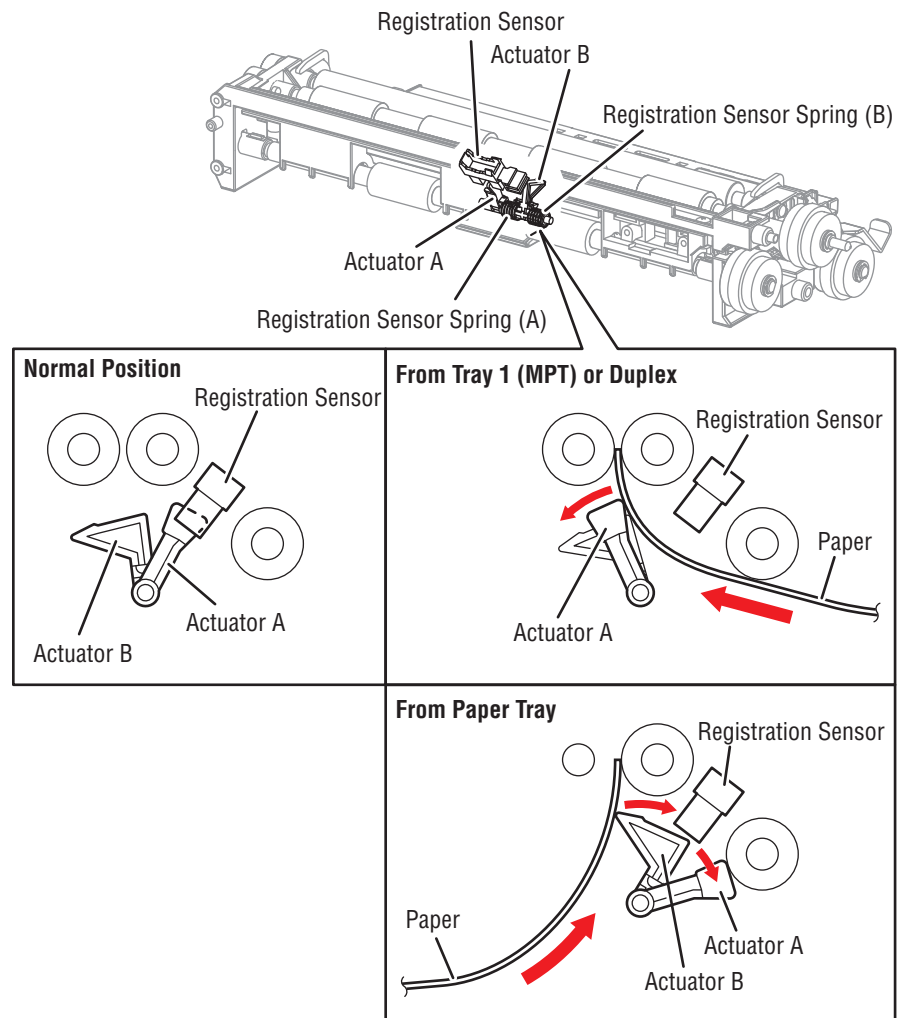
s6280-074

Paper Detection by the Registration Sensor

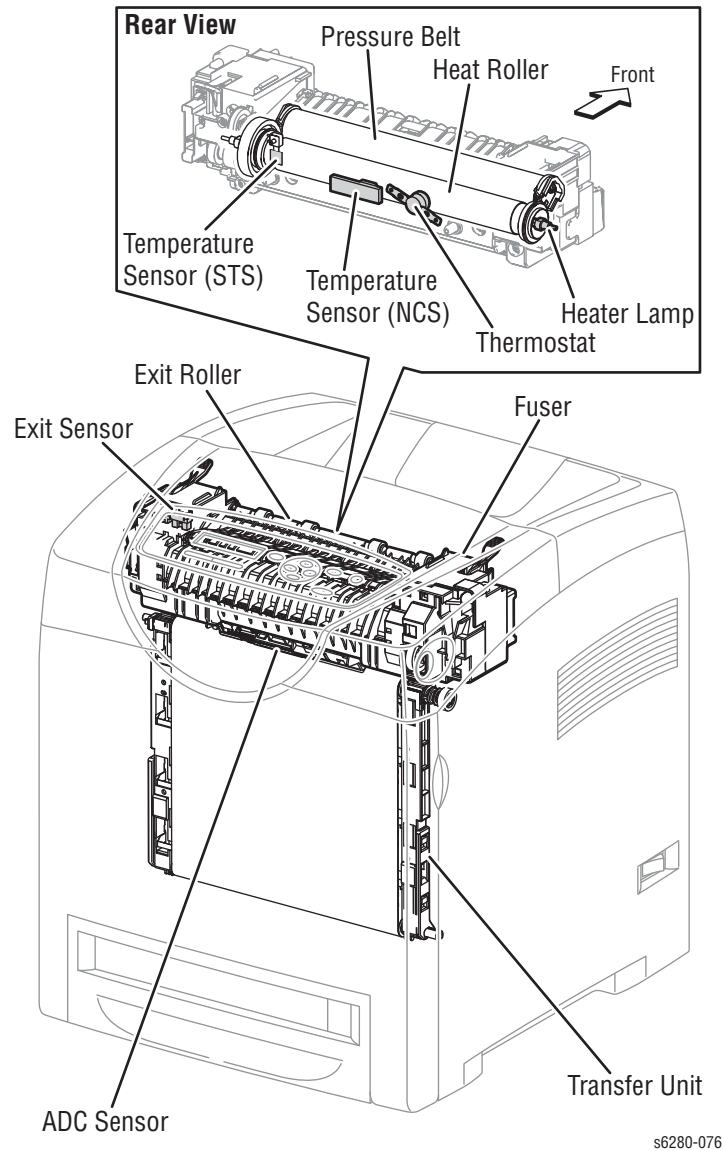
Since the paper path from Tray 1/Duplex to the Registration Sensor and from the paper tray to the Registration Sensor are different, the Registration Sensor is provided with Actuators A and B.

- Actuator A detects the sheet fed from Tray 1/Duplex.
- Actuator B detects the sheet fed from the paper tray.

The movement of Actuator A does not affect Actuator B.



Fuser



s6280-076

The Fuser fixes transferred toner onto the paper using heat and pressure and feeds the paper before and after toner is fixed. The Fuser consists of the following components: Heat Roller, Heater Lamp, Thermostat, Temperature Sensor, Pressure Belt, Exit Roller, and Exit Sensor.

■ Heat Roller

The Heat Roller is a metal tube with coated surface and a Heater inside. As the paper passes between the Heat Roller and Pressure Belt, heat that is applied to the paper, melts the toner, and fuses it to the paper.

- **Heater Lamp**

The Heater Rods are glass tubes containing heater coils. The Main Heater Lamp heats the entire length of the Heat Roller, and the Dual Sub-Heater Rods heat the center.

- **Thermostat**

The Thermostat provides a second-level of protection. If the Heat Roller temperature exceeds the current temperature, the Thermostat cuts off the AC power to the Heater Lamps.

- **Temperature Sensors**

The temperature sensors are thermistors having a known value of resistance that varies with temperature. There are two Temperature Sensors. The Soft Touch Sensor (STS) is located at the edge of the Heater Lamp, and the Non-Contact Sensor (NCS) is located at the center of the Fuser. The sensors monitor temperature of each location to control lighting of the Heater Lamp. The Sensors are mounted in contact with the surface of the Heat Roller. Power to the Heater Lamp is turned On and Off using the signals from these sensors, so that the surface temperature of the Heat Roller can be maintained within a specified range. This signal is also used to provide a first stage of overheat protection.

- **Pressure Belt**

The Pressure Belt maintains pressure on the paper passing between it and the Heat Roller. The pressure bonds the melted toner to the paper.

- **Exit Roller**

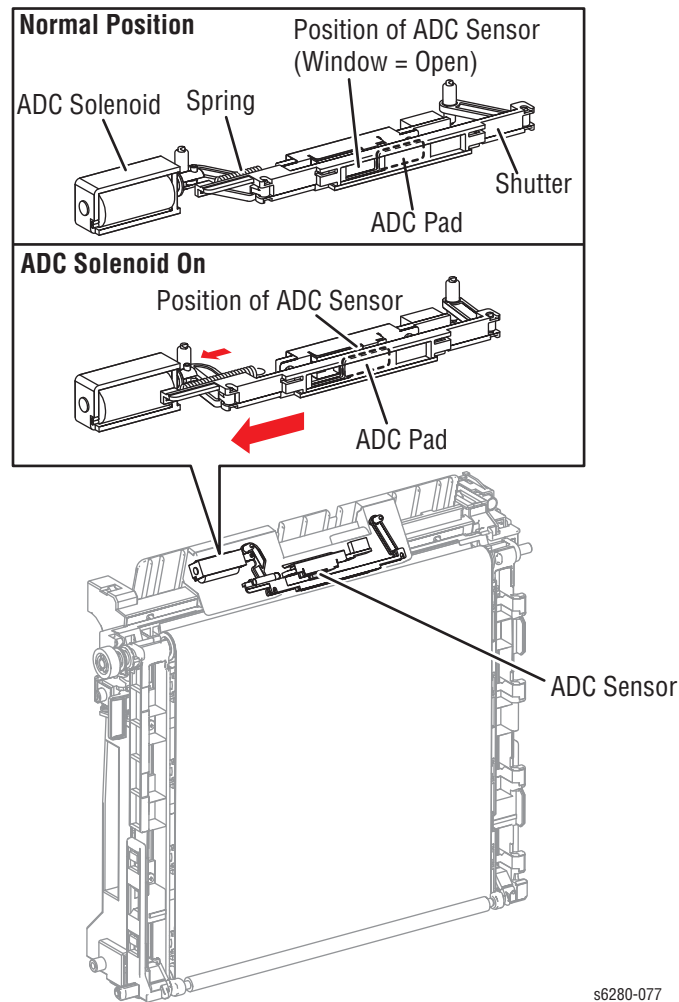
The Exit Roller transports paper from the Fuser to the output tray.

- **Exit Sensor**

The Exit Sensor detects passage of printed pages after fusing on the Actuator's position changes.

Transfer Unit

The Transfer Unit consists of the Belt, ADC Sensor, ADC Solenoid, and ADC Pad.



- **Belt**

The Belt feeds the paper toward the direction of the Fuser.

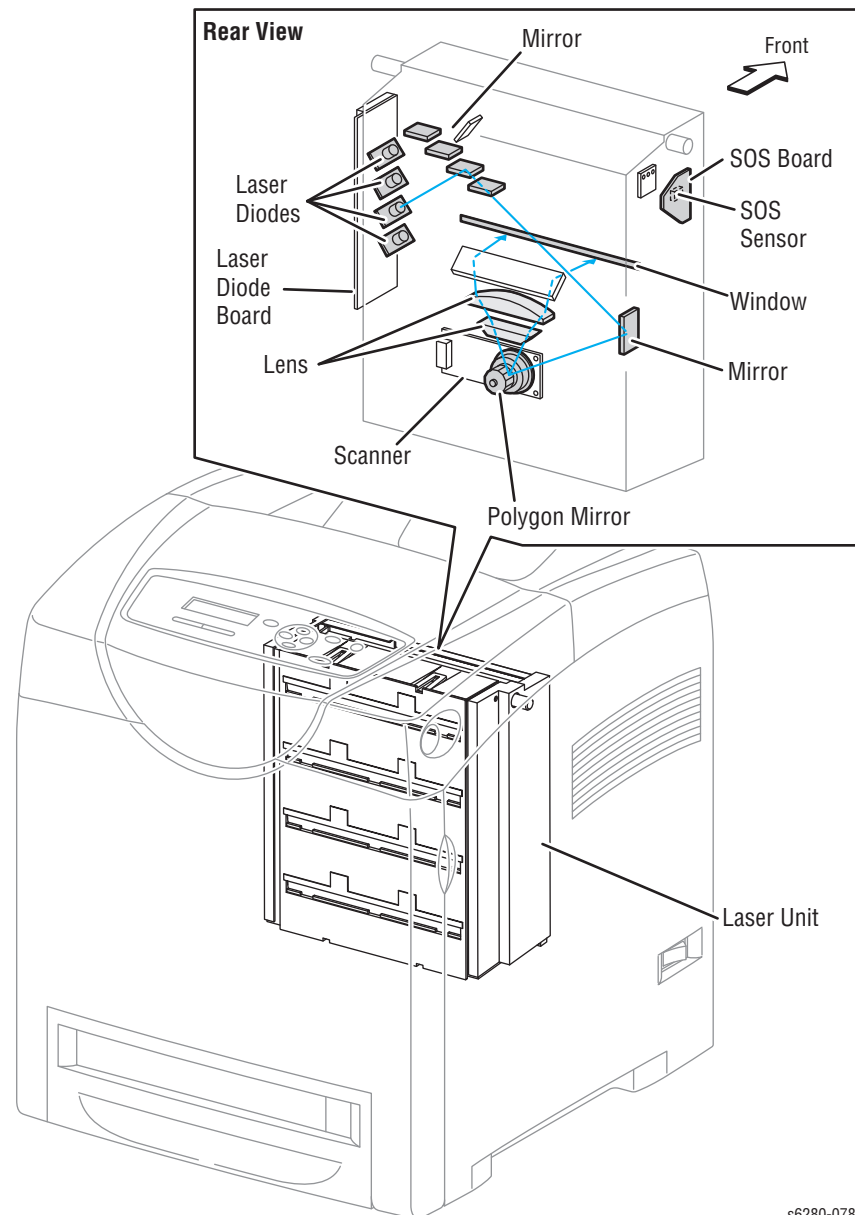
- **ADC Sensor**

The ADC Sensor detects the toner patches on the Belt and converts them to voltage value. The voltage value is used to control density of toner.

- **ADC Solenoid**

To activate the ADC Pad, turn On the ADC Solenoid for a fixed time before the ADC Sensor starts reading the toner patches. When turned On, the ADC Solenoid activates the ADC Pad, which cleans contamination on the ADC Sensor surface.

Laser Unit



s6280-078

The Laser Unit is an exposure unit that generates laser beams to form electrostatic latent image on the drum surface. The Laser Unit consists of the following components: Laser Diode (LD) Assembly, Scanner Assembly, Start of Scan (SOS) Board, Lens, Mirror, and Window.

- **Laser Diode Board**

There are four Laser Diodes which produce laser beams that are turned On and Off according to the print data signal.

The Laser Diode Board is comprised of four LDs corresponding to C, M, Y, and K. Each LD converts the electric signals of incoming image data into laser waves. In order to stabilize the laser light quantity during formation of an electrostatic latent image, the LD Board monitors the intensity of the laser beam to adjust it to the appropriate level. This process is called Auto Power Control (APC).

- **Scanner**

The Scanner is comprised of a Scanner Motor that rotates at a constant speed and a Polygon Mirror that is mounted on the Motor Shaft. The laser light output from the LD is irradiated onto the Polygon Mirror via the Mirror. The Polygon Mirror, provided with six reflecting mirror faces, changes the reflection angle of the laser light as it rotates by the Scanner Motor, thereby allowing the laser light to scan the drum along its axial direction. Scanning is performed using one reflecting mirror face for each line.

- **Start of Scan (SOS) Board**

The SOS Sensor on the SOS Board converts incoming laser beam, upon detection, to an electric signal as reference for starting scanning, and transmits this signal to the MCU Board. The SOS sensor signals are used to synchronize the starting point of the laser beam scanning with the starting point of the image writing.

- **Lenses**

The laser light reflected from the Polygon Mirror reaches the drum surface via the Lenses, Mirror, and Window. The Lenses correct aberration.

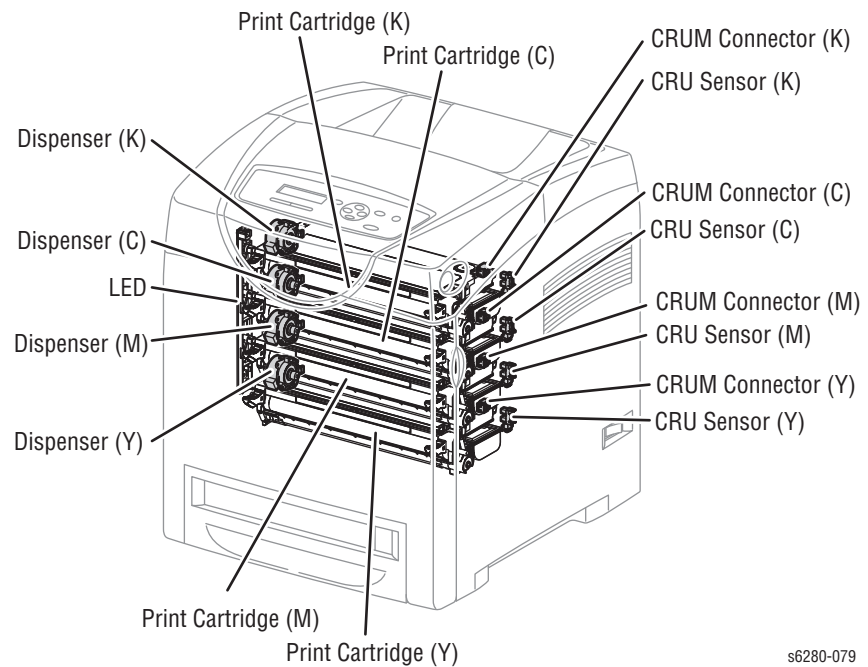
- **Mirror**

The Mirror directs the laser beam and secure an optical path.

- **Window**

The window prevents debris from entering into the Laser Unit.

Print Cartridge



The Print Cartridge is a customer replaceable item that consists of the following components:

- **Customer Replaceable Unit Memory (CRUM) Connector**

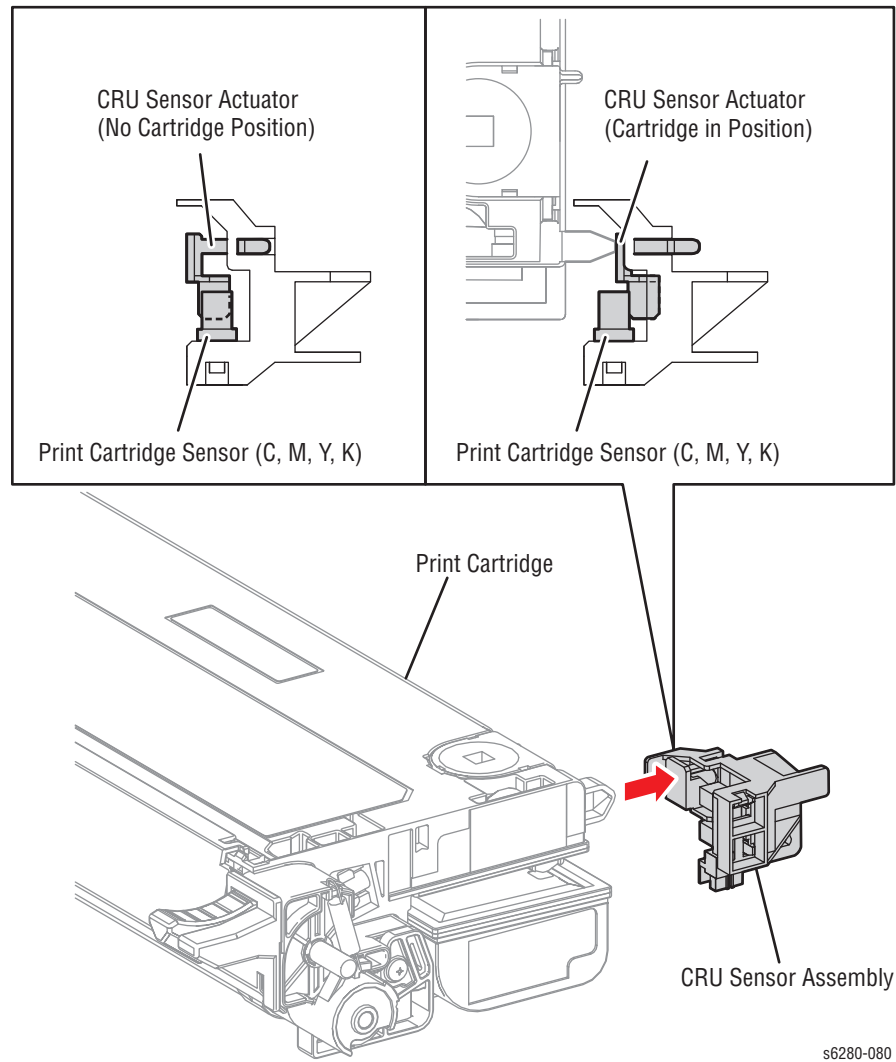
The CRUM Connector reads and writes the CRUM data. Printer specific information is stored in the CRUM.

- **Dispenser Assembly (C/M/Y/K)**

The Dispenser Assembly provides drive energy to the Agitator and Auger in the Print Cartridge, and provides toner to the Developer part of the Print Cartridge.

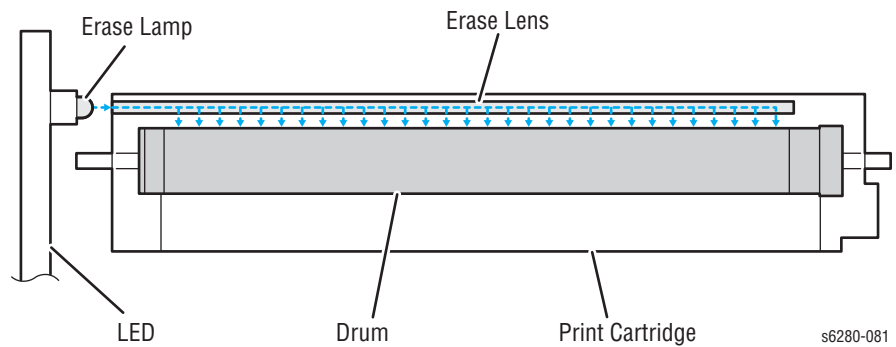
■ **CRU Sensor (C/M/Y/K)**

The CRU Sensor detects the presence of the Print Cartridge.

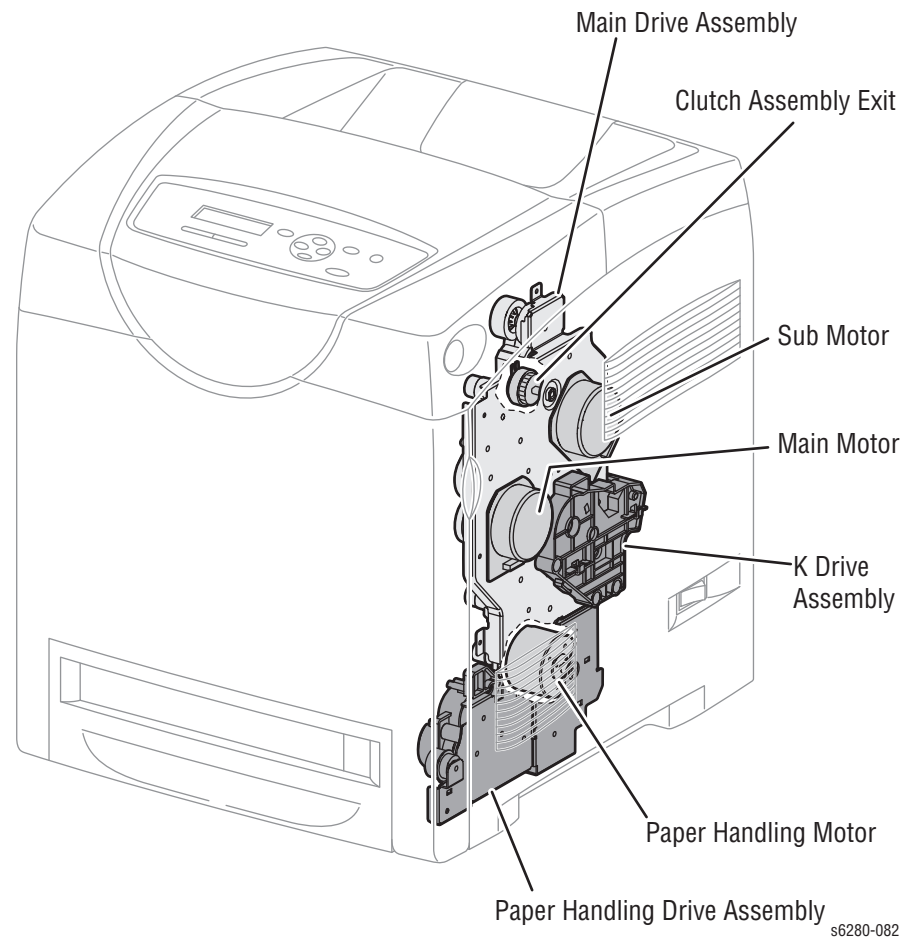


■ **Erase Lamp (LED)**

The light of the LED passes through the lens of the Print Cartridge, illuminates the drum, and eliminates the charge on the drum.



Main Drive



The Main Drive provides drive energy to the following components:

- **Main Motor**

The Main Motor provides drive energy for the Black Drum, Transfer Unit, and Fuser.

- **Sub Motor**

The Sub Motor provides drive energy for the Black Developer, Cyan, Magenta, and Yellow Drums.

- **Exit Clutch**

The Exit Clutch transmits drive energy from the Main Motor to the Exit Roll in the Fuser. When Duplex mode is in use, the Exit Clutch stops. The Exit Roll is driven by the Duplex Motor.

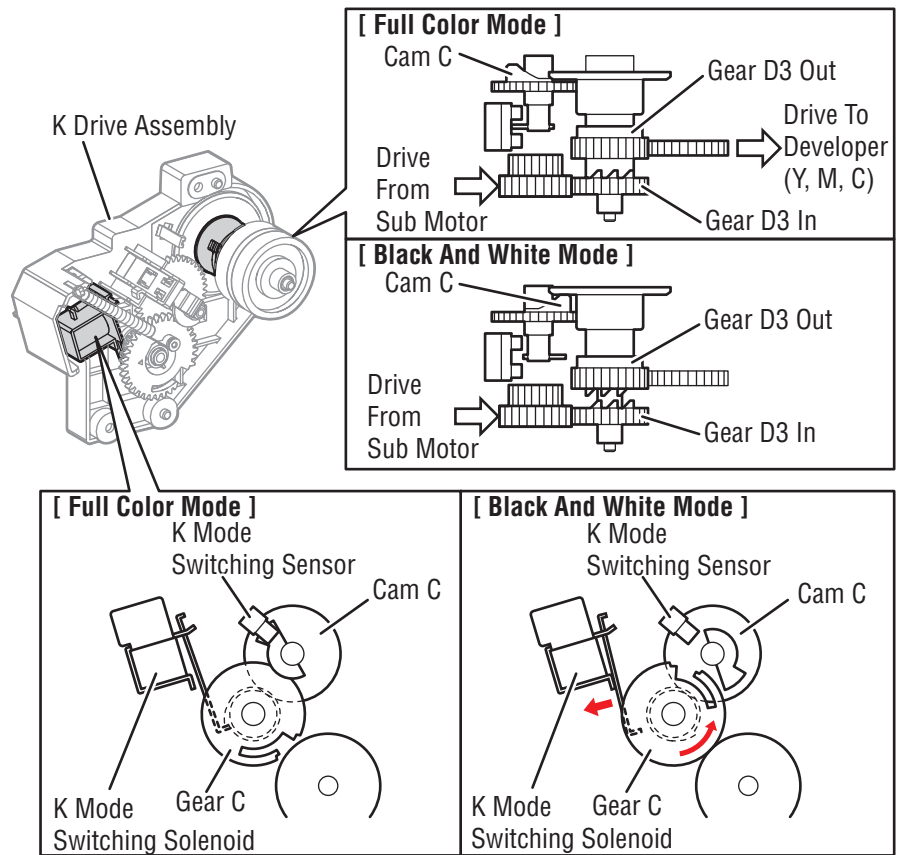
- **PH Drive Assembly**

The PH Drive Assembly provides drive energy for Tray 1 (MPT), Tray 2, and Registration Assembly. The Tray 2 Motor is part of the PH Drive Assembly.

■ **K Drive Assembly**

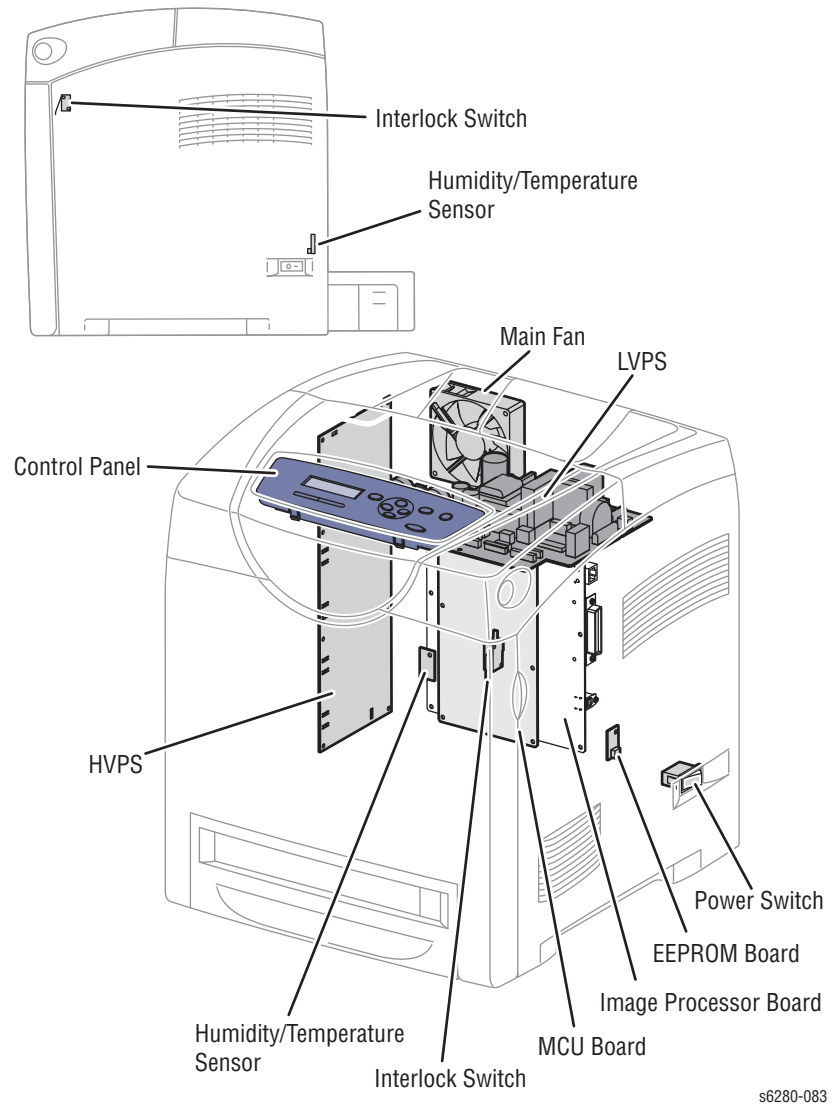
The transmission channel is changed by the the Color Mode Switching Solenoid in the K Drive Assembly to allow the driving force of the Sub Motor to reach the C/M/y Developer only.

This process ensures that the Yellow, Magenta, and Cyan Developers cannot be rotated by the Sub Drive Assembly during black and white printing.



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Electrical



Control Panel

The Control Panel displays the printer status and operates the printer.



Power Switch

The Power Switch turns the printer AC Power Supply On/Off.

Main Fan

The Main Fan removes heat from the printer to prevent overheating.

Electrically Erasable Programmable Read-Only Memory (EEPROM) Board

The EEPROM Board stores the printer unique information. Information on the EEPROM Board is also stored on the Machine Control Unit (MCU) Board.

Humidity Sensor

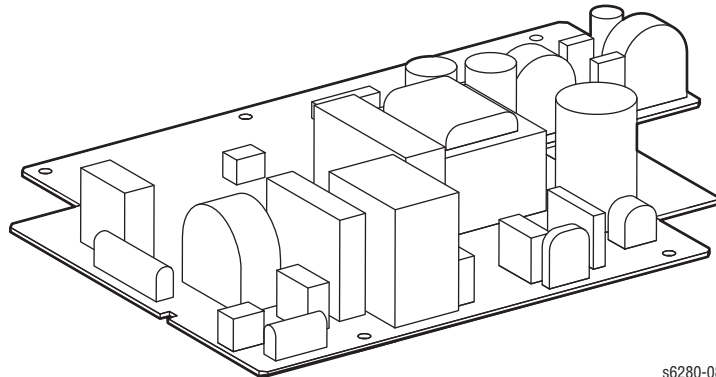
The Humidity Sensor reads the humidity and temperature within the printer.

Interlock Switch

The Interlock Switch is a switch that cuts the +24 VDC power supply to the HVPS or Motor upon the opening of the Front Cover.

Low-Voltage Power Supply (LVPS)

Two types of LVPS are available: 100/120V and 230V. The LVPS supplies AC power from the power source to the Fuser Heater; the LVPS also generates and supplies stable low-voltage DC power used for the logic circuit. The LVPS contains a control circuit for the heater of the Fuser, in addition to the power circuit.



s6280-085

High-Voltage Power Supply (HVPS)

The HVPS supplies high-voltage power to the components in the Transfer Unit and Print Cartridge to perform charging, development, and primary transfer of the print process to the BCR, BTR, and Developer.

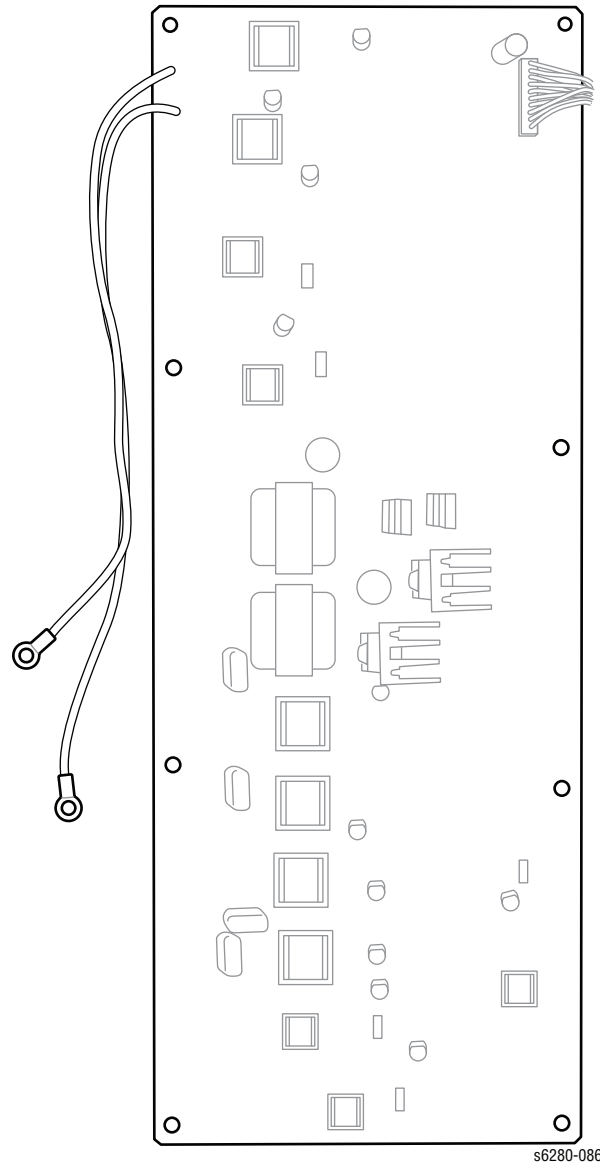
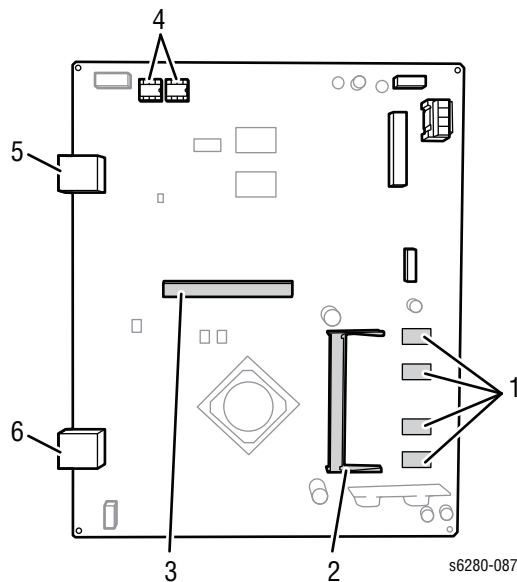


Image Processor Board

The Image Processor (I/P) Board is connected to the MCU Board, which controls the printer, including Diagnostic, Interface, and Image Processing. The I/P Board is one of the major elements of the Phaser 6280 Printer.

The primary function of the I/P Board is to receive host data through one of the following available ports (USB or Ethernet). The received host data is buffered, stored, and sent to the print engine in a rasterized format.

1. Standard Memory (256 MB on-board RAM)
2. Optional Memory DIMM (should be swapped)
3. Hard Drive Connection
4. NVRAM
5. Ethernet Connection
6. USB Connection



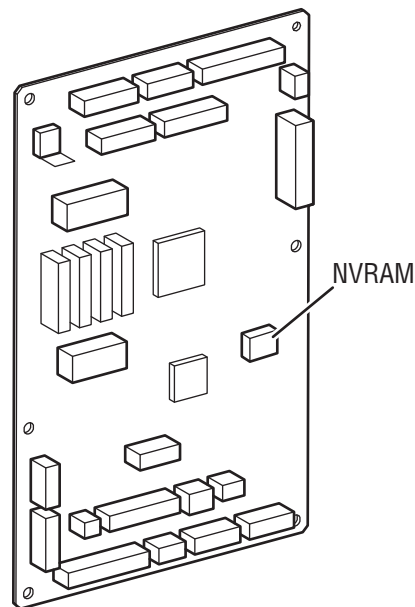
When installing a new I/P Board in the printer, you must transfer the following parts from the old I/P Board to the new I/P Board:

- Memory DIMM (if installed)
- NVRAM

Machine Control Unit Board

The Machine Control Unit (MCU) Board controls the printing process based on the communication with the printer Image Processor Board and information from the Sensors or Switches. Major functions include:

1. Communicates with the Image Processor Board.
2. Receives information from the Sensors or Switches.
3. Controls the Motors in the Main Drive and PH Drive Assembly.
4. Distributes low-voltage DC power generated from the LVPS to each component.
5. Controls the Laser Unit.



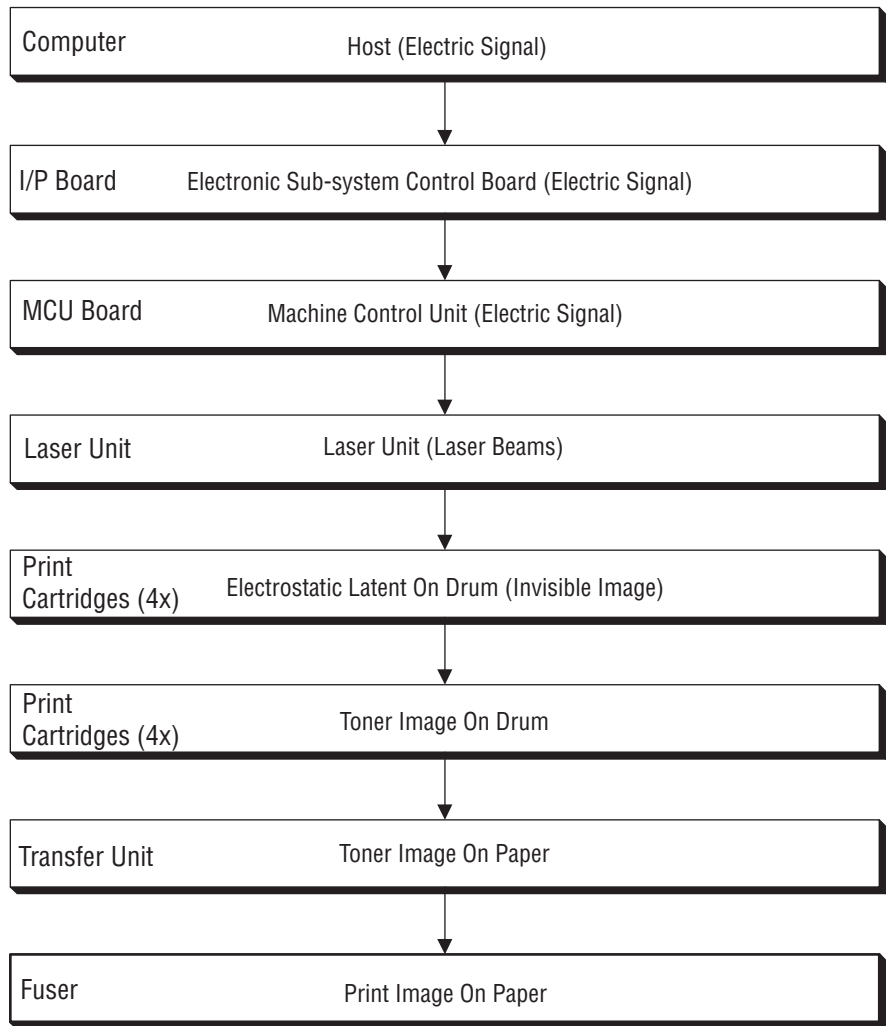
s6280-088

Note

When replacing an MCU Board, ensure to transfer the NVRAM from the old MCU Board to the new MCU Board.

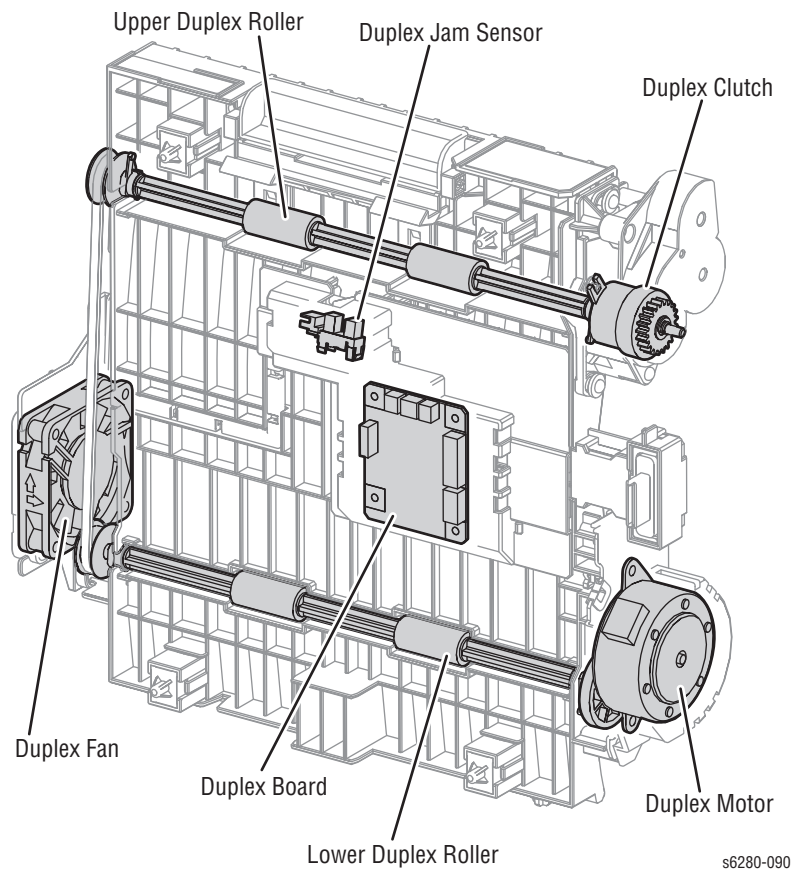
Data Flow

The electrical signal flow for the print data from the printer I/P Board is shown in the following diagram.



s6280-089

Duplex Unit



■ Duplex Jam Sensor

The Duplex Jam Sensor detects paper that is carried to the Duplex Unit.

■ Duplex Clutch

The Duplex Clutch transmits drive energy from the Duplex Motor to the Exit Roller in the Fuser. When the Clutch operates, the Exit Roller rotates in the reverse direction.

■ Duplex Motor

The Duplex Motor provides drive energy to the Lower Roller (Duplex 2 Roller), Upper Roller (Duplex 1 Roller), and Exit Roll on the Fuser.

■ Duplex Board

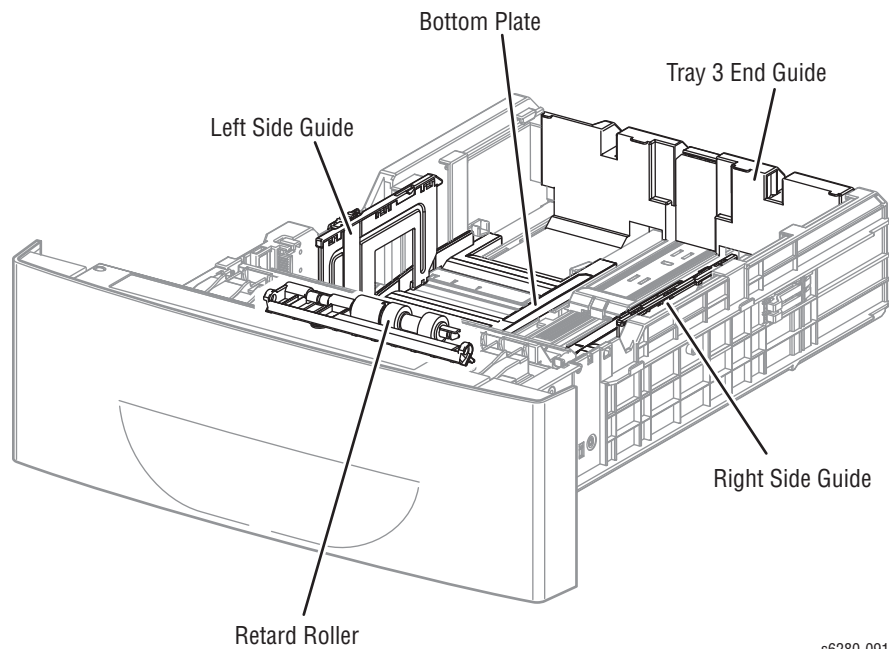
The Duplex Board controls the Motor, Sensor, and Clutch.

■ Duplex Fan

The Duplex Fan removes heat from inside of the printer to prevent overheating.

Tray 3 - Optional 550-Sheet Feeder

Tray 3 Function



s6280-091

- **Tray 3 Side Guide (Left/Right)**

The Left/Right Guide moves at a right angle to the paper transfer direction to align the paper width.

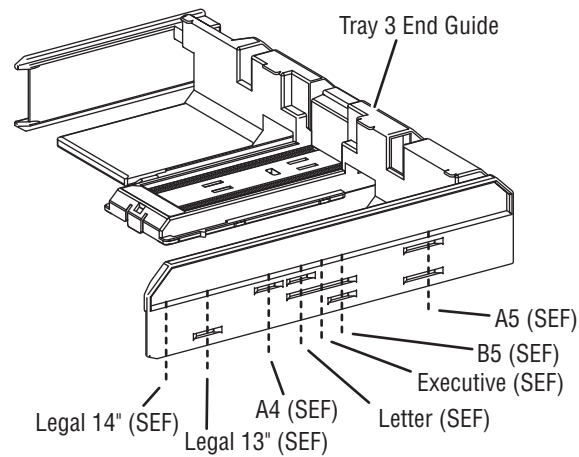
- **Tray 3 Retard Roller**

The Retard Roller and the Feed Roller (Pick Up Unit) pinch the paper to feed.

■ Tray 3 End Guide

The End Guide moves toward the paper direction to determine the paper size. The Size Switch On/Off switch varies according to the Tray 3 End Guide position to detect the paper size.

Paper is detected at the Tray 3 End Guide.



All paper should be loaded SEF.

s6280-095

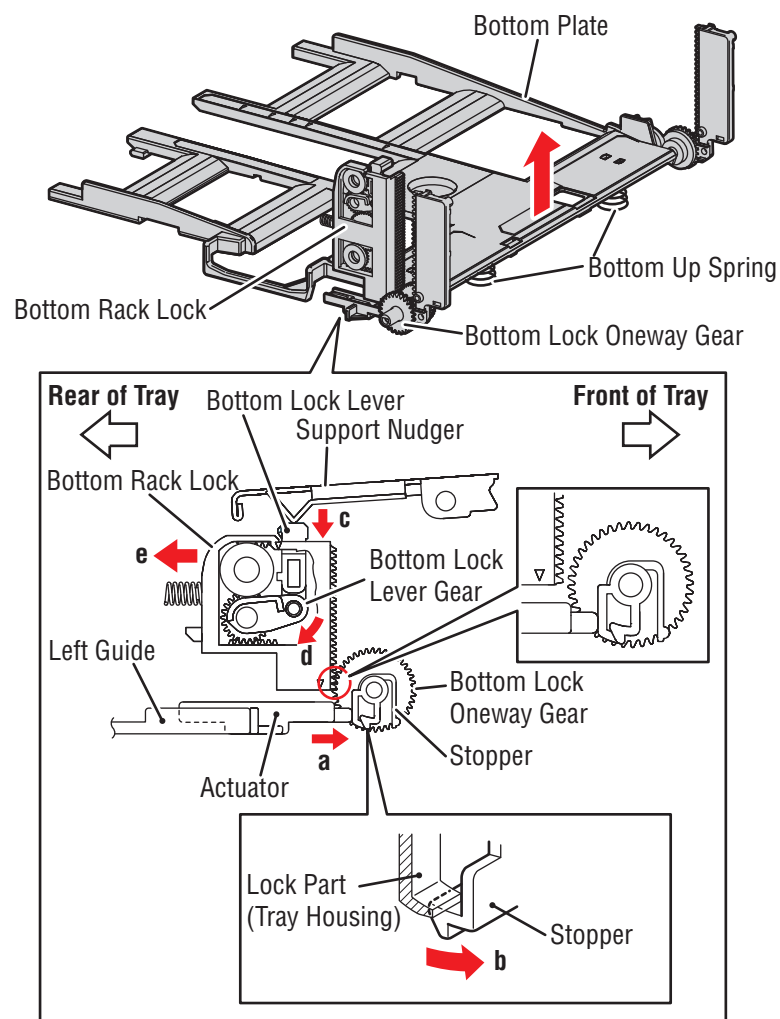
Note

Refer to "Paper Size Detection" on page 2-52 for detailed information on paper size switches and paper size.

■ Tray 3 Bottom Plate

The Bottom Plate is locked to the bottom side when the Tray is pulled out from the paper feeder, and unlocked when the Tray is installed into the paper feeder. The Bottom Plate pushes the paper against the Feed Roll using a spring tension.

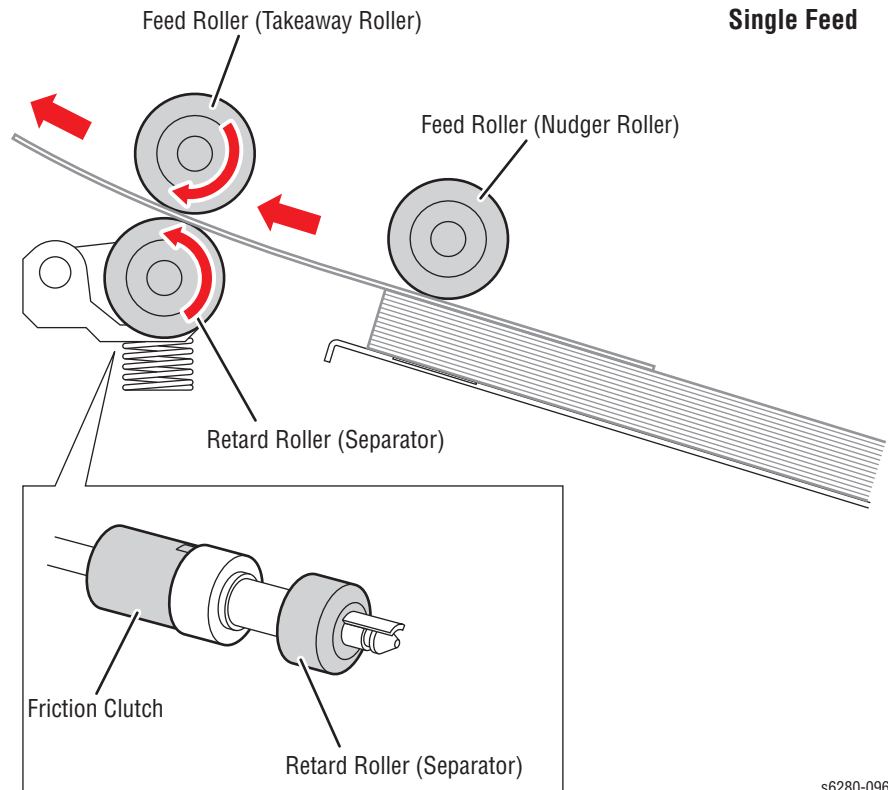
- a. When the tray is inserted into the Sheet Feeder, the Actuator is pushed toward the front by the Left Guide, which pushes the Stopper.
- b. The Stopper unlocks the Bottom Lock Oneway Gear.
- c. When the tray is pushed until it stops, the Bottom Lock Lever is pressed down by the Support Nudger in the Feeder.
- d. The Bottom Lock Lever actuates the Bottom Lock Lever Gear, which pushes the Bottom Rack Lock toward the rear.
- e. The gear on the Bottom Rack Lock is disengaged from the Bottom Lock Oneway Gear, which allows the Bottom Plate to raise up by the Bottom Up Springs.



s6280-092

Tray 3 Multiple Sheet Feed Prevention

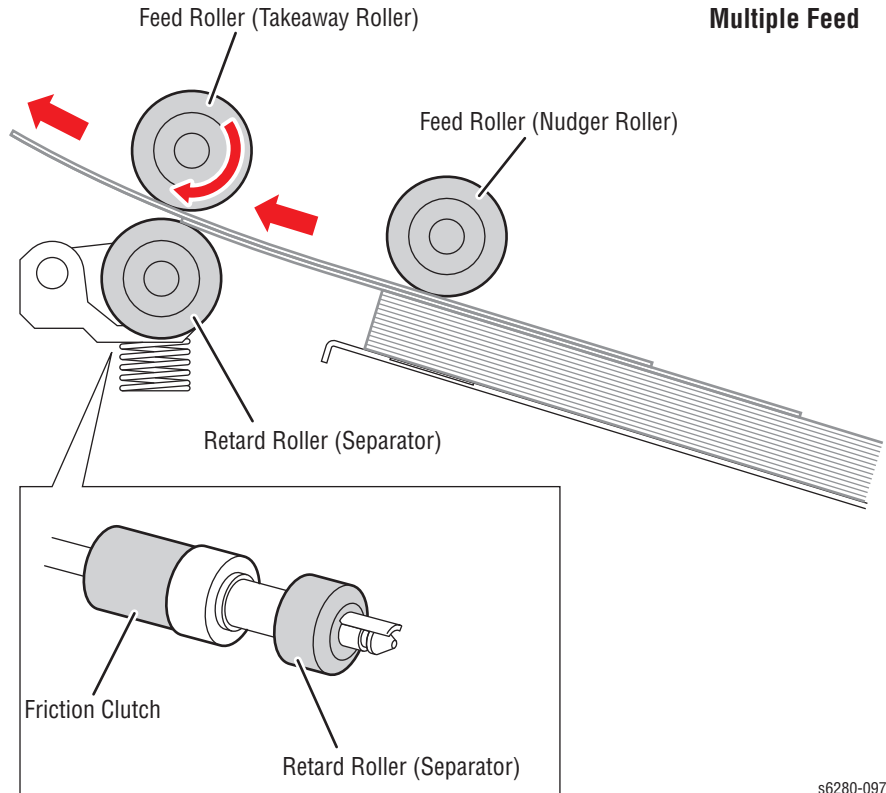
The sheets loaded in Tray 3 are occasionally stuck together along the edges, which can cause a multiple sheet feed or a jam. The Nudger Roller feeds the sheets to a position between the Feed Roller and the Retard Roller. Normally, when only one sheet is fed, both the Feed Roller and Retard Roller rotate to allow the sheet to pass.



s6280-096

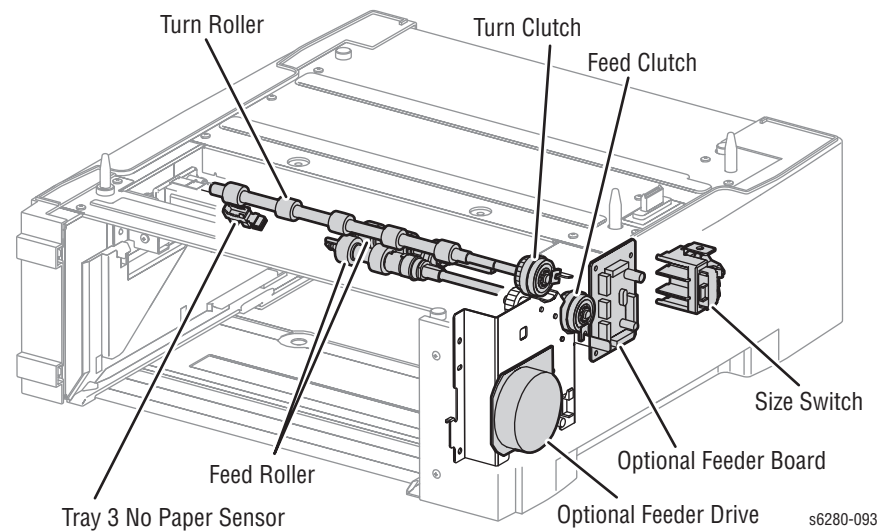
However, when two sheets are fed concurrently, only the Feed Roller rotates. The Retard Roller is coupled to a friction clutch that prevents the roller from rotating due to extra force from feeding two sheets; this process allows the upper sheet to pass by as the lower sheet is stopped by the friction with the Retard Roller at rest.

The Retard Roller is pushed toward Feed Roller by spring pressure, and controlled by the Friction Clutch with which it is coupled.



s6280-097

Optional 550-Sheet Feeder



- **Tray 3 No Paper Sensor**

The No Paper Sensor detects the presence of the paper in the paper tray based on the No Paper Actuator position.

- **Tray 3 Feed Clutch**

The Feed Clutch transmits drive energy from the Feeder Drive Assembly to the Feed Roller.

- **Tray 3 Feed Roller**

When the Feed Clutch operates, the Feed Roller rotates and feeds the paper.

- **Tray 3 Turn Clutch**

The Turn Clutch transmits drive energy from the Optional 550-Sheet Feeder Drive Assembly to the Turn Clutch to feed the paper from the paper tray to the printer.

- **Optional 550-Sheet Feeder Drive Assembly**

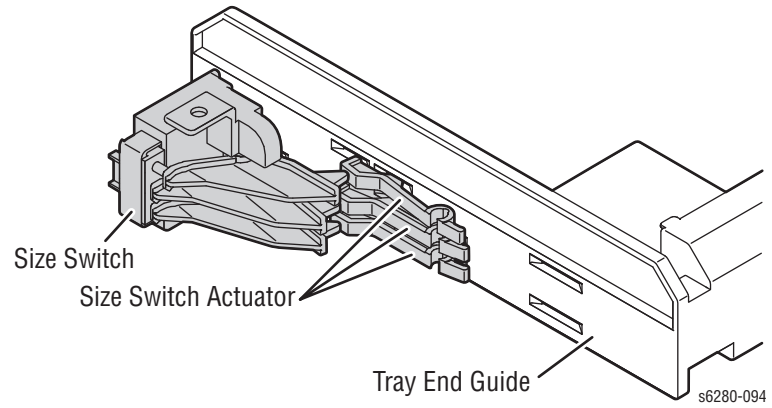
The Optional 550-Sheet Feeder Drive drives the rollers of the Optional Feeder.

- **Optional 550-Sheet Feeder Board**

The Optional 550-Sheet Feeder Board controls the Motor, Sensor, and Clutch.

■ **Tray 3 Size Switch**

The Size Switch detects the paper size and the presence of the paper tray.



Printer Control

Paper Size Detection

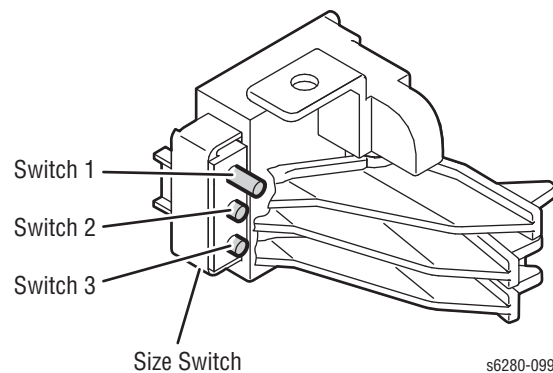
The paper size detection for Trays 2 and 3 is determined by three paper size switches in each paper tray slot. The switch condition is set by moving the paper guide in the tray. This in turn sets the plastic “fingers” on the side of the paper tray to a specific position that activates the correct switch combination for the selected paper size.

Paper Size Switches Indicated as SW1, SW2, and SW3

Paper Size	Paper Size Switch		
	SW1	SW2	SW3
Letter (SEF)	Off	Off	On
A4 (SEF)	Off	On	On
A5	Off	On	Off
B5 (SEF)	On	Off	Off
Legal 13” (SEF)	On	On	On
Legal 14” (SEF)	On	On	On
Executive (SEF)	On	Off	On
No Tray	Off	Off	Off

Note

On: The Actuator is pushing the Size Switch.



Selective Control on Paper Tray

The default tray is Tray 2. The preferred paper tray can be changed using the menu on the printer Control Panel: **Menu > Tray Settings**.

Laser Unit Light Quantity Control

Image data is sent to the Laser Unit as an electric signal (data are expressed with high and low voltage values), and the laser diodes convert the image data from electric signals to optical signals (data are expressed with blinking laser beams).

Variations in light quantity of laser beams or variations in the optical system (such as lenses) or drum sensitivity cannot attain a proper electrostatic image. Therefore, the laser beam light quantity is monitored and controlled by the laser diodes.

The Laser Unit has four laser diodes for Yellow, Magenta, Cyan, and Black respectively and the beam intensity is automatically adjusted for each color.

Process Control

For stable printing, the parameters related to the image development must be corrected as necessary. The process control is performed in two methods, after every 25 cumulative prints or during a continuous run.

- Potential Control
- Toner Density Control

The following controls supplement the above controls:

- High Area Coverage Mode
- Admix Mode

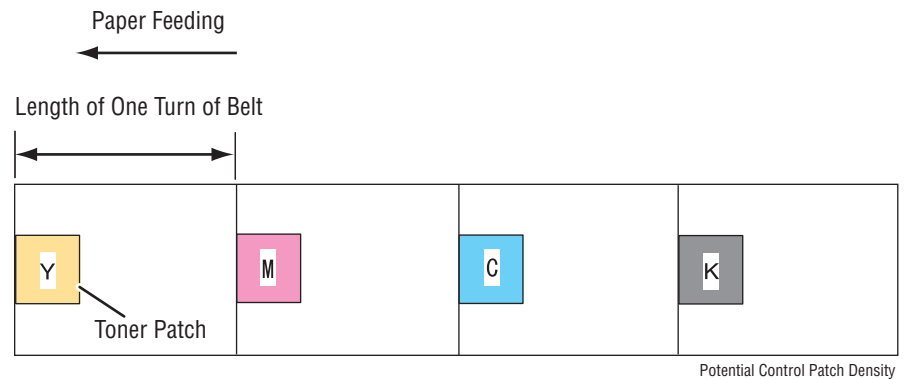
Potential Control

To attain stable printing image density, the drum charging voltage, the developing DC voltage, and the Laser Unit beam intensity are adjusted according to the developing capability of each color carrier that varies momentarily. The adjusted drum charging voltage, the developing DC voltage, and the Laser Unit beam intensity are fed back to keep the printing image density constant.

The outline of controls is as follows:

1. The Humidity Sensor detects humidity and temperature.
2. The patches of respective colors (Yellow, Magenta, Cyan, and Black) for the potential control are generated and transferred on the Transfer Belt.
3. The ADC Sensor (Density Sensor) detects the density of the patch on the Belt.

- The drum charging voltage, developing DC voltage, and the Laser Unit beam intensity are adjusted for each color according to the detected patch density.



Toner Density Control

Toner density must be kept constant to attain stable printing. The control system for this purpose is called toner density control.

1. PCDC (Pixel Count Dispense Control)

The amount of toner to be consumed in the developing process is calculated by counting the video signals entered to the Laser Unit. The amount of the toner to be consumed is calculated by the toner dispensing time. The toner motor is driven for the calculated toner dispensing time when supplying the toner to the Developer.

2. ADC (Auto Density Control)

The patches of respective colors (Yellow, Magenta, Cyan, and Black) for the toner density control are generated under a specified potential condition, and transferred on the Belt. The ADC Sensor measures this density, and the measured value is compared with reference value. If the toner density is low, the toner dispense quantity is increased at the next printing, or if the toner density is higher, the toner dispense quantity is reduced at the next printing. The toner dispense quantity is calculated by the toner dispense time. This calculation is made for each color.

High Area Coverage Mode

A continuous printing of any image of area coverage exceeding the toner dispense capability causes the toner density in the Developer to be lowered. The High Area Coverage Mode postpones the next page feed and dispenses extra toner during this time, if the toner dispense time reaches the specified value during a continuous printing.

Admix Mode

The Admix Mode dispenses toner immediately to prevent the reduction of toner density, whenever the value of the toner density control patch measured by the ADC Sensor falls far below the standard value, by dispensing extra toner. If the toner density level cannot be recovered after this operation, it is determined that toner has run out.

ADC Sensor Adjustment

The ADC Sensor is a reflection type sensor that radiates light from its LED onto the target and detects the reflected light at its photoreceptor and outputs electric signals responsive to the amount of the detected light.

To ensure an accurate patch density measurement, the surfaces of the ADC sensor is cleaned to remove soil due to toner, etc...., and the light amount adjustment is made so that the reflected light amount satisfies the prescribed value, when creating the patch for potential control and toner density control.

The surface is cleared by actuating the ADC Solenoid, which causes the ADC Pad to wipe the lens on the ADC Sensor.

LED Light Quantity Control of ADC Sensor

The ADC Sensor is a reflection type sensor that radiates light from its LED onto the target and detects the reflected light at its photoreceptor and outputs electric signals responsive to the amount of the detected light. For exact density measurement, the sensor output value (reflected light intensity) must be the specified value when no toner is put on the Belt as an objective. The reflected light intensity varies, depending on the Belt surface condition or dirty condition of the ADC Sensor surface. The light intensity emitted from the LED is controlled so that the reflected light intensity satisfies the specified value. This control is made in two ways, one to set the light intensity so that the reflected light quantity satisfies the specified value, and the other to adjust the subsequent light intensity to be within the tolerance.

1. Light Intensity Setting

The reflected light intensity may vary largely, if the Transfer Unit was replaced or the ADC Sensor was cleaned. Assuming this fact, the light intensity is set when the power is turned On, or the Front Cover is opened and closed.

The light intensity of the LED is increased gradually, and the set value is fixed when the output of the ADC Sensor exceeds the specified value.

2. Light Intensity Adjustment

At the execution of ADC, the light intensity adjustment is made immediately before the patches for toner density control are generated.

The LED outputs the current setting of light intensity to check the output value of the ADC Sensor for the specified range. If the output value is low, the light intensity is increased by the specified amount at the next ADC, or if high, the light intensity is reduced at the next ADC.

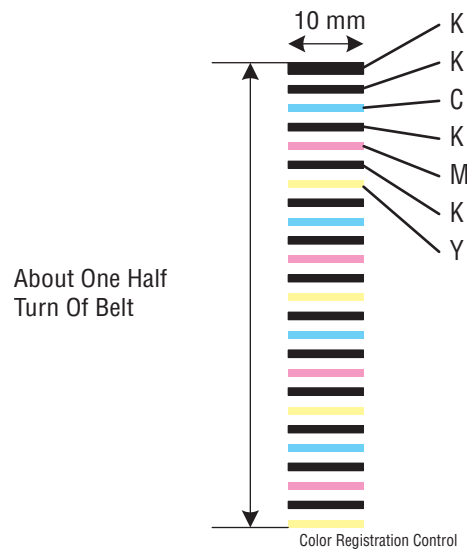
Color Registration Control

The printer uses a tandem electro-photographic system with Organic Photo Conductor (OPC) Drums and direct transfer by the Transfer Belt. The images are formed on the Drums of respective colors and they are overlapped to form one image, and in this case, a color shift may occur. The color registration control calculates how much the registration is shifted, and adjusts the Laser Unit write timing.

The scan control adjusts all four colors in the process direction.

The color registration control is made from a change in inside temperature and the print count at the execution of the process control. This control is outlined as follows:

1. With no toner on the Transfer Belt, the output value of the ADC Sensor is measured to determine the threshold value.
2. The patches for color registration control are generated on the Belt. These patches are composed of 10 mm lines of K, C, K, M, K, and Y in this order by the amount of four dispense counts, led by a black trigger.



3. The ADC Sensor reads the patch density.
4. The adjusting amount of registration shift is calculated from the threshold value determined in step 1 and the patch density measured in step 3.
5. The Laser Unit write timing is changed from the adjusting amount of registration shift.

Fuser Control

Fuser Temperature Control

After the target temperature is set, the Heat Roll surface temperature is controlled so that it can be the target temperature by turning the Heater Lamp On/Off.

Temperature of individual area of the Heat Roll is detected by the Fuser Non-Contact Sensor (NCS) in the middle of the Heat Roll and the Temp Sensor at the edge of it. When the temperature is detected higher than the target, the Heater Lamp will turn Off. When the temperature is lower than the target, the Heater Lamp will turn On.

The target temperature set up varies depending on the time of Warm-up, Printing, or Process Control. The target temperature will be changed based on the interior temperature detected by the Humidity Sensor, the difference of the temperature between the center and edge areas of the Heat Roll, Printing Mode, or the Input Power Voltage.

Cool Down

As printing continues, the distribution of temperature in the Heat Roll becomes uneven in both the paper feed and non-paper feed areas. Cooling Down process is to provide a certain period of time without feeding paper so that the Heat Roll temperature can be distributed evenly.

When the edge of Heat Roll temperature is high, cooling down is performed to lower the temperature to the target temperature.

Sensor Warm-Up

The Fuser Non-Contact Sensor at the center of the Heat Roll will lose its accuracy of detecting temperature when the temperature of the Sensor itself is below -5° C. Therefore, the Sensor will be warmed up when the temperature is below -5° C. This process is called Sensor Warm-Up.

Drive Transmission

Mechanical Components

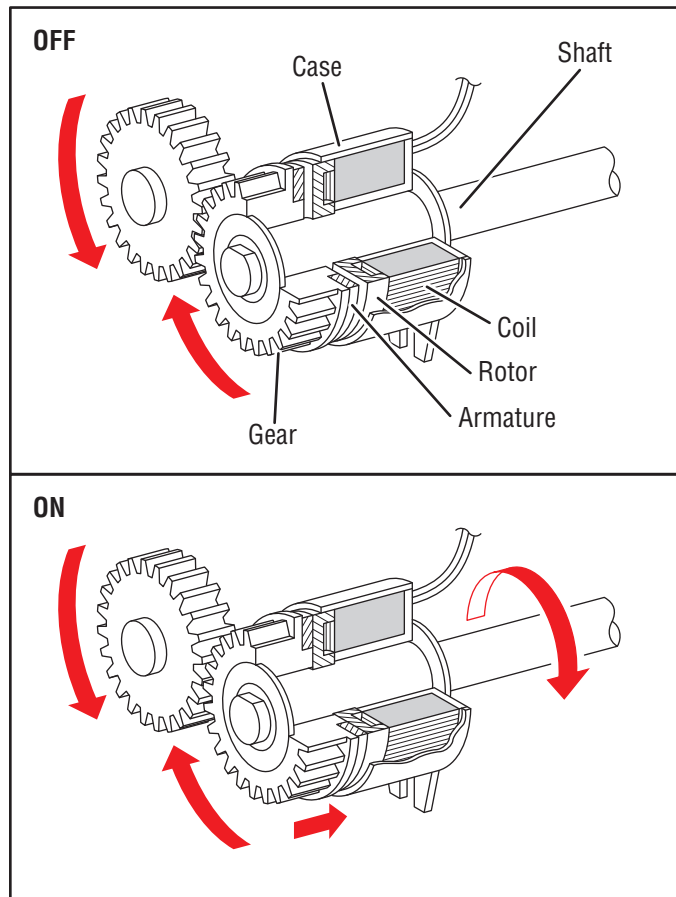
Clutch

The electromagnetic Clutch in the printer controls the rotation of the Roller by transferring torque from the Motor to the Roller.

The electromagnetic Clutch becomes an electromagnet by transferring electric current through the coil inside the case and attracts the armature and gear to the rotating rotor, which rotates the Gear.

When the Coil lost its power, electromagnetic force is lost and the armature comes off the rotor, and the Gear stops rotating.

The Clutch makes very soft noise. When verifying the Clutch operation, ensure to stay close to the component in order to hear to the sound.



Clutch

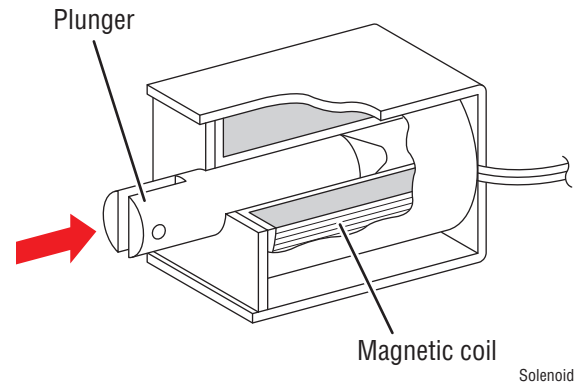
Solenoid

The Solenoid opens/closes the shutter or controls the position of the Gear for transferring torque of the Motor to the Roller.

The Solenoid becomes an electromagnet by transferring electric current through the Coil inside the Case and attracts the Plunger.

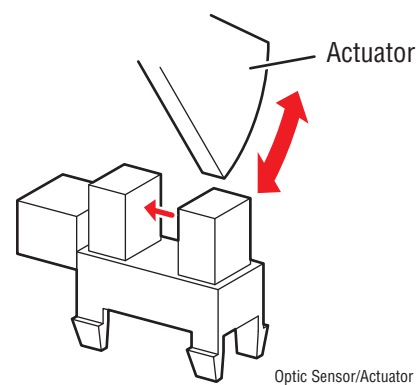
When the Coil lost its power, electromagnetic is lost and the Plunger is returned to its original position by spring action, which allows the shutter to operate or the Gear to move to the predefined position.

Unlike a Clutch, a Solenoid generates a loud noise.



Sensor

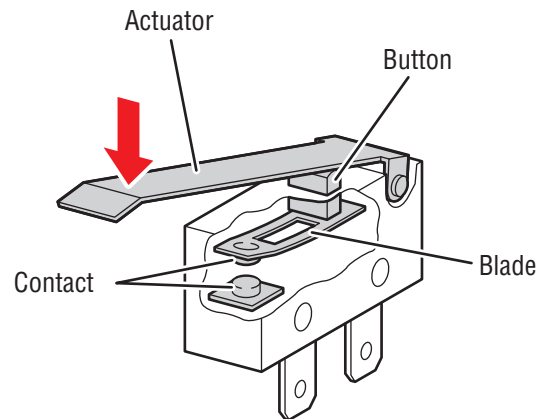
A transmissive type sensor is composed of the light-emitting side and the light-receiving side that are placed opposite to each other, allowing the light to pass from the former to the latter. On the basis of whether or not the light path is blocked due to the actuator, etc..., the sensor detects the paper absence/presence or the moving parts position such as at the home position or elsewhere.



Switch

A micro-switch closes the internal contacts via a button, which is pushed down under the leaf spring that is held down by the Actuator of the cover or door that is being closed.

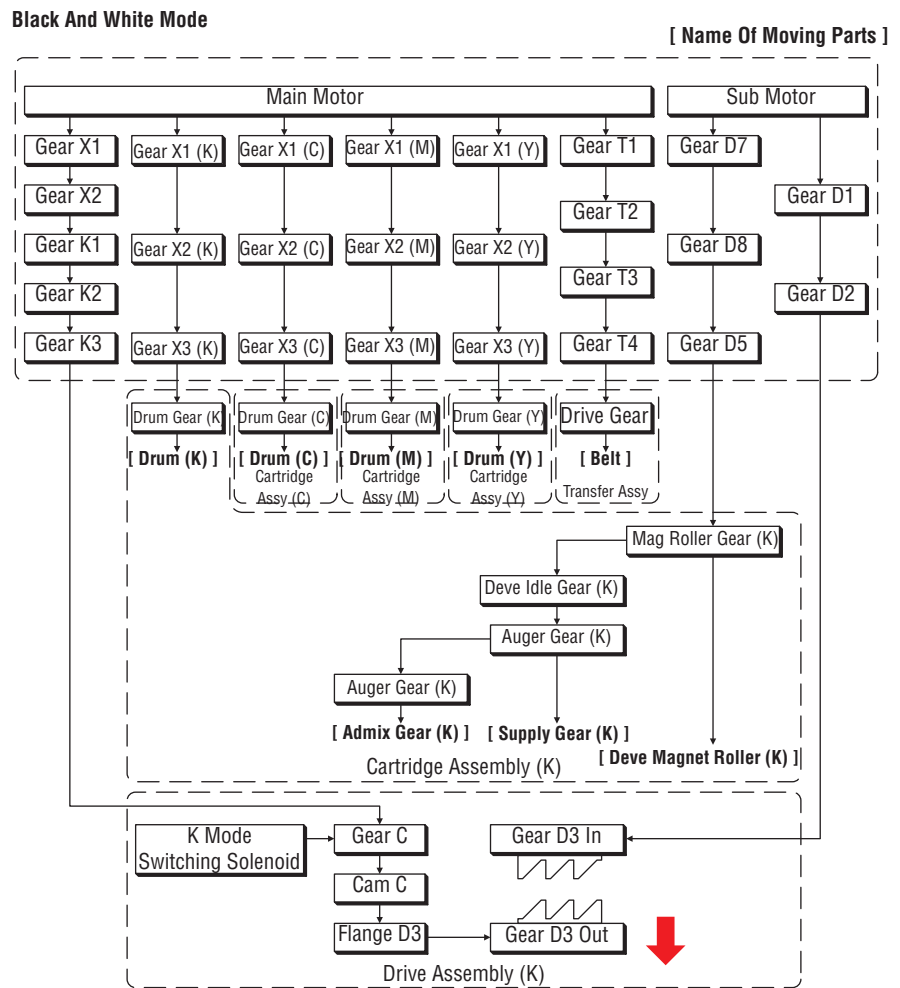
When the door or cover is opened, the leaf spring returns to its original position and the button is pushed up by the spring in the Switch, allowing the internal contacts to open.



Main Drive Assembly

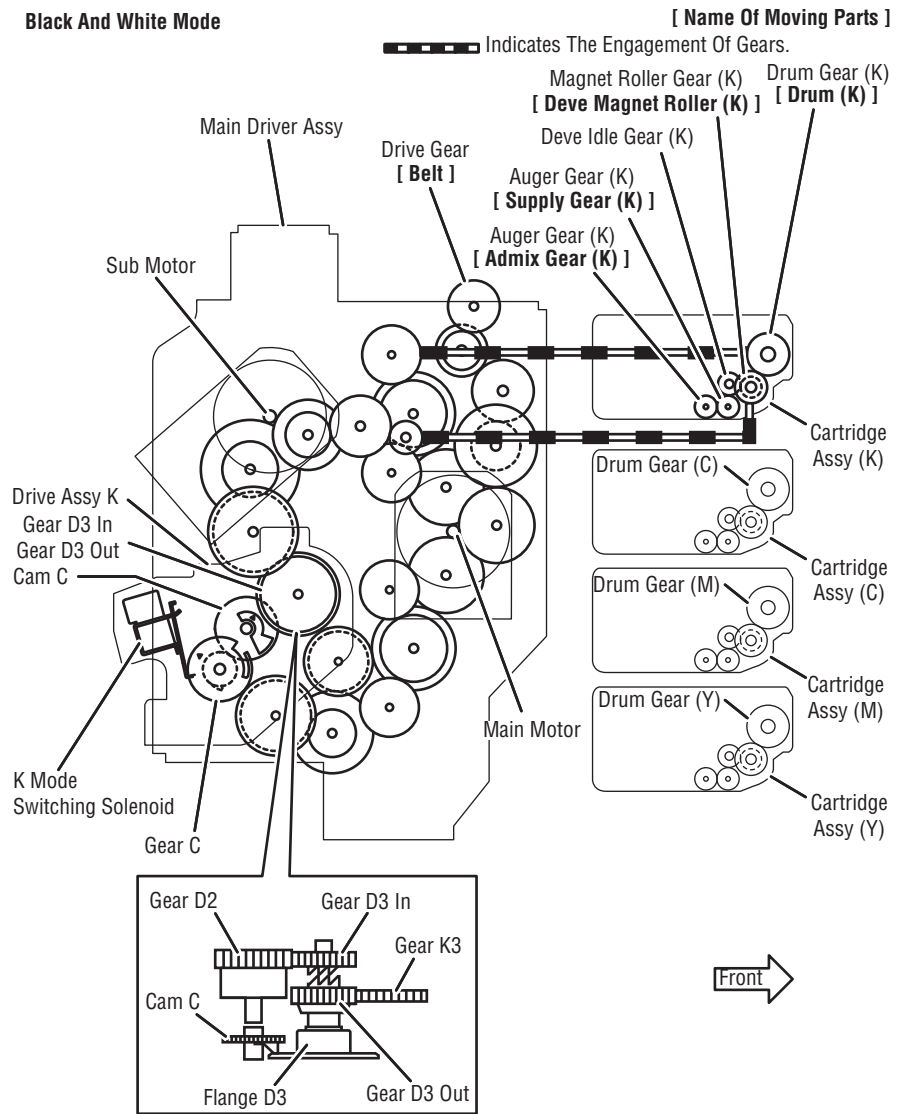
The Main Drive transmits power for Black and White, Full Color, and Simplex modes as shown in the following diagrams.

Main Drive Assembly (Black and White Mode)



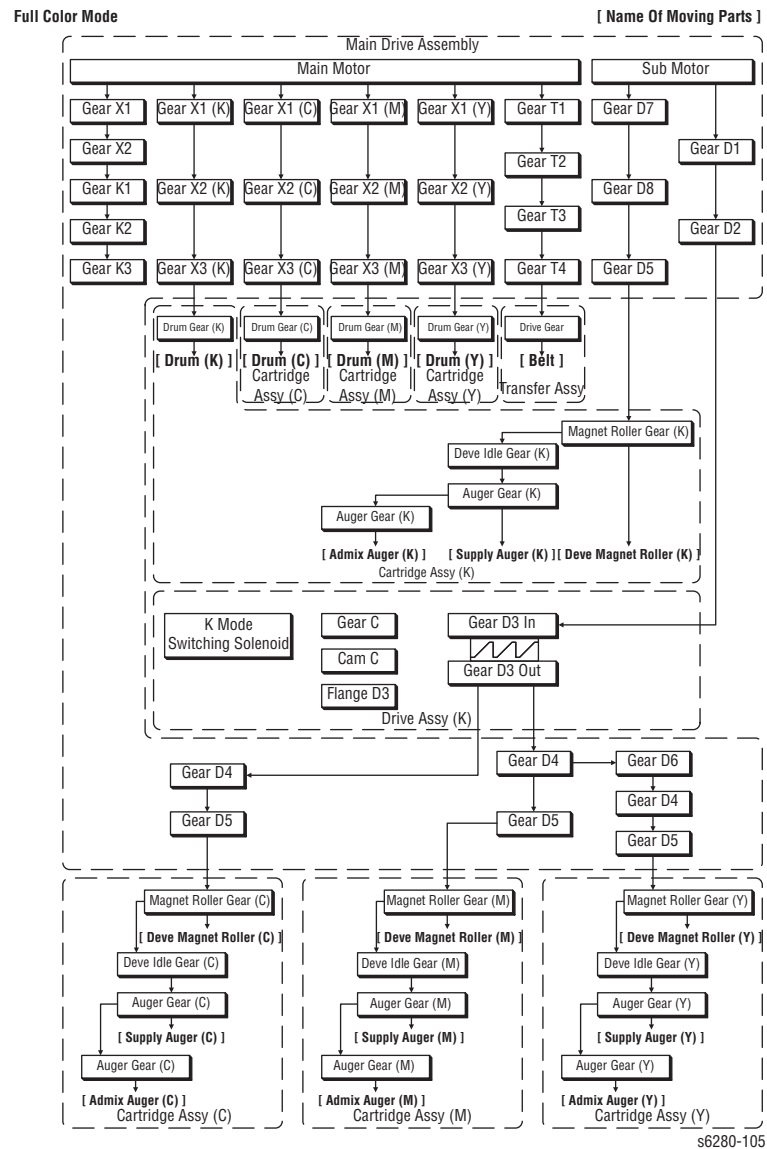
s6280-103

Main Drive Assembly (Black and White - moving parts)

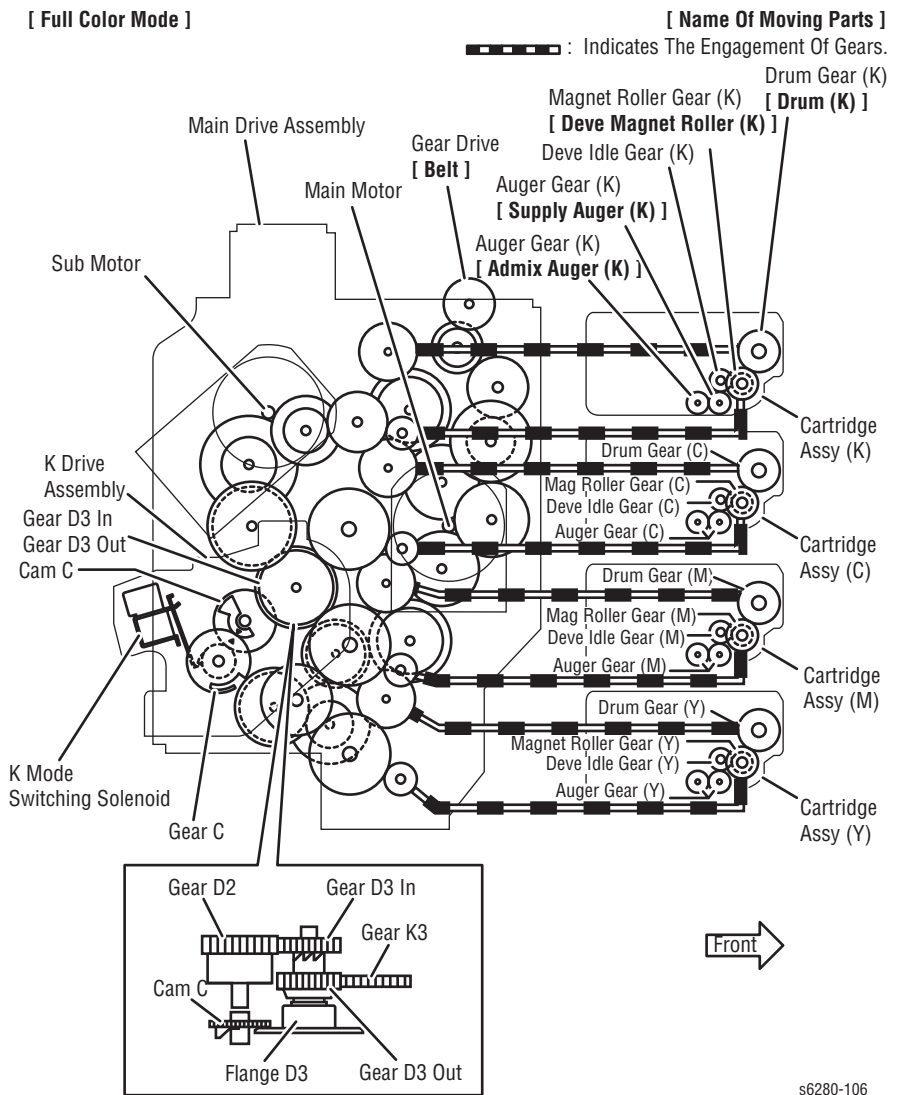


s6280-104

Main Drive Assembly (Full Color Mode)

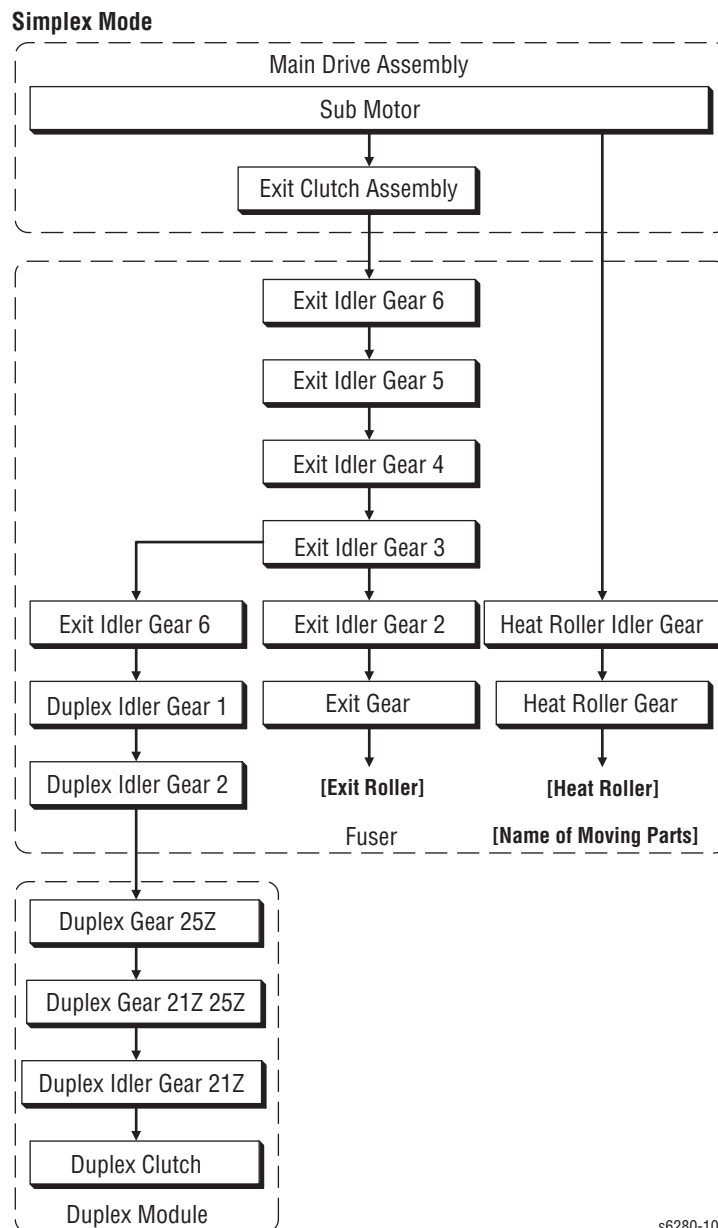


Main Drive Assembly (Color - moving parts)



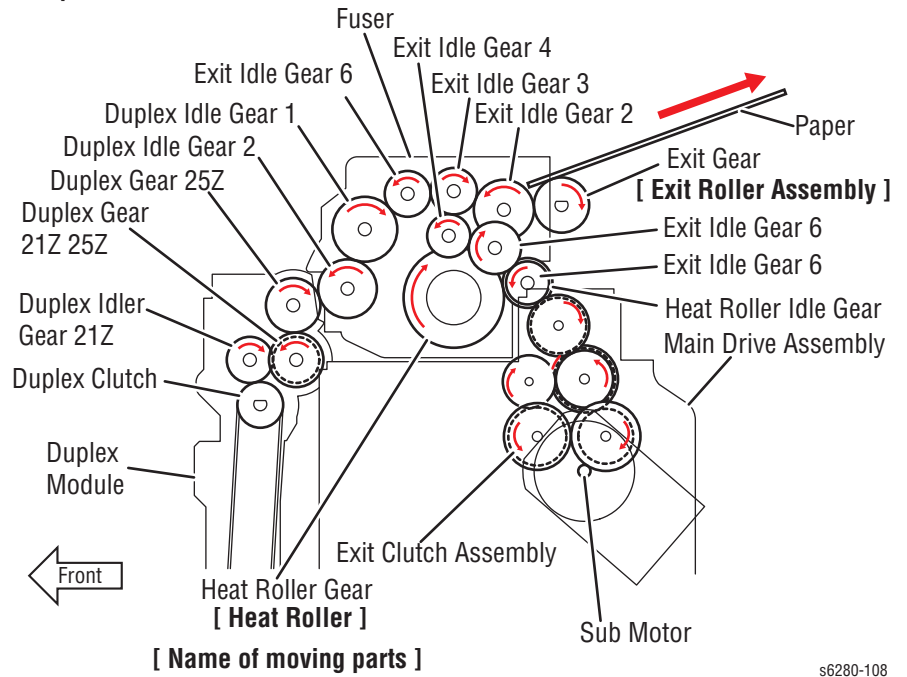
Simplex Mode

Process



Front View

Simplex Mode



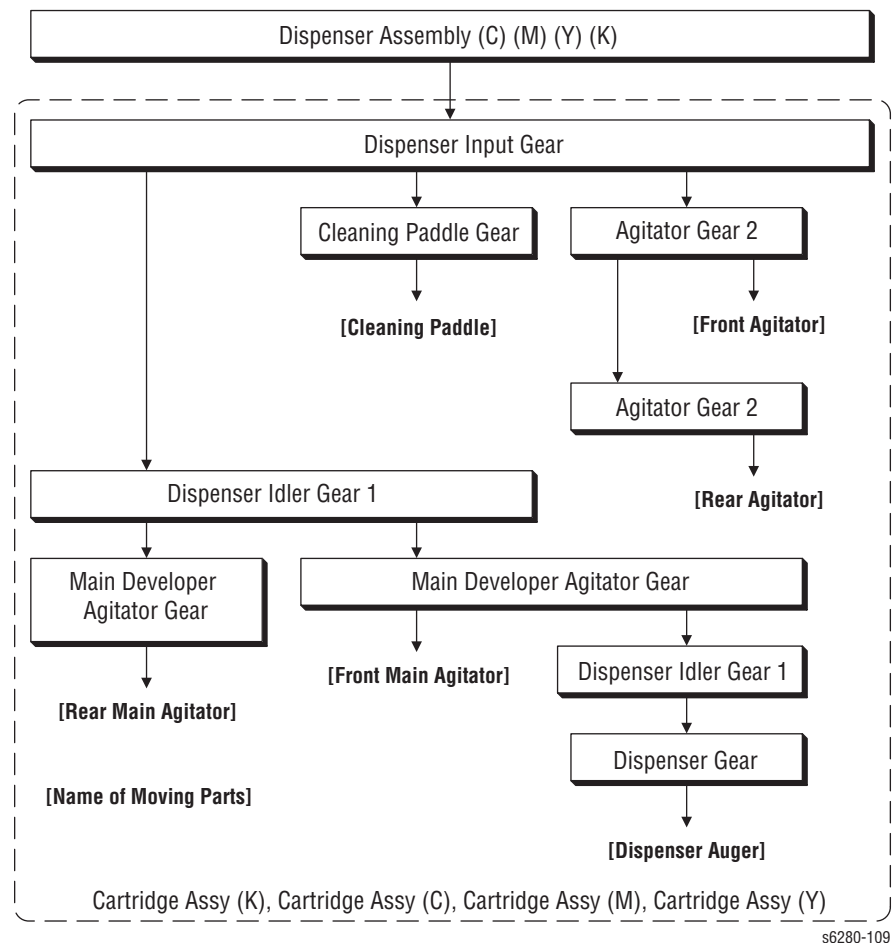
s6280-108

Dispenser Assembly (C) (M) (Y) (K)

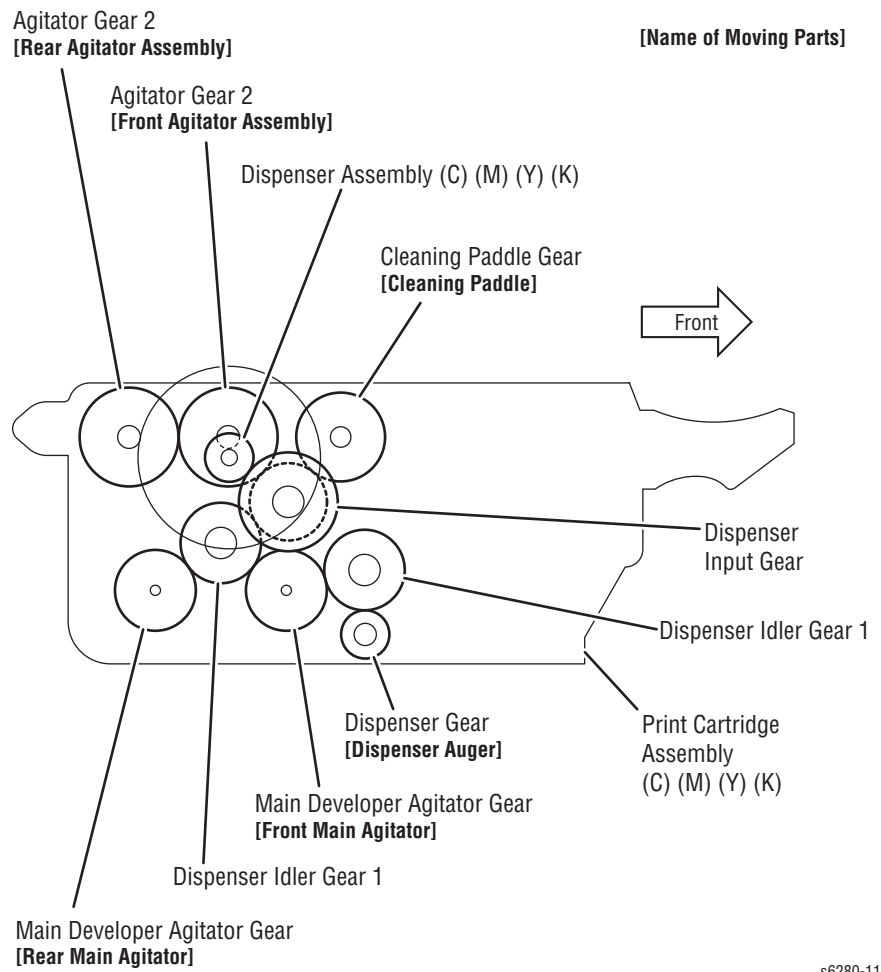
The Dispenser drives the Agitator and the Auger in the Print Cartridge as shown in the following diagram. The operation is common among the Dispensers C, M, Y, and K.

CRU Assembly

Process



Front View



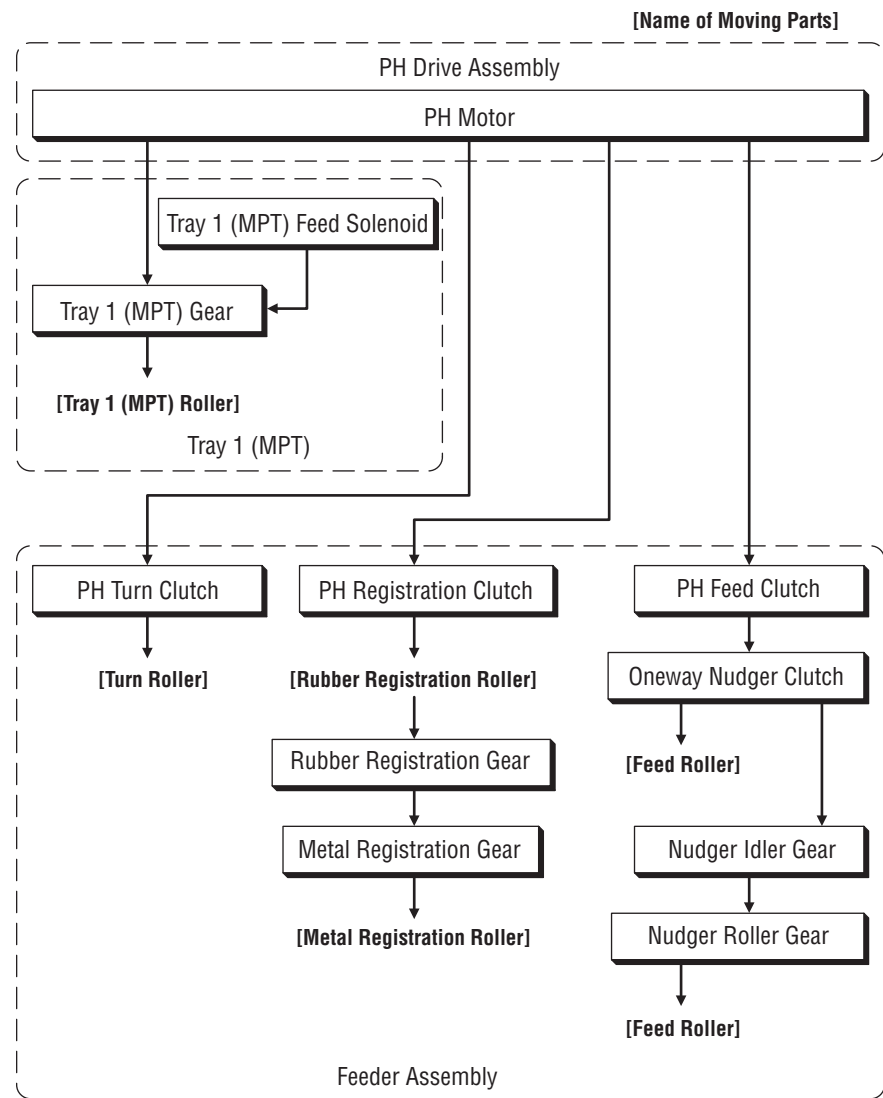
s6280-110

Paper Handling Drive Assembly

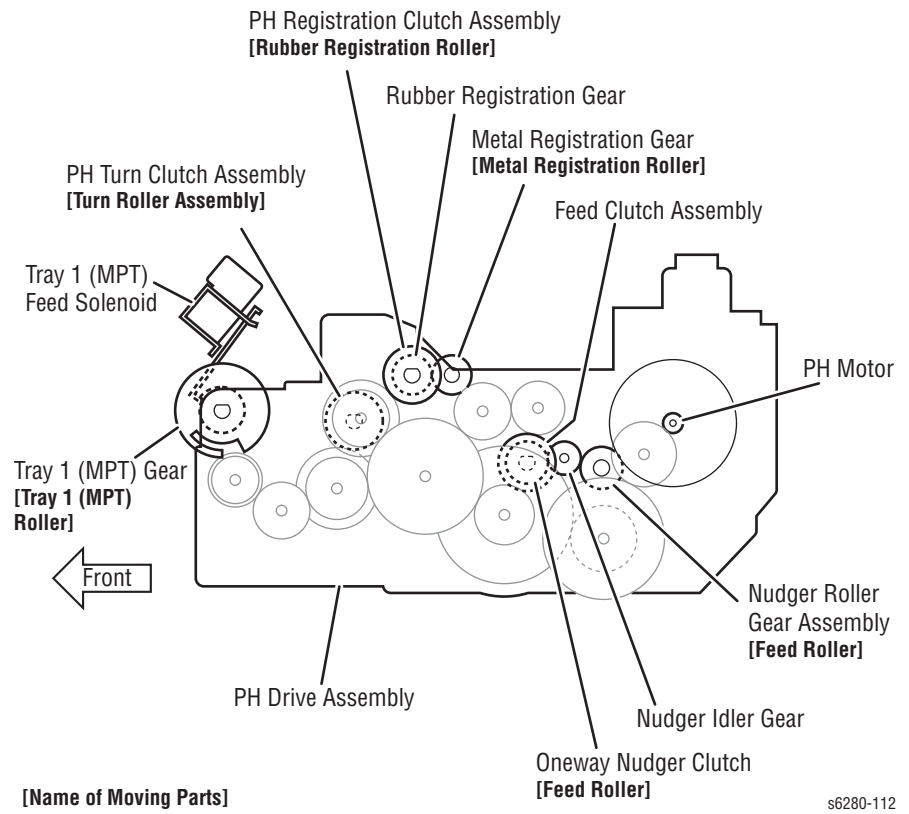
The Paper Handling (PH) Drive Assembly transmits drive energy as shown in the following diagram.

Paper Handling

Process



Front View



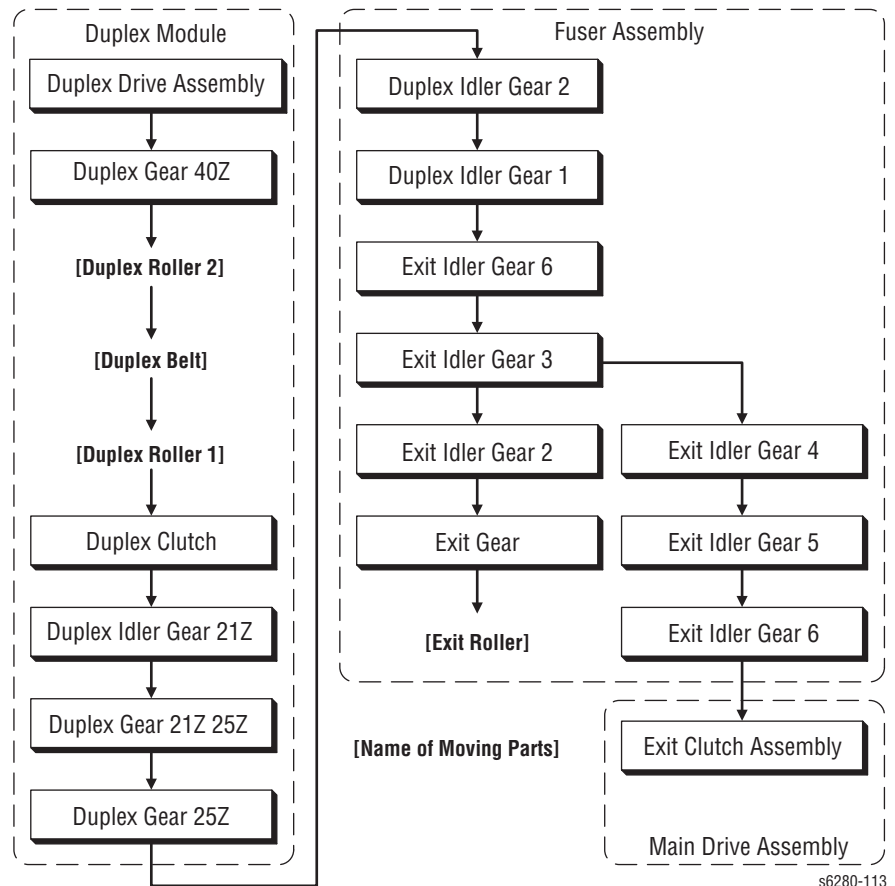
Duplex Drive

The following diagram provides the process flow of the Duplex Drive.

Duplex Mode

Process

Duplex Mode

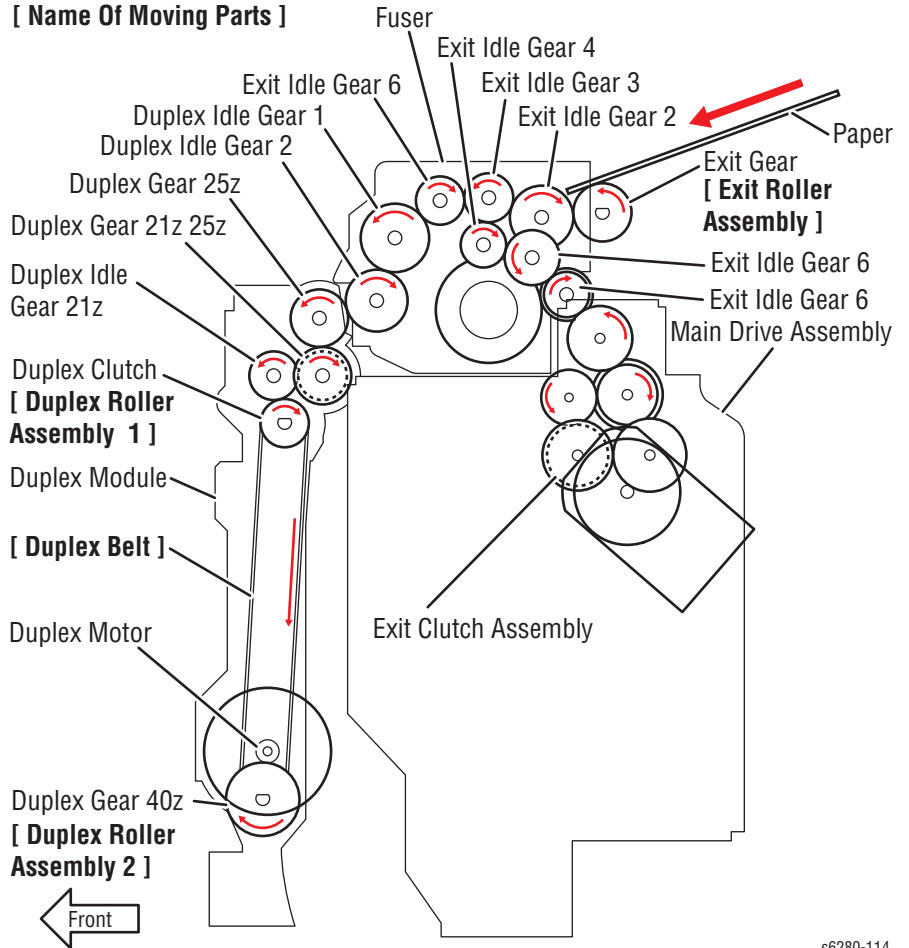


s6280-113

Front View

Duplex Mode

[Name Of Moving Parts]



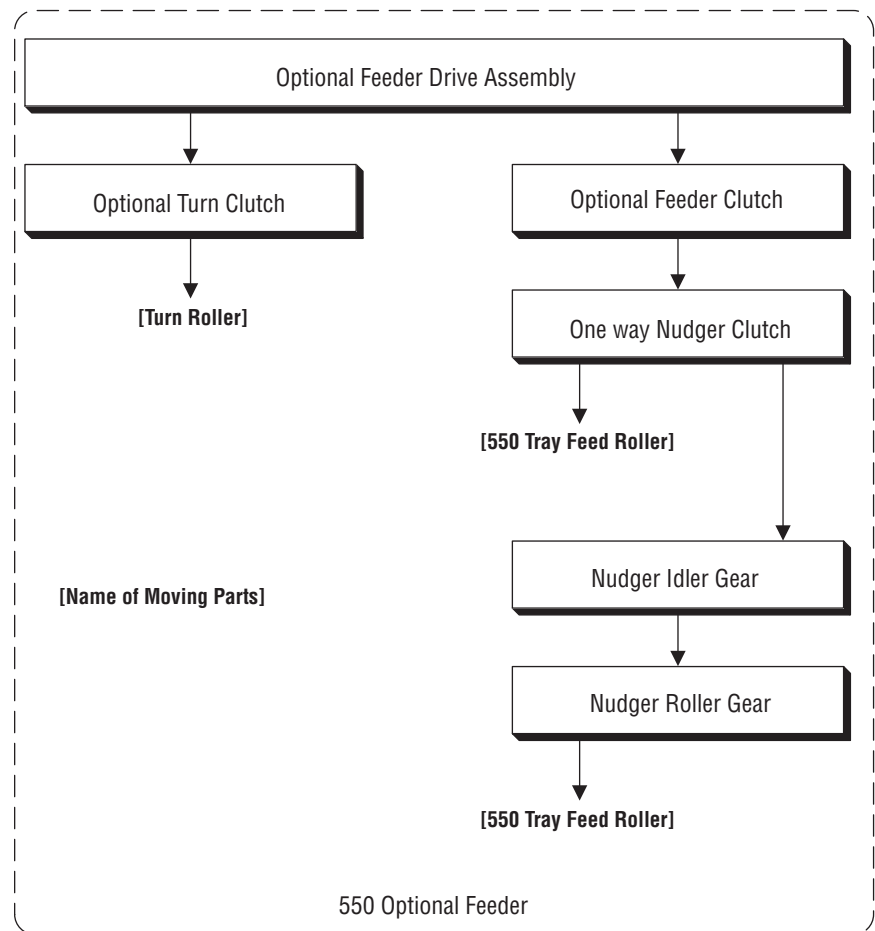
s6280-114

Optional 550-Sheet Feeder Drive

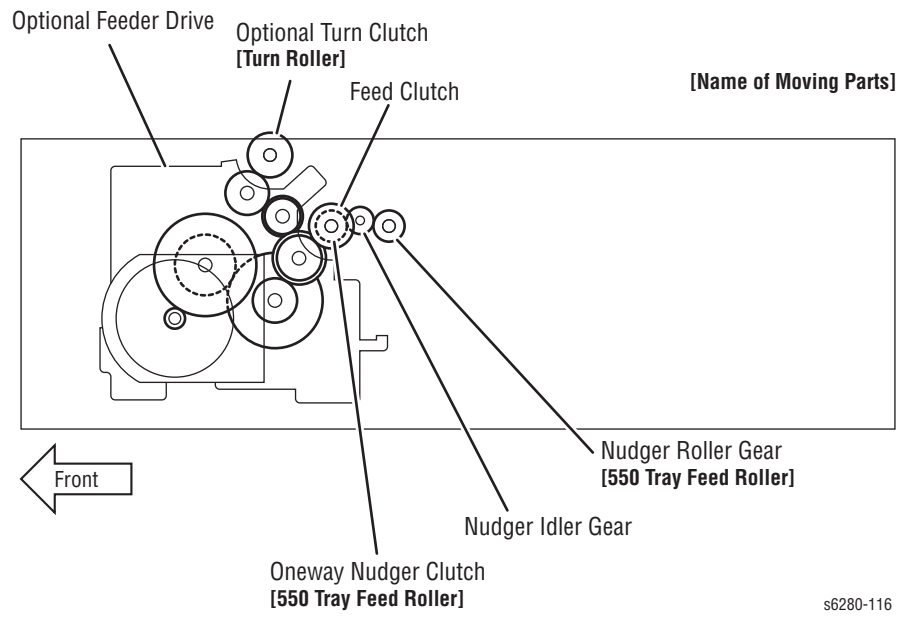
The following diagram provides the process flow of the Optional 550-Sheet Feeder Drive.

Optional 550-Sheet Feeder

Process



s6280-115



Error Messages and Codes

In this chapter...

- Introduction
- Servicing Instructions
- Messages, Chain Link Codes, and Procedures
- Jam Error Procedures
- Consumable/Routine Maintenance Procedures
- Tray and Paper Errors
- Configuration, Memory, and Firmware Errors

Chapter 3

Introduction

This chapter describes error messages and numeric codes displayed on the Control Panel or listed on the Error History page. These error indications serve as the entry point into the troubleshooting process.

Troubleshooting of problems not directly indicated by or associated with an error message or Chain Link code is covered in “General Troubleshooting” on page 4-1. Print quality problems are covered in “Print-Quality Problems Overview” on page 5-2.

The printer tracks and reports errors in a number of ways. The two types of error reporting discussed in this section include:

- Error messages and Chain Link codes display on the Control Panel
- Engine (fatal) and Jam Error logs display on the Control Panel or listed on the Error History Report

Accessing Error History Report

1. From the Control Panel, press the **Menu** button.
2. **Information Pgs** is displayed. Press the **OK** button.
3. Press the **Up** or **Down** arrow button to find **Error History**. Press the **OK** button.
4. The Error History Report is printed. When printing is finished, the menu is displayed.

Error History Report

The Error History Report provides a list of error messages and Chain Link codes relating to Jam errors and System (fatal) errors. The printer can retain up to 42 Jam errors and 42 System Fail errors.

For Chain Link codes, Chain number (0 to 999) and Link number (0 to 999) are assigned. Chain numbers are assigned for each component. The number of component that detects Fault is entered in the Chain code, and the Fault type is defined by the Link code.

Examples of Error message and Chain Link code:

- System Fail History
 - Chain Link: 116-324
- Paper Jam History
 - Paper Jam Type: IOT Feeder1 Jam


The Error History page contains two types of history information.

System Fail History

System Fail History contains: Item Number, Total Print Count, and Chain-Link code.

Paper Jam History

Paper Jam History contains: Item No., Total Print Count, and Paper Jam Type information.

Phaser® 6280N Color Laser Printer		xerox 	
Error History Report			
System Fail History			
No.	Total Print Count	Chain-Link	
1	6	016-602	
Paper Jam History			
No.	Total Print Count	Paper Jam Type	
1	95	IOT Feeder1 Jam	
2	95	IOT Feeder1 Jam	
3	95	IOT Feeder1 Jam	
Page:1(Last Page)			
<small>Xerox Corporation and Fuji Xerox Co., Ltd. 2008</small>			

Servicing Instructions

The service checklist below is an overview of the path a service technician should take when servicing the printer and printer optional equipment.

Step 1: Identify the Problem

1. Verify the reported problem does exist.
2. Check for any error codes and write them down.
3. Print normal customer prints and service test prints.
4. Make note of any print-quality problems in the test prints.
5. Make note of any mechanical or electrical abnormalities present.
6. Make note of any unusual noise or smell coming from the printer.
7. View the System Error and Paper Jam Error on the Error History Report.
8. Verify the AC input power supply is within proper specifications by measuring the voltage at the electric outlet while the printer is running.

Step 2: Inspect and Clean the Printer

1. Turn the printer power Off.
2. Disconnect the AC power cord from the wall outlet.
3. Verify the power cord is free from damage or short circuit and is connected properly.
4. Remove the Print Cartridges and protect them from light.
5. Remove the Transfer Unit.
6. Inspect the printer interior and remove any foreign matter such as paper clips, staples, pieces of paper, dust, or loose toner.
7. Do not use solvents or chemical cleaners to clean the printer interior.
8. Do not use any type of oil or lubricant on printer parts.
9. Use only an approved toner vacuum.
10. Clean all rubber rollers with a lint-free cloth, dampened slightly with cold water and mild detergent.
11. Inspect the interior of the printer for damaged wires, loose connections, toner leakage, and damaged or obviously worn parts.
12. If the Print Cartridges appear obviously damaged, replace with new ones.

Step 3: Find the Cause of the Problem

1. Use the Error Messages and Codes and troubleshooting procedures to find the cause of the problem.
2. Use Service Diagnostics to check the printer and optional components.
3. Use the Wiring Diagrams and Plug/Jack Locator to locate test points.
4. Take voltage readings as instructed in the appropriate troubleshooting procedure.

Step 4: Correct the Problem

1. Use the Parts List to locate a part number.
2. Use the FRU Disassembly procedures to replace the part.

Step 5: Final Checkout

1. Test the printer to be sure you have corrected the initial problem and there are no additional problems present.
-

Messages, Chain Link Codes, and Procedures

The error messages and chain link codes generated by the printer's operating system are the lead-in to the troubleshooting procedures that follow in subsequent pages. This section correlates the output of the printer's diagnostic aids and provides the troubleshooting procedures to locate and correct the reported errors.

Error Messages Abbreviations

Due to limited display space, some error messages include abbreviations. The most common abbreviations used throughout this chapter are listed here.

Term	Definition
ADC	Automatic Density Control
ASIC	Application-Specific Integrated Circuit
BLK	Black
COMM	Communication
CRT	Cartridge
CRUM	Customer Replaceable Unit
CTD	Calibrate Toner Density
ER/ERR	Error
ENV	Environment
FUNC	Function
HD	Hard Disk
MACAddress	Media Access Control Address
MCU	Machine Control Unit
MPT	Multi-Purpose Tray
NVM	Non-Volatile Memory. Used instead of NVRAM.
NV RAM	Non-Volatile Random Access Memory
OHP	Overhead Paper (Transparency)
PCL	Printer Control Language
PDL	Page Description Language
RAM	Random Access Memory
REG	Registration
ROM	Read Only Memory
SNR	Sensor
TRAN	Transfer Unit

Error Message and Chain Link Code Summary

The Error Message Summary table lists possible errors, along with the corresponding code, and page reference for the corrective procedure.

- The Control Panel Message column shows the message as it appears on the printer's display when the error codes during normal operation.
- The Chain Link column lists codes listed on the printer Error History Report and the Control Panel.
- The Go to Page column references the procedure related to the error.

Use this table to identify the proper procedure to correct the reported error.

Error Message and Chain Link Code Display

Chain Link Code	Control Panel Message	Go to Page
Jam Errors		
071-100	Jam at Tray 2 (Feeder 1 Jam)	page 3-11
072-100	Jam at Tray 3 (Feeder 2 Jam)	page 3-14
075-100	Jam at Tray 1 (MPT)	page 3-20
077-100	Jam at Registration Roll (IOT Regi 1 Jam)	page 3-24
077-101	Jam at Registration Roll (IOT Regi 2 Jam)	page 3-24
077-102	Jam at Exit 1/Exit 2 (IOT Exit 1 Jam)	page 3-27
077-103	Jam at Exit 1/Exit 2 (IOT Exit 2 Jam)	page 3-27
077-104	Jam at Duplex (IOT Duplex 1 Jam)	page 3-30
077-105	Jam at Duplex (IOT Duplex 2 Jam)	page 3-35
077-106	Jam at Duplex (IOT Duplex 3 Jam)	page 3-35
077-107	Jam at Duplex (IOT Duplex 4 Jam)	page 3-30
077-900	Jam at Registration Roll/Jam at Exit	page 3-39
077-901	Jam at Registration Roll/Jam at Exit	page 3-39
077-903	Jam at Tray 2 (IOT Feed Jam)	page 3-45
077-907	Jam at Duplexer (IOT Remain Duplex Jam)	page 3-47
Consumable/Routine Maintenance Errors		
010-317	Insert Fuser	page 3-51
010-351	Replace Fuser	page 3-53
010-359	Fuser CRUM ID Error	page 3-54
010-397	Fuser Error	page 3-55
010-421	Ready Fuser Life	page 3-57

Error Message and Chain Link Code Display (continued)

Chain Link Code	Control Panel Message	Go to Page
093-423 093-424 093-425 093-426	Print Cartridge Near Life (Y/M/C/K)	page 3-58
093-919 093-920 093-921 093-922	Check Print Cartridge (Y/M/C/K)	page 3-59
093-925	Print Cartridge CRUM Error (K)	page 3-63
093-926	Non-Xerox Toner Invalid (K) - (Print Cartridge CRUM ID Error)	page 3-66
093-930 093-931 093-932 093-933	Replace Print Cartridge (Y/M/C/K)	page 3-61
093-935 093-936 093-937 093-938	Empty Print Cartridge (Y/M/C/K)	page 3-62
093-950 093-951 093-952	Print Cartridge CRUM Error (Y/M/C)	page 3-63
093-955 093-956 093-957 093-958	Check Print Cartridge (Yellow/Cyan/Magenta/Black) - (IOT Cartridge Cover Staying)	page 3-65
093-960 093-961 093-962	Non-Xerox Toner Invalid (Y/M/C) - (Print Cartridge CRUM ID Error)	page 3-66
093-970 093-971 093-972 093-973	Insert Print Cartridge (Y/M/C/K)	page 3-67
094-910	Insert Transfer Unit	page 3-70
094-911	Replace Transfer Unit	page 3-72
094-330	Transfer Unit CRUM Error	page 3-73
094-422	Ready Transfer Unit Life	page 3-74
191-700	Non-Xerox Toner Invalid (Y/M/C) - (Print Cartridge CRUM ID Error)	page 3-66
Tray and Paper Errors		
024-910	Load Tray 2 (Paper Mismatch)	page 3-77
024-911	Load Tray 3 (Paper Mismatch)	page 3-79

Error Message and Chain Link Code Display (continued)

Chain Link Code	Control Panel Message	Go to Page
024-946 077-912	Insert Tray 2 (Tray Missing)	page 3-81
024-947	Insert Tray 3 (Tray Missing)	page 3-83
024-958	Load Tray 1 (MPT) (Paper Size Mismatch)	page 3-75
024-959	Load Tray 2 (No Suitable Paper)	page 3-86
024-960	Load Tray 3 (No Suitable Paper)	page 3-88
024-963	Load Tray 1 (MPT) (No Suitable Paper)	page 3-84
077-906	Open Door A	page 3-91
N/A	Multiple Feed	page 3-92
Configuration, Memory, and Firmware Errors		
016-500	Download Error (Erase Flash Error)	page 3-94
016-501	Download Error (Write Flash Error)	page 3-94
016-502	Download Error (Verify Flash Error)	page 3-94
016-610	Control Panel Language Set Unsupported	page 3-95
016-612	MAC Address Error	page 3-96
016-718	Out of Memory	page 3-97
016-720	PDL Error (Memory Flow)	page 3-98
016-721	Collate Full (Memory Overflow)	page 3-99
016-741	Download Error (Download Protect Error)	page 3-100
016-742	Download Error (Download ID Error)	page 3-100
016-743	Download Error (Download Range Error)	page 3-100
016-744	Download Error (Download Checksum Error)	page 3-100
016-745	Download Error (Download Header Error)	page 3-100
016-757	Auditron - Invalid User	page 3-101
016-758	Auditron - Disabled Function	page 3-101
016-759	Auditron - Reached Limit	page 3-101
016-799	Invalid Job (Job Environmental Violation)	page 3-102
016-982	Disk Full (Memory Overflow)	page 3-103
018-319	Network Error (On Board Network OS Error)	page 3-104
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Error Message and Chain Link Code Display (continued)

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Jam Error Procedures

Jam at Tray 2 (Feeder 1 Jam)

Paper fed from Tray 2 did not reach the Registration Sensor on time.

Applicable Chain Link

- **Chain Link 071-100:** Jam at Tray 2

Initial Actions

- Try picking paper from a different tray.
- Check the paper path for obstructions or debris.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Feed Clutch Assy., PL3.2.24 ■ Registration Sensor, PL3.2.30 ■ Registration Sensor Harness, PL3.2.37 ■ PH Drive Assy., PL8.1.7 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 	<ul style="list-style-type: none"> ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Tray 1 (MPT) and Registration” on page 10-23 ■ “Feeder” on page 10-27

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper condition. 2. Is the paper damaged?	Replace the paper.	Go to step 2.
2	1. Check the paper setting. 2. Does the paper in use match with the paper settings on the printer's Control Panel?	Go to step 3.	Correct the paper settings using the printer's Control Panel. Go to step 3.
3	Does the error still occur?	Go to step 4.	Complete.
4	1. Reseat the paper tray. 2. Does the error still occur?	Go to step 5.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	<ol style="list-style-type: none"> 1. Perform the Registration Sensor test (page 4-30): Service Mode > Engine Diag > Sensor Test > Regi Sensor. 2. Does the number on the Control Panel increase by 1 when the Actuator of the Registration Sensor is activated? 	Go to step 11.	Go to step 6.
6	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J29, P/J292, and P/J2922 between the MCU Board and the Registration Sensor. 2. Are the connectors securely connected? 	Go to step 7.	Reconnect the connectors.
7	<p>Check the Registration Sensor Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J292 and P/J2922. 2. Check continuity between P/J292 <=> P/J2922. 	Go to step 8.	Replace the Registration Sensor Harness.
8	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J29 and P/J292. 2. Check continuity between P/J29 <=> P/J292. 	Go to step 9.	Replace the Right Side Harness.
9	<p>Check the Registration Sensor signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J29 on the MCU Board. 2. Is there +3.3 V across ground <=> J29-8 pin? 	Go to step 10.	Replace the MCU Board (page 8-86).
10	<p>Check the Registration Sensor for signal.</p> <ol style="list-style-type: none"> 1. Measure the voltage across ground <=> J29-10 pin on the MCU Board. 2. Does the voltage change when the Actuator of the Registration Sensor is activated? 	Replace the MCU Board (page 8-86).	Replace the Registration Sensor (page 8-43).
11	<ol style="list-style-type: none"> 1. Perform the Tray 2 Motor test (page 4-43): Service Mode > Engine Diag > Motor Test > Tray 2 Motor. 2. Does the Motor operate? 	Go to step 15.	Go to step 12.
12	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J25 and P/J251 between the MCU Board and the PH Drive Assembly. 2. Are the connectors securely connected? 	Go to step 13.	Connect the connectors.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
13	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J25 on from the MCU Board and P/J251 from the PH Drive Assembly. 2. Check continuity between P/J25 <=> P/J251. 	Go to step 14.	Replace the Right Side Harness.
14	<p>Check the PH Drive Assembly signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J25 on the MCU Board. 2. Is there +24 V across ground <=> J25-1/J25-2 pin when the Interlock Switch is activated? 	Replace the PH Drive Assembly (page 8-73).	Replace the MCU Board (page 8-86).
15	<ol style="list-style-type: none"> 1. Perform the Tray 2 Feed Clutch test (page 4-54): Service Mode > Engine Diag > Motor Test > Tray 2 Feed Clutch. 2. Does the Clutch operate properly? 	Replace the MCU Board (page 8-86).	Go to step 16.
16	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J23 and P/J233 between the MCU Board and the Feed Clutch. 2. Are the connectors securely connected? 	Go to step 17.	Reconnect the connectors.
17	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J23 from the MCU Board and P/J233 from the Feed Clutch. 2. Check continuity between P/J23 <=> P/J233. 	Go to step 18.	Replace the Right Side Harness.
18	<p>Check the Feed Clutch signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J23 from the MCU Board. 2. Is there +24 V across ground <=> J23-5 pin when the Interlock Switch is activated? 	Replace the Tray 2 Feed Clutch (page 8-41).	Replace the MCU Board (page 8-86).

Jam at Tray 3 (Feeder 2 Jam)

Paper fed from Tray 3 did not reach the Registration Sensor on time.

Applicable Chain Link

- **Chain Link 072-100:** Jam at Tray 3

Initial Actions

- Try picking paper from a different tray.
- Check the paper path for obstructions or debris.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Regi Sensor, PL3.2.30 ■ Regi Sensor Harness, PL3.2.37 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 ■ Optional 550-Sheet Feeder, PL12.1.1 ■ Tray 3 Feed Clutch, PL12.1.6 ■ Optional Feeder Assy., PL12.1.8 ■ Optional Feeder Harness, PL12.2.3 ■ Tray 3 Turn Roll, PL12.3.4 ■ Tray 3 Feed Roll, PL12.3.29 	<ul style="list-style-type: none"> ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Map 6 - Optional 550-Sheet Feeder” on page 10-14 ■ “Tray 1 (MPT) and Registration” on page 10-23 ■ “Optional 550-Sheet Feeder Wiring Diagram” on page 10-39

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper condition. 2. Is the paper damaged?	Replace the paper.	Go to step 2.
2	1. Check the paper setting. 2. Does the paper in use match with the paper settings on the printer's Control Panel?	Go to step 3.	Correct the paper settings using the printer's Control Panel. Go to step 3.
3	Does the error still occur?	Go to step 4.	Complete.
4	1. Reseat the paper tray. 2. Does the error still occur?	Go to step 5.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	<ol style="list-style-type: none"> 1. Perform the Registration Sensor test (page 4-30): Service Mode > Engine Diag > Sensor Test > Regi Sensor. 2. Does the number on the Control Panel increase by 1 when the Actuator of the Registration Sensor is activated? 	Go to step 11.	Go to step 6.
6	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J29, P/J292, and P/J2922 between the MCU Board and the Registration Sensor. 2. Are the connectors securely connected? 	Go to step 7.	Reconnect the connectors.
7	<p>Check the Registration Sensor Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J292 from the Right Side Harness and P/J2922 from the Regi Sensor. 2. Check continuity between P/J292 <=> P/J2922. 	Go to step 8.	Replace the Registration Sensor Harness.
8	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J29 from the MCU Board and P/J292 from the Regi Sensor Harness. 2. Check continuity between P/J29 <=> P/J292. 	Go to step 9.	Replace the Right Side Harness.
9	<p>Check the Registration Sensor signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J29 from the MCU Board. 2. Is there +3.3 V across ground <=> J29-8 pin on the MCU Board? 	Go to step 10.	Replace the MCU Board (page 8-86).
10	<p>Check the Registration Sensor for signal.</p> <ol style="list-style-type: none"> 1. Measure the voltage across ground <=> J29-10 pin on the MCU Board. 2. Does the voltage change when the Actuator of the Registration Sensor is activated? 	Replace the MCU Board (page 8-86).	Replace the Registration Sensor (page 8-43).
11	<ol style="list-style-type: none"> 1. Perform the Tray 3 Motor test (page 4-45): Service Mode > Engine Diag > Motor Test > Tray 3 Feed Motor. 2. Does the Motor operate properly? 	Go to step 19.	Go to step 12.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
12	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J422 and P/J4222 between the Tray 3 Feeder Board and the Tray 3 Feeder Drive. 2. Are the connectors securely connected? 	Go to step 13.	Reconnect the connectors.
13	<p>Check the C2 Motor Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J422 from the Feeder Board and P/J4222 Feeder Assembly. 2. Check continuity between connectors P/J422 <=> P/J4222. 	Go to step 14.	Replace the Optional Sheet Feeder (page 8-100).
14	<p>Check the Tray 3 Feeder Drive signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J4222 from the Optional Feeder Board. 2. Is there +24 V across ground <=> J422-6 pin? 	Replace the Optional 550-Sheet Feeder (page 8-100).	Go to step 15.
15	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J419, P/J281, and P/J28 between the Tray 3 Feeder Board and the MCU Board. 2. Are the connectors securely connected? 	Go to step 16.	Reconnect the connectors.
16	<p>Check the Tray 3 Feeder Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J419 from the Feeder Board and P/J281 from the Right Side Harness. 2. Check continuity between P/J419 <=> P/J281. 	Go to step 17.	Replace the Optional 550-Sheet Feeder (page 8-100).
17	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J281 from the Right Side Harness and P/J28 from the MCU Board. 2. Check continuity between P/J281 <=> P/J28. 	Go to step 18.	Replace the Right Side Harness.
18	<p>Check the Tray 3 Feeder Board signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J28 on the MCU Board. 2. Is there +24 V across ground <=> J/28-B4/J28-B5 when the Interlock Switch is activated? 	Replace the Optional 550-Sheet Feeder (page 8-100).	Replace the MCU Board (page 8-86).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
19	<p>1. Perform the Tray 3 Feed Clutch test (page 4-55): Service Mode > Engine Diag > Motor Test > Tray 3 Feed Clutch.</p> <p>2. Does the Clutch operate properly?</p>	Go to step 27.	Go to step 20.
20	<p>1. Check the wiring harness connectors P/J421 and P/J4213 between the Optional Feeder Board and the Feed Clutch.</p> <p>2. Are the connectors securely connected?</p>	Go to step 21.	Reconnect the connectors.
21	<p>Check the C2 Chute Harness for continuity.</p> <p>1. Disconnect P/J421 from the Feeder Board and P/J4213 from the Feed Clutch.</p> <p>2. Check continuity between P/J421 <=> P/J4213.</p>	Go to step 22.	Replace the Optional 550-Sheet Feeder (page 8-100).
22	<p>Check the Tray 3 Feed Clutch signal.</p> <p>1. Disconnect P/J421 from the Optional Feeder Board.</p> <p>2. Is there +24 V across ground <=> J421-1 pin when the Interlock Switch is activated?</p>	Replace the Tray 3 Feed Clutch (page 8-104).	Go to step 23.
23	<p>1. Check the wiring harness connectors P/J419, P/J281, and P/J28 between the Optional Feeder Board and MCU Board.</p> <p>2. Are the connectors securely connected?</p>	Go to step 24.	Reconnect the connectors.
24	<p>Check the Feeder Harness for continuity.</p> <p>1. Disconnect P/J419 from the MCU Board and P/J281 from the Right Side Harness.</p> <p>2. Check continuity between P/J419 <=> P/J281.</p>	Go to step 25.	Replace the Optional Feeder Assembly (page 8-107).
25	<p>Check the Right Side Harness for continuity.</p> <p>1. Disconnect P/J281 from the Feeder Harness and P/J28 from the MCU Board.</p> <p>2. Check continuity between P/J281 <=> P/J28.</p>	Go to step 26.	Replace the Right Side Harness.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
26	<p>Check the Optional Feeder Board signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J28 on the MCU Board. 2. Is there 24 V across ground <=> J28-B4/J28-B5 pin when the Interlock Switch is activated? 	Replace the Tray 3 Feeder Assembly (page 8-107).	Replace the MCU Board (page 8-86).
27	<ol style="list-style-type: none"> 1. Perform the Tray 3 Turn Clutch test (page 4-56): Service Mode > Engine Diag > Motor Test > Tray 3 Turn Clutch. 2. Does the Clutch operate properly? 	Go to step 35.	Go to step 28.
28	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J420 and P/J4201 between the Optional Feeder Board and the Tray 3 Turn Clutch. 2. Are the connectors securely connected? 	Go to step 29.	Reconnect the connectors.
29	<p>Check the C2 Turn Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J420 from the Optional Feeder Board and P/J4201 from the Optional Turn Clutch. 2. Check continuity between P/J420 <=> P/J4201. 	Go to step 30.	Replace the Optional 550-Sheet Feeder (page 8-100).
30	<p>Check the Tray 3 Turn Clutch signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J420 from the Optional Feeder Board. 2. Is there +24 V across ground <=> J420-1 pin when the Interlock Switch is activated? 	Replace the Tray 3 Turn Clutch (page 8-103).	Go to step 31.
31	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J419, P/J281, and P/J28 between the Optional Feeder Board and the MCU Board. 2. Are the connectors securely connected? 	Go to step 32.	Reconnect the connectors.
32	<p>Check the Tray 3 Feeder Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J419 from the Optional Feeder Board and P/J281 from the Right Side Harness. 2. Check continuity between P/J419 <=> P/J281. 	Go to step 33.	Replace the Optional 550-Sheet Feeder (page 8-100).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
33	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J281 from the Feeder Harness and P/J28 from the MCU Board. 2. Check continuity between P/J281 <=> P/J28. 	Go to step 34.	Replace the Right Side Harness.
34	<p>Check the Tray 3 Feeder Board signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J28 from the MCU Board. 2. Is there +24 V across ground <=> J28-B4/J28-B5 when the Interlock Switch is activated? 	Replace the Tray 3 Feeder Assembly (page 8-107).	Replace the MCU Board (page 8-86).
35	<p>Check the following for evidence of fault or damage:</p> <ul style="list-style-type: none"> ■ Turn Roll, PL12.3.4 ■ Feed Roll, PL12.3.29 	Go to step 36.	Replace the defective part(s). If the Turn Roll is damaged, replace the Tray 3 Feeder Assembly (page 8-107).
36	<ol style="list-style-type: none"> 1. Replace the Optional 550-Sheet Feeder (page 8-100). 2. Does the error still occur? 	Replace the MCU Board (page 8-86).	Complete.

Jam at Tray 1 (MPT)

Paper fed from Tray 1 (MPT) did not reach the Registration Sensor on time.

Applicable Chain Link

- **Chain Link 075-100:** Jam at Tray 1

Initial Actions

- Try picking paper from a different tray.
- Check the paper path for obstructions or debris.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map Reference
<ul style="list-style-type: none"> ■ Tray 1 (MPT) Retard Roller Assy., PL2.1.3 ■ Tray 1 Feed Solenoid, PL3.1.3 ■ MPT Feed Roll, PL3.1.10 ■ Feeder Unit, PL3.2.1 ■ Turn Clutch, PL3.2.25 ■ Regi Sensor, PL3.2.30 ■ Turn Roll, PL3.2.32 ■ Registration Sensor Harness, PL3.2.37 ■ PH Drive Assembly, PL8.1.7 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 	<ul style="list-style-type: none"> ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Tray 1 (MPT) and Registration” on page 10-23 ■ “Feeder” on page 10-27

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper condition. 2. Is the paper damaged?	Replace the paper.	Go to step 2.
2	1. Check the paper setting. 2. Does the paper in use match with the paper settings on the printer's Control Panel?	Go to step 3.	Correct the paper settings on the printer's Control Panel. Go to step 3.
3	Does the error still occur?	Go to step 4.	Complete.
4	1. Reseat the Tray 1 Side Guides. 2. Does the error still occur?	Go to step 5.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	<ol style="list-style-type: none"> 1. Perform the Registration Sensor test (page 4-30): Service Mode > Engine Diag > Sensor Test > Regi Sensor. 2. Does the number on the Control Panel increase by 1 every time the Actuator of the Registration Sensor is activated? 	Go to step 11.	Go to step 6.
6	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J29, P/J292, and P/J2922 between the MCU Board and the Registration Sensor. 2. Are the connectors securely connected? 	Go to step 7.	Reconnect the connectors.
7	<p>Check the Registration Sensor Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J292 from the Regi Sensor and P/J2922 from the Right Side Harness. 2. Check continuity between P/J292 <=> P/J2922. 	Go to step 8.	Replace the Registration Sensor Harness.
8	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J29 from the MCU Board and P/J292 from the Regi Sensor Harness. 2. Check continuity between P/J29 <=> P/J292. 	Go to step 9.	Replace the Right Side Harness.
9	<p>Check the Registration Sensor for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J29 from the MCU Board. 2. Is there +3.3 V across ground <=> J29-8 pin? 	Go to step 10.	Replace the MCU Board (page 8-86).
10	<p>Check the Registration Sensor signal.</p> <ol style="list-style-type: none"> 1. Measure the voltage across ground <=> J29-10 on the MCU Board. 2. Does the voltage change when the Actuator of the Registration Sensor is activated? 	Replace the MCU Board (page 8-86).	Replace the Regi Sensor (page 8-43).
11	<ol style="list-style-type: none"> 1. Perform the Tray 1 (MPT) Feed Solenoid test (page 4-53): Service Mode > Engine Diag > Motor Test > Tray 1 (MPT) Feed Solenoid. 2. Does the Solenoid operate properly? 	Go to step 15.	Go to step 12.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
12	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J29 and P/J234 between the MCU Board and the Tray 1 Feed Solenoid. 2. Are the connectors securely connected? 	Go to step 13.	Reconnect the connectors.
13	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J29 from the MCU Board and P/J234 from the Feed Solenoid. 2. Check continuity between P/J29 <=> P/J234. 	Go to step 14.	Replace the Right Side Harness.
14	<p>Check the Tray 1 Feed Solenoid signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J29 from the MCU Board. 2. Is there +24 V across ground <=> J29-7 pin when the Interlock Switch is activated? 	Replace the Tray 1 Feed Solenoid (page 8-30).	Replace the MCU Board (page 8-86).
15	<ol style="list-style-type: none"> 1. Perform the Tray 1 (MPT) Turn Clutch test (page 4-52): Service Mode > Engine Diag > Motor Test > Tray 1 (MPT) Turn Clutch. 2. Does the Clutch operate properly? 	Go to step 19.	Go to step 16.
16	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J23 and P/J232 between the MCU Board and the Turn Clutch. 2. Are the connectors securely connected? 	Go to step 17.	Reconnect the connectors.
17	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J23 from the MCU Board and P/J232 from the Turn Clutch. 2. Check continuity between P/J23 <=> P/J232. 	Go to step 18.	Replace the Right Side Harness.
18	<p>Check the Turn Clutch signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J23 from the MCU Board. 2. Is there +24 V across ground <=> J23-3 pin when the Interlock Switch is activated? 	Replace the Turn Clutch (page 8-42).	Replace the MCU Board (page 8-86).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
19	<ol style="list-style-type: none"> 1. Perform the Tray 2 Motor test (page 4-43): Service Mode > Engine Diag > Motor Test > Tray 2 Motor. 2. Does the Motor operate properly? 	Go to step 23.	Go to step 20.
20	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J25 and P/J251 between the MCU Board and the PH Drive Assembly. 2. Are the connectors securely connected? 	Go to step 21.	Reconnect the connectors.
21	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J25 from the MCU Board and P/J251 from the PH Drive Assembly. 2. Check continuity between P/J25 <=> P/J251. 	Go to step 22.	Replace the Right Side Harness.
22	<p>Check the PH Drive Assembly signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J25 from the MCU Board. 2. Is there +24 V across ground <=> J25-1/J25-2 pin when the Interlock Switch is activated? 	Replace the PH Drive Assembly (page 8-73).	Replace the MCU Board (page 8-86).
23	<ol style="list-style-type: none"> 1. Check the following for evidence of fault or damage: <ul style="list-style-type: none"> ■ Retard Roll, PL2.1.7 ■ MPT Feed Roll, PL3.1.10 ■ Turn Roll, 3.2.32 2. Is the part damaged? 	Replace the MCU Board (page 8-86).	Replace the defective part(s). <ul style="list-style-type: none"> ■ Retard Roll (page 8-29) ■ MPT Feed Roll (page 8-34) ■ Turn Roll (replace the Feeder Assembly, page 8-36)

Jam at Registration Roll

The Exit Sensor does not turn On or the Registration Sensor does not turn Off after a paper is detected by the Registration Sensor.

Warning

The Fuser may be hot. Turn the printer power Off and allow at least 5 minutes for the Fuser to cool before removing the Fuser.

Applicable Chain Link

- **Chain Link 077-100:** IOT Reg1 JAM
- **Chain Link 077-101:** IOT Reg2 JAM

Initial Actions

- Ask the customer about the paper types being used. If not on the recommended list, determine if this is contributing to the problem. Recycled, multi-purpose or copier paper tends to contaminate the paper path. Constant use of special papers such labels or business cards can also contribute to jamming.
- Ensure the correct tray loading and setup procedures are followed (securing the guides, selecting the correct paper type, fanning the paper, etc.)
- Make sure the printer is plugged directly into an electrical outlet. Using extension cords or a power strip is not recommended.
- Make every attempt to establish a jam rate prior to starting any work. If possible print an Error History Report and note the page count between jams.
- Determine if jamming is occurring in one tray but not another. This helps to identify any dirty or defective parts.
- Clear the paper path of any jams and paper debris. Start at the Turn Chute and work up to the Registration Chute Assembly.
- Clean the paper Feed and Retard Rollers in the paper tray and tray slot using a slightly damp (water only) lint free cloth.
- Cycle printer power.
- If the problem persists, follow the following procedure.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Feeder Assy., PL3.2.1 ■ Actuator B, PL3.2.15 ■ Regi Clutch, PL3.2.23 ■ Registration Sensor, PL3.2.30 ■ Regi Sensor Harness, PL3.2.37 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 	<ul style="list-style-type: none"> ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 3 - Image Processor Board and Dispenser” on page 10-11 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Tray 1 (MPT) and Registration” on page 10-23

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper condition. 2. Is the paper damaged?	Replace the paper. Go to step 2.	Complete.
2	1. Check the Regi Rolls for correct installation. 2. Is the Regi Metal Roll pressed against the Regi Roll Assembly by spring pressure?	Go to step 3.	Replace the Feeder Assembly (page 8-36).
3	1. Perform the Regi Clutch test (page 4-51): Service Mode > Engine Diag > Motor Test > Regi Clutch . 2. Does the Clutch operate properly?	Go to step 4.	Replace the Regi Clutch (page 8-40).
4	1. Perform the Regi Sensor test (page 4-30): Service Mode > Engine Diag > Sensor Test > Regi Sensor . 2. Does the number increase by 1 when the Actuator is activated?	Replace the MCU Board (page 8-86).	Go to step 5.
5	1. Check the Actuator B for damage. 2. Is the Actuator B damaged?	Replace the Feeder Assembly (page 8-36).	Go to step 6.
6	1. Check the wiring harness connectors P/J29, P/J292, and P/J2922 between the MCU Board and the Regi Sensor. 2. Are the connectors securely connected?	Go to step 7.	Reconnect the connectors.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
7	Check the Registration Sensor Harness for continuity. 1. Disconnect P/J292 from the Right Side Harness and P/J2922 from the Regi Sensor. 2. Check continuity between P/J292 <=> P/J2922.	Go to step 8.	Replace the Registration Sensor Harness.
8	Check the Right Side Harness for continuity. 1. Disconnect P/J29 from the MCU Board and P/J292 from the Regi Sensor Harness. 2. Check continuity between P/J29 <=> P/J292.	Go to step 9.	Replace the Right Side Harness.
9	Check the Registration Sensor for continuity. 1. Disconnect P/J29 from the MCU Board. 2. Is there +3.3 V across ground <=> J29-8 pin?	Go to step 10.	Replace the MCU Board (page 8-86).
10	Check the Registration Sensor signal. 1. Measure the voltage across ground <=> J29-10 pin on the MCU Board. 2. Does the voltage change when the Actuator of the Registration Sensor is activated?	Replace the MCU Board (page 8-86).	Replace the Registration Sensor (page 8-43).

Jam at Exit 1/Exit 2

The Exit Sensor does not turn Off or the Exit Sensor detects turn Off too early after a paper is detected by the Exit Sensor.

Warning

The Fuser may be hot. Turn the printer power Off and allow at least 5 minutes for the Fuser to cool before removing the Fuser.

Applicable Chain Link

- **Chain Link 077-102:** IOT Exit1 JAM
- **Chain Link 077-103:** IOT Exit2 JAM

Initial Actions

- Ask the customer about the paper types being used. If not on the recommended list, determine if this is contributing to the problem. Recycled, multi-purpose or copier paper tends to contaminate the paper path. Constant use of special papers such labels or business cards can also contribute to jamming.
- Ensure the correct tray loading and setup procedures are followed (securing the guides, selecting the correct paper type, fanning the paper, etc.)
- Make sure the printer is plugged directly into an electrical outlet. Using extension cords or a power strip is not recommended.
- Make every attempt to establish a jam rate prior to starting any work. If possible print an Error History Report and note the page count between jams.
- Determine if jamming is occurring in one tray but not another. This helps to identify any dirty or defective parts.
- Clear the paper path of any jams and paper debris. Start at the Turn Chute and work up to the Registration Chute Assembly.
- Clean the paper Feed and Retard Rollers in the paper tray and tray slot using a slightly damp (water only) lint free cloth.
- Cycle printer power.
- If the problem persists, follow the following procedure.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Feeder Assy., PL3.2.1 ■ Actuator B, PL3.2.15 ■ Regi Clutch, PL3.2.23 ■ Registration Sensor, PL3.2.30 ■ Regi Sensor Harness, PL3.2.37 ■ Fuser, PL6.1.10 ■ Fuser Harness, PL6.1.11 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 3 - Image Processor Board and Dispenser” on page 10-11 ■ “Tray 1 (MPT) and Registration” on page 10-23 ■ “Fuser” on page 10-35

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper condition. 2. Is the paper damaged?	Replace the paper. Go to step 2.	Complete.
2	1. Perform the Exit Sensor test (page 4-29): Service Mode > Engine Diag > Sensor Test > Exit Sensor . 2. Does the number increase by 1 when the Actuator of the Exit Sensor in the Fuser is activated?	Go to step 3.	Go to step 4.
3	1. Check the Regi Rolls for correct installation. 2. Is the Regi Metal Roll pressed against the Regi Roll Assembly by spring pressure?	Go to step 8.	Replace the Feeder Assembly (page 8-36).
4	1. Check the wiring harness connectors P/J17 and P/J171 between the MCU Board and the Fuser. 2. Are the connectors securely connected?	Go to step 5.	Reconnect the connectors.
5	Check the Registration Sensor Harness for continuity. 1. Disconnect P/J17 from the MCU Board and P/J171 from the Fuser. 2. Check continuity between P/J17 <=> P/J171.	Go to step 6.	Replace the Fuser Harness.
6	Check the Fuser Unit for continuity. 1. Disconnect P/J17 from the MCU Board. 2. Is there +3.3 V across ground <=> J17-1 pin on the MCU Board?	Go to step 7.	Replace the MCU Board (page 8-86).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
7	Check the Exit Sensor signal. 1. Measure the voltage across ground <=> J17-3 pin on the MCU Board. 2. Does the voltage change when the Actuator of the Exit Sensor is activated?	Replace the MCU Board (page 8-86).	Replace the Fuser Unit (page 8-11).
8	1. Perform the Regi Clutch test (page 4-51): Service Mode > Engine Diag > Motor Test > Regi Clutch . 2. Does the Clutch operate properly?	Replace the Regi Clutch (page 8-40).	Replace the MCU Board (page 8-86).

Jam at Duplex

The Registration Sensor detects turn On too early or does not turn On after a paper is detected by the Duplex Jam Sensor.

Applicable Chain Link

- **Chain Link 077-104:** IOT Duplex1 Jam
- **Chain Link 077-107:** IOT Duplex4 Jam

Initial Actions

- Check for obstruction or debris in the Exit Chute Out or paper path.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map Reference
<ul style="list-style-type: none"> ■ Front Cover Harness, PL1.2.11 ■ Turn Clutch, PL3.2.25 ■ Regi Sensor, PL3.2.30 ■ Registration Sensor Harness, PL3.2.37 ■ PH Drive Assy., PL8.1.7 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 ■ Duplex Unit, PL11.1.1 ■ Duplex Board, PL11.1.15 ■ Duplex Clutch, PL11.2.10 ■ Duplex Motor, PL11.2.23 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Map 5 - Duplex Unit” on page 10-13 ■ “Tray 1 (MPT) and Registration” on page 10-23 ■ “Main Drive” on page 10-25 ■ “Feeder” on page 10-27 ■ “Fuser” on page 10-35 ■ “Duplex Wiring Diagram” on page 10-41

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper path. 2. Is the paper path dirty.	Clean the paper path.	Go to step 2.
2	1. Check the Rollers on the Duplex for correct installation or damage. 2. Are the Rollers correctly installed or damaged?	Go to step 3.	Replace the Duplex Unit (page 8-99).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
3	<ol style="list-style-type: none"> 1. Perform the Duplex Clutch test (page 4-57): Service Mode > Engine Diag > Motor Test > Duplex Clutch. 2. Does the Duplex Clutch operate properly? 	Go to step 4.	Go to step 11.
4	<ol style="list-style-type: none"> 1. Perform the Duplex Motor test (page 4-44): Service Mode > Engine Diag > Motor Test > Duplex Motor. 2. Does the motor operate properly? 	Go to step 5.	Go to step 26.
5	<ol style="list-style-type: none"> 1. Perform the Turn Clutch test (page 4-52): Service Mode > Engine Diag > Motor Test > MPT Turn Clutch. 2. Does the clutch operate properly? 	Go to step 6.	Go to step 7.
6	<ol style="list-style-type: none"> 1. Perform the Tray 2 Motor test (page 4-43): Service Mode > Engine Diag > Motor Test > Tray 2 Motor. 2. Does the motor operate properly? 	Go to step 7.	Go to step 13.
7	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J23 and P/J232 between the Turn Clutch and the MCU Board. 2. Are the connectors securely connected? 	Go to step 10.	Reconnect the connectors.
8	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J23 from the MCU Board and P/J272 from the Turn Clutch. 2. Check continuity between P/J23 <=> P/J272. 	Go to step 9.	Replace the Right Side Harness.
9	<p>Check the Turn Clutch signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J23 from the MCU Board. 2. Is there +24.0 V across ground <=> J23-3 pin when the Interlock Switch is activated? 	Replace the Turn Clutch (page 8-42).	Replace the MCU Board (page 8-86).
10	<ol style="list-style-type: none"> 1. Perform the Regi Sensor test (page 4-30): Service Mode > Engine Diag > Sensor Test > Regi Sensor. 2. Does the sensor operate properly? 	Replace the MCU Board (page 8-86).	Go to step 16.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
11	1. Check the wiring harness connector P/J431 between the Duplex Clutch and Duplex Board. 2. Is P/J431 securely connected?	Go to step 12.	Reconnect P/J431 connector.
12	Check the Duplex Clutch signal. 1. Disconnect P/J431 from the Duplex Board. 2. Is there +24 V across ground <=> J431-1 pin?	Replace the Duplex Unit (page 8-99).	Go to step 21.
13	1. Check the wiring harness connectors P/J25 and P/J251 between the PH Drive Assembly and the MCU Board. 2. Are the connectors securely connected?	Go to step 14.	Reconnect the connectors.
14	Check the Right Side Harness for continuity. 1. Disconnect P/J25 from the MCU Board and P/J251 from the PH Drive Assembly. 2. Check continuity between P/J25 <=> P/J251.	Go to step 15.	Replace the Right Side Harness.
15	Check the PH Drive Assembly signal. 1. Disconnect P/J25 from the MCU Board. 2. Is there +24 V across ground <=> J25-1/J25-2 pin when the Interlock Switch is activated?	Replace the PH Drive Assembly (page 8-76).	Replace the MCU Board (page 8-86).
16	1. Check the wiring harness connectors P/J29, P/J292, and P/J2922 between the MCU Board and the Regi Sensor. 2. Are the connectors securely connected?	Go to step 17.	Reconnect the connectors.
17	Check the Regi Sensor Harness for continuity. 1. Disconnect P/J2922 from the Regi Sensor and P/J292 from the Right Side Harness. 2. Check continuity between P/J2922 <=> P/J292.	Go to step 18.	Replace the Regi Sensor Harness.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
18	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J29 from the MCU Board and P/J292 from the Regi Sensor Harness. 2. Check continuity between P/J29 <=> P/J2922. 	Go to step 19.	Replace the Right Side Harness.
19	<p>Check the Regi Sensor for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J29 from the MCU Board. 2. Is there +3.3 V across ground <=> J29-8 pin on the MCU Board? 	Go to step 20.	Replace the MCU Board (page 8-86).
20	<p>Check the Regi Sensor signal.</p> <ol style="list-style-type: none"> 1. Measure the voltage across ground <=> J29-10 pin on the MCU Board. 2. Does the voltage change when the Actuator of the Regi Sensor is activated? 	Replace the MCU Board (page 8-86).	Replace the Regi Sensor (page 8-43).
21	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J428, P/J2720, P/J272, and P/J27 between the Duplex Board and the MCU Board. 2. Are the connectors securely connected? 	Go to step 22.	Reconnect the connectors.
22	<p>Check the Duplex Unit Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J428 from the Duplex Board and P/J2720 from the Front Cover Harness. 2. Check continuity between P/J428 <=> P/J2720. 	Go to step 23.	Replace the Duplex Unit (page 8-99).
23	<p>Check the Front Cover Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J2720 from the Front Cover Harness and P/J272 from the Right Side Harness. 2. Check continuity between P/J2720 <=> P/J272. 	Go to step 24.	Replace the Front Cover Harness.
24	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J272 from the Right Side Harness and P/J27 from the MCU Board. 2. Check continuity between P/J27 <=> P/J272. 	Go to step 25.	Replace the Right Side Harness.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
25	Check the Duplex Unit for continuity. 1. Disconnect P/J27 from the MCU Board. 2. Is there +3.3 V across ground <=> J27-15 pin on the MCU Board?	Replace the Duplex Unit (page 8-99).	Replace the MCU Board (page 8-86).
26	1. Check the wiring harness connector P/J429 between the Duplex Board and the Duplex Motor. 2. Is P/J429 securely connected?	Go to step 27.	Reconnect P/J 429 connector.
27	Check the Duplex Motor for continuity. 1. Disconnect P/J429 from the Duplex Board. 2. Is there +24 V across ground <=> J429-2 pin on the Duplex Board?	Replace the Duplex Unit (page 8-99).	Perform steps 21 through 25.

Jam at Duplex

The Duplex Sensor does not turn On after switching back a paper or the Duplex Sensor does not turn Off after a paper is detected by the Duplex Jam Sensor.

Applicable Chain Link

- **Chain Link 077-105:** IOT Duplex2 Jam
- **Chain Link 077-106:** IOT Duplex3 Jam

Initial Actions

- Check for obstruction or debris in the Exit Chute Out or paper path.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map Reference
<ul style="list-style-type: none"> ■ Front Cover Harness, PL1.2.11 ■ Turn Clutch, PL3.2.25 ■ Regi Sensor, PL3.2.30 ■ Registration Sensor Harness, PL3.2.37 ■ PH Drive Assy., PL8.1.7 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 ■ Duplex Unit, PL11.1.1 ■ Duplex Jam Sensor, PL11.1.12 ■ Duplex Board, PL11.1.15 ■ Duplex Unit Harness, PL11.1.18 ■ Duplex Clutch, PL11.2.10 ■ Duplex Motor, PL11.2.23 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Map 5 - Duplex Unit” on page 10-13 ■ “Tray 1 (MPT) and Registration” on page 10-23 ■ “Main Drive” on page 10-25 ■ “Feeder” on page 10-27 ■ “Fuser” on page 10-35 ■ “Duplex Wiring Diagram” on page 10-41

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper path. 2. Is the paper path dirty.	Clean the paper path.	Go to step 2.
2	1. Check the Rollers on the Duplex for correct installation or damage. 2. Are the Rollers correctly installed or damaged?	Replace the Duplex Unit (page 8-99).	Go to step 3.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
3	<p>1. Perform the Duplex Jam Sensor test (page 4-28): Service Mode > Engine Diag > Sensor Test > Duplex Jam Sensor.</p> <p>2. Does the Duplex Jam Sensor operate properly?</p>	Go to step 4.	Go to step 6.
4	<p>1. Perform the Duplex Clutch test (page 4-57): Service Mode > Engine Diag > Motor Test > Duplex Clutch.</p> <p>2. Does the clutch operate properly?</p>	Go to step 6.	Go to step 19.
5	<p>1. Perform the Duplex Motor test (page 4-44): Service Mode > Engine Diag > Motor Test > Duplex Motor.</p> <p>2. Does the motor operate properly?</p>	Replace the Duplex Unit (page 8-99).	Go to step 18.
6	<p>1. Check the wiring harness connectors P/J430 and P/J4301 between the Duplex Board and the Duplex Jam Sensor.</p> <p>2. Are the connectors securely connected?</p>	Go to step 7.	Reconnect the connectors.
7	<p>Check the Duplex Sensor Harness for continuity.</p> <p>1. Disconnect P/J4301 from the Regi Sensor and P/J430 from the Duplex Board.</p> <p>2. Check continuity between P/J430 <=> P/J4301.</p>	Go to step 8.	Replace the Duplex Unit (page 8-99).
8	<p>Check the Duplex Jam Sensor signal.</p> <p>1. Disconnect P/J430 from the Duplex Board.</p> <p>2. Is there +3.3 V across ground <=> J430-1 pin when the Interlock Switch is activated?</p>	Go to step 9.	Go to step 10.
9	<p>1. Perform the Duplex Jam Sensor test (page 4-28): Service Mode > Engine Diag > Sensor Test > Duplex Jam Sensor.</p> <p>2. Does the sensor operate properly?</p>	Replace the Duplex Unit (page 8-99).	Perform steps 10 through 14.
10	<p>1. Check the wiring harness connectors P/J428, P/J2720, P/J272, and P/J27 between the Duplex Board and the MCU Board.</p> <p>2. Are the connectors securely connected?</p>	Go to step 11.	Reconnect the connectors.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
11	<p>Check the Duplex Unit Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J428 from the Duplex Board and P/J2720 from the Front Cover Harness. 2. Check continuity between P/J428 <=> P/J2720. 	Go to step 12.	Replace the Duplex Unit (page 8-99).
12	<p>Check the Front Cover Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J2720 from the Front Cover Harness and P/J272 from the Right Side Harness. 2. Check continuity between P/J2720 <=> P/J272. 	Go to step 13.	Replace the Front Cover Harness.
13	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J272 from the Front Cover Harness and P/J27 from the MCU Board. 2. Check continuity between P/J27 <=> P/J272. 	Go to step 14.	Replace the Right Side Harness.
14	<p>Check the Duplex Board signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J27 from the MCU Board. 2. Is there +3.3 V across ground <=> J27-15 pin on the MCU Board? 	Replace the Duplex Unit (page 8-99).	Replace the MCU Board (page 8-86).
15	<p>Check the Duplex Jam Sensor signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J430 from the Duplex Unit Board. 2. Does the voltage change when the actuator of the Duplex Jam Sensor is activated? 	Perform steps 10 through 14.	Replace the Duplex Unit (page 8-99).
16	<ol style="list-style-type: none"> 1. Check the wiring harness connector P/J 431 between the Duplex Unit Board and the Duplex Clutch. 2. Is P/J431 connector securely connected? 	Go to step 18.	Reconnect P/J431 connector.
17	<p>Check the Duplex Clutch for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J431 from the Duplex Clutch. 2. Is there +24 V across ground <=> J431-1 pin on the Duplex Board? 	Replace the Duplex Unit (page 8-99).	Perform steps 10 through 14.
18	<ol style="list-style-type: none"> 1. Check the wiring harness connector P/J 429 between the Duplex Unit Board and the Duplex Motor. 2. Is P/J429 connector securely connected? 	Go to step 20.	Reconnect P/J429 connector.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
19	Check the Duplex Motor for continuity. 1. Disconnect P/J429 from the Duplex Board. 2. Is there +24 V across ground <=> J429-2 pin on the Duplex Board?	Replace the Duplex Unit (page 8-99).	Perform steps 10 through 14.

Jam at Registration Roll/Jam at Exit

The Registration Sensor indicates that paper did not reach the sensor on time or that paper remains in the Registration Chute.

Warning

The Fuser may be hot. Turn the printer power Off and allow at least 5 minutes for the Fuser to cool before removing the Fuser.

Applicable Chain Link

- **Chain Link 077-900:** Jam at Exit
- **Chain Link 077-901:** Jam at Reg. Roll

Initial Actions

- Ask the customer about the paper types being used. If not on the recommended list, determine if this is contributing to the problem. Recycled, multi-purpose or copier paper tends to contaminate the paper path. Constant use of special papers such labels or business cards can also contribute to jamming.
- Ensure the correct tray loading and setup procedures are followed (securing the guides, selecting the correct paper type, fanning the paper, etc.)
- Make sure the printer is plugged directly into an electrical outlet. Using extension cords or a power strip is not recommended.
- Make every attempt to establish a jam rate prior to starting any work. If possible print an Error History Report and note the page count between jams.
- Determine if jamming is occurring in one tray but not another. This helps to identify any dirty or defective parts.
- Clear the paper path of any jams and paper debris. Start at the Turn Chute and work up to the Registration Chute Assembly.
- Clean the paper Feed and Retard Rollers in the paper tray and tray slot using a slightly damp (water only) lint free cloth.
- Cycle printer power.
- If the problem persists, follow the following procedure.

Troubleshooting References Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Feeder Assembly, PL3.2.1 ■ Roll Regi Metal, PL3.2.6 ■ Roll Regi Rubber, PL3.2.7 ■ Registration Clutch, PL3.2.23 ■ Registration Sensor Harness, PL3.2.37 ■ Transfer Unit, PL4.1.1 ■ Fuser Harness, PL6.1.11 ■ Right Side Harness, PL10.1.15 ■ Main Drive Assembly, PL8.1.2 ■ PH Drive Assembly, PL8.1.7 ■ MCU Board, PL9.1.20 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Tray 1 (MPT) and Registration” on page 10-23 ■ “Main Drive” on page 10-25 ■ “Feeder” on page 10-27 ■ “Fuser” on page 10-35

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper condition. 2. Is the paper damaged?	Replace the paper. Go to step 2.	Go to step 2.
2	1. Open and close the Front Cover to check the latches. 2. Does the error still occur?	Go to step 3.	Complete.
3	1. Reseat the Fuser (page 8-11). 2. Does the error still occur?	Go to step 4.	Complete.
4	1. Perform the Exit Sensor test (page 4-29): Service Mode > Engine Diag > Sensor Test > Exit Sensor. 2. Does the number on the Control Panel increase by 1 when the Actuator of the Exit Sensor is activated?	Go to step 9.	Go to step 5.
5	1. Check the wiring harness connectors P/J17 and P/J171 between the MCU Board and the Fuser Assembly. 2. Are the connectors securely connected?	Go to step 6.	Reconnect the connectors.
6	Check the Fuser Harness for continuity. 1. Disconnect P/J17 from the MCU Board and P/J171 from the Fuser Assembly. 2. Check continuity between P/J17 <=> P/J171.	Go to step 7.	Replace the Fuser Harness.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
7	<p>Check the Fuser signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J17 from the MCU Board. 2. Is there +3.3 V across ground <=> J17-1 pin? 	Go to step 8.	Replace the MCU Board (page 8-86).
8	<p>Check the Exit Sensor for signal.</p> <ol style="list-style-type: none"> 1. Measure the voltage across ground <=> P/J17-3 pin. 2. Does the voltage change when the Actuator of the Exit Sensor is activated? 	Replace the MCU Board (page 8-86).	Replace the Fuser (page 8-11).
9	<ol style="list-style-type: none"> 1. Perform the Registration Sensor test (page 4-30): Service Mode > Engine Diag > Sensor Test > Regi Sensor. 2. Does the number on the Control Panel increase by 1 when the Actuator of the Registration Sensor is activated? 	Go to step 15.	Go to step 10.
10	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J29, P/J292, and P/J2922 between the MCU Board and the Registration Sensor. 2. Are the connectors securely connected? 	Go to step 11.	Reconnect the connectors.
11	<p>Check the Registration Sensor Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J292 from the Right Side Harness and P/J2922 from the Regi Sensor. 2. Check continuity between P/J292 <=> P/J2922. 	Go to step 12.	Replace the Registration Sensor Harness.
12	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J29 from the MCU Board and P/J292 from the Regi Sensor Harness. 2. Check continuity between P/J29 <=> P/J292. 	Go to step 13.	Replace the Right Side Harness.
13	<p>Check the Registration Sensor for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J29 from the MCU Board. 2. Is there +3.3 V across ground <=> J29-8 pin? 	Go to step 14.	Replace the MCU Board (page 8-86).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
14	<p>Check the Registration Sensor signal.</p> <ol style="list-style-type: none"> 1. Measure the voltage across ground <=> J29-10 pin on the MCU Board. 2. Does the voltage change when the Actuator of the Registration Sensor is activated? 	Replace the MCU Board (page 8-86).	Replace the Registration Sensor (page 8-43).
15	<ol style="list-style-type: none"> 1. Perform the Main Motor test (page 4-41): Service Mode > Engine Diag > Motor Test > Main Motor. 2. Does the Motor operate properly? 	Go to step 19.	Go to step 16.
16	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J22 and P/J222 between the MCU Board and the Main Drive. 2. Are the connectors securely connected? 	Go to step 17.	Reconnect the connectors.
17	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J22 from the MCU Board and P/J222 from the Main Drive Assembly. 2. Check continuity between P/J22 <=> P/J222. 	Go to step 18.	Replace the Right Side Harness.
18	<p>Check the Main Drive Assembly signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J22 from the MCU Board. 2. Is there +24 V across ground <=> J22-B2/J22-B4 pin when the Interlock Switch is activated? 	Replace the Main Drive Assembly (page 8-70).	Replace the MCU Board (page 8-86).
19	<ol style="list-style-type: none"> 1. Perform the Sub Motor test (page 4-42): Service Mode > Engine Diag > Motor Test > Sub Motor. 2. Does the Motor operate properly? 	Go to step 23.	Go to step 20.
20	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J22 and P/J221 between the MCU Board and the Main Drive Assembly. 2. Are the connectors securely connected? 	Go to step 21.	Reconnect the connectors.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
21	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J22 from the MCU Board and P/J221 from the Main Drive Assembly. 2. Check continuity between P/J22 <=> P/J221. 	Go to step 22.	Replace the Right Side Harness.
22	<p>Check the Main Drive signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J22 on the MCU Board. 2. Is there +24 V across ground <=> J22-A2/J22-A4 pin when the Interlock Switch is activated? 	Replace the Main Drive Assembly (page 8-70).	Replace the MCU Board (page 8-86).
23	<ol style="list-style-type: none"> 1. Perform the Tray 2 Motor test (page 4-43): Service Mode > Engine Diag > Motor Test > Tray 2 Motor. 2. Does the Motor operate properly? 	Go to step 27.	Go to step 24.
24	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J25 and P/J251 between the MCU Board and the PH Drive Assembly. 2. Are the connectors securely connected? 	Go to step 25.	Reconnect the connectors.
25	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J25 from the MCU Board and P/J251 from the PH Drive Assembly. 2. Check continuity between P/J25 <=> P/J251. 	Go to step 26.	Replace the Right Side Harness.
26	<p>Check the PH Drive Assembly signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J25 on the MCU Board. 2. Is there +24 V across ground <=> J25-1/J25-2 pin when the Interlock Switch is activated? 	Replace the PH Drive Assembly (page 8-73).	Replace the MCU Board (page 8-86).
27	<ol style="list-style-type: none"> 1. Perform the Regi Clutch test (page 4-51): Service Mode > Engine Diag > Motor Test > Regi Clutch. 2. Does the Clutch operate properly? 	Go to step 31.	Go to step 28.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
28	1. Check the wiring harness connectors P/J23 and P/J231 between the MCU Board and the Registration Clutch. 2. Are the connectors securely connected?	Go to step 29.	Reconnect the connectors.
29	Check the Right Side Harness continuity. 1. Disconnect P/J23 from the MCU Board and P/J231 from the Registration Clutch. 2. Check continuity between P/J23 <=> P/J231.	Go to step 30.	Replace the Right Side Harness.
30	Check the Registration Clutch signal. 1. Disconnect P/J23 from the MCU Board. 2. Is there +24 V across ground <=> P/J23-1 pin when the Interlock Switch is activated?	Replace the Registration Clutch (page 8-40).	Replace the MCU Board (page 8-86).
31	1. Check the Fuser. 2. Are there any paper debris in the Fuser?	Remove the debris.	Go to step 32.
32	1. Check the Rubber Registration Roll and Metal Registration Roll for operation. Are the Rolls correctly installed? 2. Are there any contaminations on the Rolls?	Go to step 33.	Replace the Feeder Assembly (page 8-36).
33	Check the Transfer Unit for correct installation. 1. Reseat the Transfer Unit (page 8-8). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Jam at Tray 2 (Feed Jam)

Paper fed from Tray 2 did not reach the Registration Sensor on time.

Applicable Chain Link

- **Chain Link 077-903:** Jam at Tray 2

Initial Actions

- Ensure that Tray 1 (MPT) is attached to the printer.
- Try picking paper from a different tray.
- Check the paper path for obstructions or debris.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map Reference
<ul style="list-style-type: none"> ■ Tray 1 (MPT) Retard Roller Assy., PL2.1.3 ■ Roll Assy Feed (Feed Roll), PL3.1.10 ■ Feeder Assy., PL3.2.1 ■ Regi Sensor, PL3.2.30 ■ Regi Sensor Harness, PL3.2.37 ■ Feed Roll, PL3.2.53 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 	<ul style="list-style-type: none"> ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Tray 1 (MPT) and Registration” on page 10-23 ■ “Feeder” on page 10-27

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check for paper jam. 2. Remove the jammed paper. 3. Does the error still occur?	Go to step 2.	Complete.
2	1. Perform the Registration Sensor test (page 4-30): Service Mode > Engine Diag > Sensor Test > Regi Sensor. 2. Does the number on the Control Panel increase by 1 when the Actuator of the Registration Sensor is activated?	Go to step 8.	Go to step 3.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
3	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J29, P/J292, and P/J2922 between the MCU Board and the Registration Sensor. 2. Are the connectors securely connected? 	Go to step 4.	Reconnect the connectors.
4	<p>Check the Regi Sensor Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J292 from the Right Side Harness and P/J2922 from the Regi Sensor. 2. Check continuity between P/J292 <=> P/J2922. 	Go to step 5.	Replace the Regi Sensor Harness.
5	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J29 from the MCU Board and P/J292 from the Regi Sensor Harness. 2. Check continuity between P/J29 <=> P/J292. 	Go to step 6.	Replace the Right Side Harness.
6	<p>Check the Registration Sensor for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J29 from the MCU Board. 2. Is there +3.3 V across ground <=> J29-8 pin? 	Go to step 7.	Replace the MCU Board (page 8-86).
7	<p>Check the Registration Sensor signal.</p> <ol style="list-style-type: none"> 1. Measure the voltage across ground <=> J29-10 pin on the MCU Board. 2. Does the voltage change when the Actuator of the Registration Sensor is activated? 	Replace the MCU Board (page 8-86).	Replace the Regi Sensor (page 8-43).
8	<ol style="list-style-type: none"> 1. Check the paper feed. 2. Does multiple feed occur? 	Go to step 4.	Replace the MCU Board (page 8-86). Go to step 4.
9	<ol style="list-style-type: none"> 1. Replace the paper. 2. Does multiple feed still occur? 	Replace the damaged part(s): <ul style="list-style-type: none"> ■ Retard Roller Assembly (page 8-26) ■ Tray 2 Feed Roll (page 8-47) ■ Feeder Assembly (page 8-36). 	Complete.

Jam at Duplexer

The Duplex Jam Sensor indicates the paper did not reach the sensor on time or that paper remains in the Chute Assembly Out.

Applicable Chain Link

- **Chain Link 077-907:** IOT Remain Duplex Jam

Initial Actions

- Check for obstruction or debris in the Exit Chute Out or paper path.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map Reference
<ul style="list-style-type: none"> ■ Front Cover Harness, PL1.2.11 ■ Feeder Assy., PL3.2.1 ■ Registration Sensor Harness, PL3.2.37 ■ Exit Out Chute, PL6.1.1 ■ Fuser Harness, PL6.1.11 ■ Duplex Gate Chute, PL6.1.13 ■ Main Drive Assy., PL8.1.2 ■ PH Drive Assy., PL8.1.7 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 ■ Duplex Unit, PL11.1.1 ■ Duplex Harness, PL11.1.18 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Map 5 - Duplex Unit” on page 10-13 ■ “Tray 1 (MPT) and Registration” on page 10-23 ■ “Main Drive” on page 10-25 ■ “Feeder” on page 10-27 ■ “Fuser” on page 10-35 ■ “Duplex Wiring Diagram” on page 10-41

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Front Cover Latch. Open and close the Front Cover. 2. Does the error still occur?	Go to step 2.	Complete.
2	1. Reseat the Fuser (page 8-11). 2. Does the error still occur?	Go to step 3.	Complete.
3	1. Reseat the Duplex Gate Chute (page 8-64). 2. Does the error still occur?	Go to step 4.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	<ol style="list-style-type: none"> 1. Check the Duplex Gate Chute for correct installation. 2. Reseat the Duplex Gate Chute (page 8-64). 3. Does the error still occur? 	Go to step 5.	Replace the Duplex Gate Chute (page 8-64).
5	<ol style="list-style-type: none"> 1. Check the Exit Out Chute for correct installation. 2. Is the Exit Out Chute correctly installed? 	Go to step 6.	Reseat the Exit Out Chute (page 8-63). If damaged, replace the Exit Out Chute (page 8-63).
6	<ol style="list-style-type: none"> 1. Perform the Duplex Jam Sensor test (page 4-28): Service Mode > Engine Diag > Sensor Test > DuplexJamSensor. 2. Does the number increase by 1 when the Actuator of the Sensor is activated? 	Go to step 13.	Go to step 7.
7	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J428, P/J2720, P/J272, and P/J27 between the Duplex Board and the MCU Board. 2. Are the connectors securely connected? 	Go to step 8.	Reconnect the connectors.
8	<p>Check the Duplex Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J428 from the Duplex Board and P/J2720 Front Cover Harness. 2. Check continuity between P/J428 <=> P/J2720. 	Go to step 9.	Replace the Duplex Unit (page 8-99).
9	<p>Check the Front Cover Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J2720 from the Duplex Harness and P/J272 Right Side Harness. 2. Check continuity between P/J2720 <=> P/J272. 	Go to step 10.	Replace the Front Cover Harness.
10	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J272 from the Front Cover Harness and P/J27 from the MCU Board. 2. Check continuity between P/J272 <=> P/J27. 	Go to step 11.	Replace the Right Side Harness.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
11	<p>Check the Duplex Board signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J27 from the MCU Board. 2. Is there +3.3 V across ground <=> J27-15 pin? 	Go to step 12.	Replace the MCU Board (page 8-86).
12	<ol style="list-style-type: none"> 1. Replace the Duplex Unit (page 8-99). 2. Does the error still occur? 	Go to step 13.	Complete.
13	<ol style="list-style-type: none"> 1. Perform the Duplex Clutch test (page 4-57): Service Mode > Engine Diag > Motor Test > Duplex Clutch. 2. Does the Clutch operate properly? 	Go to step 14.	Perform steps 7-12.
14	<ol style="list-style-type: none"> 1. Perform the Duplex Motor test (page 4-44): Service Mode > Engine Diag > Motor Test > Duplex Motor. 2. Does the Motor operate properly? 	Go to step 15.	Perform steps 7-12.
15	<ol style="list-style-type: none"> 1. Perform the Tray 1 (MPT) Turn Clutch test (page 4-52): Service Mode > Engine Diag > Motor Test > Tray 1 (MPT) Turn Clutch. 2. Does the Clutch operate properly? 	Go to step 19.	Go to step 16.
16	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J23 and P/J232 between the Tray 2 Turn Clutch and the MCU Board. 2. Are the connectors securely connected? 	Go to step 17.	Reconnect the connectors.
17	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J23 from the MCU Board and P/J232 from the Turn Clutch. 2. Check continuity between P/J23 <=> P/J232. 	Go to step 18.	Replace the Right Side Harness.
18	<p>Check the Tray 2 Turn Clutch signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J23 from the MCU Board. 2. Is there +24 V across ground <=> J23-3 pin when the Interlock Switch is activated? 	Replace the Turn Clutch (page 8-42).	Replace the MCU Board (page 8-86).
19	<ol style="list-style-type: none"> 1. Perform the Tray 2 Motor test (page 4-43): Service Mode > Engine Diag > Motor Test > Tray 2 Motor. 2. Does the Motor operate properly? 	Replace the MCU Board (page 8-86).	Go to step 20.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
20	1. Check the wiring harness connectors P/J25 and P/J251 between the PH Drive Assembly and the MCU Board. 2. Are the connectors securely connected?	Go to step 21.	Reconnect the connectors.
21	Check the Right Side Harness for continuity. 1. Disconnect P/J25 from the MCU Board and P/J251 from the PH Drive Assembly. 2. Check continuity between P/J25 <=> P/J251.	Go to step 22.	Replace the Right Side Harness.
22	Check the PH Drive Assembly signal. 1. Disconnect P/J25 from the MCU Board. 2. Is there +24 V across ground <=> J25-1/J25-2 pin when the Interlock Switch is activated?	Replace the PH Drive Assembly (page 8-76).	Replace the MCU Board (page 8-86).

Consumable/Routine Maintenance Procedures

Insert Fuser

The printer does not detect the presence of the Fuser.

Warning

The Fuser may be hot. Turn the printer power Off and allow at least 5 minutes for the Fuser to cool before removing the Fuser.

Applicable Chain Link

- **Chain Link 010-317:** IOT Fuser Detached

Initial Actions

- Ensure that the Fuser latches are fully locked.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map Reference
<ul style="list-style-type: none"> ■ Fuser, PL6.1.10 ■ Fuser Harness, PL6.1.11 ■ MCU Board, PL9.1.20 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Fuser” on page 10-35

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Fuser for correct installation. 2. Is the Fuser correctly installed?	Go to step 3.	Reseat the Fuser (page 8-11). Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Check the wiring harness connectors P/J17 and P/J171 between the MCU Board and the Fuser.* 2. Are the connectors securely connected?	Go to step 4.	Reconnect the connectors. Go to step 4.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	Check the Fuser Harness for continuity. 1. Disconnect P/J17 from the MCU Board and P/J171 from the Fuser. 2. Check continuity between P/J17 <=> P/J171.	Go to step 5.	Replace the Fuser Harness.
5	1. Replace the Fuser (page 8-11). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Replace Fuser

The Fuser has reached its end of life.

Warning

The Fuser may be hot. Turn the printer power Off and allow at least 5 minutes for the Fuser to cool before removing the Fuser.

Applicable Chain Link

- **Chain Link 010-351:** IOT Fuser Life Over

Initial Action

- Check the Fuser life using CentreWare IS.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Fuser, PL6.1.10 ■ MCU Board, PL9.1.20 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Fuser” on page 10-35

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Fuser life using CentreWare IS. 2. Does the Level show 0%?	Replace the Fuser (page 8-11).	Go to step 2.
2	Is the Fuser correctly installed?	Go to step 3.	Reseat the Fuser (page 8-11).
3	Does the error still occur?	Go to step 4.	Complete.
4	1. Replace the Fuser (page 8-11). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Fuser CRUM ID Error

The Fuser CRUM ID error is detected. The Fuser CRUM ID read by the sensor is different from the one that was recorded.

Warning

The Fuser may be hot. Turn the printer power Off and allow at least 5 minutes for the Fuser to cool before removing the Fuser.

Applicable Chain Link

- **Chain Link 010-359:** IOT Fuser CRUM ID Error

Initial Actions

- Ensure that the Fuser latches are fully locked.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Fuser, PL6.1.10 ■ MCU Board, PL9.1.20 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Fuser” on page 10-35

Troubleshooting Procedure

Step	Actions and Questions	Yes	No
1	1. Check the Fuser for correct installation. 2. Is the Fuser correctly installed?	Go to step 3.	Reseat the Fuser (page 8-11). Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Replace the Fuser (page 8-11). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Fuser Error

The Fuser temperature regulation has failed. The NC sensor circuit in the MCU is defective.

Warning

The Fuser may be hot. Turn the printer power Off and allow at least 5 minutes for the Fuser to cool before removing the Fuser.

Applicable Chain Link

- **Chain Link 010-397:** IOT Fuser Failure

Initial Actions

- Ensure that the Fuser latches are fully locked.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting References

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Fuser, PL6.1.10 ■ Fuser Harness, PL6.1.11 ■ LVPS, PL9.1.4 ■ MCU Board, PL9.1.20 ■ Top LV Harness, PL10.1.16 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Fuser” on page 10-35

Troubleshooting Procedure

Step	Actions and Questions	Yes	No
1	1. Check the Fuser for correct installation. 2. Is the Fuser correctly installed?	Go to step 2.	Reseat the Fuser (page 8-11). Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Check the wiring harness connectors P/J13, P/J17, P/J171, P/J47, and P/J501. 2. Are the connectors securely connected?	Go to step 4.	Reconnect the connectors. Go to step 4.
4	Check the Fuser Harness for continuity. 1. Disconnect P/J17 from the MCU Board and P/J171 from the Fuser. 2. Check continuity between P/J17 <=> P/J171.	Go to step 5.	Replace the Fuser Harness.

Troubleshooting Procedure

Step	Actions and Questions	Yes	No
5	Check the Top LV Harness for continuity. 1. Disconnect P/J 47 and P/J501 from the LVPS. 2. Disconnect P/J13 from the MCU Board. 3. Check continuity between: <ul style="list-style-type: none"> ■ P/J47 <=> P/J171 ■ P/J501 <=> P/J13 	Go to step 6.	Replace the Top LV Harness.
6	1. Replace the Fuser (page 8-11). 2. Does the error still occur?	Go to step 7.	Complete.
7	1. Replace the LVPS (page 8-80). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Ready Fuser Life

The Fuser has reached its end of life.

Warning

The Fuser may be hot. Turn the printer power Off and allow at least 5 minutes for the Fuser to cool before removing the Fuser.

Applicable Chain Link

- **Chain Link 010-421:** IOT Fuser Life Pre Warning

Initial Actions

- Check the Fuser life using CentreWare IS.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Fuser, PL6.1.10 ■ MCU Board, PL9.1.20 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Fuser” on page 10-35

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Fuser life using CentreWare IS. 2. Does the Level show 0%?	Replace the Fuser (page 8-11).	Go to step 2.
2	1. Check the Fuser for correction installation. 2. Is the Fuser correctly installed?	Go to step 3.	Reseat the Fuser (page 8-11). Go to step 3.
3	Does the error still occur?	Go to step 3.	Complete.
4	1. Replace the Fuser (page 8-11). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Print Cartridge Near Life (Yellow/Magenta/Cyan/Black)

The Print Cartridge (Yellow/Magenta/Cyan/Black) is near or has reached its end of life.

Applicable Chain Links

- **Chain Link 093-423:** Yellow Print Cartridge Near Life
- **Chain Link 093-424:** Magenta Print Cartridge Near Life
- **Chain Link 093-425:** Cyan Print Cartridge Near Life
- **Chain Link 093-426:** Black Print Cartridge Near Life

Initial Actions

- Check the Print Cartridge life using CentreWare IS.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Print Cartridge (Y/M/C/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Print Cartridge for correct installation. 2. Is the Print Cartridge correctly installed?	Go to step 3.	Reseat the Print Cartridge (page 8-10). Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Replace the Print Cartridge (page 8-10). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Check Cartridge (Yellow/Magenta/Cyan/Black)

The Print Cartridge (Yellow/Magenta/Cyan/Black) tape was not removed when a new Print Cartridge is installed.

Applicable Chain Links

- **Chain Link 093-919:** IOT Yellow Cartridge Tape Staying
- **Chain Link 093-920:** IOT Magenta Cartridge Tape Staying
- **Chain Link 093-921:** IOT Cyan Cartridge Tape Staying
- **Chain Link 093-922:** IOT Black Cartridge Tape Staying

Initial Actions

- Check the Print Cartridge life using CentreWare IS.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Dispenser Assy., PL5.1.12 ■ Print Cartridge (Y/M/C/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 ■ Top LV Harness, PL10.1.16 	<ul style="list-style-type: none"> ■ “Map 3 - Image Processor Board and Dispenser” on page 10-11 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Developer” on page 10-33

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Print Cartridge tape. 2. Has the tape been removed?	Go to step 2.	Remove the tape on the Print Cartridge. Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Replace the Print Cartridge (page 8-10). 2. Does the error still occur?	Go to step 4.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	<p>Perform the Toner Motor test: Service Mode > Engine Diag > Motor Test > Toner Motor.</p> <p>While testing the Toner Motor, close the Interlock Harness.</p> <ul style="list-style-type: none"> ■ Yellow Toner Motor (page 4-47) ■ Magenta Toner Motor (page 4-49) ■ Cyan Toner Motor (page 4-49) ■ Black Toner Motor (page 4-50) 	Check the gear of the Auger for damage. If the gear is damaged, replace the Dispenser Assembly (page 8-56).	Go to step 5.
5	<ol style="list-style-type: none"> 1. Check the Dispenser wiring harness connectors. <ul style="list-style-type: none"> ■ Yellow: P/J18 and P/J181 ■ Magenta: P/J18 and P/J182 ■ Black: P/J18 and P/J183 ■ Cyan: P/J18 and P/J184 2. Are the connectors securely connected? 	Go to step 6.	Reconnect the connectors. Go to step 6.
6	Does the error still occur?	Go to step 7.	Complete.
7	<p>Check the Top LV Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J Harnesses. <ul style="list-style-type: none"> ■ Yellow: P/J18 from the MCU Board and P/J181 from the Dispenser Assembly ■ Magenta: P/J18 from the MCU Board and P/J182 from the Dispenser Assembly ■ Black: P/J18 from the MCU Board and P/J183 from the Dispenser Assembly ■ Cyan: P/J18 from the MCU Board and P/J184 from the Dispenser Assembly 2. Check continuity between P/J connectors: <ul style="list-style-type: none"> ■ Yellow: P/J18 <=> P/J181 ■ Magenta: P/J18 <=> P/J182 ■ Black: P/J18 <=> P/J183 ■ Cyan: P/J18 <=> P/J184 	Go to step 8.	Complete.
8	<p>Check the Dispenser Assembly signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J18 from the MCU Board. 2. When the Interlock Switch is activated, is there +24 V across: <ul style="list-style-type: none"> ■ Ground <=> P/J18-A1/P/J18-A2 pin (Yellow) ■ Ground <=> P/J18-A7/P/J18-A8 pin (Magenta) ■ Ground <=> P/J18-B1/P/J18-B2 pin (Black) ■ Ground <=> P/J18-B7/P/J18-B8 pin (Cyan) 	Replace the Dispenser Assembly (page 8-56).	Replace the MCU Board (page 8-86).

Replace Print Cartridge (Yellow/Magenta/Cyan/Black)

The Print Cartridge (Yellow/Magenta,/Cyan/Black) has reached its end of life.

Applicable Chain Links

- **Chain Link 093-930:** IOT Yellow Cartridge Life Over
- **Chain Link 093-931:** IOT Magenta Cartridge Life Over
- **Chain Link 093-932:** IOT Cyan Cartridge Life Over
- **Chain Link 093-933:** IOT Black Cartridge Life Over

Initial Actions

- Check the Print Cartridge life using CentreWare IS.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Print Cartridge (Y/M/C/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Print Cartridge for correct installation. 2. Is the Print Cartridge correctly installed?	Go to step 3.	Reseat the Print Cartridge (page 8-10). Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Replace the Print Cartridge (page 8-10). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Empty Print Cartridge (Yellow/Magenta/Cyan/Black)

The Print Cartridge has reached its end of life.

Applicable Chain Link

- **Chain Link 093-935:** IOT Yellow Cartridge Life Over Detect by Counter
- **Chain Link 093-936:** IOT Magenta Cartridge Life Over Detect by Counter
- **Chain Link 093-937:** IOT Cyan Cartridge Life Over Detect by Counter
- **Chain Link 093-938:** IOT Black Cartridge Life Over Detect by Counter

Initial Actions

- Check the Print Cartridge life using CentreWare IS.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Print Cartridge (Y/M/C/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Print Cartridge for correct installation. 2. Is the Print Cartridge correctly installed?	Go to step 3.	Reseat the Print Cartridge (page 8-10). Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Replace the Print Cartridge (page 8-10). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Print Cartridge CRUM Error (Yellow/Magenta/Cyan/Black)

The Print Cartridge CRUM communication is detected.

Applicable Chain Link

- **Chain Link 093-950:** Yellow CRU CRUM Error
- **Chain Link 093-951:** Magenta CRU CRUM Error
- **Chain Link 093-952:** Cyan CRU CRUM Error
- **Chain Link 093-925:** Black CRU CRUM Error

Initial Actions

- Check the Print Cartridge life using CentreWare IS.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ CRUM Connector, PL5.1.3 ■ Print Cartridge (Y/M/C/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 ■ CRUM Harness, PL10.1.13 	<ul style="list-style-type: none"> ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Developer” on page 10-33

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Print Cartridge for correct installation. 2. Is the Print Cartridge correctly installed?	Go to step 3.	Reseat the Print Cartridge (page 8-10). Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Check the CRUM Connector for correct installation. 2. Is the connector securely connected?	Go to step 4.	Reseat the CRUM Connector (page 8-52). Go to step 4.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	1. Check the wiring harness connectors between the CRUM Connector and the MCU Board. <ul style="list-style-type: none"> ■ Yellow: P/J31 and P/J311 ■ Magenta: P/J31 and P/J312 ■ Cyan: P/J31 and P/J313 ■ Black: P/J31 and P/J314 2. Are the connectors securely connected?	Go to step 5.	Reconnect the connectors. Go to step 5.
5	Check the CRUM Harness for continuity. <ol style="list-style-type: none"> 1. Disconnect the wiring harnesses from the Connector CRUM and MCU Board. <ul style="list-style-type: none"> ■ Yellow: P/J31 and P/J311 ■ Magenta: P/J31 and P/J312 ■ Cyan: P/J31 and P/J313 ■ Black: P/J31 and P/J314 2. Check continuity between P/J connectors: <ul style="list-style-type: none"> ■ Yellow: P/J31 <=> P/J311 ■ Magenta: P/J31 <=> P/J312 ■ Cyan: P/J31 <=> P/J313 ■ Black: P/J31 <=> P/J314 	Go to step 6.	Replace the CRUM Harness.
6	1. Check the CRUM Connector for damages. 2. Is the CRUM Connector damaged?	Replace the CRUM Connector (page 8-52).	Go to step 7.
7	1. Replace the CRUM Connector (page 8-52). 2. Does the error still occur?	Go to step 8.	Complete.
8	1. Replace the Print Cartridge (page 8-10). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Check Cartridge (Yellow/Magenta/Cyan/Black)

The Print Cartridge (Yellow/Magenta/Cyan/Black) cover was not removed when a new Print Cartridge is installed.

Applicable Chain Links

- **Chain Link 093-955:** IOT Yellow Cartridge Cover Staying
- **Chain Link 093-956:** IOT Magenta Cartridge Cover Staying
- **Chain Link 093-957:** IOT Cyan Cartridge Cover Staying
- **Chain Link 093-958:** IOT Black Cartridge Cover Staying

Initial Actions

- Check the Print Cartridge life using CentreWare IS.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Print Cartridge (Y/M/C/K), PL5.1.18-21 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Print Cartridge Cover. 2. Has the cover been removed?	Go to step 2.	Remove the cover on the Print Cartridge. Go to step 2.
2	1. Check the Print Cartridge for correct installation. 2. Is the Print Cartridge correctly installed?	Go to step 3.	Reseat the Print Cartridge (page 8-10).
3	Does the error still occur?	Replace the Print Cartridge (page 8-10).	Complete.

Print Cartridge CRUM ID Error (Yellow/Magenta/Cyan/Black)

The Print Cartridge CRUM ID error indicates that a non-Xerox Print Cartridge is installed.

Applicable Chain Link

- **Chain Link 093-960:** Non-Xerox Toner, Invalid Yellow
- **Chain Link 093-961:** Non-Xerox Toner, Invalid Magenta
- **Chain Link 093-962:** Non-Xerox Toner, Invalid Cyan
- **Chain Link 093-926:** Non-Xerox Toner, Invalid Black
- **Chain Link 191-700:** Non-Xerox Toner

Initial Actions

- Check the Print Cartridge life using CentreWare IS.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Print Cartridge (Y/M/C/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Print Cartridge for correct installation. 2. Is the Print Cartridge correctly installed?	Go to step 3.	Reinstall the Print Cartridge (page 8-10). Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Reseat the Print Cartridge (page 8-10). 2. Does the error still occur?	Go to step 4.	Complete.
4	1. Replace the Print Cartridge (page 8-10). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Insert Print Cartridge (Yellow/Cyan/Magenta/Black)

The printer does not detect the Print Cartridge.

Applicable Chain Links

- **Chain Link 093-970:** Insert Yellow Cartridge
- **Chain Link 093-971:** Insert Magenta Cartridge
- **Chain Link 093-972:** Insert Cyan Cartridge
- **Chain Link 093-973:** Insert Black Cartridge

Initial Actions

- Check the Print Cartridge life using CentreWare IS.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Print Cartridge Sensor, PL5.1.4 ■ Print Cartridge (Y/M/C/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 ■ Toner Sensor Harness, PL10.1.9 	<ul style="list-style-type: none"> ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Developer” on page 10-33

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Print Cartridge for correct installation. 2. Is the Print Cartridge correctly installed?	Go to step 3.	Reseat the Print Cartridge (page 8-10). Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Replace the Print Cartridge (page 8-10). 2. Does the error still occur?	Go to step 4.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	<p>1. Perform the CRU Sensor test: Service Mode > Engine Diag > Sensor Test > CRU Sensor.</p> <ul style="list-style-type: none"> ■ Yellow CRU Sensor (page 4-32) ■ Magenta CRU Sensor (page 4-33) ■ Black CRU Sensor (page 4-34) ■ Cyan CRU Sensor (page 4-35) <p>2. Does the number on the Control Panel increase by 1 when the Print Cartridge is reseated?</p>	Replace the MCU Board (page 8-86).	Go to step 5.
5	<p>1. Check the Toner Sensor wiring harness connectors between the Print Cartridge Sensor and the MCU Board.</p> <ul style="list-style-type: none"> ■ Yellow: P/J19 and P/J191 ■ Magenta: P/J19 and P/J192 ■ Black: P/J19 and P/J193 ■ Cyan: P/J19 and P/J194 <p>2. Are the connectors securely connected?</p>	Go to step 6.	Reconnect the connectors. Go to step 6.
6	Does the error still occur?	Go to step 7.	Complete.
7	<p>Check the Toner Sensor Harness for continuity.</p> <p>1. Disconnect P/J Harnesses from the MCU Board and the Print Cartridge Sensor.</p> <ul style="list-style-type: none"> ■ Yellow: P/J19 and P/J191 ■ Magenta: P/J19 and P/J192 ■ Black: P/J19 and P/J193 ■ Cyan: P/J19 and P/J194 <p>2. Check continuity between P/J connectors:</p> <ul style="list-style-type: none"> ■ Yellow: P/J19 <=> P/J191 ■ Magenta: P/J19 <=> P/J192 ■ Black: P/J19 <=> P/J193 ■ Cyan: P/J19 <=> P/J194 	Go to step 8.	Replace the Toner Sensor Harness.
8	<p>Check the Print Cartridge Sensor signal.</p> <p>1. Disconnect P/J19 from the MCU Board.</p> <p>2. Is there +3.3 V across the Toner Sensor Harness?</p> <ul style="list-style-type: none"> ■ Yellow: J19-1 pin <=> J19-2 pin ■ Magenta: J19-4 pin <=> J19-5 pin ■ Black: J19-7 pin <=> J19-8 pin ■ Cyan: J19-10 pin <=> J19-11 pin 	Go to step 9.	Replace the MCU Board (page 8-86).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
9	<p>1. Check the Print Cartridge Sensor for operation. Measure the voltage across:</p> <ul style="list-style-type: none">■ Ground <=> P/J19-3 pin (Yellow)■ Ground <=> P/J19-6 pin (Magenta)■ Ground <=> P/J19-9 pin (Black)■ Ground <=> P/J19-12 pin (Cyan) <p>2. Does the voltage change when the paper is inserted into the sensor detecting point?</p>	Replace the MCU Board (page 8-86).	Replace the Print Cartridge Sensor (page 8-55)

Insert Transfer Unit

The printer does not detect the Transfer Unit.

Applicable Chain Link

- **Chain Link 094-910:** Insert Transfer Unit

Initial Actions

- Remove and reseal the Transfer Unit.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Front Cover Harness, PL1.2.11 ■ Transfer Unit, PL4.1.1 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Xerographic” on page 10-30

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Is the Transfer Unit installed correctly? 2. Is the Transfer Unit correctly installed?	Go to step 2.	Reseat the Transfer Unit (page 8-8).
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Check the wiring harness connectors P/J27, P/J272, and P/J2721 between the MCU Board and the Transfer Unit. 2. Are the connectors securely connected?	Go to step 4.	Reconnect the connectors.
4	Check the Right Side Harness for continuity. 1. Disconnect P/J27 from the MCU Board and P/J272 from the Front Cover Harness. 2. Check continuity between P/J27 <=> P/J272.	Go to step 5.	Replace the Right Side Harness.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	Check the Front Cover Harness for continuity. 1. Disconnect P/J272 from the Right Side Harness and P/J2721 from the Transfer Unit. 2. Check continuity between P/J272 <=> P/J2721.	Go to step 6.	Replace the Front Cover Harness.
6	1. Replace the Transfer Unit (page 8-8). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Replace Transfer Unit

The Transfer Unit has reached its end of life.

Applicable Chain Link

- **Chain Link 094-011:** IOT Transfer Unit Life Over

Initial Actions

- Check the Transfer Unit life using CentreWare IS.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Transfer Unit, PL4.1.1 ■ MCU Board, PL9.1.20 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Transfer Unit life: Service Mode > Parameter > Life DTB Feed . 2. Does the number show the maximum life page?	Replace the Transfer Unit (page 8-8).	Go to step 2.
2	Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Transfer Unit CRUM Error

The Transfer Unit CRUM ID error is detected.

Applicable Chain Link

- **Chain Link 094-330:** IOT CRUM ID Error

Initial Actions

- Ensure the Transfer Unit is installed correctly.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Transfer Unit, PL4.1.1 ■ MCU Board, PL9.1.20 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Transfer Unit for correct installation. 2. Is the Transfer Unit correctly installed?	Go to step 3.	Reseat the Transfer Unit (page 8-8). Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Replace the Transfer Unit (page 8-8). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Ready Transfer Unit Life

The Transfer Unit is near or has reached its end of life.

Applicable Chain Link

- **Chain Link 094-422:** IOT Transfer Unit Life Pre Warning

Initial Action

- Check the Transfer Unit life using CentreWare IS.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map Reference
<ul style="list-style-type: none"> ■ Transfer Unit, PL4.1.1 ■ MCU Board, PL9.1.20 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Transfer Unit life: Service Mode > Parameter > Life DTB Feed. 2. Does the number show the maximum life page?	Replace the Transfer Unit (page 8-8).	Go to step 2.
2	1. Check the Transfer Unit for correct installation. 2. Is the Transfer Unit installed correctly?	Go to step 3.	Reseat the Transfer Unit (page 8-8).
3	1. Replace the Transfer Unit (page 8-8). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Tray and Paper Errors

Load Tray 1 (MPT) (Paper Size Mismatch)

The paper size mismatch is detected in Tray 1 (MPT).

Applicable Chain Link

- **Chain Link 024-958:** IOT Paper Size Mismatch

Initial Actions

- Inspect the tray to ensure that it is free of obstructions, is loaded with supported paper, and the Guides are adjusted correctly.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map Reference
<ul style="list-style-type: none"> ■ Tray 1 (MPT) Cover, PL2.1.24 ■ Registration Sensor, PL3.2.30 ■ Registration Sensor Harness, PL3.2.37 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 ■ Tray 1 (MPT) Feed Roll, PL3.1.10 	<ul style="list-style-type: none"> ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Tray 1 (MPT) and Registration” on page 10-23

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper size. 2. Does the paper size meet specifications?	Go to step 2.	Replace the paper with the correct specifications.
2	1. Check the paper size setting. 2. Does the paper match with the settings in the Control Panel?	Go to step 4.	Correct the paper settings in the Control Panel. Go to step 3.
3	Does the error still occur?	Go to step 4.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	<ol style="list-style-type: none"> 1. Perform the Registration Sensor test (page 4-30): Service Mode > Engine Diag > Sensor Test > Regi Sensor. 2. Does the number on the Control Panel increase by 1 when the Actuator of the Registration Sensor is activated? 	Go to step 10.	Go to step 5.
5	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J29, P/J292, and P/J2922 between the MCU Board and the Registration Sensor. 2. Are the connectors securely connected? 	Go to step 6.	Reconnect the connectors.
6	<p>Check the Registration Sensor Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J292 from the Right Side Harness and P/J2922 from the Regi Sensor. 2. Check continuity between P/J292 <=> P/J2922. 	Go to step 7.	Replace the Registration Sensor Harness.
7	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J29 from the MCU Board and P/J292 from the Regi Sensor Harness. 2. Check continuity between P/J29 <=> P/J292. 	Go to step 8.	Replace the Right Side Harness.
8	<p>Check the Registration Sensor for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J29 from the MCU Board. 2. Is there +3.3 V across ground <=> J29-8 pin? 	Go to step 9.	Replace the MCU Board (page 8-86).
9	<p>Check the Registration Sensor signal.</p> <ol style="list-style-type: none"> 1. Measure the voltage across ground <=> J29-10 pin on the MCU Board. 2. Does the voltage change when the Actuator of the Registration Sensor is activated? 	Replace the MCU Board (page 8-86).	Replace the Registration Sensor (page 8-43).
10	<ol style="list-style-type: none"> 1. Check the Rollers for rotation. 2. Does the Rollers rotate smoothly? 	Replace the MCU Board (page 8-86).	Replace the defective Rollers. <ul style="list-style-type: none"> ■ Tray 1 (MPT) Feed Roll (page 8-34)

Load Tray 2 (Paper Mismatch)

The paper size mismatch is detected in Tray 2.

Applicable Chain Link

- **Chain Link 024-910:** IOT Paper Size Mismatch

Initial Actions

- Inspect the tray to ensure that it is free of obstructions, is loaded with supported paper, and the guides are adjusted correctly.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map Reference
<ul style="list-style-type: none"> ■ Tray 2, PL2.1.1 ■ Tray 2 Retard Roll, PL2.2.17 ■ Size Switch Assy., PL7.1.18 ■ MCU Board, PL9.1.20 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper size. 2. Does the paper size meet the specifications?	Go to step 2.	Replace the paper with the correct specifications.
2	1. Check the paper size setting. 2. Does the paper match with the settings in the Control Panel?	Go to step 4.	Correct the paper settings in the Control Panel. Go to step 3.
3	Does the error still occur?	Go to step 4.	Complete.
4	1. Reseat the paper End Guide. 2. Does the error still occur?	Go to step 5.	Complete.
5	1. Replace Tray 2. 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
6	1. Perform the Tray 2 Paper Size test (page 4-39): Service Mode > Engine Diag > Sensor Test > Tray 2 Paper Size. 2. Does the Size Switch operate properly?	Go to step 7.	Replace the Tray 2 Size Switch (page 8-69).
7	1. Check the Rollers for operation. 2. Does the Rollers rotate smoothly?	Replace the MCU Board (page 8-86).	Replace the Tray 2 Retard Rollers (page 8-29).

Load Tray 3 (Paper Mismatch)

The paper size mismatch is detected in Tray 3.

Applicable Chain Link

- **Chain Link 024-911:** IOT Paper Size Mismatch

Initial Actions

- Inspect the tray to ensure that it is free of obstructions, is loaded with supported paper, and the guides are adjusted correctly.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ MCU Board, PL9.1.20 ■ Tray 3 Size Switch, PL12.2.5 ■ Tray 3, PL12.4.1 ■ Tray 3 Retard Roll, PL12.5.17 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper size. 2. Does the paper size meet the specifications?	Go to step 2.	Replace the paper with the correct specifications.
2	1. Check the paper size setting. 2. Does the paper match with the settings in the Control Panel?	Go to step 4.	Correct the paper settings in the Control Panel. Go to step 3.
3	Does the error still occur?	Go to step 4.	Complete.
4	1. Reseat the paper End Guide. 2. Does the error still occur?	Go to step 5.	Complete.
5	1. Replace Tray 3. 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
6	1. Perform the Tray 3 Paper Size test (page 4-40): Service Mode > Engine Diag > Sensor Test > Tray 3 Paper Size . 2. Does the Size Switch operate properly?	Go to step 7.	Replace the Tray 3 Size Switch (page 8-106).
7	1. Check the Rollers for operation. 2. Does the Rollers rotate smoothly?	Replace the MCU Board (page 8-86).	Replace the Tray 3 Retard Rollers (page 8-111).

Insert Tray 2 (Tray Missing)

The Tray 2 Size Switch indicates that Tray 2 is not installed.

Applicable Chain Link

- **Chain Link 024-946:** Tray Detached
- **Chain Link 077-912:** Upper Cassette Detached

Initial Actions

- Remove the tray and inspect the tray cavity to ensure that it is free of obstructions or debris.
- Reinstall the tray and cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Tray 2 Size Switch Assy., PL7.1.18 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 	<ul style="list-style-type: none"> ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Feeder” on page 10-27

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the tray for correct installation. 2. Is Tray 2 correctly installed?	Go to step 3.	Reseat Tray 2. Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Perform the Tray 2 Paper Size test (page 4-39): Service Mode > Engine Diag > Sensor Test > Tray2 Paper Size. 2. Does the switch operate properly?	Complete.	Go to step 4.
4	Check the Right Side Harness for continuity. 1. Disconnect P/J29 from the MCU Board and P/J291 from the Size Switch Assembly. 2. Check continuity between P/J29 <=> P/J291.	Go to step 5.	Replace the Right Side Harness.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	1. Replace the Tray 2 Size Switch Assembly (page 8-69). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Insert Tray 3 (Tray 3 Missing)

The Tray 3 Size Switch indicates that Tray 3 is not installed.

Applicable Chain Link

- **Chain Link 024-947:** Tray Detached

Initial Actions

- Remove the tray and inspect the tray cavity to ensure that it is free of obstructions or debris.
- Reinstall the tray and cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ MCU Board, PL9.1.20 ■ Optional Feeder, PL12.1.1 ■ Tray 3 Size Switch Assy., PL12.2.5 ■ C2 Chute Harness, PL12.2.7 	<ul style="list-style-type: none"> ■ "Map 6 - Optional 550-Sheet Feeder" on page 10-14 ■ "Optional 550-Sheet Feeder Wiring Diagram" on page 10-39

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the tray for correct installation. 2. Is Tray 3 correctly installed?	Go to step 3.	Reseat tray 3. Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Perform the Tray 3 Paper Size test (page 4-40): Service Mode > Engine Diag > Sensor Test > Tray3 Paper Size. 2. Does the Switch operate properly?	Complete.	Go to step 4.
4	Check the C2 Chute Harness for continuity. 1. Disconnect P/J421 from the Feeder Board and P/J4211 from the Optional Size Switch Assembly. 2. Check continuity between P/J421 <=> P/J4211.	Go to step 5.	Replace Optional Sheet Feeder (page 8-100)
5	1. Replace the Tray 3 Size Switch (page 8-106). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Load Tray 1 (MPT) (No Suitable Paper)

The type or size of paper mismatched or Tray 1 (MPT) is empty.

Applicable Chain Link

- **Chain Link 024-963:** No Suitable Paper

Initial Actions

- Inspect the tray to ensure that it is free of obstructions, is loaded with supported paper, and the Guides are adjusted correctly.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Tray 1 (MPT) Actuator Assy., PL2.1.24 ■ Tray 1 No Paper Actuator, PL2.1.26 ■ Tray 1 No Paper Sensor, PL3.1.15 ■ MPT NPP Harness, PL3.1.17 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Tray 1 (MPT) and Registration” on page 10-23

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper size. 2. Does the paper size meet specifications?	Go to step 2.	Replace the paper with the correct specifications.
2	1. Check the paper size setting. 2. Does the paper match with the settings in the Control Panel?	Go to step 3.	Correct the paper settings in the Control Panel. Go to step 3.
3	Check the paper type. <ul style="list-style-type: none"> ■ Paper in the tray ■ Paper type setting in the Control Panel ■ Paper type of the printing job 	Go to step 4.	Correct the paper type setting in the Control Panel.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	1. Check the Tray 1 (MPT) Actuator. 2. Does the Actuator operate smoothly?	Go to step 5.	Replace the Tray 1 (MPT) No Paper Actuator (page 8-28).
5	1. Perform the Tray 1 (MPT) No Paper test (page 4-37): Service Mode > Engine Diag > Sensor Test > MPT No Paper. 2. Does the number on the Control Panel increase by 1 when the Actuator is activated?	Replace the MCU Board (page 8-86).	Go to step 6.
6	1. Check the wiring harness connectors P/J28, P/J282, and P/J2821 between the Tray 1 No Paper Sensor and the MCU Board.	Go to step 7.	Reconnect the connectors. Go to step 7.
7	Check the Right Side Harness for continuity. 1. Disconnect P/J28 from the MCU Board and P/J282 from the MPT NPP Harness. 2. Check continuity between P/J28 <=> P/J282.	Go to step 8.	Replace the Right Side Harness.
8	Check the Tray 1 (MPT) NPP Harness for continuity. 1. Disconnect P/J282 from the Right Side Harness and P/J2821 from the No Paper Sensor. 2. Check continuity between P/J282 <=> P/J2821.	Go to step 9.	Replace the MPT NPP Harness.
9	Check the Tray 1 No Paper signal. 1. Disconnect P/J28 from the MCU Board. 2. Is there +3.3 V across ground <=> J28-B11 pin?	Go to step 10.	Replace the MCU Board (page 8-86).
10	Check the Tray 1 No Paper Sensor for operation. 1. Measure the voltage across ground <=> J28-B13 pin. 2. Does the voltage change when the Tray 1 No Paper Sensor of the Tray 1 No Paper Sensor is activated?	Replace the MCU Board (page 8-86).	Replace the Tray 1 No Paper Sensor (page 8-35).

Load Tray 2 (No Suitable Paper)

The type or size of paper mismatched or Tray 2 is empty.

Applicable Chain Link

- **Chain Link 024-959:** No Suitable Paper

Initial Actions

- Inspect the tray to ensure that it is free of obstructions, is loaded with supported paper, and the Guides are adjusted correctly.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Tray 2, PL2.1.24 ■ Feeder Assy., PL3.2.1 ■ Tray 2 No Paper Sensor, PL3.2.30 ■ Registration Sensor Harness, PL3.2.37 ■ No Paper Actuator, PL3.2.49 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 	<ul style="list-style-type: none"> ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Feeder” on page 10-27

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper size. 2. Does the paper size meet specifications?	Go to step 2.	Replace the paper with the correct specifications.
2	1. Check the paper size setting. 2. Does the paper match with the settings in the Control Panel?	Go to step 3.	Correct the paper settings in the Control Panel. Go to step 3.
3	Check the paper type. <ul style="list-style-type: none"> ■ Paper in the tray ■ Paper type setting in the Control Panel ■ Paper type of the printing job 	Go to step 4.	Correct the paper type setting in the Control Panel.
4	1. Reseat Tray 2. 2. Does the error still occur?	Go to step 5.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	1. Check the No Paper Actuator. 2. Does the Actuator operate smoothly?	Go to step 6.	Replace the Feeder Assembly (page 8-36).
6	1. Perform the Tray 2 No Paper test (page 4-38): Service Mode > Engine Diag > Sensor Test > Tray 2 No Paper . 2. Does the number on the Control Panel increase by 1 every time the Actuator is activated?	Replace the MCU Board (page 8-86).	Go to step 7.
7	1. Check the wiring harness connectors P/J29, P/J292, and P/J2921 between the No Paper Sensor and the MCU Board. 2. Are the connectors securely connected?	Go to step 8.	Reconnect the connectors. Go to step 8.
8	Check the Right Side Harness for continuity. 1. Disconnect P/J29 from the MCU Board and P/J292 from the Registration Sensor Harness. 2. Check continuity between P/J29 <=> P/J292.	Go to step 9.	Replace the Right Side Harness.
9	Check the Registration Sensor Harness for continuity. 1. Disconnect P/J292 from the Right Side Harness and P/J2921 from the No Paper Sensor. 2. Check continuity between P/J292 <=> P/J2921.	Go to step 10.	Replace the Registration Sensor Harness.
10	Check the No Paper Sensor signal. 1. Disconnect P/J29 from the MCU Board. 2. Is there +3.3 V across ground <=> J29-5 pin?	Go to step 11.	Replace the MCU Board (page 8-86).
11	Check the No Paper Sensor for operation. 1. Measure the voltage across ground <=> J29-7 pin. 2. Does the voltage change when the No Paper Actuator of the No Paper Sensor is activated?	Replace the MCU Board (page 8-86).	Replace the No Paper Sensor (page 8-45).

Load Tray 3 (No Suitable Paper)

The type or size of paper mismatched or Tray 3 is empty.

Applicable Chain Link

- **Chain Link 024-960:** Load Tray 3

Initial Actions

- Inspect the tray to ensure that it is free of obstructions, is loaded with supported paper, and the Guides are adjusted correctly.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 ■ Tray 3 Feeder Harness, PL12.2.3 ■ Optional Feeder Board, PL12.2.6 ■ C2 Chute Harness, PL12.2.7 ■ Tray 3 Feeder Assy., PL12.3.1 ■ No Paper Sensor, PL12.3.14 ■ No Paper Actuator, PL12.3.25 ■ C2 No Paper Harness, PL12.3.30 ■ Tray 3, PL12.4.1 	<ul style="list-style-type: none"> ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Map 6 - Optional 550-Sheet Feeder” on page 10-14 ■ “Optional 550-Sheet Feeder Wiring Diagram” on page 10-39

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper size. 2. Does the paper size meet specifications?	Go to step 2.	Replace the paper with the correct specifications.
2	1. Check the paper size setting. 2. Does the paper match with the settings in the Control Panel?	Go to step 3.	Correct the paper settings in the Control Panel. Go to step 3.
3	Check the paper type. <ul style="list-style-type: none"> ■ Paper in the tray ■ Paper type setting in the Control Panel ■ Paper type of the printing job 	Go to step 4.	Correct the paper type setting in the Control Panel.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	1. Reseat Tray 3. 2. Does the error still occur?	Go to step 5.	Complete.
5	1. Check the No Paper Actuator. 2. Does the Actuator operate smoothly?	Go to step 6.	Replace the Tray 3 Feeder Assembly (page 8-107).
6	1. Perform the Tray 3 No Paper test (page 4-36): Service Mode > Engine Diag > Sensor Test > Tray 3 No Paper . 2. Does the number on the Control Panel increase by 1 every time the Actuator is activated?	Replace the MCU Board (page 8-86).	Go to step 7.
7	1. Check the wiring harness connectors P/J421, P/J4212, and P/J42121 between the No Paper Sensor and the Tray 3 Feeder Board. 2. Are the connectors securely connected?	Go to step 8.	Reconnect the connectors.
8	Check the C2 Chute Harness for continuity. 1. Disconnect P/J421 from the Optional Feeder Board and P/J4212 from the C2 No Paper Harness. 2. Check continuity between P/J421 <=> P/J4212.	Go to step 9.	Replace the Optional Sheet Feeder (page 8-100).
9	Check the C2 No Paper Harness for continuity. 1. Disconnect P/J4212 from the C2 Chute Harness and P/J42121 from the No Paper Sensor. 2. Check continuity between P/J4212 <=> P/J42121.	Go to step 10.	Replace the Tray 3 Feeder Assembly (page 8-107).
10	Check the No Paper Sensor signal. 1. Disconnect P/J421 from the MCU Board. 2. Is there +3.3 V across ground <=> J421-3 pin?	Go to step 11.	Go to step 12.
11	Check the No Paper Sensor for operation. 1. Measure the voltage across ground <=> J421-5 pin. 2. Does the voltage change when the No Paper Actuator of the No Paper Sensor is activated?	Go to step 12.	Replace the No Paper Sensor (page 8-109).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
12	1. Replace the Tray 3 Feeder Assembly (page 8-107). 2. Does the error still occur?	Complete.	Replace the MCU Board (page 8-86).
13	1. Check the wiring harness connectors P/J419, P/J281, and P/J28. 2. Are the connectors securely connected?	Go to step 14.	Reconnect the connectors. Go to step 14.
14	Check the Optional Feeder Harness for continuity. 1. Disconnect P/J419 from the Optional Feeder Board and P/J281 from the Right Side Harness. 2. Check continuity between P/J419 <=> P/J281.	Go to step 15.	Replace the Optional Sheet Feeder (page 8-100).
15	Check the Right Side Harness for continuity. 1. Disconnect P/J281 from the Feeder Unit Harness and P/J28 from the MCU Board. 2. Check continuity between P/J281 <=> P/J28.	Go to step 16.	Replace the Right Side Harness.
16	Check the Optional Feeder Board signal. 1. Disconnect P/J28 on the MCU Board. 2. Is there +3.3 V across ground <=> J28-7 pin?	Replace the Tray 3 Feeder Assembly (page 8-107).	Replace the MCU Board (page 8-86).

Open Door A

Transparency Set has occurred.

Applicable Chain Link

- **Chain Link 077-906:** IOT Transparency Set Error

Initial Actions

- Inspect the tray to ensure that it is free of obstructions, is loaded with supported paper, and the Guides are adjusted correctly.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ K Drive Assembly, PL8.1.10 ■ MCU Board, PL9.1.20 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper type. 2. Is the paper type correct?	Go to step 2.	Replace the paper.
2	1. Check the paper type setting. 2. Does the paper match with the settings in the Control Panel?	Go to step 3.	Correct the paper settings in the Control Panel. Go to step 3.
3	1. Check the MCU Board for correct installation. Reseat the MCU Board (page 8-86). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Multiple Feed

Multiple sheets of paper are fed concurrently.

Initial Actions

- Inspect the tray to ensure that it is free of obstructions, is loaded with supported paper, and the Guides are adjusted correctly.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ MPT Separator Roll, PL2.1.7 ■ Retard Roll, PL2.2.17 ■ MPT Feed Roll, PL3.1.10 ■ Feed Roll, PL3.2.53 ■ Feeder Unit, PL3.2.1 ■ Feed Roll, PL12.3.29 ■ Retard Roll (Separator), PL12.5.17 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper feeding. 2. Does multiple feed occur?	Go to step 2.	Go to step 3.
2	1. Check the paper. Replace the paper. 2. Does multiple feed still occur?	Replace the following parts: <ul style="list-style-type: none"> ■ MPT Retard Roll (page 8-26) ■ MPT Feed Roll (page 8-34) ■ Tray 2 Retard Roll (page 8-29) ■ Tray 2 Feed Roll (page 8-47) ■ Tray 3 Feed Roll (page 8-110) ■ Tray 3 Retard Roll (page 8-111) 	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
3	1. Check the paper. Replace the paper. 2. Does multiple feed still occur?	Replace the Feeder Assembly. ■ Tray 1/2 (page 8-36) ■ Tray 3 (page 8-107)	Complete.

Configuration, Memory, and Firmware Errors

Download Error

An error occurred because an invalid firmware was installed.

Applicable Chain Link

- **Chain Link 016-500:** Erase Flash Error (Download Delete Error)
- **Chain Link 016-501:** Write Flash Error (Download Write Error)
- **Chain Link 016-502:** Verify Flash Error (Download Verify Error)

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Image Process Board, PL9.1.27 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Image Processor Board for correct installation. 2. Is the Image Processor Board correctly installed?	Go to step 2.	Reseat the Image Processor Board (page 8-87). Go to step 2.
2	1. Does the error still occur?	Replace the Image Processor Board (page 8-87).	Complete.

Control Panel Language Set Unsupported

The Control Panel does not support the language.

Applicable Chain Link

- **Chain Link 016-610:** Panel Language Set unsupported

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ MCU Board, PL9.1.20 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Turn the printer power Off and back On. 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

MAC Address Error

MAC Address error occurs.

Applicable Chain Link

- **Chain Link 016-612:** MAC Address Error

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Image Processor Board, PL9.1.27 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Reboot the printer. 2. Does the error still occur?	Go to step 2.	Complete.
2	1. Reseat the Image Processor Board (page 8-87). 2. Does the error still occur?	Replace the Image Processor Board (page 8-87).	Complete.

Out of Memory

The printer memory is full and cannot continue to print. Print job requires additional memory.

Applicable Chain Link

- **Chain Link 016-718:** Memory Overflow

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Image Processor Board, PL9.1.27 ■ Memory Card (Option), PL9.1.30 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the required memory for the print job. 2. Print a small size file (example as a Windows test print). 3. Does the error still occur?	Go to step 2.	Add memory card or separate the print job.
2	1. Reseat the memory card (page 8-91). 2. Does the error still occur?	Go to step 3.	Complete.
3	1. Check the memory card capacity. Print the printer Configuration Page: Menu > Information Pgs > Configuration . 2. Does the memory meet the print job requirements?	Go to step 4.	Replace the Image Processor Board (page 8-87).
4	1. Replace the memory card (page 8-91). 2. Does the error still occur?	Replace the Image Processor Board (page 8-87).	Complete.

PDL Error

Error relating to Printer Command Language (PCL) has occurred. The print data cannot be processed by PDL.

Applicable Chain Link

- **Chain Link 016-720:** PDL Error

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Image Processor Board, PL9.1.27	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the print job. 1. Print a small print job (example as a Windows test print). 2. Does the error still occur?	Go to step 2.	Complete.
2	1. Reseat the Image Processor Board (page 8-87). 2. Does the error still occur?	Replace the Image Processor Board (page 8-87).	Complete.

Collate Full

Exceeds memory capacity.

Applicable Chain Link

- **Chain Link 016-721:** Collate Full

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Image Processor Board, PL9.1.27 ■ Memory Card (Option), PL9.1.30 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the required memory for the print job. 2. Print a small size file (example as a Windows test print). 3. Does the error still occur?	Go to step 2.	Add memory card or separate the print job.
2	1. Reseat the memory card (page 8-91). 2. Does the error still occur?	Go to step 3.	Complete.
3	1. Check the memory card capacity. Print the printer Configuration Page: Menu > Information Pgs > Configuration. 2. Does the memory meet the print job requirements?	Go to step 4.	Replace the Image Processor Board (page 8-87).
4	1. Replace the memory card (page 8-91). 2. Does the error still occur?	Replace the Image Processor Board (page 8-87).	Complete.

Download Error

Download error has occurred because an invalid firmware was installed, the header information, checksum, or the write destination is invalid, or protecting the Flash.

Applicable Chain Link

- **Chain Link 016-741:** Download Protect Error
- **Chain Link 016-742:** Download ID Error
- **Chain Link 016-743:** Download Range Error
- **Chain Link 016-744:** Download Checksum Error
- **Chain Link 016-745:** Download Header Error

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Image Process Board, PL9.1.27	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Image Processor Board for correct installation. 2. Is the Image Processor Board correctly installed?	Go to step 2.	Reseat the Image Processor Board (page 8-87). Go to step 2.
2	Does the error still occur when downloading the firmware?	Replace the Image Processor Board (page 8-87).	Complete.

Auditron Error

An error has occurred because the user's account settings did not match with administration's information, a user with only black and white mode print attempted to print in color mode, or the user attempted to print more copies than the print count limit.

Applicable Chain Link

- **Chain Link 016-757:** Auditron - Invalid User
- **Chain Link 016-758:** Auditron - Disabled Function
- **Chain Link 016-759:** Auditron - Reached Limit

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Image Process Board, PL9.1.27 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the printer's Print Auditron configuration. <ul style="list-style-type: none"> ■ Access the CWIS page - <ipaddress>frameprinter.htm ■ Click Edit User Account ■ Click Edit ■ Verify the user configuration information 2. Is the user configuration information correct?	Replace the Image Processor Board (page 8-87).	Enter the correct user configuration information.

Invalid Job

Error occurs when the configuration of the printer for paper size/type does not match the printer driver.

Applicable Chain Link

- **Chain Link 016-799:** Invalid Job (Job Environment Violation)

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Image Processor Board, PL9.1.27	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper size. 2. Does the paper meet the specifications?	Go to step 2.	Replace the paper.
2	1. Check the paper size setup on the Control Panel: Menu > Tray Settings > Tray 1/2/3 > Paper Size. 2. Does the paper size match the paper size setting?	Go to step 4.	Go to step 3.
3	1. Set the paper size in the Control Panel to match the paper in the tray. 2. Does the error still occur?	Replace the Image Processor Board (page 8-87).	Complete.
4	Does the error still occur?	Replace the Image Processor Board (page 8-87).	Complete.

Disk Full

RAM disk memory or hard disk drive is full and cannot continue processing the current print job.

Applicable Chain Link

- **Chain Link 016-982:** Disk Full

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Image Processor Board, PL9.1.27 ■ Memory Card (Option), PL9.1.30 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the required memory for the print job. 2. Print a small size file (example as a Windows test print). 3. Does the error still occur?	Go to step 2.	Add memory card or separate the print job.
2	1. Reseat the memory card (page 8-91). 2. Does the error still occur?	Go to step 3.	Complete.
3	1. Check the memory card capacity. Print the printer Configuration Page: Menu > Information Pgs > Configuration. 2. Does the memory meet the print job requirements?	Go to step 4.	Replace the Image Processor Board (page 8-87).
4	1. Replace the memory card (page 8-91). 2. Does the error still occur?	Replace the Image Processor Board (page 8-87).	Complete.

Network Error

Failure occurred on the Image Processor Board.

Applicable Chain Link

- **Chain Link 116-350:** Network Error (On Board Network Communication Fail)
- **Chain Link 116-351:** Network Error (On Board Network Ethernet BIST Parity/RAM R/W Error)
- **Chain Link 116-352:** Network Error (On Board Network Internal Loopback Error)
- **Chain Link 116-355:** Network Error (On Board Network Fatal Error)

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Image Processor Board, PL9.1.27	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Image Processor Board for correct installation. 2. Is the Image Processor Board correctly installed?	Go to step 2.	Reseat the Image Processor Board. Go to step 2.
2	Does the error still occur?	Replace the Image Processor Board (page 8-87).	Complete.

Hard Disk Error

Hard Disk error has occurred.

Applicable Chain Link

- **Chain Link 116-333:** PCI Option #0 Fail
- **Chain Link 116-353:** ESS HD Fail

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Image Processor Board, PL9.1.27 ■ Hard Disk Drive (Option), PL91..47 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Hard Disk Drive for correct installation. Reseat the Hard Disk Drive (page 8-98). 2. Does the error still occur?	Go to step 2.	Complete.
2	1. Replace the Hard Disk Drive (page 8-98). 2. Does the error still occur?	Replace the Image Processor Board (page 8-87).	Complete.

MCU Firmware Error

The MCU Board detects a firmware error.

Applicable Chain Link

- **Chain Link 024-340:** IOT Firmware Error

Code: xx

- **01-02, 04-05, 0B-14:** Unexpected Firmware Trap
- **03:** IC2 Retry Error
- **06:** Not Used
- **07:** Master Fail 1
- **08:** Master Fail 2
- **09:** NVM Illegal Data
- **0A:** Over Dispense

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Transfer Unit, PL4.1.1 ■ HVPS, PL5.1.17 ■ Print Cartridge (C/Y/Y/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Xerographic” on page 10-30 ■ “High Voltage” on page 10-32

Note

If the error occurred after replacing the MCU Board, transfer the internal data from the old MCU Board to the new MCU Board.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the error code detailed information (press the Up and Down arrow buttons simultaneously). 2. Does code “09” display on the Control Panel?	Go to step 2.	Go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
2	<ol style="list-style-type: none"> Check the following wiring harness connectors. <ul style="list-style-type: none"> P/J16 and P/J28 on the MCU Board P/J144 on the EEPROM Board Are the connectors securely connected? 	Go to step 3.	Reconnect the connectors. Go to step 2.
3	Does the error still occur?	Go to step 4.	Complete.
4	<ol style="list-style-type: none"> Replace the HVPS (page 8-61). Does the error still occur? 	Replace the MCU Board (page 8-86).	Complete.
5	<ol style="list-style-type: none"> Turn the printer power Off and On. Does the error still occur? 	Go to step 6.	Complete.
6	<ol style="list-style-type: none"> Check the printer firmware version. Does the printer have the correct firmware version? 	Go to step 7.	Upgrade the printer firmware (page A-3).
7	<ol style="list-style-type: none"> Check the MCU Board for correct installation. Reseat the MCU Board (page 8-86). Does the error still occur? 	Go to step 8.	Complete.
8	<p>Check external noise.</p> <ol style="list-style-type: none"> Are there other electrical appliances within 3 meters from the printer? Turn the electrical appliances Off or relocate the printer at least 6 meters away from other electrical appliances. Does the error still occur? 	Go to step 9.	Complete.
9	<ol style="list-style-type: none"> Check the AC ground. Is the AC power supply outlet wired and grounded appropriately? 	Go to step 10.	Request the client to fix the AC power supply outlet.
10	<ol style="list-style-type: none"> Reseat the Print Cartridges (page 8-10). Reseat the Transfer Unit (page 8-8). Does the electrical noise still occur? 	Go to step 11.	Complete.
11	<ol style="list-style-type: none"> Check the Print Cartridges for stains or debris. Are the Print Cartridges dirty? 	Clean the Print Cartridges.	Reseat the HVPS (page 8-61).

MCU Communication Error

Communication fails between IOT and ESS.

Applicable Chain Link

- **Chain Link 024-371:** IOT ESS Communication Fail

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ MCU Board, PL9.1.20 ■ Image Processor Board, PL9.1.27 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Reseat the Image Processor Board (page 8-87). 2. Reseat the MCU Board (page 8-86). 3. Does the error still occur?	Go to step 2.	Complete.
2	1. Replace the Image Processor Board (page 8-87). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

MCU NVRAM Error

Engine NVRAM is corrupted, detected by MCU NVRAM check.

Applicable Chain Link

- **Chain Link 041-340:** IOT NVRAM Error

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ Transfer Unit, PL4.1.1 ■ HVPS, PL5.1.17 ■ EEPROM Board, PL9.1.1 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Xerographic” on page 10-30

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Turn the printer power Off and On. 2. Does the error still occur?	Go to step 2.	Complete.
2	1. Check the printer firmware version. 2. Does the printer have the correct firmware version?	Go to step 3.	Upgrade printer firmware (page A-3). Go to step 3.
3	1. Check the MCU Board for correct installation. Reseat the MCU Board (page 8-86). 2. Does the error still occur?	Go to step 4.	Complete.
4	1. Check the wiring harness connectors P/J28 and P/J144 between the EEPROM Board and the MCU Board. 2. Are the connectors securely connected?	Go to step 6.	Reconnect the connectors. Go to step 5.
5	Does the error still occur?	Go to step 6.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
6	Check the Right Side Harness for continuity. 1. Disconnect P/J28 from the MCU Board and P/J144 from the EEPROM Board. 2. Check continuity between P/J28 <=> P/J144.	Go to step 7.	Replace the Right Side Harness.
7	Check the EEPROM Board signal. 1. Disconnect P/J28 from the MCU Board. 2. Is there +3.3 V across ground <=> J28-B16 pin?	Replace the MCU Board (page 8-86).	Go to step 8.
8	1. Replace the MCU Board (page 8-86). 2. Does the error still occur?	Go to step 9.	Complete.
9	Check external noise. 1. Are there other electrical appliances within 3 meters from the printer? 2. Turn the electrical appliances Off or relocate the printer at least 6 meters away from other electrical appliances. 3. Does the error still occur?	Go to step 10.	Complete.
10	1. Check the AC ground. 2. Is the AC power supply outlet wired and grounded appropriately?	Go to step 11.	Request the client to fix the AC power supply outlet.
11	1. Reseat the Print Cartridges (page 8-10). 2. Reseat the Transfer Unit (page 8-8). 3. Does the electrical noise still occur?	Go to step 12.	Complete.
12	1. Check the Print Cartridges for stains or debris. 2. Are the Print Cartridges dirty?	Clean the Print Cartridges.	Reseat the HVPS (page 8-61).

Fan Motor Error (Rear)

The MCU has detected an error upon receiving signal from the Rear Fan.

Applicable Chain Link

- **Chain Link 042-358-01**: IOT Fan Motor Failure

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Front Cover Harness, PL1.2.11 ■ LVPS, PL9.1.4 ■ Main Fan, PL9.1.10 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 ■ Top LV Harness, PL10.1.16 ■ Duplex Unit, PL11.1.1 ■ Duplex Unit Harness, PL11.1.18 ■ Duplex Fan, PL11.1.25 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Map 5 - Duplex Unit” on page 10-13 ■ “DC Power Supply” on page 10-21 ■ “Duplex Wiring Diagram” on page 10-41

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the detailed error code (press the Up and Down buttons simultaneously). 2. Does code “01” display on the Control Panel?	Go to step 2.	Go to step 7.
2	1. Check wiring harness connectors between the Main Fan and the LVPS. 2. Is P/J502 securely connected?	Go to step 3.	Complete.
3	Does the error still occur?	Go to step 4.	Complete.
4	1. Perform the Fan test (page 4-46): Service Mode > Engine Diag > Motor Test > Fan. 2. Does the Fan operate properly?	Replace the MCU Board (page 8-86).	Go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	<p>Check the Top LV Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J501 from the LVPS and P/J13 from the MCU Board. 2. Check continuity between P/J501 <=> P/J13. 	Go to step 6.	Replace the Top LV Harness.
6	<p>Check the LVPS signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J503 from the LVPS. 2. Is there +24 V across ground <=> J503-1 pin when the Interlock Switch is activated? 	Replace the MCU Board (page 8-86).	Replace the LVPS (page 8-80).
7	<ol style="list-style-type: none"> 1. Check the detailed error code (press the Up and Down buttons simultaneously). 2. Does code "02" display on the Control Panel? 	Go to step 8.	Go to step 1.
8	<ol style="list-style-type: none"> 1. Check the wiring harness connectors between the Duplex Fan and the Duplex Board. 2. Is P/J427 securely connected? 	Go to step 9.	Reconnect the wiring harness connector.
9	Does the error still occur?	Go to step 10.	Complete.
10	<ol style="list-style-type: none"> 1. Perform the Duplex Fan test (page 4-63): Service Mode > Engine Diag > Duplex Fan. 2. Does the Motor operate properly? 	Replace the MCU Board (page 8-86).	Go to step 11.
11	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J428, P/J2720, P/J272, and P/J27 between the MCU Board and Duplex Board. 2. Are the connectors securely connected? 	Go to step 12.	Reconnect the connectors.
12	<p>Check the Duplex Unit Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J428 from the Duplex Board and P/J2720 Front Cover Assembly Harness. 2. Check continuity between P/J2720 <=> P/J428. 	Go to step 13.	Replace the Duplex Unit (page 8-99).
13	<p>Check the Front Cover Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J2720 from the Front Cover Harness and P/J272 from the Right Side Harness. 2. Check continuity between P/J2720 <=> P/J272. 	Go to step 14.	Replace the Front Cover Harness.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
14	Check the Right Side Harness for continuity. 1. Disconnect P/J27 from the MCU Board and P/J272 from the Front Cover Harness. 2. Check continuity between P/J27 and P/J272.	Go to step 15.	Replace the Right Side Harness.
15	Check the Duplex Board signal. 1. Disconnect P/J27 from the MCU Board. 2. Are there +24 V across ground <=> J27-17/J27-18 pin when the Interlock is activated?	Replace the Duplex Unit (page 8-99).	Replace the MCU Board (page 8-86).

Fan Motor Error (Duplexer)

The MCU has detected an error upon receiving signal from the Duplex Fan.

Applicable Chain Link

- **Chain Link 042-358-02:** IOT Fan Motor Failure

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Front Cover Harness, PL1.2.11 ■ LVPS, PL9.1.4 ■ Main Fan, PL9.1.10 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 ■ Top LV Harness, PL10.1.16 ■ Duplex Unit, PL11.1.1 ■ Duplex Unit Harness, PL11.1.18 ■ Duplex Fan, PL11.1.25 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Map 5 - Duplex Unit” on page 10-13 ■ “DC Power Supply” on page 10-21 ■ “Duplex Wiring Diagram” on page 10-41

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the detailed error code (press the Up and Down buttons simultaneously). 2. Does code “02” display on the Control Panel?	Go to step 2.	Go to step 10.
2	1. Check the wiring harness connectors between the Duplex Fan and the Duplex Board. 2. Is P/J427 securely connected?	Go to step 3.	Reconnect the wiring harness connector.
3	Does the error still occur?	Go to step 4.	Complete.
4	1. Perform the Duplex Fan test (page 4-63): Service Mode > Engine Diag > Duplex Fan . 2. Does the Motor operate properly?	Replace the MCU Board (page 8-86).	Go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J428, P/J2720, P/J272, and P/J27 between the MCU Board and Duplex Board. 2. Are the connectors securely connected? 	Go to step 6.	Reconnect the connectors.
6	<p>Check the Duplex Unit Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J428 from the Duplex Board and P/J2720 Front Cover Assembly Harness. 2. Check continuity between P/J2720 <=> P/J428. 	Go to step 7.	Replace the Duplex Unit (page 8-99).
7	<p>Check the Front Cover Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J2720 from the Front Cover Harness and P/J272 from the Right Side Harness. 2. Check continuity between P/J2720 <=> P/J272. 	Go to step 8.	Replace the Front Cover Harness.
8	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J27 from the MCU Board and P/J272 from the Front Cover Harness. 2. Check continuity between P/J27 and P/J272. 	Go to step 9.	Replace the Right Side Harness.
9	<p>Check the Duplex Board signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J27 from the MCU Board. 2. Are there +24 V across ground <=> J27-17/J27-18 pin when the Interlock is activated? 	Replace the Duplex Unit (page 8-99).	Replace the MCU Board (page 8-86).
10	<ol style="list-style-type: none"> 1. Check the detailed error code (press the Up and Down buttons simultaneously). 2. Does code "01" display on the Control Panel? 	Go to step 11.	Go to step 1.
11	<ol style="list-style-type: none"> 1. Check wiring harness connectors between the Main Fan and the LVPS. 2. Is P/J502 securely connected? 	Go to step 12.	Complete.
12	Does the error still occur?	Go to step 13.	Complete.
13	<ol style="list-style-type: none"> 1. Perform the Fan test (page 4-46): Service Mode > Engine Diag > Motor Test > Fan. 2. Does the Fan operate properly? 	Replace the MCU Board (page 8-86).	Go to step 14.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
14	Check the Top LV Harness for continuity. 1. Disconnect P/J501 from the LVPS and P/J13 from the MCU Board. 2. Check continuity between P/J501 <=> P/J13.	Go to step 15.	Replace the Top LV Harness.
15	Check the LVPS signal. 1. Disconnect P/J503 from the LVPS. 2. Is there +24 V across ground <=> J503-1 pin when the Interlock Switch is activated?	Replace the MCU Board (page 8-86).	Replace the LVPS (page 8-80).

Deve Mode Error

The Deve Mode (K Mode) change failure has been detected.

Applicable Chain Link

- **Chain Link 042-372:** IOT Deve Mode Change Failure

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ K Drive Assembly, PL8.1.10 ■ MCU Board, PL9.1.20 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Main Drive” on page 10-25

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Perform the K Mode Solenoid test (page 4-64): Service Mode > Engine Diag > Motor Test > K Mode Clutch On . During the test, close the Front Cover. 2. Does the K Mode Solenoid make a clicking sound?	Go to step 2.	Go to step 8.
2	1. Check the K Drive Assembly for correct installation. Reseat the K Drive Assembly (page 8-76). 2. Does the error still occur?	Go to step 3.	Complete.
3	1. Check the wiring harness connectors P/J20 and P/J201 between the MCU Board and the K Mode Sensor. 2. Are the connectors securely connected?	Go to step 5.	Reconnect the connectors. Go to step 4.
4	Does the error still occur?	Go to step 5.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	<p>Check the Regi Clutch Sensor Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J20 from the MCU Board and P/J201 from the K Mode Sensor. 2. Check continuity between P/J20 <=> P/J201. 	Go to step 6.	Replace the K Drive Assembly (page 8-76).
6	<p>Check the K Mode Sensor signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J20 from the MCU Board. 2. Is there +3.3 V across ground <=> J20-1 pin on the MCU Board? 	Go to step 7.	Replace the MCU Board (page 8-86).
7	<p>Check the K Mode Sensor for operation.</p> <p>Note: Be sure to keep P/J201 and P/J24 connectors connected.</p> <ol style="list-style-type: none"> 1. Remove the K Drive Assembly (page 8-76). 2. Perform the K Mode Sensor test (page 4-64): Service Mode > Engine Diag > Sensor Test > K Mode SNR. During the test, close the Front Cover. 3. Does the voltage change when a piece of paper is inserted into the gap of the K Mode Sensor? 	Replace the MCU Board (page 8-86).	Replace the K Drive Assembly (page 8-76).
8	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J24 and P/J241 between the MCU Board and the K Mode Solenoid. 2. Are the connectors securely connected? 	Go to step 10.	Reconnect the connectors. Go to step 9.
9	Does the error still occur?	Go to step 10.	Complete.
10	<p>Check the K Mode Solenoid signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J24 from the MCU Board. 2. Is there +24 V across ground <=> J24-1 pin on the MCU Board when the Interlock Switch is activated? 	Go to step 11.	Replace the MCU Board (page 8-86).
11	<p>Check the K Mode Solenoid for resistance.</p> <ol style="list-style-type: none"> 1. Disconnect P/J24 from the MCU Board. 2. Is the resistance across J24-1 and J24-2 about 80 to 110 ohm? 	Replace the MCU Board (page 8-86).	Replace the K Drive Assembly (page 8-76).

Over Heat

The Temperature Sensor has detected high temperature.

Applicable Chain Link

- **Chain Link 042-700:** IOT Over Heat Stop
- **Chain Link 142-700:** IOT Over Heat Forced Half Speed

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Feeder Assembly, PL3.2.1 ■ MCU Board, PL9.1.20 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the room temperature. 2. Is the room temperature over 32° C?	Change the room temperature or move the printer to a different location.	Go to step 2.
2	1. Check the print usage. 2. Did the user print a large volume of document?	Go to step 3.	Go to step 4.
3	1. Allow the printer to cool down for about five minutes. 2. Does the error still occur?	Go to step 4.	Complete.
4	1. Check the MCU Board for correct installation. Reseat the MCU Board (page 8-86). 2. Does the error still occur?	Go to step 5.	Complete.
5	1. Replace the MCU Board (page 8-86). 2. Does the error still occur?	Replace the Feeder Assembly (page 8-36).	Complete.

Main Motor Error

The Main Motor has failed.

Applicable Chain Link

- **Chain Link 042-325-01**: IOT Motor Failure

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Main Drive Assembly, PL8.1.2 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Main Drive” on page 10-25

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the detailed error code (press the Up and Down buttons simultaneously). 2. Does code “00” display on the Control Panel?	Go to step 2.	<ul style="list-style-type: none"> ■ Refer to “Sub Motor Error” on page 3-122 ■ Refer to “Tray 2 (PH) Motor Error” on page 3-124 ■ Refer to “Optional Feeder Motor Error” on page 3-126
2	1. Check the Transfer Unit, Fuser, and Black Print Cartridge for correct installation. 2. Are the parts seated correctly?	Go to step 3.	Reseat the following items: <ul style="list-style-type: none"> ■ Transfer Unit (page 8-8) ■ Fuser Assembly (page 8-11) ■ Black Print Cartridge (page 8-10) ■ Go to step 2.
3	Does the error still occur?	Go to step 4.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J22 and P/J222 between the MCU Board and the Main Drive Assembly. 2. Are the connectors securely connected? 	Go to step 6.	Reconnect the connectors. Go to step 5.
5	Does the error still occur?	Go to step 6.	Complete.
6	<ol style="list-style-type: none"> 1. Perform the Main Motor test (page 4-41): Service Mode > Engine Diag > Motor Test > Main Motor. During the test, close the Front Cover. 2. Does the Motor operate properly? 	Replace the MCU Board (page 8-86).	Go to step 7.
7	<ol style="list-style-type: none"> 1. Check the Main Drive Assembly for correct installation. 2. Is the Main Drive Assembly securely installed? 	Go to step 8.	Reseat the Main Drive Assembly (page 8-70). Go to step 8.
8	Does the error still occur?	Go to step 9.	Complete.
9	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J22 from the MCU Board and P/J222 from the Main Drive Assembly. 2. Check continuity between P/J22 <=> P/J222. 	Go to step 10.	Replace the Right Side Harness.
10	<p>Check the Main Drive Assembly signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J22 from the MCU Board. 2. Are there +24 V across ground <=> J22-B2/J22-B4 pin when the Interlock Switch is activated? 	Replace the Main Drive Assembly (page 8-70).	Replace the MCU Board (page 8-86).

Sub Motor Error

The Sub Motor has failed.

Applicable Chain Link

- **Chain Link 042-325-01**: IOT Motor Failure

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 ■ Main Drive, PL8.1.2 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Main Drive” on page 10-25

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the detailed error code (press the Up and Down buttons simultaneously). 2. Does code “01” display on the Control Panel?	Go to step 2.	<ul style="list-style-type: none"> ■ Refer to “Main Motor Error” on page 3-120 ■ Refer to “Tray 2 (PH) Motor Error” on page 3-124 ■ Refer to “Optional Feeder Motor Error” on page 3-126
2	1. Check the Print Cartridges for correct installation. 2. Are the Print Cartridges correctly installed?	Go to step 4.	Reseat the Print Cartridges (page 8-10). Go to step 3.
3	Does the error still occur?	Go to step 4.	Complete.
4	1. Check the wiring harness connectors P/J22 and P/J221 between the MCU Board and the Main Drive Assembly. 2. Are the connectors securely connected?	Go to step 5.	Reconnect the connectors. Go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	1. Perform the Sub Motor test (page 4-42): Service Mode > Engine Diag > Motor Test > Sub Motor . During the test, close the Front Cover. 2. Does the Motor operate properly?	Replace the MCU Board (page 8-86).	Go to step 6.
6	1. Check the Main Drive Assembly for correct installation. 2. Is the Main Drive Assembly correctly installed?	Go to step 7.	Reseat the Main Drive Assembly (page 8-70). Go to step 8.
7	Does the error still occur?	Go to step 8.	Complete.
8	Check the Right Side Harness for continuity. 1. Disconnect P/J22 from the MCU Board and P/J221 from the Main Drive Assembly. 2. Check continuity between P/J22 <=> P/J221.	Go to step 9.	Replace the Right Side Harness.
9	Check the Main Drive Assembly signal. 1. Disconnect P/J22 from the MCU Board. 2. Are there +24 V across ground <=> J22-A2/J22-A4 pin when the Interlock Switch is activated?	Replace the Main Drive Assembly (page 8-70).	Replace the MCU Board (page 8-86).

Tray 2 (PH) Motor Error

The Tray 2 Motor has failed.

Applicable Chain Link

- **Chain Link 042-325-03:** IOT Motor Failure

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Feeder Assembly, PL3.2.1 ■ PH Drive Assembly, PL8.1.7 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Tray 1 (MPT) and Registration” on page 10-23

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	<ol style="list-style-type: none"> 1. Check the detailed error code (press the Up and Down buttons simultaneously). 2. Does code “03” display on the Control Panel? 	Go to step 2.	<ul style="list-style-type: none"> ■ Refer to “Main Motor Error” on page 3-120 ■ Refer to “Sub Motor Error” on page 3-122 ■ Refer to “Optional Feeder Motor Error” on page 3-126
2	<ol style="list-style-type: none"> 1. Check the Rubber Registration Roller for rotation. 2. Does the Roller rotate smoothly? 	Go to step 3.	Replace the Feeder Assembly (page 8-36).
3	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J25 and P/J251 between the MCU Board and the PH Drive Assembly. 2. Are the connectors securely connected? 	Go to step 4.	Reconnect the connectors. Go to step 4.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	1. Perform the Tray 2 Motor test (page 4-43): Service Mode > Engine Diag > Motor Test > Tray 2 Motor . During the test, close the Front Cover. 2. Does the Motor operate properly?	Replace the MCU Board (page 8-86).	Go to step 5.
5	1. Check the PH Drive Assembly for correct installation. 2. Is the PH Drive Assembly correctly installed?	Go to step 6.	Reseat the PH Drive Assembly (page 8-73). Go to step 6.
6	Does the error still occur?	Go to step 7.	Complete.
7	Check the Right Side Harness for continuity. 1. Disconnect P/J25 from the MCU Board and P/J251 from the PH Drive Assembly. 2. Check continuity between P/J25 <=> P/J251.	Go to step 8.	Replace the Right Side Harness.
8	Check the PH Drive Assembly signal. 1. Disconnect P/J25 from the MCU Board. 2. Are there +24 V across ground <=> J25-1/J25-2 pin when the Interlock Switch is activated?	Replace the PH Drive Assembly (page 8-73).	Replace the MCU Board (page 8-86).

Optional Feeder Motor Error

The Optional Feeder Motor has failed.

Applicable Chain Link

- **Chain Link 042-325-04:** IOT Motor Failure

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ MCU Board, PL9.1.20 ■ Feed Roll, PL12.1.9 ■ Retard Roll, PL12.3.10 ■ Right Side Harness, PL10.1.15 ■ Optional 550-Sheet Feeder, PL12.1.1 ■ Feeder Unit Harness, PL12.2.3 ■ Tray 3 Feeder Board, PL12.2.6 ■ C2 Motor Harness, PL12.2.9 ■ Tray 3 Feeder Drive, PL12.2.10 ■ Tray 3 Feeder Assembly, PL12.3.1 	<ul style="list-style-type: none"> ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Map 6 - Optional 550-Sheet Feeder” on page 10-14 ■ “Optional 550-Sheet Feeder Wiring Diagram” on page 10-39

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the detailed error code (press the Up and Down buttons simultaneously). 2. Does code “04” display on the Control Panel?	Go to step 2.	<ul style="list-style-type: none"> ■ Refer to “Main Motor Error” on page 3-120 ■ Refer to “Sub Motor Error” on page 3-122 ■ Refer to “Tray 2 (PH) Motor Error” on page 3-124
2	1. Check the paper tray for correct installation. 2. Is the tray correctly installed?	Go to step 4.	Reseat the paper tray. Go to step 3.
3	Does the error still occur?	Go to step 4.	Complete.
4	1. Check the Feed Rollers and Retard Rollers for rotation. 2. Do the Rollers rotate smoothly?	Go to step 5.	Replace the defective Roller(s).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J422, P/J4221, and P/J4222 between the Tray 3 Feeder Board and the Tray 3 Feeder Drive Assembly. 2. Are the connectors securely connected? 	Go to step 6.	Reconnect the connectors. Go to step 6.
6	<ol style="list-style-type: none"> 1. Perform the Tray 3 Feed Motor test (page 4-45): Service Mode > Engine Diag > Motor Test > Tray 3 Feed Motor. 2. Does the Motor operate properly? 	Replace the MCU Board (page 8-86).	Go to step 7.
7	<ol style="list-style-type: none"> 1. Check the Tray 3 Drive Feeder Assembly for correct installation. 2. Is the Tray 3 Drive Feeder Assembly correctly installed? 	Go to step 8.	Reseat the Tray 3 Drive Feeder (page 8-107). Go to step 8.
8	Does the error still occur?	Go to step 9.	Complete.
9	<p>Check the G2 Motor Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J422 and P/J4222. 2. Check continuity between P/J422 <=> P/J4222. 	Go to step 10.	Replace the Optional Sheet Feeder (page 8-100).
10	<p>Check the Tray 3 Feeder Drive for signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J422 from the Tray 3 Feeder Board. 2. Is the +24 V across ground <=> J422-6 pin when the Interlock Switch is activated? 	Replace the Optional 550-Sheet Feeder (page 8-100).	Go to step 11.
11	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J419, P/J281, and P/J28 between the Tray 3 Feeder Board and the MCU Board. 2. Are the connectors securely connected? 	Go to step 12.	Reconnect the connectors.
12	<p>Check the Feeder Unit Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J419 from the Feeder Board and P/J281 from the MCU Board. 2. Check continuity between P/J419 <=> P/J281. 	Go to step 13.	Replace the Optional Sheet Feeder (page 8-100).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
13	Check the Right Side Harness for continuity. 1. Disconnect P/J281 from the Feeder Harness and P/J28 from the MCU Board. 2. Check continuity between P/J281 <=> P/J28.	Go to step 14.	Replace the Right Side Harness.
14	Check the Tray 3 Feeder Board signal. 1. Disconnect P/J28 from the MCU Board. 2. Are there +24 V across ground <=> J28-4/J28-5 pin when the Interlock Switch is activated?	Replace the Optional 550-Sheet Feeder (page 8-100).	Replace the MCU Board (page 8-86).

Laser Error

An error was detected in the Laser Unit.

Applicable Chain Link

- **Chain Link 061-370:** IOT ROS Failure

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Laser Unit, PL5.1.2 ■ MCU Board, PL9.1.20 	<ul style="list-style-type: none"> ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Laser Unit” on page 10-29

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Laser Unit for correct installation. 2. Is the Laser Unit correctly installed?	Go to step 3.	Reseat the Laser Unit (page 8-50). Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Check the wiring harness connectors P/J12 and P/J151 between the MCU Board and the Laser Unit. 2. Are the connectors securely connected?	Go to step 5	Reconnect the connectors. Go to step 4.
4	Does the error still occur?	Go to step 5.	Complete.
5	1. Check the MCU Board for correct installation. 2. Is the MCU Board correctly installed?	Go to step 7.	Reseat the MCU Board (page 8-86). Go to step 6.
6	Does the error still occur?	Go to step 7.	Complete.
7	1. Replace the Laser Unit (page 8-50). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Optional 550-Sheet Feeder Error

The Optional 550-Sheet Feeder has failed.

Applicable Chain Link

- **Chain Link 072-215:** IOT Option Feeder Failure

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 ■ Feeder Unit Harness, PL12.2.3 ■ Tray 3 Feeder Board, PL12.2.6 ■ Optional 550-Sheet Feeder, PL12.1.1 	<ul style="list-style-type: none"> ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Map 6 - Optional 550-Sheet Feeder” on page 10-14 ■ “Optional 550-Sheet Feeder Wiring Diagram” on page 10-39

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Optional 550-Sheet Feeder for correct installation. 2. Is the Optional 550-Sheet Feeder correctly installed?	Go to step 3.	Reseat the Optional 550-Sheet Feeder. Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Check the wiring harness connectors P/J28, P/J281, and P/J419 between the MCU Board and the Tray 3 Feeder Board. 2. Are the connectors securely connected?	Go to step 5.	Reconnect the connectors. Go to step 4.
4	Does the error still occur?	Go to step 5.	Complete.
5	Check the Feeder Unit Harness for continuity. 1. Disconnect P/J419 from the Feeder Board and P/J281 from the Right Side Harness. 2. Check continuity between P/J419 <=> P/J281.	Go to step 6.	Replace the Optional 550-Sheet Feeder (page 8-100).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
6	Check the Right Side Harness for continuity. 1. Disconnect P/J28 from the MCU Board and P/J281 from the Feeder Harness. 2. Check continuity between P/J28 <=> P/J281.	To go step 7.	Replace the Right Side Harness.
7	1. Replace the Optional 550-Sheet Feeder (page 8-100). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Duplex Error

The Duplex Unit has failed.

Applicable Chain Link

- **Chain Link 077-215:** Duplexer Error

Initial Actions

- Inspect the Duplex to ensure that it is free of obstructions.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Front Cover Harness, PL1.2.11 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 ■ Duplex Unit, PL11.1.1 ■ Duplex Unit Harness, PL11.1.18 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Map 5 - Duplex Unit” on page 10-13 ■ “Duplex Wiring Diagram” on page 10-41

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Duplex Unit for correct installation. 2. Is the Duplex Unit correctly installed?	Go to step 3.	Reseat the Duplex Unit (page 8-99). Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Check the wiring harness connectors P/J27, P/J272, P/J2720, and P/J428 between the Duplex Board and the MCU Board. 2. Are the connectors securely connected?	Go to step 5.	Reconnect the connectors. Go to step 4.
4	Does the error still occur?	Go to step 5.	Complete.
5	Check the Duplex Unit Harness for continuity. 1. Disconnect P/J428 from the Duplex Board and P/J2720 Front Cover Harness. 2. Check continuity between P/J428 <=> P/J2720.	Go to step 6.	Replace the Duplex Unit (page 8-99).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
6	Check the Front Cover Harness for continuity. 1. Disconnect P/J272 from the Right Side Harness and P/J272 from the Duplex Unit Harness. 2. Check continuity between P/J272 <=> P/J2720.	Go to step 7.	Replace the Front Cover Harness.
7	Check the Right Side Harness for continuity. 1. Disconnect P/J272 from the Front Cover Harness and P/J27 from the MCU Board. 2. Check continuity between P/J272 <=> P/J27.	Go to step 8.	Replace the Right Side Harness.
8	1. Replace the Duplex Unit (page 8-99). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

Door A Open

The Front Cover is open.

Applicable Chain Link

- **Chain Link 077-300:** IOT Front Cover Open

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Front Cover Assy., PL1.2.1 ■ Interlock Assy. Harness, PL9.1.3 ■ MCU Board, PL9.1.20 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Front Cover for damage. 2. Are there any damages on the Front Cover Assembly?	Replace the Front Cover Assembly (page 8-16).	Go to step 2.
2	Check the Interlock Switch for operation. 1. Perform the Interlock Switch test (page 4-31): Service Mode > Engine Diag > Sensor Test > Interlock Switch. 2. Does number on the Control Panel increase by one when the Front Cover is operated?	Replace the MCU Board (page 8-86).	Go to step 3.
3	1. Replace the Interlock Assembly Harness (page 8-79). 2. Does the error still occur?	Replace the MCU Board (page 8-86).	Complete.

ADC Sensor Error (High Density)

The ADC Sensor has detected high density error.

Applicable Chain Link

- **Chain Link 092-651:** IOT ADC Sensor Error

Initial Actions

- Ensure the Transfer Unit and surrounding area is free of waste toner.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Front Cover Harness, PL1.2.11 ■ Transfer Unit, PL4.1.1 ■ Laser Unit, PL5.1.2 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ Main Drive Assembly, PL8.1.2 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Xerographic” on page 10-30

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the detailed error code on the Control Panel (press the Up and Down buttons simultaneously). 2. Does code “01” display on the Control Panel?	Go to step 2.	Go to step 10.
2	1. Check the Transfer Unit for correct installation. 2. Is the Transfer Unit correctly installed?	Go to step 4.	Reseat the Transfer Unit (page 8-8). Go to step 3.
3	Does the error still occur?	Go to step 4.	Complete.
4	1. Check the toner density. Perform Gradation Test Print (page 5-13): Service Mode > Test Print > Gradation ESS. 2. Compare the density of four colors toner. Is there dark color on the print?	Go to step 5.	Replace the MCU Board (page 8-86).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	<p>Check the Solenoid in the Transfer Unit for operation.</p> <ol style="list-style-type: none"> 1. Perform the ADC Sensor Solenoid test (page 4-58): Service Mode > Engine Diag > Motor Test > ADC (CTD) Sensor Solenoid. 2. Perform the ADC Sensor LED test (page 4-59): Service Mode > Engine Diag > Motor Test > ADC (CTD) Sensor LED. 3. Does the ADC Sensor operate properly? 	Replace the corresponding Print Cartridge (page 8-10).	Go to step 6.
6	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J27, P/J272, and P/J2721 between the MCU Board and the Transfer Unit. 2. Are the connectors securely connected? 	Go to step 7.	Reconnect the connectors. Go to step 7.
7	<p>Check the Front Cover Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J2721 from the Transfer Unit and P/J272 from the Right Side Harness. 2. Check continuity between P/J2721 <=> P/J272. 	Go to step 8.	Replace the Front Cover Harness.
8	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J27 from the MCU Board and P/J272 from the Front Cover Harness. 2. Check continuity between P/J27 <=> P/J272. 	Go to step 9.	Replace the Right Side Harness.
9	<p>Check the ADC Sensor signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J27 from the MCU Board. 2. Is there +5 V across ground <=> J27-7 pin? 	Replace the Transfer Unit (page 8-8).	Replace the MCU Board (page 8-86).
10	<ol style="list-style-type: none"> 1. Check the detailed error code on the Control Panel (press the Up and Down buttons simultaneously). 2. Does code "02" display on the Control Panel? 	Go to step 11.	Go to step 1.
11	<ol style="list-style-type: none"> 1. Check the Transfer Unit for correct installation. 2. Is the Transfer Unit correctly installed? 	Go to step 13.	Reseat the Transfer Unit (page 8-8). Go to step 12.
12	Does the error still occur?	Go to step 13.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
13	<ol style="list-style-type: none"> 1. Check the Print Cartridges for correct installation. 2. Are the Print Cartridges correctly installed? 	Go to step 15.	Reseat the Print Cartridge(s) (page 8-10). Go to step 14.
14	Does the error still occur?	Go to step 15.	Complete.
15	<ol style="list-style-type: none"> 1. Check the toner density. Perform Gradation Test Print (page 5-13): Service Mode > Test Print > Gradation ESS. 2. Compare the density of four colors toner. Is there dark color on the print? 	Go to step 16.	Replace the MCU Board (page 8-86).
16	<p>Check the Solenoid in the Transfer Unit for operation.</p> <ol style="list-style-type: none"> 1. Perform the ADC Sensor Solenoid test (page 4-58): Service Mode > Engine Diag > Motor Test > ADC (CTD) Sensor Solenoid. 2. Perform the ADC Sensor LED test (page 4-59): Service Mode > Engine Diag > Motor Test > ADC (CTD) Sensor LED. 3. Does the ADC Sensor operate properly? 	Go to step 21.	Go to step 17.
17	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J27, P/J272, and P/J2721 between the MCU Board and the Transfer Unit. 2. Are the connectors securely connected? 	Go to step 18.	Reconnect the connectors. Go to step 18.
18	<p>Check the Front Cover Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J2721 from the Transfer Unit and P/J272 from the Right Side Harness. 2. Check continuity between P/J2721 <=> P/J272. 	Go to step 19.	Replace the Front Cover Harness.
19	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J27 from the MCU Board and P/J272 from the Front Cover Harness. 2. Check continuity between P/J27 <=> P/J272. 	Go to step 20.	Replace the Right Side Harness.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
20	Check the ADC Sensor signal. 1. Disconnect P/J27 from the MCU Board. 2. Is there +5 V across ground <=> J27-7 pin?	Replace the Transfer Unit (page 8-8).	Replace the MCU Board (page 8-86).
21	1. Replace the corresponding Print Cartridge (page 8-10). 2. Does the error still occur?	Replace the Laser Unit (page 8-50).	Complete.

ADC Sensor Error (Low Density)

The ADC Sensor has detected low density error.

Applicable Chain Link

- **Chain Link 092-651:** IOT ADC Sensor Error

Initial Actions

- Ensure the Transfer Unit and surrounding area is free of waste toner.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Front Cover Harness, PL1.2.11 ■ Transfer Unit, PL4.1.1 ■ Laser Unit, PL5.1.2 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ Main Drive Assembly, PL8.1.2 ■ MCU Board, PL9.1.20 ■ Right Side Harness, PL10.1.15 	<ul style="list-style-type: none"> ■ “Map 1 - Electrical and Drive” on page 10-9 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Xerographic” on page 10-30

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the detailed error code on the Control Panel (press the Up and Down buttons simultaneously). 2. Does code “02” display on the Control Panel?	Go to step 3.	Go to step 13.
2	1. Check the Transfer Unit for correct installation. 2. Is the Transfer Unit correctly installed?	Go to step 4.	Reseat the Transfer Unit (page 8-8). Go to step 3.
3	Does the error still occur?	Go to step 4.	Complete.
4	1. Check the Print Cartridges for correct installation. 2. Are the Print Cartridges correctly installed?	Go to step 6.	Reseat the Print Cartridge(s) (page 8-10). Go to step 5.
5	Does the error still occur?	Go to step 6.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
6	<ol style="list-style-type: none"> 1. Check the toner density. Perform Gradation Test Print (page 5-13): Service Mode > Test Print > Gradation ESS. 2. Compare the density of four colors toner. Is there dark color on the print? 	Go to step 7.	Replace the MCU Board (page 8-86).
7	<p>Check the Solenoid in the Transfer Unit for operation.</p> <ol style="list-style-type: none"> 1. Perform the ADC Sensor Solenoid test (page 4-58): Service Mode > Engine Diag > Motor Test > ADC (CTD) Sensor Solenoid. 2. Perform the ADC Sensor LED test (page 4-59): Service Mode > Engine Diag > Motor Test > ADC (CTD) Sensor LED. 3. Does the ADC Sensor operate properly? 	Go to step 12.	Go to step 8.
8	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J27, P/J272, and P/J2721 between the MCU Board and the Transfer Unit. 2. Are the connectors securely connected? 	Go to step 9.	Reconnect the connectors. Go to step 9.
9	<p>Check the Front Cover Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J2721 from the Transfer Unit and P/J272 from the Right Side Harness. 2. Check continuity between P/J2721 <=> P/J272. 	Go to step 10.	Replace the Front Cover Harness.
10	<p>Check the Right Side Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J27 from the MCU Board and P/J272 from the Front Cover Harness. 2. Check continuity between P/J27 <=> P/J272. 	Go to step 11.	Replace the Right Side Harness.
11	<p>Check the ADC Sensor signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J27 from the MCU Board. 2. Is there +5 V across ground <=> J27-7 pin? 	Replace the Transfer Unit (page 8-8).	Replace the MCU Board (page 8-86).
12	<ol style="list-style-type: none"> 1. Replace the corresponding Print Cartridge (page 8-10). 2. Does the error still occur? 	Replace the Laser Unit (page 8-50).	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
13	<ol style="list-style-type: none"> 1. Check the detailed error code on the Control Panel (press the Up and Down buttons simultaneously). 2. Does code "01" display on the Control Panel? 	Go to step 14.	Go to step 1.
14	<ol style="list-style-type: none"> 1. Check the Transfer Unit for correct installation. 2. Is the Transfer Unit correctly installed? 	Go to step 16.	Reseat the Transfer Unit (page 8-8). Go to step 15.
15	Does the error still occur?	Go to step 16.	Complete.
16	<ol style="list-style-type: none"> 1. Check the toner density. Perform Gradation Test Print (page 5-13): Service Mode > Test Print > Gradation ESS. 2. Compare the density of four colors toner. Is there dark color on the print? 	Go to step 17.	Replace the MCU Board (page 8-86).
17	<p>Check the Solenoid in the Transfer Unit for operation.</p> <ol style="list-style-type: none"> 1. Perform the ADC Sensor Solenoid test (page 4-58): Service Mode > Engine Diag > Motor Test > ADC (CTD) Sensor Solenoid. 2. Perform the ADC Sensor LED test (page 4-59): Service Mode > Engine Diag > Motor Test > ADC (CTD) Sensor LED. 3. Does the ADC Sensor operate properly? 	Replace the corresponding Print Cartridge (page 8-10).	Go to step 18.
18	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J27, P/J272, and P/J2721 between the MCU Board and the Transfer Unit. 2. Are the connectors securely connected? 	Go to step 19.	Reconnect the connectors. Go to step 19.
19	<p>Check the Front Cover Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J2721 from the Transfer Unit and P/J272 from the Right Side Harness. 2. Check continuity between P/J2721 <=> P/J272. 	Go to step 20.	Replace the Front Cover Harness.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
20	Check the Right Side Harness for continuity. 1. Disconnect P/J27 from the MCU Board and P/J272 from the Front Cover Harness. 2. Check continuity between P/J27 <=> P/J272.	Go to step 21.	Replace the Right Side Harness.
21	Check the ADC Sensor signal. 1. Disconnect P/J27 from the MCU Board. 2. Is there +5 V across ground <=> J27-7 pin?	Replace the Transfer Unit (page 8-8).	Replace the MCU Board (page 8-86).

Environmental (Humidity) Sensor Error

The Environmental Sensor has detected temperature error.

Applicable Chain Link

- **Chain Link 092-661:** IOT Environmental Sensor Error

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Humidity Sensor, PL9.1.19 ■ MCU Board, PL9.1.20 ■ Humidity Harness, PL10.1.4 	<ul style="list-style-type: none"> ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Xerographic” on page 10-30

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Humidity/Temperature Sensor for correct installation. 2. Is the Humidity Sensor correctly installed?	Go to step 2.	Reseat the Humidity Sensor (page 8-85). Go to step 2.
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Check the wiring harness connectors P/J26 and P/J261 between the MCU Board and the Humidity Sensor. 2. Are the connectors securely connected?	Go to step 4.	Reconnect the connectors. Go to step 4.
4	Check the Humidity Harness for continuity. 1. Disconnect P/J26 from the MCU Board and P/J261 from the Humidity Sensor. 2. Check continuity between P/J26 <=> P/J261.	Go to step 5.	Replace the Humidity Harness.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	Check the Humidity Sensor signal. 1. Disconnect P/J26 from the MCU Board. 2. Is there +5 V across ground <=> J26-4?	Replace the Humidity Sensor (page 8-85).	Replace the MCU Board (page 8-86).

Controller System Error

The printer controller has detected error.

Note

For Chain Link 116-324: This error has occurred due to an optional 256 MB memory card is installed. Data is corrupted due to that it was stored/ accessed at incorrect locations.

Applicable Chain Link

- **Chain Link 116-314:** On Board Network MAC Address Checksum Error
- **Chain Link 116-315:** ESS On Board RAM W/R Check Fail
- **Chain Link 116-317:** ESS ROM Check (Main) Fail
- **Chain Link 116-323:** ESS NVRAM1 W/R Check Fail
- **Chain Link 116-324:** ESS Illegal Exception
- **Chain Link 116-326:** ESS NVRAM2 W/R Check Fail
- **Chain Link 116-327:** ESS Instruction Cache Error
- **Chain Link 116-328:** ESS Data Cache Error
- **Chain Link 116-343:** ASIC Error (ASIC Fail)

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Image Processor Board, PL9.1.27 ■ Memory Card, PL9.1.30 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Print the Configuration page and check the total memory capacity. 2. Does the total memory capacity show 512 MB?	Go to step 2.	Go to step 3.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
2	1. Check the memory card in the optional memory slot (page 8-91). 2. Is there a 256 MB memory card installed?	Remove the optional 256 MB memory card (page 8-91).	Go to step 3.
3	1. Check the Image Processor Board for correct installation. 2. Is the Image Processor Board correctly installed?	Go to step 2.	Reseat the Image Processor Board (page 8-87).
4	Does the error still occur?	Replace the Image Processor Board (page 8-87).	Complete.

RAM Error

The printer controller has detected RAM error.

Applicable Chain Link

- **Chain Link 116-316:** ESS DIM Slot RAM W/R Check Fail
- **Chain Link 116-320:** ESS DIMM Slot RAM Error

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Image Processor Board, PL9.1.27 ■ Memory Card (Option), PL9.1.30 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Verify RAM is compatible with the printer. If RAM was recently installed, it may not be compatible. 2. Is RAM compatible?	Go to step 2.	Replace the Memory Card (page 8-91).
2	1. Check the Memory Card for correct installation. 2. Is the Memory Card correctly installed?	Go to step 3.	Complete.
3	1. Replace the Memory Card (page 8-91). 2. Does the error still occur?	Replace the Image Processor Board (page 8-87).	Complete.

NVRAM Error

When the printer is turned On, the error is detected between the NVRAM size required by the system and its actual size.

Applicable Chain Link

- **Chain Link 116-390:** ESS NVRAM1 Size and ID Check Fail

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Image Processor Board, PL9.1.27 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Image Processor Board for correct installation. 2. Is the Image Processor Board correctly installed?	Go to step 2.	Reseat the Image Processor Board (page 8-87).
2	Does the error still occur?	Replace the Image Processor Board (page 8-87).	Complete.

MACPHY Chip Test Error

MACPHY Chip Test error occurs.

Applicable Chain Link

- **Chain Link 116-392:** MACPHY Chip Test Error (Diag Mode)

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Image Processor Board, PL9.1.27 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Reboot the printer. 2. Does the error still occur?	Go to step 2.	Complete.
2	1. Reseat the Image Processor Board (page 8-87). 2. Does the error still occur?	Replace the Image Processor Board (page 8-87).	Complete.

MACPHY Internal Loop Test Error

MACPHY Internal Loop Test error occurs.

Applicable Chain Link

- **Chain Link 116-393:** MACPHY Int Loop Test Error (Diag Mode)

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Image Processor Board, PL9.1.27	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Reboot the printer. 2. Does the error still occur?	Go to step 2.	Complete.
2	1. Reseat the Image Processor Board (page 8-87). 2. Does the error still occur?	Replace the Image Processor Board (page 8-87).	Complete.

MACPHY External Loop Test Error

MACPHY External Loop Test error occurs.

Applicable Chain Link

- **Chain Link 116-394:** MACPHY Ext Loop Test Error (Diag Mode)

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Image Processor Board, PL9.1.27	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Reboot the printer. 2. Does the error still occur?	Go to step 2.	Complete.
2	1. Reseat the Image Processor Board (page 8-87). 2. Does the error still occur?	Replace the Image Processor Board (page 8-87).	Complete.

General Troubleshooting

In this chapter...

- Introduction
- System Startup
- Power On Self Test (POST)
- Service Diagnostics
- Service Diagnostics Menu Map
- Printer Components
- Duplex Components
- Service Diagnostics Tests
- Control Panel Troubleshooting
- Inoperable Printer Troubleshooting
- AC Power Supply Troubleshooting
- DC Power Supply Troubleshooting
- +24 VDC Interlock Switch
- Abnormal and Electrical Noise
- Operating System and Application Problems

Chapter 4

Introduction

This chapter covers the System Startup, Power On Self Test (POST), Service Diagnostics, and troubleshooting problems that are not associated with a Chain Link code or Control Panel error message.

For troubleshooting problems associated with a Chain Link code or Control Panel error message, refer to “Error Messages and Codes” on page 3-1. Print-quality problems are covered in “Print-Quality Troubleshooting” on page 5-1.

System Startup

Listed here is a typical startup routine from a cold start. The printer requires approximately 20 seconds to complete this sequence.

1. When the power switch is turned On, the “Health” LED on the Image Processor Board turns On immediately.
2. The Boot Loader checks for RAM present and functional. If an error is detected, RAM ERROR is displayed and the Health LEDs alternately blink at 1/2 second intervals.
3. The Boot Loader then loads and runs POST diagnostics.
4. POST turns Off the Health LED.
5. POST checks the Control Panel.
6. The Control Panel LED cycles: Green and Red simultaneously, and Green.
7. The Control Panel LED turns Green and Red and **Diagnosing...** message is displayed.
8. The Control Panel message changes to **Ready Calibrating** and then **Xerox (TM) Print Cartridge**.
9. The Control Panel LED turns Green and the **Ready** message is displayed.

Power On Self Test (POST)

POST Diagnostics provide a quick mean of isolating a defective subsystem associated with the Image Processor Board and SDRAM. POST returns control to the boot loader and the operating system is loaded.

The following tests are performed when the printer is powered On.

1. Checks and initializes CRU Register.
2. Initializes ASIC.
3. Checks RAM.
4. Initializes the Control Panel driver.
5. Processes the ROM Sum Check.
6. Initializes Memory Manager.
7. Initializes EEPROM driver.
8. Initializes IOT Controller.
9. Starts the Operating System process.
10. Printer is Ready.

POST Test Description

Test	Chain Link	Description
CodeROM	116-317	This test calculates the ROM checksum chip by chip and compares it with the value stored in the CodeROM itself. Checksum error is in the main program ROM.
EEPROM		This test writes/reads/verifies on the diagnostic area of the EEPROM.
	116-323	Error is detected in EEPROM0 during initialization.
	116-326	Error is detected in EEPROM1 during initialization.
DRAM		This test checks OPEN/SHORT of the address line of the DRAM. This test also writes/reads/verifies on the entire DRAM.
	116-315	Error is detected if included RAM is different.
	116-316	Error is detected if extended RAM is different.
	116-320	Error is detected if extended RAM is not supported.
MAC+PHY Test	116-352 116-392 116-393 116-394	This test performs PHY internal loopback.
ASIC	116-343	Performs register test.
PANEL		This test checks input and output of the Control Panel buttons.

POST Test Description (continued)

Test	Chain Link	Description
IOT	024-371	This test performs communication test with the Engine. This test also checks for Communication failure between the Engine and Controller.

Service Diagnostics

The Phaser 6280 Color Laser Printer has built-in diagnostics that allow access to Sensors, Clutches, Solenoids, printer status, turning the motors On and Off, and some NVRAM access. Using these tests, service technicians should be able to diagnose the problems quickly and isolate which component or sub assembly part needs replacement.

If confronted with an error that requires more than a cursory investigation to clear or when directed by a troubleshooting procedure, use Service Diagnostics to exercise selected sub-assemblies or parts in the vicinity of the reported error. Diagnostic tests are controlled from the Control Panel and are described in detail in “Service Diagnostics” on page 4-5.

Entering Service Diagnostics

1. Turn the printer power Off.
2. Press and hold the **Up** and **Down Arrow** buttons simultaneously and turn the printer power On.
3. **Diagnosing...** message is displayed.
4. Continue to hold the buttons until the **Service Mode** message is displayed on the Control Panel and release the buttons.

Using Service Diagnostics

Most of the diagnostic tests are straightforward and require no additional explanation, but there are some that require specific conditions be met to achieve meaningful results. These instructions cover each of the test groups, listing special instructions, conditions, or other information necessary to successfully interpret the results of the diagnostic tests.

Service Diagnostics Control Panel Button Descriptions

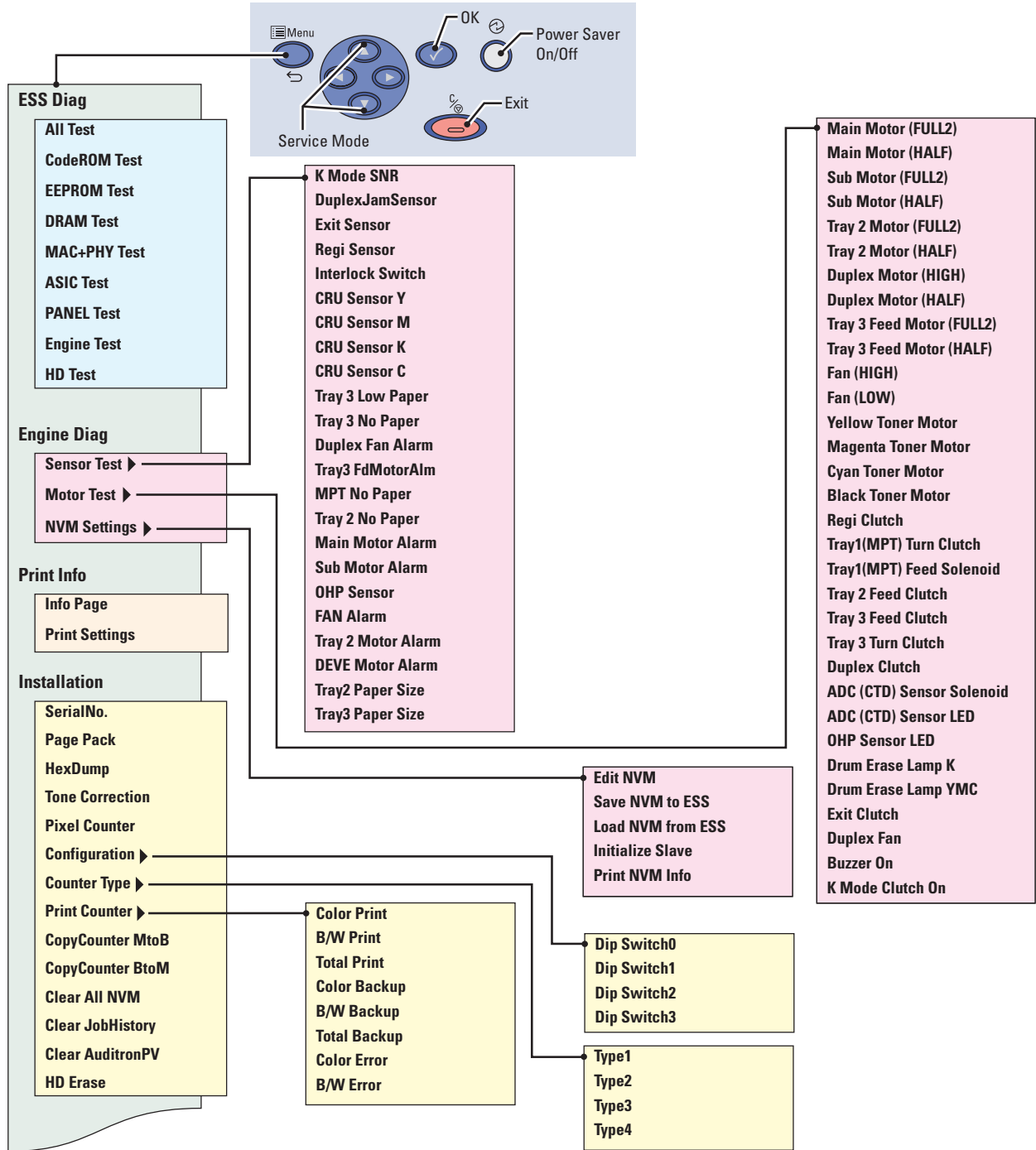
Control Panel Button Description

Button	Function
Menu	Displays printer menu.
Up	Moves from one item to another.
Down	Moves from one item to another.
Left	Moves the cursor to the left.
Right	Moves the cursor to the right.
OK	Confirms settings or executes a task.
Exit/Cancel	Resets a diagnostic item, cancels a task, or exit the menu.
Wake Up	Function not available in Diagnostics mode.

Service Diagnostics Menu Map

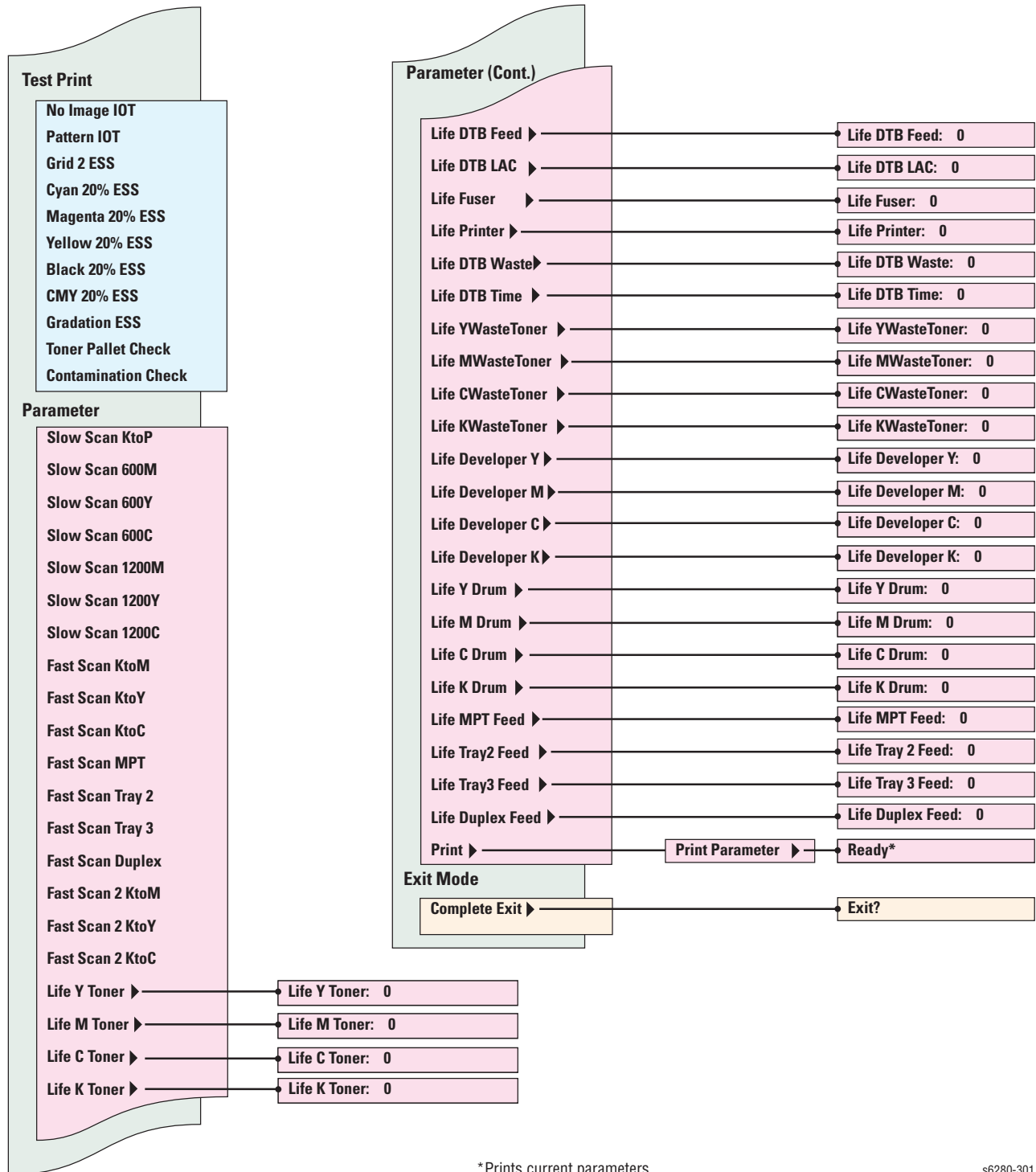
Menu Map - Page 1

To access Service Mode, press Up and Down Arrows at power ON.



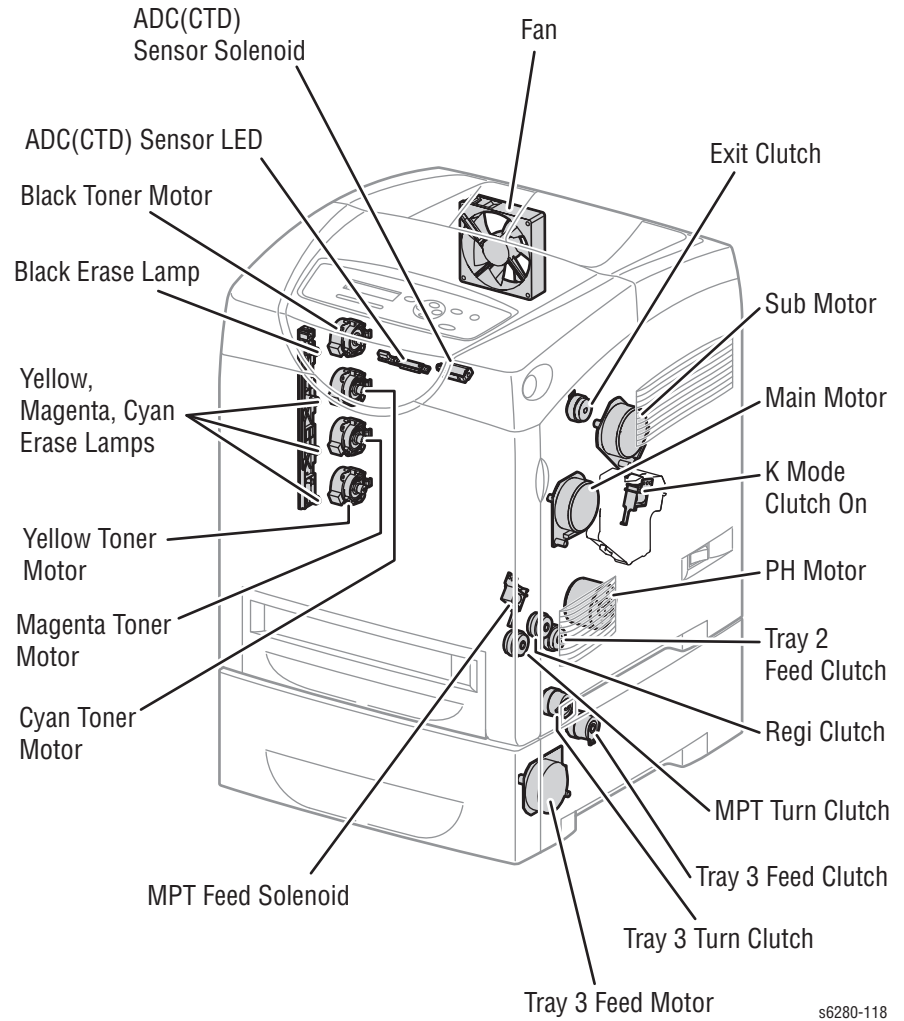
s6280-300

Menu Map - Page 2

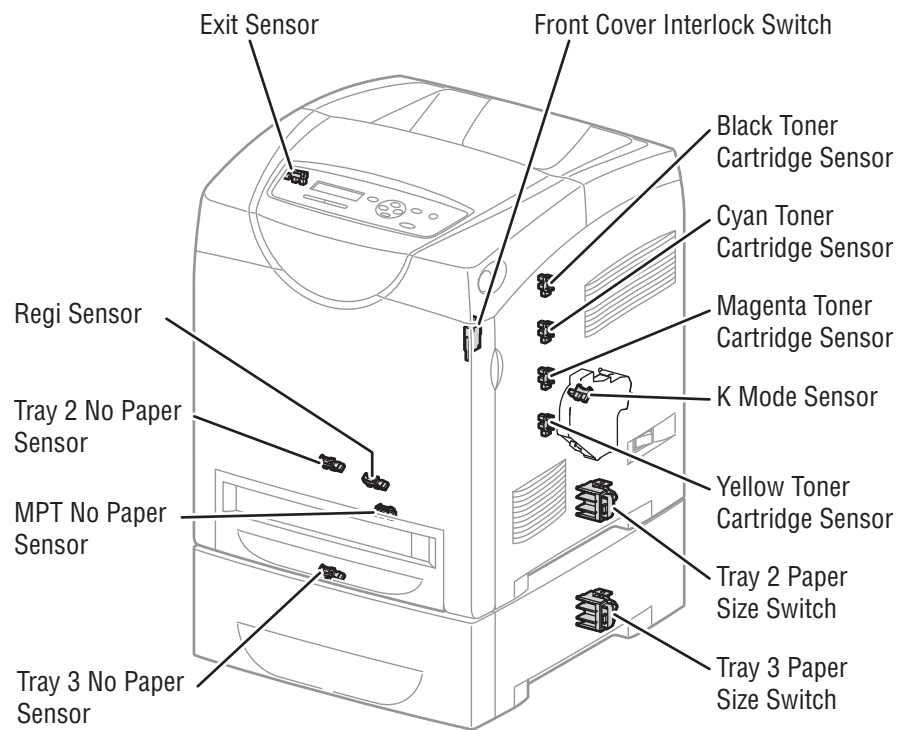


Printer Components

Motors, Clutches, Solenoids, Lamps



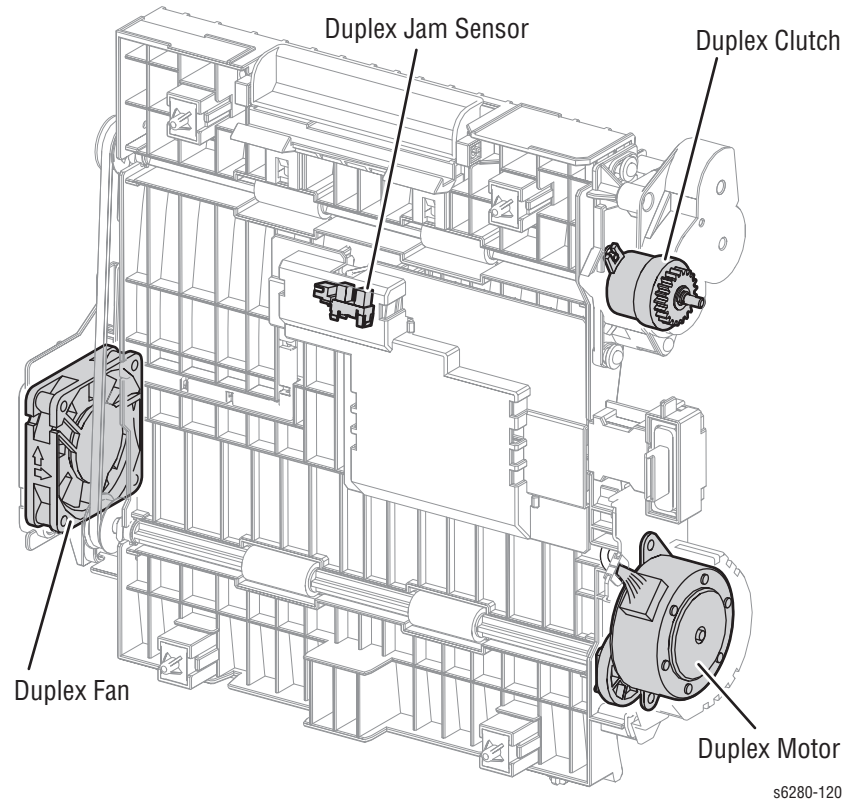
Sensors



s6280-119

Duplex Components

Clutch, Fan, Motor, Sensor



Service Diagnostics Tests

Service Diagnostic Tests and Utilities

Service Diagnostic Test Table

Test	Control Panel Display	Test Description
ESS Diag		Tests memory devices on the Controller.
All Test	All Test <ul style="list-style-type: none"> ■ Start ■ Processing ■ Check OK 	Tests all Controller Diag tests except for the MAC+PHY and Control Panel tests.
CodeROM Test	CodeROM Test <ul style="list-style-type: none"> ■ Start ■ Processing ■ Check OK 	Calculates the ROM checksum chip by chip and compares it with the value stored in the CodeROM itself beforehand. When the checksum is identical to the stored value, this test determines the chip is normal. Note: Run this test when error 116-317 occurred.
EEPROM Test	EEPROM Test <ul style="list-style-type: none"> ■ Start ■ Processing ■ Check OK 	Performs write/read/verification of the test patterns (0xff, 0xaa, 0x55, and 0x00) on one byte at every 0x400 from the first address of EEPROM. Note: Run this test when errors 116-323, 116-324, and 116-327 occurred.
DRAM Test	DRAM Test <ul style="list-style-type: none"> ■ Start ■ Processing ■ Check OK 	Tests Open/Short with the address line of the DRAM, and performs write/read/verification on the entire DRAM. Note: Run this test when errors 116-315, 116-316, and 116-320 occurred.
MAC+PHY Test	MAC+PHY Test <ul style="list-style-type: none"> ■ Start ■ Processing ■ Check OK 	Tests PHY Internal loopback test. Note: Run this test when 116-352, 116-392, 116-393, and errors 116-394 occurred.
ASIC Test	ASIC Test <ul style="list-style-type: none"> ■ Start ■ Check OK 	Performs register test. Note: Run this test when error 116-343 occurred.
PANEL Test	PANEL Test <ul style="list-style-type: none"> ■ Start 	Checks input and output of the Control Panel buttons. When buttons are pressed as shown, the test displays the corresponding contents on the LED.

Button LCD

Note: To exit the Panel Test, press the **Up** and **Down** buttons simultaneously.

Up Displays Up on the LCD.

Down Displays Down on the LCD.

Service Diagnostic Test Table (continued)

Test	Control Panel Display	Test Description
Left	Displays Left on the LCD.	
Right	Displays Right on the LCD.	
OK	Displays Set on the LCD.	
Menu	Displays Menu on the LCD.	
Cancel	Displays Cancel Job on the LCD.	
Power Saver	Displays Power Saver on the LCD.	
Engine Test	Engine Test <ul style="list-style-type: none"> ■ Start ■ Check OK 	Performs communication test with the Engine Controller. Then it reads the status register of the engine to check whether commands can be exchanged with the engine. Note: Run this test when errors 116-370 and 116-371 occurred.
HD Test <i>(HD Test is not available when Hard Drive not installed)</i>	HD Test <ul style="list-style-type: none"> ■ Start ■ Check OK 	Tests the Hard Drive. Insertion test is performed first.
Engine Diag	Performs function checks on components whether operate normally or not. Note: During Engine Diag test, other Service Diagnostics functions cannot be performed simultaneously.	
Sensor Test		Tests the sensors of the printer.
K Mode SNR	K Mode SNR <ul style="list-style-type: none"> ■ OFF ■ H - 0 ■ L - 0 	Tests the K Mode Sensor.
Duplex Jam Sensor	DuplexJamSensor <ul style="list-style-type: none"> ■ OFF ■ L - 0 ■ H - 0 	Tests the Duplex Jam Sensor.
Exit Sensor	Exit Sensor <ul style="list-style-type: none"> ■ OFF ■ L - 0 ■ H - 0 	Tests the Exit Sensor.
Regi Sensor	Regi Sensor <ul style="list-style-type: none"> ■ OFF ■ L - 0 ■ H - 0 	Tests the Registration Sensor.
Interlock Switch	Interlock Switch <ul style="list-style-type: none"> ■ OFF ■ L - 0 ■ H - 0 	Tests the Front Cover Interlock Switch.

Service Diagnostic Test Table (continued)

Test	Control Panel Display	Test Description
CRU Sensor (Y)	CRU Sensor Y <ul style="list-style-type: none"> ■ OFF ■ H - 0 ■ L - 0 	Tests the Yellow Print Cartridge Sensor.
CRU Sensor (M)	CRU Sensor M <ul style="list-style-type: none"> ■ OFF ■ H - 0 ■ L - 0 	Tests the Magenta Print Cartridge Sensor.
CRU Sensor (K)	CRU Sensor K <ul style="list-style-type: none"> ■ OFF ■ H - 0 ■ L - 0 	Tests the Black Print Cartridge Sensor.
CRU Sensor (C)	CRU Sensor C <ul style="list-style-type: none"> ■ OFF ■ H - 0 ■ L - 0 	Tests the Cyan Print Cartridge Sensor.
Tray 3 Low Paper	Tray 3 Low Paper <ul style="list-style-type: none"> ■ OFF ■ L - 0 ■ H - 0 	Tests Tray 3 Low Paper Sensor.
Tray 3 No Paper	Tray 3 No Paper <ul style="list-style-type: none"> ■ OFF ■ L - 0 ■ H - 0 	Tests Tray 3 No Paper Sensor.
Duplex Fan Alarm	Duplex Fan Alarm <ul style="list-style-type: none"> ■ OFF ■ L - 0 ■ H - 0 	Tests Duplex Fan Alarm.
Tray 3 Feed Motor Alarm	Tray 3 FdMotorAlm <ul style="list-style-type: none"> ■ OFF ■ L - 0 ■ H - 0 	Tests Tray 3 Feed Motor Alarm.
MPT No Paper	MPT No Paper <ul style="list-style-type: none"> ■ OFF ■ H - 0 ■ L - 0 	Tests Tray 1 No Paper Sensor.
Tray 2 No Paper	Tray 2 No Paper <ul style="list-style-type: none"> ■ OFF ■ H - 0 ■ L - 0 	Tests Tray 2 No Paper Sensor.
Main Motor Alarm	Main Motor Alarm <ul style="list-style-type: none"> ■ OFF ■ H - 0 ■ L - 0 	Tests Main Motor Alarm.

Service Diagnostic Test Table (continued)

Test	Control Panel Display	Test Description
Sub Motor Alarm	Sub Motor Alarm ■ H - 0 ■ L - 0	Tests Sub Motor Alarm.
OHP Sensor	OHP Sensor ■ L - 0 ■ H - 0	Tests the OHP Sensor.
Fan Alarm	FAN Alarm ■ OFF ■ L - 0 ■ H - 0	Tests Fan Alarm.
Tray 2 Motor Alarm	PH Motor Alarm ■ OFF ■ H - 0 ■ L - 0	Tests Tray 2 Motor Alarm.
Deve Motor Alarm	DEVE Motor Alarm ■ OFF ■ H - 0 ■ L - 0	Tests Developer Motor Alarm.
Tray 2 Paper Size	Tray2 Paper Size ■ OFF ■ Paper Size (Letter - 8.5x11)	Tests Tray 2 Paper Size Switch.
Tray 3 Paper Size	Tray3 Paper Size ■ OFF ■ Paper Size (Legal - 8.5x14)	Tests Tray 3 Paper Size Switch.
Motor Test	<i>Use the Up Arrow button to scroll through the menu.</i>	Tests the Motors of the printer.
Main Motor (Full2)	Main Motor (FULL2)	Tests the Main Motor.
Main Motor (Half)	Main Motor (HALF)	
Sub Motor (Full2)	Sub Motor (FULL2)	Tests the Sub Motor.
Sub Motor (Half)	Sub Motor (HALF)	
Tray 2 Motor (Full2)	Tray 2 Motor (FULL2)	Tests the Tray 2 Motor.
Tray 2 Motor (Half)	Tray 2 Motor (HALF)	
Duplex Motor (High)	Duplex Motor (HIGH)	Tests the Duplex Motor.
Duplex Motor (Half)	Duplex Motor (HALF)	

Service Diagnostic Test Table (continued)

Test	Control Panel Display	Test Description
Tray 3 Feed Motor (Full2)	Tray 3 Feed Motor (FULL2)	Tests the Tray 3 Feed Motor.
Tray 3 Feed Motor (Half)	Tray 3 Feed Motor (HALF)	
Fan (High)	Fan (HIGH)	Tests the printer Fan.
Fan (Low)	Fan (LOW)	
Yellow Toner Motor	Yellow Toner Motor	Tests the yellow Toner Motor.
Magenta Toner Motor	Magenta Toner Motor	Tests the magenta Toner Motor.
Cyan Toner Motor	Cyan Toner Motor	Tests the cyan Toner Motor.
Black Toner Motor	Black Toner Motor	Tests the black Toner Motor.
Regi Clutch	Regi Clutch	Tests the Registration Clutch.
Tray1 (MPT) Turn Clutch	Tray1(MPT) Turn Clutch	Tests the Tray 1 Turn Clutch.
Tray 1 (MPT) Feed Solenoid	Tray1(MPT) Feed Solenoid	Tests the Tray 1 Feed Solenoid.
Tray 2 Feed Clutch	Tray 2 Feed Clutch	Tests the Tray 2 Feed Clutch.
Tray 3 Feed Clutch	Tray 3 Feed Clutch	Tests the Tray 3 Feed Clutch.
Tray 3 Turn Clutch	Tray 3 Turn Clutch	Tests the Tray 3 Turn Clutch.
Duplex Clutch	Duplex Clutch	Tests the Duplex Clutch.
ADC (TCD) Sensor Solenoid	ADC (TCD) Sensor Solenoid	Tests the ADC Sensor Solenoid.
ADC (TCD) Sensor LED	ADC (TCD) Sensor LED	Tests the ADC Sensor LED.
OHP Sensor LED	OHP Sensor LED	Tests the OHP Sensor LED.
Drum Erase Lamp K	Drum Erase Lamp K	Tests the black Erase Lamp.
Drum Erase Lamp YMC	Drum Erase Lamp YMC	Tests the yellow, magenta, and cyan Erase Lamps.
Exit Clutch	Exit Clutch	Tests the Exit Clutch.
Duplex Fan	Duplex Fan	Tests the Duplex Fan.
Buzzer On	Buzzer On	Tests buzzer On.

Service Diagnostic Test Table (continued)

Test	Control Panel Display	Test Description
K Mode Clutch On	K Mode Clutch On	Tests the K Mode Clutch.
NVM Settings	<p><Press the Up or Down button to move from one item to another> <Press the Cancel button to move one level up the menu> <Press the Set button to move to the execution level></p>	Edits, saves, loads, and prints NVRAM information.
Edit NVM	<p>Edit NVM</p> <ul style="list-style-type: none"> ■ Ad0000=00000000* ■ Please wait <p><Press the Left or Right button to move the cursor> <Press the Up or Down button to change the value at the cursor> <Press the Set button to save the value in Engine NVM> <Press the Cancel button to move one level up the menu></p>	Displays the current NVRAM value. Use this function to edit NVRAM information.
Save NVM to ESS	<p>Save NVM to ESS</p> <ul style="list-style-type: none"> ■ SaveNVM to ESS OK? ■ Processing ■ Saved ■ Please wait <p><Press the Set button to save the value in the Controller NVM> <Press the Cancel button to move one level up the menu></p>	Saves the NVRAM information of the Engine in the Controller. NVRAM addresses to be saved are as follows: 1000-10FF, Total: 256Byte Note: Information saved in the Controller NVM can be initialized using Clear All NVM .
Load NVM	<p>Load NVM</p> <ul style="list-style-type: none"> ■ LoadNVM from ESS OK? ■ Processing ■ Loaded ■ Please wait <p><Press the Set button to load the value saved in the Controller NVM to the Engine> <Press the Cancel button to move one level up the menu></p>	Loads NVRAM information of the Engine saved in the Controller into the Engine. 1000-10FF / 1100-11FF / 1200-12FF Note: Information saved in the Controller NVM can be initialized using Clear All NVM .

Service Diagnostic Test Table (continued)

Test	Control Panel Display	Test Description
Initialize Slave	<p>Initialize Slave</p> <ul style="list-style-type: none"> ■ Initialize Slave OK? ■ Processing ■ Initialized ■ Please wait <p><Press the Set button to run Slave Initialization> <Press the Cancel button to move one level up the menu></p>	Initializes Slave.
Print NVM Info	<p>Print NVM Info</p> <ul style="list-style-type: none"> ■ Processing ■ Please wait <p><Press the Set button to run the test> <Press the Cancel button to move one level up the menu></p>	Prints NVRAM information saved in the Controller.
Print Info	<p>Provides printer configurations and settings information.</p> <p>Menu Buttons</p> <p><Press the Up or Down button to move from one item to another> <Press the Cancel button to move one level up the menu> <Press the Set button to move to the execution level></p>	
Info Page	<p>Info Page</p> <ul style="list-style-type: none"> ■ Ready ■ Processing 	<p>Prints the software version of the printer controller. Use this function to verify the printer configuration. The Configuration Page contains:</p> <ul style="list-style-type: none"> ■ Engine installation unit information ■ Standard Tray ■ Optional Tray (displaying version) ■ Optional Duplex Unit (displaying version) ■ Engine ROM Revision No. ■ MCU NVM Revision No.

Service Diagnostic Test Table (continued)

Test	Control Panel Display	Test Description
Print Settings	Print Settings <ul style="list-style-type: none"> ■ Ready ■ Processing 	Prints the configured settings through the Control Panel. The Print Settings page contains: <ul style="list-style-type: none"> ■ Serial No. ■ HexDump On/Off Information ■ Tone Correction On/Off Information ■ Color Print Count ■ B/W Print Count ■ Total Print Count ■ Color Backup Count ■ B/W Backup Count ■ Total Backup Count ■ Color Error Count ■ B/W Error Count
Installation	Provides printer installation information.	
Serial No.	SerialNo. <ul style="list-style-type: none"> ■ NKAxxxxxx or <ul style="list-style-type: none"> ■ NKBxxxxxx 	Displays the 6 digit Serial Number. Note: This information is not initialized with any key action.
PagePack	PagePack <ul style="list-style-type: none"> ■ Disable ■ Enable 	
Hex Dump	HexDump <ul style="list-style-type: none"> ■ OFF * ■ ON <Press the Up or Down button to switch HexDump On/Off> <Press the Set button to save the setting and move one level up the menu> <Press the Cancel button to move one level up the menu without saving the value>	Displays the current HexDump On/Off information and sets mode On/Off. Note: This information is initialized by Clear All NVM . Note: When the Counter Type has been changed, an "*" is displayed next to the text.

Service Diagnostic Test Table (continued)

Test	Control Panel Display	Test Description
Tone Correction	<p>Tone Correction</p> <ul style="list-style-type: none"> ■ ON * ■ OFF <p><Press the Up or Down button to switch Tone Correction On/Off> <Press the Set button to save the setting and move one level up the menu> <Press the Cancel button to move one level up the menu without saving the value></p>	<p>Controls TRC in conjunction with process control to keep the printer density constant. This function is implemented to turn Off tone correction control in case correction exceeds the limit due to machine-to-machine variation.</p> <p>Sets the printer Tone Correction mode On/Off.</p> <p>Note: When the Tone Correction has been changed, an "*" is displayed next to the text.</p> <p>Note: This information can be initialized by Initialize NVM (Printer Menu > Admin Menu > Maintenance Mode > Initialize NVM).</p>
Pixel Counter	<p>Pixel Counter</p> <ul style="list-style-type: none"> ■ Y: nn.n ■ C: nn.n ■ M: nn.n ■ K: nn.n <p><Press the Set or Cancel button to move one level up the menu></p>	<p>Displays the ratio (% used) of the number of pixel per C/M/Y/K counted by the Controller to A4 size area except 4 mm area from the edge on the last page print.</p> <ul style="list-style-type: none"> ■ 100% = empty print cartridge <p>The value is rounded off to one decimal place.</p> <p>For B/W print, only K is displayed. The ranges are from 0-100% for each color (CMYK).</p>
Configuration <i>(Do not use - for Development Only)</i>	<p>Configuration</p> <ul style="list-style-type: none"> ■ Dip Switch0 ■ 00000000 * ■ Dip Switch1 ■ 00000000 * ■ Dip Switch2 ■ 00000000 * ■ Dip Switch3 ■ 00000000 * 	<p>Operates the DIP switch on NVRAM of the Controller.</p> <p>Available values are 0 and 1.</p> <p>Note: This information is initialized by Clear All NVM.</p>
Counter Type	<p>Counter Type</p> <ul style="list-style-type: none"> ■ Type1 * ■ Type2 ■ Type3 ■ Type4 <p><Press the Up or Down button to change counter type> <Press the Set button to save the setting> <Press the Cancel button to move one level up the menu></p>	<p>Sets counter type from 1-4.</p> <p>Note: When the Counter Type has been changed, an "*" is displayed next to the text.</p>

Service Diagnostic Test Table (continued)

Test	Control Panel Display	Test Description
Print Counter	<p>Print Counter</p> <ul style="list-style-type: none"> ■ Color Print ■ n ■ B/W Print ■ n ■ Total Print ■ n ■ Color Backup ■ n ■ B/W Backup ■ n ■ Total Backup ■ n ■ Color Error ■ n ■ B/W Error ■ n <p>Menu Buttons</p> <p><Press the Up or Down button to move from one item to another></p> <p><Press the Cancel button to move one/two level(s) up the menu></p> <p><Press the Set button to run the test></p>	Operates the print counter.
Copy Counter MtoB	<p>CopyCounter MtoB</p> <ul style="list-style-type: none"> ■ OK? ■ Processing ■ Copied <p><Press the Cancel button to move one level up the menu></p> <p><Press the Set button to run the test></p>	<p>Copies the values from Master NVRAM to Backup NVRAM.</p> <ul style="list-style-type: none"> ■ Device-specific information called * ■ “Personal info” in the first 128 Byte ■ PV counter master ■ Printer counter master
Copy Counter BtoM	<p>CopyCounter BtoM</p> <ul style="list-style-type: none"> ■ OK? ■ Processing ■ Copied <p><Press the Cancel button to move one level up the menu></p> <p><Press the Set button to run the test></p>	<p>Copies the values from Backup NVRAM to Master NVRAM.</p> <ul style="list-style-type: none"> ■ Device-specific information called “Personal info” in the first 128 Byte ■ PV counter backup ■ Printer counter backup

Service Diagnostic Test Table (continued)

Test	Control Panel Display	Test Description
Clear All NVM	Clear All NVM <ul style="list-style-type: none"> ■ OK? ■ Processing ■ Initialized <Press the Cancel button to move one level up the menu> <Press the Set button to run the test>	Clears all NVRAM of the Controller including billing.
Clear Job History	Clear JobHistory <ul style="list-style-type: none"> ■ OK? ■ Processing ■ Initialized <Press the Cancel button to move one level up the menu> <Press the Set button to run the test>	Deletes the job history data. Note: Job History can also be initialized by Clear All NVM .
Clear Auditron PV	Clear AuditronPV <ul style="list-style-type: none"> ■ OK? ■ Processing ■ Initialized <Press the Cancel button to move one level up the menu> <Press the Set button to run the test>	Initializes Auditron or Print Volume. Print Volume and Auditron work exclusively and share the setting memory area. When Auditron is enabled, user account and restricted information is cleared. When Print Volume is enabled, Print Volume Counter is initialized. Note: AuditronPV can also be initialized by Clear All NVM .
HD Erase <i>(not displayed when Hard Drive not installed)</i>	HD Erase <ul style="list-style-type: none"> ■ OK? ■ Processing ■ Initialized <Press the Cancel button to move one level up the menu> <Press the Set button to execute the initialization>	Erases the Hard Disk Drive. This feature is available only when a Hard Disk Drive is installed.
Test Print	Provides various test prints to be used for troubleshooting the printer. Menu Buttons <Press the Up or Down button to switch from one item to another> <Press the Cancel button to move one/two level(s) up the menu> <Press the Set button to run the test>	

Service Diagnostic Test Table (continued)

Test	Control Panel Display	Test Description
No Image IOT	No Image IOT <ul style="list-style-type: none"> ■ Ready ■ Processing 	Prints a blank page.
Pattern IOT	Pattern IOT <ul style="list-style-type: none"> ■ Ready ■ Processing 	Prints the printer built-in Test Pattern 600 DPI. This test checks the print function of the printer.
Grid 2 ESS	Grid 2 ESS <ul style="list-style-type: none"> ■ Ready ■ Processing 	Prints the Controller built-in grid pattern. This test checks the print function of the printer.
Cyan 20% ESS	Cyan 20% ESS <ul style="list-style-type: none"> ■ Ready ■ Processing 	Prints 20% density paint pattern of cyan on the whole page.
Magenta 20% ESS	Magenta 20% ESS <ul style="list-style-type: none"> ■ Ready ■ Processing 	Prints 20% density paint pattern of magenta on the whole page.
Yellow 20% ESS	Yellow 20% ESS <ul style="list-style-type: none"> ■ Ready ■ Processing 	Prints 20% density paint pattern of yellow on the whole page.
Black 20% ESS	Black 20% ESS <ul style="list-style-type: none"> ■ Ready ■ Processing 	Prints 20% density paint pattern of black on the whole page.
CMY 20% ESS	CMY 20% ESS <ul style="list-style-type: none"> ■ Ready ■ Processing 	Prints 20% density paint pattern of cyan, magenta, and black combined on the whole page.
Gradation ESS	Gradation ESS <ul style="list-style-type: none"> ■ Ready ■ Processing 	Prints a pattern in which the density of each cyan, magenta, yellow, or black is varied from 0-100%.
Toner Pallet Check	Toner Pallet Check <ul style="list-style-type: none"> ■ Ready ■ Processing 	Prints 100% density color pattern of Y/M/C/K. Use this pattern to check density of each print cartridge.
Contamination Check	Contamination Chk <ul style="list-style-type: none"> ■ Ready ■ Processing 	Prints 5 pages: <ul style="list-style-type: none"> ■ 4 pages of pattern (1 each for yellow, magenta, cyan, and black) with 20% density. ■ 1 defect list of intervals by component fault. Use this list to check the size of streaks, stripes, and contamination by using the scales and identify a part to be replaced.
Parameter	Reads/writes the parameter values, errors, and life counter values stored in the printer.	

Service Diagnostic Test Table (continued)

Test	Control Panel Display	Test Description
	Menu Buttons <Press the Up or Down button to move from one item to another or change the value> <Press the Cancel button to move to one/two level(s) up the menu without saving the value> <Press the Set button to run the test or the value in NVM and move one level up the menu>	Note: After the setting has been changed, the “*” at the right end disappears. Sets registration in the paper feeding direction. Note: When the value is minimum or maximum, pressing the Up or Down button does not change the value.
Slow Scan KtoP	Slow Scan KtoP ■ -128 * ■ : ■ 127 *	Adjusts the registration in the paper feeding direction.
Slow Scan 600M	Slow Scan 600M ■ -30 * ■ : ■ 30 *	
Slow Scan 600Y	Slow Scan 600Y ■ -30 * ■ : ■ 30 *	
Slow Scan 600C	Slow Scan 600C ■ -30 * ■ : ■ 30 *	
Slow Scan 1200M	Slow Scan 1200M ■ -60 * ■ : ■ 60 *	
Slow Scan 1200Y	Slow Scan 1200Y ■ -60 * ■ : ■ 60 *	
Slow Scan 1200C	Slow Scan 1200C ■ -60 * ■ : ■ 60 *	
Fast Scan KtoM	Fast Scan KtoM ■ -30 * ■ : ■ 30 *	Sets the registration in the scanning direction for Tray 1 (MPT), Tray 2, Tray 3, and Duplex Unit.

Service Diagnostic Test Table (continued)

Test	Control Panel Display	Test Description
Fast Scan KtoY	Fast Scan KtoY ■ -30 * ■ : ■ 30 *	
Fast Scan KtoC	Fast Scan KtoC ■ -30 * ■ : ■ 30 *	
Fast Scan Tray 1 (MPT)	Fast Scan MPT ■ -30 * ■ : ■ 30 *	
Fast Scan Tray 2	Fast Scan Tray 2 ■ -30 * ■ : ■ 30 *	
Fast Scan Tray 3	Fast Scan Tray 3 ■ -30 * ■ : ■ 30 *	
Fast Scan Duplex	Fast Scan Duplex ■ -30 * ■ : ■ 30 *	
Fast Scan 2 KtoM	Fast Scan 2 KtoM ■ -1 * ■ : ■ 2 *	
Fast Scan 2 KtoY	Fast Scan 2 KtoY ■ -1 * ■ : ■ 2 *	
Fast Scan 2 KtoC	Fast Scan 2 KtoC ■ -1 * ■ : ■ 2 *	
Life Y Toner	Life Y Toner ■ 0	Reads life counter of the yellow toner.
Life M Toner	Life M Toner ■ 0	Reads life counter of the magenta toner.
Life C Toner	Life C Toner ■ 0	Reads life counter of the cyan toner.
Life K Toner	Life K Toner ■ 0	Reads life counter of the black toner.

Service Diagnostic Test Table (continued)

Test	Control Panel Display	Test Description
Life DTB Feed	Life DTB Feed ■ 0	Reads life counter of the Belt Page Count.
Life DTB LAC	Life DTB LAC ■ 0	Reads life counter of the Direct Belt Transfer. This parameter counts the number of toner output mode.
Life Fuser	Life Fuser ■ 0	Reads life counter of the Fuser.
Life Printer	Life Printer ■ 0	Reads life counter of the Printer.
Life DTB Waste	Life DTB Waste ■ 0	Reads life counter of the Belt Waste Count.
Life DTB Time	Life DTB Time ■ 0	Reads life counter of the Belt Rotation Count.
Life Y Waste Toner	Life YWaste Toner ■ 0	Reads life counter of the yellow Waste Toner.
Life M Waste Toner	Life MWaste Toner ■ 0	Reads life counter of the magenta Waste Toner.
Life C Waste Toner	Life CWaste Toner ■ 0	Reads life counter of the cyan Waste Toner.
Life K Waste Toner	Life KWaste Toner ■ 0	Reads life counter of the black Waste Toner.
Life Developer Y	Life Developer Y ■ 0	Reads life counter of the yellow Developer.
Life Developer M	Life Developer M ■ 0	Reads life counter of the magenta Developer.
Life Developer C	Life Developer C ■ 0	Reads life counter of the cyan Developer.
Life Developer K	Life Developer K ■ 0	Reads life counter of the black Developer.
Life Y Drum	Life Y Drum ■ 0	Reads life counter of the yellow OPC Drum.
Life M Drum	Life M Drum ■ 0	Reads life counter of the magenta OPC Drum.
Life C Drum	Life C Drum ■ 0	Reads life counter of the cyan OPC Drum.
Life K Drum	Life K Drum ■ 0	Reads life counter of the black OPC Drum.
Life MPT Feed	Life MPT Feed ■ 0	Reads life counter of the Tray 1 (MPT) Feed.

Service Diagnostic Test Table (continued)

Test	Control Panel Display	Test Description
Life Tray 2 Feed	Life Tray2 Feed ■ 0	Reads life counter of the Tray 2 Feed.
Life Tray 3 Feed	Life Tray3 Feed ■ 0	Reads life counter of the Tray 3 Feed.
Life Duplex Feed	Life Duplex Feed ■ 0	Reads life counter of the Duplex Feed.
Print	Print ■ Ready	Prints current parameters.
Exit Mode	Reads/writes the parameter values, errors, and life counter values stored in the printer.	
	<p>Menu Buttons <Press the Cancel button to move one/two level(s) up the menu> <Press the Set button to move to the Execution level or reboot the printer></p>	
Complete Exit	Complete Exit ■ Exit?	Exits the Service Diagnostic menu.

Sensor Tests

K Mode Sensor

Caution

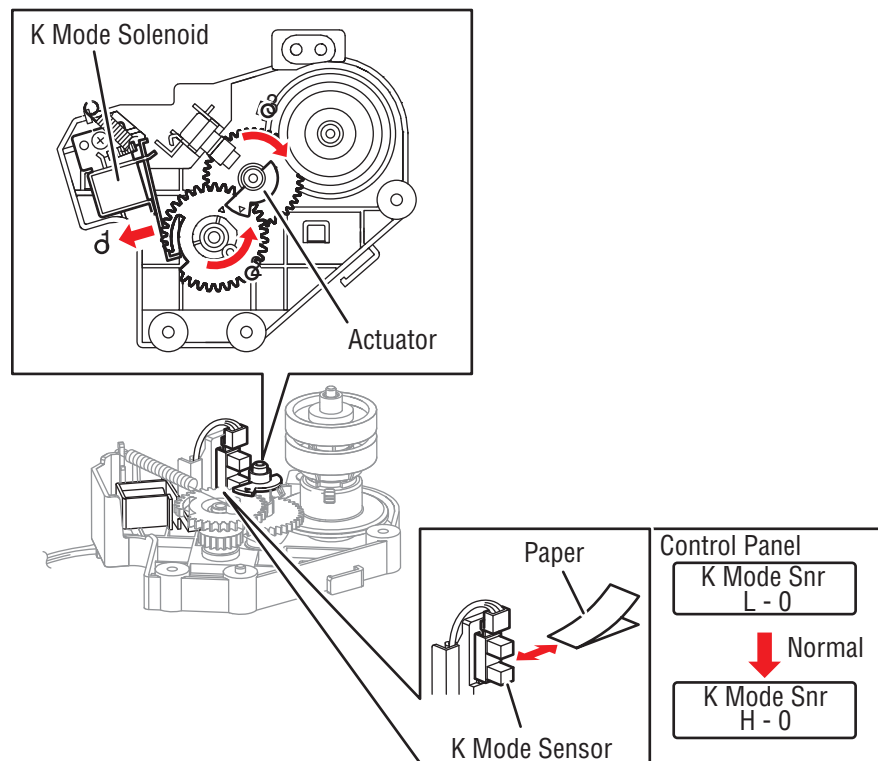
When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Perform the K Mode Sensor test: **Engine Diag > Sensor Test > K Mode SNR.**
3. Open the Front Cover.
4. Remove the Rear Cover (page 8-12).
5. Remove the Right Side Cover (page 8-13).

Note

For the following step, only rotate the K Drive Assembly to access the gear. Do not disconnect the wiring harnesses.

6. Remove the K Drive Assembly (page 8-76).
7. Press the lever mounted on the Solenoid to retract the actuator from the sensor.
8. Insert a sheet of paper between the sensor back and forth and check the information on the Control Panel display. The Low and High values change from 0 up to 99.



s6280-121

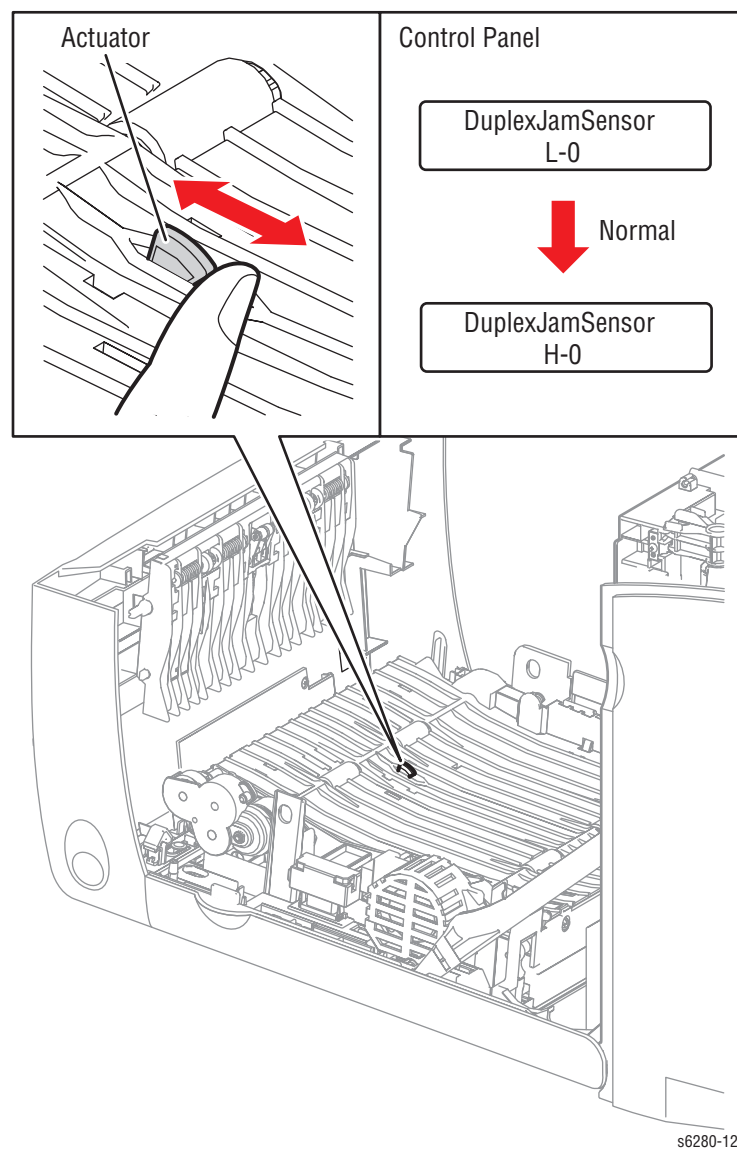
9. Press the **Cancel** button to stop the K Mode Mode Sensor test.

Duplex Jam Sensor

Caution

When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Perform the Duplex Jam Sensor test: **Engine Diag > Sensor Test > DuplexJamSensor**.
6. Move the Actuator back and forth and check the information on the Control Panel display. The Low and High values change from 0 up to 99.



s6280-122

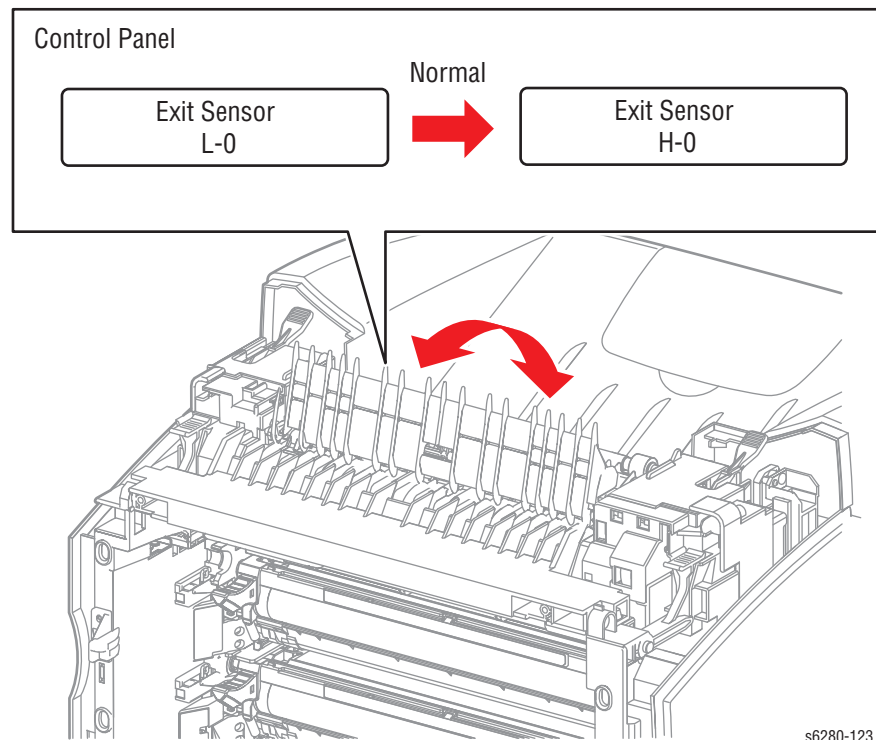
7. Press the **Cancel** button to stop the Duplex Jam Sensor test.

Exit Sensor

Warning

Ensure to wait for the Fuser to cool down before starting the procedure.

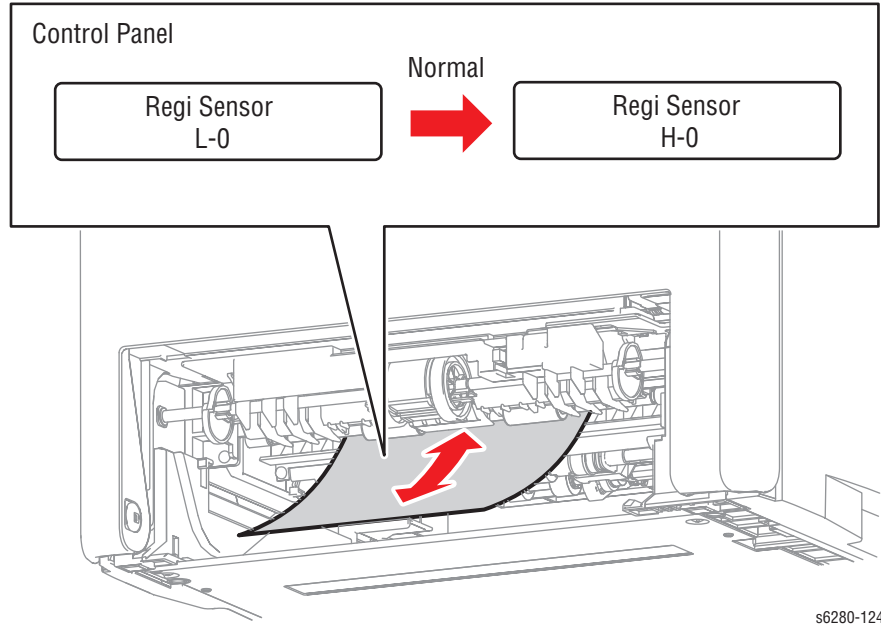
1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Perform the Duplex Jam Sensor test: **Engine Diag** > **Sensor Test** > **Exit Sensor**.
5. Move the Sensor up and down and check the information on the Control Panel display. The Low and High values change from 0 up 99.



6. Press the **Cancel** button to stop the Exit Sensor test.

Regi Sensor

1. Enter the Service Diagnostic menu (page 4-5).
2. Remove Tray 2.
3. Perform the Regi Sensor test: **Engine Diag > Sensor Test > Regi Sensor**.
4. Insert one sheet of paper in between the Registration Chute and the Turn Clutch until the paper stops.
5. Slowly pull out the sheet of paper while checking the information on the Control Panel display. The Low and High values change from 0 up 99.



s6280-124

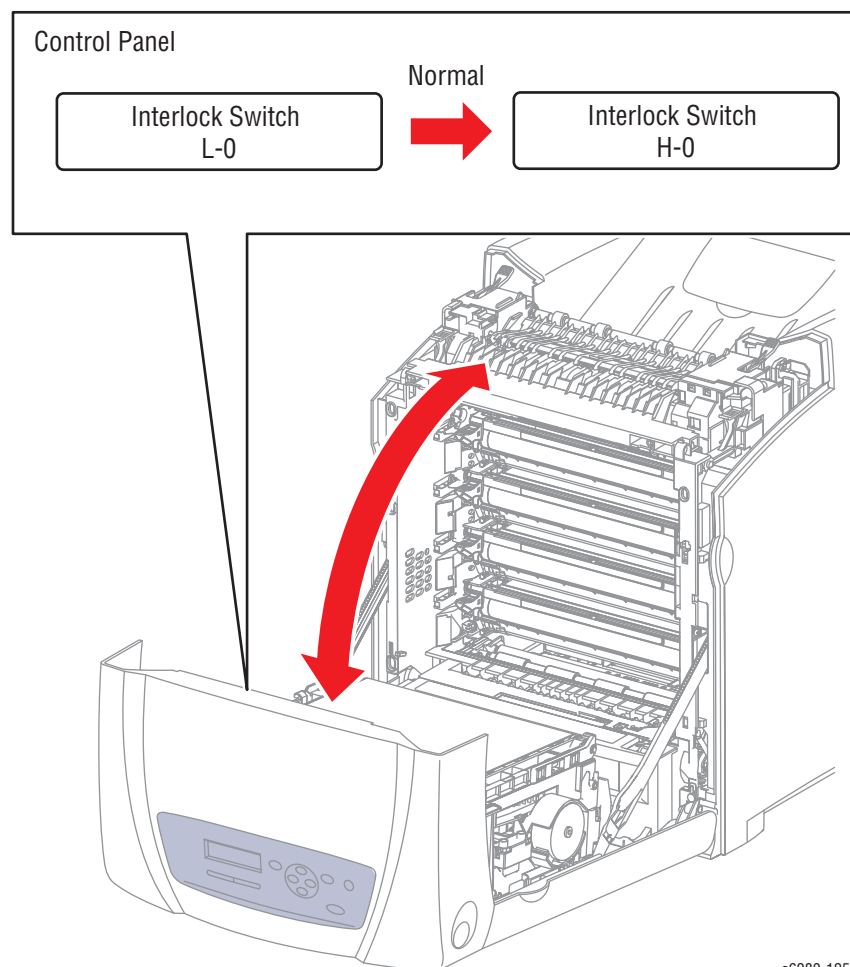
6. Press the **Cancel** button to stop the Regi Sensor test.

Interlock Switch

Caution

When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Perform the Interlock Switch test: **Engine Diag > Sensor Test > Interlock Switch**.
6. Open and close the Front Door while checking the information on the Control Panel display. The Low and High values change from 0 up to 99.



s6280-125

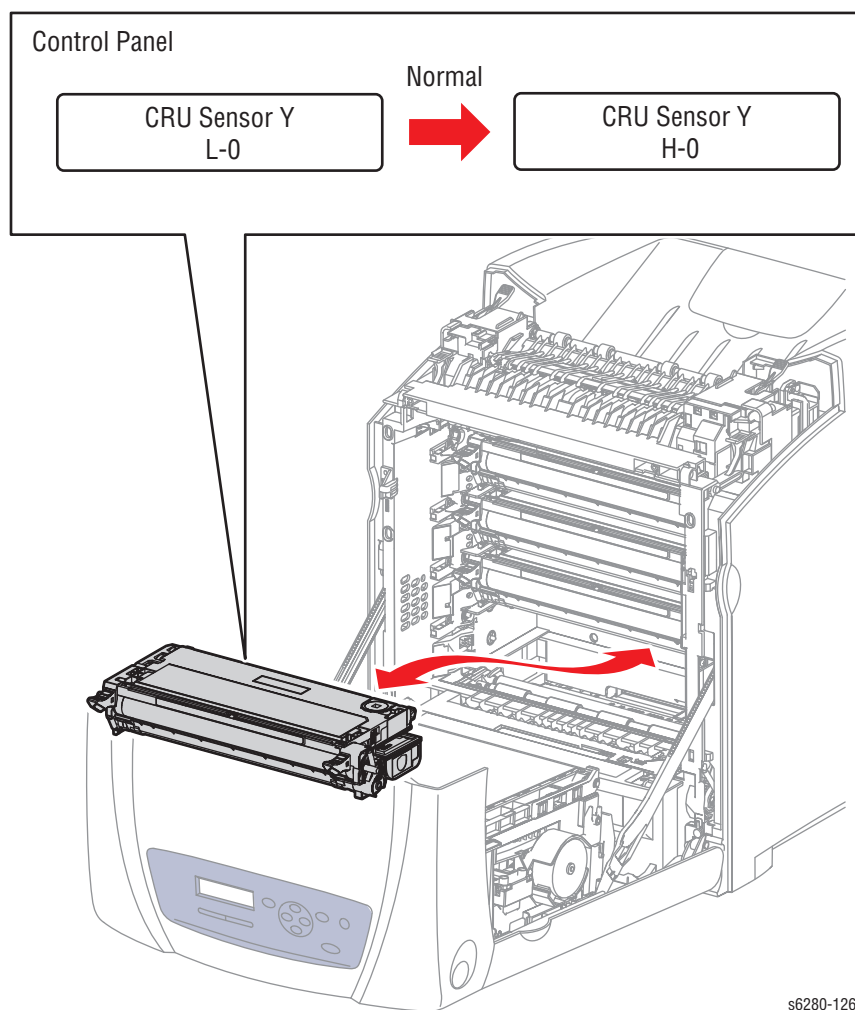
7. Press the **Cancel** button to stop the Interlock Switch test.

CRU Sensor Y (Yellow Toner Cartridge Sensor)

Caution

When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Perform the CRU Sensor Y test: **Engine Diag > Sensor Test > CRU Sensor Y**.
6. Install and remove the Yellow Print Cartridge while checking the information on the Control Panel display. The Low and High values change from 0 up to 99.



7. Press the **Cancel** button to stop the CRU Sensor Y test.

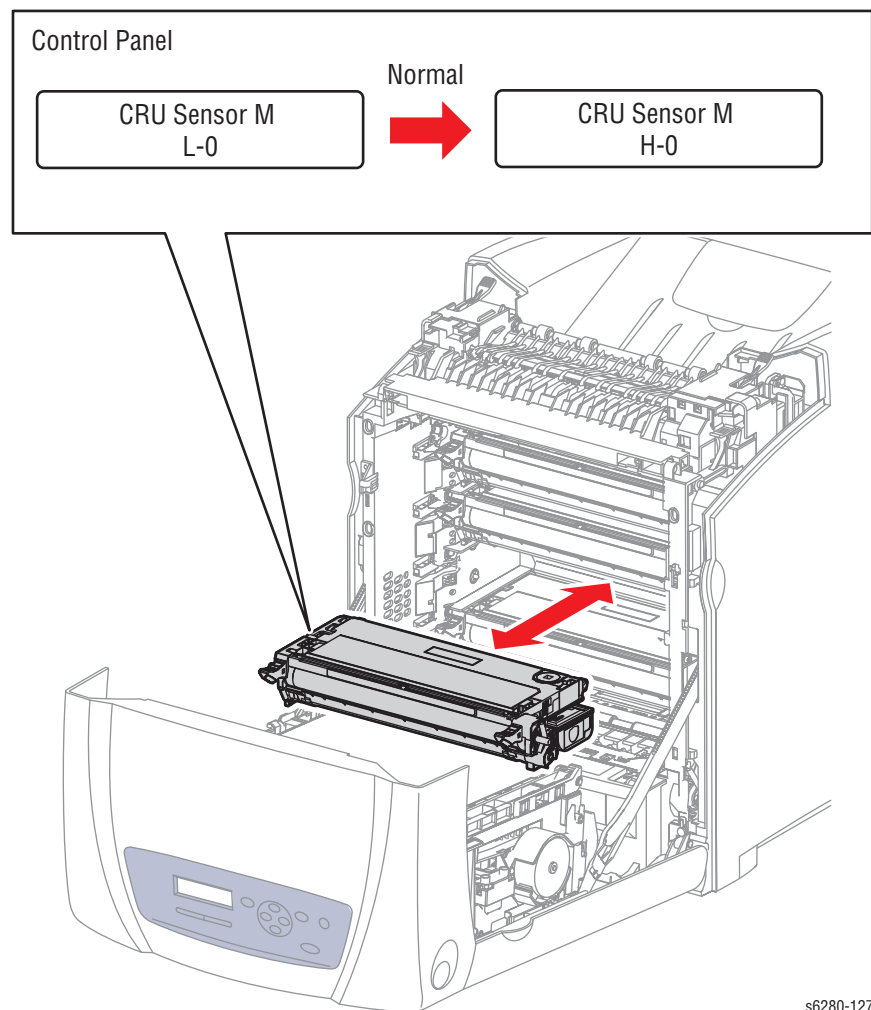
s6280-126

CRU Sensor M (Magenta Toner Cartridge Sensor)

Caution

When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Perform the CRU Sensor M test: **Engine Diag > Sensor Test > CRU Sensor M**.
6. Install and remove the Magenta Print Cartridge while checking the information on the Control Panel display. The Low and High values change from 0 up to 99.



s6280-127

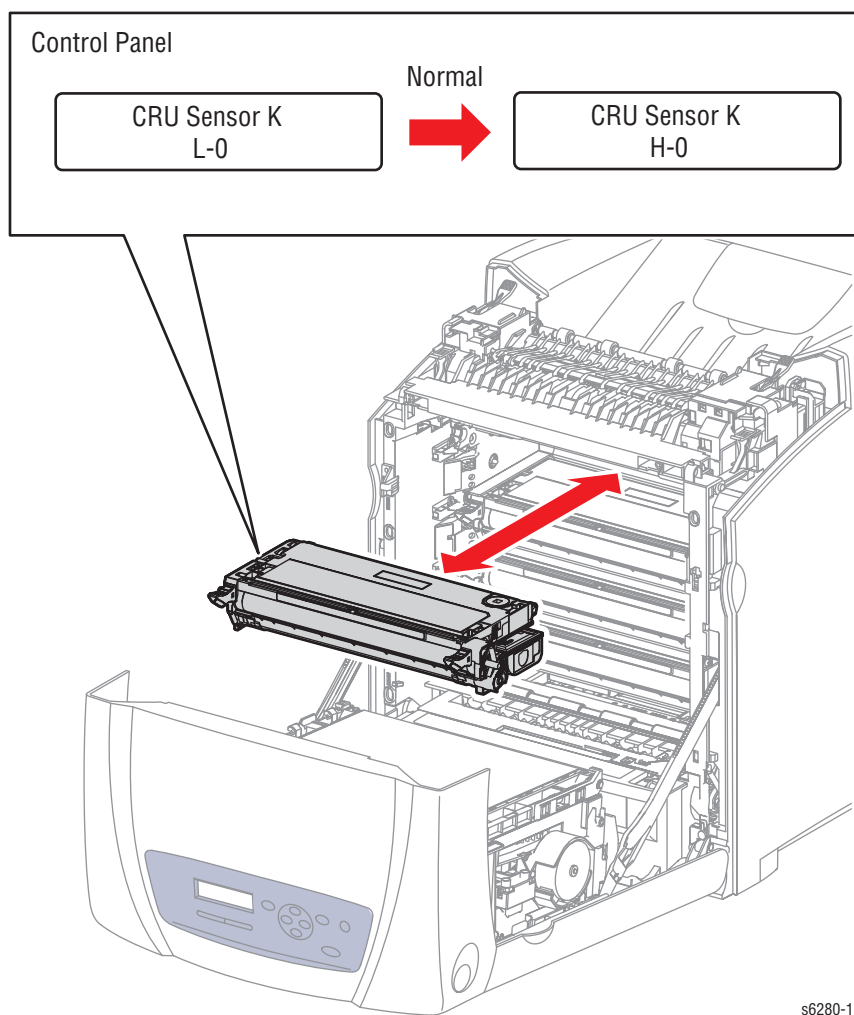
7. Press the **Cancel** button to stop the CRU Sensor M test.

CRU Sensor K (Black Toner Cartridge Sensor)

Caution

When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Perform the CRU Sensor K test: **Engine Diag > Sensor Test > CRU Sensor K**.
6. Install and remove the Black Print Cartridge while checking the information on the Control Panel display. The Low and High values change from 0 up to 99.



s6280-128

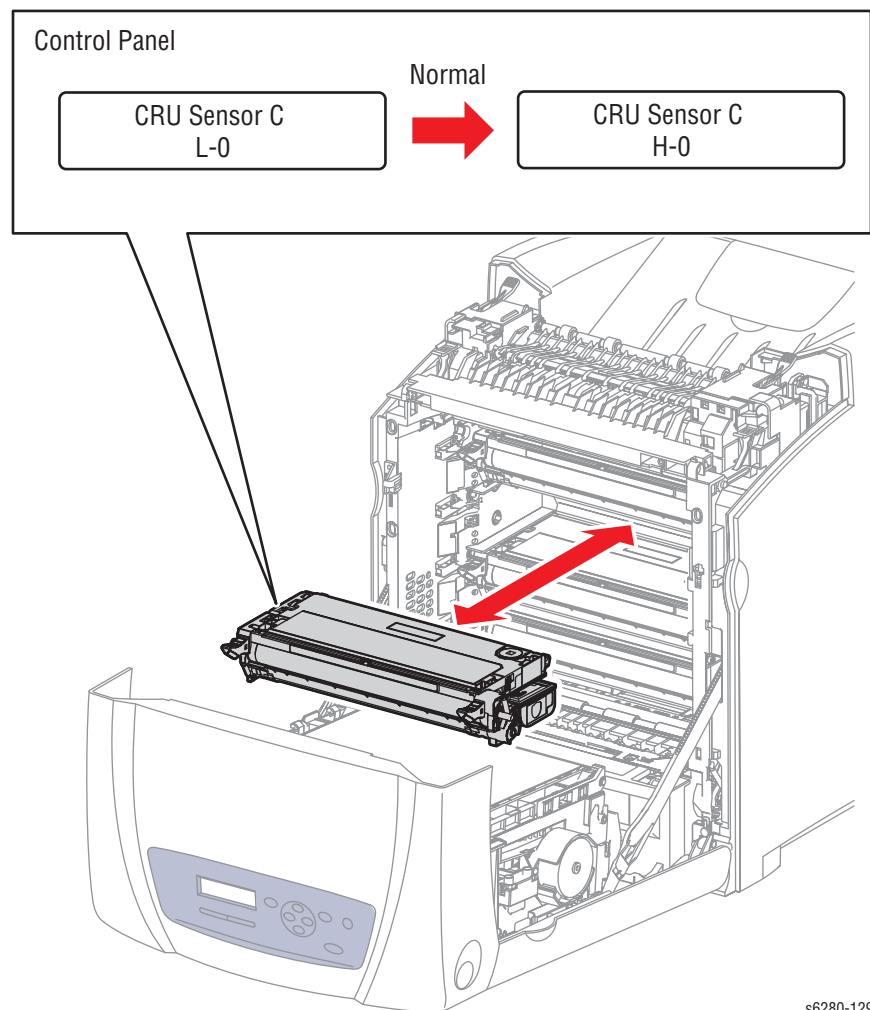
7. Press the **Cancel** button to stop the CRU Sensor K test.

CRU Sensor C (Cyan Toner Cartridge Sensor)

Caution

When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Perform the CRU Sensor C test: **Engine Diag > Sensor Test > CRU Sensor C**.
6. Install and remove the Cyan Print Cartridge while checking the information on the Control Panel display. The Low and High values change from 0 up to 99.



s6280-129

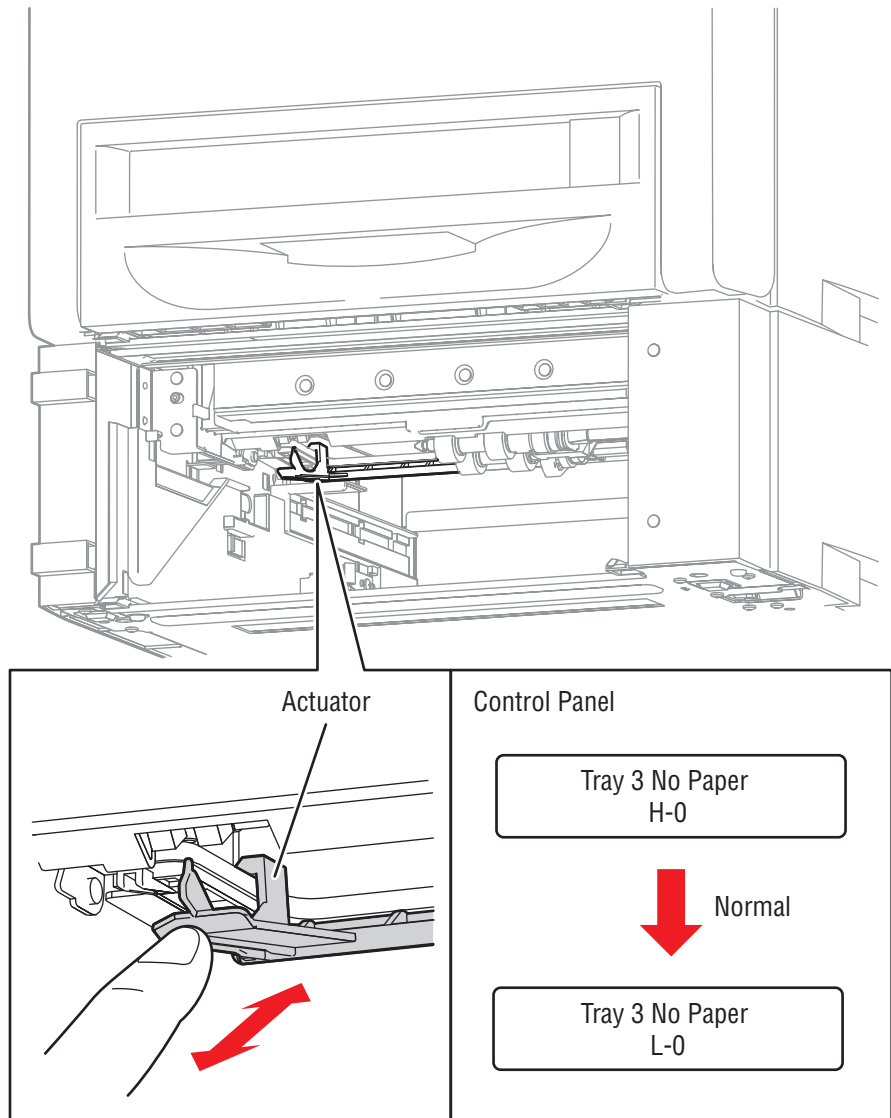
7. Press the **Cancel** button to stop the CRU Sensor C test.

Tray 3 No Paper

Note

The Tray 3 No Paper Sensor is located in the Optional 550-Sheet Feeder.

1. Enter the Service Diagnostic menu (page 4-5).
2. Perform the Tray 3 No Paper test: **Engine Diag** > **Sensor Test** > **Tray 3 No Paper**.
3. Remove Tray 3.
4. Move the Tray 3 No Paper sensor up and down while checking the information on the Control Panel display. The Low and High values change from 0 up to 99.



s6280-130

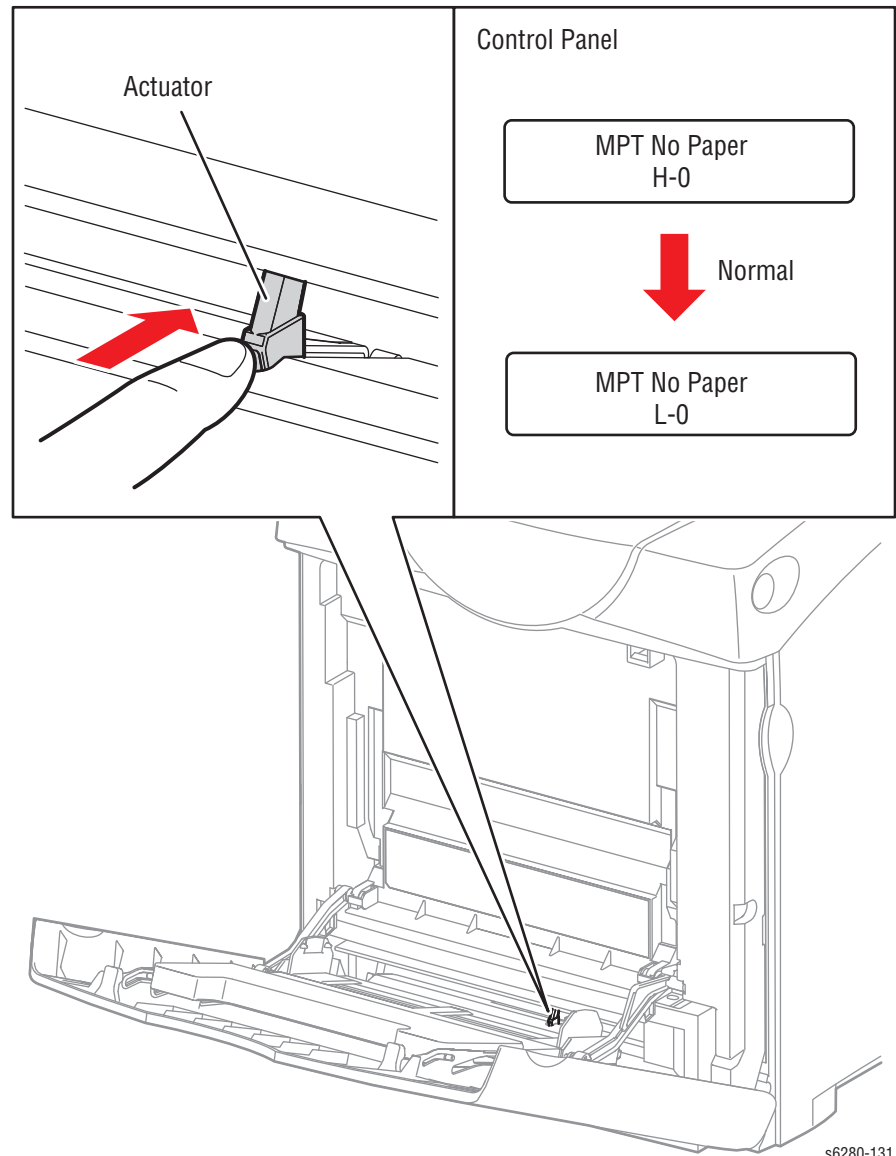
5. Press the **Cancel** button to stop the Tray 3 No Paper test.

Tray 1 (MPT) No Paper

Note

Ensure to remove paper from the Tray 1 (MPT) prior performing the test.

1. Enter the Service Diagnostic menu (page 4-5).
2. Perform the MPT No Paper test: **Engine Diag** > **Sensor Test** > **MPT No Paper**.
3. Open Tray 1 (MPT).
4. Move the Actuator back and forth while checking the information on the Control Panel display. The Low and High values change from 0 up to 99.

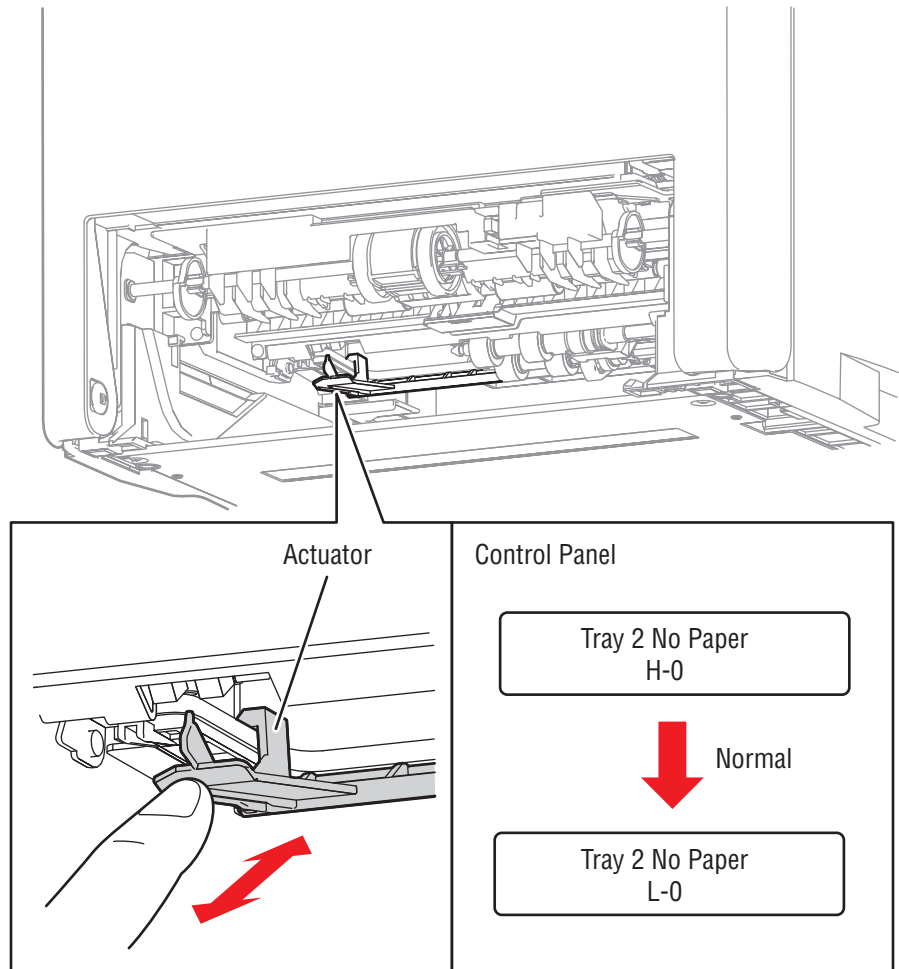


s6280-131

5. Press the **Cancel** button to stop the Tray 1 No Paper test.

Tray 2 No Paper

1. Enter the Service Diagnostic menu (page 4-5).
2. Perform the Tray 2 No Paper test: **Engine Diag** > **Sensor Test** > **Tray 2 No Paper**.
3. Remove Tray 2.
4. Move the Actuator up and down while checking the information on the Control Panel display. The Low and High values change from 0 up to 99.

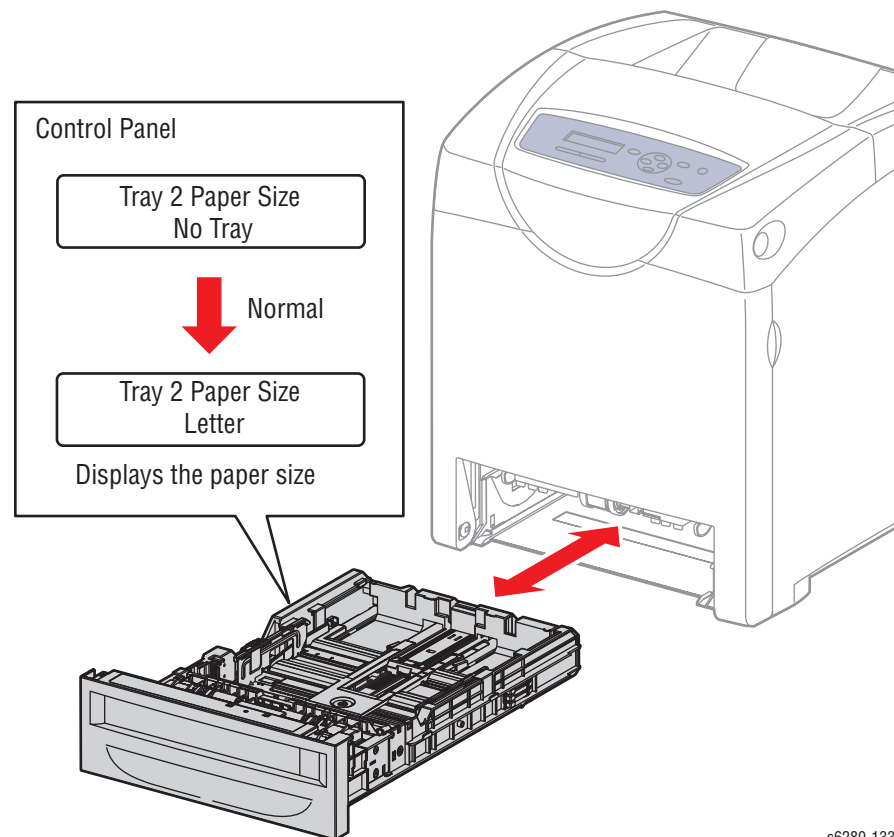


s6280-132

5. Press the **Cancel** button to stop the Tray 2 No Paper test.

Tray 2 Paper Size

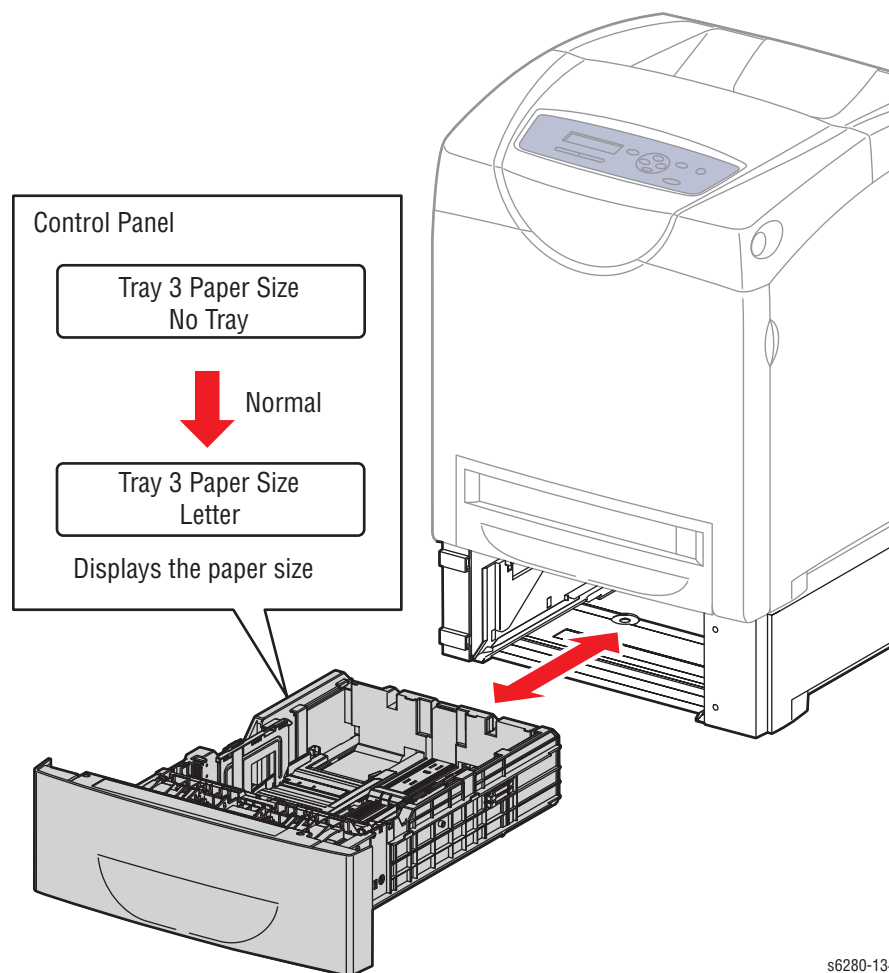
1. Enter the Service Diagnostic menu (page 4-5).
2. Perform the Tray 2 Paper Size test: **Engine Diag** > **Sensor Test** > **Tray2 Paper Size**.
3. The paper size information is displayed on the Control Panel.
4. Remove Tray 2.
5. Verify that the displayed paper size information on the Control Panel matches with the paper size settings located inside of Tray 2.



6. Press the **Cancel** button to stop the Tray 2 Paper Size test.

Tray 3 Paper Size

1. Enter the Service Diagnostic menu (page 4-5).
2. Perform the Tray 3 Paper Size test: **Engine Diag > Sensor Test > Tray3 Paper Size**.
3. The paper size information is displayed on the Control Panel.
4. Remove Tray 3.
5. Verify that the displayed paper size information on the Control Panel matches with the paper size settings located inside of Tray 3.



6. Press the **Cancel** button to stop the Tray 3 Paper Size test.

Motor Tests

Main Motor (FULL2/HALF)

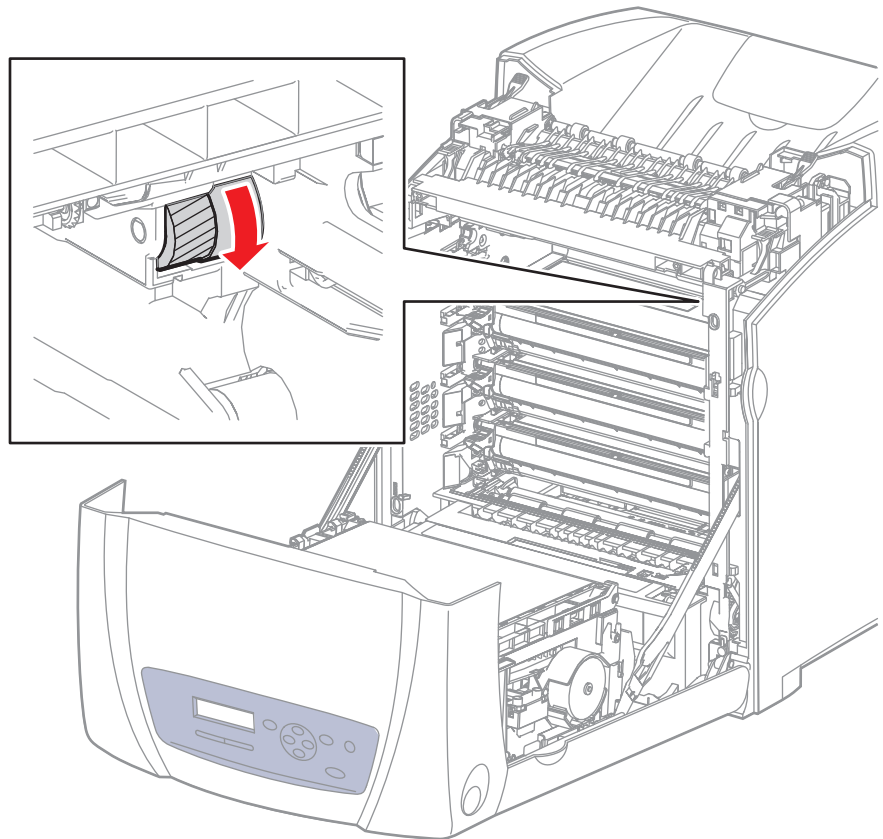
Caution

The Main Motor is in the Main Drive Assembly. When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

Note

The rotational speed of the Main Motor is as follow: HALF < FULL2

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Use a paper clip to secure the Interlock Switch.
6. Perform the Main Motor (FULL2/FULL1/HALF/LOW) test: **Engine Diag > Motor Test > Main Motor (FULL2/HALF)**.
7. Verify that the Main Motor is running and the gear is rotating.



s6280-135

8. Press the **Cancel** button to stop the Main Motor test.
9. Remove the paper clip from the Interlock Switch.

Sub Motor (FULL2/HALF)

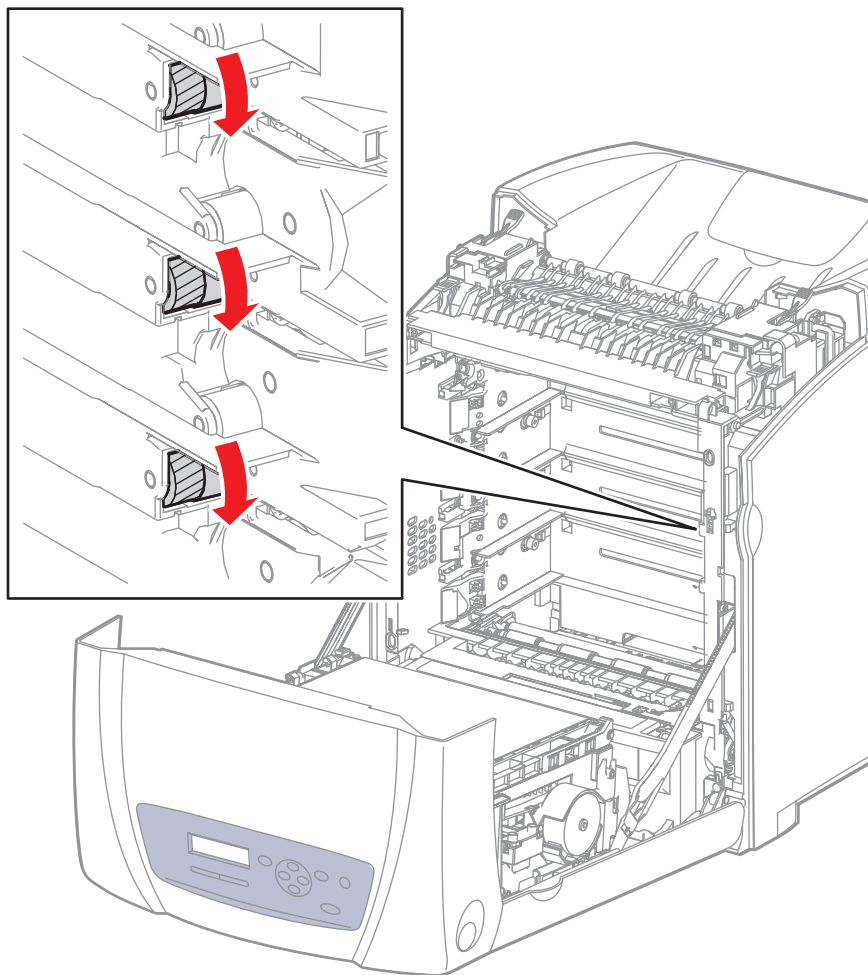
Caution

The Sub Motor is located in the Main Drive Assembly. When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

Note

The rotational speed of the Sub Motor is as follow: HALF < FULL2

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Use a paper clip to secure the Interlock Switch.
6. Perform the Sub Motor (FULL2/HALF) test: [Engine Diag](#) > [Motor Test](#) > [Sub Motor \(FULL2//HALF\)](#).
7. Verify that the Sub Motor is running and the three gears are rotating.



s6280-136

8. Press the **Cancel** button to stop the Sub Motor test.
9. Remove the paper clip from the Interlock Switch.

Tray 2 Motor (FULL2/HALF)

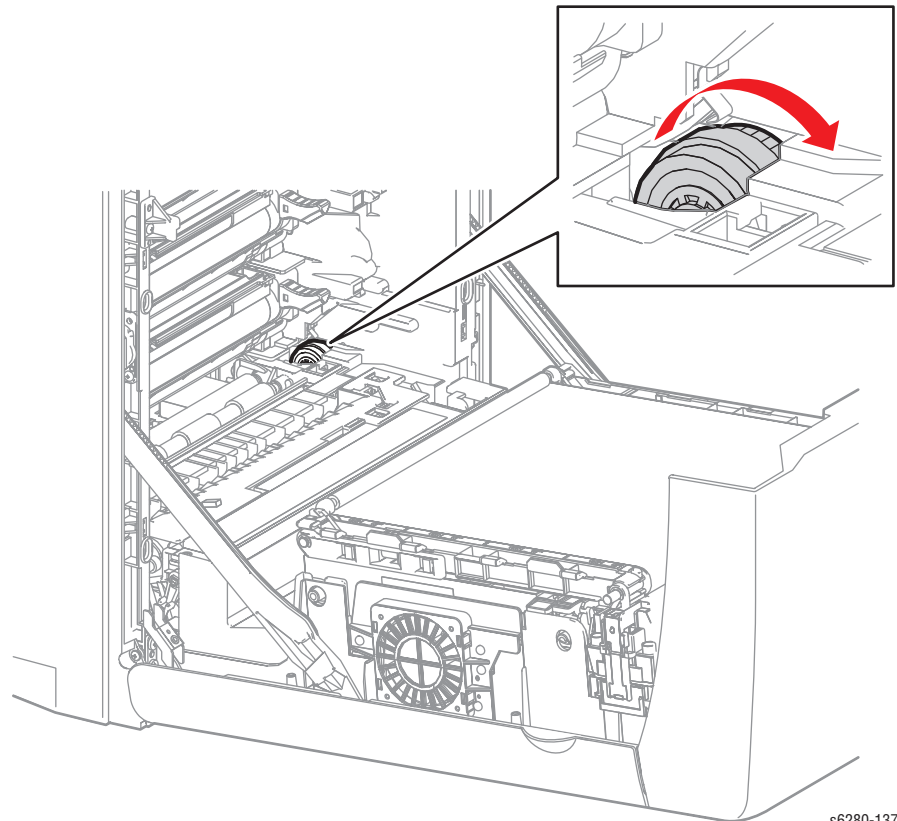
Caution

The Tray 2 Motor is located in the Main Drive Assembly. When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

Note

The rotational speed of the Tray 2 Motor is as follow: HALF < FULL2

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Use a paper clip to secure the Interlock Switch.
6. Perform the Tray 2 Motor (FULL2/HALF) test: **Engine Diag > Motor Test > Tray 2 Motor (FULL2/HALF)**.
7. Verify that the Tray 2 Motor is running and the gear is rotating.



8. Press the **Cancel** button to stop the Tray 2 Motor test.
9. Remove the paper clip from the Interlock Switch.

Duplex Motor (HIGH/HALF)

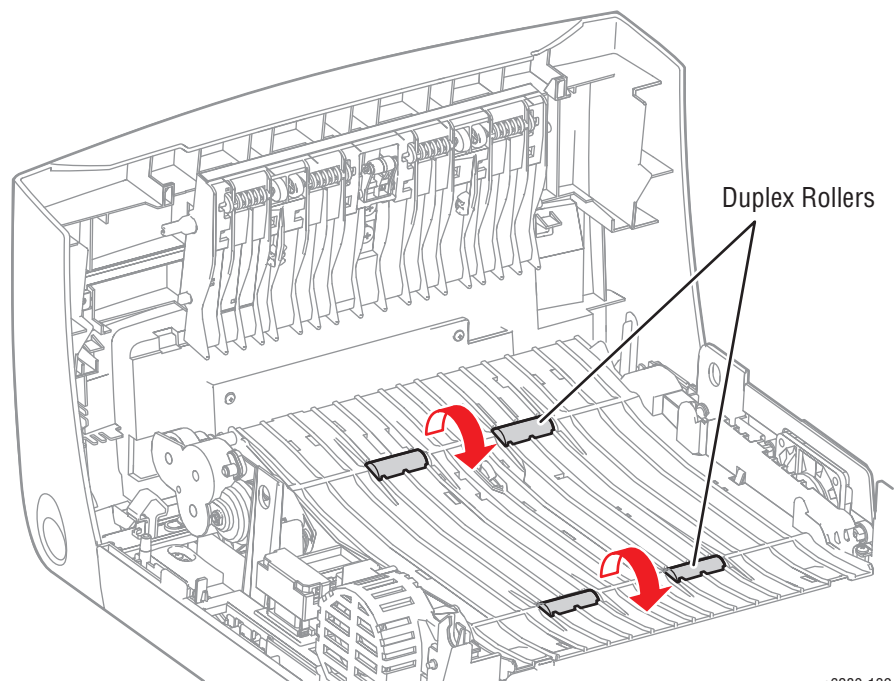
Caution

The Duplex Motor is located in the Duplex Unit. When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

Note

The rotational speed of the Duplex Motor is as follow: HALF < HIGH

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Use a paper clip to secure the Interlock Switch.
6. Perform the Duplex Motor (HIGH/HALF) test: **Engine Diag > Motor Test > Duplex Motor (HIGH/HALF)**.
7. Verify that the Duplex Motor is running and the four Duplex Rollers are rotating.



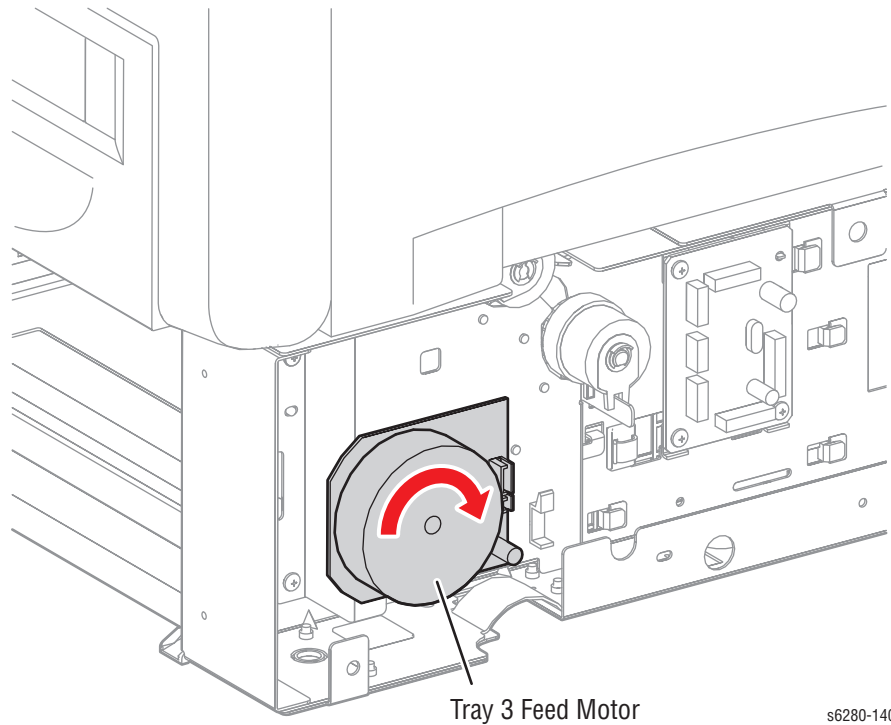
8. Press the **Cancel** button to stop the Duplex Motor test.
9. Remove the paper clip from the Interlock Switch.

Tray 3 Feed Motor (FULL2/HALF)

Note

The rotational speed of the Motor is as follow: HALF < FULL2

1. Enter the Service Diagnostic menu (page 4-5).
2. Remove Tray 3.
3. Remove the Tray 3 Left Cover (page 8-101).
4. Perform the Tray 3 Feed Motor (FULL2/HALF) test: **Engine Diag > Motor Test > Tray 3 Feed Motor (FULL2/HALF)**.
5. Verify that the Tray 3 Feed Motor is running.



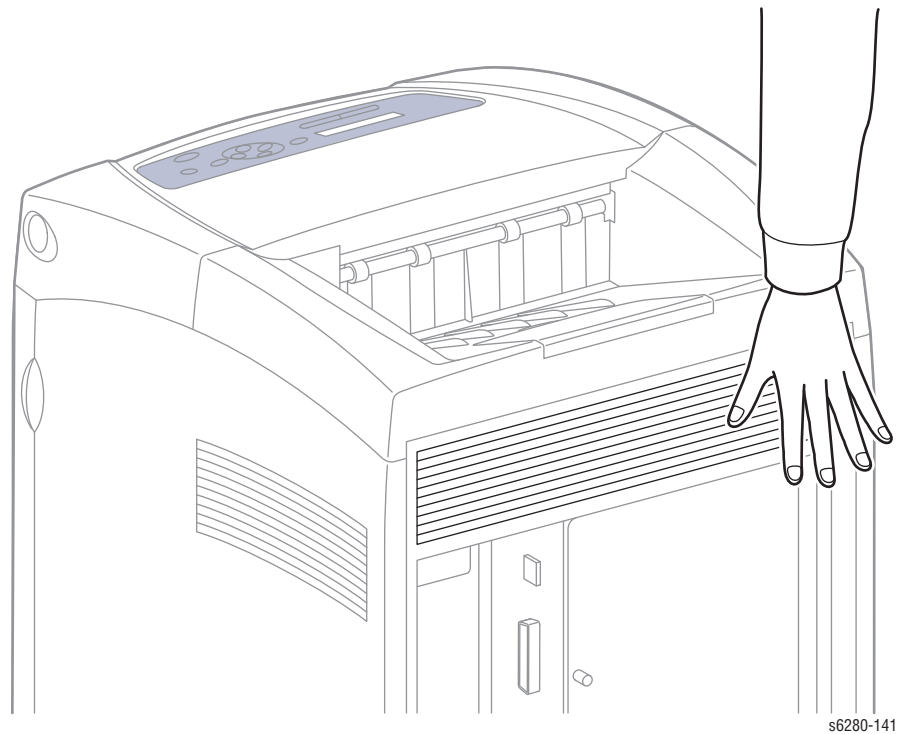
6. Press the **Cancel** button to stop the Tray 3 Feed Motor test.

Fan (HIGH/LOW)

Note

The rotational speed of the Motor is as follow: LOW < HIGH

1. Enter the Service Diagnostic menu (page 4-5).
2. Perform the Fan (HIGH/LOW) test: **Engine Diag > Motor Test > Fan (HIGH/LOW)**.
3. Verify that the fan is running.



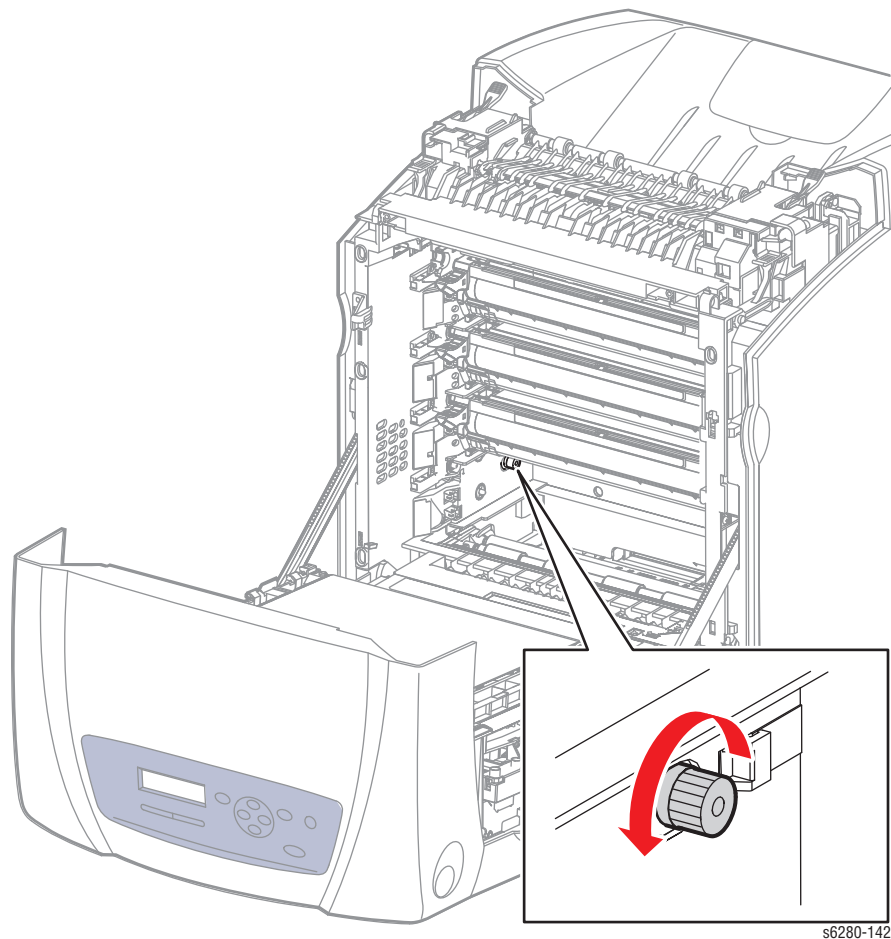
4. Press the **Cancel** button to stop the Fan test.

Yellow Toner Motor

Caution

When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Use a paper clip to secure the Interlock switch.
6. Perform the Yellow Toner Motor test: **Engine Diag > Motor Test > Yellow Toner Motor**.
7. Verify that the Yellow Toner Motor is running and the gear is rotating.



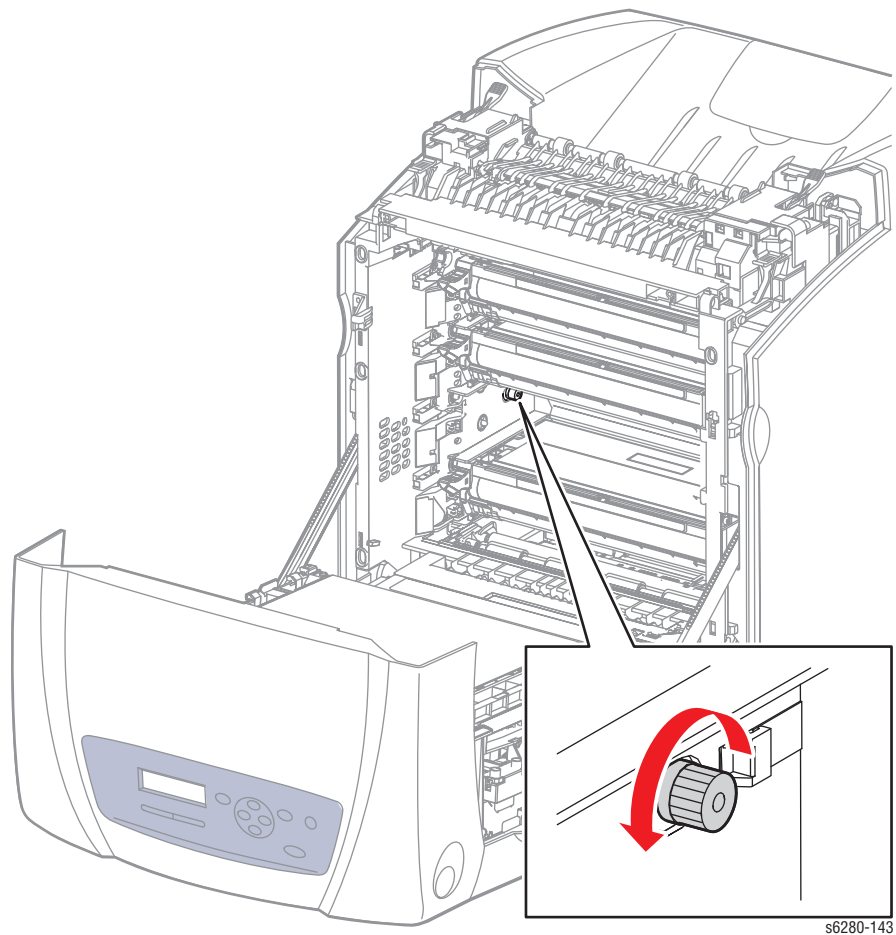
8. Press the **Cancel** button to stop the Yellow Toner Motor test.
9. Remove the paper clip from the Interlock Switch.

Magenta Toner Motor

Caution

When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Use a paper clip to secure the Interlock Switch.
6. Perform the Magenta Toner Motor test: **Engine Diag > Motor Test > Magenta Toner Motor**.
7. Verify that the Magenta Toner Motor is running and the gear is rotating.



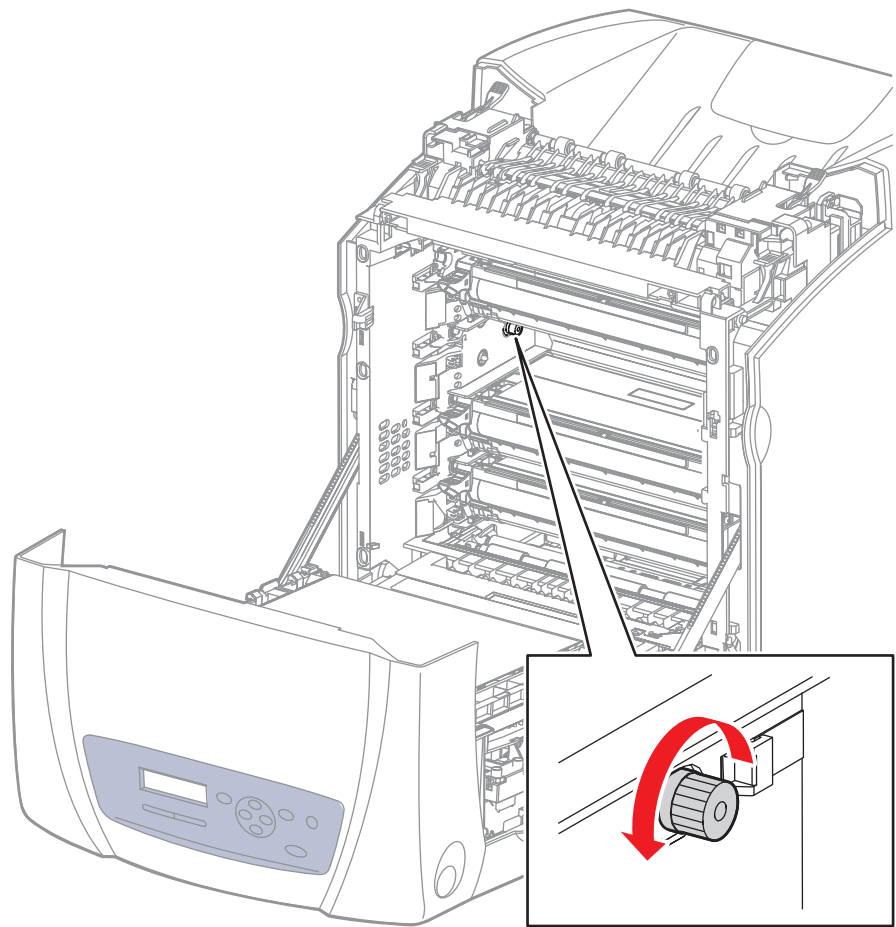
8. Press the **Cancel** button to stop the Magenta Toner Motor test.
9. Remove the paper clip from the Interlock Switch.

Cyan Toner Motor

Caution

When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Use a paper clip to secure the Interlock Switch.
6. Perform the Cyan Toner Motor test: **Engine Diag > Motor Test > Cyan Toner Motor**.
7. Verify that the Cyan Toner Motor is running and the gear is rotating.



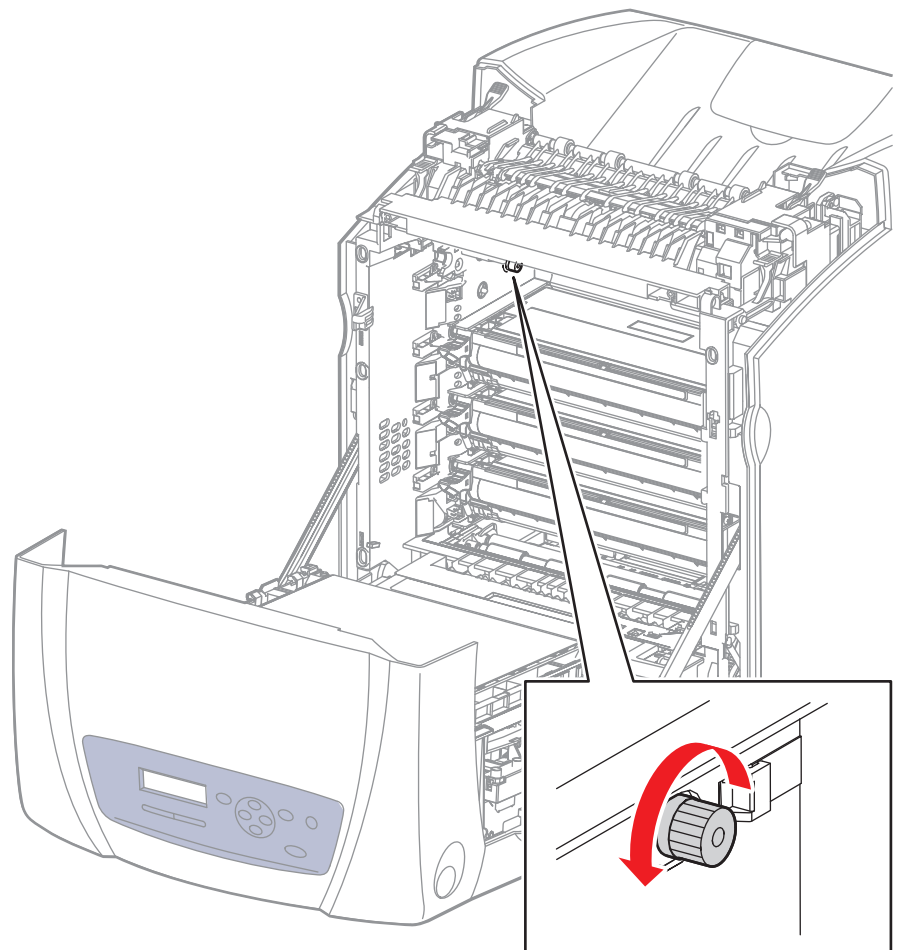
8. Press the **Cancel** button to stop the Cyan Toner Motor test.
9. Remove the paper clip from the Interlock Switch.

Black Toner Motor

Caution

When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Use a paper clip to secure the Interlock Switch.
6. Perform the Black Toner Motor test: **Engine Diag** > **Motor Test** > **Black Toner Motor**.
7. Verify that the Black Toner Motor is running and the gear is rotating.



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8. Press the **Cancel** button to stop the Black Toner Motor test.
9. Remove the paper clip from the Interlock Switch.

Regi Clutch

Caution

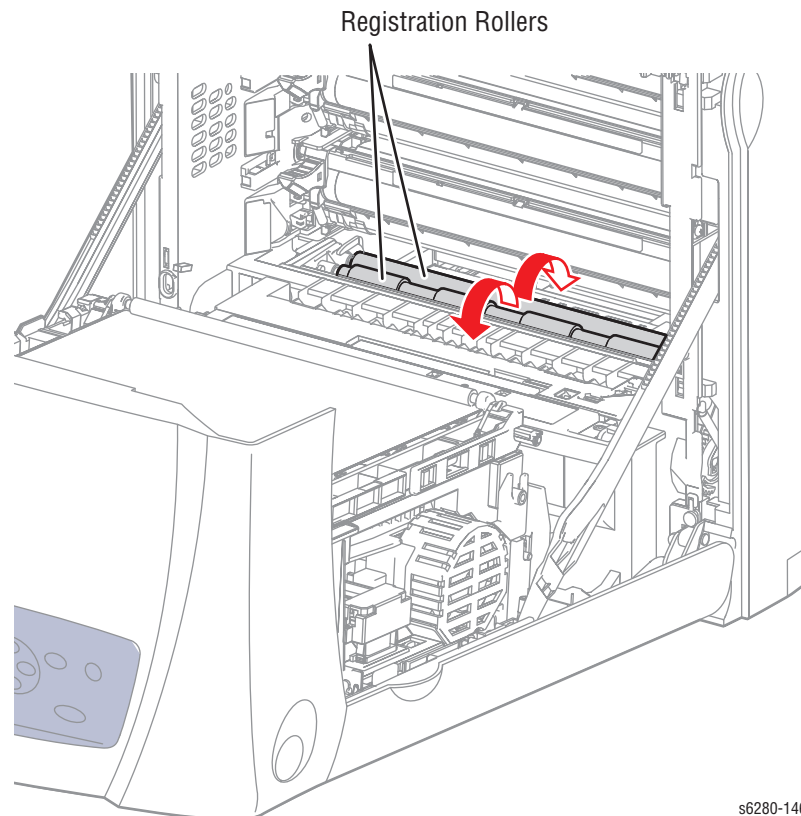
When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Use a paper clip to secure the Interlock Switch.
6. Perform the Tray 2 Motor (FULL2) test: **Engine Diag > Motor Test > Tray 2 Motor (FULL2)**.
7. While the PH Motor is running, press the **Up Arrow** button to find **Regi Clutch**. Press the **OK** button to run the Regi Clutch test.

Note

The Registration Rollers rotate when the Tray 2 Motor (FULL2) and the Registration Clutch tests are executed.

8. Verify that the Tray 2 Motor is running and the Registration Rollers are rotating.



9. Press the **Cancel** button to stop the Regi Clutch test.
10. Press the **Down Arrow** button to find **Tray 2 Motor (FULL2)**.
11. Press the **Cancel** button to stop the Tray 2 Motor test.
12. Remove the paper clip from the Interlock Switch.

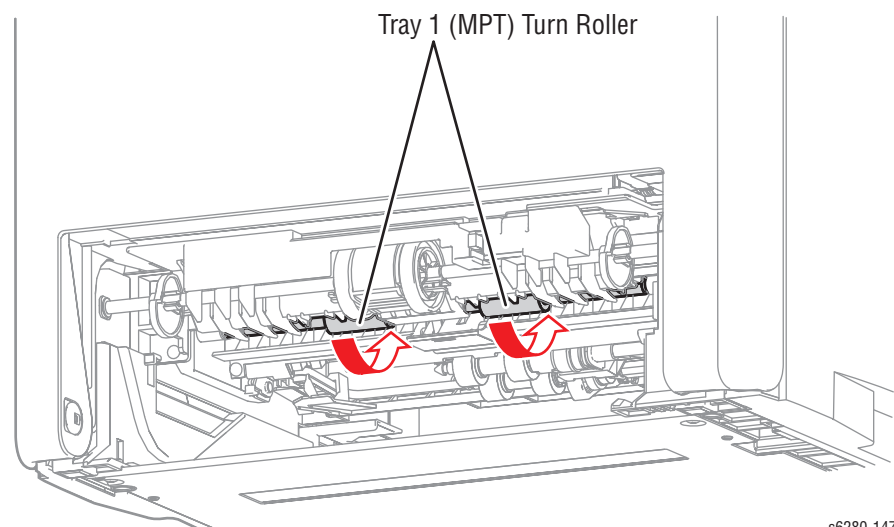
Tray 1 (MPT) Turn Clutch

1. Enter the Service Diagnostic menu (page 4-5).
2. Remove Tray 2.
3. Perform the Tray 2 Motor (FULL2) test: **Engine Diag > Motor Test > Tray 2 Motor (FULL2)**.
4. While the Tray 2 Motor is running, press the **Up Arrow** button to find **Tray 1 (MPT) Turn Clutch**. Press the **OK** button to run the Tray 1 (MPT) Turn Clutch test.

Note

The Tray 1 (MPT) Turn Rollers rotate when the Tray 2 Motor (FULL2) and the Tray 1 (MPT) Turn Clutch tests are executed.

5. Verify that the Tray 2 Motor is running and the Turn Rollers are rotating.



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6. Press the **Cancel** button to stop the Tray 1 Turn Clutch test.
7. Press the **Down Arrow** button to find **Tray 2 Motor (FULL2)**.
8. Press the **Cancel** button to stop the Tray 2 Motor test.

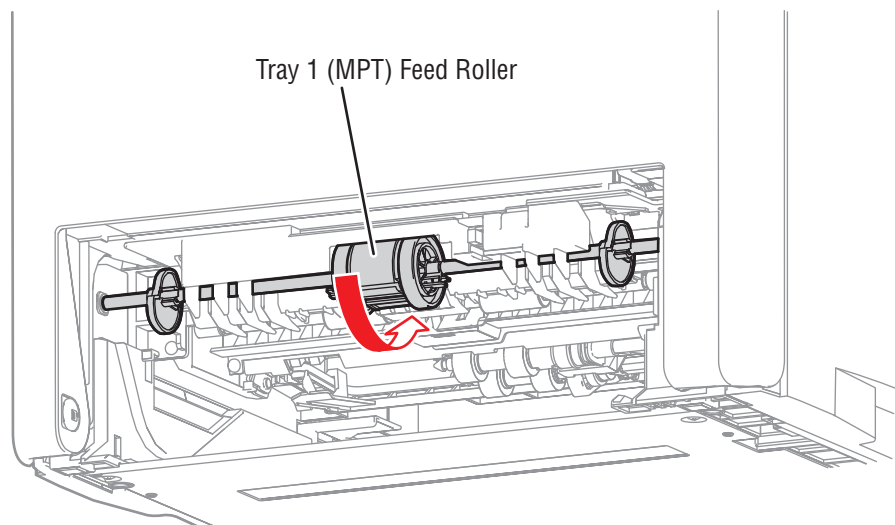
Tray 1 (MPT) Feed Solenoid

1. Enter the Service Diagnostic menu (page 4-5).
2. Remove Tray 2.
3. Perform the Tray 2 Motor (FULL2) test: **Engine Diag > Motor Test > Tray 2 Motor (FULL2)**.
4. While the Tray 2 Motor is running, press the **Up Arrow** button to find **Tray 1 (MPT) Feed Solenoid**. Press the **OK** button to run the Tray 1 (MPT) Feed Solenoid test.

Note

The Tray 1 (MPT) Feed Roller rotates when the Tray 2 Motor (FULL2) and the Tray 1 (MPT) Feed Solenoid tests are executed.

5. Verify that the Tray 2 Motor is working and the Tray 1 Feed Roller is rotating.



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6. Press the **Cancel** button to stop the Tray 1 Feed Solenoid test.
7. Press the **Down Arrow** button to find **Tray 2 Motor (FULL2)**.
8. Press the **Cancel** button to stop the Tray 2 Motor test.

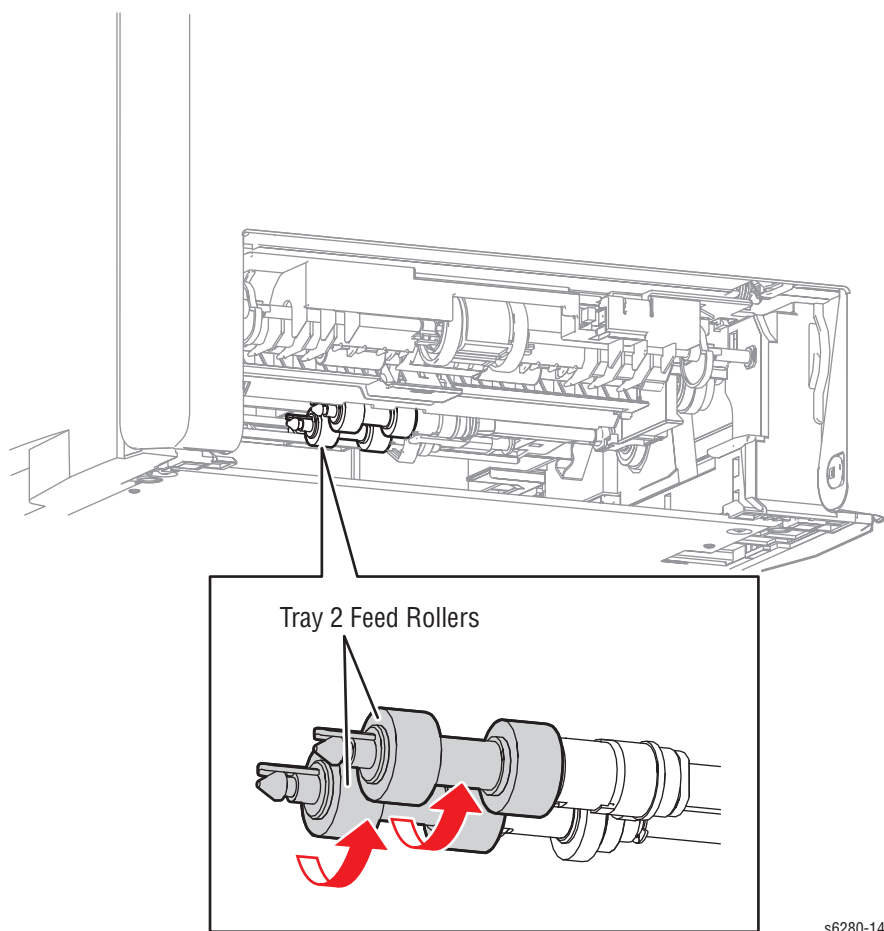
Tray 2 Feed Clutch

1. Enter the Service Diagnostic menu (page 4-5).
2. Remove Tray 2.
3. Perform the Tray 2 Feed Motor (FULL2) test: **Engine Diag > Motor Test > Tray 2 Motor (FULL2)**.
4. While the Tray 2 Motor is running, press the **Up Arrow** button to find **Tray 2 Feed Clutch**. Press the **OK** button to run the Tray 2 Feed Clutch test.

Note

The Tray 2 Feed Rollers rotate when the Tray 2 Motor (FULL2) and the Tray 2 Feed Clutch tests are executed.

5. Verify that the Tray 2 Motor is working and the Tray 2 Feed Rollers are rotating.



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6. Press the **Cancel** button to stop the Tray 2 Feed Clutch test.
7. Press the **Down Arrow** button to find **Tray 2 Motor (FULL2)**.
8. Press the **Cancel** button to stop the Tray 2 Motor test.

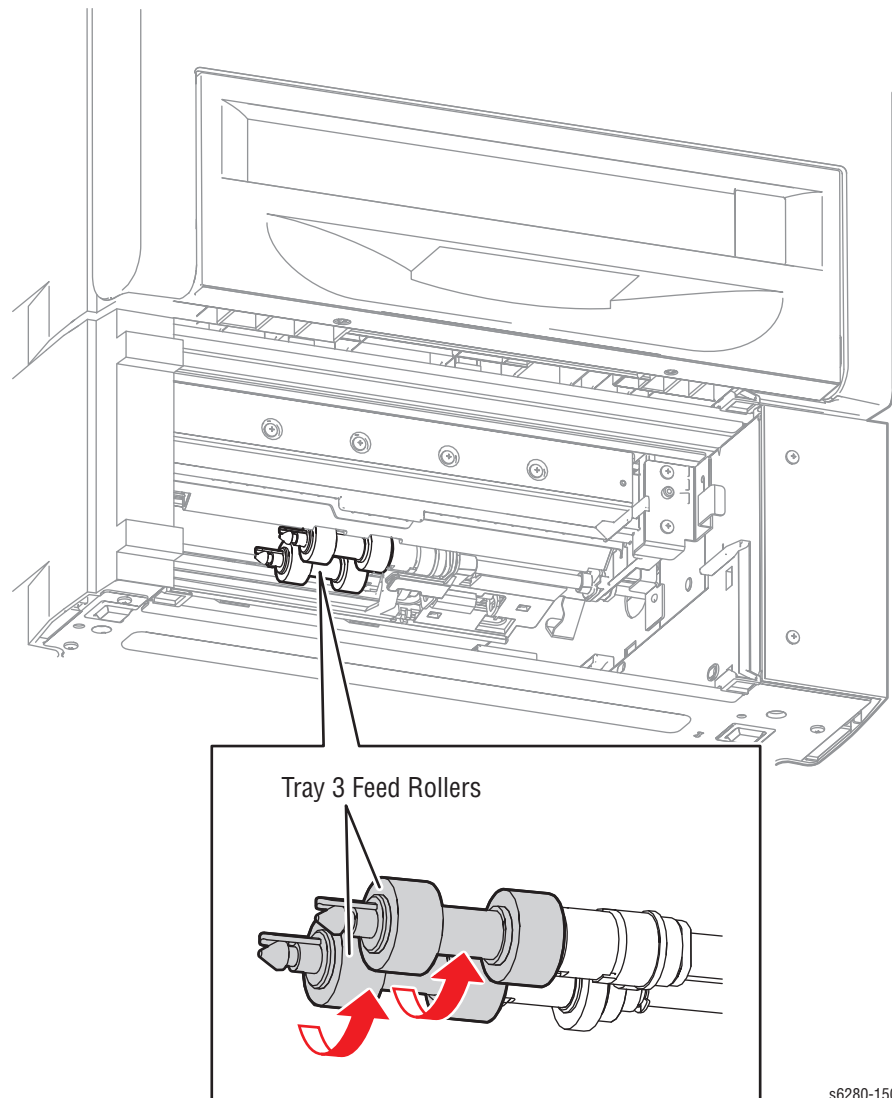
Tray 3 Feed Clutch

1. Enter the Service Diagnostic menu (page 4-5).
2. Remove Tray 3.
3. Perform the Tray 3 Feed Motor (FULL2) test: **Engine Diag** > **Motor Test** > **Tray 3 Feed Motor (FULL2)**.
4. While the Tray 3 Feed Motor is running, press the **Up Arrow** button to find **Tray 3 Feed Clutch**. Press the **OK** button to run the Tray 3 Feed Clutch test.

Note

The Tray 3 Feed Rollers rotate when the Tray 3 Feed Motor (FULL2) and the Tray 3 Feed Clutch tests are executed.

5. Verify that the Tray 3 Feed Motor is working and the Tray 3 Feed Rollers are rotating.



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6. Press the **Cancel** button to stop the Tray 3 Feed Clutch test.
7. Press the **Down Arrow** button to find **Tray 3 Feed Motor (FULL2)**.
8. Press the **Cancel** button to stop the Tray 3 Feed Motor test.

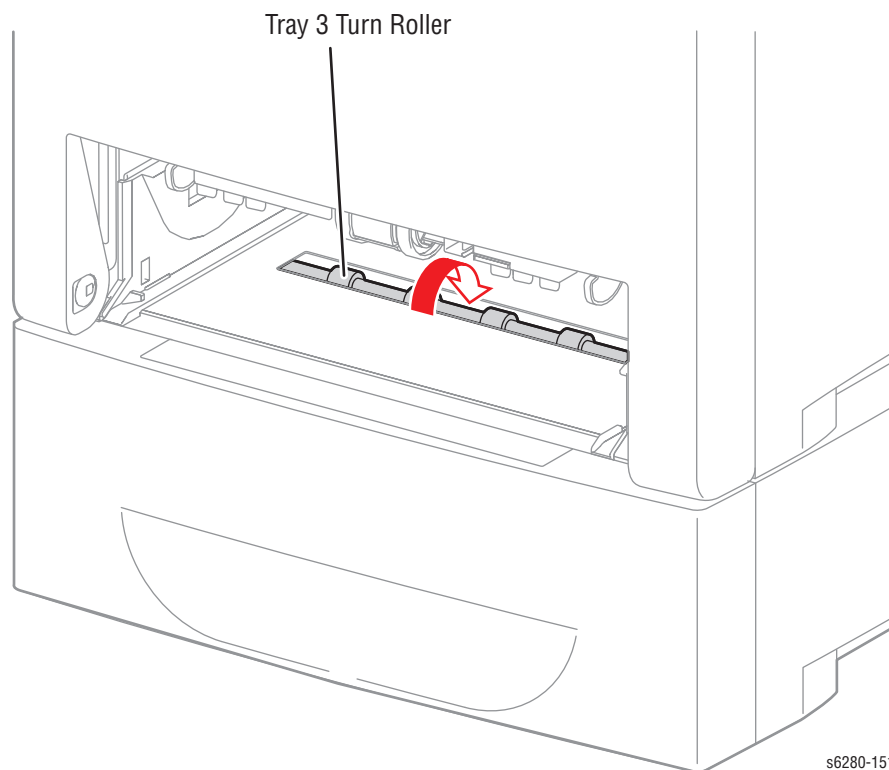
Tray 3 Turn Clutch

1. Enter the Service Diagnostic menu (page 4-5).
2. Remove Tray 3.
3. Perform the Tray 3 Feed Motor (FULL2) test: **Engine Diag > Motor Test > Tray 3 Feed Motor (FULL2)**.
4. While the Tray 3 Feed Motor is running, press the **Up Arrow** button to find **Tray 3 Turn Clutch**. Press the **OK** button to run the Tray 3 Turn Clutch test.

Note

The Tray 3 Turn Roll rotates when the Tray 3 Feed Motor (FULL2) and the Tray 3 Turn Clutch tests are executed.

5. Verify that the Tray 3 Feed Motor is working and the Turn Roller is rotating.



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6. Press the **Cancel** button to stop the Tray 3 Turn Clutch test.
7. Press the **Down Arrow** button to find **Tray 3 Feed Motor (FULL2)**.
8. Press the **Cancel** button to stop the Tray 3 Feed Motor test.

Duplex Clutch

Caution

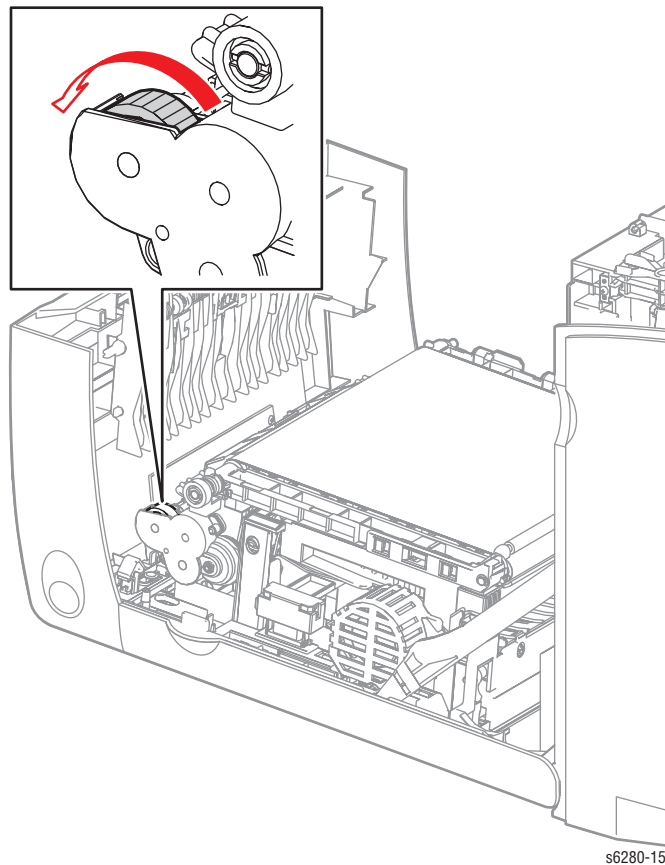
When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Use a paper clip to secure the Interlock Switch.
6. Perform the Duplex Motor (HIGH) test: **Engine Diag > Motor Test > Duplex Motor (HIGH)**.
7. While the Duplex Motor is running, press the **Up Arrow** button to find **Duplex Clutch**. Press the **OK** button to run the Duplex Clutch test.

Note

The Duplex Gear rotates when the Duplex Motor (HIGH) and the Duplex Clutch tests are executed.

8. Verify that the Duplex Motor is working and the gear is rotating.



s6280-152

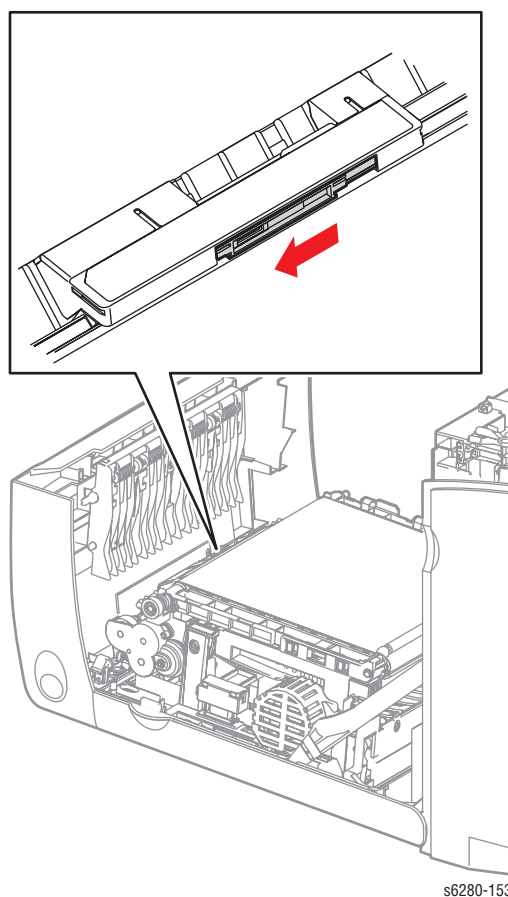
9. Press the **Cancel** button to stop the Duplex Clutch test.
10. Press the **Down Arrow** button to display **Duplex Motor (HIGH)**.
11. Press the **Cancel** button to stop the Duplex Motor test.

ADC (CTD) Sensor Solenoid

Caution

When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Print Cartridges (page 8-10).
4. Use a paper clip to secure the Interlock Switch.
5. Perform the ADC Sensor Solenoid test: **Engine Diag > Motor Test > ADC Sensor Solenoid**.
6. Verify that a clicking sound is heard when the Solenoid is operating. The ADC Sensor LED turns off (inside the Transfer Unit).



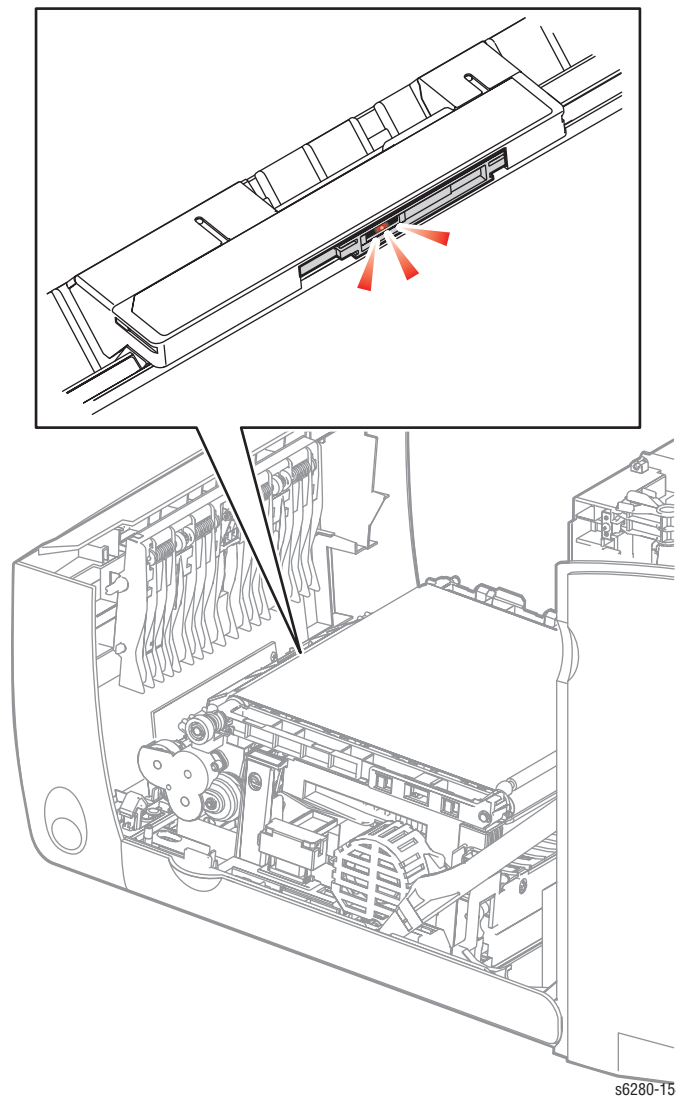
7. Press the **Cancel** button to stop the ADC Sensor Solenoid test.
8. Remove the paper clip from the Interlock Switch.

ADC (CTD) Sensor LED

Caution

When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Print Cartridges (page 8-10).
4. Use a paper clip to secure the Interlock Switch.
5. Perform the ADC Sensor LED test: **Engine Diag > Motor Test > ADC Sensor LED**.
6. Verify that the LED is working (red light inside the Transfer Unit).



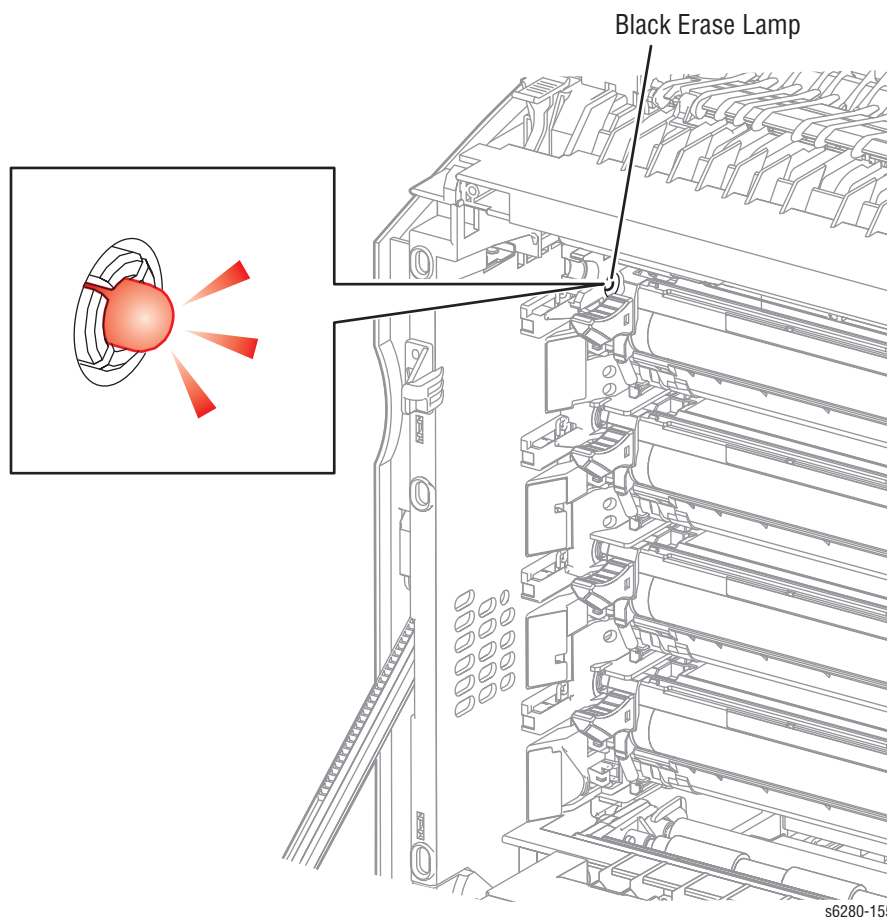
7. Press the **Cancel** button to stop the ADC Sensor LED test.
8. Remove the paper clip from the Interlock Switch.

Drum Erase Lamp (K)

Caution

When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Print Cartridges (page 8-10).
4. Use a paper clip to secure the Interlock Switch.
5. Perform the Drum Erase Lamp K test: **Engine Diag > Motor Test > Drum Erase Lamp K**.
6. Verify that the Lamp is operating.



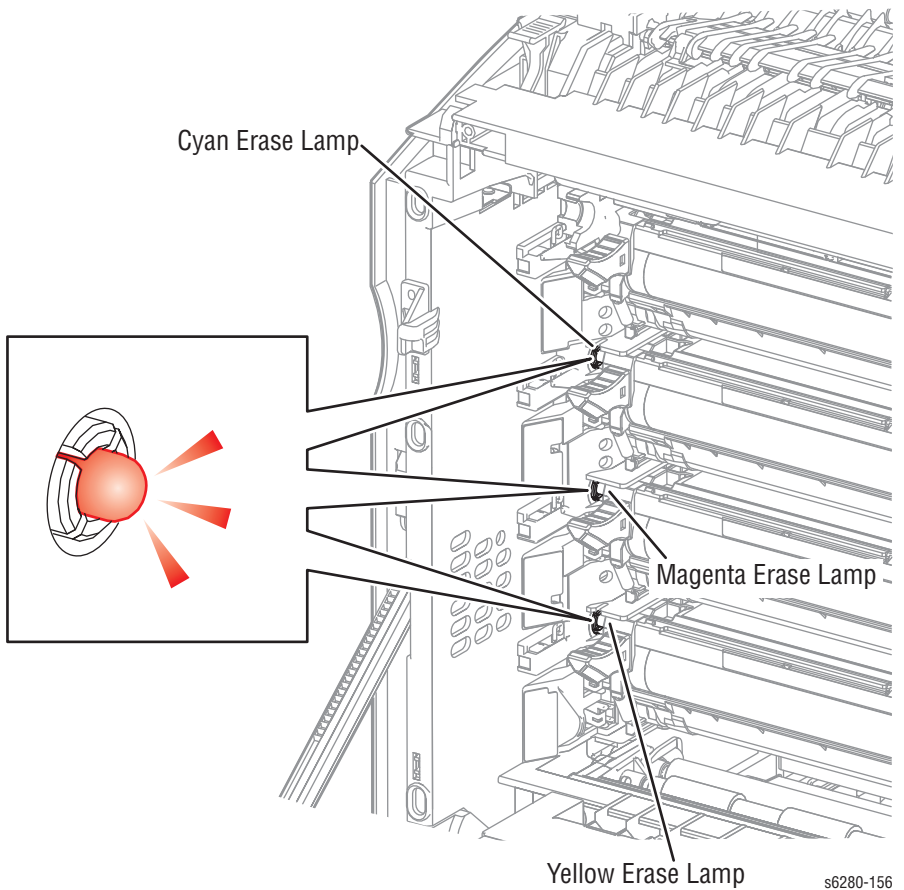
7. Press the **Cancel** button to stop the Drum Erase Lamp K test.
8. Remove the paper clip from the Interlock Switch.

Drum Erase Lamp (Y/M/C)

Caution

When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Print Cartridges (page 8-10).
4. Use a paper clip to secure the Interlock Switch.
5. Perform the Drum Erase Lamp YMC test: **Engine Diag > Motor Test > Drum Erase Lamp YMC**.
6. Verify that the Lamps are operating.



7. Press the **Cancel** button to stop the Drum Erase Lamp YMC test.
8. Remove the paper clip from the Interlock Switch.

Exit Clutch

1. Enter the Service Diagnostic menu (page 4-5).
2. Run the Exit Clutch test: **Engine Diag** > **Motor Test** > **Exit Clutch**.
3. Verify that the Exit Roller is not rotating.
4. Press the **Cancel** button to stop the test.

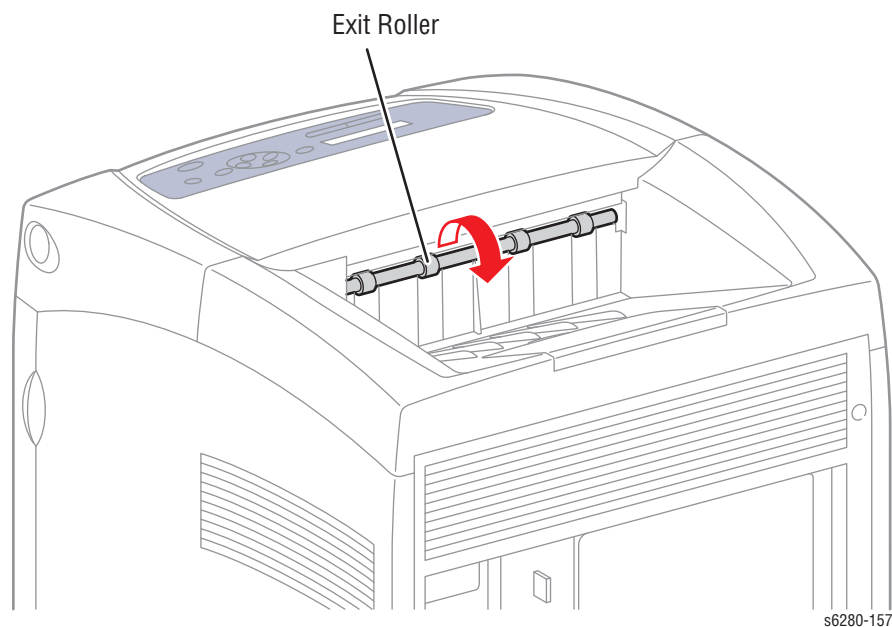
Combination Test

1. Enter the Service Diagnostic menu (page 4-5).
2. Perform the Main Motor (FULL2) test: **Engine Diag** > **Motor Test** > **Main Motor (FULL2)**.
3. While the Main Motor is running, press the **Up Arrow** button to find **Exit Clutch**. Press the **OK** button to run the Exit Clutch test.

Note

The Exit Roller rotates when the Main Motor (FULL2) and the Exit Clutch tests are executed.

4. Verify that the Main Motor is working and the Exit Roller is rotating.



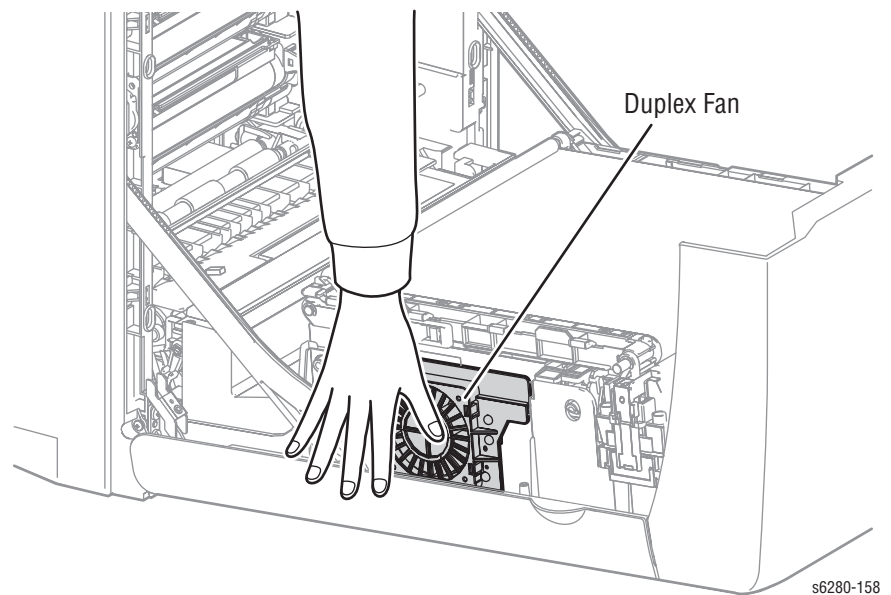
5. Press the **Cancel** button to stop the Exit Clutch test.
6. Press the **Down Arrow** button to find **Main Motor (FULL2)**.
7. Press the **Cancel** button to stop the Main Motor test.

Duplex Fan

Caution

When performing this procedure, remove and cover the Print Cartridges to avoid exposure to light.

1. Enter the Service Diagnostic menu (page 4-5).
2. Open the Front Cover.
3. Remove the Transfer Unit (page 8-8).
4. Remove the Print Cartridges (page 8-10).
5. Use a paper clip to secure the Interlock Switch.
6. Perform the Duplex Fan test: **Engine Diag > Motor Test > Duplex Fan**.
7. Verify that the Fan is operating.



8. Press the **Cancel** button to stop the Duplex Fan test.
9. Remove the paper clip from the Interlock Switch.

K Mode Solenoid

Note

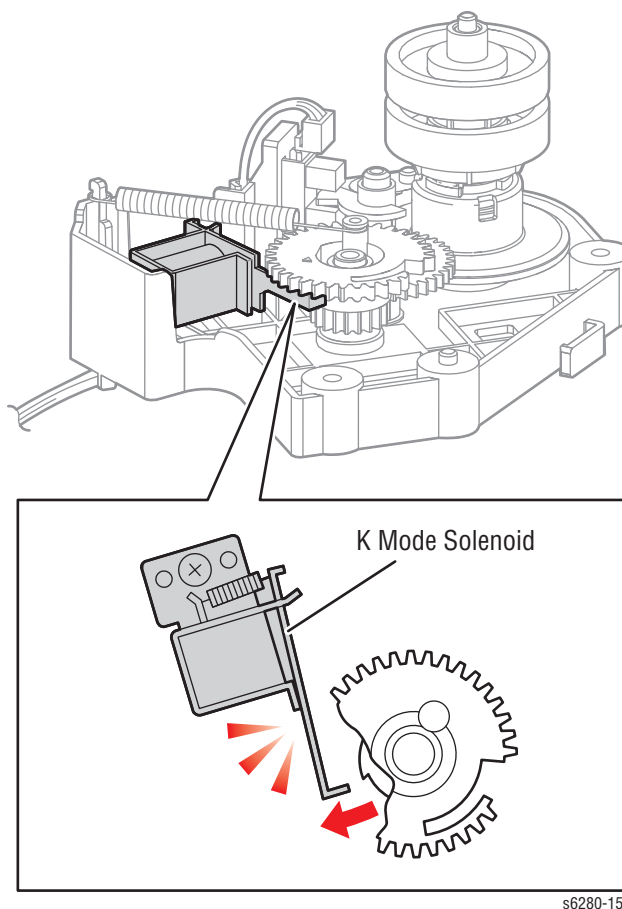
When performing the operation for 5 minutes or longer with the Front Door open, ensure to remove and cover the Print Cartridges to avoid exposure to light.

1. Open the Front Cover.
2. Remove the Rear Cover (page 8-12).
3. Remove the Right Side Cover (page 8-13).

Note

For the following step, only rotate the K Drive Assembly to access the gear. Do not disconnect the wiring harnesses.

4. Remove the K Drive Assembly (page 8-76).
5. Use a paper clip to secure the Interlock Switch.
6. Enter the Service Diagnostic menu (page 4-5).
7. Perform the K Mode Solenoid test: **Engine Diag > Motor Test > K Mode Clutch On**.
8. Verify that the Solenoid is operating.



9. Press the **Cancel** button to stop the Duplex Fan test.
10. Remove the paper clip from the Interlock Switch.

Control Panel Troubleshooting

Printer Does Not Come to a “Ready” State

1. Remove and reseal the Image Processor Board (page 8-87).
2. Refer to “DC Power Supply Troubleshooting” on page 4-71.
3. Replace the Control Panel (page 8-21).
4. Replace the Control Panel wiring harness (page 8-21).

Control Panel LED is On, Control Panel Display is Blank

1. Remove and reseal the Image Processor Board (page 8-87).
2. Replace the Control Panel (page 8-21).
3. Replace the Control Panel wiring harness (page 8-21).
4. Replace the Image Processor Board (page 8-87).

Engine Test Print

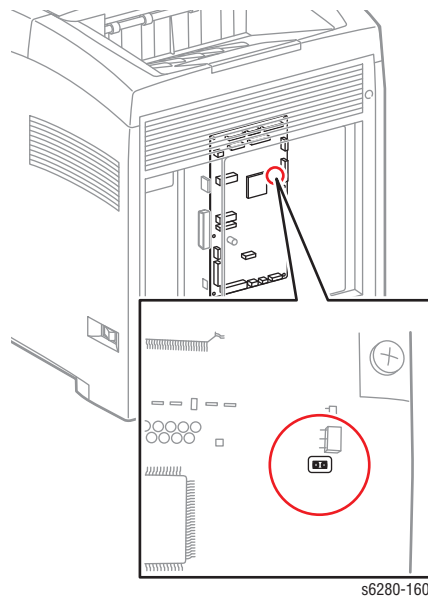
This test isolates printer hardware problems to either the Engine Control Board or Image Processor Board.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Image Processor Board, PL9.1.27 ■ MCU Board, PL9.1.20 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Remove the Image Processor Board (page 8-87).		
2	Turn the printer power On (the Control Panel will be blank).		
3	Short the pins on the MCU Board.		



4	Did the printer print the Pattern IOT page?	Replace the Image Processor Board (page 8-87).	Replace the MCU Board (page 8-86).
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Inoperable Printer Troubleshooting

Engine Power-Up Sequence

1. Machine Control Unit (MCU) Board logic check
2. Print Cartridge (Missing, NVRAM (CRUM) Error, CRUM ID, Life Over)
3. Fuser (Missing, NVRAM (CRUM) Error, Life Over)
4. Transfer Unit (Missing, Life Over)
5. ADC Sensor (Error)
6. All paper Sensor (Jam)
7. Door (Open)
8. Environmental (Humidity/Temperature) Sensor (Error)
9. NVRAM (NVRAM Error)
10. Image Processor Board POST Diagnostic check

Printer Continually Displays Warming Up

1. Verify the correct Fuser (110 V vs. 220 V) is installed in the printer.
2. Refer to the Engine Power-Up Sequence (page 4-67).

Printer Continually Displays Insert Print Cartridge

Initial Actions

- Check the Print Cartridge life using CentreWare IS.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Print Cartridge Sensor, PL5.1.4 ■ Print Cartridge (Y/M/C/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 ■ Toner Sensor Harness, PL10.1.9 	<ul style="list-style-type: none"> ■ “Map 2 - Laser Unit, Feeder Assembly” on page 10-10 ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “Developer” on page 10-33

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Print Cartridge for correct installation. 2. Is the Print Cartridge correctly installed?	Go to step 3.	Reseat the Print Cartridge (page 8-10).
2	Does the error still occur?	Go to step 3.	Complete.
3	1. Replace the Print Cartridge (page 8-10). 2. Does the error still occur?	Go to step 4.	Complete.
4	1. Perform the CRU Sensor test: Service Mode > Sensor Test > CRU Sensor. <ul style="list-style-type: none"> ■ Yellow CRU Sensor (page 4-32) ■ Magenta CRU Sensor (page 4-33) ■ Black CRU Sensor (page 4-34) ■ Cyan CRU Sensor (page 4-35) 2. Does the number on the Control Panel increase by 1 when the Print Cartridge is reseated?	Replace the MCU Board (page 8-86).	Go to step 5.
5	1. Check the Toner Sensor wiring harness connectors between the Print Cartridge Sensor and the MCU Board. <ul style="list-style-type: none"> ■ Yellow: P/J19 and P/J191 ■ Magenta: P/J19 and P/J192 ■ Black: P/J19 and P/J193 ■ Cyan: P/J19 and P/J194 2. Are the connectors securely connected?	Go to step 6.	Reconnect the connectors. Go to step 6.
6	Does the error still occur?	Go to step 7.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
7	<p>Check the Toner Sensor Harness for continuity.</p> <ol style="list-style-type: none"> 1. Disconnect P/J Harnesses from the MCU Board and the Print Cartridge Sensor. <ul style="list-style-type: none"> ■ Yellow: P/J19 and P/J191 ■ Magenta: P/J19 and P/J192 ■ Black: P/J19 and P/J193 ■ Cyan: P/J19 and P/J194 2. Check continuity between P/J connectors: <ul style="list-style-type: none"> ■ Yellow: P/J19 pin <=> P/J191 ■ Magenta: P/J19 <=> P/J192 ■ Black: P/J19 <=> P/J193 ■ Cyan: P/J19 <=> P/J194 	Go to step 8.	Replace the Toner Sensor Harness.
8	<p>Check the Print Cartridge Sensor signal.</p> <ol style="list-style-type: none"> 1. Disconnect P/J19 from the MCU Board. 2. Is there +3.3 V across the Toner Sensor Harness? <ul style="list-style-type: none"> ■ Yellow: J19-1 pin <=> J19-2 pin ■ Magenta: J19-4 pin <=> J19-5 pin ■ Black: J19-7 pin <=> J19-8 pin ■ Cyan: J19-10 pin <=> J19-11 pin 	Go to step 9.	Replace the MCU Board (page 8-86).
9	<p>Check the Print Cartridge Sensor for operation.</p> <ol style="list-style-type: none"> 1. Measure the voltage across: <ul style="list-style-type: none"> ■ Ground <=> P/J19-3 pin (Yellow) ■ Ground <=> P/J19-6 pin (Magenta) ■ Ground <=> P/J19-9 pin (Black) ■ Ground <=> P/J19-12 pin (Cyan) 2. Does the voltage change when the paper is inserted into the sensor detecting point? 	Replace the MCU Board (page 8-86).	Replace the Print Cartridge Sensor (page 8-55)

AC Power Supply Troubleshooting

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack References
<ul style="list-style-type: none"> ■ LVPS, PL9.1.4 	<ul style="list-style-type: none"> ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “DC Power Supply” on page 10-21

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the voltage at the AC wall outlet. 2. Is there approximately 110 VAC (or 220 VAC if the printer is a 220 V configuration) at the AC wall outlet?	Go to step 2.	Notify the customer of improper AC output from the outlet.
2	1. Check the power cord for defects or a loose connection. 2. Is the power cord loose or defective?	Replace or reconnect the power cord.	Replace the LVPS (page 8-80).

DC Power Supply Troubleshooting

LVPS Overcurrent Protection Circuit

This circuit stops all outputs if any of the Low Voltage Power Supply voltages 3.3 VDC, 5 VDC, or 24 VDC are shorted.

The circuit is reset when the short is removed, the power is turned Off, and then On again.

LVPS Overvoltage Protection Circuit

This circuit stops all outputs if the power supply voltage 3.3 VDC, 5 VDC, or 24 VDC exceeds the specified voltage respectively. The operating point is 32 VDC or less for 24 VDC, 7 VDC or less for 5 VDC, or 4.4 VDC for 3.3 VDC.

The circuit is reset when the power is turned Off, and then On again after certain time.

LVPS

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ LVPS, PL9.1.4 ■ Top LV Harness, PL10.1.16 	<ul style="list-style-type: none"> ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “DC Power Supply” on page 10-21

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Perform the AC power supply troubleshooting procedure (page 4-70). 2. Does the problem persist?	Go to step 2.	Complete.
2	1. Turn the AC power switch Off. 2. Is the Fuse on the low-voltage power supply board open?	Replace the LVPS (page 8-80).	Go to step 3.
3	1. Disconnect the connectors J501 and J502 from the LVPS. 2. Turn the AC power Switch On. 3. Verify the DC voltages between the following pins on the LVPS: <ul style="list-style-type: none"> ■ P501-1 pin <=> P501-2 pin = +5 V ■ P501-3 pin <=> P501-4 pin = +3.3 V ■ P502-1 pin <=> P501-2 pin = +24 V 	Go to step 4.	Replace the LVPS (page 8-80).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	<ol style="list-style-type: none"> 1. Turn the AC power Switch Off. 2. Connect J501 to the LVPS then turn the AC power Switch On. 3. Check continuity between P501-3 pin <=> P501-4 pin? 4. Is there 3.3 V present? 	Go to step 7.	Go to step 5.
5	<p>Check the following parts for fault or damage:</p> <ul style="list-style-type: none"> ■ LV Top Harness, PL10.1.16 ■ MCU Board, PL9.1.20 	<p>Replace if damaged. Go to step 6.</p>	Go to step 7.
6	Does the problem still occur?	Go to step 7.	Complete.
7	<ol style="list-style-type: none"> 1. Turn the AC power Switch Off. 2. Connect J501 to the LVPS then turn the AC power Switch Off. 3. Check continuity between P501-1 pin <=> P501-2 pin. 4. Is there +5 V present? 	Go to step 10.	Go to step 8.
8	Check the Top LV Harness for fault or damage.	<p>Replace if damaged. Go to step 9.</p>	Go to step 10.
9	Does the error occur?	Go to step 10.	Complete.
10	<ol style="list-style-type: none"> 1. Turn the AC power Switch Off. 2. Connect J502 to the LVPS then turn the AC power Switch On. 3. Check continuity between P502-1 pin <=> P502-2 pin? 4. Is there +24 V present? 	Complete.	Go to step 11.
11	Check the Top LV Harness for fault or damage.	Replace if damaged.	Complete.

+24 VDC Interlock Switch

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Interlock Harness, PL9.1.3 ■ LVPS, PL9.1.4 ■ Top LV Harness, PL10.1.16 	<ul style="list-style-type: none"> ■ “Map 4 - LVPS and MCU Boards” on page 10-12 ■ “DC Power Supply” on page 10-21

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Interlock Harness for continuity. <ol style="list-style-type: none"> 1. Disconnect P/J15 from the Interlock Harness. 2. Check continuity between P/J15-1 pin <=> P/J15-2 pin. 3. Is there voltage present when the Interlock is activated? 	Go to step 2.	Replace the Interlock Harness (page 8-79).
2	<ol style="list-style-type: none"> 1. Disconnect connectors P/J502 from the LVPS Board and P/J15 from the Interlock Harness. 2. Check continuity between P/J15-1 pin <=> P/J15-2 pin. 3. Is there +24 V present? 	Go to Troubleshooting “LVPS” on page 4-71.	Replace the Top LV Harness.

Abnormal and Electrical Noise

Abnormal Noise when Power is Turned On

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Transfer Unit, PL4.1.1 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ Fuser Unit, PL6.1.10 ■ Main Drive Assembly, PL8.1.2 ■ PH Drive Assembly, PL8.1.7 ■ Optional 550-Sheet Feeder, PL12.1.1 	

Warning

Ensure to wait for the Fuser to cool down before starting the procedure.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Perform the Main Motor test (page 4-41): Service Mode > Engine Diag > Motor Test > Main Motor . 2. Does the noise come from the printer?	Go to step 2.	Go to step 6.
2	1. Check the Fuser for correct installation. 2. Reseat the Fuser (page 8-11). 3. Perform the Main Motor test (page 4-41): Service Mode > Engine Diag > Motor Test > Main Motor . 4. Does the noise come from the printer?	Go to step 3.	Complete.
3	1. Check the Black Print Cartridge for correct installation. 2. Reseat the Black Print Cartridge (page 8-10). 3. Perform the Main Motor test (page 4-41): Service Mode > Engine Diag > Motor Test > Main Motor . 4. Does the noise come from the printer?	Go to step 4.	Complete.
4	1. Check the Transfer Unit for correct installation. 2. Reseat the Transfer Unit (page 8-8). 3. Perform the Main Motor test (page 4-41): Service Mode > Engine Diag > Motor Test > Main Motor . 4. Does the noise come from the printer?	Go to step 5.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	<ol style="list-style-type: none"> 1. Check the Main Drive Assembly for correct installation. Reseat the Main Drive Assembly (page 8-70). 2. Perform the Main Motor test (page 4-41): Service Mode > Engine Diag > Motor Test > Main Motor. 3. Does the noise come from the printer? 	Replace the following parts, one after another. <ul style="list-style-type: none"> ■ Fuser (page 8-11) ■ Black Print Cartridge (page 8-10) ■ Transfer Unit (page 8-8) ■ Main Drive Assembly (page 8-70) 	Complete.
6	<ol style="list-style-type: none"> 1. Perform the Sub Motor test (page 4-42): Service Mode > Engine Diag > Motor Test > Sub Motor. 2. Does the noise come from the printer? 	Go to step 7.	Go to step 9.
7	<ol style="list-style-type: none"> 1. Check the Print Cartridges for correct installation. Reseat the Print Cartridges (page 8-10). 2. Perform the Sub Motor test (page 4-42): Service Mode > Engine Diag > Motor Test > Sub Motor. 3. Does the noise come from the printer? 	Go to step 8.	Complete.
8	<ol style="list-style-type: none"> 1. Check the Main Drive Assembly for correct installation. Reseat the Main Drive Assembly (page 8-70). 2. Reseat the Main Drive Assembly (page 8-70). 3. Perform the Sub Motor test (page 4-42): Service Mode > Engine Diag > Motor Test > Sub Motor. 4. Does the noise come from the printer? 	Replace the following parts, one after another. <ul style="list-style-type: none"> ■ Print Cartridges (C/M/Y/K) (page 8-10) ■ Main Drive Assembly (page 8-70) 	Complete.
9	<ol style="list-style-type: none"> 1. Perform the Tray 2 Motor test (page 4-43): Service Mode > Engine Diag > Motor Test > Tray 2 Motor. 2. Does the noise come from the printer? 	Go to step 11.	Complete. if the Optional 550-Sheet Feeder is installed, go to step 10.
10	<ol style="list-style-type: none"> 1. Perform the Option Feeder Motor test (page 4-45): Service Mode > Engine Diag > Motor Test > Tray 3 Feed Motor. 2. Does the noise come from the printer? 	Replace the Tray 3 Feeder (page 8-107).	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
11	<ol style="list-style-type: none">1. Check the PH Drive Assembly for correct installation. Reseat the PH Drive Assembly (page 8-73).2. Perform the Tray 2 Motor test (page 4-43): Service Mode > Engine Diag > Motor Test > Tray 2 Motor.3. Does the noise come from the printer?	Replace the PH Drive Assembly (page 8-73).	Complete.

Abnormal Noise During Printing

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Retard (Separator) Roll, PL2.1.7 ■ Retard Roll, PL2.2.17 ■ MPT Feed Roll, PL3.1.10 ■ Feed Roll, PL3.2.53 ■ Transfer Unit, PL4.1.1 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ Fuser Assembly, PL6.1.10 ■ Main Drive Assembly, PL8.1.2 ■ PH Drive Assembly, PL8.1.7 ■ Duplex Unit, PL11.1.1 ■ Optional 550-Sheet Feeder, PL12.1.1 ■ Tray 3 Feed Roll, PL12.3.29 ■ Tray 3 Retard Roll, PL12.5.17 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check Tray 1 (MPT). 2. Does the noise come from Tray 1 when paper feed from Tray 1?	Go to step 2.	Go to step 3.
2	1. Check the paper condition. 2. Replace the paper. 3. Does the noise still occur?	Replace the Rollers: ■ Tray 1 (MPT) Feed Roll (page 8-34) ■ Tray 2 Retard Roll (page 8-29)	Complete.
3	1. Check the Feeder Assembly for abnormal noise. 2. Does the noise come from the Feeder Assembly while paper is feeding?	Go to step 4.	Go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	<ol style="list-style-type: none"> 1. Check the paper condition. 2. Replace the paper. 3. Does the noise still come from the printer? 	Replace the following parts: <ul style="list-style-type: none"> ■ Tray 2 Retard Roll (page 8-29) ■ Tray 2 Feed Roll (page 8-47) ■ Tray 2 Feeder Assembly (page 8-36) 	Complete.
5	<ol style="list-style-type: none"> 1. Check the Duplex Unit. 2. Does the noise come from the Duplex Unit while paper is feeding? 	Go to step 6.	Go to step 8.
6	<ol style="list-style-type: none"> 1. Check the Duplex Unit for correct installation. 2. Reseat the Duplex Unit (page 8-99). 3. Does the noise come from the Duplex Unit while paper is feeding? 	Replace the Duplex Unit (page 8-99).	Go to step 7.
7	<ol style="list-style-type: none"> 1. Perform the Duplex Motor test (page 4-44): Service Mode > Engine Diag > Motor Test > Duplex Motor. 2. Does the noise come from the printer? 	Replace the Duplex Unit (page 8-99).	Complete.
8	<ol style="list-style-type: none"> 1. Check the Fuser for correct installation. Reseat the Fuser (page 8-11). 2. Does the noise still occur? 	Go to step 9.	Complete.
9	<ol style="list-style-type: none"> 1. Check the Transfer Unit for correct installation. Reseat the Transfer Unit (page 8-8). 2. Does the noise still occur? 	Go to step 10.	Complete.
10	<ol style="list-style-type: none"> 1. Check the Print Cartridges for correct installation. Reseat the Print Cartridges (page 8-10). 2. Does the noise still occur? 	Go to step 10.	Complete.
11	<ol style="list-style-type: none"> 1. Check the Main Drive Assembly for correct installation. Reseat the Main Drive Assembly (page 8-70). 2. Does the noise still occur? 	Go to step 12.	Complete.
12	<ol style="list-style-type: none"> 1. Check the PH Drive Assembly for correct installation. Reseat the PH Drive Assembly (page 8-73). 2. Does the noise still occur? 	Go to step 13.	Complete.
13	<ol style="list-style-type: none"> 1. Perform the Main Motor test (page 4-41): Service Mode > Engine Diag > Motor Test > Main Motor. 2. Does the noise come from the motor? 	Replace the Main Drive Assembly (page 8-70).	Go to step 14.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
14	1. Perform the Sub Motor test (page 4-42): Service Mode > Engine Diag > Motor Test > Sub Motor. 2. Does the noise come from the motor?	Replace the Main Drive Assembly (page 8-70).	Go to step 15.
15	1. Perform the Tray 2 Motor test (page 4-43): Service Mode > Engine Diag > Motor Test > Tray 2 Motor. 2. Does the noise come from the motor?	Replace the PH Drive Assembly (page 8-73).	Complete. If the Optional Tray is installed, go to step 16.
16	1. Perform the Tray 3 Feed Motor test (page 4-45): Service Mode > Engine Diag > Motor Test > Tray 3 Motor. 2. Does the noise come from the motor?	Replace the Optional 550-Sheet Feeder (page 8-100).	Complete.

Electrical Noise

There is a variable pitch sound coming from the printer. Electrical noise can be either noise in the electrical lines or static in electromagnetic communications.

Initial Actions

- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
<ul style="list-style-type: none"> ■ Transfer Unit, PL4.1.1 ■ HVPS, PL5.1.17 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check external noise. 1. Are there other electrical appliances within 3 meters from the printer? 2. Turn the electrical appliances Off or relocate the printer at least 6 meters away from other electrical appliances. 3. Does the error still occur?	Go to step 2.	Complete.
2	1. Check the AC ground. 2. Is the AC power supply outlet wired and grounded appropriately?	Go to step 3.	Request the client to fix the AC power supply outlet.
3	1. Reseat the Print Cartridges (page 8-10). 2. Reseat the Transfer Unit (page 8-8). 3. Does the electrical noise still occur?	Go to step 4.	Complete.
4	1. Check the Print Cartridges for stains or debris. 2. Are the Print Cartridges dirty?	Clean the Print Cartridges.	Reseat the HVPS (page 8-61).

AC Noise

There is high pitch sound coming from the printer.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ LVPS, PL9.1.4	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check for abnormal noise. 2. Is there abnormal noise from the motors when turning On the printer?	Go to step 2.	Go to step 4.
2	1. Turn the printer power Off. 2. Disconnect the power cord and wait for one minute. 3. Reseat the LVPS connectors. 4. Turn the printer power On. 5. Is the printer working?	Complete.	Go to step 3.
3	1. Check the Control Panel's wiring harness connector. 2. Reconnect the Control Panel wiring harness connector P/J220 (page 8-21). 3. Does the Control Panel operate?	Complete.	Go to step 4.
4	1. Check the MCU Board for correct installation. 2. Reseat the MCU Board (page 8-86). 3. Is the printer working?	Complete.	Replace the LVPS (page 8-80).
5	1. Connect the printer power cord to another electrical outlet. 2. Turn the printer power On. 3. Is the printer working?	Complete.	Go to step 6.
6	1. Turn the printer power Off. 2. Check the power cord connection. Reconnect the printer power cord. 3. Is the printer working?	Complete.	Go to step 7.
7	1. Turn the printer power Off. 2. Disconnect the power cord and wait for one minute. 3. Reseat the LVPS connectors. 4. Turn the printer power On. 5. Is the printer working?	Complete.	Go to step 8.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
8	<ol style="list-style-type: none">1. Turn the printer power Off.2. Check the Main Switch connector. Reconnect the Main Switch connector.3. Disconnect the power cord and wait for one minute.4. Reconnect the power cord.5. Turn the printer power On.6. Is the printer working?	Complete.	Replace the LVPS (page 8-80).

Operating System and Application Problems

Windows 2000, Windows XP, Windows Server Troubleshooting

Note

For Windows XP, select Classic Look or the Windows XP procedures will not match the following procedures. To select **Classic Look**, click **Start**, **Settings**, **Taskbar**, and **Start Menu**. Select the **Start Menu** tab, and then **Classic Start Menu**. Click **OK**.

This troubleshooting section assumes you have completed the following tasks.

- Loaded a Phaser printer PCL or PostScript printer driver.
- Printed and kept a current copy of the Configuration page.

Verify Settings

1. Verify the settings on the Configuration page.
 - **IP Address Source** is set to: **DHCP/AutoIP**, **BOOTP**, **RARP**, **DHCP**, or **Panel** (depending on your network configuration).
 - **Current IP Address** is set correctly. (Note this address if it is assigned by DHCP/AutoIP, DHCP, or BOOTP.)
 - **Subnet Mask** is set correctly (if used).
 - **Default Gateway** is set correctly (if used).
 - **LPR** is enabled. Verify that the LPR and AppSocket settings are set as desired.
 - **Interpreters**: **Auto**, **PCL**, or **PostScript** (depending on your driver).
2. Verify that the client is logged into the network and printing to the correct print queue. The user should also have access to the Phaser printer queue.

Verify Driver Installation

1. From the desktop, right-click **My Network Places**, and select **Properties**.
2. Right-click **Local Area Connection** and select **Properties**.
3. Click the **General** tab. View the list of installed network protocols to verify that TCP/IP is installed. (For more information, contact your network administrator.)
4. Click **Install** to install any components not listed, and then restart your computer.
5. From the **Start** menu, select **Start > Settings > Printers and Faxes**.
6. Right-click the printer icon, and select **Properties**.
7. Click the **Advanced** tab. Verify that the correct printer driver is installed.

8. Click the **Ports** tab. Verify that the IP Address in the **Print to the Following Ports** list is identical to the one on the Configuration page. You may need to click the **Configure Port** button to see the IP address. If necessary, re-select the TCP/IP number used for the printer.

Macintosh Troubleshooting (Mac OS 10.3 and Higher)

The following procedures eliminates cabling, communication, and connection problems. Once you complete these steps, print a test page from your software application.

Note

If the job prints, no further system troubleshooting is necessary. If there are print-quality problems, refer to the User Guide at www.xerox.com/office/6280support.

Macintosh Troubleshooting OS 10.3 Step-by-Step

Perform these steps **only** for Mac OS 10.3 and higher.

1. For **AppleTalk**, perform the steps below. For **TCP/IP**, proceed to step 2.
 - a. From the printer's Control Panel, verify that the **EtherTalk** is enabled. If it not, enable **EtherTalk**, and reset the printer.
 - b. Print the Configuration page and verify that **EtherTalk** is enabled.
 - c. From the Configuration page, verify the **Zone**. If you have multiple zones on your network, verify that your printer appears in the desired zone.
2. Open the **Network Utility** and click the Ping tab.
3. Enter the printer's IP address.
4. Click **Ping**. If you do not get a response, verify that your TCP/IP settings are correct for your printer and computer.

Note

See also: www.xerox.com/office/6280support

UNIX / Linux

This section includes:

- Quick Install Steps
- Additional Resources

Your printer supports connection to a variety of UNIX platforms through the Parallel and Network interface. The workstations currently supported by CentreWare for UNIX/Linux to a network-connected printer are:

- Sun Solaris
- IBM AIX
- Hewlett-Packard HP-UX
- Linux (i386) tested on SUSE 10.0, RedHat 9, Fedora Core1

The following procedures enable you to connect your printer using any of the supported versions of UNIX or Linux listed above.

Quick Install Steps

Perform the following procedures to set up the printer and install the appropriate drivers.

From the Printer

To set up the printer:

1. Verify that both TCP/IP protocol and the proper connector are enabled.
2. On the Control Panel, select one of these IP address options:
 - Allow the printer to set up a DHCP address
 - Enter the IP address manually
3. Print the Configuration page and keep it for reference.

From Your Computer

To install the CentreWare for Unix driver:

1. Go to www.xerox.com/office/drivers.
2. Select your printer, the platform you are running (**UNIX**), and file type (**Drivers**).
3. Click **Go to Downloads**.
4. From the list of provided files, download the **PrinterPackageXPXX** and the appropriate CentreWare printer driver for your platform <O/S>XPXX 4.xx.x.tar.
 - a. As root untar the Driver and Printer package, this will create two subdirectories. Cd to <O/S>InstallPackage and type `./setup` to install the driver.
 - b. CD to the PrinterPackagexpxx and type `./setup` to install the printer specific data files.

- c. Type `xpadmin` to open the admin tool for creating print queues. Select the printer from the list of discovered printers you want to print to. Click on the printer icon at the top left of the screen to add a print queue.
5. Print a test page and verify the print quality of the printed page.

Note

If print-quality problem exists, or your job did not print, refer to the User Guide at www.xerox.com/office/6280support.

Additional Resources

For users that want to use the CUPS driver instead of CentreWare for Unix, access the Xerox website for the latest CUPS ppd package at www.xerox.com/office/drivers. To download printer drivers:

1. Find your printer. Click the **Drivers & Downloads** link. Select the platform you are running (UNIX), and the files you would like to download (Drivers).
2. Click the **Go** button.
3. Click the **CUPSPrinterPackage**.
4. Untar the printer package and select the ppd for the printer you want to install.
5. Copy the file to `/usr/share/cups/model/Xerox`. (This is the directory for SUSE10.1. The directory may not be in the same location on other Linux versions).
6. Open the printer manager supplied for the Linux release and follow the instructions for adding a print queue.

Note

The print daemon may need restarting for the print manager to see the new PPD added to the CUPS ppd directory.

Print-Quality Troubleshooting

In this chapter...

- Print-Quality Problems Overview
- Checklist Before Troubleshooting Print-Quality
- Test Prints
- Print-Quality Specifications
- Print-Quality Troubleshooting

Chapter 5

Print-Quality Problems Overview

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, eliminate as many variables as possible. The first step is to generate prints using information pages embedded in the printer on laser paper from the approved media list. Refer to “Media and Tray Specifications” on page 1-23 for supported and specialty media that have been tested and approved for use in the Phaser 6280 Color Laser Printer. Use paper from a fresh ream that is acclimated to room temperature and humidity.

If the print-quality defect is still present when printing on approved media from an unopened ream of paper, then investigate software applications and environmental conditions.

Print the Configuration page to determine the temperature and humidity under which the printer is operating. Compare this to the “Environmental Specifications” on page 1-16. Extreme temperature and humidity can adversely affect the xerographic and fusing characteristics of the printer.

When analyzing a print-quality defect, first determine if the defect occurs in all colors or only one color and if it is repeating or random occurrence. Continuous defects in the process direction, such as Voids and Lines, are the most difficult to diagnose. Inspect the visible surfaces of all Rollers for obvious defect. If no defects are found, replace the Print Cartridge, Laser Unit, Transfer Unit, and Fuser Assembly one at a time until the defect is eliminated.

Defects Associated with Specific Printer Components

Some print-quality problems can be associated with specific assemblies; the most common problems and the associated assemblies are listed in this section. Refer to the specific print-quality troubleshooting procedure for detail information.

Laser Unit

- Light or Undertone Print
- Blank Print (No Print)
- Black Print
- Vertical Blank Lines
- Horizontal Band, Voids, or Streaks
- Vertical Stripes
- Horizontal Stripes
- Partial Band
- Random Spots
- Repeating Bands, Lines, Marks, or Spots

Transfer Unit

- Light or Undertone Print
- Horizontal Band, Voids, or Streaks
- Vertical Stripes
- Horizontal Stripes
- Partial Band
- Random Spots
- Repeating Bands, Lines, Marks, or Spots
- Background Contamination

Fuser Assembly

- Vertical Stripes
- Horizontal Stripes
- Repeating Bands, Lines, Marks, or Spots
- Unfused Image

Print Cartridge

- Light or Undertone Print
- Blank Print (No Print)
- Black Print
- Vertical Blank Lines
- Horizontal Band, Voids, or Streaks
- Vertical Stripes
- Horizontal Stripes
- Partial Band
- Random Spots
- Repeating Bands, Lines, Marks, or Spots
- Background Contamination
- Unfused Image

Checklist Before Troubleshooting Print-Quality

Checking the Printer Condition

Toner

Low toner can cause print-quality problems, such as Fading, Streaking, White Lines, or Dropouts. Print a small document from different software applications to replicate the problem and check the amount of toner available. Use the CentreWare Internet Services (IS) to check the supplies status. To access the CentreWare IS:

1. Open your web browser.
2. In the Address field, enter the printer IP address.
3. Click the **Status** button.
4. Click the **Supplies** button.
5. The **Supplies Status** is displayed.

If the toner is low, you can extend the Print Cartridge life by removing the Cartridge from the printer, and gently shaking the Print Cartridge from side-to-side.

Cleaning

Paper, toner, and dust particles can accumulate inside the printer and cause print-quality problems such as Smearing or Toner Specks. Clean the inside of the printer to prevent these problems.

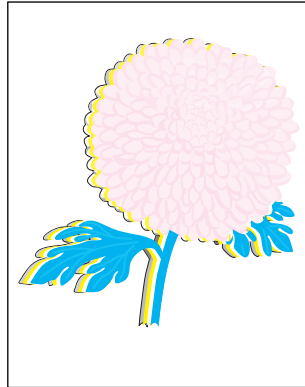
Checklist

Check the following items prior to performing troubleshooting. These procedures may help to resolve the problems without troubleshooting the printer.

1. Color is out of alignment.

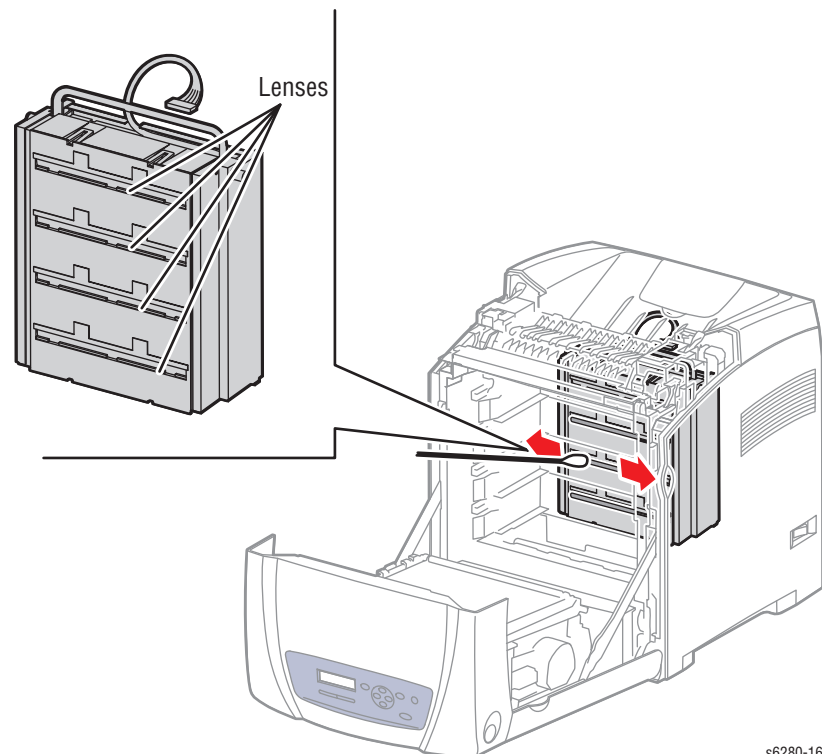
Note

After installing a new black Print Cartridge, ensure to clean the Laser lens.



Color Registration

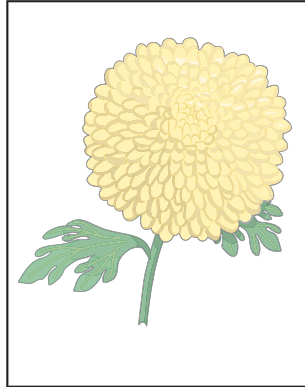
- a. Clean the Laser Unit lenses using a Q-tip or a dry, lint-free cloth to wipe the lenses.



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- b. Check the Transfer Unit for damage.
- c. Perform Color Registration Adjustment (page 6-2).

2. Print is too light.



Light or Undertone Print

- a. The toner may be too low. Check the amount of toner and change the Print Cartridges if necessary.
- b. In the printer Printing Preferences menu, **Advanced** > **Details** > **Draft Mode**, verify **Off** is selected.
- c. If you are printing on an uneven print surface, change the paper type settings in the Tray Settings menu.
- d. Verify that the correct type of paper is being used.

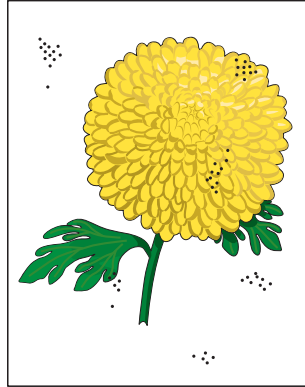
3. Toner smears or print comes off page.



Smudges or Smears

- a. If you are printing on an uneven print surface, change the Media Type settings in the Tray Settings menu.
- b. Verify that the paper is within the printer specifications (refer to "Media and Tray Specifications" on page 1-23).

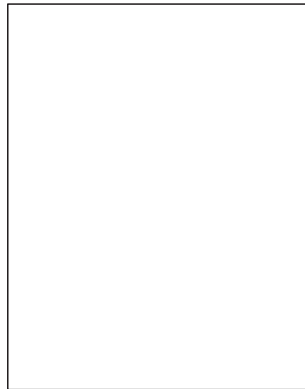
4. Toner spots appear on the page and printing is blurred.



Random Spots

- a. Check the Print Cartridge(s) to make sure that it is installed correctly.
- b. Change the Print Cartridge(s).

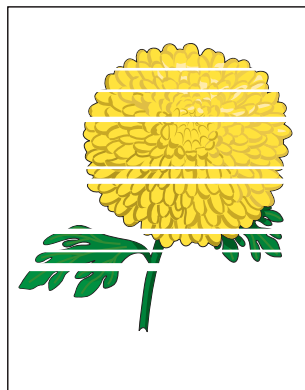
5. Entire page is white or one color is missing from color image.



Blank Print

- a. Ensure the packaging material is removed from the Print Cartridge.
- b. Check the Print Cartridge to make sure that it is installed correctly.
- c. The toner may be low. Change the Print Cartridge.

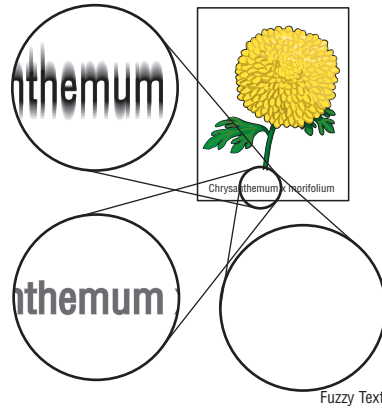
6. Streaks appear on the page.



Horizontal Band, Void, or Streaks

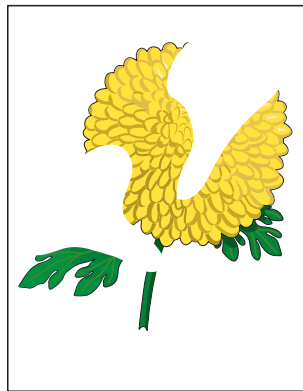
- a. The toner may be low. Change the Print Cartridge(s).
- b. If you are using preprinted forms, make sure the toner can withstand the temperature of 0° C to 35° C.

7. Characters have jagged or uneven edges.



- a. If you are using downloaded fonts, verify that the fonts are supported by the printer, the host computer, and the software application.

8. Part or all the page prints in cyan, magenta, yellow, or black.



Partial Band

- a. Check the Print Cartridges to make sure they are installed correctly.

9. The job prints, but the top and side margins are incorrect.

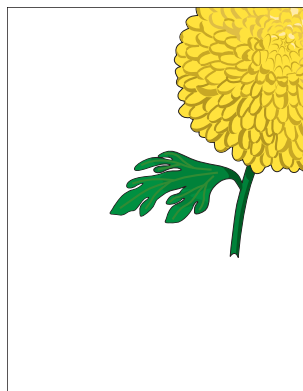


Image Not Centered

- a. Ensure the Media Size settings in the Tray Settings is correct.
- b. Ensure the margins are set correctly in your software application.

Test Prints

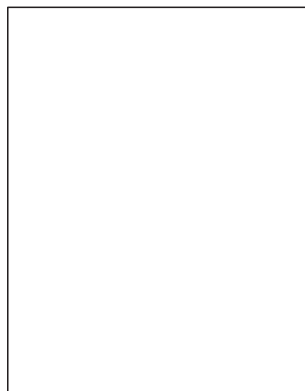
This section provides information for how to analyze test prints. A variety of test prints are available for determining the quality of output from the printer and to assist in troubleshooting the problems.

- No Image IOT
- Pattern IOT
- Grid 2 ESS
- Cyan 20% ESS
- Magenta 20% ESS
- Yellow 20% ESS
- Black 20% ESS
- CMY 20% ESS
- Gradation ESS
- Toner Pallet Check
- Contamination Check

No Image IOT

This test print provides a sample of blank page. This test is used to identify problems with the printer function.

- **Fail:** Check the printer function.
- **Pass:** Check the network connection, cable, PC...etc.

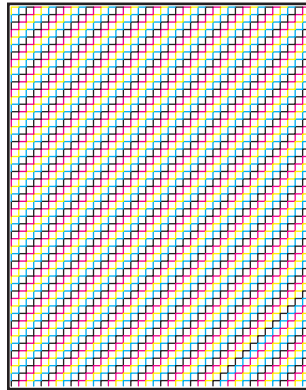


Blank Print

Pattern IOT

This test print provides the printer's built-in test pattern. This test is used to identify problems with the printer function or the Image Processor Board. The colors should be aligned vertically and horizontally. Compare the print with the following chart to determine the problem.

- **Fail:** Check the printer controller or the MCU Board.
- **Pass:** Check the Image Processor Board.

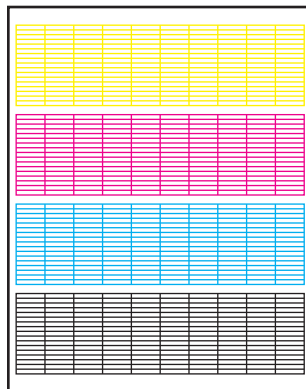


Pattern 600 IOT

Grid 2 ESS

This test print provides the Controller built-in grid pattern. This test is used to identify problems with the printer function. Compare the print with following chart to determine the problem.

- **Fail:** Check the printer function and the Image Processor Board.
- **Pass:** Check the network connection, cable, PC...etc.

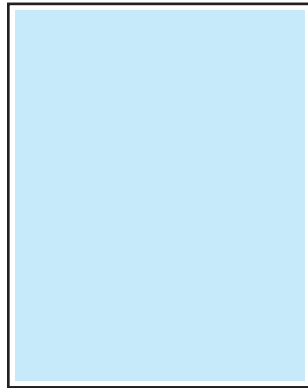


Grid 2

Cyan 20% ESS

This test print provides 20% cyan density on the whole page. This test is used to identify problems with cyan toner or another color toner. Compare the print with the following chart to determine the problem.

- **Fail:** Check the cyan Print Cartridge.
- **Pass:** Check another Print Cartridge.

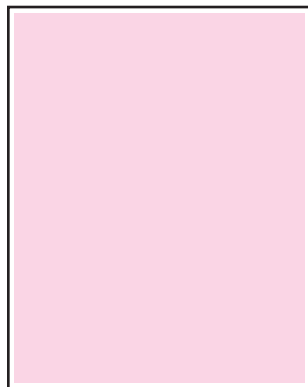


Cyan 20%

Magenta 20% ESS

This test print provides 20% magenta density on the whole page. This test is used to identify problems with magenta toner or another color toner. Compare the print with the following chart to determine the problem.

- **Fail:** Check the magenta Print Cartridge.
- **Pass:** Check another Print Cartridge.

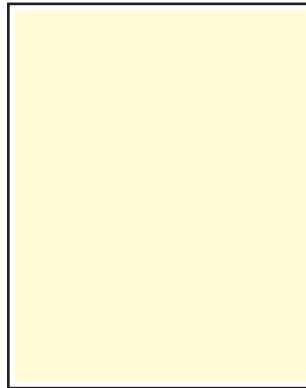


Magenta 20%

Yellow 20% ESS

This test print provides 20% yellow density on the whole page. This test is used to identify problems with yellow toner or another color toner. Compare the print with the following chart to determine the problem.

- **Fail:** Check the yellow Print Cartridge.
- **Pass:** Check another Print Cartridge.

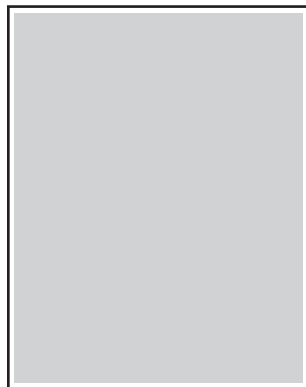


Yellow 20%

Black 20% ESS

This test print provides 20% black density on the whole page. This test is used to identify problems with black toner or another color toner. Compare the print with the following chart to determine the problem.

- **Fail:** Check the black Print Cartridge.
- **Pass:** Check another Print Cartridge.

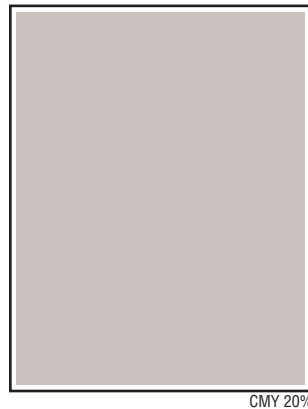


Black 20%

CMY 20% ESS

This test print provides 20% density for combination of cyan, magenta, and yellow on the whole page. This test is used to identify problems with balance of three color toners or another toner. Compare the print with the following chart to determine the problem.

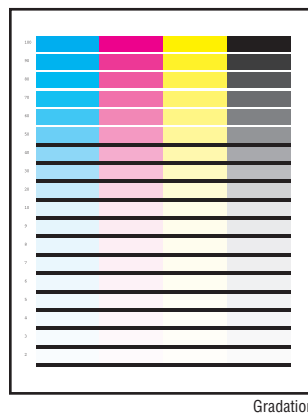
- **Fail:** Check the cyan, magenta, or yellow Print Cartridge.
- **Pass:** Check the black Print Cartridge.



Gradation ESS

This test print provides 2 - 100% density for cyan, magenta, yellow, or black on the whole page. This test is used to identify problems with the printer function or the Image Processor Board. Compare the print with the following chart to determine the problem.

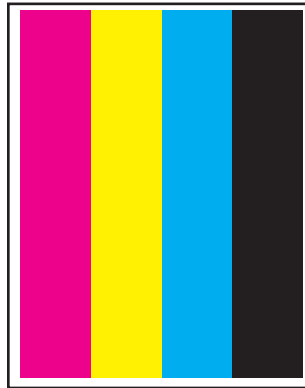
- **Fail:** Check the printer function.
- **Pass:** Check the Image Processor Board.



Toner Pallet Check

This test print provides 100% density color pattern of Y/M/C/K on the whole page. This test is used to identify problems with balance of the toner. Compare the print with the following chart to determine the problem.

- **Fail:** Check the problem Print Cartridge.
- **Pass:** Check the print job.



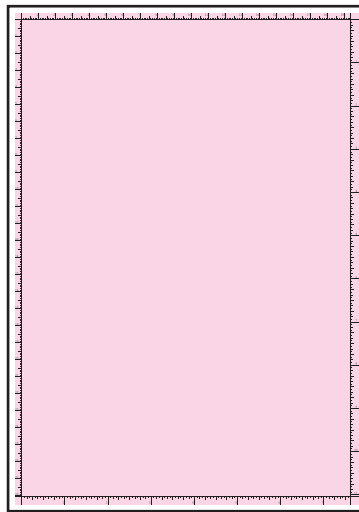
Toner Pallet Check

Contamination Check

This test print provides prints that can be checked for any regular lines or toner spots when encountering print-quality problems. From the difference in the interval of regular lines or spots, you can determine the parts that have caused the issues. Compare the print with the following chart to determine the problem.

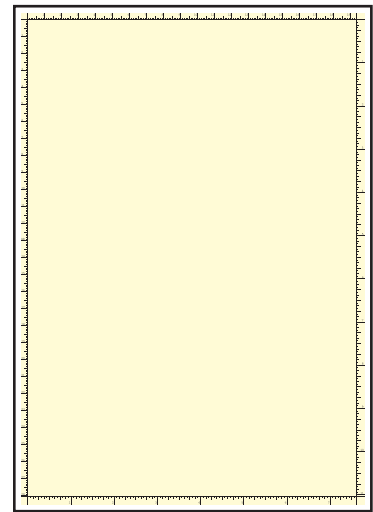
- **Pages 1 to 4:** Prints the scale patterns in vertical and horizontal directions for evaluating regularity and intervals.
- **Page 5:** Prints the list of intervals by component fault.

Page 1



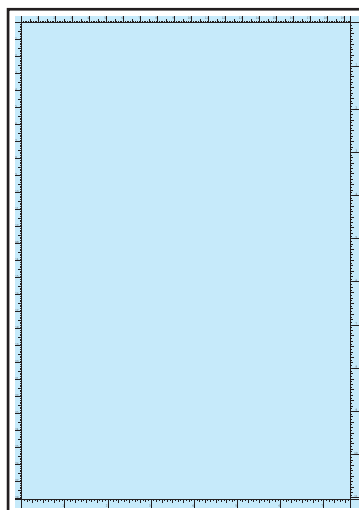
s6280-281

Page 2



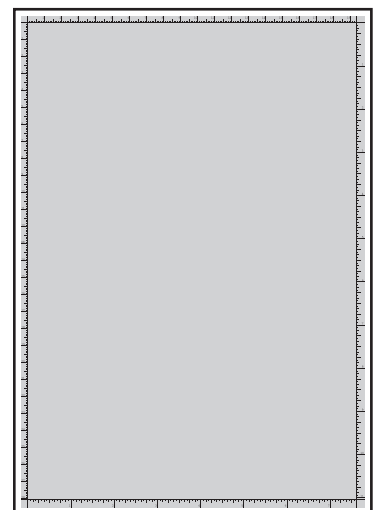
s6280-282

Page 3

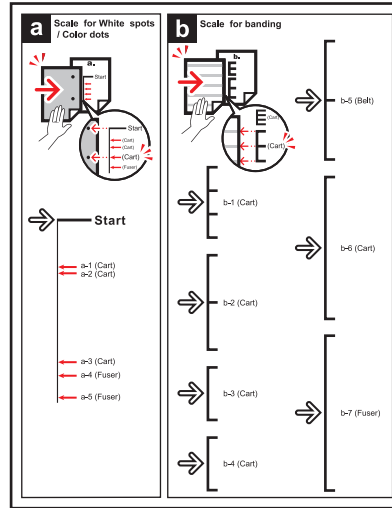


s6280-283

Page 4



s6280-284



s6280-285

Print-Quality Specifications

The Print-Quality specifications are provided as follows.

Environmental Condition

- Temperature: 10° C - 32° C
- Humidity: 15% RH - 85% RH (85% RH at 28° C)

Note

Defects may occur due to condensation after around 30 minutes if the printer is turned On in a critical environment such as 85% at 10° C.

Quality Paper

The print-quality is best when quality paper is fed from the tray. The print-quality is evaluated on the maximum size of each standard paper.

- Color Print-Quality: Xerox-brand X-Pression paper
- Black and White Quality: Xerox-brand 4200 paper

Paper Condition

Paper should be fresh and stored in the operating environment for 12 hours before use for printing.

Printer Condition

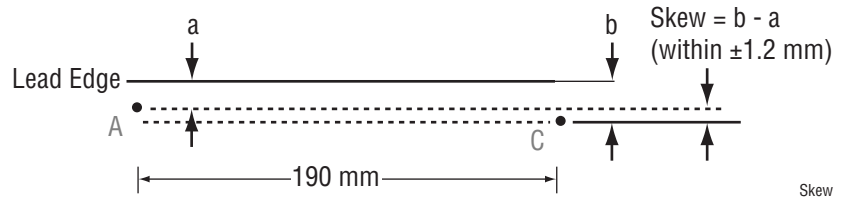
The specified print-quality is guaranteed with the printer in specified normal environmental condition.

Specifications

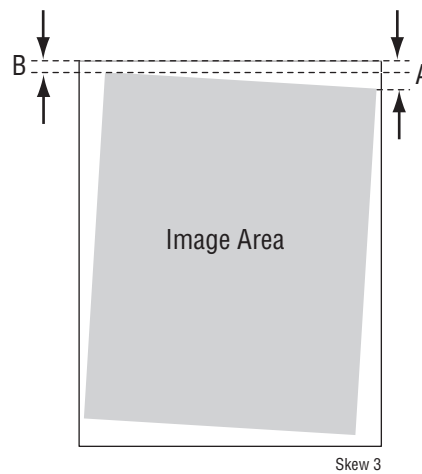
The following charts provide specifications for Skew, Parallelism, Linearity, Perpendicularity, Magnification Error, Registration, and Guaranteed and Maximum Print Areas.

Skew

- 190 mm \pm 1.2 mm

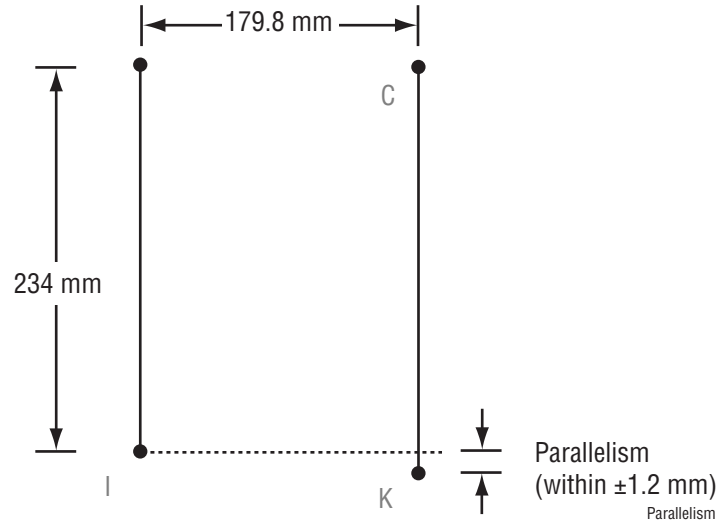


To measure Skew: Measure the margin of the paper at the leading edge of each corner, and then take the difference between them.



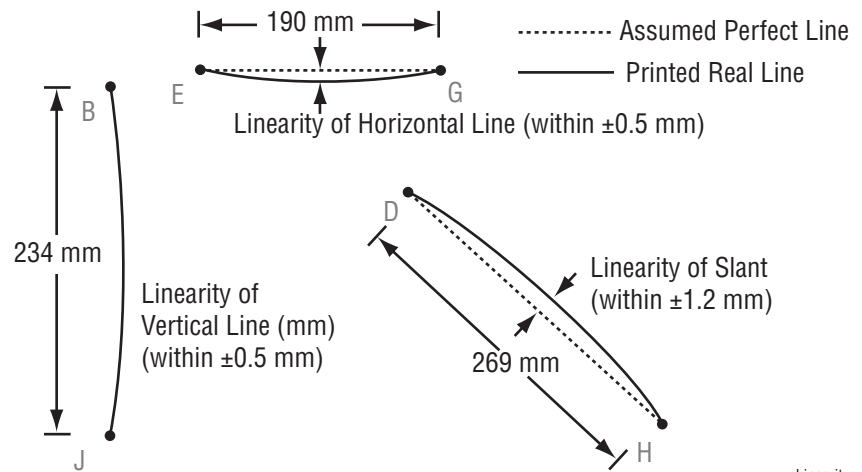
Parallelism

- Horizontal: 179.8 mm \pm 1.2 mm
- Vertical: 234 mm \pm 1.2 mm



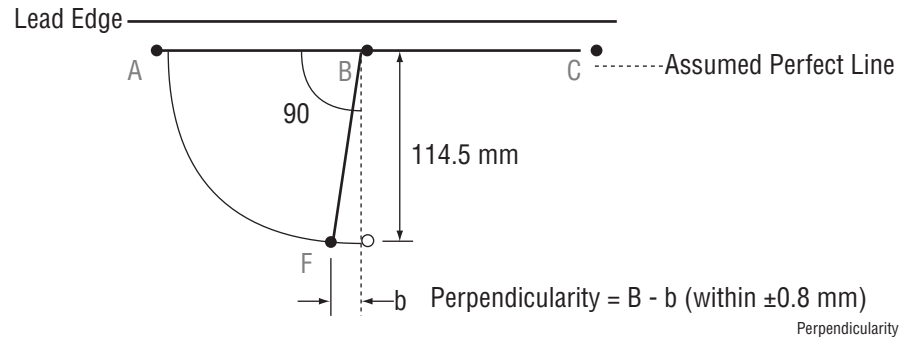
Linearity

- Horizontal: 190 mm \pm 0.5 mm
- Vertical: 234 mm \pm 0.5 mm
- Slant: 269 mm \pm 1.2 mm



Perpendicularity

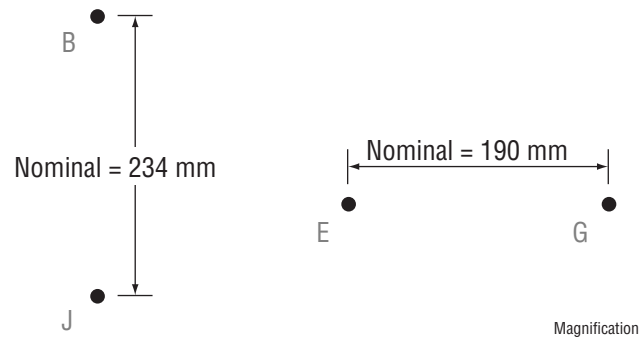
- 114.5 mm ± 0.8 mm



Magnification Error

- Horizontal Simplex: 190 mm ± 0.5%
- Horizontal Duplex: 190 mm ± 0.8%
- Vertical Simplex: 234 mm ± 0.5%
- Vertical Duplex: 234 mm ± 0.8%

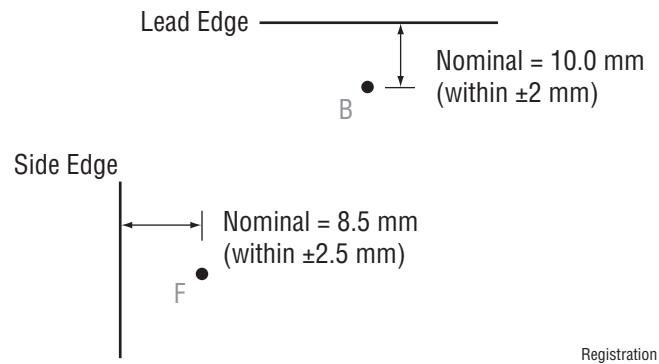
Magnification = Measured Length / Nominal (within ±0.5%)



Registration

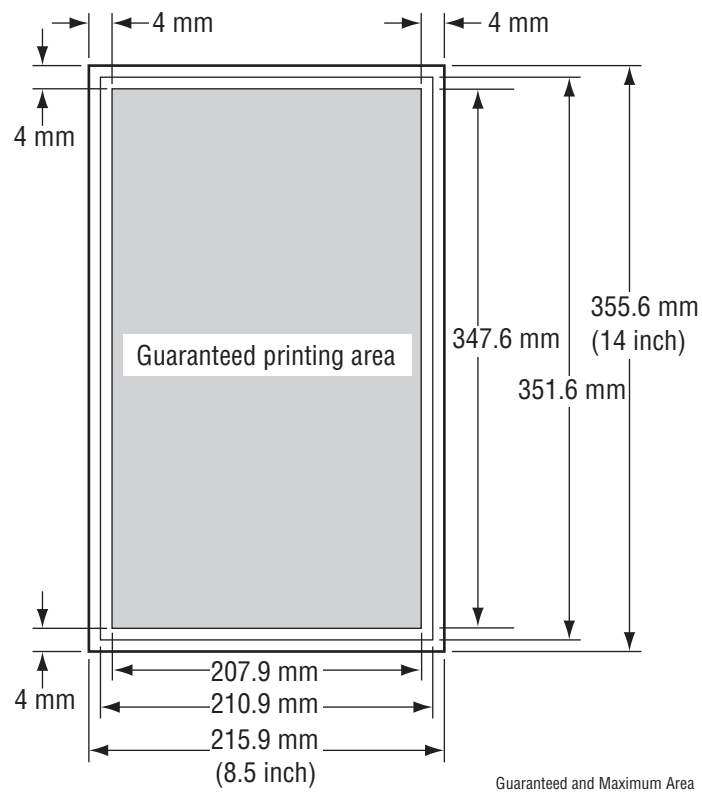
- Leading Edge: 10.0 mm ± 2.0 mm
- Side Edge: 8.5 mm ± 2.5 mm

Registration = Measured Length - Nominal



Guaranteed and Maximum Print Areas

- Maximum Print Area: 210.9 mm x 351.6 mm
- Guaranteed Print Area: 207.9 mm x 347.6 mm



Print-Quality Troubleshooting

Print-Quality Defect Definitions

The following table lists the print-quality defect corrective procedure, their definition, and the page where each procedure is provided.

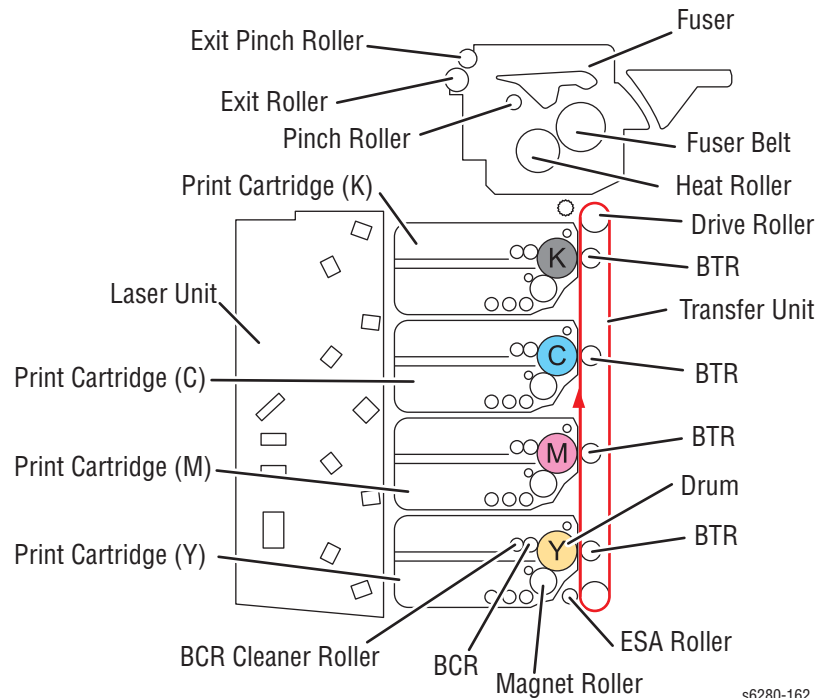
Defect	Definition	Page
Light or Undertone Print	The overall image density is too light in all colors.	page 5-24
Blank Print (No Print)	The entire image area is blank.	page 5-26
Black Print	The entire image area is black.	page 5-28
Vertical Blank Lines	There are faded or completely non-printed lines along the page.	page 5-30
Horizontal Band, Voids, or Streaks	There are areas of the image that are extremely light or are missing entirely.	page 5-32
Vertical Stripes	There are black lines along the page in the direction of the paper travel.	page 5-34
Horizontal Stripes	There are dark lines running parallel with the leading edge of the print.	page 5-36
Partial Band	There are areas of the image that are extremely light or are missing in a limited area.	page 5-39
Random Spots	There are spots of toner randomly scattered across the page.	page 5-41
Repeating Bands, Lines, Marks, or Spots	There are recurring lines, marks, or spots on the page.	page 5-43
Background Contamination	There is toner contamination on all or most of the page.	page 5-46
Skew	The printed image is not paralleled with both sides of the paper.	page 5-48
Damaged Paper	The paper comes out from the printer wrinkled, folded, or worn-out.	page 5-51
Unfused Image	The toner image is not completely fused to the paper. The image easily rubs off.	page 5-54
Color Registration	A printed yellow or black image is not overlapped on a cyan or magenta image correctly.	page 5-56

Repeating Defect Measurement

When horizontal lines and/or spot occur periodically, it is possibly caused by the trouble of particular roller. Measure the trouble interval on the test print, and check the relation to the Roller in the table. The interval does not necessary match circumference of the Roller.

Horizontal Line and Spot Trouble Measurement

Roll	Interval	Replacement	Part List Number
Drum	75.4 mm	Print Cartridge (C/M/Y/K)	PL5.1.18-21
BCR	28.3 mm	Print Cartridge (C/M/Y/K)	PL5.1.18-21
BCR Cleaner Roll	25.1 mm	Print Cartridge (C/M/Y/K)	PL5.1.18-21
Sleeve (K)	27.9 mm	Print Cartridge (K)	PL5.1.19
Sleeve (Y/M/C)	27.9 mm	Print Cartridge (C/M/Y)	PL5.1.18-21
1st BTR	31.4 mm	Transfer Unit	PL4.1.1
Drive Roll	56.9 mm	Transfer Unit	PL4.1.1
Fuser Roll	82.7 mm	Fuser Assembly	PL6.1.10
Fuser Belt	94.2 mm	Fuser Assembly	PL6.1.10
Pinch Roll	18.8 mm	Fuser Assembly	PL6.1.10
Exit Roll	43.1 mm	Fuser Assembly	PL6.1.10
Exit Pinch Roll	31.4 mm	Fuser Assembly	PL6.1.10



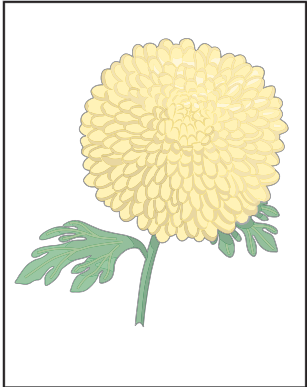
Light or Undertone Print

The overall image density is too light in all colors.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Parts	Example Print
<ul style="list-style-type: none"> ■ Transfer Unit, PL4.1.1 ■ Laser Unit, PL5.1.2 ■ Dispenser Assy., PL5.1.12 ■ HVPS, PL5.1.17 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 ■ Image Processor Board, PL9.1.27 	 <p style="text-align: center;">Light or Undertone Print</p>

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Print Cartridge (C/M/Y/K) for damages. 2. Is the Print Cartridge damaged?	Go to step 2.	Replace the Print Cartridge (page 8-10).
2	1. Check the paper condition. 2. Is the paper dry, recommended type, and loaded in the correct position?	Go to step 3.	Replace the paper.
3	1. Perform Test Print (Cyan 20%, Magenta 20%, Yellow 20%, and Black 20%): Service Mode > Test Print . 2. Check the Print Cartridge (C/M/Y/K). 3. Is there a faint toner?	Go to step 4.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	1. Check the Transfer Unit for correct installation. Reseat the Transfer Unit (page 8-8). 2. Does the image quality improve?	Complete.	Go to step 5.
5	1. Check the laser beam path. 2. Are there any debris between the Laser Unit and Transfer Unit?	Remove the debris.	Go to step 6.
6	1. Check the Print Cartridge (C/M/Y/K) for correct installation. Reseat the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 7.
7	1. Perform Yellow/Magenta/Cyan/Black Toner Motor test (Yellow, page 4-47; Magenta, page 4-48; Cyan, page 4-49; Black, page 4-50): Service Mode > Engine Diag > Motor Test > Yellow/Magenta/Cyan/Black Toner Motor. 2. Does the Dispenser Assembly rotate smoothly?	Go to step 8.	Replace the MCU Board (page 8-86). If not, replace the Dispenser Assembly (page 8-56).
8	1. Check the MCU Board for correct installation. Reseat the MCU Board (page 8-86). 2. Does the image quality improve?	Complete.	Go to step 9.
9	1. Check the Image Processor Board for correct installation. Reseat the Image Processor Board (page 8-87). 2. Does the image quality improve?	Complete.	Go to step 10.
10	1. Check the HVPS for correct installation. Reseat the HVPS (page 8-61). 2. Does the image quality improve?	Complete.	Go to step 11.
11	1. Replace the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 12.
12	1. Replace the Laser Unit (page 8-50). 2. Does the image quality improve?	Complete.	Replace the Image Processor Board (page 8-87).

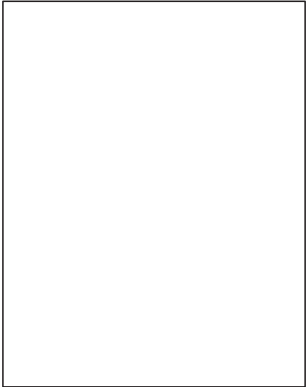
Blank Print (No Print)

The entire image area is blank.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Parts	Example Print
<ul style="list-style-type: none"> ■ Laser Unit, PL5.1.2 ■ Dispenser Assy., PL5.1.12 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 ■ Image Processor Board, PL9.1.27 	 <p style="text-align: center; font-size: small;">Blank Print</p>

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Print Cartridge (C/M/Y/K) for damages. 2. Is the Print Cartridge damaged?	Go to step 2.	Replace the Print Cartridge (page 8-10).
2	1. Check the paper condition. 2. Is the paper dry, recommended type, and loaded in the correct position?	Go to step 3.	Replace the paper.
3	1. Perform Test Print (Cyan 20%, Magenta 20%, Yellow 20%, and Black 20%): Service Mode > Test Print . 2. Does the image quality improve?	Complete.	Go to step 4.
4	1. Check the Transfer Unit for correct installation. Reseat the Transfer Unit (page 8-8). 2. Does the image quality improve?	Complete.	Go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	<ol style="list-style-type: none"> 1. Check the laser beam path. 2. Are there any debris between the Laser Unit and Transfer Unit? 	Remove the debris.	Go to step 6.
6	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J12 and P/J151 between the Laser Unit and the MCU Board. 2. Are the connectors securely connected? 	Go to step 7.	Reconnect the connectors. Go to step 7.
7	<ol style="list-style-type: none"> 1. Check the Print Cartridge (C/M/Y/K) for correct installation. Reseat the Print Cartridge (page 8-10). 2. Does the image quality improve? 	Complete.	Go to step 8.
8	<ol style="list-style-type: none"> 1. Perform Yellow/Magenta/Cyan/Black Toner Motor test (Yellow, page 4-47; Magenta, page 4-48; Cyan, page 4-49; Black, page 4-50): Service Mode > Engine Diag > Motor Test > Yellow/Magenta/Cyan/Black Toner Motor. 2. Does the Dispenser Assembly rotate properly? 	Go to step 9.	Replace the MCU Board (page 8-86). If not, replace the Dispenser Assembly (page 8-56).
9	<ol style="list-style-type: none"> 1. Check the MCU Board for correct installation. Reseat the MCU Board (page 8-86). 2. Does the image quality improve? 	Complete.	Go to step 10.
10	<ol style="list-style-type: none"> 1. Check the Image Processor Board for correct installation. Reseat the Image Processor Board (page 8-87). 2. Does the image quality improve? 	Complete.	Go to step 11.
11	<ol style="list-style-type: none"> 1. Check the HVPS for correct installation. Reseat the HVPS (page 8-61). 2. Does the image quality improve? 	Complete.	Go to step 12.
12	<ol style="list-style-type: none"> 1. Replace the Laser Unit (page 8-50). 2. Does the image quality improve? 	Complete.	Replace the Image Processor Board (page 8-87).


Black Print

The entire image is black.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Parts	Example Print
<ul style="list-style-type: none"> ■ Laser Unit, PL5.1.2 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 ■ Image Processor Board, PL9.1.27 	 <p style="text-align: center; font-size: small;">Black Print</p>

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the Print Cartridge (C/M/Y/K) for damages. 2. Is the Print Cartridge damaged?	Go to step 2.	Replace the Print Cartridge (page 8-10).
2	1. Check the paper condition. 2. Is the paper dry, recommended type, and loaded in the correct position?	Go to step 3.	Replace the paper.
3	1. Perform Test Print (Cyan 20%, Magenta 20%, Yellow 20%, and Black 20%): Service Mode > Test Print . 2. Does the image quality improve?	Complete.	Go to step 4.
4	1. Check the Transfer Unit for correct installation. Reseat the Transfer Unit (page 8-8). 2. Does the image quality improve?	Complete.	Go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	<ol style="list-style-type: none"> 1. Check the wiring harness connectors P/J12 and P/J151 between the Laser Unit and the MCU Board. 2. Are the connectors securely connected? 	Go to step 6.	Reconnect the connectors. Go to step 6.
6	<ol style="list-style-type: none"> 1. Check the Print Cartridge (C/M/Y/K) for correct installation. Reseat the Print Cartridge (page 8-10). 2. Does the image quality improve? 	Complete.	Go to step 7.
7	<ol style="list-style-type: none"> 1. Check the MCU Board for correct installation. Reseat the MCU Board (page 8-86). 2. Does the image quality improve? 	Complete.	Go to step 8.
8	<ol style="list-style-type: none"> 1. Check the Image Processor Board for correct installation. Reseat the Image Processor Board (page 8-87). 2. Does the image quality improve? 	Complete.	Go to step 9.
9	<ol style="list-style-type: none"> 1. Check the HVPS for correct installation. Reseat the HVPS (page 8-61). 2. Does the image quality improve? 	Complete.	Go to step 10.
10	<ol style="list-style-type: none"> 1. Replace the Print Cartridge (page 8-10). 2. Does the image quality improve? 	Complete.	Go to step 11.
11	<ol style="list-style-type: none"> 1. Replace the Laser Unit (page 8-50). 2. Does the image quality improve? 	Complete.	Replace the Image Processor Board (page 8-87). If not, replace the MCU Board (page 8-86).


Vertical Blank Lines

There are faded or completely non-printed lines along the page in the direction of the paper travel from the leading edge to the trailing edge.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Parts	Example Print
<ul style="list-style-type: none"> ■ Laser Unit, PL5.1.2 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 ■ Image Processor Board, PL9.1.27 	 <p style="text-align: center; font-size: small;">Vertical Blank Lines</p>

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the blank line's regular intervals. 2. Are there any blank lines on the image?	Refer to "Repeating Defect Measurement" on page 5-23.	Go to step 2.
2	1. Check the Print Cartridge (C/M/Y/K) for damages. 2. Is the Print Cartridge damaged?	Go to step 3.	Replace the Print Cartridge (page 8-10).
3	1. Check the paper condition. 2. Is the paper dry, recommended type, and loaded in the correct position?	Go to step 4.	Replace the paper.
4	1. Check the Transfer Unit. 2. Are there any damages on the Transfer Unit surface?	Replace the Transfer Unit (page 8-8).	Go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	1. Check the Transfer Unit for correct installation. Reseat the Transfer Unit (page 8-8). 2. Does the image quality improve?	Complete.	Go to step 6.
6	1. Check for debris in the laser beam path between the Laser Unit and Transfer Unit. 2. Are there debris in the laser beam path?	Remove the debris.	Go to step 7.
7	1. Check the wiring harness connectors P/J12 and P/J151 between the Laser Unit and the MCU Board. 2. Are the connectors securely connected?	Go to step 8.	Reconnect the connectors. Go to step 8.
8	1. Check the Print Cartridge (C/M/Y/K) for correct installation. Reseat the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 9.
9	1. Check the MCU Board for correct installation. Reseat the MCU Board (page 8-86). 2. Does the image quality improve?	Complete.	Go to step 10.
10	1. Check the Image Processor Board for correct installation. Reseat the Image Processor Board (page 8-87). 2. Does the image quality improve?	Complete.	Go to step 11.
11	1. Check the HVPS for correct installation. Reseat the HVPS (page 8-61). 2. Does the image quality improve?	Complete.	Go to step 12.
12	1. Replace the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 13.
13	1. Replace the Laser Unit (page 8-50). 2. Does the image quality improve?	Complete.	Replace the Image Processor Board (page 8-87). If not, replace the MCU Board (page 8-86).

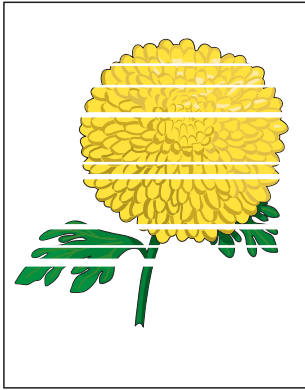
Horizontal Band, Voids, or Streaks

There are areas of the image that are extremely light or are missing entirely. These missing areas form wide bands which cover a wide area horizontally, perpendicular to the paper feed direction.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Parts	Example Print
<ul style="list-style-type: none"> ■ Transfer Unit, PL4.1.1 ■ Laser Unit, PL5.1.2 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 ■ Image Processor Board, PL9.1.27 	 <p style="text-align: center; font-size: small;">Horizontal Band, Void, or Streaks</p>

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the blank line's regular intervals. 2. Are there any blank lines on the image?	Refer to "Repeating Defect Measurement" on page 5-23.	Go to step 2.
2	1. Check the Print Cartridge (C/M/Y/K) for damages. 2. Is the Print Cartridge damaged?	Go to step 3.	Replace the Print Cartridge (page 8-10).
3	1. Check the paper condition. 2. Is the paper dry, recommended type, and loaded in the correct position?	Go to step 4.	Replace the paper.
4	1. Check the Transfer Unit. 2. Are there any damages on the Transfer Unit surface?	Replace the Transfer Unit (page 8-8).	Go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	1. Check the Transfer Unit for correct installation. Reseat the Transfer Unit (page 8-8). 2. Does the image quality improve?	Complete.	Go to step 6.
6	1. Check for debris in the laser beam path between the Laser Unit and the Transfer Unit. 2. Are there any debris?	Remove the debris.	Go to step 7.
7	1. Check the wiring harness connectors P/J12 and P/J151 between the Laser Unit and the MCU Board. 2. Are the connectors securely connected?	Go to step 8.	Reconnect the connectors. Go to step 8.
8	1. Check the Print Cartridge (C/M/Y/K) for correct installation. Reseat the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 9.
9	1. Check the MCU Board for correct installation. Reseat the MCU Board (page 8-86). 2. Does the image quality improve?	Complete.	Go to step 10.
10	1. Check the Image Processor Board for correct installation. Reseat the Image Processor Board (page 8-87). 2. Does the image quality improve?	Complete.	Go to step 11.
11	1. Check the HVPS for correct installation. Reseat the HVPS (page 8-61). 2. Does the image quality improve?	Complete.	Go to step 12.
12	1. Replace the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 13.
13	1. Replace the Laser Unit (page 8-50). 2. Does the image quality improve?	Complete.	Replace the Image Processor Board (page 8-87). If not, replace the MCU Board (page 8-86).

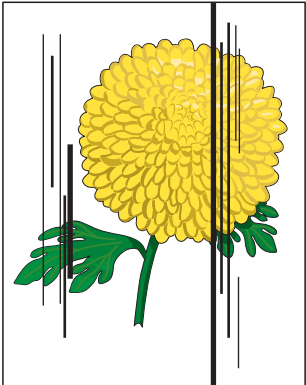
Vertical Stripes

There are black lines along the page in the direction of the paper travel from the leading edge to the trailing edge.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Parts	Example Print
<ul style="list-style-type: none"> ■ Transfer Unit, PL4.1.1 ■ Laser Unit, PL5.1.2 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ Fuser Assembly, PL6.1.10 ■ MCU Board, PL9.1.20 ■ Image Processor Board, PL9.1.27 	 <p style="text-align: center;">Vertical Stripes</p>

Warning

Ensure to wait for the Fuser to cool down before starting the procedure.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the black line's regular intervals. 2. Are there any black lines on the page?	Refer to "Repeating Defect Measurement" on page 23.	Go to step 2.
2	1. Check the Print Cartridge (C/M/Y/K) for damages. 2. Is the Print Cartridge damaged?	Go to step 3.	Replace the Print Cartridge (page 8-10).
3	1. Check the Transfer Unit. 2. Are there any damages on the Transfer Unit surface?	Replace the Transfer Unit (page 8-8).	Go to step 4.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	1. Check the Transfer Unit for correct installation. Reseat the Transfer Unit (page 8-8). 2. Does the image quality improve?	Complete.	Go to step 5.
5	1. Check the Fuser Assembly for correct installation. Reseat the Fuser Assembly (page 8-11). 2. Does the image quality improve?	Complete.	Go to step 6.
6	1. Check the wiring harness connectors P/J12 and P/J151 between the Laser Unit and the MCU Board. 2. Are the connectors securely connected?	Go to step 7.	Reconnect the connectors. Go to step 7.
7	1. Check the Print Cartridge (C/M/Y/K) for correct installation. Reseat the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 8.
8	1. Check the MCU Board for correct installation. Reseat the MCU Board (page 8-86). 2. Does the image quality improve?	Complete.	Go to step 9.
9	1. Check the Image Processor Board for correct installation. Reseat the Image Processor Board (page 8-87). 2. Does the image quality improve?	Complete.	Go to step 10.
10	1. Check the HVPS for correct installation. Reseat the HVPS (page 8-61). 2. Does the image quality improve?	Complete.	Go to step 11.
11	1. Replace the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 12.
12	1. Replace the Fuser Assembly (page 8-11). 2. Does the image quality improve?	Complete.	Go to step 13.
13	1. Replace the Laser Unit (page 8-50). 2. Does the image quality improve?	Complete.	Replace the Image Processor Board (page 8-87). If not, replace the MCU Board (page 8-86).

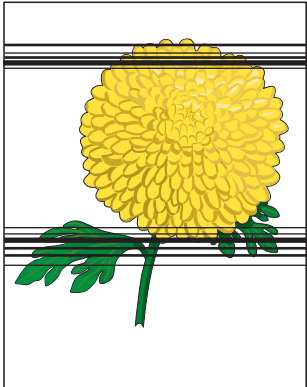
Horizontal Stripes

There are black lines running parallel with the leading edge of the print, perpendicular to the direction of the paper travel.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Notes	Example Print
<ul style="list-style-type: none"> ■ Transfer Unit, PL4.1.1 ■ Laser Unit, PL5.1.2 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ Fuser Assembly, PL6.1.10 ■ MCU Board, PL9.1.20 ■ Image Processor Board, PL9.1.27 	 <p style="text-align: center;">Horizontal Stripes</p>

Warning

Ensure to wait for the Fuser to cool down before starting the procedure.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the black line's regular intervals. 2. Are there any black lines on the page?	Refer to "Repeating Defect Measurement" on page 23.	Go to step 2.
2	1. Check the Print Cartridge (C/M/Y/K) for damages. 2. Is the Print Cartridge damaged?	Go to step 3.	Replace the Print Cartridge (page 8-10).
3	1. Check the Transfer Unit. 2. Are there any damages on the Transfer Unit surface?	Replace the Transfer Unit (page 8-8).	Go to step 4.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	1. Check the Transfer Unit for correct installation. Reseat the Transfer Unit (page 8-8). 2. Does the image quality improve?	Complete.	Go to step 5.
5	1. Check the Fuser Assembly for correct installation. Reseat the Fuser Assembly (page 8-11). 2. Does the image quality improve?	Complete.	Go to step 6.
6	1. Check the paper path. 2. Are there any toner contaminations on the paper path?	Clean the paper path.	Go to step 7.
7	1. Check the wiring harness connectors P/J12 and P/J151 between the Laser Unit and the MCU Board. 2. Are the connectors securely connected?	Go to step 8.	Reconnect the connectors. Go to step 8.
8	1. Check the Print Cartridge (C/M/Y/K) for correct installation. Reseat the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 9.
9	1. Check the MCU Board for correct installation. Reseat the MCU Board (page 8-86). 2. Does the image quality improve?	Complete.	Go to step 10.
10	1. Check the Image Processor Board for correct installation. Reseat the Image Processor Board (page 8-87). 2. Does the image quality improve?	Complete.	Go to step 11.
11	1. Check the HVPS for correct installation. Reseat the HVPS (page 8-61). 2. Does the image quality improve?	Complete.	Go to step 12.
12	1. Replace the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 13.
13	1. Replace the Fuser Assembly (page 8-11). 2. Does the image quality improve?	Complete.	Go to step 14.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
14	1. Replace the Laser Unit (page 8-50). 2. Does the image quality improve?	Complete.	Replace the Image Processor Board (page 8-87). If not, replace the MCU Board (page 8-86).

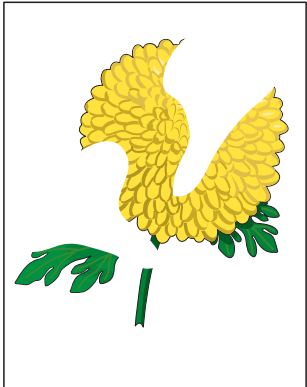
Partial Band

There are areas of the image that are extremely light or are missing in a limited area on the paper.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Notes	Example Print
<ul style="list-style-type: none"> ■ Transfer Unit, PL4.1.1 ■ Laser Unit, PL5.1.2 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 ■ Image Processor Board, PL9.1.27 	 <p style="text-align: right;">Partial Band</p>

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	<ol style="list-style-type: none"> 1. Perform Contamination Check Test Print: Service Mode > Test Print > Contamination Chk. 2. Check the partial band's regular intervals. 3. Are there any blank spots on the page? 	Refer to "Repeating Defect Measurement" on page 5-23.	Go to step 2.
2	<ol style="list-style-type: none"> 1. Check the Print Cartridge (C/M/Y/K) for damages. 2. Is the Print Cartridge damaged? 	Go to step 3.	Replace the Print Cartridge (page 8-10).
3	<ol style="list-style-type: none"> 1. Check the paper condition. 2. Is the paper dry, recommended type, and loaded in the correct position? 	Go to step 4.	Replace the paper.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	1. Check the Transfer Unit. 2. Are there any damages on the Transfer Unit surface?	Replace the Transfer Unit (page 8-8).	Go to step 5.
5	1. Check the Transfer Unit for correct installation. Reseat the Transfer Unit (page 8-8). 2. Does the image quality improve?	Complete.	Go to step 6.
6	1. Check the wiring harness connectors P/J12 and P/J151 between the Laser Unit and the MCU Board. 2. Are the connectors securely connected?	Go to step 7.	Reconnect the connectors. Go to step 7.
7	1. Check the Print Cartridge (C/M/Y/K) for correct installation. Reseat the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 8.
8	1. Check the MCU Board for correct installation. 2. Reseat the MCU Board (page 8-86). 3. Does the image quality improve?	Complete.	Go to step 9.
9	1. Check the Image Processor Board for correct installation. Reseat the Image Processor Board (page 8-87). 2. Does the image quality improve?	Complete.	Go to step 10.
10	1. Check the HVPS for correct installation. Reseat the HVPS (page 8-61). 2. Does the image quality improve?	Complete.	Go to step 11.
11	1. Replace the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 12.
12	1. Replace the Laser Unit (page 8-50). 2. Does the image quality improve?	Complete.	Replace the Image Processor Board (page 8-87) If not, replace the MCU Board (page 8-86).

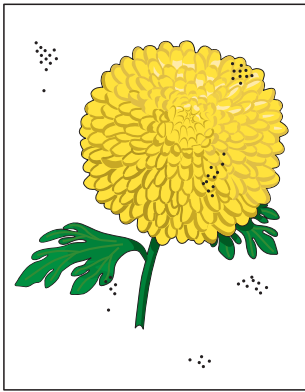
Random Spots

There are spots of toner randomly scattered across the page.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Notes	Example Print
<ul style="list-style-type: none"> ■ Transfer Unit, PL4.1.1 ■ Laser Unit, PL5.1.2 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ Fuser Assembly, PL6.1.10 ■ MCU Board, PL9.1.20 ■ Image Processor Board, PL9.1.27 	 <p style="text-align: center; font-size: small;">Random Spots</p>

Warning

Ensure to wait for the Fuser to cool down before starting the procedure.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check for spot's regular intervals. 2. Are there any spots on the page?	Refer to "Repeating Defect Measurement" on page 5-23.	Go to step 2.
2	1. Check the Print Cartridge (C/M/Y/K) for damages. 2. Is the Print Cartridge damaged?	Go to step 3.	Replace the Print Cartridge (page 8-10).
3	1. Check the Transfer Unit. 2. Are there any damages on the Transfer Unit surface?	Replace the Transfer Unit (page 8-8).	Go to step 4.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	1. Check the Transfer Unit for correct installation. Reseat the Transfer Unit (page 8-8). 2. Does the image quality improve?	Complete.	Go to step 5.
5	1. Check the Fuser Assembly for correct installation. Reseat the Fuser Assembly (page 8-11). 2. Does the image quality improve?	Complete.	Go to step 6.
6	1. Check the paper path. 2. Are there any toner contaminations on the paper path?	Clean the paper path.	Go to step 7.
7	1. Check the wiring harness connectors P/J12 and P/J151 between the Laser Unit and the MCU Board. 2. Are the connectors securely connected?	Go to step 8.	Reconnect the connectors. Go to step 8.
8	1. Check the Print Cartridge (C/M/Y/K) for correct installation. Reseat the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 9.
9	1. Check the MCU Board for correct installation. Reseat the MCU Board (page 8-86). 2. Does the image quality improve?	Complete.	Go to step 10.
10	1. Check the Image Processor Board for correct installation. Reseat the Image Processor Board (page 8-87). 2. Does the image quality improve?	Complete.	Go to step 11.
11	1. Check the HVPS for correct installation. Reseat the HVPS (page 8-61). 2. Does the image quality improve?	Complete.	Go to step 12.
12	1. Replace the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 13.
13	1. Replace the Laser Unit (page 8-50). 2. Does the image quality improve?	Complete.	Replace the Image Processor Board (page 8-87). If not, replace the MCU Board (page 8-86).

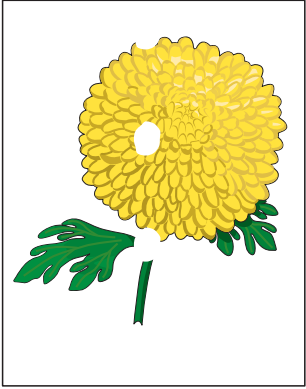
Repeating Bands, Lines, Marks, or Spots

There are recurring lines, marks, or spots on the page.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Notes	Example Print
<ul style="list-style-type: none"> ■ Transfer Unit, PL4.1.1 ■ Laser Unit, PL5.1.2 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ Fuser Assembly, PL6.1.10 	 <p style="text-align: center; font-size: small;">Repeating Defects</p>

Warning

Ensure to wait for the Fuser to cool down before starting the procedure.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check for spot's regular intervals. 2. Are there any spots, lines, or marks on the page?	Refer to "Repeating Defect Measurement" on page 5-23.	Complete.


Residual Image or Ghosting

There are faint, ghostly images appearing on the page. The images may be either from a previous page or from the page currently being printed.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Notes	Example Print
<ul style="list-style-type: none"> ■ Transfer Unit, PL4.1.1 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ Fuser Assembly, PL6.1.10 ■ MCU Board, PL9.1.20 ■ Image Processor Board, PL9.1.27 	 <p>Residual Image/Ghosting</p>

Warning

Ensure to wait for the Fuser to cool down before starting the procedure.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the printing usage. 2. Did the user print the same image at a large volume?	Go to step 2.	Go to step 3.
2	1. Print a page including color photograph. If not possible, perform CMY20% Test Print: Service Mode > Test Print > CMY 20% ESS. 2. Does the image quality improve?	Complete.	Go to step 3.
3	1. Check the Transfer Unit. 2. Are there any damages on the Transfer Unit surface?	Replace the Transfer Unit (page 8-8).	Go to step 4.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	1. Check the Transfer Unit for correct installation. Reseat the Transfer Unit (page 8-8). 2. Does the image quality improve?	Complete.	Go to step 5.
5	1. Check the Print Cartridge (C/M/Y/K) for correct installation. Reseat the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 6.
6	1. Check the MCU Board for correct installation. Reseat the MCU Board (page 8-86). 2. Does the image quality improve?	Complete.	Go to step 7.
7	1. Check the Image Processor Board for correct installation. Reseat the Image Processor Board (page 8-87). 2. Does the image quality improve?	Complete.	Go to step 8.
8	1. Check the HVPS for correct installation. Reseat the HVPS (page 8-61). 2. Does the image quality improve?	Complete.	Go to step 9.
9	1. Replace the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 10.
10	1. Replace the Fuser Assembly (page 8-11). 2. Does the image quality improve?	Complete.	Go to step 11.
11	1. Replace the MCU Board (page 8-86). 2. Does the image quality improve?	Complete.	Replace the Image Processor Board (page 8-87).

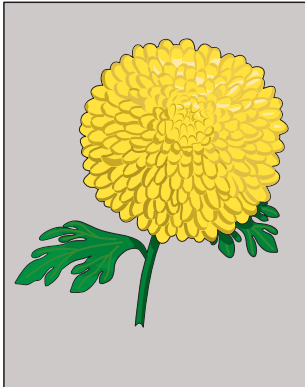
Background Contamination

There is toner contamination on all or most of the page. The contamination appears as a very light gray dusting.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Notes	Example Print
<ul style="list-style-type: none"> ■ Transfer Unit, PL4.1.1 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 ■ Image Processor Board, PL9.1.27 	 <p style="text-align: center; font-size: small;">Background Contamination</p>

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Print a page including color photograph. If not possible, perform CMY20% Test Print: Service Mode > Test Print > CMY 20% ESS . 2. Does the image quality improve?	Complete.	Go to step 2.
2	1. Check the Print Cartridge (C/M/Y/K) for damages. 2. Is the Print Cartridge damaged?	Go to step 3.	Replace the Print Cartridge (page 8-10).
3	1. Check the Transfer Unit. 2. Are there any damages on the Transfer Unit surface?	Replace the Transfer Unit (page 8-8).	Go to step 4.
4	1. Check the Transfer Unit for correct installation. Reseat the Transfer Unit (page 8-8). 2. Does the image quality improve?	Complete.	Go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	1. Check the paper path. 2. Are there any toner contaminations on the paper path?	Clean the paper path.	Go to step 6.
6	1. Check the wiring harness connectors P/J12 and P/J151 between the Laser Unit and the MCU Board. 2. Are the connectors securely connected?	Go to step 7.	Reconnect the connectors. Go to step 7.
7	1. Check the Print Cartridge (C/M/Y/K) for correct installation. Reseat the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 8.
8	1. Check the MCU Board for correct installation. Reseat the MCU Board (page 8-86). 2. Does the image quality improve?	Complete.	Go to step 9.
9	1. Check the Image Processor Board for correct installation. Reseat the Image Processor Board (page 8-87). 2. Does the image quality improve?	Complete.	Go to step 10.
10	1. Check the HVPS for correct installation. Reseat the HVPS (page 8-61). 2. Does the image quality improve?	Complete.	Go to step 11.
11	1. Replace the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Replace the Image Processor Board (page 8-87). If not, replace the MCU Board (page 8-86).

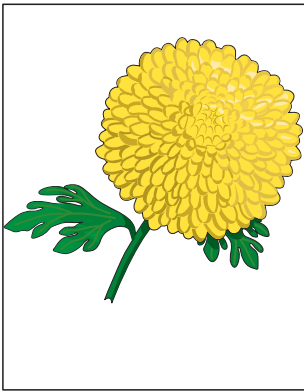
Skew

The printed image is not parallel with both sides of the paper.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Notes	Example Print
<ul style="list-style-type: none"> ■ Tray 1 Retard (Separator) Roll Assy., PL2.1.3 ■ Tray 2 Retard Roll, PL2.2.17 ■ MPT Feed Roll, PL3.1.10 ■ Feeder Assembly, PL3.2.1 ■ Tray 2 Feed Roll (Nudger Roll), PL3.2.53 ■ Duplex Unit, PL11.1.1 ■ Tray 3 Feed Roll (Nudger Roll), PL12.3.29 ■ Tray 3 Retard Roll, PL12.5.17 	 <p style="text-align: right; font-size: small;">Skew 2</p>

Troubleshooting Procedure Table

Step	Action and Questions	Yes	No
1	1. Check the paper condition. 2. Is the paper dry, recommended type, and loaded in the correct position?	Go to step 2.	Replace the paper.
2	1. Check the Front Cover Latch. Open and close the Front Cover. 2. Does the error still occur?	Go to step 3.	Complete.
3	1. Check the Transfer Unit for correct installation. Reseat the Transfer Unit (page 8-8). 2. Does the error still occur?	Go to step 4.	Complete.
4	1. Check the Print Cartridge (C/M/Y/K) for correct installation. Reseat the Print Cartridge (page 8-10). 2. Does the error still occur?	Go to step 5.	Complete.

Troubleshooting Procedure Table (continued)

Step	Action and Questions	Yes	No
5	1. Check the skewed tray. 2. Is the skewed paper fed from Tray 1 (MPT)?	Go to step 6.	Go to step 10.
6	1. Check the paper for correct placement. Reseat the paper. 2. Does the error still occur?	Go to step 7.	Complete.
7	1. Check the Tray 1 (MPT) Side Guides. Reset the Side Guides. 2. Does the error still occur?	Go to step 8.	Complete.
8	1. Check the paper path. 2. Are there any debris on the paper path?	Remove the debris.	Go to step 9.
9	1. Replace the Tray 1 (MPT) Feed Roll (page 8-34). 2. Does the error still occur?	Replace the Tray 1 Retard Roller Assembly (page 8-26).	Complete.
10	1. Replace the Feeder Assembly (page 8-36). 2. Does the error still occur?	Go to step 11.	Complete.
11	1. Check the skewed mode. 2. Is the skewed paper fed the from the Duplex?	Go to step 12.	Go to step 14.
12	1. Check the Duplex Unit for correct installation. Reseat the Duplex Unit (page 8-99). 2. Does the error still occur?	Go to step 13.	Complete.
13	1. Check the paper path. 2. Are there any debris on the paper path?	Remove the debris.	Replace the Duplex Unit (page 8-99).
14	1. Check the paper tray for correct installation. Reseat the tray. 2. Does the error still occur?	Go to step 15.	Complete.
15	1. Check the paper for correct placement. Reseat the paper in the tray. 2. Does the error still occur?	Go to step 16.	Complete.
16	1. Check the paper tray Side Guides. Reset the Side Guides. 2. Does the error still occur?	Go to step 17.	Complete.
17	1. Check the paper path. 2. Are there any debris on the paper path?	Remove the debris.	Go to step 18.

Troubleshooting Procedure Table (continued)

Step	Action and Questions	Yes	No
18	1. Replace the Feed Roll. <ul style="list-style-type: none">■ Tray 2 (page 8-47)■ Tray 3 (page 8-110) 2. Does the error still occur?	Replace the Retard Roll. <ul style="list-style-type: none">■ Tray 2 (page 8-29)■ Tray 3 (page 8-111)	Complete.

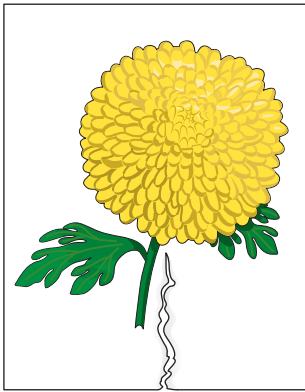
Damaged Paper

Paper comes out from the printer wrinkled, folded, or worn-out.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Notes	Example Print
<ul style="list-style-type: none"> ■ MPT Retard (Separator) Roll, PL2.1.7 ■ Tray 2 Retard Roll, PL2.2.17 ■ MPT Feed Roll, PL3.1.10 ■ Feeder Assembly, PL3.2.1 ■ Feed Roll, PL3.2.53 ■ Fuser Assembly, PL5.1.10 ■ Duplex Unit, PL11.1.1 ■ Tray 3 Feed Roll (Nudger Roll), PL12.3.29 ■ Tray 3 Retard Roll, PL12.5.17 	 <p style="text-align: center; font-size: small;">Damaged Print Media</p>

Warning

Ensure to wait for the Fuser to cool down before starting the procedure.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper condition. 2. Is the paper dry, recommended type, and loaded in the correct position?	Go to step 2.	Replace the paper.
2	1. Check the Front Cover Latch. Open and close the Front Cover. 2. Does the error still occur?	Go to step 3.	Complete.
3	1. Check the Transfer Unit for correct installation. Reseat the Transfer Unit (page 8-8). 2. Does the error still occur?	Go to step 4.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	1. Check the Print Cartridge (C/M/Y/K) for correct installation. Reseat the Print Cartridge (page 8-10). 2. Does the error still occur?	Go to step 5.	Complete.
5	1. Check the Fuser Assembly for correct installation. Reseat the Fuser Assembly (page 8-11). 2. Does the error still occur?	Go to step 6.	Complete.
6	Was the damaged paper fed from Tray 1 (MPT)?	Go to step 7.	Go to step 11.
7	1. Check the paper for correct placement. Reseat the paper in Tray 1 (MPT). 2. Does the error still occur?	Go to step 8.	Complete.
8	1. Check the Tray 1 (MPT) Side Guides. Reseat the Side Guides. 2. Does the error still occur?	Go to step 9.	Complete.
9	1. Check the paper path. 2. Are there any debris on the paper path?	Remove the debris.	Go to step 10.
10	1. Replace the Tray 1 (MPT) Feed Roll (page 8-34). 2. Does the error still occur?	Replace the Tray 1 (MPT) Retard Roller Assembly (page 8-26).	Complete.
11	1. Replace the Feeder Assembly (page 8-36). 2. Does the error still occur?	Go to step 12.	Complete.
12	Was the damaged paper fed from the Duplex Unit?	Go to step 13.	Go to step 15.
13	1. Check the Duplex Unit for correct installation. Reseat the Duplex Unit (page 8-99). 2. Does the error still occur?	Go to step 14.	Complete.
14	1. Check the paper path. 2. Are there any debris on the paper path?	Remove the debris.	Replace the Duplex Unit (page 8-99).
15	1. Check the paper tray for correct installation. Reseat the tray. 2. Does the error still occur?	Go to step 16.	Complete.
16	1. Check the paper for correct placement. Reseat the paper. 2. Does the error still occur?	Go to step 17.	Complete.
17	1. Check the paper tray Side Guides. Reseat the tray Side Guides. 2. Does the error still occur?	Go to step 18.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
18	<ol style="list-style-type: none"> 1. Check the paper path. 2. Are there any debris on the paper path? 	Remove the debris.	Go to step 19.
19	<ol style="list-style-type: none"> 1. Replace the Feed Roll. <ul style="list-style-type: none"> ■ Tray 2 (page 8-47) ■ Tray 3 (page 8-110) 2. Does the error still occur? 	Replace the Retard Roll. <ul style="list-style-type: none"> ■ Tray 2 (page 8-29) ■ Tray 3 (page 8-111). 	Complete.

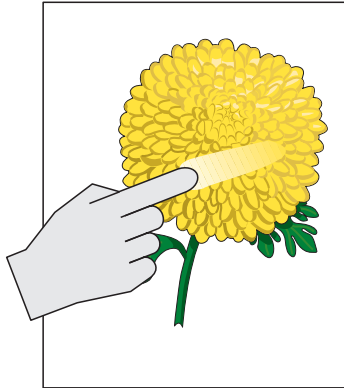
Unfused Image

The toner image is not completely fused to the paper. The image easily rubs off.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Notes	Example Print
<ul style="list-style-type: none"> ■ Print Cartridge (C/M/Y/K), PL5.1.18-21) ■ Fuser Assembly, PL6.1.10 ■ MCU Board, PL9.1.20 	 <p style="text-align: center; font-size: small;">Unfused Image</p>

Warning

Ensure to wait for the Fuser to cool down before starting the procedure.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper condition. 2. Is the paper dry, recommended type, and loaded in the correct position?	Go to step 2.	Replace the paper.
2	1. Check the Print Cartridge (C/M/Y/K) for damages. 2. Is the Print Cartridge damaged?	Go to step 3.	Replace the Print Cartridge (page 8-10).
3	1. Check the Fuser Assembly for correct installation. Reseat the Fuser Assembly (page 8-11). 2. Does the image quality improve?	Complete.	Go to step 4.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	1. Replace the Fuser Assembly (page 8-11). 2. Does the image quality improve?	Complete.	Replace the MCU Board (page 8-86).

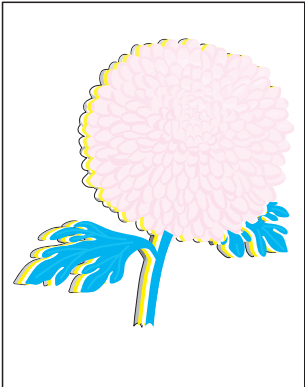
Color Registration

A printed yellow or black image is not overlapped on a cyan or magenta image correctly.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Notes	Example Print
<ul style="list-style-type: none"> ■ Feeder Assy., PL3.2.1 ■ Transfer Unit, PL4.1.1 ■ Print Cartridge (C/M/Y/K), PL5.1.18-21 ■ MCU Board, PL9.1.20 	 <p style="text-align: center;">Color Registration</p>

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Turn the printer power Off and back On. 2. Does the image quality improve?	Complete.	Go to step 2.
2	1. Check the paper condition. 2. Is the paper dry, recommended type, and loaded in the correct position?	Go to step 3.	Replace the paper.
3	1. Perform Test Print procedure (Cyan 20%, Magenta 20%, Yellow 20%): Service Mode > Test Print. 2. Adjust the color registration in the Control Panel: Menu > Admin Menu > Maintenance Mode > Adjust ColorRegi. 3. Does the image quality improve?	Complete.	Go to step 4.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	1. Check the parameter value. 2. Did the client change the value of the registration parameter?	Reset the value to default.	Go to step 5.
5	1. Check the Front Cover Latch. Open and close the Front Cover. 2. Does the image quality improve?	Complete.	Go to step 6.
6	1. Check the Transfer Unit for correct installation. Reseat the Transfer Unit (page 8-8). 2. Does the image quality improve?	Complete.	Go to step 7.
7	1. Check the Print Cartridge (C/M/Y/K) for correct installation. Reseat the Print Cartridge (page 8-10). 2. Does the image quality improve?	Complete.	Go to step 8.
8	1. Perform the Regi Clutch test (page 4-51): Service Mode > Engine Diag > Motor Test > Regi Clutch . 2. Does the Registration Clutch operate properly?	Replace the MCU Board (page 8-86).	Replace the Feeder Assembly (page 8-36).

Adjustments and Calibrations

In this chapter...

- Adjustments
- Calibrations
- Parameter Setting

Chapter 6

Adjustments

Color Registration

Color Registration adjustment procedure allows the user to change or correct the alignment of the four color images to meet specifications and/or user's requirements.

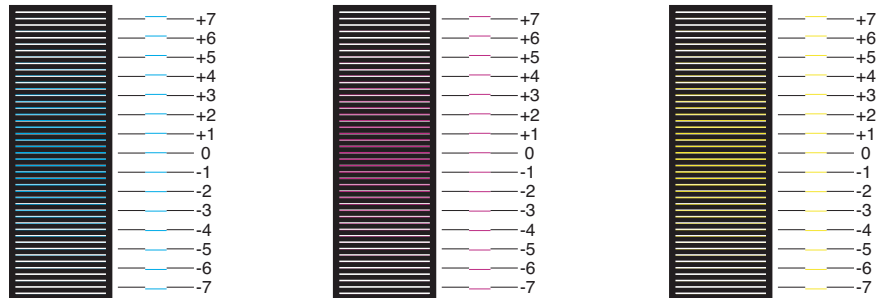
Note

Adjusting laser power from the default value impacts other print-quality parameters, such as background, halftone/fine line production, fuser fix, and toner consumption. **This adjustment should not be performed without first discussing with the customer regarding its potential impact on overall print quality.**

Printing the Color Registration Correction Chart

Before performing Color Registration adjustment procedure, print the Color Registration Chart for reference.

1. From the Control Panel, press the **Menu** button.
2. Press the **Up Arrow** or **Down Arrow** button to find **Admin Menu**. Press the **OK** button.
3. Press the **Up Arrow** or **Down Arrow** button to find **Maintenance Mode**. Press the **OK** button.
4. Press the **Up Arrow** or **Down Arrow** button find **Adjust Color Regi**. Press the **OK** button.
5. Press the **Up Arrow** or **Down Arrow** button to find **Color Regi Chart**. Press the **OK** button. The Color Registration Chart is printed. When printing is finished, the **Ready** menu is displayed.



Horizontal Color Registration CMY

Enabling/Disabling Automatic Color Registration

This procedure provides instructions for how to enable or disable the Automatic Color Registration function after a new Print Cartridge is installed.

- If the function is set to On, the printer will calibrate the color alignment every time it detects a new Print Cartridge.
- If the function is set to Off, calibration will not occur. This allows users to save toner.

To enable or disable the Automatic Color Registration:

1. From the Control Panel, press the **Menu** button.
2. Press the **Up Arrow** or **Down Arrow** button to find **Admin Menu**. Press the **OK** button.
3. Press the **Up Arrow** or **Down Arrow** button to find **Maintenance Mode**. Press the **OK** button.
4. Press the **Up Arrow** or **Down Arrow** button find **Auto Regi Adjust**. Press the **OK** button.
5. Press the **Up Arrow** or **Down Arrow** button to turn automatic color registration **On** or **Off**.
6. Press the **OK** button to save the change.

Adjusting Color Registration

Color Registration can be automatically or manually adjusted.

Determining the Values

From the lines to the right of the Y (yellow), M (magenta), and C (cyan) pattern, find the values of the straightest lines.

When “0” is the value nearest the straightest line, you do not need to adjust the color registration. When the value is not “0,” refer to “Manual Adjustment” on page 6-4.

Auto Adjustment

1. From the Control Panel, press the **Menu** button.
2. Press the **Up Arrow** or **Down Arrow** button to find **Admin Menu**. Press the **OK** button.
3. Press the **Up Arrow** or **Down Arrow** button to find **Maintenance Mode**. Press the **OK** button.
4. Press the **Up Arrow** or **Down Arrow** button find **Adjust Color Regi**. Press the **OK** button.
5. The **Auto Adjust** menu is displayed. Press the **OK** button.
6. **Are you sure?** message is displayed. Press the **OK** button to start the Auto Adjustment procedure.
7. **Ready Calibrating** message is displayed. The printer starts the auto Color Registration process.
8. When the auto Color Registration is completed, the **Ready** menu is displayed.

Manual Adjustment

Use the adjustment information in the following table to perform Color Registration procedure.

Caution

After printing the Color Registration Correction Chart, DO NOT turn Off the printer until the printer motor has stopped running.

Color Registration Adjustment

Color	Range	Default
Yellow	-9 to +9	0
Magenta	-9 to +9	0
Cyan	-9 to +9	0

1. From the Control Panel, press the **Menu** button.
2. Press the **Up Arrow** or **Down Arrow** button to find **Admin Menu**. Press the **OK** button.
3. Press the **Up Arrow** or **Down Arrow** button to find **Maintenance Mode**. Press the **OK** button.
4. Press the **Up Arrow** or **Down Arrow** button to find **Adjust Color Regi.** Press the **OK** button.
5. Press the **Up Arrow** or **Down Arrow** button to find **Enter Number**. Press the **OK** button.
6. Use the **Up Arrow** or **Down Arrow** button to enter the values and the **Left Arrow** or **Right Arrow** button to move from Y to M to C.
7. Press the **OK** button to save the data. The **Enter Number** menu is displayed.
8. Press the **Up Arrow** and **Down Arrow** buttons simultaneously to access the **Color Regi Chart** menu. Press the **OK** button to print the **Color Regi Chart**.
9. The Color Registration adjustment is complete when the straightest Y (yellow), M (magenta), and C (cyan) lines are next to the "0" line.

Note

If "0" is not next the straightest lines, determine and adjust the values again.

Calibrations

Initializing Print Meter

This process initializes the Print Meter.

1. From the Control Panel, press the **Menu** button.
2. Press the **Up Arrow** or **Down Arrow** button to find **Admin Menu**. Press the **OK** button.
3. Press the **Up Arrow** or **Down Arrow** button to find **Maintenance Mode**. Press the **OK** button.
4. Press the **Up Arrow** or **Down Arrow** button to find **Init PrintMeter**. Press the **OK** button.
5. **Are you sure?** message is displayed. Press the **OK** button to start the process.
6. **Initializing...** --> **Initialized** message is displayed. The **Maintenance Mode - Init PrintMeter** menu is displayed when the process is completed.

Initializing NVM (NVRAM)

This process initializes the settings stored in the NVRAM except for the network settings. The NVRAM is a non-volatile memory that stores the printer settings even after the power is turned Off. After executing this function and restarting the printer, all the menu parameters are reset to their default values.

1. From the Control Panel, press the **Menu** button.
2. Press the **Up Arrow** or **Down Arrow** button to find **Admin Menu**. Press the **OK** button.
3. Press the **Up Arrow** or **Down Arrow** button to find **Maintenance Mode**. Press the **OK** button.
4. Press the **Up Arrow** or **Down Arrow** button to find **Initialize NVM**. Press the **OK** button.
5. **Are you sure?** message is displayed. Press the **OK** button to start the process.
6. **Initializing...** --> **Initialized** messages are displayed.
7. The **Maintenance Mode - Initialize NVM** menu is displayed when the process is completed.
8. Press the Menu button. The Configuration pages are printed.

Parameter Setting

This function reads/writes the parameter values, errors, and life counter values stored in the printer.

Note

Print the parameter list from the **Service Mode > Parameter** before changing the registration value.

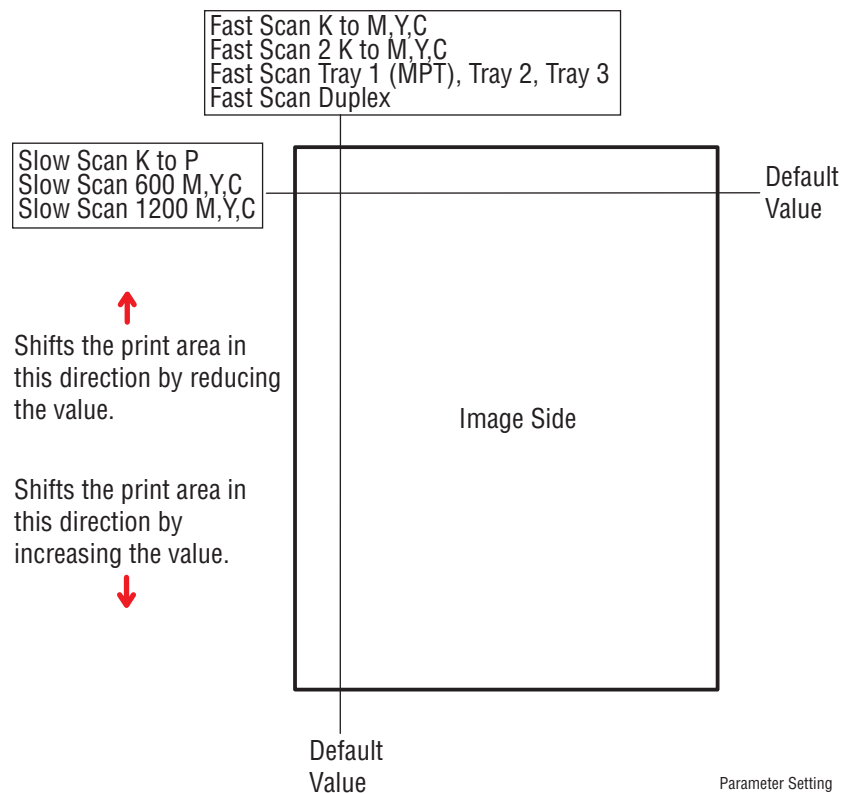
1. Turn the printer power Off (if the printer is On).
2. Simultaneously press the **Up Arrow** and **Down Arrow** buttons and turn on the printer.
3. The **Service Mode** menu is displayed.
4. Press the **Up Arrow** or **Down Arrow** button to find **Parameter**. Press the **OK** button.
5. Select the appropriate item to change (i.e., **Slow Scan KtoP**). Press the **OK** button.
6. Enter the appropriate range using the **Up Arrow** or **Down Arrow** button. Press the **OK** button.
7. The new value “# *” is displayed.

Note

“*” = data has been saved

8. Press the **Cancel** button to return to the **Parameter** menu.

← Shifts the print area in this direction by reducing the value. Shifts the print area in this direction by increasing the value. →



Parameter Setting

Item	Range	Description
Slow Scan K to P	-128 to 127	Sets the registration in the paper feeding direction.
Slow Scan 600 Y/M/C	-30 to 30	
Slow Scan 1200 Y/M/C	-60 to 60	
Fast Scan K to M, Y, or C	-30 to 30	Sets the registration in the scanning direction.
Fast Scan MPT, Tray 2, Tray 3, or Duplex	-30 to 30	
Fast Scan 2 K to M, Y, or C	-1 to -2	

Registration Values

Parameter	Function	Default	Adjustable Range
Slow Scan K to P (shifts 0.17 mm/1 count)	Black registration adjustment	---	-128 to 127
Slow Scan 600 M, Y, C (shifts 0.042 mm/1 count)	Color registration adjustment (600 and 1200 dpi)	---	-60 to 60
Slow Scan 1200 M, Y, C (shifts 0.021 mm/1 count)			
Fast Scan K to M, Y, or C (shifts 0.042 mm/1 count)	Color registration adjustment Calculation of adjustment is shown below (exp. Yellow) (Value of Fast Scan Reg K to Y + Value of Fast Scan Reg2 K to Y)/4	---	-30 to 30
Fast Scan K to M, C, or Y (shifts 0.01 mm/1 count)			
Fast Scan Tray 1, Tray 2, or Tray 3 (shifts 0.17 mm/1 count)	Black registration adjustment at side 1 print	---	-30 to 30
Fast Scan Duplex (shifts 0.17 mm/1 count)	Black registration adjustment at side 2 print	---	-30 to 30

Note

The default values are different in each printer.

Reference Counter Values

Counter Name	Value of Life Warning
Life Y Toner (Dispense Time)	---
Life M Toner (Dispense Time)	---
Life C Toner (Dispense Time)	---
Life K Toner (Dispense Time)	---
Life DTB (Transfer Unit) 1 (paper feeding count)	100,000
Life DTB (Transfer Unit) LAC	---
Life Fuser (paper feeding count)	100,000
Life Printer (paper feeding count)	---
Life DTB (Transfer Unit) 2 (Waste Toner cleaning count)	200,000
Life DTB (Transfer Unit) 3 (Cycle count)	14,000,000
Life Y Waste Toner (Waste Toner cleaning count)	18,000
Life M Waste Toner (Waste Toner cleaning count)	18,000
Life C Waste Toner (Waste Toner cleaning count)	18,000
Life K Waste Toner (Waste Toner cleaning count)	18,000
Life Y Developer (Cycle count)	2,500,000
Life M Developer (Cycle count)	2,500,000
Life C Developer (Cycle count)	2,500,000
Life K Developer (Cycle count)	2,500,000
Life Y Drum (Cycle count)	3,000,000
Life M Drum (Cycle count)	3,000,000
Life C Drum (Cycle count)	3,000,000
Life K Drum (Cycle count)	3,000,000
Life MPT Feed	---
Life Tray 2 Feed	---
Life Tray 3 Feed	---
Life Duplex Feed	---
Print	---

Cleaning and Maintenance

In this chapter...

- Service Maintenance Procedure
- Cleaning
- Maintenance

Chapter 7

Service Maintenance Procedure

Perform the following procedures whenever you check, service, or repair a printer. Cleaning the printer, as outlined in the following steps, assures proper operation of the printer and reduces the probability of having to service the printer in the future.

The frequency of use, Average Monthly Print Volume (AMPV), type of media printed on, and operating environment are factors in determining how critical cleaning the machine is and how often it is necessary. Record the number of sheets printed.

Recommended Tools

- Toner vacuum cleaner
- Clean water
- Clean, dry, lint-free cloth
- Black light-protective bag

Cleaning

Perform the following general cleaning steps as indicated by the printer's operating environment.

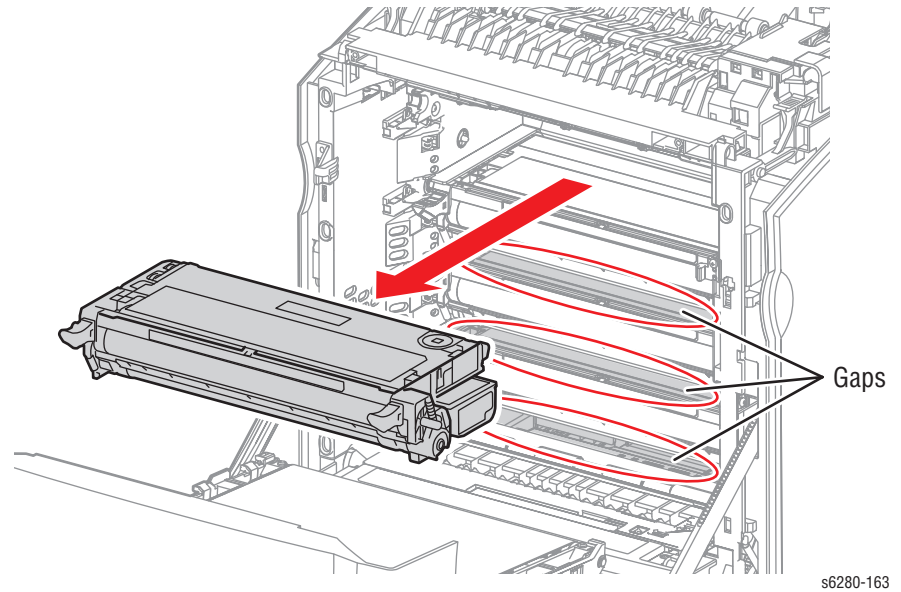
Caution

Never apply alcohol or other chemicals to any parts of the printer. Never use a damp cloth to clean up toner. If you remove the Print Cartridges, place them in a light-protective bag or otherwise protect them as exposure to light can quickly degrade performance and result in early failure.

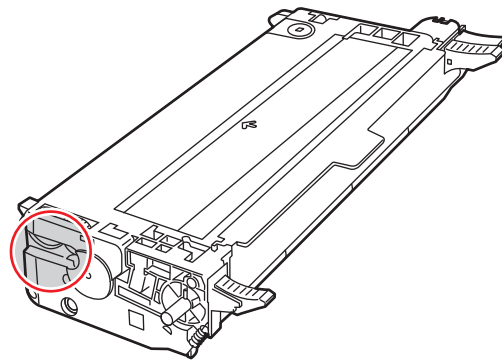
1. Record number of sheets printed.
2. Print several sheets of paper to check for problems or defects.
3. Turn the printer power Off and disconnect the power cord.
4. Remove the Transfer Unit, Fuser, Print Cartridges, Duplex Unit (if installed), Side Covers, and Rear Cover before cleaning.
5. Remove the Top Cover and clean the Main Fan to remove excess dust.
6. Ensure that all cover vents are clean and free of obstructions.
7. Remove any debris or foreign objects from the Fuser, Transfer Unit, Print Cartridges, Duplex Unit, and inside of the printer.
8. Remove and clean the paper trays.
9. Clean all rubber rollers with a lint-free cloth slightly dampened with cold water.

Cleaning the Print Cartridge

1. Open the Front Cover.
2. Using a flash light, inspect the gaps between the Print Cartridges. Remove the Print Cartridge if necessary. Using tweezers, remove any paper debris from the area.

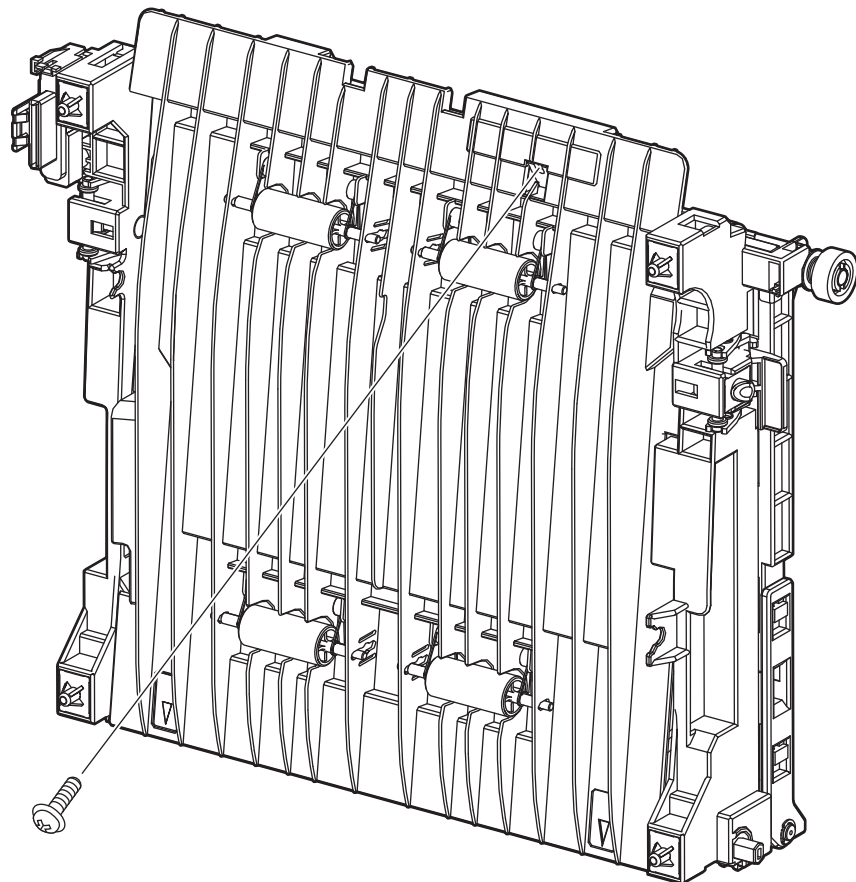


3. Check for any debris around the Print Cartridge gear areas.



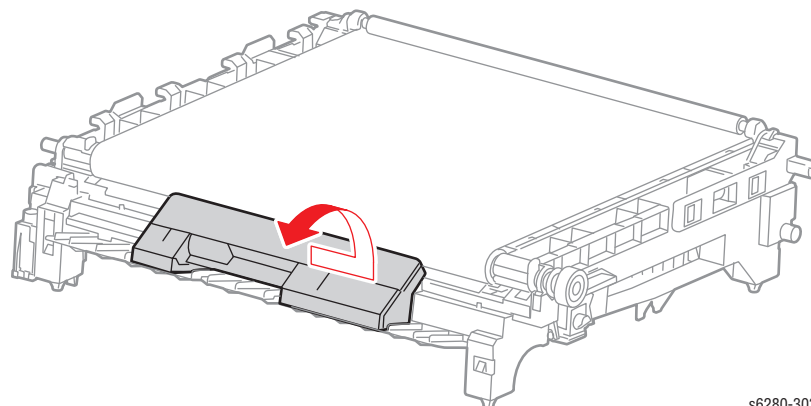
Cleaning the ADC Sensor

1. Open the Front Cover.
2. Remove the Transfer Unit (page 8-8).
3. Place the Transfer Unit on a flat work surface.
4. Remove 1 screw securing the ADC Sensor Cover.



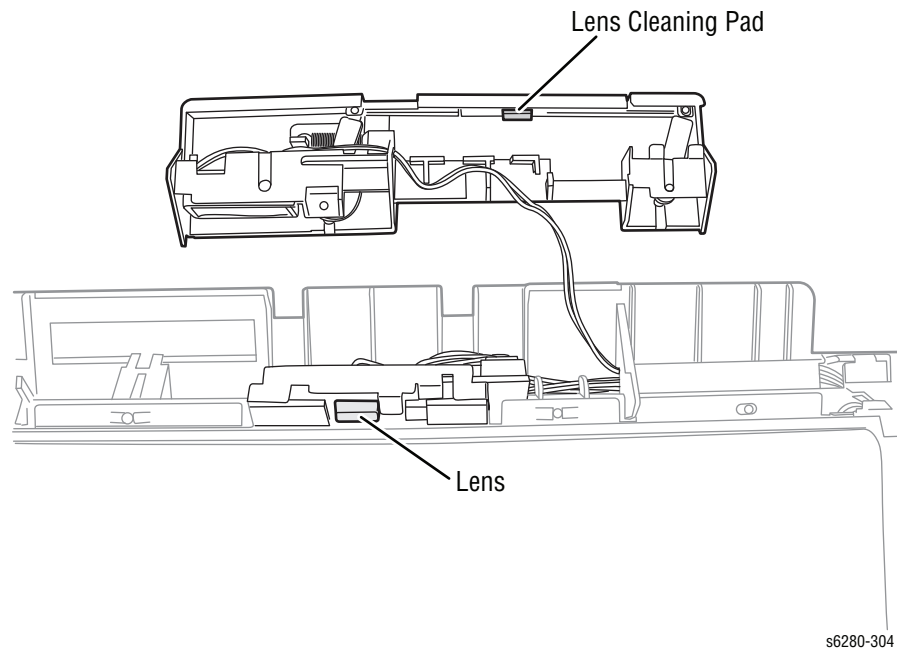
s6280-302

5. Slide the ADC Cover slightly to the right and rotate forward to remove the cover.



s6280-303

6. Use a Q-tip to clean the clear ADC Sensor's plastic lens. Clean the area surrounding the Sensor. Be sure to clean the Sensor's Cleaning Brush or Wiper; it is located on the inside of the ADC Sensor Cover.



7. Clean/vacuum loose toner from the interior of the printer.

Maintenance

RIP (Repair, Inspect, and Prevent) Procedure

Perform these routine maintenance procedures during the course of servicing the printer.

- Clean the Feed Rollers, Exit Rollers, and Guides; replace if necessary.
- Remove and clean the paper trays.
- Print a Configuration and Error History pages, diagnose, and repair any problems as indicated.
- Check the printer engine and image processor firmware fans; if necessary, clean (dust or vacuum) these areas.
- Check cleanliness of the interior and exterior, including fans; if necessary clean (dust or vacuum) these areas.
- Review proper printer operation using a customer file, if possible. Check with the customer regarding any special applications they may be running.
- Review with the customer all work that was performed and discuss proper printer care.

Service Parts Disassembly

In this chapter...

- Overview
- Maintenance Items and Consumables
- Covers
- Paper Tray
- Paper Feeder
- Xerographics
- Exit Chute
- Frame
- Drive
- Electrical
- Duplex Unit
- Optional 550-Sheet Feeder

Chapter 8

Overview

This section contains the removal procedures for field-replaceable parts of the printer listed in the Parts List. In most cases, the replacement procedure is simply the reverse of the removal procedure. In some instances, additional steps are necessary and are provided for replacement of the parts. For specific assemblies and parts, refer to the “Parts List” in Section 9.

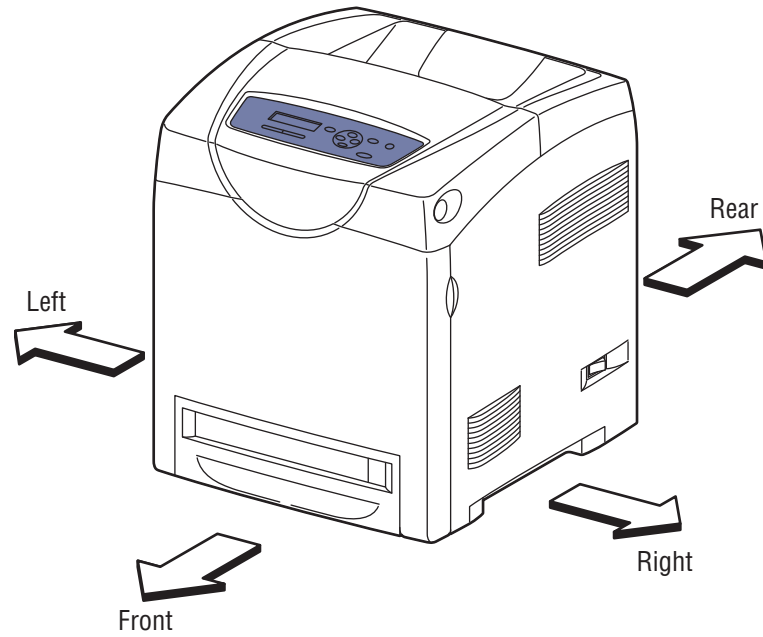
Always use the correct type and size screw. Using the wrong screw can damage tapped holes. Do not use excessive force to remove or install either a screw or a printer part. (page 8-7)

The procedures are organized by the consumer replacement parts and functions of the printer.

- Maintenance and Consumables
 - Transfer Unit (page 8-8)
 - Print Cartridge (C/M/Y/K) (page 8-10)
 - Fuser (page 8-11)
- Covers (page 8-12)
- Paper Tray (page 8-26)
- Paper Feeder (page 8-30)
- Xerographics (page 8-50)
- Exit Chute (page 8-63)
- Frame (page 8-65)
- Drive (page 8-70)
- Electrical (page 8-79)
- Duplex Unit (page 8-99)
- Optional 550-Sheet Feeder (page 8-100)

Standard Orientation of the Printer

When needed, the orientation of the printer is called out in the procedure as an aid for locating the printer parts. The following figure identifies the Front, Rear, Left, and Right sides of the printer.



s6280-165

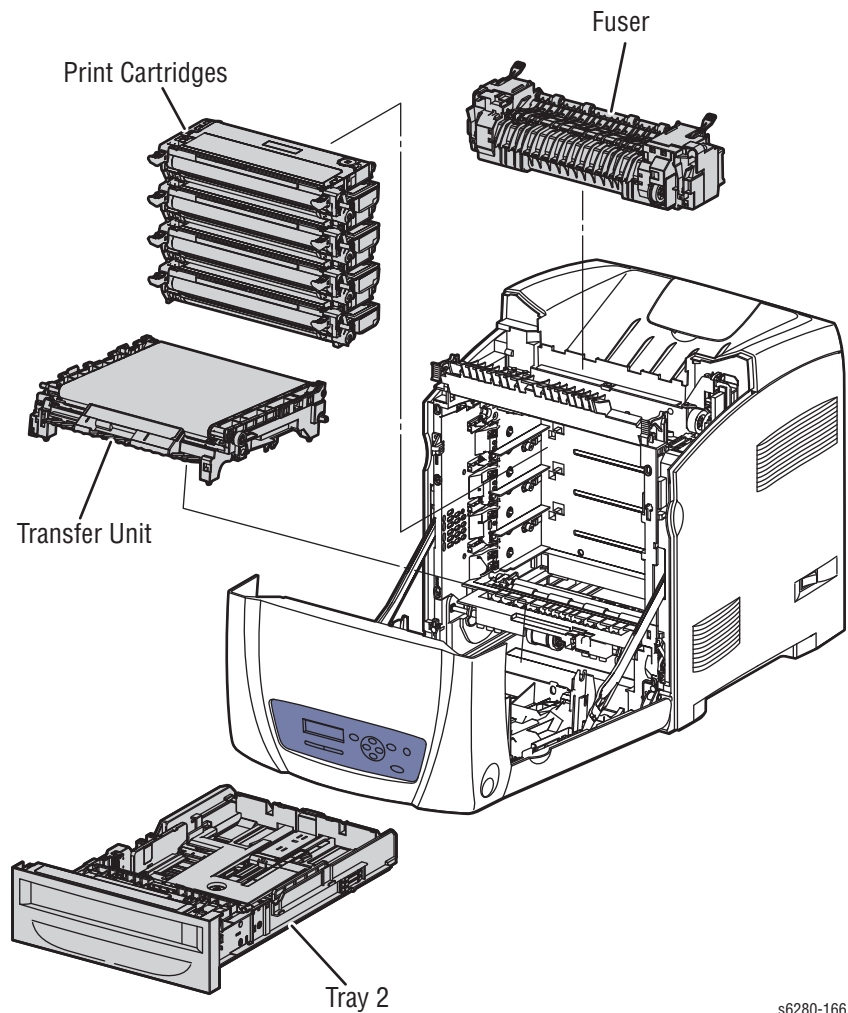
Preparation

Caution

Many parts are secured by plastic tabs. DO NOT over flex or force these parts. DO NOT over torque the screws threaded into plastic parts.

Warning

Unplug the AC power cord from the wall outlet before removing any printer part.



Before you begin any removal and replacement procedure:

1. Wear an Electrostatic Discharge wrist strap to help prevent damaging to the sensitive electronics of the printer circuit boards.
2. Turn off the printer power and disconnect the power cord from the wall outlet.
3. Disconnect all computer interface cables from the printer.
4. Remove Tray 2.
5. Open the Front Cover.

6. Remove the following Maintenance Items and Consumables.**Caution**

Do not touch the Transfer Unit belt area.

- a. Transfer Unit (page 8-8)

Caution

Do not expose the Print Cartridges to light for more than 5 minutes. After removal, cover the Print Cartridges to minimize the amount of light striking the Print Cartridges. Prolonged exposure to light significantly reduces Print Cartridges performance.

- b. Print Cartridges (page 8-10)

Warning

The Fuser may be hot. Turn the printer power Off and allow at least 5 minutes for the Fuser to cool before removing the Fuser.

- c. Fuser Unit (page 8-11)

Note

Names of parts that appear in the removal and replacement procedures may not match the names that appear in the Parts List. For example, a part called the Registration Chute Assembly in a removal procedure may appear on the Parts List as Assembly, Registration Chute. When working on a removal procedure, ignore any prerequisite procedure for parts already removed.

Notations in the Disassembly Text

- The notation “(item X)” points to a numbered callout in the illustration corresponding to the disassembly procedure being performed.
- The notation “PLX.X.X” indicates that this component is listed in the Parts List.
- Bold arrows in an illustration show direction of movement when removing or replacing a component.
- The notation “(tap, plastic, 10 mm)” or “(metal, 6 mm)” refer to the type of screw being removed.

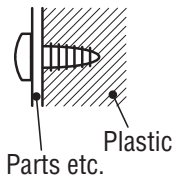
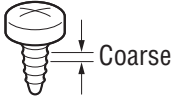
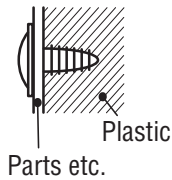

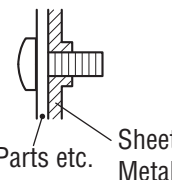
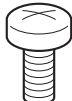
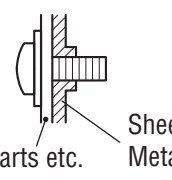

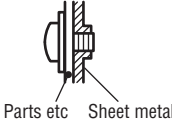

Note

Provides information specific to the replacement of parts or assemblies.

Fastener Types

The following table lists the primary types of Posi-Drive screws used to assemble the printer. The procedures provide dimensional specifications for screws being removed.

Posi-Drive Screw Types used in the Printer

Type	Application	Shape	Characteristics
Self-tapping, plastic			<ol style="list-style-type: none"> 1. Silver colored. 2. Screw thread is coarse compared to metal screw. 3. Screw tip is thin.
Self-tapping, plastic, with flange			<ol style="list-style-type: none"> 1. Black colored. 2. Screw thread is coarse compared to metal screw. 3. Screw has a flange. 4. Screw tip is thin.
Sheet Metal, silver			<ol style="list-style-type: none"> 1. Silver colored. 2. Diameter is uniform.
Sheet Metal, with flange			<ol style="list-style-type: none"> 1. Silver colored. 2. Screw has a flange. 3. Diameter is uniform.
Sheet Metal, silver with lock washer			<ol style="list-style-type: none"> 1. Silver colored. 2. Includes a toothed washer. 3. Diameter is uniform. 4. Used for grounding terminals.

Caution

Use care when installing self-tapping screws in plastic. To properly start the screw in plastic, turn the screw counter-clockwise in the hole until you feel the screw engage the threads, then tighten as usual. Failure to properly align or over tighten the screw can result in damage to previously tapped threads.

Always use the correct type and size screw. Using the wrong screw can damage tapped holes. Do not use excessive force to remove or install either a screw or a printer part.

Maintenance Items and Consumables

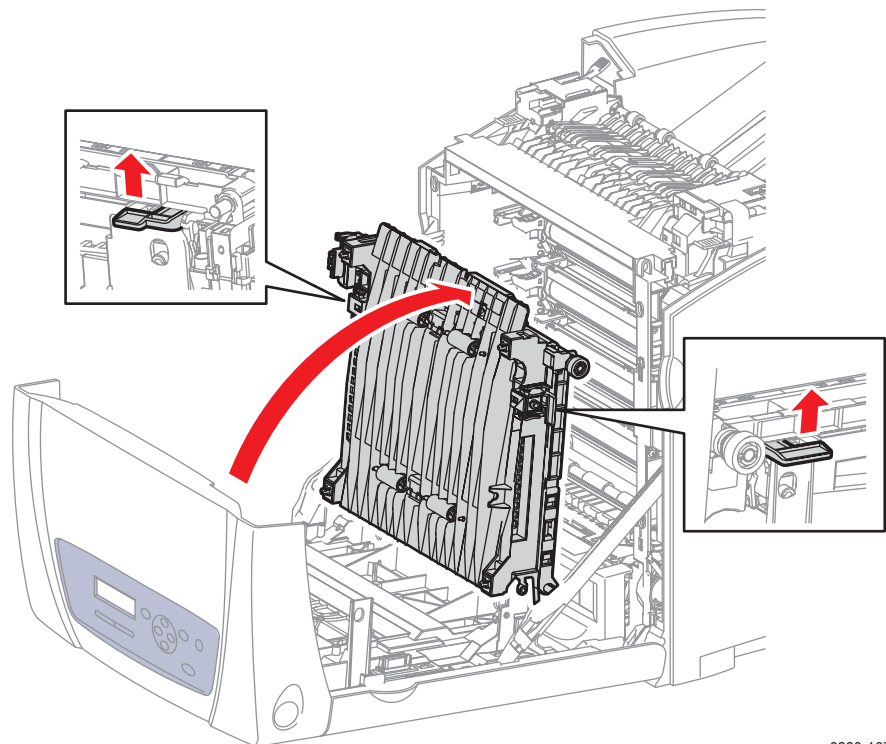
Maintenance items include the Transfer Unit, Fuser, and Feed/Retard Rollers. Individual procedures for the Rollers removal and replacement are provided starting on page 8-8. Consumables consist of the four print cartridges.

Transfer Unit (PL4.1.1)

Caution

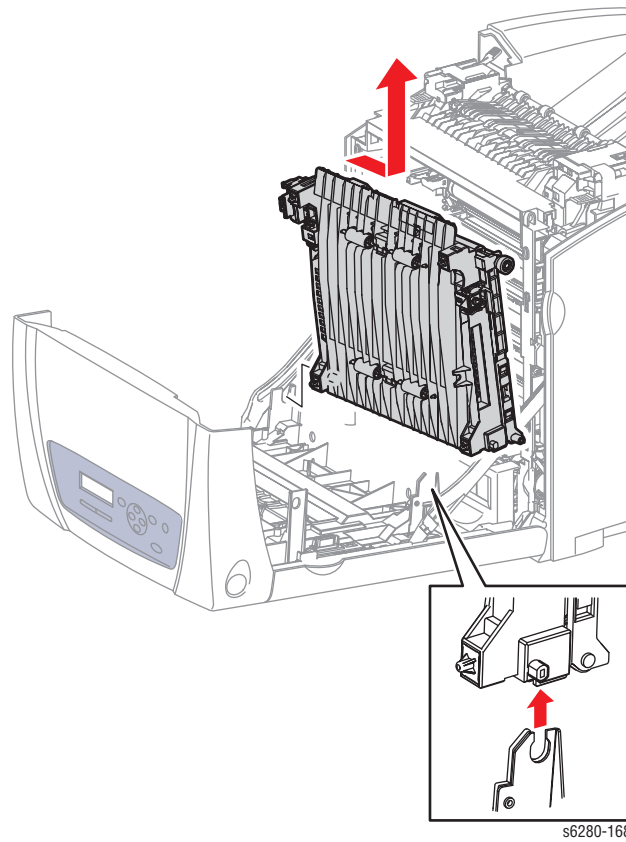
Do not touch the Transfer Unit belt area.

1. Open the Front Cover.
2. Release the levers on the left and right sides of the Transfer Unit and lift the Transfer Unit at a 90° angle.



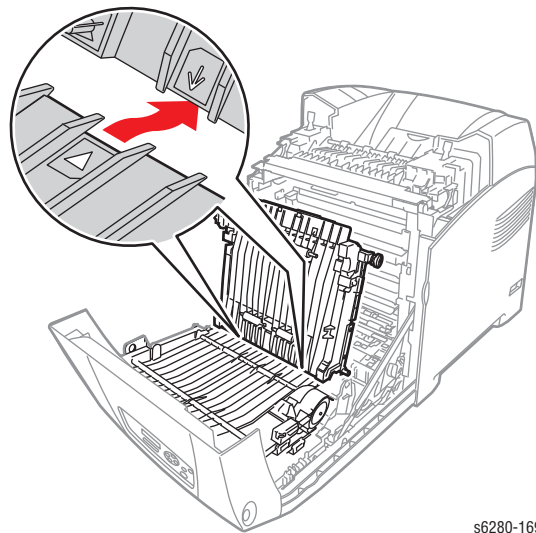
s6280-167

3. Tilt the right side of the Transfer Unit up toward the left side to move the notch out of the U-shape groove and slide the notch on the left side away from the hole to remove the Transfer Unit.



Replacement Note

If there is a Duplex Unit installed, ensure to align the arrows on the bottom of the Transfer Unit with the arrows on top of the Duplex Unit.

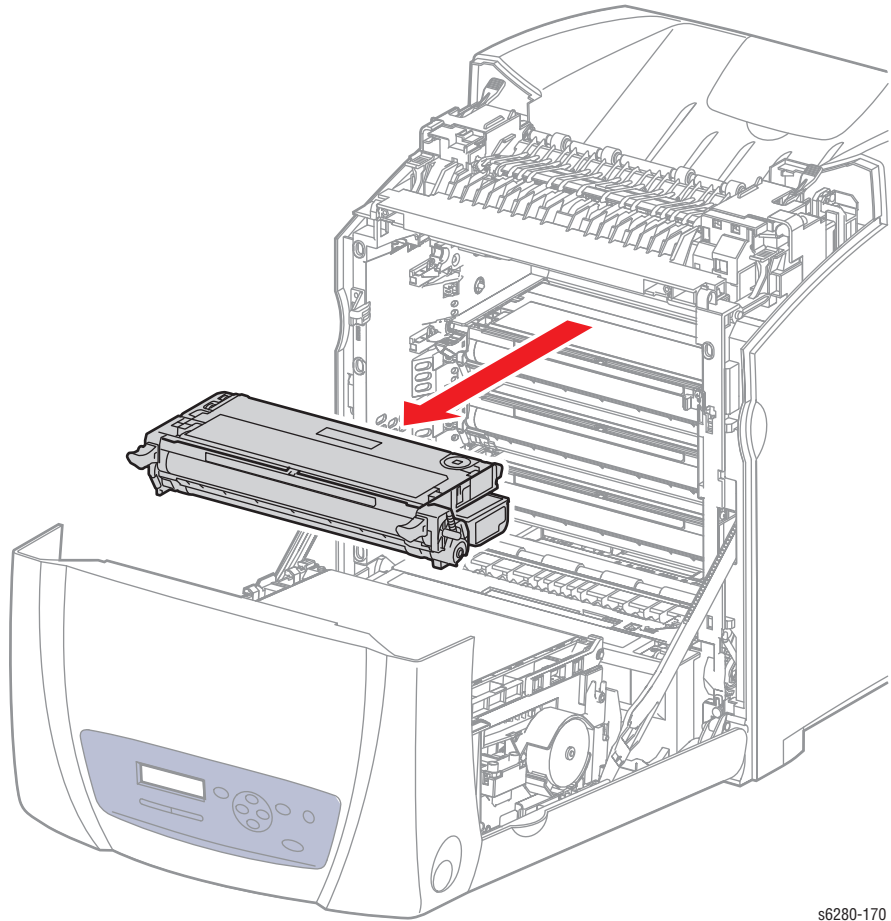


Print Cartridge (C/M/Y/K) (PL5.1.18-21)

Caution

Do not expose the Print Cartridges to light for more than 5 minutes. Cover the Print Cartridges to avoid damage.

1. Open the Front Cover.
2. Hold the levers on the left and right sides of the Print Cartridge and slowly pull it out.



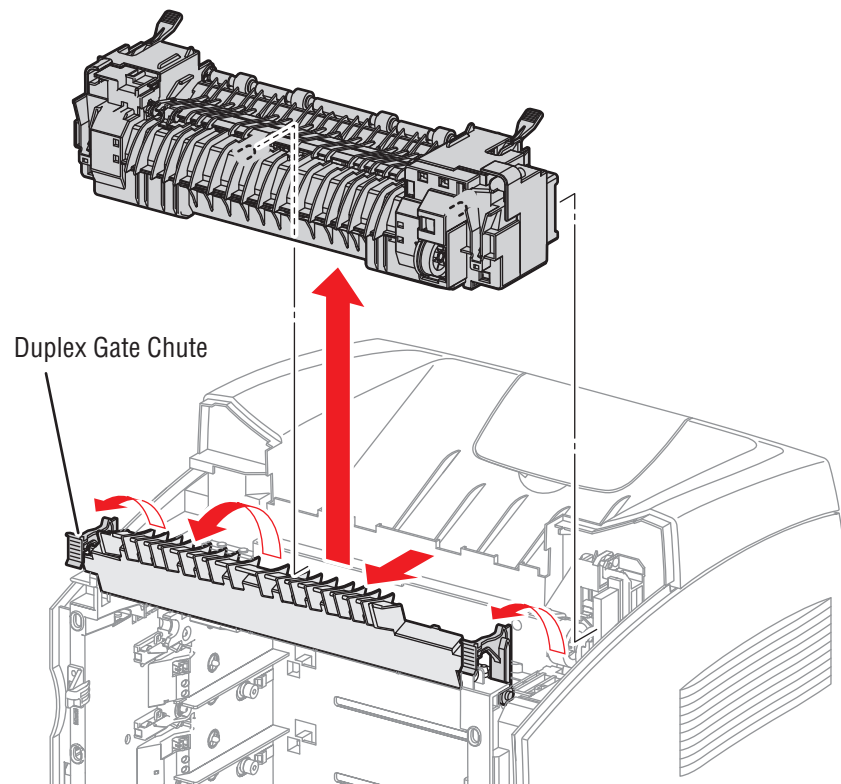
s6280-170

Fuser (PL6.1.10)

Warning

The Fuser may be hot. Turn the printer power Off and allow at least 5 minutes for the Fuser to cool before removing the Fuser.

1. Open the Front Cover.
2. Open the Duplex Gate Chute (PL6.1.13).
3. Release the Gray levers on the left and right sides of the Fuser to unlock the Fuser from the printer.
4. Push the Fuser toward the front, and lift the Fuser up to remove it.

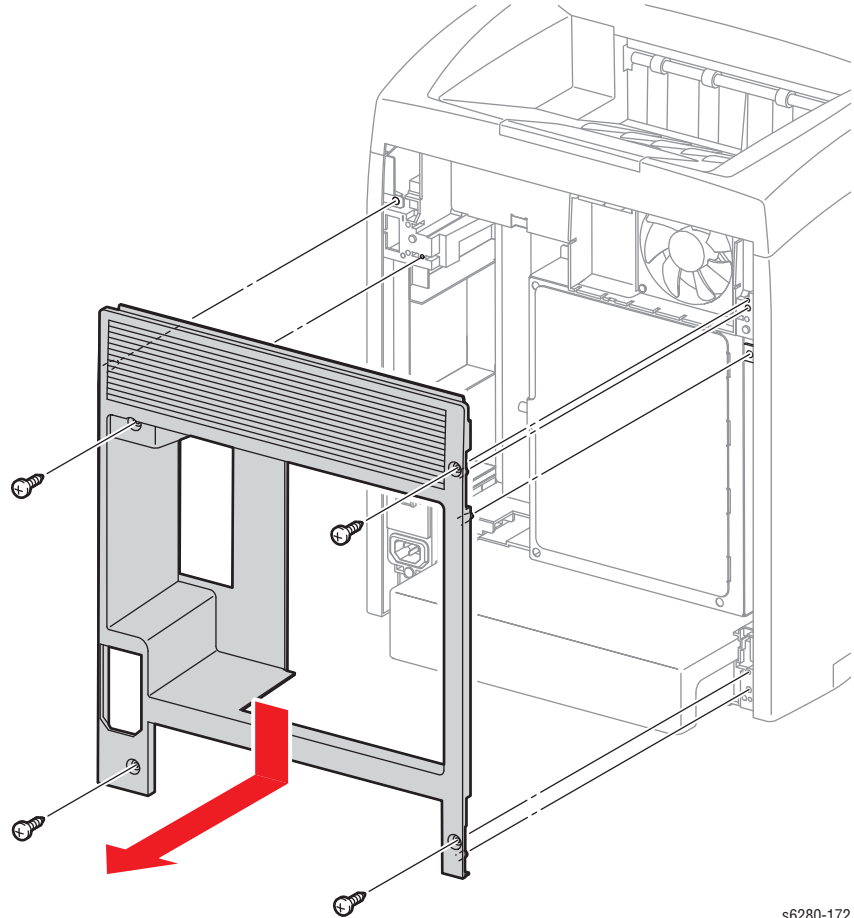


s6280-171

Covers

Rear Cover (PL1.1.4)

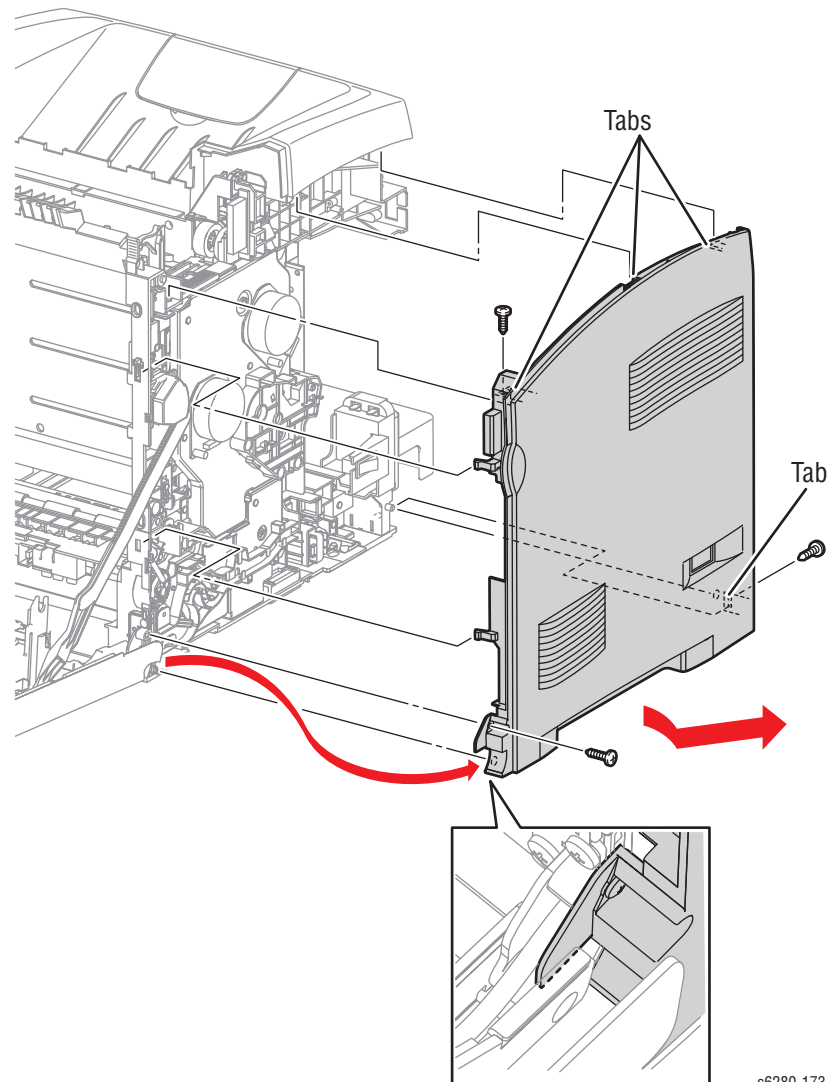
1. Remove 4 screws (10 mm) securing the Rear Cover.
2. Slightly shift the Rear Cover downward at angle and out to remove it.



s6280-172

Right Side Cover (PL1.1.6)

1. Remove the Rear Cover (page 8-12).
2. Remove 3 screws (10 mm) securing the Right Side Cover.
3. Use a flat tip screwdriver to release the plastic tabs from the notches on the top and rear sides of the printer frame.
4. Slide the Right Side Cover at an angle downward and toward the rear to remove it.



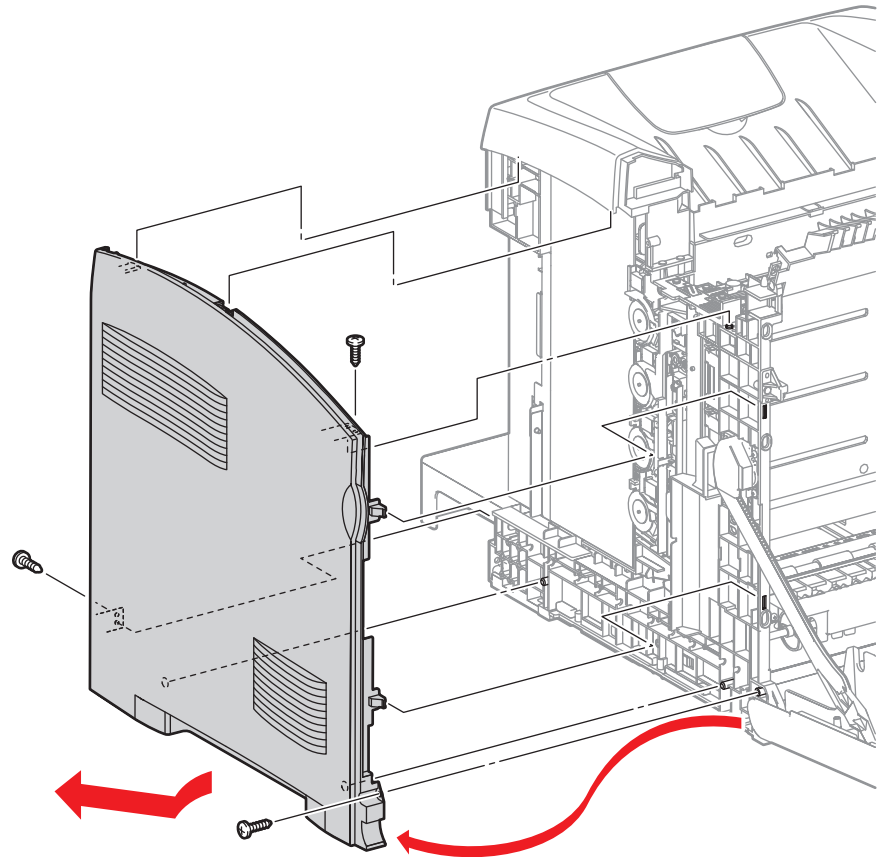
s6280-173

Replacement Note

Insert the top and bottom tabs of the Right Side Cover at an angle in order to fit the Right Side Cover in the correct position.

Left Side Cover (PL1.1.7)

1. Remove the Rear Cover (page 8-12).
2. Remove 3 screws (10 mm) securing the Left Side Cover.
3. Use a flat tip screwdriver to release the plastic tabs from the notches on the top and rear sides of the printer frame.
4. Slide the Left Side Cover at an angle toward the rear to remove it.



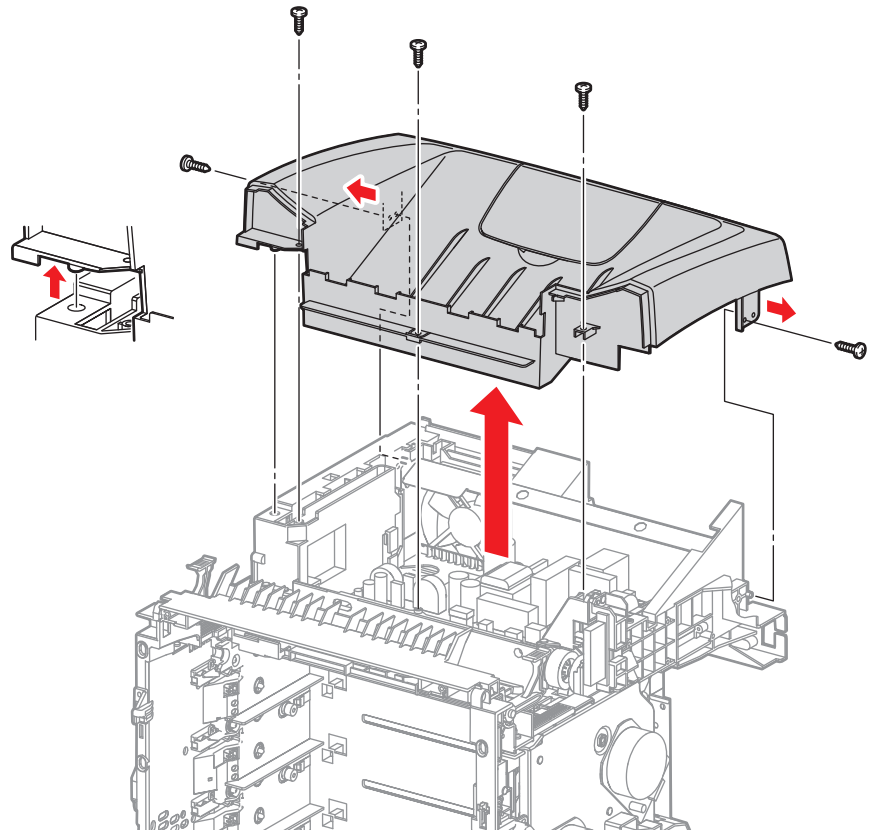
s6280-174

Replacement Note

Insert the top and bottom tabs of the Left Side Cover at an angle in order to fit the Left Side Cover in the correct position.

Top Cover (PL1.1.1)

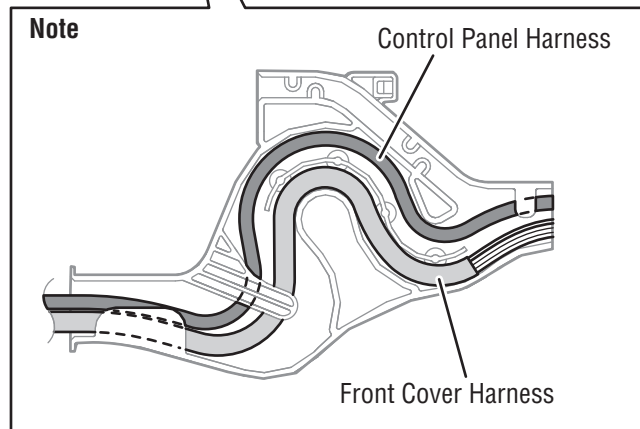
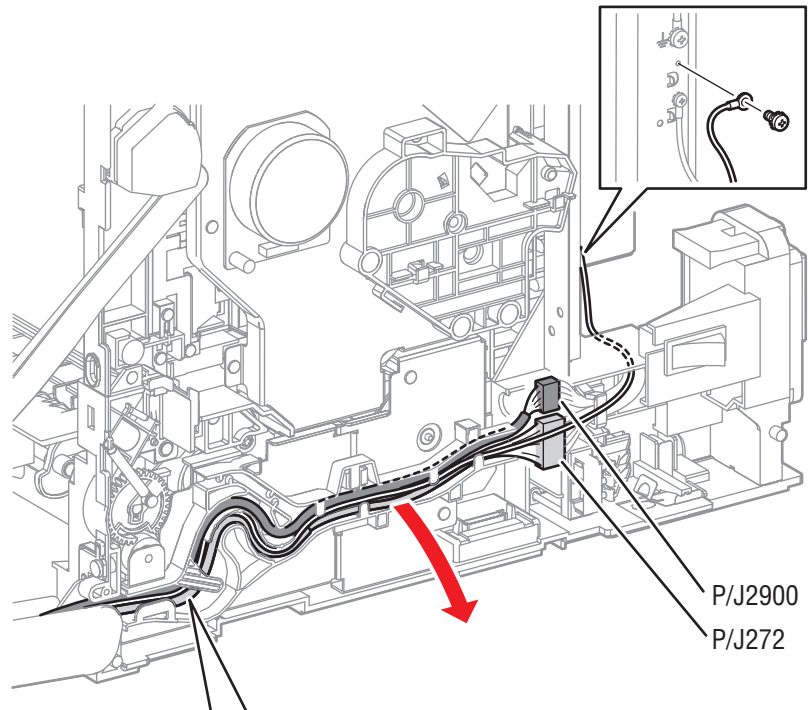
1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the Left Side Cover (page 8-14).
4. Remove 5 screws (10 mm) securing the Top Cover.
5. Release the tabs from the holes on the left and right sides of the Top Cover.
6. Release the notch on the front left of the Top Cover.
7. Lift the Top Cover up to remove it.



s6280-175

Front Cover Assembly (PL1.2.1)

1. Remove the Duplex Unit (page 8-99), if installed.
2. Remove the Rear Cover (page 8-12).
3. Remove the Right Side Cover (page 8-13).
4. Remove 1 screw (6 mm) securing the Ground Wire to the printer.
5. Disconnect the Front Cover connector P/J272 and the Control Panel connector P/J2900 (PL1.2.15).
6. Release the Ground Wire and the wiring harness from the Drive Duct (PL8.1.8).



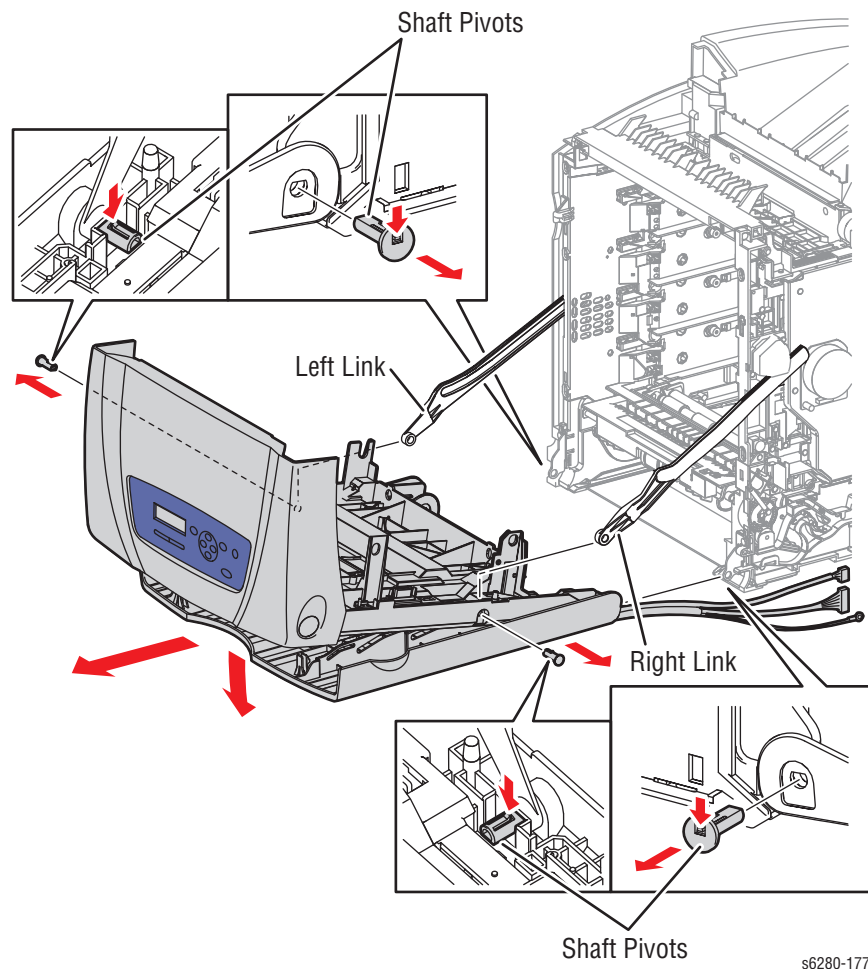
s6280-176

7. Open the Tray 1 (MPT) Cover (PL1.2.24).

Note

When performing the following step, be careful not to drop the Front Cover Assembly.

8. Release the hook of the Shaft Pivot on the left and right side of the Front Cover. Pull the Shaft Pivot outward while holding the Front Cover and remove the Cover from the Left and Right Links (PL 7.1.13).
9. From the outside of Tray 1, release the hooks of the Shaft Pivot (PL 1.2.30) securing the Front Cover to the printer and pull out the Shaft Pivot.
10. Remove the Front Cover together with the Tray 1 (MPT) Cover.
11. Remove Tray 1 (MPT) Cover from the Front Cover.



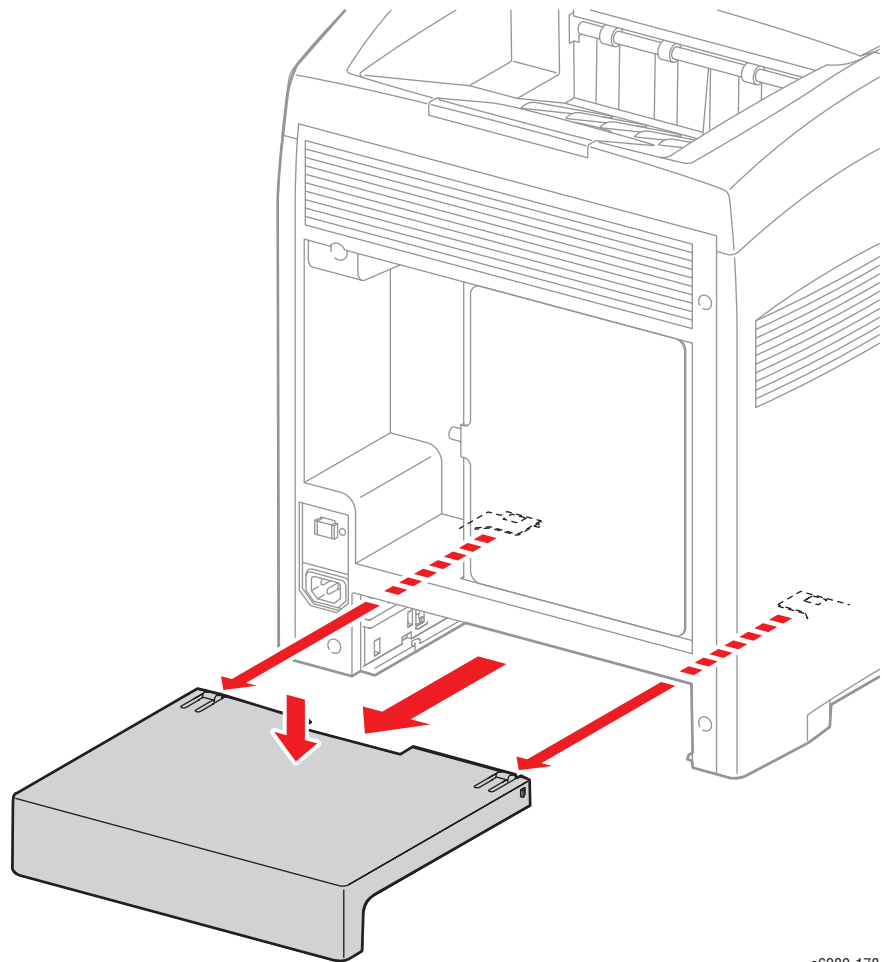
s6280-177

Replacement Note

Ensure to tilt the Front Cover accordingly when mounting the Front Cover. Push the Shaft Pivot in all the way to secure the hooks of the Shaft Pivots to the Left and Right Links.

Tray 2 Cover (PL1.1.5)

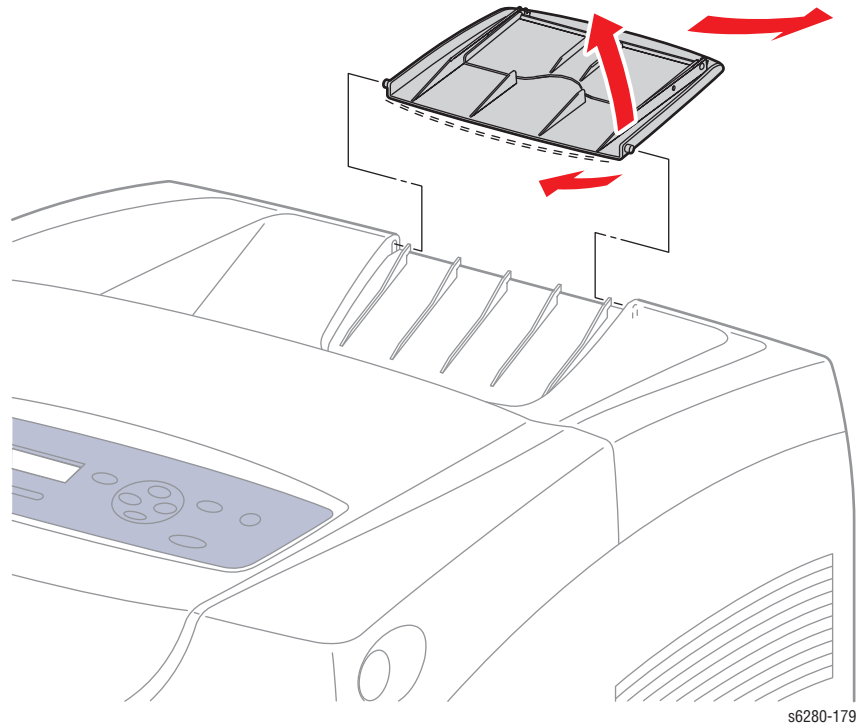
1. Remove Tray 2.
2. Pull the Tray 2 Cover all the way out until it stops.
3. Press the center part of the Tray 2 Cover to release the hooks (on the left and right sides) and remove the Tray 2 Cover from the printer.



s6280-178

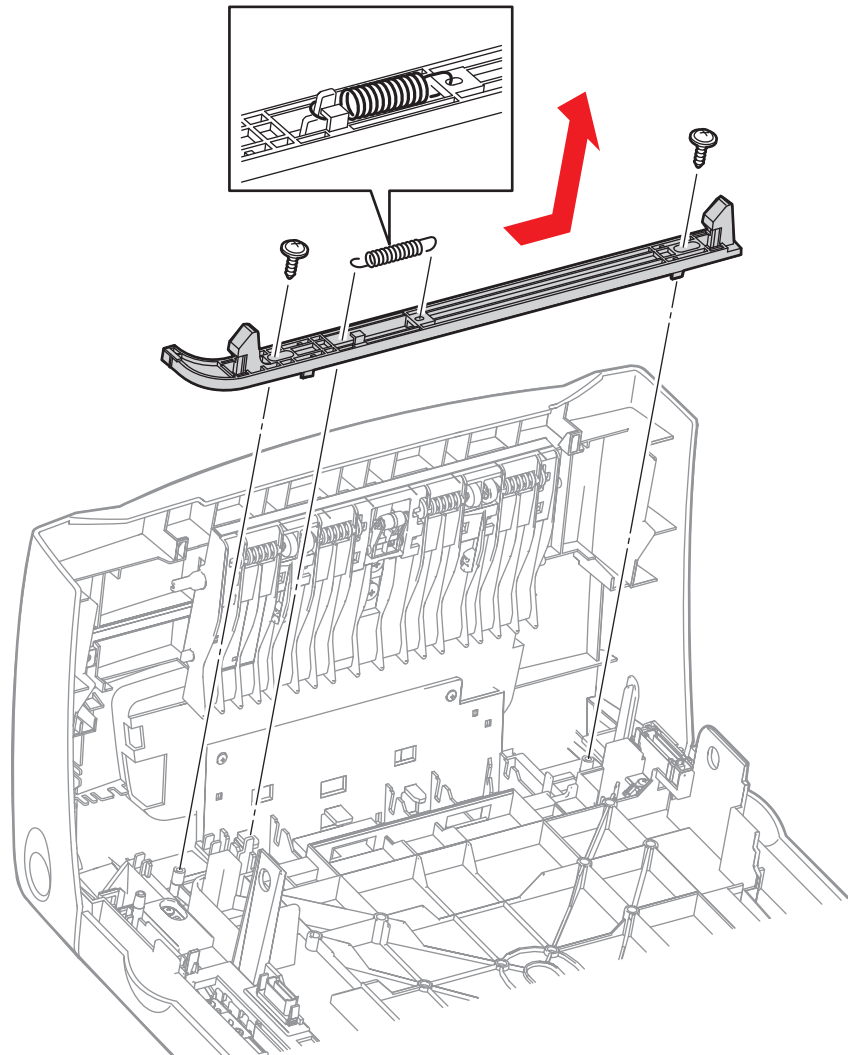
Extender Cover (PL1.1.9)

1. Open the Extender Cover.
2. Press the center part of the Extender Cover and release one of the two notches of the Extender Cover from the hole of the Top Cover (PL1.1.1).
3. Pull out the other notch of the Extender Cover from the hole of the Top Cover and remove the Extender Cover.



Front Latch (PL1.2.4)

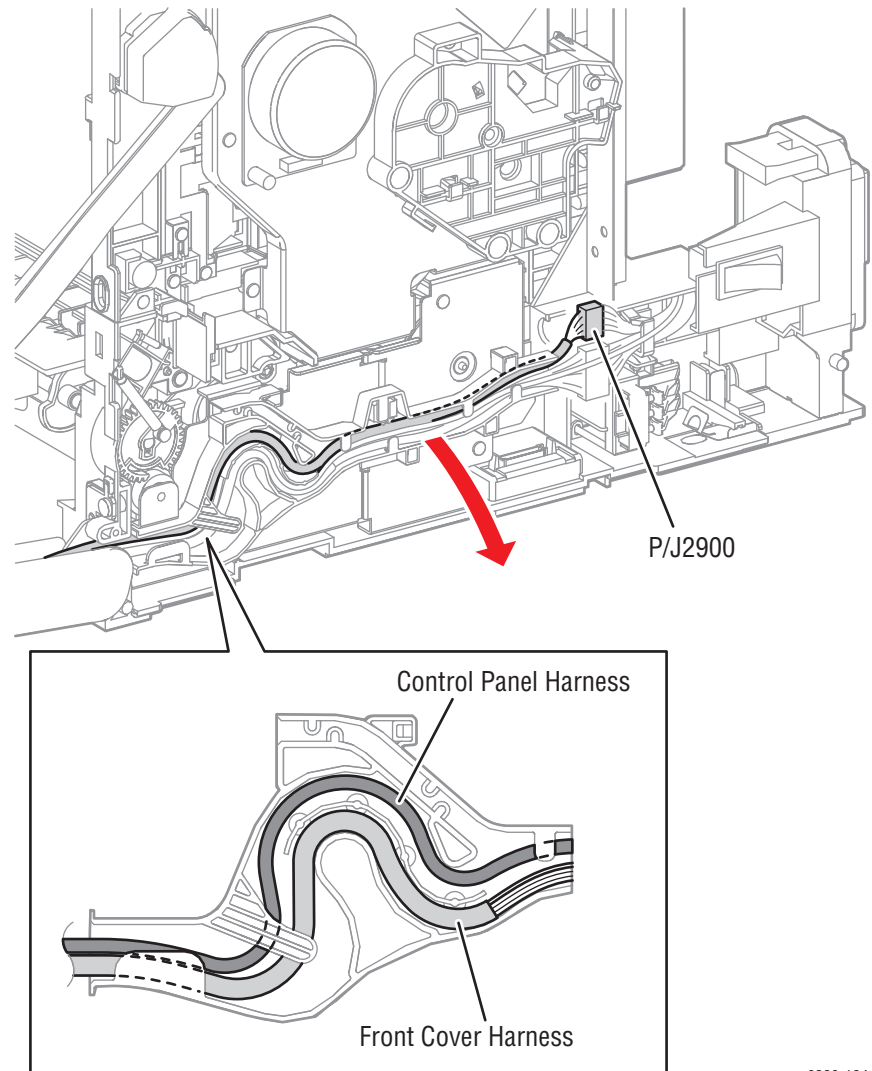
1. Remove the Duplex Unit (page 8-99), if installed.
2. Remove the Latch Spring (PL1.2.3) from the Front Latch (PL1.2.4) and the Front Cover Assembly.
3. Remove 2 screws (with flange, 10 mm) securing the Front Latch to the Front Cover Assembly.
4. Slide the Front Latch to the left and remove it from the Front Cover Assembly.



s6280-180

Control Panel Wiring Harness (PL1.2.15)

1. Remove the Duplex Unit (page 8-99), if installed.
2. Remove the Rear Cover (page 8-12).
3. Remove the Right Side Cover (page 8-13).
4. Remove the Front Latch (page 8-20).
5. Disconnect the wiring harness connector P/J2900.
6. Release the Control Panel wiring harness from the Tray 2 Drive Duct Assembly (PL8.1.8).

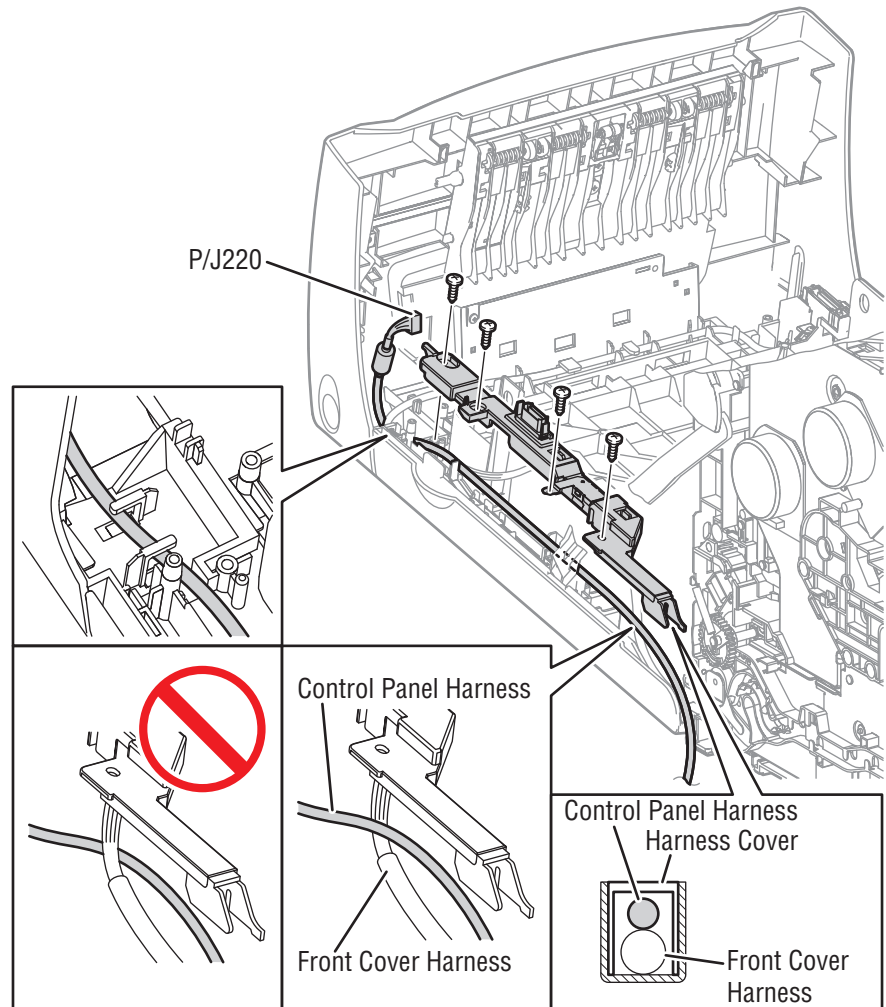


s6280-184

Note

Be sure not to move the Harness Cover away from the Front Cover Assembly too far, because the Harness Cover is secured to the Front Cover Harness Assembly.

7. Remove 4 screws (10 mm) securing the Harness Cover (PL1.2.5).
8. Remove the Harness Cover from the Front Cover Assembly.
9. Disconnect the wiring harness connector P/J220 from the Control Panel (PL1.2.16).
10. Remove the Control Panel wiring harness from the Front Cover Assembly.



s6280-185

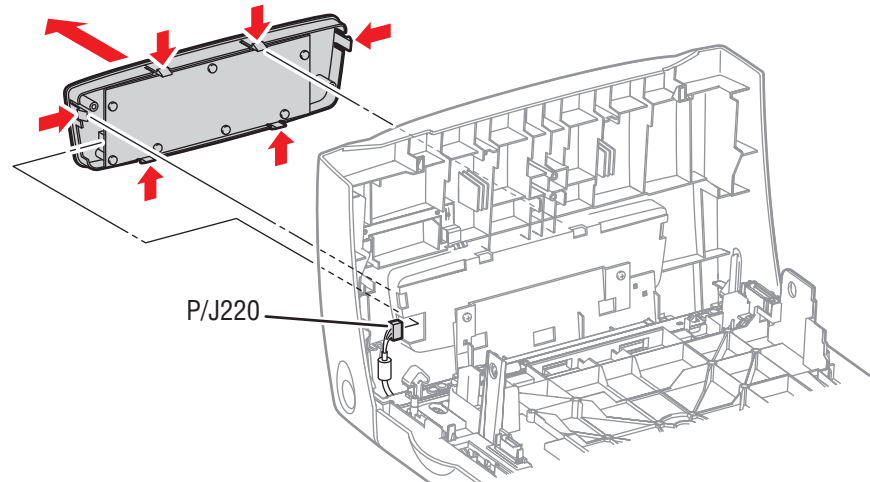
Control Panel (PL1.2.16)

1. Remove the Exit Out Chute (page 8-63).

Note

Be careful not to drop the Control Panel.

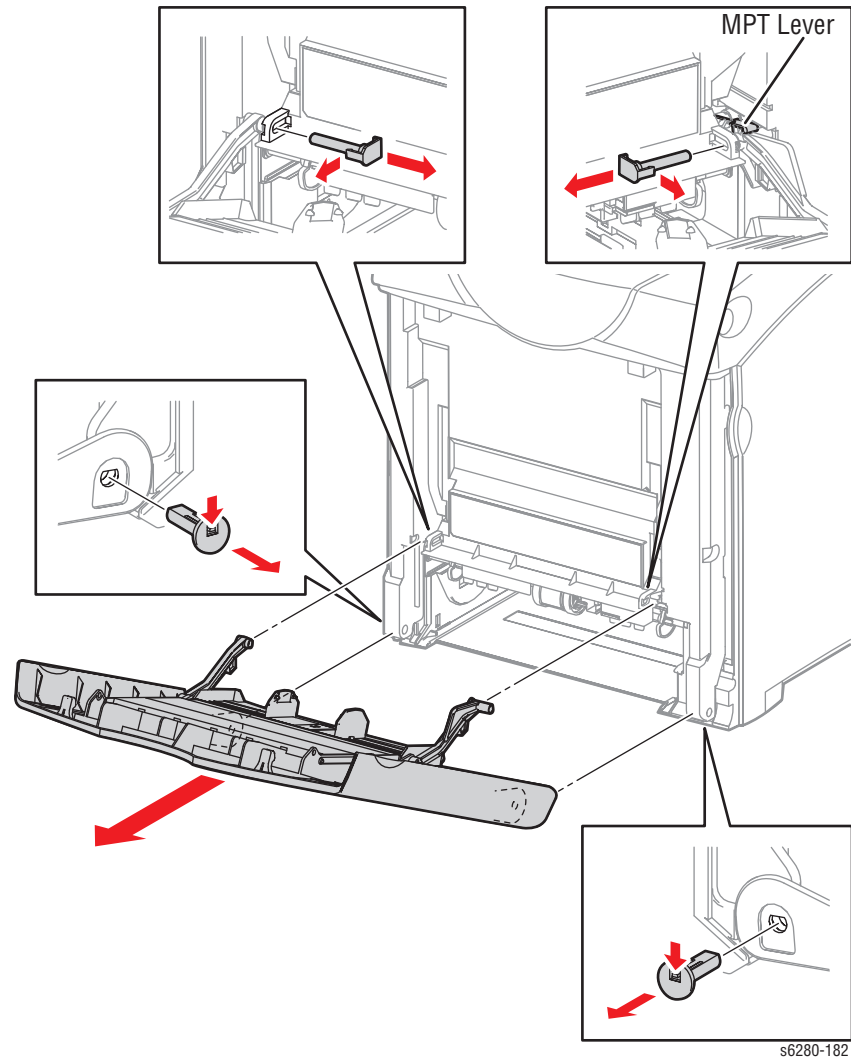
2. Disconnect the Control Panel connector P/J220.
3. Release the 6 hooks securing the Control Panel to the Front Cover (PL1.2.9).
4. Remove the Control Panel.



s6280-181

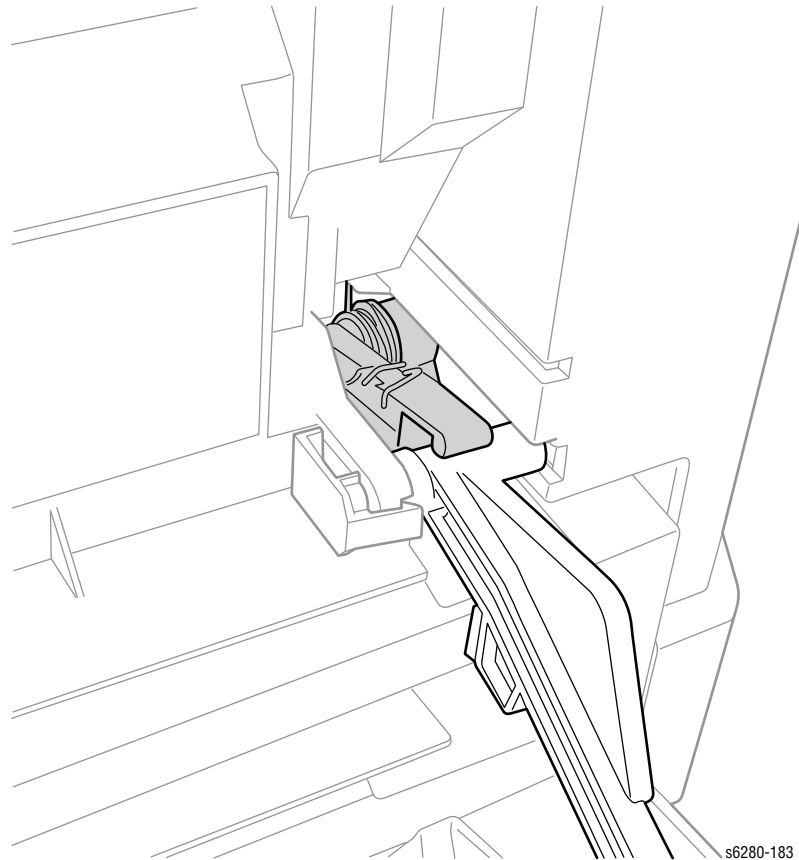
Tray 1 (MPT) Cover (PL1.2.24)

1. Open Tray 1 (MPT) Cover.
2. Rotate the Pivot Pin (PL1.2.17) to release the hooks securing the Link on the left and right sides of the Tray 1 (MPT) Cover. Remove the left and right Pivot Pins.
3. Use a small flat tip screwdriver to press on the lip of the Shaft Pivots to release the Shaft Pivots (PL1.2.30) securing the left and right sides of the Tray 1 (MPT) Cover and remove the Shaft Pivots.
4. Remove the Tray 1 (MPT) Cover from the printer.



Replacement Note

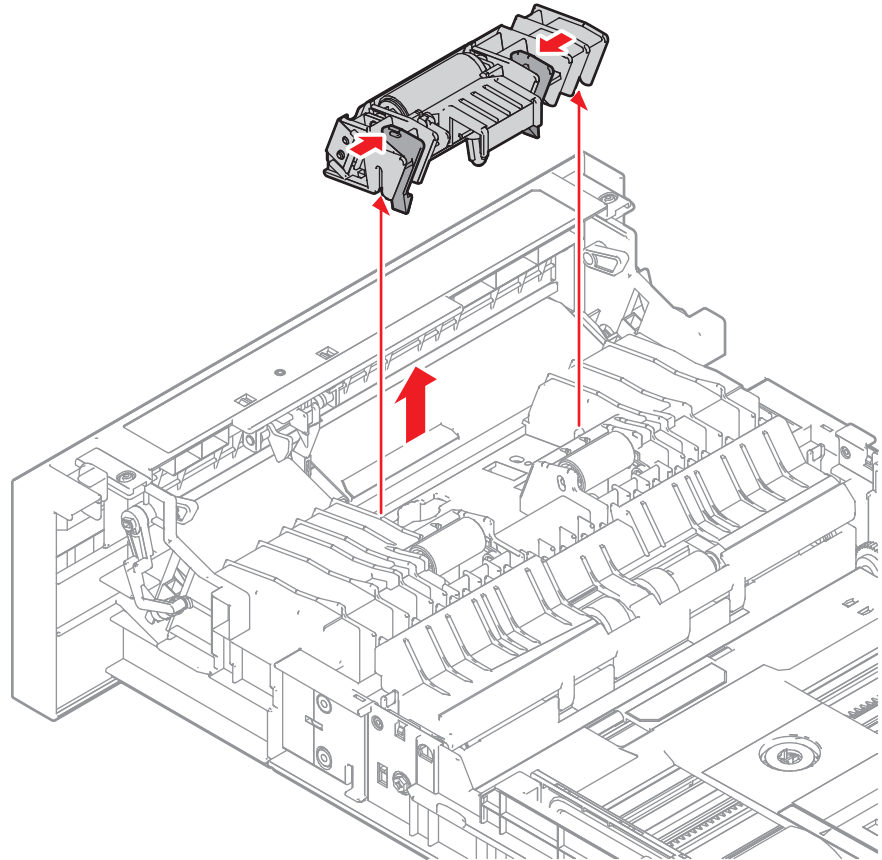
Ensure to place the Tray 1 (MPT) Lever on top of Tray 1 (MPT).



Paper Tray

Tray 1 (MPT) Retard Roller Assembly (PL2.1.3)

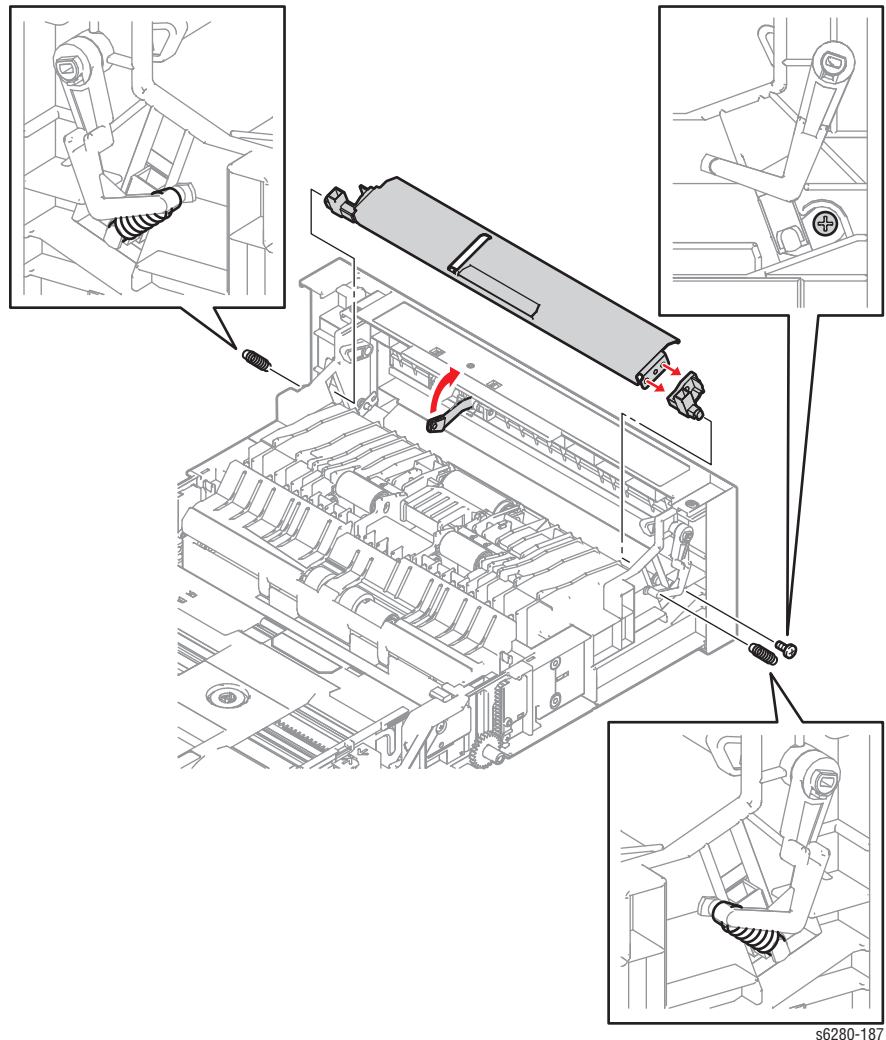
1. Remove Tray 2.
2. Press lightly on the left and right sides of the Separator Holder (PL2.1.10) toward the center, lift and remove the Holder.
3. Remove the Tray 1 (MPT) Retard Roller Assembly from the Tray Housing Base.



s6280-186

Bottom Plate (PL2.1.20)

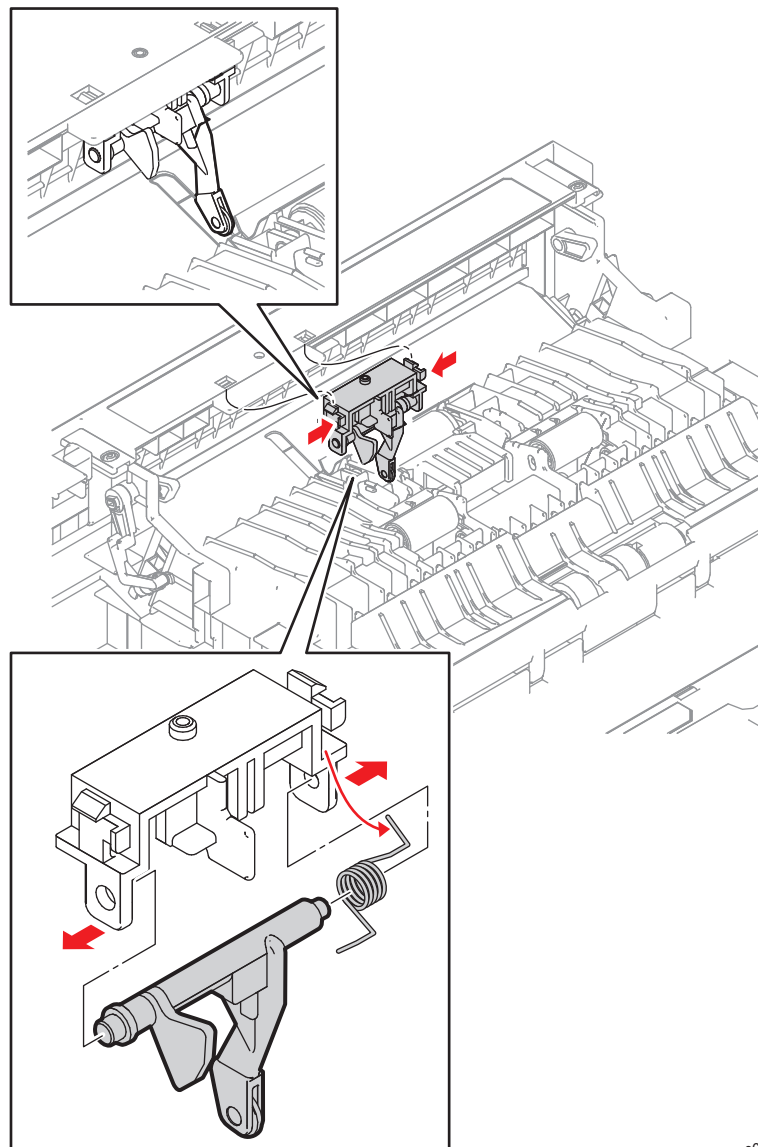
1. Remove Tray 2.
2. Remove the MPT Springs (PL2.1.17) from the left and right Arms (PL2.1.16/18).
3. Remove 1 screw (6 mm) securing the left MPT Holder Assembly (PL2.1.21) to the Bottom Plate Assembly (PL2.1.20). Remove the left MPT Holder.
4. While pushing the No Paper Actuator (PL2.1.26) upward, remove the Bottom Plate from the Tray 2 Housing Base.



s6280-187

Tray 1 (MPT) No Paper Actuator (PL2.1.26)

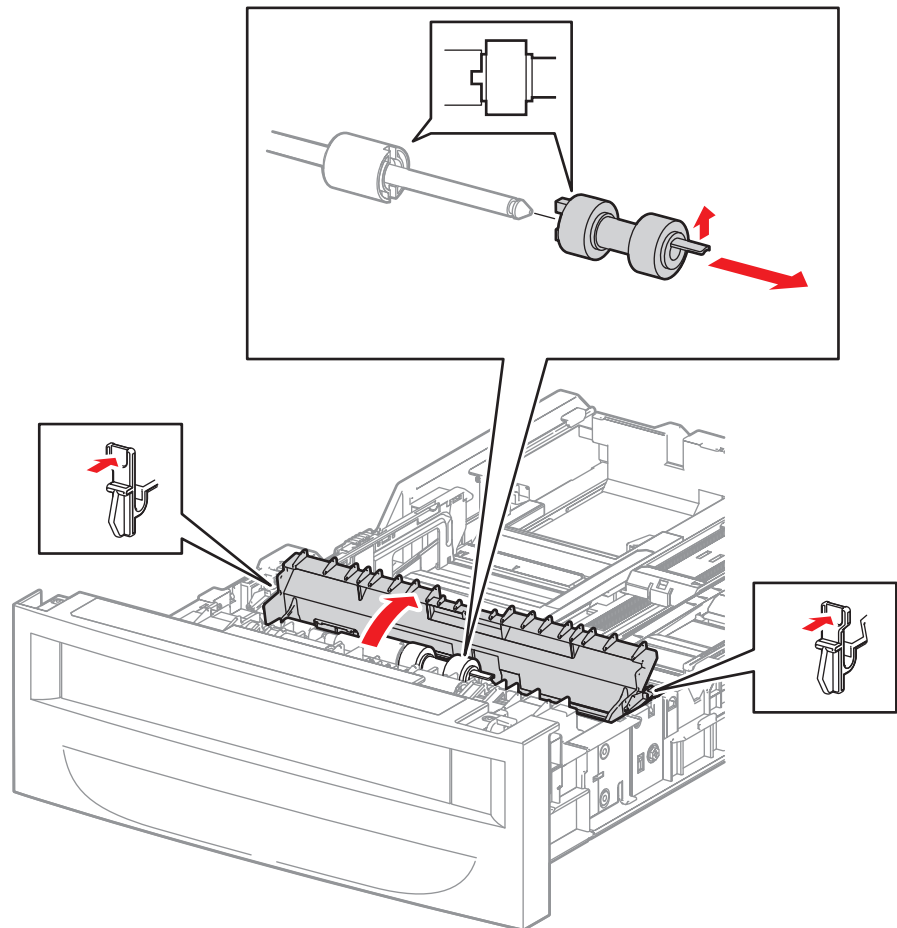
1. Remove Tray 2.
2. Press on the notches of the Actuator Assembly (PL2.1.24) to release the hooks.
3. Remove the No Paper Spring (PL2.1.28) from the Actuator Holder (PL2.1.25).
4. Expand the left and right of the Actuator Holder mounting sections and remove the Shaft.
5. Remove the No Paper Actuator together with the No Paper Spring.
6. Remove the No Paper Spring from the No Paper Actuator.



s6280-290

Tray 2 Retard Roll (PL2.2.17)

1. Remove Tray 2.
2. Release the hooks on the left and right of the Retard Tray Cover (PL2.2.13) and open the Retard Tray Cover.
3. Release the hooks on the left and right side of the Retard Roll and remove the Retard Roll from the Retard Shaft (PL2.2.15).

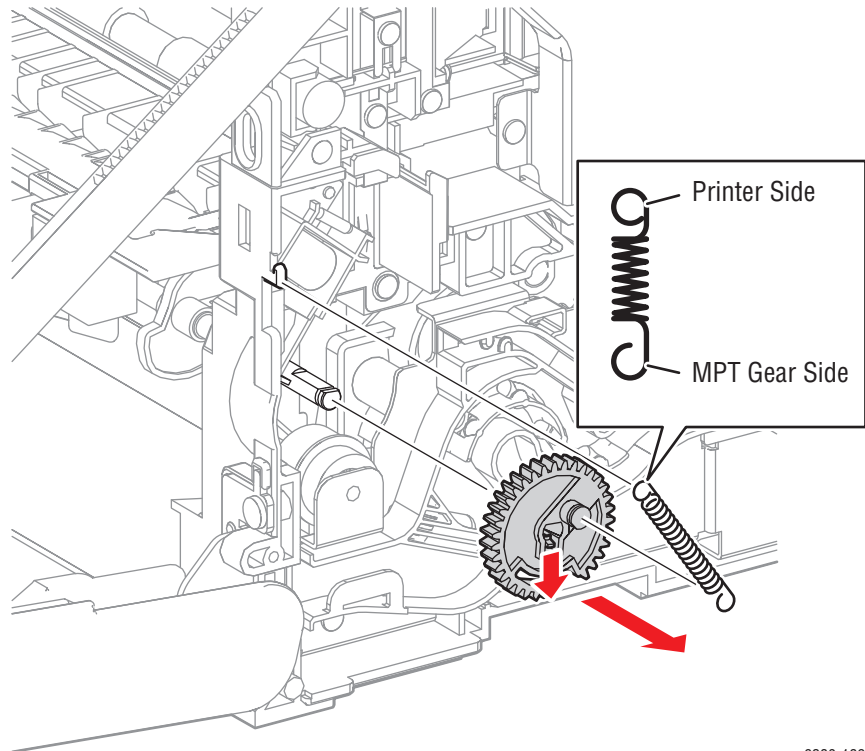


s6280-188

Paper Feeder

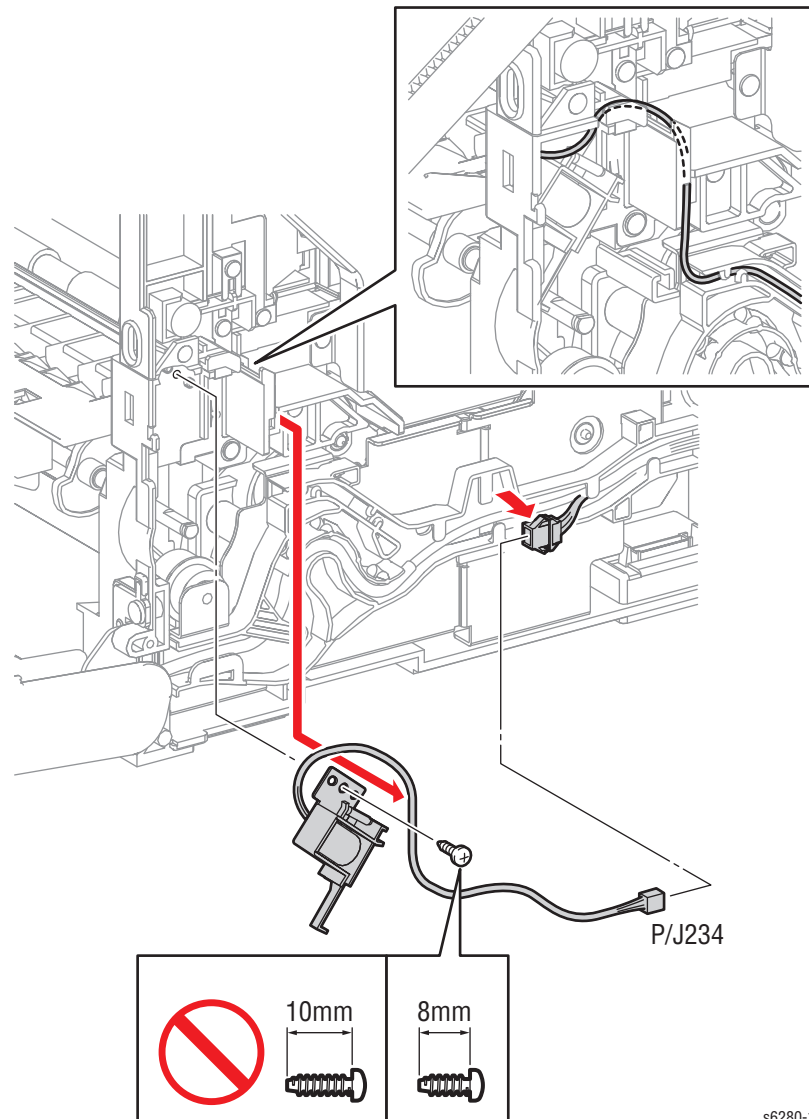
Tray 1 (MPT) Feed Solenoid (PL3.1.3, PL3.1.99)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the MPT Feed Spring (PL3.1.4).
4. Release the hook and remove the MPT Gear (PL3.1.5) from the MPT Shaft (PL3.1.12).



s6280-189

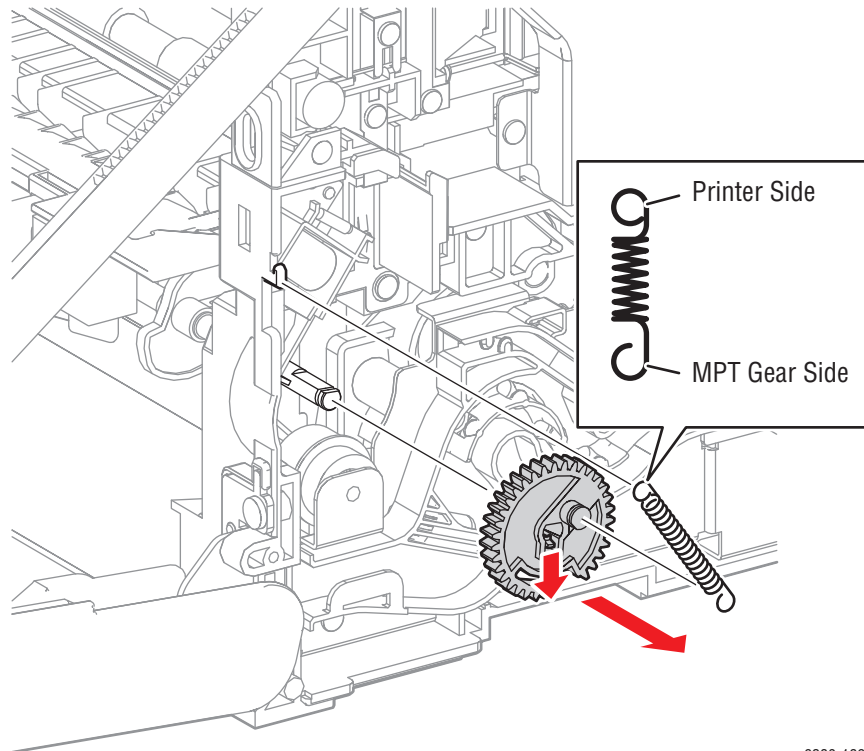
5. Disconnect the Tray 1 Feed Solenoid connector P/J234.
6. Release the Feed Solenoid wiring harness from the PH Drive Assembly Duct (PL8.1.8).
7. Remove 1 screw (8 mm) securing the Tray 1 Feed Solenoid to the printer.
8. Remove the Tray 1 Feed Solenoid from the printer.



s6280-190

Tray 1 (MPT) Roll (PL3.1.8)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the MPT Feed Spring (PL3.1.4).
4. Release the hook of the MPT Gear (PL3.1.5) and remove the Gear from the MPT Shaft (PL3.1.12).



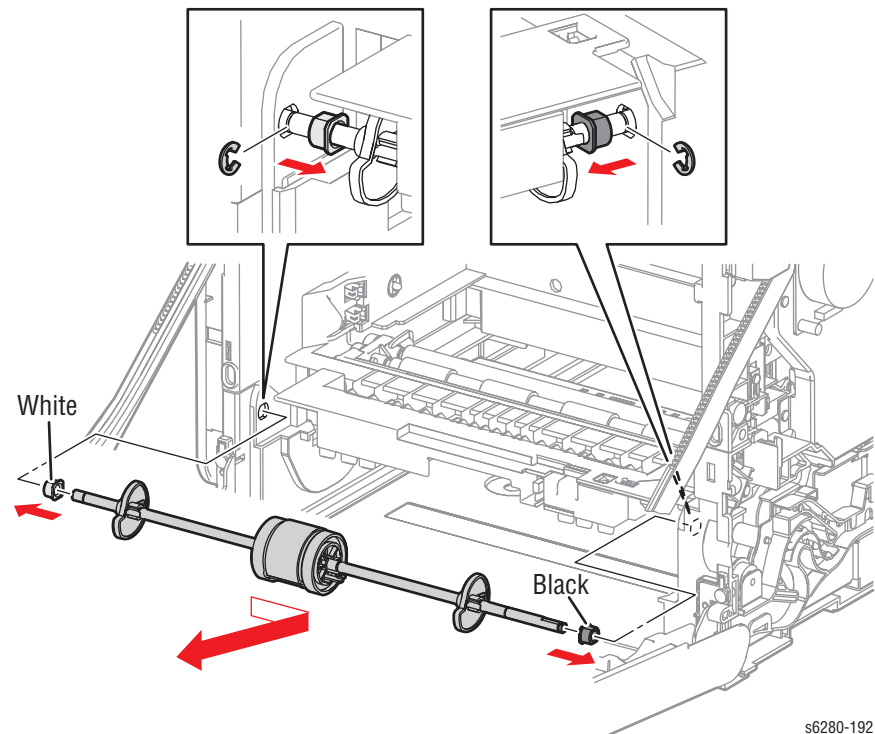
s6280-189

- Remove the E-ring securing the bearing on the left and right sides of the Roll, and shift the bearing toward the inside.

Note

When performing the following step, be careful not to loose the Earth Bearing (PL3.1.6) and the Bearing (PL3.1.13).

- Shift the Roll to the right and pull out the left side shaft section of the Roll from the bearing. Pull the Tray 1 (MPT) Roll out toward the lower left side to remove it.



Replacement Note

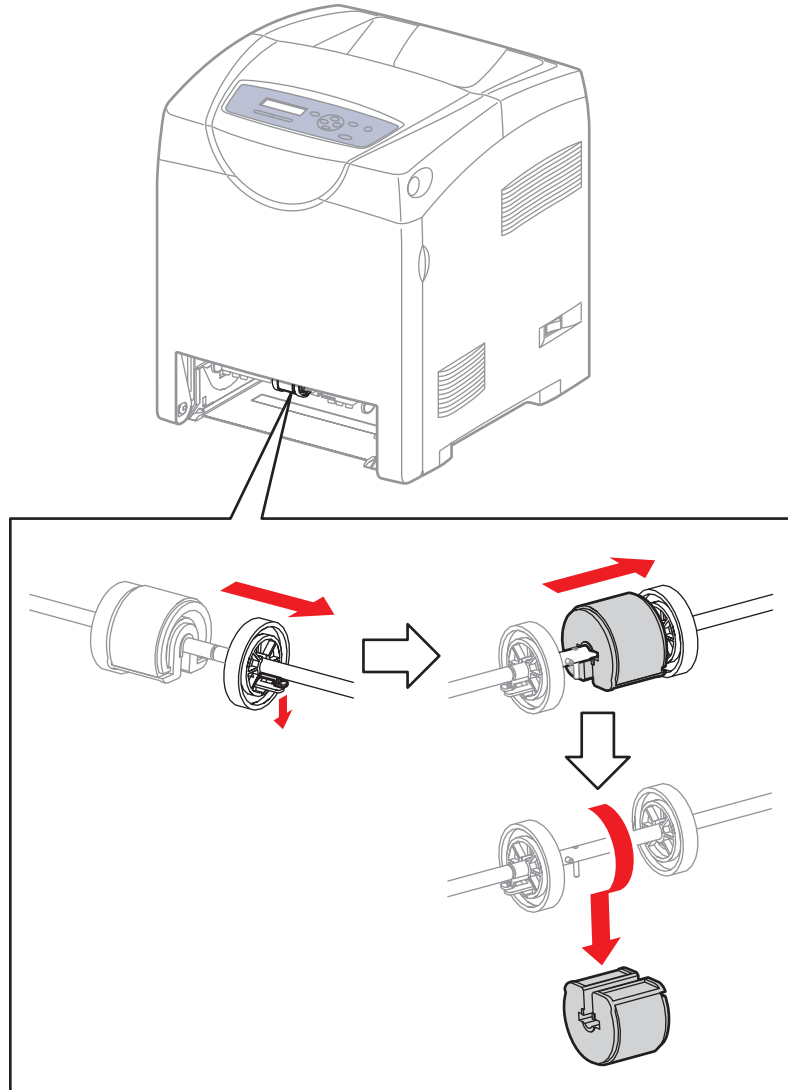
Pay attention to the orientation of the Bearings. The right side of the Bearing (PL3.1.6) is Black; the left side of the Bearing (PL3.1.13) is White.

Ensure the D cut surface of the Shaft faces upward which makes the installation process easier.

Attach the elliptical side of the mounting section of the MPT Feed Spring to the Gear.

Tray 1 (MPT) Feed Roll (PL3.1.10, PL 3.1.99)

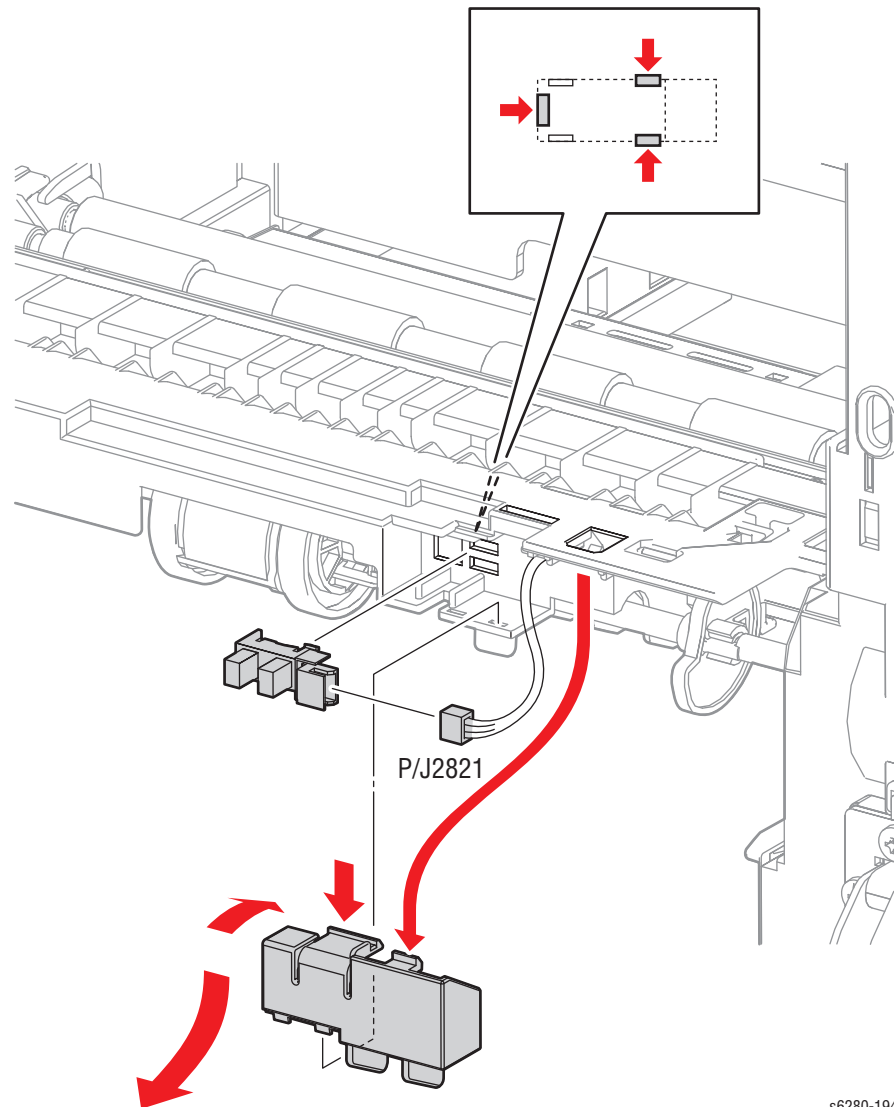
1. Remove Tray 2.
2. Release the MPT Core Roll hook (PL3.1.9) on the right side of the MPT Feed Roll. Shift the MPT Core Roll to the right.
3. Shift the MPT Feed Roll to the right and remove the groove of the MPT Feed Roll from the pin mounted on the Shaft (PL3.1.12).
4. Rotate the Tray 1 (MPT) Feed Roll 180° and remove it from the Shaft.



s6280-193

Tray 1 (MPT) No Paper Sensor (PL3.1.15)

1. Remove Tray 2.
2. Release the Cover Sensor hook (PL3.1.16).
3. Push the Cover Sensor backward while pressing on the lower side of the Sensor to remove the latch on the upper right side of the Cover Sensor from the MPT Chute (PL3.1.14).
4. Release the sensor hooks from the Feed Roller Assembly and remove the Tray 1 (MPT) No Paper Sensor from the MPT Chute.
5. Disconnect the Tray 1 (MPT) No Paper Sensor connector P/J2821.



s6280-194

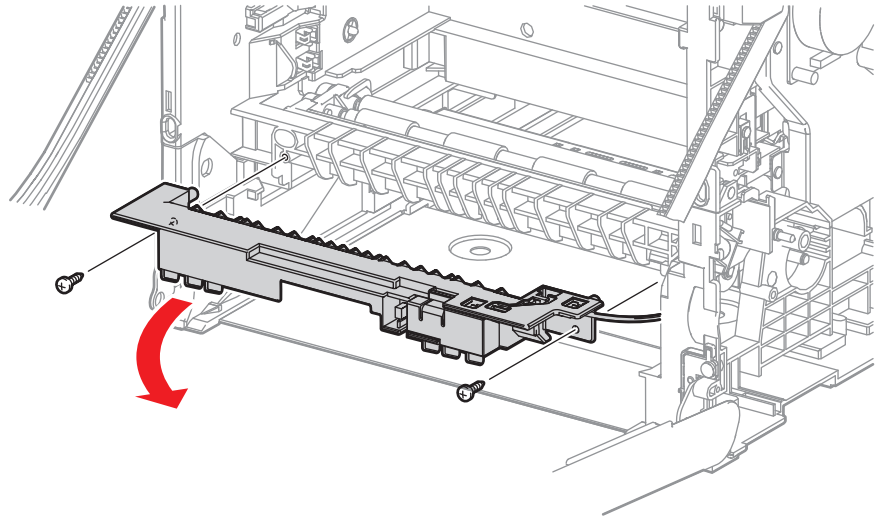
Tray 2 Feeder Assembly (PL3.2.1)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the PH Drive Assembly (page 8-73).
4. Remove the Registration Clutch (page 8-40).
5. Remove the Feed Clutch (page 8-41).
6. Remove the Tray 1 (MPT) Roll (page 8-32).

Note

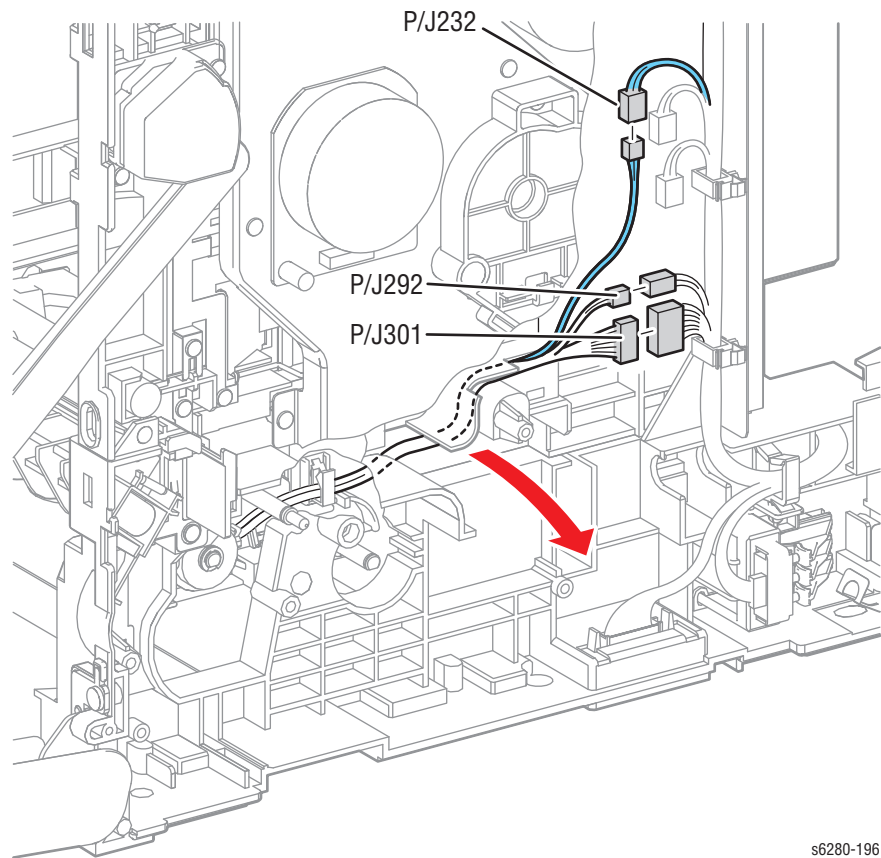
It is not necessary to remove the Tray 1 (MPT) No Paper Sensor (PL3.1.15) and the Cover Sensor (PL3.1.16).

7. Remove 2 screws (10 mm) securing the MPT Chute (PL3.1.14) to the printer.
8. Move the MPT Chute to the side away from the Feeder Assembly.



s6280-195

9. Disconnect the Feeder Assembly connectors P/J292 and P/J301.
10. Disconnect the Tray 2 Turn Clutch Assembly (PL3.2.25) connector P/J232.
11. Release the wiring harnesses from the clamps and hooks.

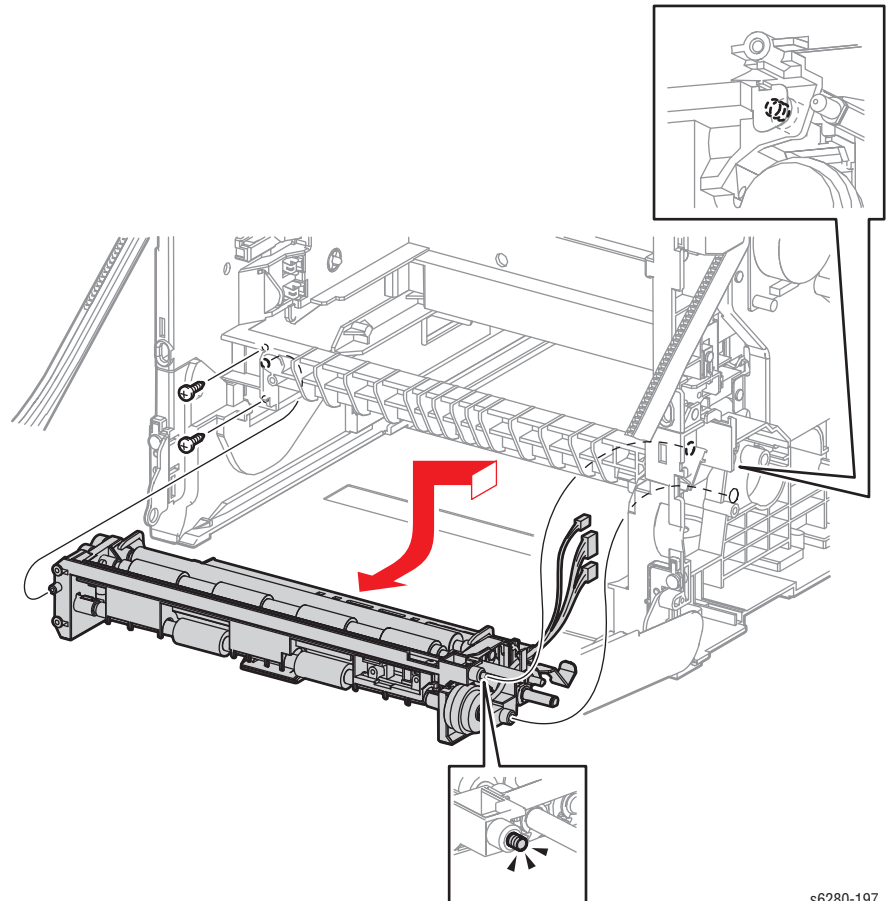


s6280-196

Caution

Ensure to hold the Feeder Assembly while removing the 2 screws to prevent the Feeder drop to the bottom of the printer.

12. Shift the CAM Shaft on the left side to access the screws. Remove 2 screws (10 mm) securing the Feeder.
13. Move the Feeder down and forward to move the notch on the left side of the Feeder Assembly out of the hole on the printer. Slightly shift the Feeder Assembly toward the rear left side to remove the notches (1 on the Earth Spring and 1 on the right side of the Feeder Assembly) out of the holes on the printer.
14. Pull the Shaft section and the Clutch on the right side of the Feeder Assembly out of the hole on the printer and remove the Feeder Assembly.



s6280-197

Replacement Procedures

1. Insert the Feeder into the printer with the right side in first.
2. Insert the 2 wiring harness connectors coming out of the Feeder and the connector of the Turn Clutch through the hole of the printer.

Note

Ensure the Earth Spring attached on the right side of the Feeder is touching the Earth Plate.

3. Insert the shaft section and the Clutch on the right side of the Feeder and the 2 notches through the holes on the printer.
4. Insert the notch on the left side of the Feeder through the hole on the printer and attach the Feeder.
5. Secure the Feeder to the printer with 2 screws (10 mm).
6. Route the wiring harnesses to the hooks on the printer frame and secure them with the clamps.

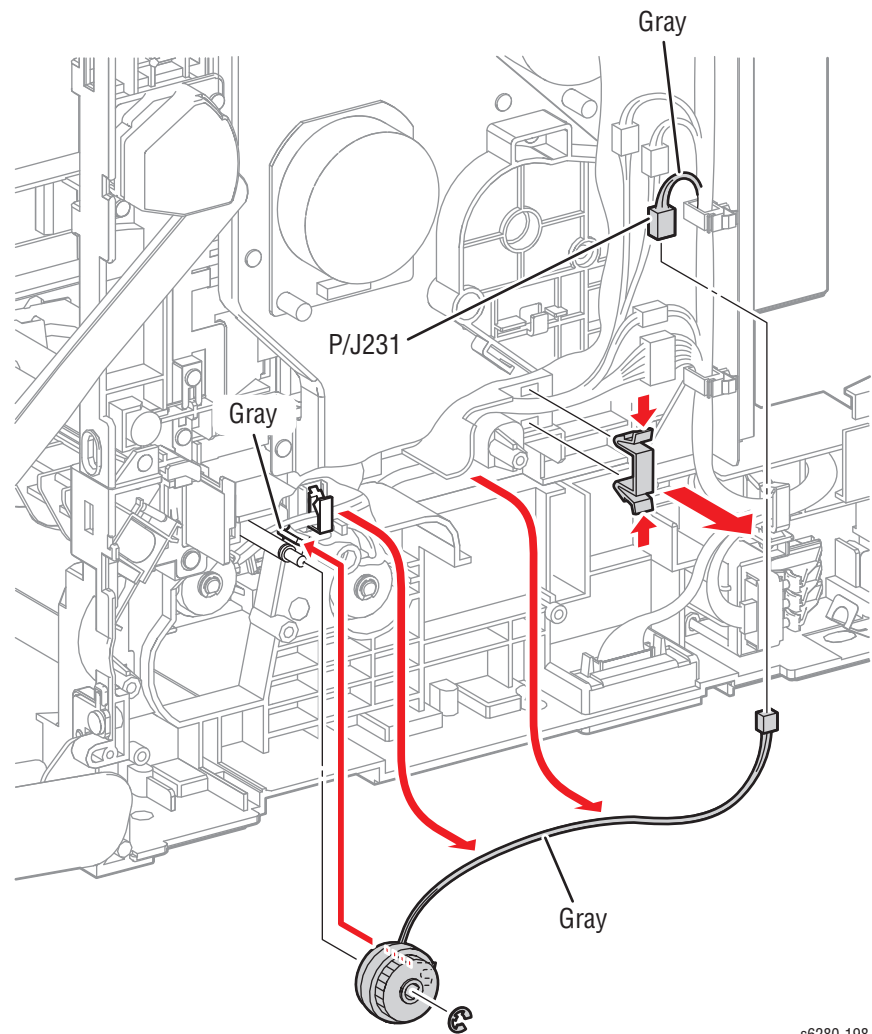
Note

Ensure to match the color of the wiring harness. The Turn Clutch wiring harness is blue.

7. Connect the Turn Clutch connector P/J232.
8. Connect the wiring harness connectors P/J292 and P/J301.
9. Align the notch on the Chute with the printer and attach the Chute.
10. Secure the Chute with 2 screws (10 mm).
11. Install the Tray 1 Roll (page 8-32).
12. Install the Feed Clutch (page 8-41).
13. Install the Registration Clutch (page 8-40).
14. Install the PH Drive Assembly (page 8-73).
15. Attach the Right Side Cover (page 8-13).
16. Attach the Rear Cover (page 8-12).
17. Install the Transfer Unit (page 8-8).
18. Install the Print Cartridges (C/M/Y/K) (page 8-10).
19. Close the Front Cover.
20. Insert Tray 2.

Registration Clutch (PL3.2.23)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the PH Drive Assembly (page 8-73).
4. Disconnect the Registration Clutch wiring harness connector P/J231.
5. Release the gray Registration Clutch wiring harness from the clamp and the clamp of the Feeder Assembly (PL3.2.1).
6. Remove the E-ring securing the Registration Clutch to the Feeder Assembly.
7. Remove the Registration Clutch from the Feeder Assembly.



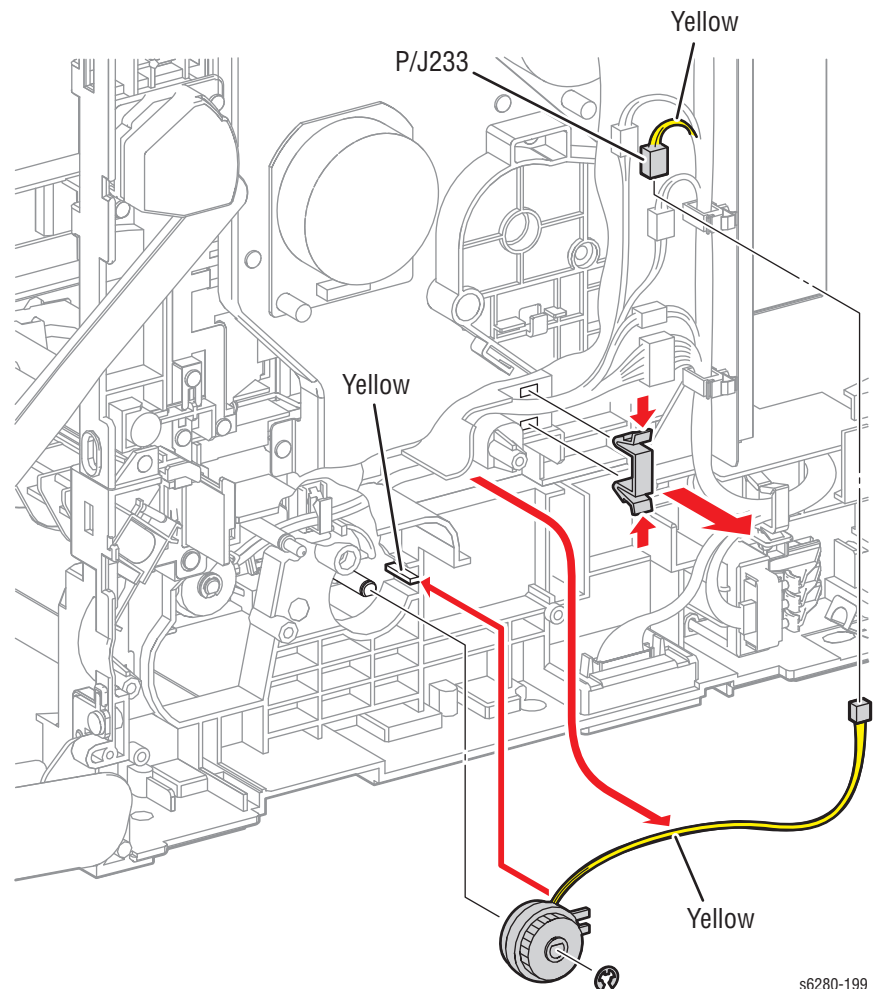
s6280-198

Replacement Note

Ensure to match the color of the Clutch Harness and the color of the Clutch positioning rib. The Registration Clutch Harness is Gray.

Feed Clutch (PL3.2.24)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the PH Drive Assembly (page 8-73).
4. Disconnect the Feed Clutch wiring harness connector P/J233.
5. Release the yellow Feed Clutch wiring harness from the clamp and the hook on the printer frame.
6. Remove the E-ring securing the Feed Clutch to the Feeder Assembly (PL3.2.1).
7. Remove the Feed Clutch from the Feeder Assembly.



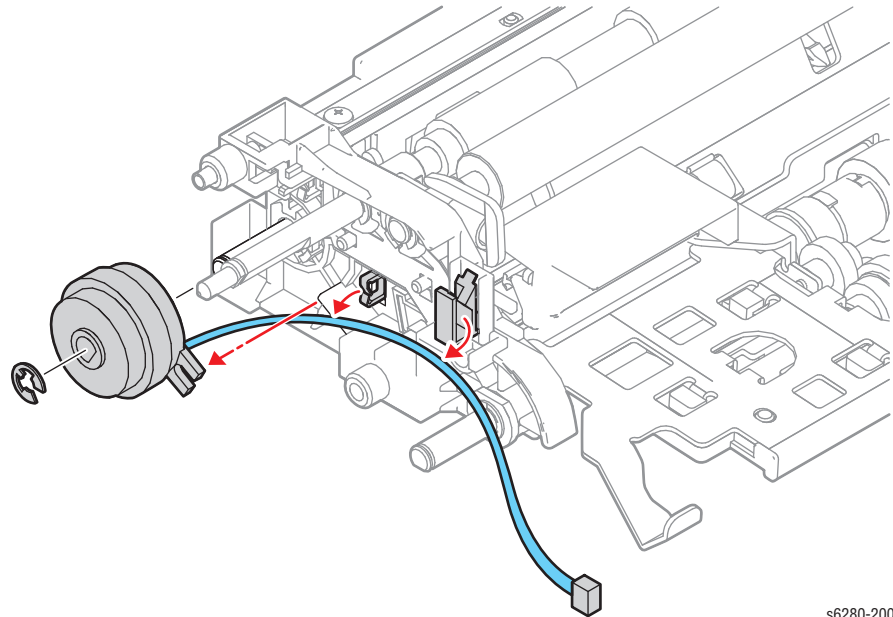
s6280-199

Replacement Note

Ensure to match the color of the Clutch Harness and the color of the Clutch positioning rib. The Feed Clutch Harness is Yellow.

Turn Clutch (PL3.2.25)

1. Remove the Feeder Assembly (page 8-36).
2. Release the Turn Clutch (PL3.2.25) wiring harness from the Clamps.
3. Remove the E-ring securing the Turn Clutch to the Feeder Assembly.
4. Remove the Turn Clutch from the Feeder Assembly.



s6280-200

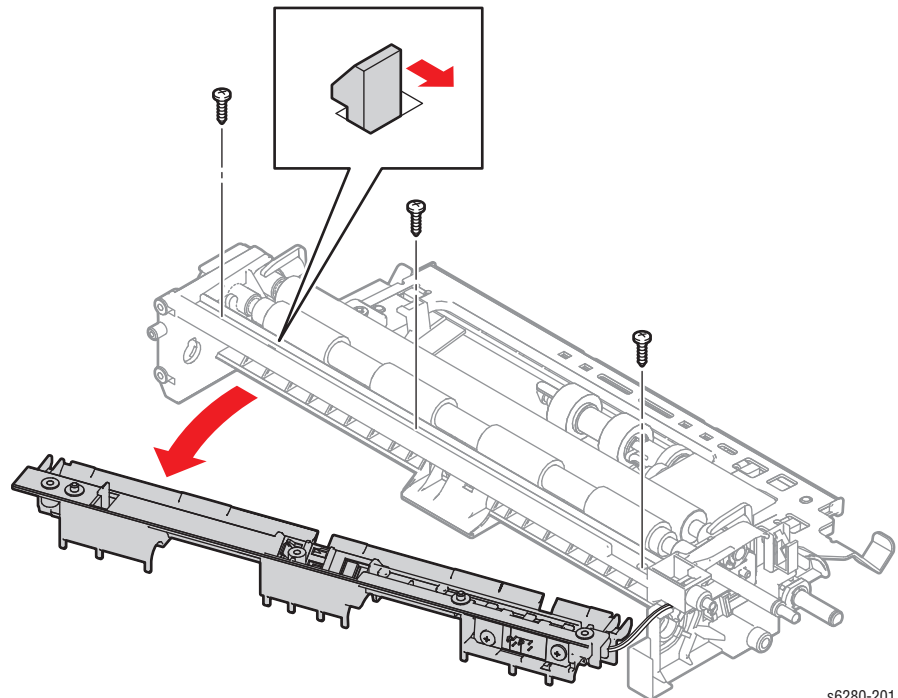
Registration Sensor (PL3.2.30)

1. Remove the Feeder Assembly (page 8-36).
2. Remove the Turn Clutch Assembly (page 8-42).
3. Remove Turn Roll Assembly (page 8-46).
4. Remove 3 screws (8 mm) securing the Upper Regi Chute Assembly (PL3.2.28).

Note

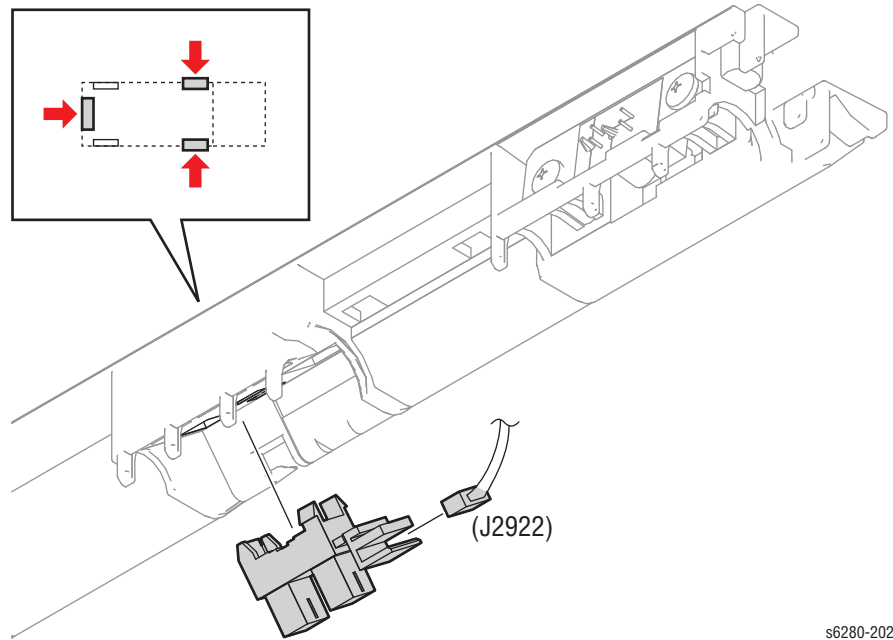
Due to the following steps will be undertaken with the Upper Regi Chute Assembly being connected to the wiring harness, be careful not to apply excessive load to the harness and the connectors.

5. Release the hook on the upper side of the Upper Regi Chute Assembly and pull the left side of the Upper Regi Chute Assembly toward you.
6. Release the hooks at 3 locations securing the Registration Sensor to the Upper Regi Chute Assembly.
7. Remove the Registration Sensor.



s6280-201

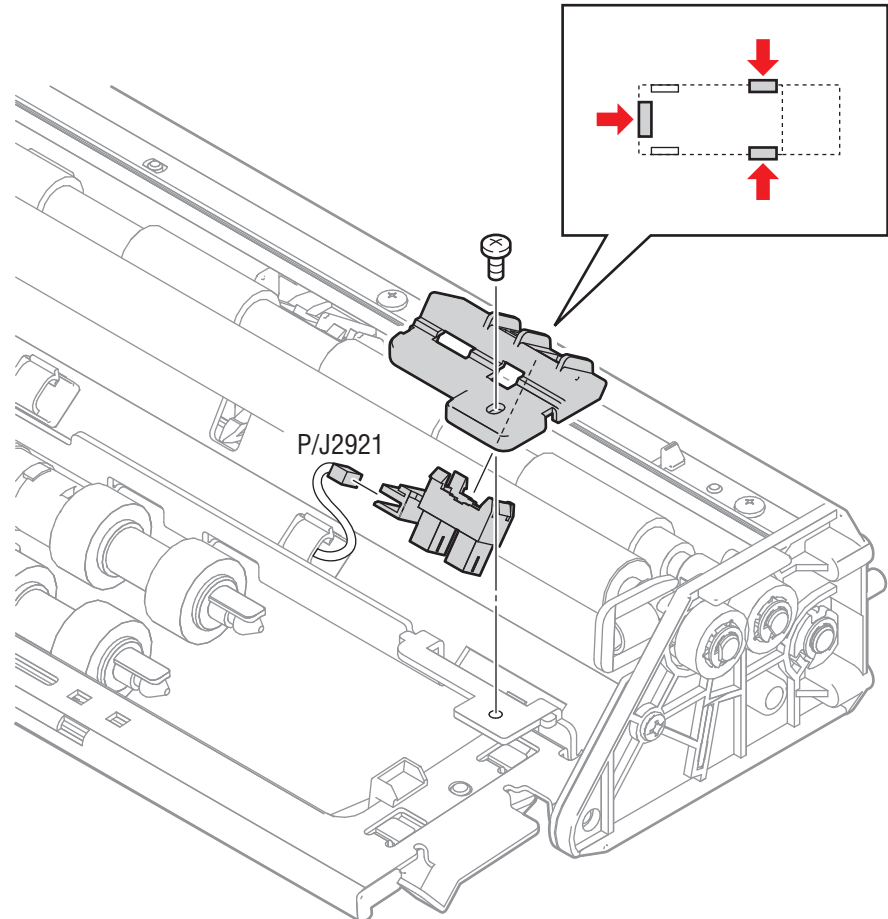
8. Disconnect the wiring harness connector P/J2922.



s6280-202

No Paper Sensor (PL3.2.30)

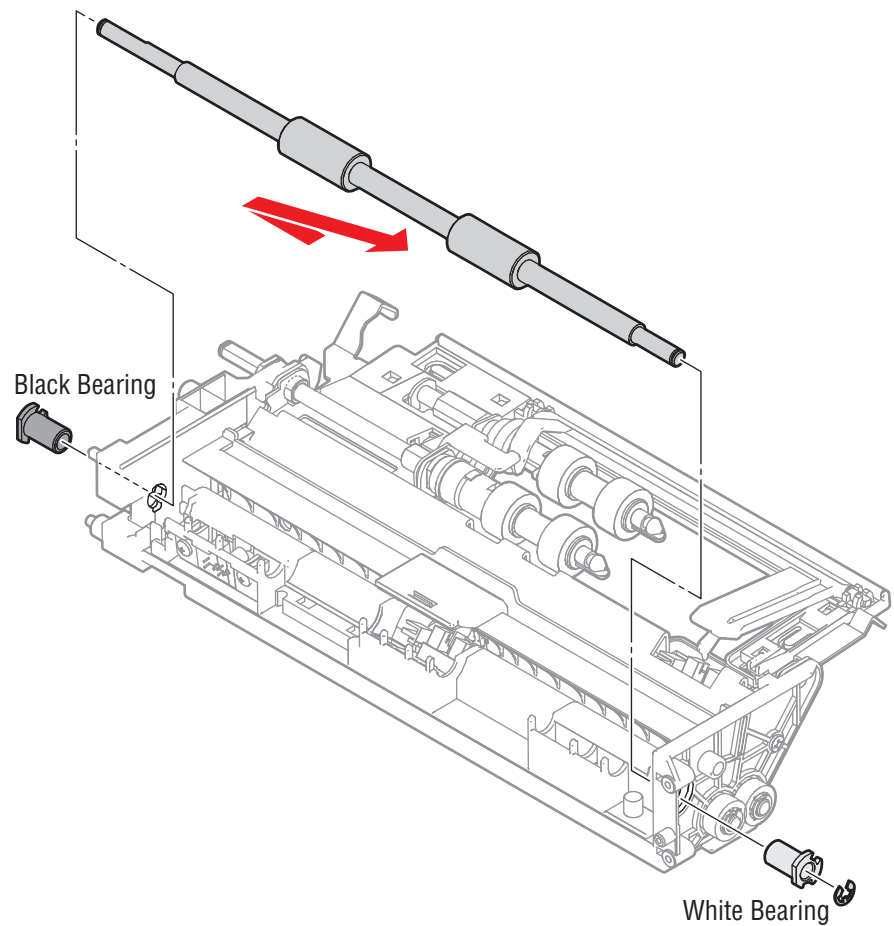
1. Remove the Feeder Assembly (page 8-36).
2. Remove 1 screw (8 mm) securing the No Sensor Holder (PL3.2.34) and remove the No Sensor Holder.
3. Release the 3 hooks securing the No Paper Sensor to the No Sensor Holder.
4. Disconnect the No Paper Sensor wiring harness connector P/J2921.



s6280-203

Turn Roll Assembly (PL3.2.32)

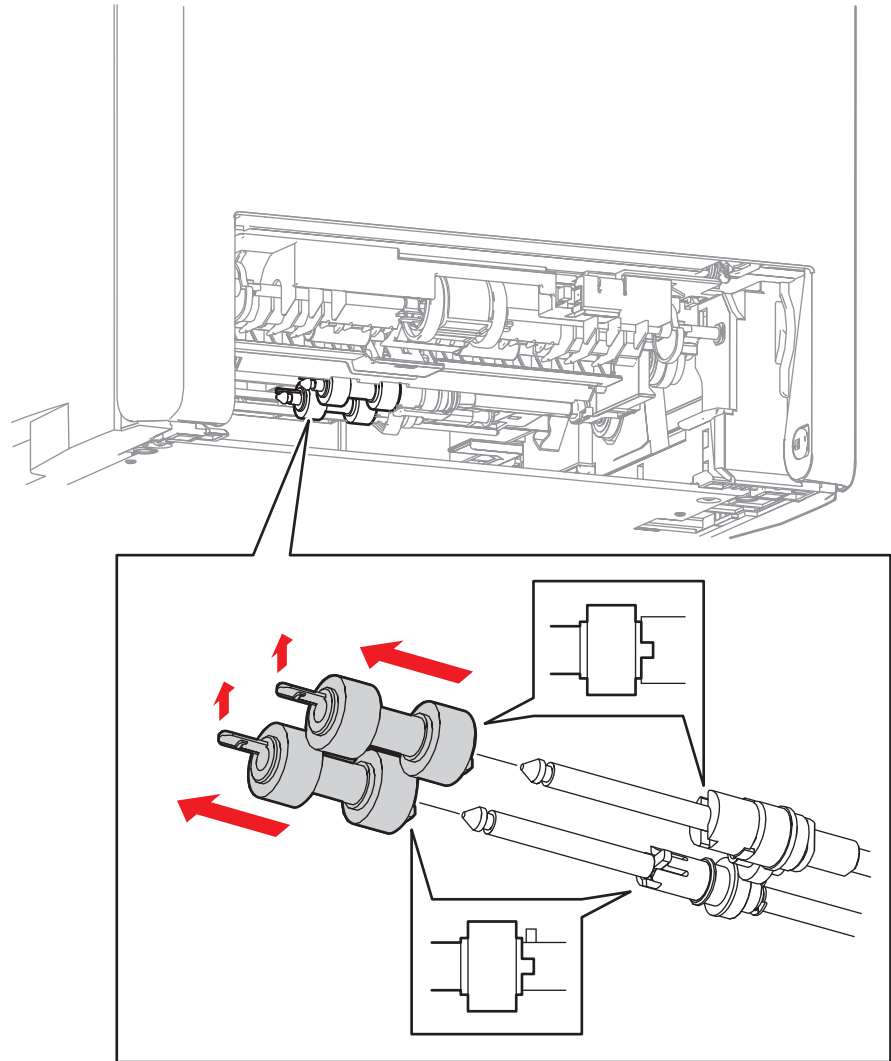
1. Remove the Feeder Assembly (page 8-36).
2. Remove the Turn Clutch Assembly (page 8-42).
3. Remove the E-ring securing the shaft section of the Turn Roll Assembly (PL3.2.32).
4. Remove the white Regi Bearing (PL3.2.11) securing the shaft section of the Turn Roll Assembly.
5. Remove the black Regi Bearing (PL3.2.21) securing shaft section of the Turn Roll Assembly.
6. Shift the Turn Roll Assembly to the left to separate the shaft section of the Turn Roll Assembly from the right side of the Regi Chute.
7. Remove the Turn Roll Assembly.



s6280-204

Tray 2 Feed Roll (PL3.2.53)

1. Remove Tray 2.
2. Release the hook on the Tray 2 Feed Roll hook and remove the Feed Roll from each Shaft.



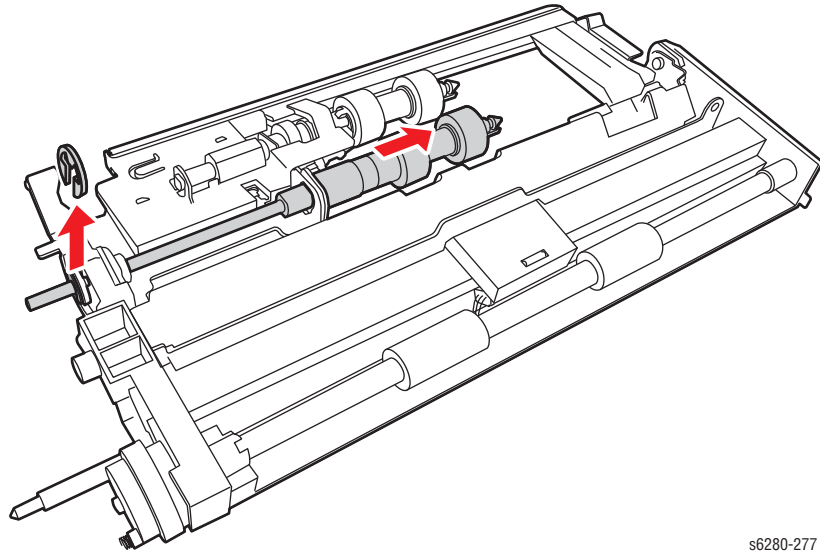
s6280-205

Replacement Note

Ensure to align the convex section of the Tray 2 Feed Roll with the concave section of the Nudger Roll Gear (PL3.2.46) and the Oneway Feed Clutch (PL3.2.52).

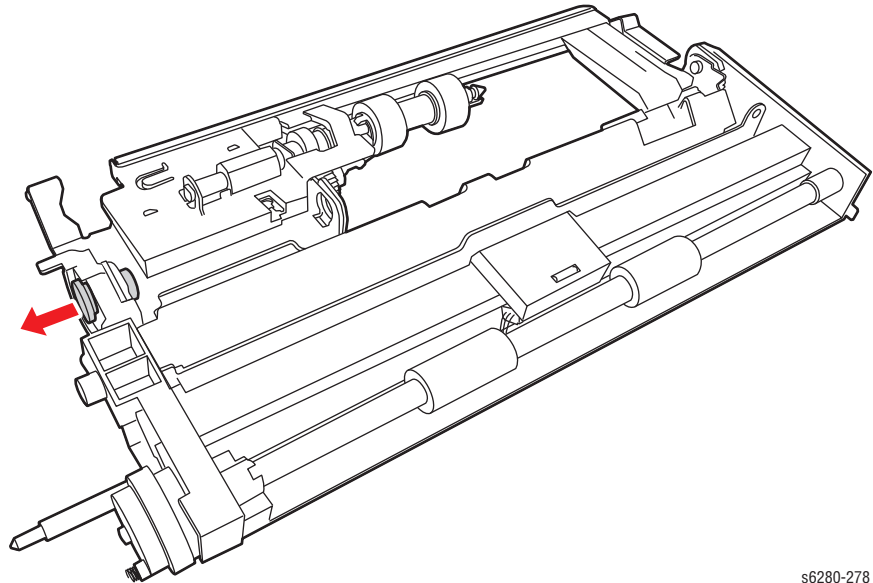
Nudger Assembly (PL3.2.59)

1. Remove the Feeder Assembly (page 8-36).
2. Remove the E-ring.
3. Slide the Nudger Shaft (PL3.2.45) out from the Nudger Support Assembly (PL3.2.44).



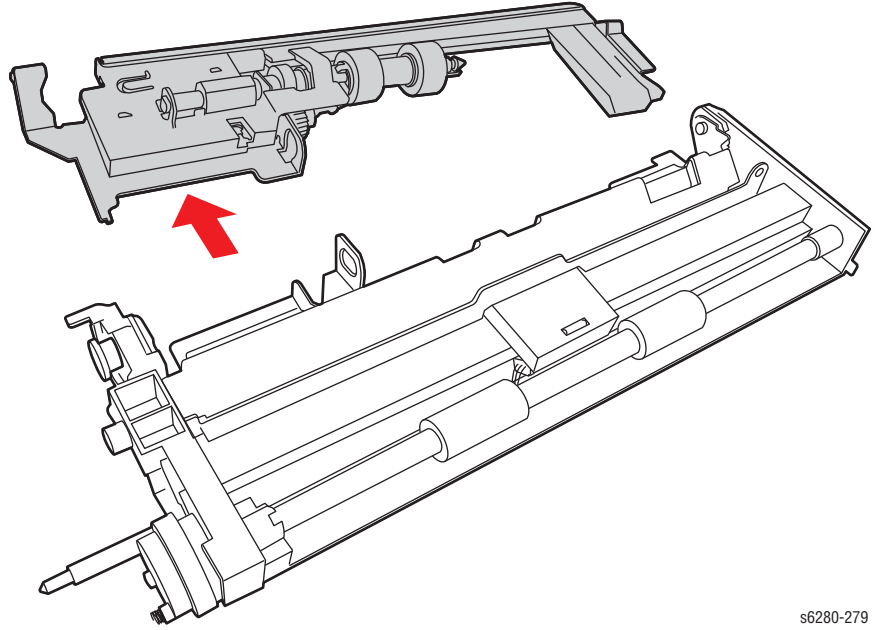
s6280-277

4. Push the Bearing (PL3.2.11) toward the outside to release the Nudger Assembly from the Regi Chute (PL3.2.12).



s6280-278

5. Slide the Nudger Assembly out from the Regi Chute.

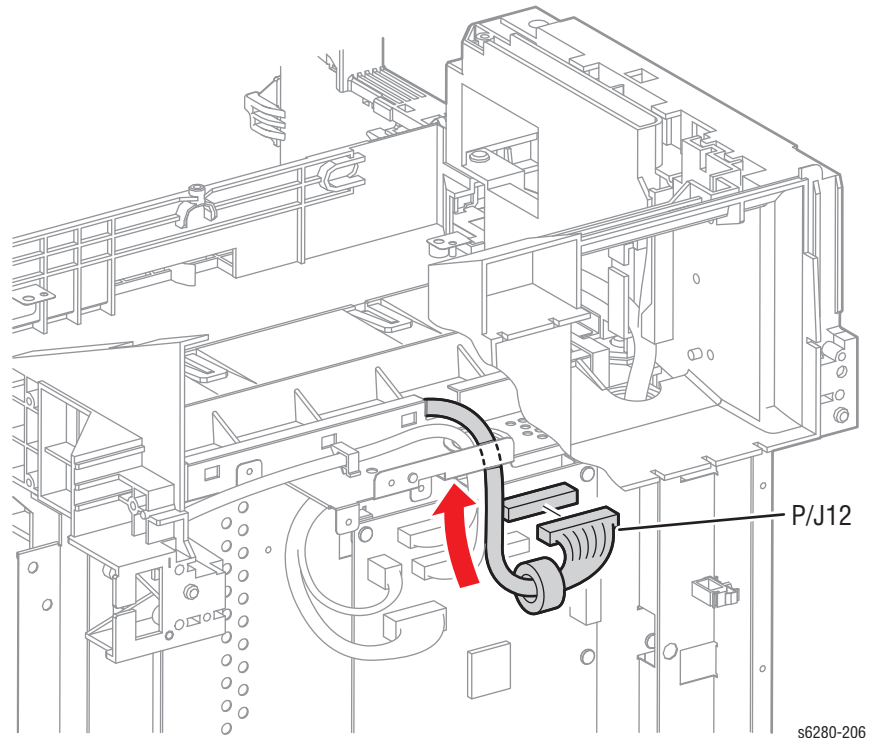


s6280-279

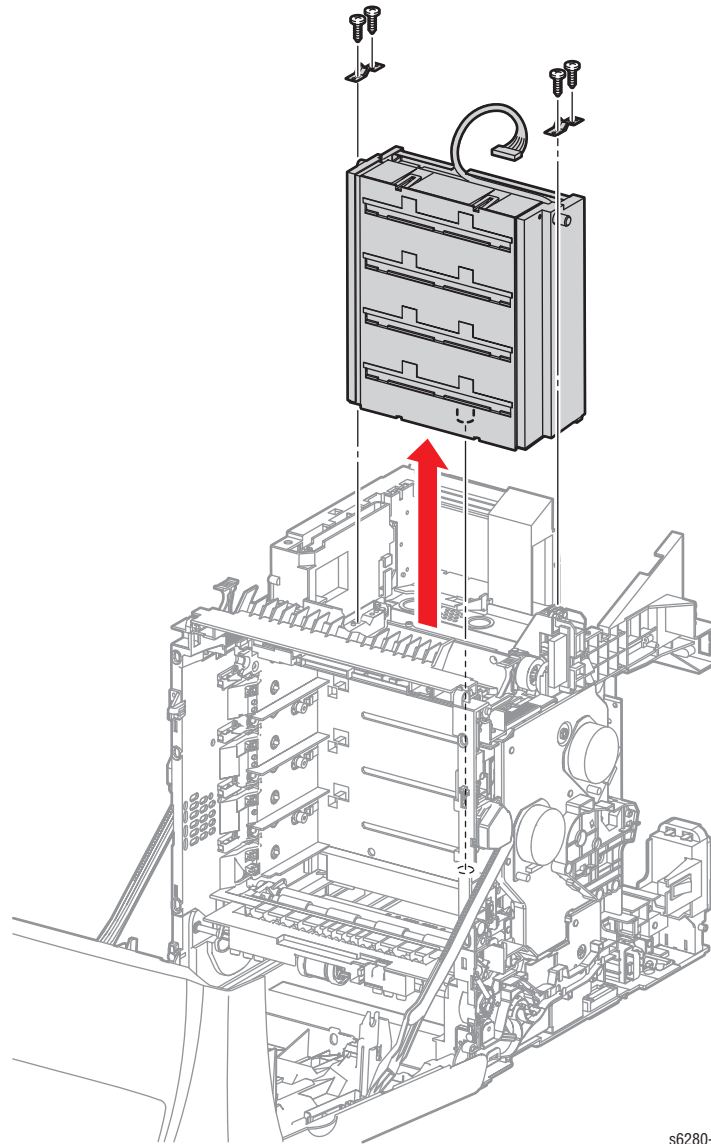
Xerographics

Laser Unit (PL5.1.2)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the Left Side Cover (page 8-14).
4. Remove the Top Cover (page 8-15).
5. Remove the I/P Board Shield (page 8-96).
6. Remove the MCU Board Shield (page 8-94).
7. Remove the Main Fan (page 8-82).
8. Remove the LVPS Assembly (page 8-92).
9. Disconnect the Laser Unit wiring harness connector P/J12 from the MCU Board (PL9.1.20).
10. Remove the Ferrite Core (PL5.1.22) from the Laser Unit wiring harness and pass the connector through the hole of the Rear Shield (PL9.1.11).



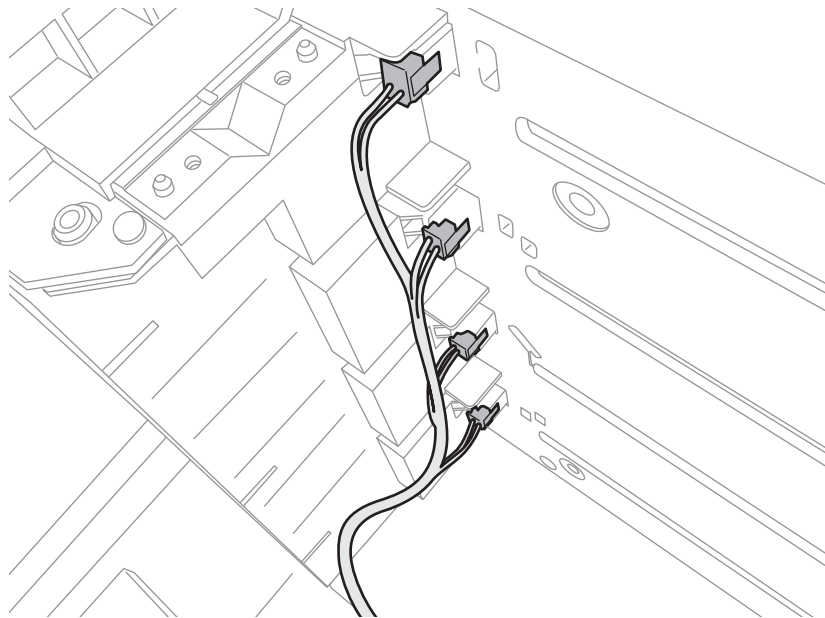
11. Remove 4 screws (10 mm) securing the Laser Unit Springs (PL5.1.1) on the left and right sides.
12. Remove the Laser Unit Springs.
13. Slowly lift up the Laser Unit and remove it from the printer.



s6280-207

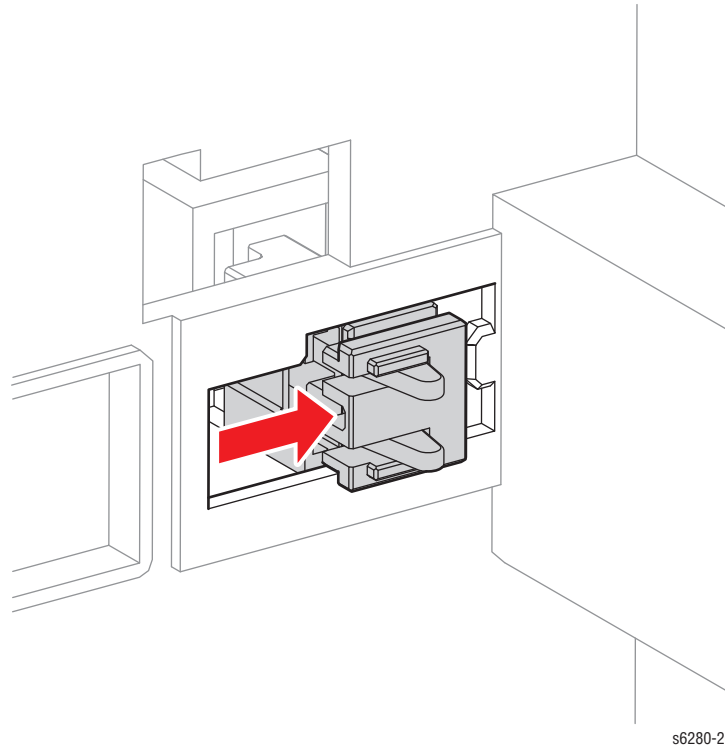
CRUM Connector (PL5.1.3)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the Left Side Cover (page 8-14).
4. Remove the Top Cover (page 8-15).
5. Remove the Interlock Harness Assembly (page 8-79).
6. Remove the K Drive Assembly (page 8-76).
7. Remove the Main Drive Assembly (page 8-70).
8. Remove the Laser Unit (page 8-50).
9. Remove the Print Cartridge Sensor Assembly (page 8-54).
10. From the inside of the printer, disconnect the CRUM Connector wiring harness connector.



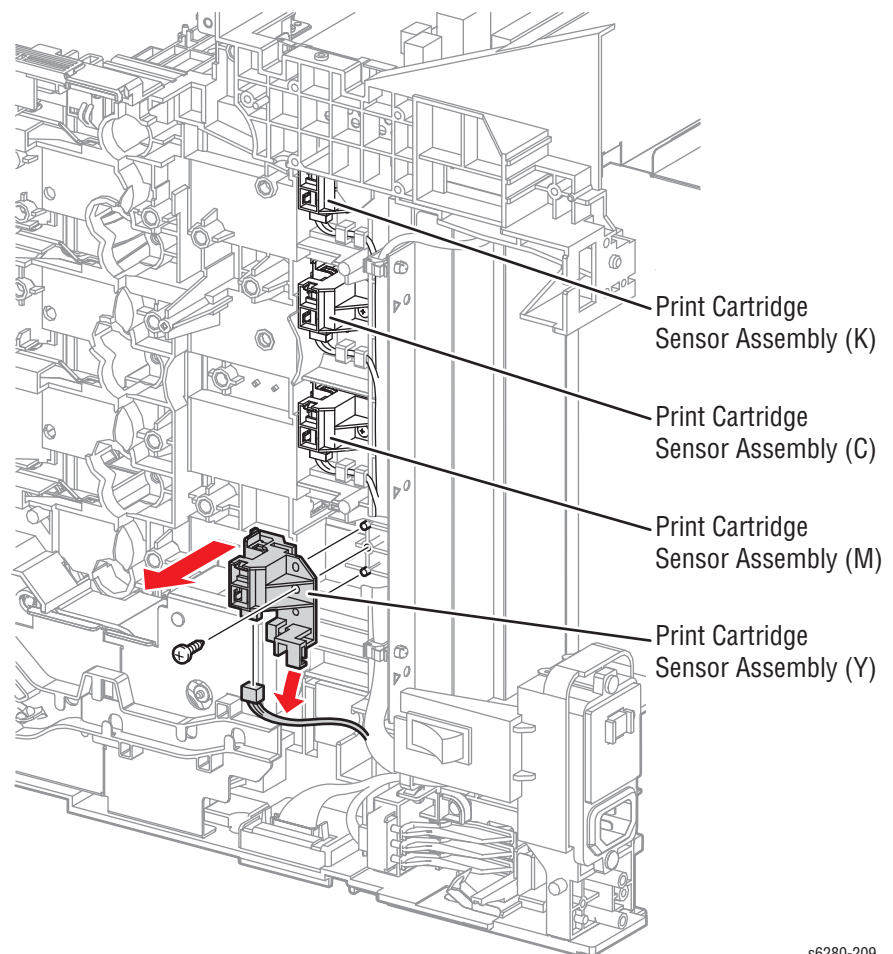
s6280-291

11. Shift the CRUM Connector to the right.
12. Disconnect and remove the CRUM Connector.



Print Cartridge Sensor Assembly (Black/Cyan/Magenta/Yellow) (PL5.1.4)

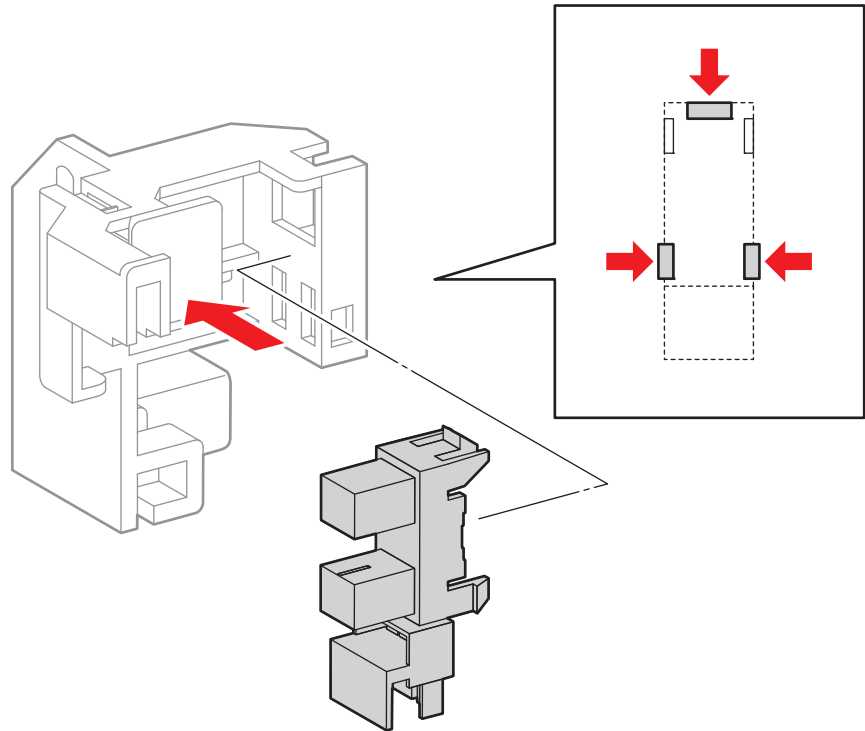
1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the Left Side Cover (page 8-14).
4. Remove the Top Cover (page 8-15).
5. Remove the Interlock Harness Assembly (page 8-79).
6. Remove the K Drive Assembly (page 8-76).
7. Remove the Main Drive Assembly (page 8-70).
8. Remove the 1 screw (10 mm) securing the Print Cartridge Sensor Assembly to the printer.
9. Remove the Print Cartridge Sensor Assembly.
10. Disconnect the Print Cartridge Sensor Assembly wiring harness connector.



s6280-209

Print Cartridge Sensor (PL5.1.8)

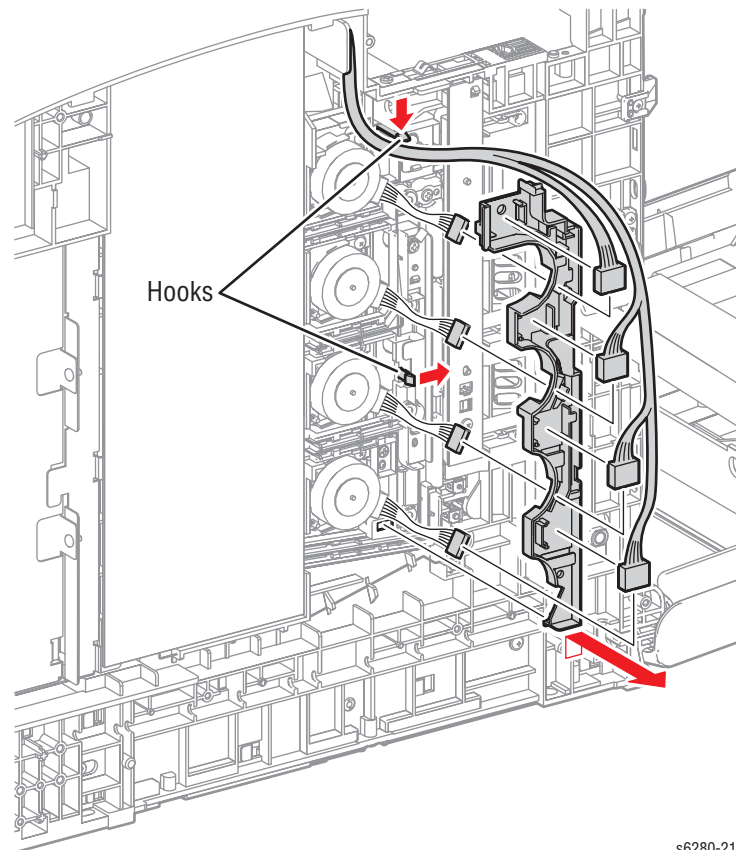
1. Remove the Print Cartridge Sensor Assembly (page 8-54).
2. Release the 3 hooks securing the Print Cartridge Sensor to the Actuator Bracket (PL5.1.7) Bracket while pressing on the CRU Actuator (PL5.1.5).
3. Remove the Print Cartridge Sensor.



s6280-210

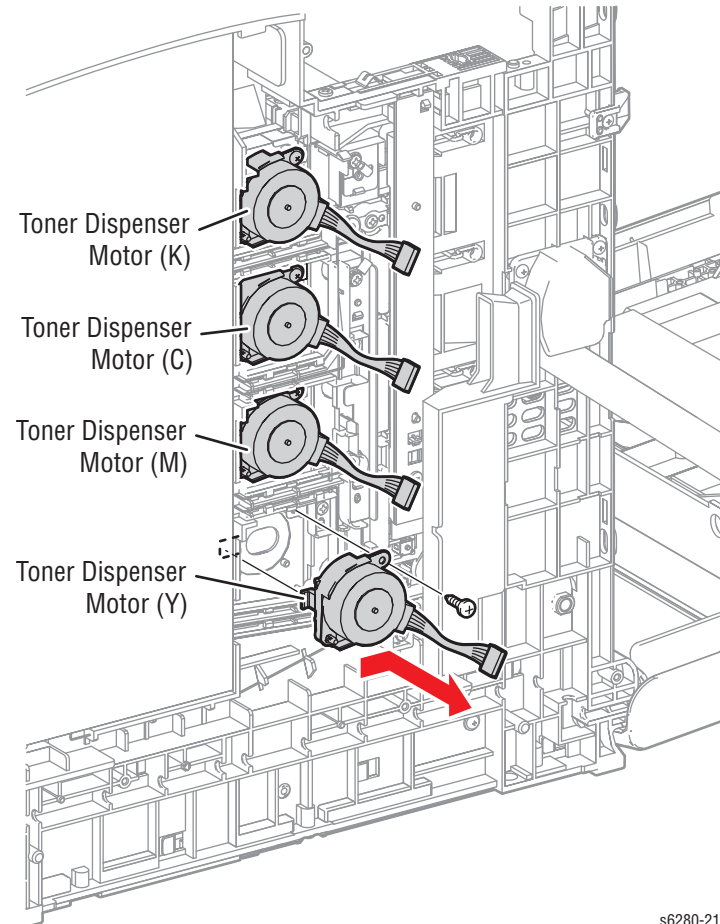
Dispenser Assembly (C/M/Y/K) (PL5.1.12)

1. Remove the Rear Cover (page 8-12).
2. Remove the Left Side Cover (page 8-14).
3. Disconnect the 4 Dispenser Motor wiring harnesses.
4. Release the 2 hooks securing the Motor Harness Duct to the printer.
5. Disconnect the Dispenser Assembly wiring harness connectors and release the wiring harnesses from the Motor Harness Duct.
6. Slightly shift the Motor Harness Duct upward and release the convex sections of the Motor Harness Duct from the printer. Place the 4 connectors through the hole of the Motor Harness Duct.



s6280-211

7. Remove 1 screw (10 mm) securing the Dispenser Assembly.
8. Slightly shift the Dispenser Assembly toward the front, release the convex sections, and remove the Dispenser Assembly.



s6280-212

Replacement Note

Ensure to align the convex sections of the Dispenser Motor with the holes on the printer and shift the Motor toward the rear.

BIAS Assembly (PL5.1.13)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the Left Side Cover (page 8-14).
4. Remove the Top Cover (page 8-15).
5. Remove the LED Assembly (page 8-60).

Note

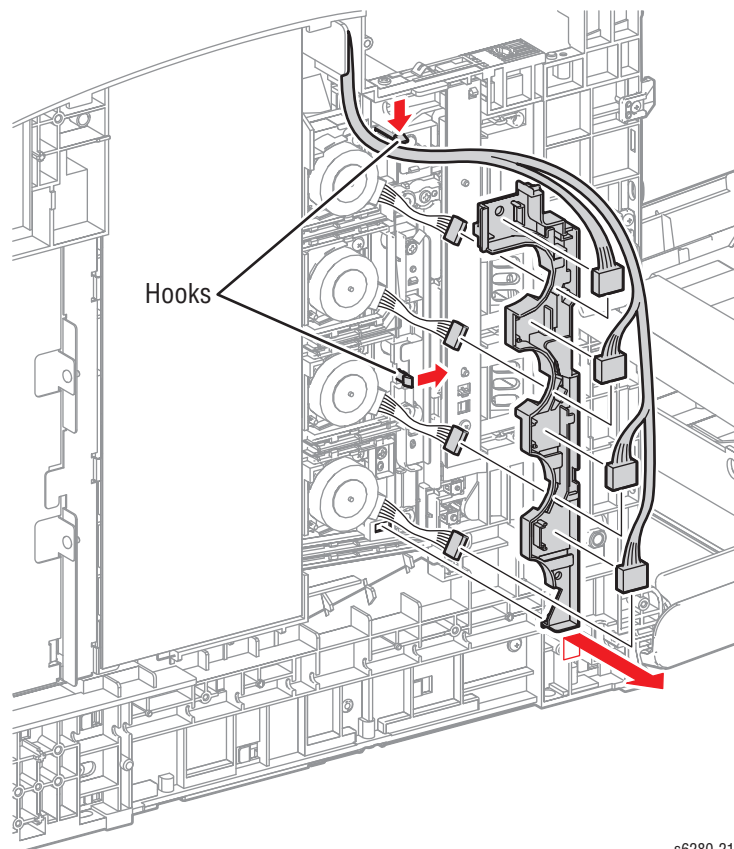
It is not necessary to disconnect the connector on the MCU Board for the following step.

6. Remove the HVPS (page 8-61).

Note

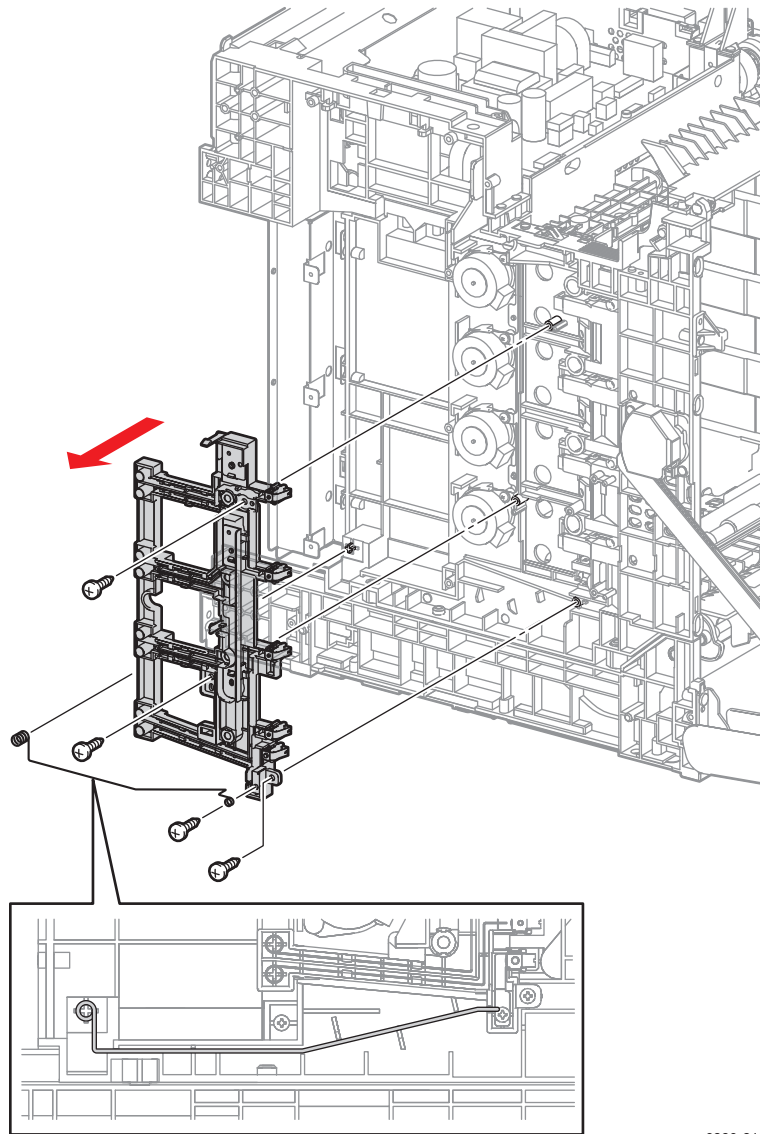
Keep the relay connector on the printer harness side.

7. Disconnect the Dispenser Assembly (PL5.1.12) wiring harness connectors and release the wiring harnesses from the Motor Harness Duct.
8. Release the 2 hooks securing the Motor Harness Duct.
9. Slightly shift the Motor Harness Duct upward to release the convex section from the printer. Place the connectors through the hole of the Motor Harness Duct and remove the Motor Harness Duct.



s6280-211

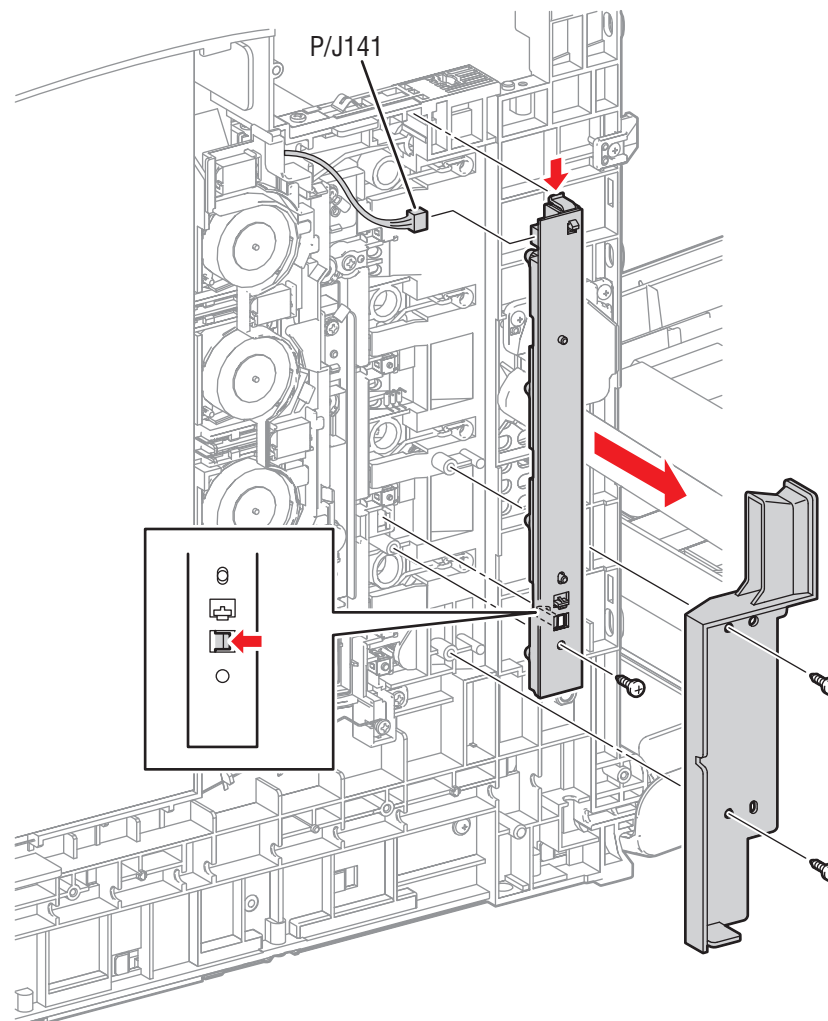
10. Remove 1 screw (10 mm) securing the ESA Roll Spring (PL5.1.14).
11. Remove the ESA Roll Spring (PL5.1.14) from the BIAS Assembly.
12. Remove 3 screws (10 mm) securing the Bias Assembly.
13. Remove the Bias Assembly from the printer.



s6280-213

LED Assembly (PL5.1.15)

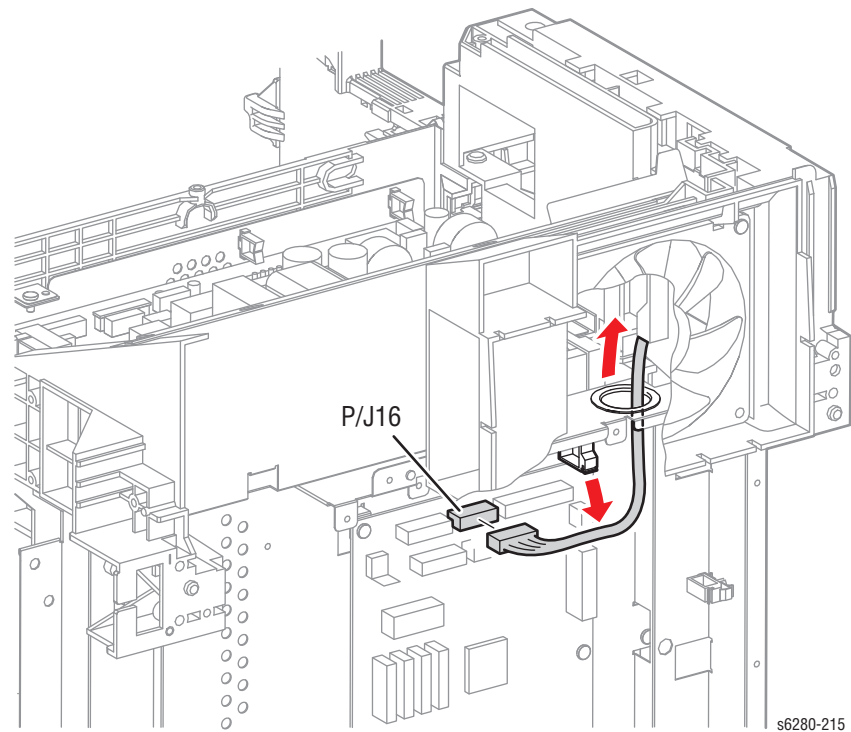
1. Remove the Rear Cover (page 8-12).
2. Remove the Left Side Cover (page 8-14).
3. Remove 2 screws (10 mm) securing the Left Side Duct (PL7.1.23) and remove the Left Side Duct.
4. Remove 1 screw (10 mm) securing the LED Assembly.
5. Release the 2 hooks securing the LED Assembly and remove the LED Assembly.
6. Disconnect the LED wiring harness connector P/J141.



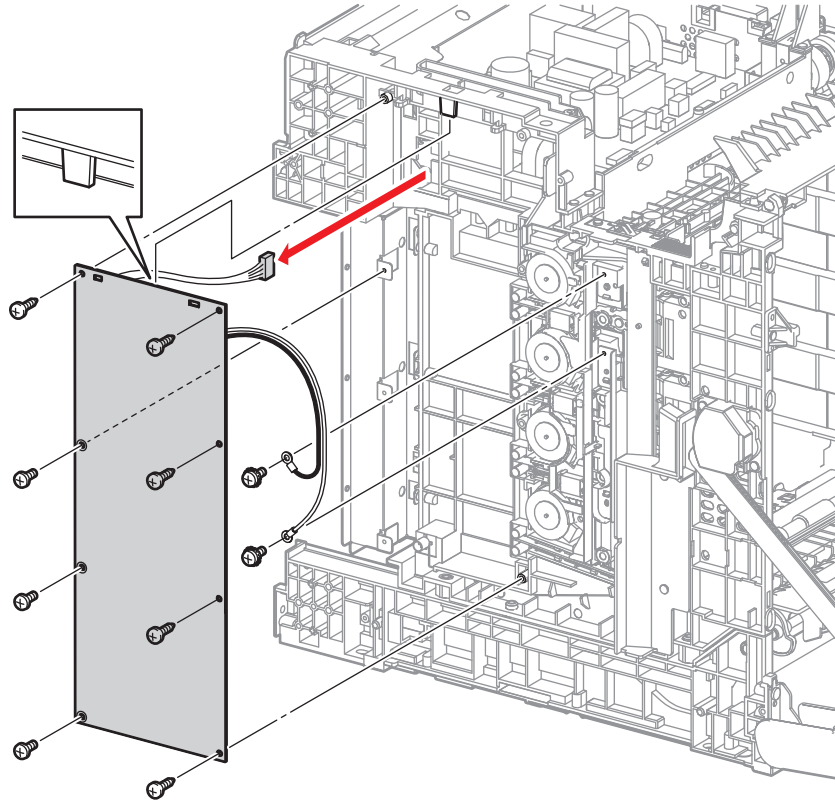
s6280-214

HVPS (PL5.1.17)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove Left Side Cover (page 8-14).
4. Remove the Top Cover (page 8-15).
5. Remove the Main Fan (page 8-82).
6. Remove the I/P Board Shield (page 8-96).
7. Remove the MCU Board Shield (page 8-94).
8. Disconnect the HVPS wiring harness connector P/J16 on the MCU Board (PL9.1.20). Pass the wiring harness connector through the hole of the Rear Shield (PL9.1.11).



9. Remove 2 screws (6 mm, with washer) securing the HVPS wiring harnesses.
10. Remove 5 screws (10 mm) and 3 screws (6 mm) securing the HVPS to the printer.
11. Shift the upper part of the HVPS from the printer, pull out the connector through the hole of the printer, and remove the HVPS.

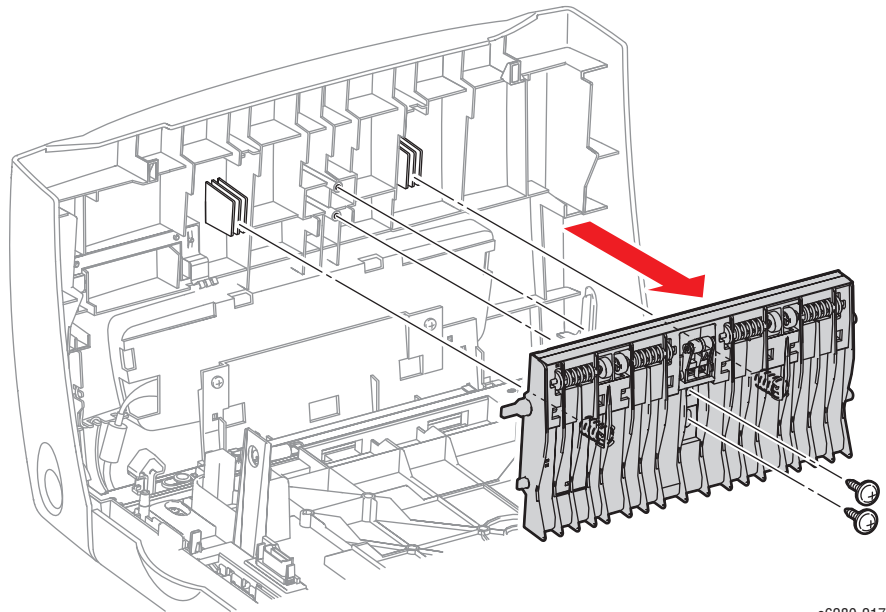


s6280-216

Exit Chute

Exit Out Chute (PL6.1.1)

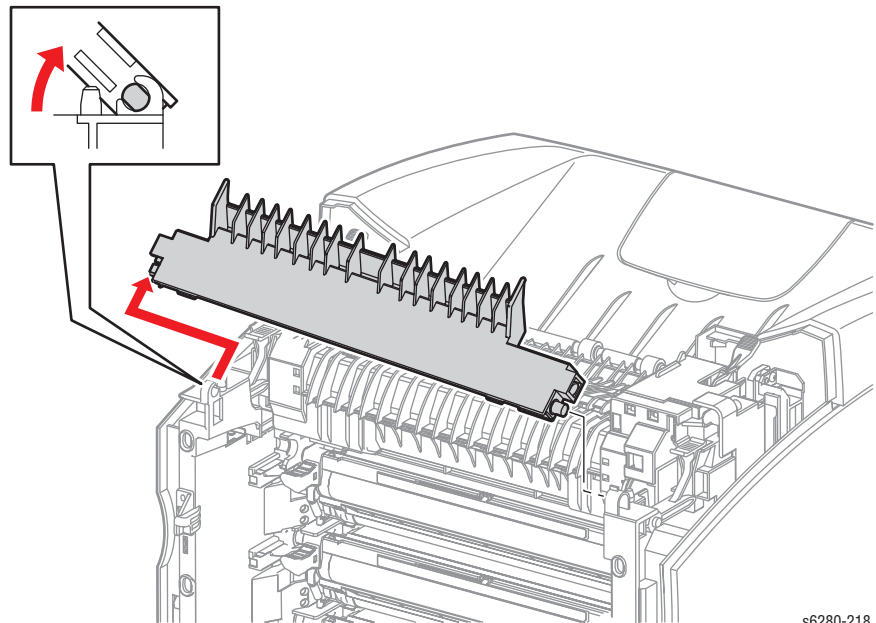
1. Remove 2 screws (10 mm, flanged) securing the Exit Out Chute to the Front Cover.
2. Remove the Exit Out Chute from the Front Cover.



s6280-217

Duplex Gate Chute (PL6.1.13)

1. Open the Front Cover.
2. Open the Duplex Gate Chute approximately 45° so that the flat surfaces of the left side pivot of the Duplex Gate Chute comes parallel with the U-shaped notch.
3. Pull out the left side pivot of the Duplex Gate Chute from the U-shaped notch diagonally toward the rear and slide the right side pivot of the Duplex Gate Chute from the hole of the printer.



s6280-218

Frame

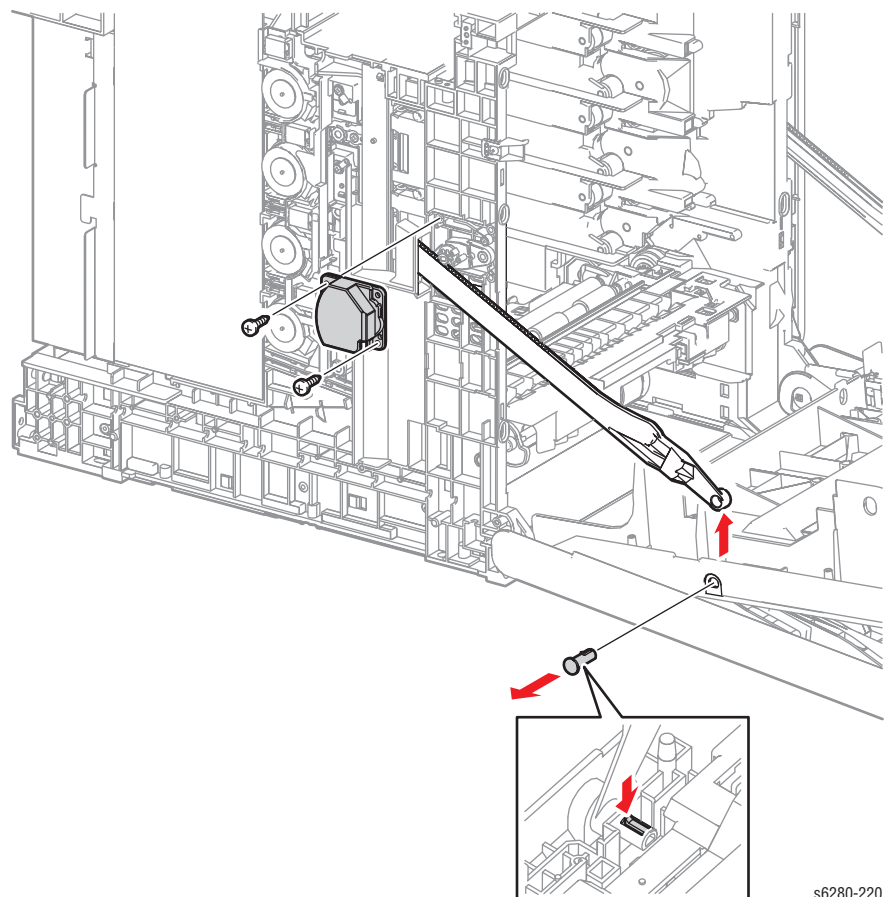
Left Link (PL7.1.3)

1. Remove the Rear Cover (page 8-12).
2. Remove the Left Side Cover (page 8-14).
3. Release the hook of the Shaft Pivot (PL1.2.8) securing the Left Link and remove the Shaft Pivot.
4. Remove the Left Link from the Front Cover.
5. Remove 2 screws (10 mm) securing the Left Support Link (PL7.1.2) to the printer.

Caution

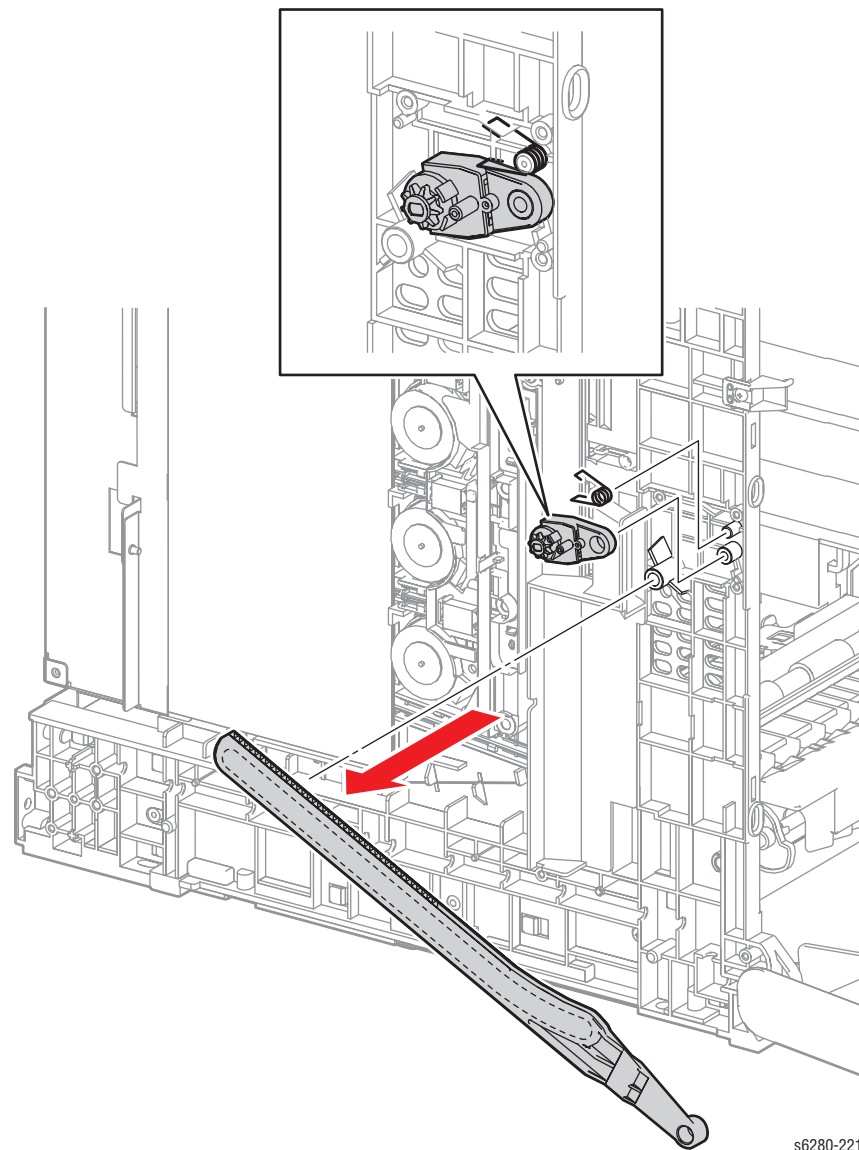
The Support Spring may come loose when removing the Left Support Link. Cover the area with your hand to prevent the Support Spring from coming loose.

6. Remove the Left Support Link from the printer.



s6280-220

7. Remove the Left Link from the printer.
8. Remove the Support Spring (PL7.1.8).
9. Remove the Damper Holder (PL7.1.6) together with the Oil Damper (PL7.1.7).



s6280-221

Replacement Note

Ensure the orientation of the Damper Holder is correct. Push the cylinder of the Release Lever toward the Damper Holder side.

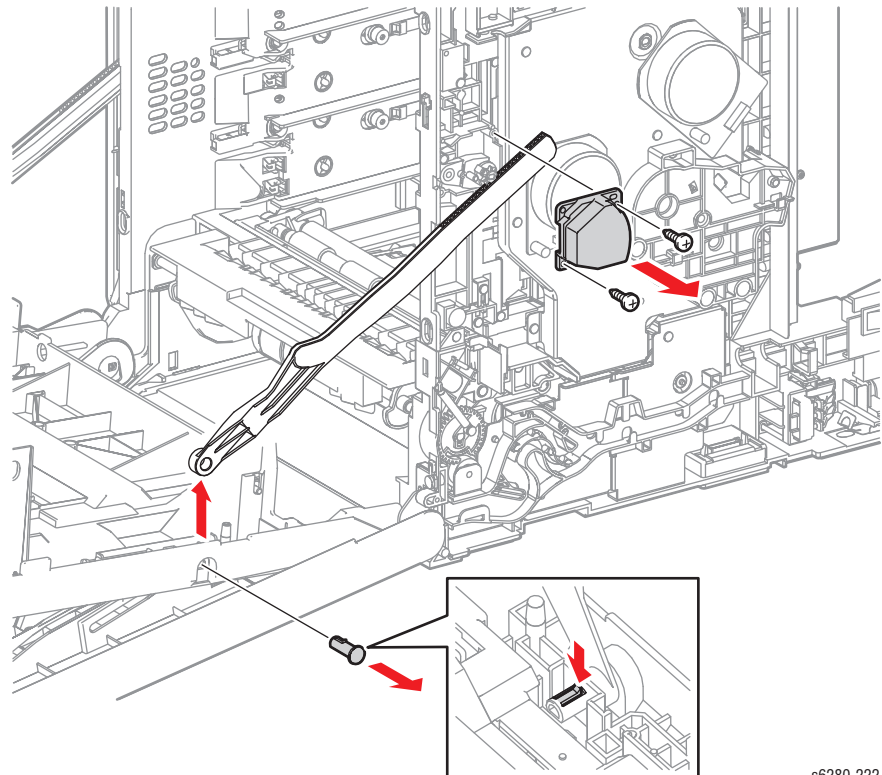
Right Link (PL7.1.13)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Release the hook of the Shaft Pivot (PL1.2.8) securing the Right Link. Pull out the Shaft Pivot.
4. Remove the Right Link from the Front Cover.
5. Remove 2 screws (10 mm) securing the Right Support Link (PL7.1.12) to the printer.

Caution

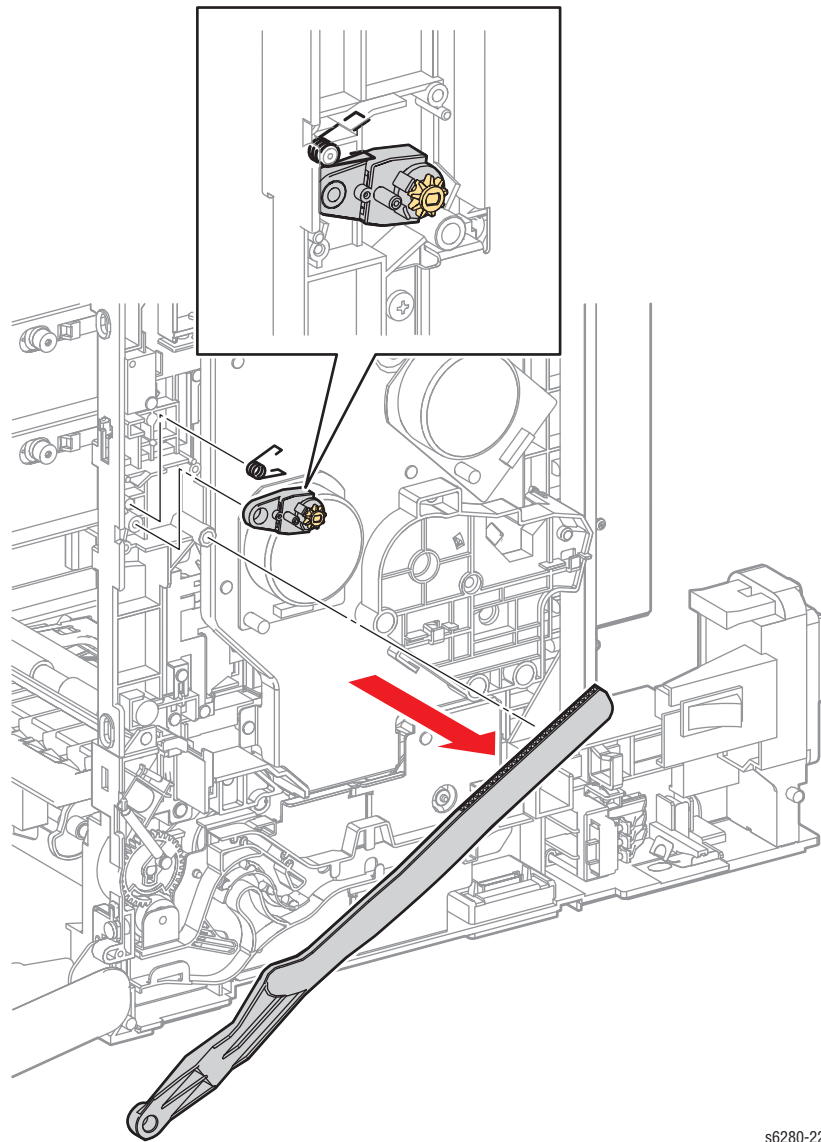
The Support Spring may come loose when removing the Right Support Link. Cover the area with your hand in case the Support Spring comes loose.

6. Remove the Right Support Link from the printer.



s6280-222

7. Remove the Right Link from the printer.
8. Remove the Support Spring (PL7.1.8).
9. Remove the Damper Holder (PL7.1.26) together with the H Oil Damper (PL7.1.27).



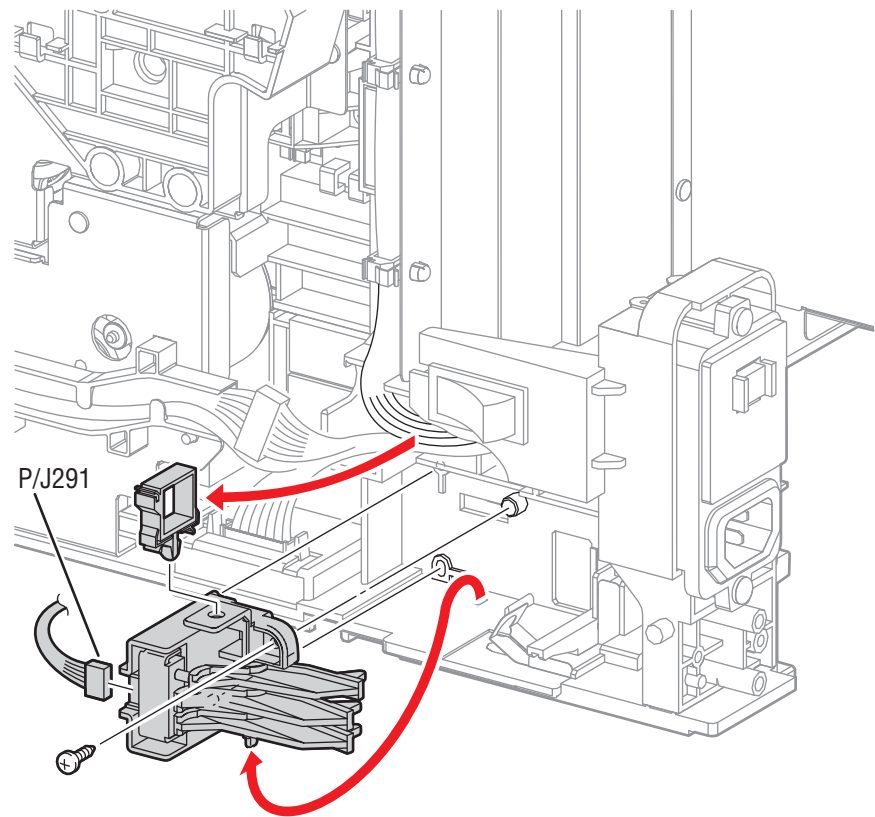
s6280-223

Replacement Note

Ensure the orientation of the Damper Holder is correct. Push the cylinder of the Release Lever toward the Damper Holder side.

Tray 2 Size Switch Assembly (PL7.1.18)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Release the Clamp (PL7.1.15) securing the Size Switch Assembly and remove the wiring harness.
4. Disconnect the Size Switch wiring harness connector P/J291.
5. Remove 1 screw (10 mm) securing the Size Switch Assembly.
6. Release the one notch on top the Size Switch Assembly and one notch located on the bottom from the holes of the printer and remove the Size Switch Assembly.
7. Remove the Clamp from the Size Switch Assembly.



s6280-224

Replacement Note

Be sure the notch on the bottom of the Size Switch Assembly fits into the groove on the printer frame.

Drive

Main Drive Assembly (PL8.1.2)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the Left Side Cover (page 8-14).
4. Remove the Top Cover (page 8-15).

Note

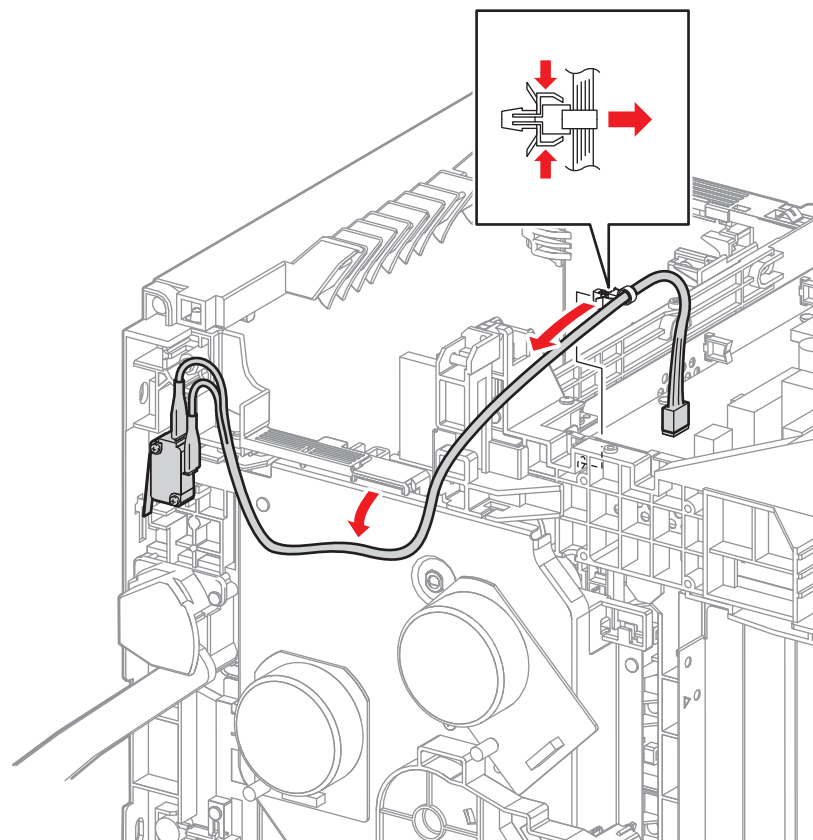
When performing the following step, it is not necessary to disconnect the K Drive Assembly wiring harness connector.

5. Remove the K Drive Assembly (page 8-76).

Note

When performing the following step, it is not necessary to disconnect the Interlock Assembly Harness connector.

6. Release the Interlock Harness Assembly from the duct of the printer and move the wiring harness away from the Main Drive Assembly.



s6280-233

7. Remove 2 screws (10 mm) securing the Fuser Bracket (PL6.1.12) to the printer.

Caution

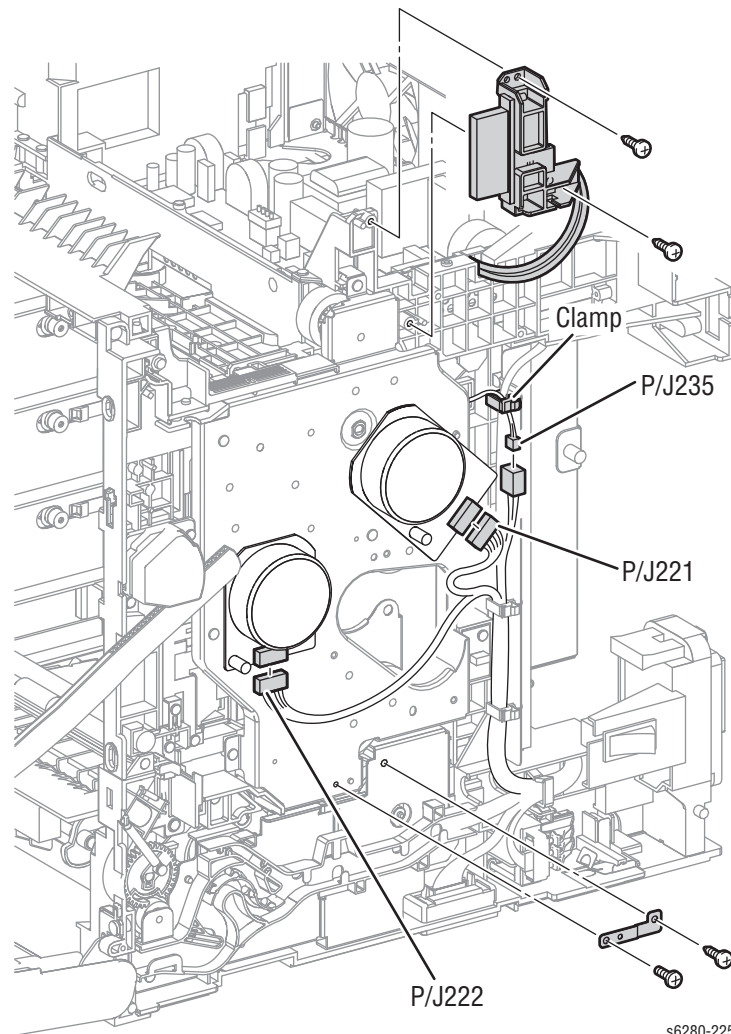
DO NOT separate the Fuser Bracket and the printer too far apart, because they are connected by a wiring harness.

8. Move the Fuser Bracket over to the top side of the printer.

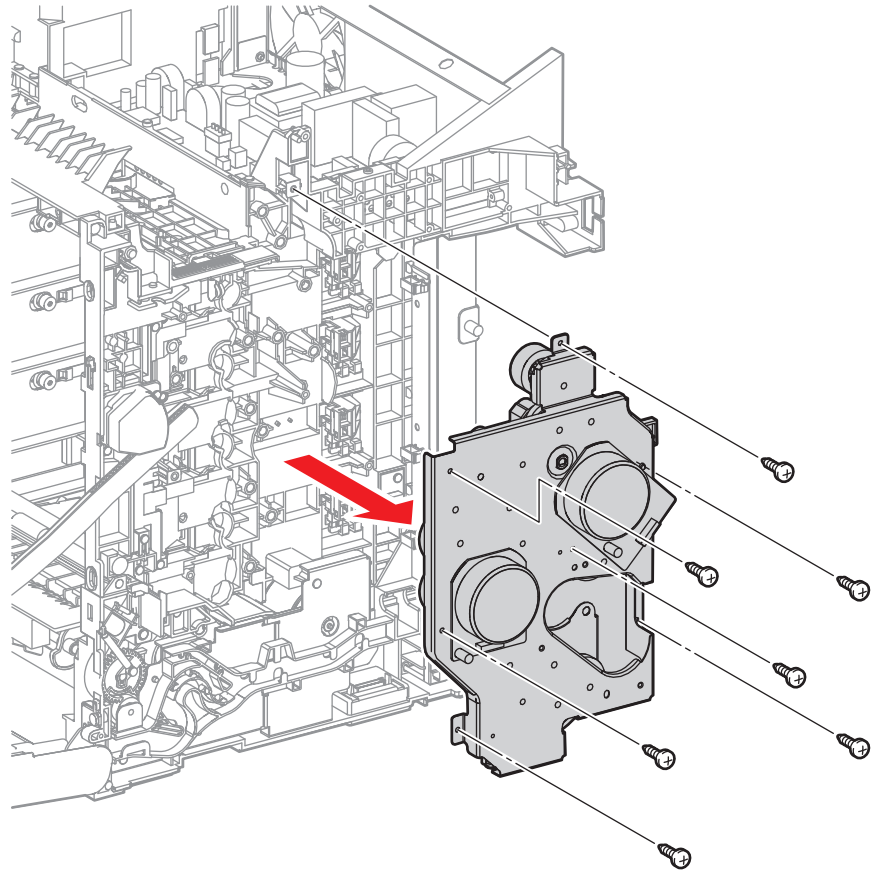
Note

Leave the Relay connector on the printer harness side.

9. Release the Exit Clutch wiring harness from the clamp on the printer frame.
10. Disconnect the wiring harness connector P/J235.
11. Disconnect the Main Motor wiring harness connector P/J222 and the Sub Motor wiring harness connector P/J221.
12. Remove 1 screw (6 mm) and 1 screw (tap, 10 mm) securing the Ground Plate (PL8.1.11) to the Main Drive Assembly and the PH Drive Assembly (PL8.1.7).
13. Remove the Ground Plate from the printer.



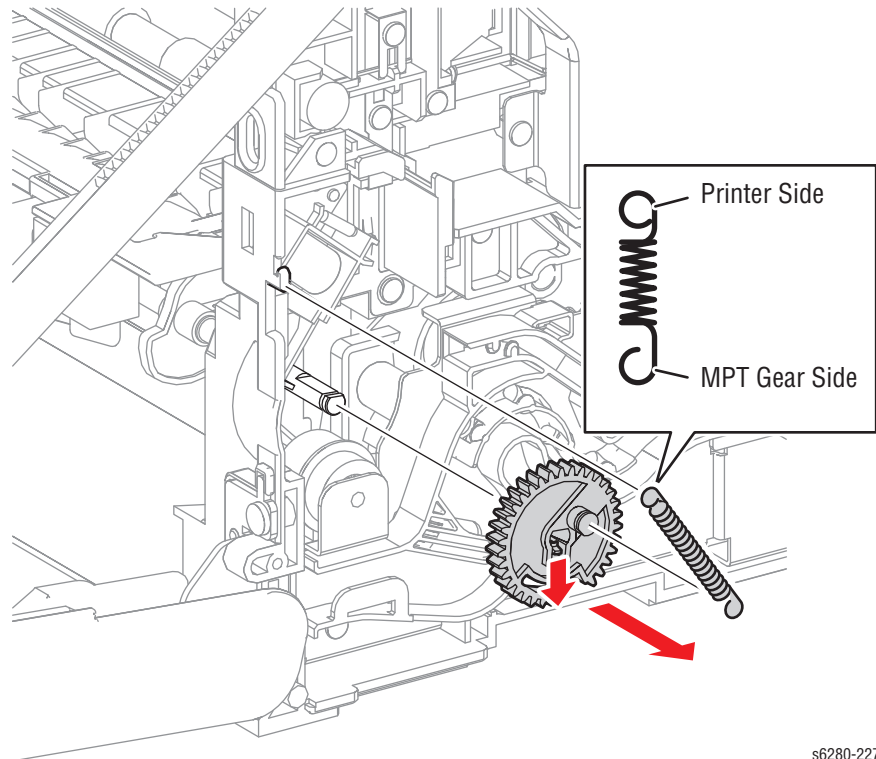
14. Remove 7 screws (tap, 10 mm) securing the Main Drive Assembly.
15. Remove the Main Drive Assembly from the printer.



s6280-226

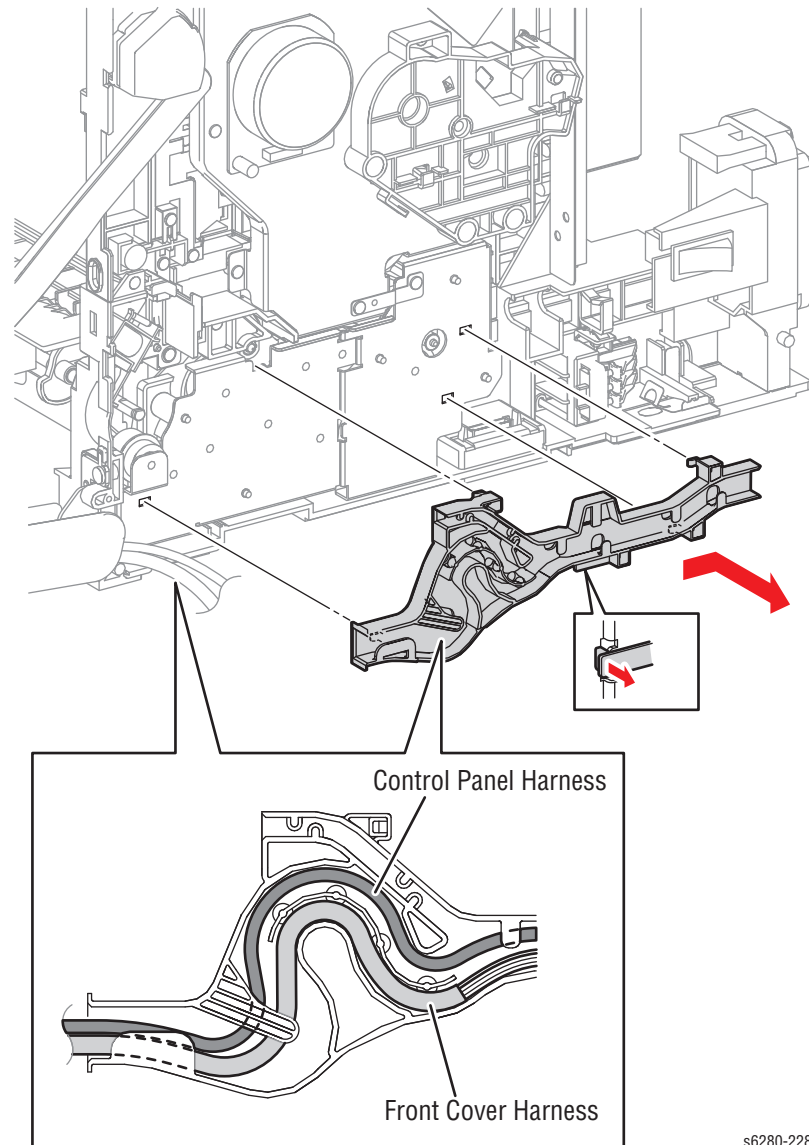
PH Drive Assembly (PL8.1.7)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the MPT Feed Spring (PL3.1.4).
4. Release the MPT Gear hook (PL3.1.5) and remove the Gear from the MPT Shaft (PL3.1.12).



s6280-227

5. Release the wiring harnesses from the PH Drive Duct Assembly (PL8.1.8).
6. Release the 4 hooks of the PH Drive Duct Assembly from the PH Drive Assembly (PL8.1.7). Shift the PH Drive Duct Assembly toward the rear side of the printer and remove it from the PH Drive Assembly.



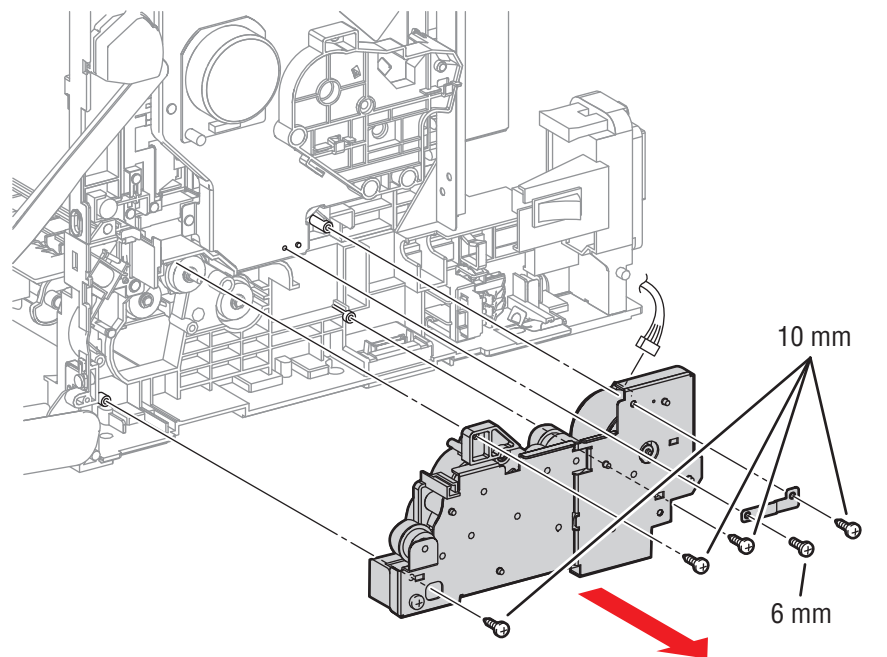
s6280-228

7. Remove 1 screw (6 mm) and 1 screw (tap, 10 mm) securing the Ground Plate (PL8.1.11) to the Main Drive Assembly (PL8.1.2) and the PH Drive Assembly.
8. Remove the Ground Plate.
9. Remove 3 screws (tap, 10 mm) securing the PH Drive Assembly to the printer.

Caution

DO NOT separate the PH Drive Assembly from the printer, because they are connected with the wiring harness.

10. Remove the PH Drive Assembly from the printer.
11. Disconnect the Drive Assembly connector P/J251.



s6280-229

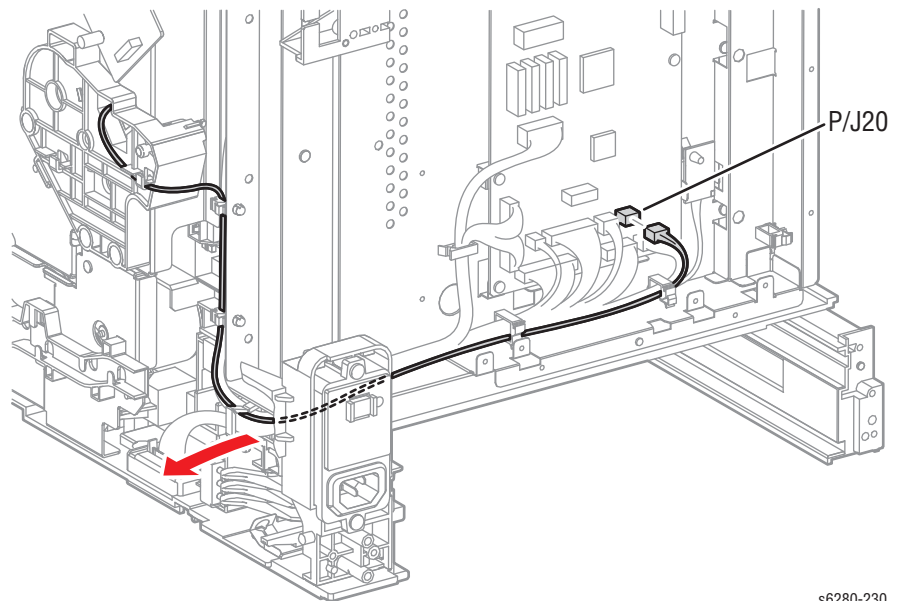
Replacement Note

Ensure to place the wiring harness connecting the Developer Motor of the Main Drive (PL8.1.2) through the back of the hook on top of the Drive Assembly.

Pay attention to the direction of the MPT Feed Spring. Attach the hyperelliptic side of the Tray 1 (MPT) Feed Spring to the Tray 1 (MPT) Gear.

K Drive Assembly (PL8.1.10)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the Left Side Cover (page 8-14).
4. Remove the I/P Board Shield (page 8-96).
5. Remove the MCU Board Shield (page 8-94).
6. Disconnect wiring harness connector P/J20 on the MCU Board (PL9.1.20).
7. Release the K Mode Sensor wiring harness from the 5 clamps and route the wiring harness through the hole to remove it.

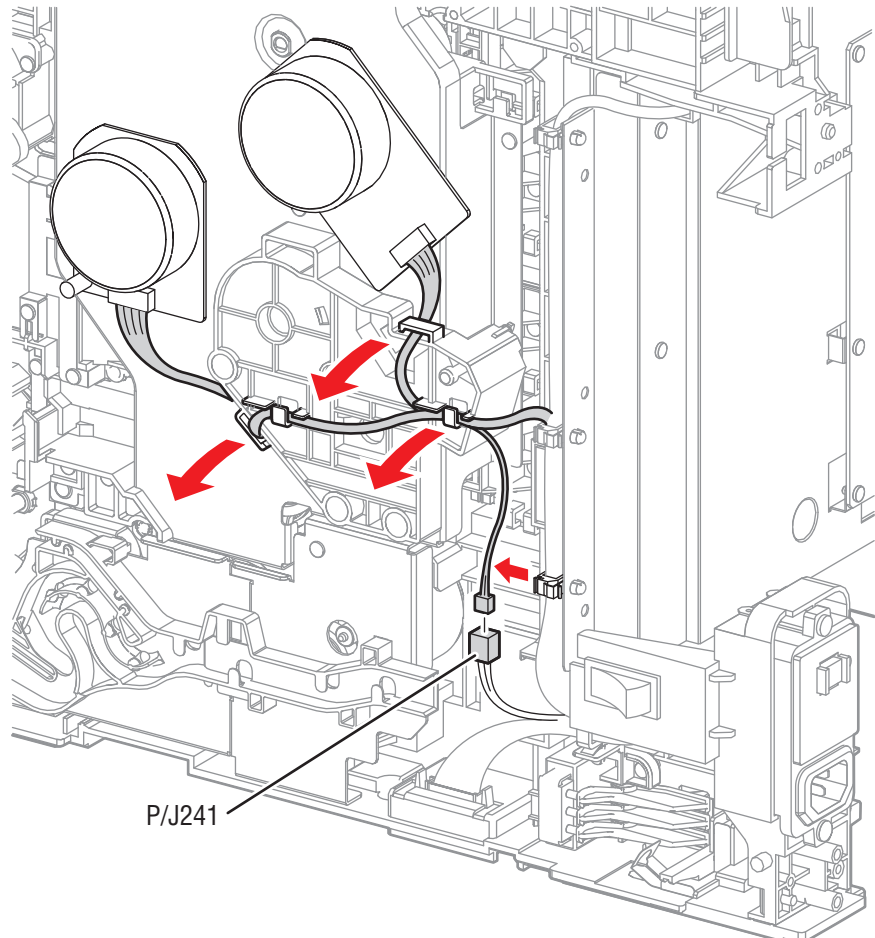


s6280-230

Note

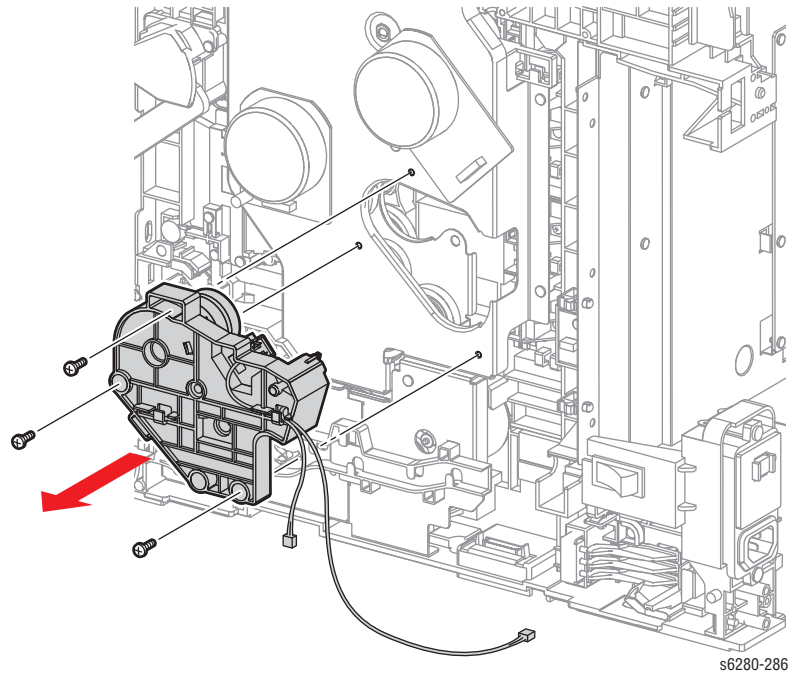
When performing the following step, leave the wiring harness connector on in the clamp on the printer harness side.

8. Release the K Mode Solenoid wiring harness on the K Drive Assembly from the clamp and disconnect the black wiring harness connector P/J241.
9. Release the wiring harness connected to the Main Motor and the Sub Motor in the Main Drive Assembly (PL8.1.2) from the hooks of the K Drive Assembly.



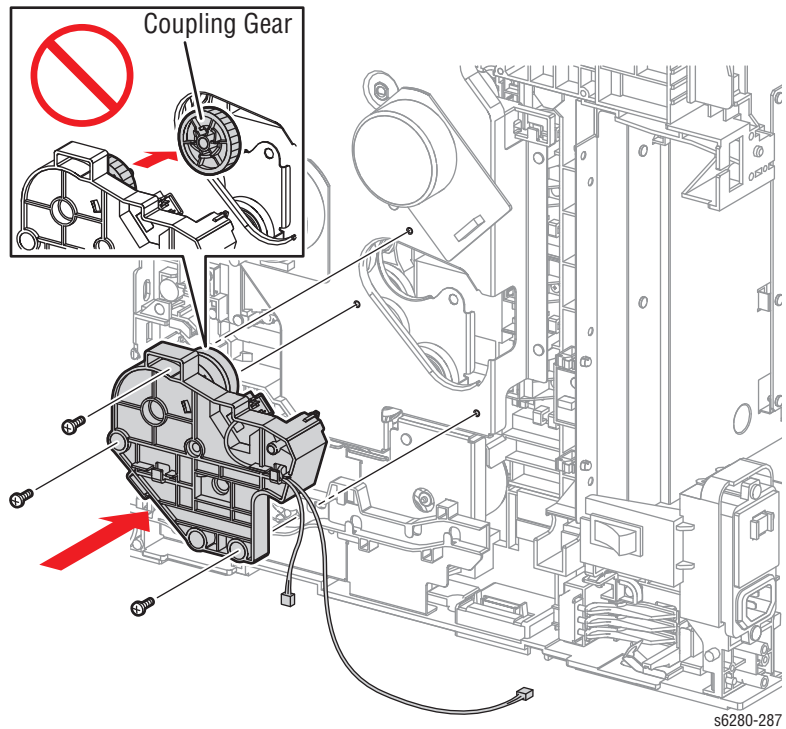
s6280-231

10. Remove 3 screws (6 mm) securing the K Drive Assembly to the Main Drive Assembly.
11. Remove the K Drive Assembly from the printer.



Replacement Note

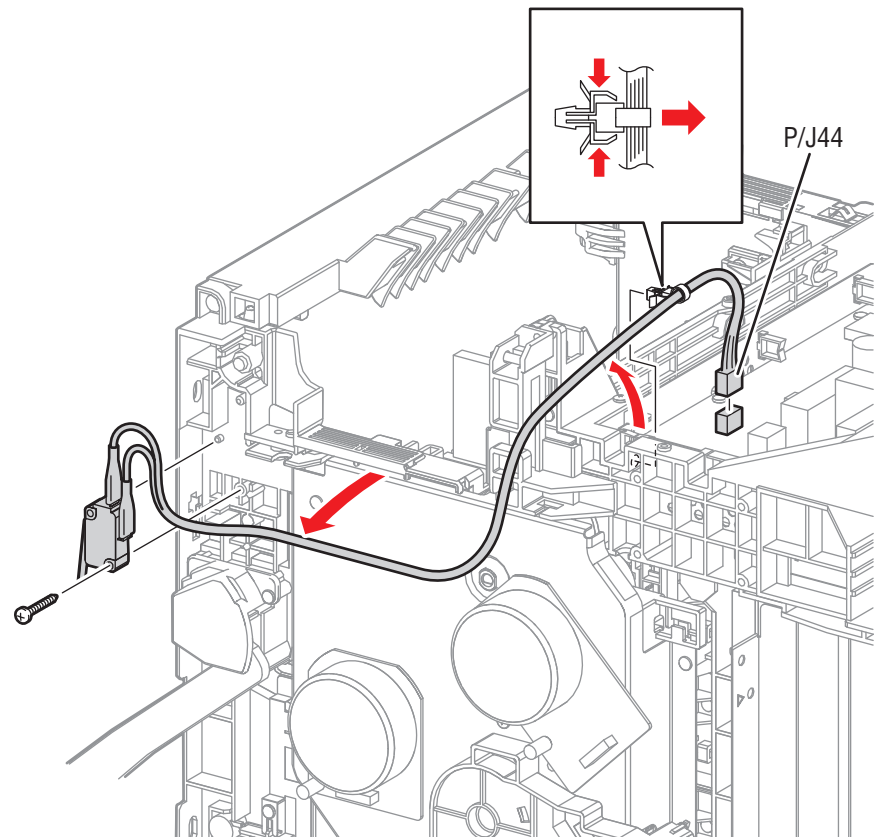
When installing the K Drive Assembly, be careful not to drop the Coupling Gear inside of the printer.



Electrical

Interlock Assembly Harness (PL9.1.3)

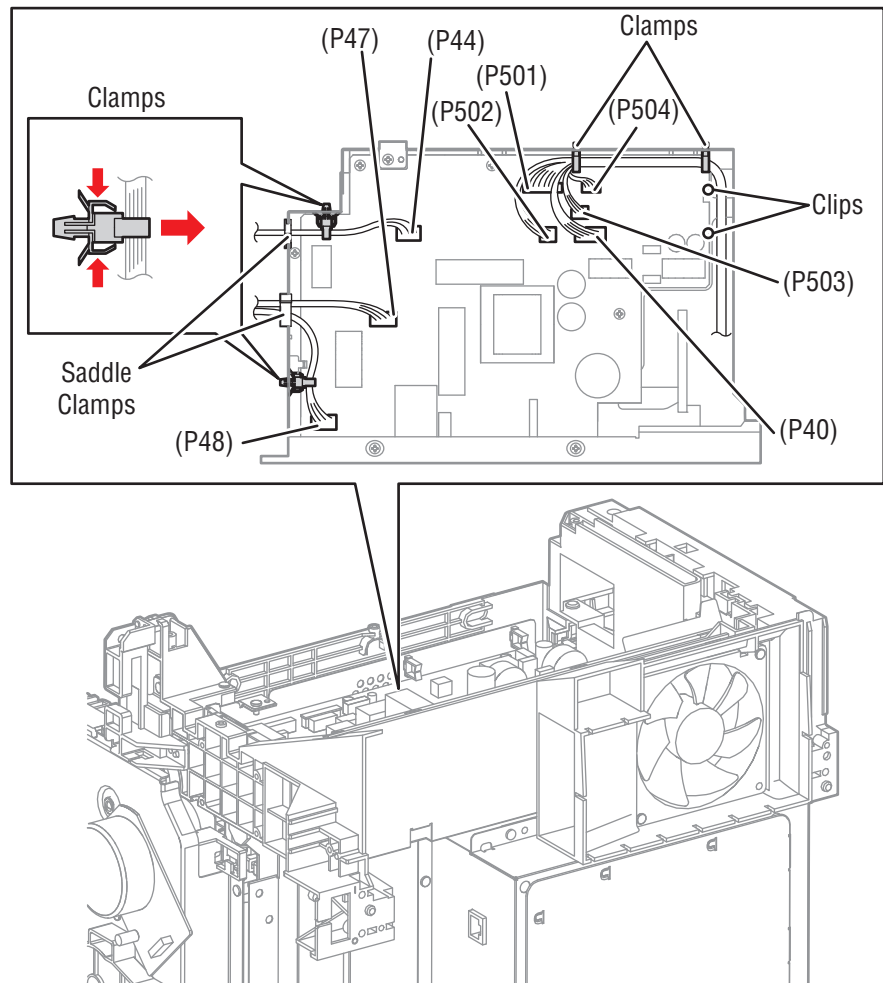
1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the Left Side Cover (page 8-14).
4. Remove the Top Cover (page 8-15).
5. Disconnect the Interlock Harness wiring harness connector P/J44 on the LVPS (PL9.1.4).
6. Release the Clamp on the LVPS Shield (PL9.1.9) securing the Interlock Harness wiring harness.
7. Remove the Interlock Harness from the duct of the printer.
8. Remove 1 screw (16 mm) securing the Interlock Harness to the printer.
9. Remove the Interlock Harness from the printer.



s6280-288

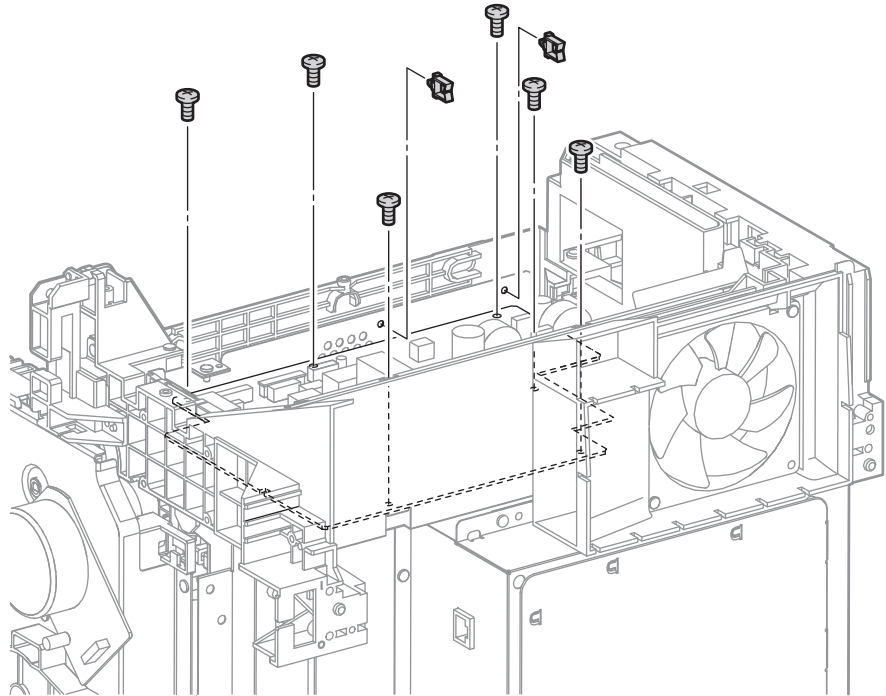
LVPS (PL9.1.4)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the Left Side Cover (page 8-14).
4. Remove the Top Cover (page 8-15).
5. Disconnect the 7 wiring harness connectors from the LVPS (PL9.1.4).
6. On the left side, from the LVPS Shield (PL9.1.9), remove the clamp securing the Interlock Harness Assembly (PL9.1.3) and the clamp securing the AC IN Harness Assembly (PL9.1.16) from the LVPS Shield (PL9.1.9).
7. Release the wiring harnesses from the 2 saddle clamps on the LVPS Shield (PL9.1.9) (left side).
8. Release the wiring harnesses from the 2 clamps and the 2 wiring harness clips (right side of the LVPS Shield).



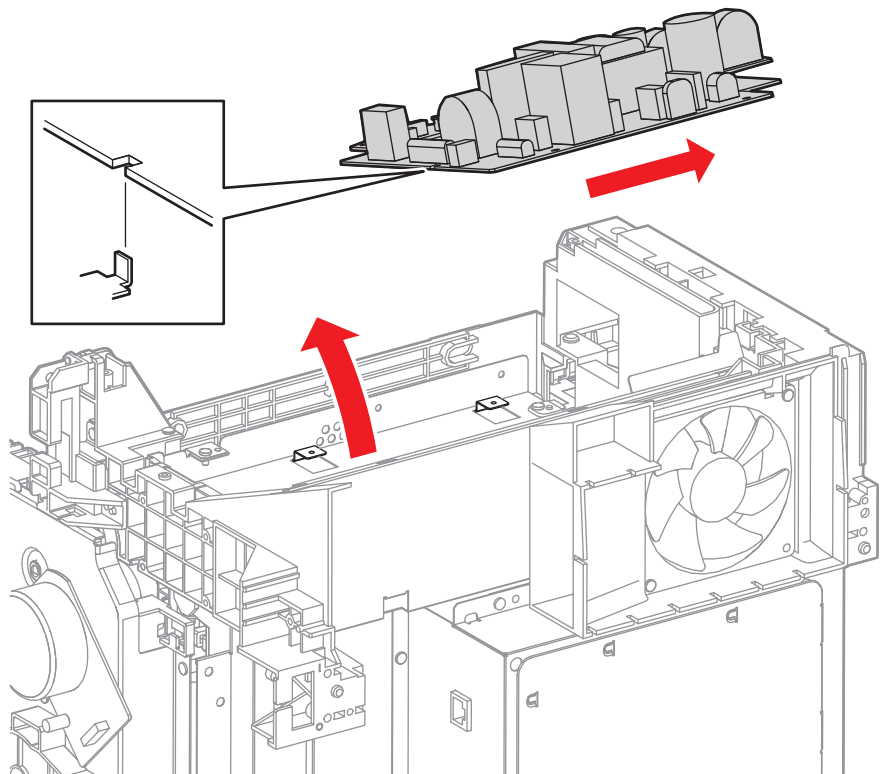
s6280-234

- Remove 6 screws (6 mm) securing the LVPS to the LVPS Shield.



s6280-235

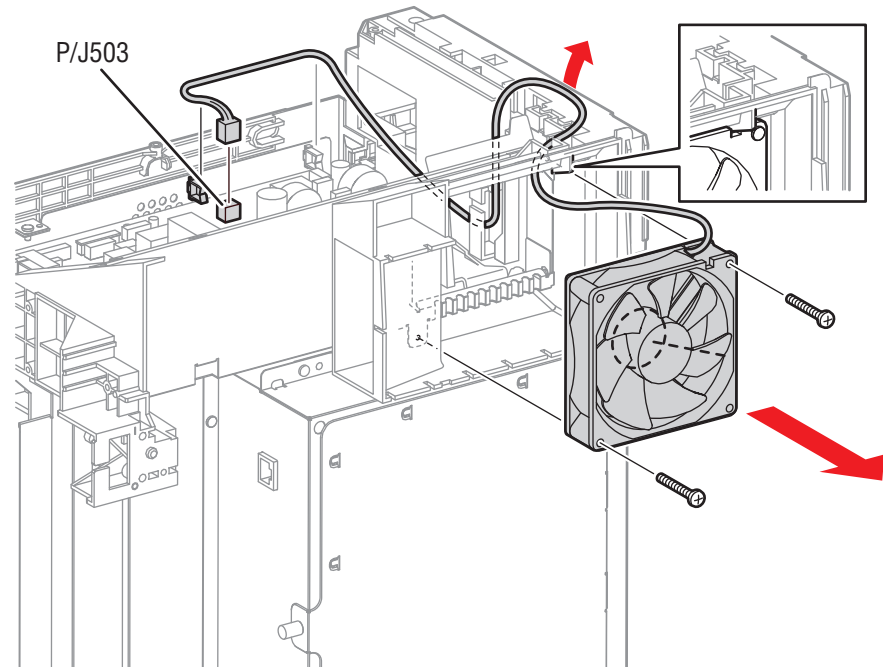
- While lifting up the LVPS, shift the LVPS to the rear at an angle to remove the LVPS from the printer.



s6280-236

Main Fan (PL9.1.10)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the Left Side Cover (page 8-14).
4. Remove the Top Cover (page 8-15).
5. Disconnect the Main Fan wiring harness connector P/J503 on the LVPS (PL9.1.4).
6. Release the Main Fan wiring harness from the clamps on the LVPS Shield (PL9.1.9).
7. Remove 2 screws (30 mm) securing the Main Fan to the printer.
8. Remove the Main Fan from the printer.



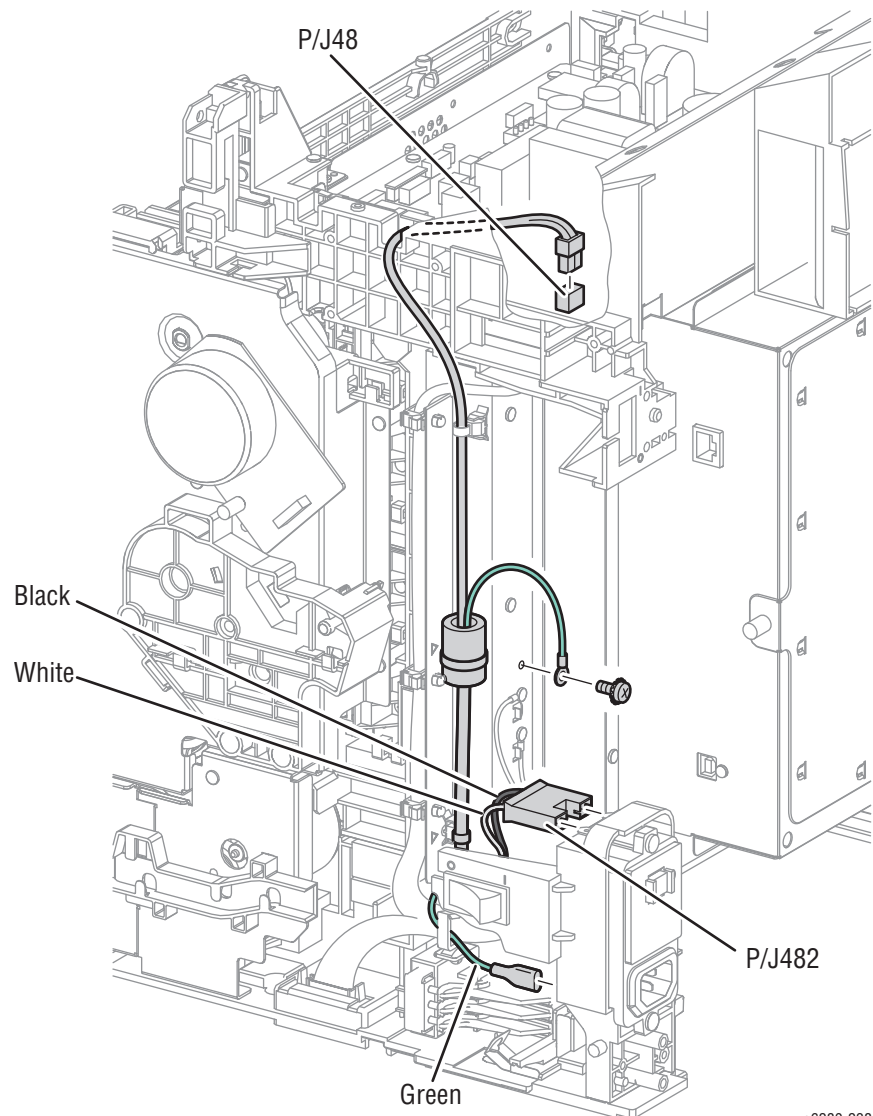
s6280-237

Replacement Note

When installing the Fan, ensure the labeled surface faces toward the front of the printer.

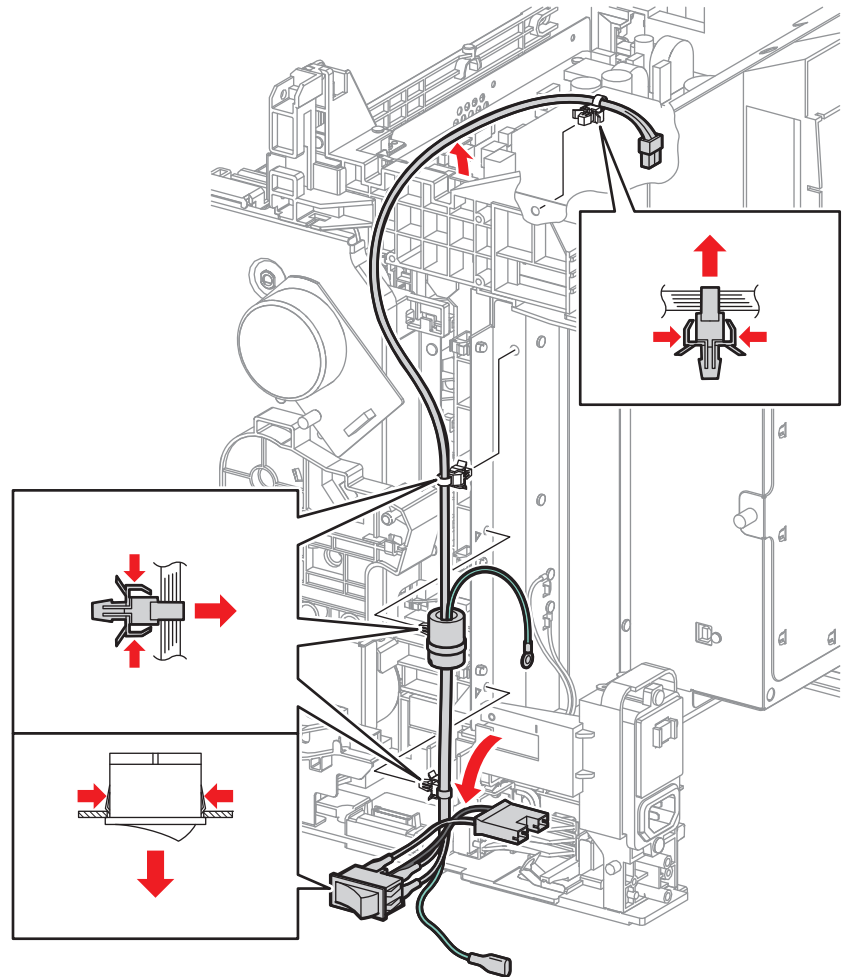
Power Switch (AC IN Harness Assembly) (PL9.1.16)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the Left Side Cover (page 8-14).
4. Remove the Top Cover (page 8-15).
5. Disconnect the wiring harness connector P/J48 on the LVPS (PL9.1.4).
6. Disconnect the wiring harness connector P/J482 and FASTON terminal FS483 on the GIF Breaker Inlet (PL9.1.43).
7. Release the ground wire of the Power Switch from the clamp.
8. Remove 1 screw (with washer, M4, 6 mm) securing the ground wire to the printer.



s6280-238

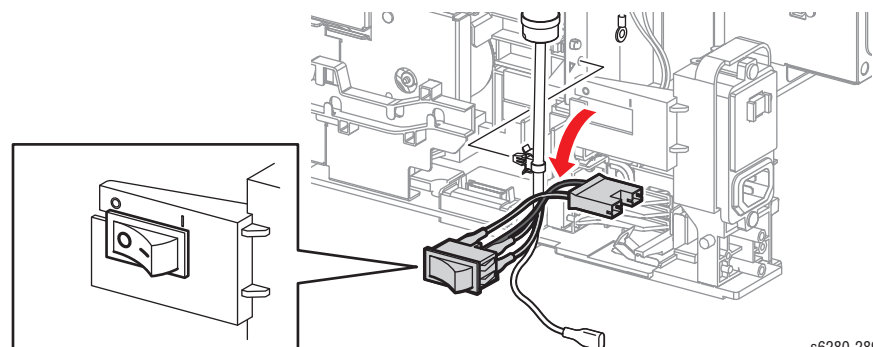
9. Release the Power Switch wiring harness from the 4 clamps.
10. Release the hooks of the Power Switch to remove the Power Switch from the printer.
11. Remove the Power Switch from the printer.



s6280-239

Replacement Note

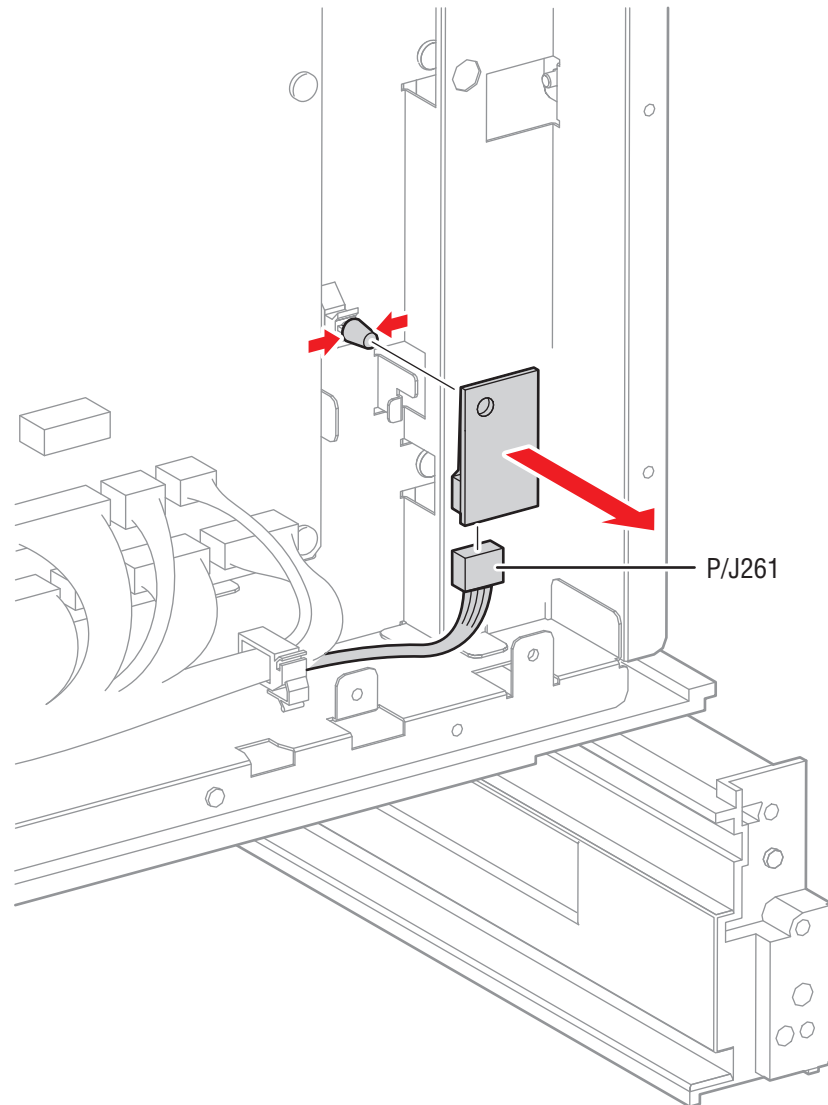
Be sure to match the On/Off mark of the Power Switch with the mark on the printer frame.



s6280-289

Humidity Sensor (PL9.1.19)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the Left Side Cover (page 8-14).
4. Remove the I/P Board Shield (page 8-96).
5. Remove the MCU Board Shield (page 8-94).
6. Release the Spacer (PL9.1.18) hook and remove the Humidity Sensor.
7. Disconnect the Humidity Sensor wiring harness connector P/J261.



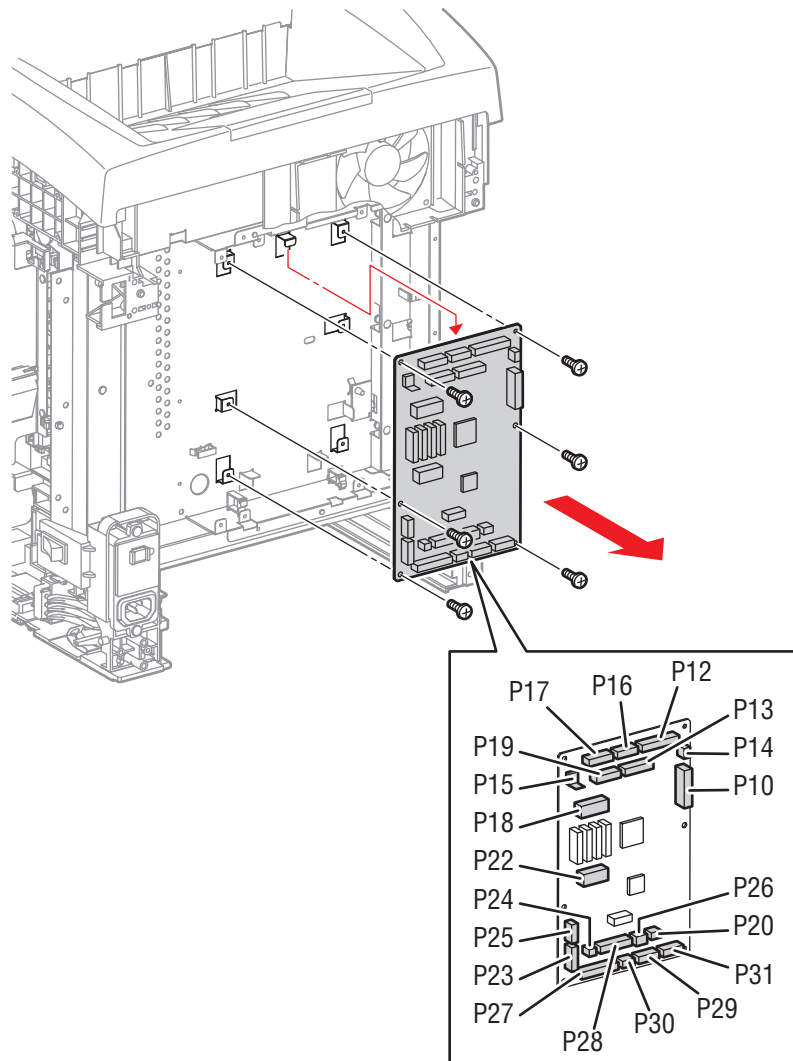
s6280-240

MCU Board (PL9.1.20)

Note

If the MCU Board is exchanged, store internal data to the Image Processor Board. Enter Service Diagnostics menu: **Service Mode** > **Engine Diag** > **NVM Settings** > **Save NVM to ESS**. Refer to "Service Diagnostics" on page 4-5 for detailed procedures.

1. Remove the Rear Cover (page 8-12).
2. Remove the I/P Board Shield Assembly (page 8-96).
3. Remove the MCU Board Shield (page 8-94).
4. Disconnect the 20 wiring harness connectors on the MCU Board.
5. Remove 6 screws (6 mm) securing the MCU Board to the printer.
6. Remove the MCU Board from the printer.



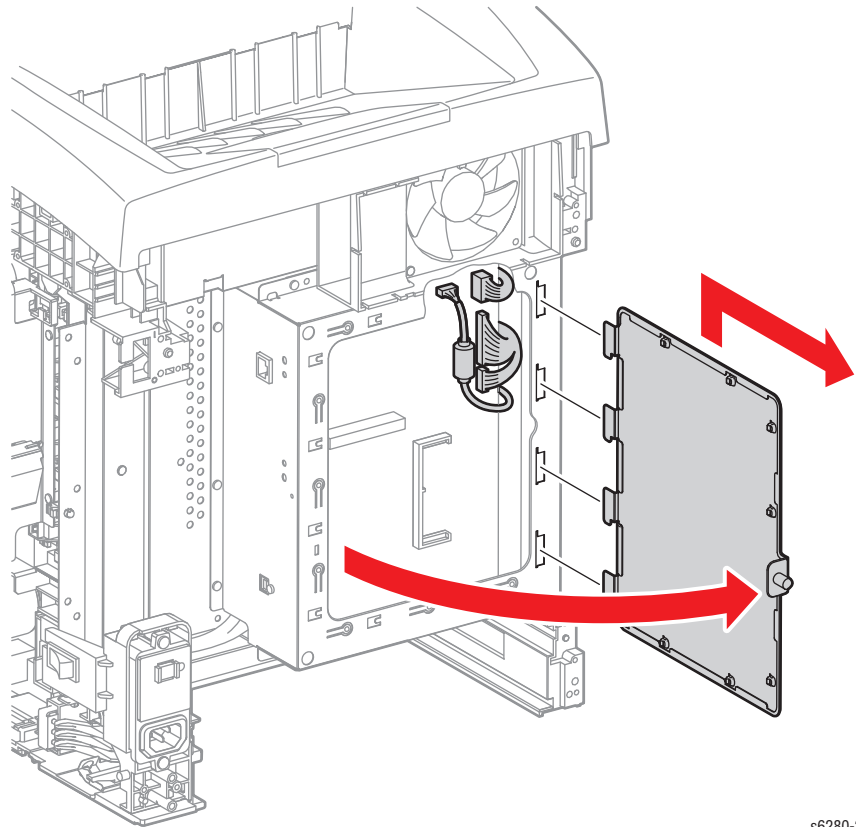
s6280-241

Replacement Note

If the MCU Board is exchanged, simply move the NVRAM chip from the old MCU Board to the new MCU Board.

Image Processor Board (PL9.1.27)

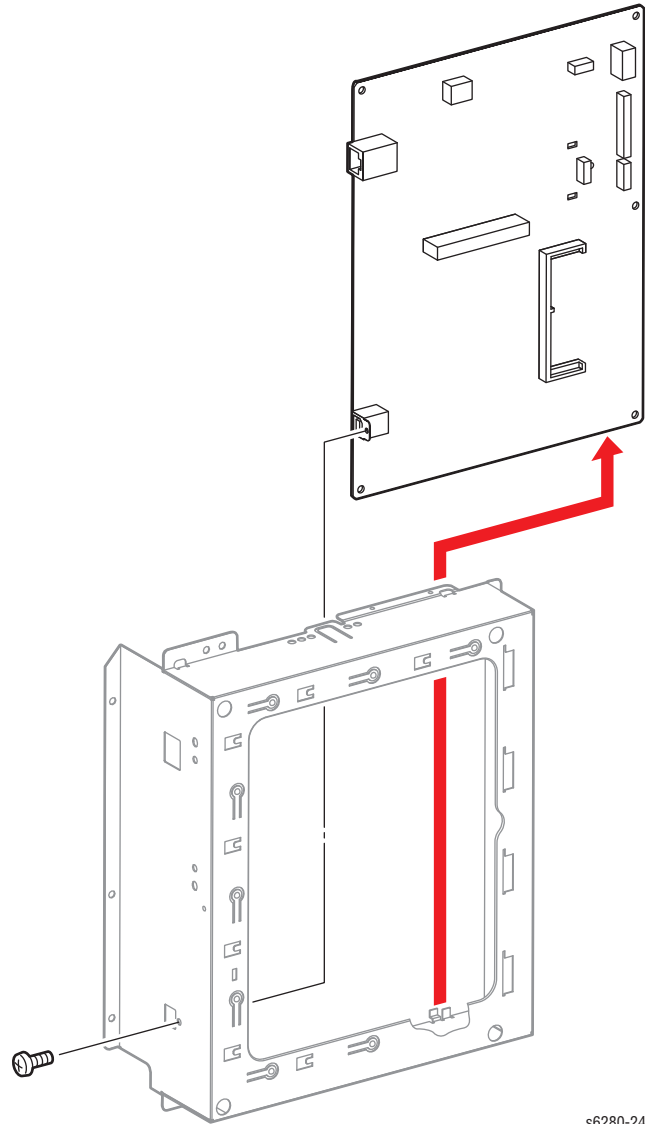
1. Remove the Rear Cover (page 8-12).
2. Loosen the Knurling Screw (PL9.1.44) and open the Window Shield (PL9.1.21).
3. Lift the Window Shield up to release the 4 tabs of the Window Shield from the holes on the I/P Board Shield (PL9.1.25).
4. Remove the Optional Hard Drive (if installed) (page 8-98).
5. Disconnect the 4 wiring harness connectors on the I/P Board.



s6280-242

6. Remove the I/P Board Shield Assembly (page 8-96).

7. Remove 1 screw securing the I/P Board to the I/P Board Shield Assembly (PL9.1.25).
8. Remove the I/P Board from the printer.



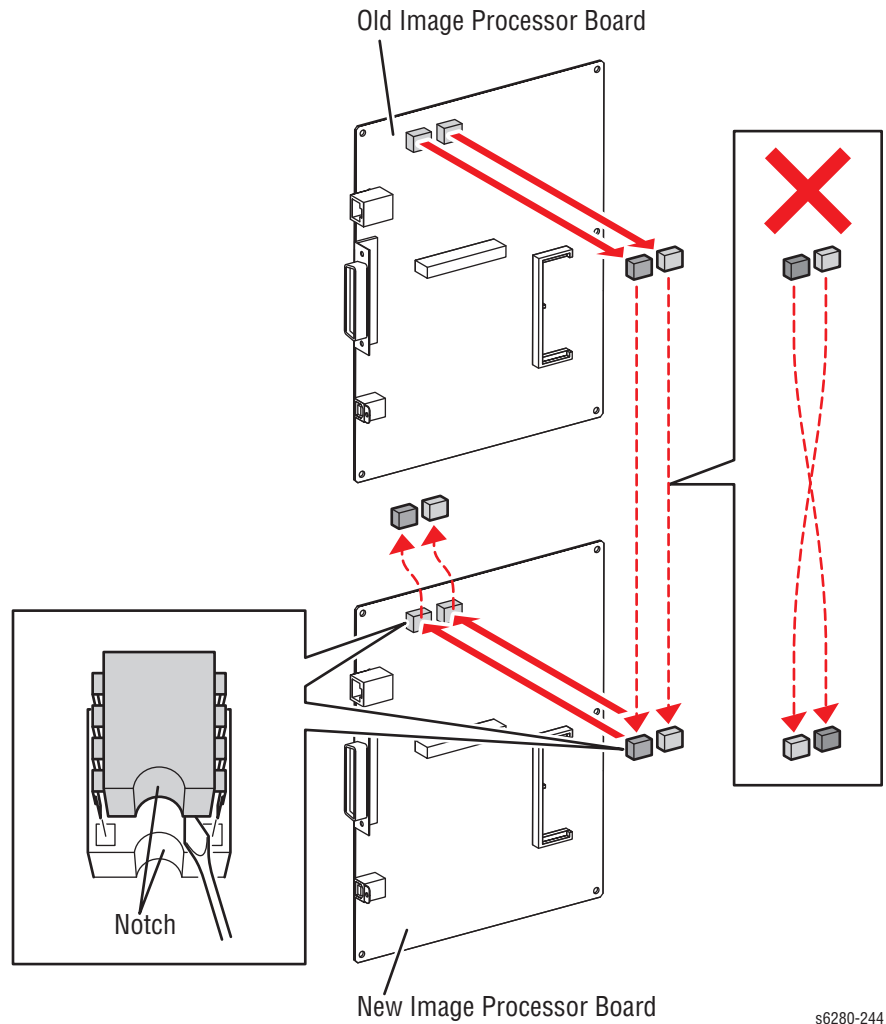
s6280-243

Replacement Note

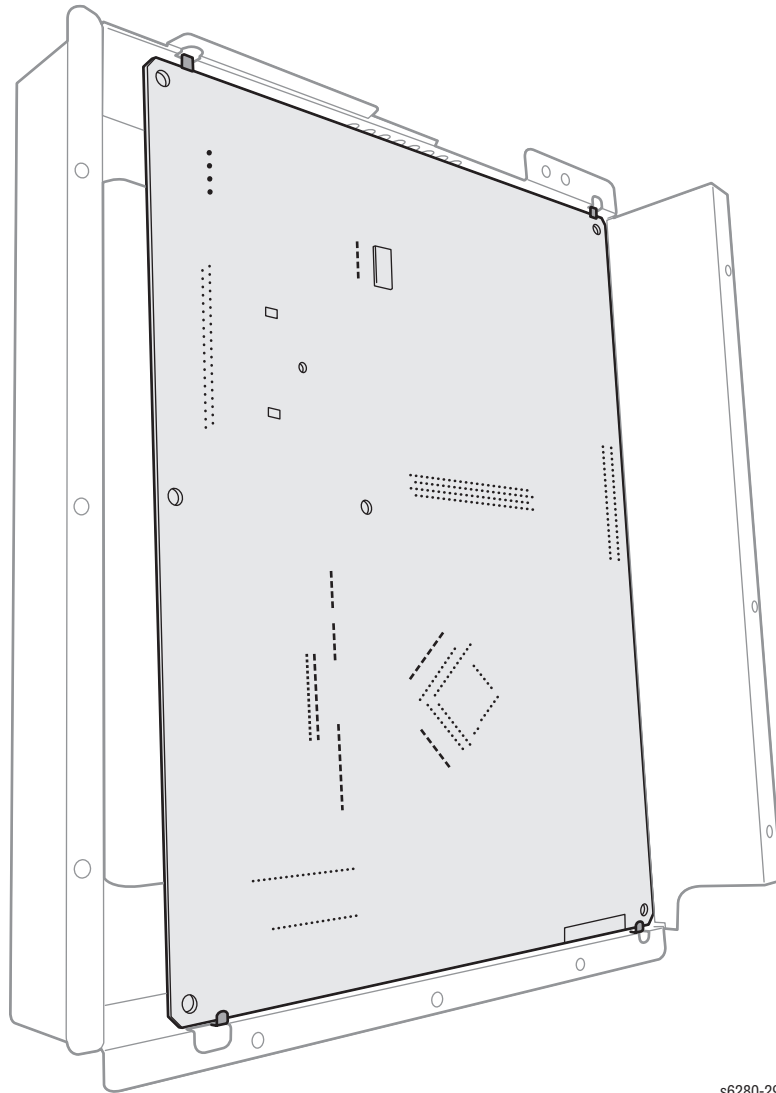
DO NOT use the NVRAM ROM from the new I/P Board.

DO NOT apply pressure on the I/P Board when removing the NVRAM ROM.

Make sure to move the NVRAM ROM from the old I/P Board to the new I/P Board. Carefully check the correct orientation of the NVRAM ROM when installing the NVRAM ROM.



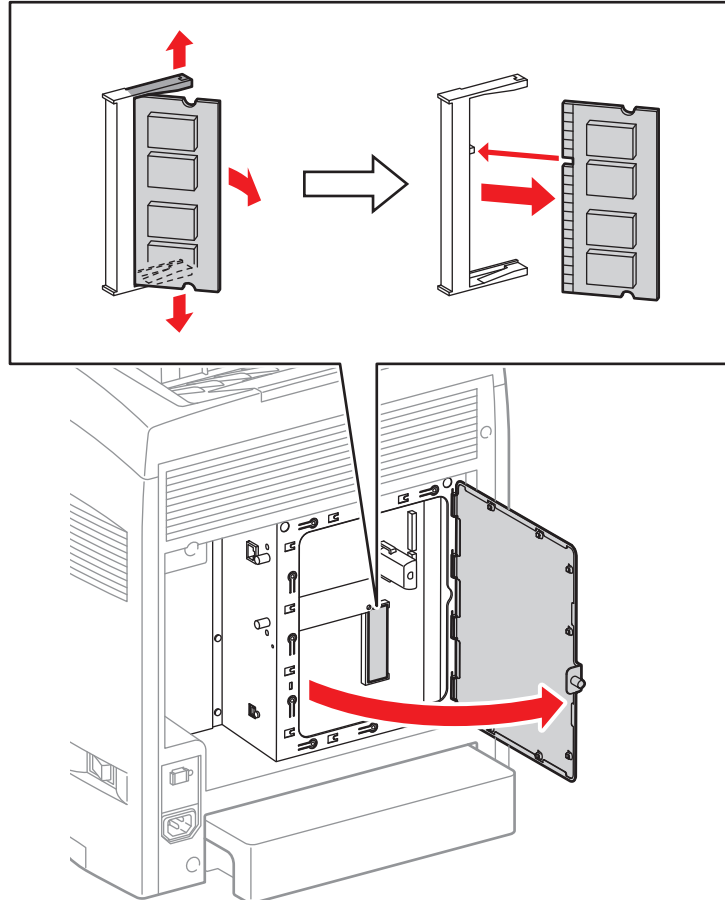
Be sure to sit the I/P Board on the 3 tabs (2 on top, 1 on bottom left) and between the 2 tabs on the bottom left of the I/P Board Shield.



s6280-292

Memory Card (PL9.1.30)

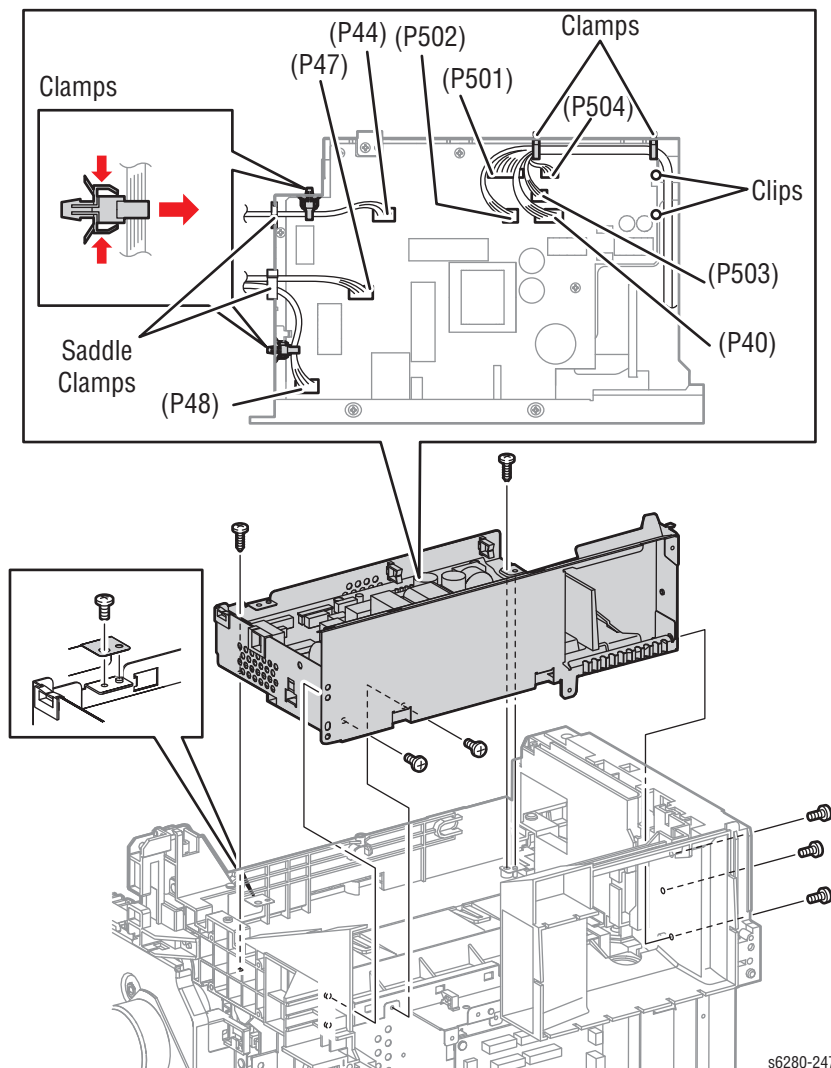
1. Loosen the Knurling Screw (PL9.1.44) and open the Window Shield (PL9.1.21).
2. Release the tabs on the memory socket securing the Memory Card.
3. Remove the Memory Card.



s6280-246

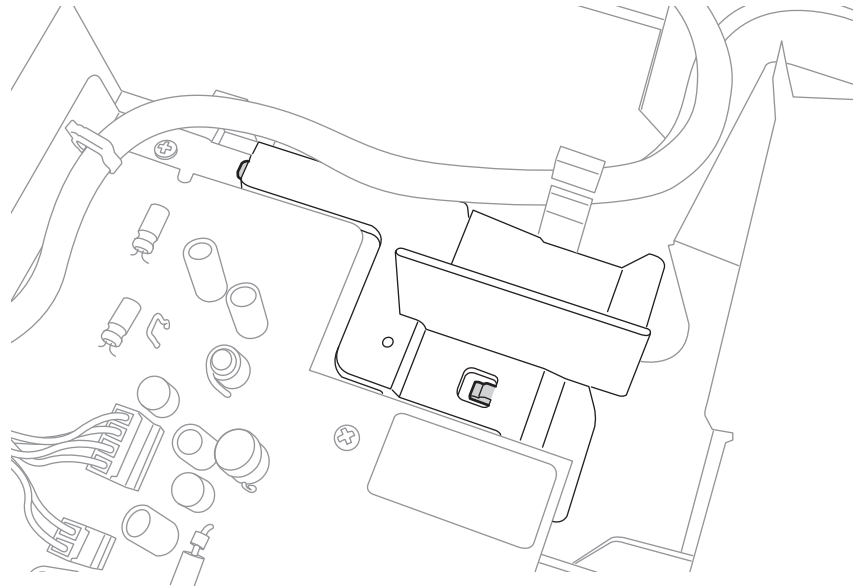
LVPS Assembly (PL9.1.40)

1. Remove the Rear Cover (page 8-12).
2. Remove the Right Side Cover (page 8-13).
3. Remove the Left Side Cover (page 8-14).
4. Remove the Top Cover (page 8-15).
5. Disconnect the 7 wiring harness connectors from the LVPS (PL9.1.4).
6. On the left side, from the LVPS Shield (PL9.1.9), remove the clamp securing the Interlock Harness Assembly wiring harness (PL9.1.3) and the clamp securing the AC In Harness Assembly wiring harness (PL9.1.16).
7. Release the wiring harnesses from the 2 saddle clamps (left side of the LVPS Assembly).
8. Release the wiring harnesses from the 2 clamps and the 2 wiring harness holders (right side of the LVPS Assembly).
9. Remove 10 screws (six 6 mm, 4 tap 10 mm) securing the LVPS Assembly to the printer.
10. Release the 3 holes of the LVPS Shield from the bosses of the printer.
11. Lift the LVPS Assembly up to remove it.



Replacement Note

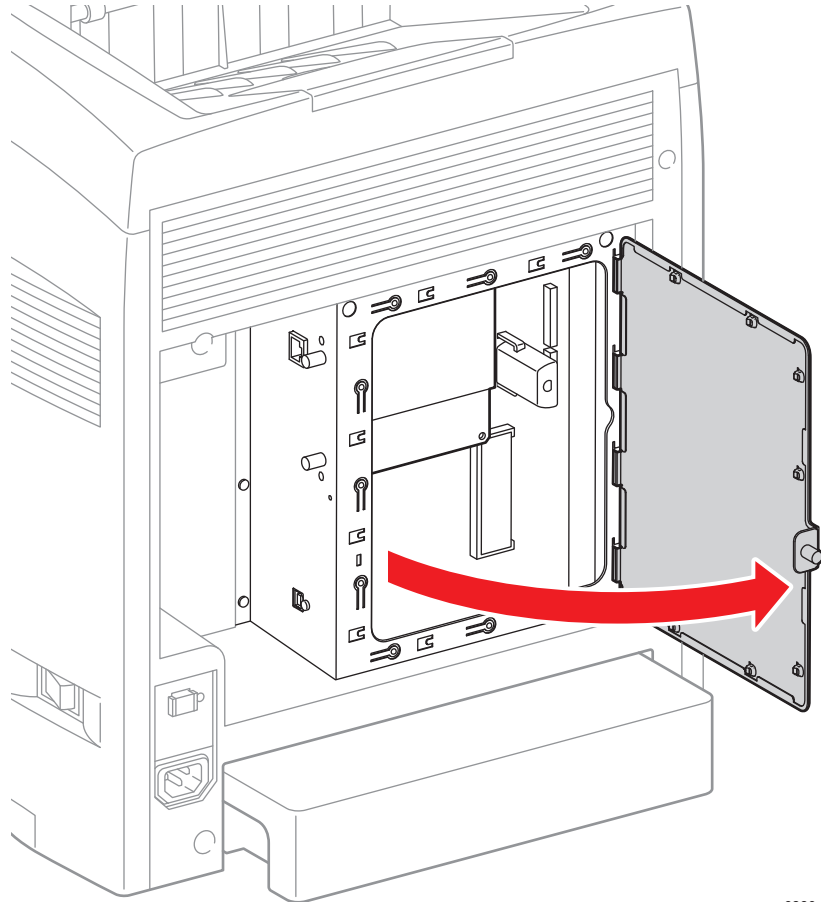
Be sure to secure the 2 latches on the Airflow Duct to the LVPS Assembly.



s6280-293

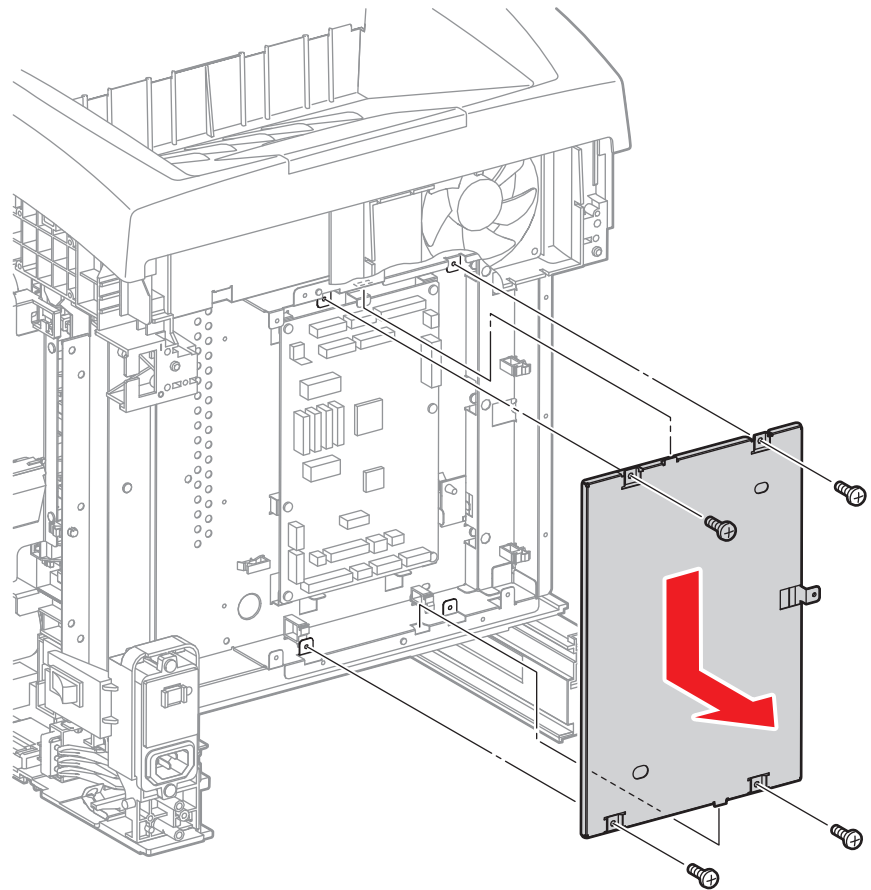
MCU Board Shield (PL9.1.42)

1. Remove the Rear Cover (page 8-12).
2. Loosen the Knurling Screw (PL9.1.44) and open the Window Shield (PL9.1.21).
3. Lift the Window Shield up to release the 4 tabs of the Window Shield from the holes on the I/P Board Shield (PL9.1.25).



s6280-248

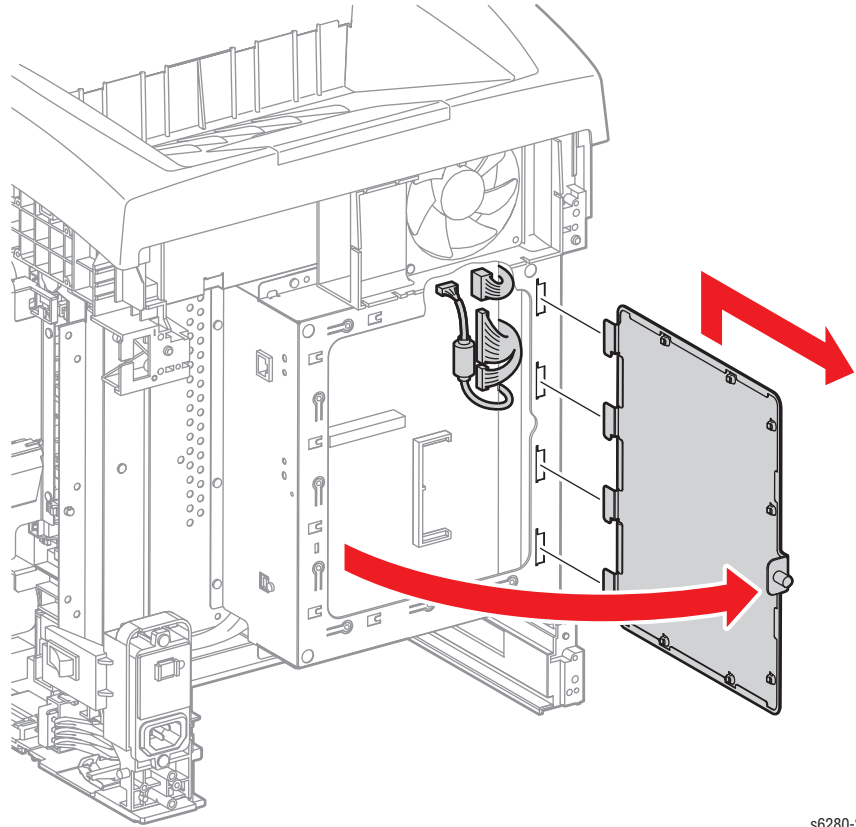
4. Remove the I/P Board Shield Assembly (page 8-96).
5. Remove 4 screws securing the MCU Board Shield.
6. Slide the MCU Board Shield downward to release the two tabs of the MCU Board Shield from the holes of the Rear Shield to remove it from the printer.



s6280-249

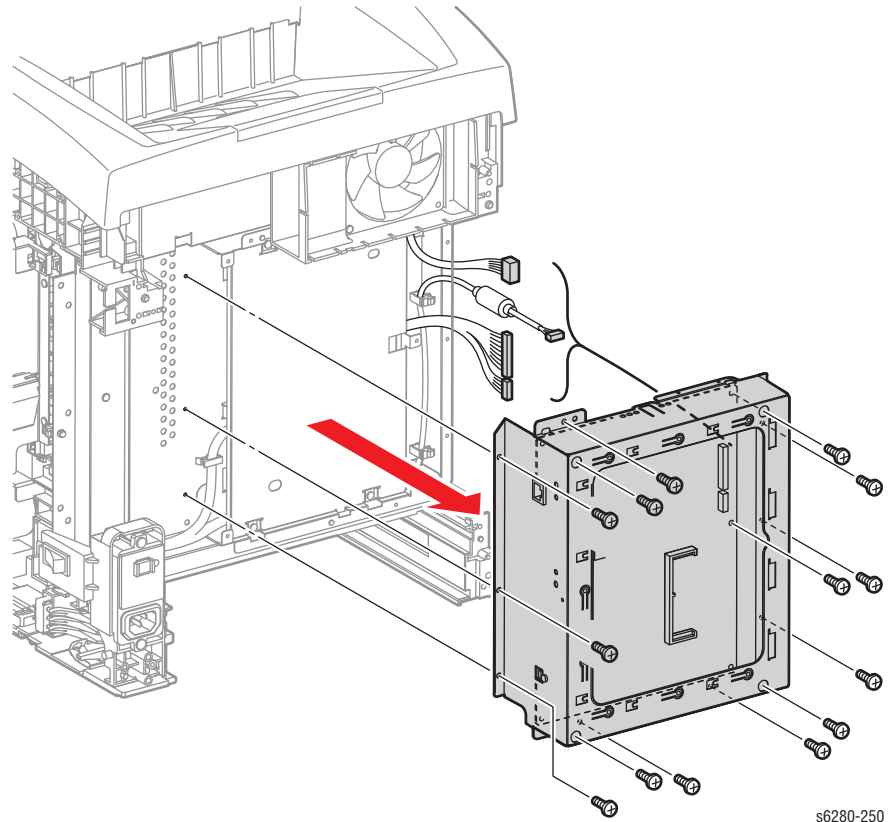
Image Processor Board Shield Assembly (PL9.1.45)

1. Remove the Rear Cover (page 8-12).
2. Loosen the Knurling Screw (PL9.1.44) and open the Window Shield (PL9.1.21).
3. Lift the Window Shield up to release the 4 tabs of the Window Shield from the holes on the I/P Board Shield (PL9.1.25).



s6280-242

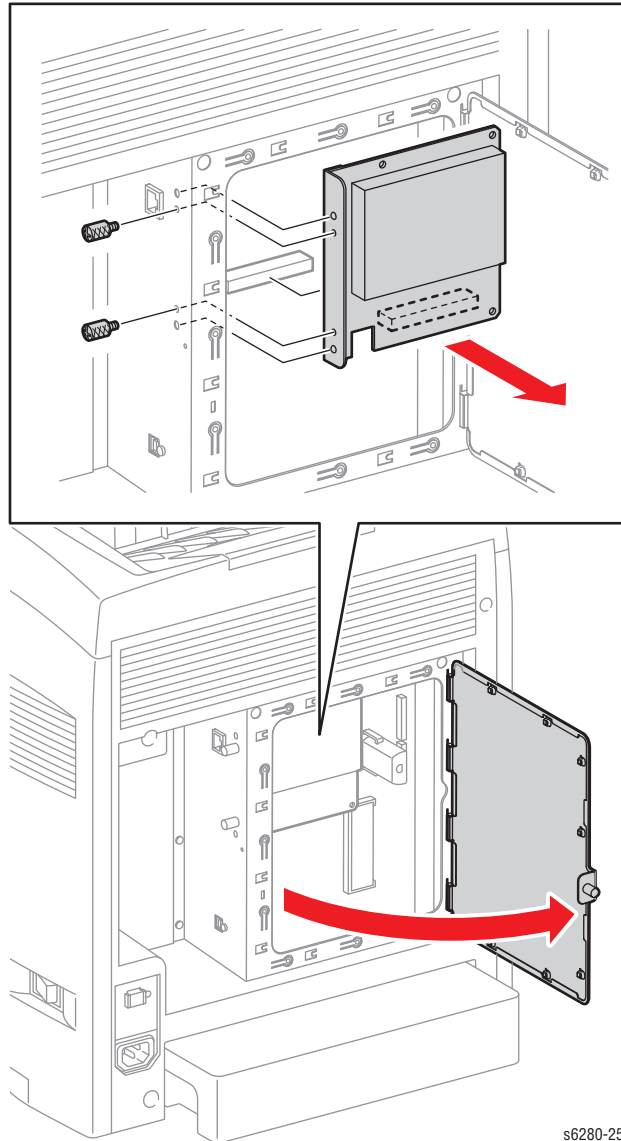
4. Disconnect the 4 wiring harness connectors on the I/P Board.
5. Remove 14 screws (6 mm) securing the I/P Board Shield.
6. Remove the I/P Board Shield from the printer.



s6280-250

Hard Drive Assembly (PL9.47)

1. Loosen the Knurling screw (PL9.1.44) and open the Window Shield (PL9.1.21).
2. Remove the 2 Knurling screws (PL9.1.22) securing the Hard Drive Assembly to the printer.
3. Remove the Hard Drive Assembly from the I/P Board (PL9.1.27).

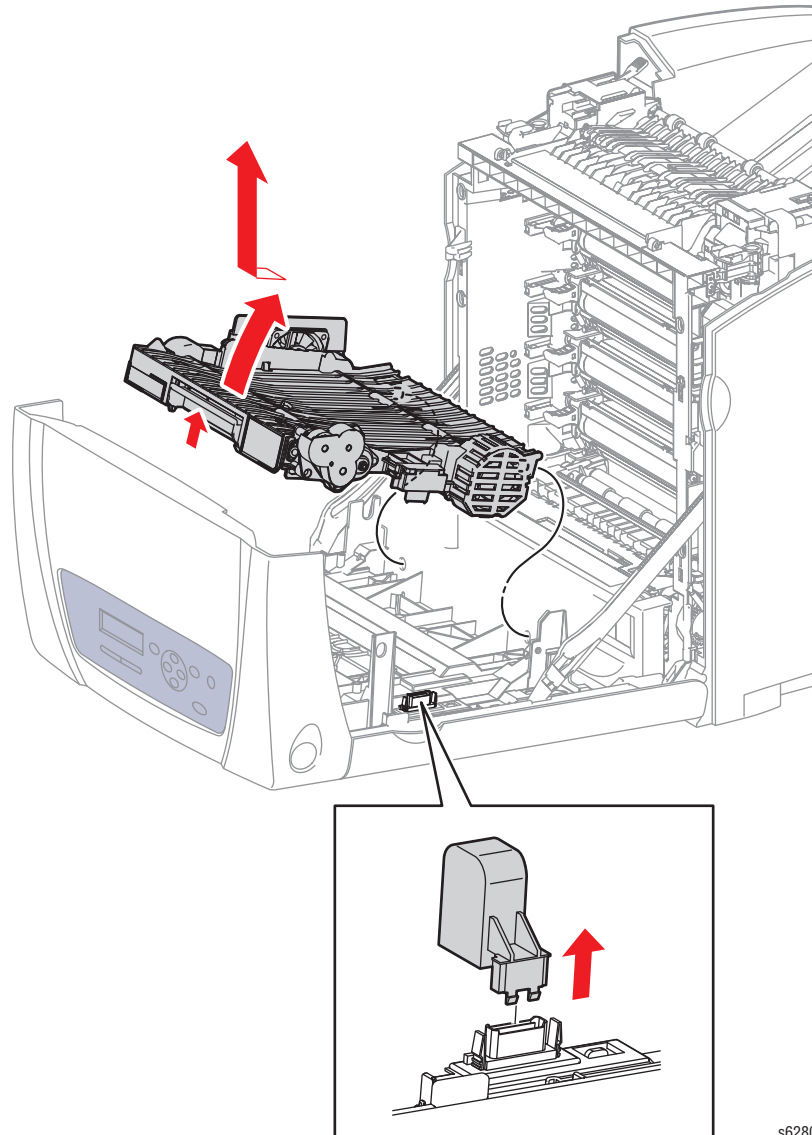


s6280-252

Duplex Unit

Duplex Unit (PL11.1.1)

1. Open the Front Cover.
2. Remove the Transfer Unit (page 8-8).
3. Lift the Duplex Unit lever to release the lock.
4. Pull the notches on the bottom of the Duplex Unit out from the holes of the Front Cover and remove the Duplex Unit.



s6280-253

Replacement Note

Ensure to remove the cover from the Duplex Unit connector location (if installed). The cover is only installed if the printer never had a Duplex Unit installed.

Optional 550-Sheet Feeder

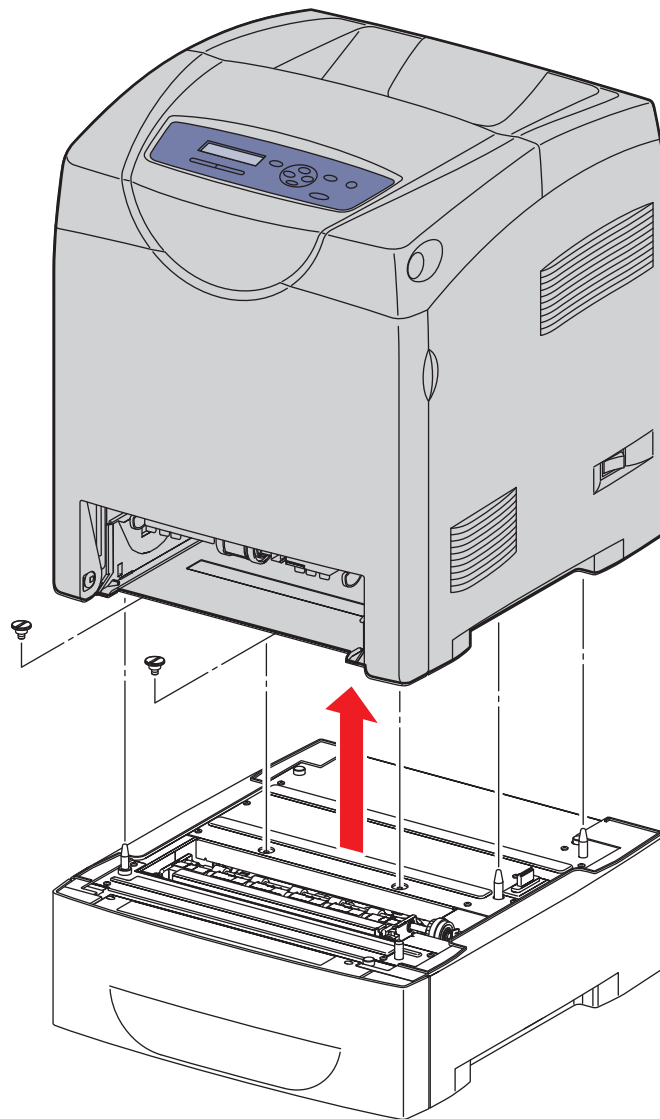
Optional 550-Sheet Feeder (PL12.1.1)

1. Remove Tray 2.
2. Remove the 2 Joint screws securing the printer to the Optional 550-Sheet Feeder.

Caution

Lifting the printer requires two people. Use care when removing the printer from the Optional 550-Sheet Feeder.

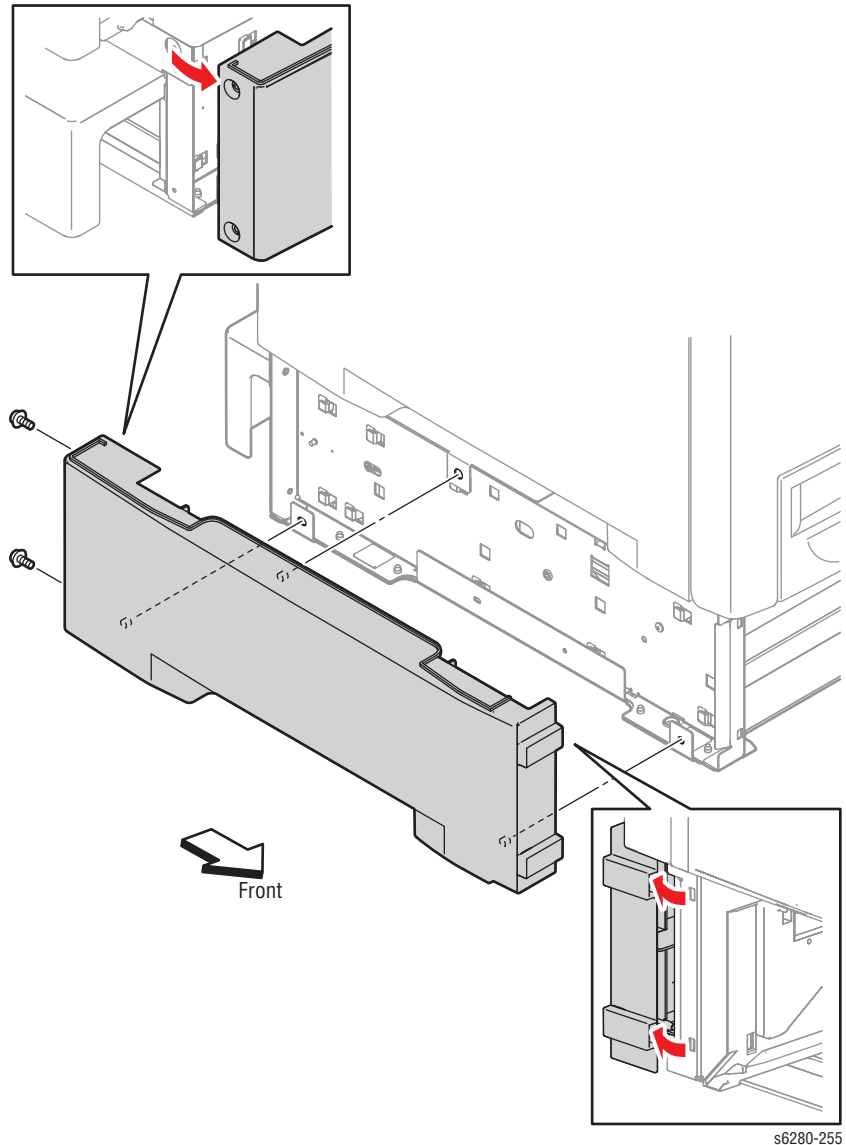
3. Lift the printer from the Optional 550-Sheet Feeder.



s6280-254

Tray 3 Left Cover (PL12.1.2)

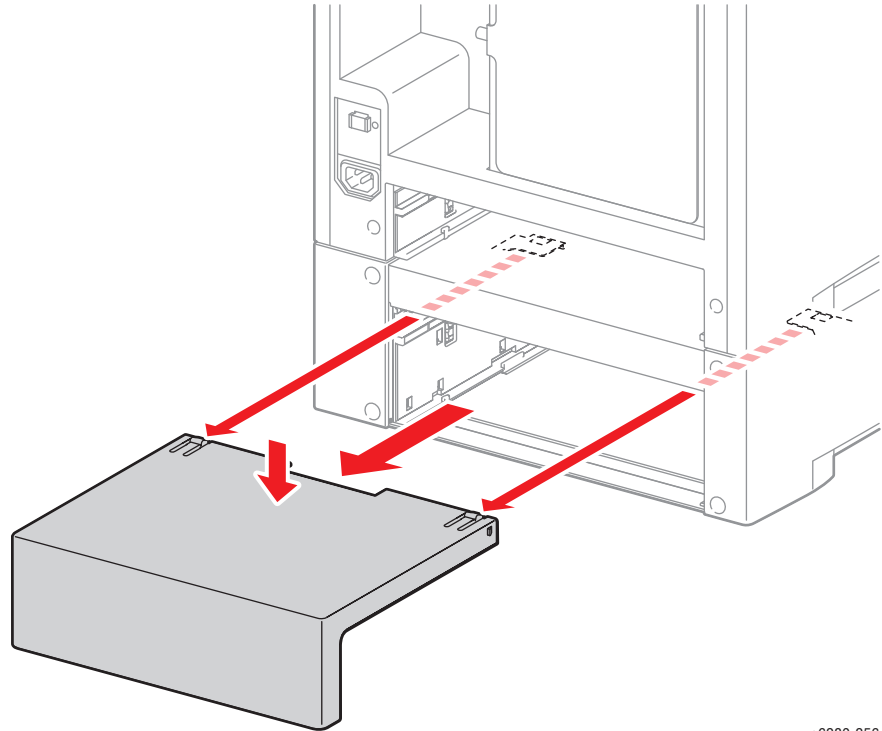
1. Remove Tray 3 from the Optional 550-Sheet Feeder.
2. Remove 2 screws (8 mm, flanged) securing the Left Cover to the Optional Frame Assembly (PL12.2.1).
3. Open the Left Cover toward the front side to release the 2 hooks securing to the Optional Frame Assembly.
4. Open the rear side of the Left Cover toward the rear side and release the convex part of the Left Cover from the concave part of the Optional Frame Assembly.
5. Remove the Left Cover.



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Tray 3 Cover (PL12.1.4)

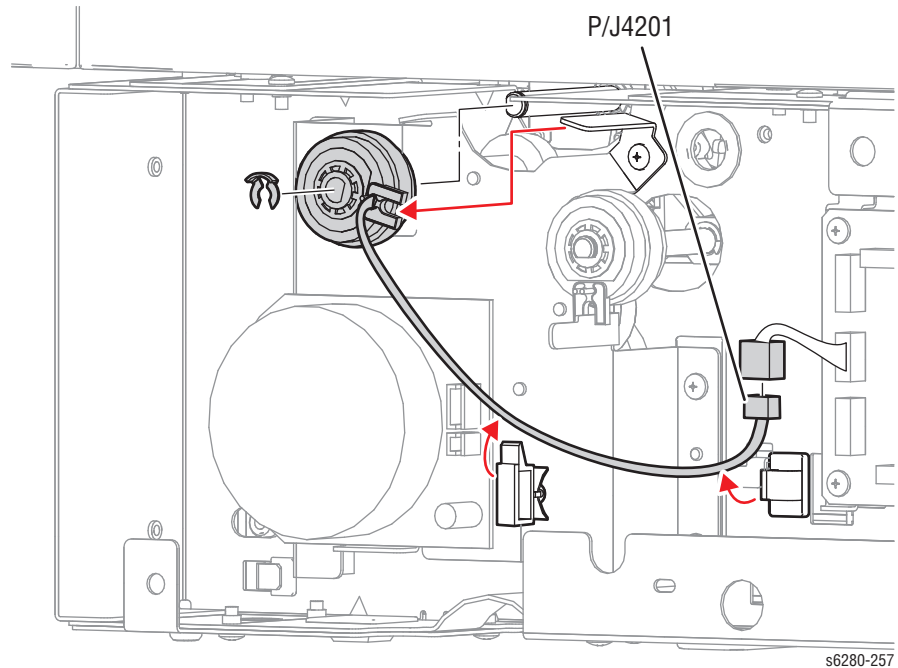
1. Remove the Tray 2 Cover (page 8-18).
2. Remove Tray 3 from the Optional 550-Sheet Feeder.
3. Pull the Tray 3 Cover backward until it stops.
4. Press the center part of the Tray 3 Cover to release the 2 hooks (on the left and right sides), and remove the Tray 3 Cover from the Optional 550-Sheet Feeder.



s6280-256

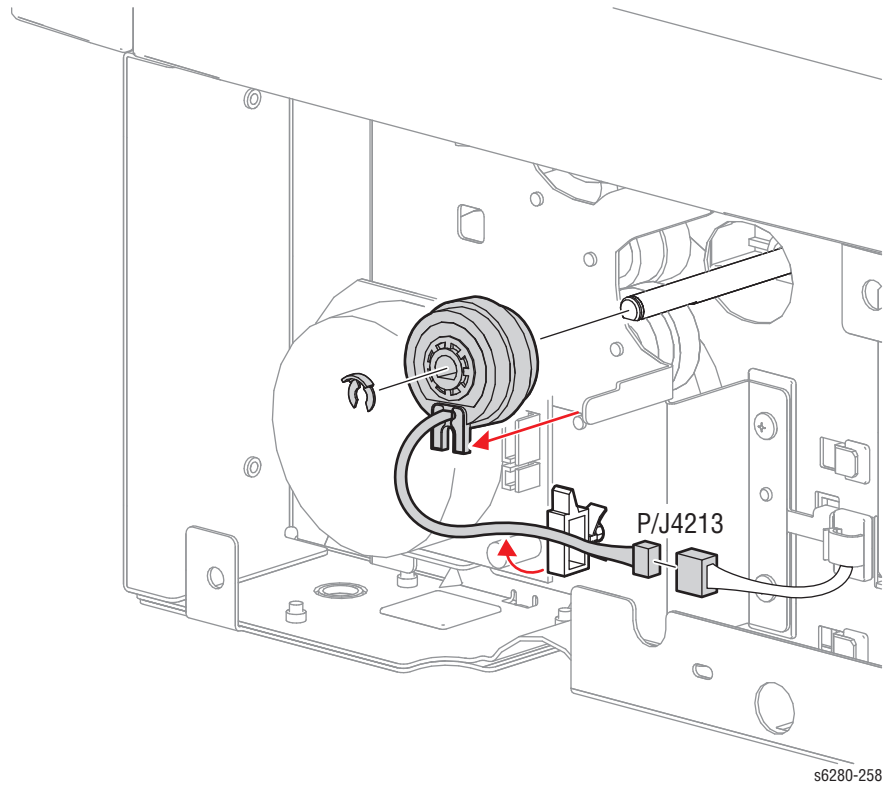
Tray 3 Turn Clutch (PL12.1.5)

1. Remove Tray 3 from the Optional 550-Sheet Feeder.
2. Remove the Tray 3 Right Cover (page 8-102).
3. Disconnect the Tray 3 Turn Clutch wiring harness connector P/J4201.
4. Release the 2 Clamps securing the Tray 3 Turn Clutch wiring harness and remove the harness.
5. Remove the K-ring securing the Tray 3 Turn Clutch to the Turn Roll Assembly (PL12.3.4).
6. Remove the Tray 3 Turn Clutch from the Turn Roll Assembly.



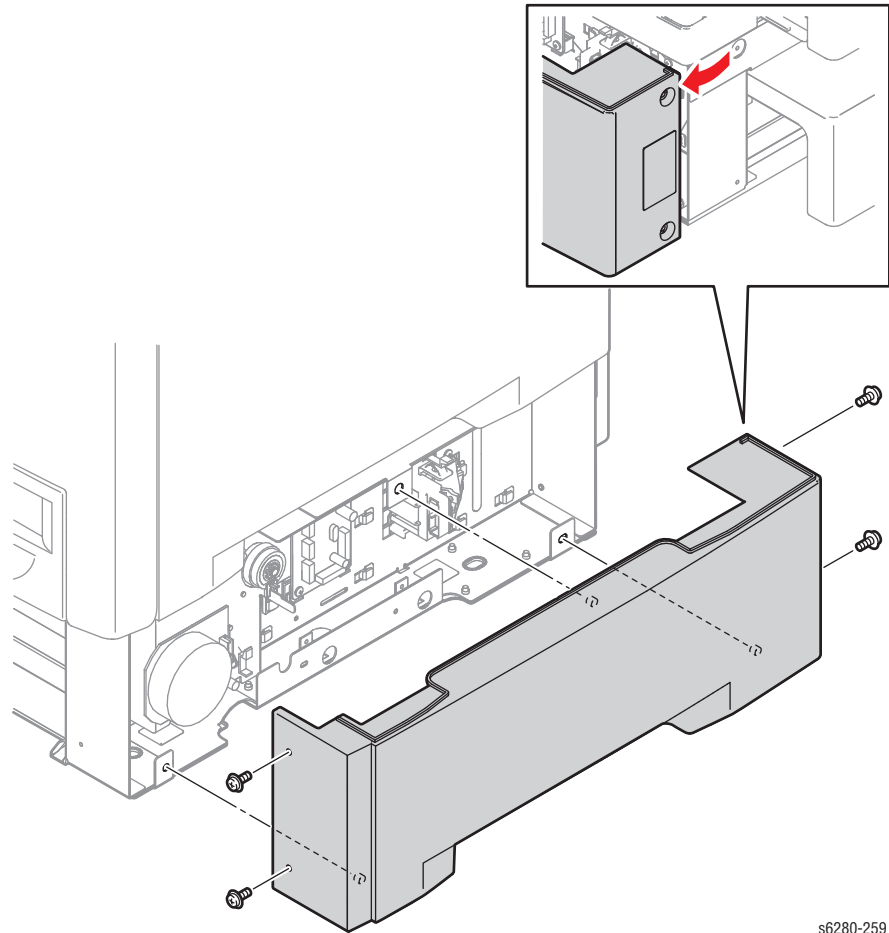
Tray 3 Feed Clutch (PL12.1.6)

1. Remove Tray 3 from the Optional 550-Sheet Feeder.
2. Remove the Tray 3 Right Cover (page 8-102).
3. Disconnect the Tray 3 Feed Clutch wiring harness connector P/J4213.
4. Release the Clamp securing the Tray 3 Feed Clutch wiring harness.
5. Remove the E-ring securing the Tray 3 Feed Clutch to the Feed Shaft (PL12.3.18).
6. Remove the Tray 3 Feed Clutch from the Feed Shaft.



Tray 3 Right Cover (PL12.1.7)

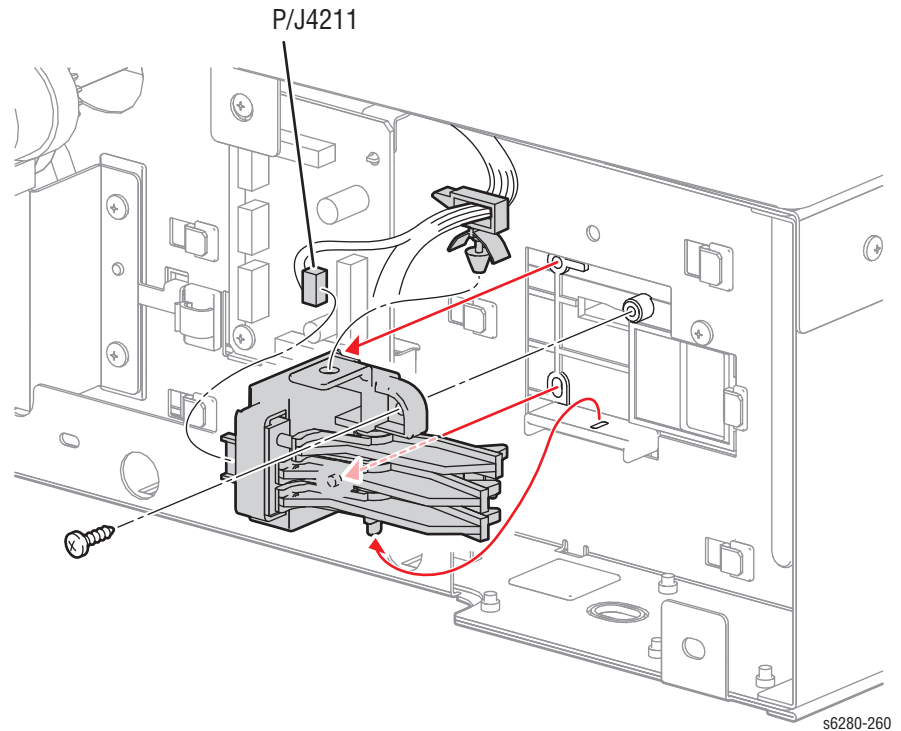
1. Remove Tray 3 from the Optional 550-Sheet Feeder.
2. Remove 4 screws (8 mm, flanged) securing the Right Cover to the Optional Frame (PL12.2.1).
3. Open the rear side of the Right Cover toward the rear side.
4. Release the notches on the Right Cover from the holes on the Optional Frame.
5. Remove the Right Cover.



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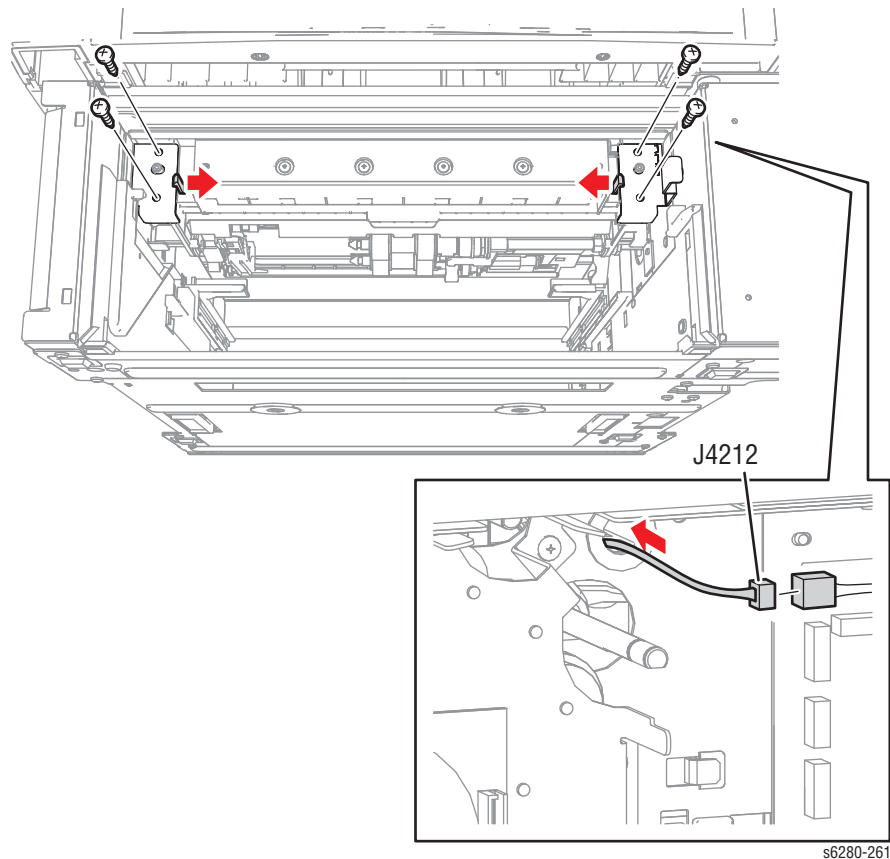
Tray 3 Size Switch (PL12.2.5)

1. Remove Tray 3 from the Optional 550-Sheet Feeder.
2. Remove the Tray 3 Right Cover (page 8-102).
3. Disconnect the Tray 3 Size Switch connector P/J4211.
4. Release the Clamp securing the Tray 3 Size Switch wiring harness.
5. Remove 1 screw (8 mm) securing the Tray 3 Size Switch to the Tray 3 Right Guide (PL12.2.11).
6. Release the tab on the bottom of the Tray 3 Size Switch from the square hole of the Tray 3 Right Guide and release the 2 notches from the holes of the Tray 3 Right Guide to remove the Tray 3 Size Switch.

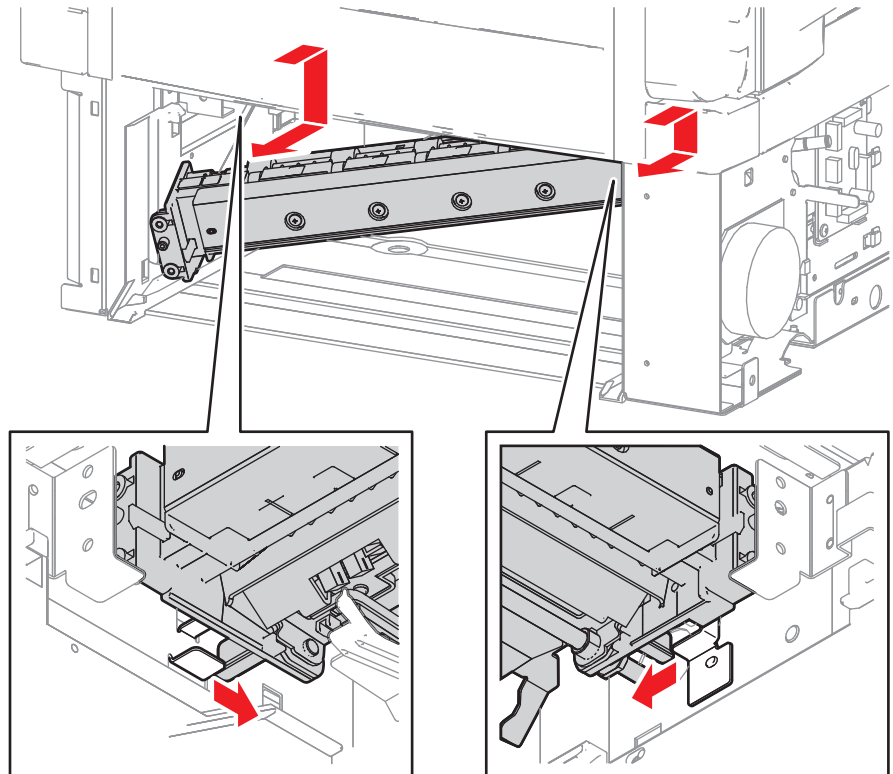


Tray 3 Feeder Assembly (PL12.1.8, PL12.3.1)

1. Remove Tray 3 from the Optional 550-Sheet Feeder.
2. Remove the Tray 3 Left Cover (page 8-101).
3. Remove the Tray 3 Right Cover (page 8-105).
4. Remove the Tray 3 Turn Clutch (page 8-103).
5. Remove the Tray 3 Feed Clutch (page 8-104).
6. Disconnect the Tray 3 Feeder wiring harness connector P/J4212 and pass the connector out of the hole of the Frame (PL12.2.1).
7. Remove 4 screws (8 mm) securing the Tray 3 Feeder to the Frame.
8. Release the 2 hooks securing the Tray 3 Feeder to the Frame and release the 2 notches from the hole of the Frame.



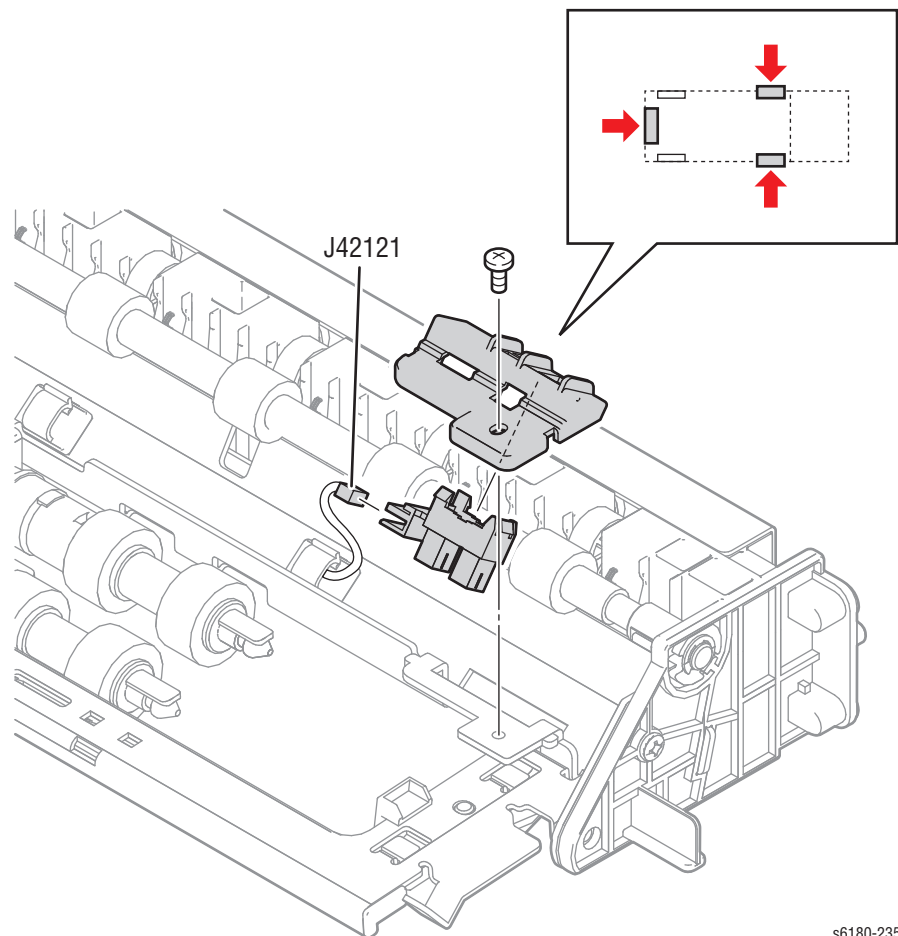
9. Release the convex part on the left and right sides of the Tray 3 Feeder from the flange on the left and right sides of the Frame to remove the Tray 3 Feeder.



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Tray 3 No Paper Sensor (PL12.3.14)

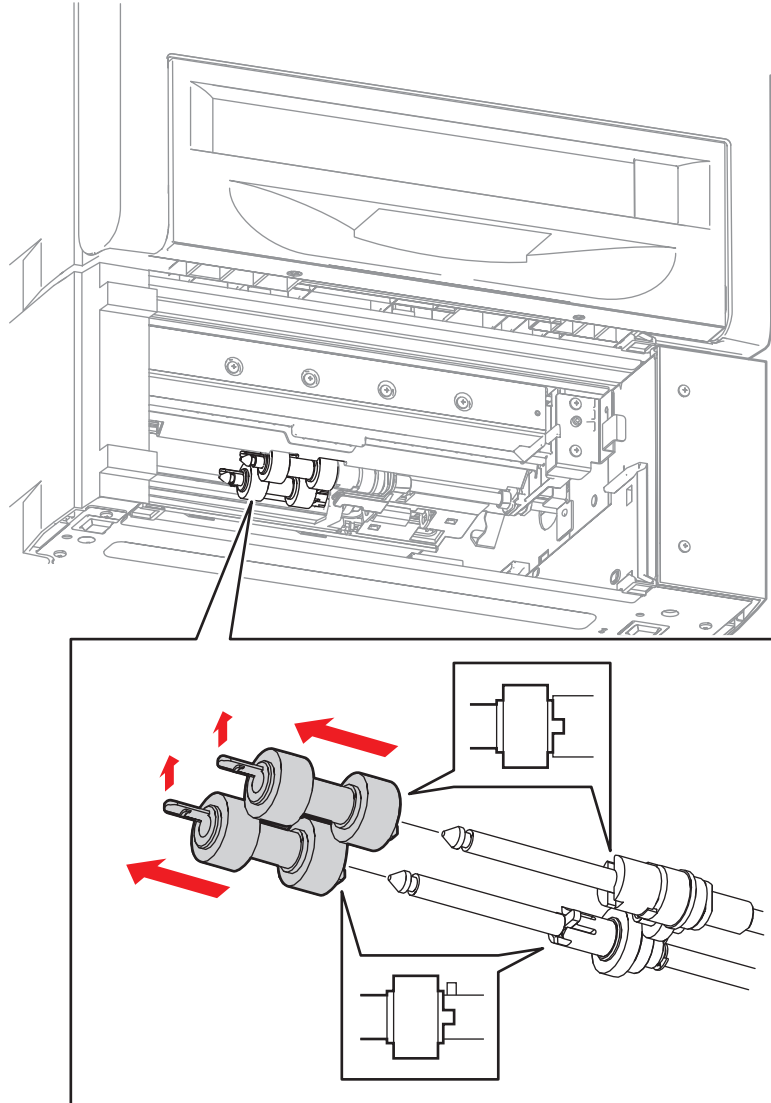
1. Remove Tray 3.
2. Remove the Tray 3 Left Cover (page 8-101).
3. Remove the Tray 3 Right Cover (page 8-105).
4. Remove the Tray 3 Turn Clutch (page 8-103).
5. Remove the Tray 3 Feed Clutch (page 8-104).
6. Remove the Tray 3 Feeder Assembly (page 8-107).
7. Remove 1 screw (6 mm) securing the No Sensor Holder (PL12.3.13) to the Feeder Assembly (PL12.3.1).
8. Remove the No Sensor Holder.
9. Release the 3 hooks securing the No Paper Sensor to the No Sensor Holder.
10. Remove the No Paper Sensor.
11. Disconnect the No Paper Sensor wiring harness connector P/J42121.



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Tray 3 Feed Roll (PL12.3.29)

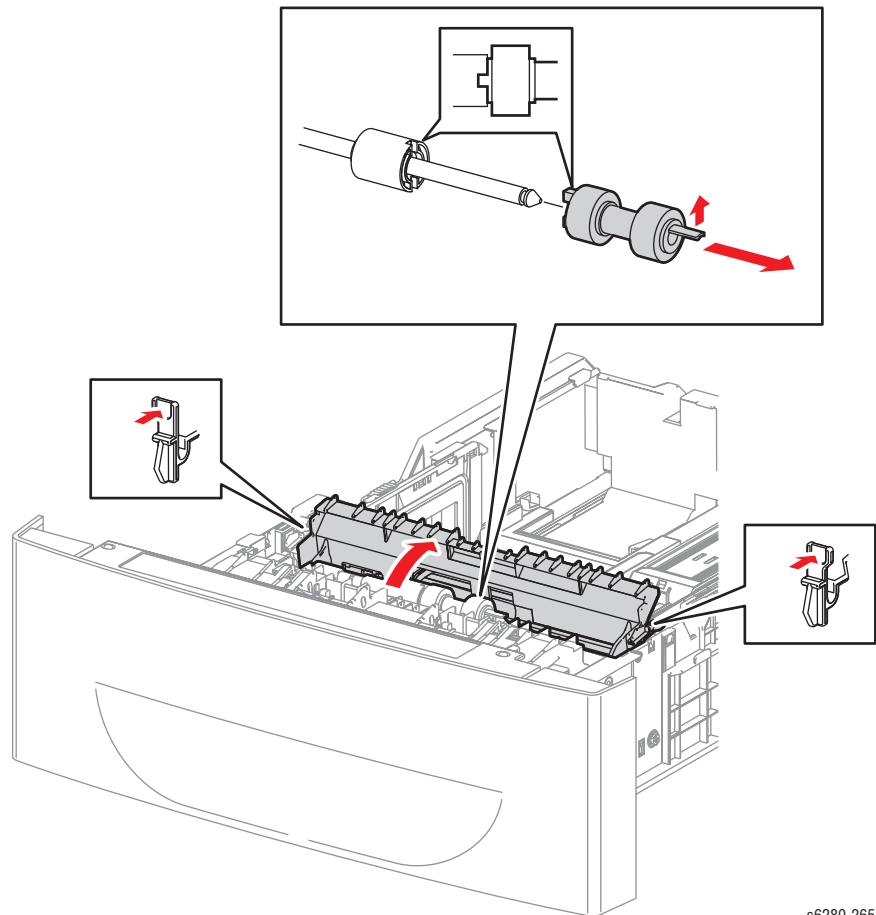
1. Remove Tray 3 from the Optional 550-Sheet Feeder.
2. Release the Tray 3 Feed Roll hook and remove the Tray 3 Feed Roll from each Shaft.



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Tray 3 Retard Roll (PL12.5.17)

1. Remove Tray 3 from the Optional 550-Sheet Feeder.
2. Release the hooks on the left and right sides of the Retard Tray Cover (PL12.5.13) and open the Retard Tray Cover.
3. Release the hook of the Tray 3 Retard Roll and remove the Tray 3 Retard Roll from the Retard Shaft (PL12.5.15).



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Parts List

In this chapter...

- Serial Number Format
- Using the Parts List
- Print Engine Parts
- Options
- Xerox Supplies and Accessories
- Service Kits

Chapter 9

Serial Number Format

Changes to Xerox products are made to accommodate improved components as they become available. It is important when ordering parts to include the following information:

- Component's part number
- Product type or model number
- Serial Number of the printer

The serial number is found on a label located on the frame of the printer. Front Cover must be opened to locate the Serial Number.

The nine-digit serial number has the following format:

- **PPPRSSSSS**
- **PPP** = Three digit alphanumeric product code
- **R** = Single digit numeric revision digit, 0-4. To be rolled when a major product change occurs and initiated with a change request.

Product	Product Code
6280, 110V Engine	NKA
6280V, 220V Engine	NKB

Pre-Production Units (PP Build)

PPP0SSSSS

SSSSS = Five digit numeric serial number based on the following table:

Product	Starting Serial Number	Ending Serial Number
6280_N, 110V Engine	00501	00600
6280_DN, 110V Engine	00601	00700
6280_YN, 110V Engine (GSA)	00701	00800
6280V_N, 220V Engine	00501	00600
6280V_DN, 220V Engine	00601	00700

Note

Not all of the serial number will be used. This is a buffer in case additional units are built by Fuji Xerox for each model of printer during pre-production.

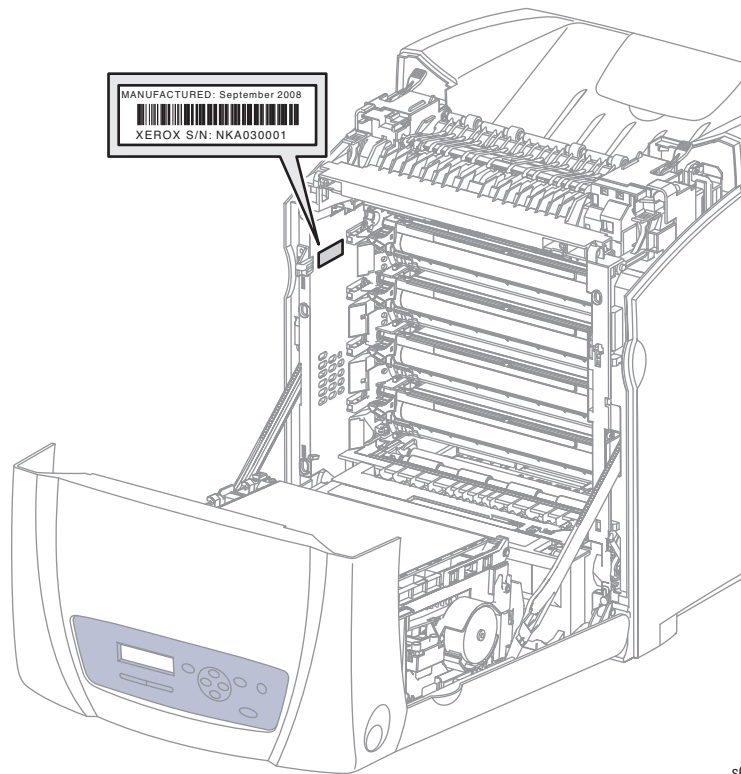
Production Units (MP Build)**PPP1SSSSS****SSSSS** = Five digit numeric serial number based on the following table:

Product	Starting Serial Number	Ending Serial Number
6280_N, 110V Engine	10001	60000
6280_DN, 110V Engine	60001	90000
6280_YN, 110V Engine (GSA)	90001	99999
6280V_N, 220V Engine	10001	60000
6280V_DN, 220V Engine	60001	99999

Note

The serial numbers are only reset to the starting serial number when the ending serial number is reached. At that time the revision digit will be rolled. Serial numbers below 10001 are reserved for XOG Final Integration Center (FIC) sites if reserialization is needed.

Serial Number Location



s6280-266

Serial Number Format Examples

NKA03001: Xerox Serial Number
NKA = Product Code for 110V printer
0 = Revision Level
30001 = Serial Number for 6280_N



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NKB299999: Xerox Serial Number, next printer serial number **NKB360001**
NKB = Product Code for 220V printer
2 = Revision Level, next Revision Level 3
99999 = Serial Number for 6280V_DN, next Serial Number **60001**

Using the Parts List

- **ID No.:** The callout number from the exploded part diagram.
- **Name/Description:** The name of the part to be ordered and the number of parts supplied per order.
- **Part Number:** The material part number used to order that specific part.
- Parts identified throughout this manual are referenced **PL#.#. #**; For example, PL3.1.10 means the part is item 10 of Parts List 3.1.
- A black triangle preceding a number followed by a parenthetical statement in an illustrated parts list means the item is a parent assembly, made up of the individual parts called out in parentheses.
- The notation “**with X~Y**” following a part name indicates an assembly that is made up of components X through Y. For example, “1 (with 2~4)” means part 1 consists of part 2, part 3, and part 4.
- An asterisk (*) following a part name indicates the page contains a note about this part.
- The notation (NS) next to a part indicates that particular part is not spared, but contained in a kit or major assembly.
- The notation “**J1<>J2 and P2**” is attached to a wire harness. It indicates that connector Jack 1 is attached to one end of the wire harness and connector J2 is attached to the other end that is plugged into P2.

Note

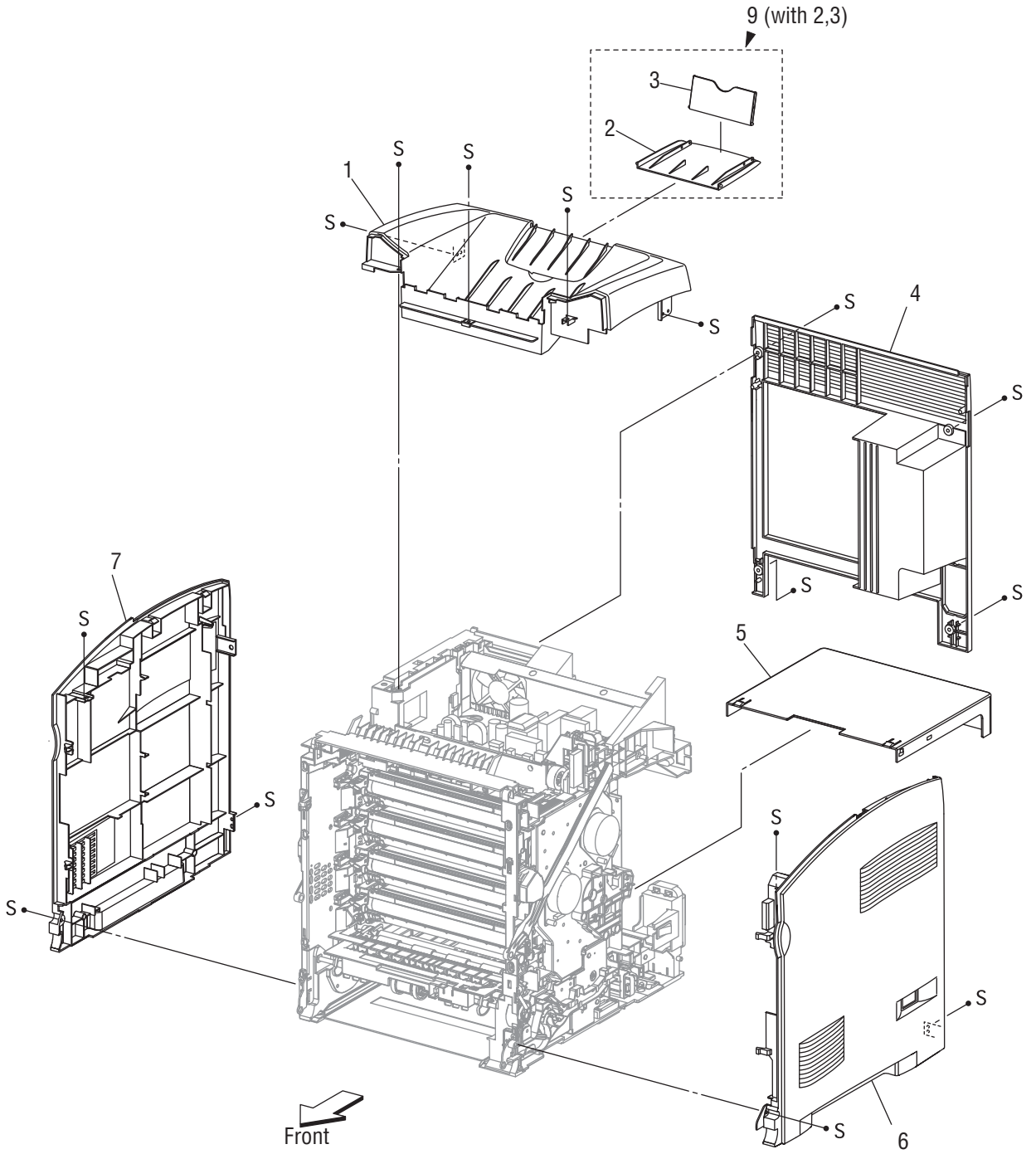
Only parts showing part numbers are available for ordering by support. Parts not showing part numbers are available on the parent assembly.

Abbreviations

Abbreviation	Meaning
C	C-ring
E	E-ring
KL	K-clip
S	Screw

Print Engine Parts

Parts List 1.1 Covers (1 of 2)

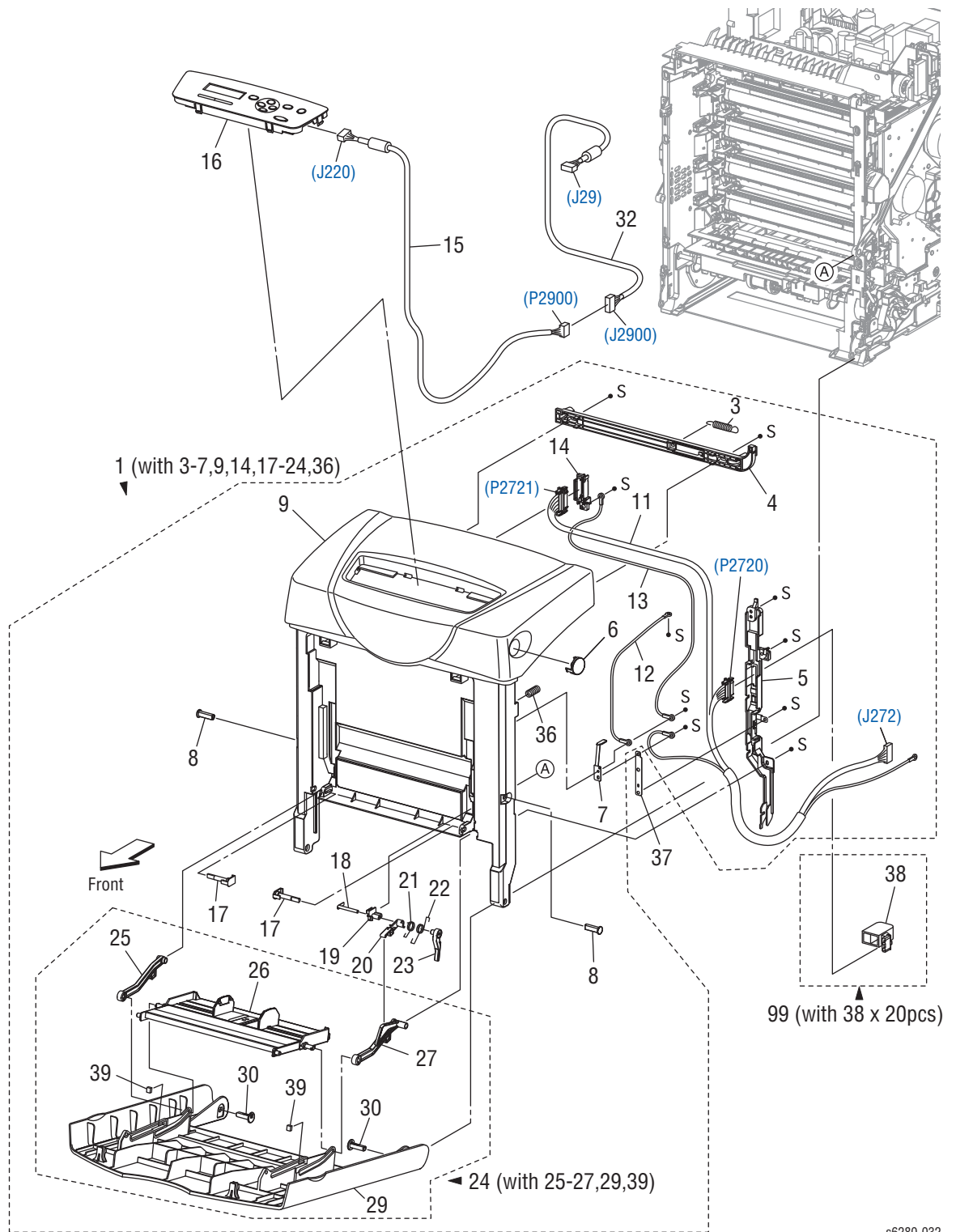


s6280-013

Parts List 1.1 Covers (1 of 2)

ID No.	Name/Description	Part Number
1.	Cover Assy Top	848K19861
2.	Cover Extension 1	
3.	Cover Extension 2	
4.	Cover Rear	848E26092
5.	Cover CST (Tray Cover)	848E26171
6.	Cover Side Right	848E26071
7.	Cover Side Left	848E26041
8.	-----	
9.	Cover Assy Extender (with 2, 3)	848K15480

Parts List 1.2 Covers (2 of 2)

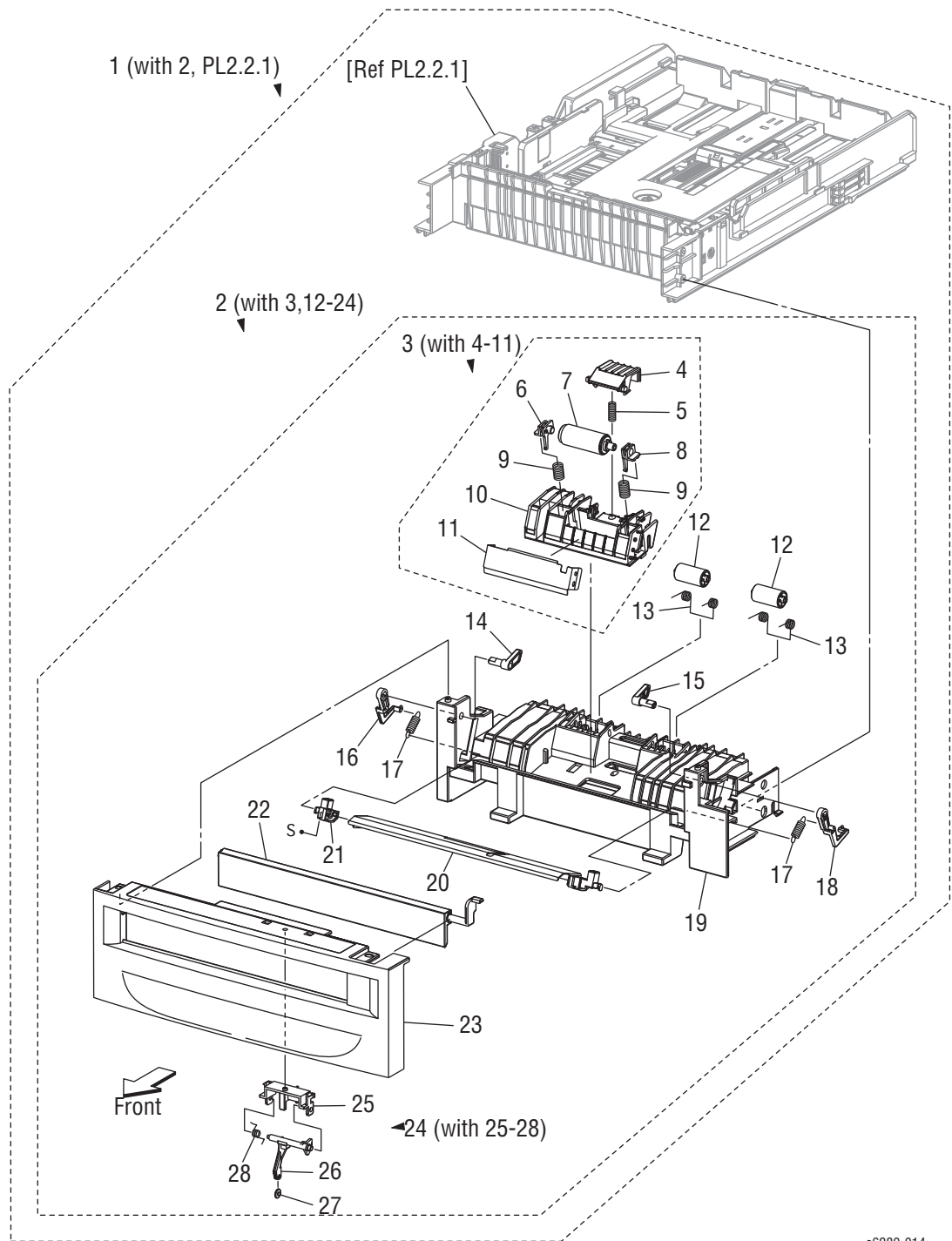


s6280-032

Parts List 1.2 Covers (2 of 2)

ID No.	Name/Description	Part Number
1.	Cover Assy Front (with 3-7, 9, 14, 17-24, 36)	848K15397
2.	-----	
3.	Spring Latch	
4.	Latch Front	
5.	Cover Harness	
6.	Button Top	
7.	Contact Front	
8.	Shaft Pivot (Pin Kit)	675K74260
9.	Cover Front Assy	
10.	-----	
11.	Harness Assy Front Cover (J272-P2720, P2721, T4322-T43221) - (Harness Kit)	675K74250
12.	Harness Assy Front Cover Earth 1 (T4321-T43210)	
13.	Harness Assy Drawer Earth	
14.	Holder Drawer	
15.	Harness Assy Z-X Operation Panel (J220-P2900) - (Harness Kit)	675K74250
16.	Console Panel ZNN (Control Panel)	848K19391
17.	Pin Pivot MPT (Pin Kit)	675K74260
18.	Shaft Lever	
19.	Plate Pivot	
20.	Lever MPT 1	
21.	Spring Lever MPT	
22.	Spring Lever Link	
23.	Lever MPT 2	
24.	Cover Assy MPT (with 25-27, 29, 39)	848K20482
25.	Link MPT Left	
26.	Tray Assy MPT Base	
27.	Link MPT Right	
28.	-----	
29.	Cover MPT (Tray 1 Cover/Door A)	
30.	Shaft Pivot MPT (Pin Kit)	675K74260
31.	-----	
32.	Harness Assy ESS (J29-J2900) - (Harness Kit)	675K74250
33.	-----	
34.	-----	
35.	-----	
36.	Spring	
37.	Plate Earth FC	
38.	CAP Connector Drawer	
39.	Pad Cover MPT	
98.	Pin Kit (with 8, 17, 30)	675K74260
99.	Kit Cap Connector Drawer (with 38 x 20 pcs)	

Parts List 2.1 Tray 2 (1 of 2)



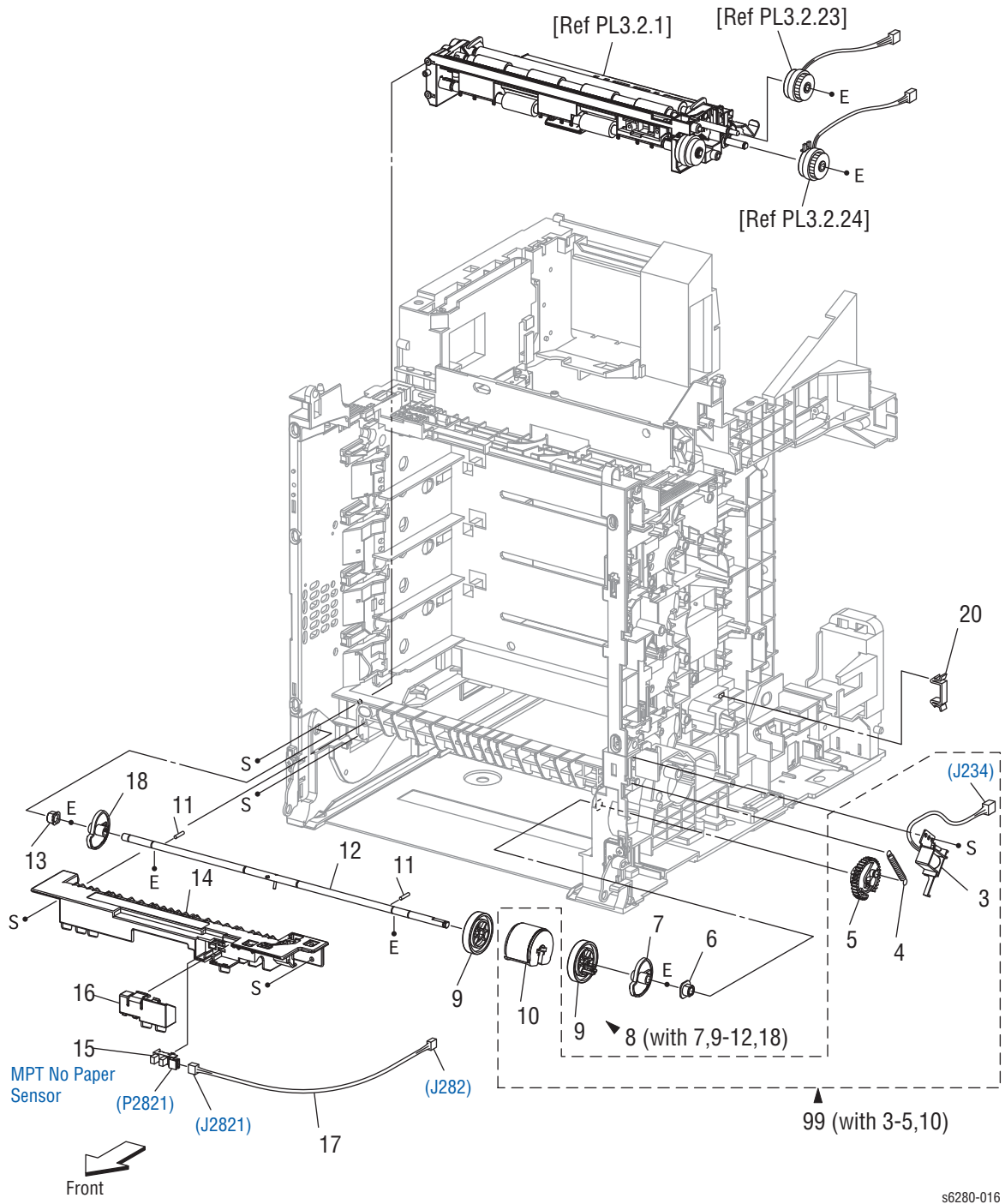
Parts List 2.1 Tray 2 (1 of 2)

ID No.	Name/Description	Part Number
1.	Cassette Assy 250 (with 2, PL2.2.1) (Tray 2)	050K58032
2.	Cassette Assy Front (with 3, 12-24) (Tray 2 Front Assy)	
3.	Separator (Retard) Roller Assembly (with 4-11)	675K74930
4.	Chute Separator	
5.	Spring Chute	
6.	Bearing Separator Left	
7.	Separator (Retard) Roller MPT	
8.	Bearing Separator Right	
9.	Spring Separator 200	
10.	Holder Separator MPT	
11.	Plate Separator	
12.	Roll Pinch Turn	
13.	Spring Pinch Turn	
14.	Follower Left	
15.	Follower Right	
16.	Arm Left	
17.	Spring NF MPT	
18.	Arm Right	
19.	Housing Base FR 250	
20.	Plate Assy Bottom	
21.	Holder Assy MPT Left	
22.	Cover Front MPT	
23.	Handle CST (Tray Handle)	
24.	Actuator Assy MPT (with 25-28)	120K92391
25.	Holder Actuator	
26.	Actuator No Paper MPT	
27.	Roll Actuator No Paper	
28.	Spring No Paper	

Parts List 2.2 Tray 2 (2 of 2)

ID No.	Name/Description	Part Number
1.	Cassette Assy Rear 250 (with 2-13, 18, 19, 21-33)	
2.	Plate Assy BTM A4	
3.	Stopper PB	
4.	Gear BTM Lock Oneway	
5.	Shaft PB A4	
6.	Gear BTM DMP Oneway	
7.	Gear PB Left	
8.	Spring BTM Up 250 A4	
9.	Guide Assy Side Right 250	
10.	Guide Assy Side Left 250	
11.	Gear Pinion	
12.	Holder Assy Separator (with 14-17)	019K09941
13.	Cover Retard CST (Tray Retard Cover)	
14.	Holder Separator	
15.	Shaft Separator	
16.	Clutch Friction Separator (Retard)	
17.	Roll Assy Retard (Separator) (Periodic Replacement Part - per 100K prints) (consists of 3 pcs and tech sheet)	604K55370
18.	Spring Separator	
19.	Switch Size Set	
20.	-----	
21.	Plate Gear Lock 250	
22.	Guide Assy Tray End 250	
23.	Actuator Size	
24.	Housing Base RE 250	
25.	Actuator Release PB	
26.	Spring Stopper Gear	
27.	Gear PB Right	
28.	Cover BTM Up 250	
29.	Rack BTM Lock 250	
30.	Spring BTM Lock	
31.	Gear BTM Lock Pinion	
32.	Gear Lever BTM Lock	
33.	Lever BTM Lock	

Parts List 3.1 Paper Feeder (1 of 2)

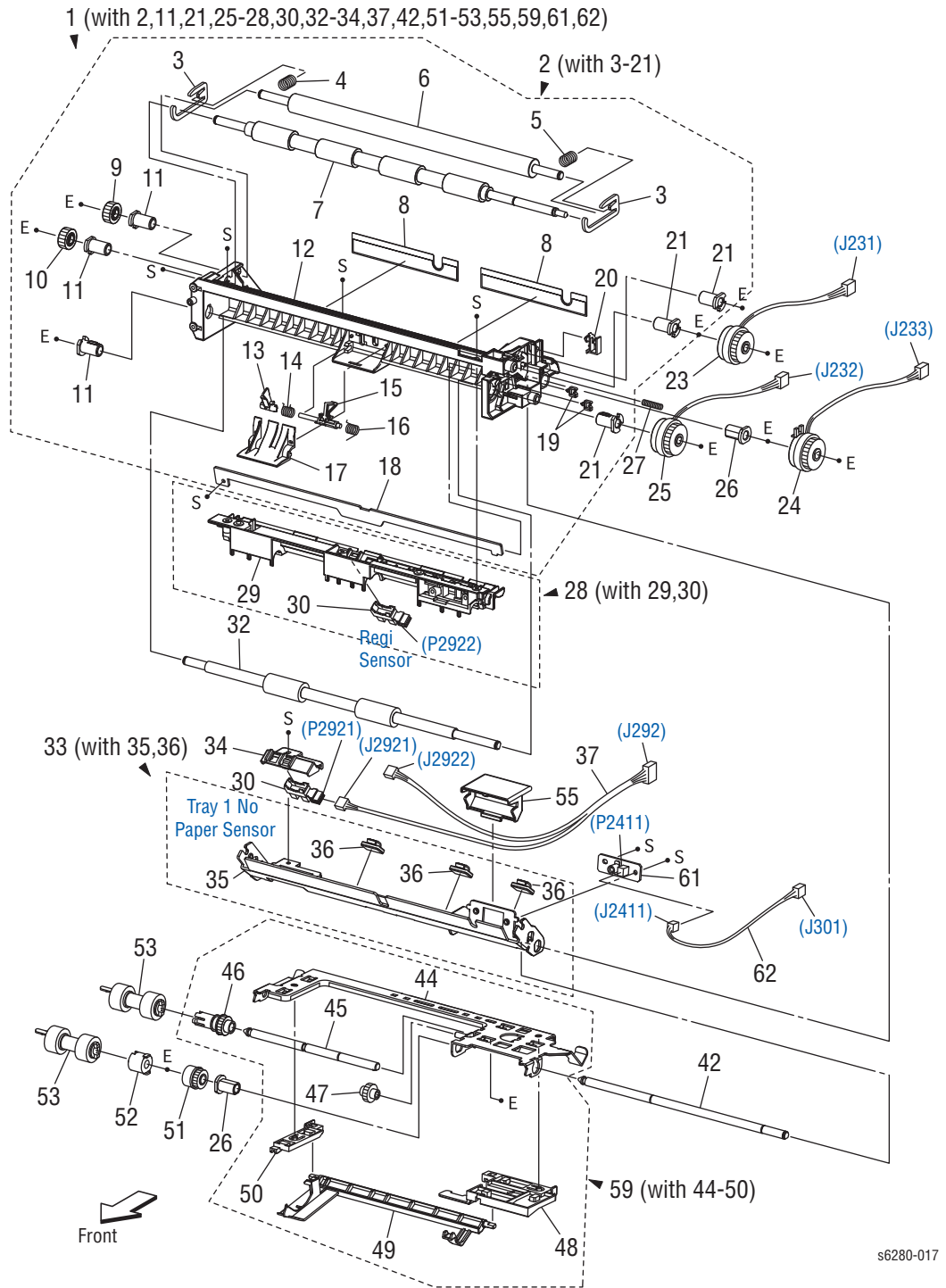


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Parts List 3.1 Paper Feeder (1 of 2)

ID No.	Name/Description	Part Number
1.	-----	
2.	-----	
3.	Solenoid Feed MPT (with 4-5)	675K35590
4.	Spring Feed MPT	
5.	Gear MPT	
6.	Bearing Earth	
7.	CAM MPT Right	
8.	Roll Assy MPT (with 7, 9-12, 18)	059K56521
9.	Roll Core MPT	
10.	Roll Assy Feed MPT	
11.	Pin Dowel	
12.	Shaft MPT	
13.	Bearing	
14.	Chute MPT	
15.	Sensor Photo (Tray 1 No Paper Sensor)	930W00113
16.	Cover Sensor	
17.	Harness Assy MPT NPP (J282-J2821) - (Harness Kit)	675K74380
18.	CAM MPT Left	
19.	-----	
20.	Clamp RFC-11V0	
99.	Kit Roll and Solenoid Feed MPT (with 3-5, 10)	675K68991

Parts List 3.2 Paper Feeder (2 of 2)



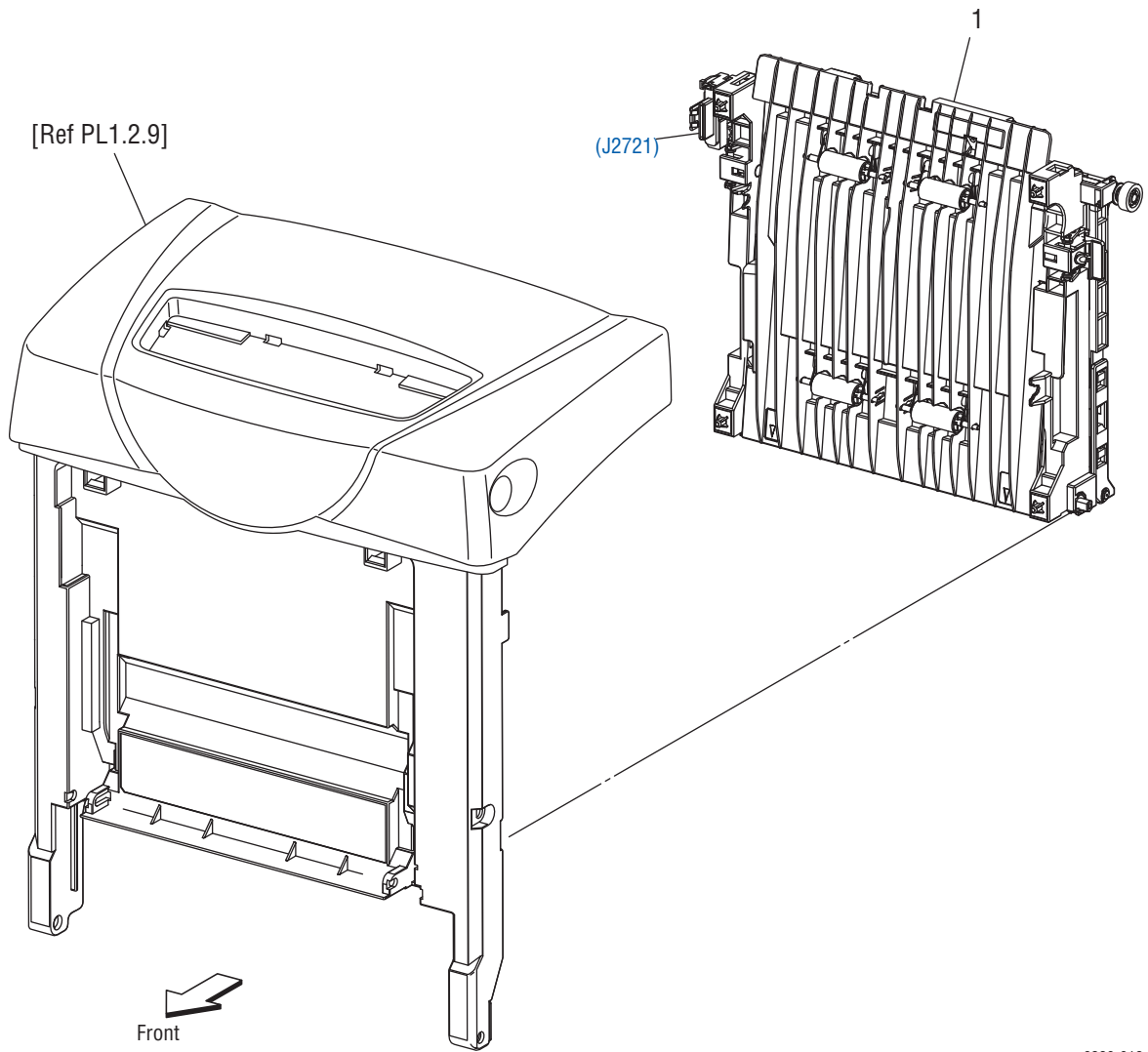
Parts List 3.2 Paper Feeder (2 of 2)

ID No.	Name/Description	Part Number
1.	Feeder Assy (with 2, 11, 21, 25-28, 30, 32-34, 37, 42, 51-53, 55, 59, 61, 62)	675K74270
2.	Chute Assy Regi (with 3-21)	
3.	Bracket NIP	
4.	Spring Regi Left	
5.	Spring Regi Right	
6.	Roll Regi Metal	
7.	Roll Regi Rubber	
8.	Film Inlet Left	
9.	Gear Regi Metal	
10.	Gear Regi Rubber	
11.	Bearing Regi	
12.	Chute Regi	
13.	Actuator A	
14.	Spring Regi Sensor A	
15.	Actuator B	
16.	Spring Regi Sensor B	
17.	Cover Actuator	
18.	Chute Separator BTM	
19.	Clamp Mini-Saddle	
20.	Clamp	
21.	Bearing Regi E	
22.	-----	
23.	Clutch Assy PH	121K37151
24.	Clutch Assy PH Feed	121K37151
25.	Clutch Assy PH Turn	121K37151
26.	Bearing Nudger	
27.	Spring Earth	
28.	Chute Assy Regi Upper (with 29, 30)	
29.	Chute Regi Upper	
30.	Sensor Photo (Regi Sensor, Tray No Paper Sensor)	930W00113
31.	-----	
32.	Roll Assy Turn	
33.	Chute Assy Top (with 35, 36)	
34.	Holder No Sensor	
35.	Chute Assy Separator	
36.	Clamp	
37.	Harness Assy Regi Sensor (J292-J2921, J2922) - (Harness Kit)	675K74380
38.	-----	
39.	-----	
40.	-----	

Parts List 3.2 Paper Feeder (2 of 2) (continued)

ID No.	Name/Description	Part Number
41.	-----	
42.	Shaft Feed	
43.	-----	
44.	Support Nudger Assy	
45.	Shaft Nudger	
46.	Gear Nudger A4	
47.	Gear Idler Nudger	
48.	Holder No Paper Left A4	
49.	Actuator No Paper A4	
50.	Holder No Paper Right A4	
51.	Clutch Oneway Nudger	
52.	Clutch Oneway Feed	
53.	Roll Assy Feed (Periodic Replacement Part - per 100K prints) (consist of 3 pcs and tech sheet)	PL2.2.17
54.	-----	
55.	Cover OHP Sensor	
56.	-----	
57.	-----	
58.	-----	
59.	Nudge Assy (with 44-50)	068K61240
60.	-----	
61.	PWBA TEM Sensor	
62.	Harness Assy TEM Sensor (J301-J2411)	
99.	Kit Feeder Assy (with 3.2.1, 23, 24)	675K74270

Parts List 4.1 Transfer Unit



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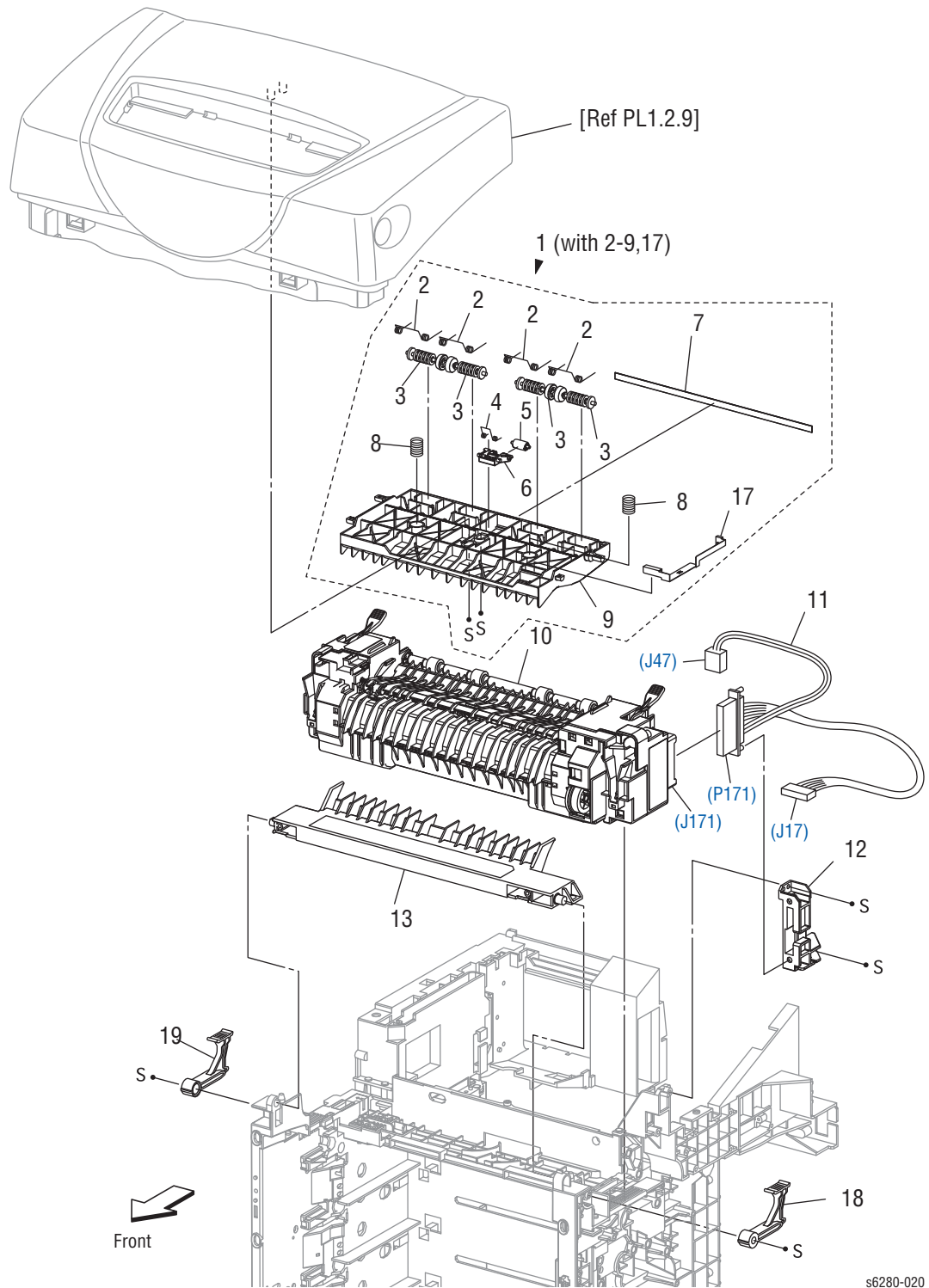
Parts List 4.1 Transfer

ID No.	Name/Description	Part Number
1.	Kit Belt CRU (Transfer Assy) (Periodic Replacement Part - per 100K prints)	675K70582

Parts List 5.1 Xerographics

ID No.	Name/Description	Part Number
1.	Spring ROS (Laser Unit Spring)	
2.	ROS Assy (with 1x2) (Laser Unit)	062K19530
3.	Connector CRUM	
4.	Sensor Assy CRU (with 5-8)	130K72260
5.	Actuator CRU	
6.	Spring CRU	
7.	Bracket Actuator	
8.	Sensor Photo (Print Cartridge Sensor)	930W00113
9.	-----	
10.	Spring CRU Right	
11.	Spring CRU Left	
12.	Dispenser Assy	094K92450
13.	Bias Assy	
14.	Spring ESA Roll	
15.	LED Assy	122K94230
16.	Duct Harness Motor	
17.	HVPS	105K23260
18.	Cartridge Assy (Print Cartridge) (K) (Periodic Replacement Part - per 8K prints)	106R01395
	Cartridge Assy (Print Cartridge) (K) (Periodic Replacement Part - per 3K prints)	106R01391
	Cartridge Assy (Print Cartridge) (K) (Periodic Replacement Part - per 8K prints - DMO)	106R01403
	Cartridge Assy (Print Cartridge) (K) (Periodic Replacement Part - per 3K prints - DMO)	106R01399
	Cartridge Assy (Print Cartridge) (K) (Periodic Replacement Part - per 11K prints - Metered prints)	106R01407
19.	Cartridge Assy (Print Cartridge) (C) (Periodic Replacement Part - per 6K prints)	106R01392
	Cartridge Assy (Print Cartridge) (C) (Periodic Replacement Part - per 2K prints)	106R01388
	Cartridge Assy (Print Cartridge) (C) (Periodic Replacement Part - per 6K prints - DMO)	106R01400
	Cartridge Assy (Print Cartridge) (C) (Periodic Replacement Part - per 2K prints - DMO)	106R01396
	Cartridge Assy (Print Cartridge) (C) (Periodic Replacement Part - per 11K prints - Metered prints)	106R01404
20.	Cartridge Assy (Print Cartridge) (M) (Periodic Replacement Part - per 6K prints)	106R01393
	Cartridge Assy (Print Cartridge) (M) (Periodic Replacement Part - per 2K prints)	106R01389
	Cartridge Assy (Print Cartridge) (M) (Periodic Replacement Part - per 6K prints - DMO)	106R01401
	Cartridge Assy (Print Cartridge) (M) (Periodic Replacement Part - per 2K prints - DMO)	106R01397
	Cartridge Assy (Print Cartridge) (M) (Periodic Replacement Part - per 11K prints 0 Metered prints)	106R01405
21.	Cartridge Assy (Print Cartridge) (Y) (Periodic Replacement Part - per 6K prints)	106R01394
	Cartridge Assy (Print Cartridge) (Y) (Periodic Replacement Part - per 2K prints)	106R01390
	Cartridge Assy (Print Cartridge) (Y) (Periodic Replacement Part - per 6K prints - DMO)	106R01402
	Cartridge Assy (Print Cartridge) (Y) (Periodic Replacement Part - per 2K prints - DMO)	106R01398
	Cartridge Assy (Print Cartridge) (Y) (Periodic Replacement Part - per 11K - Metered prints)	106R01406
22.	Core (Ferrite Core)	

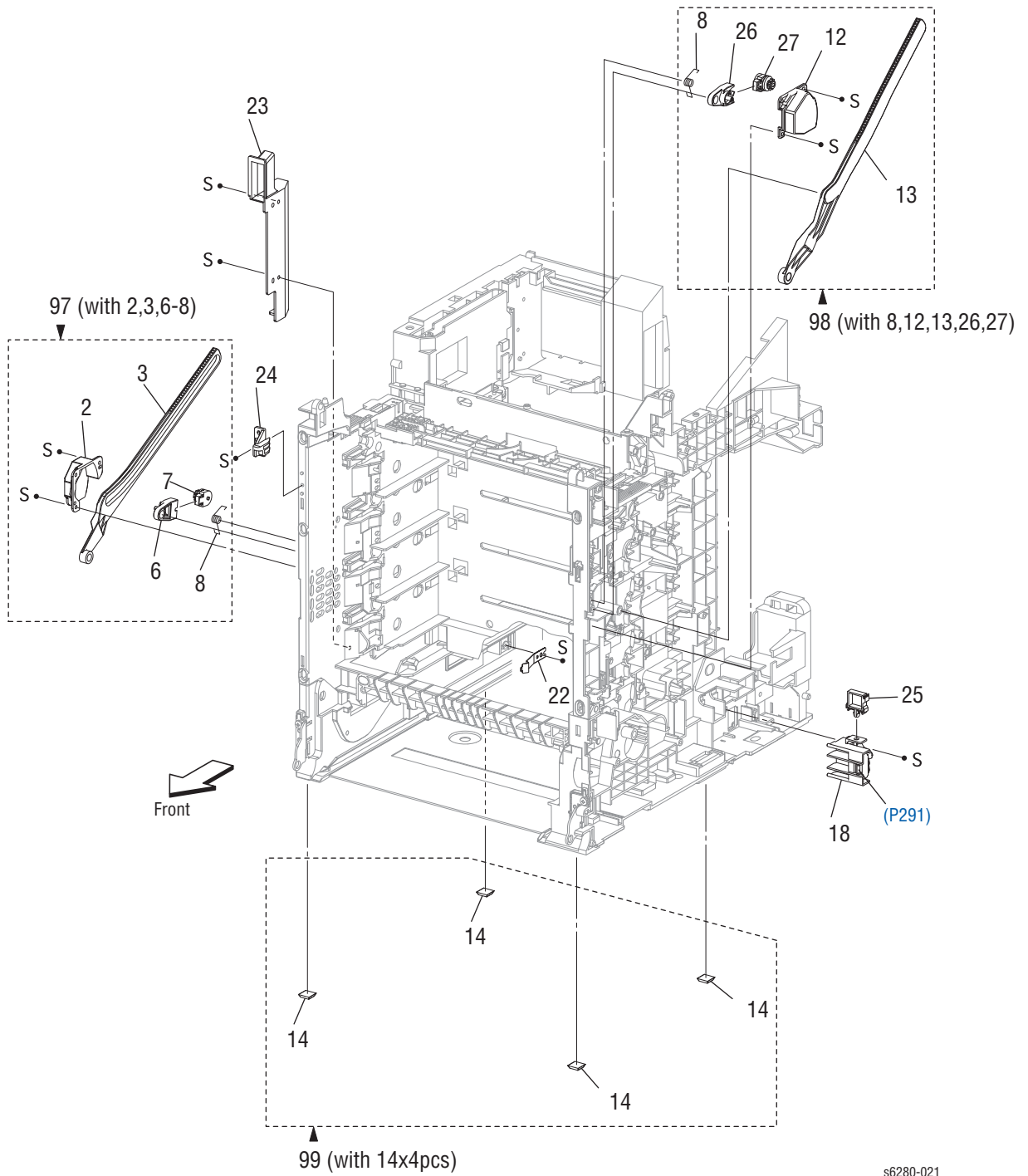
Parts List 6.1 Fuser & Exit



Parts List 6.1 Fuser & Exit

ID No.	Name/Description	Part Number
1.	Chute Assy Exit Out (with 2-9, 17) (attached on PL 01.02.09)	054K35574
2.	Spring Pinch Exit Out	
3.	Roll Pinch Exit	
4.	Spring Corrugate	
5.	Roll Corrugate	
6.	Holder Corrugate	
7.	Eliminator Exit	
8.	Spring Chute Out	
9.	Chute Exit Out	
10.	Fuser Assy KMY 115V (Periodic Replacement Part - per 100K prints)	675K70591
	Fuser Assy KMY 230V (Periodic Replacement Part - per 100K prints)	675K70601
11.	Harness Assy Fuser (P171-J17, J47) - 100V/115V - (Harness Kit, Black & White)	675K74380
	Harness Assy Fuser (P171-J17, J47) - 200V - (Harness Kit, Blue & Brown)	675K74380
12.	Bracket Fuser	
13.	Chute Dup Gate	054K40310
14.	-----	
15.	-----	
16.	-----	
17.	Plate Earth Exit	
18.	Lever Fuser D	
19.	Lever Fuser AD	

Parts List 7.1 Frame

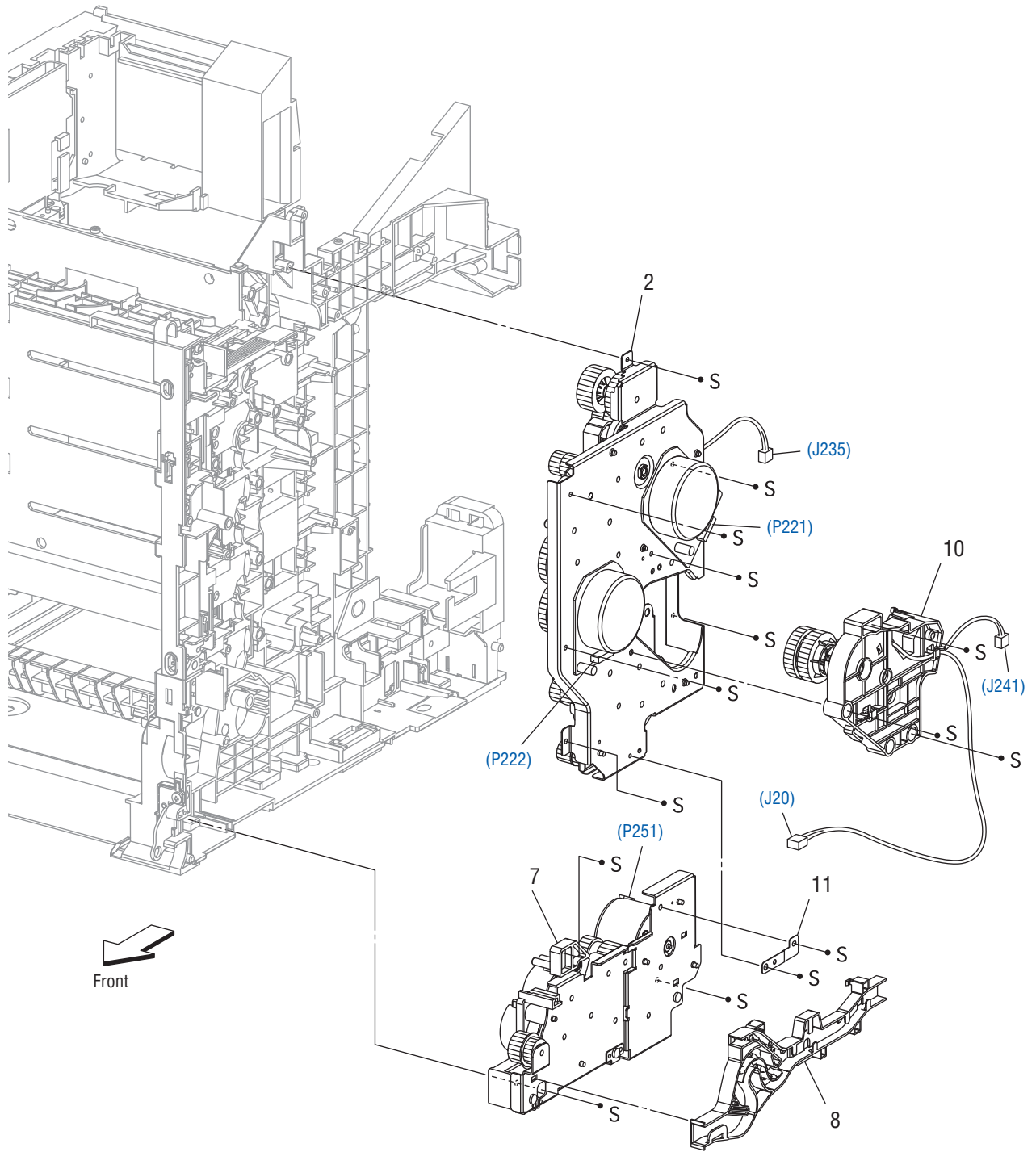


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Parts List 7.1 Frame

ID No.	Name/Description	Part Number
1.	-----	
2.	Support Link Left (Kit)	
3.	Link Left (Kit)	
4.	-----	
5.	-----	
6.	Holder Damper (Kit)	
7.	Damper Oil (Kit)	
8.	Spring Support (Kit)	
9.	-----	
10.	-----	
11.	-----	
12.	Support Link Right (Kit)	
13.	Link Right (Kit)	
14.	Foot (with 14 x 4 pcs)	
15.	-----	
16.	-----	
17.	-----	
18.	Switch Assy Size	110K15270
19.	-----	
20.	-----	
21.	-----	
22.	Spring Tray Lock	
23.	Duct Side Left	
24.	Stopper Frame Left	
25.	Clamp Locking	
26.	Holder Damper H	
27.	Damper Oil H	
97.	Kit Link Left (with 2, 3, 6-8)	675K74280
98.	Kit Link Assy Right (with 8, 12-13, 26-27)	675K74290
99.	Kit Foot Assy (with 14 x 4 pcs)	675K69770

Parts List 8.1 Drive

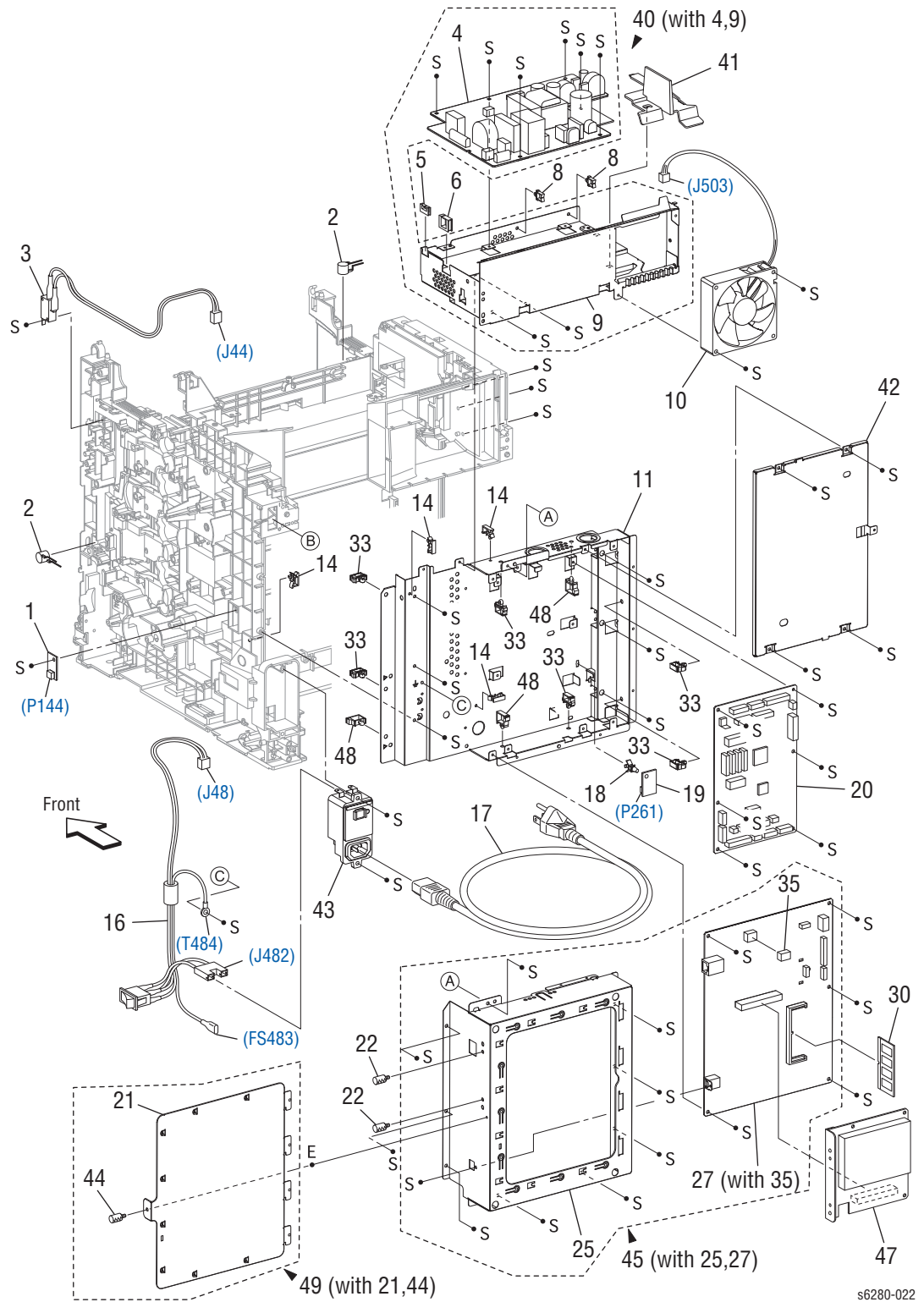


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Parts List 8.1 Drive

ID No.	Name/Description	Part Number
1.	-----	
2.	Drive Assy Main	675K74300
3.	-----	
4.	-----	
5.	-----	
6.	-----	
7.	Drive Assy PH	675K74311
8.	Duct Assy Drive PH	
9.	-----	
10.	Drive Assy K	675K74320
11.	Plate Earth DRV MP	

Parts List 9.1 Electrical



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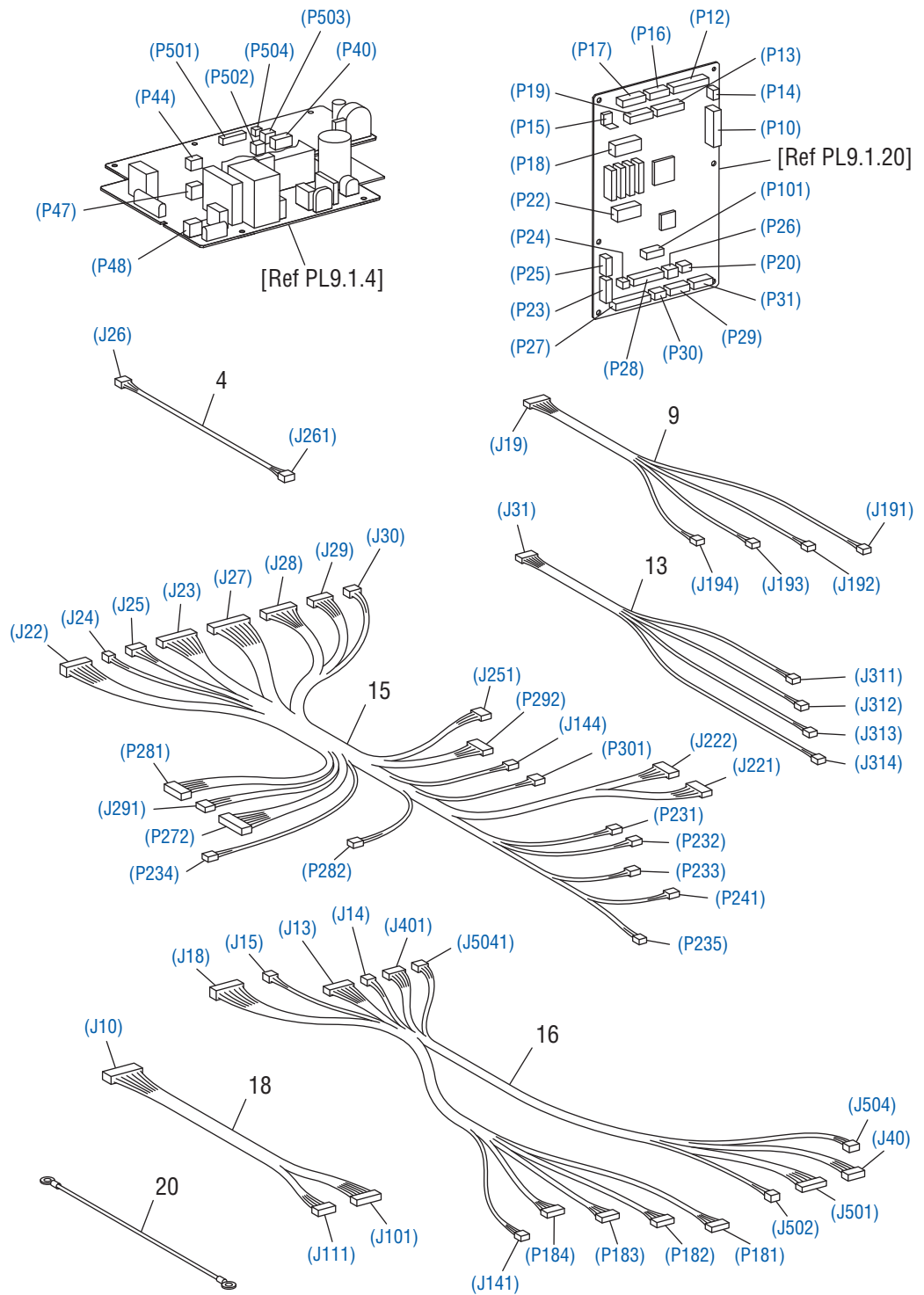
Parts List 9.1 Electrical

ID No.	Name/Description	Part Number
1.	PWBA EEPROM (XPRO)	
2.	Varistor	
3.	Harness Assy Interlock (Interlock Switch-J44) (Harness Kit)	675K74380
4.	LVPS KMY 100/115V	105K23641
	LVPS KMY 230V	105K23651
5.	Edge Saddle ES-0510	
6.	Edge Saddle LENS-1010	
7.	-----	
8.	Clamp RMS-3V0	
9.	Shield LVPS	
10.	Fan Main	127E84800
11.	Shield Rear	
12.	-----	
13.	-----	
14.	Clamp MST-10V0	
15.	-----	
16.	Harness Assy AC IN 110V (Switch Power - J48, J482, FS483,-T484) - (Harness Kit)	675K74370
	Harness Assy AC IN 240V (Switch Power - J48, J481) - (Harness Kit)	675K74370
17.	Power Cord	See Power Cord Accessories
18.	Spacer RCBT-11S	
19.	Sensor Humidity	130E87990
20.	PWBA MCU	960K39343
21.	Shield Window	
22.	Screw Knurling	
23.	-----	
24.	-----	
25.	Shield ESS (I/P Board Shield)	
26.	-----	
27.	PWBA ESS (Image Processor Board) (with 35) (with Tech Sheet)	960K39185
28.	-----	
29.	-----	
30.	512 MB DDR2 Memory (1x 512 MB) (Option)	604K48400
31.	-----	
32.	-----	
33.	Clamp RLWC-1SV0	
34.	-----	
35.	NVM ROM	
36.	-----	
37.	-----	

Parts List 9.1 Electrical (continued)

ID No.	Name/Description	Part Number
38.	-----	
39.	-----	
40.	LVPS Assy (with 4, 9)	
41.	Duct Air Flow	
42.	Shield MCU	
43.	Breaker GFI Inlet	
44.	Screw Knurling	
45.	Shield Assy ESS (with 25, 27) (I/P Board Shield Assy)	
46.	-----	
47.	HDD Assy (Option)	121K50720
48.	Clamp	
49.	Shield Assy Window (with 21, 44)	

Parts List 10.1 Wiring Harness



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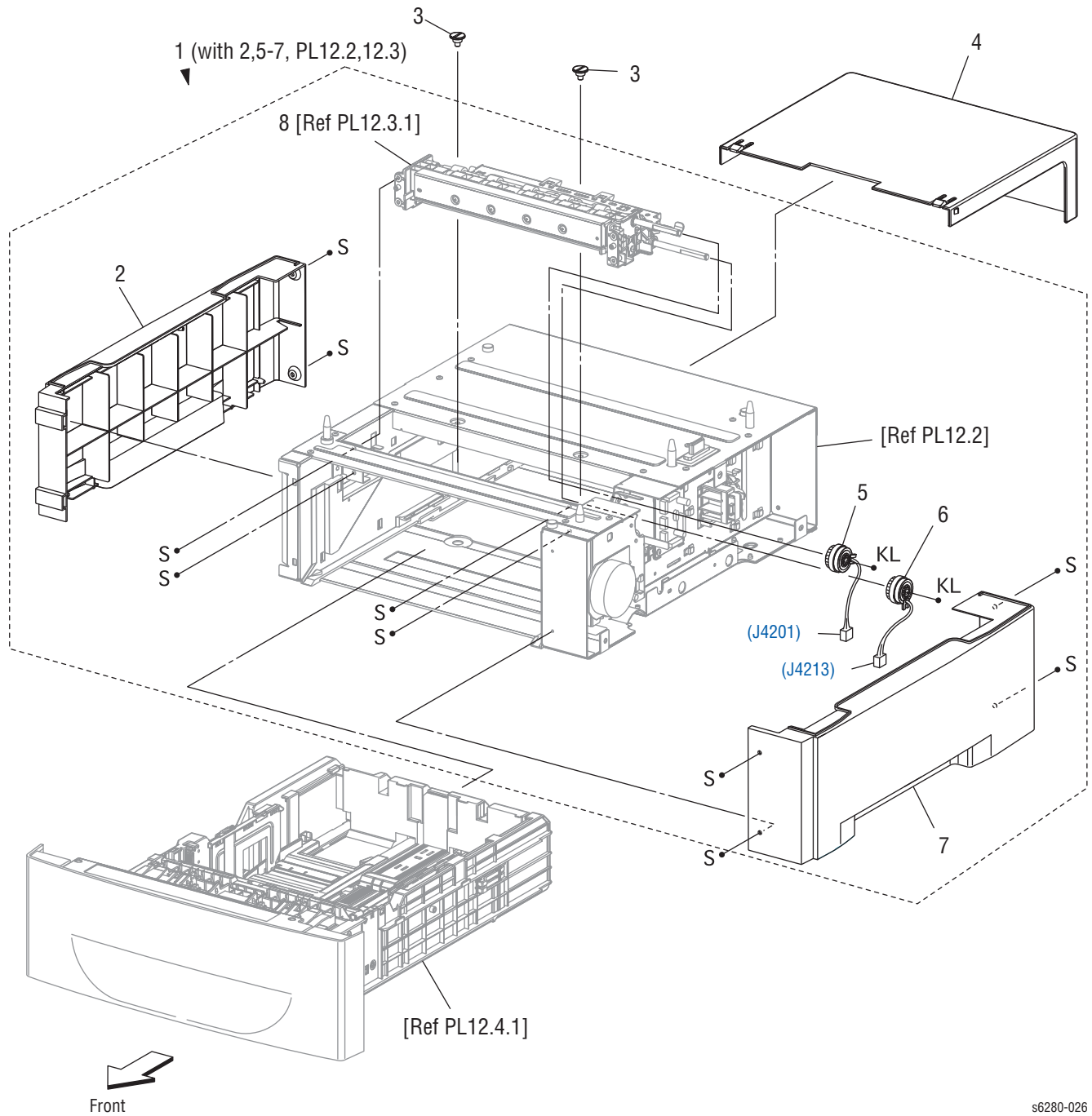
Parts List 10.1 Wiring Harness

ID No.	Name/Description	Part Number
1.	-----	
2.	-----	
3.	-----	
4.	Harness Assy Humidity (J26-J261) - (Harness Kit)	675K74370
5.	-----	
6.	-----	
7.	-----	
8.	-----	
9.	Harness Assy CRU SNR (J19-J191, J192, J193, J194) - (Harness Kit)	675K74370
10.	-----	
11.	-----	
12.	-----	
13.	Harness Assy CRUM (J31-J311, J312, J313, J314) - (Harness Kit)	675K74370
14.	-----	
15.	Harness Assy Right Side (J22, J23, J24, J25, J27, J28, J29, J30-J144, J221, J222, P231, P232, P233, P234, P235, P241, J251, P272, J281, P282, J291, P292, P301) - (Harness Kit)	675K74370
16.	Harness Assy LV Top (J13, J14, J15, J18, J401, J5041-J141, P181, P182, P183, P184, J40, J501, J502, J504) - (Harness Kit)	675K74370
17.	-----	
18.	Harness Assy IF (J10-J101, J111) - (Harness Kit)	675K74370
19.	-----	
20.	Harness Assy BTM Earth	

Parts List 11.1 Duplex

ID No.	Name/Description	Part Number
1.	Duplex Module (with 2-7, 9-20, 22-27)	675K47078
2.	Stopper Latch Duplex	
3.	Handle Latch Duplex	
4.	Latch Duplex	
5.	Holder Main	
6.	Spring Chute Duplex	
7.	Bracket Holder Duplex	
8.	-----	
9.	Actuator Duplex	
10.	Spring Sensor Duplex	
11.	Holder Sensor Duplex	
12.	Sensor Photo (Duplex Jam Sensor)	
13.	Harness Assy Duplex Sensor (J430-J4301)	
14.	Clamp Mini	
15.	PWBA Duplex-H	
16.	Cover PWBA Duplex	
17.	Cover Connect Duplex	
18.	Harness Assy Duplex Unit (J428-J2720)	
19.	Holder Connect Duplex	
20.	Spring Connect Duplex	
21.	-----	
22.	Bracket Fan Duplex	
23.	Cover Harness Fan	
24.	Cover Harness Chute	
25.	Fan Duplex	
26.	Seal Duplex	
27.	Cover Chute Duplex	

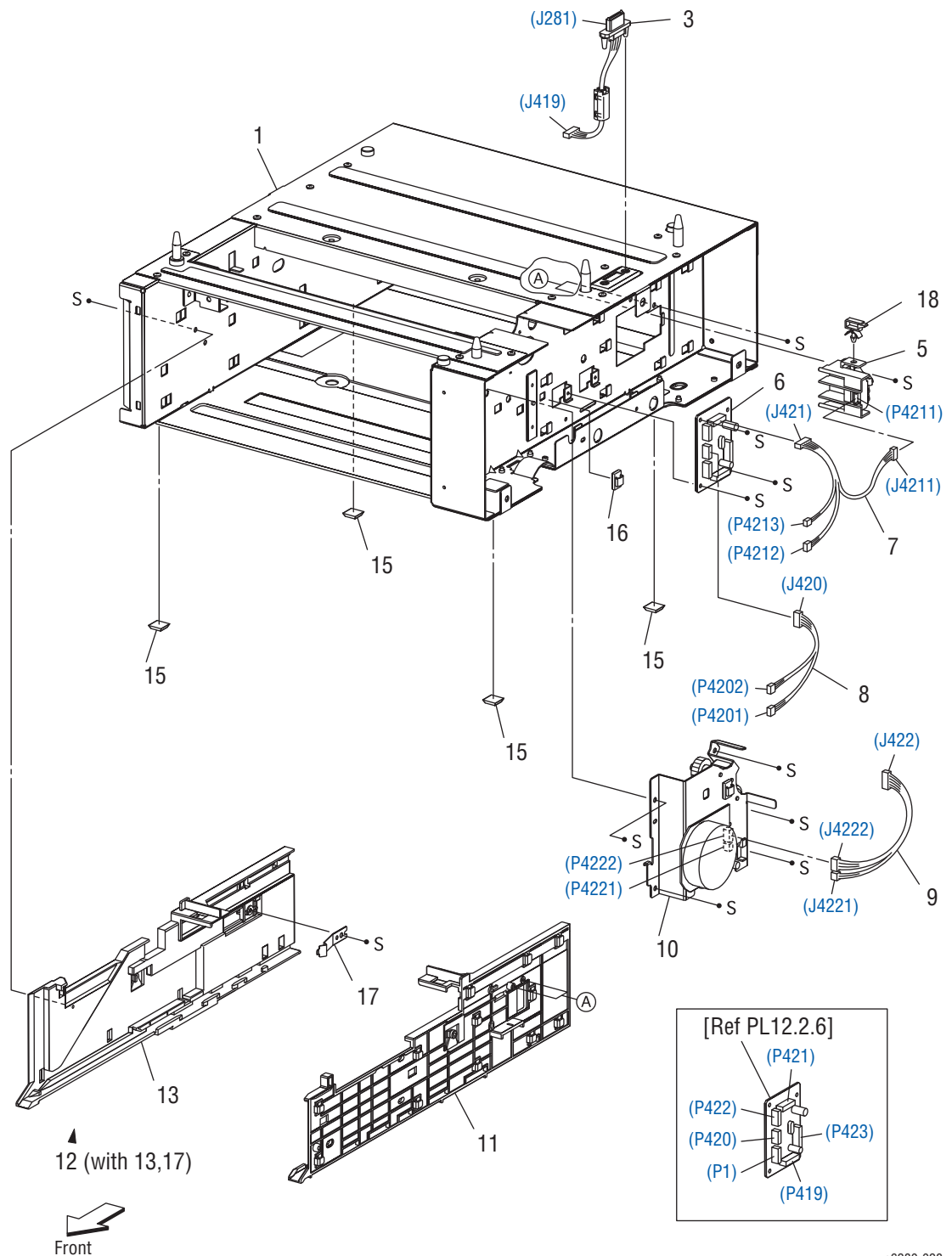
Parts List 12.1 Optional-550 Sheet Feeder - Tray 3 (1 of 5)



Parts List 12.1 Optional 550-Sheet Feeder - Tray 3 (1 of 5)

ID No.	Name/Description	Part Number
1.	550 Option Feeder (with 2, 5-7, PL12.2-12.3)	675K47066
2.	Cover Left	
3.	Screw Joint	
4.	Cover Tray 550	
5.	Clutch Assy PH Turn	
6.	Clutch Assy PH Feed	
7.	Cover Right	
8.	Feed Assy Option	05948273

Parts List 12.2 Optional 550-Sheet Feeder - Tray 3 (2 of 5)



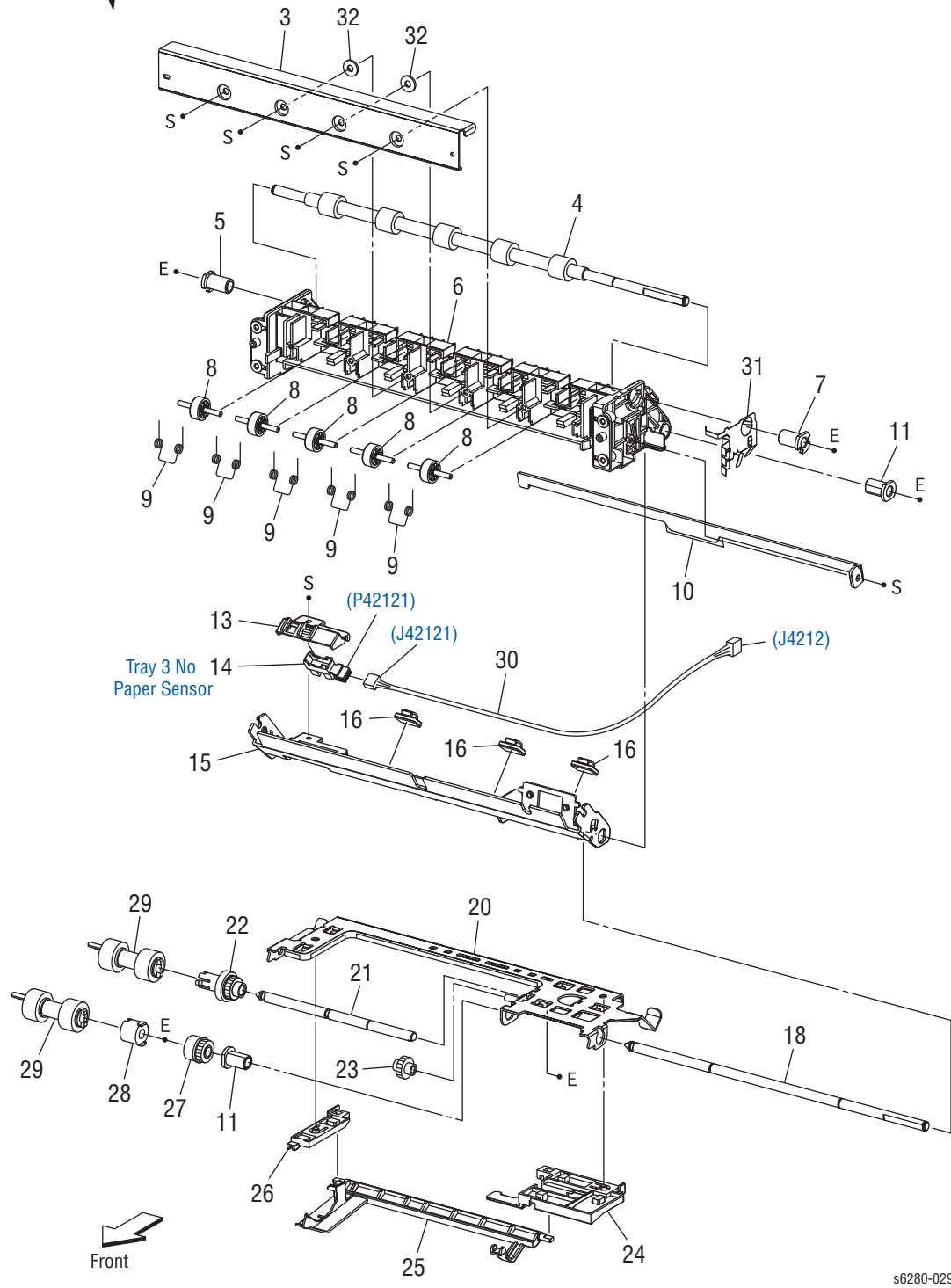
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Parts List 12.2 Optional 550-Sheet Feeder - Tray 3 (2 of 5)

ID No.	Name/Description	Part Number
1.	Frame Assy Option	
2.	-----	
3.	Harness Assy Feeder Unit (J273-J419)	
4.	-----	
5.	Switch Assy Size Option	110K15270
6.	PWBA Option Feeder (Tray 3 Feeder Board)	
7.	Harness Assy C2 Chute (J421-J4211, P4212, P4213)	
8.	Harness Assy C2 Turn (J420-P4201, P4202)	
9.	Harness Assy C2 Motor (J422-J4221, J4222)	
10.	Drive Assy Option Feeder	
11.	Guide Tray Right 550	
12.	Guide Tray Assy 550 Left (with 13, 17)	
13.	Guide Tray Left 550	
14.	-----	
15.	Foot	PL7.1.99
16.	Clamp Mini	
17.	Spring Tray Lock	
18.	Clamp Locking	

Parts List 12.3 Optional 550-Sheet Feeder - Tray 3 (3 of 5)

1 (with 3-11,13-16,18,20-29,31,32)

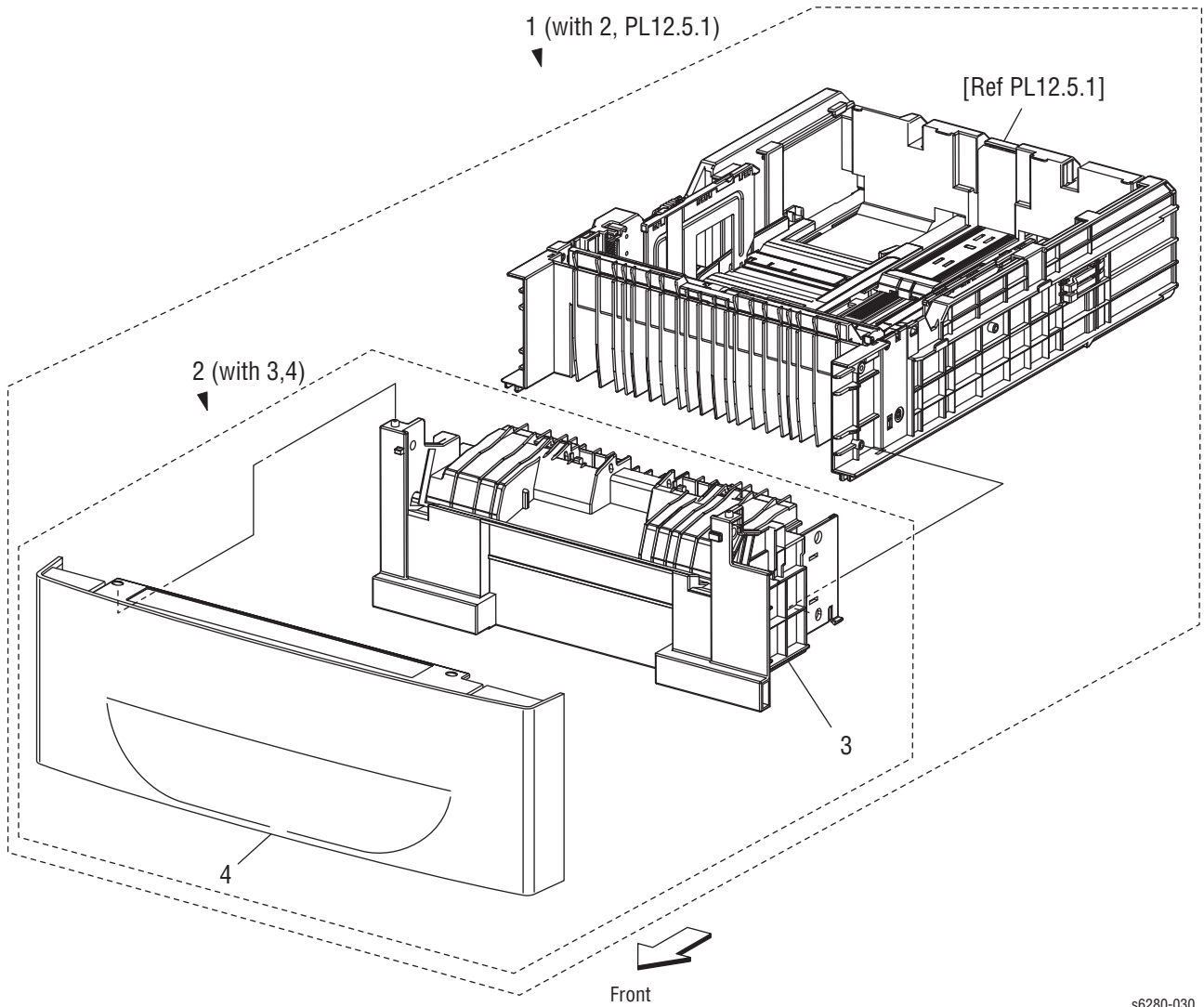


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Parts List 12.3 550-Sheet Feeder - Tray 3 (3 of 5)

ID No.	Name/Description	Part Number
1.	Feeder Assy Opt (with 3-11, 13-16, 18, 20-29, 31, 32)	05948273
2.	-----	
3.	Cover Chute	
4.	Roll Assy Turn	
5.	Bearing Regi	
6.	Chute FDR Optional	
7.	Bearing Regi E	
8.	Roll Pinch Turn	
9.	Spring Pinch Turn	
10.	Chute Assy Bottom	
11.	Bearing Nudger	
12.	-----	
13.	Holder No Sensor	
14.	Sensor Photo (Tray No Paper Sensor)	930W00113
15.	Chute Assy Separator	
16.	Clamp	
17.	-----	
18.	Shaft Feed Optional	
19.	-----	
20.	Support Nudger Assy	
21.	Shaft Nudger	
22.	Roll Assy Gear Nudger	
23.	Gear Idler Nudger	
24.	Holder No Paper Left A4	
25.	Actuator No Paper A4	
26.	Holder No Paper Right A4	
27.	Clutch Oneway Feed	
28.	Clutch Oneway Nudger	
29.	Roll Assy Feed (Periodic Replacement Part - per 100K prints)	PL2.2.17
30.	Harness Assy C2 No Paper (J4212-J42121)	
31.	Plate Earth Optional	
32.	Washer	

Parts List 12.4 Optional 550-Sheet Feeder - Tray 3 (4 of 5)



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Parts List 12.4 550-Sheet Feeder - Tray 3 (4 of 5)

ID No.	Name/Description	Part Number
1.	Tray Assy 500 Opt (with 2, PL12.5.1)	675K47066
2.	Tray Assy Front 550 Opt (with 3, 4)	
3.	Housing Base FR 550	
4.	Handle Tray 550 Opt	

Parts List 12.5 550-Sheet Feeder - Tray 3 (5 of 5)

ID No.	Name/Description	Part Number
1.	Tray Assy Rear 550 (with 2-13, 18, 19, 21-34)	
2.	Plate Assy Bottom A4	
3.	Stopper PB	
4.	Gear Bottom Lock Oneway	
5.	Shaft PB A4	
6.	Gear Bottom DMP Oneway	
7.	Gear PB Left	
8.	Spring Bottom up 550 A4	
9.	Guide Assy Side Right 550 A4	
10.	Guide Assy Side Left 550 A4	
11.	Gear Pinion	
12.	Holder Assy Separator (with 14-17)	PL2.2.12
13.	Cover Separator Tray	
14.	Holder Separator	
15.	Shaft Separator	
16.	Clutch Friction Separator	
17.	Separator (Retard) Roller (Periodic Replacement Part - per 100k prints)	PL2.2.17
18.	Spring Separator	
19.	Switch Size Set	
20.	-----	
21.	Plate Gear Lock 550	
22.	Guide Assy Tray End 550	
23.	Actuator Size	
24.	Housing Base RE 550	
25.	Actuator RLS PB	
26.	Spring Stopper Gear	
27.	Gear PB Right	
28.	Cover Bottom Up 550	
29.	Rack Bottom Lock 550	
30.	Spring Bottom Lock	
31.	Gear Bottom Lock Pinion	
32.	Gear Lever Bottom Lock	
33.	Lever Bottom Lock	
34.	Gear 40 Bottom Lock	

Xerox Supplies and Accessories

World Kit/Documentation

Description	Part Number
World Kit	650K30170

Consumables and Maintenance Items

Parts List Reference	Description	Part Number
PL2.2.17 PL3.2.53 PL12.3.17	Kit, Roll Assy Feed (100K)	604K55370
PL4.1.1	Kit Belt CRU (Transfer Unit) (100K)	675K70582
PL6.1.10	Fuser Assy - 115V (100K)	675K70591
	Fuser Assy - 230V (100K)	675K70601
PL5.1.18	Print Cartridge (K), High Capacity (8K)	106R01395
	Print Cartridge (K), Standard Capacity (3K)	106R01391
	Print Cartridge (K) (High Capacity (8K) - DMO)	106R01403
	Print Cartridge (K) (Standard Capacity (3K) - DMO)	106R01399
	Print Cartridge) (K) (Metered prints) (11K)*	106R01407
PL5.1.19	Print Cartridge (C), High Capacity (6K)	106R01392
	Print Cartridge (C), Standard Capacity (2K)	106R01388
	Print Cartridge (C) (High Capacity (6K) - DMO)	106R01400
	Print Cartridge (C) (Standard Capacity (2K) - DMO)	106R01396
	Print Cartridge (C) (Metered prints) (11K)*	106R01404
PL5.1.20	Print Cartridge (M), High Capacity (6K)	106R01393
	Print Cartridge (M), Standard Capacity (2K)	106R01389
	Print Cartridge (M) (High Capacity (6K) - DMO)	106R01401
	Print Cartridge) (M) (Standard Capacity (2K) - DMO)	106R01397
	Print Cartridge (M) (Metered prints) (11K)*	106R01405
PL5.1.21	Print Cartridge (Y), High Capacity (6K)	106R01394
	Print Cartridge (Y), Standard Capacity (2K)	106R01390
	Print Cartridge) (Y) (High Capacity (6K) - DMO)	106R01402
	Print Cartridge) (Y) (Standard Capacity (2K) - DMO)	106R01398
	Print Cartridge) (Y) (Metered prints) (11K)*	106R01406

(*) Metered prints Cartridges cannot be used in Standard configuration printer. Be sure the printer is configured for PagePack usage.

Options

Parts List Reference	Description	Part Number
PL9.1.30	512 MB DDR2 Memory (1x 512 MB)	604K48400
PL11.1.1	Kit Duplex Unit	675K47078
PL12.1.1	550-Sheet Feeder	675K47066, PL12.2-12.5

Power Cords

Description	Part Number
Power Cord, North America (NEMA 5-15), 125 V, 13A	117E35170
Power Cord, Argentina, 250 V	117K52030
Power Cord, Australia, 230 V	117E29490
Power Cord, Chile, 250 V	117K52020
Power Cord, China, 220 V	117E35030
Power Cord, Denmark, 230 V	117E29460
Power Cord, Euro, 230 V	117E29500
Power Cord, India/South Africa, 230 V	117E29470
Power Cord, Israel, 230 V	117E29480
Power Cord, Italy, 230 V	117E29450
Power Cord, UK, 240 V	117E29510
Power Cord, Peru, 125 V	117K52040
Power Cord, Switzerland, 230 V	117E35050

Service Kits

Service Kits are developed to provide an easy means to obtain spare parts normally associated with larger assemblies. A number of Service Kits have been developed for the Phaser 6280. The following tables list the contents for each kit.

Kits

Pin Kit

Parts List Reference	Description	Part Number
1.2.98	Pin Kit (with 1.2.8, 1.2.17, 1.2.30)	675K74260
<i>PL1.2.8</i>	<i>Shaft Pivot</i>	
<i>PL1.2.17</i>	<i>Pin Pivot MPT</i>	
<i>PL1.2.30</i>	<i>Shaft Pivot MPT</i>	

Hardware Kit

Parts List Reference	Description	Part Number
99.99.90	Hardware Kit	604K34030
	<i>Screw, Bind Head Del (1)</i>	
	<i>Screw, 8 mm Plastic (1)</i>	
	<i>Screw, Tap Bind Head (1)</i>	
	<i>Screw, M3x6 B (1)</i>	
	<i>Screw, DT3x8 B (1)</i>	
	<i>E-Ring, 3 mm (1)</i>	
	<i>E-Ring, 4 mm (1)</i>	

Packaging Kit

Parts List Reference	Description	Part Number
	Re-Packaging Kit	604K55460

Harness Kits

Parts List Reference	Description	Part Number
99.99.91	Kit Harness Front Cover STD	675K74250
PL1.2.11	Harness Assy Front Cover (J272-P2720, P2721, T4322-T43221)	
PL1.2.15	Harness Assy Z-X Operation Panel (J220-P2900)	
PL1.2.32	Harness Assy ESS (J29-J2900)	
99.99.92	Kit Harness Feeder/Fuser/Interlock STD	675K74380
PL3.1.17	Harness Assy MPT NPP (J282-J2821)	
PL3.2.37	Harness Assy Regi Sensor (J292-J2921, J2922)	
PL6.1.11	Harness Assy Fuser (P171-J17, J47), 100V/115V	
PL6.1.11	Harness Assy Fuser (P171-J17, J47) - 200V	
PL9.1.3	Harness Assy Interlock (Interlock Switch-J44)	
99.99.93	Kit Harness Power Switch STD	675K74370
PL9.1.16	Harness Assy AC IN 110V (Switch Power - J48, J482, FS483,-T484)	
PL9.1.16	Harness Assy AC IN 240V (Switch Power - J48, J481)	
PL10.1.4	Harness Assy Humidity (J26-J261)	
PL10.1.9	Harness Assy CRU SNR (J19-J191, J192, J193, J194)	
PL10.1.13	Harness Assy CRUM (J31, J311, J312, J313, J314)	
PL10.1.15	Harness Assy Right Side (J22, J23, J24, J25, J27, J28, J29, J30-J144, J221, J222, P231, P232, P233, P234, P235, P241, J251, P272, J281, P282, J291, P292, P301)	
PL10.1.16	Harness Assy LV Top (J13, J14, J15, J18, J401, J5041-J141, P181, P182, P183, P184, J40, J501, J502, J504)	
PL10.1.18	Harness Assy IF (J10-J101, J111)	

Plug/Jack and Wiring Diagrams

In this chapter...

- Plug/Jack Diagrams and Designators
- Plug/Jack Locators
- Notations Used in the Wiring Diagrams
- Print Engine Wiring Diagrams
- Optional 550-Sheet Feeder Wiring Diagram
- Duplex Wiring Diagram

Chapter 10

Plug/Jack Diagrams and Designators

This chapter contains the Plug/Jack Designators, Locators, and wiring diagrams for the print engine and all options.

The Plug/Jack Locator diagrams show the P/J locations within the printer, Optional 550-Sheet Feeder, and Duplex Unit. Use these illustrations to locate connections called out in the Troubleshooting procedures presented in Sections 3, 4, and 5.

The Plug/Jack locators consist of the P/J Designator Tables and the P/J Locator Diagrams.

- The P/J column lists the Plug/Jack numbers in numerical order.
- The Map column provides the map number of the specific areas (i.e., Electrical, Laser Unit...etc.)
- The Coordinates column lists the diagram coordinates for the location of the connector.
- The Remarks column provides a brief description of each connection.
 1. Locate the P/J connector designator in the first column of the table.
 2. With this information, go to the map listed in the second column.
 3. Use the coordinates to locate the connection indicated on the map with its P/J designation number.

Print Engine Plug/Jack Designators

Print Engine Plug/Jack Designators

P/J	Map	Coordinates	Remarks
3	3	E-138	Connects the Image Processor Board and the Hard Drive.
10	4	J-157	Connects the MCU Board and IF Harness.
12	4	J-157	Connects the MCU Board and the Laser Harness.
13	4	J-157	Connects the MCU Board and the Top Low Voltage Harness.
14	4	J-157	Connects the MCU Board and the Top Low Voltage Harness.
15	4	J-157	Connects the MCU Board and the Top Low Voltage Harness.
16	3	F-138	Connects the MCU Board and the Network Protocol Adapter.
16	4	I-157	Connects the MCU Board and the HVPS.
17	4	I-157	Connects the MCU Board and Fuser Harness.
18	4	I-157	Connects the MCU Board and Top Low Voltage Harness.
J19	4	I-156	Connects the MCU Board and the CRU Sensor Harness.
20	4	J-158	Connects the MCU Board and the K Drive Assembly (K Sensor Harness).
22	4	I-158	Connects the MCU Board and the Right Side Harness.
23	4	I-159	Connects the MCU Board and the Right Side Harness.
24	4	I-159	Connects the MCU Board and the Right Side Harness.
25	4	I-158	Connects the MCU Board and the Right Side Harness.
26	4	J-159	Connects the MCU Board and the Humidity Harness.
27	4	I-159	Connects the MCU Board and the Right Side Harness.
28	4	I-159	Connects the MCU Board and the Right Side Harness.
29	3	F-138	Connects the Image Processor Board and the Controller Harness.
29	4	J-159	Connects the MCU Board and the Right Side Harness.
30	4	I-159	Connects the MCU Board and Right Side Harness.
31	4	J-159	Connects the MCU Board and the CRUM Harness.
40	4	F-149	Connects the LVPS and Top Low Voltage Harness.

Print Engine Plug/Jack Designators (continued)

P/J	Map	Coordinates	Remarks
44	4	E-149	Connects the LVPS and the Interlock Harness.
47	4	E-150	Connects the LVPS and the Fuser Harness.
48	4	E-150	Connects the LVPS and AC IN Harness.
J101	3	F-138	Connects Image Processor Board and Video Harness.
101	3	F-138	Connects the Image Processor Board and the IF Harness.
101	4	I-158	Not connected (Debug only).
111	3	F-139	Connects the Image Processor Board and the IF Harness.
141	3	I-136	Connects the LED Assembly and the Top Low Voltage Harness.
144	1	C-108	Connects the EEPROM (Belt) and Belt Harness (Transfer Unit).
144	4	D-153	Connects the EEPROM Board and the Right Side Harness.
151	2	H-122	Connects the Laser Unit and the Laser Unit Harness.
161	3	G-136	Connects the HVPS and the MCU Board.
171	1	H-106	Connects the Fuser and the Fuser Harness.
181	3	I-139	Connects the Dispenser Assembly (Y) and the Top Low Voltage Harness.
182	3	H-138	Connects the Dispenser (M) and the Top Low Voltage Harness.
183	3	H-136	Connects the Dispenser (K) and the Top Low Voltage Harness.
184	3	H-137	Connects the Dispenser (C) and the Top Low Voltage Harness.
191	2	H-124	Connects the Print Cartridge Sensor (Y) and the CRU Sensor Harness.
192	2	H-124	Connects the Print Cartridge Sensor (M) and the CRU Sensor Harness.
193	2	H-122	Connects the Print Cartridge Sensor (K) and the CRU Sensor Harness.
194	2	H-123	Connects the Print Cartridge Sensor (C) and the CRU Sensor Harness.
201	1	H-108	Connects the K Drive Assembly (K Mode Sensor) and the K Sensor Harness.
220	1	F-106	Connects the Control Panel and the Control Panel Harness.
221	1	H-108	Connects the Main Drive Assembly (Sub Motor) and the Right Side Harness.
222	1	G-109	Connects the Main Drive Assembly (Main Motor) and the Right Side Harness.

Print Engine Plug/Jack Designators (continued)

P/J	Map	Coordinates	Remarks
231	2	I-124	Connects the Regi Clutch and the Right Side Harness.
232	2	H-124	Connects Feeder Assembly (PH Turn Clutch Assembly) and the Right Side Harness.
233	2	H-123	Connects the Feed Clutch and the Right Side Harness.
234	1	H-111	Connects the Feed Solenoid and the Right Side Harness.
235	1	H-107	Connects the Main Drive Assembly (Exit Clutch) and the Right Side Harness.
241	1	I-109	Connects the K Drive Assembly (K Mode Solenoid) and the Right Side Harness.
251	1	H-110	Connects the PH Drive Assembly (Tray 2 Motor) with the Right Side Harness.
261	4	H-152	Connects the Humidity Sensor and the Humidity Harness.
272	1	I-110	Connects the Front Cover Harness and the Right Side Harness.
281	2	H-126	Connects the Right Side Harness and the Optional 550-Sheet Feeder (Feeder Unit Harness).
282	1	I-109	Connects the NPP Harness and the Right Side Harness.
291	2	I-125	Connects the Size Switch Assembly and the Right Side Harness.
292	2	H-125	Connects the Feeder Assembly (Regi Sensor Harness) and the Right Side Harness.
301	2	H-124	Connects the Feeder Assembly (TEN Sensor Harness) and the Right Side Harness.
311	2	G-124	Connects the CRUM Sensor (Y) and the CRUM Harness.
312	2	G-123	Connects the CRUM Sensor (M) and the CRUM Harness.
313	2	G-122	Connects the CRUM Sensor (C) and the CRUM Harness.
314	2	G-122	Connects the CRUM Sensor (K) and the CRUM Harness.
401	3	F-138	Connects the Image Processor Board and the Top Low Voltage Harness.
482	4	E-153	Connects the GFI Inlet Breaker and the AC IN Harness.
483	4	E-154	Connects the GFI Inlet Breaker and the AC IN Harness.
501	4	F-149	Connects the LVPS and the Top Low Voltage Harness.

Print Engine Plug/Jack Designators (continued)

P/J	Map	Coordinates	Remarks
502	4	F-149	Connects the LVPS and the Top Low Voltage Harness.
503	4	F-149	Connects the LVPS and the Main Fan.
504	4	F-149	Connects the LVPS and the Top Low Voltage Harness.
2411	2	F-125	Connects the Feeder Assembly (TEN Sensor PWBA) and the TEN Sensor Harness.
2721	1	B-107	Connects the Transfer Unit and the Front Cover Harness.
2821	1	E-110	Connects the No Paper Sensor and the NPP Harness.
2900	1	I-110	Connects the Control Panel Harness and the Controller Harness.
2921	2	D-125	Connects the Feeder Assembly (No Paper Sensor) and the Regi Sensor Harness.
2922	2	E-125	Connects the Feeder Assembly (Regi Sensor) and the Regi Sensor Harness.
5041	3	D-106	Connects the ADC Sensor and Belt Harness (Transfer Assembly).
27212	1	D-107	Connects ADC Sensor and Transfer Unit Harness.
27213	1	D-107	Connects the ADC Solenoid and the Belt Harness (Transfer Assembly).

Duplex Plug/Jack Designators

Duplex Plug/Jack Designators

P/J	Map	Coordinates	Remarks
1	5	E-168	Not connected (Debug only).
427	5	F-168	Connects the Duplex Board and the Duplex Fan.
428	5	F-168	Connects the Duplex Board and the Duplex Unit Harness.
429	5	F-169	Connects the Duplex Board and the Duplex Motor.
430	5	F-168	Connects the Duplex Board and the Duplex Sensor Harness.
431	5	F-168	Connects Duplex Board and Duplex Clutch.
2720	5	I-169	Connects the Duplex Unit (Duplex Unit Harness) and the printer.
4301	5	E-167	Connects the Duplex Jam Sensor and the Duplex Sensor Harness.

Optional Feeder Plug/Jack Designators

Optional Feeder Plug/Jack Designators

P/J	Map	Coordinates	Remarks
1	6	G-180	Not connected (Debug only).
281	6	H-183	Connects the Optional-550 Sheet Feeder (Feeder Unit Harness) and the printer.
419	6	G-180	Connects the Optional Feeder Board and the Feeder Unit Harness.
420	6	G-180	Connects the Optional Feeder Board and the Tray 3 Turn Harness.
421	6	G-179	Connects the Optional Feeder Board and the Tray 3 Chute Harness.
422	6	G-179	Connects the Optional Feeder Board and the Tray 3 Motor Harness.
423	6	G-180	Not connected.
4201	6	H-185	Connects the Turn Clutch and the Tray 3 Turn Harness.
4202	6	H-185	Not connected.
4211	6	I-184	Connects the Optional Size Switch and the Tray 3 Chute Harness.
4212	6	H-184	Connects the Tray 3 Chute Harness and Tray 3 No Paper Harness.
4213	6	H-185	Connects the Feed Clutch and the Tray 3 Chute Harness.
4221	6	G-185	Connects the Optional Feeder Drive (Optional Feeder Motor) and the Tray 3 Motor Harness.
4222	6	G-185	Connects the Optional Feeder Drive (Optional Feeder Motor) and the Tray 3 Motor Harness.
42121	6	D-183	Connects the Tray 3 No Paper Sensor and the Tray 3 No Paper Sensor Harness.

Plug/Jack Locators

Maps 1 through 6 indicate the location of key connections within the printer. Connections are referenced by their P/J designation.

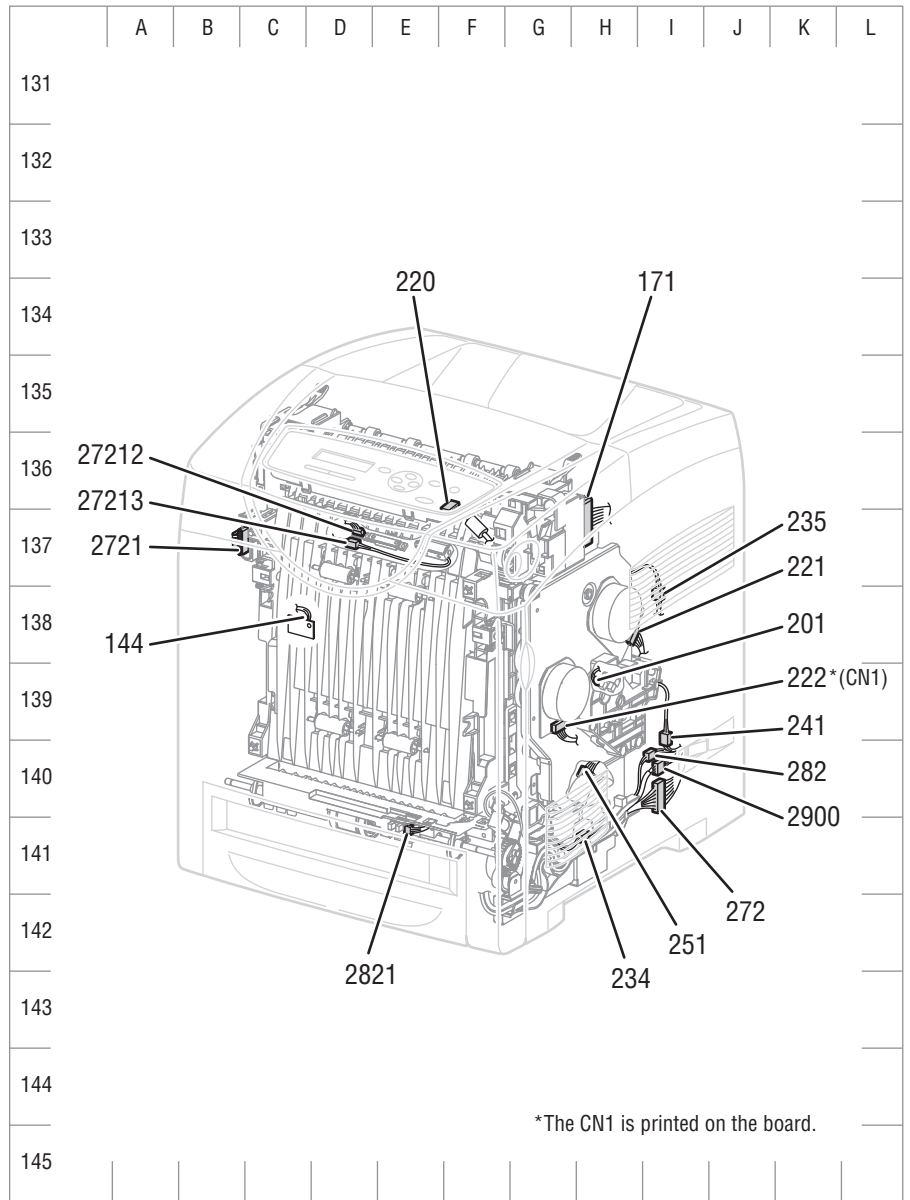
1. "Map 1 - Electrical and Drive" on page 10-9
2. "Map 2 - Laser Unit, Feeder Assembly" on page 10-10
3. "Map 3 - Image Processor Board and Dispenser" on page 10-11
4. "Map 4 - LVPS and MCU Boards" on page 10-12
5. "Map 5 - Duplex Unit" on page 10-13
6. "Map 6 - Optional 550-Sheet Feeder" on page 10-14

Wiring Diagrams

The wiring diagrams provide the functional relationship of the electrical circuitry to any mechanical, or non-mechanical, inputs or outputs throughout the printer.

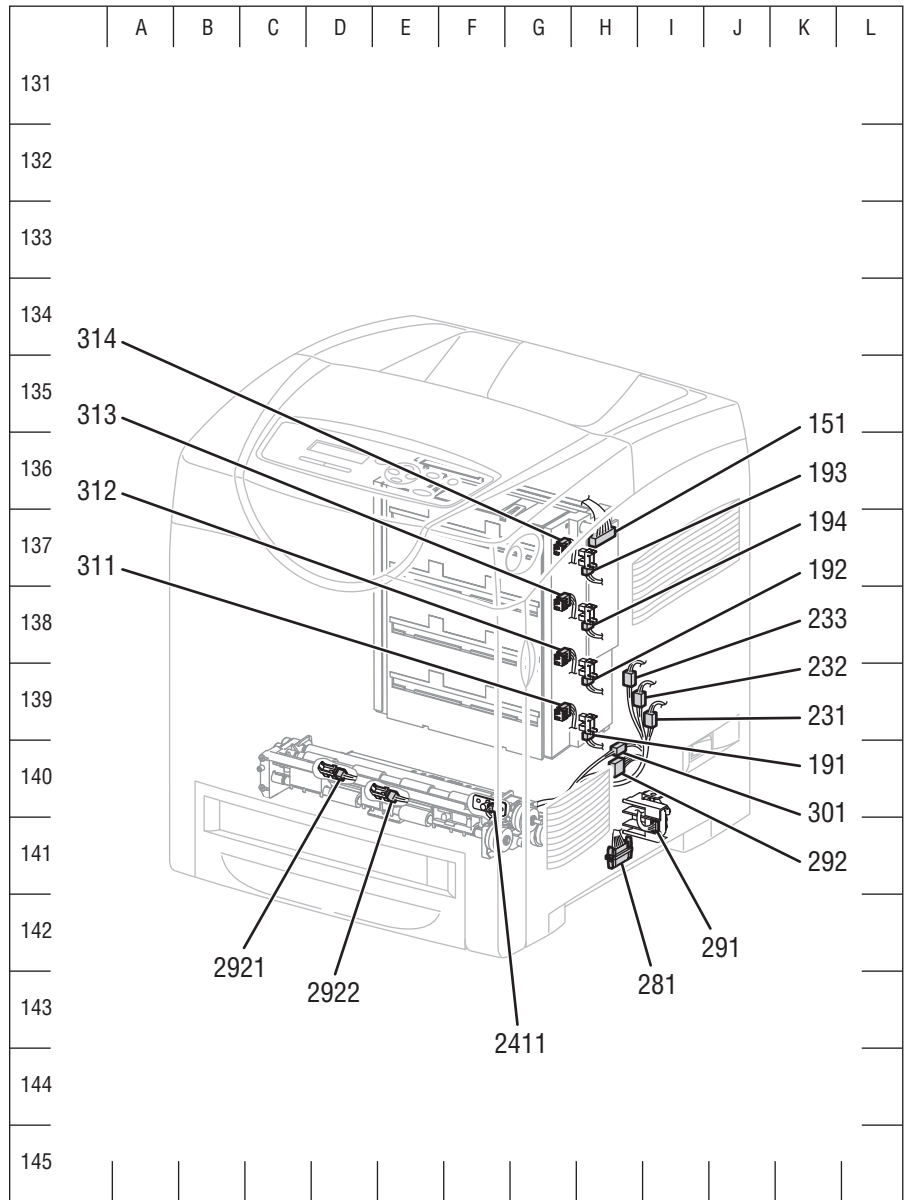
1. "General Wiring Diagram" on page 10-20
2. "DC Power Supply" on page 10-21
3. "Tray 1 (MPT) and Registration" on page 10-23
4. "Main Drive" on page 10-25
5. "Feeder" on page 10-27
6. "Laser Unit" on page 10-29
7. "Xerographic" on page 10-30
8. "High Voltage" on page 10-32
9. "Developer" on page 10-33
10. "Fuser" on page 10-35
11. "Controller" on page 10-37
12. "Optional 550-Sheet Feeder Wiring Diagram" on page 10-39
13. "Duplex Wiring Diagram" on page 10-41

Map 1 - Electrical and Drive



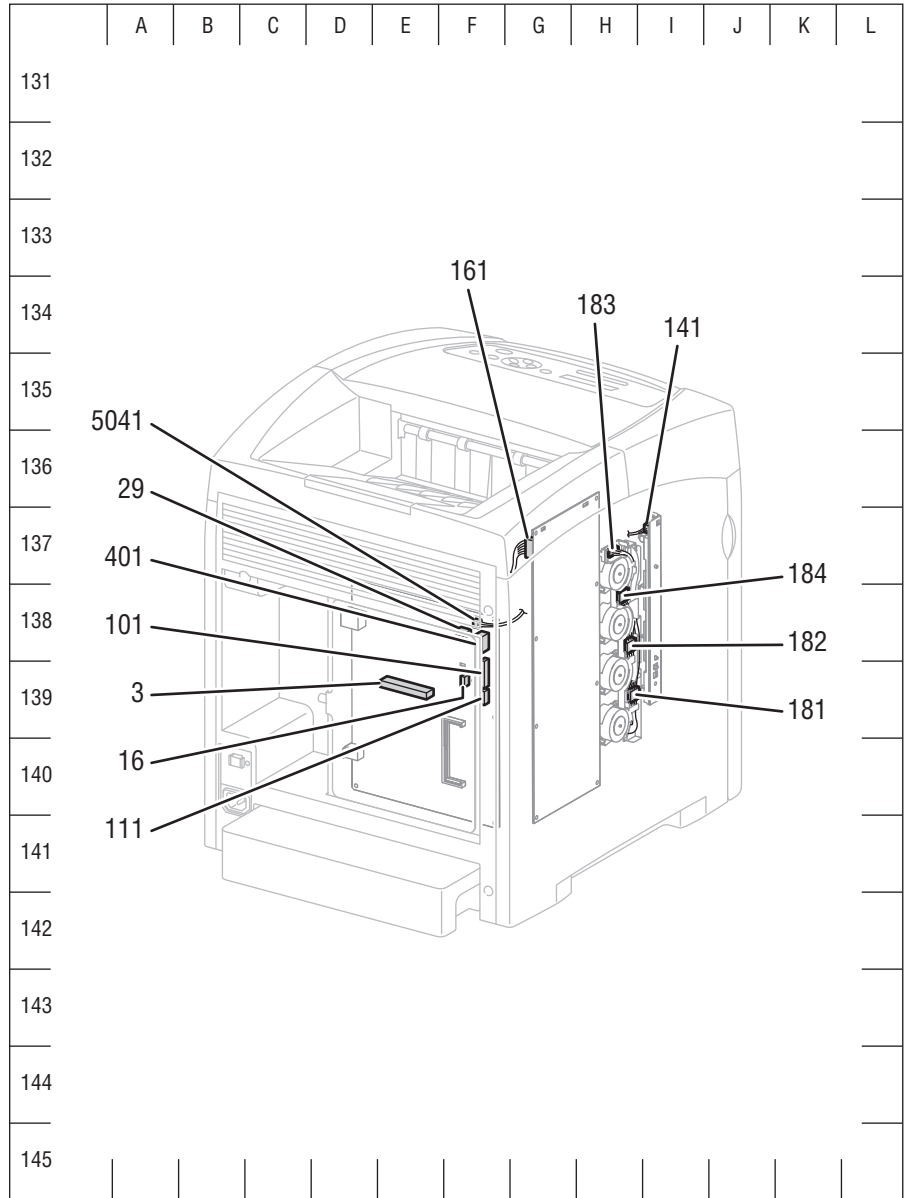
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Map 2 - Laser Unit, Feeder Assembly



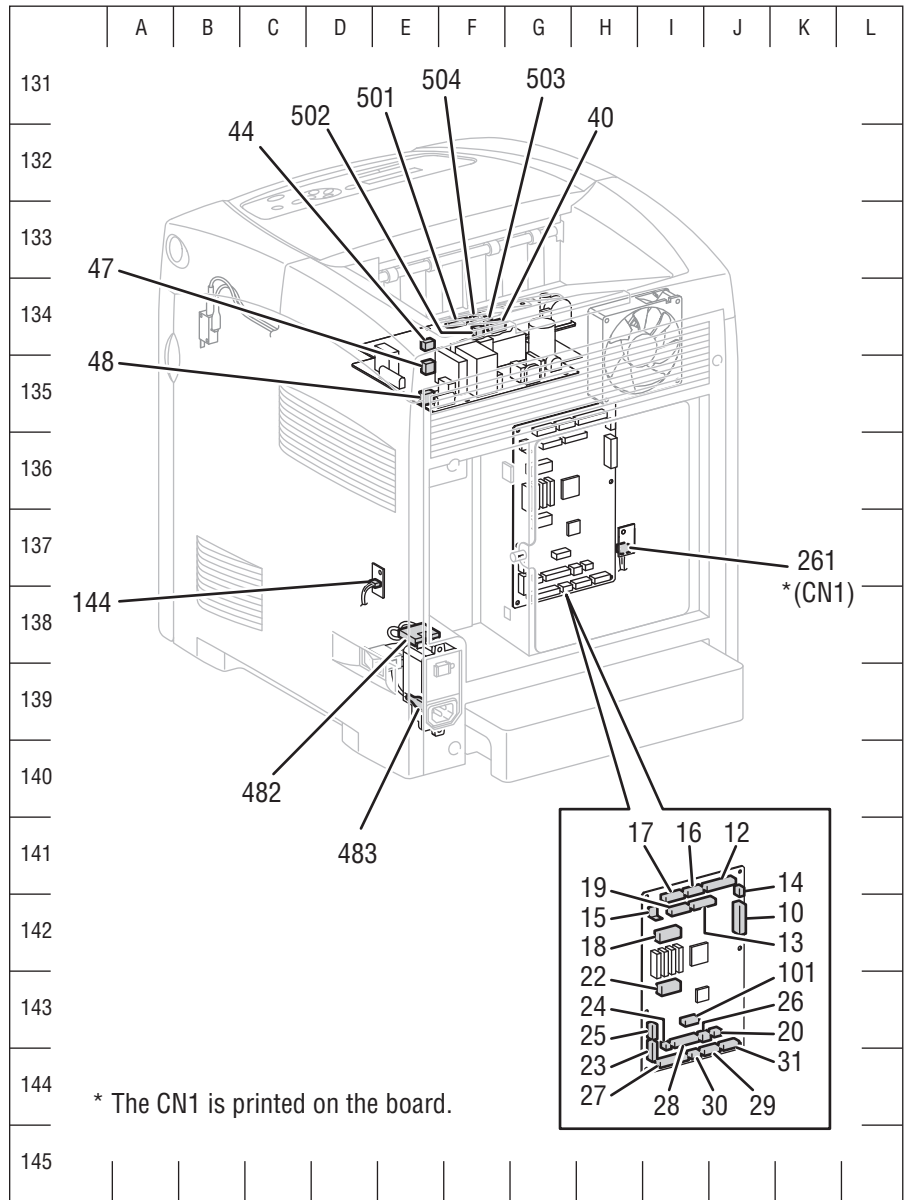
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Map 3 - Image Processor Board and Dispenser



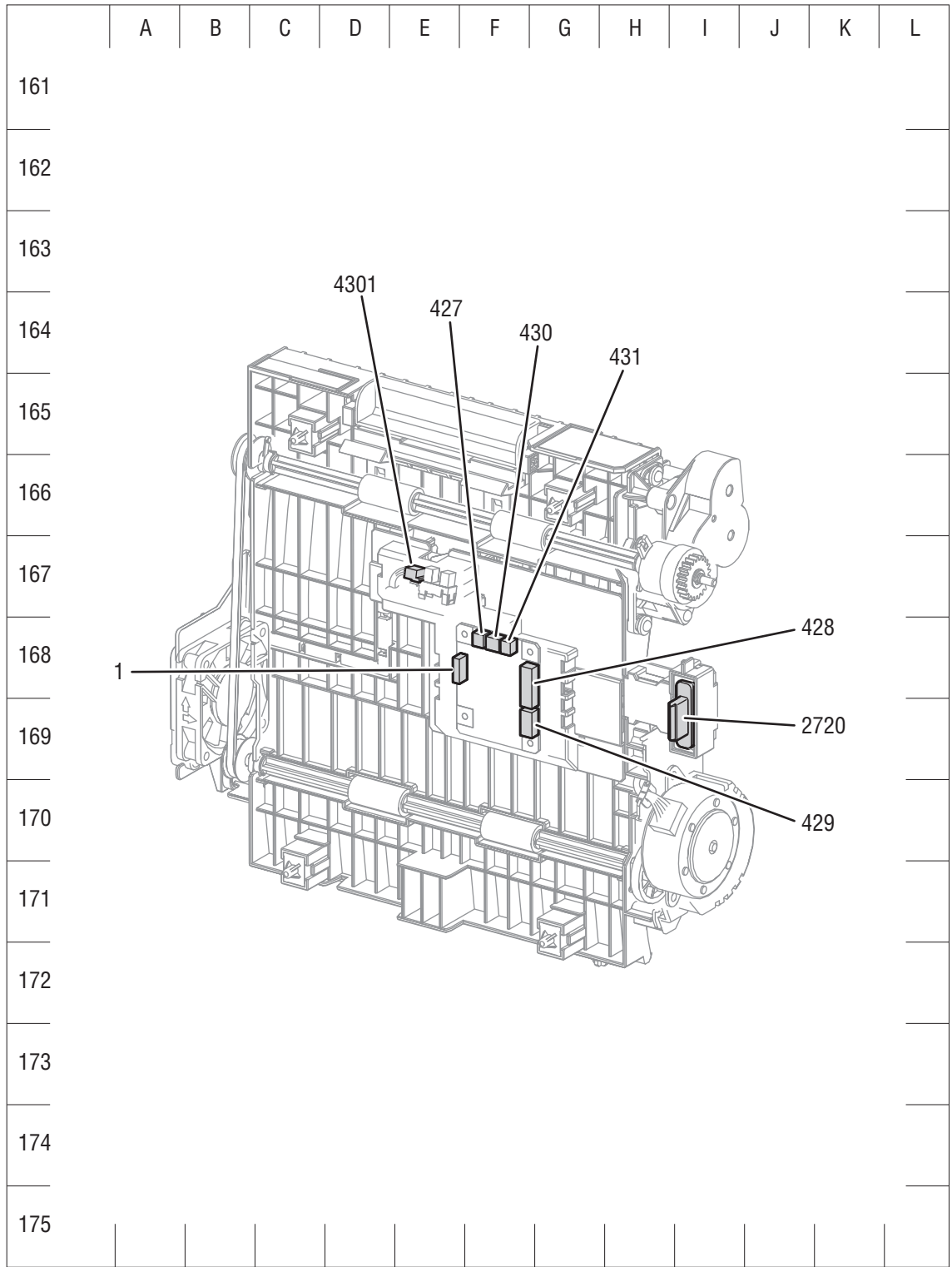
s6280-271

Map 4 - LVPS and MCU Boards



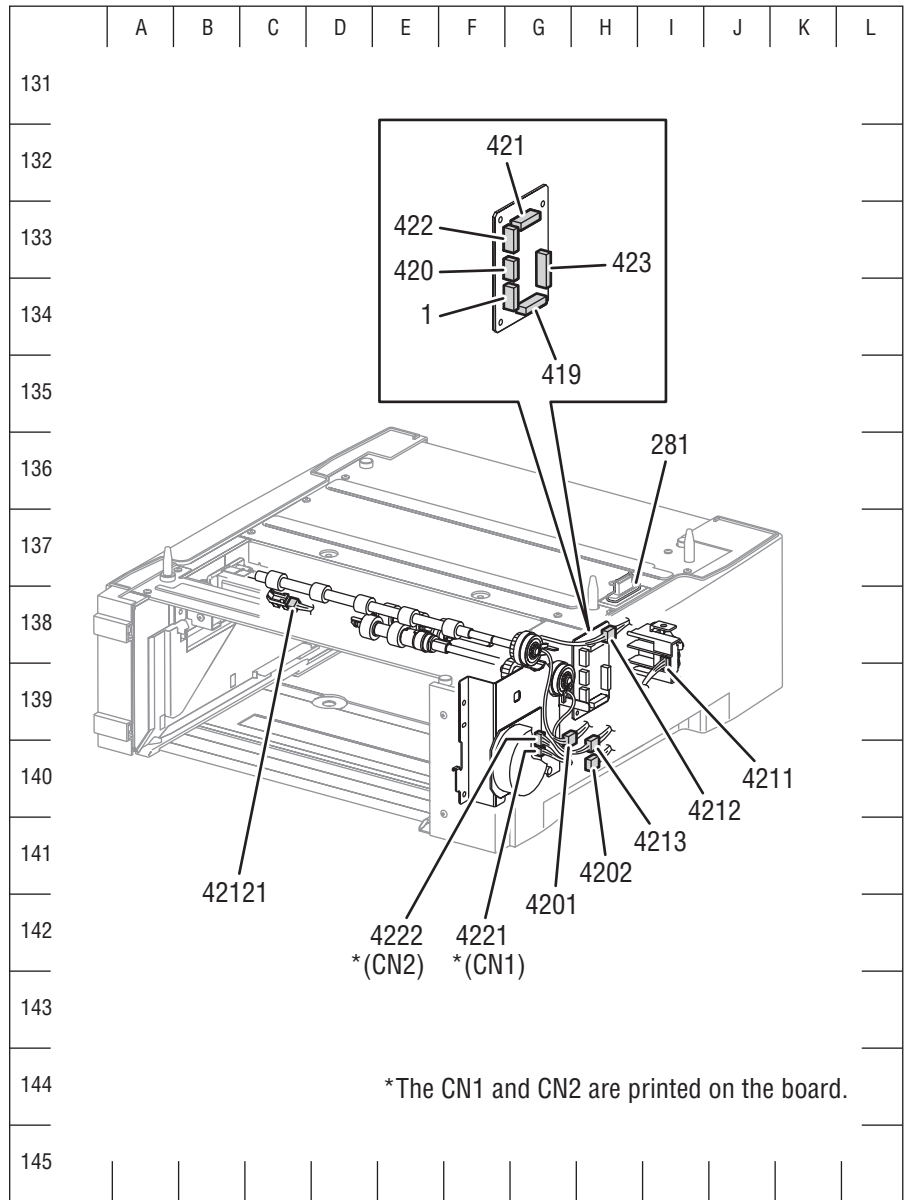
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Map 5 - Duplex Unit



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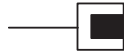



Map 6 - Optional 550-Sheet Feeder



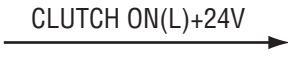


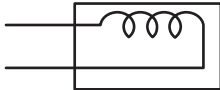

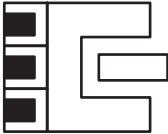







s6280-274

Notations Used in the Wiring Diagrams

The following table lists the symbols used in the wiring diagrams.

Symbol	Description
 <p style="text-align: center;">Plug</p>	Denotes a Plug.
 <p style="text-align: center;">Jack</p>	Denotes a Jack.
<p style="text-align: center;">P/Jxx</p>  <p style="text-align: center;">Plug and Jack</p>	Denotes Pin yy and Jack yy of the connector Pxx and Jxx.
<p style="text-align: center;">JPxxx</p>  <p style="text-align: center;">Jumper</p>	Denotes a Jumper Point (JPxxx/xxx). Each end of the Jumper connection has a numeric designation.
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p>Fuser PL X.Y.Z</p> </div> <p style="text-align: center;">Subassembly 1</p>	Denotes the parts. PL X.Y.Z implies the item "Z" of plate (PL) "X.Y" in Parts List.
<div style="border: 1px dashed black; padding: 5px; width: fit-content; margin: auto;"> <p>Heater</p> </div> <p style="text-align: center;">Subassembly 2</p>	Denotes functional parts attached with functional parts name.

Symbol	Description
 <p style="text-align: center;">Subassembly 3</p>	<p>Denotes the control and its outline in the Board.</p>
 <p style="text-align: center;">Connection Wire</p>	<p>Denotes a connection between parts with harness or wires, attached with signal name/ contents.</p>
 <p style="text-align: center;">Function Logic 1</p>	<p>Denotes the function, and logic value of the signal to operate the function (Low: L, High: H). The given voltage is for signal in high status. The arrow indicates the direction of signal.</p>
 <p style="text-align: center;">Function Logic 2</p>	<p>Denotes the function, and logic value of the signal when the function operated (Low: L, High: H). The given voltage is for signal in high status. The arrow indicates the direction of signal.</p>
 <p style="text-align: center;">Connection of Wires</p>	<p>Denotes a connection between wires.</p>
 <p style="text-align: center;">Solenoid/Clutch</p>	<p>Denotes a Clutch or Solenoid.</p>
 <p style="text-align: center;">Motor</p>	<p>Denotes a Motor.</p>
 <p style="text-align: center;">Optic Sensor</p>	<p>Denotes a Photo Sensor.</p>

Symbol	Description
 Fan	Denotes a Fan
 LED	Denotes an LED.
 Safety Interlock Switch	Denotes a Safety Interlock Switch.
 On Off Switch	Denotes an On-Off Switch (single-pole, single-throw switch).
 Temperature Switch	Denotes an On-Off Switch (Temperature - normally close).
I/L +24 VDC	Denotes DC voltage when the Interlock Switch in MCU Board turns On.
+5 VDC +3.3 VDC	Denotes DC voltage.
SG	Denotes signal ground.
AG	Denotes analog ground.
RTN	Denotes return.

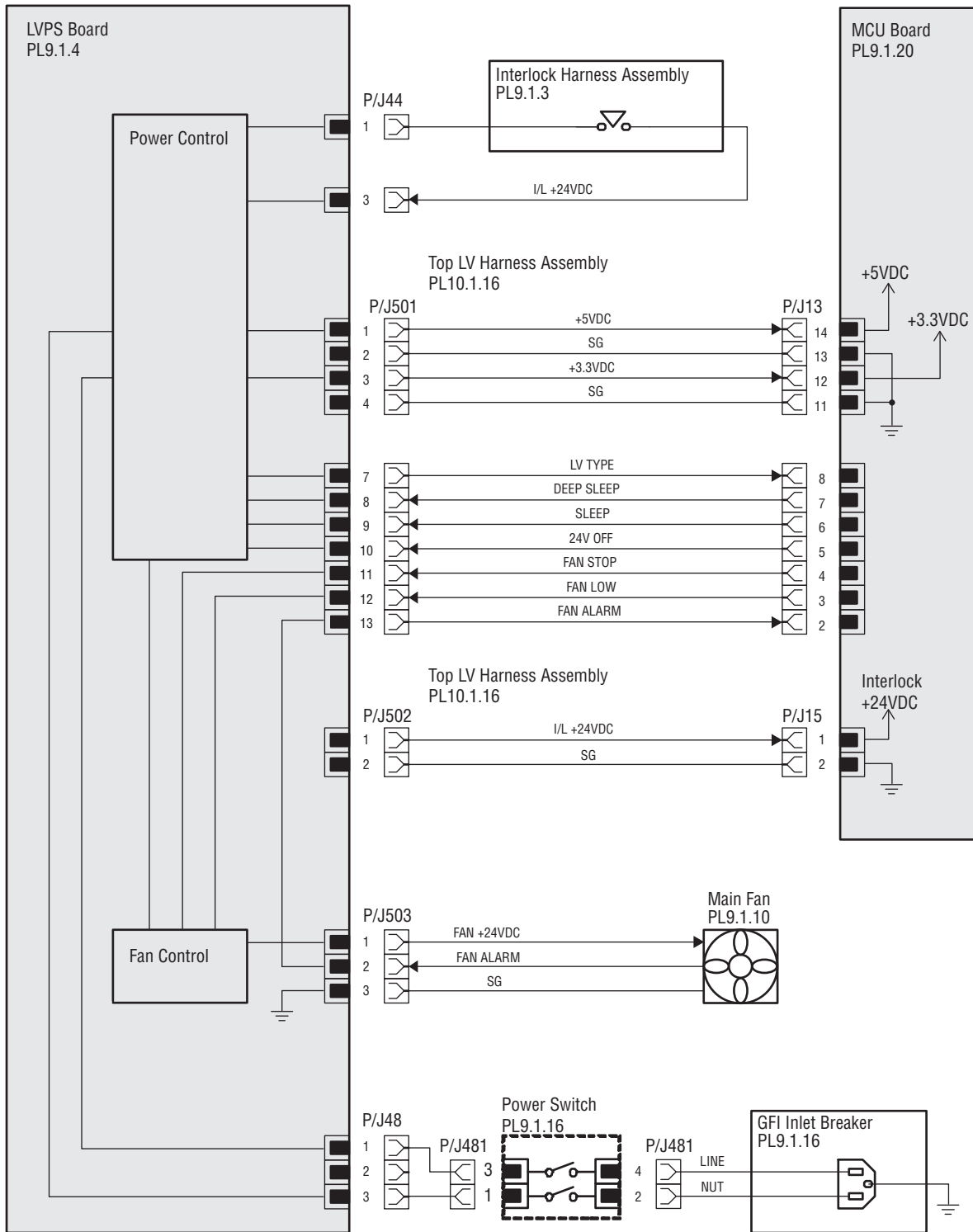
Print Engine Wiring Diagrams

Wiring Diagrams Configurations

Wiring Diagram	Description
DC Power Supply	Connections of the LVPS with the MCU Board.
	Connections of the Power Switch with the LVPS.
	Connections of the Main Fan with the LVPS.
	Connections of the Interlock Harness Assembly with the LVPS.
Tray 1 (MPT) & Registration	Connections of the PH Drive Assembly with the MCU Board.
	Connections of the Registration Clutch with the MCU Board.
	Connections of Tray 1 (MPT) Feed Solenoid with the MCU Board.
	Connections of the Registration Sensor with the MCU Board.
	Connections of the Temperature Sensor Board with the MCU Board.
	Connections of the Tray 1 (MPT) No Paper Sensor with the MCU Board.
Drive	Connections of the Main Drive Assembly with the MCU Board.
Feeder	Connections of the Tray No Paper Sensor with the MCU Board.
	Connections of the Size Switch Assembly with the MCU Board.
	Connections of the Feed Clutch with the MCU Board.
	Connections of the Turn Clutch with the MCU Board.
ROS (Laser Unit)	Connections of the Laser Unit with the MCU Board.
Xerographic	Connections of the ADC Sensor with the MCU Board.
	Connections of the ADC Solenoid with the MCU Board.
	Connections of the EEPROM Belt with the MCU Board.
	Connections of the Humidity Sensor with the MCU Board.
	Connections of the EEPROM Board with the MCU Board.
	Connections of the LED Assembly and the MCU Board.
High Voltage	Connections of the HVPS with the MCU Board.
Developer	Connections of the Dispenser (Y) with the MCU Board.

Wiring Diagram	Description
	Connections of the Dispenser (M) with the MCU Board.
	Connections of the Dispenser (C) with the MCU Board.
	Connections of the Dispenser (K) with the MCU Board.
	Connections of the CRU Sensor (Y) with the MCU Board.
	Connections of the CRU Sensor (M) with the MCU Board.
	Connections of the CRU Sensor (C) with the MCU Board.
	Connections of the CRU Sensor (K) with the MCU Board.
	Connections of the CRUM Sensor (Y) with the MCU Board.
	Connections of the CRUM Sensor (M) with the MCU Board.
	Connections of the CRUM Sensor (C) with the MCU Board.
	Connections of the CRUM Sensor (K) with the MCU Board.
Fuser	Connections of the Fuser with the MCU Board.
	Connections of the Fuser with the LVPS.
	Connections of the MCU Board with the LVPS.
Controller	Connections of the Image Processor Board with the MCU Board.
	Connections of the Control Panel with the Image Processor Board.
	Connections of the LVPS with the Image Processor Board.
Feeder	Connections of the Optional Feeder Board with MCU Board.
	Connections of the Optional Turn Clutch with the Optional Feeder Board.
	Connections of the Optional Feeder Drive with the Optional Feeder Board.
	Connections of the Optional Feed Clutch with the Optional Feeder Board.
	Connections of the Tray No Paper Sensor with the Optional Feeder Board.
	Connections of the Optional Size Switch with the Optional Feeder Board.
Duplex	Connections of the Duplex Board with the MCU Board.
	Connections of the Jam Sensor Duplex with the Duplex Board.
	Connections of the Duplex Clutch with the Duplex Board.
	Connections of the Duplex Motor with the Duplex Board.
	Connections of the Duplex Fan with the Duplex Board.

DC Power Supply



s6280-003

Signal Line Name	Description
LV TYPE	Controls signal of the LVPS.
DEEP SLEEP	
SLEEP	
24 V OFF	
FAN STOP	Drives control signal of the Main Fan.
FAN LOW	
FAN ALARM	

LVPS Over-Current Protection Circuit

This circuit stops all outputs if the power supply voltage 3.3 VDC, 5 VDC, or 24 VDC is shorted.

The circuit is reset, when after the cause of short was removed, the power is turned Off, and then On again after certain time.

LVPS Over-Voltage Protection Circuit

This circuit stops all outputs, if the power supply voltage 3.3 VDC, 5 VDC, or 24 VDC exceeds the specified voltage respectively.

At this time, the operating point is 32 VDC or less for 24 VDC, 7 VDC or less for 5 VDC, or 4.4 VDC or less for 3.3 VDC.

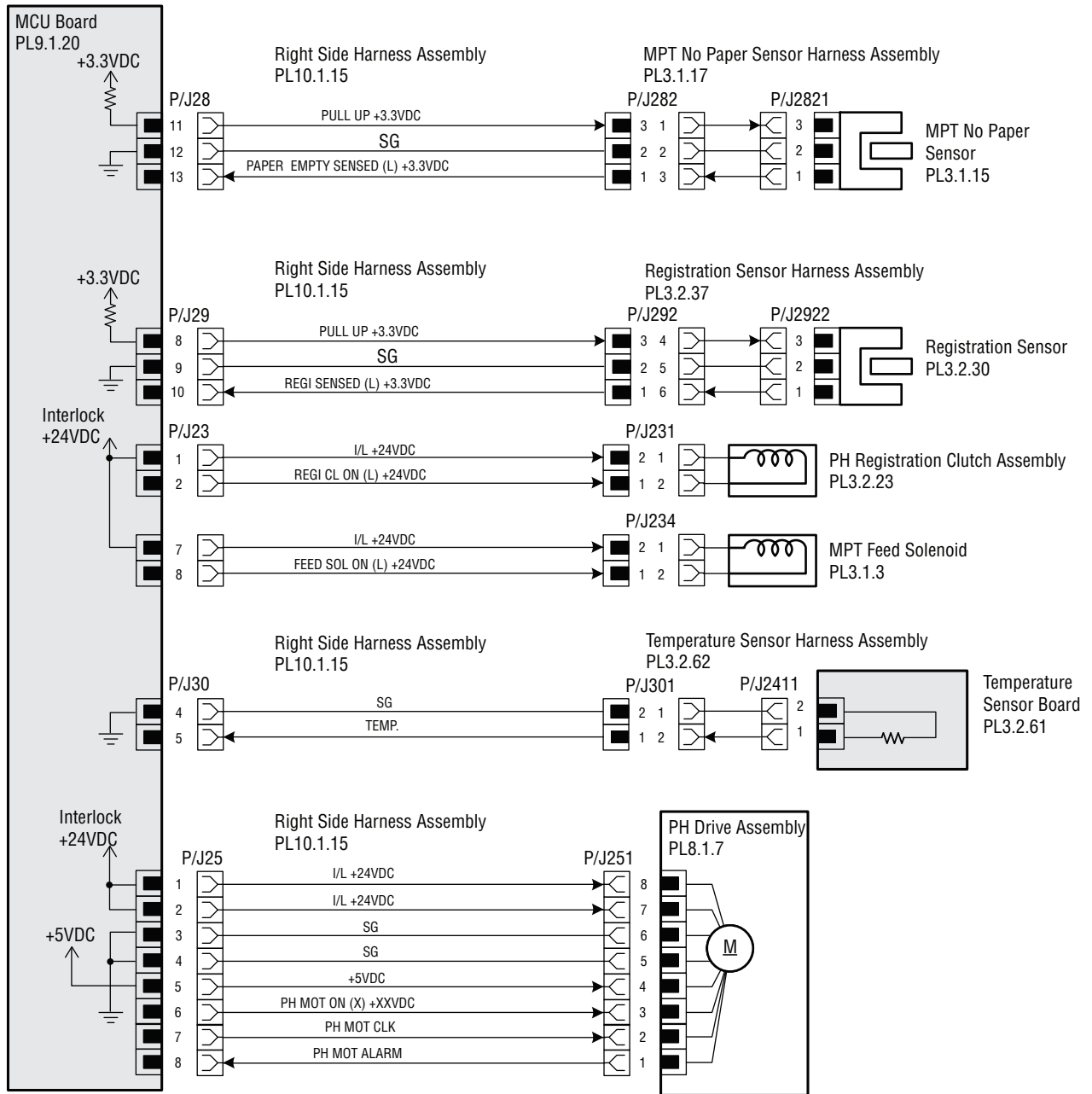
The circuit is reset when the power is turned Off, and then On again after certain time.

Deep Sleep Mode (Power Saver)

The output of the following power supply are stopped according to the signals.

Signal	+3.3 VDC	+5 VDC	+24 VDC
Sleep	On	Off	Off
Deep Sleep	Off	Off	Off

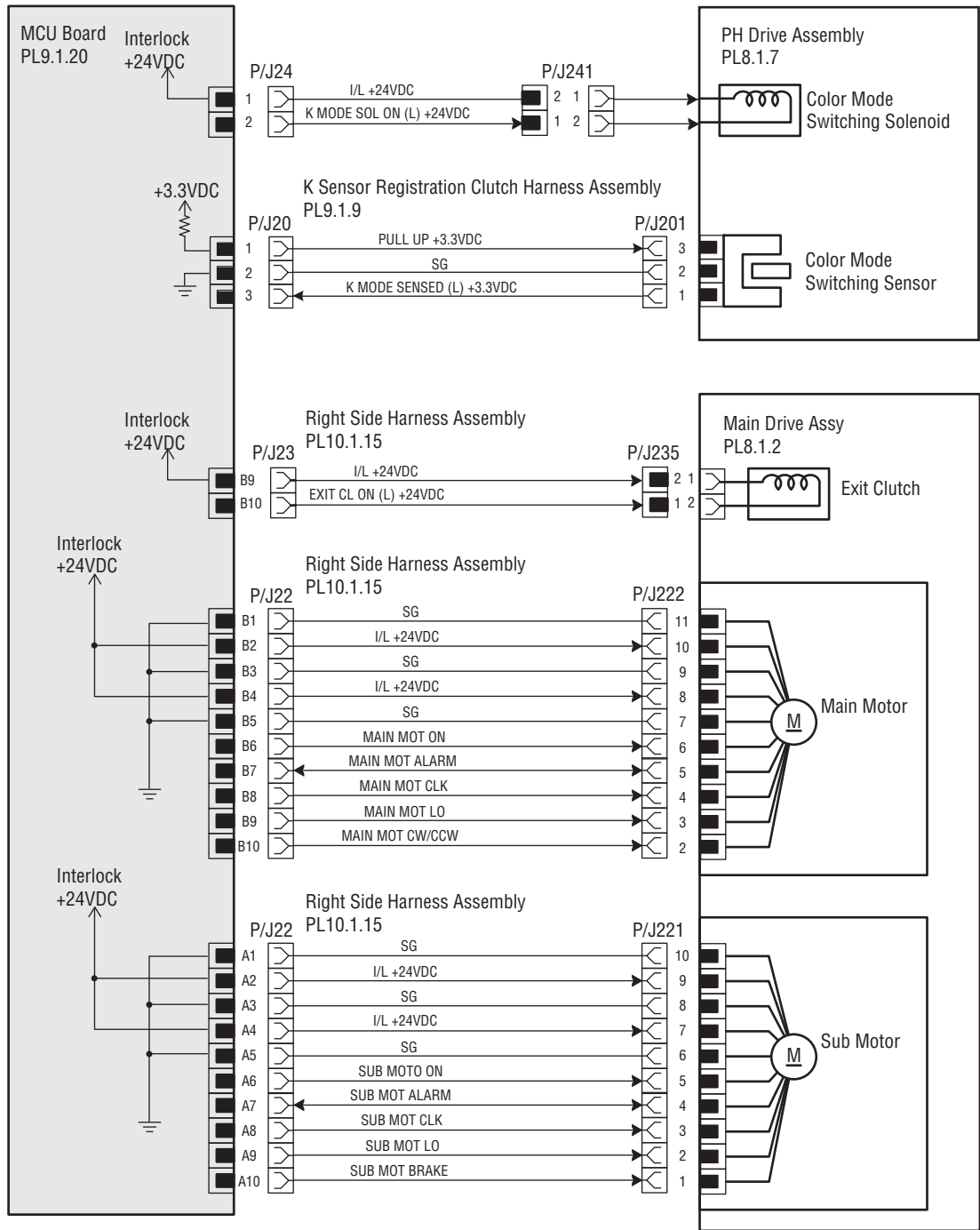
Tray 1 (MPT) and Registration



s6280-004

Signal Line Name	Description
PAPER EMPTY SENSED (L) +3.3 VDC	Paper detects signal of the Tray 1 (MPT) by the Photo Sensor (Tray 1 (MPT) No Paper Sensor).
REGI SENSED (L) +3.3 VDC	Paper detects signal of the Registration area by the Photo Sensor (Registration Sensor).
REGI CL ON (L) +24 VDC	On/Off signal of the Regi Clutch.
FEED SOL ON (L) +24 VDC	On/Off signal of the Tray 1 (MPT) Feed Solenoid.
TEMP.	Data on temperature inside the printer.
PH MOT ON (X) +XX VDC	Drives control signal of the PH Drive Assembly.
PH MOT CLK	
PH MOT ALARM	

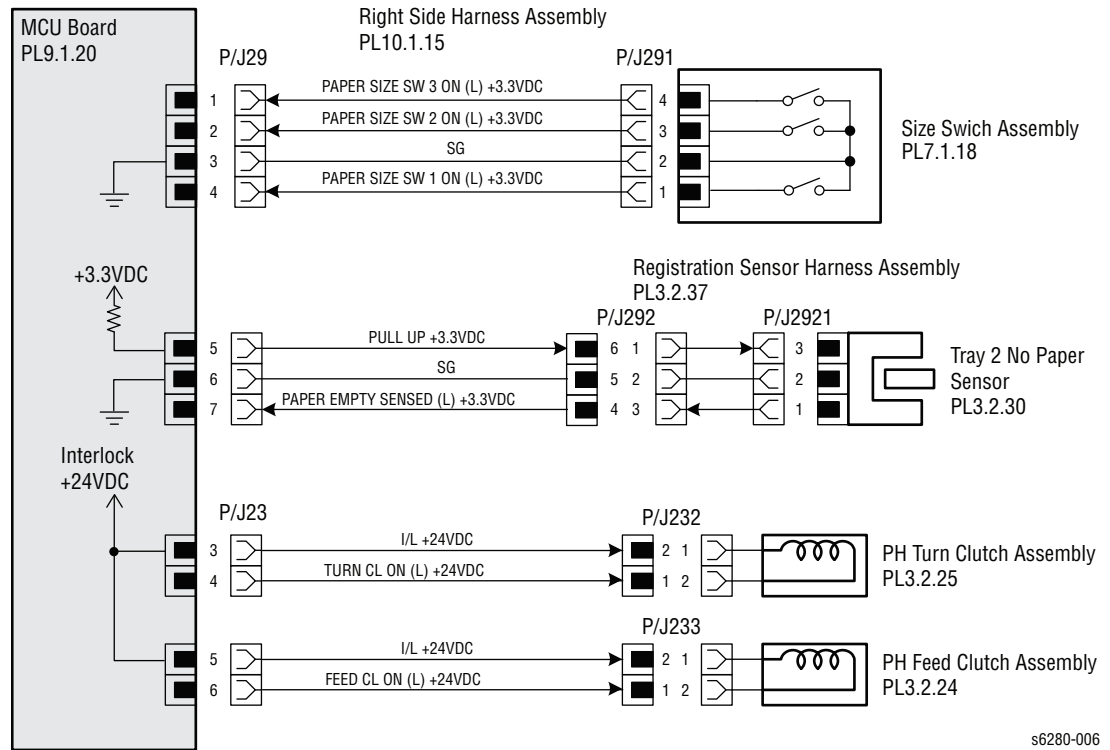
Main Drive



s6280-005

Signal Line Name	Description
K MODE SOL ON (L) +24 VDC	On/Off signal of the Color Mode Switching Solenoid.
K MODE SENSED (L) +3.3 VDC	Color mode detects signal of the PH Drive Assembly by the Photo Sensor (Color Mode Switching Sensor).
MAIN MOT ON	Drives control signal of the Main Motor.
MAIN MOT ALARM	
MAIN MOT CLK	
MAIN MOT LO	
MAIN MOT CW/CCW	
SUB MOT ON	Drives control signal of the Sub Motor.
SUB MOT ALARM	
SUB MOT CLK	
SUB MOT LO	
SUB MOT BRAKE	
EXIT CL ON (L) +24 VDC	On/Off signal of the Exit Clutch.

Feeder



s6280-006

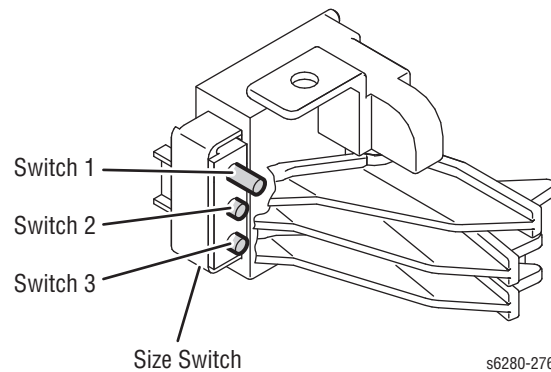
Signal Line Name	Description
PAPER SIZE SW 1 ON (L) +3.3 VDC	On/Off signal of the Size Switch Assembly.
PAPER SIZE SW 2 ON (L) +3.3 VDC	
PAPER SIZE SW 3 ON (L) +3.3 VDC	
PAPER EMPTY SENSED (L) +3.3 VDC	Paper detects signal of the Feeder by the Photo Sensor (Tray No Paper Sensor).
TURN CL ON (L) +24 VDC	On/Off signal of the Turn Clutch.
FEED CL ON (L) +24 VDC	On/Off signal of the Feed Clutch.

Outline of Size Switch

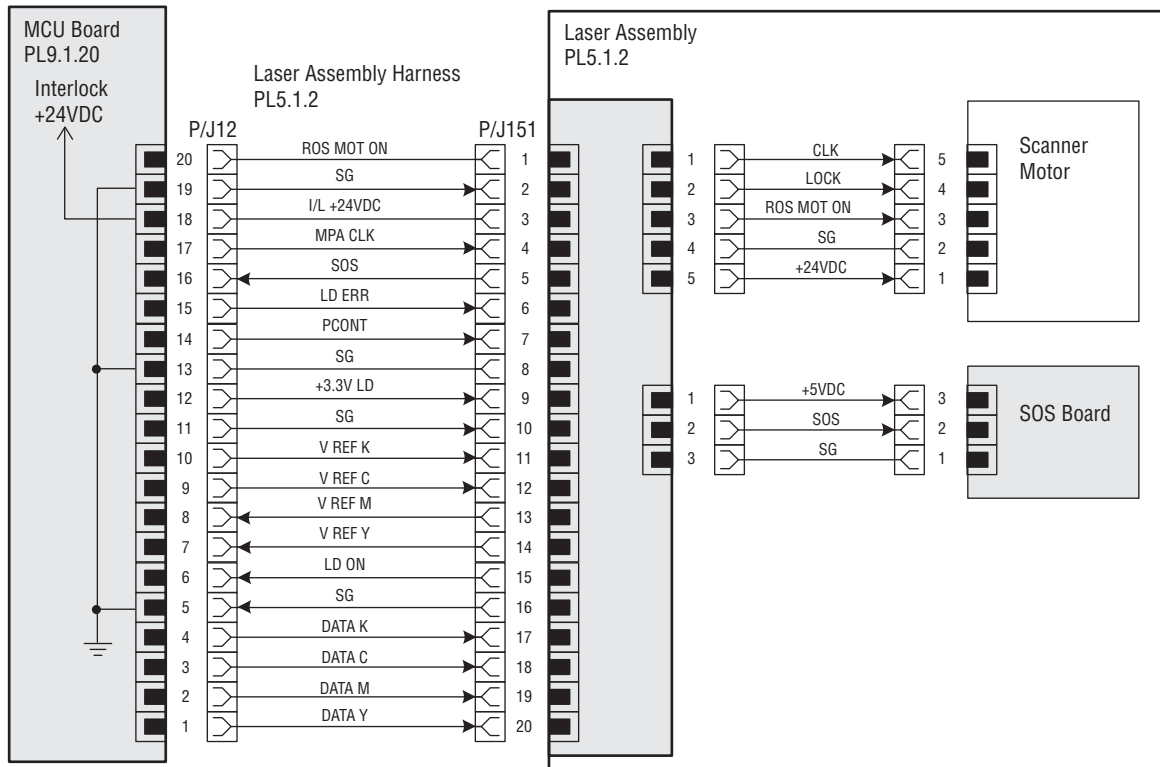
The paper size is determined by a combination of On/Off statuses of the SW 1, SW 2, and SW 3 switches of the Size Switch.

Paper Size	Switches		
	SW 1	SW 2	SW 3
Letter (SEF)	Off	Off	On
A4 (SEF)	Off	On	On
A5	Off	On	Off
B5 (SEF)	On	Off	Off
Legal 13" (SEF)	On	On	Off
Legal 14" (SEF)	On	On	On
Executive (SEF)	On	Off	On
No Tray	Off	Off	Off

On: The Actuator is pushing the Size Switch Assembly.



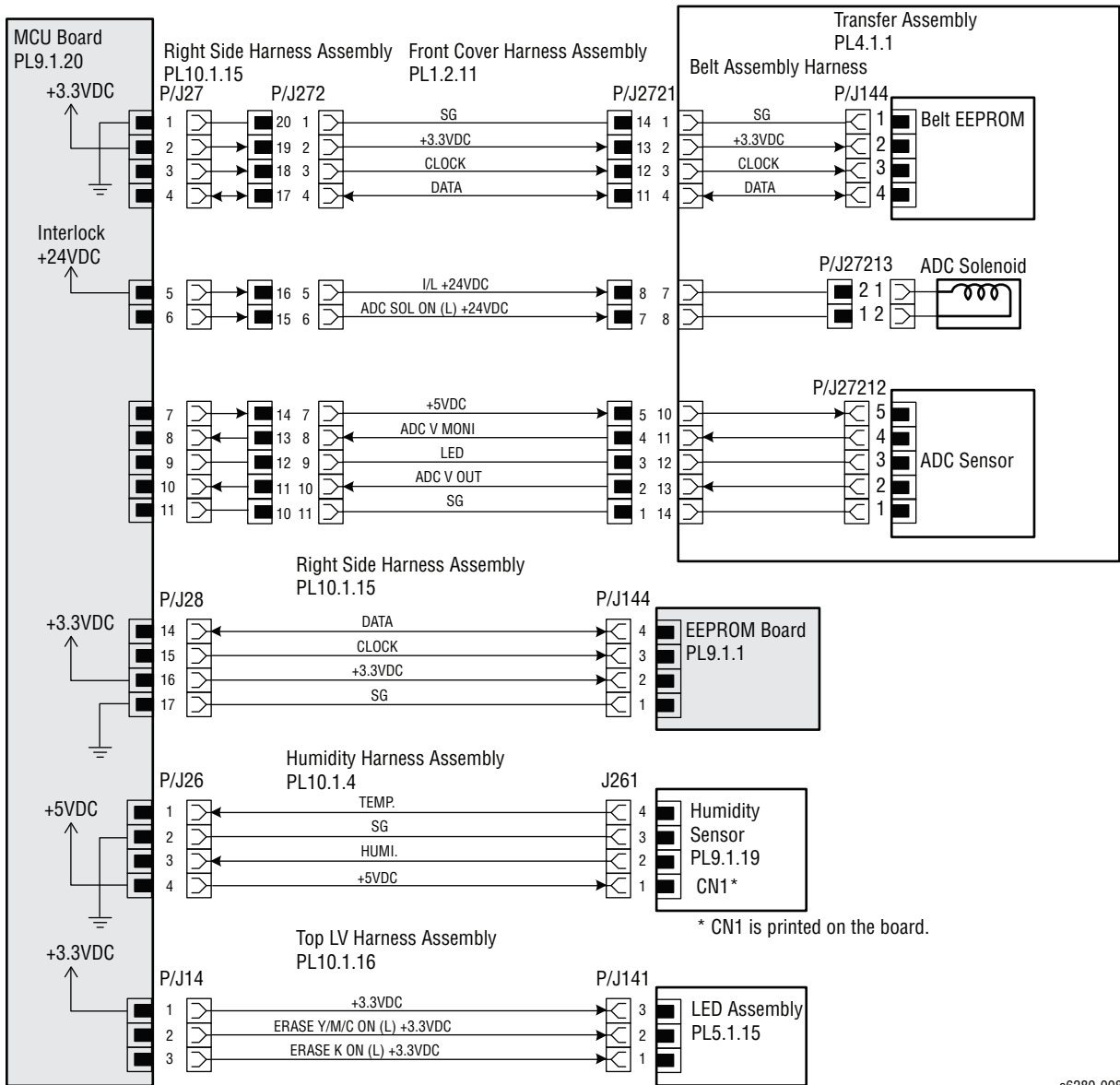
Laser Unit



s6280-007

Signal Line Name	Description
ROS MOT ON	Drives control signal of the Laser Unit Motor.
SOS	Reference signal for scan start of Laser.
V REF K	Emits control signal of the Laser Diode.
V REF C	
V REF M	
V REF Y	
DATA K	Provides video signal of the Laser Diode.
DATA C	
DATA M	
DATA Y	

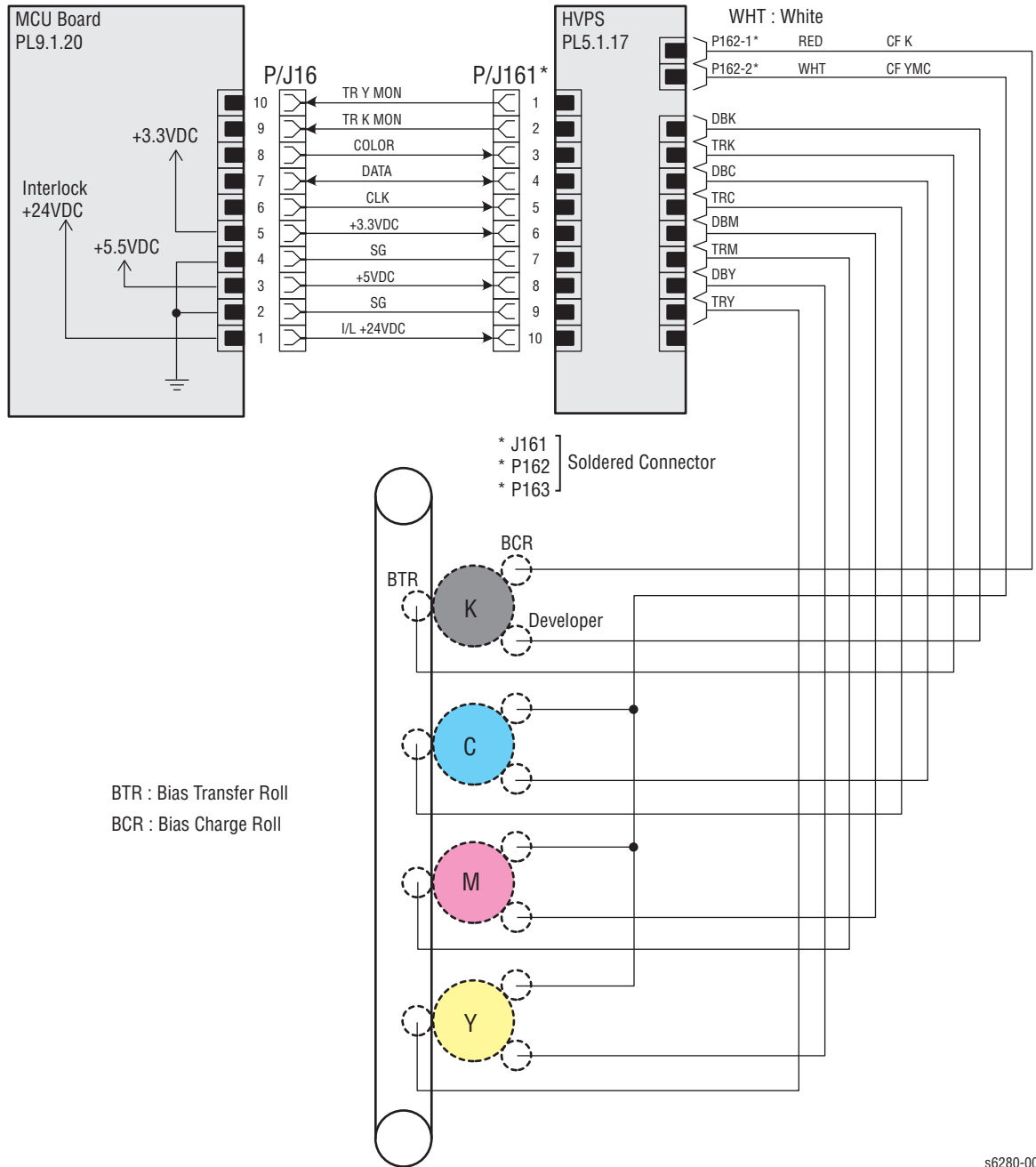
Xerographic



s6280-008

Signal Line Name	Description
CLOCK	Controls signal of the EEPROM Belt.
DATA	
ADC SOL ON (L) +24 VDC	On/Off signal of the ADC Solenoid.
ADC SENSOR	Toner patch density data measured by the ADC Sensor (Analog value).
LED REM	Removes signal of the LED of the ADC Sensor.
ADC V MONI	Controls signal of the ADC Sensor.
DATA	Controls signal of the EEPROM Board.
CLOCK	
TEMP.	Temperature data in the printer by the Humidity/ Temperature Sensor (Analog value).
HUMI.	Provides Humidity/Temperature data in the printer by the Humidity/Temperature Sensor (Analog value).
ERASE K ON (L) +3.3 VDC	On/Off signal of the Erase Lamp.
ERASE Y/M/C ON (L) +3.3 VDC	

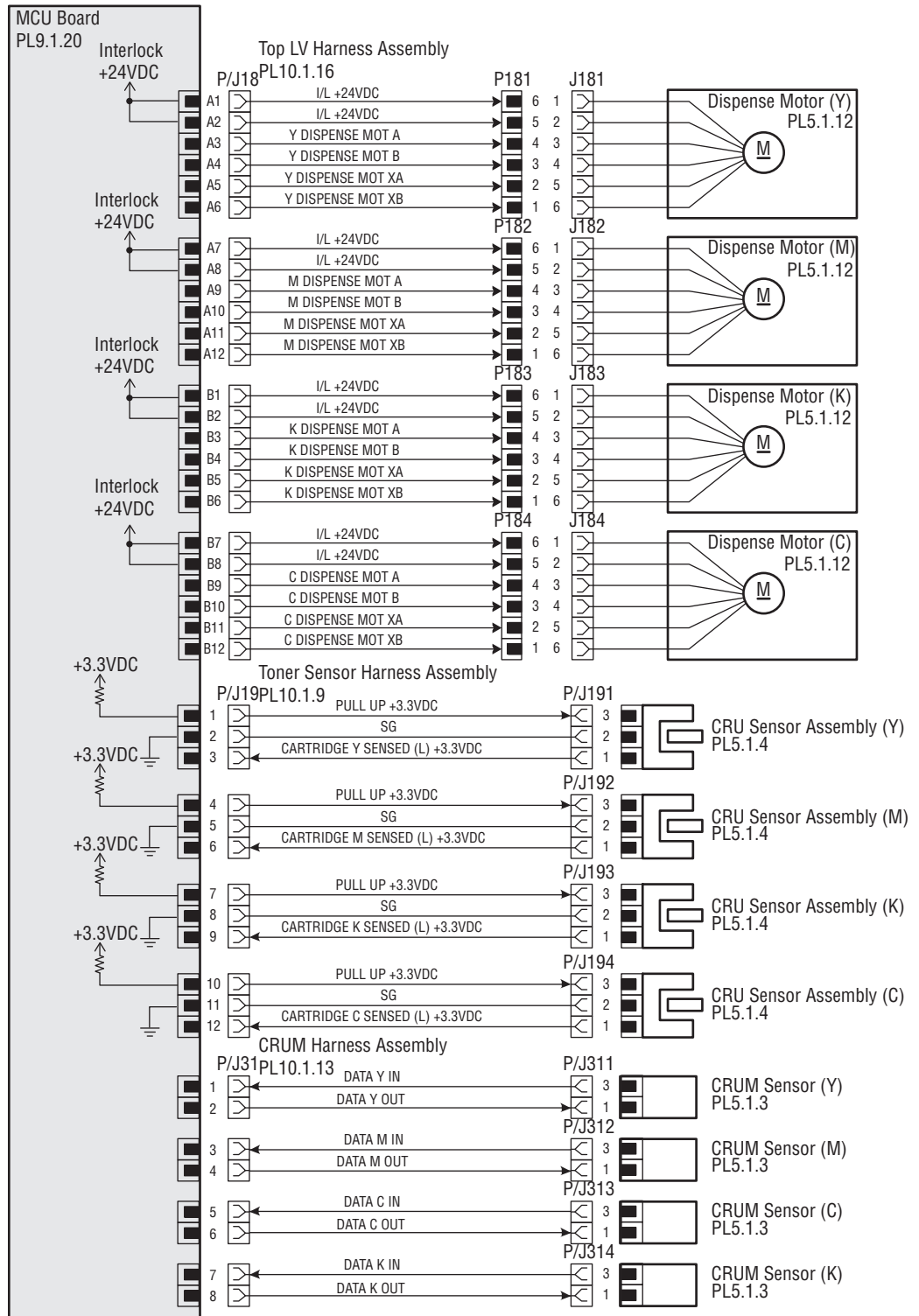
High Voltage



s6280-002

Signal Line Name	Description
TR Y MON	Controls signal of the HVPS.
TR K MON	
COLOR	
DATA	
CLK	

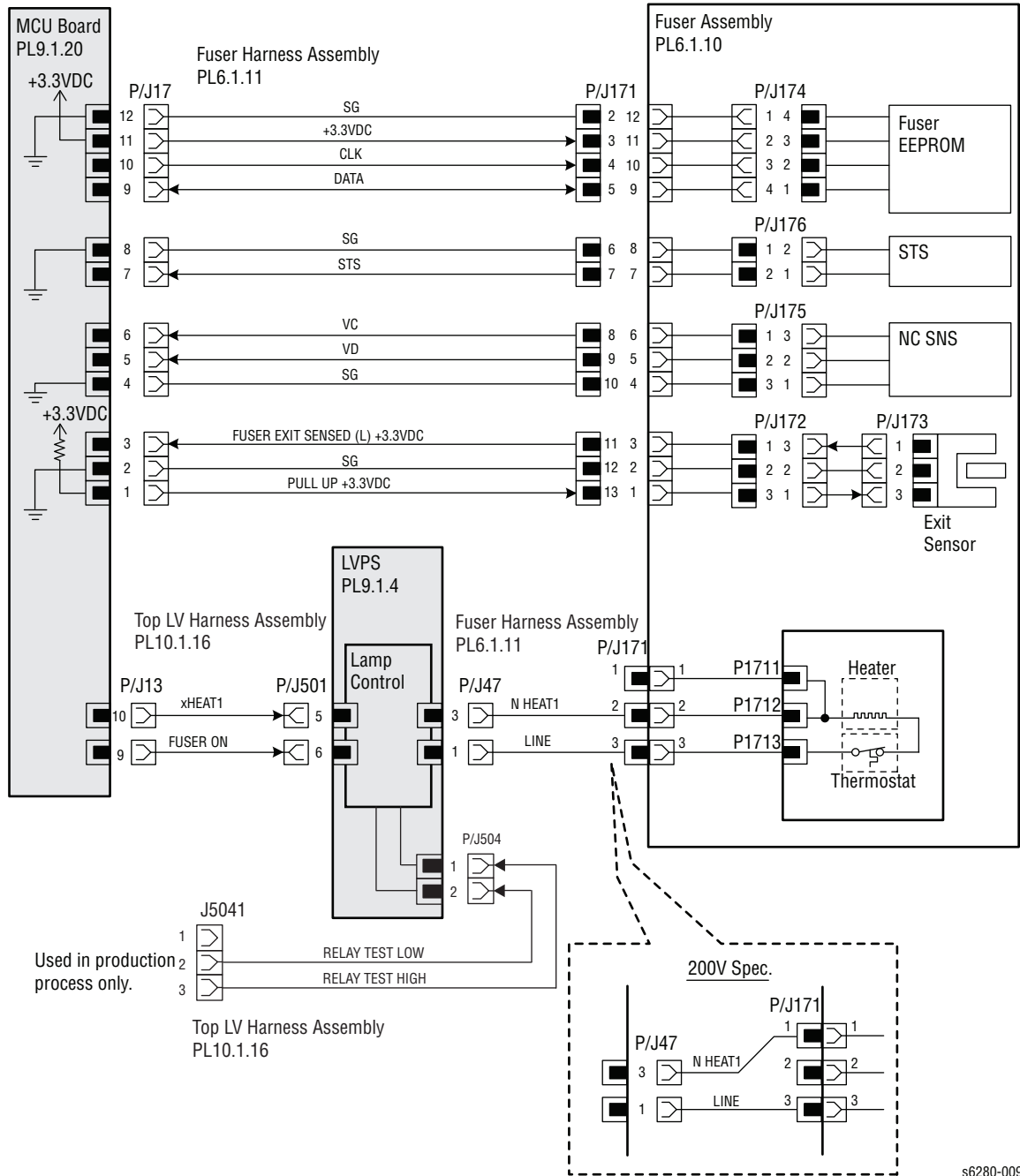
Developer



s6280-001

Signal Line Name	Description
Y DISPENSE MOT A	Drives control signal of the Dispenser Motor (Y).
Y DISPENSE MOT B	
Y DISPENSE MOT XA	
Y DISPENSE MOT XB	
M DISPENSE MOT A	Drives control signal of the Dispenser Motor (M).
M DISPENSE MOT B	
M DISPENSE MOT XA	
M DISPENSE MOT XB	
C DISPENSE MOT A	Drives control signal of the Dispenser Motor (C).
C DISPENSE MOT B	
C DISPENSE MOT XA	
C DISPENSE MOT XB	
K DISPENSE MOT A	Drives control signal of the Dispenser Motor (K).
K DISPENSE MOT B	
K DISPENSE MOT XA	
K DISPENSE MOT XB	
CARTRIDGE Y SENSED (L) +3.3 VDC	Detects signal of the CRU (Y) Sensor.
CARTRIDGE M SENSED (L) +3.3 VDC	Detects signal of the CRU (M) Sensor.
CARTRIDGE K SENSED (L) +3.3 VDC	Detects signal of the CRU (K) Sensor.
CARTRIDGE C SENSED (L) +3.3 VDC	Detects signal of the CRU (C) Sensor.
DATA Y IN	Controls signal of the CRUM Sensor (Y).
DATA Y OUT	
DATA M IN	Controls signal of the CRUM Sensor (M).
DATA M OUT	
DATA C IN	Controls signal of the CRUM Sensor (C).
DATA C Out	
DATA K IN	Controls signal of the CRUM Sensor (K).
DATA K OUT	

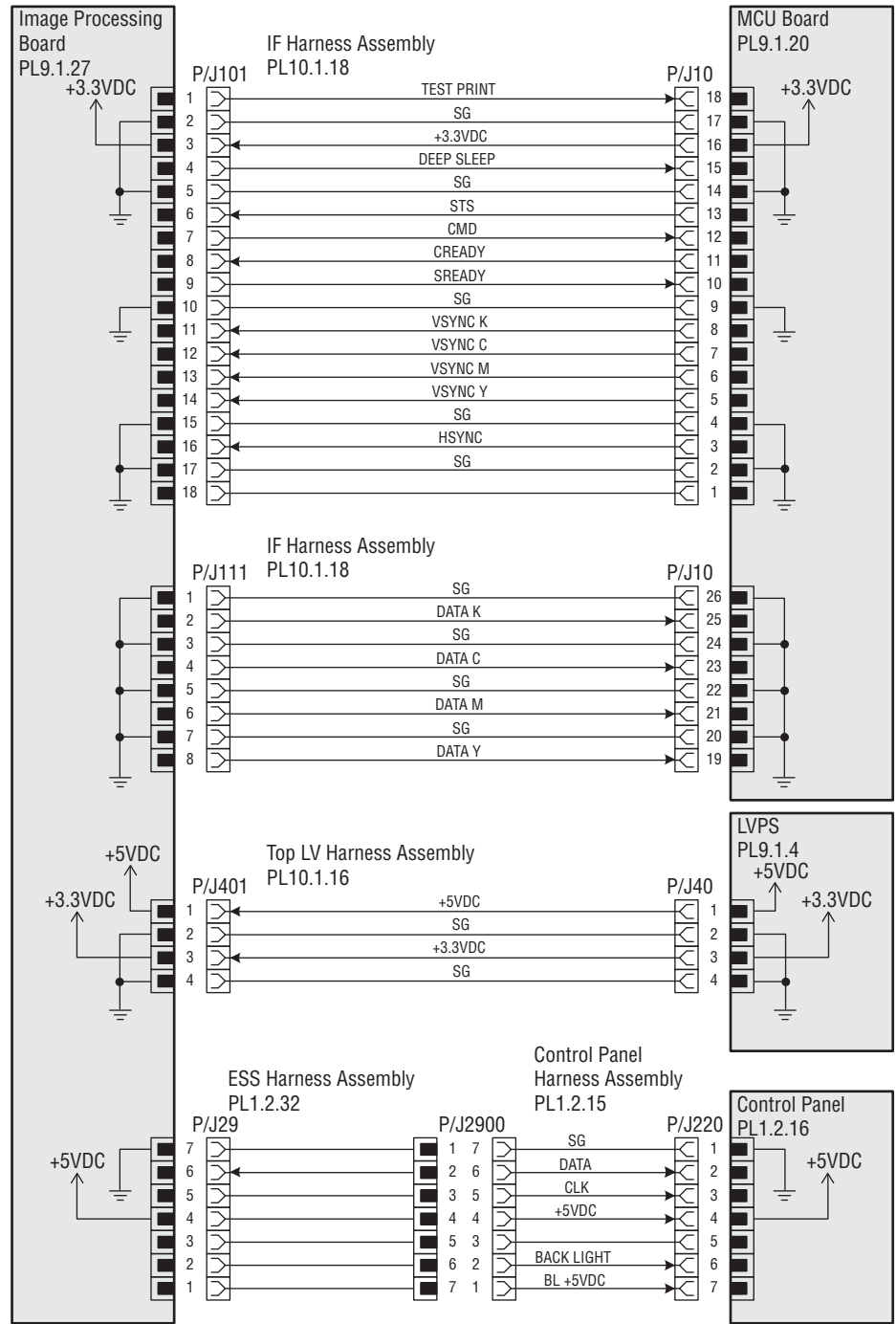
Fuser



s6280-009

Signal Line Name	Description
CLK	Controls signal of the EEPROM Fuser.
DATA	Heat Roll surface temperature data measured by the Temperature Sensor for detecting high temperature (Analog value).
VC	Temperature data measured by the Temperature Sensor for controlling the temperature (Analog value).
VD	
FUSER EXIT SENSED (L) +3.3 VDC	Paper detects signal of the Fuser Exit by the Photo Sensor (Exit Sensor).
FUSER ON	Displays lighting signal of the Fuser Lamp.
RELAY TEST LOW	Tests signal of the LVPS (used in production process only)
RELAY TEST HIGH	

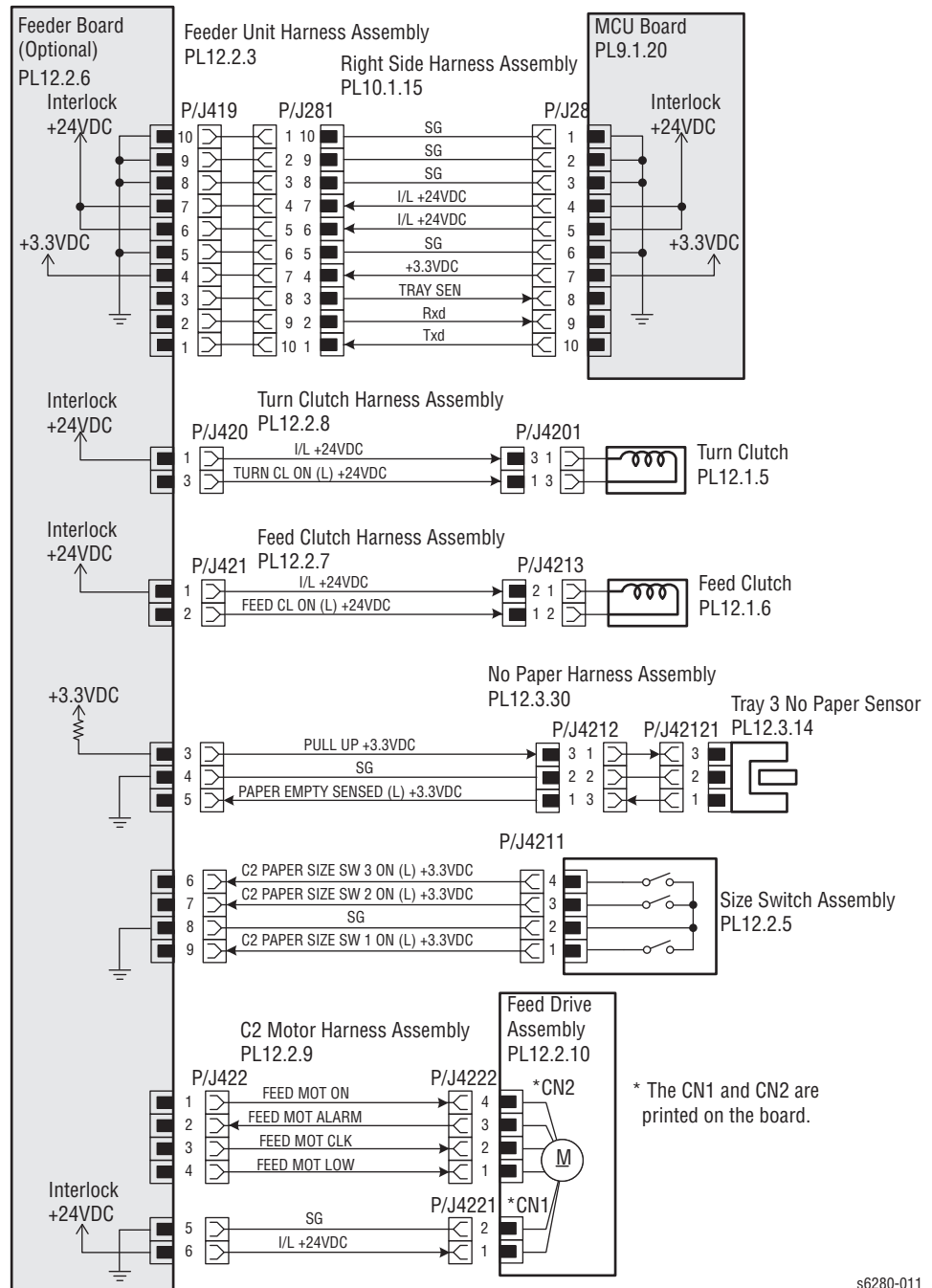
Controller



s6280-010

Signal Line Name	Description
TEST PRINT	Controls signal for the Test Print mode.
DEEP SLEEP	Controls signal for the Deep Sleep mode.
STS	Status signal transmitted from the MCU Board to the Image Processor Board.
CMD	Commands signal transmitted from the Image Processor Board to the MCU Board.
CREADY	Signal for indicating whether or not the printer is ready for receiving command signal.
SREADY	
VSYNC K	Signal for indicating registration position of each of images Y, M, C, and K.
VSYNC C	
VSYNC M	
VSYNC Y	
HSYNC	Signal for data.
DATA K	Video data of four colors.
DATA C	
DATA M	
DATA Y	
DATA	Controls signal of the Control Panel.
CLK	
BACK LIGHT	
BL +5 VDC	

Optional 550-Sheet Feeder Wiring Diagram



s6280-011

Signal Line Name	Description
TRAY SEN	Controls signal of the Optional Feeder Board.
Rxd	
Txd	
TURN CL ON (L) +24 VDC	On/Off signal of the urn Clutch.
FEED CL ON (L) +24 VDC	On/Off signal of the Feed Clutch.
PAPER EMPTY SENSED (L) +3.3 VDC	Paper detects signal of the Feeder by the Photo Sensor (Tray 3 No Paper Sensor).
PAPER SIZE SW 1 ON (L) +3.3 VDC	On/Off signal of the Size Switch Assembly.
PAPER SIZE SW 2 ON (L) +3.3 VDC	
PAPER SIZE SW 3 ON (L) +3.3 VDC	
FEED MOT ON	Drives control signal of the Feed Motor.
FEED MOT ALARM	
FEED MOT CLK	
FEED MOT LOW	

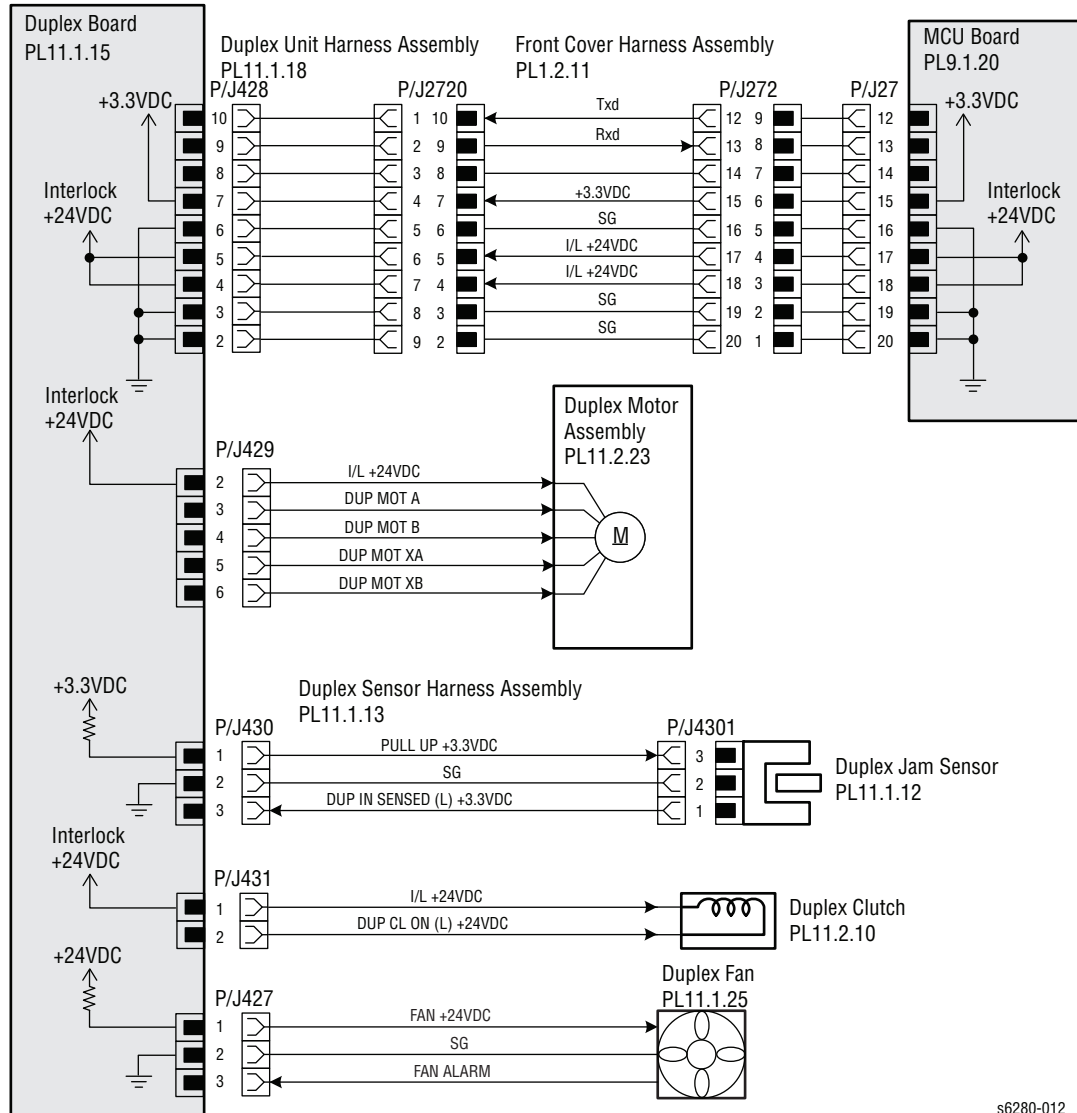
Outline of Optional Size Switch

The paper size is determined by a combination of the On/Off statuses of the SW 1, SW 2, and SW 3 switches of the Size Switch Assembly.

Paper Size	Switches		
	SW 1	SW 2	SW 3
Letter (SEF)	Off	Off	On
A4 (SEF)	Off	On	On
A5	Off	On	Off
B5 (SEF)	On	Off	Off
Legal 13" (SEF)	On	On	Off
Legal 14" (SEF)	On	On	On
Executive (SEF)	On	Off	On
No Tray	Off	Off	Off

On: The Actuator is pushing the Size Switch Assembly.

Duplex Wiring Diagram



s6280-012

Signal Line Name	Description
Txd	Controls signal of the Duplex Board.
Rxd	
DUP MOT A	Drives control signal of the Duplex Motor.
DUP MOT B	
DUP MOT XA	
DUP MOT XB	
DUP IN SENSED (L) +3.3 VDC	Paper detects signal of the Duplex by the Photo Sensor (Duplex Jam Sensor).
DUP CL ON (L) +24 VDC	On/Off signal of the Duplex Clutch.
FAN +24 VDC	Drives control signal of the Duplex Fan.
FAN ALARM	

Reference

Contents...

- Phaser 6280 Menu Map
- Firmware Update
- TELNET
- Printer Chain Link Codes
- Acronyms and Abbreviations

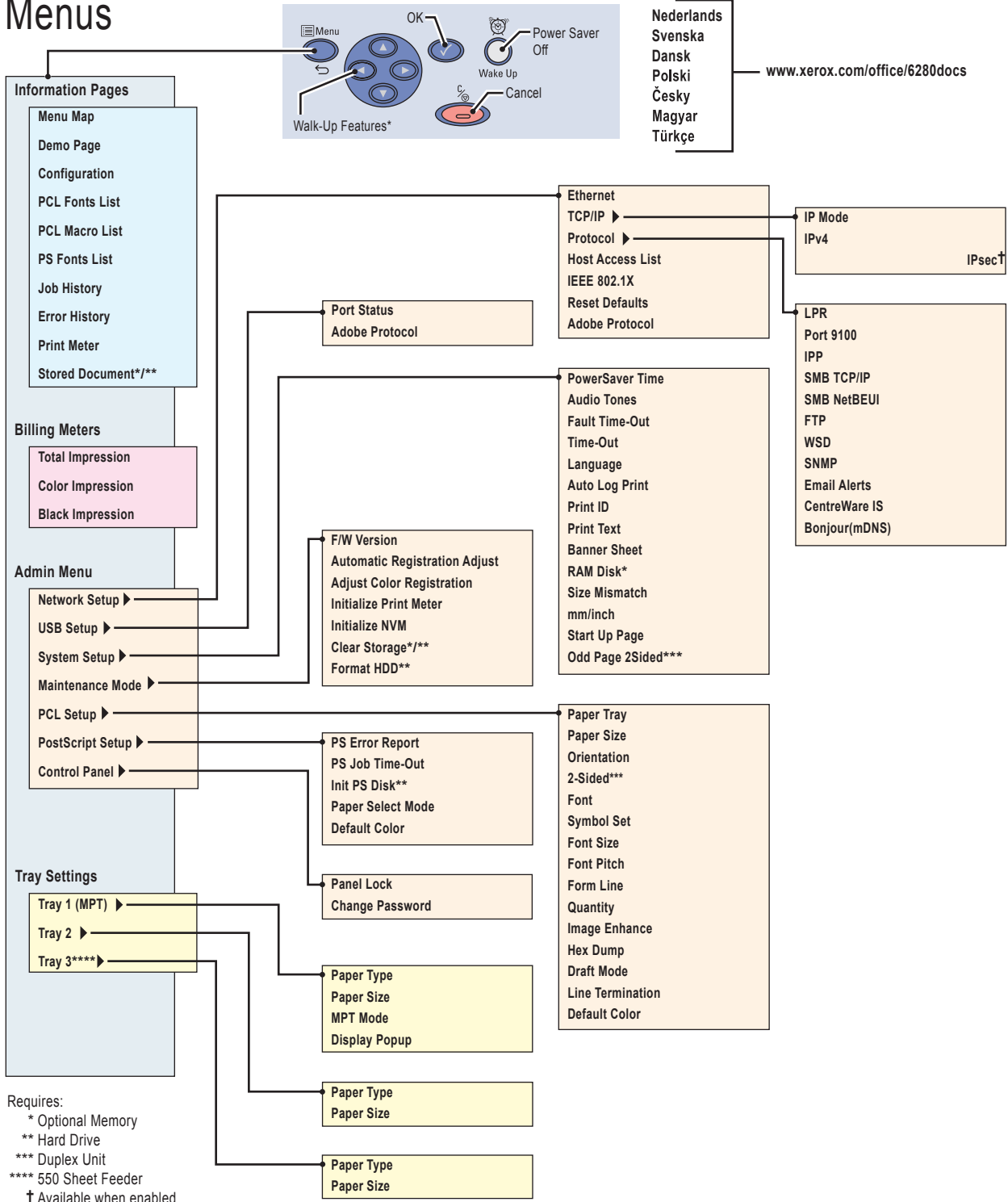
Appendix **A**



Phaser 6280 Menu Map

Phaser® 6280
Color Laser Printer

Menus



Firmware Update

Boot Controller Update

Note

Boot Code can be updated via USB port only.

1. Download applicable files from the Xerox support web site.
2. Turn off the printer.
3. Ensure the printer is connected with the computer via a USB cable.
4. Press the **Up Arrow**, **Down Arrow**, and **Menu** buttons simultaneously and turn on the printer.
5. The **FW Update Password** is displayed.
6. Press the **Down Arrow** button 2 times.
7. Press the **OK** button.
8. The **F/W Download DL Mode USB** is displayed. Press the **OK** button.
9. On the printer's Control Panel, the serial number of the printer is displayed, then the **Download Mode Ready** is displayed.
10. On your computer, locate the downloaded file. Open the **Boot** directory. Double-click the **Xeroxfwup.exe** file.
11. On the computer screen, the **USB** is selected. Click the **Next** button.
12. The **xeroxfwup** window with the Serial number is displayed. Select the printer to be updated. Click the **Next** button.
13. On the printer Control Panel, the **Writing USB... --> Erasing Flash... --> Diagnosing...** messages are displayed. The printer starts updating the firmware.

Caution

Do Not reboot or turn off the printer. The printer will automatically reboot.

14. When the process is completed, the following messages are displayed on the printer Control Panel.
 - **Xerox (TM) Print Cartridge**
 - **Processing... Ready**
 - **Please Wait... Calibrating**
15. On the computer screen, click the **Next** button.
16. The **xeroxfwup** window with "Update is finished" message is displayed. Click the **OK** button to close the window.
17. Print the Configuration page (**Menu > Information Pgs > Configuration**) and verify the Boot Firmware Version information.

Firmware Controller Update

1. Download the applicable files from the Xerox support web site.
2. Ensure your appropriate downloading cable option (Ethernet or USB) is connected.
3. Reboot the printer.
4. On your computer, locate the downloaded file. Open the **Main** directory. Double-click the **Xeroxfwup.exe** file.
5. The **xeroxfwup** window with connection options is displayed. Select the appropriate downloading option (Network or USB). Click the **Next** button.
6. The **xeroxfwup** window is displayed.
 - a. For Network connection:
 - If your printer IP address is available, select the appropriate box. Click the **Next** button.
 - If your printer IP address is not listed, click the **Add** button. Enter your printer IP address. Click the **OK** button. Select the box with your printer IP address. Click the **Next** button.
 - On the printer Control Panel, messages are displayed from **Receiving data Port 9100 --> Writing... Port 9100** as the printer starts updating the firmware.
 - b. For USB connection:
 - The **xeroxfwup** window with the serial number is displayed. Select the printer to be updated. Click the **Next** button.
 - On the printer Control Panel, messages are displayed from **Receiving data USB --> Writing... USB** as the printer starts updating the firmware.
 - A **Completed** message is displayed on the Control Panel.
7. When the process is completed, the following messages are displayed on the printer's Control Panel.
 - **Diagnosing... Xerox (TM) Print Cartridge**
 - **Processing... Configuration Printing... Please wait... Calibrating... Ready**
8. On your computer, verify that the firmware update has been sent. Click the **Next** button. Click the **OK** button to close the window.
9. Print the Configuration page (**Menu > Information Pgs > Configuration**) and verify the Firmware Version information.

Caution

Do Not reboot or turn off the printer. The printer will automatically reboot.

Firmware MCU Update

1. Download the applicable files from the Xerox support web site.
2. Ensure your appropriate downloading cable option (Ethernet or USB) is connected.
3. Reboot the printer.
4. On your computer, locate the downloaded file. Double-click the **Xeroxfwup.exe** file.
5. The **xeroxfwup** window with connection options is displayed. Select the appropriate downloading option (Network or USB). Click the **Next** button.
6. The **xeroxfwup** window is displayed.
 - a. For Network connection:
 - If your printer IP address is available, select the appropriate box. Click the **Next** button.
 - If your printer IP address is not listed, click the **Add** button. Enter your printer IP address. Click the **OK** button. Select the box with your printer IP address. Click the **Next** button.
 - On the printer Control Panel, messages are displayed from **Receiving data Port 9100 --> Checking... Port 9100 --> Writing... Port 9100** as the printer starts updating the firmware.
 - b. For USB connection:
 - The **xeroxfwup** window with the serial number is displayed. Select the printer to be updated. Click the **Next** button.
 - On the printer's Control Panel, messages are displayed from **Receiving data USB --> Checking... USB --> Writing... USB** as the printer starts updating the firmware.
 - On the printer control panel, additional messages are displayed from **Completed --> Please Wait -> Diagnosing...**

Caution

Do Not reboot or turn off the printer. The printer will automatically reboot.

7. When the process is completed, the following messages are displayed on the printer Control Panel.
 - **Diagnosing... Xerox (TM) Print Cartridge**
 - **Processing... Please wait... Calibrating... Ready**
8. On your computer, verify that the firmware update has been sent. Click the **Next** button. Click the **OK** button.
9. Print the Configuration page (**Menu > Information Pgs > Configuration**) and verify the MCU Firmware Version information.

TELNET

1. Open a Command Prompt window.
2. Type **telnet** <IPAddress>.
3. A **Password** prompt is displayed. Press the **Enter** key (no password).
4. A menu is displayed.

MAIN MENU

1. Set TCP/IP Options
2. Enable/Disable Embedded Web Server
3. Set IPv4 Filter (LPD and Port9100)
4. Set SNMP community name
5. Set adapter password
- X. Exit current menu
- I. Exit current menu and Initialize NVRAM Memory and restart printer.
- R. Exit current menu and restart printer.

Selection:

5. Select the appropriate option from the menu to perform the task.

Printer Chain Link Codes

The Chain Link codes in the table below may not require troubleshooting procedures and or do not have procedures. These Chain Link codes may appear as an information when the printer operates.

Error Message and Chain Link Code Display

Chain Link	Description
016-393	Download Write Error
016-611	IOT Speed
024-360	MCU Download Error

Acronyms and Abbreviations

Acronym	Description
3TM	Three Tray Module
A3	Paper size 297 millimeters (11.69 inches) x 420 millimeters (16.54 inches).
A4	Paper size 210 millimeters (8.27 inches) x 297 millimeters (11.69 inches).
A5	Paper size 148 millimeters (5.82 inches) x 210 millimeters (2.10 inches).
AC	Alternating Current is type of current available at power source for the printer.
ADC	Automatic Density Control
AMPV	Average Monthly Print Volume
APC	Auto Power Control
ASSY	Assembly
ATM	Adobe Type Manager
BCR	Bias Charge Roller
BOOTP	Boot Parameter Protocol
BSD	Block Schematic Diagram
BTM	Bottom
BTR	Bias Transfer Roller
CAM	Cam Shaft
CCD	Charge Coupled Device (Photoelectric Converter)
CCW	Counter-Clock Wise
CD	Circuit Diagram
CFD	Computational-Fluid Dynamics
CLT	Clutch
CMYK	Toner colors for the printer: Y=yellow, C=cyan, M=magenta, K=black
CORR	Corrugate
CRD	(PostScript) Color Rendering Dictionary
CRU	Customer Replaceable Unit
CRUM	Customer Replaceable Unit Meter/Memory
CST	Cassette
CTD	Calibrate Toner Density
CWIS	CentreWare Information System
dB	Decibel

Acronym	Description
DC	Direct Current is type of power for printer components. Machine converts AC power from power source to DC power.
DDNS	Dynamic Domain Name System
DDR2 DIMM	Double Data Rate Dual In-Line Memory Module
DEV/DEVE	Developer
DHCP	Dynamic Host Configuration Protocol
DMO	Developing Market
DMP	Damper
DPI	Dot Per Inch
DRV	Drive
DTB	Direct Transfer Belt
DUP	Duplex
Duplex	2-sided printing
EA	Emulsion Aggregation (Toner)
EC	European Community
EEC	European Economic Community
EEPROM	Electrically Erasable Programmable Read-Only Memory
ESD	Electrostatic Discharge. A transfer of charge between bodies at different electrostatic potential.
ESS	Printer Controller
FCC	Federal Communications Commission
FDR	Feeder
FE	Field Engineer
FIC	Final Integration Center
FPOT	First Print Output Time
FR/FRNT	Front
FRU	Field Replaceable Unit
GB	Giga Byte
GND	Ground
HARN	Harness
HCF	High-Capacity Feeder
HD	Hard Disk
HDD	Hard Disk Drive
HSG	Housing
HUM	Humidity
HVPS	High-Voltage Power Supply

Acronym	Description
Hz	Hertz (cycles per second)
IBT	Intermediate Belt Transfer
IC	Integrated Circuit
IDT	Intermediate Drum Transfer
IEC	International Electrotechnical Commission
I/F	Interface
IOT	Image Output Terminal - the ROS/Xerox/paper handling/fusing portion of the printer
IP	Image Processor
IPM	Impression Per Minutes
IPP	Internet Present Provider
IPX	Internetwork Packet Exchange
IQ	Image Quality
JBA	Job-Based Accounting
KB	Kilo Byte
LAC	Low Area Coverage
LAN	Local Area Network
LCD	Liquid Crystal Display
LD	Laser Diode
LED	Light Emitting Diode
LEF	Long-Edge Feed
LH	Left Hand
LPD	Line Printer Daemon
LPR	Line Printer Remote
LTR	Letter Size Paper (8.5 x 11 inches)
LV	Low Voltage
LVPS	Low-Voltage Power Supply
MAC	Media Access Control
MB	Mega Byte
MCU	Machine Control Unit (Engine Control Board)
MHz	Mega Hertz
MIB	Management Information Base
MICR	Magnetic Ink Character Recognition
MM	Millimeters
MOB	Marks On Belt
MOT	Motor
MPT	Multi-Purpose Tray

Acronym	Description
NA	North America
NCS	Non-Contact Sensor
NPP	No Paper
NVM	Non-Volatile Memory
NVRAM	Non-Volatile Random Access Memory
OEM	Original Equipment Manufacturer
OHP	Overhead Paper (Transparency)
OPC	Organic Photo Conductor
OPT	Optional
OS	Operating System
PC	Personal Computer
PCB	Printed Circuit Board
PCDC	Pixel Count Dispense Control
PCL	Printer Command Language
PDL	Page Description Language
PH	Paper Handling
PHY	Physical Layer
P/J	Plug Jack (electrical connections)
PJL	Printer Job Language
PL	Parts List
POP3	Post Office Protocol version 3
PPD	PostScript Printer Description
PPM	Pages Per Minute
PPS	Pages
PV	Print Volume Management
PWB	Printed Wiring Board
PWBA	Printed Wiring Board Assembly
RAM	Random Access Memory
RegiCon	Registration Control
RET	Retard
RH	Relative Humidity
RLS	Release
RMS	Root Mean Square Voltage
ROM	Read-Only Memory
ROS	Raster Output Scanner - Laser Unit
RTD	Retard

Acronym	Description
SEF	Short-Edge Feed
SLP	Service Location Protocol
SMB	Server Message Block
SNMP	Simple Network Management Protocol
SNR	Sensor
SOL	Solenoid
SOS	Start of Scan
STS	Soft Touch Sensor
TDC	Toner Density Control
TELNET	Telecommunication Network
TNR	Toner
TRNS	Transport
UI	User Interface
USB	Universal Serial Bus
WINS	Wireless Integrated Network Sensor
XE	Xerox Europe

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