Phaser® 6128MFP
Multi-Function Printer

Phaser® 6128MFP
Service Manual

xerox

Phaser® 6128MFP Service Manual

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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xerox

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About this Service Manual

The Phaser 6128MFP 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 printer and attached options. Also included are detailed replacement procedures, parts lists, and wiring diagrams.

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.

Warning

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

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.

Replacement Note

A replacement note provides important information related to parts replacement. When needed, replacement notes appear at the end of the disassembly procedure.

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.

Manual Organization

The Phaser 6128MFP Service Manual contains these sections:

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

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

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

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

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

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

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

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

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

Chapter 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.

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

Reference: This section provides an illustration of the printer's menu structure, printer firmware update instructions, and a list of acronyms and abbreviations.

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.

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.

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 (ESD) 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 ICs 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 xvi.

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 6128MFP 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

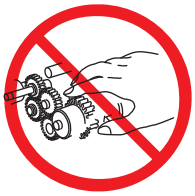
Do not touch any electrical component unless you are instructed to do so by a service procedure.

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 motor is running.



Servicing Fuser Components

Warning

This printer uses heat to fuse the image to paper. When operating, the Fuser is very hot. Turn the printer power Off and wait at least 5 minutes for the Fuser to cool before you attempt to service the Fuser or adjacent components.

Regulatory Specifications

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:

January 1, 1995: Low Voltage Directive 73/23/EEC as amended by 93/68/EEC

January 1, 1996: Electromagnetic Compatibility Directive 89/336/EEC

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.

General Information

In this chapter...

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

Chapter 1

Printer Introduction and Overview

The Xerox Phaser 6128MFP combines a color laser print engine, scanner, copier, and Fax. The Phaser 6128MFP has a single-pass color laser architecture, which offers color and mono print speed at 12/16-ppm, and resolutions up to 600 x 600 dots-per-inch (dpi). The printer supports USB 2.0 and 10/100 Base-TX Ethernet connectivity. The Scanner supports USB Scan to Desktop, Network Scan to FTP, Network Scan to Server Message Block (SMB), and Network Scan to E-Mail with resolution up to 1200 dpi and interpolated up to 9600 dpi.

The Phaser 6128MFP provides a 35-sheet Automatic Document Feeder (ADF), a 250-sheet Tray, a manual feed slot supporting single-sheet feed of specialty media, card stock, and envelopes. The Output Tray holds 150 sheets facedown.

Technical Support Information

The Xerox Service Manual is the primary document used for repairing, maintaining, and troubleshooting the printer.

To ensure complete understanding of this product, participation in Xerox 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.xrxgsn.com/secure/main.p
- Service Partners: http://www.office.xerox.com/partnersl

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

Printer Configurations

The printer is available in these configurations

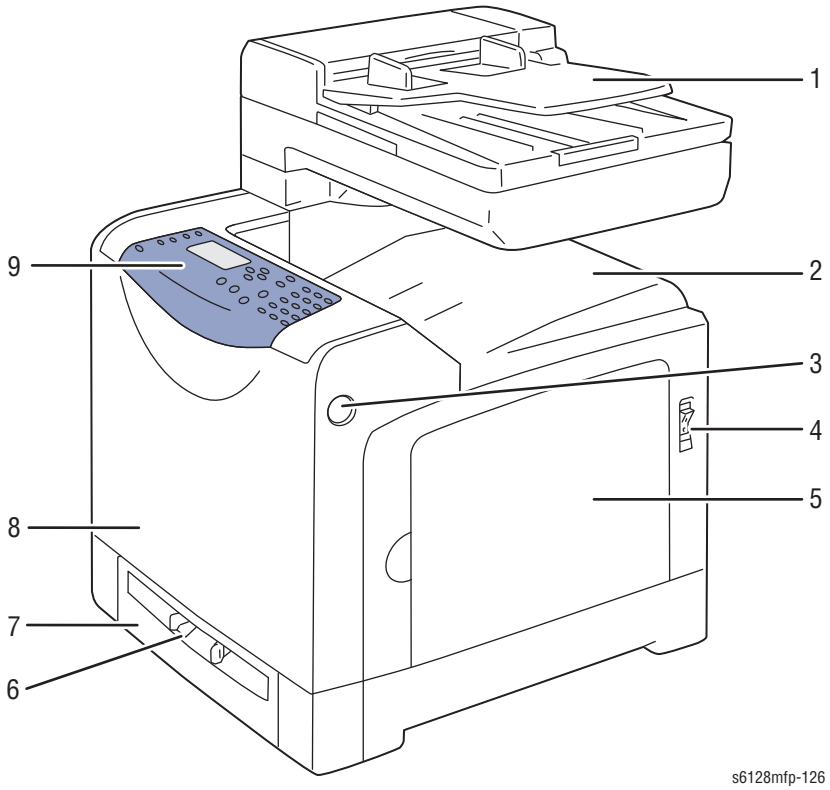
Printer Configuration

Features	Printer Configuration
Processor and Clock Speed	400 MHz
Memory Configuration[a]	384 MB
Print Speed (Color/Mono)	12/16
Resolutions (dpi)	
Standard	600 x 600 x 1 bit
Enhanced	600 x 600 x 4 bit
PCL6 Fonts	Standard
USB 2.0 Support	Standard
Ethernet Interface	10/100 Base-TX
Manual Feed Slot (Single sheet)	Standard
Standard Tray (250 Sheets)	Standard
Wireless LAN	Optional

a. The Phaser 6128MFP has one memory slot with 256 MB DDR2 DIMM installed to provide the maximum of 384 MB.

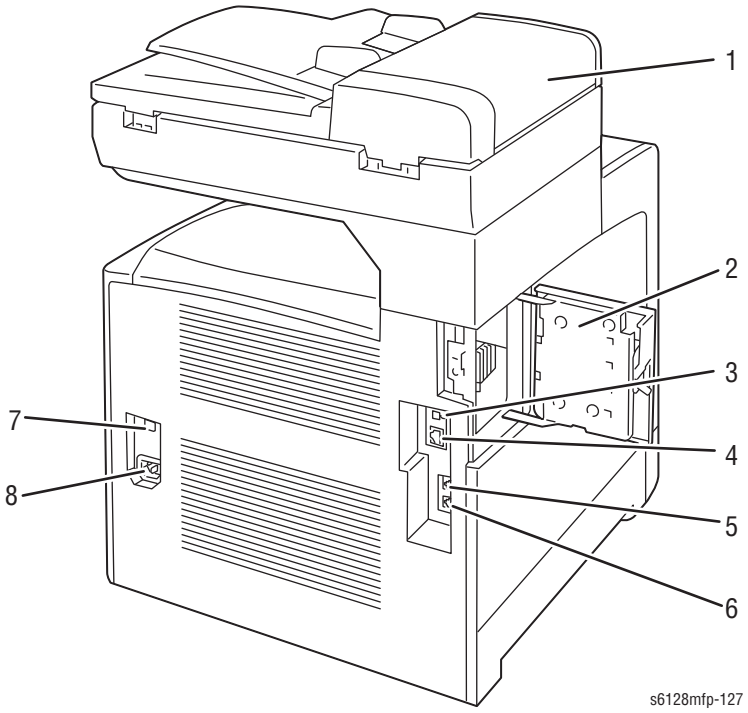
Parts of the Printer

Front and Side Views



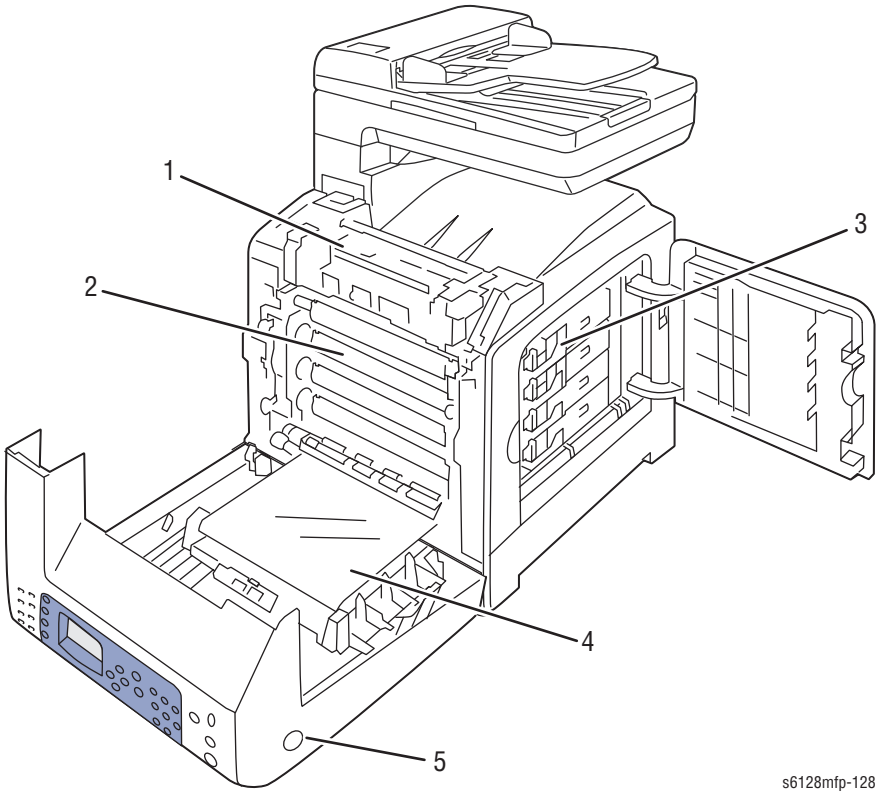
1. Automatic Document Feeder (ADF)
2. Output Tray
3. Front Door Release
4. Power Switch
5. Right Side Door
6. Sheet Feeder
7. Paper Tray
8. Front Door
9. Control Panel

Rear View



1. ADF Cover
2. ESS Cover
3. USB Port
4. Ethernet Port
5. Phone Line out
6. Phone Line in
7. Power test
8. AC input

Internal View

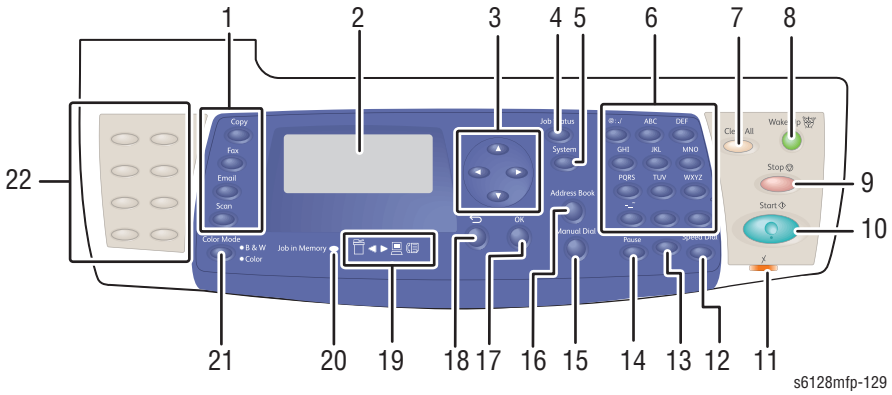


1. Fuser
2. Imaging Unit
3. Toner Cartridges
4. Transfer Belt
5. Front Cover Release

Control Panel

The Control Panel consists of multiple LEDs, a display, and several function buttons. These buttons are used to navigate the menu system, perform functions, and select modes of operation.

Control Panel Button Descriptions



1.	**Function Select** buttons	Press to use the Copy, Fax, Email, and Scan menus on the display screen.
2.	Display	Indicates messages, menus, and toner levels.
3.	**Arrow** buttons	Scroll through the menus. The Back Arrow button also displays the Walk-Up Features menu.
4.	**Job Status** button	Press to check active job status.
5.	**System** button	Switches the display to the Setup menu. The green light indicates that the printer is ready. If the light is blinking, the printer is receiving data.
6.	Alphanumeric key pad	Use to enter letters and numbers for names and phone numbers.
7.	**Clear All** button	Clears all text or numbers or instructions.
8.	**Power Saver** button	This light is on in power saver mode. Push the button to exit power saver mode.
9.	**Stop** button	Cancels the current print job.
10.	**Start** button	Press to start a copy, scan, or fax job.
11.	**Error** LED	The red light indicates an error condition.
12.	**Speed Dial** button	Press to access directories of group or individual fax telephone numbers.
13.	**Clear** button	Deletes a single character each time the button is pressed. For use when entering email addresses and telephone numbers.
14.	**Redial/Pause** button	Press the button to recall the last fax number used or to insert pauses in fax numbers.
15.	**Manual Dial** button	When faxing, press this button to enter a fax number with the alphanumeric key pad.
16.	**Address Book** button	Press to access the Fax and Email address books.
17.	**OK** button	Press to accept the setting selected.
18.	**Exit** button	Press to go up one level in the menu.
19.	Arrow LEDs	These LEDs indicate the flow of data either into or out of the printer.
20.	**Job in Memory** LED	When illuminated, it indicates that there is a job in the printer's memory.
21.	**Color Mode** button	Press to switch between Color and Black and White modes for your copy, fax, and scan job.
22.	One touch keypad	Use to dial stored speed-dial numbers.

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)	System
Boot Download for Controller	Up + Down + System buttons

Maintenance Items

Routine maintenance items are parts or assemblies that require periodic replacement. These items are typically customer replaceable (CRU).

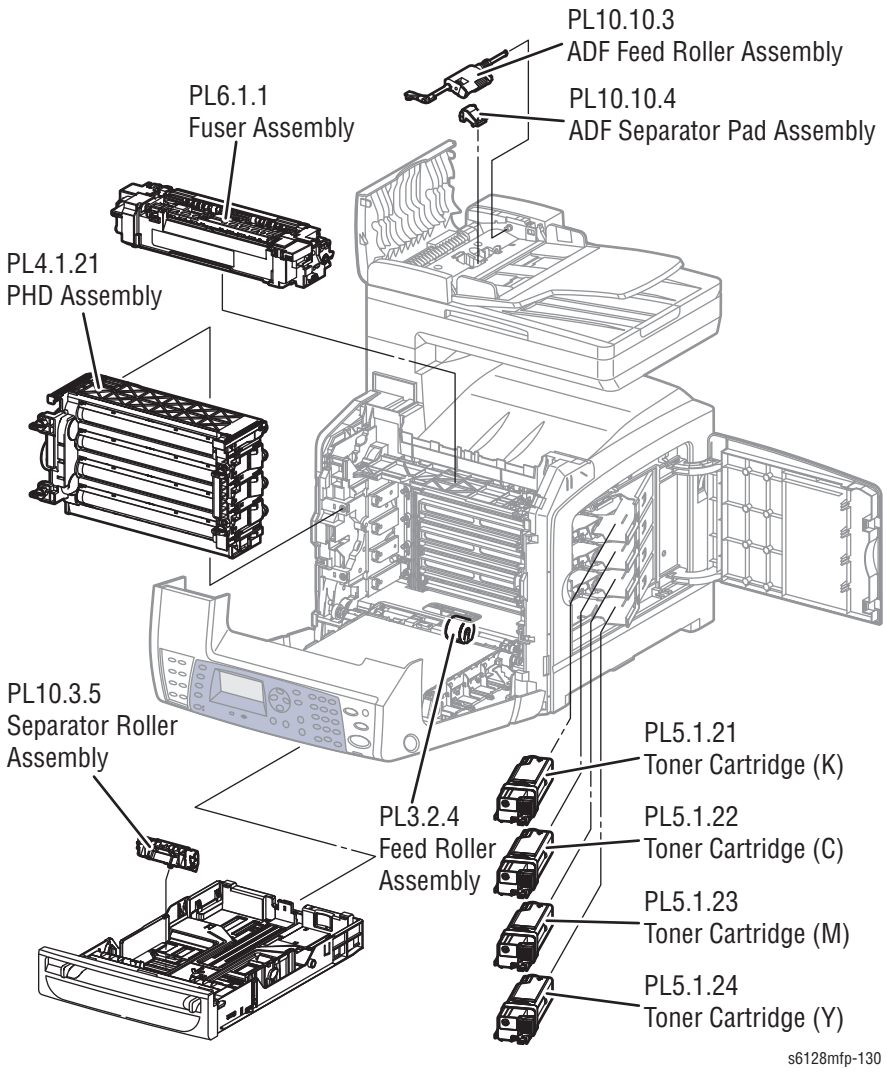
The listed items have limited life and require periodic replacement.

Maintenance Items

Item	Print Life
Imaging Unit	Approximately 30,000 pages
Fuser	Up to 50,000 pages
Tray Separator Pad	Up to 50,000 pages
Tray Pick Roller	Up to 50,000 pages
ADF Feed Roll Assy	Up to 35,000 pages
ADF Seperator Pad	Up to 35,000 pages

Note

Print life is based on “typical” office printing and 5 % coverage per color on 24 lb. paper. Print life figures are not guaranteed and varies depending on usage habits. Imaging Unit print life is based on 3-page jobs using letter-size paper.



Consumables

Consumables consist of 4 Toner Cartridges.

Each Toner Cartridge has a CRUM (Customer Replaceable Unit Meter) to record toner usage information. A CRUM counts the amount of remaining toner. When toner empty is detected, Life End status is displayed to indicate toner empty.

CMY Toner is not consumed when printing in monochrome mode or when printing Gray scale. Internal counters track consumables and maintenance life.

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

Toner Cartridge	Print Life	
	C,M,Y	Black
Standard Capacity	1,000 pages	1,000 pages
High Capacity	2,500 pages	3,100 pages

Specifications

Printer Specifications

Characteristic	Specification	
Printing Technology	**Recording System**: Tandem electro-photographic system using OPC Drum and direct transfer by the Transport Belt	
	Exposure System: 4 semiconductors laser beam scanning system	
	Transfer System: Four-color finished toner image is transferred onto the paper	
	Fusing System: Thermal fusing system by Free Belt Nip Fusing (FBNF)	
Print Volume	Average	450 PV/month
	Maximum	40,000 PV/month
	Median	300 PV/month
Color Medium	Cyan, Magenta, Yellow, and Black Toner Cartridges	
Resolution / Addressability (dpi)	Standard	600 x 600 x 1
	Enhanced	600 x 600 x 4
Print-Quality Mode	600 x 600 x 1bit (Standard) 600 x 600 x 4bit (Enhanced)	
Average Image Coverage	Color	5 % each CMYK
	Mono	5 %
Maximum Image Coverage	240 % for all C, M, Y, K combined	
Printer Life	100,000 pages	
Maximum Duty Cycle	40,000 pages/month*	
Warm-Up Time	Less than 30 seconds from Power On	
Operating System	Windows	2000/ 2003 Server/ XP Pro/ XP/ Vista
	Macintosh	OS 10.2 or higher
	Linux	Redhat, SuSe, and TurboLinux 10 Desktop

* Assumes a 30 day month of printing.

Scanning Specifications

Scanning Specifications

Characteristic	Specifications
Scanning Mode	■ Platen Mode: Scan document using the document glass ■ Constant Velocity Transport (CVT) Mode: Scan document via the Automatic Document Feeder (ADF)
Maximum Scan Size	■ Platen Mode: 215.9 mm x 297 mm (8.5 in. x 11.7 in.) ■ CVT mode; 215.9 mm x 355.6 mm (8.5 in. x 14 in.)
Media Size	
Minimum	■ Fast Scan Direction: 148 mm (5.8 in.) ■ Slow Scan Direction; 210 mm (8.3 in.)
Maximum	■ Fast Scan Direction: 215.9 mm (8.5 in.) ■ Slow Scan Direction: 355.6 mm (14.0 in.)
USB Scanning	
Resolution	Up to 9600 dpi
■ Scan Interface ■ File Formats	TWAIN/ WIA BMP, JPG, PDF, TIFF
Network Scanning	
Resolution	Up to 600 dpi
Color Mode	Color, Black & White
Original Type	Text, Photo, Mixed
File Format	JPG, PDF, TIFF
Lighter/Darker	7 levels
Sharpness	3 levels
Contrast	3 levels
Auto Exposure	Off, Normal, Higher (1, 2)
Scan to Desktop via SMB	Up to 6 SMB servers
Scan to FTP	Up to 6 FTP servers
Scan to E-mail	Yes (no individual user log in)
Network Scan to Computer via SMB	Document Glass, 150 dpi, mixed, letter size 9 sec.

Scan Performance

Function	Document	Black & White	Color
USB Scan to Application (TWAIN)	Document Glass, 300 dpi, 24-bit color, letter size	8 sec.	10 sec.
USB Scan to Computer (via Express Scan Manager)	Document Glass, 300 dpi, 24-bit color, letter size	12 sec.	33 sec.
Network Scan to Computer via SMB	Document Glass, 150 dpi, mixed, letter size	9 sec.	8 sec.
Network Scan to E-mail	Document Glass, 150 dpi, mixed, letter size	9 sec.	10 sec.

Copy Specifications

Copy Specifications

Characteristic	Specifications
Resolution	■ Black & White: 600 x 600 dpi ■ Color: 600 x 600 dpi
Copy Mode	Color, Black & White
Output Type	Standard, Enhanced (Best)
Original Type	Text, Photo, Text/Photo
Reduce/Enlarge	25 % -400 %
Lighter/Darker	7 levels
Color Saturation	3 levels
Sharpness	3 levels
Color Balance	4 colors, 3 densities, 5 levels
Auto Exposure	Off, Normal, Higher (1, 2)
Number of Copies	1-99
Multiple Up (N to 1)	Off, Auto, ID Copy, Manual
Duplex Copy	On, Off
Poster	2x2, 3x3, 4x4
Auto Fit	On, Off
Cloning	On, Off
Collate	■ Color: 19 ■ B/W: 50

Fax Specifications

Fax Specifications

Characteristic	Specifications
Communication Mode	■ Priority 1: ITU-T Super G3 ■ Priority 2: ITU-T G3 ECM ■ Priority 3: ITU-T G3
Resolution Lines: Pixels	B&W (Fast Scan x Slow Scan) ■ 8 pixels x 3.85 line / mm ■ 8 pixels x 7.7 line / mm ■ 8 pixels x 15.4 line / mm ■ 16 pixels x 15.4 line /mm ■ 400 x 400 ppi / 25mm ■ 300 x 300 ppi / 25mm ■ 200 x 200 ppi / 25mm ■ 100 x 100 ppi / 25mm
Supported Protocols	■ V. 34 (Max.33.6 kbps) ■ V. 17 (14.4/12/9.6/7.2 kbps) ■ V. 29 (9.6/7.2 kbps) ■ V. 27ter (4.8/2.4 kbps)
Compression Format	MH, MR, MMR, JBIG (B&W 1-bit) JPEG (Color Fax)
Incoming Call Control	Telephone Mode, Fax Mode, Telephone/ Fax Mode, Answering Machine Mode, Distinctive Ring Pattern Detection (DRPD)
Lighter/Darker	7 levels
DM Protection	Reject junk Fax
Forwarding & Local Print	Supported
Color Fax	Resolution is fixed by 200 x 200 dpi
Fax Address Book	Up to 200 Speed Dial numbers and up to 6 Group Dial numbers stored in device memory. The Group Dial Numbers may have up to 200 fax numbers associated with each group; however, the total number of allowable fax numbers for all groups is 200.
Lan Fax	
Resolution	Normal: 200 x 100 dpi Fine: 200 x 200 dpi Super Fine: 400 x 400 dpi
Driver	PCL driver - supported PS driver - not support
Color	Not support
Delayed Start	Up to 24 hours
Broadcast Sending	Up to 30 destinations
Zoom	25 % -400 % (same as printer driver)

Fax Specifications (continued)

Characteristic	Specifications
Auto Reduction/ Enlarge (Auto Fit)	On/Off (same as printer driver)
Rotation	On/Off (same as printer driver)
N-Up	1/ 2/ 4/ 8/ 16/ 32 (same as printer driver)
Watermark	Supported (same as printer driver)
Phone Book	Up to 500 Speed Dial numbers and up to 500 Group Dial. Local phone book stored on PC not linked device.

Memory Specifications

Characteristic	Specifications	
Memory	Minimum	128 MB Onboard memory
	Maximum	384 MB
Supported RAM	Supports one 256 MB DDR2 DIMM in one expansion slot with 128 MB mounted onboard.	

Electrical Specifications

Characteristic	Specification
Power Supply Voltage/Frequency	
Line Voltages	110-127 VAC ± 10 %
	220-240 VAC ± 10 %
Frequency Range	50/60 Hz ± 3 Hz
Current Capacity	110 V Engine: < 9 A 220 V Engine: < 5 A
Power Consumption (with all options, 110 or 220 V)	
Power Saver Mode	18.4W or less
Standby Mode (Fuser On)	60W or less
Color Continuous Printing	360W or less
B/W Continuous Printing	360W or less
Maximum Value	1100 W or less

Print Speed

Resolution	Color A/A4	Mono A/A4
600 Standard	12/12	16/16
600 Enhanced	12/12	16/16

Environmental Specifications

Characteristic	Specification	
Temperature		
Operating	5 to 32° C (41 to 90° F)	
Standby	-20 to 40° C (-4 to 104° F)	
Humidity (% RH)		
Operating	15 to 85 % RH	
Standby	5 to 85 % RH	
Altitude		
Operating	0 to 3,100 meters (10,171 feet)	
Acoustic Noise LWA(B)	**Sound Power Level (B)**	**Sound Pressure (dBA)**
Printing	6.16	51.6
Standby	4.3	25.7

Operating Mode

Mode	Condition	Description
Running Mode		The printer is under operating condition such as running or recording.
	Fusing	Maintained at operating temperature.
	Exposure	The Laser Unit Motor runs at the operating speed.
	Recording	The system is operating.
	Cooling Fan	The fan operates at high speed.
	Control Panel Operation	LCD - Backlight: On LED - Ready LED is turned On.
	Fax Communication	Sending or receiving a Fax.
Ready Mode		The printer is in standby status, ready to run.
	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	LCD - Backlight: On LED: If printer is online, Ready LED is turned On.
Power Saver Mode (Deep Sleep)		The printer enters into the Power Saver mode to reduce power consumption when it has not received print data for the specified time.
	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	LCD: Off, LCD Backlight: Off LED: Power Saver LED is turned On.

NOTE When the printer receives a print job or a button is pressed, the printer exits the Power Saver mode and enters the Ready mode.

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 Ready mode
- Paper is A size Short Edge Feed (SEF)
- Process control time is not included

Mode	Tray	FPOT (sec.)
Color	Tray	As fast as 17.0 sec.
	Manual Feed	As fast as 17.0 sec.
Mono	Tray	As fast as 14.0 sec.
	Manual Feed	As fast as 14.0 sec.

First Copy Output Time

First Copy Output Time (FCOT) is defined as the time when the Start button is pressed until the trail edge of the first copied media passes the printer Exit Roller.

The following conditions are applied:

- The Controller does not keep the print engine waiting.
- The printer is at Ready mode (Laser Unit Motor Off, Fuser Ready).
- Paper is A size Short-Edge Feed (SEF).
- Document is on the document glass (Document setting: Platen mode).
- Media: Media feed from the standard media tray.

Mode	FCOT (sec.)
Color	Less than 30.0 sec.
Mono	Less than 21.0 sec.

Image Specifications

Note

The printed image has 4 mm margins on all sides.

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

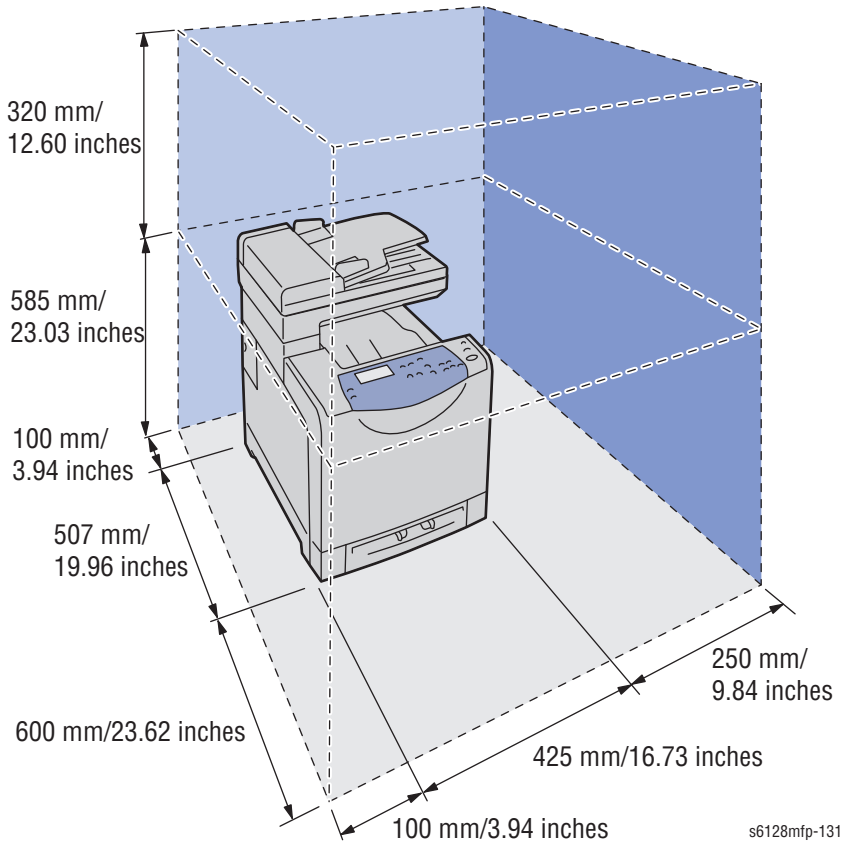
Characteristic	Specification
Maximum Print Area	210.9 mm (8.2 inches) x 351.6 mm (13.8 inches)
Guaranteed Print Area	207.9 mm (8.2 inches) x 347.6 mm (13.7 inches)
Skew	190 mm ± 1.2 mm
Perpendicularity	114.5 mm ± 0.8 mm
Parallelism	
Horizontal	180 mm ± 1.2 mm
Vertical	234 mm ± 1.2 mm
Linearity	
Horizontal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

Physical Dimensions and Clearances

Dimensions

Height	585 mm (23”)
Width	420 mm (16.7 in.)
Depth	507 mm (20”)
Weight (base printer without consumables)	25 kg (55 lb.)

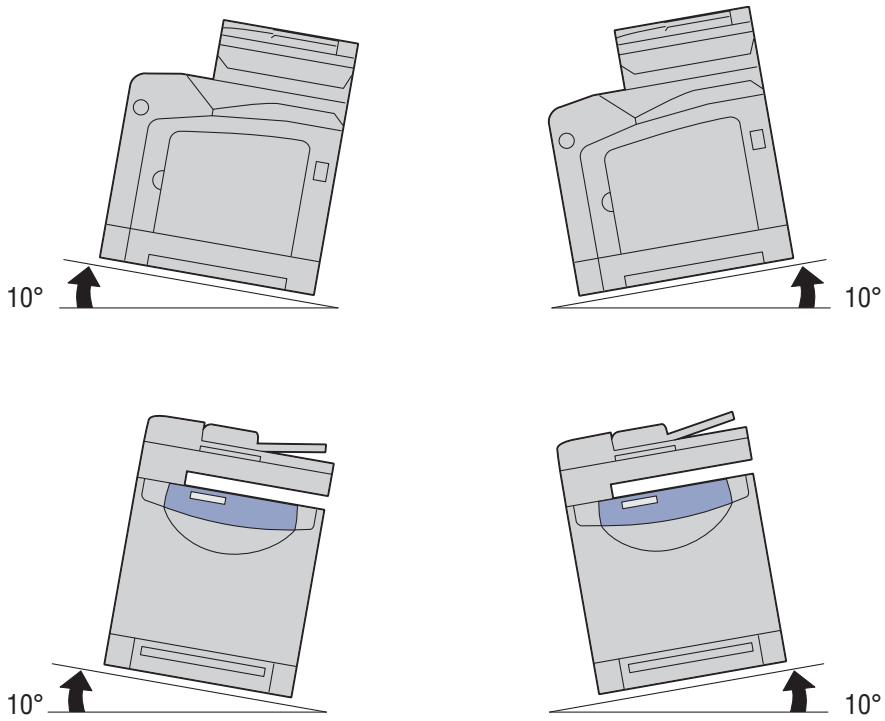
Minimum Clearances



Mounting Surface Specifications

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

Mounting surface flatness must be within the specified range. The printer must not be tipped or tilted more than 10 degrees or 7 mm.



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Known problems that 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 trailing 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	Manual Feed	Tray
Letter	8.5 x 11 in.	Yes	Yes
Legal	8.5 x 14 in.	Yes	Yes
US Folio	8.5 x 13 in.	Yes	Yes
Executive	7.25 x 10.5 in.	Yes	Yes
A4	210 x 297 mm	Yes	Yes
A5	148 x 210 mm	Yes	Yes
B5 JIS	182 x 257 mm	Yes	Yes
Custom Size[a]		Yes	Yes

a. Minimum 3"x5", maximum 8.66"x14".

Supported Paper Types and Weights

Paper Type	Dimension	Manual Feed	Tray
Plain Paper	65-90 g/m^2	Yes	Yes
Letter Head	85-120 g/m^2 (22-32 lb. Bond)	Yes	Yes
Pre-Punched	65-90 g/m^2 (17-24 lb. Bond)	Yes	Yes
Color			
Thin Card Stock	100-163 g/m^2	Yes	Yes
Special	100-163 g/m^2 (30-60 lb. Cover)	Yes	Yes
Thick Card Stock	170-216 g/m^2	Yes	No
Glossy Paper	100-163 g/m^2	Yes	Yes
Thick Glossy Paper	164-216 g/m^2	Yes	Yes
Label	N/A	Yes	Yes

Supported Envelopes

Type	Dimension	Manual Feed	Tray
Envelope #10	4.12 x 9.5 in.	Yes	Yes
Monarch Envelope	3.87 x 7.5 in.	Yes	Yes
C5 Envelope	162 x 229 mm	Yes	Yes
DL Envelope	110 x 220 mm	Yes	Yes

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

Controller Functions

Job Control

Cancel Print

Cancel a print job while printing is in progress using the **Stop** button on the Control Panel. Job cancellation is not immediate. Depending on the job size, it may take several seconds 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

Accept or reject print jobs from up to five specified IP addresses. IP filter is available only to LPD and Port9100.

Job Recovery

When a print job fails due to a jam, the printer automatically restarts the job after the jam is removed

Job Timeout

When job transmission is interrupted for a certain period of time, the print data is deleted as an error. The 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

RAM Disk functions when memory is expanded, enabling Collation, Secure Print, Proof Print, Form Overlay, and Font Download. 256 MB is needed to enable RAM Disk and all related functions.

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

Secure Print

When memory is expanded to 256 MB or more, the printer holds print data, including a User Password (11 digits), User Name, and Document Name in the memory.

- **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.

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 and will be cleared when the printer is turned off. User can omit entering a password (this is called Store Print - not available for MAC OS 10.2.).

Proof Print

Proof Print can be selected only when multiple sets of prints are specified in the printer driver. Proof Print requires at least 256 MB of memory. The printer prints only the first set of the print data including a user name and document name specified in the printer driver. 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 and erased when the printer is turned Off. This function is not available for MAC OS 10.2 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.

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.

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).

ID Print

User can position and print the User Name on the upper right, upper left, lower right, and lower left (only for PCL6) of the page.

Non-Genuine Mode

When the Toner Cartridge life has ended, the printer stops accepting print request (life of the Toner 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 Toner Cartridge rated life; however, the printer will display an end of life message on the Control Panel.

Toner Cartridge Control Panel Display

Toner Cartridge	Control Panel Display			Functionality
	Normal Status	Life Warning Error	End of Life Error	
Xerox	Xerox (TM) Toner Cartridge	Replace Soon	Replace Toner Cartridge	Prints with full functionality.
Xerox (refill Toner Cartridge)	Xerox (TM) Toner Cartridge	Replace Soon	Empty	Prints with full functionality up to 40 % of the Toner Cartridge life.
Other OEM (non-Xerox printer manufacturer)	Non-Xerox Toner Cartridge			Printer displays error and will not print.

Toner Cartridge Control Panel Display (continued)

Toner Cartridge	Control Panel Display			Functionality
	Normal Status	Life Warning Error	End of Life Error	
Non-Xerox Toner Cartridge Manufacturer	Non-Xerox Toner Cartridge	No Life Tracking	Replace Toner Cartridge	Prints with full functionality.

Maintenance Function

Firmware Update

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

Detailed procedures are available in “Firmware Update” on page A-10.

Note

Boot Code can be updated via USB port only.

Updated Firmware	Windows	
	Via USB/IEEE1284	Via Network (port 9100)
Image Processor Board	Available	Available
MCU Board[a]	Available	Available

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

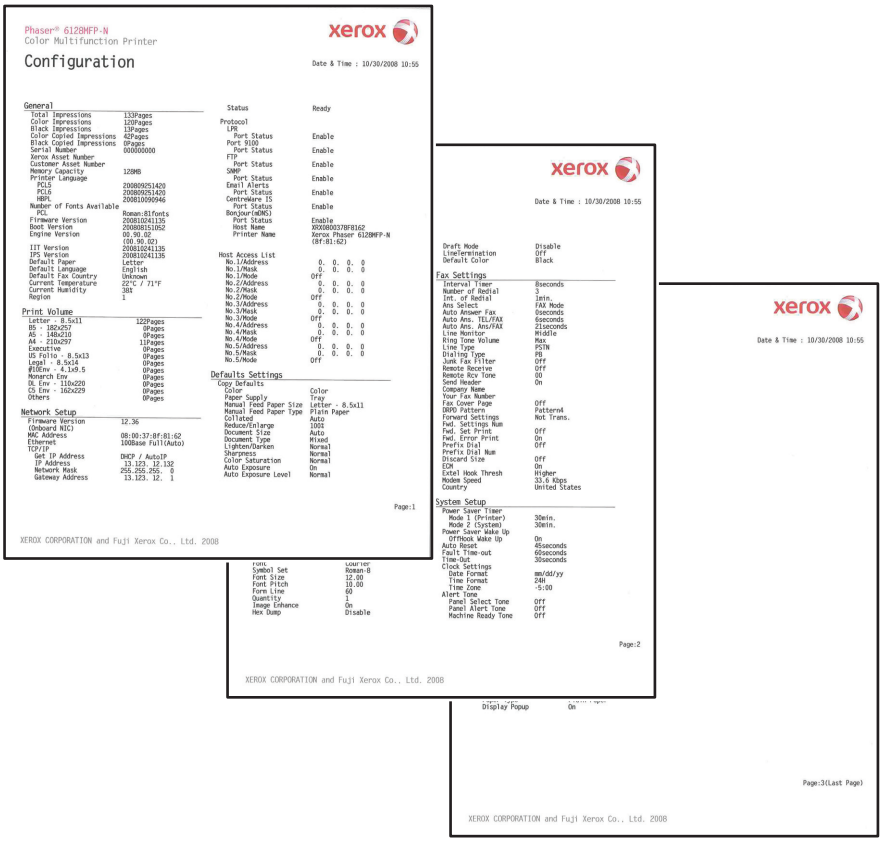
Diagnostics

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

Configuration Page



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Print the Configuration Page from the Control Panel > **System > Information Pages** > **Configuration**. The Configuration Page includes this 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, 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
Print Volume	Print Volume for each paper size
Network Setup	Firmware Version, MAC Address, Ethernet, TCP/IP, Protocol, Host Access List, Adobe Protocol

Configuration Page Information

General Description	Detail Description
USB Setup	Adobe Protocol
System Setup	PowerSaver Time, Audio Tones, Time-Out, Language, Auto Log Print, Print ID, Print Text, Banner Sheet, RAM Disk, Tray Switching, mm/inch, Start Up Page
Maintenance	Auto Reg Adj., Non-Xerox Toner
PCL	Paper Tray, Paper Size, Orientation, 2-Sided, Font, Symbol Set, Font Size, Font Pitch, Form Line, Quantity, Image Enhance, Hex Dump, Draft Mode, Line Termination, Default Color
Control Panel	Panel Lock
Tray Settings	Tray

PCL Fonts List

The PCL Font List contains No., Fonts, Escape Sequence, Font ID, Sample

PCL Macro List

Print the PCL Macro List on A paper size from default tray.

Job History Report

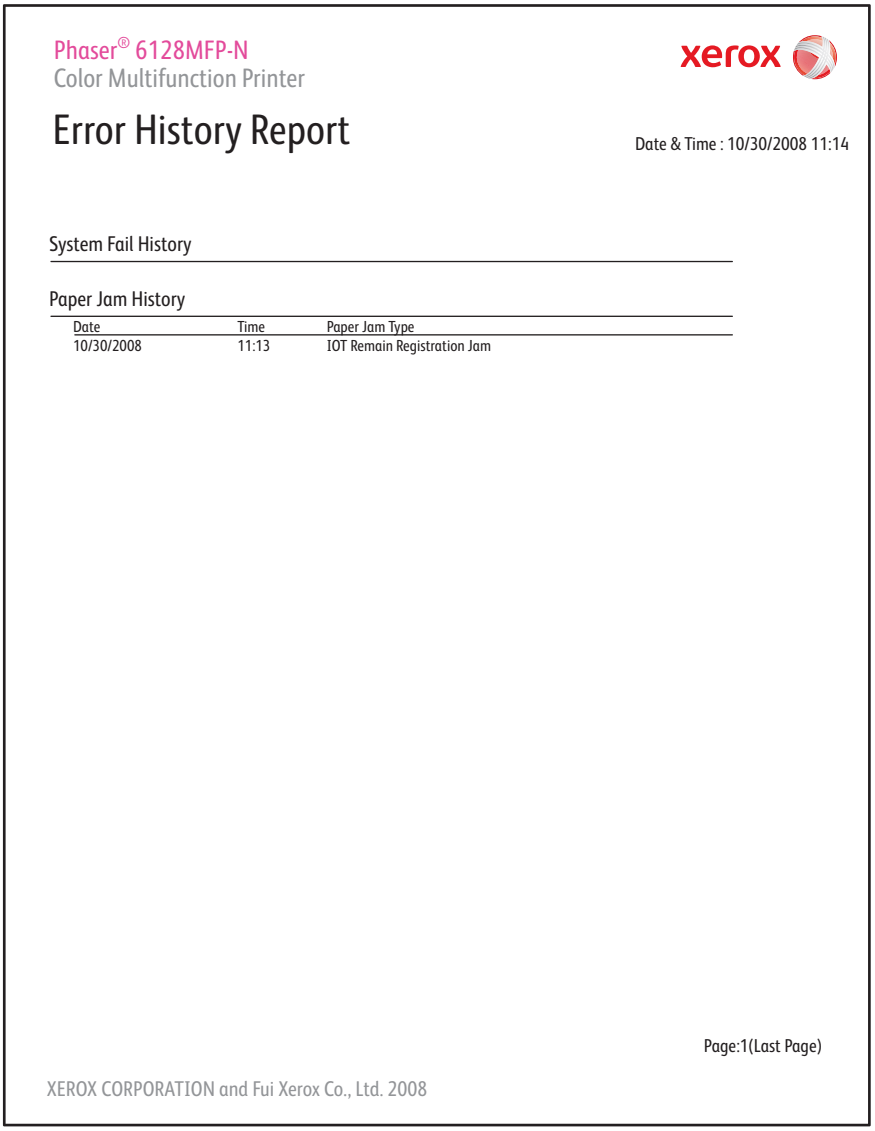
The printer retains up to 20 job logs. Job History can be manually or automatically printed when the number of the retained job logs reaches 20. Job History reports include:

- Job sent data and time
- Input Interface (USB, LPD,...etc.)
- Document Name (File Name)
- Output Color
- User Name/Host Name
- Number of Printed Pages (Color/Mono)
- Number of Printed Impressions (Color/Mono)
- Paper Size
- Result (successful, error,...etc.)

Error History Report

The printer retains up to 42 jam and up to 42 fatal errors.. The error logs include the following information:

- Jam Errors: Item No., Total Print Count, Paper Jam Type
- Fatal Errors: Item No., Total Print Count, Chain-Link Code



Phaser® 6128MFP-N
Color Multifunction Printer

xerox

Error History Report

Date & Time : 10/30/2008 11:14

System Fail History

Paper Jam History

Date	Time	Paper Jam Type
10/30/2008	11:13	IOT Remain Registration Jam

Page:1(Last Page)

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Print Meter (Print Volume Report)

The Print Meter page contains, Date of Initialization, Job Accounting User Name, Pages, Sheets, and Date/Time.

Theory of Operation

In this chapter...

- Phaser 6128MFP Operational Overview
- Printing Process
- Media Path
- Major Assemblies and Functions
- Printer Modes
- Printer Control
- Drive Transmission

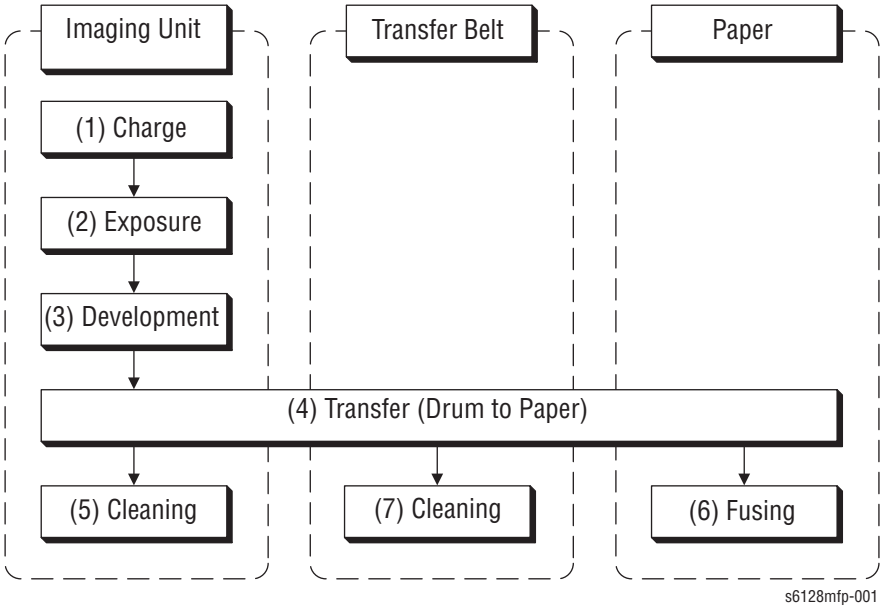
Chapter 2

Phaser 6128MFP Operational Overview

The Phaser 6128MFP is a full-color multifunction printer that uses raster output scanner (ROS) lasers with an electrophotographic four-color CMYK process. The tandem system consists of four color drums (C, M, Y, and K) which creates the toner image.

The following block diagram provides the sequence of events for the xerographic process (dashed lines) and the paper flow (solid lines) into and out of the printer.

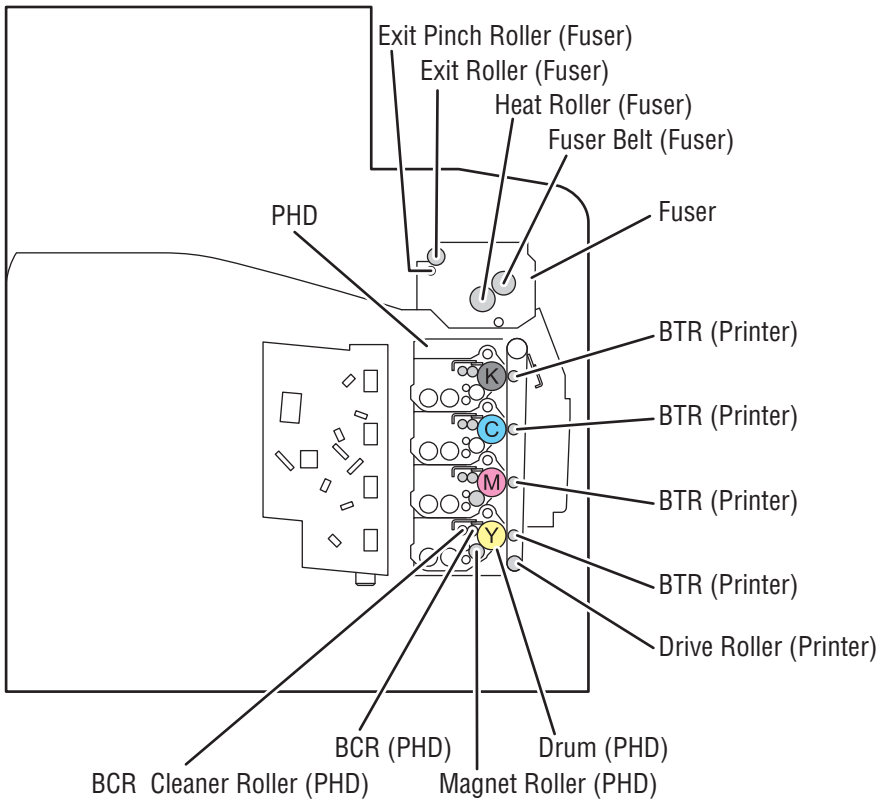
Print Process Block Diagram



Printing Process

The 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. **Imaging Unit** – Excess toner is removed from the Drum and BCR.
6. **Excess Toner Collection** – Excess toner is moved to the collection box.
7. **Fusing** – The Fuser applies toner on to paper using heat and pressure.



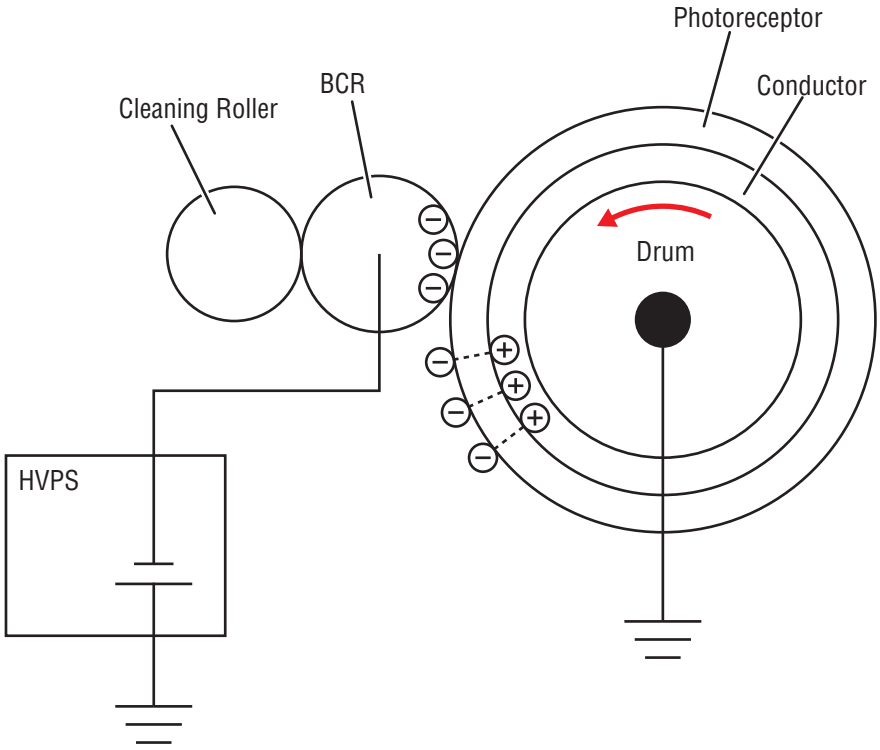
Charging

The drum surface is charged with negative electricity by discharging of the bias charge roller (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 roller, 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 cleaning roller is a sponge that contacts the BCR to catch the toner.



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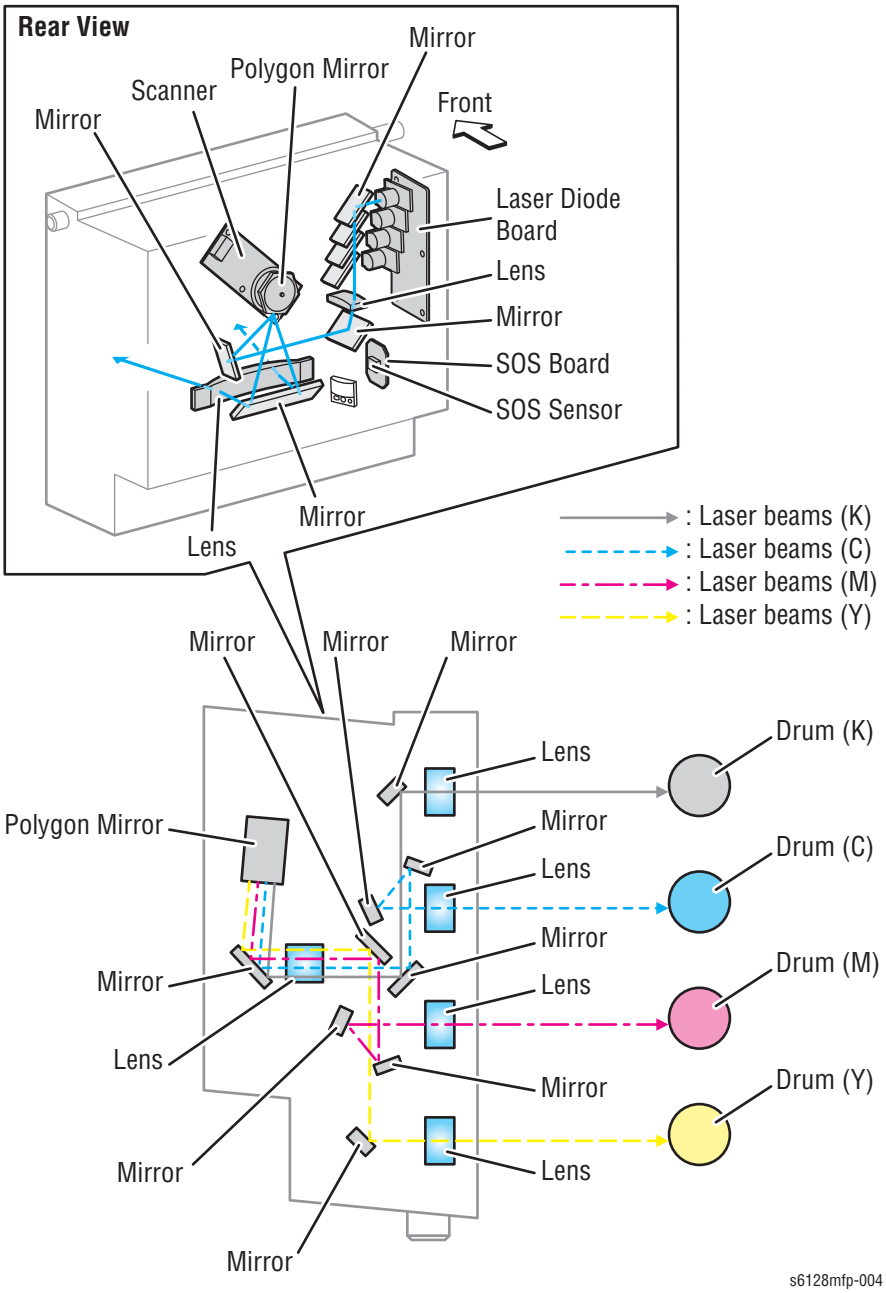
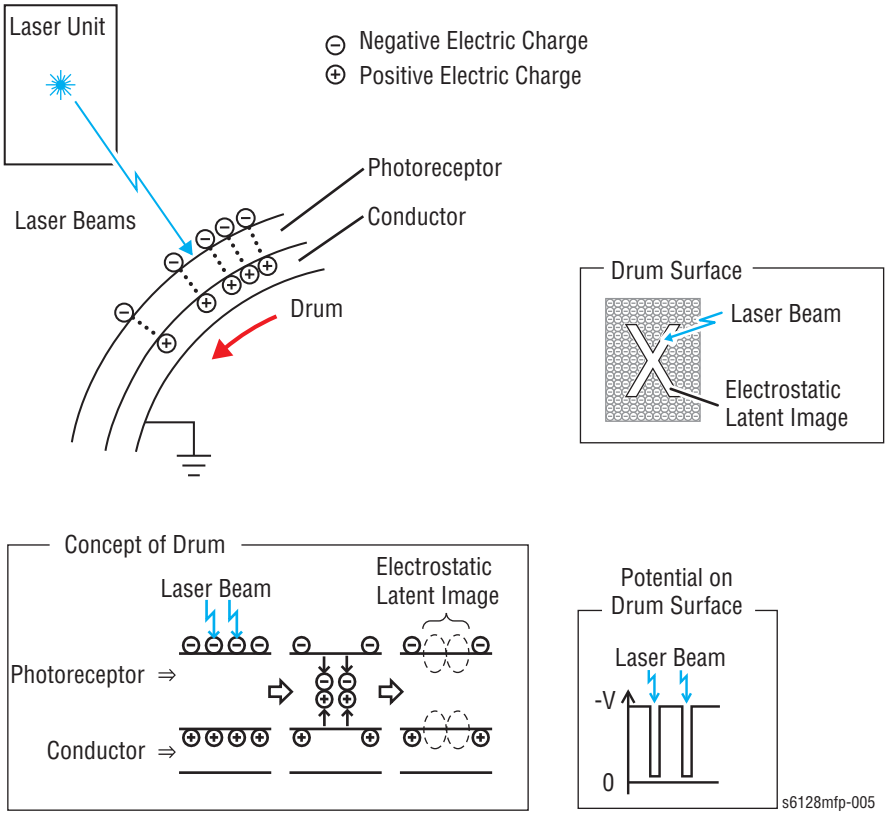
Exposure

Four laser diodes (one for each color) in the Laser Unit emit laser beams. The beams are directed by mirrors to the rotating polygon mirror attached to the scanner motor. As the polygon mirror rotates, the beams are directed through a series of lenses and mirrors to each of the drums, which are scanned by the beams from end to end in the axial direction.



The negatively 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 laser beam strikes becomes conductive. The negative charge on the surface flows to the more positive drum, lowering the voltage potential. In this way the surface areas exposed to the laser beam become the electrostatic latent image.

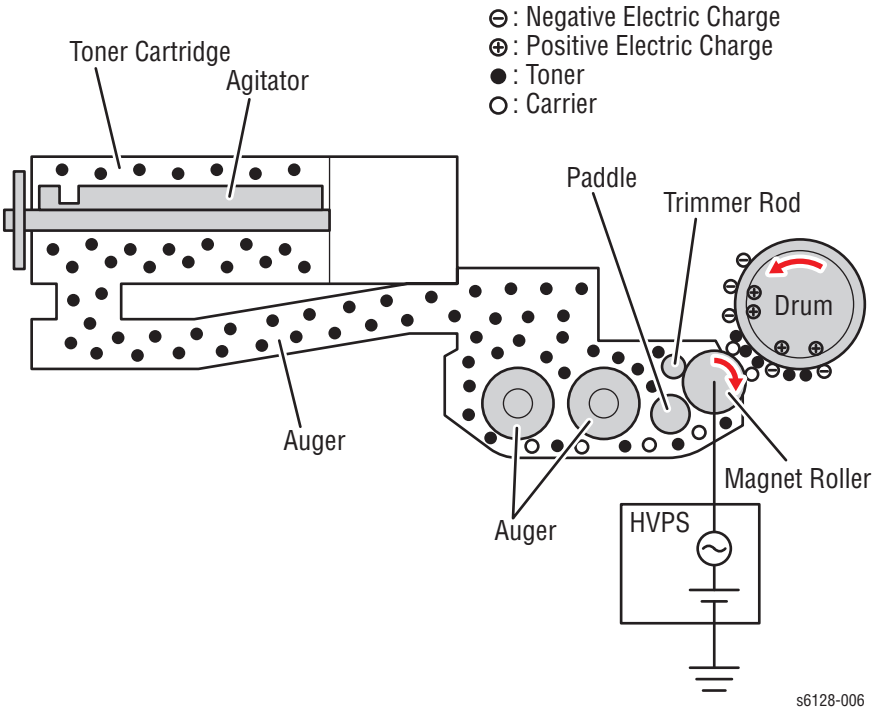

Laser Unit
Negative Electric Charge
Positive Electric Charge
Photoreceptor
Conductor
Laser Beams
Drum
Drum Surface
Laser Beam
Electrostatic
Latent Image
Concept of Drum
Laser Beam
Electrostatic
Latent Image
Photoreceptor ⇒
Conductor ⇒
Potential on
Drum Surface
Laser Beam
-V
0
s6128mfp-005

Development

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

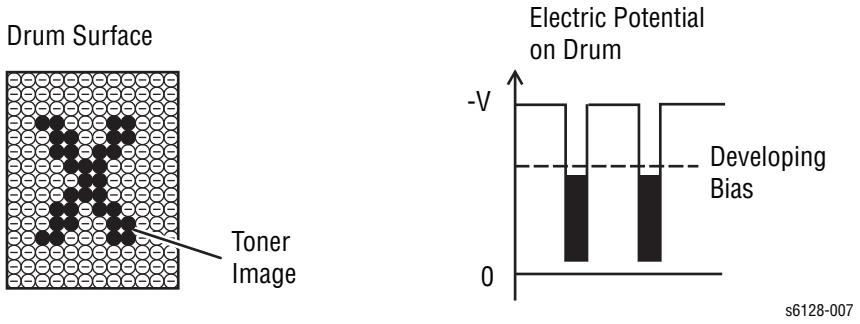
The toner in the Toner Cartridge is agitated by the built-in agitator and fed into the developer. The augers are driven by the Toner Motor and the developer motor in the Main Drive. The toner to be consumed according to the print count is calculated and fed into the developer. This process, called toner dispensation, 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 roller 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 attracted electrically. A uniform layer is formed by the trimmer bar as the carrier magnetic substance is attracted to the magnetic roller.



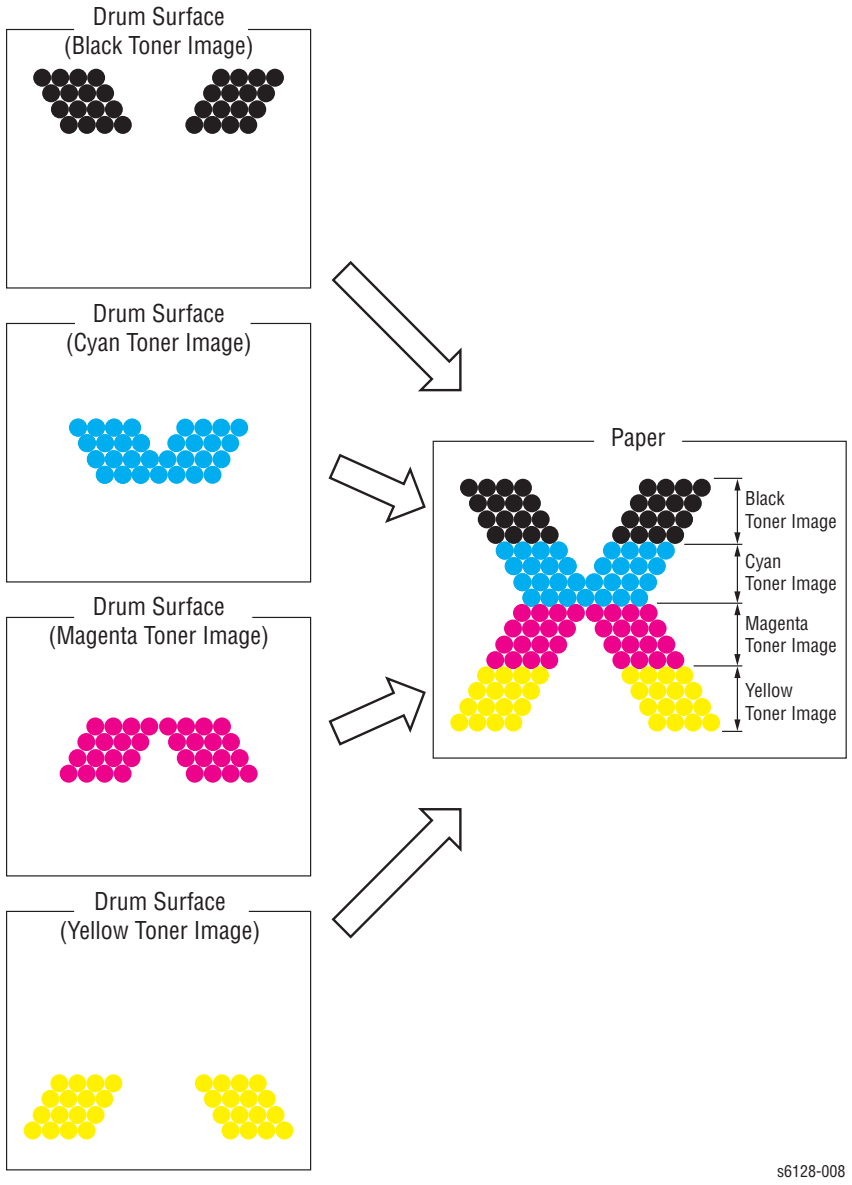
The magnet roller is covered by a thin semi-conductive sleeve. The developer bias voltage is supplied to the sleeve by the HVPS. Developer bias is negative DC voltage combined with AC voltage. The magnet roller is kept at constant negative voltage against the photoreceptor layer of the drum by DC voltage. Therefore, at the area on the drum surface where the negative electric charge does not decrease, potential is lower than the magnet roller, while the potential is higher than the magnet roller at the area where the negative charge on the drum surface decreases. The AC voltage shakes the developer on the magnet roller surface, causing the toner to transfer to the drum.

Thus, the negatively charged toner is attracted only to the area on the drum surface (electrostatic latent image) where the negative charge is lower than the charge on the magnet roller, forming the toner image on the drum. Once the toner adheres to the drum, the negative charge of the toner-bearing location increases, which decreases the potential and the toner-attracting force.



Transfer (Drum ---> Paper)

The 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.

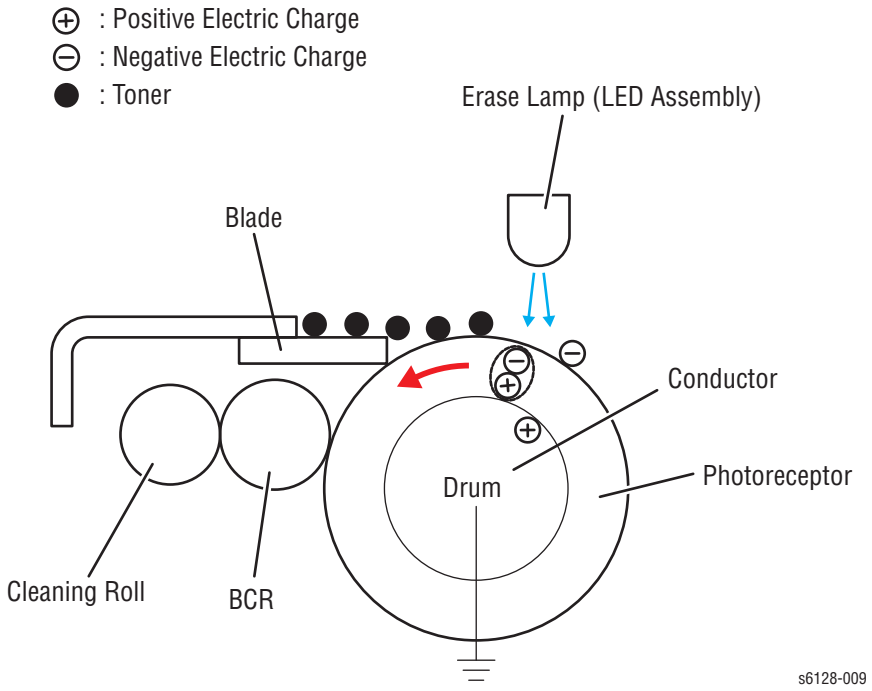


- **Bias Transfer Roller (BTR)** – The BTR is a conductive roller that receives positive voltage from the HVPS. The BTR contacts the rear side of the Belt and applies the positive voltage to the Belt.
- **Transfer Belt** – The Transfer Belt is a conductive unit that receives positive voltage from the 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 Belt feeds the paper toward the direction of the Fuser.

Imaging Unit

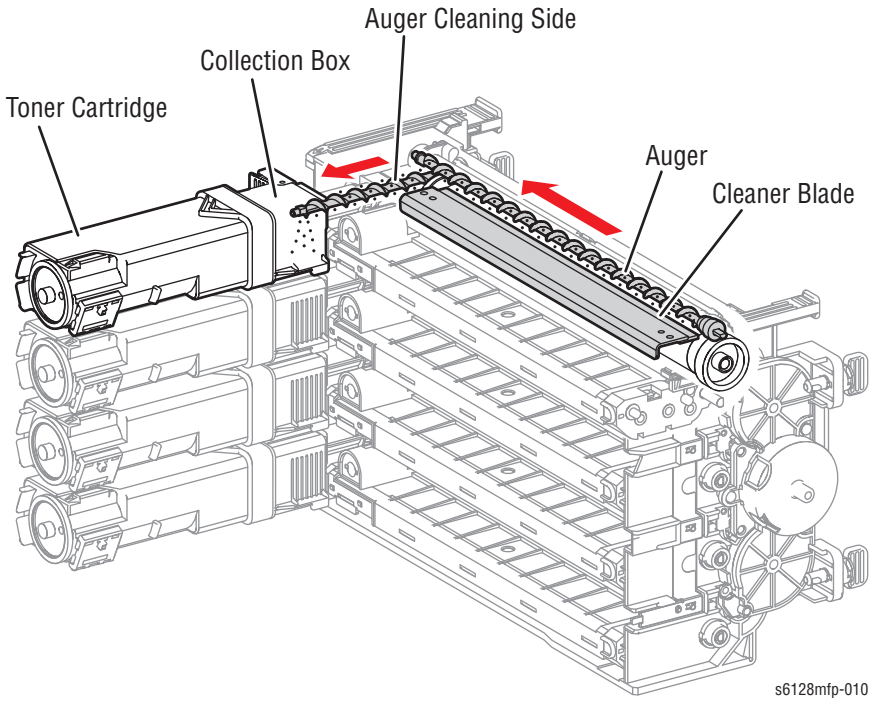
Excess toner is removed from the Drum and the BCR surfaces, while excess charge is also eliminated from the drum surface.

- **Drum Cleaning** – The cleaning blade contacts the surface of the drum collecting the excess toner by scraping off toner.
- **Cleaning Roller** – The Cleaning Roller 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 the latent charge pattern remaining on the photoconductive drum is neutralized by the Erase Lamp (LED) to prepare the drum for the next Exposure cycle.



Excess Toner Collection

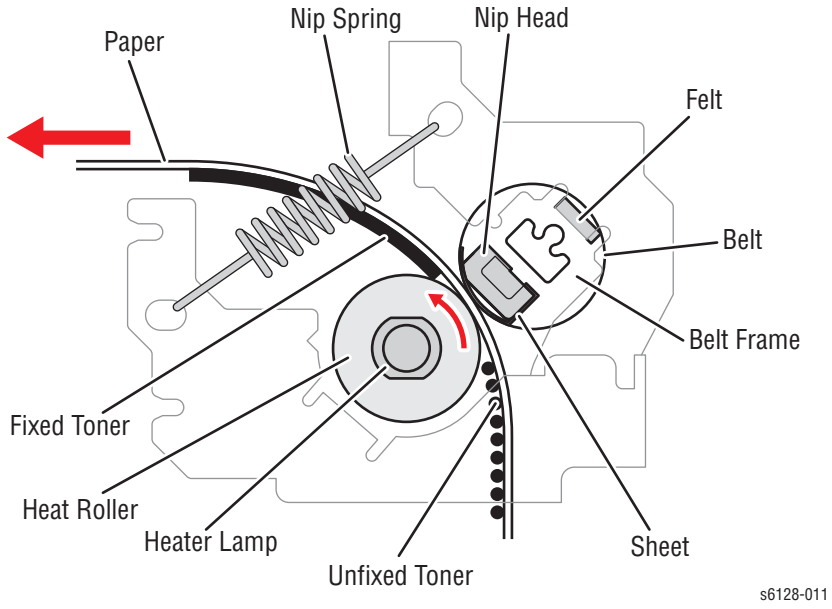
The excess toner is collected by the cleaner blade contacting the drum and is moved to the Toner Cartridge collection box by two augers.



Fusing

The image is bonded to the media by the Fuser. The heat roller with the heat lamp melts the toner particles. Toner is fused onto the media by the combination of heat and pressure.

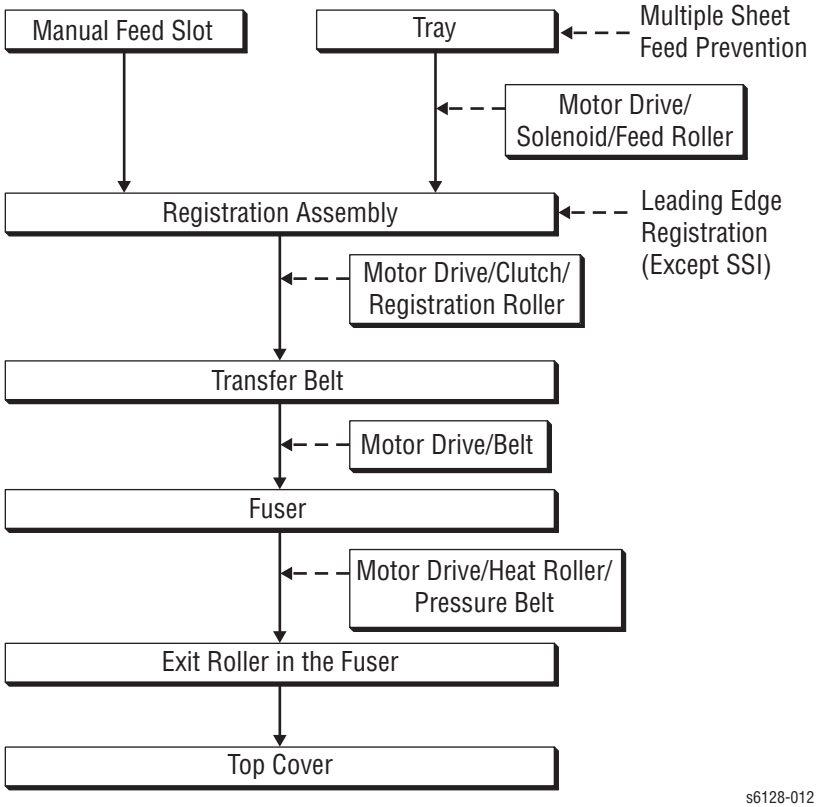
	Warm-Up	Stand By	Printing
Main Heater Lamp	On	On/Off	On



Media Path

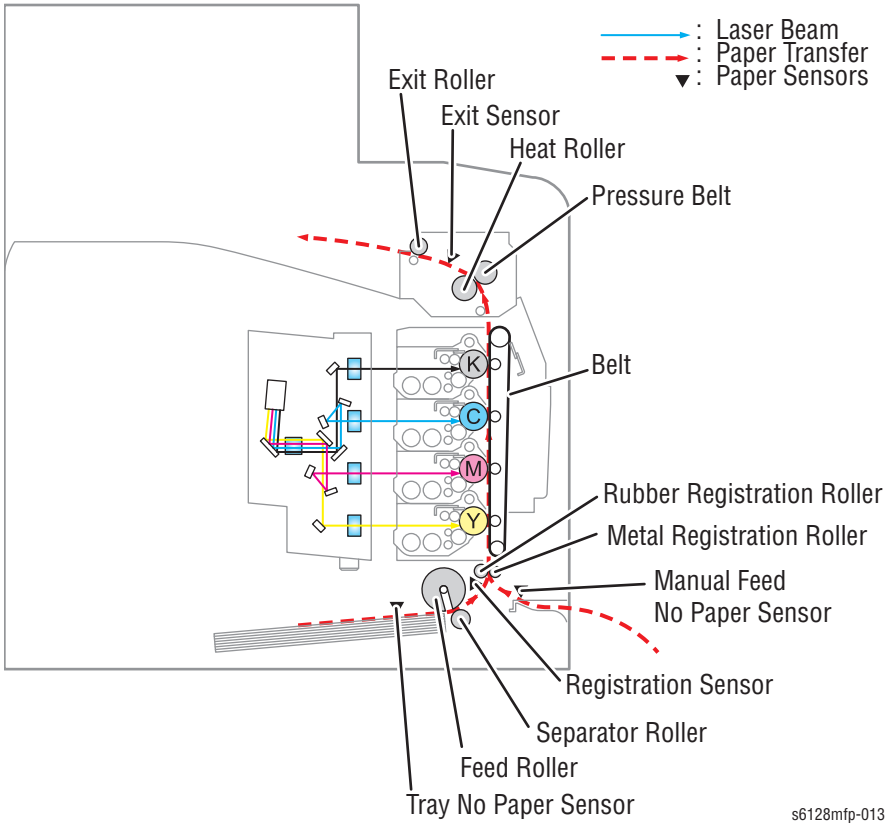
Media Path

Media is supplied from the Tray or the manual feed slot, and is transported into the printer along the paper path as shown in the diagram.



Media Path Components

Media path components for the printer are shown in the following figure.

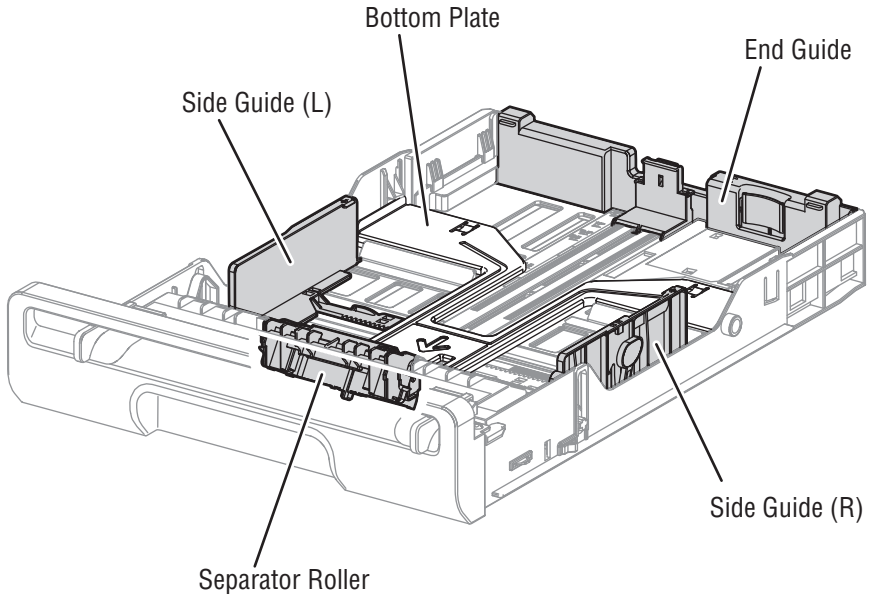


Major Assemblies and Functions

Major functional components are classified into the following categories:

- Tray
- Feeder
- Manual Feed & Registration
- Transfer Belt and Fuser
- Laser Unit
- Toner Cartridge & Dispenser
- Imaging Unit
- Drive
- Electrical

Tray



- Separator Roller

  The Separator Roller and Feed Roller pinch the media to prevent multiple sheets from feeding.

- Left/Right Side Guide

  The side guides move at a right angle to the paper transfer direction to align the paper width.

- Tray End Guide

  The end guide moves in toward the paper transfer direction to determine the paper size.

- Bottom Plate

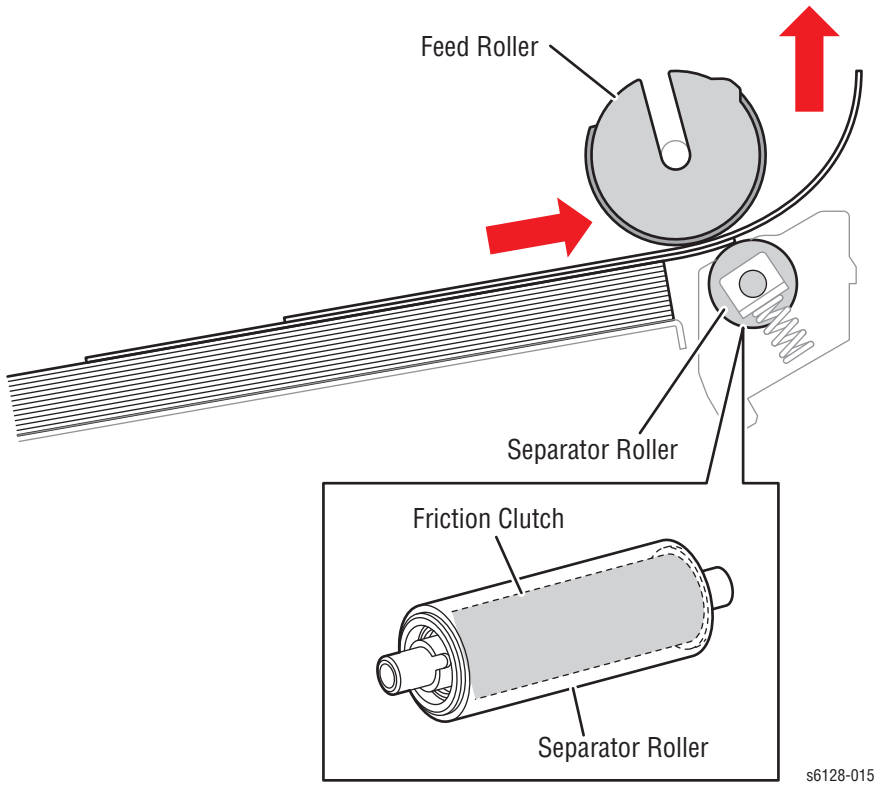
  The bottom plate is locked to the Tray bottom when the Tray is pulled out of the paper feeder, and unlocked when the Tray is installed in the paper feeder. When unlocked, the bottom plate lifts the paper, pushing it against the feed roller using spring tension.

Seperator Roller

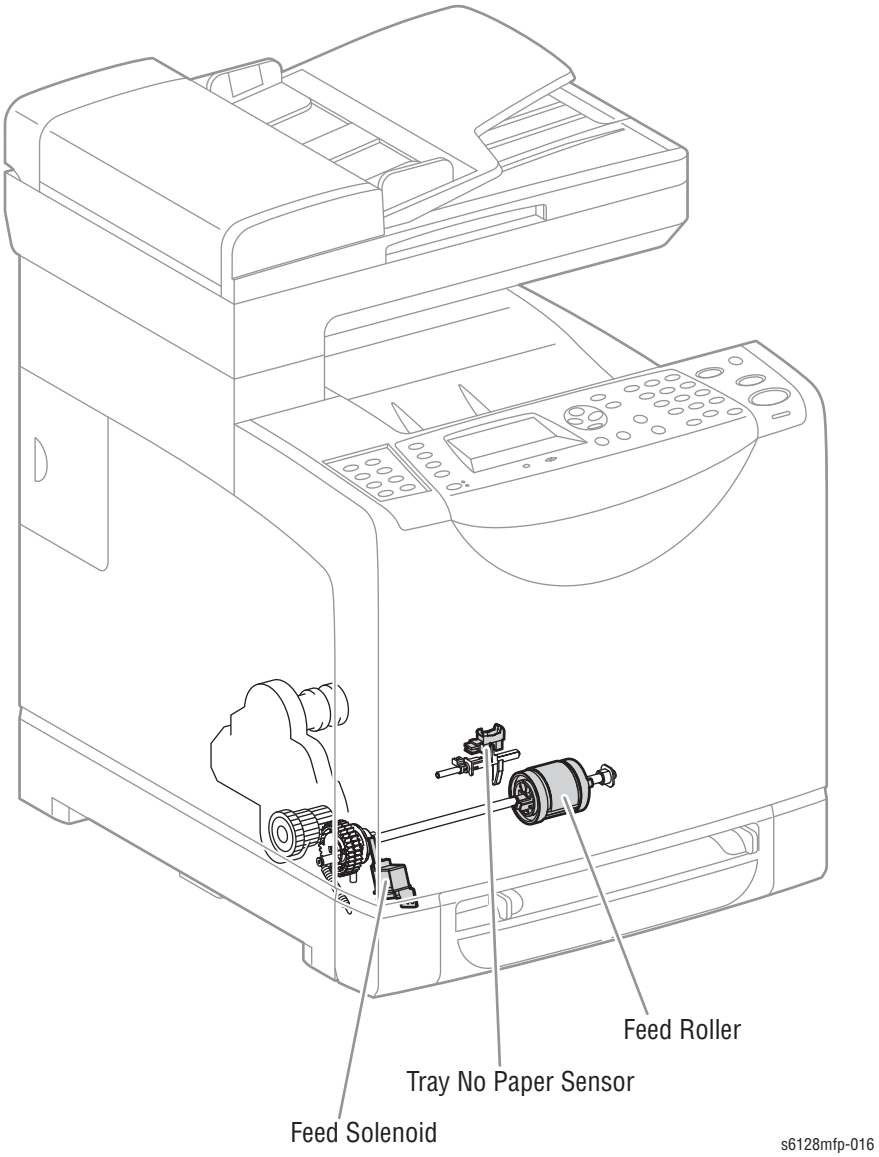
The sheets loaded into the Tray are occasionally stuck together along the edges, which can cause a multiple feed or a jam. The sheets are fed by the Feed Roller to a position between the Feed Roller and the Separator Roller. Normally, when only one sheet is fed, both the Feed Roller and Separator Roller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

However, when two sheets are fed concurrently, only the Feed Roller rotates. The Separator Roller is locked, allowing the upper sheet to pass, separated from the lower sheet that is stopped by the friction with the Separator Roller at rest.

The Separator Roller is pushed toward the Feed Roller by spring pressure, and controlled by the Friction Clutch.

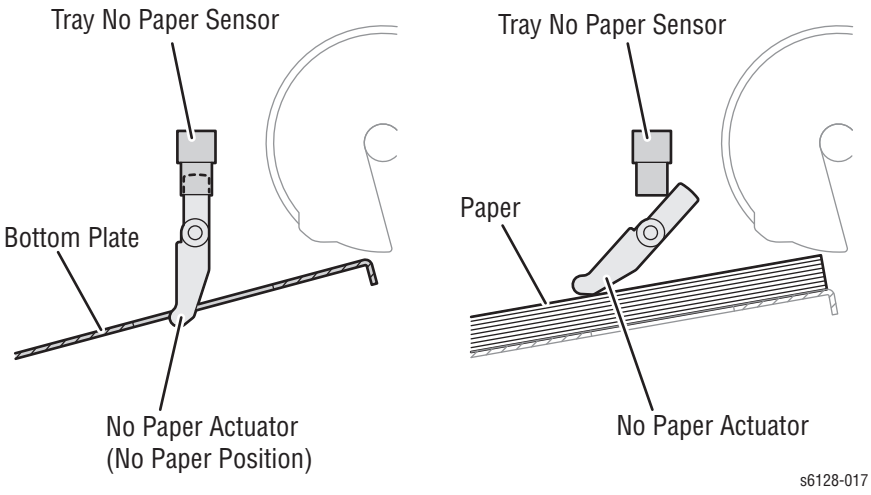


Feeder



- Tray No Paper Sensor

  Detects the presence/absence of paper in the Tray based on the position of No Paper Actuator.

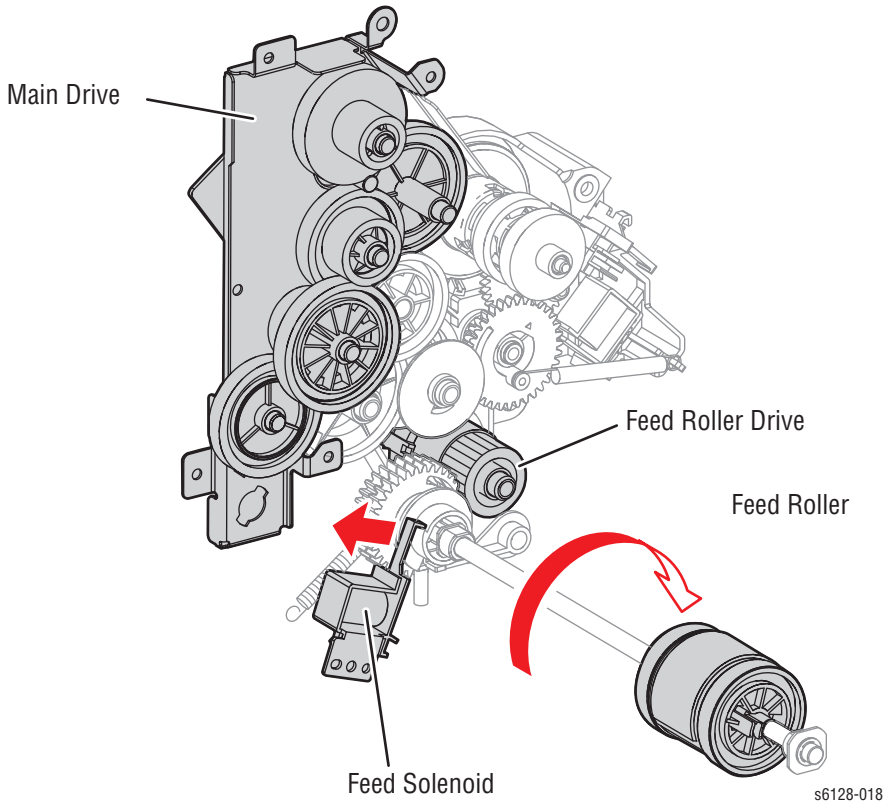


- Feed Solenoid

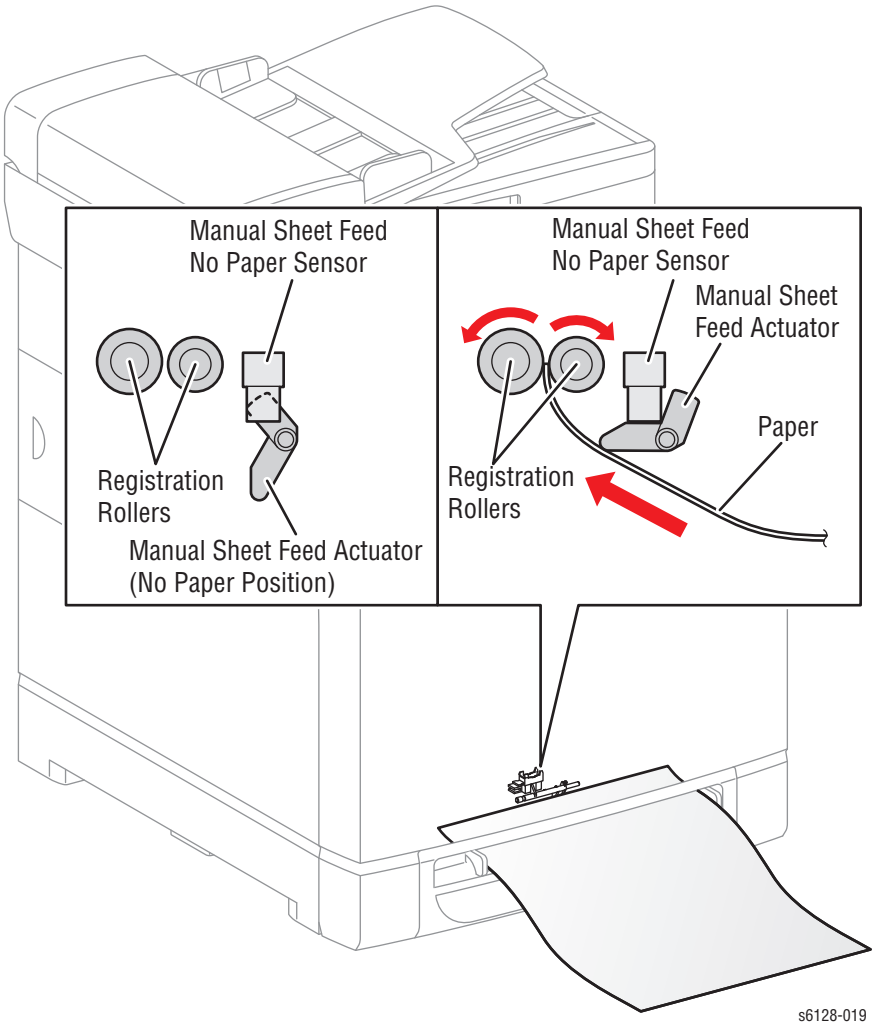
  The Feed Solenoid transmits drive energy from the Main Drive Assembly to the Feed Roller.

- Feed Roller

  When the Feed Solenoid operates, it allows the Feed Roller to rotate and feed the paper.



Manual Feed & Registration



- Manual Feed No Paper Sensor

  Detects media in the manual feed slot by the change in actuator position.

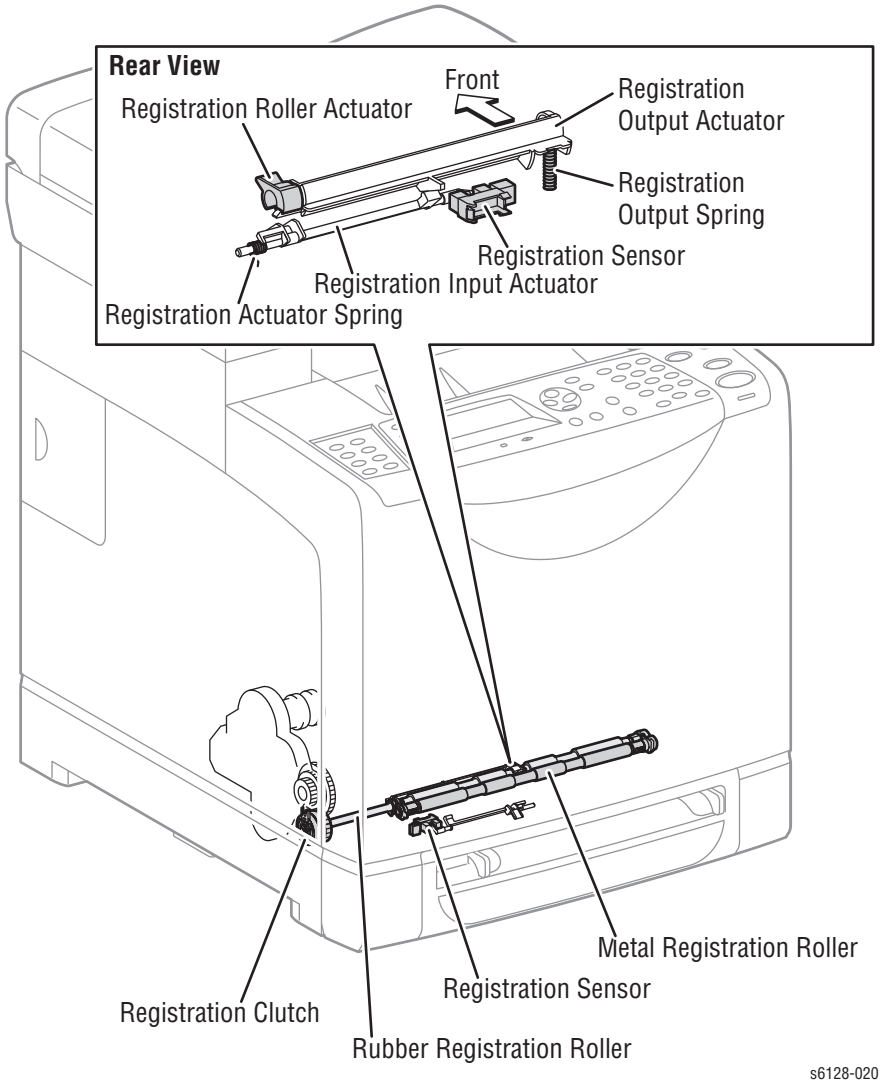
  Upon detecting the sheet, the Registration Roller rotates for a predetermined duration to feed the sheet. The rollers stop immediately when the Registration Sensor detects the media.

- Registration Sensor

  The Registration Sensor detects paper when the paper leading edge reaches the registration chute. When paper is fed from the manual feed slot, the Registration Sensor measures the paper length. The On time of the Registration Sensor determines the media length.

- **Registration Clutch**

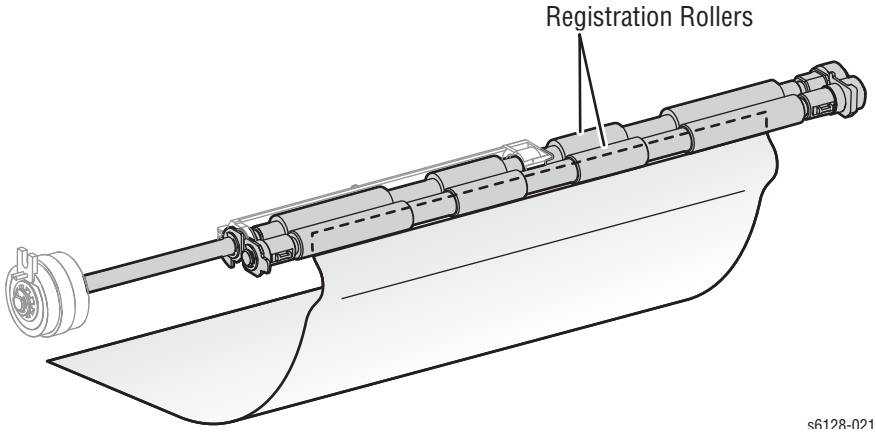
  The Registration Clutch transmits drive energy from the Main Drive to the rubber registration roller, and transports paper from the Tray and manual feed slot toward the Imaging Unit. The timing of sheets feeding from the Registration Assembly is adjusted by the duration of the Registration Clutch operation so that the toner image on the drum is transferred to the correct position on the sheet.



Lead Edge Registration

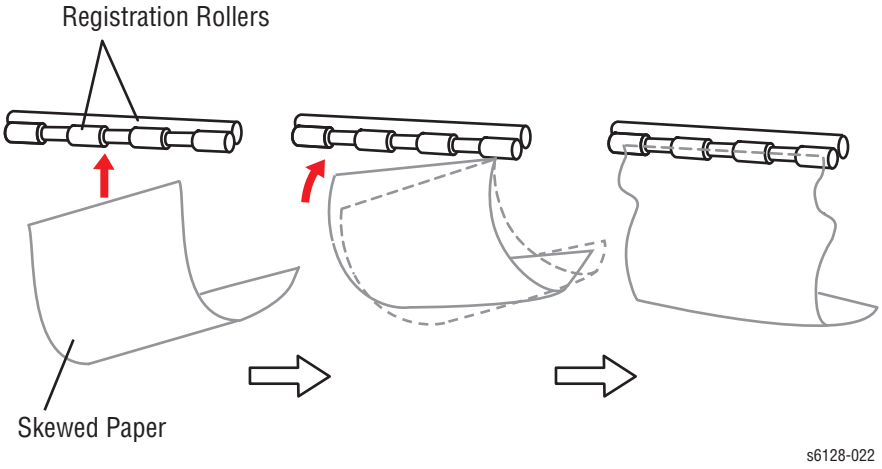
When a sheet is fed from the Tray to the toner transfer position, the registration of the sheet may not be correctly maintained due to misalignment of lead edges in the tray.

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 Belt, or in front of the BTRs.



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 against the registration roller that is not turning, the lead edge of the sheet is registered.



Paper Size Control

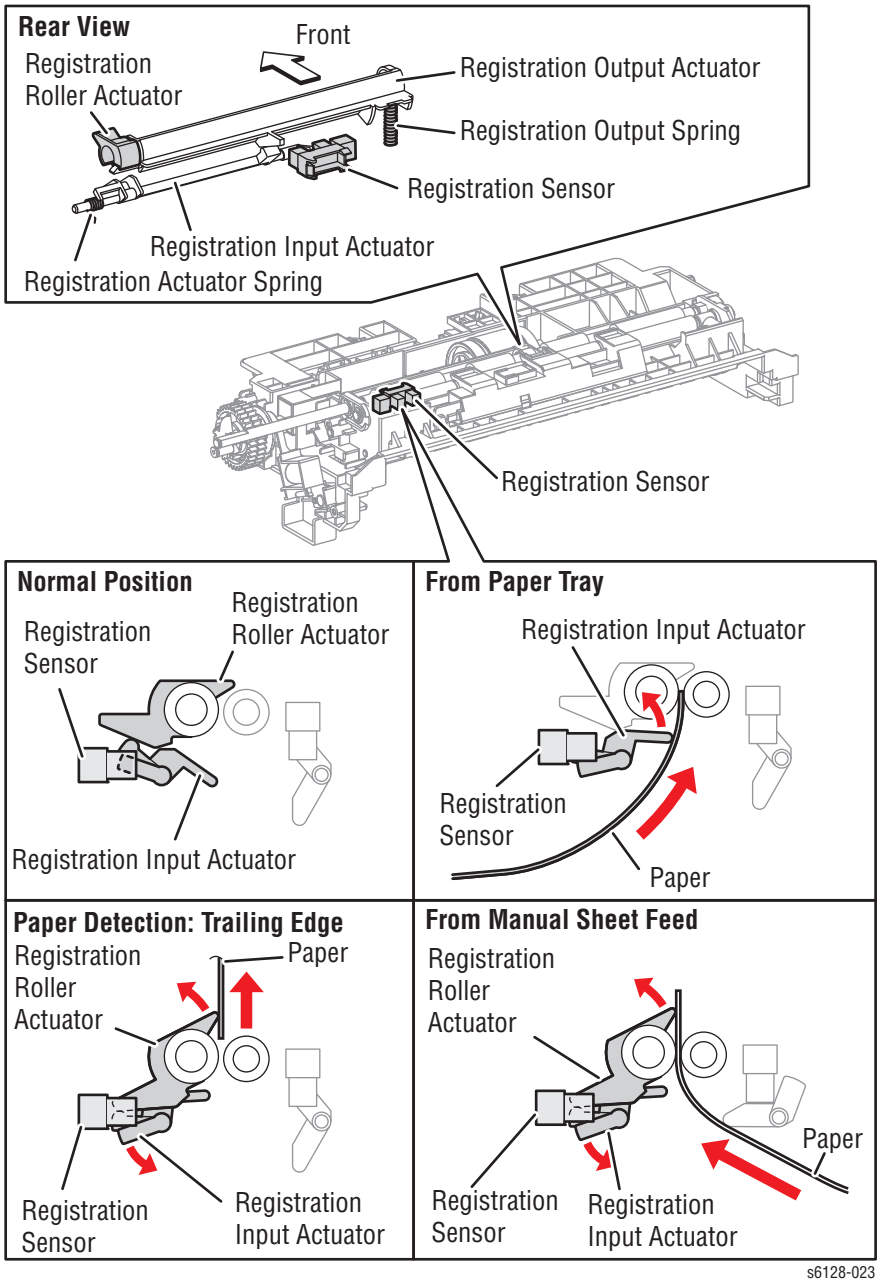
The printer doesn't have switches for detecting paper size, and the length of paper is detected only by the Registration Sensor when feeding paper. If printing data and paper size don't match, an error is sent to the Image Processor board.

Paper Detection

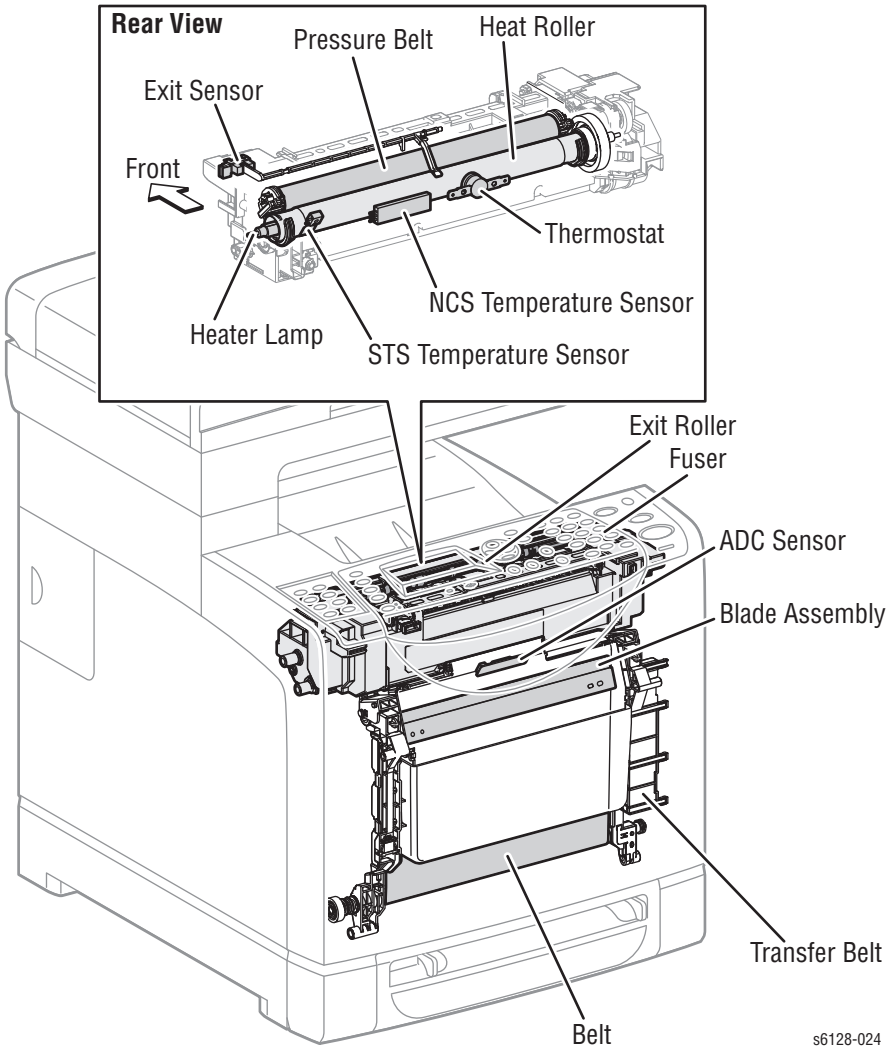
Since the paper path from manual feed slot to the Registration Sensor is different than from the Tray to the Registration Sensor, the Registration Sensor is provided with the Registration In Actuator and the Registration Roller Actuator.

- The Registration Roller Actuator detects the sheet from the manual feed slot and detects the tail edge of the paper from the Tray.
- The Registration In Actuator detects the lead edge of the paper from the Tray.

The movement of the Registration In Actuator does not affect the Registration Roller Actuator.



Transfer Belt and Fuser



Transfer Belt

The Transfer Belt consists of the transfer belt and ADC Sensor.

- **transfer 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 the density of toner.

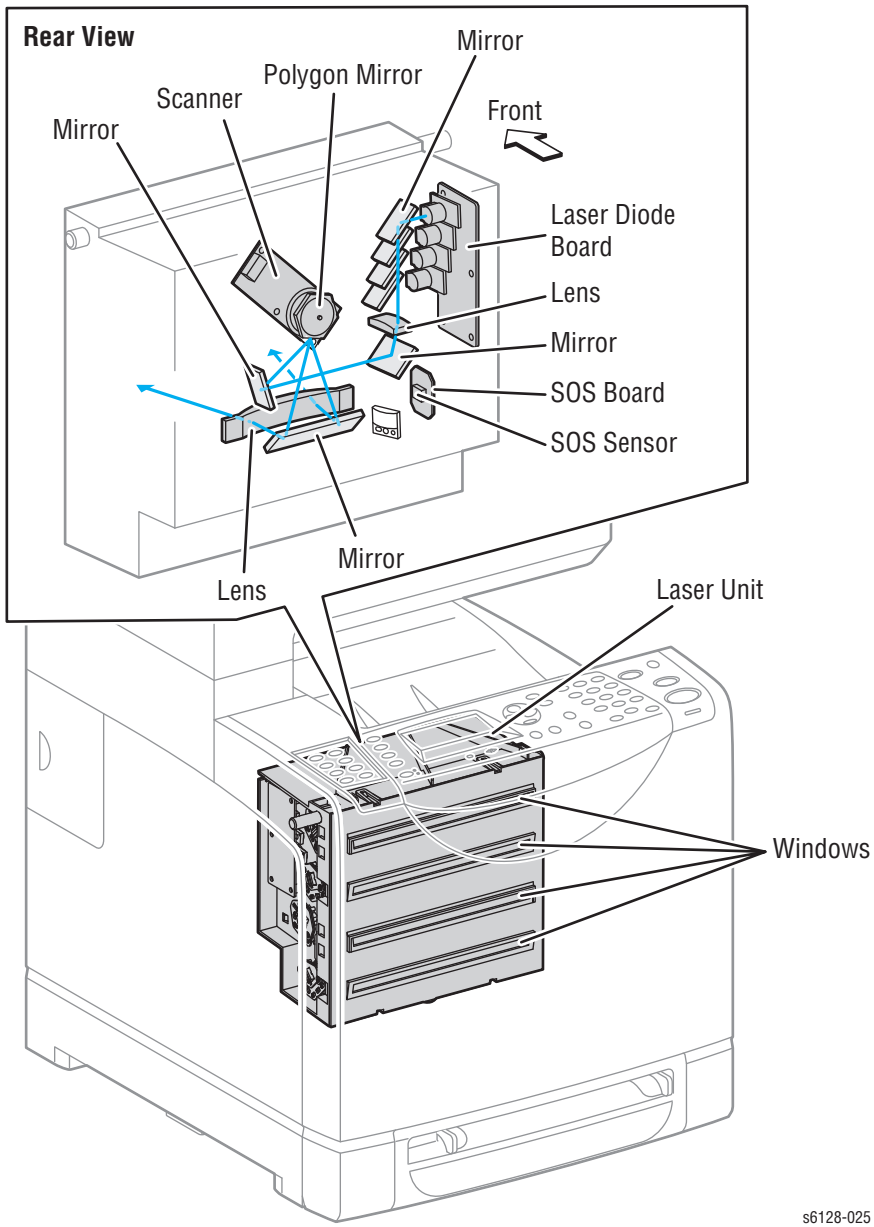
Fuser

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.

- Exit Sensor

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

Laser Unit



The Laser Unit is an exposure unit that generates laser beams to form an electrostatic latent image on the drum surface. The Laser Unit consists of the following components: laser diode (LD) board, scanner, start of scan (SOS) board, lenses, mirrors, and windows.

- Laser Diode Board

  The laser diode board consists of four laser diodes (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 laser diode 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 consists 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 directed onto the polygon mirror. The polygon mirror, provided with six reflecting mirror faces, changes the reflection angle of the laser light as it rotates, 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.

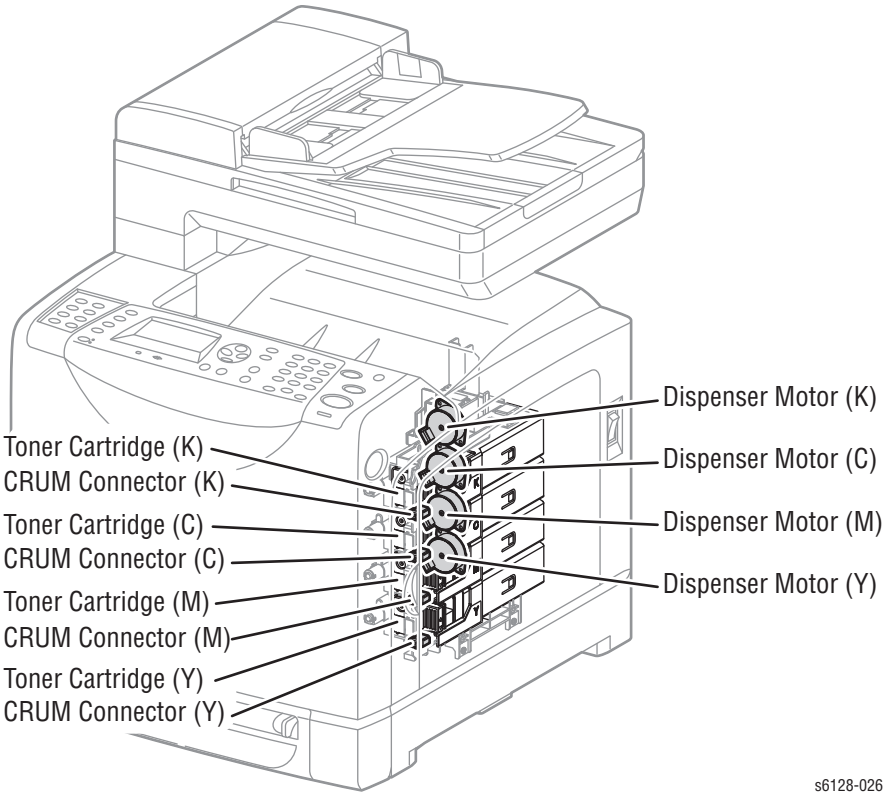
- Mirror

  The mirror directs the laser beam to the Imaging Unit.

- Window

  The window is the area where the laser beams exit the Laser Unit.

Toner Cartridge & Dispenser



The Toner Cartridge is a customer replaceable item that includes the following components:

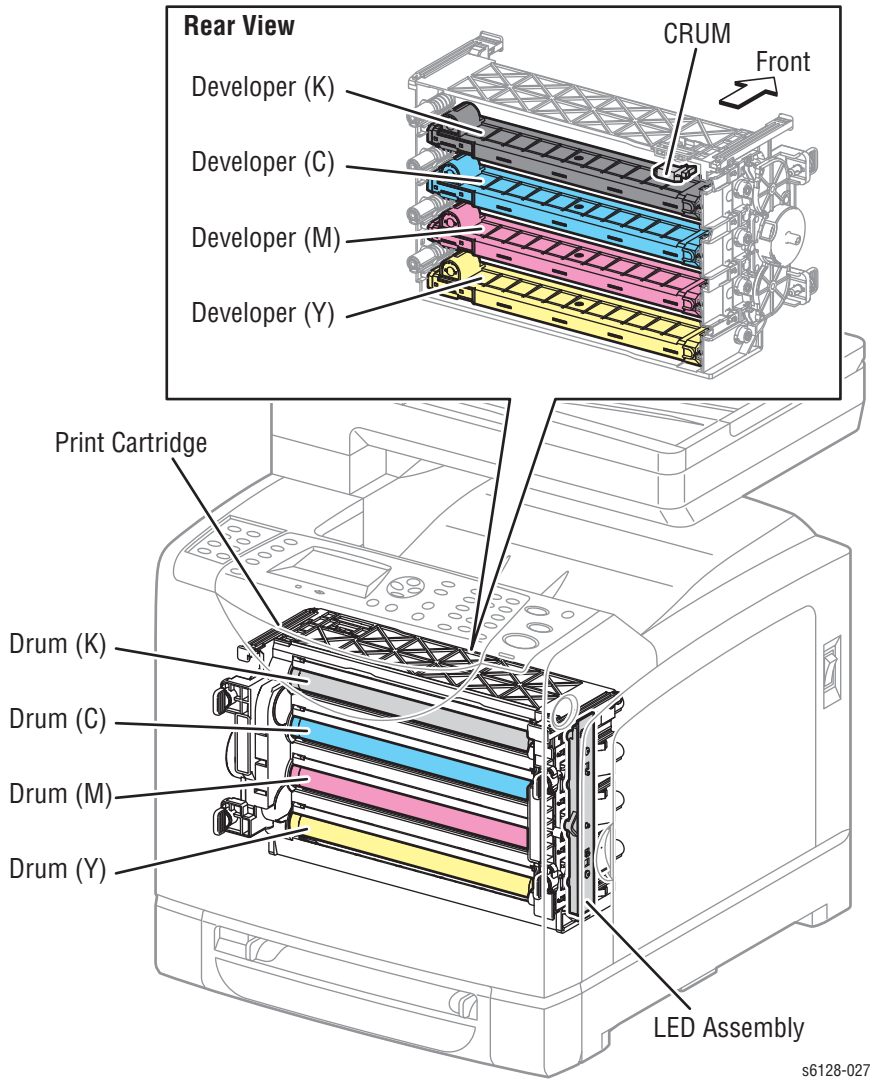
- Customer Replaceable Unit Memory (CRUM) Connector

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

- Dispenser Motor (C/M/Y/K)

  The Dispenser Motor provides the drive for the Agitator and Auger in the Toner Cartridge, and supplies toner to the Developer.

Imaging Unit



The Imaging Unit is a customer replaceable item that carries out the charging, development, transfer, and cleaning steps in the print process (see “Printing Process” on page 2-3).

The Imaging Unit consists of the following items:

- Developers

  Each of the four Developers includes the Augers that distribute the toner and the Magnet Roller that applies toner to the Drum to develop the latent image.

- Drums

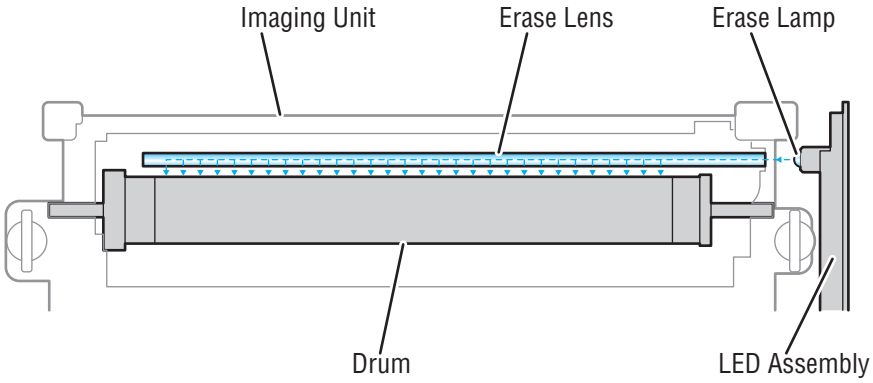
  Each drum is given a latent image to which toner is applied by the Developer. The resulting toner image is transferred to the paper.

- CRUM

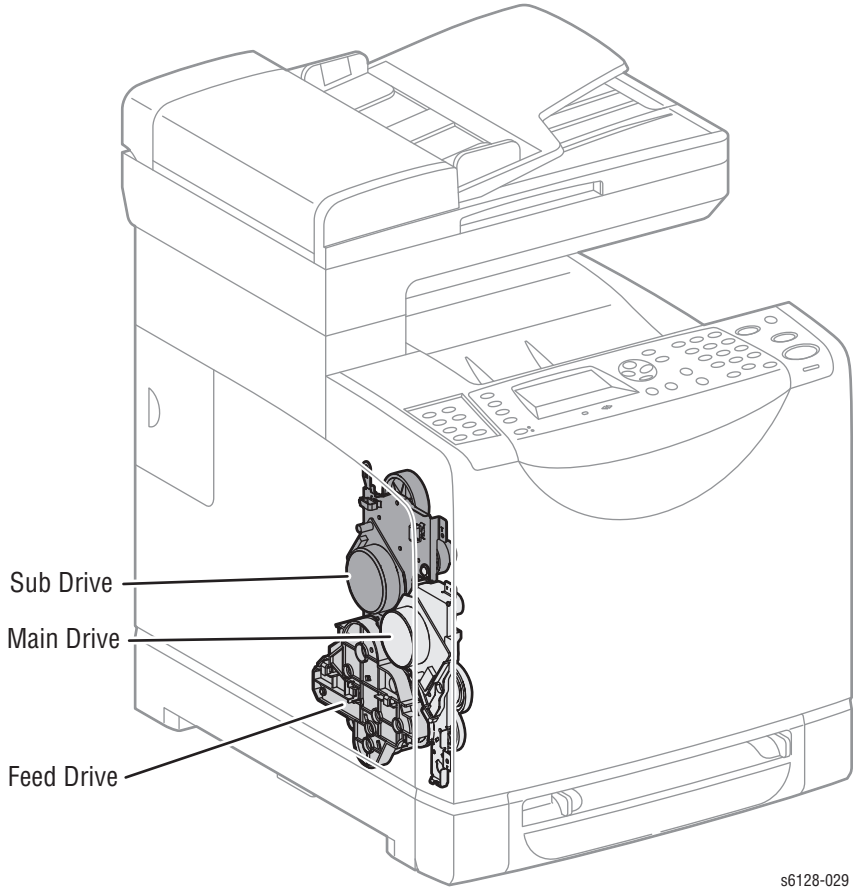
  Information specific to the Developer/Imaging unit is stored in the CRUM.

- Erase Lamp (LED)

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



Drive



The drive consists of three assemblies:

- **Main Drive Assembly**

  Drives the Imaging Unit, Transfer Belt, Registration Rollers, and Feeder.

- **Sub Drive Assembly**

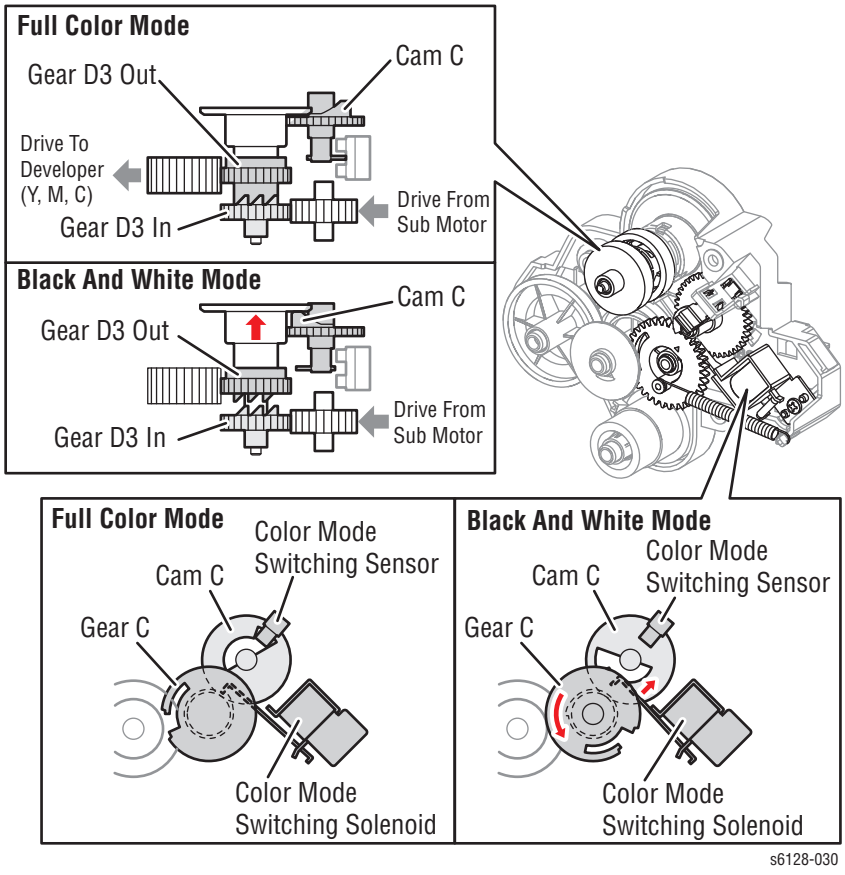
  Supplies drive to the Fuser and Developers (C, M, Y, K).

- **Feed Drive Assembly**

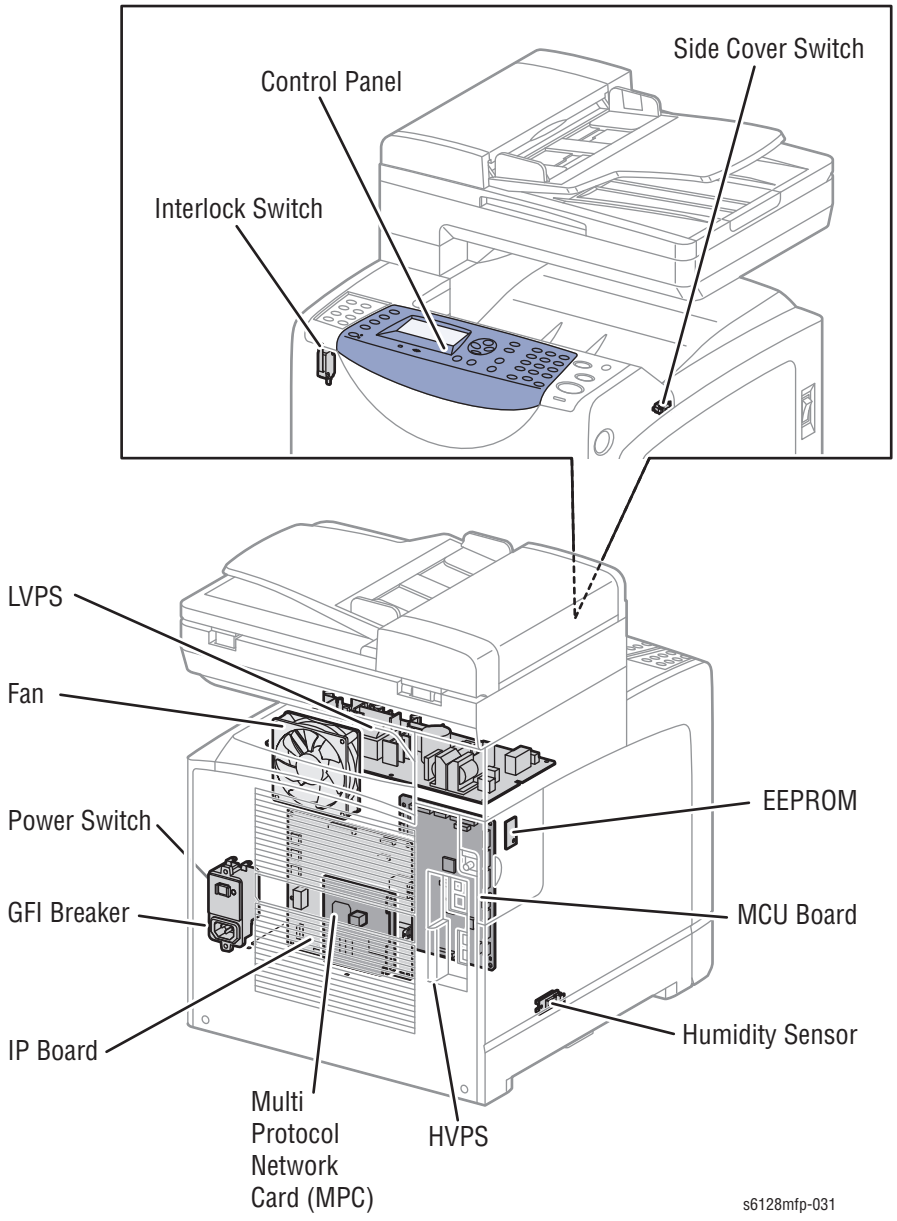
  The Feed Drive Assy transmits the driving force from the Sub Drive Assembly to relevant parts.

  The drive path is changed by the Color Mode Switching Solenoid in the Feed Drive Assy to allow drive from the Main Drive Assy to reach only the Black Developer. This is done to ensure that the Sub Drive Assembly cannot rotate the Yellow, Magenta, and Cyan Developers during B/W printing.

  The Color Mode Switching Sensor detects whether the drive path is set for B/W or full color.



Electrical



Fan

The Fan removes heat from the printer to prevent overheating.

Power Switch

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

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 circuits. The LVPS contains a control circuit for the Fuser heater, in addition to the power circuit.

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. After short is repaired, cycle main power to reset the circuit.

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 of 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 resets when main power is cycled after certain period of 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	Off	Off	On
Deep Sleep	Off	Off	Off

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 Main and Sub-Drive Assemblies.
4. Distributes low-voltage DC power from the LVPS to each component.
5. Controls the Laser Unit.

Note

When replacing an MCU Board, be sure to transfer the contents of NVM from the old MCU Board to the new MCU Board.

High-Voltage Power Supply (HVPS)

The HVPS provides high-voltage power to the components in the transfer belt and Imaging Unit to perform charging, development, and primary transfer of the print process to the BCR, BTR, and Developer.

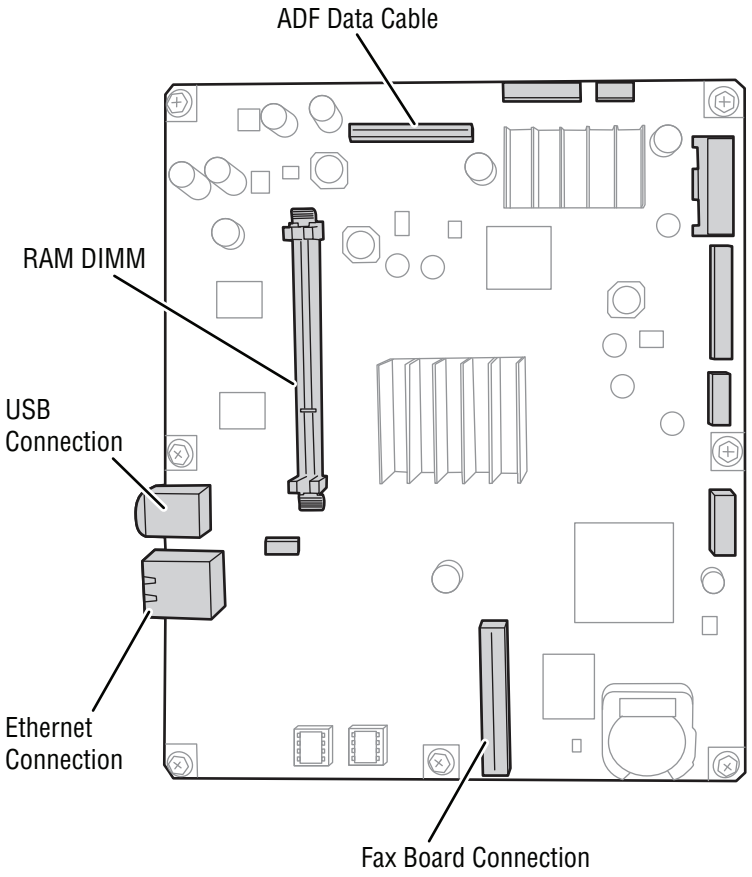
Electrically Erasable Programmable Read-Only Memory (EEPROM) Board

The EEPROM Board stores the printer unique information.

Image Processor Board

The Image Processor (I/P) Board (CONT AIO) is connected to the MCU Board, which controls the printer, including diagnostic, interface, and image processing.

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



s6128mfp-033

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

- Memory DIMM
- FAX Board

Humidity /Temperature Sensor

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

Interlock Switch

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

Toner Access Door Switch

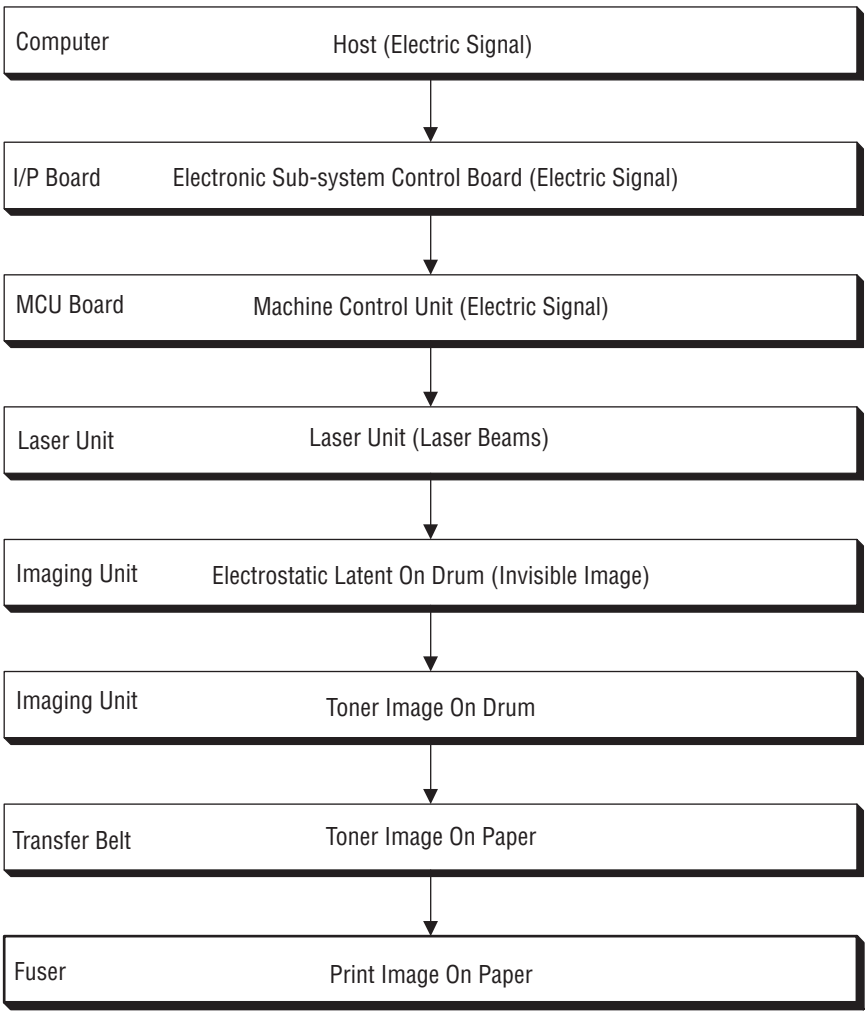
A switch that detects when the Toner Access Door is open.

GFI Breaker

Opens to shut off the AC power if it detects any voltage or current or leakage current that exceeds the rating of the AC power supply.

Data Flow

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



s6128-034

Printer Modes

Operational Modes

The Phaser 6128 printer includes the following modes:

- Ready Mode

  The printer is ready for printing.

- Printing Mode

  Printing is in progress.

- Sleep Mode

  The printer has entered a power saving state.

- Deep Sleep Mode

  The printer has entered a power saving state.

Printer Control

Paper Size Detection

The printer has no switches for detecting paper size; only the length of the paper is detected by the Regi Sensor as the paper is feeding. If the detected size does not match the size sent in the print data, an error is reported to the Image Processor.

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, upon termination of a print run, 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/Temperature 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.
4. 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 Control Function

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 surface 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.

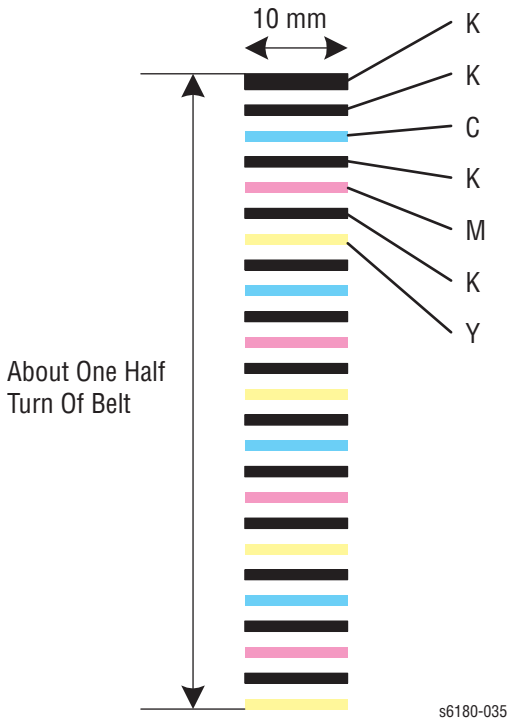
Color Registration Control

The printer uses a tandem electro-photographic system with Organic Photo Conductor (OPC) Drums and direct transfer by the transfer belt. Because the images are formed on the individual Drums of the respective colors and then overlapped to form one image, 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.



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

Fuser Control

Fuser Temperature Control

After the target temperature is set, the Heat Roller surface temperature is controlled by turning the Heater Lamp On/Off.

Temperature of individual area of the Heat Roller is detected by the Fuser Non-Contact Sensor (NCS) in the middle of the Heat Roller and the Temp Sensor at the edge of it.

The target temperature set up varies depending on the time of Warm-up, Printing, or Process Control. The target set temperature is changed based on the printer's interior temperature detected by the Humidity Sensor.

Cool Down

As printing continues, the distribution of temperature in the Heat Roller becomes uneven in both the paper feed and non-paper feed areas. Cooling Down suspends paper feeling for a certain period of time so that the Heat Roller temperature distribution can be uniform.

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

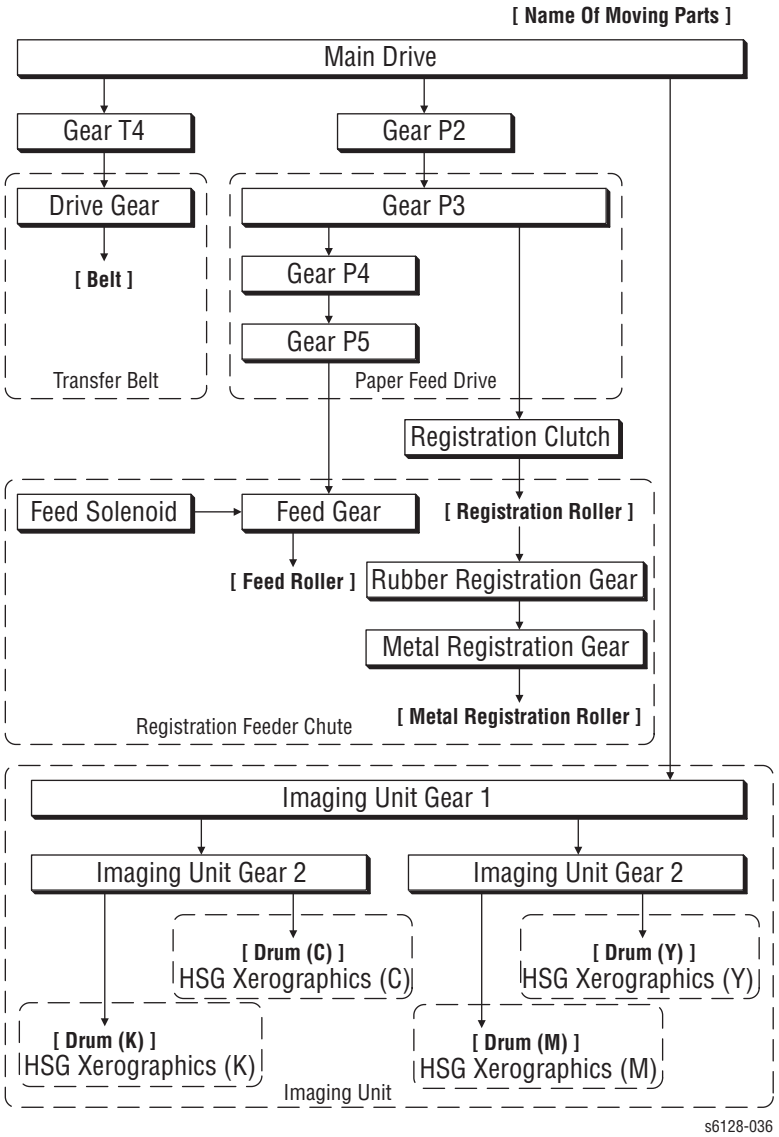
Fuser NCS Sensor Warm-Up

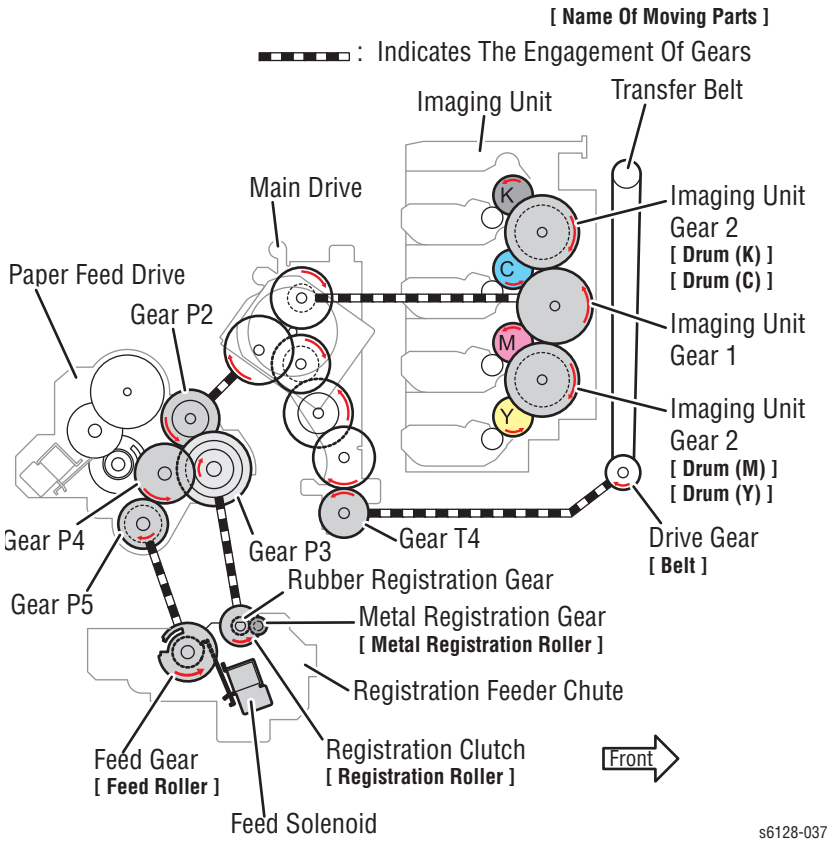
The Fuser Non-Contact Sensor at the center of the Heat Roller loses its accuracy when the temperature of the sensor itself is below -5° C. Therefore, the sensor is warmed up when the temperature is below -5° C.

Drive Transmission

Main Drive

The Main Drive transmits power as shown in the following diagram.

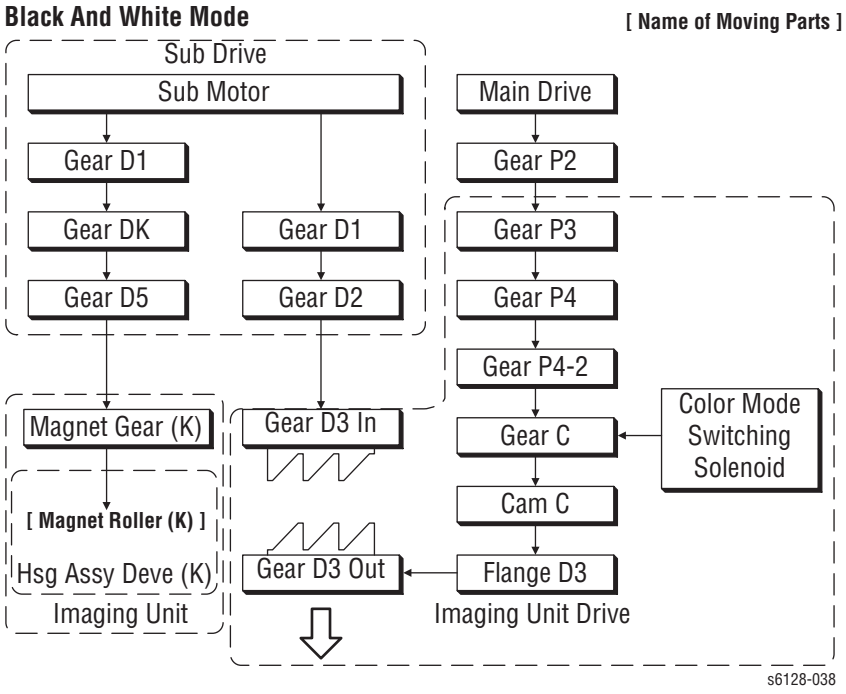



[Name Of Moving Parts]
: Indicates The Engagement Of Gears
Imaging Unit
Transfer Belt
Main Drive
Imaging Unit Gear 2
[Drum (K)]
[Drum (C)]
Paper Feed Drive
Gear P2
Imaging Unit Gear 1
Imaging Unit Gear 2
[Drum (M)]
[Drum (Y)]
Gear P4
Gear P3
Gear T4
Drive Gear
[Belt]
Gear P5
Rubber Registration Gear
Metal Registration Gear
[Metal Registration Roller]
Registration Feeder Chute
Feed Gear
[Feed Roller]
Registration Clutch
[Registration Roller]
Front
Feed Solenoid
K
C
M
Y
s6128-037

Sub-Drive Assembly

Sub Drive power is transmitted differently for Black and White or Color as shown in the following figures.

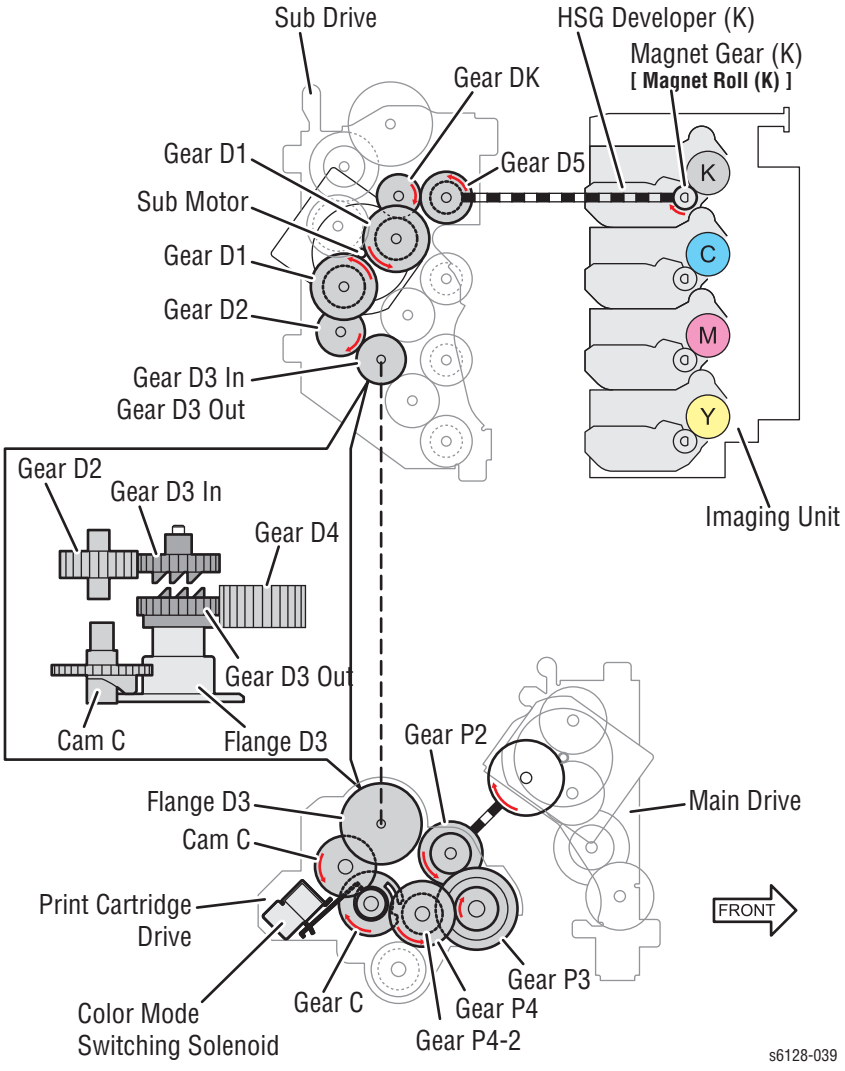
Black and White Mode



[Black And White Mode]

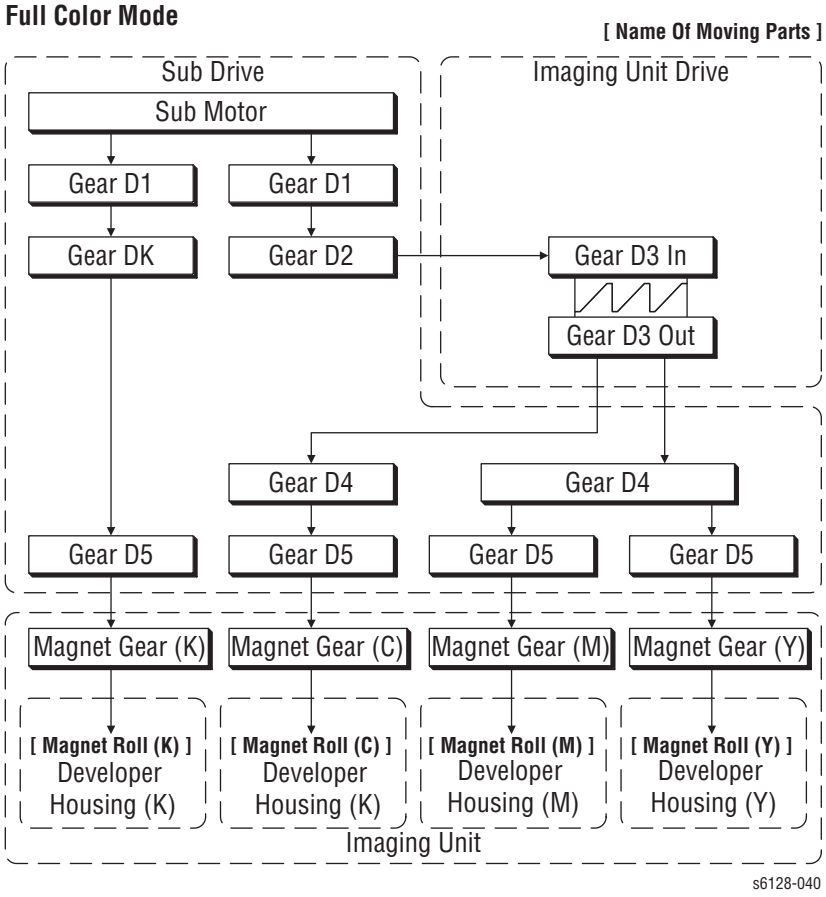
[Name Of Moving Parts]

: Indicates The Engagement Of Gears.



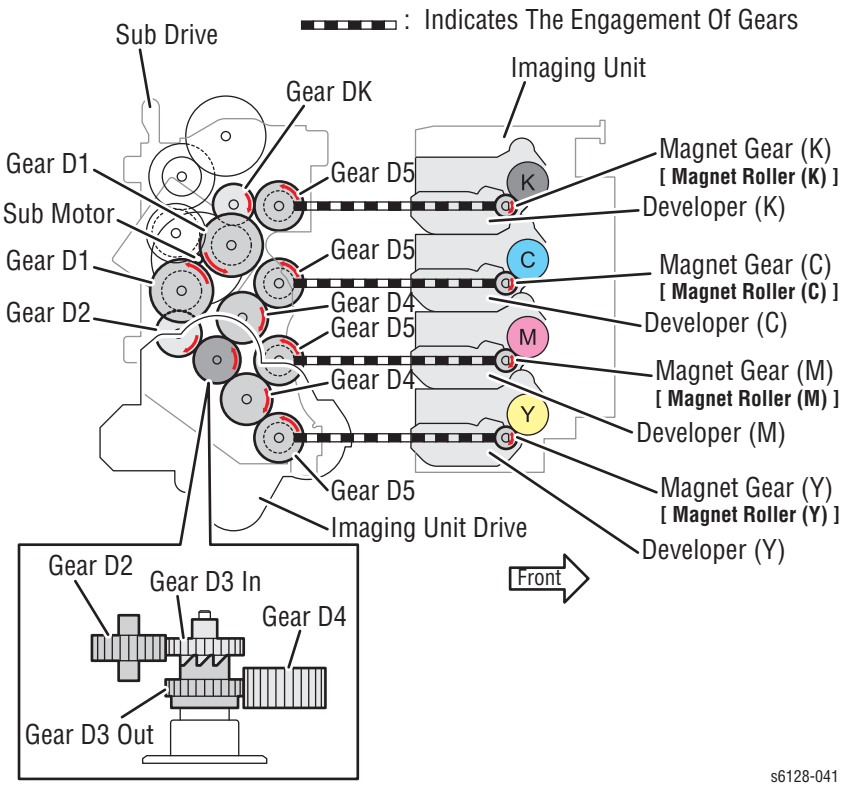
Color Mode

Full Color Mode

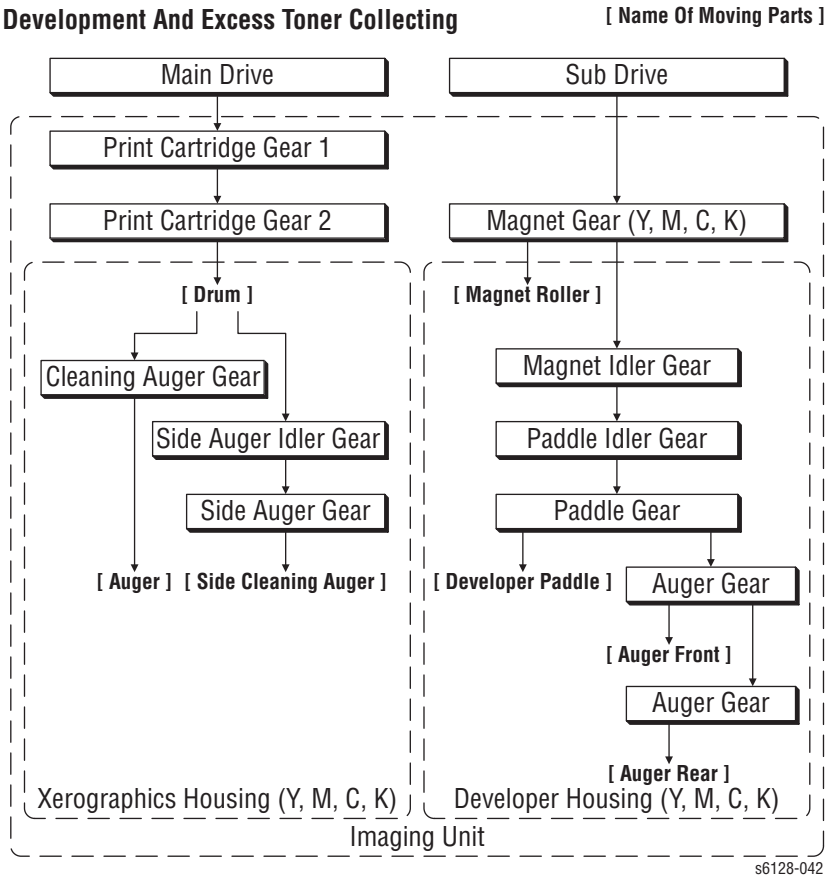


Full Color Mode

[Name Of Moving Parts]

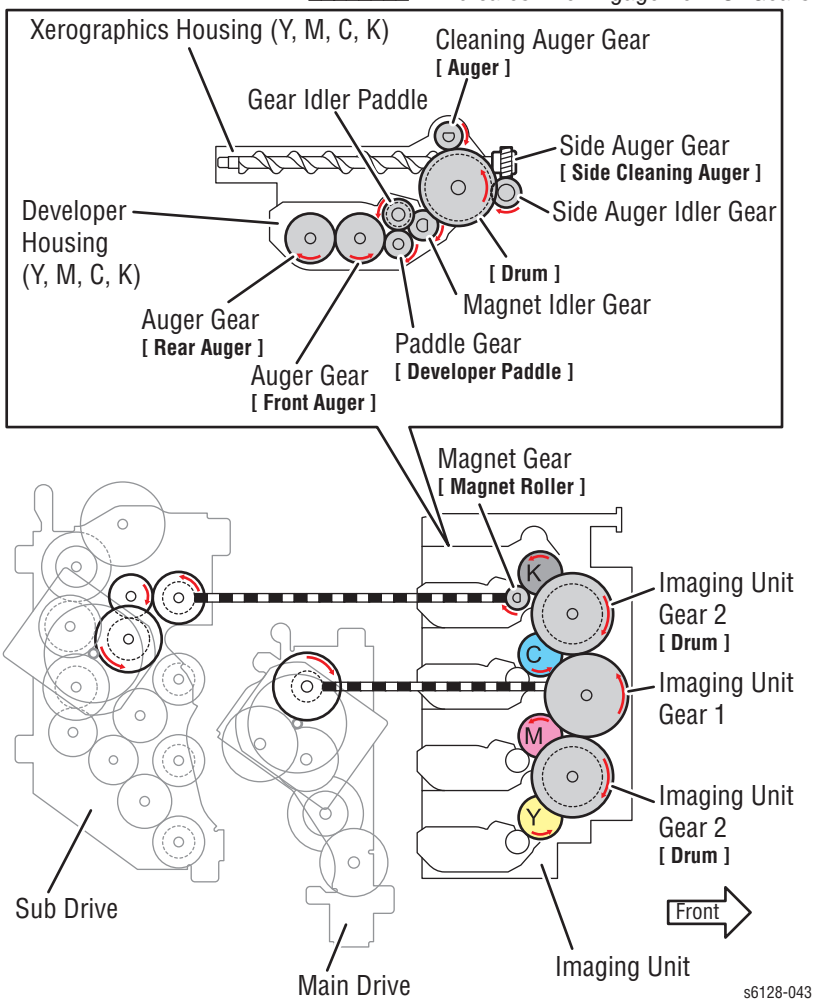


Development and Excess Toner Collection



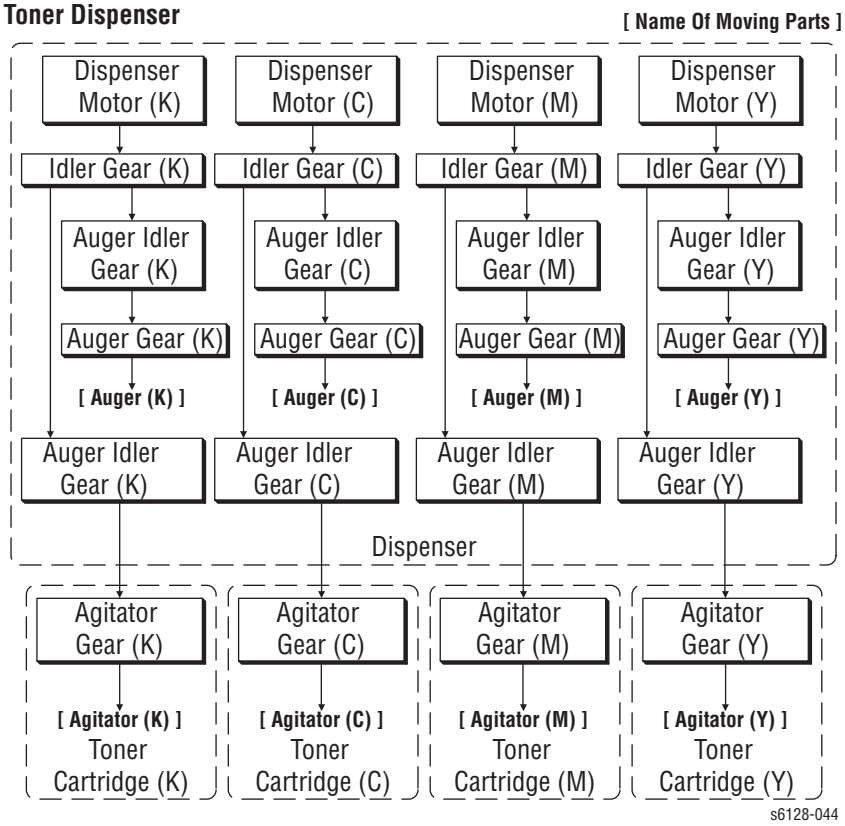
Development And Excess Toner Collecting **[Name Of Moving Parts]**

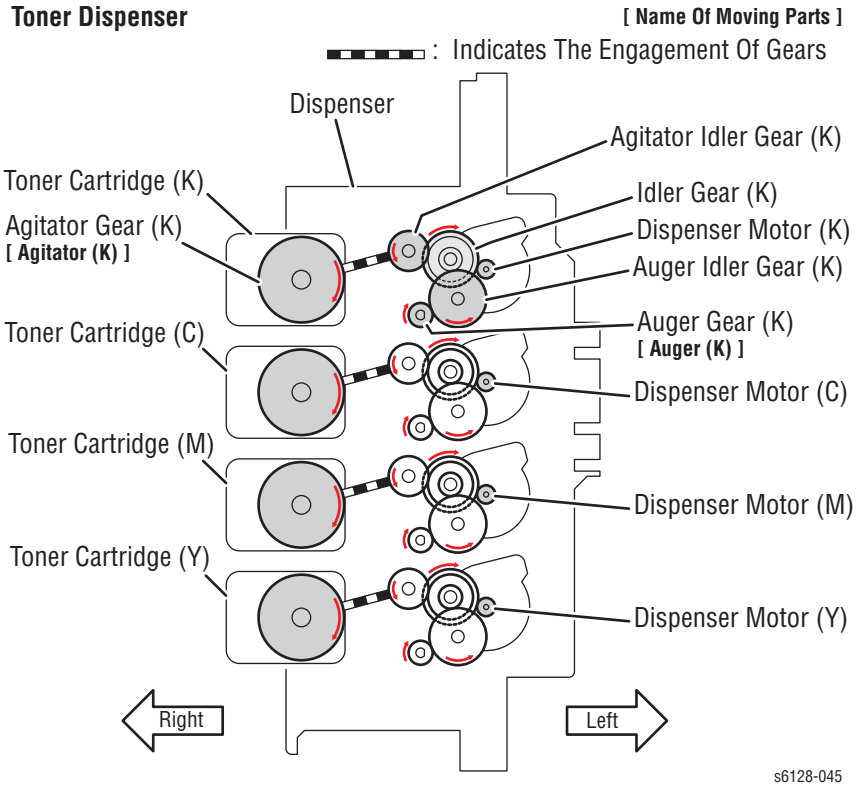
: Indicates The Engagement Of Gears



Dispense Assembly

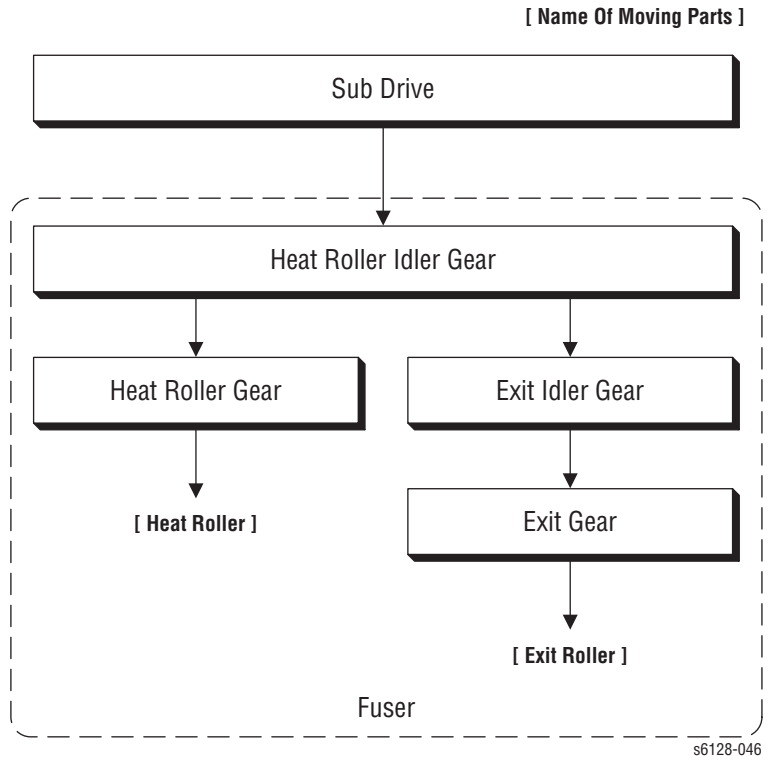
Rotation of the toner motors drives the agitator and auger in the Toner Cartridge.





Fuser Drive

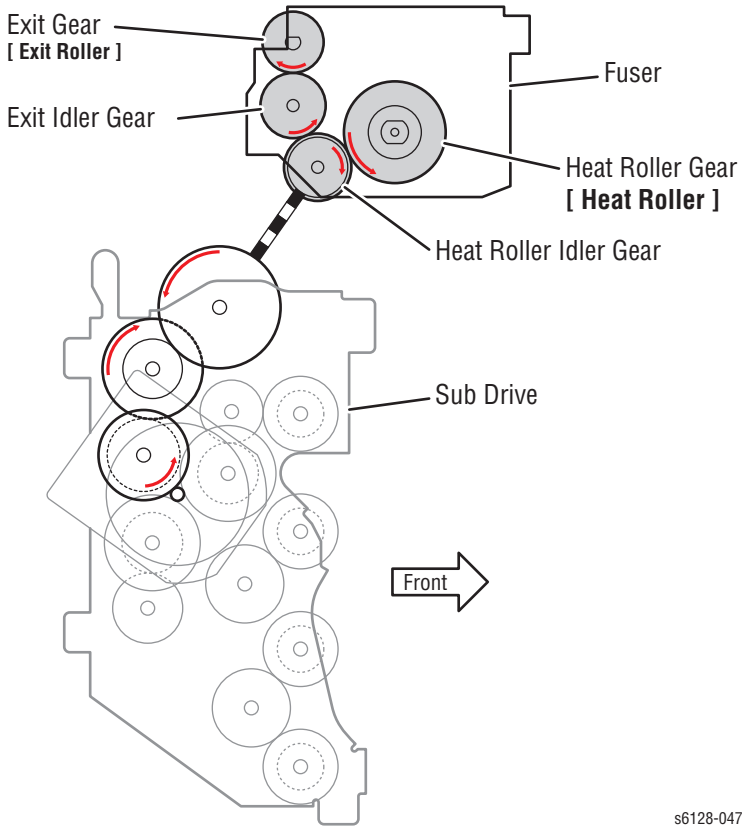
Fuser Drive



Fuser Drive

[Name Of Moving Parts]

: Indicates The Engagement Of Gears



Scanner

The Scanner consists of a lamp (fluorescent lamp, etc.) that illuminates the original document with uniform light and a Charged Coupled Device (CCD), which reads the light reflected from the image.

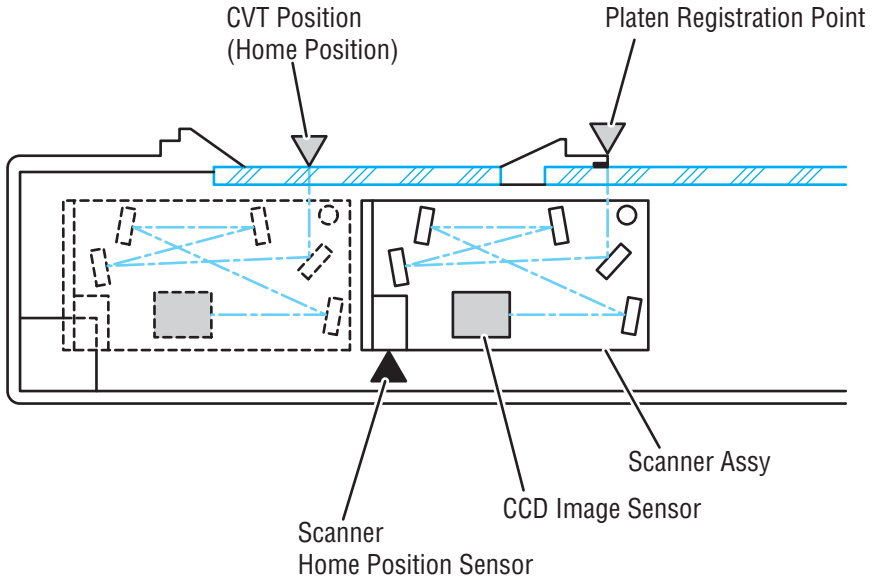
A CCD is a light-receiving element that produces an electrical signal in response to light. In the case of a Fax, a number of CCDs are arranged in a line.

The white areas of the original document reflect the light from the lamp. The black areas reflect no light. The CCDs read the light reflected from the original, outputting sequentially to the control circuit, which areas are white and which black as binary data (1/0 digital data: 1 bit).

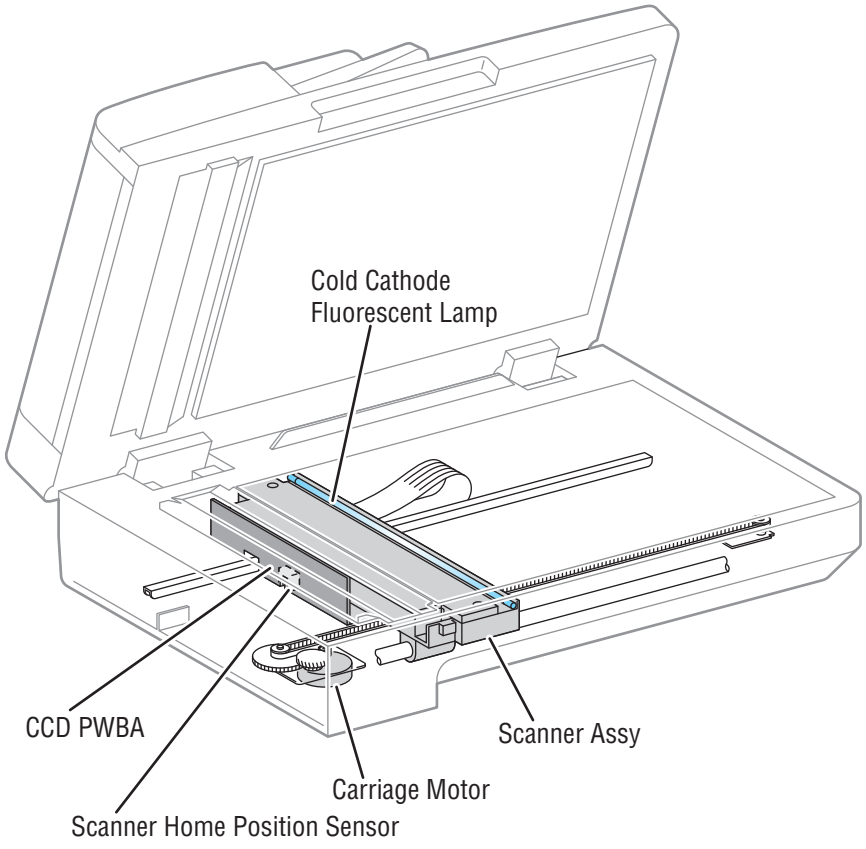
To scan the original, the CCD device is shifted a distance of one line after each line is scanned. When the original is scanned directly on the document glass, the CCD is moved across the original. When the ADFis used, scanning is performed by moving the original with the CCD fixed at one position. This is called Constant Velocity Transport (CVT).

The scanning section consists of a Scanner Assembly that scans documents placed on the document glass.

The optical image reflected from the document reaches the Charged Coupled Device (CCD) image sensor via the light path.



Scanner Components



- ADF Open Sensor

  The ADF Open Sensor detects whether or not the ADF is open and determines the timing of document size detection.

- Carriage Motor

  The Carriage Motor drives the Scanner Assembly.

- Scanner Home Position Sensor

  The Scanner Home Position Sensor is a part of the rear section of the Scanner Assembly frame that functions as an Actuator which shields the Scanner Home Position Sensor, thus detecting the Registration position.

- Cold Cathode Fluorescent Lamp (Exposure Lamp)

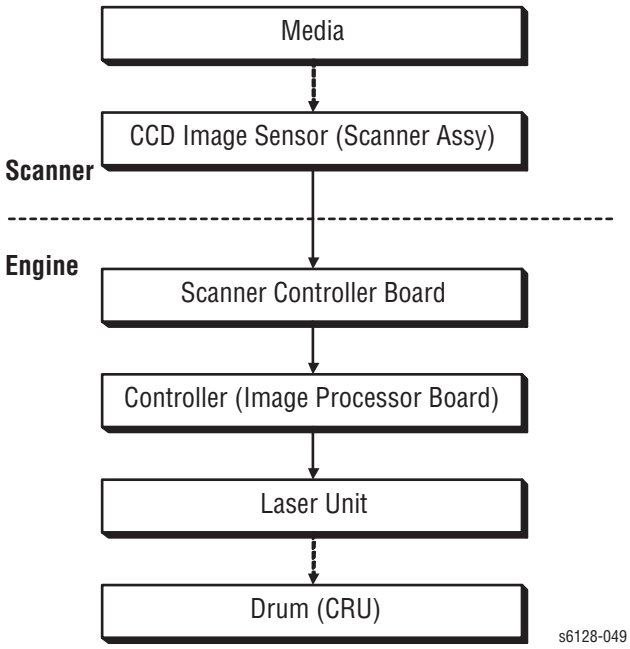
  The Cold Cathode Fluorescent Lamp exposes the document.

- Charged Coupled Device Board

  The Charged Coupled Device (CCD) Board (Image Sensor) converts optical images into electrical signals.

Image Data Flow

The image data from the media set on the Scanner or ADF goes through the following components before it is printed at the Engine section.



Document Scanning Steps

A CCD Image Sensor is used to read image data from the media. The CCD Image Sensor output is adjusted to ensure the image reading is stabilized. Adjustment includes Automatic Gain Control (AGC) and Automatic Offset Control (AOC).

Reference data for adjustment is collected and used to perform compensation on the read image data. Compensation includes shading, white variation, and black variation compensations. These adjustment and compensation steps are described below:

1. AGC (Auto Gain Control): White Level Variation Adjustment

   During AGC, the Scanner Assembly is moved to the position of the white reference plate, and the Exposure Lamp is illuminated. The light reflected from the white reference plate is read by the CCD Image Sensor as the white reference value, which is used to adjust the CCD Image Sensor output.

2. AOC (Auto Offset Control)

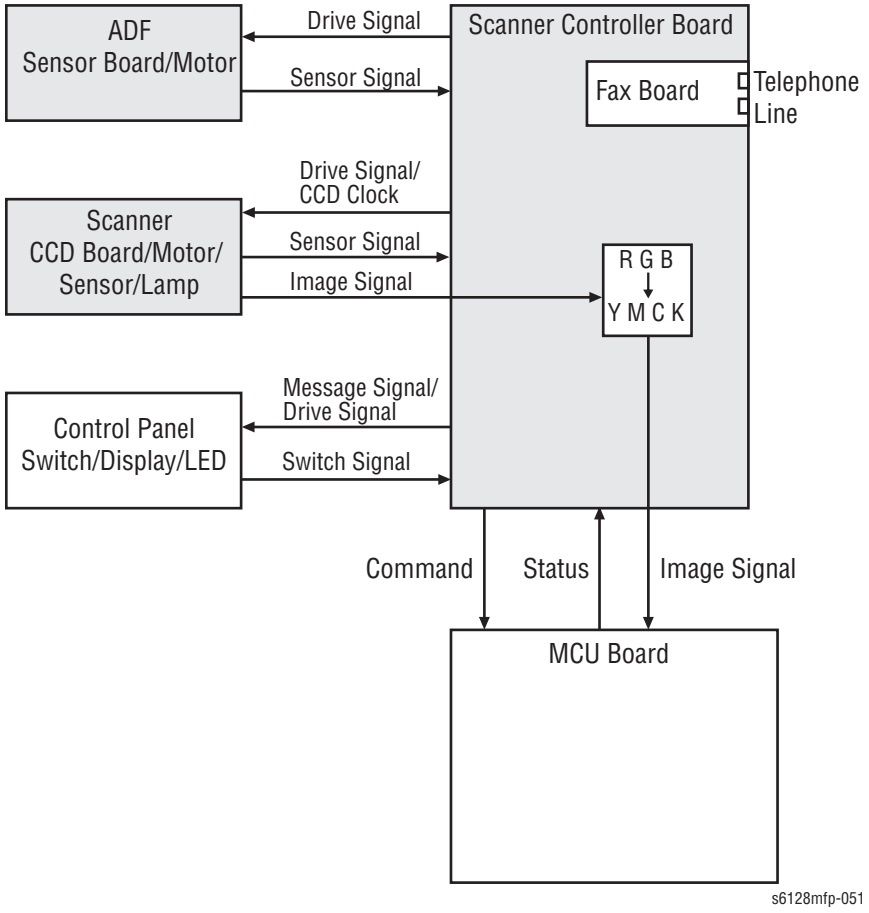
   AOC is performed by turning Off the Exposure Lamp after AGC. This state is read by the CCD Image Sensor as the black reference value, which is used to adjust the CCD Image Sensor output. (The order of AGC and AOC adjustment depends on the model.)

3. Shading Compensation

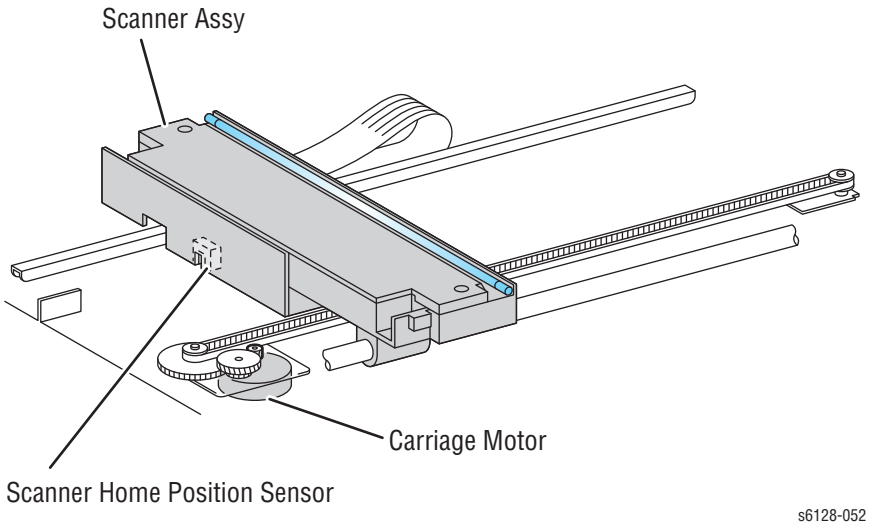
   Shading compensation compensates for pixel-by-pixel sensitivity variations and the non-uniformity of lamp light in the fast scanning direction. The AGC and AOC adjustment values are used to compensate for the image data read by the CCD Image Sensor.

CCD Image Sensor

The CCD Image Sensor is a four-color image sensor with three lines for the respective colors R (red), G (green), B (blue) and one line for B/W (black and white).



Scanning on Document Glass

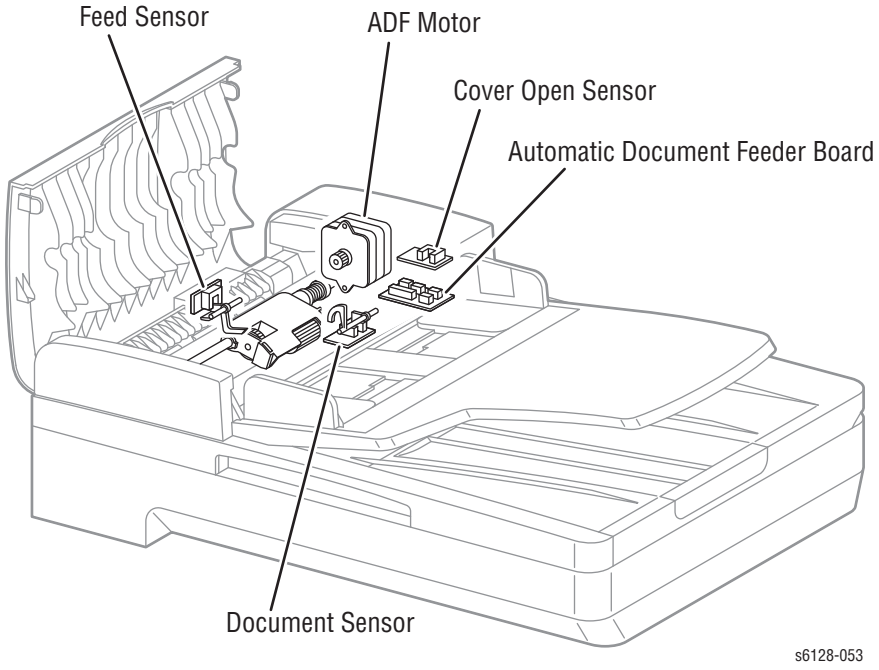


The Scanner Assembly travels to read the document. The following components are installed on the Scanner Assembly:

- Exposure Lamp that illuminates light onto the document,
- CCD Image Sensor that reads light reflected from the document, and
- Lenses and mirrors comprising the light path for the optical image.

Automatic Document Feeder

ADF Components



- Document Sensor

  The Document Sensor detects the presence of media on the ADF Document Tray.

  - Present: Beam is unshielded (unblocked)
  - Absent: Beam is shielded (blocked)

- Cover Open Sensor

  The Cover Open Sensor detects whether or not the ADF Top Cover is open.

- ADF Board

  The ADF Board controls the sensors and motor in the ADF.

- Feed Sensor

  The Feed Sensor is located downstream from the Feed Roller to detect completion of document feed.

  - Document Present: Shielded (blocked)
  - Document Absent: Unshielded (unblocked)

- Registration Sensor

  The Registration Sensor detects the preceding media is about to leave the Registration Roller, thereby determining the next document feed can be started.

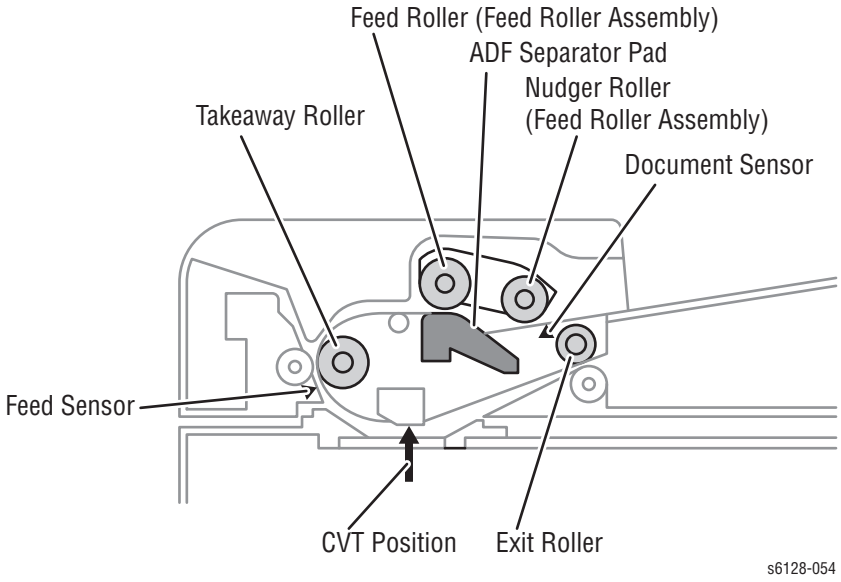
  - Document Present: Shielded (blocked)
  - Document Absent: Unshielded (unblocked)

- ADF Motor

  The ADF Motor rotates the Nudger Roller, Feed Roller, Takeaway Roller, Registration Roller, and Exit Roller.

ADF Media Path

The media set in the document tray is conveyed through the Feed Roller, Takeaway Roller, and Registration Roller. The media image is scanned at the Constant Velocity Transport (CVT) position, and the media is ejected through the Exit Roller.



Media Setting

When media is set in the paper tray and pushed into the tray until its lead edge stops, an Actuator moves to place the ADF Document Sensor in the unshielded (unblocked) state, indicating media detection.

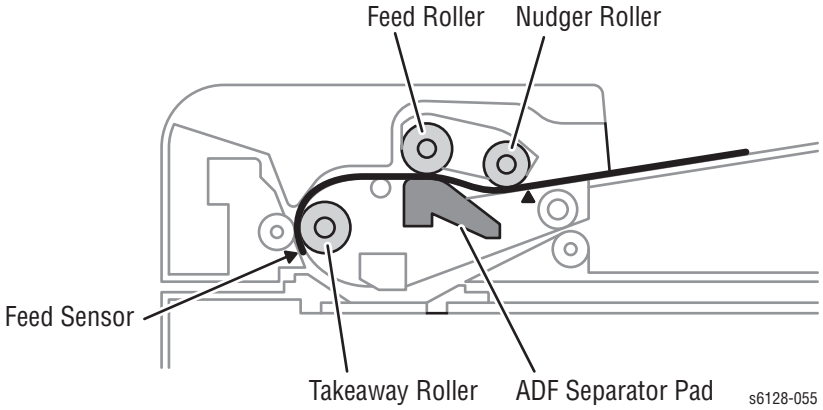
Preparation for Feed

The media in the paper tray starts feeding when the Start button is pressed.

The Nudger Roller moves down and presses onto the media in the paper tray to enable media feed. The Nudger Roller moves down with normal rotation of the ADF Motor. Upon completion of media feed, the ADF Motor reverses rotation to return the Nudger Roller to its normal position.

Prefeed

In the Prefeed process, media is fed from the Feed Roller to the Takeaway Roller. When the Nudger Roller is pressed down to the media surface, the ADF Motor rotates to drive the Nudger and Feed Rollers. The Nudger Roller feeds the top media in the document tray to the Feed Roller. The Feed Roller, nipped by the ADF Separator Pad, feeds the media. When the Feed Sensor detects the media, the printer recognizes that first media feeding is complete.



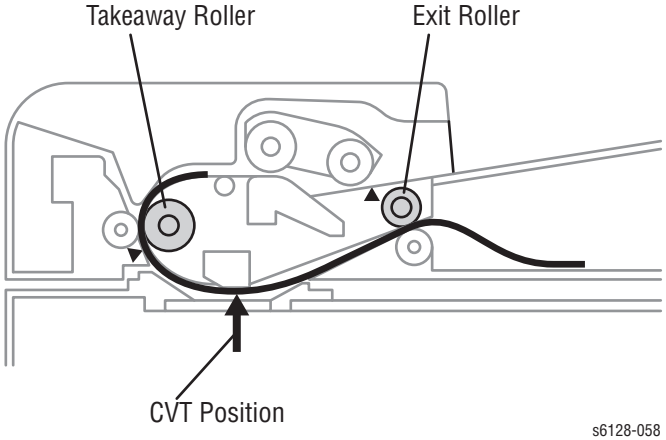
ADF Scan Control

Scanning is controlled by changing the feed speed according to the copy magnification. When the media passes the CVT position at the specified speed, the images on the media are exposed by scanning with the Exposure Lamp of the Scanner Assembly, and read by the CCD Image Sensor.

Simplex Document

For simplex document, media feed is performed as follows:

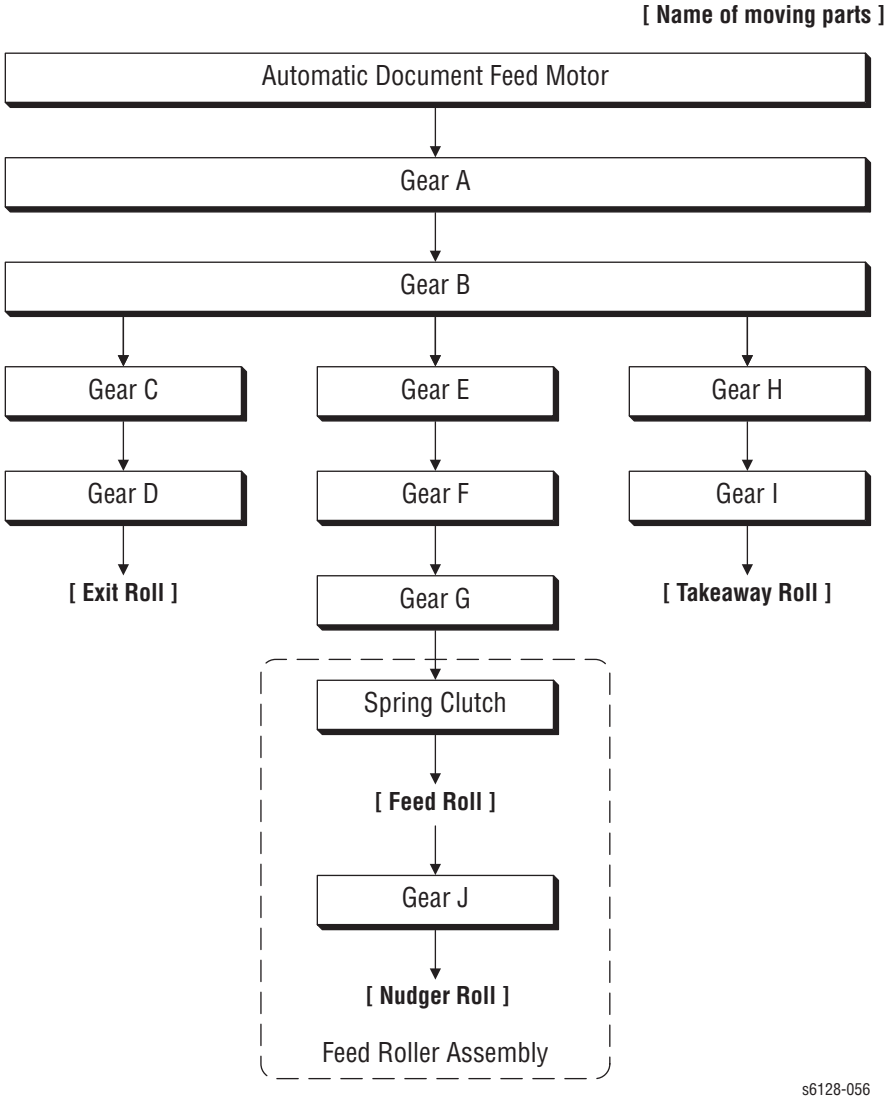
1. The media is fed to the Takeaway Roller and then fed to the scan feed reference position.
2. The media is fed at the speed corresponding to the selected magnification, and the image on it is scanned with the Exposure Lamp at the CVT position.
3. As the image is scanned, media is fed and ejected by the Exit Roller that is driven by the ADF Motor.



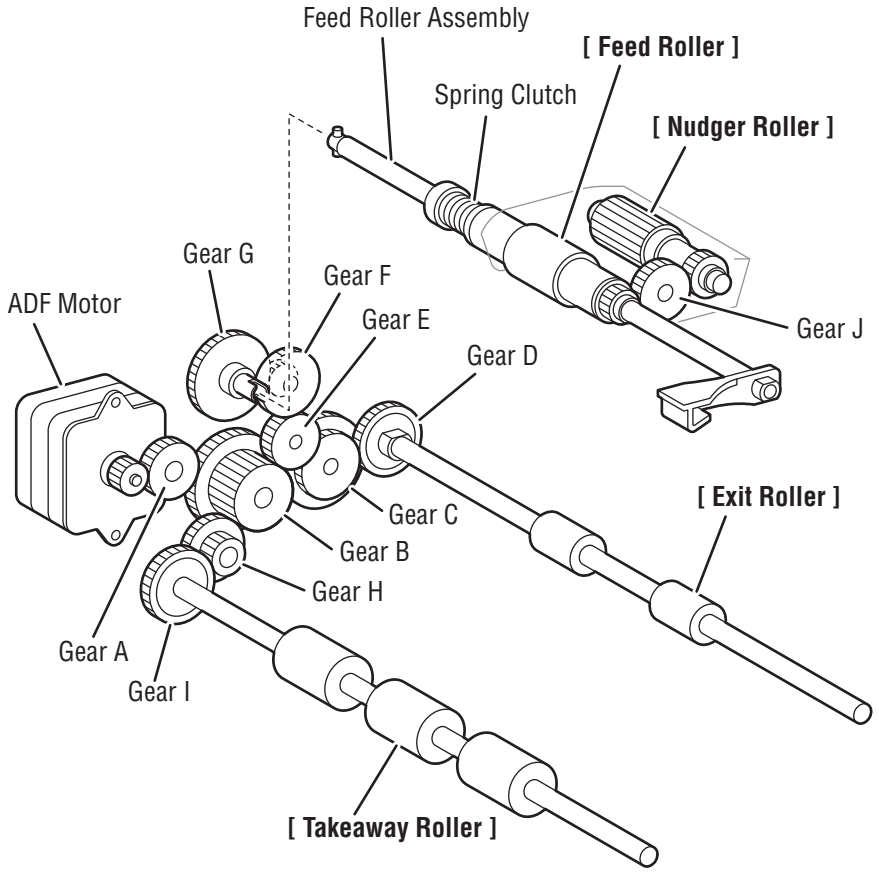
ADF Drive

ADF Motor

The torque of the ADF Motor is transferred to each Document Feeding Roller as show in the following diagram.



Gear Layout


Feed Roller Assembly
[Feed Roller]
Spring Clutch
[Nudger Roller]
Gear G
Gear F
ADF Motor
Gear E
Gear J
Gear D
[Exit Roller]
Gear C
Gear B
Gear H
Gear A
Gear I
[Takeaway Roller]
s6128-057

Fax

Fax Overview

A Fax is a device that sends and receives image data using either an analog or a digital telephone line.

The three basic units of a Fax are the Scanner (for reading the image), the Control Circuit, and the Printer.

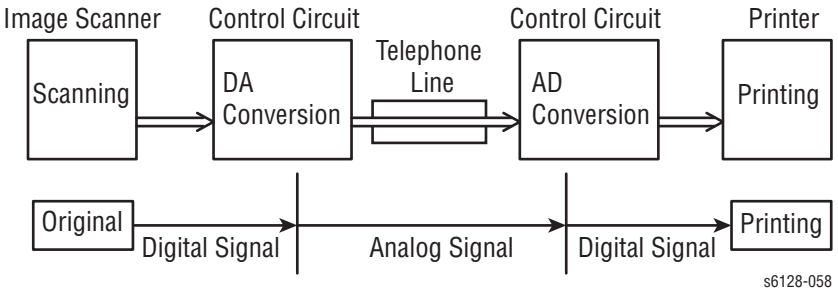
The scanner splits the image into a fine grid and reads the brightness (white/black) of each cell. This operation is called scanning. The white/black information is converted to a digital signal: bright cells become 1, dark cells become 0.

The digital signal from a scanned image is subjected to DA conversion (modulation) by the control circuit to enable transmission over an analog telephone line. After conversion, the data is sent as an analog signal. The sound audible during transmission is image data that has become an analog signal, that is, an audio signal.

The analog signal arriving over the telephone line is then subjected to AD conversion (demodulation) by the control circuit of the receiving Fax machine, and restored to a digital signal.

The black/white information obtained from the AD conversion is sent to the printer, where black cells are reproduced on the paper at the positions where they were on the original.

Fax System (Overview)



Fax Scans

For a G3 Fax (normal mode: G3 Normal), scanning is performed at the resolution of 8 divisions per millimeter (200 dpi) in the horizontal direction and 3.85 divisions per millimeter in the vertical direction. This means that the 200 dpi in-line CCD unit is shifted approximately four times per millimeter in the vertical direction. For an A4 original, the data amounts to approximately two million pixels. In the high-quality mode (G3 Fine), scanning resolution is 8 divisions per millimeter in the horizontal direction and 7.7 divisions per millimeter in the vertical direction, where the data amounts to approximately four million pixels. As resolution increases, the amount of data also increases, lengthening the transmission time.

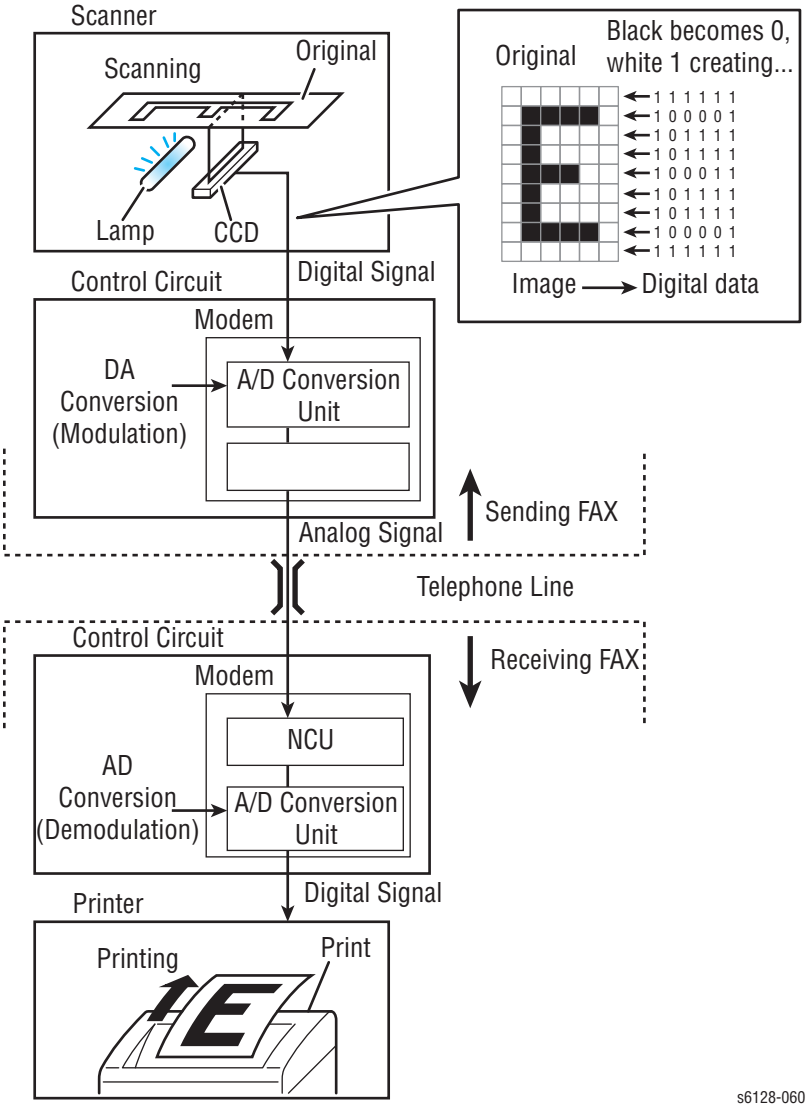
Control Circuit

The control circuit executes scanning of image data by controlling the image scanner. A line of CCDs scans the original image one line at a time. When scanning of one horizontal line is completed, the next line below is scanned. As this continues, the original is scanned from end to end one line at a time and converted to digital data as black-and-white information.

Because this image data is a set of digital signals, it cannot be transmitted using an analog telephone line; it must be subjected to DA conversion (modulation). On the other hand, the receiving Fax machine must perform AD conversion to restore the incoming digital data to analog data.

DA conversion, analog signal transmission, analog signal reception, and AD conversion are all performed by a modem (modulator/demodulator) in the control circuit. A modem consists of a Network Control Unit (NCU) for connecting to the telephone line and an A/D conversion unit for performing DA and AD conversions.

FAX System (Detail)



The following steps contains the line connection procedure between two Faxes.

1. When an AT command (a modem control command) is sent from the control circuit to the modem, the hook switch is activated, and a state is obtained that is identical to that when the handset of a telephone is lifted. A dial tone (400Hz/48VDC) is sent from the local switch. The modem's speaker emits the dial tone as an audible sound.
2. After image scanning, the telephone number (a previously stored number, number entered by pressing phone buttons, etc.) is automatically dialed and transmitted to the local switch.
3. The switch connects lines according to the transmitted number.
4. When a connection between local switches is established, the local switch of the called party sends a ringing signal to the telephone of the called party. The telephone that receives the ringing signal emits its ringtone. At the same time, the called party's local switch sends a ring back tone (RBT) to the calling party's telephone to indicate that a connection to the called party has been established.
5. When the called party's handset is lifted, activating the hook switch, the local switch on the called party side receives a response signal and stops sending tones to the calling and called parties. This is when a communications path is established between both parties.
6. The receiving party's Fax automatically answers when it receives the call signal, and the hook switch is activated. The local switch on the receiving party side receives a response signal and stops sending tones to the sending and receiving parties, thereby establishing a communications path between both parties.

   In the case of a telephone call, only voice conversion between the two parties follows. For Fax, preparation for delivery of image data is required that includes the following types of exchanges:

   a. The sending Fax indicates that the transmission is a Fax transmission.
   b. The receiving Fax indicates that it is ready to receive and also its communications capacity.
   c. The sending Fax then sends data in accordance with the receiving Fax's communications capacity.

   Once the preparation is completed, image data sending and receiving is started. Image data is modulated into an analog signal by the A/D converter at the sending Fax, then sent from its NCU. Image data received by the NCU of the receiving Fax is demodulated into a digital signal by its A/D converter and then sent to the control circuit. When image data reception is completed, the Fax automatically disconnects the line (hook is Off).

   In summary, the NCU automatically executes a series of such operations from hook switch On to hook switch Off.

The control circuit also retains other important functions such as data compression and memory. With data compression, any part of the scanned imaged data consisting of continuous or black pixels is encoded into a single element, thus compressing the volume of data. Memory temporarily stores data during transmission and reception.

Protocol Monitor

Overview of Communication Protocol

A protocol refers to an agreed-upon set of special rules to be adhered to by endpoints attempting to establish a telecommunication connection.

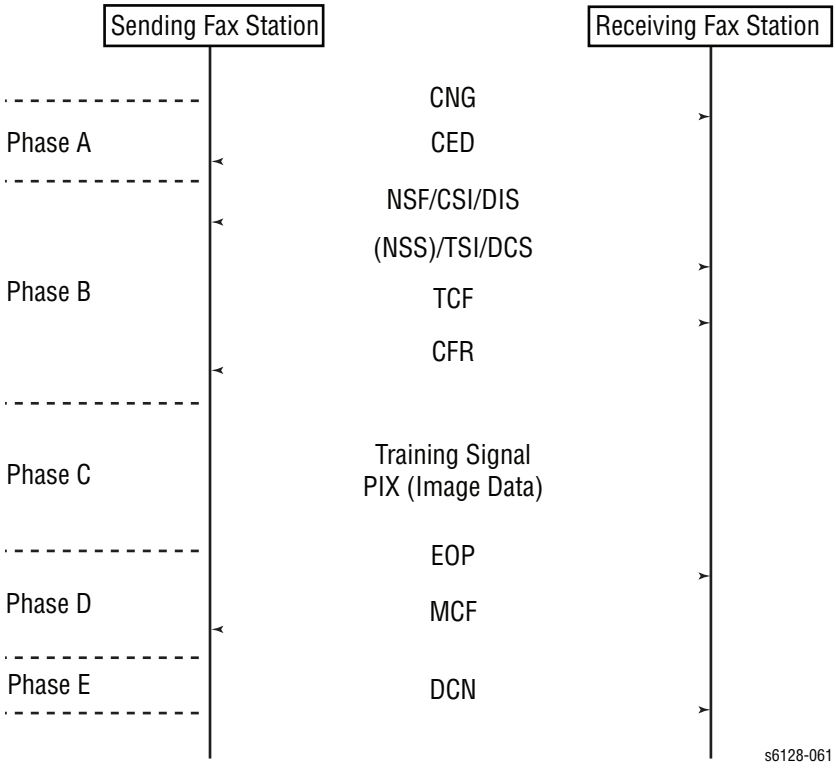
The communication protocol for the G3 fax specifications is stipulated by an international specification known as ITU-T Recommendation T.30 (page 2-65).

All G3 fax machines conform to this protocol when exchanging signal to establish communication.

The G3 fax session consists of five phases from “Phase A” to “Phase E.”

- Phase A – Call Establishment
- Phase B – Capability Negotiations
- Phase C – Image Data Transfer
- Phase D – Post-transfer Procedure
- Phase E – Call Release

The following flow chart provides a typical G3 fax session of a one-page document.



- Phase A – Call Establishment

  In order for a fax to be established, both ends of the line must recognize that the other end is a non-voice (Fax) terminal. Since G3 fax communication is intended for a transmission over the conventional voice network, a fax communication must be initiated via audible tones.

The sending side sends out a Calling Tone (CNG.1100Hz for 0.5 sec.), which identifies itself as a fax terminal. Then, the receiving side responds with a Called Station Identification (CED.2100Hz for 3 sec.) to identify itself as an available fax terminal. Thus, a fax call is established between the two terminals.

- Phase B – Capability Negotiations

  The receiving side presents all of the capabilities it has to offer by sending out NSF/CSI/DIS signals. Then, the sending side responds with NSS/TSI/DCS signals to declare what it has selected from the capabilities presented by the receiving side.

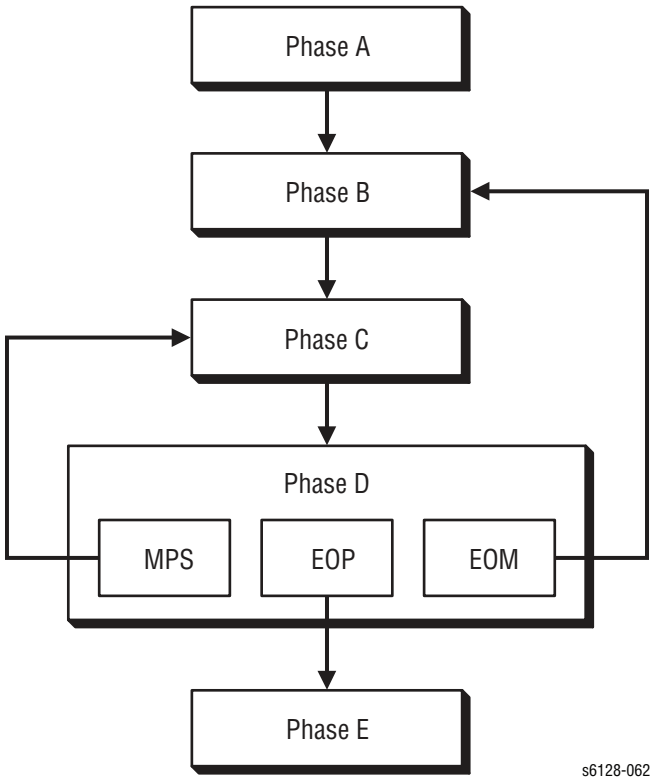
  The sending side sends out a training signal (TCF) to adjust the modem to the maximum transmission rate available. Upon a successful reception of TCF, the receiving side responds with Confirmation to Receive (CFR), which indicates that the receiving side is ready for receiving image data. In the event of an abnormal TCF reception, the receiving side responds with Failure to Train (FTT), which requests retransmission of NSS/TSI/DCS and TCF signals.

- Phase C – Image Data Transfer

  The sending side transmits the image data based on the parameters agreed upon in Phase B. Also carried out are the signaling control procedures including synchronization, error detection/correction, and line supervision.

- Phase D – Post-transfer Procedure

  In the Post-transfer Procedure, the sending side checks its status after the completion of Phase C and sends an appropriate signal to return the session to the previous phases. When there are more pages to follow, the sending side sends out Multi-Page Signal (MPS) and the session returns to Phase C. When there are more pages to follow and the subsequent page is to be sent in a different mode, the sending side sends out End of Message (EOM) and the session returns to Phase B. The session proceeds to Phase E only when the receiving side receives End of Procedure (EOP) indicating that the sending side has completed transmission of the entire document. Therefore, the session may show a looped sequence such as ABCDCD...E, ABCDBCDBCD...E. etc., depending on the remainder of the document or the transmission parameters for the subsequent page.



When the image data has been successfully received, the receiving side sends out Message Confirmation (MCF) to prompt for subsequent image data transmission. When the received image data contains permissible errors, the receiving data side responds with Retrain Positive (RTP). When unacceptable errors are detected, the receiving side responds with Retrain Negative (RTN).

To a signal requesting operator intervention, the receiving side responds with Procedural Interrupt Positive (PIP) when the image data has been received successfully. When the image data contains unacceptable errors, the receiving side responds with Procedural Interrupt Negative (PIN). When retransmission is required in Error Correction Mode (ECM), the receiving side responds with Partial Page Request (PPR).

- ECM – A transmission method that manages the encoded data by dividing it in units called frames and by numbering them. In the event of image corruption due to noise, etc., image quality can be corrected by retransmitting only the corrupted units specified by number. Multiple frames form a unit called block. One block transmitted, or multiple frames retransmitted are called partial page. To use ECM, both the sending the receiving sides must have ECM feature.
- Phase E – Call Release

  This phase terminates the entire fax session and releases the line. Before releasing the line, the sending side sends out Disconnect (DCN), which expects no response.

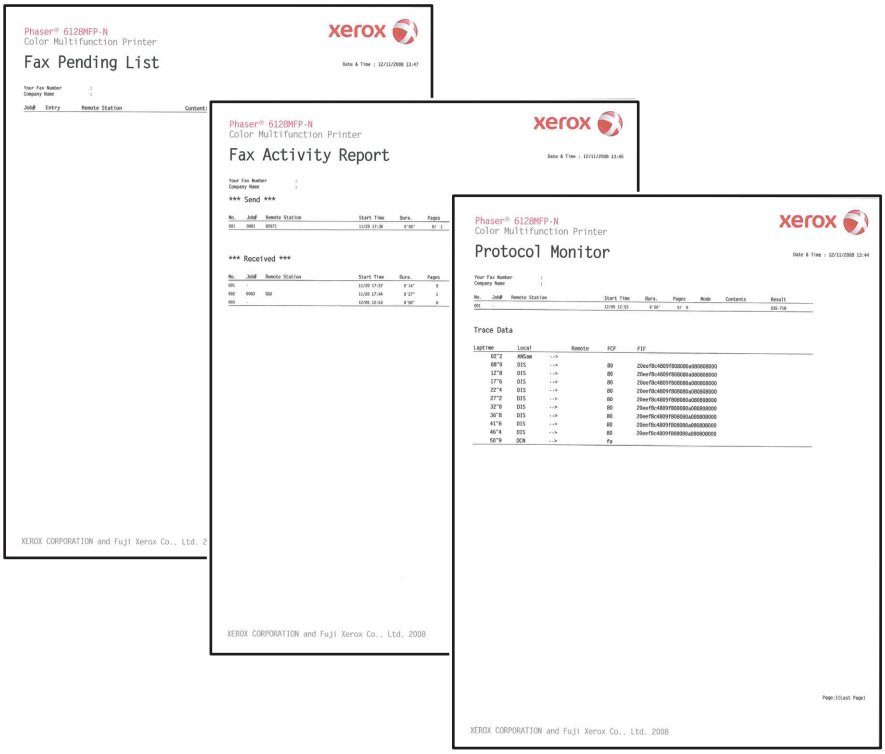
Overview of Protocol Monitor

Protocol Monitor allows the user to monitor and print the transmission/reception records of signals during a G3 fax session that is in conformance to the ITU-T Recommendation T.30, thereby helping to isolate fax communication issues.

Protocol Monitor covers the following sequence of a fax session:

- Sending side: From the detection of incoming CED signal to the transmission of DCN signal.
- Receiving side: From the transmission of CED signal to the detection of incoming DCN signal.

The following illustrates the different Fax reports available and includes an example Protocol Monitor report with the descriptions of signals handled by Protocol Monitor.



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Fax Standards (ITU-T Recommendations)

International Fax Standards (ITU-T Recommendations) include G1 to G4. G1 to G3 use analog telephone networks. G4 uses a digital telephone network (ISDN). G3 is the standard that is currently in use. Faxes conforming to Super G3, a recent added standard, are equipped with a fast 33.6kps modem and reduce transmission times to about half those of G3 Faxes.

Fax Standards

Standard	Minimum Transmission Time for Single-Page A4 Document	Maximum Resolution	Maximum Transmission Speed	Features
Group 1 (G1)	Approx. 6 min.	100 x 100 dpi	(Analog)	Analog transmission. No band compression.
Group 2 (G2)	Approx. 3 min.	100 x 100 dpi	(Analog)	Analog transmission. Band compression technology adopted.
Group 3 (G3)	Approx. 1 min.	200 x 200 dpi	14.4kbps (Super G3: 33.6kbps)	Connection to analog line using Fax modem. Image data in digital format. Data compression. Most common standard in use.
Group 4 (G4)	Approx. 3 sec.	400 x 400 dpi	64kbps (using ISDN)	Digital transmission. Supported by various digital transmission services. Halftone supported.

Error Messages and Codes

In this chapter...

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 code is covered in Chapter 4, General Troubleshooting. Print quality problems are covered in Chapter 5, Print Quality Troubleshooting.

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 codes displayed on the Control Panel
- Engine (fatal) and Jam Error logs displayed on the Control Panel or listed on the Error History Report

Accessing Error History Report

1. From the Control Panel, press the **System** button.
2. **Information Pages** 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 and System (fatal) errors. The printer can retain up to 42 Jam errors and 42 System Fail errors.

Examples of Error message and Chain Link code:

- System Fail History
  - Chain Link: 018-310
- Paper Jam History
  - Paper Jam Type: IOT Remain Registration Jam

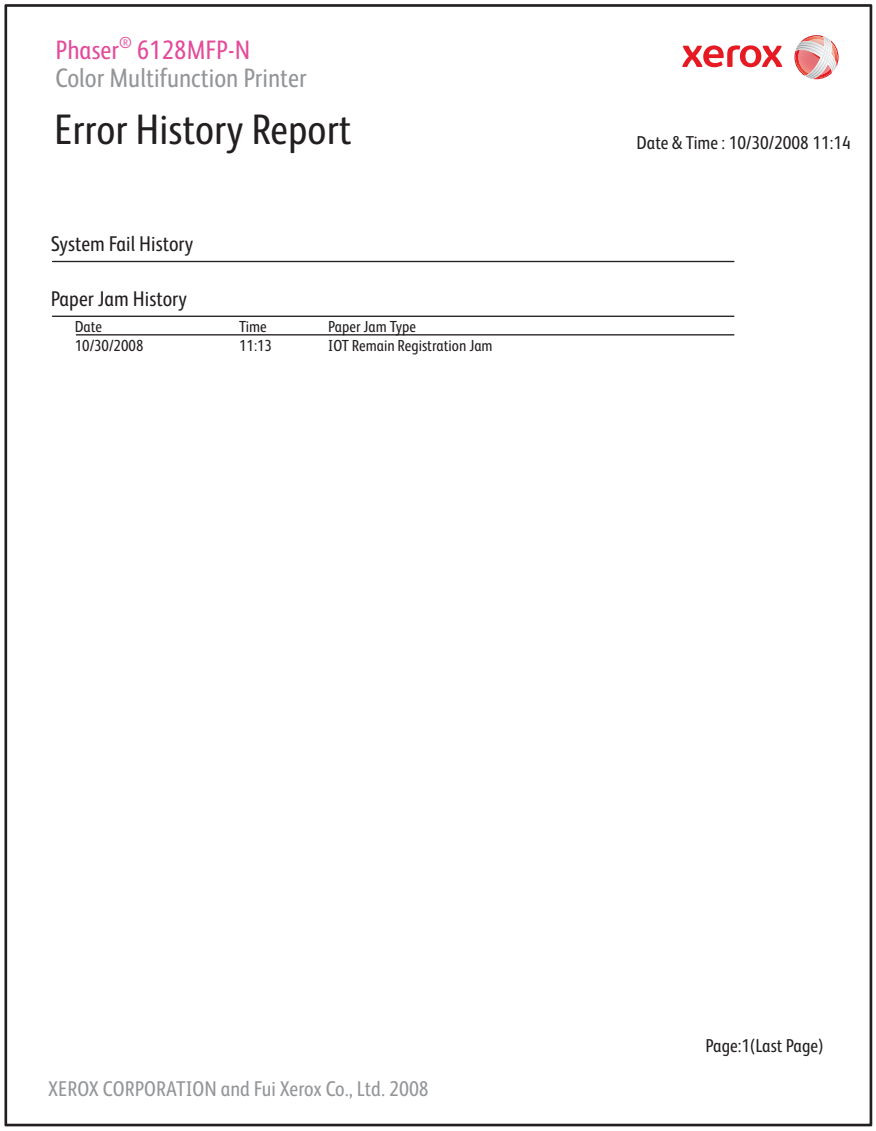
The Error History page contains two types of history information.

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® 6128MFP-N
Color Multifunction Printer

xerox

Error History Report

Date & Time : 10/30/2008 11:14

System Fail History

Paper Jam History

Date	Time	Paper Jam Type
10/30/2008	11:13	IOT Remain Registration Jam

Page:1(Last Page)

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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 Belt.
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, Codes, and Procedures

The error messages and 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
ER/ERR	Error
ENV	Environment
FUNC	Function
MACaddress	Media Access Control Address
MCU	Machine Control Unit
MFD	Multi-Function Device (IIT controller)
MPC	Multi-Protocol Network Card
NVM	Non-Volatile Memory. Used instead of NVRAM.
NVRAM	Non-Volatile Random Access Memory
PCL	Printer Control Language
PDL	Page Description Language
RAM	Random Access Memory
REG	Registration
ROM	Read Only Memory
TRAN	Transfer Belt

Error Message and Code Summary

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

- The System column lists the sub-system reporting the error.
- The Error Message column shows the message as it appears on the display when the error occurs during normal operation.
- The Error Type lists the fault trigger responsible for the error.
- The Go to column references the procedure related to the error.

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

Error Message Summary

System	Error Message	Error Type	Go to
FAX Controller	MFD Memory Full Error 017-970 Press OK Button	<Out of Memory> Out of Memory for AIOC	page 3-133
FAX Controller	MFD Controller Error Error 017-971 Press OK Button	<FlashROM Write Error> Write error at Image Data FlashROM.	page 3-135
FAX Controller	MFD Controller Error Error 017-972 Press OK Button	<FlashROM Erase Error> Erase error at Image Data FlashROM.	page 3-135
FAX Controller	MFD Controller Error Error 017-973 Press OK Button	<FlashROM Suspend Error> Suspend error at Image Data FlashROM.	page 3-135
FAX Controller	MFD Controller Error Error 017-974 Press OK Button	<FlashROM Resume Error> Resume error at Image Data FlashROM.	page 3-135
FAX Controller	MFD Controller Error Error 017-975 Press OK Button	<File Error> File Handle Count exceeds Limit.	page 3-135
FAX Controller	MFD Controller Error Error 017-976 Press OK Button	<File Error> File Count exceeds Manageable Limit.	page 3-135
FAX Controller	MFD Controller Error Error 017-977 Press OK Button	<File Error> Document Count exceeds Manageable Limit.	page 3-135
FAX Controller	MFD Controller Error Error 017-978 Press OK Button	<File Error> Document Page Count exceeds Limit.	page 3-135
FAX Controller	MFD Controller Error Error 017-979 Press OK Button	<File Error> File Double Open.	page 3-135

Error Message Summary (continued)

System	Error Message	Error Type	Go to
FAX Controller	Report Error Error 017-980 Press OK Button	<Report File Open/Close Error> Failed to Open/Close Report File.	page 3-135
FAX Controller	MFD Controller Error Error 017-986 Press OK Button	<File Error> Empty File Created.	page 3-135
FAX Controller	MFD Controller Error Error 017-987 Press OK Button	<File Error> File read error due to Buffer overflow.	page 3-135
FAX Controller	Scan Time Out Error 017-988 Press OK Button	<PC Scan Time Out> Timeout at Scan-To-Application start.	page 3-126
FAX Controller	MFD Controller Error Error 017-989 Press OK Button	<File Size Over> The Writing file size exceeds the Buffer size.	page 3-135
FAX Controller	Fax Codec Error Error 033-500 Press OK Button	<FAX RX JPEG Data Limit> Incoming FAX JPEG Data exceeds System Data Limit.	page 3-142
FAX Controller	Fax Codec Error Error 033-501 Press OK Button	<CODEC Error> The Codec process aborted by read error during manual dialing.	page 3-145
FAX Controller	Fax Error Error 033-502 Press OK Button	<File Open Error> The File Open error occurred.	page 3-135
FAX Controller	MFD Memory Full Error 033-503 Press OK Button	<Memory Full> Memory full at reception.	page 3-133
FAX Controller	Fax Codec Error Error 033-510 Press OK Button	<CODEC Error> The Decoded Line Count per Stripe error at JBIG Data Decoding.	page 3-134
FAX Controller	Fax Codec Error Error 033-511 Press OK Button	<MH/MR/MMR Decode Error> The MH/HR/MMR Received as 0 Line.	page 3-148
FAX Controller	Fax Communication Error Error 033-512 Press OK Button	<Modem Parameter Exchanege Error> The Modem Parameter Exchange error occurred.	page 3-137
FAX Controller	Fax Communication Error Error 033-513 Press OK Button	<Commucation Error> Communication Interrupted due to Memory Full.	page 3-133
FAX Controller	Fax Codec Error Error 033-514 Press OK Button	<JPEG DNL/SOF0 Error> Line Number Unavailable at JPEG Reception.	page 3-142

Error Message Summary (continued)

System	Error Message	Error Type	Go to
FAX Controller	Fax Codec Error Error 033-515 Press OK Button	<JPEG Nf Error> Color/BW Multi-value Info Unavailable at JPEG Reception.	page 3-142
FAX Controller	Fax Codec Error Error 033-516 Press OK Button	<JPEG EOI Error> Failed to Detect EOI at JPEG Reception.	page 3-142
FAX Controller	Incorrect Password Error 033-517 Press OK Button	<D-FAX Password Error> The D-FAX password does not match the password for Fax/ Scan Lock.	page 3-144
FAX Controller	Fax Country is not Set Error 033-518 Press OK Button	<Fax Country is not set correctly.> The Country setting value is not set correctly.	Set the [Country] of the [Fax Setting] on the [Admin Menu] correctly.
FAX Controller	Fax Function is Disabled Error 033-519 Press OK Button	<FAX Function is not set correctly> The FAX Function setting is not set correctly.	Set the [Fax] of the [Function Enable] on the [Secure Settings] of the [Admin Menu] correctly.
FAX Controller	Fax Codec Error Error 033-520 Press OK Button	<JBF Error Call Back> The incoming data error occurred at the Call Back.	page 3-134
FAX Controller	Fax Codec Error Error 033-521 Press OK Button	<JBF Error Marker Abort> The Abort Marker is detected.	page 3-134
FAX Controller	Fax Codec Error Error 033-522 Press OK Button	<JBF Error Marker Unknown> Unsupported Maker detected.	page 3-134
FAX Controller	Fax Codec Error Error 033-523 Press OK Button	<JBF Error Marker Unknown> Unsupported Maker detected.	page 3-134
FAX Controller	Fax Codec Error Error 033-524 Press OK Button	<JBF Error Marker Bad ATMOVE> The unsupported Adaptive Template is executed.	page 3-134
FAX Controller	Fax Codec Error Error 033-525 Press OK Button	<JBF Error Marker Bad Newline> The unsupported Image Level is executed.	page 3-134

Error Message Summary (continued)

System	Error Message	Error Type	Go to
FAX Controller	Fax Codec Error Error 033-526 Press OK Button	<JBF Error BHI> The BIH information is abnormal.	page 3-134
FAX Controller	Fax Communication Error Error 033-751 Press OK Button to retry	<Over Run> Incoming data overrun at the MODEM.	page 3-138
FAX Controller	Target Fax Busy Error 033-752 Press OK Button	<During Call Busy Tone> A busy tone was received while calling the external telephone in TEL/FAX mode.	page 3-139
FAX Controller	Fax Communication Error Error 033-753 Press OK Button	<CJ Not Detection> The CJ cannot be detected.	page 3-137
FAX Controller	Fax Communication Error Error 033-754 Press OK Button	<V8 Error> The V8 error occurred.	page 3-137
FAX Controller	Fax Communication Error Error 033-755 Press OK Button	<Phase2 Error> The Phase 2 (Line Probing) error occurred.	page 3-137
FAX Controller	Fax Communication Error Error 033-756 Press OK Button	<Phase3 Error> The Phase 3 (Primary Channel Equalizer Trimming) error occurred.	page 3-137
FAX Controller	Fax Communication Error Error 033-757 Press OK Button	<Primary Channel Synchronization Error> The Primary Channel re-Synchronization error occurred.	page 3-137
FAX Controller	Fax Communication Error Error 033-758 Press OK Button	<Control Channel Synchronization Error> The Control Channel re-Synchronization error occurred.	page 3-137
FAX Controller	Fax Communication Error Error 033-759 Press OK Button	<Control Channel Retrain Error> The Control Channel Retrain Error occurred.	page 3-137
FAX Controller	Fax Communication Error Error 033-760 Press OK Button	<Control Channel OFF Time Out> The Control Channel OFF time out occurred.	page 3-137

Error Message Summary (continued)

System	Error Message	Error Type	Go to
FAX Controller	Fax Communication Error Error 033-761 Press OK Button	<Primary Channel OFF Time Out> The Primary Channel OFF time out occurred.	page 3-137
FAX Controller	Fax Communication Error Error 033-762 Press OK Button	<DM Prevention Function Receive Refuse> The incoming data was rejected by the DM prevention function.	page 3-140
FAX Controller	Fax Communication Error Error 033-763 Press OK Button	<Manual Transmission Read Manuscript Not Do> Read Timeout at Manual Dialing.	page 3-145
FAX Controller	Fax Communication Error Error 033-764 Press OK Button	<Draw Data Create Not Do> Graphics Process Timeout at Fax Sending.	page 3-138
FAX Controller	Fax Communication Error Error 033-765 Press OK Button	<File Pointer Error> Read/Write File Pointer Error at Encoding/Decoding.	page 3-142
FAX Controller	Fax Communication Error Error 033-766 Press OK Button	<Target File Opening> The Target File Empty at Decoding.	page 3-142
FAX Controller	Fax Communication Error Error 033-767 Press OK Button	<MMR MN86064 Decode Error> The Decode error of MN86064 at MMR Decoding.	page 3-142
FAX Controller	Fax Codec Error Error 033-768 Press OK Button	<AT-Move Counter Over> The AT-Move Count per Stripe 5 or more.	page 3-134
FAX Controller	Fax Codec Error Error 033-769 Press OK Button	<JBIG NEWLEN Marker Error> The NEWLEN marker was not detected.	page 3-134
FAX Controller	Fax Codec Error Error 033-770 Press OK Button	<YD Error> The YD error at JBIG encoding.	page 3-134
FAX Controller	Fax Codec Error Error 033-771 Press OK Button	<Abort Marker Error> The Abort Marker error at JBIG decoding.	page 3-134
FAX Controller	Fax Codec Error Error 033-772 Press OK Button	<Undefined Maker Error> The undefined marker was detected.	page 3-134
FAX Controller	Fax Codec Error Error 033-773 Press OK Button	<BIH Error> The BIH was abnormal at JBIG decoding.	page 3-134

Error Message Summary (continued)

System	Error Message	Error Type	Go to
FAX Controller	Fax Codec Error Error 033-774 Press OK Button	<FAX TX Encode Output Buffer Over> The JBIG Encode Output Buffer overflow at FAX sending.	page 3-142
FAX Controller	Fax Codec Error Error 033-775 Press OK Button	<FAX RX Encode Output Buffer Over> The JBIG Encode Output Buffer overflow at Fax Receiving.	page 3-141
FAX Controller	Fax Codec Error Error 033-776 Press OK Button	<SCAN Encode Output Buffer Over> The JBIG Encode Output Buffer overflow at Accumulation of Outgoing FAX or D-FAX.	page 3-142
FAX Controller	Fax Codec Error Error 033-777 Press OK Button	<FAX RX Decode Input Buffer Over> The Incoming Buffer overflow at Copy from ECM to JBIG Decode.	page 3-141
FAX Controller	Fax Communication Error Error 033-782 Press OK Button	<NSS/DCS Function disagreement> The Incoming NSS/DCS Function Not supported.	page 3-148
FAX Controller	Fax Codec Error Error 033-784 Press OK Button	<Buffer Error> The Incoming FAX Buffer overflow at JBIG Decode Output.	page 3-141
FAX Controller	Scan Codec Error Error 033-785 Press OK Button	<Buffer Error> The MHR Decode Output Buffer overflow at PushScan.	page 3-142
FAX Controller	Fax Codec Error Error 033-786 Press OK Button	<DECORD Error > The Decode-BIH Line Count Inconsistency at JBIG Data Decoding.	page 3-134
FAX Controller	MFD Memory Full Error 033-787 Press OK Button	<Calling Table Full> The Calling Table is full.	page 3-135
FAX Controller	MFD Memory Full Error 033-788 Press OK Button	<Memory Full> Exceeds the memory capacity.	page 3-133
FAX Controller	Fax Job Canceled Error 033-789 Press OK Button	<Cancel> The Cancellation occurred.	page 3-135

Error Message Summary (continued)

System	Error Message	Error Type	Go to
FAX Controller	Fax Job Canceled Error 033-790 Press OK Button	<Cancel> The Cancellation occurred.	page 3-135
FAX Controller	Fax Job Canceled Error 033-791 Press OK Button	<Cancel> The Cancellation occurred.	page 3-135
FAX Controller	Fax Send Error Last Sheet not Sent Press OK Button	<FAX Send Count Limit> The Outgoing FAX exceeds store limit.	page 3-133
FAX Controller	Fax Codec Error Error 033-799 Press OK Button	<Line Count Limit Over> The Line Count per Page Exceeds Limit at MH/HR/MMR Reception.	page 3-148
FAX Controller	Fax Communication Error Error 034-508 Press OK Button	<Command Refuse Signal Send> The Communication Aborted Sending Command Rejection Code.	page 3-148
FAX Controller	Fax Communication Error Error 034-515 Press OK Button	<DIS DCS Illegal Command Receive> Unsupported Command received.	page 3-146
FAX Controller	Fax Number Error Error 034-799 Press OK Button	<No Dial Data> The Autodial Started but No Data Ready.	page 3-139
FAX Controller	Target Fax No Answer Error 035-701 Press OK Button	<Send T1 Time Out> The T1 Time Out error occurred at the data is transmitting.	page 3-147
FAX Controller	Fax Communication Error Error 035-702 Press OK Button	<Receive DCN> Receiving the DCN.	page 3-148
FAX Controller	Fax Communication Error Error 035-704 Press OK Button	<Not Send Ability> Source Lacking Send Capacity.	page 3-148
FAX Controller	Fax Communication Error Error 035-705 Press OK Button	<DCS/NSS Resend Over> Exceeds the predetermined value of the resending.	page 3-148
FAX Controller	Fax Communication Error Error 035-706 Press OK Button	<Fall Back Error> The Fall Back error occurred.	page 3-137

Error Message Summary (continued)

System	Error Message	Error Type	Go to
FAX Controller	Fax Communication Error Error 035-708 Press OK Button	<Post Message Resend Over> Exceeds the predetermined value of the resending.	page 3-148
FAX Controller	Fax Communication Error Error 035-709 Press OK Button	<G3 Send RTN/PIN Receive> Received RTN/PIN at G3 Transmission..	page 3-148
FAX Controller	Fax Communication Error Error 035-710 Press OK Button	<Receive PIN> Received PIN (Except the EOR).	page 3-148
FAX Controller	Fax Communication Error Error 035-716 Press OK Button	<T2 Time Out> The T2 Time Out occurred.	page 3-148
FAX Controller	Fax Communication Error Error 035-717 Press OK Button	<G3 Receive RTN Send> Received RTN at G3 Transmission.	page 3-148
FAX Controller	Target Fax No Answer Error 035-718 Press OK Button	<Receive T1 Time Out> The T1 Time Out error occurred at receiving the data.	page 3-146
FAX Controller	Fax Communication Error Error 035-720 Press OK Button	<Not Receive Ability> Source Lacking Receive Capacity.	page 3-147
FAX Controller	Fax Communication Error Error 035-728 Press OK Button	<G3 EOL Not Receive> Unable to Receive EOL for 13 sec at G3 Reception.	page 3-148
FAX Controller	Fax Communication Error Error 035-729 Press OK Button	<Career Cut> Career Interrupted.	page 3-148
FAX Controller	Fax Communication Error Error 035-730 Press OK Button	<RS Request CS NOT ON> The Modem CS not turning on to RS Request at High-Speed Training.	page 3-138
FAX Controller	Fax Communication Error Error 035-737 Press OK Button	<CTC/EOR Resend Over> Exceeds the predetermined value of the resending.	page 3-148
FAX Controller	Fax Communication Error Error 035-739 Press OK Button	<T5 Time Out> The T5 Time Out error occurred.	page 3-148

Error Message Summary (continued)

System	Error Message	Error Type	Go to
FAX Controller	Fax Communication Error Error 035-740 Press OK Button	<ECM Send EOR-Q Send> Sent EOR-Q at ECM transmission.	page 3-148
FAX Controller	Fax Communication Error Error 035-742 Press OK Button	<ECM Receive EOR-Q Receive> Received EOR-Q at ECM.	page 3-148
FAX Controller	No Dial Tone Error 035-746 Press OK Button	<Before Dial Dial Tone> Failed to Detect Dial Tone before Dialing.	page 3-139
FAX Controller	Fax Communication Error Error 035-779 Press OK Button	<FAX FWD document change error> Document Change Error at forwarding FAX.	page 3-135
FAX Controller	Target Fax Busy Error 035-781 Press OK Button	<Busy Tone error> Detected Busy Tone after Dialing.	page 3-147
FAX Controller	Fax Communication Error Error 035-792 Press OK Button	<JM Not Detection> The JM cannot be detected.	page 3-137
FAX Controller	Fax Communication Error Error 035-793 Job Failure Press OK Button	< Digital Line Detection> The telephone line is a digital line.	Change to an analog line.
FAX Controller	Scan Error Error 116-396 Restart Printer	<Software Bag> Fatal Maillib Related Error Other File2Net Lib Error	page 3-135
FAX Controller	Scan Error Error 116-987 Restart Printer	<Software Bag> A Fatal Error Related To The Format Library.	page 3-135
FAX Controller	MFD Controller Error Error 117-310 Restart Printer	<Main Program Sum Error> The main program sum error occurred.	page 3-142
FAX Controller	MFD Controller Error Error 117-311 Restart Printer	<Parameter Sum Error> The parameter sum error occurred.	page 3-142
FAX Controller	MFD Controller Error Error 117-312 Restart Printer	<Download Program Sum Error> The download program sum error occurred.	page 3-142
FAX Controller	Error 117-322 Restart Printer	<SYSMGR Task Error> The SYSMGR task error occurred.	page 3-135

Error Message Summary (continued)

System	Error Message	Error Type	Go to
FAX Controller	Error 117-328 Restart Printer	<MSCAN Task Error> The MSCAM task error occurred.	page 3-135
FAX Controller	Error 117-335 Restart Printer	<D-FAX Task Error> The D-FAX task error occurred.	page 3-135
FAX Controller	Error 117-336 Restart Printer	<PULL Task Error> The PULL task error occurred.	page 3-135
FAX Controller	Error 117-337 Restart Printer	<IITTX Task Error> The IITTX task error occurred.	page 3-135
FAX Controller	Error 117-340 Restart Printer	<HOOK Task Error> The HOOK task error occurred.	page 3-135
FAX Controller	Error 117-344 Restart Printer	<FLASHFILE Task Error> The FLASHFILE task error occurred.	page 3-117
FAX Controller	Error 117-348 Restart Printer	<IITRX Task Error> The IITRX task error occurred.	page 3-135
FAX Controller	Error 117-349 Restart Printer	<SCANMGR Task Error> The SCANMGR task error occurred.	page 3-135
FAX Controller	Error 117-350 Restart Printer	<Task Initialize Error> The task initializing (start up) error occurred.	page 3-135
FAX Controller	MFD Controller Error Error 117-352 Restart Printer	<AIOC-IIT Communication Error> Communication error between I/P Board and IIT.	page 3-132
FAX Controller	MFD EEPROM Error Error 117-362 Restart Printer	<EEPROM Sum Check Error> The EEPROM Check Sum error occurred.	page 3-135
FAX Controller	MFD NVM Error Error 117-363 Restart Printer	<NVM Sum Check Error> The NVM Check Sum error occurred.	page 3-135
FAX Controller	Control Panel Error Error 123-314 Restart Printer	<Panel Power On Error> The FAX controller power on sequence does not start within one minute after activating the Control Panel.	page 3-98
FAX Controller	Fax Communication Error Error 133-231 Restart Printer	<T_FAXCOM Data Receive I/F Error> The data processing interface error on T FAXCOM.	page 3-135
FAX Controller	Fax Error Error 133-234 Restart Printer	<JBIG Parameter Error> The JBIG parameter setting error occurred.	page 3-135

Error Message Summary (continued)

System	Error Message	Error Type	Go to
FAX Controller	Fax Error Error 133-235 Restart Printer	<MHR Parameter Error> The MHR parameter setting error occurred.	page 3-135
FAX Controller	Fax Error Error 133-236 Restart Printer	<MHR Encode Error> The encoding error at the MHR.	page 3-142
FAX Controller	Fax Codec Error Error 133-237 Restart Printer	<MHR Input Buffer Error> Data error at MHR Input Buffer	page 3-142
FAX Controller	Fax Codec Error Error 133-238 Restart Printer	<MHR Output Buffer Error> Data error at MHR Output Buffer	page 3-142
FAX Controller	Fax Error Error 133-239 Restart Printer	<FAX ECM Buffer Address Error> A FAX ECM Buffer Read/Write Address error occurred.	page 3-142
FAX Controller	Fax Error Error 133-240 Restart Printer	<Resolution Change Error> The FAX Resolution Conversion error at Sending/ Receiving.	page 3-142
FAX Controller	Fax Error Error 133-241 Restart Printer	<Memory Pool Get Error> The Memory Pool acquisition error occurred (OS error).	page 3-142
FAX Controller	Fax Error Error 133-242 Restart Printer	<Memory Pool Rerese Error> A Memory Pool release error occurred (OS error).	page 3-142
FAX Controller	Fax Error Error 133-243 Restart Printer	<Message Send Error> The Message communication error occurred (OS error).	page 3-142
FAX Controller	Fax Error Error 133-244 Restart Printer	<Message Receive Error> The Message reception error occurred (OS error).	page 3-142
FAX Controller	Fax Error Error 133-246 Restart Printer	<Memory Pool Get Error> The Memory Pool acquisition error occurred (OS error).	page 3-142
FAX Controller	Fax Error Error 133-247 Restart Printer	<Message Send Error> The communication error occurred (OS error).	page 3-142
FAX Controller	Fax Error Error 133-248 Restart Printer	<Memory Pool Rerese Error> The Memory Pool release error occurred (OS error).	page 3-142
FAX Controller	Fax Error Error 133-249 Restart Printer	<Message Receive Error> The Message receive error occurred (OS error).	page 3-142

Error Message Summary (continued)

System	Error Message	Error Type	Go to
FAX Controller	Fax Error Error 133-251 Restart Printer	<File Open Error> The File Open error occurred.	page 3-142
FAX Controller	Fax Error Error 133-252 Restart Printer	<File Close Error> The File Close error occurred.	page 3-142
FAX Controller	Fax Error Error 133-253 Restart Printer	<File Erase Error> The File Erase error occurred.	page 3-138
FAX Controller	Fax Error Error 133-254 Restart Printer	<Memory Full> Out of Memory for Printing.	page 3-138
FAX Controller	Fax Error Error 133-259 Restart Printer	<OS Call Error> The OS Call error occurred.	page 3-142
FAX Controller	Fax Error Error 133-260 Restart Printer	<File Open Error> The File Open error occurred.	page 3-142
FAX Controller	Fax Error Error 133-261 Restart Printer	<File Close Error> The File Close error occurred.	page 3-142
FAX Controller	Fax Error Error 133-269 Restart Printer	<File Close Error> The File Close error occurred.	page 3-142
FAX Controller	Fax Error Error 133-271 Restart Printer	<Memory Pool Get Error> The Memory Pool acquisition error occurred (OS error).	page 3-142
FAX Controller	Fax Error Error 133-272 Restart Printer	<Message Send Error> The Message send error occurred (OS error).	page 3-142
FAX Controller	Fax Error Error 133-273 Restart Printer	<Memory Pool Release Error> The Memory Pool release error occurred (OS error).	page 3-142
FAX Controller	Fax Error Error 133-274 Restart Printer	<Message Receive Error> The Message Receive error occurred (OS error).	page 3-142
FAX Controller	Fax Error Error 133-275 Restart Printer	<OS Call Error> The OS Call error occurred.	page 3-142
FAX Controller	Fax Error Error 133-276 Restart Printer	<File Open Error> The File Open error occurred.	page 3-142
FAX Controller	Fax Error Error 133-277 Restart Printer	<File Close Error> The File Close error occurred.	page 3-142

Error Message Summary (continued)

System	Error Message	Error Type	Go to
FAX Controller	Fax Error Error 133-278 Restart Printer	<File Erase Error> The File Erase error occurred.	page 3-142
FAX Controller	Fax Error Error 133-279 Restart Printer	<FAX CODEC I/F Error> The FAX CODEC I/F error occurred.	page 3-142
FAX Controller	Fax Error Error 133-280 Restart Printer	<Error_FAX_TIME> The FAX TIMER error occurred.	page 3-142
FAX Controller	Fax Report Error Error 133-281 Restart Printer	<Power Off Report Create Fail> Failed to Create Power Off Report	page 3-142
FAX Controller	Fax Error Error 133-282 Restart Printer	<Memory Pool Get Error> The Memory Pool acquisition error occurred (OS error).	page 3-142
FAX Controller	Fax Error Error 133-283 Restart Printer	<Memory Send Error> The Message Send error occurred (OS error).	page 3-142
FAX Controller	Fax Error Error 133-286 Restart Printer	<OS Call Error> The OS Call error occurred.	page 3-142
FAX Controller	Fax Error Error 133-287 Restart Printer	<File Open Error> The File Open error occurred.	page 3-142
FAX Controller	Fax Error Error 133-288 Restart Printer	<File Close Error> The File Close error occurred.	page 3-142
FAX Controller	Fax Error Error 133-289 Restart Printer	<File Erase Error> The File Erase error occurred.	page 3-142
FAX Controller	Fax Error Error 133-290 Restart Printer	<Print Decode Error> A decoding error occurred three times consecutively during the decoding of JBIG data..	page 3-142
FAX Controller	134-211 Fax Restart Printer Contact Support If Message Returns	<Fax Card Modem Error> MODEM error occurred.	page 3-142
FAX Controller	Controller Initialized NVM	<EEPROM R/W Error> EEPROM Read/Write error at system boot.	page 3-142
Toner	Copy, Scan Fax Yellow Low	<IOT Y CRU Near Life> Yellow cartridge is near end of life.	page 3-58

Error Message Summary (continued)

System	Error Message	Error Type	Go to
Toner	Copy, Scan Fax Magenta Low	<IOT M CRU Near Life> Magenta cartridge is near end of life.	page 3-58
Toner	Copy, Scan Fax Cyan Low	<IOT C CRU Near Life> Cyan cartridge is near end of life.	page 3-58
Toner	Copy, Scan Fax Black Low	<IOT K CRU Near Life> Black cartridge is near end of life.	page 3-58
Toner	Waste Full Cyan Cartridge	<IOT Waste Toner(C) Full> Waste Toner Counter has reached replacement time.	page 3-58
Toner	Waste Full Magenta Cartridge	<IOT Waste Toner(M) Full> Waste Toner Counter has reached replacement time.	page 3-58
Toner	Waste Full Yellow Cartridge	<IOT Waste Toner(Y) Full> Waste Toner Counter has reached replacement time.	page 3-58
Toner	Waste Full Black Cartridge	<IOT Waste Toner(K) Full> Waste Toner Counter has reached replacement time.	page 3-58
Toner	Low Density Yellow Cartridge	<IOT Y Toner Low Density> Detects low density of yellow	page 3-59
Toner	Low Density Magenta Cartridge	<IOT M Toner Low Density> Detects low density of yellow	page 3-60
Toner	Low Density Cyan Cartridge	<IOT C Toner Low Density> Detects low density of yellow	page 3-62
Toner	Low Density Black Cartridge	<IOT K Toner Low Density> Detects low density of yellow	page 3-63
Toner	I U CRUM Error Error 091-916 Restart Printer	<IOT CRUM ID Error> Imaging Unit CRUM ID error detected.	page 3-69
Toner	Insert Yellow Print Cartridge Error 093-970	<IOT Y CRU Detached> The yellow cartridge is not detected.	page 3-66
Toner	Insert Magenta Print Cartridge Error 093-971	<IOT M CRU Detached> The yellow cartridge is not detected.	page 3-66
Toner	Insert Cyan Print Cartridge Error 093-972	<IOT C CRU Detached> The yellow cartridge is not detected.	page 3-66
Toner	Insert Black Print Cartridge Error 093-973	<IOT K CRU Detached> The yellow cartridge is not detected.	page 3-66

Error Message Summary (continued)

System	Error Message	Error Type	Go to
Toner	Non-Xerox Toner Invalid Yellow	<IOT Y CRUM ID Error> Yellow cartridge CRUM ID detected.	page 3-65
Toner	Non-Xerox Toner Invalid Magenta	<IOT Y CRUM ID Error> Magenta cartridge CRUM ID detected.	page 3-65
Toner	Non-Xerox Toner Invalid Cyan	<IOT Y CRUM ID Error> Cyan cartridge CRUM ID detected.	page 3-65
Toner	Non-Xerox Toner Invalid Black	<IOT Y CRUM ID Error> Black cartridge CRUM ID detected.	page 3-65
Toner	Copy, Scan, Fax Imaging Unit Life	<IOT PHD Life Pre Warning> The Imaging Unit is near end of life.	page 3-70
Toner	Check Unit Imaging Unit	<PHD Tape Staying> Imaging Unit sealing tape detected.	page 3-71
Toner	Replace Imaging Unit	<IOT PHD Life Over> Imaging Unit at end of life.	page 3-70
Toner	Insert Imaging Unit	<IOT PHD Detached> Imaging Unit not detected.	page 3-72
Toner	Replace Yellow Cartridge	<IOT Y CRU Life Over> Cartridge reached end of life.	page 3-58
Toner	Replace Magenta Cartridge	<IOT M CRU Life Over> Cartridge reached end of life.	page 3-58
Toner	Replace Cyan Cartridge	<IOT C CRU Life Over> Cartridge reached end of life.	page 3-58
Toner	Replace Black Cartridge	<IOT K CRU Life Over> Cartridge reached end of life.	page 3-58
Server	Email Error Invalid SMTP Server Error 016-503 Press OK Button	<SMTP Error> Failed to Resolve SMTP Server Name Transmission.	page 3-118
Server	Email Error Invalid POP3 Server Error 016-504 Press OK Button	<SMTP Error> Failed to Resolve POP3 Server Name Transmission.	page 3-118
Server	Email Login Error POP3 Login Failed Error 016-505 Press OK Button	<SMTP Error> Failed to Login to POP3 Server at Mail Transmission.	page 3-118
Server	Email Login Error Error 016-506 Press OK Button	<SMTP Error> Required User Parameter Not Set.	page 3-118

Error Message Summary (continued)

System	Error Message	Error Type	Go to
Server	Email Login Error SMTP Login Failed Error 016-507 Press OK Button	<SMTP Error> Failed to Login to SMTP Server at Mail Transmission.	page 3-118
Server	Network Scan Error Email Server Full Error 016-765 Press OK Button	<SMTP Error> SMTP Server Disk Space Full.	Check the server side.
Server	SMTP Server Error Error 016-766 Press OK Button	<SMTP Error> SMTP Server File System Error.	Check the server side.
Server	Invalid Email Address Error 016-767 Press OK Button	<Email Address Error> Invalid Recipient Email Address	page 3-118
Server	Invalid From Address Error 016-768 Press OK Button	<Email Address Error> Invalid Sender Email Address	page 3-118
Server	Network Scan Error Communication Timeout Error 016-786 Press OK Button	<Network Error> Time Out Error at Data Transmission/Reception.	page 3-118 or check the server side.
Server	Network Not Ready Error 016-790 Press OK Button	<Network Error> F2N Module starting up or IP address not Determined.	page 3-118
Server	Network Not Ready Scan Aborted Error 016-794 Press OK Button	<Network Error> The Scan to SMB can not be executed, because the SMB over TCP has not woke up.	page 3-118
Server	Email Size Limit Error 016-985 Press OK Button	<Mail Size Error> Mail Size Error.	Check the server side.
Server	File Size Limit Error 016-986 Press OK Button	<File Size Error> Exceeded format-specific size limit after conversion.	page 3-135
Server	Network Scan Error SMTP Connection Failed Press OK Button	<SMTP Error> Error Connecting to SMTP Server.	page 3-118
Server	SMB Login Error Error 031-521 Press OK Button	<SMB Error> The Workstation number is not allowed to login to SMB scan.	page 3-120
Server	SMB Login Error Error 031-522 Press OK Button	<SMB Error> SMB user authentication has failed, or login to SMB scanner has failed.	page 3-120

Error Message Summary (continued)

System	Error Message	Error Type	Go to
Server	SMB Error Error 031-523 Share Name Error Press OK Button	<SMB Error> The shared name on SMB scan server has a problem.	page 3-121
Server	SMB Login Error Error 031-524 Press OK Button	<SMB Error> The number of SMB scan users has been exceeded.	page 3-122
Server	SMB Error Error 031-525 File Access Error Press OK Button	<SMB Error> The SMB scan client has no access permission (Win9x series).	page 3-123
Server	DNS Error Error 031-526 Name Resolve Error Press OK Button	<SMB Error> Resolving host names has failed on SMB scan.	page 3-121
Server	DNS Error Error 031-527 Server Address Error Press OK Button	<SMB Error> No DNS server has been set on SMB scan.	Check the network settings.
Server	SMB Error Error 031-528 Server Not Found Press OK Button	<SMB Error> The connection with a server has a problem on SMB scan.	page 3-121
Server	SMB Login Error Error 031-529 Press OK Button	<SMB Error> The login name or the password for SMB scan has a problem.	page 3-124
Server	SMB Path Error Error 031-530 Press OK Button	<SMB Error> The storage of scanned images has a problem on SMB scan server.	page 3-124
Server	SMB List Error Error 031-531 Press OK Button	<SMB Error> The file/folder name of SMB scan server could not be successfully acquired.	page 3-124
Server	SMB Error Error 031-532 File Name Error Press OK Button	<SMB Error> The suffix of the file/folder name of SMB scan has exceeded the limit value.	page 3-124
Server	SMB Error Error 031-533 File Make Error Press OK Button	<SMB Error> SMB scan file could not be successfully created.	page 3-124
Server	SMB Error Error 031-534 Folder Make Error Press OK Button	<SMB Error> SMB scan folder could not be successfully created.	page 3-124

Error Message Summary (continued)

System	Error Message	Error Type	Go to
Server	SMB Error Error 031-535 File Delete Error Press OK Button	<SMB Error> SMB scan file could not be successfully deleted.	page 3-124
Server	SMB Error Error 031-536 Folder Delete Error Press OK Button	<SMB Error> SMB scan folder could not be successfully deleted.	page 3-124
Server	SMB Error Error 031-537 Disk Full Error Press OK Button	<SMB Error> No free space is available on the location on SMB scan data server.	Check the server side.
Server	SMB Error Error 031-539 Server Name Error Press OK Button	<SMB Error> The name of SMB server (NetBIOS) is wrongly specified.	See System Administrator.
Server	SMB Login Error Error 031-540 Press OK Button	<SMB Error> SMB protocol error (4-007): The scan domain name is wrongly specified.	See System Administrator.
Server	SMB Login Error Error 031-541 Press OK Button	<SMB Error> SMB protocol error (4-008): The scan user name is wrongly specified.	page 3-124
Server	SMB initializing.. Error 031-542 Press OK Button	<SMB Error> SMB (TCP/IP) has not been started	See System Administrator.
Server	SMB Login Error Error 031-543 Press OK Button	<SMB Error> SMB protocol error (4-045): The time when no login to the scan is allowed.	See System Administrator.
Server	SMB Login Error Error 031-544 Press OK Button	<SMB Error> SMB protocol error (4-046): The password has expired.	Change the password.
Server	SMB Login Error Error 031-545 Press OK Button	<SMB Error> SMB protocol error (4-047): The password must be changed.	Change the password.
Server	SMB Login Error Error 031-546 Press OK Button	<SMB Error> SMB protocol error (4-048): The user is invalid.	page 3-124
Server	SMB Login Error Error 031-547 Press OK Button	<SMB Error> SMB protocol error (4-049): The user is locked out.	page 3-124

Error Message Summary (continued)

System	Error Message	Error Type	Go to
Server	SMB Login Error Error 031-548 Press OK Button	<SMB Error> SMB protocol error (4-050): User expiration date has passed.	See System Administrator.
Server	SMB Login Error Error 031-549 Press OK Button	<SMB Error> SMB protocol error (4-051): There is a restriction on users. Empty password is not allowed.	See System Administrator.
Server	SMB Error Error 031-550 File Append Error Press OK Button	<SMB Error> The append command failed on SMB scan.	See System Administrator.
Server	SMB Error Error 031-550 Rename Error Press OK Button	<SMB Error> The rename command failed on SMB scan.	See System Administrator.
Server	SMB Error Error 031-551 File Duplication Press OK Button	<SMB Error> SMB scan was canceled. Cancel was selected for resolving the file name overlap.	Cycle system power. If the error persists, replace the I/P Board (page 8-41).
Server	DNS Error Error 031-574 Scan Name Resolve Error Press OK Button	<DNS Library Call Error> Resolving host names has failed on FTP scan.	See System Administrator.
Server	DNS Error Error 031-575 Server Address Error Press OK Button	<DNS Library Call Error> No DNS server has been set on FTP scan.	Check network settings.
Server	FTP Error Error 031-576 Server Not Found Press OK Button	<DNS Library Call Error> The connection with a server has a problem on FTP scan.	page 3-124
Server	FTP Login Error Error 031-578 Press OK Button	<USER./PASS command failed> The login name or password for FTP scan has a problem.	page 3-124
Server	FTP Path Error Error 031-579 Press OK Button	<Migration to RepositoryPath failed> Image storage problem on FTP scan server.	page 3-124

Error Message Summary (continued)

System	Error Message	Error Type	Go to
Server	FTP Error Error 031-580 NLST Command Error Press OK Button	<NLST command failed> The file/folder name of FTP scan server could not be successfully acquired.	page 3-124
Server	FTP Error Error 031-581 File Name Error Press OK Button	<FTP Error> The suffix of the file/folder name of FTP scan has exceeded the limit value.	page 3-124
Server	FTP Error Error 031-582 STOR Command Error Press OK Button	<STOR command failed> FTP scan file could not be successfully created.	page 3-124
Server	FTP Error Error 031-584 MKD Command Error Press OK Button	<MKD command failed> FTP scan folder could not be successfully created.	page 3-124
Server	FTP Error Error 031-585 DEL Command Error Press OK Button	<DEL command failed> FTP scan file could not be successfully deleted.	page 3-124
Server	FTP Error Error 031-587 RMD Command Error Press OK Button	<RMD command failed> FTP scan folder could not be successfully deleted.	page 3-124
Server	FTP Error Error 031-588 Write Error Press OK Button	<Write failed> Data write to FTP scan server failed.	page 3-124
Server	FTP Error Error 031-590 Write Error Press OK Button	<FTP Error> FTP scan was canceled. Cancel" was selected for resolving the file name overlap.	Cycle system power. If the error persists, replace the I/P Board (page 8-41).
Server	FTP Error Error 031-594 TYPE Command Error Press OK Button	<TYPE command failed> The TYPE command failed on FTP scan.	See System Administrator.
Server	FTP Error Error 031-595 PORT Command Error Press OK Button	<PORT command failed> The PORT command failed on FTP scan.	See System Administrator.

Error Message Summary (continued)

System	Error Message	Error Type	Go to
Server	FTP Error Error 031-598 APPE Command Error Press OK Button	<APPE command failed> The append command failed on FTP scan.	See System Administrator.
Server	FTP Error Error 031-599 Rename Error Press OK Button	<RNFR command or RNTO command failed> The rename command has failed on FTP scan.	See System Administrator.
ESS	Collate Full Error 016-981 Add Memory Press OK Button	<Collate Full> Collate Full error occurred.	page 3-93
ESS	Collate Full Error 016-981 Job too Large Press OK Button	<Collate Full> Collate Full error occurred.	page 3-93
ESS	RAM Disk Full Error 016-982 Add Memory Press OK Button	<IOT Disk Full> The RAM Disk is full.	page 3-92
ESS	RAM Disk Full Error 016-982 Job too Large Press OK Button	<IOT Disk Full> The RAM Disk is full.	page 3-92
ESS	Font ROM Error Error 116-310 Restart Printer	<ESS Font-ROM Error> Font-ROM error detected	page 3-114
ESS	MACaddress Error Error 116-314 Restart Printer	<I/P Board Network MAC Address Checksum Error> Checksum error in Network MAC address is detected.	page 3-114
ESS	RAM Error Error 116-315 Restart Printer	<ESS On Baord RAM W/R Check Fail> Error in I/P Board RAM during initialization.	page 3-114
ESS	RAM Error Error 116-316 Restart Printer	<ESS DIMM Slot RAM Fail> Error in on I/P Board DIMM RAM during initialization.	page 3-116
ESS	Controller Error Error 116-317 Restart Printer	<ESS ROM Check (Main) Fail> Checksum error in main program ROM is detected.	page 3-114
ESS	RAM Error Error 116-320 Restart Printer	<ESS DIMM Slot RAM Power On Initializing Fail > Error in on I/P Board DIMM RAM during initialization.	page 3-116

Error Message Summary (continued)

System	Error Message	Error Type	Go to
ESS	NVRAM Error Error 116-323 Restart Printer	<ESS NVRAM1 W/R Check Fail> NVRAM1 failure during initialization.	page 3-114
ESS	Controller Error Error 116-324 Restart Printer	<ESS Illegal Exception> CPU illegal exception detected.	page 3-114
ESS	NVRAM Error Error 116-326 Restart Printer	<ESS NVRAM2 W/R Check Fail> NVRAM2 failure during initialization.	page 3-114
ESS	Controller Error Error 116-327 Restart Printer	<ESS Instruction Chche Error> CPU instruction cache error detected.	page 3-114
ESS	Controller Error Error 116-328 Restart Printer	<ESS Data Cache Error> CPU data cache error detected.	page 3-114
ESS	ASIC Error Error 116-343 Restart Printer	<ASIC Error> ASIC error detected.	page 3-114
ESS	Network Error Error 116-350 Restart Printer	<CONT AIO Network Communication Fail> I/P Board Communication error.	page 3-114
ESS	Network Error Error 116-351 Restart Printer	<CONT AIO Network Ethernet BIST parity/ RAM R/W Error> Network Ethernet parity error.	page 3-114
ESS	Network Error Error 116-352 Restart Printer	<CONT AIO Network Internal Loopback Error> Network Loopback error.	page 3-114
ESS	Network Error Error 116-355 Restart Printer	<CONT AIO Network Fatal Error> Fatal network error.	page 3-114
ESS	NVRAM Error Error 116-390 Restart Printer	<ESS NVRAM SIZE And ID Check Fail> NVRAM size error.	page 3-114
ESS	131-397 Scan Restart Printer Contact Support If Message Returns	<Software Bag> A fatal error occurred in File2Net.	page 3-114
ESS	131-398 Scan Restart Printer Contact Support If Message Returns	<SMB Error> A fatal error occurred in SMBclient.	Cycle system power. If the error persists, page 3-114

Error Message Summary (continued)

System	Error Message	Error Type	Go to
ESS	131-399 Scan Restart Printer	<FTP Error> A fatal FTPclient error occurred.	Cycle system power. If the error persists, page 3-114
MPC	MPC Error Error 016-738 Press OK Button	<Download Error> An error occurred opening the Flash.	page 3-94
System	MPC Comm. Error Error 024-371 Press OK Button	<IOT-ESS Communication Fail> Communication failure between IOT and I/P Board detected.	page 3-95
System	Laser Error Error 061-370 Error Code: nn Press OK Button	<IOT ROS Failure> Laser Unit failure type nn detected. ■ 01: SOS rotating up defect ■ 02: SOS interval defect ■ 03: LD defect	page 3-104
System	Controller Error Error 116-397 Restart Printer	<Communication Error> Communication Error between system modules.	page 3-135
System	Controller Error Error 116-398 Restart Printer	<Communication Error> Communication Error between system modules.	page 3-135
System	Controller Communication Error Error 117-313 Restart Printer	<Data Send Error> Failed in the ESS data transfer.	page 3-117
System	Report Error Error 117-314 Restart Printer	<Report Program Error> The Report Creating Program error occurred.	page 3-135
System	MFD EEPROM Error Error 117-315 Restart Printer	<EEPROM Driver Error> The EEPROM Driver program error occurred.	page 3-135
System	Error 117-323 Restart Printer	<ESSMGR Task Error> The ESSMGR task error occurred.	page 3-117
System	Error 117-324 Restart Printer	<ESSSUB1 Task Error> The ESSSUB1 task error occurred.	page 3-117
System	Error 117-354 Restart Printer	<ESSMGR Task Error> Failed in AIF SET.	page 3-117
System	Error 117-355 Restart Printer	<ESSMGR Task Error> The Service Function-ID out of range..	page 3-117

Error Message Summary (continued)

System	Error Message	Error Type	Go to
System	117-365 System Restart Printer	<RTC clock setting mismatch> RTC clock setting does not match memory.	page 3-114
Copy	Error 062-323 Restart Printer	<Panel Setting Paramater NG> Abnormality of the parameter.	page 3-130
Copy	Copier Error Last Sheet not Copied Press OK Button	<Copy Limit> Unable to continue due to copy limitation.	page 3-131
Copy	Illegal Settings Insert Selected Tray	<Copy Select Tray REMOVE> Copy failed because the tray is not set properly.	page 3-75
Copy	Illegal Settings Selected Tray is Unavailable	<Copy Select Tray Broken> Copy failed because of tray failure.	page 3-75
Copy	Illegal Settings Selected Tray is Unavailable	<Copy Select Tray Exist> Copy failed because of tray failure.	page 3-75
Copy	Illegal Settings Specified Paper Type Does Not Match Tray (Media)	<Copy Dup Medium NG> Copy failed because media type is not for duplex copy.	page 3-75
Copy	Illegal Settings Specified Size Does Not Match Tray (size)	<Copy Dup Size Limit> Copy failed because media type is not for duplex copy.	page 3-75
Copy	Illegal Settings Tray Selected is Empty	<Copy Select Tray NoPaper> Copy failed because there is no paper in the paper tray.	page 3-75
Copy	Illegal Settings Tray Selected is Empty	<Copy Select Tray NoPaper> Unable to start due to no paper.	page 3-75
IIT	Scanner Error Error 062-311 Restart Printer	<IIT Initializing Error> IIT initializing error occurred.	page 3-132
IIT	Scanner Error Error 062-320 Restart Printer	<Scanner Error> Image acquisition error occurred.	page 3-128
IIT	Scanner Error Error 062-321 Restart Printer	<IIT Initializing Error> IIT initializing error occurred.	page 3-132
IIT	Scanner Error Error 062-322 Restart Printer	<Parameter Error> Abnormality of the parameter.	page 3-129
IIT	Memory Full Error 062-324 Add Memory Press OK Button	<IIT Memory Over Flow> The amount of scanning data exceeded memory capacity.	page 3-128

Error Message Summary (continued)

System	Error Message	Error Type	Go to
IIT	Memory Full Error 062-324 Job too Large Press OK Button	<IIT Memory Over Flow> The amount of scanning data exceeded memory capacity.	page 3-128
IIT	Scanner Sensor Error Error 062-360 Restart Printer	<HP Sensor Error> Scanner Home Position error.	page 3-132
IIT	Scanner Lamp Error Error 062-371 Restart Printer	<IIT Lamp Error> The IIT Lamp error occurred.	page 3-132
IIT	Scanner Error Error 062-393 Restart Printer	<CCD ASIC Error> The CCD ASIC communication error occurred.	page 3-129
Jam	Jam at Tray Check Tray Open Front Cover	<IOT Tray 1 Misfeed JAM> Registration Sensor is not turned ON within the specified time after feeding from Tray.	page 3-37
Jam	Insert Output to Tray	<IOT Side 2 No paper> Media was not reloaded in Tray for duplex printing.	page 3-77
Jam	Press OK Button to continue	<IOT Side 2 No paper> Media was not reloaded in Tray for duplex printing.	page 3-77
Jam	Jam at Manual Feed Slot Chk Manual Feed Open Front Cover	<IOT SSF Misfeed JAM> Registration Sensor is not turned ON within the specified time after feeding from manual feed slot	page 3-47
Jam	Jam at Front Cover Open Front Cover and Remove Paper	<IOT SSF Insert JAM> Manual feed No Paper Sensor detected when media inserted into manual feed slot.	page 3-41
Jam	Chk Manual Feed Remove Paper Open and close Front Cover	<IOT SSF Paper Pullout JAM> Attempted feed rom manual feed slot. Media was not loaded or was pulled out.	page 3-47
Jam	Insert Output to Manual Feed	<IOT Side 2 No paper> Media was not reloaded into the manual feed slot for duplex printing.	page 3-80
Jam	Press OK Button to continue	<IOT Side 2 No paper> Media was not reloaded into manual feed slot for duplex printing.	page 3-80
Jam	Remove paper from Manual Feed	<IOT SSF No Paper> Waiting for reseat media in manual feed slot.	page 3-81

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System	Error Message	Error Type	Go to
Jam	Reseat paper from Manual Feed	<IOT SSF Paper Staying> Feeding from Tray fails due to a sheet remaining in the manual feed slot.	page 3-83
Jam	Jam at Front Cover Open Front Cover and Remove Paper	<IOT Regi Jam> Media reached the Registration Sensor earlier than expected.	page 3-43
Jam	Jam at Front Cover Open Front Cover and Remove Paper	<IOT Regi Jam> Media does not pass through the Registration Sensor on time.	page 3-43
Jam	Jam at Exit Open Front Cover and Remove Paper	<IOT Regi Jam> Media does not reach the Registration Sensor as expected.	page 3-37
Jam	Jam at Exit Open Front Cover and Remove Paper	<IOT Exit Jam> Media reached the Exit Sensor earlier than expected.	page 3-45
Jam	Jam at Exit Open Front Cover and Remove Paper	<IOT Exit Jam> Media does not pass through the Exit Sensor on time.	page 3-45
Jam	Jam at Exit Open Front Cover	<IOT Remain Exit JAM> Media remains at Exit Sensor.	page 3-45
Jam	Jam at Reg. Roll Open Front Cover	<IOT Remain Regi JAM> Media remains at Registration Sensor.	page 3-50
Media	Load Tray XXX(Paper Size) Load Tray YYY(Paper Type)	<IOT Paper Size Mismatch in Tray 1> Paper size mismatch for Tray detected.	page 3-73
Media	Load Manual Feed XXX(Paper Size) Load Manual Feed YYY(Paper Type)	<IOT Paper Size Mismatch in SSF> Paper size mismatch for manual feed slot detected.	page 3-73
Media	Load Tray XXX(Paper Size) Load Tray YYY(Paper Type)	<No suitable paper in Tray 1> No media in Tray.	page 3-75
Media	Load Manual Feed XXX(Paper Size) Load Manual Feed YYY(Paper Type)	<No suitable paper in SSF> No media in manual feed slot.	page 3-81
Media	Press OK Button to continue	<No suitable paper in SSF> No media in manual feed slot.	page 3-81

Error Message Summary (continued)

System	Error Message	Error Type	Go to
Belt	CTD Sensor Error Error 092-310 Error Code:000000xx Restart Printer	<IOT CTD (ADC) Sensor Error> CTD sensor error detected. 01 or 10: Y Toner Patch Error 02 or 20: M Toner Patch Error 03 or 30: Y and M Toner Error 04 or 40: C Toner Patch Error 05 or 50: Y and C Toner Error 06 or 60: M and C Toner Error 07 or 70: Y, M, C Toner Error 08 or 80: K Toner Patch Error 09 or 90: Y and K toner Error 0A or A0: M and K Toner Error 0B or B0: Y, M, K Toner Error 0C or C0: C, K Toner Error 0D or D0: Y, C, K Toner Error 0E or E0: M, C, K Toner Error 0F or F0: Y, M, C, K Toner Error	page 3-109
Belt	Copy, Scan, Fax, CTD Sensor	<IOT CTD (ADC) Sensor Contamination> Dusty CTD Sensor detected.	page 3-111
Belt	Check Unit CTD Sensor	<IOT CTD (ADC) Sensor Contamination> Dusty CTD Sensor detected.	page 3-111
Belt	Copy, Scan, Fax, CTD Sensor	<IOT Transfer Assy Life Pre Warning> Transfer Belt near end of life.	page 3-111
Belt	DTB Life Over Error 094-351 Restart Printerr	<IOT Transfer Assy Life Over> Transfer Belt at end of life.	page 3-111
Motor	Motor Error Error 042-325 Restart Printer	<IOT Motor Failure> Main Motor failure detected.	page 3-100
Motor	Motor Error Error 042-326 Restart Printer	<IOT Motor Failure> Sub Motor failure detected.	page 3-102
Motor	Fan Motor Error Error 042-328 Restart Printer	<IOT Fan Motor Failure> Fan Motor failure detected.	page 3-103
Fuser	Replace Fuser 010-351 Printer Replace Fuser	<IOT Fuser Life Over> Fuser has reached end of life.	page 3-54

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System	Error Message	Error Type	Go to
Fuser	Fuser Error Error 010-397 Error Code:xx Restart Printer	<IOT Fuser Failure> Fuser failure is detected. ■ 01: NC circuit fail ■ 02: NC Detect disconnection ■ 03: NC Detect fail ■ 04: NC Comp disconnection ■ 05: NC Comp fail ■ 06: NC Temp Over ■ 07: STS Temp Over ■ 08: NC Comp Table Fail ■ 09: NC Overheat ■ 0A: STS disconnection ■ 0B: STS Overheat ■ 0C: STS Low-temp ■ 0D: NC Low-temp ■ 0E: Cool Time-over ■ 0F: Fuser Ready Time-over ER1 ■ 10: NC Warm-up Time-over ER2 ■ 11: Fuser Ready Time-over ER2 ■ 12: Relay Off STS H ■ 13: Relay Off NC H ■ 14: Relay Other ■ 15: Fuser Machine Code ERR ■ 16: Fuser Ready Timeover ER3 ■ NC: No Contact Sensor ■ STS: Soft Touch Sensor	page 3-55
Fuser	010-317 Reseat Fuser Restart Printer	<IOT Fuser Detached> Fuser is disconnected.	page 3-56
Fuser	Copy, Scan, Fax, Fuser Life	<IOT Fuser Life Pre Warning> Fuser is near end of life.	page 3-54
ADF	Jam at Scanner Open ADF Cover R and remove paper Turn the Green Dial to remove paper or return the removed original and Press Start	<PICKUP JAM> The Pick Up jam occurred.	page 3-53
ADF	Jam at Scanner Open ADF Cover R and remove paper Turn the Green Dial to remove paper or return the removed original and Press Start	<ADF JAM> The ADF jam occurred.	page 3-53
ADF	Job was Finished 005-124 Open ADF Cover and Remove Document	<ADF Jam> The ADF Jam occurred when the job was cancelled.	page 3-53
ADF	Scanner ADF Cover R Open Close ADF Cover	<ADF Cover Open> The ADF Cover is open.	page 3-108

Error Message Summary (continued)

System	Error Message	Error Type	Go to
MCU	MCU Firmware Error Error 024-340 Error Code:XX Restart Printer	<IOT Firmware Error> MCU firmware error occurred. Code: XXh ■ 01: Task Over ■ 02: Time Over ■ 03: NV Write Retry ■ 04: NV Write Queue Over ■ 05: LEISUS Send Over ■ 06: CRUM Data ■ 07: Pursuit Comp ■ 08: Pursuit SUM ■ 09: Fuser NV ■ 0A: Dispense ■ 0B: FSR SBY Mode ■ 0C: Media ERR2 ■ 0D: Hanpa ■ 0E: FSR SBY Mode ■ 0F: FSR Print Mode ■ 10: Renzoku Heater ■ 11: PPM Group ERR ■ 12: CMODE ERR ■ 13: Send CMD ERR ■ 14-25h:Not Used	page 3-89
MCU	Download Mode Error 024-360 Send FW Data	<Download Error> Download failure of MCU firmware.	page 3-90
MCU	PAGEC Time Error Error 024-362 Restart Printer	<IOT PAGEC Timeout Error> The PAGEC timeout error is detected.	page 3-91
MCU	MCU NVRAM Error Error 041-340 Error Code:xxxxxxxx Restart Printer	<IOT NVRAM Error> Error detected at MCU NVM check. Code: ■ 1000-17FF PWBA MCU NVM ■ 3000-30FF PHD CRUM ■ 3100-31FF Y Toner CRUM ■ 3200-32FF M Toner CRUM ■ 3300-33FF C Toner CRUM ■ 3400-34FF K Toner CRUM ■ 3800-38FF PWBA EEPROM	page 3-96
Covers	Front Cover Open Close FrontCover	<IOT Cover Front Open> The Front Cover is open.	page 3-105
Covers	Side Door Open Close Side Door	<IOT Side Cover Open> Side cover is open.	page 3-106
Other	Erase Flash Error Error 016-500 Restart Printer	<Download Error> An error was detected at Flash memory erasing.	page 3-114
Other	Write Flash Error Error 016-501 Restart Printer	<Download Error> An error was detected at Flash memory writing.	page 3-114

Error Message Summary (continued)

System	Error Message	Error Type	Go to
Other	Verify Flash Error Error 016-502 Restart Printer	<Download Error> An error was detected at Flash memory verify.	page 3-114
Other	Out of Memory Error 016-718 Add Memory Press OK Button	<Memory Overflow> Print job data exceeded memory capacity.	page 3-115
Other	Out of Memory Error 016-718 Job too Large Press OK Button	<Memory Overflow> Print job data exceeded memory capacity.	page 3-115
Other	PDL Error Error 016-720 Press OK Button	<PDL Error> PDL error occurs.	page 3-115
Other	Format Error Error 016-737 Press OK Button	<Download Format Error> The download file is broken, or communication error detected.	page 3-94
Other	Protection Error Error 016-741 Press OK Button	<Download Error> The download file is broken, or communication error detected.	page 3-94
Other	Invalid IDError Error 016-742 Press OK Button	<Download ID Error> The download file of other models (different ID) is detected.	page 3-94
Other	Range Chk Error Error 016-743 Press OK Button	<Download Range Error> Due to the wrong data downloaded, writing was attempted to the nonmodifiable area.	page 3-94
Other	Check Sum Error Error 016-744 Press OK Button	<Download Checksum Error> The download file is broken, or communication error detected..	page 3-94
Other	Header Error Error 016-745 Press OK Button	<Download Header Error> The download file is broken, or communication error detected..	page 3-94
Other	Invalid User Error 016-757 Press OK Button	<Auditron-Invalid User> Account error occurs.	page 3-86
Other	Disabled Func Error 016-758 Press OK Button	<Auditron-Disabled Function> Disabled function is selected.	page 3-86

Error Message Summary (continued)

System	Error Message	Error Type	Go to
Other	Limit Exceeded Error 016-759 Press OK Button	<Auditron-Reached Limit> Detects the reached limit.	page 3-87
Other	Invalid Job Error 016-799 Press OK Button	<Job Environment Violation> Restricted settings in the print job.	page 3-88
Other	K Mode Sol Error Error 042-372 Restart Printer	<IOT K Mode Solenoid Error> Color Mode Switching Solenoid error detected.	page 3-99
Other	Env Sensor Error Error 092-661 Error Code:XX Restart Printer	<IOT Environment Sensor Error> Environment sensor error detected. Code:XX ■ 01: Humid Sensor Error ■ 02: Temp. Sensor Error ■ 03: Humid/Temp Sensors Error	page 3-113
Other	Copy, Scan, Fax, Non-Xerox Toner	<Custom Toner Mode> The printer is in custom toner mode.	page 3-68

Jam Errors

Some intial steps to take when evaluating repeated jams:

1. 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.
2. Ensure the correct tray loading and setup procedures are followed (securing the guides, selecting the correct paper type, fanning the paper, etc.)
3. Make sure the printer is plugged directly into an electrical outlet. Using extension cords or a power strip is not recommended.
4. 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.
5. Determine if jamming is occurring in one tray but not another. This helps to identify any dirty or defective parts.
6. Clear the paper path of any jams and paper debris. Start at the Turn Chute and work up to the Registration Chute Assembly.
7. Clean the paper Feed and Retard Rollers in the paper tray and tray slot using a slightly damp (water only) lint free cloth.

Jam at Tray or Jam at Exit

The Registration Sensor is not turned On within the specified time. The following troubleshooting procedure applies to these errors.

Applicable Errors

- Jam at Tray Check Tray
- Jam at Exit Open Front Cover

Initial Actions

- Check the media path for obstructions or debris.
- Check the condition of the Feed and Seperator Rollers.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Seperator Roller, PL2.1.5 ■ Registration Clutch, PL3.1.1 ■ Feed Solenoid, PL3.1.11 ■ Feed Roller, PL3.2.4 ■ Registration Roller Actuator, PL3.2.8 ■ Registration In Actuator, PL3.2.11 ■ Registration Sensor, PL3.2.13 ■ Main Drive Assembly, PL7.1.2 ■ Feed Drive Assembly, PL7.1.4 ■ Left Side Harness, PL10.4.18 ■ MCU Board, PL10.7.7 ■ Main Motor Harness, PL10.8.7 ■ Registration (KSNR) Harness, PL10.8.9	■ "Map 2 - Feed and Laser Unit" on page 10-7 ■ "Map 4 - Imaging" on page 10-9 ■ "Media Feed" on page 10-15 ■ "Main Drive" on page 10-16

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the media condition. Is the media damaged or damp?	Replace the media.	Go to step 2.
2	Check the Front Cover latch. Does the Front Cover latch correctly?	Go to step 3.	Repair or replace the Front Cover (page 8-15).
3	Run the Main Motor test (DO-00) on (page 4-41). Does the motor rotate?	Go to step 4.	Go to step 15.
4	Run the Feed Roller Rotation test (DO-0b) on (page 4-45). Do the Feed and Registration rollers rotate?	Go to step 5.	Repair or replace the Feed Drive Assembly (page 8-37).
5	Does the media feed from the Tray into the media path?	Go to step 10.	Go to step 6.
6	Check media guide adjustment in the Tray. Are the guides adjusted properly?	Go to step 7.	Adjust the guides to fit the media.
7	Check the Seperator Roller for damage or wear. Is the Seperator Roller damaged or worn?	Replace the Seperator Roller (page 8-7).	Go to step 8.
8	Check the Feed Roller for damage or wear. Is the Feed Roller damaged or worn?	Replace the Feed Roller (page 8-10).	Go to step 9.
9	Run the Tray Feed Solenoid test (DO-2F) on (page 4-49). Does the solenoid operate?	Replace the Tray.	Go to step 18.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
10	Does the media reach the Registration Rollers when fed from the Tray?	Go to step 13.	Go to step 11.
11	Check the Registration Actuator In for damage or misalignment. Remove the Lower Chute (PL3.2.27) to examine the actuator. Is the actuator damaged or misaligned?	Repair or replace the Registration Actuator In (page 8-32).	Go to step 12.
12	Run the Registration Sensor test (DI-02) (page 4-35). Use the Registration Actuator In to toggle the sensor output. Does the sensor operate?	Go to step 13..	Go to step 22.
13	Run the Registration Clutch test (DO-00 and DO-29) (page 4-48). Does the Registration Clutch and Registration Rollers operate?	Go to step 14.	Go to step 26.
14	Check the Registration Roller Actuator for damage or misalignment. Remove the Lower Chute (PL3.2.27) to examine the actuator. Is the actuator damaged or misaligned?	Repair or replace the Registration Roller Actuator (PL3.2.8)	Replace the MCU Board (page 8-57).
15	Check connectors P/J21 and P/J211 between the MCU Board and Main Motor Assembly. Are the connectors secure?	Go to step 16	Reconnect the connectors.
16	Check the Main Drive harness continuity. Disconnect P/J21 from the MCU Board and P/J211 from the Main Drive to check continuity. Is the harness damaged?	Repair or replace the harness (PL10.8.7).	Go to step 17.
17	Check for +24 V at J21 on the MCU Board. Is +24 V available at J21-2 and J21-4 when the Interlock Switch is closed?	Replace the Main Drive Assembly (page 8-58).	Replace the MCU Board (page 8-57).
18	Check connectors P/J23 and P/J231 between the MCU Board and Feed Solenoid. Are the connectors secure?	Go to step 19.	Reconnect the connectors.
19	Check Left Side Harness continuity. Disconnect P/J23 from the MCU Board and P/J231 from the Feed Solenoid. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 20.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
20	Check for +24 V at J23 on the MCU Board. Is +24 V available between J23-1 <=> ground when the Interlock Switch is closed?	Go to step 21.	Replace the MCU Board (page 8-57).
21	Check Feed Solenoid resistance. Disconnect P/J231 from the Feed Solenoid Is the resistance about 96 Ohm?	Replace the MCU Board (page 8-57).	Replace the Feed Solenoid (page 8-34).
22	Check connectors P/J23 and P/J232 between the MCU Board and Registration Sensor. Are the connectors secure?	Go to step 23.	Reconnect the connectors.
23	Check Left Side Harness continuity. Disconnect P/J23 from the MCU Board and P/J232 from the Registration Sensor. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 24.
24	Check for +3.3 V at J23 of the MCU Board. Is there +3.3 V across ground <=> J23-3 pin on the MCU Board?	Go to step 25..	Replace the MCU Board (page 8-57).
25	Check Registration Sensor operation. Does the voltage between ground <=>J23-5 on the MCU Board change when the Registration Actuator In is used to block the sensor?	Replace the MCU Board (page 8-57).	Replace the Registration Sensor (page 8-29).
26	Check connectors P/J26 and P/J262 between the MCU Board and Registration Clutch. Are the connectors secure?	Go to step 27.	Reconnect the connectors.
27	Check KSNR Registration Clutch harness continuity. Disconnect P/J26 from the MCU Board and P/J262 from the Registration Clutch. Is the harness damaged?	Repair or replace the harness (PL10.8.9).	Go to step 28.
28	Check for +24 V at J26 of the MCU Board. Is there +24 V between ground <=> J26-4 on the MCU Board when the Interlock Switch is closed?	Go to step 29.	Replace the MCU Board (page 8-57).
29	Check Registration Clutch resistance. Disconnect P/J262 from the Feed Solenoid Is the resistance across J262-1 and J262-2 about 280 Ohms?	Replace the MCU Board (page 8-57).	Replace the Registration Clutch (page 8-35).

Jam at Front Cover

The Manual Feed No Paper Sensor did not detect media. This troubleshooting procedure applies to this error.

Applicable Error

- Jam at Front Cover

Initial Actions

- Check the condition of the Manual Feed Detect Sensor actuator.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Manaul No Paper Sensor, PL3.2.13 ■ Left Side Harness, PL10.4.18 ■ MCU Board, PL10.7.7	■ "Map 2 - Feed and Laser Unit" on page 10-7 ■ "Media Feed" on page 10-15

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Run the Manual Feed Sensor test (DI-0) (page 4-39). Use the actuator to toggle the sensor output. Does the sensor operate?	Go to step 2.	Go to step 3
2	Cycle system power. Does the error persist?	Replace the MCU Board (page 8-57).	Complete.
3	Check connectors P/J23 and P/J233 between the MCU Board and the Manual Feed No Paper Sensor. Are the connectors secure?	Go to step 4.	Reconnect the connectors.
4	Check Left Side Harness continuity. Disconnect P/J23 from the MCU Board and P/J233 from the Manual Feed No Paper Sensor. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 5.
5	Check for +3.3 V at J23 on the MCU Board. Is +3.3 V available between J23-6 <=> ground?	Go to step 6.	Replace the MCU Board (page 8-57).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
6	Check No Paper Sensor signal. Does the voltage between ground <=>J23-8 on the MCU Board change when the actuator blocks the sensor?	Replace the MCU Board (page 8-57).	Replace the Manual Feed No Paper Sensor (page 8-28).

Jam at Front Cover Open Front Cover and Remove Paper

The Registration Sensor is not turned On within the specified time. The following troubleshooting procedure applies to these errors.

Applicable Error

- Jam at Front Cover Open Front Cover and Remove Paper

Initial Actions

- Check the media path for obstructions or debris.
- Check the condition of the Registration Rollers.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Registration In Actuator, PL3.2.11 ■ Registration Sensor, PL3.2.13 ■ Left Side Harness, PL10.4.18 ■ MCU Board, PL10.7.7	■ "Map 2 - Feed and Laser Unit" on page 10-7 ■ "Media Feed" on page 10-15 ■ "Main Drive" on page 10-16

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the media condition. Is the media damaged or damp?	Replace the media.	Go to step 2.
2	Check the Registration Rollers. Are the rollers touching and free of debris?	Go to step 3.	Repair or replace the rollers.
3	Run the Registration Clutch test (DO-00 and DO-29) (page 4-48). Does the Registration Clutch and Registration Rollers operate?	Go to step 4.	Go to step 10.
4	Run the Registration Sensor test (DI-02) (page 4-35). Use the Registration Actuator In to toggle the sensor output. Does the sensor operate?	Replace the MCU Board (page 8-57).	Go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	Check the Registration Actuator In for damage or misalignment. Remove the Lower Chute (PL3.2.27) to examine the actuator. Is the actuator damaged or misaligned?	Repair or replace the Registration Actuator In (page 8-32).	Go to step 6.
6	Check connectors P/J23 and P/J232 between the MCU Board and Registration Sensor. Are the connectors secure?	Go to step 7.	Reconnect the connectors.
7	Check Left Side Harness continuity. Disconnect P/J23 from the MCU Board and P/J232 from the Registration Sensor. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 8.
8	Check for +3.3 V at J23 of the MCU Board. Is there +3.3 V across ground <=> J23-3 pin on the MCU Board?	Go to step 9.	Replace the MCU Board (page 8-57).
9	Check Registration Sensor operation. Does the voltage between ground <=>J23-5 on the MCU Board change when the Registration Actuator In is used to block the sensor?	Replace the MCU Board (page 8-57).	Replace the Registration Sensor (page 8-29).
10	Check connectors P/J26 and P/J262 between the MCU Board and Registration Clutch. Are the connectors secure?	Go to step 27.	Reconnect the connectors.
11	Check KSNR Registration Clutch harness continuity. Disconnect P/J26 from the MCU Board and P/J262 from the Registration Clutch. Is the harness damaged?	Repair or replace the harness (PL10.8.9).	Go to step 28.
12	Check for +24 V at J26 of the MCU Board. Is there +24 V between ground <=> J26-4 on the MCU Board when the Interlock Switch is closed?	Go to step 29.	Replace the MCU Board (page 8-57).
13	Check Registration Clutch resistance. Disconnect P/J262 from the Feed Solenoid Is the resistance across J262-1 and J262-2 about 280 Ohms?	Replace the MCU Board (page 8-57).	Replace the Registration Clutch (page 8-35).

Jam at Exit

Warning

Allow the Fuser to cool before attempting this procedure.

The Exit Sensor, located in the Fuser, is not turned On within the specified time. The following troubleshooting procedure applies to these errors.

Applicable Errors

- Jam at Exit Open Front Cover and Remove Paper
- Jam at Exit Cover Open Front Cover

Initial Actions

- Check the media path for obstructions or debris.
- Reseat the Fuser.
- Check the condition of the Exit Sensor actuator.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Fuser, PL6.6.1 ■ MCU Board, PL10.7.7 ■ Fuser Harness, PL10.8.6	■ “Map 4 - Imaging” on page 10-9 ■ “Fuser” on page 10-21

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Run the exit sensor test (DI-03 (page 4-33). Does the display change when the actuator blocks the exit sensor?	Go to step 6.	Go to step 2.
2	Check connectors P/J17 and P/J171 between the MCU Board and Fuser. Are the connectors secure?	Go to step 3.	Reconnect the connectors.
3	Check the Fuser Harness continuity. Disconnect P/J17 from the MCU Board and P/J171 from the frame. Is the harness damaged?	Repair or replace the harness (PL6.1.2).	Go to step 4.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	Check for +3.3 V at J17 of the MCU Board. Is there +3.3 V across ground <=> J17-1 pin on the MCU Board?	Go to step 5.	Replace the MCU Board (page 8-57).
5	Check exit sensor signal. Does the voltage between ground <=>J17-3 on the MCU Board change when the exit sensor actuator blocks the sensor?	Replace the MCU Board (page 8-57).	Replace the Fuser (page 8-11).

Jam at Manual Feed Slot

The Registration Sensor is not turned On within the specified time. The following troubleshooting procedure applies to these errors.

Applicable Error

- Jam at Manual Feeed Slot

Initial Actions

- Check the media path for obstructions or debris.
- Check the media size being used.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Registration Clutch, PL3.1.1 ■ Registration Roller Actuator, PL3.3.8 ■ Registration Sensor, PL3.2.13 ■ Main Drive Assembly, PL7.1.2 ■ Feed Drive Assembly, PL7.1.4 ■ Left Side Harness, PL10.4.18 ■ MCU Board, PL10.7.7 ■ Main Motor Harness, PL10.8.7 ■ Registration (KSNR) Harness, PL10.8.9	■ “Map 2 - Feed and Laser Unit” on page 10-7 ■ “Map 4 - Imaging” on page 10-9 ■ “Media Feed” on page 10-15 ■ “Main Drive” on page 10-16

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the media size. Does the media maatch the print job size?	Replace the media.	Go to step 2.
2	Check the Front Cover latch. Does the Front Cover latch correctly?	Go to step 3.	Repair or replace the Front Cover (page 8-15).
3	Run the Main Motor test (DO-00) on (page 4-41). Does the motor rotate?	Go to step 4.	Go to step 15.
4	Does the media reach the Registration Rollers when fed from the Tray?	Go to step 5.	Go to step 7.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	Check the Manual Feed Actuator for damage or misalignment. Remove the Lower Chute (PL3.2.27) to examine the actuator. Is the actuator damaged or misaligned?	Repair or replace the manual Feed Actuator In (page 8-28).	Go to step 6.
6	Run the Manual Feed Sensor test (DI-0) (page 4-39). Use the actuator to toggle the sensor output. Does the sensor operate?	Go to step 7.	Go to step 10
7	Run the Registration Clutch test (DO-00 and DO-29) (page 4-48). Does the Registration Clutch and Registration Rollers operate?	Go to step 8.	Go to step 18.
8	Check the Registration Roller Actuator for damage or misalignment. Remove the Lower Chute (PL3.2.27) to examine the actuator. Is the actuator damaged or misaligned?	Repair or replace the Registration Roller Actuator (PL3.2.8)	Go to step 9.
9	Run the Registration Sensor test (DI-2) (page 4-35). Use the Registration Actuator In to toggle the sensor output. Does the sensor operate?	Replace the MCU Board (page 8-57).	Go to step 14.
10	Check connectors P/J23 and P/J233 between the MCU Board and Manual Feed Sensor. Are the connectors secure?	Go to step 11	Reconnect the connectors.
11	Check Left Side Harness continuity. Disconnect P/J23 from the MCU Board and P/J233 from the Manual Feed Sensor. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 12.
12	Check for +3.3 V at J23 on the MCU Board. Is +3.3 V available between J23-6 <=> ground?	Go to step 13.	Replace the MCU Board (page 8-57).
13	Check Manaul Feed Sensor signal. Does the voltage between ground <=>J23-8 on the MCU Board change when the actuator blocks the sensor?	Replace the MCU Board (page 8-57).	Replace the Manual Feed Sensor (page 8-27).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
14	Check connectors P/J23 and P/J232 between the MCU Board and Registration Sensor. Are the connectors secure?	Go to step 15.	Reconnect the connectors.
15	Check Left Side Harness continuity. Disconnect P/J23 from the MCU Board and P/J232 from the Registration Sensor. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 16.
16	Check for +3.3 V at J23 of the MCU Board. Is there +3.3 V across ground <=> J23-3 pin on the MCU Board?	Go to step 17.	Replace the MCU Board (page 8-57).
17	Check Registration Sensor signal. Does the voltage between ground <=>J23-5 on the MCU Board change when the Registration Actuator In is used to block the sensor?	Replace the MCU Board (page 8-57).	Replace the Registration Sensor (page 8-29).
18	Check connectors P/J26 and P/J262 between the MCU Board and Registration Clutch. Are the connectors secure?	Go to step 19.	Reconnect the connectors.
19	Check KSNR Registration Clutch harness continuity. Disconnect P/J26 from the MCU Board and P/J262 from the Registration Clutch. Is the harness damaged?	Repair or replace the harness (PL10.8.9).	Go to step 20.
20	Check for +24 V at J26 of the MCU Board. Is there +24 V between ground <=> J26-4 on the MCU Board when the Interlock Switch is closed?	Go to step 21.	Replace the MCU Board (page 8-57).
21	Check Registration Clutch resistance. Disconnect P/J262 from the Feed Solenoid Is the resistance across J262-1 and J262-2 about 280 Ohms?	Replace the MCU Board (page 8-57).	Replace the Registration Clutch (page 8-35).

Jam at Registration Roller

The Registration Sensor is not turned On within the specified time. The following troubleshooting procedure applies to these errors.

Applicable Error

- Jam at Regi Roll Open Front Cover

Initial Actions

- Check the media path for obstructions or debris.
- Check the condition of the Registration Sensor Actuator.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Registration Clutch, PL3.1.1 ■ Registration Roller Actuator, PL3.2.8 ■ Registration Roller, PL3.2.9 ■ Registration Roller Metal, PL3.2.10 ■ Registration In Actuator, PL3.2.11 ■ Registration Sensor, PL3.2.13 ■ Transfer Belt, PL6.1.7 ■ Main Drive Assembly, PL7.1.2 ■ Left Side Harness, PL10.4.18 ■ MCU Board, PL10.7.7 ■ Main Motor Harness, PL10.8.7 ■ Registration (KSNR) Harness, PL10.8.9	■ "Map 2 - Feed and Laser Unit" on page 10-7 ■ "Map 4 - Imaging" on page 10-9 ■ "Media Feed" on page 10-15 ■ "Main Drive" on page 10-16

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the media condition. Is the media damaged or damp?	Replace the media.	Go to step 2.
2	Check the Front Cover latch. Does the Front Cover latch correctly?	Go to step 3.	Repair or replace the Front Cover (page 8-15).
3	Check the Transfer Belt. Is the Transfer Belt damaged or misaligned?	Repair or replace the Transfer Belt (page 8-103).	Go to step 4.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	Check the Registration Rollers for damage, proper alignment, or wear. Are the rollers damaged, misaligned, or show signs of excessive or uneven wear?	Clean, repair, or replace the rollers. (PL3.2.9).	Go to step 5.
5	Check the Registration Actuator In and Registration Roll Actuator for damage or misalignment. Remove the Lower Chute (PL3.2.27) to examine the actuators. Is the actuator damaged or misaligned?	Repair or replace the Registration Actuator In (page 8-32).	Go to step 6.
6	Run the Registration Sensor test (DI-02) (page 4-35). Use the Registration Actuator In to toggle the sensor output. Does the sensor operate?	Go to step 7.	Go to step 9.
7	Run the Main Motor test (DO-00) on (page 4-41). Does the motor rotate?	Go to step 8.	Go to step 17.
8	Run the Registration Clutch test (DO-00 and DO-29) (page 4-48). Does the Registration Clutch and Registration Rollers operate?	Go to step 9.	Go to step 13.
9	Check connectors P/J23 and P/J232 between the MCU Board and Registration Sensor. Are the connectors secure?	Go to step 10.	Reconnect the connectors.
10	Check Left Side Harness continuity. Disconnect P/J23 from the MCU Board and P/J232 from the Registration Sensor. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 11.
11	Check for +3.3 V at J23 of the MCU Board. Is there +3.3 V across ground <=> J23-3 pin on the MCU Board?	Go to step 12.	Replace the MCU Board (page 8-57).
12	Check Registration Sensor signal. Does the voltage between ground <=>J23-5 on the MCU Board change when the Registration Actuator In is used to block the sensor?	Replace the MCU Board (page 8-57).	Replace the Registration Sensor (page 8-29).
13	Check connectors P/J26 and P/J262 between the MCU Board and Registration Clutch. Are the connectors secure?	Go to step 14.	Reconnect the connectors.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
14	Check KSNR Registration Clutch harness continuity. Disconnect P/J26 from the MCU Board and P/J262 from the Registration Clutch. Is the harness damaged?	Repair or replace the harness (PL10.8.9).	Go to step 15.
15	Check for +24 V at J26 of the MCU Board. Is there +24 V between ground <=> J26-4 on the MCU Board when the Interlock Switch is closed?	Go to step 16.	Replace the MCU Board (page 8-57).
16	Check Registration Clutch resistance. Disconnect P/J262 from the Feed Solenoid Is the resistance across J262-1 and J262-2 about 280 Ohms?	Replace the MCU Board (page 8-57).	Replace the Registration Clutch (page 8-35).
17	Check connectors P/J21 and P/J211 between the MCU Board and Main Motor Assembly. Are the connectors secure?	Go to step 18	Reconnect the connectors.
18	Check the Main Drive harness continuity. Disconnect P/J21 from the MCU Board and P/J211 from the Main Drive to check continuity. Is the harness damaged?	Repair or replace the harness (PL10.8.7).	Go to step 19.
19	Check for +24 V at J21 on the MCU Board. Is +24 V available at J21-2 and J21-4 when the Interlock Switch is closed?	Replace the Main Drive Assembly (page 8-58).	Replace the MCU Board (page 8-57).

Jam at Scanner

A media jam has occurred at the ADF. This troubleshooting procedure applies to these errors.

Applicable Errors

- Jam at Scanner
- 005-121: Job was Finished

Initial Actions

- Check media type and condition.
- Check the media path for debris or excessive roller wear.
- 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, PL10.6.6 ■ ADF Assembly, PL10.10.1	■ "Map 3 - Electrical and Drive" on page 10-8 ■ "ADF" on page 10-23 ■ "Imaging" on page 10-24

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the original document. Does the document meet the ADF specifications?	Go to step 2.	Use the document glass.
2	Check the ADF. Is the ADF completely closed?	Go to step 3.	Close the ADF.
3	Check the ADF Feed Roller for damage or excessive wear. Is the roller damaged or worn?	Replace the ADF Feed Roller (page 8-77).	Go to step 4.
4	Check the connectors P/J1002 and P/J1003 on the I/P Board. Are the connections secure?	Go to step 5.	Secure the connectors.
5	Replace the ADF Assembly (page 8-79). Does the error persist?	Replace the I/P Board (page 8-41).	Complete.

Consumable/Routine Maintenance Errors

Replace Fuser or Fuser Life Error

Warning

Allow the Fuser to cool before removal.

The Fuser has reached end of life. This troubleshooting procedure applies to this error.

Applicable Errors

- Fuser Life
- 010-351: Replace Fuser

Initial Action

- Check the Fuser life counter. If the count is at or near end of life, replace the Fuser.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Fuser, PL6.1.1 ■ MCU Board, PL10.7.7	■ "Map 4 - Imaging" on page 10-9 ■ "Fuser" on page 10-21

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Fuser life count. Has the count reached end of life?	Replace the Fuser (page 8-11).	Go to step 2.
2	Is the Fuser correctly installed?	Go to step 3.	Reseat the Fuser.
3	Cycle system power. Does the error persist.	Go to step 4.	Complete.
4	Replace the Fuser (page 8-11). Does the error still occur?	Replace the MCU Board (page 8-57).	Complete.

Fuser Error

Warning

Allow the Fuser to cool before removal.

Fuser temperature regulation has failed. This troubleshooting procedure applies to this error.

Applicable Error

- 010-397: Fuser Error

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
■ Fuser, PL6.1.1 ■ MCU Board, PL10.7.7 ■ LVPS Harness, PL10.8.3 ■ Fuser Harness, PL10.8.6	■ "Map 4 - Imaging" on page 10-9 ■ "Fuser" on page 10-21

Troubleshooting Procedure

Step	Actions and Questions	Yes	No
1	Check the connectors P/J17 and P/J171 between the MCU Board and the Fuser. Are the connectors secure?	Go to step 2.	Reconnect the connectors.
2	Check the Fuser harness for continuity. ■ Disconnect P/J17 from the MCU Board. ■ Disconnect P/J171 from the Fuser. ■ Disconnect P/J47 from the LVPS. ■ Check continuity between P/J17 and P/J47 <=> P/J171. Is the harness damaged?	Go to step 3.	Repair the Fuser harness.
3	Check the LVPS Harness for continuity. ■ Disconnect P/J501 from the LVPS. ■ Disconnect P/J14 from the MCU Board. ■ Check continuity between P/J501 <=> P/J14. Is the harness damaged?	Go to step 4.	Replace the LVPS Harness.

Troubleshooting Procedure (continued)

Step	Actions and Questions	Yes	No
4	Replace the Fuser (page 8-11). Does the error persist? **NOTE** Reset the Fuser life counter after installation of a new Fuser.	Go to step 5.	Complete.
5	Replace the LVPS (page 8-47). Does the error persist?	Replace the MCU Board (page 8-57).	Complete.

Reseat Fuser Error

Warning

Allow the Fuser to cool before removal.

The Fuser has failed. This troubleshooting procedure applies to this error.

Applicable Error

- 010-317: ReseatFuser

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
■ Fuser, PL6.1.1 ■ MCU Board, PL10.7.7 ■ Fuser Harness, PL10.8.6	■ “Map 4 - Imaging” on page 10-9 ■ “Fuser” on page 10-21

Troubleshooting Procedure

Step	Actions and Questions	Yes	No
1	Check the connectors P/J17 and P/J171 between the MCU Board and the Fuser. Are the connectors secure?	Go to step 2.	Reconnect the connectors.

Troubleshooting Procedure (continued)

Step	Actions and Questions	Yes	No
2	Check the Fuser harness for continuity. ■ Disconnect P/J17 from the MCU Board. ■ Disconnect P/J171 from the Fuser. ■ Disconnect P/J47 from the LVPS. ■ Check continuity between P/J17 and P/J47 <=> P/J171. Is the harness damaged?	Go to step 3.	Repair the Fuser harness.
3	Check the Fuser temperature sensor resistance at these pins on the Fuser connector J171: ■ J171-5 <=> J171-4 ■ J171-6 <=> J171-8 ■ J171-6 <=> J171-7 Is there a measurable resistance between each pair of pins?	Replace the MCU Board (page 8-57).	Go to step 4.
4	Replace the Fuser (page 8-11). Does the error persist? **NOTE** Reset the Fuser life counter after installation of a new Fuser.	Replace the MCU Board (page 8-57).	Complete.

Toner Cartridge Errors

The Toner Cartridge is near or has reached its end of life. The following troubleshooting procedure applies to these errors.

Applicable Errors

- C,M,Y,K Low
- Waste Full C,M,Y,K
- Replace C,M,Y,K Cartridge

Initial Actions

- Check that the Toner Cartridge is properly installed.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Toner Cartridge PL5.1.21~24 ■ MCU Board, PL10.7.7	"Toner Dispense" on page 10-20

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Replace the Toner Cartridge (page 8-13). Does the error persist?	Replace the MCU Board (page 8-57).	Complete.

Low Density Yellow Cartridge Error

The ADC Sensor detects an insufficient amount of Yellow toner being applied. The following troubleshooting procedure applies to these errors.

Applicable Error

- Low Density Yellow Cartridge

Initial Actions

- Check that the cartridge is a genuine Xerox Toner Cartridge. If not, replace with a genuine Xerox cartridge.
- Check the Toner Cartridge life cycle count. If at or near end of life, replace the cartridge.
- Remove, inspect, and gently shake the the cartridge from side to side.
- Check for sealing tape on the Imaging Unit.
- Cycle system power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Imaging Unit, PL4.1.21 ■ Dispense Assembly, PL5.1.1 ■ Transfer Belt, PL6.1.7 ■ Toner Cartridge PL5.1.24 ■ MCU Board, PL10.7.7	“Map 1 - MCU Board” on page 10-6 “Toner Dispense” on page 10-20

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Yellow toner motor. Caution: Do not run the toner motor more than a few seconds.. **Printer Diag > IOT Diag > Digital Output DO-24** Does the motor rotate?	Go to step 2.	Go to step 3.
2	Check the Dispense Assembly gears. Is the Yellow cartridge gear damaged?	Replace the Dispense Assembly (page 8-91).	Go to step 6.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
3	Check P/J18 and P/J181 connections between the MCU Board and the Yellow toner motor. Are the connections secure?	Go to step 4.	Reseat the connectors.
4	Disconnet P/J18 and P/J181 and check the harness continuity. Is the harness damaged?	Repair the harness.	Go to step 5.
5	Check for +24 V at P/J18-3 of the MCU Board. Is 24 V available at pin 3?	Replace the Dispense Assembly (page 8-91)	Replace the MCU Board (page 8-57).
6	Replace the Imaging Unit (page 8-8). Does the error persist?	Go to step 7.	Complete.
7	Reseast the Transfer Belt at the Front Cover. Does the error persist?	Replace the Transfer Belt (page 8-103)	Complete

Low Density Magenta Cartridge Error

The ADC Sensor detects an insufficient amount of Mageneta toner being applied. The following troubleshooting procedure applies to these errors.

Applicable Error

- Low Density Magenta Cartridge

Initial Actions

- Check that the cartridge is a genuine Xerox Toner Cartridge. If not, replace with a genuine Xerox cartridge.
- Check the Toner Cartridge life cycle count. If at or near end of life, replace the cartridge.
- Remove, inspect, and gently shake the the cartridge from side to side.
- Check for sealing tape on the Imaging Unit.
- Cycle system power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Imaging Unit, PL4.1.21 ■ Dispense Assembly, PL5.1.1 ■ Transfer Belt, PL6.1.7 ■ Toner Cartridge PL5.1.23 ■ MCU Board, PL10.7.7	"Map 1 - MCU Board" on page 10-6 "Toner Dispense" on page 10-20

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Magenta toner motor. Caution: Do not run the toner motor more than a few seconds.. **Printer Diag > IOT Diag > Digital Output DO-23** Does the motor rotate?	Go to step 2.	Go to step 3.
2	Check the Dispense Assembly gears. Is the Magenta cartridge gear damaged?	Replace the Dispense Assembly (page 8-91).	Go to step 6.
3	Check P/J18 and P/J182 connections between the MCU Board and the Magenta toner motor. Are the connections secure?	Go to step 4.	Reseat the connectors.
4	Disconnet P/J18 and P/J182 and check the harness continuity. Is the harness damaged?	Repair the harness.	Go to step 5.
5	Check for +24 V at P/J18-8 of the MCU Board. Is 24 V available at pin 8?	Replace the Dispense Assembly (page 8-91)	Replace the MCU Board (page 8-57).
6	Replace the Imaging Unit (page 8-8). Does the error persist?	Go to step 7.	Complete.
7	Reseast the Transfer Belt at the Front Cover. Does the error persist?	Replace the Transfer Belt (page 8-103)	Complete

Low Density Cyan Cartridge Error

The ADC Sensor detects an insufficient amount of Cyan toner being applied. The following troubleshooting procedure applies to these errors.

Applicable Error

- Low Density Cyan Cartridge

Initial Actions

- Check that the cartridge is a genuine Xerox Toner Cartridge. If not, replace with a genuine cartridge.
- Check the Toner Cartridge life cycle count. If at or near end of life, replace the cartridge.
- Remove, inspect, and gently shake the the cartridge from side to side..
- Check for sealing tape on the Imaging Unit.
- Cycle system power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Imaging Unit, PL4.1.21 ■ Dispense Assembly, PL5.1.1 ■ Transfer Belt, PL6.1.7 ■ Toner Cartridge PL5.1.22 ■ MCU Board, PL10.7.7	“Map 1 - MCU Board” on page 10-6 “Toner Dispense” on page 10-20

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Cyan toner motor. Caution: Do not run the toner motor more than a few seconds.. **Printer Diag > IOT Diag > Digital Output DO-22** Does the motor rotate?	Go to step 2.	Go to step 3.
2	Check the Dispense Assembly gears. Is the Cyan cartridge gear damaged?	Replace the Dispense Assembly (page 8-91).	Go to step 6.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
3	Check P/J19 and P/J191 connections between the MCU Board and the Cyan toner motor. Are the connections secure?	Go to step 4.	Reseat the connectors.
4	Disconnet P/J19 and P/J191 and check the harness continuity. Is the harness damaged?	Repair the harness.	Go to step 5.
5	Check for +24 V at P/J19-4 of the MCU Board. Is 24 V available at pin 4?	Replace the Dispense Assembly (page 8-91)	Replace the MCU Board (page 8-57).
6	Replace the Imaging Unit (page 8-8). Does the error persist?	Go to step 7.	Complete.
7	Reseast the Transfer Belt at the Front Cover. Does the error persist?	Replace the Transfer Belt (page 8-103)	Complete

Low Density Black Cartridge Error

The ADC Sensor detects an insufficient amount of Black Toner being applied. The following troubleshooting procedure applies to these errors.

Applicable Error

- Low Density Black Cartridge

Initial Actions

- Check that the cartridge is a genuine Xerox Toner Cartridge. If not, replace with a genuine cartridge.
- Check the Toner Cartridge life cycle count. If at or near end of life, replace the cartridge.
- Remove, inspect, and gently shake the the cartridge from side to side..
- Check for sealing tape on the Imaging Unit.
- Cycle system power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Imaging Unit, PL4.1.21 ■ Dispense Assembly, PL5.1.1 ■ Transfer Belt, PL6.1.7 ■ Toner Cartridge PL5.1.21 ■ MCU Board, PL10.7.7	"Map 1 - MCU Board" on page 10-6 "Toner Dispense" on page 10-20

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Black toner motor. Caution: Do not run the toner motor more than a few seconds.. **Printer Diag > IOT Diag > Digital Output DO-21** Does the motor rotate?	Go to step 2.	Go to step 3.
2	Check the Dispense Assembly gears. Is the Black cartridge gear damaged?	Replace the Dispense Assembly (page 8-91).	Go to step 6.
3	Check P/J19 and P/J192 connections between the MCU Board and the Black toner motor. Are the connections secure?	Go to step 4.	Reseat the connectors.
4	Disconnet P/J19 and P/J192 and check the harness continuity. Is the harness damaged?	Repair the harness.	Go to step 5.
5	Check for +24 V at P/J19-9 of the MCU Board. Is 24 V available at pin 9?	Replace the Dispense Assembly (page 8-91)	Replace the MCU Board (page 8-57).
6	Replace the Imaging Unit (page 8-8). Does the error persist?	Go to step 7.	Complete.
7	Reseast the Transfer Belt at the Front Cover. Does the error persist?	Replace the Transfer Belt (page 8-103)	Complete

Non-Xerox Toner Cartridge Error

A Toner Cartridge CRUM ID error indicates a non-Xerox cartridge is installed. The following troubleshooting procedure applies to these errors.

Applicable Errors

- 093-960: Non-Xerox Toner Yellow Print Cartridge
- 093-961: Non-Xerox Toner Magenta Print Cartridge
- 093-962: Non-Xerox Toner Cyan Print Cartridge
- 093-926: Non-Xerox Toner Black Print Cartridge

Initial Actions

- Check the Toner Type setting. Set to Non-Xerox Toner if necessary.
- Check installation of the Toner Cartridge.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Toner Cartridge, PL5.1.21~24 ■ MCU Board, PL9.2.13 ■ Toner CRUM Harness, PL5.1.26 ■ Dispense Assembly PL5.1.1	■ “Map 4 - Imaging” on page 10-9 ■ “Toner Dispense” on page 10-20

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Replace the affected Toner Cartridge (page 8-13). Does the error still occur?	Go to step 2.	Complete.
2	Check Toner CRUM harness continuity between P/J31 on the MCU Board and these CRUM connections: ■ Yellow: J311 ■ Magenta: J312 ■ Cyan: J313 ■ Black: J324 Is the Toner CRUM harness damaged?	Repair the harness.	Go to step 3.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
3	Check the toner CRUM voltage at P/J31 on the MCU Board. Measure the voltage across: ■ Ground <=> P/J31-3 pin (Yellow) ■ Ground <=> P/J31-7 pin (Magenta) ■ Ground <=> P/J31-11 pin (Cyan) ■ Ground <=> P/J31-15 pin (Black) Is +3.3 V available at the indicated CRUM connector?	Replace the Dispense Assembly (page 8-91).	Go to step 4.
4	Check for +3.3 V at P/J14 on the MCU Board. Is 3.3 V available at P14-12?	Replace the MCU Board (page 8-57).	Replace the LVPS (page 8-47).

Insert Cartridge Error

The system does not detect the indicated Toner Cartridge. The following troubleshooting procedure applies to these errors.

Applicable Error Codes

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

Initial Actions

- Check that the cartridge is a genuine Xerox Toner Cartridge. If not, check the Toner Type setting. Set to Non-Xerox Toner if necessary.
- Check installation of the Toner Cartridge.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Toner Cartridge, PL5.1.21~24 ■ MCU Board, PL9.2.13 ■ Toner CRUM Harness, PL5.1.26 ■ Dispense Assembly PL5.1.1	■ “Map 4 - Imaging” on page 10-9 ■ “Toner Dispense” on page 10-20

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Replace the affected Toner Cartridge (page 8-13). Does the error still occur?	Go to step 2.	Complete.
2	Check Toner CRUM harness continuity between P/J31 on the MCU Board and these CRUM connections: ■ Yellow: J311 ■ Magenta: J312 ■ Cyan: J313 ■ Black: J324 Is the Toner CRUM harness damaged?	Repair the harness.	Go to step 3.
3	Check the toner CRUM voltage at P/J31 on the MCU Board. Measure the voltage across: ■ Ground <=> P/J31-3 pin (Yellow) ■ Ground <=> P/J31-7 pin (Magenta) ■ Ground <=> P/J31-11 pin (Cyan) ■ Ground <=> P/J31-15 pin (Black) Is +3.3 V available at the indicated CRUM connector?	Replace the Dispense Assembly (page 8-91).	Go to step 4.
4	Check for +3.3 V at P/J14 on the MCU Board. Is 3.3 V available at P14-12?	Replace the MCU Board (page 8-57).	Replace the LVPS (page 8-47).

Non-Xerox Toner

The Printer does not have a genuine Xerox Print Cartridge installed. The following troubleshooting procedure applies to this error.

Applicable Error

- Non-Xerox Toner

Initial Actions

- Check the Toner Cartridge manufactuer.
- Cycle printer power.
- If problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack References
■ Image Processor Board, PL10.6.6.	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Is the cartridge a Xerox cartridge?	Go to step 2.	Complete.
2	Check the **Non-Xerox Toner** setting in the Set Up menu. Is the	Set the value to Off.	Go to step 3.
3	Check the installed cartridges by replacing each with known good cartridges. Does the error persist?	Replace the I/P Board (page 8-41).	Complete.

IU CRUM Error

An error occurred while reading the Imaging Unit CRUM.

Applicable Error

- 091-916: IU CRUM Error

Initial Actions

- Check that the correct Imaging Unit is installed for this model.
- Remove and reseat the Imaging Unit.
- Cycle system power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Imaging Unit PL4.1.21 ■ MCU Board, PL10.7.7 ■ Imaging Unit Harness, PL10.8.11	■ "Map 1 - MCU Board" on page 10-6 ■ "Xerographics" on page 10-18

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Imaging Unit CRUM harness. Disconnect P/J42 and P/J422 and check continuity. Is the harness damaged?	Repair the harness.	Go to step 2.
2	Replace the Imaging Unit (page 8-8). Does the error persist?	Replace the MCU Board (page 8-57)..	Complete.

Imaging Unit Life, Replace Imaging Unit Error

The Imaging Unit is near, or has reached, end of life..

Applicable Errors

- Imaging Unit Life
- Replace Imaging Unit

Initial Actions

- Check the Imaging Unit life counter.
- Check that the correct Imaging Unit is installed for this model.
- Remove and reseat the Imaging Unit.
- Cycle system power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Imaging Unit PL4.1.21 ■ MCU Board, PL10.7.7	■ "Map 1 - MCU Board" on page 10-6 ■ "Xerographics" on page 10-18

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Replace the Imaging Unit (page 8-8). **NOTE** Remove the 8 sealing tapes from the new Imaging Unit before installation. Does the error persist?	Replace the MCU Board (page 8-57)..	Complete.

Check Imaging Unit Error

The Imaging Unit sealing tapes are present or the Imaging Unit is improperly seated.

Applicable Error

- Check Imaging Unit

Initial Actions

- Check that the correct Imaging Unit is installed for this model.
- Remove, inspect, and reseat the Imaging Unit.
- Cycle system power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Imaging Unit PL4.1.21 ■ MCU Board, PL10.7.7	■ "Map 1 - MCU Board" on page 10-6 ■ "Xerographics" on page 10-18

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Remove the Imaging Unit and inspect for damage, debris, or sealing tapes. Does the error persist?	Go to step 2.	Complete.
2	Replace the Imaging Unit (page 8-8). **NOTE** Remove the 8 sealing tapes from the new Imaging Unit before installation. Does the error persist?	Replace the MCU Board (page 8-57)..	Complete.

Insert Imaging Unit Error

An error occurred while reading the Imaging Unit CRUMs.

Applicable Error

- Insert Imaging Unit

Initial Actions

- Check that the correct Imaging Unit is installed for this model.
- Remove and reseat the Imaging Unit.
- Cycle system power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Imaging Unit PL4.1.21 ■ MCU Board, PL10.7.7 ■ Imaging Unit Harness, PL10.8.11	■ "Map 1 - MCU Board" on page 10-6 ■ "Xerographics" on page 10-18

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Imaging Unit CRUM harness. Disconnect P/J42 and P/J422 and check continuity. Is the harness damaged?	Repair the harness.	Go to step 2.
2	Replace the Imaging Unit (page 8-8). **NOTE** Remove the 8 sealing tapes from the new Imaging Unit before installation. Does the error persist?	Replace the MCU Board (page 8-57).	Complete.

Tray and Media Errors

Load Tray or Manual Feed

The Tray or manual feed slot No Paper Sensor does not detect the presence of media. This troubleshooting procedure applies to these errors.

Applicable Errors

- Load Tray
- Load Manual Feed

Initial Actions

- Check the media path for obstructions, supported paper, and proper guide adjustment.
- Check the condition of the sensor actuators.
- Check the size settings and print job specifications.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map Reference
■ Tray No Paper Sensor, PL3.2.13 ■ Manual No Paper Sensor, PL3.2.13 ■ Image Processor Board, PL10.6.6 ■ MCU Board, PL9.2.13	■ "Map 2 - Feed and Laser Unit" on page 10-7 ■ "Media Feed" on page 10-15

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Is the error Load Tray?	Go to Step 2.	Go to Step 7.
2	Run the No Paper Sensor test (DI-01) (page 4-40). Use the actuator to toggle the sensor output. Does the sensor operate?	Replace the MCU Board (page 8-57).	Go to step 3.
3	Check connectors P/J23 and P/J234 between the MCU Board and the No Paper Sensor. Are the connectors secure?	Go to step 4.	Reconnect the connectors.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	Check Left Side Harness continuity. Disconnect P/J23 from the MCU Board and P/J234 from the No Paper Sensor. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 5.
5	Check for +3.3 V at J23 on the MCU Board. Is +3.3 V available between J23-9 <=> ground when the Interlock Switch is closed?	Go to step 6.	Replace the MCU Board (page 8-57).
6	Check No Paper Sensor signal. Does the voltage between ground <=>J23-11 on the MCU Board change when the actuator blocks the sensor?	Replace the MCU Board (page 8-57). If the error persists, replace the I/P Board (page 8-41).	Replace the No Paper Sensor (page 8-33).
7	Run the Manual Feed Sensor test (DI-0) (page 4-39). Use the actuator to toggle the sensor output. Does the sensor operate?	Go to step 8.	Go to step 9.
8	Cycle system power. Does the error persist?	Replace the MCU Board (page 8-57).	Complete.
9	Check connectors P/J23 and P/J233 between the MCU Board and the Manual Feed No Paper Sensor. Are the connectors secure?	Go to step 10.	Reconnect the connectors.
10	Check Left Side Harness continuity. Disconnect P/J23 from the MCU Board and P/J233 from the Manual Feed No Paper Sensor. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 11.
11	Check for +3.3 V at J23 on the MCU Board. Is +3.3 V available between J23-6 <=> ground?	Go to step 12.	Replace the MCU Board (page 8-57).
12	Check No Paper Sensor signal. Does the voltage between ground <=>J23-8 on the MCU Board change when the actuator blocks the sensor?	Replace the MCU Board (page 8-57).If the error persists, replace the I/P Board (page 8-41)	Replace the Manual Feed No Paper Sensor (page 8-28).

Load Tray or Illegal Settings

The type or size of paper mismatched or the Tray is empty. The following troubleshooting procedure applies to this error.

Applicable Errors

- Load Tray
- Illegal Settings

Initial Actions

- Check the Tray for obstructions, supported media, and guide adjustment.
- Check the No Paper Sensor Actuator function.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ No Paper Sensor, PL3.2.13 ■ No Paper Actuator, PL3.2.19 ■ Left Side Harness, PL10.4.18 ■ MCU Board, PL10.7.7	■ "Map 2 - Feed and Laser Unit" on page 10-7 ■ "Media Feed" on page 10-15

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the paper size. Does the media size match print job specifications?	Go to step 2.	Correct the media size.
2	Check the No Paper Actuator. Does the actuator operate smoothly?	Go to step 3.	Replace the Feeder Assembly (page 8-75).
3	Perform the Tray 2 No Paper test: **Service Mode** > **Printer Diag** > **Engine Diag** > **Sensor Test** > **Cassette No Paper (DO-01)**. Does the display change when the Actuator is activated?	Replace the MCU Board (page 8-57).	Go to step 4.
4	Check the wiring harness connectors P/J23, P/J234 between the No Paper Sensor and the MCU Board. Are the connections secure?	Go to step 5.	Reconnect the connectors.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	Check Left Side Harness continuity. Disconnect P/J23 from the MCU Board and P/J234 from the No Paper Sensor. Is there continuity between P/J23 <=> P/J232.	Go to step 6.	Repair the Left Side Harness.
6	Check the No Paper Sensor signal. Disconnect P/J23 from the MCU Board. Is there +3.3 V across ground <=> J23-5 pin on the MCU Board?	Go to step 7.	Replace the MCU Board (page 8-57).
7	Check the No Paper Sensor. Measure the voltage across ground <=> J23-11 on the MCU Board. Does the voltage change when the No Paper Sensor is activated?	Replace the MCU Board (page 8-57).	Replace the No Paper Sensor (page 8-33).

Insert Output to Tray

The No Paper Sensor did not detect media on a duplex job. This troubleshooting procedure applies to this error.

Applicable Error

- Insert Output to Tray

Initial Actions

- Check the condition of the No paper Sensor actuator.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ No Paper Sensor, PL3.2.13 ■ Left Side Harness, PL10.4.18 ■ MCU Board, PL10.7.7	■ "Map 2 - Feed and Laser Unit" on page 10-7 ■ "Media Feed" on page 10-15

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Run the No Paper Sensor test (DI-01) (page 4-40). Use the actuator to toggle the sensor output. Does the sensor operate?	Replace the MCU Board (page 8-57).	Go to step 2.
2	Check connectors P/J23 and P/J234 between the MCU Board and the No Paper Sensor. Are the connectors secure?	Go to step 3.	Reconnect the connectors.
3	Check Left Side Harness continuity. Disconnect P/J23 from the MCU Board and P/J234 from the No Paper Sensor. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 4.
4	Check for +3.3 V at J23 on the MCU Board. Is +3.3 V available between J23-9 <=> ground when the Interlock Switch is closed?	Go to step 5.	Replace the MCU Board (page 8-57).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	Check No Paper Sensor operation. Does the voltage between ground <=>J23-11 on the MCU Board change when the actuator blocks the sensor?	Replace the MCU Board (page 8-57).	Replace the No Paper Sensor (page 8-33).

Check Manual Feed

The Manual Feed No Paper Sensor did not detect media when expected. This troubleshooting procedure applies to this error.

Applicable Error

- Chk Manual Feed Remove Paper

Initial Actions

- Check the condition of the Manual Feed No Paper Sensor actuator.
- Check the media path for obstructions.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Registration Roller, PL3.2.9 ■ Metal Registration Roller, PL3.2.10 ■ Manual No Paper Sensor, PL3.2.13 ■ Manual Feed Actuator, PL3.2.14 ■ Registration Spring R, PL3.2.24 ■ Registration Spring L, PL3.2.29 ■ Left Side Harness, PL10.4.18 ■ MCU Board, PL10.7.7	■ “Map 2 - Feed and Laser Unit” on page 10-7 ■ “Media Feed” on page 10-15

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Was media removed from the manual feed slot during a print operation?	Go to step 2.	Go to step 3
2	Reload the manual feed slot. Does the error persist?	Go to step 3.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
3	Check the Front Cover latch. Does the Front Cover latch correctly?	Go to step 4.	Repair or replace the Front Cover (page 8-15).
4	Remove the Imaging Unit and examine the Registration Rollers. Are the rollers seated correctly, free of debris, and touching?	Go to step 5.	Clean or repair the rollers and if necessary the springs.
5	Check the Manual Feed Sensor Actuator for damage or misalignment. Remove the Lower Chute (PL3.2.27) to examine the actuator. Is the actuator damaged or misaligned?	Repair or replace the Manual Feed Sensor Actuator (page 8-28).	Go to step 6.
6	Run the Manual Feed Sensor test (DI-0) (page 4-39). Use the actuator to toggle the sensor output. Does the sensor operate?	Replace the MCU Board (page 8-57).	Go to step 7.
7	Check connectors P/J23 and P/J233 between the MCU Board and the Manual Feed No Paper Sensor. Are the connectors secure?	Go to step 8.	Reconnect the connectors.
8	Check Left Side Harness continuity. Disconnect P/J23 from the MCU Board and P/J233 from the Manual Feed No Paper Sensor. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 9.
9	Check for +3.3 V at J23 on the MCU Board. Is +3.3 V available between J23-6 <=> ground?	Go to step 10.	Replace the MCU Board (page 8-57).
10	Check No Paper Sensor signal. Does the voltage between ground <=>J23-8 on the MCU Board change when the actuator blocks the sensor?	Replace the MCU Board (page 8-57).	Replace the Manual Feed No Paper Sensor (page 8-28).

Insert Output to Manual Feed

The Manual Feed No Paper Sensor did not detect media when expected during a duplex job. This troubleshooting procedure applies to this error.

Applicable Error

- Insert output to Manual Feed Press OK to continue

Initial Actions

- Check the condition of the Manual Feed Detect Sensor actuator.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Manual No Paper Sensor, PL3.2.13 ■ Left Side Harness, PL10.4.18 ■ MCU Board, PL10.7.7	■ "Map 2 - Feed and Laser Unit" on page 10-7 ■ "Media Feed" on page 10-15

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Was media inserted for the second side of the duplex job?	Go to step 2.	Insert media when indicated.
2	Run the Manual Feed Sensor test (DI-0) (page 4-39). Use the actuator to toggle the sensor output. Does the sensor operate?	Replace the MCU Board (page 8-57).	Go to step 3.
3	Check connectors P/J23 and P/J233 between the MCU Board and the Manual Feed No Paper Sensor. Are the connectors secure?	Go to step 4.	Reconnect the connectors.
4	Check Left Side Harness continuity. Disconnect P/J23 from the MCU Board and P/J233 from the Manual Feed No Paper Sensor. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 5.
5	Check for +3.3 V at J23 on the MCU Board. Is +3.3 V available between J23-6 <=> ground?	Go to step 6.	Replace the MCU Board (page 8-57).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
6	Check No Paper Sensor signal. Does the voltage between ground <=>J23-8 on the MCU Board change when the actuator blocks the sensor?	Replace the MCU Board (page 8-57).	Replace the Manual Feed No Paper Sensor (page 8-28).

Load or Remove Paper from Manual Feed

The Manual Feed No Paper Sensor did not detect media. This troubleshooting procedure applies to these errors.

Applicable Errors

- Load Manual Feed Press OK to continue
- Remove Paper from manual Feed Press OK to continue

Initial Actions

- Check the condition of the Manual Feed Detect Sensor actuator.
- Check manual feed guide adjustment.
- Check that the media required by the print job is the type/size loaded.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Manual No Paper Sensor, PL3.2.13 ■ Manual Feed Actuator, PL3.2.14 ■ Left Side Harness, PL10.4.18 ■ MCU Board, PL10.7.7	■ “Map 2 - Feed and Laser Unit” on page 10-7 ■ “Media Feed” on page 10-15

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Manual Feed Sensor Actuator for damage or misalignment. Remove the Lower Chute (PL3.2.27) to examine the actuator. Is the actuator damaged or misaligned?	Repair or replace the Manual Feed Sensor Actuator (page 8-28).	Go to step 2.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
2	Run the Manual Feed Sensor test (DI-0) (page 4-39). Use the actuator to toggle the sensor output. Does the sensor operate?	Replace the MCU Board (page 8-57).	Go to step 3.
3	Check connectors P/J23 and P/J233 between the MCU Board and the Manual Feed No Paper Sensor. Are the connectors secure?	Go to step 4.	Reconnect the connectors.
4	Check Left Side Harness continuity. Disconnect P/J23 from the MCU Board and P/J233 from the Manual Feed No Paper Sensor. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 5.
5	Check for +3.3 V at J23 on the MCU Board. Is +3.3 V available between J23-6 <=> ground?	Go to step 6.	Replace the MCU Board (page 8-57).
6	Check No Paper Sensor signal. Does the voltage between ground <=>J23-8 on the MCU Board change when the actuator blocks the sensor?	Replace the MCU Board (page 8-57).	Replace the Manual Feed No Paper Sensor (page 8-28).

Reseat Paper at Manual Feed

The Manual Feed No Paper Sensor did not detect media within the specified time. The following troubleshooting procedure applies to this error.

Applicable Error

- Reseat Paper at Manual Feeed Slot

Initial Actions

- Check the media path for obstructions or debris.
- Check manual feed guide adjustment.
- Check that the media required by the print job is the type/size loaded.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Registration Roller Actuator, PL3.3.8 ■ Registration Sensor, PL3.2.13 ■ Manual Feed Actuator, PL3.2.14 ■ Main Drive Assembly, PL7.1.2 ■ Feed Drive Assembly, PL7.1.4 ■ Left Side Harness, PL10.4.18 ■ MCU Board, PL10.7.7 ■ Main Motor Harness, PL10.8.7 ■ Registration (KSNR) Harness, PL10.8.9	■ “Map 2 - Feed and Laser Unit” on page 10-7 ■ “Media Feed” on page 10-15 ■ “Main Drive” on page 10-16

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the media size. Does media size match the print job?	Replace the media.	Go to step 2.
2	Check the Front Cover latch. Does the Front Cover latch correctly?	Go to step 3.	Repair or replace the Front Cover (page 8-15).
3	Run the Main Motor test (DO-0) on (page 4-41). Does the motor and Registration Rollers rotate?	Go to step 4.	Repair or replace the Main Drive Assembly (page 8-58).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	Does the media reach the Registration Rollers when fed from the Tray?	Go to step 7.	Go to step 5.
5	Check the Manual Feed Actuator for damage or misalignment. Remove the Lower Chute (PL3.2.27) to examine the actuator. Is the actuator damaged or misaligned?	Repair or replace the manual Feed Actuator In (page 8-28).	Go to step 6.
6	Run the Manual Feed Sensor test (DI-0) (page 4-39). Use the actuator to toggle the sensor output. Does the sensor operate?	Go to step 7.	Go to step 10
7	Run the Registration Clutch test (DO-0 and DO-29) (page 4-48). Does the Registration Clutch and Registration Rollers operate?	Go to step 8.	Go to step 18.
8	Check the Registration Roller Actuator for damage or misalignment. Remove the Lower Chute (PL3.2.27) to examine the actuator. Is the actuator damaged or misaligned?	Repair or replace the Registration Roller Actuator (PL3.2.8)	Go to step 9.
9	Run the Registration Sensor test (DI-2) (page 4-35). Use the Registration Actuator In to toggle the sensor output. Does the sensor operate?	Replace the MCU Board (page 8-57).	Go to step 14.
10	Check connectors P/J23 and P/J233 between the MCU Board and Manual Feed No Paper Sensor. Are the connectors secure?	Go to step 11	Reconnect the connectors.
11	Check Left Side Harness continuity. Disconnect P/J23 from the MCU Board and P/J233 from the Manual Feed No Paper Sensor. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 12.
12	Check for +3.3 V at J23 on the MCU Board. Is +3.3 V available between J23-6 <=> ground?	Go to step 13.	Replace the MCU Board (page 8-57).
13	Check Manual Feed Sensor signal. Does the voltage between ground <=>J23-8 on the MCU Board change when the actuator blocks the sensor?	Replace the MCU Board (page 8-57).	Replace the Manual Feed Sensor (page 8-27).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
14	Check connectors P/J23 and P/J232 between the MCU Board and Registration Sensor. Are the connectors secure?	Go to step 15.	Reconnect the connectors.
15	Check Left Side Harness continuity. Disconnect P/J23 from the MCU Board and P/J232 from the Registration Sensor. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 16.
16	Check for +3.3 V at J23 of the MCU Board. Is there +3.3 V across ground <=> J23-3 pin on the MCU Board?	Go to step 17.	Replace the MCU Board (page 8-57).
17	Check Registration Sensor signal. Does the voltage between ground <=>J23-5 on the MCU Board change when the Registration Actuator In is used to block the sensor?	Replace the MCU Board (page 8-57).	Replace the Registration Sensor (page 8-29).
18	Check connectors P/J26 and P/J262 between the MCU Board and Registration Clutch. Are the connectors secure?	Go to step 19.	Reconnect the connectors.
19	Check KSNR Registration Clutch harness continuity. Disconnect P/J26 from the MCU Board and P/J262 from the Registration Clutch. Is the harness damaged?	Repair or replace the harness (PL10.8.9).	Go to step 20.
20	Check for +24 V at J26 of the MCU Board. Is there +24 V between ground <=> J26-4 on the MCU Board when the Interlock Switch is closed?	Go to step 21.	Replace the MCU Board (page 8-57).
21	Check Registration Clutch resistance. Disconnect P/J262 from the Feed Solenoid Is the resistance across J262-1 and J262-2 about 280 Ohms?	Replace the MCU Board (page 8-57).	Replace the Registration Clutch (page 8-35).

Configuration, Memory, and Firmware Errors

Invalid User Error

The system does not recognize the user. This troubleshooting procedure applies to this error.

Applicable Error

- 016-757: Invalid User Error

Initial Actions

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

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check user account setup. Does the error persist?	Configure the user account. Go to step 2.	Complete.
2	Check network connections. Is the system connected to the network?	Have the customer contact their system administrator.	Connect the network.

Disabled Func Error

A disabled operation was attempted. This troubleshooting procedure applies to this error.

Applicable Error

- 016-758: Disabled Func Error

Initial Actions

- Check the print driver version.
- 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, PL10.6.6	■ "Map 3 - Electrical and Drive" on page 10-8

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check network connections. Is the system connected to the network?	Go to step 2.	Connect the network.
2	Reseat the Image Processor Board connections. Cycle system power. Does the error persist?	Replace the I/P Board (page 8-41).	Complete.

Limit Exceeded Error

User count exceeds the **User Registration** count. This troubleshooting procedure applies to this error.

Applicable Error

- 016-759: Limit Exceeded Error

Initial Actions

- Check the print driver version.
- 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, PL10.6.6	■ "Map 3 - Electrical and Drive" on page 10-8

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the **User Registration** value under the **Print Auditron** setting. Maximum value is 50. Has the user count exceeded the setting?	Reset the count to 50 or less.	Go to step 2.
2	Reseat the Image Processor Board connections. Cycle system power. Does the error persist?	Replace the I/P Board (page 8-41).	Complete.

Invalid Job Error

Print job settings do not match media size/type settings for the source. The following troubleshooting procedure applies to this error.

Applicable Error

- 016-799: Invalid Job Error

Initial Actions

- Check the media size settings for the print job and source.
- Reseat installed memory.
- 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, PL10.6.6	■ "Map 3 - Electrical and Drive" on page 10-8

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Print a small size file. Does the error persist?	Go to step 2.	Complete.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
2	Print the Configuration page. Does the memory amount listed match the installed memory?	Replace the Image Processor Board (page 8-41).	Reseat the Memory Card and reprint the Configuration page to check memory.
3	Replace the Memory Card. Does the error still occur?	Replace the Image Processor Board (page 8-41).	Complete.

MCU Firmware Error

MCU firmware error has occurred. This troubleshooting procedure applies to this error.

Applicable Error

- 003-340: MCU Firmware Error

Initial Actions

- Check MCU Board firmware version.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ MCU Board, PL10.7.7	■ “Map 1 - MCU Board” on page 10-6

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the MCU Board installation. Cycle system power. Does the error persist?	Replace the MCU Board (page 8-57).	Check system electrical grounds.

Download Mode Error

Firmware download error has occurred. This troubleshooting procedure applies to this error.

Applicable Error

- 024-340: Download Mode Error

Initial Actions

- Check MCU Board firmware version.
- 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, PL10.6.6 ■ MCU Board, PL10.7.7	■ “Map 1 - MCU Board” on page 10-6

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the MCU Board installation. Cycle system power. Does the error persist?	Replace the I/P Board (page 8-41).	Check system electrical grounds.

PAGEC Timer Error

A system error has occurred. This troubleshooting procedure applies to this error.

Applicable Error

- 024-362: PAGEC Timer 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, PL10.6.6	■ “Map 3 - Electrical and Drive” on page 10-8

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Image Processor Board installation. Cycle system power. Does the error persist?	Replace the I/P Board (page 8-41).	Complete.

RAM Disk Full Error

RAM Disk memory is full and cannot receive additional data. Print job requires additional memory. The following troubleshooting procedure applies to this error.

Applicable Error

- 016-982: RAM Disk Full Error

Initial Actions

- Reseat installed memory.
- Install additional memory
- Resize the RAM Disk to hold larger files.
- 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, PL10.6.6 ■ Memory Card, PL10.6.8	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Print a small size file (example as a Windows test print). Does the error persist?	Go to step 2.	Add memory, resize the RAM Disk, or partition the print job.
2	Print the Configuration Page: **System** > **Information Pages** > **Configuration**. Does the memory amount listed match the installed memory?	Replace the Image Processor Board (page 8-41).	Reseat the Memory Card and reprint the Configuration page to check memory.
3	Replace the memory card Does the error still occur?	Replace the Image Processor Board (page 8-41).	Complete.

Collate Full Error

Memory is full and cannot receive additional data. Print job requires additional memory. The following troubleshooting procedure applies to this error.

Applicable Error

- 016-981: Collate Full Error

Initial Actions

- Install additional memory
- Resize the RAM Disk to hold larger files.
- 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, PL10.6.6 ■ Memory Card, PL10.6.8	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Reduce the RAM Disk size setting to allow space for collation. Does the error persist?	Go to step 2.	Complete.
2	Print the Configuration Page: **System** > **Information Pages** > **Configuration**. Does the memory amount listed match the installed memory?	Go to Step 3.	Reseat the Memory Card and reprint the Configuration page to check memory.
3	Partition the print job. Does the error still occur?	Replace the Image Processor Board (page 8-41).	Complete.

Firmware Errors

MPC firmware download has failed . The following troubleshooting procedure applies to this error.

Applicable Errors

- 016-737: Format Error
- 016-738: MPC Error
- 016-741: Protection Error
- 016-742: Invalid ID Error
- 016-743: Range Check Error
- 016-744: Check Sum Error
- 016-745: Header Error

Initial Actions

- Check system firmware version.
- 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, PL10.6.6	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the system firmware version. Is the system firmware the correct version?	Go to step 2.	Update the firmware .
2	Check the network or USB connection connection, then cycle system power. Does the error still occur?	Go to step 3.	Complete.
3	Reseat connections on the Image Processor Board, then cycle system power. Does the error persist?	Replace the Image Processor Board (page 8-41).	Complete.

MCU Communication Error

Communication has failed between the Engine and the Controller. The following troubleshooting procedure applies to this error.

Applicable Error

- 024-371: MCU Comm. 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, PL10.6.6 ■ MCU Board, PL10.7.7 ■ ESS Harness, PL10.8.1	■ "System Connections" on page 10-5 ■ "System Control" on page 10-22

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Reseat connections to the I/P and MCU Boards then cycle system power; Does the error persist?	Go to step 2.	Complete.
2	Check P/J901 and P/J10 connections between the I/P and MCU Boards. Are the connections secure?	Go to step 3.	Reseat the connectors.
3	Disconnet P/J901 and P/J10 and check the harness continuity. Is the harness damaged?	Repair the harness.	Go to step 4.
4	Replace the MCU Board (page 8-57). Does the error persist?	Replace the I/P Board (page 8-41).	Complete.

MCU NVRAM Error

Engine NVRAM is corrupted. The following troubleshooting procedure applies to this error.

Applicable Error

- 041-340: MCU NVRAM Error

Initial Actions

- Reseat the Imaging Unit and Toner Cartridges.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Imaging Unit, PL4.1.21 ■ Toner Cartridge, PL5.2.21~24 ■ Toner CRUM Harness, PL5.1.26 ■ MCU Board, PL10.7.7 ■ EEPROM Board, PL10.7.6 ■ Imaging Unit Harness, PL10.8.11	■ "Map 1 - MCU Board" on page 10-6 ■ "Map 4 - Imaging" on page 10-9 ■ "Xerographics" on page 10-18 ■ "Toner Dispense" on page 10-20

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check these connections: ■ P/J311 Yellow Cartridge CRUM ■ P/J312 Magenta Cartridge CRUM ■ P/J313 Cyan Cartridge CRUM ■ P/J314 Black Cartridge CRUM ■ P/J31 and P/J42 on the MCU Board ■ P/J144 on the EEPROM Board ■ P/J422 on the Imaging Unit Are the connections secure?	Go to step 2.	Secure the connections.
2	Check Toner CRUM harness continuity. Disconnect: ■ J311 from the Yellow CRUM ■ J312 from the Magenta CRUM ■ J313 from the Cyan CRUM ■ J314 from the Black CRUM ■ J31 from the MCU Board Is the harness damaged?	Repair the harness.	Go to step 3.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
3	Check the Imaging Unit harness for continuity. Disconnect: ■ J42 from the MCU Board ■ J144 from the EEPROM Board ■ P422 from the Imaging Unit Is the harness damaged?	Repair the harness.	Go to step 4.
4	Check for +3.3 V at the MCU Board connector P/J42. Is there +3.3 V between P42-3 <=>ground?	Replace the EEPROM Board.	Go to step 5.
5	Reseat the MCU Board connections. Does the error persist?	Replace the MCU Board (page 8-57).	Complete.

Electrical

Control Panel Error

The Control Panel has failed. The following troubleshooting procedure applies to this error.

Applicable Error Code

- 123-314: Control Panel 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
■ Control Panel, PL10.2.2 ■ Image Processor Board, PL10.6.6 ■ A-OP-ESS Harness, PL10.8.12	■ "Map 2 - Feed and Laser Unit" on page 10-7 ■ "System Control" on page 10-22

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Control Panel connections. Is P/J202 on the Control Panel and P/J5301 secure?	Go to Step 2.	Secure the connection.
2	Check the A-OP-ESS harness continuity. Disconnect P/J202 from the Control panel and P5301. Is the harness damaged?	Repair or replace the harness (PL10.8.12).	Go to step 3.
3	Check for +5 V at J403 of the I/P Board. Is there +5 V between ground <=> J403-4 on the MCU Board when the Interlock Switch is closed?	Replace the Control Panel (page 8-43).	Replace the I/P Board (page 8-41).

K Mode Sol Error

The K (Color) Mode Solenoid has failed. The following troubleshooting procedure applies to this error.

Applicable Error Code

- 042-372: K Mode Sol Error

Initial Actions

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

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Feed Drive Assembly, PL7.1.4 ■ MCU Board, PL10.7.7 ■ Registration (KSNR) Harness, PL10.8.9	■ "Map 1 - MCU Board" on page 10-6 ■ "Map 3 - Electrical and Drive" on page 10-8 ■ "Main Drive" on page 10-16

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Run the K Mode Solenoid test (DO-a) on (page 4-44). Does the solenoid opearate?	Go to step 2.	Go to step 3.
2	Reseat the Feed Drive Assembly. Does the error persist?	Go to step 6.	Complete.
3	Check the solenoid connection. Is P/J24 on the MCU Board secure?	Go to Step 4.	Secure the connection.
4	Check for +24 V at J24 on the MCU Board. Is +24 V available at J24-1 <=> ground when the Interlock Switch is closed?	Go to step 5.	Replace the MCU Board (page 8-57).
5	Check the solenoid resistance. Is the resistance across J24-1 and J24-2 80 to 110 Ohms?	Replace the MCU Board (page 8-57).	Replace the Feed Drive Assembly (page 8-37).
6	Check the solenoid connection. Are P/J26 and P/J261 secure?	Go to step 7.	Secure the connections.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
7	Check the Registration (KSNR) harness continuity. Disconnect P/J26 from the MCU Board and P/J261 from the solenoid. Is the harness damaged?	Repair or replace the harness (PL10.8.9).	Go to step 8.
8	Check for +3.3 V at J26 of the MCU Board. Is there +3.3 V between ground <=> J26-1 on the MCU Board when the Interlock Switch is closed?	Go to step 9.	Replace the MCU Board (page 8-57).
9	Run the K Mode Sensor test (DI-04) on (page 4-37). 1. Remove the Feed Drive Assembly leaving P/J261 and P/J24 connected. 2. Close the Front Cover. Does the display change when the sensor is blocked?	Replace the MCU Board (page 8-57).	Replace the Feed Drive Assembly (page 8-37).

Main Motor Error

The Main Motor has failed. The following troubleshooting procedure applies to this error.

Applicable Error

- 042-325: Main Motor 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
■ Main Drive, PL7.1.2 ■ MCU Board, PL10.7.7 ■ Main Motor Harness, PL10.8.7	■ “Map 1 - MCU Board” on page 10-6 ■ “Map 3 - Electrical and Drive” on page 10-8 ■ “Main Drive” on page 10-16

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Transfer Belt, Fuser, and Imaging Unit for correct installation. Are the parts correctly installed?	Go to step 3.	Correct any problems found.
2	Does the error persist when the power is turned On?	Go to step 3.	Complete.
3	Run the Main Motor test (DO-00) on (page 4-41). Does the motor rotate?	Go to step 4.	Go to step 5.
4	Check connectors P/J21 and P/J211 between the MCU Board and Main Motor Assembly. Are the connectors secure?	Go to step 5.	Reconnect the connectors.
5	Check the Main Drive harness continuity. Disconnect P/J21 from the MCU Board and P/J211 from the Main Drive to check continuity. Is the harness damaged?	Repair or replace the harness (PL10.8.7).	Go to step 6.
6	Check the Main Drive Assembly for correct installation. Is the Main Drive Assembly installed correctly?	Go to step 7.	Reseat the Main Drive Assembly (page 8-58).
7	Check for +24 V at J21 on the MCU Board. Is +24 V available at J21-2 and J21-4 when the Interlock Switch is closed?	Replace the Main Drive Assembly (page 8-58).	Replace the MCU Board (page 8-57).

Sub Motor Error

The Sub Motor failed. This troubleshooting procedure applies to this error.

Applicable Error

- 042-326: Motor Error (Sub)

Initial Actions

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

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Sub Drive Assembly, PL7.1.1 ■ MCU Board, PL10.7.7 ■ Sub Motor Harness, PL10.8.8	■ "Map 1 - MCU Board" on page 10-6 ■ "Map 3 - Electrical and Drive" on page 10-8 ■ "Main Drive" on page 10-16

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Transfer Belt, Fuser, and Imaging Unit for correct installation. Are the parts correctly installed?	Go to step 3.	Correct any problems found.
2	Does the error persist when the power is turned On?	Go to step 3.	Complete.
3	Run the Sub Motor test (DO-05) on (page 4-43). Does the motor rotate?	Go to step 4.	Go to step 15.
4	Check connectors P/J22 and P/J221 between the MCU Board and Sub Drive Assembly. Are the connectors secure?	Go to step 5.	Reconnect the connectors.
5	Check the Sub Drive harness continuity. Disconnect P/J22 from the MCU Board and P/J221 from the Sub Drive to check continuity. Is the harness damaged?	Repair or replace the harness (PL10.8.8).	Go to step 6.
6	Check the Sub Drive Assembly for correct installation. Is the Sub Drive Assembly installed correctly?	Go to step 7.	Reseat the Sub Drive Assembly (page 8-60).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
7	Check for +24 V at J22 on the MCU Board. Is +24 V available at J22-2 and J22-4 when the Interlock Switch is closed?	Replace the Sub Drive Assembly (page 8-60).	Replace the MCU Board (page 8-57).

Fan Motor Error

The Fan has failed. The following troubleshooting procedure applies to this error.

Applicable Error

- 042-358: Fan Motor 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
■ Fan, PL10.6.7 ■ LVPS, PL106.16 ■ MCU Board, PL10.7.7 ■ LVPS Harness, PL10.8.3	■ "Map 1 - MCU Board" on page 10-6 ■ "Map 3 - Electrical and Drive" on page 10-8 ■ "LVPS" on page 10-14

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Run the Fan test (DO-1e or DO-1f) (page 4-46): Does the Fan rotate?	Replace the MCU Board (page 8-57).	Go to Step 2.
2	Check P/J503 on the LVPS. Is the connection secure?	Go to step 3.	Connect the Fan.
3	Check the Main LVPS harness continuity. Disconnect P/J501from the LVPS and P/J14 from the MCU Board. Is the harness damaged?	Repair or replace the LVPS Harness (PL10.8.14).	Go to step 4.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	Check for +24 V at J503 on the MCU Board. Is +24 V available at J503-1 <=> ground when the Interlock Switch is closed?	Replace the Fan (page 8-50).	Go to step 5.
5	Replace the LVPS (page 8-47). Does the error persist?	Replace the MCU Board (page 8-57).	Complete.

Laser Error

An error was detected in the Laser Unit. The following troubleshooting procedure applies to this error.

Applicable Error

- 061-370: Laser 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
■ Laser Unit, PL4.1.1 ■ ROS RE Harness, PL4.1.22 ■ ROS Video Harness, PL4.1.23 ■ MCU Board, PL10.7.7	■ "Map 2 - Feed and Laser Unit" on page 10-7 ■ "Laser Unit" on page 10-17

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Laser Unit for correct installation. Is the Laser Unit correctly installed?	Go to step 3.	Reinstall the Laser Unit (page 8-98), then go to step 2.
2	Does the error still occur when the power is turned On?	Go to step 3.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
3	Check P/J40 and P/J41 on the MCU Board, and P/J411 and P/J412 on the laser Unit. Are the connections secure?	Go to step 5	Reconnect the connections. Go to step 4.
4	Does the error still occur when the power is turned On?	Go to step 5.	Complete.
5	Check the ROS RE and ROS Video harnesses for continuity. Is the harness damaged?	Repair the harness, then go to step 6.	Go to step 7.
6	Does the error still occur when the power is turned On?	Go to step 7.	Complete.
7	Replace the Laser Unit (page 8-98). Does the error persist?	Replace the MCU Board (page 8-57).	Complete.

Front Cover Open Close Front Cover

The Interlock Switch indicates the Front Cover is open. The following troubleshooting procedure applies to this error.

Applicable Error

- Front Cover Open Close Front Cover

Initial Actions

- Check the Front Cover interlock actuator and latch for damage.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Front Cover, PL1.1.8 ■ Interlock Harness, PL10.6.4 ■ LVPS, PL10.6.16 ■ MCU Board, PL10.7.7 ■ LVPS Main Harness, PL10.8.14	■ “Map 1 - MCU Board” on page 10-6 ■ “Map 3 - Electrical and Drive” on page 10-8 ■ “LVPS” on page 10-14

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check Interlock Switch operation. Run the Interlock Switch test (DI-07) (page 4-36). Does the Switch operate?	Replace the MCU Board (page 8-57).	Go to step 2.
2	Check the Interlock Harness connections P/J14 and P/J501. Are the connections secure?	Go to step 3.	Secure the connections.
3	Check continuity of the LVPS Main Harness. Disconnect P/J14 from the MCU Board and P/J501 from the LVPS. Is the harness damaged?	Repair the harness.	Go to step 4.
4	Check for +24 V on P44 of the LVPS. Is there +24 V between P44-1 <=> ground?	Go to step 5.	Replace the LVPS (page 8-47).
5	Check the Interlock Switch signal. Does the voltage between P44-3 <=> ground change when the switch is closed?	Replace the LVPS (page 8-47).	Replace the Interlock Harness (page 8-52).
6	Replace the Interlock Switch Harness (page 8-52). Does the error persist?	Replace the MCU Board (page 8-57).	Complete.

Side Door Open Close Side Door

The Right Side Door Switch indicates the Right Side Door is open. The following troubleshooting procedure applies to this error.

Applicable Error

- Side Door Open Close Side Door

Initial Actions

- Check the Right Side Door and switch actuator for damage.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Right Side Cover, PL1.1.7 ■ Right Side Door Switch, PL5.1.9 ■ Side Switch harness, PL5.1.27 ■ MCU Board, PL10.7.7	■ "Map 1 - MCU Board" on page 10-6 ■ "Map 4 - Imaging" on page 10-9 ■ "LVPS" on page 10-14

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check Right Side Door Switch operation. Run the Side Switch test (DI-06) (page 4-38). Does the switch operate?	Replace the MCU Board (page 8-57).	Go to step 2.
2	Check the Side Switch Harness connections P/J29 and P/J291. Are the connections secure?	Go to step 3.	Secure the connections.
3	Check continuity of the Side Switch Harness. Disconnect P/J29 from the MCU Board and P/J291 from the switch. Is the harness damaged?	Repair the harness.	Go to step 4.
4	Replace the Right Side Door Switch (page 8-51). Does the error persist?	Replace the MCU Board (page 8-57).	Complete.

Scanner ADF Cover R Open

The sensor at the ADF rear cover indicates the cover is open. This troubleshooting procedure applies to this error.

Applicable Error

- Scanner ADF Cover R Open

Initial Actions

- Check the ADF rear cover for damage or misalignment.
- 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, PL10.6.6 ■ ADF Assembly, PL10.10.1	■ "Map 3 - Electrical and Drive" on page 10-8 ■ "ADF" on page 10-23

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the ADF rear cover. Is the cover installed correctly and undamaged?	Go to step 2.	Repair or replace the ADF.
2	Check the connector P/J1003 on the I/P Board. Is the connection secure?	Go to step 3.	Secure the connector.
3	Replace the ADF Assembly (page 8-79). Does the error persist?	Replace the I/P Board (page 8-41).	Complete.

CTD Sensor Error (CMYK)

Caution

Do not run the toner motors for more than a few seconds.

The ADC Sensor has detected a density error for the indicated color. This troubleshooting procedure applies to this error.

Applicable Errors

- 092-310: CTD Sensor Error (CMYK)

Initial Actions

- Clean the Transfer Belt and ADC Sensor window using a dry cloth.
- Check the indicated Toner Cartridge.
- Check the Imaging Unit for sealing tapes or protective covers.
- Check the Transfer Belt and Imaging Unit life counters. If near end of life, replace the part.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Imaging Unit, PL4.1.21 ■ Dispense Assembly, PL5.1.1 ■ Toner Cartridge (CMYK), PL5.1.21~24 ■ Toner Motor harness, PL5.1.25 ■ Transfer Belt, PL6.1.7 ■ Left Side Harness, PL10.4.18 ■ MCU Board, PL10.7.7	■ “Map 1 - MCU Board” on page 10-6 ■ “Map 4 - Imaging” on page 10-9 ■ “Xerographics” on page 10-18 ■ “Toner Dispense” on page 10-20

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Transfer Belt installation. Is the Transfer Belt correctly installed?	Go to step 3.	Reseat the Transfer Belt. Go to step 2.
2	Does the error still occur when the printer is turned On?	Go to step 3.	Complete.
3	Check Left Side Harness continuity. Disconnect P/J28 from the MCU Board and P/J281 to the Transfer Belt. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 4.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	Run the Toner Motor test for the affected color (DO-21, DO-23, DO-25, DO-27) on (page 4-47). Does the motor rotate?	Go to step 5.	Go to step 6.
5	Check the Dispense Assembly gear for the indicated color. Is the gear damaged or excessively worn?	Repair or replace the gear or Dispense Assembly (page 8-91).	Go to step 6.
6	Check MCU Board connectors P/J18 and toner motor connections: ■ P/J181(Y) ■ P/J182(M) ■ P/J191(C) ■ P/J192(K) Are the connectors secure?	Go to step 7.	Reconnect the connectors.
7	Check Toner Motor harness continuity. Disconnect P/J18 from the MCU Board and the connection to the indicated toner motor. Is the harness damaged?	Repair or replace the harness (PL10.8.7).	Go to step 8.
8	Check for +24 V at J18 or J19 on the MCU Board. Is +24 V available at ■ J18-3 (Y) ■ J18-8 (M) ■ J19-4 (C) ■ J19-9 (K) when the Interlock Switch is closed?	Replace the Dispense Assembly (page 8-91).	Replace the MCU Board (page 8-57).
9	Reseat the Imaging Unit. Does the error persist?	Go to step 10.	Complete.
10	Replace the indicated Toner Cartridge. Does the error persist?	Replace the Transfer Belt (page 8-103).	Complete.

Check Unit CTD Sensor Error

The ADC Sensor has detected a density error for the indicated color. This troubleshooting procedure applies to this error.

Applicable Error

- Check Unit CTD Sensor

Initial Actions

- Clean the Transfer Belt and ADC Sensor window using a dry cloth.
- Check the Transfer Belt life counter. If near end of life, replace the part.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Transfer Belt, PL6.1.7 ■ Left Side Harness, PL10.4.18 ■ MCU Board, PL10.7.7	■ "Map 1 - MCU Board" on page 10-6 ■ "Map 4 - Imaging" on page 10-9 ■ "Xerographics" on page 10-18

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Transfer Belt installation. Is the Transfer Belt correctly installed?	Go to step 3.	Reseat the Transfer Belt. Go to step 2.
2	Does the error still occur when the printer is turned On?	Go to step 3.	Complete.
3	Check connectors P/J28 and P/J281 between the MCU Board and Transfer Belt. Are the connectors secure?	Go to step 4	Reconnect the connectors.
4	Check Left Side Harness continuity. Disconnect P/J28 from the MCU Board and P/J281 to the Transfer Belt. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 4.
5	Replace the Transfer Belt (page 8-103). Does the error persist?	Replace the MCU Board (page 8-57).	Complete.

Transfer Life or DTB Life Over Error

The Transfer Belt has reached end of life. This troubleshooting procedure applies to these errors.

Applicable Errors

- Transfer Life
- 094-351 DTB Life Over

Initial Actions

- Check the Transfer Belt life counter. If near end of life, replace the part.
- Cycle printer power.
- If the problem persists, follow the procedure below.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Transfer Belt, PL6.1.7 ■ Left Side Harness, PL10.4.18 ■ MCU Board, PL10.7.7	■ "Map 1 - MCU Board" on page 10-6 ■ "Map 4 - Imaging" on page 10-9 ■ "Xerographics" on page 10-18

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Transfer belt life counter. Has the counter reached end of life?	Replace the Transfer Belt (page 8-103).	Go to step 2.
2	Check the Transfer Belt installation. Is the Transfer Belt correctly installed?	Go to step 3.	Reseat the Transfer Belt. Go to step 2.
3	Does the error still occur when the printer is turned On?	Go to step 4.	Complete.
4	Check connectors P/J28 and P/J281 between the MCU Board and Transfer Belt. Are the connectors secure?	Go to step 5.	Reconnect the connectors.
5	Check Left Side Harness continuity. Disconnect P/J28 from the MCU Board and P/J281 to the Transfer Belt. Is the harness damaged?	Repair or replace the harness (PL10.4.18).	Go to step 6.
6	Replace the Transfer Belt (page 8-103). Does the error persist?	Replace the MCU Board (page 8-57).	Complete.

Env Sensor Error

The Environmental Sensor has detected temperature error. This troubleshooting procedure applies to this error.

Applicable Error

- 092-661: Env 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
■ Humidity/Temp Sensor PL10.4.20 ■ Humidity Harness, PL10.4.21 ■ MCU Board, PL10.7.7	■ "Map 1 - MCU Board" on page 10-6 ■ "Map 3 - Electrical and Drive" on page 10-8 ■ "Xerographics" on page 10-18

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Humidity/Temperature Sensor for correct installation. Is the Humidity/Temperature Sensor correctly installed?	Go to step 2.	Reseat the Humidity/ Temperature Sensor. Go to step 2.
2	Does the error still occur when the printer is turned On?	Go to step 3.	Complete.
3	Check connectors P/J20 and P/J201 between the MCU Board and the Humidity/Temperature Sensor. Are the connectors securely connected?	Go to step 4.	Reconnect the connectors.
4	Check the Humidity Harness for continuity. Disconnect P/J20 from the MCU Board and P/J201 from the Humidity/Temperature Sensor. Is the harness damaged.	Go to step 5.	Replace the Humidity Harness.
5	Check the Humidity/Temperature Sensor signal. Is there +5 V across ground <=> J20-4 pin on the MCU Board?	Replace the Humidity/ Temperature Sensor (page 8-45).	Replace the MCU Board (page 8-57).

Memory Errors

A memory access error occurred. This troubleshooting procedure applies to these errors.

Applicable Errors

- 016-500: Erase Flash Error
- 016-501: Write Flash Error
- 016-502: Verify Flash Error
- 116-310: Font ROM Error
- 116-314: MAC Address Error
- 116-315: RAM Error
- 116-317: Controller Error
- 116-323: NVRAM Error
- 116-324: Controller Error
- 116-326: NVRAM Error
- 116-327: Controller Error
- 116-328: Controller Error
- 116-343: ASIC Error
- 116-350: Network Error
- 116-351: Network Error
- 116-352: Network Error
- 116-355: Network Error
- 116-390: NVRAM Error
- 117-365: Verify Flash Error
- 131-397: Verify Flash 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, PL10.6.6	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Image Processor Board for correct installation. Is the Image Processor Board correctly installed?	Go to step 2.	Reseat connections on the Image Processor Board (page 8-41).
2	Does the error still occur when the printer is turned On?	Replace the Image Processor Board (page 8-41).	Complete.

Out of Memory

The printer controller has detected a memory access error. The following troubleshooting procedure applies to these errors.

Applicable Errors

- 016-718: Out of Memory Error
- 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, PL10.6.6	■ "Map 3 - Electrical and Drive" on page 10-8

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the memory. Print the Configuration page to determine installed memory size. Is the print job too large?	Divide the print job to fit installed memory.	Go to step 2.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
2	Reseat the Memory Card. Does the error persist?	Replace the Memory Card, then go to step 3.	Complete.
3	Reseat all connections on the Image Processor Board. Does the error persist?	Replace the Image Processor Board (page 8-41).	Complete.

RAM Errors

The controller has detected a RAM access error. The following troubleshooting procedure applies to these errors.

Applicable Errors

- 116-316: RAM Error
- 116-320: 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
■ Image Processor Board, PL10.6.6 ■ Memory Card, PL10.6.8	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Memory Card. If the Memory Card was recently installed, it may not be compatible. Is the Memory Card compatible?	Go to step 2.	Replace the Memory Card.
2	Check the Memory Card for correct installation. Is the Memory Card correctly installed?	Go to step 3.	Reseat the Memory Card.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
3	Replace the Memory Card. Does the error persist?	Replace the Image Processor Board (page 8-41).	Complete.

Controller Error

Communication error has occurred while performing a copy job. The following troubleshooting procedure applies to these errors.

Applicable Errors

- 117-313: Controller Communication Error
- 117-323: Controller Error
- 117-324: Controller Error
- 117-344: Controller Error
- 117-354: Controller Error
- 117-355: Controller 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, PL10.6.6	■ "Imaging" on page 10-24

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Reseat all connections to the I/P Board, then cycle system power. Does the error persist?	Replace the I/P Board (page 8-41)	Complete.

Email Errors

Email Errors

Email was unsuccessful. This troubleshooting procedure applies to these errors.

Applicable Errors

- 016-503: Email Error, Invalid SMTP Server Error
- 016-504: Email Error, Invalid POP3 Server Error
- 016-505: Email Login Error, POP3 Login Failed Error
- 016-506: Email Login Error
- 016-507: Email Login Error, SMTP Login Failed Error
- 016-767: Invalid Email Address
- 016-768: Invalid From Address
- 016-786: Network Scan Error, Communication Time Out
- 016-790: Network Not Ready Error
- 016-794: Network Not Ready, Scan Aborted Error

Initial Actions

- Check network connectivity.
- 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, PL10.6.6	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the network connection using **ping** command. Is the printer connected to the network?	Go to step 3.	Go to step 2.
2	Check the network setting: **System** > **Admin Menu** > **Wired.** Are the network settings correct?	Go to step 3.	Correct the network settings.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
3	Check the Address Book setting: **System > Admin Menu > Address Book** Is the address book setting correct?	Go to step 4.	Set the correct address book information.
4	Check the printer configuration. Does the printer configuration match the server requirements?	Go to step 5.	Change the configurations to match.
5	Check the Image Processor Board installation. Does the error persist when connecting to the server?	Replace the I/P Board (page 8-41).	Complete.

SMB Errors

SMB Login Error

SMB login failed. This troubleshooting procedure applies to these errors.

Applicable Errors

- 031-521: SMB Login Error
- 031-522: SMB Login Error

Initial Actions

- Check network connectivity.
- Check administrative access permissions.
- 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, PL10.6.6	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the scan setting: **Default Settings> Scan > Scan Defaults> Scan to Network.** Are the network settings correct?	Go to step 2.	Set to **Computer**.
2	Check the network connection using **ping** command. Is the printer and computer connected to the network?	Go to step 3.	Connect the printer to the network.
3	Check the Image Processor Board installation. Does the error persist when connecting to the server?	Replace the I/P Board (page 8-41).	Complete.

SMB or DNS Error

SMB or DNS failed to resolve the device. This troubleshooting procedure applies to these errors.

Applicable Errors

- 031-523: SMB Error
- 031-526: DNS Error
- 031-528: SMB Error

Initial Actions

- Check network connectivity.
- Check that the shared folder exists and has the correct name.
- 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, PL10.6.6	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Address Book setting: Does the **Share Name** in the **Server Address** tab of the address book match the target system?	Go to step 2.	Rename the shared folder.
2	Cycle system power. Does the error persist?	Replace the I/P Board (page 8-41).	Complete.

SMB Login Error

SMB login failed. This troubleshooting procedure applies to these errors.

Applicable Error

- 031-524: SMB Error

Initial Actions

- Check network connectivity.
- Check administrative access permissions.
- 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, PL10.6.6	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the server setting: Is the **User Limit** in the **Sharing** tab set to **Maximum Allowed**?	Go to step 2.	Set the user limit to **Maximum Allowed**.
2	Cycle system power. Does the error persist?	Replace the I/P Board (page 8-41).	Complete.

SMB Error

SMB failed. Windows 2000 or later is required. This troubleshooting procedure applies to these errors.

Applicable Error

- 031-525: SMB Error

Initial Actions

- Check client computer operating system version (Windows 2000 or later).
- 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, PL10.6.6	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the operating system version: Is the client computer running Windows 2000 or later?	Go to step 2.	Upgrade the client computer.
2	Cycle system power. Does the error persist?	Replace the I/P Board (page 8-41).	Complete.

SMB or FTP Errors

SMB or FTP failed to resolve the device. This troubleshooting procedure applies to these errors.

Applicable Errors

- 031-529: SMB Login Error
- 031-530: SMB Path Error
- 031-531: SMB List Error
- 031-532: SMB Error
- 031-533: SMB Error
- 031-534: SMB Error
- 031-535: SMB Error
- 031-536: SMB Error
- 031-541: SMB Login Error
- 031-546: SMB Login Error
- 031-547: SMB Login Error
- 031-576: FTP Error
- 031-578: SMB Login Error
- 031-579: SMB Path Error
- 031-580: FTP Error
- 031-580: FTP Error
- 031-581: SMB Login Error
- 031-582: FTP Error
- 031-584: FTP Error
- 031-585: FTP Error
- 031-587: FTP Error
- 031-588: FTP Error

Initial Actions

- Check network connectivity.
- Check the system adress book configuration settings.
- 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, PL10.6.6	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Address Book setting. Is the **Server Addresss** tab in the **Address Book** setting correct?	Go to step 2.	Reset the **Server Address** setting.
2	Check the sharing folder. Is the **Sharing** tab of the sharing foler set correctly?	Go to step 3.	Reset the **Sharing** tab setting.
3	Cycle system power. Does the error persist?	Replace the I/P Board (page 8-41).	Complete.

Scanner and Copier Errors

PC Scan Time Out

017-988 occurs due to:

- Specified destination folder does not exist on the PC.
- Black and White scanning was performed with JPEG specified as the image format.
- There was no request from the PC within 30 seconds after Scan to Application was set via the printer menu.

Applicable Error

- 017-988: Scan Time Out

Initial Actions

- Check for scanner driver installation
- Check connections between the PC and printer (USB)
- Cycle system power.
- If the problem persists, follow the procedure below

.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Image Processor Board (PL10.6.6) ■ USB Cable	“System Control” on page 10-22

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the USB cable connection. Reconnect the PC and the printer. Does the error persist?	Go to step 2.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
2	Check the scanner driver on the PC. 1. Enable Windows Image Acquisition on the PC: **Start** > **Settings** > **Control Panel** > **Administrative Tools** > **Services** > **Window Image Acquisition (WIA)**. 2. Check for the Scanner Icon on the PC: **Start** > **Settings** > **Control Panel** > **Scanners and Cameras.** Is the Scanner icon available?	Go to step 3.	Install the scanner driver.
3	Check the scanner software on the PC: **Start** > **Programs** > **Xerox** > **Phaser 6128MFP.** Is the Scan Manager software installed?	Go to step 4.	Install the scanner utility software.
4	Check the Scan Manager settings: **Start** > **Programs** > **Xerox** > **Phaser 6128MFP** > **Express Scan Manager.** Are the Scan Manager settings correct? **NOTE** Check that the output destination directory esists on the PC.	Go to step 5.	Correct the settings: ■ Image Type ■ Resolution ■ Paper Type ■ Output Destination
5	Check the scanner utility software: **Start** > **Settings** > **Control Panel** > **Scanners and Cameras** > **Xerox Phaser 6128MFP Scanner**. 1. Highlight and right-click on Phaser 6180MFP Scanner to open the Properties window. 2. Click the **Events** tab. 3. Check that the **Select an event** option is correctly selected. 4. Check the software being used with the scanner. Is Phaser 6128MFP Express Scan Manager selected? (**Actions** > **Start this program** > **Phaser 6128MFP Express Scan Manager**)	Retry the scanning job. If the message "Select the program to launch for this action" appears on the PC, select the Express Scan Manager within 30 seconds. If the error persists, replace the I/P Board (page 8-41)	Under the Events tab, Actions box, Start the Express Scan Manager.

Scanner Error

Scanning has failed. This troubleshooting procedure applies to these errors.

Applicable Errors

- 062-320: Scanner Error
- 062-324: Memory 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
■ Image Processor Board, PL10.6.6 ■ IIT Sub Assembly, PL10.9.2	■ "Map 3 - Electrical and Drive" on page 10-8 ■ "Imaging" on page 10-24

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check connectors P/J1001 and P/J1002,on the Image Processor Board. Reseat the connectors. Does the error persist?	Go to step 2.	Complete.
2	Clear system memory, then scan a document. Does the error persist?	Go to step 3.	Complete.
3	Check the **Color** scan default setting. Is the scan default for **Color** set to **Photo**?	Set the default to **Color**.	Go to step 4.
4	Check the **Resolution** scan default setting. Is the scan default for **Resolution** set to **600**?	Go to step 5.	Set the default to **600**.
5	Replace the IIT Sub Assembly (page 8-82). Does the error persist?	Replace the I/P Board (page 8-41).	Complete.

Scanner Error

Scanning has failed. This troubleshooting procedure applies to these errors.

Applicable Errors

- 062-322: Scanner Parameter Error
- 062-393: Scanner Error (CcdAsic 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, PL10.6.6 ■ IIT Sub Assembly, PL10.9.2	■ "Map 3 - Electrical and Drive" on page 10-8 ■ "Imaging" on page 10-24

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check connectors P/J1001 and P/J1002,on the Image Processor Board. Reseat the connectors. Does the error persist?	Replace the I/P Board (page 8-41).	Complete.

Scanner Error

The Scanner has failed. The following troubleshooting procedure applies to these errors.

Applicable Error

- 062-323: Scanner 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, PL10.6.6	■ "Imaging" on page 10-24

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Turn the printer Off, wait 5 seconds, then turn the power On. Does the error persist?	Go to step 2.	Complete.
2	Check IIT connections to the Image Processor Board. Does the error persist?	Replace the Image Processor Board (page 8-41).	Complete.

Copier Error Last Sheet not Copied

An error in the imaging subsystem was detected. The following troubleshooting procedure applies to this error.

Applicable Error

- Copier Error Last Sheet not Copied

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, PL10.6.6	■ "Imaging" on page 10-24

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Does the error message disappear within 70 seconds automatically, or disappear after pressing the **OK** button?	Go to step 2.	Go to step 4.
2	Does the error persist when copying, faxing, or scanning?	Go to step 3.	To to step 4.
3	Print a Configuration page: **System > Information Pages > Configuration**. Does the error persist when copying, faxing, or scanning?	Go to step 4.	Complete.
4	Cycle system power. Does the error persist?	Replace the Image Processor Board (page 8-41).	Complete.

Controller Error

Communication between the Scanner and the Controller has failed. The following troubleshooting procedure applies to this error.

Applicable Errors

- 062-311: Scanner Error
- 062-321: Scanner Error
- 062-360: Scanner Sensor Error
- 062-371: Scanner Sensor Error
- 117-352: MFP Controller 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, PL10.6.6 ■ IIT Sub Assembly, PL10.9.2	■ “Imaging” on page 10-24

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Reseat connectors P/J1001 and P/J1002 on the I/P Board, then cycle system power. Does the error persist?	Replace the I/P Board (page 8-41), then go to step 2.	Complete.
2	Restore system power. Does the error persist?	Replace the IIT Sub Assembly (page 8-82).	Complete.

Fax Errors

Memory Full / Fax Communications

The Image Processor Board does not have enough memory. The following troubleshooting procedure applies to these errors.

Applicable Errors

- 017-970 MFD Memory Full
- 033-503 MFD Memory Full
- 033-788 MFD Memory Full
- 033-513 FAX Communication
- Fax Send Error Last Sheet not Sent

Note

The Fax Send Error Last Sheet not Sent error occurs when the sheet count of a single fax transmission exceeds 75. To send more than 75 sheets at a time, divide the documents in blocks

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 (PL10.6.6) ■ Memory Card (PL10.6.8)	“System Control” on page 10-22

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Clear the stored data: **Fax/Scanner diag > BackUp Data > Document Clear**. Does the error persist after clearing the data?	Go to step 2.	Complete
2	Reseat the Memory Card and cycle system power. Does the error persist?	Go to step 3.	Complete

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
3	Replace the Memory Card. Does the error persist?	Replace the I/P Board (page 8-41).	Complete.

Fax Codec Error

The Fax has failed. The following troubleshooting procedure applies to this error.

Applicable Errors

- 033-510: Fax Codec Error
- 033-520: Fax Codec Error
- 033-521: Fax Codec Error
- 033-522: Fax Codec Error
- 033-523: Fax Codec Error
- 033-524: Fax Codec Error
- 033-525: Fax Codec Error
- 033-526: Fax Codec Error
- 033-768: Fax Codec Error
- 033-769: Fax Codec Error
- 033-771: Fax Codec Error
- 033-772: Fax Codec Error
- 033-773: Fax Codec Error
- 033-786: Fax Codec 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, PL10.6.6	"Imaging" on page 10-24

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the system firmware. Is the system firmware current?	Reseat connections to the I/P Board, then go to step 2.	Reload system firmware.
2	Cycle system power. Does the error persist?	Go to step 3.	Complete.
3	Check the Fax Parameter setting: **Service Mode** > **Fax/Scanner Diag** > **Parameter**. Does the value [Hex] show number 2 (MMR)?	Replace the I/P Board (page 8-41).	Change the value ([Hex] to 2.

MFD Controller Errors

The MFD Controller has detected errors. The following troubleshooting procedure applies to these errors.

Applicable Errors

- 016-986 File Size Limits
- 017-314: Report Error
- 017-315: Report Error
- 017-971: MFD Controller Error (FlashROM Write Error)
- 017-972: Controller Error (FlashROM Erase Error)
- 017-973: Controller Error (FlashROM Suspend Error)
- 017-974: Controller Error (FlashROM Resume Error)
- 017-975: Controller Error (File Handle Over)
- 017-976: Controller Error (File Table Over)
- 017-977: Controller Error (File Count Over)
- 017-978: Controller Error (File Page Over)
- 017-979: Controller Error (Double File Open)
- 017-980: Report Error
- 017-986: Controller Error (Create 0 Byte File)
- 017-987: Controller Error (File Read Error)
- 017-989: Controller Error (File Write Error)
- 033-502: Fax Error
- 033-787; Memory Full
- 033-789: Fax Job Cancelled
- 033-790: Fax Job Cancelled
- 033-791: Fax Job Cancelled

- 035-779: Fax Communications Error
- 133-231: Fax Communications Error
- 133-234: Fax Error
- 133-235: Fax Error
- 116-396: Scan Error
- 116-987: Scan Error
- 116-397: Controller Error
- 116-398: Controller Error
- 117-322: Error (SYSMGR Task Error)
- 117-328: Error (MSCAN Task Error)
- 117-335: Error (DFAX Task Error)
- 117-336: Error (Pull Task Error)
- 117-337: Error (IITTX Task Error)
- 117-340: Error (Hook Task Error)
- 117-348: Error (IITRX Task Error)
- 117-349: Error (SCANMGR Task Error)
- 117-350: Error (Task Initialize Error)
- 117-362: EEPROM 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 (PL10.6.6)	"System Control" on page 10-22

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Print any files stored in memory, then cycle system power. Does the error persist?	Go to step 2.	Complete.
2	Check the country setting: **System** > **Admin Menu** > **Fax Settings** > **Country**. Is the country setting correct?	Go to step 3.	Correct the country setting.
3	Reseat IIT connections on the I/P Board, then cycle system power. Does the error persist?	Replace the I/P Board (page 8-41).	Complete.

Fax Communication Error

Fax communication has failed. This troubleshooting procedure applies to these errors.

Applicable Errors

- 033-512: Fax Communication Error
- 033-753: Fax Communication Error
- 033-754: Fax Communication Error
- 033-755: Fax Communication Error
- 033-756: Fax Communication Error
- 033-757: Fax Communication Error
- 033-758: Fax Communication Error
- 033-759: Fax Communication Error
- 033-760: Fax Communication Error
- 033-761: Fax Communication Error
- 035-706: Fax Communication Error
- 035-792: Fax Communication 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, PL10.6.6	“Imaging” on page 10-24

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Fax line connection at both ends. Reconnect the Fax line to the Fax Board. Does the error still occur?	Go to step 2.	Complete.
2	Set the Fax Capability V34 setting to **Disable**. Does the error persist?	Go to step 3.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
3	Check the system firmware. Is the system firmware current?	Reseat connections to the I/P Board, then go to step 4.	Reload system firmware.
4	Cycle system power. Does the error persist?	Replace the I/P Board (page 8-41)	Complete.

Fax Communication Error

Fax communication has failed. This troubleshooting procedure applies to these errors.

Applicable Errors

- 033-757: Fax Communication Error
- 033-758: Fax Communication Error
- 033-759: Fax Communication Error
- 033-760: Fax Communication Error
- 033-761: Fax Communication Error
- 035-706: Fax Communication Error
- 035-792: Fax Communication 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, PL10.6.6 ■ Fax Board, PL10.6.9	"Imaging" on page 10-24

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the system firmware. Is the system firmware current?	Reseat connections to the I/P Board, then go to step 2.	Reload system firmware.
2	Cycle system power. Does the error persist?	Replace the Fax Board (page 8-47), then go to step 3.	Complete.
3	Cycle system power. Does the error persist?	Replace the I/P Board (page 8-41)	Complete.

Target Fax Connect Errors

The Fax was unable to connect to the receiving Fax after dialing. This troubleshooting procedure applies to these errors.

Applicable Errors

- 033-752: Target Fax Busy Error
- 034-799: Fax Number Error
- 035-746: No Dial Tone 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, PL10.6.6	"Imaging" on page 10-24

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Is the target Fax number correct?	Go to step 2.	Manually dial the number.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
2	Is the target Fax busy?	Wait for ten minutes and re-dial.	Go to step 3.
3	Check the Fax Parameter setting for **Country**. Is **Country** set correctly?	Go to step 4.	Correct the setting.
4	Check the system firmware. Is the system firmware current?	Reseat connections to the I/P Board, then go to step 5.	Reload system firmware.
5	Cycle system power. Does the error persist?	Replace the I/P Board (page 8-41)	Complete.

Fax Communication Error

The Fax has failed to received a transmission signal. This troubleshooting procedure applies to this error.

Applicable Error

- 033-762: Fax Communication 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, PL10.6.6	"Imaging" on page 10-24

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the system firmware. Is the system firmware current?	Go to step 2.	Reload system firmware.
2	Check the Junk Fax setting. Is Junk Fax Filter On?	Go to step 3.	Replace the I/P Board (page 8-41).

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
3	Reseat all connections to the I/P Board and cycle system power. Does the error persist?	Replace the I/P Board (page 8-41)	Complete.

Fax Codec Error

The Fax has failedl. This troubleshooting procedure applies to this error.

Applicable Errors

- 033-775: Fax Codec Error
- 033-777: Fax Codec Error
- 033-784: Fax Codec 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, PL10.6.6	"Imaging" on page 10-24

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the system firmware. Is the system firmware current?	Go to step 2.	Reload system firmware.
2	Reseat all connections to the I/P Board and cycle system power. Does the error persist?	Replace the I/P Board (page 8-41)	Complete.

Fax Data Errors

The Fax has failed. The following troubleshooting procedure applies to these errors.

Applicable Errors

- 033-500: Fax Codec Error
- 033-514: Fax Codec Error
- 033-515: Fax Codec Error
- 033-516: Fax Codec Error
- 033-765: Fax Codec Error
- 033-766: Fax Codec Error
- 033-767: Fax Codec Error
- 033-774: Fax Codec Error
- 033-776: Fax Codec Error
- 033-785: Scan Codec Error
- 117-310 MFD Controller Error
- 117-311 MFD Controller Error
- 117-312 MFD Controller Error
- 133-236: Fax Error
- 133-237: Fax Codec Error
- 133-238: Fax Codec Error
- 133-239: Fax Error
- 133-240: Fax Error
- 133-241: Fax Error
- 133-242: Fax Error
- 133-243: Fax Error
- 133-244: Fax Error
- 133-246: Fax Error
- 133-247: Fax Error
- 133-248: Fax Error
- 133-249: Fax Error
- 133-251: Fax Error
- 133-252: Fax Error
- 133-259: Fax Error
- 133-260: Fax Error
- 133-261: Fax Error
- 133-269: Fax Error
- 133-271: Fax Error
- 133-272: Fax Error

- 133-273: Fax Error
- 133-274: Fax Error
- 133-275: Fax Error
- 133-276: Fax Error
- 133-277: Fax Error
- 133-278: Fax Error
- 133-279: Fax Error
- 133-280: Fax Error
- 133-281: Fax Error
- 133-282: Fax Error
- 133-283: Fax Error
- 133-286: Fax Error
- 133-287: Fax Error
- 133-288: Fax Error
- 133-289: Fax Error
- 133-290: Fax 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, PL10.6.6	"Imaging" on page 10-24

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the system firmware. Is the system firmware current?	Reseat connections to the I/P Board, then go to step 2.	Reload system firmware.
2	Cycle system power. Does the error persist?	Replace the I/P Board (page 8-41)	Complete.

Incorrect Password Error

The DFAX password does not match with the Fax/Scan Lock password. The following troubleshooting procedure applies to this error.

Applicable Error

- 033-517: Incorrect Password

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 Processsor Board, PL10.6.6	"Imaging" on page 10-24

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the password setting. Is the password correct?	Go to step 2.	Set the password.
2	Set the Panel Lock Set to **Disable**. Does the error persist?	Replace the I/P Board (page 8-41).	Set the Panel Lock Set to **Enable**. If the error returns, replace the I/P Board (page 8-41).

Fax Communication Error

The Fax has failed. The following troubleshooting procedure applies to this error.

Applicable Errors

- 033-501: Fax Codec Error
- 033-763: Fax Communication 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, PL10.6.6 ■ IIT Sub Assembly, PL10.9.2	■ "Imaging" on page 10-24 ■ "System Connections" on page 10-5

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the system firmware. Is the system firmware current?	Reseat connections to the I/P Board, then go to step 2.	Reload system firmware.
2	Cycle system power. Does the error persist?	Go to step 3.	Complete.
3	Replace the I/P Board (page 8-41). Does the error persist?	Repalce the IIT Sub Assembly (page 8-82).	Complete.

Fax Communication Error

The Fax is unable to communicate with the receiving Fax. This troubleshooting procedure applies to these errors.

Applicable Errors

- 034-515: Fax Communication Error
- 035-718: Target Fax No Answer
- 134-211: Restart Printer

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, PL10.6.6 ■ Fax Board, PL10.6.9	■ "Imaging" on page 10-24 ■ "System Connections" on page 10-5

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the user operation. Does the user operate the Fax correctly?	Go to step 2.	Retry the Fax operation.
2	Check Fax line connections at both ends of the cable. Reconnect the Fax line to the Fax Board. Does the error still occur?	Go to step 3.	Complete.
3	Check system operation using a known good Fax to receive the data. Does the error persist?	Go to step 4.	Complete.
4	Check the system firmware. Is the system firmware current?	Reseat connections to the I/P Board, then go to step 5.	Reload system firmware.
5	Replace the Fax Board (page 8-47). Does the error persist?	Go to step 6.	Complete.
6	Cycle system power. Does the error persist?	Replace the I/P Board (page 8-41)	Complete.

Target Fax No Answer

The Fax has failed. The following troubleshooting procedure applies to this error.

Applicable Errors

- 035-701: Fax Communication Error
- 035-720: Fax Communication Error
- 035-781: Target Fax Busy 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
■ Conrol Panel, PL10.2.2 ■ Image Processor Board, PL10.6.6	“System Control” on page 10-22

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check Fax line connections at both ends of the cable. Reconnect the Fax line to the Fax Board. Does the error still occur?	Go to step 2.	Complete.
2	Check system operation using a known good Fax to receive the data. Does the error persist?	Go to step 3.	Complete.
3	Check the **Line Type**, **Tone/Pulse**, and **Country** settings. Are the settings correct?	Go to step 4.	Correct the settings.
4	Check the system firmware. Is the system firmware current?	Reseat connections to the I/P Board, then go to step 5.	Reload system firmware.
5	Replace the Fax Board (page 8-47). Does the error persist?	Go to step 6.	Complete.
6	Cycle system power. Does the error persist?	Replace the I/P Board (page 8-41)	Complete.

Fax Communications Error

The Fax failed. The following troubleshooting procedure applies to these errors.

Applicable Errors

- 033-511: Fax Codec Error
- 033-799: Fax Codec Error
- 033-782: Fax Communication Error
- 034-508: Fax Communication Error
- 035-702: Fax Communication Error
- 035-704: Fax Communication Error
- 035-705: Fax Communication Error
- 035-708: Fax Communication Error
- 035-709: Fax Communication Error
- 035-710: Fax Communication Error
- 035-716: Fax Communication Error
- 035-717: Fax Communication Error
- 035-728: Fax Communication Error
- 035-729: Fax Communication Error
- 035-737: Fax Communication Error
- 035-739: Fax Communication Error
- 035-740: Fax Communication Error
- 035-742: Fax Communication 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, PL10.6.6 ■ Fax Board PL10.6.9	“System Control” on page 10-22

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check Fax line connections at both ends of the cable. Reconnect the Fax line to the Fax Board. Does the error still occur?	Go to step 2.	Complete.
2	Check system operation using a known good Fax to receive the data. Does the error persist?	Go to step 3.	Complete.
3	Replace the Fax Board (page 8-47). Does the error persist?	Go to step 4.	Complete.
4	Check the system firmware. Is the system firmware current?	Reseat connections to the I/P Board, then go to step 5.	Reload system firmware.
5	Cycle system power. Does the error persist?	Replace the I/P Board (page 8-41)	Complete.

General Troubleshooting

In this chapter...

Chapter 4

Introduction

This chapter covers the System Startup, Power On Self Test (POST), Service Diagnostics, and troubleshooting procedures 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 Toner 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.

POST Test Description

Test	Error	Description
CodeROM	116-317	This test calculates the ROM checksum chip by chip and compares it with the value stored in CodeROM.
FontROM		This test calculates the FontROM checksum chip by chip and compares it with the value stored in FontROM.
	116-310	Checksum error is in the built-in FontROM.
	116-317	Checksum error is in the main program ROM.
EEPROM		This test verifies the EEPROM.
	116-323	Error in EEPROM0 during initialization.
	116-326	Error in EEPROM1 during initialization.
DRAM		This test checks the DRAM.
	116-315	Error if included RAM is different.
	116-316	Error if extended RAM is different.
	116-320	Error if extended RAM is not supported.
MAC+PHY Test	116-352	This test performs PHY internal loopback.
ASIC	116-343	Performs register test.
PANEL		This test checks Control Panel function.
IOT	024-371	This test performs communication tests between the print engine and controller.

Service Diagnostics

The Phaser 6128MFP printer has built-in diagnostics to test Sensors, Clutches, Solenoids, display printer status, and provides some NVRAM access. Use these tests to diagnose problems 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 the diagnostic tests 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 Diagnostic Tests” on page 4-9.

Entering Service Diagnostics Mode

1. Turn the printer power Off.
2. Press and hold the **Up** and **Down Arrow** buttons simultaneously and turn the printer power On.
3. Release the **Arrow** buttons when **Please Wait...** message is displayed.
4. The **Service Mode** menu appears with **FAX/Scanner Diag** and **Printer Diag** and test groups listed to indicate the printer is in service mode.

Using Service Diagnostics

Two test groups, FAX/Scanner Diag and Printer Diag are avilable to test components of the ADF, Scanner, Fax, or printer. 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.

Diagnostic tests are arranged in a menu structure. Use the Arrow buttons to scroll through the menus and highlight the desired test. The OK button runs the test. To switch between test groups, exit the current diagnostics mode and return to the Service Mode menu.

Service Diagnostics Button Functions

Service Diagnostics Button Functions

Button	Function
Up	Moves or selects an item or parameter.
Down	Moves or selects an item or parameter.
Left	Moves the cursor to the left.
Right	Moves the cursor to the right.
OK	Confirms settings or runs the selected test.
Stop	Resets a diagnostic item, cancels a task, or exit the menu.

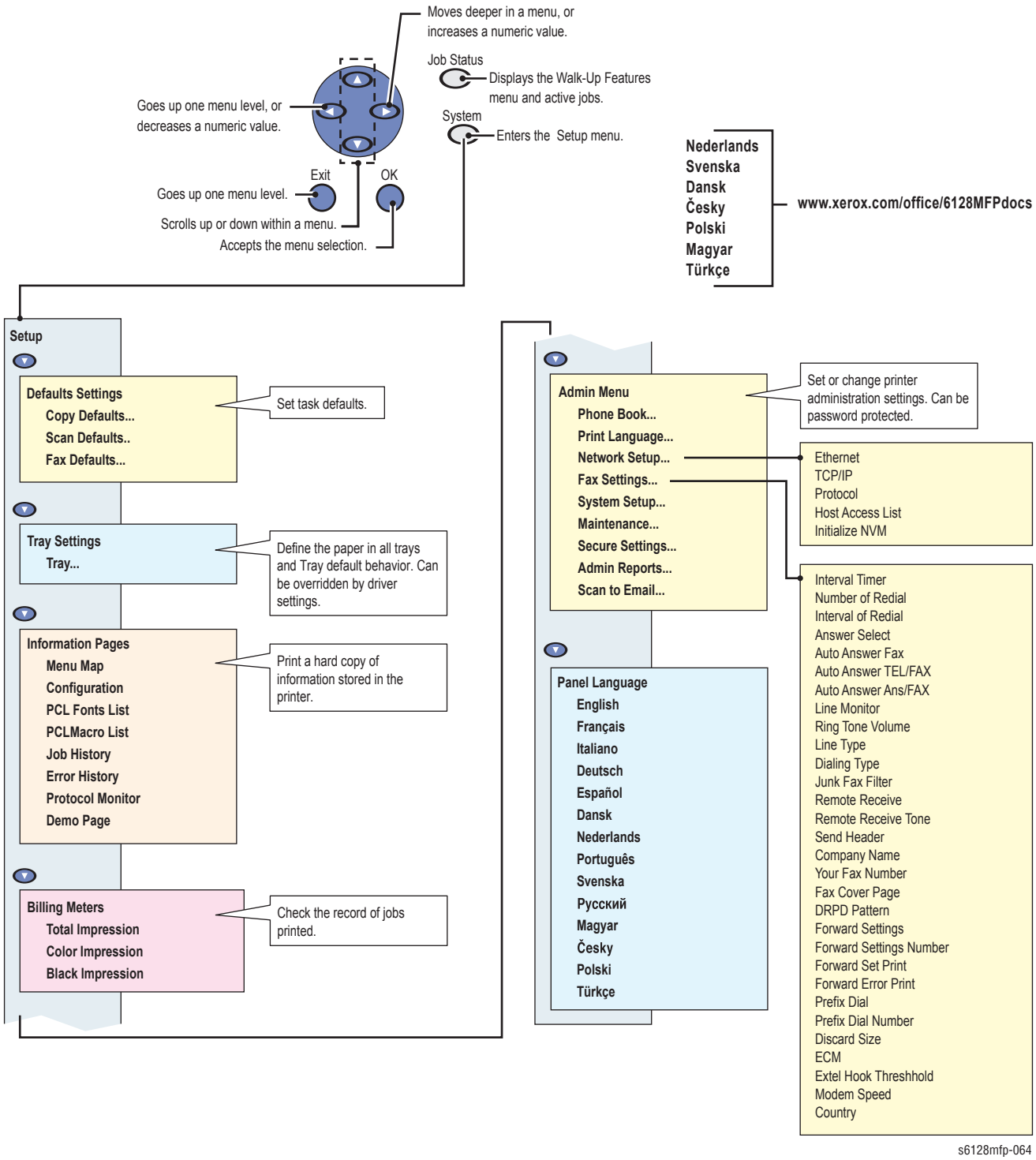
For parameter setting, pressing OK after selecting an item from the menu displays the current value of the item. Then a numeric value selected by Up and Down are written into NVM by pressing OK.

Exiting Service Diagnostics Mode

Scroll to **Complete** in the Fax/Scanner Diag group **Exit Mode** in the Printer Diag test group, then press OK.

Service Diagnostics Menu Maps

Customer Menu Map



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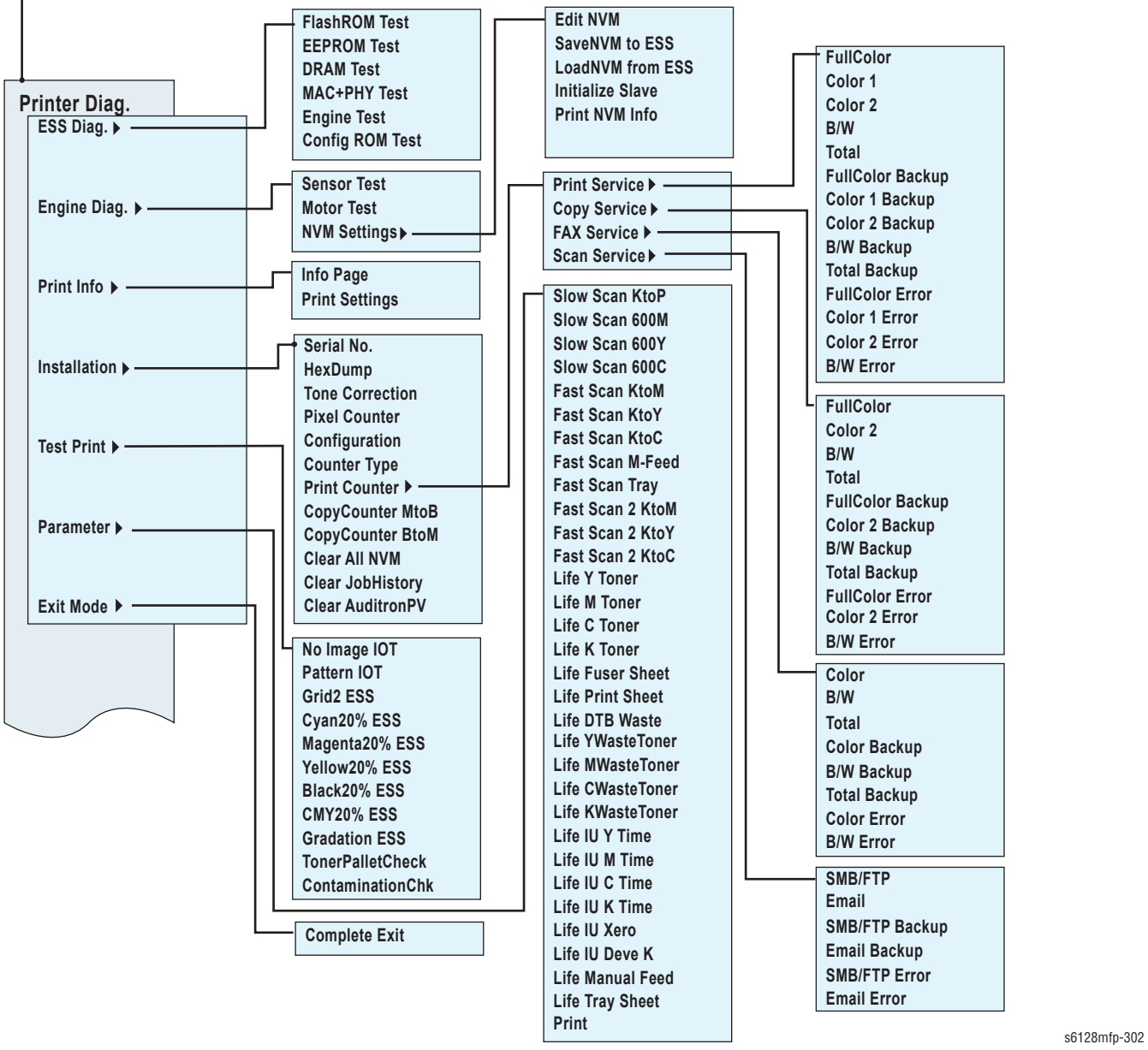
Diagnostic Menu Map Page 1

To access the Service Diagnostics Menu:
1. Turn off the power.
2. Turn on the power while holding down the **Up Arrow** and **Down Arrow** buttons.
3. Release the buttons when "Please Wait..." is displayed.



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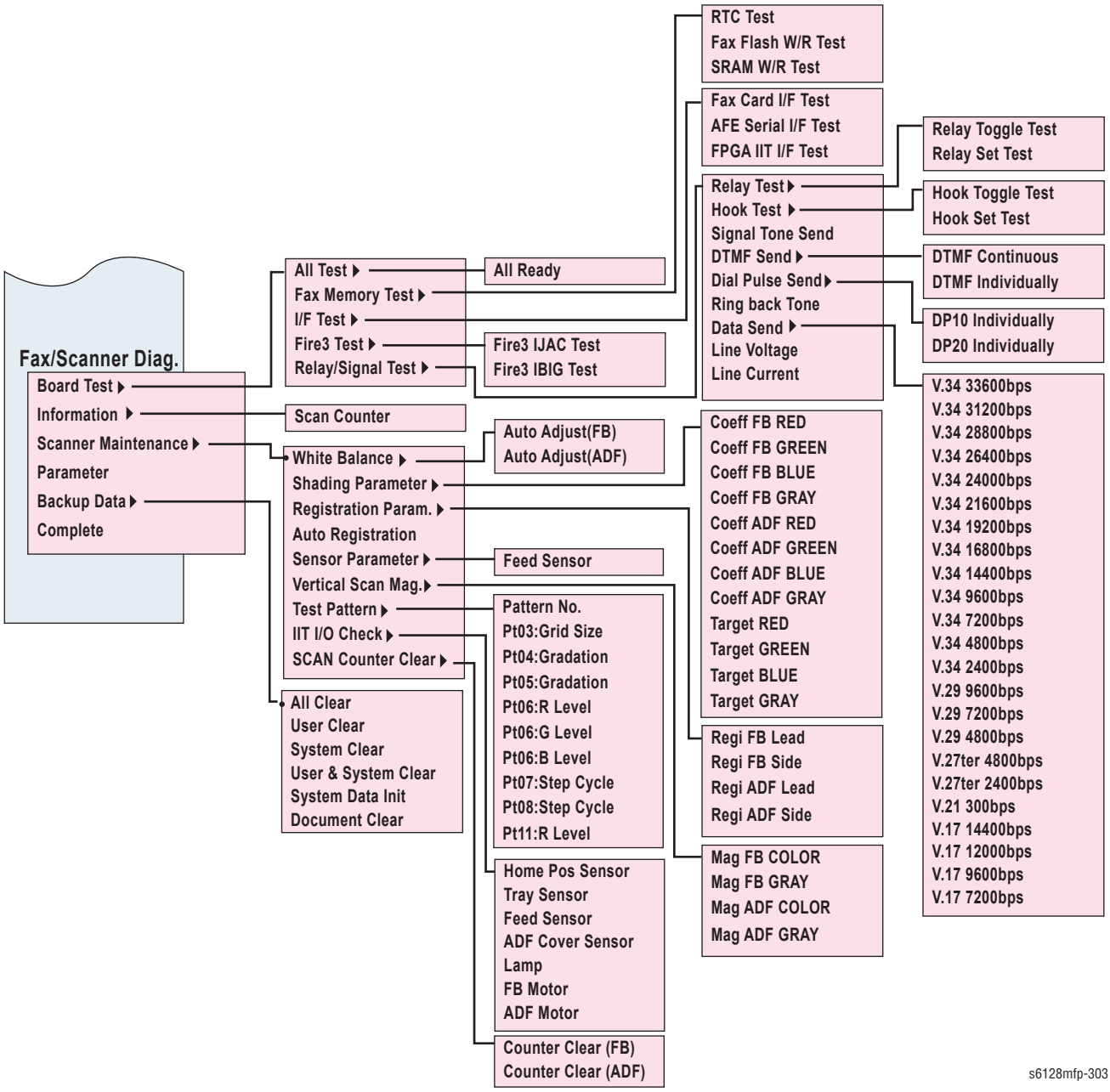
Diagnostic Menu Map Page 2



Service Diagnostic Tests

IIT Diagnostic Tests

Test	Control Panel Display	Test Description
Board Tests	Tests the function of the Fax, ADF, and Scanner boards.	
All Test	All Test ■ Ready ■ Now checking ■ Check OK or NG	Runs all board tests.
FAX Memory		
RTC Test	■ Ready ■ Now checking ■ Check OK or NG	This test checks the Real Time Clock chip. Run this test when error 117-365 occurs.
FAX Flash Test	■ Ready ■ Now checking ■ Check OK or NG	Performs write/read/verification on the FAX Flash memory. Run this test when error 017-971, 017-972, 017-973, 017-974, or 117-344 occurs.
SDRAM Test	■ Ready ■ Now checking ■ Check OK or NG	Performs write/read/verify on the SRAM. Run this test when error 117-311, 117-362, 117-363, 133-254, 017-970, 033-503, or 033-787 occurs.
I/F Test		
FAX CardTest	■ Ready ■ Now checking ■ Check OK or NG	This test checks communication with the FAX Board. Run this test when FAX related errors occur.
AFE Serial Test	■ Ready ■ Now checking ■ Check OK/Check NG	This test checks communication with the AFE serial interface. Run this test when FAX or Scanner related errors occur.
FPGA IIT I/F Test	■ Ready ■ Now checking ■ Check OK/Check NG	This test checks communication with the IIT interface. Run this test when FAX or Scanner related errors occur.
Fire3 Test		
Fire3 IJAC Test	■ Ready ■ Now checking ■ Check OK or NG	This test checks the Fire3 IJAC. Run this test when FAX or Scanner related errors occur.
Fire3 IBIG Test	■ Ready ■ Now checking ■ Check OK or NG	This test checks the Fire3 IBIG. Run this test when FAX or Scanner related errors occur.
Relay/Signal Test		

Test	Control Panel Display	Test Description
Relay Test		Switches the relay circuit between the Fax and telephone lines.
Relay Toggle Test	Relay Toggle Test ■ Time [10ms]:0000 ■ Now Switching	This test switches the relay circuit between the Fax and telephone lines at a set cycle mulitple. Cycle value range is 50 to 9999, and the toggle interval is 10ms. (Time = CV x 10ms). Data 1: Default is 2 seconds.
Relay Set Test	Relay Set Test ■ **Set ON [OPEN]** ■ Set OFF [CLOSE] ■ Complete	This test connects the relay circuit to the Fax or telephone line. ■ Set ON: Connect the Fax line. ■ Set OFF: Connect the telephone line.
Hook Test		This test switches the telephone line between on and off-hook states.
Hook Toggle Test	Hook Toggle Test ■ Time [10ms]:0000 ■ Now Switching	This test switches the telephone line between on and off-hook states at a set cycle. Cycle value range is 50 to 9999, and the toggle interval is 10ms. (Time = CV x 10ms). Data 1: Default is 2 seconds.
Hook Set Test	Hook Set Test ■ Set ON ■ Set OFF ■ Complete	This test switches the telephone line between on or off-hook states. ■ Set ON: Connect the on-hook circuit. ■ Set OFF: Connect the off-hook circuit.
Single Tone Send	Single Tone Send ■ 0Hz, 400Hz, 462Hz, 1100Hz, 1300Hz, 1500Hz, 1650Hz, 1850Hz, 2100Hz, 500Hz, 600Hz, 900Hz, 1000Hz ■ Now Sending Signal ■ Complete	Checks the tone output for each single tone for tone dialing.
DTMF Send	DTMF Send	Unplug phone line before performing these tests to prevent a call connection.
DTMF Continuous	DTMF Continuous ■ DTMF: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, *, # ■ Now Sending Signal ■ Complete	This test checks the tone output for all touch tones for tone dialing.
DTMF Individually	DTMF Individually ■ 0000000000000000 ■ Now Sending Signal ■ Complete	This test checks the tone output for 16 key numbers on the LCD. Use to transmit the specified signal separately 3 seconds after off hook. After 16-digit signal is transmitted, the signal stops, but off hook status continues.

Test	Control Panel Display	Test Description
Dial Pulse Send	Dial Pulse Send	Unplug phone line before performing this test to prevent a call connection.
DP10 Individually	DP10 Individually ■ 0000000000 ■ Now Sending Signal ■ Complete	This test checks the 10PPS pulse output for one of the 10 key numbers set on the LCD. Use to transmit the specified signal separately 3 seconds after off hook. After 10-digit signal is transmitted, the signal stops, but off hook status continues.
DP20 Individually	DP20 Individually ■ 0000000000 ■ Now Sending Signal ■ Complete	This test checks the 20PPS pulse output for one of the 10 key numbers set on the LCD. Use to transmit the specified signal separately 3 seconds after off hook. After 10-digit signal is transmitted, the signal stops, but off hook status continues.
Ring Back Tone	Ring Back Tone ■ Now Sending Signal	Checks the tone output signals for the ring back tone at 400Hz + 16Hz.
Data Send	Data Send ■ V.34 33600bps ■ V.34 31200bps ■ V.34 28800bps ■ V.34 26400bps ■ V.34 24000bps ■ V.34 21600bps ■ V.34 19200bps ■ V.34 16800bps ■ V.34 14400bps ■ V.34 12000bps ■ V.34 9600bps ■ V.34 7200bps ■ V.34 4800bps ■ V.34 2400bps ■ V.29 9600bps ■ V.29 7200bps ■ V.27ter 4800bps ■ V.27ter 2400bps ■ V.21 300 bps ■ V.17 14400bps ■ V.17 12000bps ■ V.17 9600bps ■ V.17 7200bps ■ Pattern All 0 ■ Pattern All 1 ■ Pattern 0101010101 ■ Pattern 0000100001 ■ Pattern 1111011110 ■ Now Sending Signal	Checks the modem output for each of the transmission rates in compliance with ITU-T recommendations. Data Sending Patterns: ■ All 0 ■ All 1 ■ 0101010101 ■ 0000100001 ■ 11101110

Test	Control Panel Display	Test Description
Line Voltage	Line Voltage ■ Value[1.0V]: 000 ■ Now Sampling	This test measures the telephone line voltage. Line voltage varies country to country. Typically 48V in the US.
Line Current	Line Current ■ Value[1.1mA]: 000 ■ Now Sampling	This test measures the telephone line amperage. The minimum current in the US is 20mA.
Information	Displays the scan count for platen and ADF scans.	
Scan Counter		
Scan Counter	FB:0x00000000 ADF:0x00000000	Displays the scan counter value. ■ FB: Platen scans. ■ ADF: ADF scans.
Scanner Maintenance		
White Balance	White Balance	Enables automatic calibration of the correction value for platen (FB) and ADF scanning.
Auto Adjust (FB)	Auto Adjust (FB) ■ Ready ■ Now Adjusting ■ Adjust OK or NG	Use to configure the White Balance by correcting C2 value for document glass with auto-adjustment.
Auto Adjust (ADF)	Auto Adjust (ADF) ■ Ready ■ Now Adjusting ■ Adjust OK or NG	Use to configure the White Balance by correcting C2 value for ADF with auto-adjustment.
Shading Parameter	■ Coeff FB ■ Coeff ADF [Hex]: 00 ■ Target[Hex]:*00	Displays the values stored for shading correction (R, G, B, and Grey) applied to platen, ADF, and target scans. Adjust the white balance value read from the white reference plate. Changing these values affects image quality.
Registration Parameter	■ Regi FB Lead [Hex]: 00 ■ Regi FB Side [Hex]: 00 ■ Regi ADF Lead [Hex]: 00 ■ Regi ADF Side [Hex]: 00	Adjusts the side and lead registrations during document scanning. Changing this value affects image quality.
Auto Registration	■ Set ON ■ Set OFF ■ Complete	Sets whether or not to auto-adjust the registration.
Sensor Parameter	Feed Sensor V	Adjusts the Feed sensor output value.

Test	Control Panel Display	Test Description
Vertical Scan Magnification	■ Mag FB Color [Hex]: 00 ■ Mag FB Grey [Hex]: 00 ■ Mag ADFColor [Hex]: 00 ■ Mag ADF Grey [Hex]: 00	Adjusts the scaling in the sub-scanning direction. Changing this value affects image quality
Test Pattern	Pattern No. 0000	Select the test pattern and to set the parameter.The beginning "*" of the value suggests to complete setting.
	Pt No. Contents	**Value**
	Pattern No.	Value (Dec) *000
	03 Grid Size	Value (Hex) *FFFF
	04 Gradation	Value (Hex) *FF
	05 Gradation	Value (Hex) *FF
	06 R Level	Value (Hex) *FF
	06 G Level	Value (Hex) *FF
	06 B Level	Value (Hex) *FF
	07 Step Cycle	Value (Hex) *FFFF
IIT I/O Check	Test IIT sensors and motors.	
Home Position Sensor	Status: Off or On	Checks the function of the sensor.
Tray Sensor	Status: Off or On	Checks the function of the sensor.
Feed Sensor	Status: Off or On	Checks the function of the sensor.
ADF Cover Sensor	Status: Off or On	Checks the function of the sensor.
Lamp	See procedure	Checks lamp function.
Scanner Motor	See procedure	Runs the Scanner motor.
ADF Motor	See procedure	Runs the ADF motor.
Scan Counter Clear	Counter Clear ■ Ready ■ Processing ■ Complete	Resets the platen and ADF scan counters to zero.
Counter Clear (FB)	Counter Clear (FB) ■ Ready ■ Processing ■ Complete	Use to clear the platen counter.
Counter Clear (ADF)	Counter Clear (ADF) ■ Ready ■ Processing ■ Complete	Use to clear the ADF counter.

Test	Control Panel Display	Test Description
Parameter	Parameter	These functions read and write parameters stored on the Image Processor Board. Run this to configure Scanner values manually.
Continue Illegal	■ Clear - delete data ■ Transmit - contents of memory.	Specifies how to handle the document data when the transmission queue overflows memory.
Thresh Memory RX (%)		Sets the percentage of memory reserved when data is received. When the remaining memory amount falls below this threshold, data reception is denied. Values range from 0 to 100. The smaller the value, the larger data storage capacity becomes.
Thresh Immediate (%)		Sets the remaining memory threshold that triggers immediate output. Immediate output refers to an automatic image output to accommodate incoming data that exceeds memory capacity. Values range from 0 to 99. The larger the value, the sooner the immediate output is initiated.
Thresh Memory TX (%)		Sets the percentage of memory reserved when data is sent. Values range from 0 to 100. The smaller the value, the greater the available memory for scanned documents.
Thresh GC (%)		Sets the remaining memory amount in the Flash file system for image data storage that triggers garbage collection.
Page Margin 1 (mm)		Sets the page margin that allows a larger-than-standard size document to be handled as a standard size document. The document is reduced to the standard size by the set value. Values range from 0 to 127. When the value is 10, the margin is 10 mm. Valid when the Discard Size setting in Fax Setting is "Off"

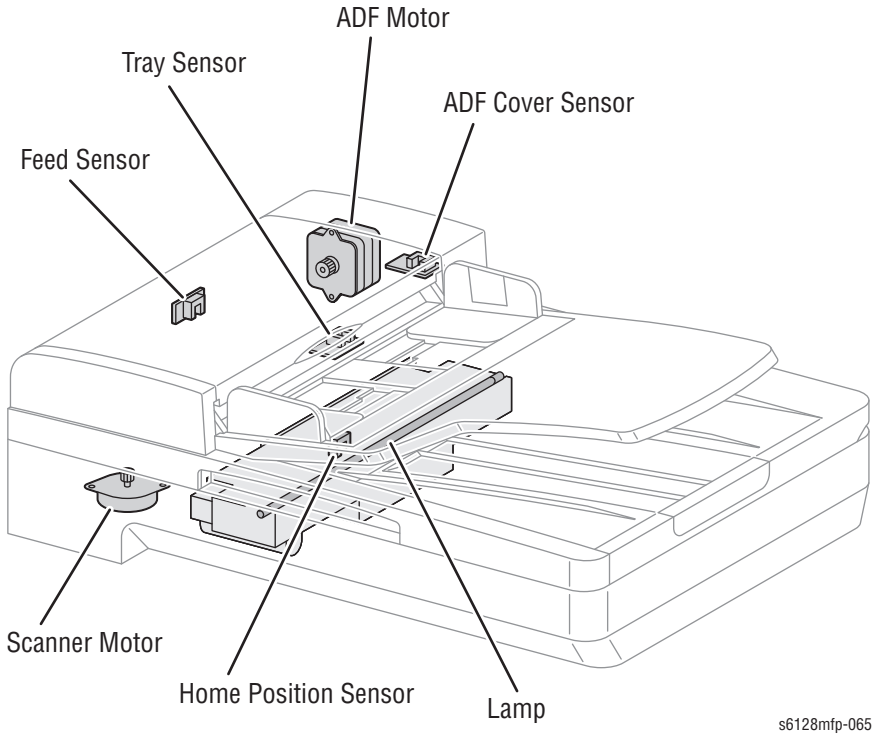
Test	Control Panel Display	Test Description
Page Margin 2 (mm)		Sets the page margin that allows a larger-than-standard size document to be handled as a standard size document. The document is reduced to the standard size, by the set value. Values range from 0 to 127. When the value is 10, the margin is 10 mm. Valid when the Discard Size setting in Fax Setting is "On"
Extel Hook Thresh		Sets the threshold of ON HOOK detection at the external telephone to one of Lower, Normal, and Higher.
Dis DP 20PPS		Sets whether or not to enable 20PPS dial pulse. When 20PPS is disabled in this menu, any 20PPS setting in other menu will be overridden with 10PPS.
CNG Detect (0.1s)		Sets the CNG detection duration for telephone-FAX switching. Values range from 0 to 255. When the value is 100, the detecting time is 10 sec.
Auto Answer (1.0s)		Sets the ring tone duration of the external telephone terminal for FAX-telephone switching. Values range from 0 to 255. When the value is 100, the duration is 100 sec.
Num Check (1.0s)		Sets the autodialing delay duration when different sets of document data bound for the same destination are placed consecutively in the transmission queue. This pause allows the receiving side to make time for processing. Values range from 1 to 255. When the value is 10, the pause is 10 sec.
OffHook LCS Rate (%)		Sets the threshold of off hook detection at LCS. Values range from 1 to 100.
Dial tone TO (1.0s)		Sets the time out for detecting the dial tone. Values range from 0 to 255. When the value is 10, the dial tone detect duration is 10 sec.
OnHook Detect (20ms)		Sets the detecting duration for a valid on hook signal. Values range from 10 to 255. When the value is 10, the duration is 200 msec. Any on hook signal shorter than the set time is invalid.
Dis Dial tone		Sets whether or not to enable dial tone pattern detection.

Test	Control Panel Display	Test Description
Dial tone Min (10ms)		Sets the minimum limit of dial tone pattern detection duration.
Dial tone Max (10ms)		Sets the maximum limit of dial tone pattern detection duration.
CNG Stop Select		Sets the conditions for stopping CNG transmission. Conditions : CED&V21: When CED and V.21 preamble are detected. CED: When CED is detected. V21: When V.21 preamble is detected.
G3M TX Cable EQU		Sets the cable amplitude equalizer value for transmission. These values are available: 0db Equal to a cable length of 0km. 4db Equal to a cable length of 1.9km 8db Equal to a cable length of 3.6km 12db Equal to a cable length of 7.2km
G3M RX Cable EQU		Sets the cable amplitude equalizer value for reception (applicable to V17, V29, and V27ter) These values are available: 0db Equal to a cable length of 0km. 4db Equal to a cable length of 1.9km 8db Equal to a cable length of 3.6km 12db Equal to a cable length of 7.2km
G3M V34 Bit Rate		Sets the signaling rate for the Super G3 (V34) mode. Values range from 2400bps to 33600bps in 14 steps. 2400/4800/7200/9600/12000/ 14400/16800/19200/21600/24000/ 26400/28800/31200/33600
Capability V34		Sets the communication capability of the Super G3 (V34) mode.
G3M TX Coding		Sets the data encoding method for transmission. When the encoding method set here is not supported by the receiving side, the receiving side's method is adopted. Available methods: are MH/MR/ MMR/JBIG
G3M RX Coding		Sets the data encoding method for reception. Available methods: are MH/MR/ MMR/JBIG
BackUp Data	**NOTE:** The system data initialization does not initialize data on EEPROM (except dial types and country codes). The counter clear does not clear scan counter clearance on EEPROM; it only clears counters on SRAM.	

Test	Control Panel Display	Test Description
All Clear	All Clear ■ (displays a list of country)	■ Initializes system data. ■ Clears address data, etc. ■ Clears communication control data. ■ Clears history. ■ Clears counters. Information includes: ■ User's area ■ System area ■ Counters (in SRAM) Number of Scan Number of Fax sending Number of FlashROM erase
User Clear	User Clear ■ (displays a list of country)	■ Clears stored document data and address information. ■ Initializes system data.
System Clear	System Clear ■ (displays a list of country)	■ Clears stored document data, communication management data, and history. ■ Initializes system data.
User & System Clear	User&System Clear ■ (displays a list of country)	■ Clears stored document data, address information, communication management data, and history. ■ Initializes system data.
System Data Init	System Data Init ■ (provides a list of country)	■ Initializes system data in accordance with the country specified in Data1.
Document Clear	Document Clear ■ Ready ■ Processing ■ Complete	■ Clears all stored data including calling table, substitute queue.
Complete	Exits the Fax/Scanner Diag menu.	
Complete	Complete?	Exits the Service Diagnostic menu.

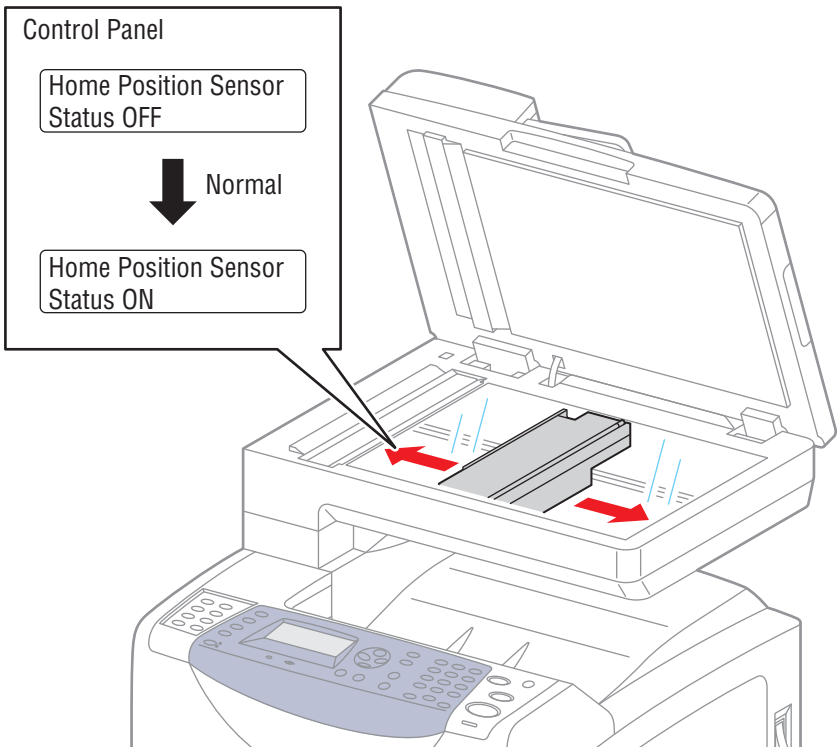
IIT I/O Diagnostic Testing Procedures

Procedures for testing each IIT componet using Service Diagnostics.



Home Position Sensor

1. Enter Service Diagnostics (page 4-4).
2. Open the Platen Cover.
3. Move the carriage forward with the **FB Motor** test.
4. Perform the **FAX/Scanner Diag > Scanner Maintenance > IIT I/O Check >Home Position Sensor** test.
5. Check the ControL Panel display for Status OFF.
6. Press **Stop** to return one step higher menu.
7. Reverse the carriage with the **FB Motor** test.
8. Perform the **FAX/Scanner Diag > Scanner Maintenance > IIT I/O Check >Home Position Sensor** test again.
9. Check the ControL Panel display for Status ON.



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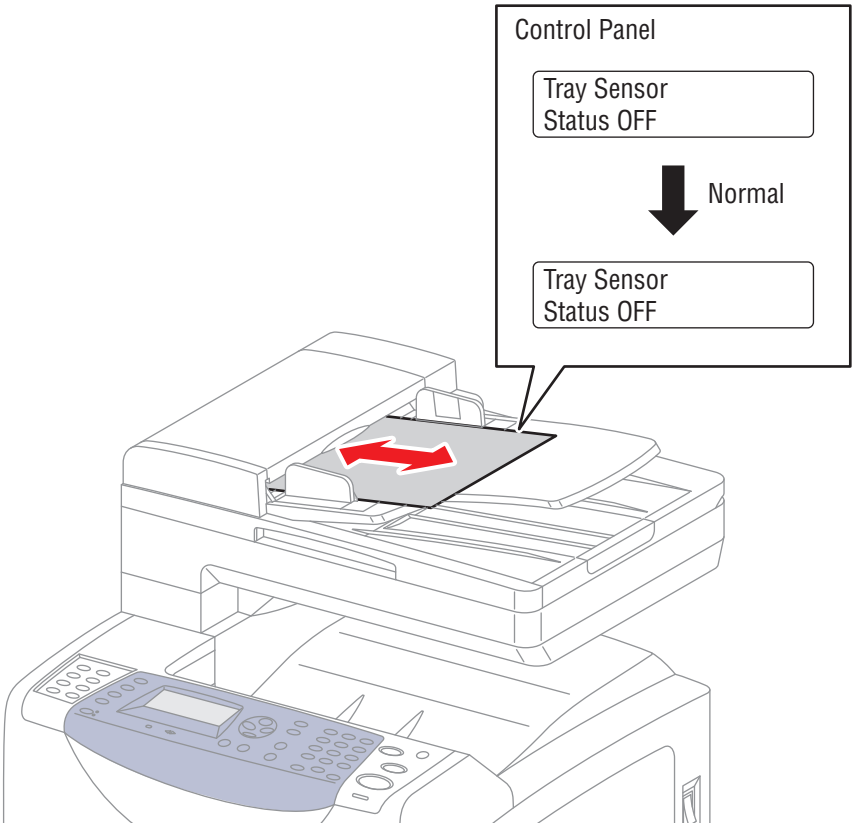
10. Press the **Stop** button to stop the Home Position Senosr test.

ADF Tray Sensor

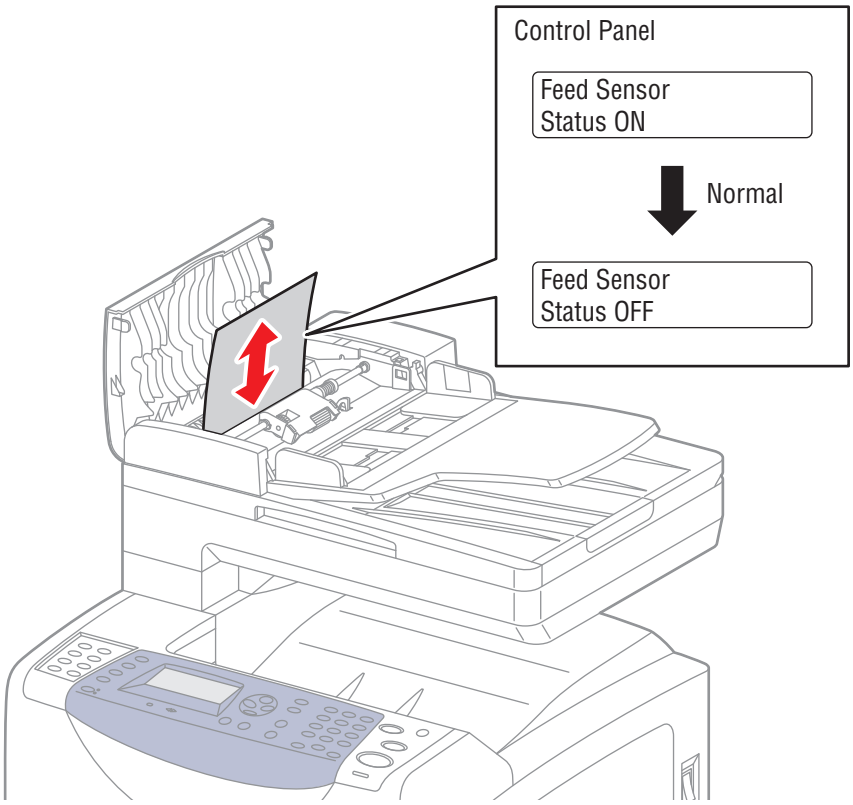
1. Enter Service Diagnostics (page 4-4).
2. Place a sheet of media in the ADF Tray.
3. Perform the **FAX/Scanner Diag > Scanner Maintenance > IIT I/O Check >Tray Sensor** test.
4. Check the Control panel display for Status ON.
5. Press **Stop** to return one step higher menu.
6. Remove the media from the ADF Tray.
7. Perform the **FAX/Scanner Diag > Scanner Maintenance > IIT I/O Check >Tray Sensor** test.
8. Check the sensor "Status OFF"



9. Press the **Stop** button to stop the ADF Tray Sensor test.

ADF Feed Sensor

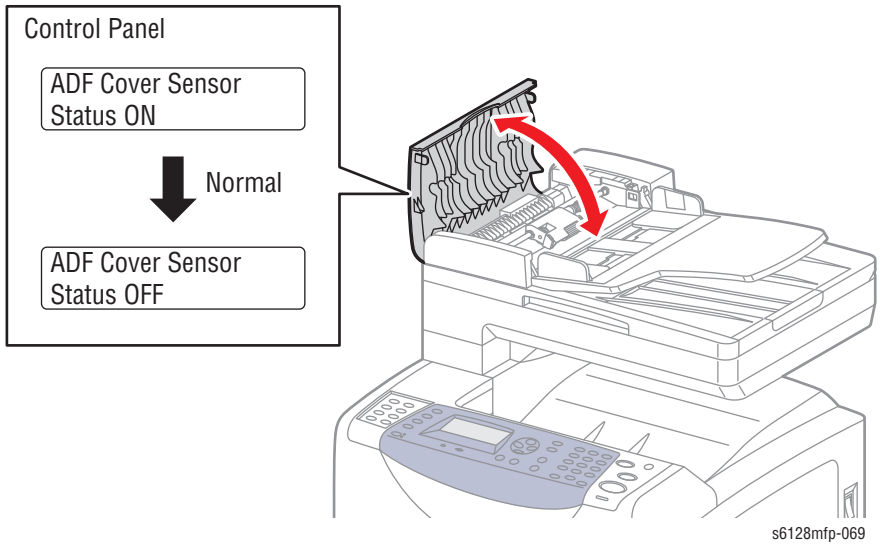
1. Enter Service Diagnostics (page 4-4).
2. Open the ADF Cover.
3. Place a sheet of media in the ADF Feeder.
4. Perform the **FAX/Scanner Diag > Scanner Maintenance > IIT I/O Check >Feed Sensor** test.
5. Check the Control panel display for Status ON.
6. Press **Stop** to return one step higher menu.
7. Remove the media from the ADF Tray.
8. Perform the **FAX/Scanner Diag > Scanner Maintenance > IIT I/O Check >Feed Sensor** test.
9. Check the Control panel display for Status OFF.



10. Press the **Stop** button to stop the ADF Feed Senosr test.

ADF Cover Sensor

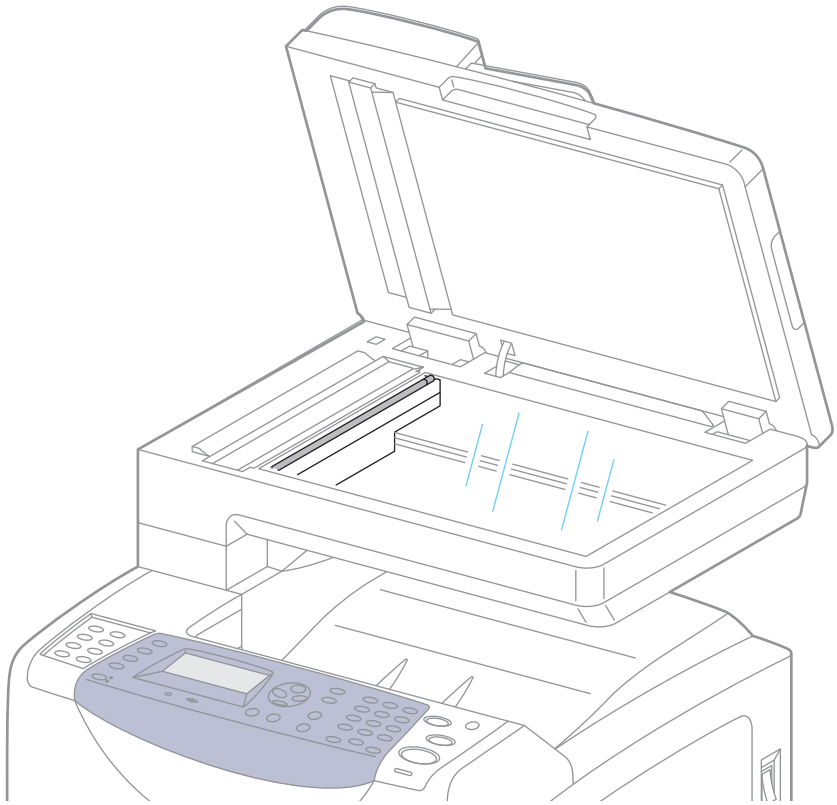
1. Enter Service Diagnostics (page 4-4).
2. Open the ADF Cover.
3. Perform the **FAX/Scanner Diag > Scanner Maintenance > IIT I/O Check >ADF Cover Sensor** test.
4. Check the Control panel display for Status ON.
5. Press **Stop** to return one step higher menu.
6. Close the ADF cover.
7. Perform the **FAX/Scanner Diag > Scanner Maintenance > IIT I/O Check >ADF Cover Sensor** test.
8. Check the Control panel display for Status OFF.



9. Press the **Stop** button to stop the ADF Cover Senosr test.

Scanner Lamp

1. Enter Service Diagnostics (page 4-4).
2. Open the Platen Cover.
3. Perform the **FAX/Scanner Diag > Scanner Maintenance > IIT I/O Check >Lamp** test.
4. Press the Arrow buttons to select **Set OFF**.
5. Press **OK** to run the test.
6. Check that the Lamp is Off.
7. Press **Stop** to return one step higher menu.
8. Repeat the Lamp test **FAX/Scanner Diag > Scanner Maintenance > IIT I/O Check >Lamp** test.
9. Press the Arrow buttons to select **Set ON**.
10. Check that the Lamp is ON.



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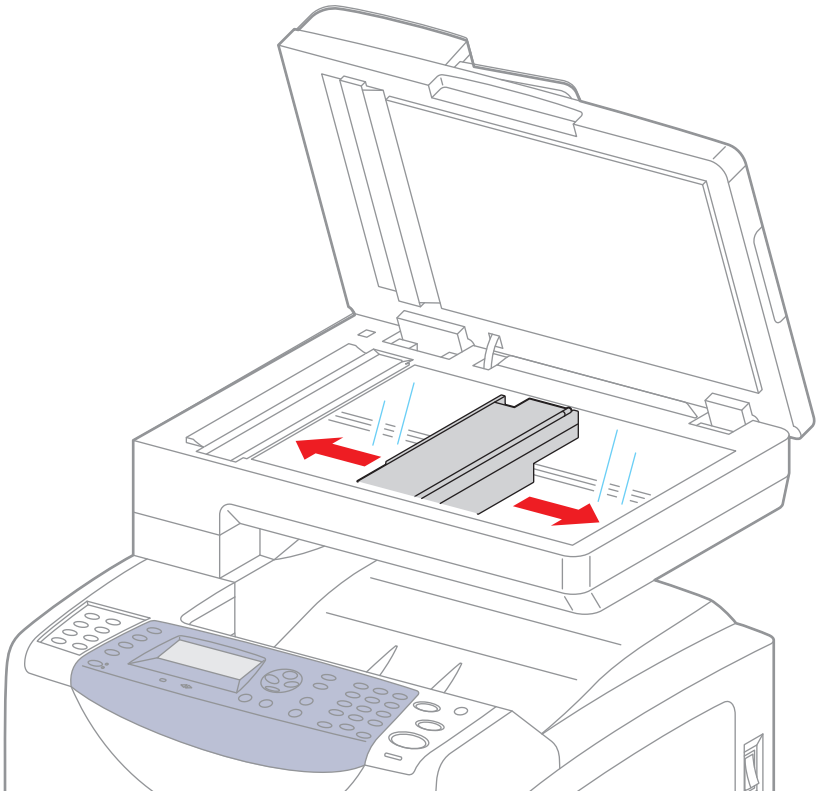
11. Press **Stop** to stop the test.

FB Motor Test

Note

The FB Motor automatically stops at the limit of travel in both directions.

1. Enter Service Diagnostics (page 4-4).
2. Open the Platen Cover.
3. Perform the **FAX/Scanner Diag > Scanner Maintenance > IIT I/O Check >FB Motor** test.
4. Press the Arrow buttons to select **Forward**.
5. Press **OK** to run the test.
6. Check that the carriage moves to the Right.
7. Press **Stop** to return one step higher menu.
8. Repeat the Lamp test **FAX/Scanner Diag > Scanner Maintenance > IIT I/O Check >FB Motor** test.
9. Press the Arrow buttons to select **Reverse**.
10. Check that the carriage move to the Left.



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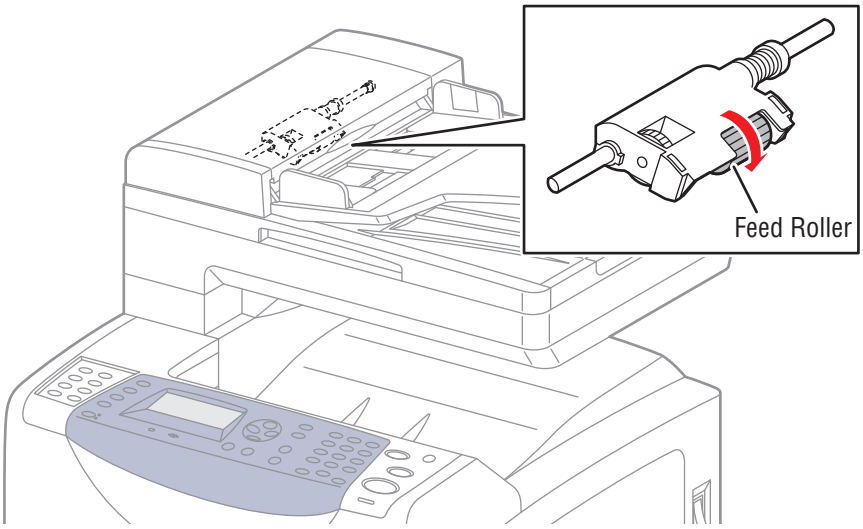
11. Press **Stop** to stop the test.

ADF Motor

Note

Close the ADF Cover before testing the ADF Motor.

1. Enter Service Diagnostics (page 4-4).
2. Perform the **FAX/Scanner Diag > Scanner Maintenance > IIT I/O Check >ADF Motor** test.
3. Press the Arrow buttons to select **Forward**.
4. Press **OK** to run the test.
5. Listen for motor operation.



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6. Press **Stop** to stop the test.

IOT Diagnostic Tests

Caution

Do not turn the printer Off during ESS testing.

Test	Control Panel Display	Test Description
ESS Diag	Tests for core print engine components.	
Flash ROM Test	■ Start ■ Processing ■ Check OK or NG	Calculates the Flash ROM checksum and compares it with the stored value. Run this test when 016-500, 016-501 and 016-502 errors occur. Test result: NG (Go to FIP.) OK (cycle main power.)
EEPROM Test	■ Start ■ Processing ■ Check OK or NG	This test checks the diag. area of the EEPROM. Run this test when 116-323 and 116-390 errors occur. Test result: NG(Go to FIP.) OK (cycle main power.).
DRAM Test	■ Start ■ Processing ■ Check OK or NG	This test checks the DRAM address lines.. Execute this test when 116-315, 116-316 and 116-320 errors occur. Test result: NG(Go to FIP.) OK (cycle main power.).
MAC+PHY Test	■ Start ■ Processing ■ Check OK or NG	Run this test when 116-314, 116-350, 116-351, 116-352 and 116-355 errors occur. Test result: NG (Go to FIP.) OK (cycle main power.)

Test	Control Panel Display	Test Description
Engine Test	■ Start ■ Check OK or NG	Communication test with the print engine. Run this test when the 024-371 error occurs. Test result: NG (Go to FIP.) OK (cycle main power.)
ConfigROM Test	■ Start ■ Check OK or NG	Communication test with the ConfigROM and the FPGAregister.
READ ROM Revision No	■ Start ■ Check OK or NG	This test checks communication with the ConfigROM. The revision number is read several times.
Engine Diag		Tests for print engine components.
Sensor Test	■ Digital Input ■ Code H 0 or 1 At the start of the test, 0 is displayed. This number counts up when a sensor is turned On from Off to indicate proper operation	These tests check whether the sensors operate normally. The Sensor Test is performed for all the components. Press the **OK** button twice to run the selected test. Exit the Sensor Test by pressing the **Stop** button. The display returns to the Service Mode menu. **NOTE:** During the Sensor Test, no other diagnostic. functions can be performed. The printer only accepts DI components and exit commands. The device code for each component is listed below.
	Code	**Component**
	DI-0	Manual Feeder Sensor
	DI-1	No Paper Seneor
	DI-2	Registration Sensor
	DI-3	Exit Sensor
	DI-4	K Mode Sensor
	DI-6	Side Switch
	DI-7	Interlock Switch
Motor Test		These tests check whether the sensors operate normally. The Sensor Test is performed for all the components. Press the **OK** button twice to run the selected test. Exit the Sensor Test by pressing the **Stop** button. The display returns to the Service Mode menu. **NOTE:** During the Sensor Test, no other diagnostic. functions can be performed. The printer only accepts DO components and exit commands. The device code for each component is listed below.
	Code	**Component**
	DO-0, DO-1, DO-2	Main Drive Motor

Test	Control Panel Display	Test Description
	DO-5, DO-6, DO-7	Sub Motor
	DO-a	Color Mode Switching Solenoid
	DO-b, DO-c	Feed Roller (half, full rotation)
	DO-1e, DO-1f	Fan (high, low speed)
	DO-21, DO-23, DO-25, DO-27	Toner Motors (Y,M,C,K)
	DO-29	Registration Clutch
	DO-2f	Feed Solenoid
	DO-3d	K Drum Erase Lamp
	DO-3f	C, M, Y Drum Erase Lamps
NVM Settings	Edits, saves, loads, and prints NVM information.	
Edit NVM	■ Ad0000=00000000* ■ Please wait	Displays current NVM values. Use this function to edit NVM information.
Save NVM to ESS	Save NVM ■ Save NVM MCU -> ESS OK? ■ Saved ■ Please wait	Saves MCU NVM to the Controller Board.
Load NVM from ESS	■ Load NVM MCU -> ESS OK? ■ Processing ■ Loaded ■ Please wait	Loads MCU NVM from the Controller Board into the replacement MCU Board.
Print NVM Info	■ Processing ■ Please wait	Prints NVRAM information saved in the Controller.
Print Info	Provides printer configurations and settings information.	
Info Page	■ Ready ■ Processing	Prints the software version of the printer controller. Use this function to verify the printer configuration. The Configuration Page contains: ■ Engine installation unit information ■ Standard Tray ■ Optional Tray (displaying version) ■ Optional Duplex Unit (displaying version) ■ Engine ROM Revision No. ■ MCU NVM Revision No.

Test	Control Panel Display	Test Description
Print Settings	■ Ready ■ Processing	Prints the configured settings through the Control Panel. The Print Settings page contains: ■ 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.	■ HATxxxxxx or ■ HARxxxxxx	Displays the 6 digit Serial Number. This value is read-only.
Tone Correction	**Tone Correction** ■ ON * ■ OFF	Controls TRC in conjunction with process control to keep density constant. Turn Off tone correction when correction exceeds the limit due to machine-to-machine variation. Sets the printer Tone Correction mode On/Off. **NOTE: Note:** When the Tone Correction has been changed, an "*" is displayed next to the text.
Display Counter		Not used in this printer.
Hex Dump	■ OFF * ■ ON	Sets **HexDump** On/Off. Used to analyze received data in case of an error. Setting Hex Dump to On enables printing of received data via [Info Page] under [Print info].
Pixel Counter	■ Y: nn.n ■ C: nn.n ■ M: nn.n ■ K: nn.n	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. ■ 100 % = empty Toner Cartridge The value is rounded off to one decimal place. For B/W print, only K is displayed. The ranges are from 0-100 % for each color (CMYK).
Configuration		Not used in this printer.
Counter Type		Not used in this printer.
Print Counter	Numeric counts of activity.	

Test	Control Panel Display	Test Description
Print Service	■ Full Color ■ n	Color prints.
	■ Color 1 ■ n	Color print using toner save mode.
	■ Color 2 ■ n	Color prints using toner save mode.
	■ B/W ■ n	Black and White prints.
	■ Total ■ n	Total of all color prints (full, 1 and 2)
	■ Color 1 Error ■ n	Errors in toner saving Color 1 prints.
	■ Color 2 Error ■ n	Errors in toner saving Color 2 prints.
	■ B/W Error ■ n	Errors in Black and White prints.
Copy Service	■ Full Color ■ n	Color copies.
	■ Color 2 ■ n	Mono color or 2-color copies.
	■ B/W ■ n	Black and White copies.
	■ Total ■ n	Total of all copies
	■ Color 2 Error ■ n	Errors in toner saving Color 2 copies.
	■ B/W Error ■ n	Errors in Black and White copies.
FAX Service	■ Color ■ n	Color FAX received.
	■ B/W ■ n	Black and White FAX received.
	■ Total ■ n	Total FAX received.
	■ Color Error ■ n	Errors in color FAX reception.
	■ B/W Error ■ n	Errors in Black and White FAX reception.
Scan Service	■ SMB/FTP ■ n	Transferred pages (SMB or FTP).
	■ Email ■ n	Scan to Email pages.
	■ SMB/FTP Error ■ n	Errors in scan to **SMB/FTP** transfers.
	■ Email Error ■ n	Errors in Scan to Email transfers.

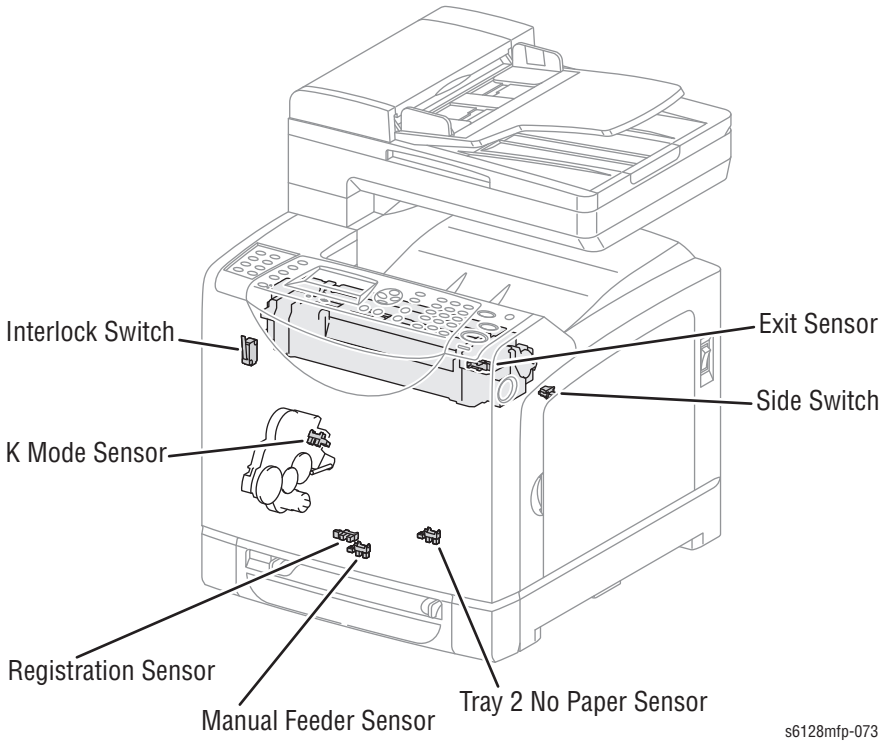
Test	Control Panel Display	Test Description
Copy Counter MtoB	■ OK? ■ Processing ■ Copied	Copies the values from Master NVM to Backup NVM on the Controller Board. ■ Device-specific information called “Personal info” in the first 128 Byte ■ PV counter master ■ Printer counter master
Copy Counter BtoM	■ OK? ■ Processing ■ Copied	Copies the values from Backup NVM to Master NVM on the Controller Board. ■ Device-specific information called “Personal info” in the first 128 Byte ■ PV counter backup ■ Printer counter backup
Clear All NVM	■ OK? ■ Processing ■ Initialized	Clears all Controller Board NVM of the Controller.
Clear Job History	■ OK? ■ Processing ■ Initialized	Deletes the job history data from Controller Board NVM.
Clear Auditron PV		Clears print volume (PV) or Print Auditron values.
Test Print	Test prints for troubleshooting the printer. See Chapter 5 for examples and descriptions of test prints.	
No Image IOT	■ Ready ■ Processing	Prints a blank page.
Pattern IOT	■ Ready ■ Processing	Prints the Engine Test print at 600 DPI. This page isolates the print engine (IOT) from the I/P Board.
Grid 2	■ **Ready** ■ **Processing**	Prints a built-in grid pattern. This print isolates ESS function.
Cyan 20%	■ Ready ■ Processing	Prints 20 % density pattern of cyan.
Magenta 20%	■ Ready ■ Processing	Prints 20 % density pattern of magenta.
Yellow 20%	■ Ready ■ Processing	Prints 20 % density pattern of yellow.
Black 20%	■ Ready ■ Processing	Prints 20 % density pattern of black .
CMY 20%	■ Ready ■ Processing	Prints 20 % density pattern of cyan, magenta, and black combined.
Gradation	■ 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	Prints a pattern of 100 % density of each color.

Test	Control Panel Display	Test Description
Contamination Check	Contamination Check	Prints a scale pattern for each color (sheets 1-4) and the Pitch Chart, a repeating defects page (sheet 5).
Parameter	Reads/writes the parameter values, errors, and life counter values stored in the printer. **NOTE:** Print the parameter list using the Print function of Parameter Menu in diagnosis before changing the value of the registration.	
Slow Scan K to P	■ -128 * ■ : ■ 127 *	Adjusts registration in the feed direction.
Slow Scan 600M	■ -128 * ■ : ■ 127 *	
Slow Scan 600Y	■ -128 * ■ : ■ 127 *	
Slow Scan 600C	■ -128 * ■ : ■ 127 *	
Fast Scan KtoM	■ -128 * ■ : ■ 127 *	Adjusts registration in the scan direction.
Fast Scan KtoY	■ -128 * ■ : ■ 127 *	
Fast Scan KtoC	■ -128 * ■ : ■ 127 **	
Fast Scan M-feed	■ -30 * ■ : ■ 30 *	
Fast Scan Tray	■ -30 * ■ : ■ 30 *	
Fast Scan 2 KtoM	■ -1 * ■ : ■ 2 *	Adjusts registration in the scan direction.
Fast Scan 2 KtoY	■ -1 * ■ : ■ 2 *	
Fast Scan 2 KtoC	■ -1 * ■ : ■ 2 *	
Life Y Toner	■ 0	Yellow toner cartridge life count.
Life M Toner	■ 0	Magenta toner cartridge life count.

Test	Control Panel Display	Test Description
Life C Toner	■ 0	Cyan toner cartridge life count.
Life K Toner	■ 0	Black toner cartridge life count.
Life Fuser Sheet	■ 0	Fuser sheet life count.
Life Printer Sheet	■ 0	Printer life count.
Life DTB Waste	■ 0	Belt Waste life count.
Life Y Waste Toner	■ 0	Yellow waste toner life count.
Life M Waste Toner	■ 0	Magenta waste toner life count..
Life C Waste Toner	■ 0	Cyan waste toner life count.
Life K Waste Toner	■ 0	Black waste toner life count.
Life IU Y Time	■ 0	Yellow drum cycle count.
Life IU M Time	■ 0	Magenta drum cycle count.
Life IU C Time	■ 0	Cyan drum cycle count..
Life IU K Time	■ 0	Black drum cycle count..
Life IU Xero	■ 0	Imaging Unit motor operating time.
Life IU Deve K	■ 0	K Developer sheet count.
Life Manual Feed	■ 0	manual feed slot sheet count.
Life Tray Sheet	■ 0	Tray sheet count.
Print	■ Ready	Prints current parameter values.
Exit Mode	Exits Service Mode.	
Complete Exit	Complete Exit ■ Exit?	Pressing **OK** twice, exits the Service Diagnostic menu.

IOT Sensor Testing Procedures

Procedures for testing each IOT sensor using Service Diagnostics.

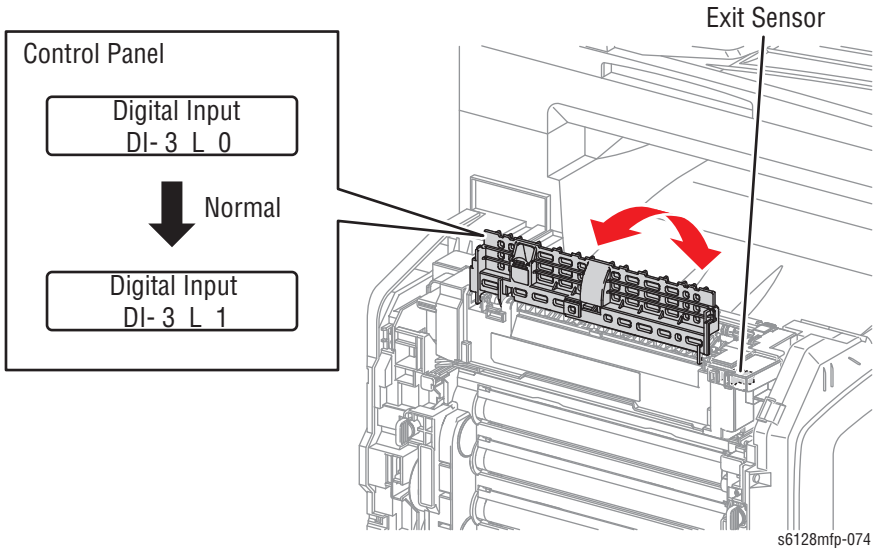


Exit Sensor

Warning

Allow the Fuser to cool down before starting the procedure.

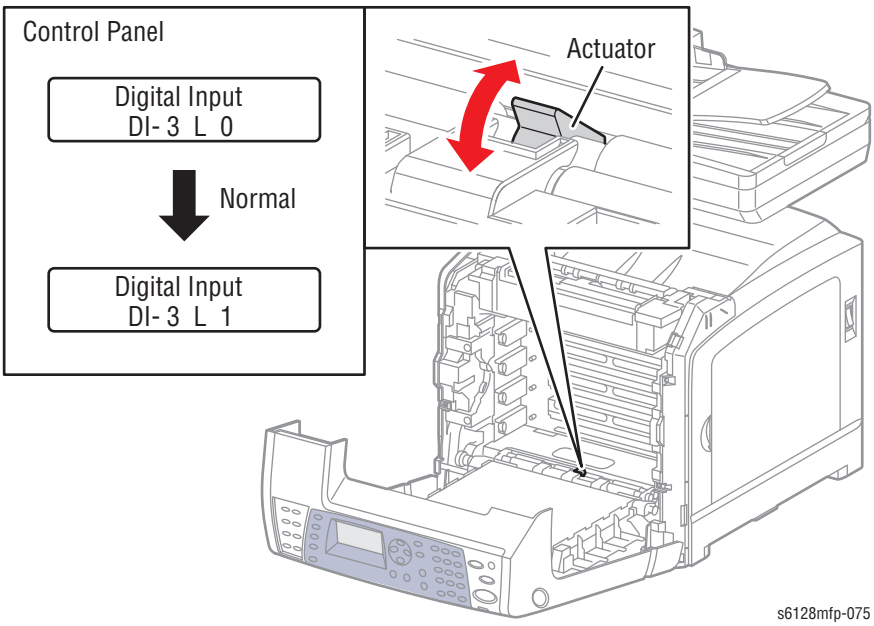
1. Enter Service Diagnostics (page 4-4).
2. Open the Front Cover.
3. Perform the Exit Sensor test: **Engine Diag** > **Sensor Test** > **Exit Sensor**.
4. Move the Sensor up and down and check the information on the Control Panel display. The Low and High values change from 0 up 99.



5. Press the **Stop** button to stop the Exit Sensor test.

Registration Sensor

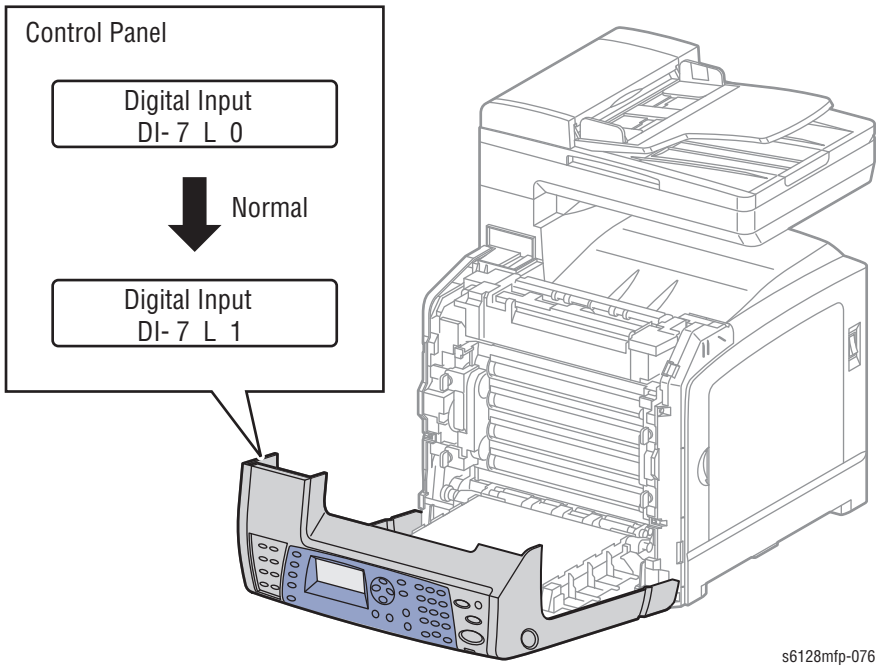
1. Enter Service Diagnostics (page 4-4).
2. Open the Front Cover.
3. Perform the Registration Sensor test: **Engine Diag** > **Sensor Test** > **Regi Sensor**.
4. Operate the actuator while checking the information on the Control Panel display. The Low and High values change from 0 up 99.



5. Press the **Stop** button to stop the Registration Sensor test.

Interlock Switch

1. Enter Service Diagnostics (page 4-4).
2. Open the Front Cover.
3. Remove the Imaging Unit (page 8-8) and place in a dark location.
4. Perform the Interlock Switch test: **Engine Diag** > **Sensor Test** > **Interlock Switch**.
5. 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.



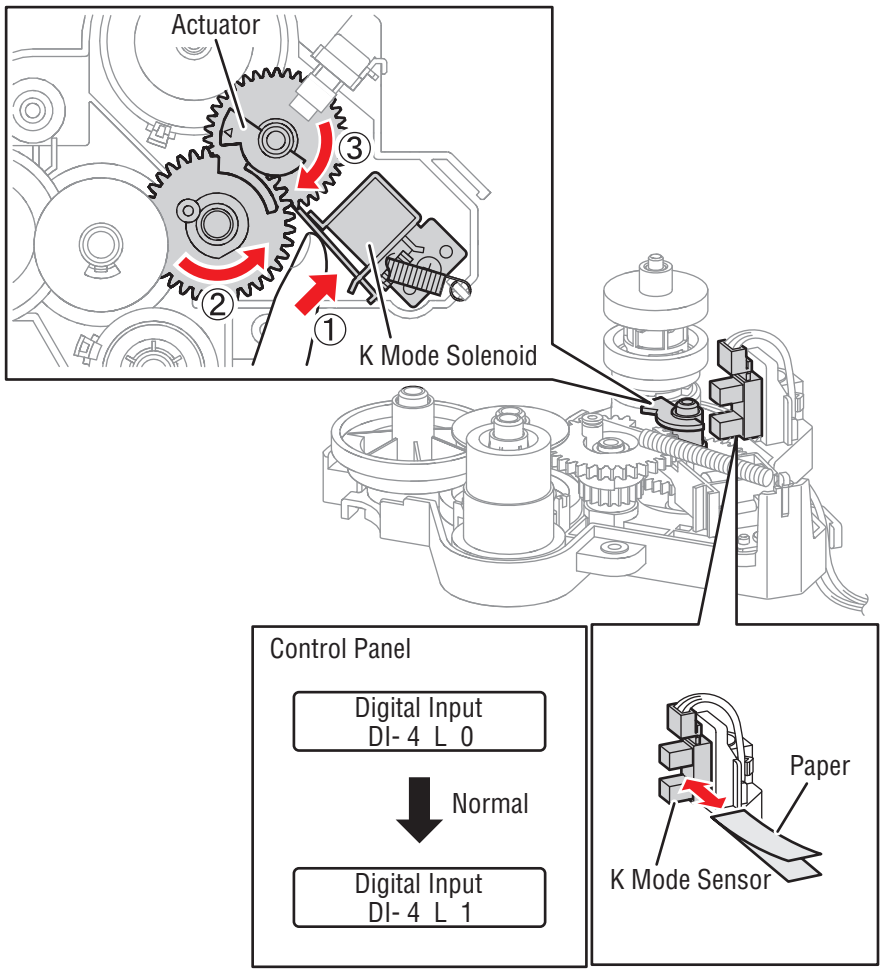
6. Press the **Stop** button to stop the Cover Open Sensor test.

K Mode Sensor

Note

Install the safety interlock override to provide power to the device under test.

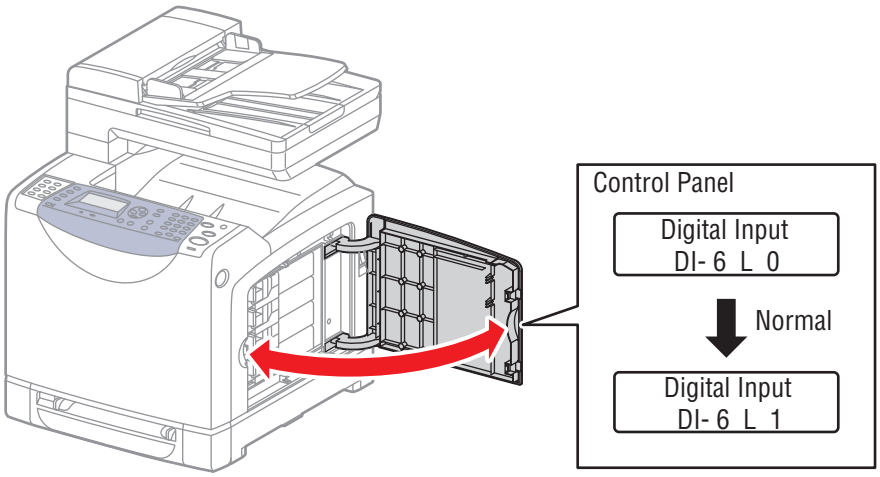
1. Enter Service Diagnostics (page 4-4).
2. Open the Front Cover.
3. Remove the Imaging Unit (page 8-8) and place in a dark location.
4. Remove the Left Side Cover (page 8-17).
5. Remove the Feed Drive Assembly (page 8-37) but do not unplug any of the cables.
6. Perform the K Mode Sensor test: **Engine Diag** > **Sensor Test** > **K Mode Sensor**.
7. Press the lever mounted on the Solenoid to retract the actuator from the sensor.
8. Move a strip of paper in and out of the sensor arms to simulate the action of the actuator. The Low and High values change from 0 up to 99.



9. Press the **Stop** button to stop the test.

Right Side Door Switch

1. Enter Service Diagnostics (page 4-4).
2. Perform the Side Switch test: **Engine Diag** > **Sensor Test** > **Side Switch**.
3. Open and close the Toner Access Door while checking the information on the Control Panel display. The Low and High values change from 0 up to 99.



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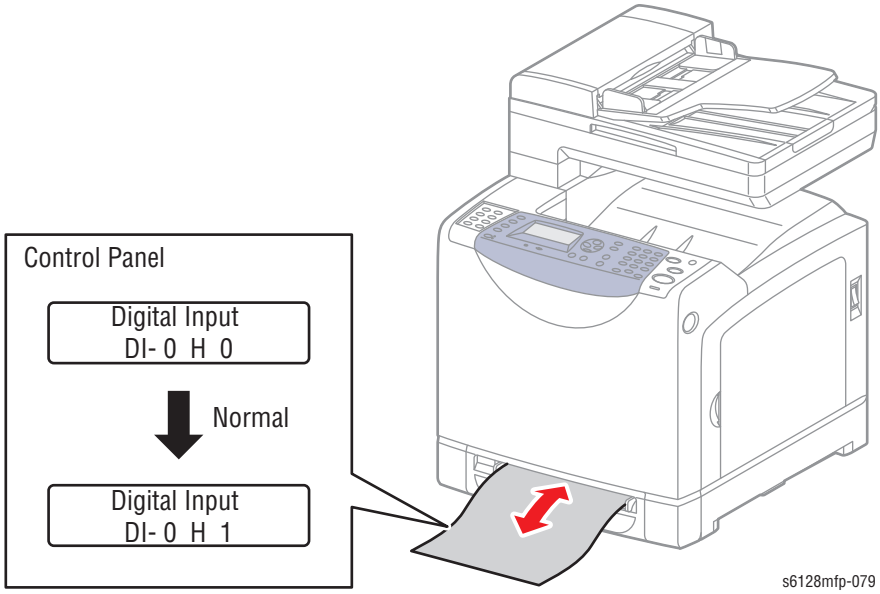
4. Press the **Stop** button to stop the Side Switch test.

Manual Feed Slot Paper Detect

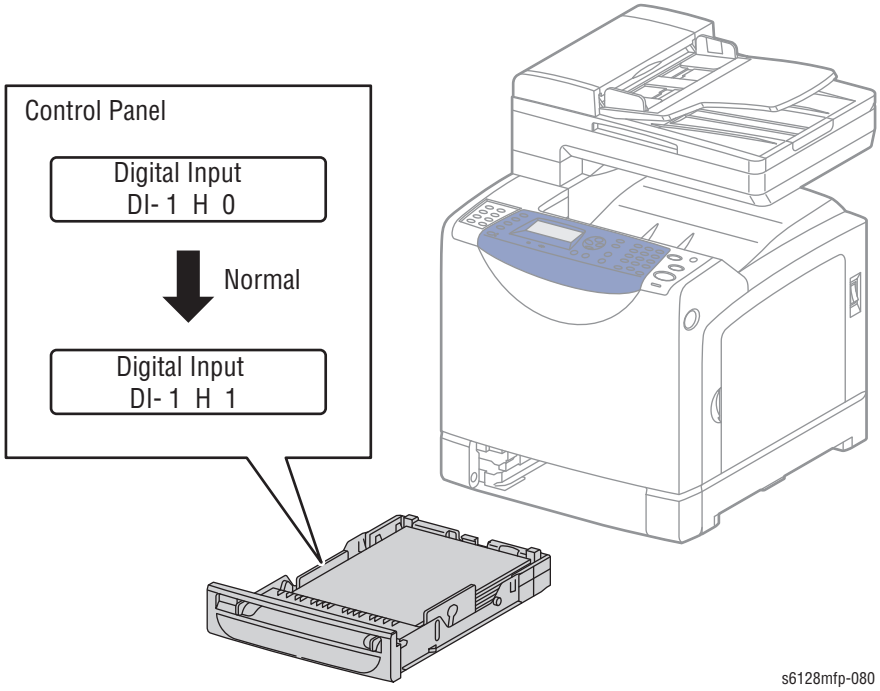
1. Enter Service Diagnostics (page 4-4).
2. Perform the Tray 1 (MPT) Sensor test: **Engine Diag** > **Sensor Test** > **Manual Feed Sensor**.
3. Slide a sheet of paper in and out of the manual feed slot. The Low and High values change from 0 up to 99.



4. Press the **Stop** button to stop the Tray 1 No Paper test.

Tray No Paper

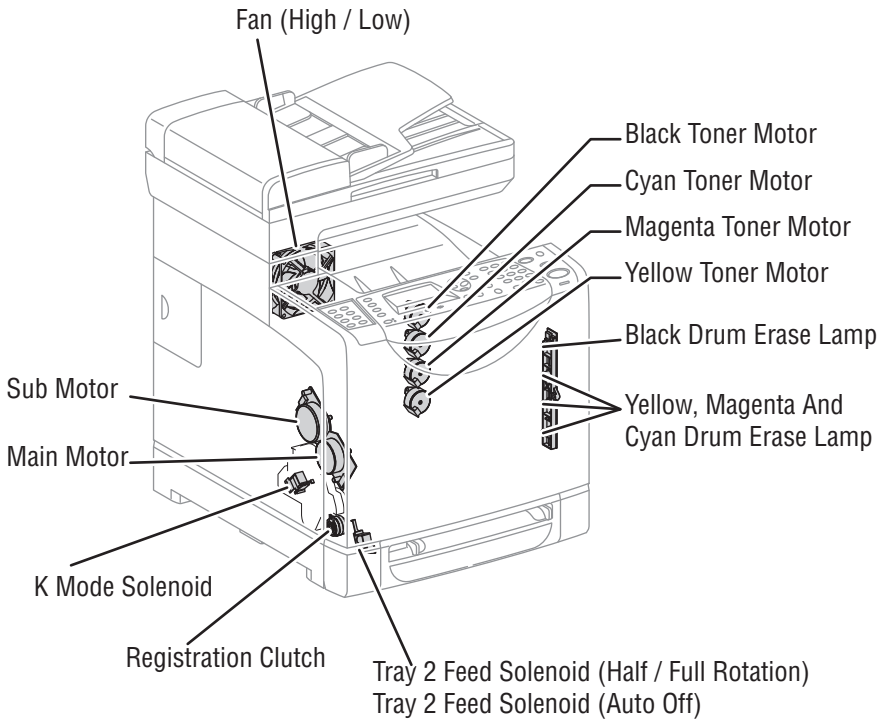
1. Enter Service Diagnostics (page 4-4).
2. Perform the Tray No Paper test: **Engine Diag** > **Sensor Test** > **Tray No Paper**.
3. Remove Tray.
4. Move the Actuator up and down while checking the information on the Control Panel display. The Low and High values change from 0 up to 99.



5. Press the **Cancel** button to stop the Tray No Paper test.

IOT Motor, Solenoid Testing Procedures

Procedures for testing each IOT motors, solenoids and erase lamps using Service Diagnostics.



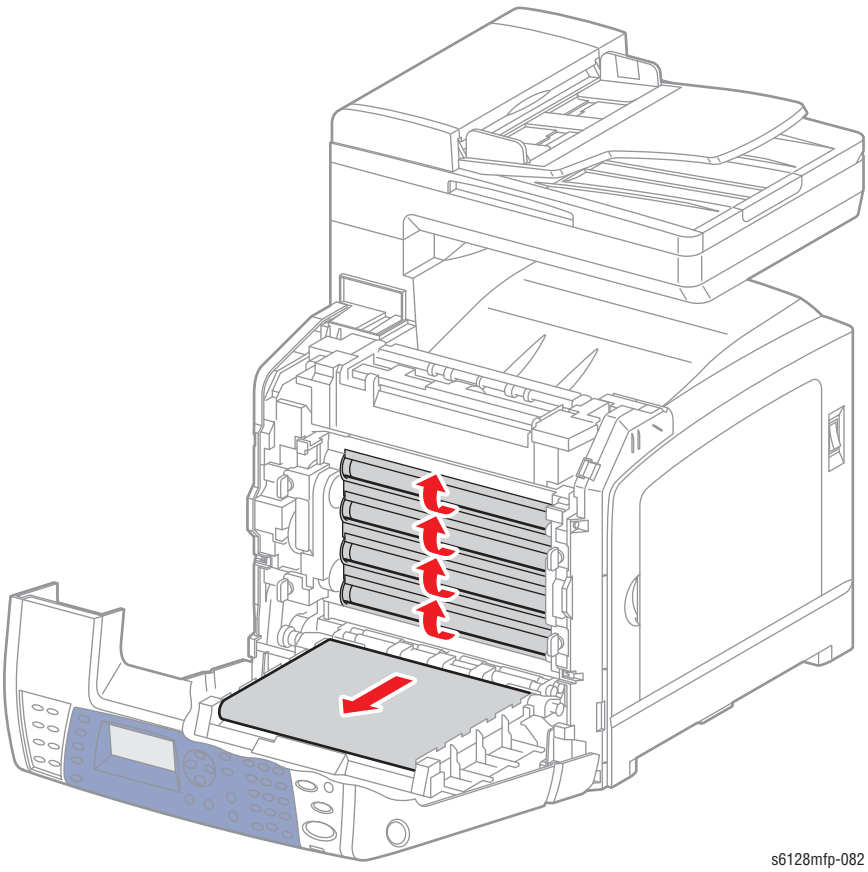
Main Motor

The Main Motor drives the transfer belt and Imaging Unit drums.

Note

Install the interlock override to provide power to the device under test.

1. Enter Service Diagnostics (page 4-4).
2. Open the Front Cover.
3. Perform the Main Motor test: **Engine Diag** > **Motor Test** > **Main Motor DO-0, DO-1, DO-2**. The rotational speed order of the Main Motor test is DO-2 > DO-0 > DO-1.
4. Verify that the Main Motor is running, the imaging unit drums are rotating, and the transfer belt is moving.



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5. Press the **Stop** button to stop the Main Motor test.

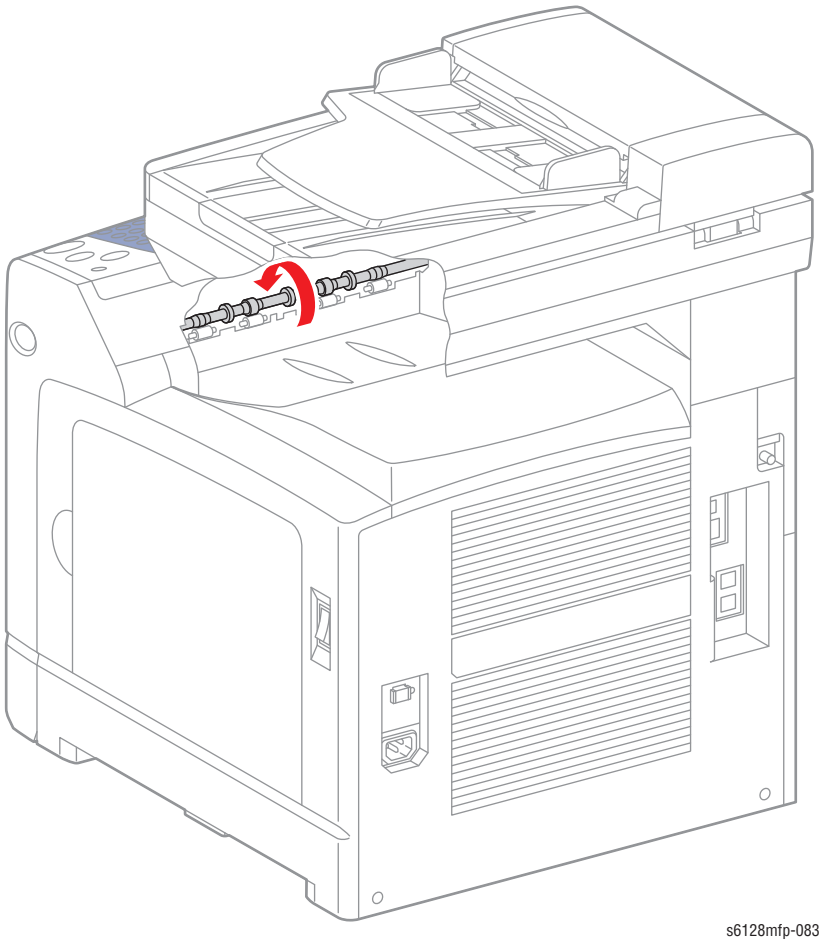
Sub Motor

The Sub Motor is located in the Main Drive and drives the Fuser and Developer.

Note

Install the safety interlock override to provide power to the device under test.

1. Enter Service Diagnostics (page 4-4).
2. Open the Front Cover.
3. Perform the Sub Motor test: **Engine Diag > Motor Test > Sub Motor (DO-5, DO-6, DO-7)**. The rotational speed order of the test is DO-7 > DO-5 > DO-6.
4. Verify that the Sub Motor is running and the Exit Roller is rotating.



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5. Press the **Stop** button to stop the Sub Motor test.

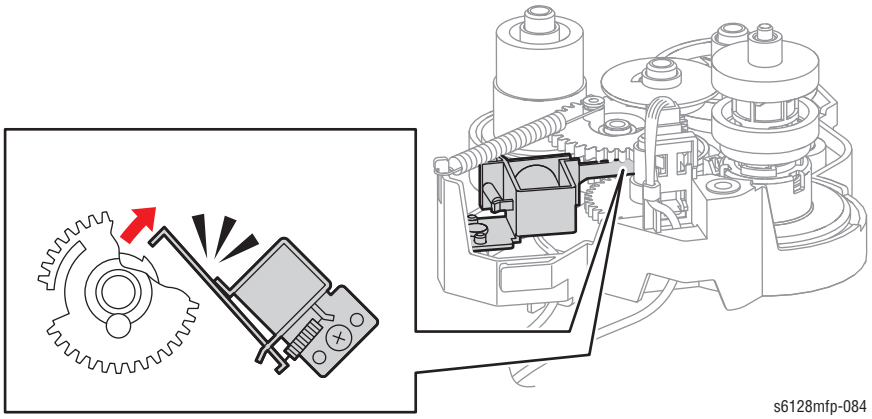
K Mode Solenoid

The K Mode Solenoid shifts the gear drive when printing in B & W Only mode.

Note

Install the safety interlock override to provide power to the device under test.

1. Remove the Feed Drive Assembly (page 8-37) but leave all harnesses connected.
2. Enter Service Diagnostics (page 4-4).
3. Perform the K Mode Solenoid test: **Engine Diag** > **Motor Test** > **K Mode Solenoid** (DO-a).

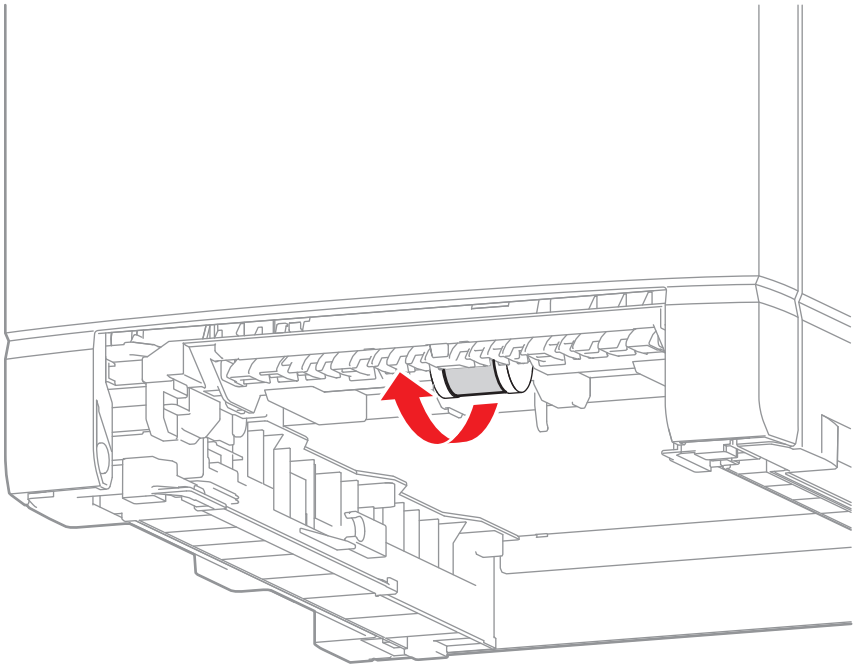


4. Press the **Stop** button to stop the K Mode Solenoid test.
5. Turn off the printer and install the Feed Drive Assembly.

Feed Roller Rotation

This test operates the Feed Solenoid and allows the Feed Roller for the Paper Tray to turn. When (DO-b) is selected, the Feed Roller makes a half rotation; When (DO-c) is selected, the Feed Roller makes a full-rotation.

1. Enter Service Diagnostics (page 4-4).
2. Remove the Paper Tray.
3. Perform the Tray 2 Feed Solenoid (Half) or (Init) test: **Engine Diag** > **Motor Test**> **Feed Roller (**DO-b, DO-c). The rotational speed of the solenoid is DO-c<DO-b



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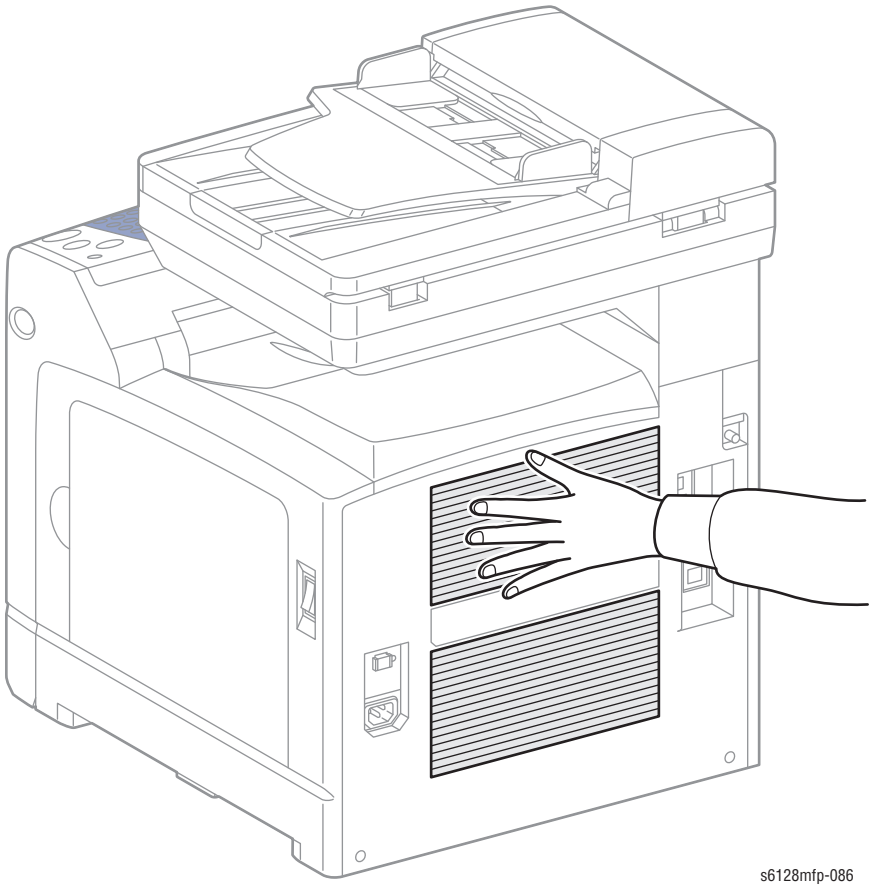
Note

To repeat either the (DO-b) or (DO-c) test, it is necessary to press the **Stop** button first. However, to perform the (DO-c) test after the (DO-b) test, it is only necessary to select the test

4. Press the **Stop** button to stop the Tray 1 Feed Solenoid test.

Fan

1. Enter Service Diagnostics (page 4-4).
2. Perform the Fan test: **Engine Diag** > **Motor Test** > **Fan (**DO-1e ,DO-1f).
3. Verify that the fan is running.



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4. Press the **Stop** button to stop the Fan test.

Toner Motors

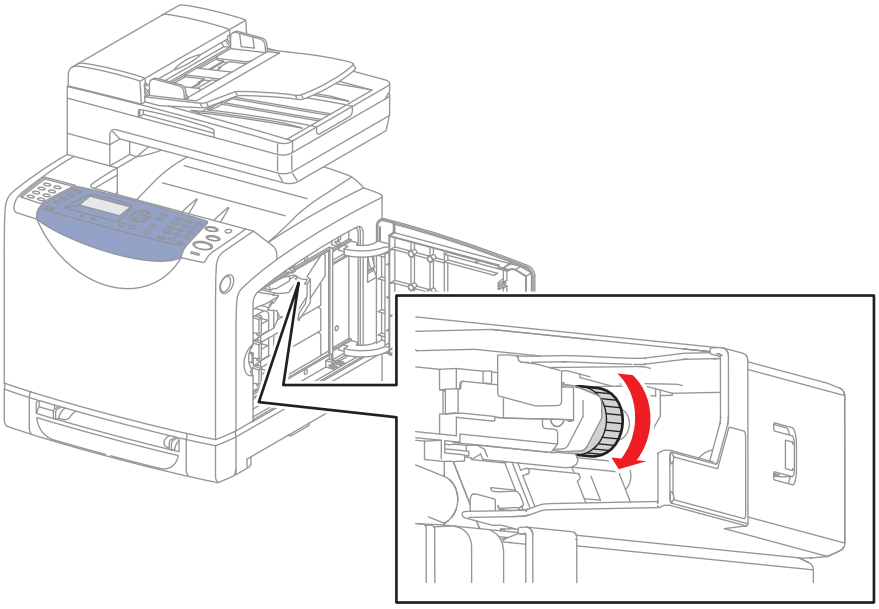
Caution

Running the Toner Motor for longer than a few seconds can result in toner spilling from the Imaging Unit.

Note

Install the safety interlock override to provide power to the device under test.

1. Enter Service Diagnostics (page 4-4).
2. Remove the Toner Cartridge (page 8-13) of the color under test.
3. Open the Toner Cartridge Holder of the color under test.
4. Perform the Toner Motor test: **Engine Diag** > **Motor Test** > **CMYK Toner Motor** (DO-21, DO-23, DO-25, DO-27).
5. Check that the Toner Motor for the chosen color is running and the gear is rotating.



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6. Press the **Stop** button to stop the Toner Motor test.

Registration Clutch

The Registration Clutch controls the drive to the Registration Roller.

Note

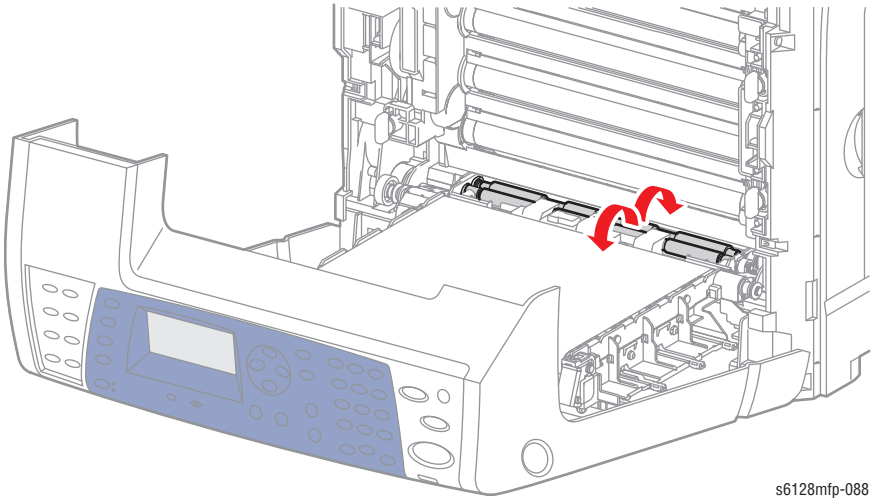
Install the safety interlock override to provide power to the device under test.

1. Enter Service Diagnostics (page 4-4).
2. Open the Front Cover.
3. Remove the Imaging Unit (page 8-8).
4. Perform the Main Motor DO-0 test: **Engine Diag** > **Motor Test** > **Main Motor DO-0**.
5. While the Main 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 Main Motor (DO-0) and Registration Clutch (DO-29) tests are executed.

7. Verify that the Main Motor is running and the Registration Rollers are rotating.



8. Press the **Stop** button to stop the Registration Clutch test.
9. Press the **Down Arrow** button to find **Main Motor DO-0**
10. Press the **Stop** button to stop the Main Motor test.

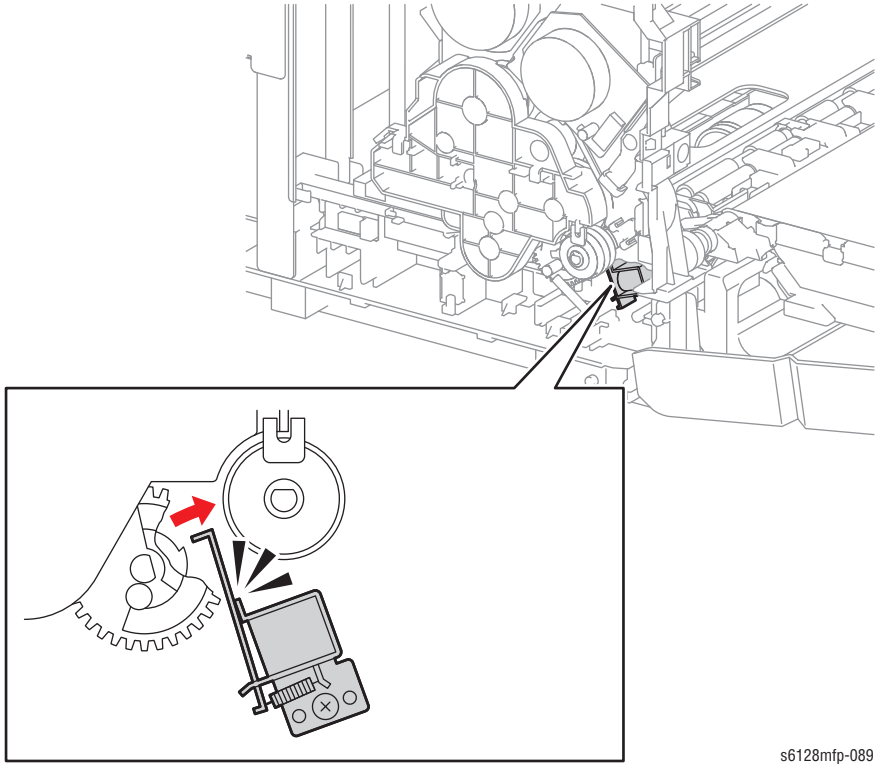
Tray Feed Solenoid

Solenoid that controls the drive of the Tray Feed Roll

Note

Install the safety interlock override to provide power to the device under test. Run this test when the Feed Roller fails to rotate during the Feed Solenoid (DO-b) test.

1. Remove the Left Side Cover (page 8-17).
2. Enter Service Diagnostics (page 4-4).
3. Perform the Tray 2 Feed Solenoid (Auto) test: **Engine Diag > Motor Test> Tray Feed Solenoid** (DO-2f).
4. Observe the Feed Solenoid movement.



s6128mfp-089

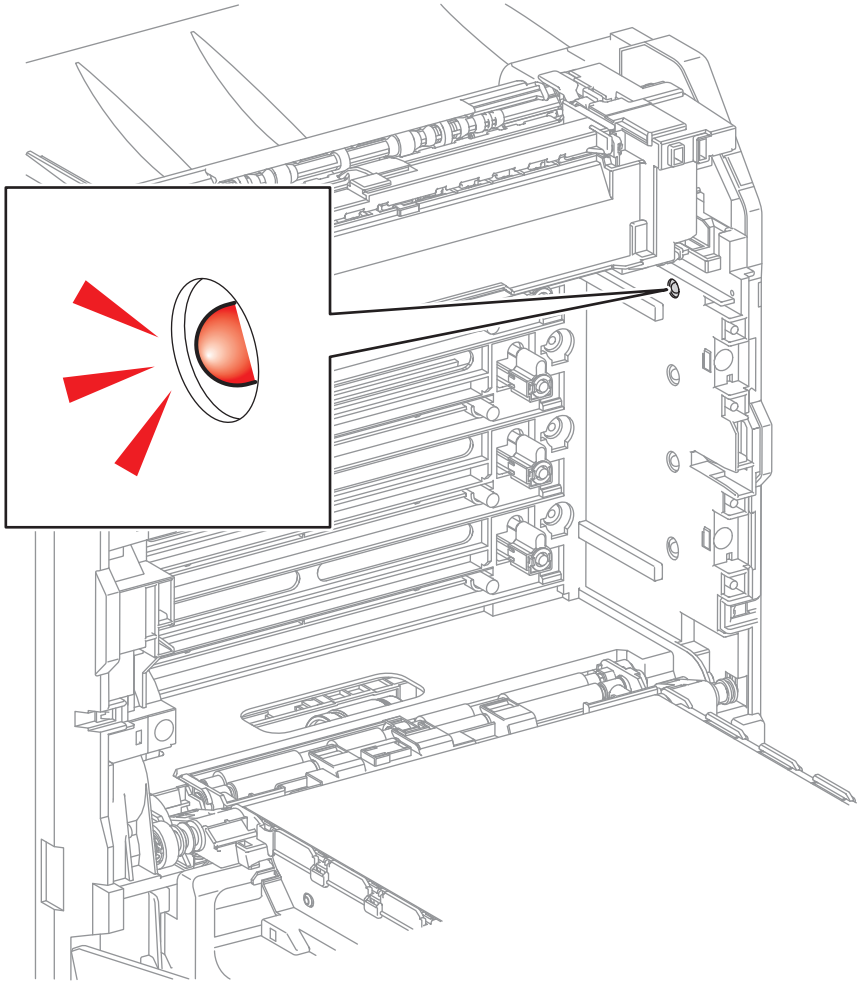
6. Press the **Stop** button to stop the Feed Solenoid (Auto) test.

Drum Erase Lamp (K)

Note

Install the safety interlock override to provide power to the device under test.

1. Enter Service Diagnostics (page 4-4).
2. Open the Front Cover.
3. Remove the Imaging Unit (page 8-8).
4. Perform the Drum Erase Lamp K test: **Engine Diag** > **Motor Test** > **Drum Erase Lamp K (DO-3d)**.
5. Verify that the Lamp is operating.



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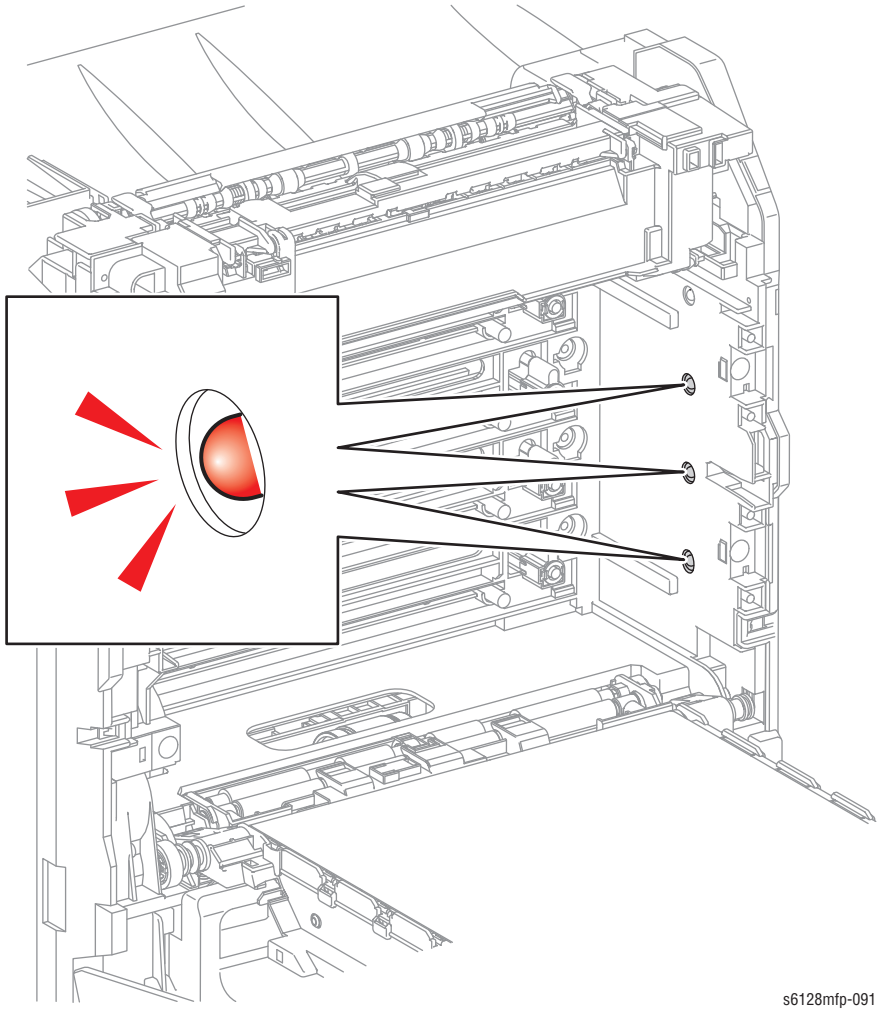
7. Press the **Stop** button to stop the Drum Erase Lamp K test.

Drum Erase Lamp (C, M, Y)

Note

Install the safety interlock override to provide power to the device under test.

1. Enter Service Diagnostics (page 4-4).
2. Open the Front Cover.
3. Remove the Imaging Unit (page 8-8).
4. Perform the Drum Erase Lamp YMC test: **Engine Diag** > **Motor Test** > **Drum Erase Lamp YMC (DO-3f)**.
5. Verify that the Lamps are operating.



7. Press the **Stop** button to stop the Drum Erase Lamp YMC test.

Control Panel Troubleshooting

Printer Does Not Come to a "Ready" State

1. Reseat connectors on the Image Processor Board.
2. Refer to "DC Power Supply Troubleshooting" on page 4-64.
3. Replace the Control Panel (page 8-43).
4. Repair the Control Panel wiring harness.

Control Panel LED is On, Control Panel Display is Blank

1. Remove and reseat the Image Processor Board (page 8-41).
2. Replace the Control Panel (page 8-43).
3. Repair the Control Panel wiring harness.
4. Replace the Image Processor Board (page 8-41).

Fax Troubleshooting

If the Fax isn't operating correctly, try using the copy function. If the copy function's printing results are correct, the probability of a fault in the Fax itself is low. The fault is likely in the telephone line or receiving Fax. If the fault is in the telephone line, first retry sending the data. If there is no improvement, contact the telephone company. If the copy function's printing results are incorrect, it can be determined if the fault is in the scanner or printer by operating each unit separately via a computer.

Transmission Fault

1. Problem with printing quality at receiving Fax, such as corrupt image, lines in image, or top/bottom cut off.

   a. If a copy is normal.

   Cause: Degraded telephone line connection is caused by noise, etc., or a fault in receiving Fax's printer.

   Corrective Action: Determine whether the fault is in the telephone or receiving Fax by trying a copy function at the receiving Fax.

   Note

   If the telephone line is degraded, white horizontal lines, missing rows, and/or cut-off top/bottom may occur. Branch connections or incoming call (call waiting) may also caused image corruption.

   b. If copy function is faulty.

   Cause: Dirt or fault in scanner.

   Corrective Action: Clean the document glass or repair the scanner. If the original is being sent from the ADF, try making a copy with the original placed on the platen. If this resolves the problem, the fault is in the ADF.

2. Cannot dial.

   Cause: No connection. Incorrect setup of dial type and/or line type.

   Corrective Action: Reconnect the telephone line. Reset the dial type and/or line type to correct the settings.

Reception Fault

1. Cannot Receive.

   a. Answering mode is incorrect.

   Cause: The answering mode is set to TEL Mode in the **Fax Settings: System --> Admin Menu --> Fax Settings --> Ans Select**.

   Corrective Action: Change the answering mode from TEL Mode to other mode (i.e., FAX Mode, TEL/FAX Mode, Ans/FAX Mode, DRPD Mode...).

   b. Fax memory is full.

   Cause: An attempt was made to send document data in excess of the available memory capacity.

   Corrective Action: On the receiving side, wait until the current fax job is printed completely.

   c. The printer displays some fault messages.

   Cause: A fault occurred in the printer.

   Corrective Action: Refer to the appropriate fault error procedures to resolve the problem.

   d. Distinctive ring pattern detection fails.

   Cause: The distinctive ring pattern set for the DRPD mode is incorrect (applicable only in USA and Canada).

   Corrective Action: Check the ring pattern provided by the telephone service provider, and select the correct pattern for fax.

   e. Cannot detect Calling Tone (CNG) signal.

   Cause: Communication fails in TEL/FAX mode or Ans/FAX mode.

   Corrective Action: Ground the printer properly.

   f. Cannot detect off-hook.

   Cause: Communication fails in TEL/FAX mode or Ans/FAX mode.

   Corrective Action: Set Extel Hook Thresh to Higher: **System --> Admin Menu -> Fax Settings --> Extel Hook Thresh**.

   Note

   Off-hook detection is indicated by a change in the Control Panel display on receipt of an off-hook signal from an external telephone.

2. Problem with printing quality, such as corrupted image, lines in image, or top/bottom cut off.

   a. If copy function is normal.

   Cause: Degraded telephone line connection is caused by noise, etc., or a fault is sending Fax's scanner.

Corrective Action: Determine whether fault is in the telephone line or at sending Fax by trying the copy function at sending Fax.

Note

If the telephone line condition is degraded, white horizontal lines, missing rows, and/or image cut-off at either top or bottom may occur. Branch connections or an incoming call (Call Waiting) may also cause image corruption.

b. If copy function is faulty.

Cause: Dirt or fault in printer.

Corrective Action: Clean all parts of the printer or repair the printer.

c. Response signal was not sent.

Cause: No connection. Incorrect setup of dial type, line type, and/or reception mode.

Corrective Action: Reconnect the telephone line. Reset the dial type, line type, and/or receive mode to correct settings.

Note

If a call is made to the Fax from a telephone, and the Fax does not emit its ringing sound, a telephone line fault is highly probable. Be sure an external telephone line is connected prior checking for a ring tone.

Other Fax Problems

Branch Connection (Parallel Connection)

During Fax reception, if the handset of another telephone on a branch connection is lifted, the received image may be corrupted or a transmission error may occur. Branch connection may also interfere with Caller ID, Call Waiting, or the receiving operation of the connected telephones.

Call Waiting

If a call comes in during Fax sending/reception, the image may be corrupted.

Digital Subscriber Line

Digital Subscriber Line (DSL) is a high-speed digital transmission method using existing telephone lines. Because the line is used for both voice and data transmission, various problems may occur, such as noise during spoken conversation, low sound volume, and mis-dialing. Replacing the splitter may improve the situation.

The Digital Subscriber Line cannot be directly connected to a fax machine; the line must be connected via a filter.

There are several types of DSL:

- ADSL (Asymmetric Digital Subscriber Line) – Transmits digital information at a high-speed bandwidth on phone lines. ADSL provides continuously available connection with differing upstream and downstream transmission speeds and

simultaneously accommodates analog (voice) and digital information on the same line. Downstream data rates are offered from 512 Kbps to about 6 Mbps.

- SDSL (Symmetric Digital Subscriber Line) – Runs over one pair of copper wires with symmetrical upstream and downstream transmission speeds up to 3 Mbps, with a maximum range up to 3 km.
- VDSL (Very high Bit Rate Digital Subscriber Line) – An xDSL technology that provides faster data transmission over a single twisted pair of copper wires. VDSL transmits data from 13 Mbps ~ 55 Mbps range over short distances, usually between 1000 and 4500 feet.

Noise

If electronic equipment (television, computer, microwave, etc.) or devices equipped with motors are located near a Fax, noise from the electronic equipment may degrade the line condition.

Also, a telephone line, acting as an antenna, may absorb electric waves generated from wireless or broadcasting equipment.

Because Fax data is audio data, the line quality affects the quality/stability of image data as well as that of conversation.

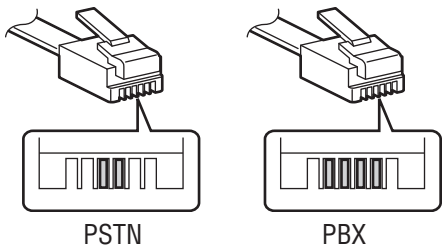
Fax Failure After Installation/Relocation

The Fax has failed to send after installation. The following troubleshooting procedure applies to this error.

Initial Actions

- Disconnect all devices other than the Fax machine.
- Cycle printer power.
- If the problem persists, follow the procedure below.

The conventional analog telephone line uses standard RJ-11 cable, which has two conductors. However, the four-conductor cables commonly available are backward compatible with RJ-11 and can be used with no problems. On the other hand, since these four-conductor cables are also used for ISDN systems, the number of elements is not the key for identification of the type of line/service.



Troubleshooting Procedure

Applicable Parts	Wiring and Plug/Jack Map References
■ Image Processor Board, PL10.6.6	■ “Map 3 - Electrical and Drive” on page 10-8

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the telephone services for screening feature such as blocking unwanted calls, etc. 2. Is the line identified?	Go to step 2.	Go to step 4.
2	1. Manually dial any local phone number using touch tone, pulse 20PPM and pulse 10PPM in this order. 2. Is there a connection?	Go to step 3.	Request the phone company for a line repair.
3	1. Manually dial any out-of-area phone number. 2. Is there a connection?	Go to step 6.	Check if the transmission route consists of multiple telephone service providers. Confirm that your telephone line supports faxing.
4	1. Check the line type. ■ Confirm that the line is not an ISDN/ xDSL/IP phone line but an analog line. ■ If no dial tone is present at Off hook, the line may be faulty. 2. For PSTN: ■ Is there a continuous tone present at the hook? ■ Does the cable have 2 conductors?	Manually dial any local phone number using touch tone.	Go to step 5.
5	Is the line a PBX?	Go to step 8.	Request the telephone company for a line repair.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
6	1. Update Fax Setting information for a new fax job. 2. Send a fax to another fax machine. 3. Did the fax transmit?	Go to step 10.	**Note**: Error 035-752 occurs when the receiving line is busy. If the line is not busy, resend fax. Go to step 7.
7	1. Check the outside line prefix is added. 2. Is the fax number correct?	Check the following information: **System > Admin Menu > Fax Settings.** Ans Select Line Type Dialing Type	Retry the fax transmission.
8	1. Manually dial any local phone number using touch tone with the outside line prefix (i.e., 9). 2. Is there a connection?	Go to step 3.	Go to step 9.
9	1. Check for the pulse. Manually dial using pulse 20PPM. 2. Is there a connection?	Go to step 3.	Set pulse to 10PPM. Go to step 3.
10	1. Receive a fax from another fax machine. 2. Did the reception complete?	Complete. Connect additional devices such as external telephone and answering machine.	Check the Secure settings: **System > Admin Menu > Secure Settings > Secure Receive.** Is Secure Rcv. Set Disable? (the default is Disable)
11	1. Check the Fax setting: **System > Admin Menu > Fax Settings > Ans Select.** 2. Is the Ans Select setting correct?	Go to step 12.	Correct the setting.
12	1. Check the Auto Answer Fax value: **System > Admin Menu > Fax Settings > Auto Answer Fax.** 2. Does the value exceed 30?	Set the value to below 30.	Replace the Image Processor Board (page 8-41).

Fax Failure After Continuous Normal Operation

The Fax has failed to send or receive after continuous normal operation. The following troubleshooting procedure applies to this error.

Initial Actions

- Disconnect all the devices other than the Fax machine.
- 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, PL10.6.6	■ “Map 3 - Electrical and Drive” on page 10-8

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the error message on the Control Panel. 2. Is there an error code?	Refer to the appropriate error code procedure.	Go to step 2.
2	Has the Fax machine been relocated?	Refer to “Fax Failure After Installation/ Relocation” on page 4-55).	Go to step 3.
3	Do all calls fail?	Go to step 4.	Go to step 11.
4	Has the line contract been switched to ISDN/xDSL or IP-phone?	Check the Fax configuration for the TA/ xDSL modem, etc.	Go to step 5.
5	Has there been any change of line contract for the line type (Pulse to Tone, Tone to Pulse, etc.)?	Correct the Line Type setting.	Go to step 6.
6	Is a dial tone present at Off hook?	Go to step 7.	Go to step 9.
7	Does the manual dialing function properly?	Go to step 8.	Replace the I/P Board (page 8-41).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
8	Is the paper size correct?	Replace the I/P Board (page 8-41).	Replace the paper.
9	1. Check the cable type. ■ Two-conductor (PSTN) ■ Four-conductor (PBX) 2. Check the cable condition. ■ Normal continuity ■ Straight, unlooped, uncoiled routing ■ Appropriate cable length 3. Is the cable type correct and in good condition?	Go to step 10.	Replace the cable.
10	Is a sufficient line voltage obtained via Diagnostics?	Replace the I/P Board (page 8-41).	Request for a line repair.
11	Does the error occur only when sending?	Go to step 12.	Go to step 18.
12	1. Check the Delayed Start setting: **System** > **Default Settings** > **Fax Defaults** > **Delayed Start.** 2. Is the Delayed Start On?	Go to step 13.	Go to step 15.
13	Is the Delayed Start on a specified time?	Complete.	Go to step 14.
14	Is the Local Time setting correct?	Replace the I/P Board (page 8-41)..	Set the Local Time setting.
15	Is a ring tone present?	Go to step 16.	Go to step 17.
16	Is the modem sound present?	Analyze the Protocol Monitor Report.	Replace the I/P Board (page 8-41).
17	Is the setting correct for the line type?	Replace the I/P Board (page 8-41)..	Correct the setting.
18	1. Check the Secure Receive setting: **System** > **Admin Menu** > **Secure Settings** > **Secure Receive.** 2. Is the Secure Rcv. Set Enable?	Go to step 19.	Go to step 20.
19	1. Print the stored data and turn **Secure Rcv.** to **Disable**. 2. Does the error still occur?	Go to step 20.	Complete.
20	Is a calling tone present?	Go to step 21.	Replace the I/P Board (page 8-41).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
21	Is a modem sound present at transmission?	Go to step 22.	Replace the I/P Board (page 8-41).
22	1. Check the Junk Fax Filter setting: **System** > **Admin Menu** > **Fax Settings** > **Junk Fax Filter.** 2. Is the Junk Fax Filter On?	Go to step 23.	Analyze the Protocol Monitor Report.
23	Is the number of sending fax registered?	Analyze the Protocol Monitor Report.	Complete.

Color Fax Troubleshooting

The following procedure applies to Color Faxing has failed errrors.

- Color Fax cannot be used while receiving or transmitting a Fax.
- When faxing a document from the platen, only one page can be transmitted.
- If the Fax machine must provide color reception.
- There is no retransmission when a Color fax error occurs.
- Color Fax cannot be used by Direct Fax.
- The data of Color Fax cannot be transferred to other parties.

Initial Actions

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

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ IIT Sub Asssembly (PL10.9.2)	“Imaging” on page 24

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Did the user operate the Fax machine correctly?	Go to step 2.	Complete.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
2	Does the error occur when sending a Fax?	Go to step 3.	Check with the sender on information: Fax machine Original document Fax settings Fax menu
3	Check the Fax settings: **System** > **Admin Menu** > **Fax Settings** > **Color Fax.** Is the Color Fax setting On?	Go to step 4.	Turn the Color Fax setting On.
4	Check the original document. Is the customer using a color document?	Go to step 5.	Complete.
5	Did the user select Color Fax mode?	Replace the IIT Sub Assembly (page 8-82).	Complete.

Engine Test Print

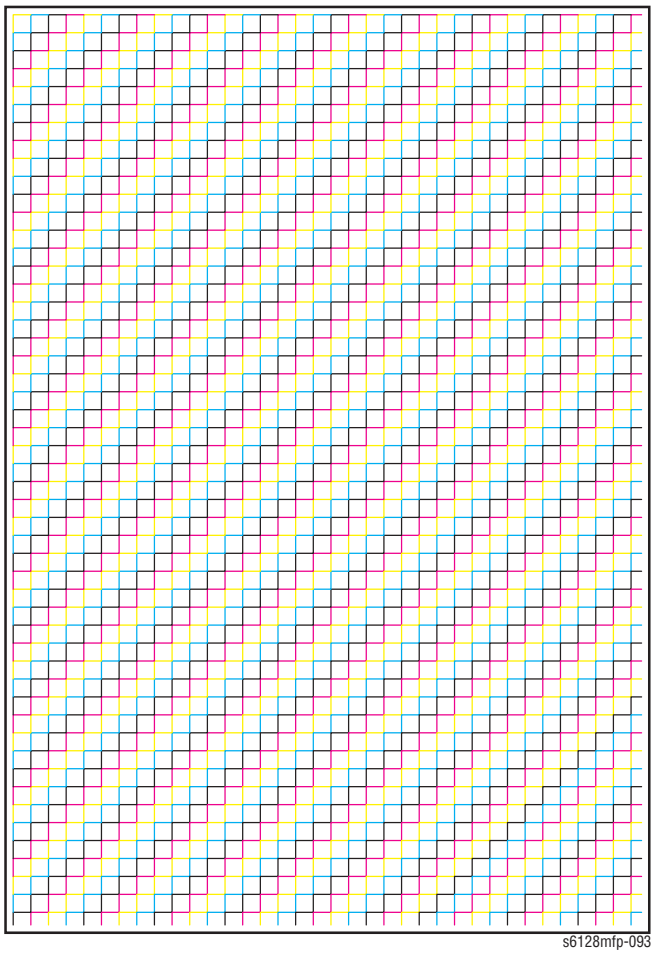
The Pattern IOT test print isolates printer hardware problems to either the MCU or Image Processor Board.

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Image Processor Board, PL10.6.6 ■ MCU Board, PL10.7.7	"System Control" on page 10-22

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Print the Pattern IOT test print from Service Diagnostics . Did the test pattern print?	Replace the Image Processor Board (page 8-41).	Replace the MCU Board (page 8-57).



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Inoperable Printer Troubleshooting

Engine Power-Up Sequence

1. Machine Control Unit (MCU) Board logic check
2. Toner Cartridge (Missing, NVRAM (CRUM) Error, CRUM ID, Life Over)
3. Fuser (Missing, NVRAM (CRUM) Error, Life Over)
4. Transfer Belt (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 4-63).

AC Power Supply Troubleshooting

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack References
■ LVPS, PL9.1.4	■ "LVPS" on page 10-14

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the voltage at the AC wall outlet. 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	Check the power cord for defects or a loose connection. Is the power cord loose or defective?	Replace or reconnect the power cord.	Replace the LVPS (page 8-47).

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.

LVPS

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ LVPS, PL10.6.16 ■ MCU Board, PL10.7.7	■ "LVPS" on page 10-14

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the AC power supply (page 4-73). Does the problem persist?	Go to step 2.	Complete.
2	Turn the Power Switch Off. Is the Fuse on the LVPS open?	Replace the LVPS (page 8-47).	Go to step 3.
3	1. Disconnect J501 and J502 from the LVPS. 2. Turn the Power Switch On. 3. Measure the DC voltages between these pins on the LVPS: ■ P501-1 <=> P501-2 = +5 V ■ P501-3 <=> P501-4 = +3.3 V ■ P502-1 <=> P502-2 = +24 V Are all of the voltages present?	Go to step 4.	Replace the LVPS (page 8-47).

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	1. Turn the Power Switch Off. 2. Connect J501 to the LVPS then turn the Power Switch On. 3. Measure the voltage between P501-3 <=> P501-4? Is there 3.3 V present?	Go to step 7.	Go to step 5.
5	Is there obvious damage to the MCU Board, PL10.7.7?	Replace the MCU Board (page 8-57), then go to step 6.	Go to step 7.
6	Does the problem still occur?	Go to step 7.	Complete.
7	1. Turn the Power Switch Off. 2. Connect J501 to the LVPS then turn the Power Switch On. 3. Measure the voltage between P501-1 <=> P501-2. Is there +5 V present?	Go to step 9.	Replace the MCU Board (page 8-57), then go to step 8.
8	Does the error still occur?	Go to step 9.	Complete.
9	1. Turn the Power Switch Off. 2. Connect J502 to the LVPS then turn the Power Switch On. 3. Measure the voltage between P502-1 <=> P501-2? Is there +24 V present?	Complete.	Go to step 10.

+24 VDC Interlock Switch

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Interlock Harness, PL10.6.4 ■ LVPS, PL10.6.16	■ “LVPS” on page 10-14

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Interlock Harness for continuity. 1. Disconnect P/J44. 2. Check continuity between P/J44-1 <=> P/J44-3. Is the circuit continuous when the Interlock is activated?	Complete	Replace the Interlock Harness (page 8-52).

Abnormal Noise and Electrical Problems

Abnormal Noise When Power is Turned On

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Imaging Unit (PL4.1.21) ■ Fuser (PL6.1.1) ■ Transfer Belt (PL6.1.7) ■ Sub Drive Assembly (PL7.1.1) ■ Main Drive Assembly (PL7.1.2)	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Perform the Main Motor test (page 4-41): **Service Mode > Engine Diag > Motor Test > Main Motor FULL2**. Is the noise still present?	Go to step 2.	Go to step 5.
2	1. Reseat the Imaging Unit. 2. Perform the Main Motor test (page 4-41): **Service Mode > Engine Diag > Motor Test > Main Motor FULL2**. Is the noise still present?	Go to step 3.	Complete
3	1. Reseat the Transfer Belt connectors. 2. Perform the Main Motor test (page 4-41): **Service Mode > Engine Diag > Motor Test > Main Motor FULL2**. Is the noise still present?	Go to step 4.	Complete
4	1. Reseat the Main Drive Assembly. 2. Perform the Main Motor test (page 4-41): **Service Mode > Engine Diag > Motor Test > Main Motor FULL2**. Is the noise still present?	Try replacing one after another: ■ Imaging Unit (page 8-8) ■ Transfer Belt (page 8-103) ■ Main Drive Assembly (page 8-58).	Complete

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	Perform the Sub Motor test (page 4-43): **Service Mode > Engine Diag > Motor Test > Sub Motor FULL2**. Is the noise still present?	Go to step 6.	Check the installation situation of printer.
6	1. Reseat the Imaging Unit. 2. Perform the Sub Motor test (page 4-43): **Service Mode > Engine Diag > Motor Test > Sub Motor FULL2**. Is the noise still present?	Go to step 7.	Complete
7	1. Reseat the Fuser. 2. Perform the Sub Motor test (page 4-43): **Service Mode > Engine Diag > Motor Test > Sub Motor FULL2**. Is the noise still present?	Go to step 8.	Complete
8	1. Reseat the Sub Drive Assembly. 2. Perform the Sub Motor test (page 4-43): **Service Mode > Engine Diag > Motor Test > Sub Motor FULL2**. Is the noise still present?	Try replacing one after another: ■ Imaging Unit (page 8-8) ■ Fuser (page 8-11) ■ Sub Drive Assembly (page 8-60).	Complete

Abnormal Noise During Standby

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Fan (PL10.6.17) ■ LVPS (PL10.6.16)	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Perform the Fan test (page 4-46): **Service Mode > Engine Diag > Motor Test > Fan.** Is the noise coming from the Fan?	Replace the Fan. (page 8-50)	Replace the LVPS. (page 8-47)

Abnormal Noise During Printing

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ Separator Roller (PL2.1.5) ■ Feed Roller Assembly (PL3.2.4) ■ Imaging Unit (PL4.1.21) ■ Fuser (PL6.1.1) ■ Transfer Belt (PL6.1.7) ■ Sub Drive Assembly (PL7.1.1) ■ Main Drive Assembly (PL7.1.2) ■ Fan (PL8.1.1)	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Is the noise present when paper is fed from the Tray?	Go to step 2.	Go to step 6.
2	Check the paper condition. Is the paper dry and approved?	Go to step 4.	Replace the paper, then go to step 3.
3	Check for noise when paper is fed from Tray 1 Is the noise still present?	Go to step 4.	Complete
4	1. Remove the Tray. 2. Rotate the Separator Roller with your finger. Does the roller rotate smoothly?	Go to step 5.	Replace the Separator Roller (page 8-7).
5	Check the Feed Roller rotation 1. Remove the Tray. 2. Start the Main Motor FULL2 test (page 4-41): **Service Mode > Engine Diag > Motor Test > Main Motor FULL2**, then while the motor is running, start the Tray Feed Solenoid (Auto) test (page 4-49): **Service Mode > Engine Diag > Motor Test > Tray Feed Solenoid (Auto)**. Is the noise coming from this roller? **NOTE:** After check is completed, turn off the Tray Feed Solenoid test first, then turn off the Main Motor FULL2 test.	Replace the Feed Roller (page 8-10).	Go to step 9.
6	Check the feed slot paper guides Were the guides correctly set, and was the paper correctly inserted?	Go to step 7.	Reset the guides, then go to step 7.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
7	Check the paper condition Is the paper dry and approved paper?	Go to step 9.	Replace the paper, then go to step 8.
8	Check for noise when the paper is fed into the feed slot Does the noise come from the printer?	Go to step 9	Complete
9	Perform the Main Motor test (page 4-41): **Service Mode** > **Engine Diag** > **Motor Test** > **Main Motor FULL2**. Does the noise arise from the printer?	Go to step 10.	Go to step 16.
10	1. Reseat the Imaging Unit. 2. Perform the Main Motor test (page 4-41): **Service Mode** > **Engine Diag** > **Motor Test** > **Main Motor FULL2**. Is the noise still present?	Go to step 11.	Complete
11	1. Reseat the Transfer Belt connectors. 2. Perform the Main Motor test (page 4-41): **Service Mode** > **Engine Diag** > **Motor Test** > **Main Motor FULL2**. Is the noise still present?	Go to step 12.	Complete
12	Check for dirt or debris on the registration rollers?	Clean the rollers, then go to step 13.	Go to step 14.
13	Check for noise when printing Is the noise still present?	Go to step 14.	Complete
14	Check registration roller rotation. 1. Start the Main Motor test (page 4-41): **Service Mode** > **Engine Diag** > **Motor Test** > **Main Motor FULL2**, and while the motor is running start the Regi Clutch test: **Service Mode** > **Engine Diag** > **Motor Test** > **Regi Clutch**. Is the noise coming from the Roller(s)?	Replace the Registration Roller Assembly and/or Metal Registration Roller.	Go to step 15.
15	1. Reseat the Main Drive Assembly. 2. Perform the Main Motor test (page 4-41): **Service Mode** > **Engine Diag** > **Motor Test** > **Main Motor FULL2**. Is the noise still present?	Try replacing one after another: ■ Imaging Unit (page 8-8) ■ Transfer Belt (page 8-103) ■ Main Drive Assembly (page 8-58).	Complete

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
16	Perform the Sub Motor test (page 4-43): **Service Mode > Engine Diag > Motor Test > Sub Motor FULL2**. Is the noise still present?	Go to step 17.	Check the installation situation of the printer.
17	1. Reseat the Imaging Unit. 2. Perform the Sub Motor test (page 4-43): **Service Mode > Engine Diag > Motor Test > Sub Motor FULL2**. Is the noise still present?	Go to step 18.	Complete
18	1. Reseat the Fuser. 2. Perform the Sub Motor test (page 4-43): **Service Mode > Engine Diag > Motor Test > Sub Motor FULL2**. Is the noise still present?	Go to step 19.	Complete
19	1. Reseat the Sub-Drive Assembly. 2. Perform the Sub Motor test (page 4-43): **Service Mode > Engine Diag > Motor Test > Sub Motor FULL2**. Is the noise still present?	Try replacing one after another: ■ Imaging Unit (page 8-8) ■ Fuser (page 8-11) ■ Sub Drive Assembly (page 8-60).	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
■ HVPS, PL4.1.19 ■ Transfer Belt, PL6.1.7 ■ Imaging Unit, PL4.1.21	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check external noise. 1. Are there other electrical appliances within 3 meters of the printer? 2. 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 2.	Complete
2	Check the AC ground Is AC power supply outlet wired and grounded appropriately?	Go to step 3.	Request the client to fix AC power supply outlet.
3	1. Open the Front Cover. 2. Inspect the four Transfer Belt HV connections. Are the four terminals on the Transfer Belt, and the four springs on the frame (PL4.1.11, 12, 13 and 14) dirty and/or deformed?	Clean or replace the Transfer Belt (page 8-103) or clean the spring(s).	Go to step 4.
4	Check the Imaging Unit connection 1. Remove the Imaging Unit. 2. Inspect the five Imaging Unit HV connections. Are the five HV terminals on the Imaging Unit, and five springs on the frame (PL4.1.10 and PL4.1.15 to 18) dirty and/or deformed?	Clean and/or replace the Imaging Unit (page 8-8) or clean the spring(s).	Go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	Reseat the Imaging Unit. Does the electrical noise error still occur?	Go to step 6.	Complete
6	Reseat the Transfer Belt. Does the electrical noise error still occur?	Reseat the HVPS.	Complete

AC Supply Problems

Troubleshooting Reference Table

Applicable Parts	Wiring and Plug/Jack Map References
■ LVPS, PL10.6.16	

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	**NOTE:** During this test, close the Front Cover. Does motor noise occur when the power is turned On?	Go to "DC Short" on page 4-74.	Go to step 2.
2	1. Connect the printer power cord to another electrical outlet. 2. Turn the printer power On. Does the printer operate normally?	Complete	Go to step 3.
3	1. Turn the printer power Off. 2. Reconnect the printer power cord. 3. Turn the printer power On. Does the printer operate normally?	Complete	Go to step 4.
4	Test the GFI Breaker Does the GFI Breaker operate normally?	Complete	Go to step 5.
5	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. Does the printer operate normally?	Complete	Go to step 6.
6	1. Turn the printer power Off. 2. Disconnect the printer power cord and wait for one minute. 3. Reconnect the power cord. 4. Turn the printer power On. Does the printer operate normally?	Complete	Replace the LVPS. (page 8-47)

DC Short

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. 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. Does the printer operate normally?	Complete	Go to step 2.
2	Check the Control Panel connection Reconnect the Control Panel connector (P/J220). Does the Control Panel operate normally?	Complete	Go to step 3.
3	Reseat all MCU Board connectors. Does the printer operate normally?	Complete	Replace the LVPS. (page 8-47).

Operating System and Application Problems

Windows 2000, Windows XP, Windows Server Troubleshooting

Note

For Window 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**, **Control Panel**, **BOOTP**, or **Auto IP** (depending on your network configuration).
   - **Current IP Address** is set correctly. (Note this address if it is assigned by Auto IP, 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 10.2 and Higher)

The following procedures eliminates cabling, communication, and connection problems. Once you complete these steps, print a test page from your software application.

Macintosh Troubleshooting OS 10.2 Step-by-Step

Perform these steps **only** for Mac OS 10.2 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, verity 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.

Print-Quality Troubleshooting

In this chapter...

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 p 2ossible. 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 1-22 for supported and specialty media that have been tested and approved for use in the Phaser 6128MFP. Use paper from a fresh ream that is acclimated to room temperature and humidity.

If the print-quality defect remains after printing on approved media from an unopened ream of paper, then investigate applications and environmental conditions.

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 print quality.

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 a 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 defects. If no defects are found, replace the Imaging Unit, Laser Unit, Transfer Belt, and Fuser one at a time until the defect is eliminated.

Defects Associated with Specific Printer Components

Some print-quality problems are associated with specific assemblies. The xerographic component is listed with the associated print-quality defects. Refer to the specific print-quality troubleshooting procedure for detail information.

Laser Unit

- Light or Undertone Print
- Blank 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 Belt

- 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

- Vertical Stripes
- Horizontal Stripes
- Repeating Bands, Lines, Marks, or Spots
- Unfused Image

Imaging Unit

- Light or Undertone Print
- Blank 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

Check 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. If the toner is low, replace the affected cartridges.

Cleaning

Paper, toner, and dust particles can accumulate inside the printer and cause print-quality problems such as smearing or specks. Clean the inside of the printer to reduce these problems. Refer to “Cleaning” on page 7-2.

Symptom Checklist

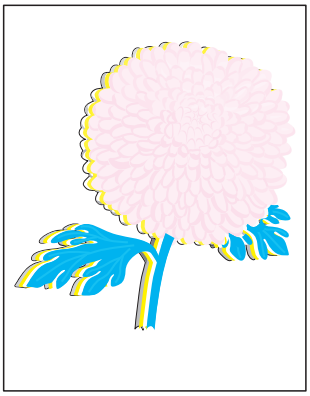
Based on the observed defect, check the following items prior to performing troubleshooting. These actions may help resolve the problem without troubleshooting the printer.

1. **Color is out of alignment.**

Note

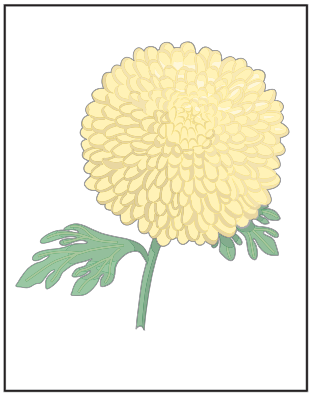
This problem can occur after installing a new black Toner Cartridge if the Imaging Unit has not been cleaned.

a. Clean inside the printer.
b. Clean the Laser Unit lenses using a Q-tip or a dry, lint-free cloth to wipe the lenses.
c. Check the Transfer Belt for damage.
d. Perform Color Registration Adjustment (page 6-3).



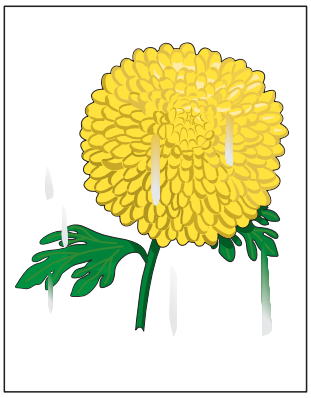
Color Registration

2. **Print is too light**.
   a. The toner may be too low. Check the amount of toner and change the Toner 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. Check that the correct media is being used.
   e. The Imaging Unit needs to be replaced.



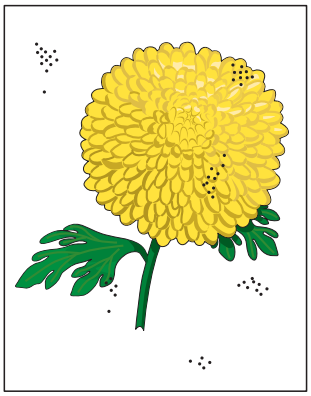
Light or Undertone Print

3. **Toner smears or print comes off page.**
   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 1-22).



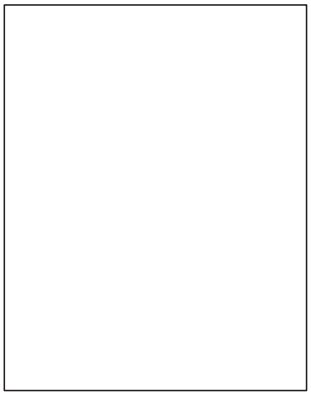
Smudges or Smears

4. **Toner spots appear on the page and printing is blurred.**
   a. Check the Toner Cartridge(s) to make sure that it is installed correctly.
   b. Change the Toner Cartridge(s).



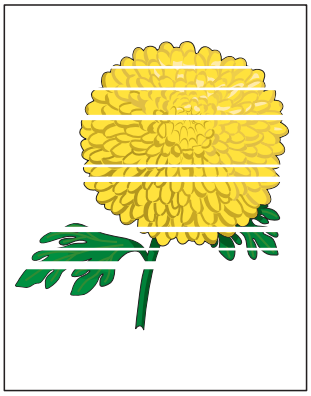
Random Spots

5. **Entire page is white or one color is missing from image**.
   a. Ensure the packaging material is removed from the Toner Cartridge.
   b. Check the Toner Cartridge to make sure that it is installed correctly.
   c. The toner may be low. Change the Toner Cartridge.



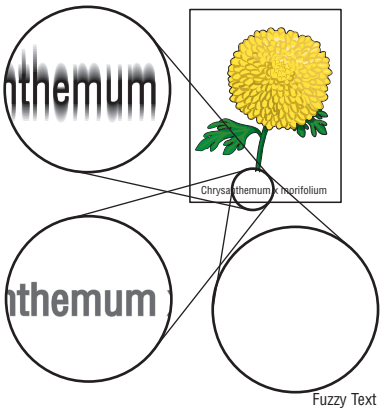
Blank Print

6. **Streaks appear on the page.**
   a. The toner may be low. Change the Toner Cartridge(s).
   b. If you are using preprinted forms, make sure the toner can withstand the temperature of 0˚ C to 35˚ C.



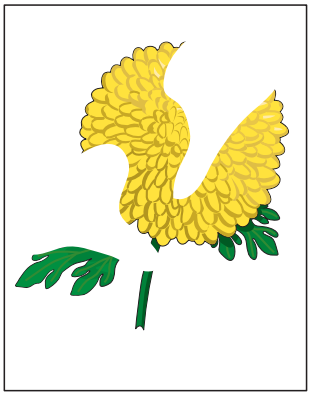
Horizontal Band, Void, or Streaks

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.



Fuzzy Text

8. **Part or all the page prints in cyan, magenta, yellow, or black.**
   a. Check the Toner Cartridges to make sure they are installed correctly.


Partial Band

9. **The job prints, but the top and side margins are incorrect.**
   a. Make sure the Paper Size setting in the Tray Settings is correct.
   b. Make sure the margins are set correctly in the software application.

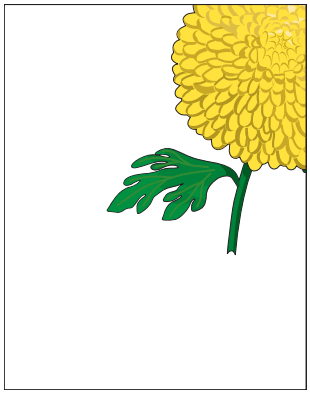


Image Not Centered

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	Description	Procedure
Light or Undertone Print	The overall image density is too light in all colors.	page 5-8
Blank Print	The entire image area is blank.	page 5-10
Black Print	The entire image area is black.	page 5-14
Vertical Blank Lines	There are faded or completely non-printed lines along the page.	page 5-16
Horizontal Band, Voids, or Streaks	There are areas of the image that are extremely light or are missing entirely.	page 5-18
Vertical Stripes	There are black lines along the page in the direction of the paper travel.	page 5-20
Horizontal Stripes	There are dark lines running parallel with the leading edge of the print.	page 5-22
Partial Band	Areas of the image are extremely light or missing.	page 5-24
Random Spots	Spots of toner are randomly scattered.	page 5-26
Repeating Bands, Lines, Marks, or Spots	Recurring lines, marks, or spots on the page.	page 5-28
Background Contamination	There is toner contamination on all or most of the page.	page 5-31
Skew	The image is not parallel with both sides of the paper.	page 5-33
Damaged Media	The paper is wrinkled, folded, or worn-out.	page 5-35
Unfused Image	The toner is not completely fused.	page 5-38
Color Registration	A printed yellow or black image is not overlapped on a cyan or magenta image correctly.	page 5-39
Wavy Lines	The image has wavy lines.	page 5-41
Incorrect Magnification	Incorrect magnification when copying with the ADF feeding.	page 5-42
Lines or Streaks (from ADF)	There are lines or streaks on copies from the ADF.	page 5-43
Spots from ADF	There are spots on copies from the ADF.	page 5-44

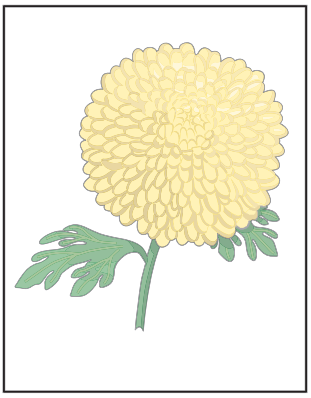
Light or Undertone Print

The overall image density is too light in all colors.

Initial Actions

- Check the Imaging Unit life counter.
- Set the print mode to Enhanced.
- Check for obstructions or debris in the beam path between the Laser and the Imaging Units.
- Check the media settings at the Control Panel.

Troubleshooting Reference Table

Applicable Parts	Example Print
■ Laser Unit kit(PL4.1.99) ■ Imaging Unit (PL4.1.21) ■ Dispense Assy (PL5.1.3) ■ Toner Cartridge K (PL5.1.21) ■ Toner Cartridge C (PL5.1.22) ■ Toner Cartridge M (PL5.1.23) ■ Toner Cartridge Y (PL5.1.24) ■ Transfer Belt (PL6.1.7) ■ IP Board (PL10.6.6) ■ MCU Board (PL10.7.7)	 Light or Undertone Print

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the toner type. Are the cartridges genuine Xerox?	Go to step 2.	Replace with Xerox toner.
2	Check the media condition. Is the media the recommended type?	Go to step 4.	Replace the media with a recommended one, then go to step 3.
3	Is the image printed correctly?	Complete	Go to step 4.
4	Check the print mode. Is the **Standard Mode** selected?	Select **Enhanced Mode**, then go to step 5.	Go to step 6.
5	Is the image printed correctly?	Complete	Go to step6.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
6	Perform the Toner Pallet Check: **Service Mode > Test Print> Toner Pallet Check** Is one or more of the colors faint?	Go to step 7.	Check the original printing data.
7	Reseat and lock the Toner Cartridges. Is the image printed correctly?	Complete	Go to step 8.
8	Check the Transfer Belt high-voltage connections.. Are the contacts on the Transfer Belt and springs damaged or dirty?	Clean or replace the Transfer Belt or spring(s), then go to step 9.	Go to step 9.
9	Check the Imaging Unit high-voltage connections. Are the contacts on the Imaging Unit, and springs damaged or dirty?	Clean or replace the Imaging Unit or spring(s), then go to step 10.	Go to step 10.
10	Reseat the Imaging Unit. Is the image printed correctly?	Complete	Go to step 11.
11	Check the laser windows of the Laser Unit. Are the laser windows clean?	Go to step 12.	Clean with soft cloth or cotton swab.
12	Check the laser beam path. Are there any obstructions between the Laser Unit and Imaging Unit?	Remove any obstructions.	Go to step 13.
13	Perform the Toner Motor test for each color: **Service Mode > Engine Diag > Motor Test > Yellow/ Magenta/Cyan/Black Toner Motor** Does the Toner Dispenser Motor function normally?	Go to step 15.	Replace the Dispense Assy (page 8-91), then go to step 14.
14	Is the image printed correctly?	Complete	Replace the MCU Board (page 8-57).
15	Reseat all MCU Board connectors. Is the image printed correctly?	Complete	Go to step 16.
16	Reseat all IP Board connectors. Is the image printed correctly?	Complete	Go to step 17.
17	Open and close the Front Cover to reseat the Transfer Belt. Is the image printed correctly?	Complete	Go to step 18.
18	Replace the Transfer Belt (page 8-103) Is the image printed correctly?	Complete	Go to step 19.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
19	Replace the Imaging Unit. (page 8-8) Is the image printed correctly?	Complete	Go to step 20.
20	Replace the Dispense Assy (page 8-91). Is the image printed correctly?	Complete	Go to step 21.
21	Replace the Laser Unit. (page 8-98) Is the image printed correctly?	Complete	Replace the IP Board (page 8-41)

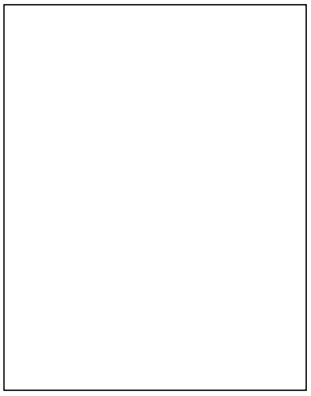
Blank Print

The entire image area is blank.

Initial Actions

- Check the paper transfer path.
- Run the Engine Test print to help isolate the problem between the Image Processor Board and the MCU Board
- Check for obstructions or debris in the beam path between the Laser and the Imaging Units.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Parts	Example Print
■ Laser Unit Kit (PL4.1.99) ■ Imaging Unit (PL4.1.21) ■ Dispense Assy (PL5.1.1) ■ Toner Cartridge K (PL5.1.21) ■ Toner Cartridge C (PL5.1.22) ■ Toner Cartridge M (PL5.1.23) ■ Toner Cartridge Y (PL5.1.24) ■ Transfer Belt (PL6.1.7) ■ Sub Drive Assembly (PL7.1.1) ■ Main Drive Assembly (PL7.1.2) ■ Feed Drive Assembly (PL7.1.4) ■ IP Board (PL10.6.6) ■ MCU Board (PL10.7.7)	 Blank Print

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the toner type. Are the Toner Cartridges genuine Xerox?	Replace with Xerox toner, then go to step 2.	Go to step 3.
2	Is the image printed correctly?	Complete	Replace the IP Board (page 8-41).
3	Reseat and lock the Toner Cartridges. Is the image printed correctly?	Complete	Go to step 4.
4	Check the Transfer Belt high-voltage connections.. Are the contacts on the Transfer Belt and springs damaged or dirty?	Clean or replace the Transfer Belt (page 8-103) or spring(s), then go to step 5.	Go to step 6.
5	Is the image printed correctly?	Complete	Go to step 6.
6	Check the paper condition Is the paper dry and recommended paper?	Go to step 8.	Replace the paper with a new dry and recommended one, then go to step 7.
7	Is the image printed correctly?	Complete	Go to step 8.
8	Check the Toner Cartridge life . Are one or more of the Toner Cartridges near end of life?	Replace the Toner Cartridge(s) (page 8-13).	Go to step 9.
9	Inspect the laser beam windows of the Laser Unit Are the laser beam windows on the Laser Unit clean?	Go to step 10.	Clean the window(s) with soft cloth or cotton swab.
10	Inspect the laser beam path Are there any obstructions between the Laser Unit and Imaging Unit?	Remove the foreign substances.	Go to step 11.
11	Reseat the Imaging Unit. Is the image printed correctly?	Complete	Go to step 12.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
12	Perform the Toner Motor test for each color: **NOTE** Run each motor just long enough to check operation. **Service Mode > Engine Diag > Motor Test > Yellow/Magenta/ Cyan/Black Toner Motor (DO-21(Y), 23(M), 25(C), 27(K))** Do the Toner Motors function normally?	Go to step 17.	Go to step 13.
13	Inspect the connectors between the MCU Board and Toner Motor (Y/M/ C/K) (Dispenser Motor Assy). Are P/J18, P/J19, P/J181, P/J182, P/ J191 and P/J192 connected correctly?	Go to step 15.	Securely reconnect the connectors, then go to step 14.
14	Is the image printed correctly?	Complete	Go to step 15.
15	Check the Toner Motor Harness for continuity: 1. Disconnect J18 and J19 from the MCU Board. 2. Disconnect J181, J182, J191 and J192 from the Toner Motors. Is each cable of J18 <=> J181 and J182 continuous? Is each cable of J19 <=> J191 and J192 continuous?	Go to step 16.	Replace the Dispense Assy (page 8-91).
16	Check for power to Toner Motors (Y/ M/C/K): 1. Disconnect J18 and J19 from the MCU Board. 2. Measure the voltage across P18-3, P18-8, P19-4 and P19-9 <= > ground on the MCU Board. Is the voltage about +24 VDC when the Front Cover interlock switch (Interlock Harness Assy) is actuated?	Replace the Dispense Assy (page 8-91).	Replace the MCU Board (page 8-57).
17	Check the connections between the Laser Unit and MCU Board. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly?	Go to step 19.	Reconnect the connector(s) P/ J40, P/J41, P/ J411 and/or P/ J412 securely, then go to step 18.
18	Is the image printed correctly?	Complete	Go to step 19.
19	Reseat all MCU Board connectors. Is the image printed correctly?	Complete	Go to step 20.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
20	Reseat all IP Board connectors. Is the image printed correctly?	Complete	Go to step 21.
21	Open and close the Front Cover to reseat the Transfer Belt. Is the image printed correctly?	Complete	Go to step 22.
22	Replace the Imaging Unit (page 8-8). Is the image printed correctly?	Complete	Go to step 23.
23	Replace the Transfer Belt (page 8-103) Is the image printed correctly?	Complete	Go to step 24.
24	Replace the Laser Unit. (page 8-98) Is the image printed correctly?	Complete	Replace the IP Board (page 8-41).

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
■ Laser Unit Kit (PL4.1.99) ■ HVPS Board (PL4.1.19) ■ Imaging Unit (PL4.1.21) ■ IP Board (PL10.6.6) ■ MCU Board (PL10.7.7)	 Black Print

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Run the Gradation ESS test print: **Service Mode > Test Print> Toner Gradation ESS** Is the image printed correctly?	Go to step 2.	Go to step 3.
2	Run the Pattern IOT test print: **Service Mode > Test Print> Toner Pattern IOT** Is the image printed correctly?	Replace the IP Board (page 8-41).	Go to step 3.
3	Reseat the Imaging Unit. Is the image printed correctly?	Complete	Go to step 4.
4	Reseat all MCU Board connectors. Is the image printed correctly?	Complete	Go to step 5.
5	Reseat all IP Board connectors. Is the image printed correctly?	Complete	Go to step 6.
6	Reseat the Laser Unit. Is the image printed correctly?	Complete	Go to step 7.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
7	Inspect the connections between the Laser Unit and MCU Board. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly?	Go to step 9.	Reconnect the connectors securely, then go to step 8.
8	Is the image printed correctly?	Complete	Go to step 9.
9	Replace the Imaging Unit (page 8-8). Is the image printed correctly?	Complete	Go to step 10.
10	Replace the IP Board (page 8-41). Is the image printed correctly?	Complete	Go to step 11.
11	Replace the HVPS Board (page 8-54). Is the image printed correctly?	Complete	Go to step 12.
12	Replace the Laser Unit (page 8-98). Is the image printed correctly?	Complete	Replace the MCU Board (page 8-57).

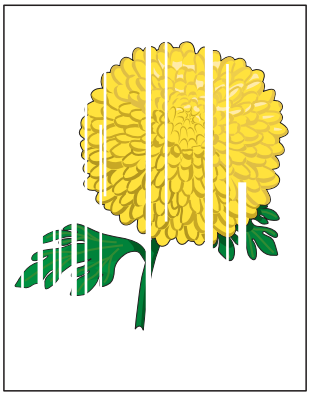
Vertical Blank Lines

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 area around the Laser Unit windows and openings in the Imaging Unit. Small obstructions, such as hair or fibers, can create streaks.
- Ensure there is no debris on the media path.

Troubleshooting Reference Table

Applicable Parts	Example Print
■ Laser Unit Kit (PL4.1.99) ■ Imaging Unit (PL4.1.21) ■ Transfer Belt (PL6.1.7) ■ IP Board (PL10.6.6) ■ MCU Board (PL10.7.7)	 Vertical Blank Lines

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the paper condition Is the paper dry and approved for use?	Go to step 3.	Replace with dry, approved paper, then go to step 2.
2	Is the image printed correctly?	Complete	Go to step 3.
3	Inspect the paper path between the Transfer Belt and Fuser. Is there any debris or other foreign substance in the paper path?	Remove the debris or foreign substances, then go to step 4.	Go to step 5.
4	Is the image printed correctly?	Complete	Go to step 5.
5	Inspect the Transfer Belt surface. Is there any damage to the transfer belt surface?	Replace the Transfer Belt (page 8-103).	Go to step 6.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
6	Check the Transfer Belt high-voltage connections.. Are the contacts on the Transfer Belt and springs damaged or dirty?	Clean or replace the Transfer Belt contacts or spring(s).	Go to step 7.
7	Inspect the laser beam path Are there any obstructions between the Laser Unit and Imaging Unit?	Remove the foreign substances.	Go to step 8.
8	Check the Imaging Unit high-voltage connections. Are the contacts on the Imaging Unit, and springs damaged or dirty?	Clean or replace the Imaging Unit contacts or spring(s).	Go to step 9.
9	Reseat the Imaging Unit. Is the image printed correctly?	Complete	Go to step 10.
10	Reseat the Fuser. Is the image printed correctly?	Complete	Go to step 11.
11	Reseat all MCU Board connectors. Is the image printed correctly?	Complete	Go to step 12.
12	Reseat all IP Board connectors. Is the image printed correctly?	Complete	Go to step 13.
13	Open and close the Front Cover to reseat the Transfer Belt. Is the image printed correctly?	Complete	Go to step 14.
14	Replace the Imaging Unit (page 8-8). Is the image printed correctly?	Complete	Go to step 15.
15	Replace the IP Board (page 8-41). Is the image printed correctly?	Complete	Go to step 16.
16	Inspect the connections between the Laser Unit and MCU Board. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly?	Go to step 18.	Reseat the connectors, then go to step 17.
17	Is the image printed correctly?	Complete	Go to step 18.
18	Replace the Laser Unit (page 8-98). Is the image printed correctly?	Complete	Replace the MCU Board (page 8-57).

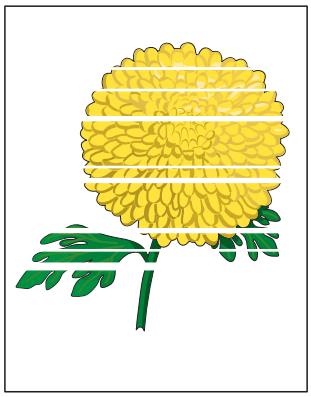
Horizontal Band, Voids, or Streaks

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
■ Laser Unit Kit (PL4.1.99) ■ HVPS Board (PL4.1.19) ■ Imaging Unit (PL4.1.21) ■ Toner Cartridge K (PL5.1.21) ■ Toner Cartridge C (PL5.1.22) ■ Toner Cartridge M (PL5.1.23) ■ Toner Cartridge Y (PL5.1.24) ■ Transfer Belt (PL6.1.7) ■ IP Board (PL10.6.6) ■ MCU Board (PL10.7.7)	 Horizontal Band, Void, or Streaks

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Run the Contamination Check test print: **Service Mode > Test Print > Contamination Chk** Compare any defects with the Pitch Chart (page 5-51). Do any of the horizontal bands match the chart?	Replace the corresponding parts	Go to step 2.
2	Check the paper condition Is the paper dry and approved for use?	Go to step 4.	Replace with dry, approved paper, then go to step 3.
3	Is the image printed correctly?	Complete	Go to step 4.
4	Inspect the transfer belt surface. Is there any damage to the belt?	Replace the Transfer Belt (page 8-103).	Go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	Check the Transfer Belt high-voltage connections.. Are the contacts on the Transfer Belt and springs damaged or dirty?	Clean or replace the Transfer Belt contacts or spring(s).	Go to step 6.
6	Inspect the laser beam path Are there any obstructions between the Laser Unit and Imaging Unit?	Remove the obstructions.	Go to step 7.
7	Check the Imaging Unit high-voltage connections. Are the contacts on the Imaging Unit, and springs damaged or dirty?	Clean or replace the Imaging Unit contacts or spring(s).	Go to step 8.
8	Reseat the Imaging Unit. Is the image printed correctly?	Complete	Go to step 9.
9	Reseat the Fuser. Is the image printed correctly?	Complete	Go to step 10.
10	Reseat all MCU Board connectors. Is the image printed correctly?	Complete	Go to step 11.
11	Reseat all IP Board connectors. Is the image printed correctly?	Complete	Go to step 12.
12	Open and close the Front Cover to reseat the Transfer Belt. Is the image printed correctly?	Complete	Go to step 13.
13	Replace the Toner Cartridge(s) (page 8-13). Is the image printed correctly?	Complete	Go to step 14.
14	Replace the Imaging Unit (page 8-8). Is the image printed correctly?	Complete	Go to step 15.
15	Replace the IP Board (page 8-41). Is the image printed correctly?	Complete	Go to step 16.
16	Inspect the connections between the Laser Unit and MCU Board. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly?	Go to step 18.	Reconnect the connectors securely, then go to step 17.
17	Is the image printed correctly?	Complete	Go to step 18.
18	Replace the HVPS (page 8-54). Is the image printed correctly?	Complete	Go to step 19.
19	Replace the Laser Unit (page 8-98). Is the image printed correctly?	Complete	Replace the MCU Board (page 8-57).

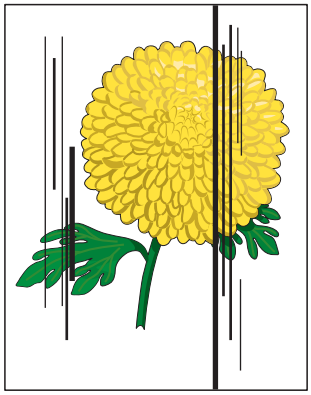
Vertical Stripes

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
■ Laser Unit Kit (PL4.1.99) ■ Imaging Unit (PL4.1.21) ■ Fuser (PL6.1.1) ■ Transfer Belt (PL6.1.7) ■ IP Board (PL10.6.6) ■ MCU Board (PL10.7.7)	 Vertical Stripes

Warning

Allow the Fuser to cool before starting the procedure.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the Transfer Belt high-voltage connections.. Are the contacts on the Transfer Belt and springs damaged or dirty?	Clean or replace the Transfer Belt contacts or spring(s).	Go to step 2.
2	Check the Imaging Unit high-voltage connections. Are the contacts on the Imaging Unit, and springs damaged or dirty?	Clean and/or replace the Imaging Unit or spring(s).	Go to step 3.
3	Reseat the Imaging Unit. Is the image printed correctly?	Complete	Go to step 4.
4	Reseat the Fuser. Is the image printed correctly?	Complete	Go to step 5.
5	Reseat all MCU Board connectors. Is the image printed correctly?	Complete	Go to step 6.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
6	Reseat all IP Board connectors. Is the image printed correctly?	Complete	Go to step 7.
7	Open and close the Front Cover to reseat the Transfer Belt. Is the image printed correctly?	Complete	Go to step 8.
8	Check after reseating the HVPS Board Reseat the HVPS Board. Is the image printed correctly?	Complete	Go to step 9.
9	Check the connections between the Laser Unit and MCU Board. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly?	Go to step 10.	Reconnect the connectors securely, then go to step 10.
10	Is the image printed correctly?	Complete	Go to step 11.
11	Replace the Imaging Unit (page 8-8). Is the image printed correctly?	Complete	Go to step 12.
12	Replace the Fuser (page 8-11). Is the image printed correctly?	Complete	Go to step 13.
13	Replace the IP Board (page 8-41). Is the image printed correctly?	Complete	Go to step 14.
14	Replace the Laser Unit (page 8-98). Is the image printed correctly?	Complete	Replace the MCU Board (page 8-57).

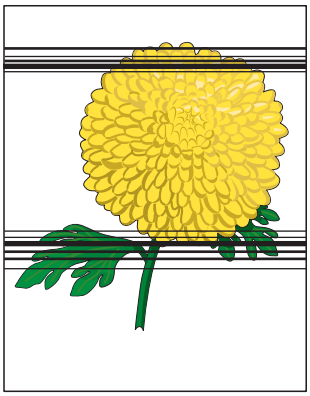
Horizontal Stripes

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
■ Laser Unit Kit (PL4.1.99) ■ Imaging Unit (PL4.1.21) ■ Toner Cartridge K (PL5.1.21) ■ Toner Cartridge C (PL5.1.22) ■ Toner Cartridge M (PL5.1.23) ■ Toner Cartridge Y (PL5.1.24) ■ Fuser (PL6.1.1) ■ Transfer Belt (PL6.1.7) ■ IP Board (PL10.6.6) ■ MCU Board (PL10.7.7)	 Horizontal Stripes

Warning

Allow the Fuser to cool before starting the procedure.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Run the Contamination Check test print: **Service Mode > Test Print > Contamination Chk** Compare any horizontal dropout bands with the Pitch Chart (page 5-51). Do any of the horizontal bands match the chart?	Replace the corresponding parts.	Go to step 2.
2	Check the Transfer Belt high-voltage connections.. Are the contacts on the Transfer Belt and springs damaged or dirty?	Clean or replace the Transfer Belt contacts or spring(s).	Go to step 3.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
3	Inspect the paper path. Is there toner contamination on the paper path?	Clean the paper path (refer to "Cleaning" on page 7-2).	Go to step 4.
4	Check the Imaging Unit high-voltage connections. Are the contacts on the Imaging Unit, and springs damaged or dirty?	Clean and/or replace the Imaging Unit or spring(s).	Go to step 5.
5	Reseat the Imaging Unit. Is the image printed correctly?	Complete	Go to step 6.
6	Reseat the Fuser. Is the image printed correctly?	Complete	Go to step 7.
7	Inspect the Toner Cartridges Are any of the Toner Cartridges damaged?	Replace any damaged Toner Cartridges (page 8-13)	Go to step 8.
8	Reseat all MCU Board connectors. Is the image printed correctly?	Complete	Go to step 9.
9	Reseat all IP Board connectors. Is the image printed correctly?	Complete	Go to step 10.
10	Open and close the Front Cover to reseat the Transfer Belt. Is the image printed correctly?	Complete	Go to step 11.
11	Check the connections between the Laser Unit and MCU Board. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly?	Go to step 14.	Reconnect the connectors securely, then go to step 12.
12	Is the image printed correctly?	Complete	Go to step 13.
13	Replace the Imaging Unit (page 8-8). Is the image printed correctly?	Complete	Go to step 14.
14	Replace the Fuser (page 8-11). Warning: Start the operation after the Fuser has cooled down. Does the error still occur when printing?	Complete	Go to step 15.
15	Replace the IP Board (page 8-41). Is the image printed correctly?	Complete	Go to step 16.
16	Replace the Laser Unit (page 8-98). Is the image printed correctly?	Complete	Replace the MCU Board (page 8-57).

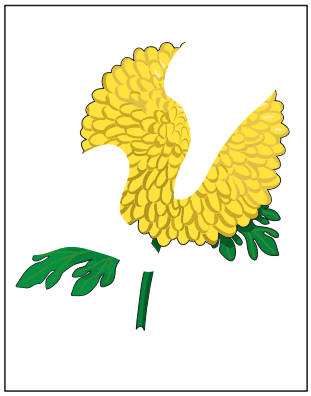
Partial Band

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
■ Laser Unit Kit (PL4.1.99) ■ Imaging Unit (PL4.1.21) ■ Transfer Belt (PL6.1.7) ■ IP Board (PL10.6.6) ■ MCU Board (PL10.7.7)	 Partial Band

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Run the Contamination Check test print: **Service Mode > Test Print > Contamination Chk** 2. Compare any blank areas with the Pitch Chart (page 5-51). Do any of the blank areas appear at regular intervals, and do the intervals match the chart?	Replace the corresponding parts.	Go to step 2.
2	Check the paper condition Is the paper dry and approved for use?	Go to step 4.	Replace with dry, approved paper, then go to step 3.
3	Is the image printed correctly?	Complete	Go to step 4.
4	Inspect the transfer belt surface. Is the transfer belt damaged?	Replace the Transfer Belt (page 8-103).	Go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	Check the Transfer Belt high-voltage connections.. Are the contacts on the Transfer Belt and springs damaged or dirty?	Clean or replace the Transfer Belt contacts or spring(s).	Go to step 6.
6	Check the Imaging Unit high-voltage connections. Are the contacts on the Imaging Unit, and springs damaged or dirty?	Clean and/or replace the Imaging Unit or spring(s).	Go to step 7.
7	Reseat the Imaging Unit. Is the image printed correctly?	Complete	Go to step 8.
8	Reseat and lock the Toner Cartridges. Is the image printed correctly?	Complete	Go to step 9.
9	Reseat all MCU Board connectors. Is the image printed correctly?	Complete	Go to step 10.
10	Reseat all IP Board connectors. Is the image printed correctly?	Complete	Go to step 11.
11	Open and close the Front Cover to reseat the Transfer Belt. Is the image printed correctly?	Complete	Go to step 12.
12	Reseat HVPS Board connections. Is the image printed correctly?	Complete	Go to step 13.
13	Check the connections between the Laser Unit and MCU Board. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly?	Go to step 15.	Reconnect the connectors securely, then go to step 14.
14	Is the image printed correctly?	Complete	Go to step 15.
15	Replace the Imaging Unit (page 8-8). Is the image printed correctly?	Complete	Go to step 16.
16	Replace the IP Board (page 8-41). Is the image printed correctly?	Complete	Go to step 17.
17	Replace the Laser Unit (page 8-98). Is the image printed correctly?	Complete	Replace the MCU Board (page 8-57).

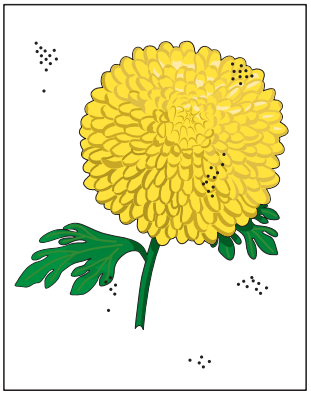
Random Spots

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
■ Laser Unit Kit (PL4.1.99) ■ Imaging Unit (PL4.1.21) ■ Transfer Belt (PL6.1.7) ■ IP Board (PL10.6.6) ■ MCU Board (PL10.7.7)	 Random Spots

Warning

Allow the Fuser to cool before starting the procedure.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Inspect the paper transfer path. Is there any contamination on the paper transfer path?	Clean the paper path (refer to "Cleaning" on page 7-2), then go to step 2.	Go to step 3.
2	Is the image printed correctly?	Complete	Go to step 3.
3	1. Run the Contamination Check test print: **Service Mode > Test Print > Contamination Chk** 2. Compare any spots with the Pitch Chart (page 5-51). Do any of the spots appear at regular intervals, and do the intervals match the chart?	Replace the corresponding parts.	Go to step 4.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
4	Inspect the paper being used. Is it approved paper?	Go to step 6.	Load supported media, then go to step 5.
5	Is the image printed correctly?	Complete	Go to step 6.
6	Inspect the transfer belt surface. Is there any damage on the surface of the transfer belt?	Replace the Transfer Belt (page 8-103).	Go to step 7.
7	Check the Transfer Belt high-voltage connections.. Are the contacts on the Transfer Belt and springs damaged or dirty?	Clean or replace the Transfer Belt contacts or spring(s).	Go to step 8.
8	Check the Imaging Unit high-voltage connections. Are the contacts on the Imaging Unit, and springs damaged or dirty?	Clean and/or replace the Imaging Unit or spring(s).	Go to step 9.
9	Reseat the Imaging Unit. Is the image printed correctly?	Complete	Go to step 10.
10	Reseat and lock the Toner Cartridges. Is the image printed correctly?	Complete	Go to step 11.
11	Reseat the Fuser. Is the image printed correctly?	Complete	Go to step 12.
12	Reseat all MCU Board connectors. Is the image printed correctly?	Complete	Go to step 13.
13	Reseat all IP Board connectors. Is the image printed correctly?	Complete	Go to step 14.
14	Open and close the Front Cover to reseat the Transfer Belt. Is the image printed correctly?	Complete	Go to step 15.
15	Check the connections between the Laser Unit and MCU Board. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly?	Go to step 17.	Reconnect the connectors securely, then go to step 16.
16	Is the image printed correctly?	Complete	Go to step 17.
17	Replace the Imaging Unit (page 8-8). Is the image printed correctly?	Complete	Go to step 18.
18	Replace the IP Board (page 8-41). Is the image printed correctly?	Complete	Go to step 19.
19	Replace the Laser Unit (page 8-98). Is the image printed correctly?	Complete	Replace the MCU Board (page 8-57).

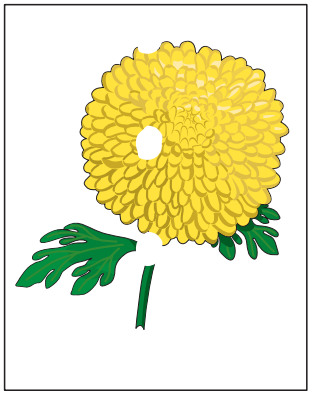
Repeating Bands, Lines, Marks, or Spots

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
■ Transfer Belt, PL6.1.7 ■ Print Cartridge, PL5.1.18-21 ■ Fuser, PL6.1.10 ■ Laser Unit, PL5.1.2	 Repeating Defects

Warning

Allow the Fuser to cool before starting the procedure.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check for spot's regular intervals. Do spots, lines, or marks that might appear on the page occur at regular intervals?	Refer to "Pitch Chart Test Print" on page 5-51.	Complete.

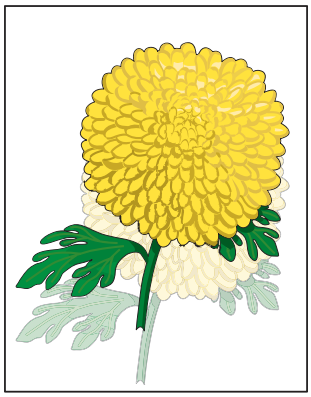
Residual Image or Ghosting

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
■ Erase LED Assy (PL4.1.8) ■ Imaging Unit (PL4.1.21) ■ Fuser (PL6.1.1) ■ Transfer Belt (PL6.1.7) ■ IP Board (PL10.6.6) ■ MCU Board (PL10.7.7) ■ LVPS Harness Assy (PL10.8.14)	 Residual Image/Ghosting

Warning

Allow the Fuser to cool before starting the procedure.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Did the client print a large number of the same image?	Go to step 2.	Go to step 3.
2	Run the Contamination Check test print: **Service Mode > Test Print > Contamination Chk** Is the image printed correctly?	Complete	Go to step 3.
3	1. Open the Front Cover, and remove the Imaging Unit. 2. Defeat the safety interlock switch. Do the four erase LEDs light correctly?	Go to step 6.	Go to step 4.
4	Inspect the connections between the MCU Board and Erase LED Assy. Are P/J141 and P/J14 connected correctly?	Go to step 5.	Reconnect the connectors securely, then go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	1. Disconnect J14 from the Erase LED Assy. 2. Measure the voltage across P14-15 <=> ground on the MCU Board. Does the voltage measure about +3.3 VDC?	Replace the Erase LED Assy (page 8-86).	Replace the MCU Board (page 8-57).
6	Check the Imaging Unit high-voltage connections. Are the contacts on the Imaging Unit, and springs damaged or dirty?	Clean and/or replace the Imaging Unit or spring(s), then go to step 7.	Go to step 8.
7	Reseat the Imaging Unit. Is the image printed correctly?	Complete	Go to step 8.
8	Check the Transfer Belt high-voltage connections.. Are the contacts on the Transfer Belt and springs damaged or dirty?	Clean or replace the Transfer Belt contacts or spring(s).	Go to step 9.
9	Reseat all MCU Board connectors. Is the image printed correctly?	Complete	Go to step 10.
10	Reseat all IP Board connectors. Is the image printed correctly?	Complete	Go to step 11.
11	Open and close the Front Cover to reseat the Transfer Belt. Is the image printed correctly?	Complete	Go to step 12.
12	Replace the Imaging Unit (page 8-8). Is the image printed correctly?	Complete	Go to step 13.
13	Replace the Fuser (page 8-11). Is the image printed correctly?	Complete	Go to step 14.
14	Replace the MCU Board (page 8-57). Is the image printed correctly?	Complete	Replace the IP Board (page 8-41).

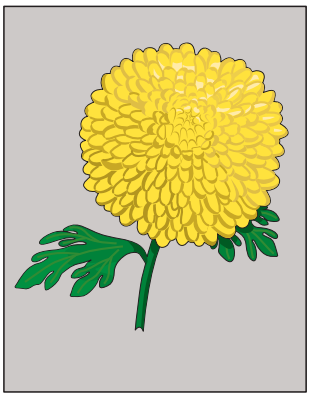
Background Contamination

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
■ Erase LED Assy (PL4.1.8) ■ Imaging Unit (PL4.1.21) ■ Transfer Belt (PL6.1.7) ■ IP Board (PL10.6.6) ■ MCU Board (PL10.7.7) ■ LVPS Harness Assy (PL10.8.14)	 Background Contamination

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Inspect the media path. Are there obstructions in the media path?	Clean the paper path (refer to "Cleaning" on page 7-2), then go to step 2.	Go to step 3.
2	Is the image printed correctly?	Complete	Go to step 3.
3	Print the Windows test page after printing the Demo page (**Menu > Information Pages > Demo Page**, or running **Service Mode > Test Print > Toner Pallet Check**). Is the image printed correctly?	Complete	Go to step 4.
4	1. Open the Front Cover, and remove the Imaging Unit. 2. Defeat the safety interlock switch. Do the four erase LEDs light correctly?	Go to step 7.	Go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	Check the connections between the MCU Board and Erase LED Assy. Are P/J141 and P/J14 connected correctly?	Go to step 6.	Reconnect the connector(s) securely, then go to step 6.
6	1. Disconnect J14 from the Erase LED Assy. 2. Measure the voltage across P14-15 <=> ground on the MCU Board. Does the voltage measure about +3.3 VDC?	Replace the Erase LED Assy (page 8-86).	Replace the MCU Board (page 8-57).
7	Check the Transfer Belt high-voltage connections.. Are the contacts on the Transfer Belt and springs damaged or dirty?	Clean or replace the Transfer Belt contacts or spring(s).	Go to step 8.
8	Check the Imaging Unit high-voltage connections. Are the contacts on the Imaging Unit, and springs damaged or dirty?	Clean and/or replace the Imaging Unit or spring(s).	Go to step 9.
9	Reseat all IP Board connectors. Is the image printed correctly?	Complete	Go to step 10.
10	Reseat and lock the Toner Cartridges. Is the image printed correctly?	Complete	Go to step 11.
11	Check the connections between the Laser Unit and MCU Board. Are P/J40, P/J 41, P/J411 and P/J 412 connected correctly?	Go to step 13.	Reconnect the connectors securely, then go to step 12.
12	Is the image printed correctly?	Complete	Go to step 13.
13	Reseat all MCU Board connectors. Is the image printed correctly?	Complete	Go to step 14.
14	Reseat all IP Board connectors. Is the image printed correctly?	Complete	Go to step 15.
15	Open and close the Front Cover to reseat the Transfer Belt. Is the image printed correctly?	Complete	Go to step 16.
16	Replace the Imaging Unit (page 8-8). Is the image printed correctly?	Complete	Go to step 17.
17	Replace the IP Board (page 8-41). Is the image printed correctly?	Complete	Replace the MCU Board (page 8-57).

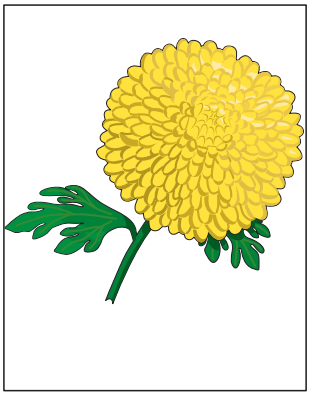
Skew

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
■ Separator Roller Assembly (PL2.1.5) ■ Feed Roller Assembly (PL3.2.4) ■ Registration Roller Assembly (PL3.2.9) ■ Metal Registration Roller (PL3.2.10)	 Skew 2

Note

The Tray is recommended for paper feeding because paper fed via the Manual Feed is prone to skew depending on how the sheet is placed on Manual Feed.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Inspect the paper being used. Is it approved paper?	Go to step 3.	Use paper that is on the list of papers approved for the printer, then go to step 2.
2	Is the image printed correctly?	Complete	Go to step 3.
3	Check the paper being used and its condition. Is the paper dry and recommended paper?	Go to step 5.	Replace the paper with a new dry and recommended one, then go to step 4.
4	Is the image printed correctly?	Complete	Go to step 5.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
5	Open and close the Front Cover. Does the Front Cover latch closed properly?	Complete	Replace the defective parts, then go to step 6.
6	Is the image printed correctly?	Complete	Go to step 7.
7	Reseat the Imaging Unit. Is the image printed correctly?	Complete	Go to step 8.
8	Open and close the Front Cover to reseat the Transfer Belt. Is the image printed correctly?	Complete	Go to step 9.
9	Is the skewed paper being fed from the manual feed slot?	Go to step 10.	Go to step 14.
10	Check the setting of the manual feed slot side guides and reset the side guides if needed. Is the image printed correctly?	Complete	Go to step 11.
11	Inspect the paper path. Is there toner contamination on the paper path?	Clean the paper path (refer to "Cleaning" on page 7-2), then go to step 12.	Go to step 13.
12	Is the image printed correctly?	Complete	Go to step 13.
13	Reseat the Paper Tray. Is the image printed correctly?	Complete	Go to step 14.
14	Reseat the paper in the Paper Tray. Is the image printed correctly?	Complete	Go to step 15.
15	Reset the Paper Tray side guides. Is the image printed correctly?	Complete	Go to step 16.
16	Reseat the Separator Roller. Is the image printed correctly?	Complete	Go to step 17.
17	Replace the Separator Roller (page 8-7). Is the image printed correctly?	Complete	Go to step 18.
18	Replace the Feed Roller (page 8-10). Is the image printed correctly?	Complete	Go to step 19.
19	**NOTE** During this check, defeat the Front Cover interlock switch. 1. Start the Main Motor FULL2 test: **Service Mode > Engine Diag > Motor Test > Main Motor FULL2**. 2. While it is running, start the Regi Clutch test: **Service Mode > Engine Diag > Motor Test > Regi Clutch**. Do the registration rollers rotate?	Complete	Replace the Feeder Assembly page 8-75.

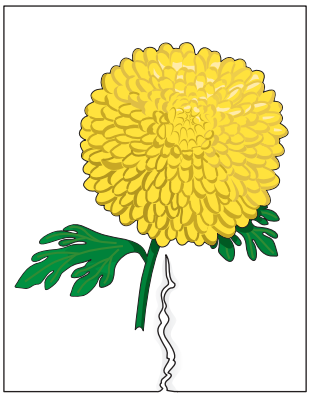
Damaged Media

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
■ Separator Roller Assembly (PL2.1.5) ■ Feed Roller Assembly (PL3.2.4) ■ Registration Roller Assembly (PL3.2.9) ■ Metal Registration Roller (PL3.2.10)	 Damaged Print Media

Note

The Tray is recommended for media feeding. Media fed through the Manual Feed is prone to skew depending on how the sheet is inserted.

Warning

Allow the Fuser to cool before starting the procedure.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the paper condition Is the paper dry and approved for use?	Go to step 3.	Replace with dry, approved paper, then go to step 2.
2	Is the image printed correctly?	Complete	Go to step 3.
3	Open and close the Front Cover. Does the Front Cover latch close properly?	Complete	Replace any defective parts, then go to step 4.
4	Is the image printed correctly?	Complete	Go to step 5.
5	Reseat the Imaging Unit. Is the image printed correctly?	Complete	Go to step 6.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
6	Reseat the Fuser. Is the image printed correctly?	Complete	Go to step 7.
7	Open and close the Front Cover to reseat the Transfer Belt. Is the image printed correctly?	Complete	Go to step 8.
8	Is the paper damaged when fed from the manual feed slot?	Go to step 9.	Go to step 12.
9	Check the setting of the manual feed slot side guides and reset the side guides if needed. Is the image printed correctly?	Complete	Go to step 10.
10	Inspect the media path. Is there any contamination?	Clean the paper path (refer to "Cleaning" on page 7-2), then go to step 11.	Go to step 12.
11	Is the image printed correctly?	Complete	Go to step 12.
12	Reseat the Paper Tray. Is the image printed correctly?	Complete	Go to step 13.
13	Reset the Paper Tray side guides. Is the image printed correctly?	Complete	Go to step 14.
14	Replace the media in the Paper Tray. Is the image printed correctly?	Complete	Go to step 15.
15	Inspect the media path. Is there any contamination?	Clean the paper path (refer to "Cleaning" on page 7-2), then go to step 16.	Go to step 17.
16	Is the image printed correctly?	Complete	Go to step 17.
17	Reseat the Separator Roller. Is the image printed correctly?	Complete	Go to step 18.
18	Replace the Separator Roller (page 8-7). Is the image printed correctly?	Complete	Go to step 19.
19	Replace the Feed Roller (page 8-10). Is the image printed correctly?	Complete	Go to step 20.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
20	**NOTE** During this check, defeat the Front Cover interlock switch . 1. Start the Main Motor FULL2 test: **Service Mode > Engine Diag > Motor Test > Main Motor FULL2**. 2. While it is running, start the Regi Clutch test: **Service Mode > Engine Diag > Motor Test > Regi Clutch**. Do the Regi Roller Assy and Metal Regi Roller rotate?	Complete	Replace the Feeder Assembly page 8-75.

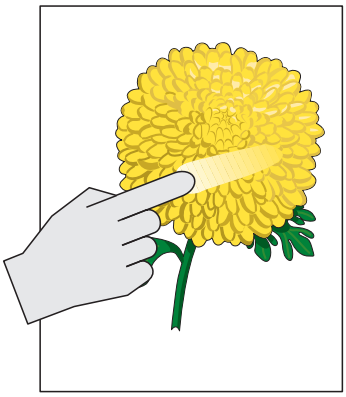
Unfused Image

The image is not completely fused to the paper. The image easily rubs off.

Initial Actions

- Check the media path.
- Check the Fuser connection (P/J171).

Troubleshooting Reference Table

Applicable Notes	Example Print
■ Fuser (PL6.1.1) ■ MCU Board (PL10.7.7)	 Unfused Image

Warning

Allow the Fuser to cool before starting the procedure.

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Check the media being used and its condition. Is the media dry and recommended?	Go to step 3.	Replace with dry, approved media, then go to step 2.
2	Is the image printed correctly?	Complete	Go to step 3.
3	Check the Toner type Is non-Xerox Toner in use?	Replace with Xerox toner, then go to step 4.	Go to step 5.
4	Is the image printed correctly?	Complete	Go to step 5.
5	Reseat the Fuser. Is the image printed correctly?	Complete	Go to step 6.
6	Replace the Fuser (page 8-11). Does the error persist?	Replace the MCU Board (page 8-57).	Complete

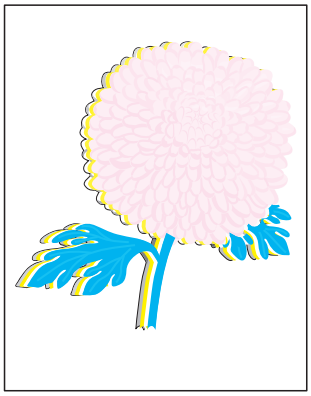
Color Registration

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
■ Imaging Unit (PL4.1.21) ■ Fuser (PL6.1.1) ■ Transfer Belt (PL6.1.7) ■ MCU Board (PL10.7.7)	 Color Registration

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	Cycle the printer power. Does the mis-registration (color shift) appear on the print?	Go to step 2.	Complete
2	Print a test page. Is the image printed correctly?	Check the printing data for errors.	Go to step 3.
3	Check the paper being used and its condition. Is the paper dry and recommended paper?	Go to step 5.	Replace with dry, approved paper, then go to step 4.
4	Does the mis-registration (color shift) appear on the print?	Go to step 5.	Complete
5	Open and close the Front Cover. Does the Front Cover latch close properly?	Complete	Replace any defective parts, then go to step 6.

Troubleshooting Procedure Table (continued)

Step	Actions and Questions	Yes	No
6	Open and close the Front Cover. Does the mis-registration (color shift) appear on the print?	Go to step 7.	Complete
7	Reseat the Imaging Unit. Does the mis-registration (color shift) appear on the print?	Go to step 8.	Go to step 8.
8	Open and close the Front Cover to reseat the Transfer Belt. Does the mis-registration (color shift) appear on the print?	Go to step 8.	Complete
9	Set the printer to adjust the color registration automatically: **Menus > Admin Menu > Maintenance Mode > Automatic Registration Adjust**. Does the mis-registration (color shift) appear on the print?	Go to step 9.	Complete
9	Adjust the color registration manually: **Menus > Admin Menu > Maintenance Mode > Adjust Color Registration**. Does the mis-registration (color shift) appear on the print?	Go to step 10.	Complete
10	Replace the Imaging Unit (page 8-8). Is the image printed correctly?	Go to step 11.	Complete
11	Replace the Transfer Belt (page 8-103). Does the mis-registration (color shift) appear on the print?	Go to step 12.	Complete
12	Replace the MCU Board (page 8-57). Does the mis-registration (color shift) appear on the print?	Replace the printer.	Complete

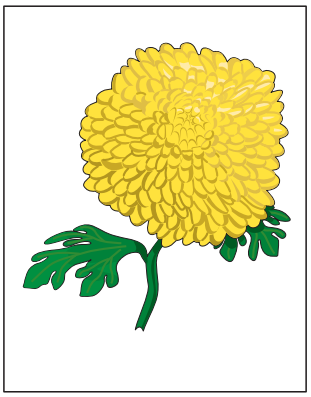
Wavy Lines

The printed image has wavy column line in the direction of the paper travel.

Initial Actions

- Check the ADF media path for dirt or debris.
- Check the ADF medi transport components.

Troubleshooting Reference Table

Applicable Parts	Example Print
■ ADF Scanner Assembly, PL11.1.1	 Hunting

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the media condition. 2. Is the media the recommended type, loaded in the correct position, and meet specifications?	Go to step 2.	Replace the paper or use the document glass mode.
2	Is the ADF closed against the document glass completely?	Replace the IIT Sub-Assembly (page 8-82).	Close the ADF.

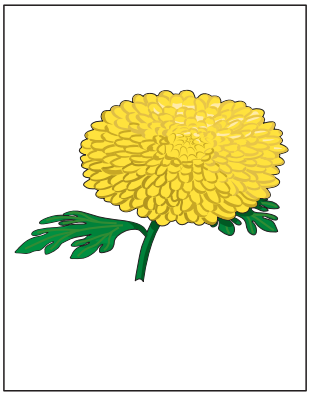
Incorrect Magnification

Incorrect magnification when copying with the ADF feeding.

Initial Actions

- Check the paper transfer path.
- Ensure there are no debris on the transfer path.

Troubleshooting Reference Table

Applicable Parts	Example Print
■ ADF Scanner Assembly, PL11.1.1	 Magnification Incorrect

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the paper condition. 2. Is the paper dry, recommended, loaded in the correct position, and meet the ADF specifications?	Go to step 2.	Replace the paper or use the platen mode.
2	Is the ADF closed against the document glass completely?	Go to step 3.	Close the ADF.
3	1. Perform Scanner Calibration procedure (“Scanner Calibration” on page 6-7). 2. Does the error still occur?	Replace the IIT Sub-Assembly (page 8-82).	Complete.

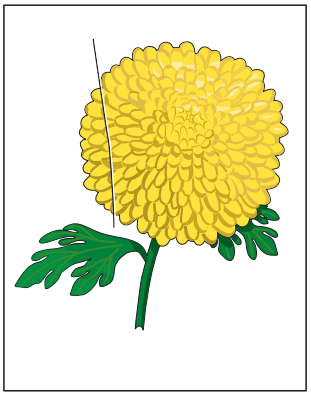
Lines or Streaks (from ADF)

There are lines or streaks on copies from the ADF.

Initial Actions

- Check the document glass.
- Ensure there are no debris on the document glass.

Troubleshooting Reference Table

Applicable Parts	Example Print
■ ADF Scanner Assembly, PL11.1.1	 Scratch on Glass

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the output document. 2. Are there lines or streaks on the document?	Replace the original document.	Go to step 2.
2	Are there debris on the document glass?	Clean the document glass using a lint-free cloth.	Go to step 3.
3	Does the image quality improve?	Complete.	Go to step 4.
4	Are there scratches on the document glass?	Replace the IIT Sub-Assembly (page 8-82).	Complete.

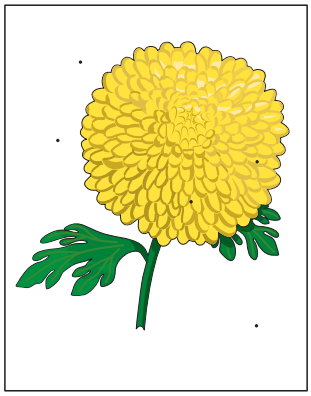
Spots from ADF

There are spots on copies from the ADF.

Initial Actions

- Check the document glass.
- Ensure there are no debris on the document glass.

Troubleshooting Reference Table

Applicable Parts	Example Print
■ ADF Scanner Assembly, PL11.1.1	 Spots on Glass

Troubleshooting Procedure Table

Step	Actions and Questions	Yes	No
1	1. Check the original document. 2. Are there spots on the original document?	Replace the original document.	Go to step 2.
2	1. Check for any debris on the document glass and the CVT window. 2. Are there any debris?	Remove the debris and clean the document glass using a lint-free cloth.	Go to step 3.
3	Does the image quality improve?	Complete.	Replace the IIT Sub-Assembly (page 8-82).

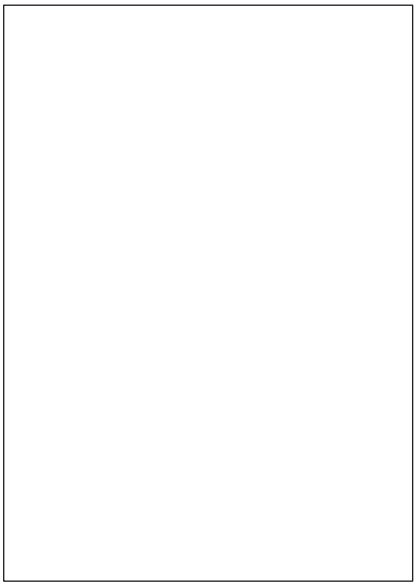
Test Prints

A variety of test prints are available for troubleshooting print quality defects and to confirm proper pinter operation.

No Image IOT Test Print

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.

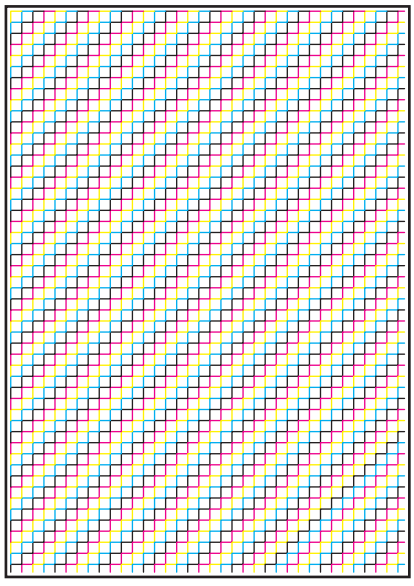


s6128mfp-094

Pattern IOT Test Print

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 this example to determine the problem.

- **Fail:** Check the printer controller or the MCU Board.
- **Pass:** Check the Image Processor Board.

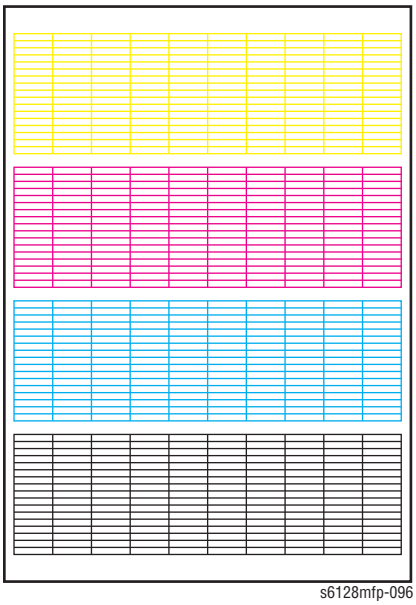


s6128mfp-324

Grid 2 ESS Test Print

This test print provides the Controller built-in grid pattern sample. This test is used to identify problems with the printer function. Compare the print with this example to determine the problem.

- **Fail:** Check the printer function and the Image Processor Board.
- **Pass:** Check the network connection, cable, PC...etc.

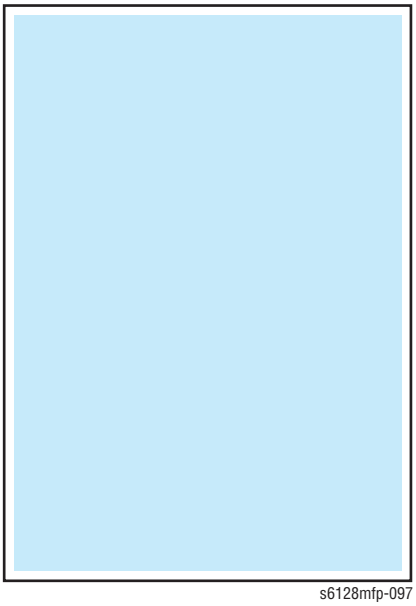


s6128mfp-096

Cyan 20% ESS Test Print

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 this example to determine the problem.

- **Fail:** Check the cyan Toner Cartridge.
- **Pass:** Check another Toner Cartridge.

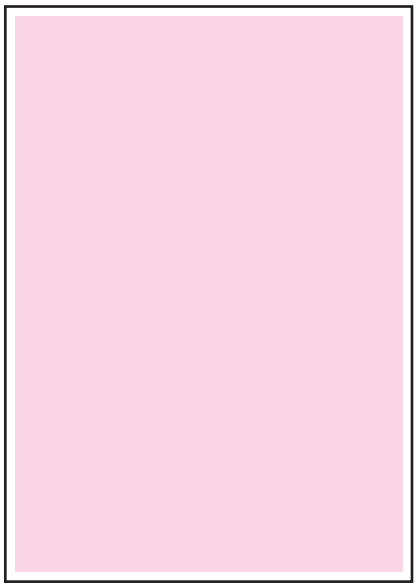


s6128mfp-097

Magenta 20% ESS Test Print

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 this example to determine the problem.

- **Fail:** Check the magenta Toner Cartridge.
- **Pass:** Check another Toner Cartridge.

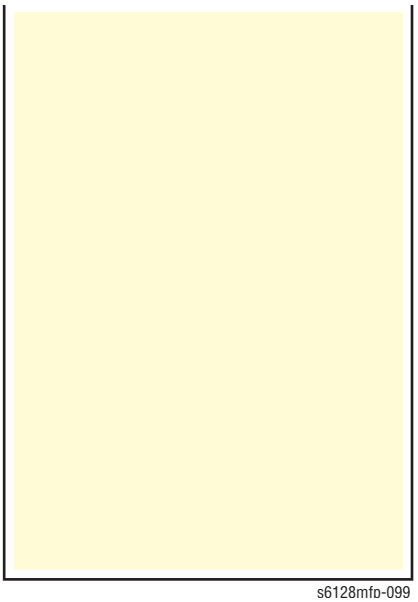


s6128mfp-098

Yellow 20% ESS Test Print

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 this example to determine the problem.

- **Fail:** Check the yellow Toner Cartridge.
- **Pass:** Check another Toner Cartridge.

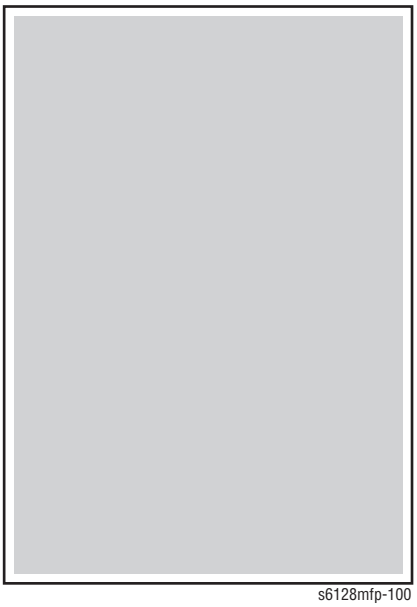


s6128mfp-099

Black 20% ESS Test Print

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 this example to determine the problem.

- **Fail:** Check the black Toner Cartridge.
- **Pass:** Check another Toner Cartridge.

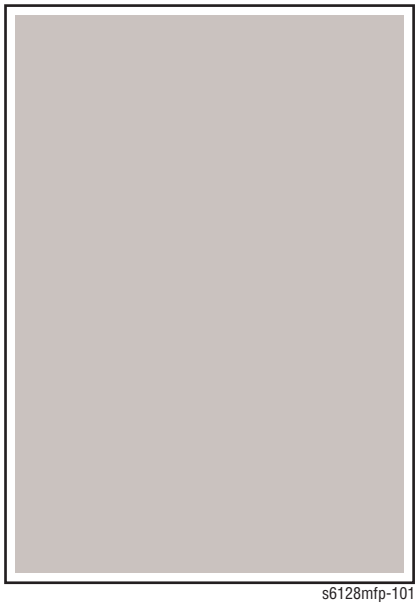


s6128mfp-100

CMY 20% ESS Test Print

This test print provides 20 % density for combination of cyan, magenta, and black on the whole page. This test is used to identify problems with balance of three color toners or another toner. Compare the print with this example to determine the problem.

- **Fail:** Check the cyan, magenta, or yellow Toner Cartridge.
- **Pass:** Check the black Toner Cartridge.



s6128mfp-101

Gradation ESS Test Print

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 this example to determine the problem.

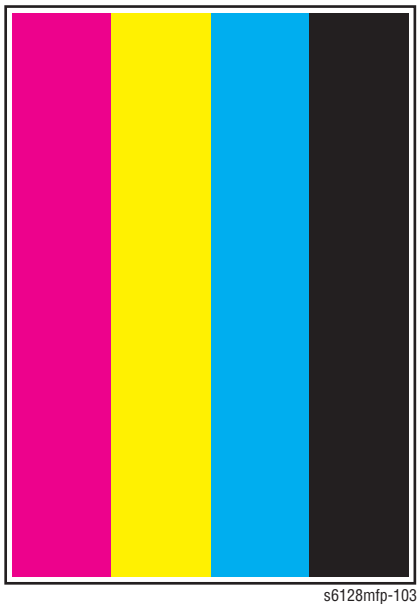
- **Fail:** Check the printer function.
- **Pass:** Check the Image Processor Board.

s6128mfp-102

Toner Pallet Check Test Print

This test print provides 100 % density for cyan, magenta, yellow, and black on the whole page. This test is used to identify problems with the toner when printing pictures or photos. Compare the print with this example to determine the problem.

- **Fail:** Check the toner cartridge and delivery for the problem color.
- **Pass:** Check the print data.



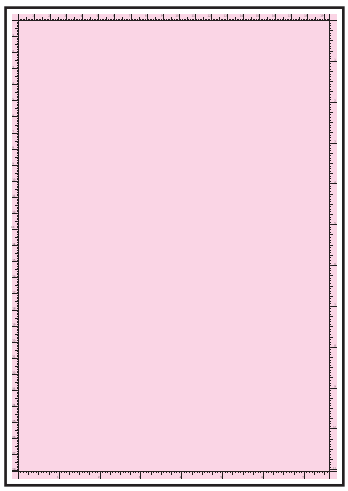
s6128mfp-103

Contamination Check Test Prints

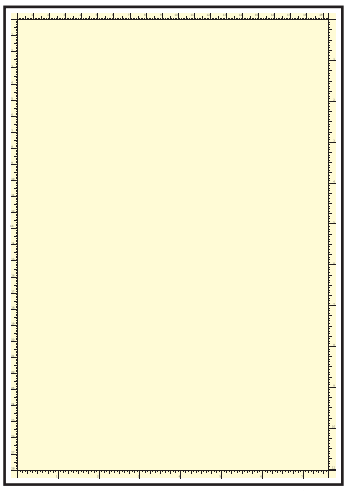
This check produces five pages that are useful for analyzing repeating defects such as lines or spots that occur at regular interval. By measuring the size of the interval it is possible to determine which printer component is causing the problem.

Pages 1 through 4: Vertical and horizontal scale patterns on a 20 % density background of one color; for evaluating regularity and intervals.

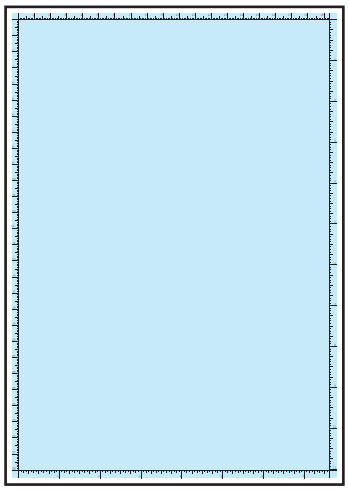
Page 5: A Pitch Chart that lists repeating defect intervals and their associated components.



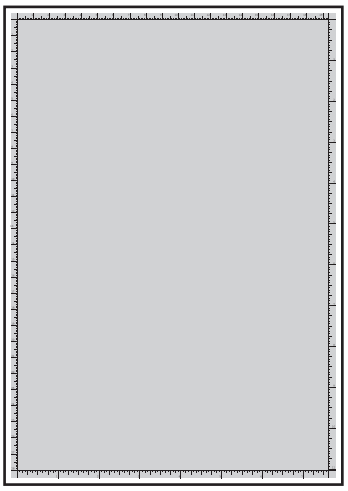
s6128mfp-104



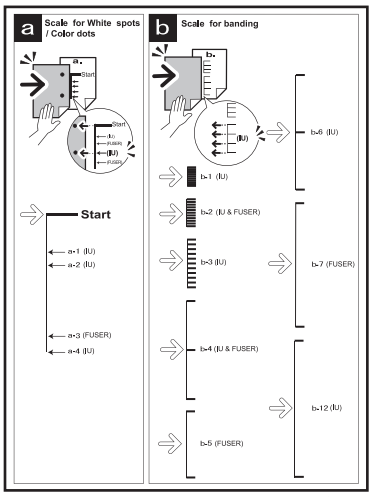
s6128mfp-105



s6128mfp-106



s6128mfp-107

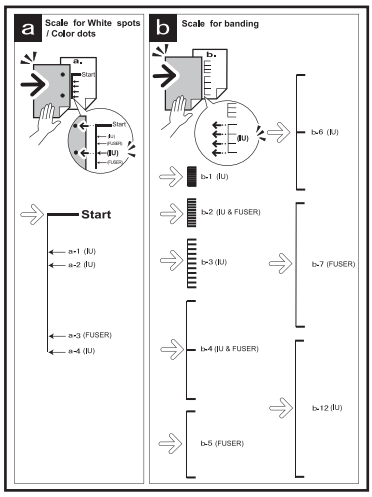


s6128mfp-108

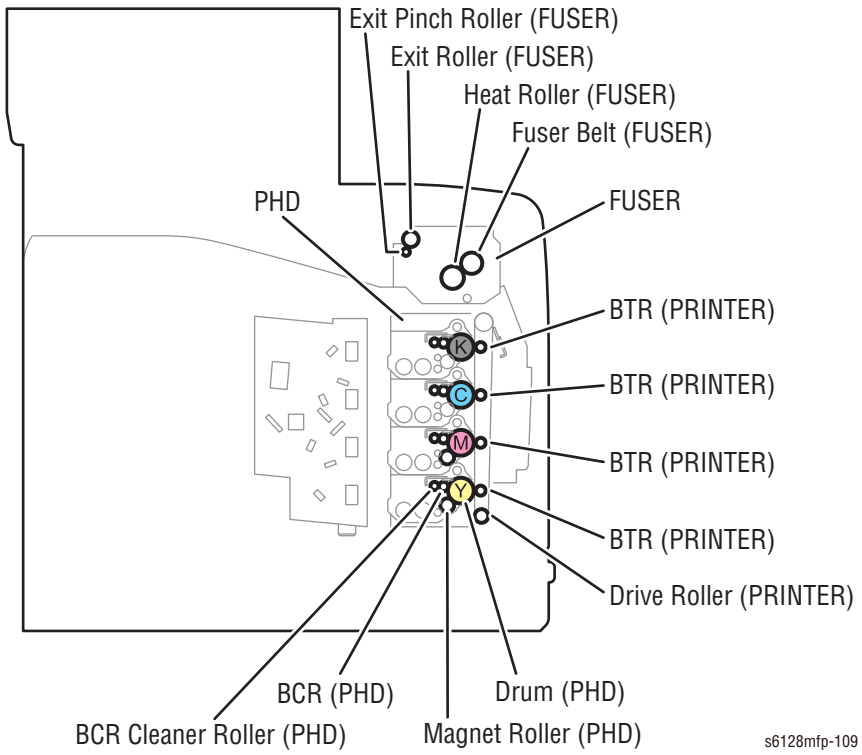
Pitch Chart Test Print

Horizontal lines and/or spots that occur periodically are usually caused by one of the printer's many rollers. However, the interval does not necessarily match the circumference of the roller. Compare the print defect intervals on the test print with the gauges on the Pitch Chart that can be printed from the diagnostics in Service Mode. The problem may be solved easily by the check.

To print the Pitch Chart, print the Contamination Check test prints: **Service Mode > Test Print > Contamination Check**.



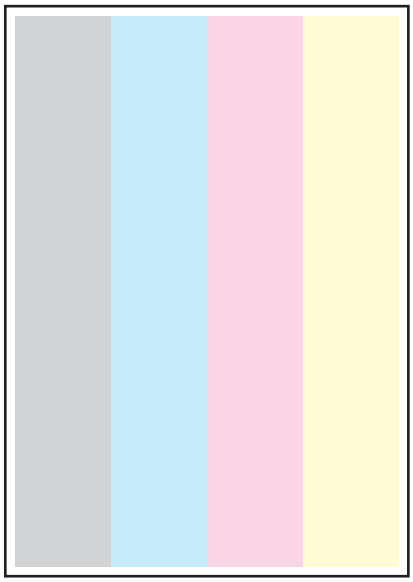
s6128mfp-108



s6128mfp-109

Imaging Unit Refresh Test Print

When the result of a Contamination Check corresponds to b-12 (PHD) of the pitch chart, printing this test print may improve image quality. This chart is printed the [PHD Refresh Configuration Chart] of the [Diagnosis] tab in [Tool Box]..



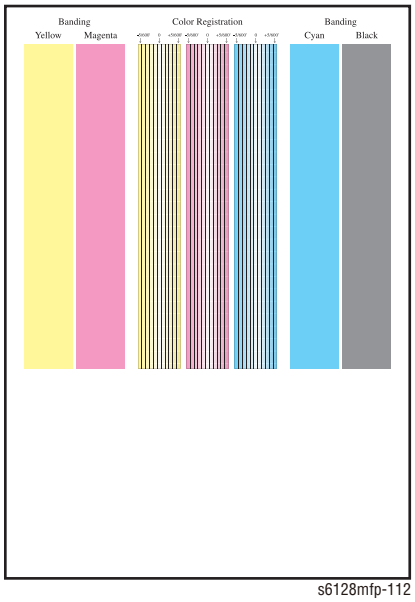
s6128mfp-110

MQ Test Print

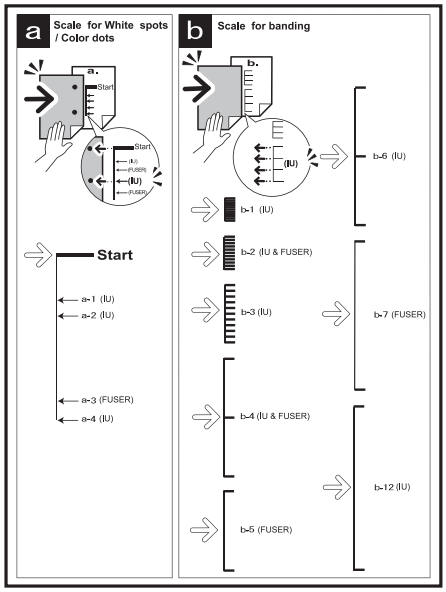
This print allows you to check for banding. The print is printed from the MQ Chart Diagnosis tab in Tool Box.

When the image quality is normal, the Y, M, and C are confined within the frame. When the image quality is abnormal, the colors run out the frame. Compare the pitch of the wave with the pitch chart printed after the MQ Chart..

No	Roll Parts	Period (mm)	Replaceable Parts
1	Heat Roll	66.7	Fuser
2	Drum	75.4	Imaging Unit
3	Mag Roll	37.7	Imaging Unit
4	Drive Roll	44.0	Printer
5	Registration Roll	37.6	Printer



s6128mfp-112

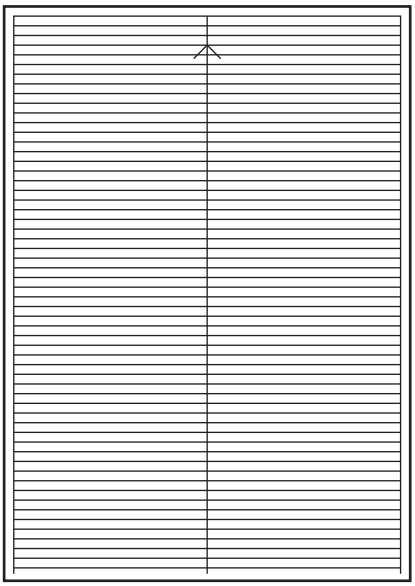


s6128mfp-108

Alignment Test Print

This chart allows you to check for media skew. This print is printed from the Alignment Chart of the Diagnosis tab in Tool Box. When the sheet is fed normally, the vertical and horizontal lines are aligned parallel to the edges of the sheet. When there is a problem, alignment is skewed..

- **Fail:** Run the alignment procedure.
- **Pass:** Lines are parallel to the edges of the shee

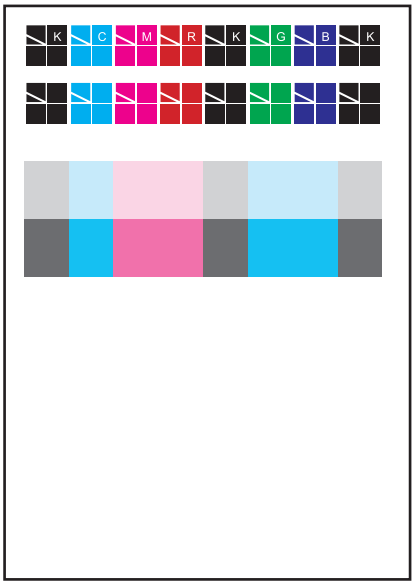


s6128mfp-113

Ghost Test Print

This print allows you to check for image ghosting. This print is printed from the Ghost Configuratio Chart of the Diagnosis tab in Tool Box. When a ghost occurs, the patches with open cross and character K/B/G/R/M/C appear on the light-colored patches K/C/M in the lower half of the chart, and the patches with open cross only appears on the dark-colored patches K/C/M below the light-colored patches..

- **Fail:** Characters repeat in the light area.
- **Pass:** Characters are not visible in the light area.

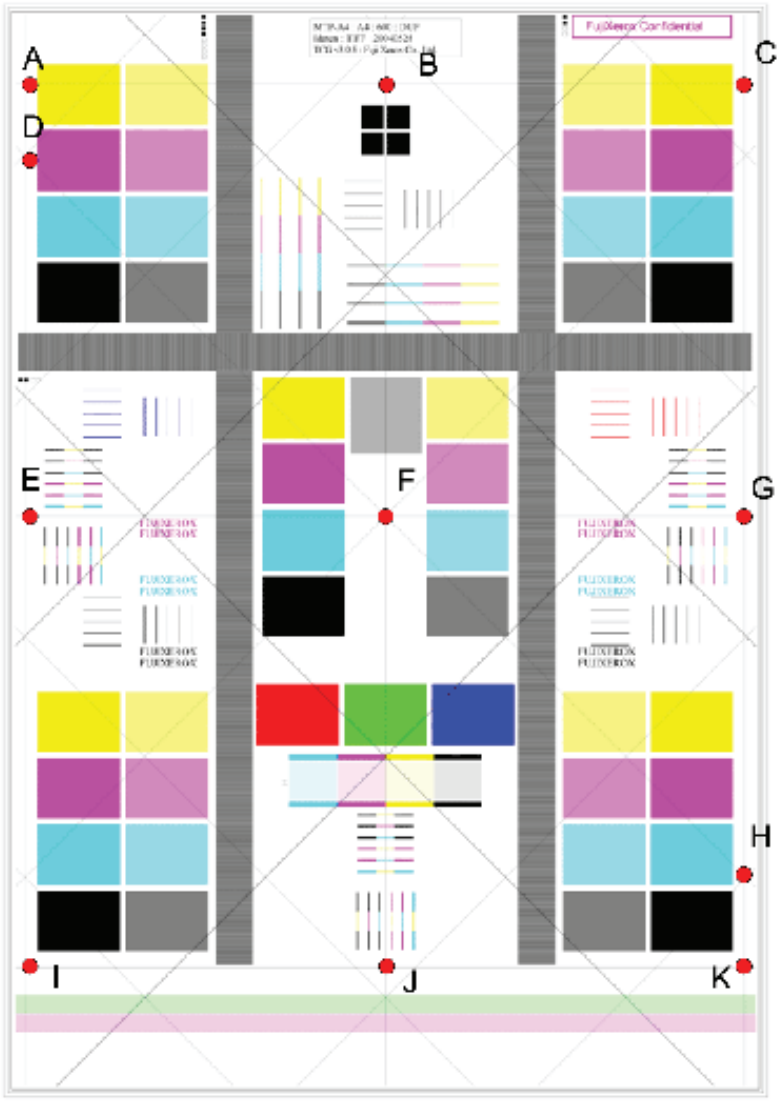


s6128mfp-114

Print-Quality Specifications

The following provide specifications for Skew, Parallelism, Linearity, Perpendicularity, Magnification Error, Registration, and Guaranteed and Maximum Print Areas.

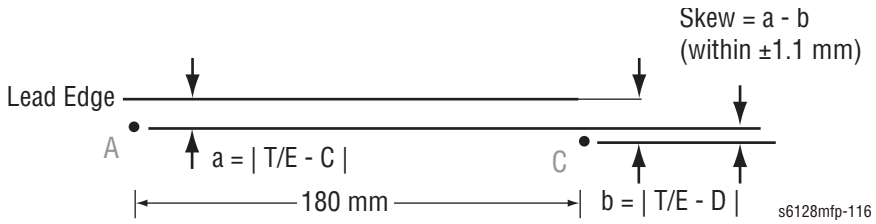
Color Chart



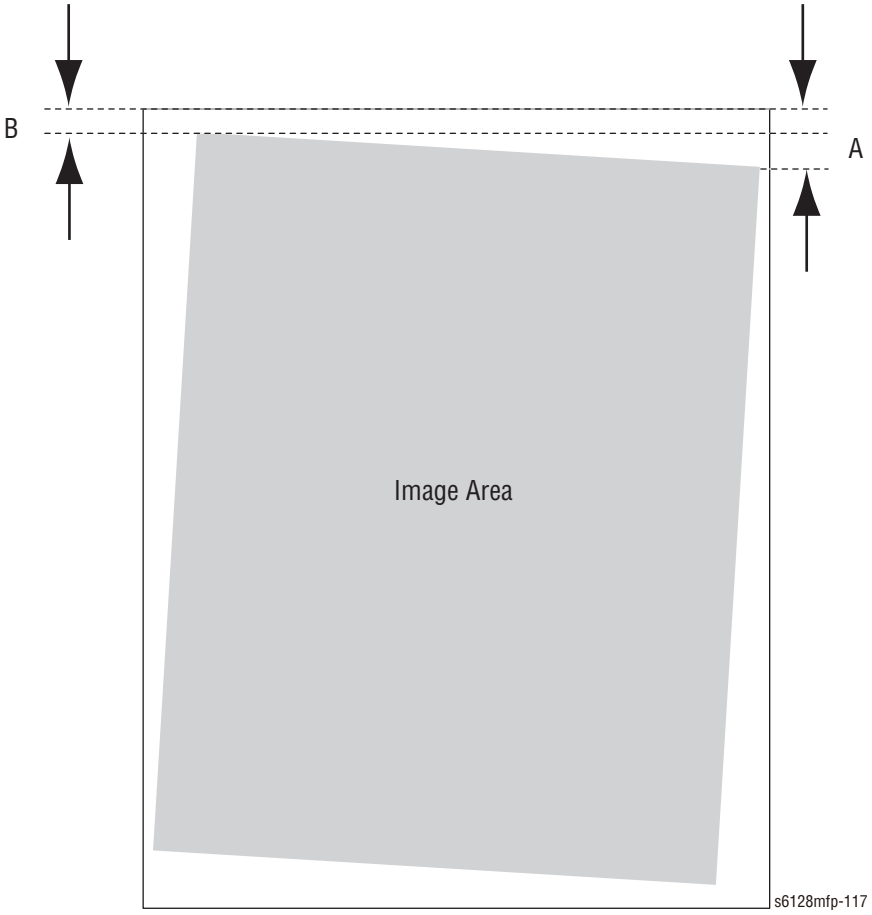
s6128mfp-115

Skew

- 180 mm ± 1.1 mm

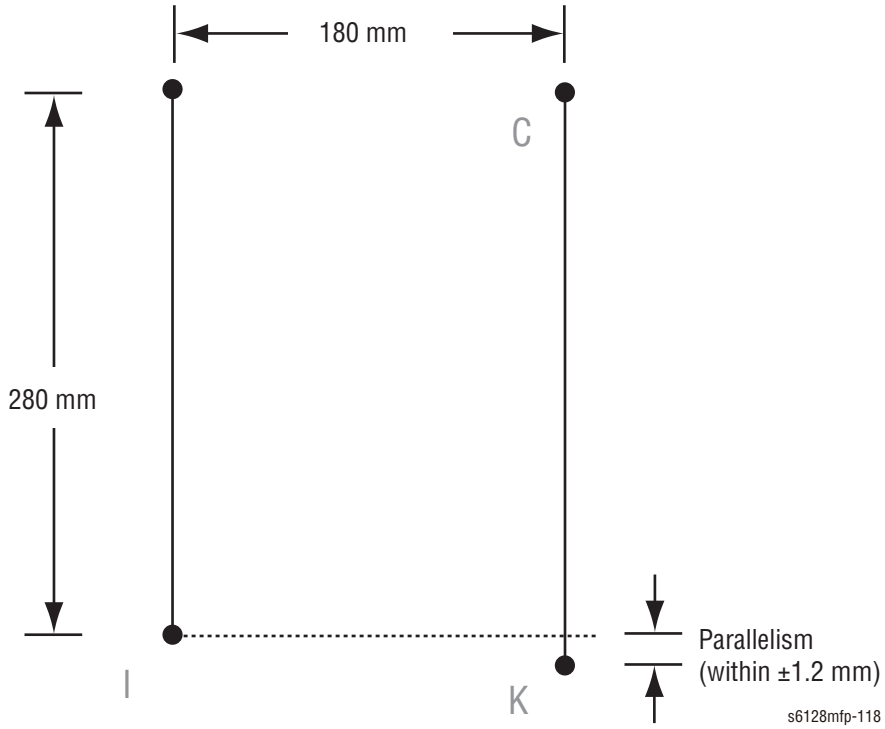


To measure Skew: Measure the margin of the paper at the leading edge of each corner, and then take the difference between them.



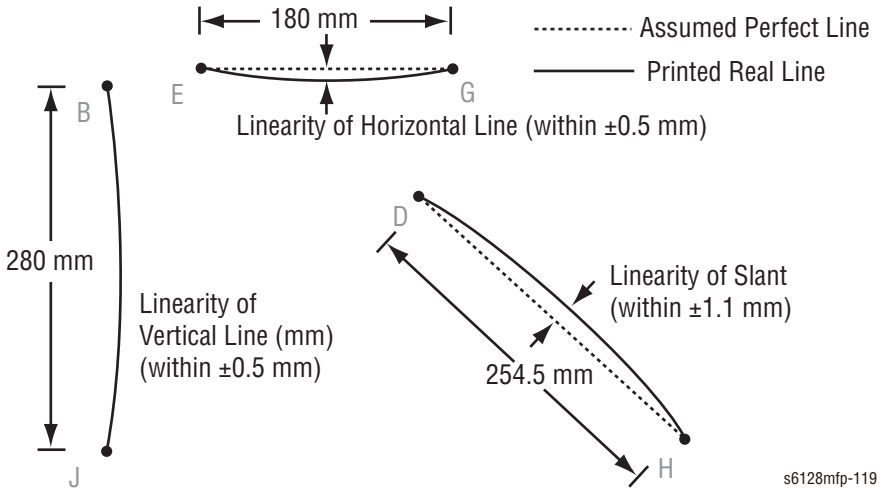
Parallelism

- Horizontal: 180 mm ± 1.2 mm
- Vertical: 280 mm ± 1.2 mm



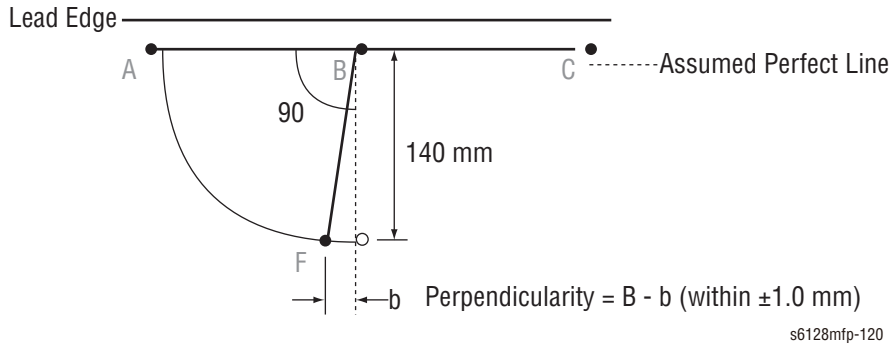
Linearity

- Horizontal: 190 mm ± 0.5 mm
- Vertical: 234 mm ± 0.5 mm
- Slant: 269 mm ± 1.2 mm



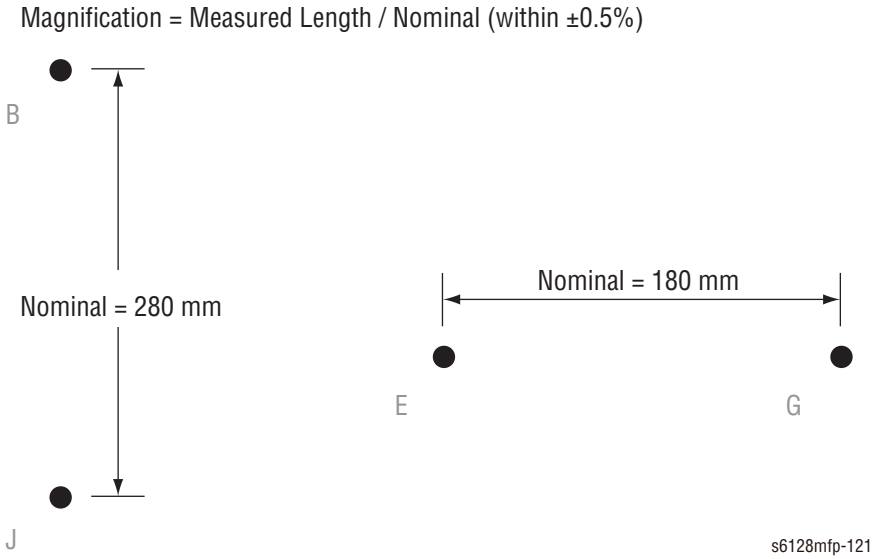
Perpendicularity

- 114.5 mm ± 0.8 mm



Magnification Error

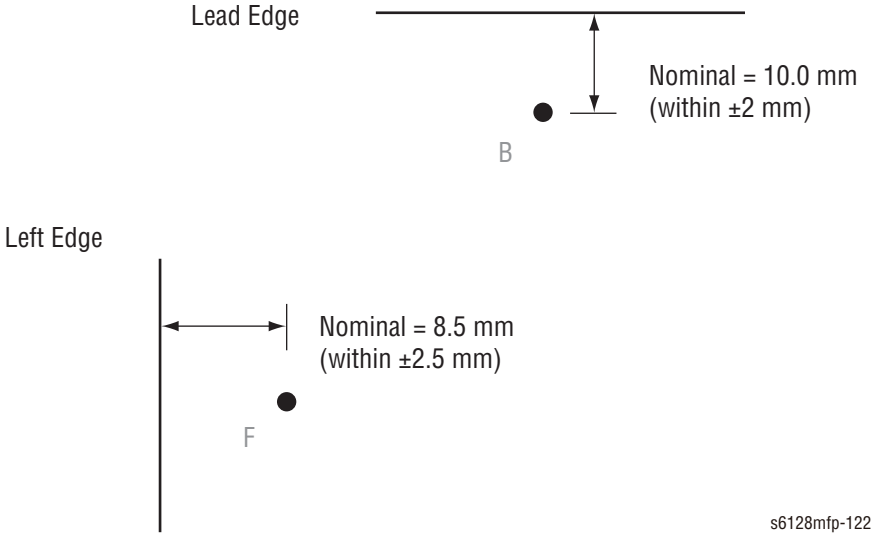
- Horizontal Simplex: 190 mm ± 0.5 %
- Horizontal Duplex:190 mm ± 0.8 %
- Vertical Simplex: 234 mm ± 0.5 %
- Vertical Duplex: 234 mm ± 0.8 %



Registration

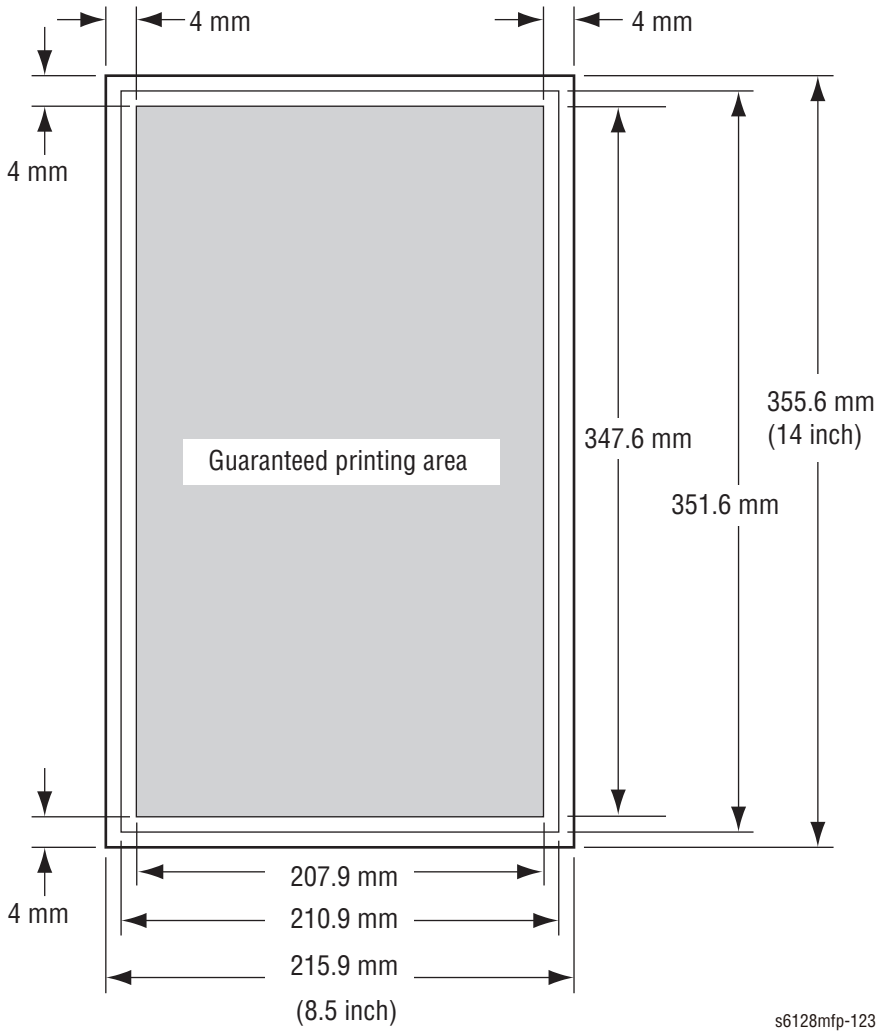
- Leading Edge: 10.0 mm ± 2.0 mm
- Side Edge: 8.5 mm ± 2.5 mm

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

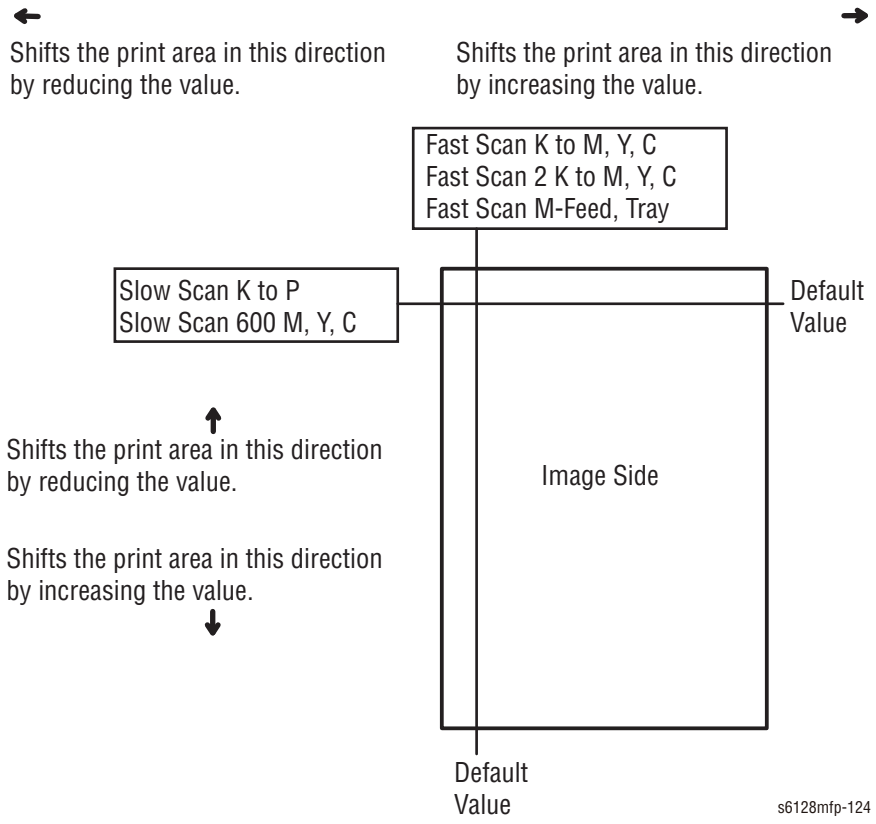


Note

Print the parameter list using the Print function of Parameter Menu in Service Diagnostics before changing the registration values.

Printer Diag Parameter Settings

Item	Range	Description
Slow Scan K to P (Shifts 0.17mm/1count)	-128 to 127	Sets the registration in the paper feeding direction
Slow Scan 600 M,Y,C (Shifts 0.042mm/1count)		
Fast Scan K to M,Y or C (Shifts 0.042mm/1count)	-128 to 127	Sets the registration in the scanning direction. Color registration adjustment Calculation of adjustment is shown below. (exp. Yellow) (Value of Fast Scan K to Y + Value of Fast Scan 2 K to Y)/4
Fast Scan M-Feed ,Tray (Shifts 0.17mm/1count)	-30 to 30	
Fast Scan 2 K to M,Y or C (Shifts 0.01mm/1count)	-1 to 2	


Shifts the print area in this direction by reducing the value.
Shifts the print area in this direction by increasing the value.
Fast Scan K to M, Y, C
Fast Scan 2 K to M, Y, C
Fast Scan M-Feed, Tray
Slow Scan K to P
Slow Scan 600 M, Y, C
Default Value
Shifts the print area in this direction by reducing the value.
Image Side
Shifts the print area in this direction by increasing the value.
Default Value
s6128mfp-124

Adjustments and Calibrations

In this chapter...

- Adjustments
- Calibrations
- Parameter Settings

Chapter 6

Adjustments

Color Registration

The 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.

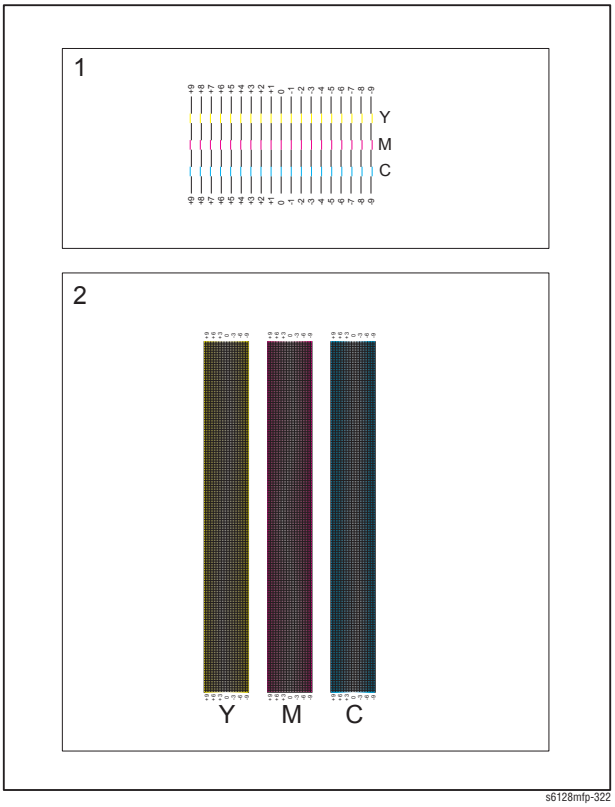
Note

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 the Color Registration adjustment procedure, print the Color Registration Correction Chart for reference.

1. From the Control Panel, press the **System** button.
2. Press the **Up** or **Down Arrow** button to find **Admin Menu**. Press **OK**.
3. Press the **Up** or **Down Arrow** button to find **Maintenance Mode**. Press **OK**.
4. Press the **Up** or **Down Arrow** button find **Adjust Color Regi**. Press **OK**.
5. Press the **Up** or **Down Arrow** button to find **Color Regi Chart**. Press **OK**. The Color Registration Chart prints. When finished, the **Ready** menu appears.



Note

After printing the Color Registration Correction Chart, do not power Off the printer until the printer motor has stopped running.

Enabling/Disabling Automatic Color Registration

This procedure provides instructions for how to enable or disable the Automatic Color Registration function after a new Imaging Unit is installed.

- If the function is set to On, the printer will calibrate the color alignment every time it detects a new Imaging Unit.
- 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 **System 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 Regi.** Press the **OK** button.
5. Press the **Up Arrow** or **Down Arrow** button to turn automatic color registration **On** or **Off**.

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 Color Registration Adjustment” on page 6-4.

Auto Adjustment

1. From the Control Panel, press the **System** 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. The printer starts the auto Color Registration process.
8. When the auto Color Registration is completed, the **Ready** menu is displayed.

Manual Color Registration Adjustment

Color registration can be adjusted manually by a user or automatically by the printer. Color registration should be adjusted any time the printer is moved. The color registration can be fine tuned by performing a manual adjustment.

Note

An automatic color registration adjustment is performed every time a new Print Cartridge is installed.

Horizontal Registration

Section 1 of the Color Registration Correction Chart displays a series of lines. Some lines are straight, with both the colored and black segments aligned, while other lines are jagged, with the colored segments offset to the right or left. A value is listed next to each line. When the value is **0**, the color registration needs no adjustment.

To determine correction values for Horizontal Registration, choose the straightest line. If the value listed next to the straight line is anything other than **0**, follow the procedure below to enter values.

Note

The densest colors of the grid can also be used to find the straightest lines. The colors printed at the highest density are those next to the straight lines.

To enter values:

1. From the Control Panel, press the **System 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. Press the **Up Arrow** or **Down Arrow** button to find **Fast Scan**. Press the **OK** button.
7. Use the **Up Arrow** or **Down Arrow** button to enter the values and the **Right Arrow** button to move from Y to M to C.
8. Repeat step 2 to continue adjusting the color registration.
9. Press the **OK** button twice to print the Color Registration Correction Chart with the new values. The color registration adjustment is complete when the straightest Y, M, and C lines are next to the **0** line.

Note

If **0** is not displayed next to the straightest lines, determine the values and adjust again.

Vertical Registration

Section 2 of the Color Registration Correction Chart displays three columns of color. In the center of each column is a wavy white column. This column of white needs to be centered as much as possible at **0**.

To determine correction values for use in Vertical Registration adjustment, choose the value from each column that is best centered on the wavy white column.

To enter the correction values:

1. From the Control Panel, press the **System 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. Press the **Up Arrow** or **Down Arrow** button to find **Slow Scan**. Press the **OK** button.
7. Use the **Up Arrow** or **Down Arrow** button to enter the values and the **Right Arrow** button to move from Y to M to C.
8. Repeat step 7 to continue adjusting the color registration.
9. Press the **OK** button twice to print the Color Registration Correction Chart with the new values. The color registration adjustment is complete when the columns of white are centered, as much as possible, on **0**.

Resetting the Fuser

Fuser reset is required when a new Fuser is installed. This function sets the life counter to "0."

1. From the Control Panel, press the **System 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 **Reset Fuser**. 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. The **Maintenance Mode - Reset Fuser** menu is displayed when the process is completed.

Calibrations

Initializing Print Meter

This process initializes the Print Meter.

1. From the Control Panel, press the **System 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. **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.

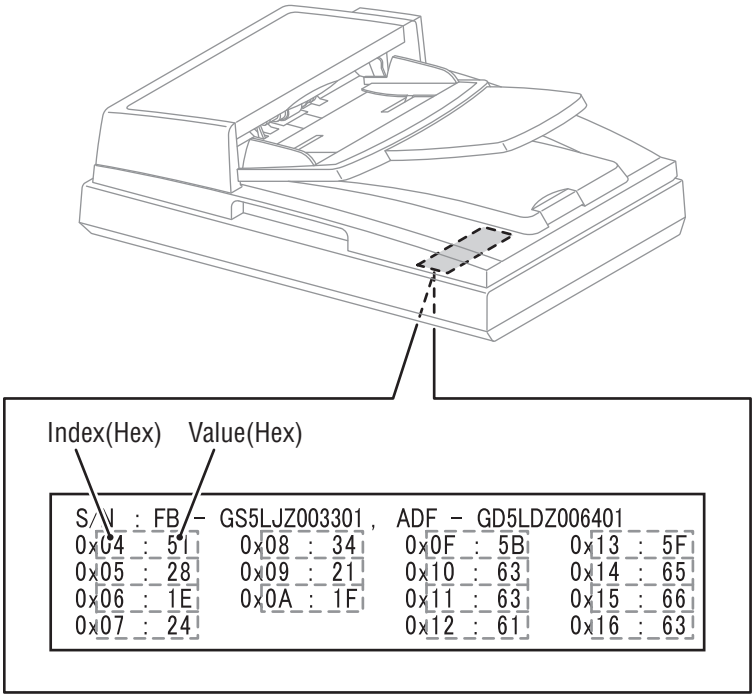
1. From the Control Panel, press the **System button**.
2. Press the **Up Arrow** or **Down Arrow** button to find **Admin Menu**. Press the **OK** button.
3. Press the **Up Arrow** or **Down Arrow** button to find **Maintenance Mode**. Press the **OK** button.
4. Press the **Up Arrow** or **Down Arrow** 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. Turn the printer power Off and back On.

Scanner Calibration

This process enables manual calibration of the registration adjustment value or correction value. Use this procedure to enter the correction value when replacing the scanner.

Note

Note the Scanner Assembly correction values located under the assembly prior to installing the replacement on the printer.



s6128mfp-125

Note

The information in the table below is for reference only. Each scanner has its own calibration information.

FB - GS6JW0000501, ADF - GD6JW0000501 >PET<

0x04 : 52	0x08 : 46	0x0F : 56	0x13 : 5D
0x05 : 2B	0x09 : 21	0x10 : 5D	0x14 : 64
0x06 : 1E	0x0A : 1E	0x11 : 5D	0x15 : 66
0x07 : 26		0x12 : 59	0x16 : 62

s6128mfp-175

1. Turn the printer power Off.
2. Access the Service Diagnostics menu by pressing and holding the **Up** and **Down Arrow** buttons simultaneously and turn the printer power On.
3. The **Service Mode** is displayed. Select **Fax/Scanner Diag** and press the **OK** button.
4. Press the **Up Arrow** or **Down Arrow** button to find **Scanner Maintenance**. Press the **OK** button.
5. Press the **Up Arrow** or **Down Arrow** button to find **Parameter**. Press the **OK** button.

6. Enter the value using the numbers provided underneath the Scanner.
   - Index[Hex]: 00
   - Value[Hex]:

Note

Use the **Left** and **Right Arrow** buttons to move the cursor. Use the **Up** and **Down Arrow** buttons to change the value.

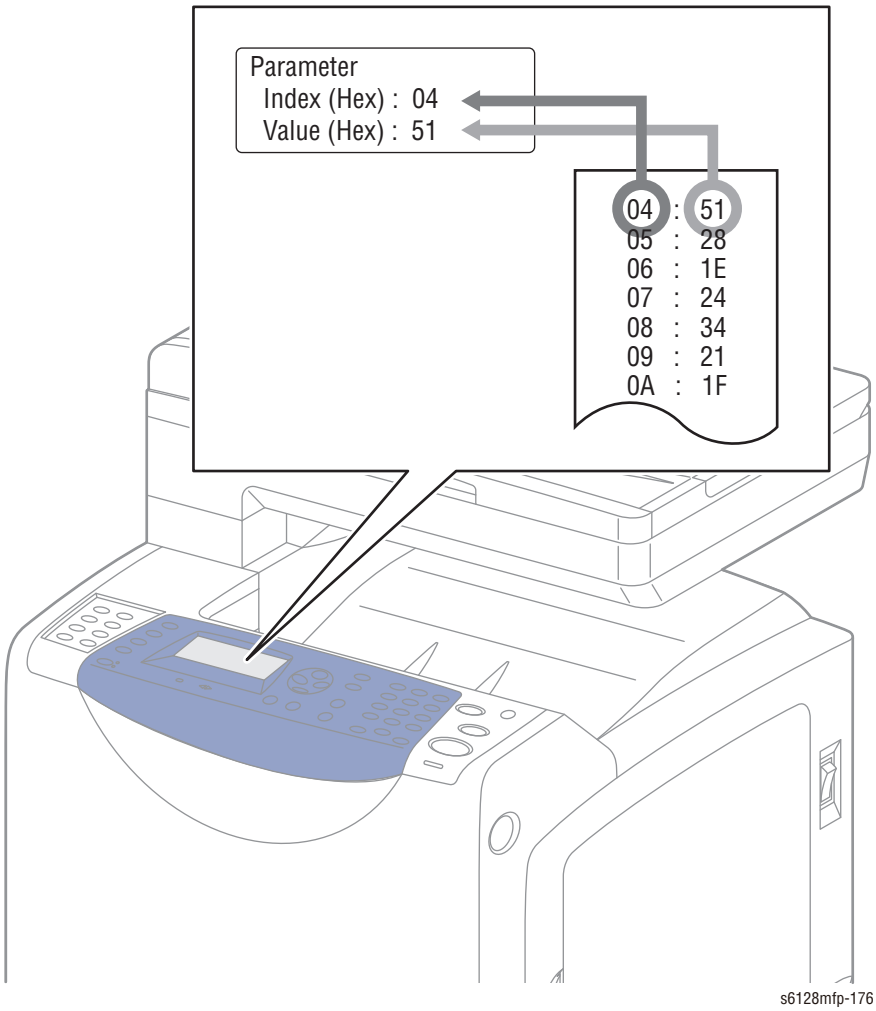
a. Enter the Index information and press the **OK** button.

b. The Value is displayed with an "*", which should match the provided value from the table. Ensure to confirm that there is an "*" in front of the Value number. This represents the value has been updated and saved.

Examples:

- Index[Hex]: 04
- Value[Hex]: *52

c. Press the **Exit** button to return to the **Parameter** screen. Continue to enter the Index and Value information using the provided scanner calibration information.



s6128mfp-176

Parameter Settings

Print Parameter Setting

This function reads/writes the parameter values, errors, and life counter values stored in the printer.

Note

Print the parameter list from **Service Mode** > **Parameter** > **Print** before changing the registration value. The parameter list contains the parameter and life counter values currently stored in the engine.

To access the Parameter list:

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.

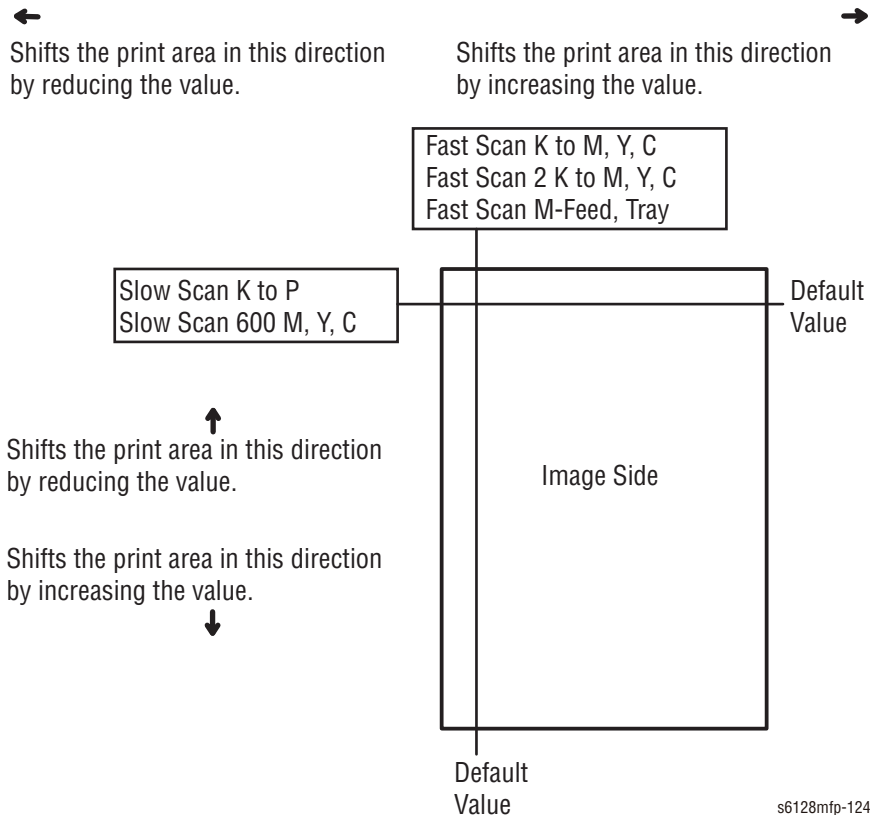
Note

"*" = data has been saved

8. Press the **Stop** button to return to the **Parameter menu.**

Printer Diag Parameter Settings

Item	Range	Description
Slow Scan K to P (Shifts 0.17mm/1count)	-128 to 127	Sets the registration in the paper feeding direction
Slow Scan 600 M,Y,C (Shifts 0.042mm/1count)		
Fast Scan K to M,Y or C (Shifts 0.042mm/1count)	-128 to 127	Sets the registration in the scanning direction. Color registration adjustment Calculation of adjustment is shown below. (exp. Yellow) (Value of Fast Scan K to Y + Value of Fast Scan 2 K to Y)/4
Fast Scan M-Feed ,Tray (Shifts 0.17mm/1count)	-30 to 30	
Fast Scan 2 K to M,Y or C (Shifts 0.01mm/1count)	-1 to 2	



Life Counters

Counter Name
Life Y Toner (Dispense Time)
Life M Toner (Dispense Time)
Life C Toner (Dispense Time)
Life K Toner (Dispense Time)
Life Fuser Sheet
Life Printer Sheet
Life DTB (Transfer Belt) Waste (Toner cleaning count)
Life Y Waste Toner (Waste Toner cleaning count)
Life M Waste Toner (Waste Toner cleaning count)
Life C Waste Toner (Waste Toner cleaning count)
Life K Waste Toner (Waste Toner cleaning count)
Life IU Y Time (Dispense Time)
Life IU M Time (Dispense Time)
Life IU C Time (Dispense Time)
Life IU K Time (Dispense Time)
Life IU Xero (Round Time)

Life Counters (continued)

Counter Name
Life IU Deve K (Sheet)
Life Manual Feed
Life Tray Sheet

Fax/Scanner Parameter Setting

This function reads and writes parameter stored in the Image Processor Board.

Note

Refer to “Chain Link for Fax Parameter Setting” on page A-9 in the Reference chapter.

To access the Parameter menu:

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. Select **Fax/Scanner Diag** and press the **OK** button.
5. Press the **Up Arrow** or **Down Arrow** button to find **Parameter**. Press the **OK** button.

Note

Use the **Left** or **Right Arrow** button to move the cursor. Use the **Up** or **Down Arrow** button to change the value.

1. Enter the Chain Link number and press the **OK** button.
2. The value of the parameter is displayed with an *. This is the current value.
3. Enter the appropriate value and press the **OK** button.
4. Press the **Stop** button three times to return to the **Parameter** menu.
5. Press the Up **Arrow** or **Down Arrow** button to find Complete. Press the **OK** button two times to exit.

Cleaning and Maintenance

In this chapter...

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 Imaging Unit, place it in a light-protective bag or otherwise protect it 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 Imaging Unit, Fuser, Toner Cartridges, Left and Right Side Covers, and Rear Cover before cleaning.
5. Clean the Fan.
6. Ensure that all cover vents are clean and free of obstructions.
7. Remove any debris or foreign objects from the Fuser, Transfer Belt, Imaging 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.

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...

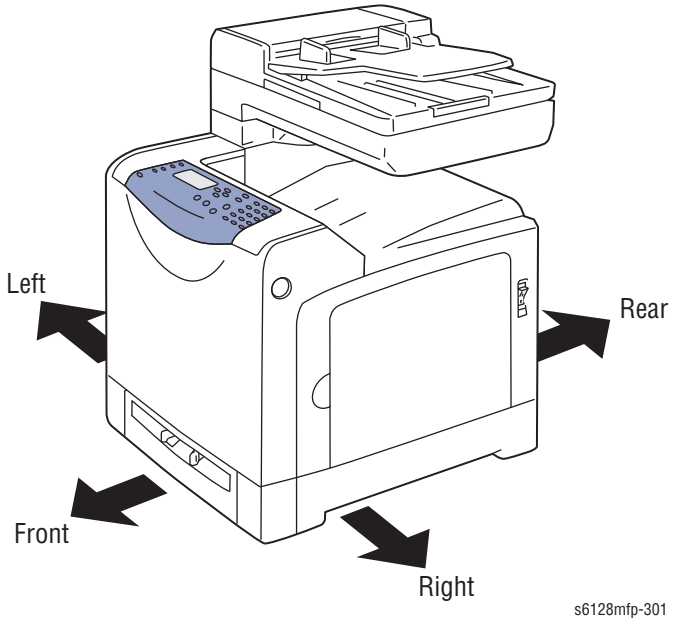
Chapter 8

Overview

This section contains the removal procedures for field-replaceable parts 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 Chapter 9.

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.



Preparation

Before you begin any servicing procedure:

Warning

Unplug the power cord from the wall outlet.

Warning

Allow the Fuser to cool before starting the procedure.

Caution

Remove and cover the Imaging Unit to avoid light exposure.

1. Wear an Electrostatic Discharge wrist strap.
2. Turn Off power and disconnect the power cord from the wall outlet.
3. Disconnect all cables from the printer.
4. Remove these items:
   a. Imaging Unit (page 8-8).
   b. Tray
   c. Fuser (page 8-11).
   d. Toner Cartridges (page 8-13).

   The disassembly procedures do not include steps for the removal of the parts listed above.

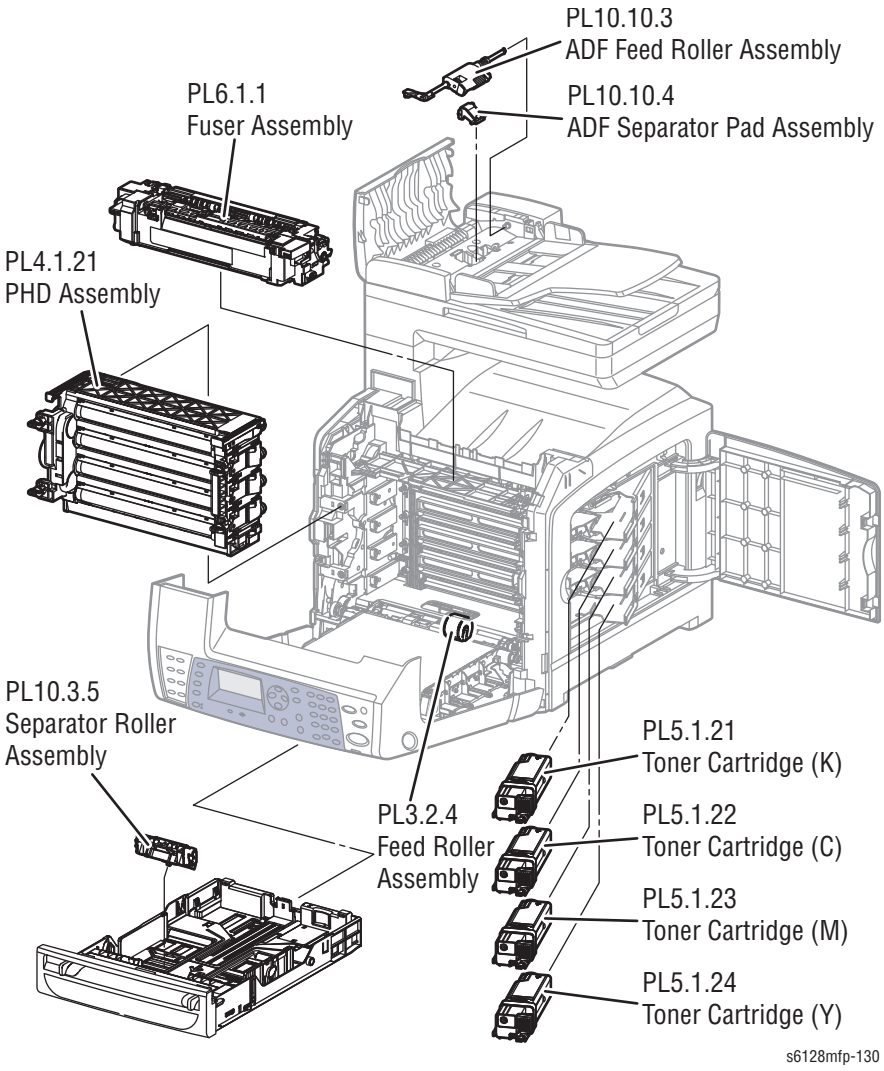
Note

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 Paper Tray in a removal procedure may appear on the Parts List as CASSETTE, ASSY. When working on a removal procedure, ignore any prerequisite procedure for parts already removed.

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.

Procedural flow diagrams are included in the Reference chapter. These diagrams indicate the sequence ofparts removal or replacement. Use these diagrams as a guide to which parts to remove to access a specific part, or in which order to reassemble parts.


PL10.10.3
ADF Feed Roller Assembly
PL10.10.4
ADF Separator Pad Assembly
PL6.1.1
Fuser Assembly
PL4.1.21
PHD Assembly
PL10.3.5
Separator Roller
Assembly
PL3.2.4
Feed Roller
Assembly
PL5.1.21
Toner Cartridge (K)
PL5.1.22
Toner Cartridge (C)
PL5.1.23
Toner Cartridge (M)
PL5.1.24
Toner Cartridge (Y)
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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 “PL*X.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.

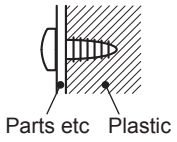
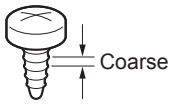
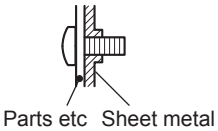
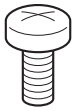
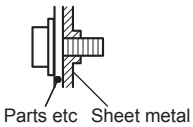
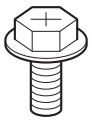
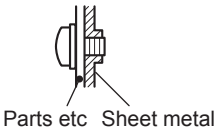
Replacement Note

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 this Product

Type	Application	Shape	Characteristics
Self-tapping, plastic			1. Silver colored. 2. Screw thread is coarse compared to metal screw. 3. Screw tip is thin.
Sheet Metal, silver			1. Silver colored. 2. Diameter is uniform.
Sheet Metal, with flange			1. Silver colored. 2. Screw has a flange. 3. Diameter is uniform.
Sheet Metal, silver with lock washer			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. Improperly aligning or over tightening 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.

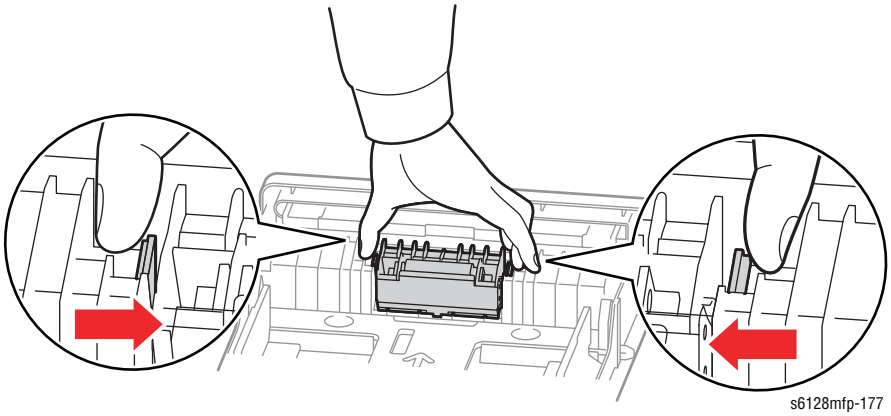
Maintenance Items and Consumables

Maintenance items include the Separator Roller in the Paper Tray, Imaging Unit, and Fuser. Consumables consist of the four Toner Cartridges.

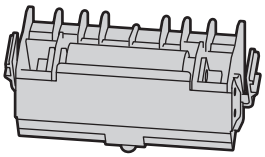
Separator Roller

PL10.3.5

1. Hold the tray and pinch the left and right hooks of the Separator Roller. Swing the Separator Roller to release the two hooks.



2. Pull the Separator Roller up to remove it from the Tray.



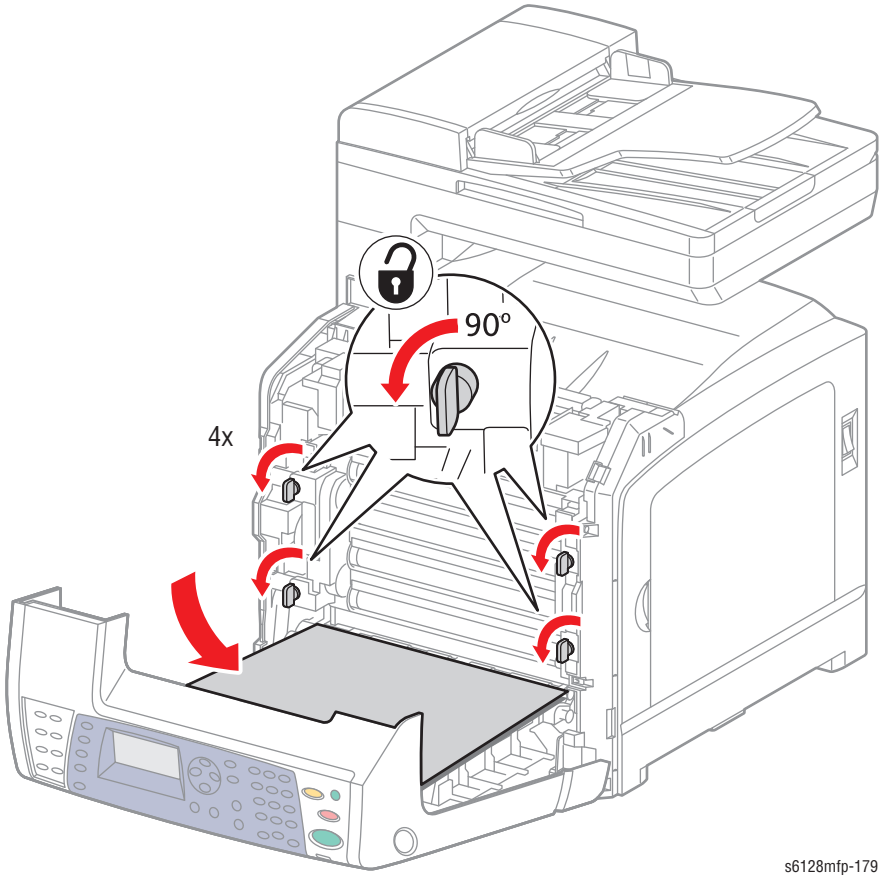
Imaging Unit

PL4.1.21

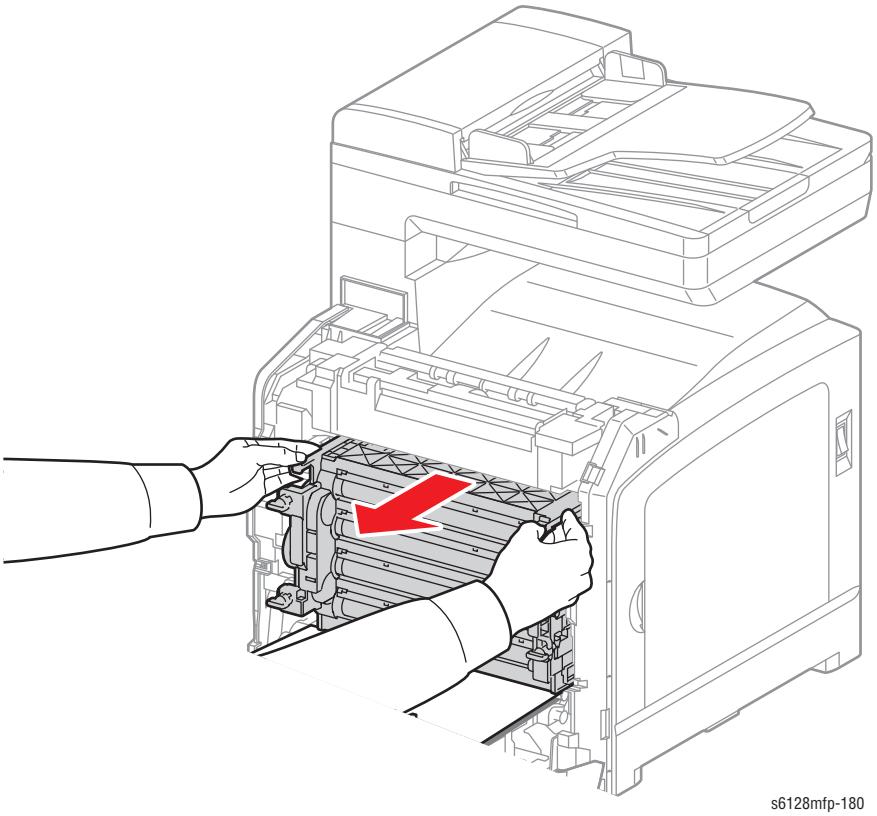
Caution

Cover the Imaging Unit to avoid light exposure.

1. Open the Front Cover.
2. Place a sheet of paper over the Transfer Belt to protect the belt.
3. Rotate the four securing locks counter-clockwise.



4. Grasp the left and right handles and pull the Imaging Unit straight forward until it is clear, then lift as shown. Take care to not touch the drums.



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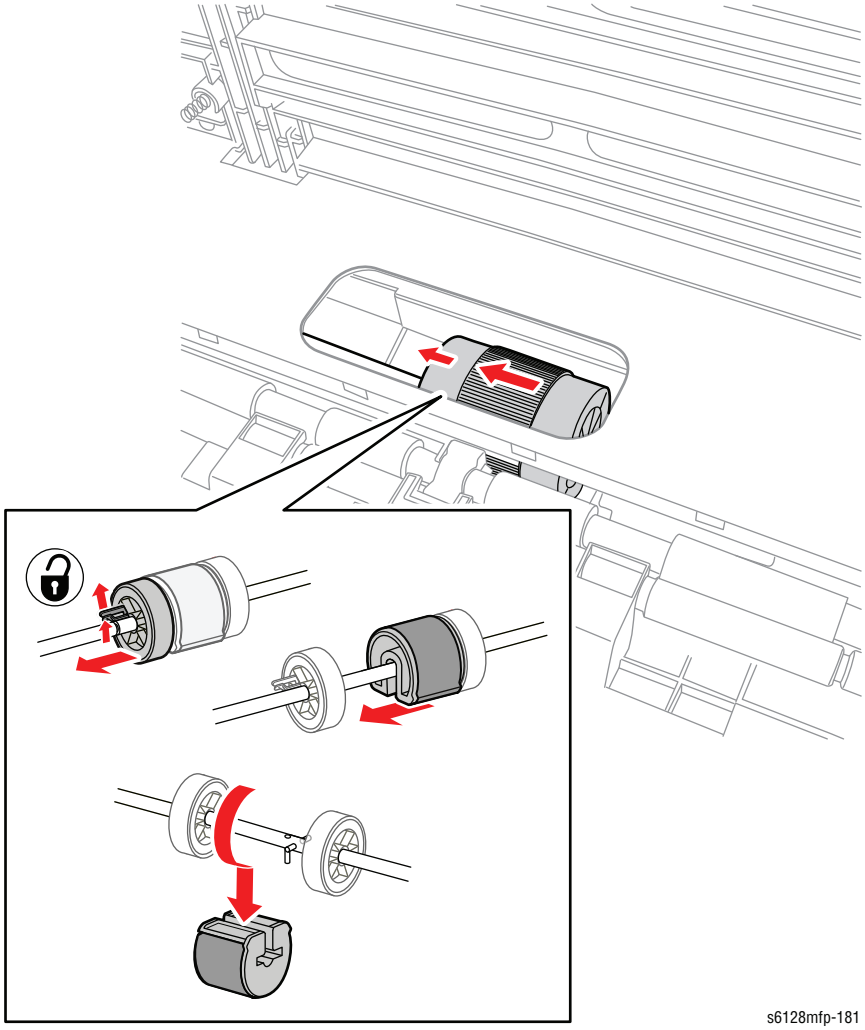
Feed Roller

PL3.2.4

1. Open the Front Cover.
2. Remove the Imaging Unit (page 8-8)
3. Reach in through the opening in the bottom of the Imaging Unit cavity and release the hook on the left side of the roller. Move the roller core to the left side.
4. Move the Feed Roller to the left, so that the grooves in the Feed Roller are clear of the pins on the feed shaft.
5. Rotate the Feed Roller 180˚ on the feed shaft and allow the Feed Roller to drop off the shaft.



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Replacement Note

Because there are grooves in only in one side of the Feed Roller, it fits over the pins on the feed shaft in only one direction. Note the location of the grooves when installing the Feed Roller on the shaft.

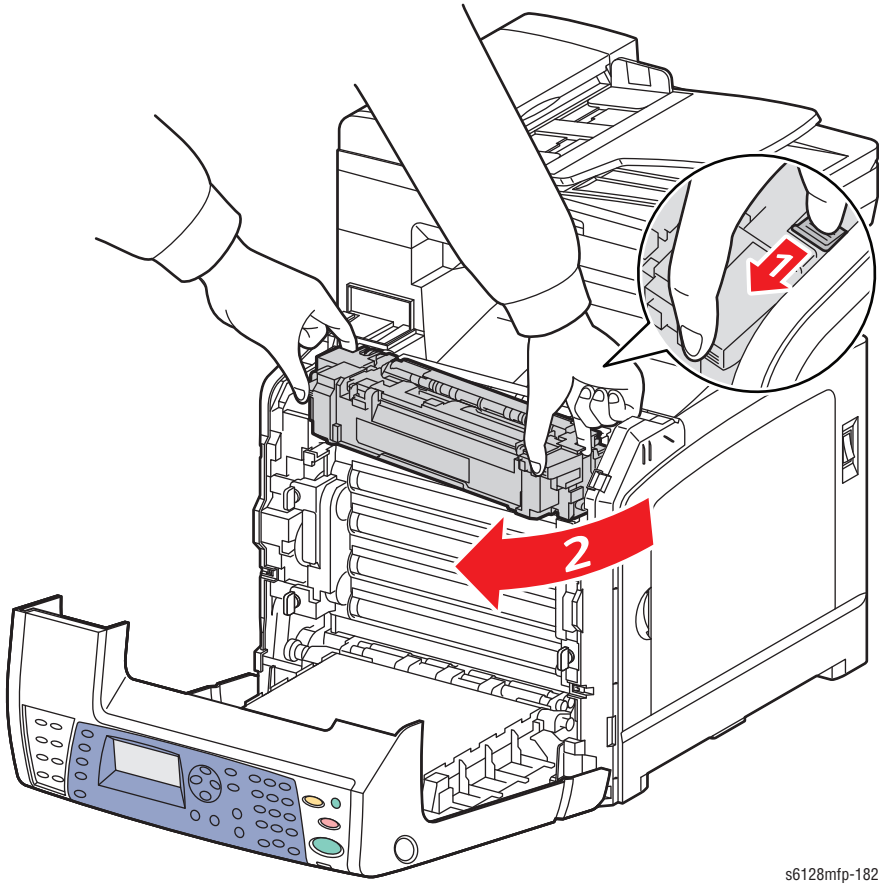
Fuser

PL6.1.1

Warning

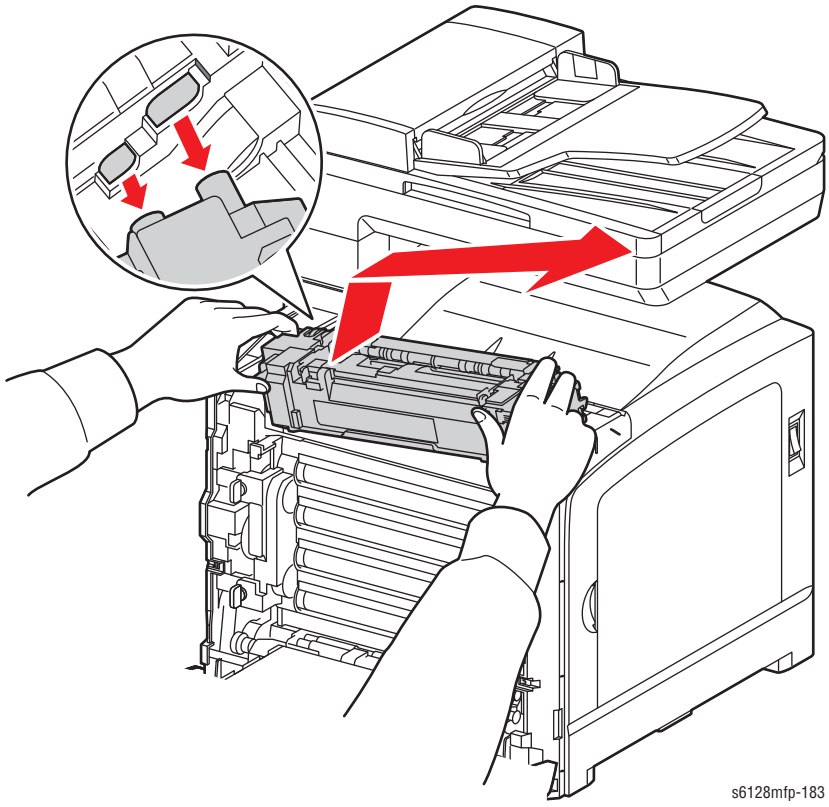
Allow the Fuser to cool before using this procedure.

1. Open the Front Cover.
2. Pull the lever to release the lock.
3. Swing the right side of the Fuser toward you with the lever released to unplug the fuser connector.



s6128mfp-182

4. Lift the Fuser up, then to the right to remove it.



Replacement Note

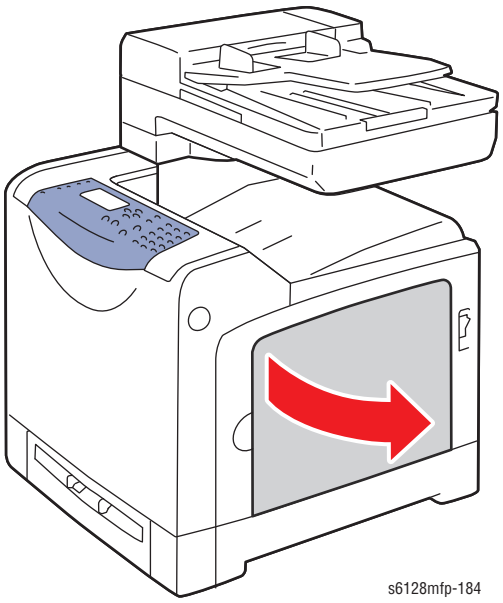
If the Fuser being replaced has reached end-of-life:

1. Reset the Fuser counter in the customer menu
2. It is highly recommended that the Feed and Separator Rollers be replaced also.

Toner Cartridges

PL5.1.21~24

1. Open the Right Side Door.



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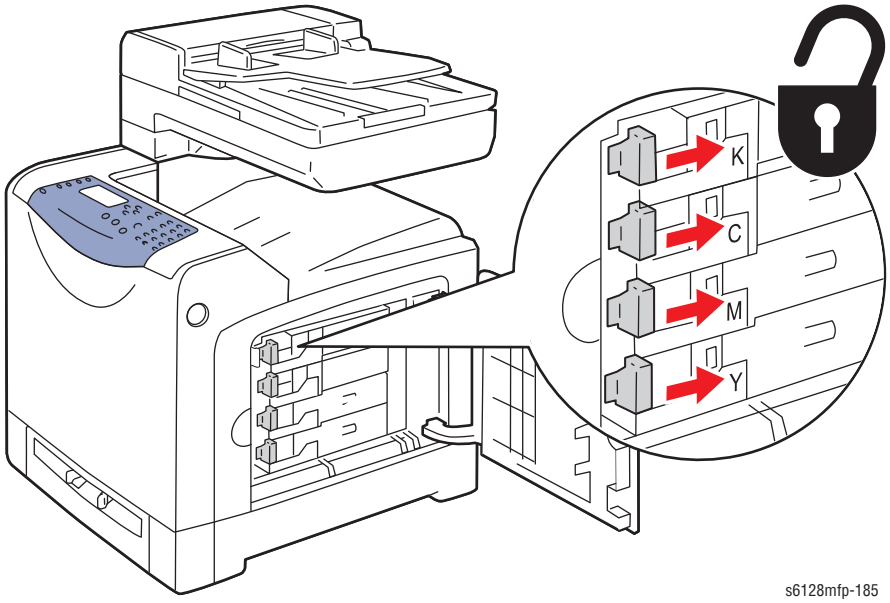
2. Push the Toner Cartridge handle toward the rear to release the latch.



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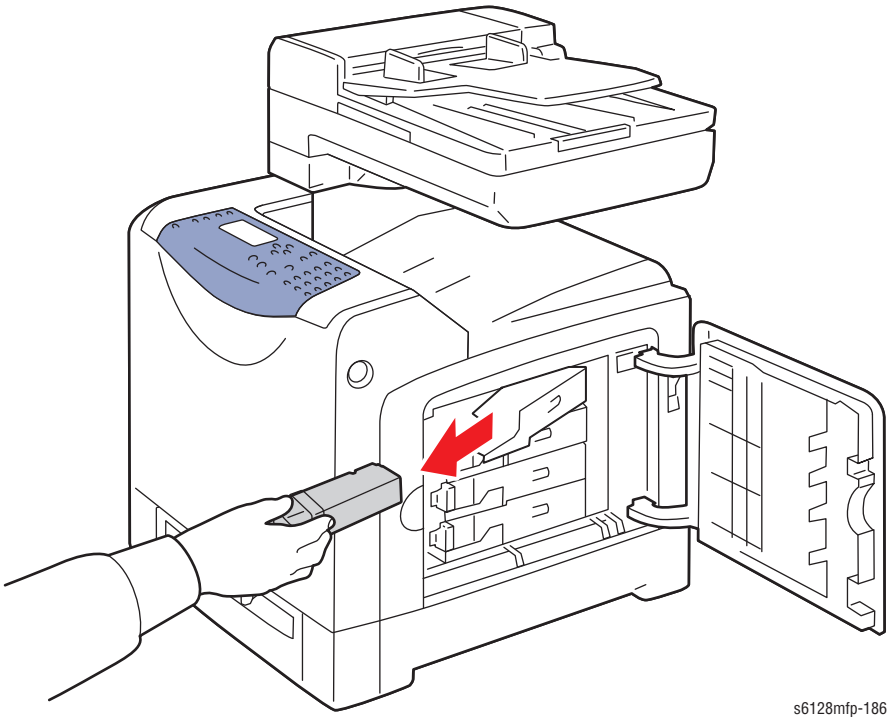
3. Swing open the Toner Cartridge Holder and slide the Toner Cartridge out of the holder as shown.



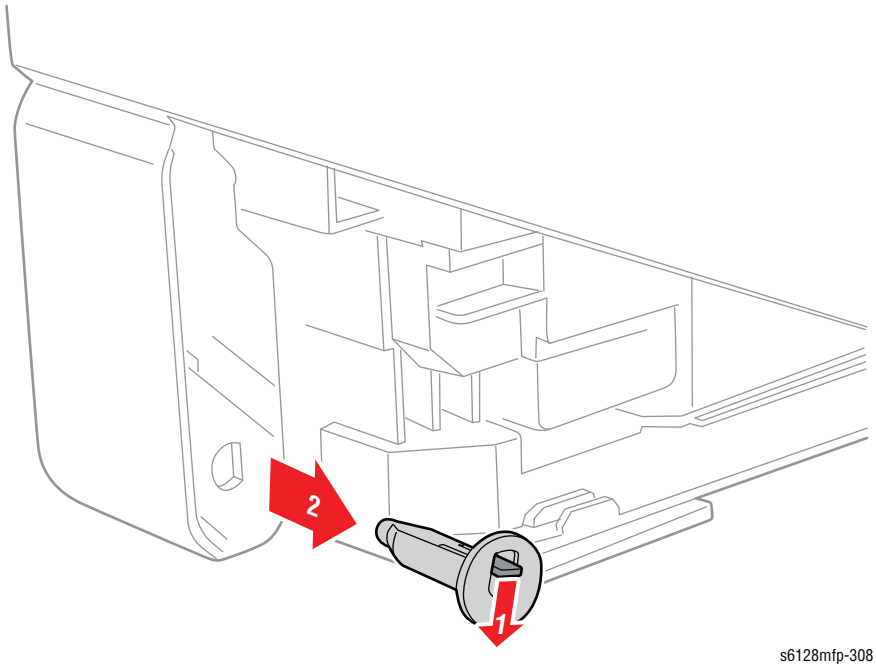
s6128mfp-186

Covers

Front Cover

PL10.2.1

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Rear Cover (page 8-22).
4. Remove the Right Side Cover (page 8-23).
5. Close the Front Cover.
6. Release the Pivot Shaft hook and pull the Left and Right Pivot Shafts out of the Front Cover.



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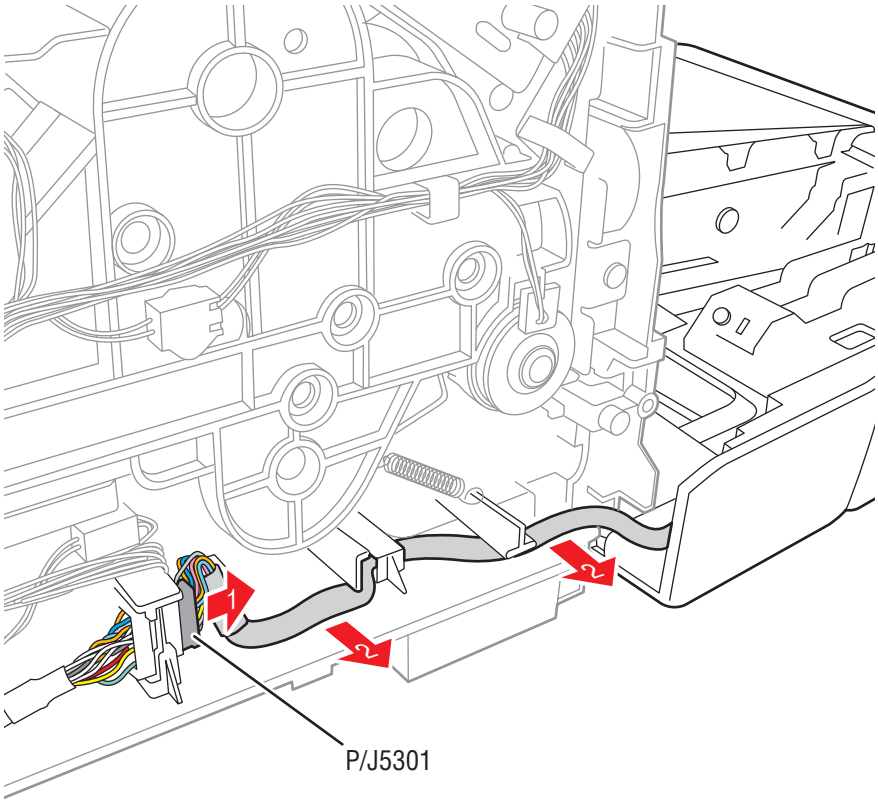
7. Disconnect P/J5301 and release the harness from the chassis.



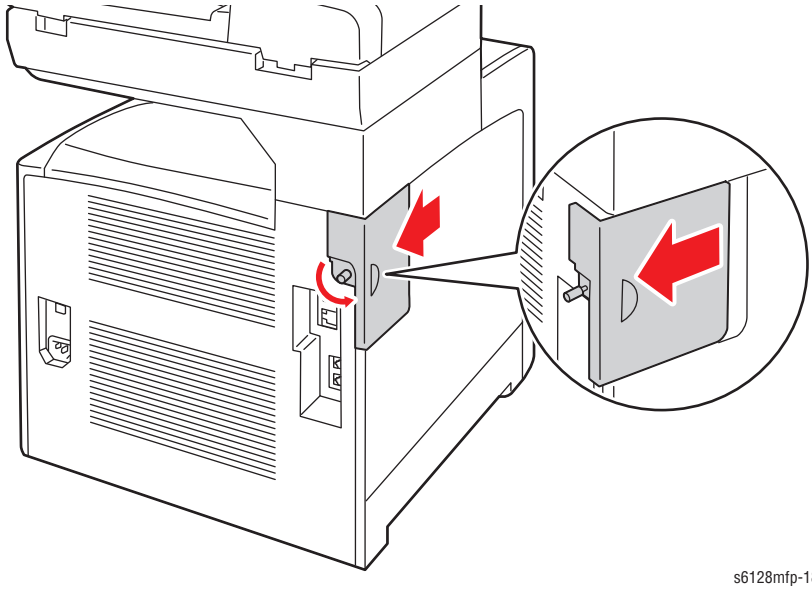
s6128mfp-187

8. Release the Transfer Belt bosses from the guides in the Front Cover and remove the cover.

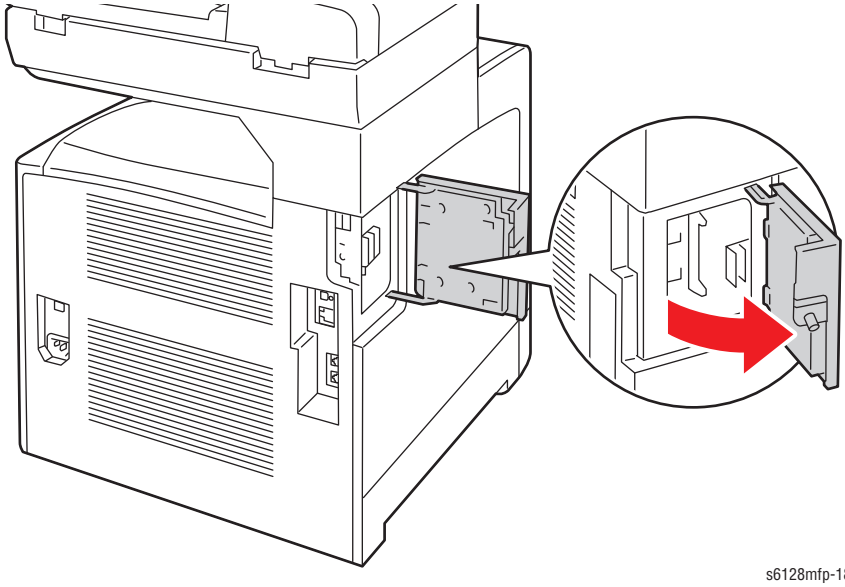
Left Side Cover

PL 10.1.10

1. Open the Front Cover.
2. Loosen the captive screw that secures the ESS Cover. Gently pull the cover back and swing the cover open.



s6128mfp-188



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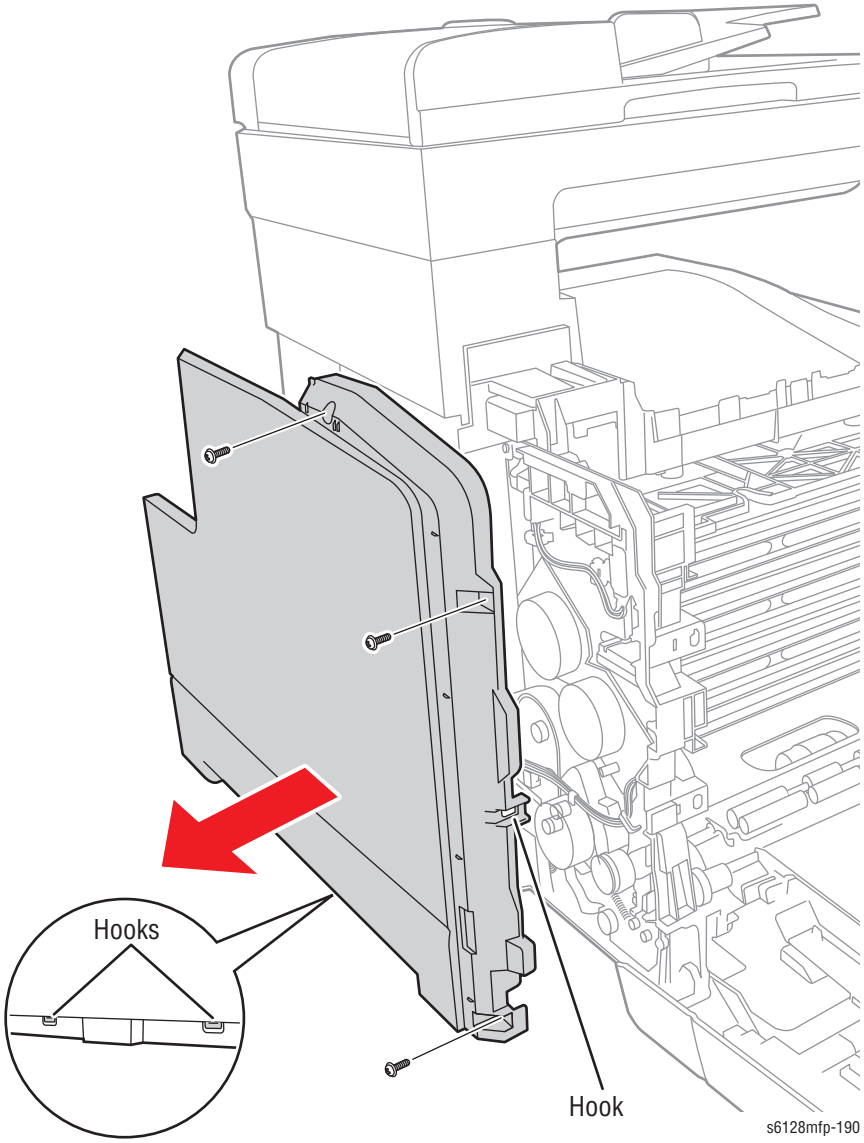
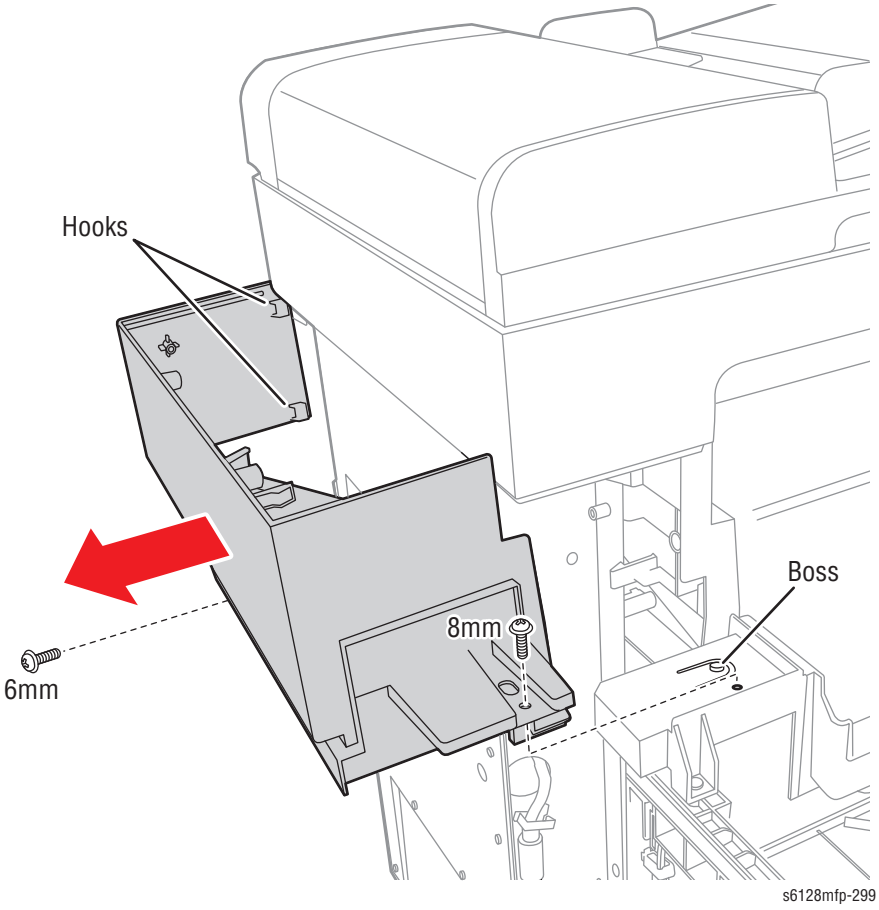
3. Remove the 3 screws (silver, tap, 8mm) and release the 3 hooks that secure the Left Side Cover.



Outer Pole Cover

PL 10.1.1

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the screw (silver, 6mm) and screw (silver, tap, 8mm) that secure the Outer Pole Cover.



4. Push the boss of the Top Cover (PL10.1.4) using the screwdriver and release the front of the Outer Pole Cover.
5. Release the 2 hooks that secure the Outer Pole Cover at the back to remove the cover.

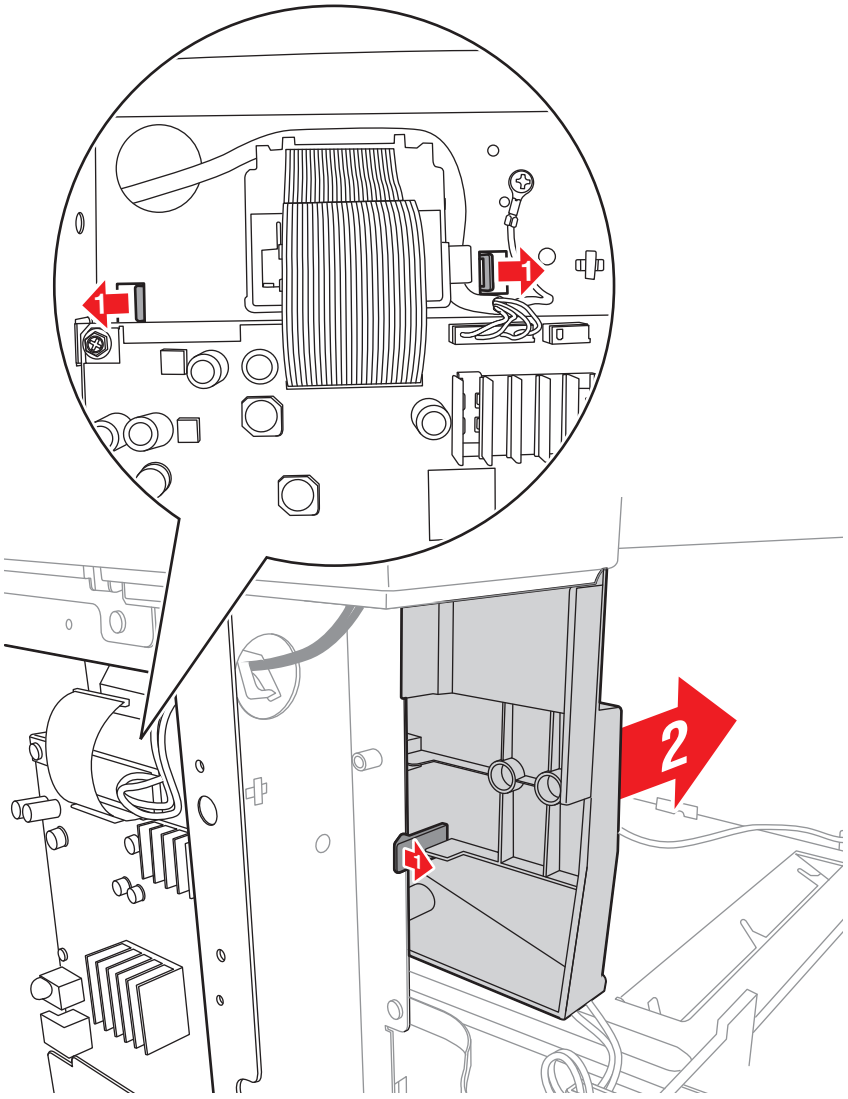
Replacement Note

Engage the 2 hooks on the back side of the Outer Pole Cover first.

Inner Pole Cover

PL10.1.3

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Remove the Lower Scanner Cover (page 8-26).
8. Remove the ESS Cover (page 8-21).
9. Release the 3 hooks that secure the Inner Pole Cover to the chassis.



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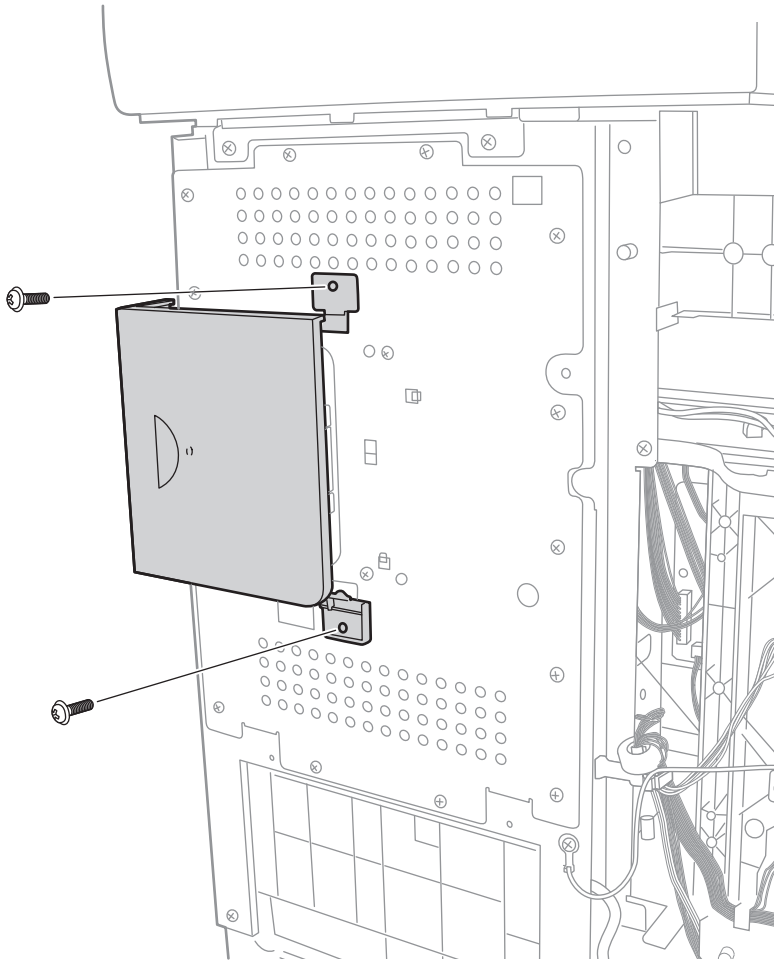
ESS Cover

PL10.1.11

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the 2 screws that secure the brackets to the chassis and remove the ESS Cover.



s6128mfp-309

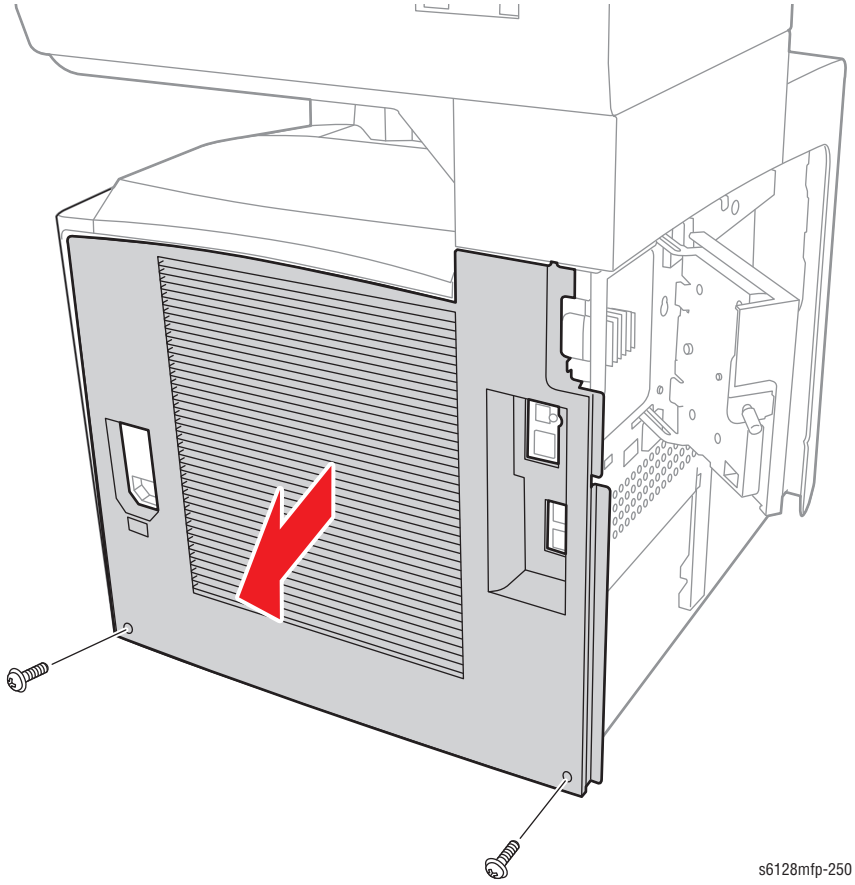
Replacement Note

Align the bosses of the ESS Cover brackets to the chassis before tightening the screws.

Rear Cover

PL10.1.5

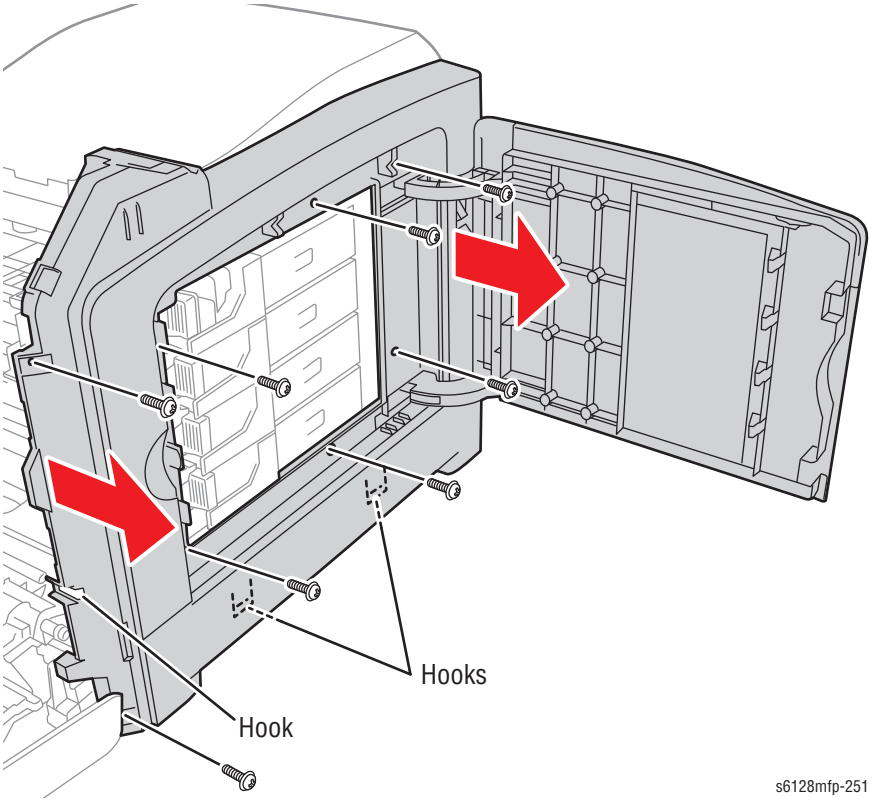
1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the two screws (silver, tap, 8mm) that secure the Rear Cover.



Right Side Cover

PL10.14.1

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Rear Cover (page 8-22).
4. Open the Toner Door.
5. Remove the 8 screws (silver, tap, 8mm) that secure the cover to the chassis.

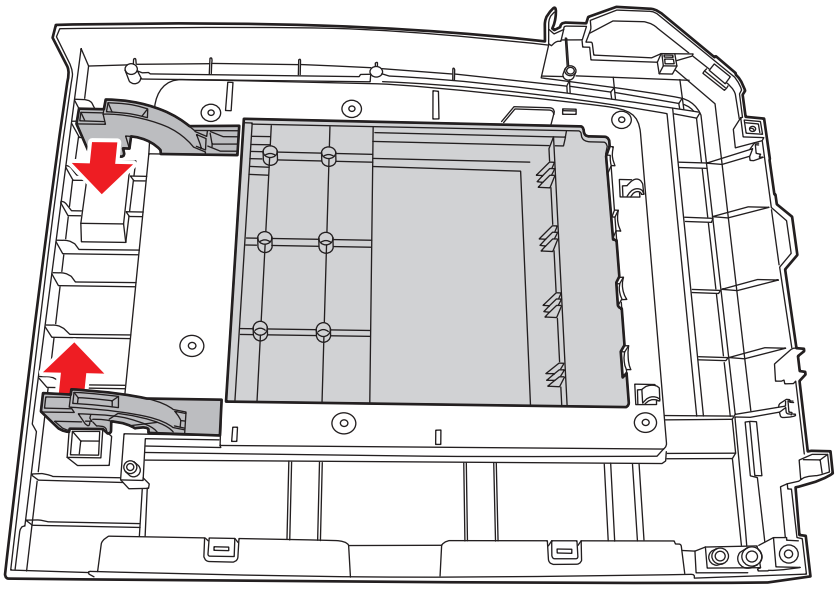


6. Release hooks to remove the cover.

Right Side Door

PL10.1.7

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Rear Cover (page 8-22).
4. Remove the Right Side Cover (page 8-23).
5. Release the bosses that secure to upper and lower Toner Door hinges to the Right Side Cover.



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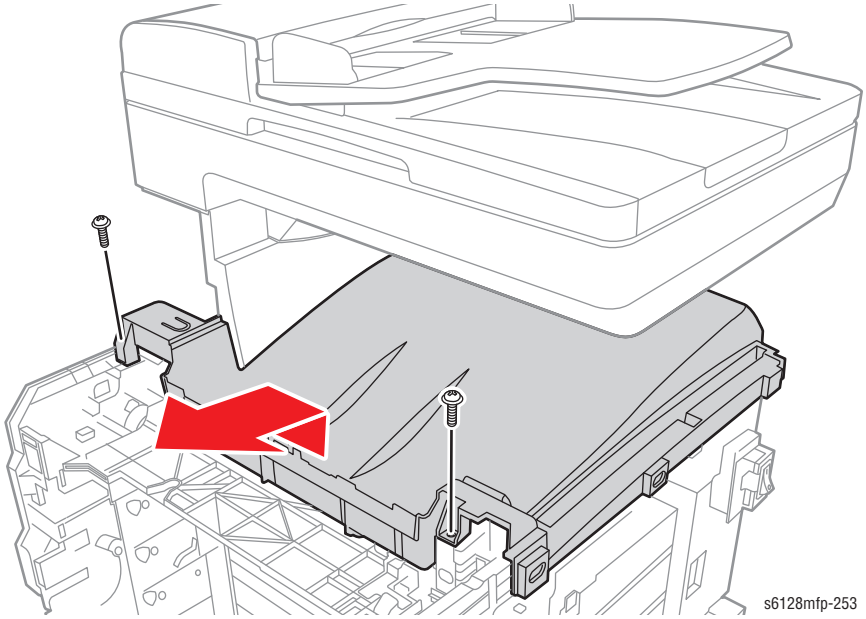
Top Cover

PL10.1.4

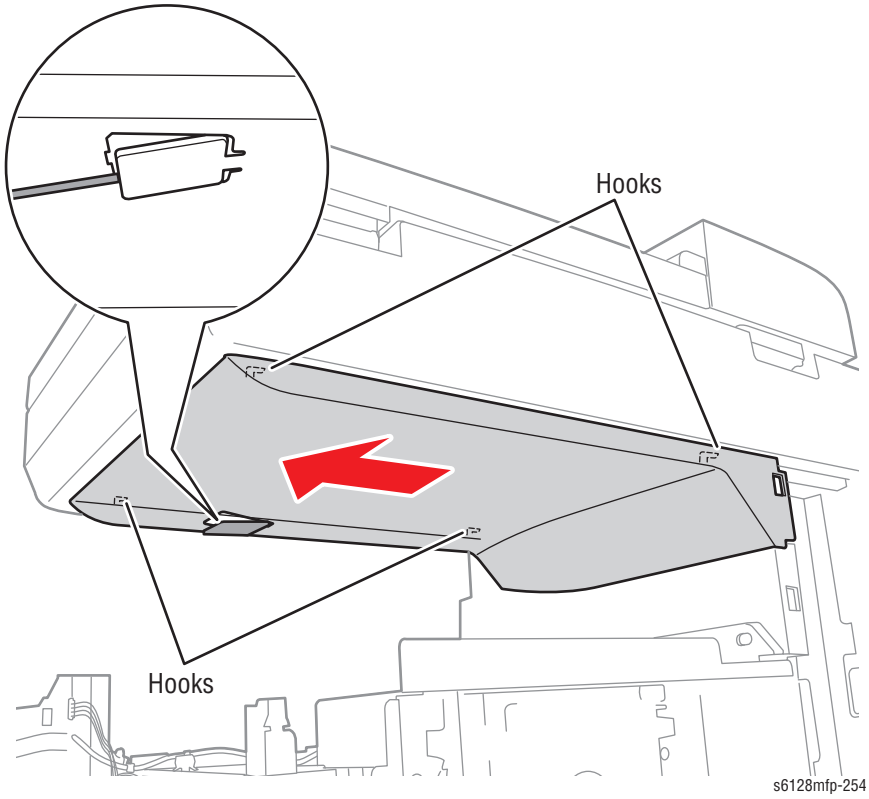
1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the two screws (silver, tap, 8mm) that secure the Top Cover to the chassis.
7. Lift the front of the Top Cover to release the cover from the 2 bosses and remove.



Lower Scanner Cover

PL10.1.2

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Release the hook at the center of the cover usig a miniture screwdriver.



5. Shift the cover to the right to release the remaining hooks and remove the cover.

Feeder

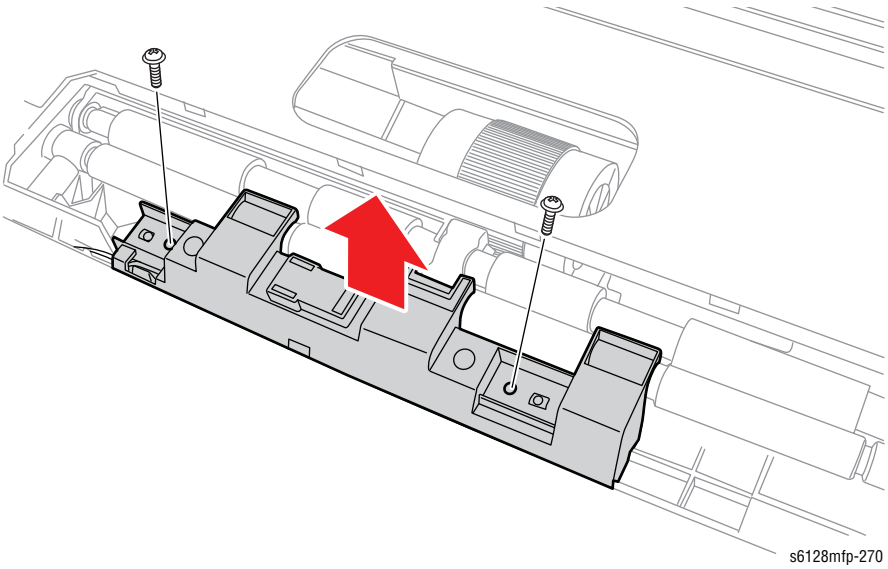
Manual Feed No Paper Sensor

PL3.2.13

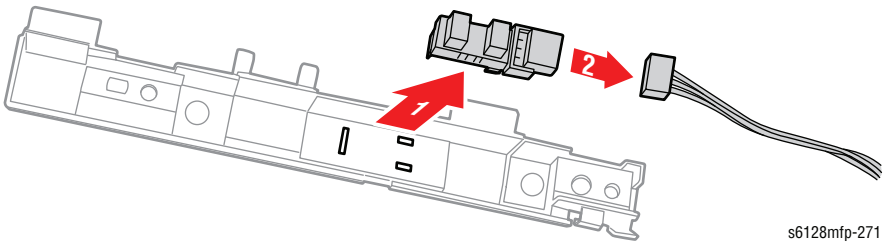
Note

To help prevent damage to the Transfer Belt while removing the sensor, place a sheet of paper on the Transfer Belt.

1. Open the Front Cover.
2. Remove the Imaging Unit (page 8-8).
3. Remove 2 screws (silver, tap, 8mm) that secure the bracket, and lift.



4. Release 3 hooks that secure the sensor to the bracket. Release the harness wires from the restraint on the bracket and set the bracket aside.



5. Unplug the sensor from the harness connector (P/J233).

Replacement Note

When installing a new sensor:

1. Plug the sensor into harness connector.
2. Install the sensor into the bracket. Tip: insert the end hook first, then snap the side hooks in place.
3. Route the harness wires into the restraint in the bracket.
4. Set the bracket in place and secure it with the two screws.

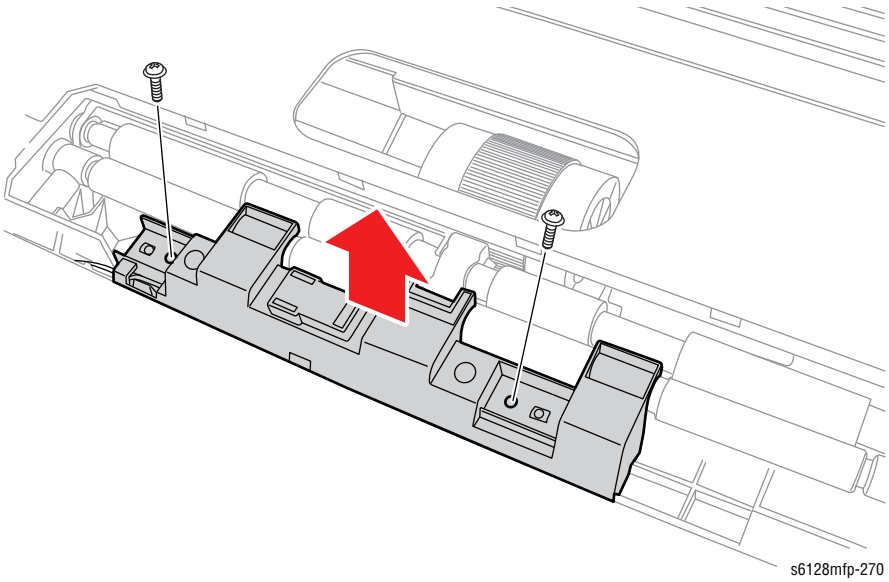
Manual Feed Sensor Actuator

PL3.2.14

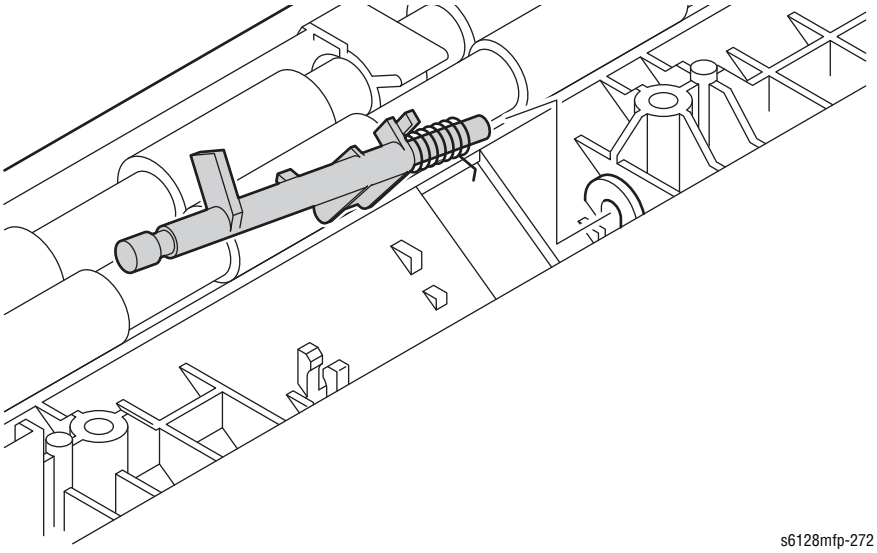
Note

To help prevent damage to the Transfer Belt while removing the sensor, place a sheet of paper on the Transfer Belt.

1. Open the Front Cover.
2. Remove the Imaging Unit (page 8-8).
3. Remove 2 screws (silver, tap, 8mm) that secure the sensor bracket, and lift the bracket from the printer.



4. Remove the actuator and spring (PL3.2.15) by removing the right end of the shaft from the hole in the chute.



Replacement Note

Note the orientation of the spring on the acutator.

Registration Sensor

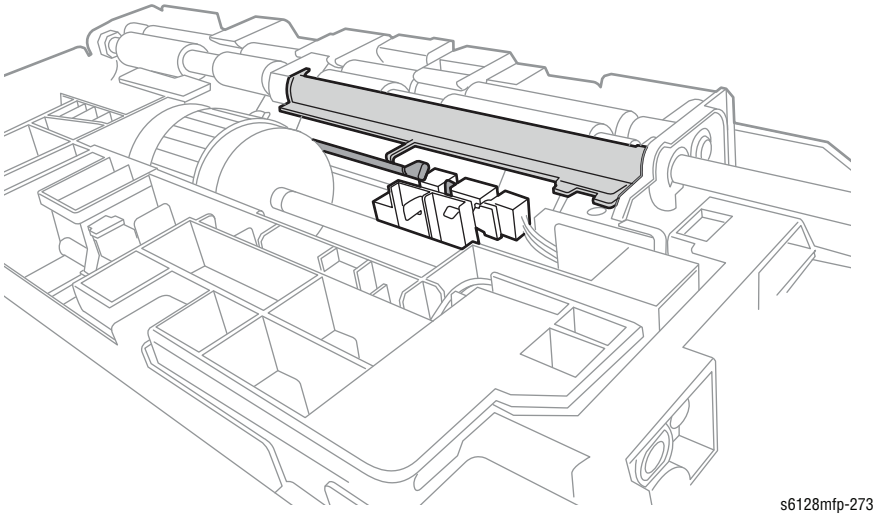
PL3.2.13

1. Remove the Upper Frame Assembly (page 8-68).

Caution

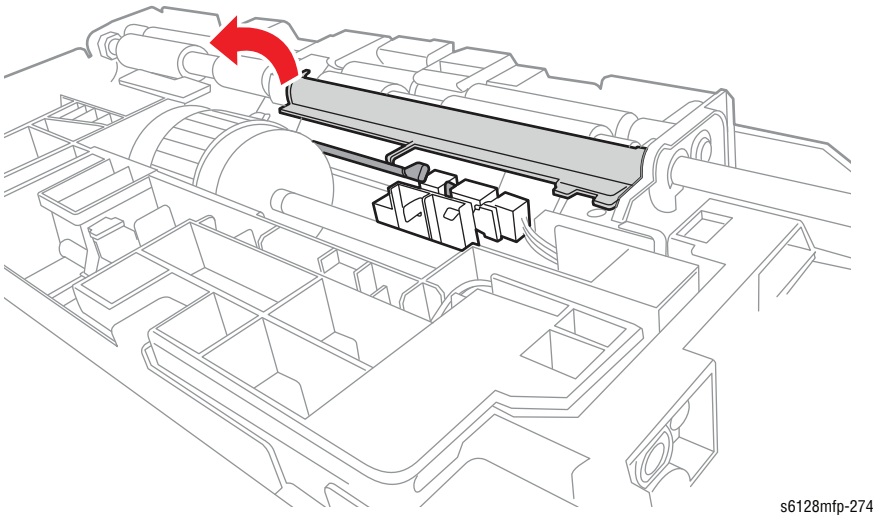
The Registration Actuator Out is spring-loaded by a small spring located under the actuator.

2. Release the hook on the Registration Actuator Out and shift the Registration Roller Actuator to the right side.



s6128mfp-273

3. Release the Registration Actuator Out from the hook on the Chute Up (PL3.2.26), then open the Registration Actuator Out.



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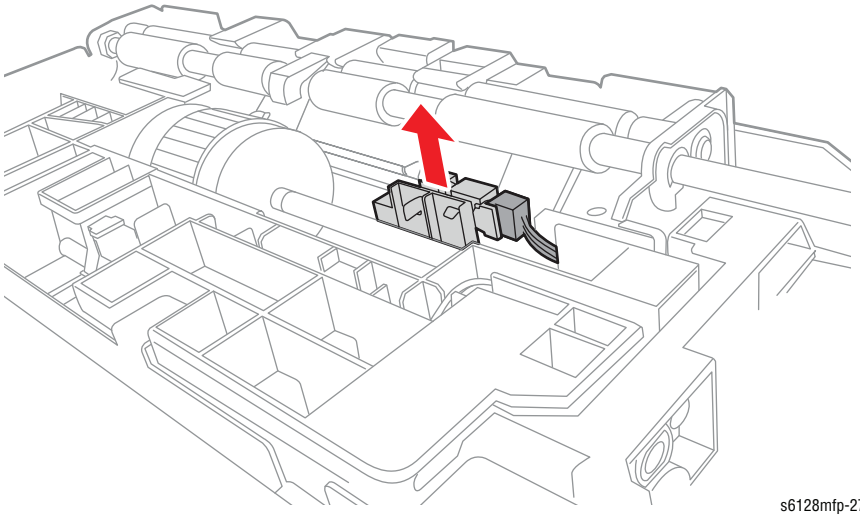
4. Release 3 hooks that secure the Registration Sensor to the Feeder Assembly and remove the sensor.



5. Disconnect P/J232 from the Registration Sensor.

Registration Roller

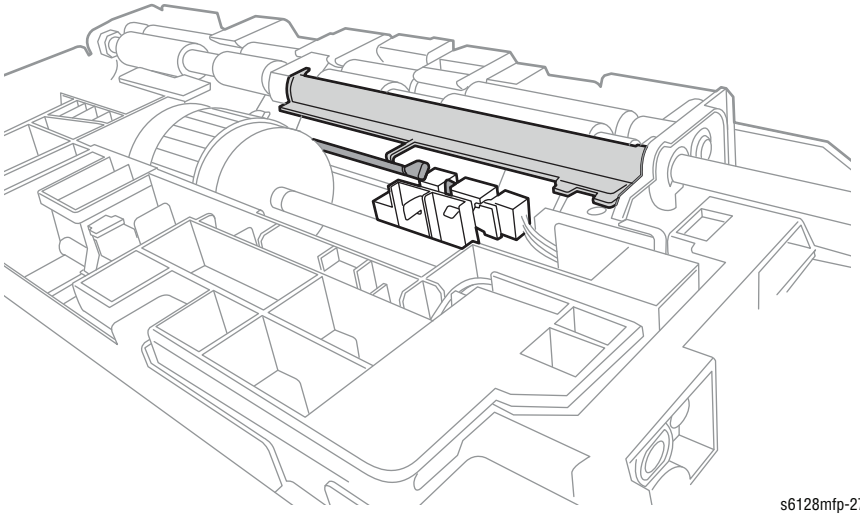
PL3.2.9

1. Remove the Upper Frame Assembly (page 8-68).

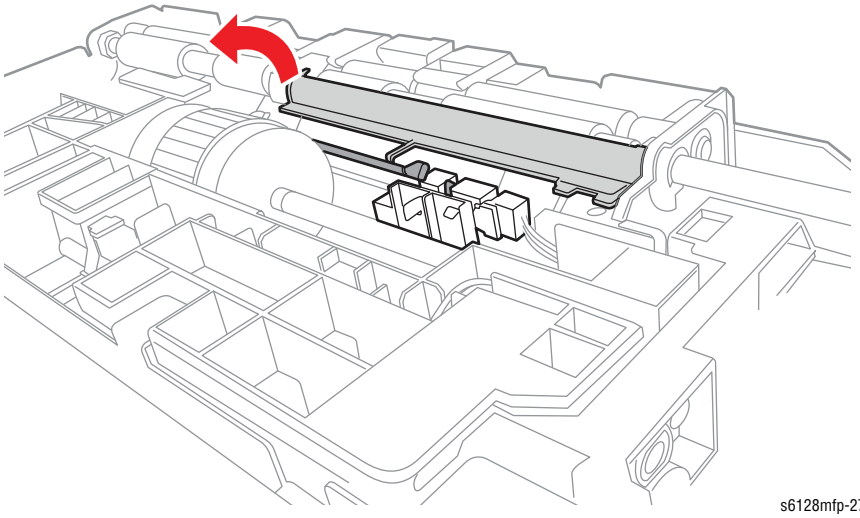
Caution

The Registration Actuator Out is spring-loaded by a small spring located under the actuator.

2. Release the hook on the Registration Actuator Out and shift the Registration Roller Actuator to the right side.

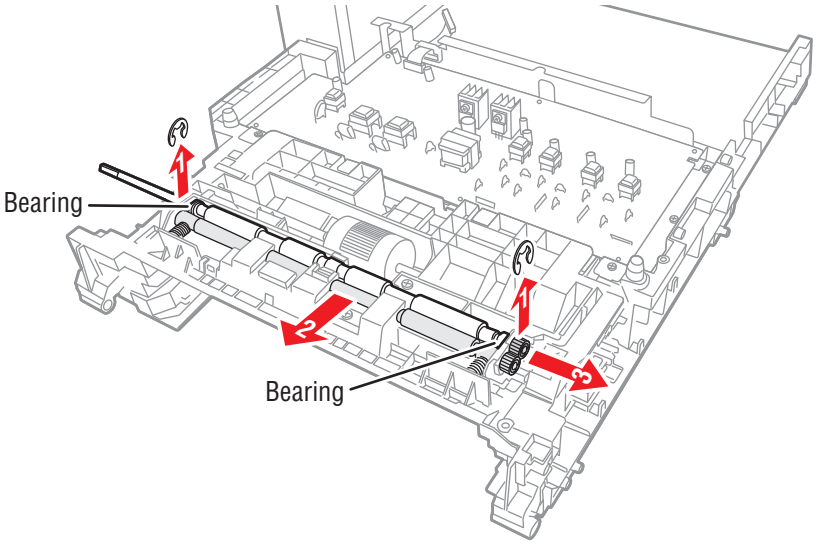


3. Release the Registration Actuator Out from the hook on the Chute Up (PL3.2.26), then open the Registration Actuator Out.



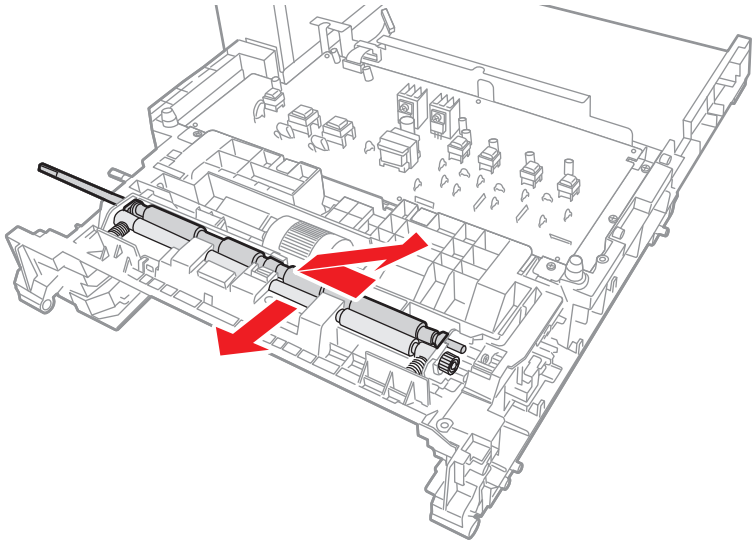
s6128mfp-274

4. Remove the E-rings that secure the Registration Roller at both ends using a miniature screwdriver. Push the metal registration roller forward and remove the Gear and bearings from the shaft.



s6128mfp-311

5. Shift the Registration Roller left to remove the shaft from the Feeder Assembly together with the Registration Actuator Out and Registration Roller Actuator.

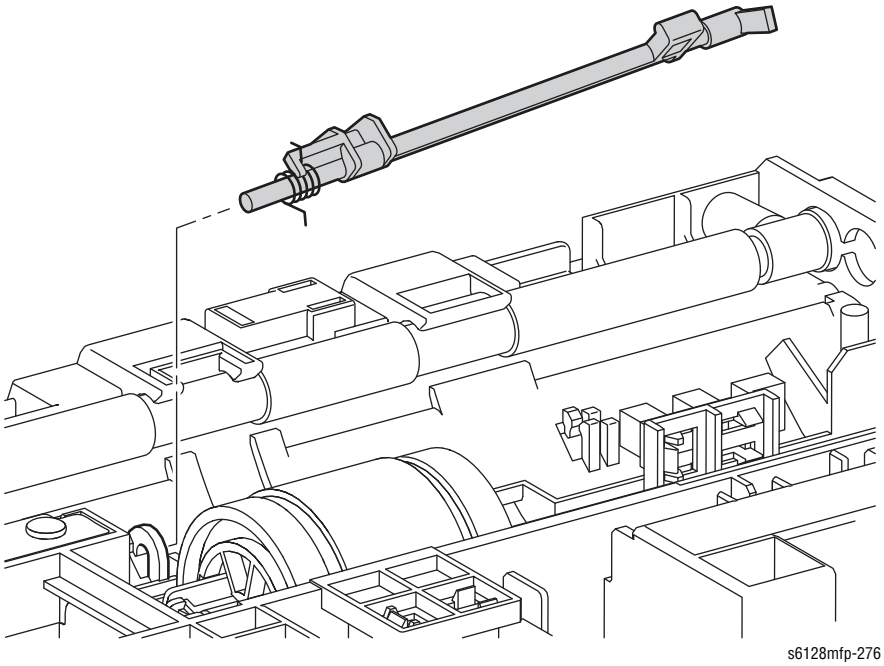


s6128mfp-312

Registration Sensor Actuator

PL3.2.11

1. Remove the Upper Frame Assembly (page 8-68).
2. Remove the Registration Roller (page 8-30).
3. Release the left side of the Registration Sensor Actuator from the hook on the chute up.



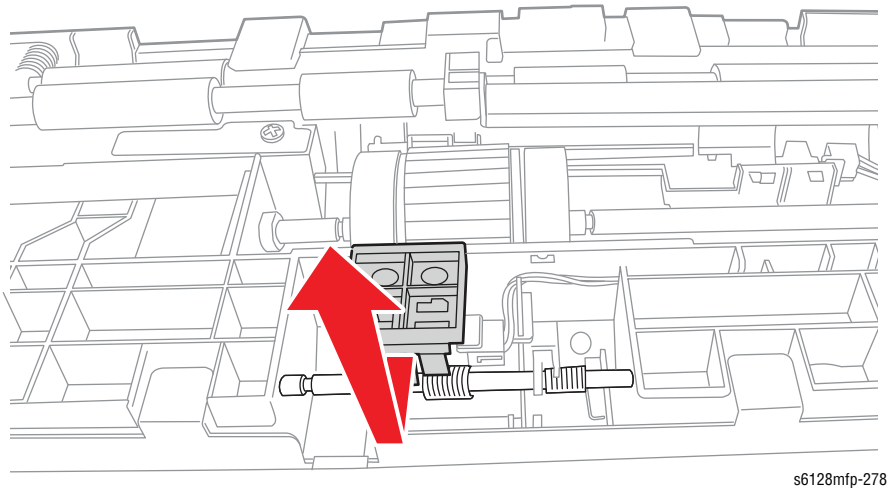
s6128mfp-276

4. Remove the actuator and spring by removing the right end of the shaft of from the hole of the chute up.
5. Remove the spring from the Registration Sensor Actuator.

Tray No Paper Sensor

PL3.2.13

1. Remove the Upper Frame Assembly (page 8-68).
2. Release the three hooks that secure the Tray No Paper Sensor to the Feeder and remove the sensor.



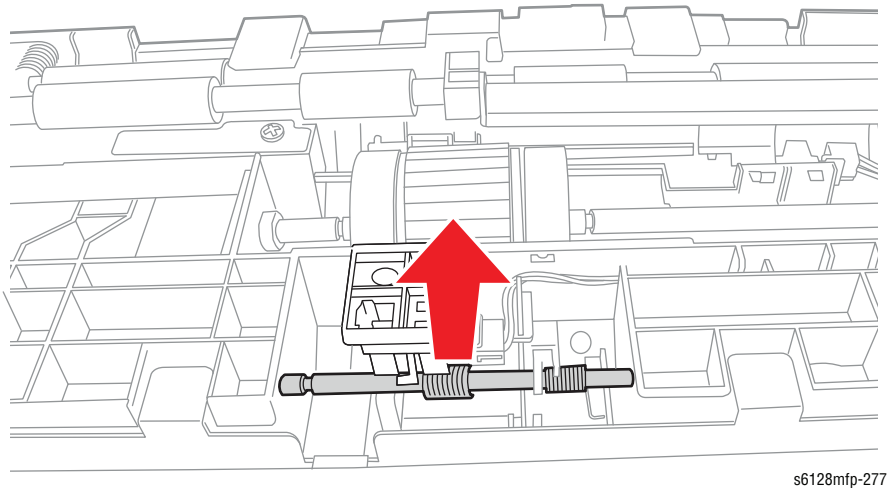
s6128mfp-278

3. Disconnect P/J234 from the sensor.

Tray No Paper Sensor Actuator

PL3.2.32

1. Remove the Upper Frame Assembly (page 8-68).
2. Remove the Tray No Paper Sensor (page 8-33).
3. Release the right end of the actuator shaft from the hole in the chute up using a miniature screwdriver.



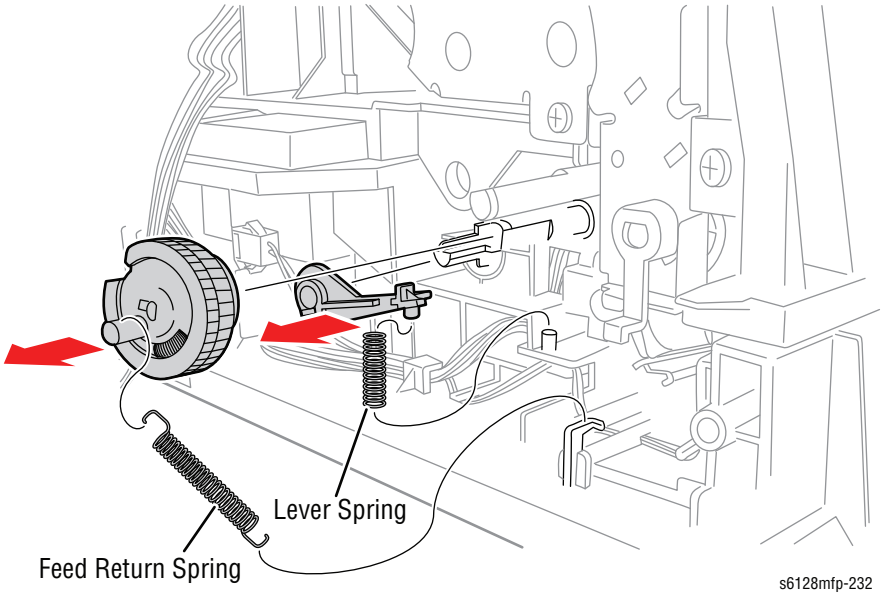
s6128mfp-277

4. Remove the actuator and spring from the hole in the left side of the chute up.
5. Remove the spring from the actuator.

Feed Solenoid

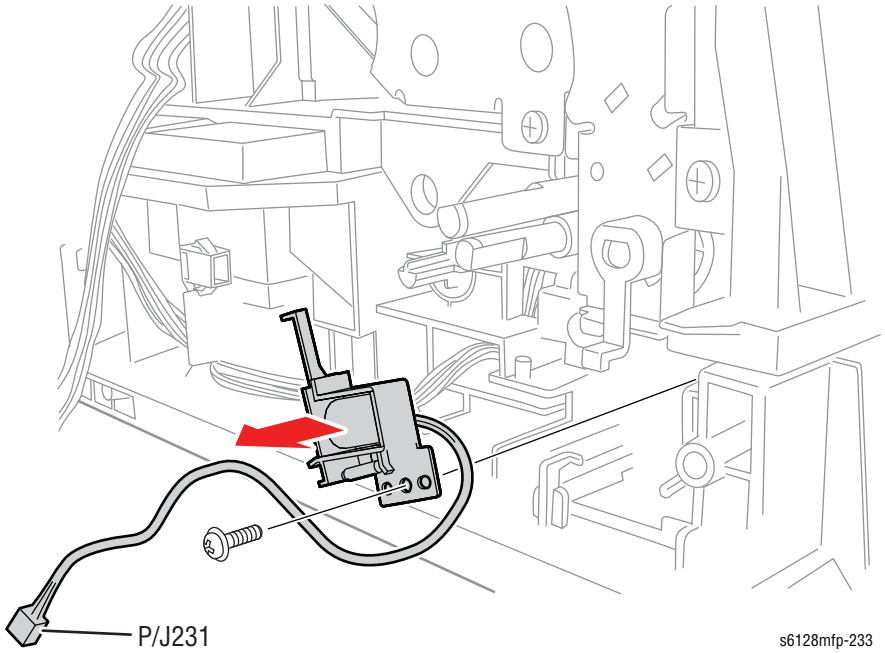
PL3.1.98

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Remove the Drive Clutch and Bearing Kit (page 8-35).
8. Remove the Feed Drive Assembly (page 8-37).
9. Release the Feed Gear Return Spring from the hook on the printer frame. Leave the spring connected to the arm on the Feed Gear.
10. Push down on the Feed Lever and release the Feed Gear retainer hook to slide the Feed Gear off the Feed Shaft.
11. Remove the Lever Spring from the printer.
12. Release the Feed Lever hook and slide the Feed Lever off the shaft.



13. Release the Feed Solenoid harness from the cable restraints on the frame.
14. Disconnnect P/J231. Allow the relay connector to remain with the printer side of the harness.

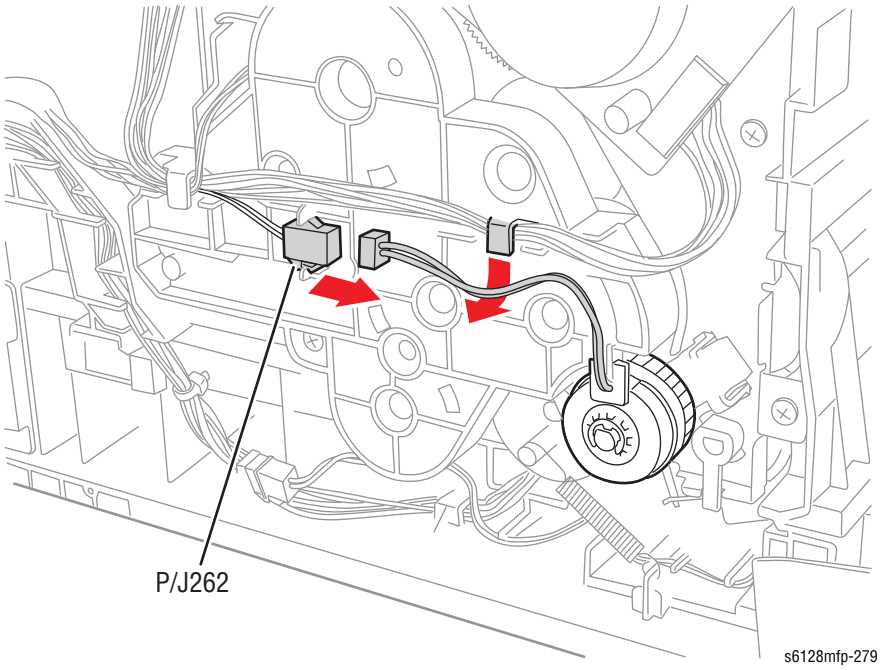
15. Remove the screw (silver, tap, 8mm) that secures the Feed Solenoid to the chassis to remove the solenoid.



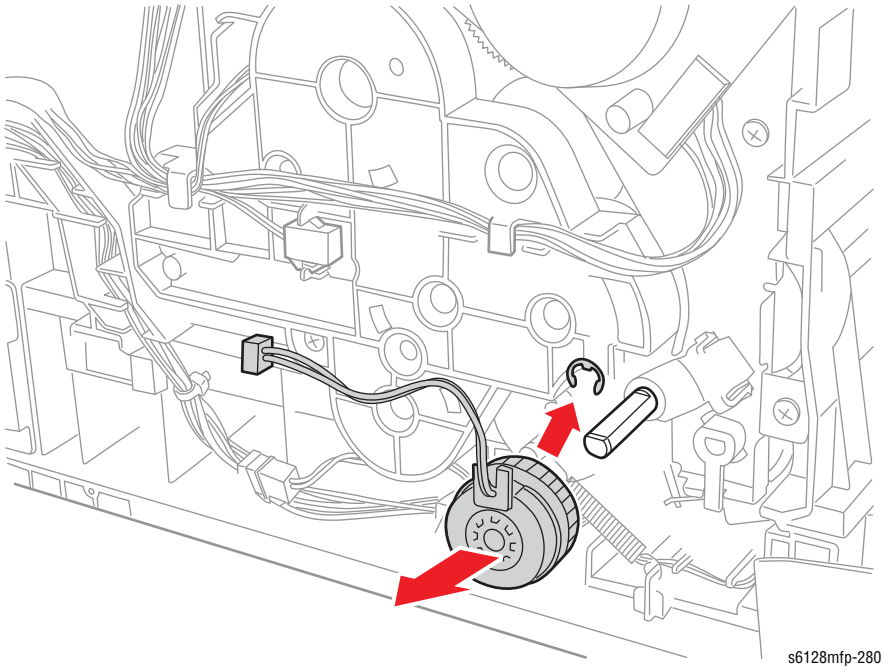
Drive Clutch and Bearing Kit

PL10.4.99

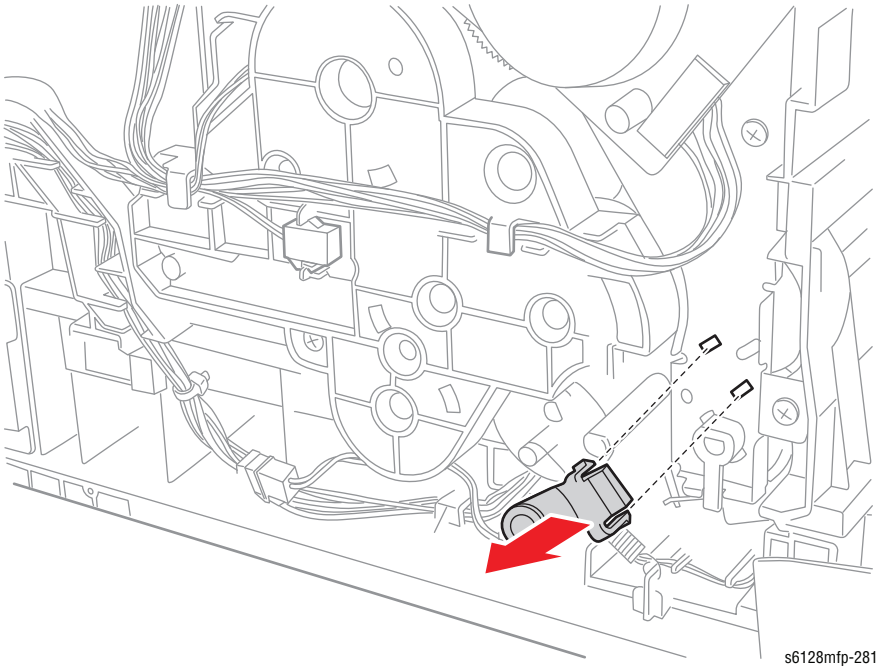
1. Remove the Left Side Cover (page 8-17).
2. Release the Drive Clutch harness from the cable restraint on the Feed Drive Assembly.
3. Disconnect the Drive Clutch connector, P/J262. Allow the relay connector to remain with the printer side of the harness.



4. Remove the E-ring that secures the Drive Clutch on the shaft, using a miniature screwdriver, and remove the Drive Clutch.



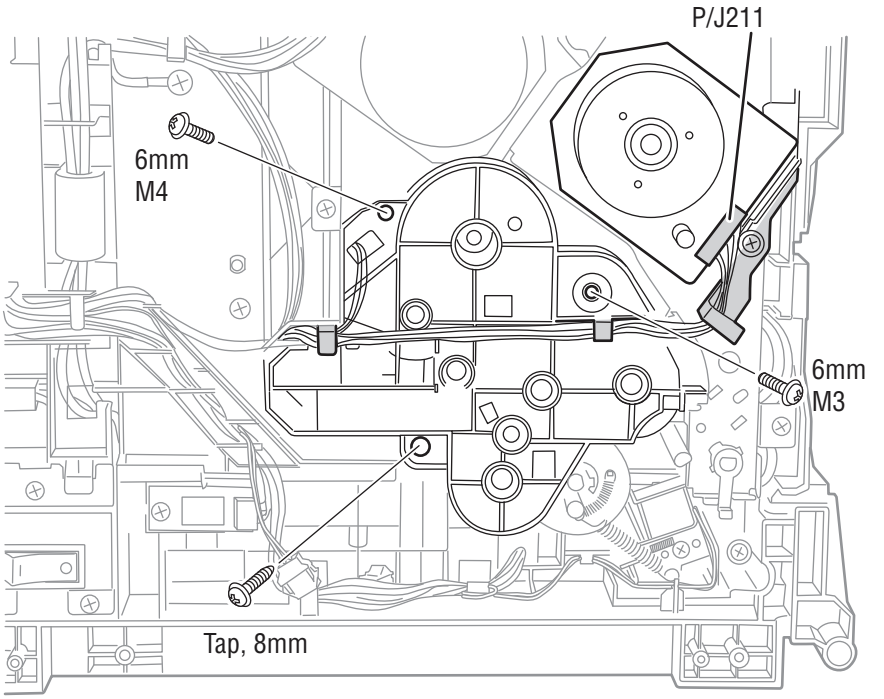
5. Release the two hooks of the Registration Bearing, and remove the Registration Bearing from the shaft.



Feed Drive Assembly

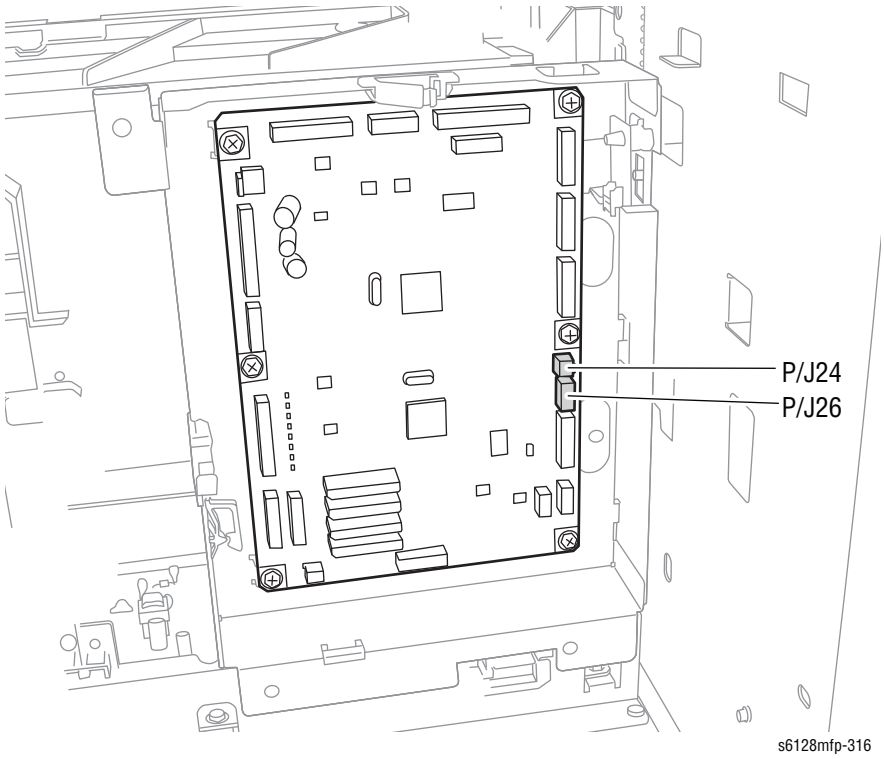
PL7.1.4

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Remove the Drive Clutch and Bearing Kit (page 8-35).
8. Remove the LVPS Card Cage (page 8-66).
9. Disconnect P/J211 of the Main Drive Assembly (PL7.1.2) and release all the harnesses from the hooks on the Feed Drive Assembly.

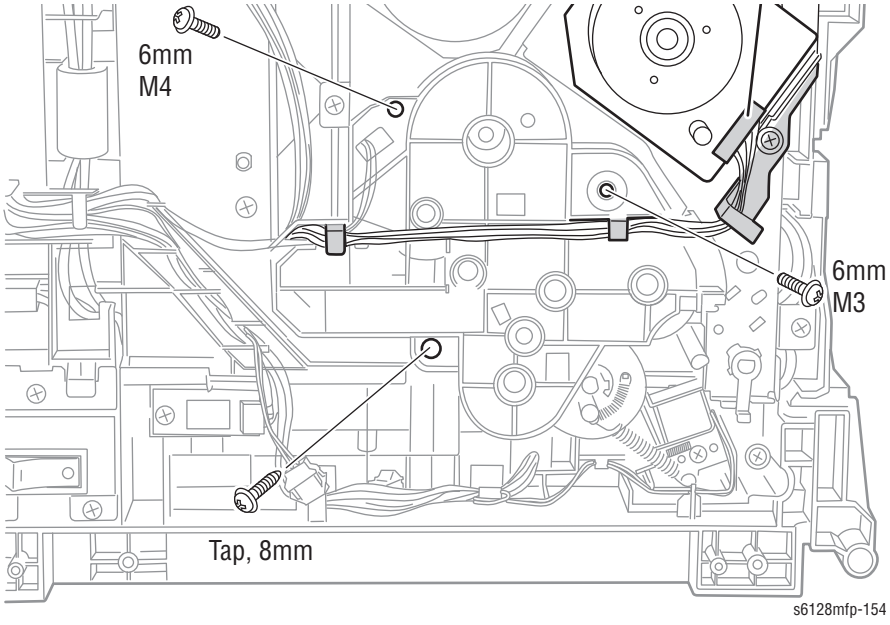


s6128mfp-282

10. Disconnect P/J24 and P/J26 on the MCU Board.



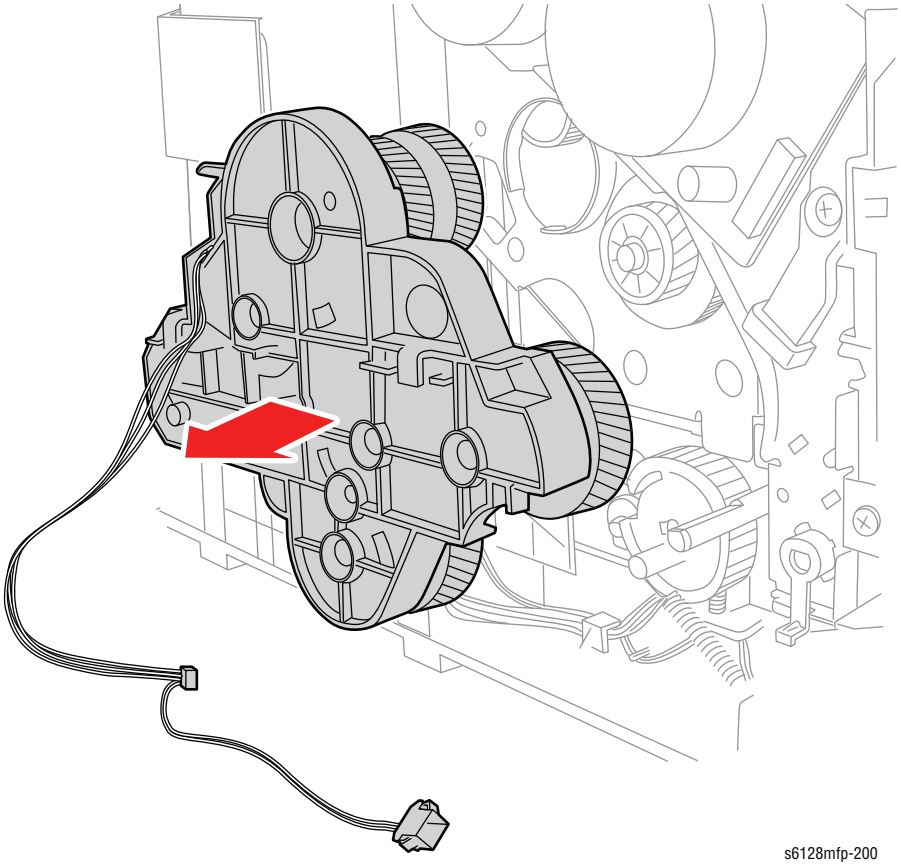
11. Release the harnesses from the locking clamp and pull the harness out from the hole in the chassis.
12. Remove the three screws (one silver, M4, 6mm; one silver, M3, 6mm; one silver, tap, 8mm) that attach the Feed Drive Assembly to the printer.



Note

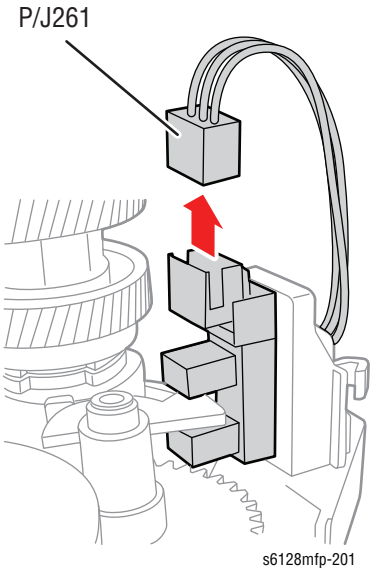
When performing the next step, make sure the coupling gear remains on the shaft of the Feed Drive Assembly. Take care not to drop the gear.

13. Remove the Feed Drive Assembly.



s6128mfp-200

14. Disconnect the color mode sensor (P/J261) from the Feed Drive Assembly and release the Color Mode Sensor Harness from the hook on the Feed Drive Assembly.



s6128mfp-201

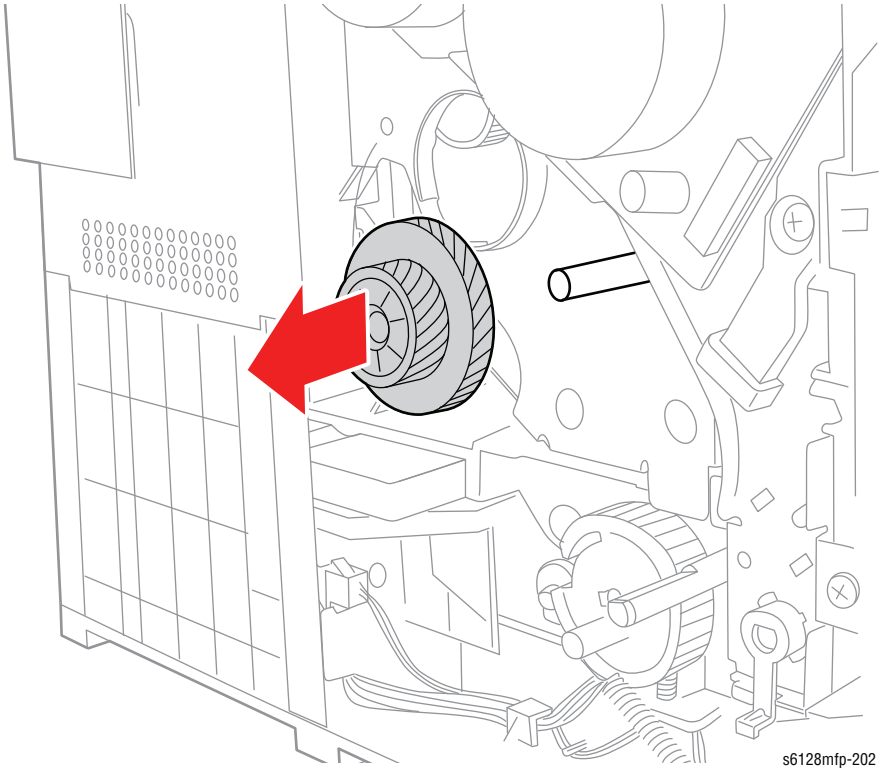
Replacement Note

The screw holes in the assembly are marked with “M” and “T” to indicate where machine (M) or tapping (T) screws are used.

Gear P2

PL 7.1.3

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Drive Clutch and Bearing Kit (page 8-35).
4. Remove, but do not disconnect the Feed Drive Assembly (page 8-37).
5. Remove Gear P2 from the shaft of the Sub-Drive Assembly.

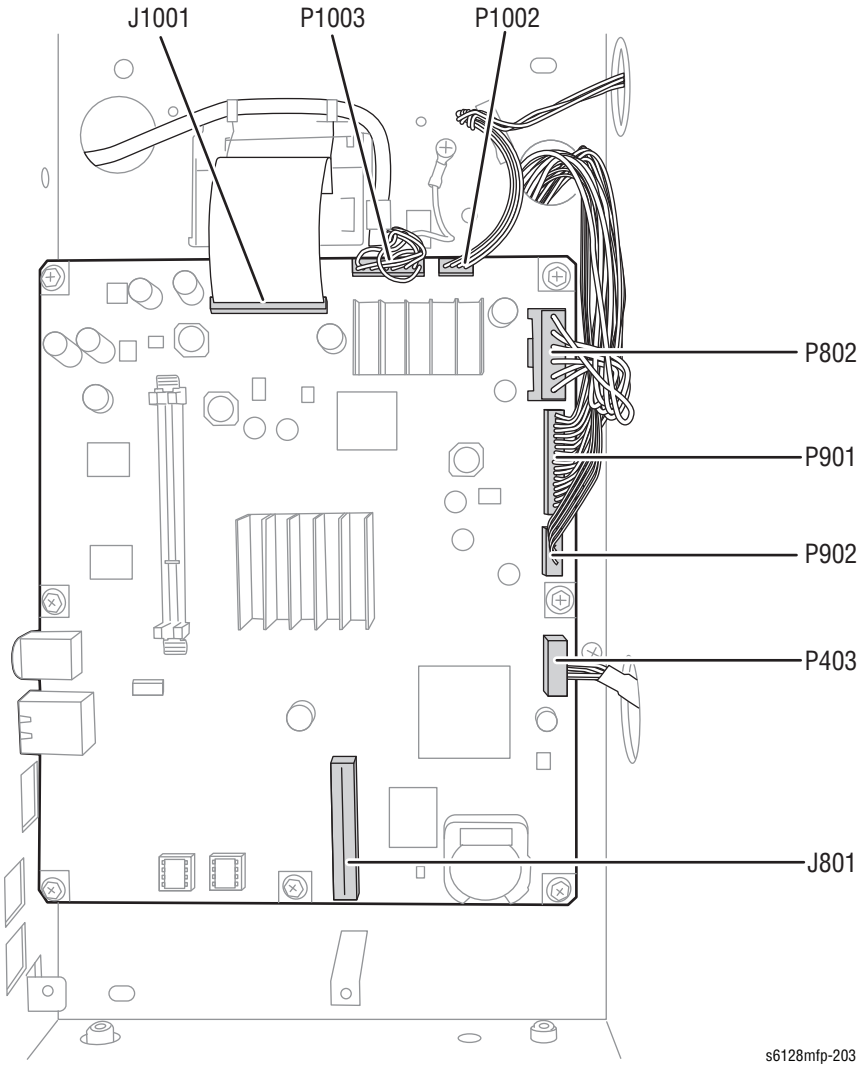


Electrical

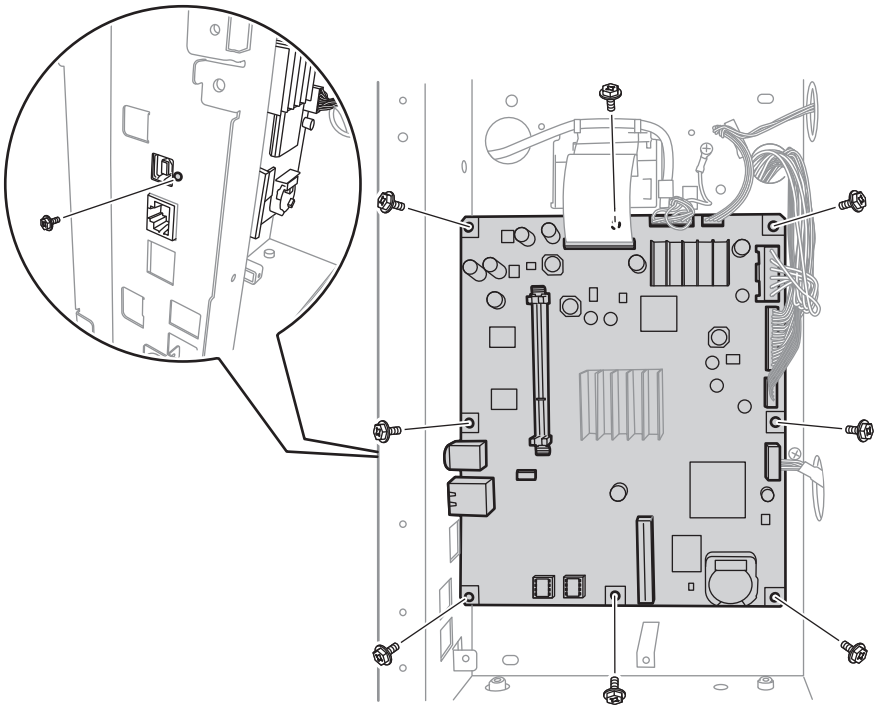
Image Processor Board

PL10.6.6

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the ESS Shield (page 8-46).
6. Remove the FAX Board (page 8-47).
7. Disconnect all connections from the Image Processor Board.



8. Remove the 8 screws (silver, with flange, 6mm) that secure the board to the chassis.
9. Remove the one screw (silver, 6mm) that secures the USB connector to the Card Cage and remove the board.

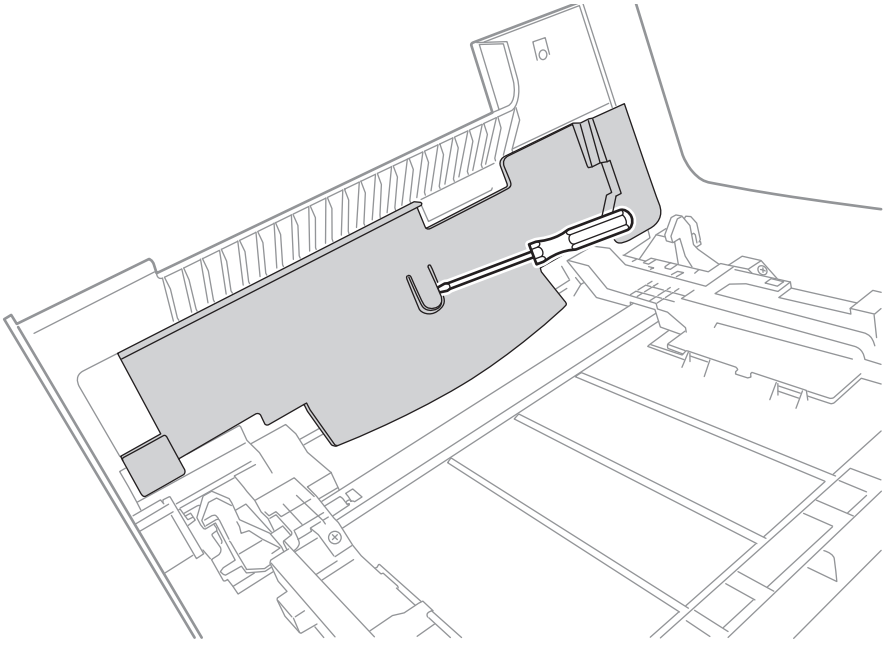


s6128mfp-204

Control Panel

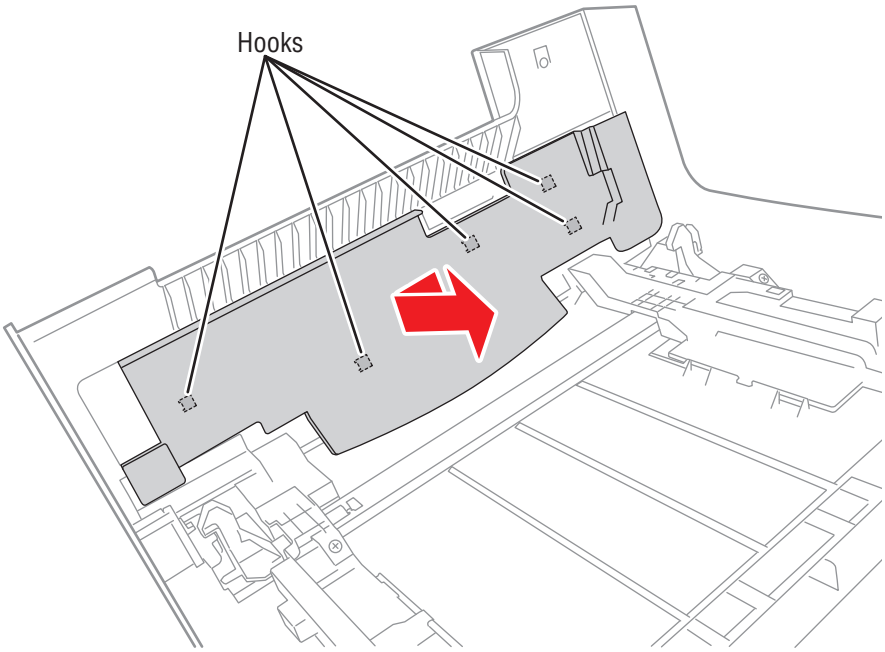
PL10.2.2

1. Open the Front Cover.
2. Release the boss on the Inner Front Cover (PL10.2.4) using a small screwdriver, then shift the Inner Front Cover to right.



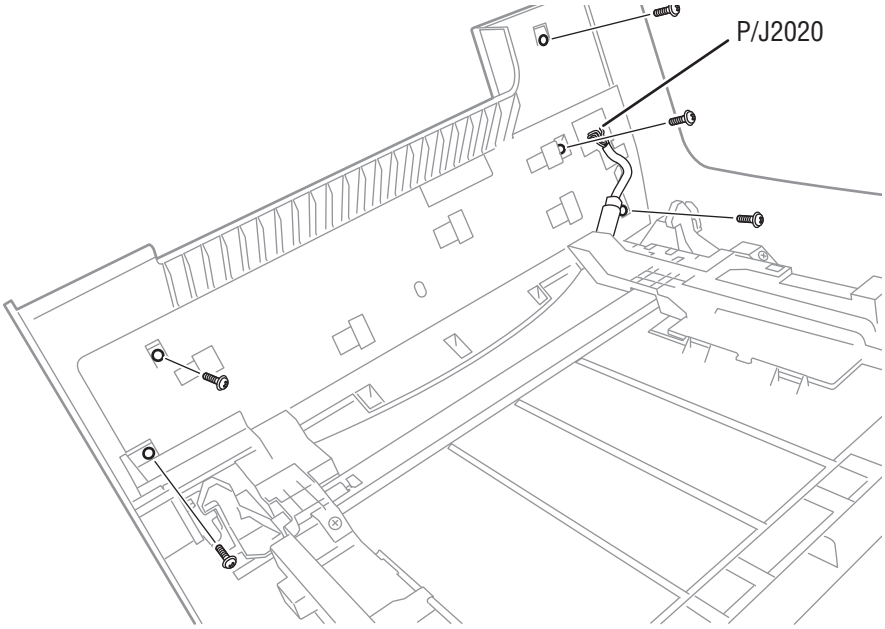
s6128mfp-206

3. Release the five hooks of the Inner Front Cover and remove the cover.

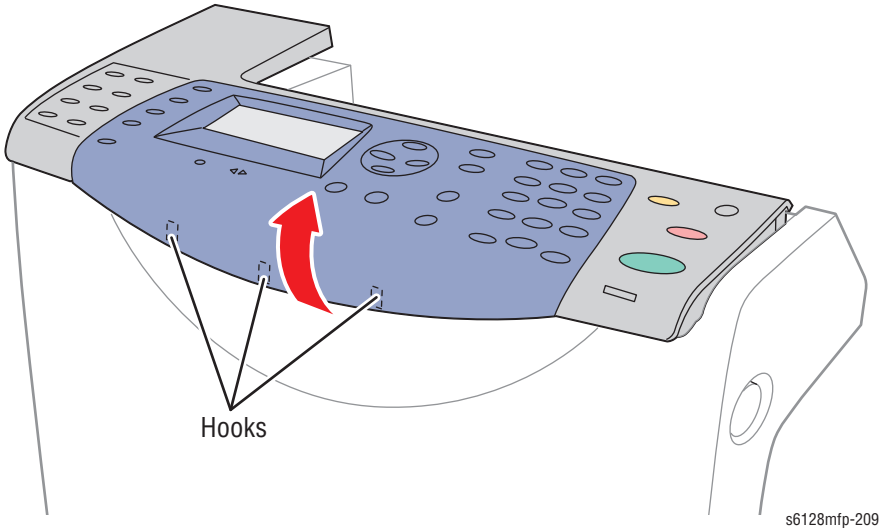


s6128mfp-207

4. Disconnect (P/J2020), remove the five screws (silver, tap, 8mm), and release the hook that secures the Control Panel to the Front Cover.



s6128mfp-208

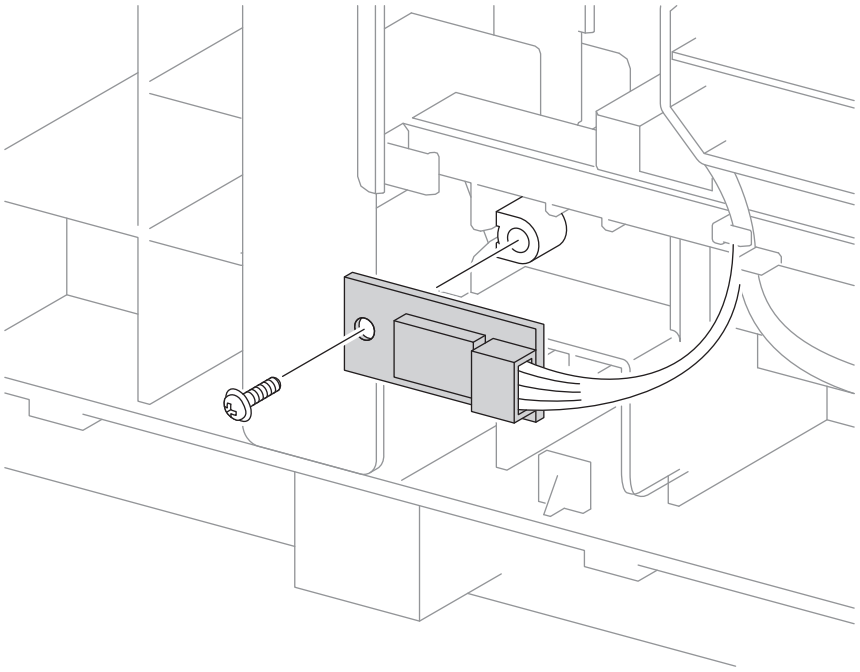


s6128mfp-209

Humidity Sensor

PL10.4.20

1. Remove the Left Side Cover (page 8-17).
2. Remove the screw (silver, tap, 8mm) that secures the Humidity Sensor to the chassis.
3. Unplug the connector (P/J201) and remove the sensor.

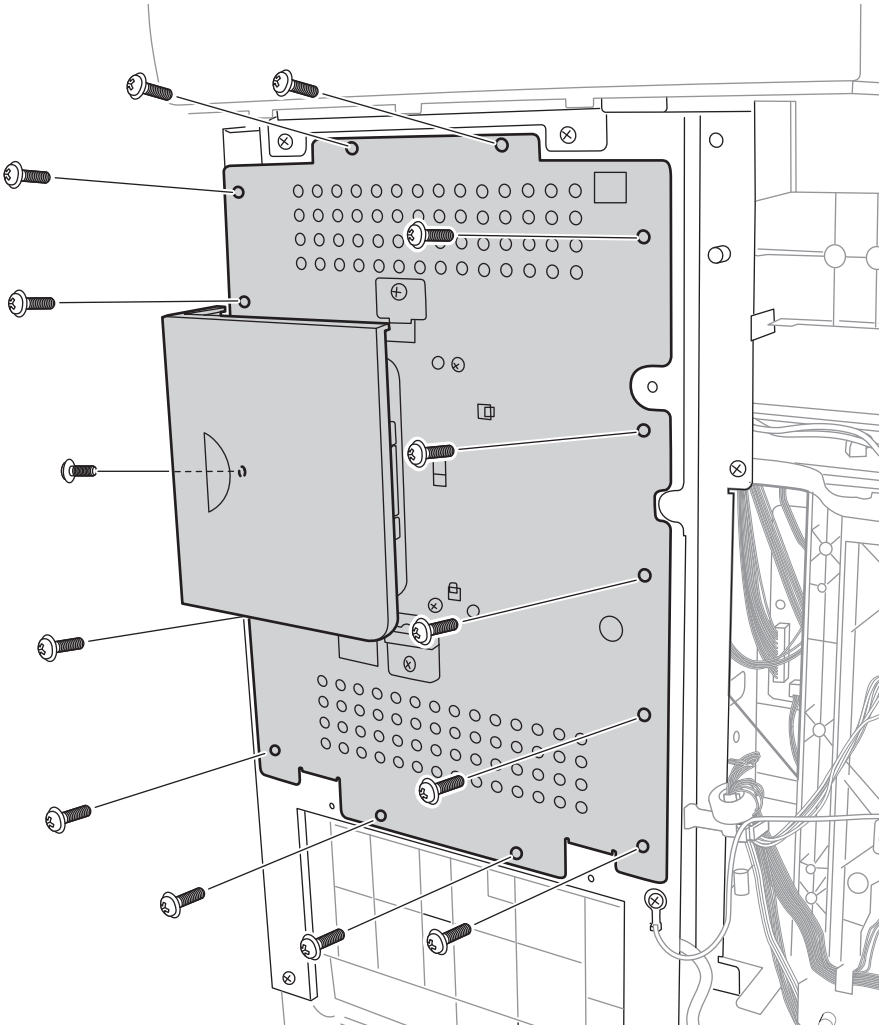


s6128mfp-210

ESS Shield

PL 10.6.19

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the 14 screws that secure the ESS Shield to the chassis.



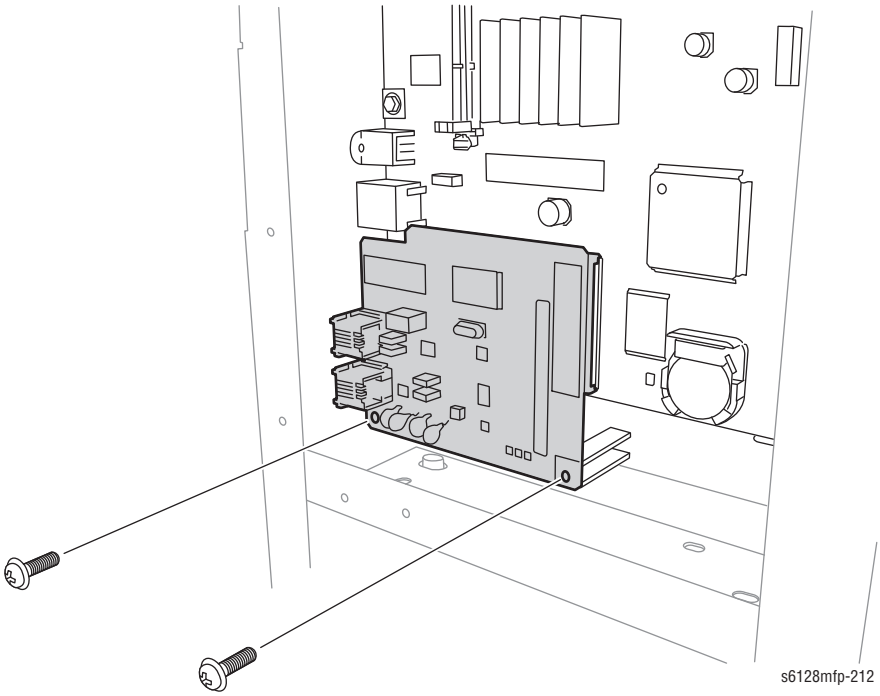
s6128mfp-211

6. Lift the shield to release the 2 tabs at the bottom and remove the shield.

FAX Board

PL10.6.9

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the ESS Shield (page 8-46).
6. Remove 2 screws (silver, with flange, 6mm) that secure the board to the chassis .



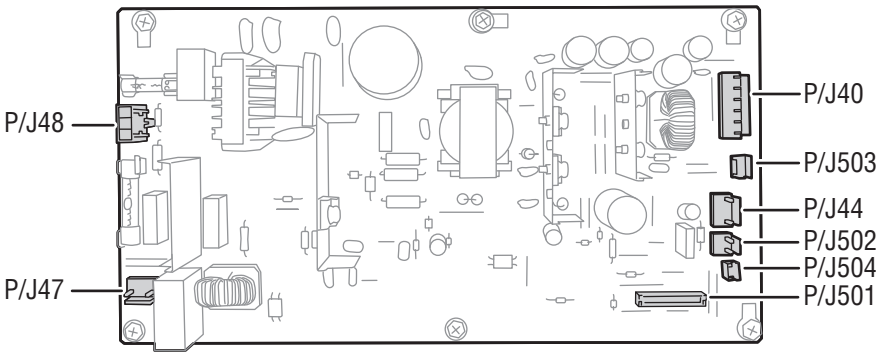
7. Release the board from the connector on the Image Processor Board.

LVPS

PL10.6.16

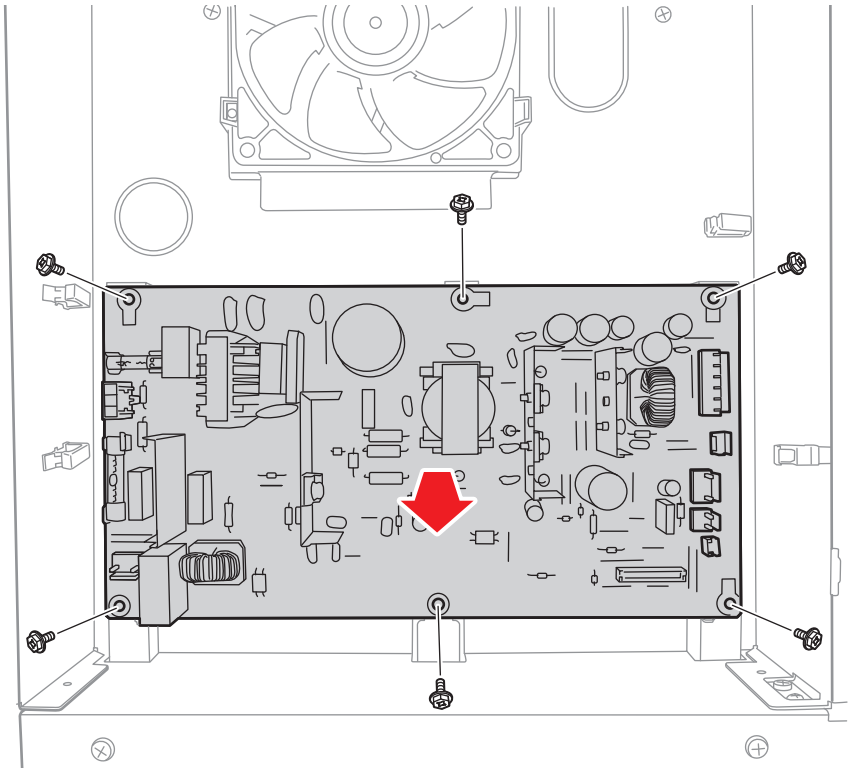
1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Rear Cover (page 8-22).

4. Disconnect all connections from the LVPS.



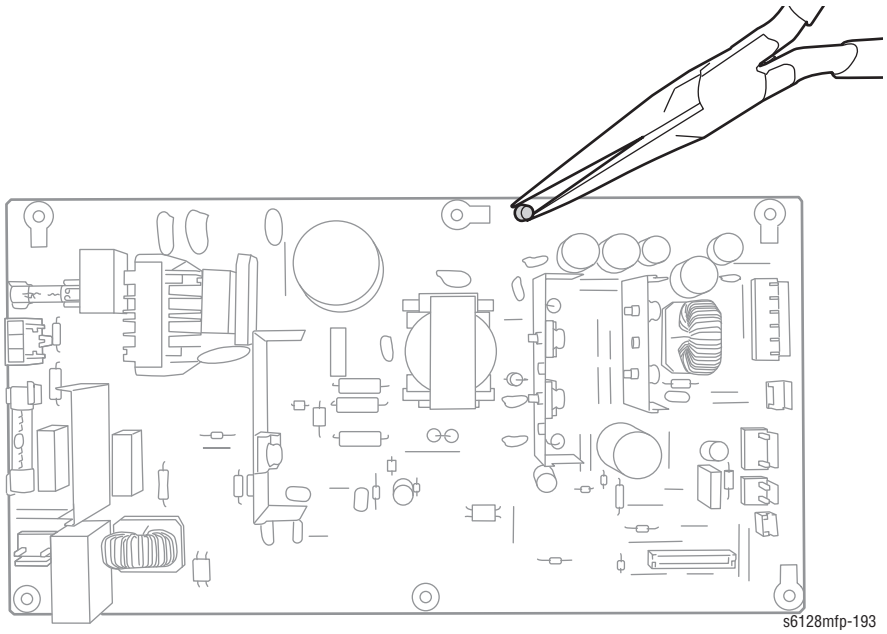
s6128mfp-191

5. Remove the 6 screws (silver, with flange, 6mm).



s6128mfp-192

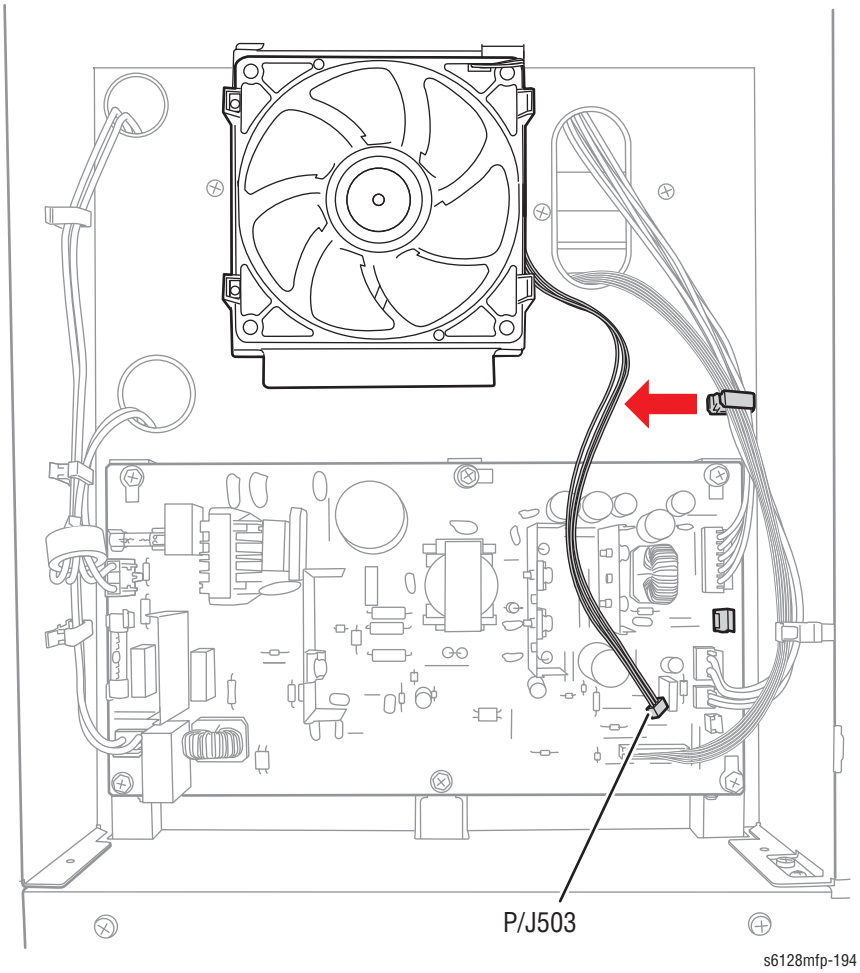
6. Release the plastic retainer and remove the LVPS from the chassis.



Fan

PL10.6.17

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Rear Cover (page 8-22).
4. Disconnect P/J503 from the LVPS and release the Fan harness from the clamp

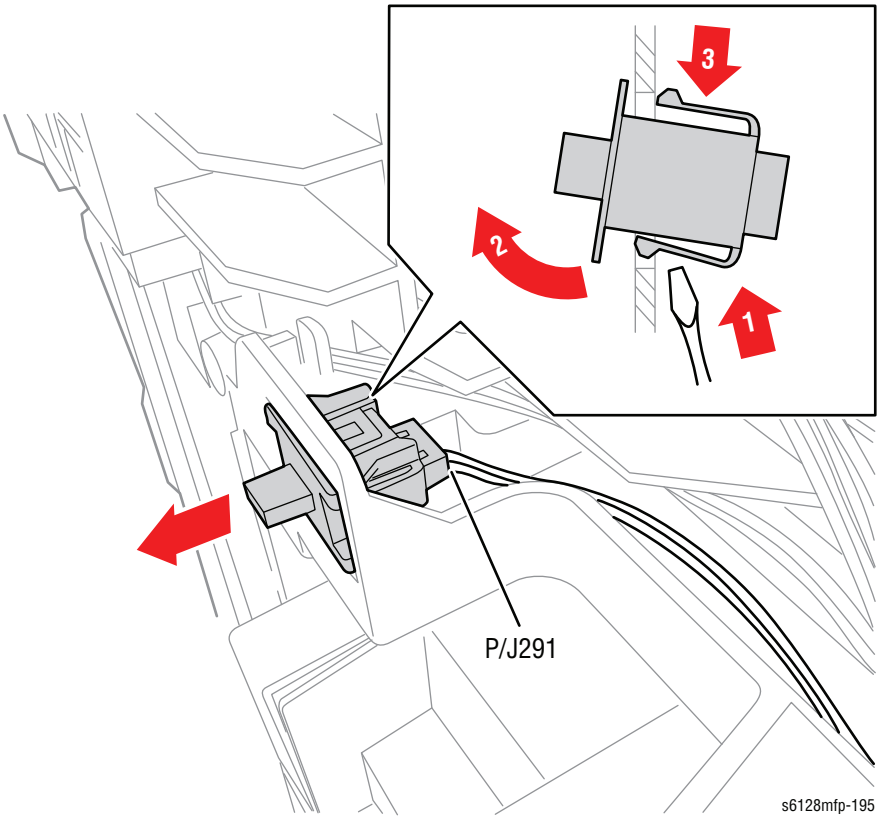


5. Release the 4 hooks of the fan duct to remove the FAN from the chassis.

Right Side Door Switch

PL5.1.9

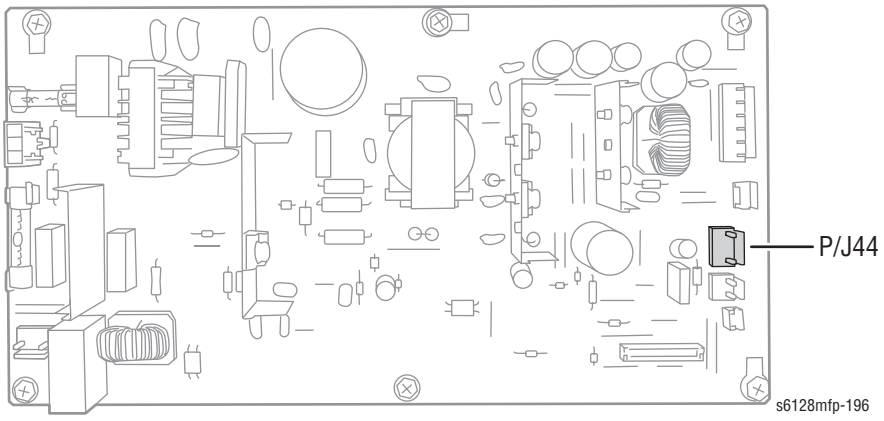
1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Using a miniature screwdriver, release the hooks that latch the switch in the frame and remove the switch from the printer.
8. Unplug the switch from the harness connector (P/J291).



Interlock Harness

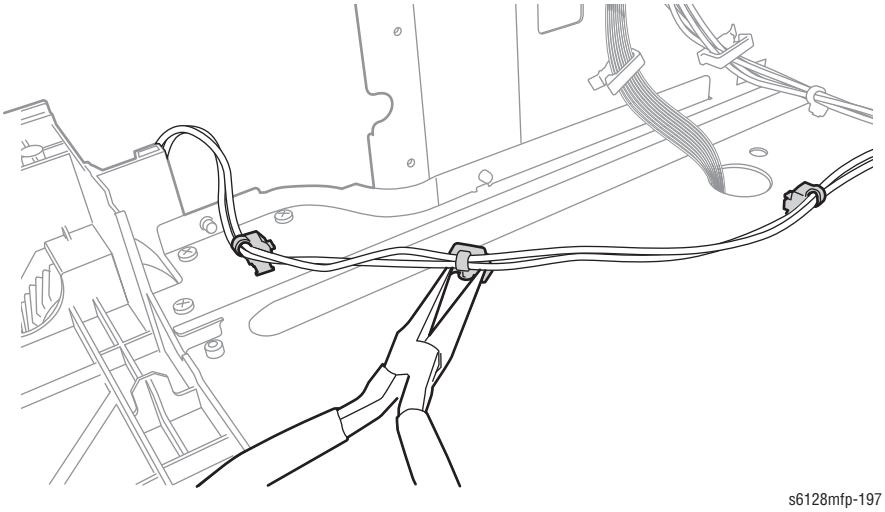
PL10.6.4

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Disconnect P/J44 on the LVPS, and release the harness from the clamp.



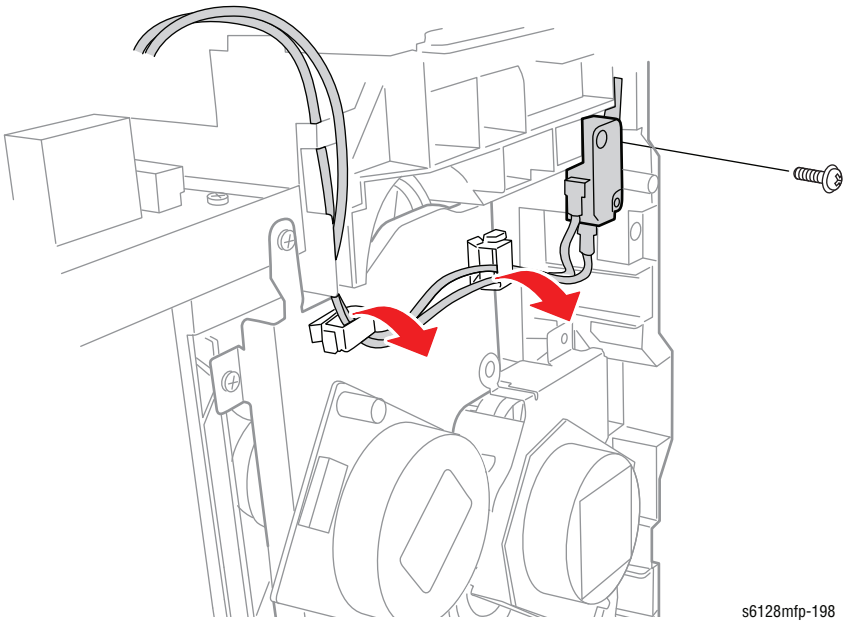
s6128mfp-196

8. Remove the 3 clamps on the Duct Plate (PL10.6.1) that secure the harness, then pull the harness through the hole.



s6128mfp-197

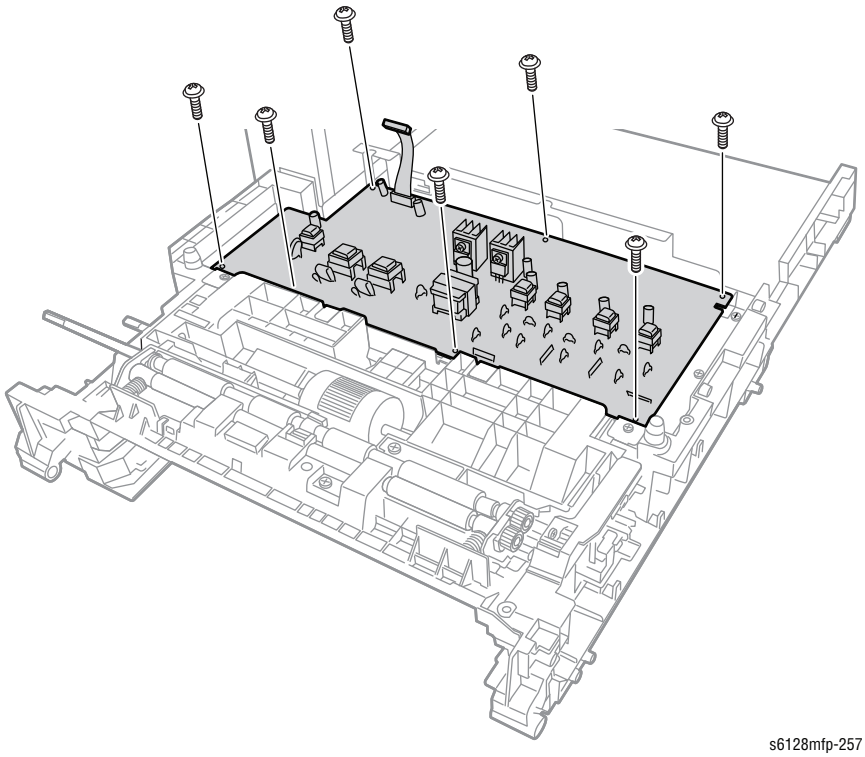
9. Release the harness from the 2 clamps on the chassis.
10. Remove the screw (sliver, tap, 6mm) that attaches the Interlock Harness to remove the harness.



HVPS

PL10.7.1

1. Remove the Upper Frame Assembly (page 8-68).
2. Open the Edging Saddle and release the HVPS harness.
3. Remove 7 screws (silver, with flange, 6mm) that secure the HVPS to remove the HVPS.



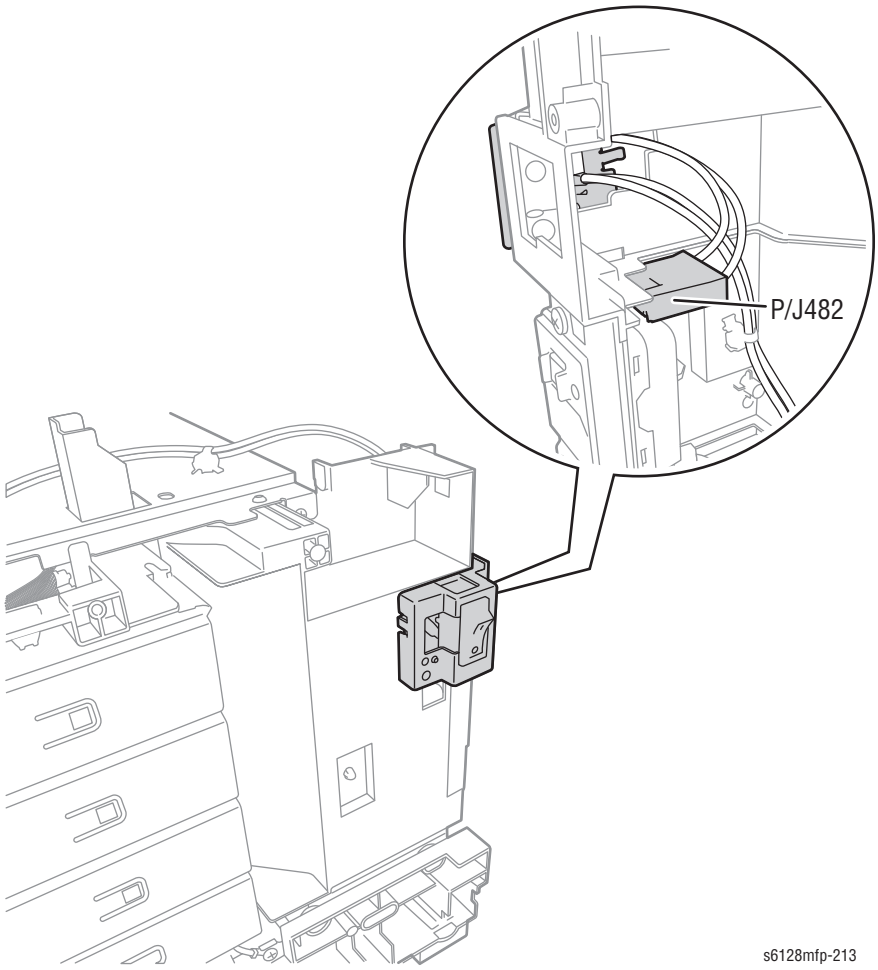
s6128mfp-257

Power Switch Harness

PL10.7.8

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Remove the LVPS Card Cage (page 8-66).
8. Release the clamp that secures the Power Switch Harness.

9. Disconnect P/J482 on the GFI Breaker (PL10.7.10).

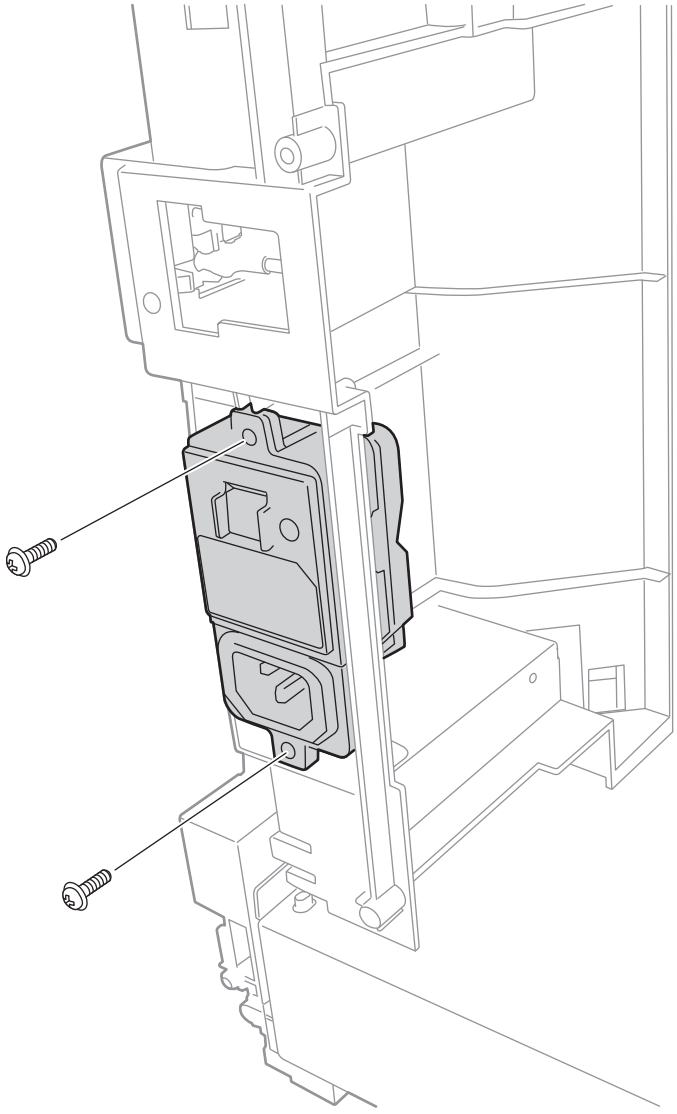


10. Release 1 screw that secures the Power Switch Bracket to the Breaker Assembly.
11. Release the Power Switch hooks from the bracket to remove the Power Switch Harness from the chassis.

GFI Breaker

PL10.7.10

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Remove the LVPS Card Cage (page 8-66).
8. Disconnect P/J482 and the FASTON terminal FS484 on the GFI breaker.
9. Remove 2 screws (silver, tap, 12mm) that secure the GFI Breaker in the chassis to remove the breaker.

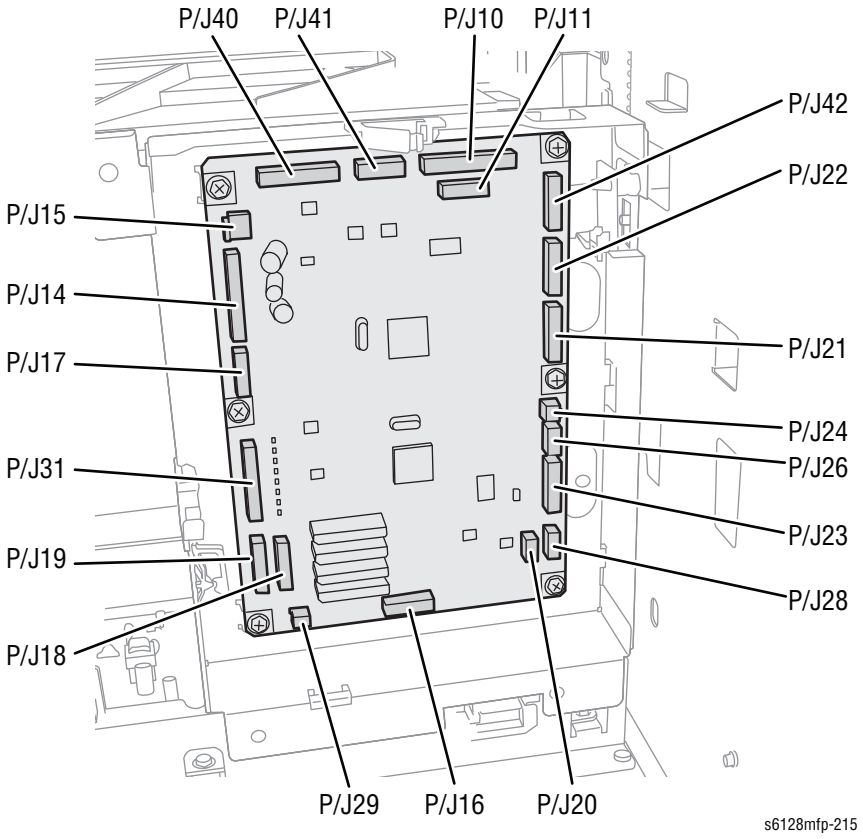


s6128mfp-214

MCU Board

PL 10.7.7

1. Enter Service Diagnostics and transfer the contents of MCU memory to the Image Processor Board (ESS).
2. Exit Service Diagnostics and turn Off the printer.
3. Disconnect the Power Cord from the wall outlet.
4. Open the Front Cover.
5. Remove the Left Side Cover (page 8-17).
6. Remove the Outer Pole Cover (page 8-19).
7. Remove the Rear Cover (page 8-22).
8. Remove the Right Side Cover (page 8-23).
9. Remove the Top Cover (page 8-25).
10. Remove the LVPS Card Cage (page 8-66).
11. Disconnect all connectors on the MCU Board.

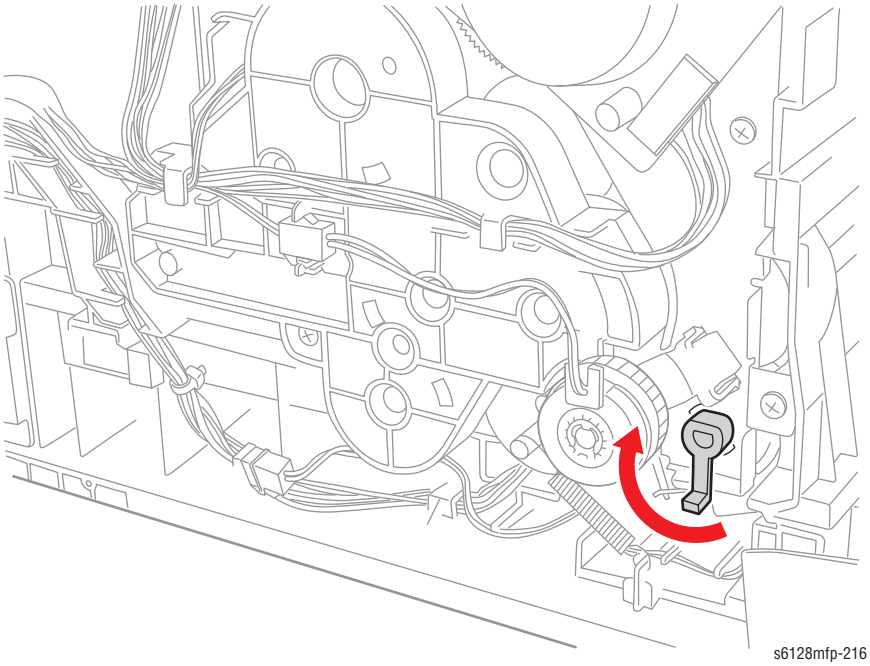


12. Remove the 6 screws (silver, with flange, 6mm) that secure the MCU Board to the chassis and remove the board.

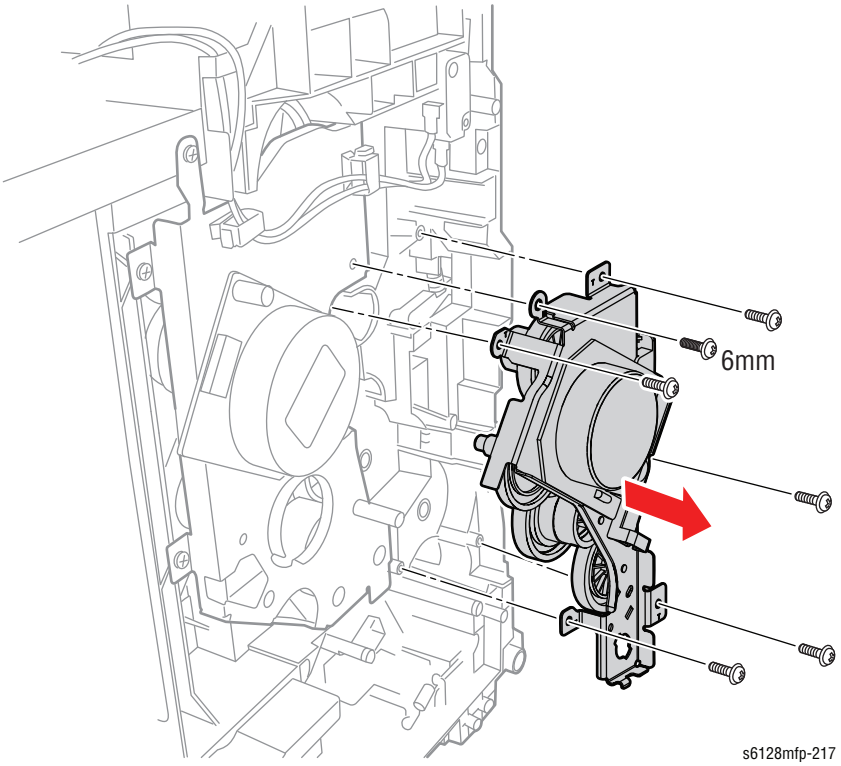
Main Drive Assembly

PL 7.1.2

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Drive Clutch Kit (page 8-35).
4. Remove the Feed Drive Assembly (page 8-37).
5. Remove Gear P2 from the Sub-Drive shaft.
6. Rotate the Stopper Pivot(PL6.1.3) counter clockwise to align the tabs with openings in the Main Drive Assembly and remove the stopper.



7. Remove the one screw (silver, M4, 6mm) and the five screws (silver, tap, 8mm) that secure the Main Drive Assembly and remove the drive.



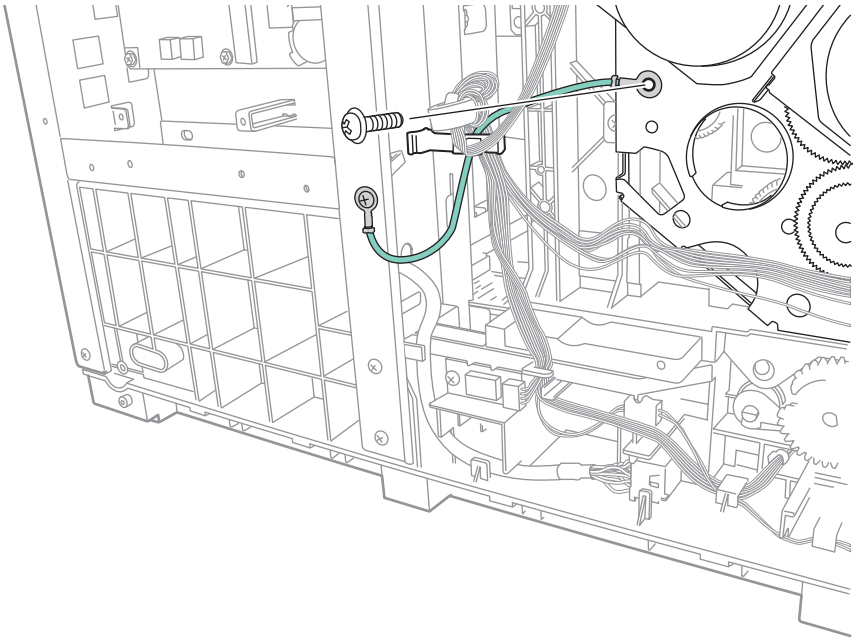
Replacement Note

Secure the wiring harness connecting the sub motor through the back of the hook on the Main Drive Assembly

Sub-Drive Assembly

PL 7.1.1

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Remove the Drive Clutch Kit (page 8-35).
8. Remove the Feed Drive Assembly (page 8-37).
9. Remove Gear P2 (page 8-40).
10. Remove the Main Drive Assembly (page 8-58).
11. Remove the Interlock Harness (page 8-52).
12. Remove the 1 screw (silver, 6mm) that secures the Ground Harness (PL7.1.5) to the Sub-Drive Assembly.



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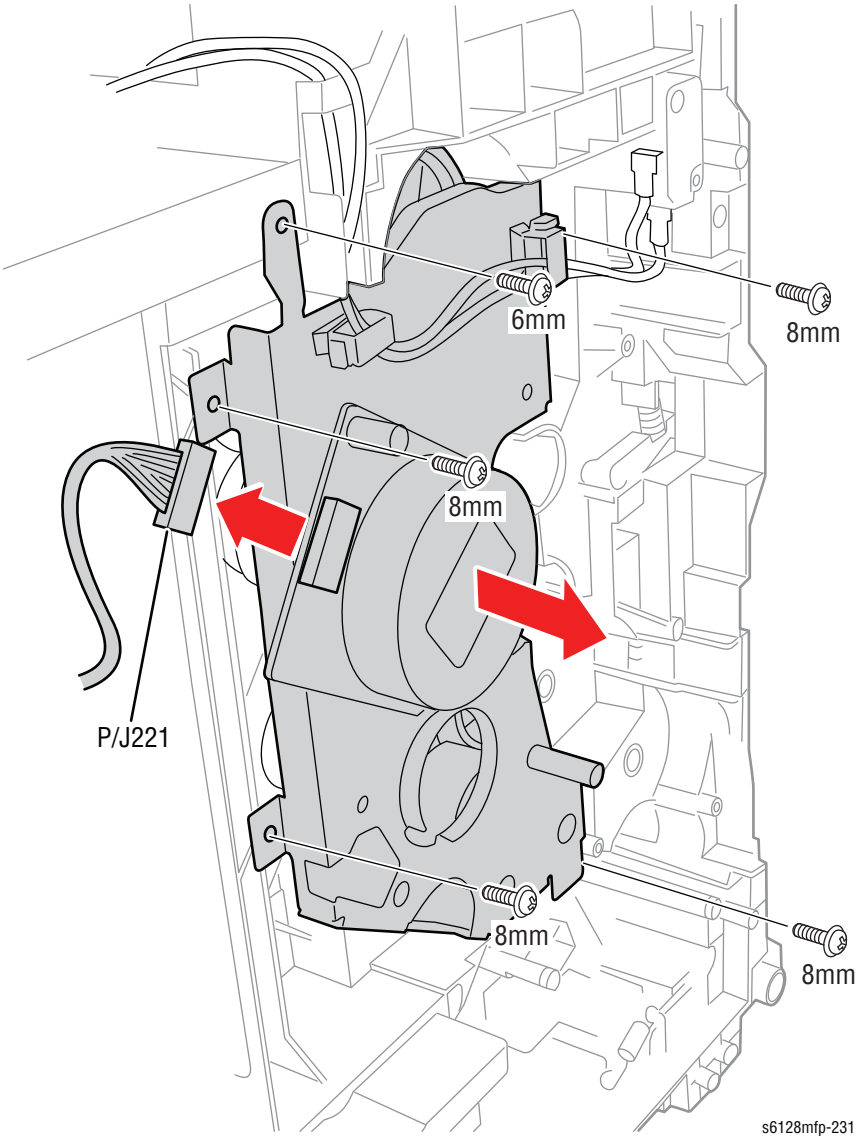
13. Disconnect P/J221 from the Sub-Drive Assembly.
14. Remove the one screw (silver, M4, 6mm) and the four screws (silver, tap, 8mm) that secure the Sub-Drive Assembly to remove the drive.

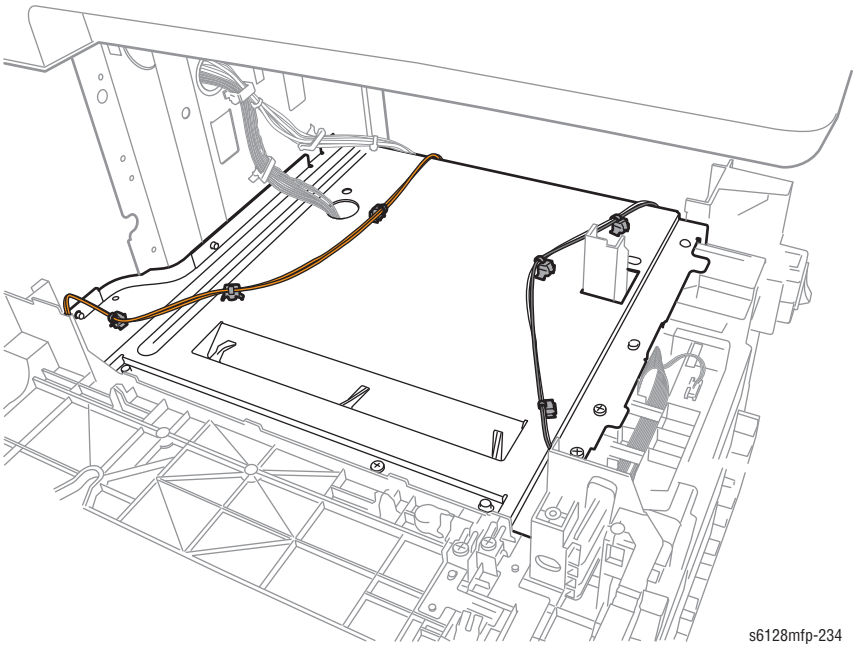


Chassis

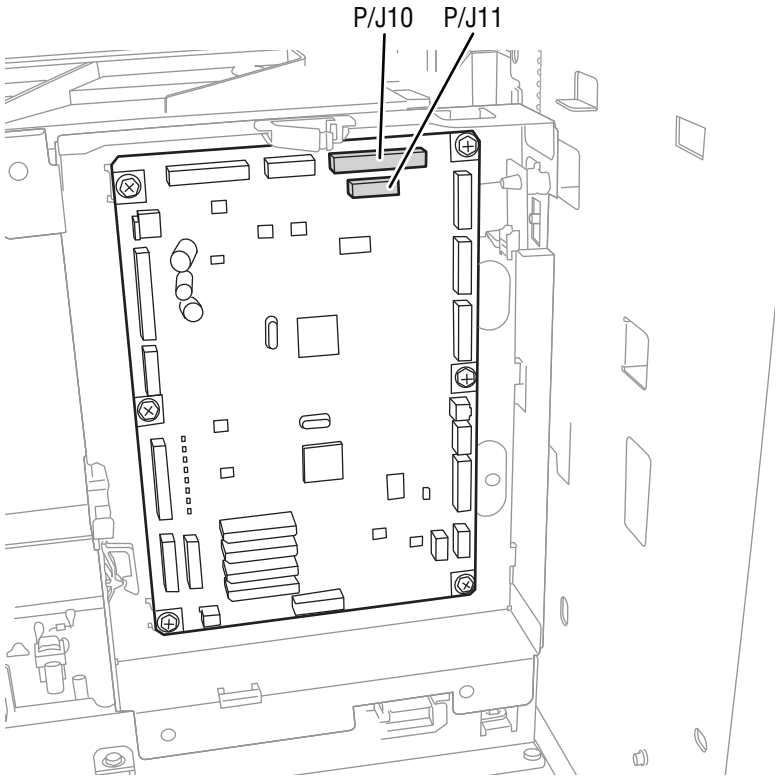
Duct Plate

PL 10.6.1

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Remove the Lower Scanner Cover (page 8-26).
8. Remove the ESS Shield (page 8-46).
9. Remove the Inner Pole Cover (page 8-20).
10. Remove the LVPS Card Cage (page 8-66).
11. Release 7 harness clamps that secure the Fuser and Interlock harnesses to the Duct Plate.



12. Disconnect P/J10 and P/J11 on the MCU Board, then pull the connectors through the hole in the Duct Plate.



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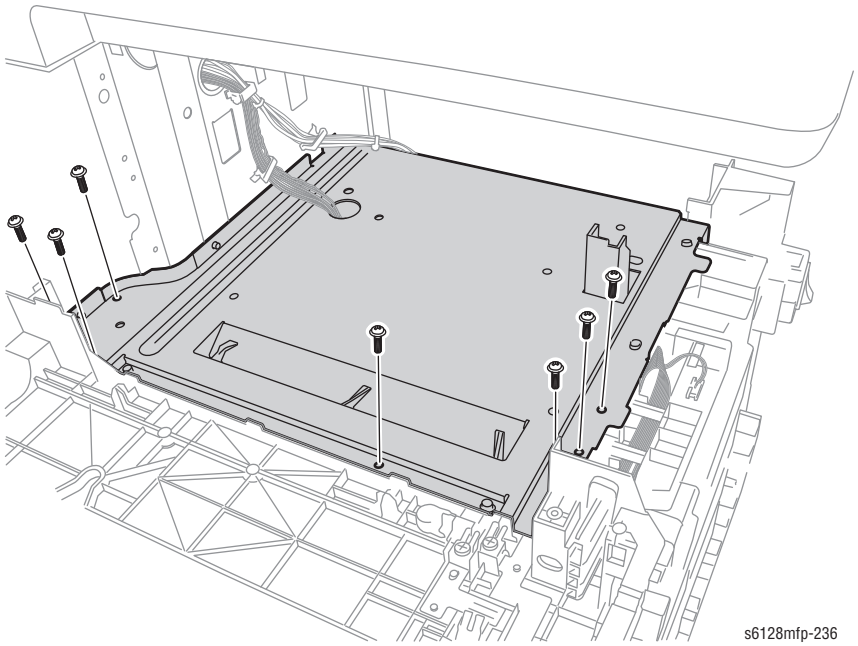
13. Remove 7 screws (silver, tap, 8mm) on the upper side of the Duct Plate.



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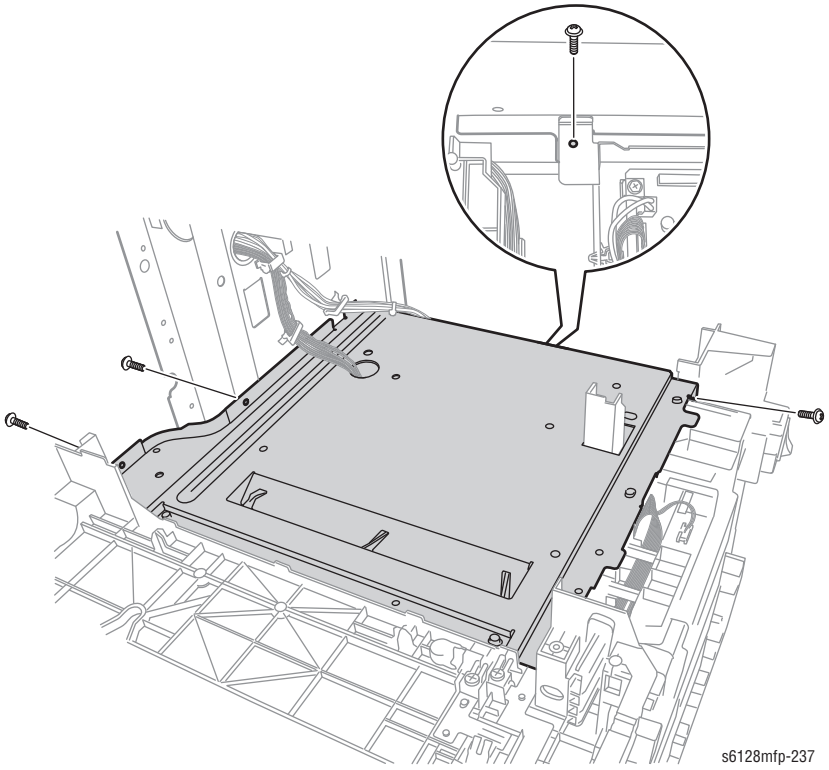
14. Remove 1 screw (silver, tap, 8mm) that secures the right edge of the Duct Plate at the front.
15. Remove 2 screws (silver, M4, 6mm) that secure the left edge of the Duct Plate at the back.
16. Remove 1 screw (silver, M4, 6mm) that secures the Duct Plate near the MCU Board and remove the Duct Plate.

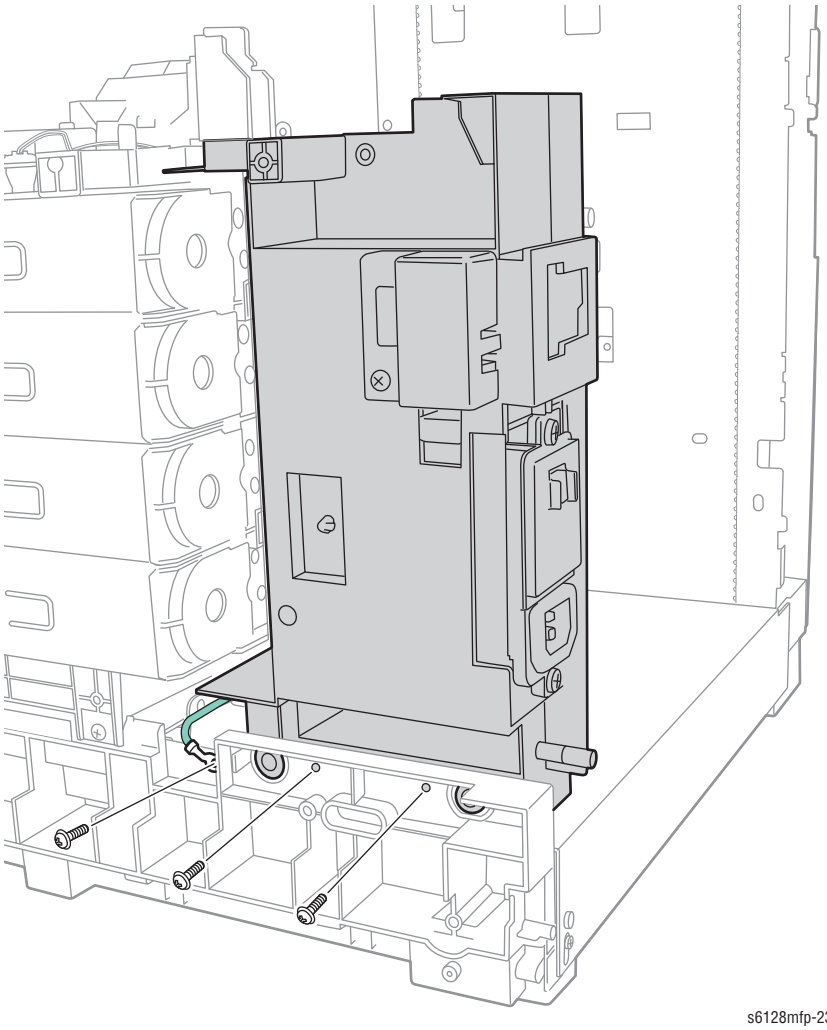


Breaker Chassis

PL 10.5.8

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Remove the Lower Scanner Cover (page 8-26).
8. Remove the ESS Shield (page 8-46).
9. Remove the Inner Pole Cover (page 8-20).
10. Remove the LVPS Card Cage (page 8-66).
11. Remove the Duct Plate (page 8-62).

12. Remove 2 screws (silver, tap, 8mm) that secure the Breaker Chassis to the frame.
13. Remove 1 screw (silver, with lock washer, 6mm) that secures the grounding terminal of the GFI Ground Harness to the chassis.



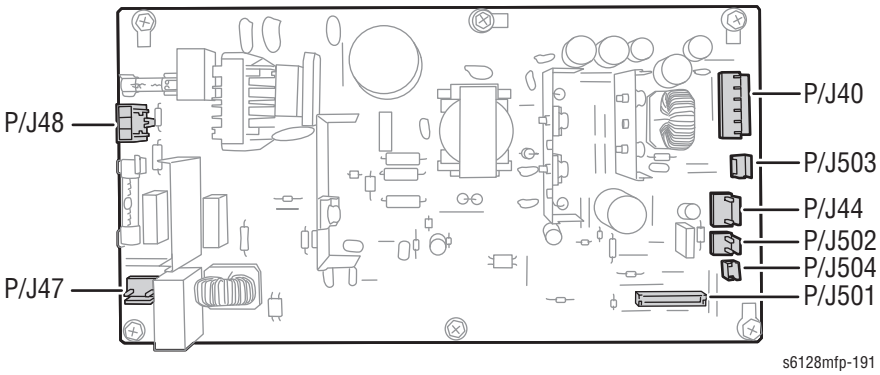
s6128mfp-238

14. Release the ground harness from the clamp.
15. Release the 2 hooks that secure the Breaker Chassis to the frame to remove the Breaker Chassis, GFI Breaker, and Power Switch.

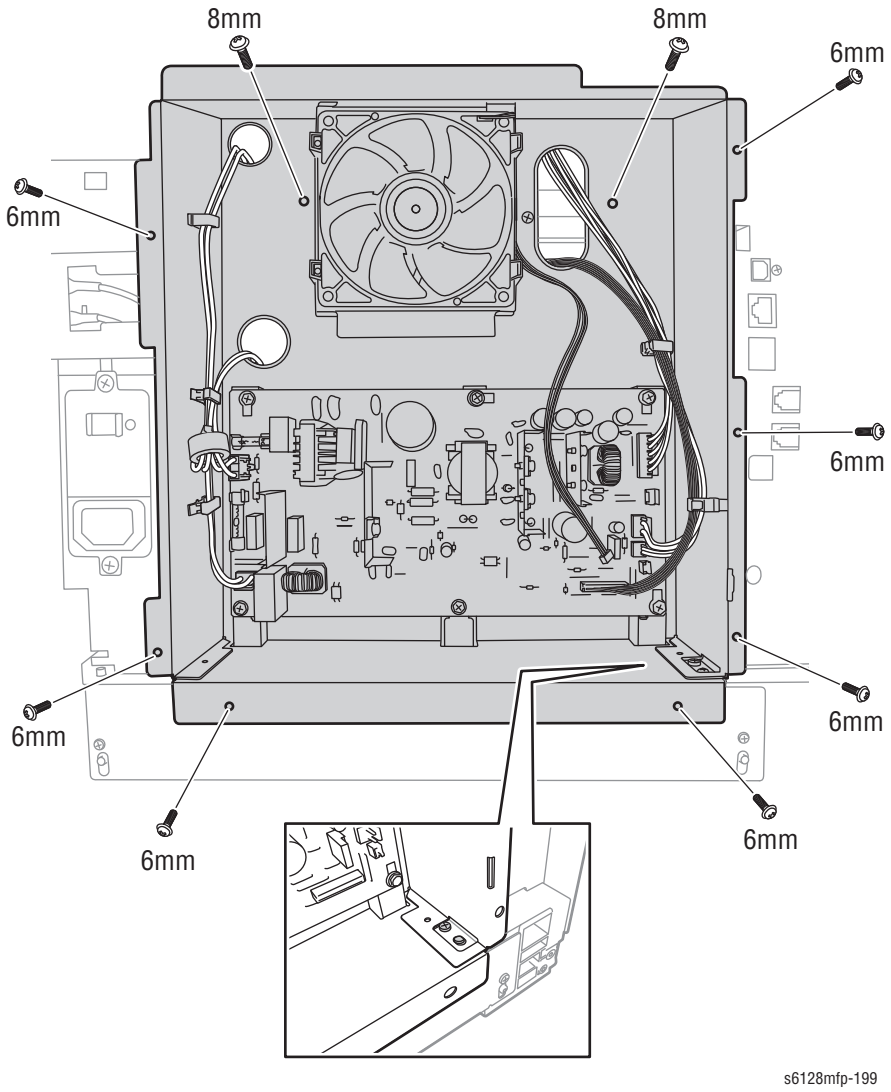
LVPS Card Cage

This procedure removes the entire LVPS enclosure including the Fan. Although it is not associated with any one part, it is a necessary prerequisite for other procedures.

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Disconnect 8 connectors on the LVPS and release the harnesses from the clamps.



8. Remove the 7 screws (silver, M4, 6mm) and the 2 screws (silver, tap, 8mm) that secure the LVPS card cage to the chassis



9. Lift the card cage slightly and pull it from the chassis while feeding the cables through the holes provided.

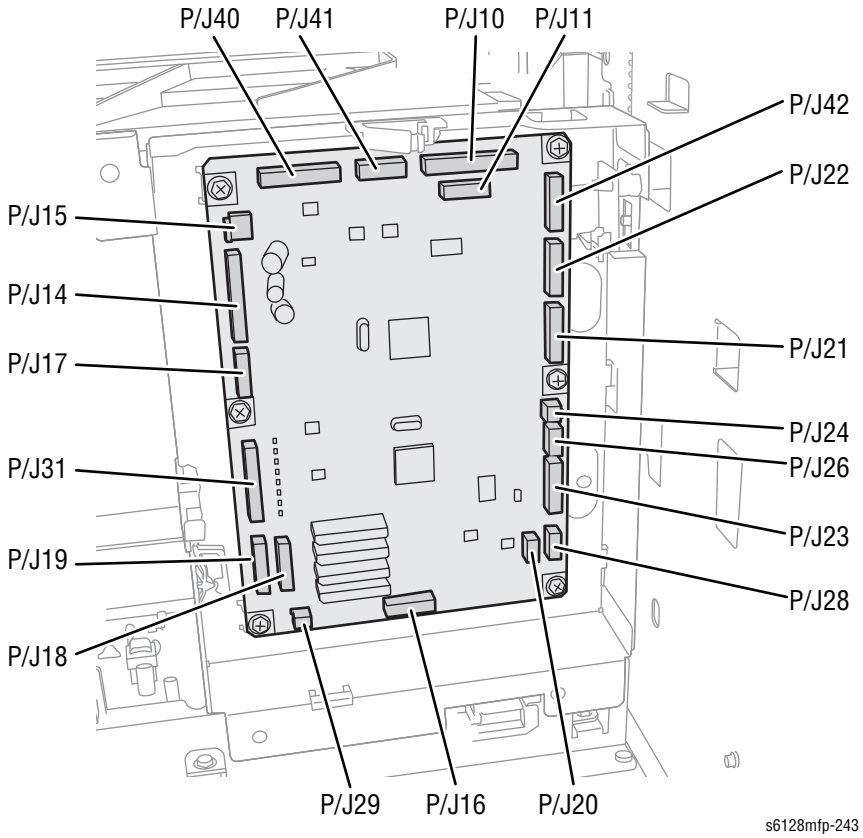
Replacement Note

Lift the card cage over the screw located at the lower right corner of the chassis.

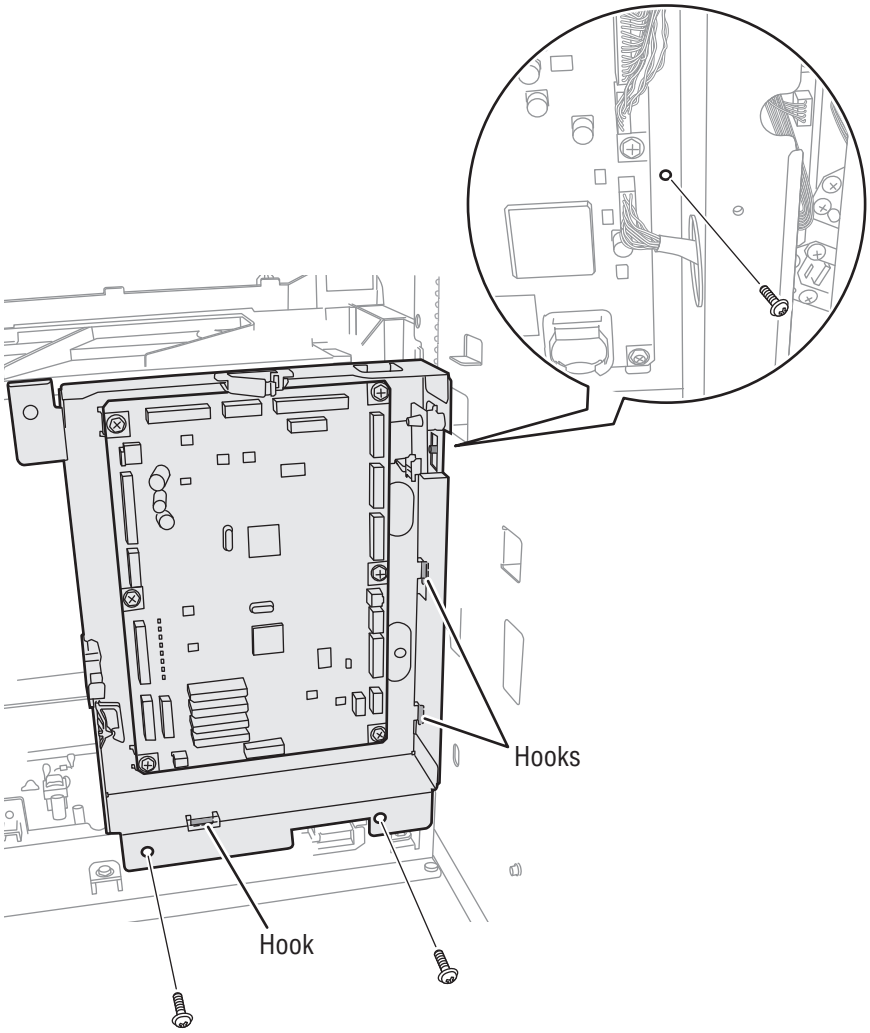
Upper Frame Assembly

While this major procedure is not connected to a specific part or parts list, it is a necessary pre-requisite for removing the HVPS or components of the Feeder Assembly. As few parts as possible are removed from the upper assembly that will allow the assemblies to separate.

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Remove the Lower Scanner Cover (page 8-26).
8. Remove the ESS Shield (page 8-46).
9. Remove the Inner Pole Cover (page 8-20).
10. Remove the LVPS Card Cage (page 8-66).
11. Remove the Duct Plate (page 8-62).
12. Remove the Breaker Chassis (page 8-64).
13. Remove the Drive Clutch and Bearing Kit (page 8-35).
14. Remove the Front Cover (page 8-15).
15. Remove the Transfer Belt Pivot Kit (page 8-100).
16. Remove the Transfer Belt (page 8-103).
17. Disconnect all connections to the MCU and EEPROM boards, then pull the harnesses out through the hole in the chassis.

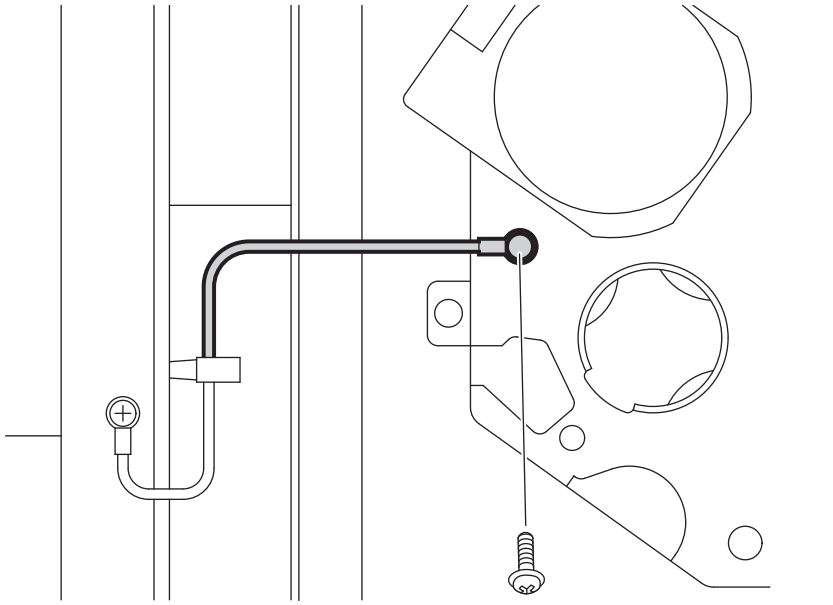


18. Remove the 3 screws that secure the MCU chassis to the chassis.



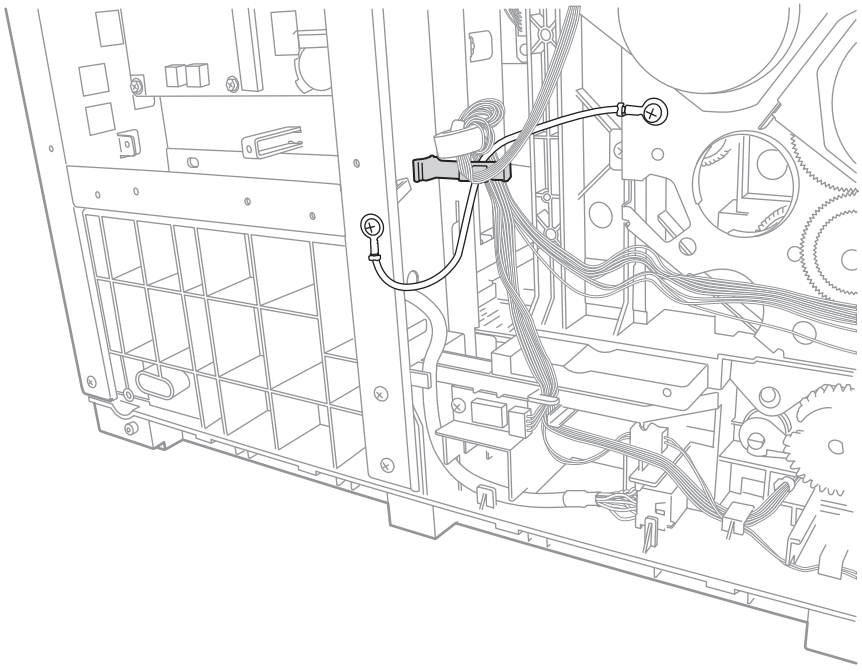
19. Lift the MCU chassis to release the 3 hooks ro remove the MCU chassis containing the MCU and EEPROM Boards.

20. Remove the 1 screw (silver, 6mm) that secures the Ground Harness to the Sub-Drive Assembly.



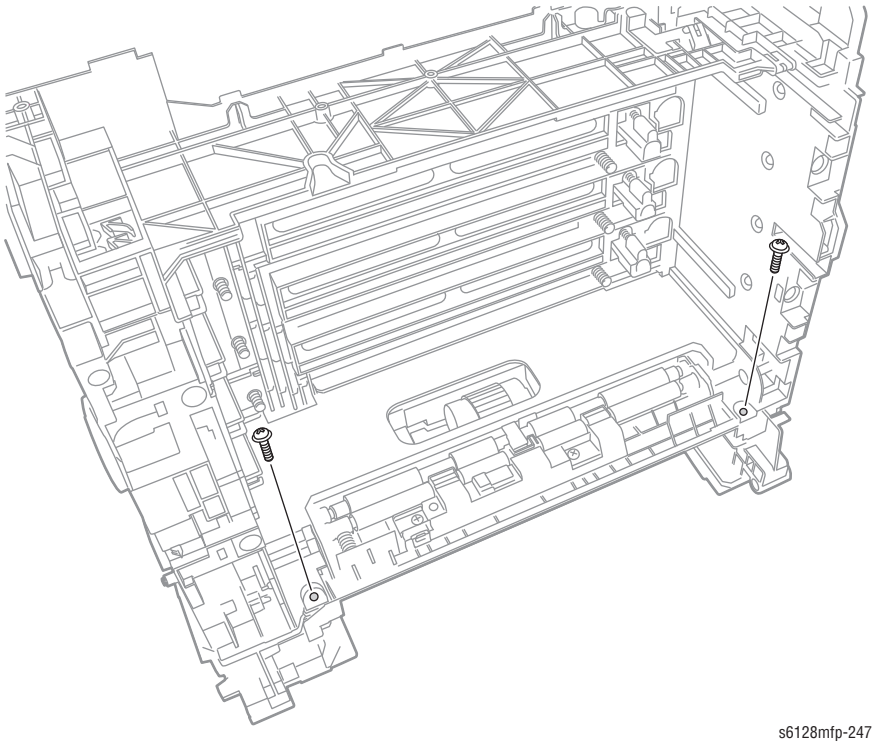
s6128mfp-245

21. Release all the harnesses from the Locking Clamp (PL10.5.10).



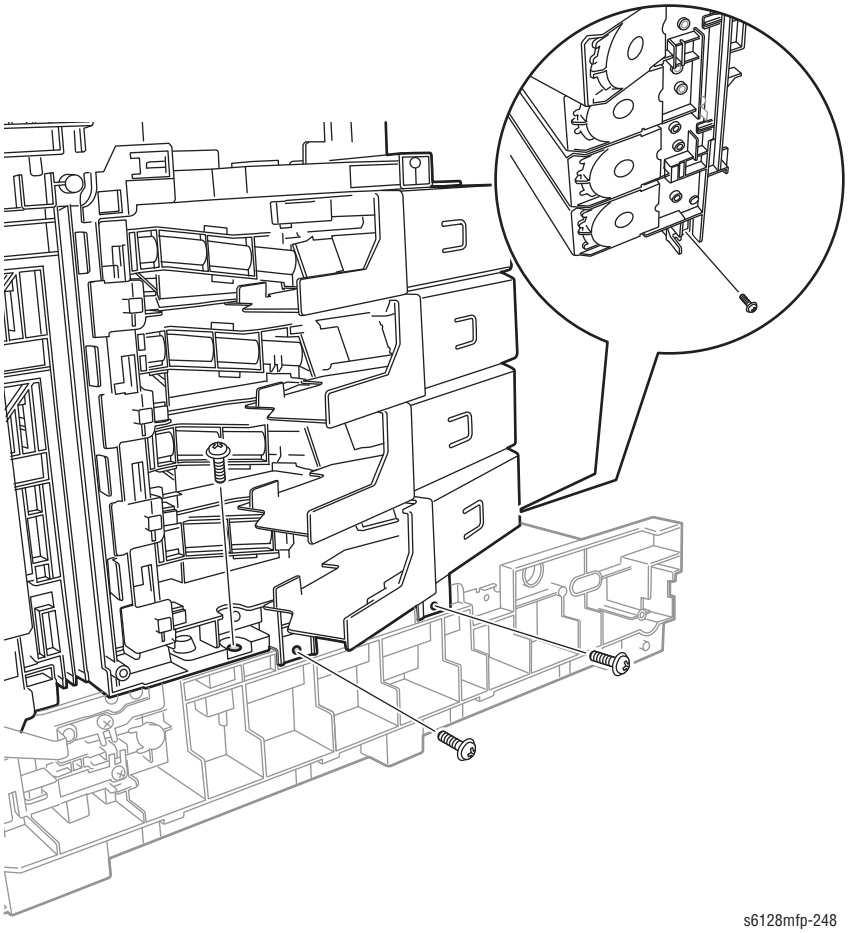
s6128mfp-246

22. Remove 2 screws (silver, tap, 8mm) that secure the front of the frame.



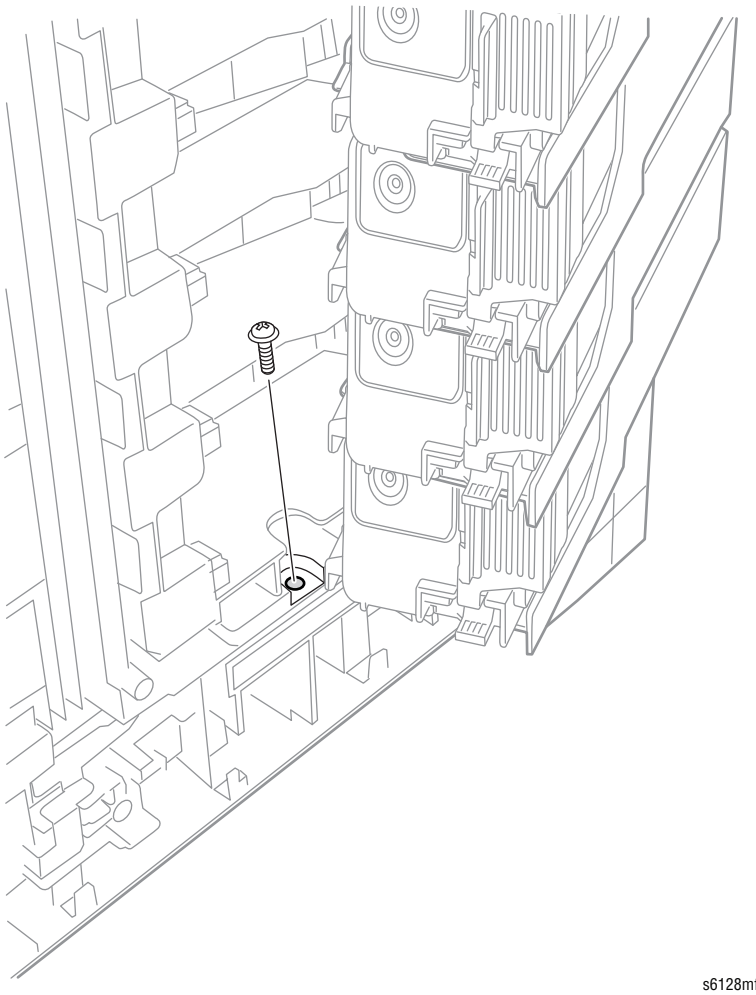
s6128mfp-247

23. Remove 2 screws (silver, tap, 8mm) that secure the bottom and 1 screw (silver, M4, 6mm) that secures the rear of the Dispense Assembly .



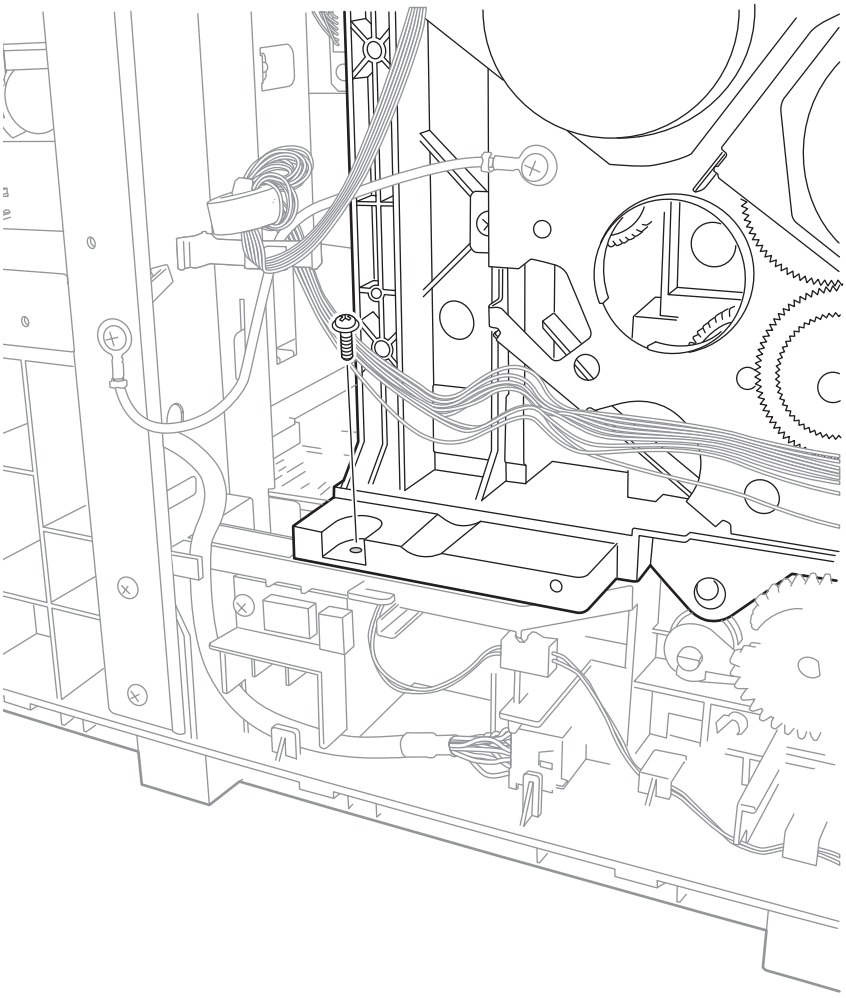
s6128mfp-248

24. Open the Toner Cartridge Holders and remove 1 screw (silver, tap, 8mm) that secures the right side of the frame.



s6128mfp-249

25. Remove 1 screw (silver, tap, 8mm) that fixes the left side of the upper frame.



s6128mfp-256

26. Lift the upper frame from the chassis.

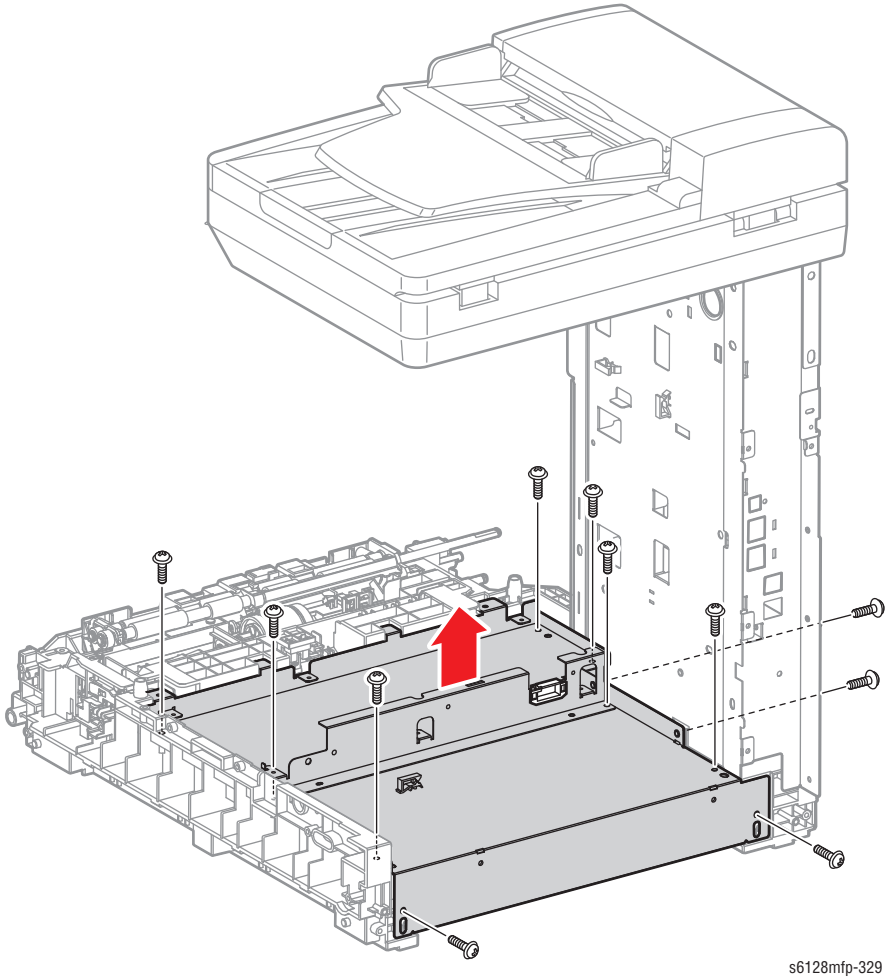
Replacement Note

Removal of the Laser Unit from the Upper Frame Assembly simplifys the task of lacing the harnesses around the Dispense Assembly.

Feeder Assembly

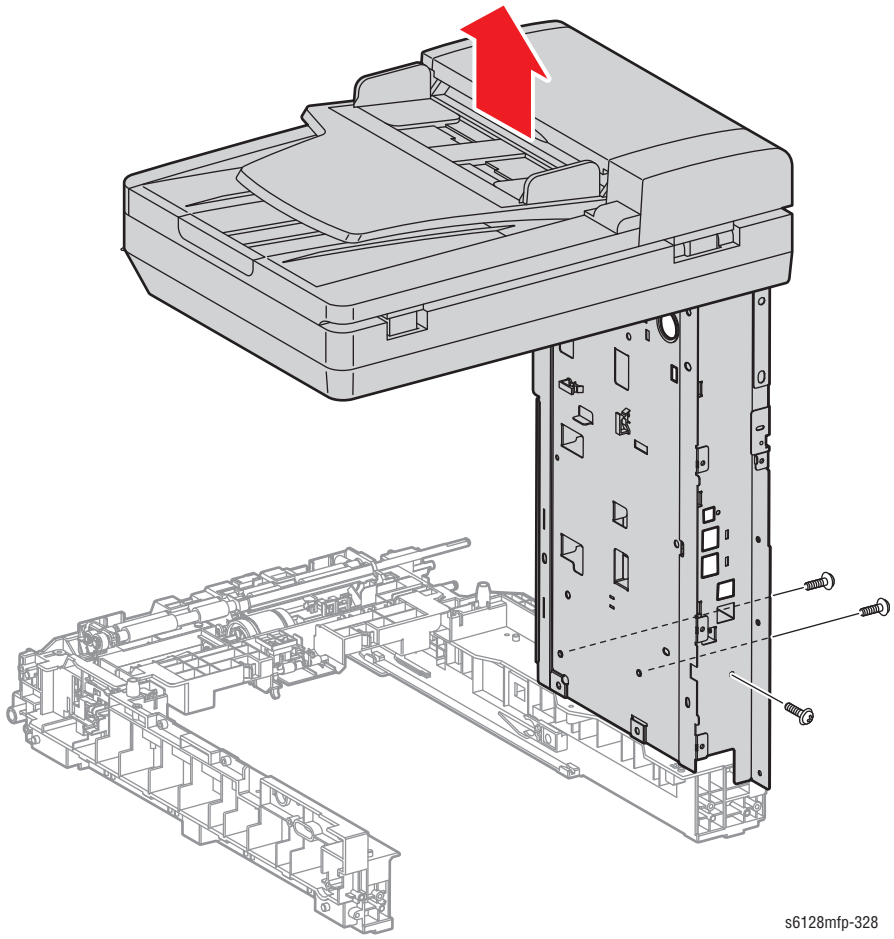
PL10.4.3

1. Remove the Upper Frame Assembly (page 8-68).
2. Remove the HVPS (page 8-54).
3. Remove the 11 screws theat secure the HVPS chassis to the Feeder Assembly.



s6128mfp-329

4. Remove 3 screws that secure the scanner frame assembly, then lift the assembly from the Feeder Assembly.



Note

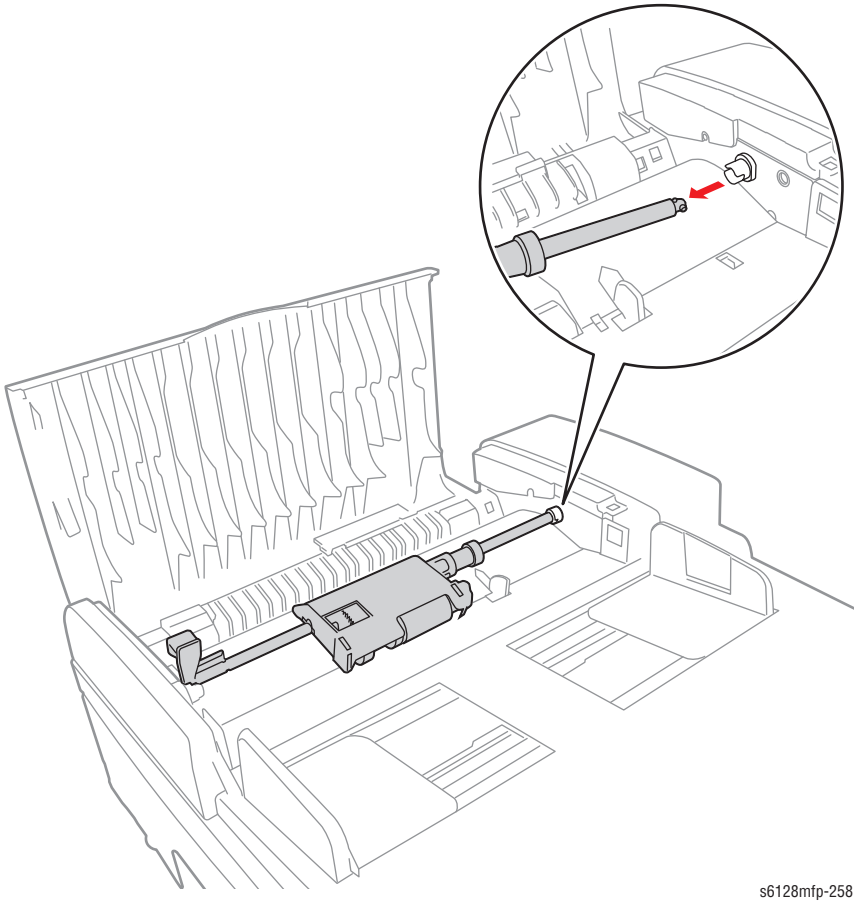
While replacing the Feeder Assembly, transfer components mounted to the old assembly to the new assembly.

IIT Procedures

ADF Feed Roll Assembly

PL 10.10.3

1. Open the ADF Jam Cover.
2. Raise the release lever 90 degrees.
3. Lift the Roll Assembly by the lever and remove the back end of the shaft from the ADF.

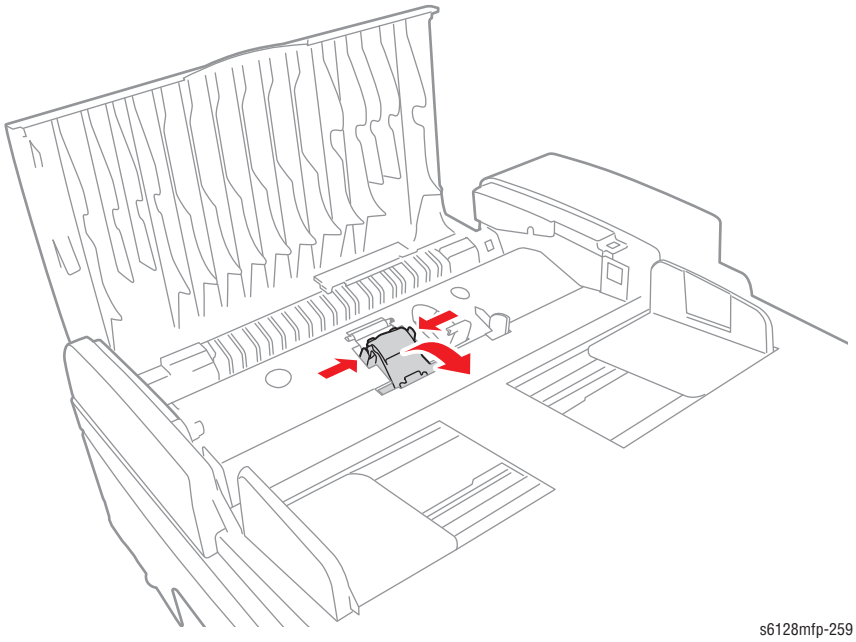


s6128mfp-258

ADF Seperator Pad

PL 10.10.4

1. Open the ADF Jam Cover.
2. Remove the ADF Feed Roll Assembly (page 8-77).
3. Squeeze the tabs inward to release the ADF Seperator Pad from the chassis.

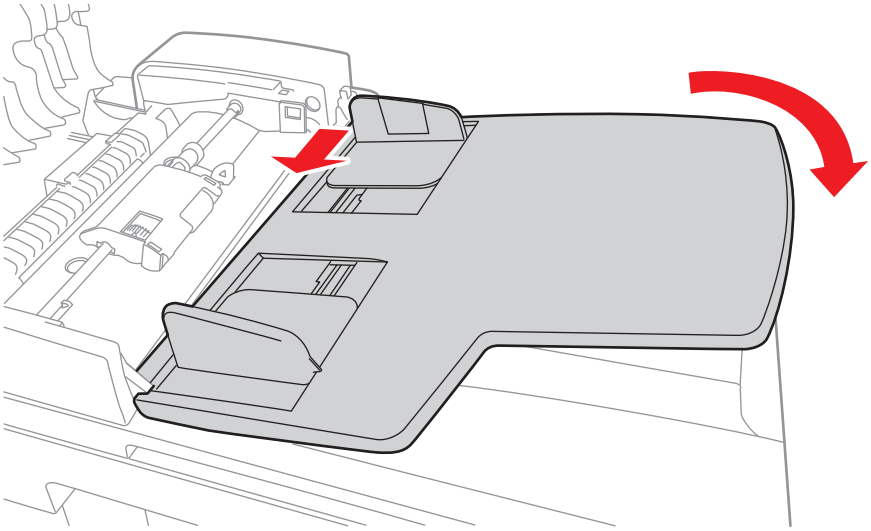


s6128mfp-259

ADF Input Tray

PL 10.10.11

1. Open the ADF Jam Cover.
2. Release the tray hinges from the bosses in the ADF cover.

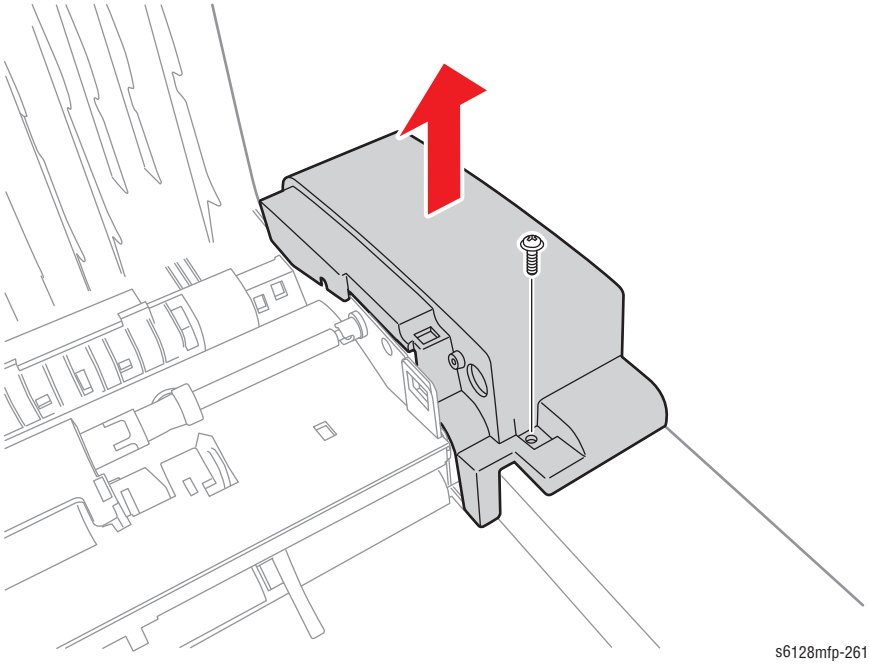


s6128mfp-260

ADF Assembly

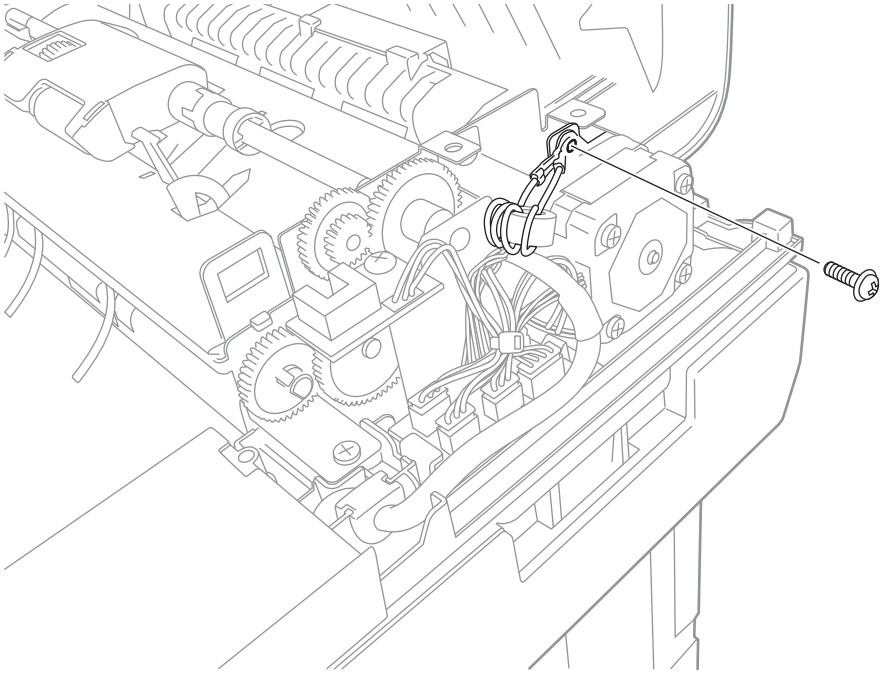
PL 10.10.1

1. Remove the ADF Input Tray (page 8-78).
2. Remove 1 screw (silver, tap, 8mm) that secures the Rear ADF Cover.
3. Slightly raise the right side of the Rear ADF Cover, then move the cover to the left until 2 hooks release.



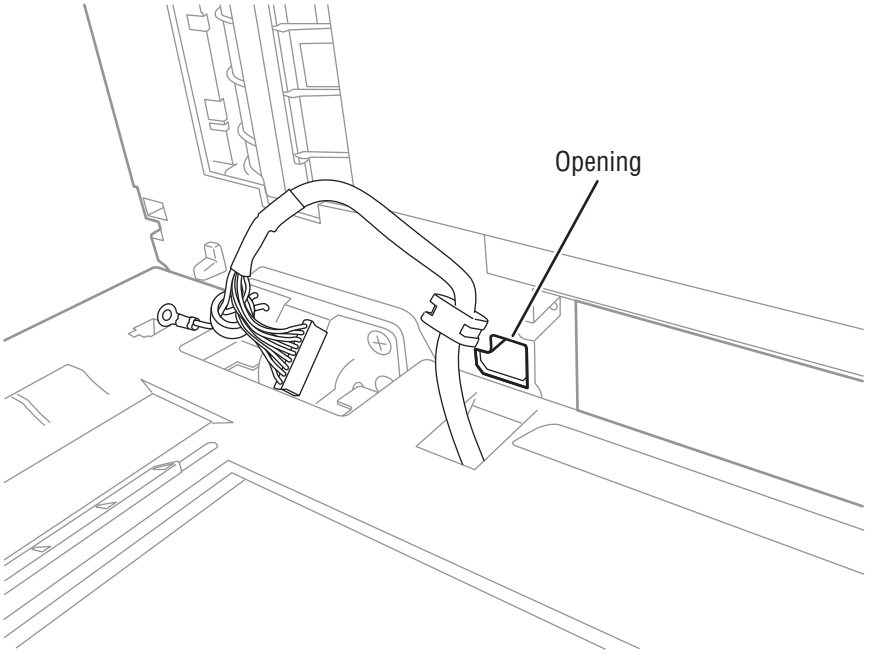
s6128mfp-261

4. Remove 1 screw (silver, 4mm) that secures the ADF Harness grounding terminal.



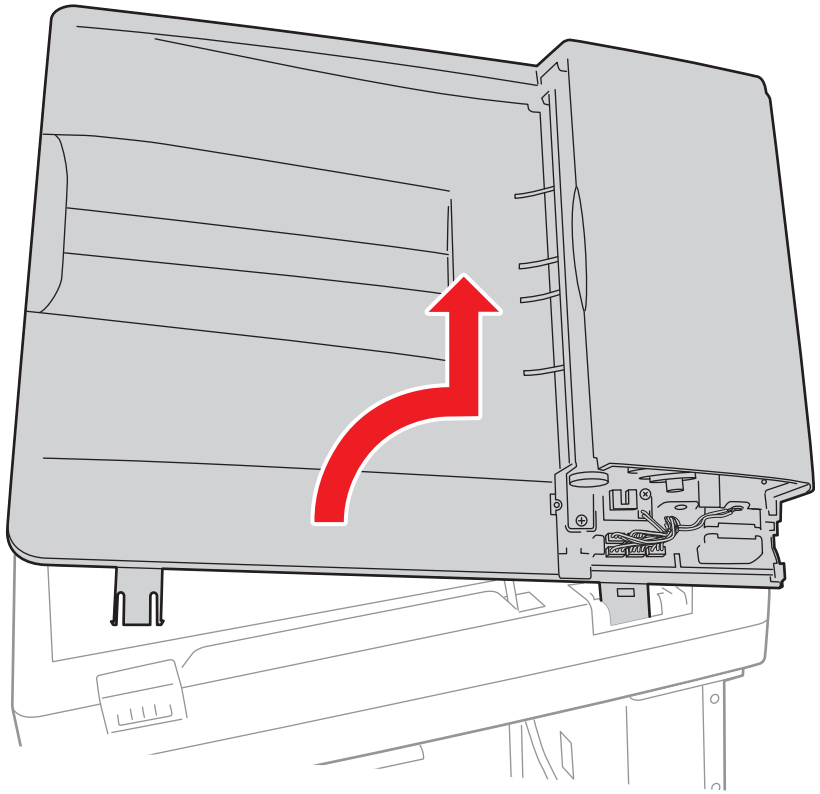
s6128mfp-262

5. Disconnect P/JADF1 and release the grommet from the frame.



6. Feed the harness through the hole in the ADF.

7. Release the hook of the Right Counter Balance using the miniature screwdriver, then remove the Right Counter Balance from the IIT Sub-Assembly.



s6128mfp-264

8. Tilt the ADF Assembly to the right, and release the tab of the Left Counter Balance.
9. Lift the ADF Assembly and remove the ADF Harness from the hole of the ADF Assembly to remove the ADF Assembly from the IIT Sub-Assembly.

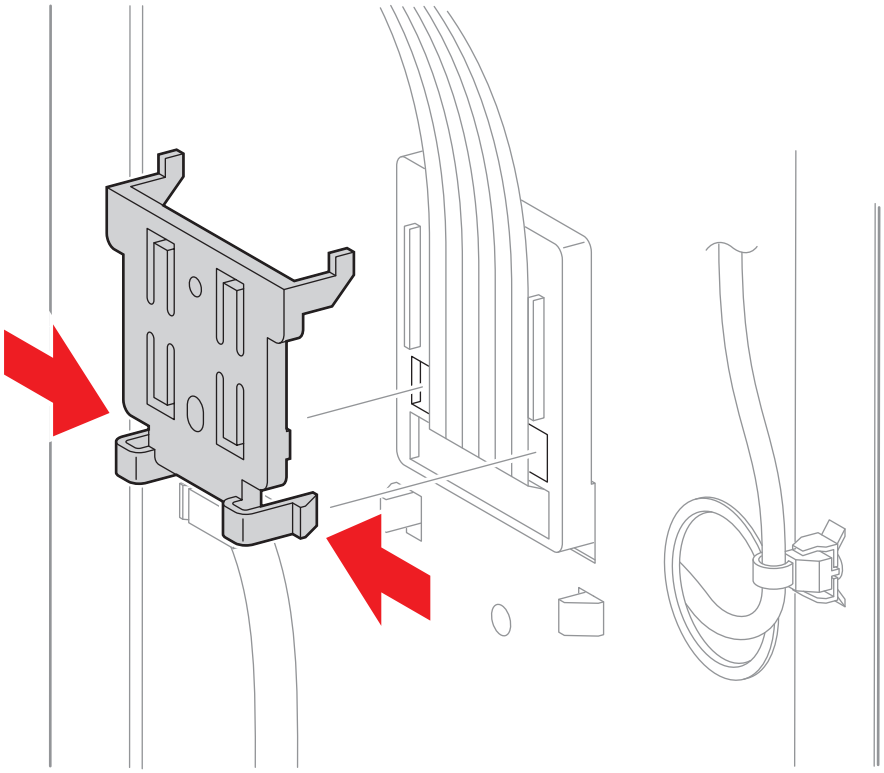
IIT Sub-Assembly

PL 10.9.2

Caution

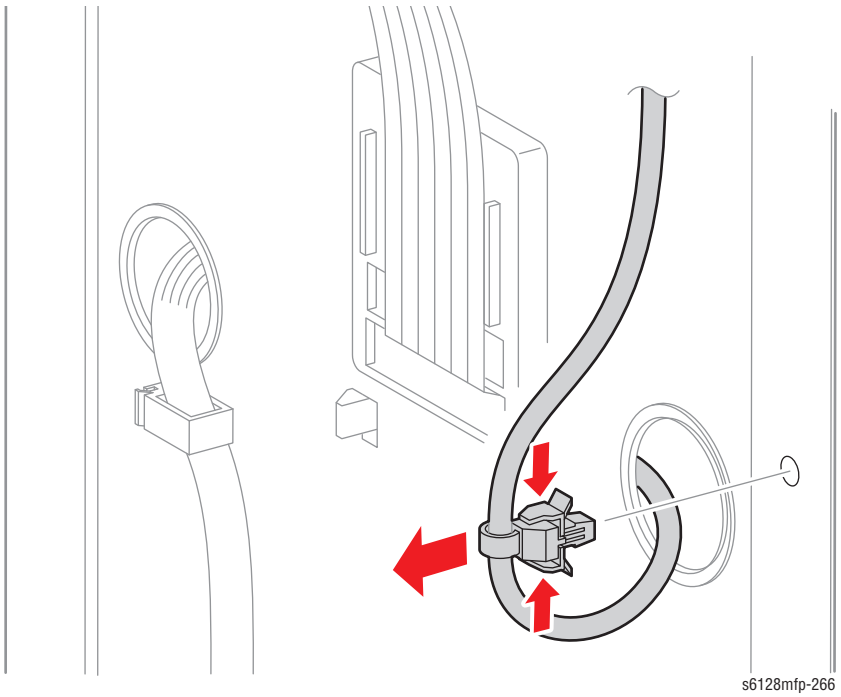
The Ferrite Core (PL 10.9.4) strung on the IIT Sub-Assembly ribbon cable is extremely fragile.

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Remove the Lower Scanner Cover (page 8-26).
8. Remove the ESS Shield (page 8-46).
9. Remove the Inner Pole Cover (page 8-20).
10. Release 2 hooks that secure of the FFC Cover to the chassis and remove the cover.



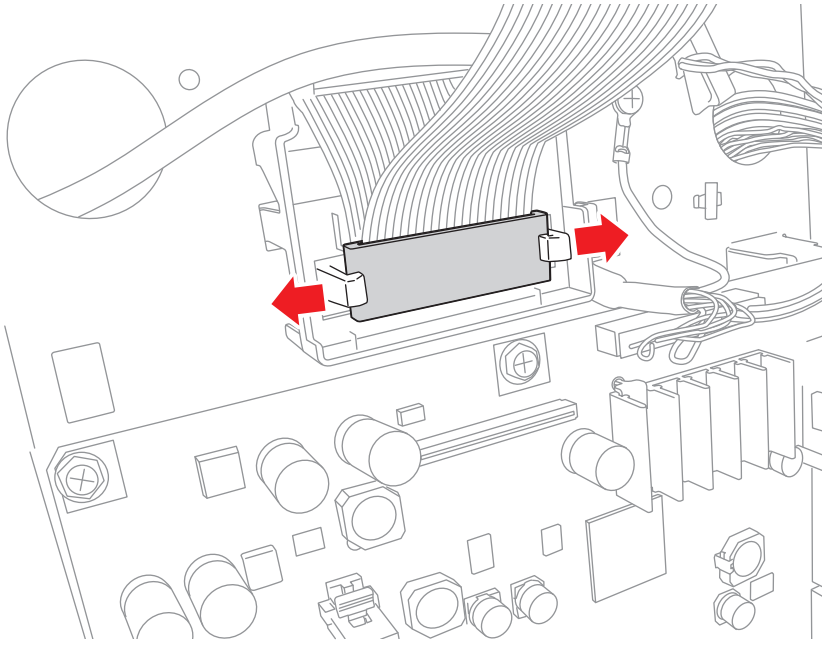
s6128mfp-265

11. Remove the clamp that secures the ADF Assembly harness to the chassis.



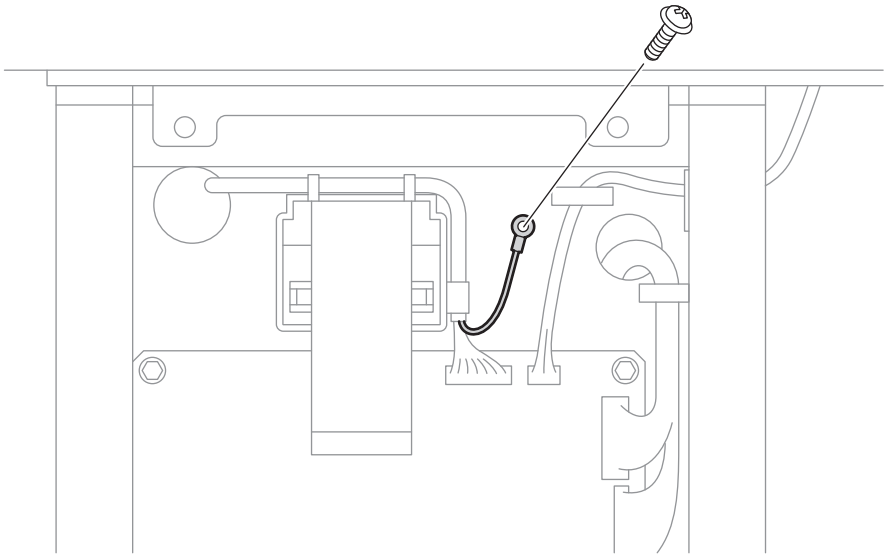
s6128mfp-266

12. Disconnect the ribbon cable from P/J1001 on the Image Processor Board.
13. Release 2 hooks of the FFC Holder to remove the Ferrite Core from the ribbon cable.



s6128mfp-267

14. Remove 1 screw (silver, 6mm) that secures the ADF Assembly the ground wire.

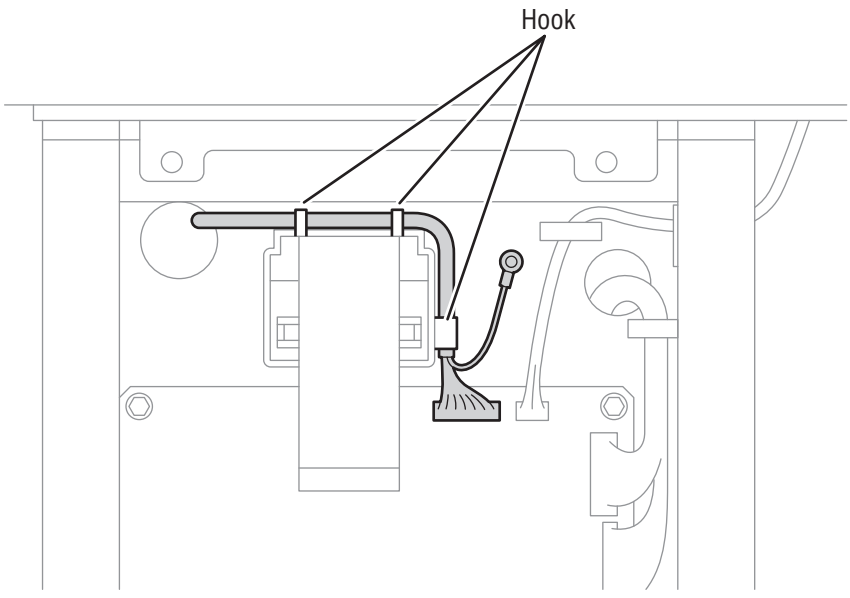


s6128mfp-268

Caution

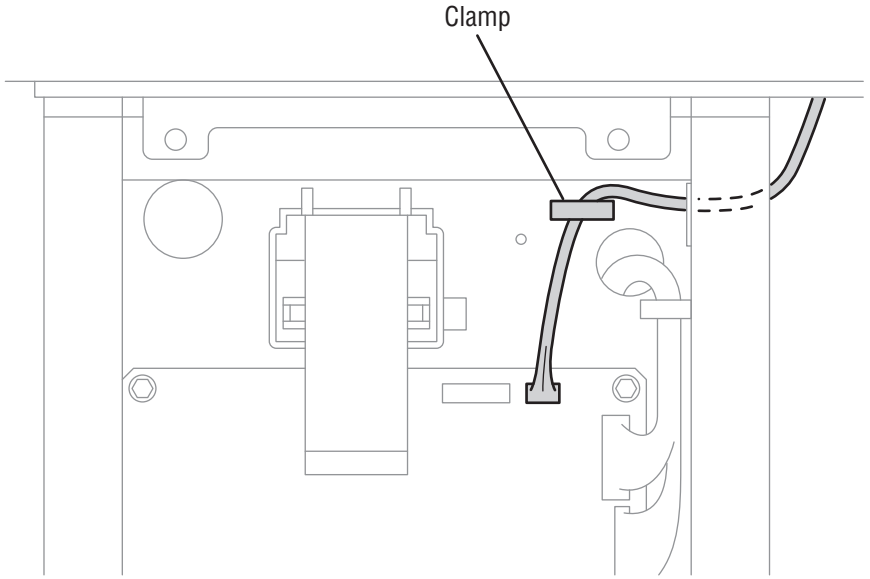
The Ferrite Core is extremely fragile. Use care when removing the core from the ribbon cable.

15. Disconnect P/J1003 on the Image Processor Board and release the ADF Assembly harness from the three hooks on the Ferrite Core holder, pull it through the hole in the chassis.



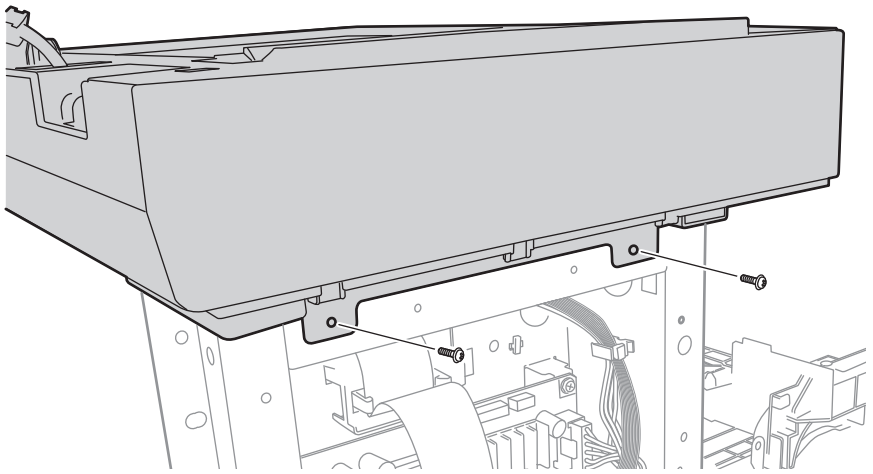
s6128mfp-269

16. Disconnect P/J1002 from the Image Processor Board and release the IIT Sub-Assembly harness from the clamp. Pull the harness through the hole.



s6128mfp-283

17. Remove 2 screws (silver, 6mm) that secure the IIT Sub-Assembly to the chassis. Shift the IIT Sub-Assembly to left to release the holes of the assembly from the four studs to remove the IIT from the chassis.



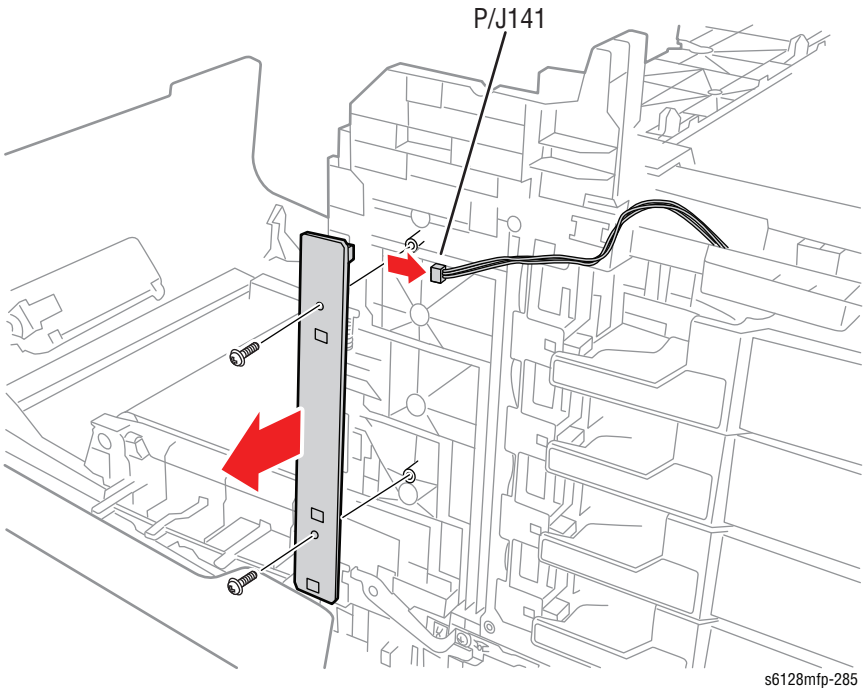
s6128mfp-284

Xerographics

Erase LED Assembly

(PL4.1.8)

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Rear Cover (page 8-22).
4. Remove the Right Side Cover (page 8-23).
5. Remove the two screws (silver, tap, 8mm) that secure the Erase LED Assembly to the chassis.
6. Remove the Erase LED Assembly from the printer.
7. Unplug the connector (P/J141) of the Erase LED Assembly.



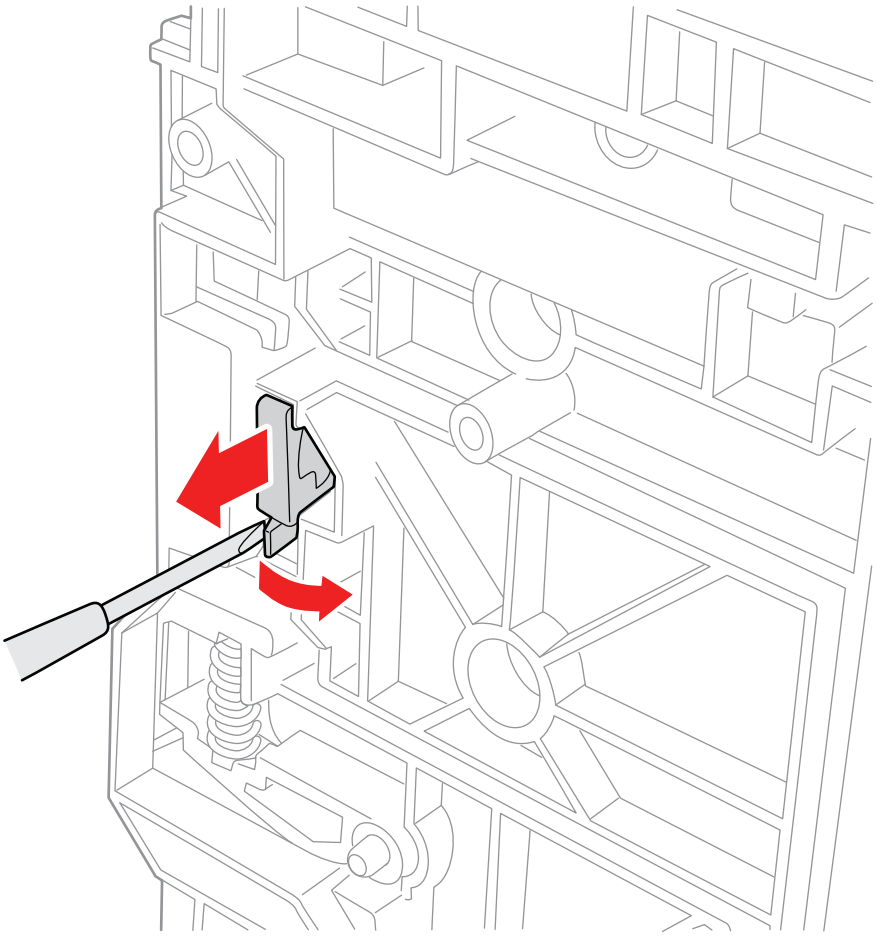
Right Imaging Unit Restraint Block

(PL4.1.97)

Note

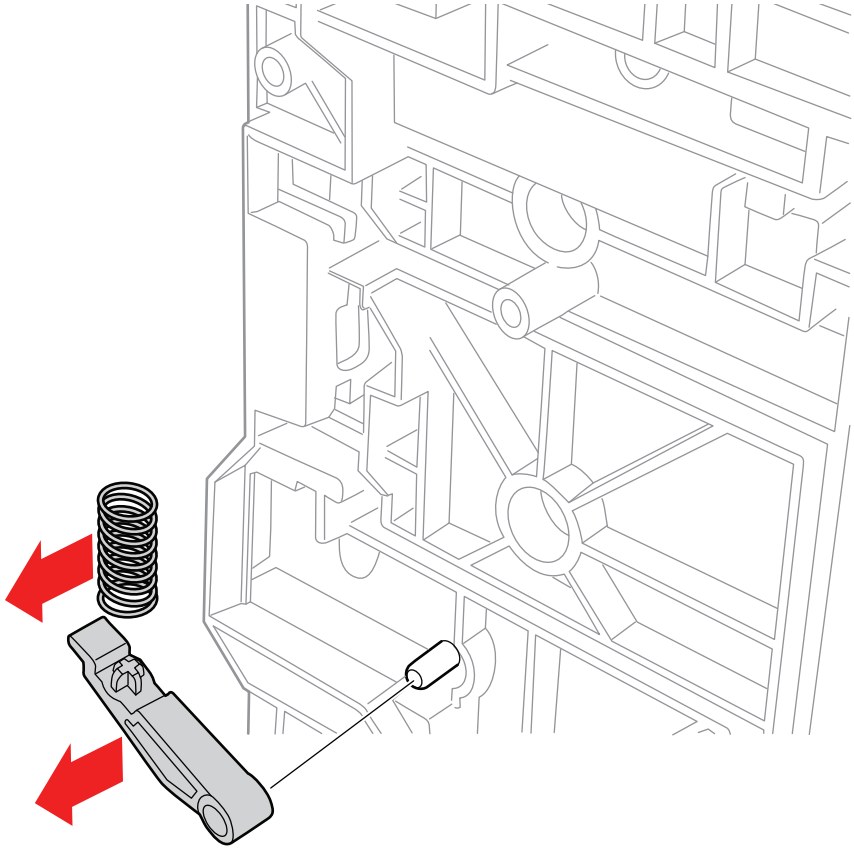
The following procedure applies to both the upper and lower Right Imaging Unit Restraint Blocks.

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Rear Cover (page 8-22).
4. Remove the Right Side Cover (page 8-23).
5. Remove the Erase LED Assembly (page 8-86).
6. Use a miniature screwdriver to release the hook on the Imaging Unit Restraint Block.
7. Remove the Imaging Unit Restraint Block from the printer.



s6128mfp-286

8. Remove the Imaging Unit Spring from the printer.
9. Rotate the Imaging Unit Lever slightly and remove it from the printer.

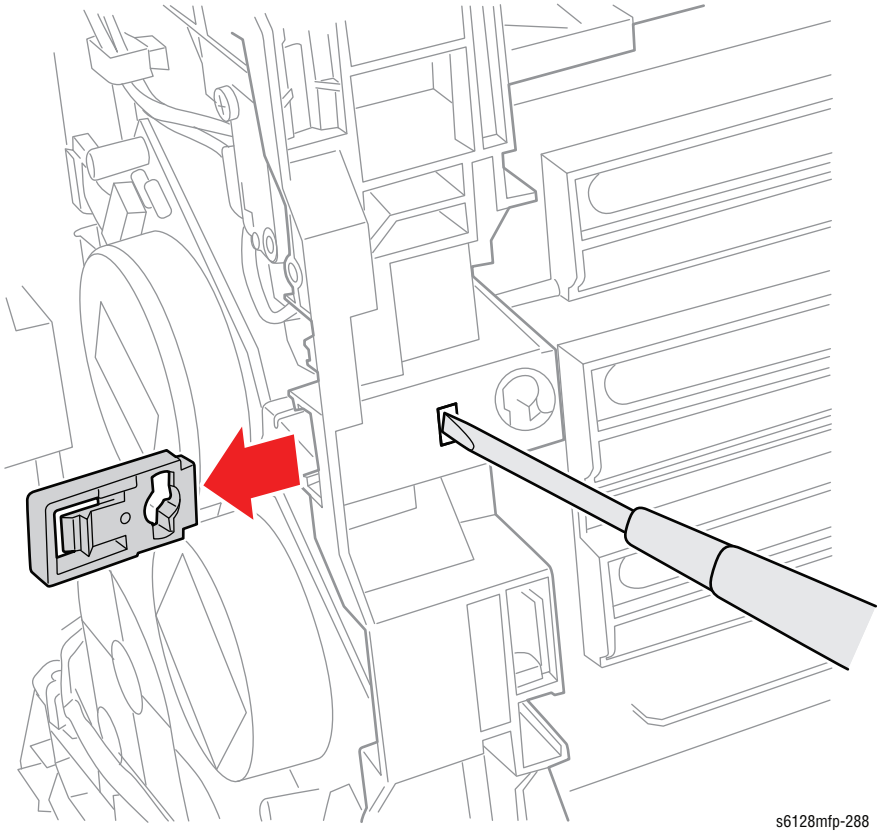


s6128mfp-287

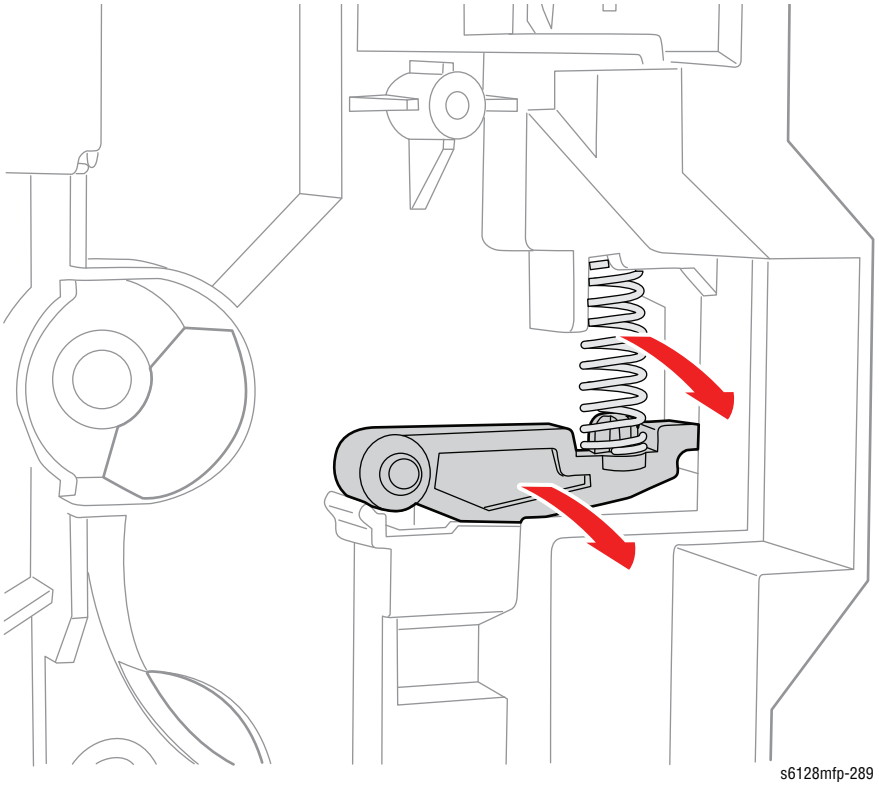
Left Imaging Unit Restraint Block

PL 4.1.98

1. Remove the Left Side Cover (page 8-17).
2. Remove the Main Drive Assembly (page 8-58).
3. Use a miniature screwdriver to release the hook on the Imaging Unit Restraint Block.



4. Remove the Imaging Unit Restraint Block from the printer.
5. Remove the Imaging Unit Spring from the printer.
6. Rotate the Imaging Unit Lever slightly and remove it from the printer.



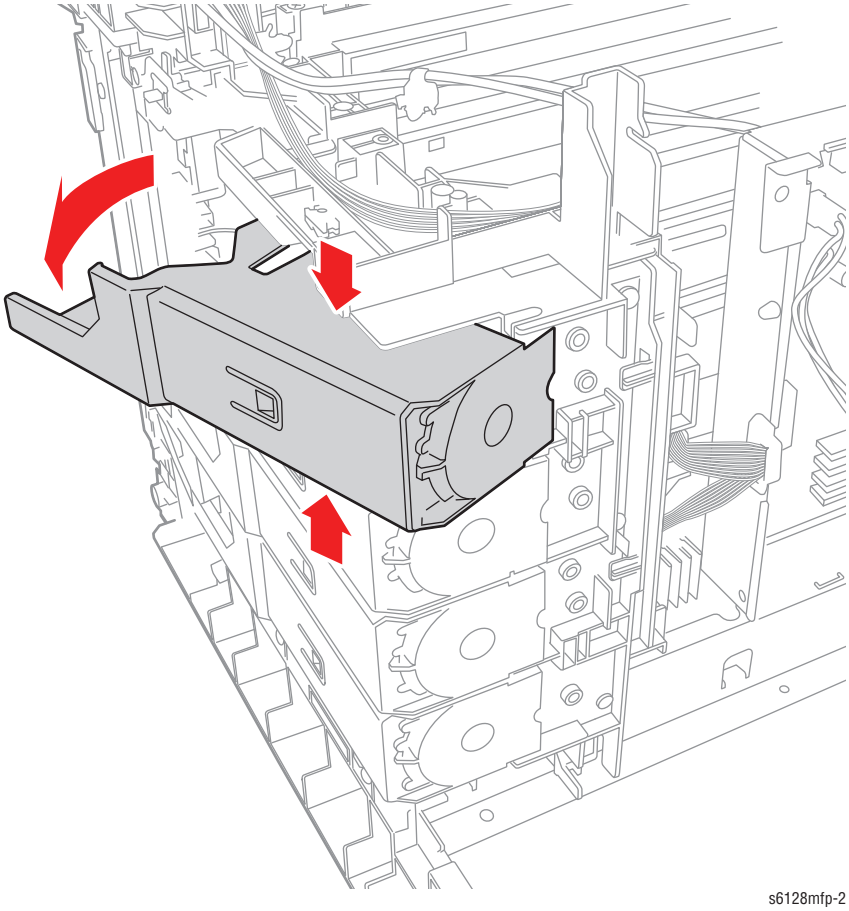
Toner Cartridge Holders

PL 5.1.17~20

Note

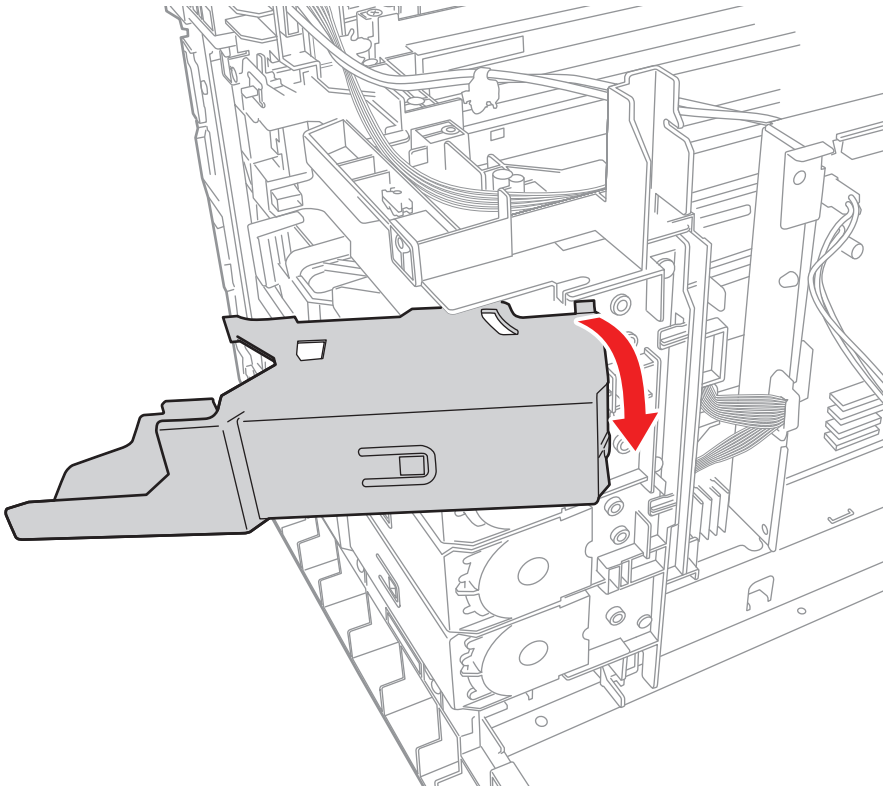
The following procedure applies to each of the four Toner Cartridge Holders.

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Remove the Lower Scanner Cover (page 8-26).
8. Remove the ESS Shield (page 8-46).
9. Remove the Inner Pole Cover (page 8-20).
10. Remove the LVPS Card Cage (page 8-66).
11. Remove the Duct Plate (page 8-62).
12. Remove the Breaker Chassis (page 8-64).
13. Remove the Toner Cartridges (page 8-13).
14. Squeeze the center of the Toner Cartridge Holder to release the hole of the Toner Cartridge Holder from the boss of the Dispenser Frame. Open the Toner Cartridge Holder by 90 degrees.



s6128mfp-2

15. Press the boss part of the Toner Cartridge Holder, remove the Toner Cartridge Holder from the printer.

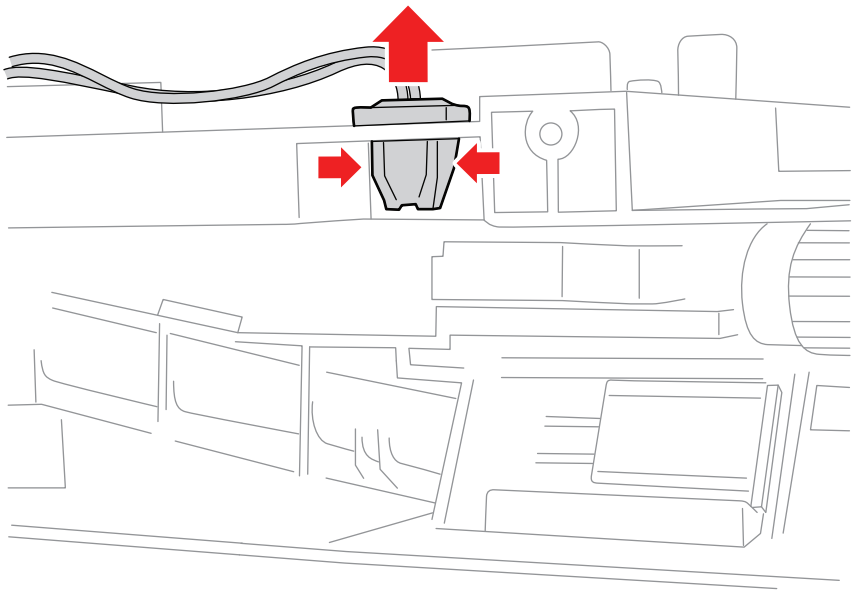


s6128mfp-291

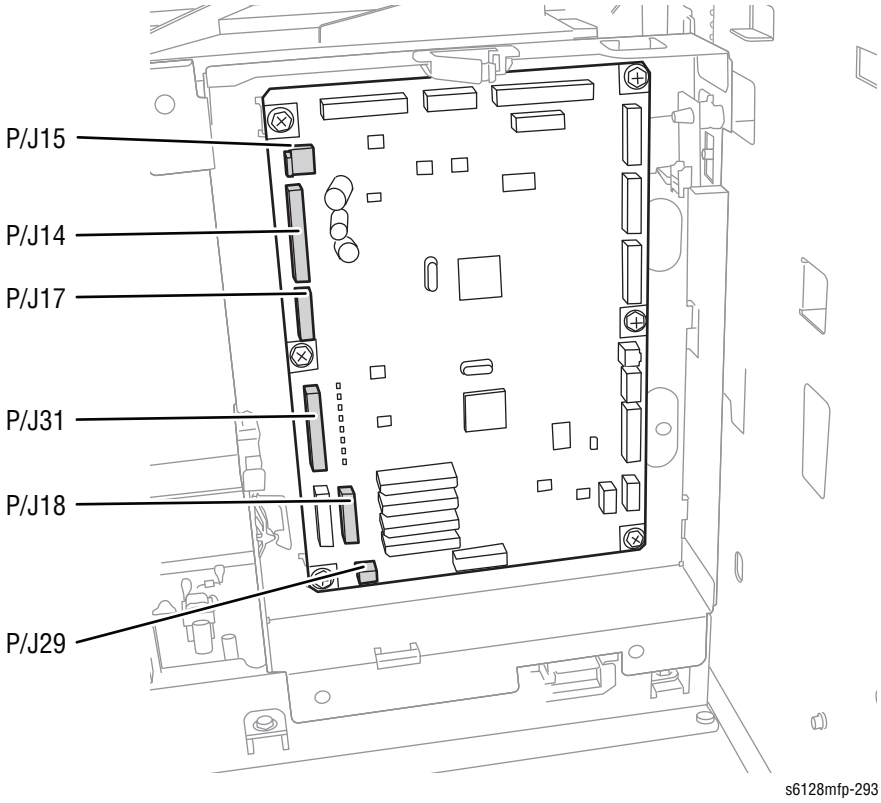
Dispense Assembly

PL 5.1.1

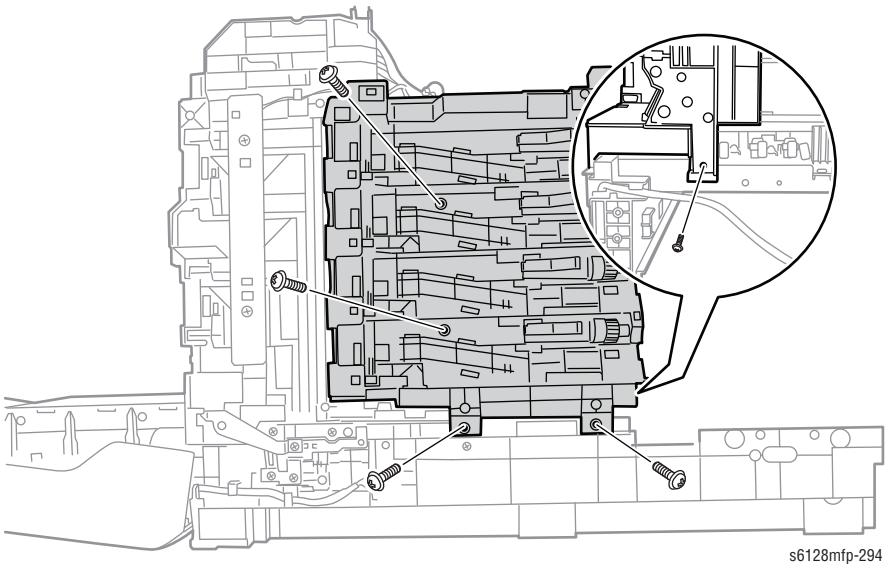
1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Remove the Lower Scanner Cover (page 8-26).
8. Remove the ESS Shield (page 8-46).
9. Remove the Inner Pole Cover (page 8-20).
10. Remove the LVPS Card Cage (page 8-66).
11. Remove the Duct Plate (page 8-62).
12. Remove the Breaker Chassis (page 8-64).
13. Remove the Toner Cartridge Holders (page 8-90).
14. Release the hooks of the LVPS Main Harness connector (P5041), using needle nose pliers, to remove it from the Dispense Assembly.



15. Disconnect 7 connectors (P/J14, 15, 17, 18, 19, 29, 31) on the MCU Board, then release the Fuser and LVPS main harnesses from the hooks on the Dispense Assembly.

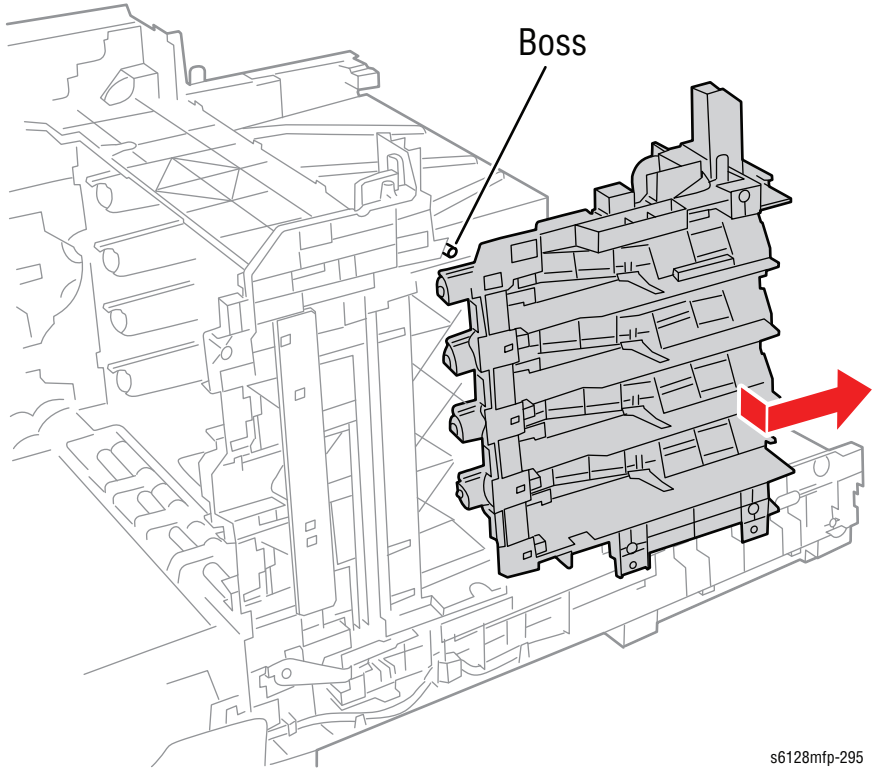


16. Remove 4 screws (silver, tap, 8mm) that secure the Dispense Assembly to the chassis.
17. Remove 1 screw (silver, M4, 6mm) at the rear side of the Dispense Assembly.



s6128mfp-294

18. Release the hole of the Dispense Assembly from the boss, then move the Dispense Assembly backward to remove it.



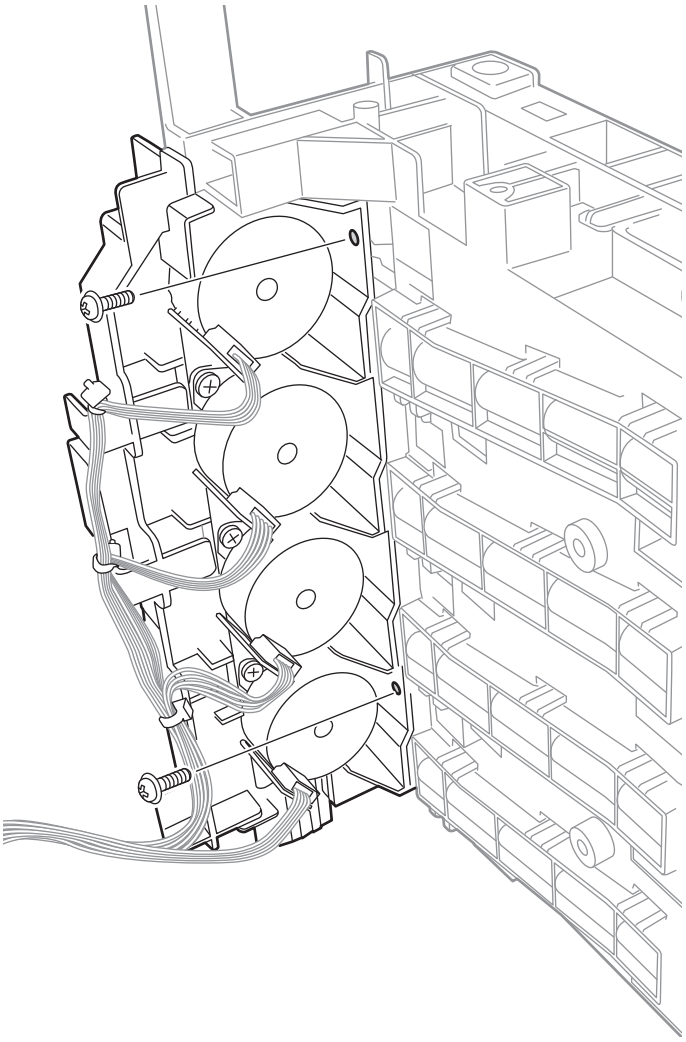
s6128mfp-295

Toner Motor Frame Assembly

PL 5.1.2

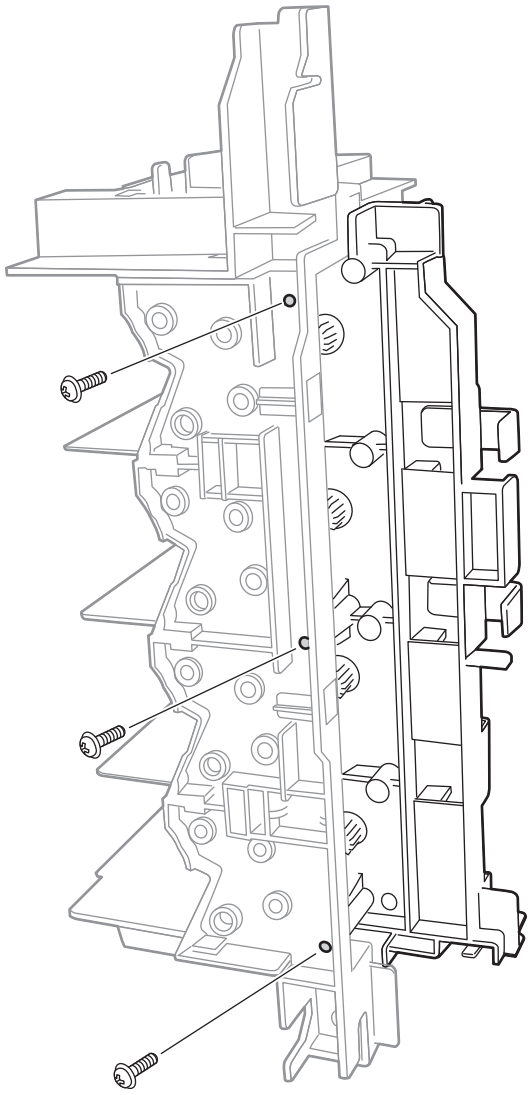
1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Remove the Lower Scanner Cover (page 8-26).
8. Remove the ESS Shield (page 8-46).
9. Remove the Inner Pole Cover (page 8-20).
10. Remove the LVPS Card Cage (page 8-66).
11. Remove the Duct Plate (page 8-62).
12. Remove the Breaker Chassis (page 8-64).
13. Remove the Toner Cartridge Holders (page 8-90).
14. Remove the Dispense Assembly (page 8-91).
15. Disconnect all the Toner Motor connectors and release all the harnesses from the Toner Motor Frame Assembly.

16. Remove 2 screws (silver, tap, 8mm) that secure the Toner Motor Frame Assembly to the Dispense Assembly at the side..



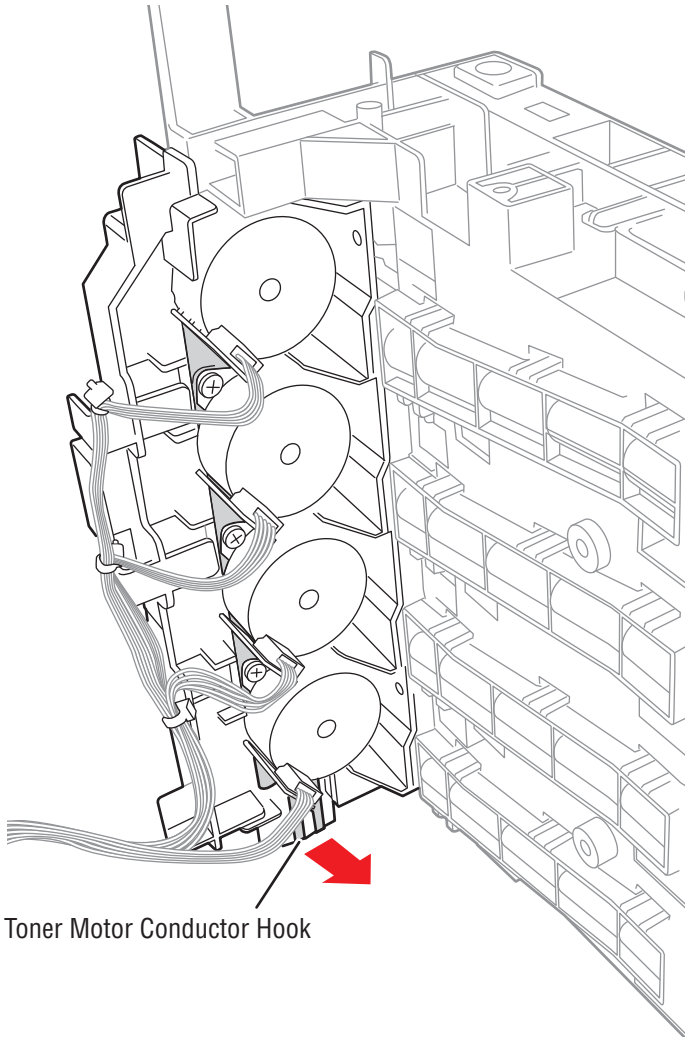
s6128mfp-296

17. Remove 3 screws (silver, tap, 8mm) that secure the Toner Motor Frame Assembly to the Dispense Assembly at the back.



s6128mfp-313

18. Release the Toner Motor Conductor from the hook of the Dispense Assembly.



s6128mfp-323

Note

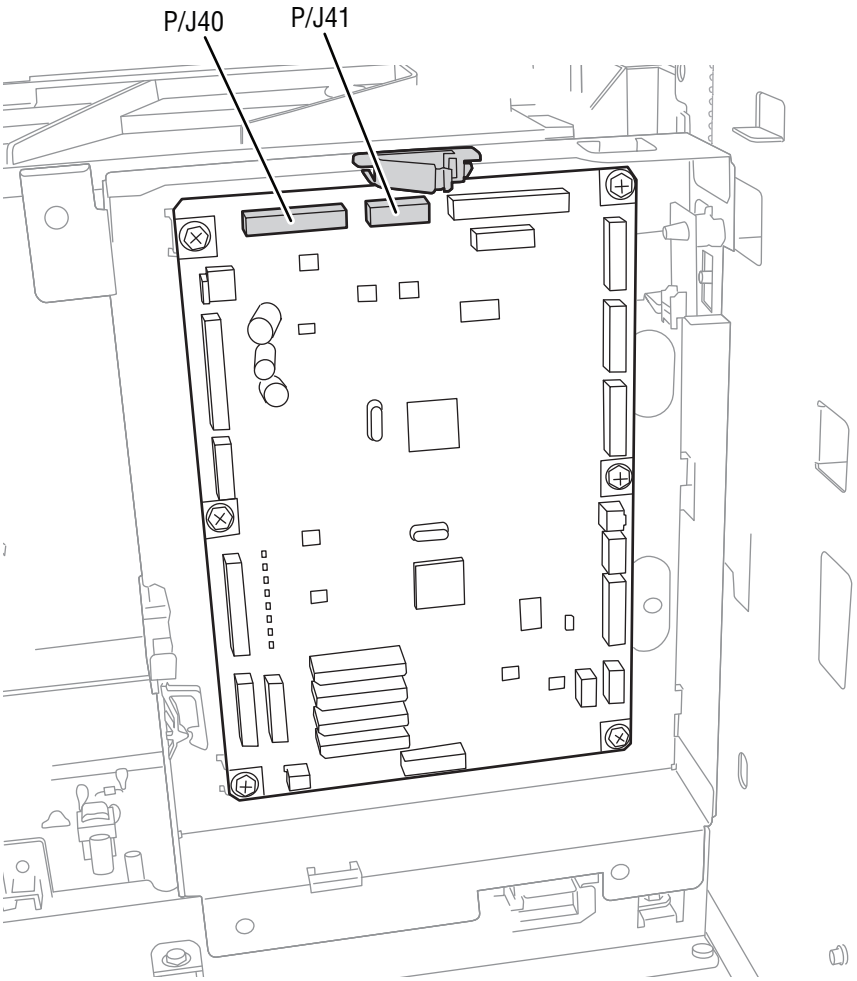
The Auger drve gears are not captive to the toner motor frame assembly.

19. Seperate the toner motor frame assembly from the Dispense Assembly.

Laser Unit

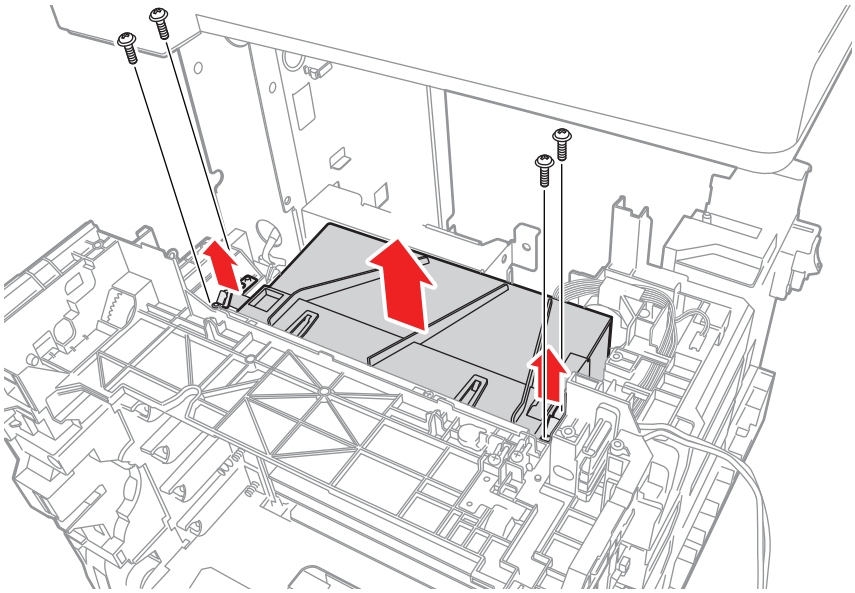
PL 4.1.1

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Remove the Lower Scanner Cover (page 8-26).
8. Remove the ESS Shield (page 8-46).
9. Remove the Inner Pole Cover (page 8-20).
10. Remove the LVPS Card Cage (page 8-66).
11. Remove the Duct Plate (page 8-62).
12. Disconnect P/J40 and P/J41 from the MCU Board and release the harnesses from the Edging Saddle.



s6128-297

13. Remove 4 screws (silver, tap 8mm) that secure the left and right Springs and remove the Springs.



s6128mfp-298

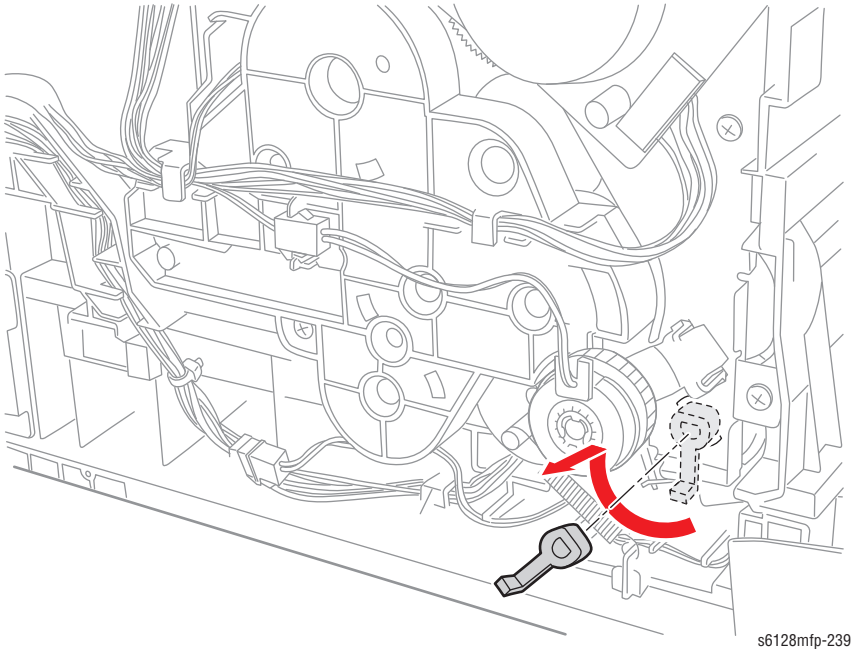
14. Lift the Laser Unit from the chassis.
15. Disconnect the 2 Laser Unit harnesses from the Laser Unit (P/J411 and P/J412).

Transfer Belt Pivot Kit

PL 6.1.99

This procedure removes the pivot shafts for the Transfer Belt.

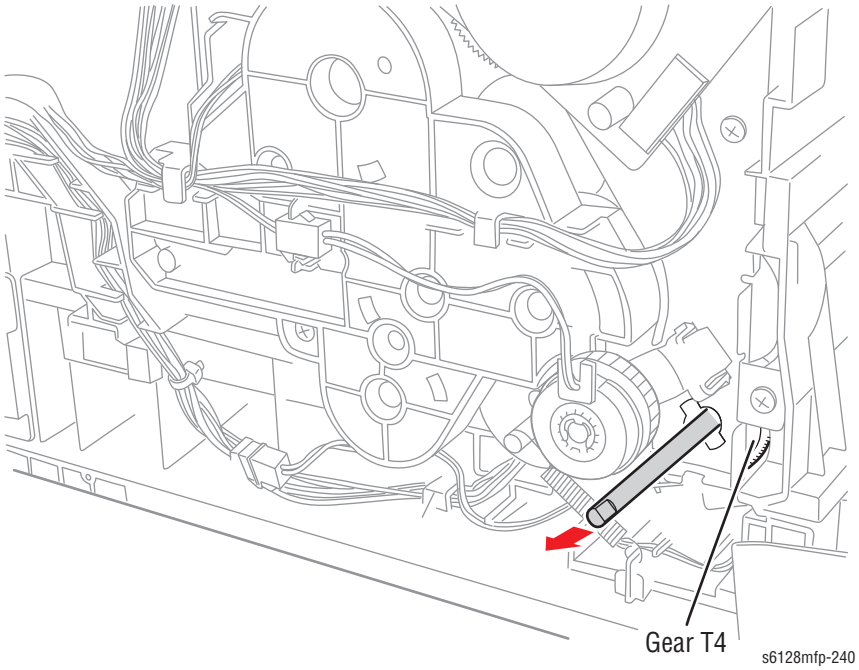
1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Outer Pole Cover (page 8-19).
4. Remove the Rear Cover (page 8-22).
5. Remove the Right Side Cover (page 8-23).
6. Remove the Top Cover (page 8-25).
7. Remove the Front Cover (page 8-15).
8. Rotate the Pivot Stopper to align the tabs of the Pivot Stopper with the notches of the Main Drive Assembly.
9. Remove the Pivot Stopper from the printer.



Note

When performing the following procedure, take care not to drop Gear T4.

10. Pull out the Left Transfer Pivot, and remove the Gear T4 from the printer.

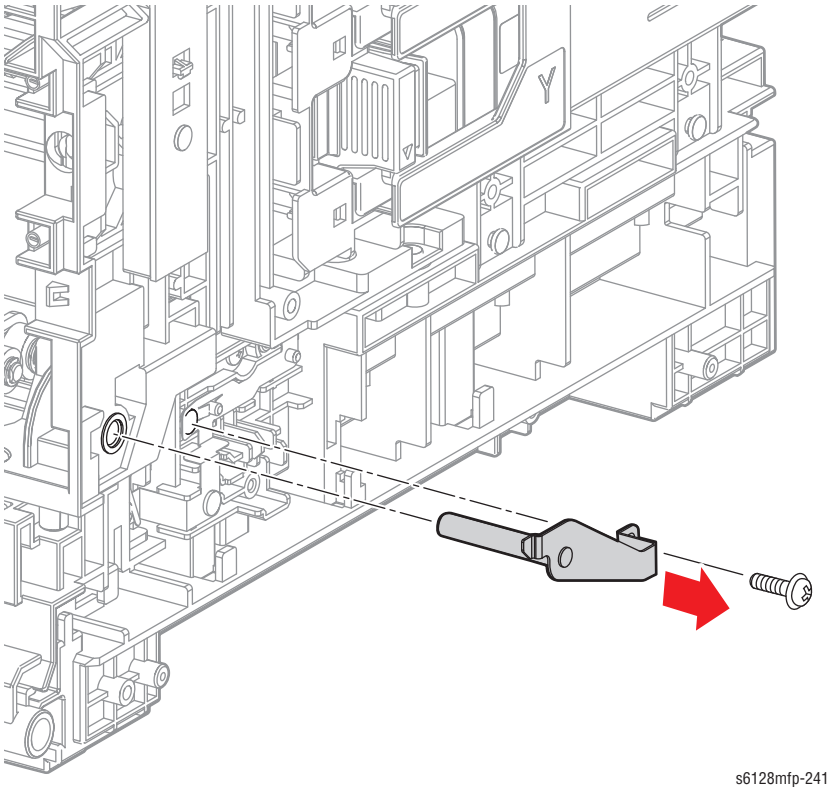


11. Remove the screw (silver, tap, 8mm) that attaches the Right Side Pivot Shaft to the printer.

Note

When performing the next step, keep the Transfer Belt slightly lifted to ease removal of the Pivot Shaft. If you are performing this procedure as part of the Transfer Belt removal, the only step remaining after removing the Right Pivot Shaft is to lift the Transfer Belt out of the printer.

12. Pull the Pivot Shaft out of the printer.

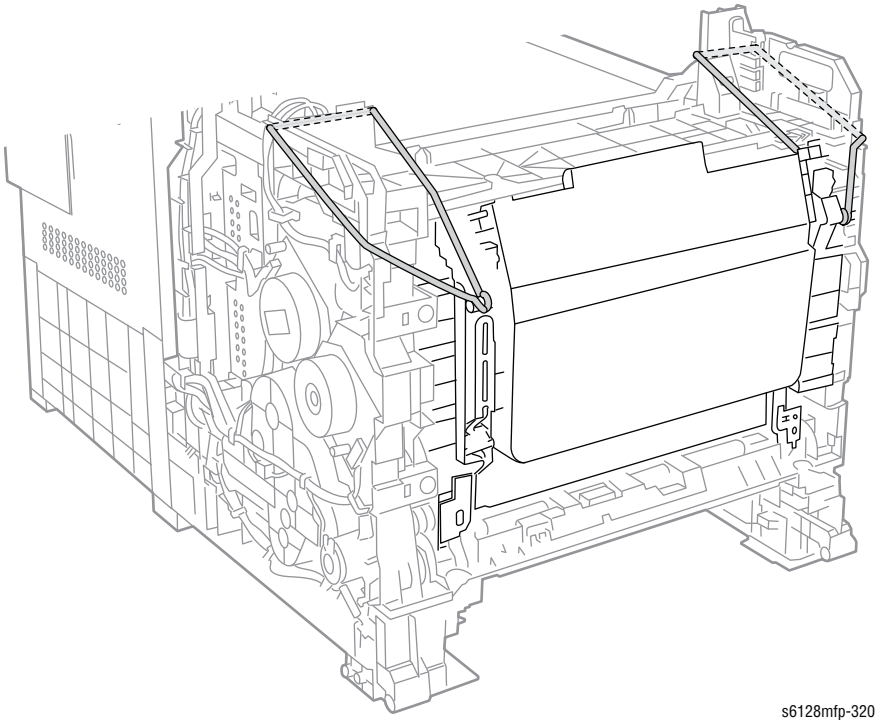


s6128mfp-241

Transfer Belt

PL 6.1.7

1. Open the Front Cover.
2. Remove the Left Side Cover (page 8-17).
3. Remove the Rear Cover (page 8-22).
4. Remove the Right Side Cover (page 8-23).
5. Remove the Front Cover (page 8-15).
6. Secure the Transfer Belt to the chassis using rubber bands to hold it upright.



s6128mfp-320

Caution

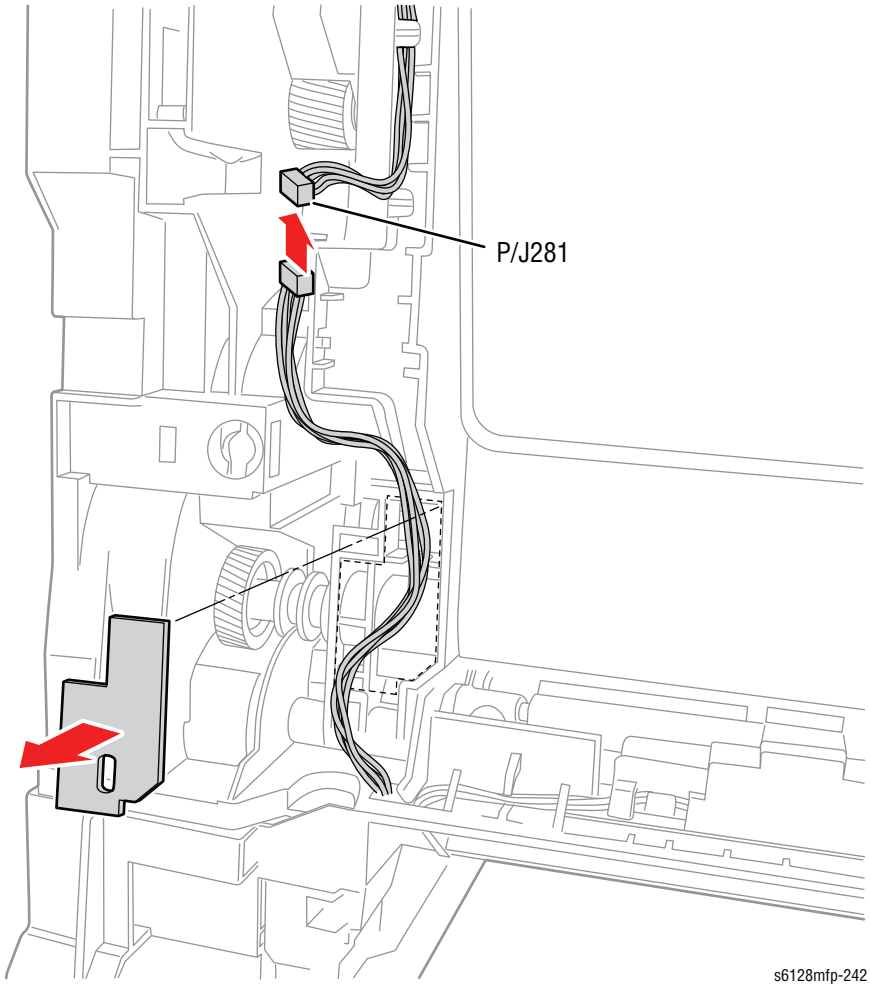
When performing the next step, take care not to scratch the surface of the Transfer Belt.

7. Use a miniature screwdriver to release the Harness 2 Cover hook, then remove the Harness 2 Cover.

Note

When performing the next step, leave the relay connector on the Transfer Belt harness side.

8. Release the harness from the pegs of the Transfer Belt, then unplug the Transfer Belt connector (P/J281).
9. Release the harness coming from printer from hook of the Transfer Belt.



10. Tilt the Transfer Belt slowly.
11. Remove the Pivot Kit (page 8-100).
12. Remove the Front Cover Pivot Shaft holding the Transfer Belt in the chassis and remove the Transfer Belt.

Replacement Note

Reset the Transfer Belt life counter in after installing a new Transfer Belt.

Parts List

In this chapter...

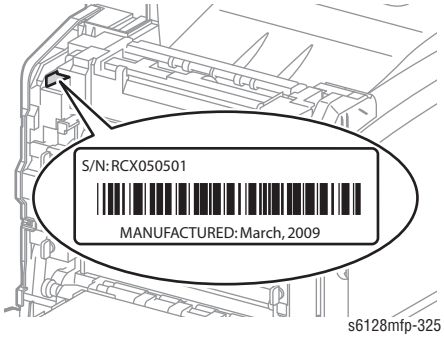
Chapter 9

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 left-side frame near the Fuser. The Front Cover must be opened to locate the Serial Number.



The nine-digit serial number uses the format **PPPRSSSSS**.

- **PPP** = Three digit alphanumeric product code

Product Code	Product
RCX	6128MFP, 110 V Engine
RDA	6128MFPV, 220 V Engine

- **R** = Single digit numeric revision digit, 0-9. To be rolled when the ending serial number is reached or when a major product change occurs.
- **SSSSS** = Five digit numeric serial number based on the following table. The serial numbers are reset only when the ending number is reached or when the revision number is rolled.

Product	Starting Serial Number	Ending Serial Number
6128MFP_N, 110V Engine	050501	500500
6128MFPV_N, 220V Engine	050501	500500

Example

RCX253072: Xerox Serial Number

RCX: Product Code for the Phaser 6128MFP, 110V printer

2 = Revision Level

53072 = Serial Number for 6128 N

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

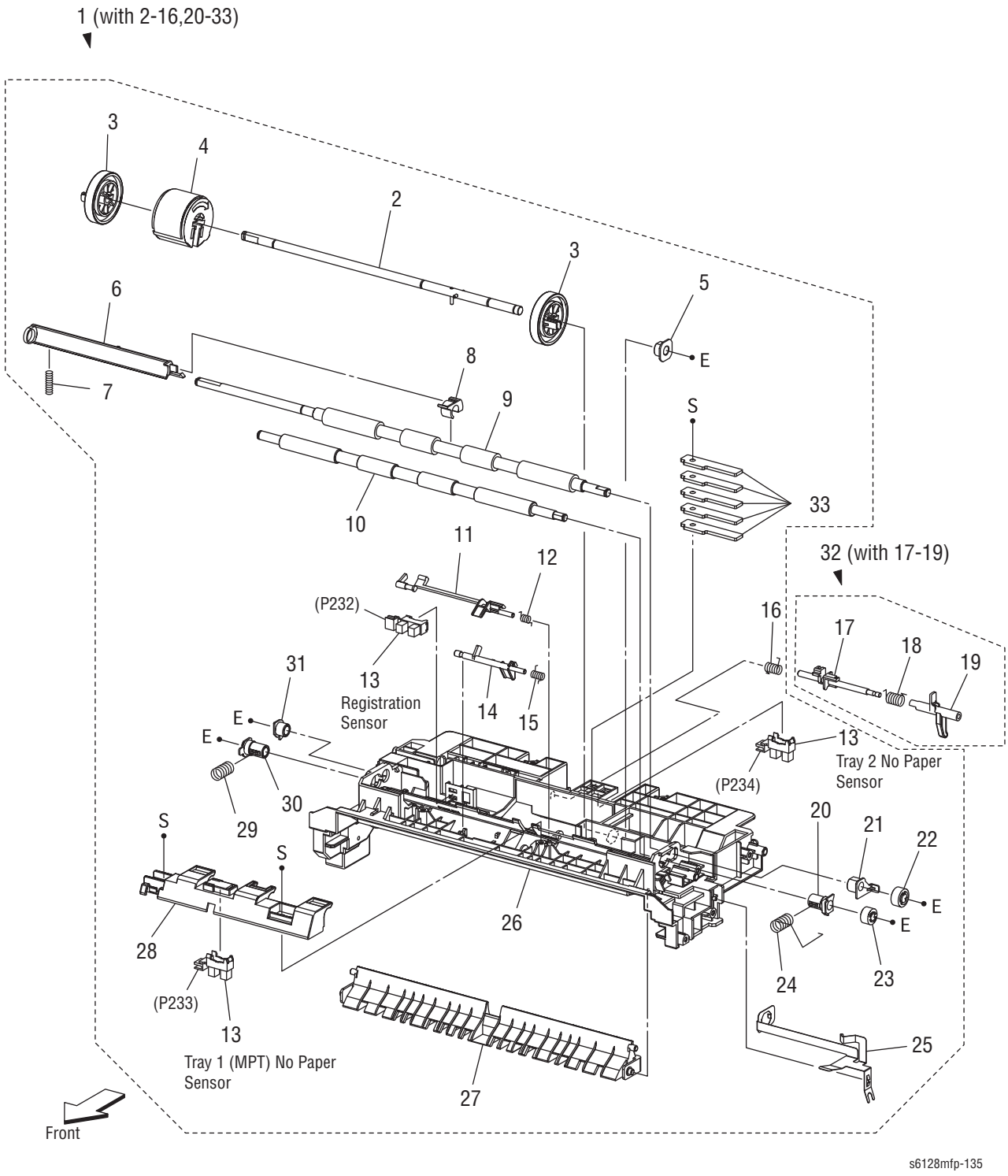
Only parts showing part numbers are available for ordering by support. Parts not showing part numbers are available on the parent assembly.

Abbreviations

Abbreviation	Meaning
C	C-ring
E	E-ring
KL	K-clip
S	Screw

Parts Lists

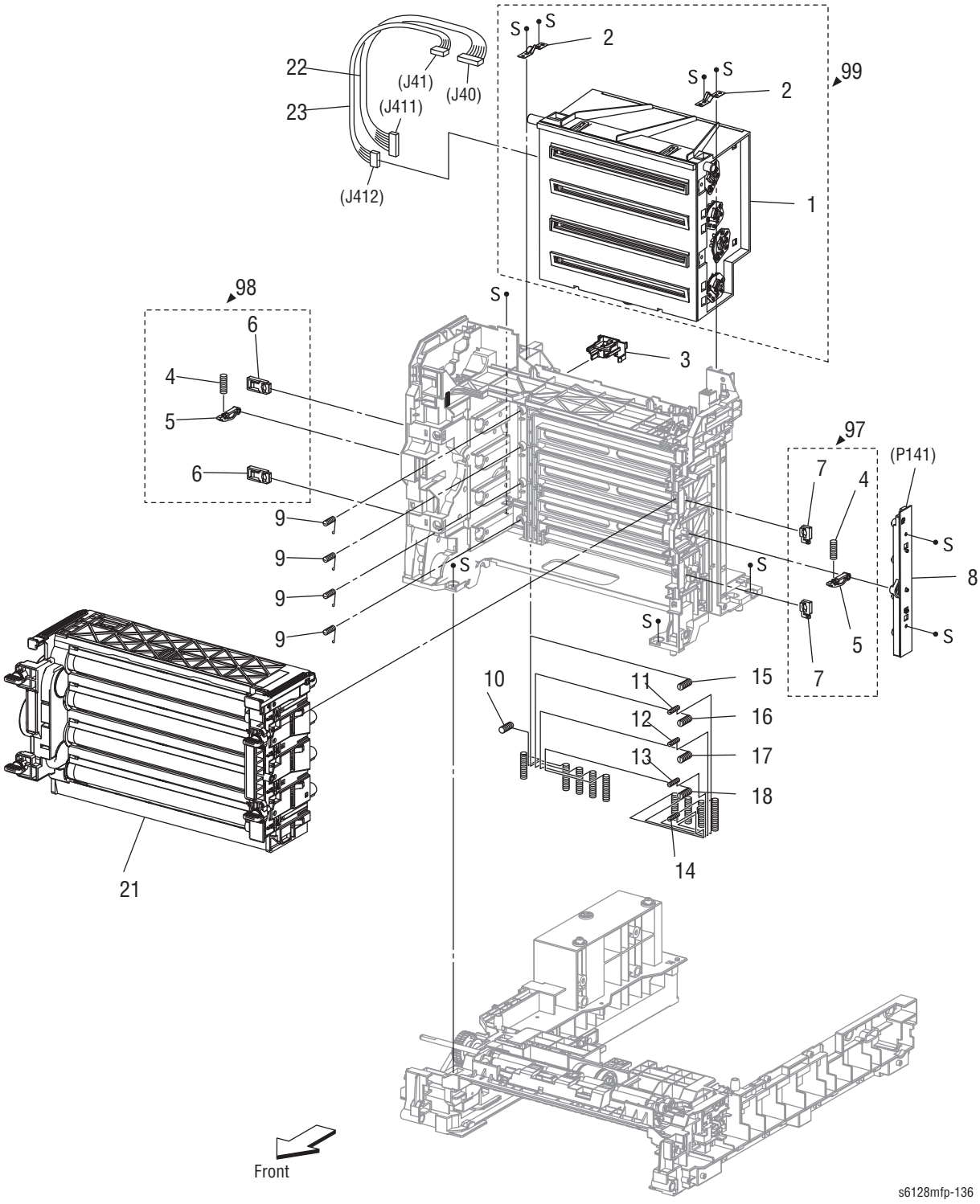
Parts List 3.2 Feeder



Parts List 3.2 Feeder

Item	Parts name	Part number
1	Chute Assy Fdr Regi (With 2-16,20-33)	—
2	Shaf Assy Feed	—
3	Roll Core Msi	—
4	Roll Assy Feed	657K81230
5	Bearing Earth	—
6	Actuator Regi Out	—
7	Spring Regi Out	—
8	Actuator Regi Roll	—
9	Roll Assy Regi	—
10	Roll Regi Metal	—
11	Actuator Regi In	120E27820
12	Spring Act Regi	—
13	Sensor Photo	130E87090
14	Actuator SSI (Manual Feed)	120E27850
15	Spring Act SSI	—
16	Spring Stp	—
17	Stopper Act	—
18	Spring Act Np	—
19	Actuator No Paper	—
20	Bearing M Earth	—
21	Bearing Earth Regi	—
22	Gear Regi R	—
23	Gear Regi M	—
24	Spring Regi R M	—
25	Plate Earth Regi	—
26	Chute Up	—
27	Chute Low	—
28	Bracket SNS	—
29	Spring Regi L M	—
30	Bearing M	—
31	Bearing R	—
32	Actuator Assy No Paper (With 17-19)	120K92294
33	Plate Weight	—

Parts List 4.1 Xerographics

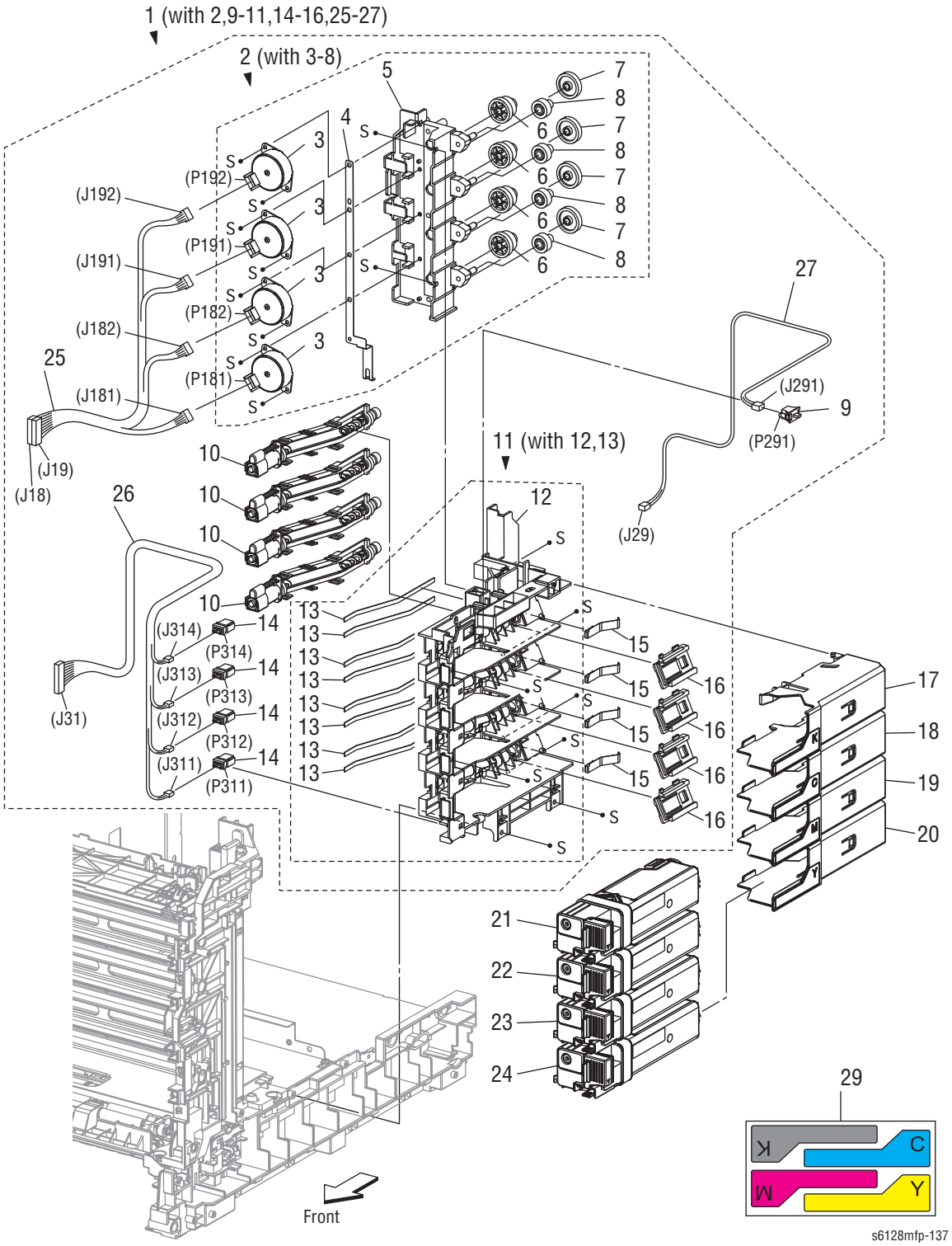


Parts List 4.1 Xerographics

ID No.	Name/Description	Part Number
1	ROS Assy (Laser Unit)[a]	
2	Spring Ros	—
3	Holder Crum	—
4	Spring PHD	—
5	Lever PHD	—
6	Block Stopper PHD D	—
7	Block Stopper PHD AD	—
8	Led Assy Erase	122K94041
9	Spring Tracking	—
10	Spring Cf	—
11	Spring Tr4	—
12	Spring Tr3	—
13	Spring Tr2	—
14	Spring Tr1	—
15	Spring D4	—
16	Spring D3	—
17	Spring D2	—
18	Spring D1	—
19		
20		
21	PHD Assy (Imaging Unit)	675K69240
22	Harn Assy ROS Re (J40-j411)	—
23	Harn Assy ROS Video (J41-j412)	—
97	Kit Block PHD Right (With 4,5,7 × 2pcs)	675K54241
98	Kit Block PHD Left (With 4,5,6 × 2pcs)	675K54251
99	Kit ROS (With 1,2 × 2pcs) (Laser Unit Kit)	604K43050

a. Use PL4.1.99, Laser Unit kit, when ordering the Laser Unit.

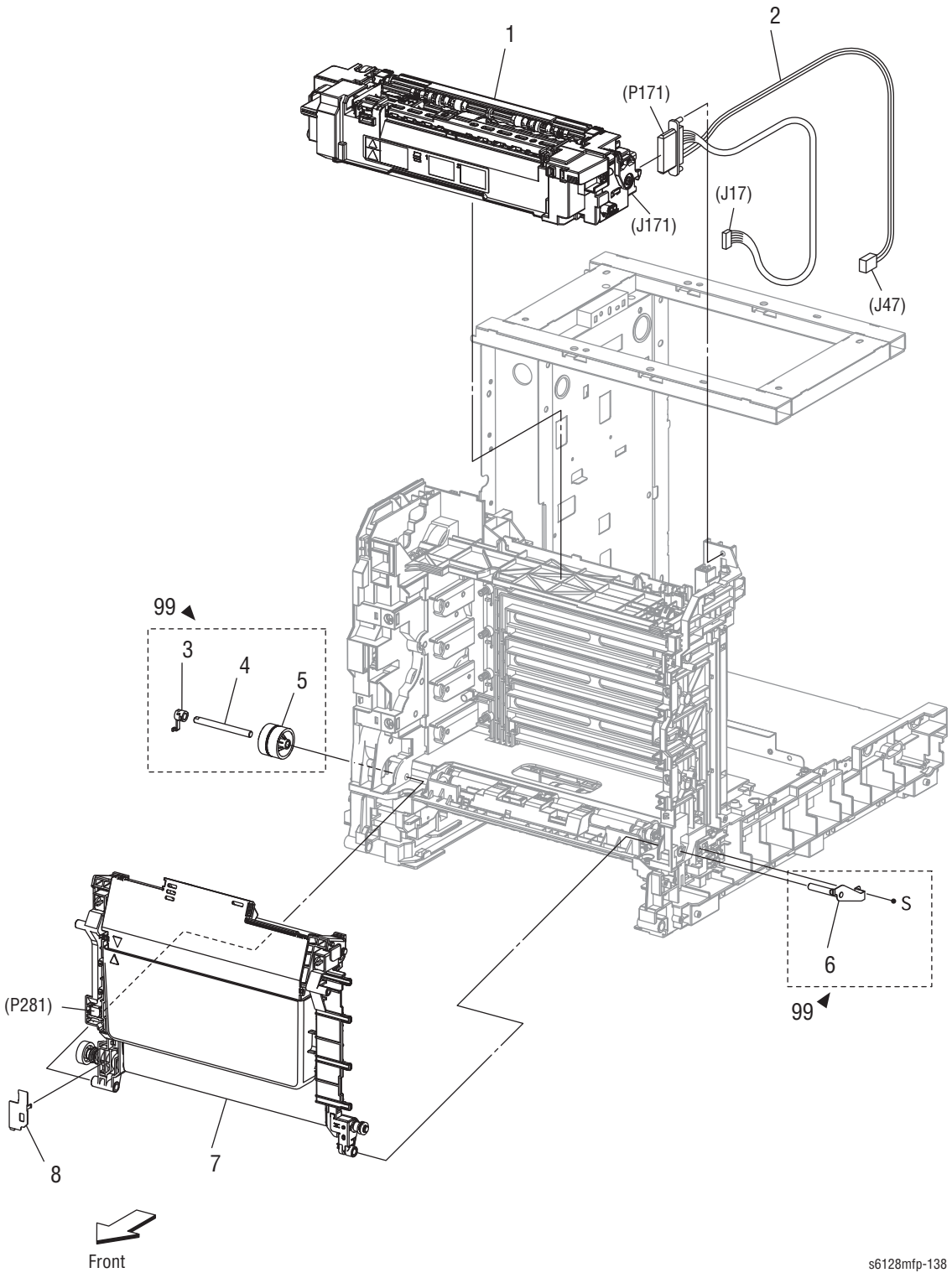
Parts List 5.1 Dispenser



Parts List 5.1 Dispenser

ID No.	Name/Description	Part Number
1	Dispense Assy (With 2,9-11,14-16,25-27)	094K92290
2	Frame Assy Mot (With 3-8)	—
3	Motor Assy Disp	—
4	Conductor Motor	—
5	Frame Motor	—
6	Gear Idler	—
7	Gear Idler Aug	—
8	Gear Idler Agi	—
9	Switch (R Side Door)	110E10200
10	Housing Assy Auger	—
11	Frame Assy Disp (With 12,13)	—
12	Frame Disp	—
13	Seal Disp Aug	—
14	Connector Crum	—
15	Spring Disp	—
16	Joint Assy Disp	—
17	Holder TCRU K	604K44920
18	Holder TCRU C	604K44930
19	Holder TCRU M	604K44940
20	Holder TCRU Y	604K44950
21B	Toner Cartridge US/EU 2.5k (K)	675K59231
21C	Toner Cartridge DMO 2.5k (K)	675K59311
22B	Toner Cartridge US/EU 2k (C)	675K59241
22C	Toner Cartridge DMO 2k (C)	675K59321
23B	Toner Cartridge US/EU 2k (M)	675K59251
23C	Toner Cartridge DMO 2k (M)	675K59331
24B	Toner Cartridge US/EU 2k (Y)	675K59261
24C	Toner Cartridge DMO 2k (Y)	675K59341
25	Harn Assy Tnr Mot (J18,J19-J181,J182,J191,J192)	—
26	Harn Assy Toner Crum (J31-J311,J312,J313,J314)	—
27	Harn Assy Side SW (J29-J291)	—
28		—
29	Label Holder	—

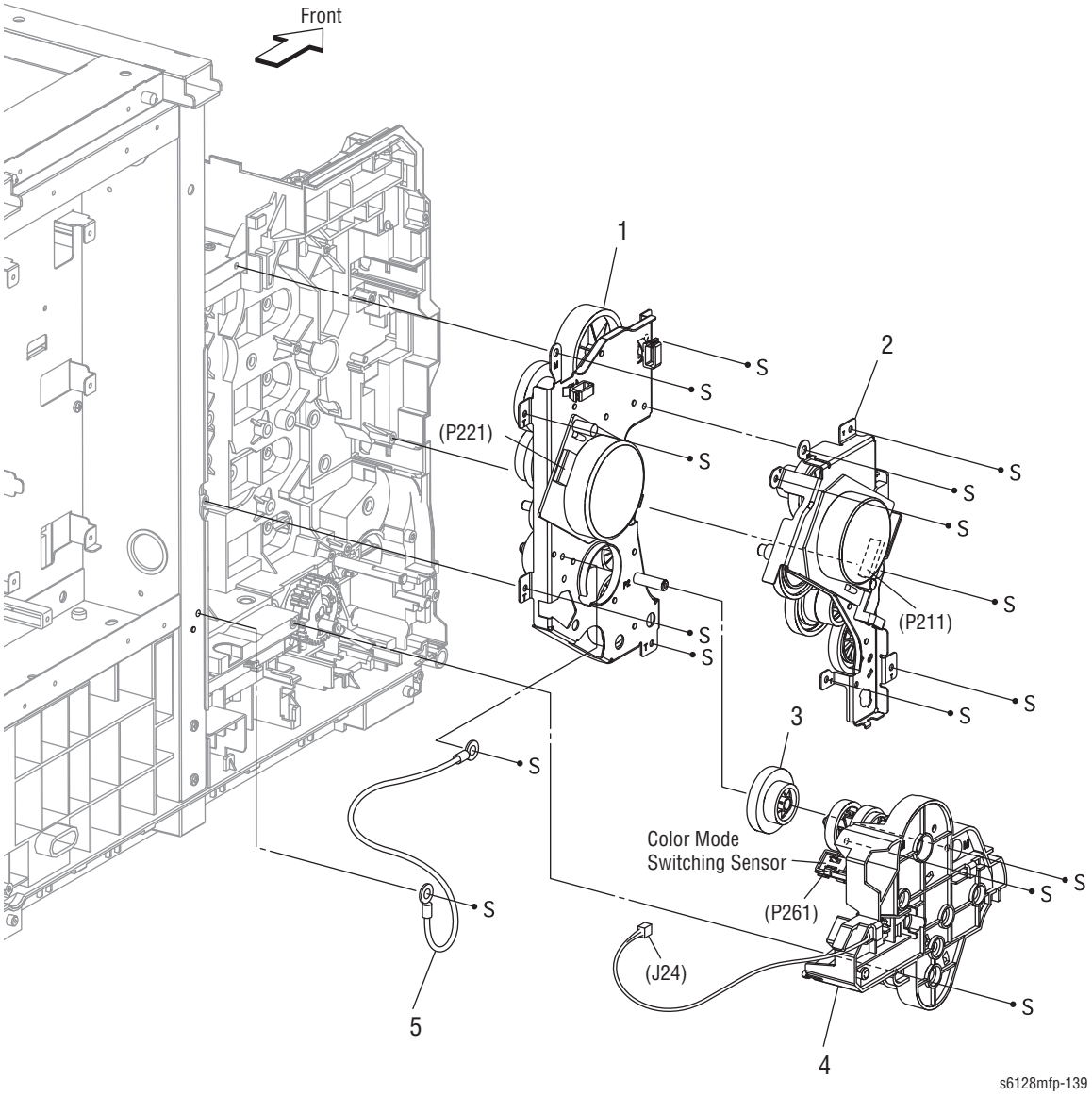
Parts List 6.1 Transfer & Fuser



Parts List 6.1 Transfer & Fuser

ID No.	Name/Description	Part Number
1A 1B	Fuser 115V Fuser 220V	675K65653 675K65663
2	Harn Assy Fuser (J17,J47-P171)	—
3	Stopper Pivot	—
4	Pivot Trans L	—
5	Gear T4	—
6	Shaft Assy Pivot	—
7	Transfer (Unit) Belt	848K03270
8	Cover Harness 2	—
99	Kit Pivot (with 3-6)	675K54121

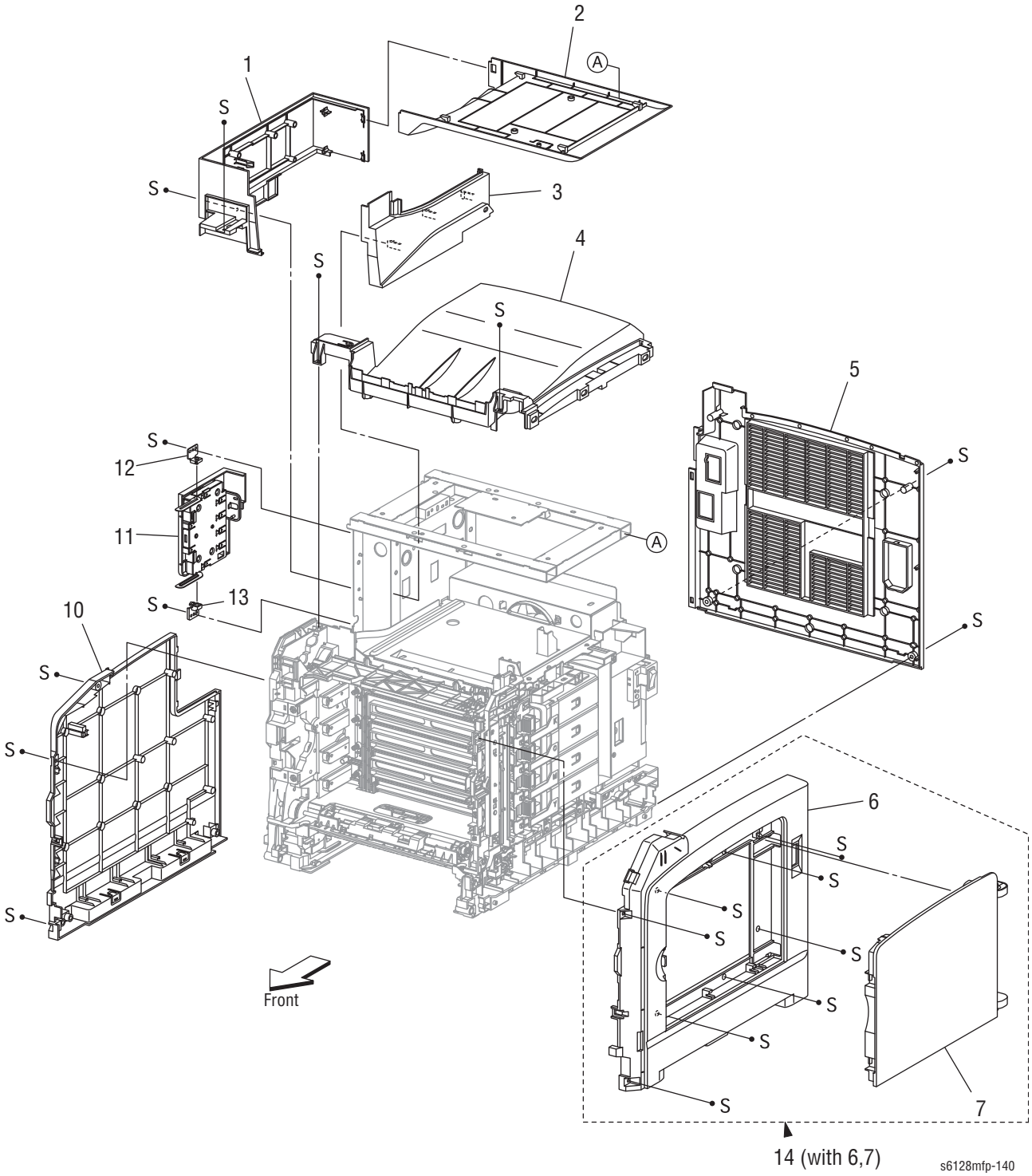
Parts List 7.1 Drive



Parts List 7.1 Drive

ID No.	Name/Description	Part Number
1	Drive Assy Sub (Sub Drive Assembly)	007K94692
2	Drive Assy Main (Main Drive Assembly)	007K94686
3	Gear P2	807E15100
4	Drive Assy PH (Feed Drive Assembly)	007K94706
5	Harness Assy Gnd	

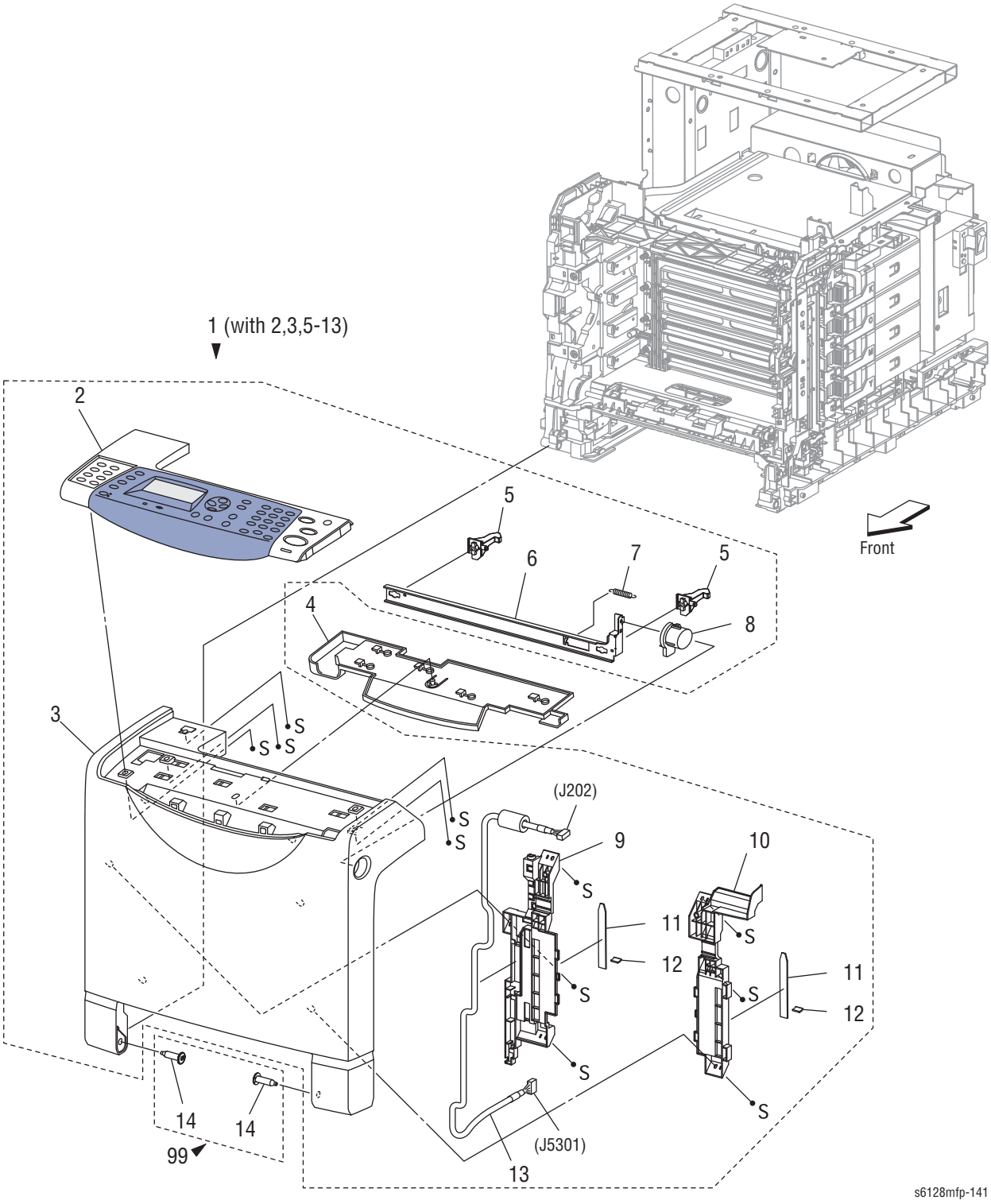
Parts List 10.1 Covers



Parts List 10-1 Covers

Item	Parts name	Part Number
1	Cover Pole Out	848E31790
2	Cover Scanner Low	848E31780
3	Cover Pole In	848E31770
4	Cover Top	848E31850
5	Cover Rear	848E31840
6	Cover Side R	
7	Cover Window Tnr	
8	- -	
9	- -	
10	Cover Side L	848K31831
11	Cover Assy ESS	848K33010
12	Pivot Assy	029K92730
13	Housing Pivot	848E30320
14	Cover Assy Side R (With 6,7)	848K27343

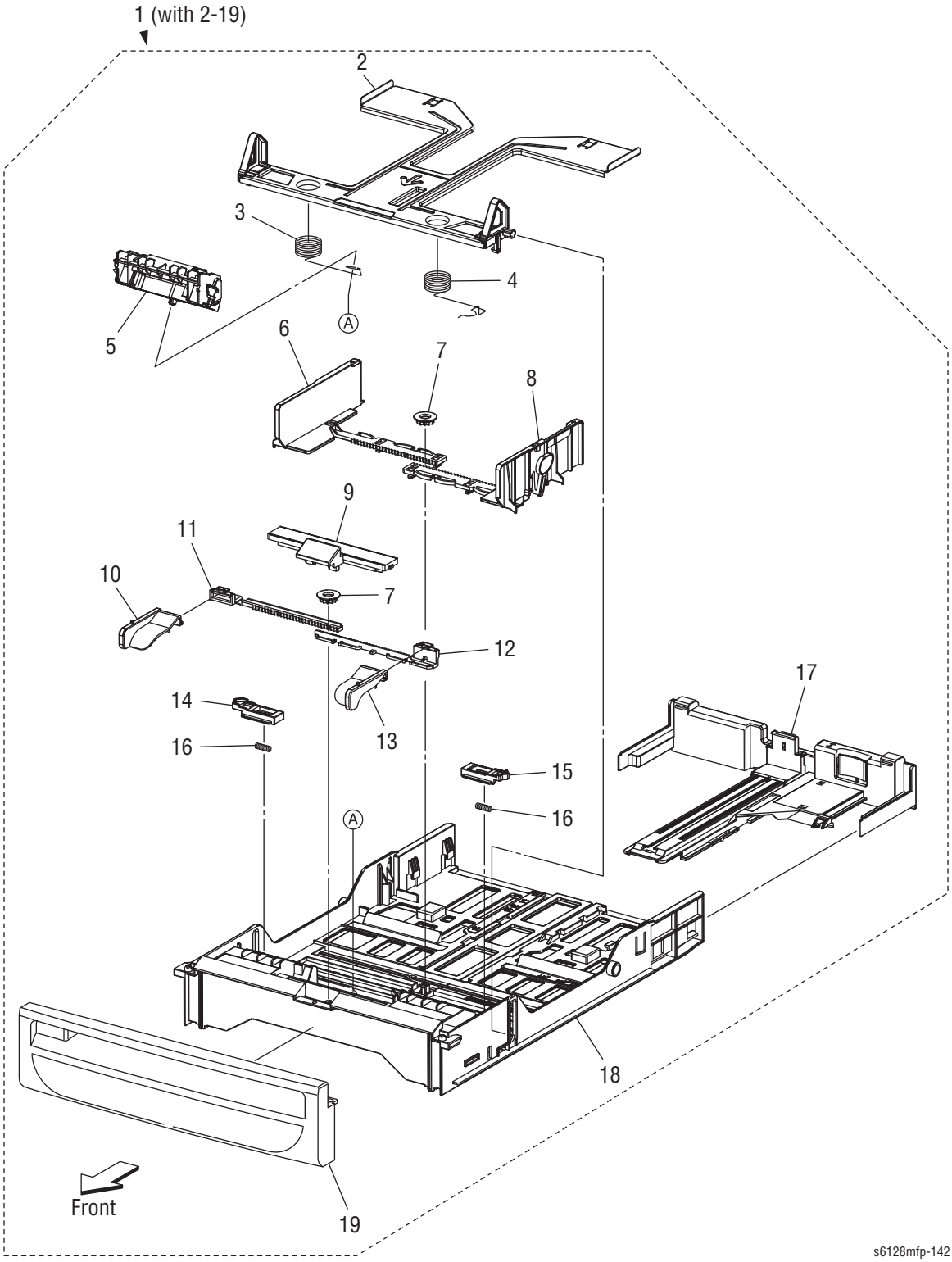
Parts List 10.2 Front Cover



Parts List 10.2 Front Cover

Item	Parts name	Part Number
1	Cover Assy Front (With 2,3,5-13)	848K27329
2	Console Assy Panel (Control Panel)	848K26097
3	Cover Front	
4	Cover Inner Front	
5	Latch Front	
6	Plate Latch	
7	Spring Latch Out	
8	Button Latch	
9	Cover Harness	
10	Guide Belt R	
11	Damper Front L Aio	
12	Damper Front S	
13	Harness A-op-opp (J202-J5301)	
14	Shaft Pivot	
99	Kit Shaft Pivot	675K54051

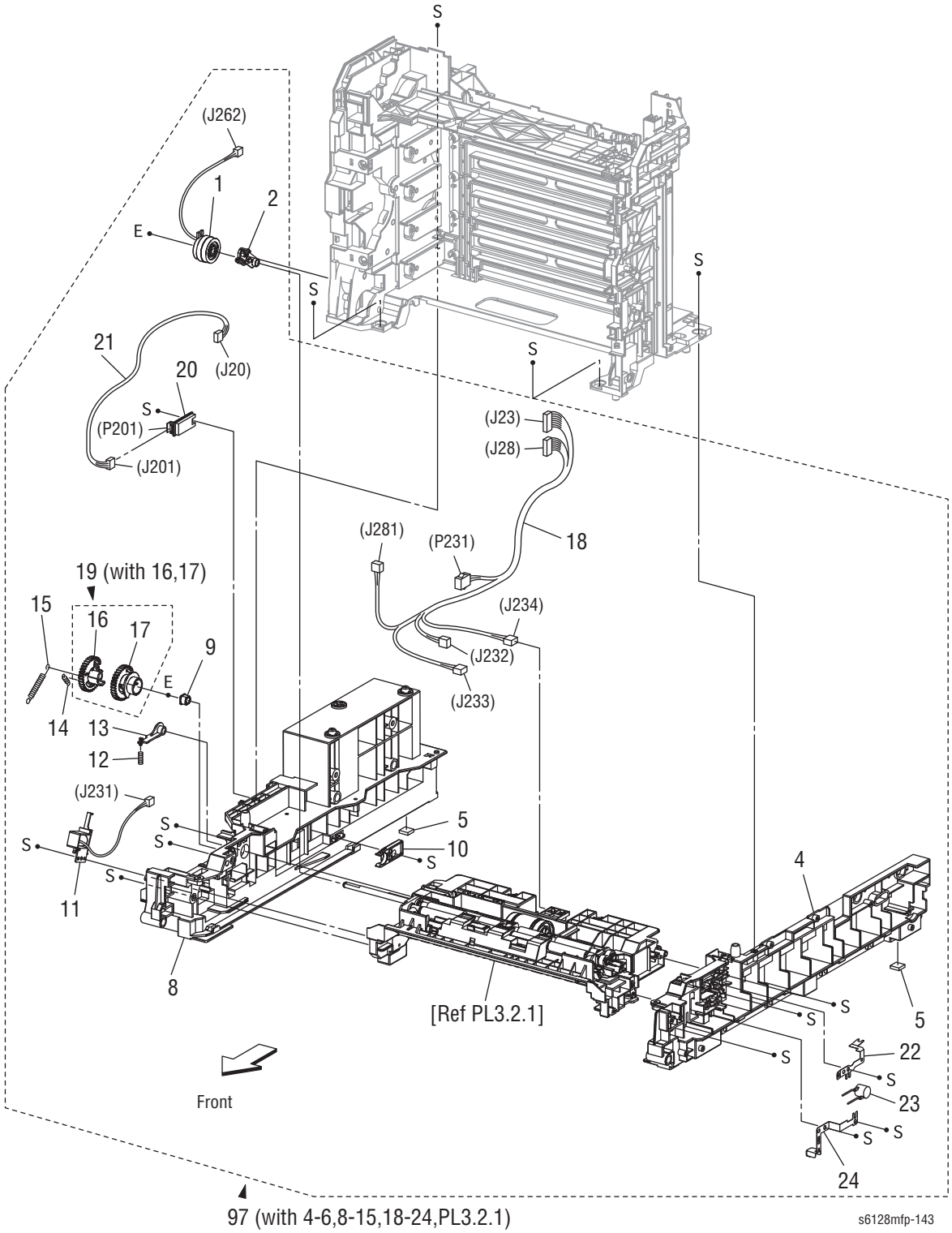
Parts List 10.3 Media Tray



Parts List 10.3 Media Tray

ID No.	Name/Description	Part Number
1	Cassette Assy 250 (With 2-19) (Tray)	050K64020
2	Plate Assy Bottom	—
3	Spring N/f L	—
4	Spring N/f R	—
5	Separator Roller Assembly	675K81220
6	Guide Side L	—
7	Gear Pinion	—
8	Guide Side Assy R	—
9	Cover Ssi	—
10	Guide Side Ssi L	—
11	Rack Guide Side Ssi L	—
12	Rack Guide Side Ssi R	—
13	Guide Side Ssi R	—
14	Latch Bottom L	—
15	Latch Bottom R	—
16	Spring Latch B	—
17	Tray Assy Extension	—
18	Housing Cst 250	—
19	Handle Cst AIO	—

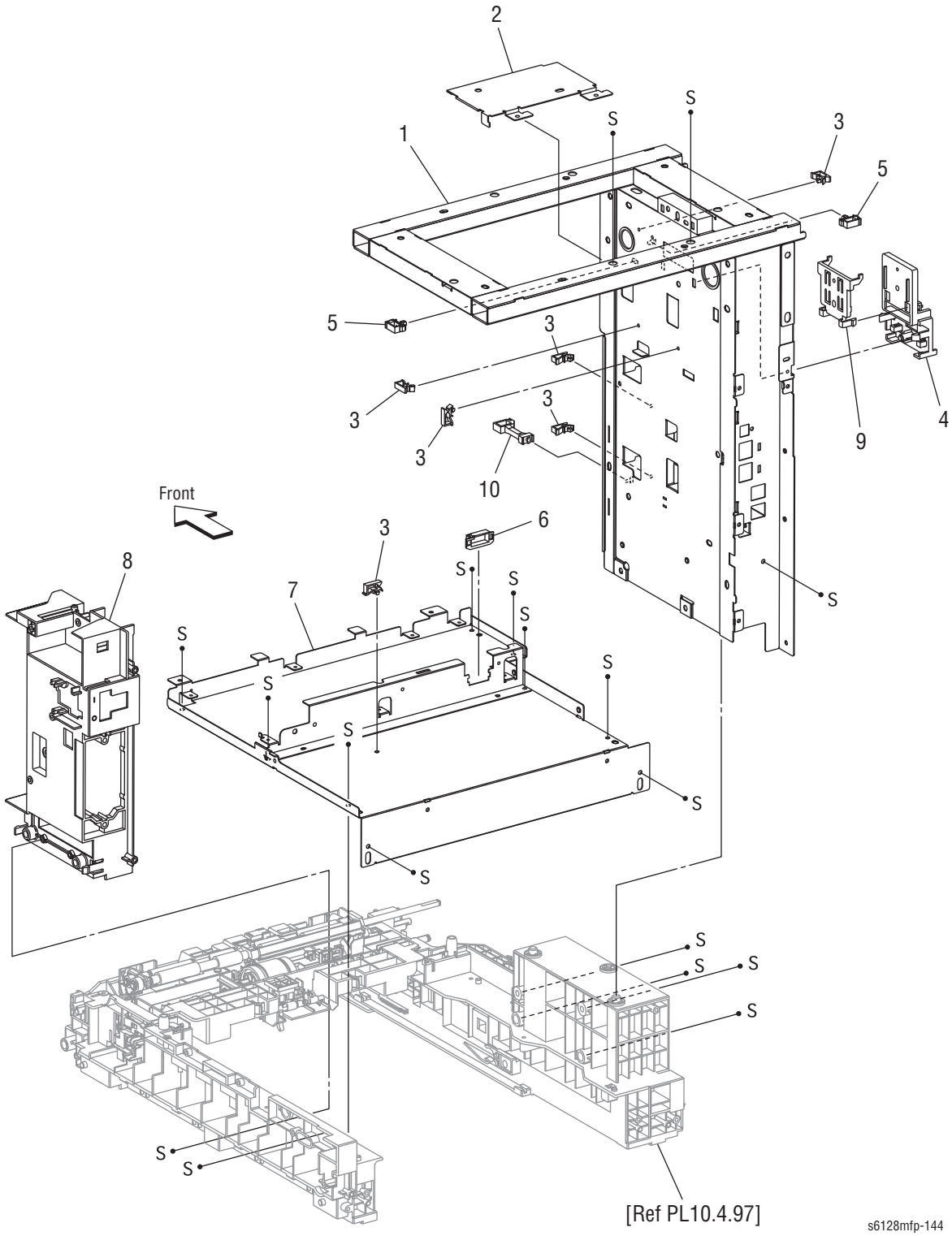
Parts List 10.4 Feeder



Parts List 10.4 Feeder

Item	Parts name	Part Number
1	Clutch Assy Drv	—
2	Bearing Regi	—
3		—
4	Chassis Fdr R	—
5	Foot	—
6		—
7		
8	Chassis Fdr L	—
9	Bearing	—
10	Stopper CST	003E73341
11	Solenoid Feed MSI	—
12	Spring Lever	—
13	Lever Feed	—
14	Spring Feed In	—
15	Spring Feed Out	—
16	Gear Feed Out	—
17	Gear Feed In	—
18	Harn Assy L Side (J23,J28-P231,J232,J233,J234,J281)	962K57541
19	Gear Assy Feed (With 15,16) Gear Kit (With 16, 17)	
20	Sensor, Temp Humidity	
21	Harn Assy Temp Humidity	
22	Plate Earth FDR	
23	Arrester ENE 112d-10a	
24	Plate Earth CST	
97	Feeder Assy V AIO (with 4-6, 8-15, 18-24, PL3.2.1)	059K56390
98	Kit Solenoid Feed (With 9-14)	675K54150
99	Kit Clutch Assy Drv (With 1,2)	675K54230

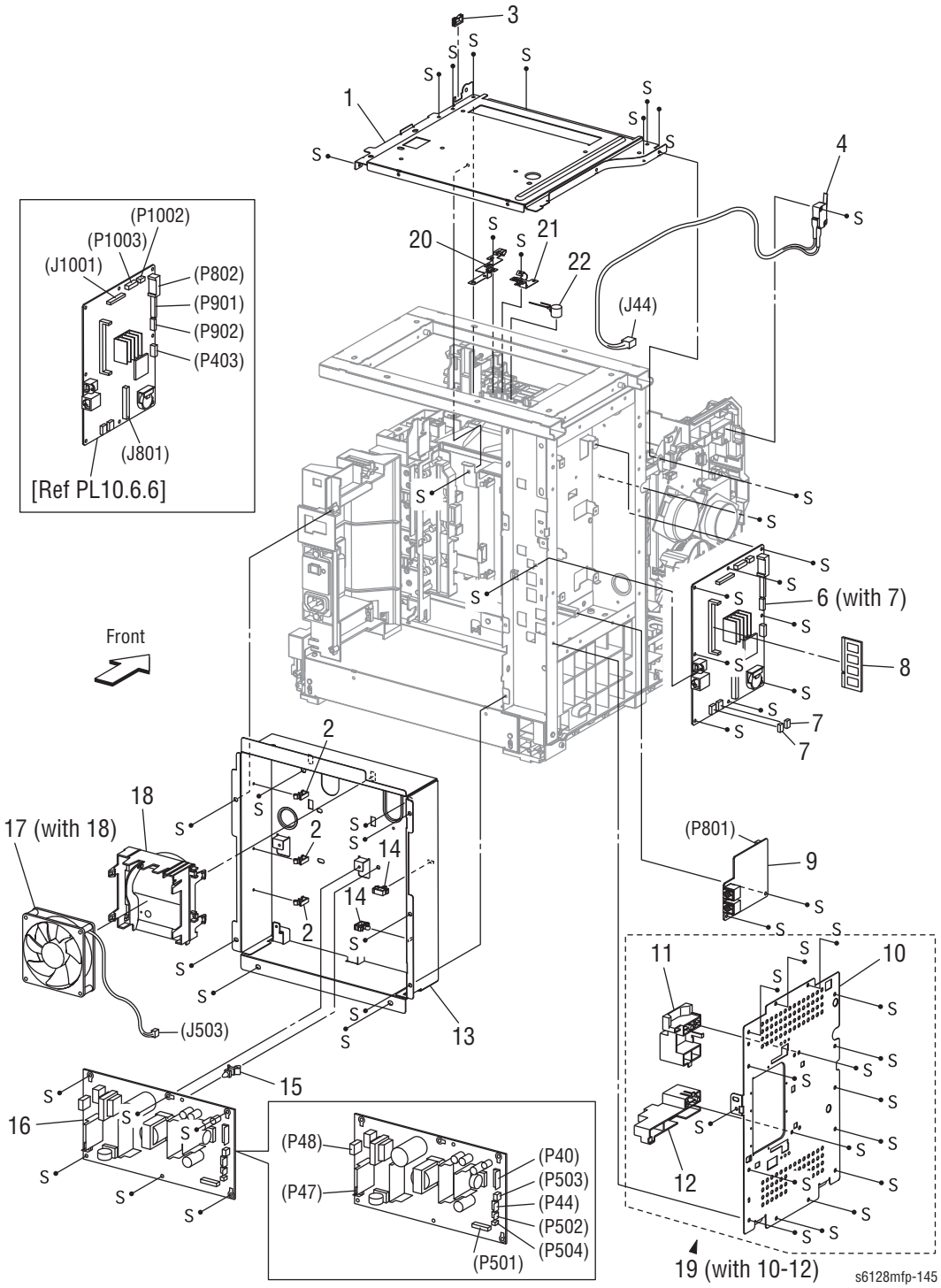
Parts List 10.5 Frame



Parts List 10.5 Frame

Item	Parts name	Part Number
1	Frame Assy Aio	
2	Shield IIT	
3	Clamp Mst-10v0	
4	Holder FFC	
5	Clamp Rlwc-1sv0	
6	Edging Saddle	
7	Chassis Assy HVPS	
8	Chassis Breaker	
9	Cover FFC	
10	Clamp Locking	

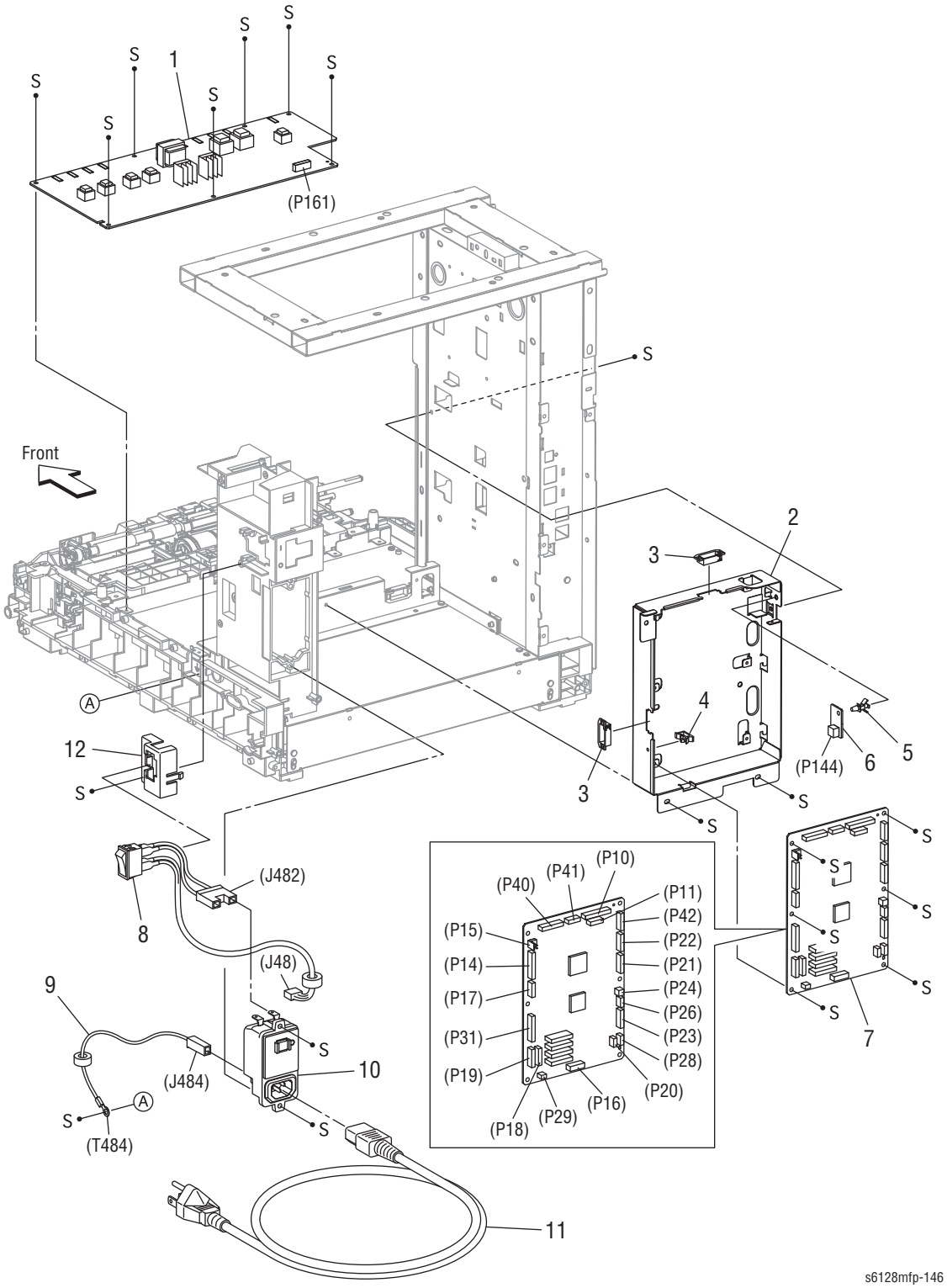
Parts List 10.6 Electrical (1/2)



Parts List 10.6 Electrical (1/2)

Item	Parts name	Part Number
1	Plate Assy Duct	
2	Clamp Mst-10v0	
3	Edge Saddle	
4	Harn Assy Interlock (Aio) (SW-J44)	962K65360
5	- -	
6	Pwba Cont Aio (I/P Board) (With 7)	960K45742
7	NVM Rom	
8	Memory Card	133K25920
9	Pwba Fax	960K38811
10	Shield Ess	
11	Cover Inner Upr	
12	Cover Inner Btm	
13	Chassis LVPS	
14	Clamp	
15	Support Pwb	
16a 16b	LVPS (110v) LVPS (220v)	105K23210 105K23470
17	Duct Fan Assy (With 18)	054K40530
18	Duct Fan	
19	Shield Assy Ess (With 10-12)	
20	Plate Earth Drum	
21	Plate Earth Fsr	
22	Arrester ENE 112d-10a	

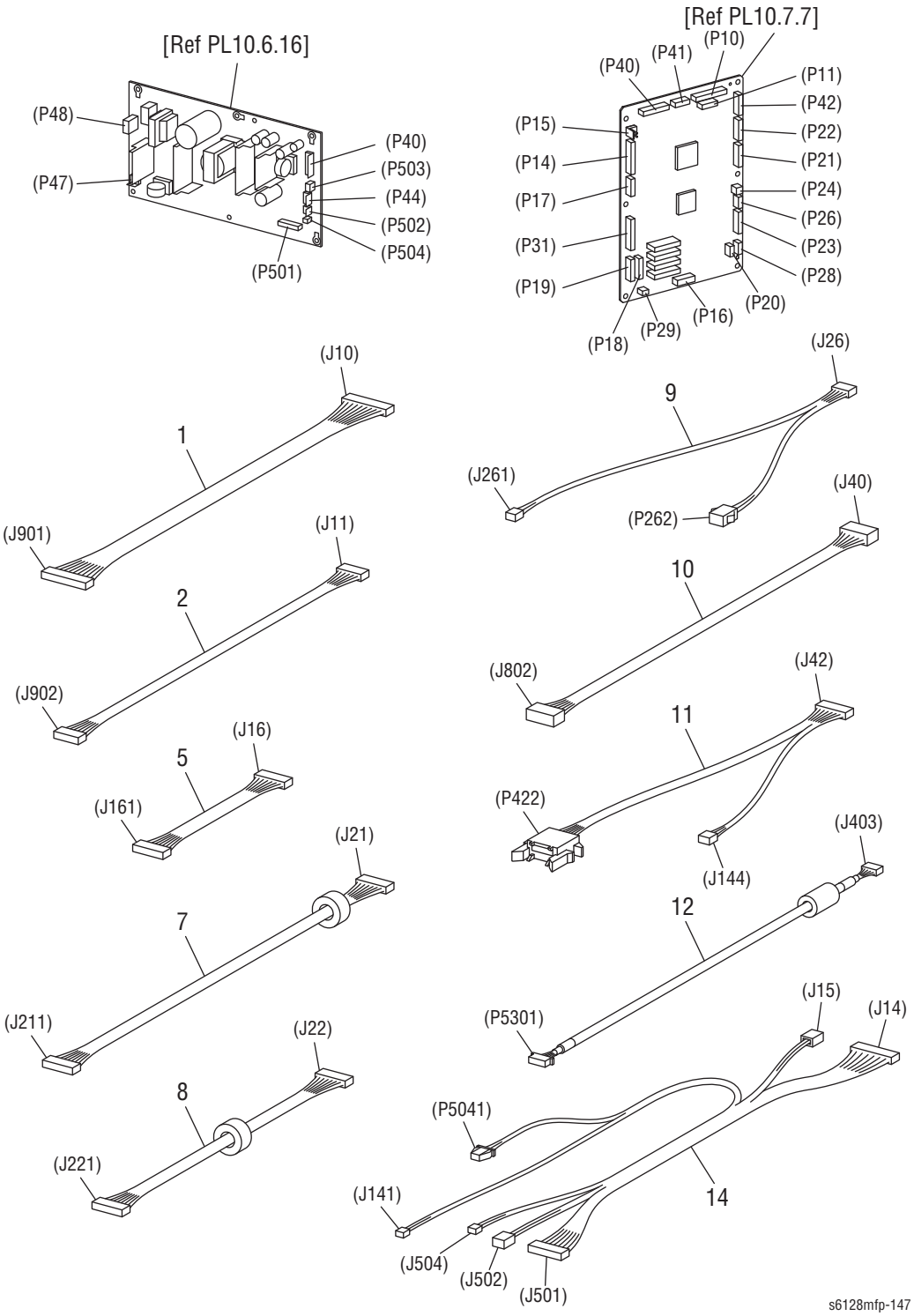
Parts List 10.7 Electrical (2/2)



Parts List 10.7 Electrical (2/2)

Item	Parts name	Part Number
1	HVPS	105K22661
2	Chassis MCU	
3	Edging Saddle	
4	Clamp Mst-10v0	
5	Support Pwb Rcbt-11s	
6	Pwba EEPROM (Xpro)	
7	Pwba MCU	960K47041
8	Harn Assy Sw Pwr (Aio) (SW-J48,J482)	
9	Harn Assy GFI Gnd (J484-t484)	
10	Breaker GFI	908W01201
11	Power Cord	
12	Bracket SW	

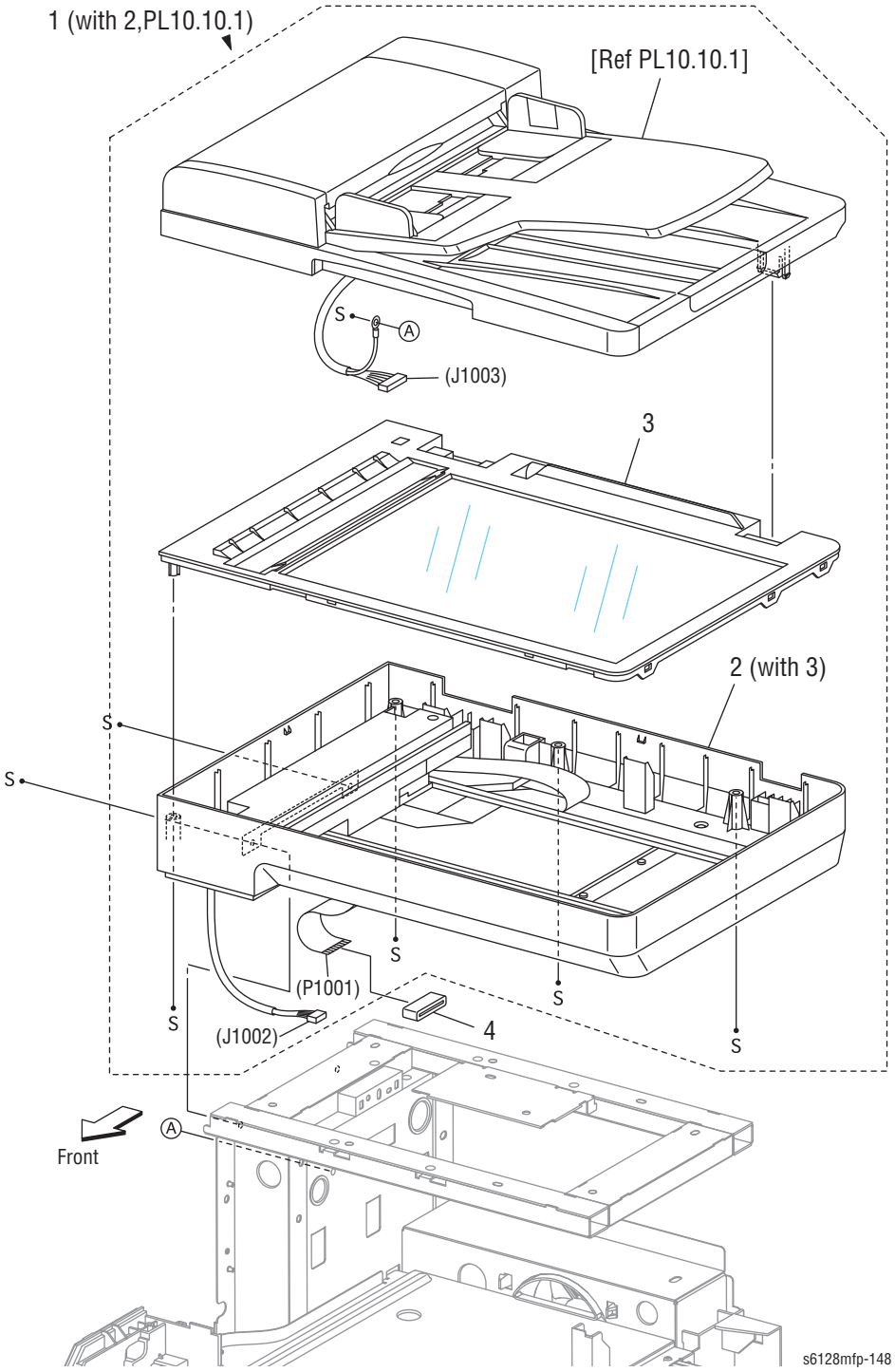
Parts List 10.8 Harnesses



Parts List 10.8 Harnesses

Item	Parts name	Part Number
1	Harn Assy Ess (Aio) (J10-J901)	
2	Harn Assy Ess Video (Aio) (J11-J902)	
3	- -	
4	- -	
5	Harn Assy HVPS (Aio) (J16-J161)	
6	- -	
7	Harn Assy Main Mot (J21,J211)	
8	Harn Assy Sub Mot (Aio) (J22-J221)	
9	Harn Assy KSNR Regcl (J26-J261,P262)	
10	Harn Assy IIT Power (J40-J802)	
11	Harn Assy PHD Xpro (J42-J144,P422)	
12	Harness A-op-ess (J403-P5301)	
13	- -	
14	Harness Assy Lvps Main (J14,J15,P5041-J141,J501,J502,J504)	

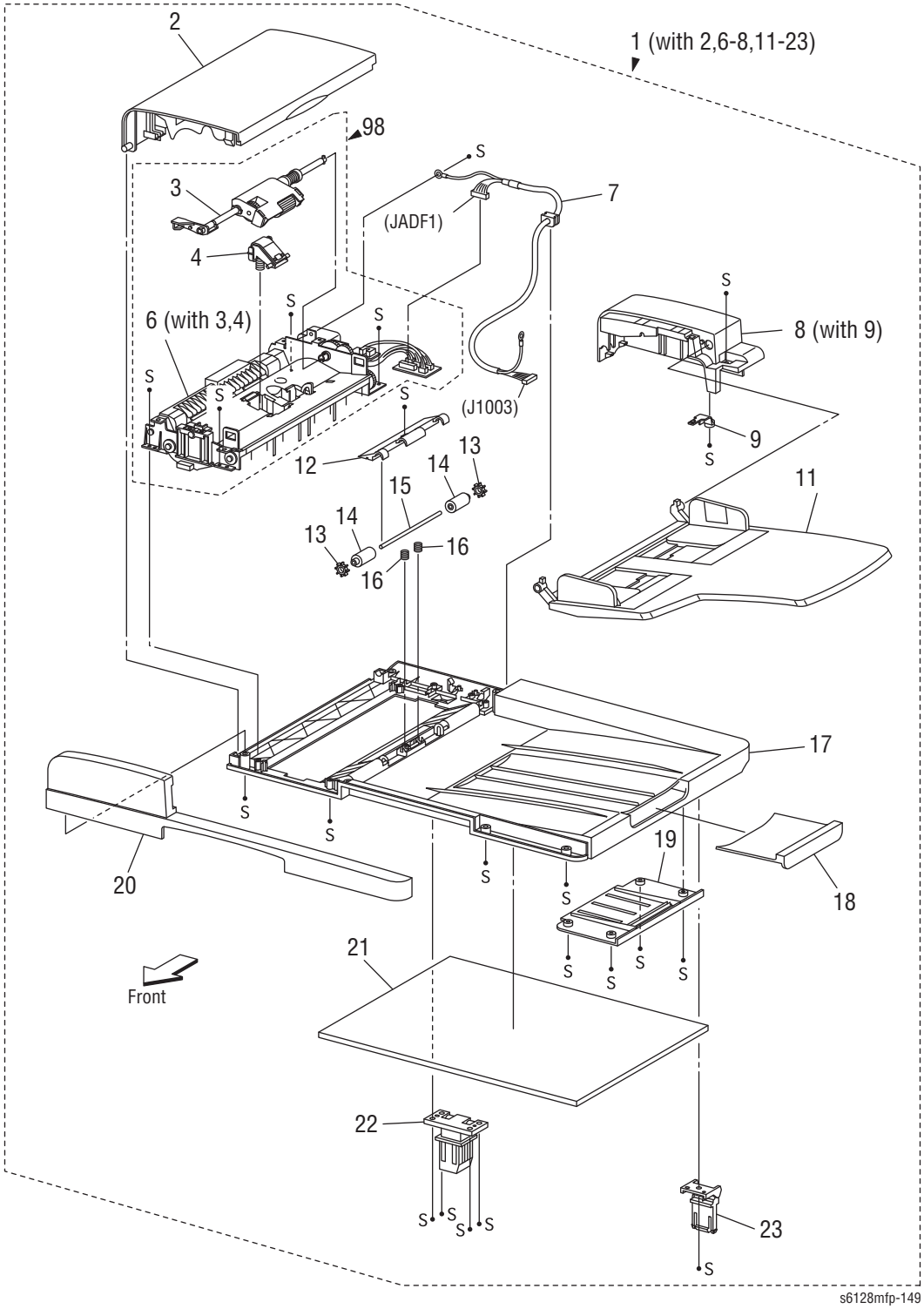
Parts List 10.9 Scanner



Parts List 10.9 Scanner

Item	Parts name	Part Number
1	Scanner Assy (With 2,pl10.10.1)	
2	IIT Assy Sub (With 3)	604K52480
3	Glass Assy Platen	
4	Core Ferr Ffc	121E22020

Parts List 10.10 ADF



Parts List 10.10 ADF

Item	Part Name	Part Number
1	ADF Assy (With 2,6-8,11-23)	059K61840
2	Cover ADF Jam	
3	Roll Assy Feed	059K61850
4	Pad Assy Separator	019K10390
5	- -	
6	Feeder Assy ADF (With 3,4)	
7	Harn Assy ADF (J1003-jadf1)	
8	Cover ADF Rear (With 9)	
9	Arm Interlock	
10	- -	
11	Tray Assy ADF Input	050K63720
12	Cover Roll Exit	
13	Roll Fin Exit	
14	Roll Pinch Exit	
15	Shaft Roll Exit	
16	Spring Roll Exit	
17	Cover ADF Base	
18	Output Tray Extension	
19	Cover Tray Extension	
20	Cover ADF Front	
21	Cushion ADF Platen	
22	Counter Balance L	
23	Counter Balance R	
98	Kit Feed roll and Pad (with 3, 4 and instruction sheet)	604K52220

Xerox Supplies and Accessories

Consumable and Maintenance Items

Parts List Reference	Description	Part Number
PL5.1.21B	Toner Cartridge US/EU 2.5K (K)	675K59231
PL5.1.21C	Toner Cartridge DMO 2.5K (K)	675K59311
PL5.1.22B	Toner Cartridge US/EU 2.5K (C)	675K59241
PL5.1.22C	Toner Cartridge DMO 2.5K (C)	675K59321
PL5.1.23B	Toner Cartridge US/EU 2.5K (M)	675K59251
PL5.1.23C	Toner Cartridge DMO 2.5K (M)	675K59331
PL5.1.24B	Toner Cartridge US/EU 2.5K (Y)	675K59261
PL5.1.24C	Toner Cartridge DMO 2.5K (Y)	675K59341

Customer-replaceable Service Items

Parts List Reference	Description	Part Number
PL6.1.1A	Fuser 115V	675K65653
PL6.1.1B	Fuser 220V	675K65663
PL4.1.21	Imaging Unit	675K59860
PL3.2.4	Feed Roller Assembly	657K81230
PL10.3.5	Separator Roller Assembly	675K81220

Service Kits

Service Kits provide spare parts normally associated with larger assemblies.

Hardware Kit

Hardware Kit

Description	Part Number
Hardware Kit	604K34030
Screw, Bind Head Del (1)	
Screw, 8 mm Plastic (1)	
Screw, Tap Bind Head (1)	
Screw, M3x6 B (1)	
Screw, DT3x8 B (1)	
E-Ring, 3 mm (1)	
E-Ring, 4 mm (1)	

Wiring

In this chapter...

Chapter 10

Plug/Jack Designations and Locator Diagrams

This chapter contains the plug/jack designators, locator diagrams, and wiring diagrams for the print engine, Scanner, and ADF.

The Plug/Jack Locator diagrams show the P/J locations within the printer. Use these illustrations to locate connections called out in the Troubleshooting procedures presented in Sections 3, 4, and 5.

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.
4. The Remarks column provides a brief description of each connection.

Print Engine Plug/Jack Designators

Print Engine Plug/Jack Designators

P/J	Map	Coordiates	Description
10	1	J-157	Connects MCU Board and HARNESS ASSY ESS
11	1	J-157	Connects MCU Board and HARNESS ASSY ESS VIDEO
14	1	I-157	Connects MCU Board and HARNESS ASSY LVPS MAIN
15	1	I-157	Connects MCU Board and HARNESS ASSY LVPS MAIN
16	1	I-159	Connects MCU Board and HARNESS ASSY HVPS
17	1	I-157	Connects MCU Board and HARNESS ASSY FUSER
18	1	I-158	Connects MCU Board and HARNESS ASSY TNR MOT
19	1	I-158	Connects MCU Board and HARNESS ASSY TNR MOT
20	1	J-159	Connects MCU Board and HARNESS ASSY HUM
21	1	J-158	Connects MCU Board and HARNESS ASSY MAIN MOT
22	1	J-157	Connects MCU Board and HARNESS ASSY SUB MOT
23	1	J-158	Connects MCU Board and HARNESS ASSY L SIDE
24	1	J-158	Connects MCU Board and DRIVE ASSY PH (Color Mode Switching solenoid)
26	1	J-158	Connects MCU Board and HARNESS ASSY KSNR REGCL
28	1	J-159	Connects MCU Board and HARNESS ASSY L SIDE
29	1	I-159	Connects MCU Board and HARNESS ASSY SIDE SW
31	1	I-158	Connects MCU Board and HARNESS ASSY TONER CRUM

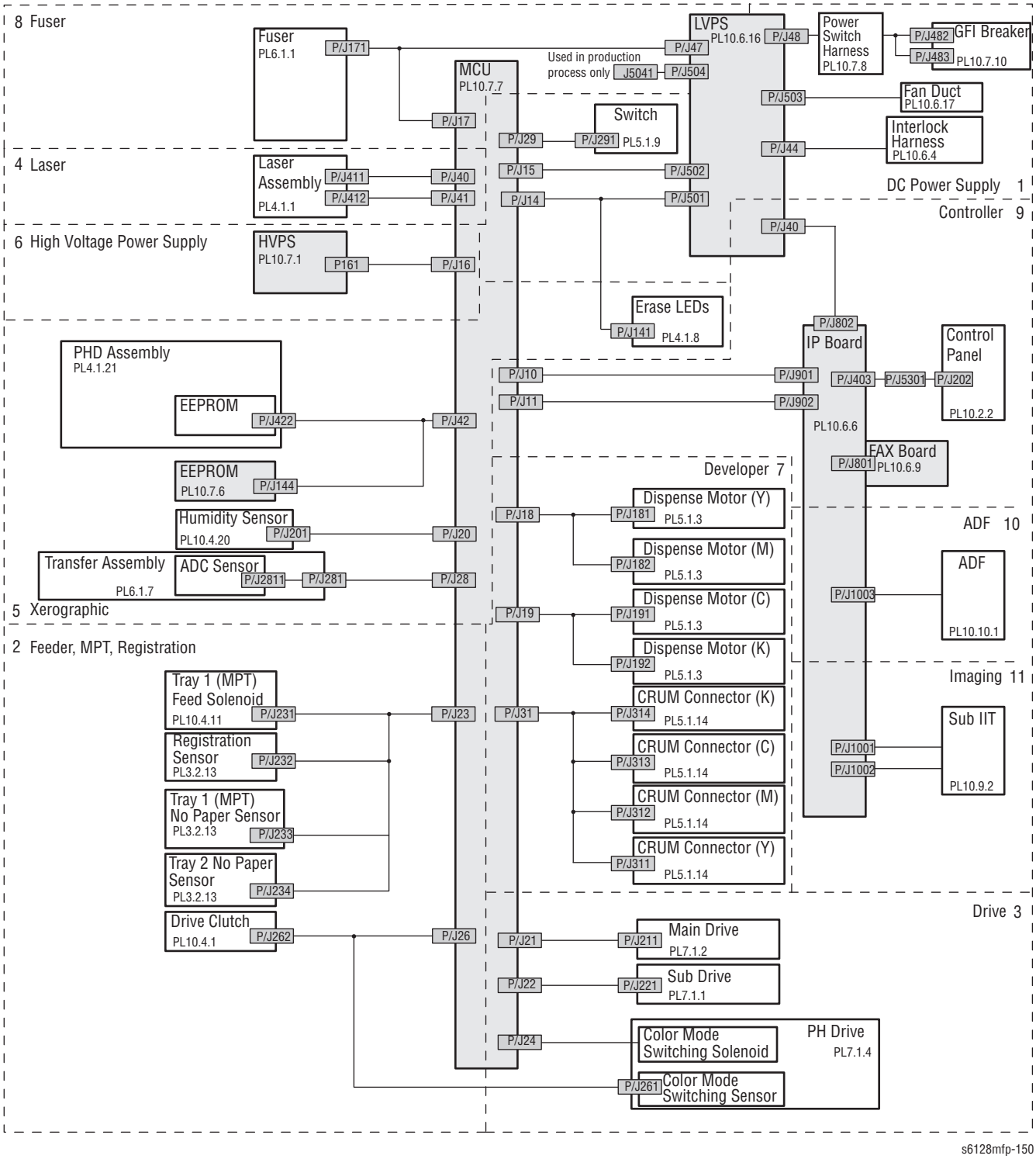
Print Engine Plug/Jack Designators

P/J	Map	Coordiates	Description
40	3	E-143	Connects LVPS and HARNESS ASSY IIT POWER
40	1	I-157	Connects MCU Board and HARNESS ASSY ROS RE
41	1	I-157	Connects MCU Board and HARNESS ASSY ROS VIDEO
42	1	J-157	Connects MCU Board and HARNESS ASSY PHD XPRO
44	3	E-143	Connects LVPS and Interlock Switch
47	3	C-143	Connects LVPS and HARNESS ASSY FUSER
48	3	C-142	Connects LVPS and HARNESS ASSY SW PWR
141	4	G-109	Connects LED ASSY ERASE and HARNESS ASSY LVPS MAIN
144	1	G-151	Connects PWBA EEPROM and HARNESS ASSY PHD XPRO
161	1	F-154	Connects HVPS and HARNESS ASSY HVPS
171	4	G-108	Connects FUSER and HARNESS ASSY FUSER
181	1	D-152	Connects Dispense Assy (Y toner motor) and HARNESS ASSY TNR MOT
182	1	D-152	Connects Dispense Assy (M toner moto) and HARNESS ASSY TNR MOT
191	1	D-151	Connects Dispense Assy (C toner moto) and HARNESS ASSY TNR MOT
192	1	D-151	Connects Dispense Assy (K toner moto) and HARNESS ASSY TNR MOT
201	3	H-139	Connects FEEDER ASSY NV AIO (HUM Sensor) and HARNESS ASSY HUM
202	2	E-123	Connects CONSOLE ASSY PANEL and HARNESS ASSY A-OP-OPP
211	3	J-137	Connects DRIVE ASSY MAIN (Main Motor) and HARNESS ASSY MAIN MOT
221	3	I-137	Connects DRIVE ASSY SUB (Sub Motor) and HARNESS ASSY SUB MOT
231	2	D-127	Connects FEEDER ASSY NV AIO (Feed Solenoid) and HARNESS ASSY L SIDE
232	2	F-126	Connects FEEDER ASSY NV AIO (REGI Sensor) and HARNESS ASSY L SIDE
233	2	G-126	Connects FEEDER ASSY NV AIO (SSI No Paper Sensor) and HARNESS ASSY L SIDE
234	2	G-126	Connects FEEDER ASSY NV AIO (Tray No Paper Sensor) and HARNESS ASSY L SIDE
261	3	H-138	Connects DRIVE ASSY PH (Color Mode Switching Sensor) and HARNESS ASSY KSNR REGCL
262	3	I-138	Connects CLUTCH ASSY DRV and HARNESS ASSY KSNR REGCL
281	4	B-110	Connects Transfer Belt (Harness Assy CTD SNR2) and HARNESS ASSY L SIDE

Print Engine Plug/Jack Designators

P/J	Map	Coordiates	Description
291	4	G-109	Connects Dispense Assy (Side Cover Switch) and HARNESS ASSY SIDE SW
311	4	G-111	Connects Dispense Assy (Connector CRUM Y) and HARNESS ASSY TONER CRUM
312	4	G-110	Connects Dispense Assy (Connector CRUM M) and HARNESS ASSY TONER CRUM
313	4	G-110	Connects Dispense Assy (Connector CRUM C) and HARNESS ASSY TONER CRUM
314	4	G-109	Connects Dispense Assy (Connector CRUM K) and HARNESS ASSY TONER CRUM
403	3	G-137	Connects I/P Board and HARNESS ASSY A-OP-ESS
411	2	E-124	Connects Laser Unit and HARNESS ASSY ROS RE
412	2	E-124	Connects Laser Unit and HARNESS ASSY ROS VIDEO
422	1	H-151	Connects PHD UNIT (EEPROM PHD) and HARNESS ASSY PHD XPRO
482	3	B-137	Connects BREAKER GFI and HARNESS ASSY SW PWR
484	3	B-138	Connects BREAKER GFI and HARNESS ASSY GFI GND
501	3	E-143	Connects LVPS and HARNESS ASSY LVPS MAIN
502	3	E-143	Connects LVPS and HARNESS ASSY LVPS MAIN
503	3	E-143	Connects LVPS and Fan
504	3	E-143	Connects LVPS and HARNESS ASSY LVPS MAIN
801	3	G-138	Connects I/P Board and Fax Board
802	3	G-136	Connects I/P Board and HARNESS ASSY IIT POWER
901	3	G-136	Connects I/P Board and HARNESS ASSY ESS
902	3	G-137	Connects I/P Board and HARNESS ASSY ESS VIDEO
1001	3	G-136	Connects I/P Board and SCANNER ASSY (PCB CCD)
1002	3	G-136	Connects I/P Board and SCANNER ASSY (Scanner Motor)
1003	3	G-136	Connects I/P Board and SCANNER ASSY (ADF Assy)
2811	4	D-108	Connects ADC Sensor and HARNESS ASSY CTD SNR2 (TRANSFER BELT)
5041	4	H-108	Not Connected (Used in production process only)
5301	2	D-127	Connects HARNESS ASSY A-OP-OPP and HARNESS ASSY A-OP-ESS

System Connections



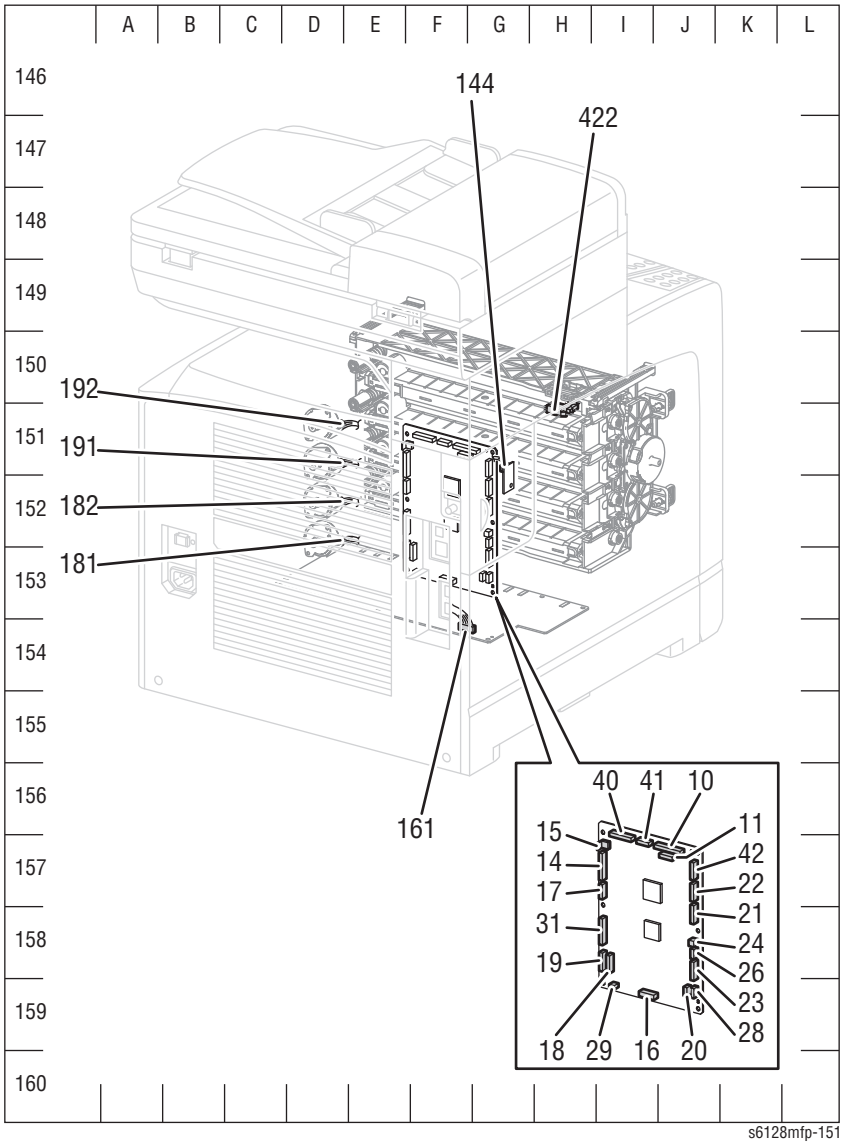
s6128mfp-150

Plug/Jack Locators

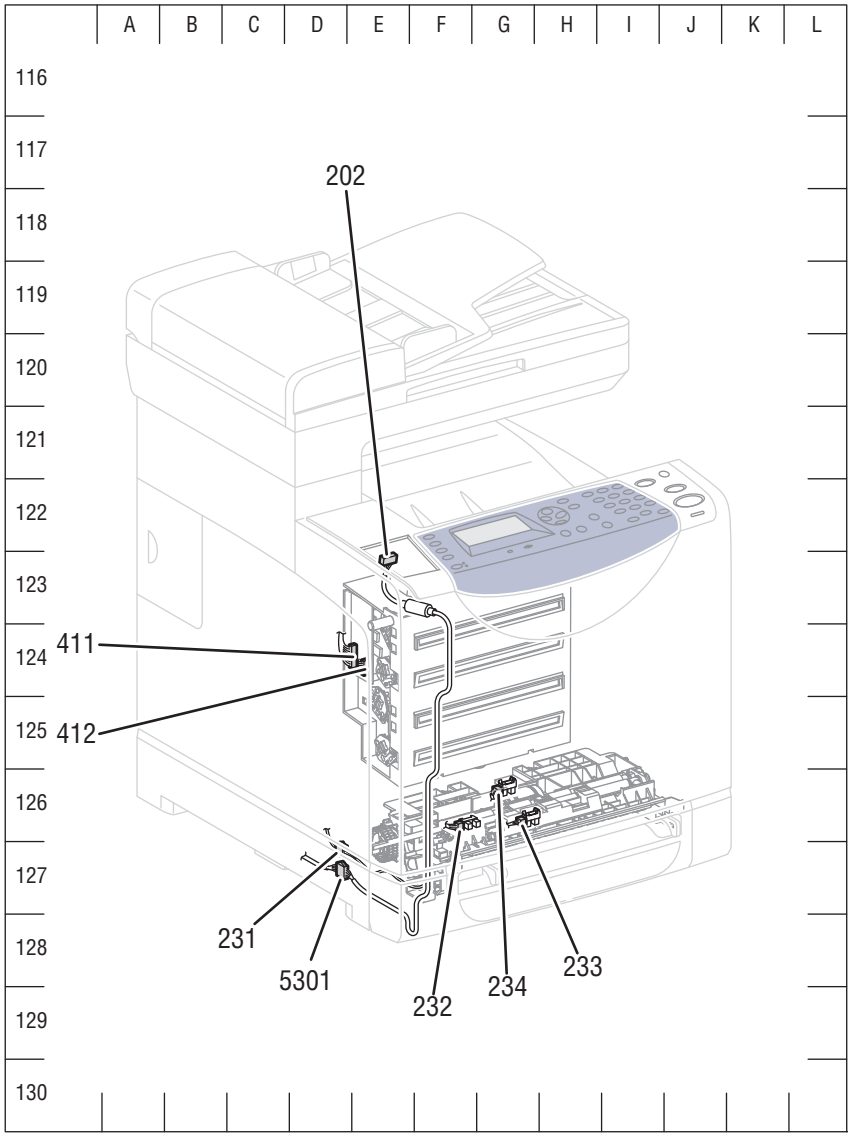
Maps 1 through 4 indicate the location of key connections within the printer. Connections are referenced by their P/J designation.

1. System Connections
2. Map 1 - MCU Board
3. Map 2 - Feed and Laser Unit
4. Map 3 - Electrical and Drive
5. Map 4 - Imaging

Map 1 - MCU Board

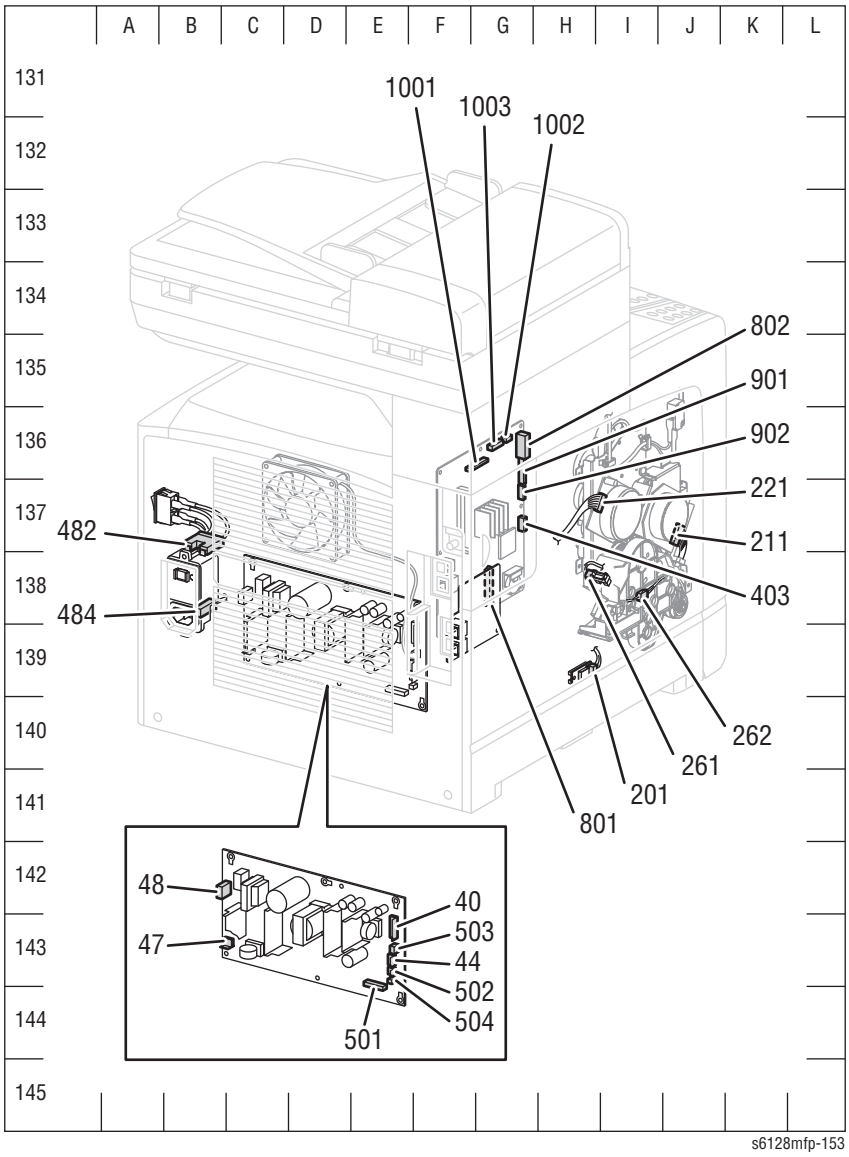


Map 2 - Feed and Laser Unit

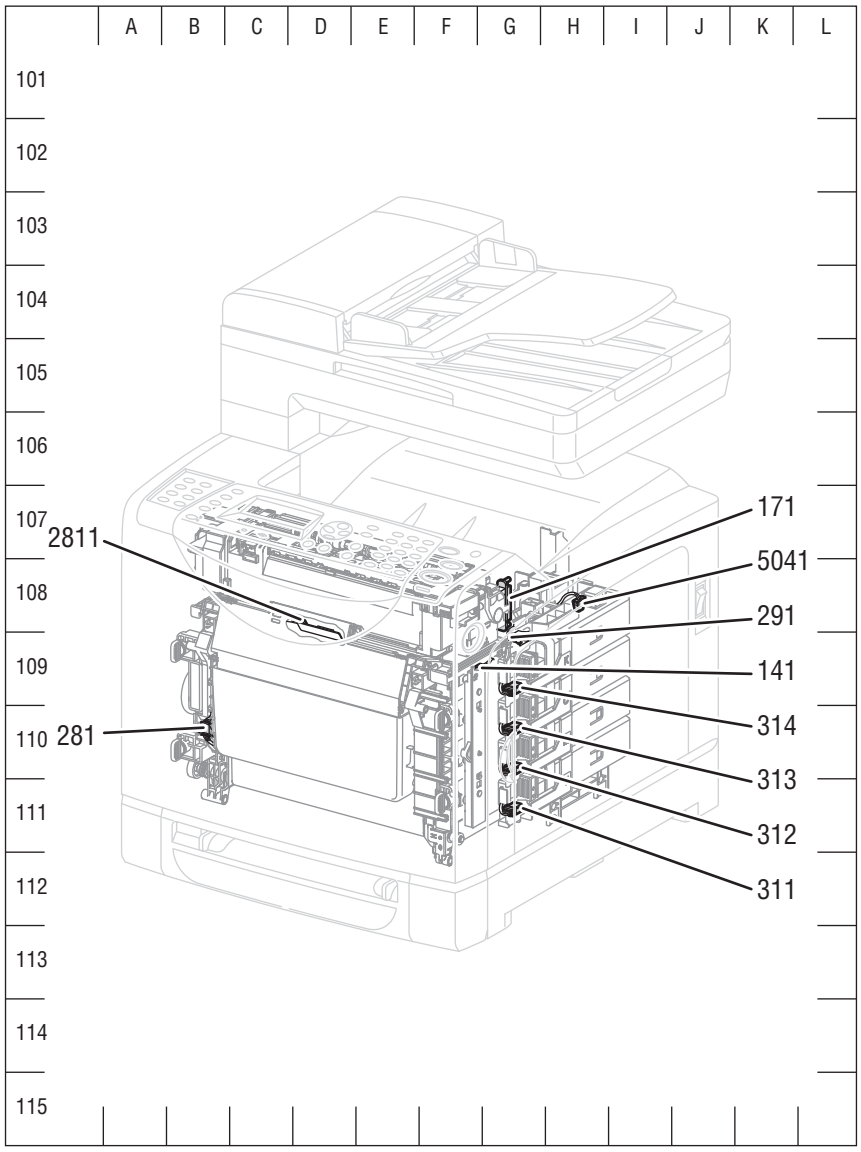


s6128mfp-152

Map 3 - Electrical and Drive



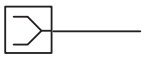
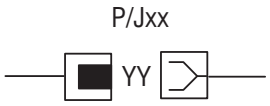
Map 4 - Imaging

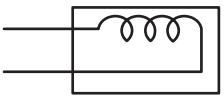
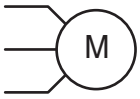


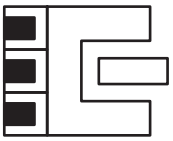
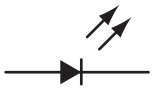
Wiring Diagrams

Notations Used in the Wiring Diagrams

The following table lists the symbols used in the wiring diagrams.

Symbol	Description
 s6128mfp-156	Denotes a Plug.
 s6128mfp-157	Denotes a Jack.
 s6128mfp-158	Denotes Pin yy and Jack yy of the connector Pxx and Jxx.
 s6128mfp-159	Denotes a Jumper Point (JPxxx/xxx). Each end of the Jumper connection has a numeric designation.
 s6128mfp-160	Denotes the parts. PL X.Y.Z implies the item “Z” of plate (PL) “X.Y” in Parts List.
 s6128mfp-161	Denotes functional parts attached with functional parts name.

Symbol	Description
 s6128mfp-162	Denotes the control and its outline in the Board.
 s6128mfp-163	Denotes a connection between parts with harness or wires, attached with signal name/ contents.
 s6128mfp-164	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.
 s6128mfp-165	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.
 s6128mfp-166	Denotes a connection between wires.
 s6128mfp-167	Denotes a Clutch or Solenoid.
 s6128mfp-168	Denotes a Motor.

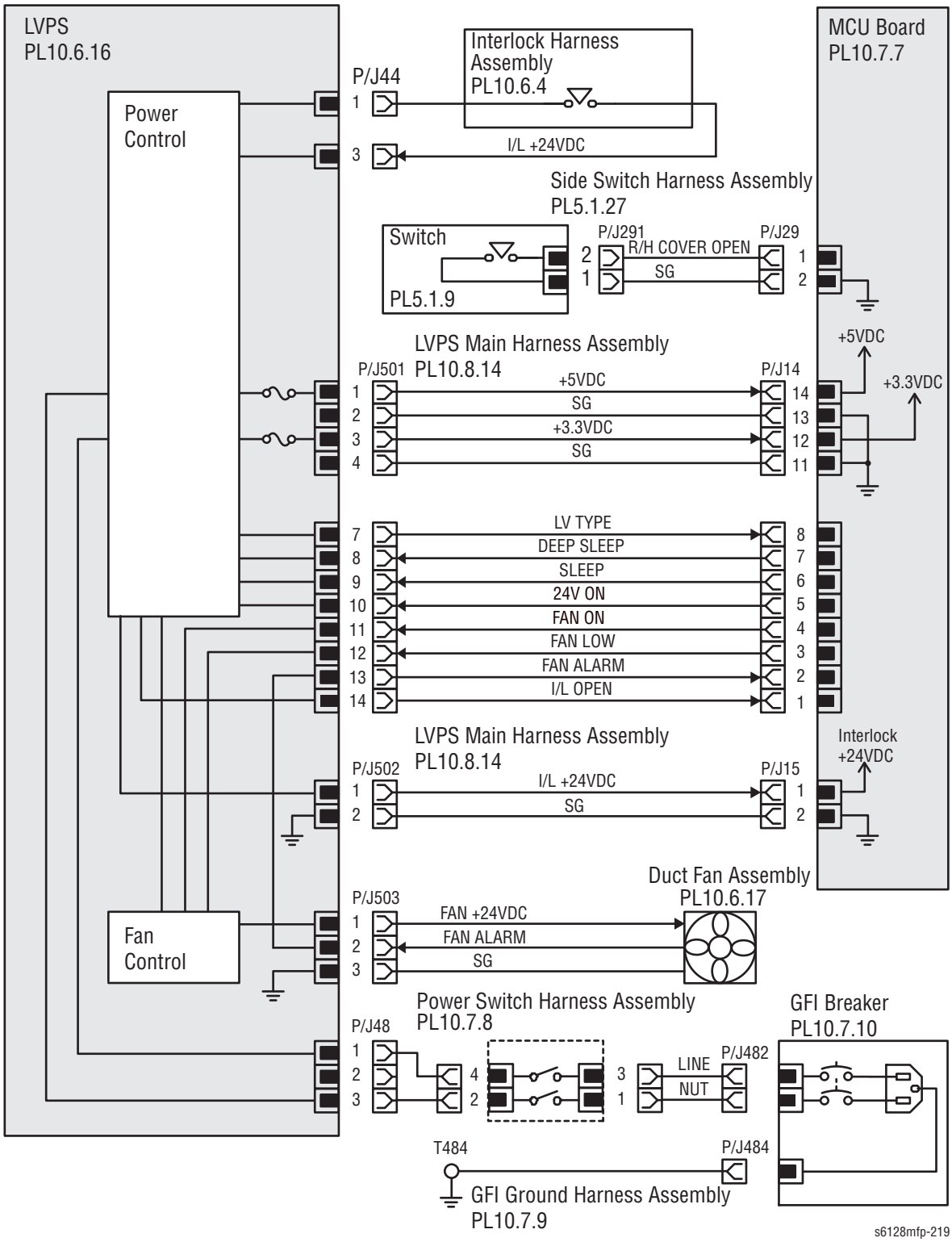
Symbol	Description
 s6128mfp-169	Denotes a Photo Sensor.
 s6128mfp-170	Denotes an LED.
 s6128mfp-171	Denotes a Safety Interlock Switch.
 s6128mfp-172	Denotes an On-Off Switch (single-pole, single-throw switch).
 s6128mfp-173	Denotes an On-Off Switch (Temperature - normally close).
 s6128mfp-174	Denotes an NPN Photo-transistor.
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.

Wiring Diagram Descriptions

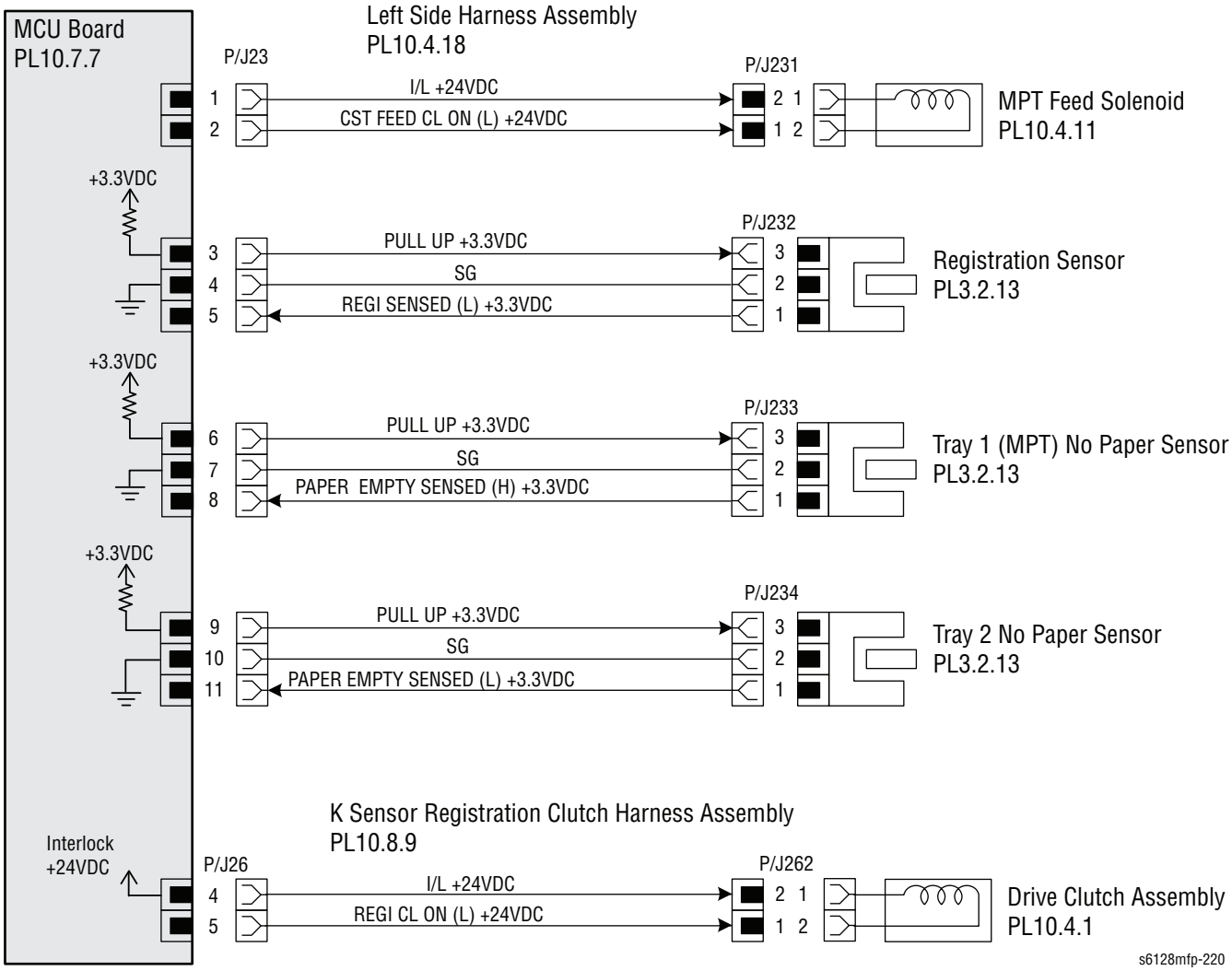
The connections illustrated on each of the wiring diagrams is listed below.

Wiring Diagram	Description
LVPS	Connections of LVPS with MCU Board.
	Connections of Power Switch with LVPS.
	Connections of GFI Breaker with Power Switch.
	Connections of Main Fan with LVPS.
	Connections of Interlock Harness with LVPS.
	Connections of RH Cover Switch with MCU Board.
Media Feed	Connections of Feed Solenoid with MCU Board.
	Connections of Registration Sensor with MCU Board.
	Connections of Manual Feed (SSI) No Paper Sensor with MCU Board.
	Connections of CST No Paper Sensor with MCU Board.
	Connections of Drive Clutch with MCU Board.
Main Drive	Connections of Feeder Drive with MCU Board.
	Connections of Main Drive with MCU Board.
	Connections of Sub-Drive with MCU Board.
Laser Unit	Connections of Laser Unit with MCU Board.
Xerographics	Connections of EEPROM Board with MCU Board.
	Connections of Imaging Unit (PHD) with MCU Board.
	Connections of Hum/Temp Sensor with MCU Board.
	Connections of Erase LEDs and MCU Board.
	Connections of Transfer Belt with MCU Board.
HVPS	Connections of HVPS with MCU Board.
Toner Dispense	Connections of Dispenser Motor (Y) with MCU Board.
	Connections of Dispenser Motor (M) with MCU Board.
	Connections of Dispenser Motor (C) with MCU Board.
	Connections of Dispenser Motor (K) with MCU Board.
	Connections of CRUM Connector (Y) with MCU Board.
	Connections of CRUM Connector (M) with MCU Board.
	Connections of CRUM Connector (C) with MCU Board.
	Connections of CRUM Connector (K) with MCU Board.
Fuser	Connections of Fuser with MCU Board.
	Connections of Fuser with LVPS.
	Connections of MCU Board with LVPS.
System Control	Connections of Image Processor Board with MCU Board.
	Connections of Control Panel with Image Processor Board.
	Connections of LVPS with Image Processor Board
ADF	Connections of Image Processor Board with ADF
Scanner	Connections of Image Processor Board with Scanner

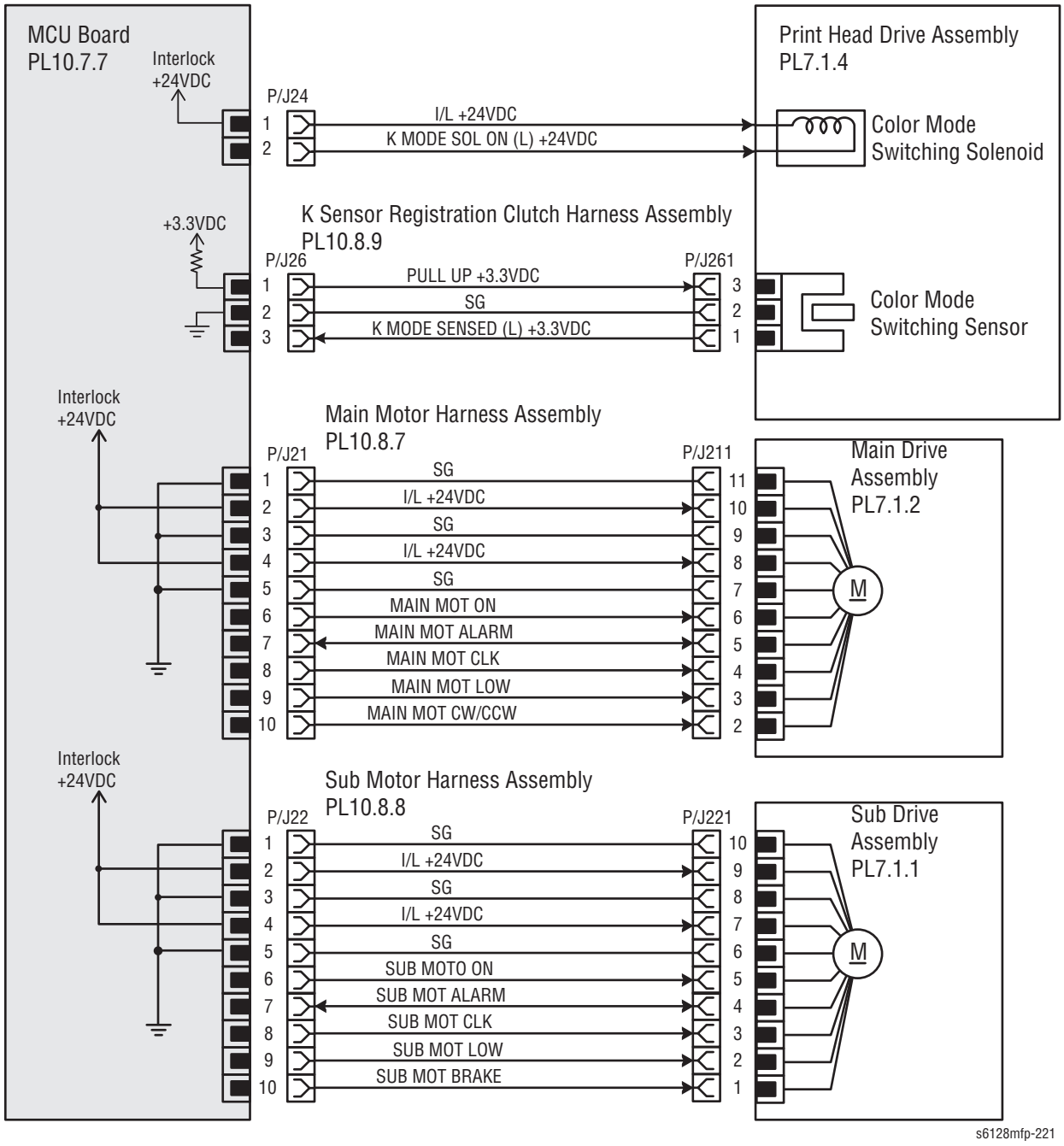
LVPS


LVPS
PL10.6.16
Power
Control
Fan
Control
MCU Board
PL10.7.7
P/J44
Interlock Harness
Assembly
PL10.6.4
I/L +24VDC
Side Switch Harness Assembly
PL5.1.27
Switch
PL5.1.9
P/J291
R/H COVER OPEN
SG
P/J29
LVPS Main Harness Assembly
PL10.8.14
P/J501
+5VDC
SG
+3.3VDC
SG
P/J14
+5VDC
+3.3VDC
LV TYPE
DEEP SLEEP
SLEEP
24V ON
FAN ON
FAN LOW
FAN ALARM
I/L OPEN
LVPS Main Harness Assembly
PL10.8.14
P/J502
I/L +24VDC
SG
P/J15
Interlock
+24VDC
Duct Fan Assembly
PL10.6.17
P/J503
FAN +24VDC
FAN ALARM
SG
Power Switch Harness Assembly
PL10.7.8
P/J48
LINE
NUT
P/J482
GFI Breaker
PL10.7.10
T484
P/J484
GFI Ground Harness Assembly
PL10.7.9
s6128mfp-219

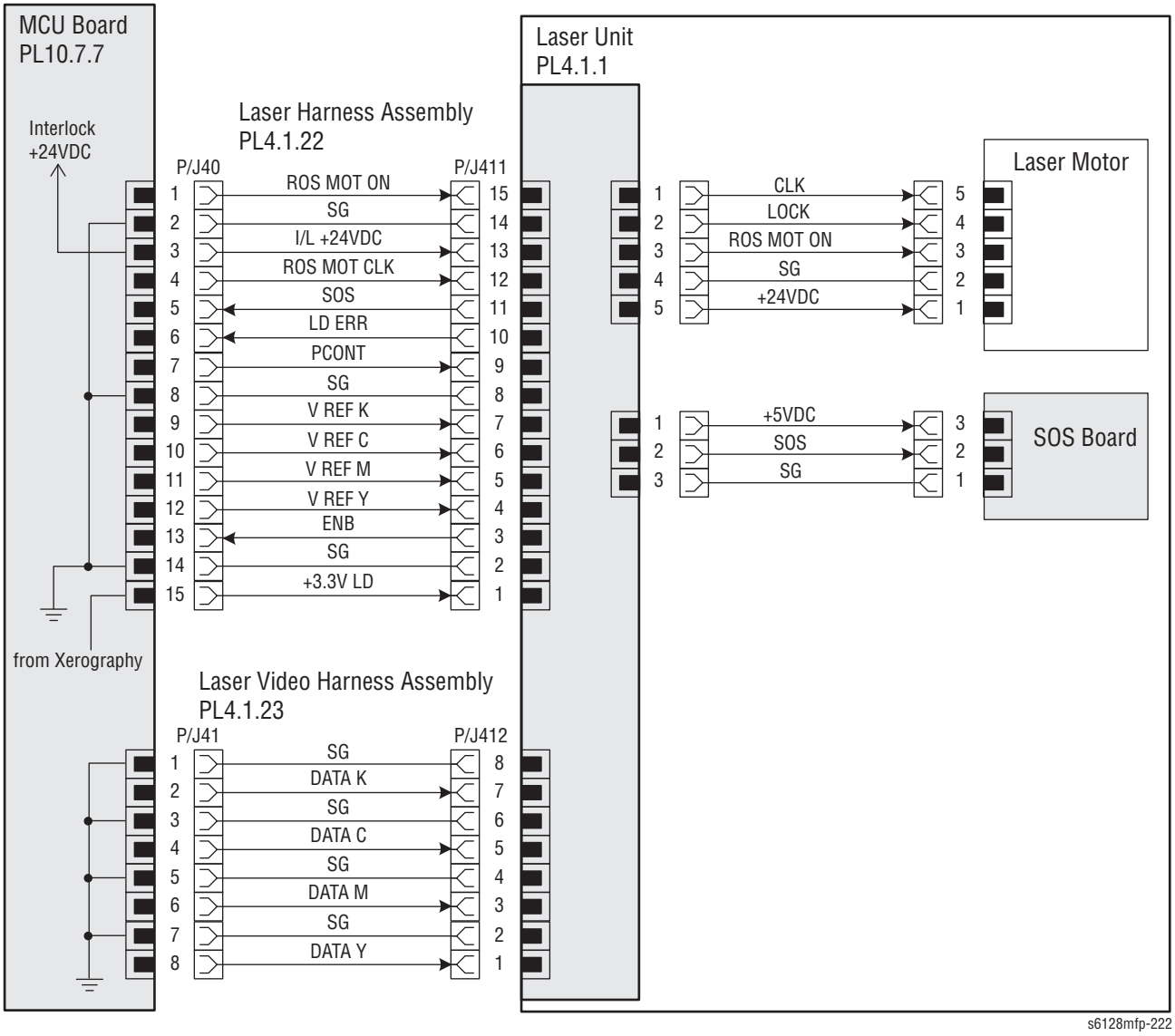
Media Feed


MCU Board
PL10.7.7
Left Side Harness Assembly
PL10.4.18
P/J23
P/J231
1
2
I/L +24VDC
CST FEED CL ON (L) +24VDC
2 1
1 2
MPT Feed Solenoid
PL10.4.11
+3.3VDC
P/J232
3
4
5
PULL UP +3.3VDC
SG
REGI SENSED (L) +3.3VDC
Registration Sensor
PL3.2.13
+3.3VDC
P/J233
6
7
8
PULL UP +3.3VDC
SG
PAPER EMPTY SENSED (H) +3.3VDC
Tray 1 (MPT) No Paper Sensor
PL3.2.13
+3.3VDC
P/J234
9
10
11
PULL UP +3.3VDC
SG
PAPER EMPTY SENSED (L) +3.3VDC
Tray 2 No Paper Sensor
PL3.2.13
K Sensor Registration Clutch Harness Assembly
PL10.8.9
Interlock
+24VDC
P/J26
P/J262
4
5
I/L +24VDC
REGI CL ON (L) +24VDC
2 1
1 2
Drive Clutch Assembly
PL10.4.1
s6128mfp-220

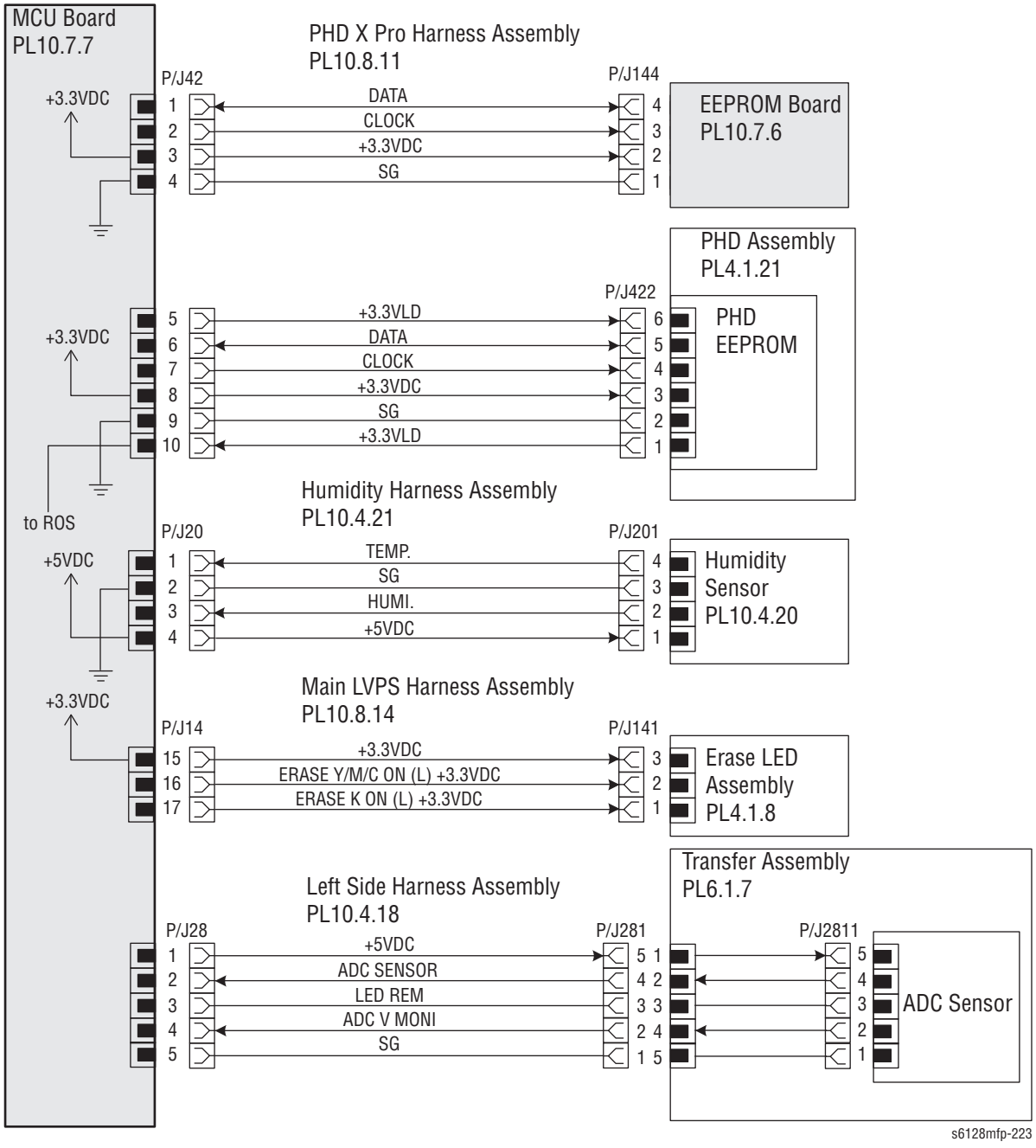
Main Drive


MCU Board
PL10.7.7
Interlock
+24VDC
P/J24
1
2
I/L +24VDC
K MODE SOL ON (L) +24VDC
Print Head Drive Assembly
PL7.1.4
Color Mode
Switching Solenoid
+3.3VDC
K Sensor Registration Clutch Harness Assembly
PL10.8.9
P/J26
P/J261
1
2
3
PULL UP +3.3VDC
SG
K MODE SENSED (L) +3.3VDC
3
2
1
Color Mode
Switching Sensor
Interlock
+24VDC
Main Motor Harness Assembly
PL10.8.7
P/J21
P/J211
1
2
3
4
5
6
7
8
9
10
SG
I/L +24VDC
SG
I/L +24VDC
SG
MAIN MOT ON
MAIN MOT ALARM
MAIN MOT CLK
MAIN MOT LOW
MAIN MOT CW/CCW
11
10
9
8
7
6
5
4
3
2
Main Drive
Assembly
PL7.1.2
M
Interlock
+24VDC
Sub Motor Harness Assembly
PL10.8.8
P/J22
P/J221
1
2
3
4
5
6
7
8
9
10
SG
I/L +24VDC
SG
I/L +24VDC
SG
SUB MOTO ON
SUB MOT ALARM
SUB MOT CLK
SUB MOT LOW
SUB MOT BRAKE
10
9
8
7
6
5
4
3
2
1
Sub Drive
Assembly
PL7.1.1
M
s6128mfp-221

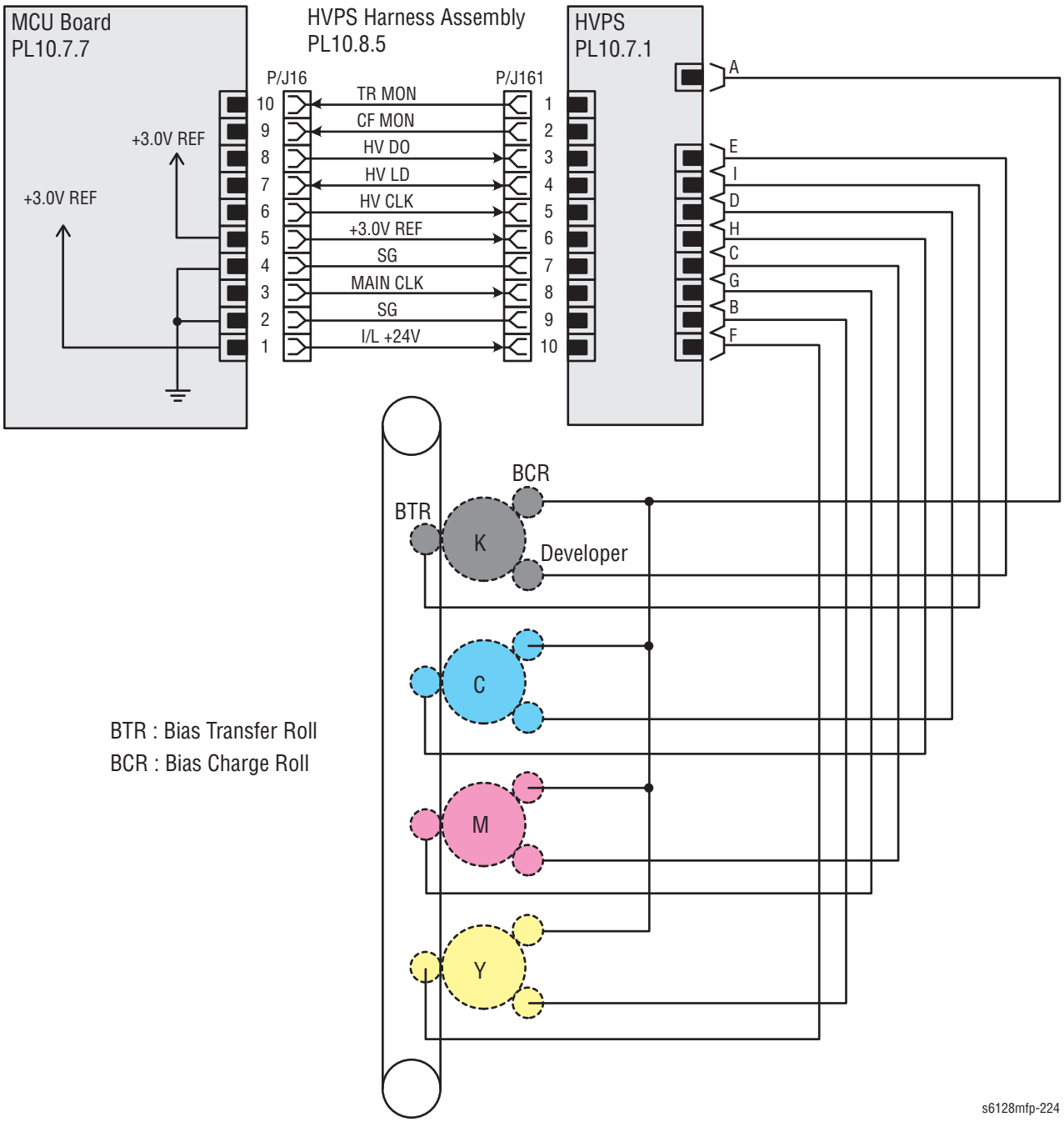
Laser Unit


MCU Board
PL10.7.7
Interlock
+24VDC
from Xerography
Laser Harness Assembly
PL4.1.22
P/J40
P/J411
1 ROS MOT ON 15
2 SG 14
3 I/L +24VDC 13
4 ROS MOT CLK 12
5 SOS 11
6 LD ERR 10
7 PCONT 9
8 SG 8
9 V REF K 7
10 V REF C 6
11 V REF M 5
12 V REF Y 4
13 ENB 3
14 SG 2
15 +3.3V LD 1
Laser Video Harness Assembly
PL4.1.23
P/J41
P/J412
1 SG 8
2 DATA K 7
3 SG 6
4 DATA C 5
5 SG 4
6 DATA M 3
7 SG 2
8 DATA Y 1
Laser Unit
PL4.1.1
1 CLK 5
2 LOCK 4
3 ROS MOT ON 3
4 SG 2
5 +24VDC 1
Laser Motor
1 +5VDC 3
2 SOS 2
3 SG 1
SOS Board
s6128mfp-222

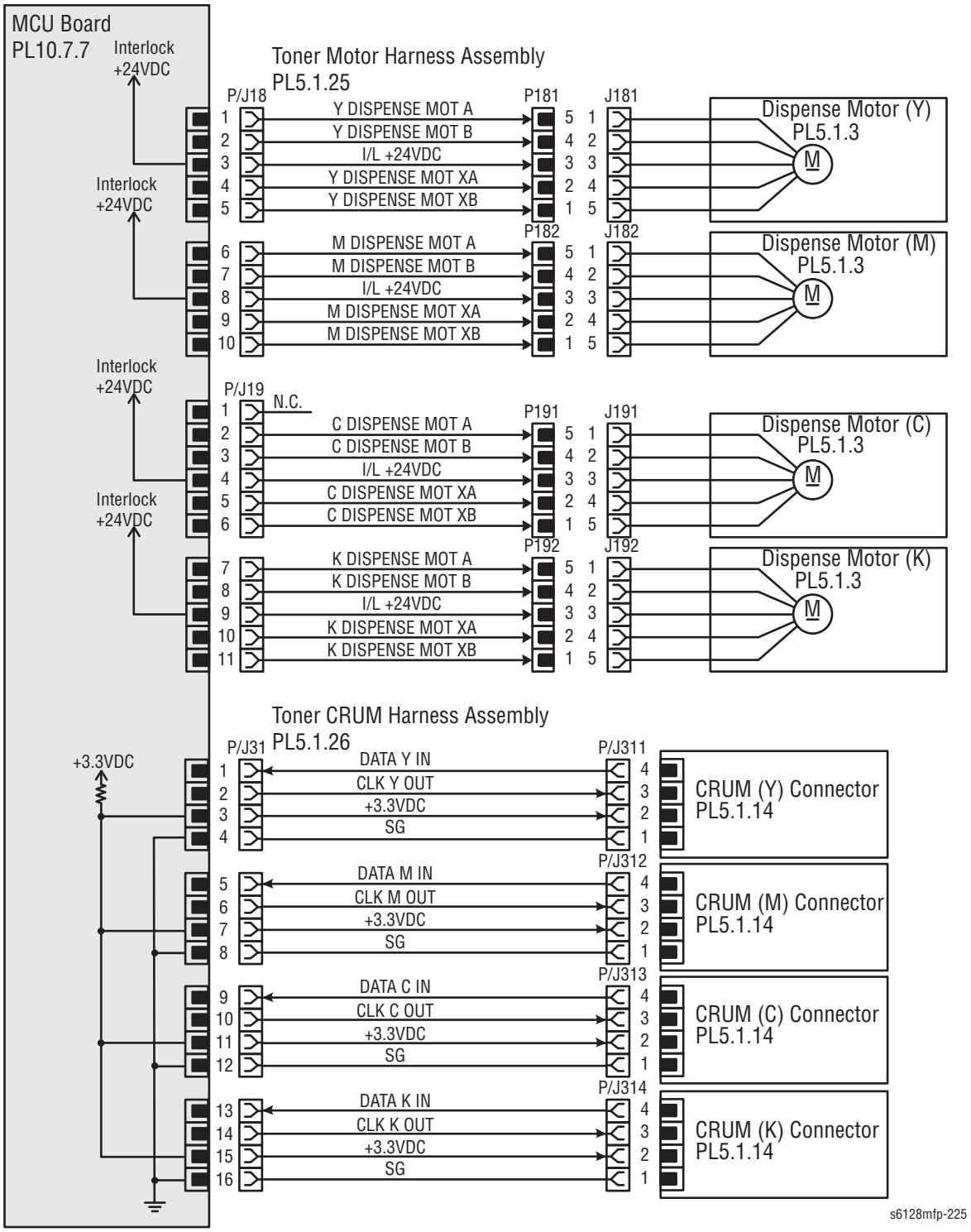
Xerographics



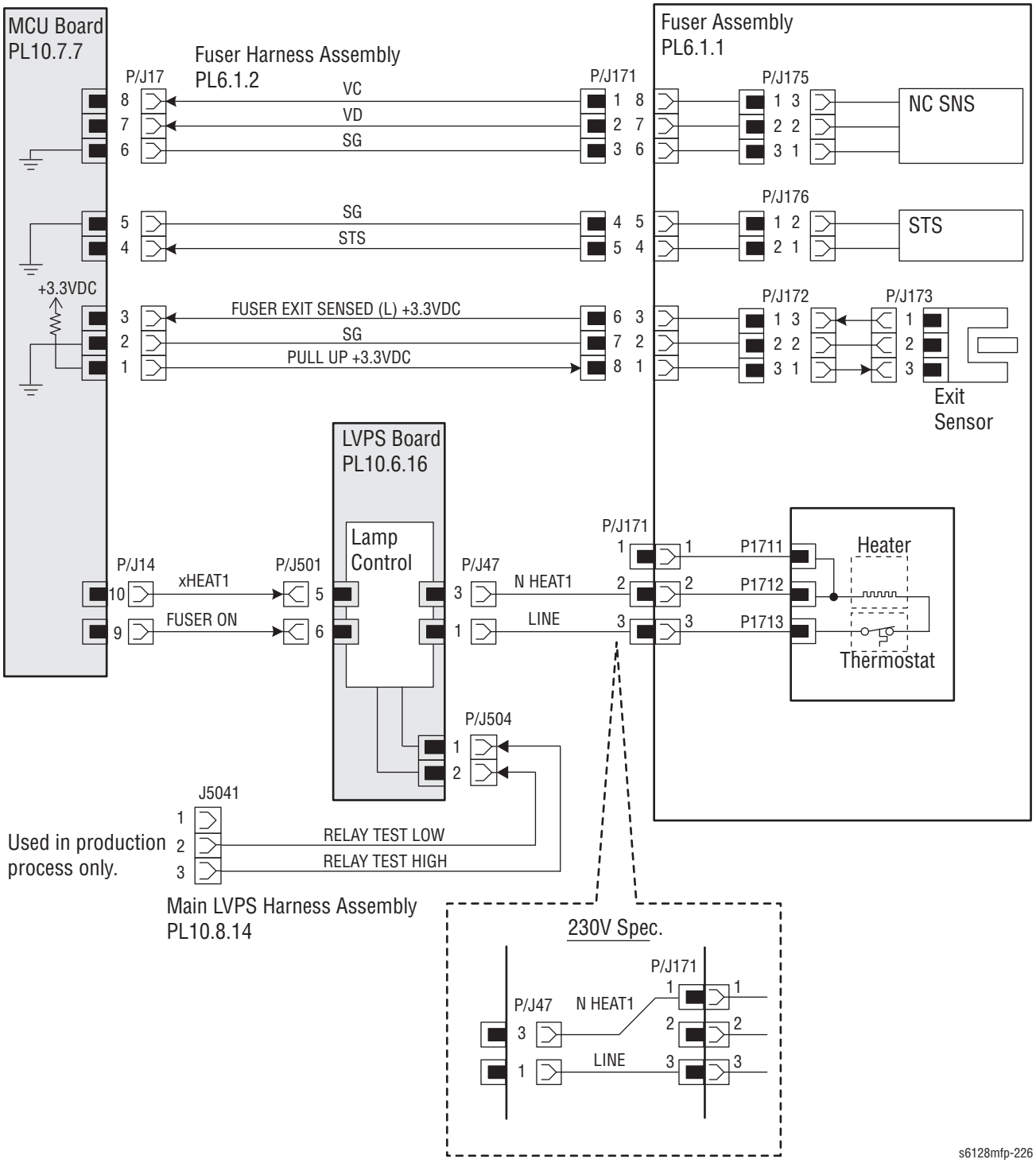
HVPS


MCU Board
PL10.7.7
+3.0V REF
+3.0V REF
HVPS Harness Assembly
PL10.8.5
P/J16
P/J161
10
9
8
7
6
5
4
3
2
1
TR MON
CF MON
HV DO
HV LD
HV CLK
+3.0V REF
SG
MAIN CLK
SG
I/L +24V
HVPS
PL10.7.1
A
E
I
D
H
C
G
B
F
BCR
BTR
K
Developer
C
M
Y
BTR : Bias Transfer Roll
BCR : Bias Charge Roll
s6128mfp-224

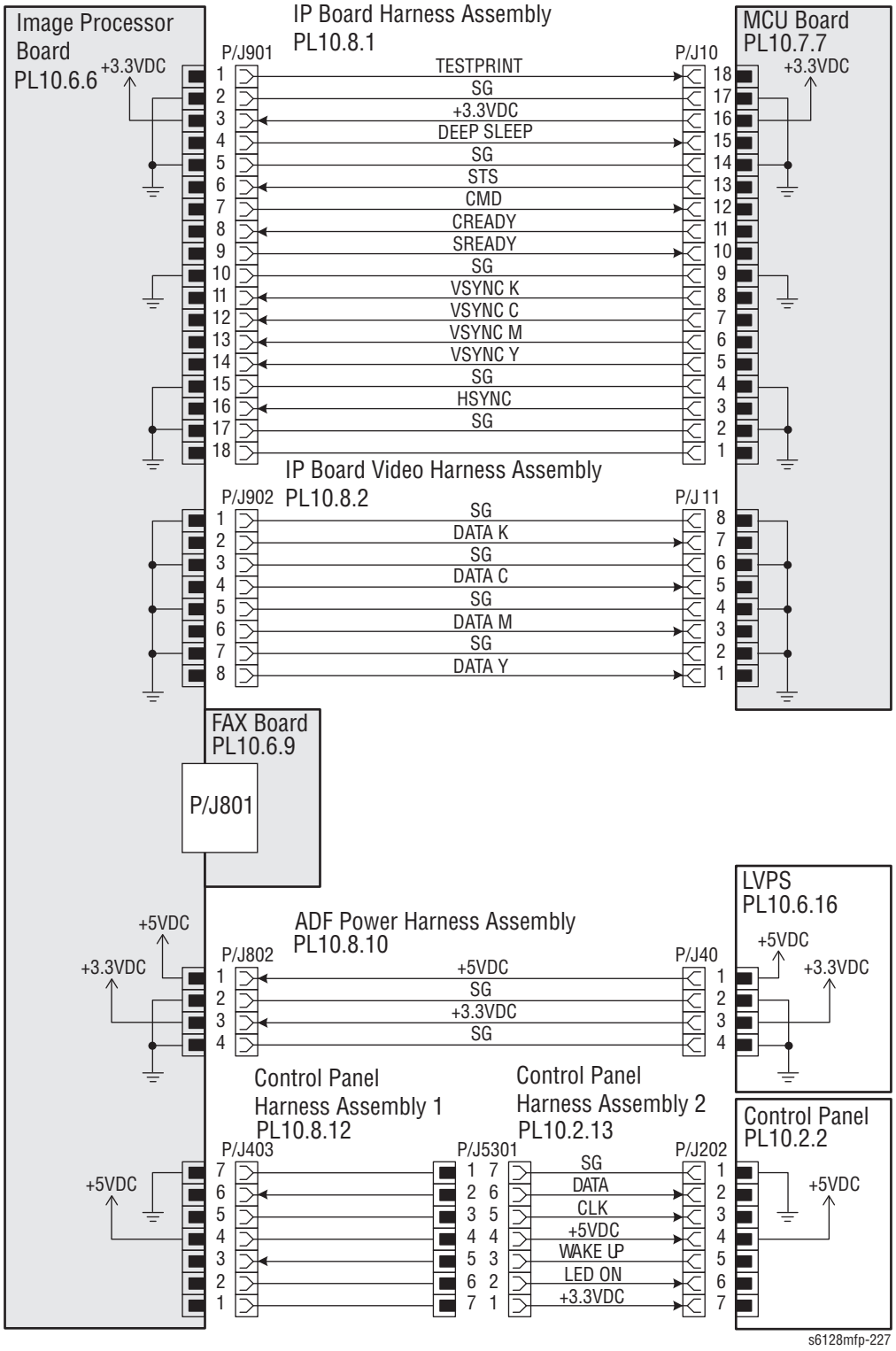
Toner Dispense



Fuser


MCU Board
PL10.7.7
Fuser Harness Assembly
PL6.1.2
Fuser Assembly
PL6.1.1
P/J17
P/J171
P/J175
VC
VD
SG
NC SNS
P/J176
SG
STS
STS
+3.3VDC
P/J172
P/J173
FUSER EXIT SENSED (L) +3.3VDC
SG
PULL UP +3.3VDC
Exit
Sensor
LVPS Board
PL10.6.16
Lamp
Control
P/J171
P/J14
P/J501
P/J47
xHEAT1
FUSER ON
N HEAT1
LINE
P1711
P1712
P1713
Heater
Thermostat
P/J504
J5041
Used in production
process only.
RELAY TEST LOW
RELAY TEST HIGH
Main LVPS Harness Assembly
PL10.8.14
230V Spec.
P/J171
P/J47
N HEAT1
LINE
s6128mfp-226

System Control



ADF

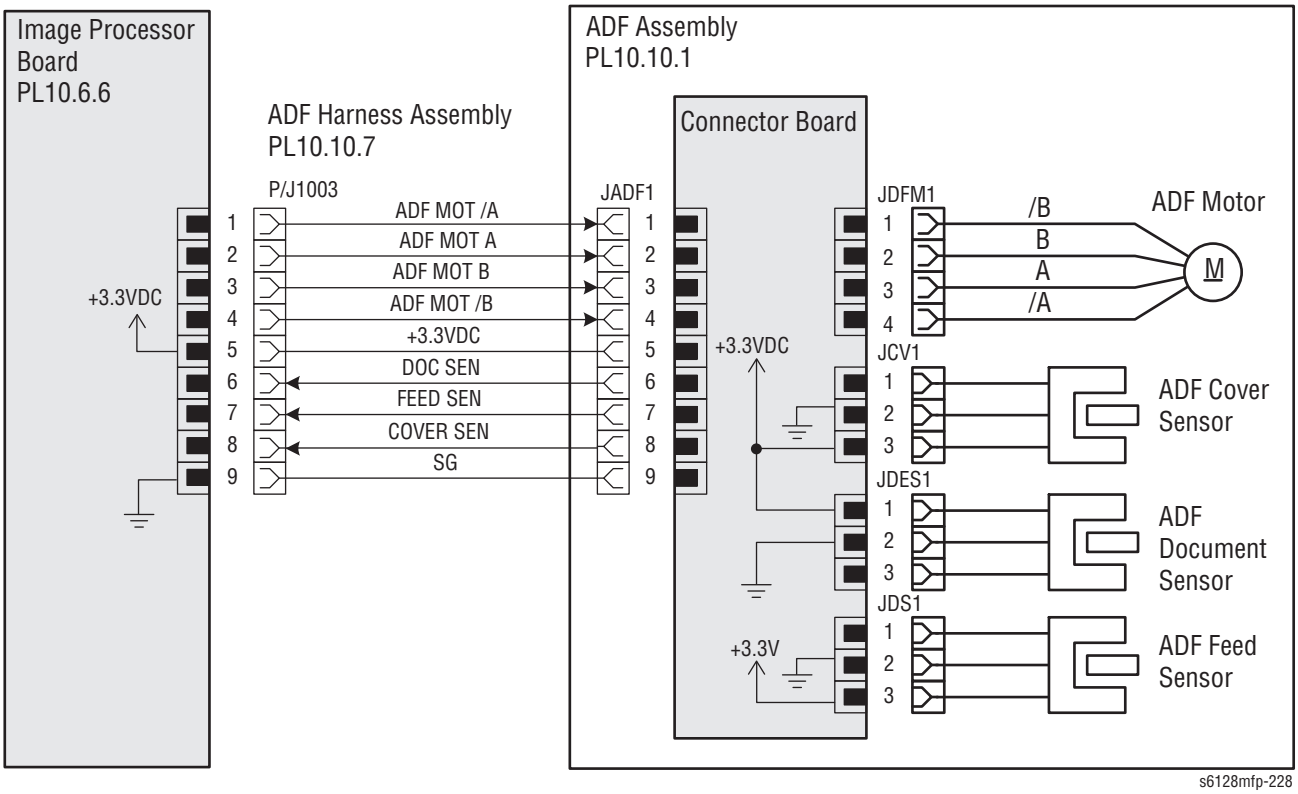
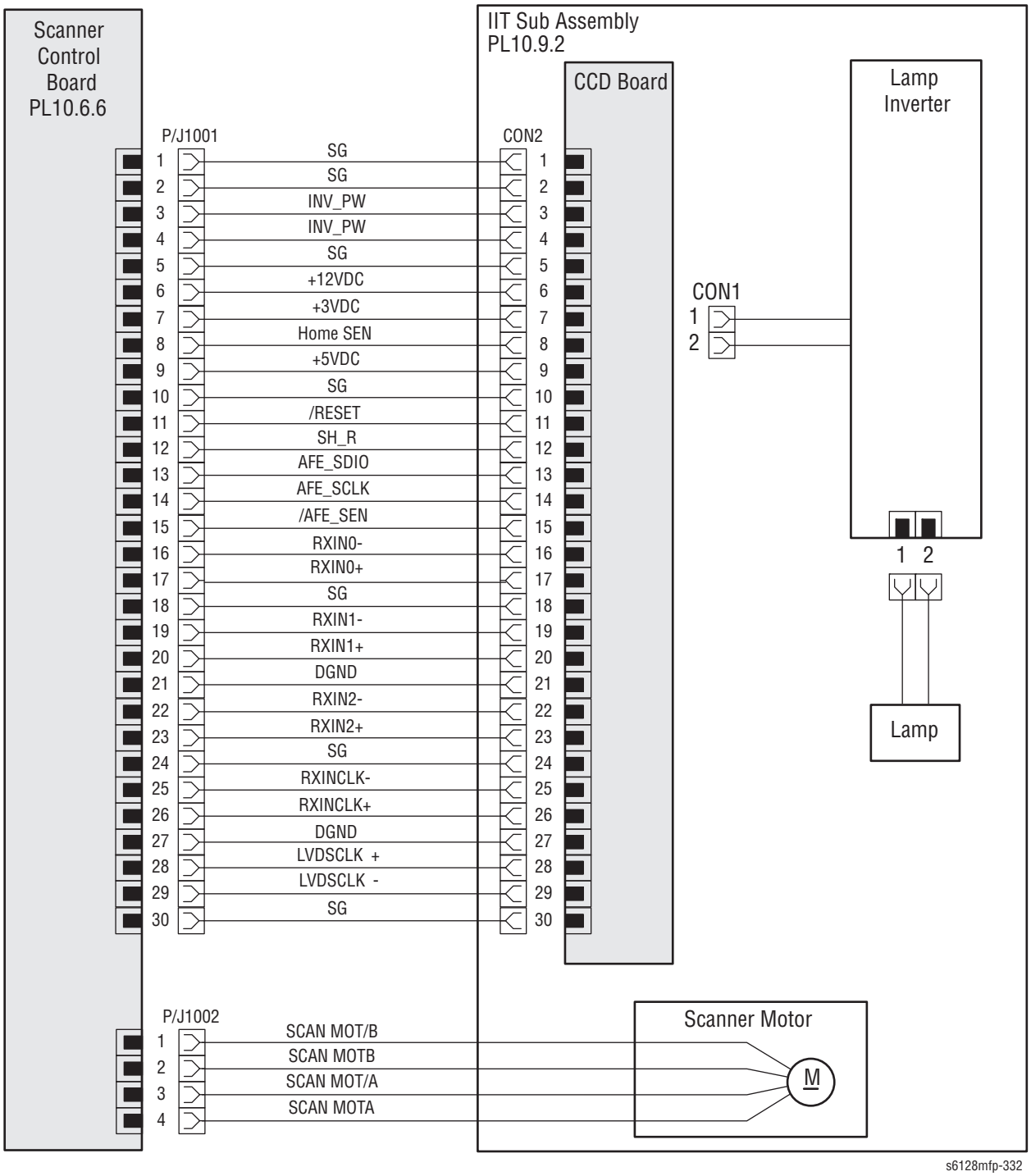


Image Processor Board PL10.6.6
ADF Harness Assembly PL10.10.7
ADF Assembly PL10.10.1
Connector Board
P/J1003
JADF1
JDFM1
JCV1
JDES1
JDS1
+3.3VDC
ADF MOT /A
ADF MOT A
ADF MOT B
ADF MOT /B
+3.3VDC
DOC SEN
FEED SEN
COVER SEN
SG
/B
B
A
/A
M
ADF Motor
ADF Cover Sensor
ADF Document Sensor
ADF Feed Sensor
+3.3V
s6128mfp-228

Imaging


Scanner Control Board PL10.6.6
IIT Sub Assembly PL10.9.2
CCD Board
Lamp Inverter
P/J1001
CON2
1 SG
2 SG
3 INV_PW
4 INV_PW
5 SG
6 +12VDC
7 +3VDC
8 Home SEN
9 +5VDC
10 SG
11 /RESET
12 SH_R
13 AFE_SDIO
14 AFE_SCLK
15 /AFE_SEN
16 RXIN0-
17 RXIN0+
18 SG
19 RXIN1-
20 RXIN1+
21 DGND
22 RXIN2-
23 RXIN2+
24 SG
25 RXINCLK-
26 RXINCLK+
27 DGND
28 LVDSCLK +
29 LVDSCLK -
30 SG
CON1
1
2
1 2
Lamp
P/J1002
1 SCAN MOT/B
2 SCAN MOTB
3 SCAN MOT/A
4 SCAN MOTA
Scanner Motor
M
s6128mfp-332

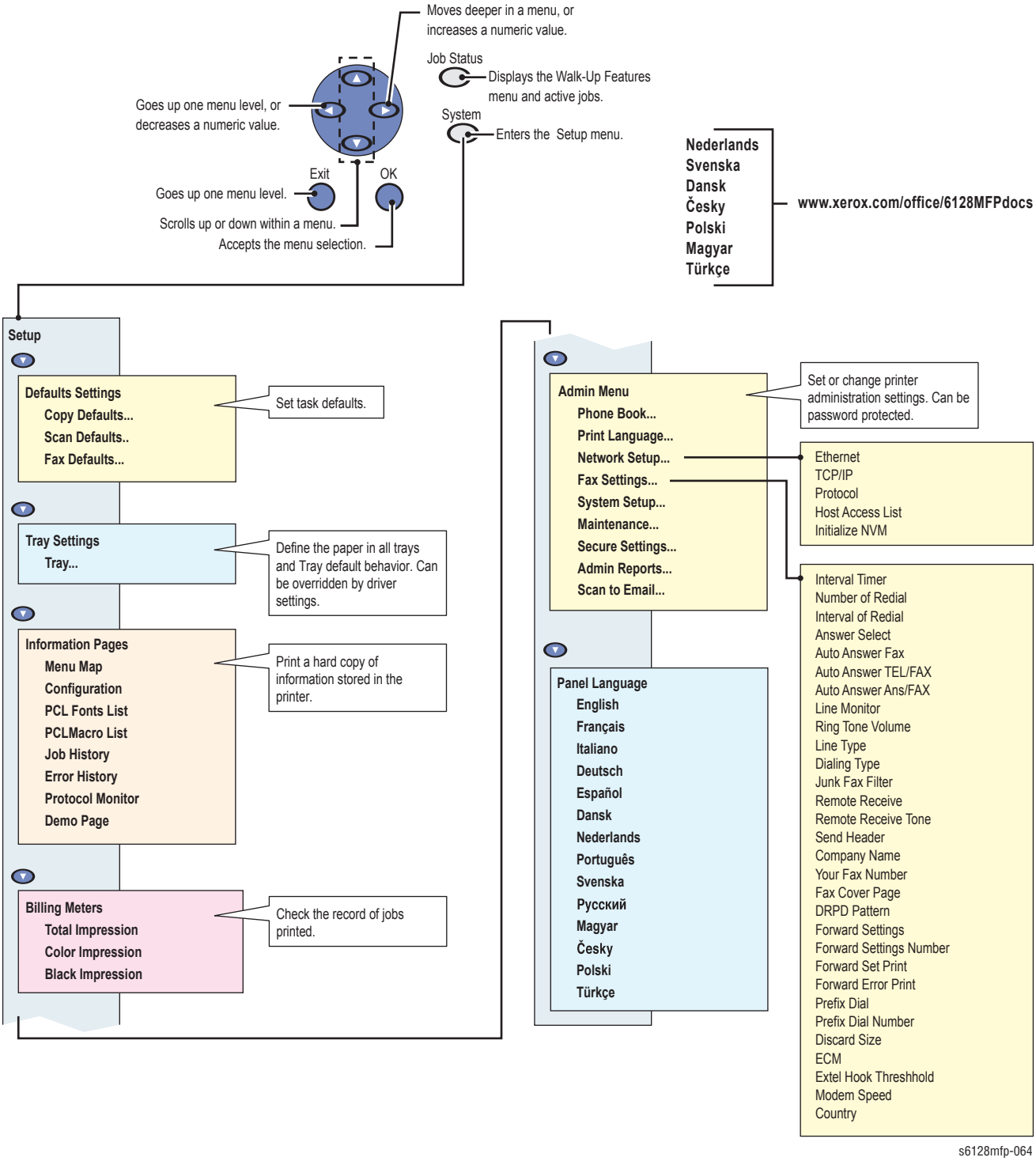
Reference

In this chapter...

- Phaser 6128MFP Menu Map
- Firmware Update
- Acronyms and Abbreviations

Appendix A

Phaser 6128MFP Menu Map

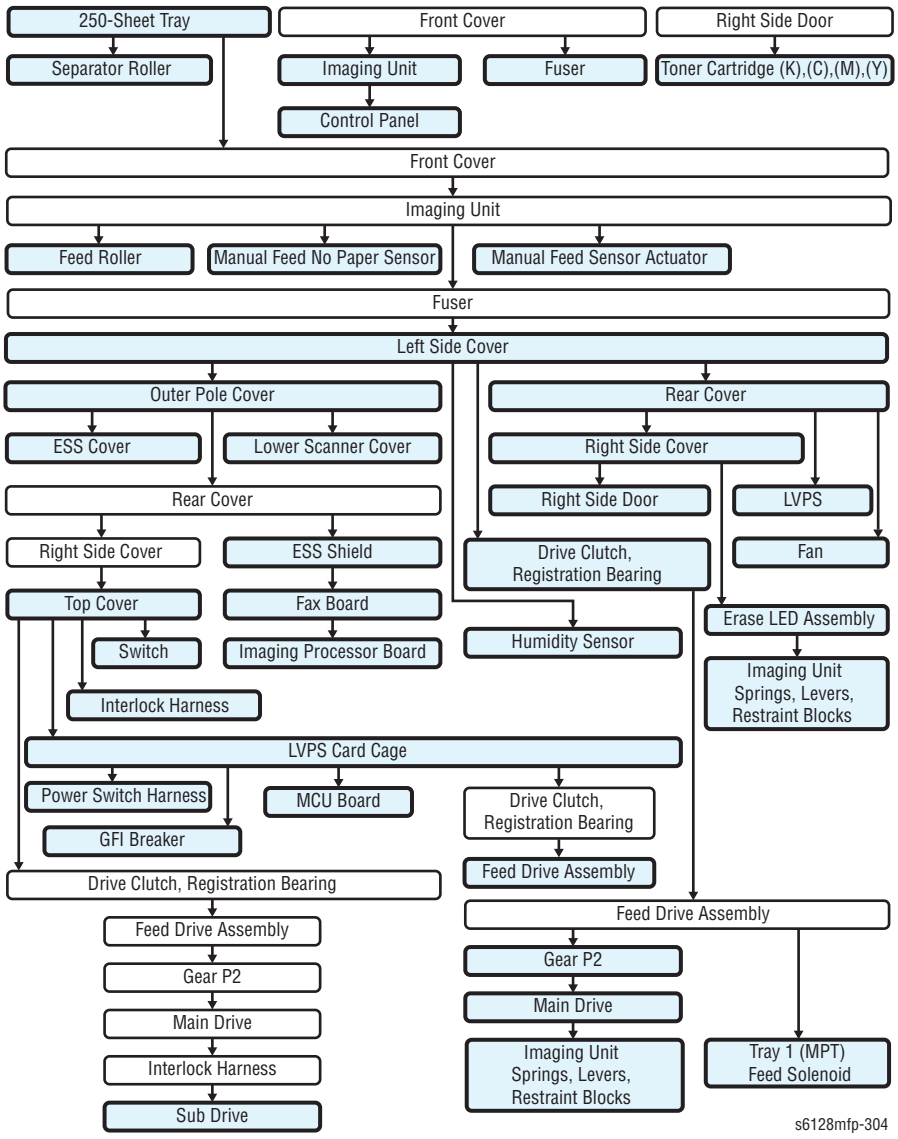


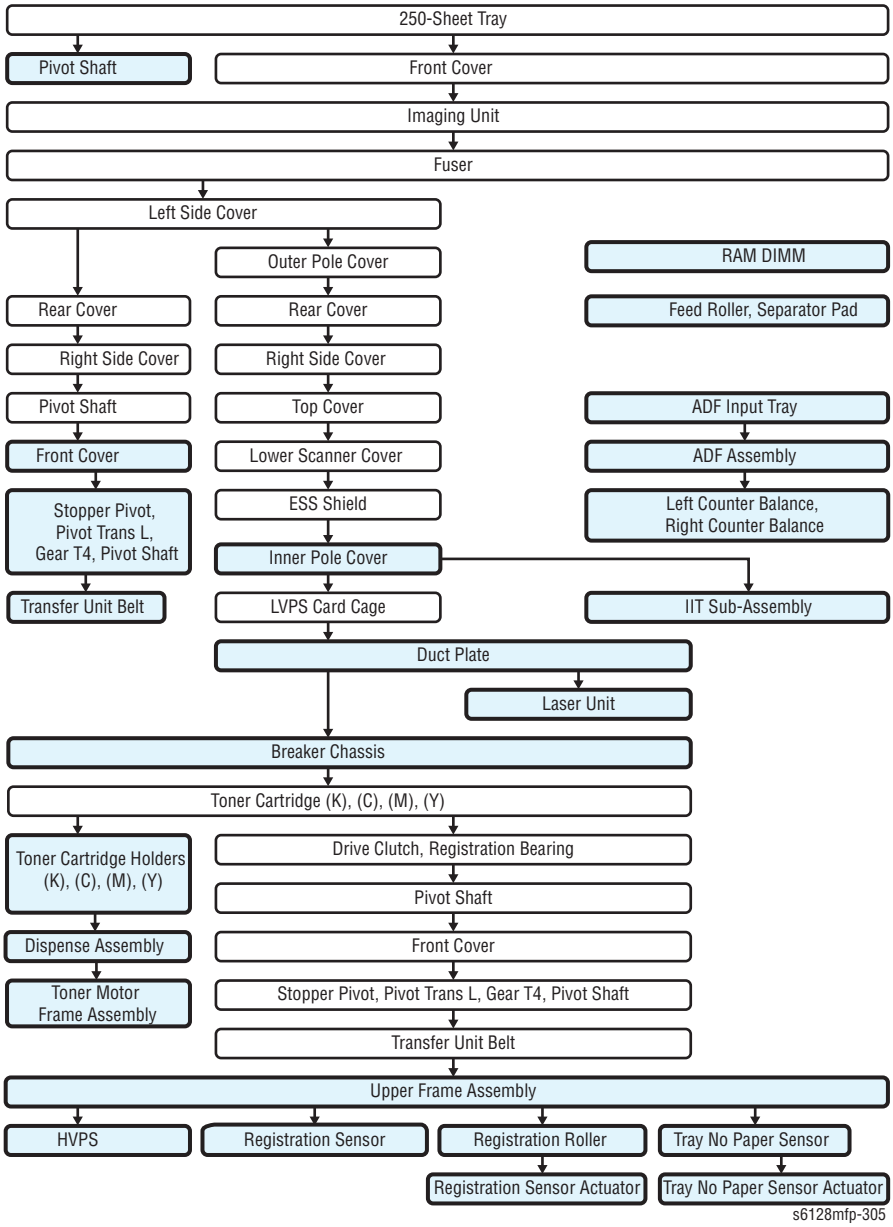
s6128mfp-064

Procedural Flow Diagrams

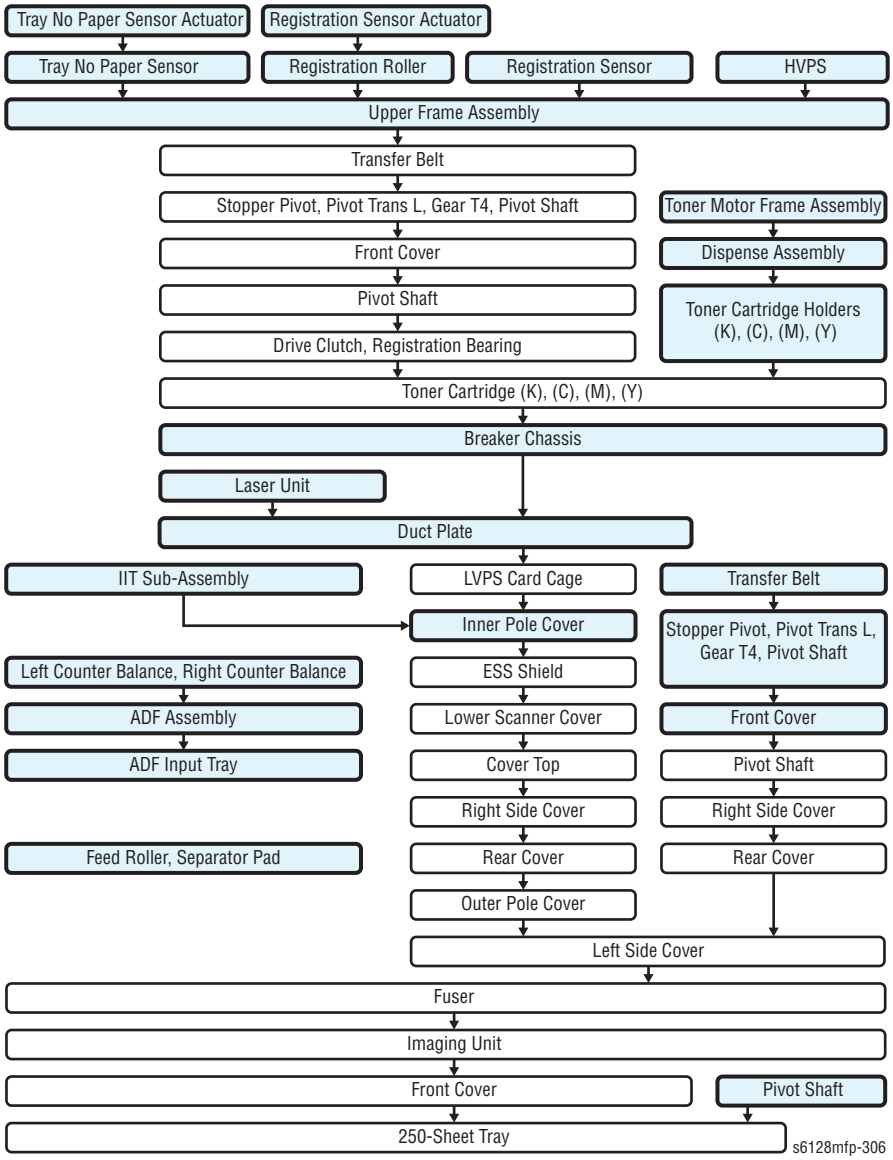
These diagrams illustrate procedural flow for component removal and replacement. Components not connected with arrows can be removed or installed independently.

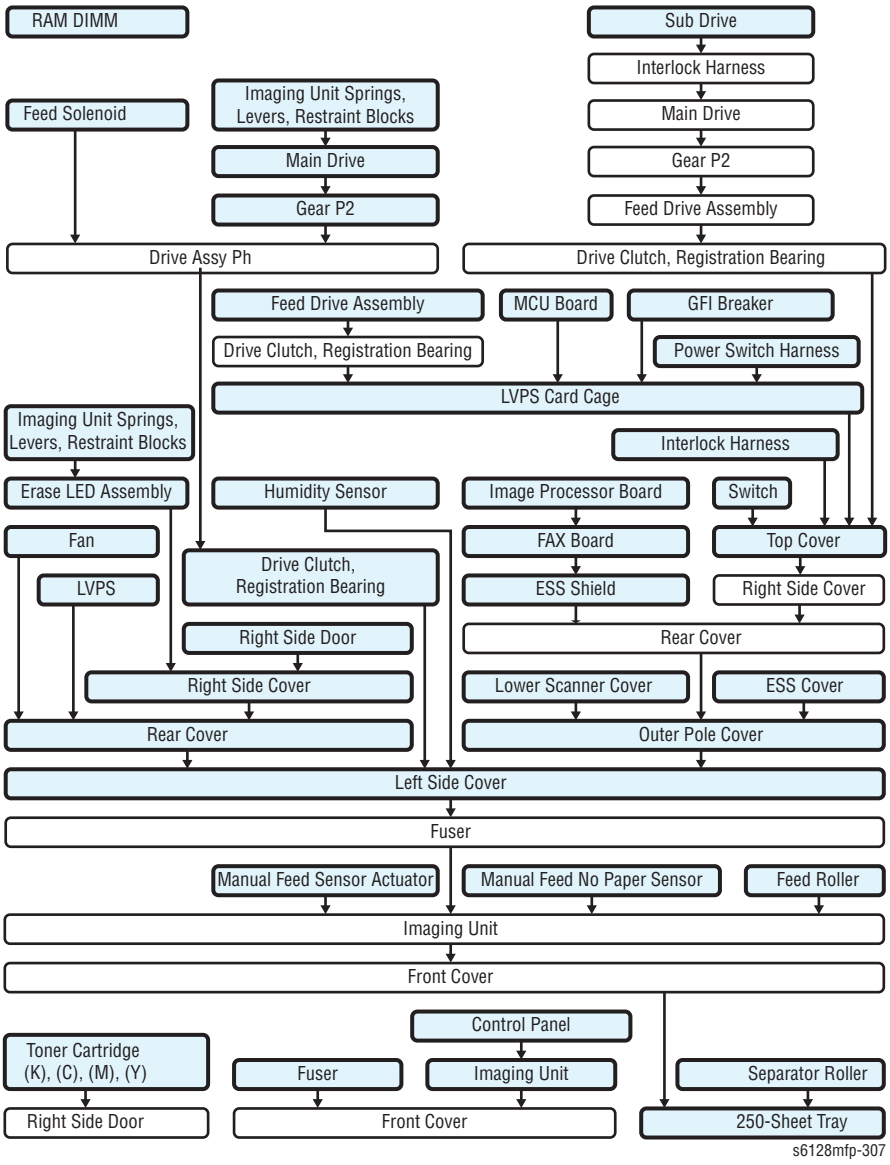
Removal Flow Diagrams




250-Sheet Tray
Pivot Shaft
Front Cover
Imaging Unit
Fuser
Left Side Cover
Outer Pole Cover
RAM DIMM
Rear Cover
Rear Cover
Feed Roller, Separator Pad
Right Side Cover
Right Side Cover
Pivot Shaft
Top Cover
ADF Input Tray
Front Cover
Lower Scanner Cover
ADF Assembly
Stopper Pivot, Pivot Trans L, Gear T4, Pivot Shaft
ESS Shield
Left Counter Balance, Right Counter Balance
Inner Pole Cover
Transfer Unit Belt
LVPS Card Cage
IIT Sub-Assembly
Duct Plate
Laser Unit
Breaker Chassis
Toner Cartridge (K), (C), (M), (Y)
Toner Cartridge Holders (K), (C), (M), (Y)
Drive Clutch, Registration Bearing
Pivot Shaft
Dispense Assembly
Front Cover
Toner Motor Frame Assembly
Stopper Pivot, Pivot Trans L, Gear T4, Pivot Shaft
Transfer Unit Belt
Upper Frame Assembly
HVPS
Registration Sensor
Registration Roller
Tray No Paper Sensor
Registration Sensor Actuator
Tray No Paper Sensor Actuator
s6128mfp-305

Replacement Flow Diagrams




RAM DIMM
Sub Drive
Interlock Harness
Main Drive
Gear P2
Feed Drive Assembly
Feed Solenoid
Imaging Unit Springs, Levers, Restraint Blocks
Main Drive
Gear P2
Drive Assy Ph
Drive Clutch, Registration Bearing
Feed Drive Assembly
MCU Board
GFI Breaker
Drive Clutch, Registration Bearing
Power Switch Harness
LVPS Card Cage
Imaging Unit Springs, Levers, Restraint Blocks
Interlock Harness
Erase LED Assembly
Humidity Sensor
Image Processor Board
Switch
Fan
FAX Board
Top Cover
LVPS
Drive Clutch, Registration Bearing
ESS Shield
Right Side Cover
Right Side Door
Rear Cover
Right Side Cover
Lower Scanner Cover
ESS Cover
Rear Cover
Outer Pole Cover
Left Side Cover
Fuser
Manual Feed Sensor Actuator
Manual Feed No Paper Sensor
Feed Roller
Imaging Unit
Front Cover
Control Panel
Toner Cartridge (K), (C), (M), (Y)
Fuser
Imaging Unit
Separator Roller
Right Side Door
Front Cover
250-Sheet Tray
s6128mfp-307

Acronyms and Abbreviations

Acronym	Description
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
BTR	Bias Transfer Roller
CCD	Charge Coupled Device (Photoelectric Converter)
CCW	Counter-Clock Wise
CMYK	Toner colors for the printer: Y=yellow, C=cyan, M=magenta, K=black
CRU	Customer Replaceable Unit
CRUM	Customer Replaceable Unit Meter/Memory
CST	Cassette
dB	Decibel
DC	Direct Current
DDNS	Dynamic Domain Name System
DDR2 DIMM	Double Data Rate Dual In-Line Memory Module
DEV	Developer
DHCP	Dynamic Host Configuration Protocol
DPI	Dots Per Inch
DRV	Drive
DUP	Duplex
Duplex	2-sided printing
EA	Emulsion Aggregation (Toner)
EEPROM	Electrically Erasable Programmable Read-Only Memory

Acronym	Description
ESD	Electrostatic Discharge. A transfer of charge between bodies at different electrostactic potential.
ESS	Image process controller
FCC	Federal Communications Commission
FDR	Feeder
FPOT	First Print Output Time
FRU	Field Replaceable Unit
GB	Giga Byte
GDI	Graphics Device Interface
GND	Ground
HARN	Harness
HCF	High-Capacity Feeder
HDD	Hard Disk Drive
HUM	Humidity
HV	High Voltage
HVPS	High-Voltage Power Supply
Hz	Hertz (cycles per second)
IDT	Intermediate Drum Transfer
IEC	International Electrotechnical Commission
I/F	Interface
IIT	Image Input Teminal - ADF, Scanner
IOT	Image Output Terminal - the printer
IP	Image Processor
KB	Kilo Byte
LAN	Local Area Network
LCD	Liquid Crystal Display
LD	Laser Diode
LED	Light Emitting Diode
LEF	Long-Edge Feed
LPD	Line Printer Daemon
LPR	Line Printer Remote
LTR	Letter Size Paper (8.5 x 11 inches)
LVPS	Low-Voltage Power Supply
MB	Mega Byte
MCU	Machine Control Unit (Engine Control Board)
MHz	Mega Hertz
MIB	Management Information Base

Acronym	Description
MM	Millimeters
MOT	Motor
MPT	Multi-Purpose Tray
NCS	Non-Contact Sensor
NVM	Non-Volatile Memory
NVRAM	Non-Volatile Random Access Memory
OHP	Overhead Paper (Transparency)
OPT	Optional
OS	Operating System
PCB	Printed Circuit Board
PCL	Printer Command Language
PDL	Page Description Language
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
PWBA	Printed Wiring Board Assembly
RAM	Random Access Memory
RH	Relative Humidity
RMS	Root Mean Square Voltage
ROM	Read-Only Memory
ROS	Raster Output Scanner - Laser Unit
SEF	Short-Edge Feed
SMB	Server Message Block
SNMP	Simple Network Management Protocol
SNR	Sensor
SOL	Solenoid
SOS	Start of Scan
TDC	Toner Density Control
TNR	Toner
UI	User Interface
USB	Universal Serial Bus
WINS	Wireless Integrated Network Sensor

Firmware Update

Boot Controller Update

Note

Boot Code can be updated via USB port only.

1. Down load applicable files from the Xerox support web site.
2. Turn off the printer.
3. Ensure your USB cable is connected.
4. Press the **Up Arrow**, **Down Arrow**, and **System** buttons simultaneously and turn on the printer.
5. The FW Update Password is displayed.
6. Press the **Down Arro**w button 2 times.
7. Press the **OK** button.
8. The F/W Download is displayed.
9. Select DL Mode USB. Press the **OK** button.
10. The serial number of the printer is displayed. Then the DownLoad Mode Send F/W Data is displayed.
11. On your computer, locate the downloaded file. Open the Boot directory. Double-click the Xeroxfwup.exe file.
12. Select USB. Click the Next button.
13. The xeroxfwup window with the module number is displayed. Click the Next button.
14. On the printer Control Panel, the Erasing Flash... --> Diagnosing message is displayed. The the printer starts updating the firmware.

Caution

Do Not reboot or turn off the printer. The printer will automatically reboot.

1. When the process is completed, the following messages are displayed on the printer Control Panel.
   - Xerox (TM) Print Cartridge
   - Processing... Ready
2. Print the printer Configuration page and verify the Boot Version information.

Firmware Controller Update

1. Down load 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 in 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 module number is displayed. 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.

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 printer Configuration page and verify the firmware version.

Firmware MPC Update

1. Down load 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 in 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 module number is displayed. Click the **Next** button.
      - On the printer Control Panel, messages are displayed from Receiving data USB --> Checking... USB --> Writing... USB as the printer starts updating the firmware.
      - A Diagnosing... message is displayed on the Control Panel.

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) Toner 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 printer Configuration page and verify the firmware version.

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