XEROX

Xerox DocuPrint N2125

Network Laser Printer Service Manual

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

721P52390
February 2000

This Service Manual contains information that applies to the DocuPrint N2125 Laser Printer.

Copyright

This Service Manual contains information that applies to the DocuPrint N2125 Electronic Laser Printer.

NOTICE

This manual is for use by Xerox Technicians and Xerox trained technicians only.

NOTICE

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Warning

This equipment complies with the requirements in Part 15 of FCC rules for a class A computing device. Operation of the equipment in a residential area may cause unacceptable interference to radio and TV reception, requiring the operator to take whatever steps are necessary to correct the interference.

Electrostatic Discharge

This caution indicates that there are components which are sensitive to damage caused by electrostatic discharge.

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

Shock Hazard

This symbol indicates the presence of potentially hazardous voltages.

FM_001

Fuser Hazard

This symbol indicates the presence of extreme heat from the Fuser Assembly.

Class 1 LASER Product

The DocuPrint N2125 laser printer 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 is a class of laser product that does not emit hazardous laser radiation; this is possible only because the laser beam is totally enclosed during all modes of customer operation.

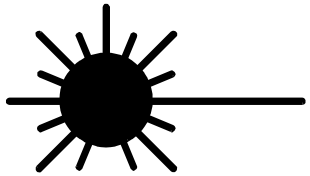
The laser and output of the laser scanner unit produces a beam that, if looked into, could cause eye damage. Service procedures must be followed exactly as written without change.

When servicing the machine or laser module, follow the procedures specified in the manual and there will be no hazards from the laser.

Laser (FDA): Any laser label visible to service must be reproduced in the service manual with location shown or indicated. Safe working procedures and clear warnings concerning precautions to avoid possible exposure must also be included.

The Laser contained in the DocuPrint N2125 meets the following standard: Laser class 3B, maximum 5mW, wavelength 780nm.

The following LASER symbol will be displayed at the start of any procedure where possible exposure to the laser beam exists.



LUOKAN 1 LASERLAITE

KLASS 1 LASER APPARAT

Table of Contents

Introduction

The DocuPrint N2125 Service Manual is the primary document used for repairing and maintaining the DocuPrint N2125 Laser Printer.

This manual contains Service Call Procedures, Diagnostic Procedures, General Information, Repair Analysis Procedures, Image Quality Analysis Procedures, Wiring Data, and Parts Lists that will enable the Service Representative to repair DocuPrint N2125 failures.

Organization

This manual is divided into seven sections. The title and description of each section of the manual is as follows:

Section 1 - Service Call Procedures

This section is used to identify a suspected problem. It contains Machine Orientation, Call Flow, Initial Actions, Corrective Actions, and Final Actions. This part of the service manual should always be used to start the service call.

Section 2 - Repair Analysis Procedures

This section is used to isolate and identify problems to a faulty component or subassembly. It contains the introduction, display message table, error code tables and the Repair Analysis Procedures (RAPs).

Section 3 - Image Quality

This section contains image quality repair procedures to assist in correcting image quality defects. These procedures provide defect samples and definitions to help identify the type of defect that exists, the test pattern to use, and actions required to correct the defects.

Section 4 - Repair / Adjustment

This section contains the instructions for removal, replacement, and adjustment of the spared parts within the machine.

Section 5 - Parts Lists

This section contains illustrations of disassembled subsystems and a listing of the spared parts.

Part names are listed in this section of the manual even if the part itself is not spared. All the parts that are spared will have the part number listed. Parts that are not spared will not have a number listed.

Section 6 - General Procedures

This section includes the Operations Menu Map and the Service Mode Menu Map. It includes all unique service operations, supplemental tools and supplies.

Section 7 - Wiring Data

This section contains sensor, connector, and PWB location drawings; power distribution diagrams, interconect diagrams, interconnect diagrams and pin assignment information. This information is not specific to individual procedures but is provided for general reference.

Terminology and Symbols

The following is the terminology and symbols that are used in this manual for Warnings, Electrostatic Device or General Cautions, and Notes.

Warning

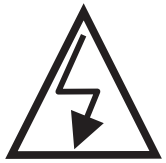
This equipment complies with the requirements in Part 15 of FCC rules for a class A computing device. Operation of the equipment in a residential area may cause unacceptable interference to radio and TV reception, requiring the operator to take whatever steps are necessary to correct the interference.

Electrostatic Discharge

The following symbols indicates that there are components which are sensitive to damage caused by electrostatic discharge.

Shock Hazard

This symbol indicates the presence of potentially hazardous voltages.



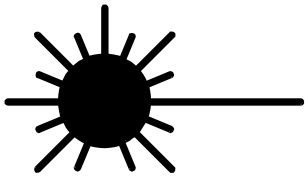
FM_001

Fuser Hazard

This symbol indicates the presence of extreme heat from the Fuser Assembly.

Laser Product Certification

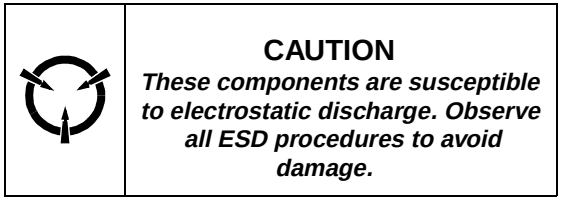
CAUTION



Use of controls or adjustments other than those specified in this manual may result in an exposure to dangerous laser radiation.

The DocuPrint N2125 is certified to comply with Laser Product Performance Standards set by the United States Department of Health and Human Services as a Class 1 product. This means that it is a laser product that does not emit dangerous laser radiation during any mode of customer operation.

During servicing, the laser beam could cause eye damage if looked at directly. Service procedures must be followed exactly as written without change.



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1 Service Call Procedures

1.0 Introduction

The Service Call Procedures section is used to identify a suspected problem. This section contains Call Flow, Initial Actions, Corrective Actions, and Final Actions.

Call Flow illustrates the normal activities and flow of a service call.

Initial Actions are used to gather information regarding the performance of the machine and prepare the product for servicing.

Corrective Actions are used to verify the normal operation of the machine. In the Y/N (Yes/No) steps of the corrective actions, a Yes response will lead you to the next step. A No response will indicate the next step to perform or will direct you to a Repair Analysis Procedure (RAP).

RAPs will provide the instructions to isolate the faulty part or provide a list of suspect parts, when isolation is not appropriate. Wire harnesses are not included in the repair actions and problems with loose connections or damaged harnesses should be isolated using visual inspection and the wiring data in section 7.

Final Actions are used to evaluate the total operation of the system and to identify the actions required to complete the service call.

1.1 Machine Orientation

For servicing the DocuPrint N2125, all references to machine orientation are as illustrated in Figure 1.

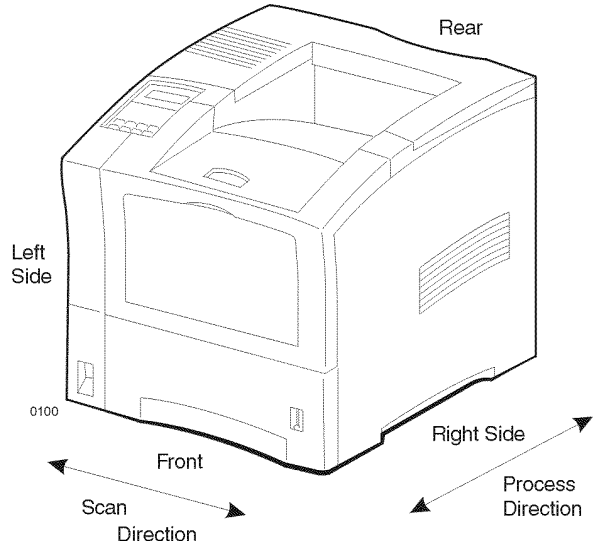

Figure 1 Machine Orientation

1.2 Call Flow

The call flow diagram shows the relationship of actions during a typical service call Figure 1.

The functions in Call Flow correspond to service manual sections as follows:

Section 1 - Initial Actions, Corrective Actions, and Final Actions

Section 2 - Status Indicator Repair Analysis Procedures (RAPs)

Section 3 - Image Quality Repair Analysis Procedures (IQ RAPs)

Section 4 - Repair / Adjustment (REPs)

Section 5 - Parts Lists (PLs)

Section 6 - General Procedures

Section 7 - Wiring

All service calls start with Initial Actions and all service calls end with Final Actions.

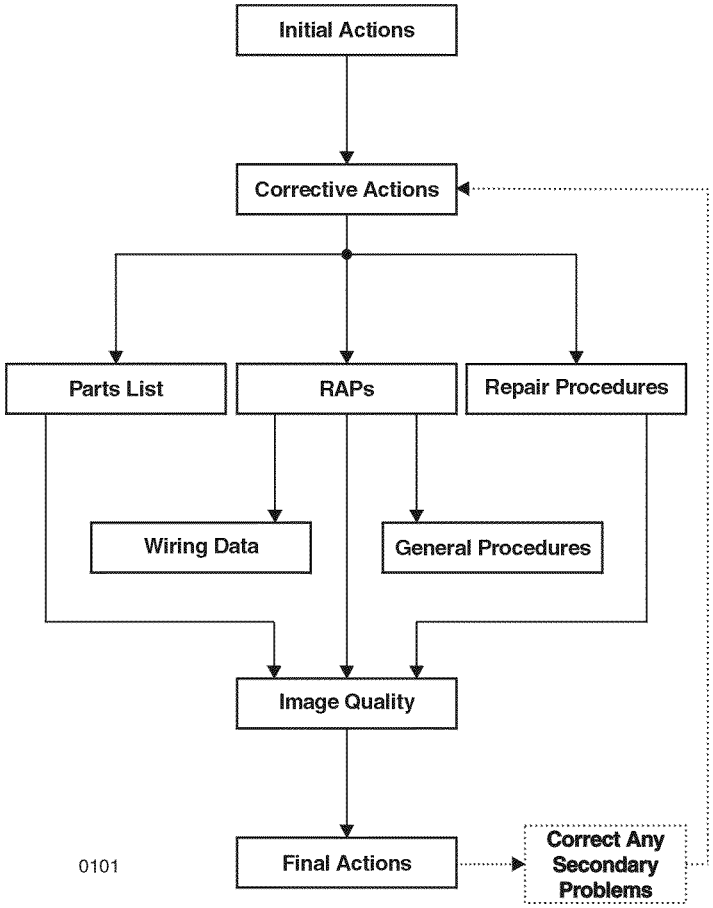

Figure 1 Call Flow Diagram

1.3 Initial Actions

Initial Actions are used to gather information from the operator concerning problems at the local machine. Make note of symptoms, error messages, error codes or other information concerning the problem that the operator may provide. This information may help identify an intermittent or unusual problem.

Procedure

1. Ensure that the power cord is connected to the wall outlet and to the machine.
2. Check for paper or other objects in the paper path.
3. Remove all paper from the output tray(s).
4. The Rear Cover and Front Cover are closed.
5. The paper is within specification and is loaded correctly in the Paper Tray(s).
6. Ask the operator to describe, or if possible, demonstrate the problem.
7. If the problem is the result of incorrect operator action, refer the operator to the User documentation.

   NOTE: *The printer has the capability of displaying error messages while in the online mode or in the diagnostic mode. The Fault History log will list the last 100 errors that have occurred. The three codes may be different in format, but you can use any one of the codes to access the Error Code Tables (Table 1 or Table 2) in section 2. The Error Code Tables will list the corrective actions or direct you to a RAP.*

8. If an error message is displayed refer to the Error Code Tables (Table 1 or Table 2).
9. If possible, print the “Configuration Sheet”. To print the Configuration Sheet, press and release [1] or [5] until “Print Menu” is displayed. Then press and release [2] or [6] until “Config Sheet” is displayed. Press Enter [4] to print the sheet. If the sheet is blank, go to IQ RAP 2.
10. Have the customer determine that the configuration settings are correct.
11. If possible, print the “Fault History”. To print the “Fault History” press and release [1] or [5] until “Print Menu” is displayed. Then press and release [2] or [6] until “Fault History” is displayed. Next, press Enter [4] to print the sheet. The Fault History will list the error codes and the meter count when the event happened. Use the Fault History to determine the frequency of a problem. Access the Error Code Tables (Table 1 or Table 2) and perform the corrective action as instructed.
12. If the Fault History can not be printed, the fault history can be displayed on the Control Panel. To display the “Fault History” press and release [1] or [5] until “Print Menu” is displayed. Then press and release [2] or [6] until “Display Faults” is displayed. Next, press press [3] to display the last fault that occurred. Continue to press and release [3] to display the error codes in order from the newest to the oldest. Pressing and releasing the [4] key will display the codes in order from the oldest to the newest. The Display Faults will display the error code and the meter count when the event happened. An example of the display “E9-2 #820”, where E9-2 is the error code and #820 is the meter count.
13. Proceed to Corrective Actions.

1.4 Corrective Actions

Procedure

Ensure that the Initial Actions have been completed. Switch the main power off, wait 10 seconds, then switch the main power on. **The Fuser Fan runs.**

Y N

Perform RAP 2. If the DC power is correct, perform RAP 20.

The Main Drive Motor runs for approximately 6 seconds, then stops.

Y N

Perform RAP 16.

The Fuser Fan runs.

Y N

Perform RAP 20.

In approximately 30 seconds, the LCD Panel will display “Power On” and the Power On Diagnostic (POD) software “Version x.xxx”. **The display is correct.**

Y N

Perform RAP 25

The Control Panel will display a number of different screens as the Power On Diagnostics Completes Figure 1. **The printer completes Power On Diagnostics and Ready is displayed.**

Y N

Perform RAP 25.

Press [1] twice to select “Print Menu”, then press and release [2] until “Menu Map” is displayed. Press Enter [4] to print the “Menu Map”. “Processing Menu Map” is displayed, immediately followed by “Processing Tray #”. **The display is correct.**

Y N

Perform RAP 25/RAP 26.

The Main Driver Motor runs.

Y N

Perform RAP 29.

Paper is fed from the paper tray and is delivered to the output tray.

Y N

Perform RAP as specified by the Error Code / Message listed in Table 1 of section 2.

The print contains readable text.

Y N

If the print is black or blank perform IQ RAP 10 or IQ RAP 2.
If the text is garbled, Perform ()RAP A.

The print quality of the Menu Map is acceptable.

Y N

Perform Image Quality Checkout.

A

A

Enter Diagnostics and select “Print Menu”. Scroll to “Test Print”. Feed at least 5 test prints from all available trays to the Standard output tray (GP 2.5) for test print. **Test prints were successfully delivered from each tray.**

Y N

Perform RAP as specified by the Error Code / Message listed in Table 1 of section 2.

If the Duplex Assembly is installed, run at least 5 duplexed prints (GP 2.5) for test print. If a Duplex Assembly is not installed, follow the “Y” path. **The prints were delivered successfully.**

Y N

Perform RAP as specified by the Error Code / Message listed in Table 1 of section 2.

If a Offset Catch Tray (OCT) is installed, run at least 5 prints to the OCT (GP 2.5) for test print. If an OCT is not installed, follow the “Y” path. **Prints were successfully delivered to the OCT.**

Y N

Perform RAP as specified by the Error Code / Message listed in Table 1 of section 2.

Ensure that all normal printer conditions are set i.e. paper loaded, machine in Ready condition, internet cable connected. Have the customer send a document to the printer. **The print is successful.**

Y N

Try a sending a document from a different application. **The print was successful.**

Y N

There may be a problem with the print drivers. Have the customer contact Xerox Customer Support.

There may be a problem with the application software. Have the customer contact Xerox Customer Support.

Go to Final Actions.

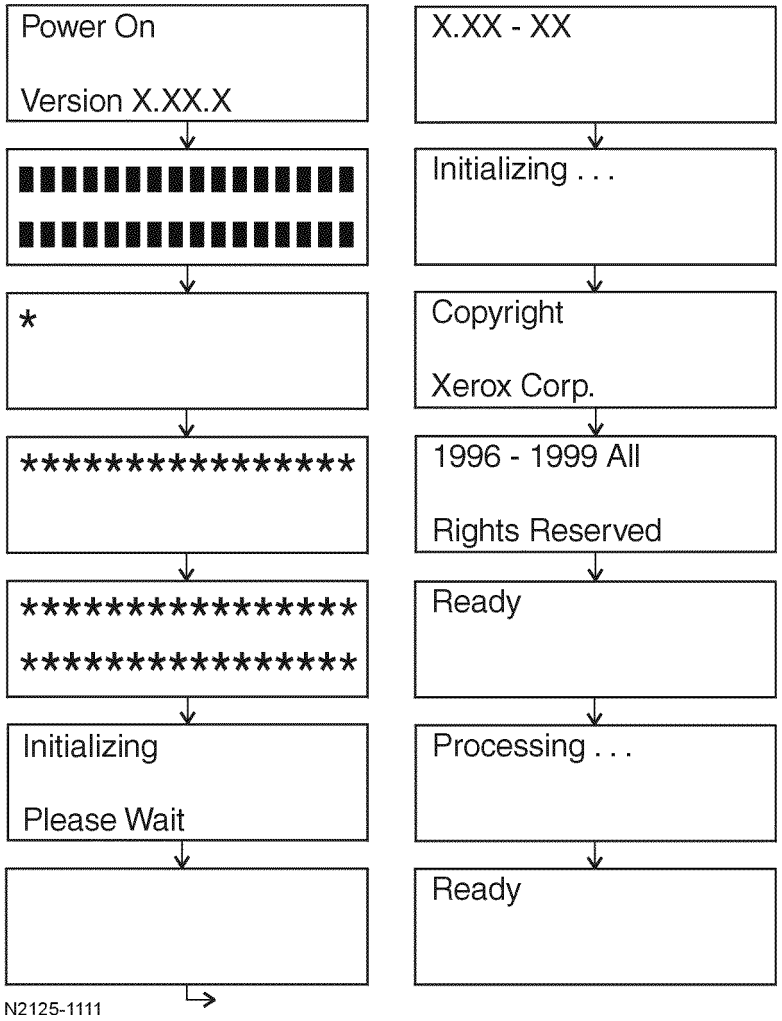

Figure 1 Power On Diagnostic Sequence

1.5 Final Actions

Procedure

1. Switch the main power off.
2. Update the tag matrix as required.
3. Reinstall all the covers removed during the service call and complete all required administrative tasks.
4. Clean the covers and ensure all labels are readable.
5. Switch the printer power on. If any of the customer selections were changed return them to the customer's preferred settings.
6. Run final prints and verify image quality. For Image Quality problems, go to section 3 - Image Quality Checkout.
7. Clean the general area.
8. Communicate with the customer to inform them of actions taken and to ensure all problems have been solved.

2 Status Indicator Repair Analysis Procedures

Introduction

The Repair Analysis Procedures section is used to isolate and identify problems to a faulty component or subassembly. It contains the Introduction, display message table, error code table and the Repair Analysis Procedures (RAPs).

Use the Error Code Tables when messages or error codes are displayed or printed in a report.

The Repair Analysis Procedures (RAPs) are accessed from Section 1, system checks or additional checks. There are two types of RAPs: Status Indicator (SI) RAPs, contained in this section, and Image Quality (IQ) RAPs, located in Section 3.

RAPs will normally isolate a problem to a specific component or subassembly, excluding the wire harnesses.

In the Y/N (Yes/No) steps of the RAPs, a Yes/No response will either lead you to the next step or will indicate a corrective action. When the indicated corrective action has been completed, go to Section 1 and restart the System Check to verify that the problem has been corrected.

Measurements

Power and signal grounds are connected to frame ground, therefore all circuit troubleshooting can be performed using the metal frame (chassis) as the grounding point. If more information is needed to locate connectors or test points, refer to section 7.

Unless otherwise specified, the following voltage tolerances are used within this section: Table 1

Table 1 Voltage Measurements

Stated	Measured
+3.3 VDC	+3.0 to 3.6 VDC
+5.0 VDC	+4.8 to +5.2 VDC
+24.0 VDC	+21.6 to +26.4 VDC
0.0 VDC	Less than +0.5 VDC

Error Code Tables

Table 1 Error Code Table

General Info	Control Panel Message	Fault History Entry	Diagnostic Message	Error Description	Action
	Tray 1 Failure Power Off/On	C3-1E		Tray 1 is not detected, motor failure, Stack Height Sensor Failure.	Inspect and repair Tray 1 Go to RAP 4.
	Tray 2 Failure Power Off/On	C3-2E		Tray 2 is not detected, motor failure, Stack Height Sensor Failure.	Inspect and repair Tray 2 Go to RAP 4.
	Tray 3 Failure Power Off/On	C3-3E		Tray 3 is not detected, motor failure, Stack Height Sensor Failure.	Inspect and repair Tray 3 Go to RAP 4.
	Load Envelope	No Fault Entry	C5: EBF Add Paper	Envelope is out of paper	Load Paper into Envelope Go to RAP 65.
	Load MBF	No Fault Entry	C5:MBF Add Paper	MBF is out of paper.	Load paper into MBF Go to RAP 50.
	Remove Output from Off-set Bin	No Fault Entry	C5:OCT Tray Full	5 prints are delivered to the top tray after the OCT Full Stack Sensor is actuated.	Empty OCT Tray Go to RAP 59.
	Remove Output from Std. Bin	No Fault Entry	C5: Top Tray Full	Top Tray is declared full when 5 prints are delivered to the top tray after the Full Stack Sensor is actuated.	Empty Top Tray Go to RAP 6.
	Tray 1 Empty	No Fault Entry	C5:Tray 1 Add Pap	Tray 1 is out of paper	Load paper into Tray 1 Go to Rap 5.
	Tray 2 Empty	No Fault Entry	C5:Tray 2 Add Pap	Tray 2 is out of paper	Load paper into Tray 2 Go to Rap 5.
	Tray 3 Empty	No Fault Entry	C5:Tray 3 Add Pap	Tray 3 is out of paper	Load paper into Tray 3 Go to Rap 5.
	Disk Error Format Disk	D-1	N/A	Hard Drive error was detected.	Power Off/On Format Hard Drive Replace Hard Drive (PL 10.1) Replace System Controller PWB (REP 9.2).
	Format Failed Disk Locked	D-2	N/A	Cannot format disk, disk locked via PJL or SNMP Command.	Customer Unlock Disk Replace Hard Disk (PL 10.1).
	Format Failed Disk Locked	D-3	N/A	Cannot put disk in factory default attempt to initialize disk after it is locked.	Customer Unlock Disk Replace Hard Disk (PL 10.1).
Tray 1 Feed Jam	Tray 1 Jam - Open Tray 1	E2-01	E2-0: Feed Jam	Paper arrives at Registration Sensor too early.	Open Tray 1 Open Front Cover Clear Paper Path Go to RAP 8.
Tray 2 Feed Jam	Tray 2 Jam - Open Tray 2	E2-02	E2-0: Feed Jam	Paper arrives at Registration Sensor too early.	Open Tray 2 Open Front Cover Clear Paper Path Go to RAP 8.

Table 1 Error Code Table

General Info	Control Panel Message	Fault History Entry	Diagnostic Message	Error Description	Action
Tray 3 Feed Jam	Tray 3 Jam - Open Tray 3	E2-03	E2-0: Feed Jam	Paper arrives at Registration Sensor too early.	Open Tray 3 Open Front Cover Clear Paper Path Go to RAP 8.
Envelope Feed Jam	Envelope Feeder Jam/ Remove all Envelopes	E2-0E	E2-0: Feed Jam	Paper arrives at Registration Sensor too early.	Remove Envelope Feeder Open Front Cover Clear Paper Path Go to RAP 66.
MBF Feed Jam	MBF Jam - Remove All Paper	E2-0M	E2-0: Feed Jam	Paper arrives at Registration Sensor too early.	Open Front Cover Clear Paper Path Go to RAP 7.
Envelope Feed Jam	Envelope Feeder Jam/ Remove all Envelopes	E2-1E	E2-1: Feed Jam	Paper does not arrive at Registration Sensor position within a specified time.	Remove Envelope Feeder Open Front Cover Clear Paper Path Go to RAP 66
MBF Misfeed	MBF Jam - Remove All Paper	E2-1M	E2-1: Feed Jam	Paper does not arrive at Registration Sensor position within a specified time.	Open Front Cover or Feeder Clear Paper Path Close the Cover Go to RAP 7.
Tray 1 Misfeed	Tray 1 Jam - Open Tray 1	E2-11	E2-1: Feed Jam	Paper does not arrive at Registration Sensor position within a specified time.	Open Tray 1 Open Front Cover Clear Paper Path Go to RAP 8
Tray 2 Misfeed with 550 Sheet Feeder installed as Tray 2	Tray 2 Jam - Open Tray 2	E2-12	E2-1: Feed Jam	Paper does not arrive at Registration Sensor position within a specified time.	Open Front Cover Open Tray 2 Clear Paper Path Go to RAP 8
Tray 3 Misfeed with 550 Sheet Feeder installed as Tray 3	Tray 3 Jam - Open Tray 3	E2-13	E2-1: Feed Jam	Paper does not arrive at Registration Sensor position within a specified time.	Open Tray 1 Open Front Cover Clear Paper Path Go to RAP 8
	Paper Jam - Open Front Cover	E3-1	E3-1: Reg. Jam	Exit Sensor did not actuate within time after the Registration clutch is actuated.	Open Front Cover Remove Print Cartridge Clear Paper Path Go to RAP 10
	Paper Jam - Open Front Cover	E3-2	E3-2: Reg. Jam	1. Registration Sensor did not deactuate within time after actuation of Registration sensor. 2. Registration Sensor is actuated at power on.	Open Front Cover Remove Print Cartridge Clear Paper Path Go to RAP 10
	Exit Jam - Open Rear Cover	E4-0	E4-0: Exit Jam	Paper leaves Exit Sensor early.	Open Rear Cover Clear Paper Path Go to RAP 11
Exit Jam 1	Exit Jam - Open Rear Cover	E4-2	E4-2: Exit Jam	1. Paper late off Exit Sensor. 2. Exit Sensor on at power up.	Open Rear Cover Clear Paper Path Go to RAP 11

Table 1 Error Code Table

General Info	Control Panel Message	Fault History Entry	Diagnostic Message	Error Description	Action
Exit Jam 2	Exit Jam - Open Rear Cover	E4-3	E4-3: Exit Jam	Custom Paper late off Exit Sensor within a specified time from Registration Sensor.	Open Rear Cover Clear Paper Path Change Paper Setting in Custom Mode to correct size. Go to RAP 11.
	Close Front Cvr Close Rear Cvr		E5: FRNT/Rear Cover	1. Front cover interlock is open. 2. Rear cover interlock is open.	Close Front Cover Close Rear Cover Go to RAP 12.
			E-5: Face Up Open	Face Up Tray is open.	Close Face Up Tray Check Actuator Check Sensor Go to RAP 51.
Jam in the OCT	Offset Jam - Open Rear Cover	E6-1	E6-1: OCT Jam	1. Paper late to OCT Sensor.	Open OCT Rear Door Clear Paper Path Open Printer Rear Cover Clear Paper Path Go to RAP 57
OCT Jam	Offset Jam - Open Rear Cover	E6-2	E6-2: OCT Jam	Paper late off OCT Sensor. OCT Sensor on at Power On	Open OCT Rear Door Clear Paper Path Go to RAP 57
	Paper Jam - Open Front Cover	E7-0	E7-0: Duplex Jam	Paper arrives at Registration Sensor early from Duplex Sensor.	Open Front Cover Clear Paper Path Go to RAP 56.
	Paper Jam - Open Rear Cover	E7-1	E7-1: Duplex Jam	Paper late to Duplex Sensor	Open the Rear Cover Remove Duplex Unit Clear Paper Path Go to RAP 56.
Duplex Jam 3	Paper Jam - Open Rear Cover	E7-2	E7-2: Duplex Jam	1. Paper late off Duplex Sensor. 2. Duplex Sensor on at power up.	Open Rear Cover Remove Duplex Unit Clear Paper Path Go to RAP 56.
Duplex Jam 4	Paper Jam - Open Rear Cover	E7-3	E7-3: Duplex Jam	Paper late to Registration Sensor from Duplex Sensor.	Open Rear Cover Remove Duplex Unit Clear Paper Path Go to RAP 56.
	Duplex Unit Fail or Removed	E9-1	E9-1: Duplex Fail	Duplex module removed while power is on.	Reinstall Duplex Module Go to RAP 55.
	Offset Bin Fail Power Off/On	E9-2	E9-2: OCT Fail	OCT removed while power is on.	Switch Power Off Remove and Reinstall OCT Switch Power On Go to RAP 58.
	Envelope Feeder Fail or Removed	E9-E	E9: EBF Unit Fail	Envelope Feeder module removed while power on.	Reinstall Envelope Feeder Go to RAP 62.
	Tray 2/3 Failure Power Off/On	E11	E11: Tray 2/3 Fail	Trays 2/3 disconnected after power on.	Reinstall Trays 2/3 Go to RAP 54.

Table 1 Error Code Table

General Info	Control Panel Message	Fault History Entry	Diagnostic Message	Error Description	Action
	Paper Size Jam Open Rear Cover	PSE-1	C5: Paper Size Error	There is a conflict between the size of the paper, which is detected by the Size Switches, and the length of paper the printer detects by the length of time the Registration Sensor is actuated.	Correct the mismatch Open Rear Cover Go to RAP 22.
	Install Print Cartridge		J3: EP Cartridge	1. Print Cartridge is not installed 2. The installed Print Cartridge is not the correct one.	Install the Print Cartridge, or replace with the correct Print Cartridge Go to RAP 13.
	Toner Low	No Fault Entry	J5:Toner Low	Toner Low is detected after 10 prints while Toner Sensor is on.	Replace Print Cartridge Go to RAP 14.
	Memory Failure Power Off/On	ESS-M	N/A	Controller memory has failed (32 meg on board).	Power Off/On Go to RAP 9.
	NV Memory Fail Power Off/On	ESS-N	N/A	Controller NVM Failure.	Power Off/On Go to RAP 9.
	Flash Error Format Flash	FMF-1	N/A	Flash Memory error found. Flash memory format required.	Flash memory format required Go to RAP 9.
	Motor Failure Power Off/On	U1	U1: Motor Fail	Motor Fail signal is declared 1.3 seconds after start of Main Motor.	Power Off and On Go to RAP 16.
	Laser Failure Power Off/On	U2	U2: ROS Fail	1.Laser Signal intervals are longer than the Ready time interval 20 seconds after the start of Laser warm up. 2. The laser power does not reach the value in NVM when the laser diode is switched on after the start of Laser warm up. 3. Laser signal intervals become longer than the Fail time interval after Laser warm up is completed.	Power Off and On Go to RAP 17.
	Fuser Failure Power Off/On	U4	U4: Fuser Fail	1. Fuser temperature drops below the set temperature after the Fuser warm up is complete. 2. Fuser warm up does not complete within 110 seconds. 3. Thermistor circuit is detected to be open. 4. Fuser temperature rises above the set temperature. 5. Heat rod is on for 10 seconds when the Main Drive Motor is stopped, after the Fuser warm up is completed.	Power Off and On Go to RAP 18.
	Fan Failure Power Off Now	U5	U5: Fan Fail Printer Pause	Main Fan has failed.	Check the Main Fan Power Off and On Go to RAP 20

Table 1 Error Code Table

General Info	Control Panel Message	Fault History Entry	Diagnostic Message	Error Description	Action
	IOT NVM Fail Power Off/On	U6	U6: NVM Fail	1. A read error is detected during power on. 2. A write error is detected during write to the Nonvolatile Memory.	Power Off and On Replace Print Engine Controller PWB (REP 9.3).

Table 2 System Controller Error Code Table

Control Panel Message	LED # blinks Followed by 1 sec. off	Comment
0001 - System Controller	1	System Controller Board major failure. Go to RAP 42.
0001 - BASE RAM	1	System Controller Board RAM failure. Go to RAP 42.
0001 - BASE ROM	3	System Controller Board boot ROM. Go to RAP 42.
0001 - ASIC	4	System Controller Board ASIC failure. Go to RAP 42.
0001 - TIMER	4	System Controller Board Timer failure. Go to RAP 42.
0001 - PWPM	5	System Controller Board PWPM failure. Go to RAP 42.
0001 - DMA	5	System Controller DMA failure. Go to RAP 42.
0001 - COMM	6	System controller parallel port failure, USB port failure, E-Net Port Failure. Replace System Controller PWB (REP 9.2)
1000 - IOT	8	System Controller - IOT handshake failure. Remove and reinstall the System Controller PWB (REP 9.2). Replace the System Controller PWB (REP 9.2). Replace the Print Engine Controller PWB (REP 9.3).
0010 - DISK	9	Hard disk failure. Format Hard Disk (see Reset Menu - GP 4.1). Replace the Hard Disk (PL 10.1). Replace the System Controller PWB (REP 9.2).
0101 - DIMM1	10	DIMM board 1 failure. Go to RAP 45.
0102 - DIMM2	11	DIMM board 2 failure. Go to RAP 46.
0103 - DIMM3	12	DIMM board 3 failure. Go to RAP 47.
2000 - XIE RAM	15	System Controller Xerox Image Enhanced PWPM failure. Replace the System Controller PWB (REP 9.2).
2010 - XIE PWPM	15	System Controller Xerox Image Enhanced PWPM failure. Replace the System Controller PWB (REP 9.2).
2020 - XIE VDMA	15	System Controller Xerox Image Enhanced VDMA failure. Replace the System Controller PWB (REP 9.2).
3000 - Token Ring 3000 - Serial 3000 - E-Net (10 Base 2)	16	Replace the appropriate network card (PL 10.1). Replace System Controller PWB (REP 9.2).
5000 - Memory	None	Memory size not large enough to load the system software Download Data. Replace System Controller PWB (REP 9.2).

RAP 1 AC Power

Initial Actions

Disconnect the AC power cord from the wall outlet.

WARNING

Improper connection of the grounding conductor can result in the risk of electrical shock. The following must be observed:

- **Never use a ground adapter plug to connect the machine to a power source.**
- **Never attempt any maintenance function which is not specifically called out in the service procedures.**
- **Never remove any covers which are fastened with screws, unless so instructed in the service procedures.**

CAUTION

*If any of the voltage measurements are not as specified in the following steps, the cause must be corrected. Caution the customer **NOT** to connect the machine to the wall outlet. Advise the customer that a licensed electrician must correct the wiring. Do not attempt to correct the wiring yourself. If you later find the condition has not been corrected, inform your manager in writing of the improper wiring.*

Procedure

Perform one of the following line voltage checks:

US, XCI, and AO (115 VAC) Figure 1. Perform the following:

Measure the AC voltage between AC Line and Neutral, between AC Line and Ground, and between AC Neutral and Ground. The voltage between Line and Neutral and between Line and Ground is 90 to 140 VAC and the voltage between Neutral and Ground less than 3 VAC.

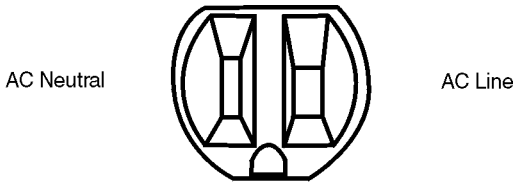

Figure 1 US, XCI, and AO (115 VAC) Outlet.

XL, UK and AO (220 VAC) Figure 2. Perform the following:

Measure the AC voltage between Line and Neutral, between Line and Earth/Ground, and between Neutral and Earth/Ground. The voltage between Line and Neutral and between Line and Earth/Ground is 198 to 264 VAC and between Neutral and Earth/Ground is less than 3 VAC.

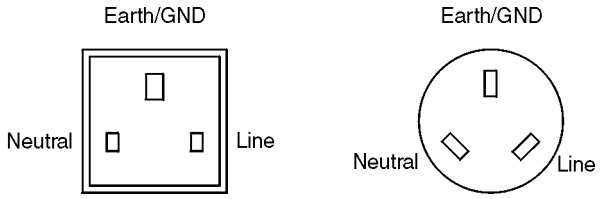

Figure 2 XL, UK, and AO (220 VAC) Outlet.

XL, Europe (220 VAC) Figure 3. Perform the following:

Measure the AC voltage between the supply pins, then between a supply pin and earth, then between the other supply pin and earth. The voltage is 198 to 264 VAC between the supply pins and between one of the supply pins and earth. Between the other supply pin and earth is less than 3 VAC.

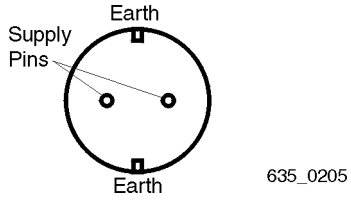

Figure 3 XL, Europe (220 VAC) Outlet.

The voltage measured is correct.

Y N

Inform the customer of insufficient voltage or improper wiring.

Check the continuity through all connections of the power cord. **The measurement is less than 10 ohms for each connection.**

Y N

Replace the power cord (PL 10.1), as applicable.

Perform RAP 2.

RAP 2 DC Power

This procedure is used to troubleshoot the Low Voltage Power Supply.

Procedure

Perform RAP 1 before starting this RAP. If RAP 1 results are correct, switch the printer power off and disconnect the printer power. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Connect printer power. Switch the printer power on. Measure the voltage on the LVPS between P/J285 pins 1 and 2. **The voltage matches the line voltage.**

Y N

Repair/replace the AC Wire Assembly (PL 10.1).

Measure the voltage between both sides of the Fuse F1 and frame ground. **Both readings match the line voltage.**

Y N

Switch the printer power off. Replace fuse F1 (125V - 10A / 250V - 3A). Switch the printer power on. Measure the voltage between both sides of the Fuse F1 and frame ground. **Both readings match the line voltage.**

Y N

Replace the LVPS (REP 9.5).

Problem Solved.

Measure the voltage between LVPS P/J281 pin 1 and frame ground. **The voltage is +24VDC.**

Y N

On the LVPS, measure the voltage between P/J284 pin 2 and frame ground. **The voltage is +24VDC**

Y N

Switch the printer power off. Disconnect printer power. Disconnect P/J 281. Connect printer power. Switch the printer power on. Measure the voltage between LVPS P/J 281 pin 1 and frame ground. **The voltage is +24VDC.**

Y N

Replace the LVPS (REP 9.5).

Go to RAP 3.

Measure the voltage between P/J 284 pin 1 and frame ground. **The voltage is +24VDC.**

Y N

Check the Front Cover. **The Front Cover is closed and actuating the interlock switch.**

Y N

Repair or replace the defective cover/interlock switch as necessary.

Check the continuity through the interlock switch. Replace if necessary.

Replace the LVPS (REP 9.5).

A

Check the voltages listed in Table 1.

Table 1 Low Voltage Readings

Red Lead	Black Lead	Voltage
P/J281 pin 7	Frame Ground	+5.0VDC
P/J281 pin 10	Frame Ground	+3.3VDC
P/J281 pin 1	Frame Ground	+24.0VDC

All voltages in Table 1 are correct.

Y N

Go to RAP 3.

Return to Initial Actions or to the procedure that sent you here.

RAP 3 DC Power Loading

Initial Actions

Perform RAP 2 DC Power before starting this RAP.

WARNING

AC input voltages can be lethal. Use extreme care while checking the voltages on the LVPS.

Disconnect the power cord while checking the continuity of fuses and while removing or reinstalling the components.

Procedure

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Disconnect the following from the LVPS:

- P/J281 (Print Engine Controller PWB)
- P/J282 (System Controller PWB)
- P/J283 (LVPS Fan)
- Pn1 (5VDC Power Supply)

Switch the printer power on and measure the voltages listed in Table 1 on the LVPS.

Table 1 LVPS

Red Lead	Black Lead	Voltage
P/J281 pin 7	Frame Ground	+5.0VDC
P/J281 pin 10	Frame Ground	+3.3VDC
P/J281 pin 1	Frame Ground	+24.0VDC

All voltages are correct.

Y N

Replace the LVPS (REP 9.5).

Switch the printer power off. Reconnect P/J281 to the LVPS. Switch the printer power on and measure the voltages listed in Table 1. **All the voltages are correct**

Y N

Switch the printer power off. Reconnect all the P/Js to the LVPS. Disconnect the following from the Print Engine Controller PWB:

- P/J22 (Laser)
- P/J21 (Laser, SOS)
- P/J23 (Connector PWB)
- P/J25 (Print Cartridge Sensor)
- P/J32 (Exit Motor)
- P29 (Main Motor)
- P/J26 (HVPS PWB)
- P/J27 (Exit Sensor)
- P/J31 (Stack Full Sensor)
- P/J33 (Size 1 PWB)
- P/J34 (Duplex PWB)
- P/J35 (OCT PWB)

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Switch the printer power on and measure the voltages listed in Table 1. **All voltages are correct.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Switch the printer power off. Reconnect P/J23. Switch the printer power on. Measure the voltages listed in Table 1. **All the voltages are correct.**

Y N

Disconnect the following from the Connector PWB:

- P/J43 (Registration Sensor, Registration Clutch)
- P/J42 (Toner Sensor)
- P/J45 (Paper Set Sensor)
- P/J44 (Pick Up Solenoid)
- P/J41 (Envelope PWB)

Switch the printer power on. Measure the voltages listed in Table 1. **All the voltages are correct.**

Y N

Replace the Connector PWB.

Switch the printer power off. Reconnect one of the disconnected plugs. Switch the printer power on. Measure the voltages listed in Table 1. **All the voltages are correct.**

Y N

Replace the component just connected to the Connector PWB.

Repeat the step with the next disconnected plug.

Switch the printer power off. Reconnect one of the disconnected plugs. Switch the printer power on. Measure the voltages listed in Table 1. **All the voltages are correct.**

Y N

Replace the component just connected to the Print Engine Controller PWB.

Repeat the step with the next disconnected plug.

Switch the printer power off. Reconnect one of the disconnected plugs. Switch the printer power on. Measure the voltages listed in Table 1. **All the voltages are correct.**

Y N

Replace the component just connected to the LVPS.

Repeat the step with the next disconnected plug.

RAP 4 Tray # Failure Power Off/On (C3)

Tray Assembly (Tray 1, Tray 2, or Tray 3) are not in place.

Procedure

Enter Diagnostics, run a test print from every tray (see section 6). **The Error Code specifies Tray 2 or Tray 3.**

Y N

Remove and reinstall Tray 1. Press key “0”. **The C3 error code still appears.**

Y N

Problem solved.

Measure the voltage from the lower contact of the Paper Feeder Socket (P/J672) and frame ground. **The voltage is +24VDC.**

Y N

Measure the voltage from P/J33 pin 6 on the Print Engine Controller PWB and frame ground. **The voltage is +24VDC.**

Y N

Go to RAP 2.

Switch off the printer power. Remove the Size Sensor Housing (REP 3.11). Measure continuity between the disconnected P/J33 pin 6 to P/J331 pin 12 on the Tray 1 Size PWB. **There is continuity between the two pins.**

Y N

Repair or replace Feeder Harness Assembly (PL 9.1).

On the Tray 1 Size PWB, measure continuity between P/J331 pin 12 to P/J61 pin 1. **There is continuity between the two pins.**

Y N

Replace the Tray 1 Size PWB (REP 3.13).

Check the wiring between P/J67 pin 5 on the Tray 1 Feeder PWB and the bottom pin on the Paper Feeder Socket (P/J672). If in good condition, replace the Tray 1 Feeder PWB (REP 3.9).

On the paper tray, measure the resistance between the middle and bottom terminals on the Paper Feeder Socket. **The resistance is 75 to 105 ohms.**

Y N

Go to RAP 37

On the paper tray, measure the resistance between the top and bottom terminals on the Paper Feeder Socket. **There is continuity (0 ohms) between the two pins.**

Y N

Repair or replace the Paper Feeder Socket.

Replace the following parts one at a time until the problem is resolved:

- Stack Height Sensor (3.4)
- Feeder PWB (3.9)
- Size 1 PWB (3.13)
- Print Engine Controller PWB (9.3)

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Remove and reinstall the Tray indicated. Press key “0”. **The C3 error code still appears.**

Y N

Problem solved.

Exchange Tray 1 with the Tray generating the “C3” code. Run a test print from each tray. **The error code now indicates a Tray 1 failure.**

Y N

The error code indicates a Tray 2 failure.

Y N

Remove the Tray 3 from the paper feeder. Check the voltage between the lower terminal on the Paper Feeder Connector and frame ground. **The voltage is +24VDC**

Y N

Check the wiring harnesses between the Tray 2 Size PWB (P/J53) and the Tray 3 Size PWB (P/J54). Repair or replace if necessary. If the harnesses are in good condition, replace the Tray 3 Size PWB (REP 11.19) then the Tray 3 Feeder PWB (REP 11.9).

Replace the following components, in order, until the problem is resolved:

- Stack Height Sensor (REP 11.13)
- Feeder PWB (REP 11.9)
- Size PWB (REP 11.19)
- Print Engine Controller PWB (REP 9.3).

Remove the Tray 2 from the paper feeder. Check the voltage between the lower terminal on the Paper Feeder Connector and frame ground. **The voltage is +24VDC**

Y N

Check the wiring harnesses between the Tray 1 Size PWB (P/J51) and the Tray 2 Size PWB (P/J52). Repair or replace if necessary. If the harnesses are in good condition, replace the Tray 2 Size PWB (REP 11.19) then the Tray 2 Feeder PWB (REP 11.9).

Replace the following components, in order, until the problem is resolved:

- Stack Height Sensor (REP 11.13)
- Feeder PWB (REP 11.9)
- Size PWB (REP 11.19)
- Print Engine Controller PWB (REP 9.3).

Remove the Tray now occupying the Tray 1 position and continue with RAP 37.

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RAP 5 Tray # Empty (C5)

Procedure

The problem appears when using Tray 2 or Tray 3.

Y N

Check the paper level in Tray 1. **There is paper in Tray 1.**

Y N

Load paper into Tray 1.

Enter diagnostics and select Test Print. Run a test print from the Tray 1. **The C5 error code reappears.**

Y N

Return to Initial Actions and restart.

Remove Tray 1 from the printer. Remove all paper from the tray. Reinsert Tray 1 into the printer. From the rear of the printer, watch the Tray 1 bottom plate. **The Bottom Plate is raised fully and evenly.**

Y N

Go to RAP 37.

Remove Tray 1. Manually actuate the Tray 1 No Paper sensor. **The No Paper Actuator moves smoothly.**

Y N

Replace the Tray 1 No Paper Actuator (REP 3.3).

Enter diagnostics and select Component Test. Scroll to Sensor Input test and press Enter. Manually actuate the Tray 1 No Paper Sensor. **The number on the LCD increments each time you press and release the actuator.**

Y N

Go to RAP 34.

Replace the Print Engine Controller PWB (REP 9.3).

Check the paper level in Tray 2/3. **There is paper in the Tray.**

Y N

Load paper into Tray 2/3.

Enter diagnostics and select Test Print. Run a test print from Tray 2/3. **The C5 error code reappears.**

Y N

Return to Initial Actions and restart.

Remove Tray 2/3 from the printer. Remove all paper from the tray. Reinsert the Tray into the printer. From the rear of the printer, watch the tray bottom plate. **The Bottom Plate is raised fully and evenly.**

Y N

Go to RAP 37.

Remove Tray 2/3. Manually actuate the No Paper Sensor. **The No Paper Actuator moves smoothly.**

Y N

Replace the Tray 2/3 No Paper Actuator (REP 11.7).

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Enter diagnostics and select Component Test. Scroll to Sensor Input test and press Enter. Manually actuate the Tray 2/3 No Paper Sensor. **The number on the LCD increments each time you press and release one of the actuators.**

Y N

Replace in order; the Feeder PWB (REP 11.9) then the Size PWB (REP 11.19) for the problem feeder assembly.

Replace the Print Engine Controller PWB (REP 9.3).

RAP 6 Remove Output From Std Bin (C5)

Error code indicates the output tray is full.

Procedure

There is a paper stack in the standard bin actuating the stack full Sensor.

Y N

The paper is curled.

Y N

Lift and release the Stack Full Actuator a few times. **The actuator moves freely.**

Y N

Replace Stack Full Actuator (REP 6.8) or Stack Full Sensor (REP 6.6), as necessary.

Enter diagnostics and select Component Test. Scroll to Sensor Input test. Manually actuate and deactuate the Stack Full Actuator. **The number on the LCD increments each time you lift and release the actuator (the count may have a short delay because of the sensor circuit).**

Y N

Go to RAP 35.

Replace Print Engine Controller PWB (REP 9.3).

Replace paper in paper tray with fresh dry paper. Run test prints. **The error code reappears.**

Y N

Problem solved.

Enter diagnostics and select Component Test. Scroll to Sensor Input test. Manually actuate and deactuate the Stack Full Actuator. **The number on the LCD increments each time you lift and release the actuator (the count may have a short delay because of the sensor circuit).**

Y N

Go to RAP 35.

Replace Print Engine Controller PWB (REP 9.3).

Remove the paper stack.

RAP 7 MBF Misfeed (E2)

Paper arrives early or late to the Registration Sensor.

Procedure

Switch the printer power off. Open the Front Cover. Check the MBF Chute for contamination or obstructions. **The MBF is free of contamination, paper, or other obstructions.**

Y N

Clean the MBF and remove the paper or obstruction.

Check the MBF Feed Roll for contamination and wear. **The feed roll is clean and in good condition.**

Y N

Replace the MBF Feed Roll (REP 4.3).

Enter Diagnostics and select Component Test. Scroll to Confirm MBF Feed Solenoid and press Enter [4]. **You can hear the solenoid energize.**

Y N

Go to RAP 41.

Open the Front Cover and cheat the Front Cover Interlock. Scroll to Main Motor Operation and press Enter. **The MBF drive gears rotate smoothly.**

Y N

Check, repair, or replace the Drive Gear (PL 5.1), Main Drive Gear Assembly (REP 8.2), or Main Motor Assembly (REP 8.1) as necessary.

Scroll to Confirm MBF Feed Solenoid and press Enter [4]. **The Feed Roll Shaft rotates, the Pick-up Cams move and allow the Bottom Plate to contact the Feed Roll, and the Feed Roll Shaft stops after one complete revolution.**

Y N

Remove the MBF Chute Assembly (REP 4.1) and repair of replace the components as necessary.

Check the Registration Sensor (RAP 32). If the Registration Sensor is good, and the problem persists, replace the Print Engine Controller PWB (REP 9.3).

RAP 8 Paper Jam / Misfeed (E2)

Paper arrives early or late to the Registration Sensor or is on the sensor at power up.

Procedure

Check the paper in all trays. Check for curled, damaged, or damp paper and for paper that is out of specification. **The paper is in good condition and meets specification.**

Y N

Replace with fresh dry paper that is within specifications.

Check all paper paths for contamination, paper, or other obstructions. **All paper paths are clean and free of obstructions.**

Y N

Remove contamination or obstructions.

Enter Diagnostics and select Test Print. Run five prints from every paper tray. **The problem appears when printing from Tray 2 or 3.**

Y N

Remove Tray 1 from the printer. Check the Nudger Roll, Feed Roll, and Retard Roll for contamination and wear. **All rolls are clean and in good condition.**

Y N

Clean or replace the Nudger, Feed or Retard Roll as necessary (REP 3.8/REP 2.1).

Reinsert Tray 1 into the printer. From the rear of the printer, watch the Tray 1 Bottom Plate. **The Bottom Plate is raised fully and evenly.**

Y N

Go to RAP 37.

From the rear of the printer, watch the paper feed as you run a test print from tray 1. **The Nudger Roll and Feed Roll rotate.**

Y N

Go to RAP 40.

Paper is fed from the tray to the Turn Roll Assembly.

Y N

Replace the Nudger and Feed Rolls (REP 3.8).

The Turn Roll Assembly moves the paper to the Registration Sensor.

Y N

Go to RAP 39.

Go to RAP 32.

Remove Tray 1. Check the paper chute at the front of the tray (the chute guides paper from Tray 2 to the Tray 1 turn rolls). Check for contamination, paper, or other obstructions. **The chute is clean and free of obstructions.**

Y N

Remove obstructions and clean chute. Replace paper tray if necessary (PL 2.1).

The jams occur when feeding from tray 3.

Y N

Remove tray 2 and place the tray in feeder 1. Place tray 1 in feeder 2. Enter diagnostics and select Test Print. Run 20 to 25 test prints from tray 2. **All prints completed sucessfully.**

Y N

Remove the tray currently in feeder 2. Check the Nudger and Feed Rolls in feeder 2 for contamination and wear. **The Feed Rolls are clean and in good condition.**

Y N

Replace the Feed Rolls (REP 11.11).

Check the Tray 2 Turn Roll Assembly. Check for obstructions, contamination, or wear. **The Turn Rolls are clean and in good condition.**

Y N

Remove the obstruction, clean, or replace the Turn Roll Assembly (REP 11.8).

Replace the Feeder PWB (REP 11.9). If the problem persists, replace the Size PWB (REP 11.19) then the Print Engine Controller (REP 9.3).

The paper tray currently in feeder 1 appears to be defective. Perform RAP 37 to check the tray motor. If RAP 37 checks out correctly, check the paper tray for contamination, obstructions, broken or deformed parts. Replace the paper tray if necessary (PL 2.1).

Remove Tray 1 and Tray 2. Check the paper chute at the front of both trays (the chute guides paper from Tray 3 to the Tray 2 turn rolls and from Tray 2 to the Tray 1 turn rolls). Check for contamination, paper, or other obstructions. **The chute is clean and free of obstructions.**

Y N

Remove obstructions and clean chute. Replace paper tray if necessary (PL 2.1).

Replace Tray 2. Remove tray 3 and place the tray in feeder 1. Place tray 1 in feeder 3. Enter diagnostics and select Test Print. Run 20 to 25 test prints from tray 3. **All prints completed successfully.**

Y N

Remove the tray currently in feeder 3. Check the Nudger and Feed Rolls in feeder 3 for contamination and wear. **The Feed Rolls are clean and in good condition.**

Y N

Replace the Feed Rolls (REP 11.11).

Check the Tray 3 Turn Roll Assembly. Check for obstructions, contamination, or wear. **The Turn Rolls are clean and in good condition.**

Y N

Remove the obstruction, clean, or replace the Turn Roll Assembly (REP 11.8).

Replace the Feeder PWB (REP 11.9). If the problem persists, replace the Size PWB (REP 11.19) then the Print Engine Controller (REP 9.3).

The paper tray currently in feeder 1 appears to be defective. Perform RAP 37 to check the tray motor. If RAP 37 checks out correctly, check the paper tray for contamination, obstructions, broken or deformed parts. Replace the paper tray if necessary (PL 2.1).

RAP 9 System Controller PWB

Procedure

Switch the printer power off. Remove the Left Interface Cover (REP 1.1). Remove all options and host interface cables from the System Controller PWB. Switch the printer power on. **The error code reappears.**

Y N

Switch the printer power off. Reinstall one of the removed cables or options. Switch the printer power on. **The error code reappears.**

Y N

Repeat the step with the next option or cable.

Replace the option just installed.

Replace the System Controller PWB (REP 9.2).

RAP 10 Paper Jam Open Front Cover (E3)

Paper is late to the Exit Sensor, paper is late off the Registration Sensor or Registration Sensor is actuated at power on.

Procedure

Switch the printer power off. Open the Front Cover and remove the Print Cartridge. Check the printer for contamination, paper scraps, or other obstructions. **The paper path is clean and free of obstructions.**

Y N

Clean components and remove all obstructions.

Open the Rear Cover. Remove the Duplex unit if installed. Open the Fuser Access Cover. Check for contamination, paper scraps, or other obstructions. **The paper path is clean and free of obstructions.**

Y N

Clean components and remove all obstructions.

Rotate the Fuser Idler Gear. **The Fuser Idler Gear rotates smoothly.**

Y N

Replace the Fuser Assembly (REP 6.2).

Check the paper in all trays. **The paper loaded in the paper trays is damp, wrinkled, or damaged.**

Y N

The paper size used is within specifications.

Y N

Replace with paper meeting size specifications.

Close the Rear Cover. Cheat the Front Cover Interlock. Enter diagnostics and select Component Test. Scroll to Confirm Reg Clutch and press Enter. **You can hear the Registration Clutch energize.**

Y N

Go to RAP 38.

Scroll to Main Motor Operation and press Enter. **The Registration Rolls rotate smoothly.**

Y N

Repair or replace as necessary: the Registration Rolls (REP 5.6), Registration Clutch (REP 5.5), Main Drive Gear Assembly (REP 8.2), or Main Motor Assembly (REP 8.1).

Perform RAP 32 to test the Registration Sensor. **The Registration Sensor is working correctly.**

Y N

Repair or replace the Registration Sensor as necessary (REP 5.4).

Perform RAP 48 to test the Exit Sensor. **The Exit Sensor is working correctly.**

Y N

Replace the Fuser Assembly (REP 6.2).

A B

A B

Select Test Print and Run test prints. When the error code appears, inspect the position of lead edge of the paper. **The lead edge of the paper passes between the BTR and the Print Cartridge Drum.**

Y N

Check for contamination or obstructions between the Registration Rolls and the Print Cartridge Drum.

The Detack Saw is clean and free of contamination.

Y N

Clean the Detack Saw or Replace the Transport Chute Assembly (REP 6.1)

Inspect paper path between Transport Chute Assembly and the Fuser Assembly. **The paper passes through the Fuser Assembly.**

Y N

Replace the Fuser Assembly (REP 6.2).

Replace the Print Engine Controller PWB (REP 9.3).

Replace with fresh, dry paper.

RAP 11 Paper Jam / Exit (E4)

There is a paper jam at the Exit Sensor.

Procedure

Check the paper in the paper trays. Ensure the paper is installed correctly and the end guide touches the rear of the paper stack. The paper is within specification. If Custom Mode is used, ensure the settings are correct. **All settings are correct and the paper is within specification.**

Y N

Install fresh paper that is within specification or correct settings.

Check the paper path for contamination, paper, or other obstructions. **The paper path is clean and free of obstructions.**

Y N

Remove obstructions and clean components as necessary.

Enter Diagnostics and select Test Print. Run 25 prints from Tray 1. **When the error code is displayed, there is paper on the Exit Sensor.**

Y N

Open the Rear Cover and the Fuser Access Cover. Check the Exit Sensor Actuator. **The actuator moves freely and returns to the home position when released.**

Y N

Repair actuator or replace the Fuser Assembly (REP 6.2).

Enter diagnostics and select Component Test. Scroll to Sensor Input test and press Enter. Open the Fuser Access Cover and use a piece of paper to block and unblock the Exit Sensor. **The number on the LCD increments each time you press and release the actuator.**

Y N

Go to RAP 48.

Replace Print Engine Controller PWB (REP 9.3).

Open the Rear Cover and check the Face Up Chute Assembly for contamination or obstructions. **The chute assembly is clean and free of obstructions.**

Y N

Clean of replace the Face Up Chute Assembly as necessary (PL 1.2).

Select Component Test. Scroll to Exit Motor FWD and press Enter. **The Exit Motor rotates.**

Y N

Go to RAP 49.

The Exit Rollers and Pinch Rollers (on the Rear Cover) rotate smoothly.

Y N

Replace the Exit Rollers or Gears as necessary (PL 7.1).

Check the Fuser Assembly for obstructions or contamination. **The Fuser is clean and free of obstructions.**

Y N

Clean or replace the Fuser Assembly (REP 6.2), as necessary.

A

A

Check the Transport Chute for contamination or obstructions. **The Transport Chute is clean and free of obstructions.**

Y N

Clean of replace the Transport Chute as necessary (REP 6.1).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 12 Close Front Cvr/Close Rear Cvr (E5)

The Front Cover / Rear Cover (Interlock Switch) is open.

Procedure

Open and close the Front Cover. Inspect the movement of the Interlock Switch. **The actuator tab on the Front Cover presses down on the Interlock Switch lever.**

Y N

Replace the Front Cover Assembly (PL 1.1).

Open and close the Rear Cover. Inspect the movement of the Interlock Switch. **The actuator tab on the Rear Cover presses down on the Interlock Switch lever.**

Y N

Replace the Rear Cover Assembly (PL 1.3).

Enter diagnostics and select Component Test. Scroll to Sensor Input test and press Enter [4]. Open and close the Rear Cover. **The number on the LCD increments each time you open and close the Rear Cover.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), the Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Disconnect P/J30 from the Print Engine Controller PWB. Measure the resistance between pins 1 and 2 on the disconnected plug as you open and close the Rear Cover. **There is continuity when the Rear Cover is closed and infinity when the Rear Cover is open.**

Y N

Check the wiring between P/J30 and the Rear Cover Interlock Switch. Repair or replace the wiring or interlock switch (REP 9.10) as required.

Replace the Print Engine Controller PWB (REP 9.3).

Open and close the Front Cover. **The number on the LCD increments each time you open and close the Front Cover.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), the Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Disconnect P/J284 from the LVPS PWB. Measure the resistance between pins 1 and 2 on the disconnected plug as you open and close the Front Cover. **There is continuity when the Front Cover is closed and infinity when the Front Cover is open.**

Y N

Check the wiring between P/J284 and the Front Cover Interlock Switch. Repair or replace the wiring or interlock switch (REP 9.9) as required.

Connect P/J284 to the LVPS. Switch the printer power on. On the Print Engine Controller PWB, check the voltage between P/J28 pin 1 and frame ground. **The voltage is 24VDC.**

Y N

Replace the LVPS (REP 9.5).

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 13 Install Print Cartridge (J3)

The Print Cartridge is not in place or is installed incorrectly.

Procedure

Open the Front Cover and remove the Print Cartridge. Inspect the tab on the top left of the Print Cartridge that actuates the Print Cartridge Sensor Assembly. **The tab on the Print Cartridge is intact.**

Y N

Replace the Print Cartridge (PL 8.1).

Press and release the Print Cartridge Sensor Assembly Actuator. **The Print Cartridge Sensor Assembly Actuator lever moves smoothly.**

Y N

Replace the Print Cartridge Sensor Assembly (REP 7.3).

Enter diagnostics and select Component Test. Scroll to Sensor Input test and press Enter. Manually actuate the Print Cartridge Sensor Assembly Actuator. **The number on the LCD increments each time you press and release the actuator.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), the Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Install the Print Cartridge. Leave the Front Cover open. Disconnect P/J25 from the Print Engine Controller PWB. Check for continuity between J21-4 and J25-3, and J25-2 and J25-1 as you insert and remove the Print Cartridge. **There is continuity between J25-4 and J25-3, and J25-2 and J25-1 when you insert the cartridge and no continuity when you remove the cartridge.**

Y N

The Print Cartridge is a Xerox N2125 Print Cartridge.

Y N

Replace Print Cartridge with a Xerox N2125 Print Cartridge (PL 8.1).

Replace the Print Cartridge Sensor Assembly together with the harness (REP 7.4).

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 14 Toner Low (J5)

The Print Cartridge is in a low toner condition.

Procedure

Install a new Print Cartridge. **The J5 Error Code still appears.**

Y N

Problem solved.

Remove the Front Cover (REP 1.6) and the Left Front Cover (REP 1.7). Cheat the Front Cover Interlock Switch. On the Connector PWB, check the voltage between P/J42 pin 4 and frame ground. **The voltage is 0.0VDC with the print cartridge installed and 3.3VDC with the print cartridge removed.**

Y N

Check the voltage between P/J42 pin 3 and pin 1. **The voltage is 24VDC.**

Y N

On the Connector PWB, check the voltage between P/J231 pin 11 and pin 12. **The voltage is 24VDC.**

Y N

Check the Connector Harness Assembly. If OK, replace the Print Engine Controller PWB (REP 9.3).

Replace the Connector PWB (REP 9.7).

Replace the Toner Sensor (REP 5.2).

On the connector PWB, check the voltage between P/J231 pin 9 and frame ground. **The voltage is 0.0VDC with the print cartridge installed and 3.3VDC with the print cartridge removed.**

Y N

Replace the Connector PWB (REP 9.7).

Check the Connector Harness Assembly. If OK, replace the Print Engine Controller PWB (REP 9.3).

RAP 15 P1: Fuser Pause

Receiving PAUSE command from the Controller.

Procedure

Switch OFF the printer power. Remove the Fuser Assembly. Measure the resistance between pins A4 & A5 of P272 on the Fuser Assembly (Figure 1). **The resistance reads between 7K ohms and 380K ohms (see NOTE).**

Y N

Replace the Fuser Top Cover (REP 6.9).

Replace the Print Engine Controller PWB (REP 9.3).

NOTE: *The resistance measured will be determined by the actual temperature of the Fuser when the test is made. The acceptable range is between 7K ohms and 380K ohms.*

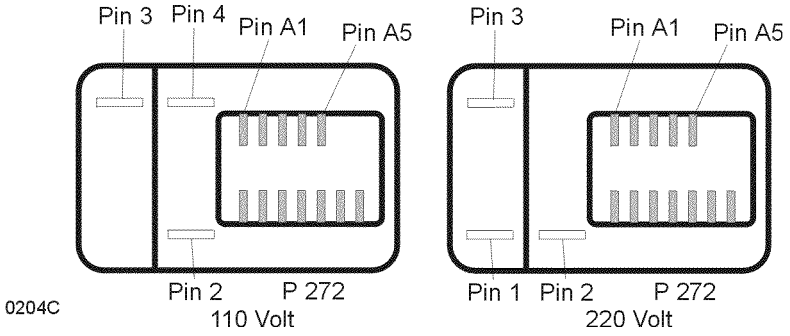

Figure 1 Fuser Connector

RAP 16 Motor Failure Power Off/On (U1)

There is a problem with the Main Motor.

Procedure

Remove the Left Interface Cover (REP 1.1), the Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Open the Rear Cover and, if installed, remove the Duplex Assembly. Manually rotate the rotor of the Main Motor clockwise (as viewed from the left side of the printer). **The rotor of the Motor rotates smoothly.**

Y N

Open the Front Cover and remove Print Cartridge. Manually rotate the rotor of motor clockwise. **The rotor of Main Motor rotates smoothly.**

Y N

Remove the Fuser Assembly (REP 6.2). Manually rotate the rotor of the Motor clockwise. **The rotor of the Main Motor rotates smoothly.**

Y N

Remove the Main Motor (REP 8.1). Manually rotate the rotor of the Motor clockwise. **The rotor of Main Motor rotates smoothly.**

Y N

Replace the Main Motor (REP 8.1).

Replace the Main Drive Gear Assembly (REP 8.2)

Replace the Fuser Assembly (REP 6.2).

Replace the Print Cartridge (PL 8.1).

Open the Front Cover and remove the Print Cartridge. Rotate the Metal Registration Roll manually. **The Metal and Rubber Registration Rolls rotate smoothly.**

Y N

Replace the Registration Rolls (REP 5.6) or clutch (REP 5.5), as necessary.

With the Front Cover open, cheat the Front Cover Interlock. Enter diagnostics and select Component Test. Run the Main Motor Operation. Visually inspect the Main Motor and Main Drive Gears. **The Main Motor and drive gears run smoothly and all drive gears are in good condition.**

Y N

Go to REP 8.1.

With the Main Motor still running, select MBF Feed Solenoid. **The MBF Feed Roll Assembly rotates smoothly.**

Y N

Replace the MBF Feed Roll components as necessary (REP 4.2/REP 4.3).

Scroll to Turn Roll Clutch and press Enter. **All Turn Roll Shafts rotate smoothly.**

Y N

Repair or replace the appropriate Turn Roll Assembly (REP 3.2/REP 11.8).

Scroll to Reg Roll Clutch and press Enter. **The Registration Roll rotate smoothly.**

Y N

Repair or replace the Registration Rolls (REP 5.6) as necessary.

A

A

Remove the paper from all paper trays. Scroll to Tray 1 Feed Clutch and press Enter. **The Main Motor continues to rotate smoothly.**

Y N

Repair or replace the Tray 1 Feed Clutch or Feed Shaft (REP 3.6).

The printer has a Tray 2.

Y N

Replace the Main Motor Assembly (REP 8.1).

Scroll to Tray 2 Feed Clutch and press Enter. **The Main Motor continues to rotate smoothly.**

Y N

Repair or replace the Tray 2 Feed Clutch or Feed Shaft (REP 11.10).

The printer has a Tray 3.

Y N

Replace the Main Motor Assembly (REP 8.1).

Remove the paper from all paper trays. Scroll to Tray 3 Feed Clutch and press Enter. **The Main Motor continues to rotate smoothly.**

Y N

Repair or replace the Tray 3 Feed Clutch or Feed Shaft (REP 3.6).

Go to RAP 29.

RAP 17 Laser Fail / Power Off/On (U2)

There is a problem with the Laser Assembly.

Procedure

Enter Diagnostics and select NVM Config (password 0734). Check the value for Print Resolution and for Laser Power. **The value for Resolution is “02” and for Laser Power is “8”.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Select Component Test then ROS Motor. **You can hear the Scanner Motor spin up.**

Y N

Go to RAP 30.

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), the Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Disconnect P/J21 from the Print Engine Controller PWB. Switch the printer power on. On the Print Engine Controller PWB, check the voltage between P21-6 and frame ground. **The voltage is +5.0 VDC.**

Y N

On the Print Engine Controller PWB, check the voltage between P25 pin 4 and frame ground. **The voltage is +5.0 VDC.**

Y N

On the Print Engine Controller PWB, check the voltage between P28 pin 7 and frame ground. **The voltage is +5.0 VDC.**

Y N

Replace the LVPS (REP 9.5).

Replace the Print Engine Controller PWB (REP 9.3).

On the Print Engine Controller PWB, check the voltage between P25 pin 3 and frame ground. **The voltage is +5.0 VDC.**

Y N

Go to RAP 13.

Replace the Print Engine Controller PWB (REP 9.3).

Go to RAP 30.

RAP 18 Fuser Failure Power Off/On (U4)

There is a problem with the Fuser Assembly.

Procedure

Switch the printer power off. Wait a few minutes, then switch the printer power on. **The Error Code reappears.**

Y N

Run 25 to 30 test prints. **The Error code reappears.**

Y N

Problem solved

Go to RAP 31.

Go to RAP 31.

RAP 19 IOT NVM Fail / Power Off/On (U6)

There is problem with Non-Volatile RAM.

Procedure

Switch the printer power off then on. **The U6 Error Code appears.**

Y N

To ensure that the problem is solved, switch the printer power off and on several times. **The U6 Error Code reappears.**

Y N

Problem Solved.

Enter Diagnostics and select NVM Config (password 0734). **It is possible to enter into the NVM Config.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Check the NVM Data one by one referring to the NVM Table (Table 2) in section 6. **The data is set properly.**

Y N

The incorrect data is read only.

Y N

Set the data to the default value.

Replace the Print Engine Controller PWB (REP 9.3).

Go to RAP 44.

Enter Diagnostics and select NVM Config (password 0734). **It is possible to enter into the NVM Config.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Check the NVM Data one by one referring to the NVM Table (Table 2) in section 6. **The data is set properly.**

Y N

The incorrect data is read only.

Y N

Set the data to the default value.

Replace the Print Engine Controller PWB (REP 9.3).

Go to RAP 44.

RAP 20 Fan Failure Power Off Now (U5)

The printer is detecting incorrect fan rotation.

Procedure

Switch the printer power off, then on. **The Fan rotates when the main power is switched on.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and Left Plate Assembly (REP 1.11). Switch the printer power on. On the LVPS, check the voltage between P/J283 pin 1 and frame ground. **The voltage is +19VDC.**

Y N

Check the voltage between P/J281 pin 13 and frame ground. **The voltage is +0.8VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Replace the LVPS (REP 9.5).

Replace the Fan Assembly (REP 9.1).

Enter Diagnostics and select Component Test. Scroll to Fan Motor Hi and press Enter. **The Fan rotates at high speed.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and Left Plate Assembly (REP 1.11). Switch the printer power on. Scroll to Fan Motor Hi and press Enter. On the LVPS, check the voltage between P/J283 pin 1 and frame ground. **The voltage is +21.5VDC.**

Y N

Press the Online [0] key. Check the voltage between P/J281 pin 11 and frame ground. Press the Enter key. **The voltage changes from 0.8VDC to 0.0VDC when you press the Enter key.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Replace the LVPS (REP 9.5).

Replace the Fan Assembly (REP 9.1).

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and Left Plate Assembly (REP 1.11). Enter Diagnostics and select Component Test. On the LVPS, check the voltage between P/J283 pin 2 and frame ground. **The voltage is less than 1.0VDC.**

Y N

Replace the Fan Assembly (REP 9.1).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 21 Low Paper Tray

Paper stack in the Paper Tray Assembly is below 50 ±30 sheets.

Procedure

Insert a full Tray Assembly in the affected position. **The Error Message reappears.**

Y N

Problem solved.

Remove the affected tray Assembly. Push up the Low Paper Actuator manually and then release. **The Low Paper Actuator moves smoothly.**

Y N

Repair or replace the Low Paper Sensor Assembly (REP 3.5/REP 11.14).

Enter Diagnostics and select Component Test. Scroll to Sensor Input test and press Enter. Press the Low Paper Actuator manually and then release. **The LCD increments the counter each time you press and release the Actuator.**

Y N

Check the wiring associated with the specific Low Paper Sensor. If ok, replace the Low Paper Sensor (REP 3.5/REP 11.14).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 22 Paper Size Error

There is a conflict between the size of paper the printer senses and the size of paper that is actually loaded.

Procedure

The problem appears when using Tray 1, 2, or 3.

Y N

Verify the size of paper currently in the MBF Tray. Enter the User Menus, select Tray Menu, then select MBF Size. **The paper size displayed on the LCD matches the size actually in the MBF.**

Y N

Set MBF size to the size of paper actually installed, then press Enter.

Replace the Print Engine Controller PWB (REP 9.3).

The paper size in the problem tray is within printer specifications.

Y N

Replace with paper that meets specifications.

Check the side guides and the Paper Stack End Guide in the problem tray. **All guides are properly set for the size of paper installed.**

Y N

Properly set the guides.

Check the size cam on the left side of the paper tray (Table 1). **The cams are in good condition (not broken) and move freely as the paper tray end guide is moved.**

Y N

Replace the paper tray (PL 2.1/PL 11.1).

Reinstall the paper tray. Enter Diagnostics and select Component Test. Scroll to Paper Tray Size Reading and press Enter to display MBF size. Press Enter repeatedly to scroll through each of the paper trays. **The paper size displayed on the LCD matches the size of the paper actually loaded.**

Y N

Replace the Tray Size PWB (REP 3.13/REP 11.19).

Replace the Print Engine Controller PWB (REP 9.3).

Table 1 Paper Size Actuators

Actuator Cam Extended	B5 SEF	A5 SEF	13" SEF	14" SEF	8.5" SEF	A4 SEF
Top	X		X			
Middle			X	X		X
Bottom				X	X	X
Forward Cam		X				

RAP 23 Low Toner Sensor Failure

Low Toner is not displayed when the Print Cartridge appears to be empty.

Procedure

Run a Test Print. Inspect the print quality. **The print is light.**

Y N

Return to Initial Actions.

Replace the Print Cartridge (PL 8.1). Run 5 test prints (Config Sheet or Demo Page) and inspect the print quality. **The print quality meets specifications.**

Y N

Go to IQ RAP 1.

Open the Front Cover and cheat the Front Cover Interlock. Enter Diagnostics and select Component Test. Scroll to Sensor Input and press Enter [4]. Hold the Print Cartridge in position while you carefully push down then release the Toner Sensor. **The number on the LCD increments each time you pull down and release the Toner Sensor.**

Y N

Switch the printer power off. Remove the Front Cover (REP 1.6) and the Left Front Cover (REP 1.7). Cheat the Front Cover Interlock Switch. Switch the printer power on. On the connector PWB, check the voltage between P/J42 pin 4 and frame ground. **The voltage is 0.0VDC with the print cartridge installed and 3.3VDC with the print cartridge removed.**

Y N

Check the voltage between P/J42 pin 3 and pin 1. **The voltage is 24VDC.**

Y N

On the Connector PWB, check the voltage between P/J231 pin 11 and pin 12. **The voltage is 24VDC.**

Y N

Check the Connector Harness Assembly. If OK, replace the Print Engine Controller PWB (REP 9.3).

Replace the Connector PWB (REP 9.7).

Replace the Toner Sensor (REP 5.2).

On the connector PWB, check the voltage between P/J231 pin 9 and frame ground. **The voltage is 0.0VDC with the print cartridge installed and 3.3VDC with the print cartridge removed.**

Y N

Replace the Connector PWB (REP 9.7).

Check the Connector Harness Assembly. If OK, replace the Print Engine Controller PWB (REP 9.3).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 24 Inoperative Printer

The main power cannot be switched on.

Procedure

Ensure the power cord is properly connected to the wall outlet and to the Power Receptacle of the printer. **The problem still exists.**

Y N

Problem solved.

Perform RAP 1, then return here. **RAP 1 indicated that correct AC voltage is being supplied to the printer.**

Y N

Notify customer that the power is out of specification.

Perform RAP 2, then return here. **RAP 2 indicated that correct DC voltage is being supplied to the printer.**

Y N

Rap 2 instructed you to replace a component.

Y N

Perform RAP 3.

Replace component as necessary.

On the System Controller PWB, check the voltage on P/J13 between pins 1 and 2. **The voltage is 3.3VDC.**

Y N

Switch the printer power off. Disconnect P/J13 from the System Controller PWB. Switch the printer power on. Check the voltage between pins 1 and 2 on the disconnected plug. **The voltage is 3.3VDC.**

Y N

Replace the LVPS (REP 9.5).

Switch the printer power off. Remove any options connected to the System Controller PWB. Reconnect P/J13 to the System Controller PWB. Switch the printer power on. Check the voltage on P/J13 between pins 1 and 2 (if there are no options installed, follow the No path). **The voltage is 3.3VDC.**

Y N

Replace the System Controller PWB (REP 9.2).

Switch the printer power off. Reinstall the removed options one at a time, switching on the power and checking for 3.3VDC on P/J13 between pins 1 and 2 after each one is installed. Replace the option just installed when the voltage fails.

On the System Controller PWB, check the voltage on P/J13 between pins 3 and 4. **The voltage is 5.0VDC.**

Y N

Switch the printer power off. Disconnect P/J13 from the System Controller PWB. Switch the printer power on. Check the voltage between pins 3 and 4 on the disconnected plug. **The voltage is 5.0VDC.**

A

A

Y N

On the LVPS, check the voltage between P/J PN1 pin 1 and frame ground. **The voltage is +24.0VDC.**

Y N

Replace the LVPS (REP 9.5).

Replace the System Controller +5.0VDC Power Supply (REP 9.4).

Switch the printer power off. Remove any options connected to the System Controller PWB. Reconnect P/J13 to the System Controller PWB. Switch the printer power on. Check the voltage on P/J13 between pin 3 and frame ground (if there are no options installed, follow the No path). **The voltage is 5.0VDC.**

Y N

Replace the System Controller PWB (REP 9.2).

Switch the printer power off. Reinstall the removed options one at a time, switching on the power and checking for 5.0VDC on P/J13 between pin 3 and frame ground after each one is installed. Replace the option just installed when the voltage fails.

On the Print Engine Controller PWB, check the voltage between P/J28 pin 1 and frame ground, P/J28 pin 7 and frame ground, and P/J28 pin 10 and frame ground. The voltage on pin 1 is +24VDC, pin 7 is +5.0VDC, and pin 10 is 3.3VDC. **All voltages are correct.**

Y N

Replace the LVPS (REP 9.5).

Replace the System Controller PWB (REP 9.2). If the problem persists, replace the Print Engine Controller PWB (REP 9.3).

RAP 25 Malfunctioning LCD/LED

There is an erratic display on LCD/LED.

Procedure

Switch the printer power off. Remove any options connected to the System Controller PWB. Disconnect P/J18 from the System Controller PWB. Switch the printer power on. On the System Controller PWB, check the following voltages between P/J18 and frame ground.

Table 1

P18	With P/J18 Disconnected	With P/J18 Connected
Pin 1	3.3VDC	3.3VDC
Pin 2	0.0VDC	0.0VDC
Pin 3	1.4VDC	3.3VDC
Pin 4	0.0VDC	0.0VDC
Pin 5	3.3VDC	3.3VDC
Pin 6	1.4VDC	3.3VDC
Pin 7	3.3VDC	3.3VDC
Pin 8	0.0VDC	3.3VDC

All the voltages listed in the column "with P/J18 disconnected" are correct.

Y N

On the System Controller PWB, check the voltage on P/J13 between pins 1 and 2. **The voltage is 3.3VDC.**

Y N

Switch the printer power off. Disconnect P/J13 from the System Controller PWB. Switch the printer power on. Check the voltage between pins 1 and 2 on the disconnected plug. **The voltage is 3.3VDC.**

Y N

On the LVPS, check the voltage on P/J282 between pins 1 and 2. **The voltage is 3.3VDC.**

Y N

Replace the LVPS (REP 9.5).

Repair or replace the harness between the LVPS and the System Controller PWB (PL 10.1).

Replace the System Controller PWB (REP 9.2).

On the System Controller PWB, check the voltage on P/J13 between pins 3 and 4. **The voltage is 5.0VDC.**

Y N

Switch the printer power off. Disconnect P/J13 from the System Controller PWB. Switch the printer power on. Check the voltage between pins 3 and 4 on the disconnected plug. **The voltage is 5.0VDC.**

Y N

On the LVPS, check the voltage between P/J PN1 pins 1 and 2. **The voltage is 24.0VDC.**

A B C

Y N

Replace the LVPS (REP 9.5).

Replace the System Controller +5.0VDC Power Supply (REP 9.4).

Replace the System Controller PWB (REP 9.2).

Switch the printer power off. Reconnect P/J18 to the System Controller PWB. Switch the printer power on. Check the voltages between the pins listed in Table 1 and frame ground. **All the voltages listed in the column "with P/J18 connected" are correct.**

Y N

Replace the Control Panel Assembly (PL 1.1).

Switch the printer power off. Reinstall the removed options one at a time, switching on the power and checking the voltages between the pins listed in Table 1 and frame ground after each component is installed. Replace the option just installed if the voltage fails. **After all the options are reinstalled, the LCD display is still erratic.**

Y N

Problem solved. Return to Initial Actions and restart.

Replace the Control Panel Assembly (PL 1.1). If the problem persists, replace the System Controller PWB (REP 9.2).

Switch the printer power off. Reconnect P/J18 to the System Controller PWB. Switch the printer power on. Check the voltages between the pins listed in Table 1 and frame ground. **All the voltages listed in the column "with P/J18 connected" are correct.**

Y N

Replace the Control Panel Assembly (PL 1.1).

Switch the printer power off. Reinstall the removed options one at a time, switching on the power and checking the voltages between the pins listed in Table 1 and frame ground after each component is installed. Replace the option just installed if the voltage fails. **After all the options are reinstalled, the LCD display is still erratic.**

Y N

Problem solved. Return to Initial Actions and restart.

Replace the Control Panel Assembly (PL 1.1). If the problem persists, replace the System Controller PWB (REP 9.2).

RAP 26 Inoperative Keypad

Control Panel is not operative.

Procedure

Enter Diagnostics and select the Component Test. Scroll to Sensor Input test and press Enter [4]. **The printer enters the Diagnostic Mode to the Sensor Input Level.**

Y N

Disconnect P/J18 on the System Controller PWB. Measure the voltages listed in Table 1 between P18 on the System Controller PWB and frame ground.

Table 1 Keypad

Pin	Voltage
1	3.3 VDC
2	0 VDC
3	1.4 VDC
4	0 VDC
5	3.3 VDC
6	1.4 VDC
7	3.3 VDC
8	0 VDC

All the voltages are correct.

Y N

Replace the System Controller PWB (REP 9.2).

Disconnect P/J412 from the Control Panel. Measure continuity on all wires between P/J412 and P/J18. **All checks are good.**

Y N

Replace the wiring harness (PL 1.1).

Replace the Control Panel Assembly (PL 1.1).

Keypad numbers (1-7) increment the counter. Keypad number [4] enters the test and (0) exits the test.

Y N

Replace the Control Panel Assembly (PL 1.1).

Replace the System Controller PWB (REP 9.2).

RAP 27 Erratic Printer Operation

Procedure

Disconnect all host cables. Enter diagnostics and select Test Print. Run 15 to 20 test prints. **The printer generates test prints.**

Y N

Switch the printer power off. Disconnect P/J PN1 from the LVPS Assembly. Switch the printer power on. Check the voltage between P/J281 pin 7 and frame ground. **The voltage is +5.0VDC.**

Y N

Switch the printer power off and reconnect PN1. Go to RAP 28.

Replace the Print Engine Controller PWB (REP 9.3). **The problem still appears.**

Y N

Problem solved.

Go to RAP 44.

The printer RESETS while generating test print.

Y N

Replace the Print Engine Controller PWB (REP 9.3). **The problem still appears.**

Y N

Problem solved

Notify customer the cause of the trouble seems to be a communication problem between the host computer and the printer. The customer should contact Customer Support.

Go to RAP 28.

RAP 28 Power Supply

Procedure

Switch the printer power off. Disconnect the power cord. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Disconnect the following from the LVPS:

- P/J281 (Print Engine Controller PWB) (REP 9.3)
- P/J282 (System Controller PWB)(REP 9.2)
- P/J11(Fuser)(REP 6.2)
- P/J283 (Main Fan)(REP 9.1)
- P/J284(Front Interlock Switch)(REP 9.9)
- P/JPN1 (5VDC Power Supply)(REP 9.4)

Connect the power cord. Switch the printer power on and measure the voltages listed in Table 1 on the LVPS.

Table 1 LVPS

Red Lead	Black Lead	Voltage
P/J281 pin 7	Frame Ground	+5.0VDC
P/J281 pin 10	Frame Ground	+3.3VDC
P/J281 pin 1	Frame Ground	+24.0VDC

All voltages are correct.

Y N

Replace the LVPS (REP 9.5).

Switch the printer power off. Reconnect P/J281 to the LVPS. Switch the printer power on and measure the voltages listed in Table 1. **All the voltages are correct.**

Y N

Switch the printer power off. Reconnect all the P/Js to the LVPS. Disconnect the following from the Print Engine Controller PWB:

- P/J35 (OCT PWB) (REP 10.7)
- P/J34 (Duplex PWB) (REP 12.4)
- P/J33 (Size 1 PWB) (REP 3.13)
- P/J22 (Laser) (REP 7.4)
- P/J21 (Laser) (REP 7.4)
- P/J23 (Connector PWB) (REP 9.7)
- P/J31 (Stack Full Sensor) (REP 6.6)
- P/J30 (Rear Interlock Switch) (REP 9.10)
- P/J25 (Print Cartridge Sensor) (REP 7.3)
- P/J32 (Exit Motor) (REP 6.5)
- P/J29 (Main Motor) (REP 8.1)
- P/J26 (HVPS PWB) (REP 9.6)
- P/J27 (Fuser Sensors) (REP 6.2)

Switch the printer power on and measure the voltages listed in Table 1. **All voltages are correct.**

A

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Switch the printer power off. Reconnect one of the disconnected plugs. Switch the printer power on. Measure the voltages listed in Table 1. **All the voltages are correct.**

Y N

Replace the component just connected to the Print Engine Controller PWB.

Repeat the step with the next disconnected plug.

Switch the printer power off. Reconnect one of the disconnected plugs. Switch the printer power on. Measure the voltages listed in Table 1. **All the voltages are correct.**

Y N

Replace the component just connected to the LVPS.

Repeat the step with the next disconnected plug.

RAP 29 Main Motor Assembly

Procedure

Enter Diagnostics and select the Component Test. Scroll to Main Motor Operation and press Enter. **The Main Motor rotates.**

Y N

Switch the printer power off. Remove the Left Interface Cover (1.1), Left Cover (1.2), and Left Plate Assembly (1.11). Ensure the Rear Cover is closed. Switch the printer power on. Measure the voltages listed in Table 1 on the Main Motor Assembly.

Table 1 Main Motor Harness

From	To	Voltage
CN101 - Pin 1	Frame Ground	+24.0 VDC
CN101 - Pin 2	Frame Ground	+24.0 VDC
CN101 - Pin 3	Frame Ground	+24.0 VDC
CN101 - Pin 7	Frame Ground	+5.0 VDC
CN101 - Pin 8	Frame Ground	+3.3 VDC

All voltages are correct.

Y N

The voltages on pins 1, 2, and 3 are correct.

Y N

On the Print Engine Controller PWB, check the voltage between P/J28 pins 1, 2, and 3 and frame ground. **All three readings are +24.0 VDC.**

Y N

Replace the LVPS (REP 9.5).

On the Print Engine Controller PWB, check the voltage between P/J30 pin 2 and frame ground. **The voltage is 24VDC.**

Y N

Check the wiring between the Print Engine Controller PWB and the Rear Interlock. Repair or replace the wiring or replace the Rear Interlock Switch (REP 9.10).

Replace the Print Engine Controller PWB (REP 9.3).

The voltage on pin 7 is correct.

Y N

On the Print Engine Controller PWB, check the voltage between P/J28 pin 7 and frame ground. **The voltage is +5.0 VDC.**

Y N

Replace the LVPS (REP 9.5).

Replace the Print Engine Controller PWB (REP 9.3).

On the Print Engine Controller PWB, check the voltage between P/J28 pin 10 and frame ground. **The voltage is 3.3 VDC.**

Y N

Replace the LVPS (REP 9.5).

A B C

A B C

Replace the Print Engine Controller PWB (REP 9.3).

Enter Diagnostics and select the Component Test. Scroll to Main Motor Operation. On the Print Engine Controller PWB, measure the voltage between P/J29 pin 7 and frame ground. Press the Enter key. **The voltage drops from 5.0 VDC to 0.0 VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Main Motor Assembly (REP 8.1).

Problem solved, return to Initial Actions and continue.

RAP 30 Laser Assembly

Procedure

Enter Diagnostics and select Component Test. Scroll to ROS Motor and press Enter. **You can hear the ROS Motor spin up.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1) Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the printer power on. Check the voltage between P/J21 pin 10 on the Print Engine Controller PWB and frame ground. **The voltage is 24.0 VDC.**

Y N

Check the voltage between P/J28 pin 1 on the Print Engine Controller PWB and frame ground. **The voltage is 24.0 VDC.**

Y N

Replace the LVPS (REP 9.5).

Replace the Print Engine Controller PWB (REP 9.3).

Enter Diagnostics and select Component Test. Scroll to ROS Motor Operation. Check the voltage between P/J21 pin 12 and frame ground. Press the Enter key. **The voltage drops from 5.0 VDC to 0.0 VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Laser Assembly (REP 7.4).

Switch the printer power off. Remove the Left Interface Cover (REP 1.1) Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the printer power on. Check the voltage between P21 pin 6 and frame ground. **The voltage is +5.0VDC.**

Y N

Check the voltage between P/J28 pin 7 and frame ground. **The voltage is +5.0VDC.**

Y N

Replace the LVPS (REP 9.5).

Check the voltage between P/J25 pin 3 and frame ground. **The voltage is +5.0VDC.**

Y N

Go to RAP 36.

Replace the Print Engine Controller PWB (REP 9.3).

Measure the voltage between P/J21 pin 9 and frame ground. **The voltage is +5.0VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Laser Assembly (REP 7.4).

RAP 31 Fuser Assembly

Procedure

WARNING

If the printer has been switched on, the fuser may be hot.

Switch the printer power off. Remove the Fuser Assembly (REP 6.2). Measure the resistance between pins A4 and A5 of P272 (Figure 1). **The resistance is between 7K and 380K ohms (depending on the temperature of the fuser).**

Y N

Replace the Fuser Top Cover (REP 6.9).

Measure the resistance between pins 3 and 4 of P272 on the Fuser Assembly (Figure 1). **The resistance is less than 5 ohms.**

Y N

Remove the Fuser Heat Rod (REP 6.9). Measure the resistance of the Heat Rod. **The resistance is less than 5 ohms.**

Y N

Replace the Heat Rod (REP 6.9).

Replace the Fuser Top Cover (REP 6.9).

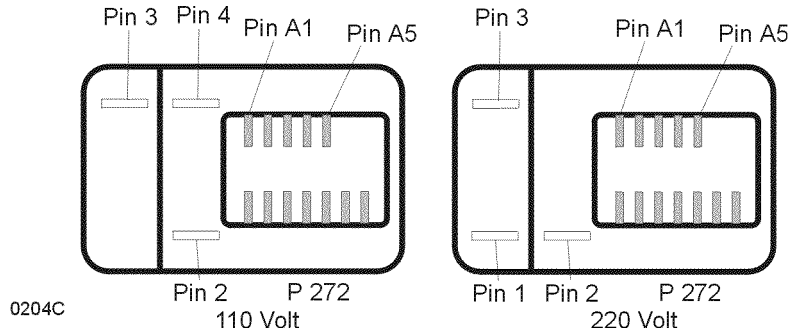

Figure 1 Fuser Connector (P272)

Reinstall the Fuser Assembly. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Disconnect P/J11 from the LVPS PWB. Check the resistance between P11 pin 1 and pin 2. **There is less than 5 ohms resistance.**

Y N

Repair or replace the Fuser Harness Assembly (REP 6.3).

Reconnect P/J11 and disconnect P/J27. Measure the resistance between P/J27 pins 1 and 2 (Figure 1). **The resistance is between 7K and 380K ohms (depending on the temperature of the fuser).**

Y N

Repair or replace the Fuser Harness Assembly (REP 6.3).

A

A

Reconnect P/J27. Measure the voltage on the LVPS between P/J281 pin 12 and frame ground as you switch the printer power on. **The voltage is 0.0VDC during fuser warm up, then changes to 2.8VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Replace the LVPS (REP 9.5).

RAP 32 Registration Sensor

Procedure

Enter Diagnostics and select Component Test. Scroll to Sensor Input test and press Enter. Actuate and deactuate the Registration Sensor. **The number on the LCD increments each time you press and release the actuator.**

Y N

The actuator moves freely and is in good condition (not broken or damaged).

Y N

Replace the Registration Actuator (REP 4.2).

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the printer power on. On the Print Engine Controller PWB, measure the voltage between P/J23 pin 11 and frame ground. **The voltage is +3.3VDC with the Registration Sensor deactuated and 0.0VDC with the Registration Sensor actuated.**

Y N

Switch the printer power off. Remove the Left Front Cover (REP 1.7). Switch the printer power on. On the Connector PWB, measure the voltage between P/J43 pin 5 and frame ground. **The voltage is +3.3VDC with the Registration Sensor deactuated and 0.0VDC with the Registration Sensor actuated.**

Y N

Check the voltage between P/J43 pin 3 and frame ground. **The voltage is 1.2VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Registration Sensor (REP 5.4).

Replace the Connector PWB (REP 9.7).

Replace the Print Engine Controller PWB (REP 9.3).

It appears that the Registration Sensor is working correctly. If a problem persists, replace the Print Engine Controller PWB (REP 9.3).

RAP 33 MBF No Paper Sensor

Procedure

Enter Diagnostics and select Component Test. Scroll to Sensor Input test and press Enter. Actuate and deactuate the MBF No Paper Sensor. **The number on the LCD increments each time you press and release the actuator.**

Y N

The actuator moves freely and is in good condition (not broken or damaged).

Y N

Replace the MBF No Paper Sensor Actuator (REP 4.5).

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the printer power on. On the Print Engine Controller PWB, measure the voltage between P/J23 pin 14 and frame ground. **The voltage is +3.3VDC with the MBF No Paper Sensor deactuated and 0.0VDC with the Sensor actuated.**

Y N

Switch the printer power off. Remove the Left Front Cover (REP 1.7). Switch the printer power on. On the Connector PWB, measure the voltage between P/J45 pin 3 and frame ground. **The voltage is +3.3VDC with the MBF No Paper Sensor deactuated and 0.0VDC with the Sensor actuated.**

Y N

Check the voltage between P/J45 pin 1 and frame ground. **The voltage is 1.2VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Replace the MBF No Paper Sensor (REP 4.8).

Replace the Connector PWB (REP 9.7).

Replace the Print Engine Controller PWB (REP 9.3).

It appears that the MBF No Paper Sensor is working correctly. If a problem persists, replace the Print Engine Controller PWB (REP 9.3).

RAP 34 Tray 1 No Paper Sensor

Procedure

Remove Tray 1. Enter Diagnostics and select Component Test. Scroll to Sensor Input test and press Enter. Actuate and deactuate the Tray 1 No Paper Sensor Actuator. **The number on the LCD increments each time you press and release the actuator.**

Y N

Visually inspect the Tray 1 No Paper Sensor Actuator. **The actuator moves freely and is in good condition (not broken or damaged).**

Y N

Replace the Tray 1 No Paper Sensor Actuator (REP 3.3).

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the printer power on. On the Print Engine Controller PWB, measure the voltage between P/J33 pin 2 and frame ground as you actuate and deactuate the No paper Sensor. **The voltage is 3.3VDC with the sensor deactuated and 0.0VDC with the sensor actuated.**

Y N

Check the voltage between P/J33 pin 8 and frame ground. **The voltage 3.3VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Tray 1 Feeder PWB (REP 3.9).

Replace the Print Engine Controller PWB (REP 9.3).

It appears that the Tray 1 No Paper Sensor is working correctly. If a problem persists, replace the Print Engine Controller PWB (REP 9.3).

RAP 35 Standard Bin Stack Full Sensor

Procedure

Enter Diagnostics and select Component Test. Scroll to Sensor Input test and press Enter. Actuate and deactuate the Stack Full Sensor Actuator. **The number on the LCD increments each time you press and release the actuator.**

Y N

Visually inspect the Stack Full Sensor Actuator. **The actuator moves freely and is in good condition (not broken or damaged).**

Y N

Replace the Stack Full Actuator (REP 6.8).

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and Left Plate (REP 1.11). Disconnect P/J31 from the Print Engine Controller PWB. Switch the printer power on. On the Print Engine Controller PWB, measure the voltage between P31 pin 1 and frame ground. **The voltage is +3.3VDC.**

Y N

On the Print Engine Controller PWB, measure the voltage between P/J28 pin 10 and frame ground. **The voltage is +3.3VDC.**

Y N

Replace the LVPS (REP 9.5).

Replace the Print Engine Controller PWB (REP 9.3).

Switch the printer power off. Reconnect P/J31 to the Print Engine Controller PWB. Switch the printer power on. On the Print Engine Controller PWB, measure the voltage between P/J31 pin 3 and frame ground. **There is +3.3VDC between P/J31 pin 3 and frame ground when the Stack Full Sensor is deactuated and 0.0VDC when actuated.**

Y N

Replace the Stack Full Sensor (REP 6.6).

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 36 Print Cartridge Sensor Assembly

Procedure

Open the Front Cover and remove the Print Cartridge. Inspect the tab on the top of the Print Cartridge that actuates the Print Cartridge Sensor Assembly. **The tab on the Print Cartridge is intact.**

Y N

Replace the Print Cartridge (PL 8.1).

Press and release the Print Cartridge Sensor Assembly Actuator. **The Print Cartridge Sensor Assembly Actuator lever moves smoothly.**

Y N

Replace the Print Cartridge Sensor Assembly (REP 7.3).

Enter diagnostics and select Component Test. Scroll to Sensor Input test and press Enter. Manually actuate the Print Cartridge Sensor Assembly Actuator. **The number on the LCD increments each time you press and release the actuator.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and Left Plate Assembly (REP 1.11). Switch the printer power on. On the print Engine Controller PWB, check the voltage between P/J25 pin 4 and frame ground. **The voltage is +5.0VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Check the voltage between P/J25 pin 3 and frame ground. Manually actuate and deactuate the Print Cartridge Sensor Assembly. **The voltage is 0.0VDC with the Print Cartridge Sensor Assembly deactuated and +5.0VDC with the sensor actuated.**

Y N

Replace the Print Cartridge Sensor Assembly together with the harness (REP 7.3).

Check the voltage between P/J25 pin 2 and frame ground. Manually actuate and deactuate the Print Cartridge Sensor Assembly. **The voltage is 3.3VDC with the Print Cartridge Sensor Assembly deactuated and 0.0VDC with the sensor actuated.**

Y N

Replace the Print Cartridge Sensor Assembly together with the harness (REP 7.3).

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 37 Tray Motor Assembly Checkout Procedure

Procedure

NOTE: *Tray 1 interlocks the 24VDC supply to the Tray 1 Size PWB, Tray 1 Feeder PWB, Tray 2 and Tray 3. Tray 2 interlocks the 24VDC supply to the Tray 2 Size PWB, Tray 2 Feeder PWB, and Tray 3. Tray 3 interlocks the 24VDC supply to the Tray 3 Size PWB and the Tray 3 Feeder PWB.*

Switch the printer power off. Remove the Paper Tray to be tested. Switch the printer power on. Measure the voltage from the lower contact of the Paper Feeder Socket to frame ground. **The voltage is +24 VDC.**

Y N

Go to RAP 2.

On the left side of the paper tray, measure the motor winding resistance from the middle contact to the lower contact of the Paper Feeder Connector. **The resistance reading is between 110 - 130 ohms.**

Y N

Disconnect J673 from the 3 pin Paper Feeder Connector. Measure resistance between pins 1 and 4. **The resistance reading is between 110 - 130 ohms.**

Y N

Replace the Motor Assembly (REP 2.4).

Replace Paper Feeder Connector (PL 2.2).

Check the Paper Tray for damage, contamination, binding, misalignment or obstruction. **All components are clean, connected properly, aligned properly and without damage.**

Y N

Repair/replace as necessary.

Replace the Motor Assembly (REP 2.4).

RAP 38 Registration Clutch

Procedure

Enter Diagnostics and select Component Test. Scroll to Confirm Reg. Clutch and press Enter. **You can hear the Registration Clutch energize.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Disconnect P/J23 on the Print Engine Controller PWB. Measure the resistance between pins 6 and 9 on the disconnected plug. **The resistance is approximately 145 to 165 ohms.**

Y N

Remove the Front Cover (REP 1.6) and the Left Front Cover (REP 1.7). Disconnect P/J43 from the Connector PWB. Measure the resistance between pins 1 and 2 on the disconnected plug. **The resistance is approximately 145 to 165 ohms.**

Y N

Replace the Registration Clutch (REP 5.5).

Replace the Connector PWB (REP 9.7).

Reconnect P/J23. Switch the printer power on. Check the voltage between P/J23 pin 6 and frame ground. **The voltage is +24VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Enter Diagnostics and select Component Test. Scroll to Confirm Reg. Clutch. Check the voltage between P/J23 pin 9 and frame ground. Press Enter. **The voltage drops from +24VDC to 0.0VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Registration Clutch (REP 5.5)

Switch the printer power off. Open the Front Cover and remove the Print Cartridge. With the Front Cover open, cheat the Front Cover Interlock. Enter Diagnostics and select Component Test. Scroll to Main Motor and press Enter. Scroll to Confirm Reg. Clutch and press Enter. **The Registration Rolls rotate smoothly without stalling or jerking.**

Y N

Replace the Registration Clutch (REP 5.5) or Registration Rolls (REP 5.6).

Problem Solved.

RAP 39 Turn Roll Clutch Assembly

Procedure

Enter Diagnostics and select Component Test. Scroll to Turn Roll Clutch and press Enter. **You can hear the Turn Roll Clutch energize.**

Y N

Remove Tray 1. Check the voltage between the lower contact of the Paper Feeder Connector and frame ground **The voltage is +24VDC.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the printer power on. On the Print Engine Controller PWB, check the voltage between P/J33 pin 6 and frame ground. **The voltage is +24VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Feeder PWB (REP 3.9).

On the left side of the Paper Tray, measure the resistance between the upper and lower contacts on the Paper Feeder Connector. **Their is continuity between the two contacts.**

Y N

Replace the Paper Feeder Connector (REP 2.5).

Switch the printer power off. Remove the Paper Feeder Assembly (REP 3.1). Disconnect P/J64 from the Feeder PWB. Measure the resistance between pins 1 and 2 on the disconnected plug. **Their is continuity between the two pins.**

Y N

Replace the Turn Clutch Assembly (PL 3.1).

Replace the Feeder PWB (REP 3.9). If the problem persists, replace the Size PWB (REP 3.13).

Switch the printer power off. Remove the Front Cover (REP 1.6). Cheat the Front Cover Interlock Switch. Enter diagnostics and select Component Test. Scroll to Main Motor and press Enter. Scroll to Turn Roll Clutch and press Enter. **The Turn Rolls rotate smoothly without stalling or jerking.**

Y N

Replace the Turn Roll Assembly (REP 3.2).

Replace the Turn Roll Clutch (REP 3.2). If the problem persists, replace the Print Engine Controller PWB (REP 9.3).

RAP 40 Tray 1 Feed Clutch

Procedure

NOTE: *Tray 1 interlocks the 24VDC supply to the Tray 1 Size PWB, Tray 1 Feeder PWB, Tray 2 and Tray 3. Tray 2 interlocks the 24VDC supply to the Tray 2 Size PWB, Tray 2 Feeder PWB, and Tray 3. Tray 3 interlocks the 24VDC supply to the Tray 3 Size PWB and the Tray 3 Feeder PWB.*

Enter Diagnostics and select Component Test. Scroll to Confirm Tray 1 Feed Clutch and press Enter. **You can hear the Tray 1 Feed Clutch energize.**

Y N

Remove Tray 1. Check the voltage between the lower contact of the Paper Feeder Connector and frame ground **The voltage is +24VDC.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the printer power on. On the Print Engine Controller PWB, check the voltage between P/J33 pin 6 and frame ground. **The voltage is +24VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Feeder PWB (REP 3.9).

On the left side of the Paper Tray, measure the resistance between the upper and lower contacts on the Paper Feeder Connector. **Their is continuity between the two contacts.**

Y N

Replace the Paper Feeder Connector (REP 2.5).

Switch the printer power off. Remove the Paper Feeder Assembly (REP 3.1). Disconnect P/J65 from the Feeder PWB. Measure the resistance between pins 1 and 4 on the disconnected plug. **Their is continuity between the two pins.**

Y N

Replace the Tray 1 Feed Clutch (REP 3.6).

Replace the Feeder PWB (REP 3.9). If the problem persists, replace the Size PWB (REP 3.13).

Replace the Tray 1 Feed Clutch (REP 3.6). If the problem persists, replace the Print Engine Controller PWB (REP 9.3).

RAP 41 MBF Feed Solenoid

Procedure

Enter Diagnostics and select Component Test. Scroll to Confirm MBF Feed Solenoid and press Enter. **You can hear the MBF Feed Solenoid energize.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Disconnect P/J23 on the Print Engine Controller PWB. Measure the resistance between pins 6 and 12 on the disconnected plug. **The resistance is approximately 75 to 95 ohms.**

Y N

Remove the Front Cover (REP 1.6) and the Left Front Cover (REP 1.7). Disconnect P/J44 from the Connector PWB. Measure the resistance between pins 1 and 2 on the disconnected plug. **The resistance is approximately 75 to 95 ohms.**

Y N

Replace the MBF Feed Solenoid (REP 4.9).

Replace the Connector PWB (REP 9.7).

Reconnect P/J23. Switch the printer power on. Check the voltage between P/J23 pin 6 and frame ground. **The voltage is +24VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Enter Diagnostics and select Component Test. Scroll to Confirm MBF Feed Solenoid. Check the voltage between P/J23 pin 12 and frame ground. Press Enter. **The voltage drops from +24VDC to 0.0VDC when you press Enter.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Replace the MBF Feed Solenoid (REP 4.9)

Switch the printer power off. Open the Front Cover and remove the Print Cartridge. With the Front Cover open, cheat the Front Cover Interlock. Enter Diagnostics and select Component Test. Scroll to Main Motor and press Enter. Scroll to Confirm MBF Feed Solenoid and press Enter. **The MBF Feed Rolls make one complete revolution then stop.**

Y N

Replace the MBF Feed Solenoid (REP 4.9).

The MBF Feed Solenoid appears to operate correctly. If the problem persists, replace the Print Engine Controller PWB (REP 9.3).

RAP 42 System Controller Isolation

Procedure

Switch the printer power off. Disconnect all cables connected to the rear of the System Controller PWB. Remove the Left Interface Cover (REP 1.1). Remove all options from the System Controller PWB. Switch the printer power on. **The printer boots up correctly and Ready is displayed on the Control Panel (if no options are installed, follow the No path).**

Y N

Switch the printer power off. Remove then reinstall the System Controller PWB (REP 9.2) to reseat the connection with the Print Engine Controller PWB. Switch the printer power on. **The printer boots up correctly and Ready is displayed on the Control Panel.**

Y N

Replace the System Controller PWB (REP 9.2).

Problem Solved.

Switch the printer power off. Reinstall one of the removed options or cables. Switch the printer power on. **The printer boots up correctly and Ready is displayed on the Control Panel.**

Y N

Replace the option or cable just installed.

Repeat the last step with the next option or cable until the problem is found.

RAP 43 HVPS Assembly

Procedure

Open the Front Cover. Remove the Print Cartridge. Inspect all contacts on the Transport Chute Assembly and the terminals on the Print Cartridge. **The terminals are in good condition and contacting properly when the cartridge is installed.**

Y N

Replace the Transport Chute Assembly (REP 6.1) or the Print Cartridge (PL 8.1) as necessary.

Cheat the Front Cover Interlock Switch. Enter Diagnostics and select Component Test. Scroll to each of the high voltage tests (Table 1). Measure the voltage between the contact listed and frame ground. Press the Enter Key.

Table 1 High Voltage Power Supply Readings

High Voltage Test	Contact	Reading
Charge Roll DC	Rear Transport Chute Pin Contact	-425 ±40 VDC
Charge Roll AC	Rear Transport Chute Pin Contact	1000 ± 100 VAC
Dev Bias DC	Front Transport Chute Pin Contact	+7.3 ± 3 VDC
Dev Bias AC	Front Transport Chute Pin Contact	555 ± 55 VAC
BTR -	BTR Roll Bushing	-81 ± 8 VDC
BTR +	BTR Roll Bushing	0 VDC
Detack Saw	Detack Saw	-930 ± 100 VDC

At least one of the voltages is correct.

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the printer power on. On the Print Engine Controller PWB, check the voltage between P/J26 pin 2 and frame ground. **The voltage is +24VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Replace the HVPS (REP 9.6).

All the voltages are correct.

Y N

Replace the Print Engine Controller PWB (REP 9.3). Cheat the Front Cover Interlock Switch. Enter Diagnostics and select Component Test. Scroll to each of the high voltage tests (Table 1). Measure the voltage between the contact listed and frame ground. Press the Enter Key. **All the voltages are correct.**

Y N

Check the Transport Chute Assembly for proper installation. Check the HVPS harness for proper connection and for damage. If everything is OK, Replace the HVPS (REP 9.6)

Problem Solved.

Problem solved.

RAP 44 Electrical Noise

Procedure

Check if there is other electrical equipment, such as electrical generators, radio transmitters, or devices using electrical motors, within ten feet of the printer. Shut off the other electrical equipment, or relocate the printer at least twenty feet away from other devices. **The Electrical Noise problem is still present.**

Y N

Problem solved.

Check the AC wall outlet and power cord (see RAP 1). **The AC wall outlet is correctly wired and grounded.**

Y N

Inform the customer of insufficient voltage or improper wiring. A licensed electrician must correct the wiring.

Open the Front Cover. Remove the Print Cartridge. Inspect all contacts on the Transport Chute Assembly and the terminals on the Print Cartridge. **The terminals are in good condition and contacting properly when the cartridge is installed.**

Y N

Replace the Transport Chute Assembly (REP 6.1) or the Print Cartridge (PL 8.1) as necessary.

Remove the Left Interface Cover (REP 1.1). Inspect the grounding screw and wire connected to the Main Power Connector. **The cable is grounded properly.**

Y N

Attach the grounding screw properly.

Replace the Print Cartridge (PL 8.1). **The Electrical Noise problem is still present.**

Y N

Problem solved.

Remove the Fuser Assembly (REP 6.2). Remove the end covers (see REP 6.9). Inspect the cables of the Heater Rod. **The cables are attached properly.**

Y N

Attach the cables properly or replace the Fuser Assembly (REP 6.2).

Disconnect the HVPS (P/J26) from the Print Engine Controller PWB. Run 20 Test Prints (the prints will be blank). **The Test Prints run normally.**

Y N

Replace the Print Engine Controller PWB (REP 9.3). **The problem is still present.**

Y N

Problem solved.

Inspect all of the grounds in the printer. **All the grounds are securely connected.**

Y N

Repair the bad grounds.

Replace the following components one at a time until the cause of the problem is found.

- HVPS PWB Assembly (REP 9.6).
- Print Engine Controller PWB (REP 9.3).

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- Print Cartridge (PL 8.1).
- Fuser Assembly (REP 6.2).

Replace the HVPS PWB Assembly (REP 9.6).

RAP 45 DIMM 1 (0101)

Procedure

Switch the printer power off. Remove the Left Interface Cover (REP 1.1). Remove the DIMM installed in Slot 1 (slot 1 is the middle DIMM slot). Switch the printer power on. **The error code reappears.**

Y N

Switch the printer power off. Install the removed DIMM in Slot 2 (bottom DIMM slot). Switch the printer power on. **The error code reappears.**

Y N

Switch the printer power off. Remove DIMM from Slot 2 (bottom DIMM slot) and install the DIMM in slot 1 (middle DIMM slot). Switch the printer power on. **The error code reappears.**

Y N

Attribute the problem to a poor connection between the DIMM and the System Controller PWB. Go to Initial Actions.

Replace the System Controller PWB (REP 9.2).

Replace the DIMM installed in slot 2 with a new DIMM (PL 10.1).

Replace the System Controller PWB (REP 9.2).

RAP 46 DIMM 2 (0102)

Procedure

Switch the printer power off. Remove the Left Interface Cover (REP 1.1). Remove the DIMM installed in Slot 2 (slot 2 is the bottom DIMM slot). Switch the printer power on. **The error code reappears.**

Y N

Switch the printer power off. Install the removed DIMM in Slot 3 (top DIMM slot). Switch the printer power on. **The error code reappears.**

Y N

Switch the printer power off. Remove DIMM from Slot 3 (top DIMM slot) and install the DIMM in slot 2 (bottom DIMM slot). Switch the printer power on. **The error code reappears.**

Y N

Attribute the problem to a poor connection between the DIMM and the System Controller PWB. Go to Initial Actions.

Replace the System Controller PWB (REP 9.2).

Replace the DIMM installed in slot 3 with a new DIMM (PL 10.1).

Replace the System Controller PWB (REP 9.2).

RAP 47 DIMM 3 (0103)

Procedure

Switch the printer power off. Remove the Left Interface Cover (REP 1.1). Remove the DIMM installed in Slot 3 (slot 3 is the top DIMM slot). Switch the printer power on. **The error code reappears.**

Y N

Switch the printer power off. Install the removed DIMM in Slot 2 (bottom DIMM slot). Switch the printer power on. **The error code reappears.**

Y N

Switch the printer power off. Remove DIMM from Slot 2 (bottom DIMM slot) and install the DIMM in slot 3 (top DIMM slot). Switch the printer power on. **The error code reappears.**

Y N

Attribute the problem to a poor connection between the DIMM and the System Controller PWB. Go to Initial Actions.

Replace the System Controller PWB (REP 9.2).

Replace the DIMM installed in slot 2 with a new DIMM (PL 10.1).

Replace the System Controller PWB (REP 9.2).

RAP 48 Exit Sensor

Procedure

Open the printer Rear Cover. Remove the Duplex Module, if installed. Open the Fuser Access Cover and check the Exit Sensor Actuator. Check that the actuator moves smoothly and is not broken. Make sure the actuator flag blocks the Exit Sensor when the access cover is closed. **The actuator is in good condition and moves smoothly.**

Y N

Replace the Fuser Assembly (REP 6.2).

Enter Diagnostics and select Component Test. Scroll to Sensor Input test and press Enter [4]. Open the rear cover and open the Fuser Access Cover. Use a folded piece of paper to block and unblock the Fuser Exit Sensor. **The number on the LCD increments each time you block and unblock the sensor.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Disconnect P/J27 from the Print Engine Controller PWB. Switch the printer power on. Check the voltage between P/J27 pin 3 and frame ground. **The voltage is 3.3VDC.**

Y N

Check the voltage between P/J28 pin 10 and frame ground. **The voltage is 3.3VDC.**

Y N

Replace the LVPS (REP 9.5).

Replace the Print Engine Controller PWB (REP 9.3).

Switch the printer power off. Reconnect P/J27 to the Print Engine Controller PWB. Switch the printer power on. Measure the voltage between P/J27 pin 5 and frame ground as you block and unblock the Fuser Exit Sensor. **The voltage is 3.3VDC when the Fuser Exit Sensor is blocked and 0.0VDC when unblocked.**

Y N

Replace the Fuser Assembly (REP 6.2).

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 49 Exit Motor

Procedure

Switch the printer power off. Open the Rear Cover and manually rotate the Exit Chute Assembly. **The Exit Chute rotates without binding.**

Y N

Remove the Exit Chute Assembly (REP 6.4). Repair or replace components as necessary (PL 7.1).

Enter diagnostics and select Component Test. Scroll to Exit Motor Fwd Operation. Open the Rear Cover and cheat the Rear Cover Interlock. Press the Enter Key. **The Exit Motor rotates.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Disconnect P/J32 from the Print Engine Controller PWB. On the disconnected plug, check the resistance between pins 1 and 2, pins 1 and 3, pins 1 and 4, and between pins 1 and 5. **All readings are 25 to 35 ohms.**

Y N

Replace the Exit Motor (REP 6.5).

Replace the Print Engine Controller PWB (REP 9.3).

Press the [0] key to stop the test. Scroll to Exit Motor Rev H and press Enter. **The Exit Motor runs in reverse at high speed.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Disconnect P/J32 from the Print Engine Controller PWB. On the disconnected plug, check the resistance between pins 1 and 2, pins 1 and 3, pins 1 and 4, and between pins 1 and 5. **All readings are 25 to 35 ohms.**

Y N

Replace the Exit Motor (REP 6.5).

Replace the Print Engine Controller PWB (REP 9.3).

Press the [0] key to stop the test. Scroll to Exit Motor Rev L and press Enter. **The Exit Motor runs in reverse at low speed.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Disconnect P/J32 from the Print Engine Controller PWB. On the disconnected plug, check the resistance between pins 1 and 2, pins 1 and 3, pins 1 and 4, and between pins 1 and 5. **All readings are 25 to 35 ohms.**

Y N

Replace the Exit Motor (REP 6.5).

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 50 Load MBF (C5)

Procedure

Enter Diagnostics and select Component Test. Scroll to Sensor Input test and press Enter. Actuate and deactuate the MBF No Paper Sensor. **The number on the LCD increments each time you press and release the actuator.**

Y N

The actuator moves freely and is in good condition (not broken or damaged).

Y N

Replace the MBF No Paper Sensor Actuator (REP 4.5).

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the printer power on. On the Print Engine Controller PWB, measure the voltage between P/J23 pin 14 and frame ground. **The voltage is +3.3VDC with the MBF No Paper Sensor deactuated and 0.0VDC with the Sensor actuated.**

Y N

Switch the printer power off. Remove the Left Front Cover (REP 1.7). Switch the printer power on. On the Connector PWB, measure the voltage between P/J45 pin 3 and frame ground. **The voltage is +3.3VDC with the MBF No Paper Sensor deactuated and 0.0VDC with the Sensor actuated.**

Y N

Check the voltage between P/J45 pin 1 and frame ground. **The voltage is 1.2VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Replace the MBF No Paper Sensor (REP 4.8).

Replace the Connector PWB (REP 9.7).

Replace the Print Engine Controller PWB (REP 9.3).

It appears that the MBF No Paper Sensor is working correctly. If a problem persists, replace the Print Engine Controller PWB (REP 9.3).

RAP 51 Face Up Tray Open (E5)

Procedure

Open the Rear Cover. **The printer has a Duplex Unit installed.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Check the Face Up Tray Sensor Actuator on the Rear Cover. **The actuator is in good condition.**

Y N

Replace the Rear Cover (REP 1.8).

Cheat the Rear Cover Interlock. Enter diagnostics and select Component Test. Scroll to Sensor Input Test and press Enter. Use a piece of paper to block and unblock the Face Up Tray Sensor. **The number on the LCD increments each time you block and unblock the sensor.**

Y N

On the Face Up Tray Sensor, check the voltage between pin 1 (pin to the rear of the printer) and frame ground. **The voltage is 0.0VDC with the sensor unblocked and 3.3VDC with the sensor blocked.**

Y N

Check the voltage between pin 3 on the sensor and frame ground. **The voltage is 1.2VDC.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the printer power on. On the Print Engine Controller PWB, check the voltage between P/J34 pin 11 and frame ground. **The voltage is 1.2VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Check the wiring harnesses. If the harnesses are in good condition, replace the Duplex PWB (REP 12.4).

Replace the Face Up Tray Sensor (REP 12.14).

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the printer power on. On the Print Engine Controller PWB, check the voltage between P/J34 pin 11 and frame ground. **The voltage is 0.0VDC with the sensor unblocked and 3.3VDC with the sensor blocked.**

Y N

Check the wiring harnesses. If the harnesses are in good condition, replace the Duplex PWB (REP 12.4).

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 52 Low Paper Tray 2 (or Tray 3) 550 Sheet Feeder

Tray 2 and/or Tray 3 have low paper.

Procedure

Fill the affected paper tray with fresh paper. **The Error Code is still displayed.**

Y N

Problem solved.

Remove the paper tray from affected Feeder Assembly. Manually push up and release the low paper actuator. **The low paper actuator moves smoothly up and down.**

Y N

Inspect the Low Paper Actuator. Repair or replace as required.

Enter Diagnostics and select Component Test. Scroll to Sensor Input test and press Enter. Press and release the Low Paper Actuator. **The number on the LCD increments each time you press and release the actuator.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the printer power on. On the Print Engine Controller PWB, check the voltage between P/J33 pin 8 and frame ground. **The voltage is 3.3VDC.**

Y N

On the Print Engine Controller PWB, check the voltage between P/J28 pin 10 and frame ground. **The voltage is 3.3VDC.**

Y N

Replace the LVPS (REP 9.5).

Replace the Print Engine Controller PWB (REP 9.3).

Enter diagnostics and select Component Test. Scroll to Sensor Input test and press Enter. On the Print Engine Controller PWB, for Tray 2, check the voltage between P/J33 pin 9 and frame ground; for Tray 3, check the voltage between P/J33 pin 10 and frame ground. Check the voltage as you actuate the Low Paper Sensor. **The voltage changes from 3.3VDC to 0.0VDC.**

Y N

Replace the Low Paper Sensor (REP 11.14) for the affected tray. If the problem persists, replace the Feeder PWB (REP 11.9) then the Size PWB (REP 11.19).

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 53 550 Sheet Feeder Feed Clutch

The 550 Sheet Feeder is not feeding paper or not feeding paper at the correct time.

Procedure

Enter Diagnostics and select Component Test. Scroll to Confirm Tray 2 Feed Clutch or Confirm Tray 3 Feed Clutch and press Enter. **You can hear the clutch energize.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Enter diagnostics and select Component Test. Scroll to Confirm Tray 2 Feed Clutch or Confirm Tray 3 Feed Clutch. On the Print Engine Controller PWB, for Tray 2, check the voltage between P/J33 pin 13 and frame ground; for Tray 3, check the voltage between P/J33 pin 14 and frame ground. **The voltage is +24VDC.**

Y N

Remove the Sheet Feeder Drive Assembly (REP 11.6) for the affected feeder. Disconnect P/J651 from the Feed Clutch. Measure the resistance between the two pins on the feed clutch. **The resistance is 140 to 170 ohms.**

Y N

Replace the Paper Feed Clutch (REP 11.10).

Replace the Feeder PWB (REP 11.9). If the problem persists, replace the Size PWB (REP 11.19).

Press the Enter key. **The voltage drops from +24VDC to 0.0VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Paper Feed Clutch (REP 11.10).

Remove the Sheet Feeder Drive Assembly (REP 11.6) for the affected feeder. Check the Paper Feed Rolls for contamination and wear. **The Paper Feed Rolls are clean and in good condition.**

Y N

Replace the Paper Feed Rolls (REP 11.11).

Check the Paper Feed Assembly for binding, obstructions, or contamination. **The feed assembly is clean and in good condition.**

Y N

Clean, repair, or replace as necessary (REP 11.12).

If the problem persists, replace the following in order until the problem is found:

- Print Engine Controller PWB (REP 9.3).
- Feeder PWB (REP 11.9).
- Size PWB (REP 11.19)
- Paper Feed Clutch (REP 11.10).

RAP 54 550 Sheet Feeder Assembly Not Recognized

Controller does not recognize the Feeder Assembly.

Procedure

Check the alignment of the printer to the 550 Sheet Feeder and the alignment of the top 550 Sheet Feeder to the second 550 Sheet Feeder, if installed. Ensure that the connectors are properly aligned and properly connected. **All connectors are properly aligned and connected.**

Y N

Reseat the feeders and printer to obtain proper alignment and connection.

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the printer power on. On the Print Engine Controller PWB, check the voltage between P/J33 pin 13 and frame ground. **The voltage is 24VDC.**

Y N

On the Print Engine Controller PWB, check the voltage between P/J33 pin 6 and frame ground. **The voltage is 24.0VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3)**.**

Remove Paper Tray 2. Check the voltage between the bottom terminal on the mating connector on the Tray 2 feeder and frame ground. **The voltage is 24.0VDC.**

Y N

Remove paper tray 1. Check the voltage between the bottom terminal on the mating connector on the Tray 1 feeder and frame ground. **The voltage is 24.0VDC.**

Y N

Replace the Tray 1 Size PWB (REP 3.13). If the problem persists, replace the Tray 1 Feeder PWB (REP 3.9).

Check the resistance between the bottom and top terminals of the mating connector on paper tray 1. **There is continuity between the two pins.**

Y N

Replace the paper tray mating connector (PL 2.2).

Check that the paper tray mating connector and the feeder mating connector are properly aligned when the tray 1 is inserted into the feeder. **The mating connectors are properly connected when the paper tray is inserted.**

Y N

Repair or replace components as necessary.

Replace the Tray 1 Size PWB (REP 3.13). If the problem persists, replace the Tray 1 Feeder PWB (REP 3.9).

Check the resistance between the bottom and top terminals of the mating connector on the paper tray 2. **There is continuity between the two pins.**

Y N

Replace the paper tray mating connector (PL 2.2).

A B

Check that the paper tray mating connector and the feeder mating connector are properly aligned when the tray is inserted into the feeder. **The mating connectors are properly connected when the paper tray is inserted.**

Y N

Repair or replace components as necessary.

Replace the Tray 2 Size PWB (REP 11.19). If the problem persists, replace the Tray 2 Feeder PWB (REP 11.9).

The printer has two optional 550 Sheet Feeders installed.

Y N

Replace the Printer Engine Controller PWB (REP 9.3).

On the Print Engine Controller PWB, check the voltage between P/J33 pin 14 and frame ground. **The voltage is 24.0VDC.**

Y N

Remove Paper Tray 3. Check the voltage between the bottom terminal on the mating connector on the Tray 3 feeder and frame ground. **The voltage is 24.0VDC.**

Y N

Replace the Tray 3 Size PWB (REP 11.19). If the problem persists, replace the Tray 3 Feeder PWB (REP 11.9).

Check the resistance between the bottom and top terminals of the mating connector on paper tray 3. **There is continuity between the two pins.**

Y N

Replace the paper tray mating connector (PL 2.2).

Check that the paper tray mating connector and the feeder mating connector are properly aligned when the tray is inserted into the feeder. **The mating connectors are properly connected when the paper tray is inserted.**

Y N

Repair or replace components as necessary.

Replace the Tray 3 Size PWB (REP 11.19). If the problem persists, replace the Tray 3 Feeder PWB (REP 11.9).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 55 Duplex Unit Fail or Removed (E9-1)

Duplex Unit was removed while power was on.

Procedure

Switch the printer power off. Remove and reinstall the Duplex Unit. Switch the printer power on. Run a Config Sheet. **The Duplex Unit is listed on the Config Sheet.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the printer power on. On the Print Engine Controller PWB, check the voltage between P/J34 pin 9 and frame ground. **The voltage is 3.3VDC with the duplex Unit removed and 0.0VDC with the Duplex Unit installed.**

Y N

Check the wiring harnesses. If in good condition, replace the Duplex PWB (REP 12.4). If the problem persists, replace the Print Engine Controller PWB (REP 9.3).

Replace the Print Engine Controller PWB (REP 9.3).

Problem Solved.

RAP 56 Paper Jam Open Front Cover (E7)

Paper is early to the Registration Sensor, paper is late to or late off the Registration Sensor, or the Registration Sensor is actuated at power on.

Procedure

Open the printer and check for paper or other obstructions in the paper path. Remove the Duplex Assembly and check the rear entrance chute to the Paper Handler. **The printer is free of jammed paper, paper scraps, or other obstructions.**

Y N

Clear all jammed paper, paper scraps, and obstructions from the printer.

Check the Duplex Belt, Rollers, and gears. Check for contamination, wear, and obstructions. **The Duplex rollers, gears, and belt are clean and in good condition.**

Y N

Replace components or Duplex Assembly as necessary (REP 12.1).

Reinstall the Duplex Assembly. Enter diagnostics and select Test Print. Run 15 to 20 duplex test prints. **The error code reappears.**

Y N

Problem solved.

Select Component Test. Scroll to Duplex Motor Low and press Enter. Then scroll to Duplex Motor Hi and press Enter. **You can hear the Duplex Motor run at both speeds.**

Y N

Remove the Duplex Assembly then remove the Duplex Cover (REP 12.3). Disconnect P/J38 from the Duplex PWB. Measure the resistance on the disconnected plug between pin 1 and pin 2; between pin 1 and pin 3; between pin 1 and pin 4; and between pin 1 and pin 5. **All four readings are between 30 and 37 ohms.**

Y N

Replace the Duplex Motor Assembly (REP 12.8).

Replace the Duplex PWB (REP 12.4). If the problem persists, replace the Print Engine Controller PWB (REP 9.3).

Press [0] for one second to stop all tests. Scroll to Sensor Input test and press Enter. Use a small strip of paper to actuate and deactuate the Duplex Transport Sensor. **The number on the LCD increments each time you press and release the actuator.**

Y N

Replace the Duplex Sensor Assembly (REP 12.13). If the problem persists, replace the Print Engine Controller PWB (REP 9.3).

Perform RAP 32 to test the Registration Sensor. **The Registration Sensor is working correctly.**

Y N

Replace the Registration Sensor (REP 5.4).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 57 Offset Jam Open Rear Cover (E6-X)

Paper late to OCT sensor, paper late off OCT sensor, or paper on OCT sensor at power on.

Procedure

Open the printer Rear Cover and the OCT Rear Cover. Check for paper or other obstructions in the paper path. **The printer if free of jammed paper, paper scraps, or other obstructions.**

Y N

Clear all jammed paper, paper scraps, and obstructions from the printer and the OCT.

Run 15 to 20 test prints, output to OCT. **The error code reappears.**

Y N

Problem Solved

Enter Diagnostics and select Component Test. Scroll to Sensor Input test and press Enter. Open the OCT Rear Cover. Actuate and deactuate the OCT Exit Sensor Actuator. **The number on the LCD increments each time you press and release the actuator.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). On the Print Engine Controller PWB, check the voltage between P/J35 pin 7 and frame ground as you actuate and deactuate the OCT Exit Sensor Actuator. **The voltage is 3.3VDC when deactuated and 0.0VDC when actuated.**

Y N

Replace the OCT Exit Sensor (REP 10.11). If the problem persists, replace the OCT PWB (REP 10.7).

Replace the Print Engine Controller PWB (REP 9.3).

Exit Sensor Input test and scroll to OCT Motor Operation. Press Enter. **The OCT Motor runs.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Enter diagnostics and select Component Test. Scroll to OCT Motor Operation. On the Print Engine Controller PWB, check the voltage between P/J35 pin 6 and frame ground. Press Enter. **The voltage drops from 3.3VDC to 0.5VDC when the Enter Key is pressed.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Switch the printer power off. Remove the OCT from the printer (REP 10.1). Turn the OCT up side down. Disconnect P/J210 from the OCT PWB. Check the resistance between pins 1 and 4, pins 1 and 6, pins 2 and 3, and pins 2 and 5 on the disconnected plug. **All readings are 70 ± 10 ohms.**

Y N

Replace the OCT Motor (REP 10.8).

Replace the OCT PWB (REP 10.7).

Open the OCT Rear Cover. Check the OCT rollers. **The OCT Rollers are rotating smoothly.**

Y N

Repair or replace the OCT Rollers as necessary (REP 10.14/REP 10.15).

A

Switch the printer power off. Remove the OCT (REP 10.1). Open the printer rear cover and check the movement of the Exit Gate. **The Exit Gate moves freely in both directions when pressed and released.**

Y N

Repair or replace the Exit Gate as necessary (REP 6.4).

Reinstall the OCT. Each time the printers' rear cover or front cover is opened and closed with power applied, the printer performs a reset. At the completion of the reset, the Exit Gate toggles between fully open and fully closed positions. Open the printer rear cover. Switch the printer power on. Cheat the Rear Cover Interlock and watch the Exit Gate at the end of reset. Remove then replace the Rear Cover Interlock cheater. **The Exit Gate toggles at the completion of each reset.**

Y N

Replace the Direction Solenoid (REP 10.10). if the problem persists, Replace the OCT PWB (REP 10.7).

Replace the OCT PWB (REP 10.7). If the problem persists, Replace the Print Engine Controller PWB (REP 9.3).

A

RAP 58 OCT Assy Not Recognized

Procedure

Switch the printer power off. Remove and reinstall the OCT. Switch the printer power on. Run a Config Sheet. **The OCT is listed on the Config Sheet.**

Y N

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Remove the OCT from the printer. Switch the printer power on. On the Print Engine Controller PWB, check the voltage between P/J35 pin 1 and frame ground. **The voltage is 3.3VDC.**

Y N

Replace the Print Engine Controller PWB (REP 9.3).

Switch the printer power off. Properly install the OCT on the printer. Switch the printer power on. On the Print Engine Controller PWB, check the voltage between P/J35 pin 1 and frame ground. **The voltage is 0.0VDC.**

Y N

Replace the OCT PWB (REP 10.7).

Replace the Print Engine Controller PWB (REP 9.3).

Problem Solved.

RAP 59 Remove Output From Offset Bin (C5)

Error code indicates the output tray is full.

Procedure

There is a paper stack in the offset bin actuating the Stack Full Sensor.

Y N

The paper is curled.

Y N

Lift and release the Stack Full Actuator a few times. **The actuator moves freely.**

Y N

Replace Stack Full Actuator (REP 10.12) or Stack Full Sensor (REP 10.13), as necessary.

Enter diagnostics and select Component Test. Scroll to Sensor Input test. Manually actuate and deactuate the Stack Full Actuator. **The number on the LCD increments each time you lift and release the actuator (the count may have a short delay because of the sensor circuit).**

Y N

Go to RAP 60.

Replace Print Engine Controller PWB (REP 9.3).

Replace paper in paper tray with fresh dry paper. Run test prints. **The error code reappears.**

Y N

Problem solved.

Enter diagnostics and select Component Test. Scroll to Sensor Input test. Manually actuate and deactuate the Stack Full Actuator. **The number on the LCD increments each time you lift and release the actuator (the count may have a short delay because of the sensor circuit).**

Y N

Go to RAP 60.

Replace Print Engine Controller PWB (REP 9.3).

Remove the paper stack.

RAP 60 OCT Stack Full Sensor

Procedure

Enter Diagnostics and select Component Test. Scroll to Sensor Input test and press Enter. Actuate and deactuate the OCT Stack Full Sensor Actuator. **The number on the LCD increments each time you press and release the actuator.**

Y N

Visually inspect the Stack Full Sensor Actuator. **The actuator moves freely and is in good condition (not broken or damaged).**

Y N

Replace the Stack Full Actuator (REP 10.12).

Switch the printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and Left Plate (REP 1.11). Disconnect P/J35 from the Print Engine Controller PWB. Switch the printer power on. On the Print Engine Controller PWB, measure the voltage between P35 pin 2 and frame ground. **The voltage is +3.3VDC.**

Y N

On the Print Engine Controller PWB, measure the voltage between P/J28 pin 10 and frame ground. **The voltage is +3.3VDC.**

Y N

Replace the LVPS (REP 9.5).

Replace the Print Engine Controller PWB (REP 9.3).

Switch the printer power off. Reconnect P/J35 to the Print Engine Controller PWB. Switch the printer power on. On the Print Engine Controller PWB, measure the voltage between P/J35 pin 2 and frame ground. **There is +3.3VDC between P/J35 pin 2 and frame ground when the Stack Full Sensor is deactuated and 0.0VDC when actuated.**

Y N

Replace the Stack Full Sensor (REP 10.13). If the problem persists, replace the OCT PWB (REP 10.7).

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 61 OCT Offset Operation Not Performed

Procedure

Manually move the Offset Assembly from one side to the other. **The Offset Assembly moves smoothly.**

Y N

Replace the Offset Assembly (REP 10.14).

Enter Diagnostics and select Component Test. Scroll to OCT Offset Motor and press Enter [4]. **The Offset Assembly shifts left then returns right.**

Y N

Switch the printer power off. Remove the Inner Exit Chute Assembly (REP 10.6). Disconnect P/J229 from the OCT PWB. On the disconnected plug, measure the resistance between pins 1 and 3, pins 1 and 5, pins 2 and 4, and between pins 2 and 6. **The resistance is 245 to 265 ohms.**

Y N

Replace the OCT Offset Motor (REP 10.17).

Replace the OCT PWB (REP 10.7). If the problem persists, replace the Print Engine Controller PWB (REP 9.3).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 62 Envelope Feeder Not Recognized

Procedure

Switch the Printer power off. Remove and reinstall the envelope feeder. Switch the Printer power on. Run a Config Sheet. **The Envelope Feeder is listed on the Config Sheet.**

Y N

Switch the Printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the Printer power on. Check the voltage on the Print Engine Controller PWB between P/J23 Pin 4 and frame ground. **The voltage is 0.0VDC.**

Y N

Switch the Printer power off. Remove the Envelope Feeder. Check for continuity between J418 Pin 3 (Envelope Connector Assembly) and P/J23 Pin 4 on the Print Engine Controller PWB. **There is continuity between the two pins.**

Y N

Remove the Front Cover (REP 1.6) and the Left Front Cover (REP 1.7). Check for continuity between P/J 41 Pin 6 on the Connector PWB and P/J 23 Pin 4. **There is continuity between the two pins.**

Y N

Check the Connector Harness Assembly for proper connection and for defective wires. Repair or replace if necessary. If Harness is in good condition, replace the Connector PWB (REP 9.7).

Replace the Envelope Connector Assembly (REP 4.10).

Replace the Envelope Feeder PWB (REP 13.3).

Replace the Envelope Feeder PWB (REP 13.3).

Problem solved.

RAP 63 Envelope Feed Clutch

Procedure

Enter Diagnostics and select Component Test. Scroll to confirm EBF Clutch and press Enter. **You can hear the clutch energize.**

Y N

Switch Power Off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Enter Diagnostics and select Component Test. Scroll to confirm EBF Clutch. On the Print Engine Controller PWB, check voltage between P/J23 Pin 1 and frame ground. Press Enter. **The voltage pulses from 0.0VDC to 3.3VDC then returns to 0.0VDC.**

Y N

Check the voltage between P/J23 Pin 4 and frame ground. **The voltage is 0.0VDC.**

Y N

Go to RAP 62.

Replace the Print Engine Controller PWB (REP 9.3).

Remove the Envelope Feeder from the Printer. Remove the Bottom Cover (REP 13.1) and the Top Chute (REP 13.2). Disconnect P/J413 from the Envelope Feeder PWB. Measure the resistance between Pins 1 and 2 on the disconnected plug. **The resistance is 170 to 190 ohms.**

Y N

Replace the Envelope Feed Clutch (REP 13.12).

Replace the Envelope Feeder PWB (REP 13.3).

Check the Envelope Feed Belts for wear and contamination. Check for belts slipping. Repair or replace as necessary. If Belts are in good condition and not slipping replace the Envelope Feed Clutch (REP 13.12).

RAP 64 Envelope No Paper Sensor

Procedure

Enter Diagnostics and select Component Test. Scroll to Sensor Input Test and press Enter. Press and release the Envelope Feeder No Paper Sensor Actuator. **The number on the LCD increments each time you press and release the Actuator.**

Y N

Switch the Printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the Printer power on. On the Print Engine Controller PWB check the voltage between P/J23 Pin 4 and the frame ground. **The voltage is 0.0VDC.**

Y N

Go to RAP RAP 62.

Check the voltage between P/J23 Pin 3 and frame ground. **The voltage is 3.3 with the Envelope Feeder No Paper Sensor de-actuated and 0.0VDC with the sensor actuated.**

Y N

Switch the Printer power off and remove the Envelope Feeder. Check for continuity between J418 (Envelope Connector Assembly) and P/J23 Pin 3 on the Print Engine Controller PWB. **There is continuity between the pins.**

Y N

Remove the Front Cover (REP 1.6) and the Front Left Cover (REP 1.7). Check for continuity between P/J41 Pin 5 on the Connector PWB and P/J23 Pin 3 on the Print Engine Controller PWB. **There is continuity between the two pins.**

Y N

Check the Connector Harness Assembly for proper connection and for defective wires. Repair or replace if necessary. If Harness is in good condition, replace the Connector PWB (REP 9.7).

Replace the Envelope Connector Assembly (REP 4.10).

Replace the Envelope Feeder PWB (REP 13.3). If the problem persists, replace the Envelope Feeder No Paper Sensor (REP 13.10).

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 65 Load Envelope (C5)

Procedure

Enter Diagnostics and select Component Test. Scroll to Sensor Input Test and press Enter. Press and release the Envelope Feeder No Paper Sensor Actuator. **The number on the LCD increments each time you press and release the Actuator.**

Y N

Switch the Printer power off. Remove the Left Interface Cover (REP 1.1), Left Cover (REP 1.2), and the Left Plate Assembly (REP 1.11). Switch the Printer power on. On the Print Engine Controller PWB check the voltage between P/J23 Pin 4 and the frame ground. **The voltage is 0.0VDC.**

Y N

Go to RAP RAP 62.

Check the voltage between P/J23 Pin 3 and frame ground. **The voltage is 3.3 with the Envelope Feeder No Paper Sensor de-actuated and 0.0VDC with the sensor actuated.**

Y N

Switch the Printer power off and remove the Envelope Feeder. Check for continuity between J418 (Envelope Connector Assembly) and P/J23 Pin 3 on the Print Engine Controller PWB. **There is continuity between the pins.**

Y N

Remove the Front Cover (REP 1.6) and the Front Left Cover (REP 1.7). Check for continuity between P/J41 Pin 5 on the Connector PWB and P/J23 Pin 3 on the Print Engine Controller PWB. **There is continuity between the two pins.**

Y N

Check the Connector Harness Assembly for proper connection and for defective wires. Repair or replace if necessary. If Harness is in good condition, replace the Connector PWB (REP 9.7).

Replace the Envelope Connector Assembly (REP 4.10).

Replace the Envelope Feeder PWB (REP 13.3). If the problem persists, replace the Envelope Feeder No Paper Sensor (REP 13.10).

Replace the Print Engine Controller PWB (REP 9.3).

Replace the Print Engine Controller PWB (REP 9.3).

RAP 66 Envelope Feeder Jam (E2)

Envelopes early of late to the Registration Sensor.

Procedure

Remove all envelopes. Check the Envelope Feeder and Printer for contamination, paper scraps, or other obstructions. **The printer and Envelope Feeder is clean and free of obstructions.**

Y N

Clean feeder and remove all obstructions.

Check the Feed Belts. Check for dirt or contamination on the top side and the under side of the belt. **Both sides of the belt are clean.**

Y N

Replace the Feed Belts (REP 13.17).

Enter Diagnostics and select Component Test. Scroll to Confirm EBF Clutch and press Enter. **You can hear the clutch energize.**

Y N

Go to RAP 63.

Scroll to Main Motor Operation and press Enter. Scroll to Confirm EBF Clutch. Watch the Feed Belts and Feed Rollers and press Enter. **The Feed Belts and Feed Rollers all rotate.**

Y N

Ensure the Envelope Feeder is installed properly and is contacting the printer drive gear. **The Envelope Feeder is installed correctly.**

Y N

Reinstall the Envelope Feeder correctly.

Remove the Envelope Feeder and check the feeder drive gears. **All gears are in good condition and operating properly.**

Y N

Replace the gears as necessary (PL 12.2).

Replace the Envelope Feed Clutch (REP 13.12). If the problem persists, Replace the Envelope Feeder PWB (REP 13.3).

Perform RAP 32 to check the Registration Sensor. **The Registration Sensor is operating correctly.**

Y N

Replace the Registration Sensor (REP 5.4).

Replace the Print Engine Controller PWB (REP 9.3).

3 Image Quality Repair Analysis Procedures

Introduction

This section contains image quality repair procedures to assist in correcting image quality defects. These procedures provide defect samples, definitions and specifications to help identify the type of defect that exists, the test pattern to use, and actions required to correct the defects.

The voltage tolerances for this section are listed in Table 1 under the topic Measurements.

Throughout these procedures, the term “vertical” refers to the process direction (the direction paper travels through the printer); the term “horizontal” refers to the scanning direction (the direction the laser beam scans across the page).

Cleaning procedures should always be performed before beginning any Print Quality Repair procedure.

Be sure that the paper meets printer specifications. Changing the paper, or using paper from a previously unopened ream, will resolve many print quality issues.

After resolving an image quality problem, return to Image Quality Checkout to verify that no other image quality defects exist.

Sample reproductions of the various image quality patterns are included under Image Quality Specifications.

Use the Image Quality RAPS to further diagnose machine problems.

In the Y/N (Yes/No) steps of the RAPs, a Yes response will lead you to the next step. A No response will indicate a corrective action, or will direct you to another step. When the indicated corrective action has been completed, go to Section 1 and restart the Initial Actions to verify that the problem has been corrected.

Measurements

Power and signal grounds are connected to frame ground, therefore all circuit troubleshooting can be performed using the metal frame (chassis) as the grounding point. If more information is needed to locate connectors or test points, refer to section 7.

Unless specified otherwise, the following voltage tolerances are used within this section: Table 1

Table 1 Voltage Measurements

Stated	Measured
+ 5.0 VDC	+ 4.8 VDC to + 5.2 VDC
+ 3.3 VDC	+ 3.0 VDC to + 3.6 VDC
+ 24.0 VDC	+ 21.6 VDC to + 26.4 VDC
0.0 VDC	less than + 0.5 VDC

Image Quality Defect Definitions

The System Controller Test Print (Figure 1) is used to evaluate each of the print quality parameters. Each area of the test pattern is used for a print quality parameter. The areas and the print quality parameters are listed in Image Quality Checkout.

Table 1 Image Quality Defect Definitions

Defect Definitions	Go To:
LIGHT PRINTS: The overall image density is too light.	IQ RAP 1
BLANK PRINTS: Prints with no visible image.	IQ RAP 2
SPOTS: There are spots of toner on the page.	IQ RAP 3
HORIZONTAL DELETIONS: There are areas of the image that are extremely light or missing entirely. These areas run horizontally across the page in the direction of scanning.	IQ RAP 4
VERTICAL DELETIONS: There are areas of the image that are extremely light or missing entirely. These areas run vertically along the page in the direction of paper movement.	IQ RAP 5
SPOT DELETIONS: Solid areas are marked with irregular white areas.	IQ RAP 6
VERTICAL STREAKS: Extraneous dark lines/bands in the process direction.	IQ RAP 7
HORIZONTAL STREAKS: Extraneous dark lines/bands in the direction of scan.	IQ RAP 8
RESIDUAL IMAGES: The image from a previous print, which was not removed during the cleaning process, has been developed on the current print.	IQ RAP 9
BLACK PRINTS: The print is completely covered with toner and has no visible image.	IQ RAP 10
BACKGROUND: Uniform toner contamination in non image areas. Refer to the Background specification.	IQ RAP 11
UNEVEN DENSITY: The text/line darkness and solid area density image varies across the print.	IQ RAP 12
SKEWED IMAGE: Angular displacement of the image from its intended position on the print. Refer to the specification.	IQ RAP 13
DAMAGED PRINTS: Creases, wrinkles, excessive curl, cuts, folds or embossed marks.	IQ RAP 14
REGISTRATION (lead edge to trail edge): Displacement of the image, in the process direction, from its intended position on the print. (inboard to outboard): Displacement of the image, in the direction of scan, from its intended position on the print.	IQ RAP 15
SKIPS / SMEARS: Skip-Loss or stretching of the image in bands across the process direction. Smear-The distortion of the image in bands across the process direction that cause it to appear to be blurred or compressed.	IQ RAP 16
UNFUSED IMAGE: Part of or all of the image is unfused. Refer to the specification.	IQ RAP 17
RESOLUTION: At 600 DPI, the two pixel lines and halftone patches cannot be reproduced clearly on the print.	IQ RAP 18

Image Quality Checkout

The System Controller Test Print is used to evaluate and ensure that the printed image meets the printer specifications.

Use new paper, whenever possible, to check the image quality of prints. Make five (5) prints of the System Controller Test Print (Figure 1). Discard the first two prints and retain the remaining prints for image quality analysis.

The Image quality Checkout is used to evaluate the following:

1. Resolution (2 places) (Figure 1)
2. Skips and Smears (4 places) (Figure 1)
3. Registration (1 place) (Figure 1)
4. Resolution and Uniformity (2 places) (Figure 1)
5. Solid Area Density (3 places) (Figure 1)
6. Half Tone Resolution (2 places). (Figure 1)

Go to Solid Area Density.

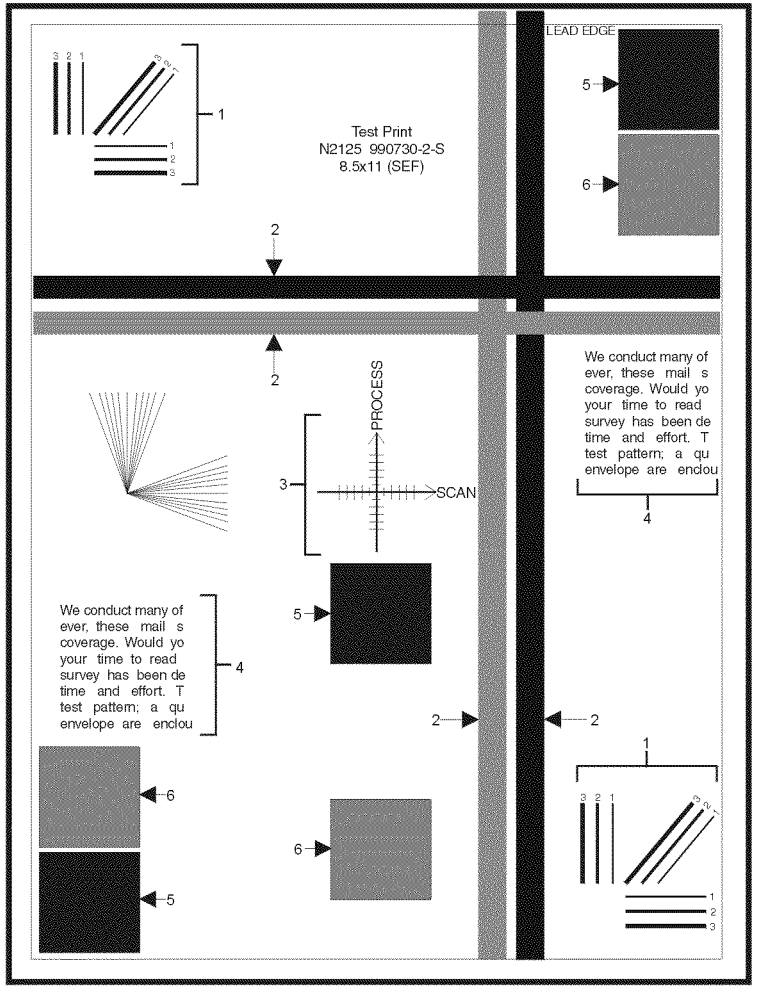


Figure 1 System Controller Test Print.

Solid Area Density

Procedure

Ensure the printer is set for 600 dpi. Compare the solid areas on the System Controller Test Patterns with the Output Reference document (82P520) (Figure 1). **The solid areas on the print are at the 1.20 density square on the scale or higher, and all the solid areas on any print differ in density less than one density square.**

Y N

The solid area density is uniform.

Y N

Go to IQ RAP 12 Uneven Density.

The prints are too faint.

Y N

The prints are black.

Y N

Go to IQ RAP 11 Background.

Go to IQ RAP 10 Black Prints

Go to IQ RAP 1 Light Prints

The Solid Area Density is within specifications. Go to Background.

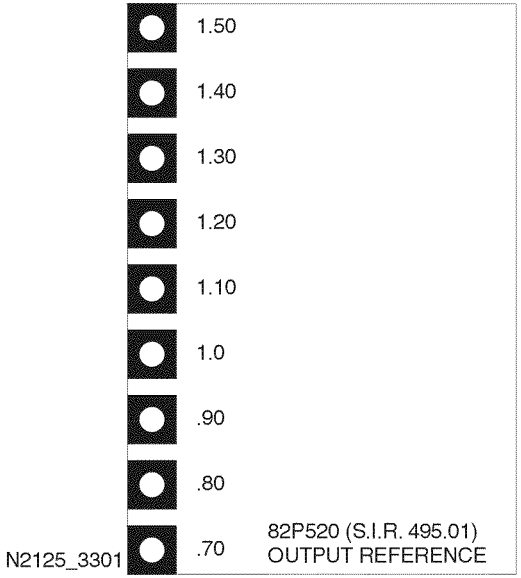


Figure 1 Output Reference Document

Background

Procedure

Compare the Test Prints with the Visual Scale (82P284). The worst background area on any print should be at, or below, area 3 on the rating guide (Figure 1). **The print is at the area 3 or below.**

Y N

The background is uniform.

Y N

Go to IQ RAP 12 Uneven Density.

Go to IQ RAP 11 Background.

The printed test patterns meet the Background specification. Go to Deletions.

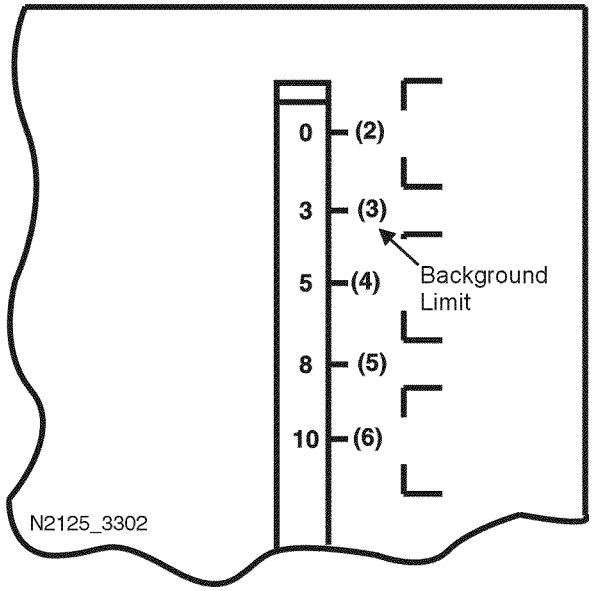


Figure 1 Rating Guide

Deletions (Line, Band, Spots)

Procedure

Inspect Test Prints for the presence of deletions (missing image). There should be no deletions with a diameter larger than 0.5 mm visible on test prints (Figure 1). **There are deletions on the test prints.**

Y N

Go to Fusing.

There are vertical (in direction of paper movement) Line/Band deletions present.

Y N

There are Horizontal (in direction of scanning) Line/Band Deletions present.

Y N

There are Spot Deletions present.

Y N

Go to Fusing.

Go to IQ RAP 6 Spot Deletions.

Go to IQ RAP 4 Horizontal Deletions.

Go to IQ RAP 5 Vertical Deletions.

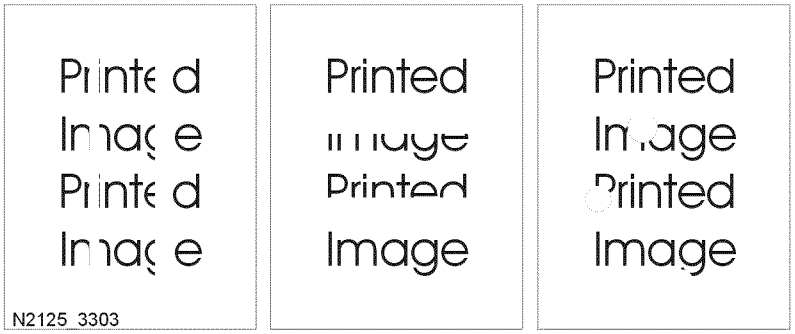


Figure 1 Line, Band, or Spot Deletions.

Fusing

Procedure

NOTE: *The operating environment of the printer is from 41° F (5° Celsius) at 15% relative humidity to 95° F (35° Celsius) at 85% relative humidity. The fusing performance of the printer will vary according to the environment.*

- A cold environment will affect the warm-up time.
- The weight (lb. / gsm) of the paper or transparency will affect the fusing of prints.
- High humidity will have an adverse affect on the fusing of prints.

Check the fusing quality of the image of a System Controller Test Print (Figure 1). Rub the image three times with a soft cloth or tissue. The image should not lift off of the surface of the print. **The fusing quality of the image meets the specification.**

Y N

Go to IQ RAP 17 Unfused Image.

Go to Resolution.

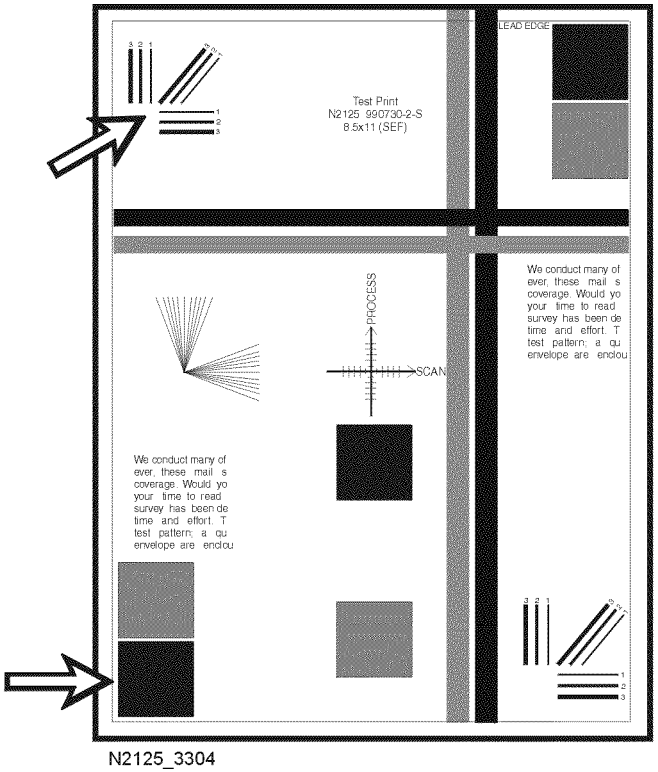


Figure 1 Fusing Quality.

Resolution

Procedure

Refer to Figure 1. Observe the three image areas on several System Controller Test Patterns. Check the resolution of the images in each of the areas:

Arrow 1

The two pixel vertical, horizontal and diagonal lines should be clear and continuous. The diagonal lines might appear to be narrower than the others.

Arrow 2

The text paragraphs should be roughly equal in density.

Arrow 3

The half-tone patches adjacent to the solid blocks in the corners should be uniform in appearance. **The three checks (arrows 1, 2, & 3) are within specification.**

Y N

Go to IQ RAP 18 Resolution.

The printed test patterns meet the Resolution specification. Go to the Registration (Side to Side).

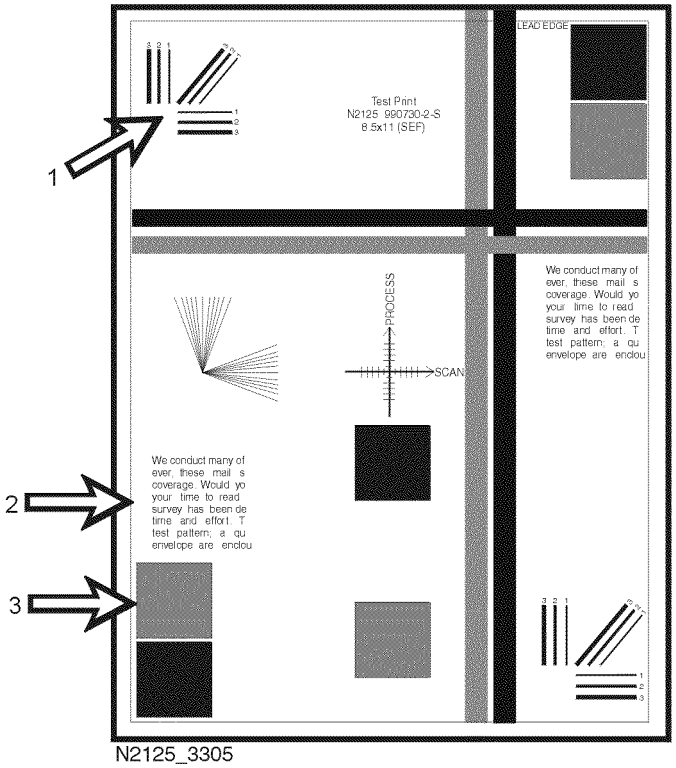


Figure 1 Resolution.

Registration (Side to Side)

Procedure

Measure the registration on two consecutive System Controller Test Patterns. Fold the paper in half (side edge to side edge). Observe the fold line of the paper with reference to the cross hairs of the target, Figure 1. **The fold is within +/- 2.0 mm of the target cross hairs (each line on the target is 1 mm).**

Y N

Go to IQ RAP 15 Registration.

The test prints meet the side to side registration specification. Go to Registration (Lead Edge to Trail Edge).

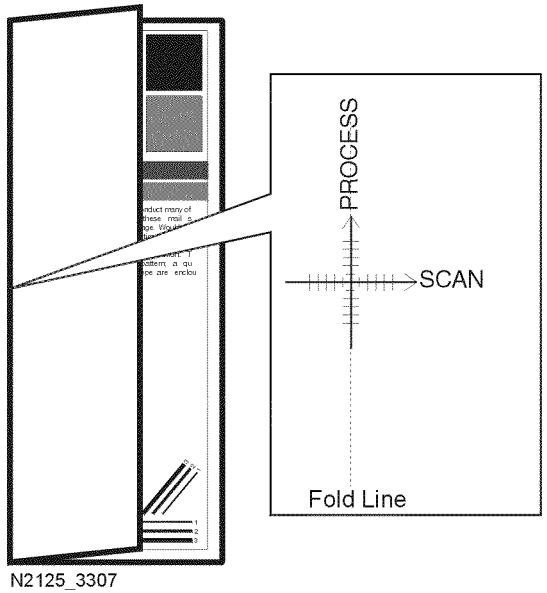


Figure 1 Registration (Side to Side).

Registration (Lead Edge to Trail Edge)

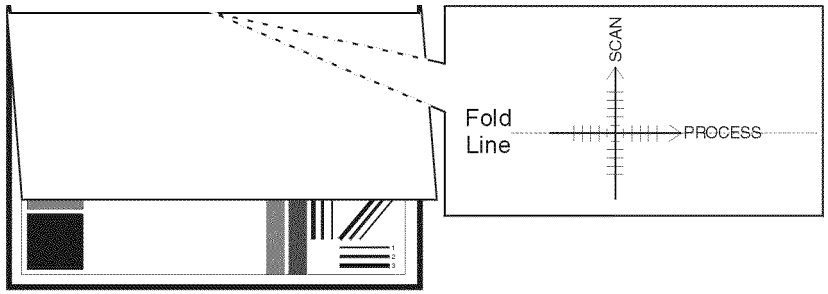
Procedure

Measure the registration on two consecutive System Controller Test Patterns. Fold the paper in half (lead edge to Trail Edge). Observe the fold line of the paper with reference to the cross hairs of the target. **The fold is within +/- 2.0 mm of the target cross hairs (each line on the target is 1 mm) (Figure 1).**

Y N

Go to IQ RAP 15 Registration.

The printed test patterns meet the lead edge to trail edge registration specification. Go to Skew.



N2125_3306

Figure 1 Registration (Lead Edge to Trail Edge).

Skew

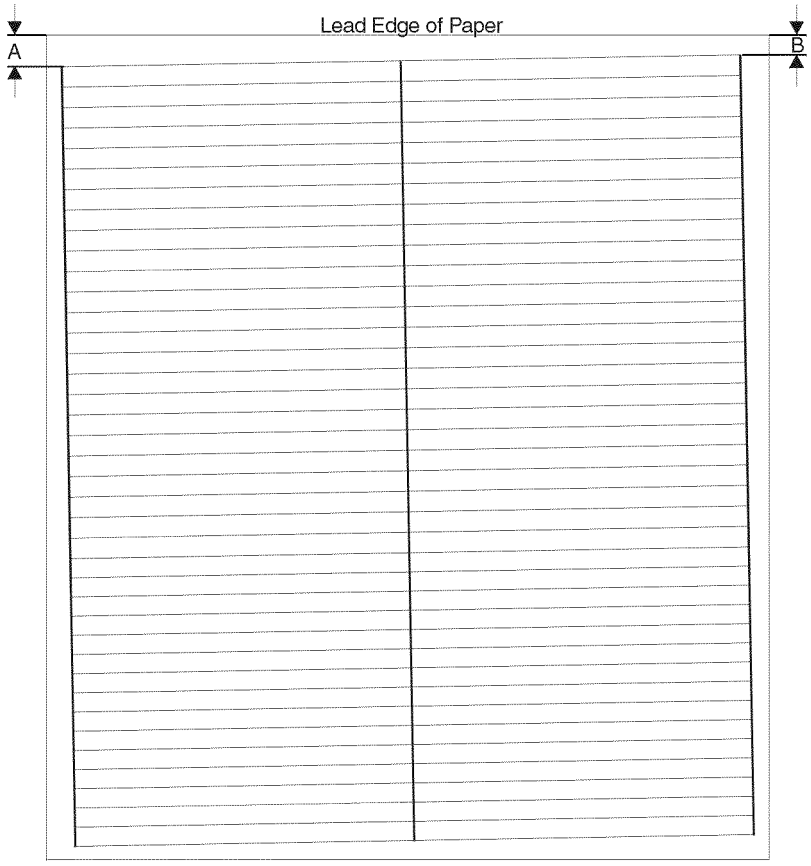
Procedure

Enter Diagnostics and select Test Print. Scroll to Print Pattern and press Enter [4]. Observe the test pattern. Measure the dimensions ‘A’ and ‘B’ (Figure 1) on two consecutive test patterns. The difference between ‘A’ and ‘B’ should be 1.5 mm or less. **The skew on the test patterns meets the specification.**

Y N

Go to IQ RAP 13 Skewed Image.

The printed test patterns meet the Skew specification. Go to the Skips and Smears.



N2125_3308

Figure 1 Printer Engine Controller Test Pattern.

Skips / Smears

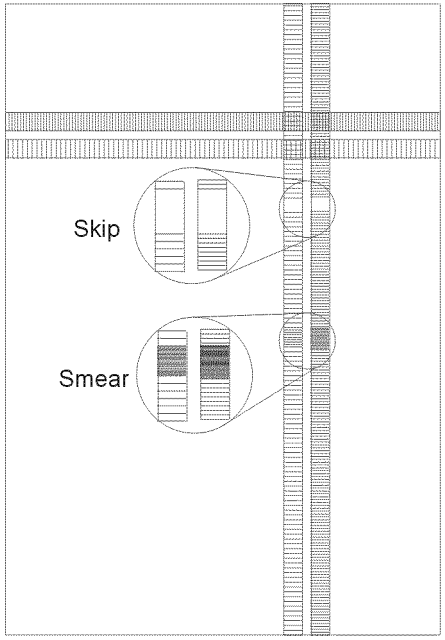
Procedure

Enter Diagnostics and select Test Print. Scroll to Print Pattern and press Enter [4]. Inspect the ladder chart test pattern. The pattern should be free from skips and smears (Figure 1). **The test prints are free from skips and smears.**

Y N

Go to IQ RAP 16 Skips/Smears.

Go to the Spots checkout



N2125_3309

Figure 1 Skips / Smears.

Spots

Procedure

From the menu mode, run a Config Sheet. Inspect the print for spots (Figure 1). Within a 208 x 95 mm square:

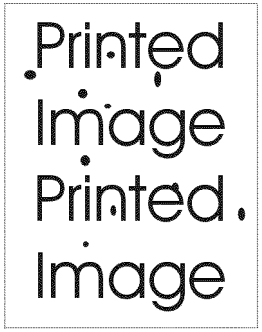
- There should be no spots larger than or equal to 0.5 mm visible on the prints.
- There should be no more than 1 spot measuring between 0.4 mm and 0.5 mm visible on the print.
- There should be no more than 16 spots measuring between 0.25 mm and 0.4 mm visible on the print.
- Any spot measuring less than 0.25 mm is acceptable.

The prints are free of spots or the spots that are visible fall within the acceptable range.

Y N

Go to IQ RAP 3 Spots.

Go to Other Print Defects.



N2125_3310

Figure 1 Spots.

Other Print Defects

Procedure

Inspect the Test Patterns for other Print Defects. **Test Prints are free of defects.**

Y N

There are dark streaks present on the Test Prints.

Y N

There is a residual image (ghosts) on the Test Prints.

Y N

There is paper damage: wrinkles, creases, tears, etc.

Y N

The printer meets specifications. Go to Initial Actions

Go to IQ RAP 14 Damaged Prints.

Go to IQ RAP 9 Residual Image.

Go to IQ RAP 7 / IQ RAP 8 Streaks.

Go to Final Actions

IQ RAP 1 Light (Undertoned) Prints

The overall image density is too light (Figure 1).

Figure 1 Light Prints

Initial Actions

- Inspect the printer paper path for items such as staples, paper clips and paper scraps.
- Check installation of the Print Cartridge.
- Check that the Print Cartridge ground contact points are clean.
- Ensure there are no obstructions in the Laser path.

Procedure

Load fresh, dry paper. Run a test print. **The image density meets specifications.**

Y N

Install a new Print Cartridge. Run a test print. **The image density meets specifications.**

Y N

Remove the Print Cartridge. Inspect the Metal Grounding Contacts on the Print Cartridge Side Guide. **The Metal Grounding Contacts are intact and free of contamination.**

Y N

Reform or clean the Metal Grounding Contacts, so they make better contact with the drum shaft, or replace the Print Cartridge Side Guide (REP 7.5).

Check for the continuity between the Metal Grounding Contacts and the printer body frame. **There is continuity between the Metal Grounding Contacts and the printer frame.**

Y N

Replace the Print Cartridge Side Guide (REP 7.5).

Inspect Laser beam path between the Laser Assembly and the Drum for obstructions. **The laser beam path is free of obstructions.**

A B

A B

Y N

Clean the Laser window and remove any obstructions from the laser beam path.

The BTR is intact and is free of contamination.

Y N

Replace the BTR (REP 7.1).

Generate a Test Print and switch OFF the printer power halfway through the print cycle. Carefully remove the Print Cartridge and inspect the toner image on the drum just before the transfer area (BTR). **The image on the drum is completely developed with sharp, black, easily read areas.**

Y N

Go to (RAP 43)

Inspect the toner image on the drum immediately after the transfer area (BTR). **The toner image on the drum is transferred completely to the paper.**

Y N

Go to (RAP 43)

Replace in order until the problem is solved: BTR Assembly (REP 7.1), Fuser Assembly (REP 6.2), HVPS PWB (REP 9.6), Laser Assembly (REP 7.4), LVPS Assembly (REP 9.5), Print Cartridge Side Guide (REP 7.5), Print Engine Controller PWB (REP 9.3), Chute Transport Assembly (REP 6.1).

Go to RAP 23.

Problem Solved.

IQ RAP 2 Blank Prints

No visible image anywhere on the output print (Figure 1).

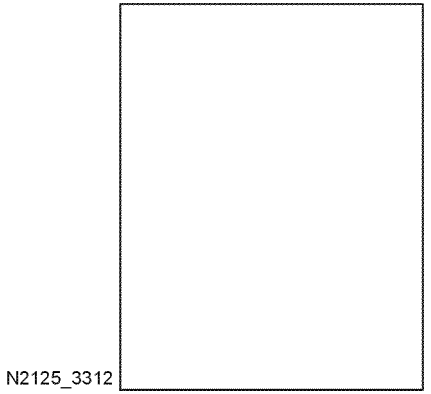


Figure 1 Blank Prints

Initial Actions

- Inspect the printer paper path for items such as staples, paper clips and paper scraps.
- Check installation of the Print Cartridge.
- Check that the Print Cartridge ground contact points are clean.
- Ensure there are no obstructions in the Laser path.
- Ensure the blank prints are not the result of multisheet feeds.

Procedure

Enter Diagnostics and select Test Print. Scroll to Print Pattern and press Enter [4]. Run five test prints. **The test prints are blank.**

Y N

Exit diagnostics and enter the Menu Mode. Print a Config Sheet. **The prints are blank.**

Y N

The problem appears to be with the host computer or the cables. If the problems persist, replace the System Controller PWB (REP 9.2).

Remove and reseat the System Controller PWB. If the problems persist, replace the System Controller PWB (REP 9.2).

Install a new Print Cartridge. Run a test print. **There is a normal image on the paper.**

Y N

Remove the Print Cartridge. Inspect the Metal Grounding Contacts on the Print Cartridge Side Guide. **The Metal Grounding Contacts are intact and is free of contamination.**

Y N

Reform or clean the Metal Grounding Contacts, so they make better contact with the drum shaft, or replace the Print Cartridge Side Guide (REP 7.5).

A B

A B

Check for continuity between the Metal Grounding Contacts and the printer frame. **There is continuity between the Grounding Contacts and the printer frame.**

Y N

Replace the Print Cartridge Side Guide (REP 7.5).

The BTR is intact and is free of contamination.

Y N

Replace the BTR Assembly (REP 7.1).

Generate a Test Print and switch OFF the printer power halfway through the print cycle. Carefully remove the Print Cartridge and inspect the toner image on the drum just before the transfer area (BTR). **The image on the drum is completely developed; with sharp, black, easily read areas.**

Y N

Go to RAP 43.

Replace in order until the problem is solved: HVPS PWB (REP 9.6), Laser Assembly (REP 7.4), BTR Assembly (REP 7.1), Print Engine Controller PWB (REP 9.3), LVPS PWB (REP 9.5), Print Cartridge Side Guide (REP 7.5).

Problem solved.

IQ RAP 3 Spots

There are spots of toner randomly scattered on the page (Figure 1).

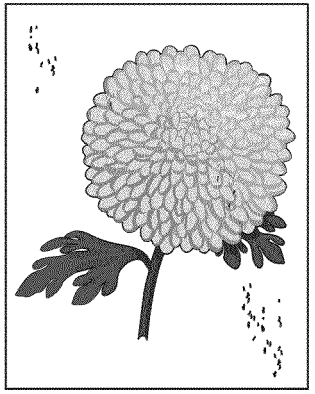


Figure 1 Spots

Initial Actions

- Check that the paper supply is clean, dry and fresh (recycled paper may have spots).
- Ensure there are no obstructions in the Laser path.
- Inspect the printer paper path for items such as staples, paper clips and paper scraps.
- Check installation of the Print Cartridge.
- Check that the Print Cartridge ground contact points are clean.
- Check that rollers and other components in the paper path are clean and unobstructed.

Procedure

Install a new Print Cartridge. Run a Test Print. **The spots are gone.**

Y N

Inspect the BTR Assembly for contamination and wear. **The BTR is free of contamination and wear.**

Y N

Replace the BTR Assembly (REP 7.1).

Generate a Test Print and switch OFF the printer power halfway through the print cycle. Carefully remove the Print Cartridge and inspect the toner image on the drum just before the transfer area (BTR). **The image on the drum is completely developed; with sharp, black easily read areas and no spots.**

Y N

Go to RAP 43.

A B

A B

WARNING

If the printer has been switched on, the Fuser will be hot.

Open the Rear Cover. Remove the Fuser Assembly. Rotate the fuser idler gear manually and inspect the Heat Roll. Open fuser jam access cover. Rotate the fuser idler gear manually and inspect the Pressure Roll. **The Heat Roll and the Pressure Roll are free of scratches and contamination.**

Y N

Replace the Fuser Assembly (REP 6.2).

Replace the following, in order, until the defective component is found: BTR Assembly (REP 7.1), Fuser Assembly (REP 6.2), Chute Transport Assembly (REP 6.1), HVPS PWB (REP 9.6), Laser Assembly (REP 7.4), Print Engine Controller PWB (REP 9.3)

Problem solved.

IQ RAP 4 Horizontal Deletions

A deletion is an area of the print where the image is missing or extremely light. Horizontal deletions extend across the page (Figure 1).

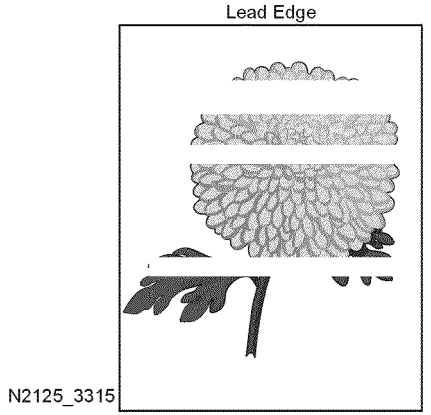


Figure 1 Horizontal Deletions

Initial Actions

- Check that the paper supply is dry and fresh.
- Inspect the printer paper path for items such as staples, paper clips and paper scraps.
- Check installation of the Print Cartridge.
- Check that the Print Cartridge ground contact points are clean.
- Check that rollers and other components in the paper path are clean and unobstructed.

Procedure

Enter Diagnostics and select Test Print. Scroll to Print Pattern and press Enter [4]. Run five test prints. **The test prints have horizontal deletions.**

Y N

Exit diagnostics and enter the Menu Mode. Print a Config Sheet. **The prints have horizontal deletions.**

Y N

The problem appears to be with the host computer or the cables. If the problems persist, replace the System Controller PWB (REP 9.2).

Remove and reseat the System Controller PWB. If the problems persist, replace the System Controller PWB (REP 9.2).

Load fresh, dry paper. Run a test print. **The problem is still present.**

Y N

Problem solved.

Install a new Print Cartridge. **The problem is still present.**

Y N

Problem solved.

Inspect the BTR Assembly for contamination and wear. **The BTR is free of contamination and wear.**

Y N

Replace the BTR Assembly (REP 7.1).

Generate a test print and switch OFF the printer power halfway through the print cycle. Carefully remove the Print Cartridge and inspect the toner image on the drum just before the transfer area (BTR). **The image on the drum is completely developed, with sharp, black, easily read areas and no horizontal deletions.**

Y N

Go to RAP 43.

Inspect the toner image on the drum immediately after the transfer area (BTR). **The toner image on the drum was transferred to the paper.**

Y N

Go to RAP 43.

WARNING

If the printer has been switched on, the Fuser will be hot.

Warning: the Fuser may be hot. Open the Rear Cover and remove the Fuser Assembly. Rotate the fuser idler gear manually and inspect the Heat Roll. Open the fuser jam access cover. Rotate the fuser idler gear manually and inspect the Pressure Roll. **The Heat Roll and the Pressure Roll are free of scratches and contamination.**

Y N

Replace the Fuser Assembly (REP 6.2).

Replace in order until the problem is solved: HVPS PWB (REP 9.6), Print Cartridge Side Guide (REP 7.5), BTR Assembly (REP 7.1), Chute Transport Assembly (REP 6.1), Laser Assembly (REP 7.4), Print Engine Controller PWB (REP 9.3), Fuser Assembly (REP 6.2), MBF Chute Assembly (REP 4.1), Registration Clutch (REP 5.5), Turn Roll Assembly (REP 11.8).

IQ RAP 5 Vertical Deletions

A deletion is an area of the print where the image is missing or extremely light. Vertical band deletions are deletions which extend down the page (Figure 1).

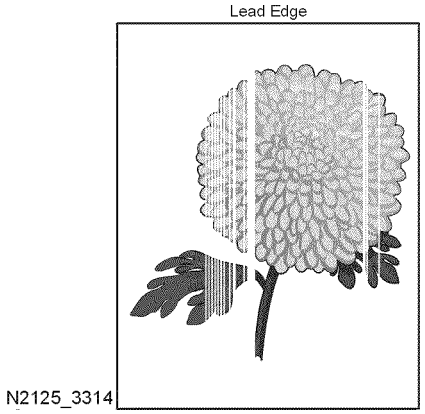


Figure 1 Vertical Deletions

Initial Actions

- Check that the paper supply is dry and fresh.
- Inspect the printer paper path for items such as staples, paper clips and paper scraps.
- Check installation of the Print Cartridge.
- Check that the Print Cartridge ground contact points are clean.
- Ensure there are no obstructions in the Laser path.
- Check that rollers and other components in the paper path are clean and unobstructed.

Procedure

Load fresh, dry paper. Run a test print. **The problem is still present.**

Y N

Problem solved.

Install a new Print Cartridge. Run a test print. **The problem is still present.**

Y N

Problem solved.

Inspect the laser beam path between the Laser Assembly and the Drum. **The laser beam path is free of obstructions.**

Y N

Remove any obstructions from the laser beam path.

Inspect the paper path, between feed and exit, for contamination or obstructions. **The paper path is free of obstructions.**

Y N

Remove obstructions or contamination from the paper path.

A

A

Inspect the BTR Assembly for contamination and wear. **The BTR is free of contamination and wear.**

Y N

Replace the BTR Assembly (REP 7.1).

WARNING

If the printer has been switched on, the Fuser will be hot.

Open the Rear Cover and remove the Fuser Assembly. Rotate the fuser idler gear manually and inspect the Heat Roll. Open the fuser jam access cover. Rotate the fuser idler gear manually and inspect the Pressure Roll. **The Heat Roll and the Pressure Roll are free of scratches and contamination.**

Y N

Replace the Fuser Assembly (REP 6.2).

Replace in order until the problem is solved: BTR Assembly (REP 7.1), Laser Assembly (REP 7.4), Fuser Assembly (REP 6.2), Print Engine Controller PWB (REP 9.3).

IQ RAP 6 Spot Deletions

Solid areas are marked with irregular white areas.

Figure 1 Spot Deletions

Initial Actions

- Check that the paper supply is dry and fresh.
- Inspect the printer paper path for items such as staples, paper clips and paper scraps.
- Check installation of the Print Cartridge.
- Check that the Print Cartridge ground contact points are clean.

Procedure

Load fresh, dry paper. Run a test print. **The problem is still present.**

Y N

Problem solved.

Install a new Print Cartridge. Run a test print. **The problem is still present.**

Y N

Problem solved.

Inspect the toner image on the drum immediately after the transfer area (BTR). **The toner image on the drum transferred to the paper.**

Y N

Replace the BTR Assembly (REP 7.1).

WARNING

If the printer has been switched on, the Fuser will be hot.

Open the Rear Cover and remove the Fuser Assembly. Rotate the fuser idler gear manually and inspect the Heat Roll. Open the fuser jam access cover. Rotate the fuser idler gear manually and inspect the Pressure Roll. **The Heat Roll and the Pressure Roll are free of scratches and contamination.**

Y N

Replace the Fuser Assembly (REP 6.2).

Replace the following, in order, until the defective component is found: BTR Assembly (REP 7.1), Chute Transport Assembly (REP 6.1).

IQ RAP 7 Vertical Streaks

Extraneous dark lines/bands in the process direction (in the direction of paper travel) (Figure 1).

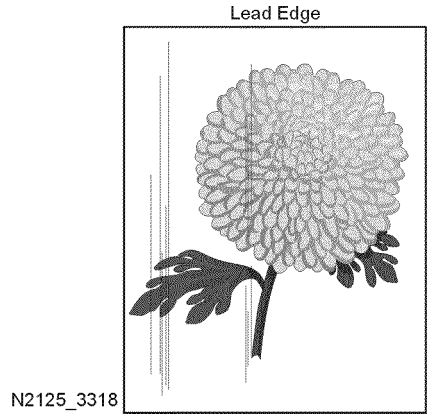


Figure 1 Vertical Streaks

Initial Actions

- Check that the paper supply is dry and fresh.
- Inspect the printer paper path for items such as staples, paper clips and paper scraps.
- Check installation of the Print Cartridge.
- Check that the Print Cartridge ground contact points are clean.
- Check that the paper is within specifications.
- Inspect the paper path, between feed and exit, for contamination or obstructions.

Procedure

Enter Diagnostics and select Test Print. Scroll to Print Pattern and press Enter [4]. Run five test prints. **The test prints have vertical streaks.**

Y N

Exit diagnostics and enter the Menu Mode. Print a Config Sheet. **The prints have vertical streaks.**

Y N

The problem appears to be with the host computer or the cables. If the problems persist, replace the System Controller PWB (REP 9.2).

Remove and reseat the System Controller PWB. If the problems persist, replace the System Controller PWB (REP 9.2).

Install a new Print Cartridge. Run a Test Print. **The vertical streaks are gone.**

Y N

Inspect the laser beam path between the Laser Assembly and the Drum. **The laser beam path is free of obstructions.**

A

A

Y N

Remove any obstructions from the laser beam path.

Inspect the BTR Assembly for contamination and wear. **The BTR is free of contamination and wear.**

Y N

Replace the BTR Assembly (REP 7.1).

WARNING

If the printer has been switched on, the Fuser will be hot.

Open the Rear Cover. Remove the Fuser Assembly. Rotate the fuser idler gear manually and inspect the Heat Roll. Open the fuser jam access cover. Rotate the fuser idler gear manually and inspect the Pressure Roll. **The Heat Roll and the Pressure Roll are free of scratches and contamination.**

Y N

Replace the Fuser Assembly (REP 6.2).

Go to RAP 44

Problem solved.

IQ RAP 8 Horizontal Streaks

There are black lines running horizontally across the page (at a right angle to the direction of paper travel) (Figure 1).

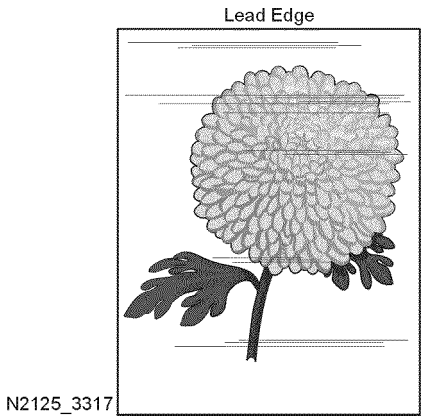


Figure 1 Horizontal Streaks

Initial Actions

- Check that the paper supply is dry and fresh.
- Inspect the printer paper path for items such as staples, paper clips and paper scraps.
- Check installation of the Print Cartridge.
- Check that the Print Cartridge ground contact points are clean.

Procedure

Enter Diagnostics and select Test Print. Scroll to Print Pattern and press Enter [4]. Run five test prints. **The test prints have horizontal streaks.**

Y N

Exit diagnostics and enter the Menu Mode. Print a Config Sheet. **The prints have horizontal streaks.**

Y N

The problem appears to be with the host computer or the cables. If the problems persist, replace the System Controller PWB (REP 9.2).

Remove and reseat the System Controller PWB. If the problems persist, replace the System Controller PWB (REP 9.2).

Install a new Print Cartridge. Run a test print. **The horizontal streaks are gone.**

Y N

Remove the Print Cartridge. Inspect the Metal Grounding Contacts on the Print Cartridge Side Guide. **The Metal Grounding Contacts are intact and is free of contamination.**

Y N

Reform or clean the Metal Grounding Contacts, so it makes better contact with the drum shaft, or replace the Print Cartridge Side Guide (REP 7.5).

A B

A B

Check for the continuity between the Metal Grounding Contacts and the printer body frame. **There is continuity between the Grounding Contacts and the Printer Frame.**

Y N

Replace the Print Cartridge Side Guide (REP 7.5).

Inspect the BTR Assembly for contamination and wear. **The BTR is free of contamination and wear.**

Y N

Replace the BTR Assembly (REP 7.1).

Generate a Test Print and switch OFF the printer power halfway through print cycle. Carefully remove the Print Cartridge and inspect the toner image on the Drum just before the transfer area (BTR). **The image on the Drum is developed; with sharp, black, easily read areas and no horizontal streaks.**

Y N

Go to RAP 43.

Inspect the toner image on the Drum immediately after the transfer area (BTR). **The toner image on the Drum was transferred to the paper along with any horizontal streaks.**

Y N

Replace the BTR Assembly (REP 7.1).

Open the Rear Cover. Remove the Fuser Assembly. Rotate the fuser idler gear manually and inspect the Heat Roll. Open the fuser jam access cover. Rotate the fuser idler gear manually and inspect the Pressure Roll. **The Heat Roll and the Pressure Roll are free of scratches and contamination.**

Y N

Replace the Fuser Assembly (REP 6.2).

Go to RAP 44.

Problem solved.

IQ RAP 9 Residual Image

The image from a previous print, which was not removed during the cleaning process, has been developed on the current print.

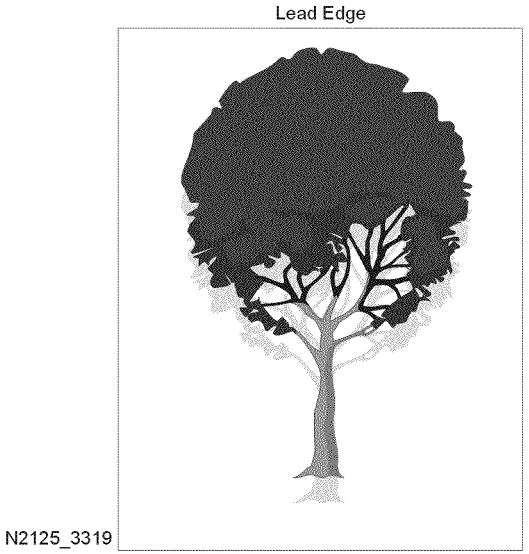


Figure 1 Residual Image

Initial Actions

- Inspect the printer paper path for items such as staples, paper clips and paper scraps.
- Check installation of the Print Cartridge.
- Check that the Print Cartridge ground contact points are clean.
- Verify the fuser temperature (NVM).

Procedure

Replace paper with fresh, dry paper. Run a test print. **Residual images still appear.**

Y N

Problem solved.

Install a new Print Cartridge. Run a test print. **The residual images still appear.**

Y N

Problem solved.

Inspect the BTR Assembly for contamination and wear. **The BTR is free of contamination and wear.**

Y N

Replace the BTR Assembly (REP 7.1).

A

A

WARNING

If the printer has been switched on, the Fuser will be hot.

Open the Rear Cover. Remove the Fuser Assembly. Rotate the fuser idler gear manually and inspect the Heat Roll. Open the fuser jam access cover. Rotate the fuser idler gear manually and inspect the Pressure Roll. **The Heat Roll and the Pressure Roll are free of scratches and contamination.**

Y N

Clean or replace the Fuser Assembly (REP 6.2).

Replace the following, in order, until the defective component is found: BTR Assembly (REP 7.1), Fuser Assembly (REP 6.2), HVPS PWB (REP 9.6), Print Cartridge Side Guide (REP 7.5).

IQ RAP 10 Black Prints

A totally black output print. There is toner on the paper with no visible image.

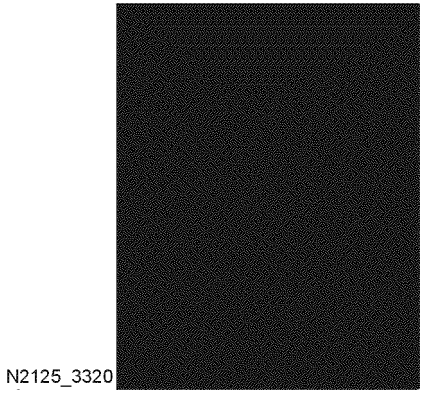


Figure 1 Black Prints

Initial Actions

- Inspect the printer paper path for items such as staples, paper clips and paper scraps.
- Check installation of the Print Cartridge.
- Check that the Print Cartridge ground contact points are clean.
- Ensure the machine covers are in place and fit well so no outside light can enter the machine.

Procedure

Install a new Print Cartridge. Run a Test Print. **The print is normal.**

Y N

Shield half of the window of the Laser Assembly. Run a Test Print. **The print is half white and half black.**

Y N

Go to RAP 44.

Go to RAP 30.

Problem solved.

IQ RAP 11 Background

There is toner contamination on all or part of the page. The contamination appears as a very light gray dusting (Figure 1).

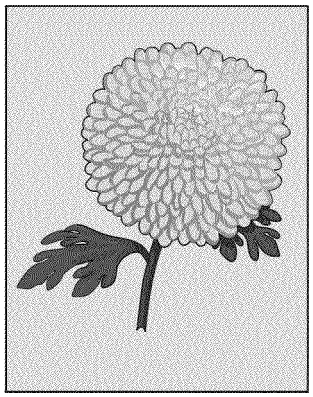


Figure 1 Background

Initial Actions

- Inspect the printer paper path for items such as staples, paper clips and paper scraps.
- Check installation of the Print Cartridge.
- Check that the Print Cartridge ground contact points are clean.
- Ensure the machine covers are in place and fit well so no outside light can enter the machine.

Procedure

Install a new Print Cartridge (PL 8.1). Run a Test Print. **The background is gone.**

Y N

Generate a Test Print and switch OFF the printer power halfway through the print cycle. Carefully remove the Print Cartridge and inspect the toner image on the drum just before the transfer area (BTR). **The undeveloped areas of the drum are clean and without background.**

Y N

Go to RAP 43.

Clean or replace the Fuser Assembly (REP 6.2). **The background is gone.**

Y N

Replace the following, in order, until the defective component is found: HVPS PWB (REP 9.6), Fuser Assembly (REP 6.2), Chute Transport Assembly (REP 6.1), Laser Assembly (REP 7.4), Print Cartridge Side Guide (REP 7.5), Print Engine Controller PWB (REP 9.3).

Problem solved.

Problem solved.

IQ RAP 12 Uneven Density

Image density varies within the page in either direction (Figure 1).

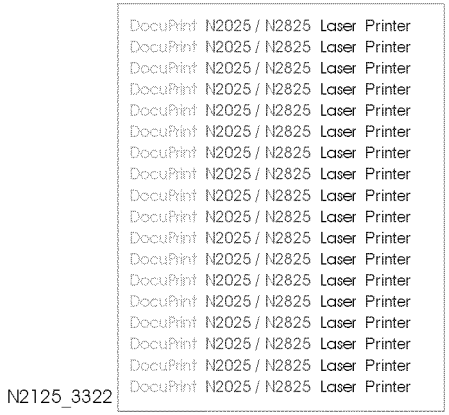


Figure 1 Uneven Density

Initial Actions

- Load fresh dry paper.
- Check that the correct Print Cartridge is properly installed and not empty.
- Ensure that the machine is reasonably level.
- Check to make sure the Laser path is clean and unobstructed.
- Remove the Print Cartridge and check the Left and Right Guides for ware, contamination, obstructions, etc.
- Clean the Laser window.

Procedure

Run a Test Print. **The Test Print output image contains uneven print.**

Y N

Go to Final Actions.

Install a new Print Cartridge (PL 8.1). Run a Test Print. **The Test Print output image contains uneven print.**

Y N

Problem solved. Go to Initial Actions.

Check the Bias Transfer Roll (BTR) for contamination, even spring pressure, and proper installation. **The BTR is in good condition (not contaminated) and properly installed.**

Y N

Repair or replace the BTR Assembly (REP 7.1).

Check the Fuser Assembly for worn parts and for contamination on the Fuser Roll or Pressure Roll. **The Fuser Assembly is in good condition.**

Y N

Replace the Fuser Assembly (REP 6.2).

Panic stop the printer half way through the print cycle. Look at the image on the drum. **The image on the drum has even density.**

Y N

Replace the Laser Assembly (REP 7.4).

Look at the print on the paper before the Fuser. **The print on the paper has even density.**

Y N

Replace the BTR (REP 7.1).

Replace the Fuser Assembly (REP 6.2).

IQ RAP 13 Skewed Image

The image is not parallel to the edges of the print sheet (Figure 1).

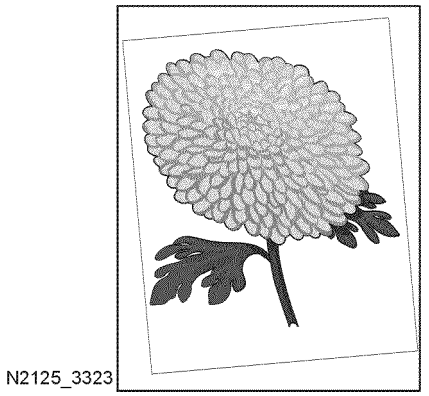


Figure 1 Skewed Image

Initial Actions

- Check the paper tray(s) installation and the paper in the tray(s).
- Load fresh dry paper.
- Paper meets specification.
- Check the paper path for any obstructions or debris that might hamper the passage of the paper.
- Ensure the Print Cartridge is properly installed.

Procedure

Run 5 test prints, single sided, from each paper tray. If the printer has a Duplex Assembly, run five duplexed prints from each tray. **The skewed image appears only on duplexed prints.**

Y N

The skewed image occurs on prints fed from all trays.

Y N

The skewed image occurs on prints fed from the MBF Tray.

Y N

The skewed image occurs on prints fed from Tray 1.

Y N

The skewed image occurs on prints fed from Tray 2.

Y N

- Check the Tray 3 Feed Rolls. Clean or replace if necessary.
- Check the Tray 3 Retard Roll. Clean or replace if necessary.
- Check the Nudger Roll. Clean or replace if necessary.
- Check the Tray 3 Transport Rolls. Check for obstructions or contamination. Clean as necessary.
- Check the feed chute between Tray 3 and Tray 2. Check for obstructions or contamination. Clean as necessary.

A B C D E

A B C D E

- Check the Tray 2 Feed Rolls. Clean or replace if necessary.
- Check the Tray 2 Retard Pad/Retard Roll. Clean or replace if necessary.
- Check the Tray 2 Nudger Roll. Clean or replace if necessary.
- Check the Tray 2 Transport Rolls. Check for obstructions or contamination. Clean as necessary.
- Check the feed chute between Tray 2 and Tray 1. Check for obstructions or contamination. Clean as necessary.

- Check the Tray 1 Feed Rolls. Clean or replace if necessary.
- Check the Tray 1 Nudger Roll. Clean or replace if necessary.
- Check the Tray 1 Retard Roll. Clean or replace if necessary.
- Check the feed chute between Tray 1 and the Registration Rolls. Check for obstructions or contamination. Clean as necessary.

- Check the MBF Feed Rolls. Clean or replace if necessary.
- Check the MBF Retard Pad. Clean or replace if necessary.
- Check the MBF Guide. Check for obstructions or contamination. Clean or replace as necessary.
- Check the Registration Sensor. Check actuation and for obstructions or contamination. Clean or replace as necessary.

- Check the Registration Sensor. Check actuation and for obstructions or contamination. Clean or replace as necessary.
- Check the Registration Rolls. Clean or replace if necessary.
- Check the BTR Roll and bearings. Clean or replace if necessary.
- Check the Print Cartridge. Replace if necessary.
- Check the Chute Transport Assembly. Check for obstructions or contamination. Clean or replace as necessary.

- Check the Fuser Assembly. Check for worn parts or rolls. Check for obstructions or contamination. Clean or replace as necessary.
- Check all rolls and drives in the Exit Assembly. Check for obstructions or contamination. Clean or replace as necessary.
- Check the Duplex assembly. Check for worn parts or rolls. Check for obstructions or contamination. Clean or replace as necessary.
- Check the chute between the Duplex Assembly and the Registration Rolls. Check for worn parts or rolls. Check for obstructions or contamination. Clean or replace as necessary.

IQ RAP 14 Damaged Print

The printed page comes out of the printer either wrinkled, creased, or torn (Figure 1).

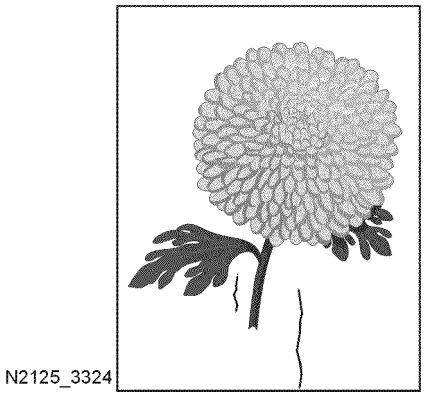


Figure 1 Damaged Print

Initial Actions

- Check that the paper supply is dry and fresh.
- Check that rollers and other components in the paper path are clean and unobstructed.
- Ensure that paper is within specification.

Procedure

Observe paper feed as you run a test print. **The paper fed crooked.**

Y N

Replace paper with fresh, dry standard paper. Run a Test Print. **The paper is still damaged.**

Y N

Problem solved.

Open the Rear Cover. Remove the Fuser Assembly. Rotate the fuser idler gear manually and inspect the Heat Roll. Open the fuser jam access cover. Rotate the fuser idler gear manually and inspect the Pressure Roll. **The Heat Roll and the Pressure Roll are free of scratches and contamination.**

Y N

Clean or replace the Fuser Assembly (REP 6.2).

Inspect the paper path between the feed tray and the exit tray for contamination or obstructions. **The paper path is free of obstructions.**

Y N

Remove obstructions or contamination from the paper path.

Inspect all of the rolls along the paper path, between the feed tray and the exit tray, for contamination, wear or damage. **The paper path rolls are free of contamination, wear, or damage.**

A

A

Y N

Replace the damaged or worn roll.

Install a new Print Cartridge. Run a Test Print. **The print is still damaged.**

Y N

Problem Solved.

Replace the following, in order, until the defective component is found: Fuser Assembly (REP 6.2), Chute Transport Assembly (REP 6.1), BTR Assembly (REP 7.1), MBF Feed Roll Assembly (REP 4.2), Retard Pad Assembly (REP 4.7), Turn Roll Assembly (REP 11.8), Paper Feed Rolls (REP 11.11), Tray Assembly /REP 4.4).

Go to IQ RAP 13.

IQ RAP 15 Registration

The image is not positioned correctly on the paper. It may be off in either the process direction or in the scan direction (Figure 1).

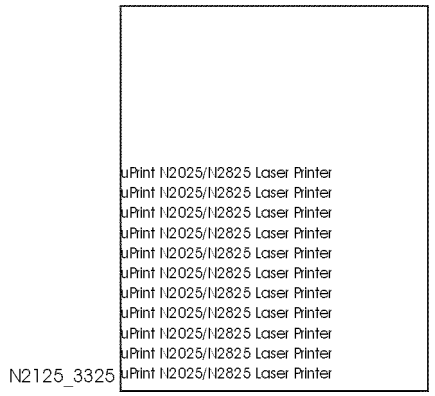


Figure 1 Registration

Initial Actions

- Check to ensure that the paper is within specification.
- Check that the paper supply is dry and fresh and loaded correctly.
- Check that the Paper Tray guides are set correctly.
- Check that rollers and other components in the paper path are clean and unobstructed.

Procedure

Run a test print. **The Test Print output image is properly registered.**

Y N

Perform the registration check (ADJ 1.1). **The printer registration is set correctly.**

Y N

Perform the registration procedure (ADJ 1.1).

If misregistration occurs in the process direction, replace in sequence as necessary: Rubber Registration Rolls (REP 5.6), Registration Clutch (REP 5.5), Main Drive Gear Assembly (REP 8.2), Main Motor Assembly (REP 8.1), Registration Sensor (REP 5.4), Print Engine Controller PWB (REP 9.3), or System Controller PWB (REP 9.2).

If misregistration occurs across the process direction, replace in sequence as necessary: Laser (REP 7.4), System Controller PWB (REP 9.2).

Have the customer send another print job. **The print image is properly registered.**

Y N

Have the customer contact the Xerox Customer Support.

Problem Solved.

IQ RAP 16 Skips / Smears

A disturbance of the image which lengthens or shortens the image in the process direction. A darkening across the process direction or a repeat of the image in the process direction (Figure 1).

Figure 1 Skips / Smears

Initial Actions

- Check that the paper supply is dry and fresh.
- Check to ensure that the paper is within specification.
- Check the paper path for any obstructions or debris.

Procedure

Run a test print. **The image has skips or smears.**

Y N

Problem Solved.

Check, clean, or replace as necessary in the following sequence:

- Transport Chute Assembly (REP 6.1).
- The Main Drive Gear components (REP 8.2).
- The Fuser Assembly (REP 6.2).

The defect still occurs.

Y N

Problem Solved.

Replace the Print Cartridge (PL 8.1).

IQ RAP 17 Unfused Image

The printed image is not fully fused to the paper. The image rubs off easily (Figure 1).

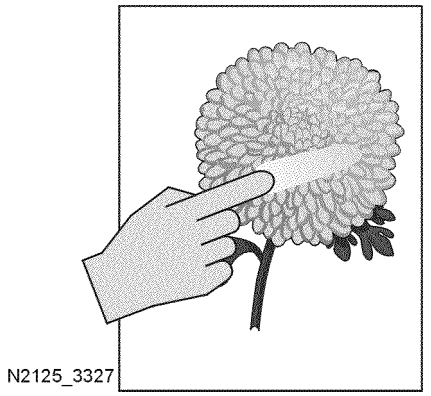


Figure 1 Unfused Image

Initial Actions

- Check to ensure that the paper is within specification.

Procedure

Replace the paper with fresh, dry paper from an unopened ream. Run a test print. **The problem is still present.**

Y N

Problem solved.

Refer to Nonvolatile Memory Setup Mode and check the Fuser setting. **The NV code is set to the factory default value.**

Y N

Set NV code to the factory default value. Run 25 test prints. **The problem is still present.**

Y N

Problem Solved.

Increase the fuser temperature by one increment.

The overall print density is within specification.

Y N

Go to IQ RAP 1

Open the Rear Cover. Remove the Fuser Assembly. Rotate the fuser idler gear manually and inspect the Heat Roll. Open the fuser jam access cover. Rotate the fuser idler gear manually and inspect the Pressure Roll. **The Heat Roll and the Pressure Roll are free of scratches and contamination.**

Y N

Clean or replace the Fuser Assembly (REP 6.2).

Open the fuser jam access cover. Rotate the fuser idler gear manually and inspect the contact between the Heat Roll and the Pressure Roll along the rotation. **The Heat Roll and the Pressure Roll are contacting each other uniformly.**

Y N

Replace the Fuser Assembly (REP 6.2).

Replace the following, in order, until the defective component is found: Fuser Assembly (REP 6.2), Print Engine Controller PWB (REP 9.3), LVPS PWB (REP 9.5).

IQ RAP 18 Resolution

The two pixel lines and halftone patches cannot be reproduced clearly on the print.

Initial Actions

- Ensure that the print density is set to the default value.

Procedure

Install a new Print Cartridge (PL 8.1). Run the image quality test print. **The Test Print output resolution is good.**

Y N

Replace the following, in order, until the defective component is found: Laser Assembly (REP 7.4) then the HVPS PWB (REP 9.6).

Problem Solved.

4 Repair-Adjustment

Optional Paper Feeder

Duplex Unit

Envelope Feeder

Adjustments

Introduction

Overview

The Repair / Adjustment section, Section 4 of the Service Manual, provides information that enables the Service Representative to restore the product to within specification after fault isolation.

Section Contents

The Section Contents lists, in sequence, all the items of the section, with page references. Each entry in the section contents appears exactly as it appears in the manual.

Repair Procedures

This repair subsection contains instructions for removal and replacement tasks. A removal and/or replacement task is included when it is not obvious how components are removed and replaced, or when special conditions (such as an adjustment) must be met during these tasks.

Step-by-step removal procedures for a specific component or assembly are provided. Numbers in the illustrations refer to steps in the procedure. For example: if step 3 in a procedure instructed you to remove a screw, the screw in the illustration would be labeled 3.

Illustrations are used to assist you with the procedures. You should refer to the specific Parts List illustration (listed under the repair title) for locating most components within a procedure.

NOTE: *Always reinstall the correct type and size screws. Using the wrong screw can damage tapped holes.*

NOTE: *Do not use excessive force to either remove or install a part.*

Locations, such as left, right, front, or rear, given in the repairs assume you are facing the printer control panel.

The Print Cartridge should be removed and stored in a safe place when performing any procedure where screws or components may damage the cartridge.

Adjustment

Other than side-to-side and lead edge to trail edge registration, the N2125 printer does not contain any field adjustable components.

WARNING

Use of controls or adjustments other than those specified in this manual may result in an exposure to dangerous laser light.

REP 1.1 Left Interface Cover Assembly

Parts List on PL 1.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Loosen the two thumb screws that secure the Left Interface Cover Assembly (Figure 1).
2. Slide cover to the rear and remove (Figure 1).

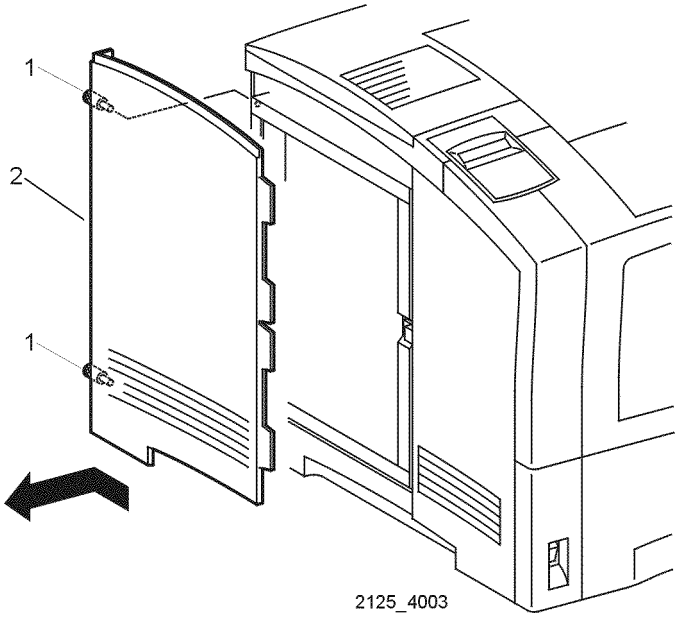


Figure 1 Left Interface Cover

Replacement

1. Reinstall the components in the reverse order.

REP 1.2 Left Cover

Parts List on PL 1.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Left Interface Cover Assembly (REP 1.1).
2. Remove the two screws securing the Left Cover to the printer (Figure 1).
3. Remove the Left Cover (Figure 1).

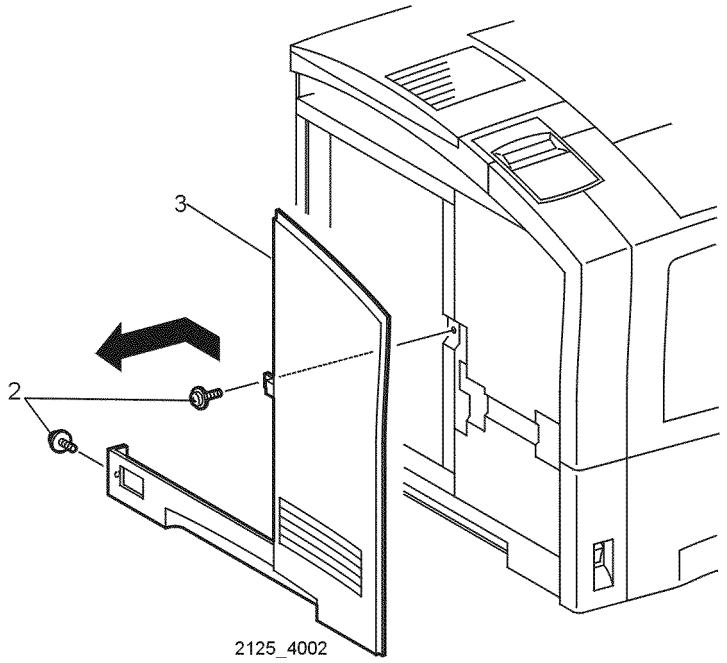


Figure 1 Left Cover

Replacement

1. Reinstall the components in the reverse order.

REP 1.3 Option Cover

Parts List on PL 1.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Squeeze the cover release and open the Rear Cover Assembly.
2. Push the two locking tabs at the rear of Option Cover (Figure 1).
3. Lift and slide the Option Cover to the rear and remove (Figure 1).

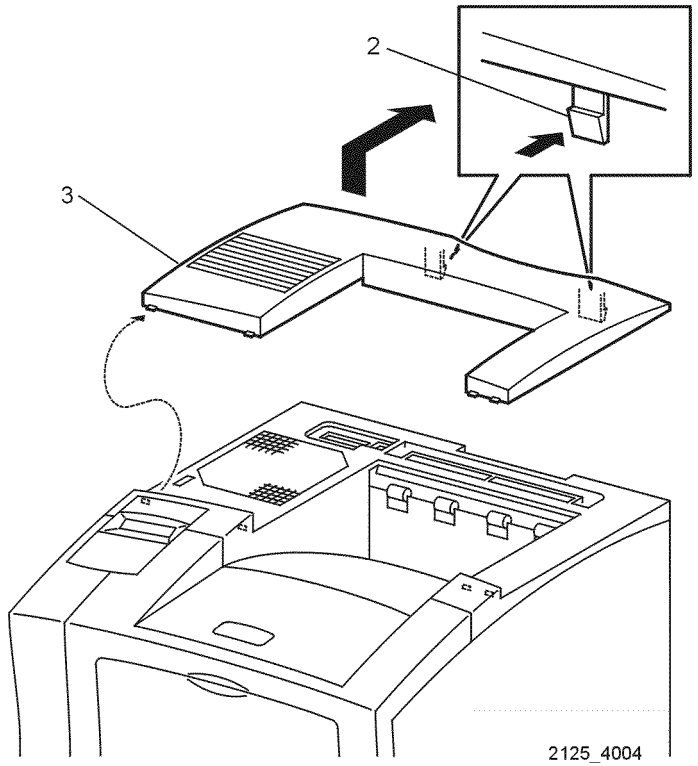


Figure 1 Option Cover

Replacement

1. Reinstall the components in the reverse order.

REP 1.4 Top Cover Assembly

Parts List on PL 1.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Front Cover Assembly (REP 1.6).
3. Remove the Left Front Cover (REP 1.7).
4. Open the Rear Cover Assembly.
5. Remove the four screws securing the Top Cover Assembly (Figure 1).
6. Raising the Top Cover Assembly, disconnect P/J412 connector on the back side of the Control Panel Assembly (Figure 1).
7. Remove the Top Cover Assembly (Figure 1).

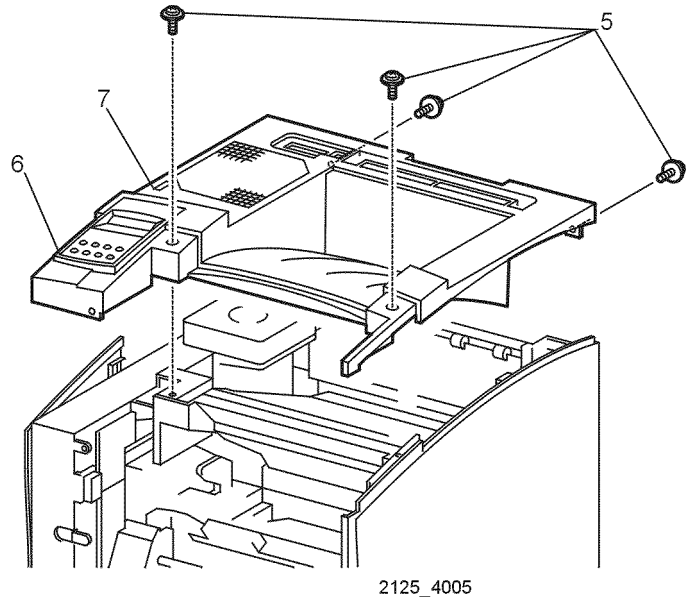


Figure 1 Top Cover Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 1.5 Right Cover

Parts List on PL 1.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Front Cover Assembly (REP 1.6).
3. Remove the Left Front Cover (REP 1.7).
4. Open the Rear Cover Assembly.
5. Remove the Top Cover Assembly (REP 1.4).
6. Remove the four screws securing the Right Cover (Figure 1).

   NOTE: *On printers without an optional feeder, slide the right edge of the printer over the edge of the stand/table by approximately 1 inch.*

7. Lower the cover to disconnect the three hooks at the top and bottom of the Right Cover (Figure 1).
8. Remove the Right Cover (Figure 1).

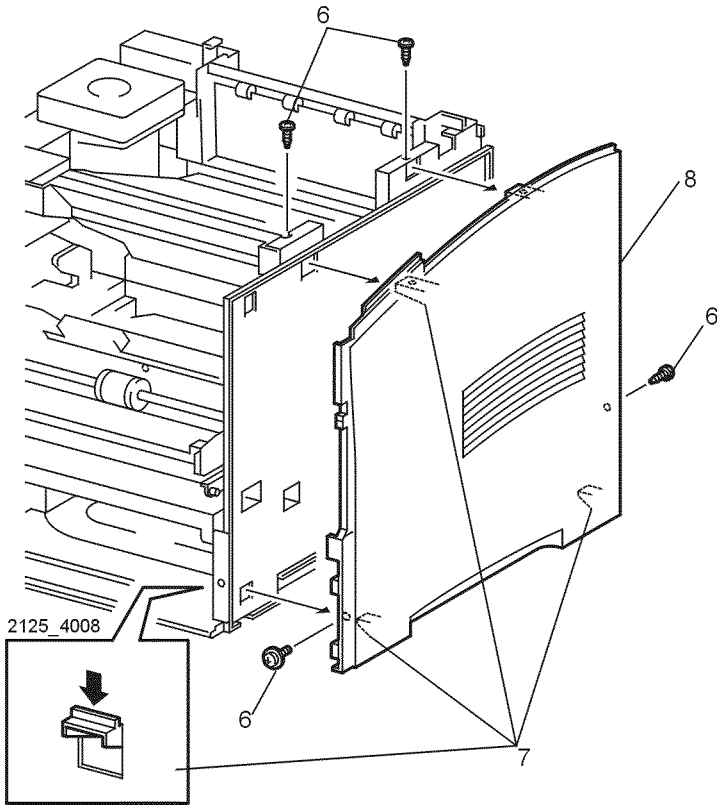


Figure 1 Right Cover

Replacement

1. Reinstall the components in the reverse order.

REP 1.6 Front Cover Assembly

Parts List on PL 1.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Open the Front Cover Assembly.
2. Slide the Cover Stopper to the left or right and remove from the right cover (Figure 1).
3. Remove the K clip that secures the Front Cover Assembly to the left stud of the printer (Figure 1).
4. Slide the Front Cover to the right and remove (Figure 1).

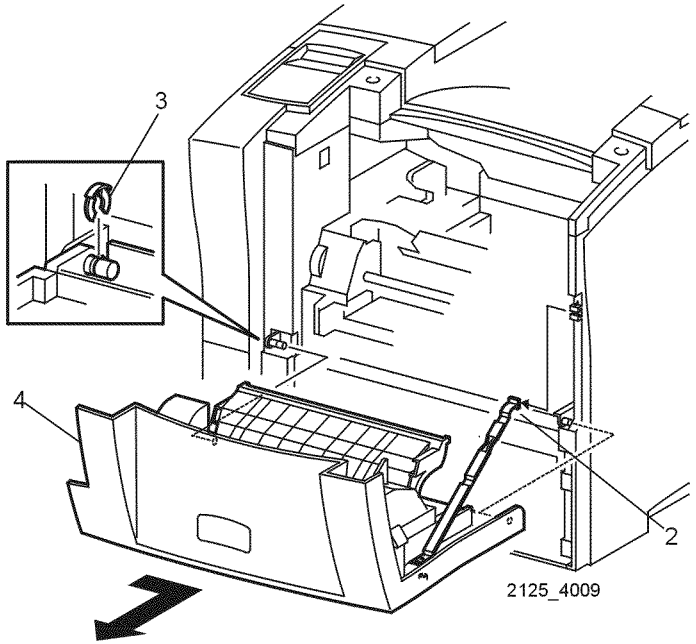


Figure 1 Front Cover

Replacement

1. Reinstall the components in the reverse order.

REP 1.7 Left Front Cover

Parts List on PL 1.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Front Cover Assembly (REP 1.6).
3. Remove the three screws securing the Left Front Cover (Figure 1).
4. Use a small screwdriver to press on the locking tab and the remove the cover (Figure 1).

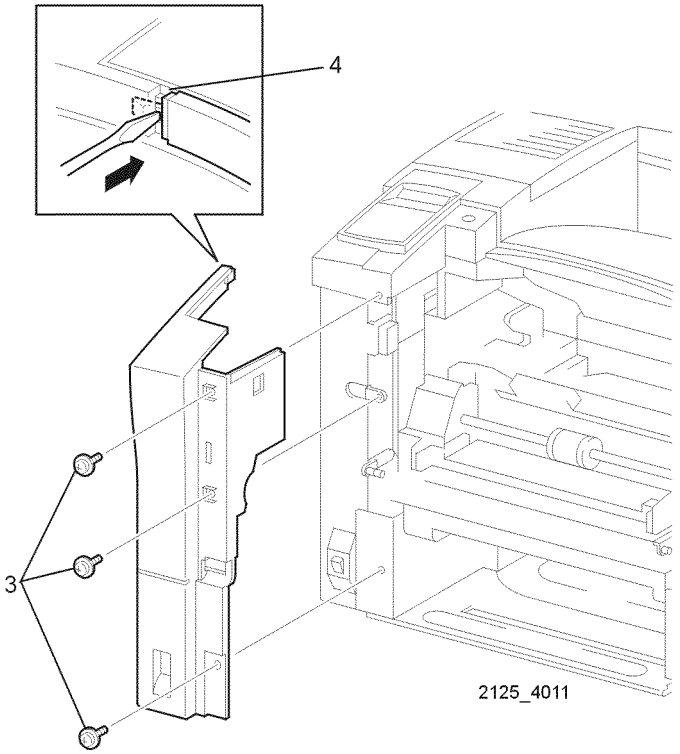


Figure 1 Left Front Cover

Replacement

1. Reinstall the components in the reverse order.

REP 1.8 Rear Cover Assembly

Parts List on PL 1.3

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Open the Rear Cover Assembly by squeezing the clips.
2. Lift the lead edge of the locking tab to release and remove the Stopper from the cover. (Figure 1).
3. Slide the Pivot Stopper that secures the left Rear Cover Assembly (Figure 2).
4. Slide the Rear Cover Assembly to the right (as viewed from the rear) (Figure 2).

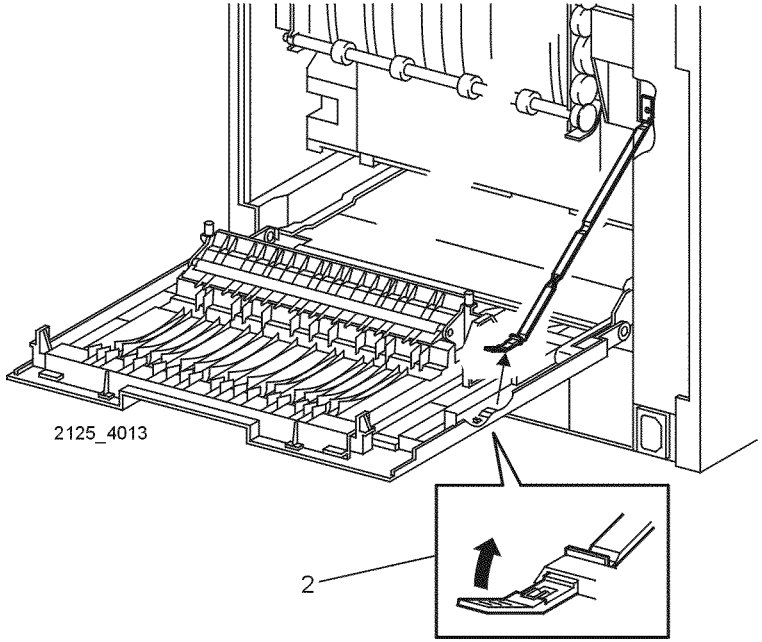


Figure 1 Stopper

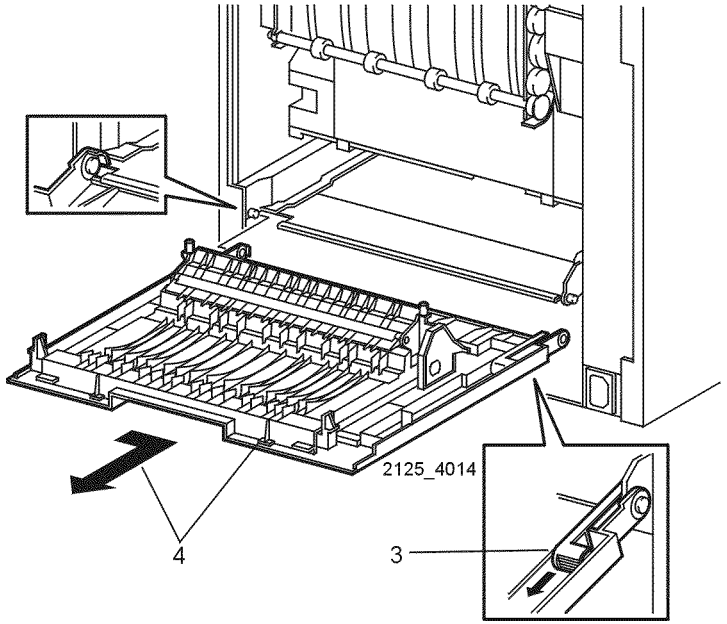


Figure 2 Rear Cover

Replacement

1. Reinstall the components in the reverse order.

REP 1.9 Rear Face Up Cover Assembly

Parts List on PL 1.3

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Open the Rear Cover Assembly (REP 1.8).
2. Release the Pivot Arm from the Rear Face Up Cover Assembly (Figure 1). (The art shows the cover removed for clarity.)
3. Close the Rear Cover Assembly.
4. Open the Rear Face Up Cover Assembly.
5. Push the right hinge pin to the left (as viewed from the rear) until the hinge pin is free of the Rear Cover.
6. Remove the Rear Face Up Cover Assembly.

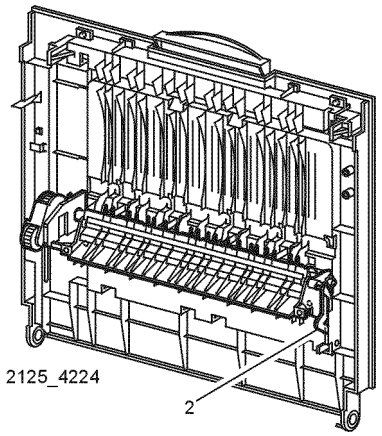


Figure 1 Rear Face Up Cover Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 1.10 Interlock Cover

Parts List on PL 7.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Rear Cover Assembly (REP 1.8).
2. Remove the one screw that secures the Stopper to the printer (Figure 1).
3. Remove the two screws that secure the Interlock Cover to the printer (Figure 1).
4. Remove the Interlock Cover from the printer (Figure 1).

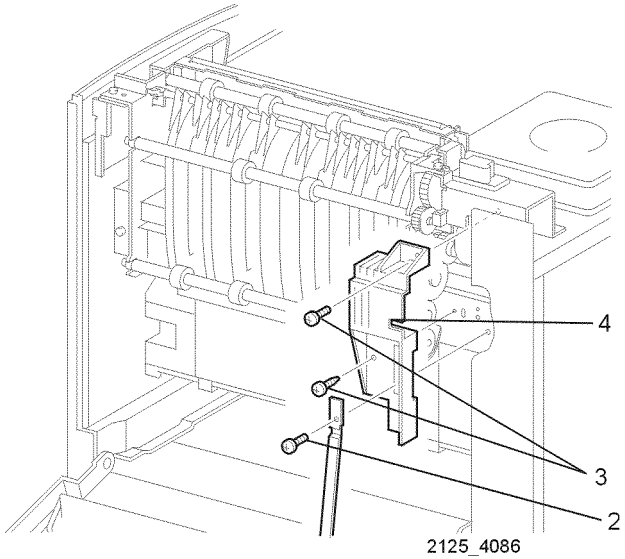


Figure 1 Interlock Cover

Replacement

1. Reinstall the components in the reverse order.

REP 1.11 Left Plate Assembly

Parts List on PL 9.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the six screws that secure the Left Plate Assembly to the printer and remove (Figure 1).

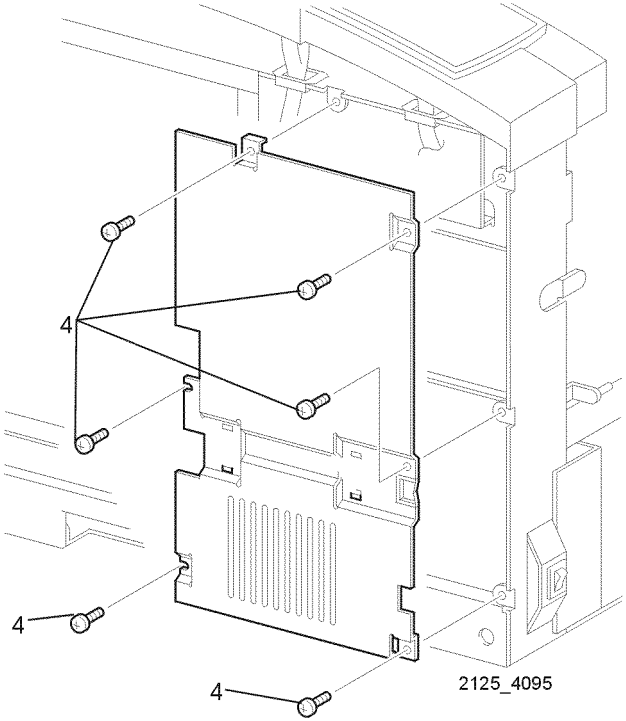


Figure 1 Left Plate

Replacement

1. Reinstall the components in the reverse order.

REP 1.12 Plate Handle

Parts List on PL 9.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Paper Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Left Plate Assembly (REP 1.11).
7. Remove the four screws that secure the Plate Handle to the printer and remove (Figure 1).

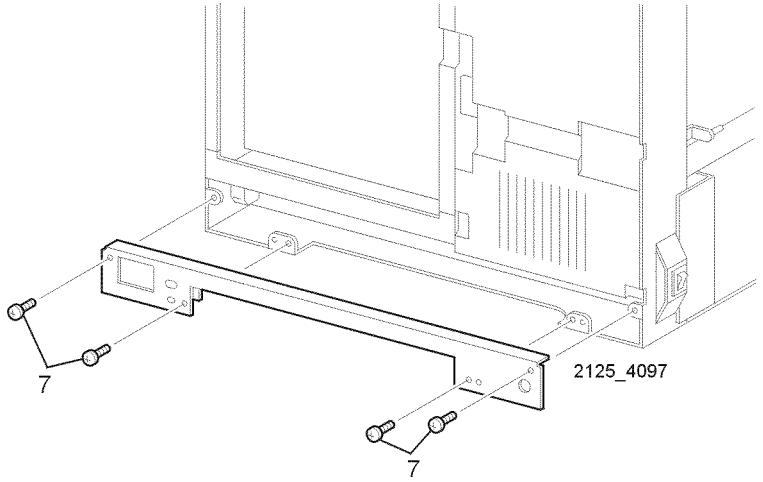


Figure 1 Plate Handle

Replacement

1. Reinstall the components in the reverse order.

REP 2.1 Retard Roll Assembly

Parts List on PL 12.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Release the left and right latches of Tray 1 (Figure 1).
3. Open the Retard Chute (Figure 1).
4. Lift the locking tab and remove the Retard Roll Assembly (Figure 2).

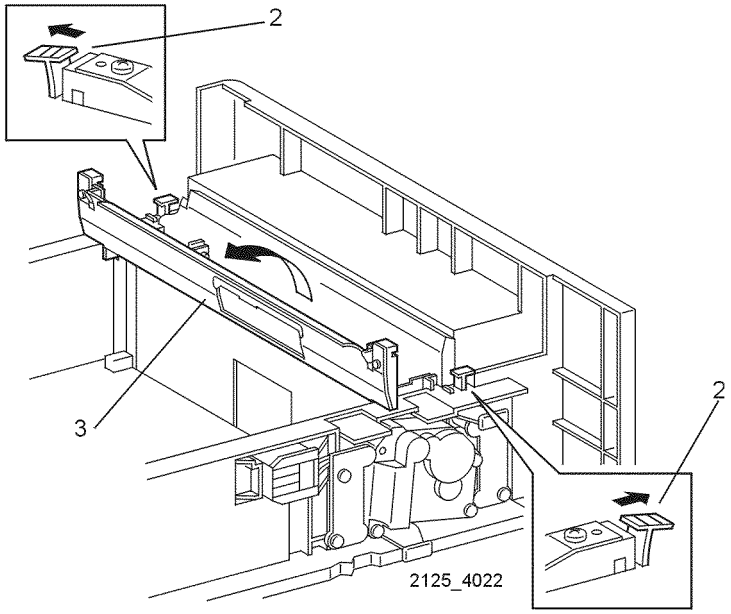


Figure 1 Retard Chute

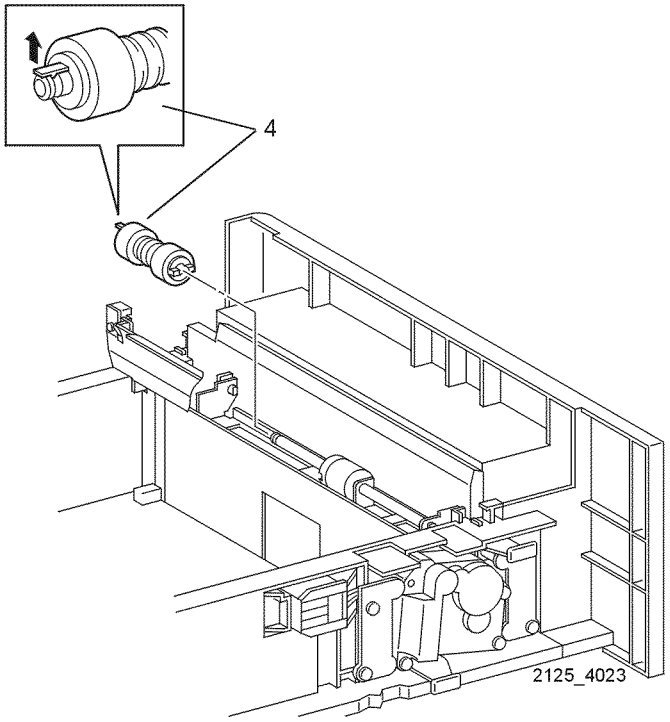


Figure 2 Roll Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 2.2 Friction Clutch Assembly

Parts List on PL 2.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Release the left and right latches of Tray 1 (Figure 1).
3. Open the Retard Chute (Figure 1).
4. Lift the locking tab and remove the Retard Roll Assembly (Figure 2).
5. Remove the Friction Clutch Assembly from the shaft (Figure 3).

Replacement

1. Reinstall the components in the reverse order.

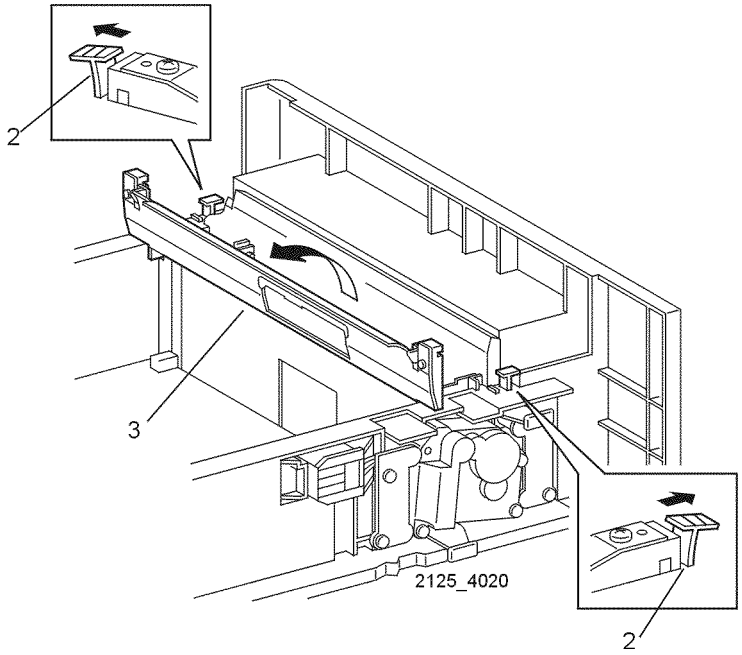


Figure 1 Tray 1 Latches

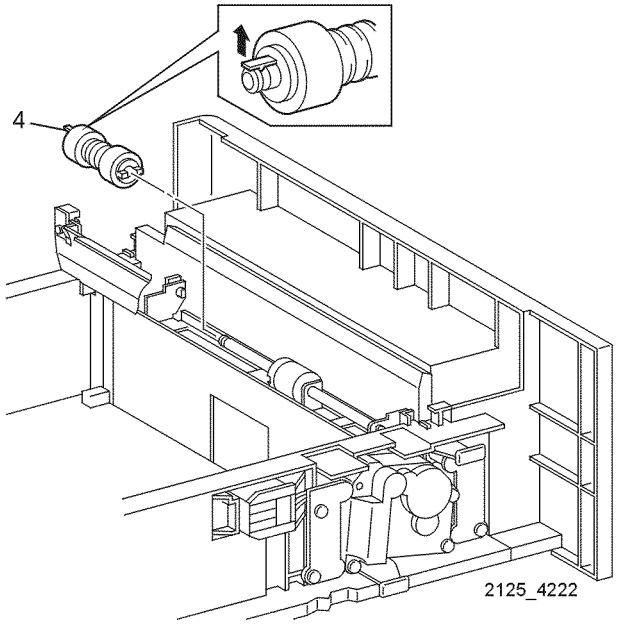


Figure 2 MBF Feed Roll

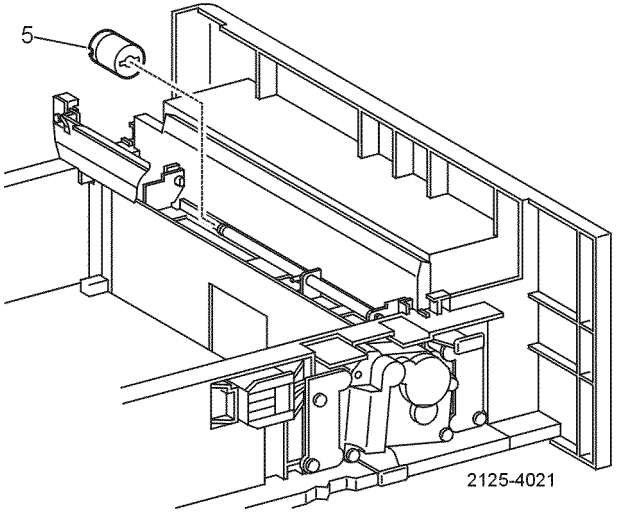


Figure 3 Friction Clutch Assembly

REP 2.3 Retard Spring

Parts List on PL 2.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Release the left and right latches of Tray 1 (Figure 1).
3. Open the Retard Chute (Figure 1).
4. Release the two Locking Tabs and lift the Retard Assembly (Figure 2).
5. Remove the Retard Spring from the Roll Assembly (Figure 2).

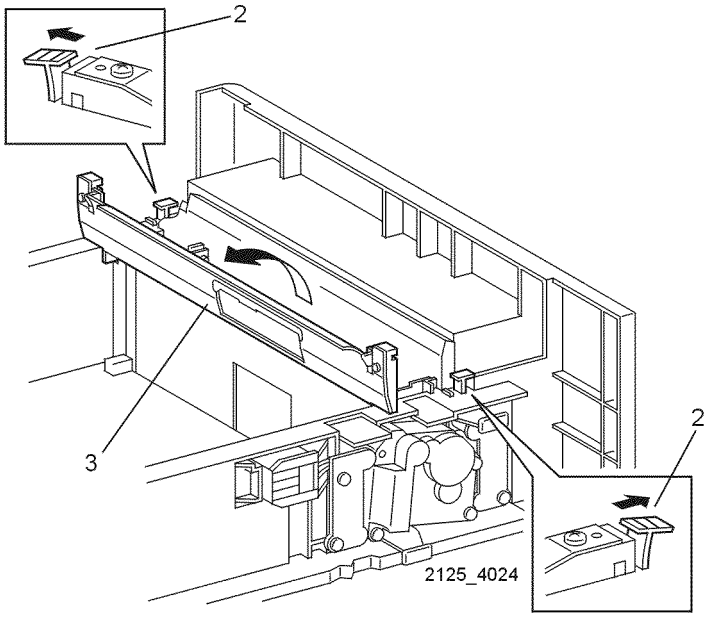


Figure 1 Retard Chute

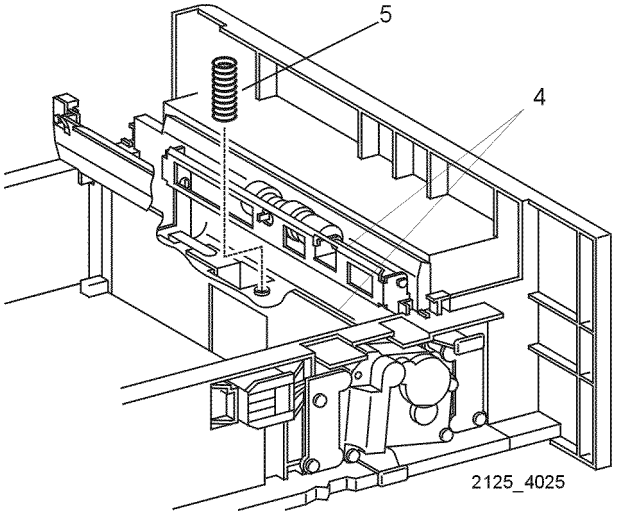


Figure 2 Retard Spring

Replacement

1. Reinstall the components in the reverse order.
2. Ensure that the tab on the clutch is positioned on the pin on the Retard Shaft.

REP 2.4 Motor Assembly

Parts List on PL 2.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the two screws that secure the Rear L Holder to Tray 1 (Figure 1).
3. Remove the Motor Spring (Figure 1).
4. Remove the bearing (Figure 1).

   NOTE: *It may be necessary to use a scribe or small screwdriver to lift the locking tabs to disconnect P/J672*

5. Press the Socket Guide slightly and disconnect P/J672 (Figure 2).
6. Remove the three screws securing the Motor to the Motor Assembly (Figure 2).
7. Remove the Motor (Figure 2).

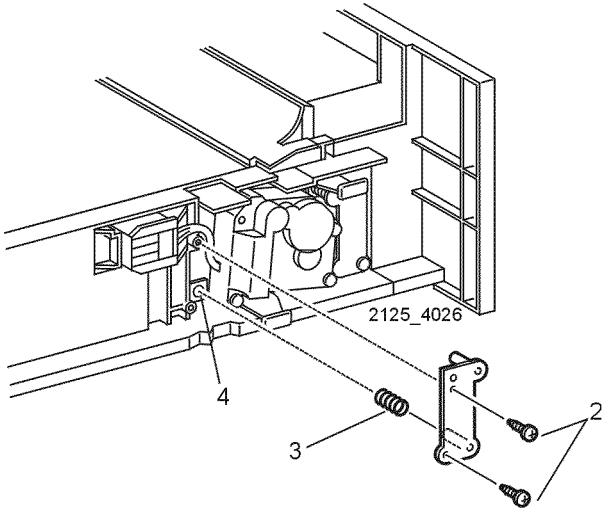


Figure 1 Rear L Holder

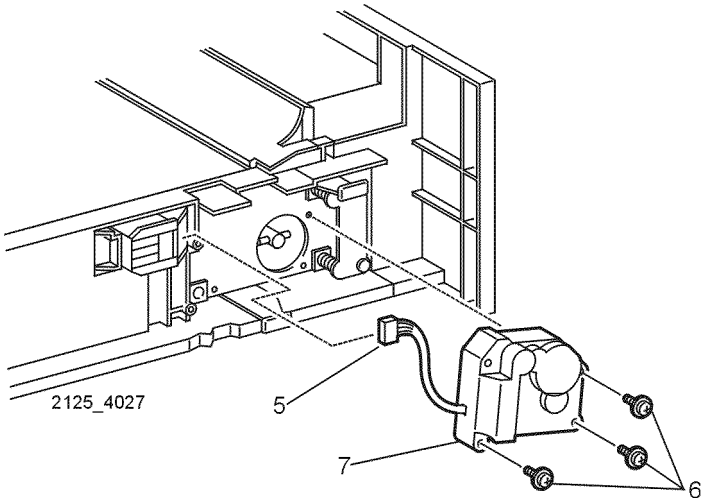


Figure 2 Motor Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 2.5 Connector and Socket Guide

Parts List on PL 2.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the two screws that secure the Left Holder to the Tray 1 (Figure 1).
3. Remove the Motor Spring (Figure 1).
4. Remove the Bearing (Figure 1).

   NOTE: *It may be necessary to use a scribe or small screwdriver to lift the locking tabs to disconnect P/J672*

5. Disconnect P/J672 from the Socket Guide (Figure 2).
6. Remove the two screws that secure the Socket Guide (Figure 2).
7. Remove the Socket Guide together with the Connector (Figure 2).
8. Remove the Spring (Figure 2).
9. Slide the Connector to disconnect it from the Socket Guide (Figure 2).

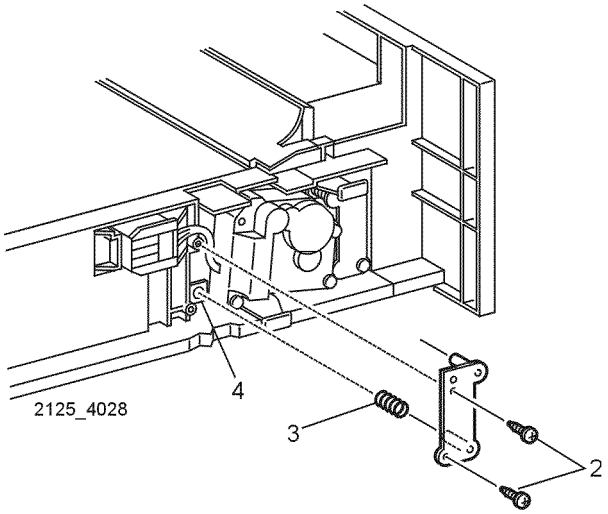


Figure 1 Rear L Holder

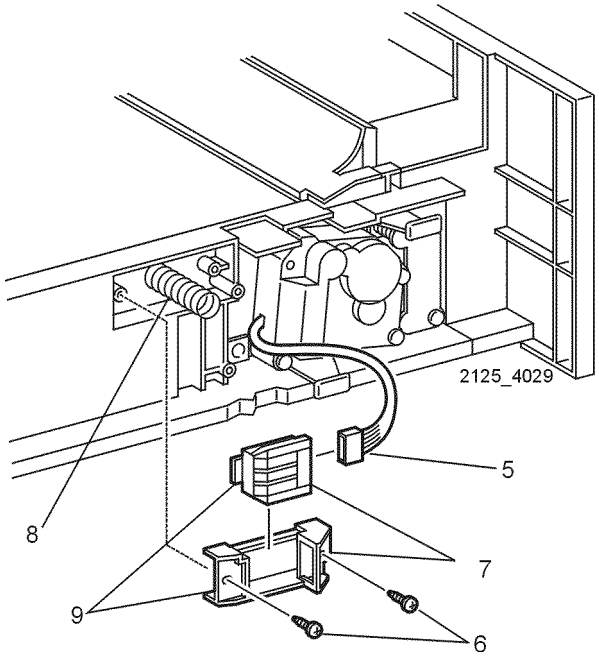


Figure 2 Connector and Socket Guide

Replacement

1. Reinstall the components in the reverse order.

REP 3.1 Paper Feeder

Parts List on PL 3.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.

   NOTE: *Remove all Optional 550 Sheet Feeders.*

2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Left Plate Assembly (REP 1.11).
7. Remove the Plate Handle (REP 1.12).
8. Open Rear Door.
9. Remove the Top Cover Assembly (REP 1.4).
10. Remove the Right Cover (REP 1.5).
11. Remove the LVPS PWB (REP 9.5).
12. Remove the seven screws that secure the Paper Feeder to the printer (Figure 1).
13. Pull the Paper Feeder toward the front to remove (Figure 1).

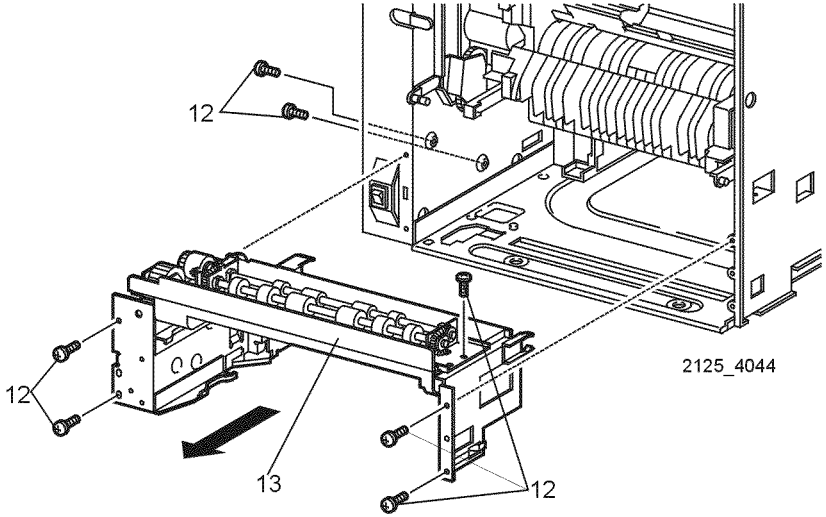


Figure 1 Paper Feeder

Replacement

1. Reinstall the components in the reverse order.

REP 3.2 Turn Roll Assembly

Parts List on PL 3.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2)
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Left Plate Assembly (REP 1.11).
7. Remove the Plate Handle (REP 1.12).
8. Open Rear Door.
9. Remove the Top Cover Assembly (REP 1.4).
10. Remove the Right Cover (REP 1.5).
11. Remove the LVPS PWB (REP 9.5).
12. Remove the Paper Feeder (REP 3.1).
13. Disconnect P/J64 on the Feeder PWB (Figure 1). Release cable from all cable clamps.
14. Remove the four screws that secure the Turn Roll Assembly to the Paper Feeder Assembly (Figure 1).
15. Remove the Turn Roll Assembly together with the Extension Spring and Chute Spring (Figure 1).

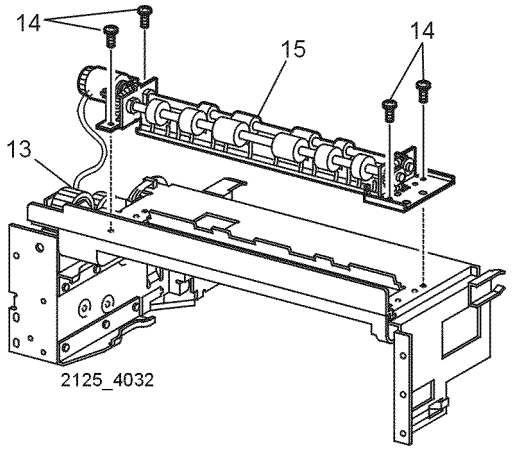


Figure 1 Turn Clutch Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 3.3 Tray 1 No Paper Actuator

Parts List on PL 3.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Left Plate Assembly (REP 1.11).
7. Remove the Plate Handle (REP 1.12).
8. Open Rear Door.
9. Remove the Top Cover Assembly (REP 1.4).
10. Remove the Right Cover (REP 1.5).
11. Remove the LVPS PWB (REP 9.5).
12. Remove the Paper Feeder (REP 3.1)
13. Rotate the No Paper Actuator up until the left end of the actuator can be removed from the support (Figure 1). Remove the actuator.

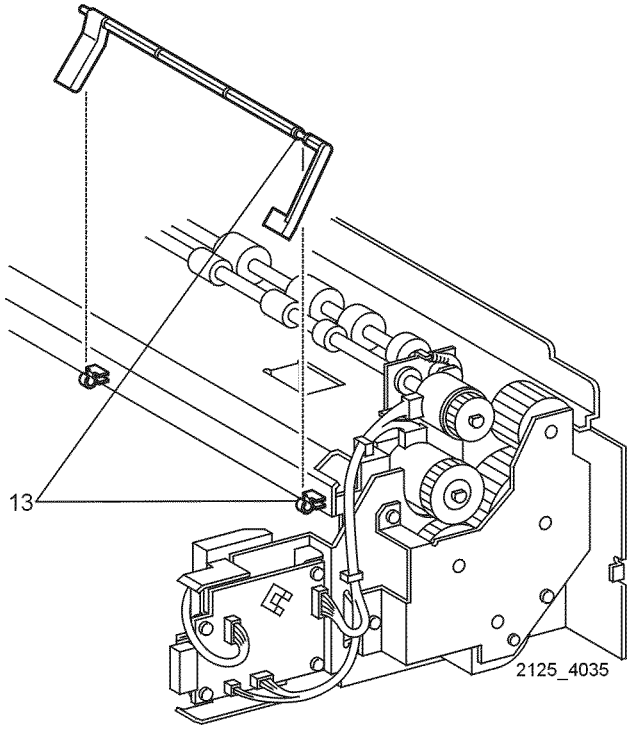


Figure 1 No Paper Actuator

Replacement

1. Reinstall the components in the reverse order.

REP 3.4 Stack Height Sensor

Parts List on PL 3.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Left Plate Assembly (REP 1.11).
7. Remove the Plate Handle (REP 1.12).
8. Open Rear Door.
9. Remove the Top Cover Assembly (REP 1.4).
10. Remove the Right Cover (REP 1.5).
11. Remove the LVPS PWB (REP 9.5).
12. Remove the Paper Feeder (REP 3.1)
13. Remove the No Paper Actuator (REP 3.3)
14. Disconnect P/J662 from the Stack Height Sensor (Figure 1).
15. Release the five hooks, and remove the Sensor (Figure 1).

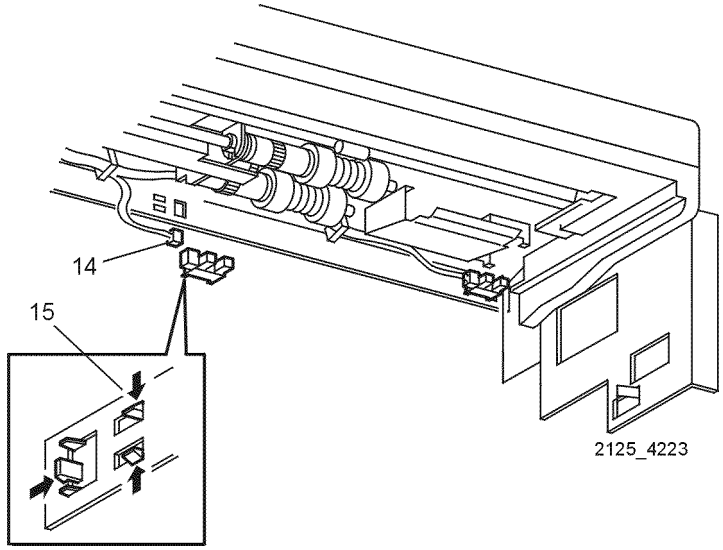


Figure 1 Stack Height Sensor

Replacement

1. Reinstall the components in the reverse order.

REP 3.5 Low Paper Sensor

Parts List on PL 3.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Left Plate Assembly (REP 1.11).
7. Remove the Plate Handle (REP 1.12).
8. Open Rear Door.
9. Remove the Top Cover Assembly (REP 1.4).
10. Remove the Right Cover (REP 1.5).
11. Remove the LVPS PWB (REP 9.5).
12. Remove the Paper Feeder (REP 3.1)
13. Disconnect P/J661 from the Low Paper Sensor (Figure 1).
14. Release the five hooks, and remove the Low Paper Sensor (Figure 1).

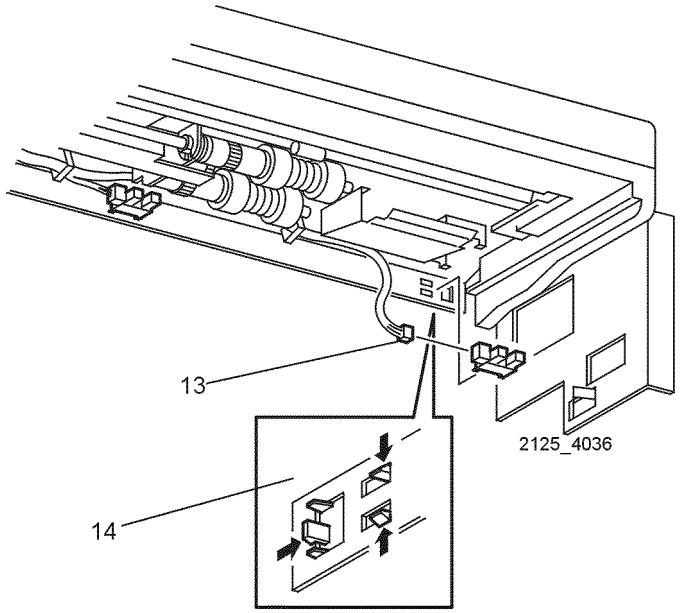


Figure 1 Low Paper Sensor

Replacement

1. Reinstall the components in the reverse order.

REP 3.6 Feed Clutch Assembly

Parts List on PL 3.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Left Plate Assembly (REP 1.11).
7. Remove the Plate Handle (REP 1.12).
8. Open Rear Door.
9. Remove the Top Cover Assembly (REP 1.4).
10. Remove the Right Cover (REP 1.5).
11. Remove the LVPS PWB (REP 9.5).
12. Remove the Paper Feeder (REP 3.1)
13. Remove the four screws that secure the bracket to the Paper Feeder and remove the bracket (Figure 1).
14. Remove the Gear 3 and Gear 2 from the shaft of the Paper Feeder (Figure 1).
15. Remove the E-ring that secures the Feed Clutch Assembly to the Feeder (Figure 2).
16. Disconnect P/J651 from the clutch (Figure 2).
17. Remove the Feed Clutch Assembly (Figure 2).

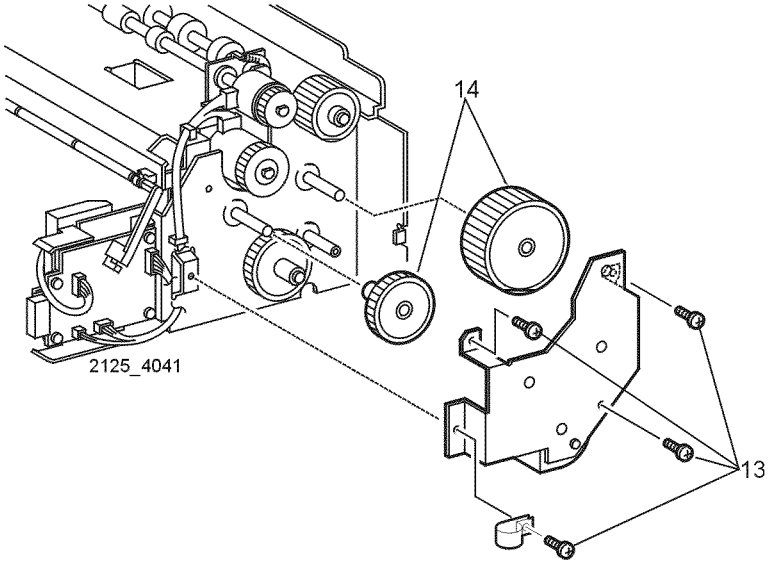


Figure 1 Paper Feeder Bracket

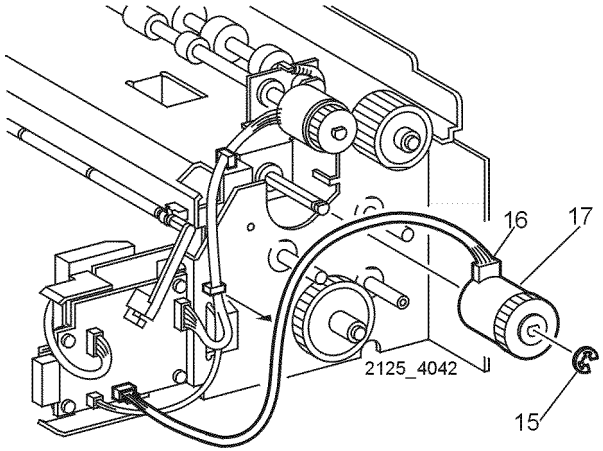


Figure 2 Feed Clutch Assembly

Replacement

1. Reinstall the components in the reverse order.
2. Ensure that all alignment pins are properly inserted in the bracket holes before replacing the four screws.

REP 3.7 Feeder Assembly

Parts List on PL 3.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Left Plate Assembly (REP 1.11).
7. Remove the Plate Handle (REP 1.12).
8. Open Rear Door.
9. Remove the Top Cover Assembly (REP 1.4).
10. Remove the Right Cover (REP 1.5).
11. Remove the LVPS PWB (REP 9.5).
12. Remove the Paper Feeder (REP 3.1).
13. Remove the Feed Clutch Assembly (REP 3.6)
14. Remove the E-ring that secures the left shaft of the Feeder Assembly (Figure 1).
15. Remove the left bearing from the left shaft of the Feeder Assembly (Figure 1).
16. Open the Front Chute Assembly (Figure 2).

    NOTE: *Caution: Don't lose Bias Spring located under the Feeder Assembly (Figure 2).*

17. Slide the Feeder Assembly to the right and remove (Figure 2).

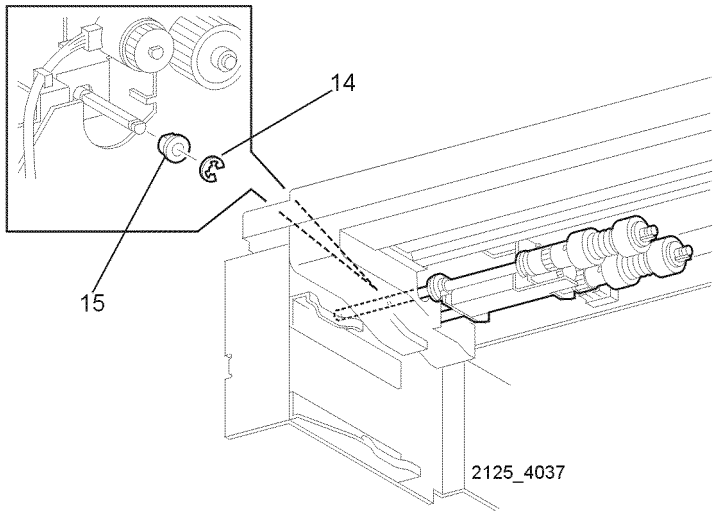


Figure 1 Feeder Assembly Bearing

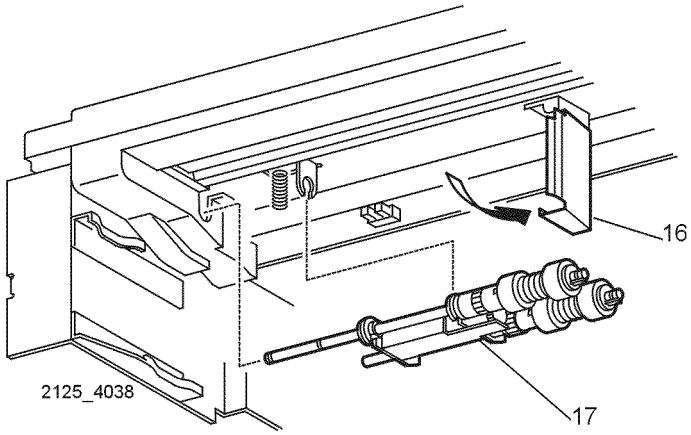


Figure 2 Feeder Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 3.8 Paper Feed Rolls

Parts List on PL 3.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Open the Front Chute Assembly (Figure 1).
3. Release the locking tab on the Front Feed Roll and slide the roll to the right and remove (Figure 1).
4. Repeat with Rear Feed Roll (Figure 1).

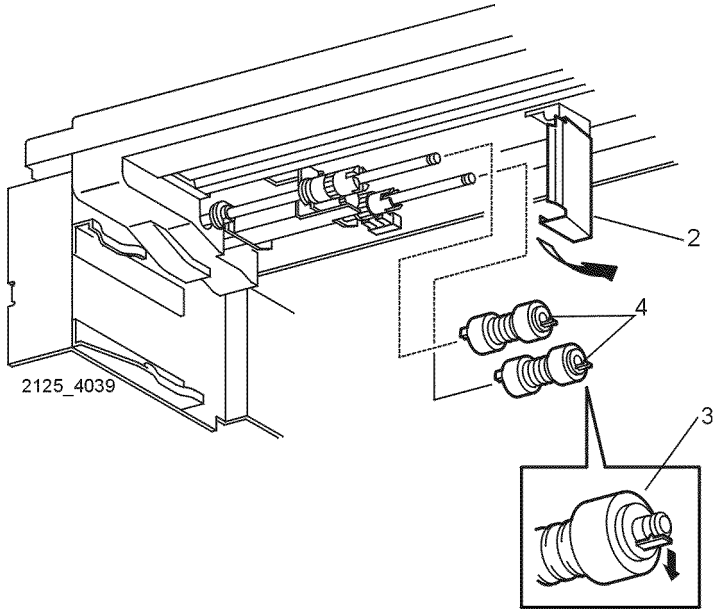


Figure 1 Paper Feed Rolls

Replacement

1. Reinstall the components in the reverse order.

REP 3.9 Feeder PWB

Parts List on PL 3.1

Removal

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Left Plate Assembly (REP 1.11).
7. Remove the Plate Handle (REP 1.12).
8. Open Rear Door.
9. Remove the Top Cover Assembly (REP 1.4).
10. Remove the Right Cover (REP 1.5).
11. Remove the LVPS PWB (REP 9.5).
12. Remove the Paper Feeder (REP 3.1).
13. Disconnect P/J64, P/J65, P/J66, and P/J67 from the Feeder PWB.
14. Remove the No Paper Actuator (REP 3.3)
15. Remove the four screws that secure the Feeder PWB to the Paper Feeder (Figure 1).
16. Remove the PWB (Figure 1).

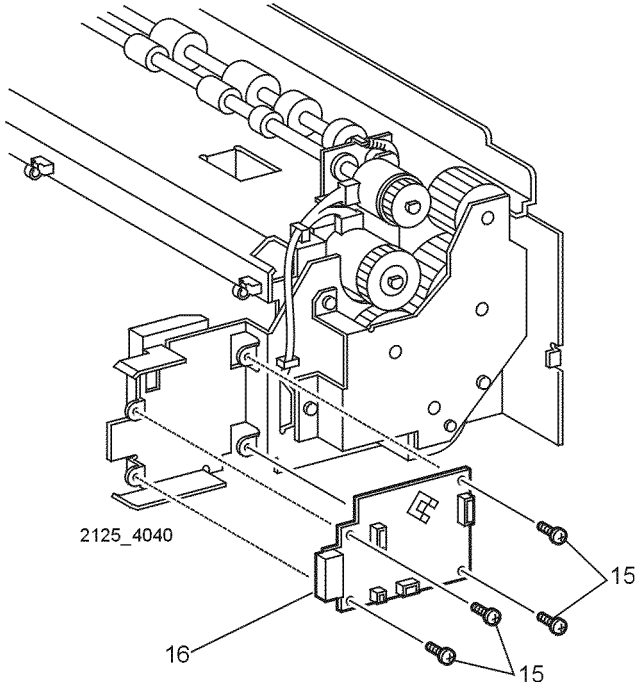


Figure 1 Feeder PWB

Replacement

1. Reinstall the components in the reverse order.

REP 3.10 Feeder Socket

Parts List on PL 3.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Left Plate Assembly (REP 1.11).
7. Remove the Plate Handle (REP 1.12).
8. Open Rear Door.
9. Remove the Top Cover Assembly (REP 1.4).
10. Remove the Right Cover (REP 1.5).
11. Remove the LVPS PWB (REP 9.5).
12. Remove the Paper Feeder (REP 3.1).
13. Remove the two screws that secure the Feeder Socket in the printer (Figure 1).

    NOTE: *It may be necessary to use a scribe or small screwdriver to lift the locking tabs to disconnect P/J671*

14. Lift locking tabs and disconnect P/J671 from the Socket (Figure 1).

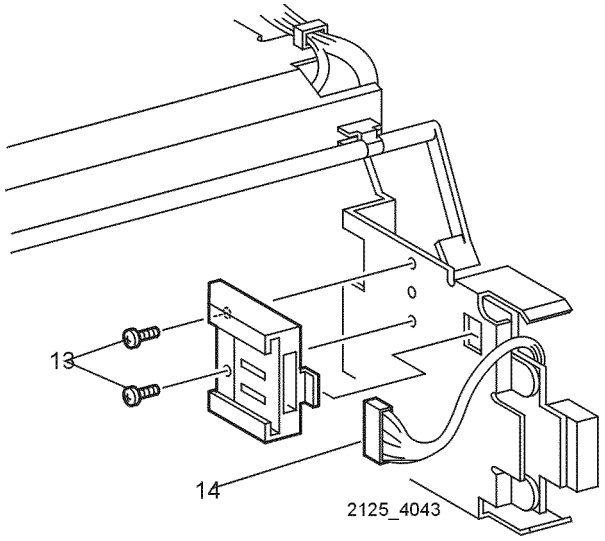


Figure 1 Feeder Socket

Replacement

1. Reinstall the components in the reverse order.

REP 3.11 Size Sensor Housing

Parts List on PL 9.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover (REP 1.1).
3. Remove Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover Assembly (REP 1.7).
6. Remove Top Cover Assembly (REP 1.4).
7. Remove the Left Plate Assembly (REP 1.11).
8. Remove the Plate Handle (REP 1.12).
9. Disconnect P/J33 from the Print Engine Controller PWB and remove cable from all cable clamps (Figure 1).
10. Press the locking pin and slide the housing to the rear of the printer and remove (Figure 1).

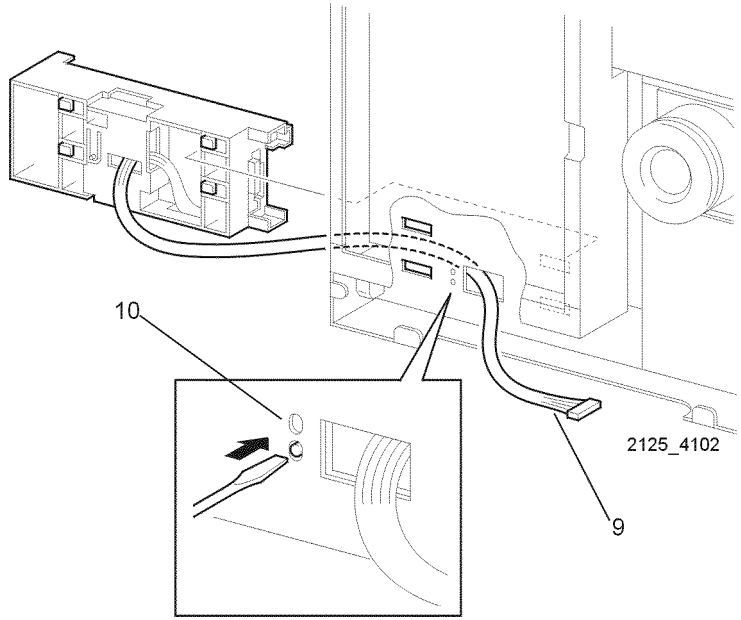


Figure 1 Size Sensor Housing

Replacement

1. Reinstall the components in the reverse order.

REP 3.12 Size Sensor Actuators

Parts List on PL 9.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover (REP 1.1).
3. Remove Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover Assembly (REP 1.7).
6. Remove Top Cover Assembly (REP 1.4).
7. Remove the Left Plate Assembly (REP 1.11).
8. Remove the Plate Handle (REP 1.12).
9. Remove the Size Sensor Housing (REP 3.11).

   NOTE: *Observe orientation of switch actuators before removal.*

10. Remove the four screws that secure the Size Sensor Actuators to the Size Sensor Housing (Figure 1).
11. From the back side, disengage the two Locking Tabs that secure the Size Sensor Actuators to the Housing Assembly and remove (Figure 1).

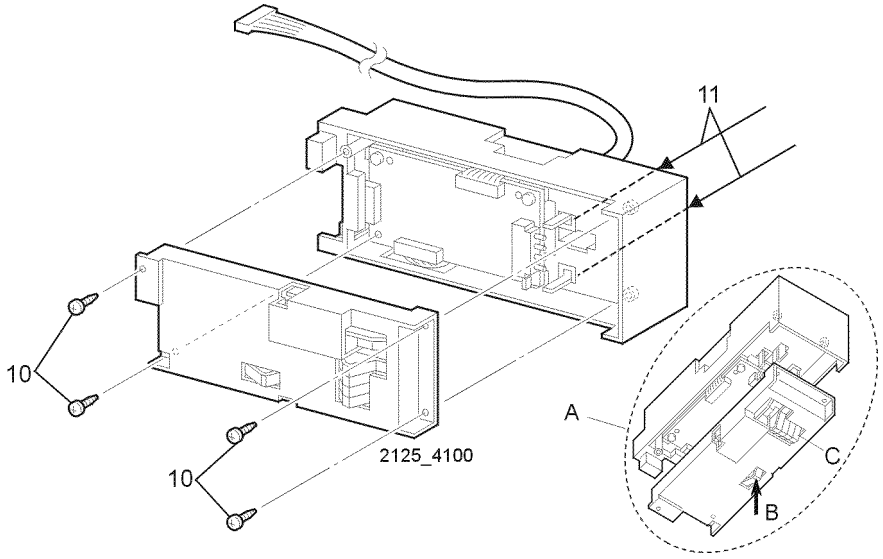


Figure 1 Size Sensor Actuators

Replacement

Refer to inset (A)

1. Position the Size Sensor Actuators below the Housing Assembly as shown.
2. Press and hold (B) to allow the actuators (C) to fall into position.
3. During reassembly ensure that locking tabs slide into position.
4. Reinstall the components in the reverse order.

REP 3.13 Tray 1 Size PWB

Parts List on PL 9.1

Removal

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove all optional feeders.
3. Remove the Left Interface Cover (REP 1.1).
4. Remove Left Cover (REP 1.2).
5. Remove the Front Cover Assembly (REP 1.6).
6. Remove the Left Front Cover Assembly (REP 1.7).
7. Remove Top Cover Assembly (REP 1.4).
8. Remove the Left Plate Assembly (REP 1.11).
9. Remove the Plate Handle (REP 1.12).
10. Remove the Size Sensor Housing (REP 3.11).
11. Remove the Size Sensor Actuators (REP 3.12)
12. Remove the two screws that secure the Tray 1 Size PWB to the Size Sensor Housing (Figure 1)
13. Lift the PWB and disconnect P/J51 and P/J331.

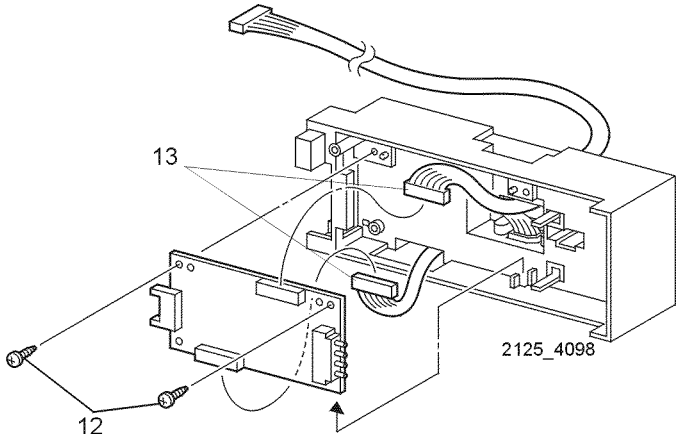


Figure 1 Tray 1 Size PWB

Replacement

1. Reinstall the components in the reverse order.

REP 3.14 Size Harness Assembly

Parts List on PL 9.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover (REP 1.1).
3. Remove Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover Assembly (REP 1.7).
6. Remove Top Cover Assembly (REP 1.4).
7. Remove the Left Plate Assembly (REP 1.11).
8. Remove the Plate Handle (REP 1.12).
9. Remove the Size Sensor Housing (REP 3.11).
10. Disconnect P/J51 from the Tray 1 Size PWB (Figure 1).
11. Remove the two screws that secure the Size Harness Assembly to the Sensor (Figure 1).
12. Remove the Size Harness Assembly (Figure 1).

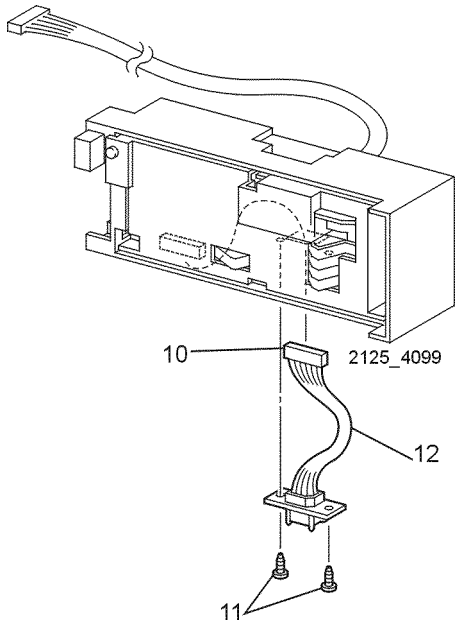


Figure 1 Size M Harness Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 4.1 MBF Chute Assembly

Parts List on PL 4.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Disconnect P/J41, P/J44, and P/J45 from the Connector PWB (Figure 1).
6. Open the two clamps securing the harness of the MBF Chute Assembly to the printer (Figure 1).
7. Remove the four screws that secure the MBF Chute Assembly. Remove the assembly (Figure 1).

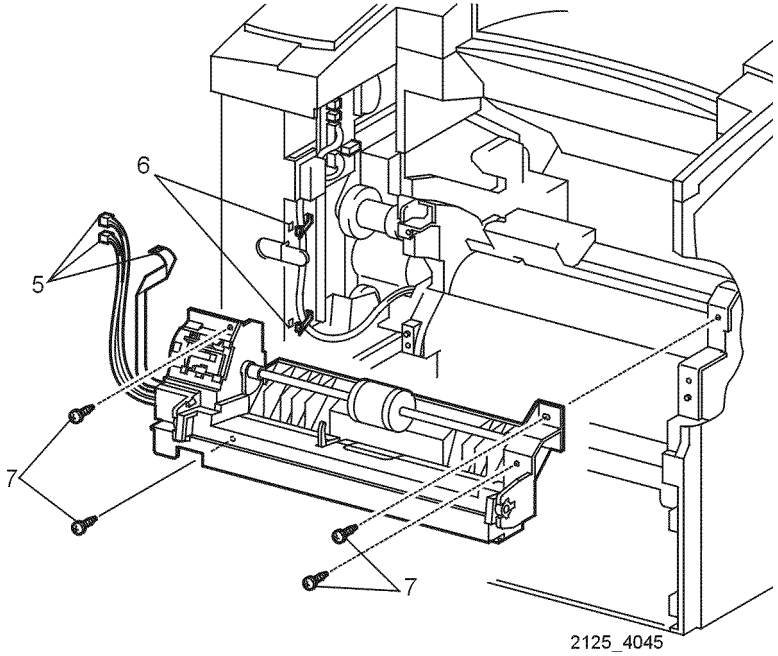


Figure 1 MBF Chute Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 4.2 MBF Feed Roll Assembly

Parts List on PL 4.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the MBF Chute Assembly (REP 4.1).
6. Remove the MBF Pick Up Gear Spring (Figure 1).
7. LIft the locking tab and remove the Pick Up Gear (Figure 1).
8. Lift the locking tab and slide the left MBF Pick Up Cam to the right (Figure 2).
9. Lift the locking tab and slide the right MBF Pick Up Cam to the left (Figure 2).
10. Aligning the pin in the shaft with the slit in the assembly, slide the MBF Feed Roll Assembly to the left (Figure 3).
11. Lift the right end of the shaft and remove (Figure 3).

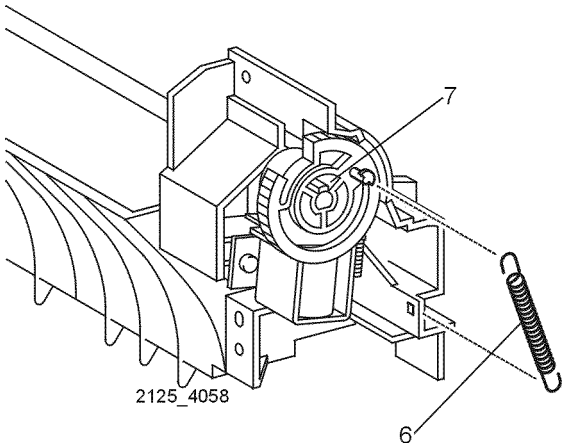


Figure 1 MBF Pick Up Gear Spring

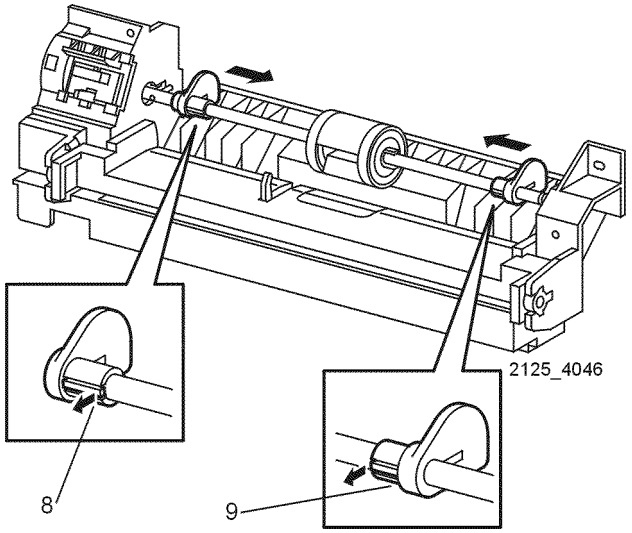


Figure 2 MBF Pick Up Cam

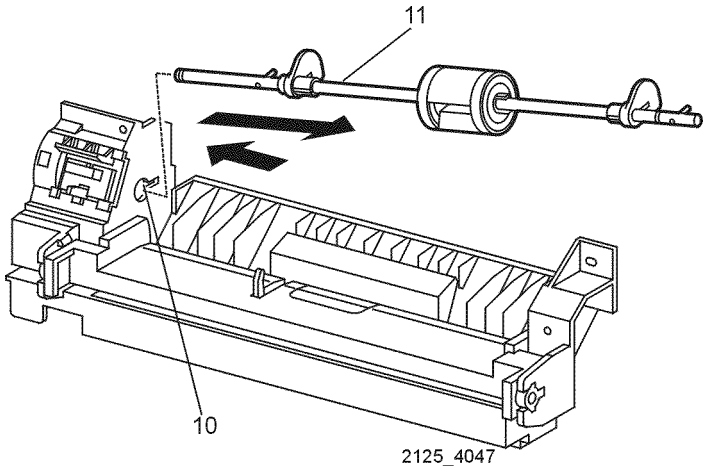


Figure 3 MBF Roll Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 4.3 MBF Feed Roll

Parts List on PL 4.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Open the Front Cover.
2. Lift the locking tab and slide the right core to the right (Figure 1).
3. Slide the MBF Feed Roll to the right and remove (Figure 1).

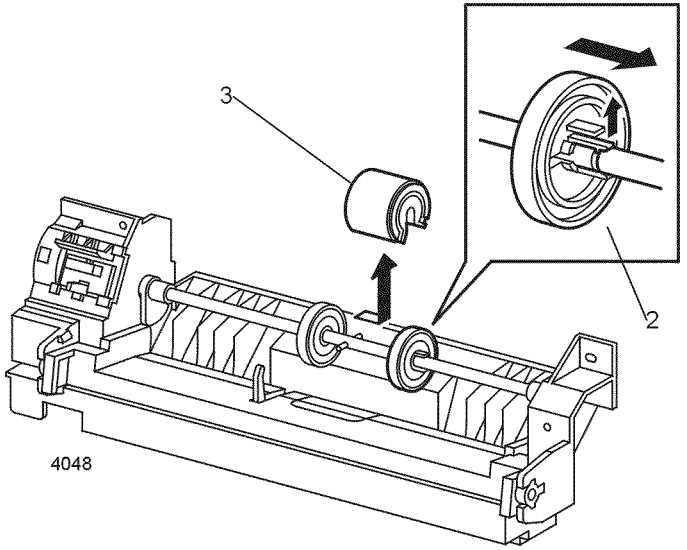


Figure 1 MBF Feed Roll

Replacement

NOTE: *Note the arrow on the side of the Feed Roll. Install with the arrow pointing in the direction of rotation.*

1. Reinstall the components in the reverse order.

REP 4.4 Tray Bottom Assembly

Parts List on PL 4.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the MBF Chute Assembly (REP 4.1).
6. Remove the MBF Feed Roll Assembly (REP 4.2).
7. Disconnect the hook that secures the Bottom Tray Assembly to the MBF Chute Assembly (Figure 1).
8. Use a small screwdriver to carefully lift the locking tab and remove the Bottom Tray Assembly (Figure 2).
9. Remove the right Exit Bearing (Figure 2).

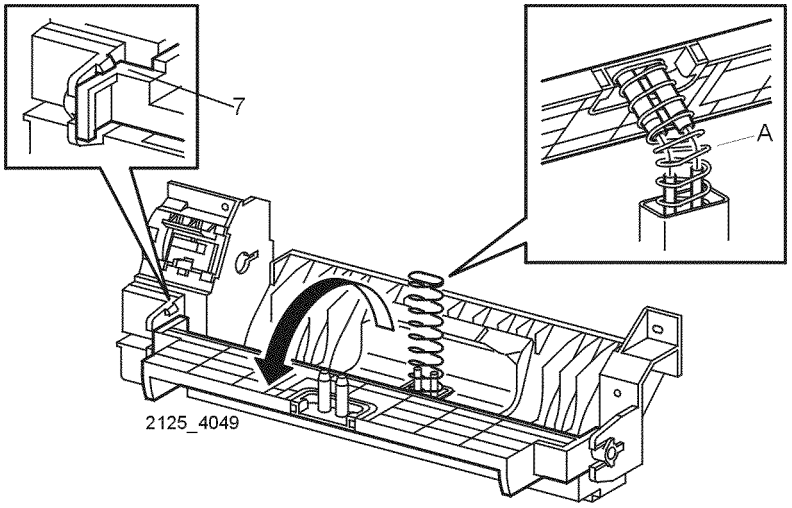


Figure 1 Bottom Tray Assembly Chute

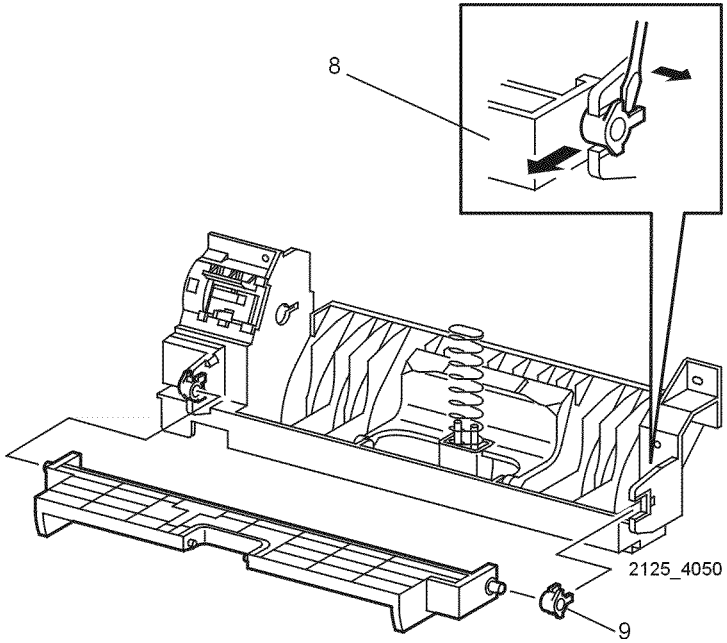


Figure 2 Bottom Tray Assembly

Replacement

1. Reinstall the components in the reverse order.

   NOTE: *After replacing the tray bottom, ensure that the sleeves on the Tray Bottom fit over the two posts on the MBF frame (see A, Figure 1).*

REP 4.5 MBF No Paper Actuator

Parts List on PL 4.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the MBF Chute Assembly (REP 4.1).
6. Remove the MBF Feed Roll Assembly (REP 4.2).
7. Remove the Bottom Tray Assembly (REP 4.4).
8. Lift the MBF No Paper Actuator from the back of the Bottom Tray and remove (Figure 1).

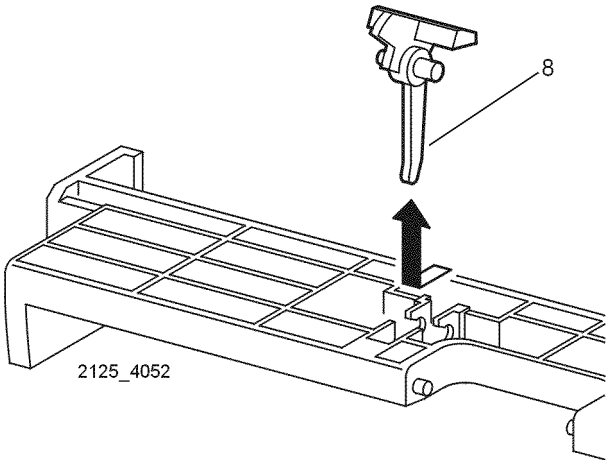


Figure 1 MBF No Paper Actuator

Replacement

1. Reinstall the components in the reverse order.

REP 4.6 Tray Pick Up

Parts List on PL 4.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the MBF Chute Assembly (REP 4.1).
6. Remove the MBF Feed Roll Assembly (REP 4.2).
7. Open the Bottom Tray Assembly.
8. Lift the Tray Pick Up from the Bottom Tray Assembly and remove (Figure 1).

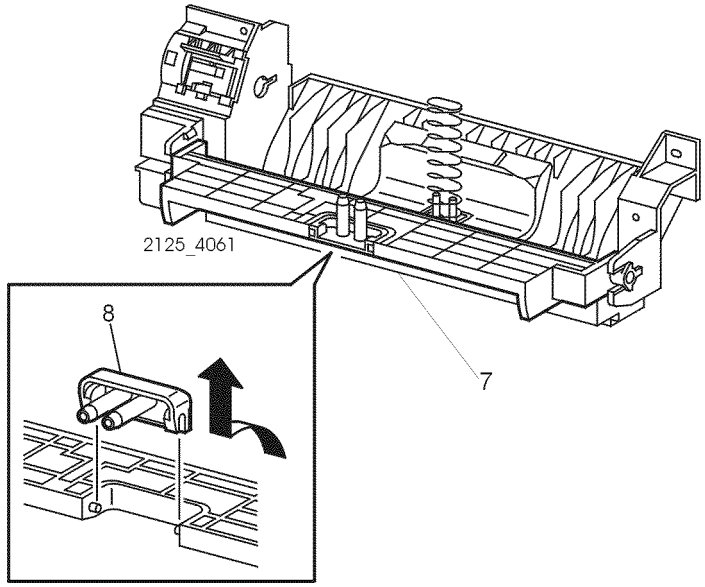


Figure 1 Tray Pick Up

Replacement

1. Reinstall the components in the reverse order.

REP 4.7 Retard Pad Assembly

Parts List on PL 4.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the MBF Chute Assembly (REP 4.1).
6. Remove the MBF Feed Roll Assembly (REP 4.2).
7. Open the Bottom Tray Assembly (REP 4.4).
8. Carefully pry the left and right bracket arms of the Retard Pad Assembly from the MBF Chute Assembly (Figure 1).
9. Remove the assembly (Figure 1).

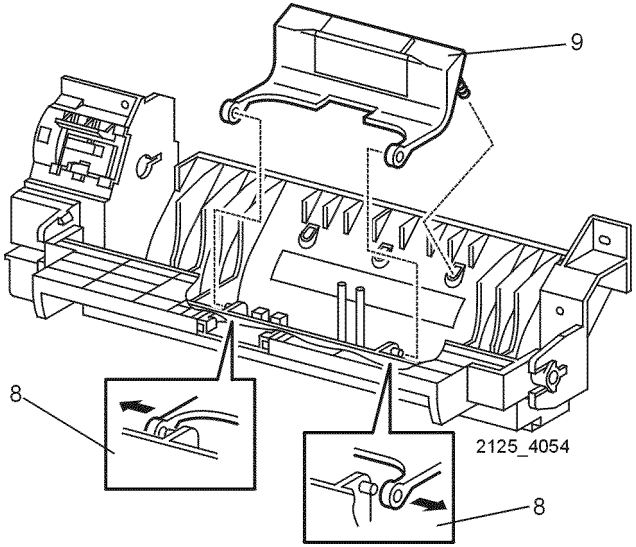


Figure 1 Retard Pad Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 4.8 MBF No Paper Sensor

Parts List on PL 4.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the MBF Chute Assembly (REP 4.1).
6. Remove the MBF Feed Roll Assembly (REP 4.2).
7. Open the Bottom Tray Pick Up (Figure 1).
8. Remove the MBF Bottom Tray Spring from the two studs on the MBF Chute Assembly (Figure 1).
9. Release the five hooks that secures the No Paper Sensor and remove (Figure 2).
10. Disconnect P/J451 from the No Paper Sensor (Figure 2).

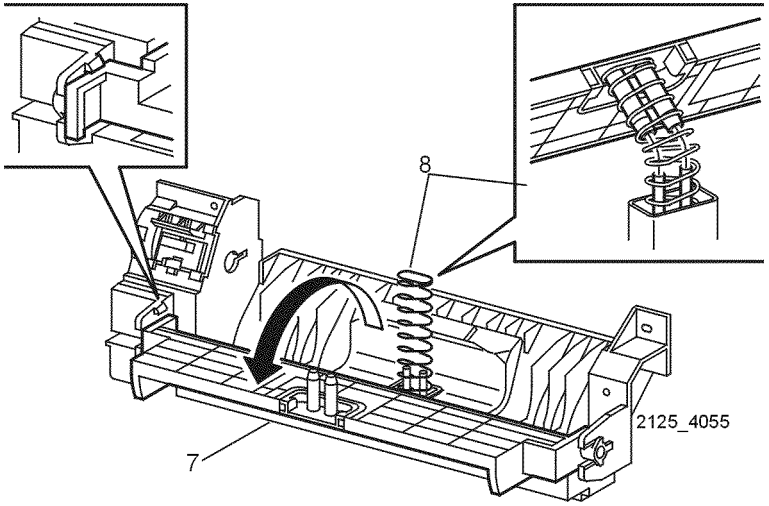


Figure 1 Bottom Tray Pick Up

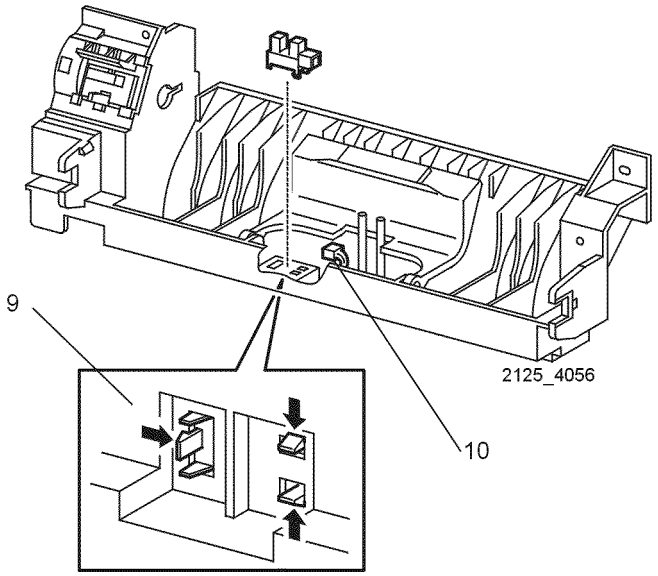


Figure 2 MBF No Paper Sensor

Replacement

1. Reinstall the components in the reverse order.

REP 4.9 Pick Up Solenoid

Parts List on PL 4.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the MBF Chute Assembly (REP 4.1).
6. Remove the screw that secures the Pick Up Solenoid to the MBF Chute Assembly (Figure 1).
7. Remove the solenoid (Figure 1).

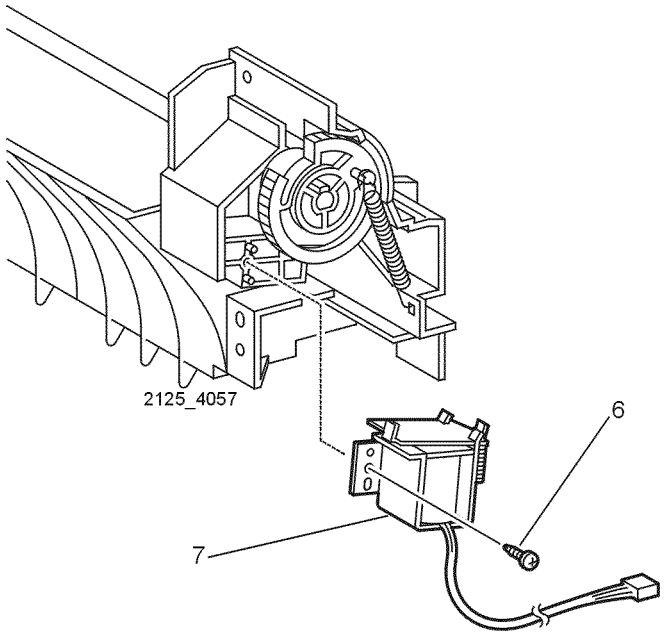


Figure 1 Pick Up Solenoid

Replacement

1. Reinstall the components in the reverse order.

REP 4.10 Envelope Connector Assembly

Parts List on PL 4.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the MBF Chute Assembly (REP 4.1).
5. Remove the two screws that serve the Envelope Connector Assembly in the Chute Assembly (Figure 1).
6. Slide the Envelope Connector Assembly and the Mounting to the left and remove (Figure 1).
7. Remove the Envelope connector Assembly from the MBF Assembly.

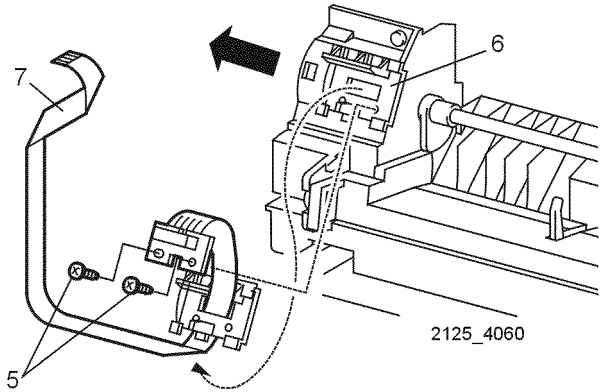


Figure 1 Envelope Connector Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 5.1 Paper Handler Assembly

Parts List on PL 5.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the MBF Chute Assembly (REP 4.1).
6. Using long nose pliers remove Shaft 14 from the Printer (Figure 1).
7. Remove Gear 14 (Figure 2).
8. Disconnect P/J43 and P/J42 from the Connector PWB (Figure 3).
9. Remove the five screws that secure the Paper Handler Assembly (Figure 3).
10. Lift the right end slightly and remove the Paper Handler (Figure 4).

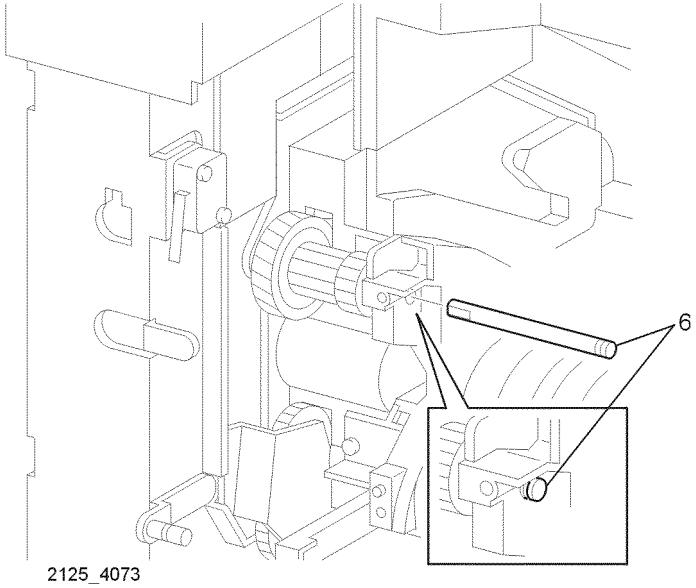


Figure 1 Shaft 14 Paper Handler Assembly

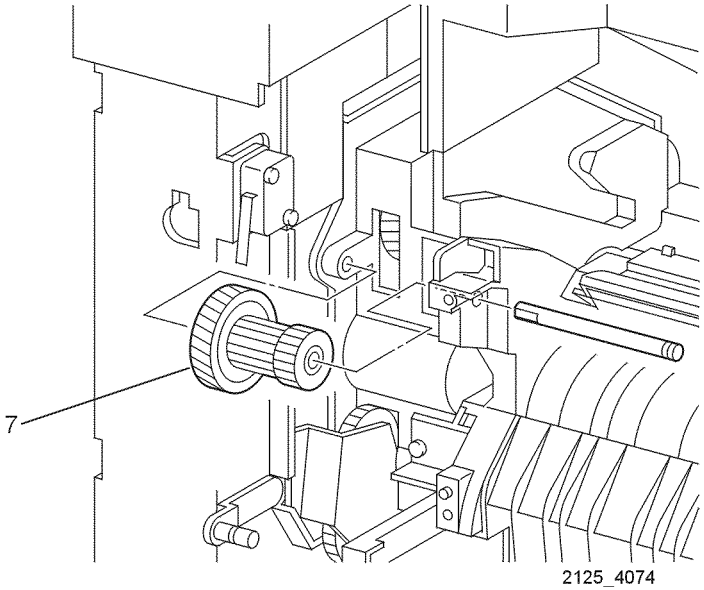


Figure 2 Gear 14 Paper Handler Assembly

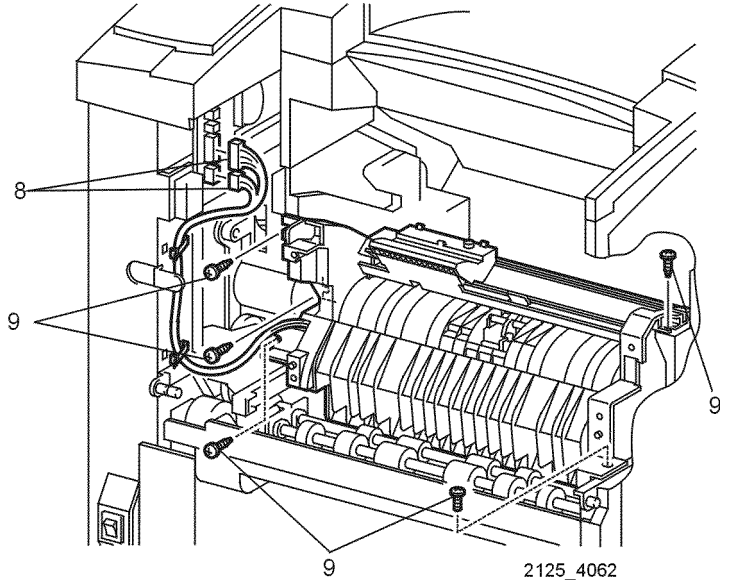


Figure 3 Paper Handler Assembly

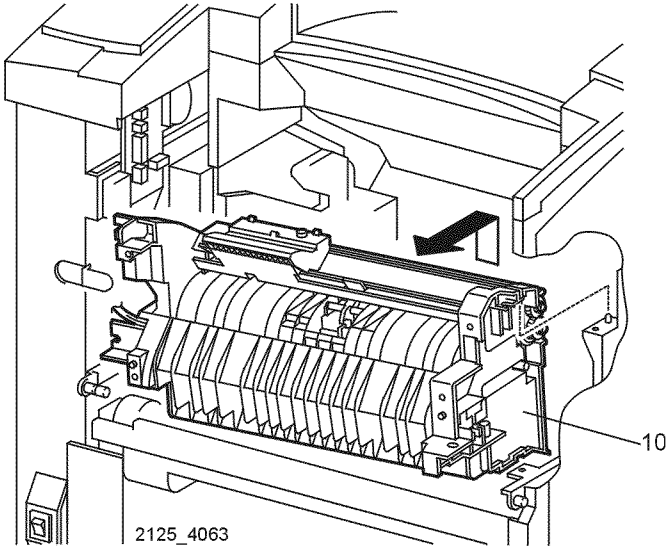


Figure 4 Paper Handler Assembly Removal

Replacement

1. Reinstall the components in the reverse order.

REP 5.2 Toner Sensor

Parts List on PL 5.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the MBF Chute Assembly (REP 4.1).
6. Remove the Paper Handler Assembly (REP 5.1).
7. Release the front locking tab and remove the Sensor (Figure 1).
8. Disconnect P/J421 from the Toner Sensor (Figure 1).

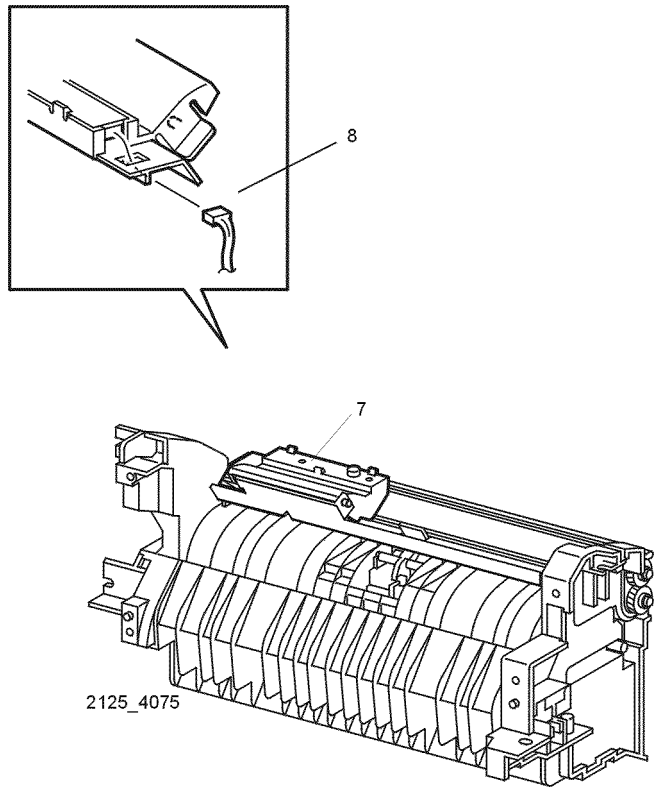


Figure 1 Toner Sensor Kit

Replacement

1. Reinstall the components in the reverse order.

REP 5.3 Registration Actuator

Parts List on PL 5.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the MBF Chute Assembly (REP 4.1).
6. Remove the Paper Handler Assembly (REP 5.1).
7. Open the Upper Chute (Figure 1).
8. Disconnect the right hook of the Registration Sensor Spring (Figure 1).
9. Move the Actuator to the left until the right end is free (Figure 1).
10. Remove the Actuator.

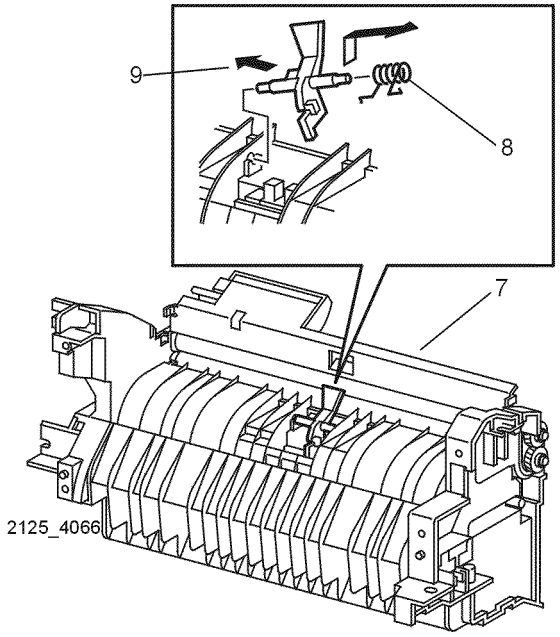


Figure 1 Registration Actuator

Replacement

1. Reinstall the components in the reverse order.

REP 5.4 Registration Sensor

Parts List on PL 5.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the MBF Chute Assembly (REP 4.1).
6. Remove the Paper Handler Assembly (REP 5.1).
7. Remove the Registration Actuator (REP 5.3).
8. Disengage the five hooks that secure the Sensor (Figure 1).
9. Remove the Sensor out the back of the Paper Handler. (Figure 1).
10. Disconnect P/J432 from the Registration Sensor.

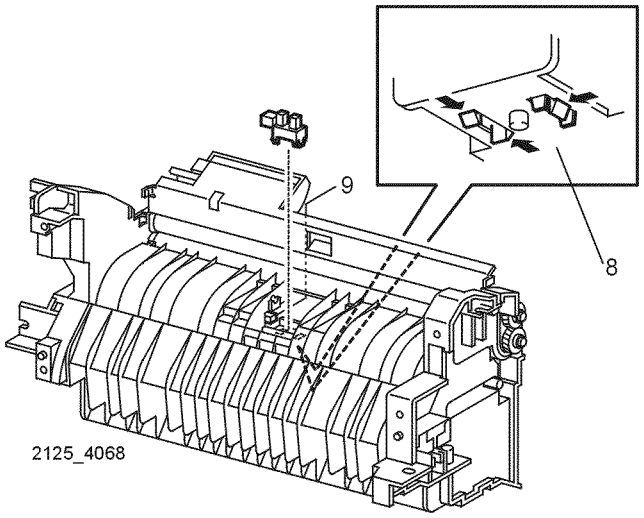


Figure 1 Registration Sensor

Replacement

1. Reinstall the components in the reverse order.

REP 5.5 Registration Clutch

Parts List on PL 5.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the MBF Chute Assembly (REP 4.1).
6. Remove the Paper Handler Assembly (REP 5.1).
7. Remove the E-ring that secures the Registration Clutch to the Paper Handler Assembly (Figure 1).
8. Slide the clutch out and Disconnect P/J453 from the Clutch (Figure 1).
9. Remove the Clutch.

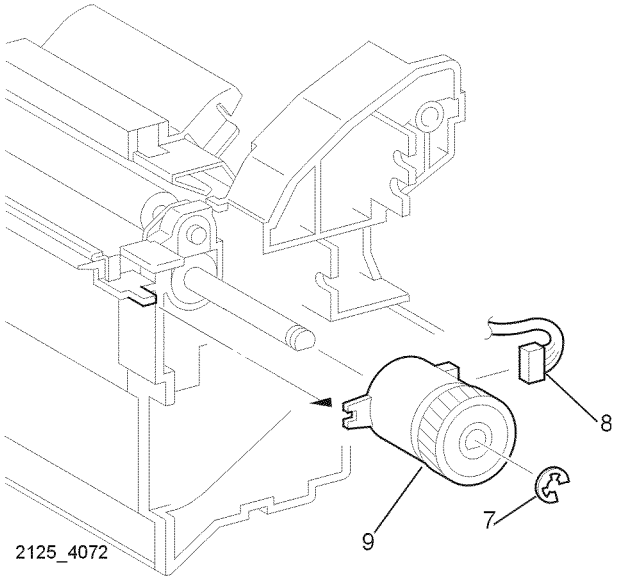


Figure 1 Registration Clutch

Replacement

1. Reinstall the components in the reverse order.

REP 5.6 Rubber Registration Roll

Parts List on PL 5.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the MBF Chute Assembly (REP 4.1).
6. Remove the Paper Handler Assembly (REP 5.1).
7. Remove the Registration Clutch (REP 5.5).
8. Remove the two E-rings that secure the two Registration Gears (Figure 1).
9. Remove the E-ring from the left end of the Metal Registration Shaft (Figure 1).
10. Release the two registration springs from the Metal Registration Roll (Figure 2).
11. Squeeze and hold the Upper Chute and Inlet Chute together. Align the hole in the chute with the Boss on the Left Bearing. Remove the Left Bearing from the Metal Registration Roll (Figure 1).
12. Lift the Torsion Spring and slide the Right Bearing out. Squeeze and hold the Upper Chute and Inlet Chute together and align the hole in the chute with the Boss on the Right Bearing. Remove the Right Bearing (Figure 1).
13. Slide the Metal Registration Shaft to the right and remove the assembly (Figure 1).
14. Remove the left and right bearings from the Rubber Registration Roll (Figure 3).
15. Lift the right end of the Rubber Registration Roll and remove (Figure 3).

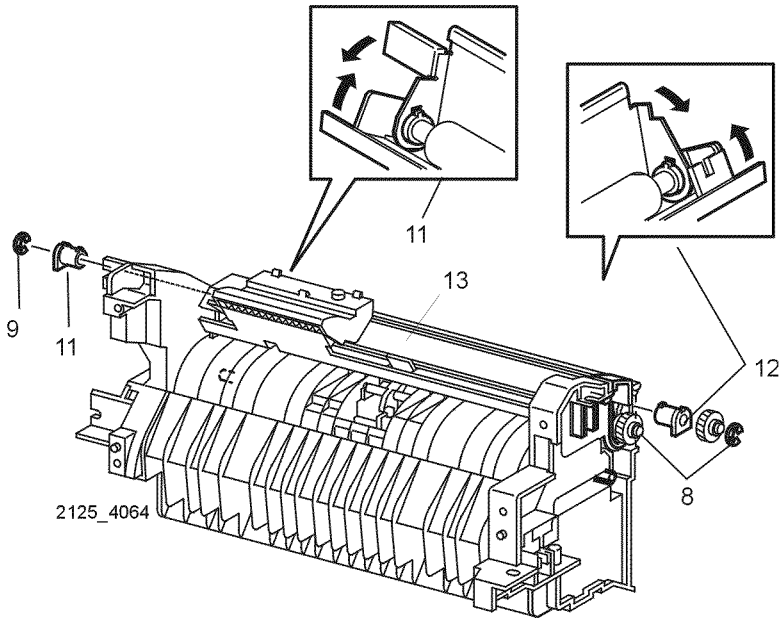


Figure 1 Registration Roll

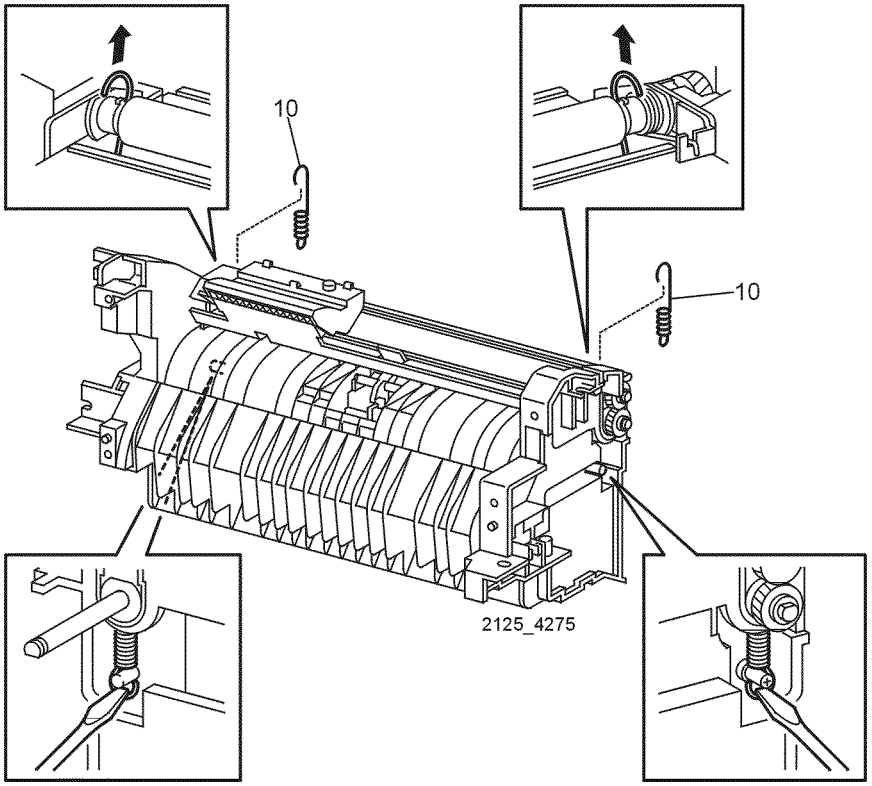


Figure 2 Registration Springs

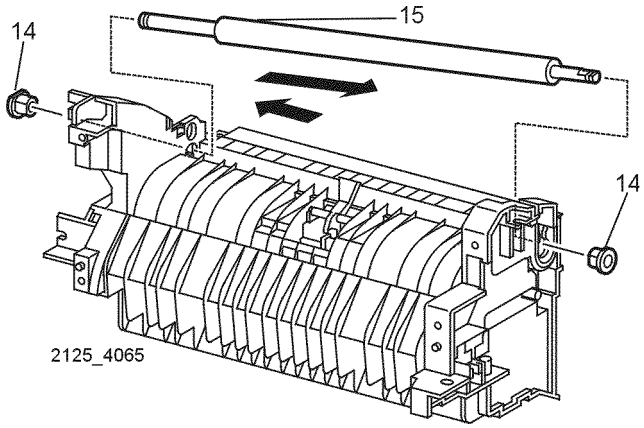


Figure 3 Rubber Registration Roll

Replacement

1. Reinstall the components in the reverse order.

REP 6.1 Transport Chute Assembly

Parts List on PL 6.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the MBF Chute Assembly (REP 4.1).
6. Remove the Paper Handler Assembly (REP 5.1).
7. Remove the BTR Assembly (REP 7.1).
8. Remove the screw that secures the DTS Wire (white) to the Transport Chute Assembly (Figure 1).
9. Remove the screw that secures the TR Wire (red) to the Transport Chute Assembly (Figure 1).
10. Use care not to drop high voltage contact springs when chute is removed (Figure 1).
11. Remove the two screws that secure the Transport Chute Assembly to the printer (Figure 1). Remove Assembly.

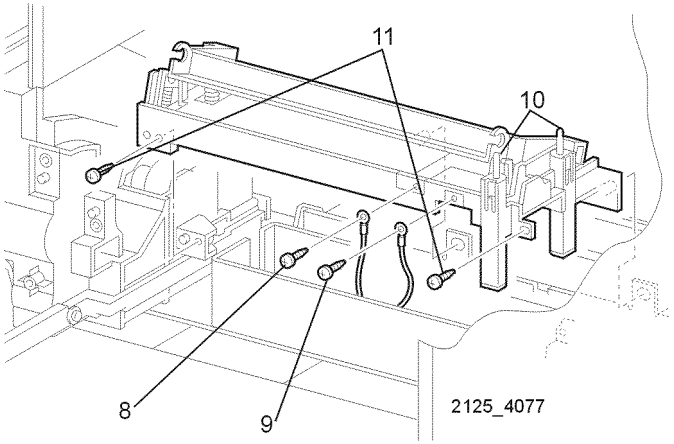


Figure 1 Transport Chute Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 6.2 Fuser Assembly

Parts List on PL 6.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

The Fuser may be hot.

1. Open the Rear Cover Assembly.
2. Remove Duplex Assembly (if installed).
3. Remove the two thumb screws that secure the Fuser Assembly to the printer and remove the Fuser (Figure 1).

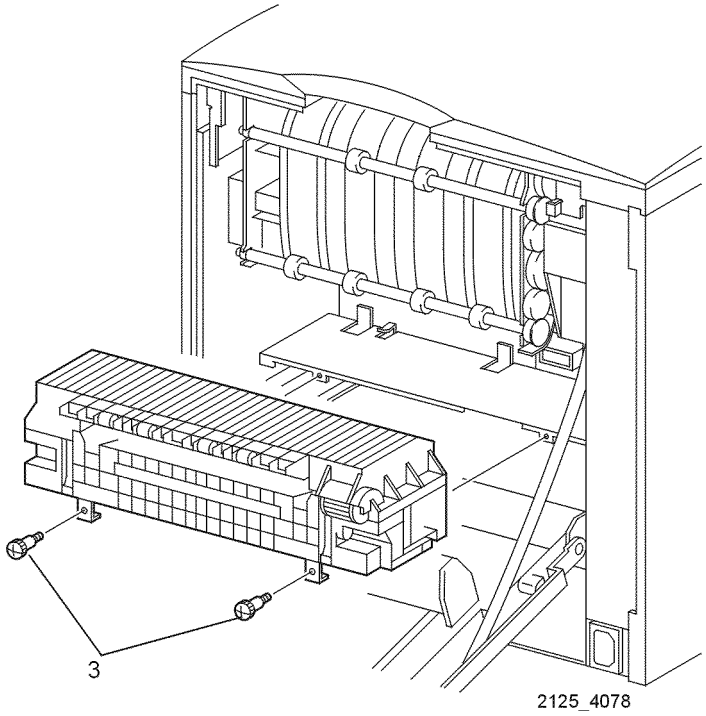


Figure 1 Fuser Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 6.3 Fuser Harness Assembly

Parts List on PL 6.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Left Plate Assembly (REP 1.11).
7. Remove the Plate Handle (REP 1.12).
8. Open Rear Door.
9. Remove the Fuser Assembly (REP 6.2).
10. Remove the Top Cover Assembly (REP 1.4).
11. Remove the MBF Chute Assembly (REP 4.1).
12. Remove the Paper Handler Assembly (REP 5.1)
13. Remove the Transport Chute Assembly (REP 6.1)
14. Remove the Print Cartridge Top Guide Assembly (REP 7.2).
15. Remove the Print Engine Controller PWB (REP 9.3)
16. Remove the Main Motor Assembly (REP 8.1)
17. Remove the LVPS PWB (REP 9.5)
18. Remove the Drive Gear Assembly (REP 8.2)
19. Unplug the P/JPRB (red) from the HVPS PWB (REP 10.6).
20. Remove the screw that secures the HVPS Housing to the printer (Figure 1).
21. Remove the HVPS.
22. Pull the Fuser Harness Assembly from the left side of the printer (Figure 1).
23. Remove the two screws that secure the Fuser Harness Assembly to the printer (Figure 1).
24. Remove the Fuser Harness Assembly.

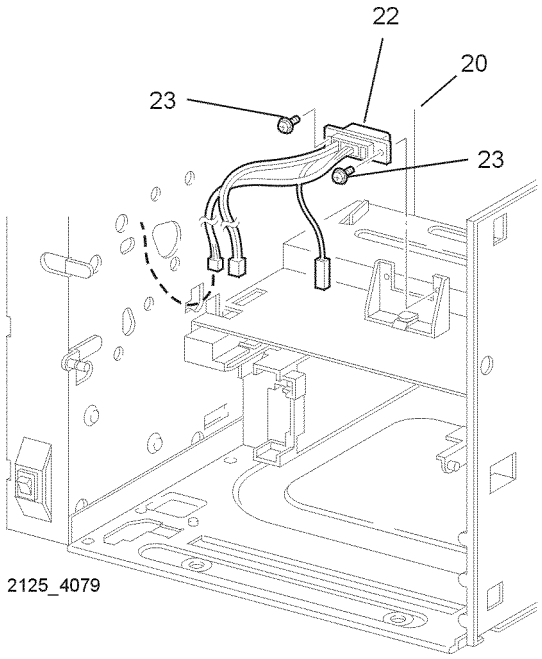


Figure 1 Fuser Harness Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 6.4 Exit Chute Assembly

Parts List on PL 7.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the Left Cover (REP 1.2).
6. Remove the Left Plate Assembly (REP 1.11).
7. Remove the Top Cover Assembly (REP 1.4).
8. Remove the Rear Cover Assembly (REP 1.8)
9. Remove the Interlock Cover (REP 1.10).
10. Disconnect P/J31 and P/J32 from the Print Engine Controller PWB (Figure 1).
11. Remove the four screws that secure the Exit Chute Assembly to the printer (Figure 2).
12. Remove the Exit Chute Assembly (Figure 2).

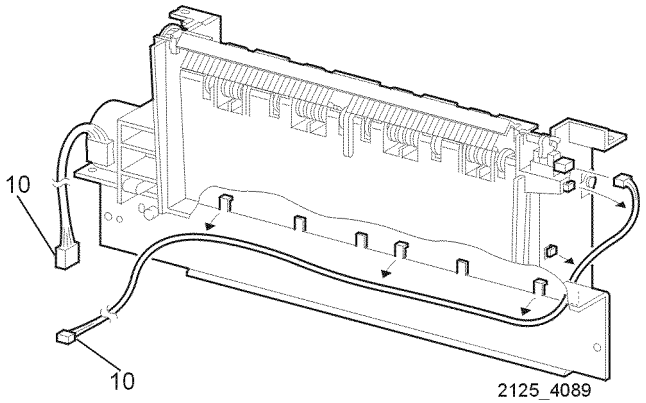


Figure 1 Exit Chute Harness Assembly

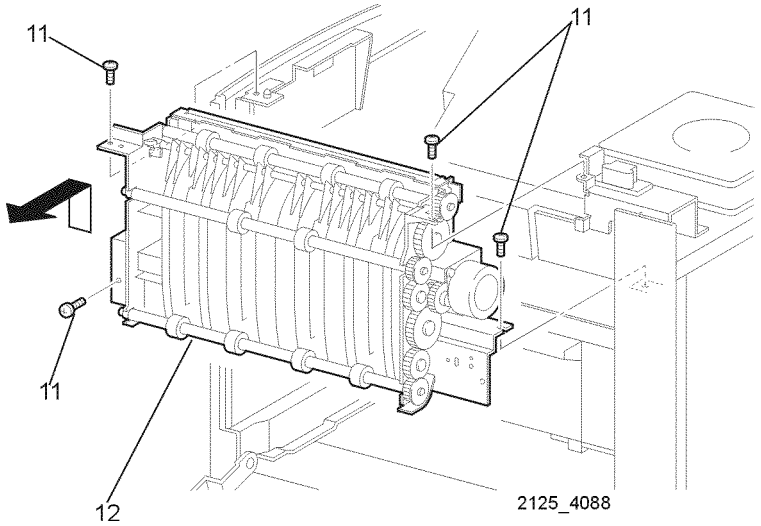


Figure 2 Exit Chute Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 6.5 Exit Motor Assembly

Parts List on PL 7.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the Left Cover (REP 1.2).
6. Remove the Left Plate Assembly (REP 1.11).
7. Remove the Top Cover Assembly (REP 1.4).
8. Remove the Rear Cover Assembly (REP 1.8)
9. Remove the Interlock Cover (REP 1.10).
10. Remove the Exit Chute Assembly (REP 6.4).
11. Remove the two screws that secure the Exit Motor Assembly to the Exit Chute Assembly (Figure 1).
12. Remove the Motor (Figure 1).

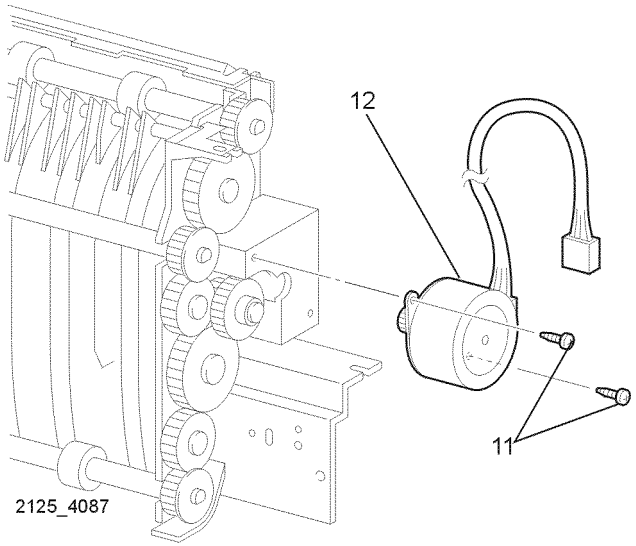


Figure 1 Exit Motor Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 6.6 Stack Full Sensor

Parts List on PL 7.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the Top Cover Assembly (REP 1.4).
6. Open Rear Cover.
7. Remove the Static Eliminator Assembly (See REP 6.8 - step 6).
8. Remove the Stack Full Actuator (REP 6.8).
9. Disconnect P/J311 from the Stack Full Sensor (Figure 1).
10. Disengage the five hooks securing the Stack Full Sensor to the Exit Chute Assembly (Figure 1) Remove the Sensor (Figure 1)

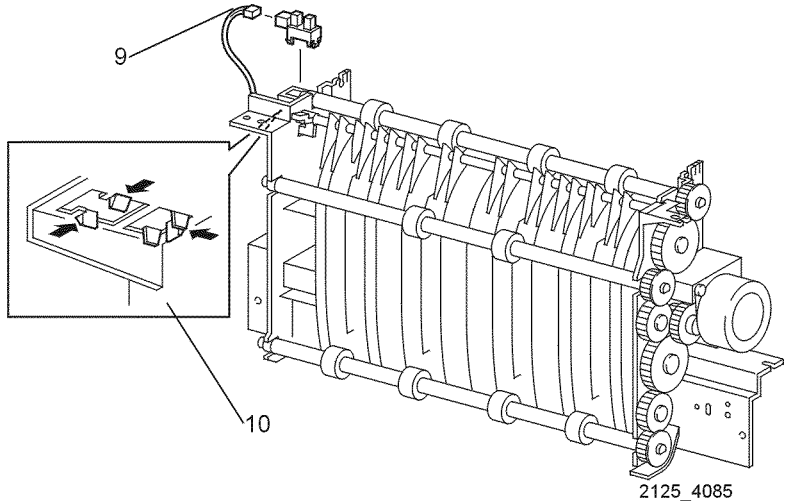


Figure 1 Exit Sensor

Replacement

1. Reinstall the components in the reverse order.

REP 6.7 Mid 1 & Mid 2 Roll Assemblies

Parts List on PL 7.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Top Cover Assembly (REP 1.4).
7. Remove the Rear Cover Assembly (REP 1.8).
8. Remove the Interlock Cover (REP 1.10).
9. Remove the Left Plate Assembly (REP 1.11).
10. Remove the Exit Chute Assembly (REP 6.4).
11. Lift the Static Eliminator Assembly and remove (Figure 1) (See REP 6.8 - step 6).
12. Remove the Stack Full Actuator (REP 6.8).
13. Release the locking tab and remove the Exit-17 Gear from the defective Roll Assembly (Figure 1), (Figure 2), or (Figure 3).
14. Remove the Exit-32 Gear from the Exit Chute Assembly (Figure 1).
15. With a small screwdriver carefully release the locking tab that secures the Exit Bearings to the Exit Chute Assembly (Figure 1), (Figure 2), or (Figure 3).
16. Remove the Roll Assembly together with the Exit Bearing from the Exit Chute Assembly (Figure 1), (Figure 2), or (Figure 3).
17. Remove the left Exit Bearing from the Roll Assembly.

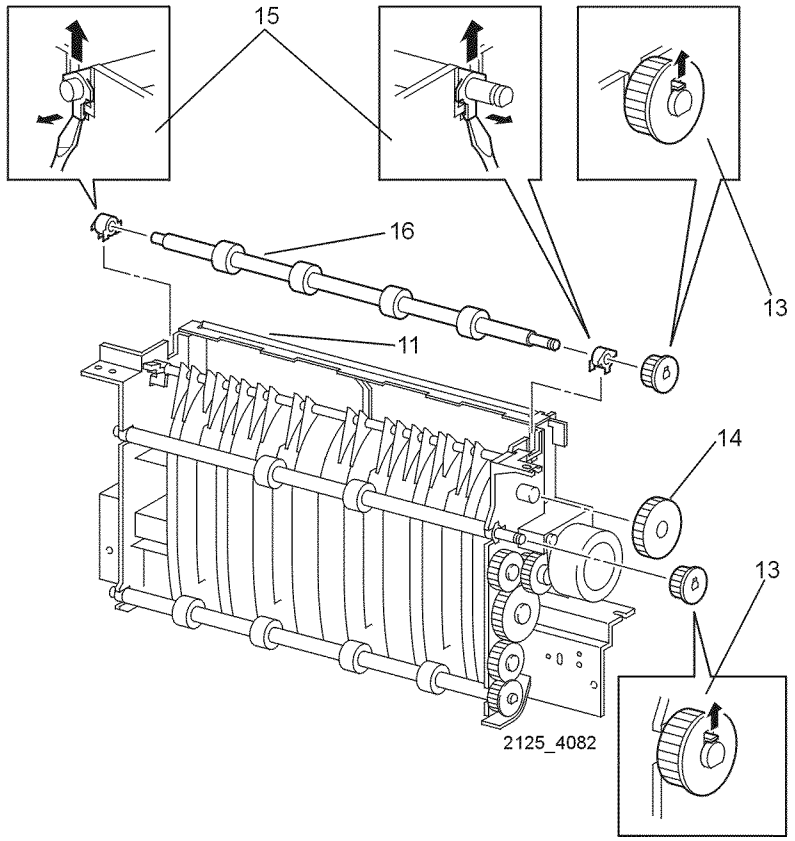


Figure 1 Exit 17 & Exit 32 Gears

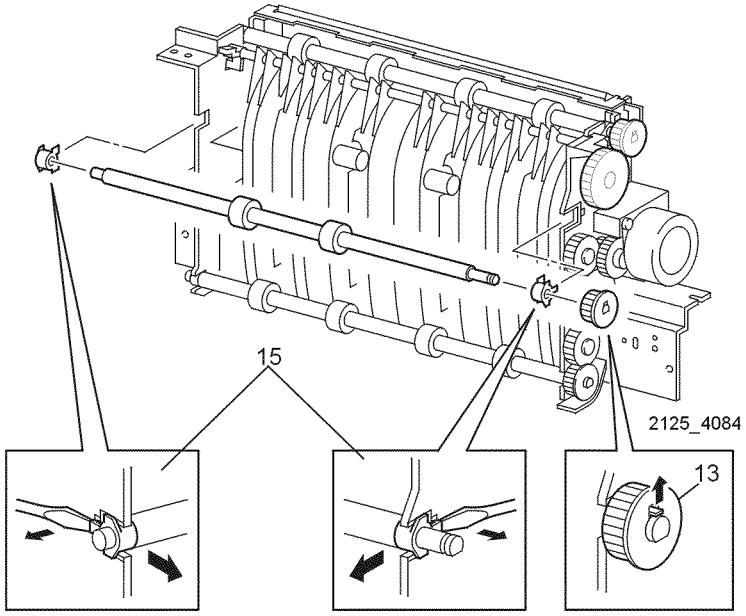


Figure 2 Mid 1 Roll Assembly

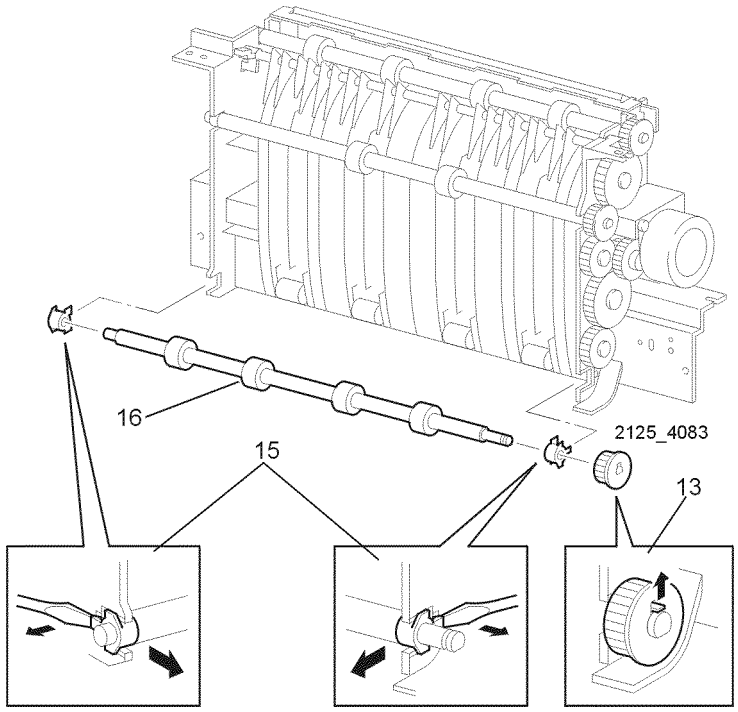


Figure 3 Mid 2 Roll Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 6.8 Stack Full Actuator

Parts List on PL 7.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Top Cover Assembly (REP 1.4).
5. Remove the Rear Cover Assembly (REP 1.8)
6. Remove the Static Eliminator Assembly (Figure 1).
7. Lift the right end of the Actuator free of the Exit Chute Assembly (Figure 2).
8. Remove the Actuator.

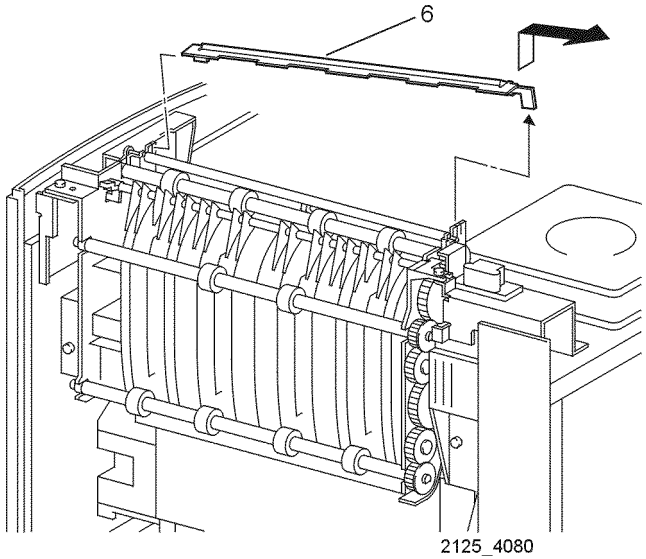


Figure 1 Static Eliminator Assembly

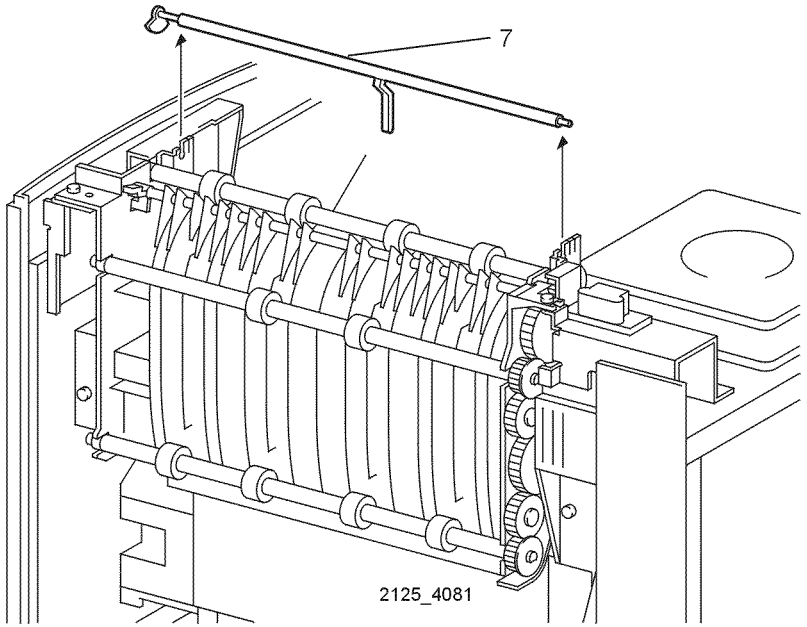


Figure 2 Stack Full Actuator

Replacement

1. Reinstall the components in the reverse order.

REP 6.9 Fuser Upper Cover Assembly/ Heat Rod

Parts List on PL 6.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Fuser Assembly (REP 6.2).
2. Disconnect P/J274 from the left end of the Fuser Assembly (Figure 1).
3. Remove the four screws securing the right and left end cover on the Fuser Assembly (Figure 1).
4. Remove both covers while carefully disengaging the wiring harness on each end (Figure 1).

   NOTE: *The Heat Rod must be removed before the Upper Cover Assembly to avoid breakage.*

5. Invert the Fuser Assembly to access the Fuser Heat Rod (Figure 2)
6. Remove the three screws securing the Fuser Heat Rod and Harness (Figure 2).

   NOTE: *Avoid touching the glass rod with your fingers. Oil from your skin will contaminate and shorten the life of the Heat Rod.*

7. Carefully remove the Heat Rod by lifting the right end sliding it out to the right side of the Heat Roll (Figure 3).
8. Return the Fuser Assembly to it's right side up position (Figure 4).
9. Remove the four screws and the Fuser Upper Cover (Figure 4).

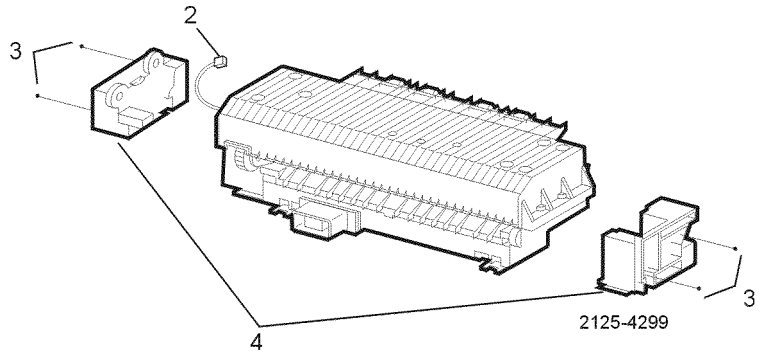


Figure 1 Fuser Assembly

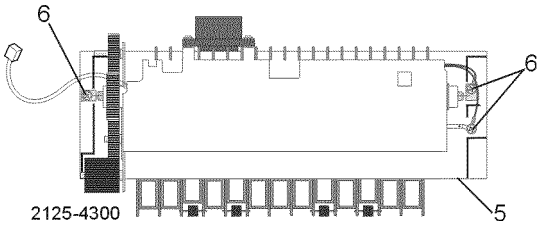


Figure 2 Fuser Heat Rod

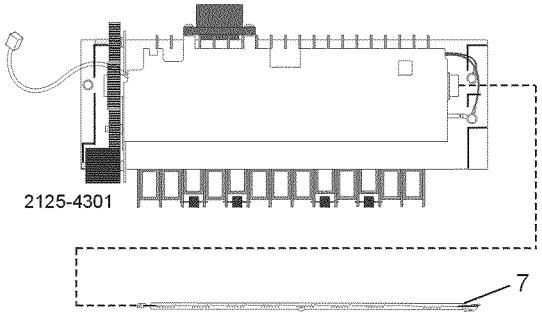


Figure 3 Heat Rod

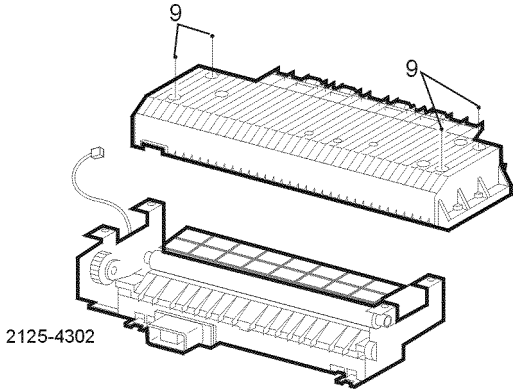


Figure 4 Fuser Upper Cover

Replacement

1. Reinstall the components in the reverse order.

REP 7.1 BTR Assembly

Parts List on PL 6.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

Do not touch the surface of the BTR with your hands. Oil from your hands can cause image quality problems.

After removing the BRT Roll, store the Roll on clean paper and cover with another sheet of paper.

1. Open the Front Cover Assembly and remove the Print Cartridge.
2. Push down to release the left and right latches of the BTR Assembly (Figure 1).
3. Holding the ends of the BTR Assembly, remove the assembly (Figure 1).

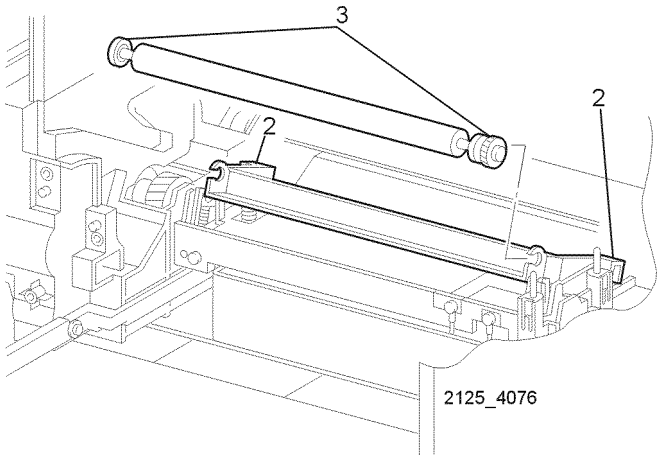


Figure 1 BTR Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 7.2 Print Cartridge Top Guide Assembly

Parts List on PL 8.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.2)
3. Remove the Option Cover (REP 1.3).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Top Cover Assembly (REP 1.4).
7. Remove the Left Plate Assembly (REP 1.11).
8. Open the Rear Cover.
9. Disconnect P/J 25 from the Print Engine Controller PWB (REP 9.3).
10. Remove the two screws that secure the Print Cartridge Top Guide Assembly to the printer (Figure 1).
11. Remove the Print Cartridge Top Guide Assembly together with the Print Cartridge Sensor Assembly from the printer (Figure 1).

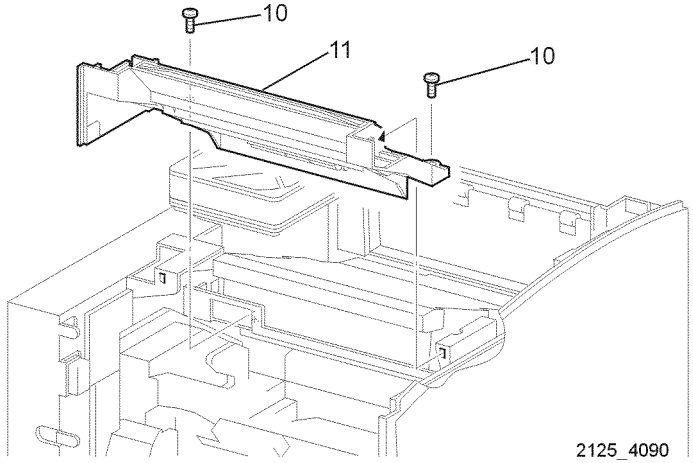


Figure 1 EP Cartridge Top Guide Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 7.3 Print Cartridge Sensor Assembly

Parts List on PL 8.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.2)
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove the Top Cover Assembly (REP 1.4).
6. Remove the Left Plate Assembly (REP 1.11).
7. Open the Rear Cover.
8. Remove the Print Cartridge Top Guide Assembly (REP 7.3).
9. Release the harness of the Print Cartridge Sensor Assembly from the three clamps securing it to the Print Cartridge Top Guide Assembly (Figure 1).
10. With a small screwdriver pry the right shaft free of the assembly (Figure 1).
11. With a small screwdriver pry the left shaft free of the assembly. Remove the Sensor Assembly (Figure 1).
12. Remove the Sensor Assembly (Figure 1).

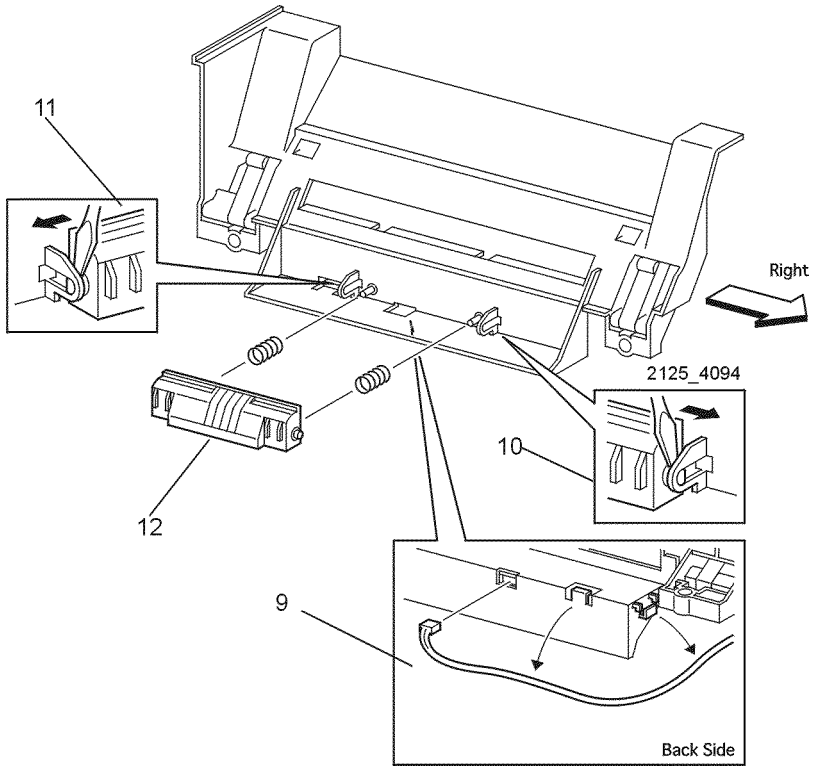


Figure 1 Print Cartridge Sensor Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 7.4 Laser Assembly

Parts List on PL 8.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Front Cover Assembly (REP 1.6).
2. Remove the Left Front Cover (REP 1.7).
3. Open the Rear Cover.
4. Remove the Top Cover Assembly (REP 1.4).
5. Remove the four screws securing the Laser Assembly to the printer (Figure 1).
6. Raising the Laser Assembly slightly disconnect P/J213 and P/J223 from the rear and two connectors from the bottom of the Laser Assembly (Figure 1).
7. Remove the Laser Assembly from the printer (Figure 1).

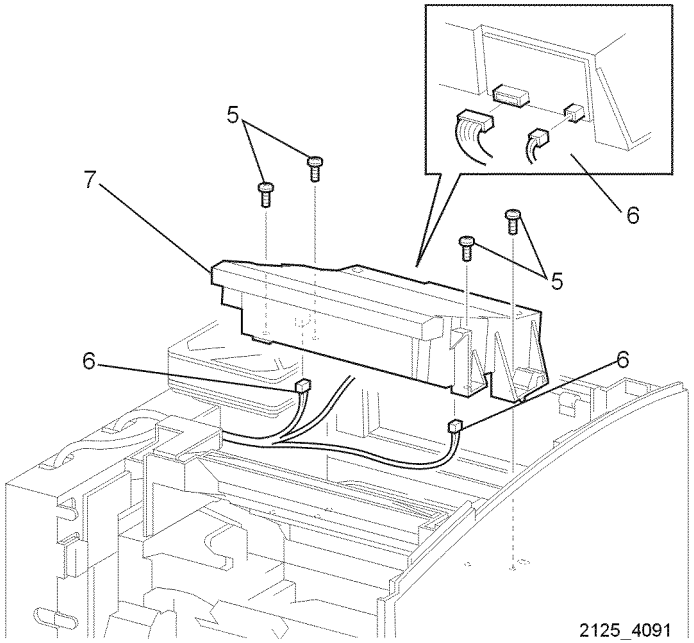


Figure 1 Laser Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 7.5 Print Cartridge Side Guide

Parts List on PL 8.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover (REP 1.1).
3. Remove Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Remove MBF Chute Assembly (REP 4.1).
6. Remove the Paper Handler Assembly (REP 5.1).
7. Remove Top Cover Assembly (REP 1.4).
8. Remove Right Cover (REP 1.5).
9. Remove the two K-clips that secure the Print Cartridge Locking Arm.
10. Remove the five screws on the right side of the frame (Figure 1).
11. Remove the Print Cartridge Side Guide (Figure 1).
12. Remove the Spring Clip (Figure 1).

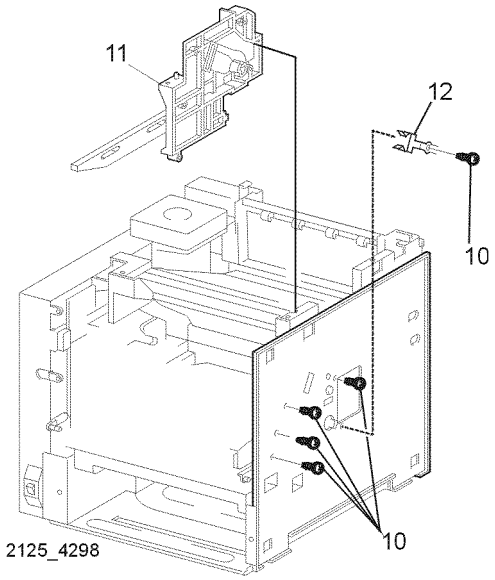


Figure 1 Print Cartridge Side Guide

Replacement

1. Reinstall the components in the reverse order.

REP 8.1 Main Motor Assembly

Parts List on PL 8.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Left Interface Cover (REP 1.1).
2. Remove the Left Cover (REP 1.2).
3. Remove the Left Plate Assembly (REP 1.11).
4. Disconnect P/J29 from the Print Engine Controller PWB (Figure 1).
5. Release Motor Harness from all cable clamps.
6. Remove the four screws that secure the Main Motor Assembly to the printer and remove the assembly (Figure 1).

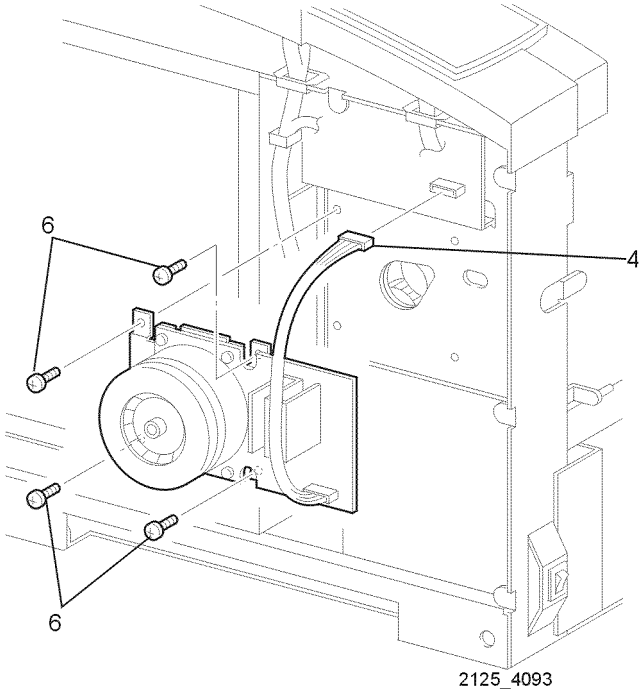


Figure 1 Main Motor Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 8.2 Main Drive Gear Assembly

Parts List on PL 8.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Left Plate Assembly (REP 1.11).
7. Remove the Plate Handle (REP 1.12).
8. Open Rear Door.
9. Remove the Fuser Assembly (REP 6.2).
10. Remove the Top Cover Assembly (REP 1.4).
11. Remove the MBF Chute Assembly (REP 4.1).
12. Remove the Paper Handler Assembly (REP 5.1).
13. Remove the Chute Trans Assembly (REP 6.1).
14. Remove the Print Cartridge Top Guide Assembly (REP 7.2).
15. Remove the System Controller PWB (REP 9.2).
16. Remove the Print Engine Controller PWB (REP 9.3)
17. Remove the Main Motor Assembly (REP 8.1).
18. Remove the LVPS PWB (REP 9.5)
19. Remove the four screws that secure the Drive Gear Assembly from the left side of the printer. (Screws are marked with a “D”) (Figure 1).

20. Pull bottom of assembly out and lower the assembly to release the locking tab and remove (Figure 1).

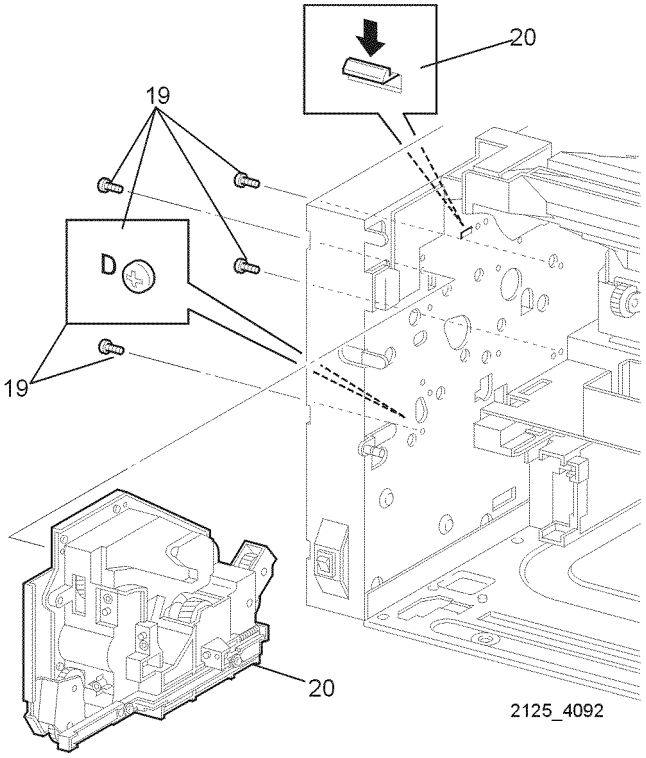


Figure 1 Drive Gear Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 9.1 Fan Assembly

Parts List on PL 9.1

Removal

WARNING

Turn the power off and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Top Cover Assembly (REP 1.4).
7. Open the Rear Cover Assembly.
8. Remove the Left Plate Assembly (REP 1.11).
9. Disconnect P/J283 connected to the Fan Assembly from the LVPS PWB.
10. Release the harness of the Fan Assembly from the two clamps on the printer (Figure 1).
11. Remove the four screws securing the assembly to the printer (Figure 1).
12. Remove the Fan (Figure 1).

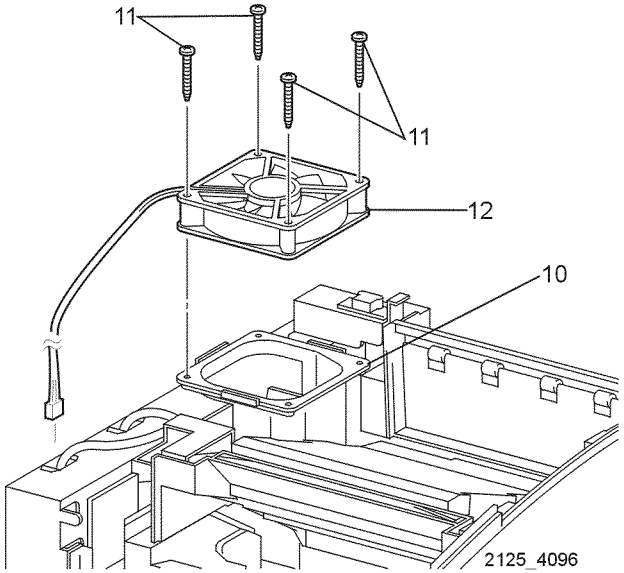


Figure 1 Fan Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 9.2 System Controller PWB

Parts List on PL 10.1

Removal

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

WARNING

Turn the power off and disconnect the Power Cord.

1. Remove the Interface Cover Assembly (REP 1.1).
2. Disconnect host cables connected to the System Controller PWB.
3. Disconnect P/J18 and P/J13 from the System Controller PWB (Figure 1).
4. Remove the five screws that secure the System Controller PWB to the printer (Figure 1).
5. Move the System Controller PWB toward the rear to disconnect P/J14 from the Print Engine Controller PWB (REP 9.3).
6. Remove the System Controller PWB from the printer (Figure 1).

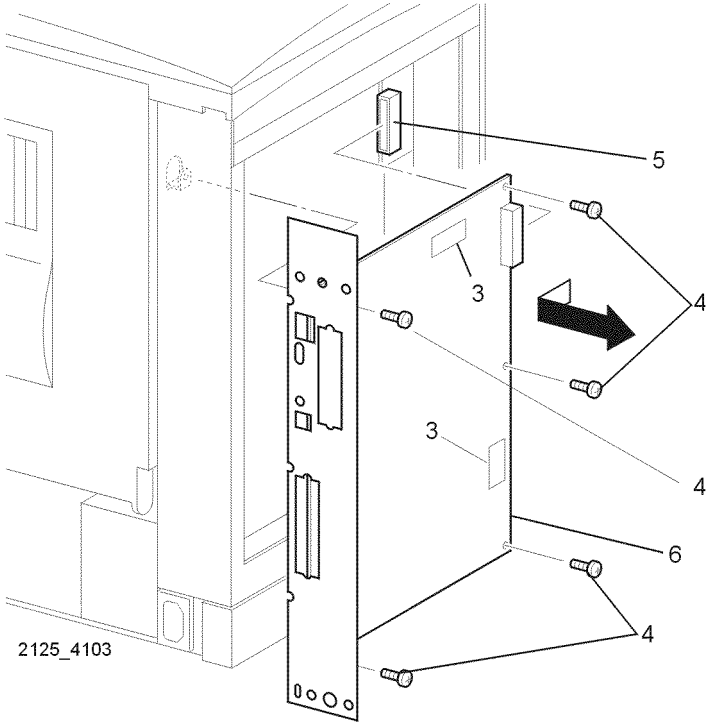


Figure 1 System Controller PWB

Replacement

1. Reinstall the components in the reverse order.

REP 9.3 Print Engine Controller PWB

Parts List on PL 10.1

Removal

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Left Interface Cover Assembly (REP 1.1).
2. Remove the Left Cover (REP 1.2).
3. Remove the Left Plate Assembly (REP 1.11).
4. Disconnect P/J21, P/J22, P/J23, P/J25, P/J26, P/J27, P/J28, P/J29, P/J30, P/J31, P/J32, P/J33, P/J34 and P/J35 from the Print Engine Controller PWB.
5. Remove the four screws that secure the Print Engine Controller PWB to the printer. Remove the Print Engine Controller PWB (Figure 1).

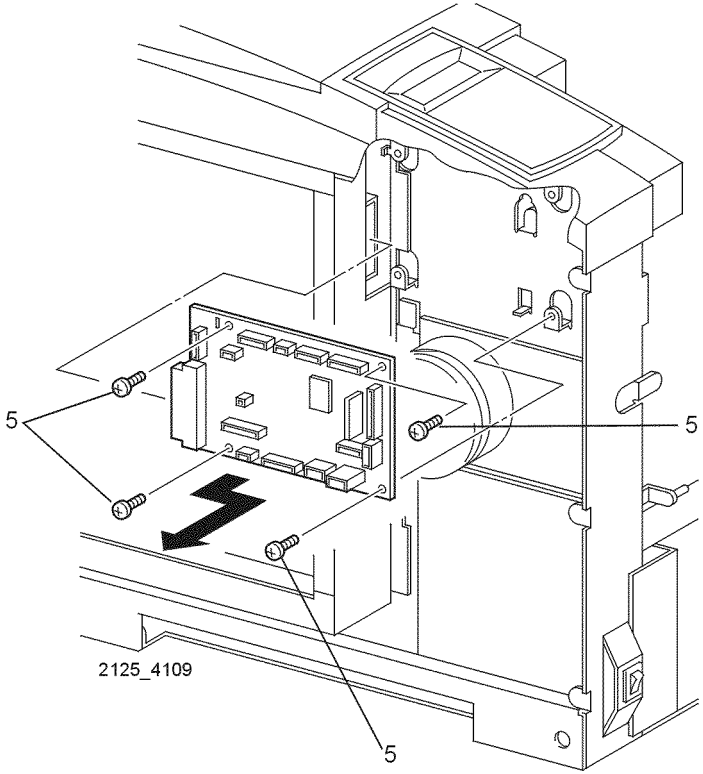


Figure 1 Print Engine Controller PWB

Replacement

1. Reinstall the components in the reverse order.

REP 9.4 5VDC PWB

Parts List on PL 10.1

Removal

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Left Interface Cover Assembly (REP 1.1).
2. Remove the Left Cover (REP 1.2).
3. Remove the Left Plate Assembly (REP 1.11).
4. Disconnect PN288 from the 5VDC PWB and PN1 from the LVPS PWB.
5. Remove the two screws that secure the 5VDC PWB to the printer (Figure 1).
6. Remove the 5VDC PWB (Figure 1).

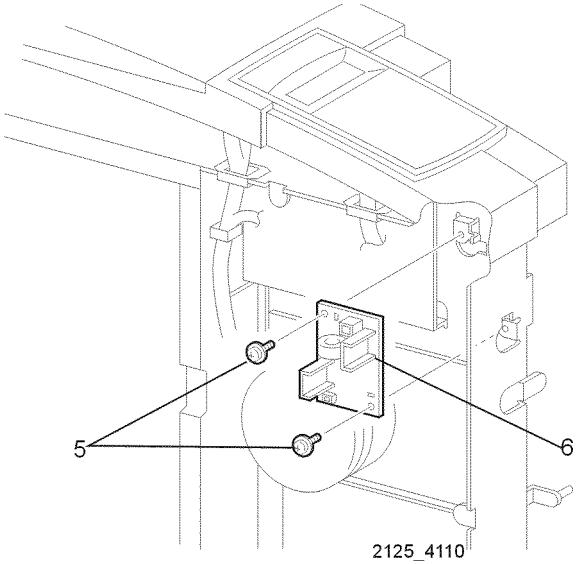


Figure 1 5VDC PWB

Replacement

1. Reinstall the components in the reverse order.

REP 9.5 LVPS PWB

Parts List on PL 10.1

Removal

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Left Plate Assembly (REP 1.11).
7. Remove Plate Handle (REP 1.12).
8. Disconnect the Main Switch (Figure 1).
9. Disconnect P/J11, PN1, P/J282, P/J283, P/J284, P/J285 and P/J281.
10. Remove the four screws that secure the LVPS PWB to the printer (Figure 1).
11. Remove the LVPS PWB (Figure 1).

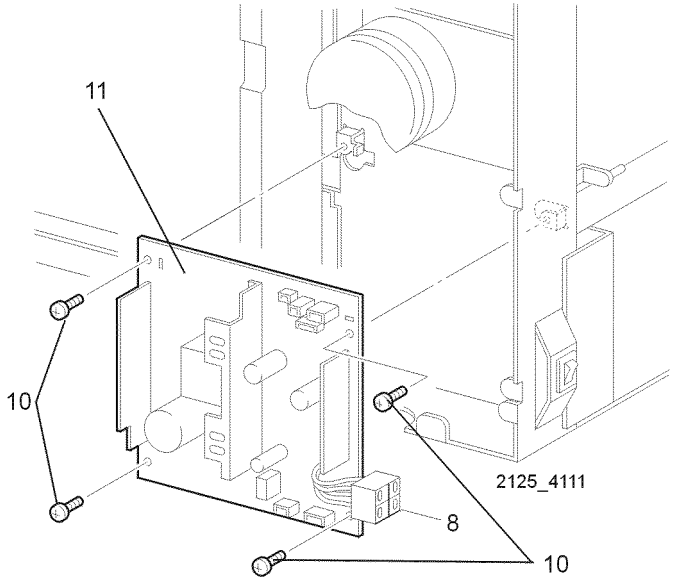


Figure 1 LVPS PWB

Replacement

1. Reinstall the components in the reverse order.

REP 9.6 HVPS PWB

Parts List on PL 10.1

Removal

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Front Cover Assembly (REP 1.6).
3. Remove the Left Front Cover (REP 1.7).
4. Remove the MBF Chute Assembly (REP 4.1).
5. Remove the Paper Handler Assembly (REP 5.1).
6. Remove the BTR Assembly (REP 7.1).
7. Remove the Transport Chute Assembly (REP 6.1).
8. Disconnect P/J261 from the HVPS PWB (Figure 1).
9. Disconnect PRB (red) (Figure 1).
10. Remove the screw that secures the HVPS PWB housing to the printer (Figure 1).
11. Remove the HVPS Assembly Housing from the printer (Figure 1).
12. Carefully disconnect the DTS (white) and TR (red) wires from the HVPS (Figure 2).
13. Releasing the two hooks that secure the HVPS PWB to the Housing, remove the HVPS PWB (Figure 2).

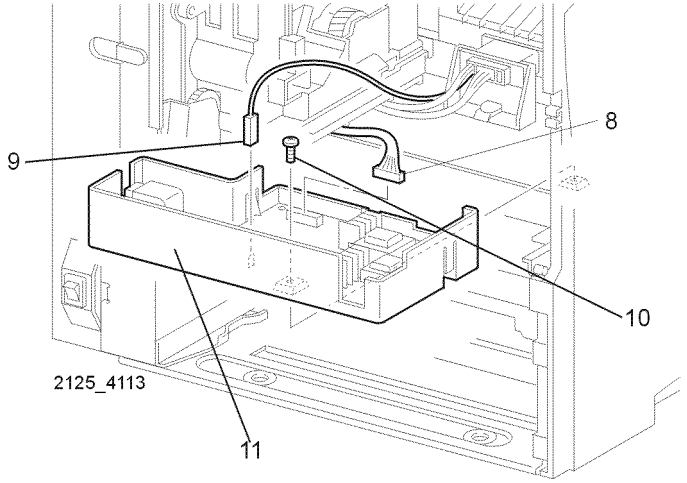


Figure 1 Transport Chute Assembly

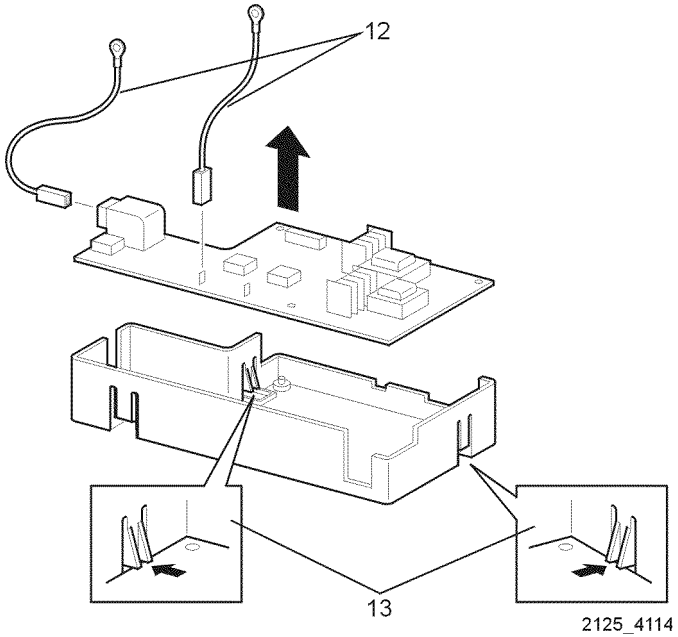


Figure 2 HVPS PWB

Replacement

1. Reinstall the components in the reverse order.

REP 9.7 Connector PWB

Parts List on PL 10.1

Removal

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Print Cartridge and store in safe place.
3. Remove the Front Cover Assembly (REP 1.6).
4. Remove the Left Front Cover (REP 1.7).
5. Disconnect P/J41, P/J42, P/J43, P/J44, P/J45 and P/J231 from the Connector PWB (Figure 1).
6. Remove the three screws that secure the Connector PWB to the printer (Figure 1).
7. Remove the Connector PWB (Figure 1).

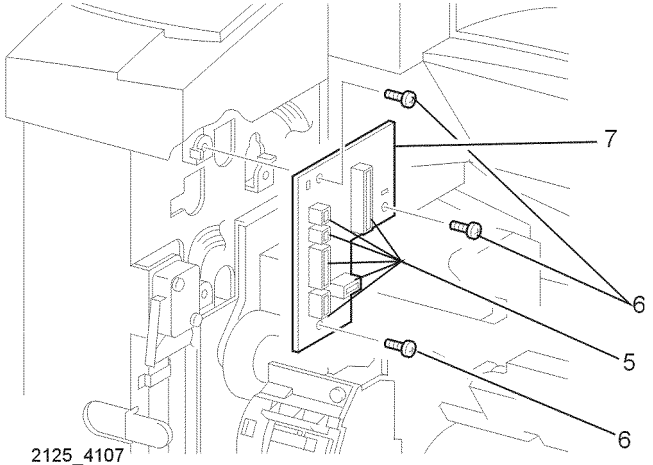


Figure 1 Connector PWB

Replacement

1. Reinstall the components in the reverse order.

REP 9.8 Main Switch

Parts List on PL 10.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Left Plate Assembly (REP 1.11).
7. Remove the Plate Handle (REP 1.12).
8. Press the locking tabs and push the rear of the Main Switch so that it comes out of the front of the printer (Figure 1).
9. Disconnect the Harness from the Main Switch, and remove the Main Switch from the printer (Figure 1).

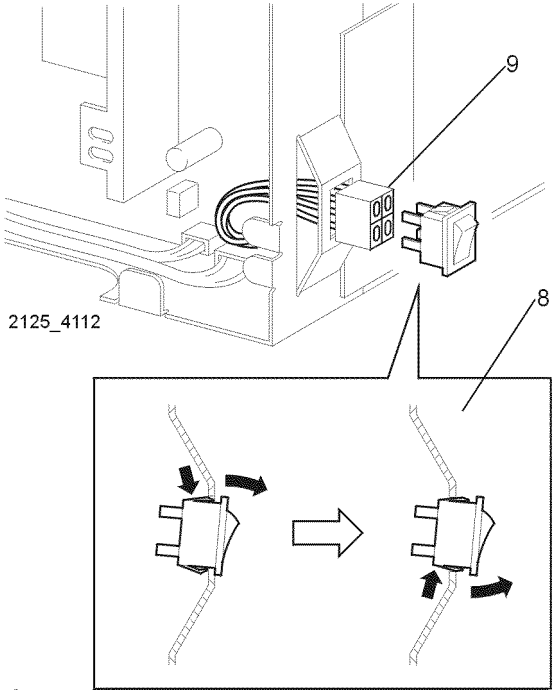


Figure 1 Main Switch

Replacement

1. Reinstall the components in the reverse order.

REP 9.9 Front Interlock Switch Assembly

Parts List on PL 10.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Left Plate Assembly (REP 1.11).
7. Disconnect P/J284 from the LVPS PWB (REP 9.5).
8. Release the switch harness from all cable clamps.
9. Remove the two screws that secure the Front Interlock Switch Assembly to the printer (Figure 1).
10. Remove the Front Interlock Switch Assembly (Figure 1).

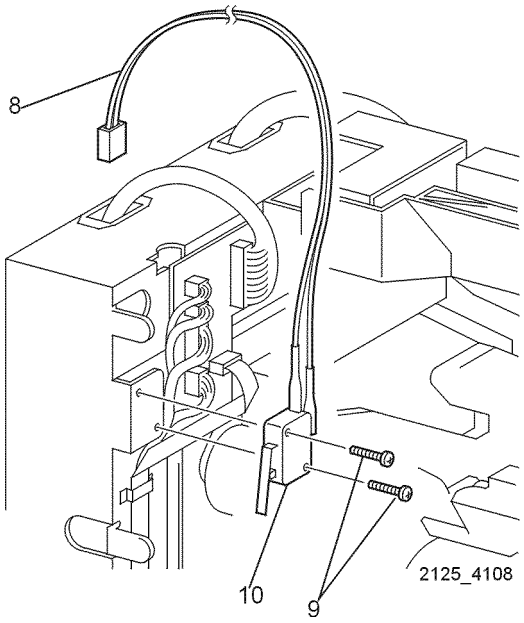


Figure 1 Front Interlock Switch Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 9.10 Rear Interlock Switch Assembly

Parts List on PL 10.1

Removal

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Top Cover Assembly (REP 1.4).
7. Open the Rear Cover Assembly.
8. Remove the Interlock Cover (REP 1.10).
9. Remove the Left Plate Assembly (REP 1.11).
10. Remove the Exit Chute Assembly (REP 6.4).
11. Disconnect P/J30 from Print Engine Controller PWB.
12. Release the Harness from all cable clamps (Figure 1).
13. Remove the two screws that secure the Rear Interlock Switch Assembly to the printer (Figure 1).
14. Remove the Rear Interlock Switch Assembly (Figure 1).

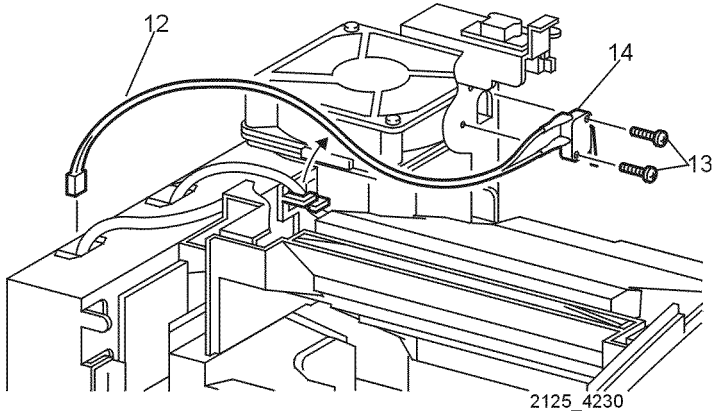


Figure 1 Rear Interlock Switch Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 9.11 Offset Catch Tray Harness Assembly

Parts List on PL 10.1

Removal

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Top Cover Assembly (REP 1.4).
7. Remove the Interlock Cover (REP 1.10).
8. Remove the Left Plate Assembly (REP 1.11).
9. Remove the Exit Chute Assembly (REP 6.4).
10. Disconnect P/J35 from the Print Engine Controller PWB (REP 9.3).
11. Release the Offset Catch Tray Harness from all cable clamps (Figure 1).
12. Remove the two screws that secure the Offset Catch Tray Harness Assembly (Figure 1).
13. Remove the Offset Catch Tray Harness Assembly from the printer (Figure 1).

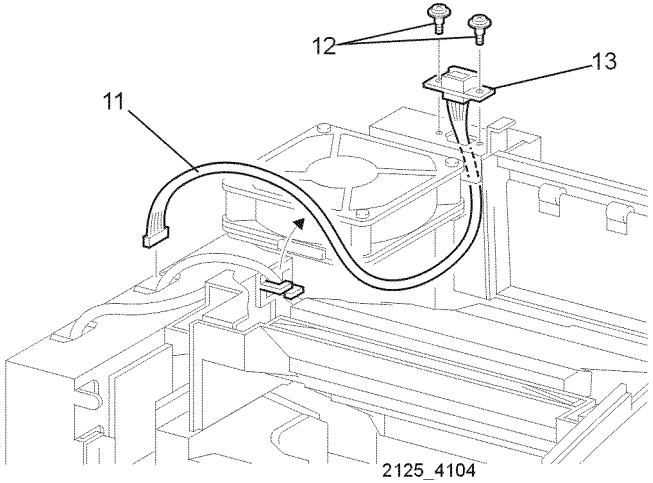


Figure 1 Offset Catch Tray Harness Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 9.12 Duplex Harness Assembly

Parts List on PL 10.1

Removal

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray 1.
2. Remove the Left Interface Cover Assembly (REP 1.1).
3. Remove the Left Cover (REP 1.2).
4. Remove the Front Cover Assembly (REP 1.6).
5. Remove the Left Front Cover (REP 1.7).
6. Remove the Top Cover Assembly (REP 1.4).
7. Remove the Rear Cover Assembly (REP 1.8).
8. Remove the Left Plate Assembly (REP 1.11).
9. Remove the Plate Handle (REP 1.12).
10. Remove the MBF Chute Assembly (REP 4.1).
11. Remove the Paper Handler Assembly (REP 5.1).
12. Remove the Transport Chute Assembly (REP 6.1).
13. Remove the Fuser Assembly (REP 6.2).
14. Remove the Print Cartridge Top Guide Assembly (REP 7.2).
15. Remove the Main Motor Assembly (REP 8.1).
16. Remove the Drive Gear Assembly (REP 8.2).
17. Remove the Print Engine Controller PWB (REP 9.3).
18. Remove the LVPS PWB (REP 9.5).
19. Remove the two screws that secure the Duplex Harness Assembly to the printer (Figure 1).

20. Remove the Duplex Harness Assembly (Figure 1).

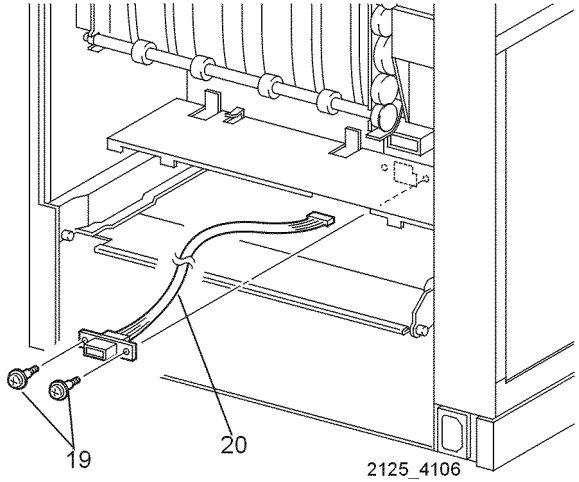


Figure 1 Duplex Harness Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 10.1 Offset Catch Tray (OCT)

Parts List on PL 14.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Open the printer Rear Cover.
2. Press the two locking tabs at the rear of the Offset Catch Tray (Figure 1).
3. Lift the rear of the Offset Catch Tray approximately 1 inch (25mm).
4. Slide the Offset Catch Tray toward the rear and remove (Figure 1).

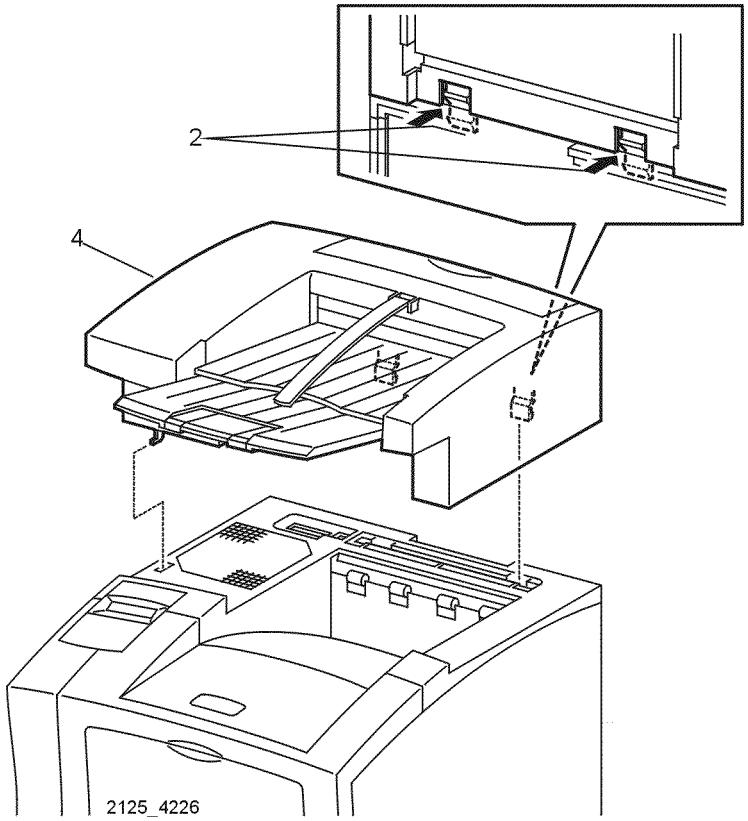


Figure 1 Offset Catch Tray

Replacement

1. Reinstall the components in the reverse order.

REP 10.2 Exit Tray Extension

Parts List on PL 14.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Open the Exit Tray Extension.
2. Slide the tray to the left.
3. Carefully deflect the center of the tray until the right hinge pin is free (Figure 1).
4. Slide the tray to the right and remove (Figure 1).

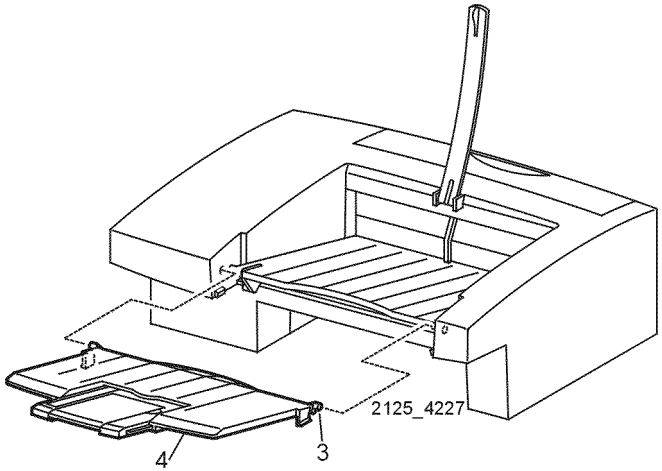


Figure 1 Exit Tray Extension

Replacement

1. Reinstall the components in the reverse order.

REP 10.3 Exit Tray

Parts List on PL 14.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Exit Tray Extension (REP 10.2).
2. Squeeze the upper end of the Paper Weight and remove (Figure 1).
3. Slide the tray to the left.
4. Push the right hinge pin in until it is free of the Offset Catch Tray (Figure 2).
5. Push the left hinge pin in until it is free of the Offset Catch Tray (Figure 2).
6. Remove the Exit Tray.

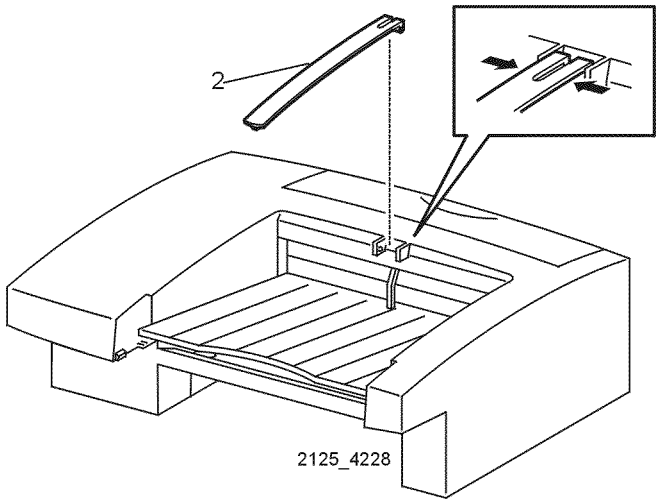


Figure 1 Exit Tray Paper Weight

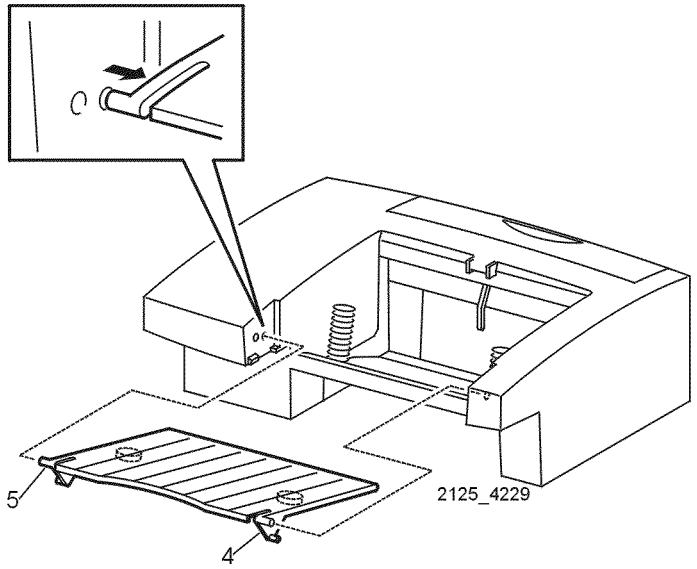


Figure 2 Exit Tray

Replacement

1. Reinstall the components in the reverse order.

REP 10.4 Rear Cover Assembly

Parts List on PL 14.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Offset Catch Tray (REP 10.1).
2. Remove the Exit Tray extension (REP 10.2).
3. Remove the Exit Tray (REP 10.3).
4. Turn the Offset Catch Tray upside down.
5. Remove the Lower Cover (REP 10.5).
6. Remove the Inner Exit Chute Assembly (REP 10.6).
7. Release and remove the two Rear Cover Springs (Figure 1).
8. Remove the six screws that secure the Rear Cover (Figure 1).
9. Remove the Rear Cover.

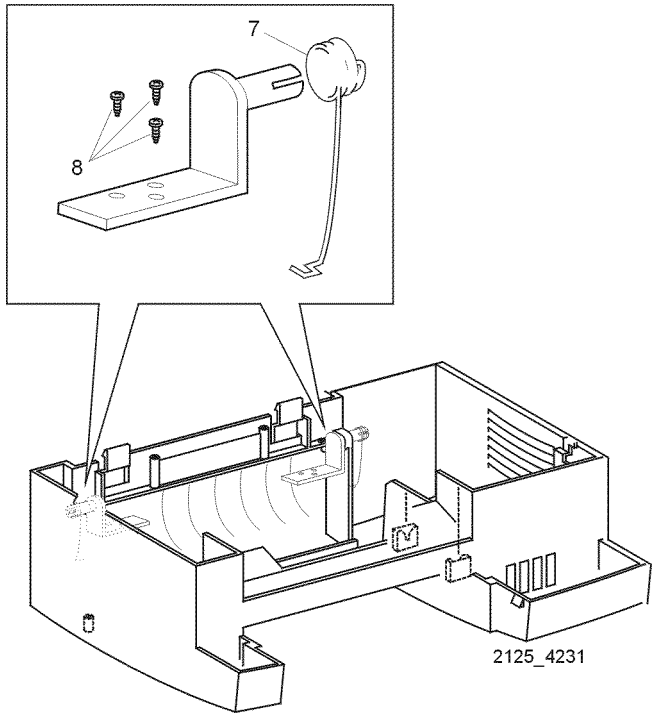


Figure 1 Rear Cover Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 10.5 Lower Cover

Parts List on PL 14.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Offset Catch Tray (REP 10.1).
2. Carefully turn the Offset Catch Tray upside down.
3. Remove the six screws that secure the lower cover (Figure 1).
4. Remove the Lower Cover (Figure 1).

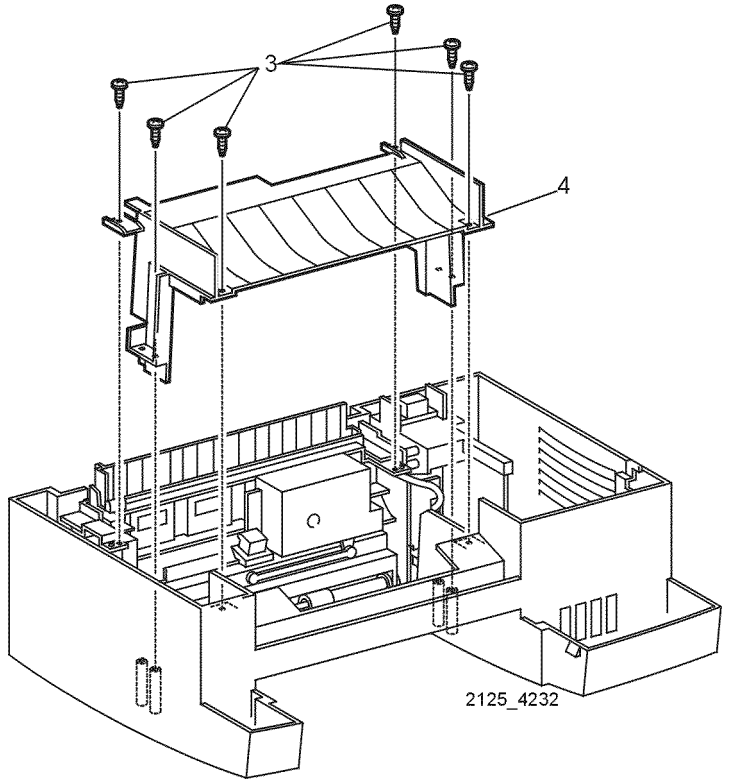


Figure 1 Lower Cover

Replacement

1. Hold the Stack Height Sensor Actuator out as you reinstall the lower cover.
2. Reinstall the components in the reverse order

REP 10.6 Inner Exit Chute Assembly

Parts List on PL 14.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Offset Catch Tray (REP 10.1).
2. Remove the Exit Tray Extension (REP 10.2).
3. Remove the Exit Tray (REP 10.3).
4. Turn the Offset Catch Tray upside down.
5. Remove the Lower Cover (REP 10.5).
6. Remove the five screws that secure the Inner Exit Chute Assembly (Figure 1).
7. Hold open the Rear Cover.
8. Remove the assembly (Figure 1).

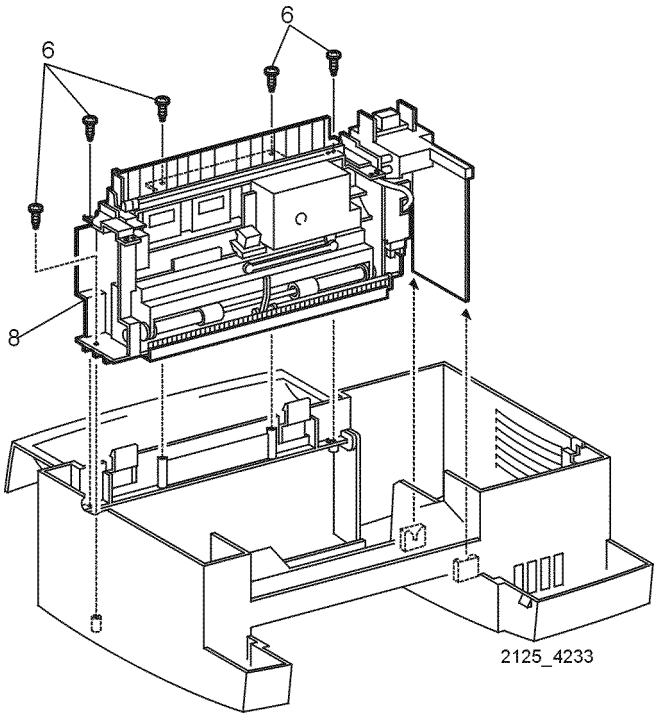


Figure 1 Inner Exit Chute Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 10.7 Offset Catch Tray PWB

Parts List on PL 14.2

Removal

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Offset Catch Tray (REP 10.1).
2. Remove the Exit Tray Extension (REP 10.2).
3. Remove the Exit Tray (REP 10.3).
4. Turn the Offset Catch Tray upside down.
5. Remove the Lower Cover (REP 10.5).
6. Hold open the Rear Cover.
7. Remove the Inner Exit Chute Assembly (REP 10.6).
8. Remove the screw that secures the PWB to the Inner Exit Chute Assembly (Figure 1).
9. Disconnect P/J209, P/J224, P/J210, and P/J229 (Figure 1).
10. Remove the Offset Catch Tray PWB (Figure 1).

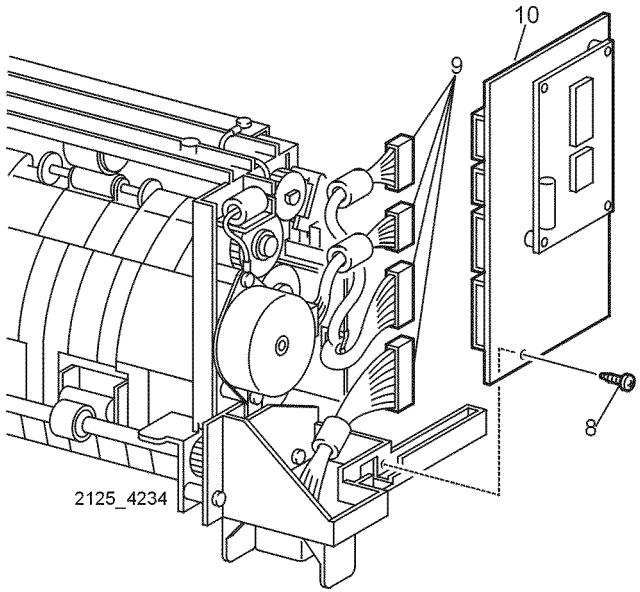


Figure 1 Offset Catch Tray PWB

Replacement

1. Reinstall the components in the reverse order.

REP 10.8 Motor Drive Assembly

Parts List on PL 14.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Offset Catch Tray (REP 10.1).
2. Remove the Exit Tray Extension (REP 10.2).
3. Remove the Exit Tray (REP 10.3).
4. Turn the Offset Catch Tray upside down.
5. Remove the Lower Cover (REP 10.5).
6. Hold open the Rear Cover.
7. Remove the Inner Exit Chute Assembly (REP 10.6).
8. Remove the two screws that secure the motor to the Inner Exit Chute Assembly (Figure 1).
9. Disconnect P/J210 from the Offset Catch Tray PWB and remove the motor (Figure 1).

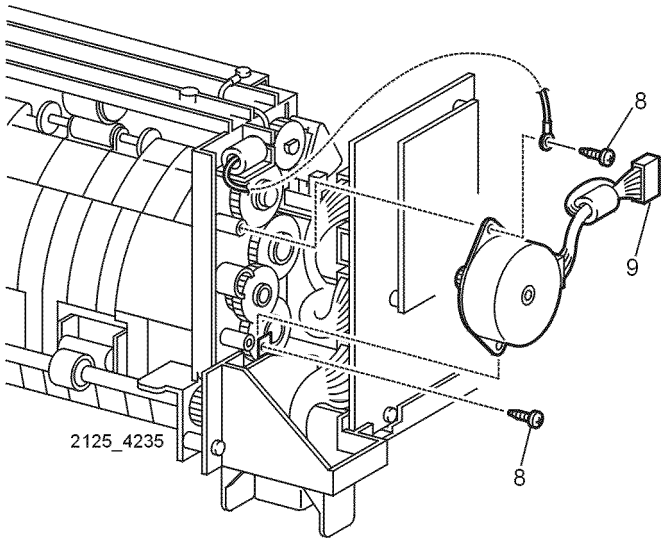


Figure 1 Motor Drive Assembly

Replacement

1. Install the motor with both tabs touching the plastic standoffs.
2. The ground wire on top and the earth plate at the bottom should be on the outside (Figure 1).
3. Reinstall the components in the reverse order.

REP 10.9 Static Eliminator

Parts List on PL 14.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Offset Catch Tray (REP 10.1).
2. Remove the Exit Tray Extension (REP 10.2).
3. Remove the Exit Tray (REP 10.3).
4. Turn the Offset Catch Tray upside down.
5. Remove the Lower Cover (REP 10.5).
6. Hold open the Rear Cover.
7. Remove the Inner Exit Chute Assembly (REP 10.6).
8. Remove the three screws that secure the Static Eliminator to the Inner Exit Chute (Figure 1).
9. Remove the Static Eliminator (Figure 1).

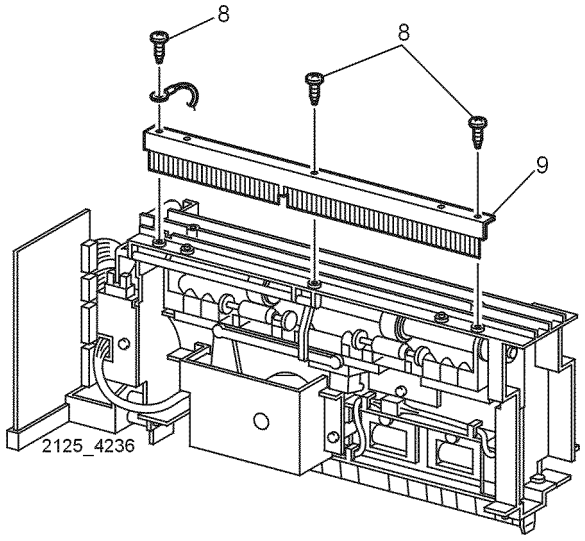


Figure 1 Static Eliminator

Replacement

1. Reinstall the components in the reverse order.

REP 10.10 Direction Solenoid

Parts List on PL 14.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Offset Catch Tray (REP 10.1).
2. Remove the Exit Tray Extension (REP 10.2).
3. Remove the Exit Tray (REP 10.3).
4. Turn the Offset Catch Tray upside down.
5. Remove the Lower Cover (REP 10.5).
6. Hold open the Rear Cover.
7. Remove the Inner Exit Chute Assembly (REP 10.6).
8. Disconnect P/J228 from the Direction Solenoid (Figure 1).
9. Remove the two screws that secure the solenoid to the Inner Exit Chute Assembly (Figure 1). Remove the Solenoid.

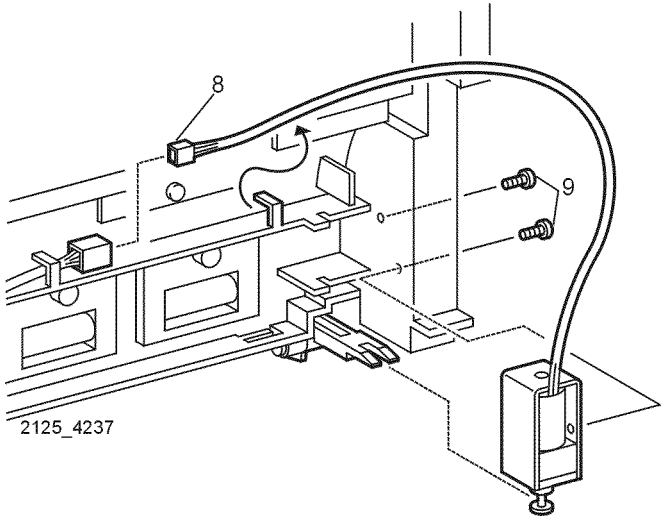


Figure 1 Direction Solenoid

Replacement

1. Reinstall the components in the reverse order.

REP 10.11 Exit Sensor Assembly

Parts List on PL 14.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Offset Catch Tray (REP 10.1).
2. Remove the Exit Tray Extension (REP 10.2).
3. Remove the Exit Tray (REP 10.3).
4. Turn the Offset Catch Tray upside down.
5. Remove the Lower Cover (REP 10.5).
6. Hold open the Rear Cover.
7. Remove the Inner Exit Chute Assembly (REP 10.6).
8. Release the four locking tabs and remove the sensor (Figure 1).
9. Disconnect P/J227 from the Exit Sensor Assembly (Figure 1).

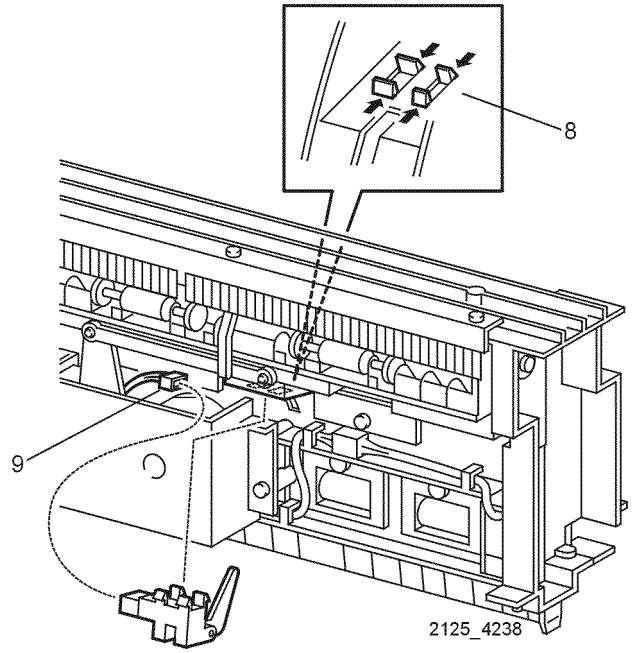


Figure 1 Exit Sensor Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 10.12 Stack Full Sensor Actuator

Parts List on PL 14.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Offset Catch Tray (REP 10.1).
2. Remove the Exit Tray Extension (REP 10.2).
3. Remove the Exit Tray (REP 10.3).
4. Turn the Offset Catch Tray upside down.
5. Remove the Lower Cover (REP 10.5).
6. Hold open the Rear Cover.
7. Remove the Inner Exit Chute Assembly (REP 10.6).
8. Remove the Static Eliminator (REP 10.9).
9. Remove the Stack Full Actuator from the two retaining clips (Figure 1).

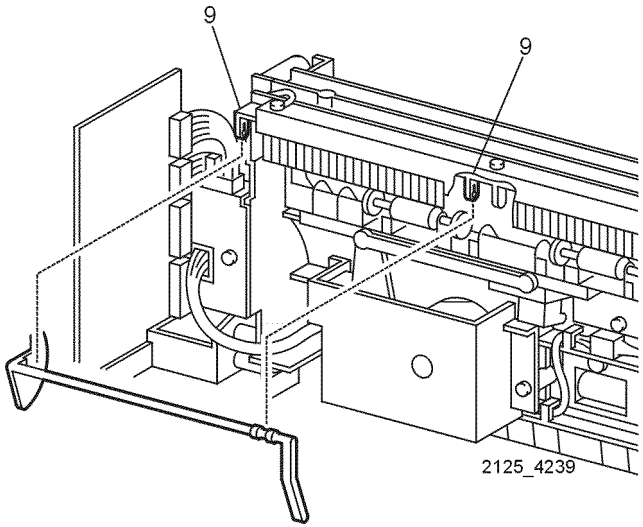


Figure 1 Stack Full Sensor Actuator

Replacement

1. Reinstall the components in the reverse order.

REP 10.13 Stack Full Sensor

Parts List on PL 14.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Offset Catch Tray (REP 10.1).
2. Remove the Exit Tray Extension (REP 10.2).
3. Remove the Exit Tray (REP 10.3).
4. Turn the Offset Catch Tray upside down.
5. Remove the Lower Cover (REP 10.5).
6. Hold open the Rear Cover.
7. Remove the Inner Exit Chute Assembly (REP 10.6).
8. Remove the Offset Catch Tray PWB (REP 10.7).
9. Disconnect P/J225 from the Stack Full Sensor (Figure 1).
10. Release the four locking tabs that secure the sensor (Figure 1). Remove the sensor.

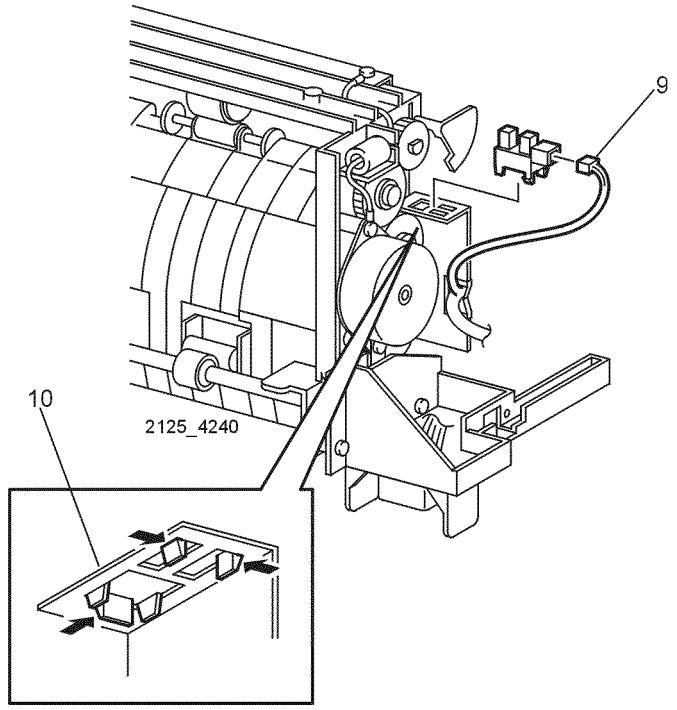


Figure 1 Stack Full Sensor

Replacement

1. Reinstall the components in the reverse order.

REP 10.14 Offset Roll Assembly

Parts List on PL 14.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Offset Catch Tray (REP 10.1).
2. Remove the Exit Tray Extension (REP 10.2).
3. Remove the Exit Tray (REP 10.3).
4. Turn the Offset Catch Tray upside down.
5. Remove the Lower Cover (REP 10.5).
6. Hold open the Rear Cover.
7. Remove the Inner Exit Chute Assembly (REP 10.6).
8. Remove the Offset Catch Tray PWB (REP 10.7).
9. Remove the Static Eliminator (REP 10.9).
10. Remove the Stack Full Actuator (REP 10.12).
11. Release the locking tab and remove the Exit Gear (Figure 1).
12. Remove the Exit Gear Bearing (Figure 1).
13. Release the two locking tabs and remove the Offset Level from the Offset Roll Assembly (Figure 1).
14. Remove the Exit Shaft (Figure 1).
15. Remove the Offset Roll Assembly (Figure 1).

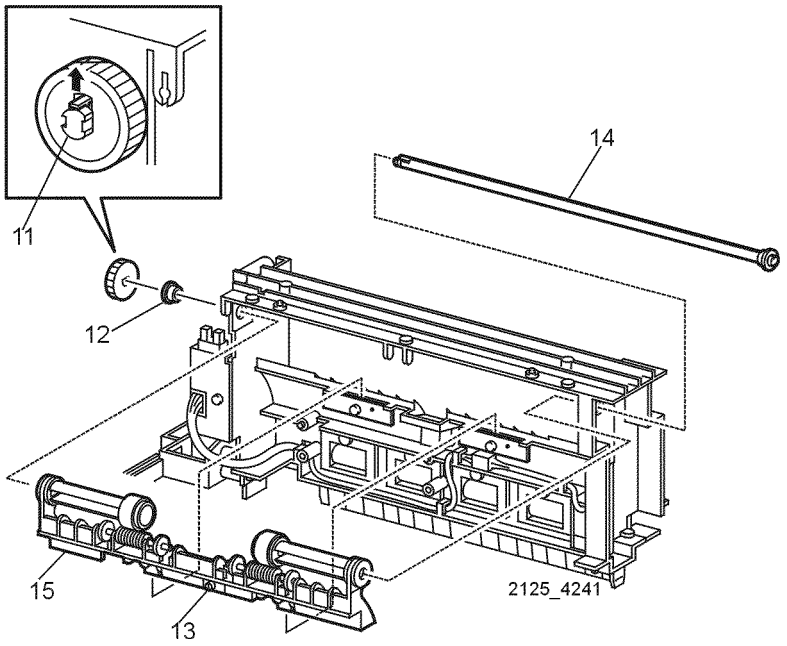


Figure 1 Offset Roll Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 10.15 Mid Roll Assembly

Parts List on PL 14.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Offset Catch Tray (REP 10.1).
2. Remove the Exit Tray Extension (REP 10.2).
3. Remove the Exit Tray (REP 10.3).
4. Hold open the Rear Cover.
5. Turn the Offset Catch Tray upside down.
6. Remove the Lower Cover (REP 10.5).
7. Remove the Inner Exit Chute Assembly (REP 10.6).
8. Remove the Offset Catch Tray PWB (REP 10.7).
9. Remove the screw that secures the ground plate to the bottom of the Motor Drive Assembly (Figure 1).
10. Remove the three screws that secure the PWB Holder to the Inner Exit Chute Assembly (Figure 1). Remove the holder.
11. Release the locking tab and remove the Exit Gear and Bearing (Figure 2).
12. Remove the E-Ring and Bearing from the other end of the shaft (Figure 2).
13. Slide the shaft to the right and remove the left end of the Mid Roll Assembly. Remove the assembly (Figure 3).

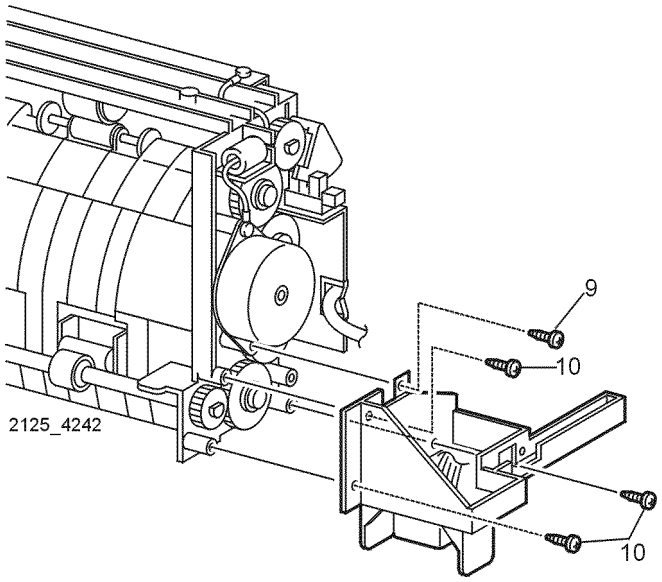


Figure 1 Ground Plate

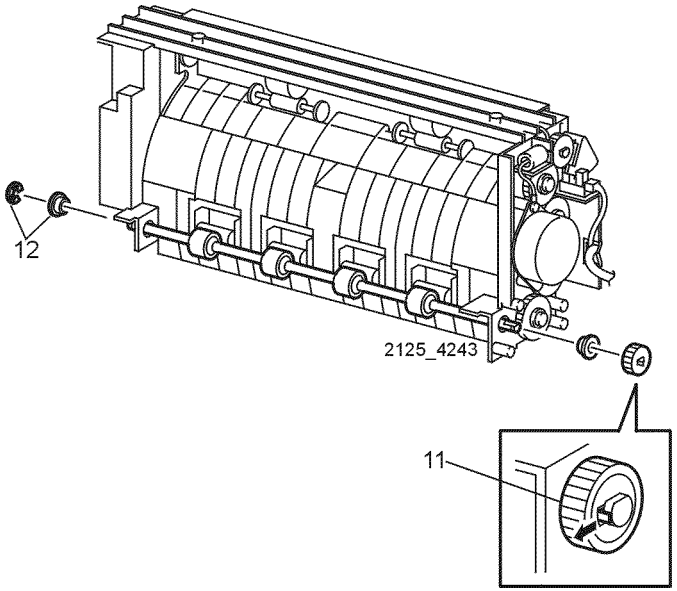


Figure 2 Locking Tab, Exit Gear, and Bearings

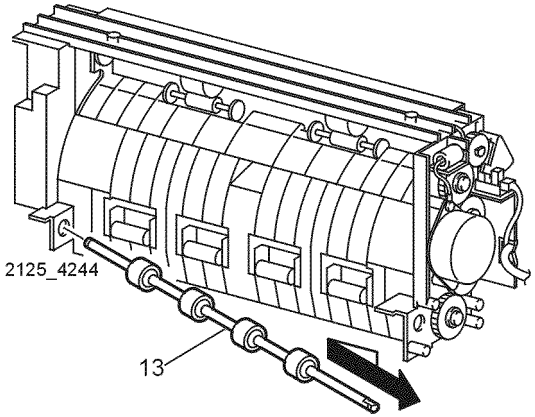


Figure 3 Mid Roll Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 10.16 Offset Assembly

Parts List on PL 14.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Offset Catch Tray (REP 10.1).
2. Remove the Exit Tray Extension (REP 10.2).
3. Remove the Exit Tray (REP 10.3).
4. Turn the Offset Catch Tray upside down.
5. Remove the Lower Cover (REP 10.5).
6. Hold open the Rear Cover.
7. Remove the Inner Exit Chute Assembly (REP 10.6).
8. Release the two locking tabs and remove the Offset Lever from the Offset Assembly (Figure 1).
9. Remove the two screws that secure the Offset Assembly to the Inner Exit Chute Assembly (Figure 1).
10. Disconnect P/J229 from the Offset Catch Tray PWB (Figure 1).
11. Disconnect P/J226 from the Offset Home Sensor (Figure 1).
12. Remove the harness from all harness clamps.
13. Remove the Offset Assembly (Figure 1).

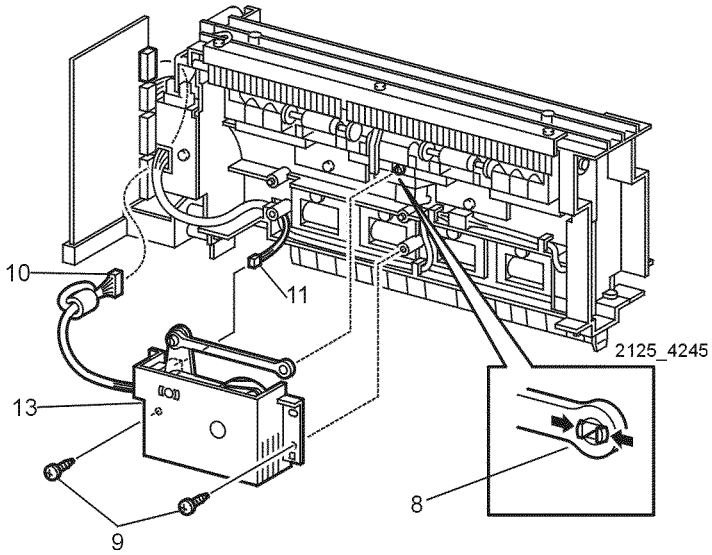


Figure 1 Offset Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 10.17 Offset Motor Assembly

Parts List on PL 14.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Offset Catch Tray (REP 10.1).
2. Remove the Exit Tray Extension (REP 10.2).
3. Remove the Exit Tray (REP 10.3).
4. Turn the Offset Catch Tray upside down.
5. Remove the Lower Cover (REP 10.5).
6. Hold open the Rear Cover.
7. Remove the Inner Exit Chute Assembly (REP 10.6).
8. Remove the Offset Assembly (REP 10.16).
9. Remove the two screws that secure the Offset Motor (Figure 1).
10. Remove the Offset Motor Assembly (Figure 1).

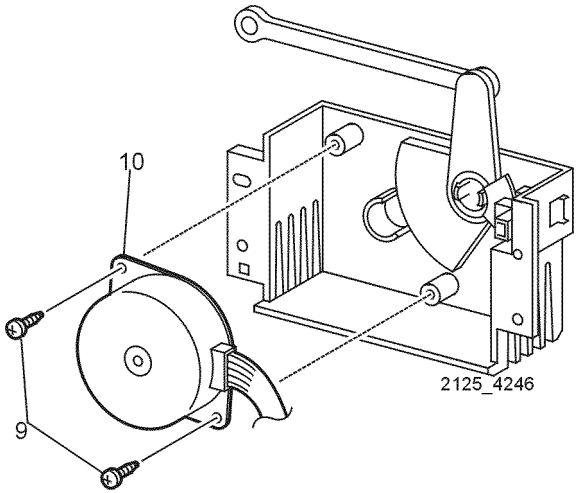


Figure 1 Offset Motor Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 10.18 Offset Assembly Home Sensor

Parts List on PL 14.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Offset Catch Tray (REP 10.1).
2. Remove the Exit Tray Extension (REP 10.2).
3. Remove the Exit Tray (REP 10.3).
4. Turn the Offset Catch Tray upside down.
5. Remove the Lower Cover (REP 10.5).
6. Hold open the Rear Cover.
7. Remove the Inner Exit Chute Assembly (REP 10.6).
8. Remove the Offset Assembly (REP 10.16).
9. Disconnect P/J226 from the Home Sensor (Figure 1).
10. Move the motor linkage until the flag is clear of the Sensor (Figure 1).
11. Release the locking tabs and remove the Offset Assembly Home Sensor (Figure 1).

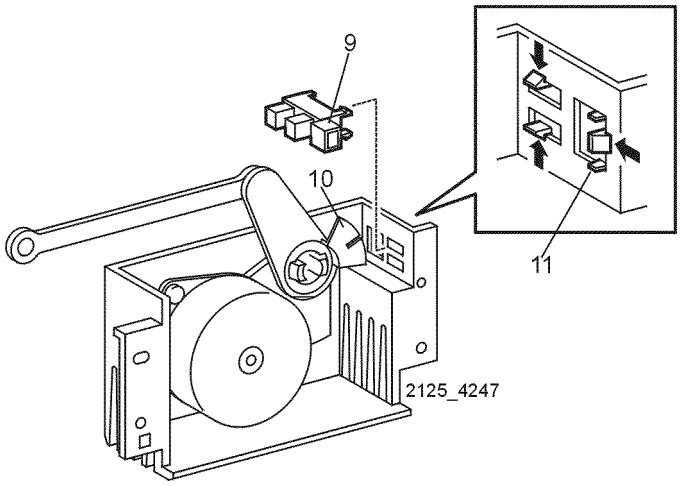


Figure 1 Offset Assembly Home Sensor

Replacement

1. Reinstall the components in the reverse order.

REP 11.1 Printer Removal

Parts List on PL 11.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove Tray from the Feeder.
2. Remove the three screws that secure the printer to the 550 Sheet Feeder. Remove the printer (Figure 1).
3. Lift the printer & remove the 550 Sheet Feeder.

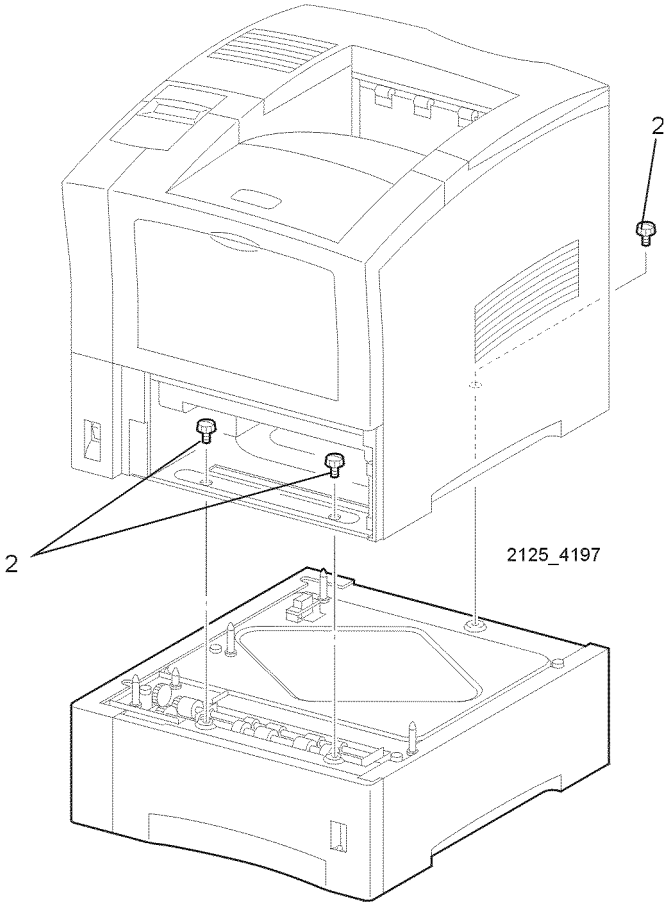


Figure 1 Optional Feeder Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 11.2 550 Sheet Feeder Right Cover

Parts List on PL 11.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove Tray from Feeder.
3. Remove the four screws that secure the right cover (Figure 1).
4. Lift slightly to remove the cover (Figure 1).

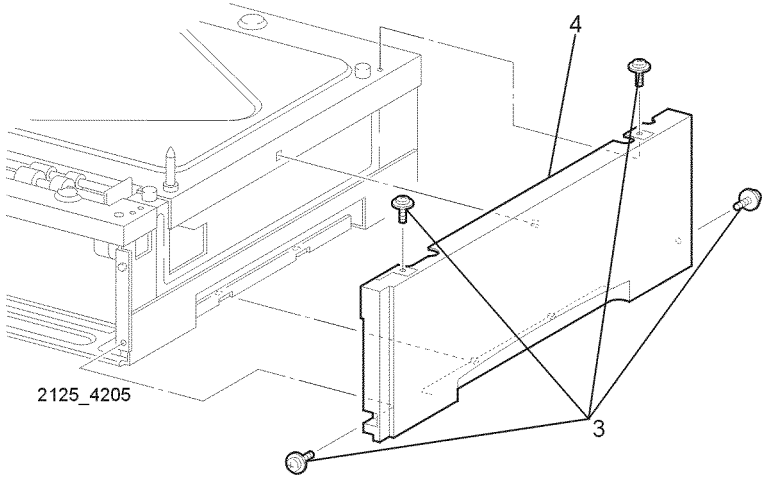


Figure 1 Right Cover

Replacement

1. Reinstall the components in the reverse order.

REP 11.3 550 Sheet Feeder Left Cover

Parts List on PL 11.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove the Tray from the feeder.
3. Remove the four screws that secure the Left Cover to the 550 Sheet Feeder (Figure 1).
4. Pull the top of the cover out and down to remove the cover (Figure 1).

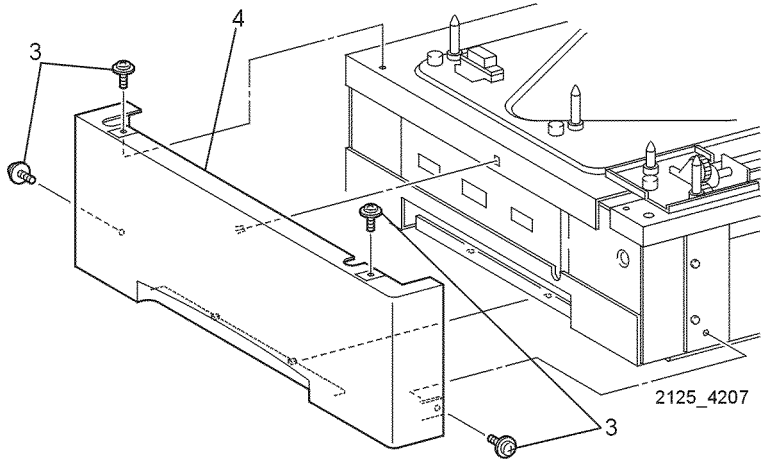


Figure 1 Left Cover

Replacement

1. Reinstall the components in the reverse order.

REP 11.4 550 Sheet Feeder Gear Bracket Assembly

Parts List on PL 11.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove the Tray from the Feeder.
3. Remove the five screws that secure the 550 Sheet Feeder Gear Bracket Assembly to the 550 Sheet Feeder (Figure 1).
4. Remove the Gear Bracket Assembly.

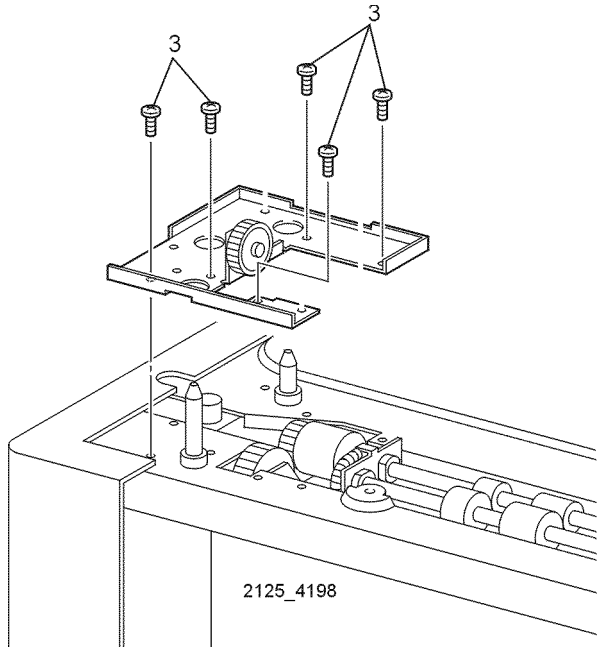


Figure 1 Gear Bracket Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 11.5 Top Plate

Parts List on PL 11.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove the Tray from the Feeder.
3. Remove the 550 Sheet Feeder Right Cover (REP 11.2).
4. Remove the 550 Sheet Feeder Left Cover (REP 11.3).
5. Remove 550 Sheet Feeder Gear Bracket Assembly (REP 11.4).
6. Remove the screw that secures the Top Plate to the Feeder (Figure 1)
7. Lift and remove the Top Plate from the Feeder (Figure 1).

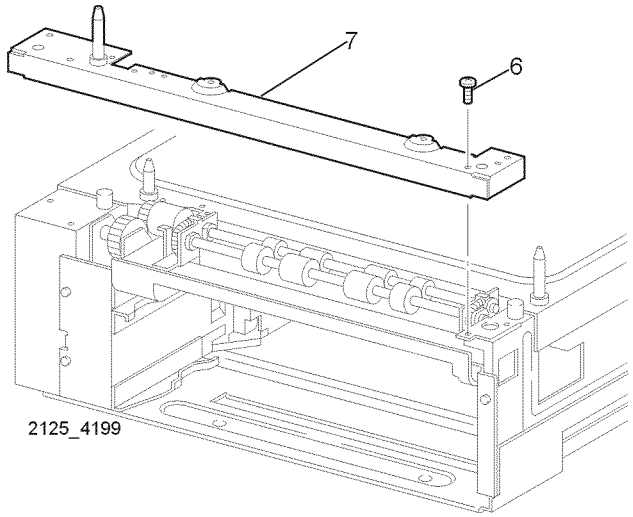


Figure 1 Top Plate

Replacement

1. Reinstall the components in the reverse order.

REP 11.6 550 Sheet Feeder Drive Assembly

Parts List on PL 11.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove the Tray from the Feeder.
3. Remove the 550 Sheet Feeder Right Cover (REP 11.2).
4. Remove the 550 Sheet Feeder Left Cover (REP 11.3).
5. Remove 550 Sheet Feeder Gear Bracket Assembly (REP 11.4).
6. Remove the Top Plate (REP 11.5).
7. Remove the six screws that secure the 550 Sheet Feeder Drive Assembly to the 550 Sheet Feeder (Figure 1).
8. Remove the Feeder Drive Assembly (Figure 1).

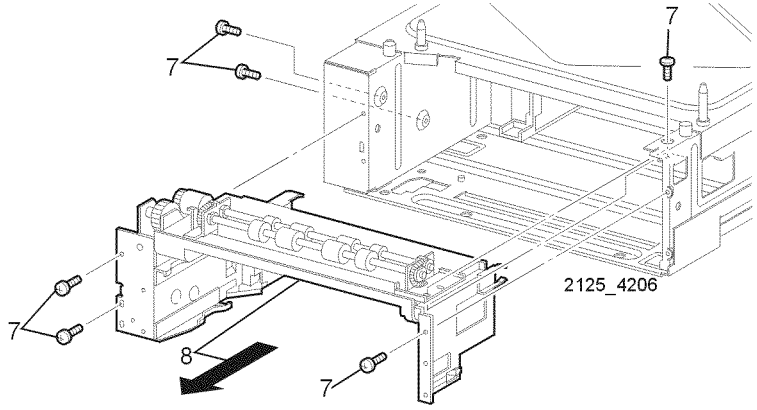


Figure 1 Feeder Drive Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 11.7 No Paper Actuator

Parts List on PL 11.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove the Tray from the Feeder.
3. Remove the 550 Sheet Feeder Right Cover (REP 11.2).
4. Remove the 550 Sheet Feeder Left Cover (REP 11.3).
5. Remove 550 Sheet Gear Bracket Assembly (REP 11.4).
6. Remove the Top Plate (REP 11.5).
7. Remove the 550 Sheet Feeder Drive Assembly (REP 11.6).
8. Rotate the No Paper Actuator up until the left end of the actuator can be removed from the support (Figure 1). Remove the Actuator.

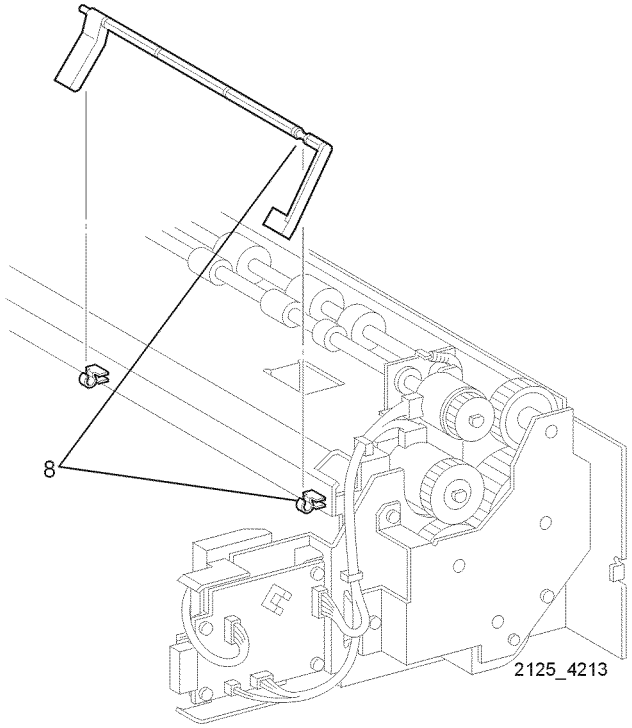


Figure 1 No Paper Actuator

Replacement

1. Reinstall the components in the reverse order.

REP 11.8 Turn Roll Assembly

Parts List on PL 11.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove the Tray from the Feeder.
3. Remove the 550 Sheet Feeder Right Cover (REP 11.2).
4. Remove the 550 Sheet Feeder Left Cover (REP 11.3).
5. Remove 550 Sheet Feeder Gear Bracket Assembly (REP 11.4).
6. Remove the Top Plate (REP 11.5).
7. Remove the 550 Sheet Paper Feeder Drive Assembly (REP 11.6).
8. Remove the No Paper Actuator (REP 11.7).
9. Disconnect P/J64 on the Paper Feeder PWB (Figure 1).
10. Remove the four screws that secure the Turn Roll Assembly to the Feeder Assembly (Figure 1).
11. Remove the Turn Roll Assembly together with the Extension Springs and Chute Spring (Figure 1).
12. Unhook the left and right Extension Springs from the two notches (Figure 3).
13. Remove the Chute Spring (Figure 2).

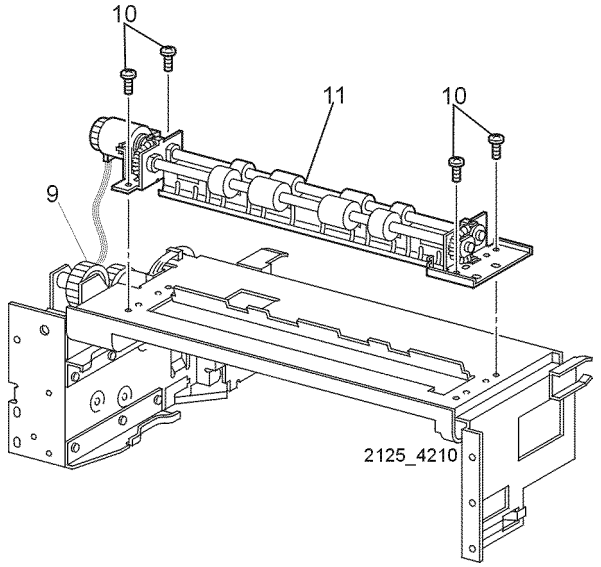


Figure 1 Turn Roll Assembly

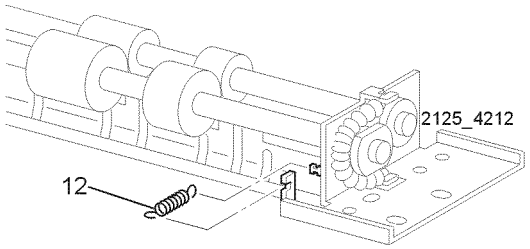


Figure 2 Chute Spring

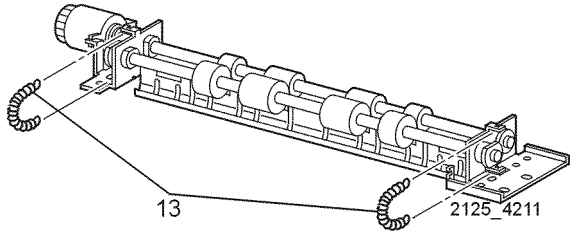


Figure 3 Extension Springs

Replacement

1. Reinstall the components in the reverse order.

REP 11.9 Feeder PWB

Parts List on PL 11.2

Removal

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove the Tray from the Feeder.
3. Remove the 550 Sheet Feeder Right Cover (REP 11.2).
4. Remove the 550 Sheet Feeder Left Cover (REP 11.3).
5. Remove 550 Sheet Feeder Gear Bracket Assembly (REP 11.4).
6. Remove the Top Plate (REP 11.5).
7. Remove the 550 Sheet Feeder Drive Assembly (REP 11.6).
8. Disconnect P/J64, P/J65, P/J66, and P/J67 on the Feeder PWB (Figure 1).
9. Remove the four screws that secure the Feeder PWB and remove the PWB (Figure 1).

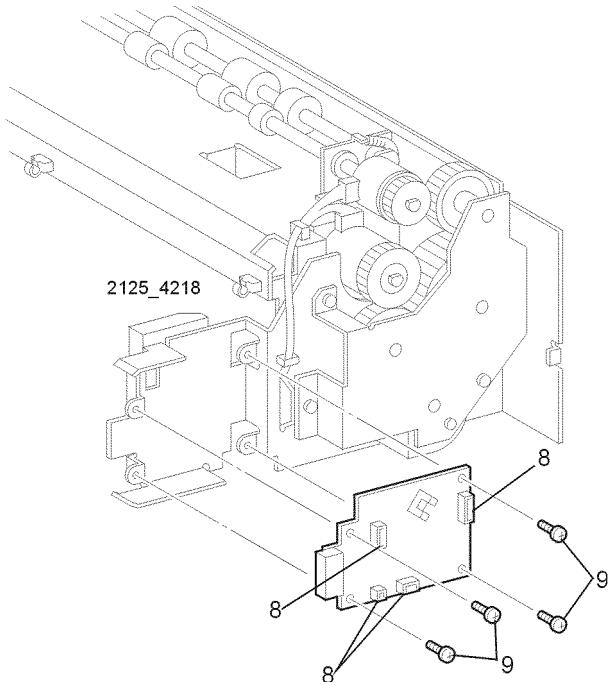


Figure 1 Feeder PWB

Replacement

1. Reinstall the components in the reverse order.

REP 11.10 Feed Clutch Assembly

Parts List on PL 11.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove Tray 2 from the Feeder.
3. Remove the 550 Sheet Feeder Right Cover (REP 11.2).
4. Remove the 550 Sheet Feeder Left Cover (REP 11.3).
5. Remove 550 Sheet Feeder Gear Bracket Assembly (REP 11.4).
6. Remove the Top Plate (REP 11.5).
7. Remove the 550 Sheet Feeder Drive Assembly (REP 11.6).
8. Remove the four screws that secure the bracket to the Paper Feeder (Figure 1).
9. Remove the Gear 3 and 2 from the shaft of the Paper Feeder (Figure 1).
10. Remove the E-ring that secures the Feed Clutch Assembly to the feeder (Figure 2).
11. Remove the Feed Clutch (Figure 2).
12. Disconnect P/J651 From the Feed Clutch (Figure 2).

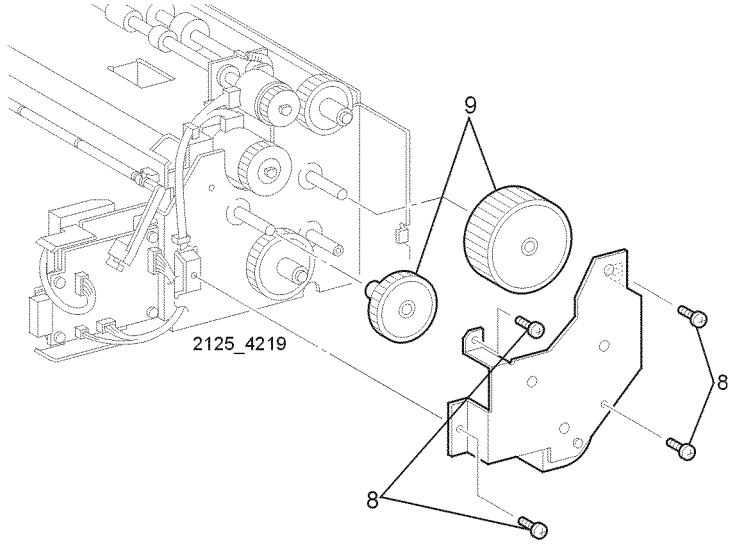


Figure 1 Bracket

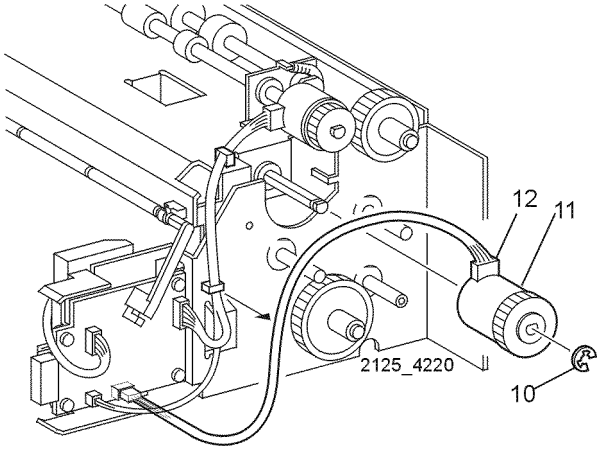


Figure 2 Feed Clutch Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 11.11 Paper Feed Rolls

Parts List on PL 11.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Tray.
2. Open the Front Chute Assembly from the Feeder of the 550 Sheet Feeder (Figure 1).
3. Release the locking tab on the front Feed Roll and slide the roll to the right and remove (Figure 1).
4. Repeat with rear Feed Roll (Figure 1).

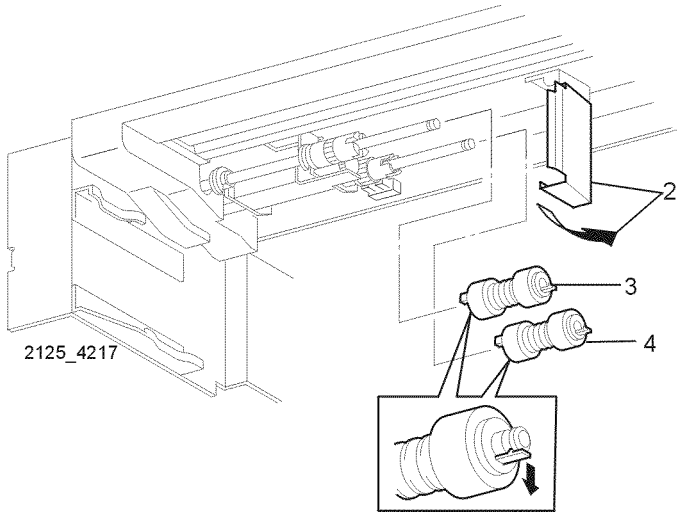


Figure 1 Paper Feed Rolls

Replacement

1. Reinstall the components in the reverse order.

REP 11.12 Feeder Assembly

Parts List on PL 11.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove the Tray from the Feeder.
3. Remove the 550 Sheet Feeder Right Cover (REP 11.2).
4. Remove the 550 Sheet Feeder Left Cover (REP 11.3).
5. Remove 550 Sheet Feeder Gear Bracket Assembly (REP 11.4).
6. Remove the Top Plate (REP 11.5).
7. Remove the 550 Sheet Feeder Drive Assembly (REP 11.6).
8. Remove the Feed Clutch Assembly (REP 11.10).
9. Remove the E-ring that secures the left shaft of the Feeder Assembly (Figure 1).
10. Remove the left bearing from the left shaft of the Feeder Assembly (Figure 1).
11. Open the Front Chute Assembly (Figure 2).

    NOTE: *Caution: Don't lose Bias Spring located under the Feeder Assembly.*

12. Slide the Feeder Assembly to the right and remove (Figure 2).

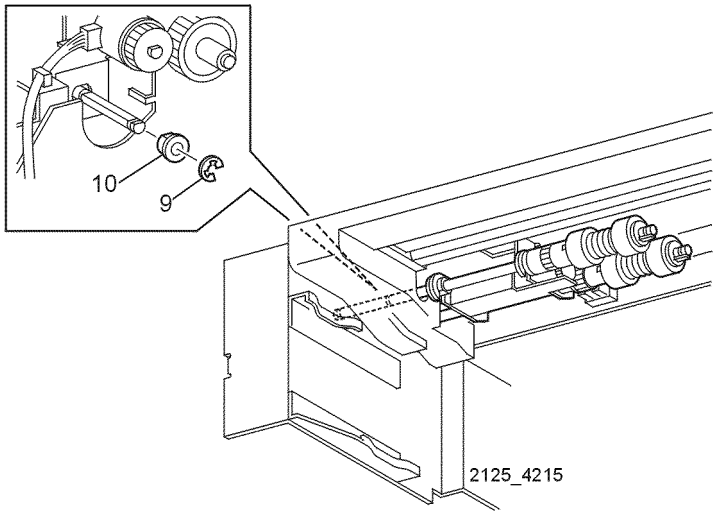


Figure 1 E-Ring & Bearing

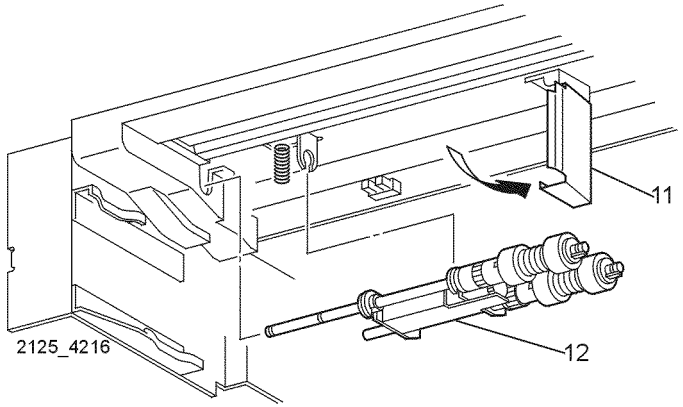


Figure 2 Feeder Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 11.13 Stack Height Sensor

Parts List on PL 3.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove the Tray from the Feeder.
3. Remove the 550 Sheet Feeder Right Cover (REP 11.2).
4. Remove the 550 Sheet Feeder Left Cover (REP 11.3).
5. Remove 550 Sheet Feeder Gear Bracket Assembly (REP 11.4).
6. Remove the Top Plate (REP 11.5).
7. Remove the 550 Sheet Feeder Drive Assembly (REP 11.6).
8. Disconnect P/J662 from the Stack Height Sensor (Figure 1).
9. Release the five hooks and remove the Sensor (Figure 1).

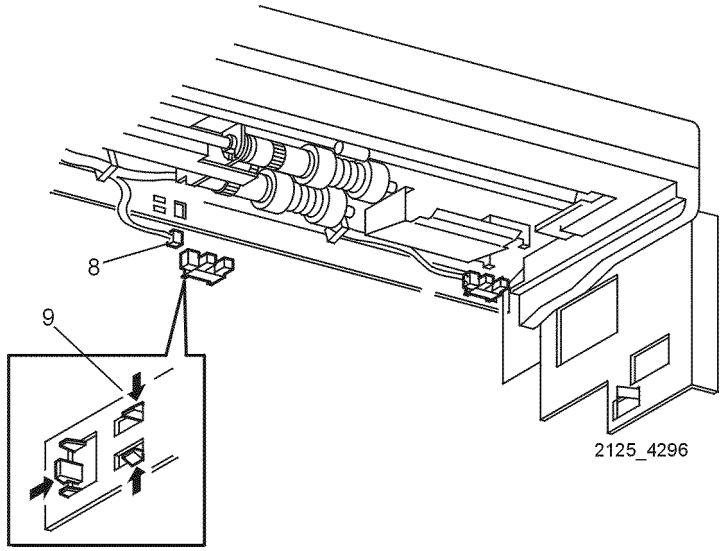


Figure 1 Stack Height Sensor

Replacement

1. Reinstall the components in the reverse order.

REP 11.14 Low Paper Sensor

Parts List on PL 11.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove the Tray from the Feeder.
3. Remove the 550 Sheet Feeder Right Cover (REP 11.2).
4. Remove the 550 Sheet Feeder Left Cover (REP 11.3).
5. Remove 550 Sheet Gear Bracket Assembly (REP 11.4).
6. Remove the Top Plate (REP 11.5).
7. Remove the 550 Sheet Feeder Drive Assembly (REP 11.6).
8. Disconnect P/J661 from the Low Paper Sensor (Figure 1).
9. Release the five hooks and remove the Sensor (Figure 1).

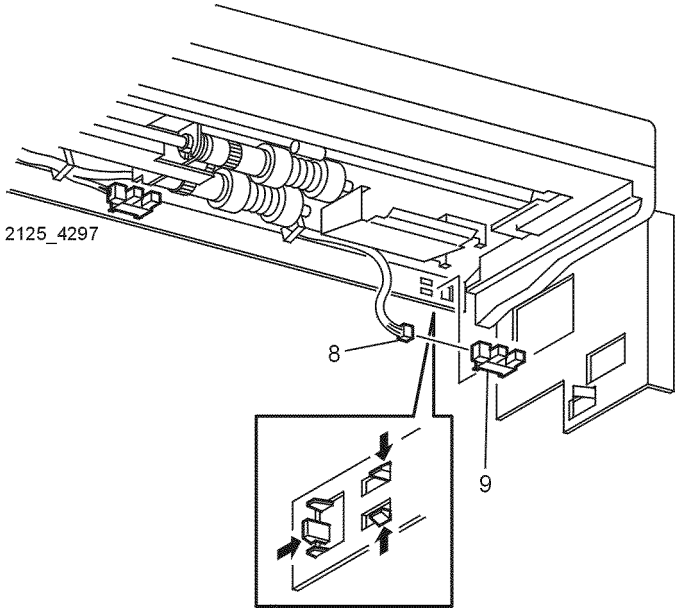


Figure 1 Low Paper Sensor

Replacement

1. Reinstall the components in the reverse order.

REP 11.15 Feeder Socket

Parts List on PL 3.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Tray.
2. Remove the two screws that secure the Socket to the Feeder in the printer (Figure 1).
3. It may be necessary to use a scribe or small screwdriver to lift the locking tabs to disconnect P/J71.
4. Disconnect P/J71 from the Socket and remove (Figure 1).

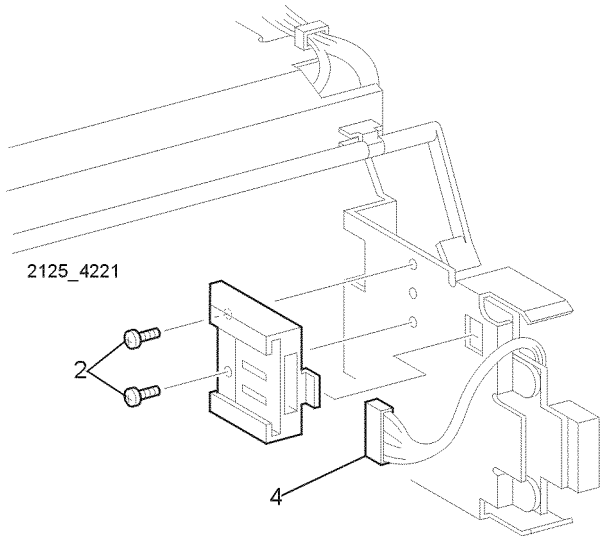


Figure 1 Feeder Socket

Replacement

1. Reinstall the components in the reverse order.

REP 11.16 550 Sheet Feeder Size Harness Assembly

Parts List on PL 11.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove the Tray from the Feeder.
3. Remove the 550 Sheet Feeder Left Cover (REP 11.3).
4. Remove the two screws that secure the 550 Sheet Feeder Size Harness Assembly to the 550 Sheet Feeder and remove from the wiring harness (Figure 1).
5. Remove the Feeder Gear Bracket Assembly (REP 11.4).
6. Remove the Top Plate (REP 11.5).
7. Remove the Feeder Drive Assembly (REP 11.6).
8. Using a small screwdriver push the locking tab that secures the Size Sensor Housing to the Feeder and remove (Figure 2).
9. Disconnect P/J52 from the Size Option PWB and remove the Harness Assembly (Figure 3).

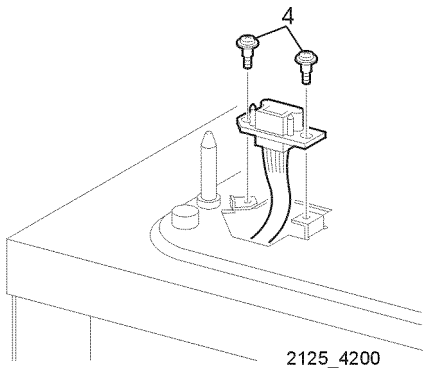


Figure 1 Removing Harness Assembly

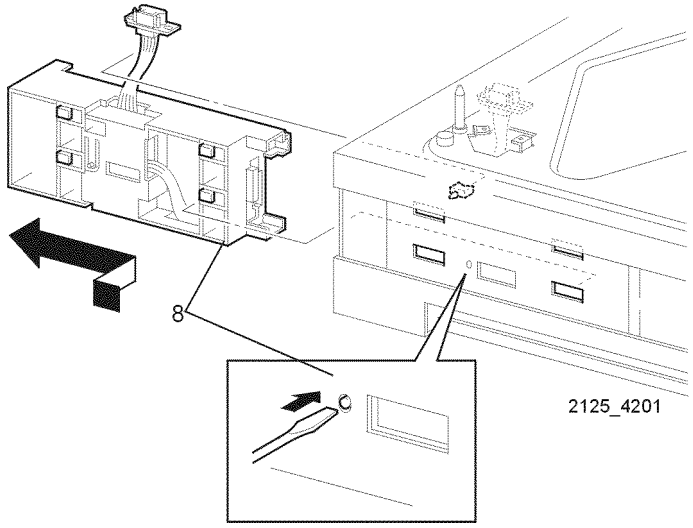


Figure 2 Disconnecting Boss

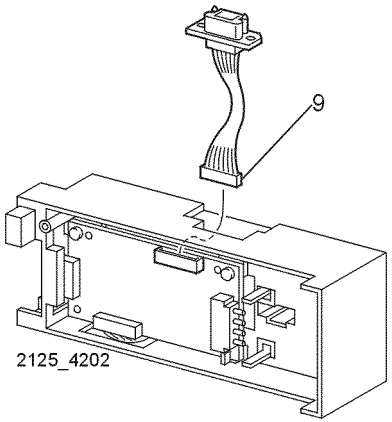


Figure 3 Size Sensor Harness Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 11.17 Size Sensor Housing Assembly

Parts List on PL 9.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove the Tray from the Feeder.
3. Remove the 550 Sheet Feeder Left Cover (REP 11.3).
4. Remove the two screws that secure the 550 Sheet Feeder Size Harness Assembly into the hole in the 550 Sheet Feeder and remove from the wiring harness (Figure 1).
5. Using a small screwdriver push the boss that secures the Size Sensor Housing from the 550 Sheet Feeder and remove (Figure 1).

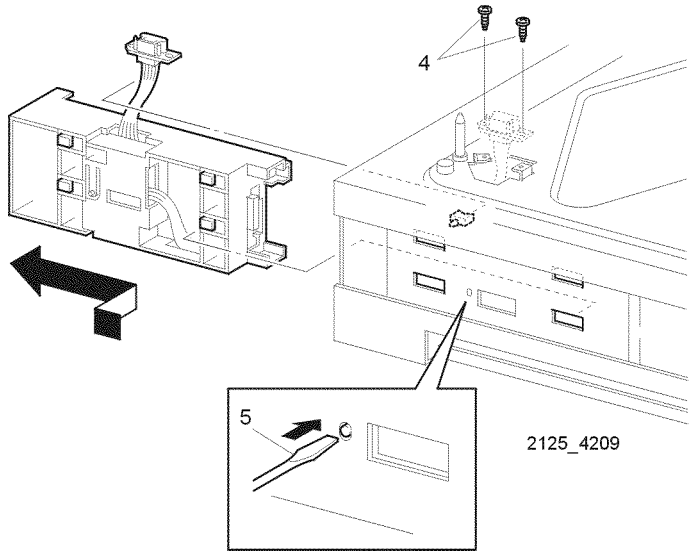


Figure 1 Size Sensor Housing Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 11.18 Size Sensor Actuators

Parts List on PL 11.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove any lower feeders if installed.
3. Remove the Tray from the Feeder.
4. Remove the 550 Sheet Feeder Left Cover (REP 11.3).
5. Remove the Size Sensor Housing Assembly (REP 11.17)

   NOTE: *Observe orientation of switch actuators before removal.*

6. Remove the four screws that secure the Size Sensor Actuators to the Size Sensor Housing (Figure 1).
7. From the back side, disengage the two locking tabs that secure the Size Sensor Actuators to the Housing Assembly and remove (Figure 1).

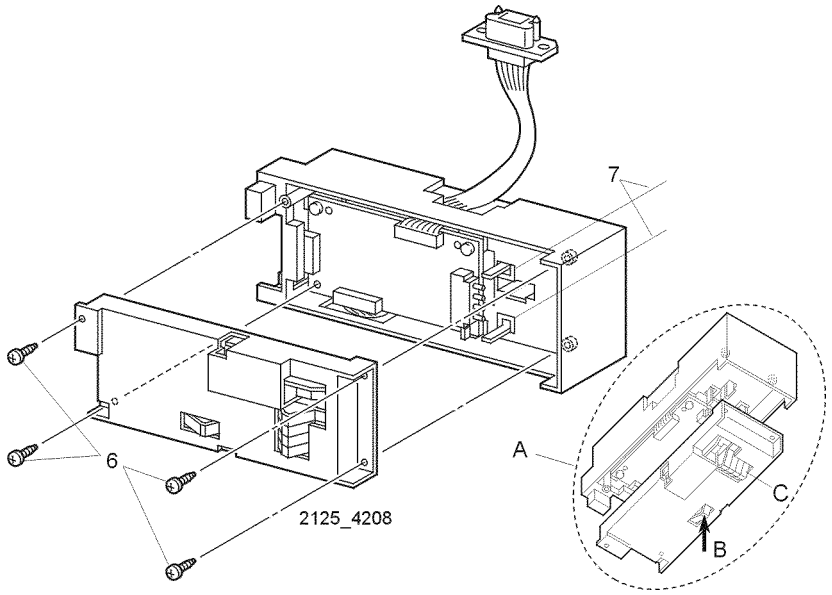


Figure 1 Size Sensor Housing

Replacement

Refer to inset (A)

1. Position the Size Sensor Actuators below the Housing Assembly as shown.
2. Press and hold (B) to allow the actuators (C) to fall into position.
3. During reassembly ensure that locking tabs slide into position.
4. Reinstall the components in the reverse order.

REP 11.19 Size PWB

Parts List on PL 9.1

Removal

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove the Tray from the Feeder.
3. Remove the 550 Sheet Feeder Left Cover (REP 11.3).
4. Remove the 550 Sheet Feeder Size Harness Assembly (REP 11.16).
5. Remove the Size Sensor Harness Assembly (REP 11.17).
6. Remove the Size Sensor Housing (REP 11.18).
7. Disconnect P/J53 from the Tray 2 Size PWB (Figure 1).
8. Remove the two screws that secure the Size PWB to the Size Sensor Housing Assembly (Figure 1).
9. Remove the Tray 2 Size PWB (Figure 1).

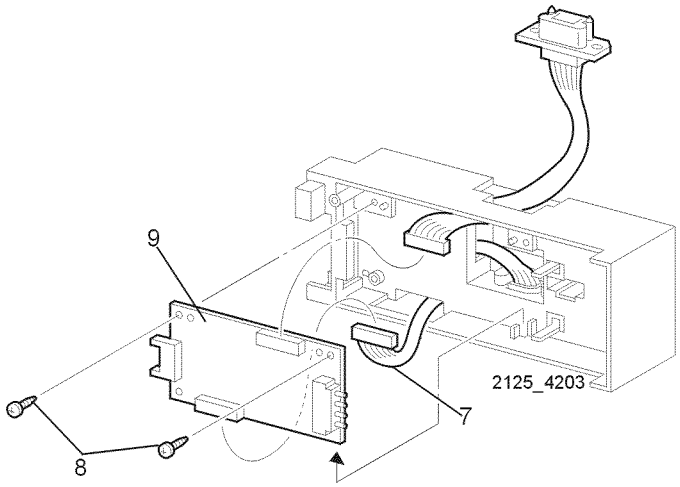


Figure 1 Tray 2 Size PWB

Replacement

1. Reinstall the components in the reverse order.

REP 11.20 Size Harness Assembly

Parts List on PL 9.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the printer from the 550 Sheet Feeder (REP 11.1).
2. Remove the Tray from the Feeder.
3. Remove the 550 Sheet Feeder Left Cover (REP 11.3).
4. Remove the 550 Sheet Feeder Size Harness Assembly (REP 11.16).
5. Remove the Size Sensor Harness Assembly (REP 11.17).
6. Remove the Size Sensor Housing (REP 11.18).
7. Disconnect P/J53 from the Tray 2 Size PWB (Figure 1).
8. Remove the two screws that secure the Size Harness Assembly (Figure 1).
9. Remove the Size Harness Assembly (Figure 1).

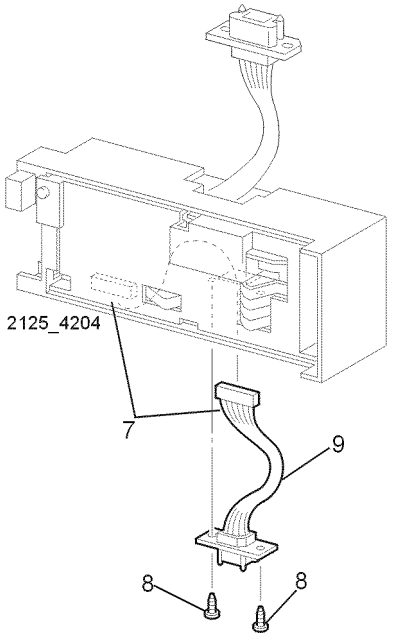


Figure 1 Size M Harness Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 12.1 Duplex Assembly

Parts List on PL 13.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Open the Printer Rear Cover.
2. Push the left and right latches in and pull the Duplex Assembly out and up to remove (Figure 1).

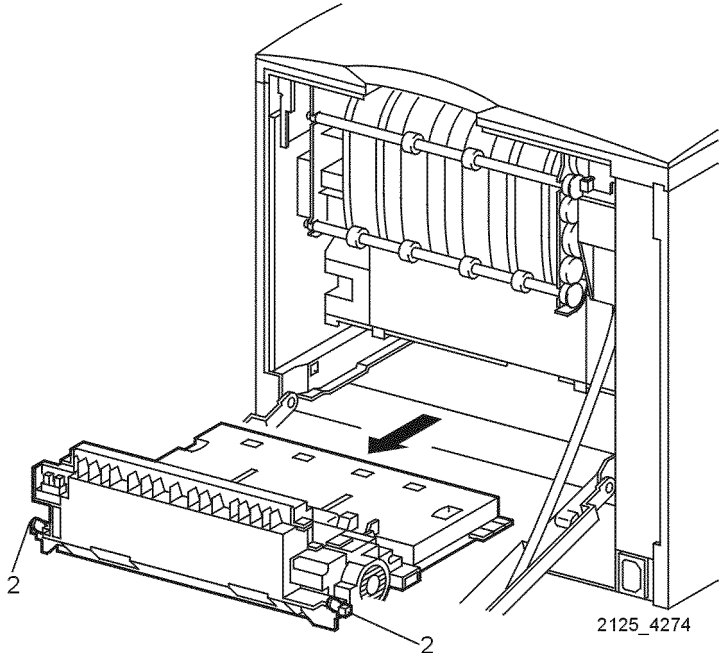


Figure 1 Duplex Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 12.2 Turn Chute Assembly

Parts List on PL 13.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Duplex Assembly (REP 12.1).
2. Remove the two screws that secure the Turn Chute Assembly (Figure 1).
3. Remove the Turn Chute Assembly (Figure 1).

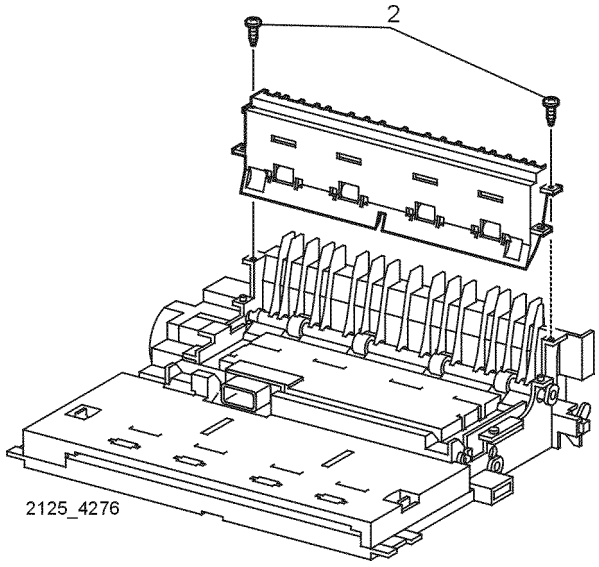


Figure 1 Turn Chute Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 12.3 Duplex Cover

Parts List on PL 13.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Duplex Assembly (REP 12.1).
2. Turn the Duplex Assembly upside down.
3. Release the three locking tabs that secure the cover (Figure 1).
4. Remove the Duplex Cover (Figure 1).

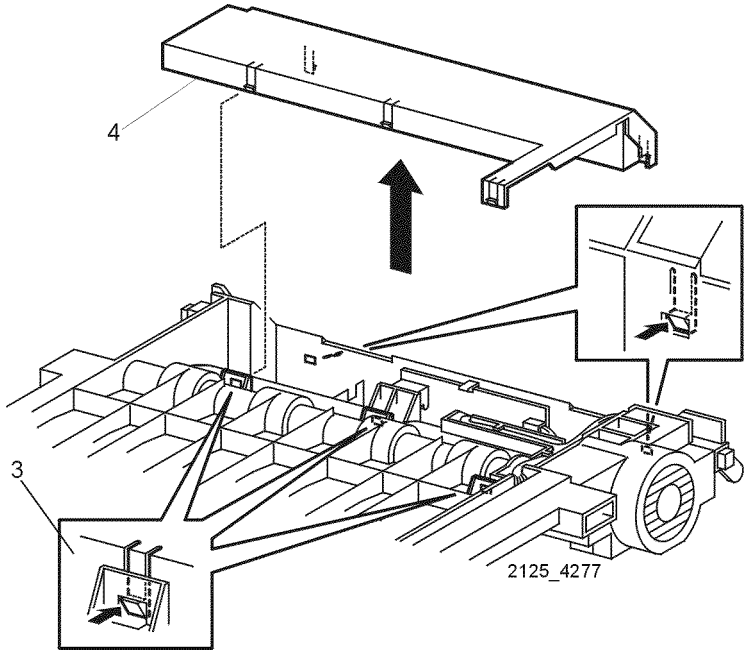


Figure 1 Duplex Cover

Replacement

1. Reinstall the components in the reverse order.

REP 12.4 Duplex PWB

Parts List on PL 13.2

Removal

CAUTION

These components are susceptible to electostatic discharge. Observe all ESD procedures to avoid damage.

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Duplex Assembly (REP 12.1).
2. Remove the Duplex Cover (REP 12.3).
3. Carefully release the locking tab and remove the PWB to access the connectors (Figure 1).
4. Disconnect P/J392, P/J37, P/J38 and P/J39 (Figure 1).
5. Remove the Duplex PWB (Figure 1).

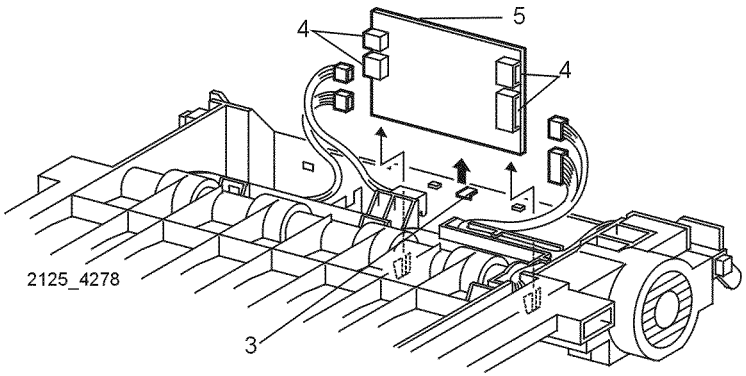


Figure 1 Duplex PWB

Replacement

1. Reinstall the components in the reverse order.

REP 12.5 Drive Cover

Parts List on PL 13.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Duplex Assembly (REP 12.1).
2. Remove the two screws that secure the cover (Figure 1).
3. Remove the Drive Cover (Figure 1).

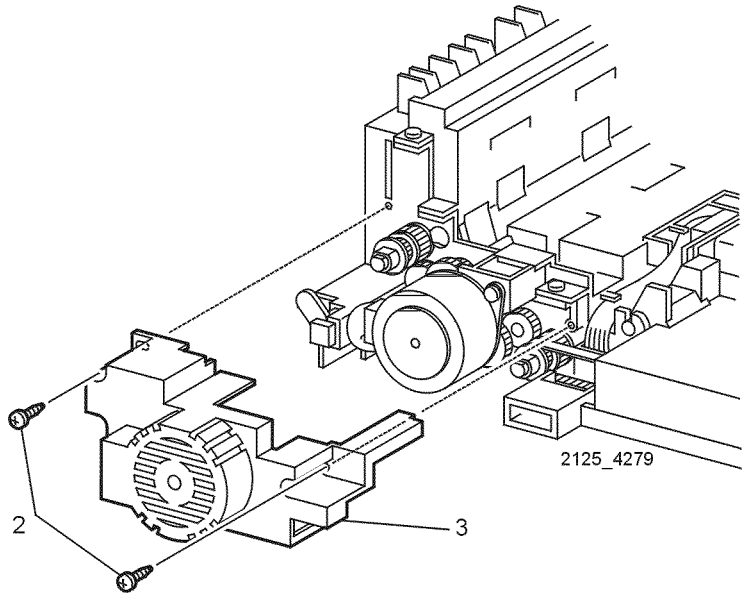


Figure 1 Drive Cover

Replacement

1. Reinstall the components in the reverse order.

REP 12.6 Connector Chute Assembly

Parts List on PL 13.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Duplex Assembly (REP 12.1).
2. Remove the Duplex Cover (REP 12.3).
3. Remove the Drive Cover (REP 12.5).
4. Remove the Duplex PWB (REP 12.4). Only disconnect P/J39 (Figure 1).
5. Remove the connector harness from all cable clamps and pull connector through the hole in the frame (Figure 1).
6. Remove the two screws that secure the Connector Chute Assembly (Figure 1).

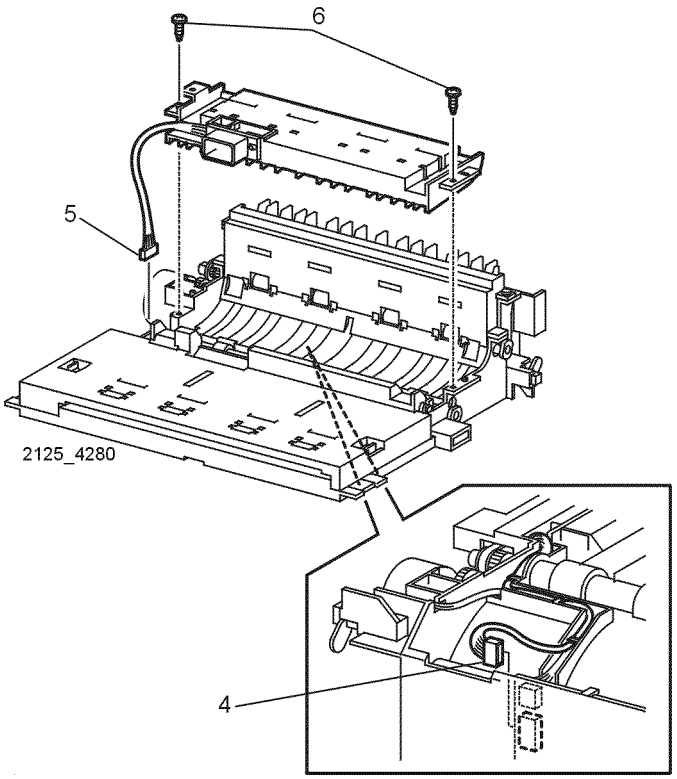


Figure 1 Connector Chute Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 12.7 Upper Chute Assembly

Parts List on PL 13.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Duplex Assembly (REP 12.1).
2. Remove the Duplex Cover (REP 12.3).
3. Remove the Drive Cover (REP 12.5).
4. Remove the Connector Chute Assembly (REP 12.6).
5. Push the two locking tabs out to release the Upper Chute Assembly (Figure 1).
6. Lift the Upper Chute until it is straight up (Figure 2).
7. Lift the right end to remove it from the right mounting (Figure 2).
8. Move the Upper Chute Assembly to the right and remove.

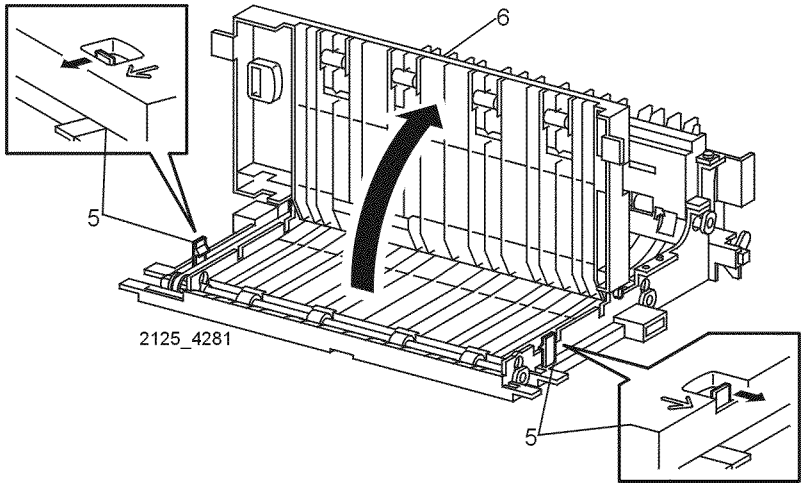


Figure 1 Locking Tabs

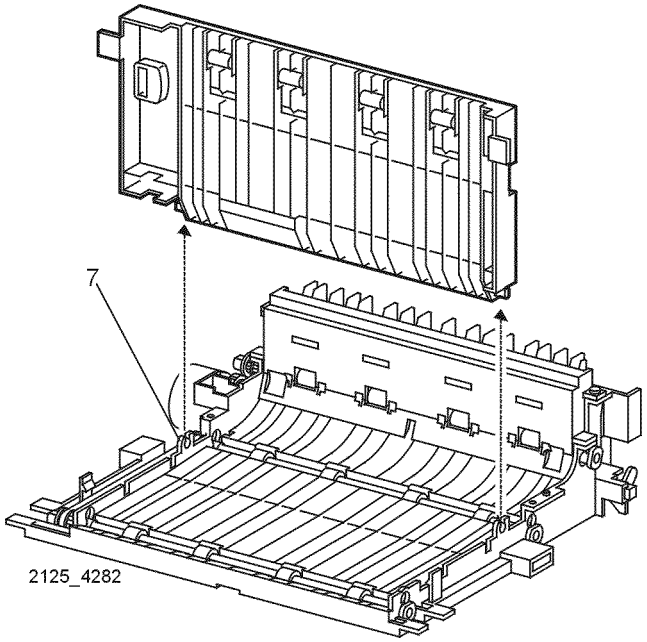


Figure 2 Upper Chute Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 12.8 Motor Assembly

Parts List on PL 13.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Duplex Assembly (REP 12.1).
2. Remove the Duplex Cover (REP 12.3).
3. Remove the Drive Cover (REP 12.5).
4. Disconnect P/J38 from the Duplex PWB (Figure 1).
5. Remove the harness from all cable clamps (Figure 1).
6. Remove the two screws that secure the Motor Assembly (Figure 1).
7. Remove the Motor Assembly (Figure 1).

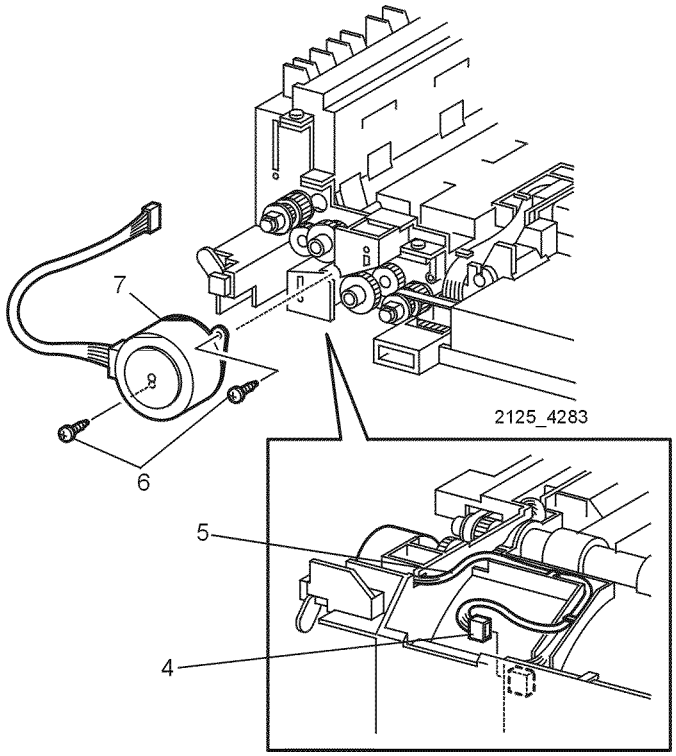


Figure 1 Motor Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 12.9 Rear Roll Assembly

Parts List on PL 13.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Duplex Assembly (REP 12.1).
2. Remove the Turn Chute Assembly (REP 12.2).
3. Remove the Duplex Cover (REP 12.3).
4. Remove the Drive Cover (REP 12.5).
5. Remove the Motor Assembly (REP 12.8).
6. Release the locking tab and remove the Rear Belt Stopper (Figure 1).
7. Remove the Duplex Gear (Figure 1).
8. Remove Gears 17 and 18 (Figure 1).
9. Release the locking tabs and remove both the left and right bearings (Figure 1).
10. Move the Rear Roll Assembly forward, then to the left until the right end is free (Figure 2).
11. Remove the Rear Roll Assembly (Figure 2).

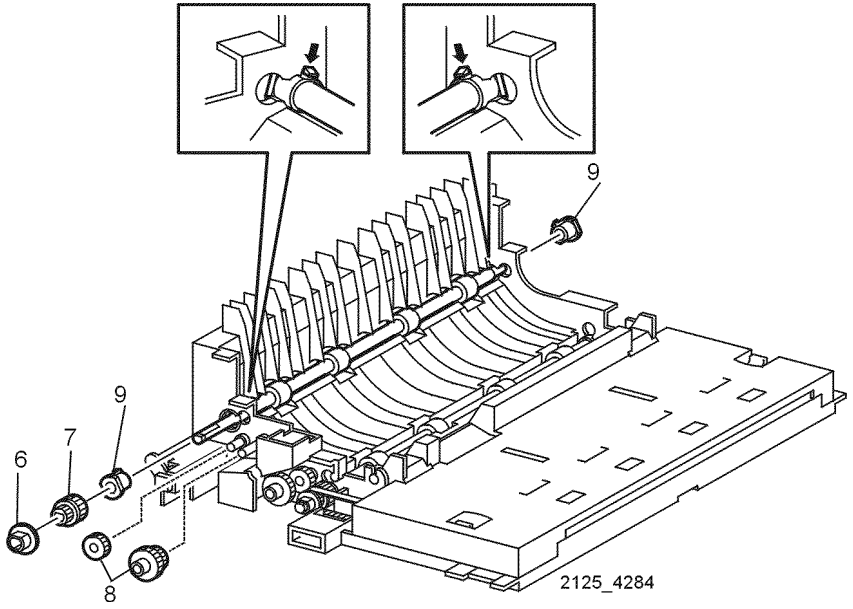


Figure 1 Locking Tab and Rear Belt Stopper

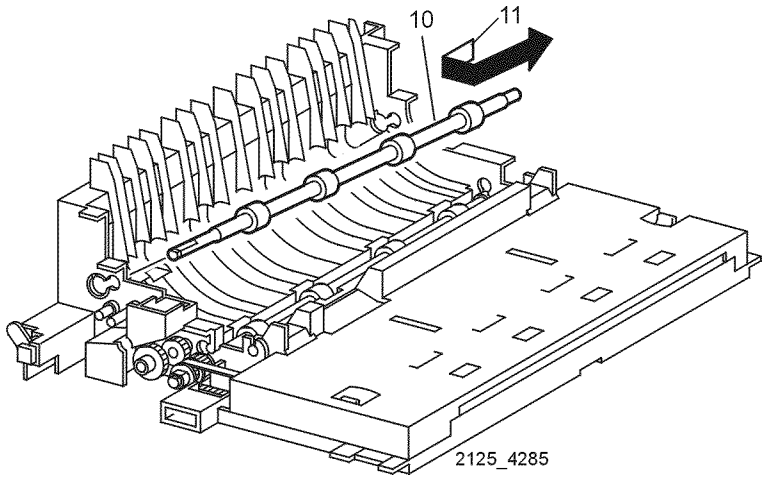


Figure 2 Rear Roll Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 12.10 Middle Roll Assembly

Parts List on PL 13.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Duplex Assembly (REP 12.1).
2. Remove the Turn Chute Assembly (REP 12.2).
3. Remove the Duplex Cover (REP 12.3).
4. Remove the Drive Cover (REP 12.5).
5. Remove the Duplex PWB (REP 12.4).
6. Remove the Connector Chute Assembly (REP 12.6).
7. Remove the Motor Assembly (REP 12.8).
8. Release the locking tab and remove the Middle Belt Stopper (Figure 1).
9. Remove the Synchronous Belt from the pulley.
10. Remove the Middle Duplex Gear (Figure 1).
11. Remove 17 and 18 Gear (Figure 1).
12. Use a small screwdriver to release the left and right bearings (Figure 1).
13. Lift the Middle Roll Assembly then move the roller to the left until the right end is free (Figure 2).
14. Remove the Middle Roll Assembly (Figure 2).

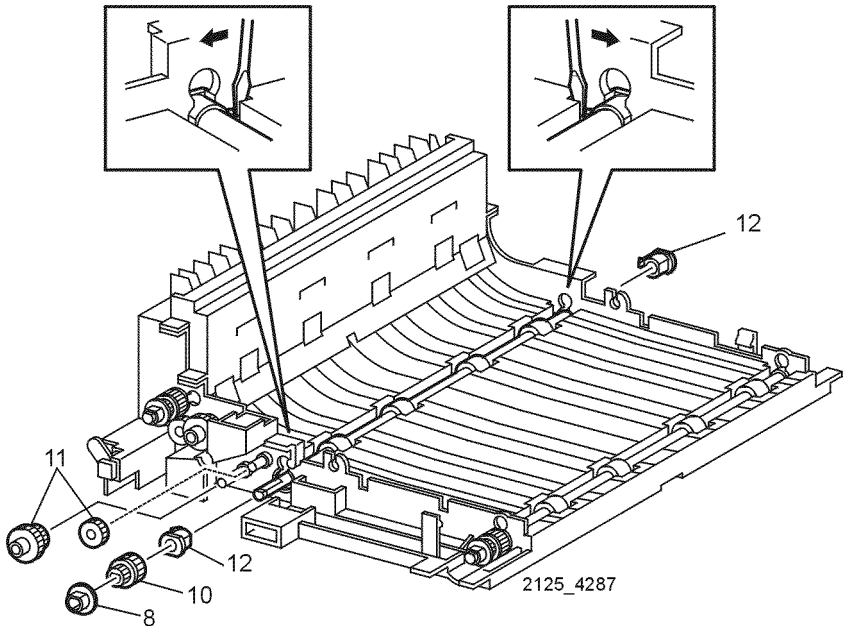


Figure 1 Locking Tab and Middle Belt Stopper

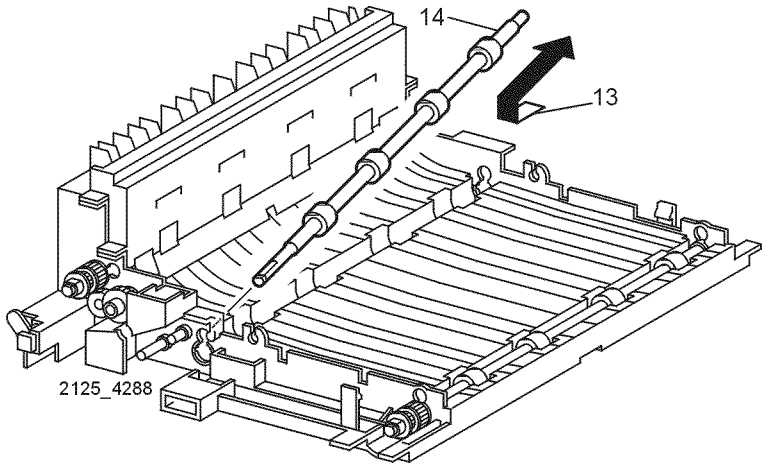


Figure 2 Middle Roll Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 12.11 Front Roll Assembly

Parts List on PL 13.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Duplex Assembly (REP 12.1).
2. Release the tabs and open the Upper Chute Assembly (Figure 1).
3. Release the locking tab and remove the Front Belt Stopper (Figure 1).
4. Remove the Synchronous Belt from the Pulley (REP 12.12).
5. Remove the Drive Gear (Figure 1).
6. Use a small screwdriver to release the left and right bearings (Figure 1).
7. Lift the Roll Assembly and move it to the left until the right end is free (Figure 2).
8. Remove the Front Roll Assembly (Figure 2).

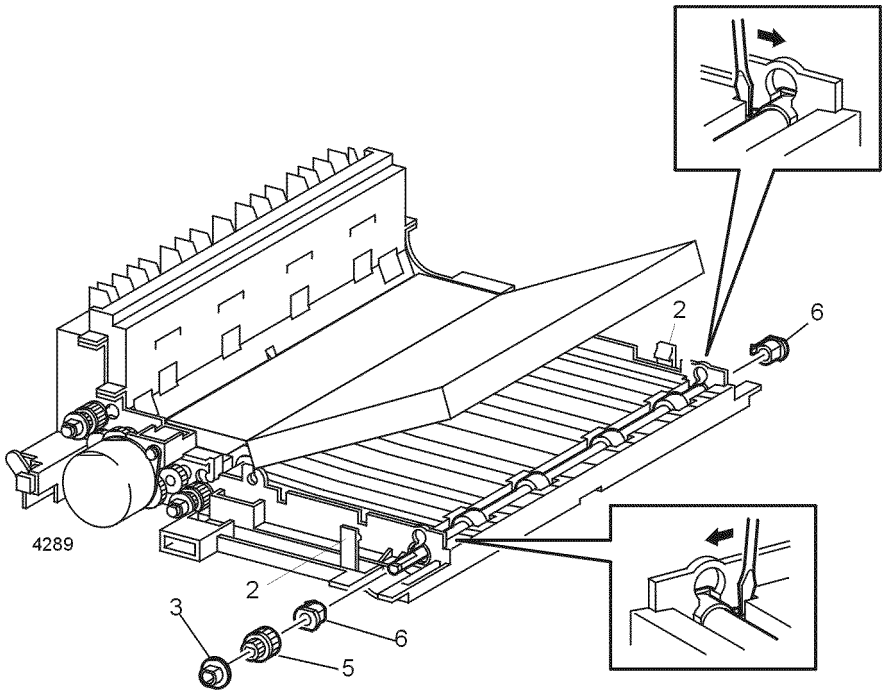


Figure 1 Locking Tab and Front Belt Stopper

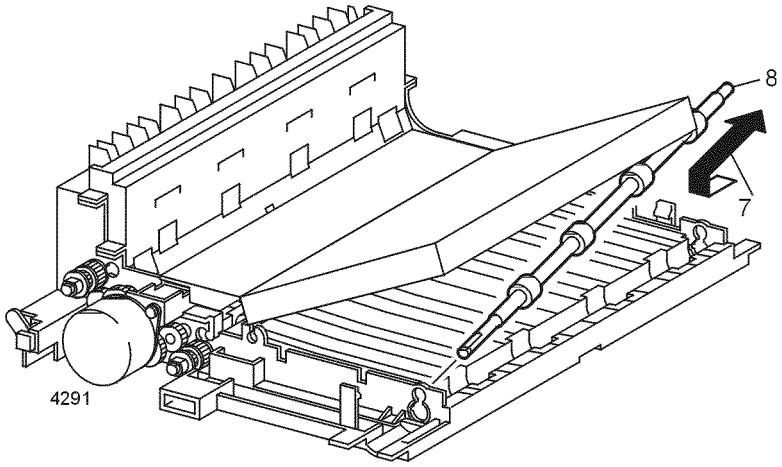


Figure 2 Front Roll Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 12.12 Synchronous Belt

Parts List on PL 13.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Duplex Assembly (REP 12.1).
2. Remove the Drive Cover (REP 12.5).
3. Remove the Front Belt Stopper (Figure 1).
4. Remove the Synchronous Belt from the pulleys (Figure 1).

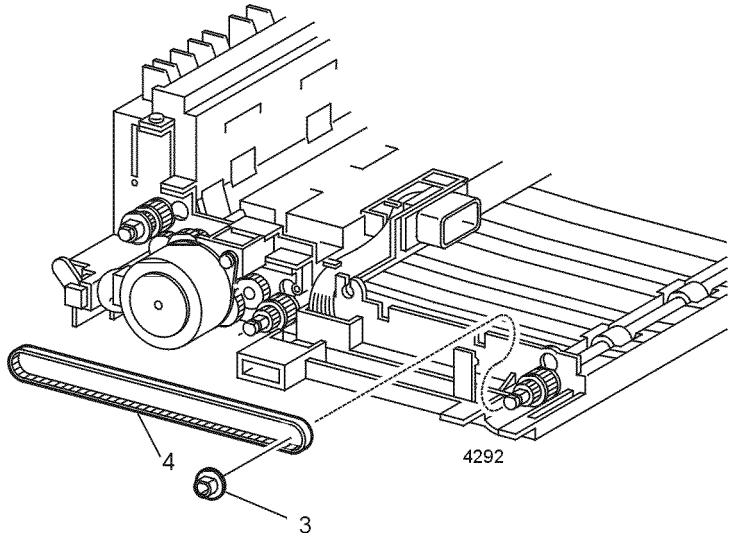


Figure 1 Synchronous Belt

Replacement

1. Reinstall the components in the reverse order.

REP 12.13 Transport Sensor

Parts List on PL 13.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Duplex Assembly (REP 12.1).
2. Remove the Duplex Cover (REP 12.3).
3. Disconnect P/J37 from the Duplex PWB (Figure 1).
4. Release the four locking tabs that secure the Transport Sensor (Figure 1).
5. Remove the Sensor (Figure 1).

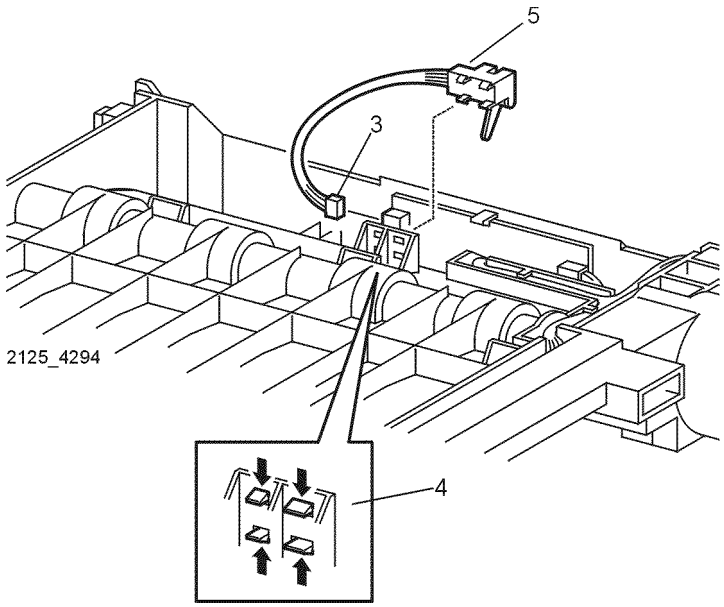


Figure 1 Transport Sensor

Replacement

1. Reinstall the components in the reverse order.

REP 12.14 Face Up Tray Sensor

Parts List on PL 13.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Duplex Assembly (REP 12.1).
2. Release the four locking tabs that secure the Face Up Tray Sensor (Figure 1).
3. Disconnect P/J361 from the Face Up Tray Sensor (Figure 1).
4. Remove the Sensor (Figure 1).

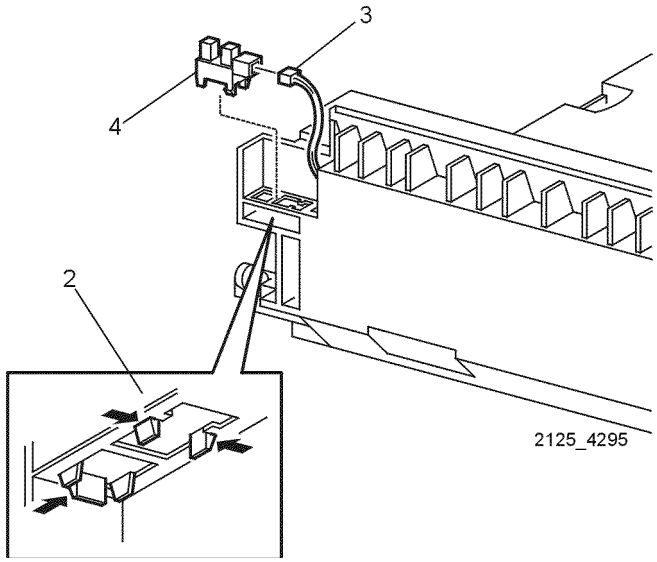


Figure 1 Face Up Tray Sensor

Replacement

1. Reinstall the components in the reverse order.

REP 13.1 Bottom Cover

Parts List on PL 12.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Turn the Feeder upside down.
3. Remove the two screws that secure the front of the Bottom Cover (Figure 1).
4. Rotate the front of the Bottom Cover up until the two rear tabs can be removed from the Feeder (Figure 1).

   NOTE: *Make note of how the Harness Connector is inserted in the Bottom Cover.*

5. Lift the Bottom Cover and remove the harness connector from the cover (Figure 1).

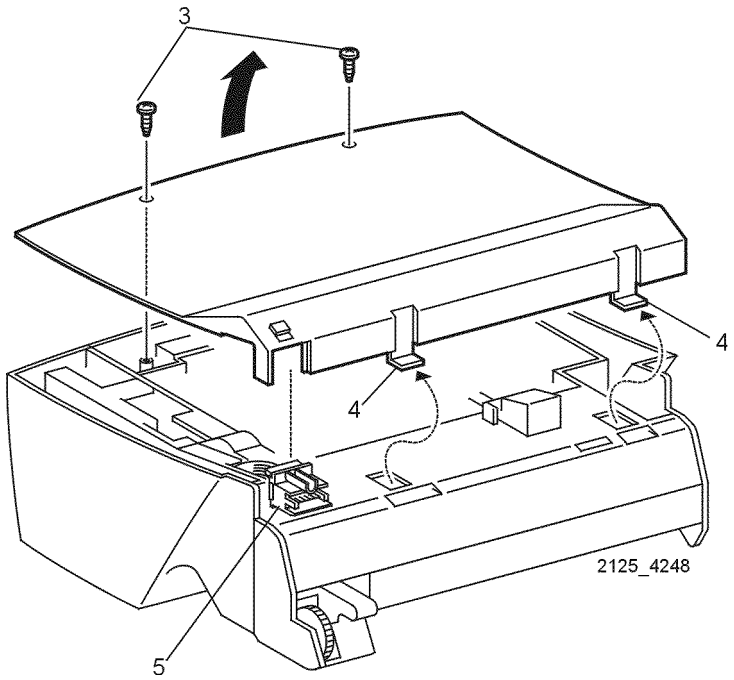


Figure 1 Bottom Cover

Replacement

1. Reinstall the components in the reverse order.

REP 13.2 Top Chute

Parts List on PL 12.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Remove the Bottom Cover (REP 13.1).
3. Remove the four screws that secure the Top Chute (Figure 1).
4. Rotate the feeder unit up and disconnect P/J417 from the Exit Sensor (Figure 1).
5. Slide the feeder unit to the right and remove it from the Top Chute (Figure 1).

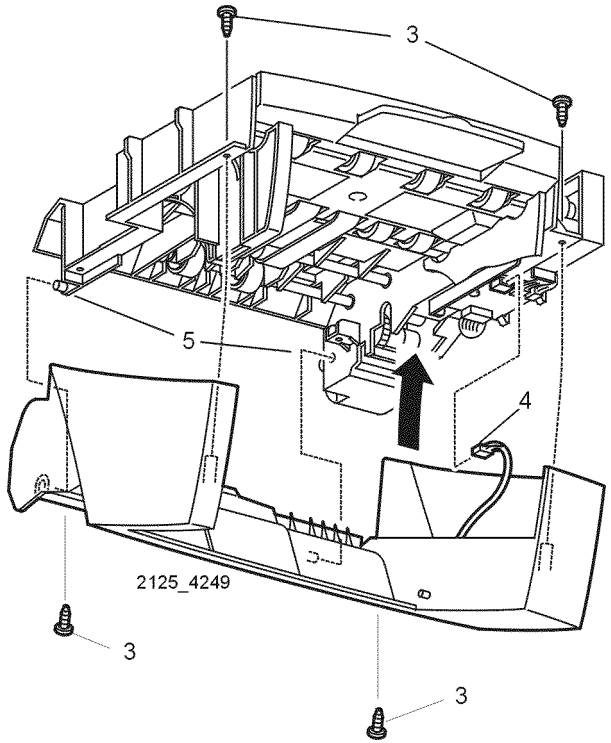


Figure 1 Top Chute

Replacement

1. Reinstall the components in the reverse order.

REP 13.3 Envelope Feeder PWB

Parts List on PL 12.2

Removal

CAUTION

These components are susceptible to electrostatic discharge. Observe all ESD procedures to avoid damage.

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Remove the Bottom Cover (REP 13.1).
3. Remove the Top Chute (REP 13.2).
4. Disconnect P/J411, P/J 412, P/J413, and P/J414 from the Feeder PWB (Figure 1).
5. Remove the screw that secures the Feeder PWB to the frame (Figure 1).

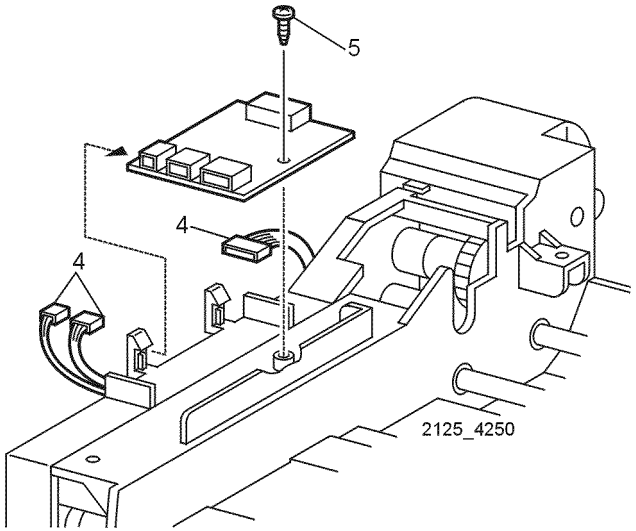


Figure 1 Envelope Feeder PWB

Replacement

1. Reinstall the components in the reverse order.

REP 13.4 Retard Roll Assembly

Parts List on PL 12.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Remove the Bottom Cover (REP 13.1).
3. Remove the Top Chute (REP 13.2).
4. Carefully pry up on the two hinge pins and remove the Retard Roll Assembly (Figure 1).

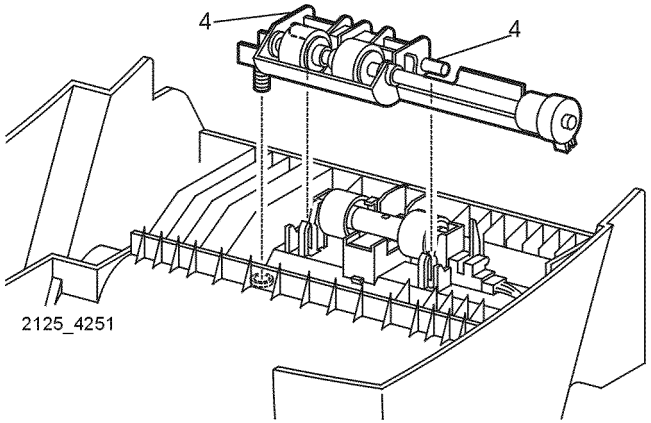


Figure 1 Retard Roll Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 13.5 Exit Pinch Roll

Parts List on PL 12.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Remove the Bottom Cover (REP 13.1).
3. Remove the Top Chute (REP 13.2).
4. Carefully pry up on either end of the Pinch Roll until it is free of the mounting (Figure 1).
5. Remove the Exit Pinch Roll (Figure 1).

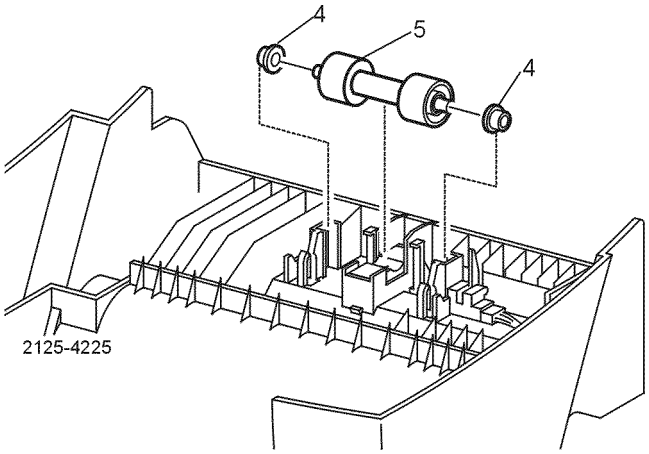


Figure 1 Exit Pinch Roll

Replacement

1. Reinstall the components in the reverse order.

REP 13.6 Exit Sensor Assembly

Parts List on PL 12.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Remove the Bottom Cover (REP 13.1).
3. Remove the Top Chute (REP 13.2).
4. Release the four locking tabs and remove the Exit Sensor (Figure 1).

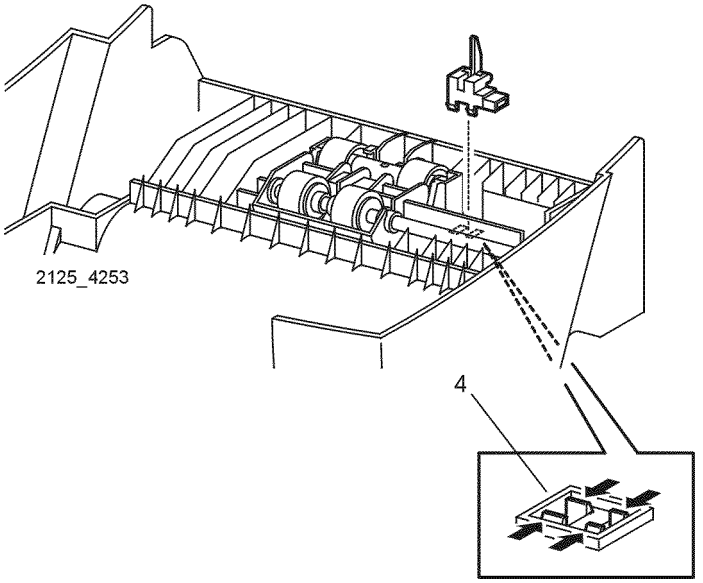


Figure 1 Exit Sensor Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 13.7 Weight Arm

Parts List on PL 12.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Deflect the center of the Weight Arm until the end of the arm is free of the hinge pin (Figure 1).
3. Remove the Weight Arm (Figure 1).

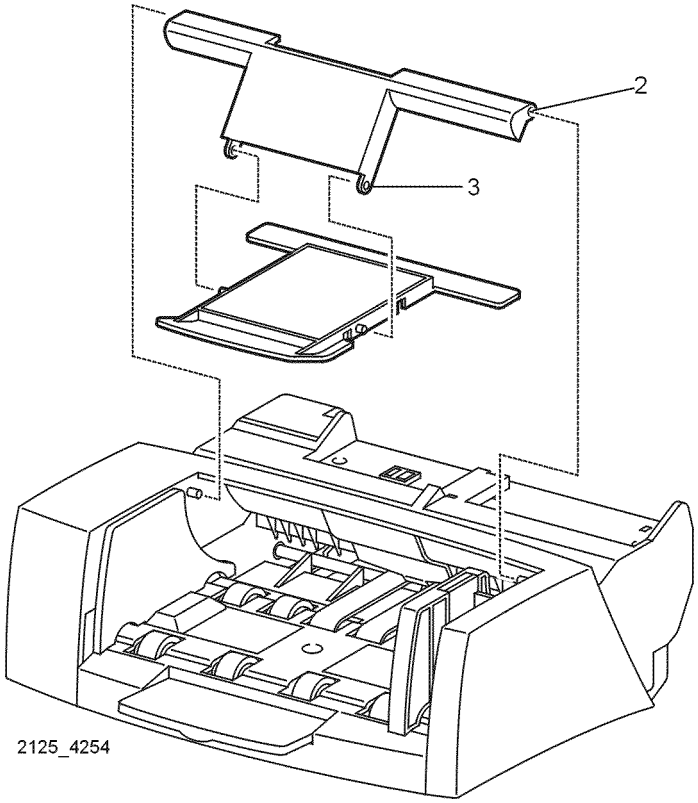


Figure 1 Weight Arm

Replacement

1. Reinstall the components in the reverse order.

REP 13.8 Tray Extension

Parts List on PL 12.1

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Remove the Bottom Cover (REP 13.1).
3. Pull the extension out at a 45° angle and remove (Figure 1).

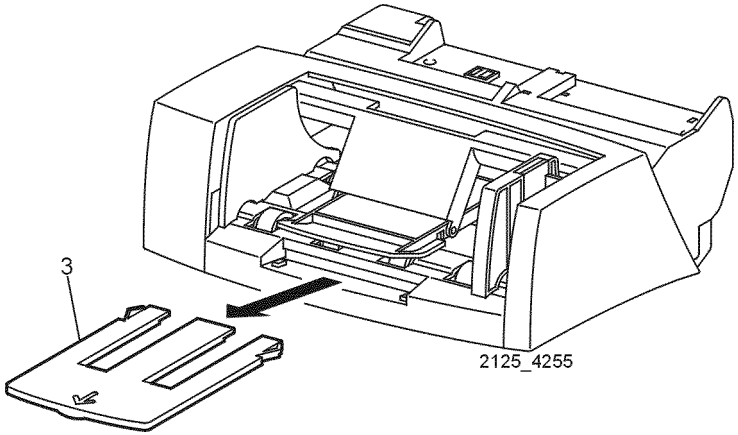


Figure 1 Tray Extension

Replacement

1. Reinstall the components in the reverse order.

REP 13.9 No Paper Actuator

Parts List on PL 12.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Remove the Bottom Cover (REP 13.1).
3. Carefully pry up on the hinge pins to remove the actuator from the mounting (Figure 1).
4. Rotate the No Paper Actuator up to remove (Figure 1).

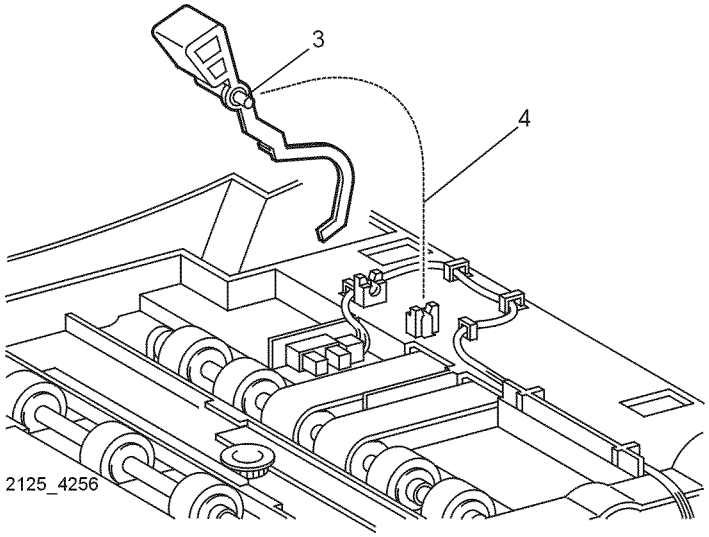


Figure 1 No Paper Actuator

Replacement

1. Reinstall the components in the reverse order.

REP 13.10 No Paper Sensor

Parts List on PL 12.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Remove the Bottom Cover (REP 13.1).
3. Remove the No Paper Actuator (REP 13.9).
4. Release the three locking tabs that secure the No Paper Sensor (Figure 1).
5. Disconnect P/J415 from the sensor (Figure 1).

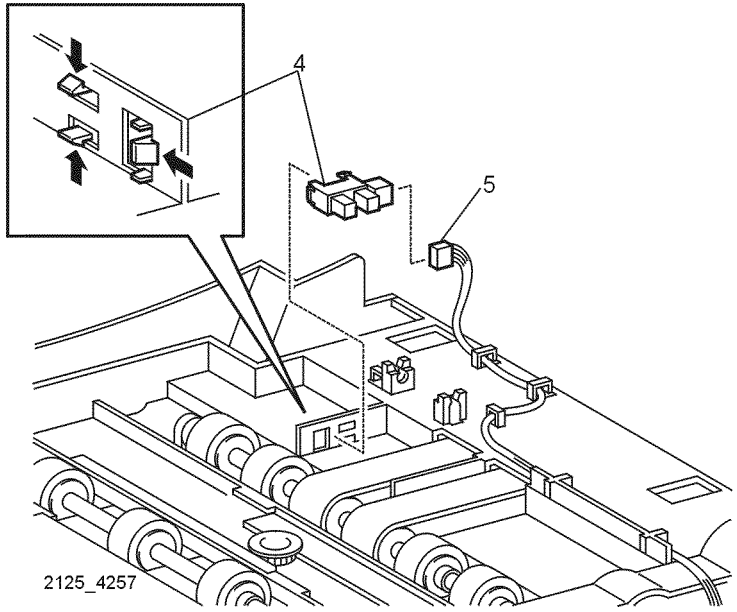


Figure 1 No Paper Sensor

Replacement

1. Reinstall the components in the reverse order.

REP 13.11 Gear Cover

Parts List on PL 12.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Remove the Bottom Cover (REP 13.1).
3. Remove the Top Chute (REP 13.2).
4. Remove the Envelope Feeder PWB (REP 13.3).
5. Remove the two screws that secure the Gear Cover on the feeder (Figure 1).
6. Disconnect P/J416 from the Feed Clutch (Figure 1).
7. Remove the cover.

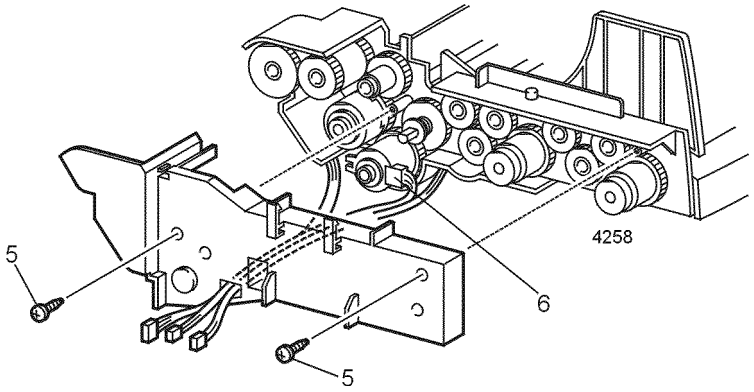


Figure 1 Gear Cover

Replacement

1. Reinstall the components in the reverse order.

REP 13.12 Feed Clutch

Parts List on PL 12.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Remove the Bottom Cover (REP 13.1).
3. Remove the Top Chute (REP 13.2).
4. Remove the Envelope Feeder PWB (REP 13.3).
5. Remove the Gear Cover (REP 13.11).
6. Remove the Torque Clutch (Figure 1).
7. Remove the Feed Clutch (Figure 2).

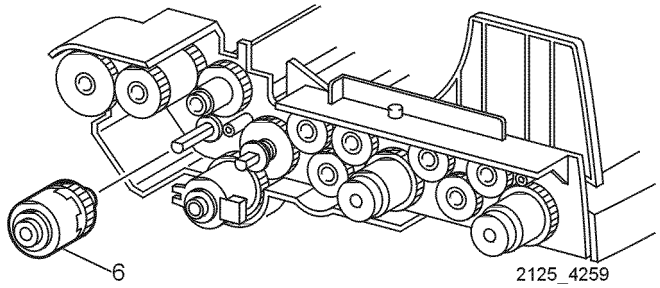


Figure 1 Torque Clutch

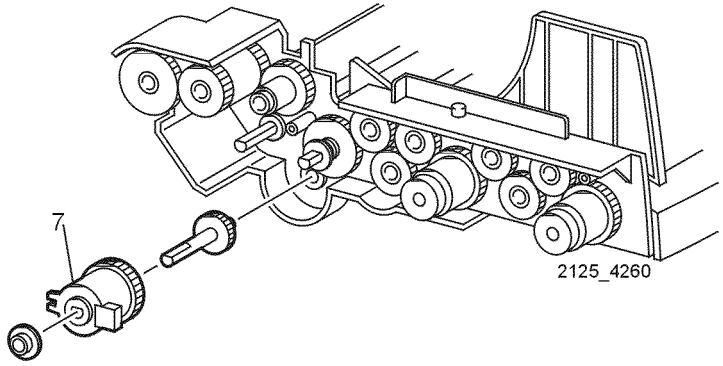


Figure 2 Feed Clutch

Replacement

1. Reinstall the components in the reverse order.

REP 13.13 Transport Roll Assembly

Parts List on PL 12.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Remove the Bottom Cover (REP 13.1).
3. Remove the Top Chute (REP 13.2).
4. Remove the Envelope Feeder PWB (REP 13.3).
5. Remove the Gear Cover (REP 13.11).
6. Remove the Torque Clutch and Bearing from Transport Roll Assembly (Figure 1).
7. Move the right bearing and Transport Roll Shaft to the left until it is free of the right support (Figure 2).
8. Lift and remove the Transport Roll Assembly (Figure 2).

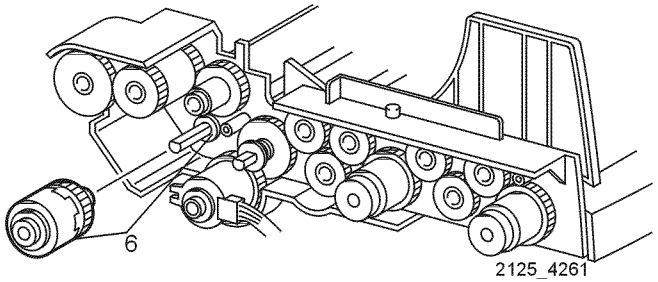


Figure 1 Torque Clutch

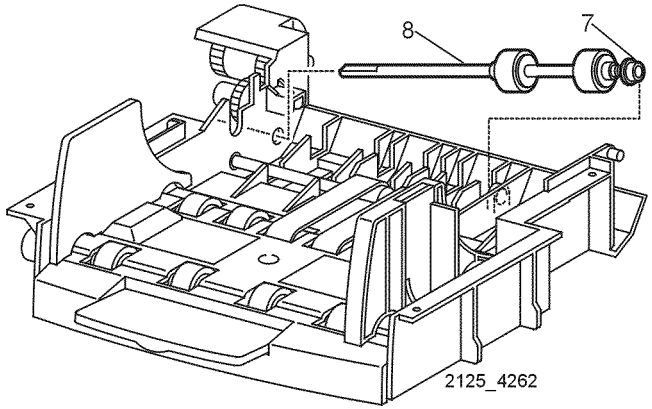


Figure 2 Transport Roll Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 13.14 Bottom Roll Assembly

Parts List on PL 12.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Remove the Bottom Cover (REP 13.1).
3. Remove the Top Chute (REP 13.2).
4. Remove the Envelope Feeder PWB (REP 13.3).
5. Remove the Gear Cover (REP 13.11).
6. Remove the Torque Clutch (Figure 1).
7. Remove the Feed Clutch (Figure 1).
8. Remove the one way clutch and bearing from the Bottom Roll Assembly shaft (Figure 2).
9. Slide the Bottom Roll Assembly and the right bearing to the left until free of the mounting (Figure 2).
10. Raise the right end of the shaft and remove (Figure 3).

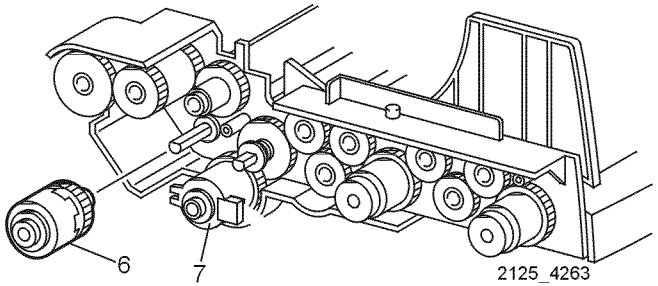


Figure 1 Torque Clutch

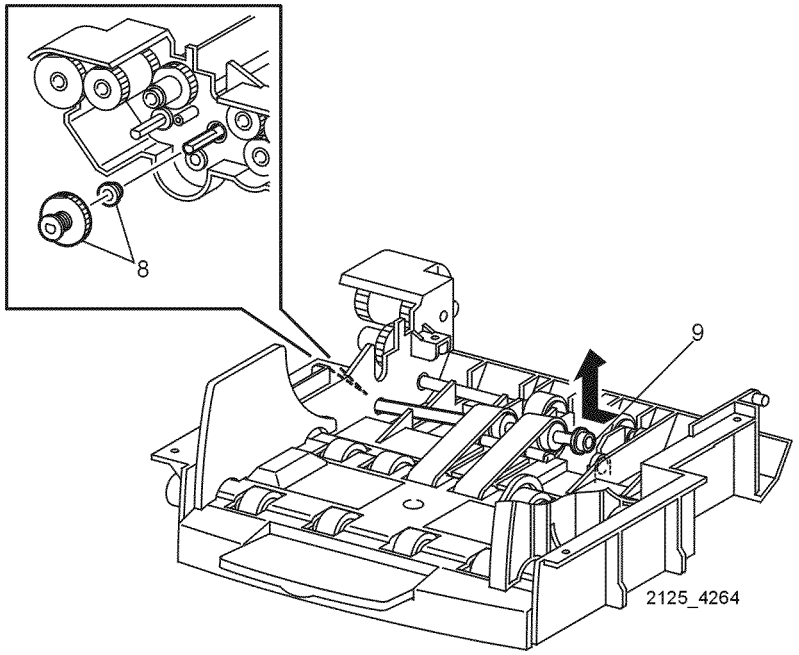


Figure 2 Clutch and Bearing

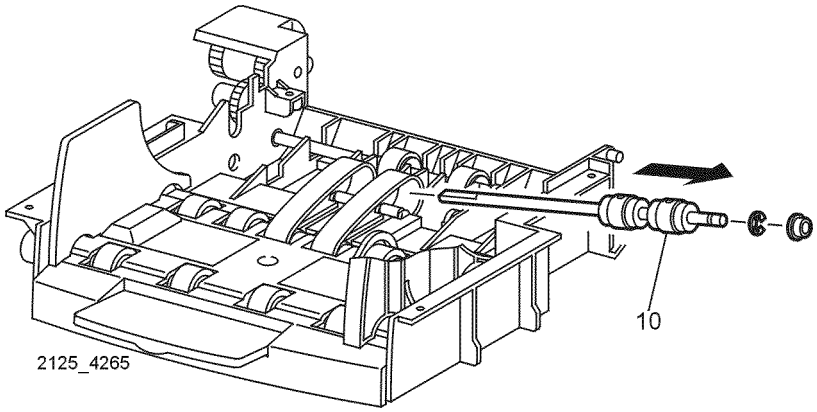


Figure 3 Bottom Roll Assembly

Replacement

1. Reinstall the components in the reverse order.

REP 13.15 Feed Roll Assembly 1

Parts List on PL 12.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Remove the Bottom Cover (REP 13.1).
3. Remove the Top Chute (REP 13.2).
4. Remove the No Paper Actuator (REP 13.9).
5. Remove the Envelope Feeder PWB (REP 13.3).
6. Remove the Gear Cover (REP 13.11).
7. Remove the Feed Clutch (REP 13.12).
8. Remove the Torque Clutch, Gear, and Bearing from the Roll Feed shaft (Figure 1).
9. Slide the Feed Roll Shaft and bearing to the left until it is free of the right mounting (Figure 2).
10. Lift the right end and remove assembly from the feed belts (Figure 2).
11. If replacing the feeder rolls, remove the rolls from the assembly (Figure 3).

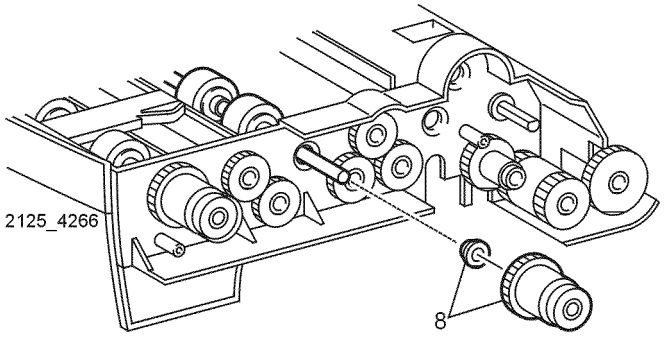


Figure 1 Bearing

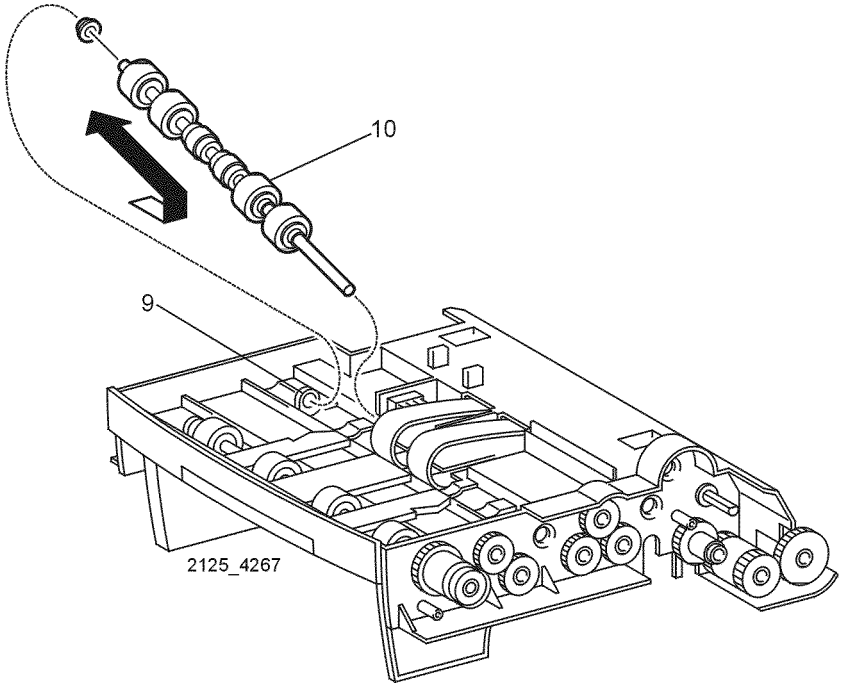


Figure 2 Feed Roll Shaft

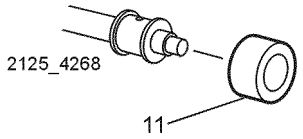


Figure 3 Feed Roll Assembly 1

Replacement

1. Reinstall the components in the reverse order.

REP 13.16 Feed Roll Assembly 2

Parts List on PL 12.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Remove the Bottom Cover (REP 13.1).
3. Remove the Top Chute (REP 13.2).
4. Remove the Envelope Feeder PWB (REP 13.3).
5. Remove the Gear Cover (REP 13.11).
6. Remove the Torque Clutch and Bearing from the Feed Roll Shaft (Figure 1).
7. Slide the Feed Roll Shaft and Bearing to the left until it is free of the right mounting (Figure 2).
8. Remove the Feed Roll Assembly 2 (Figure 2).
9. If replacing the feeder rolls, remove the feeder rolls from the assembly (Figure 3).

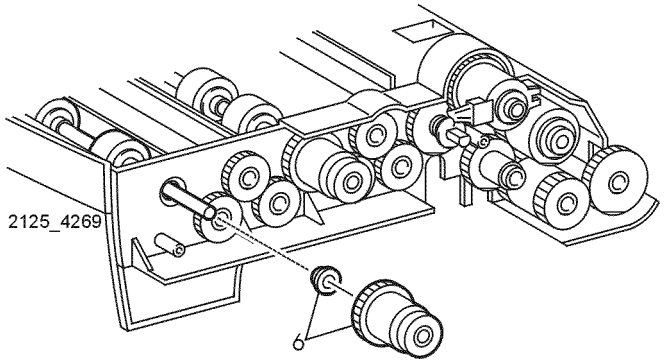


Figure 1 Torque Clutch and Bearing

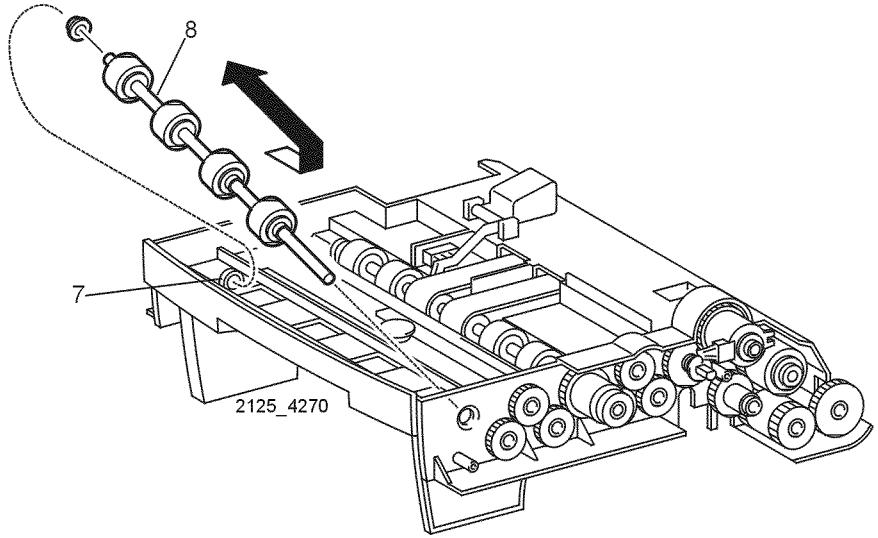


Figure 2 Feed Roll Shaft

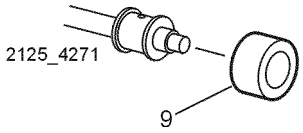


Figure 3 Feed Roll Assembly 2

Replacement

1. Reinstall the components in the reverse order.

REP 13.17 Feed Belts

Parts List on PL 12.2

Removal

WARNING

Switch off the power and disconnect the Power Cord.

1. Remove the Envelope Feeder from the printer.
2. Remove the Bottom Cover (REP 13.1).
3. Remove the Top Chute (REP 13.2).
4. Remove the Envelope Feeder PWB (REP 13.3).
5. Remove the Gear Cover (REP 13.11).
6. Remove the Feed Clutch (REP 13.12).
7. Remove the Bottom Roll Assembly (REP 13.14).
8. Remove the Feed Roll Assembly 1 (REP 13.15).
9. Remove the two pinch rolls from under the feed belts (Figure 1).
10. Rotate one side of the belt and slide it through the slot in the frame (Figure 2). Remove the belts.

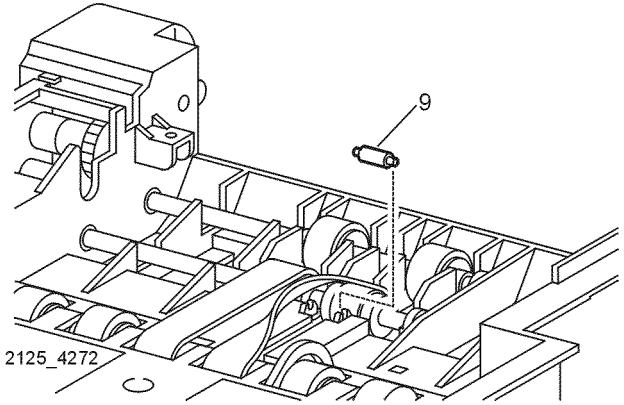


Figure 1 Pinch Roll

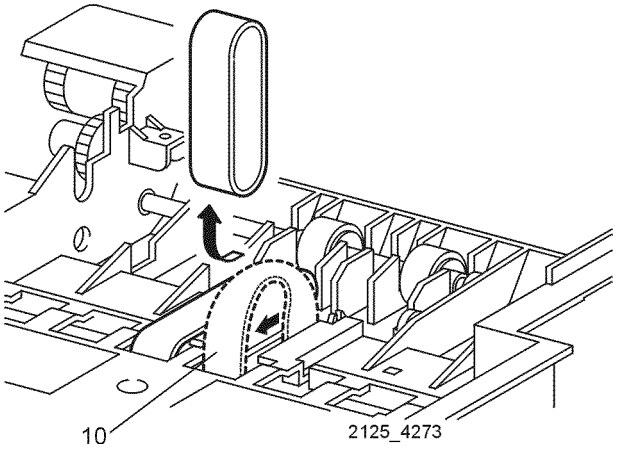


Figure 2 Feed Belts

Replacement

1. Reinstall the components in the reverse order.

ADJ 1.1 Registration

Purpose

To adjust the registration in the scan direction and the process direction.

To set Default Tray

1. Enter Diagnostics and select Test Print.
2. Scroll to Input Tray.
3. Select the tray that you wish to feed from.
4. Press “Enter”.
5. Exit Diagnostics.

Check

1. Ensure that Edge to Edge Printing is set to off.
2. Set the Default Tray.
3. Enter diagnostics and select Test Print.
4. Scroll to Print Pattern and press Enter to run a IOT Test Pattern.
5. After at least two prints are completed (Figure 1), press and hold the [0] key for one second to stop printing.
6. The measurement should be made on two consecutive test patterns from each tray.
   - Measure the distance from the lead edge of the paper to the lead edge of the image (A) and measure the distance from the trail edge of the paper to the trail edge of the image (B) (Figure 1). These two measurements should be within 1mm.
   - Measure the distance from the left edge of the paper to the left edge of the image (C) and measure the distance from the right edge of the paper to the right edge of the image (D) (Figure 1). These two measurements should be within 1mm.
7. If either measurement does not meet specification perform the adjustment below.
8. Repeat steps 2 through 7 for each paper tray.
9. From the Test Print menu, set duplex to on and print a duplex test print. Check the adjustment (step 5) for the duplexed print.

   NOTE: *When checking the measurement for a duplexed print in the scan direction, you must exit diagnostics and run a duplexed System Controller Test Print. Fold the test pattern in half, left edge to right edge. The target should be within 2mm of the fold line.*

Adjustment

1. Enter Diagnostics and select NVM Config.
2. Enter the NVM Password (0734).
3. Scroll to process (Tray X Proc Dir) or scan (Tray X Scan Dir) adjustment for the desired tray.
4. Press the Value Key (3 or 7) to display the current setting.
5. Use the 3 or 7 keys to set the new value (Each increment of change equals 0.5mm).

   NOTE: *In the scan direction, increasing the value moves the image to the right and decreasing the value moves the image to the left. In the process direction, increasing the value moves the image toward the trail edge and decreasing the value moves the image towards the lead edge.*

6. Press Enter to save the setting.
7. Scroll to Test Print. Select Print Pattern and press Enter.
8. Measure the distance from the lead edge of the paper to the lead edge of the image (A) and measure the distance from the trail edge of the paper to the trail edge of the image (B) (Figure 1). These two measurements should be within 1mm.
9. Measure the distance from the left edge of the paper to the left edge of the image (C) and measure the distance from the right edge of the paper to the right edge of the image (D) (Figure 1). These two measurements should be within 1mm.
10. Repeat steps 1 through 9 until equal lead edge to trail edge (process direction) and side-to-side (scan direction) measurements are achieved.

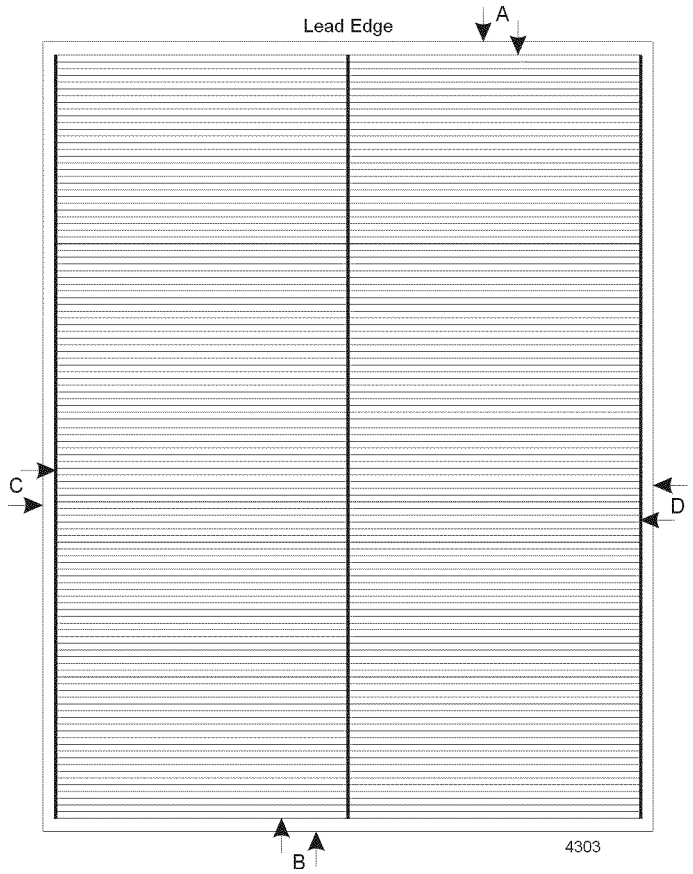


Figure 1 IOT Test Pattern

5 Parts-list

Introduction

Overview

The Parts List section provides exploded view illustrations of all spared subsystem components and a listing of the corresponding part numbers. The illustrations show the relationships between parts.

Organization of this Section

The following elements make up the Parts List section:

Parts Lists (PL)

Each item number in the part numbers listing corresponds to an item number in the illustration. All the parts in a given subsystem of the machine will be located in the same illustration or in a series of associated illustrations. The parts which are not spared are indicated by “- -” in the Part column.

Exploded View Illustrations

An item that is called out on an illustration has a corresponding listing within this section.

Components are given item numbers that correspond to the part number listings.

Hardware items are lettered. All hardware dimensions are in millimeters unless otherwise noted.

Assemblies and kits are a combination of several separate components. A bracket is used on the illustration when an assembly or kit is spared but is not shown. The item number of the assembly or kit precedes the bracket; the item numbers of the piece parts follow it.

Part Number Index

This index lists all the spared parts in the system in numerical order. Each number is followed by a reference to the parts list on which the part may be found.

Other Information

Abbreviations

Abbreviations which may be used in the parts lists text or illustrations are as follows:

US ------ United States Parts Distribution System

XE ------ European Parts Distribution System

AO ------ South America Parts Distribution System

XCL ------ Canada Parts Distribution System

P/J ------ Plug/Jack

P/O ------ Part of

W/ ------ With

W/O ------ Without

Tag

A Tag is used when a part or area of the system has been modified. The Change Tag Index, which is found in the General Procedures/Information Section, lists the name and purpose of the Tag. In some cases, you will go to the parts lists and find a part number listed as “with Tag.” Go to the Change Tag Index for a description of what the Tag is and what you need to install the Tag. The Change Tag Index will either list a kit number or indicate “piece part.” If “piece part” is indicated, the parts lists reference(s) will be given and all parts associated with the Tag will have to be individually located, ordered, and installed.

The notation “P/O Tag” after a part number indicates that the item is part of a Tag. The notation “Tag” after a part number will be used only to indicate the entire Tag, whether that is a kit number or an individual part.

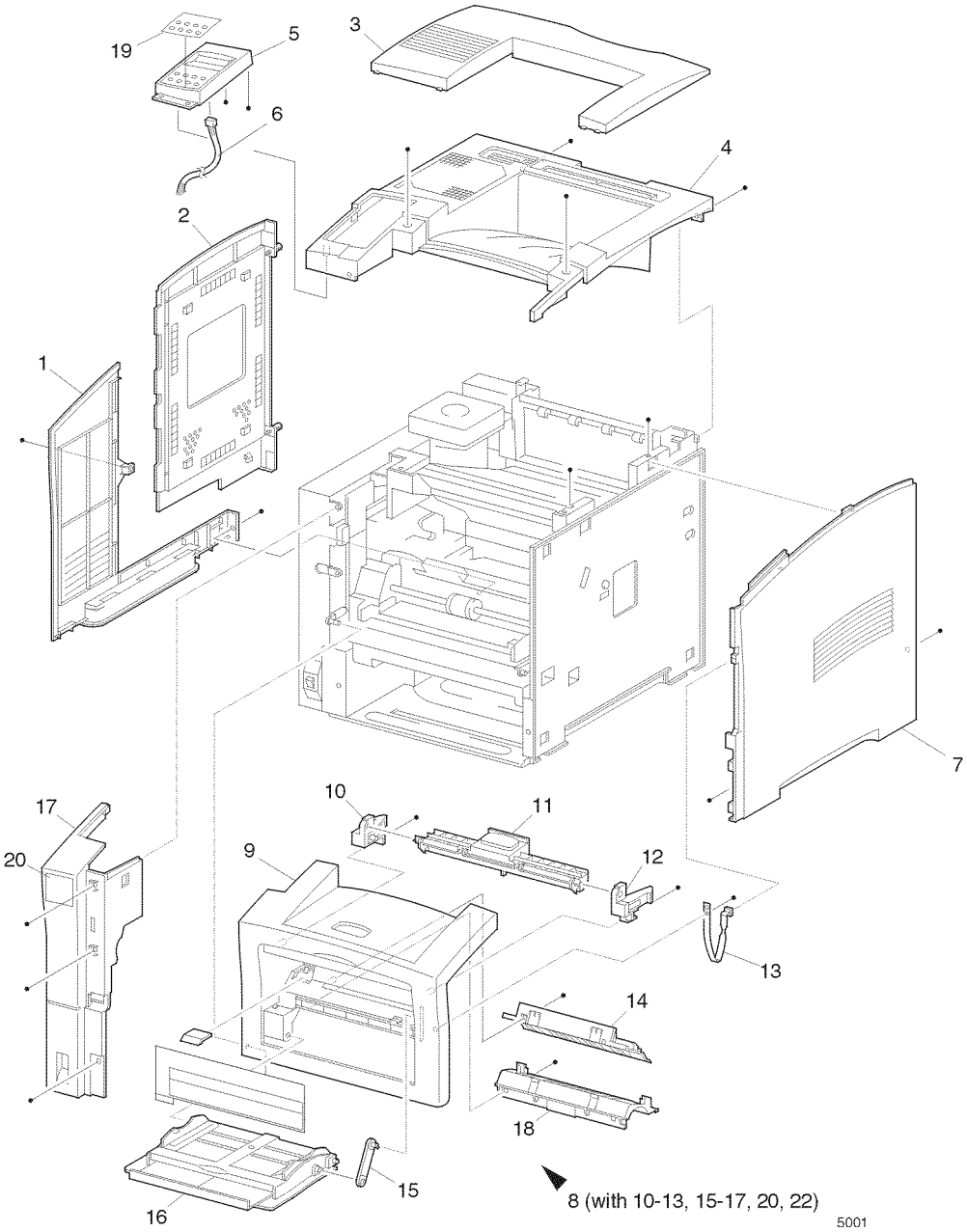
Whenever you install a Tag kit or all the piece parts that make up a Tag, mark the appropriate number on the Tag matrix.

Using the Parts List

1. The numbers shown in each illustration correspond to the parts list number for that illustration.
2. Throughout this manual, parts are identified by the prefix “PL”, followed by a number, a decimal point, and another number. For example, PL3.1.12 means the part is item 12 of parts list 3.1.
3. The capital letters “C”, “E”, and “S” shown in an illustration stand for C-ring, E-ring, and Screw, respectively.
4. A shaded triangle t in an illustration indicates the item is part of an assembly.
5. The notation “with X~Y” following an 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.
6. The notation "RS" means that the part is a requested spare. Part numbers for these parts will be provided as soon as they are available.
7. An asterisk * following a part name indicates the page contains a note about this part.
8. 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 jack 2 is attached to the other end that is plugged into plug 2.
9. A notation "(part of item 1.1)" indicates that the part is included with item 1.2.1 (PL1.2, line item 1).

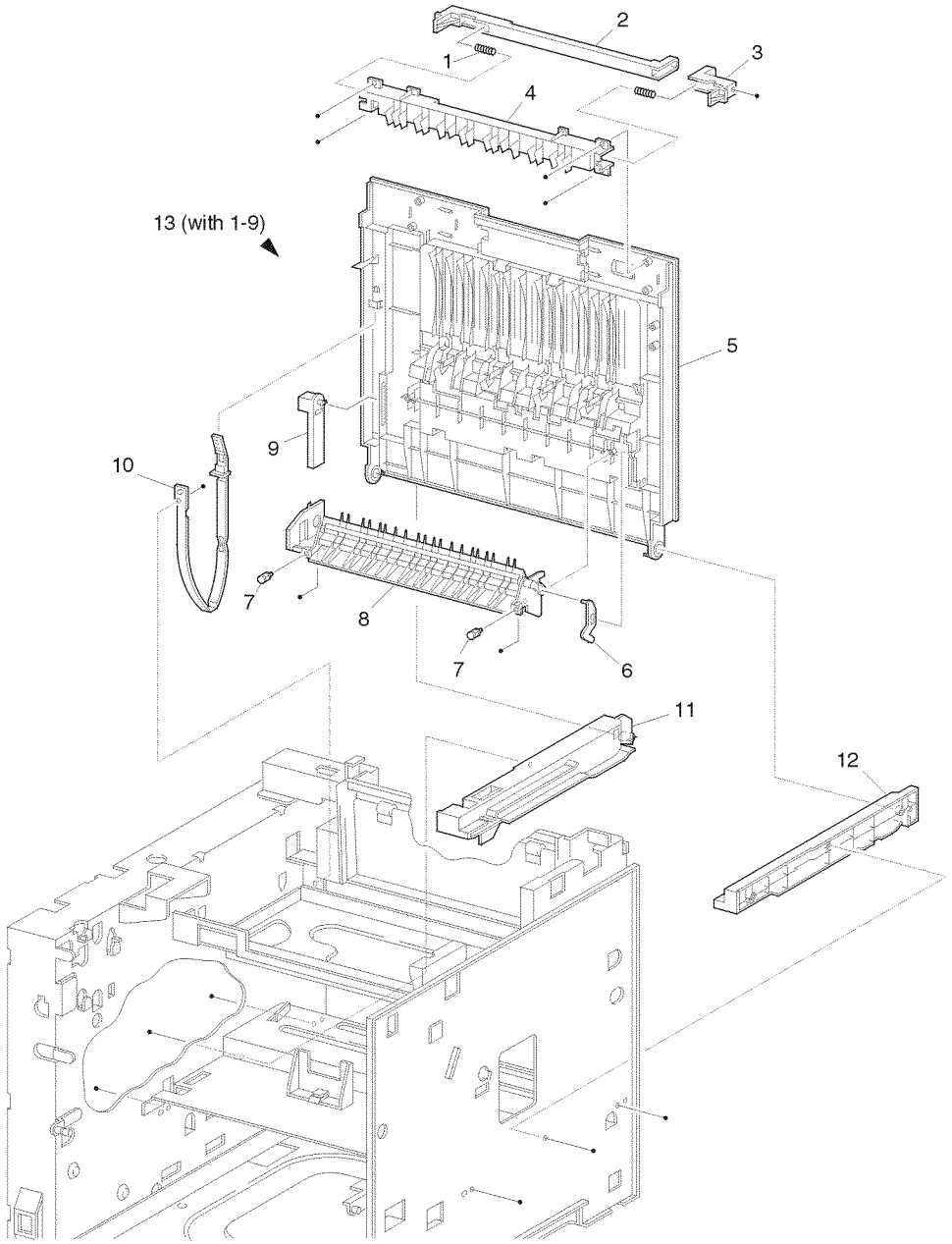
PL 1.1 Covers (1 of 3)

Item	Part	Description
1	48E64591	Left Cover
2	802K11330	Left Interface Cover
3	48E64642	Option Cover
4	48K76454	Top Cover Assembly
5	802K09700	Control Panel Assembly (with 6)
6	162K55281	Control Panel Harness Assembly
7	48E64612	Right Cover
8	802K10800	Front Cover Assembly (with 10-13, 15-17, 20, 22)
9		Front Cover
10	- - - - -	Left Latch Assembly
11	- - - - -	Lever
12	- - - - -	Right Latch Assembly
13	3E48991	Stopper Cover
14	- - - - -	Envelope Chute
15	3E43880	Tray Stopper
16	50K39130	MBF Tray Assembly
17	48E64624	Left Front Cover
18	- - - - -	MBF Chute
19	891E95830	Control Panel Overlay (English 110V)
	892E03010	Control Panel Overlay (Symbols 220V)
	892E15040	Control Panel Overlay (Spanish)
	892E15050	Control Panel Overlay (Portuguese)
	892E15020	Control Panel Overlay (French Canadian)
20	892E08500	Xerox Logo Badge
S	600K79660	Hardware Kit (Includes Screw)



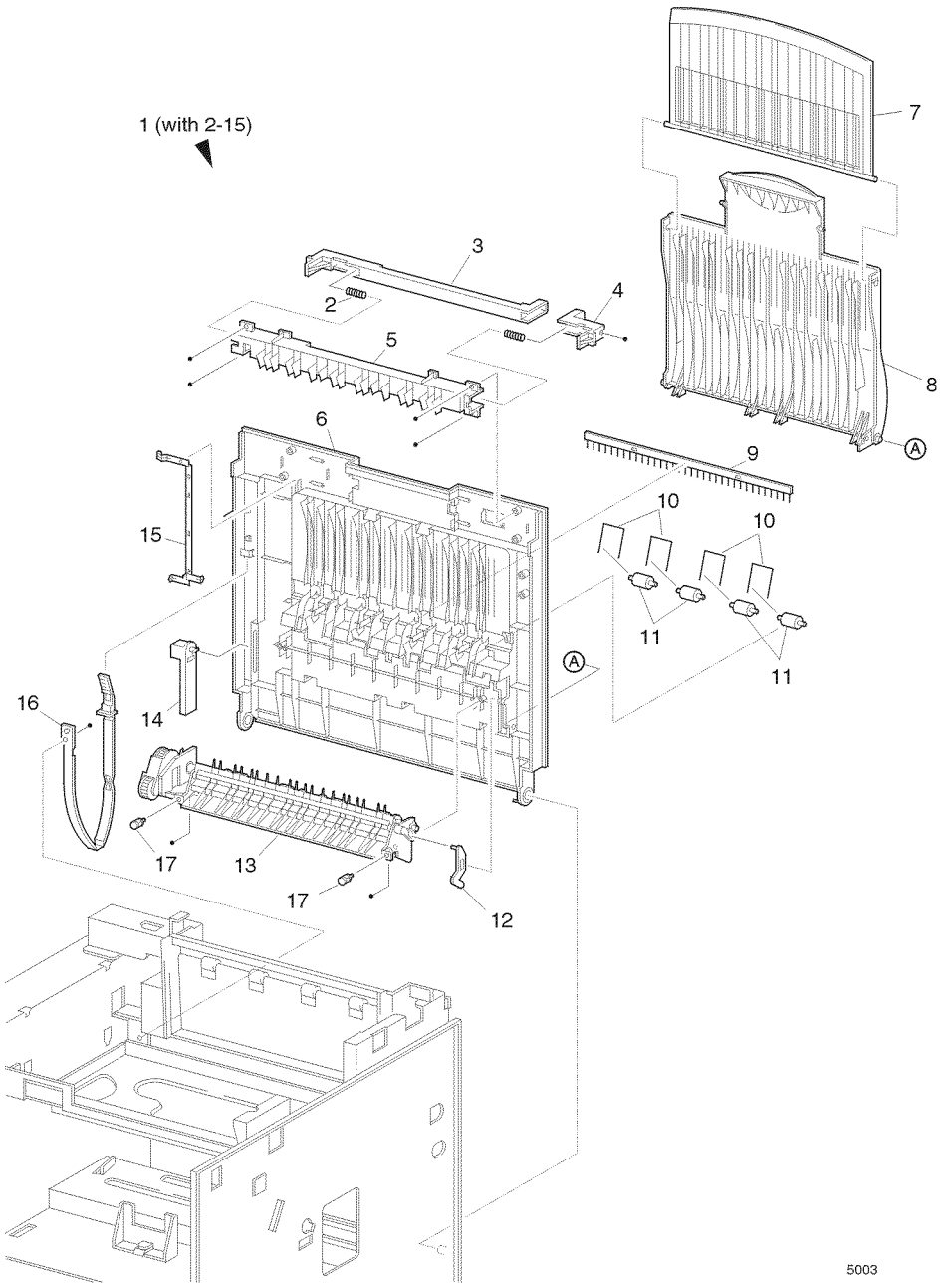
PL 1.2 Covers (2 of 3)

Item	Part	Description
1	- - - - -	Latch Spring
2	- - - - -	Left Latch
3	- - - - -	Right Latch
4	- - - - -	Latch Cover
5	- - - - -	Rear Cover
6	- - - - -	Direction Arm
7	600K79530	Cap Kit (quantity 2)
8	54K14991	Face Up Chute Assembly
9	- - - - -	Right Pivot Stopper
10	3E46120	Stopper
11	- - - - -	Duplex Guide Rail-Left
12	- - - - -	Duplex Guide Rail-Right
13	802K10010	Rear Cover Assembly (with 1-9)
S	600K79660	Hardware Kit (Includes Screw)



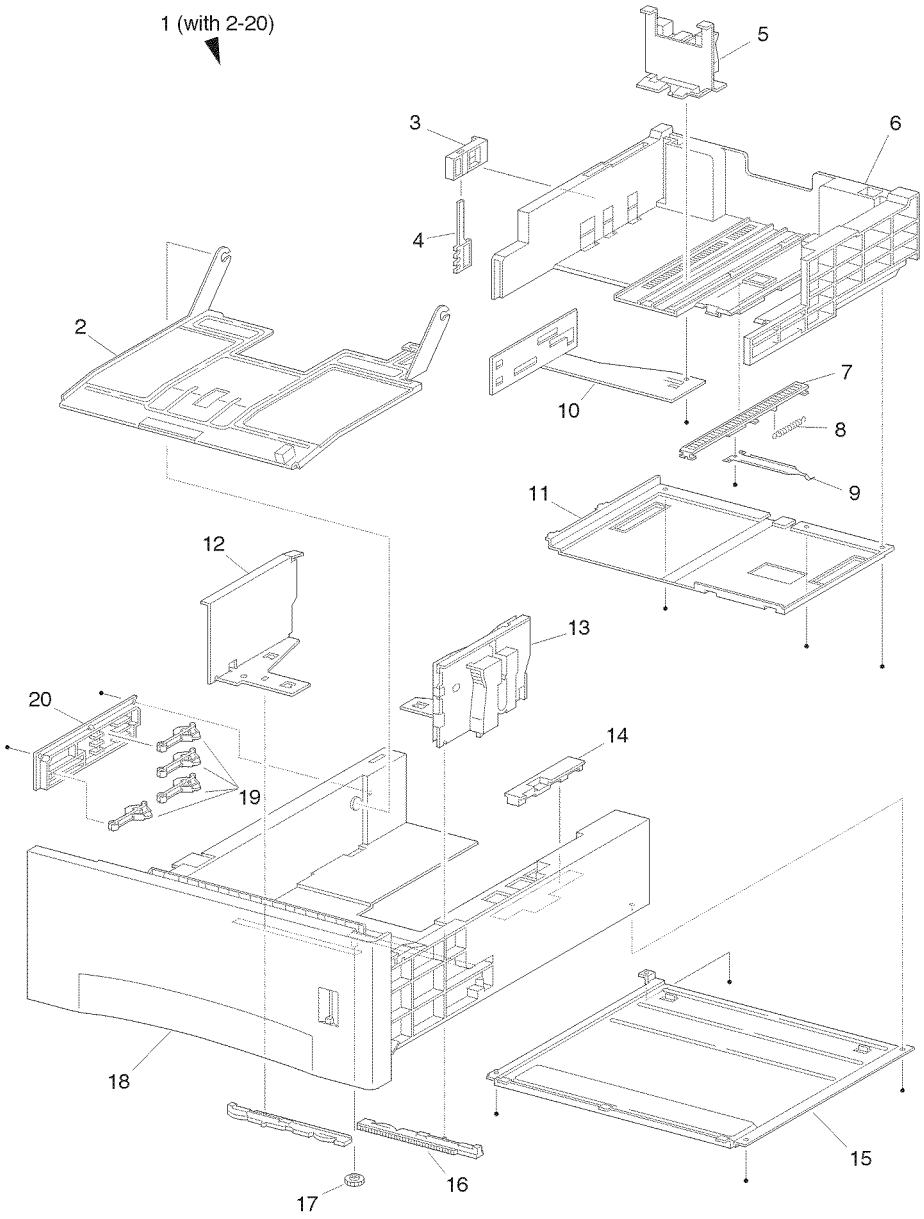
PL 1.3 Covers (3 of 3) Options

Item	Part	Description
1	- - - - -	Rear Face-up Cover Assembly (with 2-15)
2	- - - - -	Latch Spring
3	- - - - -	Left Latch
4	- - - - -	Right Latch
5	- - - - -	Latch Cover
6	- - - - -	Rear Cover
7	- - - - -	Face-up Sub Tray
8	- - - - -	Face-up Main Tray
9	- - - - -	Eliminator
10	- - - - -	Pinch Spring
11	- - - - -	Pinch Roll
12	- - - - -	Direction Arm
13	54K14991	Face-up Chute Assembly
14	- - - - -	Right Stopper Pivot
15	- - - - -	Face-up Ground Spring
16	3E46120	Right Stopper
17	600K79530	Cap Kit (quantity 2)
S	600K79660	Hardware Kit (Includes Screw)



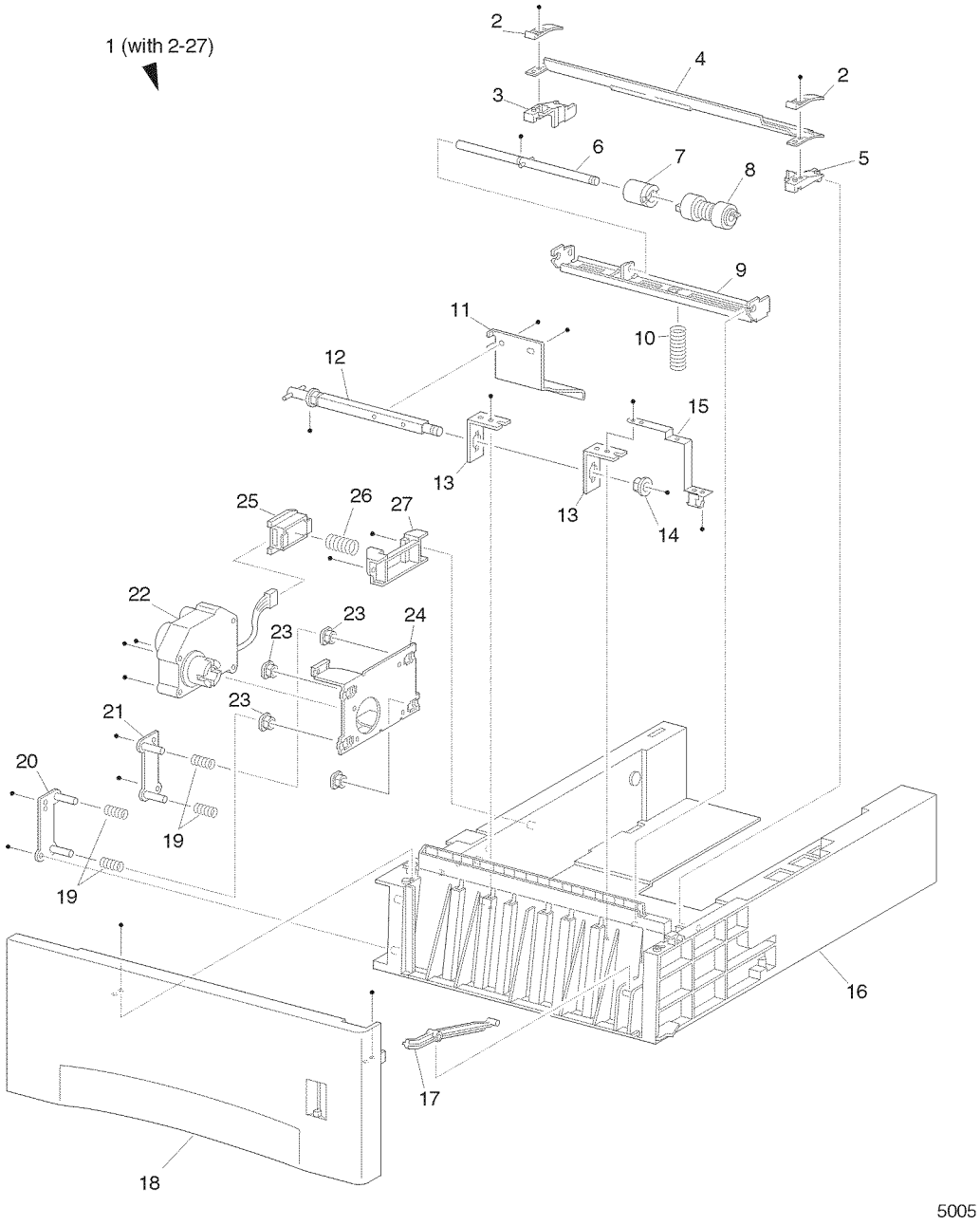
PL 2.1 Tray 1 (1 of 2)

Item	Part	Description
1	109R00448	Cassette Assembly (with 2-20 and PL 2.2)
2	- - - - -	Bottom Plate Assembly
3	- - - - -	Customer Size Knob
4	- - - - -	Custom Size Plate
5	- - - - -	End Guide Assembly
6	- - - - -	Extension Housing
7	- - - - -	Rack Slide
8	- - - - -	Extension Spring
9	- - - - -	Latch Spring
10	- - - - -	Size Plate
11	- - - - -	Base Extension
12	- - - - -	Left Side Guide Assembly
13	- - - - -	Right Side Guide Assembly
14	- - - - -	Link
15	- - - - -	Tray 1 Base
16	- - - - -	Rack
17	- - - - -	Pinion
18	- - - - -	Sub Cassette Assembly
19	- - - - -	Tray 1 Actuator
20	- - - - -	Actuator Cover
S	600K79660	Hardware Kit (Includes Screw)



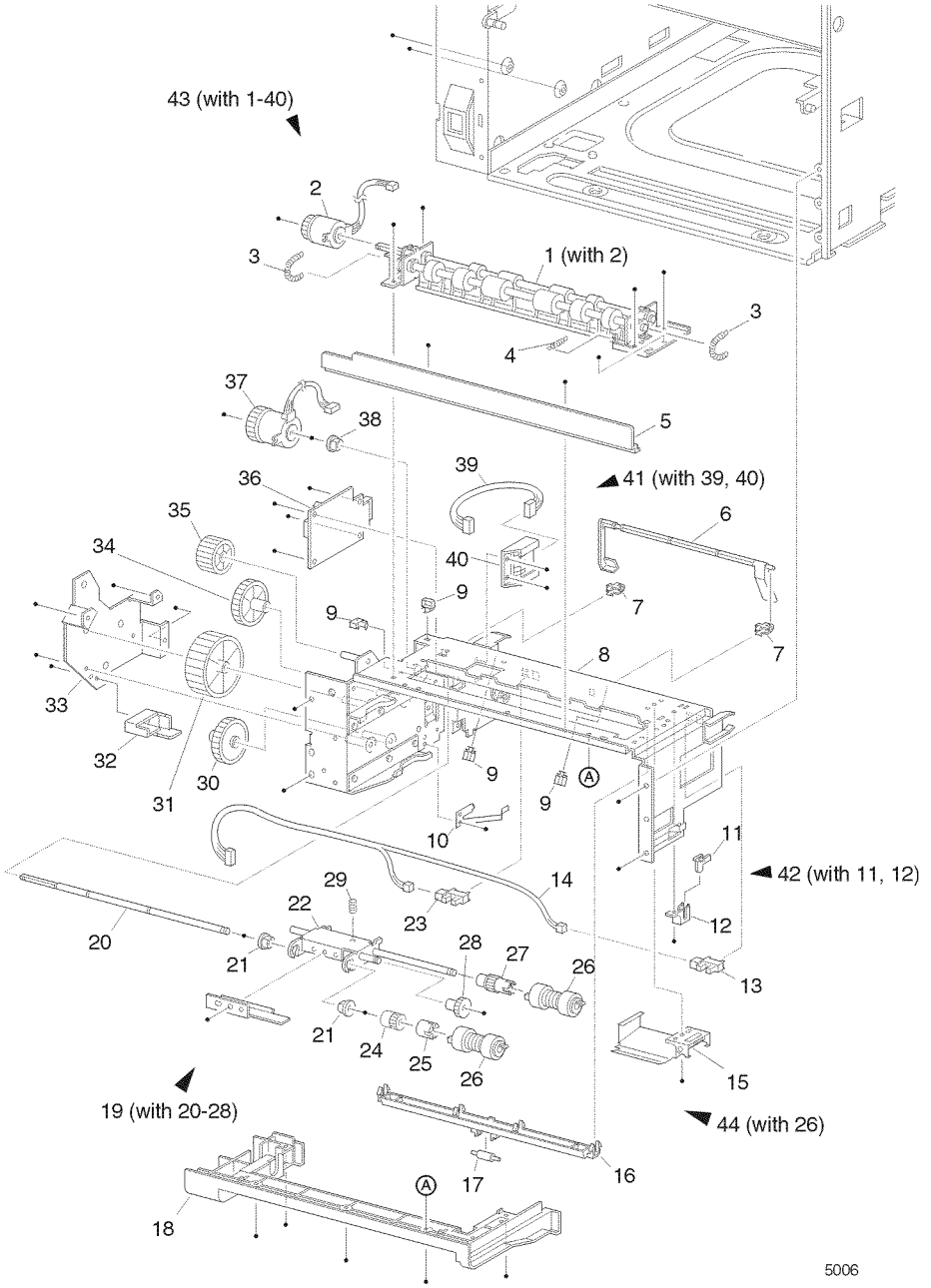
PL 2.2 Tray 1 (2 of 2)

Item	Part	Description
1	- - - - -	Cassette Assembly (with 2-27) (P/O PL 2.1 Item 1)
2	- - - - -	Retard Cap
3	- - - - -	Retard Chute Base - Left
4	- - - - -	Retard Chute
5	- - - - -	Retard Chute Base - Right
6	- - - - -	Retard Shaft Assembly
7	5K82890	Friction Clutch Assembly
8	600K79550	Roll Assembly Kit
9	- - - - -	Retard Bracket
10	809E11830	Retard Spring
11	- - - - -	Tongue Plate
12	- - - - -	Tongue Shaft Assembly
13	- - - - -	Lift Up Shaft Holder
14	- - - - -	Bearing
15	- - - - -	Lift Up Ground Spring
16	- - - - -	Cassette Housing
17	- - - - -	Lever
18	- - - - -	Cassette Handle Assembly
19	- - - - -	Motor Spring
20	- - - - -	Right Holder
21	- - - - -	Left Holder
22	127K24682	Motor Assembly
23	- - - - -	Bearing
24	- - - - -	Motor Holder Assembly
25	114E11680	Connector
26	- - - - -	Spring
27	- - - - -	Socket Guide
S	600K79660	Hardware Kit (Includes Screw)



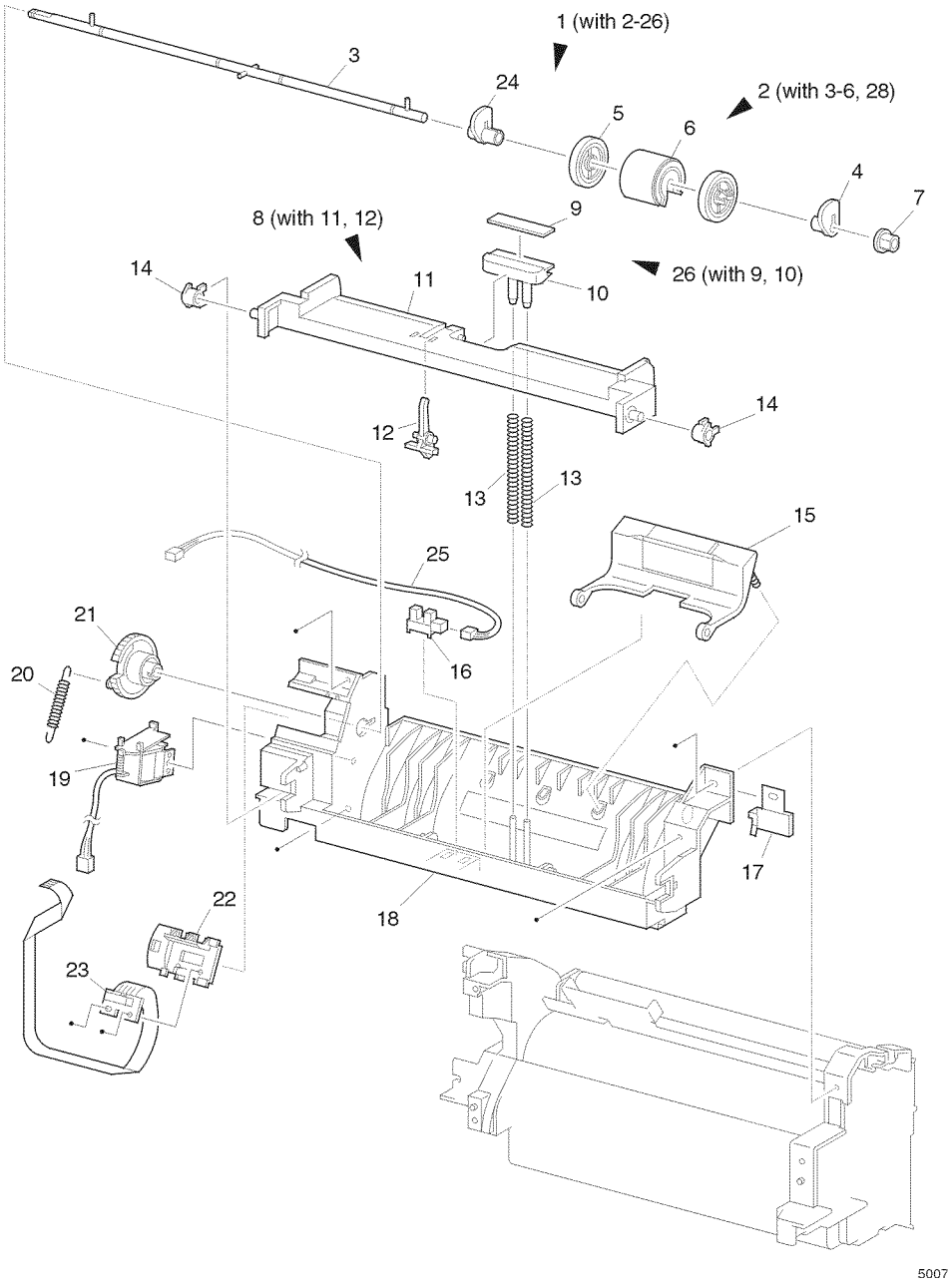
PL 3.1 Paper Feeder

Item	Part	Description
1	22K51531	Turn Roll Assembly (with 2)
2	121K20151	Turn Clutch Assembly
3	- - - - -	Extension Spring
4	809E11630	Chute Spring
5	- - - - -	Feed CST Cover
6	120E16960	No Paper Actuator
7	830E18131	Support Actuator
8	- - - - -	Feeder Frame Assembly
9	- - - - -	Clamp
10	- - - - -	Left Latch Spring
11	- - - - -	Low Paper Actuator (P/O item 42)
12	- - - - -	Low Paper Actuator Support (P/O item 42)
13	130E81970	Low Paper Sensor
14	162K47211	No Paper Sensor Harness Assy.
15	- - - - -	Front Chute Assembly
16	- - - - -	Turn Chute
17	- - - - -	Roll 7
18	- - - - -	Feeder Cover
19	600K79320	Feed Head Assembly (with 20-28)
20	- - - - -	Feed Shaft (P/O item 19)
21	- - - - -	Bearing (P/O item 19)
22	- - - - -	Nudger Support Assembly (P/O item 19)
23	130E81970	Stack Height Sensor (P/O item 19)
24	- - - - -	Gear Clutch (P/O item 19)
25	- - - - -	O/W Clutch Assembly(P/O item 19)
26	- - - - -	Roll Assembly (P/O item 44)
27	- - - - -	Gear 25T (P/O item 19)
28	- - - - -	Gear 31T (P/O item 19)
29	809E11610	Nudger Spring
30	- - - - -	Gear 4
31	- - - - -	Gear 2
32	- - - - -	Gear Cover
33	- - - - -	Bracket
34	- - - - -	Gear 3
35	- - - - -	Gear 1
36	160K52781	Feeder PWB
37	121K19010	Feed Clutch Assembly
38	- - - - -	Bearing
39	- - - - -	N/MOT Harness Assembly
40	- - - - -	Socket
41	600K79640	Socket & Harness Kit (with 39, 40)
42	600K79650	Actuator & Support Kit (with 11, 12)
43	22K56900	Feeder Assembly 1 Kit (with 1-40)
44	600K79550	Feed Roll Kit (item 26- quantity 3)
45	108R00330	Feed Roll Usage Kit (item 44- quantity 2)
46	600K79660	Hardware Kit (includes screw)



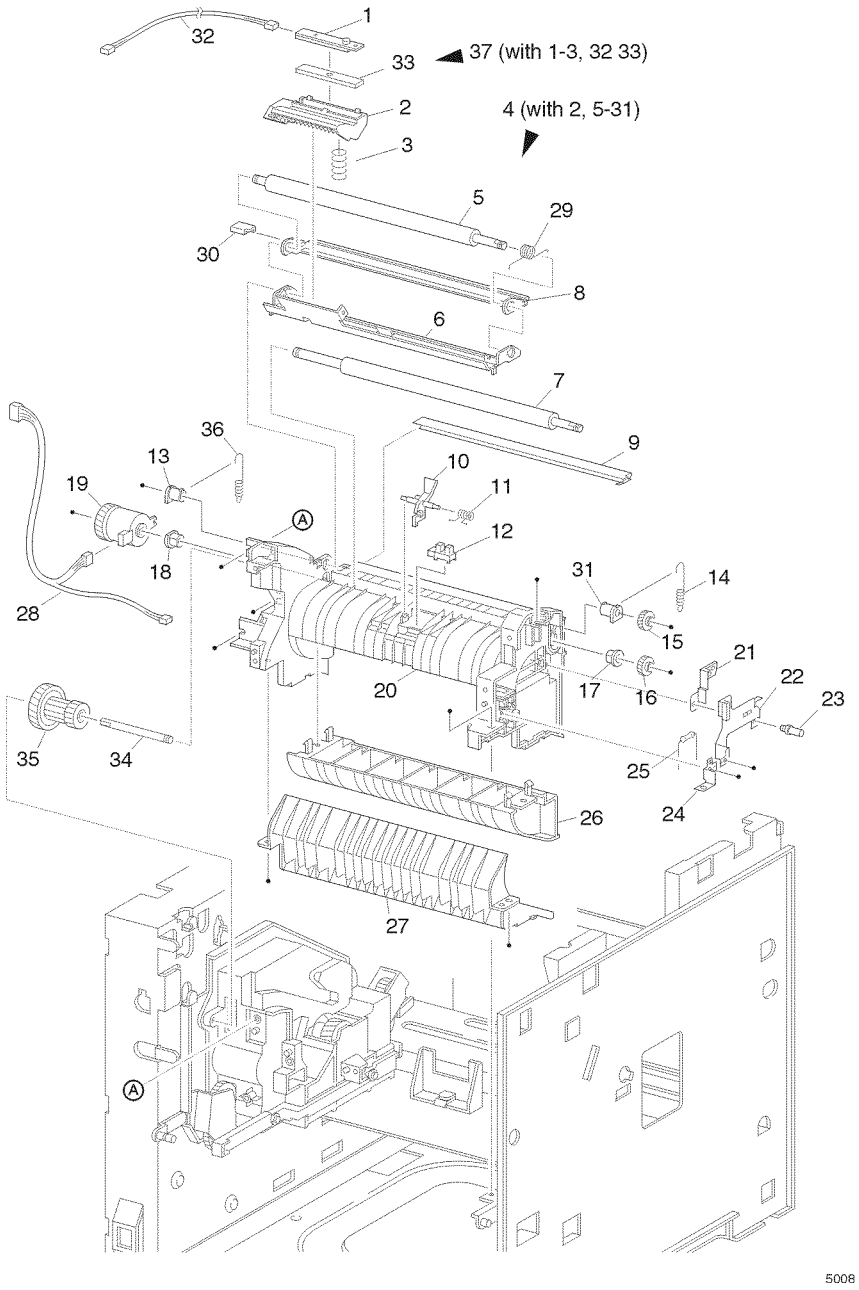
PL 4.1 MBF Chute

Item	Part	Description
1	54K13630	MBF Chute Assembly (with 2-30)
2	- - - - -	MBF Roll Assembly (with 3-6, 28)
3	- - - - -	MBF Shaft Assembly
4	- - - - -	MBF Pick-up CAM
5	- - - - -	Core
6	22K50812	MBF Roll Assembly
7	- - - - -	Bearing
8	- - - - -	Tray Bottom Assembly (with 11, 12)
9	- - - - -	MBF Bottom Pad
10	- - - - -	Tray Pick-up
11	- - - - -	Tray Bottom (P/O item 8)
12	120E17120	MBF No Paper Actuator (P/O item 8)
13	- - - - -	MBF Bottom Spring Tray
14	- - - - -	Exit Bearing
15	19K94570	Retard Pad Assembly
16	130E81970	Paper Set Sensor
17	- - - - -	MBF Ground Plate
18	- - - - -	MBF Chute Assembly
19	121E85920	Pick Up Solenoid
20	809E20170	MBF Spring
21	7E54660	Gear Pick Up
22	- - - - -	Envelope Connector Plate
23	113K82141	Envelope Connector Assembly
24	- - - - -	MBF (Left) Cam Pick-up
25	162K47021	MBF No Paper Harness Assembly (J45-J451)
26	19K96830	Pick Up Pad Assembly (with 9, 10)
S	600K79660	Hardware Kit (Includes Screw)



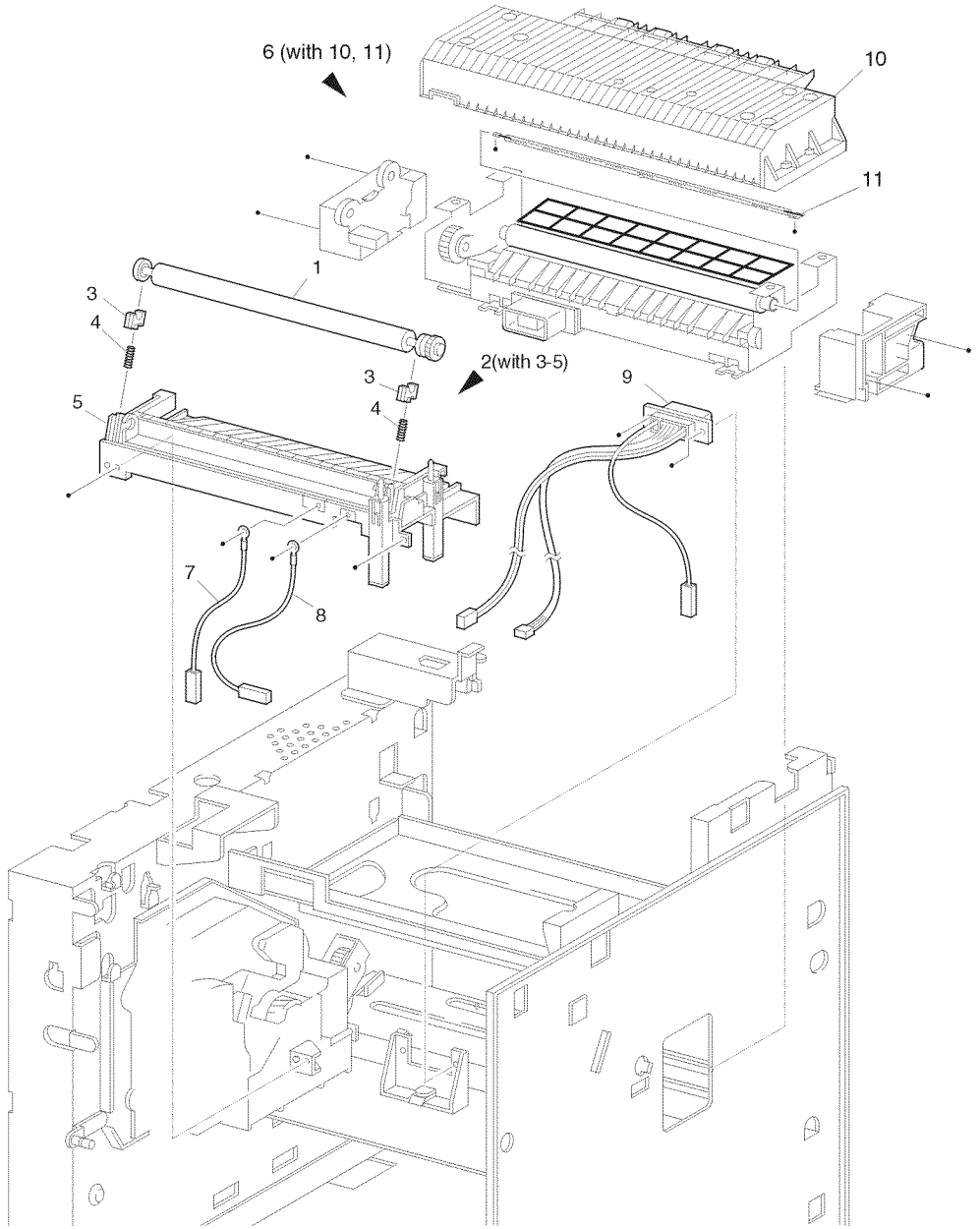
PL 5.1 Paper Handler Assembly

Item	Part	Description
1	- - - - -	Toner Sensor
2	- - - - -	Toner Holder Sensor
3	- - - - -	Toner Spring Sensor
4	54K14980	Paper Handler Assembly (with 2, 5-31)
5	- - - - -	Registration Roll - Metal
6	- - - - -	Upper Chute Assembly
7	59K11910	Registration Roll - Rubber
8	- - - - -	Chute Inlet
9	- - - - -	Ground Spring - Bottom
10	120E13331	Registration Actuator
11	809E19721	Registration Sensor Spring
12	130E81970	Registration Sensor
13	- - - - -	Metal Bearing
14	9E79120	Registration Spring - Right
15	7E54671	Registration Gear - Metal
16	7E54681	Registration Gear - Rubber
17	- - - - -	Right Bearing - Rubber
18	- - - - -	Left Bearing - Rubber
19	121E85820	Registration Clutch
20	- - - - -	Upper Chute Bottom
21	- - - - -	Ground Spring - Right
22	- - - - -	Ground Spring - Center
23	- - - - -	Ground Screw
24	- - - - -	Left Spring
25	- - - - -	Resist Baffle
26	- - - - -	Lower Chute Bottom
27	- - - - -	CST Chute
28	162K47011	Registration Harness Assembly (J43-J431, J432)
29	- - - - -	Torsion Spring
30	- - - - -	Lever Handle
31	- - - - -	Right Metal Bearing
32	- - - - -	Toner Sensor Harness Assembly (J42-J421)
33	- - - - -	TNS Cushion
34	6E60980	Shaft 14
35	7E54650	Gear 14
36	809E19030	Registration Spring Left
37	600K79380	Toner Sensor Kit (with 1-3, 32 & 33)
S	600K79660	Hardware Kit (Includes Screw)



PL 6.1 Chute Transport & Fuser

Item	Part	Description
1	22K55010	BTR Assembly
2	54K15000	Transfer Chute Assembly (with 3-5)
3	- - - - -	Bearing BTR SUP
4	- - - - -	Spring BTR
5	- - - - -	Transport Chute (reference only)
6	126K10132	Fuser Assembly (120V) (with 10, 11)
	126K10141	Fuser Assembly (230V)
7	- - - - -	DTS Wire Assembly
8	- - - - -	TR Wire Assembly
9	162K47191	Fuser Harness Assembly (120V) (J271, J11, J27, J262)
	162K51861	Fuser Harness Assembly (230) (J271, J11, J27, J262)
10	802K10000	Fuser Upper Cover Assembly
11	126K08410	Heat Rod (120V)
	126K09710	Heat Rod (230V)
12	108R00328	Usage Kit (120V) (with Fuser, BTR, 3 Feed Rolls)
13	108R00329	Usage Kit (230V) (with Fuser, BTR, 3 Feed Rolls)
S	600K79660	Hardware Kit (Includes Screw)



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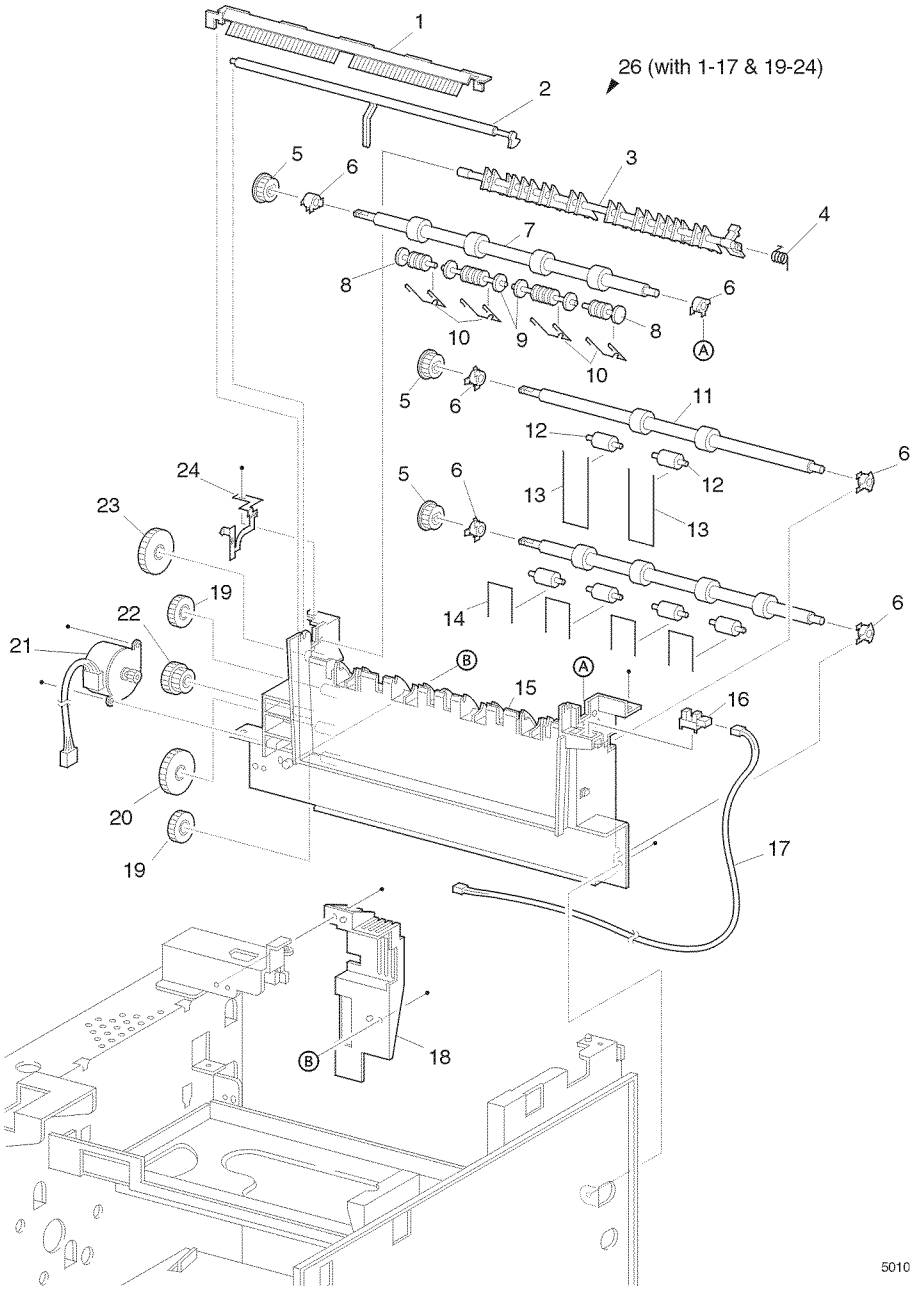
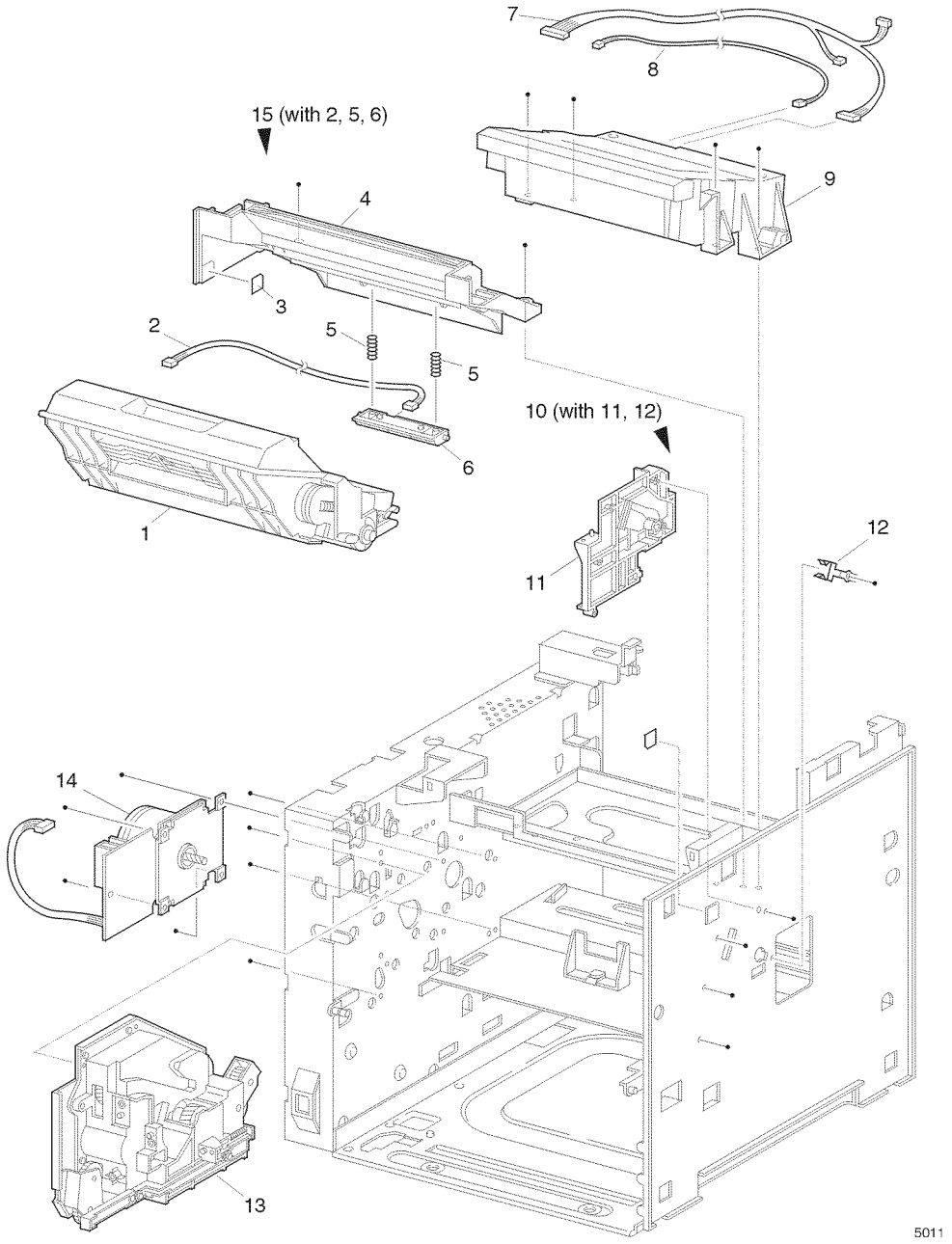
PL 7.1 Exit

Item	Part	Description
1	105K14903	Static Eliminator Assembly
2	120E13350	Stack Full Actuator
3	- - - - -	Exit Gate
4	- - - - -	Exit Spring
5	- - - - -	Exit-17 Gear
6	- - - - -	Exit Bearing
7	59K11950	MID-1-3 Roll Assembly
8	- - - - -	Out Exit Roll Pinch
9	- - - - -	Exit Roll Pinch
10	- - - - -	Exit Spring Pinch
11	59K11960	MID-2 Roll Assembly
12	- - - - -	Roll Pinch
13	- - - - -	MID Spring Pinch
14	- - - - -	Spring Pinch
15	- - - - -	Exit Chute
16	130E81970	Exit Photo Sensor
17	162K46981	Stack Full Sensor Harness Assembly (J30-J301)
18	- - - - -	Interlock Cover
19	- - - - -	Exit-23 Gear
20	- - - - -	Exit-33 Gear
21	127K24111	Exit Motor Assembly
22	- - - - -	Exit Gear 17/47
23	- - - - -	Exit Gear -32
24	- - - - -	Exit Ground Spring
25	600K79540	Bearing Kit (quantity 6 of item 6)
26	54K15890	Exit Chute Assembly (with 1-16, 17, 19-24)
S	600K79660	Hardware Kit (Includes Screw)



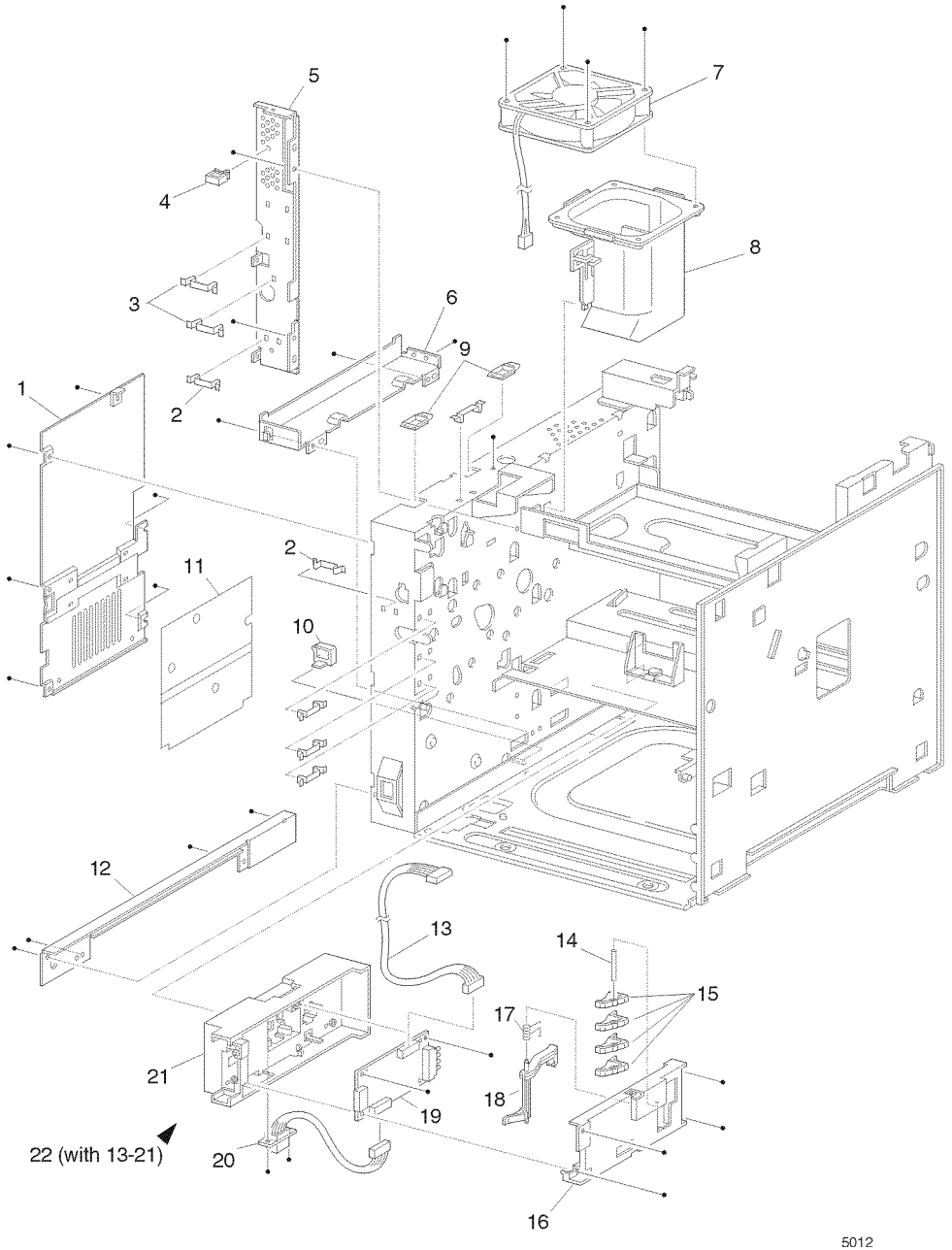
PL 8.1 Drive & Xerographics

Item	Part	Description
1	113R00445	Print Cartridge (XC 10K)
	113R00446	Print Cartridge (XC 15K)
2	- - - - -	Print Cartridge Sensor Harness Assembly (J25-J251) (P/O item 15)
3	- - - - -	Arrow Label
4	32K94111	Print Cartridge Top Guide Assembly
5	- - - - -	Spring (P/O item 15)
6	- - - - -	Print Cartridge Sensor Assembly (P/O item 15)
7	162K46922	Laser Harness Assembly (J21-J211, J212, J213)
8	- - - - -	VDO Harness Assembly (J22-J223) (P/O item 7)
9	62K09600	Laser Assembly
10	- - - - -	Print Cartridge Side Guide Assembly-R (with 11, 12)
11	- - - - -	Print Cartridge Side Guide
12	- - - - -	Spring Clip
13	7K85220	Drive Gear Assembly
14	127K27791	Main Motor Assembly
15	32K94130	Print Cartridge Sensor Kit (with 2, 5, 6)
S	600K79660	Hardware Kit (Includes Screw)



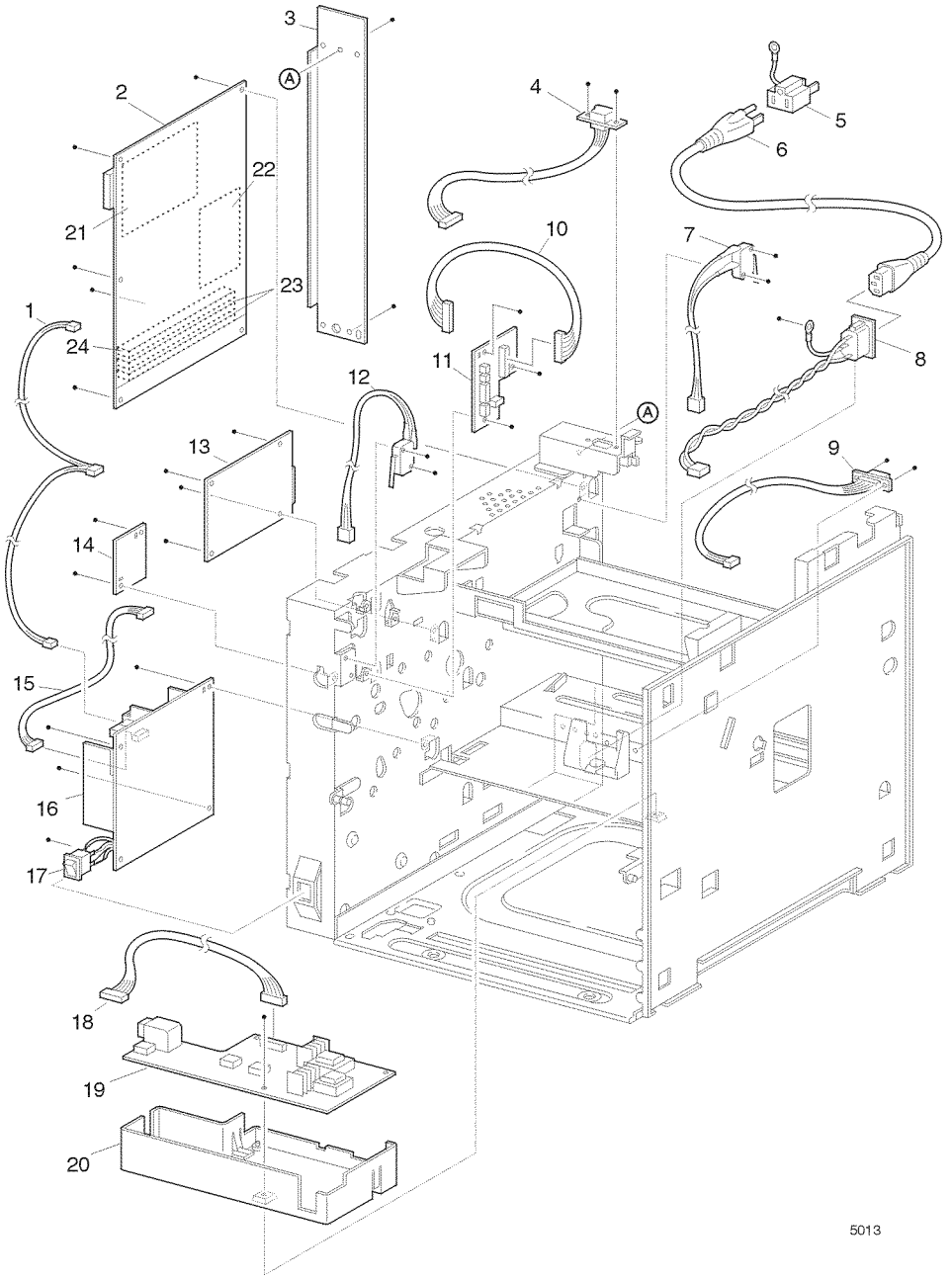
PL 9.1 Frame & Size Sensor

Item	Part	Description
1	- - - - -	Left Plate Assembly
2	- - - - -	Clamp Press
3	- - - - -	Left Clamp Press
4	- - - - -	Interface Clamp
5	- - - - -	Lower B Elec Box
6	- - - - -	Lower A Elec Box
7	127K24771	Fan Assembly
8	- - - - -	Duct
9	- - - - -	Edge Saddle H
10	- - - - -	AC Clamp
11	- - - - -	Insulator Plate
12	- - - - -	Plate Handle
13	162K47001	Feeder Harness Assembly (J33-J331)
14	- - - - -	CAM Shaft
15	- - - - -	Size Sensor Actuators
16	- - - - -	Cover Size Sensor
17	- - - - -	Spring CAM
18	- - - - -	Lever CAM
19	160K52771	Tray 1 Size PWB
20	162K48420	Size Harness Assembly (J51-J52)
21	- - - - -	Size Sensor Housing
22	802K09970	Size Sensor 1 Kit (with 13-21)
S	600K79660	Hardware Kit (Includes Screw)



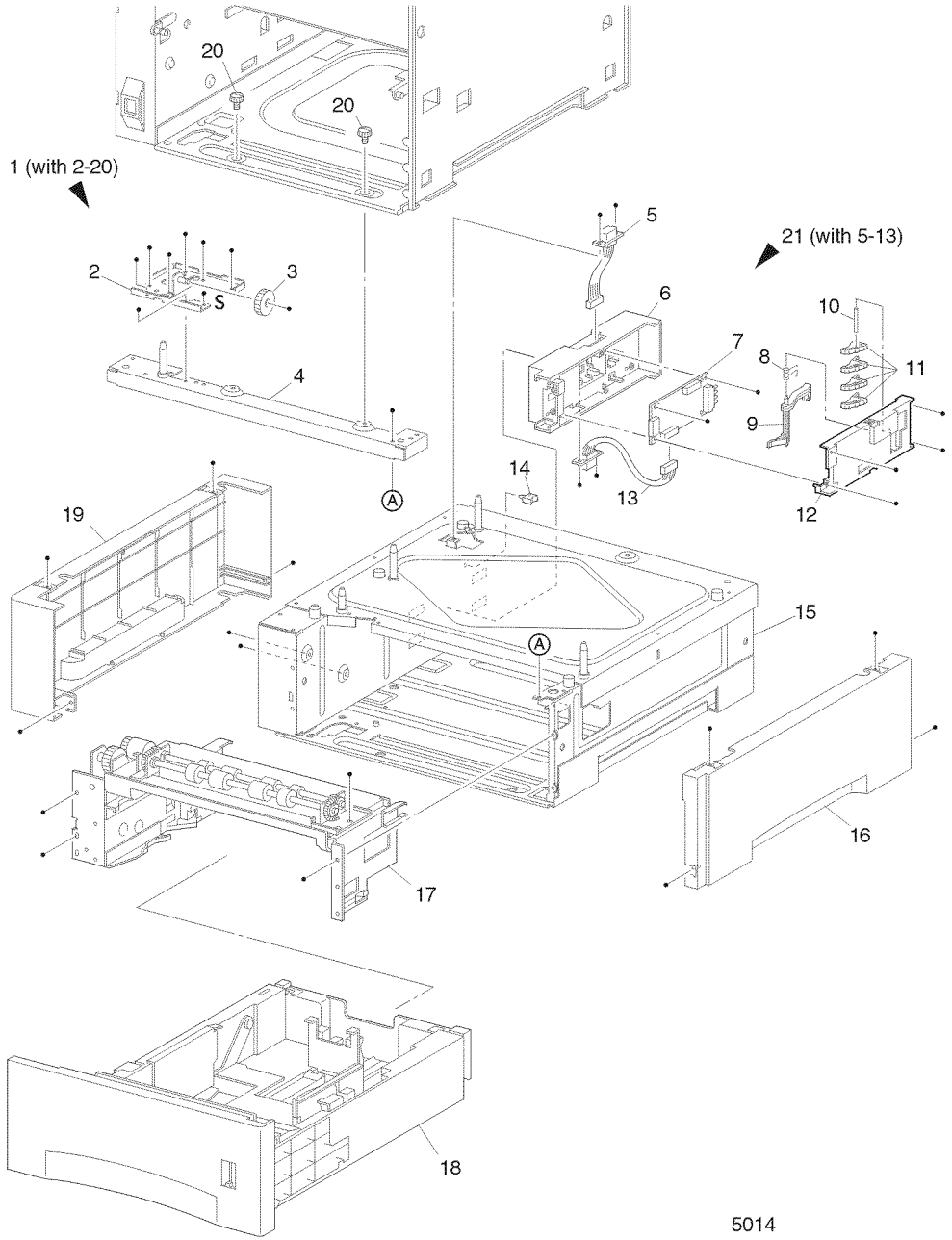
PL 10.1 Electrical

Item	Part	Description
1	162K47201	System Controller Harness Assembly (J287-J282, J288)
2	160K65650	System Controller PWB (Network)
	160K65940	System Controller PWB (Non-network)
3	- - - - -	Back Panel
4	162K49271	OCT Harness Assembly (J35-P351)
5	- - - - -	Adapter
6	- - - - -	Power Cord
7	110K08571	Rear Interlock Switch Assembly
8	- - - - -	AC Wire Assembly (J285)
9	162K46991	Duplex Harness Assembly (J34-P341)
10	162K46941	Connector Harness Assembly (J23-J231)
11	160K52761	Connector PWB
12	110K08561	Front Interlock Switch Assembly
13	160K52414	Print Engine Controller PWB
14	105K15401	5VDC PWB
15	162K46972	LVPS Harness Assembly (J28-J218)
16	105K14931	LVPS PWB (120V)
	105K15411	LVPS PWB (230V)
17	110E93711	Main Switch
18	162K46962	HVPS Harness Assembly
19	105K14954	HVPS PWB
20	- - - - -	HVPS Housing
21	160K71520	Serial Card
	160K71530	10 Base 2 Network Card
	160K71540	Token Ring Card
22		Hard Disk Drive
23	733W14695	16 mb Dimm
	733W14696	32 mb Dimm
	733W14697	64 mb Dimm
24	160K71940	8 mb Flash Dimm
S	600K79660	Hardware Kit (Includes Screw)



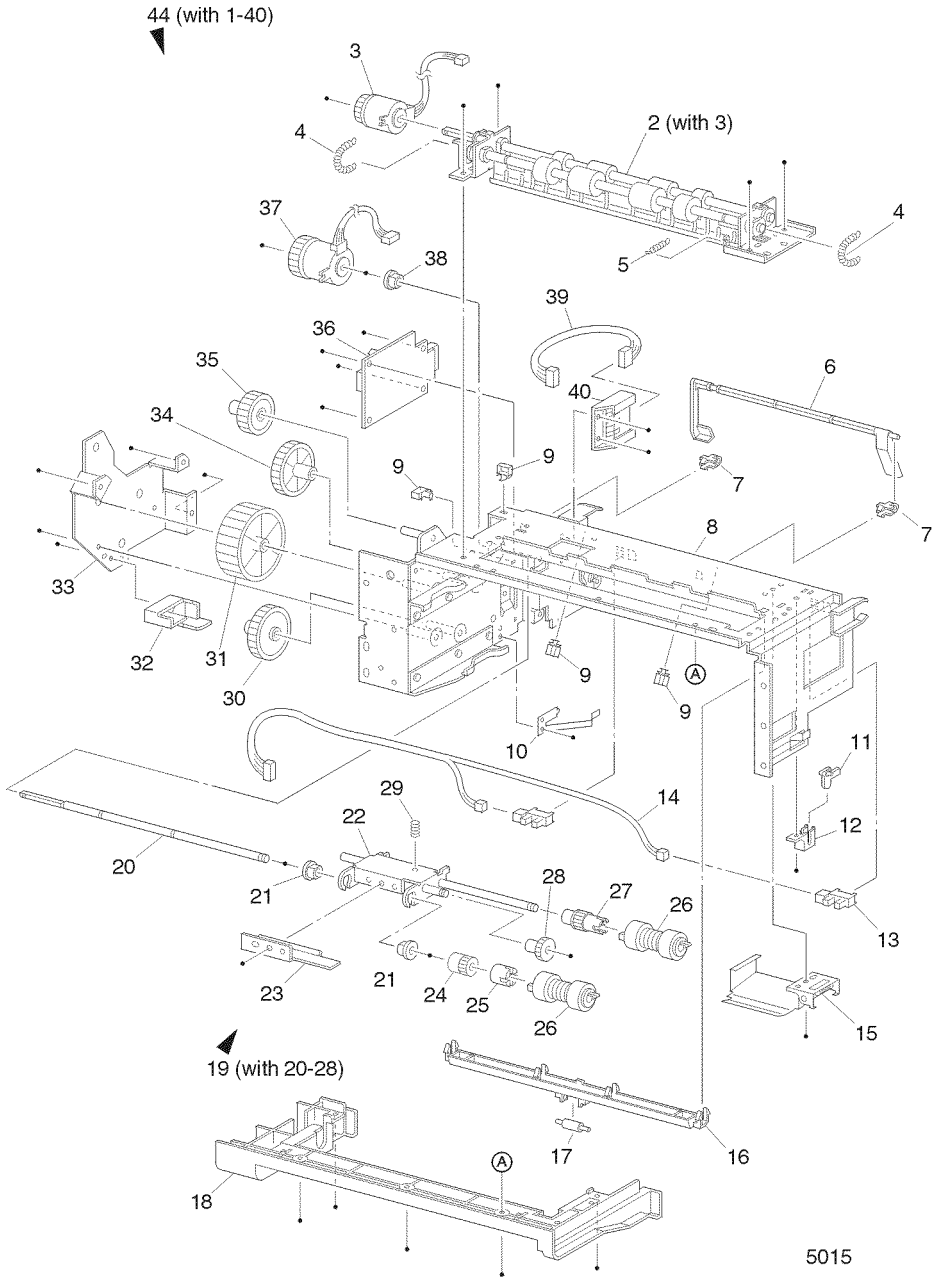
PL 11.1 500 Sheet Feeder (1 of 2)

Item	Part	Description
1	- - - - -	Option Feeder Assembly (with 2-20)
2	- - - - -	Gear OPT Bracket Assembly
3	7E54920	Gear OPT I
4	- - - - -	Top Plate
5	162K48431	Option Size Harness Assembly
6	- - - - -	Size Sensor Housing
7	160K53061	Size Option PWB
8	- - - - -	CAM Spring
9	- - - - -	CAM Lever
10	- - - - -	CAM Shaft
11	- - - - -	CAM SW
12	- - - - -	Cover Size Sensor
13	162K48420	Size Harness Assembly
14	- - - - -	Clamp
15	- - - - -	Main Frame Assembly
16	802E04930	Right Side Cover
17	22K56910	Feeder Assembly
18	109R00448	Cassette Assembly
19	802E04920	Left Side Cover
20	600K79670	Screw (quantity 3)
21	802K09980	Size Sensor Housing Assembly (with 5-13)
S	600K79660	Hardware Kit (Includes Screws)



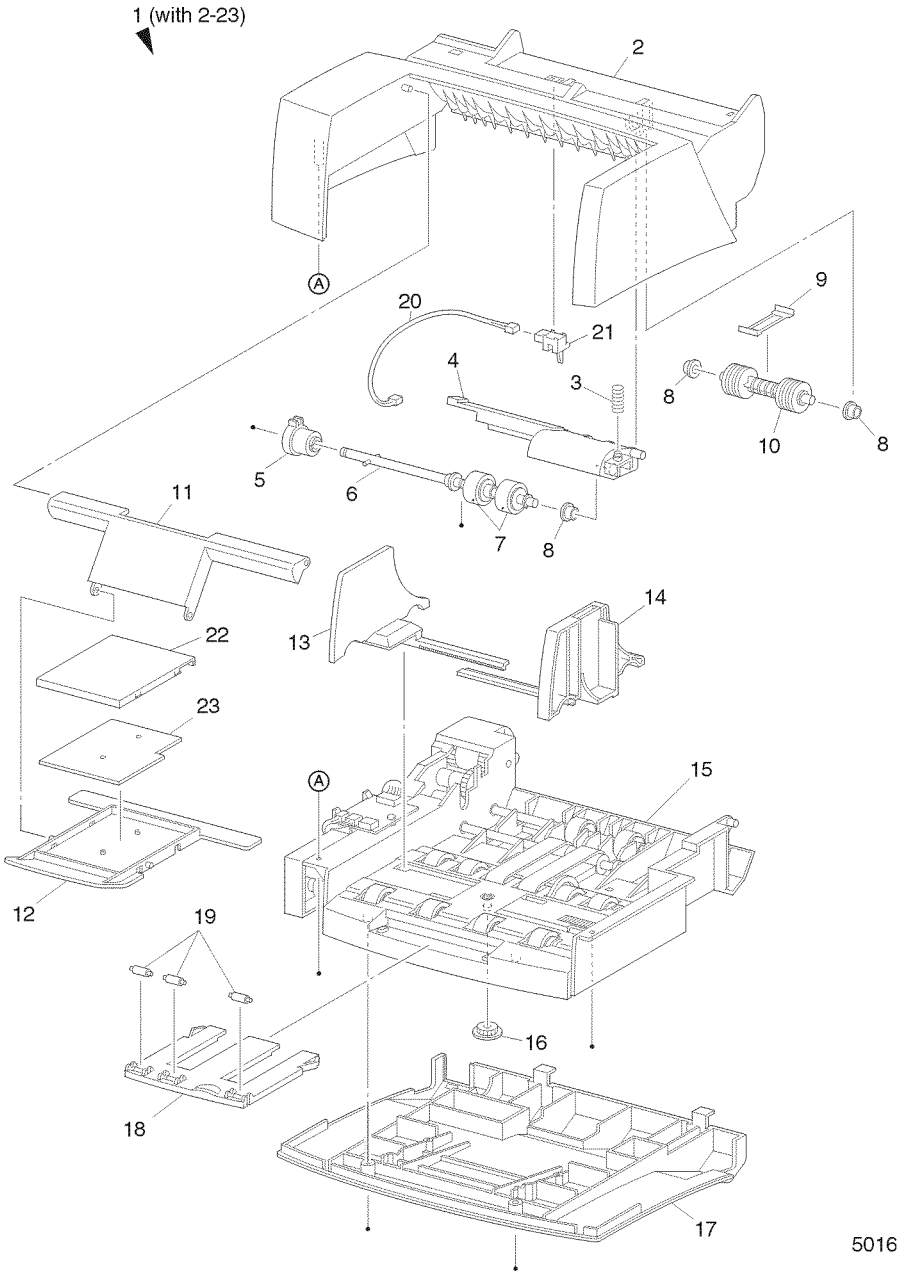
PL 11.2 500 Sheet Feeder (2 of 2)

Item	Part	Description
1	- - - - -	Feeder Assembly (with 2-40)
2	22K55001	Turn Roll Assembly (with 3)
3	121K20151	Turn Clutch Assembly
4	- - - - -	Spring Extension
5	809E11630	Spring Chute
6	120E16960	No Paper Actuator
7	- - - - -	Actuator Support
8	- - - - -	Feeder Frame Assembly
9	- - - - -	Clamp
10	- - - - -	Left Latch Spring
11	- - - - -	Low Paper Actuator (P/O item 43)
12	- - - - -	Low Paper Support Actuator (P/O item 43)
13	130E81970	Low Paper Sensor
14	162K47211	N/Sensor Harness Assembly
15	- - - - -	Front Chute Assembly
16	- - - - -	Turn Chute
17	- - - - -	Roll 7
18	- - - - -	Feeder Cover
19	600K79320	Feeder Assembly (with 20-28)
20	- - - - -	Feed Shaft
21	- - - - -	Bearing
22	- - - - -	Nudger Support Assembly
23	- - - - -	Nudger Chute
24	- - - - -	Gear Clutch
25	- - - - -	O/W Clutch Assembly
26	- - - - -	Roll Assembly
27	- - - - -	Gear 25T
28	- - - - -	Gear 31T
29	- - - - -	Nudger Spring
30	- - - - -	Gear 4
31	- - - - -	Gear 2
32	- - - - -	Gear Cover
33	- - - - -	Bracket
34	- - - - -	Gear 3
35	- - - - -	OPT Gear
36	160K52781	Feeder PWB
37	121K19010	Feed Clutch Assembly
38	- - - - -	Bearing
39	- - - - -	N/Motor Harness Assembly
40	- - - - -	Socket
41	600K79550	Feed Roll Kit (item 26- quantity 3)
42	600K79640	Socket & Harness Kit (with 39, 40)
43	600K79650	Actuator & Support Kit (with 11, 12)
44	22K56900	Feeder Assembly 1 Kit (with 1-40)
45	108R00330	Feed Roll Usage Kit (item 41- quantity 2)
S	600K79660	Hardware Kit (Includes Screw)



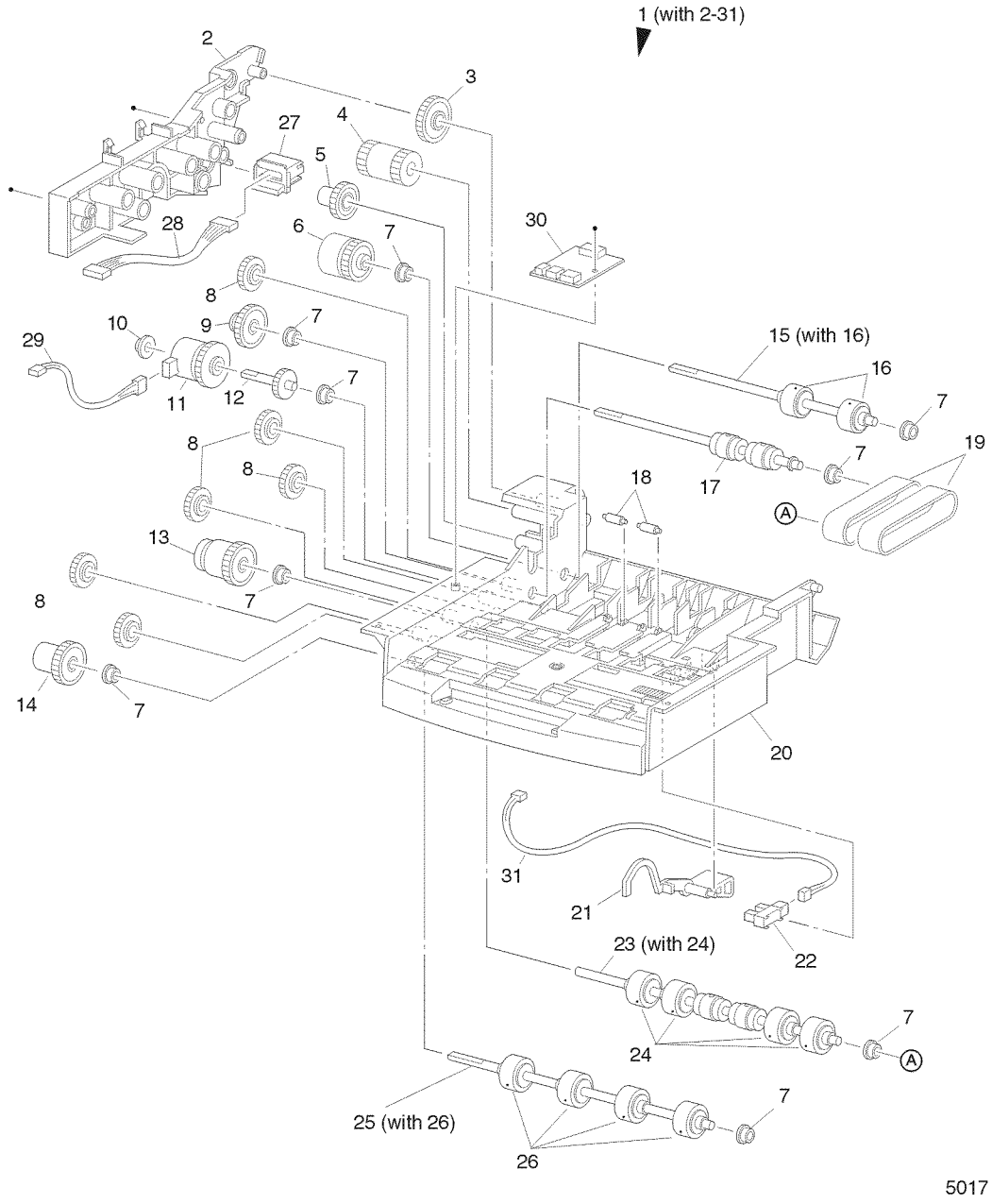
PL 12.1 Envelope Feeder (1 of 2)

Item	Part	Description
1	- - - - -	Envelope Feeder Assembly (with 2-23)
2	54E14452	Top Chute
3	- - - - -	Retard Spring
4	- - - - -	Retard Holder
5	- - - - -	Torque 29 Clutch Assembly
6	- - - - -	Retard Roll Assembly (with 7)
7	- - - - -	Retard Roll
8	- - - - -	Feeder Bearing
9	- - - - -	Pinch Spring
10	59E93940	Exit Pinch Roll
11	31E93291	Weight Arm
12	- - - - -	Weight Holder
13	- - - - -	Envelope Left Side Guide
14	- - - - -	Envelope Right Side Guide
15	- - - - -	Envelope Feeder Sub Assembly
16	- - - - -	Pinion Gear
17	- - - - -	Bottom Cover
18	- - - - -	Tray Extension
19	- - - - -	Envelope Pinch Roll
20	- - - - -	Sensor Harness Assembly
21	130K60390	Exit Sensor Assembly
22	- - - - -	Weight Cover
23	- - - - -	Weight Plate
24	600K79310	Retard Roll Kit Assembly
S	600K79660	Hardware Kit (Includes Screw)



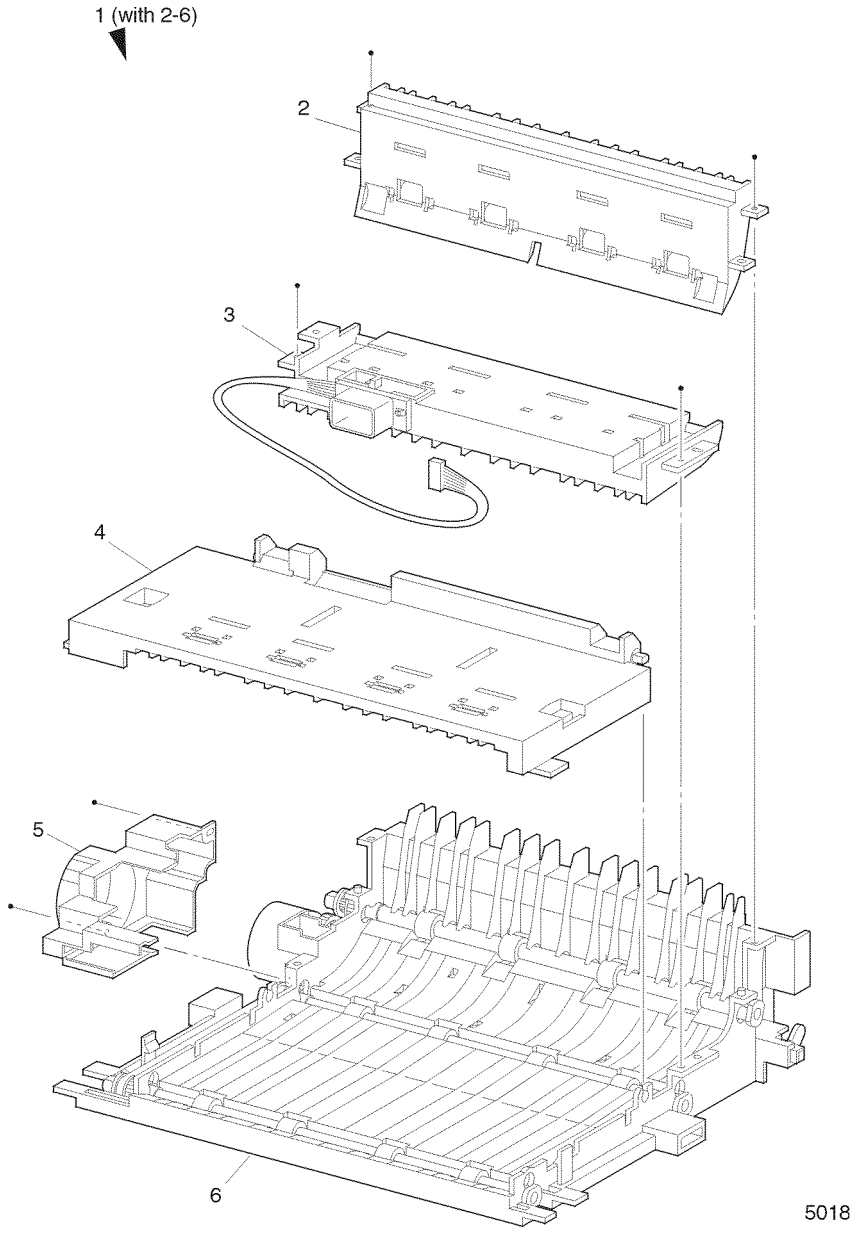
PL 12.2 Envelope Feeder (2 of 2)

Item	Part	Description
1	- - - - -	Envelope Feeder Sub Assembly (with 2-31)
2	- - - - -	Gear Cover
3	7E27420	Gear 29
4	- - - - -	Gear Drive 21
5	7E36080	Gear 23
6	121K87180	Torque 25 Clutch Assembly
7	- - - - -	Feeder Bearing
8	7E28780	Idler 21 Gear
9	121K87201	One Way 26 Clutch Assembly
10	- - - - -	Bearing Clutch Elec
11	121K87190	Feed Clutch
12	6E47120	Clutch Shaft 17
13	121K87210	One Way Clutch Assembly
14	121K87220	One Way Clutch Assembly
15	- - - - -	Transport Roll Assembly (with 16)
16	- - - - -	Transport Roll
17	- - - - -	Bottom Roll Assembly
18	- - - - -	Envelope Pinch Roll
19	- - - - -	Feed Belt
20	- - - - -	Main Chassis
21	- - - - -	No Paper Actuator
22	130E81970	No Paper Sensor
23	- - - - -	Feed Roll Assembly 1 (with 24)
24	- - - - -	Feeder Roll
25	- - - - -	Feed Roll Assembly 2 (with 26)
26	- - - - -	Feeder Roll
27	- - - - -	Envelope Connector
28	- - - - -	Main Harness Assembly
29	- - - - -	Clutch Harness Assembly
30	- - - - -	Envelope PWB
31	- - - - -	No Paper Harness Assembly
S	600K79660	Hardware Kit (Includes Screw)



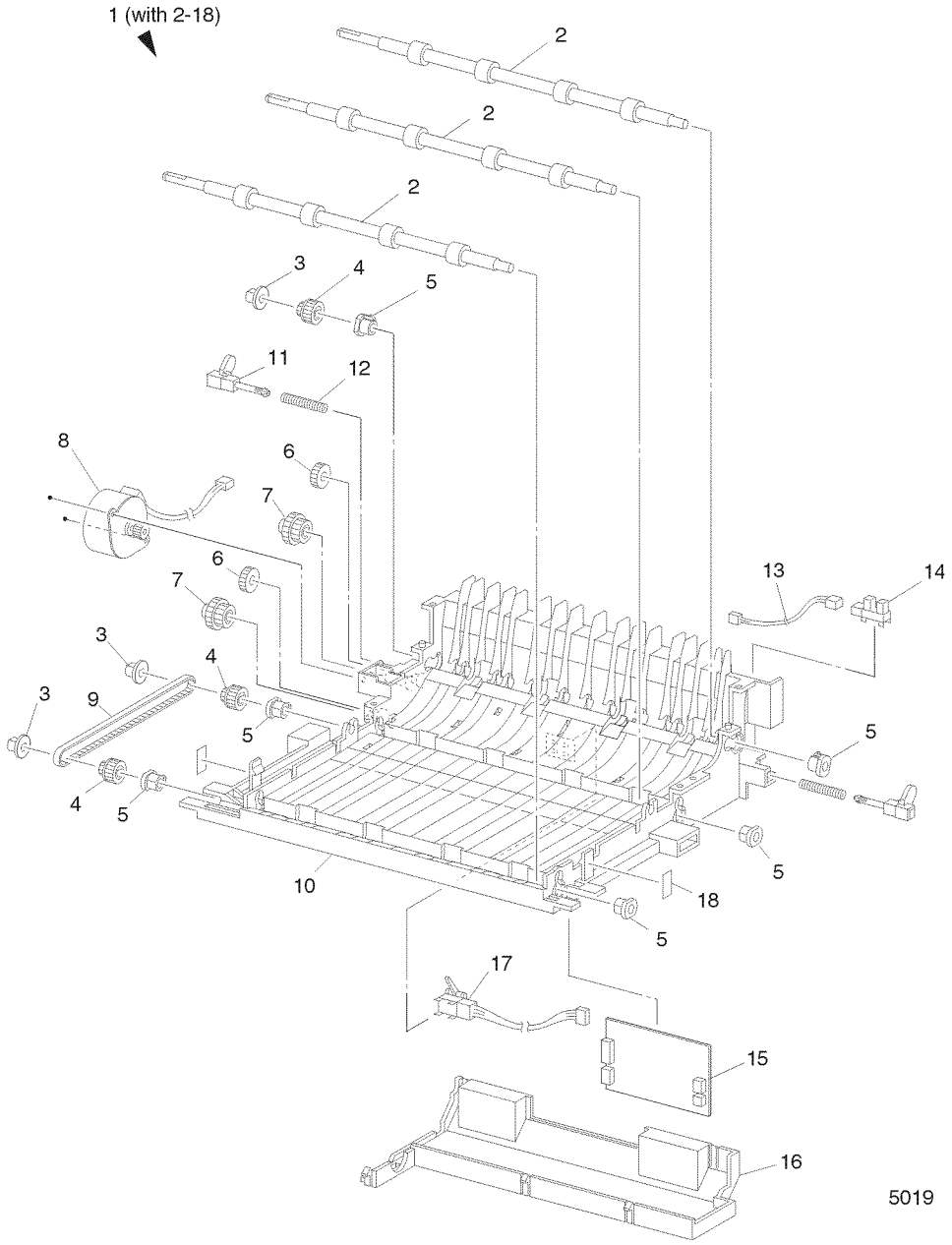
PL 13.1 Duplex (1 of 2)

Item	Part	Description
1	- - - - -	Duplex Assembly (with 2-6)
2	- - - - -	Turn Chute Assembly
3	- - - - -	Connector Chute Assembly Connector
4	54K15061	Upper Chute Assembly
5	- - - - -	Duplex Drive Cover
6	- - - - -	Lower Duplex Chute Assembly
S	600K79660	Hardware Kit (Includes Screw)



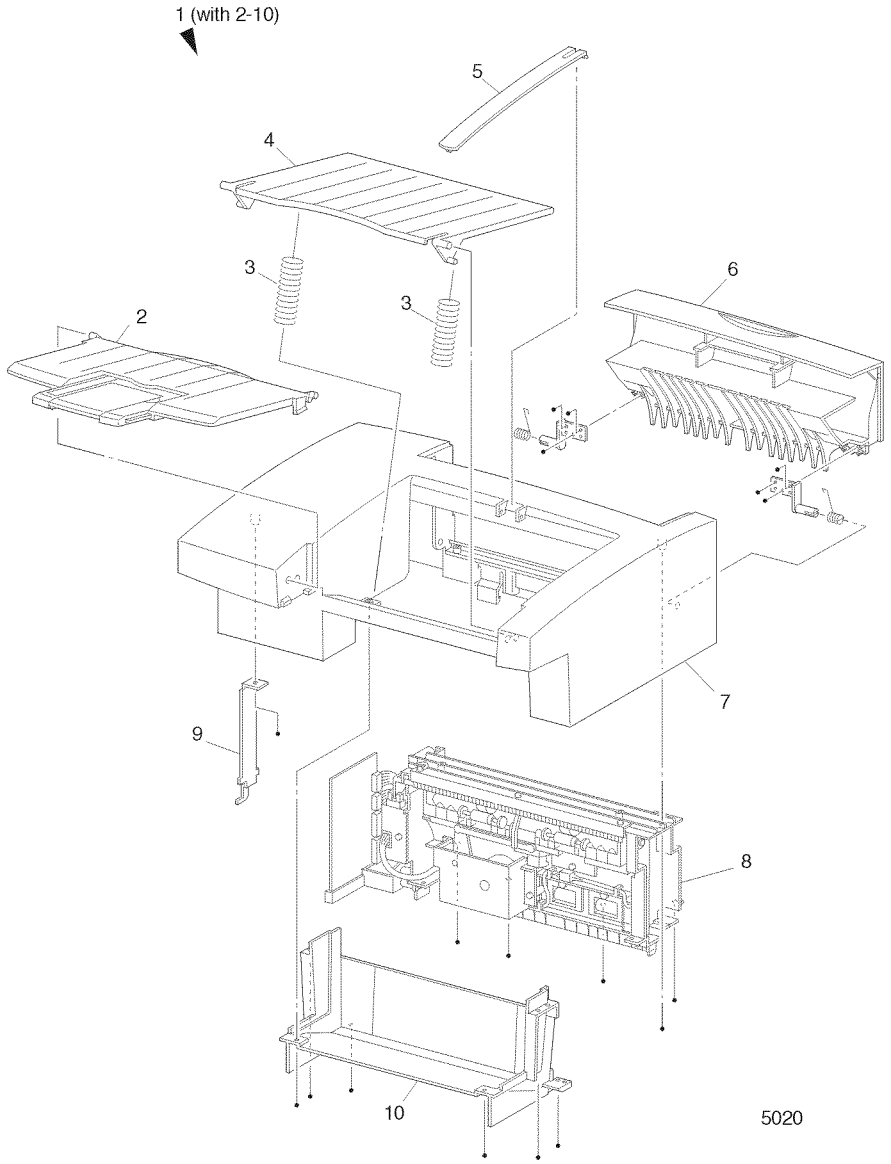
PL 13.2 Duplex (2 of 2)

Item	Part	Description
1	- - - - -	Lower Duplex Chute Assembly (with 2-18)
2	59K12151	Duplex Roll Assembly
3	3E47580	Duplex Stopper Belt
4	- - - - -	Duplex Gear 17/Pulley
5	- - - - -	Duplex Bearing
6	- - - - -	Duplex Gear 18
7	- - - - -	Duplex Gear 17/39
8	127K24800	Motor Assembly
9	423W15455	Synchronous Belt
10	- - - - -	Lower Duplex Chute
11	- - - - -	Duplex Latch
12	- - - - -	Duplex Latch Spring
13	- - - - -	Duplex Sensor Harness
14	130E81970	Face Up Tray Sensor
15	160K53051	Duplex PWB
16	- - - - -	Duplex Cover
17	130K83310	Duplex Transport Sensor
18	- - - - -	Duplex Handle Label
S	600K79660	Hardware Kit (Includes Screw)



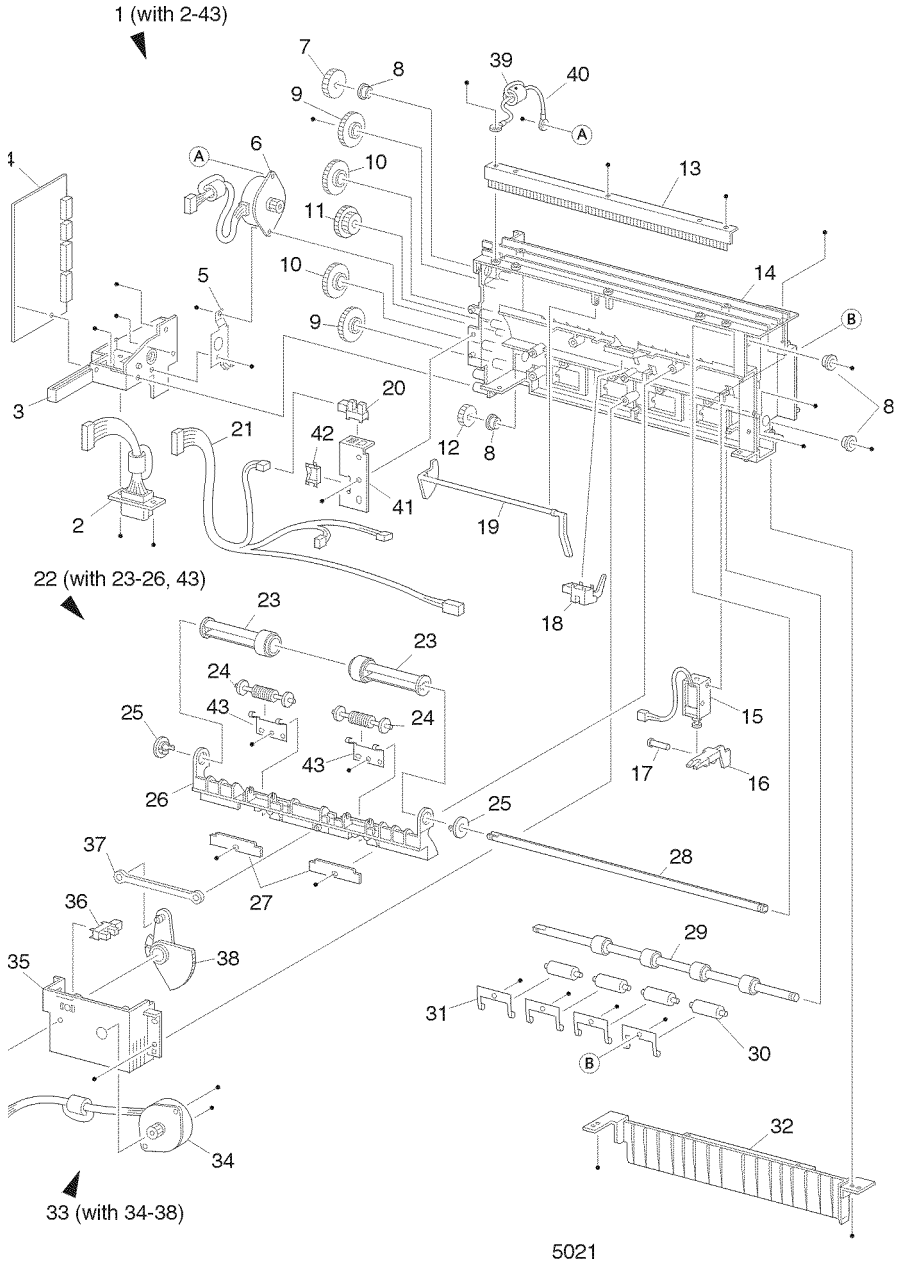
PL 14.1 Offset Catch Tray (1 of 2)

Item	Part	Description
1	- - - - -	Offset Catch Tray Assembly (with 2-10)
2	50K38631	Exit Tray Assembly
3	- - - - -	Tray Spring
4	50E89160	Exit Tray
5	12E09550	Weight Link
6	802E02773	Rear Cover
7	802E02755	OCT Cover
8	54K14842	Inner Exit Chute Assembly
9	- - - - -	Hook Cover
10	- - - - -	Lower Cover
S	600K79660	Hardware Kit (Includes Screw)



PL 14.2 Offset Catch Tray (2 of 2)

Item	Part	Description
1	54K14842	Inner Exit Chute Assembly (with 2-43)
2	- - - - -	OCT Harness Assembly (J21-P202)
3	- - - - -	PWB Holder
4	160K47332	OCT PWB
5	- - - - -	Ground Plate
6	127K28640	Drive Motor Assembly
7	- - - - -	Gear Exit 20
8	- - - - -	Bearing Exit
9	- - - - -	Gear 27
10	- - - - -	Gear 26
11	- - - - -	Gear 47W
12	- - - - -	Gear Exit
13	- - - - -	Static Eliminator
14	- - - - -	HSG Gear
15	121K20551	Direction Solenoid
16	11E09450	Solenoid Lever
17	- - - - -	Solenoid Pin
18	130K84220	Exit Sensor Assembly
19	120E17191	Stack Full Actuator
20	130E81970	Stack Full Sensor
21	- - - - -	OCT Sensor Harness Assembly (J224-225, J226, J227, J228)
22	- - - - -	Offset Roll Assembly (with 23-26, 43)
23	- - - - -	Exit Roll Assembly
24	- - - - -	Exit Roll Pinch
25	- - - - -	Offset Bearing
26	- - - - -	OCT Guide
27	- - - - -	OCT Holder
28	- - - - -	Exit Shaft
29	- - - - -	Mid Roll Assembly
30	- - - - -	OCT Pinch Roll
31	- - - - -	Mid Pinch Spring
32	54E14431	Inner Exit Chute
33	802K05770	Offset Assembly (with 35-39)
34	- - - - -	Offset Motor Assembly
35	- - - - -	Offset Housing
36	130E81970	OCT Home Sensor
37	- - - - -	Offset Lever
38	- - - - -	Core Gear
39	- - - - -	Ferrite Core
40	- - - - -	OCT Wire Assembly
41	- - - - -	Sensor Bracket
42	- - - - -	Saddle Edge
43	- - - - -	Exit Pinch Spring
S	600K79660	Hardware Kit (Includes Screw)



6 General Procedures / Information

Introduction

The following information is contained within this section:

General Procedures includes the Operations Menu Map and the Service Mode Menu Map. It includes all unique service operations and the machine soft switch parameters and defaults.

When you suspect a machine is functioning outside the range of its specifications, refer to product specifications. If the problem is a result of space, electrical, or environmental problems, call for management or sales assistance as needed.

Tools and consumables contains a listing of the required tools and supplies needed to correctly repair and maintain the machine.

Changes in configuration to the machine are assigned a Tag number. Information about a specific modification is found in the Tag Index within Tag Information. The firmware matrix lists the launch firmware level and all subsequent issues.

Install provides the procedures required to install the machine and options.

The Principles of Operation have been added to provide additional machine operation theory and information to help in resolving obscure machine faults.

GP 1.1 General Specifications

Table 1 General Specifications

Category	Specification
Printing method	Electro-photographic system (roller charging, single component magnetic toner development)
Exposure method	Semiconductor Laser Beam Scanning
Laser specifications	Class 1 Laser Product Class 3B Laser, rated at 5mW output @ 780nm
Resolution	600/1200 dots per inch (dpi), switchable at full engine speed.
Fuser method	Heat and pressure
Warm-up time	From a cold start (22°C / 71.6°F ambient temperature) to READY TO PRINT within 65 seconds.
Power supply	100/120VAC (90-140VAC) 50/60Hz (47Hz -63Hz) 220/240VAC (198-264VAC) 50/60Hz (47Hz -63Hz)
Power consumption	100/120VAC printer: Maximum consumption: 800W Running, 45 W Sleep, Maximum current: 8A (100VAC)/6.66A (120VAC). 240VAC printer: Maximum consumption: 800W Running, 45W Sleep. Maximum current: 3.33A (240VAC). Note: No electrical current is supplied to the Fuser assembly in Sleep Mode.
Fuser control temperature	100/120VAC printer: T.B.D°C / °F 220/240VAC printer: T.B.D°C / °F
Size and weight (not including the Print Cartridge, System Controller PWB or any options)	Width 422mm X Depth 439mm X Height 413mm (16.5 inches x17.25 inches x 16.25 inches) Weight = 26Kg (57lbs)
Space requirements	Overhead: Minimum T.B.D. mm Front: Minimum 240mm (9.5 inches) Back: Minimum 300mm (11.8 inches) Sides: Minimum T.B.Dmm
Maximum paper size	Legal 14" (8.5"X14" = 355.6mm X 215.9mm)
Maximum printable area	Edge to edge printing capability. Within the 4mm border (4 sides) the printer will print any data 6 point Arial or larger.
Maximum paper load	550 sheets of RX 80 A4 paper, or Xerox 20lb Letter size paper.
Operating environment	5 - 35°C / 41° - 95°F @ 15% to 85% RH (operating) 0 - 3100 meter (10171.1 ft.) above sea level Horizontal bias within 5° of level
Storage environment with a packed Print Cartridge	Normal condition:12 months maximum at 0-35°C/32-95°F @ 15-80%RH with no condensation present Severe condition: 1 month maximum at -20° to 0°C / -4° to 32°F or 35° to 40°C / 95 to104°F @ 5-15 or 80-95%RH with no condensation present

Table 1 General Specifications

Category	Specification
Storage environment without a packed Print Cartridge	Normal condition: 12 months maximum at -20 to -50°C / -4 to -58°F @ 5-85% RH with no condensation present Severe condition: 48 hours maximum at 50-60°C / 122 - 140 °F @ 85-95% RH with no condensation present
Acoustic Noise	Standby mode: 35.0dB(A) Sleep mode: Background noise only Printing mode: 49.5dB(A) or 53.0dB(A) Base Engine: Duplex Assembly, Tray 2, Tray 3, Envelope Feeder, and OCT. The paper is 20lb Letter SEF, at 600 dpi.
Dust generated	No more than 0.1mg/m3 of dust
Print Cartridge life (See GP 1.7)	*10,000/15,000 prints on A4/Letter paper, with 5% print coverage (*10,000 or 15,000 prints dependent on Print Cartridge used)
Toner Sensor	After Toner Sensor detects a low level of toner in the CRU, the printer makes ten additional prints before generating an J5 error message.

GP 1.2 Safety Standards

N2125 satisfies the following safety standards: Table 1

Table 1 Safety Standards

Category	Standard Satisfied
Laser Safety	100V/120V type is submitted to FDA 21 CFR (Chapter 1, Subchapter J, Section 1010/1040). 220V/240V type is submitted to IEC 825 Class 1 laser Product.
Ozone Density	Does not exceed 0.02 ppm of ozone density TWA (Time Weight Average), measured according to ECMA 129 standard
Other standards	100V/120V type satisfies;- UL 1950 3rd Edition, CSA C22.2 no. 950-M95 or equivalent, NOM 200V/220V satisfies;- IEC 950 including amendments 1,2,3 and 4, CE Directive 1, Nordic and other Agency Approval 2, CCIB Note: 1. When the controller is installed, the OEM customer shall be responsible for the submittal of CE and CCIB. 2. The OEM customer shall be responsible for the Nordic agency approvals including NEMKO, SEMKO, SETI and DEMKO.

GP 1.3 First Print Output Time (FPOT)

The First Print Output Time is the time from when the printer receives a START signal in the READY state, until a single page is printed and delivered into the output tray Table 1.

Table 1 FPOT

Paper Size	Tray 1 (sec)		Tray 2 (sec)		Tray 3 (sec)		MBF (sec)	
	Simplex	Duplex	Simplex	Duplex	Simplex	Duplex	Simplex	Duplex
Letter SEF	9.2	16.5 17.5	10.4	17.7 18.7	11.6	18.9 19.9	9.2	16.5 17.5
A4 SEF	9.3	16.8 18.6	10.5	18.0 19.8	11.7	19.2 21.0	9.3	16.8 18.6

NOTE:

1. The data is the theoretical values when the paper is fed from tray 1.
2. When Laser Motor OFF, the values are adjusted as follows:
   - FPOT = t + 4.0 seconds (600 dpi)
   - FPOT = t + 4.0 seconds (1200 dpi)
3. When the paper is fed from other tray, the values are adjusted as follows:
   - FPOT = t - 1.2 seconds (from MBF)
   - FPOT = t + 1.2 seconds (from tray 2)
   - FPOT = t + 2.4 seconds (from tray 3)
4. FPOT from the Sleep Mode add up to 65 seconds to each value.

GP 1.4 Continuous Printing Speed After The First Sheet Out

Table 1 Continuous Printing Speed After the First Sheet Out

Paper Type	Simplex Mode (prints per minute)	Duplex Mode (impressions per minute)
Letter SEF	21	15
Legal 13” SEF	17	12.5
Legal 14” SEF	17	12
Executive SEF	21	14
A4 SEF	20	14
B5 (JIS) SEF	21	15
Envelopes	14	N.A.

GP 1.5 Paper Specifications

The printer uses the following paper feed methods:

- **550 Universal Paper Tray**

  Standard feeder for the N2125 printer. Holds up to 550 sheets of the following papers (Table 1).

Table 1 550 Universal Paper Tray

Type	Size (mm x mm) (inches x inches)
Letter SEF	215.9 x 279.4 (8.5" x 11")
Legal 13”	215.9 x 330.2 (8.5" x 13")
Legal 14”	215.9 x 355.6 (8.5" x 14")
Executive SEF	184.2 x 266.7 (7.25" x 10.5")
A4 SEF	210.0 x 297.0 (8.25" x 11.5")
B5 (JIS) SEF	182.0 x 257.0 (7" x 10")
A5 SEF	148.5 x 210.0 (5.8" x 8.25")
Custom Width: Length:	 98.4 - 215.9 (3.5" - 8.5") 148.5 - 355.6 (5.8" - 14")

NOTE: *Automatic size sensing is not effective for the custom size paper.*

Available paper weight for Simplex Mode is 60gsm (16lb) - 216gsm (80lb) and for Duplex Mode 60gsm (16lb) - 105gsm (28lb).

- Multi-Bypass Feeder (MBF)

  Standard feeder for the N2125 printer. The tables show available paper sizes and stack capacity (Table 2) and (Table 3).

Table 2 MBF (1 of 2)

Width (mm)	Length (mm)
76.2 - 215.9 (3" - 8.5")	127.0 - 355.6 (5" - 14")

NOTE: *Available weight of paper as follows:*

Qualified paper:60gsm (16lb Xerographic) - 216gsm (80lb Cover Stock)

Japanese Official Postcard:190gsm

Card Stock:216gsm (80lb)

Table 3 MBF (2 of 2)

Type	Paper Stack Capacity
Fuji Xerox P A4	120 sheets
Xerox 20lb Letter, RX 80 A4	100 sheets
Standard 20lb Paper	11.5 mm (.45") stacking height
Transparency, Label, Postcard	30 sheets
Envelope	10 sheets

Table 3 MBF (2 of 2)

Type	Paper Stack Capacity
Label sheet	30 sheets
Thicker Stock	30 sheets

- Envelope Feeder (optional)

  Optional Envelope feeder for the N2125 printer, enables the feeding of envelopes. The table shows available paper sizes and stack capacity (Table 4).

Table 4 Envelope Feeder

Paper Size	Stackable Capacity
Com #10 SEF	75 envelopes (Columbian brand)
Monarch SEF	75 envelopes (Monroe brand)
DL SEF	75 envelopes (River Series)
C5 SEF	50 envelopes (River Series)
Japanese Official postcard	100 sheets
Postcard	100 sheets
Other Media	24mm (1") maximum

NOTE: *Supported paper weight is 60gsm (16lb) to 105gsm (28lb).*

- Duplex Assembly optional for the N2125 printer enables printing on both sides of the paper. The table shows available paper sizes (Table 5).

Table 5 Duplex Assembly

Type	Size (mm x mm)
Letter SEF	215.9 x 279.4 (8.5" x 11")
Legal 13”	215.9 x 330.2 (8.5" x 13")
Legal 14”	215.9 x 355.6 (8.5" x 14")
Executive SEF	184.2 x 266.7 (7.25" x 10.5")
A4 SEF	210.0 x 297.0 (8.25" x 11.5")
B5 (JIS) SEF	182.0 x 257.0 (7" x 10")
Custom Width: Length:	 182.0 - 215.9 (7" - 8.5") 257.0 - 355.6 (10" - 14")

NOTE: *Supported paper weight is 60gsm (16lb) - 105gsm (28lb).*

Custom size paper longer than JIS B5 is available only when Custom Size is selected.

Special Purpose Paper supported for Paper Trays and MBF (Table 6)

Table 6 Special Purpose Paper Supported for Paper Trays and MBF

Type	Size	Media recommended
Transparency	216 x 279mm (8.5" x 11")(Letter) 216 x 279mm (8.5" x 11")(Letter) 210 x 297mm (8.25" x 11.7")(A4) (note 1) 210 x 297mm (8.25" x 11.7")(A4)	Xerox P/N 3R2780 (US) 3M P/N CG3300 Xerox 3R91334 (Europe) Xerox P/N JE001 (Japan)
Label	216 x 279mm (8.5" x 11")(Letter) 216 x 279mm (8.5" x 11")(Letter) 210 x 297mm (8.25" x 11.7")(A4) 210 x 297mm (8.25" x 11.7")(A4)	Xerox 3R4469 (US) Avery Laser Labels P/N 5160 Xerox P/N 3R97408 (Europe) Xerox P/N V860 (Japan)
Envelope (note 2)	104.8 x 241.3mm (4" x 9.5") 98.4 x 190.5mm (3.87" x 7.5") 162 x 229mm (6.4" x 9") 110 x 220mm (4.3" x 8.7")	Columbian Brand Com #10 Monroe Brand Monarch C5 (River series #02067/ Gummed) DL (River series #01029/ Gummed)
Postcard (note 3)	105 x 148.5mm (4" x 5.8") 100 x 148mm (note 3) (3.9" x 5.8")	Postcard Japanese Official Post Card
Cardstock	76.2 x 127mm - 210 x 297mm (3" x 5") - (8.25" x 11.7") (A4) or 215.9 x 279.4mm (Letter) (8.5" x 11")	3"x5" Oxford index card (40801) Classic Crest Super Smooth Cover (Long Grain)

Paper Size and Feeder Tray / Output Tray Compatibility (Table 7)

Paper sizes shown in the following table can be identified by the controller to improve processing. Otherwise, media will be processed as the maximum custom size.

Table 7 Paper Size and Feeder Tray/Output Tray Compatibility

Type	Name	Size Short Edge x Long Edge	Paper Tray(STD /OPT)	MBF	Duplex (Option)	Face Up (Option)	OCT (Option)
Regular Cut Sheet	Legal 14”	215.9 x 355.6 (8.5" x 14")	X	X	X	X	X
	Legal 13”	215.9 x 330.2 (8.5" x 13")	X	X	X	X	X
	A4	210.0 x 297.0 (8.25" x 11.7")	X	X	X	X	X
	1/3 A4	99.0 x 210.0 (3.9" x 8.25")	X	X			
	Letter	215.9 x 279.4 (8.5" x 11")	X	X	X	X	X
	Executive	184.2 x 266.7 (7.25" x 10.5")	X	X	X	X	
	B5(JIS)	182.0 x 257.0 (7" x 10")	X	X	X	X	X
	B5(ISO)	176.0 x 250.0 (6.9" x 9.8")		X		X	X
	A5	149.0 x 210.0 (5.8" x 8.25")	X	X		X	X
	Statement (Half Letter)	139.7 x 215.9 (5.5" x 8.5")		X		X	
Envelope	C5	162.0 x 229.0 (6.4" x 9")		X		X	
	COM-10	104.8 x 241.3 (4" x 9.5")		X		X	
	DL	110.0 x 220.0 (4.3" x 8.7")		X		X	
	Monarch	98.4 x 190.5 (3.9" x 7.5")		X		X	
Postcard	Japanese Official	100 x 148.0 (3.9" x 5.8")		X		X	
	Universal size	105.0 x 148.5 (4" x 5.8")		X		X	

Table 7 Paper Size and Feeder Tray/Output Tray Compatibility

Type	Name	Size Short Edge x Long Edge	Paper Tray(STD /OPT)	MBF	Duplex (Option)	Face Up (Option)	OCT (Option)
Others	Cardstock	76.2 x 127.0 - 210 x 297 (3" x 5") - (8.25" x 11.7")(A4) or 215.9 x 279.4 (8.5" x 11")(Letter)	X	X		X	
	Universal	76.2 - 215.9 x 127 - 355.6 (3" - 8.5") x (5" x 14")	X	X		X	
	Custom	98.4 - 215.9 x 148.0 - 355.6	X	X		X	X
	Custom	182.0 - 215.9 x 257.0 - 355.6 (7" - 8.5") x (10" - 14")X	X	X	X	X	
Transparency Sheet	Letter	215.9 x 279.4 (8.5" x 11")	X	X		X	X
	A4	210.0 x 297.0 (8.25" x 11.7")	X	X		X	X
Label Media Sheet	Letter	215.9 x 279.4 (8.5" x 11")	X	X		X	X
	A4	210.0 x 297.0 (8.25" x 11.7")	X	X		X	X

Media Input / Output Chart (Table 8)

NS = Not Supported; CUS* = Supported when printer is in custom mode.

Table 8 Media Input/Output Chart

Paper Style	Paper Size	Inputs			Outputs		
		MBF Tray	Tray 1, 2, 3 (A4/Letter/ Legal)	Envelope feeder (option)	Main	Face Up	OCT
Letter	215.9 x 279.4 mm (8.5" x 11.0")	Duplex SEF	Duplex SEF	NS	Yes	Yes	Yes
Legal	215.9 x 355.6 mm (8.5" x 14.0")	Duplex SEF	Duplex SEF	NS	Yes	Yes	Yes
Legal 13"	215.9 x 330.2 mm (8.5" x 13.0")	Duplex SEF	Duplex SEF	NS	Yes	Yes	Yes
A4	210 x 297 mm (8.27" x 11.69")	Duplex SEF	Duplex SEF	NS	Yes	Yes	Yes
B5-JIS	182 x 257 mm (7.16" x 10.12")	Duplex SEF	Duplex SEF	NS	Yes	Yes	Yes
B5-ISO	176.0 x 250.0 mm (6.93" x 9.84")	Simplex SEF	CUS*	NS	Yes	Yes	Yes

Table 8 Media Input/Output Chart

Paper Style	Paper Size	Inputs			Outputs		
		MBF Tray	Tray 1, 2, 3 (A4/Letter/ Legal)	Envelope feeder (option)	Main	Face Up	OCT
A5	148.0 x 210.0 mm (5.83" x 8.27")	Simplex SEF	Simplex SEF	NS	Yes	Yes	Yes
Executive	182.4 x 266.7 mm (7.25" x 10.5")	Duplex SEF	Duplex SEF	NS	Yes	Yes	Yes
1/3 A4	99.0 x 210.0 mm (3.9" x 8.27")	Simplex CUS*	Simplex CUS*	NS	Yes	Yes	Yes
State-ment	139.7 x 215.9 mm (5.5" x 8.5")	Simplex SEF	CUS*	NS	Yes	Yes	Yes
UP Post-card	89.9 x 139.7 mm (3.5" x 5.5")	Simplex SEF	NS	NS	Yes	Yes	Yes
Index	76.2 x 127.0 mm (3" x 5")	Simplex SEF	NS	NS	Yes	Yes	Yes
A6 Post-card	105.0 x 148.0 mm (4.13" x 5.85")	Simplex SEF	CUS*	Yes	Yes	Yes	Yes
Hagaki (Japa-nese Postcard)	100.0 x 148.0 mm (3.94" x 5.83")	Simplex SEF	CUS*	Yes	Yes	Yes	Yes
Monarch Envelope	98.4 x 190.5 mm (3.88" x 7.5")	Simplex SEF	CUS*	Yes	Yes	Yes	Yes
COM10 Envelope	104.8 x 241.3 mm (4.13" x 9.5")	Simplex SEF	CUS*	Yes	Yes	Yes	Yes
C5 Enve-lope	162.0 x 229.0 mm (6.38" x 9.02")	Simplex SEF	CUS*	Yes	Yes	Yes	Yes
DL Enve-lope	110.0 x 220.0 mm (4.33" x 8.66")	Simplex SEF	CUS*	Yes	Yes	Yes	Yes
Transpar-encies Letter	215.9 x 279.4 mm (8.5" x 11.0")	Simplex SEF	Simplex SEF	NS	Yes	Yes	Yes
Transpar-encies A4	210.0 x 297.0 mm (8.27" x 11.69")	Simplex SEF	Simplex SEF	NS	Yes	Yes	Yes
Labels Letter	215.9 x 279.4 mm (8.5" x 11.0")	Simplex SEF	Simplex SEF	NS	Yes	Yes	Yes
Labels A4	210.0 x 297.0 mm (8.27" x 11.69")	Simplex SEF	Simplex SEF	NS	Yes	Yes	Yes
Custom	Simplex Width: 76.2-215.9mm (3" - 8.5") Length: 127.0 - 355.6 mm (5" - 14")	X					

Table 8 Media Input/Output Chart

Paper Style	Paper Size	Inputs			Outputs		
		MBF Tray	Tray 1, 2, 3 (A4/Letter/ Legal)	Envelope feeder (option)	Main	Face Up	OCT
Custom	Duplex Width: 182.0 - 215.9 mm (7"- 8.5") Length: 257.0 - 355.6mm (10" - 14")	X					
Custom	Simplex Width: 98.4-215.9 mm (3.9" - 8.5") Length: 148.0-355.6mm (5.8" - 14")		X				
Custom	Duplex Width: 182.0 - 215.9 mm (7" - 8.5") Length: 257.0 - 355.6mm (10" - 14")		X				
Custom	Simplex Width: 98.4 - 178.0mm Length: 148.5 - 254.0mm			X			
Custom	Simplex Width: 76.2 - 215.9mm (3" - 8.5") Length: 127.0 - 355.6mm (5" - 14")				X		
Custom	Simplex Width: 76.2 - 215.9mm (3" - 8.5") Length: 127.0 - 355.6mm (5" - 15")					X	
Custom	Simplex Width: 98.4 - 215.9mm (3.9" - 8.5") Length: 148.0 - 355.6mm (5.8" - 14")						X

GP 1.6 Printing Accuracy

- Lead Edge Registration: +2.0mm maximum
- Side Edge Registration: +2.5mm maximum
- Skew: +1.2mm maximum (at the distance of 190mm)

GP 1.7 CRU (Print Cartridge / Fuser Assembly)

Print Cartridges

Two Print Cartridges are available for the printer. The following figures represent the number of impressions on an average 5% image coverage on Letter size paper in Simplex printing. The Duplex printing is evaluated as two Simplex prints.

Table 1 Customer Replaceable Units

CRU	Prints	Weight (toner)
10K Print Cartridge	10,000	420 grams (.9lbs)
15K Print Cartridge	15,000	620 grams (1.36lb)
Fuser Assembly (includes BTR)	200,000	n/a

GP 1.8 Options

There are several customer installed options available for the N2125 printer (Table 1).

Table 1 Options

Option	Description
550 Sheet Paper Feeder Customer Order Number: 97S02377	Provides 550 sheet continuous feed when used in conjunction with the 550 sheet Paper Tray. You can install one or two 550 Sheet Paper Feeders.
550 Sheet Paper Tray Customer Order Number: 109R00448	Used with the 550 Sheet Paper Feeder. The Tray holds 550 sheets of paper.
Cover Assembly Rear Face Up Customer Order Number: 97S02406	The tray can hold 120 sheets of 20 lb. paper or 13mm (.5") stack height.
Duplex Assembly Customer Order Number: 97S02379	Provides duplex (two sided) printing capability.
Offset Catch Tray (OCT) Customer Order Number: 97S02380	Offsets each set of printouts by 1.1 inches (2.8 cm). The tray holds up to 500 sheets of paper, in four different paper sizes.
Envelope Feeder Customer Order Number: 97S02388	Provides continuous envelope feed.

GP 1.9 Optional Feeder Specifications

The Optional Feeder Assembly consists of a 550 Sheet Paper Tray and a 550 sheet feeder. The feeder contains the mechanism to feed paper out of the 550 Sheet Paper Tray.

The Optional Feeder Assembly can be used as the second and the third feeder on the printer. If two Optional feeders are installed, the bottom feeder is designated Feeder 3, and the middle feeder is designated Feeder 2 (Figure 1).

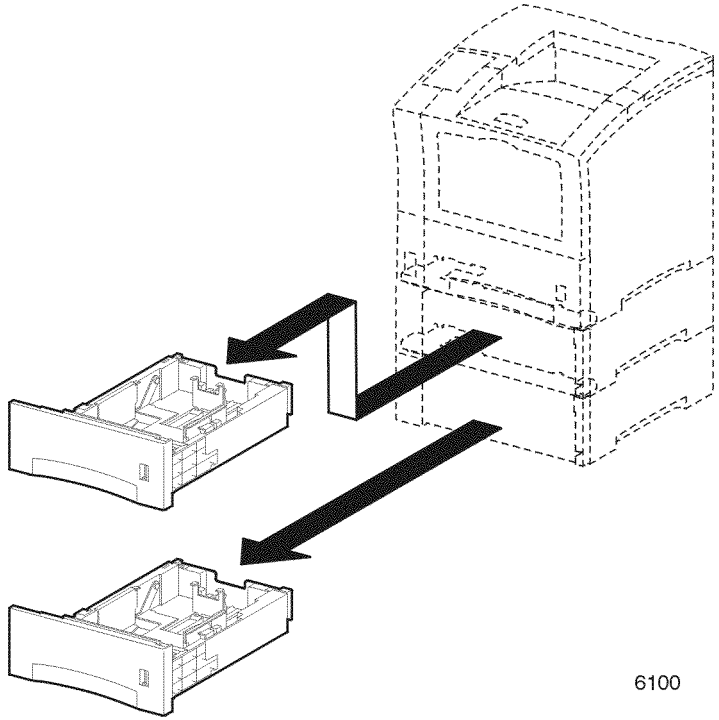


Figure 1 Optional Feeders

Dimension and Weight (Table 1)

Table 1 Dimension and Weight

	Width	Depth	Height	Weight
Feeder + Paper Tray	422 mm (16.6")	433 mm (17")	175 mm (6.9")	10.3 kg (22 lbs)
Feeder	422 mm (16.6")	433 mm (17")	175 mm (6.9")	7.6 kg (16.7 lbs)
Paper Tray	358 mm (14")	432 mm (17")	136 mm (5.3")	2.7 kg (5.9 lbs)

Power Supply

The +24VDC and +3.3VDC are supplied from the LVPS PWB through the Print Engine Controller PWB, to the Option Size PWB and Feeder PWB.

GP 1.10 Duplex Assembly Specifications

Dimension and Weight (Table 1)

Table 1 Duplex Assembly Specifications and Weight

Width	Depth	Height	Weight
320 mm (12.6")	320 mm (12.6")	100 mm (3.9")	0.8 kg (1.5 lb.)

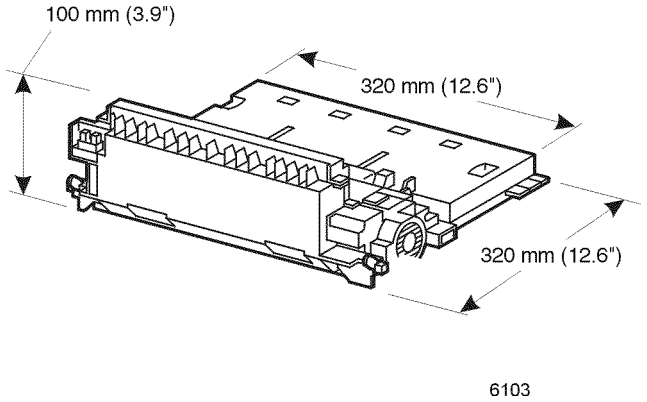


Figure 1 Duplex Specifications

Power Supply

The +24VDC and +3.3VDC are supplied from the LVPS PWB through the Print Engine Controller PWB to the Duplex Assembly.

GP 1.11 Offsetting Catch Tray Assembly Specifications

Dimension and Weight (Table 1)

Table 1 Offsetting Catch Tray Assembly Specification Dimension and Weight

Width	Depth	Height	Weight
422 mm (16.6")	293 mm (11.5")	147 mm (5.8")	2.5 kg (5.5lbs)

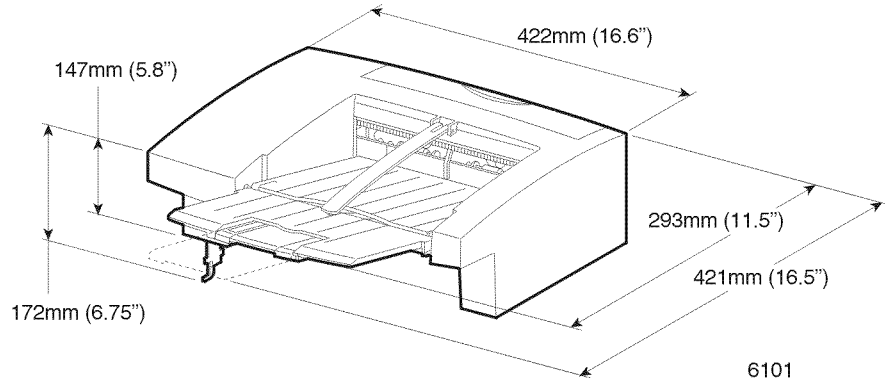


Figure 1 OCT Dimensions

Power Supply

The +24VDC and +3.3VDC are supplied from the LVPS PWB through the Print Engine Controller PWB to the OCT.

GP 1.12 Envelope Feeder Specifications

Dimension and Weight (Table 1)

Table 1 Envelope Feeder Specifications Dimension and Weight

Width	Depth	Height	Weight
272 mm (10.7")	260 mm (10.25")	117 mm (4.6")	1.5 kg (3.3lbs)

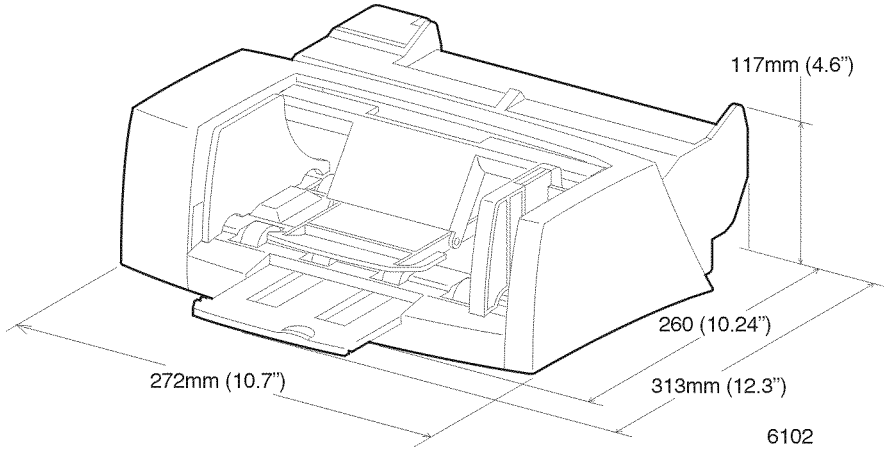


Figure 1 Envelope Feeder Dimensions

Power Supply

The +24VDC and +3.3VDC are supplied from the LVPS PWB through the Print Engine Controller PWB and Connector PWB.

GP 2.1 Power On Diagnostics

The System Controller PWB has the following LEDs (Table 1) (Figure 1):

Table 1 Controller LEDs

LED	Description
Power	Indicates power to the controller board. Should stay on when power is turned on.
Test	Indicates that a power on diagnostics failure has occurred when flashing.
Speed	Off: 10 Mbit Ethernet. Red: 100 Mbit Ethernet.
Link X	Off: Indicates no Ethernet link found. Green: Indicates Ethernet link found.
Activity	Off: Indicates no activity on Ethernet link. Amber: Indicates activity on Ethernet link.

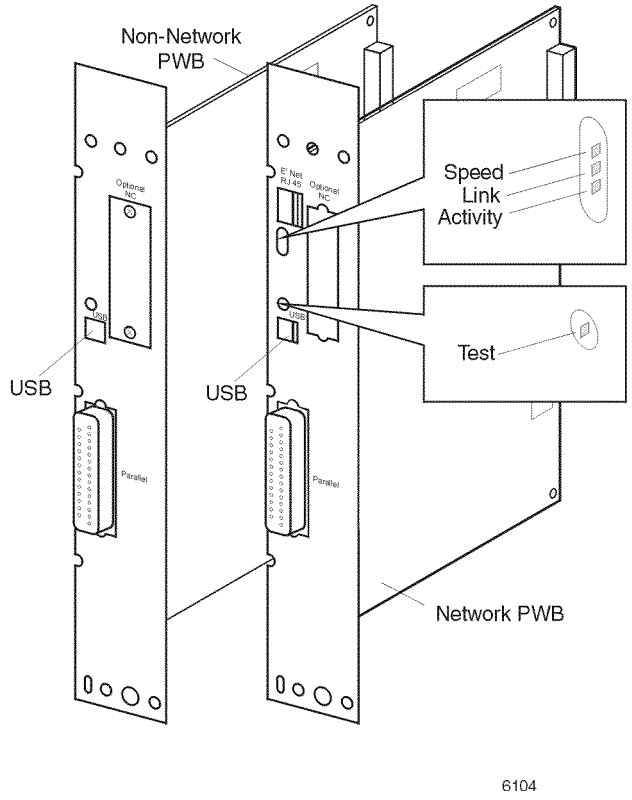


Figure 1 Power On Diagnostic LEDs

GP 2.2 Controller / ESS Diagnostics

The System Controller PWB provides the following diagnostic capability:

- Configuration Sheet includes System Controller Software Version and Print Engine Controller Software Version.
- System Controller PWB Test Print for 81/2 x 11 and A4 paper sizes.
- Diagnostic Menu contains a sub menu containing the following:
  - Printing of Test Patterns from selectable input sources to selectable output destinations.
  - Input Sources: MBF, Tray 1, Tray 2, Tray 3, MBF Duplex, Tray 1 Duplex, Tray 2 Duplex, and Tray 3 Duplex.
  - Output Sources: Top Tray, OCT, OCT with offset.
  - Print quantity is 999 and can be terminated at anytime by pressing "0".
  - Hex dump
  - Error Log enablement and print capability
  - Active Faults
  - Fault History (list last 100 faults).
- Smart Diagnostics (Sixth Sense), CenterWare Internet Services

  This feature enables system administrator to be notified of various reactive events in the printer via E-mail messages. The system administrator configures which events to be notified of through CentreWare Internet Service pages. System administrator may be notified of the following REACTIVE events:
  - Periodic - specified time arrives (Fuser change, etc.)
  - Service - printer requires service (showing active fault)
  - Consumable - toner is low.
  - Paper - paper is low or out.
- Smart Diagnostic will allow system administrator to:
  - Query printer for configuration sheet, and Fault history log to prescribed printer address or E-mail address.

GP 2.3 Keys Pad & LED Layout

Figure 1 illustrates the layout of the Control Panel

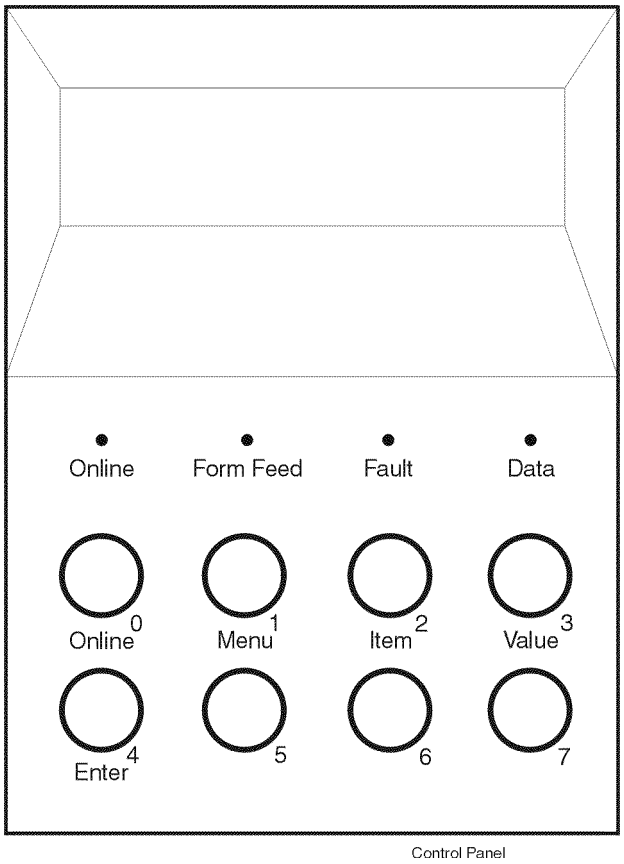


Figure 1 Keys Pad and LED Layout

GP 2.4 IOT Diagnostics

The IOT diagnostics provide the ability to:

- Print IOT test page.
- Read or Set IOT NVM configuration values. Access to NVM is password protected.
- Monitor and verify operation of all input sensors for IOT and options.
- Monitor and verify operation of all Output devices for IOT and options (motors, clutches, etc.)

Table 1 summarizes the operation of the Control Panel Keys for entering IOT diagnostics.

Table 1 Entering IOT Diagnostics

Key Combination - Key Number	Action
Item Up + Item Down 2 + 6	While turning on power press and hold until message "*IOT*" is displayed on the LCD (it takes approximately 30 seconds). During this time the following occurs: • Switch printer power on • Squares (light) • Boot Code Version • IOT displayed
Enter 4	After *IOT* is displayed the ENTER key must be pressed within 5 sec. to enter Diagnostics. If the ENTER key is not pressed within 5 sec., printer will continue its normal power up sequence.

The IOT diagnostic menu has the following selections:

- **Test Print**
- **NVM Config**
- **Component Test**

Table 2 summarizes the operation of the Control Panel keys in IOT diagnostic main menu.

Table 2 IOT Diagnostic Mode Key Table

Key Combination - Key Number	Action
Menu Up / Menu Down 1 or 5	Scroll through the IOT diagnostic menu: Print Menu, NVM Menu, Component Menu.
On-line (Press and hold for 1 second) 0	Stops routing in process and clears error messages from Control Panel.

GP 2.5 Test Print

The IOT pattern is stored in the Print Engine Controller PWB. The pattern will be used by service personnel to identify, repair, and validate the operability of printer xerographics and paper handling from all paper sources, options, and output sources. Test Print diagnostics will allow for the following routines:

- Print the Test Print
- Input Tray selection (all supported paper sizes)
- Output Tray selection
- Duplex selection
- Display error message/code when failure occurs (Table 2).

Table 1 summarizes the operation of the Control Panel keys in **Test Print** mode.

Table 1 Test Print Key Table

Key Numbers		Actions
Item Up / Item Down	2 or 6	Scrolls through Print Menu containing: Print Pattern, Input Tray, Output Tray, and Duplex
Value Up / Value Down	3 or 7	Scrolls all available selections of the Item Menu selection. * = selected item
Enter	4	Executes the Test Print up to 999 prints. Enters selections of Input Tray, Output Tray and Duplex selections.
On Line	0	Stop printing and clears error code. • Press and hold the "0" key for 1 second • Used to stop printing in the Test Print mode • If an error code appears, pressing "0" clears the error code. Pressing "0" a second time returns to Print Pattern

Procedure:

1. Power down printer.
2. Simultaneously hold keys 2 and 6 down.
3. Power up printer, wait for message "IOT?" to appear on the LCD.
4. Release both keys, then press key 4 to enter the IOT Diagnostics menu (message "Entering IOT Diagnostics Mode" appears. If key 4 is not pressed within 5 seconds of the "IOT?" message, printer will go to the normal boot process.
5. Press key 1 or 5 to scroll through the Main Menu. "Component Test" and "NVM Config" and "Test Print" are the choices available.
6. With Test Print displayed, press key 2 or 6 to scroll through the items menu.
7. Press key 3 or 7 to view the options selected under the item.

   Test Print items menu offers the following selections:

   - Input Tray (Tray 1, Tray 2, Tray 3, MBF, EBF)
   - Output Tray (Standard, OCT)
   - Duplex (Off, On)
   - Print Pattern
8. Press key 2 or 6 to scroll through the items menu. When the LCD display "Input Tray," press key 3 or 7 to view the selected option. Press key 3 or 7 to cycle through all available input trays. Press key 4 to select it. Selected tray has an * next to it.
9. Repeat step 8 for output tray selection and duplex or simplex selection.
10. When ready to print, press key 2 or 6 until "Print Pattern" is displayed. Then press key 4 to start printing.
11. During printing, press key 0 for 1 second to stop printing. Wait for message "Ready" to appear on the LCD. Press key 4 to resume printing, or key 0 to get back to the items menu.
12. Press key 1 or 5 to get back to the Main Menu (selection of Component Test or NVM Config or Test Print).

Error and Jam Recovery

During Test Print, if printer encounters problem. . .

1. It will halt printing and displays the problem found on the LCD panel (Table 2). LED 3 will start blinking. Follow the instruction display on LCD panel to troubleshoot the problem. Press key 0 after fixing problem. LED 3 will stop blinking once the error is cleared.
2. Printing will resume itself after problem has been fixed or printer will go back to step 1.

Table 2 IOT Fault Table

Condition / Message	UI Error Code	Action
Paper Size Error-all inputs	C5	Put correct size paper in Tray(s)
Early feed jam	E2-0	Open covers clear paper path
Misfeed jam	E2-1	Open covers clear paper path
Reg jam	E3-1, E3-2	Open covers clear paper path
Duplex jam	E7-0, E7-1, E7-2, E7-3 (refeed)	Open covers clear paper path
OCT jam	E6-1, E6-2	Open covers clear paper path
Exit jam	E4-0, E4-2, E4-3	Open covers clear paper path
EP Cart out	J3	Check Toner Cartridge; it may need to be installed properly
Low Toner	J5	Replace EP Cartridge
Output tray full	C5	Empty face down bin
Optional output tray full (OCT)	C5	Empty OCT bin
Add Paper to MBF	C5	MBF is out of paper, add paper
Add Paper to tray 1	C5	Main Tray is out of paper, add paper
Add Paper to tray 2	C5	Aux Tray 1 is out of paper, add paper
Add Paper to tray 3	C5	Aux Tray 2 is out of paper, add paper
Add Paper EBF Tray	C5	Add envelopes to Envelope Feeder
Top cover, Rear cover, open, Face-up open	E5	Close Top cover, Close Rear Cover, face-up

Table 2 IOT Fault Table

Condition / Message	UI Error Code	Action
Face up tray open	E5	Close Face-up tray
Tray 1 out install tray	C3	Main tray not installed properly, insert main tray
Tray 2 out install tray	C3	Aux tray 1 not installed properly, insert Tray properly
Tray 3 out install tray	C3	Aux tray 2 not installed properly, insert Tray properly
(Main Drive) Motor Fail	U1	Power off & on if problem continues call for service
ROS Fail	U2	Power off & on if problem continues call for service
Fuser Fail	U4	Power off & on if problem continues call for service
Fan Fail	U5	Power off & on if problem continues call for service
(IOT) NVM Fail	U6	Power off & on problem continues call for service
Duplex Unit Fail	E9	Power off & on if problem continues call for service
Envelope Feeder unit fail	E9	Power off & on if problem continues call for service
OCT Unit fail	E9	Power off & on if problem continues call for service
Optional Feeder Unit fail	E11	Power off & on if problem continues call for service
Set pause command	P1	Printer received set pause command
Fuser Warning	Fuser Unit Needs to be replaced, Please Wait	Replace fuser, clear fuser warning

GP 2.6 NVM Config

The IOT NVM values hold critical control parameters of the mechanical and electromagnetic components of the printer. The following allows service personnel to status or change NVM settings.

Table 1 summarizes the operation of the Control Panel keys in the NVM Config Menu.

Table 1 NVM Config Key Table

Key Numbers		Actions
Item Up / Item Down	2 or 6	First key press will request password. Scroll through NVM locations after password has been entered. If location is READ ONLY, a (R) will be displayed.
Value Up / Value Down	3 or 7	First key press will display current value. Second key press changes NVM value up or down.
Enter	4	Press Enter key to enter new value, message "Wrote (value selected) to NVM" will be displayed. New value has been entered into NVM.
0 -7 -3 -4		Password to enter NVM (Password only has to be entered once after entering diagnostics.)

Procedure

1. Power down printer.
2. Simultaneously hold keys 2 and 6 down.
3. Power up printer, wait for message "IOT?" to appear on the LCD.
4. Release both keys, then press key 4 to enter the IOT Diagnostics menu (message "Entering IOT Diagnostics Mode" appears. If key 4 is not pressed within 5 seconds of the "IOT?" message, printer will go to the normal boot process.
5. Press key 1 or 5 to scroll through the Main Menu. "Component Test" and "NVM Config" and "Test Print" are the choices available.
6. Press key 2 or 6.
7. The message "Enter Password" will appear on the LCD.
8. Press keys 0 7 3 4 in sequence.
9. Press key 2 or 6 to scroll through the items menu (Table 2).
   The value in the configuration NVM can be viewed and changed.
10. Press key 3 or 7 to view the content of the selected item. Item with an (R) next to it is a read only item.
11. Press key 3 or 7 to change the NVM value to a different value. Press key 4 to store the new value. If key 4 is pressed, a message "Wrote value to NVM" will appear for about 1 second on the LCD.

12. Press key 1 or 5 to get back to the Main Menu (selection of Component Test or NVM Config or Test Print).

Table 2 NVM Table

Menu Selection	Default Value	Read / Write
Print Res Setting	02	Read Only
Config 1 Setting	0E	Read Only
Config 2 Setting	00	Read Only
Laser Power Setting	08	Read Only
Fser Tmp Sby Setting	08 (Table 5)	Read Only
Fser Tmp Norm Adjustment	08 (Table 5)	Read/Write
Fser Tmp High Adjustment	08 (Table 5)	Read/Write
Fser Tmp OHP Adjustment	08 (Table 5)	Read/Write
Fser Tmp Env Adjustment	00 (Table 5)	Read/Write
Fser Tmp Dup Adjustment	00 (Table 5)	Read/Write
MBF Paper Size Adjustment	Table 3	Read/Write
EBF Paper Size Adjustment	Table 4	Read/Write
Tray 1 Proc Dir Adjustment	08	Read/Write
Tray 2 Proc Dir Adjustment	08	Read/Write
Tray 3 Proc Dir Adjustment	08	Read/Write
EBF Proc Dir Adjustment	08	Read/Write
MBF Proc Dir Adjustment	08	Read/Write
Tray 1 Scan Dir Adjustment	04	Read/Write
Tray 2 Scan Dir Adjustment	04	Read/Write
Tray 3 Scan Dir Adjustment	04	Read/Write
EBF Scan Dir Adjustment	04	Read/Write
MBF Scan Dir Adjustment	04	Read/Write
Proc Dir DUP Adjustment	08	Read/Write
Scan Dir DUP Adjustment	04	Read/Write
Details U2 Errors	00	Read Only
Details U4 Errors	00	Read Only
Details U6 Errors	00	Read Only

Table 3 MBF Paper Size Table

Value	Size
00	Index Card
01	Post Card
02	Monarch
03	A5 149.0 x 210.0 (5.8" x 8.2")
04	Statement
05	DL 110.0 x 220.0 (4.3" x 8.6")
06	C5 162.0 x 229.0 (6.4" x 9")
*07	COM 10
08	B5 (ISO)

Table 3 MBF Paper Size Table

Value	Size
09	B5 (JIS)
0A	Executive
0B	Letter
0C	A4 210.0 x 297.0 (8.3" x 11.7")
0D	Legal 13"
0E	Legal 14"
0F	Universal

* Default

Table 4 EBF Paper Size Table

Value	Size
00	Index Card
01	Post Card
02	Monarch
N/A	A5 149.0 x 210.0 (5.8" x 8.2")
N/A	Statement
05	DL 110.0 x 220.0 (4.3" x 8.6")
06	C5 162.0 x 229.0 (6.4" x 9")
*07	COM 10
N/A	B5 (ISO)
N/A	B5 (JIS)
N/A	Executive
N/A	Letter
N/A	A4 210.0 x 297.0 (8.3" x 11.7")
N/A	Legal 13"
N/A	Legal 14"
N/A	Universal

* Default

Table 5 Fuser Temperature Equivalency

Nonvolatile Code 4 (NV4) Contents	Heat Roll Temperature (°C / °F)
00	148°C / 298° F
01	152°C / 306° F
02	156°C / 313° F
03	160°C / 320° F
04	164°C / 327° F
05	168°C / 334° F
06	172°C / 342° F
07	176°C / 349° F

Table 5 Fuser Temperature Equivalency

Nonvolatile Code 4 (NV4) Contents	Heat Roll Temperature (°C / °F)
08	180°C / 356° F (Default Value)
09	184°C / 363° F
0A	188°C / 370° F
0B	192°C / 377° F
0C	196°C / 385° F
0D	200°C / 392° F
0E	204°C / 399° F
0F	208°C / 406° F

If there is a U2 Failure the detail code will be displayed when you press the Value Keys "3" or "7".

Table 6 U2

Value	Description
1	ROS Fail at WarmUp
2	ROS Fail after WarmUp

If there is a U4 Failure the detail code will be displayed when you press the Value Keys "3" or "7".

Table 7 U4

Value	Description
1	Low Trouble Temperature
2	WarmUp fail
3	STS disconnection fail
4	High Trouble Temp
5	Continuous Heat ON

If there is a U6 Failure the detail code will be displayed when you press the Value Keys "3" or "7".

Table 8 U6

Value	Description
1	Task Over Flow
2	Timer Table Over Flow
5, 6, 7, 8, 9	Illegal interruption, NVM fail

GP 2.7 Component Test

This operation allows the user to test various electrical components of the printer. The actuation and deactuation of switches/sensors, and the energizing/de-energizing of motors, solenoids, and clutches (Table 2). The component Diagnostics will provide the following routines:

- Input actuation and state change of sensors and switches.
- Turning on and off of Output components (motors, clutches, solenoids, etc.)
- Input test-displays "Test Name" and increments counter. (01, 02, 03 etc.)
- Output test-displays "Test Name" and visual feedback of operation displayed.

Table 1 summarizes the operation of the Control Panel keys in "Component Test"

Table 1 Test Print Key Table

Key Numbers		Actions
Item Up / Item Down	2 or 6	Will scroll Component Menu (see Table 2)
Enter	4	Will turn on selected components.
On Line	0	Will turn off all components

Procedure:

1. Power down printer.
2. Simultaneously hold keys 2 and 6 down.
3. Power up printer, wait for message "IOT?" to appear on the LCD.
4. Release both keys, then press key 4 to enter the IOT Diagnostics menu (message "Entering IOT Diagnostics Mode" appears. If key 4 is not pressed within 5 seconds of the "IOT?" message, printer will go to the normal boot process.
5. Press key 1 or 5 to scroll to "Component Test".
6. Press key 2 or 6 to select Component Test Item (Table 2).
7. Press key 2 or 6 to scroll through the items menu.
8. Press key 4 to execute the test item appearing on the LCD.
9. Press and hold key 0 for 1 second to exit any Component test at any given time.
10. Press key 1 or 5 to get back to the Main Menu (selection of Component Test or NVM Config or Test Print).

Table 2 Component Menu Table

Menu Item	Comment
Print Counter Reading	Print count displays for 5 seconds
Sensor Input Test	Press key 0 to exit
Read Fuser Set Temperature	Fuser set temperature displays for 5 seconds
Read Fuser Temperature	Continuously updating temperature reading - press key 0 to exit
Confirm MBF Feed Solenoid	
Confirm Tray 1 Feed Clutch	
Confirm Tray 2 Feed Clutch	
Confirm Tray 3 Feed Clutch	
Confirm EBF Clutch	
Confirm OPT Dir Operation	

Table 2 Component Menu Table

Menu Item	Comment
Confirm Trn Roll Clutch	
Confirm Reg Clutch	
Charge Roll DC Operation	
Charge Roll AC Operation	
Dev Bias DC Operation	
Dev Bias AC Operation	
BTR - Operation	
BTR + Operation	
Detack SAW	
Duplex Motor Hi Operation	Press "0" or "4" to stop motor
Duplex Motor Low Operation	Press "0" or "4" to stop motor
Exit Motor Fwd Operation	Press "0" or "4" to stop motor
Exit Motor Rev H Operation	Press "0" or "4" to stop motor
Exit Motor Rev L Operation	Press "0" or "4" to stop motor
Main Motor Operation	Main motor remains on for 5 minutes, or Press "0" or "4" to stop motor
Fan Motor Hi Operation	Press "0" or "4" to stop motor
ROS Motor Operation	Press "0" or "4" to stop motor
OCT Motor Operation	Press "0" or "4" to stop motor
OCT Offset Motor Operation	
Stop All Tests Operation	Terminate all component tests
LASER Diode Operation	
IOT ROM Checksum	Check sum displays for 5 seconds
Paper Tray Size Reading	Press key 4 to scroll through different tray - press key 0 to exit

GP 2.8 Entering Download Mode

1. Power down printer.
2. Press and hold keys 1 and 5 as you switch printer power on.
3. Wait for message "Entering Down Load Mode" to appear on the LCD.
4. Release both keys.
5. From the PC in DOS command mode. Change directory to where the program file resides.
6. Type: mode LPT1:,,p
7. Type: C:\file_directory\.copy \b filename LPT1: then press "Enter".
8. Data LED should light up, and LCD should display "Downloading. Please Wait."
9. Wait for message "Down Load Completed. Please reboot." to appear on the LCD. All LEDs should be cycling for about 5 seconds then go off.
10. Task completed. Power off, power on.

GP 2.9 To Reset Fuser

1. Power down printer.
2. Simultaneously hold keys 2 and 6 down.
3. Power up printer, wait for message "IOT?" to appear on the LCD.
4. Release both keys, then simultaneously press keys 0 and 5 to activate the fuser reset function. If keys 0 and 5 are not pressed within 5 seconds of the "IOT?" message, printer will go to the normal boot process.
5. Wait for message "Reset Completed. Please reboot" to appear on the LCD then release both keys.
6. Power off, power on.

GP 2.10 Reset Menu

1. Power down printer.
2. Simultaneously hold keys 0 and 4 down.
3. Power up printer, wait for first * to display on the LCD line 1 then release both keys.
4. Let printer go to Ready mode.
5. Press 1 or 5 to scroll to Reset Menu.
6. Press 2 or 6 to select Reset items (Table 1)
7. Press 3 or 7 to change the values.

   NOTE: *After execution all values except Demo Mode will return to "Default" value*

8. Press Enter to execute.

Table 1 Reset Menu

Reset Menu Item	Reset Menu Values
Factory Defaults	Yes (resets USB, System PCC, Tray, and Parallel menu). No (default)
Network Defaults	Yes (resets Ethernet and Novell menu). No (default)
Demo Mode	Yes No (default)
Delete All Jobs	Yes (Hard drive installed) No (default)
Disk Initialize	Yes (Hard drive installed) No (default)
Disk Format	Yes (Hard drive installed) No (default)
Flash Format	Yes (Flash DIMM installed) No (default)

GP 2.11 System Controller Reset

Resets the System Controller to factory defaults.

NOTE: *This will reset all network addresses to the factory default.*

1. Power down printer.
2. Simultaneously hold keys 0 and 7 down.
3. Power up printer, wait for message "NVM Erased!" to appear on the LCD then release both keys.

GP 3.1 Print Process Overview

Print Process Overview (Figure 1) (Figure 2)

There are seven steps in the N2125 print process. This seven step cycle is repeated for each sheet of paper that is sent through the printer.

The seven steps in the print process are:

1. **Charge**
   A bias charge roll places a uniform negative electric charge on the drum surface.
2. **Exposure**
   The laser scanner scans the drum surface with a very thin beam of laser light modulated according to the signal from the Print Engine Controller to form an invisible electrostatic latent image on the drum surface.
3. **Development**
   Attracts toner to the electrostatic latent image on the drum surface to form a visible toner image.
4. **Transfer**
   Transfers the toner image from the drum surface to the paper.
5. **Discharge**
   Partially neutralizes the charge on the paper to allow the paper to peel off the drum surface.
6. **Fusing**
   Permanently fixes the toner image to the paper by heat and pressure.
7. **Cleaning**
   Cleans the drum surface of the remaining toner.

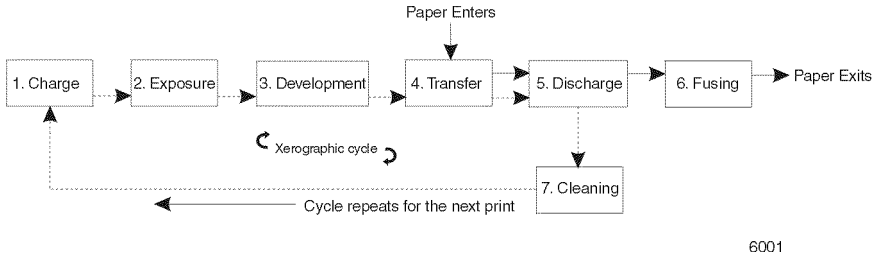


Figure 1 Block Diagram of the Print Cycle

Figure 1 illustrates the N2125 print cycle. It shows the sequence of events for the xerographic process and the paper flow into and out of the printer.

Figure 2 is both a cut-away side view of the N2125 printer that shows the location of individual components within the printer, and a side view block diagram that shows the major components that are directly related to the print cycle and to the paper path.

The pages following Figure 2 describe in detail each step of the print cycle.

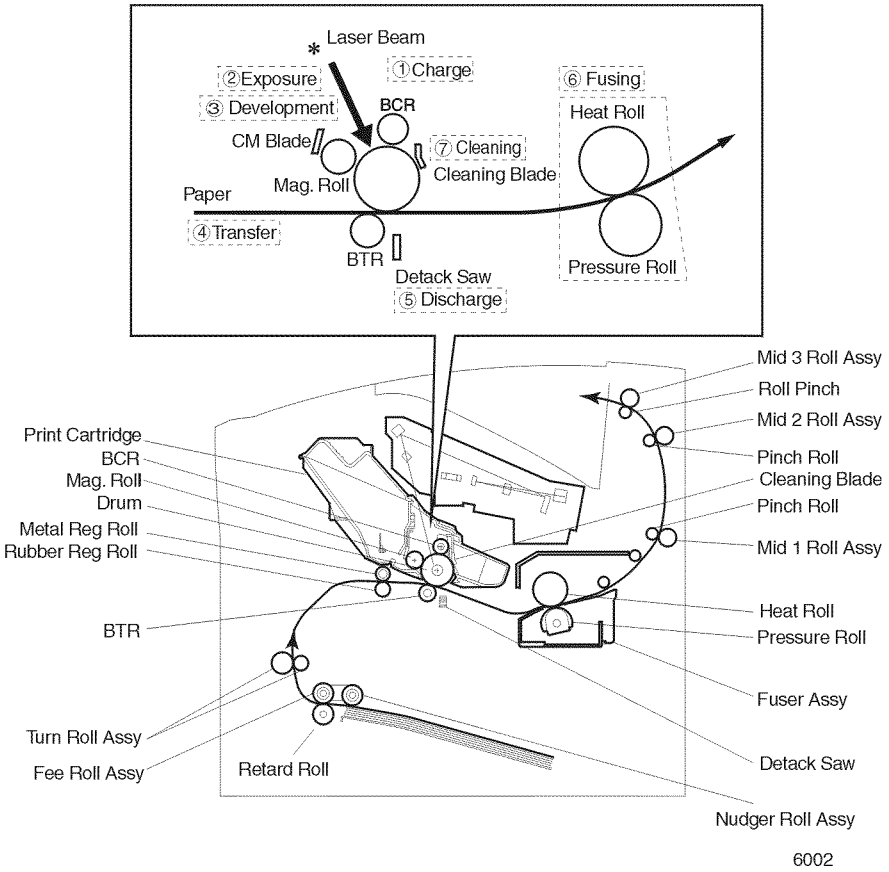


Figure 2 Side View Block Diagram of the Print Cycle

Print Process Description

1. **Charge** (Figure 3)

   The Bias Charge Roll (BCR) places a uniform negative electrostatic charge on the drum surface. The drum surface is made of a photoconductive material that holds the electrical charge as long as the drum remains in darkness. Light striking the drum discharges the surface charge.

   The BCR is a conductive roll that is positioned slightly above the surface of the drum. The HVPS PWB supplies the BCR with two voltages; a negative DC charge voltage and an AC discharge voltage The negative DC voltage creates a uniform negative charge across the surface of the drum. The AC voltage removes any residual DC charge that was left from the previous print cycle.

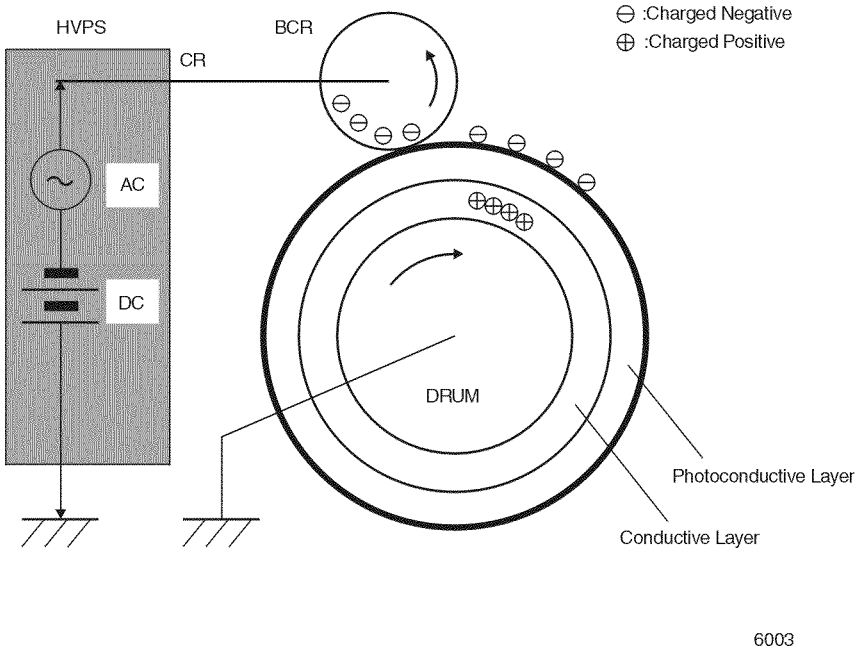


Figure 3 Side View Block Diagram of the Drum Charge Process

2. **Exposure**

   The Raster Output Scanner (Laser) generates an invisible beam of cohesive light, called a laser beam. Image data received from the print controller modulates this beam, turning it on and off according to image information.

   Through the use of a series of rotating and stationary mirrors within the Laser Assembly, the beam scans the negative charged drum surface. Whenever the print controller sends a command to print a black pixel, the laser switches on long enough to shine onto the drum at a single pixel point. That point is now discharged and is less negative, relative to the surrounding negative charge.

3. **Development** (Figure 4)

   The toner in the Print Cartridge has a magnetic property that causes it to adhere to the Magnetic Roll. The Charge Metering Blade (CM Blade) spreads the toner into a very thin layer on the Magnetic Roll. Friction between the Magnetic Roll and the CM Blade generates a small electrical charge that is transferred to the toner.

   The surface of the Magnetic Roll is made up of a thin sheet of conductive material. The HVPS PWB supplies the Magnetic Roll with two voltages; a negative DC voltage and an AC voltage. The DC voltage is the voltage that is used to transfer toner from the Magnetic Roll to the surface of the drum. The AC voltage agitates the toner on the Magnetic Roll and makes toner transfer easier.

   The Magnetic Roll maintains an electrical potential relative to the charged surface of the drum. Negative charged areas of the drum have a lower electrical potential, or higher relative negative value, than the Magnetic Roll. Discharged areas of the drum have a higher electrical potential, or lower relative negative value, than the Magnetic Roll. A discharged point on the surface of the drum now appears less negative, or positive, relative to the negative charge on the Magnetic Roll.

   The toner adhering to the Magnetic Roll is always in contact with the drum surface. When a less negative point on the drum (a discharged area) comes in contact with the more negative charged toner on the Magnetic Roll, toner transfers from the Magnetic Roll to that point on the drum. At this point there is now a visible toner image on the drum surface.

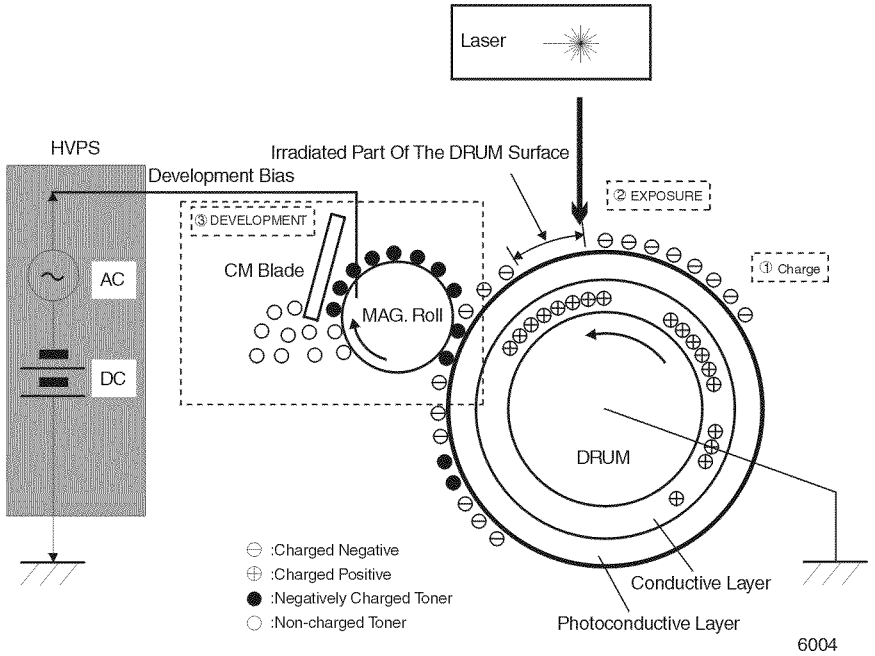


Figure 4 Side View Block Diagram of the Development Process

4. **Transfer** (Figure 5)

   The Bias Transfer Roll (BTR) applies a positive charge to the back side of the printing paper as the paper travels between the BTR and the drum surface. This positive charge transfers the negative charged toner image from the drum surface to the front of the paper. The toner image is now on the paper and the paper is now stuck to the drum surface due to the relative electrical differences.

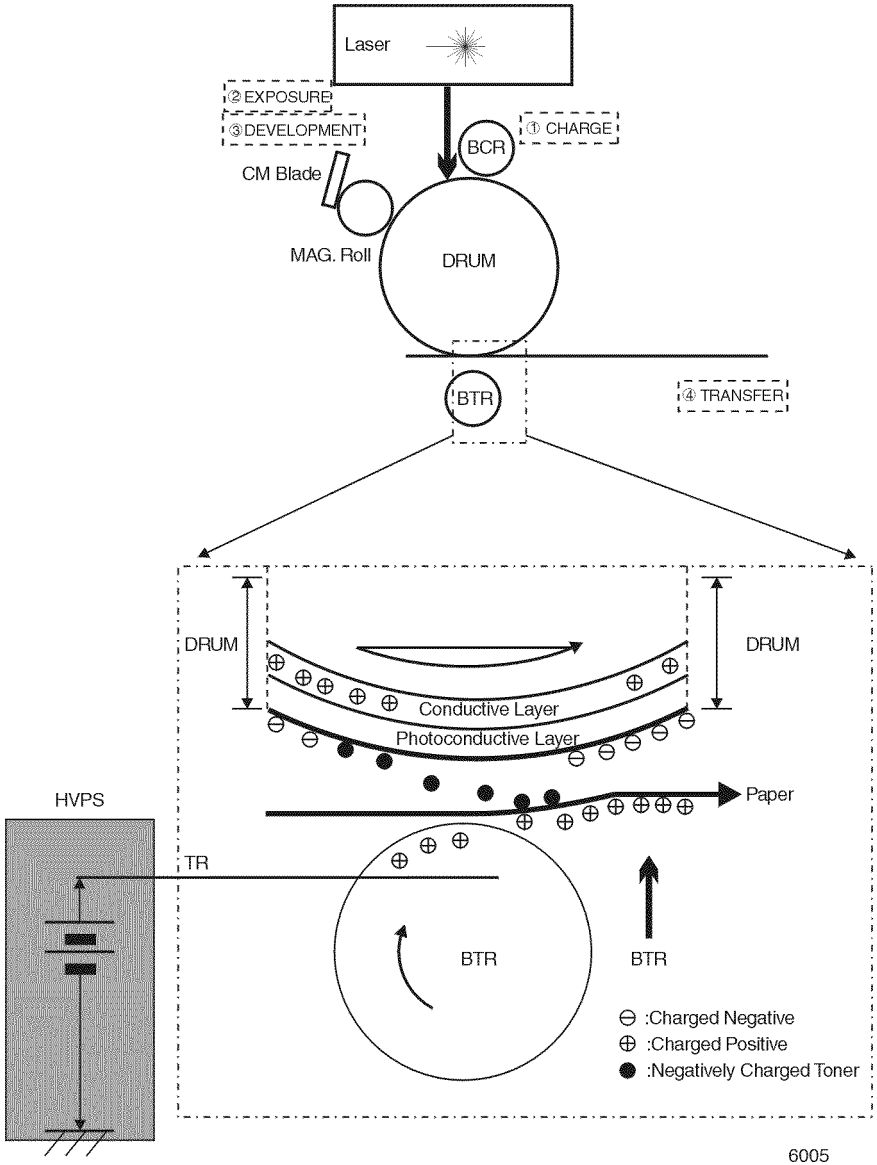


Figure 5 Side View Block Diagram of the Transfer Process

5. **Discharge** (Figure 6)

   After the toner image has transferred to the surface of the paper, the Detack Saw (a thin strip of metal that resembles a saw blade) applies a negative charge to the back side of the paper to neutralize the positive voltage that was applied to it by the BTR. Once the positive voltage is neutralized, the paper strips easily off of the drum surface.

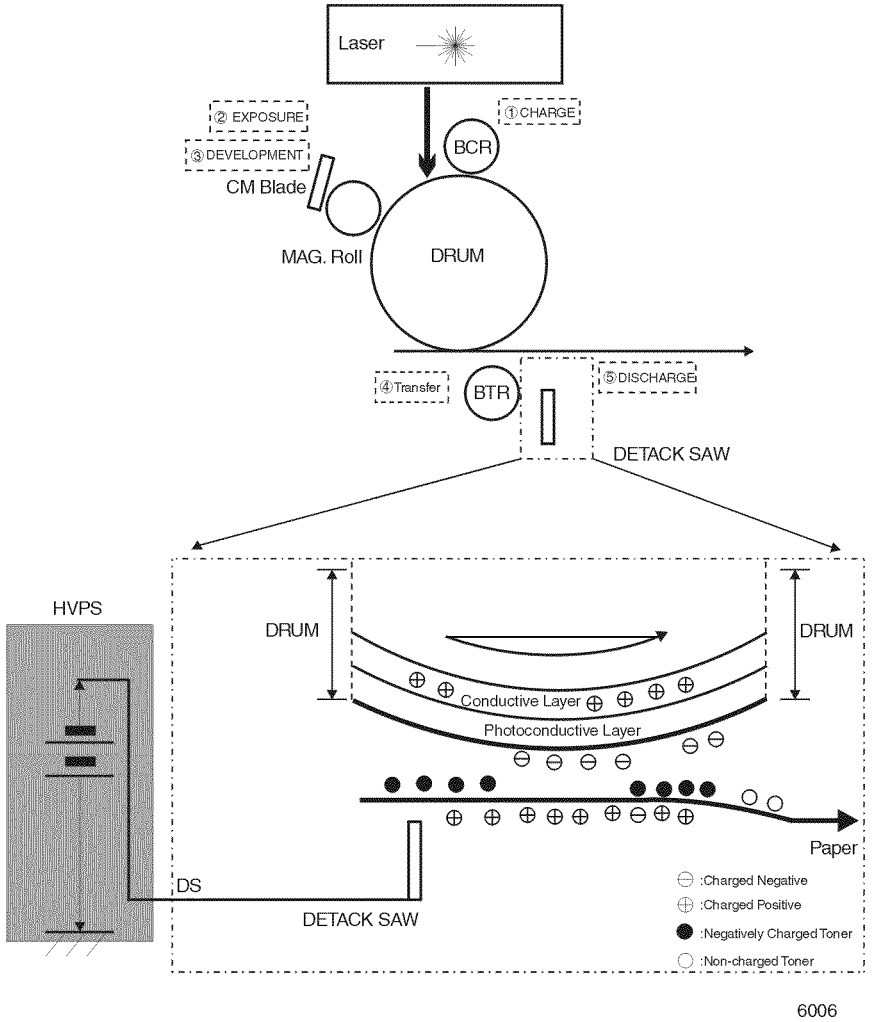


Figure 6 Side View Block Diagram of the Discharge Process

6. **Fusing** (Figure 7)

   The paper moves to the Fuser Assembly where it passes between the Heat Roll and the Pressure Roll. The Heat Roll melts the toner image and bonds it permanently to the paper. The paper then is transported to the output tray.

7. **Cleaning** (Figure 7)

   The Cleaning Blade removes any toner that remains on the drum after the transfer process. Immediately after passing the Cleaning Blade, the drum passes under the BCR. The BCR applies an AC voltage to the surface of the drum to neutralize any electrical patterns remaining from the last print cycle.

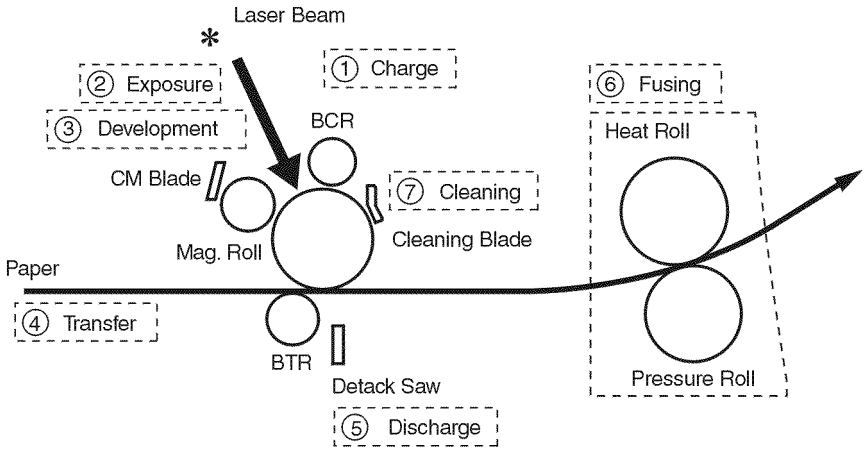


Figure 7 Side View Block Diagram of the Fusing and Cleaning Process

The toner that the Cleaning Blade removes is collected inside the Print Cartridge. Toner that is reclaimed from the drum is not reused by the Print Cartridge (Figure 8).

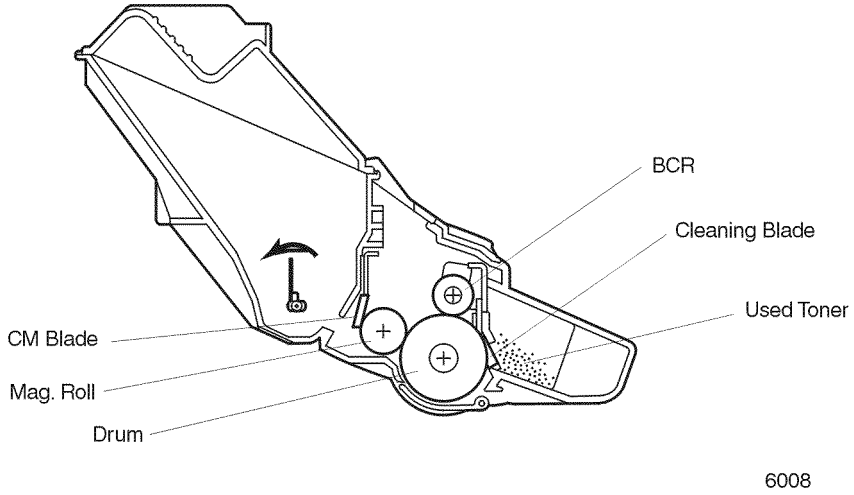


Figure 8 Side View of the Print Cartridge

GP 3.2 The Paper Path

There are three paths that a sheet of paper can follow during a feed cycle (Figure 1). One path is taken if paper is fed from the Paper Tray. Another path is taken if paper is fed from the Multiple-Bypass Feeder (MBF). A third path is taken if paper is fed from the Envelope Feeder Assembly option.

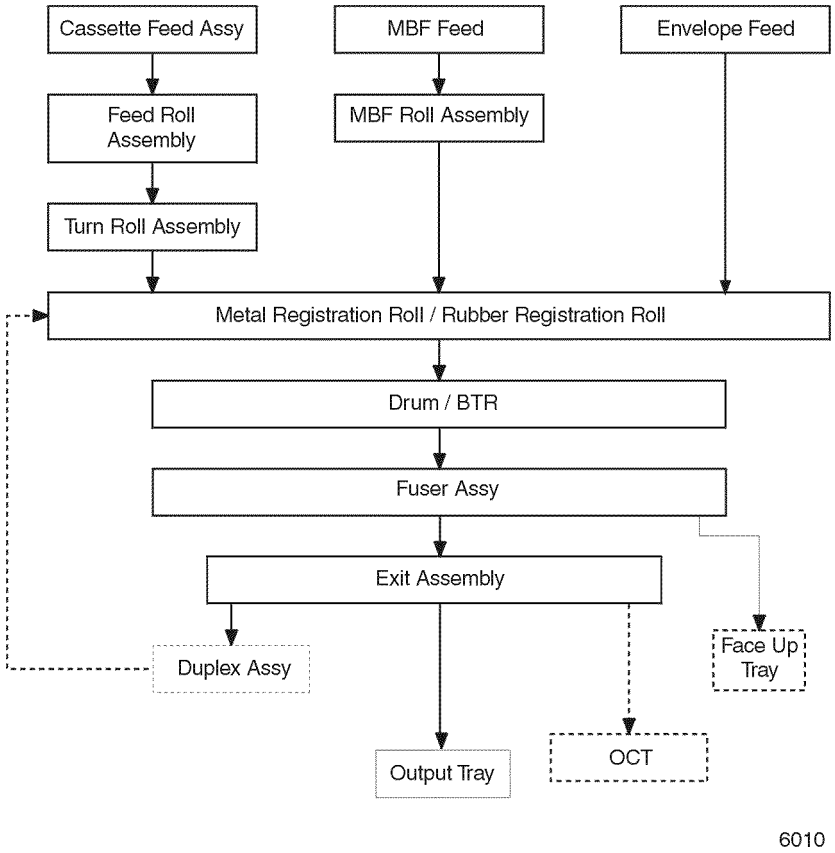


Figure 1 The Three Possible Paper Paths

Figure 2 is a cut-away side view of the N2125 printer that shows the major components that are directly related to the paper path.

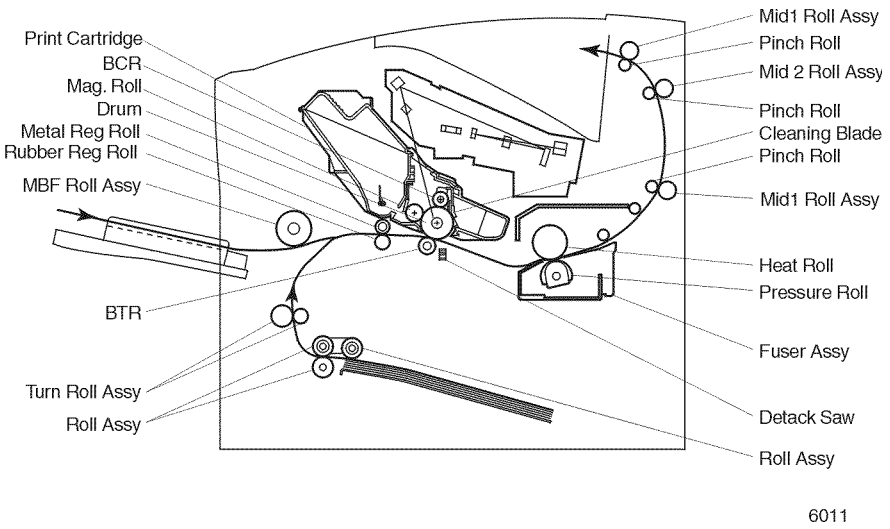


Figure 2 Cut-away Side View of the Printer Showing the Paper Path

GP 3.3 Drive Flow

As shown in Figure 1, the Drive Gear Assembly takes the mechanical energy that is created by the Main Motor Assembly and transmits it to four printer subsystems; the Turn Clutch Assembly, the drum gear, the Fuser Assembly and the Optional Envelope Feeder Assembly. The Exit Motor Assembly provides the power needed by the exit component. The pages following this figure show each drive section in greater detail.

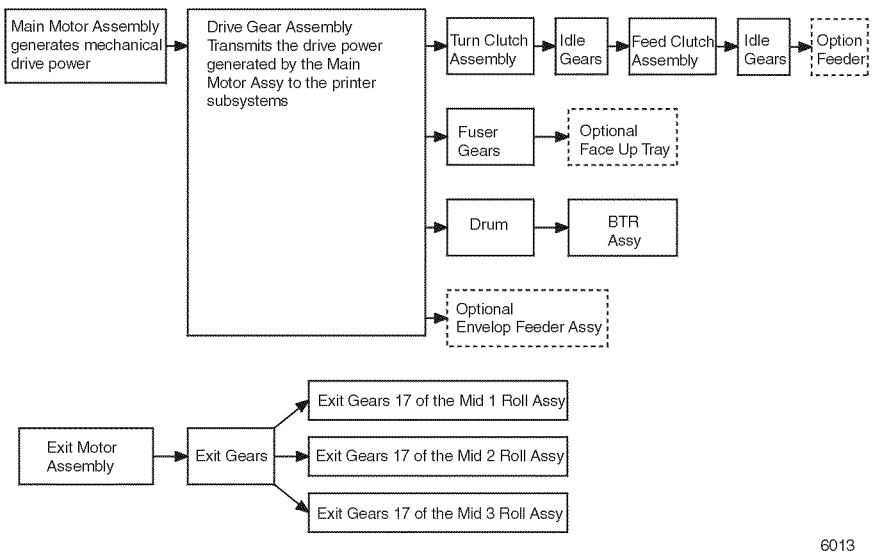


Figure 1 Drive Flow Through the Printer

Drive transmission to the MBF Roll Assembly

As shown in Figure 2, the mechanical energy created by the Main Motor Assembly is transmitted through Gear 14 to the Pick Up Gear that drives the MBF Roll Assembly. When the Pick Up Solenoid actuates, it transmits the energy from Gear 14 to the Pick Up Gear that is located on the end of the MBF Shaft Assembly.

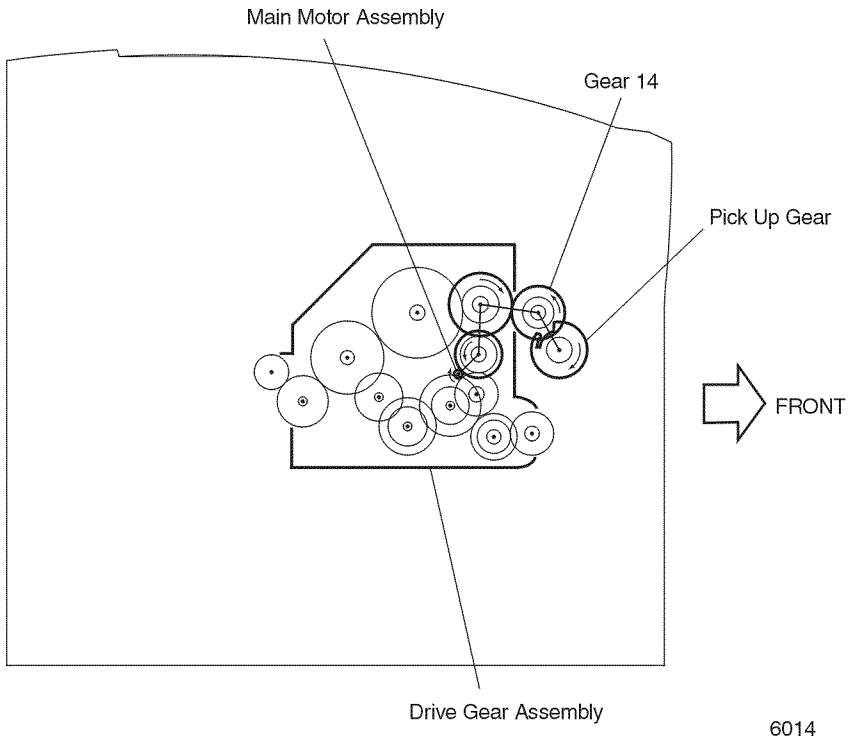


Figure 2 Drive transmission to the MBF Roll Assembly

Drive transmission to the Turn Roll Assembly

As shown in Figure 3, the mechanical energy created by the Main Motor Assembly is transmitted through the Drive Gear Assembly to the Turn Clutch Assembly. When the Turn Clutch Assembly actuates it transmits the energy to the Turn Roll Assembly.

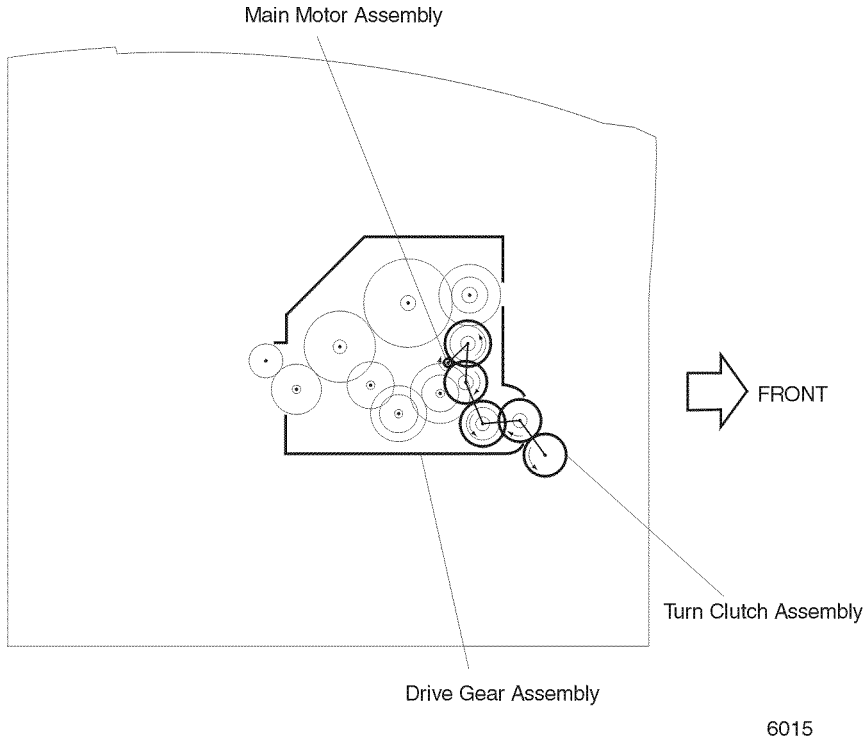


Figure 3 Drive transmission to the Turn Roll Assembly

Drive transmission to the Feeder Assembly

As shown in Figure 4, the mechanical energy created by the Main Motor Assembly is transmitted through the Drive Gear Assembly, Turn Clutch Assembly, and idle gears to the Feed Clutch Assembly. When the Feed Clutch Assembly actuates, it transmits the energy to the Feed Roll Assembly.

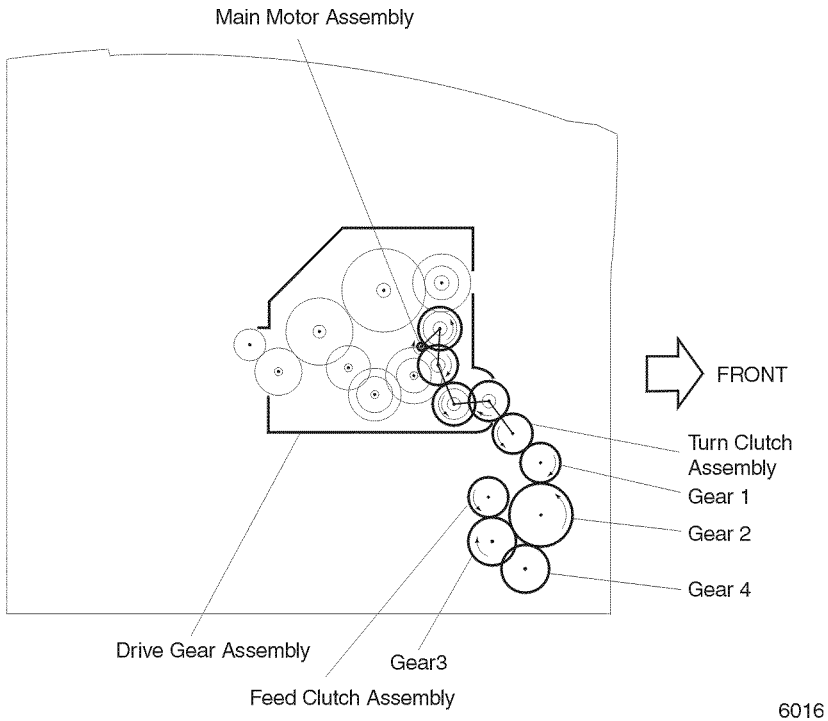


Figure 4 Drive transmission to the Feeder Assembly

Drive transmission to the Rubber Registration Roll Assembly

As shown Figure 5, the mechanical energy created by the Main Motor Assembly is transmitted through the Drive Gear Assembly to the Registration Clutch that is located on the end of the Rubber Registration Roll.

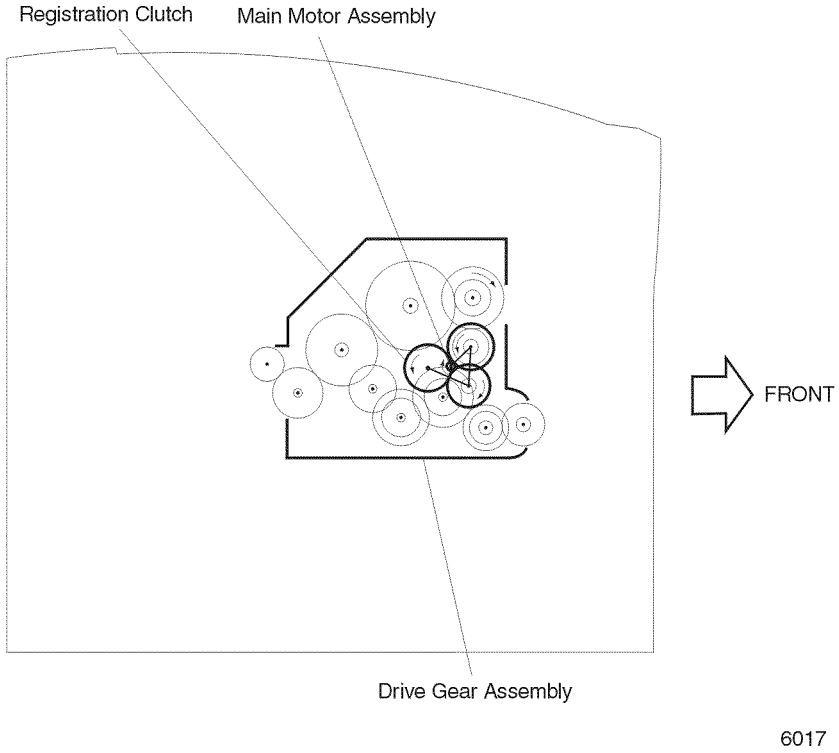


Figure 5 Drive transmission to the Rubber Registration Roll

Drive transmission to the Drum and the BTR

The Main Motor Assembly transmits drive through the Drive Gear Assembly to the Drum drive gear that is located on the end of the Drum. The Drum Gear drives the BTR Gear that is located on the end of the BTR Assembly (Figure 6).

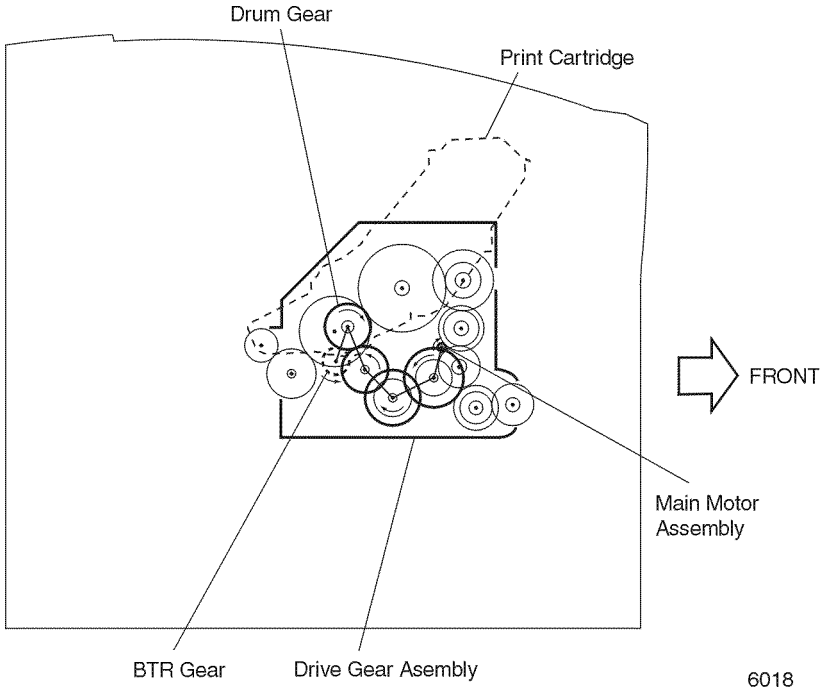


Figure 6 Drive transmission to the Drum and BTR

Drive transmission to the Fuser Assembly

As shown in Figure 7, the mechanical energy created by the Main Motor Assembly is transmitted through the Drive Gear Assembly to the Idler Gear of the Fuser Assembly. The Idler Gear transmits energy to the Heat Roll Gear located on the Heat Roll.

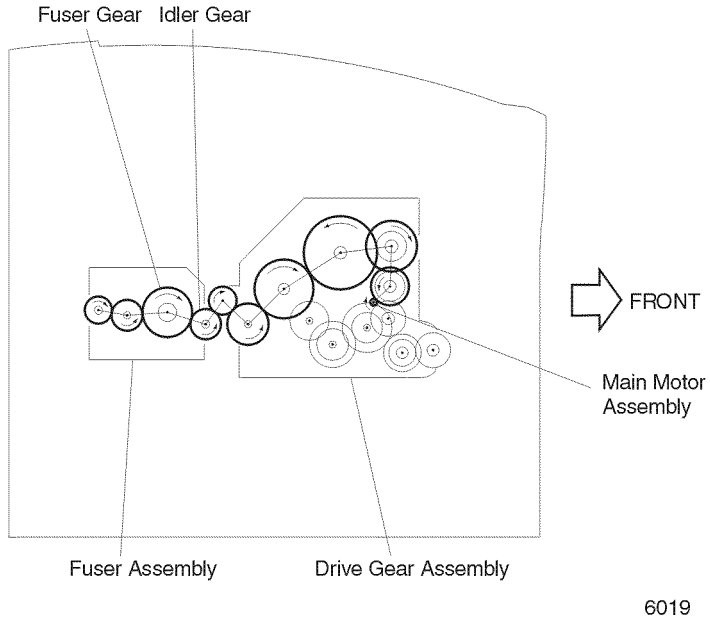


Figure 7 Drive transmission to the Fuser Assembly

Drive transmission to the Exit Components

As shown in Figure 8, the mechanical energy created by the Exit Motor Assembly provides drive to the gears located on the Roll Assembly.

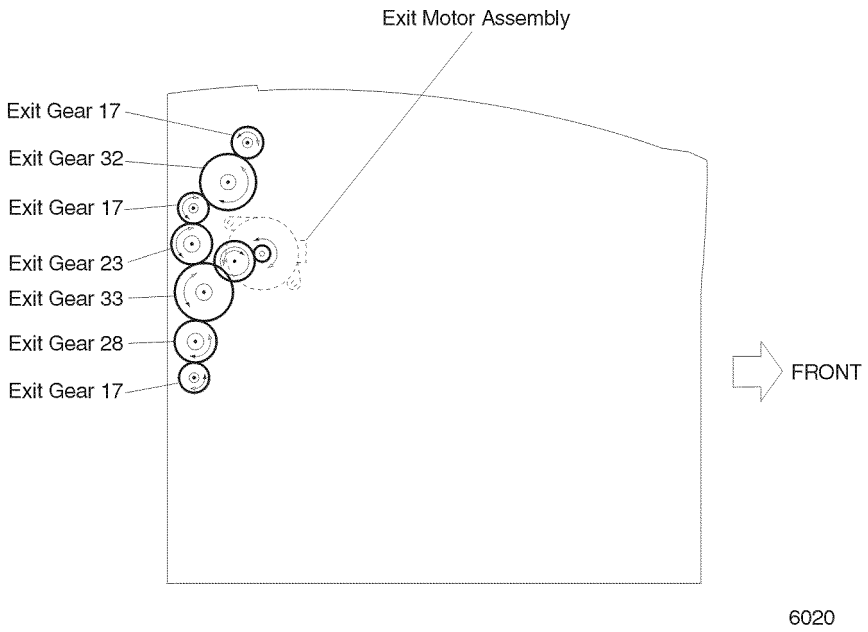


Figure 8 Drive transmission to the Exit Components

GP 3.4 Print Engine Controller and Control Panel Functions

The Print Engine Controller PWB performs eight main functions:

1. Communicates with the System Controller.
2. Controls the print sequence.
3. Controls the Fuser Assembly, Laser Assembly, and Drive components.
4. Distributes low DC voltages to various printer components.
5. Monitors printer status.
6. Maintains a running print count.
7. Writes the NVRAM settings.
8. Controls printer options.

The Print Engine Controller PWB uses a 32 bit microcomputer and ASICs (Application Specific Integrated Circuits). The 32 bit microcomputer includes ROM, RAM, a 16 bit integrated timer, a programmable timing pattern controller, a watch dog timer, serial communication interfaces, an A/D converter, a D/A converter, I/O ports, a DMA controller, and a refresh controller.

The System Controller connects to the Print Engine Controller PWB directly. The Control Panel is connected to the System Controller and signals pass through the Print Engine Controller PWB via the System Controller.

GP 3.5 Power Supplies

The LVPS (Low Voltage Power Supply) (Figure 1)

The LVPS uses a resonance-type switching regulator. The LVPS supplies +24VDC, +5VDC, +3.3VDC.

The LVPS has built-in over current protection. If an excessive current begins to flow the DC supplies are shut down. Switch the power supply OFF for 5 minutes, then ON again to reset the circuit after an over current shutdown.

The LVPS also supplies AC power to the Heat Rod. A circuit, controlled by the Heat ON signal from the Print Engine Controller PWB, switches power to the Heat Rod.

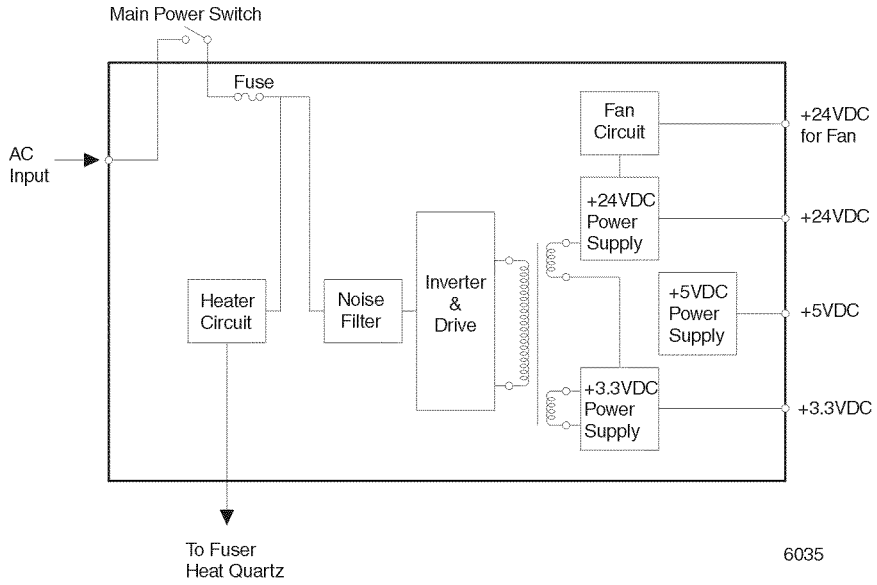


Figure 1 LVPS Block Schematic Diagram

The HVPS (High Voltage Power Supply)

The HVPS supplies high voltages for the BCR, BTR, DB and DTS. The HVPS receives +24VDC input from the LVPS, along with nine control signals from the Print Engine Controller PWB.

The HVPS has built-in overcurrent protection. If an excessive current begins to flow in any of the four power supplies, all of the supplies are shut down. Switch the power supply OFF, then ON again to reset the circuit after an overcurrent shutdown.

GP 3.6 Laser Control

Warm-up

The Laser completes warm-up when the SOS signal intervals are shorter than the READY reference value, during three consecutive samplings of the SOS signal interval, and when the actual Laser Diode laser power reaches the value that was set in NVM Configuration. The READY interval for the SOS signal is approximately 98% of the SOS interval when the Laser Motor is rotating.

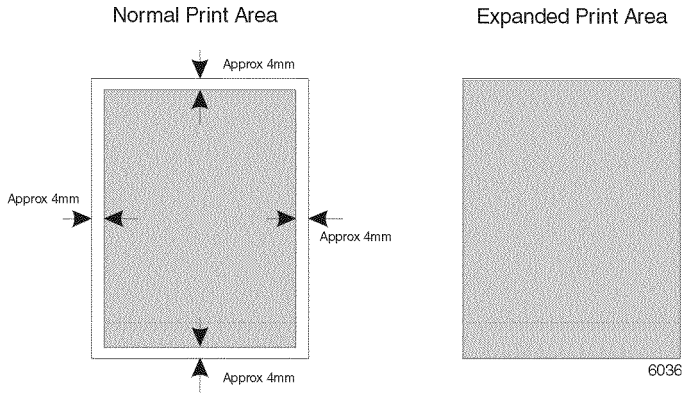
Table 1 illustrates the Laser Motor and Laser Diode Control in Various Printer Modes

Table 1 Laser Motor and Laser Diode Control in Various Printer Modes

Printer Mode	Laser Motor and Laser Diode Control
On-line Mode	The Laser Motor and the Laser Diode are both controlled by the Printer Controller.
Printing Test Mode	The Laser Motor and the Laser Diode are both controlled by the Printer Controller.
Diagnostic Mode	The Laser Motor and the Laser Diode are always on.

Printable Area

NOTE: *Edge to edge printing capability. Within the 4mm border (4 sides) the printer will print any data 6 point Arial or larger.*



Note: Edge to edge printing capability. Within the 4mm border (4 sides) the printer will print any data 6 point Arial or larger.

Figure 1 Printable Area

Laser Trouble (U2 Error Code)

There are three major causes of U2 errors.

- Warm-up failure - SOS signal intervals are longer than the READY reference value during three consecutive samplings of the SOS. The actual laser power does not equal the value set in NVRAM.
- Laser speed too low (Down Failure) - SOS signal intervals are longer than the set Down Failure interval after completion of warm-up. The set Down Failure is a time interval corresponding to 90% of the rated Laser Motor speed of rotation.
- Laser speed too high (Overrun Failure) - SOS signal intervals are shorter than the set Overrun Failure interval after completion of warm-up. The set Overrun Failure is a time interval corresponding to 102% of the rated Laser Motor speed of rotation.

GP 3.7 Fuser Control

Fuser Temperature Control

The Thermistor monitors the temperature on the surface of the Heat Roll and compares that temperature with the rated temperature that was set in NVRAM. The Print Engine Controller switches the Heat Rod on or off depending on how the actual temperature differs from the rated temperature.

Fuser Temperature Adjustment

You can adjust the rated Fuser temperature by changing the NVRAM Value. You can adjust the setting in 16 increments, with each increment approximately 4°C.

The printer switches on the Heat Rod when the Fuser temperature lowers below the current control temperature (approximately 178°C for the standard control temperature). The printer switches off the Heat Rod when the Fuser temperature rises above the current control temperature (approximately 180°C for the standard control temperature).

Fuser Warm-up

Power to the Heat Rod is applied at the start of printer warm-up. Warm-up is complete when the Heat Roll reaches the current control Temperature. If the Fuser Temperature is below 100°C at start of warm-up, then warm-up finishes when the Fuser temperature reaches "standby temperature".

Fuser Trouble (U4 Error Code)

There are five major causes of a U4 error.

- Warm-up failure - Fuser warm-up does not complete within specified seconds after starting.
- Low Trouble temperature - The Fuser temperature drops to the Low Trouble temperature (approximately current control temperature, minus approximately 25°C
- High Trouble temperature -The Fuser temperature rises to the High Trouble temperature (approximately current control temperature, plus approximately 35°C
- The Thermistor circuit opened.
- STS failure -The Heat Rod remains on for at least ten seconds after warm-up has completed.

AC Power Shutoff to the Fuser

There are eight reasons that the printer shuts off AC power to the Fuser.

- Fuser Failure (U4)
- Paper jam
- Open Front Cover Assembly
- Laser failure (U2)
- CPU or NVRAM problem (U6)
- Main Motor Assembly problem (U1)
- Fan problem (U5)

- FUSER PAUSE command issued

Fuser Temperature Cycling (Table 1)

Table 1 Fuser Temperature Cycling

Temperature Name	Temperature Value
High Trouble Temperature	Approximately 215 °C (Standby temperature + approximately 35 °C)
Fuser Off Temperature	Fuser control temperature +/- 0 °C
Fuser Control Temperature (NVRAM Code 09=08)	Standby temperature (180 °C)
	Running temperature (180 °C)
Fuser On Temperature	Fuser control temperature - 2 °C
Low Trouble Temperature	Approximately 155 oC (Standby temperature - approximately 25 °C)

GP 3.8 Erase Cycle

The printer immediately interrupts a print cycle whenever the Front or Rear Covers are opened, there is a paper jam, Tray 1 is removed, or the printer power is switched off. When you remove the cause of the print cycle interruption, such as closing the covers, clearing the paper jam, reinstalling the Paper Tray, or switching on printer power, the printer runs an Erase Cycle before continuing with the next print cycle.

During an Erase Cycle, the printer switches on the Main Motor Assembly and the BCR (AC and DC), BTR(-) and DB (DC) voltages. The Erase Cycle removes any developed image (toner) on the drum, and any latent image (electrical) on the drum. When the Erase Cycle finishes, the printer returns to normal mode and is ready to resume printing.

GP 3.9 Fan Control

The printer switches between two Fan speeds.

- High Speed, when the Main Motor Assembly is on.
- Low Speed, when the Main Motor Assembly is off.

When printer power is switched on, or when an Interlock Switch is actuated (after being deactuated), the Fan runs at High Speed for one second, then switches to Low Speed.

GP 3.10 Duplex

The Paper Path for Duplex Printing (Figure 1) and (Figure 2)

During the duplex printing, the printer prints the first side of the paper. Then the Exit Assembly reverses direction and re-feeds the paper to the Duplex Assembly. The paper is transferred through the Duplex Assembly and fed again to the Paper Handler Assembly. When the paper reaches the registration position, the second side of the paper is already face up. Then the printer starts to print the second side of the paper, and transfers the completed duplex sheet to the Output Tray.

During duplexing to ensure proper collation of the output documents, even sides are printed first.

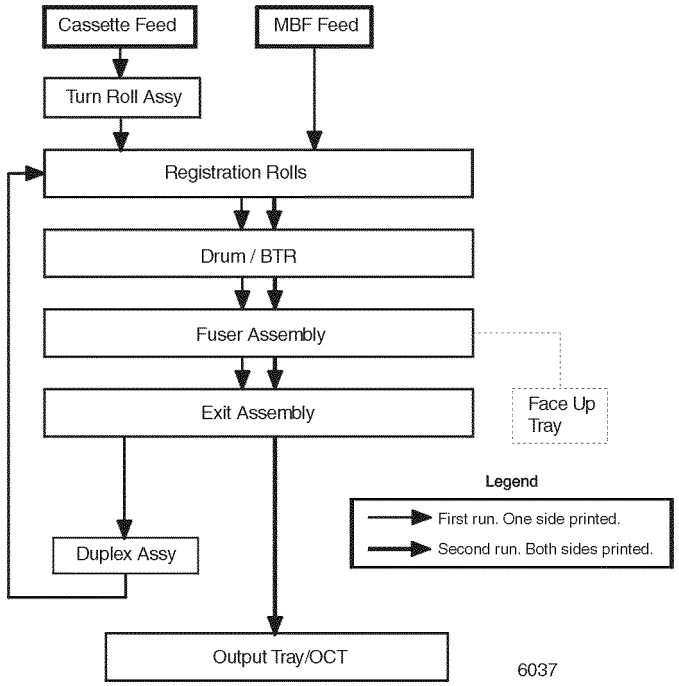


Figure 1 The Duplex Assembly Paper Path

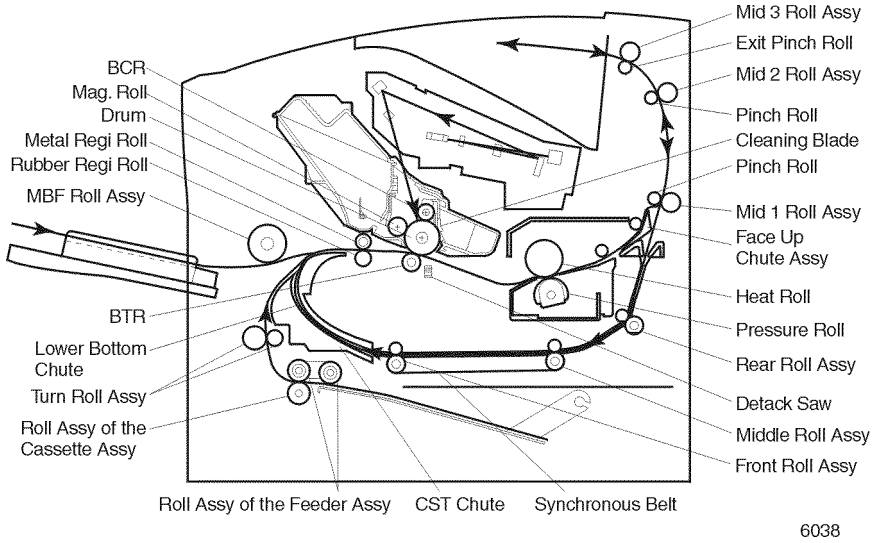


Figure 2 The Duplex Paper Path

Drive Flow

The Duplex Drive Assembly generates the mechanical energy needed to run the Duplex Unit (Figure 3).

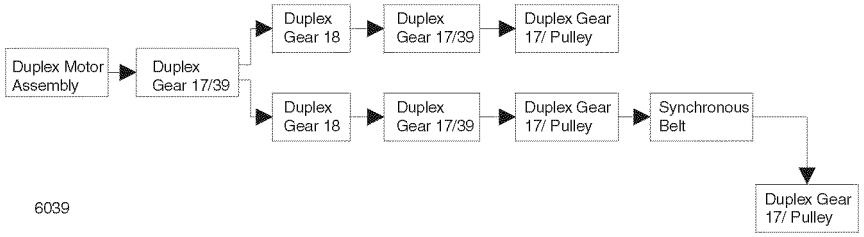


Figure 3 The Drive Flow of the Duplex Assembly

Function of Major Components (Figure 4)

Duplex Roll Assemblies (Rear, Middle, and Front) -

Transfers the paper through the Duplex Assembly.

Duplex Motor Assembly -

Generates the drive to the Duplex Assembly.

Gears -

Transmits the drive power generated by the Duplex Motor Assembly to the Duplex Roll Assembly.

Synchronous Belt -

Transmits the drive power from the Middle Roll Assembly to the Front Roll Assembly.

Duplex Sensor Assembly -

Detects paper entering and leaving the Duplex Assembly.

Home Position Sensor -

Detects the position of the Face Up Tray.

Duplex PWB -

Receives the control signals for the Duplex Motor Assembly from the Print Engine Controller PWB, and provides the phase signals to operate the Duplex Motor Assembly.

Transmits the detection signals of the Duplex Sensor Assembly and the Duplex Sensor to the Print Engine Controller PWB.

Provides +24VDC and +3.3VDC for the Duplex Motor Assembly and Sensors.

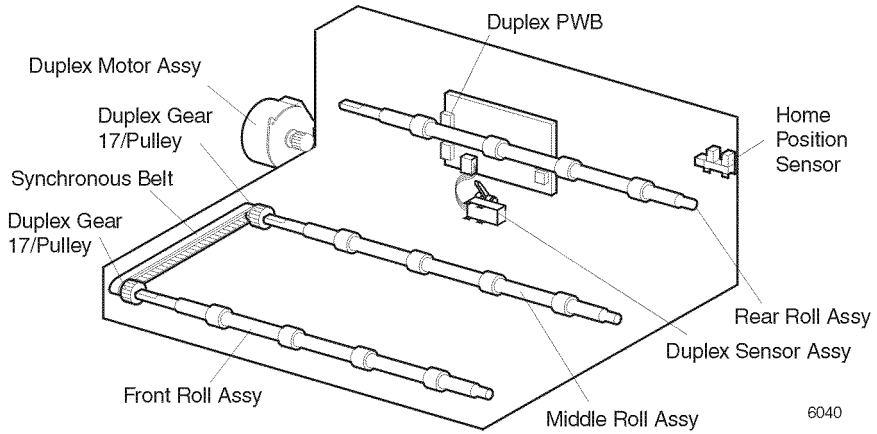


Figure 4 The Major Components of the Duplex Assembly

Duplex Printing Methods

Single Sheet Batch Printing -

Involving a single sheet of paper. The first side of the page is printed, then the second side is printed and the page is sent to the output tray.

The Duplex Assembly uses a Single-sheet Batch and a Multi-sheet Batch mode when duplexing a print job.

Single-sheet batch is used by the printer when a complex duplex job is received. For example, if the printer received a job that contains complicated graphics, the printer will switch to single-batch mode so it can process the job.

Multi Sheet Batch Printing -

1. The printer prints on one side of the first sheet of paper.
2. The first sheet is returned to the Duplex Assembly and held.
3. The printer prints on one side of a second sheet of paper.
4. The Duplex Assembly returns the first sheet to the printer as the Exit Assembly returns the second sheet to the Duplex Assembly
5. The printer prints on the second side of the first sheet.
6. The printer transports the first sheet to the Output Tray.
7. A third sheet is fed and printed on one side.
8. The Duplex Assembly returns the second sheet to the printer as the third sheet is returned to the Duplex Assembly.
9. The printer prints on the second side of the second sheet.
10. The printer transports the duplexed printed second sheet to the output tray.
11. This process repeats for additional prints.

GP 3.11 Envelope Feeder

The Paper Path for the Envelope Feeder

Paper that is fed from the optional Envelope Feeder follows the path (Figure 1).

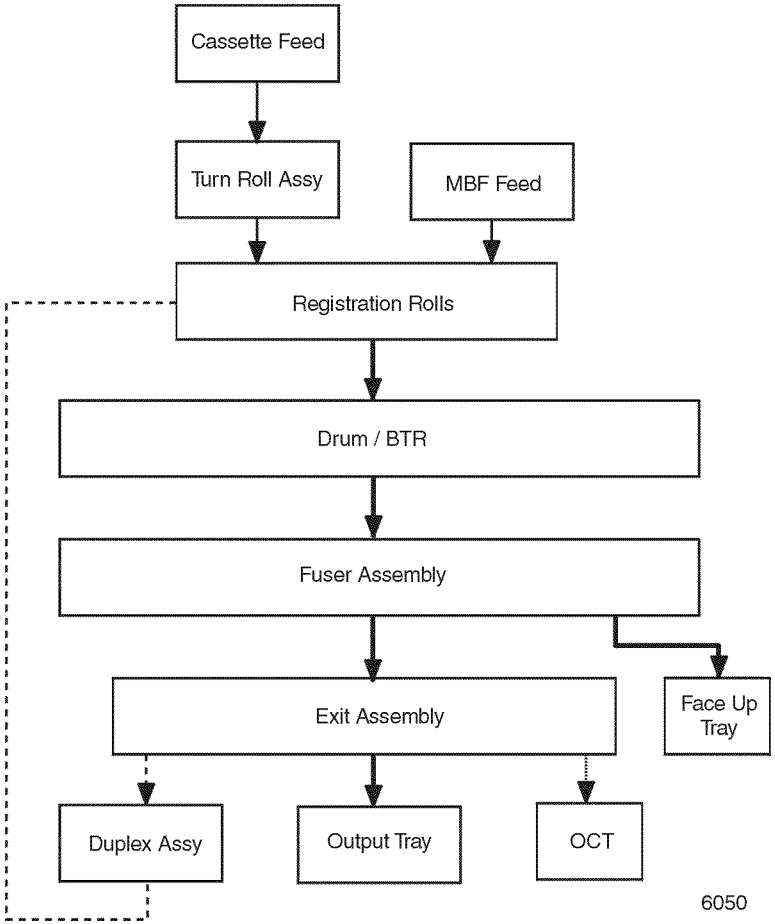


Figure 1 The Envelope Feeder Paper Path

Figure 2 shows a cut-off view of the printer, to better illustrate the components involved in the Envelope paper path.

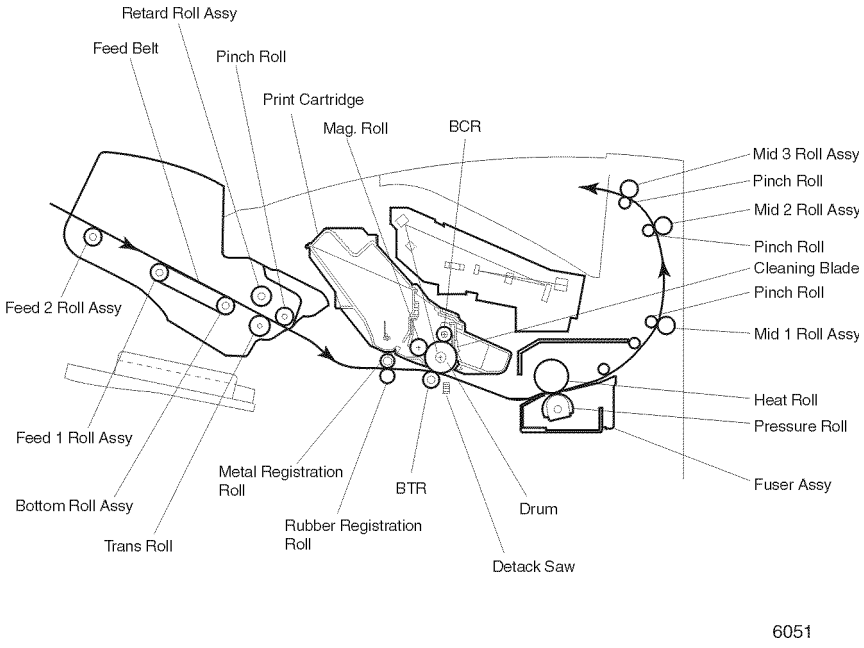


Figure 2 The Envelope Paper Path

Drive Flow

As shown in Figure 3, the mechanical power generated by the Main Motor Assembly is transmitted to the gears of the Envelope Feeder.

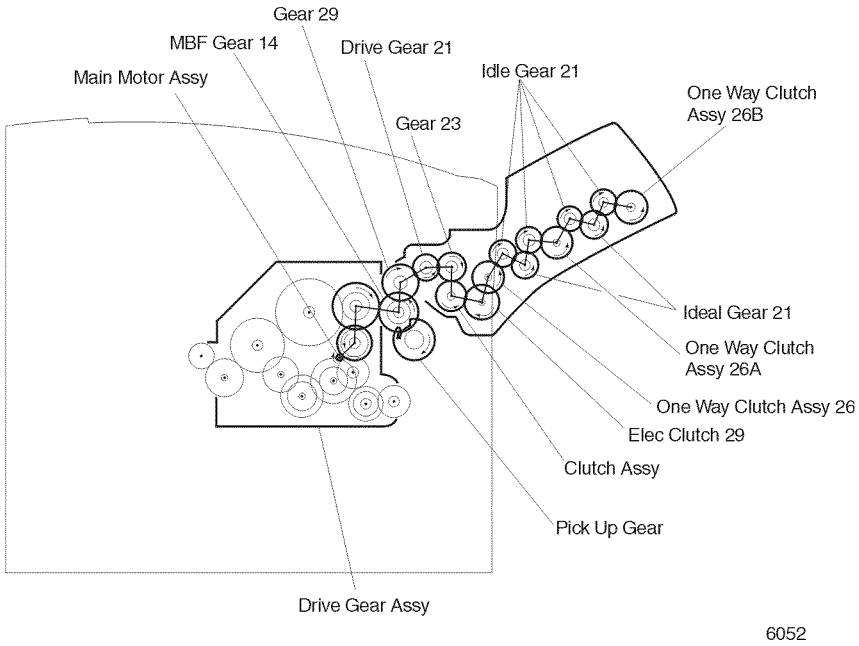


Figure 3 Drive Flow

Function of Major Components

Figure 4 shows the major components of the Envelope Feeder.

Clutch 29

Controls the transmission of the drive power by the actuation of the clutch function.

Clutch Assembly One-way Torque

25, 26, 26A and 26B

Prevents the clockwise rotation.

Feed 1 Roll Assembly

Transfers the envelope by its counterclockwise rotation

Feed 2 Roll Assembly and Roll Assembly Bottom

Transfers the envelope by its counterclockwise rotation and transfers the drive power to the Feed Belts at the same time.

Transfer Roll Assembly

Transfers the envelope to the registration paper path.

No Paper Sensor

Detects out of envelope condition.

Envelope Exit Sensor Assembly

Detects exit of the envelope.

Envelope PWB

Controls the Envelope Feeder and is the signal interface to the Print Engine Controller PWB.

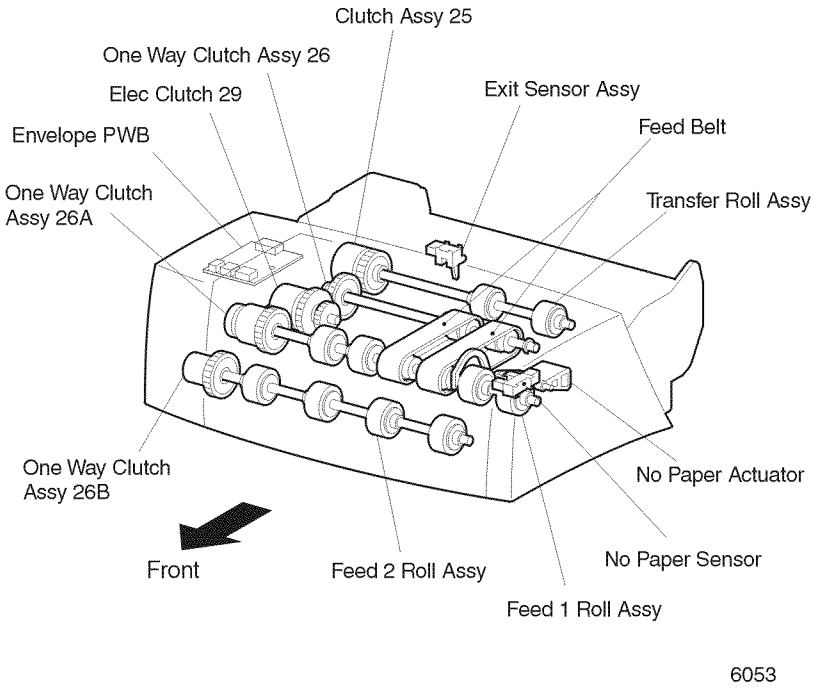


Figure 4 Major Components of the Envelope Feeder

GP 3.12 Offset Catch Tray (OCT)

The Paper Path for the Offset Catch Tray

Paper that is fed to the optional Offset Catch Tray follows the path shown in Figure 1.

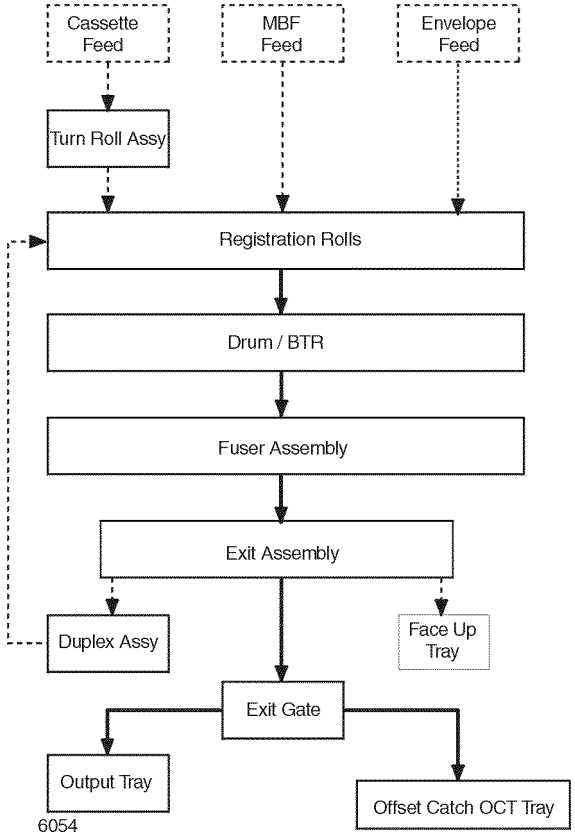


Figure 1 The OCT Paper Path

Figure 2 shows a cut-off view of the printer, to better illustrate the components involved in the OCT paper path.

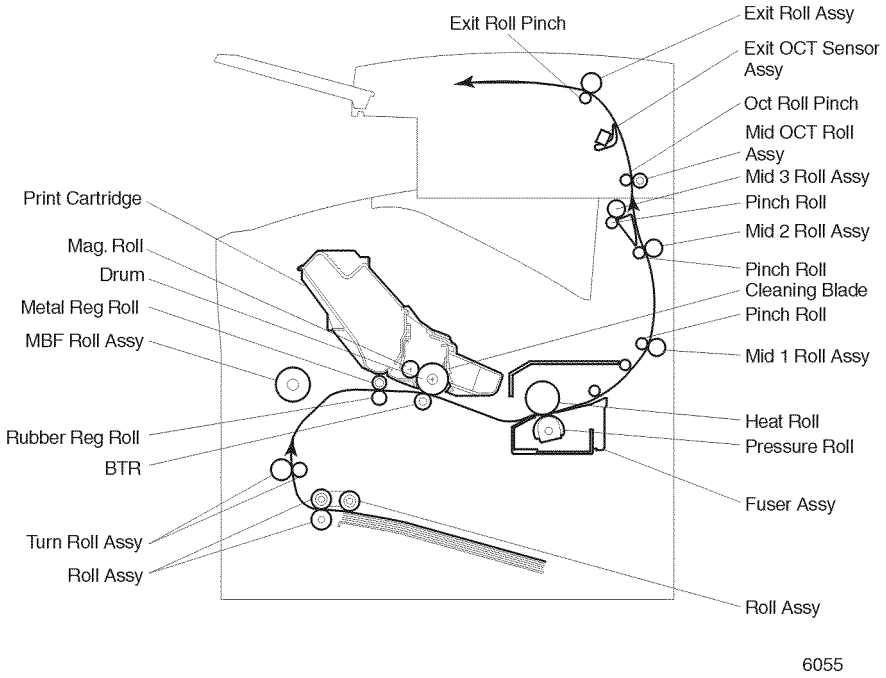


Figure 2 The OCT Paper Path

Drive Flow

As shown in Figure 3, the Motor Assembly Drive generates the mechanical power needed to run the Mid OCT Roll Assembly and Exit Roll Assembly. The Offset Motor Assembly generates the drive power to move the Offset Roll Assembly in alternating directions.

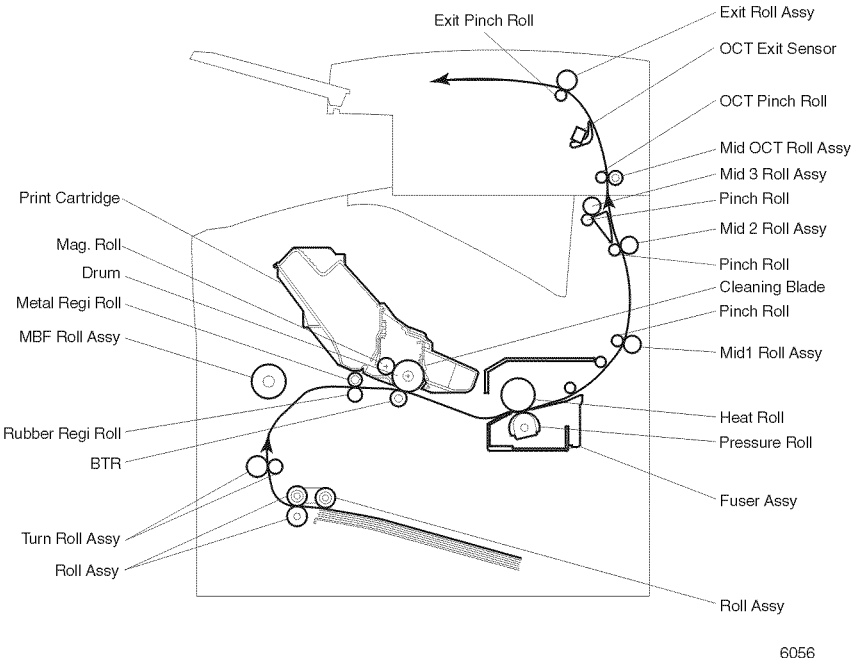


Figure 3 OCT Drive Flow

Function of Major Components

Figure 4 and Figure 5 show the major components of the Offset Catch Tray.

Motor Assembly Drive

Drives the Mid OCT Roll Assembly and the Exit Roll Assembly.

Offset Motor Assembly

Shifts the Offset Roll Assembly.

Full Stack Sensor and Actuator Full Stack

Detects when the stacking of the Tray Exit exceeds 500 sheets of paper.

OCT PWB

Controls OCT operations.

Offset Roll Assembly

Drives printed pages into the OCT Tray, offsetting each from the normal position.

OCT Exit Sensor Assembly

Located between the Mid OCT Roll Assembly and the Exit Roll Assembly, it detects when paper passes into the Tray Exit.

Home Sensor

The OCT Home Sensor detects when the Offset Roll Assembly is in the home position. It is turned On when the Gear Core is located at the sensing point of the OCT Home Sensor.

Direction **Solenoid** and Lever

Switches the paper path between the normal paper path and the OCT paper path.

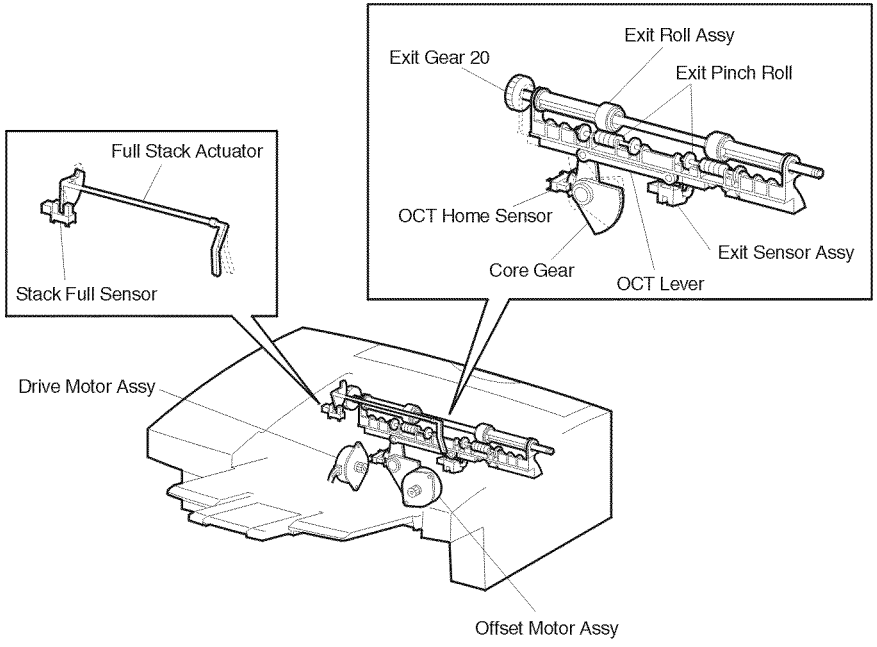


Figure 4 Major Components of the OCT (1 of 2)

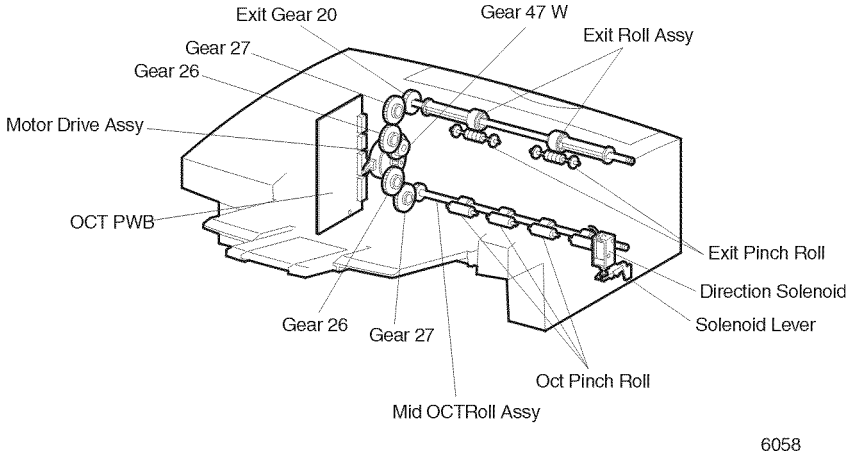


Figure 5 Major Components of the OCT (2 of 2)

Offset Catch Tray Control

Offset Motor Control

When the end of a sheet of paper reaches the OCT Exit Sensor Assembly, the sensor signal goes Low. The Offset Motor Assembly begins rotating clockwise for a specified time after the signal goes Low. This clockwise rotation shifts the sheet of paper from the normal position. At the specified time after the Sensor Assembly Exit goes Low, the Exit Motor Assembly begins rotating in the counterclockwise direction, moving the Offset Roll Assembly back into home position, until the Sensor OCT Home signal (/OCT HOME) goes Low. When the power is first switched on, the Offset Motor Assembly performs this offset operation once, to make sure the Offset Roll Assembly is in the home position.

When the printer is running in Duplex mode, paper partially feeds out into the Face Down Tray (under the OCT Assembly), it then reverses direction and is printed on the second side, then sent to the Exit Tray of the OCT.

Full Stack Detection

The Print Engine Controller PWB examines the state of the Full Stack Sensor after the Sensor Assembly Exit signal goes Low. The Print Engine Controller PWB detects that the Tray Exit is full when the Full Stack Sensor remains High for a set number of successive Sensor Assembly Exit actuations (sheets of paper exiting in the OCT). The Full Stack condition stays in affect until the Full Stack Sensor goes Low.

Paper Jam Detection

The base printer and the OCT are designed to move a sheet of paper between the detecting points, i.e. sensors, on the paper path within specific periods of time. If a sheet of paper is either early or late arriving at any point, the Print Engine Controller PWB interprets this deviation as a paper jam.

E6-1 Jam

E6-1 is the specified time that the paper has to turn the OCT Sensor Assembly Low after it has turned the Sensor Exit High. If the Sensor Assembly Exit does not go Low after the specified time, the Print Engine Controller PWB detects that an OCT jam has occurred.

E6-2 Jam

One of the conditions of the E6-2 jam is the same as the condition of the E6-1 jam. Another is the signal of the OCT Exit Sensor Assembly turns Low during the warming-up.

GP 3.13 Option Feeder Assembly

The Paper Path for the Option Feeder Assembly

Paper that is fed from the Optional Feeder Assembly follows the path shown in Figure 1.

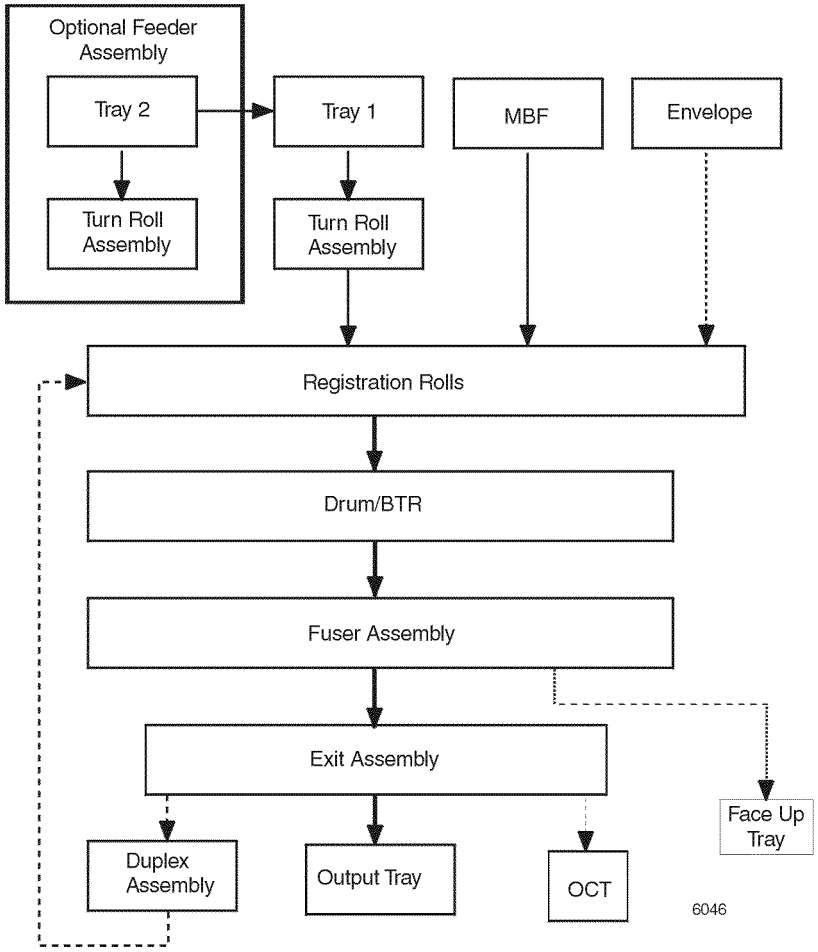


Figure 1 The Option Feeder Paper Path

Figure 2 shows a cut-off view of the printer, to better illustrate the components involved in the Option Feeder Assembly paper path.

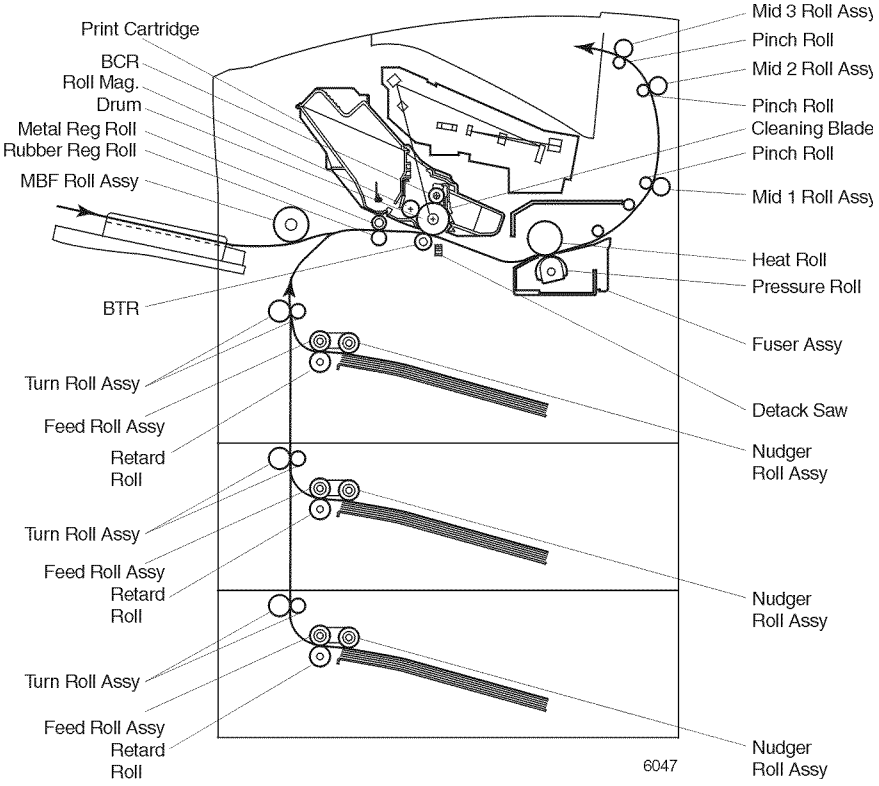


Figure 2 The Option Feeder Paper Path

Drive Flow

As shown in Figure 3, the mechanical power generated by the Main Motor Assembly is transmitted to the gears of the Option Feeder Assembly

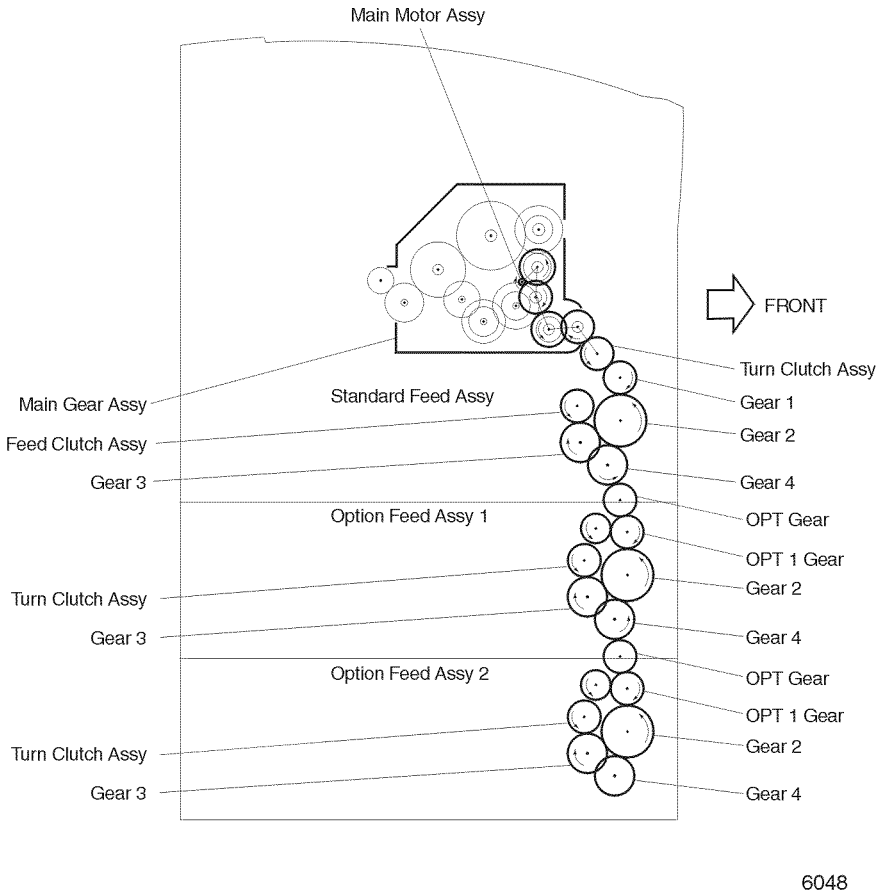


Figure 3 Option Feeder Drive Flow

Function of Major Components

Figure 4 shows the major components of the Option Feeder Assembly.

Turn Clutch Assembly

Consists of a gear and an electric clutch located on the end of the Turn Roll Assembly shaft. This clutch controls the transmission of the drive power from Gear 4 of the Standard Feeder Assembly to the Turn Roll Assembly by turning on and off the Turn Roll clutch. When this clutch is activated, the drive power is transmitted to the Turn Roll Assembly through the Gear OPT to the gear of the Clutch Assembly Feed.

Feed Clutch Assembly

Consists of a gear and a electric clutch located on the end of the Feeder Assembly shaft. This clutch controls the transmission of the drive power from Gear 3 through the Turn Clutch Assembly to the Roll Assembly of the Feeder Assembly by turning on and off the Feed clutch. When this clutch is activated, the drive power is transmitted to the Feeder Assembly.

Feeder Assembly

Consists of the Nudger Support Assembly, Shaft Feed and Roll Assembly. The task of this Assembly is to pick the paper from the Paper Tray Assembly and feed it to the Turn Roll Assembly. To ensure this task, the Nudger Support Assembly acts as the actuator for the Stack Height Sensor Control by swivelling itself up and down synchronizing the height of the stacked paper.

Turn Roll Assembly

This Assembly feeds the paper to the Standard Feeder Assembly path. The mechanical activity is same as the Turn Clutch Assembly.

Feeder PWB

Connective interface between the Sensors, Clutches and Motor, and the Size Option PWB. This PWB also monitors the No Paper Sensor which detects the out of paper condition of the Paper Tray.

Size Option PWB

Controls the Option Feeder Assembly, the interface function between the Size Option PWBs, the Feeder PWB, and the Print Engine Controller PWB.

No Paper Sensor

Detects the out of paper of the Paper Tray Assembly.

No Paper Actuator

Actuates the No Paper Sensor. When out of paper, this actuator will swivel down and shield the No Paper Sensor.

Low Paper Sensor

Detects the state of low paper of the Paper Tray Assembly. Low paper detect is at approximately 50 +/- 30 sheets of paper.

Stack Height Sensor

Detects the state of the paper level (the position of the top sheet of paper). This sensor is actuated by the Nudger Support Assembly.

Size Switch

Mounted on the Feeder PWB and detects when the Paper Tray Assembly is out of paper.

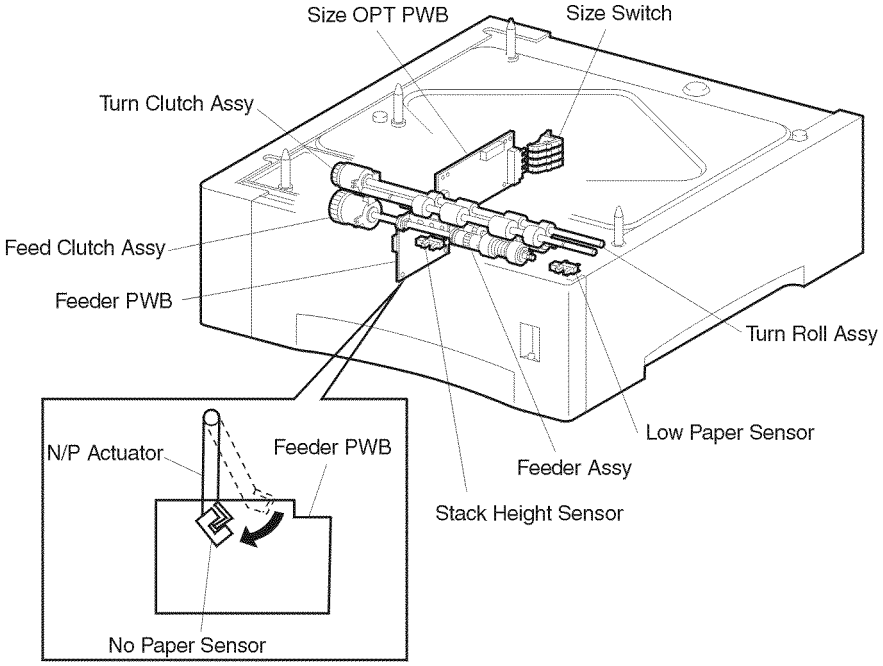


Figure 4 Major Components of the Option Feeder Assembly

GP 4.1 Menu Maps

This chapter shows the menu structure in graphical format. The names of menus, items and values found in the menu maps contain the English language strings for reference only. The order of menus, items, and values found in the menu maps is the order in which these strings are displayed when scrolling through the menu items. The “first” menu, item or value is at the top of the list and the “last” menu, item or value is at the bottom of the list. Selecting an “Up” key causes scrolling from first to last. Pressing a “Down” key causes scrolling from last to first.

Some of the Menus and Items in the following maps are only displayed if an associated option is installed. These options entries are flagged with the symbol “_” following the entry.

Job Menu/Print Menu/Reset Menu

Press **Menu Down** or **Menu Up** to enter this menu system and scroll through the menus. Scroll through the items with Item Up or Item Down keys. Use the **Enter** (*) key to accept an item or execute a function such as set a language or print a page or cancel a job.

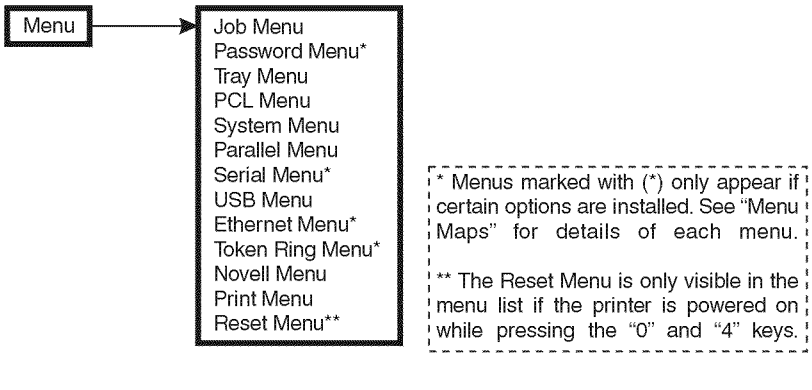


Figure 1 Job Menu/Print Menu/Reset Menu

Password Menu

The Password Menu is used to request printing of secure and proof jobs, which require a four digit password matching that sent with the job to enable printing. The user has the option of printing or deleting all or selected jobs associated with that password.

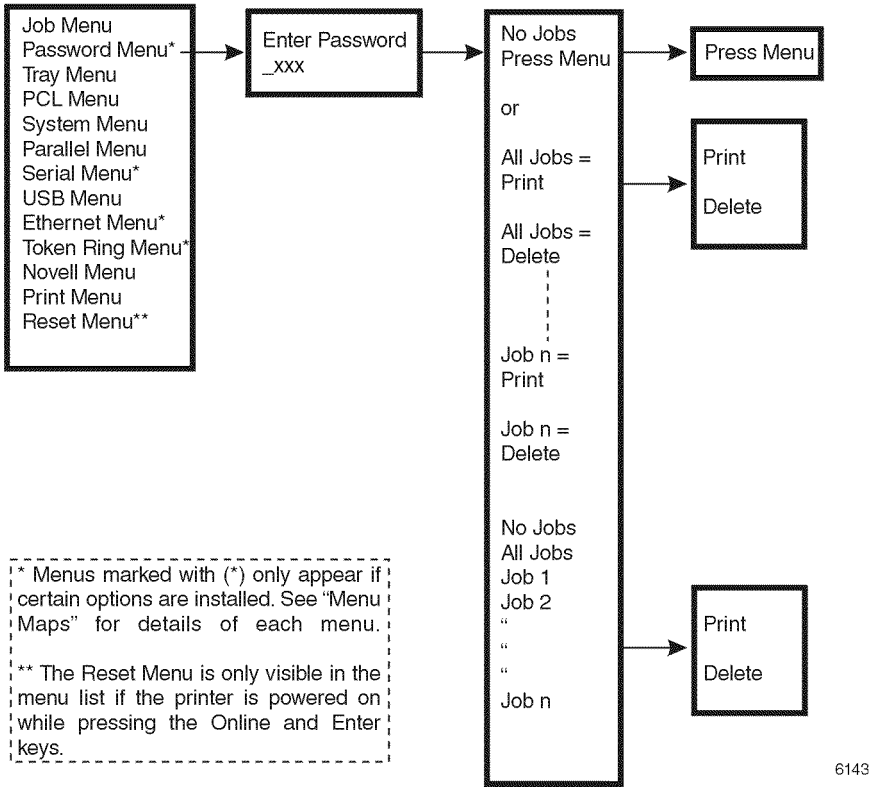
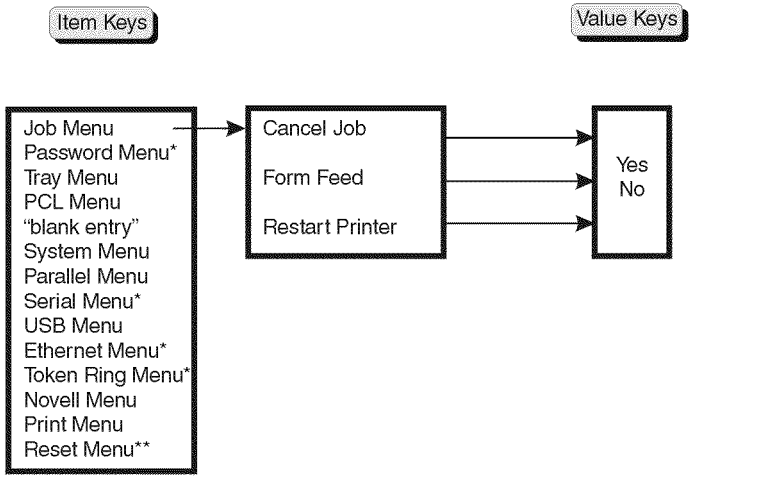


Figure 2 Password Menu

Job Menu

Select the Job Menu using the **Menu Up** and **Menu down** keys. Select a variable with I
Up or **Item Down** keys. Use the **Value Up** or **Value Down** keys to scroll to the required
Use **Enter** key to load value in NVRAM. Asterisk indicates factory default values.



* Menus marked with (*) only appear if certain options are installed. See "Menu Maps" for details of each menu.

** The Reset Menu is only visible in the menu list if the printer is powered on while pressing the Online and Enter keys.

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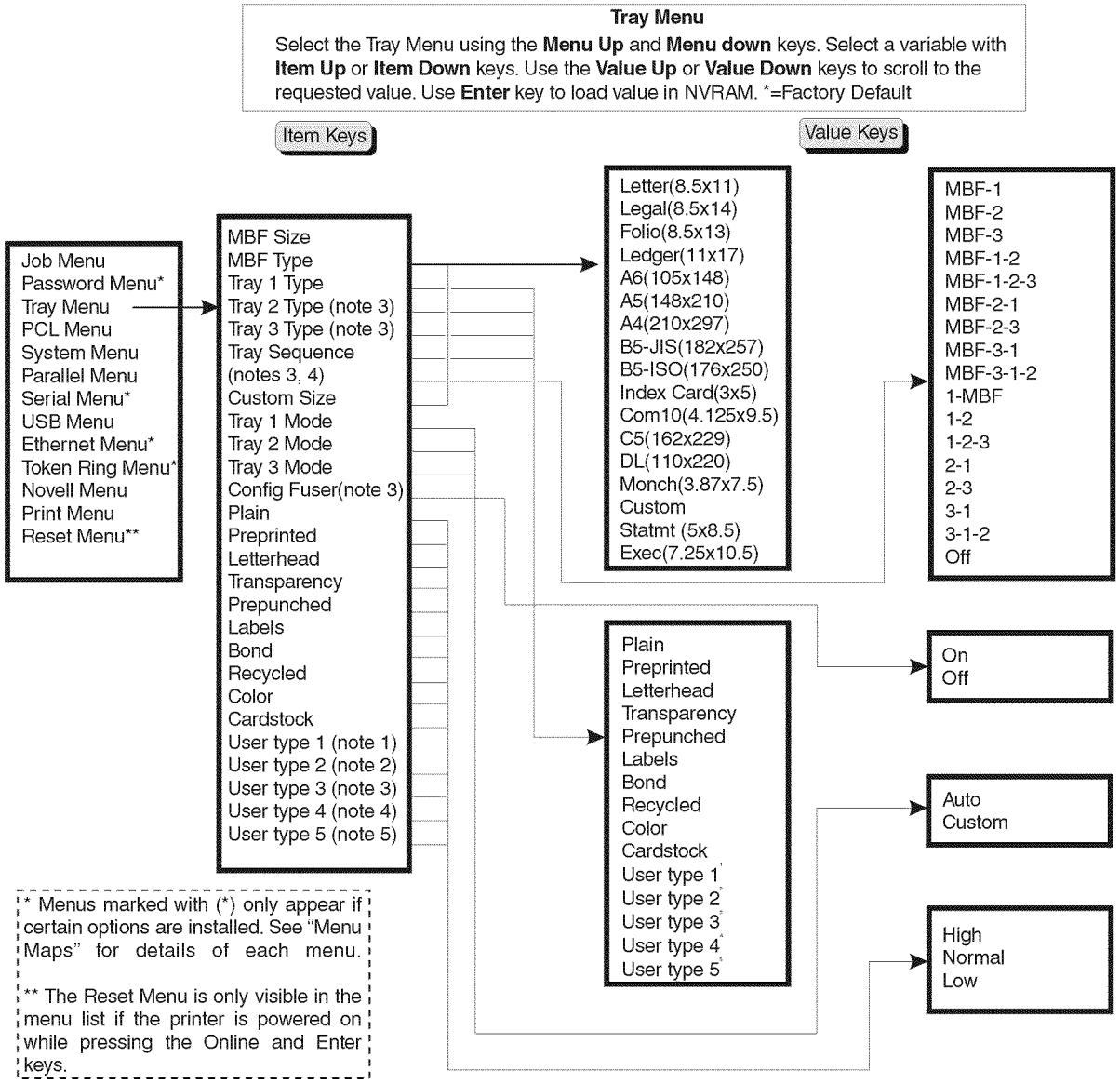


Figure 3 Tray Menu

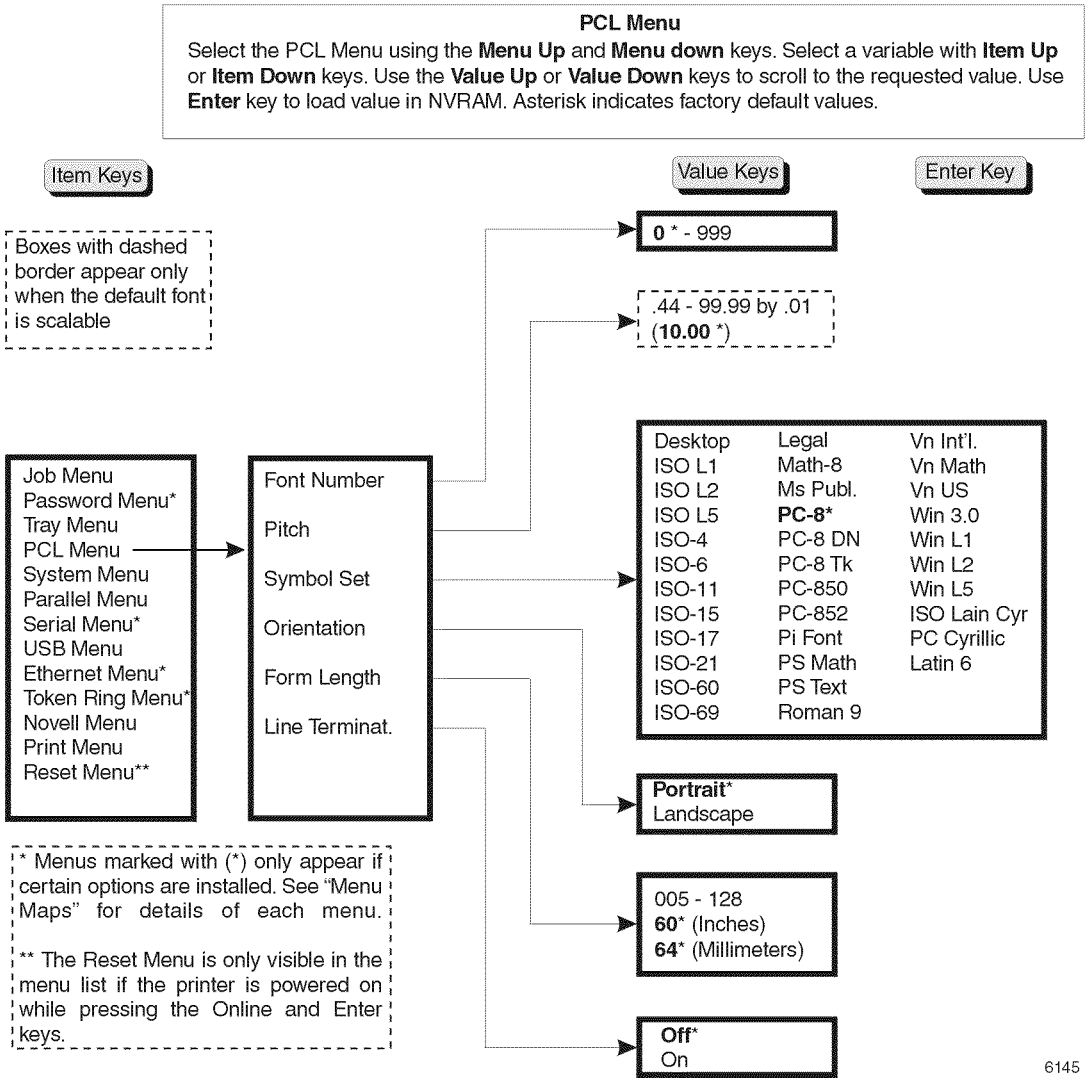


Figure 4 PCL Menu

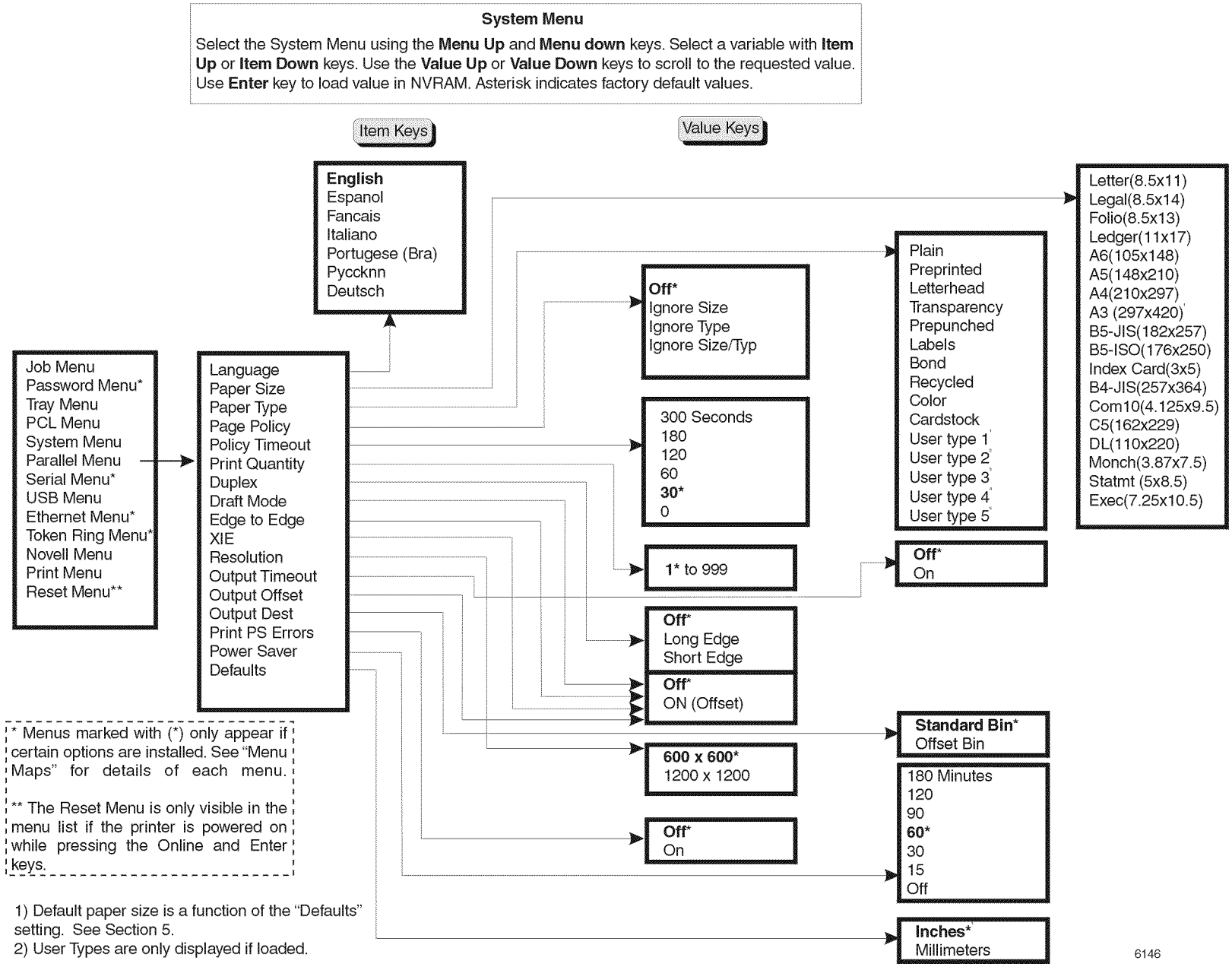


Figure 5 System Menu

Parallel Menu

Select the Parallel Menu using the **Menu Up** and **Menu down** keys. Select a variable with **Item Up** or **Item Down** keys. Use the **Value Up** or **Value Down** keys to scroll to the required value. Use **Enter** key to load value in NVRAM. Asterisk indicates factory default values.

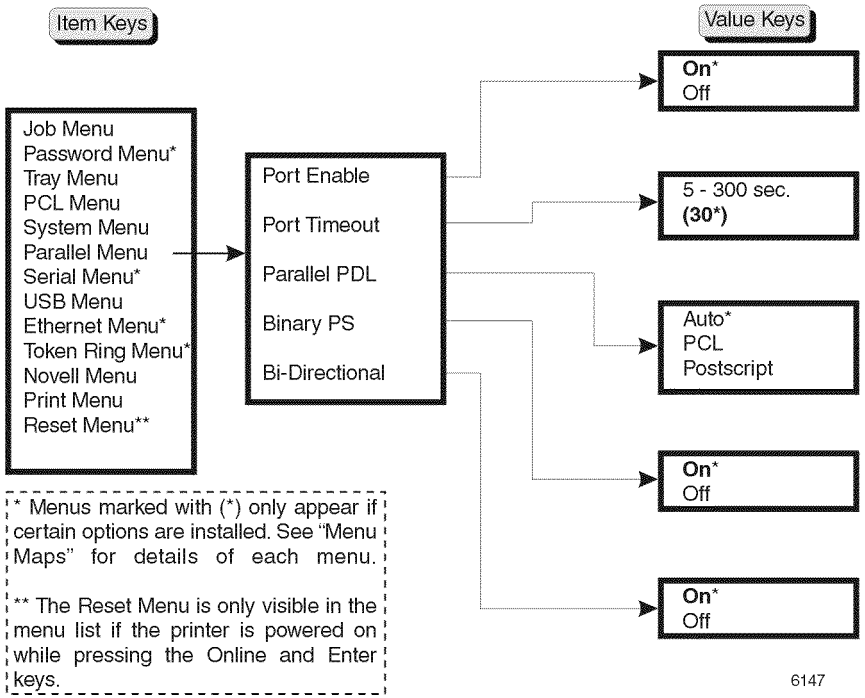


Figure 6 Parallel Menu

Serial Menu

Select the Serial Menu using the **Menu Up** and **Menu down** keys. Select a variable with **Item Up** or **Item Down** keys. Use the **Value Up** or **Value Down** keys to scroll to the requested value. Use **Enter** key to load value in NVRAM. Asterisk indicates factory default values. This menu only appears if the Serial option is installed.

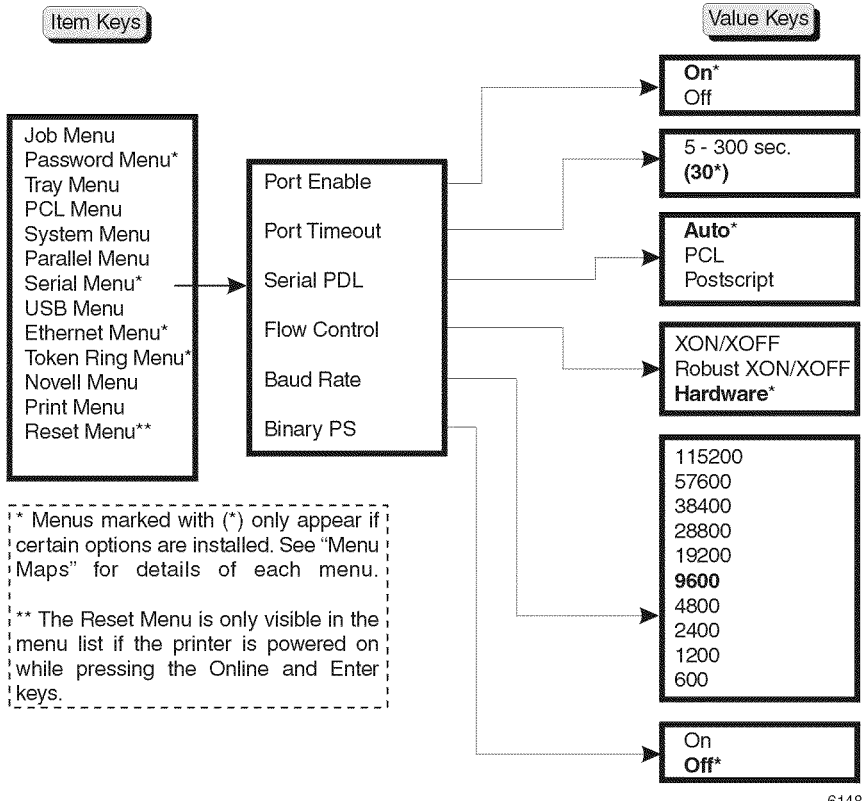


Figure 7 Serial Menu

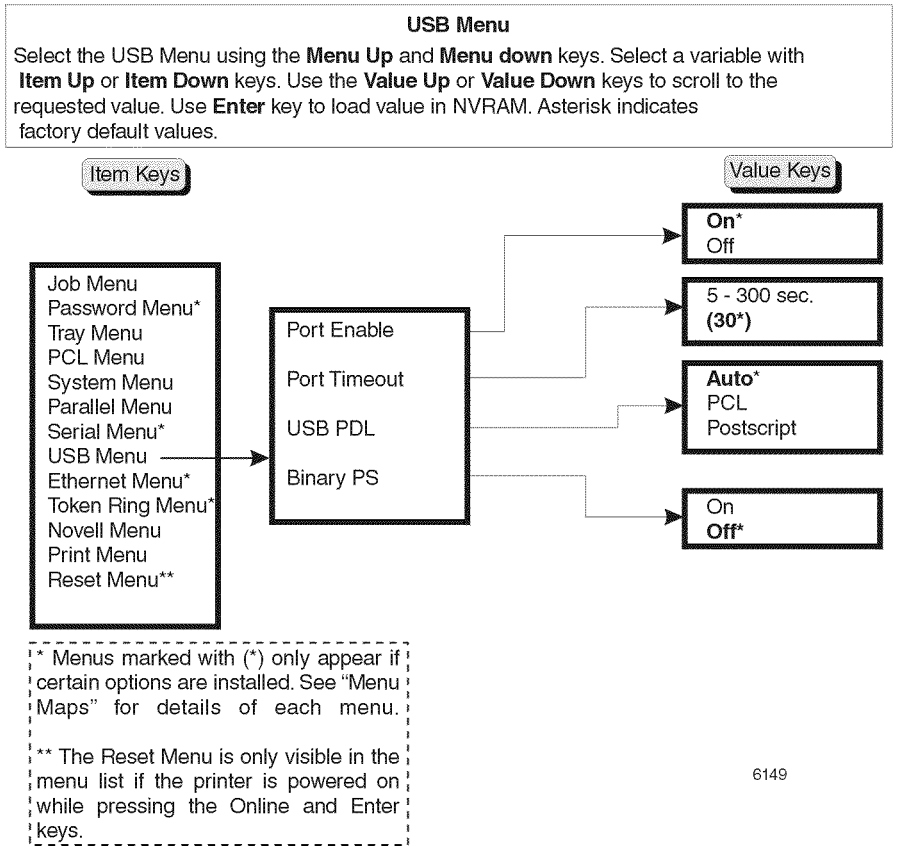


Figure 8 USB Menu

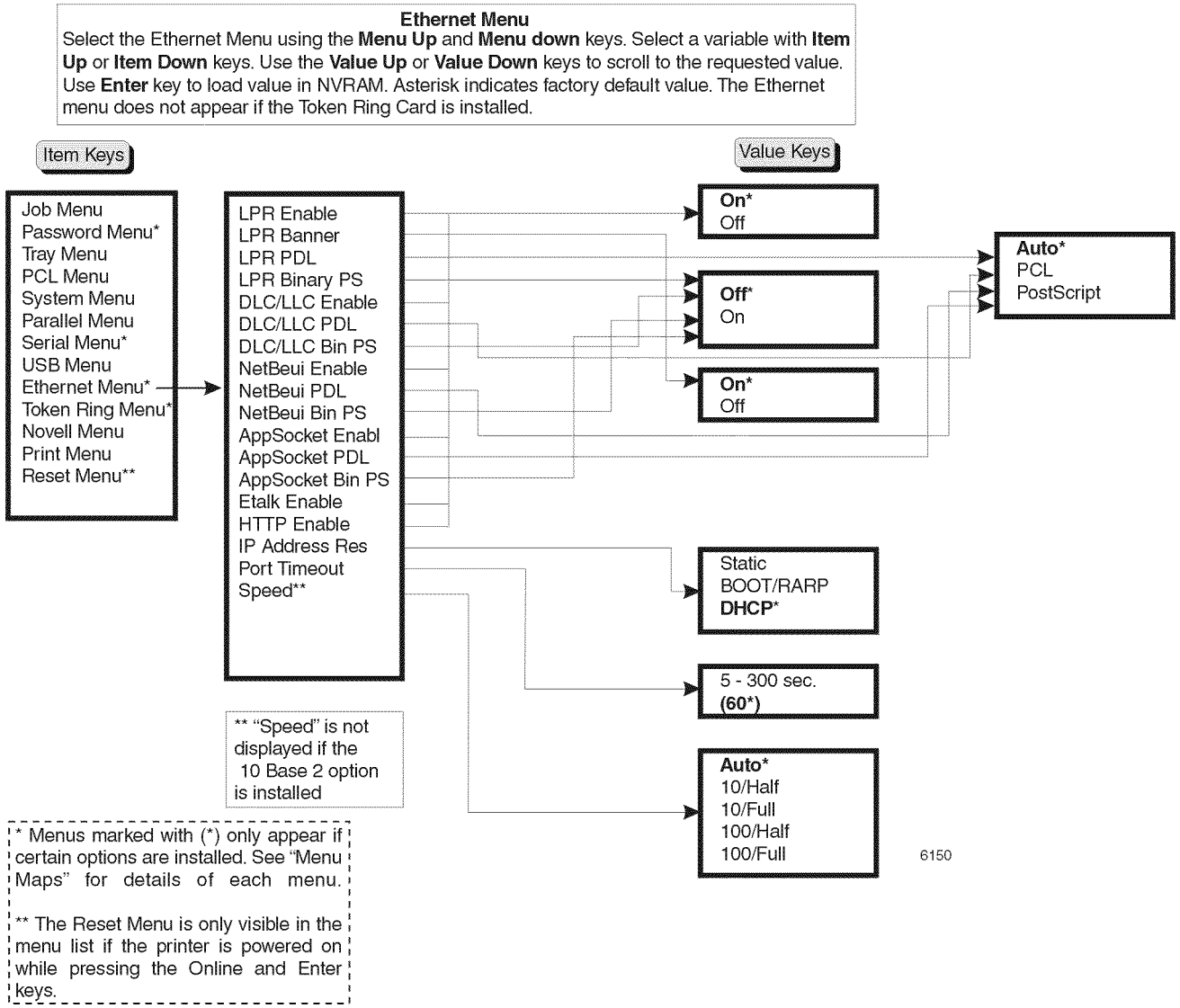


Figure 9 Ethernet Menu

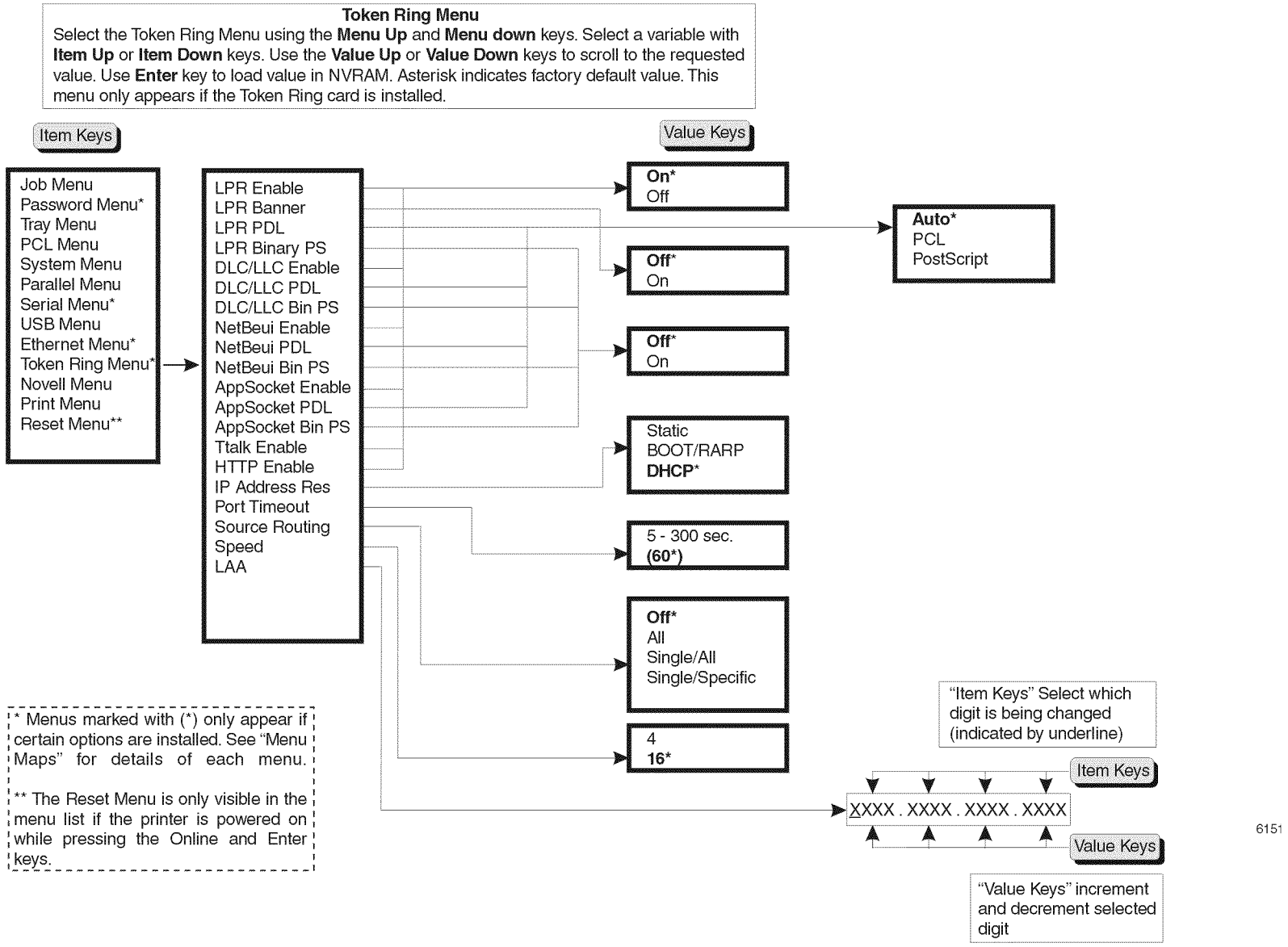


Figure 10 Token Ring Menu

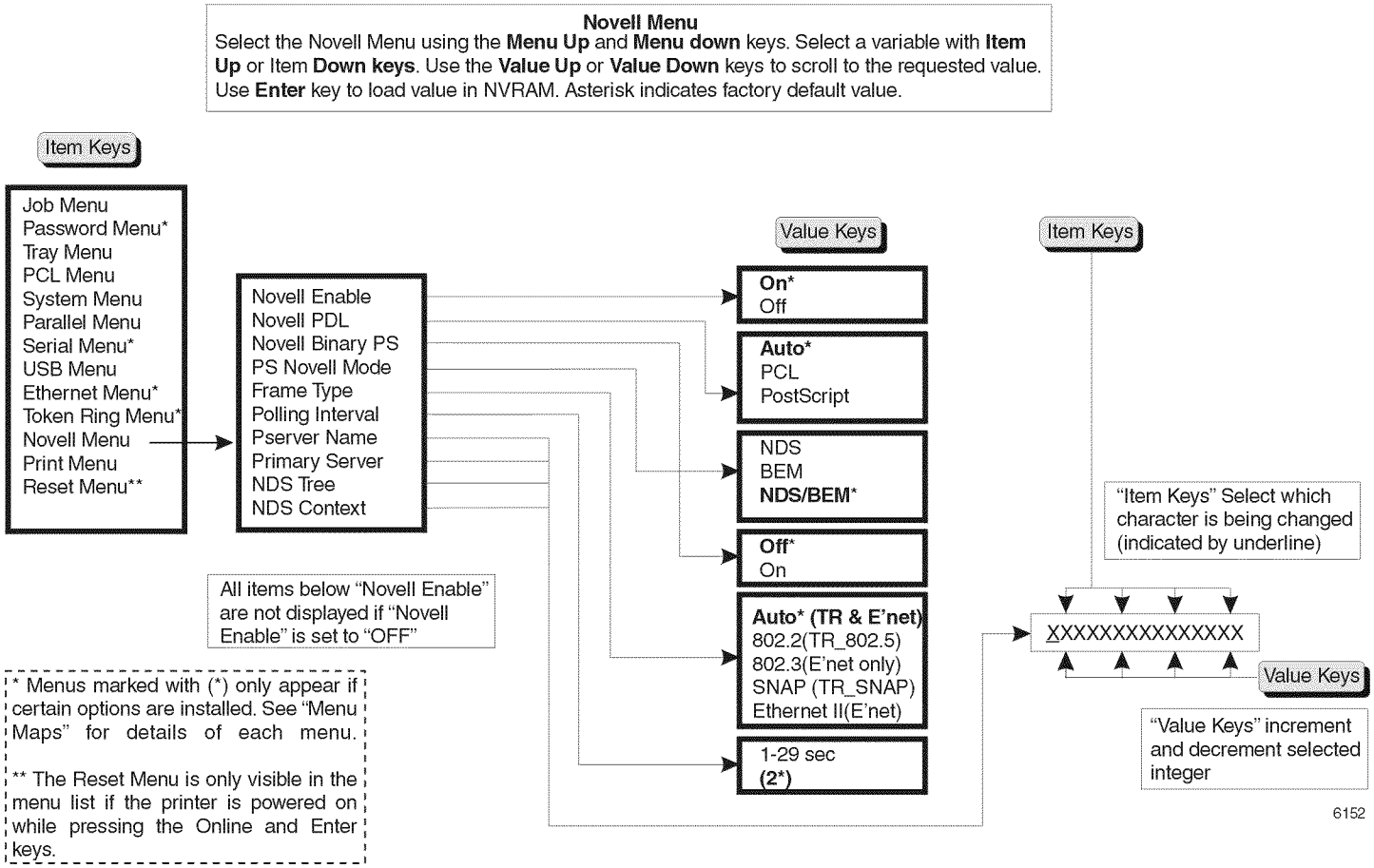
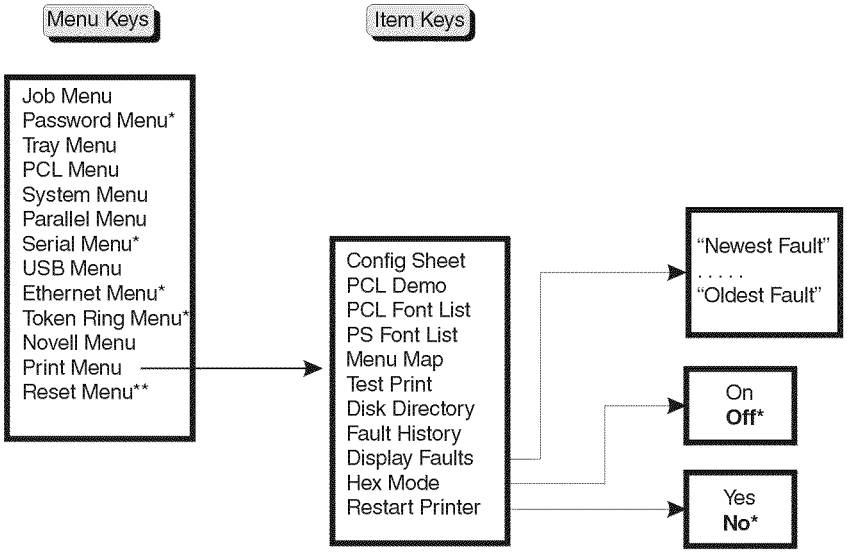


Figure 11 Novell Menu

Print Menu

Press ***Menu Down*** or ***Menu Up*** to enter this menu system and scroll through the menus. Scroll through the items with ***Item Up*** or ***Item Down*** keys. Use the Enter (*) key to accept an item or execute a function such as set a language or print a page or cancel a job.



* Menus marked with (*) only appear if certain options are installed. See "Menu Maps" for details of each menu.

** The Reset Menu is only visible in the menu list if the printer is powered on while pressing the Online and Enter keys.

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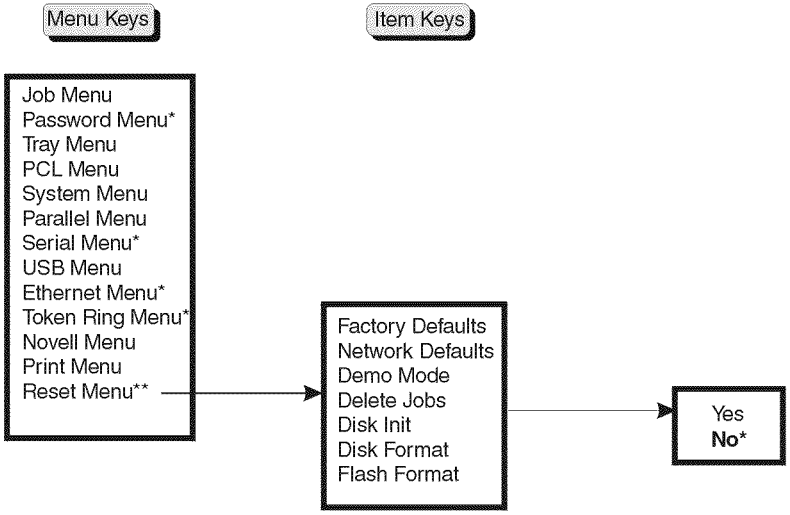
Figure 12 Print Menu

Reset Menu

Press ***Menu Down*** or ***Menu Up*** to enter this menu system and scroll through the menus. Scroll through the items with ***Item Up*** or ***Item Down*** keys. Use the Enter (*) key to accept an item or execute a function such as set a language or print a page or cancel a job.



* Menus marked with (*) only appear if certain options are installed. See "Menu Maps" for details of each menu.

** The Reset Menu is only visible in the menu list if the printer is powered on while pressing the Online and Enter keys.

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Figure 13 Reset Menu

GP 5.1 Supplemental Tools, Supplies, and Hardware

Table 1 Supplemental Tools, Supplies and Hardware

Description	Part Number
Cleaning Cloth (treated)	35P1538
Cleaning Pads	600S4372
Cotton Swabs	35P2162
Disposable Gloves	99P3082
Disposable Plastic Bags	99P30234
Drop Cloth	5P1737
Film Remover	43P45
Formula A Cleaner	43P48
Towel (heavy duty)	35P3191
RX Unique Cleaner	8R90175
Cleaning Pad Kit	600S4372
Fuser Cleaning Solvent Pads	43P83
General Cleaning Solvent	8R90176
Test Pattern, Output Performance	82P520
Test Pattern, Visual Scale	82P284
14" Magnetic Screwdriver	600T91798
Yellow Towels	35P1638

7 Wiring Data

Section Contents

Introduction

This section of the manual contains a Block Diagram for the N2125 printer. The Block Diagram shows the interconnections of the major subsystems within the printer. The remainder of this section divides the Block Diagram into nine individual block diagrams to better illustrate the electrical relationships between components and assemblies within the printer. Each wire in the block diagram is tagged with a signal name, and each wire is terminated at both ends with a pin number.

Base Engine

Wiring Diagrams and Signal Information for Engine

Organization

1. Wiring Diagram Notations (Figure 3)
2. Block Diagram (Figure 4 & Figure 5)
3. Print Engine Controller PWB <=> LVPS PWB and Fuser Assembly (Figure 7) (Table 2)
4. LVPS PWB <=> Fan Assembly, Front Switch Interlock Assembly, 5VDC PWB and System Controller PWB (Figure 8) (Table 3)
5. Print Engine Controller PWB <=> HVPS PWB <=> BTR, Print Cartridge, and Fuser Assembly (Figure 9) (Table 4) (Table 5)
6. Print Engine Controller PWB <=> Fuser Assembly (Figure 10) (Table 6)
7. Print Engine Controller PWB <=> Exit Sensor, and Rear Interlock Switch (Figure 11) (Table 7)
8. Print Engine Controller PWB <=> Size 1 PWB <=> Feeder PWB <=> Low Paper Sensor, Stack Height Sensor, Feed Clutch Assembly, Turn Clutch Assembly and Motor Assembly (Figure 12) (Table 8) (Table 9)
9. Print Engine Controller PWB <=> Main Motor Assembly, Exit Motor Assembly and Print Cartridge Sensor Assembly (Figure 13) (Table 10)
10. Print Engine Controller PWB <=> Connector PWB <=> Paper Set Sensor, Registration Sensor, Registration Clutch, Toner Sensor, Pick Up Solenoid (Figure 14) (Table 11)
11. Print Engine Controller PWB <=> Laser Assembly (Figure 15) (Table 12)
12. System Controller PWB <=> Control Panel (Figure 16) (Table 13)

Location of P/J Connectors

Use the P/J table (Table 1) and the P/J Map (Figure 1) and (Figure 2) to locate a specific P/J connector within the Base Engine.

- Locate the P/J connector number in the first column of the table.
- Locate the corresponding coordinates in the second column, such as I7 or J7.
- Go to the map.
- Cross-reference the letter and number of the P/J coordinates with the letters and numbers on the map.
- The P/J connector is located within the area where the coordinates cross.

Table 1 Base Engine P/J Table

Connector	Coordinate	Description
TR	E20 (Figure 1)	Connects the BTR Roll to the HVPS
DTS	E29 (Figure 1)	Connects the Detack Saw to the HVPS
P/J51	J20 (Figure 1)	Connects the Print Engine Controller PWB to the 550 Sheet Feeder PWB
P/J61	G19 (Figure 1)	Connects the Feeder PWB to the Tray 1 Size PWB
P/J64	A18 (Figure 1)	Connects the Turn Clutch Assembly to the Feeder PWB
P/J65	C19 (Figure 1)	Connects the Feed Clutch Assembly to the Feeder PWB
P/J66	D18 (Figure 1)	Connects the Low Paper Sensor to the Feeder PWB
P/J67	B18 (Figure 1)	Connects the Paper Lift Motor to the Feeder PWB
P/J261	K25 (Figure 1)	Connects the HVPS to the Print Engine Controller PWB
PRB	K26 (Figure 1)	Connects the Fuser to the HVPS
P/J331	J17 (Figure 1)	Connects the Size PWB to the Print Engine Controller PWB
P/J641	A25 (Figure 1)	Connects the Turn Clutch to the Feeder PWB
P/J651	A26 (Figure 1)	Connects the Feed Clutch to the Feeder PWB
P/J661	G29 (Figure 1)	Connects the Low Paper Sensor to the Feeder PWB
P/J662	D29 (Figure 1)	Connects the Stack Height Sensor to the Feeder PWB
P/J671	D20 (Figure 1)	Connects the Motor Harness Assembly to the Socket
P/J672	C20 (Figure 1)	Connects the Cassette Assembly to the Feeder Assembly
P/J673	B20 (Figure 1)	Connects the Motor Assembly to the Connector
P/J11	K43 (Figure 2)	Connects the Fuser Assembly to the LVPS
P/J21	H31 (Figure 2)	Connects the Laser Assembly to the Print Engine Controller PWB
P/J22	G34 (Figure 2)	Connects the Connects the Laser Assembly to the Print Engine Controller PWB
P/J23	K32 (Figure 2)	Connects the Connects the Connector PWB to the Print Engine Controller PWB
P/J25	I31 (Figure 2)	Connects the Print Cartridge Sensor to the Print Engine Controller PWB
P/J26	H35 (Figure 2)	Connects the HVPS to the Print Engine Controller PWB
P/J27	I35 (Figure 2)	Connects the Fuser Exit Sensor to the Print Engine Controller PWB
P/J28	K35 (Figure 2)	Connects the LVPS to the Print Engine Controller PWB
P/J29	K33 (Figure 2)	Connects the Main Motor to the Print Engine Controller PWB
P/J30	K35 (Figure 2)	Connects the Rear Interlock Switch to the Print Engine Controller PWB
P/J31	G31 (Figure 2)	Connects the Stack Full Sensor to the Print Engine Controller PWB
P/J32	K33 (Figure 2)	Connects the Exit Motor Assembly to the Print Engine Controller PWB

Table 1 Base Engine P/J Table

Connector	Coordinate	Description
P/J33	J35 (Figure 2)	Connects the Size 1 PWB to the Print Engine Controller PWB
P/J34	J31 (Figure 2)	Connects the Duplex PWB to the Print Engine Controller PWB
P/J35	J31 (Figure 2)	Connects the OCT PWB to the Print Engine Controller PWB
P/J14	H36 (Figure 2)	Connects the System Controller PWB to the Print Engine Controller PWB
P/J37	G33 (Figure 2)	Connects the Duplex Sensor to the Duplex PWB
PN101	K38 (Figure 2)	Connects the 5VDC PWB to the LVPS
P/J211	A37 (Figure 2)	Connects the SOS Sensor to the Print Engine Controller PWB
P/J212	A39 (Figure 2)	Connects the Laser Motor to the Print Engine Controller PWB
P/J213	A40 (Figure 2)	Connects the Laser PWB to the Print Engine Controller PWB
P/J223	A41 (Figure 2)	Connects the Laser PWB to the Print Engine Controller PWB
P/J281	K41 (Figure 2)	Connects the LVPS to the Print Engine Controller PWB
P/J282	K39 (Figure 2)	Connects the System Controller PWB to the LVPS
P/J283	K41 (Figure 2)	Connects the Fan Assembly to the LVPS
P/J284	K40 (Figure 2)	Connects the Front Interlock Switch to the LVPS
P/J285	K42 (Figure 2)	Connects the AC Input voltage to the LVPS
P/J13	I44 (Figure 2)	
P/J288	K37 (Figure 2)	Connects the 5VDC PWB to the System Controller PWB
P/J291	K39 (Figure 2)	Connects the Main Motor to the Print Engine Controller PWB
P/J341	D44 (Figure 2)	Connects the Duplex PWB to the Print Engine Controller PWB
P/J18	G36 (Figure 2)	Connects the Control Panel to the System Controller PWB
P/J511	G44 (Figure 2)	Connects the Tray1 Size PWB to the Tray 2 Size PWB

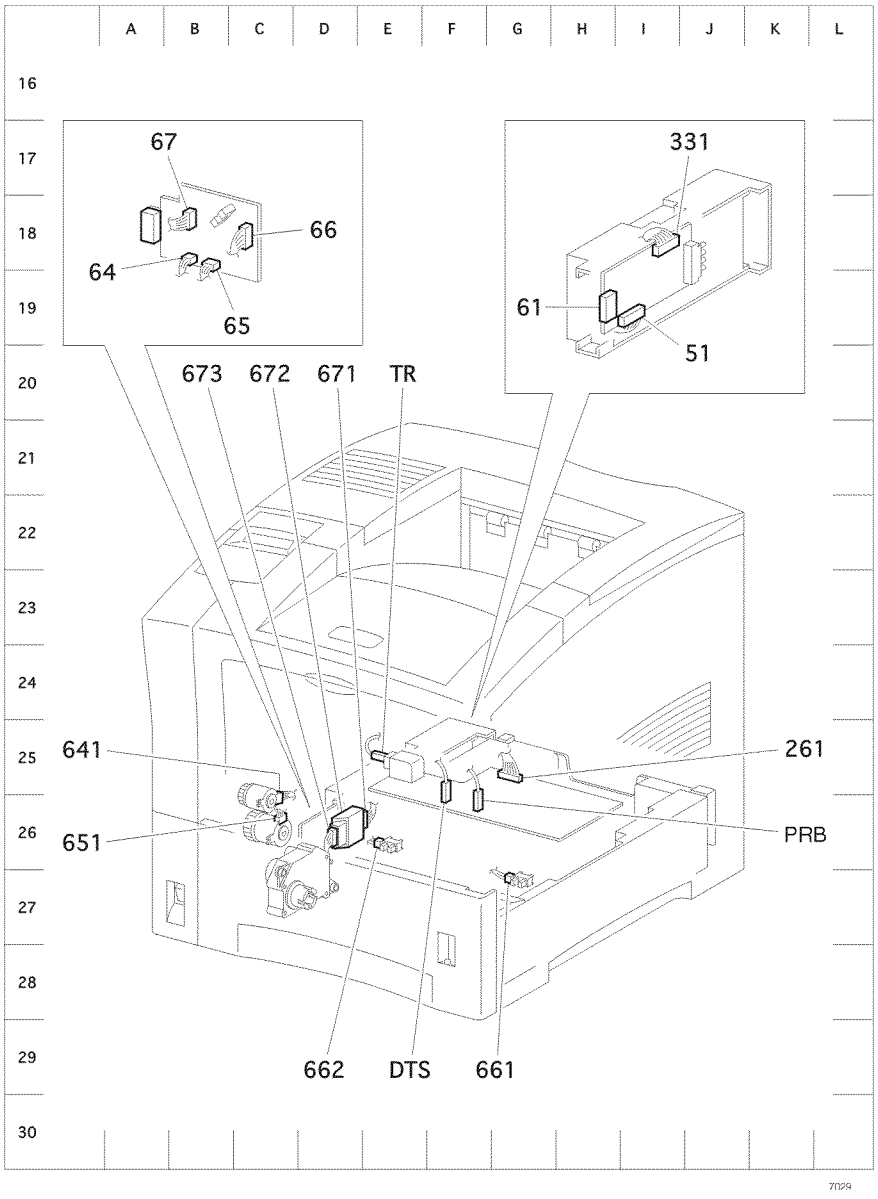

Figure 1 Base Engine P/J Location Map (1 of 2)

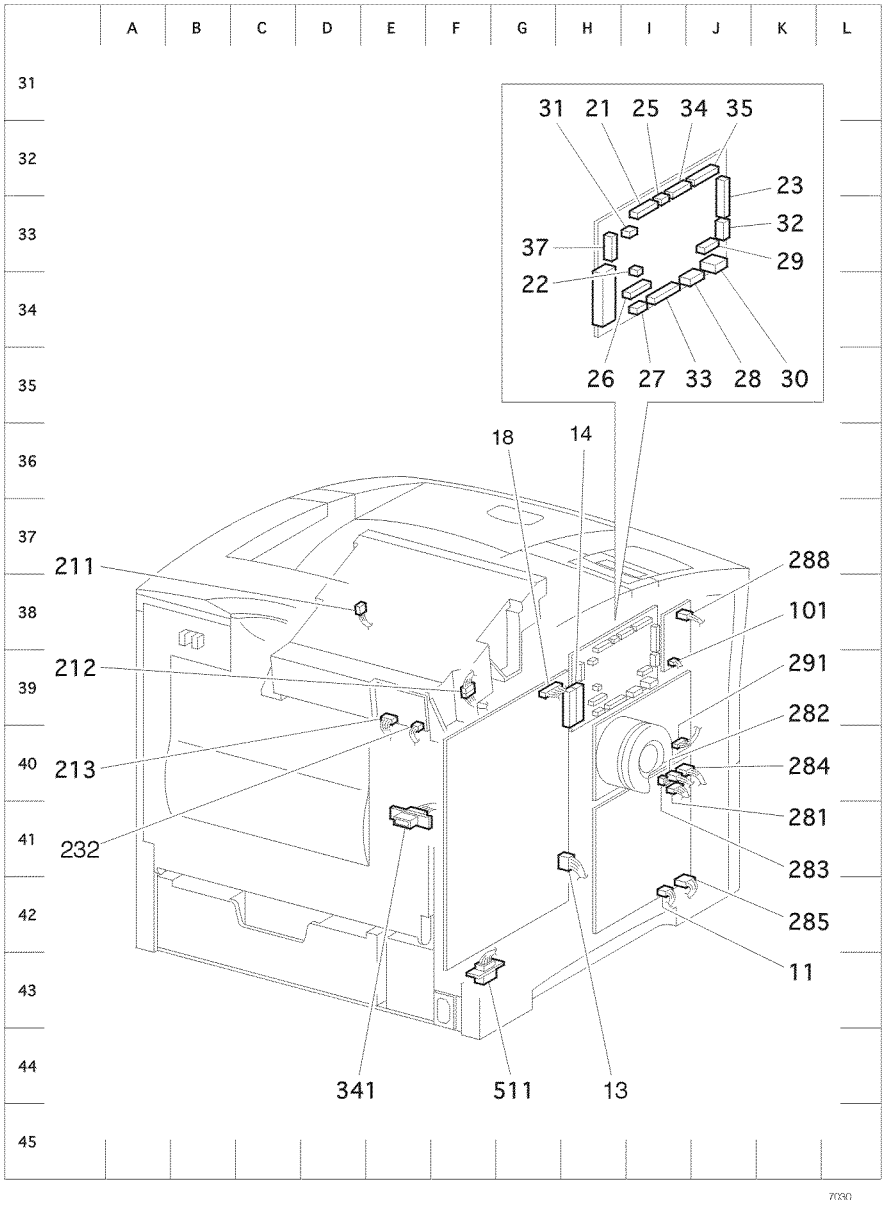

Figure 2 Base Engine P/J Location Map (2 of 2)

Wiring Diagram Notations

The wiring diagrams presented in this manual use the following circuit notations to describe components and signal paths within the printer (Figure 3).

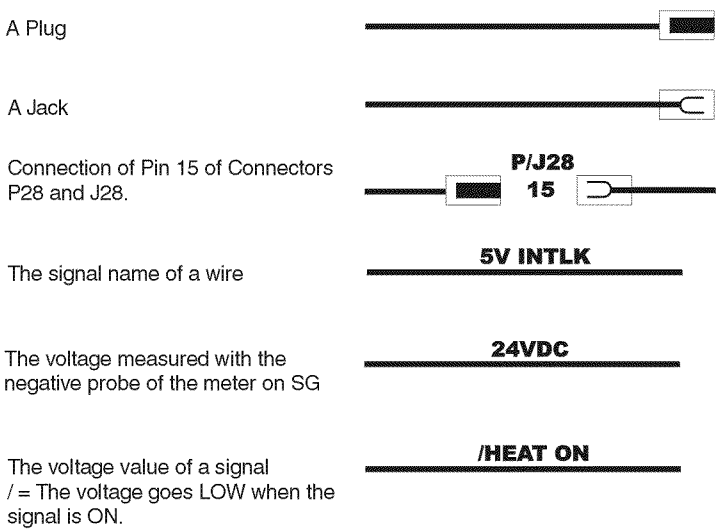

Figure 3 Wiring Diagram Notations

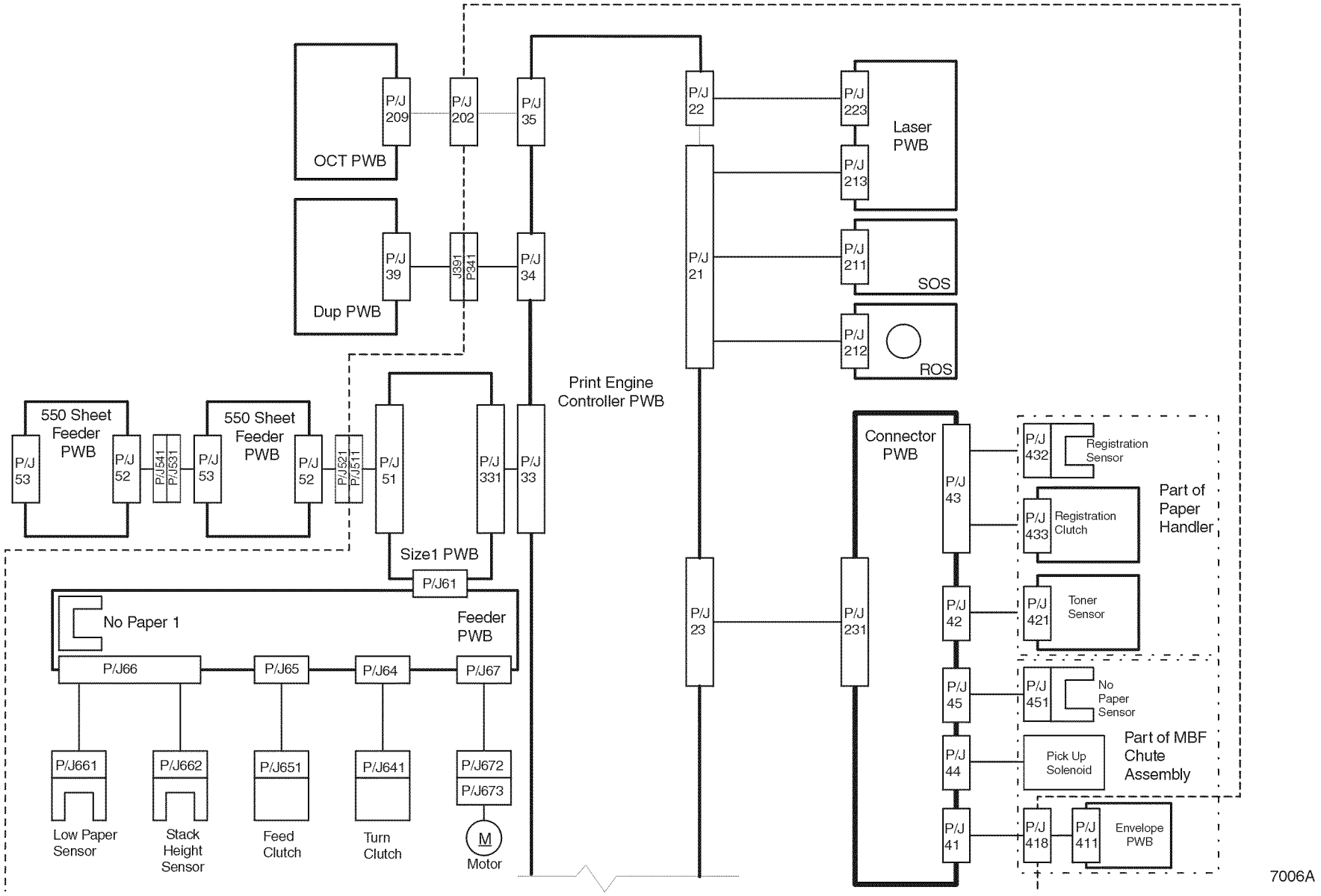

Figure 4 Block Diagram (1 of 2)

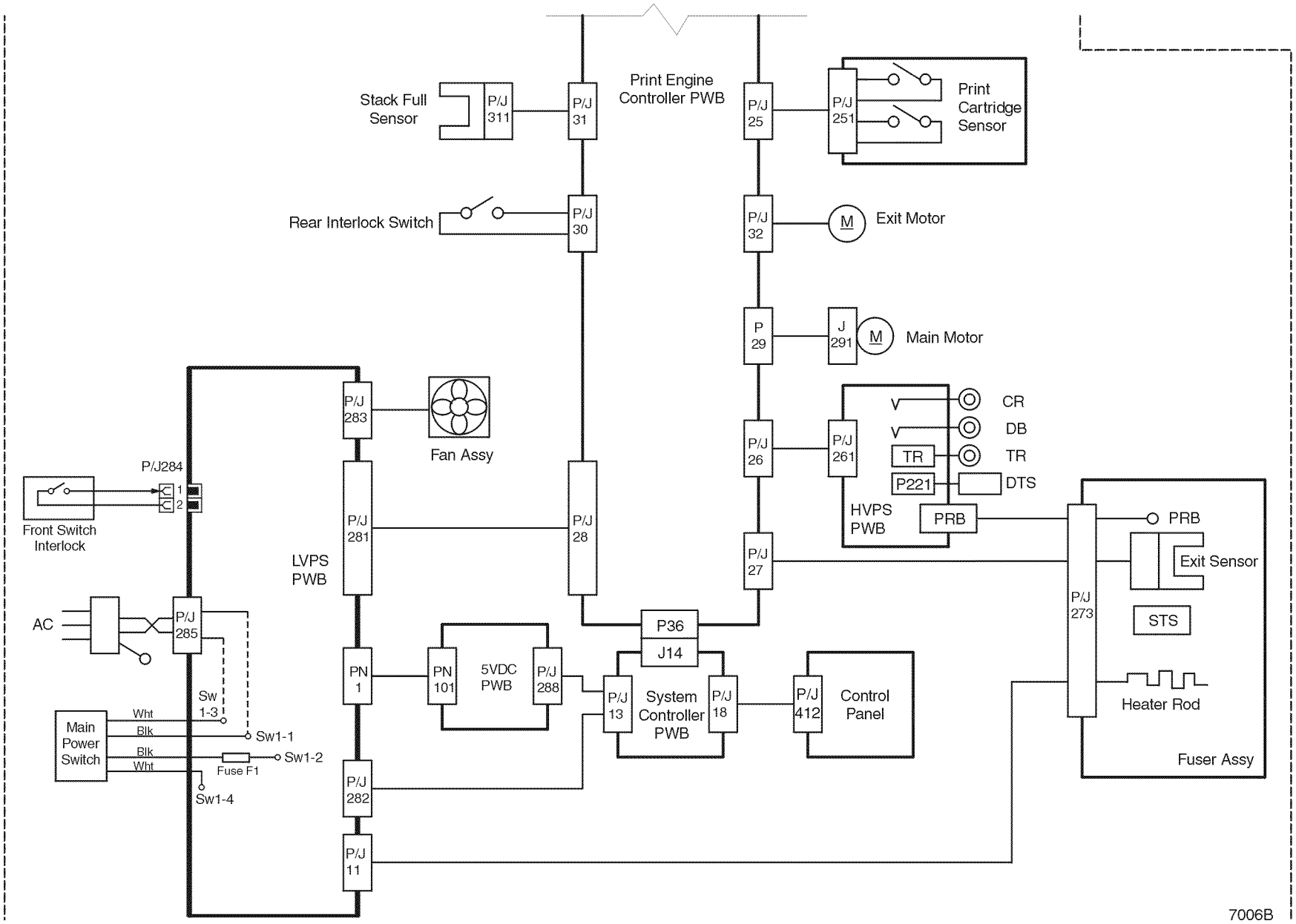

Figure 5 Block Diagram (2 of 2)

Block Diagram Tray 2 and Tray 3

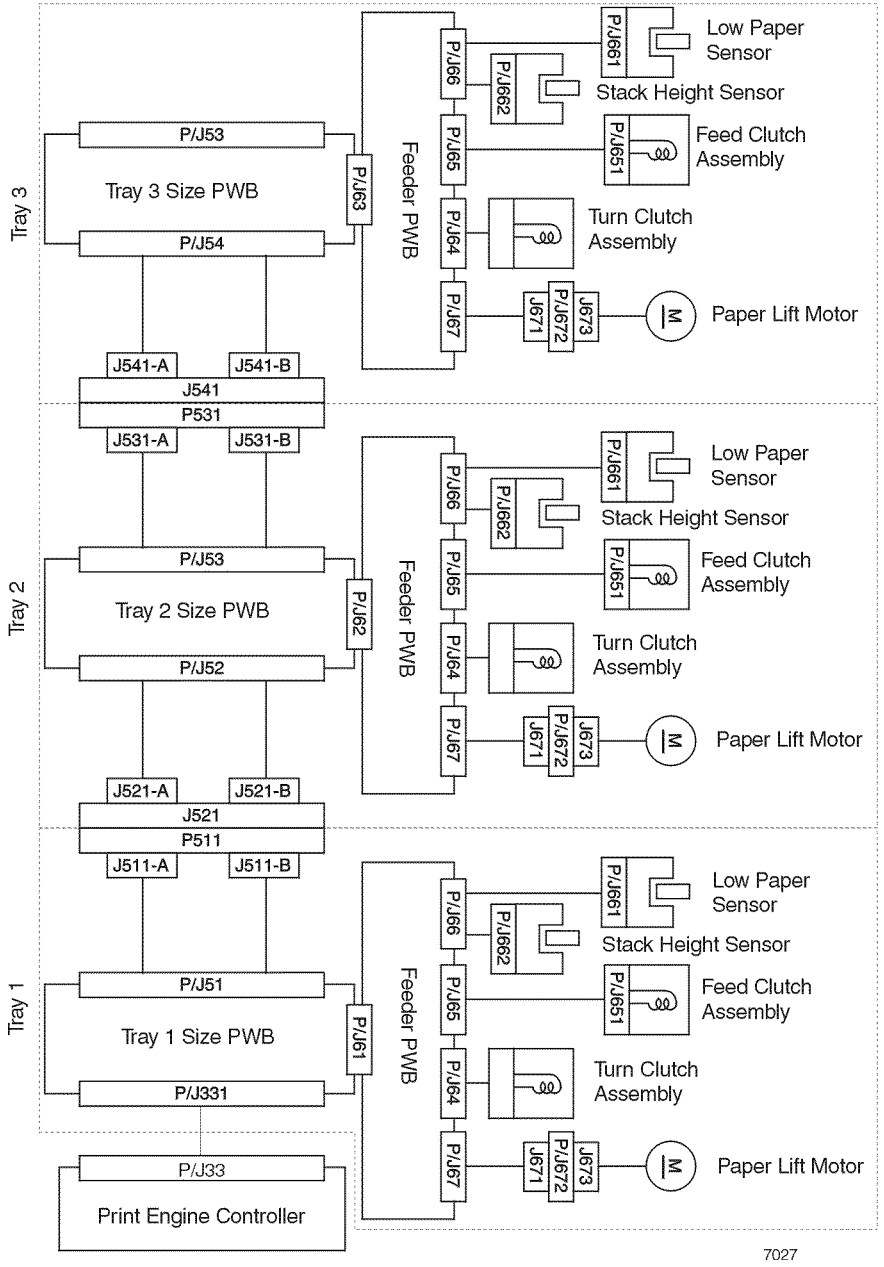

Figure 6 Block Diagram Tray 2 and Tray 3

Print Engine Controller PWB <=> LVPS PWB and Fuser Assembly (Figure 7) (Table 2)

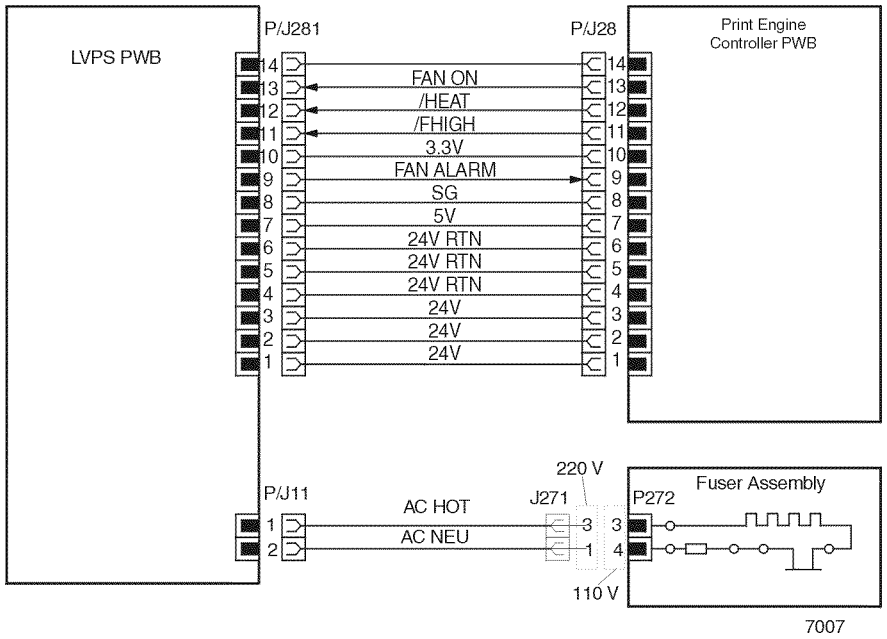

Figure 7 Print Engine Controller <=> LVPS <=> Fuser

Print Engine Controller PWB <=> LVPS PWB and Fuser Assembly

Table 2 shows the signal names for the Print Engine Controller PWB <=> LVPS PWB path:

Table 2 Signal Names

Signal Name	Description
FAN ON	Fan drive power that drives the Fan Assembly with 2 voltages, 24V for High speed and 15V for Low speed
/HEAT (TTL)	Fuser control signal to switch AC power to the Heat Rod on and off Low: 0V (ON), High: 3.3V (OFF)
/FHIGH (24V)	Fan speed switching signal that switches the speed of rotation of the Fan Assembly between High and Low Low: 0V (High speed), High: 24V (Low speed)
FAN ALARM (TTL)	Fan monitor signal. Goes Low when the rotation of the Fan Assembly is abnormal Low: 0V (Abnormal), High: 3.3V (Normal)

LVPS PWB <=> Fan Assembly, Front Switch Interlock Assembly, 5VDC PWB and System Controller PWB (Figure 8) (Table 3)

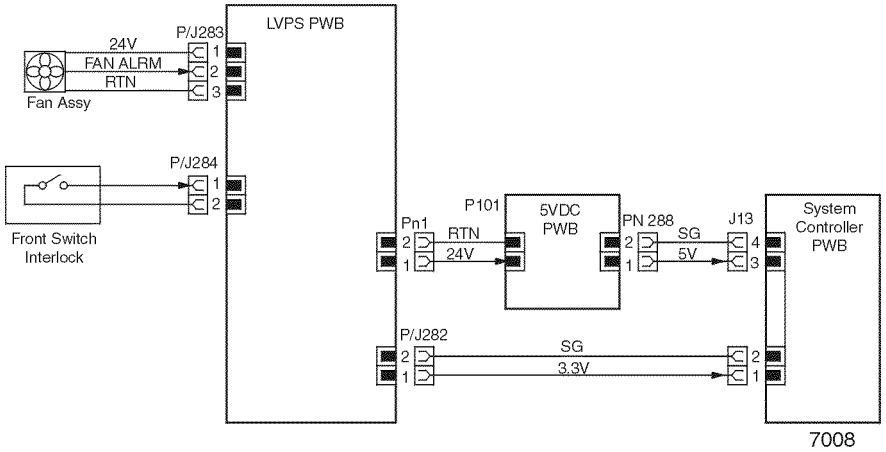

Figure 8 LVPS <=> Fan Assembly <=> Front Switch Interlock <=> 5VDC PWB <=> System Controller PWB

LVPS PWB <=> Fan Assembly, Front Switch Interlock Assembly, 5VDC PWB and System Controller PWB

Table 3 shows the signal names for the LVPS PWB <=> Fan Assembly path:

Table 3 Signal Names

Signal Name	Description
FAN ALARM	Actuates the Cassette 1 Feed Solenoid (Normally LOW (0V), and HIGH (3.3V) when paper is fed)

Print Engine Controller PWB <=> HVPS PWB <=> BTR, Print Cartridge, and Fuser Assembly (Figure 9) (Table 4) (Table 5)

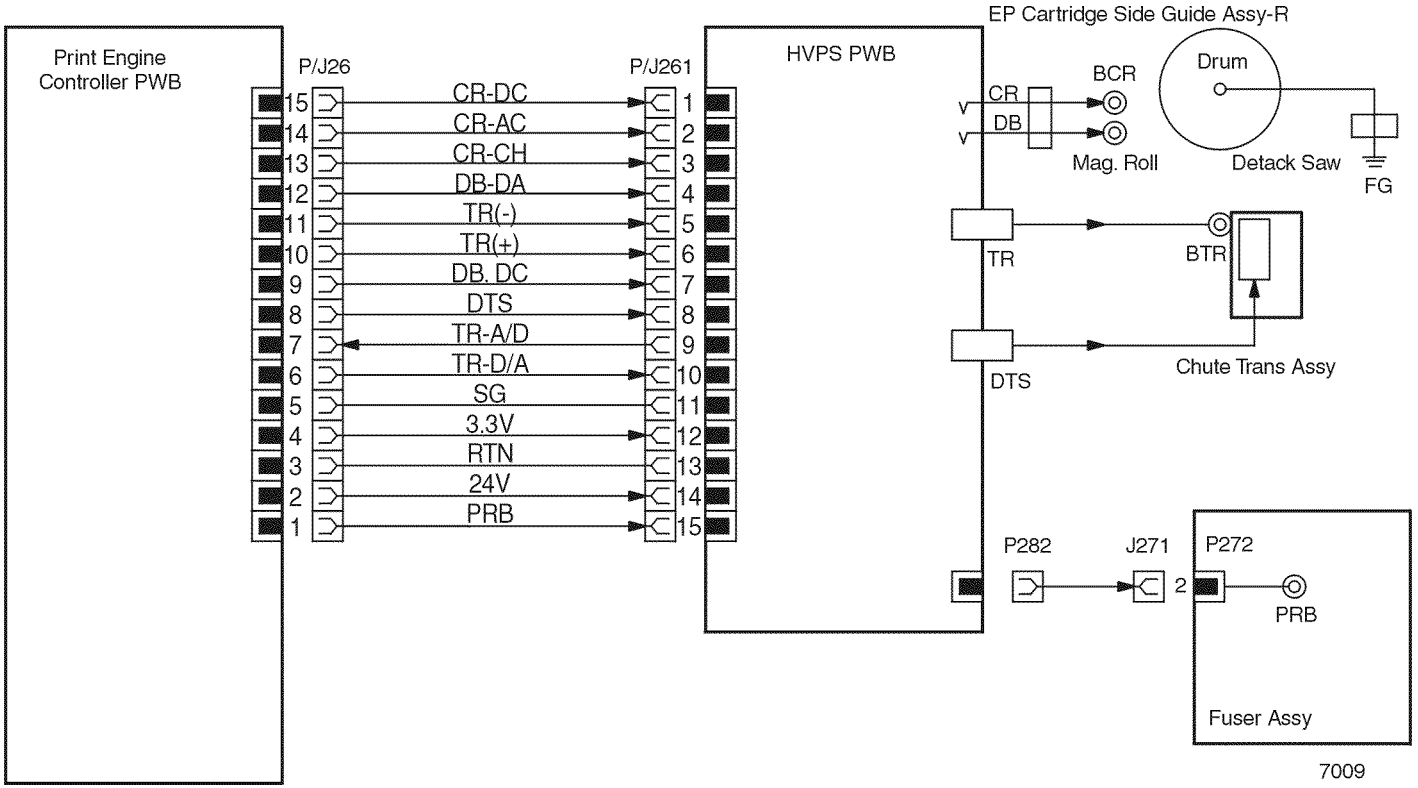

Figure 9 Print Engine Controller PWB <=> HVPS PWB <=> BTR <=> Print Cartridge <=>

Print Engine Controller PWB <=> HVPS PWB <=> BTR, Print Cartridge, and Fuser Assembly

Table 4 shows the signal names for the Print Engine Controller PWB <=> HVPS PWB path:

Table 4 Signal Names

Signal Name	Description
CR-DC	Control signal to switch the Charge Voltage for DC component of the CR and the PBR on and off. Low: 0V (OFF), High: 3.3V (ON) (applied charge voltage)
CR-AC	Constant-frequency pulse signal that provides the source of oscillation for generating the AC component of the CR
CR-CH	-
DB-DA	Constant-frequency pulse signal that provides the source of oscillation for generating the AC component of the DB (Development Bias) in the HVPS

Table 4 Signal Names

Signal Name	Description
TR(-)	Transfer Voltage (-) to be applied onto BTR (Analog)
TR(+)	Transfer Voltage (+) to be applied onto BTR (Analog)
DB.DC	Control signal to select the Development Voltage for DC component (Analog)
DTS	Control signal to select the DTS Voltage (Analog)
TR-A/D	-
TR-D/A	Control signal to select the TR(+) voltage (0 to 3.3VDC) as determined by the ATDVC (Analog)
PRB	Pressure Roll Bias to be applied on the Pressure Roll

Print Engine Controller PWB <=> HVPS PWB <=> BTR, Print Cartridge, and Fuser Assembly

Table 5 shows the signal names for the HVPS PWB <=> BTR, Print Cartridge, and Fuser Assembly path:

Table 5 Signal Names

Signal Name	Description
CR	HVPS output to the Magnet Roll
DB	HVPS output to the BCR
TR	HVPS output to the BTR (+DC in Transfer operation, and -DC when cleaning the BTR)
DTS	HVPS output to the Detack Saw
PRB	HVPS output to the Pressure Roll

Print Engine Controller PWB <=> Fuser Assembly (Figure 10) (Table 6)

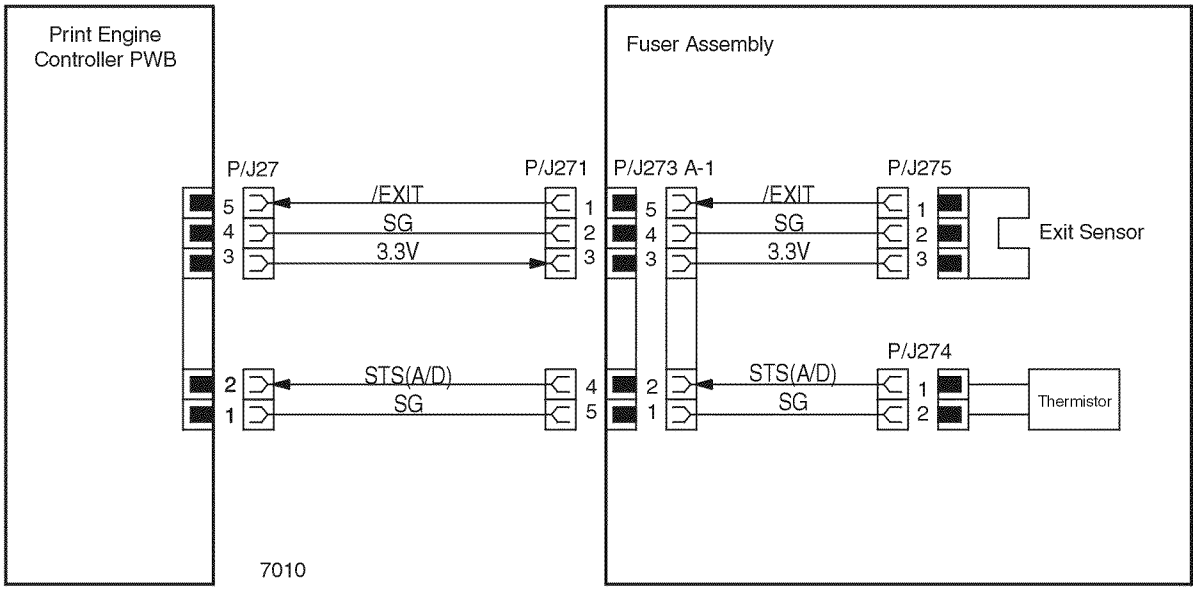

Figure 10 Print Engine Controller PWB <=> Fuser Assembly

Print Engine Controller PWB <=> Fuser Assembly

Table 6 shows the signal names for the Print Engine Controller PWB <=> Fuser Assembly path:

Table 6 Signal Names

Signal Name	Description
/EXIT	Signal from the Exit Sensor. This signal is Low (0V) when the Exit Sensor is activated, and High (3.3V) when deactuated.
STS	Signal from the Temperature Sensor which monitors the Fuser Heat Roll temperature. (Analog)

Print Engine Controller PWB <=> Exit Sensor, and Rear Interlock Switch (Figure 11) (Table 7)

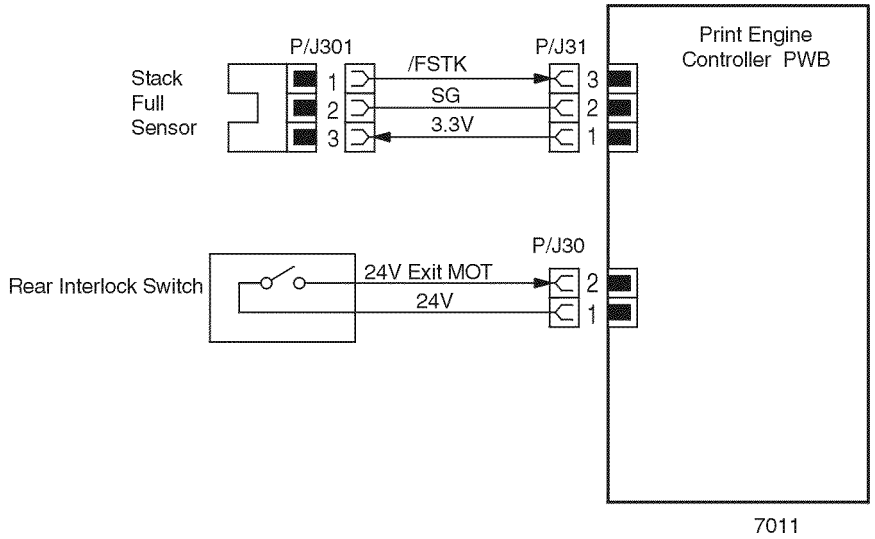

Figure 11 Print Engine Controller PWB <=> Exit Sensor <=> Rear Interlock Switch

Print Engine Controller PWB <=> Exit Sensor, and Rear Interlock Switch Assembly

Table 7 shows the signal names for the Print Engine Controller PWB <=> Exit Sensor, and Rear Interlock Switch Assembly path:

Table 7 Signal Names

Signal Name	Description
/FSTK	Signal from the Stack Full Sensor. This signal is Low (0V) when the Full Stack Sensor is actuated, and High (3.3V) when deactuated
24V EXIT MOT	Signal from the Rear Interlock Switch Assembly. Goes Low (0V) when the Cover Rear is open and breaks the 24VDC circuit for the Exit Motor Assembly.

Print Engine Controller PWB <=> Size 1 PWB <=> Feeder PWB <=> Low Paper Sensor, Stack Height Sensor, Feed Clutch Assembly, Turn Clutch Assembly and Motor Assembly (Figure 12) (Table 8) (Table 9)

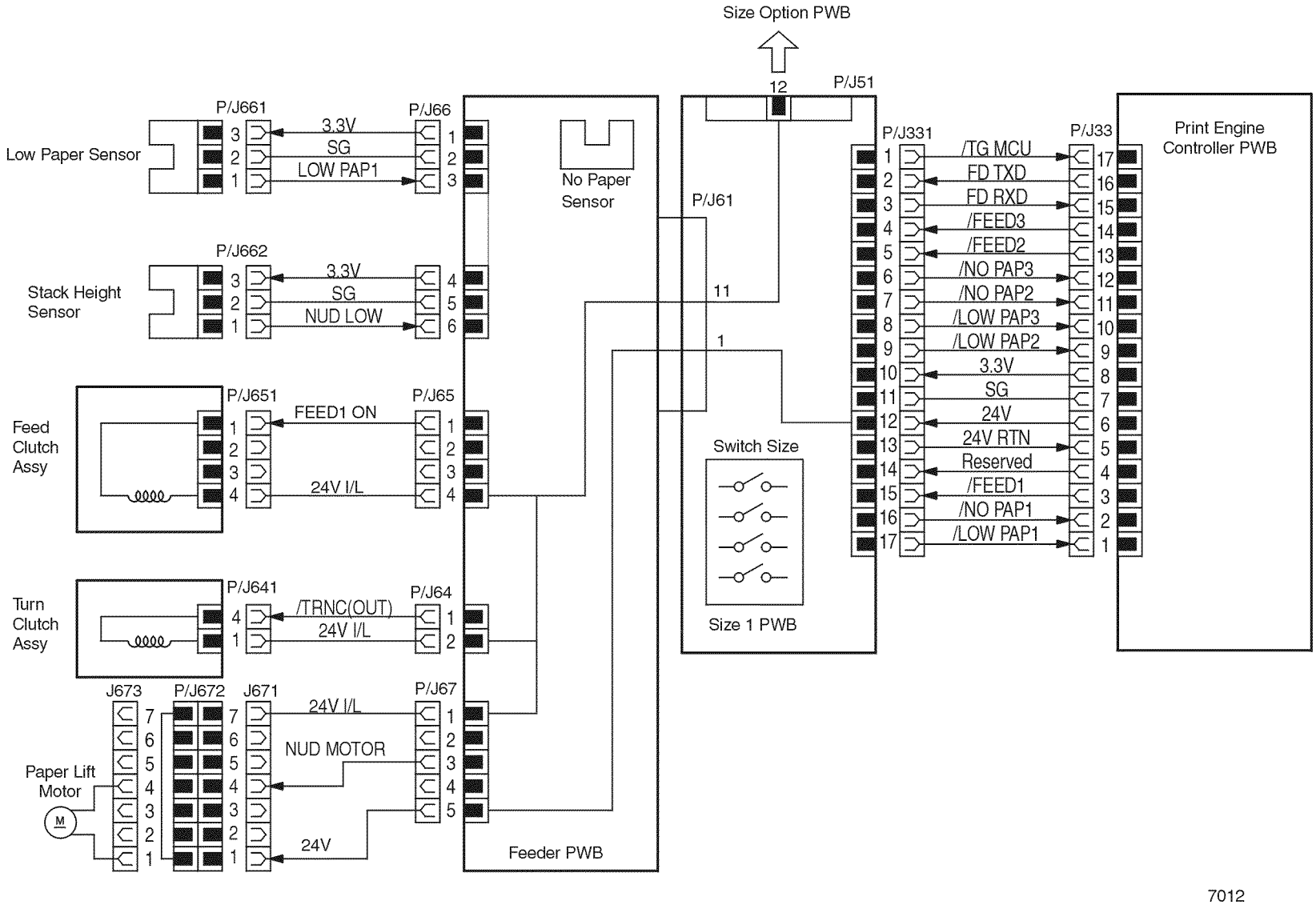

Figure 12 Print Engine Controller PWB <=> Size 1 PWB <=> Feeder PWB <=> Low Paper Sensor, Stack Height Sensor, Feed Clutch Assembly, Turn Clutch Assembly, Motor Assembly

Print Engine Controller PWB <=> Size 1 PWB <=> Feeder PWB <=> Low Paper Sensor, Stack Height Sensor, Feed Clutch Assembly, Turn Clutch Assembly and Motor Assembly

Table 8 shows the signal names for the Print Engine Controller PWB <=> Size 1 PWB path:

Table 8 Signal Names

Signal Name	Description
/TG MCU	550 Sheet Feeder check signal which is transferred from the Print Engine Controller PWB. Signal Levels: High = 3.3V Low = 0V
FD TXD	Control data which is transferred from the Print Engine Controller PWB Signal Levels: High = 3.3V Low = 0V
FD RXD	Received data from the Feeder Signal Levels: High = 3.3V Low = 0V
/FEED 3	Feed control signal for the Feeder 3. The Feed Clutch Assembly and the Turn Clutch Assembly are activated when this signal goes Low. Signal Levels: High = 3.3V Low = 0V
/FEED 2	Feed control signal for the Feeder 2. The Feed Clutch Assembly and the Turn Clutch Assembly are activated when this signal goes Low. Signal Levels: High = 3.3V Low = 0V
/NO PAP 3	Signal from the No Paper 3 Sensor (equipped on the 550 Sheet Feeder 3). This signal is Low when the No Paper 3 Sensor is activated. Signal Levels: High = 3.3V Low = 0V
/NO PAP 2	Signal from the No Paper 2 Sensor (equipped on the 550 Sheet Feeder 2). This signal is Low when the No Paper 2 Sensor is activated. Signal Levels: High = 3.3V Low = 0V
/LOW PAP 3	Signal from the Low Paper Sensor 3 (equipped on the 550 Sheet Feeder 3). This signal is Low when the Low Paper Sensor 3 is activated. Signal Levels: High = 3.3V Low = 0V
/LOW PAP 2	Signal from the Low Paper Sensor 2 (equipped on the 550 Sheet Feeder 2). This signal is Low when the Low Paper Sensor 2 is activated. Signal Levels: High = 3.3V Low = 0V
/FEED 1	Feed control signal for the Feeder 1. The Feed Clutch Assembly and the Turn Clutch Assembly are activated when this signal goes Low. Signal Levels: High = 3.3V Low = 0V
/NO PAP 1	Signal from the No Paper 1 Sensor (equipped on the Feeder). This signal is Low when the No Paper 1 Sensor is activated. Signal Levels: High = 3.3V Low = 0V

Table 8 Signal Names

Signal Name	Description
/LOW PAP 1	Signal from the Low Paper Sensor (equipped on the Feeder). This signal is Low when the Low Paper Sensor is activated. Signal Levels: High = 3.3V Low = 0V

Print Engine Controller PWB <=> Size 1 PWB <=> Feeder PWB <=> Low Paper Sensor, Stack Height Sensor, Feed Clutch Assembly, Turn Clutch Assembly and Motor Assembly

Table 9 shows the signal names for the Feeder PWB <=> Low Paper Sensor, Stack Height Sensor, Feed Clutch Assembly, Turn Clutch Assembly and Motor Assembly path:

Table 9 Signal Names

Signal Name	Description
LOW PAP 1	Signal from the Low Paper Sensor. This signal is Low when the Low Paper Sensor is activated. Signal Levels: High = 3.3V Low = 0V
FEED 1 ON	Control signal which actuates the Feed Clutch Assembly. Signal Levels: High = 24V Low = 0V
/TRNC (OUT)	Control signal which actuates the Turn Clutch Assembly. The Turn Clutch Assembly is interlocked with the Feed Clutch Assembly. Signal Levels: High = 24V Low = 0V
NUD MOTOR	Control signal which turns on the motor Assembly. Signal Levels: High = 3.3V Low = 0V
24V Interlock	Interlock signal which related with the all clutches and motors equipped on the Feeder PWB.

Print Engine Controller PWB <=> Main Motor Assembly, Exit Motor Assembly and Print Cartridge Sensor Assembly (Figure 13) (Table 10)

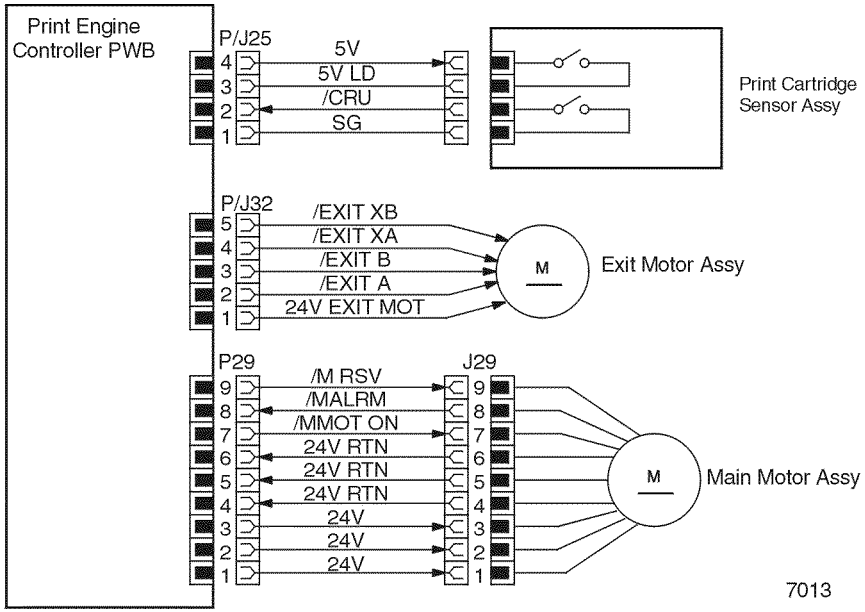

Figure 13 Print Engine Controller PWB <=> Main Motor Assembly, Exit Motor Assembly, Print Cartridge Sensor Assembly

Print Engine Controller PWB <=> Main Motor Assembly, Exit Motor Assembly and Print Cartridge Sensor Assembly

Table 10 shows the signal names for the Print Engine Controller PWB <=> Main Motor Assembly, Exit Motor Assembly and Print Cartridge Sensor Assembly path:

Table 10 Signal Names

Signal Name	Description
5VLD	+5V power source to the Laser Diode (0V when the Print Cartridge is not in place) High: 5V Low: 0V
/CRU	Signal which activates the 5VLD circuit (0V when the Print Cartridge is not in place) High: 5V Low: 0V
/EXIT XB	Phase XB drive signal for the stepping motor (LOW when driving, and High when not driving) Signal Levels: High = 24V Low = 0V
/EXIT XA	Phase XA drive signal for the stepping motor (LOW when driving, and High when not driving) Signal Levels: High = 24V Low = 0V
/EXIT B	Phase B drive signal for the stepping motor (LOW when driving, and High when not driving) Signal Levels: High = 24V Low = 0V
/EXIT A	Phase A drive signal for the stepping motor (LOW when driving, and High when not driving) Signal Levels: High = 24V Low = 0V
/M RSV	Signal Levels: High = 3.3V Low = 0V
/MALRM	Main motor monitor signal. Goes Low when the rotation of the Main Motor Assembly is abnormal. Signal Levels: High = 3.3V Low = 0V
/MMOT ON	Main motor control signal to turn the Main Motor Assembly on and off. Signal Levels: High = 3.3V Low = 0V

Print Engine Controller PWB <=> Connector PWB <=> Paper Set Sensor, Registration Sensor, Registration Clutch, Toner Sensor, Pick Up Solenoid (Figure 14) (Table 11)

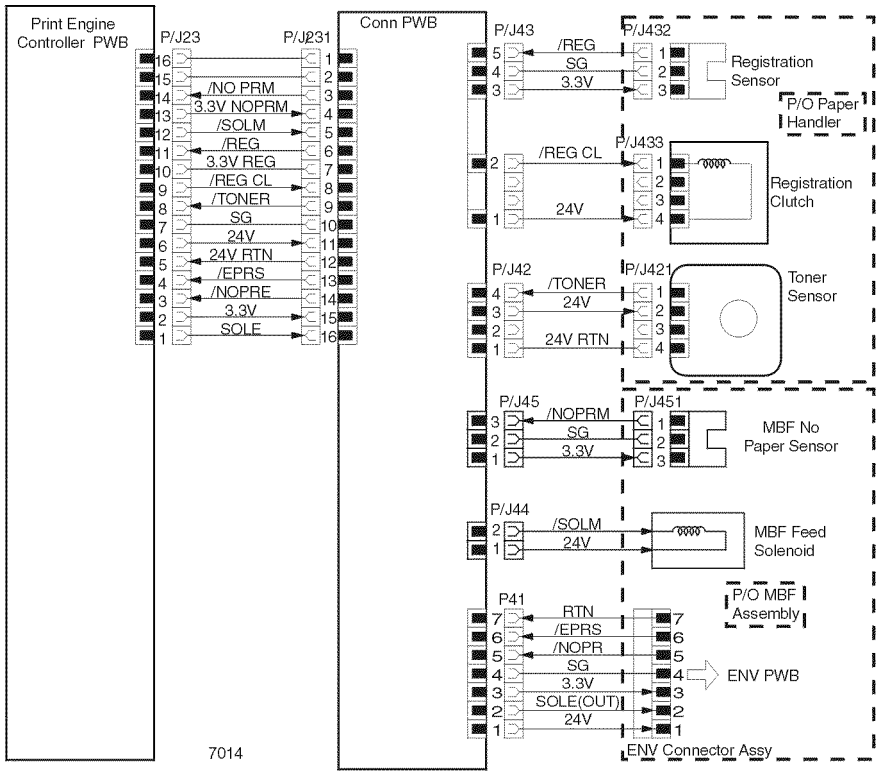

Figure 14 Print Engine Controller PWB <=> Connector PWB <=> Paper Set Sensor, Registration Sensor, Registration Clutch, Toner Sensor, Pick Up Solenoid

Print Engine Controller PWB <=> Connector PWB <=> Paper Set Sensor, Registration Sensor, Registration Clutch, Toner Sensor, Pick Up Solenoid

Table 11 shows the signal names for the Print Engine Controller PWB <=> Connector PWB path:

Table 11 Signal Name

Signal Name	Description
/NO PRM	Signal from the Paper Set Sensor. This signal is Low when the Paper Set Sensor is activated. Signal Levels: High = 3.3V Low = 0V

Table 11 Signal Name

Signal Name	Description
/SOLM	Control signal which activates the Pick Up Solenoid Signal Levels: High = 3.3V Low = 0V
/REG	Signal from the Registration Sensor. This signal is Low when the Registration Sensor is activated. Signal Levels: High = 3.3V Low = 0V
/REG CL	Control signal which activates the Registration Clutch. Signal Levels: High = 24V Low = 0V
/TONER	Signal from the Toner Sensor. This signal is Low when the Toner Sensor is activated. Signal Levels: High = 3.3V Low = 0V
/EPRS	Signal from the Envelope Exit Sensor Assembly equipped on the Envelope. This signal is Low when the Envelope Exit Sensor Assembly is activated. Signal Levels: High = 3.3V Low = 0V
/NOPER	Signal from the No Paper Sensor equipped on the Envelope. This signal is Low when the No Paper Sensor is activated. Signal Levels: High = 3.3V Low = 0V
SOLE	Control signal which activates the Clutch equipped on the Envelope Signal Levels: High = 24V Low = 0V

Print Engine Controller PWB <=> Laser Assembly (Figure 15) (Table 12)

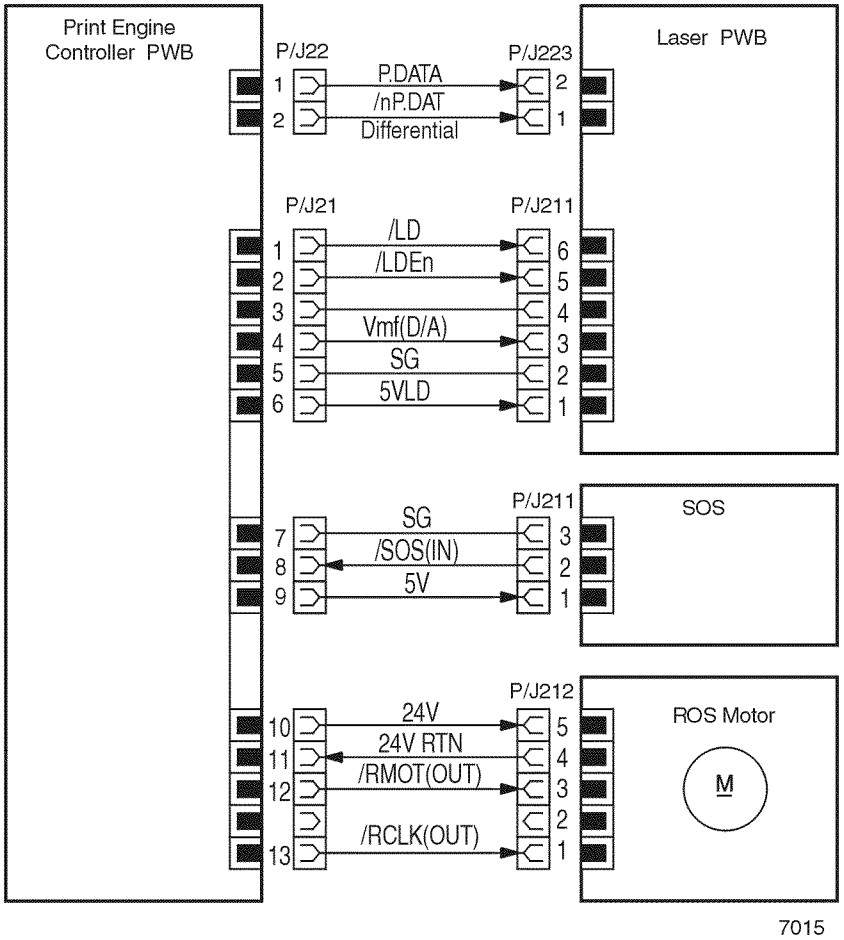

Figure 15 Print Engine Controller PWB <=> Laser Assembly

Table 12 shows the signal names for the Fuser Print Engine Controller PWB <=> Laser Assembly path:

Table 12 Signal Names

Signal Name	Description
P.DATA	Print Image Data Signal Levels: High = 3.3V Low = 0V
/nP.DATA	Print Image Data Signal Levels: High = 3.3V Low = 0V
/LD	Control signal which determines the drive voltage for the Laser Diode. Signal: Analog
/LDEN	Control signal which determines the drive voltage for the Laser Diode. Signal: Analog
Vmf(D/A)	Control signal for the Laser Diode Signal: Analog
/SOS(IN)	Synchronization signal generated by the SOS PWB which indicates the start of each scan. Signal: TTL
5VLD	+5V power source to the Laser Diode (0V when the Front Cover Assembly is open or the Print Cartridge is not in place). High: 5V Low: 0V
/RMOT(OUT)	Scanner Motor Control signal which switches the Laser Motor on and off Low: 0V (ON), HIgh: 3.3V (OFF)
/RCLK	Synchronization signal for the Laser Motor Signal: Pulse

System Controller PWB <=> Control Panel (Figure 16) (Table 13)

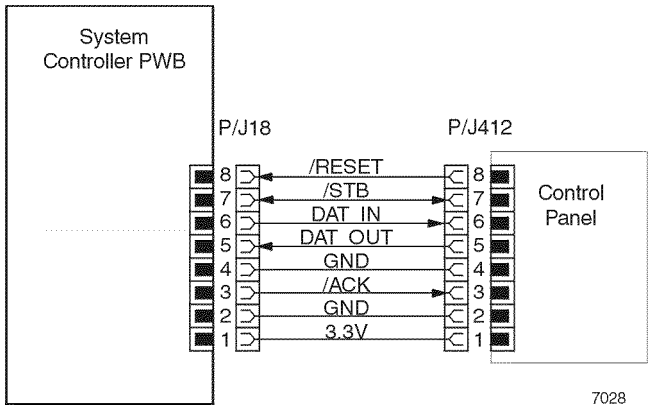

Figure 16 System Controller PWB <=> Control Panel

Table 13 Signal Names

Pin Number	Signal Name	In/Out
1	3.3V	-
2	GND	-
3	/ACK	In
4	GND	-
5	DAT_OUT	Out
6	DAT_IN	In
7	/STB	Out
8	/RESET	Out

550 Sheet Paper Feeder

Wiring Diagrams and Signal Information

This section of the manual contains a Block Diagram for the N2125 550 Sheet Paper Feeder Assembly. The Block Diagram shows the interconnections of the major subsystems within the printer. The remainder of this section divides the Block Diagram into individual block diagrams to better illustrate the electrical relationships between components and assemblies within the 550 Sheet Paper Feeder Assembly. Each wire in the block diagram is tagged with a signal name, and each wire is terminated at both ends with a pin number.

Block Diagram

1. 550 Sheet Feeder Block Diagram
2. Size 1 PWB <=> Tray 2 PWB <=> Tray 3 PWB (Table 2)
3. Feeder PWB <=> Low Paper Sensor, Stack Height Sensor, Feed Clutch Assembly, Turn Clutch Assembly and Motor Assembly (Table 3)

Location of P/J Connectors

Use the P/J Table (Table 1) and the P/J Map (Figure 1) to locate a specific P/J connector within the Feeder and Cassette.

To find the location of a P/J:

1. Locate the P/J connector number in the first column of the table.
2. Locate the corresponding coordinates in the second column, such as I7 or J7.
3. Go to the map.
4. Cross-reference the letter and number of the P/J coordinates with the letters and numbers on the map.
5. The P/J connector is located within the area where the coordinates cross.

P/J Table

Table 1 550 Sheet Paper Feeder P/J Table

Connector	Coordinate	Description
P/J 52	I4	Connects the Size 550 Sheet Harness Assembly to the Size 550 Sheet PWB.
P/J 53	I5	Connects the Harness Assembly to the Size 550 Sheet Feeder PWB.
P/J 62	H5	Connects the Size Option PWB to the Feeder PWB.
P/J 64	B5	Connects the Turn Clutch Harness Assembly to the Feeder PWB.
P/J 65	B5	Connects the Feed Clutch Harness Assembly to the Feeder PWB.
P/J 66	C4	Connects the N/SNSR Harness Assembly to the Feeder PWB.
P/J 67	B4	Connects the N/MOT Harness Assembly to the Feeder PWB.
J 521	E8	Connects the Size Option Harness Assembly to the Printer Assembly. (Size 1 PWB)
P 531	E9	Connects the Harness Assembly to the Lower Feeder.
P/J 641	C9	Connects the Turn Clutch Harness Assembly to the Turn Clutch Assembly.
P/J 651	C9	Connects the Feed Clutch Harness Assembly to the Feed Clutch Assembly.
P/J 661	G10	Connects the N/SNSR Harness Assembly to the Low Paper Sensor Paper.
P/J 662	E10	Connects the N/SNSR Harness Assembly to the Stack Height Sensor.
P/J 671	E9	Connects the N/MOT Harness Assembly to the Socket.
P/J 672	E9	Connects the Cassette Assembly to the Feeder Assembly.
P/J 673	D9	Connects the Motor Assembly to the Connector.

P/J Map

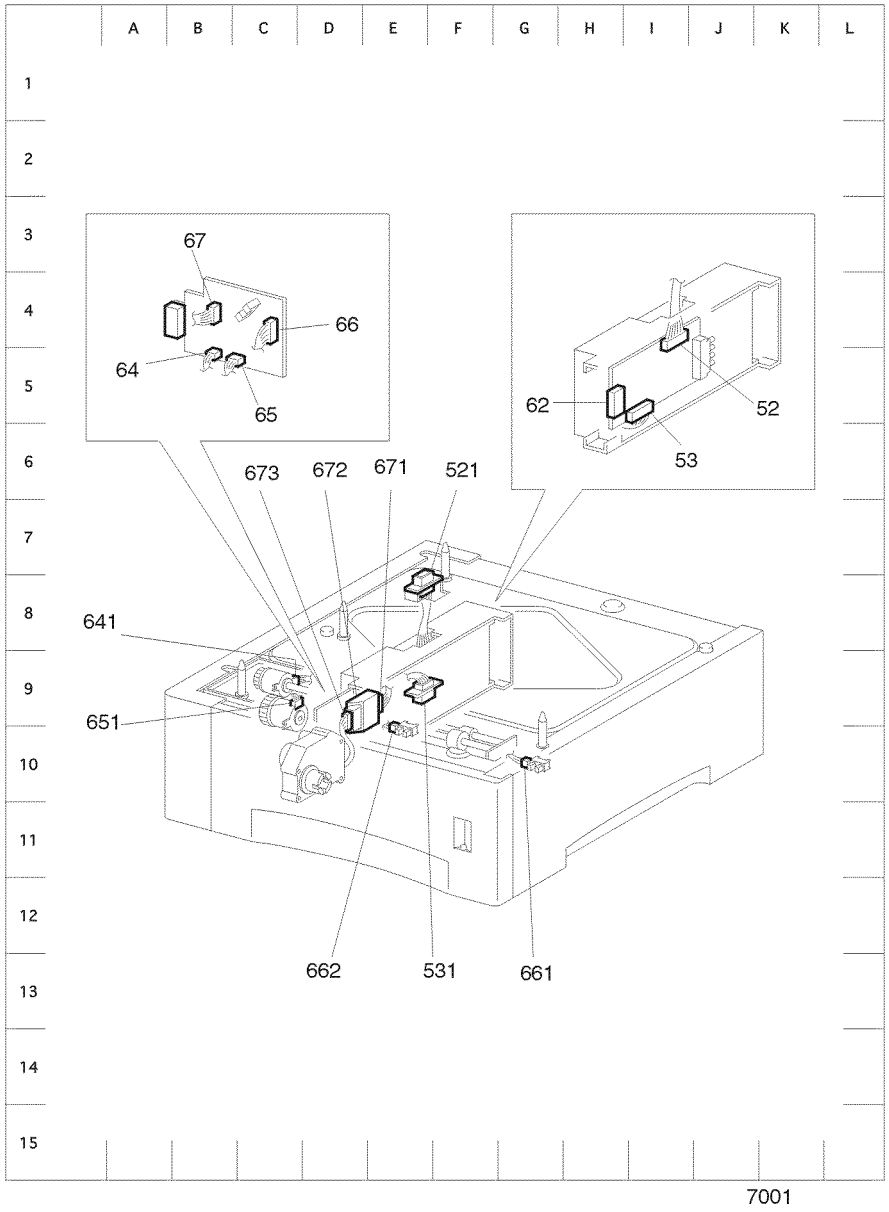

Figure 1 550 Sheet Paper Feeder P/J Map

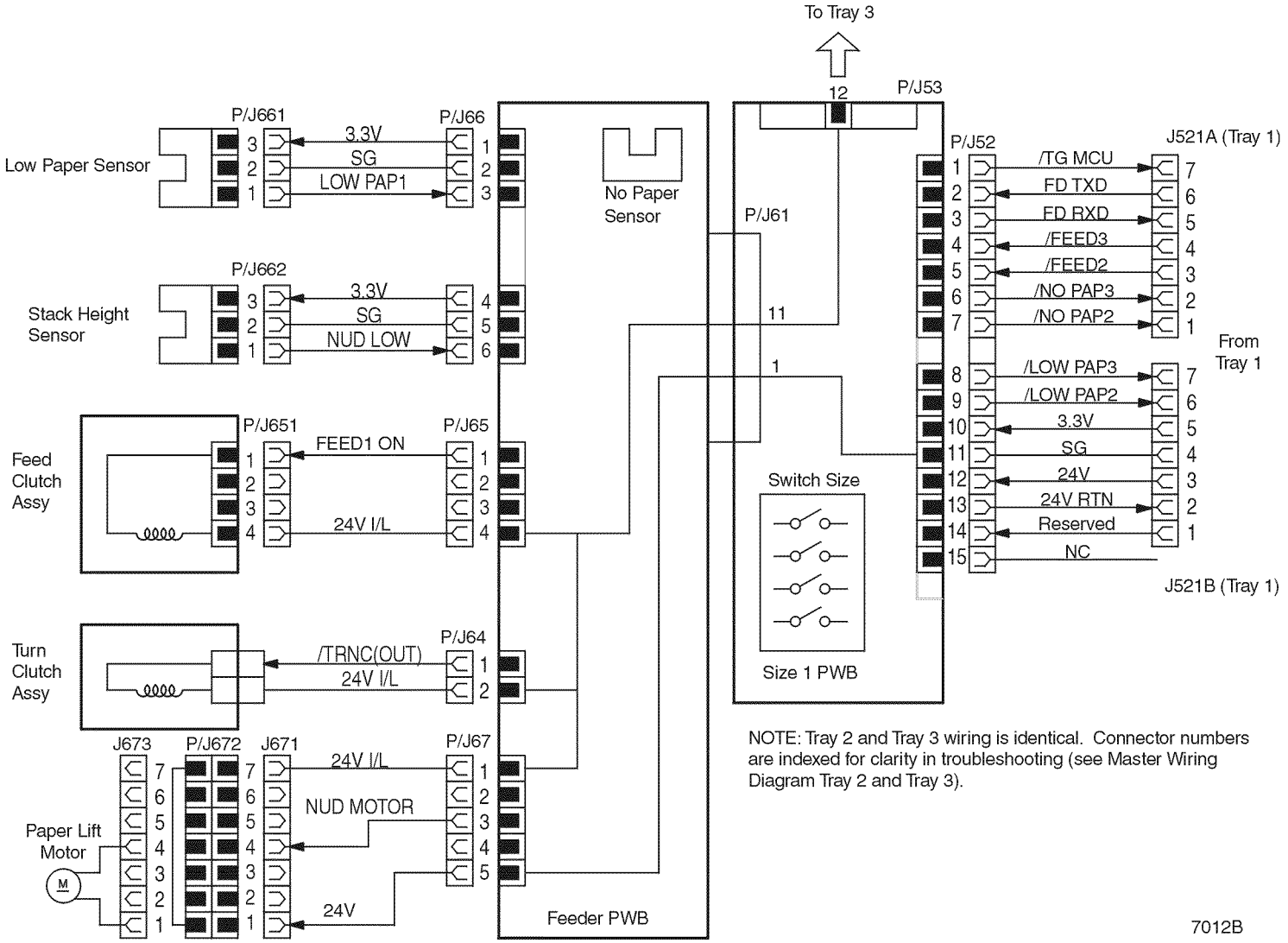

Figure 2 550 Sheet Feeder Block Diagram

Size 1 PWB <=> Tray 2 PWB <=> Tray 3 PWB (Table 2)

Table 2 shows the signal names for the Print Engine Controller PWB <=> Size 1 PWB<=> PWB Option path:

Table 2 Signal Names

Signal Name	Description
FD TXD	Control data which is transferred from the Print Engine Controller PWB Signal Levels: High = 3.3V Low = 0V
FD RXD	Received data from the Feeder Signal Levels: High = 3.3V Low = 0V
/FEED 3	Feed control signal for the Feeder 3. The Feed Clutch Assembly and the Turn Clutch Assembly are activated when this signal goes Low. Signal Levels: High = 3.3V Low = 0V
/FEED 2	Feed control signal for the Feeder 2. The Feed Clutch Assembly and the Turn Clutch Assembly are activated when this signal goes Low. Signal Levels: High = 3.3V Low = 0V
/NO PAP 3	Signal from the No Paper 3 Sensor (equipped on the Option Feeder 3). This signal is Low when the No Paper 3 Sensor is activated. Signal Levels: High = 3.3V Low = 0V
/NO PAP 2	Signal from the No Paper 2 Sensor (equipped on the Option Feeder 2). This signal is Low when the No Paper 3 Sensor is activated. Signal Levels: High = 3.3V Low = 0V
/LOW PAP 3	Signal from the Low Paper Sensor 3 (equipped on the Option Feeder 3). This signal is Low when the Low Paper Sensor 3 is activated. Signal Levels: High = 3.3V Low = 0V
/LOW PAP 2	Signal from the Low Paper Sensor 2 (equipped on the Option Feeder 2). This signal is Low when the Low Paper Sensor 2 is activated. Signal Levels: High = 3.3V Low = 0V

Feeder PWB <=> Low Paper Sensor, Stack Height Sensor, Feed Clutch Assembly, Turn Clutch Assembly and Motor Assembly (Table 3)

The following table shows the signal names for the Feeder PWB <=> Low Paper Sensor, Stack Height Sensor, Feed Clutch Assembly, Turn Clutch Assembly and Motor Assembly path:

Table 3 Signal Names

Signal Name	Description
LOW PAP 1(/2/3)	Signal from the Low Paper Sensor. This signal is Low when the Low Paper Sensor is activated. Signal Levels: High = 3.3V Low = 0V

Table 3 Signal Names

Signal Name	Description
FEED 1(/2/3) ON	Control signal which actuates the Feed Clutch Assembly. Signal Levels: High = 24V Low = 0V
/TRNC (OUT)	Control signal which actuates the Turn Clutch Assembly. The Turn Clutch Assembly is interlocked with the Feed Clutch Assembly. Signal Levels: High = 24V Low = 0V
NUD MOTOR	Control signal which turns on the Motor Assembly. Signal Levels: High = 3.3V Low = 0V
24V Interlock	Interlock signal which related with the all clutches and motors equipped on the Feeder PWB. Signal Levels: High = 24V Low = 0V

Duplex Assembly

Wiring Diagrams and Signal Information

This section of the manual contains a Block Diagram for the N2125 Duplex Feeder Assembly. The Block Diagram shows the interconnections of the major subsystems within the printer. The remainder of this section divides the Block Diagram into individual block diagrams to better illustrate the electrical relationships between components and assemblies within the Duplex Feeder Assembly. Each wire in the block diagram is tagged with a signal name, and each wire is terminated at both ends with a pin number.

Block Diagram

1. Duplex Assembly Block Diagram
2. Print Engine Controller PWB <=> Duplex PWB (Figure 3) (Table 2)
3. Duplex PWB <=> Sensor Photo IN-H(L), Duplex Sensor Assembly and Duplex Motor Assembly (Figure 4)

Location of P/J Connectors

Use the P/J table (Table 1) and the P/J Map (Figure 1) to locate a specific P/J connector within the Feeder and Cassette.

- Locate the P/J connector number in the first column of the table.
- Locate the corresponding coordinates in the second column, such as I7 or J7.
- Go to the map.
- Cross-reference the letter and number of the P/J coordinates with the letters and numbers on the map.
- The P/J connector is located within the area where the coordinates cross.

P/J Table

Table 1 Duplex Assembly P/J Table

Connector	Coordinate	Description
P/J 36	H7	Connects the Duplex Sensor Harness Assembly to the Duplex PWB.
P/J 37	H8	Connects the Duplex Sensor Assembly to the Duplex PWB.
P/J 38	G7	Connects the Duplex Motor Assembly to the Duplex PWB.
P/J 39	G7	Connects the Duplex Option Harness Assembly to the Duplex PWB.
P/J 360	J7	Connects the Duplex Sensor Harness Assembly to the Sensor Photo IN-H(L).
J 391	E8	Connects the Duplex Option Harness Assembly to the Printer Assembly. (Print Engine Controller PWB)

P/J Map

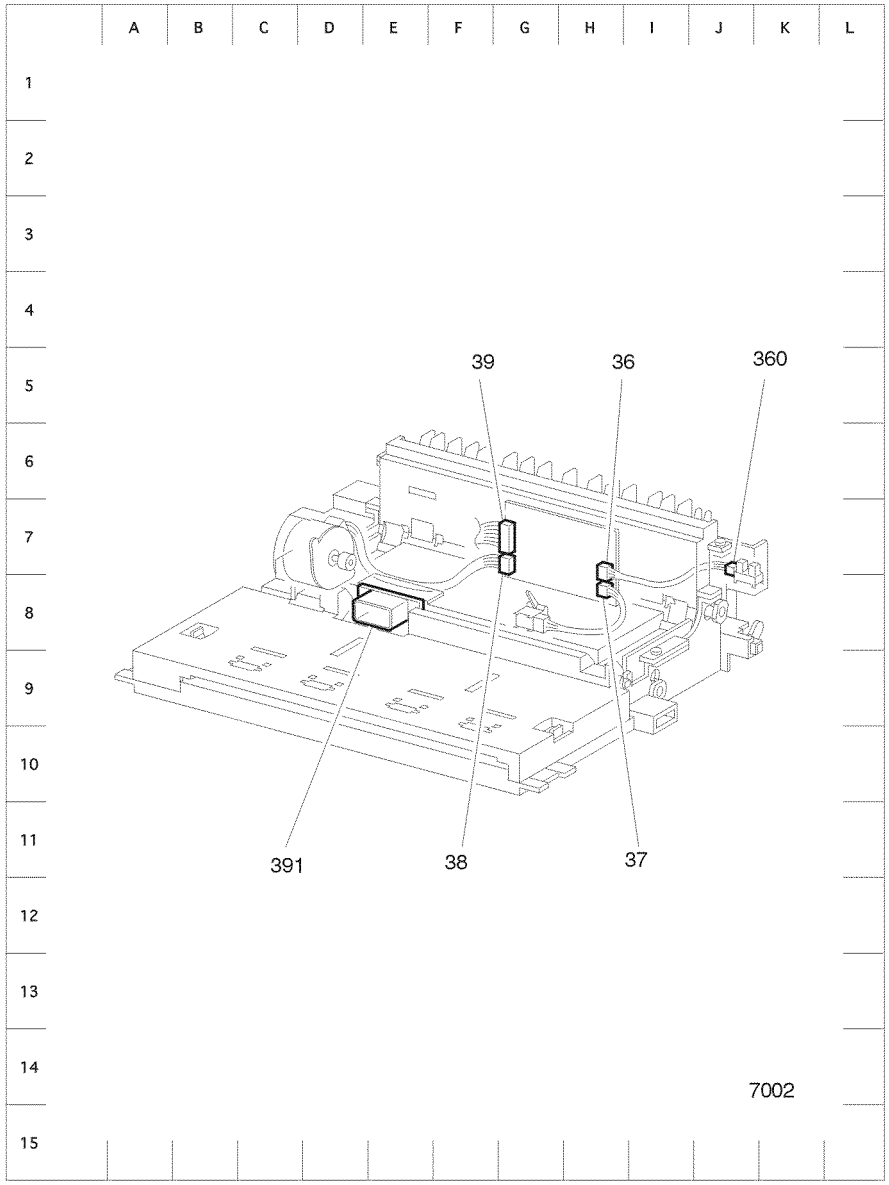

Figure 1 Duplex Assembly P/J Map

Block Diagram

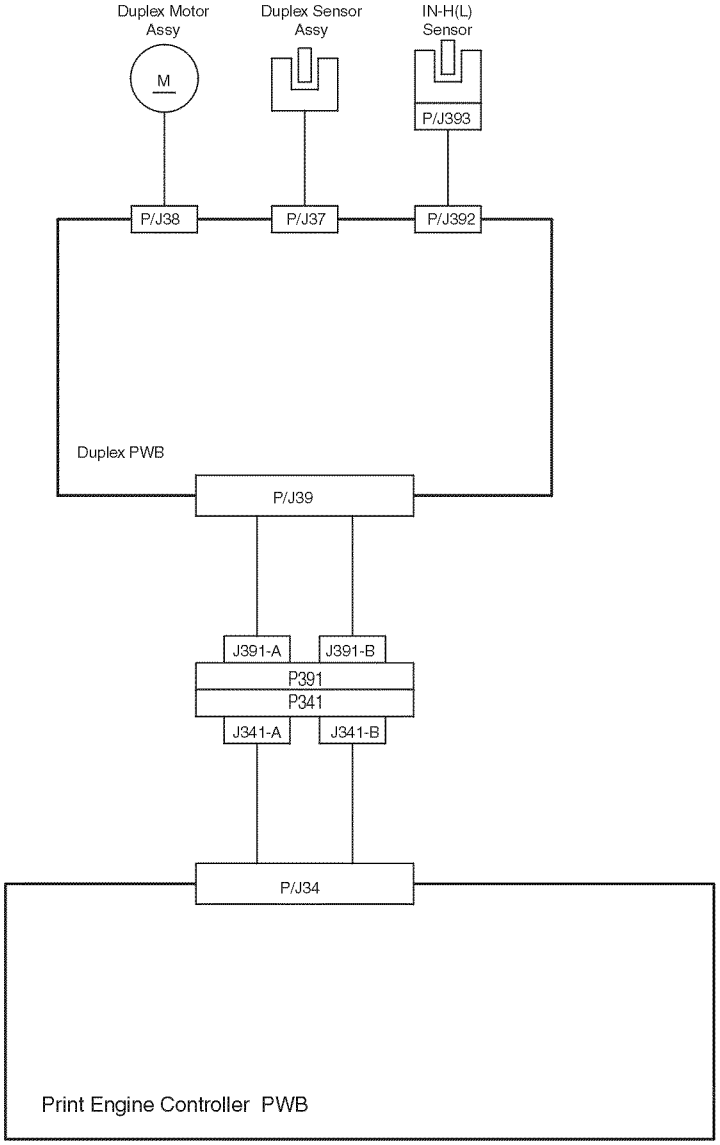

Figure 2 Duplex Assembly Block Diagram

Print Engine Controller PWB <=> Duplex PWB (Figure 3) (Table 2)

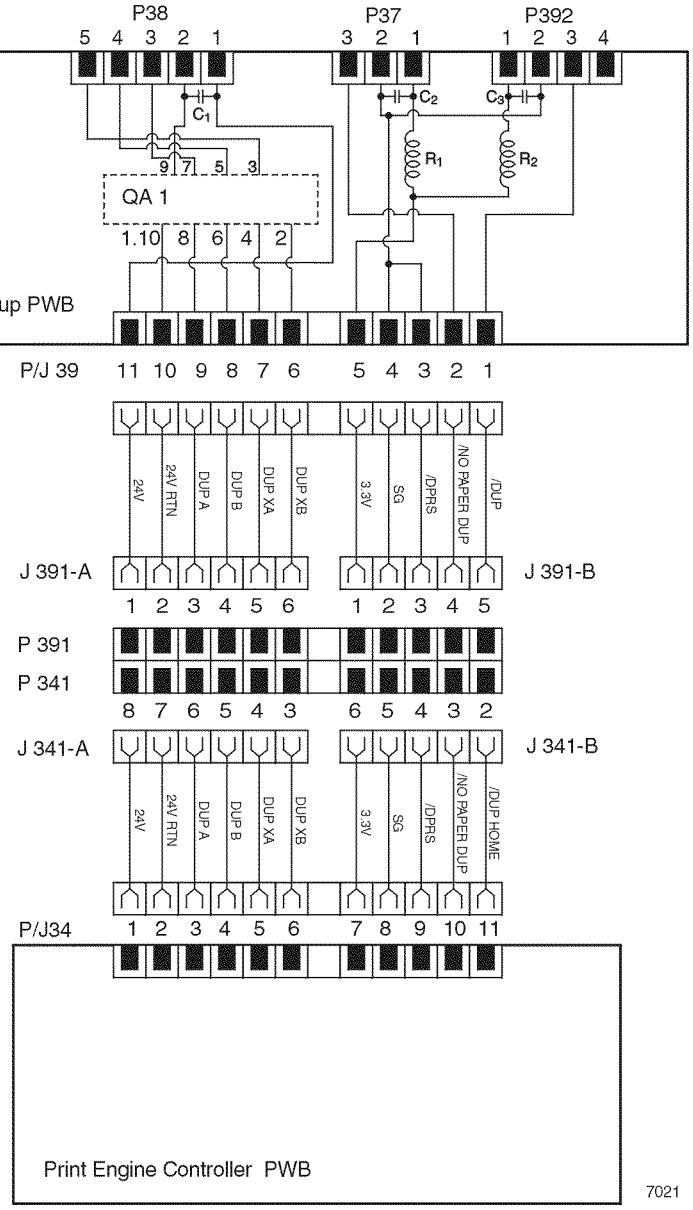

Figure 3 Print Engine Controller PWB <=> Duplex PWB

Table 2 shows the signal names for the Print Engine Controller PWB <=> Duplex PWB path:

Table 2 Signal Names

Signal Name	Description
DUP A	Motor control signal Signal: Pulse
DUP B	Motor control signal Signal: Pulse
DUP XA	Motor control signal Signal: Pulse
DUP XB	Motor control signal Signal: Pulse
/DPRS	Signal Levels: High = 3.3V Low = 0V
/NO PAPER DUP	Signal from the Duplex Sensor Assembly. This signal informs the paper pass at the Duplex Assembly to the Print Engine Controller. This signal is Low when the Duplex Sensor Assembly is actuated (when the paper passes at the Duplex Sensor Assembly). Signal Levels: High = 3.3V Low = 0V
/DUP HOME	Signal from the Sensor Photo IN-H(L). This signal informs that the Duplex Assembly is in the correct position (Home Position). This signal is Low when the Duplex Assembly is in the correct position. Signal Levels: High = 3.3V Low = 0V

Duplex PWB <=> Sensor Photo IN-H(L), Duplex Sensor Assembly and Duplex Motor Assembly (Figure 4)

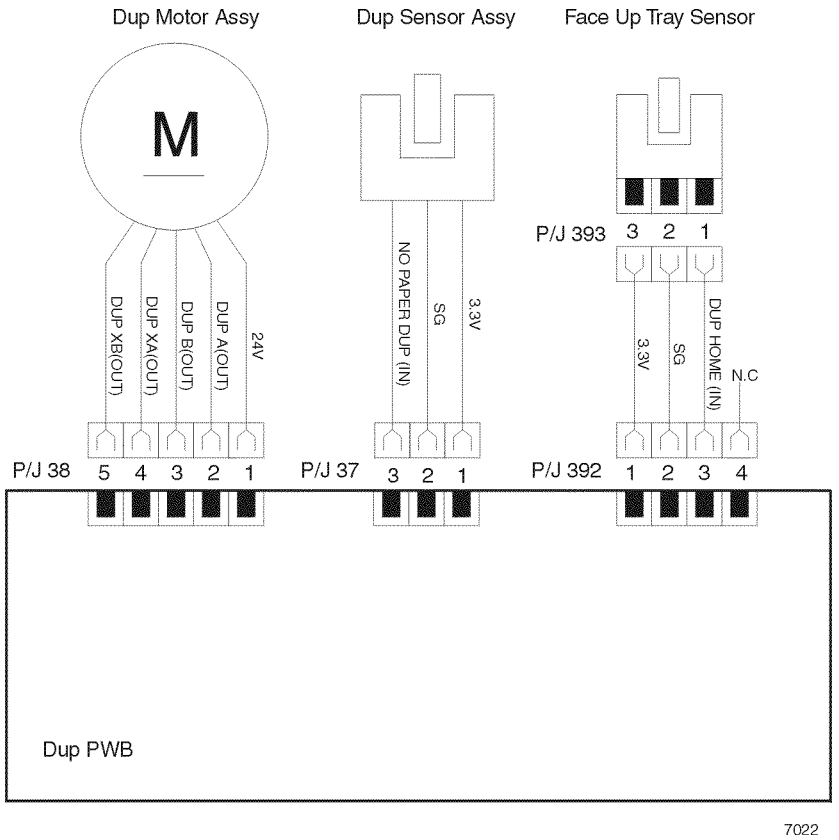

Figure 4 Duplex PWB <=> Sensor Photo IN-H(L), Duplex Sensor Assembly and Duplex Motor Assembly

Offset Catch Tray

Wiring Diagrams and Signal Information

This section of the manual contains a Block Diagram for the N2125 OCT. The Block Diagram shows the interconnections of the major subsystems within the printer. The remainder of this section divides the Block Diagram into individual block diagrams to better illustrate the electrical relationships between components and assemblies within the Offset Catch Tray. Each wire in the block diagram is tagged with a signal name, and each wire is terminated at both ends with a pin number.

Block Diagram

1. OCT Block Diagram
2. Print Engine Controller PWB <=> OCT PWB (Figure 3) (Table 2)
3. OCT PWB <=> Stack Full Sensor, OCT Home Sensor, OCT Exit Sensor Assembly and Direction Solenoid (Figure 4) (Table 3)
4. OCT PWB <=> Drive Motor Assembly and Offset Motor Assembly (Figure 5) (Table 4)

Location of P/J Connectors

Use the P/J table (Table 1) and the P/J map (Figure 1) to locate a specific P/J connector within the Feeder and Cassette.

1. Locate the P/J connector number in the first column of the table.
2. Locate the corresponding coordinates in the second column, such as I7 or J7.
3. Go to the map.
4. Cross-reference the letter and number of the P/J coordinates with the letters and numbers on the map.
5. The P/J connector is located within the area where the coordinates cross.

P/J Table

Table 1 OCT P/J Table

Connector	Coordinate	Description
P/J 202	E7	Connects the OCT Harness Assembly Unit to the Printer Assembly. (Print Engine Controller PWB)
P/J 209	E7	Connects the OCT Harness Assembly Unit to the OCT PWB.
P/J 210	E6	Connects the Motor Drive Assembly to the OCT PWB.
P/J 223	E6	Connects the Offset Motor Assembly to the OCT PWB.
P/J 224	E7	Connects the OCT Harness Assembly SNR to the OCT PWB.
P/J 225	E6	Connects the OCT Harness Assembly SNR to the Stack Full Sensor.
P/J 226	G7	Connects the OCT Harness Assembly SNR to the OCT Home Sensor.
P/J 227	H7	Connects the OCT Harness Assembly SNR to the OCT Exit Sensor Assembly.
P/J 228	H7	Connects the OCT Harness Assembly SNR to the Direction Solenoid.

P/J Map

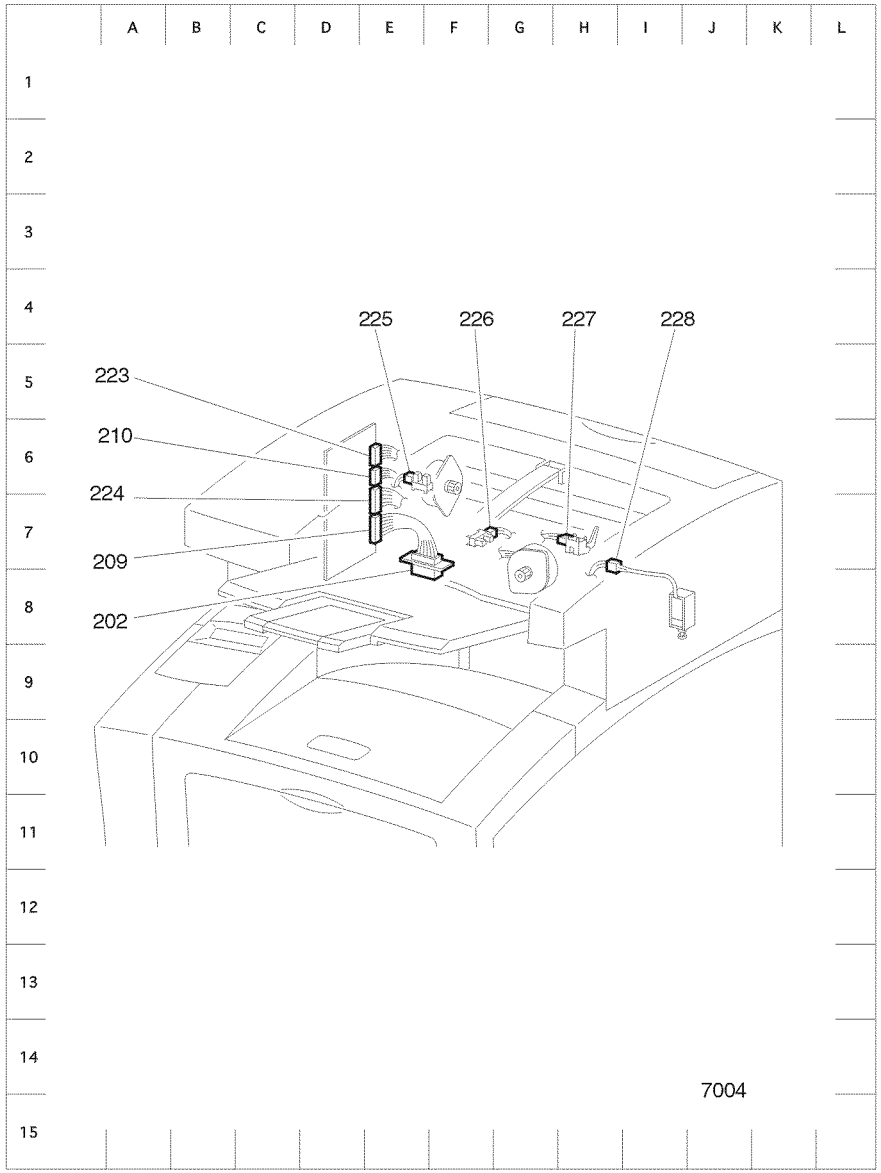

Figure 1 OCT P/J Map

Block Diagram

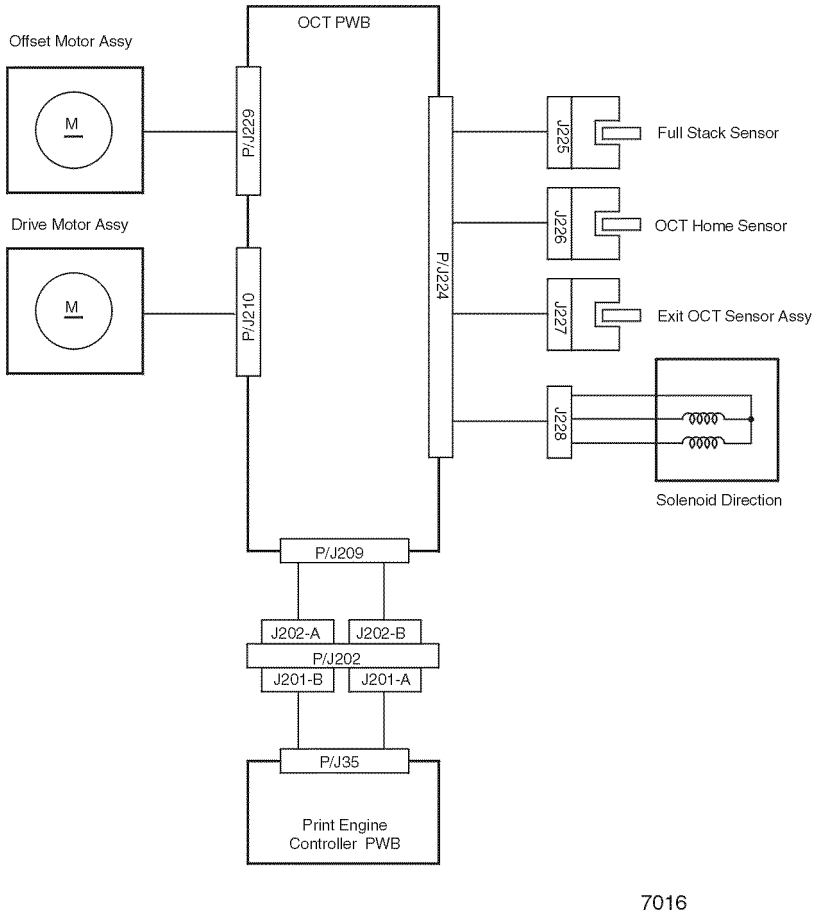

Figure 2 OCT Block Diagram

Print Engine Controller PWB <=> OCT PWB (Figure 3) (Table 2)

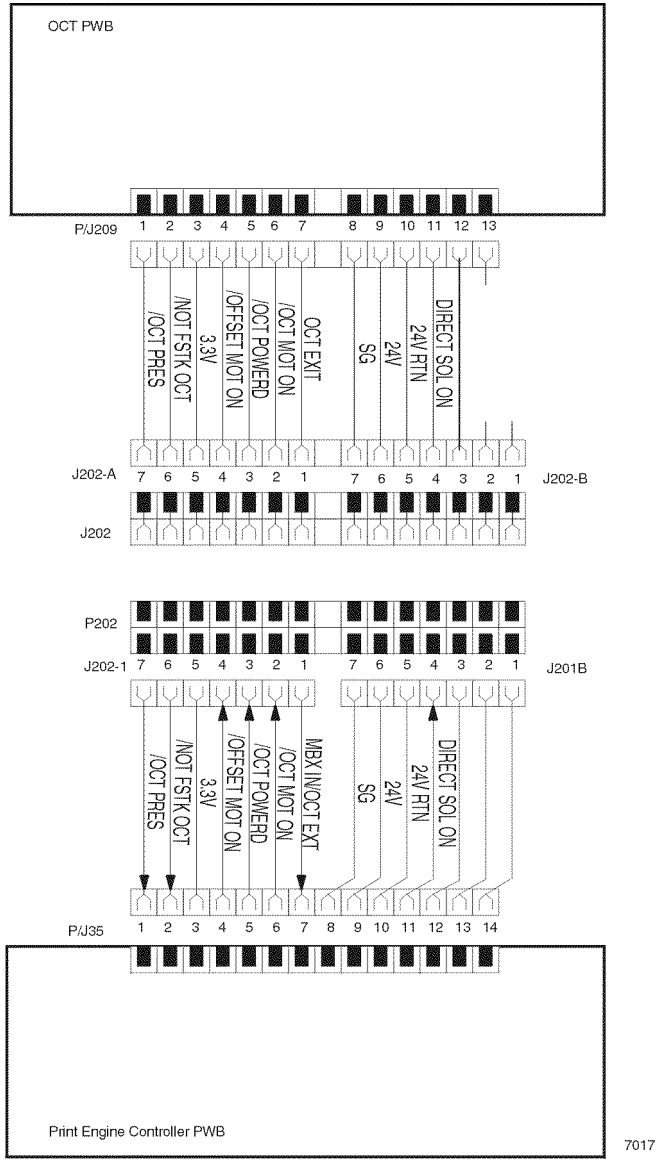

Figure 3 Print Engine Controller PWB <=> OCT PWB

Table 2 shows the signal names for the Print Engine Controller PWB <=> OCT PWB path:

Table 2 Signal Names

Signal Name	Description
/OCT PRES	Signal from the OCT PWB that detects the installation of the OCT. This signal turns Low when the OCT is installed. Signal Levels: High = 3.3V Low = 0V
/NOT FSTK OCT	Signal from the OCT PWB generated after the receipt of the signal /NOT FSTK from the Stack Full Sensor. This signal detects the full of paper on the Exit Tray of the OCT. Turning High of this signal informs the Print Engine Controller of the full stack of the Exit Tray. Signal Levels: High = 3.3V Low = 0V
/OFFSET MOT ON	Motor control signal for the Offset Motor Assembly. Signal Levels: High = 3.3V Low = 0V
/OCT POWERD	Control signal for the OCT. The signal is used to switch on the OCT for the reason that the OCT Harness Assembly-M includes the signal lines for the Mail Box and is used commonly for the Mail Box. This signal is sent from the Print Engine Controller to the OCT PWB when /OCT PRES is Low. Signal Levels: High = 3.3V Low = 0V
/OCT MOT ON	Motor control signal for the Drive Motor Assembly. Signal Levels: High = 3.3V Low = 0V
MBX IN/OCT EXIT	Signal from the OCT Exit Sensor Assembly. This signal turns High when the paper actuates the OCT Exit Sensor Assembly. Signal Levels: High = 3.3V Low = 0V
DIRECT SOL ON	Control signal for the Direction Solenoid. This signal is High when the Direction Solenoid is actuated. Signal Levels: High = 3.3V Low = 0V
/NOT FSTK OCT	Signal from the Stack Full Sensor. This signal turns High continuously when the Exit Tray becomes to be full of paper.

OCT PWB <=> Stack Full Sensor, OCT Home Sensor, OCT Exit Sensor Assembly and Direction Solenoid (Figure 4) (Table 3)

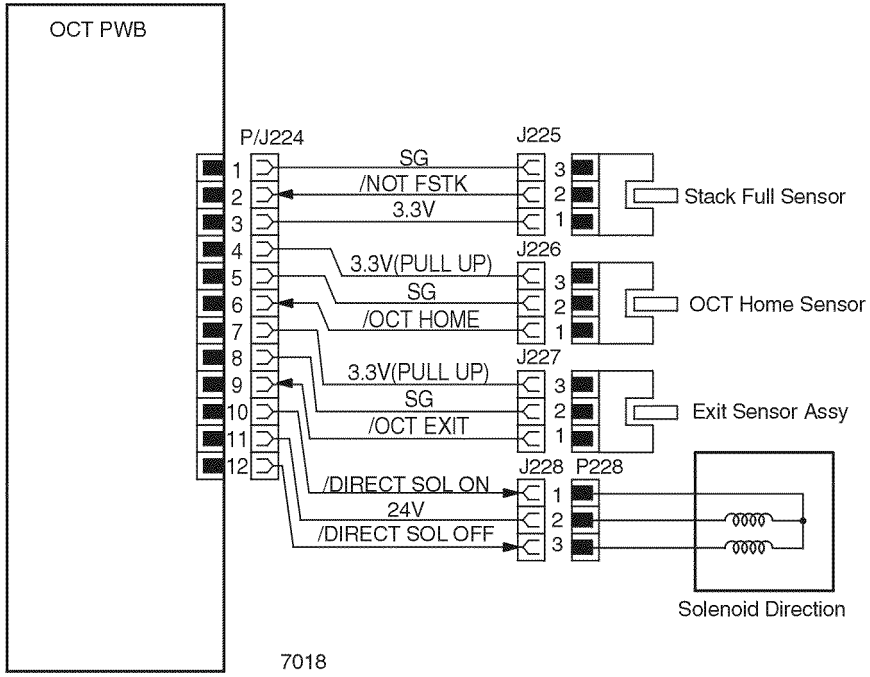

Figure 4 OCT PWB <=> Stack Full Sensor, OCT Home Sensor, OCT Exit Sensor Assembly, Direction Solenoid

Table 3 shows the signal names for the OCT PWB <=> Stack Full Sensor, OCT Home Sensor, OCT Exit Sensor Assembly and Direction Solenoid path:

Table 3 Signal Names

Signal Name	Description
/NOT FSTK	Signal from the Stack Full Sensor that detects the installation of the OCT. This signal turns Low when the OCT is installed. Signal Levels: High = 3.3V Low = 0V
/OCT HOME	Signal from the OCT Home Sensor. This signal detects the home position of the Offset Roll Assembly. Turning Low of this signal informs the OCT PWB that the initiation of the Offset Roll Assembly is completed. Signal Levels: High = 3.3V Low = 0V

Table 3 Signal Names

Signal Name	Description
/OCT EXIT	Signal from the OCT Exit Sensor Assembly. This signal first turns High when the paper is passing on this sensor and turns Low again when the end of the paper passes over. Signal Levels: High = 3.3V Low = 0V
/DIREXT SOL ON	Control signal for the Direction Solenoid. The solenoid is actuated when this signal is Low and holds the state of actuation until the signal/DIRECT SOL OFF is issued by the OCT PWB. Signal Levels: High = 3.3V Low = 0V
/DIRECT SOL OFF	Control signal for the Direction Solenoid. This signal cuts off the power circuit of the solenoid. Signal Levels: High = 3.3V Low = 0V

OCT PWB <=> Drive Motor Assembly and Offset Motor Assembly (Figure 5) (Table 4)

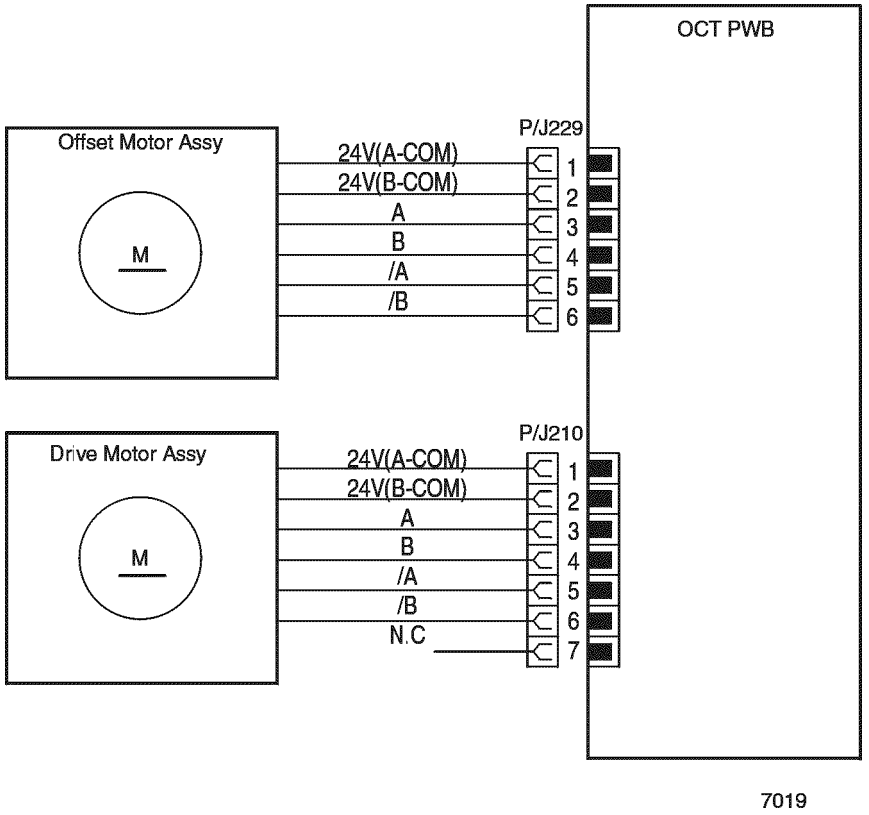

Figure 5 OCT PWB <=> Drive Motor Assembly and Offset Motor Assembly

Table 4 shows the signal names for the OCT PWB <=> Drive Motor Assembly and Offset Motor Assembly path:

Table 4 Signal Names

Signal Name	Description
A	Motor control signal Signal: Pulse
B	Motor control signal Signal: Pulse
/A	Motor control signal Signal: Pulse

Table 4 Signal Names

Signal Name	Description
/B	Motor control signal Signal: Pulse

Envelope Feeder

Wiring Diagrams and Signal Information

This section of the manual contains a Block Diagram for the N2125 Envelope Feeder. The Block Diagram shows the interconnections of the major subsystems within the printer. The remainder of this section divides the Block Diagram into individual block diagrams to better illustrate the electrical relationships between components and assemblies within the Envelope Feeder. Each wire in the block diagram is tagged with a signal name, and each wire is terminated at both ends with a pin number.

Block Diagram

1. Envelope Feeder Block Diagram
2. Print Engine Controller PWB <=> Connector PWB <=> Envelope PWB (Figure 3) (Table 2)
3. Envelope PWB <=> Envelope Exit Sensor Assembly, No Paper Sensor and Clutch (Figure 4)

Location of P/J Connectors

Use the P/J Table (Table 1) and the P/J map (Figure 1) to locate a specific P/J connector within the Feeder and Cassette.

To find the location of a P/J:

1. Locate the P/J connector number in the first column of the table.
2. Locate the corresponding coordinates in the second column, such as I7 or J7.
3. Go to the map.
4. Cross-reference the letter and number of the P/J coordinates with the letters and numbers on the map.
5. The P/J connector is located within the area where the coordinates cross.

P/J Table

Table 1 Envelope Feeder P/J Table

Connector	Coordinate	Description
P/J 411	D6	Connects the Main Harness Assembly to the Envelope PWB.
P/J 412	C7	Connects the Sensor Harness Assembly to the Envelope PWB.
P/J 413	C7	Connects the Clutch Harness Assembly to the Envelope PWB.
P/J 414	C7	Connects the No Paper Harness Assembly to the Envelope PWB.
P/J 415	H8	Connects the No Paper Harness Assembly to the No Paper Sensor.
P/J 416	D8	Connects the Clutch Harness Assembly to the Clutch.
P/J 417	G6	Connects the Sensor Harness Assembly to the Envelope Exit Sensor Assembly.
P/J 418	F7	Connects the Main Harness Assembly to the Envelope Connector.

P/J Map

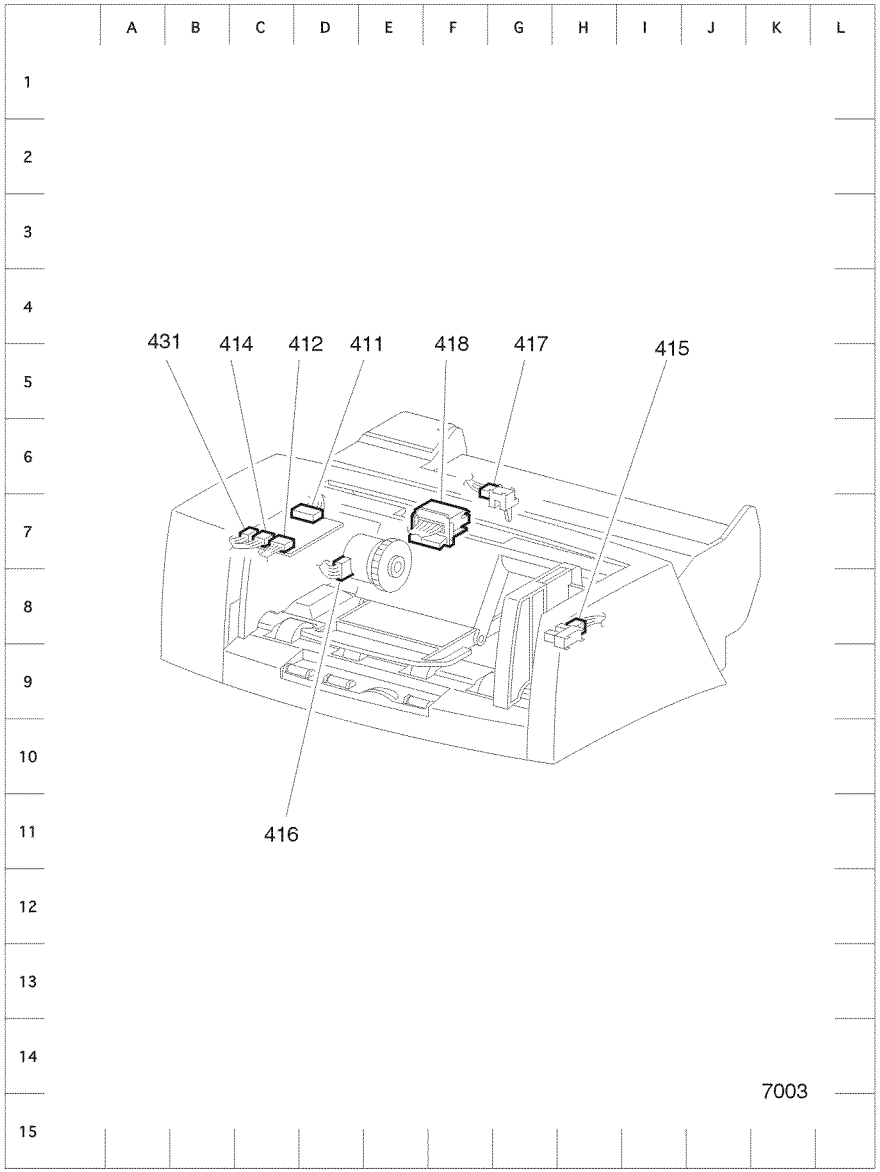

Figure 1 Envelope Feeder P/J Map

Block Diagram

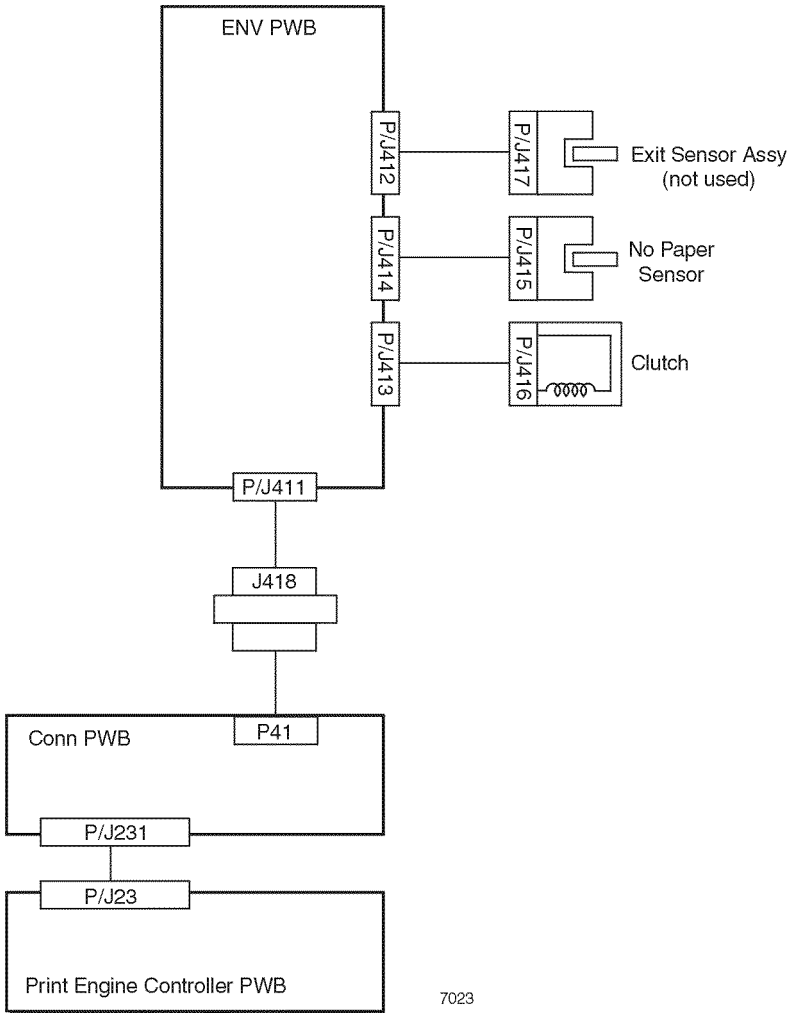

Figure 2 Envelope Feeder Block Diagram

Print Engine Controller PWB <=> Connector PWB <=> Envelope PWB (Figure 3) (Table 2)

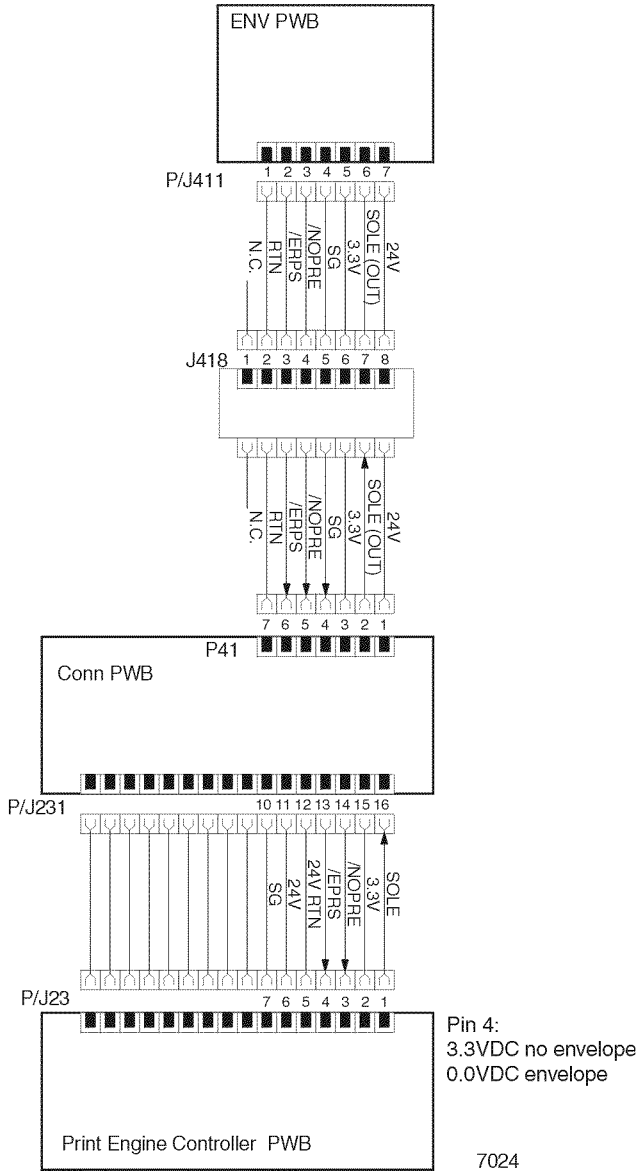

Figure 3 Print Engine Controller PWB <=> Connector PWB <=> Envelope PWB

Table 2 shows the signal names for the Print Engine Controller PWB <=> Connector PWB <=> Envelope PWB path:

Table 2 Signal Names

Signal Name	Description
/EPRS	This signal is High when the Envelope Feeder is not installed. Signal Levels: High = 3.3V Low = 0V
/NOPRE	Signal from the No Paper Sensor. This signal is High when all envelopes are fed from the Envelope Feeder. Signal Levels: High = 3.3V Low = 0V
SOLE	Control signal for the Envelope Feeder PWB. This signal is High when the Print Engine Controller makes the PWB active. Signal Levels: High = 3.3V Low = 0V
SOLE (out)	Control signal for the clutch. This signal is Low when the Envelope Feeder PWB makes the clutch active.

Envelope PWB <=> Envelope Exit Sensor Assembly, No Paper Sensor and Clutch (Figure 4)

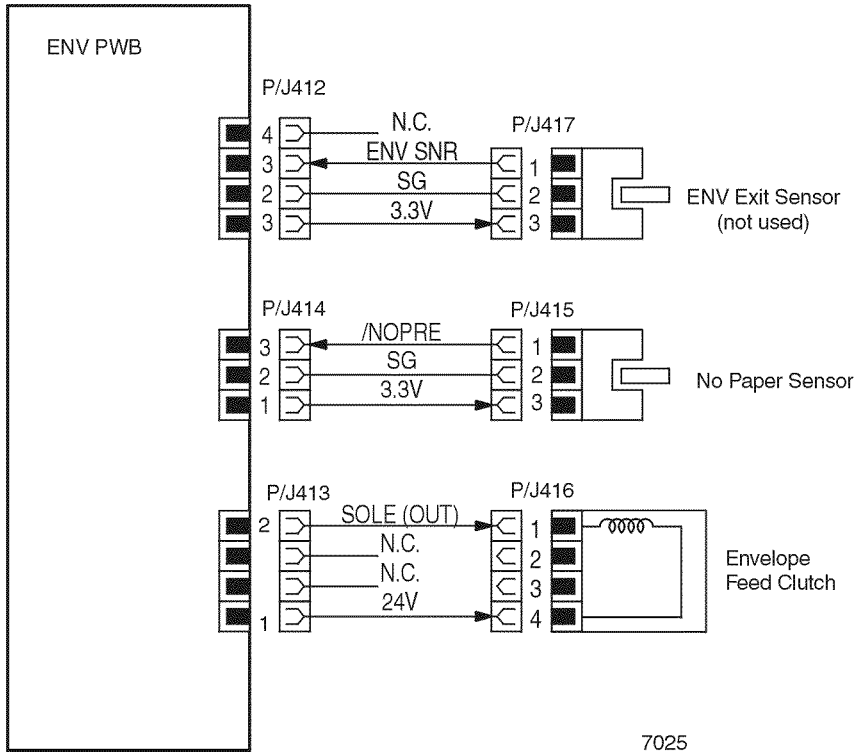

Figure 4 Envelope PWB <=> Envelope Exit Sensor Assembly, No Paper Sensor and Clutch