

**PRINTRONIX®**

# *Operator's Guide*



*The Printronic L5020 Multifunction Printer*

## Consumables Information

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Printronix® has years of experience designing printer imaging systems. For the best possible performance of your Printronix printer, always use Genuine Printronix parts and consumables.

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Consumable Item	Part Number	Replacement Interval (in Pages) <sup>1</sup>
Toner cartridge	703532-001	21,000
Waste toner bottle	202984-001	150,000
Photoreceptor drum	703535-001	150 - 300,000 See Note 2
Developer	703548-001	150,000
Developing Unit	705739-001	600,000
Note 1: Varies with paper size, media type, and toner coverage. Note 2: Inspect every 150,000 pages; clean if needed. Replace at 300,000 pages or sooner if print quality is no longer acceptable. Drum life is dependent upon media used and proper maintenance and operation of the printer. Print media other than bond paper (e.g., labels, card stock, plastic, or vinyl) may reduce drum life as much as 50%.		

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**L5020 Multifunction Printer**  
**Operator's Guide**

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Dieses Gerät ist berechtigt in Übereinstimmung mit dem deutschen das EG-Konformitätszelchen - CE - zu führen.

Der Außsteller der Konformitätserklärung ist die Printronix.....(1)

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--

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Anmerkung: Um die Einhaltung des EMVG sicherzustellen sind die Geräte, wie in den Handbüchern angegeben, zu installieren und zu betreiben.

This product has been tested and found to comply with the limits for Class A Information Technology Equipment according to European Standard EN 55022. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication equipment.

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# Table of Contents

<b>1</b>	<b>Introduction .....</b>	<b>17</b>
	About This Manual.....	17
	Important Safety Precautions.....	18
	Components And Labels .....	20
	About The Printer .....	24
	Features .....	24
	Emulations .....	24
	Fonts And Forms.....	25
<b>2</b>	<b>Initial Setup .....</b>	<b>27</b>
	Installation Overview .....	27
	Loading Paper .....	28
	Powering On The Printer .....	31
	Power Paper Stacker (Option).....	33
	Control Panel Commands .....	34
	Using The Control Panel .....	35
	Control Panel .....	35
	Liquid Crystal Display (LCD) .....	36
	Function Keys .....	37
<b>3</b>	<b>Consumables Replacement.....</b>	<b>41</b>
	Consumable Replacement .....	41
	Replacement Intervals .....	41
	Opening The Upper Doors .....	42
	Replacing The Toner Cartridge.....	42
	Replacing The Waste Toner Bottle .....	46
	Replacing The Photoreceptor Drum.....	48
	Photoreceptor Drum Installation.....	53
	Proper Disposal Of A Drum Unit .....	55



---

## Table of Contents

Replacing The Developing Unit.....	56
Replacing Developer.....	60
<b>4 Scheduled Maintenance .....</b>	<b>67</b>
Maintaining Print Quality.....	67
Maintenance Tools.....	68
Service Level Page Counts.....	68
Clearing Service Level Messages.....	70
Maintenance Schedules .....	70
Cleaning Schedule.....	70
Replacement Schedule.....	71
Tech Service Maintenance Level Kits.....	72
General Cleaning.....	77
Vacuuming.....	77
Cleaning The Chargers.....	85
Cleaning The Fuser Unit Cover Glass .....	90
Major Cleaning .....	95
Cleaning Unit .....	95
Cleaning The Photoreceptor Drum .....	98
<b>5 Troubleshooting .....</b>	<b>101</b>
Troubleshooting.....	101
Diagnostics .....	101
Paper Jams .....	102
Paper Jam Near The Tractor .....	102
Paper Jam Near The Paper Output Section .....	104
Paper Jam In The Transport Input Section .....	109
Paper Jam In The Transport Output Section .....	111
Paper Jam In The Power Paper Stacker.....	112
System Status And Error Messages.....	114
Reprinting Pages After Fault Condition.....	115
Error Messages.....	119

---

## Table of Contents

<b>A</b>	<b>Maintenance Log Sheets.....</b>	<b>125</b>
	Maintenance Log Sheets.....	125
	Level A Maintenance - 15,000 Pages (User) .....	126
	Level B Maintenance -150,000 Pages (User) .....	127
	Level C Maintenance - 600,000 Pages (User) .....	128
<b>B</b>	<b>Specifications .....</b>	<b>129</b>
	Specifications .....	129
	Paper Specifications .....	129
	Performance Characteristics.....	132
	Host Interfaces .....	133
	Emulations .....	133
	Memory Requirements.....	134
	Safety Regulations .....	134
	Electromagnetic Interference .....	134
	Physical Characteristics And Environment .....	135



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## Table of Contents



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# 1

## *Introduction*

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### About This Manual

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This manual explains how to use your printer.

#### **Safety Notices And Special Information**

For your safety and to protect valuable equipment, it is very important that you read and comply with all information highlighted under the following special headings.

**WARNING** A warning notice calls attention to a condition that could harm you.

#### **WARNUNG**

Ein Warhinweis dieser Art weist auf Verletzungsgefahr hin.

#### **AVISO**

Las notas de aviso llaman la atención sobre una condición que puede causar lesiones.

#### **ATTENTION**

Attire votre attention sur une opération pouvant présenter un danger.

#### **AVVERTENZA**

Un'indicazione di avvertenza segnala una condizione di pericolo suscettibile causare lesioni all'operatore.

**CAUTION** A caution notice calls attention to a condition that could damage the printer.

**IMPORTANT** An important notice provides information that is vital to proper operation of the printer.

**NOTE:** A note provides information and helpful tips about printer operation.

### **Control Panel Keys And Display Messages**

Keys and indicators that are labeled on the printer are printed in uppercase letters. For example:

Press ENTER to select the value shown on the LCD.

Messages that appear on the control panel message display (called the Liquid Crystal Display, or LCD), are printed in uppercase letters and enclosed in quotation marks. For example:

“ENTER SWITCH LOCKED” appears on the LCD.

### **Important Safety Precautions**

---

Observe the following precautions at all times to ensure safe operation of the printer.

Read all instructions and save them for future use.

Follow all safety notices and instructions printed in this manual and marked on the printer.

The operator-accessible power switch does not shut off all power to the printer. You must unplug the power cord to shut off all power to the printer.

The power outlet must be near the equipment and easily accessible.

The printer relies on protective devices in the building installation for protection. The printer must be connected to a 30 Amp, 250 V outlet.

Do not operate the printer in a room that is not properly ventilated. The room should be at least 1,000 cubic feet with a complete air exchange every two hours.

## Important Safety Precautions

---

Remove packaging materials carefully and save them for possible future use. If the printer is powered on without removing all internal tape and packing, the printer may be damaged.

Keep combustible materials away from the printer. Dispose of used toner properly, as it is flammable.

Keep away from components in the printer that are potentially hazardous. For example, the fuser unit becomes very hot under normal operating conditions, and several components use high voltage.

Handle the photoreceptor drum properly, due to the nature of the material. Do not put used drums in the trash; ship them to the appropriate disposal facility for recycling.

Do not block or obstruct any cabinet ventilation slots.

Never spill liquid on or in the printer. Use only approved cleaning agents and methods.

Put nothing on the power cord. Do not locate the power cord where people can walk on it. Do not place the power cord under any carpet.

Do not lean on or put heavy objects on top of the printer.

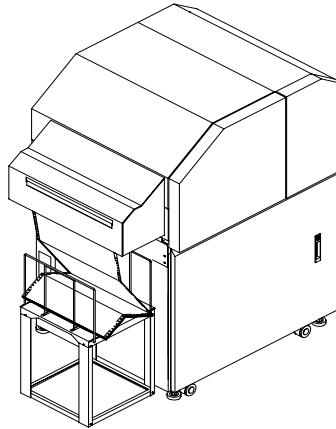
Turn off the power immediately if the printer emits an unusual noise or smell.

Do not look directly at the flash lamp light.

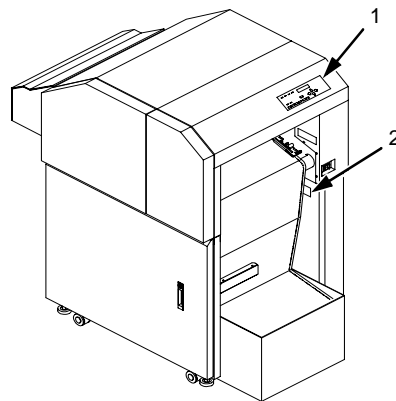
## Components And Labels

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Rear of Printer



Front of Printer



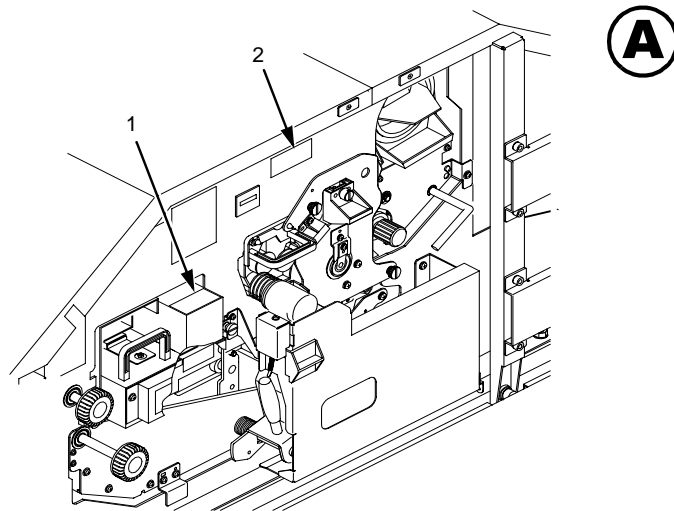
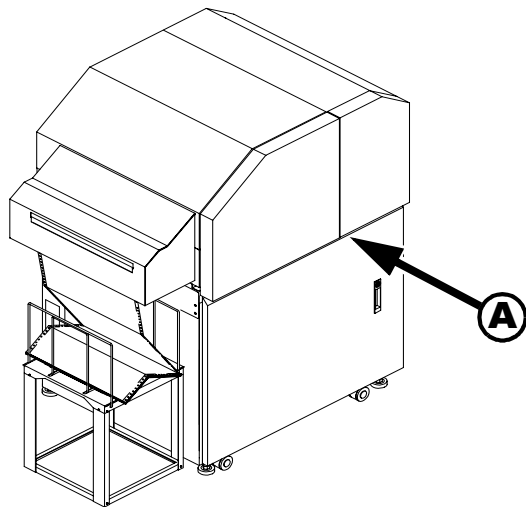
**Legend:**

- 1) Control Panel
- 2) CAUTION

**Figure 1: Front and Rear Views**

## Important Safety Precautions

---

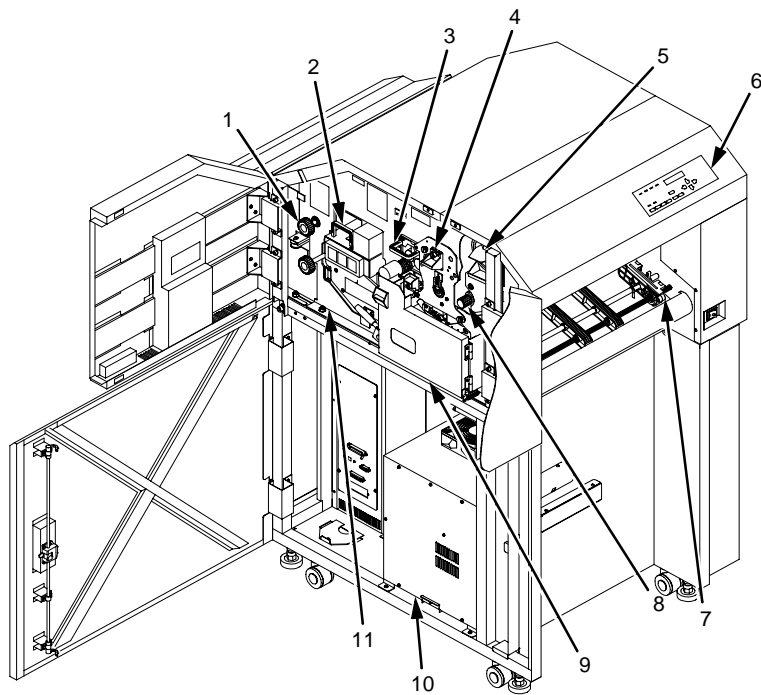


**Legend:**

- 1) WARNING
- 2) CAUTION

**Figure 2: Safety Labels Behind Front Upper Doors**

## Chapter 1 Components And Labels



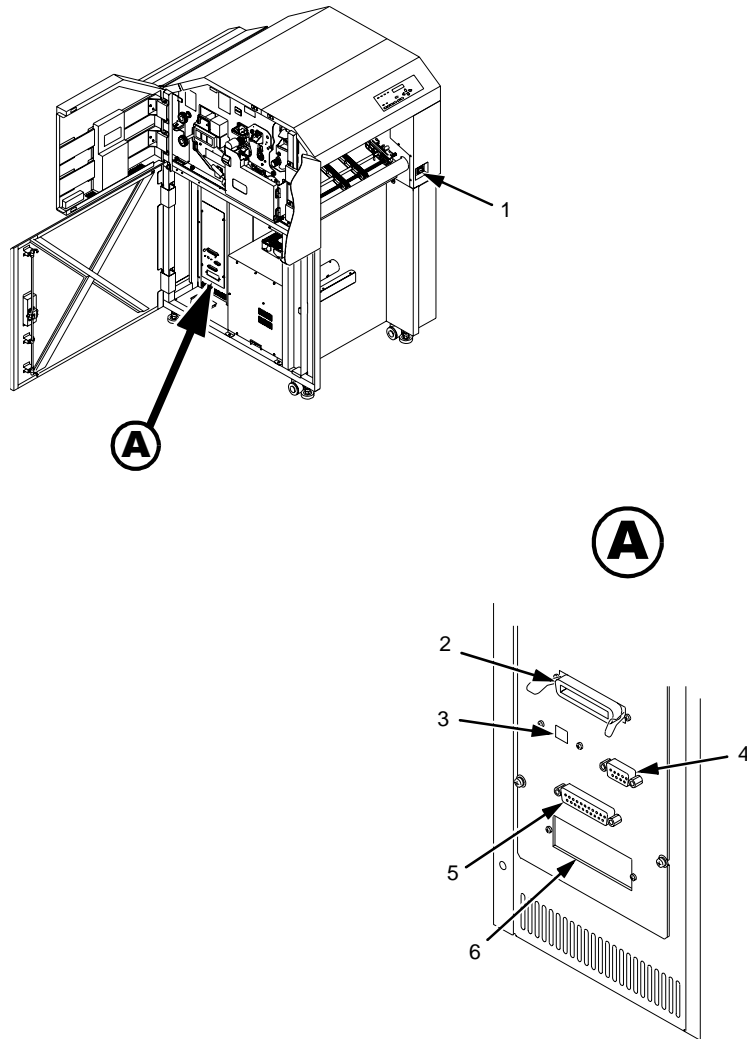
### Legend:

- 1) Scuff Roller
- 2) Fuser Unit
- 3) Cleaning Unit
- 4) Main Charger
- 5) Toner Cartridge
- 6) Control Panel
- 7) Paper Feed Tractor
- 8) Developing Unit
- 9) Waste Toner Recovery Unit
- 10) Flash Power Supply
- 11) Transport Unit

**Figure 3: Printer Components**

## Important Safety Precautions

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### Legend:

- 1) Power Switch
- 2) Diagnostic Port
- 3) Serial Port
- 4) Optional Coax/Twinax Port
- 5) 232/422 Toggle Switch
- 6) Parallel Port

**Figure 4: Power Switch and Printer Interfaces**

## About The Printer

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### Features

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Printing speed is 20 pages per minute on continuous letter size and A4 size fanfold forms (long edge fed). The printer produces printed output with a 300 x 300, (or optionally) 240 x 240, or 400 x 400 dots-per-inch (dpi) resolution. See Appendix B for printer specifications.

Features include the following:

- Continuous fanfold paper
- User-replaceable toner cartridge
- FlashFusion™ fusing technology
- Two-line, 16-character alphanumeric display that provides operating and error messages
- Flash Memory which stores preset configurations and emulations
- Serial and parallel interfaces
- Coax/Twinax interface (optional)
- Power stacker (optional)

### Emulations

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Your printer comes equipped with the Printronix® LinePrinter Plus® emulation software (which emulates an impact printer). Printronix LinePrinter Plus includes the following printer protocols:

- P-Series
- P-Series XQ
- Serial Matrix
- Proprinter® III XL
- Epson® FX-1050



## Fonts And Forms

---

Printronic LinePrinter Plus provides portrait and landscape image orientation. Automatic 1-up, 2-up, 4-up, and gray bar overprinting are also provided. The emulation also offers optional proportional (scalable) fonts.

The following optional emulations are also available:

- IGP<sup>®</sup>/PGL<sup>®</sup>
- IGP/VGL
- PCL5<sup>®</sup>
- IPDS<sup>™</sup>

For specific information on each emulation, see the appropriate emulation manual.

## Fonts And Forms

---

The printer provides a variety of resident fonts. The emulation you are using determines what resident fonts are available. For example, the LinePrinter Plus emulation provides CG Times, Letter Gothic, Courier, OCR-A, and OCR-B as standard sets of fonts.

With either the LinePrinter Plus or PCL 5 emulations, you can load additional fonts into printer memory. Once any additional fonts are in printer memory, you can then access them in the same way as the resident fonts. Note that if you download fonts from the host computer and do not save them, the downloaded fonts are lost when the printer is powered off.

You can store forms together with fonts. The storage space for forms and fonts depends upon the amount of printer memory available. You can manipulate different fonts and/or forms depending upon the emulation installed.

**Chapter 1** About The Printer

---

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# 2

## *Initial Setup*

### **Installation Overview**

---

This chapter explains how to load paper, power on the printer, use the optional power stacker, and how to use the control panel.

The installation and setup of your printer should be performed by a service provider trained and authorized by Printronix. Your service provider is also responsible for doing a preinstallation site survey, unpacking the printer, connecting the power and host data cables, and installing the first set of consumable items in the printer.

Depending on the terms of your service contract, your service provider might also power on your printer and configure it.

As the owner of the printer, it is your responsibility to prepare the printer site. This includes providing adequate ventilation and power for the printer.

## Loading Paper

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Do the following steps whenever top-of-form must be reset (after clearing a paper jam, loading new paper, etc.).

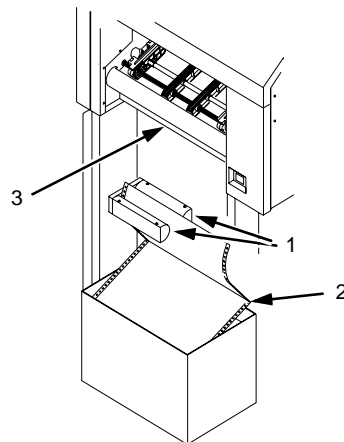
**NOTE:** You do not need to power off the printer power to replace paper. If you leave the printer on and replace the paper it will resume printing where it left off when you put it on line.

1. Place the paper box under the tractor unit with the first paper fold toward the printer.

### IMPORTANT

**Be sure the leading edge of the paper has a clean, separated perforation without ragged edges.**

2. Pass the leading edge of the paper between the lower paper guides to prevent jams. Put the first fold of the paper facing the printer as shown.

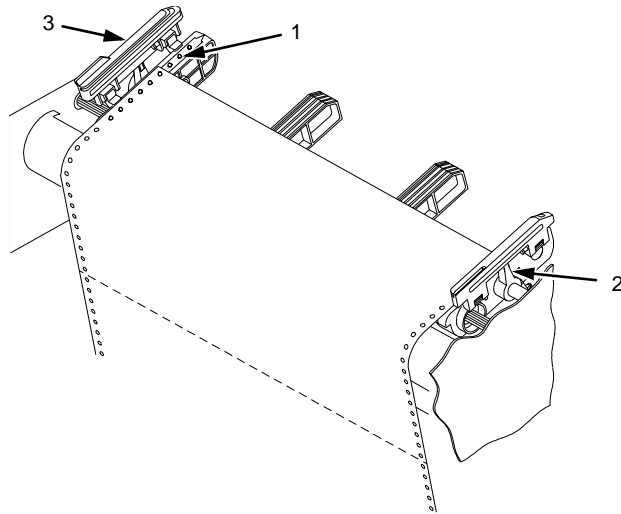


#### Legend:

- 1) Paper Guides
- 2) First paper fold is toward printer
- 3) Tractor Unit

3. Unlock only the right tractor by pushing forward on the tractor lock.

- 
4. Open the left and right tractor gates and place the paper about half-way onto the tractor pins. Do not push the paper past the tractors; a paper jam sensor will detect a paper jam if the paper is pushed too far.
  5. Close the left tractor gate.



**Legend:**

- 1) Tractor Pins
- 2) Tractor Lock
- 3) Tractor Gate

6. Move the right tractor until its pins line up with the holes in the right edge of the paper, put the paper on the pins, then close the right tractor gate.

## Chapter 2 Loading Paper

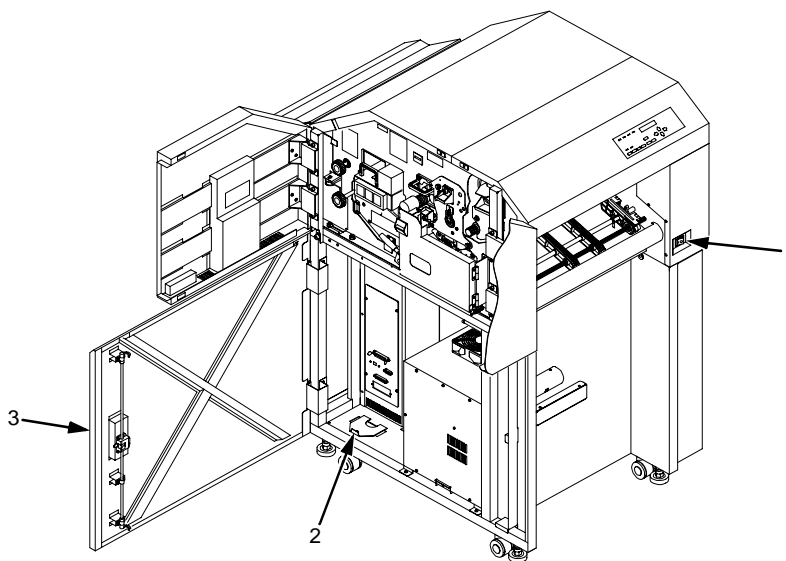
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7. Introduce a slight amount of side-to-side tension into the paper by setting the right tractor far enough to the right so that there is no looseness or wrinkles in the paper. Be careful not to set the right tractor too far to the right, however, as too much tension may cause the paper holes to tear away from the tractor pins.
8. Tighten the paper by moving the right tractor slightly outward and lock the right tractor with the tractor lock.
9. If you are reloading paper following a "PAPER EMPTY" message with the printer power on, press ONLINE to place the printer online. The printer automatically sets the physical top of form at the leading edge of the paper and resumes printing.

---

## Powering On The Printer

---



**Legend:**

- 1) Power Switch
- 2) Strain Relief
- 3) Door Latch

**Figure 5: Power Switch**

**CAUTION** The printer must be connected to the proper power source: 220-240 VAC and 50-60 Hz, as shown on the rear panel label. Using an incorrect power source may damage the printer.

1. Open the cabinet door by turning the key and flipping up the latch.
2. Route all cables through the hole in the bottom of the cabinet and secure them with the strain relief.
3. Make sure the printer is plugged into the appropriate power source, the interface cables are connected, and the host computer is on.
4. Close the cabinet door and flip down the latch.

## Chapter 2 Powering On The Printer

---

5. Turn on the printer by setting the power switch to | (on). When you power on the printer, the following occurs:
  - a. The printer reads the emulation boot file and displays the message:  
H0: TEST HARDWARE  
PLEASE WAIT...
  - b. The ONLINE indicator lights continuously and STAND BY goes out.

**NOTE:** The printer can be set to power on in the OFFLINE state instead of the ONLINE state. To print, ONLINE must be lit; if it is not, press ONLINE.

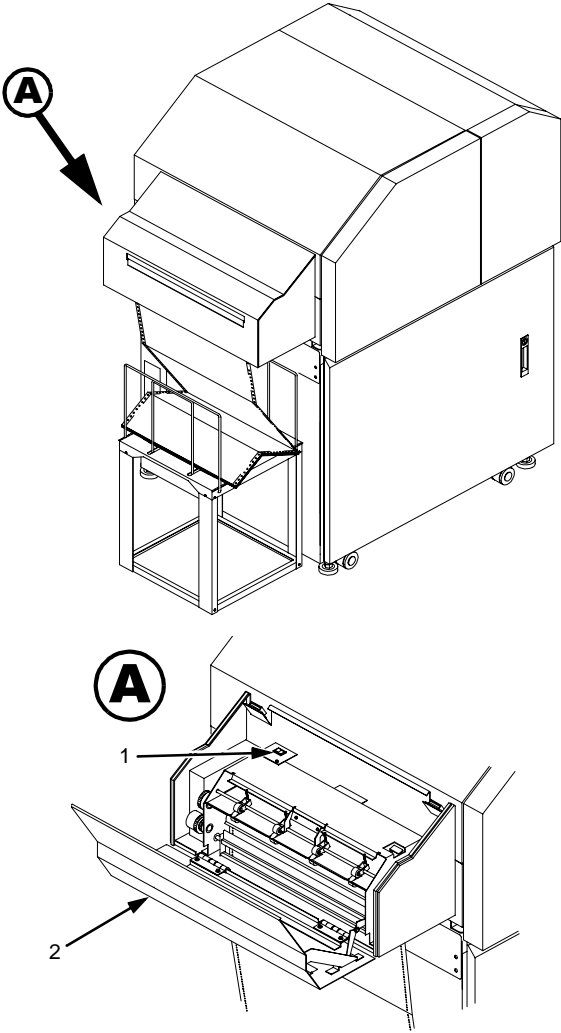
If other messages and prompts appear on the control panel, answer the prompts and follow the directions as explained on page 120.



---

# Power Paper Stacker (Option)

---



- Legend:**
- 1) Heavy Mode/Light Mode Switch
  - 2) Stacker Cover

**Figure 6: Power Paper Stacker**

## Chapter 2 Power Paper Stacker (Option)

---

The L5020 Paper Stacker works with a specially designed basket. The stacker can stack any paper in the following weight and width ranges:

Weight: 8 to 44 lbs/ream (68 to 165 g/m<sup>2</sup>) bond (17 inch x 22 inch), fanfold.

Width: 7 to 17.5 inches (178 to 445 mm) edge to edge.

As fanfold paper moves through the stacker, it is folded, allowing the paper to stack evenly as it falls into the basket. The basket is designed to stack approximately 1 box (3,000) sheets of paper. The basket is also designed to compensate for the natural tendency of the paper to crown as the height of the paper increases.

**NOTE:** Load the paper with the first perforation facing the printer. This allows the stacker to re-fold the paper as it was originally folded in the box.

### Control Panel Commands

---

When setting up the operation of the stacker through the control panel there are two options:

- Into Stacker
- Bypass Stacker

If Bypass Stacker is chosen, paper travels over the stacking mechanism; the perforation on the paper is not broken.

The Control Panel path to these options is:

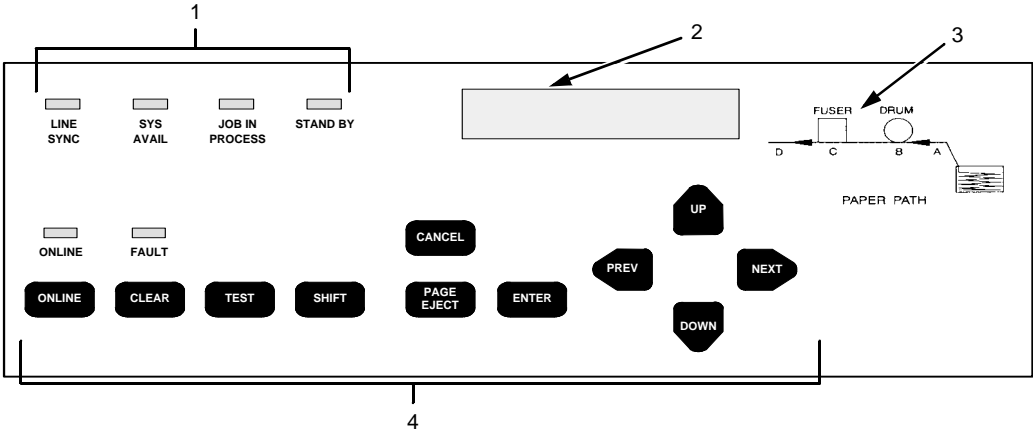
Paper Control > Paper Output > Into Stacker or Bypass Stacker

### Heavy Mode/Light Mode Switch

The stacker has a manual switch to adjust its operation depending on the weight of the paper. If the paper is less than or equal to 34 pounds, set the switch to Light Mode. If the paper is heavier than 34 pounds set the switch to Heavy Mode. In Heavy Mode the stacker passes the paper through without actively breaking the perforation. To activate the switch, open the stacker cover, as shown on page 33.

# Using The Control Panel

## Control Panel



- Legend:**
- 1) Status Indicators
  - 2) Liquid Crystal Display (LCD)
  - 3) Paper Path Diagram
  - 4) Function Keys

**Figure 7: Control Panel**

The control panel (Figure 7), is located on the top right side of the front cover and consists of the following:

- A Liquid Crystal Display (LCD)
- Six status indicators
- Eleven function keys
- Paper path diagram

The LCD, status indicators, and function keys are described in the following sections.

## Liquid Crystal Display (LCD)

The liquid crystal display (LCD) displays printer status, messages, configuration options, and error codes.

### Status Indicators

The status indicators display the current operational status of the printer.

### LINE SYNC

Twinax interface only. Indicates there is activity on the line from the host computer.

### SYS AVAIL

Twinax interface only. Indicates there is activity to the current address on the line.

### JOB IN PROCESS

When the printer is receiving data or processing data, JOB IN PROCESS flashes. If data has been processed and is waiting to be printed, or has been printed but not yet fused and ejected by the printer, JOB IN PROCESS lights continuously.

JOB IN PROCESS does not light when the printer is not processing data, no data exists in the buffer, and the printer is not receiving data.

### STAND BY

**IMPORTANT** Do not press any control panel key when STAND BY is flashing. The printer may carry out unwanted commands.

STAND BY flashes while the printer is executing any control panel command, and while the printer is unavailable for printing due to its normal system activities, such as booting, printing its configuration, writing status information, and loading applications.

### **ONLINE**

ONLINE is lit continuously when the printer is online (when the printer is ready to print and accept data from the host). It flashes when the printer is offline or when the printer stops because of an error.

### **FAULT**

FAULT flashes when the printer is unavailable for printing because of an internal error.

## **Function Keys**

---

The pressure-sensitive function keys are located directly below the status indicators. When pressing the keys, a “beep” verifies contact.

The function keys permit you to configure the options of the printer. You can access these options via a structured menu which is displayed on the LCD. To navigate through the options, use the UP, DOWN, NEXT, and PREV keys. Press ENTER to select an option that appears on the LCD.

The purpose of each function key (under normal printing mode) is defined below.

For specific procedures and information regarding the configuration menu, see Chapter 3 in the *User's Manual*.

**NOTE:** You can enable or disable the panel key sound via the configuration menu.

### **ONLINE Key**

The ONLINE key toggles the printer online and offline.

- To place the printer online, press ONLINE until the ONLINE status indicator remains continuously lit. The LCD displays “ONLINE,” along with the name of the current emulation. The printer can now receive and process data and print.

## Chapter 2 Using The Control Panel

---

- To place the printer offline, press ONLINE until the ONLINE status indicator blinks. The LCD displays “OFFLINE.” The printer stops processing and printing any new data, except for any pages in process.
- To start downloading files to the printer, hold down the ONLINE + PAGE EJECT keys while cycling power. (See Chapter 3 in the *User’s Manual*.)

**NOTE:** When the printer is not in an error state, pressing ONLINE in any level of the configuration menu causes the printer to accept any configuration changes you have entered and return to online status.  
When the printer is in an error state, pressing ONLINE in any level of the configuration menu causes the printer to re-display the fault message.

### **CLEAR Key**

In the fault state, press the CLEAR key to clear errors and reset the printer to the offline state (if all errors are cleared).

### **TEST Key**

When the printer is offline, you can run a test print, as configured under the Test Print menu (see Chapter 3 in the *User’s Manual*), by pressing the TEST key. To stop the test print, press TEST again.

Pressing TEST when the printer is online has no effect.

### **SHIFT Key**

This key does not have a function of its own. It is combined with other keys to modify their functions.

### **PAGE EJECT Key**

**IMPORTANT** Do not press PAGE EJECT while JOB IN PROCESS is flashing, or your print job might become misaligned.

The PAGE EJECT key performs the following functions when the printer is online:

When the JOB IN PROCESS status indicator lights steadily, pressing PAGE EJECT causes the printer to print all data in the printer. The page is then cut at the perforation (unless the Burst On Eject option is disabled).

When the JOB IN PROCESS status indicator flashes, pressing PAGE EJECT causes the printer to attempt to print any data in the buffer. The paper motion caused by the page eject operation may interrupt the printing of data that is not currently in the buffer. Once the paper motion has occurred, the data that was not yet in the buffer should print. The page is then cut at the perforation (unless the Burst On Eject option is disabled).

To start downloading files to the printer, hold down the ONLINE + PAGE EJECT keys while cycling power. (See Chapter 3 in the *User's Manual*.)

When the JOB IN PROCESS status indicator is not lit or flashing, PAGE EJECT has no effect.

Pressing the SHIFT + PAGE EJECT keys together moves the paper one page length without printing or cutting the paper. It can be used to feed the paper into (customer-supplied) postprocessing equipment.

### **ENTER Key**

When you enter parameters in the configuration menu, press ENTER to select the value shown in the LCD. The printer confirms your selection by placing an asterisk (\*) next to the value in the display. However, if the ENTER key is locked, "ENTER SWITCH LOCKED" appears and the value is not accepted.

### **CANCEL Key**

The CANCEL key performs the following functions when the printer is offline:

- Cancels the current page in process
- Cancels any pages queued to print but not yet printed
- Cancels any input data not yet processed

## Chapter 2 Using The Control Panel

---

- Clears the reprint buffers
- Cancels a download if one is in process. See Chapter 3 in the *User's Manual*.

### **UP And DOWN Keys**

The UP and DOWN keys are used for the configuration menu:

- To unlock or lock the ENTER key, press UP + DOWN at the same time when the printer is offline
- To enter the configuration menu, press DOWN when the printer is offline
- To move between the different levels in the configuration menu, either press UP or DOWN as needed

### **NEXT And PREV Keys**

The NEXT and PREV keys are used to move between the parameter options on the current level of the configuration menu. Press NEXT or PREV to move forward or backward through parameter options.



# 3

## *Consumables Replacement*

### **Consumable Replacement**

#### **Replacement Intervals**

For the best print quality, replace the printer consumables at the intervals specified below. The yield of the supplies is based on a 4% coverage of letter size (8.5 inch x 11 inch) paper. However, the yield may vary according to your print applications, environmental conditions, and toner density setting.

<b>Consumable Item</b>	<b>Part Number</b>	<b>Replacement Interval (in Pages)<sup>1</sup></b>
Toner Cartridge	703532-001	25,000
Waste toner bottle	703539-001	150,000
Photoreceptor drum	703535-001	150 - 300,000 See Note 2
Developer	703548-001	150,000
Developing unit	705739-001	600,000

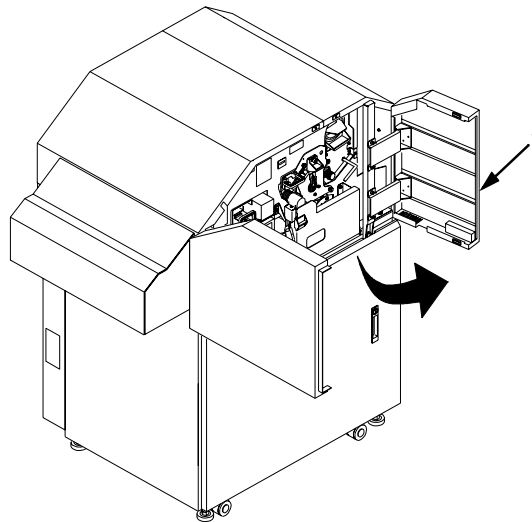
Note 1: Will vary with paper size, media type, and toner coverage.

Note 2: Replace at 300,000 pages or sooner if print quality is no longer acceptable. Drum life is dependent upon media used and proper maintenance and operation of the printer. Print media other than bond paper (e.g., labels, card stock, plastic, or vinyl) may reduce drum life as much as 50%.

## Opening The Upper Doors

---

1. Take the printer offline.
2. When paper motion stops, wait 15 seconds, then open the printer upper doors.



**Legend:**

- 1) Upper Door

## Replacing The Toner Cartridge

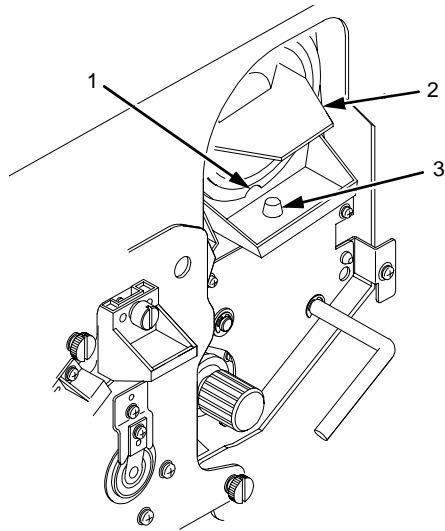
---

**NOTE:** When replacing the toner cartridge, place the old cartridge in a disposable wrapper (e.g., a plastic bag, paper towels, newspaper) to minimize toner spillage. You can wear vinyl gloves to prevent toner from contacting the skin. If necessary, use only cold water to remove toner from skin or clothing.

---

## Replacing The Toner Cartridge

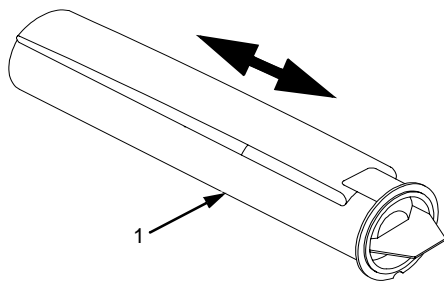
3. Rotate the toner cartridge counterclockwise until the notch is aligned with the pin in the toner hopper, and remove the cartridge.



**Legend:**

- 1) Notch
- 2) Toner Cartridge
- 3) Positioning Pin

4. Put the old cartridge into a plastic bag and discard it.
5. Keep the new toner cartridge in its package. Hold it level and shake it back and forth several times as shown. This loosens the toner in the cartridge.

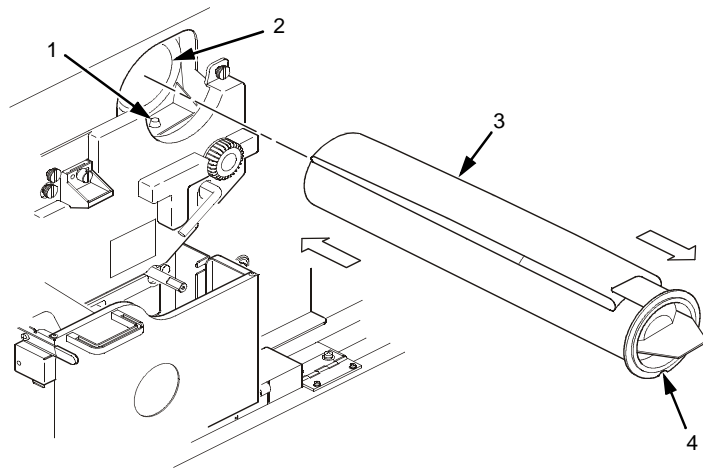


**Legend:**

- 1) Toner Cartridge

## Chapter 3 Consumable Replacement

6. Remove the new toner cartridge from its package.
7. With the cover tape facing up, insert the cartridge into the toner hopper, and slowly pull off the cover tape in the direction of the arrow. Remove the last of the tape just as the cartridge is completely inside the hopper.



### Legend:

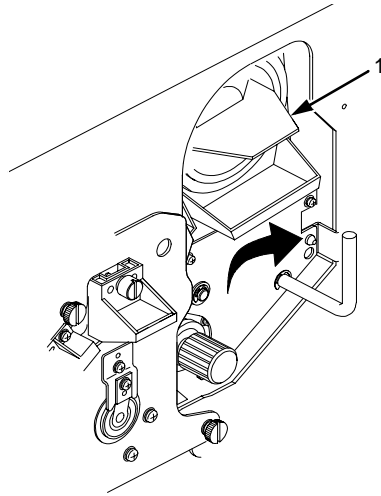
- 1) Pin
- 2) Toner Hopper
- 3) Cover Tape
- 4) Notch

8. Fit the notch to the pin on the developing unit. Push the new toner cartridge as far as possible into the toner hopper.

## Replacing The Toner Cartridge

---

9. Rotate the cartridge clockwise as far as it will turn.



**Legend:**

- 1) Toner Cartridge

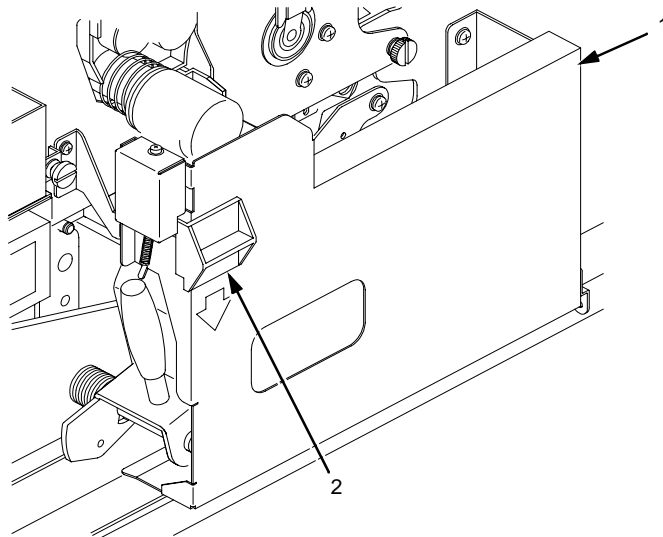
10. If any toner has spilled, remove it with wet tissue paper or a toner vacuum.
11. Close the upper doors.

### Replacing The Waste Toner Bottle

---

When the “WASTE TONER FULL” message appears on the control panel, replace the waste toner bottle by doing the following steps, and discard the empty bottle. Do not reuse the bottle.

1. When paper motion stops, wait 15 seconds, then open the printer upper doors. (See page 42.)
2. Open the waste toner recovery unit by pressing down on the opening lever and pulling the door toward you.



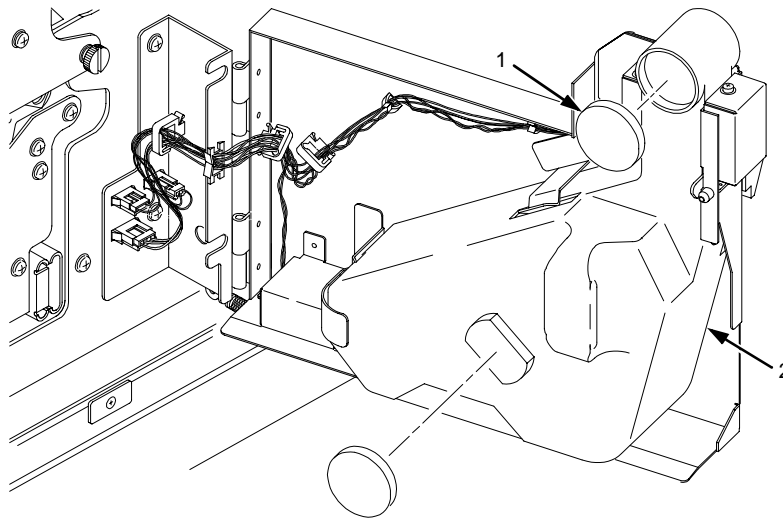
**Legend:**

- 1) Waste Toner Recovery Door
- 2) Opening Lever

---

## Replacing The Waste Toner Bottle

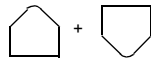
3. Remove the cap from the outside of the waste toner bottle, and cap the toner bottle.



**Legend:**

- 1) Cap
- 2) Waste Toner Bottle

4. Remove the waste toner bottle from the unit and discard it.
5. Install a new waste toner bottle.
6. Close the printer upper doors.
7. Clear Error 28, "WASTE TONER FULL," as follows:
  - a. Press CLEAR.
  - b. Press UP + DOWN to unlock the configuration menu.



- c. Enter the configuration menu and select the Paper Control menu.
- d. Select the "RESET TONER FULL" option and press ENTER.
- e. Exit the configuration menu.
- f. Press ONLINE.

## Replacing The Photoreceptor Drum

---

Drum life is dependent upon media used and proper maintenance and operation of the printer. Print media other than bond paper (e.g., labels, card stock, plastic, or vinyl) may reduce drum life as much as 50%.

To replace the drum, you need a drum auxiliary rod. Please read all steps before beginning the replacement procedure.

### Removal

**CAUTION** Do not do this procedure unless you have had the appropriate training. Do not do this procedure without the drum auxiliary rod (P/N 703531-170), as you may damage the drum.

1. Turn the power switch OFF.
2. Open the printer upper doors. (See page 42.)
3. Open the waste toner recovery unit. (See page 46.)
4. Remove the developing unit. (See page 56.)
5. Vacuum any spilled toner.

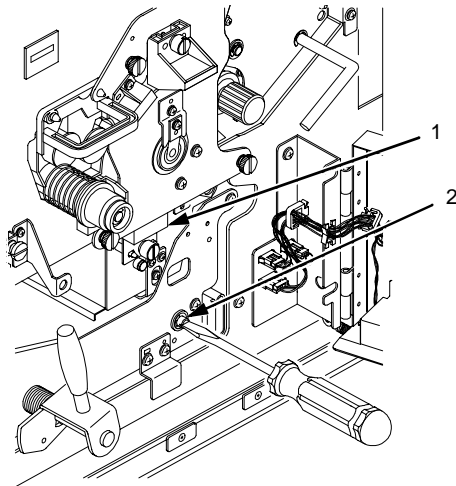


## Replacing The Photoreceptor Drum

---

**CAUTION** The transfer charger must be in the down position to avoid scratching the drum. Failure to perform steps 6 and 7 damages the drum.

6. Rotate the transfer elevator drive shaft counterclockwise. Watch the charger movement:
  - a. If the charger starts to move up, it is already in the down position.
  - b. If the charger starts to move down, continue to rotate the drive shaft until the charger reaches the complete down position.



**Legend:**

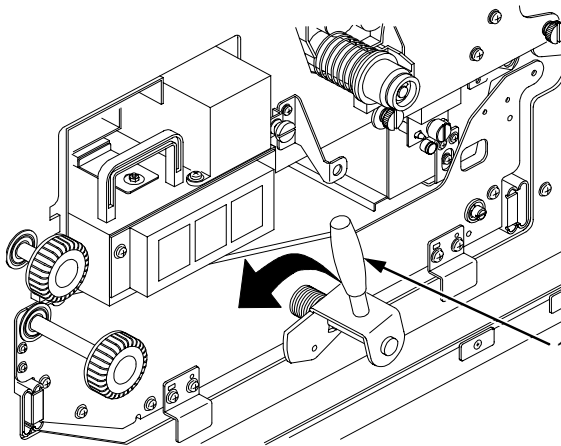
- 1) Transfer Charger
- 2) Transfer Elevator Drive Shaft

## Chapter 3 Consumable Replacement

---

**CAUTION** To avoid damaging the printer or causing false paper jams, the transport lever must be in the fully down position before closing the transport unit.

7. Lower the transport unit by turning the green lever on the transport unit to the left.



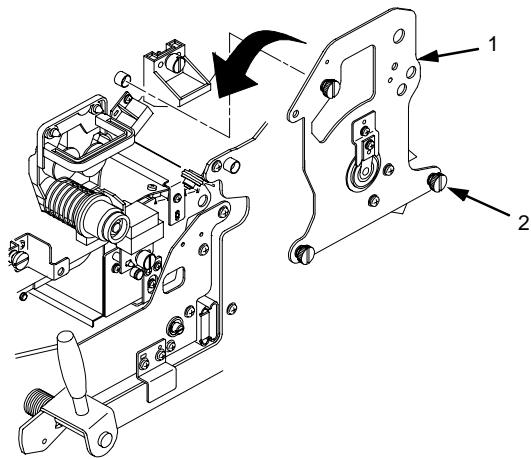
**Legend:**

- 1) Green Lever

## Replacing The Photoreceptor Drum

---

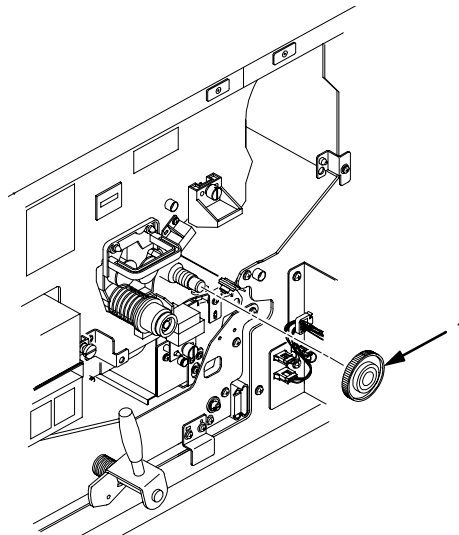
8. Loosen the three thumbscrews securing the drum plate and remove the drum plate.



**Legend:**

- 1) Drum Plate
- 2) Thumbscrews (3)

9. Remove the nut from the end of the drum shaft.



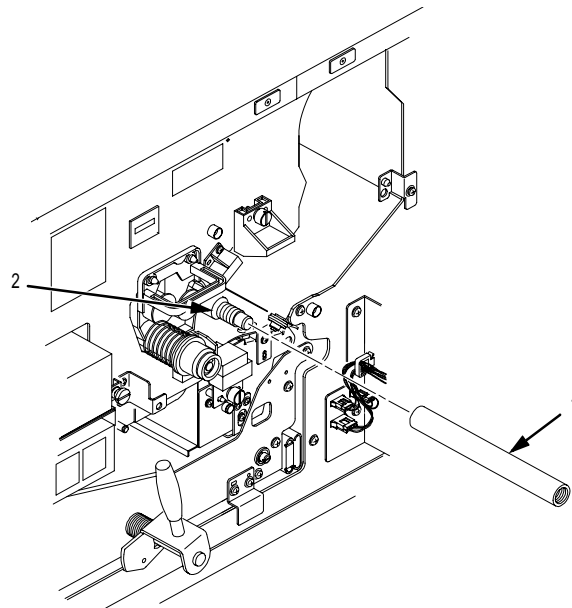
**Legend:**

- 1) Nut

## Chapter 3 Consumable Replacement

---

10. Screw the drum auxiliary rod onto the drum shaft.



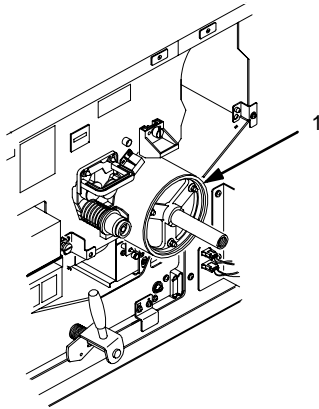
**Legend:**

- 1) Drum Auxiliary Rod
- 2) Drum Shaft

## Photoreceptor Drum Installation

---

11. Pull the drum out along the drum auxiliary rod. Hold the front and back ends when the drum is nearly out of the printer, and remove it with both hands.



**Legend:**

- 1) Drum

12. Pack the old drum for shipment using the original packaging material, and close the cover of the box.
13. Wipe the drum shaft clean with a cloth.

## Photoreceptor Drum Installation

---

**CAUTION**

**Avoid touching the surface of the drum with your hands. It reduces the life of the drum**

1. Remove the new photoreceptor drum from its package. Do not discard the packaging material; as you need it for future drum disposal. The ends of the drum are identical; there are no front or back ends.
2. Wipe inside the endcaps of the drum with a cloth to ensure that they are clean.

**CAUTION** Exposing the drum to light shortens its life. Do not expose the drum to direct sunlight, and install it within five minutes under typical room lighting conditions. When removing the drum from its packaging, do not touch the surface of the drum. Fingerprints and scratches can damage the surface and cause poor print quality.

3. Using both hands, slowly slide the drum onto the drum auxiliary rod. When the drum reaches the area where the auxiliary rod connects to the drum shaft, lift the drum very gently over the connection. Let the drum rest on the rubber rollers as you gently guide it into the printer.

**CAUTION** The drum must rest on the rubber rollers to avoid being scratched.

4. When the drum is fully inserted into the printer, the end of the drum is slightly recessed relative to the front of the printer and the rubber guide rollers should be visible. Slightly lift the drum up off of the rubber rollers and rotate the drum by hand while applying inward pressure, until the drum moves slightly farther into the printer and locks in place.

**CAUTION** In order to position the drum slot and the drum shaft pin, push the drum in all the way to the back and rotate it until you feel it drop in place. Failure to lock the drum in place properly can severely damage the printer.

Never force the drum onto the shaft. If it feels as though the drum is not seating properly, remove the drum and inspect the shaft for foreign material or burrs.

5. Remove the drum auxiliary rod from the drum shaft.
6. Install the nut on the drum shaft and tighten it securely by hand.
7. Install the drum plate and tighten the thumbscrews. While installing the drum plate, hold the copper grounding clip with your thumb. Otherwise the grounding clip can be bent, making no contact with the drum shaft.

## Proper Disposal Of A Drum Unit

---

8. After installing the drum plate, visually verify good electrical contact between the copper grounding clip and the end of the drum shaft.  
Alternatively, measure the resistance. Connect one lead of an ohmmeter to the bracket on the drum plate, and touch the other lead to the edge of the drum. Normal resistance should be 0Ω.
9. Install the developing unit.
10. Raise the transport unit by turning the green lever on the transport unit to the right.
11. Close the waste toner recovery unit and ensure that it latches.
12. Close the printer upper doors.

## Proper Disposal Of A Drum Unit

---

Federal regulations prohibit inappropriate disposal of laser print drums. Dispose of used drums by shipping them to one of the following organizations:

### **Within U.S.A.**

U.S. Fuji Electric, Inc.  
240 Circle Drive N.  
Piscataway, NJ 08854  
Attn: Rod Storm  
Phone: (732) 560-9410

### **Outside U.S.A.**

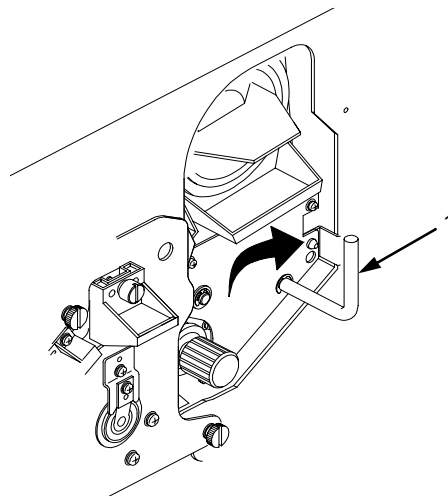
Fuji Distribution Europe B.V.  
Attn: Mr. Asada  
Leisteen 7,2132 ME Hoofddorp,  
The Netherlands.  
TEL: 20-6534790

## Replacing The Developing Unit

**CAUTION** Do not replace the developing unit unless you have been trained to do so. Be careful not to damage the sensors while cleaning the developing unit. (If damage occurs, contact your service representative.)

### Removal

1. Turn the power switch OFF.
2. Open the printer upper doors. (See page 42.)
3. Open the waste toner recovery unit. (See page 46.)
4. Rotate the developing unit lever fully clockwise so that it is pointing straight up. This separates the developing unit from the photoreceptor drum.



**Legend:**

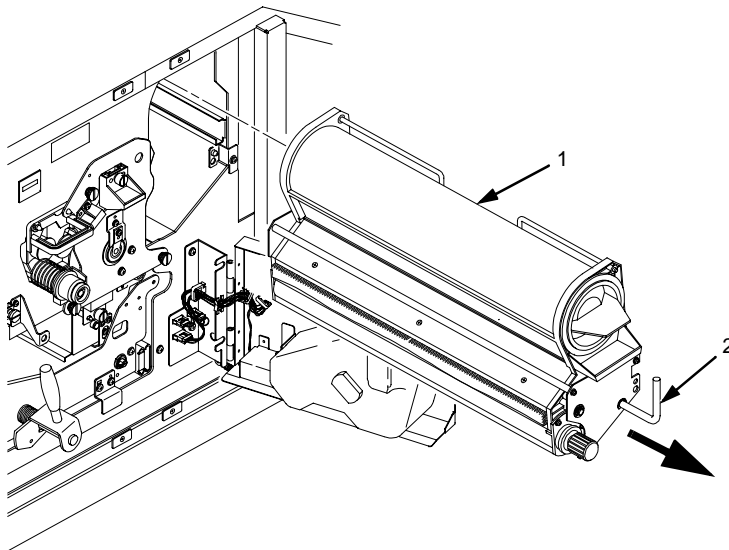
- 1) Lever



## Replacing The Developing Unit

---

5. Remove the developing unit by holding the lever in one hand and pulling the developing unit partially out of the printer.



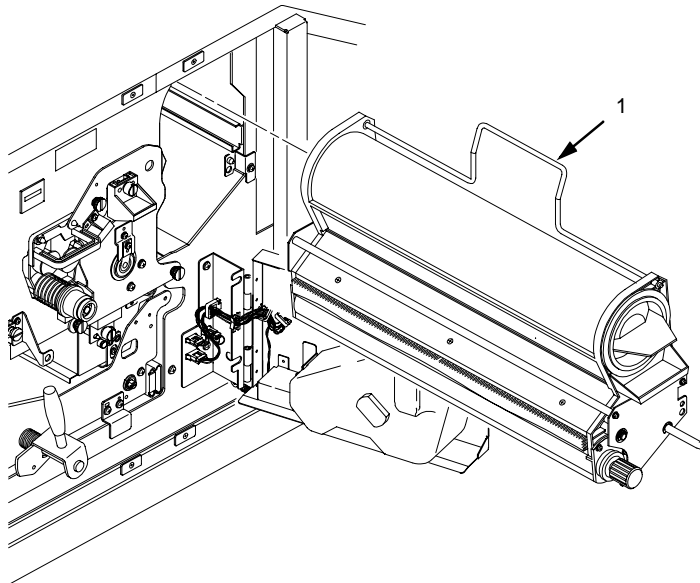
**Legend:**

- 1) Developing Unit
- 2) Lever

## Chapter 3 Consumable Replacement

---

6. With your other hand, grasp the hanger and remove the developing unit from the printer.

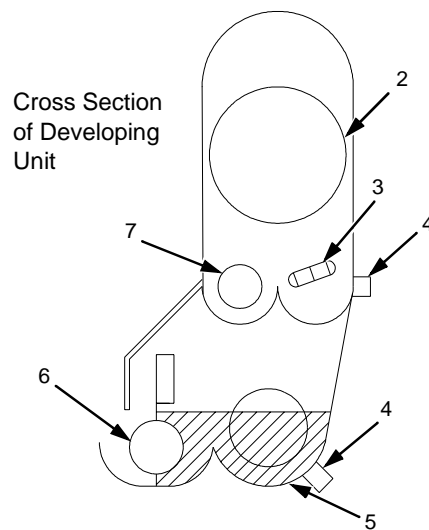
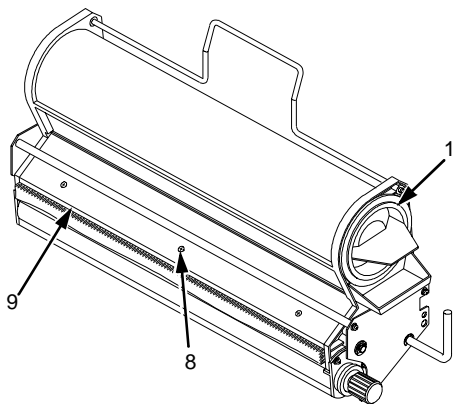


**Legend:**

- 1) Hanger

7. Place the old developing unit in a plastic bag and dispose of it properly.
8. Vacuum any spilled toner.
9. Remove the new developing unit from its package, and add developer to the unit. (See page 63.)

## Replacing The Developing Unit



### Legend:

- 1) Toner Cartridge
- 2) Developing Unit
- 3) Auger
- 4) Toner Sensor
- 5) Developing Tank
- 6) Developing Roller
- 7) Toner Supply Roller
- 8) Screws (3)
- 9) Cover

## Replacing Developer

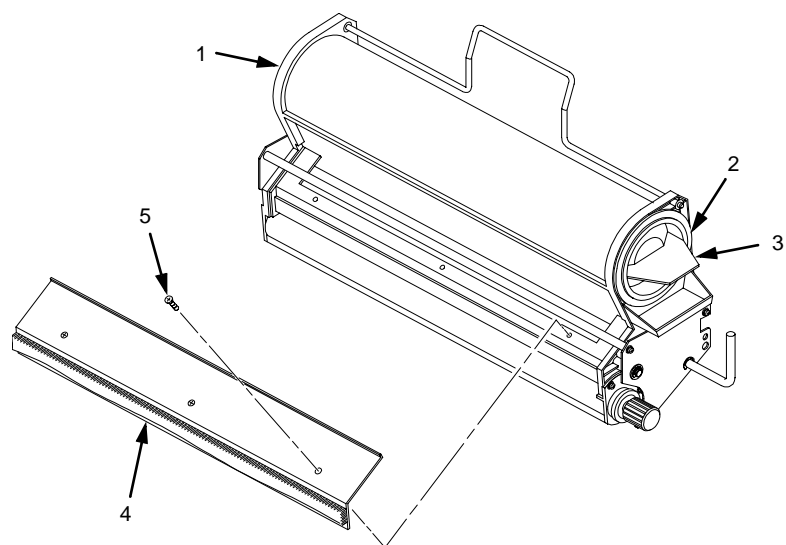
The toner sensor is sensitive to both electrostatic discharge (ESD) and positional adjustment. Do not touch the sensor with your hand or jar it from its factory-set position. (See page 59.)

1. Turn the power switch OFF.
2. Open the printer upper doors. (See page 42.)
3. Prepare a large plastic bag in which to put the developing unit.
4. Remove the developing unit (See page 56.) and place it in the plastic bag, making sure it is still accessible.

### IMPORTANT

When replacing developer in an existing developing unit, you must empty and clean the unit before adding new developer. Do this every 150,000 pages.

5. Turn the toner cartridge knob counterclockwise until it stops, then remove the cartridge from the developing unit.



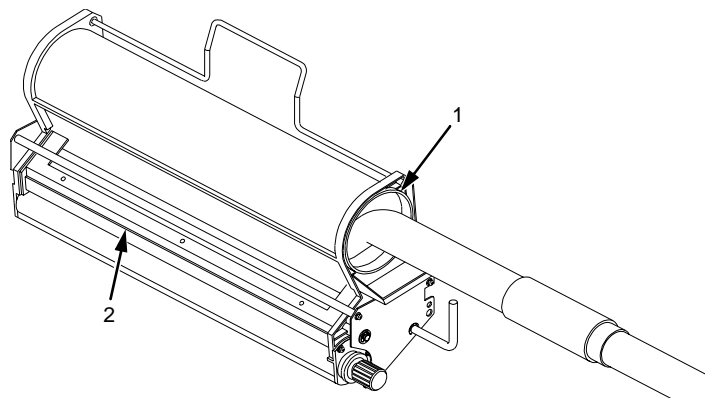
#### Legend:

- 1) Developing Unit
- 2) Toner Cartridge
- 3) Toner Cartridge Knob
- 4) Cover
- 5) Screws (3)

## Replacing Developer

---

6. Remove the three screws on the developing unit cover and detach the cover.
7. Put the developing unit in the plastic bag and do the following:
  - a. Remove the developer and toner in the toner hopper by gently shaking the developing unit up and down with the opening of the toner cartridge facing downward.
  - b. Rotate the developing unit and gently shake it, to allow any remaining developer or toner to fall out of the cover slot.
8. Remove the developing unit from the plastic bag and place it on a protected surface.
9. Vacuum up any developer and toner which remains on the toner supply roller and the auger with a toner vacuum cleaner equipped with a narrow nozzle.



**Legend:**

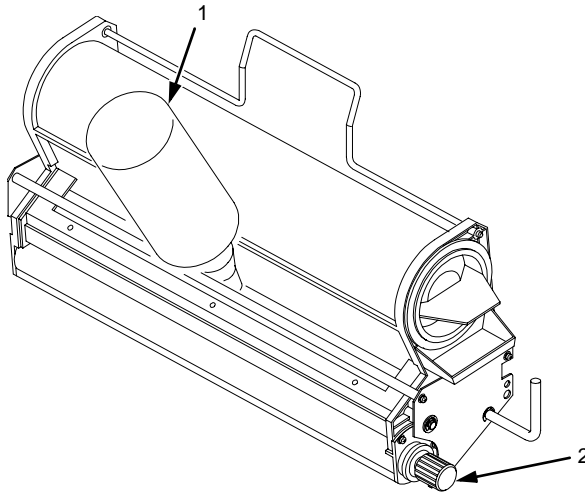
- 1) Toner Hopper
- 2) Toner Spray-Guard Brush

10. Vacuum the toner from the toner spray-guard brush on the developing unit.
11. Shake the new developer bottle several times, remove the bottle cap, and screw the nozzle tightly onto the bottle.

## Chapter 3 Consumable Replacement

---

12. While rotating the new developing roller knob counterclockwise, evenly pour the entire bottle of developer powder into the developing unit.



**Legend:**

- 1) Bottle of new Developer
- 2) Developing Roller Knob

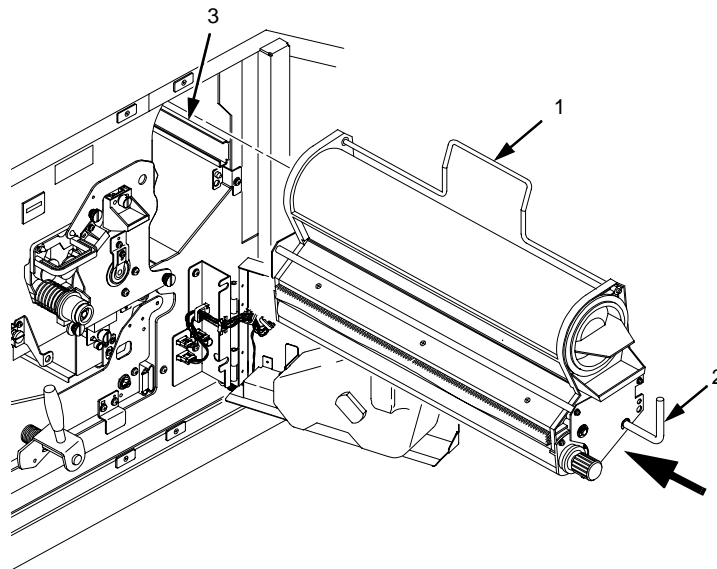
13. Replace the cover and tighten the screws.

**IMPORTANT** If toner or developer spills on clothing, use cold water to remove it.

14. Install the developing unit.

### Install The Developing Unit

1. On the developing unit, rotate the lever fully clockwise so that it is pointing straight up.



**Legend:**

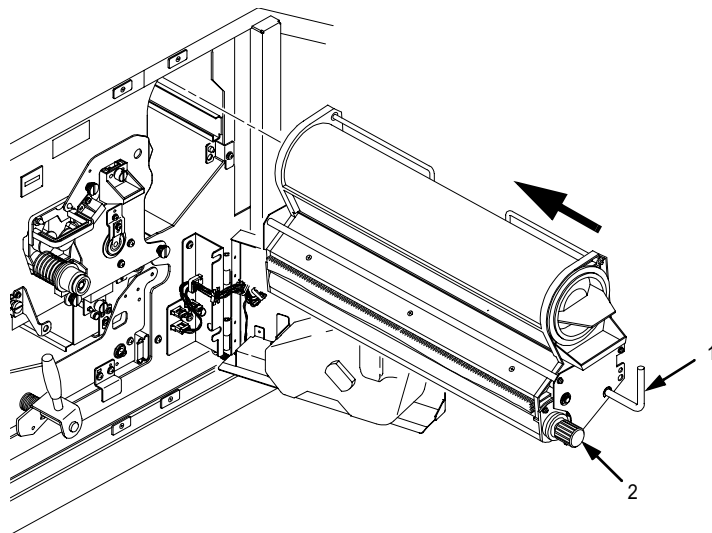
- 1) Hanger
- 2) Lever
- 3) Guide Rail

2. Holding the lever in one hand and the hanger in the other hand, insert the developing unit on the guide rail.
3. Rotate the hanger to the right so that it rests against the developing unit, and push the developing unit in.

## Chapter 3 Consumable Replacement

---

4. Rotate the developing roller knob counterclockwise until the unit drops into its final resting position. The developing unit lever should protrude through the main body of the developing unit.



**Legend:**

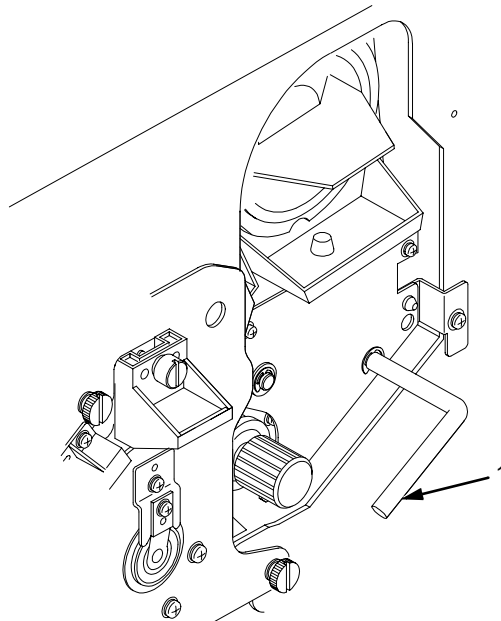
- 1) Lever
- 2) Developing Roller Knob



## Replacing Developer

---

5. Rotate the developing unit lever fully counterclockwise to lock the developing unit in place.



**Legend:**

- 1) Lever

6. Close the waste toner recovery unit and ensure that it latches.
7. Close the printer upper doors.

**Chapter 3** Consumable Replacement

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---

# 4

## *Scheduled Maintenance*

---

### **Maintaining Print Quality**

---

To maintain good print quality, clean the printer according to the schedules and information listed in this chapter.

1. Do a General Cleaning. (See page 77.)
2. Clean the main charger, precharger, and transfer charger. For cleaning instructions, see page 85 for the main charger, and page 89 for the precharger and transfer charger.
3. If print quality problems occur, clean the following areas (see page 68 for tool part numbers):
  - a. Clean the drum with the drum freshener (only when smears appear on print samples due to the drum).
  - b. Clean the LED array and the SELFOC<sup>®</sup> lens (LED print head) with the Toraysee<sup>™</sup> cloth.
  - c. Clean the fuser cover glass with a razor blade or the cover glass scraper.

If the print quality is still poor after cleaning the printer, the chargers may need to be replaced. Contact your authorized service representative for further assistance.

**NOTE:** For replacement intervals, see the maintenance schedules that begin on page 70.

## Maintenance Tools

---

To maintain the printer, you need the following tools:

Item	Part Number
Brush Cleaner	703531-169
Drum Auxiliary Rod	703531-170
Drum Freshener Pad	703531-171
Fuser Cover Glass Scraper	703531-187
Special Dry Tissue Paper	703531-188
Standard Toner Vacuum Cleaner	See below for recommended models
Toraysee Cloth	703531-183
Wire Cleaner	703531-168
9 inch Phillips #1 Screwdriver	N/A

Recommended toner vacuum cleaner models are:

- 3M<sup>®</sup> model 497-AJM standard VAC with Type 1 filter
- 3M model 497-AB 220V with Type 1 filter
- Hitachi<sup>®</sup> CV-TN10 with TN-15 filter

## Service Level Page Counts

---

### IMPORTANT

**Keep a record of all maintenance done on your printer. Maintenance log sheets are provided in Appendix A. Photocopy the pages and keep your maintenance log in a binder near the printer. Every time you or your service provider do printer maintenance make an entry in the log.**

Each time you complete a level of preventive maintenance, you must reset the service level page count by selecting the User Maintenance option on the Maintenance menu.

## Service Level Page Counts

---

(See the Maintenance menu in Chapter 3 of the *User's Manual*.) Levels A, B, and C are your responsibility, while levels D through H are the responsibility of your service provider.

When the page count reaches one of the maintenance intervals listed below, the control panel displays one of the following messages:

User Maint Level X	(User)
Tech Service Level X	(Service Technician)

Service Level X represents the level of service required:

- Level A= every 15,000 pages
- Level B= every 150,000 pages
- Level C= every 600,000 pages
- Level D= every 300,000 pages
- Level E= every 600,000 pages
- Level F= every 900,000 pages
- Level G= every 1,200,000 pages
- Level H= every 2,400,000 pages

A service level includes all the levels that precede it. For example, at 150,000 pages, you do Level B *and* Level A service. At 900,000 pages, your service provider will do Level F, Level E, and Level D service.

Note that this condition does not cause the printer to stop printing. When one of the above messages appears, you should perform the appropriate scheduled maintenance or call your factory-trained service representative to perform the maintenance.

### Clearing Service Level Messages

---

When you have done a level of service, clear the page count for that service level. Note that when you clear a lower service level, the levels above it are also cleared. For example, clearing level C also clears levels A and B.

To clear a service level (level A, for example), select the Maintenance menu from the control panel, select the User Maint option, then select “Clear Level A” by pressing ENTER.

## Maintenance Schedules

---

### Cleaning Schedule

---

Each time you do maintenance, you must reset the service level page count by selecting the User Maintenance option on the Maintenance menu. (See the Maintenance menu in Chapter 3 of the *User's Manual*.) This removes the maintenance error message.

Do the following actions in Table 2 after the specified number of letter size pages (4% coverage) have been printed. Appendix A, “Maintenance Log Sheets,” contains log sheets you can photocopy.

**Table 1. User Cleaning Responsibility**

Action	Frequency (Pages)	Service Level
General cleaning	15,000; See Note 1	A
Major cleaning	150,000	B
Note 1: Every 15,000 pages or 6 paper jams, whichever occurs first.		

## Replacement Schedule

### Replacement Schedule

Replace the following items after the specified number of letter size pages (4% coverage) have printed. Appendix A, "Maintenance Log Sheets," contains log sheets you can photocopy.

**Table 2. User Responsibility - Replacement**

Item	Part Number	Frequency (Pages)	Service Level
Toner cartridge	703532-001	21,000 See Note 1	As Needed
Waste toner bottle	202984-001	150,000 See Note 2	As needed
Photoreceptor drum	703535-001	150 - 300,000 See Note 3	B (as needed)
Developer	703548-001	150,000	B
Developing Unit	705739-001	600,000	C

Note 1: Replace when the "TONER EMPTY" message displays. A guideline for the replacement is 21,000 pages (A4 size, 4% coverage).

Note 2: Replace when the "WASTE TONER FULL" message appears. A guideline for the replacement is every 90,000 pages (A4 size, 4% coverage).

Note 3: Inspect every 150,000 pages; clean if needed. Replace at 300,000 pages or sooner if print quality is no longer acceptable. Drum life depends upon media used and proper maintenance and operation of the printer. Print media other than bond paper (e.g. labels, card stock, plastic or vinyl) can reduce drum life as much as 50%.

### **Tech Service Maintenance Level Kits**

The following maintenance kits should be used after the specified letter size pages (4% coverage) have been printed.

Level D kit is used at 300,000 pages.

<b>Item</b>	<b>Part Number</b>
<b>Maintenance Kit, Level D, L5020</b>	<b>706802-001</b>
<ul style="list-style-type: none"><li>• Main charger</li><li>• Precharger</li><li>• Transfer charger</li><li>• Smoke filter</li></ul>	



## Tech Service Maintenance Level Kits

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Use Level E kit after printing 600,000 letter size pages.

Item	Part Number
<b>Maintenance Kit, Level E, L5020</b>	<b>706806-001</b>
<ul style="list-style-type: none"><li>• Main charger</li><li>• Precharger</li><li>• Transfer charger</li><li>• Smoke filter</li><li>• Cleaning unit</li><li>• Transport belt (set of 3)</li><li>• Cutter motor</li></ul>	

## Chapter 4 Maintenance Schedules

---

Use Level F kit after printing 900,000 letter size pages.

Item	Part Number
<b>Maintenance Kit, Level F, L5020</b>	<b>706812-001</b>
<ul style="list-style-type: none"><li>• Main charger</li><li>• Precharger</li><li>• Transfer charger</li><li>• Smoke filter</li><li>• Xenon (flash) lamp</li></ul>	

## Tech Service Maintenance Level Kits

---

Use Level G kit after printing 1,200,000 letter size pages.

Item	Part Number
<b>Maintenance Kit, Level G, L5020</b>	<b>706818-001</b>
<ul style="list-style-type: none"><li>• Main charger</li><li>• Precharger</li><li>• Transfer charger</li><li>• Smoke filter</li><li>• Cleaning unit</li><li>• Transport belt (set of 3)</li><li>• Cutter motor</li><li>• Trigger coil unit</li><li>• Developing motor unit</li><li>• Exit feed roller belt</li></ul>	

## Chapter 4 Maintenance Schedules

---

Use Level H kit after printing 2,400,000 letter size pages.

Item	Part Number
<b>Maintenance Kit, Level H, L5020</b>	<b>706830-001</b>
<p>The kit includes the following items:</p> <ul style="list-style-type: none"><li>• Main charger</li><li>• Precharger</li><li>• Transfer charger</li><li>• Smoke filter</li><li>• Cleaning unit</li><li>• Transport belt (set of 3)</li><li>• Cutter motor</li><li>• Trigger coil unit</li><li>• Developing motor unit</li><li>• Exit feed roller belt</li><li>• Lamp housing filter</li><li>• EPS3</li><li>• EPS4</li><li>• Capacitor</li><li>• Discharge LEDs (PEL)</li></ul>	

---

## General Cleaning

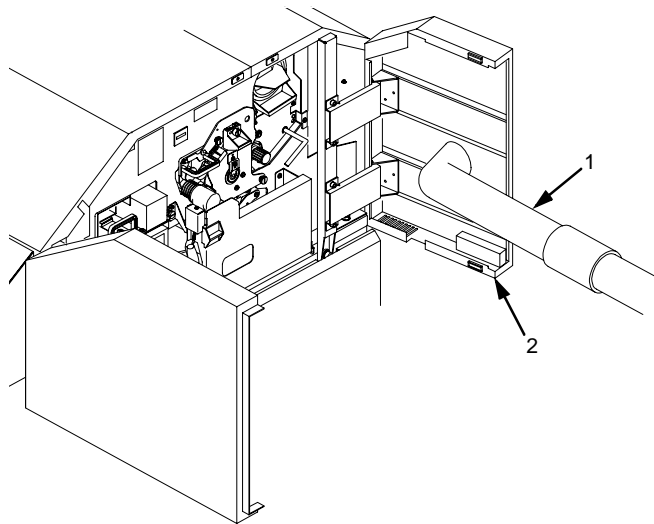
---

To maintain optimum print quality, clean the printer regularly. Depending upon the density of your print jobs, the printer may require cleaning every 10,000 - 20,000 sheets.

### Vacuuming

---

1. Turn the power switch OFF.
2. Open the printer upper doors. (See page 42.)
3. Using a vacuum, clean up the toner, paper dust, etc. inside the upper doors.



**Legend:**

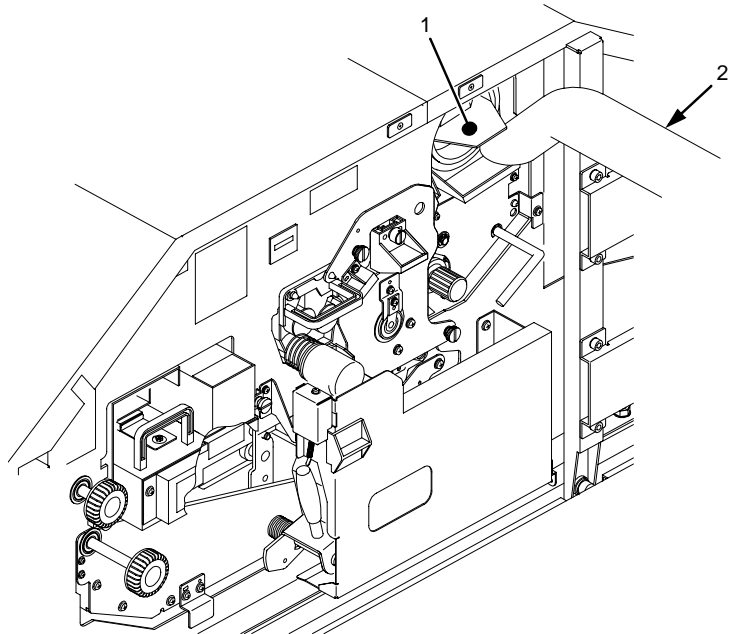
- 1) Vacuum
- 2) Upper Door

4. Open the waste toner recovery unit. (See page 46).

## Chapter 4 General Cleaning

---

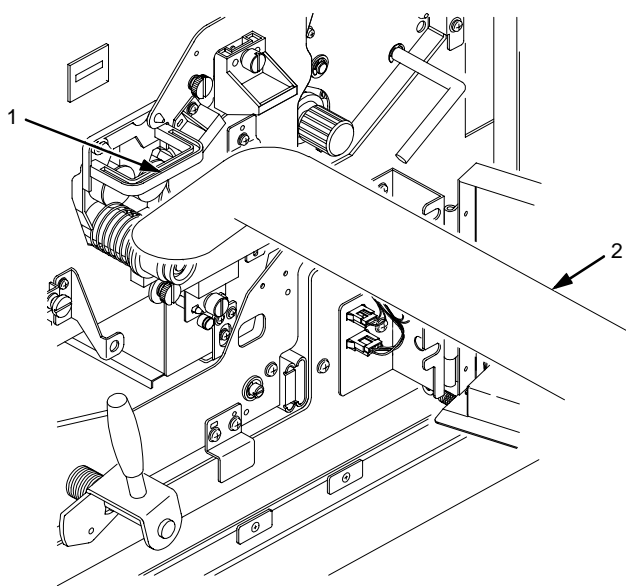
5. Vacuum the developing unit and toner hopper.



**Legend:**

- 1) Developing Unit and Toner Hopper
- 2) Vacuum

6. Vacuum the cleaning unit.



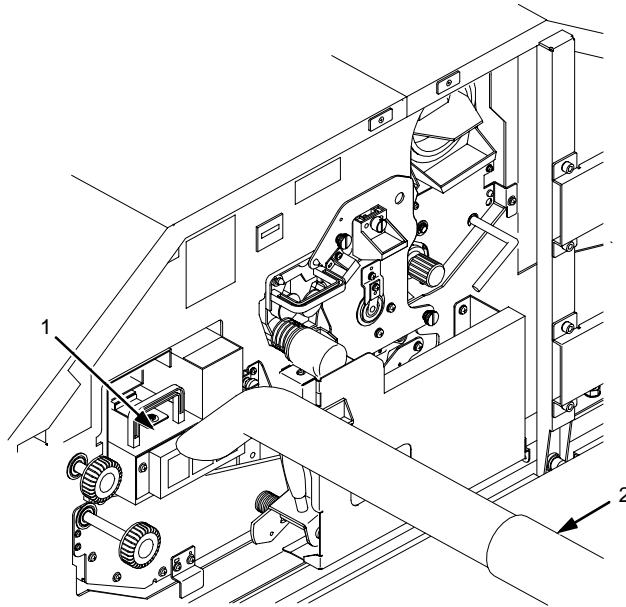
**Legend:**

- 1) Cleaning Unit
- 2) Vacuum

## Chapter 4 General Cleaning

---

7. Vacuum the fuser unit.
8. Vacuum the lamp housing filter on the end of the fuser unit.



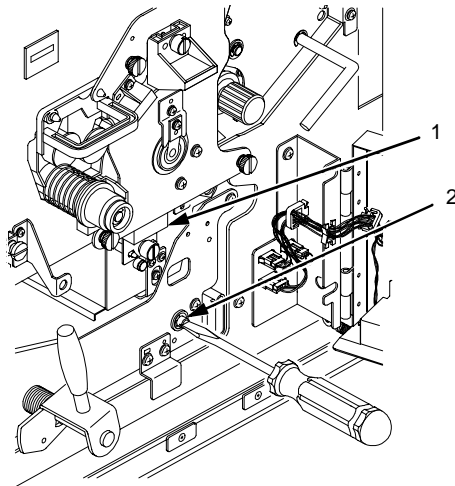
**Legend:**

- 1) Fuser Unit
- 2) Vacuum



**CAUTION** The transfer charger must be in the down position to avoid scratching the drum. Failure to perform steps 9 and 10 damages the drum.

9. Rotate the transfer elevator drive shaft counterclockwise. Watch the charger movement:
  - a. If the charger starts to move up, it is already in the down position.
  - b. If the charger starts to move down, continue to rotate the drive shaft until the charger reaches the complete down position.



**Legend:**

- 1) Transfer Charger
- 2) Transfer Elevator Drive Shaft

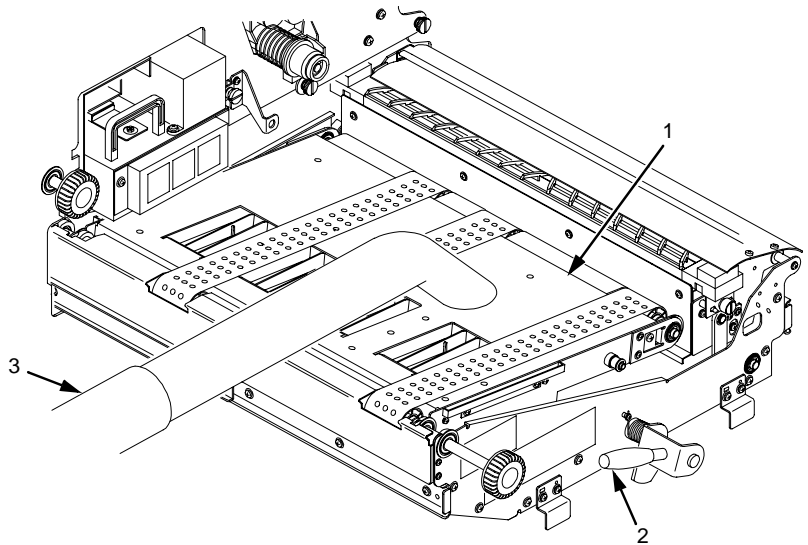
**CAUTION** To avoid damaging the printer or causing false paper jams, the transport lever must be in the fully down position before closing the transport unit.

10. Lower the transport surface by turning the green lever on the transport unit to the left.
11. Pull the transport unit toward you until it stops.

## Chapter 4 General Cleaning

---

12. Vacuum the toner, paper dust, etc. Be sure to clean under the transport unit as well.



**Legend:**

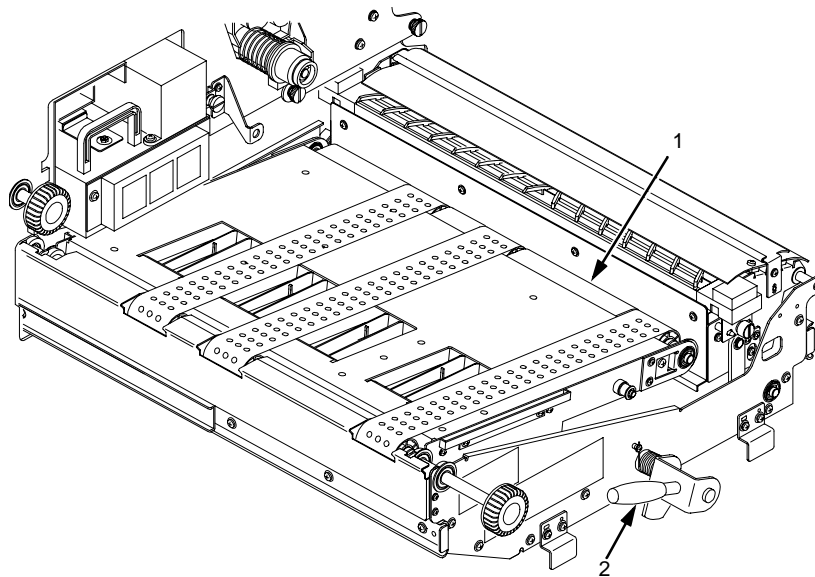
- 1) Transport Surface
- 2) Green Lever
- 3) Vacuum

13. Wipe off the dirt on the transport surface with wet tissue paper. Make sure no paper debris is left on the surface
14. Using an ammonia-based wax-free cleaner or rubbing alcohol, clean the belts to remove residue buildup and restore their tacky surface.

## Vacuuming

---

15. Push the transport unit into the printer while holding down the green lever. Raise the green lever to the right to raise the transport surface.



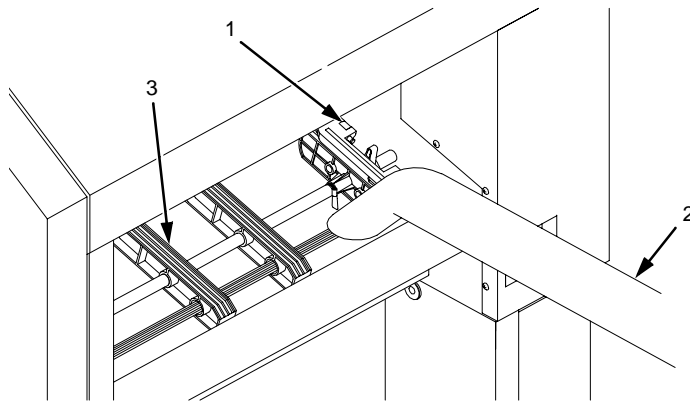
**Legend:**

- 1) Transport Surface
- 2) Green Lever

## Chapter 4 General Cleaning

---

16. Vacuum the toner, paper dust, etc. in the tractor area.



**Legend:**

- 1) Tractor
- 2) Vacuum
- 3) Paper Guide

## Cleaning The Chargers

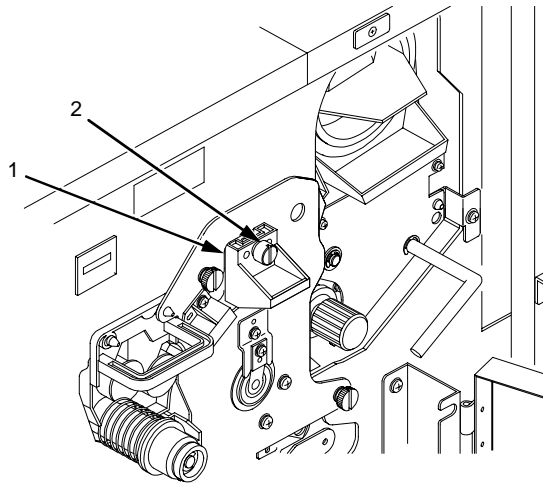
---

1. Turn the power switch OFF.
2. Open the printer upper doors. (See page 42.)

### Main Charger

**CAUTION** Handle the charger carefully to avoid damaging or breaking the charger wires.

3. Loosen the thumbscrew and remove the main charger by pulling it toward you.



**Legend:**

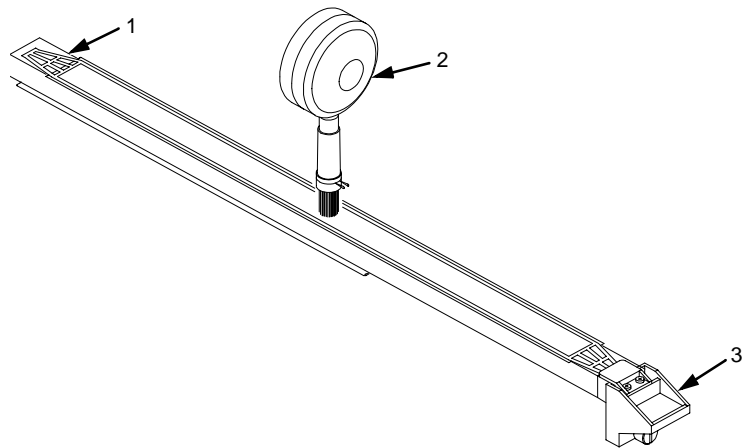
- 1) Main Charger
- 2) Thumbscrew

4. Place the main charger on a flat, clean work surface.

## Chapter 4 General Cleaning

---

- Using the brush cleaner (listed on page 68), clean the exposed side of the charger grid and the body of the main charger to remove paper dust, etc., as shown below.



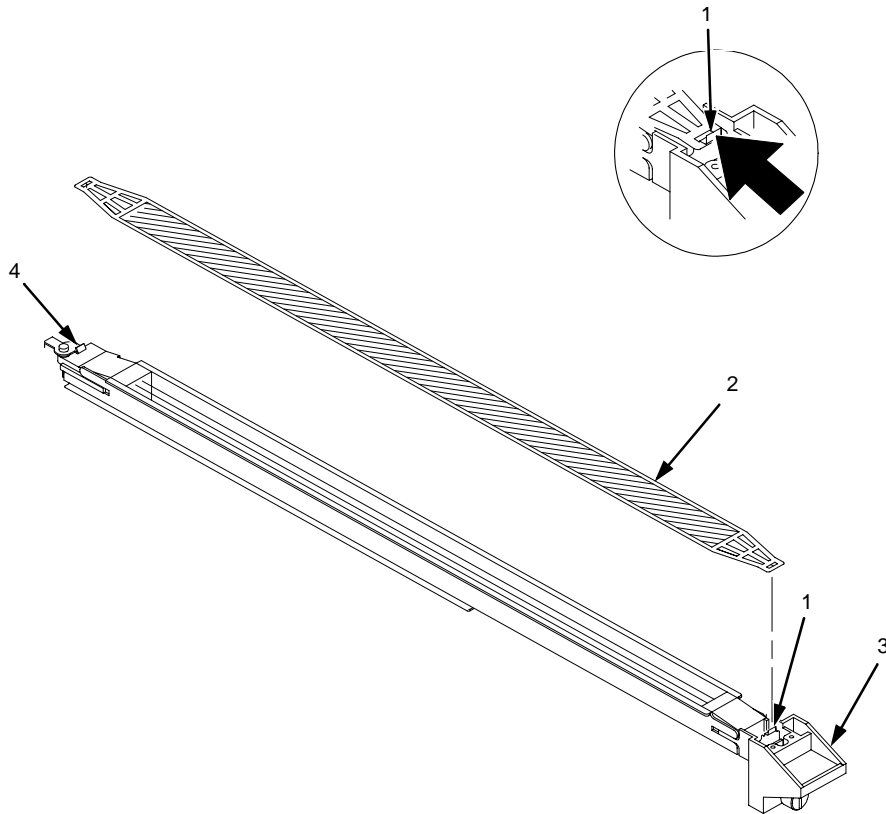
**Legend:**

- Charger Grid
- Brush Cleaner
- Main Charger

---

## Cleaning The Chargers

6. Position the main charger with the charger grid up and the front end of the charger toward you, as shown in the following figure. Remove the charger grid from the main charger as follows:
  - a. While pressing the front retaining tab toward the rear of the charger, unhook the rear end of the charger grid from the rear retaining tab.
  - b. Release the front retaining tab, then remove the charger grid from it.



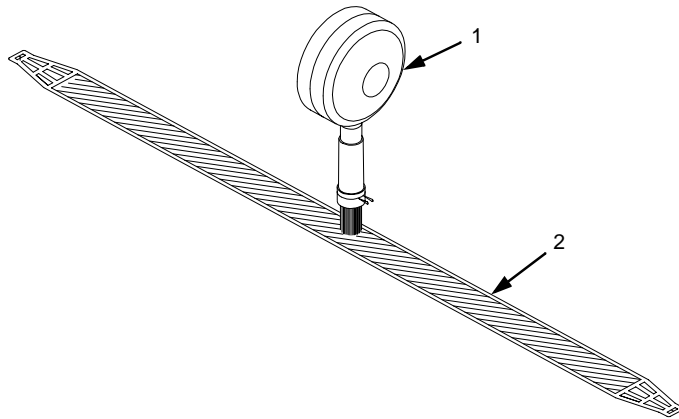
**Legend:**

- 1) Front Retaining Tab
- 2) Charger Grid
- 3) Main Charger
- 4) Rear Retaining Tab

## Chapter 4 General Cleaning

---

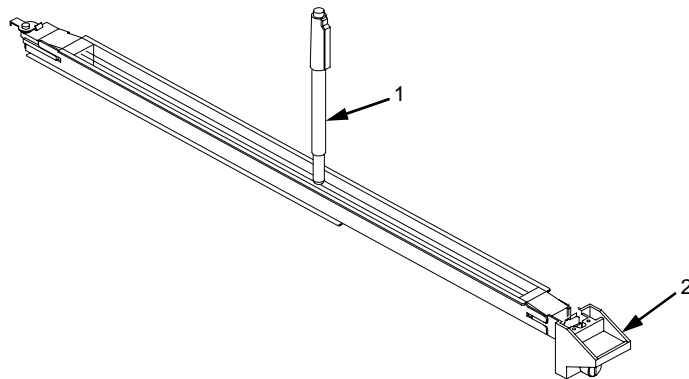
- Using the brush cleaner, clean both sides of the charger grid.



**Legend:**

- Brush Cleaner
- Charger Grid

- Using the wire cleaner (listed on page 68), clean the two wires in the main charger. When clean, the wires feel smooth.



**Legend:**

- Wire Cleaner
- Main Charger



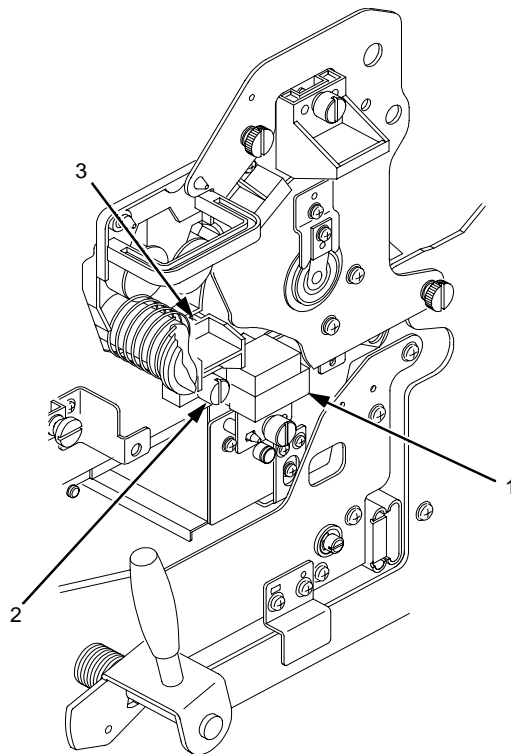
## Cleaning The Chargers

---

9. Install the charger grid.
10. Return the main charger to its original position. Fasten the main charger screw to secure it.

### Precharger And Transfer Charger

11. Open the waste toner recovery unit.
12. Loosen the precharger thumbscrew and transfer/separator charger thumbscrew, and remove the chargers by pulling them toward you.



**Legend:**

- 1) Transfer/Separator Charger
- 2) Thumbscrews
- 3) Precharger

13. Place the chargers on a flat, clean work surface.

14. Using the brush cleaner and the wire cleaner (listed on page 68), remove the dust and dirt on the wires. The precharger contains one wire, while the transfer/separator charger contains two wires. When clean, the wires feel smooth.
15. After cleaning, return the chargers to their original positions. Fasten the charger screws to secure them.

### Cleaning The Fuser Unit Cover Glass

---

**WARNING**

The fuser unit remains hot after operation. Wait until it has *completely* cooled down before handling it.

**WARNUNG**

Die Einbrennvorrichtung behält auch nach dem Betrieb ihre Temperatur bei. Fassen Sie sie erst an, wenn sie *vollständig* abgekühlt ist.

**AVISO**

La unidad de fusor estará a alta temperatura después de funcionar. Espere a que se haya en friado *por completo* antes de manipularla.

**ATTENTION**

L'unité de four est encore très chaude après chaque opération. Attendez qu'elle refroidisse complètement avant de la manipuler.

**AVVERTENZA**

Dopo l'uso, l'unità fusore é calda. Attendere il *completo* raffreddamento dell'unità prima di intervenire sulla medesima.

Do not scratch or place your hands directly on the cover glass.

**IMPORTANT**

**Do not use any cleaners or chemicals on the Fuser Unit Cover Glass. Use only the scraper.**

1. Turn the power switch OFF.
2. Open the printer upper doors. (See page 42.)

## Cleaning The Fuser Unit Cover Glass

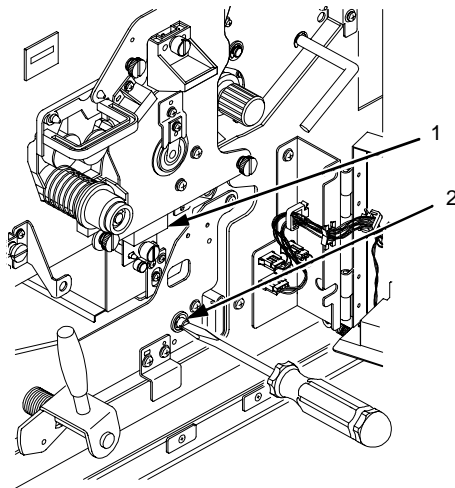
---

3. Open the waste toner recovery unit.

### CAUTION

The transfer charger must be in the down position to avoid scratching the drum. Failure to perform steps 4 and 5 damages the drum.

4. Rotate the transfer elevator drive shaft counterclockwise.  
Watch the charger movement:
  - a. If the charger starts to move up, it is already in the down position.
  - b. If the charger starts to move down, continue to rotate the drive shaft until the charger reaches the complete down position.



#### Legend:

- 1) Transfer Charger
- 2) Transfer Elevator Drive Shaft

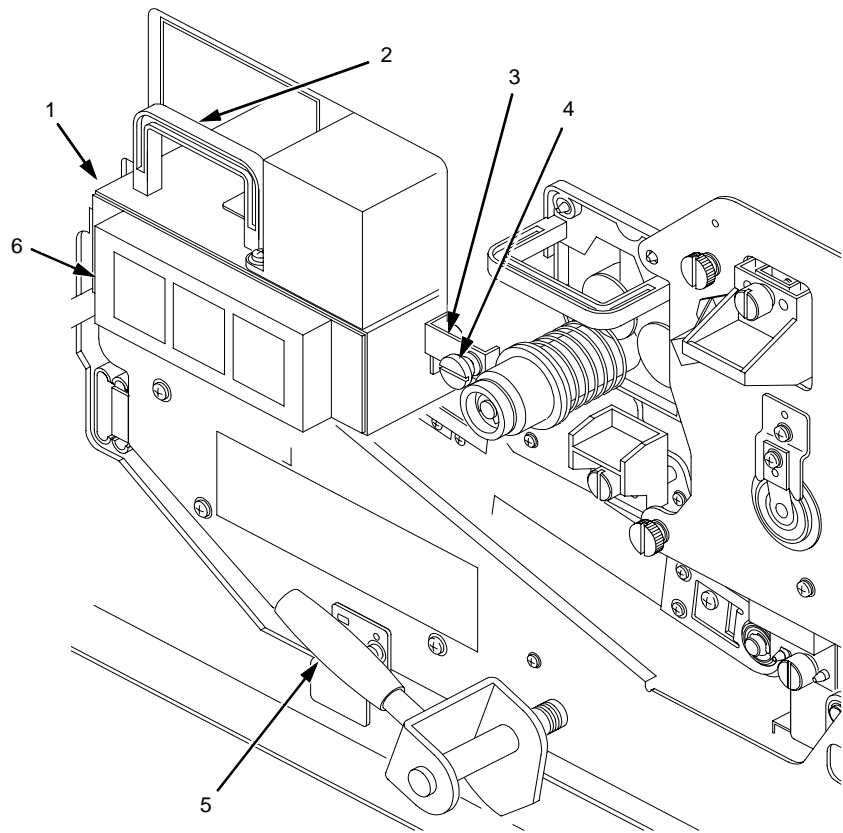
### CAUTION

To avoid damaging the printer or causing false paper jams, the transport lever must be in the fully down position before closing the transport unit.

5. Lower the transport surface by turning the green lever on the transport unit to the left.

## Chapter 4 General Cleaning

6. Loosen the thumbscrews (2) on the right and left fuser unit holding plates.



**Legend:**

- 1) Thumbscrew (not visible)
- 2) Handle
- 3) Holding Plate
- 4) Thumbscrew
- 5) Green Lever
- 6) Fuser Unit

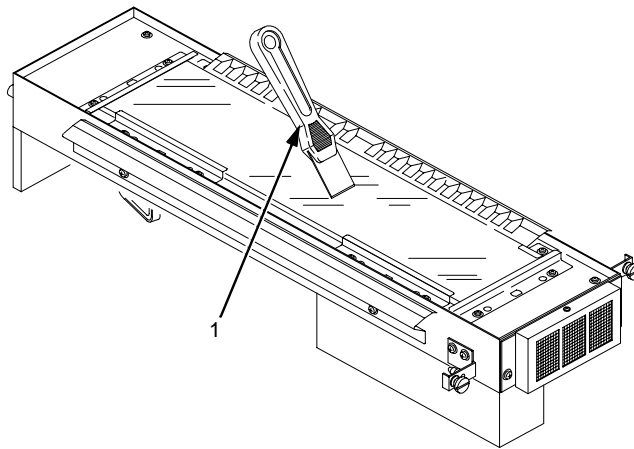
7. Grasp the handle and pull out the fuser unit until the second handle is visible.
8. With the other hand, grasp the second handle and remove the fuser from the printer.

## Cleaning The Fuser Unit Cover Glass

---

**CAUTION** Do not scratch or place your hands directly on the cover glass. Fingerprints on the cover glass or lamps will cause them to break.

9. Place the fuser on a clean, flat surface with the cover glass facing up.
10. Using the fuser cover glass scraper (listed on page 68), remove the dirt and toner buildup on the cover glass surface.



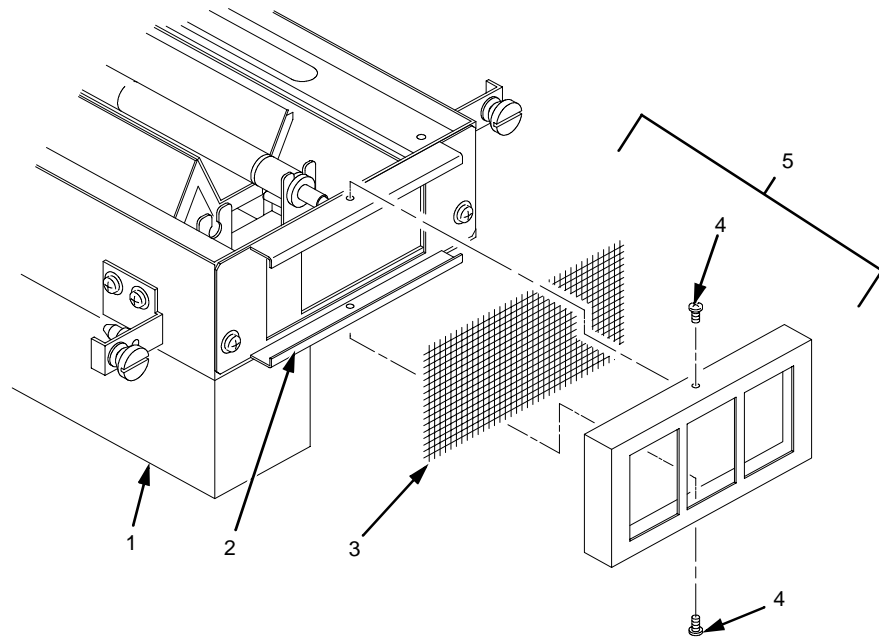
**Legend:**

- 1) Scraper

11. Wipe away any remaining toner or dirt with a Toraysee cloth (listed on page 68).

## Chapter 4 General Cleaning

12. Remove the two screws that secure the filter housing to the filter, then remove the filter.



**Legend:**

- 1) Fuser Unit
- 2) Filter Holding Plate
- 3) Filter
- 4) Screws (2)
- 5) Filter Housing

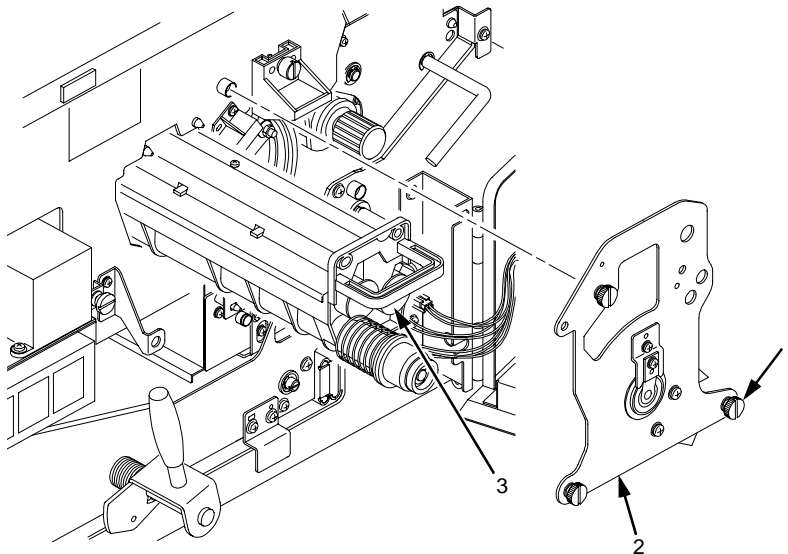
13. Vacuum the filter, then install it.
14. Vacuum any paper dust from the printer frame.
15. Install the fuser, making sure that the guide pins in the screw bracket align with the holes in the side frame of the printer.

## Major Cleaning

Do a major cleaning every 150,000 pages to keep your printer in the best working order.

### Cleaning Unit

1. Turn the power switch OFF.
2. Open the printer upper doors. (See page 42.)
3. Open the waste toner recovery unit. (See page 46.)
4. Loosen the three thumbscrews securing the drum plate and remove the drum plate.
5. Remove the cleaning unit by grasping its handle and pulling it toward you.



**Legend:**

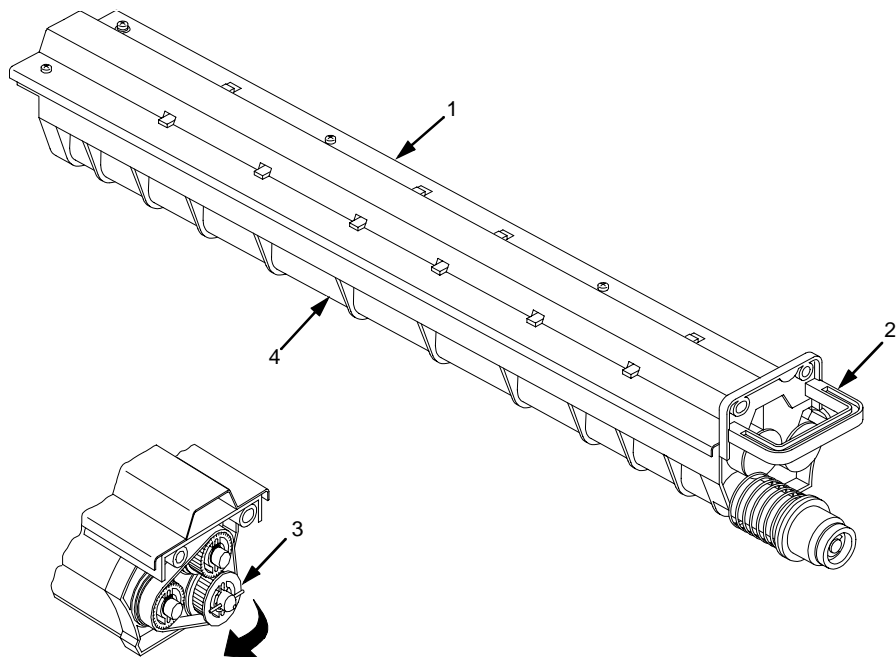
- 1) Thumbscrews (3)
- 2) Drum Plate
- 3) Cleaning Unit Handle

## Chapter 4 Major Cleaning

**IMPORTANT** To avoid spilling toner, do not turn the cleaning unit upside down.

6. Vacuum the brush on the cleaning unit. Turn the end of the shaft to rotate the brush. Continue to rotate and vacuum the brush until the entire brush surface has been cleaned.

**CAUTION** Do not touch the brush surface with your hand.



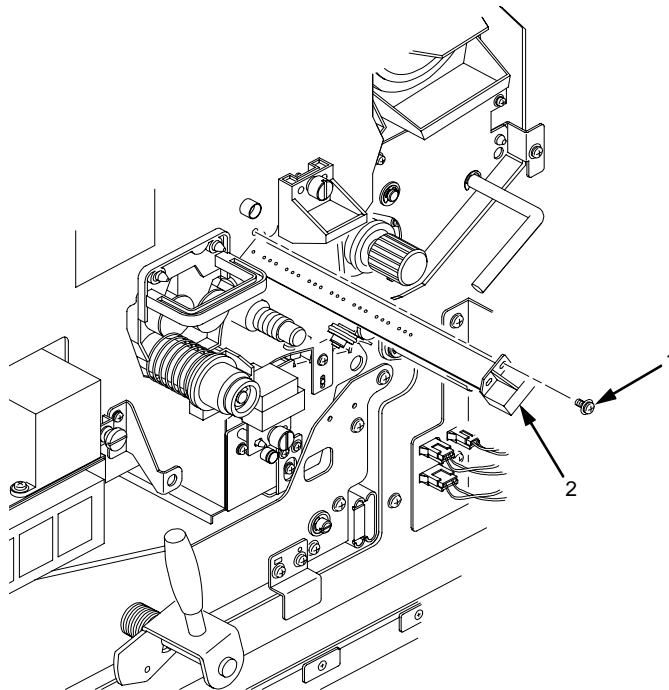
**Legend:**

- 1) Cleaning Unit
- 2) Cleaning Unit Handle
- 3) Rotate Shaft
- 4) Brush



**CAUTION** Do not flex the discharge LED, or it may break.

7. Remove the discharge LED screw.

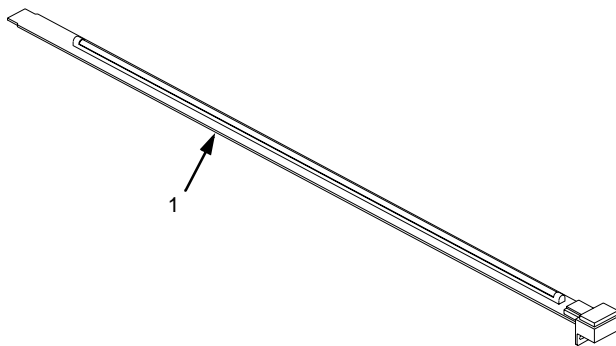


**Legend:**

- 1) Screw
- 2) Discharge LED

8. Remove the discharge LED by pulling it toward you.

- Using a Toraysee cloth (listed on page 68), wipe off the dirt on the discharge LED.



**Legend:**

- Discharge LED

- Install the discharge LED.

## Cleaning The Photoreceptor Drum

---

**CAUTION** When cleaning the photoreceptor drum, observe the following precautions:

- Do not touch the drum surface with your hands.
- To prevent the drum surface from being scratched, clean it in a location free of dust.
- Cleaning the drum may result in wiping stains. A drum left unused in the printer for a long time after cleaning may especially be affected. Therefore, after cleaning and installing the drum in the printer, use maximum size paper to print an image repeatedly until no stains remain. Stains usually clear after printing a few dozen pages.

- Remove the photoreceptor drum from the printer. (See page 115.)
- Place the drum on a covered work surface.

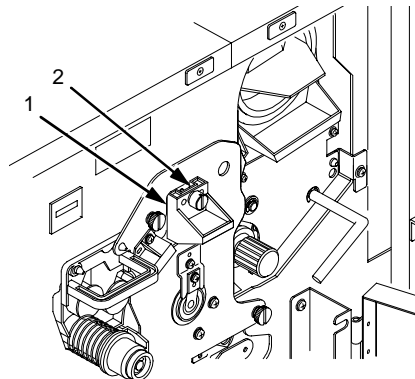
## Cleaning The Photoreceptor Drum

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3. If the drum is only slightly dirty, clean it with ethanol or isopropyl alcohol. **Do not use acetone.**
4. If the drum has toner buildup, clean it with the drum freshener pad. (See page 68.) Turn the drum little by little while polishing the drum surface with the freshener pad. Polish with a slight force in the direction of the drum circumference, using a circular motion. Let the polished areas slightly overlap each other, and polish the entire drum surface two or three times.

**CAUTION** Press lightly when polishing the drum surface, as too much pressure can damage the drum.

5. Using the special dry tissue paper (see page 68), thoroughly wipe the drum freshener off the drum surface.
6. To avoid exposing the drum to light for too long, temporarily pack the drum in its original packaging material, and close the box cover. Set the drum aside.
7. Remove the drum auxiliary rod from the drum shaft.
8. Wipe the drum shaft clean with a cloth.
9. Loosen the thumb screw and remove the main charger by pulling it toward you.
10. Clean the developing unit area with a vacuum cleaner and a soft cloth.



**Legend:**

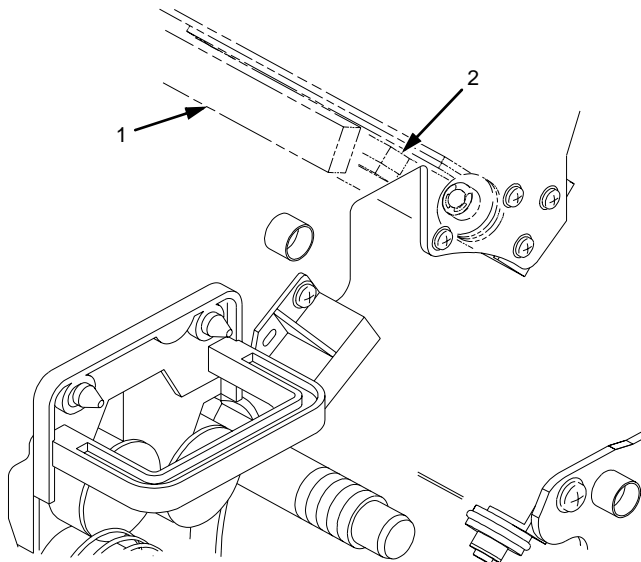
- 1) Main Charger
- 2) Thumbscrew

## Chapter 4 Major Cleaning

**CAUTION** When wiping the SELFOC® lens, be certain not to apply excessive force to the drum surface potential sensor located near the SELFOC lens, as this may cause the sensor to be dislocated. (If this happens, contact your service representative.)

11. Wipe the SELFOC lens by moving a Toraysee cloth (see page 68) from the inner part of the printer toward you. Wipe the lens in this manner several times until there is no more dirt on the cloth.

**NOTE:** Always wipe the SELFOC lens with the unused side of the Toraysee.



**Legend:**

- 1) SELFOC Lens
- 2) Drum Surface Potential Sensor

12. Install the main charger.
13. Install the photoreceptor drum. (See page 53.)
14. Install the developing unit. (See page 63.)
15. Install the cleaning unit.

---

# 5

# *Troubleshooting*

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## Troubleshooting

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This chapter discusses diagnostic tests, paper jams, and system messages (status and error).

### **Diagnostics**

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The printer includes diagnostic circuits and software to aid in the discovery, prevention, and correction of system problems and failures. The printer has both offline and on-line diagnostics.

#### **Offline Diagnostics**

Most of the software diagnostics are executed when the printer is powered on, and when you request diagnostic information through the control panel.

Each time the printer is powered on, it performs a power-on self test. There is no printout during this test. However, the printer displays any errors on the control panel, accompanied by an audible alarm.

You may request the following diagnostic and configuration information via the control panel, through various menus:

- **Test Print:** Prints various predefined graphics pages to verify that the printer can print properly on the entire page (Test Print menu).
- **Print Statistics:** Displays all accumulated print engine statistics, such as number of pages printed and power-on time. This is a display-only feature; there is no printout (Print Statistics menu).

## Chapter 5 Paper Jams

---

- **Print Configuration:** Prints all current configuration parameters in the printer, including print statistics (Config. Control menu).

### **Online Diagnostics**

When it is online, the printer senses and reports problems or conditions as they arise. When an error is detected, the printer halts, lights the appropriate LED, and displays the proper error message on the control panel. The error message remains displayed until the error condition is cleared and you press CLEAR.

After the error is cleared, the printer reprints any pages that were not ejected prior to the error, provided the Reprint on Fault option is enabled. (See the Paper Control menu in Chapter 3 of the *User's Manual*.)

## Paper Jams

---

### **Paper Jam Near The Tractor**

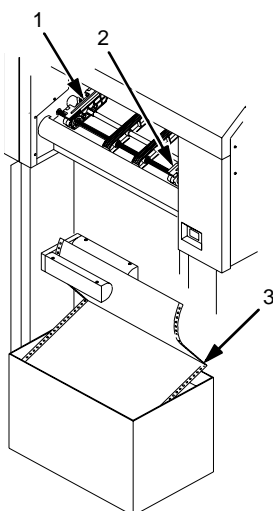
---

1. Raise the tractor gates.
2. Pull out the jammed paper. If the end of the paper is crumpled, tear it away from the perforation.

## Paper Jam Near The Tractor

---

3. Reload the paper. The first fold of the paper should be facing towards the printer; otherwise, a paper jam could occur. (see illustration). Do not push the paper past the tractors as there is a paper jam sensor that will sense the paper and return a paper jam error.

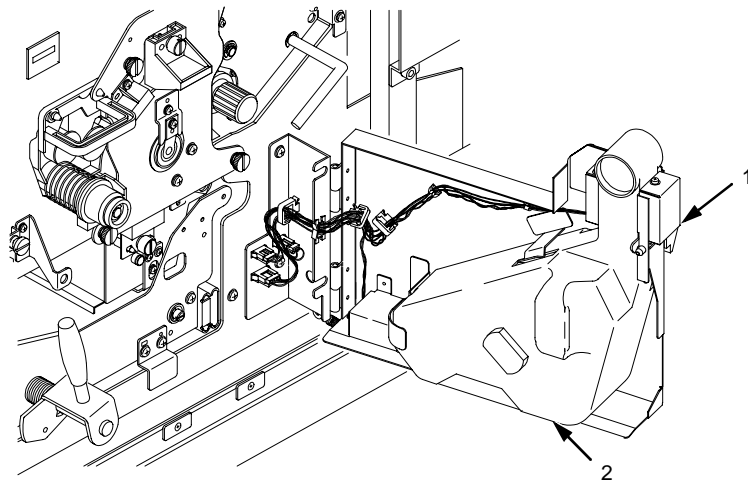


**Legend:**

- 1) Left Tractor
- 2) Right Tractor
- 3) First paper fold is toward printer

### Paper Jam Near The Paper Output Section

1. When paper motion stops, wait 15 seconds, then open the upper doors.
2. Open the waste toner recovery unit.



**Legend:**

- 1) Opening Lever
- 2) Waste Toner Recovery Unit

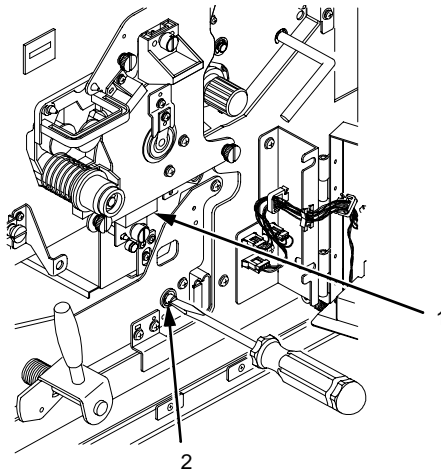


## Paper Jam Near The Paper Output Section

---

**CAUTION** The transfer charger must be in the down position to avoid scratching the drum. Failure to perform steps 3 and 4 damages the drum.

3. Rotate the transfer elevator drive shaft counterclockwise. Watch the charger movement:
  - a. If the charger starts to move up, it is already in the down position.
  - b. If the charger starts to move down, continue to rotate the drive shaft until the charger reaches the fully down position.



**Legend:**

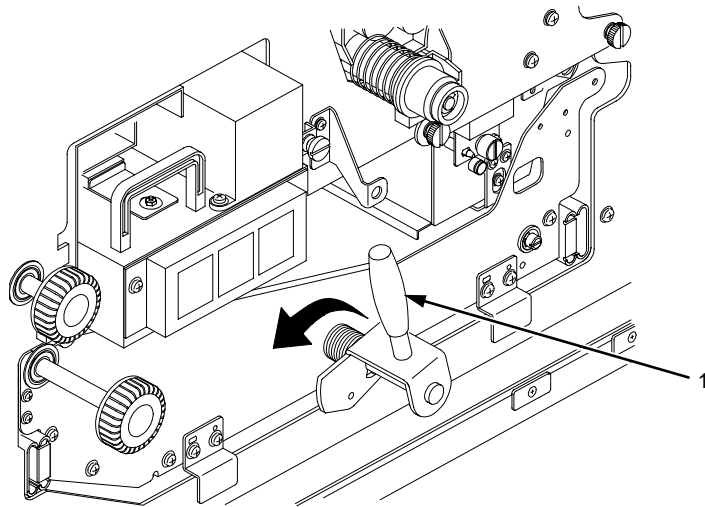
- 1) Transfer Charger
- 2) Transfer Elevator Drive Shaft

## Chapter 5 Paper Jams

---

**CAUTION** To avoid damaging the printer or causing false paper jams, the transport lever must be in the fully down position before opening the transport unit

4. Lower the transport unit by turning the green lever on the transport unit to the left.



**Legend:**

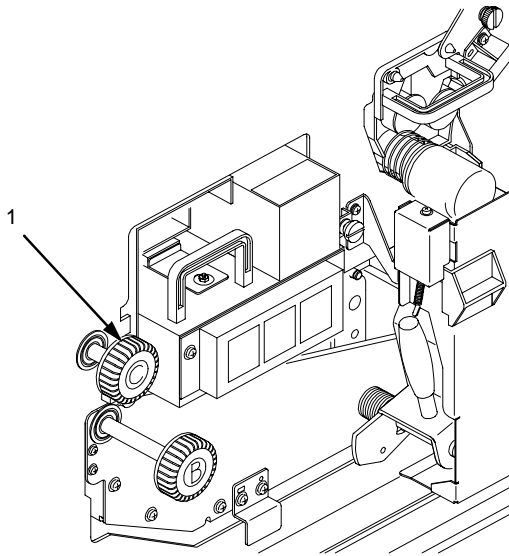
- 1) Green Handle

5. Check for and remove any paper jammed in the transport unit.

## Paper Jam Near The Paper Output Section

---

6. Turn knob C clockwise 90° to raise the scuff roller holding the paper.



**Legend:**

- 1) Knob C

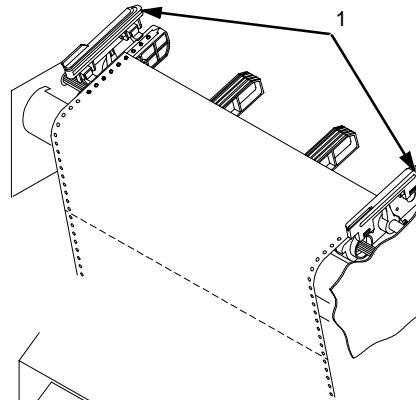
7. Separate the fanfold paper at the perforations on both the paper input *and* the output sections. Then remove the jammed paper by pulling it out.

## Chapter 5 Paper Jams

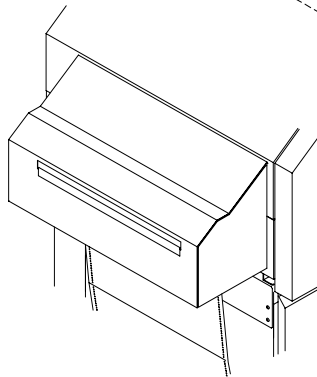
---

When removing the paper from the paper input section, raise the tractor gates first, then pull out the jammed paper.

Input Section



Output Section



**Legend:**

1) Tractor Gate

**CAUTION** To avoid damaging the printer or causing false paper jams, the transport lever must be in the fully down position before closing the transport unit.

8. After removing the pieces of jammed paper, restore the transport unit and waste toner recovery unit to their original positions, and close the front cover.
9. Reload the paper.

## Paper Jam In The Transport Input Section

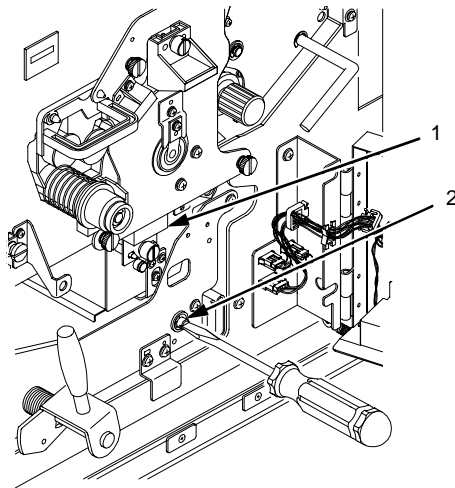
---

1. When paper motion stops, wait 15 seconds, then open the upper doors.
2. Open the waste toner recovery unit cover.

### CAUTION

The transfer charger must be in the down position to avoid scratching the drum. Failure to perform steps 3 and 4 damages the drum.

3. Rotate the transfer elevator drive shaft counterclockwise.  
Watch the charger movement:
  - a. If the charger starts to move up, it is already in the down position.
  - b. If the charger starts to move down, continue to rotate the drive shaft until the charger reaches the complete down position.



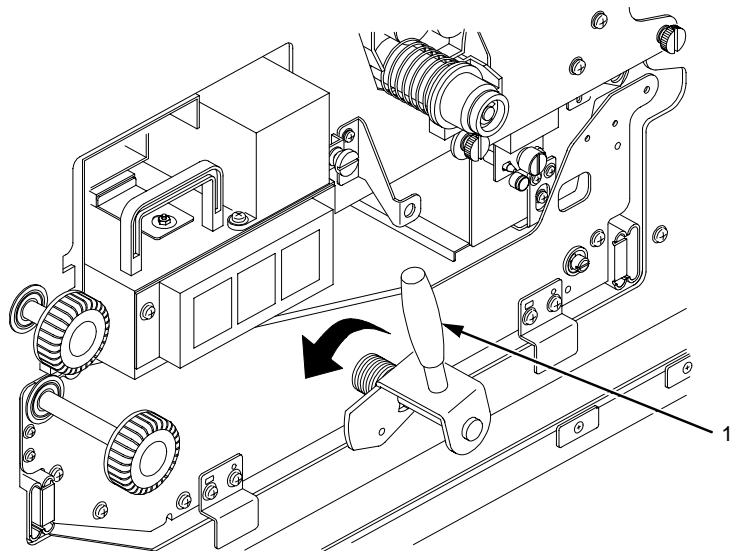
#### Legend:

- 1) Transfer Charger
- 2) Transfer Elevator Drive Shaft

## Chapter 5 Paper Jams

**CAUTION** To avoid damaging the printer or causing false paper jams, the transport lever must be in the fully down position before opening or closing the transport unit.

4. To lower the transport route surface, turn the green transport unit lever to the left.



**Legend:**

- 1) Green Lever

5. Manually clear the paper jam.
6. Restore the transport unit and the waste toner recovery unit to their original positions, and close the upper doors.

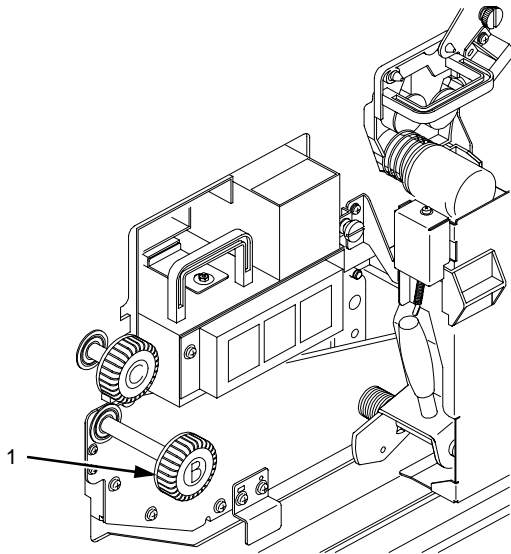
---

## Paper Jam In The Transport Output Section

### Paper Jam In The Transport Output Section

---

1. When paper motion stops, wait 15 seconds, then open the upper doors.
2. Turn the green knob B counterclockwise. This causes the jammed paper to be moved to the paper feed section. Remove any jammed paper.



**Legend:**

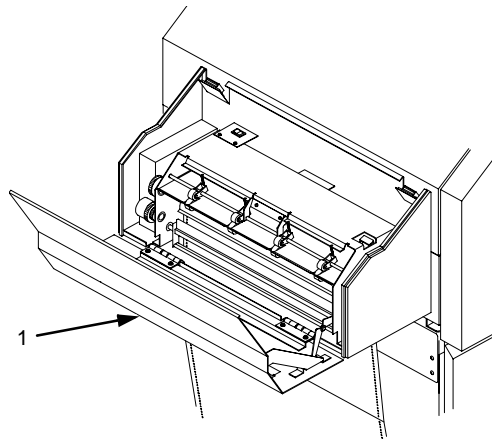
- 1) Knob B

3. Close the upper doors.

### Paper Jam In The Power Paper Stacker

---

1. When paper motion stops, wait 15 seconds, then tear the paper from the output section of the printer.
2. Open the stacker cover and clear any paper jams.



**Legend:**

- 1) Stacker Cover

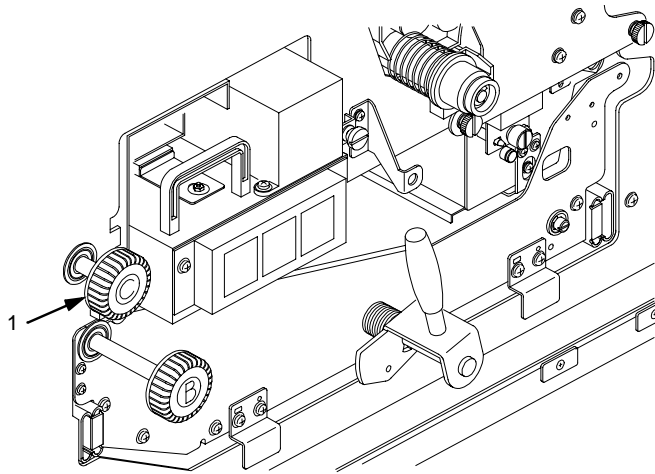
3. Open the upper doors.



## Paper Jam In The Power Paper Stacker

---

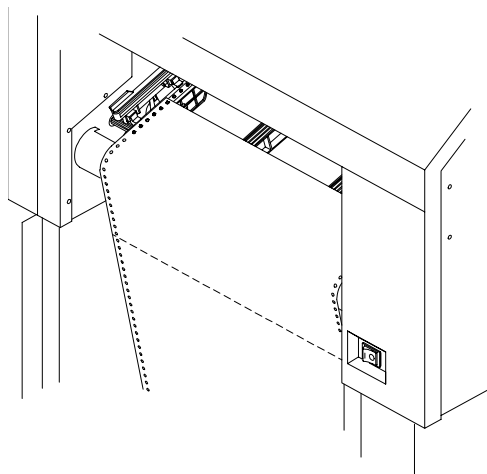
4. Turn Knob C, clockwise to unlock it.



**Legend:**

- 1) Knob C

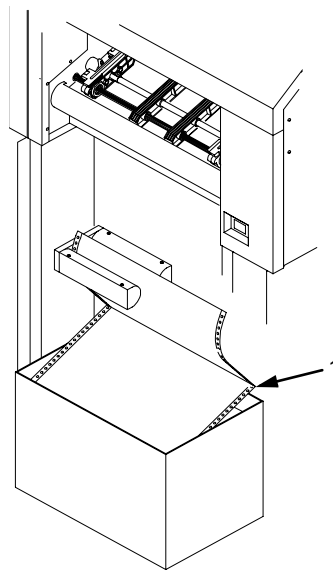
5. Pull the paper out from the paper entrance.



## Chapter 5 System Status And Error Messages

---

6. Reload the paper being sure to load it correctly, with the first perforation facing the printer.



**Legend:**

- 1) First Perforation

7. Rotate Knob C counterclockwise to lock it.
8. Close the upper doors.
9. Press CLEAR on the control panel.
10. When the error is cleared, press ONLINE. The printer resumes printing.

## System Status And Error Messages

---

When an error occurs, the printer displays an appropriate message on the control panel LCD. Some errors are operator-correctable, some require field service, and others require reprinting.

Operator-correctable errors include paper jams, and missing consumables. After correcting the error condition, press CLEAR to remove the message from the display and place the printer offline.

---

## Reprinting Pages After Fault Condition

---

If any data resides in the print buffer, it is then printed. Press ONLINE to place the printer online.

Errors requiring field service are printer failures that require the attention of service personnel. Before calling your service representative, press CLEAR to attempt to remove the message from the display. If the message disappears, the original message may have been a false error indication. If the message reappears, call for service.

Errors requiring reprinting are those errors which require reprinting to recover from an error condition. These are discussed in detail in the following topics.

### Reprinting Pages After Fault Condition

---

The printer handles errors in three ways, depending on your configuration of the Reprint on Fault option in the Paper Control menu.

#### **If Reprint On Fault Is *Enabled* (The Default):**

Any pages left in the printer at the time of failure are reprinted. No data is lost.

The printer reprints all pages that have not completely exited the printer at the time of failure. The exact number of pages that are reprinted is determined by the length of the page and where within the page the fault occurred.

#### **If Reprint On Fault Is *Disabled*:**

Any pages left in the printer at the time of failure are not reprinted. Data is lost (you need to reprint the lost pages according to your application software).

#### **If Reprint On Fault Is *Confirm*:**

The control panel on the printer returns a message asking whether or not to reprint. Answer Yes to reprint, answer No if a reprint is not necessary.

## Chapter 5 System Status And Error Messages

---

### Whether Reprint On Fault Is *Enabled, Disabled, Or Confirm:*

After a paper jam, you may need to reload the paper onto the tractors.

Table 3, "Error Messages," on page 120, designates those errors that require reprinting to recover from an error condition.

**NOTE:** Some errors require reprinting, regardless of your printer configuration. Refer to Table 3 for details.

### Procedure For Fault Clearing-Reprint On Fault *Disabled*

1. A fault occurs.
2. Correct the fault condition.
3. Press CLEAR.
4. The STAND BY LED blinks and the following message appears while the printer attempts to clear the fault:

Standby... Clearing Fault
------------------------------

If the fault is not cleared:

- a. The printer beeps and briefly displays the following message:

Faults Not Clearing
---------------------

- b. The printer then redisplay the original fault message, or any other uncleared fault message.
- c. Attempt to clear the fault condition again, or contact your service representative.

If the fault is cleared, and if you do *not* need to reload the paper into the tractors (for example, the printer ran out of toner):

- a. The printer goes OFFLINE.
- b. Press ONLINE to resume printing.

## Reprinting Pages After Fault Condition

---

If the fault is cleared, and if you need to reload paper into the tractors (such as after a paper jam), the following message appears:

Reload Paper  
in Tractors

- a. Reload the paper onto the tractors.
- b. Press CLEAR.
- c. Press ONLINE to resume printing. Note that pages have been lost.

If the fault is cleared, and if you have already reloaded the paper while clearing the fault condition (in Step 2), the following message appears:

Not Reprinting  
Failed Pages

5. Press ONLINE to resume printing. Note that pages have been lost.

### **IMPORTANT**

**If Reprint on Fault is disabled and an error occurs, and if either the “RELOAD PAPER IN TRACTORS” or “NOT PRINTING FAILED PAGES” message appears, then any pages removed from the printer are not reprinted, and the data on them is lost.**

#### **Procedure For Fault Clearing-Reprint On Fault *Enabled***

1. A fault occurs.
2. Clear the fault condition.
3. Press CLEAR.
4. The STAND BY LED blinks and the following message appears while the printer attempts to clear fault:

Standby...  
Clearing Fault

## Chapter 5 System Status And Error Messages

---

If the fault is not cleared:

- a. The printer beeps and briefly displays the following message:

Faults Not Cleared

- b. The printer then redisplay the original fault message, or any other uncleared fault message.
- c. Attempt to clear the fault condition again, or contact your service representative.

If the fault is cleared, and if you do *not* need to reload the paper into the tractors (for example, the printer ran out of toner):

- a. The printer goes OFFLINE.
- b. Press ONLINE to resume printing.

If the fault is cleared, and if you need to reload paper into the tractors (such as after a paper jam), the following message appears:

Clear Paper Path  
for Reprint

- a. Reload the paper onto the tractors.
- b. Press CLEAR. The printer reprints only the pages affected by the fault (even though the message display reads "OFFLINE").
- c. Press ONLINE to resume printing.

If the fault is cleared, and if you already have reloaded the paper while clearing the fault condition (in Step 2), the following message appears:

Reprinting  
Failed Pages

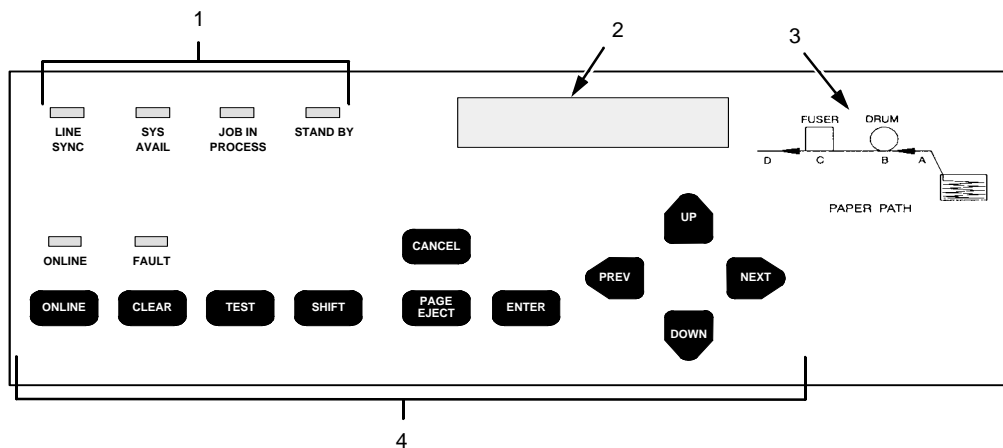
- a. The printer reprints only the pages affected by the fault.
- b. Press ONLINE to resume printing.

## Error Messages

Table 3, “Error Messages,” on page 120, lists errors by error code and shows which are operator-correctable, which require field service, and which require reprinting.

- Operator-correctable errors include paper jams, and missing consumables.
- Errors requiring field service are printer failures that require the attention of service personnel.
- Errors requiring reprinting are those errors which require reprinting to recover from an error condition.

**NOTE:** The letter designations (A-D) following the “PAPER JAM” error messages in Table 3 match the sensor positions indicated on the control panel, as shown in the following illustration.



**Legend:**

- 1) Status Indicators
- 2) Liquid Crystal Display (LCD)
- 3) Sensor Positions A - D
- 4) Function Keys

## Chapter 5 System Status And Error Messages

Table 3. Error Messages

Error Code	Error Message	Operator Correctable	Field Service Required	Reprint Required
01	Front Cover Open	✓		
02	Paper Empty	✓		
03	Paper Jam at Fuser (C)	✓		✓
04	Paper Jam at Exit (D)	✓		✓
05	Paper Jam at Exit (D)	✓		✓
06	No Transfer Unit	✓		
07	Scuff Lever Open (Knob C)	✓		
08	Reserved			
09	Reserved			
0A	Cutter Fail		✓	
0B	Cutter Fail		✓	
0C	Transfer Platform Fail		✓	
0D	Transfer Platform Fail		✓	
0E	Reserved			
0F	Reserved			
10	Reserved			
11	Paper Jam at Drum (B)	✓		✓
12	Paper Jam at Fuser (C)	✓		✓
13	Paper Jam at Exit (D)	✓		✓
16	Paper Jam at Entrance (A)	✓		✓
17	High Voltage Failure		✓	
18	Drum Motor Fail		✓	
19	Surface Voltage too High		✓	
1A	Surface Voltage too Low		✓	
1D	Surface Voltage Fail		✓	
1E	Fuser Supply Fail		✓	
1F	Fuser Failure		✓	



## Error Messages

<b>Error Code</b>	<b>Error Message</b>	<b>Operator Correctable</b>	<b>Field Service Required</b>	<b>Reprint Required</b>
20	Fuser Lamp Overheat		✓	
21	Fuser Fan Fail		✓	
22	Reserved			
26	No Cleaning Unit	✓		
27	Reserved			
28	Waste Toner Full	✓		
29	No Waste Toner Box	✓		
2A	Toner Low			
2B	Toner Density too High		✓	
2C	Toner Density too Low		✓	
2D	Toner Empty	✓		
2E	Reserved			
32	LED Head Overheat		✓	
36	Reserved			
37	Reserved			
38	Engine CPU Fail		✓	
39	Engine CPU Fail		✓	
3A	Engine CPU Fail		✓	
3B	Engine CPU Fail		✓	
3C	Engine CPU Fail		✓	
3D	Engine CPU Fail		✓	
3E	Engine CPU Fail		✓	
3F	Engine CPU Fail		✓	
40	Engine CPU Fail		✓	
41	Engine CPU Fail		✓	
42	Engine CPU Fail		✓	
43	Engine CPU Fail		✓	
44	Engine CPU Fail		✓	

## Chapter 5 System Status And Error Messages

Error Code	Error Message	Operator Correctable	Field Service Required	Reprint Required
45	Engine CPU Fail		✓	
46	Engine CPU Fail		✓	
47	Engine CPU Fail		✓	
48	Controller Comm. Fail		✓	
49	Controller Comm. Fail		✓	
4A	Controller Comm. Fail		✓	
4B	Controller Comm. Fail		✓	
4C	Controller Comm. Fail		✓	
4D	Controller Comm. Fail		✓	
4E	Reserved		✓	
50	Stacker Fail		✓	
51	Stacker Fail		✓	
52	Stacker Fail		✓	
53	Stacker Fail		✓	
54	Stacker Fail		✓	✓
55	Stacker Busy	✓		✓
56	Stacker Fail		✓	
57	Stacker Cover Open	✓		
58	Stacker Jam at Paper Sensor	✓		✓
59	Stacker Jam at Roller Sensor	✓		✓
5A	Stacker Jam Clear Paper	✓		✓
5B	Stacker Fail		✓	
5C	Stacker Fail		✓	
5D	Stacker Fail		✓	
5E	Stacker Fail		✓	
5F	Stacker Fail		✓	
K0	DC Not 1st File	✓		

## Error Messages

Error Code	Error Message	Operator Correctable	Field Service Required	Reprint Required
K1	File Not Compatible	✓		
K2	Wrong File Checksum	✓		
K3	DC Program Not Valid	✓		
K4	No Flash File System	✓		
K5	DRAM Fail at Address XXXXXXXX		✓	
K6	Flash Memory Fail		✓	
K7	Program Flash Fail at XXXXXXXX		✓	
K8	Flash Memory Full	✓		
K9	Program Needs More DRAM	✓		
L0	Invalid DRAM*/ Configuration		✓	

### TABLE NOTES:

1. For *any* error with Reprint on Fault enabled: If the printer stops while in the middle of printing a page, reloading the paper and reprinting are required. There may be other cases requiring reloading and reprinting; if so, a message appears.
2. For *any* error with Reprint on Fault disabled: If the printer stops while in the middle of printing a page, reloading the paper is required and pages are lost.
3. For error numbers 01, 14, and 15: If the error occurs while paper is *not* moving, it is not necessary to reload or reprint.
4. For error number 02: If the error is caused by a paper-empty at the lower sensor (Paper Near End Sensor), it is not necessary to reprint.
5. Status message only. No operator action required to clear message.

## Chapter 5 System Status And Error Messages

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The Front Cover Open error can occur if the upper doors are open or the paper output door is open. If the upper doors are closed, push the paper output door in to release it to its down position.

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# *Maintenance Log Sheets*

## **Maintenance Log Sheets**

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The maintenance log sheets are for your use. These may be photocopied and kept in a binder near the printer. Be sure to use them each time either you or your service provider perform printer maintenance.

Only maintenance levels A through C are presented in this *Operator's Guide*. These three levels are done by the user. Levels D through H are done by a service representative and are included in the *User's Manual*.

## Appendix A Maintenance Log Sheets

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### Level A Maintenance - 15,000 Pages (User)

---

Action	Item	Part #	Performed By	Date
Clean	General cleaning	N/A		
Clean	Main charger	705741-001		
Clean	Precharger	705742-001		
Clean	Transfer charger	705743-001		
Clean See Note 1	Cover glass	N/A		
Replace See Note 2	Toner cartridge	703532-050		
Note 1: Every 15,000 pages or 6 paper jams, whichever occurs first. Note 2: The Toner cartridge should be replaced about every 21,000 pages or as needed (for page coverage of 4%)				

**Level B Maintenance -150,000 Pages (User)**

**Level B Maintenance -150,000 Pages (User)**

<b>Action</b>	<b>Item</b>	<b>Part #</b>	<b>Performed By</b>	<b>Date</b>
Clean	General cleaning	N/A		
Clean	Main charger	705741-001		
Clean	Precharger	705742-001		
Clean	Transfer charger	705743-001		
Clean See Note 1	Cover glass	N/A		
Clean	SELFOC® lens	N/A		
Vacuum	Lamp housing filter	202985-001		
Vacuum	Cleaning unit	705740-001		
See Note 2	Photoreceptor drum	703535-001		
Replace See Note 3	Toner cartridge	703532-001		
Replace	Developer	703548-001		
Replace See Note 4	Waste toner bottle	202984-001		

Note 1: Every 15,000 pages or 6 paper jams, whichever occurs first.

Note 2: Inspect every 150,000 pages; clean if needed. Replace at 300,000 pages or sooner if print quality is no longer acceptable. Drum life is dependent upon media being used and proper maintenance and operation of the printer. Print media other than bond paper (e.g., labels, card stock, plastic, or vinyl) may reduce drum life as much as 50%.

Note 3: The Toner cartridge should be replaced about every 21,000 pages or as needed (for page coverage of 4%).

Note 4: The waste toner bottle is replaced every 90,000 pages, so may not need to be replaced at this time.

## Appendix A Maintenance Log Sheets

### Level C Maintenance - 600,000 Pages (User)

Action	Item	Part #	Performed By	Date
Clean	General cleaning	N/A		
Clean See Note 1	Cover glass	N/A		
Clean	SELFOC lens	N/A		
Clean	Flash power supply filter	N/A		
See Note 2	Photoreceptor drum	703535-001		
Replace	Developing Unit	705739-001		
Replace See Note 3	Toner cartridge	703532-001		
Replace	Waste toner bottle	202984-001		

Note 1: Every 15,000 pages or 6 paper jams, whichever occurs first.

Note 2: Inspect every 150,000 pages; clean if needed. Replace at 300,000 pages or sooner if print quality is no longer acceptable. Drum life is dependent upon media being used and proper maintenance and operation of the printer. Print media other than bond paper (e.g., labels, card stock, plastic, or vinyl) may reduce drum life as much as 50%.

Note 3: The Toner cartridge should be replaced about every 21,000 pages or as needed (for page coverage of 4%).



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# B

## *Specifications*

### Specifications

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#### Paper Specifications

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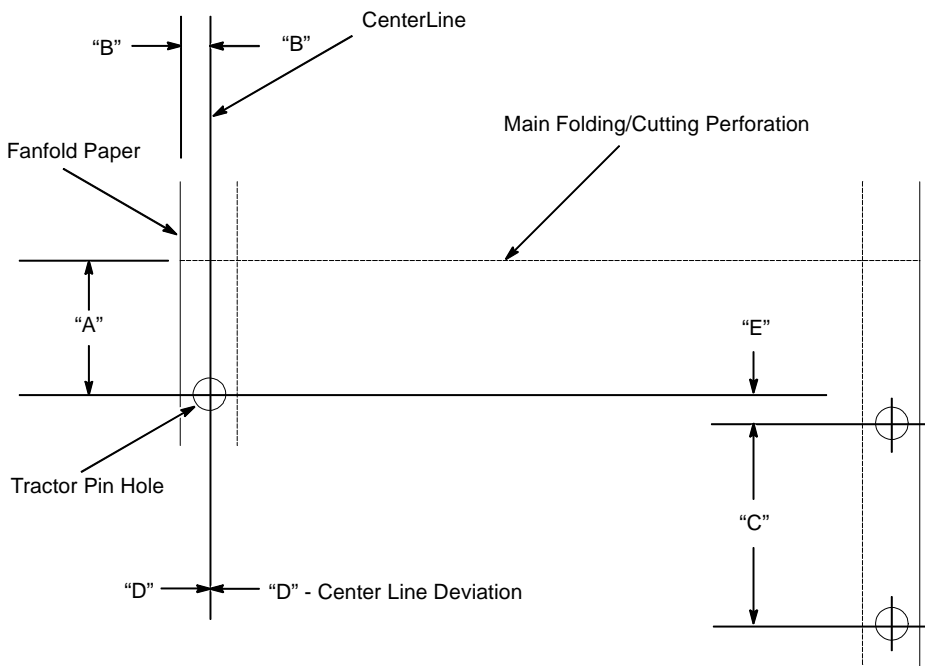
Paper type	Fanfold
Paper size	
Width	7 to 16 inches
Length*	1 to 30 inches, in multiples of 1/6 inch.
* Measured from main folding/cutting perforation to main folding/cutting perforation.	
Tractor pin holes	See the table and figure on the next page.

## Appendix B Specifications

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Specification	Inch	Millimeter	Dimension in Figure
Pin hole center to folding perforation	1/6, 1/4, 1/3, or 1/2	4.2, 6.4, 8.5, 12.7	A
Hole center line to edge of form	0.236 ±0.028	6.0 ±0.1	B
Hole diameter	0.156 ±0.004	4.0 ±0.1	N/A
Distance between centers of two consecutive holes	0.500 ±0.002	12.7 ±0.05	C
Max. deviation of holes from their center line	0.004	0.1	D
Max. deviation Left Hand hole to companion Right Hand hole (Center Line to Center Line)	0.006	0.15	E
Max. parallel deviation Left Hand hole Center Line to Right Hand hole Center Line	0.006	0.15	N/A

## Paper Specifications



Paper thickness	.010 inch maximum
Paper Weight	18-44 lb. bond (68-165g/m <sup>2</sup> ), 44-125 lb. tag/label (75-204g/m <sup>2</sup> )
Capacity	3000 sheets (18 lb.)
Paper Feed	Automatic Paper Parking mechanism incorporated
Stacker Perforation	
Cut	0.12 inches or 3mm minimum
Cut to Tie	3:1 minimum

## Appendix B Specifications

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### Performance Characteristics

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Printing density	300 x 300 dpi 400 x 400 dpi or 240 x 240 dpi (options)
Printing speed	2.78 inches per second.

Paper Size	Orientation	Printing Speeds (Pages per Minute)
A4	Landscape	20
Letter	Landscape	20
A4	Portrait	15
Letter	Portrait	15

Maximum effective print width	14.7 inches
Duty cycle	200,000 total pages/month of fanfold paper (11 inch length)
Mechanical life	5 years or 12,000,000 pages (11 inch length)
Warm-up time	60 sec. max.
First page printing time	25 sec. max.
MTBF/MPBF	8,000 hours/2,880,000 pages (letter size) 25% print to power on ratio
MTRR	2 hour max. (unit exchange)

## Host Interfaces

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Standard	Centronics parallel, Dataproducts parallel, serial RS-232/422
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**NOTE:** Dataproducts parallel interface requires an optional adapter cable.

Optional	IBM coax and twinax
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## Emulations

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Standard	LinePrinter Plus
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Optional	PCL5/LP+ PCL5/PGL PCL5/VGL IGP/VGL IGP/PGL IPDS
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## Appendix B Specifications

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### Memory Requirements

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The L5000 series printers have 32 MB (standard) or 64 MB (optional) of RAM (Random Access Memory), and 8 MB (standard) or 16, 32, or 64 (optional) of Flash Memory. This is available with all new printer shipments, and all upgraded printers.

### Safety Regulations

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UL	1950
CSA	950
EUROPE	EN 60950

### Electromagnetic Interference

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FCC	Class A
Europe	EN55022 Class A

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## Physical Characteristics And Environment

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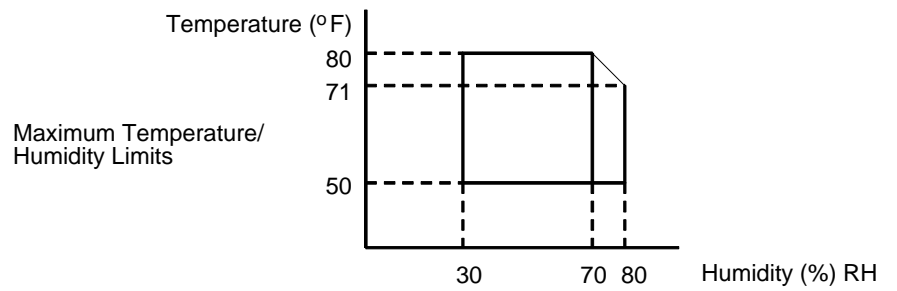
### Physical Characteristics And Environment

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Dimensions (H x W x D)	49 inch H x 30 inch W x 34 inch D  In crate: 58 inches H x 36 inches W x 61 inches D
Weight	353 lbs. (or 441 lbs.) with options
Input voltage range	200 - 240 V $\pm$ 10% 50/60 Hz (47 - 62 Hz) single phase
Power consumption	3300 W (operating); wall outlet <i>must</i> be on a 30-amp breaker.
Environment	
Temperature	Operating: 50° to 80° F (10° to 27° C)  Non-operating: 14° to 95° F(-10° to 35° C)
Humidity	Operating: 30 to 80% RH Non-operating: 10 to 80% RH RH (non-condensing)

## Appendix B Specifications

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### Sound level

Operating	60 db (A-weighted ) max. Full options
Standby state	50 dB (A-weighted)
Inclination	1° max.



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# Index

## B

Buttons See Function keys, 33

## C

CANCEL

function key, 39

Caution notice, 17

Charger main

cleaning, 85

Cleaning

fuser unit cover glass, 90

general, 77

main charger, 85

Cleaning intervals

user responsibility, 70

CLEAR

function key, 38

Clearing faults procedure

with Reprint on Fault disabled, 116

with Reprint on Fault enabled, 117

Clearing service level messages, 70

Consumables

replacement intervals, 71

Control panel

using, 33

Cover glass

fuser unit cleaning, 90

## D

Danger notice, 17

Developer

replacing, 55

Developing unit

replacing, 56

Developing unit recharging See Developer,

replacing, 55

Diagnostics

printer, 101

printer offline, 101

printer online, 102

Diagrams

paper path, 33

Disk drives

location, 31

Disposal

photoreceptor drum, 55, 56

DOWN

function key, 40

Drum photoreceptor

disposal, 55, 56

replacing, 46, 48

## E

Electromagnetic interference

specifications, 134

Emulation specifications, 133

## Index

---

- Emulations, 24
- ENTER
  - function key, 39
- Environmental specifications, 135
- Error messages, 114
- Error messages table, 119
- Errors
  - operator-correctable, 114
  - requiring field service, 115
  - requiring reprinting, 115
- Errors requiring field service, 115
- Errors requiring reprinting, 115
- F**
- Fanfold paper jams, 102
- FAULT
  - status lamp, 37
- Fault clearing procedure
  - with Reprint on Fault disabled, 116
  - with Reprint on Fault enabled, 117
- Fault condition
  - reprinting pages after, 115
- Fault messages table, 119
- Field service
  - errors requiring, 115
- Fonts, 25
- Forms, 25
- Front panel See Control panel, 33
- Function keys
  - CANCEL, 39
  - CLEAR, 38
  - DOWN, 40
  - ENTER, 39
  - NEXT, 40
  - ONLINE, 37
  - PAGE EJECT, 38
  - PREV, 40
  - SHIFT, 38
  - TEST, 38
  - UP, 40
- Fuser unit cover glass
  - cleaning, 90
- G**
- Glass cover
  - fuser unit cleaning, 90
- H**
- Host interface specifications, 133
- I**
- IGP / PGL Emulation, 24
- IGP / VGL Emulation, 24
- Impact Printer Emulation, 24
- Important notice, 17
- Input section
  - transport paper jams in, 109
- Intervals cleaning
  - user responsibility, 70
- Intervals replacement
  - consumables, 71
  - user responsibility, 71
- J**
- Jams paper
  - fanfold, 102
  - in transport input section, 109

in transport output section, 111, 112  
near paper output section, 104  
near tractor, 102

**JOB IN PROCESS**

status lamp, 36

**K****Keys**

function, 33

Keys See Function keys, 33

**L**

LCD See Liquid crystal display, 33

**LINE SYNC**

status lamp, 36

LinePrinter Plus emulation, 24

Liquid crystal display (LCD), 33

Loading paper, 28

**Location**

disk drives, 31

power switch, 31

**Log sheets maintenance**

level A, 126

**M****Main charger**

cleaning, 85

Maintaining print quality, 67

**Maintenance Kit**

Level D, 72

Level E, 73

Level F, 74

Level G, 75

Level H, 76

**Maintenance log sheets**

level A, 126

Maintenance schedules, 70

Manual conventions, 18

Memory requirements, 134

Message display See Liquid crystal display, 33

**Message table**

error messages, 119

**Messages**

error, 114

service level clearing, 70

system status, 114

**N****NEXT**

function key, 40

**O****ONLINE**

function key, 37

status lamp, 37

Operator-correctable errors, 114

Operator's panel See Control panel, 33

**Output section**

transport paper jams in, 111, 112

**P****Page counts**

service level, 68

## Index

---

- PAGE EJECT
    - function key, 38
  - Pages
    - reprinting after fault, 115
  - Paper
    - loading, 28
  - Paper jams
    - fanfold, 102
    - in transport input section, 109
    - in transport output section, 111, 112
    - near paper output section, 104
    - near tractor, 102
  - Paper output section
    - paper jams near, 104
  - Paper path diagram, 33
  - Paper specifications, 129
  - Paper stacker
    - power, 31
  - PCL5 Emulation, 24
  - Performance specifications, 132
  - PhoenixPage PCL5 Emulation, 24
  - Photoreceptor drum
    - disposal, 55, 56
    - replacing, 46, 48
  - Physical characteristics, 135
  - Power paper stacker, 31
  - Power switch
    - location, 31
  - Precautions
    - safety See Safety., 18
  - PREV
    - function key, 40
  - Print quality
    - maintaining, 67
    - problems, 67
  - Print quality problems, 67
  - Printer
    - emulations, 24
    - general information, 24
  - Printer diagnostics, 101
    - offline, 101
    - online, 102
  - Printer specifications
    - electromagnetic interference, 134
    - emulations, 133
    - environment, 135
    - host interfaces, 133
    - memory requirements, 134
    - paper, 129
    - performance, 132
    - physical, 135
    - safety regulations, 134
  - Printronix LinePrinter Plus emulation, 24
  - Procedure fault clearing
    - with Reprint on Fault disabled, 116
    - with Reprint on Fault enabled, 117
- Q**
- Quality print
    - maintaining, 67
    - problems with, 67
- R**
- Recharging developing unit See Replacing, developer, 55

Recommended vacuum cleaners, 68

Replacement intervals

consumables, 71

user responsibility, 71

Replacing

developer, 55

developing unit, 56

photoreceptor drum, 46, 48

waste toner bottle, 46

Reprint on Fault disabled

fault clearing procedure, 116

Reprint on Fault enabled

fault clearing procedure, 117

Reprinting

errors requiring, 115

Reprinting pages after fault, 115

## S

Safety

notices, 17

precautions, 18

Safety regulations, 134

Schedules

maintenance, 70

Service levels messages

clearing, 70

SHIFT

function key, 38

Specifications printer

electromagnetic interference, 134

emulations, 133

environment, 135

host interfaces, 133

memory requirements, 134

paper, 129

performance, 132

physical, 135

safety regulations, 134

Stacker

power paper, 31

STAND BY

status lamp, 36

Status lamps, 33

FAULT, 37

JOB IN PROCESS, 36

LINE SYNC, 36

ONLINE, 37

STAND BY, 36

SYS AVAIL, 36

Switches See Function keys, 33

SYS AVAIL

status lamp, 36

System status messages, 114

## T

TEST

function key, 38

Toner bottle waste

replacing, 46

Tractor

paper jams near, 102

Transport input section

paper jams in, 109

Transport output section

paper jams in, 111, 112



---

## Index

### U

UP

function key, 40

### V

Vacuum cleaners

recommended, 68

### W

Waste toner bottle

replacing, 46



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