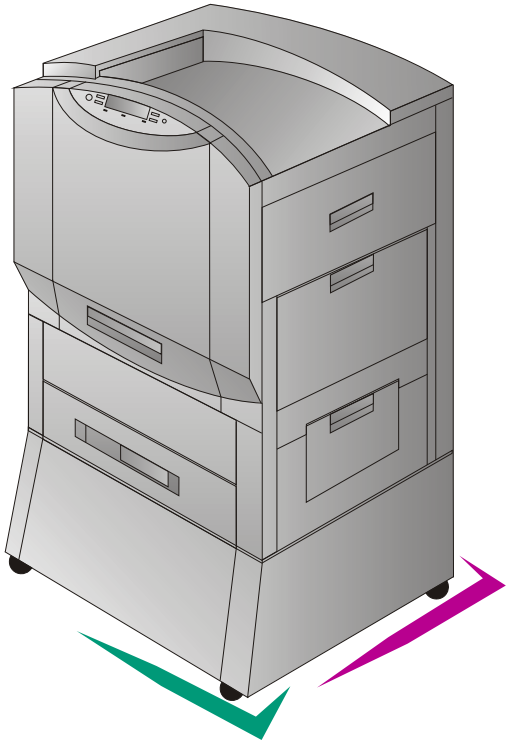
HEWLETT PACKARD

Color LaserJet™

8500/8550 Printer Family

Service Manual



English

HP Color LaserJet 8500/8550 Printer Family

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WARNING
Electrical Shock Hazard

To avoid electrical shock, use only supplied power cords and connect only to properly grounded (3-hole) wall outlets.

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Chapter contents

Introduction

This manual covers service topics for the following printers and their paper-handling optional accessories:

- HP Color LaserJet 8500 printer (base model)
- HP Color LaserJet 8500 N printer
- HP Color LaserJet 8500 DN printer
- HP Color LaserJet 8550 printer (base model)
- HP Color LaserJet 8550 N printer
- HP Color LaserJet 8550 DN printer
- HP Color LaserJet 8550 GN printer
- HP Color LaserJet 8550 MFP—print engine **only**

Note Service topics for the HP Color LaserJet 8550 MFP printer's copy module, automatic document feeder, and 1,000-sheet input paper deck are not included in this manual. See the HP Color LaserJet 8550 MFP printer service manual for all service information related to these devices.

Printer features

Table 1. Features and accessories by printer model

	Feature/accessory \ Model	8500	8500 N	8500 DN	8550	8550 N	8550 DN	8550 GN	8550 MFP
Features	● Standard DIMM memory (in MB)	32	32	64	32	64	64	128	64
	● Maximum DIMM memory[1] (in MB)	256	256	256	512	512	512	512	512
	● Internal hard disk		X	X		X	X	X	X
	● HP JetDirect EIO card		X	X		X	X	X	X
	● 500-sheet tray 2	X	X	X		X	X	X	X
	● 2,000-sheet input unit			X			X	X	
	● Duplexer			X			X	X	X
	● Copy module								X
Accessories	● External (EIO-compatible) printer hard disk	X			X				
	● DRAM DIMMs (synchronous)	X	X	X	X	X	X	X	X
	● Duplexer[2]	X	X		X	X			
	● HP JetDirect EIO card	X			X				
	● 500-sheet input tray				X				
	● 1,000-sheet paper deck (input)								X
	● Automatic document feeder								X
	● Multi-bin mailbox (output)			X			X	X	
	● 3,000-sheet stapler/ stacker or 3,000-sheet stacker (output)						X	X	

[1] To expand the dual inline memory module (DIMM) memory to 512 MB, install 64-MB DIMMs in all eight DIMM slots. Optimized memory for all models is 128 MB.

[2] Minimum 64 MB memory recommended for automatic duplex printing.

Table 2. Printer performance

Print speeds	• 24 pages per minute (ppm) black and white (b/w) • 6 ppm color
Text and graphics resolution	• 600 dots per inch (dpi) resolution
Approximate print speeds	
Letter and A4-size	• 24 ppm b/w; 6 ppm color
Legal, Executive, and 11-by-17 inch size	• 12 ppm b/w; 3 ppm color
Heavy paper	• 3.2 ppm b/w; 2.2 ppm color
Transparencies	• 2.6 ppm b/w; 2.0 ppm color
Fonts	• TrueType™ rasterizer in both HP PCL and Adobe PostScript® • 45 scalable HP typefaces • 136 scalable Adobe PostScript fonts
Printer personality support	• Automatic personality switching • PCL and PostScript support
User interface and EIO	• Standard ECP or bidirectional parallel cable interface (IEEE-1284 compliant) • 2 enhanced input/output (EIO) slots • Automatic input/output (I/O) switching

The approximate print speeds offered by this printer might vary from those listed above because the following factors affect processing time:

- complexity and size of graphics
- I/O configuration
- computer configuration
- amount of printer memory
- network operating system
- network configuration
- printer color calibration

Specifications

Electrical specifications

Table 3. Electrical specifications

Item	110-volt models	220-volt models
Power requirements	100 to 127 V (+/- 10%) 50/60 Hz (+/- 2 Hz)	220 to 240 V (+/- 10%) 50/60 Hz (+/- 2 Hz)
Power consumption (typical): During printing (b/w) During printing (color) During standby During Power Save mode During Off mode	 750 W (average) 375 W (average) 190 W (average) less than 45 W less than 2 W	 750 W (average) 375 W (average) 190 W (average) less than 45 W less than 2 W
Minimum recommended circuit capacity for typical product	12.0 A at 120 V	6.0 A at 220 V

Operating environment specifications

Table 4. Operating environment specifications

Item	Operating	Storage
Temperature Recommended Allowed	 20 to 26° C (68 to 79° F) 15 to 30° C (59 to 86° F)	 0 to 35° C (32 to 95° F) -20 to 60° C (-4 to 140° F)
Humidity Recommended Allowed	 20 to 50% relative humidity (RH) 10 to 80% RH	 35 to 85% RH 10 to 95% RH
Altitude Allowed	 0 to 3,048 meters (0 to 10,000 feet)	 0 to 3,048 meters (0 to 10,000 feet)

Note See the HP Color LaserJet 8550 MFP printer service manual for dimensions that include copy module, automatic document feeder, and 1,000-sheet input paper deck.

Acoustic emission specifications

Table 5. Acoustic emissions

Category		8500	8550
Operation position (per ISO 9296, DIN 45635, T.19)	Printing: Standby:	L_pA 54 dB(A) L_pA 49 dB(A)	L_pA 57 dB(A) L_pA 52 dB(A)
Bystander 1 meter (per ISO 7779, DIN 45635, T.19)	Printing: Standby:	L_pA 50 dB(A) L_pA 45 dB(A)	L_pA 54 dB(A) L_pA 47 dB(A)
Sound power (per ISO 9296)	Printing: Standby:	6.8 B (A) 6.3 B (A)	7.0 B (A) 6.4 B (A)

Printer dimensions

Table 6. Printer dimensions

Category	Printer	Printer with stand	Printer with 2,000-sheet input unit and multi-bin mailbox or stapler/stacker
Height	750 millimeters (mm) (30 inches)	1111 mm (44 inches)	1230 mm (48 inches)
Width	566 mm (22 inches)	566 mm (22 inches)	1056 mm (42 inches)
Depth	625 mm (25 inches)	625 mm (25 inches)	625 mm (25 inches)
Weight (with consumables)	87 kilograms (kg) (192 pounds)	100 kg (220 pounds)	118 kg (260 pounds)

Consumable storage specifications

The life of consumables is greatly affected by their storage environment. Use the following table to determine the shelf life of stored consumables.

For consumable replacement specifications, see page 119.

Table 7. Consumable storage specifications

Temperature	
Normal (maximum of 2.5 years)	0 to 35° C (32 to 95° F)
Severe (maximum of 18 days)	High: 35 to 40° C (95 to 104° F) Low: 0 to -20° C (32 to -4° F)
Maximum temperature change rate	
40 to 15° C (104 to 59° F) within 3 minutes -20 to 25° C (-4 to 77° F) within 3 minutes	
Humidity	
Normal (maximum of 2.5 years)	35 to 85% RH
Severe (maximum of 18 days)	High: 85 to 95% RH Low: 10 to 35% RH
Atmospheric pressure	
460 to 760 mm mercury (Hg)	

Site requirements

General guidelines

Locating and placing the printer correctly are important in maintaining the performance level set at the factory. In particular, be sure to adhere to the environmental specifications listed in this chapter. The following are recommendations for locating and placing the printer:

- Install in a well-ventilated, dust-free area.
- Install on a hard, level surface.
- Install where the temperature and humidity do not change abruptly. Do not install near water sources, humidifiers, air conditioners, refrigerators, or other major appliances.
- Do not expose the printer to direct sunlight, dust, open flames, or ammonia fumes.
- Install the printer away from walls or other objects. There must be enough space around the printer for proper access and ventilation (see figure 1 on page 28).
- Install the printer away from the direct flow of exhaust from air ventilation systems.

Space requirements

Note

See the HP Color LaserJet 8550 MFP printer service manual for space requirements for the copy module, automatic document feeder, and 1,000-sheet input paper deck.

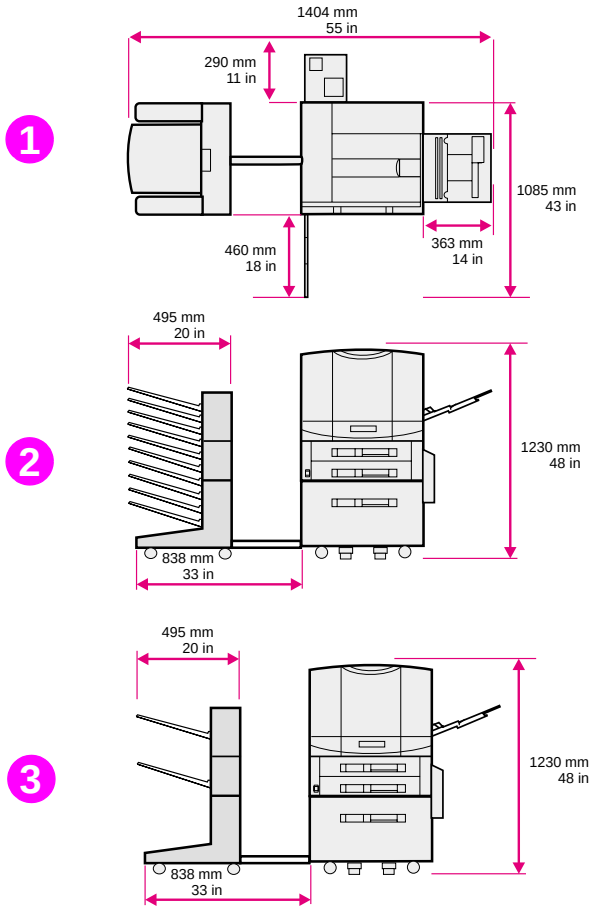


Figure 1. **Space requirements**

1 Top view (with an optional 2,000-sheet input tray and an optional multi-bin mailbox, 3,000-sheet stapler/stacker, or 3,000-sheet stacker)

2 Front view (with an optional 2,000-sheet input tray and an optional multi-bin mailbox)

3 Front view (with an optional 2,000-sheet input tray and an optional 3,000-sheet stapler/stacker or 3,000-sheet stacker)

Media requirements

Selecting media

Many types of paper and other print media can be used with the printer, within certain specifications.

CAUTION Using media that do not meet the specifications outlined in this chapter can increase the incidence of media jams, contribute to repair and maintenance costs, and cause premature wear, print quality problems, and problems requiring service. This service might not be covered by the HP warranty or service agreements.

Before purchasing media or specialized forms, test a small quantity in the printer. Make sure your media supplier obtains and understands the media specifications in the *HP LaserJet Printer Family Paper Specification Guide*. For ordering information, see page 514.

Note It is possible that media could meet all of the specifications in this chapter and still not print satisfactorily. This might be caused by abnormal characteristics of the printing environment, such as extremes in temperature and humidity.

- For complete media specifications, see the *HP LaserJet Printer Family Paper Specification Guide*.
- Use only print media that meet the specifications outlined in this chapter.
- Do not try to print unsupported sizes or weights of media or other unsupported media.
- Always handle transparencies and glossy media by their edges to avoid fingerprints in the image area.
- Adhesives on any media must be compatible with the printer's fusing temperatures (approximately 190° C, or 374° F).
- Do not use media that have already passed through the printer or through a copy machine (even if there is no printing on the page), unless you use the "manual print second side" feature.
- Recycled media can be used with this printer. Recycled media must meet the specifications described in this chapter.

Storing media

Follow these guidelines when stacking and storing media:

- Leave media in the wrapper until you are ready to use it.
- Rewrap partially used packages of media before storing.
- Stack cartons upright and squarely on top of each other.
- Store envelopes in a protective box to avoid damaging the envelope edges.
- Keep stored media away from temperature and humidity extremes.
- *Do not* store cartons or reams directly on the floor where they will absorb humidity. Instead, place cartons on a pallet or on shelves.
- *Do not* store individual reams in any manner that causes them to curl or warp along the edges.
- *Do not* stack more than six cartons on top of each other.
- *Do not* place anything on top of media (except for stacking cartons of media), regardless of whether the media is packaged or unpackaged.

When storing printed documents:

- *Do not* store printed documents in vinyl folders.
- *Do not* expose printed documents to petroleum-based solvents.

Media capacity and sizes for input trays

The following table lists the types and sizes of media supported by each input tray. For best results, use HP LaserJet paper or conventional white copier paper. The media should be of good quality and free of cuts, nicks, tears, spots, loose particles, dust, wrinkles, voids, perforations, and curled or bent edges. For a complete list of media specifications, see the *HP LaserJet Printer Family Paper Specification Guide*.

Table 8. Media capacity and sizes for input trays

Tray	Media type	Media size and orientation	Media weight	Maximum capacity
Tray 1	Paper Plain Preprinted Letterhead Prepunched Bond Recycled Color Card stock Heavy (more than 28 lb, 105 g/m^2) Glossy	11 by 17 inch (portrait) JIS B4 (portrait) A3 (portrait)* A4 (portrait) A5 (portrait) Custom minimum (99 by 190 mm, 3.90 by 7.49 in) (portrait) Custom maximum (304 by 469 mm, 12 by 18.5 inch) (portrait) Executive (portrait) ISO B5 (portrait) JIS B4 (portrait) JIS B5 (portrait) Letter (landscape) Legal (landscape)	16 to 58 lb (60 to 216 grams per square meter [g/m^2]) bond	100 sheets of 20 lb (75 g/m^2) bond Limit to media-fill mark on the media width guides.
	Envelopes	B5 (portrait) C5 (portrait) Commercial #10 (Com10) (portrait) DL (portrait) Double Post Card (JPOSTD) Monarch (portrait)	Maximum 24 lb (90 g/m^2) bond	Approximately 10 Limit to media-fill mark on the media width guides.
	Labels	A4 (landscape) Letter (landscape)	—	Limit to media-fill mark on the media width guides.
	Transparencies	A4 (landscape) Letter (landscape)	5 mils (0.13 mm) thick	Limit to media-fill mark on the media width guides.

*A3 full-bleed is not supported by any of the HP CLJ 8500 or 8550 models.

Table 8. Media capacity and sizes for input trays (continued)

Tray	Media type	Media size and orientation	Media weight	Maximum capacity
Tray 2	Paper Plain Preprinted Letterhead Prepunched Bond Recycled Color Glossy	A4 (landscape) JIS B4 (portrait) Letter (landscape) Legal (portrait)	16 to 28 lb (60 to 105 g/m^2) bond	500 sheets of 20 lb (75 g/m^2) bond Limit to media-fill mark on the media width guides.
	Transparency	A4 (portrait) Letter (portrait)	5 mils (0.13 mm) thick	Limit to media-fill mark on the media width guides.
Tray 3	Paper Plain Preprinted Letterhead Prepunched Bond Recycled Color Glossy	11 by 17 in (portrait) A3 (portrait)* A4 (landscape) JIS B4 (portrait) Legal (portrait) Letter (landscape)	16 to 28 lb (60 to 105 g/m^2) bond	500 sheets of 20 lb (75 g/m^2) bond Limit to media-fill mark on the media width guides.
	Transparency	A4 (portrait) Letter (portrait)	5 mils (0.13 mm) thick	Limit to media-fill mark on the media width guides.
2,000-sheet input tray	Paper Plain Preprinted Letterhead Prepunched Bond Recycled Color Glossy	11 by 17 in (portrait) A4 (landscape) JIS B4 (portrait) Legal (portrait) Letter (landscape)	16 to 28 lb (60 to 105 g/m^2) bond	2,000 sheets of 20 lb (75 g/m^2) bond Limit to media-fill mark on the media width guides.

*A3 full-bleed is not supported by any of the HP CLJ 8500 or 8550 models.

Media capacity and sizes for the multi-bin mailbox

The following table lists the types and sizes of media supported by multi-bin mailbox output bins.

Table 9. Media capacity and sizes for the multi-bin mailbox

Bins	Media type	Media size	Media weight	Maximum capacity
Mailboxes	Paper Plain Preprinted Letterhead Prepunched Bond Recycled Color	11 by 17 in A3* A4 JIS B4 Legal Letter	16 to 28 lb (60 to 105 g/m^2) bond	250 sheets of 20 lb (75 g/m^2) bond
Left (face-up) output bin	Paper Plain Preprinted Letterhead Prepunched Bond Recycled Color Card Stock Heavy (more than 28 lb, 105 g/m^2) Glossy	11 by 17 in A3* A4 A5 Custom minimum (99 by 190 mm, 3.90 by 7.49 inch) Custom maximum (304 by 469 mm, 11.98 by 18.48 inch) Executive JIS B4 JIS B5 Legal Letter	16 to 58 lb (60 to 216 g/m^2) bond	125 sheets of 20 lb (75 g/m^2) bond
	Labels	A4 Letter	—	—
	Transparency	A4 Letter	5 mils (0.13 mm) thick	—
	Envelopes	B5 C5 Commercial #10 (Com10) DL Double Post Card (JPOSTD) Monarch	Maximum 24 lb (90 g/m^2) bond	30 Monarch-sized envelopes

*A3 full-bleed is not supported by any of the HP CLJ 8500 or 8550 models.

Printable area

Print areas shown in the table below are defined as follows:

- **Non-masked area**—the maximum area in which image signals are not masked by the compulsory formation of blank image area (this is the maximum area that can be addressed by the laser beam).
- **Recommended print area**—the maximum area in which image signals can be printed on media without any loss of image signals, excluding manual feed.
- **Image assurance area**—the maximum area in which print quality can be assured, including manual feed.

Table 10. Printable area specification

Media type	Margin			
	Top	**Bottom**	**Left**	**Right**
Non-masked print area				
● Cut sheet	2.1 mm (0.083 inch)	2.9 mm (0.114 inch)	3.2 mm (0.126 inch)	3.7 mm (0.146 inch)
● Envelope	2.1 mm (0.083 inch)	2.6 mm (0.102 inch)	3.3 mm (0.130 inch)	3.5 mm (0.138 inch)
Recommended print area				
● Cut sheet	3.0 mm (0.118 inch)	6.0 mm (0.236 inch)	4.0 mm (0.157 inch)	4.5 mm (0.177 inch)
● Envelope	8.0 mm (0.315 inch)	10.5 mm (0.413 inch)	8.5 mm (0.335 inch)	9.5 mm (0.374 inch)
Image assurance area				
● Cut sheet	6.0 mm (0.236 inch)	6.0 mm (0.236 inch)	5.0 mm (0.197 inch)	5.0 mm (0.197 inch)
● Envelope	15.0 mm (0.591 inch)	15.0 mm (0.591 inch)	15.0 mm (0.591 inch)	15.0 mm (0.591 inch)

Media considerations

Note Not all media types are supported in all modes.

Media for duplexer

The duplexer accepts standard-sized media as large as A3 media. The duplexer accepts up to 28 lb (105 g/m^2) bond.

Envelopes

- The **Envelope** media-type setting in the printer driver has been optimized for the best print adhesion for most envelopes.
- The **Heavy Paper** mode might also work well for some envelopes, especially if the printing environment humidity is low.
- Use the left (face-up) output bin to reduce curl.
- Envelopes with more than one flap can wrinkle, crease, and cause jams.

CAUTION To prevent severe printer damage, envelopes with peel-off adhesive strips must use adhesives compatible with the printer's fusing temperatures (approximately 190° C or 374° F).

Transparencies

- The default output for all transparencies is the top output bin for all HP Color LaserJet 8550 printer models.
- The printer's internal color settings are optimized for the best color quality if **Transparency** is selected as the media type in the printer driver. Using other media type settings will result in less accurate colors.
- The printer only supports transparencies of 5 mils (0.13 mm) in thickness.
- To prevent damage to the printer, transparencies must be able to withstand the printer's fusing temperature (approximately 190° C or 374° F).
- Handle transparencies by the edges. Oil from your fingers can be deposited on the transparencies, causing print quality problems.
- Allow printed transparencies to cool before handling to prevent curling.

WARNING! Allow transparencies to cool before handling to prevent burns.

Glossy media

If you want the effect of glossy media, use only HP LaserJet soft gloss media in this printer. **HP soft gloss is the only glossy media supported by the printer.** For ordering information, see page 513.

Heavy paper stock

Heavy paper stock is any paper from 28 lb to 58 lb (105 to 216 g/m^2). Always print heavy paper stock from tray 1. In the printer driver, select **Heavy Paper** or **Cardstock** as the paper type on the paper tab to ensure the correct finish on the media. Also, use the left (face-up) output bin to prevent media jams. For more information about changing the printer driver settings, see the online help.

Do *not* use extremely heavy paper stock (greater than 58 lb, or 216 g/m^2 bond). Misfeeds, mis-stacking, media jams, poor toner fusing, poor print quality, and excessive mechanical wear can result.

Colored media

Colored media should be of the same high quality as white xerographic paper. Pigments used must be able to withstand the printer's fusing temperature (approximately 190° C, or 374° F). Do not use media on which a colored coating was added after production.

The printer cannot detect the color of media you are using. Varying the shade or color of the media can change the shades of the printed colors.

Media to avoid

To avoid poor print quality or damage to the printer, do not use any of the following:

- coated or embossed media
- prepunched paper in which the holes were punched 8 mm from the edge of the pages
- media with cutouts or perforations (except prepunched paper)
- multi-part forms
- media with irregularities, such as tabs or staples
- preprinted media with thermography or inks that melt, vaporize, or release hazardous emissions when subjected to the fusing temperature (approximately 190° C, or 374° F)
- media that produce hazardous emissions, melt, offset, or discolor when heated to the printer's fusing temperature (approximately 190° C, or 374° F)
- media that have already been through a photocopier or laser printer (even if there is no printing on the page) unless you use the "manual print second side" feature.
- media with watermarks, if solid fill areas are to be printed
- transparencies designed for ink jet printers
- any glossy media other than HP soft gloss media
- media with texture or finish different from one side to the other
- creased or folded media (except for supported envelopes)

Identification (model and serial numbers)

To identify the model number and serial number, find the label located on the rear of the printer, similar to the one shown in figure 2 (the example shown is from an HP Color LaserJet 8500 printer).

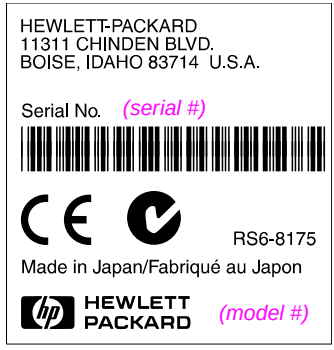


Figure 2. **Example of printer model number and serial number label (110 V and 220 V)**

Printer Information

Configurations

Available configurations for the HP Color LaserJet 8500 printer appear below; available configurations for the HP Color LaserJet 8550 printer are shown on the following page.

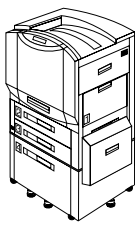
The HP Color LaserJet 8500 printer is available in the following configurations:

HP Color LaserJet 8500

The HP Color LaserJet 8500 comes standard with a 100-sheet tray 1, a 500-sheet tray 2, a 500-sheet tray 3, a printer stand, and 32 MB random-access memory (RAM).

HP Color LaserJet 8500 N

The HP Color LaserJet 8500N comes standard with a 100-sheet tray 1, a 500-sheet tray 2, a 500-sheet tray 3, a printer stand, 32 MB RAM, an HP JetDirect print server (10/100 Base-TX), and an internal hard disk.



HP Color LaserJet 8500 DN

The HP Color LaserJet 8500DN comes standard with a 100-sheet tray 1, a 500-sheet tray 2, a 500-sheet tray 3, a (tray 4) 2000-sheet input tray, a duplexer, 64 MB RAM, an HP JetDirect print server (10/100 Base-TX), an internal hard disk, and five stabilizing legs.

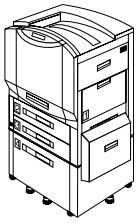
The HP Color LaserJet 8550 printer is available in the following configurations:

HP Color LaserJet 8550

The HP Color LaserJet 8550 comes standard with a 100-sheet tray 1, a 500-sheet tray 3, a printer stand, and 32 MB RAM.

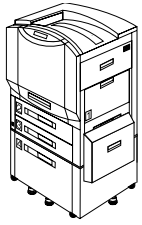
HP Color LaserJet 8550 N

The HP Color LaserJet 8550N comes standard with a 100-sheet tray 1, a 500-sheet tray 2, a 500-sheet tray 3, a printer stand, 64 MB RAM, an HP JetDirect print server (10/100 Base-TX), and an internal hard disk.



HP Color LaserJet 8550 DN

The HP Color LaserJet 8550DN comes standard with a 100-sheet tray 1, a 500-sheet tray 2, a 500-sheet tray 3, a (tray 4) 2000-sheet input tray, a duplexer, 64 MB RAM, an HP JetDirect print server (10/100 Base-TX), an internal hard disk, and five stabilizing legs.



HP Color LaserJet 8550 GN

The HP Color LaserJet 8550GN comes standard with a 100-sheet tray 1, a 500-sheet tray 2, a 500-sheet tray 3, a (tray 4) 2000-sheet input tray, a duplexer, 128 MB RAM, an HP JetDirect print server (10/100 Base-TX), an internal hard disk, five stabilizing legs, and a high-performance processor.

HP Color LaserJet 8550 MFP

The HP Color LaserJet 8550MFP comes standard with a 100-sheet tray 1, a 500-sheet tray 2, a 500-sheet tray 3, a duplexer, 64 MB RAM, an HP JetDirect print server (10/100 Base-TX), an internal hard disk, a printer/copy module stand, and a copy module.

External views

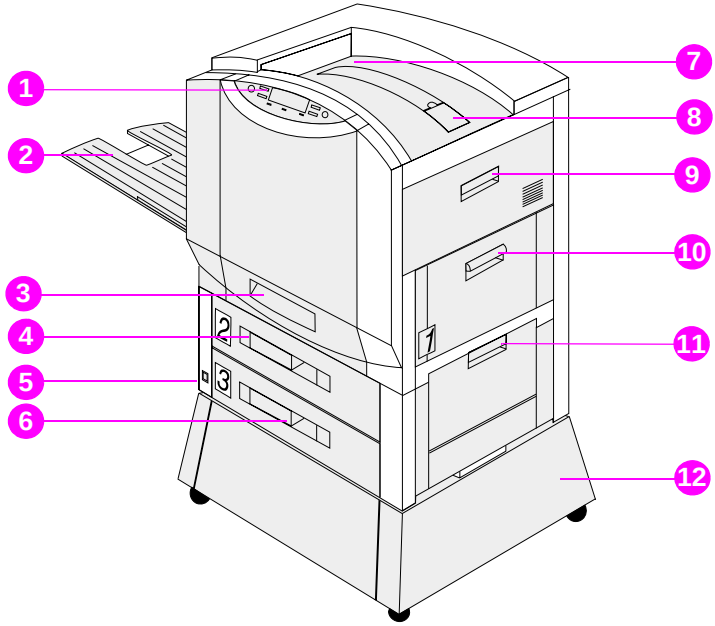


Figure 3. **Front view**

1 Printer control panel (see page 80)

2 Left (face-up) output bin

3 Front door handle

4 Input tray 2 (not included on the HP Color LaserJet 8550 base model, but available as an option)

5 Power/standby button

6 Input tray 3

7 Top (face-down) output bin

8 Flip-up media stop (HP Color LaserJet 8500 models only)

9 Right upper cover

10 Input tray 1

11 Right lower cover

12 Printer stand (base unit and N models only)

Note The power/standby button shown above is immobilized in HP Color LaserJet 8550 MFP printers. Use the power button at the top, right of the copy module after plugging the printer power cable into the right side of the copy module. See the HP Color LaserJet 8550 MFP printer user guide for more information.

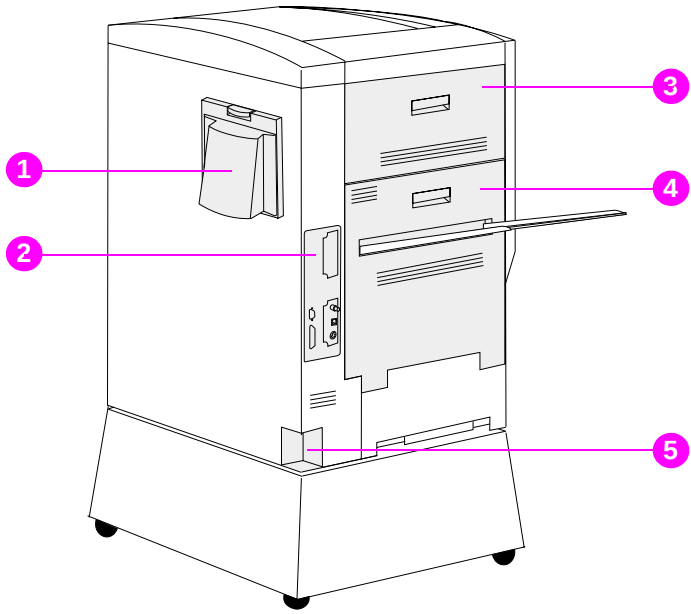


Figure 4. **Rear view**

1 Air filter door

2 Formatter tray

3 Left upper cover

4 Left lower cover

5 Power connector

Formatter assemblies

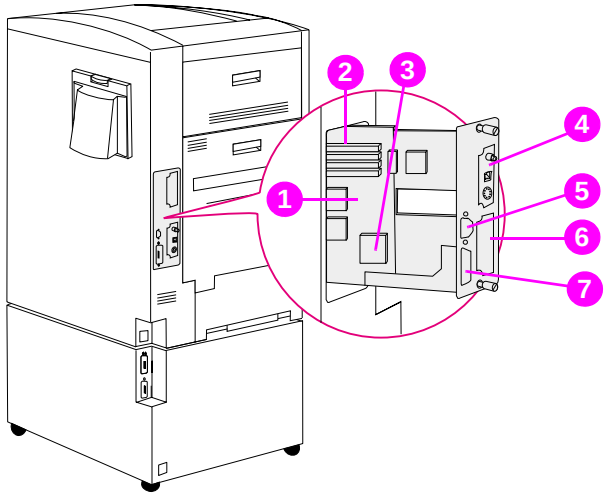


Figure 5. **Formatter assemblies**

1 Formatter board

2 DIMM slots

3 Printer hard disk location (factory-installed on HP Color LaserJet 8500 N, 8500 DN, 8550 N, 8550 DN, 8550 GN, and 8550 MFP models)

4 EIO slot 2 (shown with HP JetDirect internal print server)

5 Parallel IEEE-1284 interface port (C-size)

6 EIO slot 1

7 C-link connector

Note Either EIO slot can have a hard disk installed if there is not a factory-installed internal hard drive mounted on the formatter board. However, the printer does not support two hard disks; the printer can support one hard disk at a time—either internal or external.

Media-handling accessories and options

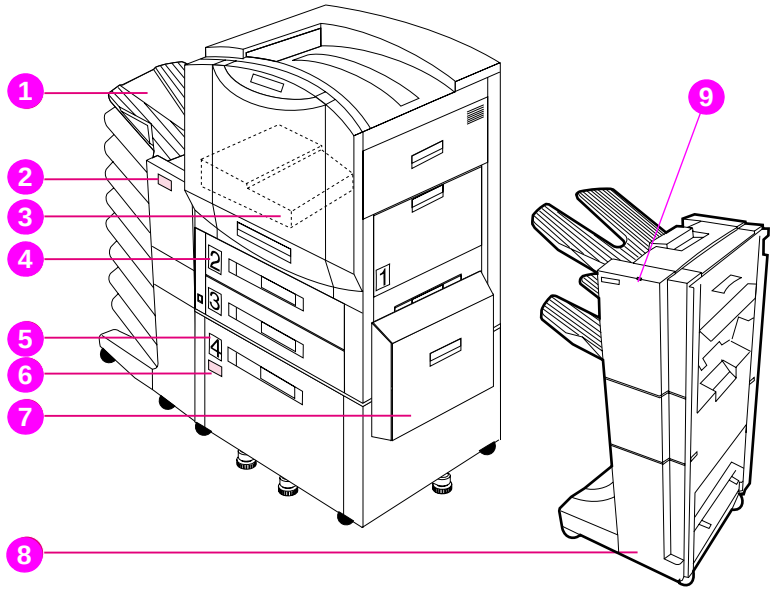


Figure 6. **Media-handling accessories and options**

1 Multi-bin mailbox

2 Multi-bin mailbox status light

3 Duplexer (internal)

4 Tray 2

5 2,000-sheet input tray (tray 4) (only available on 8500 DN, 8550 DN, and 8550 GN models)

6 Tray 4 status light

7 Media transfer door (attached to tray 4)

8 3,000-sheet stapler/stacker or 3,000-sheet stacker (only compatible with 8550 DN and 8550 GN models)

9 3,000-sheet stapler/stacker or 3,000-sheet stacker status light

Table 11. Paper handling accessory status LEDs

LED	2,000-sheet input unit	Multi-bin mailbox	Stapler/stacker
Flashing amber	The accessory has a media jam or a page needs to be removed from the 2,000-sheet input unit, even if the page is not jammed. The vertical transfer unit (VTU) might be open.	The accessory has a media jam or a page needs to be removed from the multi-bin mailbox, even if the page is not jammed. The accessory is not correctly attached to the printer.	The accessory has a media jam or a staple jam, or one or more bins are full. The accessory is not correctly attached to the printer.
Solid amber	The accessory is experiencing a hardware malfunction.		
Solid green	The accessory is on and ready.		
Off	The printer might be in Power Save mode. Press Go. The accessory is not receiving power. Check both the power supply and the power cables.		

Safety information

FCC regulations

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

- Reorient or relocate the receiving antenna.
- Increase separation between equipment and receiver.
- Connect equipment to an outlet on a circuit different from that on which the receiver is located.
- Consult your dealer or an experienced radio/television technician.

Note

Any changes or modifications to the printer not expressly approved by HP could void the user's authority to operate this equipment.

Use of a shielded interface cable is required to comply with the FCC rules.

Canadian DOC regulations

Complies with Canadian EMC Class B requirements.

«Conforme á la classe B des normes canadiennes de compatibilité électromagnétiques. «CEM».»

Declarations of conformity

DOC—HP Color LaserJet 8500 printer

DECLARATION OF CONFORMITY
according to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name:	Hewlett-Packard Company
Manufacturer's Address:	11311 Chinden Boulevard Boise, Idaho 83714-1021, USA

declares, that the product

Product Name:	HP Color LaserJet 8500, 8500 N, 8500 DN
Model Number:	C3983A, C3984A, C3985A
Product Options:	ALL

conforms to the following Product Specifications:

Safety: IEC 950:1991+A1+A2+A3+A4 / EN 60950:1992+A1+A2+A3+A4
IEC 825-1:1993 / EN 60825-1:1994 Class 1 (Laser/LED)

EMC: CISPR 22:1993+A1 / EN 55022:1994 Class B[1]
CISPR 22:1993+A1 / EN 55022:1994 Class A*
EN 5081-1:1992
EN 50082-1:1992
IEC 801-2:1991 / prEN 55024-2:1992 -4 kV CD, 8 kV AD
IEC 801-3:1984 / prEN 55024-3:1991 -3 V/m
IEC 801-4:1988 / prEN 55024-4:1992 -0.5 kV Signal Lines
1.0 kV Power Lines
FCC Title 47 CFR, Part 15 Class B[2]/ICES-003, Issue 2/VCCI-2[1]
AS / NZS 3548:1992 / CISPR 22:1993 Class[1]

Supplementary Information:

The product herewith complies with the requirements of the following Directives and carries the CE-marking accordingly:
- the EMC directive 89/336/EEC
- the Low Voltage Directive 73/23/EEC

[1] The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.
[2] This Device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

* This printer contains Local Area Network (LAN) options. When the interface cable is attached to either of the IEEE 802.3 connectors, the printer meets the requirements of EN55022 Class A.

February 12, 1997

For Compliance Information ONLY, contact:

Australia Contact:	Product Regulations Manager, Hewlett-Packard Australia Ltd., 31-41 Joseph Street, Blackburn, Victoria 3130, Australia
Europe Contact:	A Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE / Standards Europe, Herrenberger Strasse 130, D-71034 Böblingen (Fax: +49-7031-14-3143)
USA Contact:	Product Regulations Manager, Hewlett-Packard Company, P.O. Box 15 Mail Stop 160, Boise, ID 83707-0015 (Phone: 208-396-6000)

DOC—HP Color LaserJet 8550 printer

DECLARATION OF CONFORMITY
according to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name:	Hewlett-Packard Company
Manufacturer's Address:	11311 Chinden Boulevard Boise, Idaho 83714-1021, USA

declares, that the product

Product Name:	HP Color LaserJet 8550, 8550 N, 8550 DN, 8550 GN, 8550 MFP
Model Number:	C7096A, C7097A, C7098A, C7099A, C7835A, C7836A
Product Options:	ALL

conforms to the following Product Specifications:

Safety:	IEC 950:1991+A1+A2+A3+A4 / EN 60950:1992+A1+A2+A3+A4+A11 IEC 825-1:1993 / EN 60825-1:1994+A11 Class 1 (Laser/LED)
EMC:	CISPR 22:1997 / EN 55022:1998 Class A[1] EN 61000-3-2:1995 EN 61000-3-3:1995 EN 55024:1998 FCC Title 47 CFR, Part 15 Class A[2]/ ICES-002[1] AS / NZS 3548:1995[1]

Supplementary Information:

The product herewith complies with the requirements of the following EMC Directive 89/336/EEC and the Low Voltage Directive 73/23/EEC, and carries the CE-Marking accordingly.

[1] The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.
[2] This Device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

WARNING! This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Boise, Idaho USA
May 1999

For regulatory topics only:

Australia Contact:	Product Regulations Manager, Hewlett-Packard Australia Ltd., 31-41 Joseph Street, Blackburn, Victoria 3130, Australia
Europe Contact:	A Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE / Standards Europe, Herrenberger Strasse 130, D-71034 Böblingen (Fax: +49-7031-14-3143)
USA Contact:	Product Regulations Manager, Hewlett-Packard Company, P.O. Box 15 Mail Stop 160, Boise, ID 83707-0015 (Phone: 208-396-6000)

DOC—Duplexer

DECLARATION OF CONFORMITY
according to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name:	Hewlett-Packard Company
Manufacturer's Address:	Montemorelos 299 Guadalajara Jalisco, 45060 México

declares, that the product

Product Name:	Duplexer
Model Number:	C4782A
Product Options:	N/A

conforms to the following Product Specifications:

EMC: CISPR 22:1993+A1 / EN 55022:1994 Class B[1]
CISPR 22:1993+A1 / EN 55022:1994
EN 50081-1:1992
EN 50082-1:1992
IEC 801-2:1991 / prEN 55024-2:1992 -4 kV CD, 8 kV AD
IEC 801-3:1984 / prEN 55024-3:1991 -3 V/m
IEC 801-4:1988 / prEN 55024-4:1992 -0.5 kV Signal Lines
1.0 kV Power Lines
FCC Title 47 CFR, Part 15 Class B[2]/ICES-003, Issue 2/VCCI-2[1]
AS / NZS 3548:1992 / CISPR 22:1993 Class B[1]

Supplementary Information:

The product herewith complies with the requirements of the following Directives and carries the CE-marking accordingly:
- the EMC directive 89/336/EEC
- the Low Voltage Directive 73/23/EEC

[1] The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.
[2] This Device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

July 16, 1997

For Compliance Information ONLY, contact:

Australia Contact:	Product Regulations Manager, Hewlett-Packard Australia Ltd., 31-41 Joseph Street, Blackburn, Victoria 3130, Australia
Europe Contact:	A Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE / Standards Europe, Herrenberger Strasse 130, D-71034 Böblingen (Fax: +49-7031-14-3143)
USA Contact:	Product Regulations Manager, Hewlett-Packard Company, P.O. Box 15 Mail Stop 160, Boise, ID 83707-0015 (Phone: 208-396-6000)

DOC—2,000-sheet input tray

DECLARATION OF CONFORMITY
according to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name:	Hewlett-Packard Company
Manufacturer's Address:	Montemorelos 299 Guadalajara Jalisco, 45060 México

declares, that the product

Product Name:	2,000-Sheet Input Tray
Model Number:	C4781A
Product Options:	N/A

conforms to the following Product Specifications:

Safety: IEC 950:1991+A1+A2+A3+A4 / EN 60950:1992+A1+A2+A3+A4
IEC 825-1:1993 / EN 60825-1:1994 Class 1 (Laser/LED)

EMC: CISPR 22:1993+A1 / EN 55022:1994 Class B[1]
CISPR 22:1993+A1 / EN 55022:1994
EN 50081-1:1992
EN 50082-1:1992
IEC 801-2:1991 / prEN 55024-2:1992 -4 kV CD, 8 kV AD
IEC 801-3:1984 / prEN 55024-3:1991 -3 V/m
IEC 801-4:1988 / prEN 55024-4:1992 -0.5 kV Signal Lines
1.0 kV Power Lines
FCC Title 47 CFR, Part 15 Class B[2]/ICES-003, Issue 2/VCCI-2[1]
AS / NZS 3548:1992 / CISPR 22:1993 Class B[1]

Supplementary Information:

The product herewith complies with the requirements of the following Directives and carries the CE-marking accordingly:
- the EMC directive 89/336/EEC
- the Low Voltage Directive 73/23/EEC

[1] The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.
[2] This Device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

July 16, 1997

For Compliance Information ONLY, contact:

Australia Contact:	Product Regulations Manager, Hewlett-Packard Australia Ltd., 31-41 Joseph Street, Blackburn, Victoria 3130, Australia
Europe Contact:	A Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE / Standards Europe, Herrenberger Strasse 130, D-71034 Böblingen (Fax: +49-7031-14-3143)
USA Contact:	Product Regulations Manager, Hewlett-Packard Company, P.O. Box 15 Mail Stop 160, Boise, ID 83707-0015 (Phone: 208-396-6000)

DOC—Multi-bin mailbox

DECLARATION OF CONFORMITY
according to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name:	Hewlett-Packard Company
Manufacturer's Address:	Montemorelos 299 Guadalajara Jalisco, 45060 México

declares, that the product

Product Name:	Multi-bin Mailbox
Model Number:	C4785A, C4240A
Product Options:	N/A

is in conformity with:

EMC:	CISPR 22:1993+A1 / EN 55022:1994 Class B[1]
	EN 50082-1:1992
	IEC 801-2:1991 / prEN 55024-2:1992 -4 Kv CD, 8 kV AD
	IEC 801-3:1984 / prEN 55024-3:1991 -3 V/m
	IEC 801-4:1988 / prEN 55024-4:1992 -0.5 kV Signal Lines 1.0 kV Power Lines
	FCC Title 47 CFR, Part 15 Class B[2] / ICES-003, Issue 2/VCCI-B[1]
	AS / NZS 3548:1992 / CISPR 22:1993 Class B[1]
Safety:	IEC 950:1991+A1+A2+A3 / EN 60950:1992+A1+A2+A3
	IEC 825-1:1993 / EN 60825-1:1994 Class 1 (Laser/LED)
Telecom	N/A

Additional Information:

The product herewith complies with the requirements of the following Directives and carries the CE-marking accordingly:

EMC	the EMC directive 89/336/EEC
Safety	the Low Voltage Directive 73/23/EEC
Quality System	This product was manufactured under a formal quality system.

[1] The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.
[2] This Device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

April 29, 2998

For Compliance Information ONLY, contact:

Australia Contact:	Product Regulations Manager, Hewlett-Packard Australia Ltd., 31-41 Joseph Street, Blackburn, Victoria 3130, Australia
Europe Contact:	A Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE / Standards Europe, Herrenberger Strasse 130, D-71034 Böblingen (Fax: +49-7031-14-3143)
USA Contact:	Product Regulations Manager, Hewlett-Packard Company, P.O. Box 15 Mail Stop 160, Boise, ID 83707-0015 (Phone: 208-396-6000)

DOC—3,000-sheet stapler/stacker

DECLARATION OF CONFORMITY
according to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name:	Hewlett-Packard Company
Manufacturer's Address:	Montemorelos 299 Guadalajara Jalisco, 45060 México

declares, that the product

Product Name:	3,000-Sheet Stapler/Stacker
Model Number:	C4788A
Product Options:	N/A

is in conformity with:

EMC: CISPR 22:1993+A1+A2 / EN 55022:1994+A1+A23 Class B[1]
EN 50082-1:1992
IEC 801-2:1991 / prEN 55024-2:1992 -4 Kv CD, 8 kV AD
IEC 801-3:1984 / prEN 55024-3:1991 -3 V/m
IEC 801-4:1988 / prEN 55024-4:1992 -0.5 kV Signal Lines
1.0 kV Power Lines
FCC Title 47 CFR, Part 15 Class B[2] / ICES-003, Issue 2/VCCI-B[1]
AS / NZS 3548:1992 / CISPR 22:1993 Class B[1]

Safety: IEC 950:1991+A1+A2+A3+A4+A11 / EN 60950:1992+A1+A2+A3+A4+A11
IEC 825-1:1993 / EN 60825-1:1994 Class 1 (Laser/LED)
UL1950, Third Edition

Additional Information:

The product herewith complies with the requirements of the following Directives and carries the CE-marking accordingly:

EMC	the EMC directive 89/336/EEC
Safety	the Low Voltage Directive 73/23/EEC

[1] The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.
[2] This Device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Quality System: This product was manufactured under a formal quality system.

February 10, 1999

For Compliance Information ONLY, contact:

Australia Contact:	Product Regulations Manager, Hewlett-Packard Australia Ltd., 31-41 Joseph Street, Blackburn, Victoria 3130, Australia
Europe Contact:	A Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE / Standards Europe, Herrenberger Strasse 130, D-71034 Böblingen (Fax: +49-7031-14-3143)
USA Contact:	Product Regulations Manager, Hewlett-Packard Company, P.O. Box 15 Mail Stop 160, Boise, ID 83707-0015 (Phone: 208-396-6000)

DOC—3,000-sheet stacker

DECLARATION OF CONFORMITY
according to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name:	Hewlett-Packard Company
Manufacturer's Address:	Montemorelos 299 Guadalajara Jalisco, 45060 México

declares, that the product

Product Name:	3,000-Sheet Stacker
Model Number:	C4788A
Product Options:	N/A

is in conformity with:

EMC: CISPR 22:1993+A1+A2 / EN 55022:1994+A1+A23 Class B[1]
EN 50082-1:1992
IEC 801-2:1991 / prEN 55024-2:1992 -4 Kv CD, 8 kV AD
IEC 801-3:1984 / prEN 55024-3:1991 -3 V/m
IEC 801-4:1988 / prEN 55024-4:1992 -0.5 kV Signal Lines
1.0 kV Power Lines
FCC Title 47 CFR, Part 15 Class B[2] / ICES-003, Issue 2/VCCI-B[1]
AS / NZS 3548:1992 / CISPR 22:1993 Class B[1]

Safety: IEC 950:1991+A1+A2+A3+A4+A11 / EN 60950:1992+A1+A2+A3+A4+A11
IEC 825-1:1993 / EN 60825-1:1994 Class 1 (Laser/LED)
UL1950, Third Edition

Additional Information:

The product herewith complies with the requirements of the following Directives and carries the CE-marking accordingly:

EMC	the EMC directive 89/336/EEC
Safety	the Low Voltage Directive 73/23/EEC

[1] The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.
[2] This Device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Quality System	This product was manufactured under a formal quality system.
	February 10, 1999

For Compliance Information ONLY, contact:

Australia Contact:	Product Regulations Manager, Hewlett-Packard Australia Ltd., 31-41 Joseph Street, Blackburn, Victoria 3130, Australia
Europe Contact:	A Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE / Standards Europe, Herrenberger Strasse 130, D-71034 Böblingen (Fax: +49-7031-14-3143)
USA Contact:	Product Regulations Manager, Hewlett-Packard Company, P.O. Box 15 Mail Stop 160, Boise, ID 83707-0015 (Phone: 208-396-6000)

Note See the HP Color LaserJet 8550 MFP printer Service Manual for Declarations of Conformity for the copy module, automatic document feeder, and 1,000-sheet input paper deck.

VCCI statement (Japan)—8500 models

この装置は，情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＢ情報技術装置です。この装置は，家庭環境で使用することを目的としていますが，この装置がラジオやテレビジョン受信機に近接して使用されると，受信障害を引き起こすことがあります。
取り扱い説明書に従って正しい取り扱いをして下さい。

VCCI statement (Japan)—8550 models

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

EMI statement (Korea)—8500 models

사용자 안내문 (B급 기기)

이 기기는 비업무용으로 전자파장해검정을 받은
기기로서, 주거지역에서는 물론 모든 지역에서
사용할 수 있습니다.

EMI statement (Korea)—8550 models

사용자 안내문 (A급 기기)

이 기기는 업무용으로 전자파장해 검정을 받은 기기이오니, 만약 잘못 구입하셨 을 때에는구입한 곳에세 비업무용으로 교환하시기 바랍니다.

Laser safety statement

The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration has implemented regulations for laser products manufactured since August 1, 1976. Compliance is mandatory for products marketed in the United States. This printer is certified as a “Class 1” laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968. Because radiation emitted inside this printer is completely confined within protective housings and external covers, the laser beam cannot escape during any phase of normal user operation.

Laser statement for Finland

Luokan 1 laserlaite

Klass 1 Laser Apparat

HP LaserJet 8500, 8500 N, 8500 DN laserkirjoitin on käyttäjän kannalta turvallinen luokan 1 laserlaite. Normaalissa käytössä kirjoittimen suojakotelointi estää lasersäteen pääsyn laitteen ulkopuolelle. Laitteen turvallisuusluokka on määritetty standardin EN 60825-1 (1994) mukaisesti.

Varoitus!

Laitteen käyttäminen muulla kuin käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

Varning!

Om apparaten används på annat sätt än i bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

HUOLTO
HP LaserJet 8500, 8500 N, 8500 DN -kirjoittimen sisällä ei ole käyttäjän huollettavissa olevia kohteita. Laitteen saa avata ja huoltaa ainoastaan sen huoltamiseen koulutettu henkilö. Tällaiseksi huoltotoimenpiteeksi ei katsota väriainekasetin vaihtamista, paperiradan puhdistusta tai muita käyttäjän käsikirjassa lueteltuja, käyttäjän tehtäväksi tarkoitettuja ylläpitotoimia, jotka voidaan suorittaa ilman erikoistyökaluja.

Varo!

Mikäli kirjoittimen suojakotelo avataan, olet alttiina näkymättömälle lasersäteilylle laitteen ollessa toiminnassa. Älä katso säteeseen.

Varning!

Om laserprinterns skyddshölje öppnas då apparaten är i funktion, utsättas användaren för osynlig laserstrålning. Betrakta ej strålen.

Tiedot laitteessa käytettävän laserdiodin säteilyominaisuuksista:

Aallonpituus 775-795 nm

Teho 5 mW

Luokan 3B laser

Product information sheet

The Toner Product Information Sheet can be viewed on the World Wide Web at the following URL:

http://www.hp.com

Click “Search” and enter “Toner Product Information Sheet” where appropriate.

International customers should see page 66 for appropriate phone numbers and information.

Toner safety

Toner is composed of plastic and a small amount of pigment. Avoid breathing toner particles; toner might be harmful to your health. Toner can also stain clothing. Skin and clothing are best cleaned by removing as much toner as possible with a dry tissue, then washing with cold water. Hot water causes toner to melt and permanently fuse into clothing.

Material Safety Data Sheet (MSDS)

The Toner Cartridge/Drum MSDS can be viewed on the World Wide Web at the following URL:

http://www.hp.com

Click “Search” and enter “MSDS” where appropriate.

International customers should see page 66 for appropriate phone numbers and information.

Ozone safety

Ozone emission

The corona assemblies found in laser printers and photocopiers generate ozone gas (O_3) as a by-product of the electrophotographic process. Ozone is generated only while the printer is printing (while the coronas are energized).

This HP LaserJet printer contains an charcoal filter to protect office air quality. See page 119 for suggested replacement intervals.

Ozone standards

Standards for exposure to ozone have been established by the Department of Labor—Occupational Safety and Health Administration (DOL-OSHA) and the American Conference of Governmental Industrial Hygienists (ACGIH). These standards are 0.1 parts per million as a time-weighted average and a ceiling limit respectively. All HP LaserJet family printers meet these standards when shipped from the factory.

Recommendations for minimizing ozone exposure

Some people are extremely sensitive to ozone. In such cases, it is advisable to position the printer away from the sensitive user. Also, a more frequent filter replacement might be necessary.

Almost all ozone concerns arise from abnormal site or operating conditions. The following conditions might generate an ozone complaint:

- installation of multiple laser printers in a confined area
- extremely low relative humidity
- poor room ventilation
- directing the exhaust port of the printer towards the face of personnel
- poor conditions of the existing ozone filter
- long, continuous printing combined with any of the above

Inspect your work environment for the operating conditions listed above if you believe ozone emissions are a problem in your area. (Your employer is responsible for providing a work environment that is free of these conditions.)

2 Service approach

Chapter contents

Introduction

Repair normally begins with the use of printer internal diagnostics in conjunction with the troubleshooting procedures in chapter 7.

When repairing an HP Color LaserJet 8550 MFP printer, first isolate the location of the problem. Usually, simply sending a print job to the printer from a computer is sufficient to determine whether or not the print engine is involved. If it is not, see the service manual specific to the HP Color LaserJet 8550 MFP printer.

Once a faulty part is located, repair is generally accomplished by assembly-level replacement of the field-replaceable units. Some mechanical assemblies can be repaired at the subassembly level.

Parts and supplies

Field replaceable and accessory part numbers are found in chapter 8 of this manual. Use only accessories specifically designed for this printer. Accessories can be ordered from an authorized service or support provider. For a list of available accessories and their part numbers, see page 511. Replacement parts can be ordered from HP's Service Materials Organization or Support Materials Europe.

The following table lists information for ordering from SME, SMO, and HP Distribution Center (HPD).

Table 12. Ordering

Organization	Address	Phone
SMO (Service Materials Organization)	Hewlett-Packard Company Support Materials Organization 8050 Foothills Blvd. Roseville, CA 95678	(1) (800) 227-8164 (U.S. only)
SME (Support Materials Europe)	Hewlett-Packard Company Support Materials Europe Wolf-Hirth Strasse 33 D-7030 Böblingen, Germany	(49 7031) 14-2253
HPD (HP Distribution Center)		(805) 257-5565 (805) 257-6995 Fax

Obtaining related documentation and software

To order related documentation and software, contact SMO or SME at the numbers listed on the previous page. Part numbers for related documentation are listed beginning on page 514.

For information through the World Wide Web, visit the following websites:

Table 13. Technical support websites

HP Customer Care Online Software drivers, support documentation, and answers to frequently asked questions	http://www.hp.com/go/support
HP Technical Training (North America) Classes and schedules	http://www.hp.com/go/resellertraining
Parts Parts information	http://outfield.external.hp.com/spi/welcom.htm

Ordering consumables

Consumable parts and accessories are available directly from Hewlett-Packard at the following numbers:

- U.S.: (1) (800) 538-8787
- Canada: (1) (800) 387-3154
  (in Toronto: (416) 671-8383)
- United Kingdom: 0734-441212
- Contact your local HP Parts Coordinator for other local phone numbers.

To find a dealer near you, call the HP Customer Information Center at (1) (800) 752-0900.

If the local dealer is temporarily out of stock, use one of the numbers above or call (1) (800) 752-0900 to find another dealer near you.

Ordering field-replaceable units

This printer is designed to be repaired by replacing field-replaceable units. Part numbers are located in chapter 8 of this manual and can be ordered from SMO or SME (see page 62).

Parts exchange program

HP offers remanufactured assemblies for some selected parts. These are identified in chapter 8 and can be ordered through SMO or SME (see page 62).

List Server

A list server is an e-mail program that allows users to subscribe to certain mail lists by sending e-mail to the server. The list server allows HP LaserJet Technical Marketing to make the support community aware of new or urgent information by sending information to subscribers.

- To subscribe to hardware-related information, send e-mail to:

  subscribe-CLJ8500/8550-HW@chsdes1.boi.hp.com

- To subscribe to software-related information, send e-mail to:

  subscribe-CLJ8500/8550-SW@chsdes1.boi.hp.com

Once you subscribe, you will receive more information about the benefits of the list server as well as additional instruction about how to use the list server.

HP ASAP

HP ASAP (Automated Support Access Program) provides free technical support information 24 hours a day, 7 days a week. The ASAP system includes HP FIRST, explained below. The ASAP service at (1) (800) 333-1917 (U.S.) requires a touchtone phone.

HP FIRST

HP FIRST (Fax Information Retrieval Support Technology) is a phone-in fax service providing technical information for HP LaserJet end-users as well as service personnel. Receiving a fax requires a type 3 facsimile machine or fax card. Service-related information includes:

- service notes (HP Authorized Dealers)
- Product Data Sheets
- Material Safety Data Sheets (MSDSs)
- typeface and accessory information
- printer support software information
- toner information
- driver request form and Software Matrix

HP FIRST, U.S.

Call the HP ASAP system at (1) (800) 333-1917 and follow the voice prompts to enter HP FIRST.

HP FIRST, Europe

Call HP FIRST at one of the following numbers:

- U.K: 0800-96-02-71
- Belgium: 078-111906 (Dutch)
- Switzerland: 155-1527 (German)
- Netherlands: 06-0222420
- Germany: 0130-810061
- Austria: 0660-8128

For English-language service outside the countries listed above, call (31) 20-681-8192.

Dealer Response Line

For further technical assistance on pre/post-sales and service support, HP dealer service-authorized personnel can contact the Dealer Response Line:

(1) (800) 544-9976, U.S. only
(1) (800) 363-6584, Canada

HP Software Distribution Center

For printer drivers and application note orders:

(1) (805) 257-5565

HP Direct

For supplies and accessories orders:

(1) (800) 538-8787, U.S. only

Customer Support Sales Center

For existing hardware and software service agreements:

(1) (800) 386-1115, U.S. only

For price quotes on or purchase of new hardware or software agreements:

(1) (800) 743-8305, U.S. only

Parts identification

For service part number identification:

(1) (916) 783-0804

Customer Information Centers

For further technical assistance, service-authorized HP and dealer service personnel can contact the nearest Hewlett-Packard Customer Information Center at (1) (800) 752-0900 in North America.

HP Customer Care Centers

HP representatives are available to answer technical questions at no charge for a period equivalent to the original HP hardware warranty period.

Questions regarding operating systems such as MS-DOS®, UNIX®, or network configuration operating systems cannot be answered by the Customer Care Center, and should be referred to your dealer.

Note Each time you call the HP Customer Care Centers, you will be asked to provide the printer serial number and the original date of purchase.

U.S. Customer Care Center (CCC)

The CCC can be reached at (208) 323-2551 and is available weekdays from 6:00 am to 6:00 pm mountain time.

European Customer Care Center (ECCC)

The ECCC can be reached at 31-0-20-605-0505 and is available weekdays from 8:30 am until 6:00 pm central European time. Multilingual customer support representatives are available to answer questions.

Canadian Customer Care Center (CCCC)

The CCCC at (905) 206-4663 is available weekdays from 8:00 am until 8:00 pm Eastern time. French- and English-speaking customer support representatives are available to answer questions.

Asia Pacific region Customer Care Centers

Table 14. Asia Pacific region Customer Care Centers

Country	Phone	Hours of operation
Australia	+ 61 3 8877 8000	9:00 am to 5:00 pm, Monday through Friday
China	+ 86 (0)10 6564 5959	8:30 am to 5:30 pm, Monday through Friday
Hong Kong	800 96 7729	8:30 am to 5:30 pm, Monday through Friday
India	+ 91 11 682 6035	9:30 am to 5:30 pm, Monday through Friday
Indonesia	+62 (21) 350 3408	8:00 am to 5:00 pm, Monday through Friday
Japan	+ 81 3 3335 8333	9:00 am to noon and 1:00 pm to 5:00 pm, Monday through Friday
Korea, Republic of	+82 (2) 3270 0700	8:30 am to 5:30 pm, Monday through Friday
(outside Seoul only)	080 999 0700	8:30 am to 5:30 pm, Monday through Friday
Malaysia	+60 (3) 295 2566	8:30 am to 5:30 pm, Monday through Friday
Penang	1 300 88 00 28	8:30 am to 5:30 pm, Monday through Friday
New Zealand	+64 (9) 356 6640	9:00 am to 5:00 pm, Monday through Friday
Philippines	+ 63 (2) 867 3551	8:30 am to 5:30 pm, Monday through Friday
Singapore	+65 272 5300	8:30 am to 5:30 pm, Monday through Friday
Taiwan	+ 886 (2) 2717 0055	8:30 am to 6:00 pm, Monday through Friday
Thailand	+66 (2) 661 4000	8:30 pm to 5:30 pm, Monday through Friday
Vietnam	+84 (0) 8 823 4530	8:00 am to 5:00 pm, Monday through Friday, and 8:00 am to noon pm on Saturday

Warranty

The warranty outlines specific legal rights. There might also be other rights that vary from area to area. Refer to the user's guide for further warranty information.

Installation

Installation by service personnel is included with the HP Color LaserJet 8500 DN printer and is required with the HP Color LaserJet 8550 MFP. Installation is optional with all other models of HP Color LaserJet 8500 and 8550 models. Installation can be arranged through the Customer Care Center.

Toner cartridge information

The toner cartridge is designed to simplify replacement of the major "consumable" parts. The toner cartridge contains part of the printing mechanism and a supply of toner.

Note For best results, always use a toner cartridge before the expiration date stamped on the toner cartridge box.

Refilled toner cartridges

While HP does not prohibit the use of refilled toner cartridges during the warranty period or while the printer is under a maintenance contract, it is not recommended for the following reasons:

- Repairs resulting from the use of refilled toner cartridges are not covered under HP warranty or maintenance contracts.
- HP has no control or process to ensure that a refilled toner cartridge functions at the high level of reliability of a new HP LaserJet toner cartridge. HP also cannot predict what the long-term reliability effect on the printer is from using different toner formulations found in refilled cartridges.
- The print quality of HP LaserJet toner cartridges influences the customer's perception of the printer. HP has no control over the actual print quality produced by a refilled toner cartridge.

Recycling toner cartridges

To reduce waste, HP offers a recycling program for used toner cartridges. Cartridge components that do not wear out are recycled. Plastics and other materials are recycled. HP pays the shipping costs from the user to the recycling facility.

3 Operational overview

Chapter contents

Verifying package contents

Verify that the following items were included from the factory:

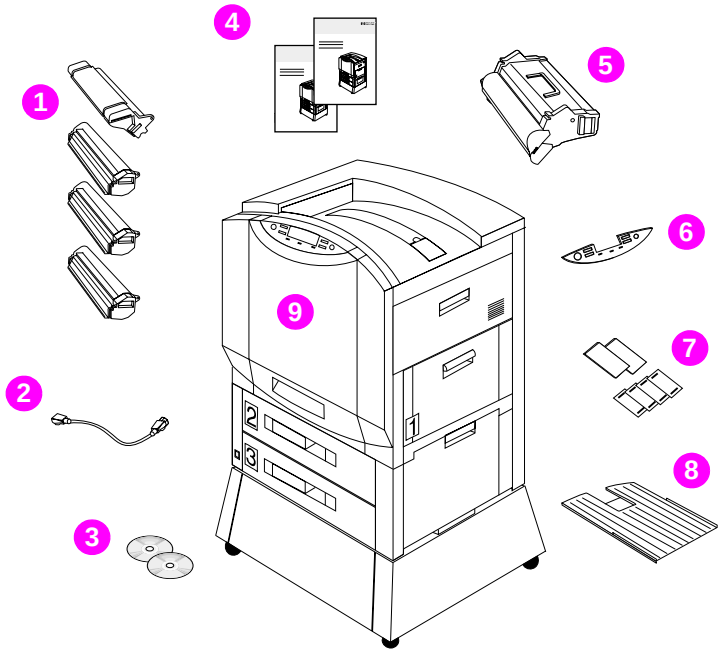


Figure 7. **Contents of printer box**

1 Four toner cartridges: black, cyan, magenta, and yellow

2 Power cord

3 One software CD-ROM and one documentation CD-ROM

4 Manuals: getting started guide and quick reference guide

5 Imaging drum

6 Printer control panel overlay (if applicable)

7 Media size labels

8 Left (face-up) output bin

9 An HP Color LaserJet 8500 (shown above), 8500 N, 8500 DN, 8550, 8550 N, 8550 DN, 8550 GN, or 8550 MFP printer. See Chapter 1 for descriptions of the various printer configurations. See the HP Color LaserJet 8550 MFP printer Service Manual for package contents of HP Color LaserJet 8550 MFP printers.

Verifying the cables are installed

Verify that the cables are connected to the printer correctly.

Printer with stand

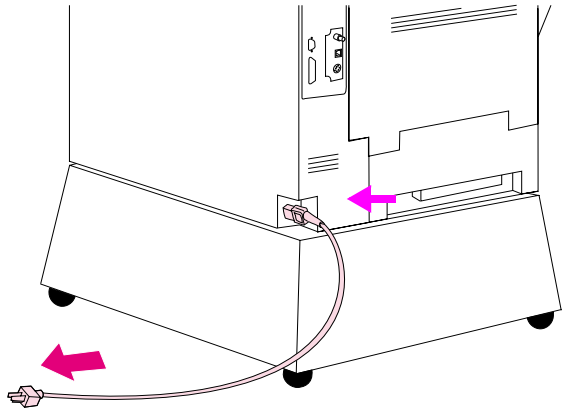


Figure 8. **Power cord connection**

WARNING! An unstable printer can tip over and cause injury; verify that the printer is secured properly and the printer wheels are locked.

- ☐ The power cord plugs into the connector on the back left corner of the printer and into a surge protector or other grounded power source.

Printer with a 2,000-sheet input unit

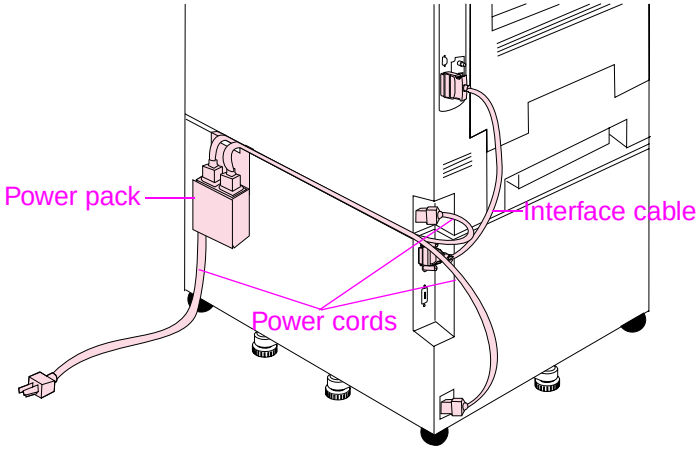


Figure 9. **C-link and power cables connections**

- The interface cable attaches to the printer above the parallel connector and to the connector on the 2,000-sheet input unit.
- The power pack attaches to the back of the printer.
- The shorter of the two cables from the power pack plugs into the connector on the back left corner of the printer.
- The longer of the two cables from the power pack plugs into the connector on the back left corner of the 2,000-sheet input unit.
- The power cord plugs into the bottom of the power pack and into a surge protector or other grounded power source.

Connecting the printer to the network

If the printer was shipped with an optional HP JetDirect internal print server, one of two types is installed:

- HP JetDirect Ethernet print server supports up to three different network interface cables—RJ-45 (unshielded twisted pair) for 10Base-T networks, BNC (coaxial) for 10Base2 networks, and DIN-8 for LocalTalk networks. This print server supports only one Ethernet connection at a time—RJ-45 or BNC.
- HP JetDirect 10/100TX print server supports RJ-45 (unshielded twisted pair) cables for 10Base-T or 100Base-TX networks.

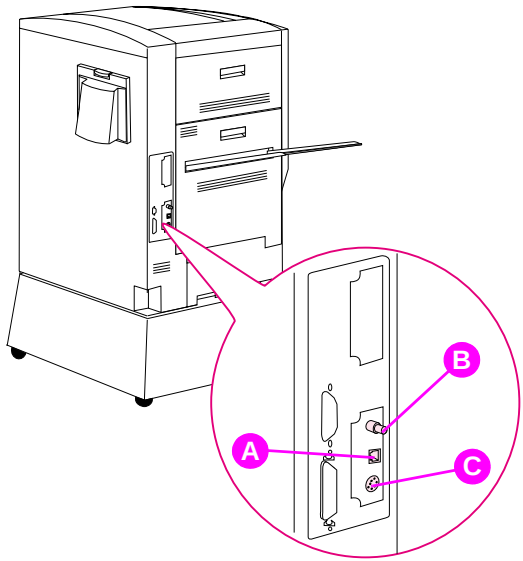


Figure 10. **Network connections**

The locations of ports on the HP JetDirect internal printer server are:

A RJ-45 port (this is the only connector available with the HP JetDirect 10/100TX card)

B BNC port

C LocalTalk (DIN-8) port

Connecting to a 10Base-T or 100Base-TX network

- ☐ The connector of the unshielded twisted pair network cable plugs into the RJ-45 port.

Connecting to a 10Base2 network

- ☐ Attach one section of the ThinLAN (coaxial) cable to a BNC “T” connector.
- ☐ Attach another ThinLAN cable section, or (if it is at the end of the network) a 50-ohm terminator, on the other side of the BNC “T” connector.
- ☐ Plug the BNC “T” connector into the BNC port.

Connecting to a LocalTalk network

- ☐ Plug the end of the DIN-8 cable into the LocalTalk port.

Note

The printer can be connected to a LocalTalk network in addition to an Ethernet or 10Base2 network.

If you use only the LocalTalk port, EIO 1 INITIALIZING appears every time you turn the printer on if you have an HP JetDirect internal print server installed in EIO port 1. The message should not interfere with normal printing through LocalTalk. If it does not clear within approximately five minutes, there is a problem with the print server or the network. To prevent the message from appearing during normal operation, connect a BNC “T” connector with two 50-ohm terminators to the BNC port.

Connecting a parallel cable

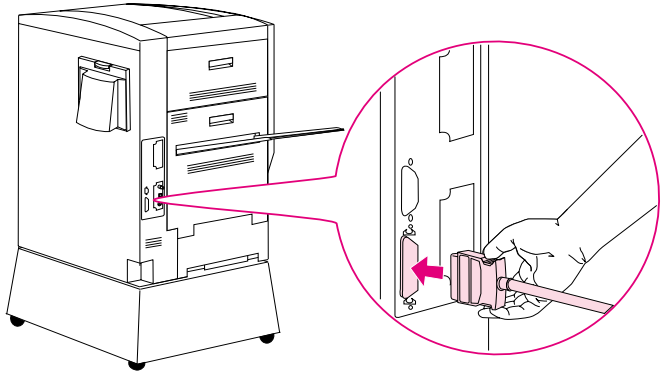


Figure 11. **Parallel cable connection**

- To print through the parallel port, the printer requires a 25-pin male/micro 36-pin male (“C-size”) parallel cable that is IEEE-1284 compliant. The cable is included with the base model of this printer only. It must be purchased separately for other printer models.

Changing the printer control panel overlay

Replace the printer control panel overlay with the one included for your language, if applicable. Then configure the printer control panel to show printer messages in your language (see page 97).

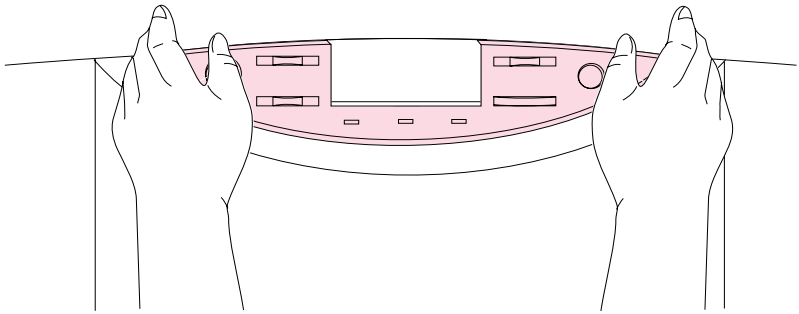


Figure 12. **Changing the printer control panel overlay**

1. Insert a thin, rigid object under the two edges of the overlay on the printer control panel and pull up evenly on both sides of the overlay until it comes off.
2. Place the new overlay over the printer control panel and snap it into place.

Printer control panel layout

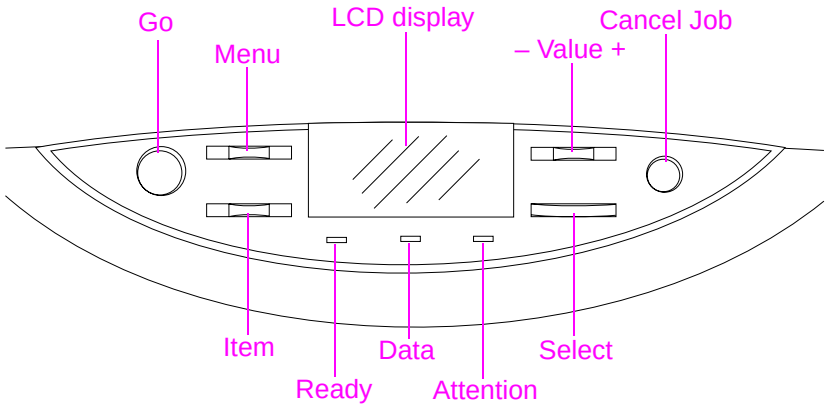


Figure 13. **Location of printer control panel features**

Go	Brings the printer online or offline and exits menus; will override load tray messages to print on the default media size and type.
Menu	Allows access to the printer control panel menus to set the printer defaults. This key permits both forward and backward movement through the list of available menus.
LCD display	Presents data about the printer (such as printer status, required actions, or data and print errors) in one or two lines of characters.
– Value +	Steps through the value choices for a particular menu item using – or +. This key permits both forward and backward movement through the values.
Cancel Job	Stops the current job from printing. If no job is printing and the display indicates that a job is processing, CANCEL JOB cancels the job currently processing and the next job begins to print. While the job is being canceled, CANCELING JOB is displayed.

Item	Steps through the items in a particular menu. This key permits both forward and backward movement through the available items. Use the right side of the key to activate online help in all HP Color LaserJet 8550 printer models.
Ready Indicator (green)	• On—The printer is online and able to accept and process data. • Off—The printer is offline and unable to accept or process data. • Flashing—The printer is going from online to offline, or from offline to online.
Data Indicator (green)	• On—Data is in the printer buffer, or the printer is processing data. • Off—The printer buffer is empty. • Flashing—The printer is receiving or processing data.
Attention Indicator (amber)	• On—An error has occurred in the printer. • Off—The printer does not require attention. • Flashing—The printer requires attention.
Select	Selects the item or value currently shown on the printer control panel display. An asterisk (*) is displayed when an item has been selected.

Menu maps

Press MENU to cycle through the printer control panel menus. Each menu is described in a separate table in this section. Menu items are displayed only if their associated option or function is installed or activated.

All menus and their associated items are accessible when the printer is online. In a menu mode, if no keys are pressed for approximately 30 seconds, the system automatically returns to the top level and displays one of the following:

- READY if the printer was online
- OFFLINE if the printer was offline
- an existing error or service message

Making selections in the printer control panel menus

1. Press MENU until the menu you want appears on the printer control panel display.
2. Press ITEM until the item you want appears on the display.
3. Press – VALUE + until the value you want appears on the display.
4. Press SELECT to save the selection. An asterisk (*) appears to the right of the selection.
5. Repeat steps 1 through 4 until all of your changes are complete.
6. Press GO to bring the printer online.

Note Changes in the printer control panel will not take effect until all current data in the print buffer prints or until the next print job.

Information Menu

Press SELECT to print.

The printer displays READY when finished.

Table 15. Information Menu

Item	Value	Description/action
PRINT MENU MAP	None	Shows current settings of all menu items.
PRINT CONFIG PAGE	None	Shows the configuration of the printer including installed options and serial numbers.
PRINT PCL FONT LIST	None	Shows installed PCL fonts including soft fonts.
PRINT PS FONT LIST	None	Shows installed PostScript fonts.
PRINT LASERJET DEMONSTRATION	None	Prints a demonstration page for sales purposes.
PRINT FILE DIRECTORY	None	Appears only if the printer has a hard disk installed.
PRINT EIO PAGE	None	Appears only if an EIO device is installed that supports EIO page printing.
PRINT CONTINUOUS CONFIG PAGES	None	Used for testing printer operation.
PRINT EVENT LOG	None	Shows printer events.

Proof and Print Menu (HP Color LaserJet 8500)

This menu appears only if the printer has a hard disk installed.

Table 16. Proof and Print Menu

Item	Value	Description/action
<job name> <job owner>	<nn> SELECTED <nn> PRINTED	**<nn>** = Number of copies To cancel a proof and print job: **1** Press ITEM to display the job name and job owner. **2** Press – VALUE + to change the number of copies to be printed. **3** Press SELECT to print the remaining copies. - Or - Press CANCEL JOB or set the number of copies to zero to delete the remaining copies.
<job name> <job owner>	<nn> SELECTED <nn> PRINTED	
<job name> <job owner>	<nn> SELECTED <nn> PRINTED	
<job name> <job owner>	<nn> SELECTED <nn> PRINTED	
<job name> <job owner>	<nn> SELECTED <nn> PRINTED	

Quick Copy Jobs Menu (HP Color LaserJet 8550)

This menu appears only if the printer has a hard disk installed.

Table 17. Quick Copy Jobs Menu

Item	Value	Description/action
<job name> <job owner>	<nn> SELECTED <nn> PRINTED	**<nn>** = Number of copies To cancel quick copy jobs: **1** Press ITEM to display the job name and job owner. **2** Press – VALUE + to change the number of copies to be printed. **3** Press SELECT to print the remaining copies. - Or - Press CANCEL JOB or set the number of copies to zero to delete the remaining copies.
<job name> <job owner>	<nn> SELECTED <nn> PRINTED	
<job name> <job owner>	<nn> SELECTED <nn> PRINTED	
<job name> <job owner>	<nn> SELECTED <nn> PRINTED	
<job name> <job owner>	<nn> SELECTED <nn> PRINTED	

Private/Stored Jobs Menu (HP Color LaserJet 8550)

This menu appears only if the printer has a hard disk installed.

Table 18. Proof and Print Menu

Item	Value	Description/action
<job name> <job owner>	<nn> SELECTED <nn> PRINTED	**<nn>** = Number of copies To cancel private and stored jobs: **1** Press ITEM to display the job name and job owner. **2** Press – VALUE + to change the number of copies to be printed. **3** Press SELECT to print the remaining copies. - Or - Press CANCEL JOB or set the number of copies to zero to delete the remaining copies.
<job name> <job owner>	<nn> SELECTED <nn> PRINTED	
<job name> <job owner>	<nn> SELECTED <nn> PRINTED	
<job name> <job owner>	<nn> SELECTED <nn> PRINTED	
<job name> <job owner>	<nn> SELECTED <nn> PRINTED	

Paper Handling Menu

Table 19. Paper Handling Menu

Item	Value	Description/action
TRAY 1 MODE= (HP Color LaserJet 8500 only)	FIRST* CASSETTE	
TRAY 1 TYPE=	AUTO (8550 only) PLAIN* PREPRINTD LTRHEAD TRNSPRNCY PREPUNCHED LABELS BOND RECYCLED COLOR CARDSTOCK HEAVY GLOSSY 28# TYPE 1 28# TYPE 2 ENVELOPE	Appears only if TRAY 1 MODE=CASSETTE.
* Default setting.		

Table 19. Paper Handling Menu (continued)

Item	Value	Description/action
TRAY 1 SIZE=	AUTO (8550 only) LETTER* LEGAL A4 A5 11X17 A3 EXEC JIS B4 JIS B5 JPOSTD COM10 MONARCH C5 DL B5 CUSTOM	Appears only if TRAY 1 MODE=CASSETTE.
TRAY 2 TYPE= TRAY 3 TYPE= TRAY 4 TYPE=	PLAIN* PREPRINTD (plain and preprinted are combined to one menu item on the 8550) LTRHEAD TRNSPRNCY (trays 2 and 3 only) PREPUNCHED BOND RECYCLED COLOR GLOSSY 28# TYPE 1 28# TYPE 2	The TRAY 4 TYPE= option appears only if the 2,000-sheet input unit is properly installed.
PAPER DEST=	TOP OUTPUT BIN* LEFT OUTPUT BIN STACKER OUTBIN SEPARATOR BIN MAILBOX 1 MAILBOX 2 MAILBOX 3 MAILBOX 4 MAILBOX 5 MAILBOX 6 MAILBOX 7 MAILBOX 8	The STACKER OUTBIN, SEPARATOR BIN, and MAILBOX options appear only if the multi-bin mailbox is installed and configured for the appropriate mode.
DUPLEX=	OFF* ON	Appears only if a duplexer is properly installed.
BINDING=	LONG EDGE* SHORT EDGE	Appears only if DUPLEX= is set to ON.
* Default setting.		

Table 19. Paper Handling Menu (continued)

Item	Value	Description/action
MANUAL FEED=	OFF* ON	Allows the user to feed media into the printer by hand rather than automatically from an input tray. The user can select manual feed instead of automatic input tray as the default for the paper source. If MANUAL FEED = ON and an input tray is not selected, then manual feed is selected.
OVERRIDE A4 WITH LETTER=	NO* YES	Enabling this option prints A4-sized documents on letter-sized media (if letter is the default size), *or* it prints letter-sized documents on A4-sized media (if A4 is the default size). However, if an input tray is configured for the size you want to override, then the printer prints on the correct size of media regardless of the override setting.
AUTO PAPER OVERRIDE=	OFF* ON	Selects the media the job prints on if the requested media is not found. If ON is selected, the printer displays TRAY <x> LOAD <type> <size>. After a delay the printer automatically prints on the default media. The delay time can be changed through HP JetAdmin software. If OFF is selected, the printer displays TRAY <x> LOAD <type> <size> until it detects the requested media type and size or Go is pressed.
* Default setting.		

Configuration Menu

Table 20. Configuration Menu

Item	Value	Description/action
POWERSAVE=	30 MIN 1 HOUR* 2 HOURS (8500 only) 3 HOURS 8 HOURS (8550 and some 8500 models) 10 SEC	Sets the length of time after use before the printer switches to powersave mode. Note that the 10-second setting is for service personnel use.
PERSONALITY=	AUTO* PCL PS	Allows the user to determine which personality will be the default for the printer. When AUTO is selected, the printer will determine which personality to use for each print job. **Note:** PCL support is not available at initial product introduction.
CLEARABLE WARNINGS=	ON* JOB	Determines the amount of time that a clearable warning is displayed on the printer control panel. If set to ON, then clearable warnings are displayed until GO is pressed. If set to JOB, then clearable warnings are displayed until the end of the print job.
TONER LOW=	CONTINUE* STOP	Determines the printer response to consumable low and out messages (including TONER LOW, TRANSFER KIT OUT, FUSER LIFE OUT, and DRUM LIFE LOW). If set to CONTINUE, clear the message by pressing GO. If set to STOP, clear the message by replacing the consumable.
NEW TONER CARTRIDGE= (8550 only)	NO YES	
QUICK COPY JOBS = (8550 only)	0 to 50	The default is 32.
PRINT PS ERRORS=	OFF* ON	If the PostScript interpreter detects illegal commands, the job is canceled. If ON, an error page prints. If OFF, there is no indication that an error occurred.
INITIALIZE DISK	None	Appears only if the appropriate printer hard disk is installed. Press SELECT to initialize.
* Default setting.		

Printing Menu

Table 21. Printing Menu

Item	Value	Description/action
COPIES=	1* to 999	Sets the number of uncollated copies to be sent if the number of copies is not defined by the print job.
PAPER=	LETTER* LEGAL A4 EXEC A5 11X17 A3 JIS B4 JIS B5 JPOSTD	Sets the default media size. The default media size is used for jobs that do not include media size commands, or when the requested media size is not installed in the printer.
ENVELOPE=	COM10 MONARCH C5 DL B5	ENVELOPE is not a separate item. The printer control panel display switches when - VALUE + gets to envelope sizes.
CONFIGURE CUSTOM PAPER (8550 only)	NO YES	
UNIT OF MEASURE (8550 only)	INCHES MILLIMETERS	
X DIMENSION (8550 only)	3.87 . . . 11.7*	
Y DIMENSION (8550 only)	7.5 . . . 17.7*	
ORIENTATION=	PORTRAIT* LANDSCAPE	
FORM LENGTH=	5 . . . 60* . . . 128 LINES	
PCL FONT SOURCE=	SOFT INTERNAL* SLOT n (n = 1, 2, 3, 4)	Sets the default font source to search first for the requested fonts. Soft fonts are selected first, DIMM fonts second, and internal fonts third, if all are installed.
PCL FONT NUMBER=	0 (Courier)* to 999	
PCL PITCH=	0.44 . . . 10* . . . 99.99	Appears only if the selected font is a fixed-spaced contour font.
PCL POINT SIZE=	4.00 . . . 12* . . . 999.75	Appears only if the selected font is a proportional-spaced contour font.
*Default setting.		

Table 21. Printing Menu (continued)

Item	Value	Description/action
PCL SYMBOL SET=	PC-8* ROMAN-8 ISO L1 ISO L2 ISO L5 ISO L6 PC-775 PC-8 DN PC-850 PC-852 PC-8TK PC-1004 WIN L1 WIN L2 WIN L5 WINBALT DESKTOP PS TEXT LEGAL ISO-4 ISO-6 ISO-11 ISO-15 ISO-16 ISO-17 ISO-21 ISO-60 ISO-69 WIN 3.0 MC TEXT	Default symbol-set mapping. Used only for jobs that do not include symbol-set selection commands.
COURIER=	REGULAR* DARK	DARK emulates the heavier Courier font of the HP LaserJet III printer. REGULAR is the lighter and more accurate Courier font used since the HP LaserJet 4 printer and in books and magazines.
WIDE A4=	NO* YES	Allows the user to change the printable area of A4-sized media so that eighty 10-pitch characters can be printed on one line. The printer will print past the normal 5-mm boundaries on the sides of the page. This setting is useful if printing files formatted for letter-sized media on A4-sized media.
APPEND CR TO LF=	NO* YES	These are control characters identified in ASCII to control the cursor (which is the current printing position). LF (line feed) moves the cursor down one row without changing the column position. CR (carriage return) moves the cursor back to column 1 without moving it down a row.
*Default setting.		

Duplex Registration Menu (HP Color LaserJet 8550)

Table 22. I/O Menu

Item	Value	Description/action
TRAY 1 PRINT TEST PAGE		
TRAY 1 X=	-5 . . . 0* . . . 5	
TRAY 1 Y=	-5 . . . 0* . . . 5	
TRAY 2 PRINT TEST PAGE		
TRAY 2 X=	-5 . . . 0* . . . 5	
TRAY 2 Y=	-5 . . . 0* . . . 5	
TRAY 3 PRINT TEST PAGE		
TRAY 3 X=	-5 . . . 0* . . . 5	
TRAY 3 Y=	-5 . . . 0* . . . 5	
TRAY 4 PRINT TEST PAGE		
TRAY 4 X=	-5 . . . 0* . . . 5	
TRAY 4 Y=	-5 . . . 0* . . . 5	
* Default setting.		

I/O Menu

If an EIO card is installed, an additional EIO menu will appear.

Table 23. I/O Menu

Item	Value	Description/action
I/O TIMEOUT=	5 . . . 15[1] . . . 30[2] . . . 300	Period of time, in seconds, that the printer will wait without seeing data before considering the job complete and printing it. Does not have an effect for jobs with end-of-job markers.
PARALLEL ADV FUNCTIONS=	ON* OFF	Forces parallel port to compatibility mode, which can be more reliable in some cases, but will not allow the printer status to be sent to the host computer.
[1]Default setting for HP Color LaserJet 8550. [2]Default setting for HP Color LaserJet 8500.		

Resets Menu

Table 24. Resets Menu

Item	Value	Description/action
FACTORY DEFAULT RESET	None	Resets menus to the factory settings. I/O Menu and Color Adjust Menu values do not change.
RESET ACTIVE I/O	None	Resets I/O to known state.
RESET ALL I/O	None	Used to clear I/O problems.
RESET TRANSFER LIFE COUNT	None	Used to indicate that a new transfer kit has been installed.
RESET FUSER LIFE COUNT	None	Used to indicate that a new fuser kit has been installed.

Color Adjust Menu

Table 25. Color Adjust Menu

Item	Value	Description/action
PRINT TEST PAGE	None	See page 457 for information about using this menu.
BLACK SMOOTH VALUE=	-6 ... 0 ... +6	
CYAN SMOOTH VALUE=	-6 ... 0 ... +6	
MAGENTA SMOOTH VALUE=	-6 ... 0 ... +6	
YELLOW SMOOTH VALUE=	-6 ... 0 ... +6	
BLACK DETAIL VALUE=	-6 ... 0 ... +6	
CYAN DETAIL VALUE=	-6 ... 0 ... +6	
MAGENTA DETAIL VALUE=	-6 ... 0 ... +6	
YELLOW DETAIL VALUE=	-6 ... 0 ... +6	

Service Mode Menu

The Service Mode Menu can be entered only by pressing the left side of the ITEM and the VALUE keys at the same time. For more information about using the Service Mode Menu, see page 420.

- NVRAM SETTING (nonvolatile random-access memory setting) menu is provided to replace values that might be lost when a formatter board or control board is replaced in the field.
- FORMATTER DIAGNOSTICS menu is provided for manufacturing and field service personnel to perform specific diagnostic tests on the formatter board and its related components.
  - Service personnel can pinpoint problem areas on the formatter board for replacement or for tracking defects.
  - The operator can choose which tests are enabled and disabled during execution, whether the tests run once or continuously, and whether the test sequence stops upon failure or continues despite failure.
  - A fault log is implemented within formatter diagnostics to record errors for review.
  - Because many of the formatter diagnostic tests are destructive memory tests, a special key sequence is used to enter the mode. A message warns service personnel that the printer is about to perform destructive memory tests.

Table 26. Service Mode Menu

Service Mode Menu	Item	Value	Description/action
NVRAM SETTING	SERIAL NUMBER	<xxxxxxxxxx>	This number is the serial number of the printer. Press – VALUE + to change the value of the current character. Press SELECT to save the value and move to the next character.
	FORMATTER NUMBER	<xxxxxxxxxx>	This number is the serial number of the formatter board. Enter the number in the same manner as the serial number of the printer.
	TOTAL PAGE COUNT	<xxxxxxxxxx>	Total number of pages processed.
	COLOR PAGE COUNT	<xxxxxxxxxx>	Number of color pages processed.
* Default setting.			

Table 26. Service Mode Menu (continued)

Service Mode Menu	Item	Value	Description/action
NVRAM SETTING (continued)	DUPLEX COUNT	<xxxxxxxxxxxx>	Number of duplex pages processed.
	TRANSFER LIFE LEFT	<xxxx>	Remaining life, from 0 to 100 percent.
	FUSER LIFE LEFT	<xxxx>	Remaining life, from 0 to 100 percent.
	ENGINE SETTING 1	<xxxxxxxxxxxx>	The registration values of the engine used to align the various color planes. The values are listed on a sticker inside the front of the printer (to the left of the printer control panel and to the right of the front door). Enter these values only when replacing the control board. Enter only 12 characters for each engine setting (0 [zero] to F). The last two digits of the engine setting might change after setting because of varying checksum values. This difference is acceptable.
	ENGINE SETTING 2	<xxxxxxxxxxxx>	See ENGINE SETTING 1.
	CR PAPER SIZE	LETTER* A4	The cold reset (CR) paper size is the default media size in the country for which the printer is localized. If the NVRAM SETTING menu is used to change the CR PAPER SIZE, the PAPER= setting in the Printing Menu also changes to make the new CR PAPER SIZE the default media size.
	CLEAR EVENT LOG	NO* YES	Clears the printer event log.
FORMATTER DIAGNOSTICS	EXECUTE TESTS		Press SELECT to enter the FORMATTER DIAGNOSTICS menu. ITEM and – VALUE + do not function until SELECT is pressed. Once the FORMATTER DIAGNOSTICS menu has been entered, MENU moves only between the FORMATTER DIAGNOSTICS and FAULT LOG.
* Default setting.			

Table 26. Service Mode Menu (continued)

Service Mode Menu	Item	Value	Description/action
	REPEAT=	NO* YES	
	ON FAULT=	BREAK* CONT PAUSE	BREAK stops at error and only the printer control panel displays a message. CONTINUE does not stop at error, and error is posted only to the fault log. PAUSE stops at error and the printer control panel displays a message. Press SELECT to continue. Then, error is also posted to the fault log.
	ROM CRC=	YES* NO	Firmware read-only memory (ROM) is tested.
	DRAM DIMM=	YES* NO	Installed DIMMs are tested to verify that they are supported by the formatter board and functioning properly.
	IDE ASIC=	YES* NO	This test verifies the read and write integrity of the formatter IDE ASIC.
	DISK=	YES* NO	Used to verify the integrity of the printer hard disk and the interface between the printer hard disk and the printer. This test also ensures that the printer hard disk buffering and caching are working properly.
	VX ASIC=	YES* NO	This test verifies the read and write integrity of the formatter VX ASIC.
	FAULT LOG	first fault message . . . last fault msg	Records all errors that occurred while formatter diagnostics tests were executing. FAULT LOG does not appear until the formatter diagnostics have been run and a failure exists. The fault log is cleared when the printer is turned off.
	POWER OFF TO EXIT		Turn the printer off and on to exit the formatter diagnostics and reset the printer.
PAPER PATH	EXECUTE TEST		Press SELECT to execute tests.
* Default setting.			

Table 26. Service Mode Menu (continued)

Service Mode Menu	Item	Value	Description/action
	REPETITIONS	1* . . . 10	
	TRAY 1=	ON* OFF	
	TRAY 2=	ON* OFF	
	TRAY 3=	ON* OFF	
	OUTPUT =	TOP OUTPUT BIN* LEFT OUTPUT BIN	
DEVELOPER MOTOR	REPETITIONS	1* . . . 10	
	EXECUTE TEST		
DRUM MOTOR	REPETITIONS	1* . . . 10	
	EXECUTE TEST		
SENSOR MONITOR	EXECUTE TEST	0123456789AB 000000000000	Once EXECUTE TEST is selected, the current value (0 or 1) of each of the 10 sensors is shown on the display, on the lower line. The upper line of the display shows digits to be used as identifiers. For information about performing this test and an explanation of the digits in the upper line of the display, see page 423.
EXIT SERVICE MODE			
* Default setting.			

Selecting the display language

The printer supports printer messages and prints configuration pages in a variety of languages. Use the printer control panel to set the display language.

1. To enter configure language mode, hold down SELECT while turning the printer on. When CONFIG LANGUAGE (in English) appears on the printer control panel display for approximately one second, release SELECT. Once the printer has restarted, LANGUAGE = ENGLISH appears on the display.

Note

Only – VALUE +, SELECT, and GO are active while the display language is being configured. All other keys are ignored.

If you press GO without selecting a language, the printer brings itself online and all subsequent messages are in English. However, because no display language was selected, the LANGUAGE = ENGLISH message reappears (after the power-on self test) when the printer is turned on again. This message appears every time the printer is turned on until you select a language through the configure language mode.

2. Press – VALUE + until the language you want appears on the display.
3. Press SELECT to save the selection. An asterisk (*) appears to the right of the selection. The language selected is the default language until another selection is made by restarting the printer in the configure language mode.
4. Press GO.
5. Turn the printer off and back on.

Note

See the HP Color LaserJet 8550 MFP printer Service Manual for information about how to change the display language on the copy module.

Installing the consumables

When installing a new printer, install the consumables in the printer in this order:

1 Imaging drum

2 Black toner cartridge

3 Color toner cartridges

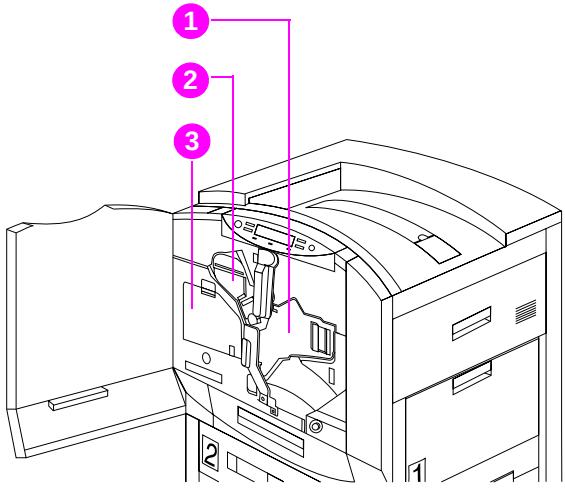
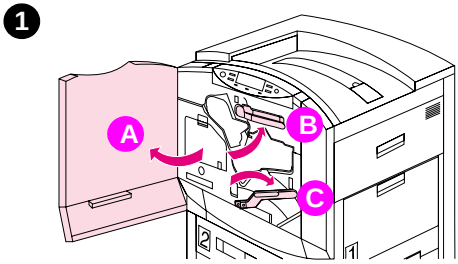
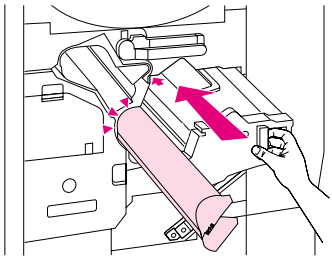
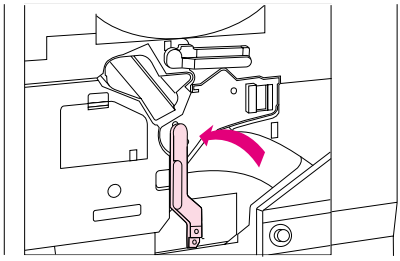


Figure 14. **Consumables installation**







To install the imaging drum

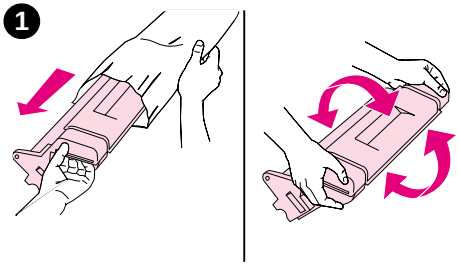
1 Open the front door of the printer (A). Swing the upper (blue) lever to the right (B). Press the white button on the lower (green) lever and swing the lever to the right (C).

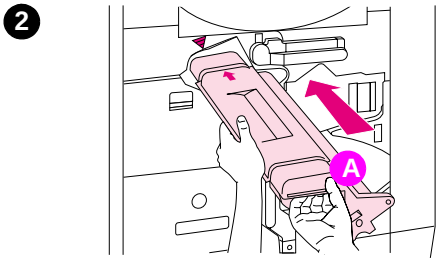
CAUTION
There is a cover protecting the drum cylinder. Do not remove this cover or the drum might be damaged; it will come off during the next step.

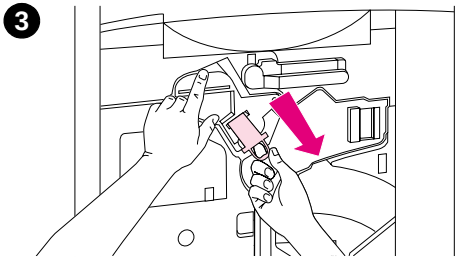
2 Push the drum into the printer. The protective cover slides off as the drum enters the printer.

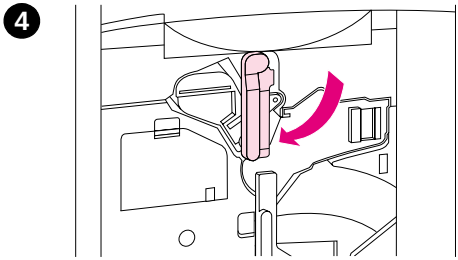
3 Swing the lower (green) lever back to the left, making sure it clicks into place.

Note
If the lever does not return to its original position, make sure that the imaging drum is all the way in the printer.









To install the black toner cartridge

1 Remove the black toner cartridge from its packaging and gently rock the cartridge several times to distribute the toner.

CAUTION
Do not lift or remove the shutter (A) on the cartridge.

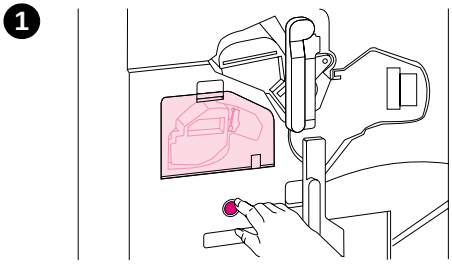
2 Align the arrow on the top of the cartridge with the arrow at the top of the slot in the printer and slide the cartridge into the printer.

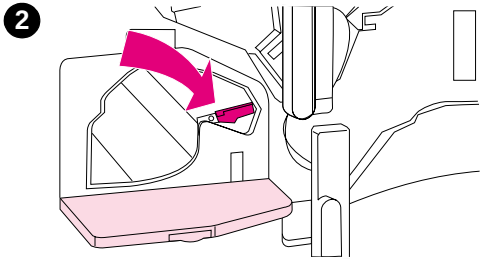
3 Place one hand on the cartridge and use the other hand to pull the orange ring and remove the seal. Discard the seal.

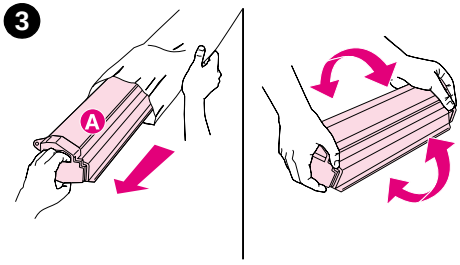
Note
If toner gets on fabric, wipe the toner off with a dry cloth and then wash the clothing in cold water. Heat will set toner into fabric.

4 Swing the upper (blue) lever back to the left.

Note
If the lever does not return to its original position, make sure that the black toner cartridge and the imaging drum are all the way in the printer and that the orange seal was removed from the toner cartridge.







To install the color toner cartridges

1 With the printer on, press the blue button beneath the carousel door to turn the carousel to a toner cartridge slot.

Note

The carousel will not rotate unless all of the following conditions are met (each of these actions engages an interlock switch, which allows the carousel motor to receive power):

- the carousel door is closed
- the imaging drum is installed completely
- the black toner cartridge is installed completely
- the orange seal is removed from the black toner cartridge
- the upper left lever is to the left
- the right upper door is closed

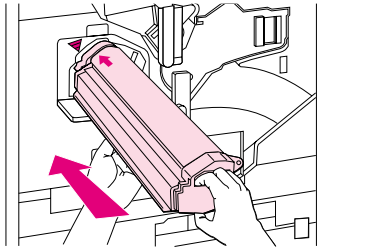
2 Open the carousel door, and push the (blue) locking lever to the right.

3 Remove the toner cartridge that matches the color of the sticker in the empty carousel slot from its packaging and gently rock the cartridge several times to distribute the toner.

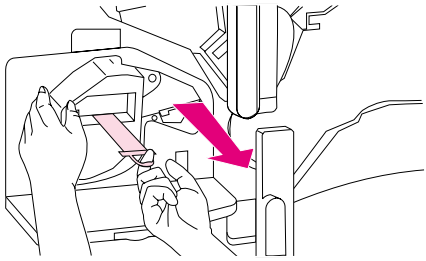
CAUTION

Do not lift or remove the shutter (A) on the cartridge.

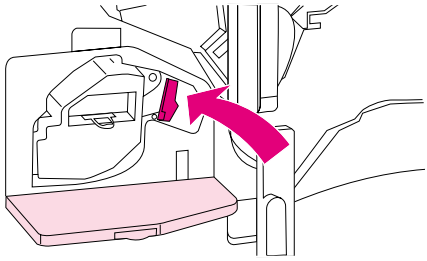
4



5



6



4 Align the arrows on the top of the cartridge and at the top of the slot. Slide the cartridge into the printer.

Note
If the cartridge does not slide completely into the printer, make sure that the color of toner in the cartridge matches the colored sticker on the slot.

5 Place one hand on the cartridge and use the other hand to pull the orange ring and remove the seal. Discard the seal.

6 Push the blue locking lever back to the left and close the carousel door.

Note
If toner gets on fabric, wipe the toner off with a dry cloth and then wash the clothing in cold water. Heat will set toner into fabric.

Note
If the carousel door does not close, make sure that the blue lever is locked and that the seal has been completely removed from the toner cartridge.

7 Rotate the carousel to the two remaining slots (by closing the carousel door and pushing the carousel rotation button) and repeat steps 3 through 6 for each color.

8 Close the front door.

CAUTION
To prevent contamination or damage to the printer, do not move the printer after the imaging drum or any of the toner cartridges have been installed.

Configuring input trays

When input trays are configured correctly, the printer automatically uses the correct input tray based on media type and size.

Note Setting the media type is necessary for best print quality on envelopes, paper heavier than 24 up to 28 lb (90 to 105 g/m^2) bond paper, and paper heavier than 28 lb (105 g/m^2) bond.

For example, tray 2 could contain letterhead; tray 3, plain legal-sized paper; and the 2,000-sheet input unit, plain letter-sized paper. If the trays are configured correctly, when you set up a print job you can choose the media type and size in the printer driver, and the printer automatically prints from the correct input tray.

Selecting the mode for tray 1

Tray 1 has two modes: FIRST mode and CASSETTE mode.

FIRST mode is the default mode for tray 1. In FIRST mode, tray 1 functions as a multipurpose tray. When tray 1 is in FIRST mode, specify the media type and size in the printer driver. The printer looks first for media loaded in tray 1. If the correct width of media is loaded in tray 1, the printer prints from tray 1. If the printer senses that the media in tray 1 is a different size than the media specified in the printer driver, then the printer does not feed the media (to prevent toner residue on subsequent pages).

In CASSETTE mode, tray 1 functions as a regular input tray. When tray 1 is in CASSETTE mode, load media in tray 1 and configure the media type and size in the printer control panel.

1. Press MENU until PAPER HANDLING MENU appears on the printer control panel display.
2. Press ITEM until TRAY 1 MODE = appears on the display.
3. Press – VALUE + until the correct mode appears on the display.
4. Press SELECT to save the selection. An asterisk (*) appears to the right of the selection.
5. Press GO to bring the printer online.

Configuring media type and size

Configuring the media type is beneficial for several reasons:

- Configuring the media type prevents printing on the wrong (and possibly more expensive) media.
- If a user changes the type of media in an input tray, other users can still print on the correct media.
- The printer automatically adjusts its print speed to accommodate special media (such as card stock, labels, and transparencies). These adjustments give the highest quality output, saving time and resources.

Note If the media type is not set correctly, then the printer might not print on the correct media or at the correct speed for the media type, which can result in poor print quality or excessively slow printing.

1. Press MENU until PAPER HANDLING MENU appears on the printer control panel display.
2. Press ITEM until TRAY <number> TYPE = appears on the display.
3. Press – VALUE + until the correct media type appears on the display.
4. Press SELECT to save the selection. An asterisk (*) appears to the right of the selection.

Note Tray 2, tray 3, and the optional 2,000-sheet input unit automatically sense the media size. To configure the media size for tray 1 in CASSETTE mode, continue with step 5. Otherwise, proceed to step 8.

5. Press ITEM until TRAY 1 SIZE = appears on the printer control panel display.
6. Press – VALUE + until the media size appears on the display.
7. Press SELECT to save the selection. An asterisk (*) appears to the right of the selection.
8. Repeat steps 2 through 4 to configure media type in another tray.
   - Or -
   Press GO to bring the printer online.

Verifying the printer is installed correctly

Configuration page

Print a configuration page to verify that the printer was installed correctly. Configuration pages include the following information:

- general information about the printer (such as serial number and number of pages since most recent maintenance)
- installed languages
- last three printer events
- memory available and installed DIMMs
- printer control panel and printer hard disk security
- installed optional equipment (such as a 2,000-sheet input unit, multi-bin mailbox, 3,000-sheet stapler/stacker or 3,000-sheet stacker, or duplexer)
- tray configuration

Note See page 415 for more information about and examples of configuration pages.

To print a configuration page

1. Press MENU until INFORMATION MENU appears on the printer control panel display.
2. Press ITEM until PRINT CONFIG PAGE appears on the display.
3. Press SELECT to print the configuration page.

EIO page

Use the printer control panel to print an EIO page to verify network configuration.

To print an EIO page

1. Press MENU until INFORMATION MENU appears on the printer control panel display.
2. Press ITEM until PRINT EIO PAGE appears on the display.
3. Press SELECT to print the EIO page.

Verifying DIMM installation

The HP Color LaserJet 8500 printer comes with the following amounts of memory installed in slots 1 and 2:

- 16-MB DIMMs in the base and N models
- 32-MB DIMMs in the DN model

The HP Color LaserJet 8550 printer comes with the following amounts of memory installed in slots 1 and 2:

- 16-MB DIMMs in the base model
- 32-MB DIMMs in the N, DN, and MFP models (2 x 32 = 64)
- 64-MB DIMMs in the GN model (2 x 64 = 128)

In all printer models, slots 3 through 8 are available for additional DIMMs.

The printer supports ROM and synchronous DRAM DIMMs. Extended data out (EDO) or Fast Page Mode DRAM DIMMs are not supported.

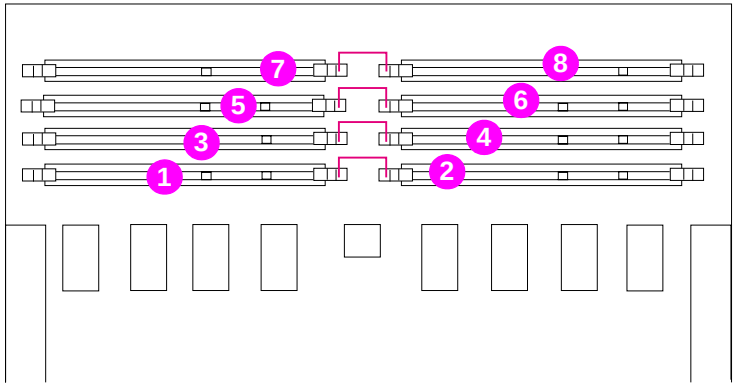


Figure 15. **DIMM slot configuration**

- DRAM DIMMs must be installed in synchronized pairs: two DIMMs with the same amount of DRAM are installed in facing left and right slots (such as slots 5 and 6).
- ROM DIMMs need not be installed in a specific configuration. For example, ROM DIMMs can be installed in slots 1 and 3, and slot 2 can be empty. However, ROM DIMMs cannot be installed as pairs (in corresponding left and right slots).
- The minimum amount of memory required to start the printer is 16-MB DIMMs installed in both slots 1 and 2.

Duplex registration (HP Color LaserJet 8550)

The duplex registration feature allows precise alignment of images on the front and back of a duplexed page. Image placement varies slightly for each input tray. The alignment procedure must be performed for each tray.

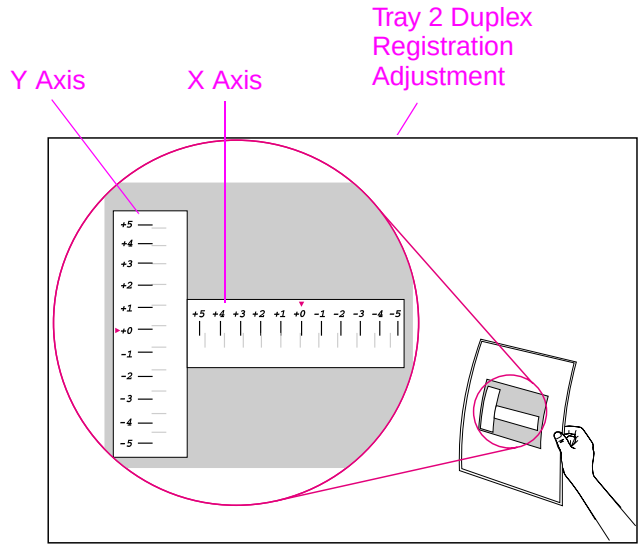


Figure 16. **Duplex registration**

1. Press MENU until DUPLEX REGISTRATION MENU appears on the printer control panel display.
2. Press ITEM until PRINT TEST PAGE appears for the tray you want.
3. Press SELECT to print the page.
4. Hold the printed page up to a light source and choose the number on each axis where the lines on the front and back of the page align most accurately.
5. Repeat step 1.
6. Press ITEM until TRAY n X= appears and use -VALUE+ to enter the number you selected from the test page in step 4.
7. Press SELECT to store the value. An asterisk in the lower right corner of the display indicates the currently stored value.
8. Repeat steps 6 and 7 for the y axis.

9 Press ITEM to scroll up through the duplex registration menu until PRINT TEST PAGE appears for the tray you want.

10 Press SELECT to print the page.

11 Repeat step 4 to verify that the lines on the front and back of the page are now properly aligned.

Note If the lines on the front and back do not properly align, then repeat steps 4 through 9 until they properly align.

Booklet printing

Booklet printing is available on all HP Color LaserJet 8550 printer models and on HP Color LaserJet 8500 models with the PCL upgrade.

Booklet printing allows the pages of a print job to be arranged so that the document can be folded and stapled or bound into a book. Booklet printing is supported in PostScript and PCL5c in Windows 3.x, 9x, NT 4.0, Windows 2000, and using the Booklet Maker for Macintosh.

Note Duplex printing must be selected in order to use the Booklet Printing feature.

Offline Booklet Printing delivers the job to the top (face-down) output bin. The user can remove the job from the printer and bind or staple it. (Right and left binding options are provided for Asian languages.) The user may also insert one full blank page (2 booklet pages) at any location in the booklet.

Inline Booklet Printing uses a finishing device like a multi-bin mailbox to staple or bind the booklet. (Booklet Printing requires the document be sent to the left [face-up] output bin instead of the top [face-down] output bin.) The user selects the destination of the print job, and the software places the pages in the proper order for binding.

Custom Order allows the user to specify the page sequence.

HP TonerGauge (HP Color LaserJet 8550)

Note The HP TonerGauge feature is not enabled on HP Color LaserJet 8550 MFP printers.

The HP TonerGauge feature allows the user to estimate how much toner is left in the cartridges. The HP TonerGauge indicator appears on the configuration page, on the status tab of the driver, and in HP Web JetAdmin (for the network administrator). The toner level indicated by the gauge may be used to estimate whether enough toner remains in the cartridges to complete a print job.

Resetting the HP TonerGauge

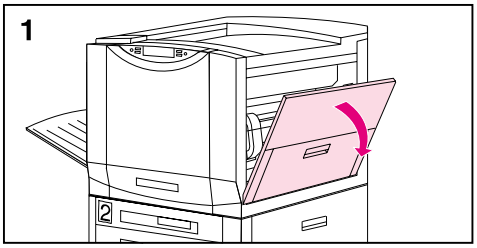
After a new toner cartridge is installed, the user must reset the HP TonerGauge from the control panel. When the top cover is closed after the printer has detected a toner low condition, the `NEW TONER CARTRIDGE=NO` message is displayed on the control panel for approximately 30 seconds. To reset the HP TonerGauge:

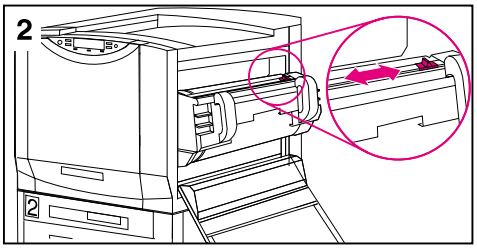
Note If the `NEW TONER CARTRIDGE=NO` message is no longer displayed on the control panel and you have replaced one or more of the toner cartridges, then press MENU repeatedly until `CONFIGURATION MENU` appears. When you replace an empty or low toner cartridge, press ITEM repeatedly until `NEW TONER CARTRIDGE=NO` appears.

1. Press - VALUE + until `YES` appears.
2. Press SELECT to save the selection.
3. `NEW TONER=BLACK` will appear. Press - VALUE + until the correct color appears.
4. Press SELECT to save the selection.
5. Repeat steps 2 through 4 if other cartridges have been replaced.
6. Press GO to exit the menu.

4 Printer maintenance

Chapter contents



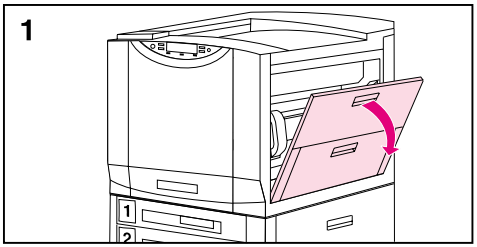


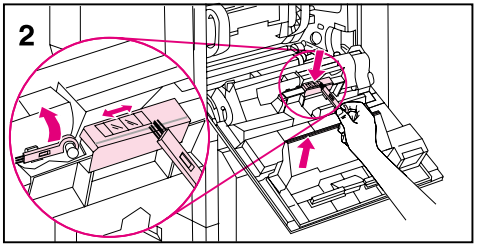
Cleaning the post charger

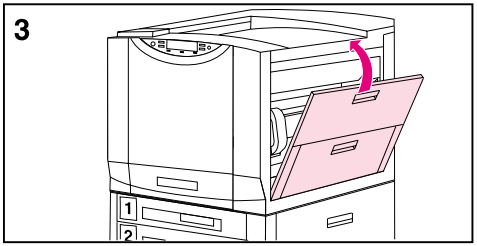
Clean the post charger on the transfer drum if there are light streaks in halftone areas.

To clean the post charger

1. Open the right upper door.
2. Locate the post charger unit cleaner next to the transfer drum handle.
3. Slide the post charger unit cleaner across the bar several times.
4. Push the cleaner back into place.
5. Close the right upper door.







Cleaning the density sensor

Clean the density sensor after replacing the imaging drum and when printed colors are inaccurate.

To clean the density sensor and erase lamp

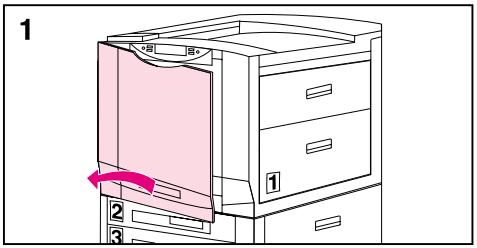
1 Open the right upper door.

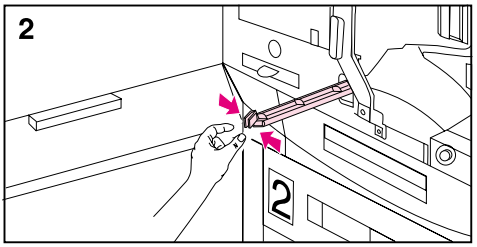
2 On the inside of the door, locate the density sensor and the density sensor brush. Use the brush to brush off toner particles from the density sensor and the erase lamp.

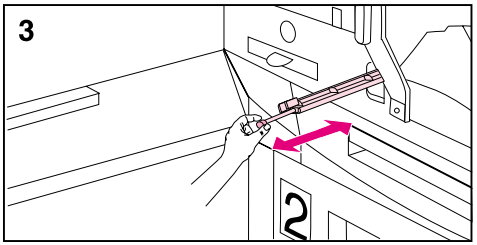
Note
You can also use a hand wipe to clean the density sensor. To prevent scratches on the sensor, do not use any paper products, such as tissue or paper towels, to clean the sensor.

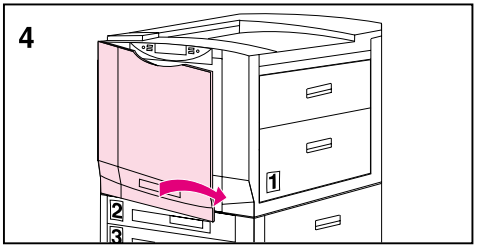
3 Replace the brush.

4 Close the right upper door.









Cleaning the transfer charger

Clean the transfer charger when irregular wavy patterns appear in solid backgrounds.

To clean the transfer charger

1. Open the front door.
2. Find the knob below the transfer charger.
3. Pull the knob out and push it back in.
4. Close the front door.

Cleaning the toner catch tray

The toner catch tray will not normally have much toner in it. Clean the toner catch tray before moving the printer to another location or when performing routine maintenance at the customer site.

1 Open the front door.

2 Remove the toner catch tray cover by releasing the tab on the right side of the cover with a small screwdriver.

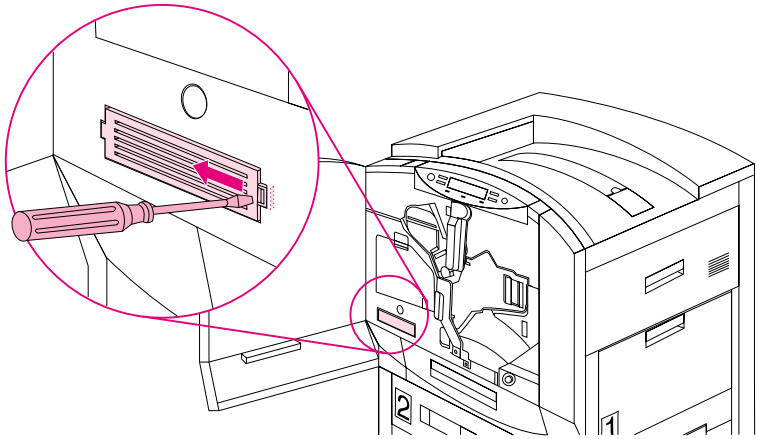


Figure 17. **Removing the toner catch tray cover**

3 Remove the toner catch tray.

4 Vacuum toner out of the tray, or use a hand wipe to clean the tray if there is a small amount of toner in the tray.

WARNING! Do not use a regular vacuum to clean up toner. The toner can penetrate the vacuum bag, and toner might be harmful if inhaled.

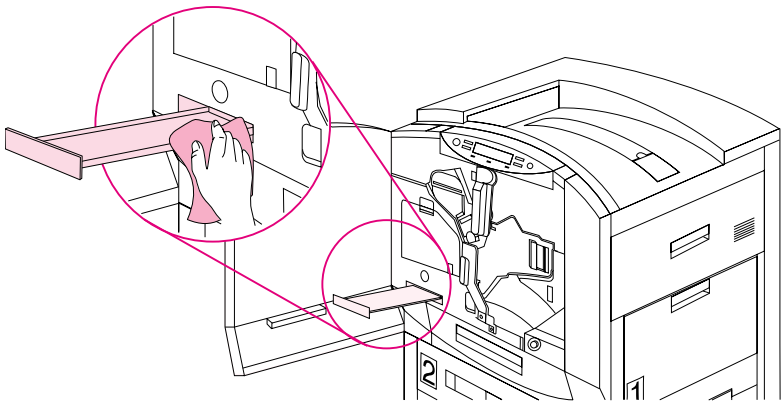


Figure 18. Cleaning the toner catch tray

5 Reinstall the toner catch tray and cover, and close the front door.

Printer consumables

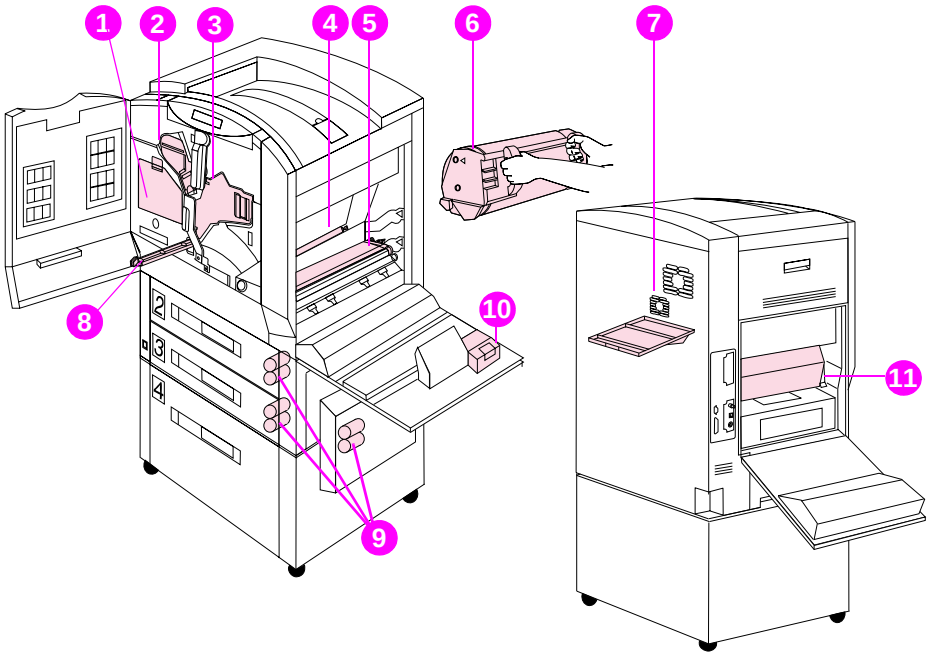


Figure 19. **Location of consumables in printer**

1	Color toner cartridges	**7**	Air filters
2	Black toner cartridge	**8**	Transfer charger
3	Imaging drum	**9**	Pick-up/feed rollers
4	Cleaning roller	**10**	Charcoal filter
5	Transfer belt	**11**	Fuser
6	Transfer drum		

HP encourages responsible disposal of HP printer consumables through its printing supplies recycling program. All consumables listed above can be disposed of through the printing supplies recycling program.

Replacement frequencies

Table 27 lists the approximate schedule for replacing consumables and the printer messages that appear when each consumable should be replaced (see page 513 for part numbers). For best print quality output, use HP consumables that have been designed to work together in this printer.

For an explanation of printer control panel messages, see page 368.

Table 27. Replacement frequencies for printer consumables

Consumable	Printer message	Page count	Approximate time period[1]
Black toner cartridge	TONER LOW REPLACE BLACK	17,000 pages[2]	2.5 months
Color toner cartridges Cyan Magenta Yellow	TONER LOW REPLACE [color]	8,500 pages[2]	1.1 to 1.6 months
Drum kit Imaging drum Air filters (2) Hand wipe	DRUM LIFE LOW REPLACE DRUM KIT	50,000 black-and-white only pages, or 12,500 color pages[3]	8.3 months for black-and-white only pages, or 2.1 months for color pages
Transfer kit Transfer drum Transfer belt Transfer charger Cleaning roller Charcoal filter Hand wipe	TRANSFER KIT LOW REPLACE KIT	150,000 black-and-white only pages, or 75,000 color pages	25 months for black-and-white only pages, or 12.5 months for color pages
Fuser kit (110 Volt) Fuser Paper rollers (6) Hand wipe	FUSER LIFE LOW REPLACE KIT	100,000 pages black-and-white only pages, or 50,000 color pages	16.7 months for black-and-white only pages, or 8.3 months for color pages
Fuser kit (220 Volt) Fuser Paper rollers (6) Hand wipe	FUSER LIFE LOW REPLACE KIT	100,000 pages black-and-white only pages, or 50,000 color pages	16.7 months for black-and-white only pages, or 8.3 months for color pages

[1] Approximate life based on printing 6,000 pages per month.

[2] Approximate average letter-size page count based on 5% coverage of individual toner colors. This value can be used to estimate other levels of coverage from 2% to 35%. For example, 5,000 pages at 5% coverage is approximately 2,500 pages at 10% coverage. Estimates made in this manner are only approximate, and usage conditions and print patterns can cause the results to vary.

[3] Drum life is stated in terms of letter/A4-size images. The number of images printed for each sheet of media varies, depending on the mix of color, duplexing, and large-format printing. An image is a layer of toner. A letter-size, color (CMYK) sheet printed on one side contains four letter/A4 images. A duplexed sheet (printed on both sides) counts as two images. In color duplex mode, there are eight letter-size images per letter/A4 sheet. An 11-by-17/A3 sheet contains twice as many letter-size images as a letter-size sheet.

Replacing consumables

Toner cartridges

For information about replacing the black and color toner cartridges, see page 100 and page 101.

Transfer kit

Replace the parts in the transfer kit when the printer control panel displays:

TRANSFER KIT LOW / REPLACE KIT
TRANSFER KIT OUT / REPLACE KIT

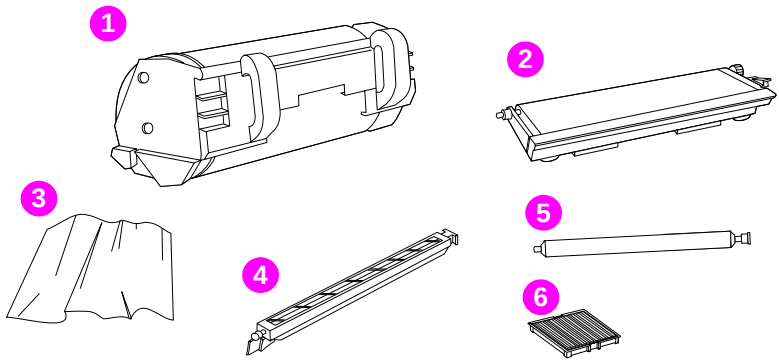


Figure 20. **Contents of transfer kit**

1 Transfer drum

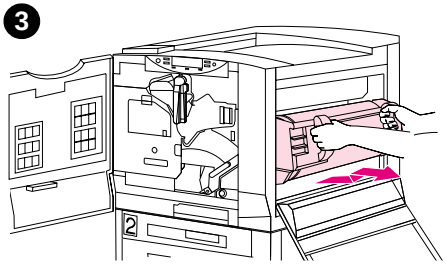
2 Transfer belt

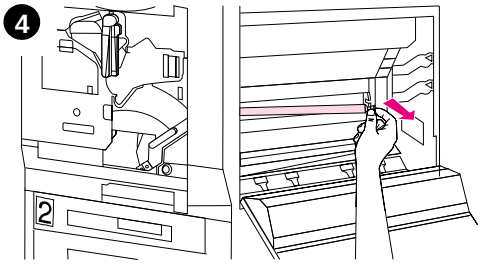
3 Hand wipe

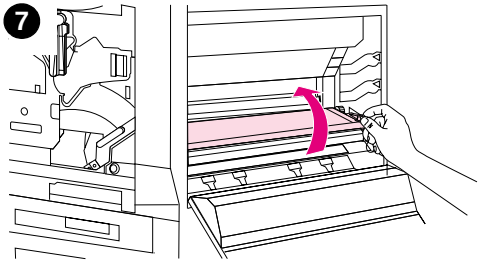
4 Transfer charger

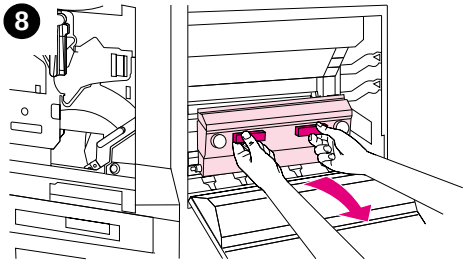
5 Cleaning roller

6 Charcoal filter









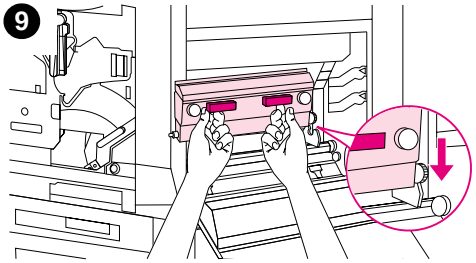
To replace the transfer kit

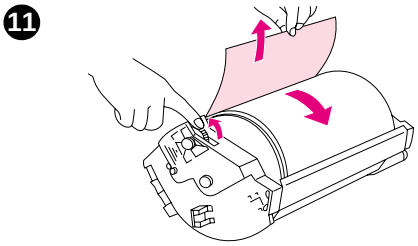
1. Open the front door of the printer.
2. Push the white button on the lower (green) lever and swing the lever to the right.
3. Open the upper door on the right side of the printer, and remove the transfer drum.
4. On the right, back wall of the opening, firmly pull the blue knob to release the right end of the cleaning roller. Lift the roller slowly out and to the right to release the left end.

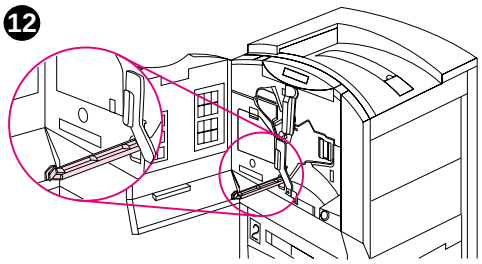
CAUTION
Do not touch the roller; hold the roller only by the blue knob and left end to avoid print quality problems.

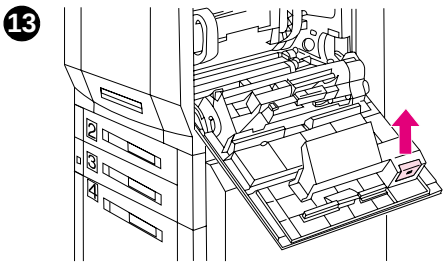
5. While holding the new roller by the blue knob, insert the left end into the hole in the left side of the back wall.
6. Push the right end into its bracket until it snaps into place.
7. Rotate the transfer belt up using the blue lever on the bottom, right side of the printer opening.
8. Using the blue handles, lift the belt up and out of the printer.

Note
Do not touch the surface of the transfer belt or poor print quality might result.









9 Replace the belt by resting the ends of the new belt in the notches inside the printer. Place the gear side in the notch first to mesh the gear teeth.

10 Rotate the belt down into place.

Note

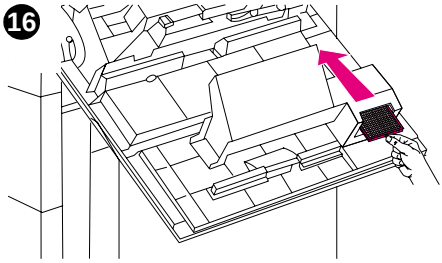
Damage to the drum can cause print quality problems. Hold the drum only by the handles.

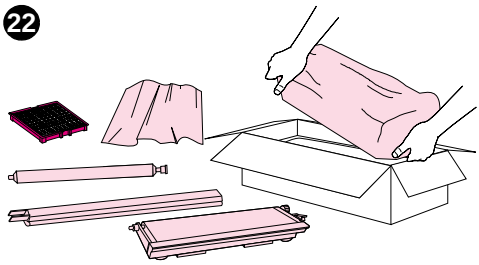
11 Remove the protective sheet covering the new transfer drum by pulling the tab. Discard the sheet. Reinstall the transfer drum.

12 Remove the transfer charger. Remove the new transfer charger from its packaging and while holding the new transfer charger by its blue clip, slide the new transfer charger into the printer until the transfer charger clicks into place.

13 On the inside of the door, locate the blue filter cover and slide it in the direction of the arrow.

14 Pull the old filter out of the opening.





15 Hold the new filter by the small handles, and remove the new filter from its packaging.

16 Slide the filter in under the guides in the opening and close the blue filter door, making sure it clicks into place.

17 Close the upper right door. If the door does not close, the drum might not be all the way in the printer.

18 In the front of the printer, swing the lower (green) lever to the left, making sure it clicks into place.

19 Close the front door and turn the printer on. The printer control panel should display the message PRESS SELECT IF TRANSFER IS NEW. If it displays the message, go to step 20. If it does not, go to step 21.

20 When the printer control panel displays the message, press SELECT to bring the printer online and reset the transfer drum life count. Then go to step 22.

21 If the printer control panel does not display the message:

a. Press MENU until RESETS MENU appears on the printer control panel display.

b. Press ITEM until RESET TRANSFER LIFE COUNT appears.

c. Press SELECT to reset the transfer drum life count.

d. Press GO to bring the printer online.

22 Place the used parts in the packaging from the new ones. See the included recycling guide for recycling information.

Drum kit

Replace the parts in the imaging drum kit when the printer control panel displays any of the following messages:

DRUM LIFE LOW / REPLACE DRUM KIT
DRUM LIFE OUT / REPLACE DRUM KIT
DRUM ERROR / REPLACE DRUM KIT

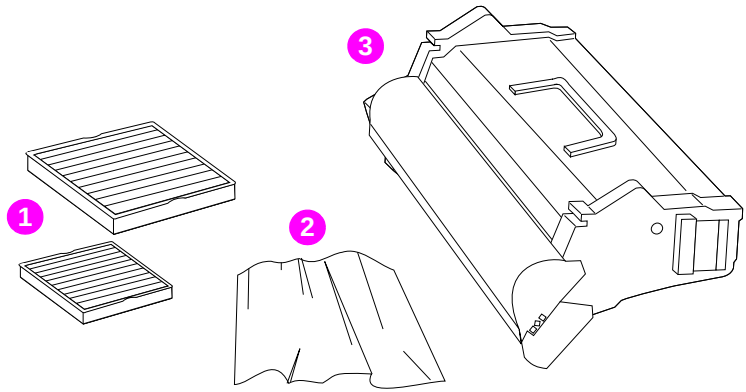


Figure 21. **Contents of drum kit**

1 Two air filters

2 Hand wipe

3 Imaging drum cartridge

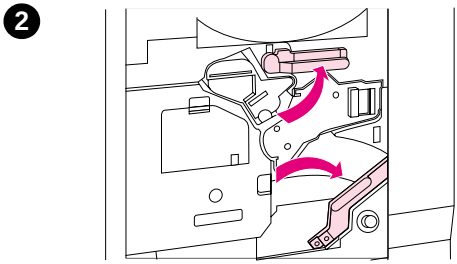
Imaging drum life—"drum life low" and "drum life

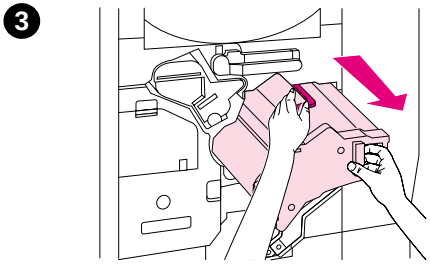
out”

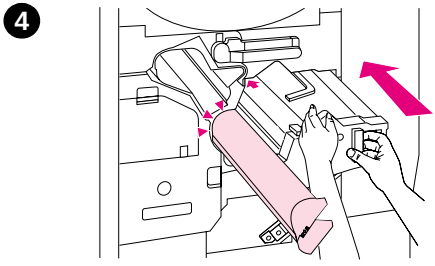
“Drum life low” warns the user that the imaging drum has only about 20% of its life remaining. This should allow the user time to order a replacement imaging drum kit before “drum life out.” The user can continue to operate the HP Color LaserJet 8500/8550 printer until “drum life out” occurs, at which point the printer will not operate.

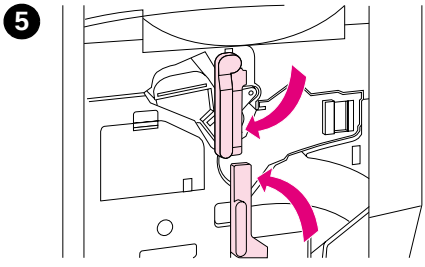
The user should be advised that:

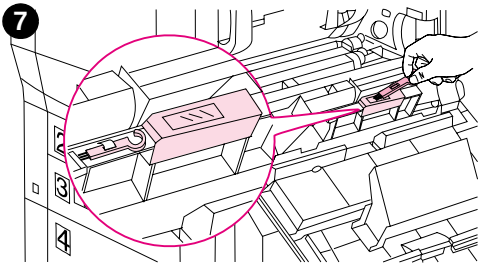
- Drum life specification assumes two-page jobs, one-sided printing on letter- and A4-sized pages. When printing in color, the number of pages will be one-fourth of the images printed.
- Color printing uses four images per page even if only one color is actually used.
- The imaging drum is a relatively small contributor to the overall printing cost.











To replace the imaging drum and air filters

1 Open the front door.

2 Swing the upper (blue) lever to the right. Then, press the white button on the lower (green) lever and swing it to the right.

3 Pull the drum partway out. Grasp the blue handle on the top of the drum and remove the imaging drum.

CAUTION
A gray cover protects the new imaging drum. Do not remove this cover; it will come off during the next step.

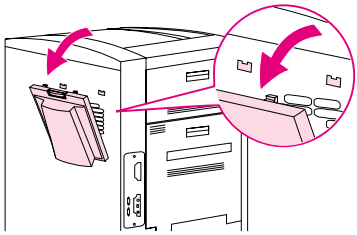
4 Line up the guides and push firmly to slide the new drum into the printer. The cover will slide off as the drum enters the printer.

5 Swing the upper (blue) lever to the left. Then swing the lower (green) lever to the left, making sure it clicks into place.

6 Close the front door and open the upper door on the right side of the printer.

7 On the inside of the door, locate the density sensor and the density sensor brush. Use the brush to brush toner particles from the density sensor. Then replace the brush, and close the upper right door.

8



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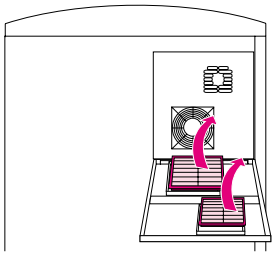

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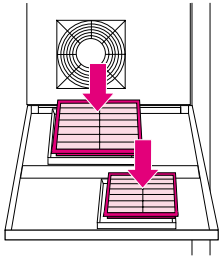

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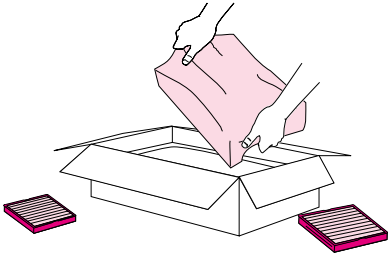


8 On the back of the printer, release the two latches on the filter door and lower the door.

9 Remove both filters from the door.

10 Insert the new filters into their respective locations.

11 Close the filter door. If the filter door does not close, make sure the filters are in place. Use the hand wipe to remove toner from your hands.

12 Place the used parts in the packaging from the new ones. See the included recycling guide for recycling information.

Fuser kit

Replace the parts in the fuser kit when the printer control panel displays:

FUSER LIFE LOW / REPLACE KIT
FUSER LIFE OUT / REPLACE KIT

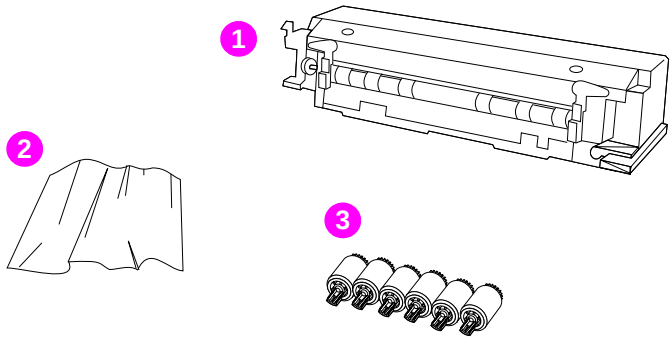


Figure 22. **Contents of fuser kit**

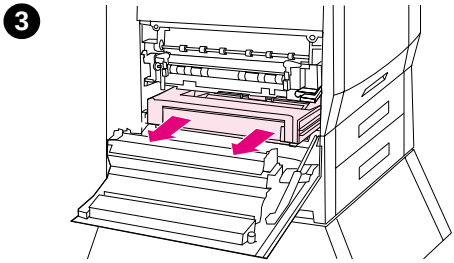
1 Fuser

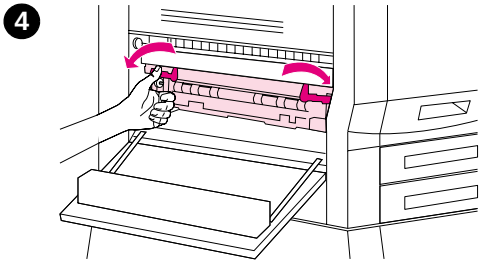
2 Hand wipe

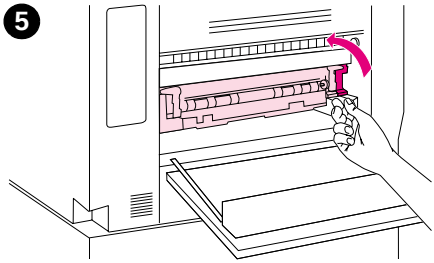
3 Six paper rollers

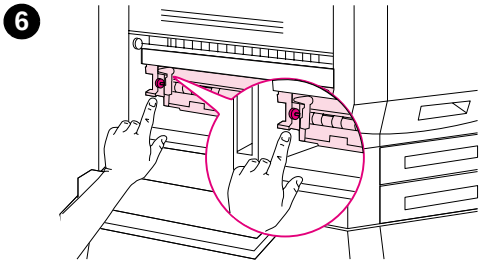
Note The paper rollers are all the same; any of the rollers can be used in any of the replacement locations.

If you do not have an optional 2,000-sheet input unit, you will need only four of the rollers.





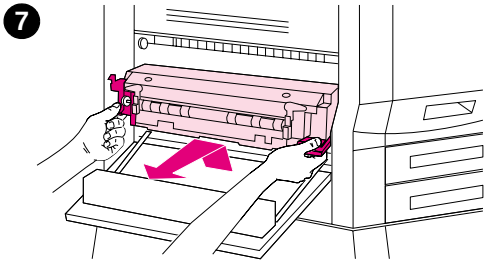


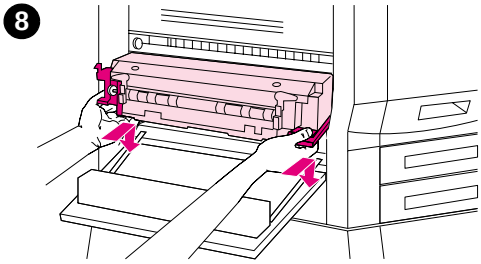


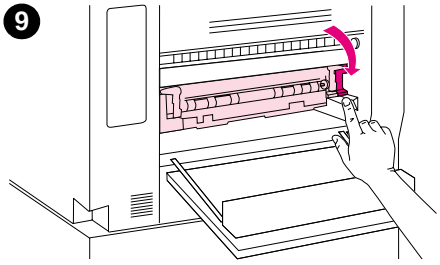
To replace the fuser

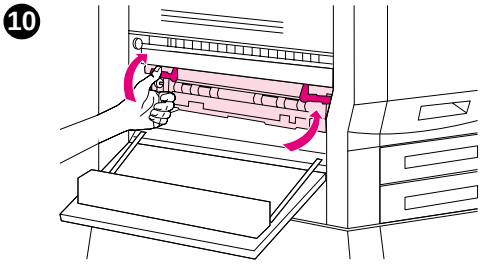
WARNING!
The fuser is very hot and can cause burns. Turn the printer off and allow the printer to cool for at least 30 minutes before beginning this procedure.

1. If an optional multi-bin mailbox is attached to the printer, pull the mailbox away from the printer.
2. Open the lower door on the left side of the printer.
3. If the printer contains an optional duplexer, press the green tab on the right side of the duplexer and pull the duplexer out of the printer.
4. To unlock the fuser, rotate the blue levers down.
5. On the right side of the fuser, lift the large green lever to release the fuser springs.
6. On the left side of the fuser, rotate the blue gear down two or three times to release the fuser.









7 Firmly pull the fuser up by the blue tabs on both ends, and then pull the fuser out.

8 Use the blue tabs on the new fuser to slide it into the printer along the guides. On the left side of the fuser, rotate the blue gear up two or three times until the fuser drops into place.

CAUTION
Use only the blue tabs to push the fuser into the printer.

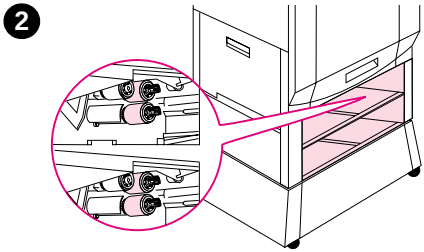
9 On the right side of the fuser, push the green lever down.

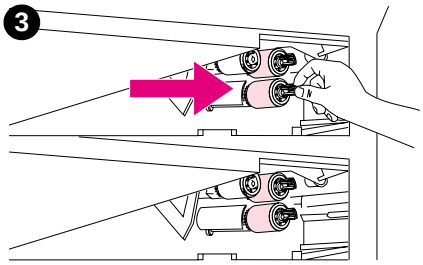
10 Rotate the blue levers up until they snap into place.

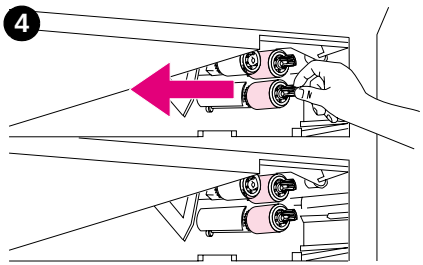
11 If an optional duplexer was removed from the printer, slide the duplexer back into the printer until it clicks into place.

12 Close the lower left door.

13 If an optional multi-bin mailbox is attached to the printer, push the mailbox back toward the printer.







To replace the rollers

1 Remove trays 2 and 3.

2 On the inside right of each opening, locate the two paper rollers that are blue on the ends.

Note
The separation rollers that are not blue on the end will not be replaced.

3 On the end of each roller, pinch together the release lever and handle between two fingers and slide the roller off of its spindle. Set the rollers aside.

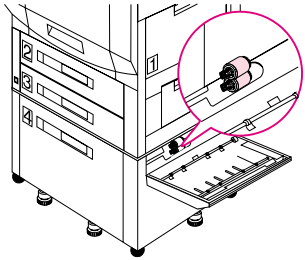
4 While holding the new roller by its handle, slide the roller onto the spindle until it clicks into place. Repeat this procedure for the other three rollers.

5 Replace trays 3 and 2.

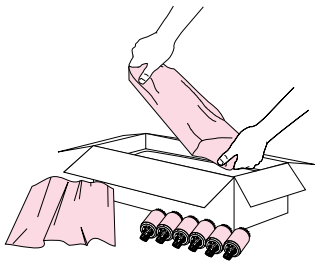
Note
Trays 2 and 3 are not interchangeable.

6 If an optional 2,000-sheet input unit is not attached to the printer, proceed to step 9. If a 2,000-sheet input unit is attached, open the vertical transfer door on the right side of the printer.

7



12



7 Locate the two rollers. Remove the rollers (upper roller first) and replace them (lower roller first).

Note
Press down on the lower roller while replacing the upper one.

8 Close the vertical transfer door and turn the printer on.

9 The printer control panel should display the message PRESS SELECT IF FUSER IS NEW. If it displays the message, go to step 10. If it does not, go to step 11.

10 When the printer control panel displays the message, press SELECT to bring the printer online and reset the fuser life count. Then go to step 12.

11 If the printer control panel does not display the message:

a. Press MENU until RESETS MENU appears on the printer control panel display.

b. Press ITEM until RESET FUSER LIFE COUNT appears.

c. Press SELECT to reset the fuser life count.

d. Press GO to bring the printer online.

12 Place the used parts in the packaging from the new ones. See the included recycling guide for recycling information

5 Theory of operation

Chapter contents

Introduction

This chapter presents the theory of operation and the functional overview for the printer. It provides the service representative with an understanding of the printing process required to service the printer. This chapter discusses the following:

- Color theory
- Image formation
- Paper path
- Mechanical drive system
- Control board system
- Formatter system
- Power distribution system
- 2,000-sheet input unit
- Multi-bin mailbox
- 3,000-sheet stapler/stacker
- 3,000-sheet stacker

Figure 23 shows a cross-sectional view of the internal components of the printer.

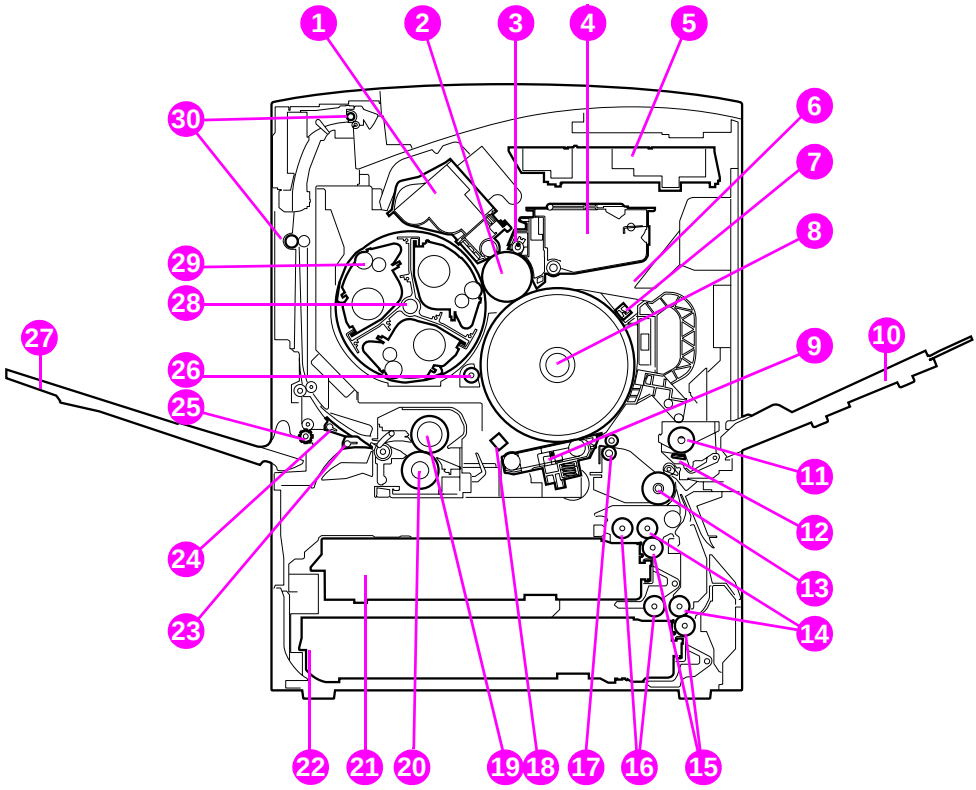


Figure 23. **Cross-section view of internal components**

1 Black toner cartridge

2 Imaging drum

3 Charging roller

4 Imaging drum cartridge

5 Laser/scanner

6 Preconditioning exposure LED

7 Post charging unit

8 Transfer drum

9 Transfer belt

10 Tray 1

11 Tray 1 pick-up roller

12 Separation pad

13 Feed roller 1

14 Feed roller 2

15 Separation rollers

16 Pick-up rollers

17 Registration roller

18 Transfer charger

19 Upper fusing roller

20 Lower fusing roller

21 Tray 2

22 Tray 3

23 Duplexer deflector

24 Left (face-up) output bin deflector

25 Left (face-up) output bin delivery roller

26 Cleaning roller

27 Left (face-up) output bin

28 Color toner carousel

29 Color toner cartridges

30 Delivery roller(s)

Color theory

There are two methods used to create color. The subtractive process (which is used in this printer) and the additive process (which is used in monitors and television).

Subtractive color theory

The subtractive color theory deals with mixing color pigments (such as those found in toner, ink, and paint) to produce any color. The subtractive primary colors are cyan, yellow, and magenta. Primary colors will produce any color in the spectrum when combined in certain proportions. The subtractive process begins with an external white light reflected from a white surface (for instance, paper). The color components of the light are reflected or absorbed by the paper and toner.

Subtractive color absorption

Table 28 describes how colors are mixed to produce subtractive colors.

Table 28. Subtractive color absorption

Pigment color	Color of absorbed light	Colors of reflected light	Perceived color
Magenta	Green	Blue Red	Magenta
Yellow	Blue	Red Green	Yellow
Cyan	Red	Green Blue	Cyan
None	None	Red Green Blue	White

Subtractive color mixing

Table 29 describes how mixing equal amounts of subtractive colors produces other colors.

Table 29. Subtractive color mixing

Mix equal amounts of...	To produce...
Cyan + Yellow + Magenta	Black
Cyan + Yellow	Green
Yellow + Magenta	Red
Magenta + Cyan	Blue

Half-toning

Half-toning (also called dithering) is a method used to distribute color pigment to create a full spectrum of color. Because this printer places dots of toner on a page to create an image rather than physically mixing the color (like paint), the dots are distributed in selected patterns. Although they are not physically combined on the page, the eye integrates the dots and the viewer perceives them as a solid color.

Process colors

The printer does not use half-toning for every application. Any of the four basic colors (cyan, magenta, yellow, or black) can be printed as a solid color. Since red, green, and blue are formed by combining two base colors, they are called process colors. See page 146 for an explanation of how the process colors are created on the transfer drum.

Additive color theory

The additive color theory deals with colors that are produced when light sources are mixed. The primary additive colors are red, blue, and green. Adding various levels of these colors, which are generated by a light source (such as a color monitor), produces all other colors. Mixing equal amounts of the additive primary colors produces the colors indicated in table 30.

Table 30. Additive color mixing

Mix equal amounts of...	To produce...
Red + Green + Blue	White
Red + Blue	Magenta
Green + Blue	Cyan
Red + Green	Yellow

Image formation

Figure 24 and figure 25 give an overview of the image formation process.

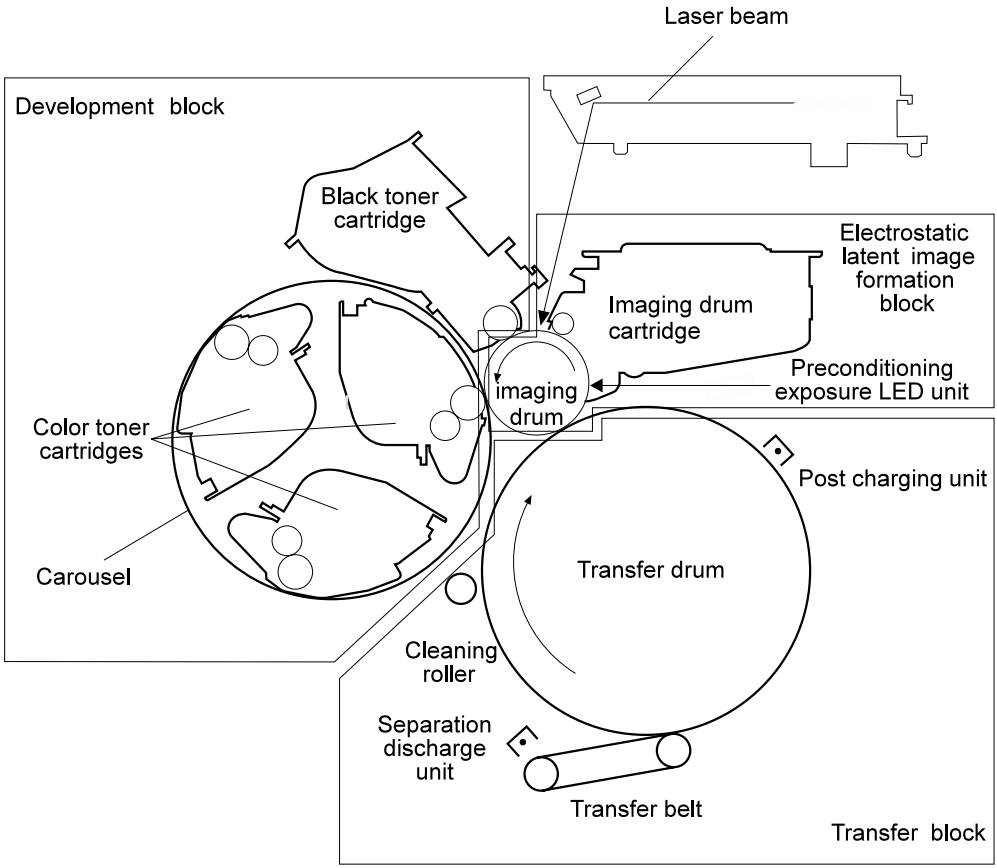


Figure 24. **Image formation**

Figure 25 shows the simultaneous processes of image formation and paper pick-up that occur during the electrostatic latent image formation block.

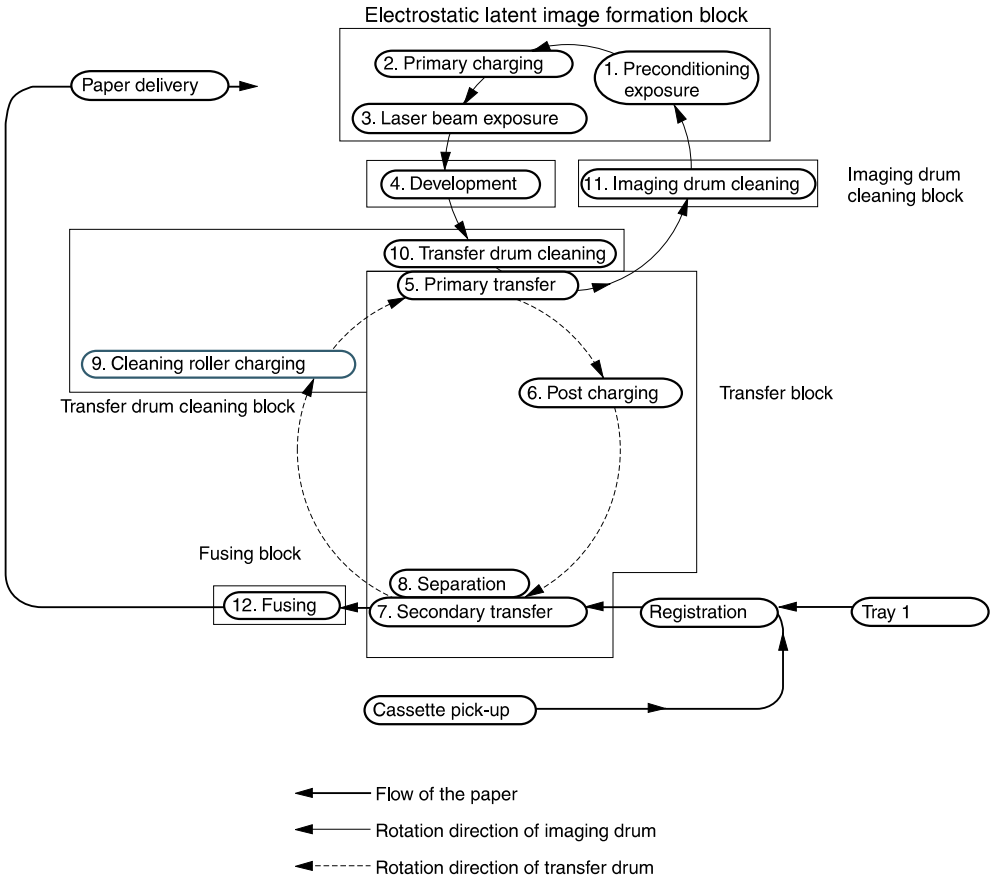


Figure 25. **Electrostatic latent image formation block**

Note In the following sections, the text is numbered to match each of the numbered steps in the process flowchart above.

Electrostatic latent image formation block

One of the differences between color and black-and-white laser imaging is that the color image is created with multiple layers. This printer contains four toner cartridges (cyan, magenta, yellow, and black).

The electrostatic latent image formation block consists of three steps for forming the image on the imaging drum. At the end of the last step, the negative charge on the unexposed area remains while the negative charge on the exposed area is decreased. This potential image on the drum is invisible to the human eye and is called electrostatic latent image.

1. Preconditioning exposure

To prepare for primary charging, the preconditioning exposure light-emitting diode (LED) unit removes the residual charge on the imaging drum surface. This helps prevent uneven surface charge on the imaging drum.

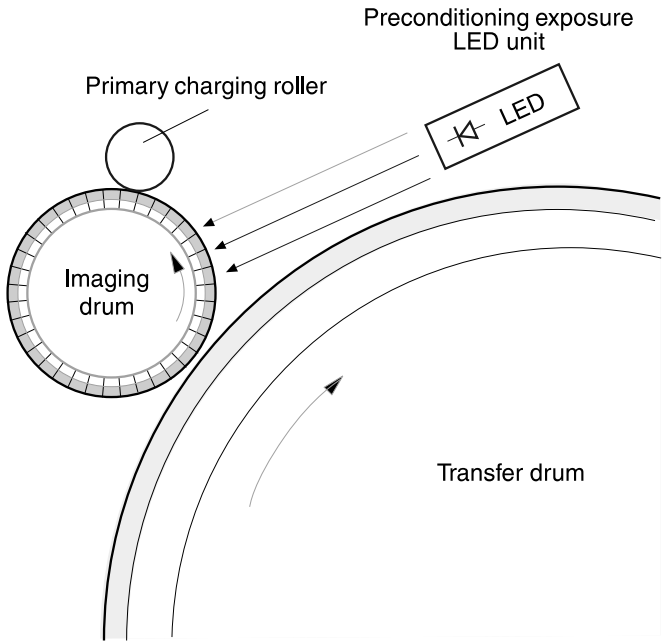


Figure 26. **Preconditioning exposure**

2. Primary charging

In preparation for the latent image formation, the imaging drum surface is charged so that it has a uniform negative potential. AC and DC bias are applied to the primary charging roller to create uniform negative potential charge on the drum surface.

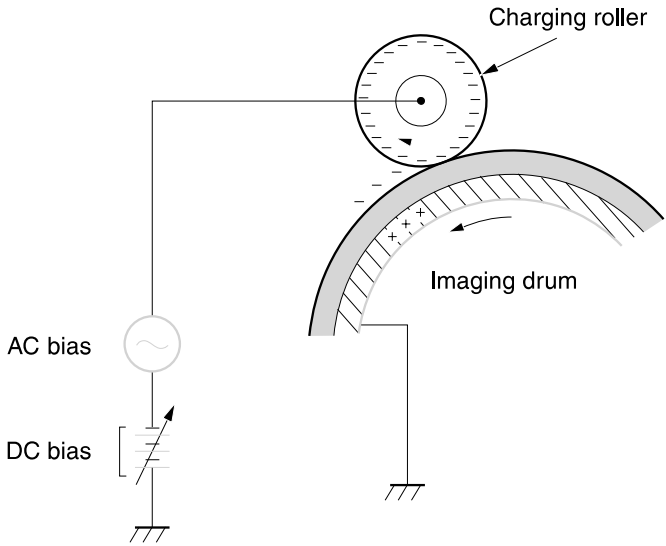


Figure 27. **Primary charging of imaging drum**

3. Laser beam exposure

When the laser beam scans the imaging drum surface, the charge on the exposed area is decreased. This area then forms the electrostatic latent image.

Developing block

The black toner used in the printer is magnetic single-component toner composed of magnetite and resin. The color toner is non-magnetic single-component toner composed of resin. The toners are given a negative charge when they rub against the developing cylinder and the blade.

4. Development

The developing cylinder is biased to create a potential difference with the imaging drum. This bias consists of AC and DC components. The AC component breaks the toner free from the developing cylinder, creating a toner cloud. The DC component drives the toner particles to the imaged region on the imaging drum.

The three color cartridges are brought into contact with the imaging drum when the carousel rotates. The black toner cartridge is set separately, and is always in contact with the imaging drum. When the area on the imaging drum exposed by the laser beam nears the developing cylinder, the charged toner particles move from the developer to the image surface because of the potential differences between the developing cylinder and the exposed imaging drum.

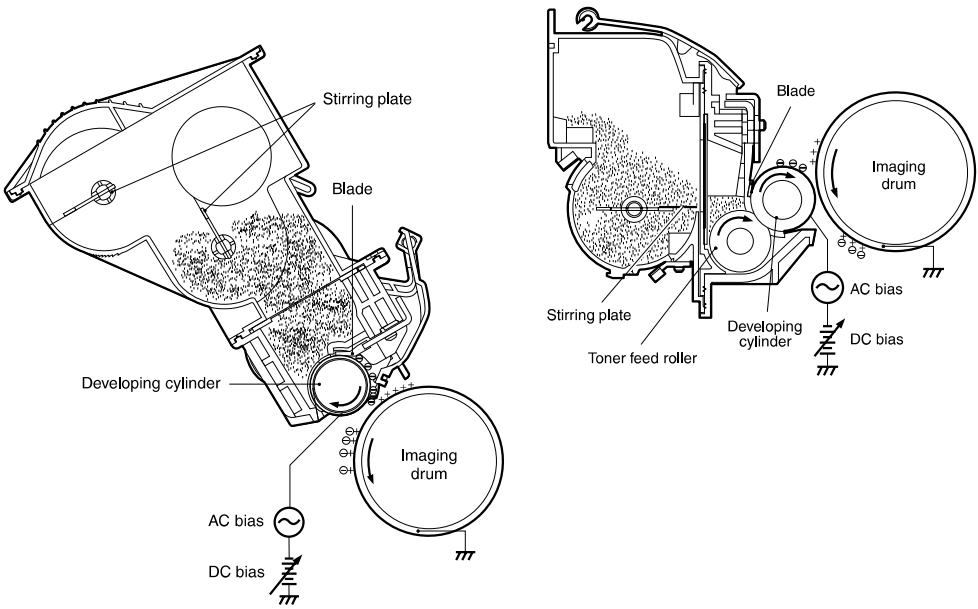


Figure 28. **Black toner cartridge (left) and color toner cartridge (right) development**

Transfer block

The image is built up on the transfer drum in layers of toner. The toner is then transferred to the paper. The transfer block includes the transfer of the toner from the imaging drum to the transfer drum, then from the transfer drum to the paper.

5. Primary transfer

A positive DC bias is applied to the transfer drum during printing to transfer the toner that is on the imaging drum to the transfer drum. This process occurs in sequence for the four colors (yellow, magenta, cyan, black).

For full-color printing, as the transfer steps proceed for the four colors, the amount of toner with negative charge increases on the transfer drum. As a result, the DC bias must increase to transfer the toner on top of the toner that is already on the transfer drum.

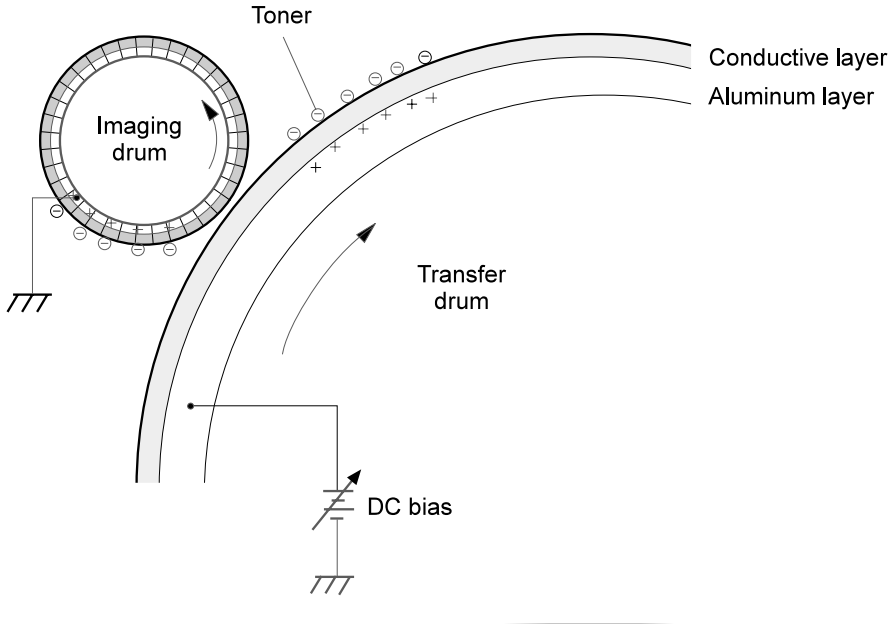


Figure 29. **Primary transfer**

6. Post charging

AC and DC bias are applied to the post charging unit to add the appropriate bias to the toner that is on the transfer drum and to increase the efficiency of the secondary transfer.

The post charging unit is turned on during the yellow toner primary transfer as well as after the entire image is formed. During the yellow toner transfer, the negative charge is decreased. A negative bias is applied for the black toner transfer to increase the efficiency of the secondary transfer (the transfer of the toner from the transfer drum to the paper).

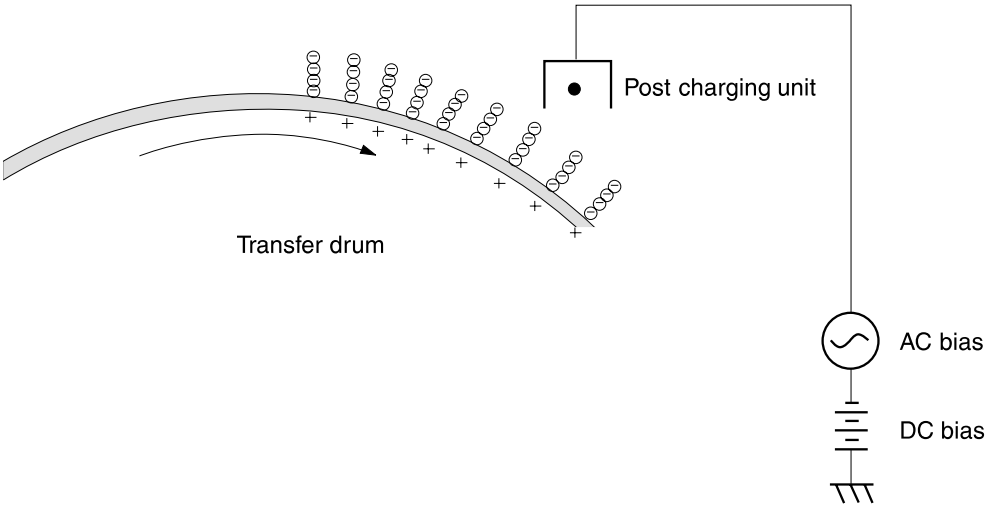


Figure 30. Post charging

7. Secondary transfer

The paper is pressed against the transfer drum when the transfer belt press clutch (CL4) pushes the transfer belt up to the transfer drum. Positive DC bias is applied to the transfer belt to transfer the toner that is on the transfer drum surface to the paper. The positive DC bias value changes according to the paper type (such as plain, heavy, or overhead transparency) and environmental conditions. Because the transfer belt is highly resistive, the potential bias is reversed between pages to eliminate excessive charge build up on the transfer belt.

After a jam, negative DC bias is applied to the transfer belt to transfer any residual toner from the transfer belt. The residual toner moves back to the transfer drum, and is then collected in the waste toner case in the imaging drum.

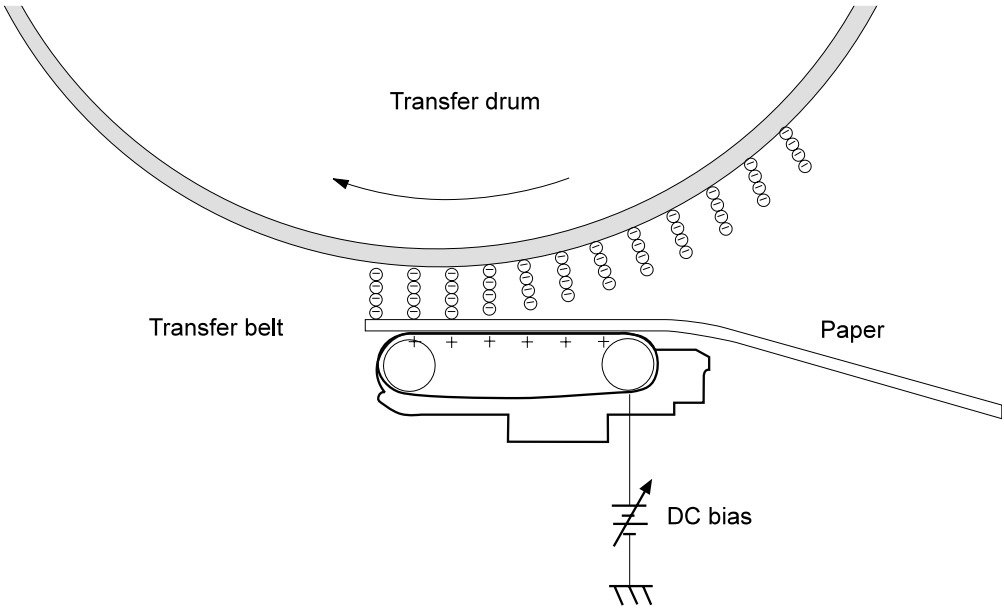


Figure 31. **Secondary transfer**

8. Separation

The paper is separated from the transfer drum because of the paper's elasticity. When duplex printing or overhead transparency (OHT) printing is performed, an AC bias is applied to the transfer charger. In high temperature/high humidity conditions, the AC bias is not applied since excessive charge does not build up in high humidity conditions. The AC bias is applied to the transfer charger to prevent discharge between the paper and the transfer belt, which can disrupt the image.

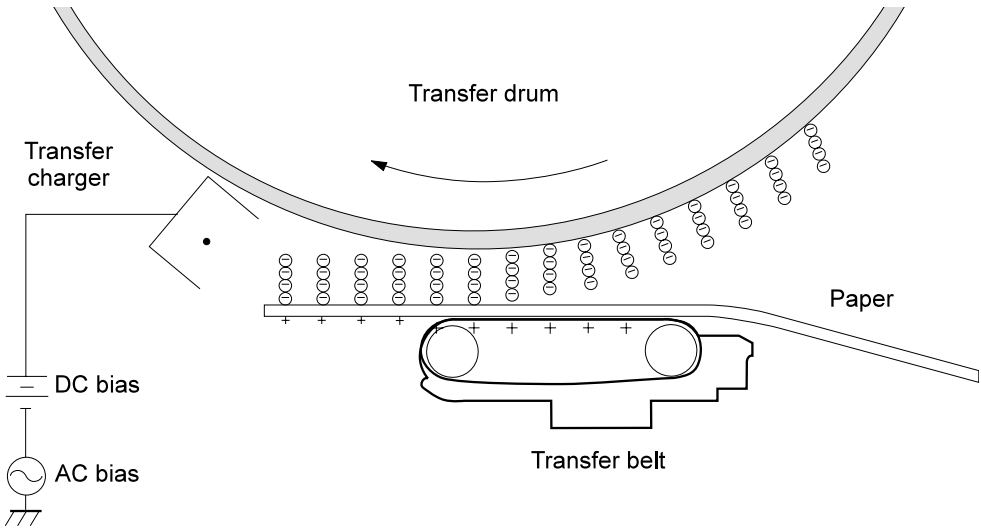


Figure 32. Separation

Transfer drum cleaning block

This block follows two steps to clean the transfer drum. Even though most of the toner is transferred to the paper during secondary transfer, some toner particles remain on the transfer drum surface. This residual toner on the transfer drum is returned to the imaging drum, where it will be moved to the waste toner case.

9. Cleaning roller charging

Bias is applied to the cleaning roller so that the residual toner on the transfer drum surface is charged positive. The cleaning roller is usually separated from the transfer drum. However, the cleaning roller can be brought into contact with the transfer drum by the cleaning roller press cam which is activated by the cleaning roller press solenoid (SL1). When contact is made, positive bias is applied to the cleaning roller to charge the toner on the transfer drum surface positive.

After the charging is complete, the bias is turned off and the cleaning roller press cam separates the cleaning roller from the transfer drum. After printing is complete, negative bias is applied to the cleaning roller to remove the residual toner.

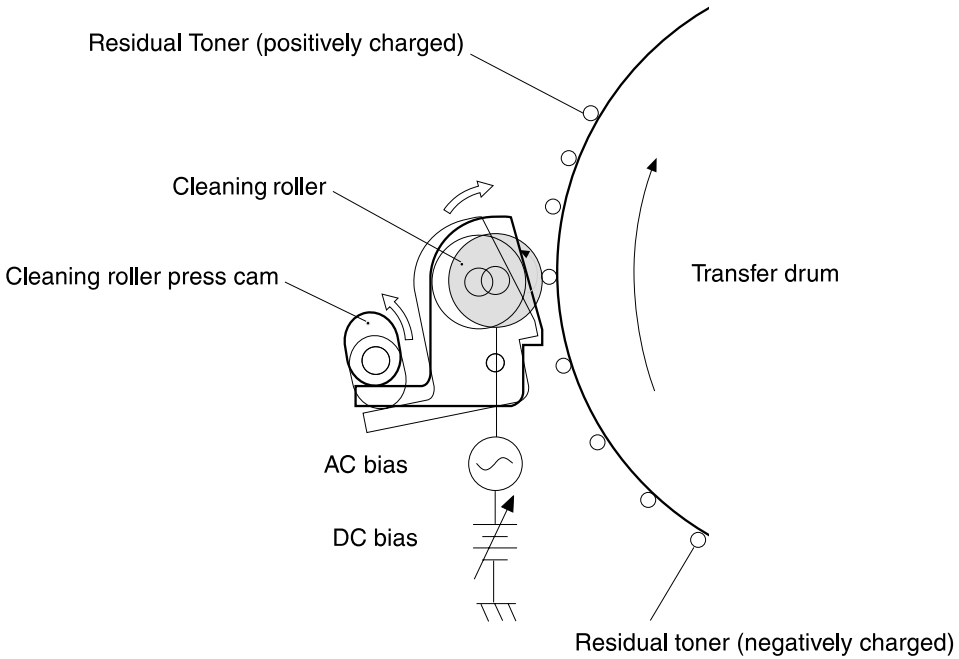


Figure 33. Cleaning roller charging

10. Transfer drum cleaning

The bias on the imaging drum is negative, and the bias on the transfer drum is positive. Because the charge on the residual toner is made positive by the transfer drum cleaning roller, the toner moves from the transfer drum to the imaging drum, where it will be removed during imaging drum cleaning.

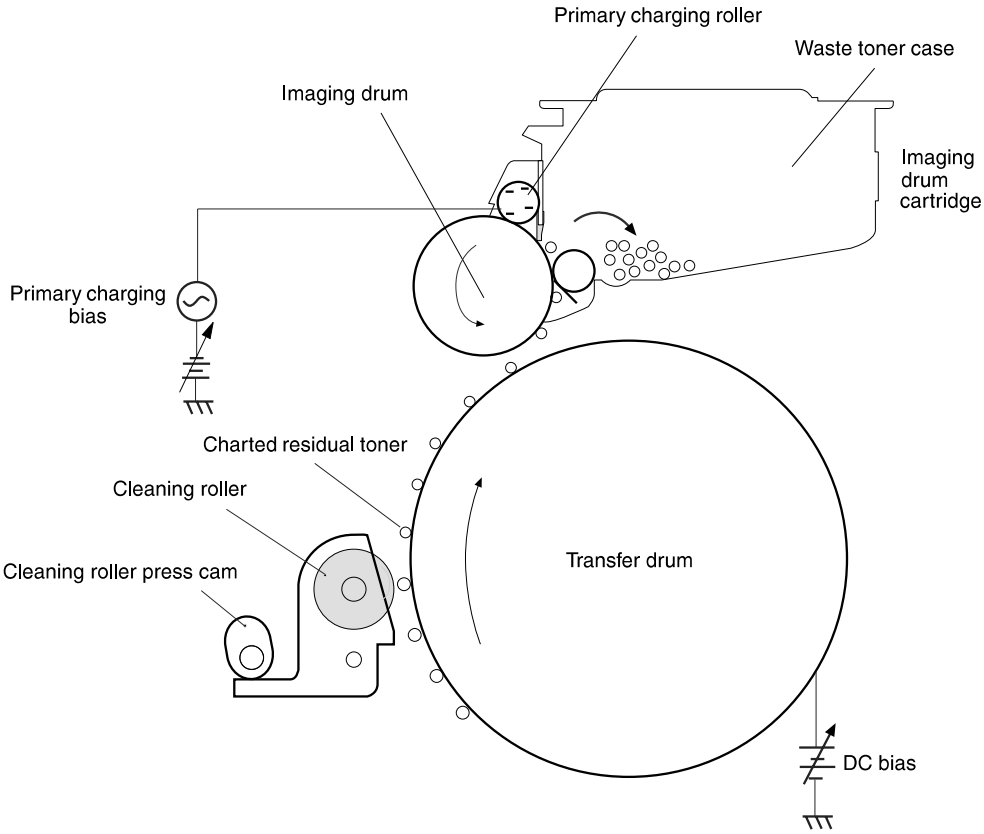


Figure 34. Transfer drum cleaning

Imaging drum cleaning block

In the primary transfer, not all of the toner on the imaging drum is transferred to the transfer drum, leaving some toner on the imaging drum surface. Also, additional toner is placed on the imaging drum surface when the transfer drum is cleaned.

11. Imaging drum cleaning

To prepare for the next printing operation, the cleaner blade scrapes the residual toner off the imaging drum surface. The scraped toner particles are trapped with the sweeper strip and collected into the waste toner case.

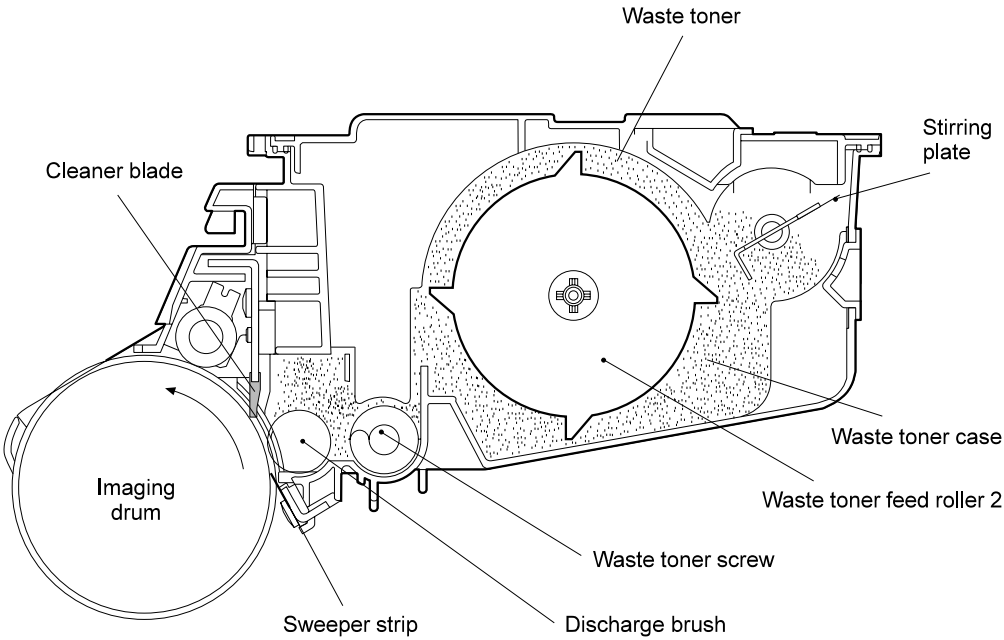


Figure 35. Imaging drum cleaning block

Fusing block

The toner image placed on the paper during transfer adheres to the paper by static electricity, and a light touch will smear the image. During fusing, the four toner colors are melted on the paper to create a permanent image.

12. Fusing

The surfaces of the upper and lower fusing rollers are coated with silicone, which has excellent offset prevention performance. The upper fusing roller is charged with a negative DC bias to repel the toner and help prevent the toner on the paper from adhering to the roller.

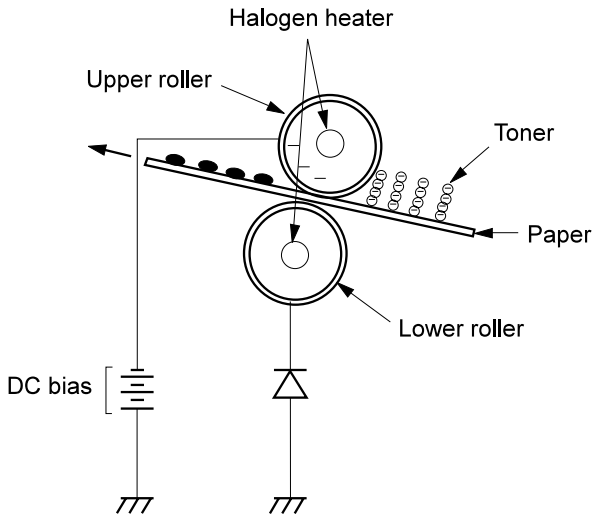


Figure 36. **Fusing the toner**

Consumable detection mechanisms

For information on resetting the consumable life counts, see table 24 on page 92.

Drum kit life detection

The imaging drum cartridge contains a memory device. The number of images printed is written to the imaging drum cartridge memory. The controller board senses the imaging drum life expiration based on the data from the imaging drum cartridge memory. When the image count reaches approximately 40,000 images, DRUM LIFE LOW / REPLACE DRUM KIT is shown on the printer control panel. This error is also written into the imaging drum cartridge memory and cannot be erased.

The printer is still able to print after the imaging drum life expiration warning. The controller board counts the number of printed images after notification occurs. When the number reaches approximately 50,000 images, the controller board stops the printer and signals DRUM LIFE OUT / REPLACE DRUM KIT. Printing cannot continue until a new imaging drum is installed.

Note An image is one layer of toner (cyan, magenta, yellow, or black). A full-color page is counted as four images.

Waste toner level detection

The waste toner detection unit in the printer senses the waste toner level by emitting light into the detection window and passing the light through the imaging drum cartridge when the stirring plate in the drum removes the waste toner around the detection window. The controller board detects the toner level by timing from the moment that the detection window is cleared to the time the waste toner recovers the window. If the time is shorter than a stored value in the controller board, DRUM ERROR / REPLACE DRUM KIT is reported on the printer control panel. The controller board writes the data into the imaging drum cartridge memory.

The printer is still able to print after the waste toner full warning. The controller board counts the number of printed images after notification occurs. When the number reaches approximately 200 images, the

controller board stops the printer and signals DRUM LIFE OUT / REPLACE DRUM KIT. Printing cannot continue without a new imaging drum being installed.

Note If the imaging drum cartridge memory fails, a warning will be displayed on the printer control panel. Printing can continue until the waste toner sensor indicates full.

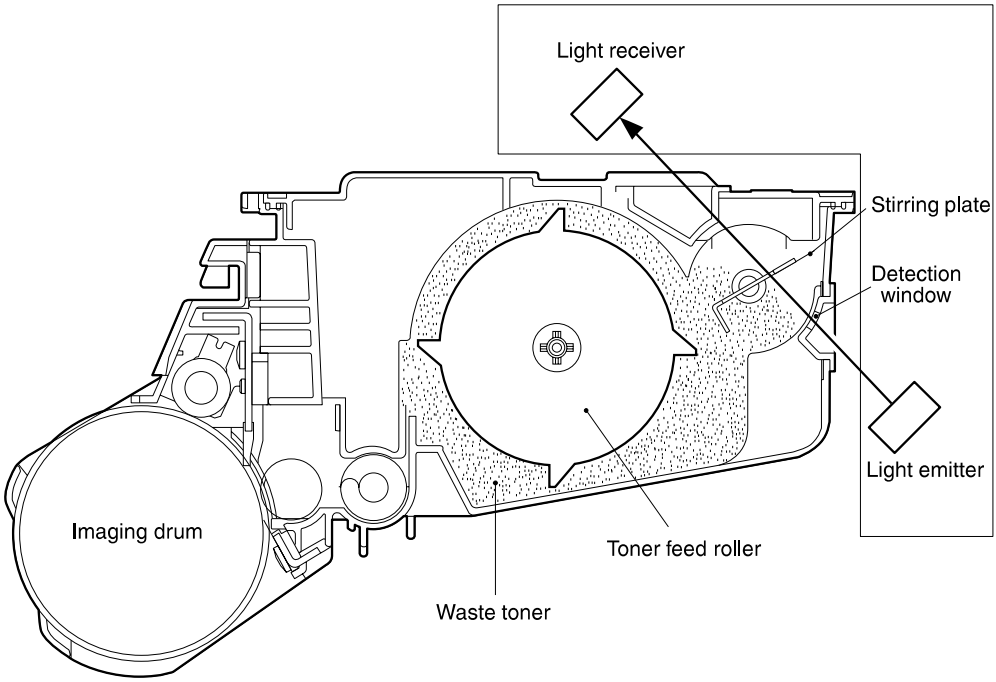


Figure 37. Waste toner level detection

Transfer kit life detection

The transfer kit life is determined by both the page and image counts. The number of images printed is stored in the formatter, and the controller board senses the transfer kit life expiration based upon this data. When the life data reaches 149,000 pages or 299,000 images total, TRANSFER KIT LOW / REPLACE KIT is displayed on the printer control panel. The printer is still able to print after the transfer kit low warning.

The formatter counts the number of printed images after the transfer kit low warning occurs. When the number reaches 150,000 pages or 300,000 images, the controller board signals TRANSFER KIT OUT / REPLACE KIT. End of life behavior is determined by the TONER LOW setting on the printer control panel (see page 88). Printing can continue after the transfer kit out signal; however, print quality might be degraded and the number of jams might increase.

Because there is not a memory mechanism in the transfer devices, users and service personnel must reset the transfer count when a new transfer kit is installed. Also, if the formatter board is replaced, the transfer count must be reset in the Service menu.

Fuser kit life detection

The controller board senses the fuser kit life expiration based upon page count stored in the formatter. When the page count reaches 99,000 pages, FUSER LIFE LOW / REPLACE KIT is shown on the printer control panel. The printer is still able to print after the fuser kit life expiration warning. The formatter counts the number of printed images after notification occurs. When the number reaches the 100,000 pages, the controller board signals FUSER LIFE OUT / REPLACE KIT. End of life behavior is determined by the TONER LOW setting on the printer control panel (see page 88). Printing can continue after the fuser life out signal, but print quality might be degraded.

Color toner level detection

The color toner level sensor (PS621) detects the toner level in the color toner cartridge. PS621 consists of a light emitter and a light receiver. The light from the light emitter enters the detection window at the light guide facing the outside of the toner cartridge. The light entering the detection window passes through the inside of the cartridge. Then the light guide at the stirring plate cleans the toner

around the detection window. The light receiver of PS621 detects the toner. After PS621 detects light, the controller board notes the time until light can no longer pass through the detection window.

The controller board signals the formatter that the color toner cartridge has no toner if the time the light passes through the detection window exceeds the fixed time. The printer detects the toner level when the printer is turned on, or while the stirring plate is rotating.

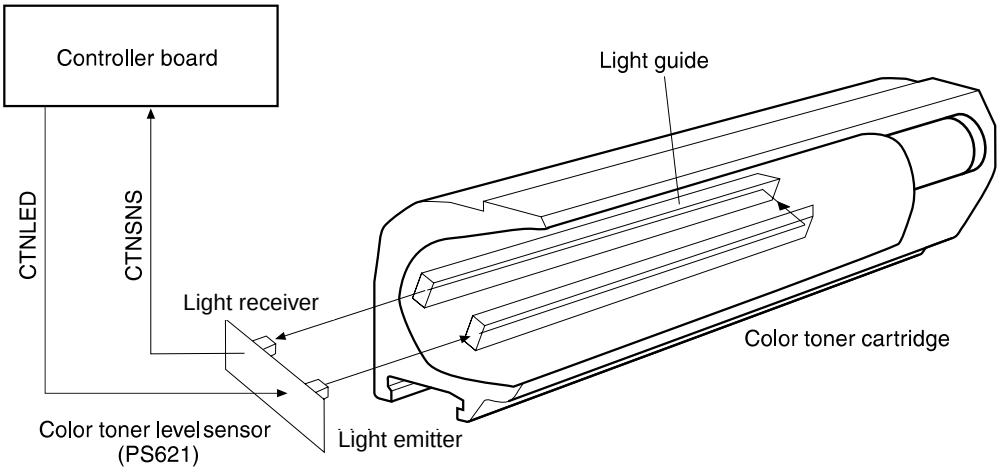


Figure 38. **Color toner level detection**

Color cartridge sensor

The color cartridge sensor (PS1901C) detects the color toner cartridge. PS1901C consists of a light emitter and a light receiver. The light from the light emitter is reflected by the cartridge and reaches to the light receiver only when the cartridge is installed. If the light does not reach the light receiver, the controller board signals color toner cartridge failure to the formatter and stops the printer. Also, the printer checks for the cartridge pressure when the power switch is turned on, or right after any cover is opened or closed.

Color toner lever detection

The printer has a color toner lever sensor (PS1902) to prevent toner cartridge setup failure. This sensor consists of a light receiver and a light emitter. If the color toner lever is set incorrectly, the light from the light emitter is reflected by the color toner lever and detected by the light receiver. The controller board monitors the sensor when the carousel door is closed. If the color toner lever is not locked in place, LOCK TONER LEVER is shown on the printer control panel and the carousel will not rotate.

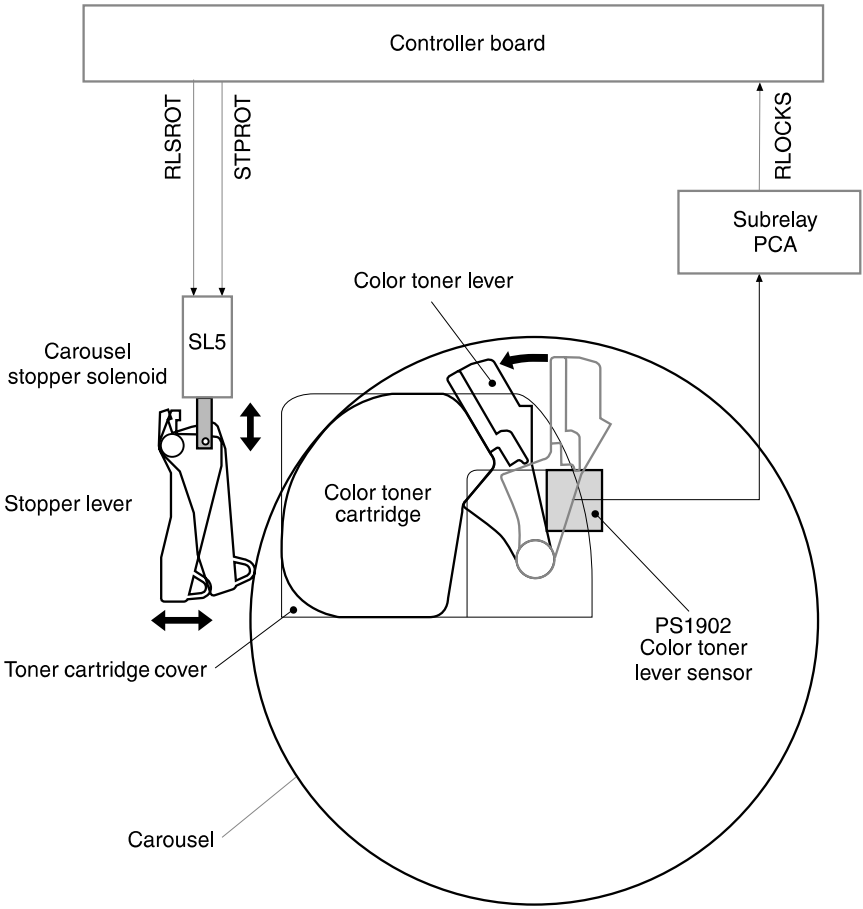


Figure 39. **Color toner lever detection**

Black toner level detection and cartridge detection

The toner antenna in the black toner cartridge detects the black toner level. The controller board monitors the toner level sensor signal output from the toner antenna via high-voltage PCA 1. The controller board checks the signal at the moment that the black developing AC bias is applied to the black developing cylinder. If the toner level is less than specified, the controller board signals the formatter that the black toner cartridge has no toner. The black toner cartridge is detected by the black toner cartridge switch (SW644) in the printer.

Environment change control

The controller board judges the temperature/humidity environment based on temperature/humidity sensor signals from the temperature/humidity sensors on the temperature/humidity sensor PCA and executes the following controls to obtain the appropriate image:

- Controls the value of the secondary transfer bias, the transfer drum cleaning bias, and the transfer charger bias.
- Performs a color calibration if the environmental change is great enough.

The controller board checks for an environment change before starting image density control, after the power is turned on, or every 30 minutes after the image density control is completed.

Color calibration density sensor

The density sensor inside the right upper door senses the density detection pattern for each color formed on the transfer drum during a calibration cycle. The sensor emits light from the LED, and the density detection pattern on the transfer drum reflects the light. The sensor then receives the light with the photo diode and that information is converted to digital values and stored on the controller board. The controller board uses this information to control appropriate developing bias and primary charging bias values to stabilize density of each color.

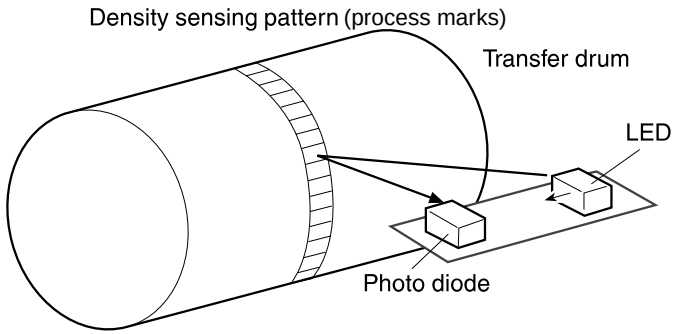


Figure 40. **Density sensor**

Calibration occurs at the following intervals:

- After the power is turned on
- After 50 pages in one-page mode are printed (after initial power-on)
- After 95 pages in one-page mode are printed
- After the printer is revived from Power Save (if Power Save has been on for more that 30 minutes)
- When a toner cartridge is installed
- When an imaging drum cartridge is installed
- When environment is changed by the environment change control

Note The density control will only be executed if all of the printer doors are closed and all of the printer components are detected.

Transfer belt control

During secondary transfer, the controller board activates the transfer belt press clutch (CL4). The transfer belt is normally away from the transfer drum, except while pushed against the transfer drum during secondary transfer. When the secondary transfer is complete, the transfer belt is removed from the transfer drum when the controller board sets the CL4 to off.

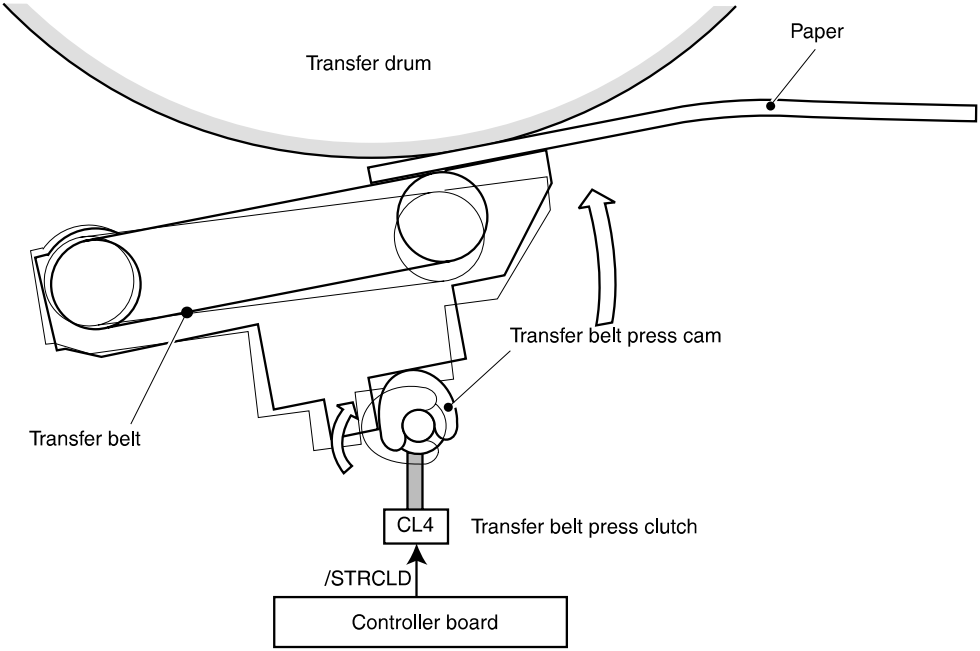


Figure 41. **Transfer belt control**

Cleaning roller control

The controller board activates the cleaning roller press solenoid (SL1). SL1 presses the cleaning roller to the transfer drum just after the secondary transfer begins. When the SL1 signals on, the cleaning roller press cam presses the cleaning roller, and the cleaning roller presses against the transfer drum. When the transfer drum cleaning and secondary transfer are complete, the controller board sets the SL1 off to detach the cleaning roller from the transfer drum.

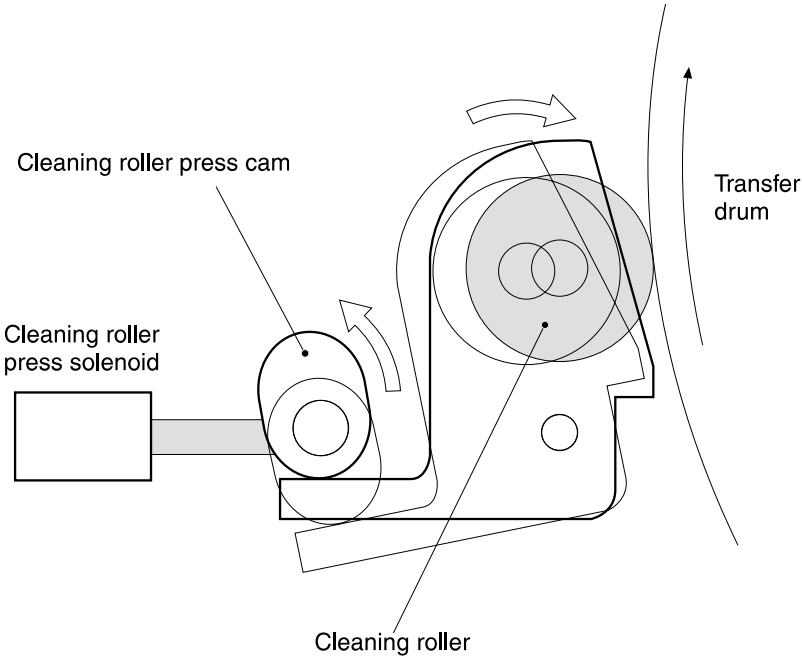


Figure 42. **Cleaning roller control**

Carousel control

The controller board controls the rotation speed and the stop position of the carousel by monitoring the timing of the eight flags that pass through the carousel position sensor (PS3). The rotation position flags are located on the back side of the carousel. The eight rotation position flags consist of the home position flag (also the black toner

cartridge stop position flag); the yellow, magenta, and cyan cartridge stop position flags (three flags); and the fetch (removal or replacement) flags (four flags).

When the controller board receives the print signal from the formatter, the carousel motor (M1) is turned on at normal speed. When the controller board detects that the carousel rotation has reached the slow down position, the controller board reduces the carousel speed until the controller board senses that the carousel rotation has reached the stop position.

Figure 43 shows an example of the carousel in the yellow cartridge stop position where the printer is ready for yellow development. The yellow toner cartridge is facing the imaging drum.

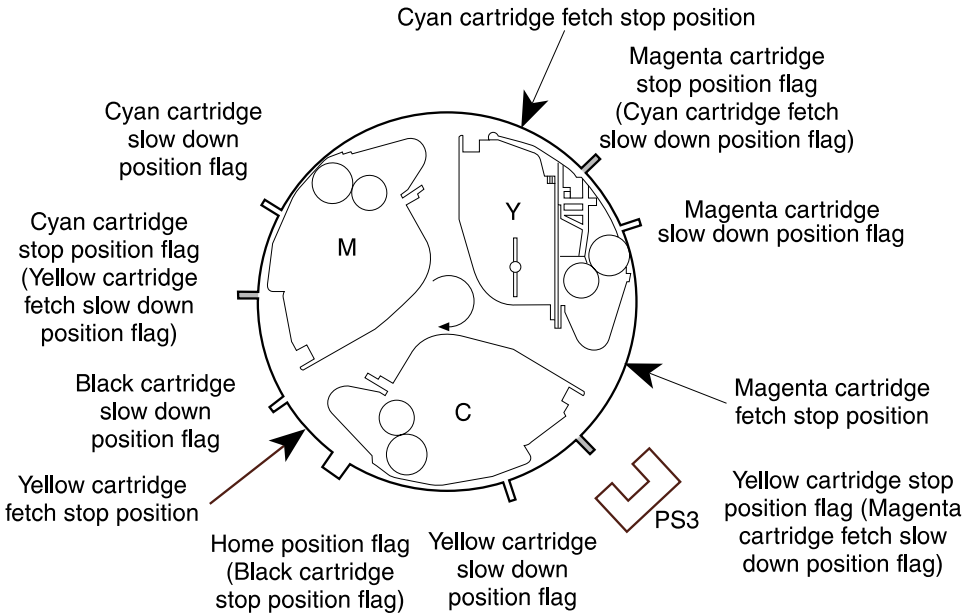


Figure 43. **Carousel control**

Carousel stop solenoid

The carousel lock control fixes the carousel by pushing the stopper lever against the carousel when the cartridge is moved to the fetch position. When a user presses the carousel rotation button while replacing the color toner cartridge, the carousel begins to rotate, then stops in the color toner cartridge fetch position. The carousel is fixed when the carousel stopper solenoid (SL5) pushes the stopper lever.

Power distribution

The low-voltage power distribution circuit transforms the AC input voltage to supply the DC power sources, +24VB and +5V, on which the printer operates. The +24V source feeds the various motors, solenoids, and exhaust fans within the printer, while the +5V source feeds the controller board and image processor.

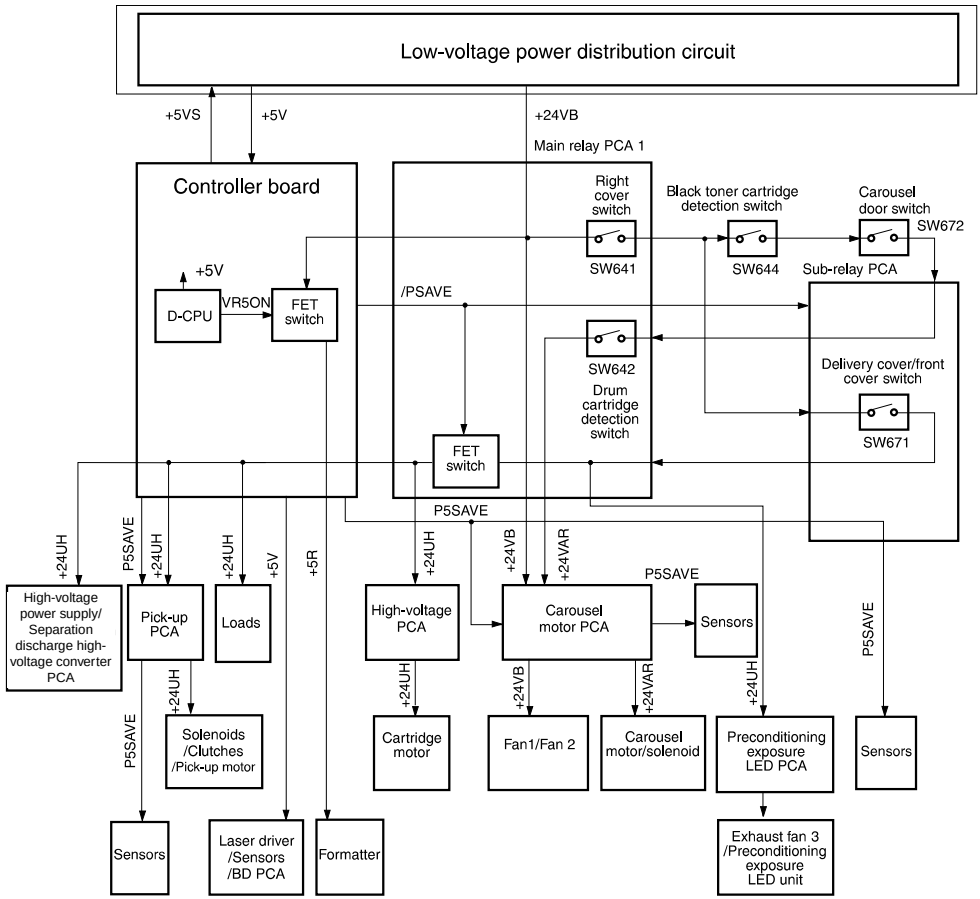


Figure 44. **Power distribution circuit diagram**

When the printer receives the Power Save command from the formatter board, the controller board turns off the FET switch in the main relay PCA and stops the supply of +24 UH. Additionally, the sensors, carousel motor, and toner cartridge motor are turned off. After the fuser cools down, all fans are also turned off. When the printer receives the “wake up” command from the formatter board, the printer leaves Power Save mode and resumes normal operation.

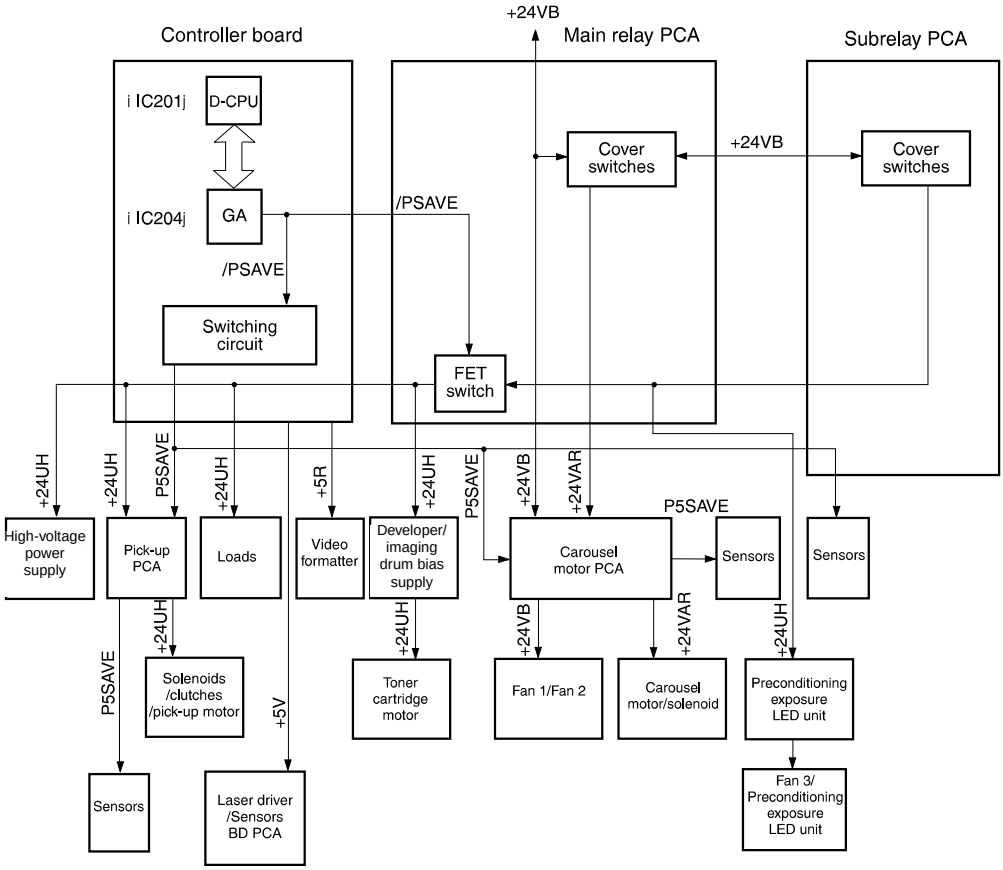


Figure 45. **Power Save circuit diagram**

Fuser control

The fuser controller directly interfaces with both the power supply and controller board. As the surface temperature of the upper and lower fusing rollers rises, the resistance of the thermistors drops and the voltage of the fusing temperature detection signals also drops.

Table 31 shows the temperatures the formatter sets, based on the media in use.

Table 31. Fusing temperatures

	Color mode	Number of sheets	Fusing mode: Plain paper	OHT	Heavy or glossy	Envelope
Target temperature	Full color	1st sheet	175° C 347° F	175° C 347° F	175° C 347° F	180° C 356° F
		2nd and after	165° C 329° F	170° C 338° F	165° C 329° F	180° C 356° F
	Black and white	1st sheet	180° C 356° F	175° C 347° F	175° C 347° F	180° C 356° F
		2nd and after	165° C 329° F	170° C 338° F	165° C 329° F	170° C 338° F

Problems in the fuser can be detected in the following three circuits:

- Controller board. If the fuser is heated abnormally or does not reach the specified temperature for some reason, the controller board interrupts power to the fuser heaters. From there, the formatter assesses the fusing heater failure and signals the printer control panel.
- Fusing heater safety circuit (in the power supply circuit). If the fusing heater safety circuit detects an upper or lower fusing heater failure, the safety circuit interrupts power to the upper and lower fusing heaters.
- Fuser abnormality detection circuit (in the power supply circuit). If there are broken wires to the fusing heater system, the fuser abnormality detection circuit detects no AC current flow, causing the controller board to assess the broken wires, stop driving the fusing heaters, and signal the printer control panel.

High-voltage power supply circuit

The printer contains three high-voltage PCAs (shown in figure 46) that are directly controlled by the controller board:

- Developer/imaging drum bias supply, which controls:
  - cartridge motor (M3)
  - imaging drum bias
  - black developing bias
  - color developing bias
- High-voltage power supply, which controls:
  - transfer drum
  - cleaning roller
  - transfer belt
  - post charging unit
  - upper fusing roller
- Separation discharge high-voltage converter PCA which controls:
  - transfer charger

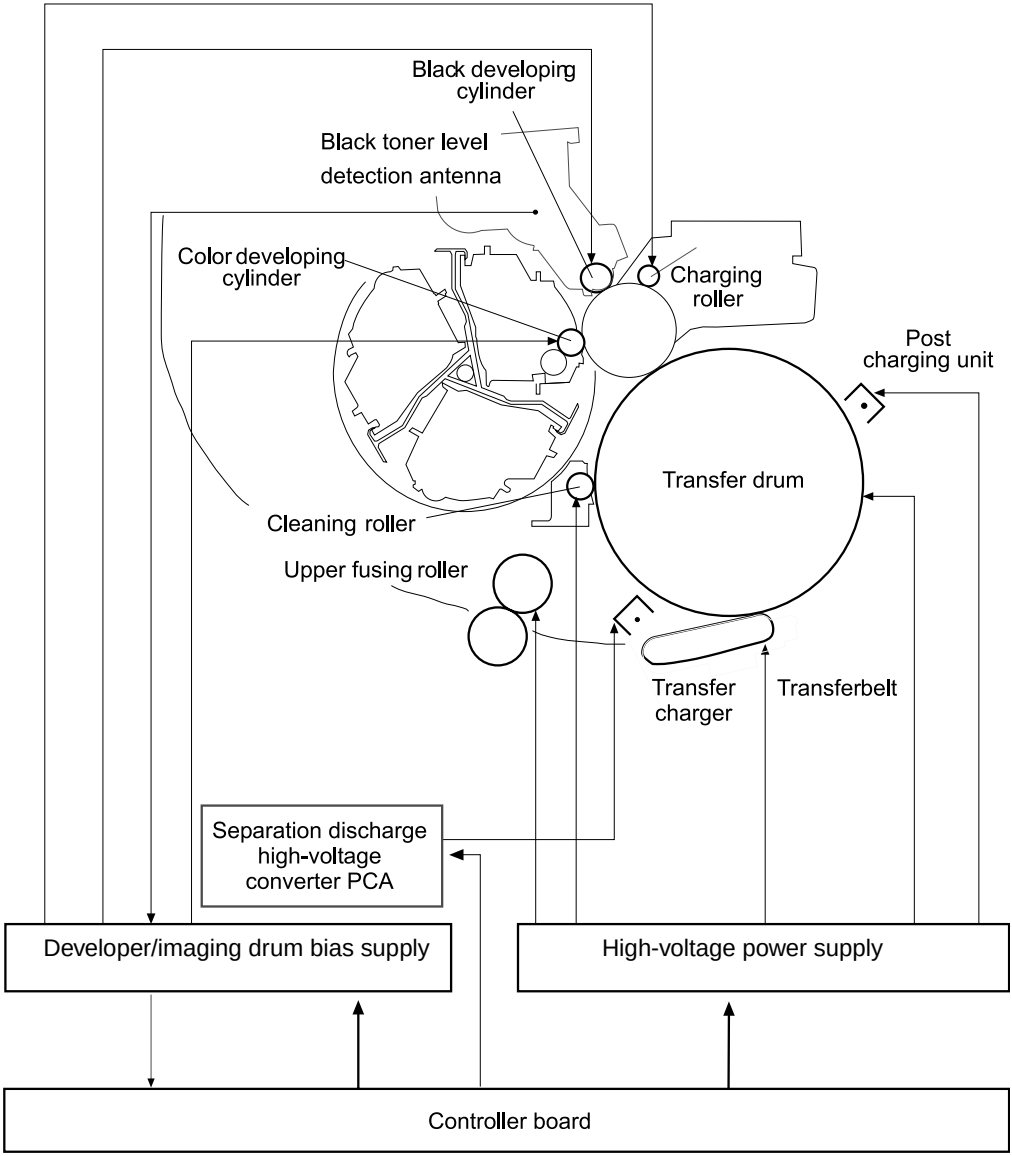


Figure 46. **High-voltage power supply circuit**

Laser/scanner

The laser/scanner unit scans the laser beam across the imaging drum. Video signals sent from the formatter are pulse-width modulated and converted to video data signals. The video data signals are then converted to two low-voltage differential signals (which suppress radio frequency emissions), and are sent to the laser driver PCA. There the voltage differential signals are converted to a single laser drive signal (the internal signal of the laser/scanner unit) in the laser driver PCA, which turns the laser diode on and off and generates the modulated laser beam.

The modulated laser beam is aligned by the collimator lens and the cylindrical lens, becoming a parallel beam. The laser beam then strikes the scanning mirror that rotates at a constant speed. The beam reflected from the scanning mirror travels through the focusing lens and the reflecting mirror located in front of the scanning mirror, and is brought to a focus point on the imaging drum.

The scanning mirror rotates at a constant speed, so the laser beam is scanned across the drum at a constant speed. The drum is also rotating at a slower constant speed, which allows the laser beam to form an image on the drum surface.

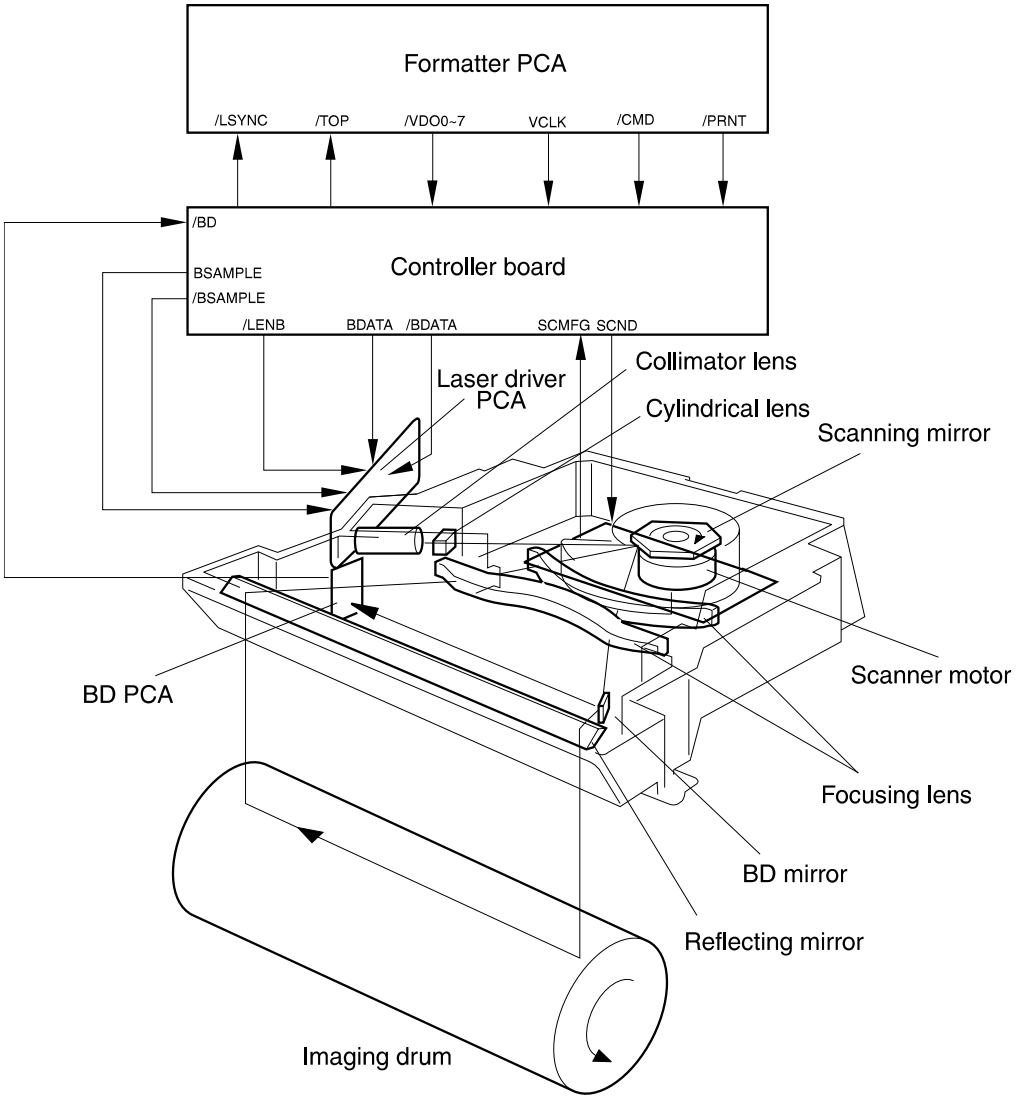


Figure 47. **Laser/scanner**

If the laser/scanner motor does not reach operating speed within seven seconds of rotation, then the laser/scanner motor lock detection circuit generates a scanner motor failure, and the laser/scanner motor stops.

Motors and heaters

The following section describes the motors and heaters in the printer.

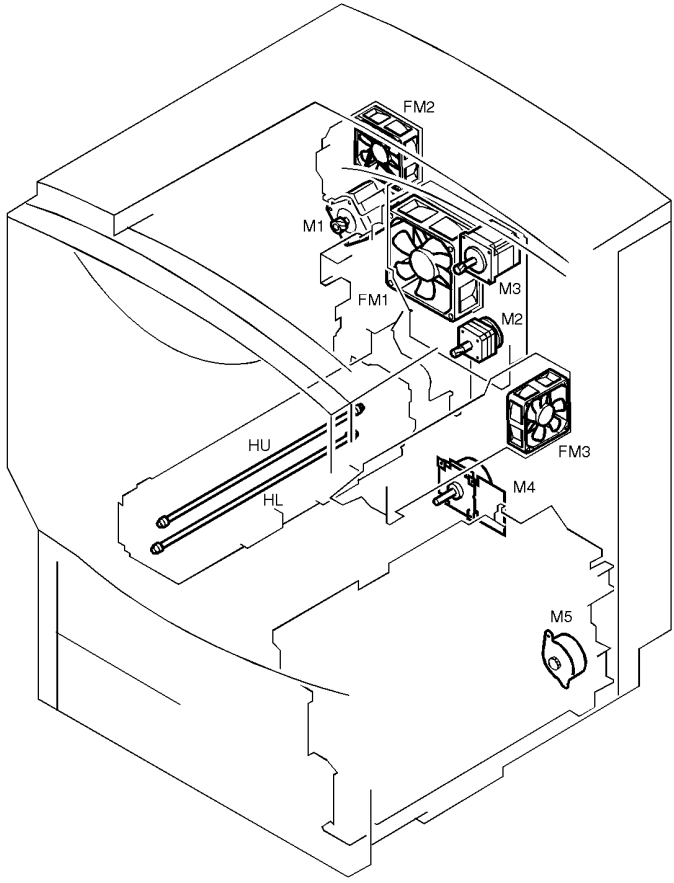


Figure 48. **Printer motors and heaters**

Table 32. Printer motor and heater names and descriptions

Name	Description	Name	Description
M1	Carousel motor	FM1	Fan 1 motor
M2	Drum motor	FM2	Fan 2 motor
M3	Cartridge motor	FM3	Fan 3 motor
M4	Main motor	HU	Upper fuser heater
M5	Pick-up motor	HL	Lower fuser heater

Carousel motor (M1)

The carousel motor (M1) is a two-phase stepping motor, and rotates the carousel. The motor operates at low and normal speeds depending on the printer function (such as sensing toner cartridges or printing).

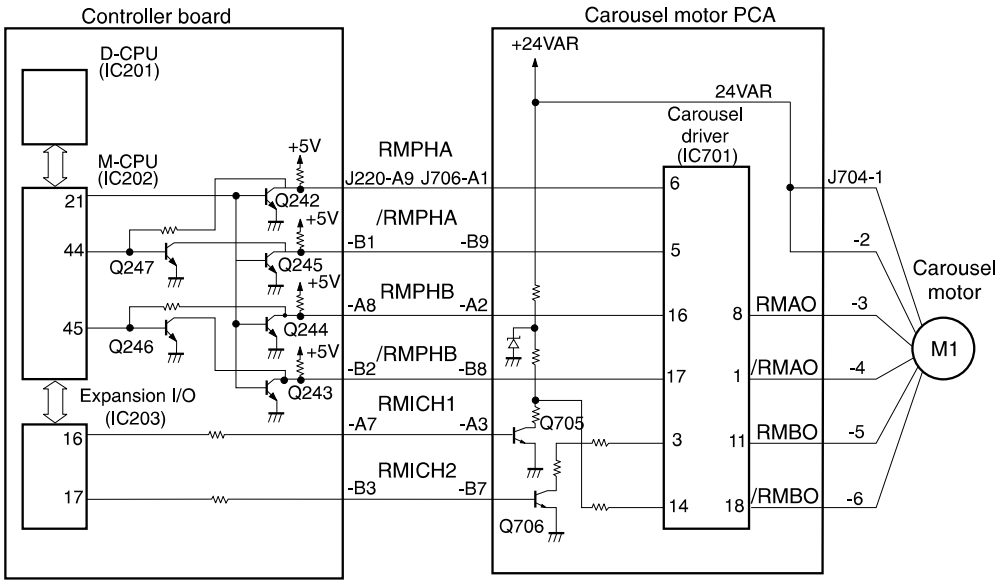


Figure 49. **Carousel motor (M1)**

Drum motor (M2)

The drum motor (M2) is a two-phase stepping motor, and drives the transfer drum and the imaging drum.

For overhead transparencies and glossy or heavy media, the motor rotates at low speed (OHT mode: 1/4 speed rotation; glossy and heavy media: 1/3 speed rotation). The speed of the media through the fuser is identical to the speed at which the media passed through the image transfer process.

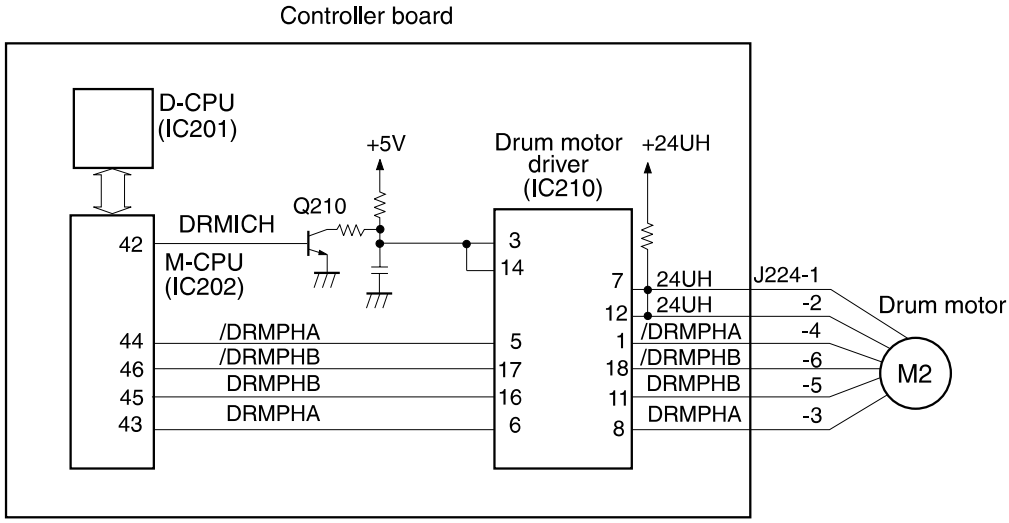


Figure 50. **Drum motor (M2)**

Cartridge motor (M3)

The cartridge motor (M3) is a two-phase stepping motor, and drives the black and color toner cartridge developing cylinders.

The motor rotates in the normal direction for color toner development, then the motor reverses for black toner development. The developer gear drive assembly and its associated clutches engage the proper developer drive gear based on the direction of the cartridge motor rotation.

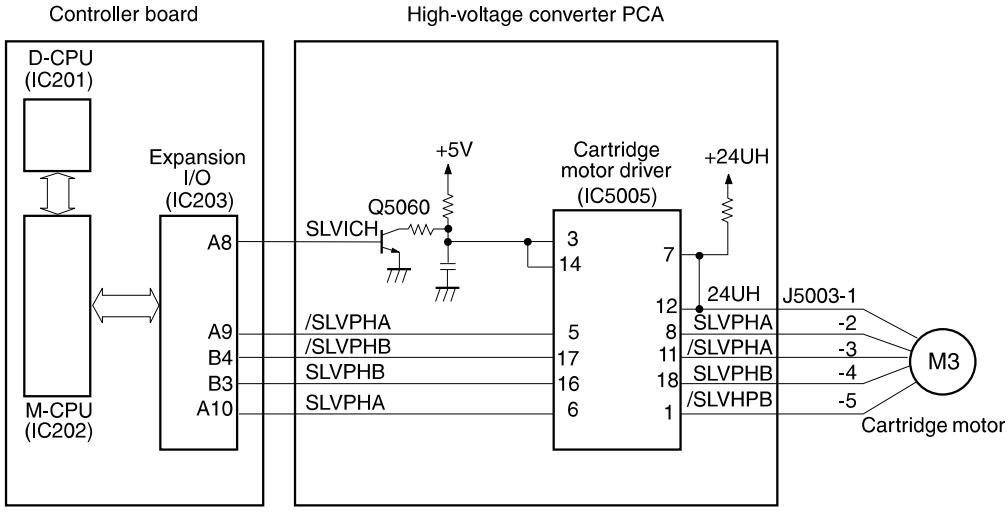


Figure 51. **Cartridge motor (M3)**

Main motor (M4)

The main motor (M4) is a three-phase, eight-pole, brushless motor. This motor drives the rollers related to pick-up, feeding, fusing, and delivery. This motor also drives the transfer belt press drive cam and cleaning roller press drive cam.

The controller board switches the motor speed between normal speed, 1/4 speed for OHT mode, and 1/3 speed for glossy or heavy media by combining the M4 speed change signals.

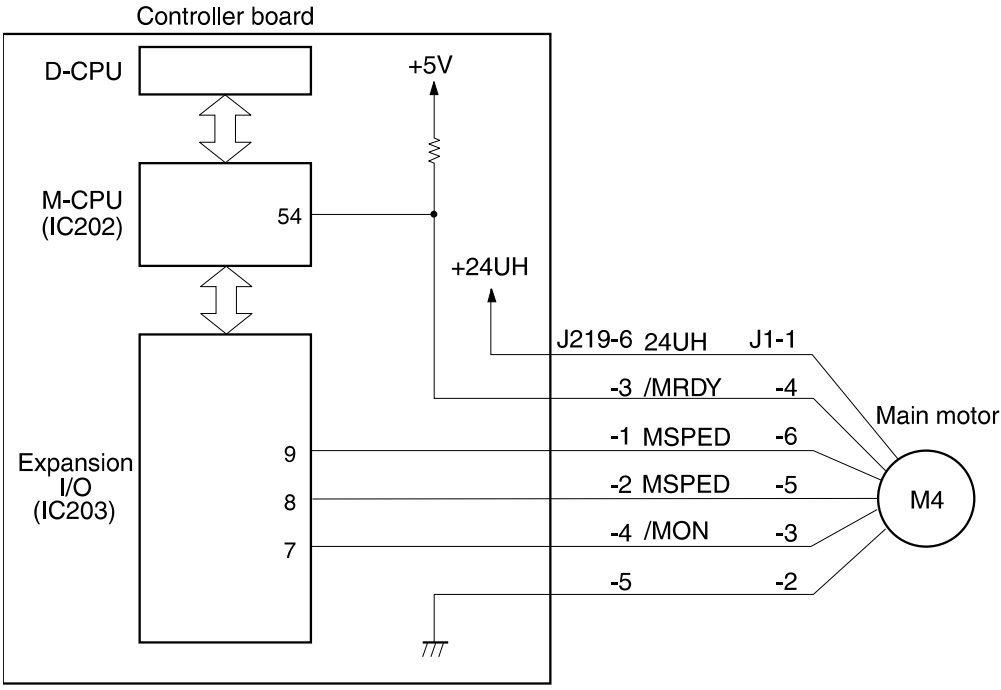


Figure 52. **Main motor (M4)**

Pick-up motor (M5)

The pick-up motor (M5) is a two-phase stepping motor. M5 picks up the paper, drives tray 2 and 3 tray lifts, and activates the pick-up rollers for trays 2 and 3. During tray 2 paper pick-up, M5 is rotated at normal speed. During tray 3 pick-up, normal speed reverse rotation is used.

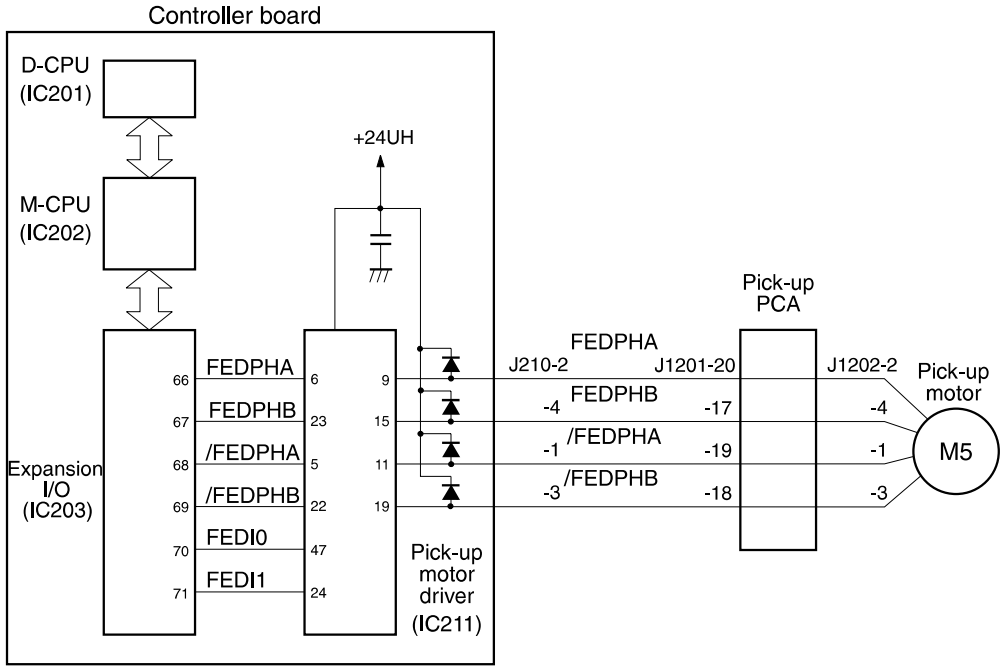


Figure 53. **Pick-up motor (M5)**

Fan motors (FM1, FM2, and FM3)

The printer contains three exhaust fans, all of which use DC brushless motors. Table 33 describes when each of the fans operates and at what speed each operates.

Table 33. Fan operation

	Turn printer on	Standby	Printing	Power Save or power off <30 minutes	Power Save or power off >30 minutes
FM1*	Full speed	On	On	On	Off
FM2	Full speed	Full speed	Full speed	Full speed	Off
FM3	Off	Off	Full speed	Off	Off

*FM1 contains a thermistor, and the fan speed changes according to the temperature inside the printer.

Paper path

Figure 54 shows the printer paper path.

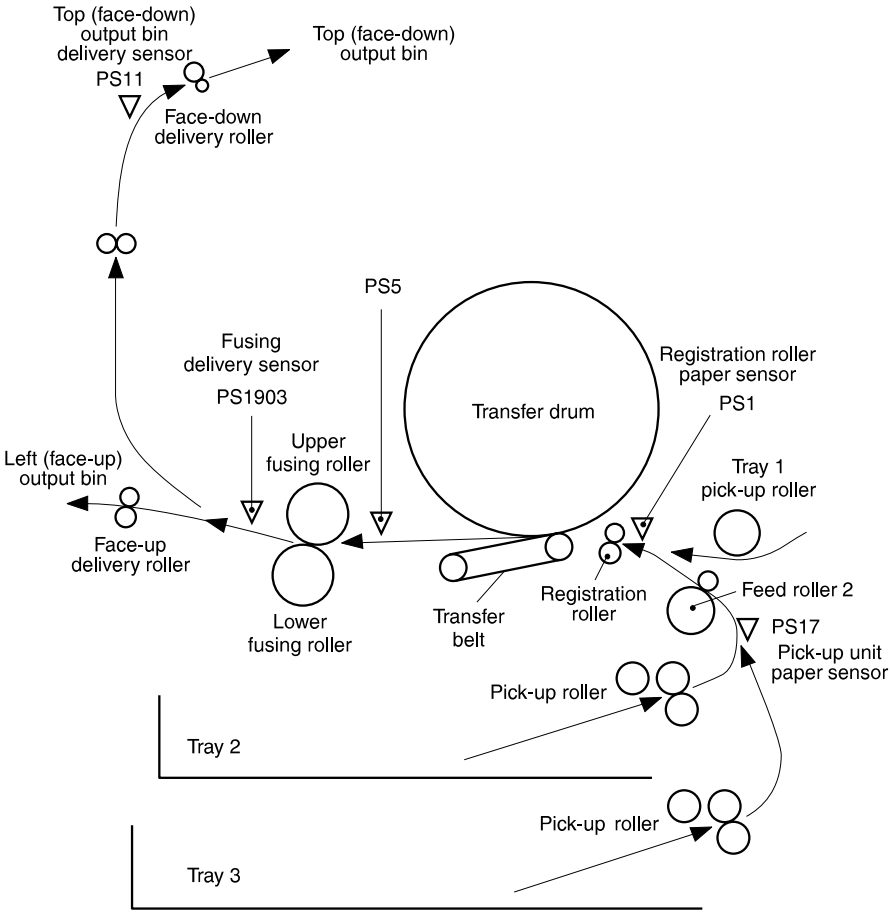


Figure 54. **Paper path**

Pick-up/feed

For cassette paper pick-up, the paper is sent into the printer by the pick-up roller, then fed by the feed roller. After the registration roller corrects the skew of the paper, the paper stops. The paper is then refed so that its leading edge will match the top of the image on the transfer drum. After that, the paper is fed through the transfer, separation, and fusing/delivery units to the top (face-down) or the left (face-up) output bin. The printer switches the speed at which the paper is fed for different media types as indicated in table 34.

Table 34. Feed speeds based on media type

Modes	Plain paper	Glossy or heavy media	OHT
Feed speed	Normal speed	1/3 of normal speed	1/4 of normal speed

The controller board switches the feed speed when the registration roller paper sensor detects the paper. The printer has two overhead transparency sensors (PS1801 and PS1802, see figure 57 on page 184), and the controller board always monitors these sensors.

Automatic overhead transparency detection

The printer enters overhead transparency (OHT) mode when the user selects to print on transparencies through the printer driver or by selecting OHT as the media type at the printer control panel. The OHT sensors (PS1801 and PS1802, see figure 57 on page 184) are installed in front of the registration roller to detect transparencies even if the user has not set the media type at the printer control panel. The controller board monitors these sensors to execute OHT detection.

PS1801 and PS1802 consist of light emission and light reception units. When a transparency is used, the light emitted from the light emitter unit goes through the transparency and is received by the light receptor. As a result, the controller board determines that the fed media is a transparency and enters the OHT mode.

Paper pick-up

Paper pick-up begins when the print signal is sent. The pick-up roller is lowered to the paper level, and the main motor (M4) rotates the roller. This process feeds the paper into the printer from the input trays.

- **Tray pick-up** — When the pick-up motor is in normal rotation, the tray 2 pick-up roller, feed roller 1, and separation roller are driven. The paper is then picked up from the tray 2 pick-up roller. In the case of reverse rotation, the tray 3 pick-up roller, feed roller 1, and separation roller are driven. The paper is then picked up from the tray 3 pick-up roller.
  - **Multi-feed prevention mechanism** — During paper pick-up from tray 2 or 3, the separation roller prevents multi-feeding.
  - **Tray 2 last page detection** — The last-page sensor (PS29) consists of a light emitter and light receiver. When paper is present in tray 2, the light from the light emitter is reflected by the paper and received by the light receiver. However, when the last page is picked up, the light from the light emitter is transmitted inside the printer and does not reach the light receiver. The controller board signals the formatter that there is no paper in tray 2 and stops formation of the next image. The tray 2 last-page detection prevents the imaging drum and the transfer drum from getting dirty by detecting that no paper is available before the next image is written.

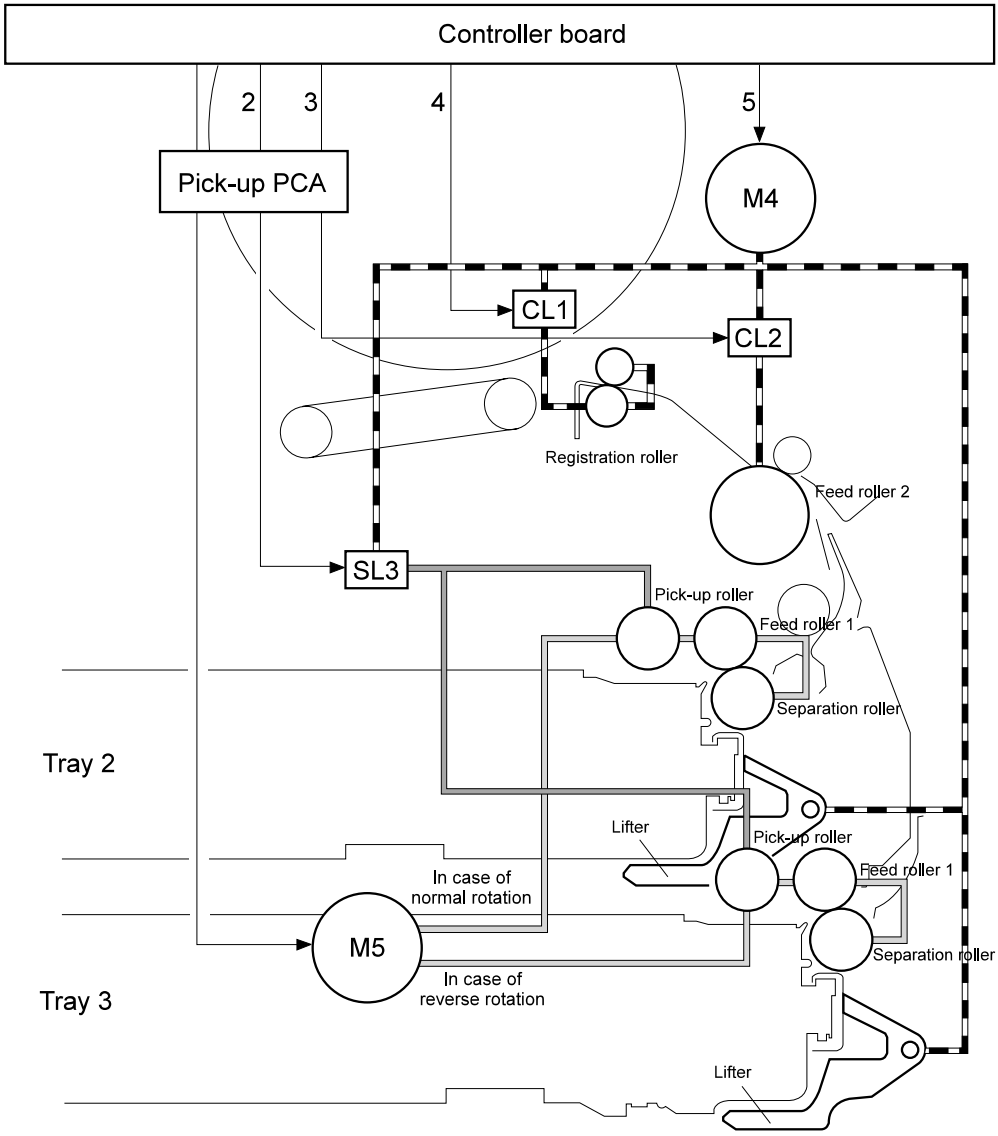


Figure 55. **Tray 2 and 3 pick-up**

1	Pick-up motor drive signal	**M4**	Main motor
2	Feed roller clutch drive signal	**M5**	Pick-up motor
3	Tray pick-up solenoid drive signal	**SL3**	Tray pick-up solenoid
4	Registration roller clutch drive signal	**CL1**	Registration roller clutch
5	Main motor drive signal	**CL2**	Feed roller clutch

- **Tray 1 pick-up** — One sheet of paper is pressed to the multi-purpose pick-up roller by the paper lifting plate and is picked up by the rotation of the pick-up roller. Any extra sheets are removed by the separation pad, then sent into the printer. Operation after transmission is the same as for tray pick-up except that the paper lifting plate solenoid is reset on to lower the paper lifting plate right after registration roller rotation.
  - **Tray 1 paper-width sensor** — The tray 1 paper-width sensor (PS1701) detects the paper width when the user adjusts the media width guides, which moves the slide resistance connected with the size-control plate. When paper is loaded in tray 1, the controller board detects the paper width. If the paper width is not the width specified by the formatter, the controller board notifies a paper-size failure to the formatter and stops the printer.
  - **Tray 1 last-page detection** — The tray 1 last-page sensor (PS19) monitors the rotation of the last-page detection roller in tray 1 and detects the last page. If the tray has two or more pages, the last page detection roller does not rotate at pick-up. When the last page is picked up, the last-page detection roller rotates past the page and PS19 and sends an off to signal the controller board. The controller board then signals the formatter that no pages are in tray 1 and stops the next image formation. The PS19 detects no page before the next image is written and prevents the imaging drum and the transfer drum from getting dirty.

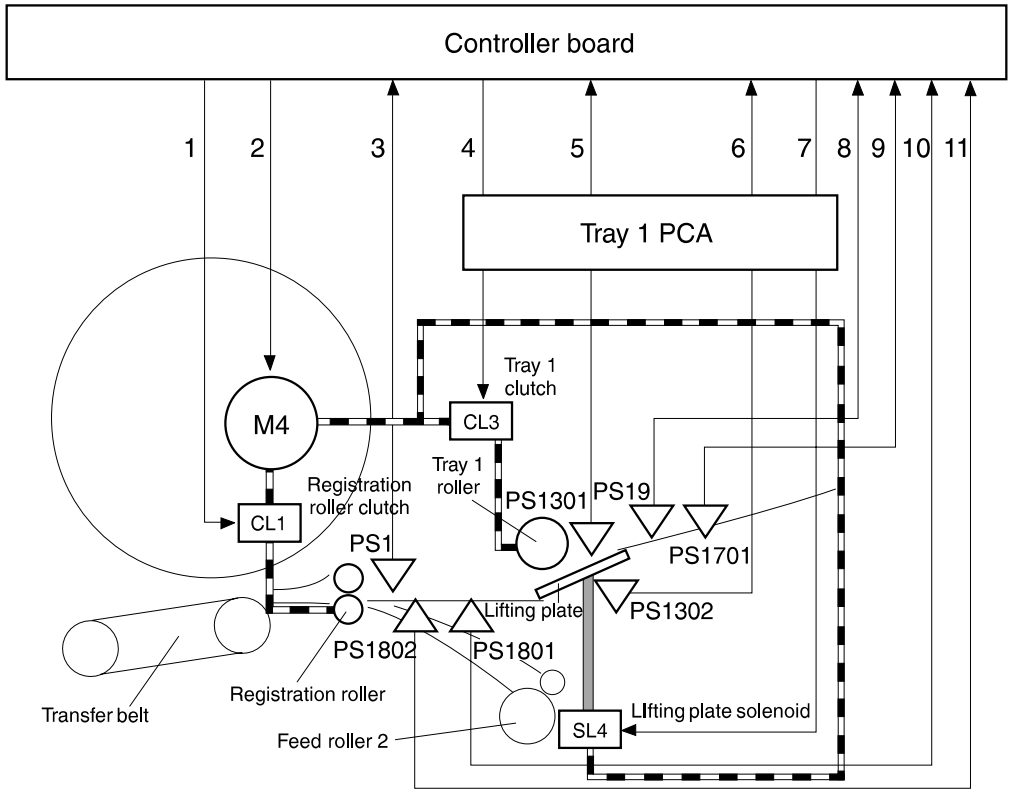


Figure 56. **Tray 1 pick-up**

1	Registration roller clutch drive signal	**SL4**	Lifting plate solenoid
2	Main motor drive signal	**CL1**	Registration roller clutch
3	Registration roller paper detection signal	**CL3**	Tray 1 pick-up clutch
4	Tray 1 pick-up clutch drive signal	**PS1**	Registration roller paper sensor
5	Tray 1 paper detection signal	**PS19**	Tray 1 last page sensor
6	Lifting plate position detection signal	**PS1301**	Tray 1 page sensor
7	Lifting plate solenoid drive signal	**PS1302**	Lifting plate position sensor
8	Tray 1 last paper detection signal	**PS1701**	Tray 1 paper width sensor
9	Tray 1 paper width detection signal	**PS1801**	OHT sensor 1
10	OHT detection signal	**PS1802**	OHT sensor 2
11	OHT detection signal		

Sensors, switches, clutches, and solenoids

The following figures and tables illustrate and describe the sensors, switches, clutches, and solenoids in the printer paper path.

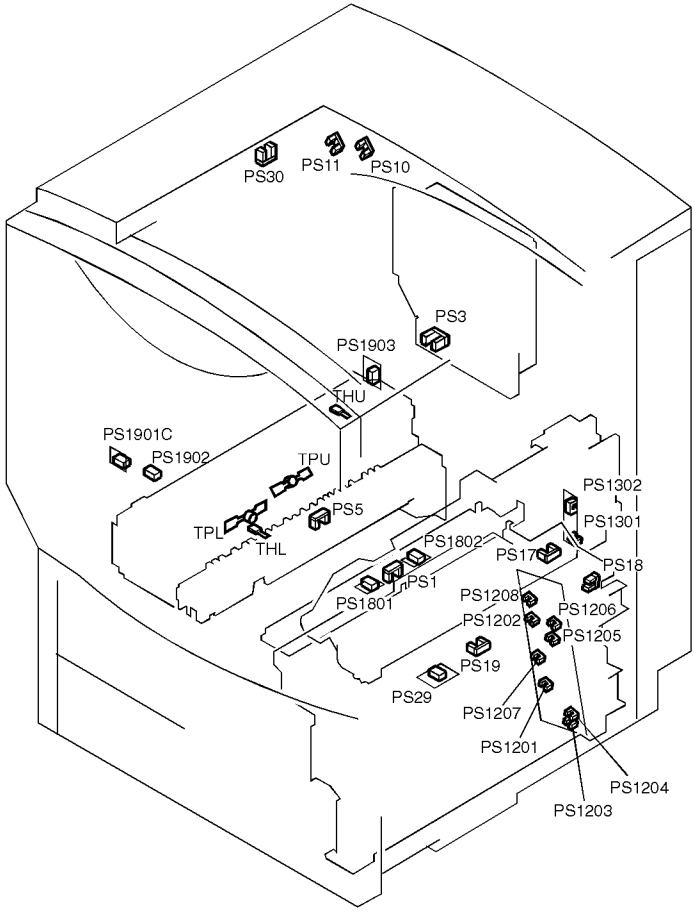


Figure 57. **Printer sensors**

Table 35. Printer sensor names and descriptions

Name	Description
PS1	Registration roller paper sensor
PS3	Carousel position sensor
PS5	Separation sensor
PS10	Top (face-down) output bin paper-full sensor
PS11	Top (face-down) output bin delivery sensor
PS17	Pick-up unit paper sensor
PS18	Pick-up unit cover sensor
PS19	Tray 1 last page sensor
PS29	Tray 2 last page sensor
PS30	Left cover sensor
PS1201	Tray 3 sensor
PS1202	Tray 2 sensor
PS1203	Tray 3 paper-level sensor 2
PS1204	Tray 3 paper-level sensor 1
PS1205	Tray 2 paper-level sensor 2
PS1206	Tray 2 paper-level sensor 1
PS1207	Tray 3 paper-out sensor
PS1208	Tray 2 paper-out sensor
PS1301	Tray 1 paper sensor
PS1302	Lifting plate position sensor
PS1801	OHT sensor 1
PS1802	OHT sensor 2
PS1901C	Color toner cartridge sensor
PS1902	Color toner lever sensor
PS1903	Fusing delivery sensor
THU	Upper thermistor
THL	Lower thermistor
TPU	Upper thermo switch
TPL	Lower thermo switch

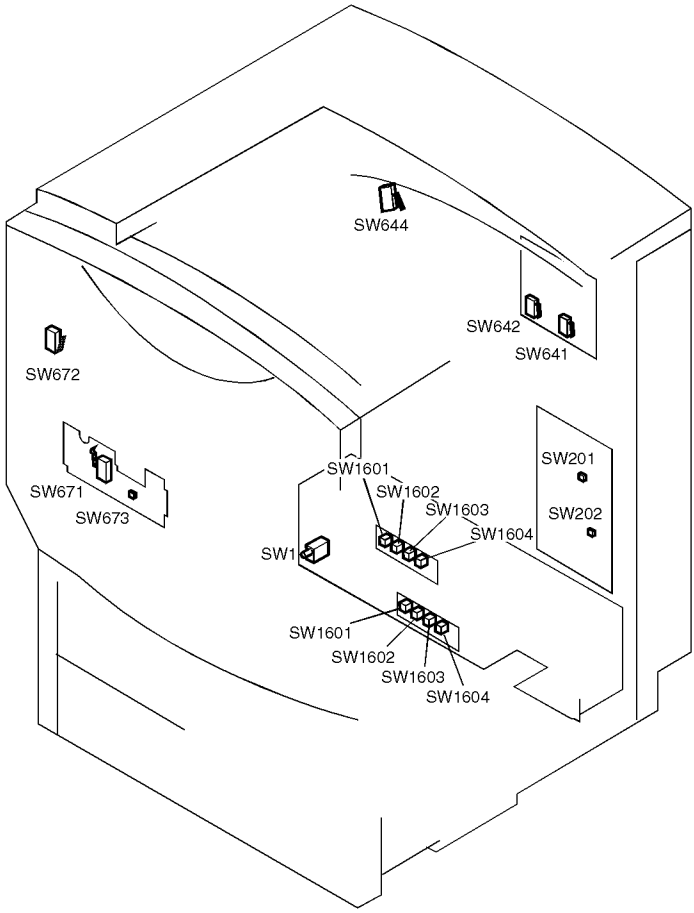


Figure 58. **Printer switches**

Table 36. Printer switch names and descriptions

Name	Description
SW1	Power switch
SW201	Test-print switch
SW202	Reset switch
SW641	Right cover switch
SW642	Imaging-drum switch
SW644	Black toner cartridge switch
SW671	Delivery cover/front cover switch
SW672	Toner cartridge cover switch
SW673	Carousel-button switch
SW1601	Tray 3 paper-size detection switch
SW1602	Tray 3 paper-size detection switch
SW1603	Tray 3 paper-size detection switch
SW1604	Tray 3 paper-size detection switch
SW1601	Tray 2 paper-size detection switch
SW1602	Tray 2 paper-size detection switch
SW1603	Tray 2 paper-size detection switch
SW1604	Tray 2 paper-size detection switch

Switch functionality

The following table describes the functionality of the paper-size switches in the printer.

Table 37. Tray 2 and Tray 3 paper-size detection

	Paper-size detection switches			
Paper size	**SW1601**	**SW1602**	**SW1603**	**SW1604**
A3	Off	On	Off	Off
A4 (horizontal)	Off	Off	On	Off
A4 (landscape)	On	Off	Off	On
A5	Off	Off	On	On
B4	On	Off	Off	Off
B5	Off	On	Off	On
Ledger	Off	Off	Off	Off
Legal	On	On	Off	Off
Letter (horizontal)	Off	Off	Off	On

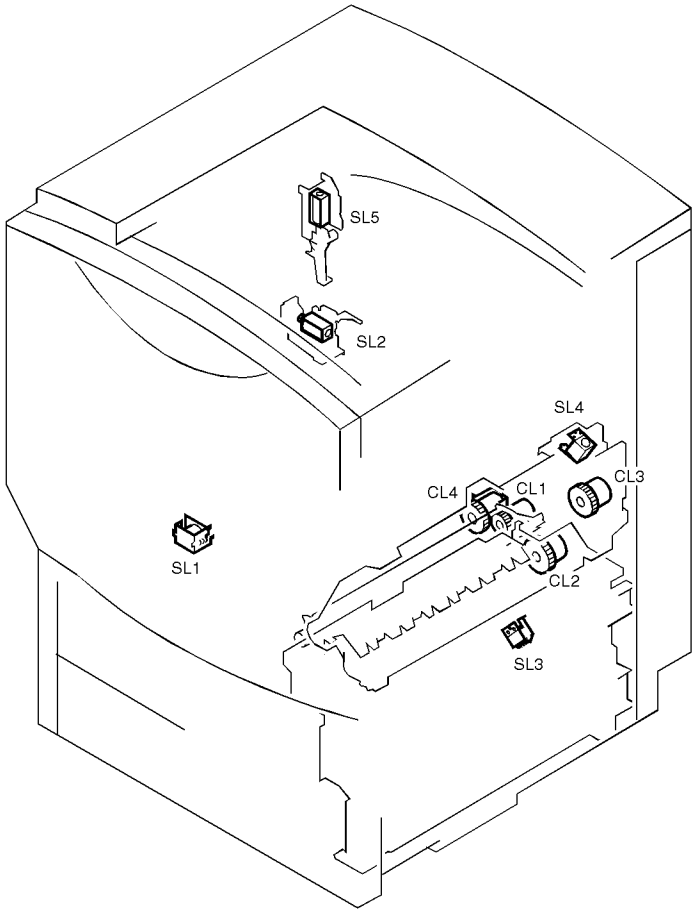


Figure 59. **Printer clutches and solenoids**

Name	Description	Name	Description
CL1	Registration roller clutch	**SL3**	Tray 2 and tray 3 pick-up solenoid
CL2	Feed roller clutch	**SL4**	Lifting plate solenoid
CL3	Tray 1 pick-up roller clutch	**SL5**	Carousel stopper solenoid
CL4	Transfer belt press clutch		
SL1	Cleaning roller press solenoid		
SL2	Left (face-up) output bin solenoid		

Fusing and delivery unit

The upper and lower rollers in the fuser and the face-up and face-down delivery rollers are driven by the main motor (M4). Paper separated from the transfer drum is fed into the fuser and delivered from the unit via the fusing roller and the fusing delivery roller. The fusing delivery sensor detects paper delivered from the fuser.

The printer has a left (face-up) output bin and a top (face-down) output bin, and diverts the media to the output bins using the face-up flapper. When the face-up output bin solenoid drive signal turns off, the face-up solenoid moves the face-up flapper to face the face-up output bin. From there, the paper is delivered to the face-up output bin. When the face-up solenoid drive signal turns on, the paper is delivered to the face-down output bin. Paper delivered to the face-down output bin is detected by the face-down output bin delivery sensor. When paper fills the face-down output bin, it is detected by the face-down output bin paper-full sensor.

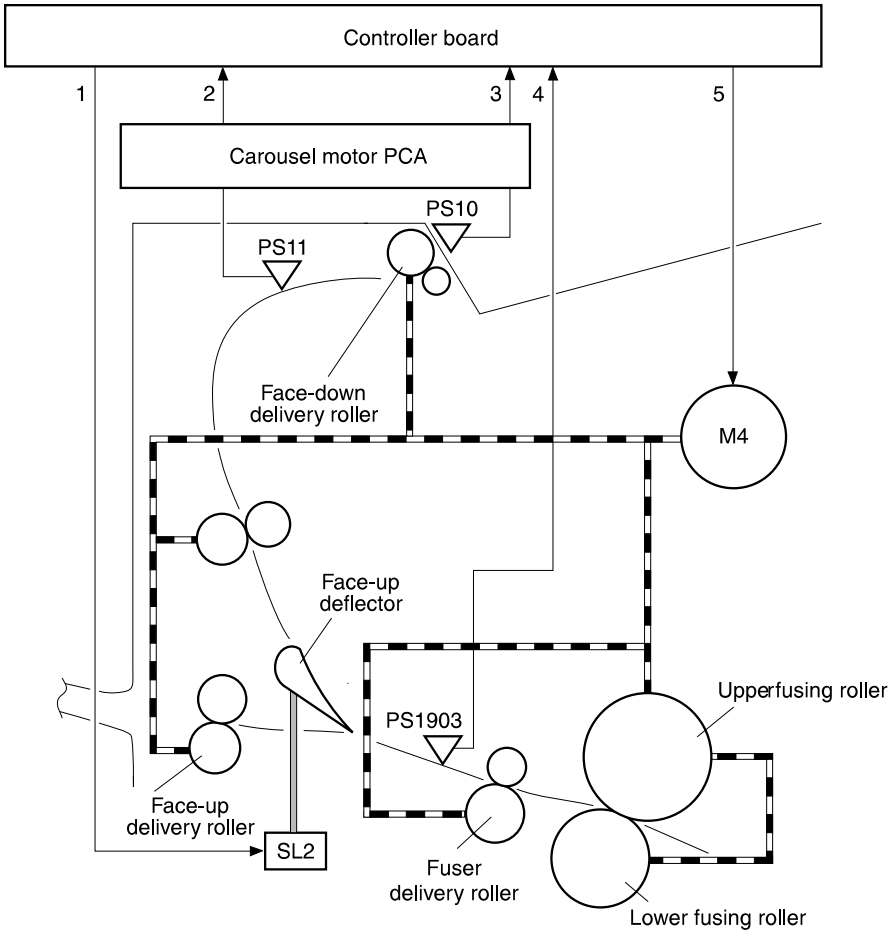


Figure 60. **Fusing and delivery unit**

1	Left (face-up) output bin solenoid drive signal	**PS10**	Top (face-down) output bin paper full sensor
2	Top (face-down) output bin delivery detection signal	**PS11**	Top (face-down) output bin delivery sensor
3	Top (face-down) output bin paper full detection signal	**PS1903**	Fusing delivery sensor
4	Fusing delivery detection signal	**SL2**	Left (face-up) output bin solenoid
5	Main motor (M4) drive signal	**M4**	Main motor

Media jam detection

The controller board checks if paper is at the appropriate sensor at the proper time. If the controller board detects a media jam, the printer stops printing and signals a jam condition to the formatter board.

Printer timing

The formatter PCA and controller board PCA share information during the printer operation. This information consists of printer status, command, and dot-image data. Figures 61 through 66 show the timing of different printer events.

(Unit:second)

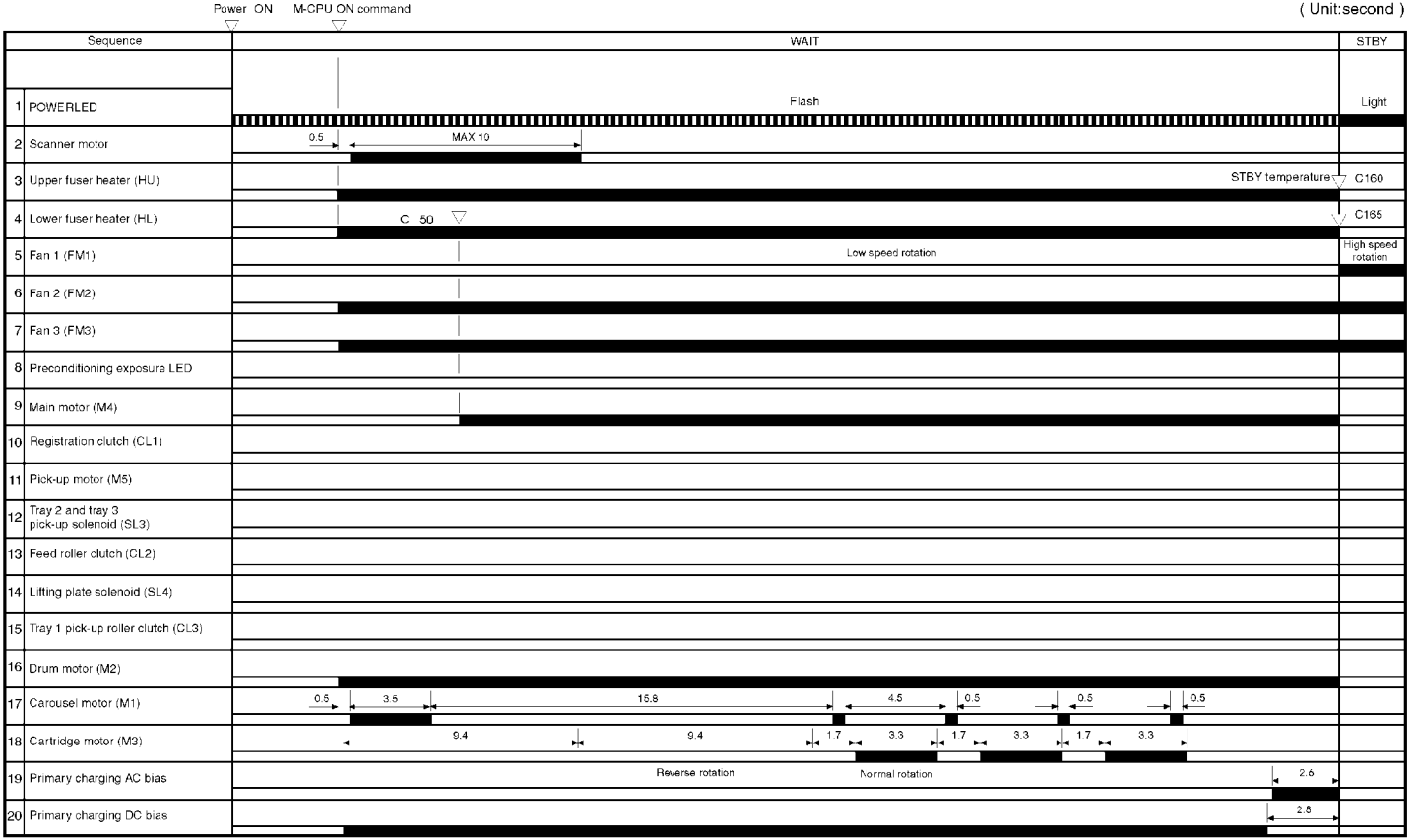


Figure 61. Timing chart for WAIT period (1 of 2)

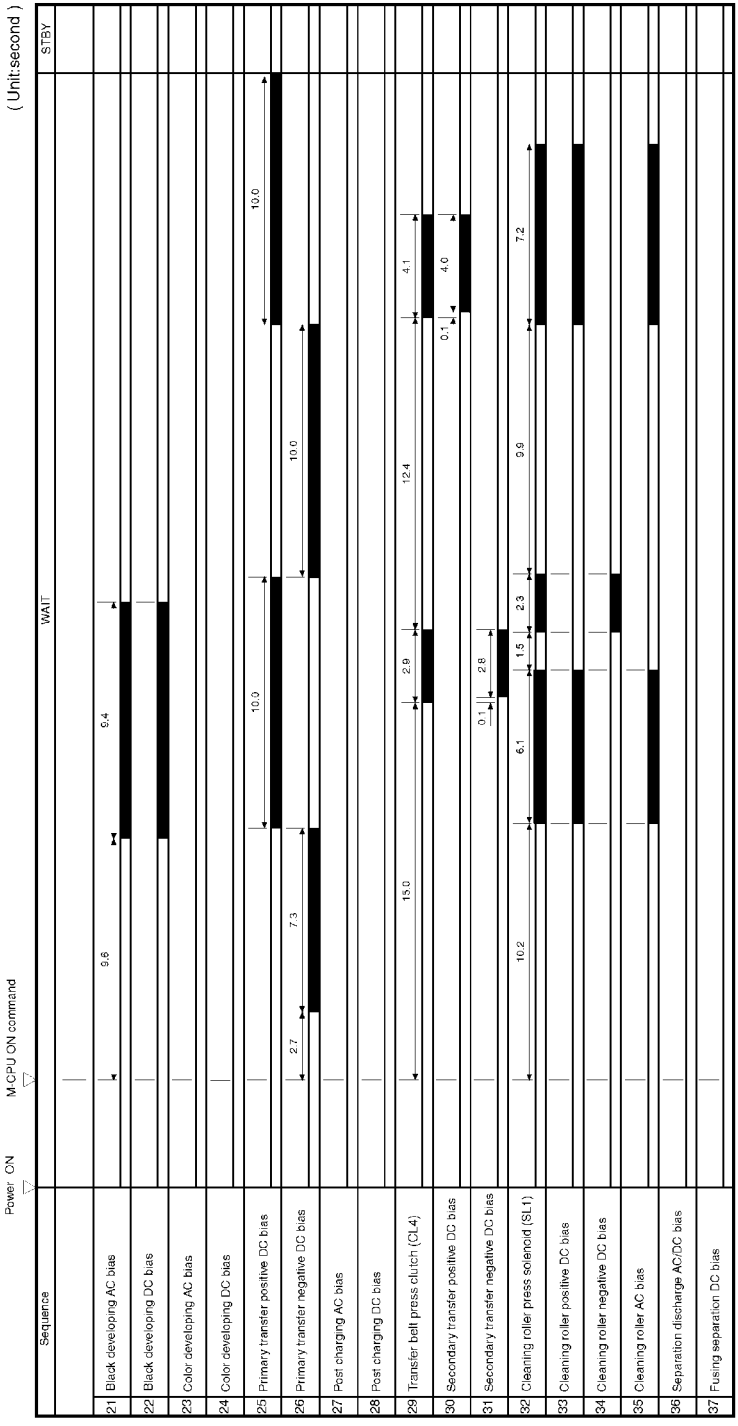


Figure 62. Timing chart for WAIT period (2 of 2)

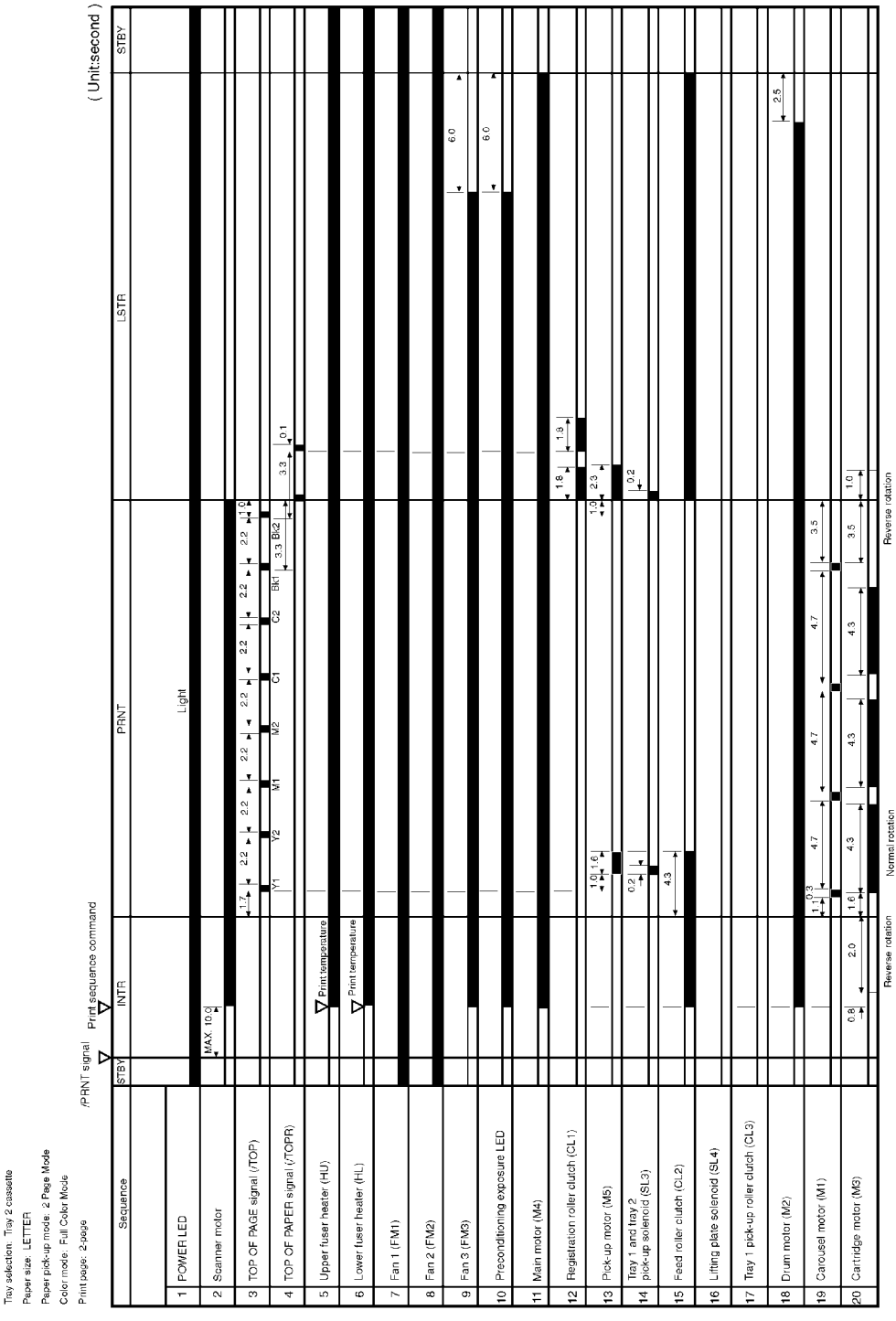


Figure 63. Timing chart, printing full-color letter-sized page (1 of 2)

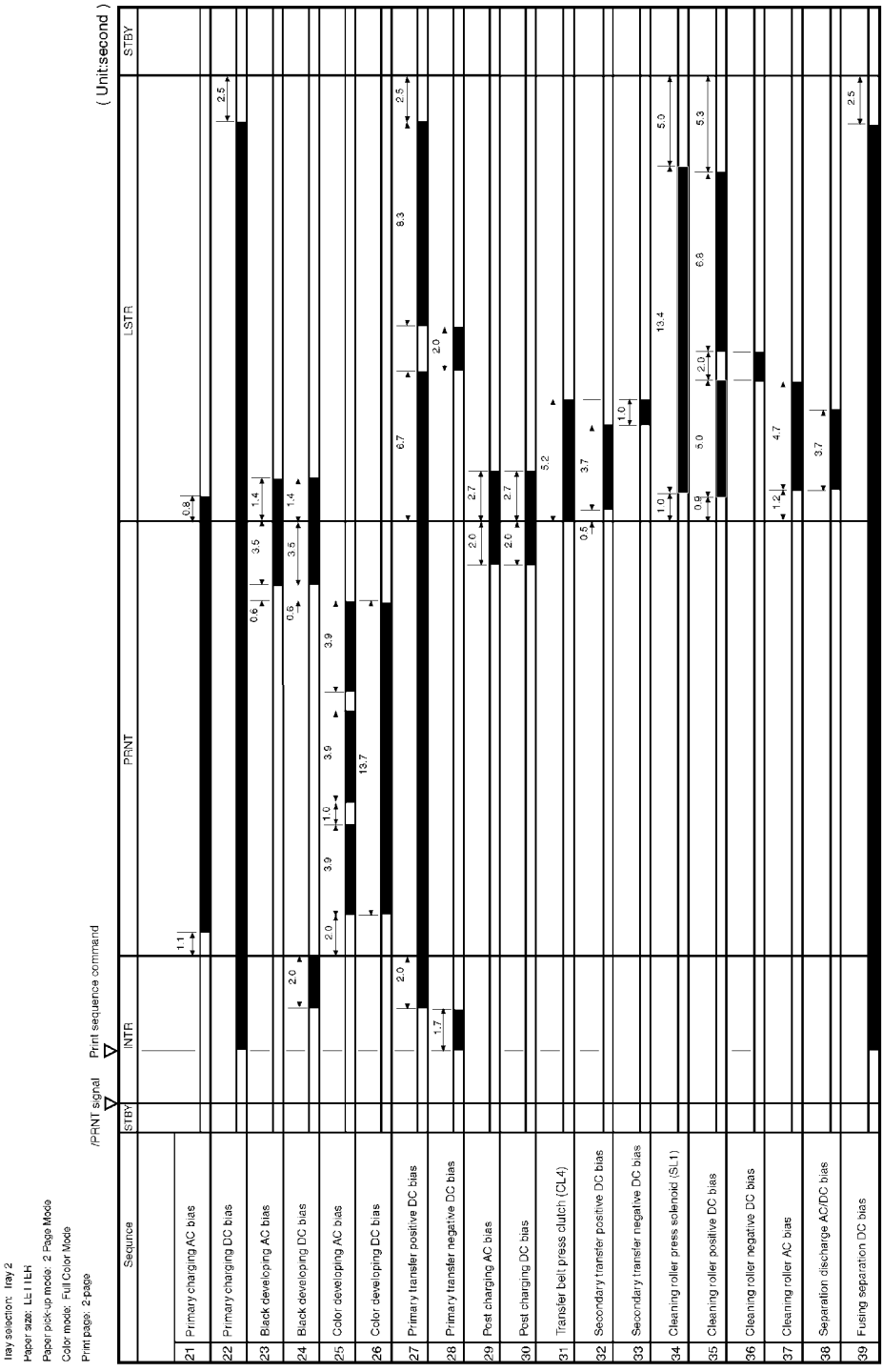


Figure 64. Timing chart, printing full-color letter-sized page (2 of 2)

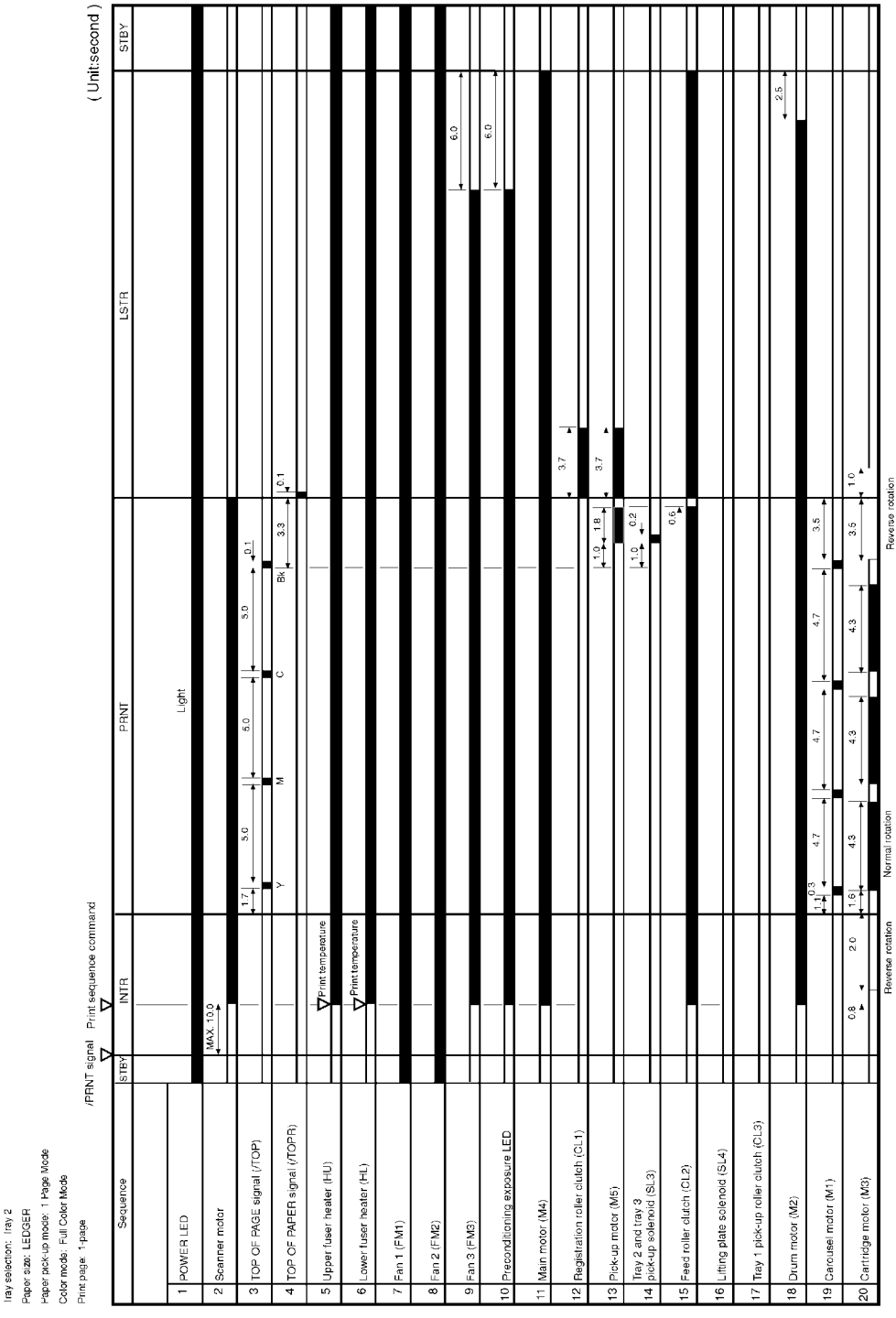


Figure 65. Timing chart, printing full-color 11-by-17-inch page (1 of 2)

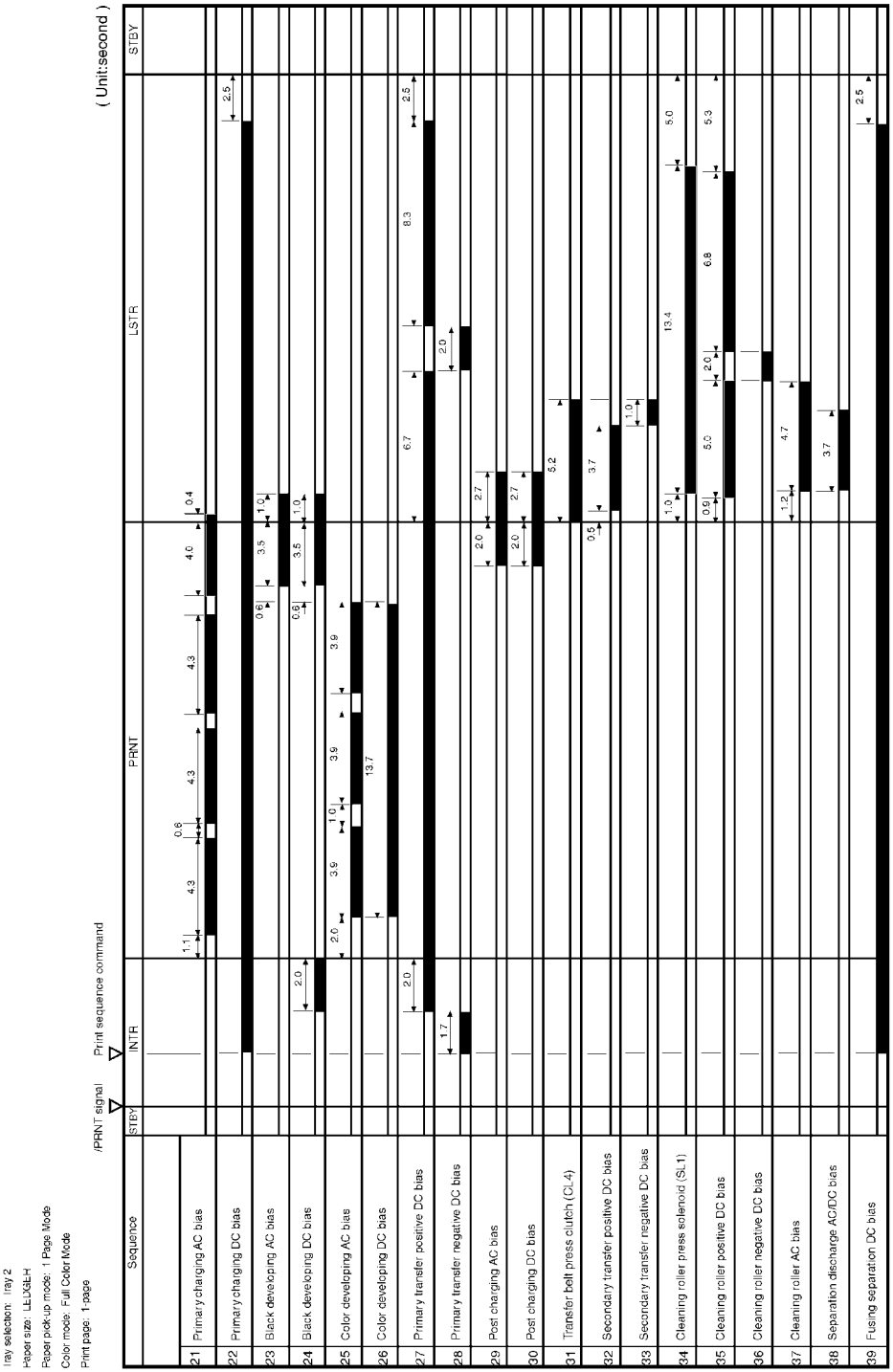


Figure 66. Timing chart, printing full-color 11-by-17 inch page (2 of 2)

EPH controller board

The external paper-handling (EPH) controller board controls the communication from the printer to the input and output devices. The EPH controller board PCA is integrated onto the printer formatter PCA.

Duplexer

The duplexer is installed below the fusing assembly. The back side of the paper is printed first. Then the paper is turned over and fed back through the paper path to print on the front side. The duplexer supports variable engine input speeds.

2,000-sheet input unit

The 2,000-sheet input unit is a multi-speed high-capacity device that feeds paper to the printer. The 2,000-sheet input unit also automatically senses the paper size.

Power supply

The 2,000-sheet input unit has an internal power supply that is activated when the printer power switch is turned on. The EPH controller board on the printer sends a power-on signal to the power supply on the 2,000-sheet input unit. When the signal is high, the power supply provides both +24 V and +5 V to the paper deck driver. The +24V drives the motors, clutches, and solenoids for the lifter, feed, and pick-up systems. The +5 V drives the sensors and PCA electronics.

Sensors, switches, clutches, and motors

Figure 67 and the table below illustrate and describe the sensors, switches, clutches, and motors on the 2,000-sheet input unit.

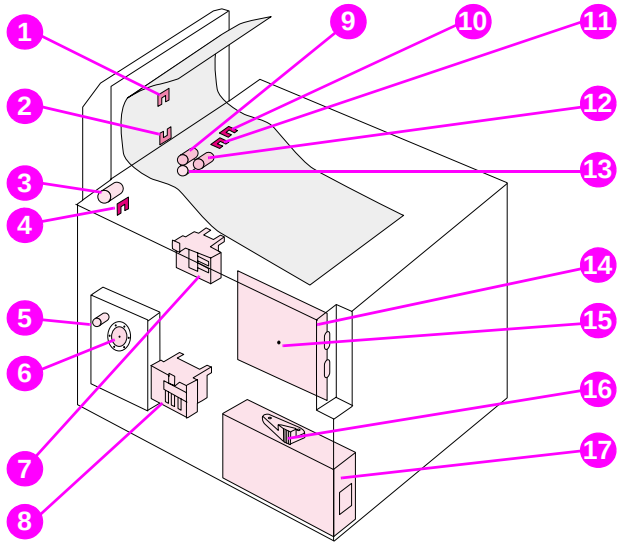


Figure 67. **2,000-sheet input unit sensors, switches, clutches, and motors**

Ref.	Control device	Description	Ref.	Description
1	PS32	Paper exit sensor	11	Feed roller
2	PS31	Paper entry sensor	12	Pickup roller
3	CL32	Main drive clutch	13	Separation roller
4	PS35	Vertical transfer unit (VTU) closed sensor	14	Controller board PCA
5	CL31	VTU clutch	15	‘Diagnostic LEDs
6	MT31	Main motor	16	Normal/diagnostic mode switch
7	SW601 - SW602	Paper quantity switches		
8	SW701 - SW704	Paper size switches	17	Power supply
9	PS34	Paper tray raised sensor		
10	PS33	Paper tray empty sensor		

Pick-up and feed system

When the 2,000-sheet input unit is loaded with paper and the paper tray is closed, the paper stack lifts into position under the pick-up, feed, and separation rollers. This operation is detected by the PS34 sensor in the 2,000-sheet input unit's pick-up assembly. The presence of paper in the paper tray is detected by the PS33 sensor. The paper level is detected by switches SW601 and SW602. The paper size is detected by switches SW701 through SW704.

When the EPH controller board on the printer sends an input command to the controller board PCA on the 2,000-sheet input unit, the paper deck driver runs the pick-up motor to rotate the pick-up, feed, and separation rollers. As the pick-up roller turns, the paper feeds into the VTU and passes through the PS31 and PS32 sensors.

If the paper fails to reach the PS31 and PS32 sensors in the VTU within the allotted time, the controller board PCA on the 2,000-sheet input unit assumes that a paper jam has occurred. The 2,000-sheet input unit stops operating and reports the jam to the EPH controller board on the printer. A paper jam message appears on the printer control panel.

Switch functionality

The following tables describe the functionality of the paper-quantity and paper-size switches in the 2,000-sheet input unit.

Table 38. Paper-quantity detection switches

SW601	SW602	Remaining paper
Off	Off	100%
On	Off	75%
On	On	50%
Off	On	25%

Table 39. Paper-size detection switches

Paper size	SW701	SW702	SW703	SW704
A3 (portrait)	On	On	Off	Off
A4 (landscape)	On	On	Off	On
B4 (portrait)	Off	Off	On	Off
Ledger (portrait)	Off	On	Off	Off
Legal (portrait)	Off	On	On	Off
Letter (landscape)	Off	On	Off	On

Lifter operation

The lifting plate in the 2,000-sheet input unit is held by two wires that are wound on four pulleys by the lifter motor. When the paper tray is open, the pulley gears disengage from the lifter motor gears, and the lifting plate is lowered by its own weight. The presence or absence of the tray is detected by switches SW701 through SW704 on the unit paper/tray size switch assembly.

After the paper tray is closed, the lifter motor raises the paper stack into position; this action is detected by the PS34 sensor. The PS34 sensor also maintains the height of the paper stack. As pages are picked up by the rollers, the number of sheets decreases. Once the paper stack decreases to a certain level, the PS34 sensor registers a low condition. Then the paper deck driver turns on the lifter motor again and lifts the paper stack until the PS34 sensor registers sufficient paper in the tray.

Paper path

Figure 68 illustrates the paper path components in the 2,000-sheet input unit.

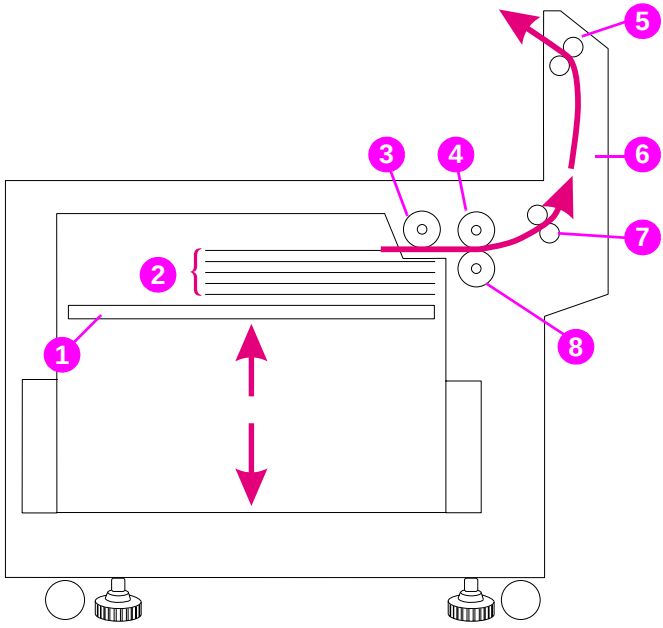


Figure 68. **2,000-sheet input unit paper path**

1	Lifting plate	**5**	Upper VTU rollers
2	Paper stack	**6**	VTU
3	Pick-up roller	**7**	Lower VTU rollers
4	Feed roller	**8**	Separation roller

Multi-bin mailbox

The multi-bin mailbox is an output unit designed for variable speeds, from 6 to 32 ppm. The multi-bin mailbox holds up to 2,100 sheets distributed in eight 250-sheet face-down bins and one 100-sheet face-up bin.

Operating modes

The multi-bin mailbox features four intelligent and configurable operating modes.

- **Mailbox mode** — The network administrator can address each bin as an output destination with a name assigned to it. The printer sends a print job to the selected bin. If the assigned bin is full, the printer stops printing.
- **Job separator mode** — Each print job (or copy, if printing multiple original copies) is placed in a separate bin. All multi-bin mailbox bins are used for this purpose, starting with the first face-down bin (at the top). If a multi-bin mailbox bin is full, the printer automatically sends the job to the next available bin. If there are more jobs than bins, the extra jobs will start again at the top face-down bin. This process is seen in the printer software as one logical bin.
- **Virtual stacker mode** — Printed sheets are stacked face down in the bins from the lowest bin to the top bin, regardless of where a print job begins or ends. All printed sheets are sent to the bottom bin until it is full; subsequent sheets are sent to the next upward bin until it is full. This mode of operation takes advantage of the total capacity of the multi-bin mailbox bins. In this mode, the software sees the multi-bin mailbox as one logical bin. When the multi-bin mailbox is full, the printer stops sending paper until all the bins are emptied.

Configuring operating modes

The network administrator chooses the mode of operation through an HP network configuration utility, such as the HP JetAdmin software or the HP LaserJet utility for the Macintosh. Additionally, on all workstations that print to the printer, the printer driver might need to be set up to reflect the chosen operating mode.

- **Bidirectional environment** — The printer automatically selects the mode established by the network administrator.
- **Unidirectional environment** — The mode of operation can be changed in the driver to reflect the current multi-bin mailbox settings. The method for changing the mode varies with the driver and type of operating system. For additional information, see the online help for the printer software.

Power-on sequence

During the power-on sequence, the delivery head assembly moves first to the top, “home” position at the face-up bin. From that position the delivery head moves down, scanning to determine if all the multi-bin mailbox bins are installed, if they contain paper, and if they are full. Then the delivery head proceeds upward again to the home position and remains there for about 7 seconds. Finally, the delivery head assembly moves to the bottom bin, where it waits for the next command from the EPH controller board.

Note If one of the bins has been removed or is not seated correctly, the delivery head assembly will not complete the scan and will send an error message to the printer control panel.

Communication link (C-link) cables

Communication with the multi-bin mailbox is handled through the EPH controller board on the printer. The information coming from the EPH controller board is carried by the C-link cables that connect the EPH controller board PCA to all the devices that support the C-link protocol. Figure 69 shows the C-link connections.

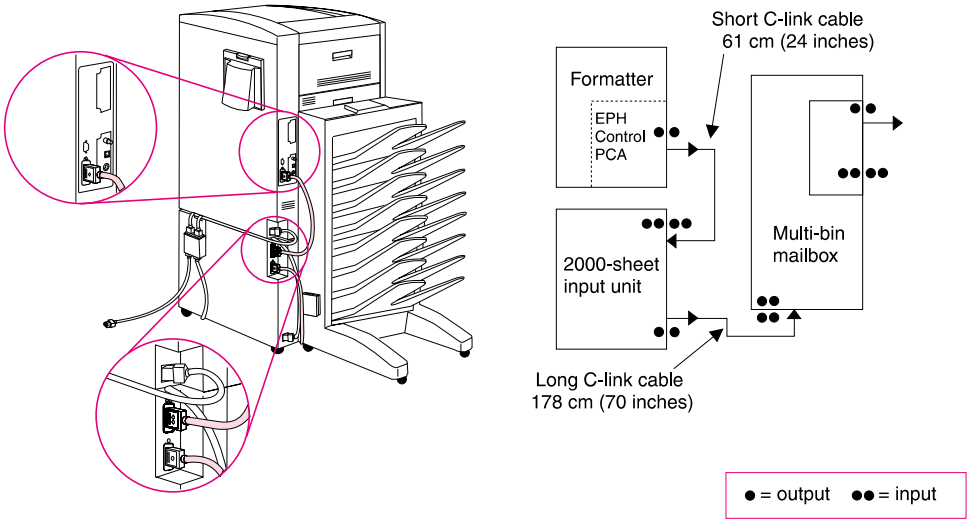


Figure 69. **Multi-bin mailbox cabling**

Sensors, switches, motors, and controller board PCA

Figure 70 and table 40 illustrate and describe the multi-bin mailbox sensors, switches, motors, and controller board PCA.

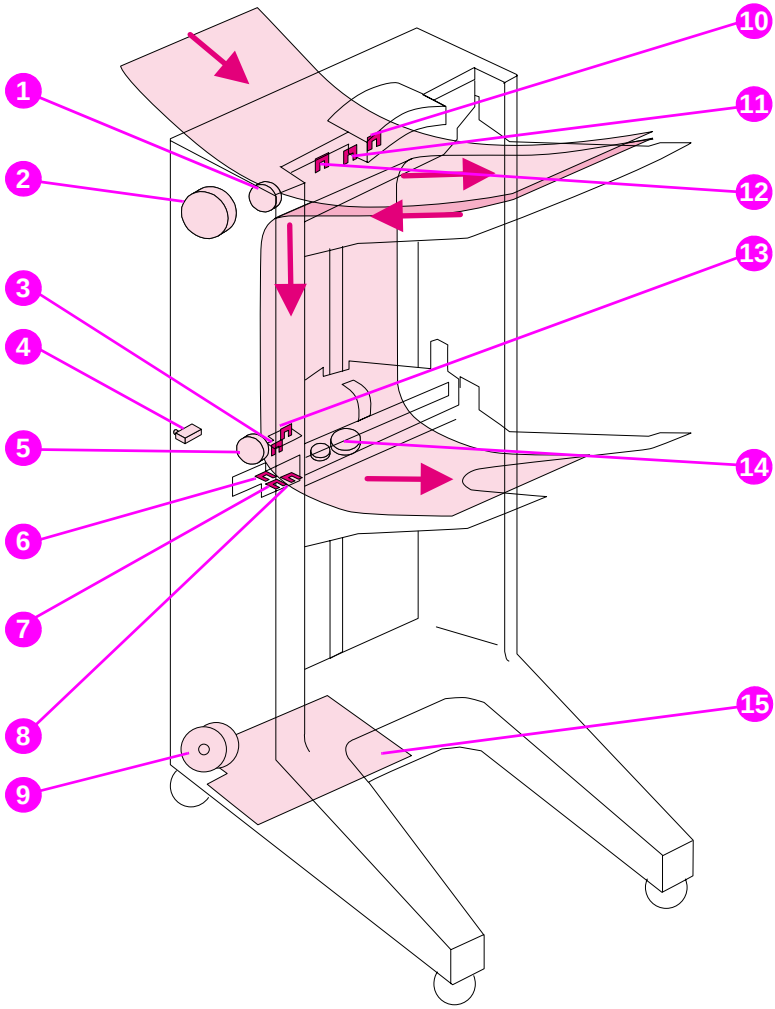


Figure 70. **Multi-bin mailbox sensors**

Table 40. Multi-bin mailbox sensors, switches, motors, controller board PCA

Ref.	Control device	Description
1	M2	Flipper roller motor with encoder
2	M1	Delivery head motor
3	PSEject	Delivery-rollers-extended sensor
4	SW1	Interlock switch
5	M3	Delivery head roller motor
6	PSBinFull/Head Position	Paper-bin-full sensor (below)
7	PSBinEmpty	Paper-bin-empty sensor
8	PSExit2	Paper-delivered-to-bin sensor
9	M5	Transport belt motor
10	PSFaceUp	Reverse-stepper-motor sensor
11	PSFaceFull	Left-output-bin-full sensor
12	PSEntry	Paper-entry sensor
13	PSExit1	Paper-delivered-to-head sensor
14	M4	Ejector motor
15		Controller board PCA

Receiving paper

The printer delivers paper to the multi-bin mailbox through the face-up delivery slot (input paper guide) at a rate of 107 mm per second. Paper arrival is sensed by the PSEntry sensor, which activates the flipper roller motor (M2), causing the paper to move through the multi-bin mailbox transport and delivery system.

Delivering paper

The delivery head assembly on the multi-bin mailbox moves or stays in the indicated bin according to the commands coming from the EPH controller board on the printer. If paper is designated for the face-up bin, the multi-bin mailbox feeds it through the flipper assembly. If paper is designated for one of the face-down output bins, the multi-bin mailbox feeds it through the flipper assembly until the trailing edge is sensed by the PSFaceUp sensor. Then the flipper roller motor (M2) reverses and feeds the paper down between the transport belt and the metal tape until it reaches the delivery head assembly.

Paper path

Figure 71 illustrates the components of the multi-bin mailbox paper path.

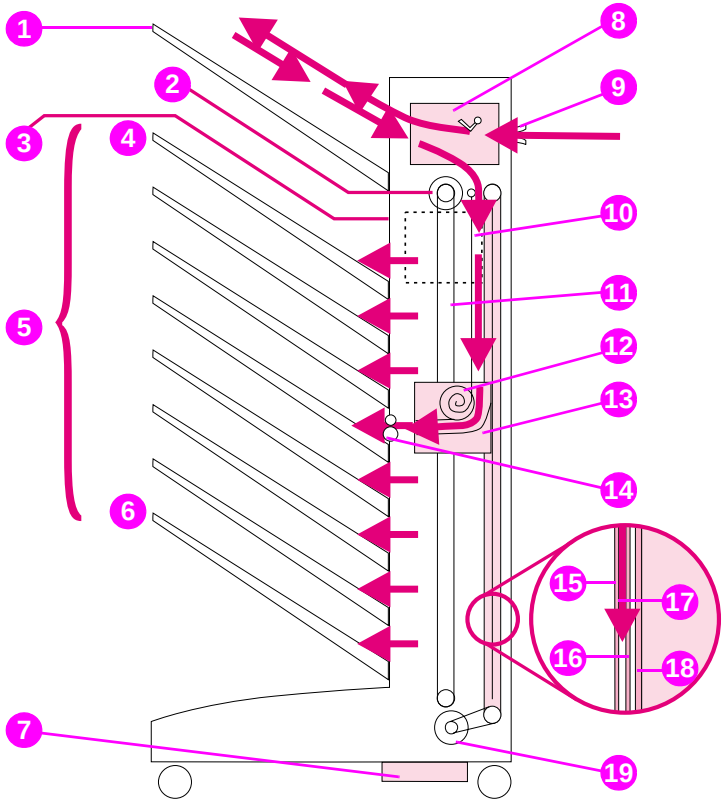


Figure 71. **Multi-bin mailbox paper path**

1 Face-up bin
2 Delivery head motor
3 Blind cover
4 Bin 1
5 Face-down bins
6 Bin 8
7 Controller board PCA
8 Flipper assembly
9 Input paper guide
10 Home position
11 Delivery head line
12 Metal tape
13 Delivery head assembly
14 Eject rollers
15 Metal tape
16 Transport belt
17 Paper
18 Magnetic strip
19 Transport belt motor

3,000-sheet stapler/stacker

Device configuration

The HP 3,000-sheet stapler/stacker and the HP 3,000-sheet stacker attach to printers' left sides.

3,000-sheet stapler/stacker

Set the default offset action and default stapler action at the printer control panel under `Configuration of Stkr`.

The options for default offset action are:

● No	Print jobs or mopies are stacked without separation (although stapling options override this setting).
● Yes	Print jobs or mopies are offset from each other.

The options for default stapler action are:

● No staple	Print jobs or mopies are delivered to the stapler bin without being stapled.
● One angled staple	Print jobs or mopies are stapled with one staple at a 40° angle.
● (#) staples	Print jobs or mopies are stapled with the configured number (1, 2, 3, or 6) of staples.
● Custom staples	Print jobs or mopies are stapled with the configured number of staples as defined by the network administrator.

3,000-sheet stacker

Set the default offset action at the printer control panel under `Configuration of Stkr`. The options for default offset action are:

● No	Print jobs or mopies are stacked without separation.
● Yes	Print jobs or mopies are offset from each other.
● Job Separator	Print jobs or mopies are separated by offsetting the first page.

Power supply

A universal power supply is activated when the printer's power switch is turned on. The printer's paper handling controller sends a power-on signal to the power supply through the controller PCA.

The power supply provides +26 V (volts) for motors and +5 V for sensors and controller electronics. The power supply is also activated when the controller PCA is set to service mode.

Power-on sequence

During the power-on sequence, an internal self-test is performed. All motors, electronics, and main assemblies are tested.

After successful power-on sequence, the user LED is lit green.

If the power-on sequence is NOT successful, a jam condition or a hardware malfunction is indicated through the printer control panel and the user LED is lit amber.

C-link communication

Communication and control of the C-link devices is accomplished through the paper-handling controller embedded on the formatter PCA (printed circuit assembly) in the printer. The C-link devices have their own power supplies and controller boards that receive signals and commands from the paper-handling controller.

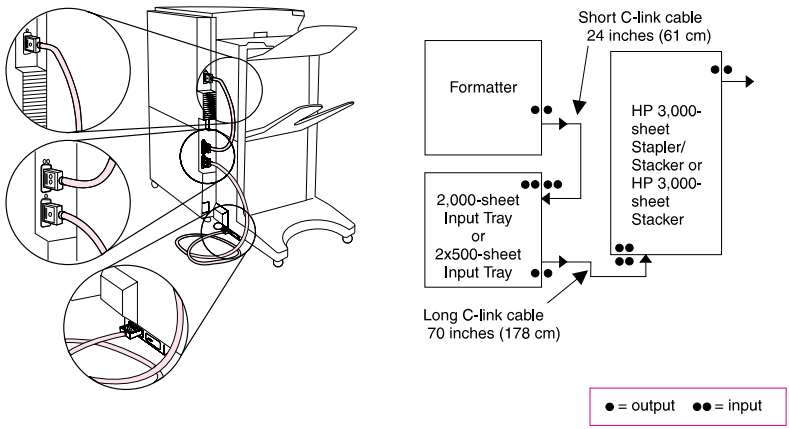


Figure 72. **C-link cabling**

Paper path sensors and jam detection

The paper path sensors detect paper jams as follows:

- Flipper entry sensor 1 (FLEntry1) and flipper entry sensor (FLEntry):
  - paper in the flipper at power on or after clearing a paper jam (when either sensor is activated at power on or after clearing a jam)
  - paper jammed before entering the flipper (when the printer sends a message that pages are being sent to the stapler/stacker or stacker, but FLEntry1 is never activated)
  - paper jammed in the flipper (when FLEntry1 is activated, but FLEntry is not, or when FLEntry1 is never deactivated, or when FLEntry is never deactivated)
- Flipper exit sensor (FLExit)
  - paper in the flipper at power on or after clearing a paper jam (when FLExit is activated at power on or after clearing a jam)
  - paper jammed in the last part of flipping (FLExit never activated)
  - paper jammed entering the accumulator (FLExit never deactivated)
- Gear wheel sensor (GWSens)—stapler/stacker only
  - paper jammed in the accumulator (GWSens never activated)
- Accumulator exit sensor (ACExit)—stapler/stacker only
  - paper in the accumulator at power on or after clearing a paper jam (when ACExit is activated at power on or after clearing a jam)
  - paper jammed in the accumulator (when ACExit is not deactivated after eject)
- Exit (Exit)—stacker only
  - paper jammed in the offset module (Exit never activated)

Paper path

Paper input

The device receives paper from the printer at different speeds—106, 117, or 147 mm/second—depending on the printer in use.

Flipper

Paper arrival is sensed by FLEntry1, which activates the flipper motors. For face-up printing, the flipper simply delivers paper sensed by FLEntry to the face-up bin. Otherwise, the flipper changes page orientation from face-up to face-down and delivers paper sensed by FLExit to the accumulator assembly.

Accumulator assembly (stapler/stacker ONLY)

The accumulator assembly collects and registers print jobs/mopies from the flipper (sensed by GWSens), sends them to the carriage assembly for stapling, and delivers them to the stapler bin (sensed by ACExit).

Offset module (stacker ONLY)

The offset module collects and registers print jobs/mopies from the flipper (sensed by FLExit), offsets them (if selected), and delivers them to the stacker bin (sensed by Exit).

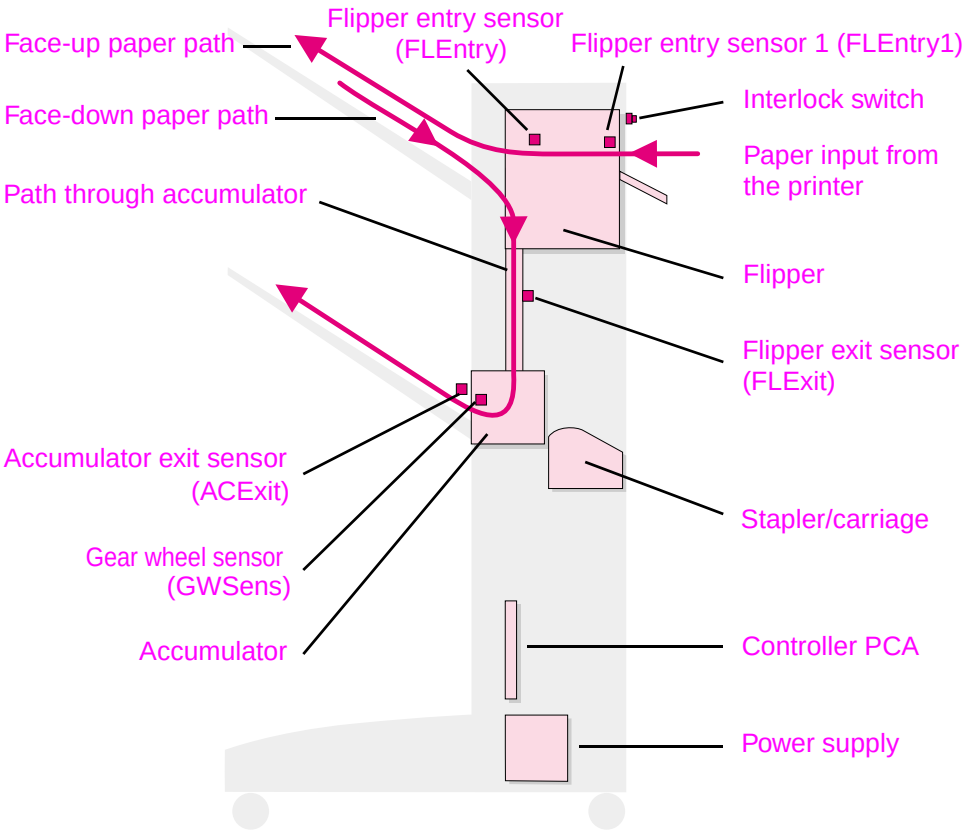


Figure 73. **Stapler/stacker paper path and sensors**

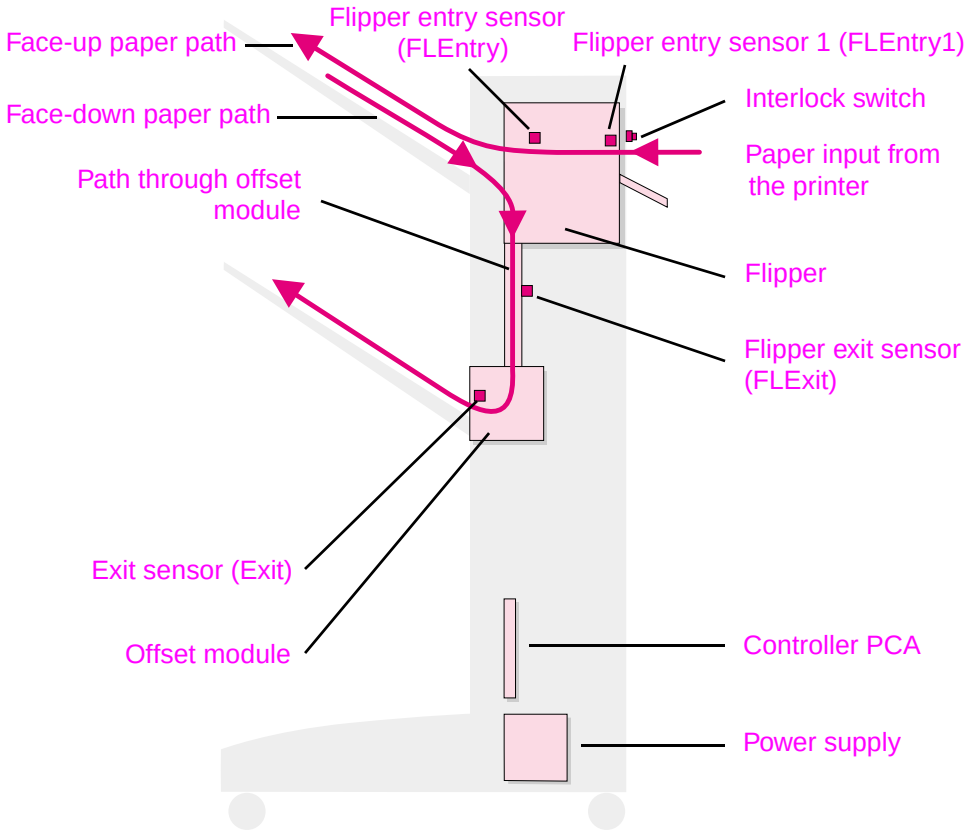


Figure 74. **Stacker paper path and sensors**

6 Removal and replacement

Chapter contents

Introduction

Removal and replacement strategy

This chapter explains how to remove and replace major printer components.

Replacement is generally the reverse of removal. Occasionally, directions for difficult or critical replacement procedures are included.

Repair notices

WARNING! Turn the printer off and disconnect the power cord before servicing the printer. Failure to follow this instruction could result in severe injury.

Never operate or service the printer with the protective cover removed from the scanner assembly. The reflected beam, although invisible, can damage your eyes.

The sheet-metal parts can have sharp edges. Be careful not to cut yourself when handling sheet-metal parts.

CAUTION Always protect the imaging drum from light and physical contact when removed from the printer. HP recommends reinstalling the original cover whenever the drum is removed from the printer.

Electrostatic discharge (ESD)

The printer contains parts that are sensitive to electrostatic discharge (ESD). Watch for the ESD reminder shown at the left while removing printer parts. Protect the parts that are sensitive to ESD by using an ESD wrist strap and protective ESD pouches.

Required tools

The following tools are needed to service the printer:

- Phillips #1 magnetized screwdriver, 6-inch (152-mm) shaft
- Phillips #2 magnetized screwdriver, 6-inch (152-mm) shaft
- T-10, T-15, and T-20 Torx driver, 6-inch (152-mm) shaft
- Flat-blade #2 screwdriver
- Small pair of needle-nose pliers
- ESD equipment (see page 222).
- Penlight
- Can of compressed air

If you are using a multi-speed screwdriver, ensure that you have a torque limiter. Ensure that you have a Phillips screwdriver and not a Posidriv screwdriver.

CAUTION To install a self-tapping screw, first turn it counterclockwise to align it with the existing thread pattern. Then carefully turn it clockwise to tighten it. Do not over-tighten. If a self-tapping screw hole becomes stripped, either repair the screw hole or replace the affected assembly.

Maintenance units

The user replaces the following maintenance units as part of periodic maintenance. Chapter 4 explains the maintenance procedures.

- Color toner cartridges
- Black toner cartridge
- Imaging drum
- Air filters
- Transfer drum
- Transfer belt
- Transfer charger
- Cleaning roller
- Charcoal filter
- Fuser
- Paper rollers

The printer keeps track of use on some of its user-replaceable parts. Because maintenance unit life is tracked by the formatter board by page count, swapping maintenance units between printers might cause a misrepresentation of maintenance unit life values.

Doors and covers

The following figures show the orientation of the printer and paper handling accessories as they are referred to in this chapter.

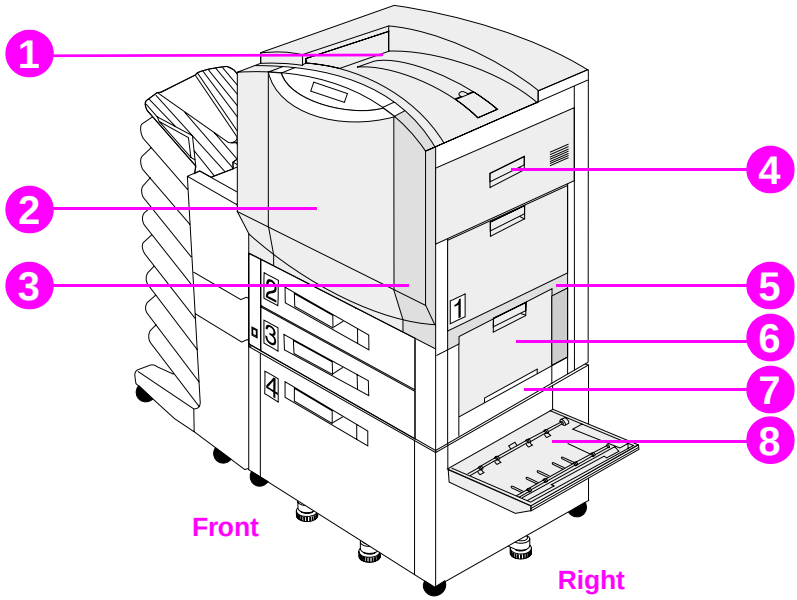


Figure 75. **Orientation of printer and accessories: top, front, and right**

1 Top cover assembly

2 Front cover

3 Front right cover

4 Right upper cover assembly (includes the right upper door)

5 Right cover subassembly

6 Right lower cover assembly (includes the right lower door)

7 Right rear cover

8 VTU

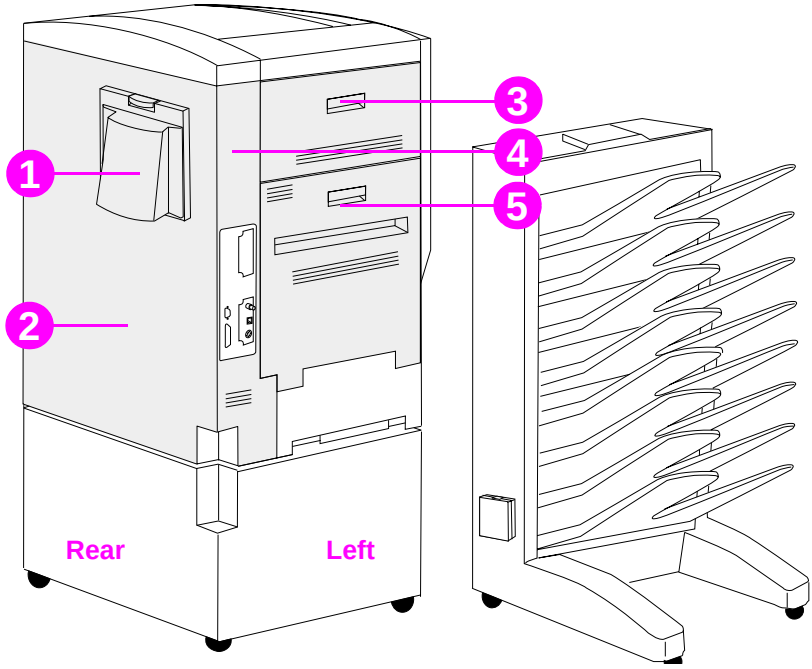


Figure 76. **Orientation of printer and accessories: rear and left**

1 Exhaust fan cover

2 Rear cover

3 Left upper cover (includes the left upper door)

4 Left rear cover

5 Left lower cover

HP Color LaserJet 8500 MFP printer—separating the printer from the frame

1 Remove two screws (callout 1) from the attachment cover on the left side of the printer to release the attachment cover.

2 Remove two screws (callout 2) from the attachment bracket.

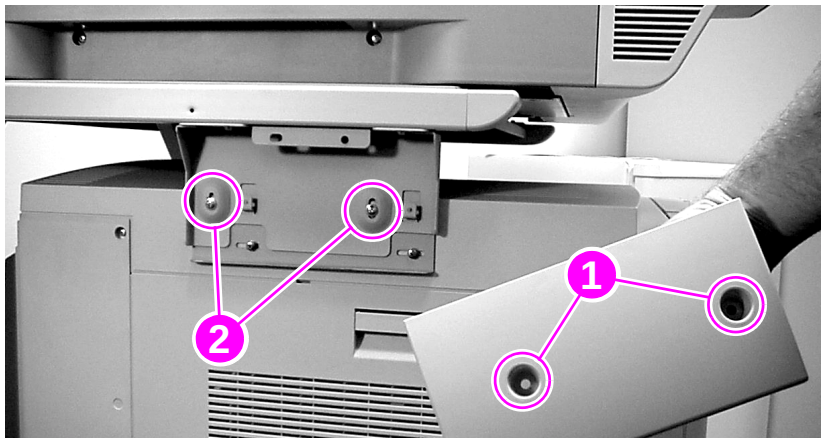


Figure 77. Attachment bracket, HP Color LaserJet 8550 MFP printer

3 On each side at the bottom of the rack, rotate the locking pins (callout 3) until they slide out of the holes.

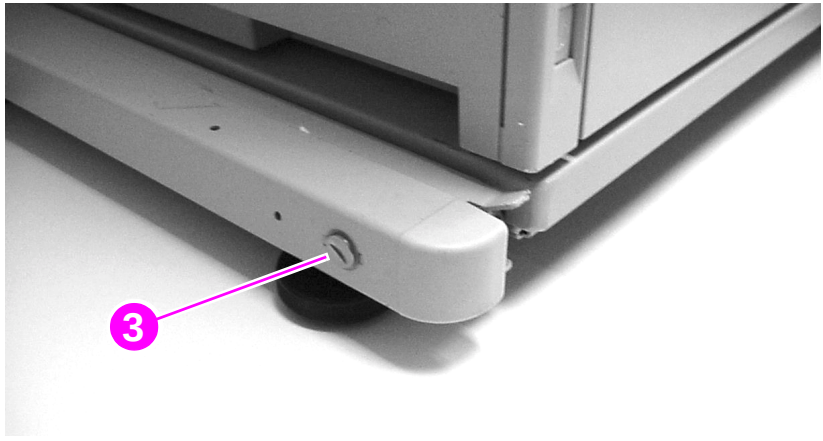


Figure 78. Locking pins

4 Roll the printer off of the rack.

Front covers and panels

Removing the front cover

1 Open the front cover.

2 Remove one screw holding the strap in place (callout 1).

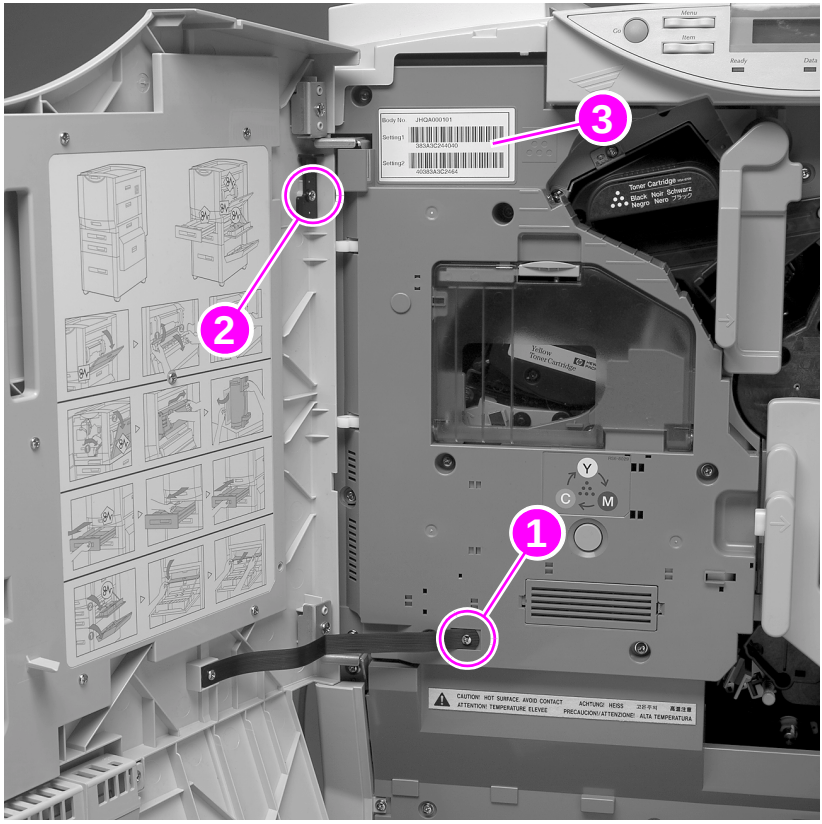


Figure 79. **Removing the front cover**

3 Remove one screw holding the cover (callout 2).

4 Open the cover to approximately a 45-degree angle and lift it up to remove it.

Note Callout 3 is the tag that shows engine settings; sections of Chapter 6, “Troubleshooting” refer to the tag.

Removing the front right cover

1 Open the front door.

2 Remove one screw in the upper right-hand side that holds the front right cover on (callout 1).

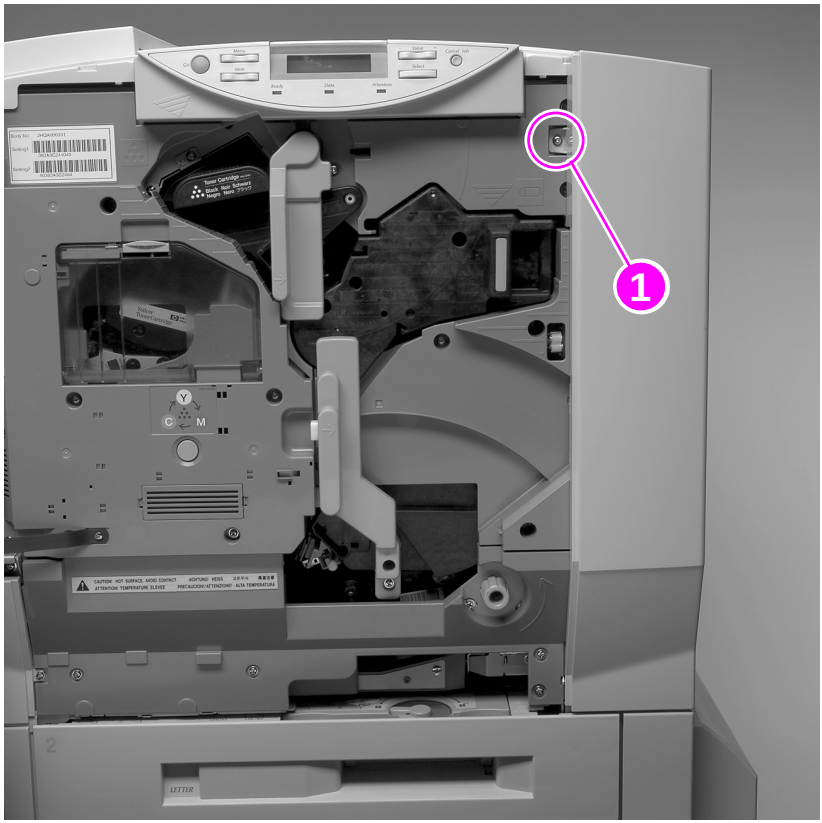


Figure 80. **Front right cover**

3 Pull the cover off.

Removing the inside left panel

1 Remove the front cover (see page 228).

2 Remove the top cover assembly (see page 232).

3 Remove eight screws on the inside panel (callout 1).

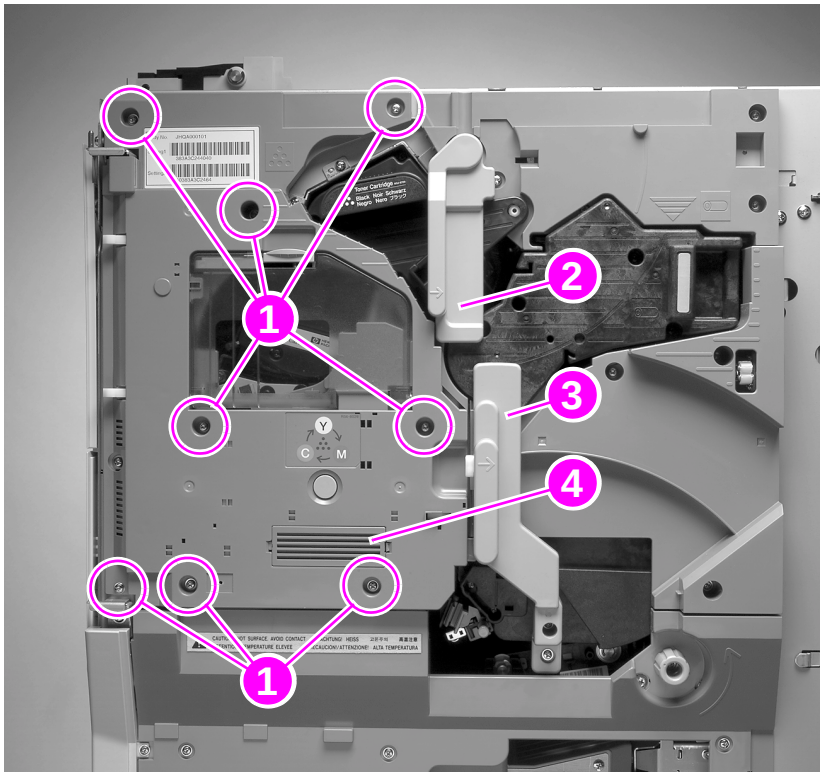


Figure 81. **Inside left panel**

4 Remove the waste toner tray cover (callout 2) by releasing the tab on the right side of the cover with a small screwdriver.

5 Remove the waste toner tray.

6 Open the left lower door to disengage the interlock.

7 Swing both the lower green lever (callout 3) and the upper blue lever (callout 4) to the right.

8 Pull the panel off.

Notes about reinstalling:

- When replacing the inside left panel, the lower left door and the toner carousel door must be open so that the interlock engages.

Removing the filler panel for tray 2 (HP Color LaserJet 8550 base model)

1 Open the front cover.

2 Release the tab at the top, towards the right, of the filler panel and rotate the top of the filler panel toward you.

Figure 82. **Filler panel for tray 2**

Note One screw secures the filler panel bracket. To replace the filler panel with a tray 2, remove the screw and the bracket before attempting to install a tray 2.

Top cover assembly

1 Remove the front right cover (see page 229). Leave the front door open.

2 Open the left door and loosen the two screws (callout 1).

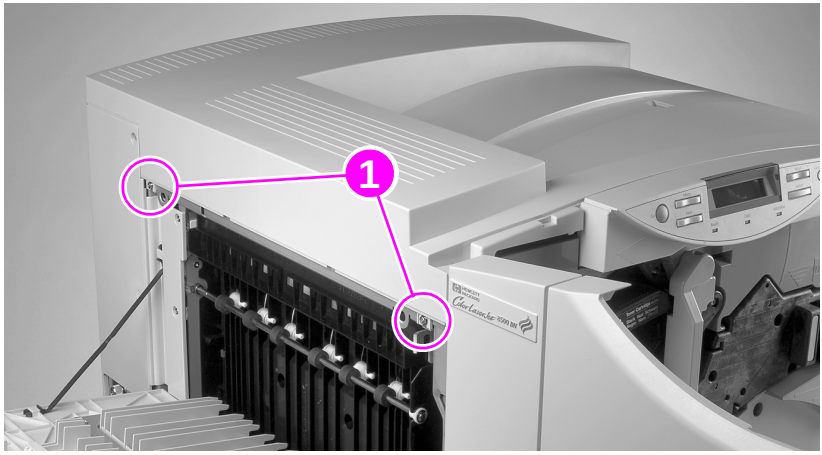


Figure 83. **Screws behind left door**

3 Open the right door and loosen the two screws (callout 2).

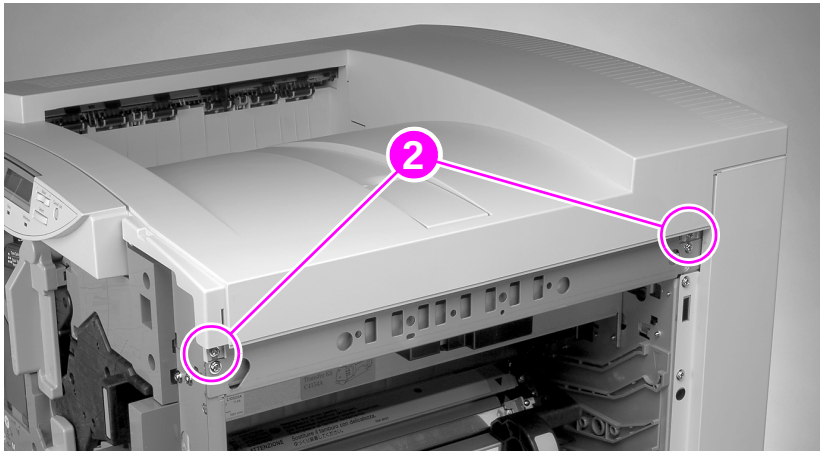


Figure 84. **Screws behind right door**

4 Open the front cover.

5 Lift the cover up and unplug the connector (callout 3) at the rear of the cover.

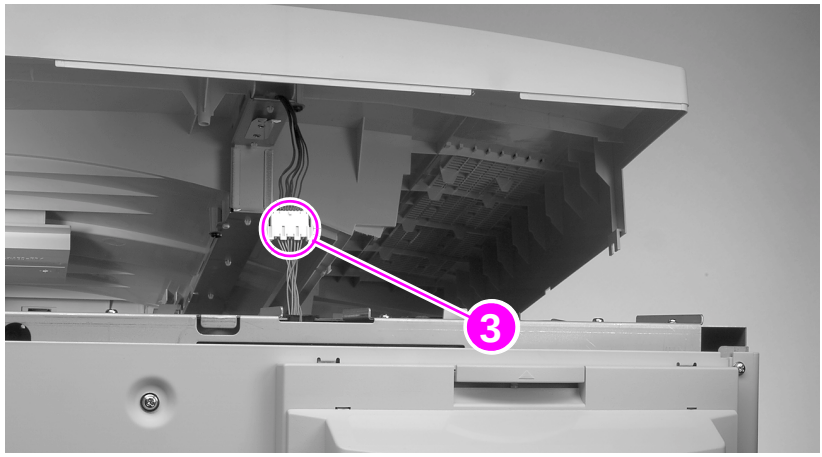


Figure 85. Connector on top cover

6 Remove the top cover assembly.

Left covers and doors

Removing the left rear cover

1. Open the left upper door.
2. Support the door and squeeze the prong with needle-nose pliers to unhook the strap holding the door to the left rear cover (callout 1).

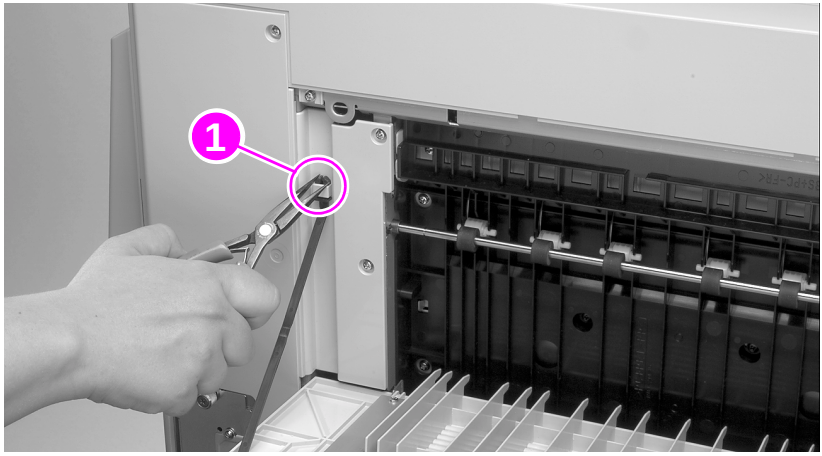


Figure 86. **Left door and strap**

3 Remove 11 screws (callout 2).

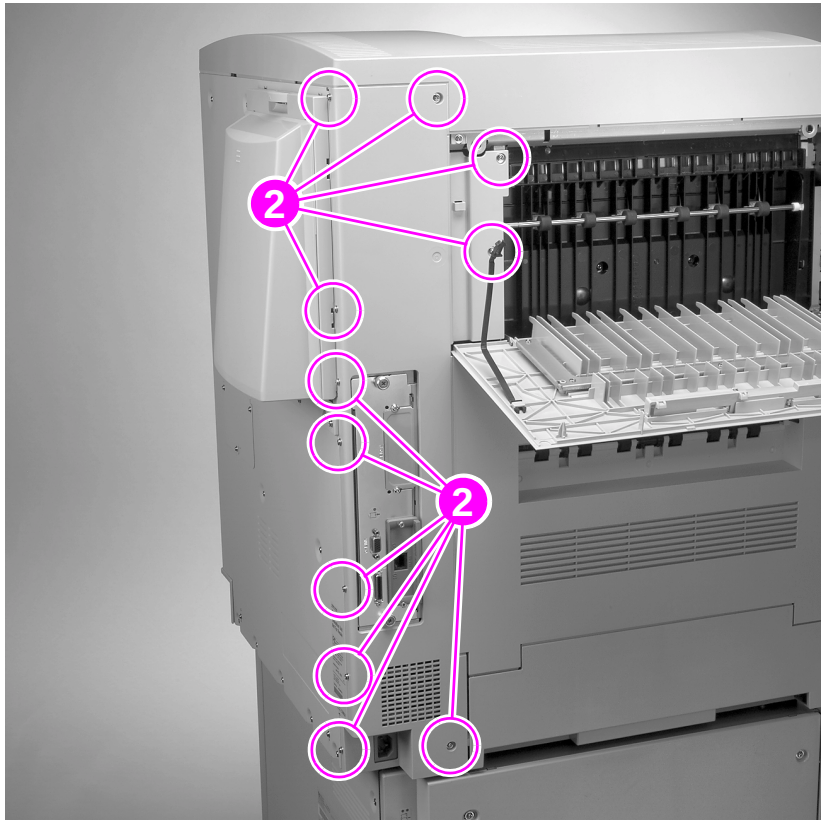


Figure 87. **Screws on left rear cover**

4 Pull the cover to the left and off.

Removing the left upper cover

1 Remove the left rear cover (see page 234).

2 Remove two screws on the rail (callout 1, one screw is on the left side of the cover and the other is located inside the front cover).

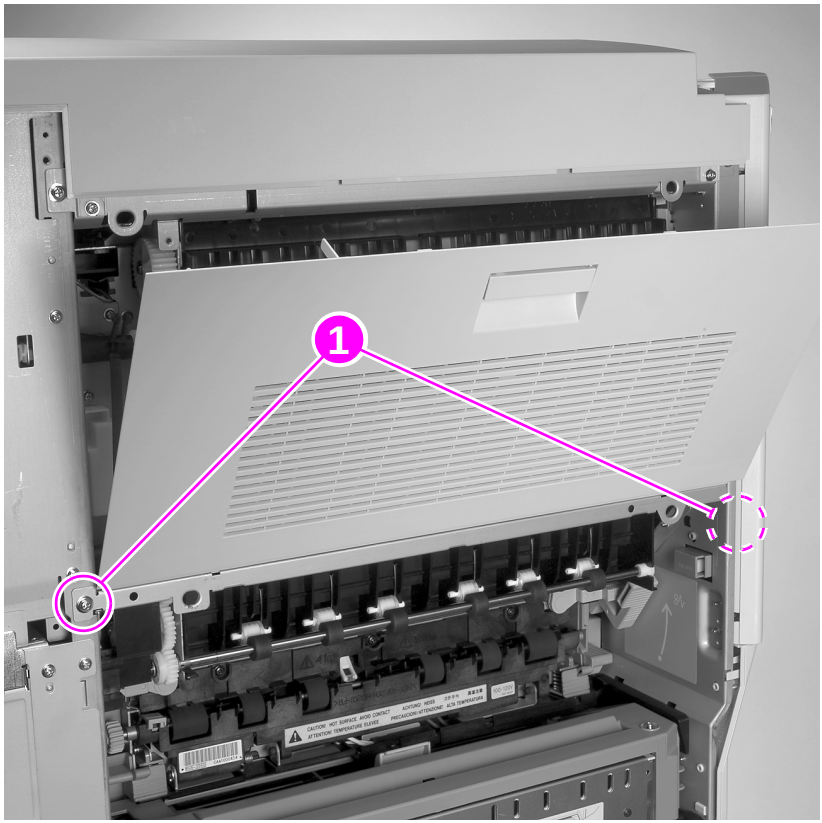


Figure 88. **Screws on upper left door**

3 Remove the door.

Removing the left lower cover

1 Open the left lower cover.

2 Push the spring-loaded stopper hinges (callout 1) towards the printer and down to release them.

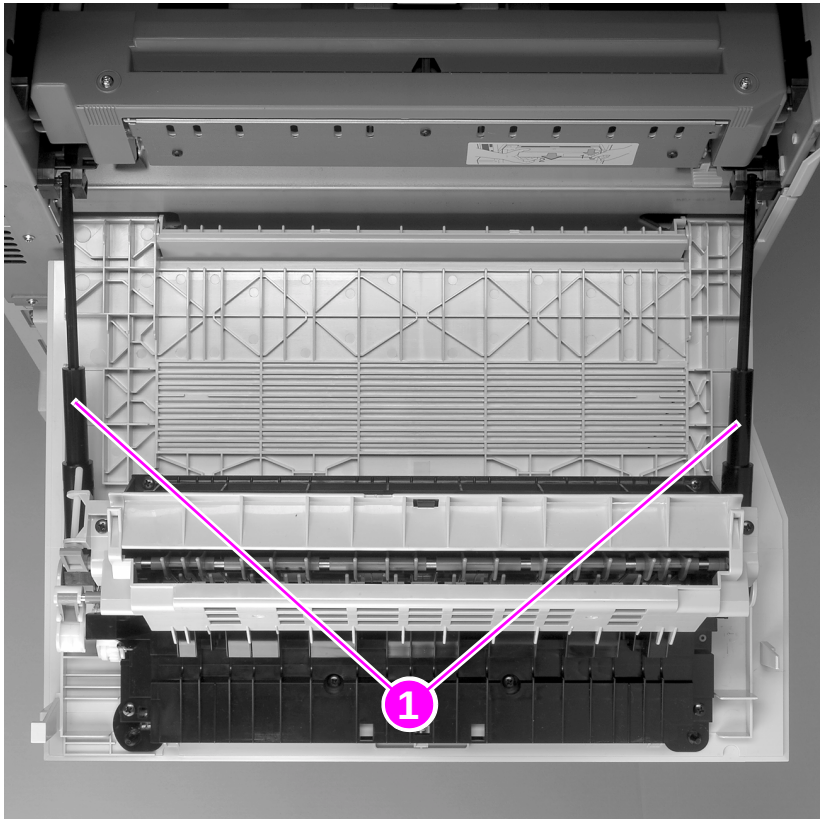


Figure 89. **Stopper hinges on lower left cover**

3 Move the cover to a 45-degree angle and lift the right side out.

4 Slide the cover to the left and up to release the left side.

Right covers and doors

Removing the right upper cover assembly

Tray 1 is part of the right upper door. Take the tray off and save it if you are replacing the whole assembly (see page 261). The new assembly does not include the tray.

1. Remove the rear cover (see page 243).
2. Open the right upper door.
3. On the right side of the door, unplug four connectors that lead through the printer frame to the right upper cover (callout 1).

Note Two connectors are plugged into the controller board, and two connectors are inline connectors. It might be easier to disconnect the connectors from the rear of the printer and pull the wires through the printer frame than to unplug the connectors from the right upper door.

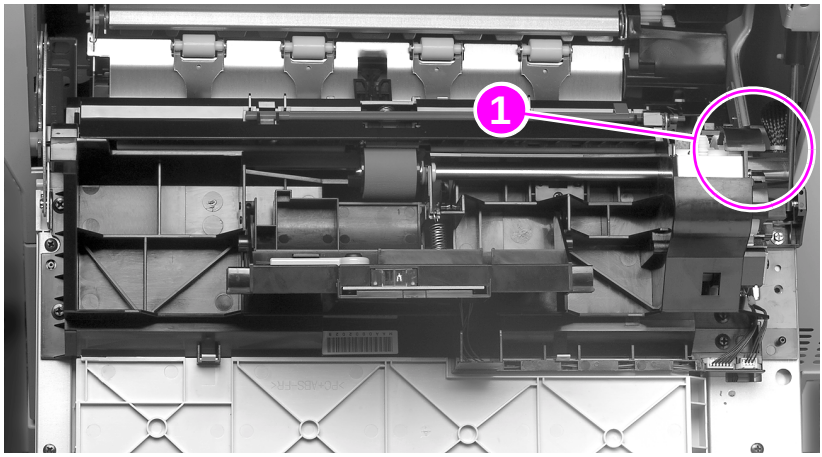


Figure 90. **Connectors on the right upper door**

4. Close the door to a 45-degree angle and release the spring-loaded hinges on the right side.

5 With needle-nose pliers, remove the e-ring from the hinge (callout 2) on the left side of the door.

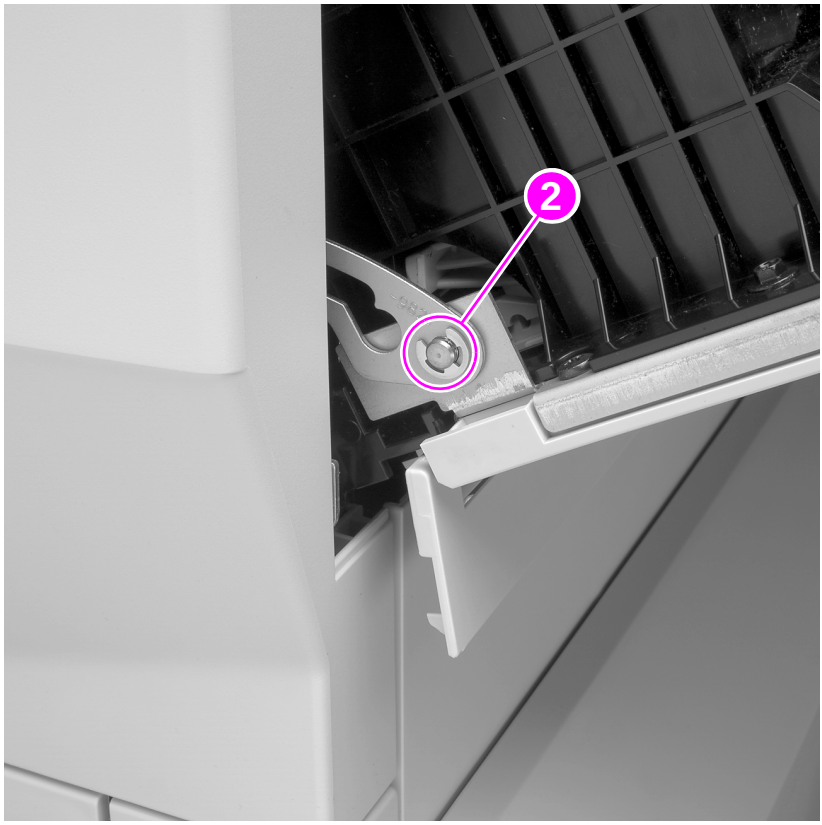


Figure 91. **E-ring**

6 Remove the front right cover (see page 229).

7 Rotate the plastic tab (located on the left hinge) in an upward direction to a 90-degree angle.

8 Lift the door slightly to the left and pull it away from the chassis.

Removing the right cover subassembly

Note Use this procedure if you want to separate the right cover subassembly from the right upper cover.

1. Open the right upper cover assembly slightly.
2. Pull the right side of the subassembly slightly to the right and pull outward on the right side to snap it out of place.
3. Move the subassembly slightly to the left and to remove it.

Note There is a small spring on the left side of the subassembly—be careful it does not fall off.

Notes about reinstalling:

- If the spring falls off the subassembly, slide it onto the pin and through the slot on the left side of the subassembly.

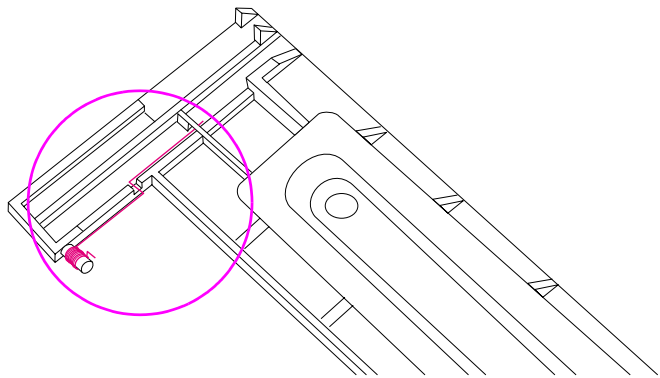


Figure 92. **Spring on right cover subassembly**

Removing the right rear cover

1 If you have a 2,000-sheet input unit, open the VTU.

2 Remove one screw (callout 1).

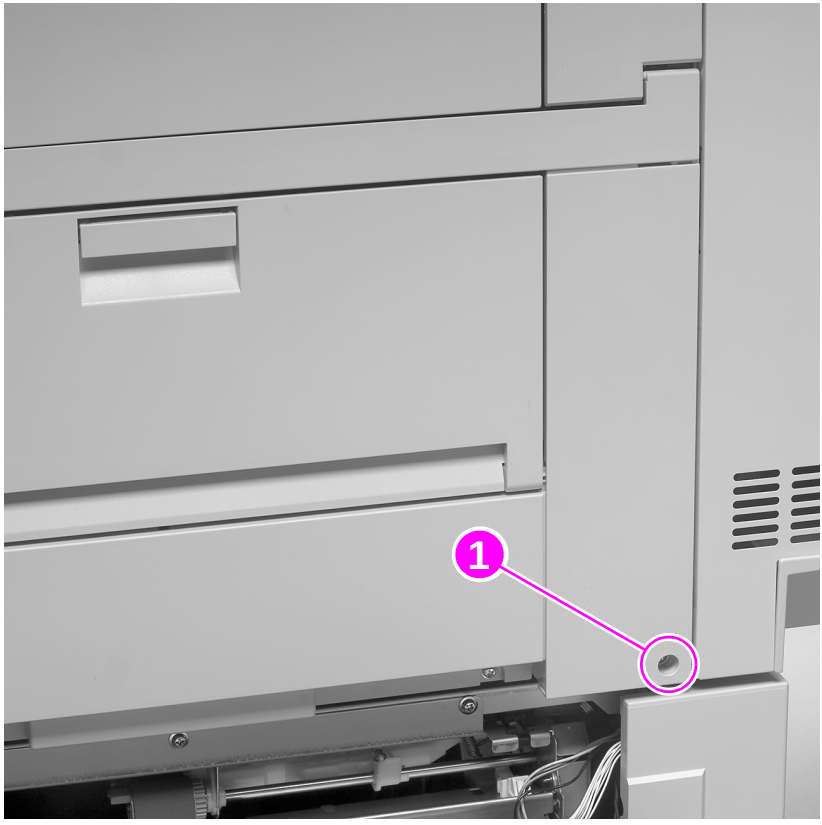


Figure 93. **Right rear cover**

3 Pull the bottom of the cover out and then down to remove the cover.

Removing the right lower cover assembly

1. Remove the front right cover (see page 229).
2. If you have a 2,000-sheet input unit, open the VTU.
3. Remove the right rear cover (see page 241).
4. Remove four screws on the right lower cover in place (callout 1).

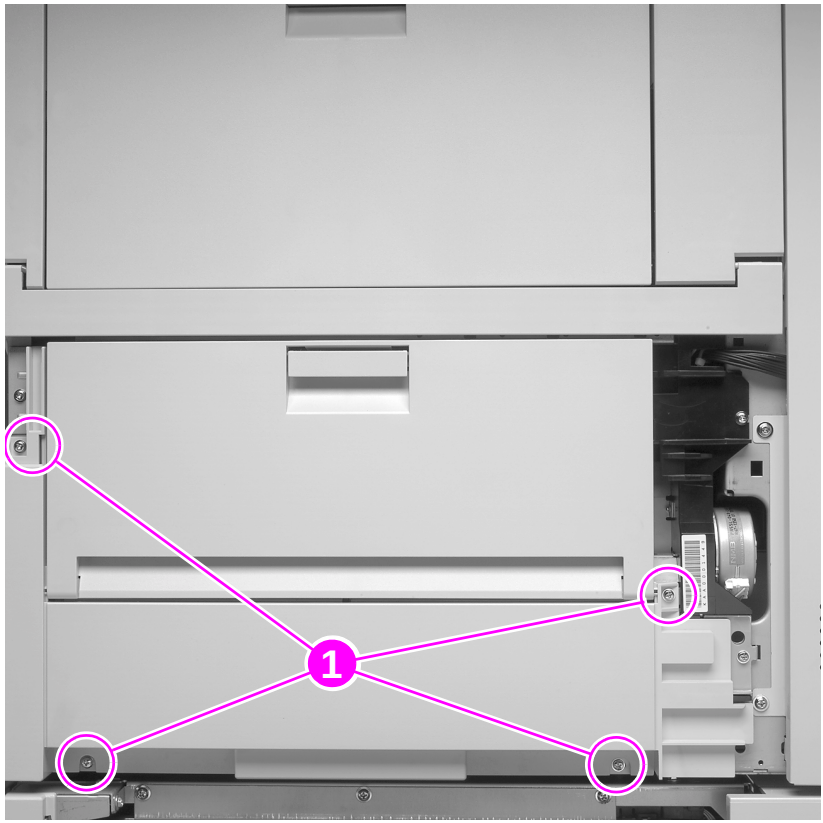


Figure 94. **Screws on the right lower cover**

5. Unfasten the holding strap on the right.
6. Remove tray 2 and tray 3, and release the locking tabs inside the tray 3 area.
7. While holding the cover in place, push down to release the tabs on the top of the cover and pull out on the bottom of the cover.

Notes about reinstalling:

- Insert the tabs on the top of the cover in the corresponding holes first, then snap the bottom of the cover into place.

Rear cover

1 For HP Color LaserJet 8550 MFP printer models, complete the following steps before continuing to step 2 on the following page:

a Release two thumb screws (callout 1) to disconnect the video I/O connector.

b Remove three screws (callout 2) from inside the opening; the plate remains attached to the rear cover.

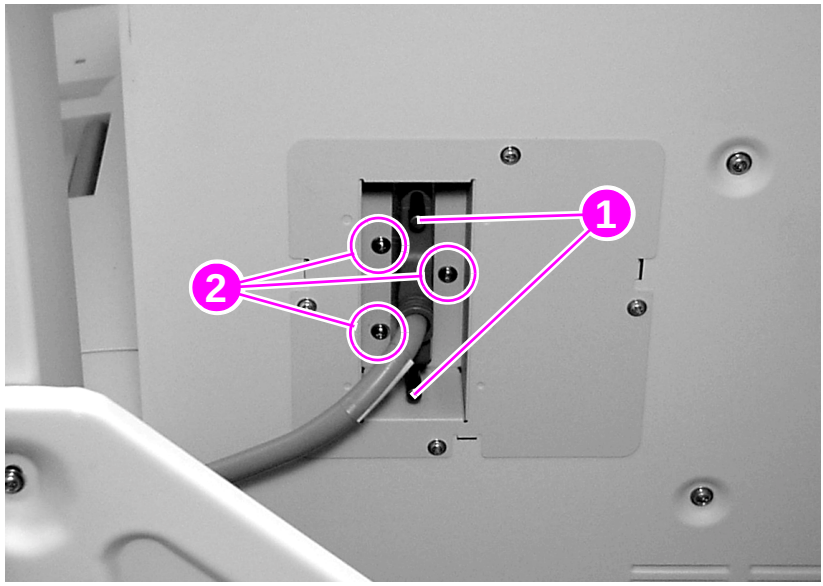


Figure 95. **Plate, HP Color LaserJet 8550 MFP printer**

2 Remove the rear lower left cover (one screw) (callout 1).

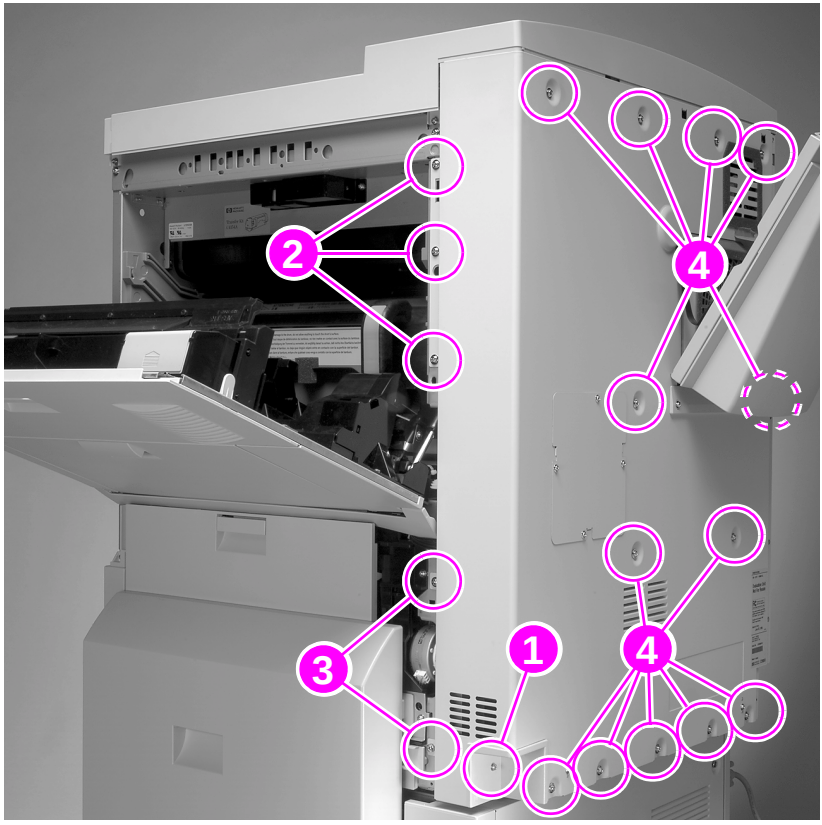


Figure 96. **Rear cover**

3 Remove the left rear cover (see page 234).

4 Open the right upper door.

5 Remove three screws in the sheet metal tab (callout 2).

6 Remove the right rear cover (see page 241).

7 Remove two screws (callout 3).

8 Remove 13 screws on the rear cover (callout 4).

Note Two screws are holding the cover to the hinges at the bottom. It is not necessary to remove these screws.

9 Lift the rear cover off.

Top assemblies

Gain access to the following assemblies from the top of the printer:

- control panel
- laser/scanner unit
- face-down output assembly

Control panel

1 Remove the top cover assembly (see page 232).

2 Turn the cover upside down.

3 Remove four screws attaching the control panel to the top cover (callout 1).

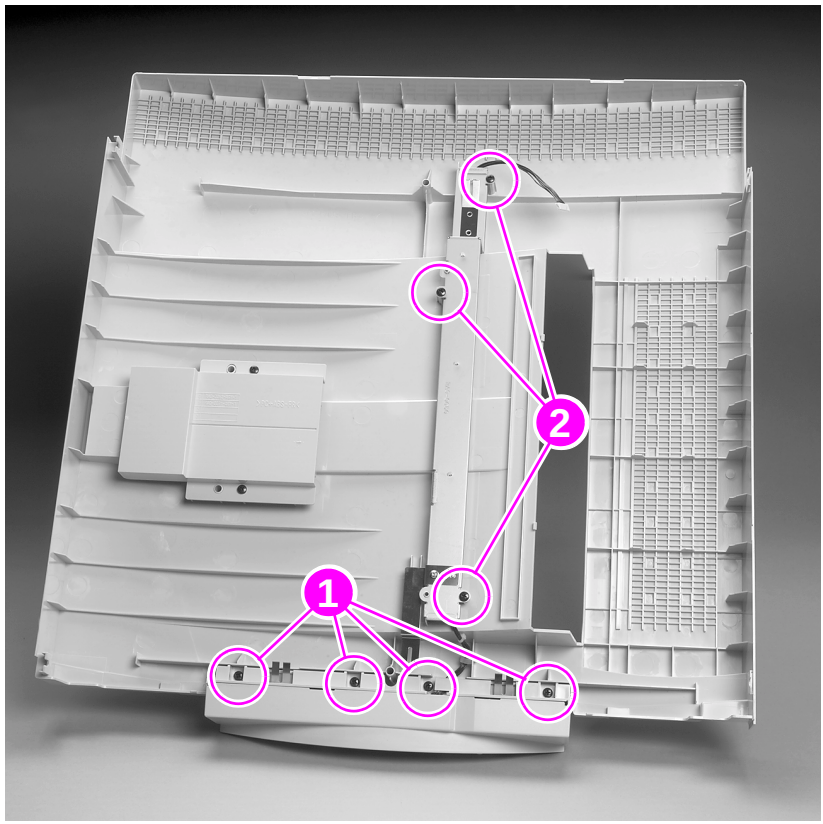


Figure 97. **Bottom of the control panel**

4 Remove three screws from the bar on the bottom of the control panel that is holding the wires in place (callout 2).

5 Release the cable stays.

6 Remove the assembly.

Laser/scanner unit

1 Remove the top cover assembly (see page 232).

2 On HP Color LaserJet 8550 printer models, remove four screws, two on each side (callout 1 shows two of them), from the laser/scanner shield and lift the shield out of the printer (the shield is not present on HP Color LaserJet 8500 printer models).

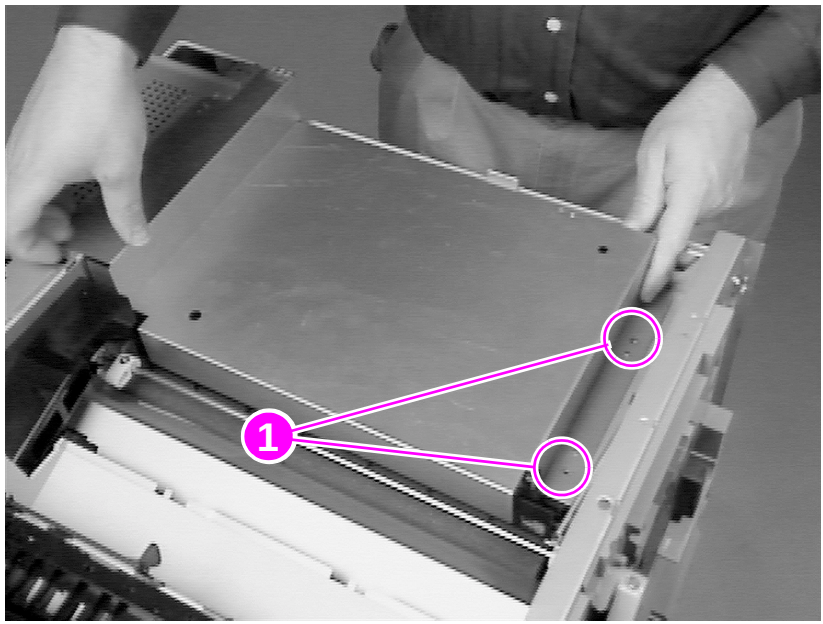


Figure 98. **Laser/scanner shield**

3 Remove four screws (callout 1) from the laser/scanner unit.

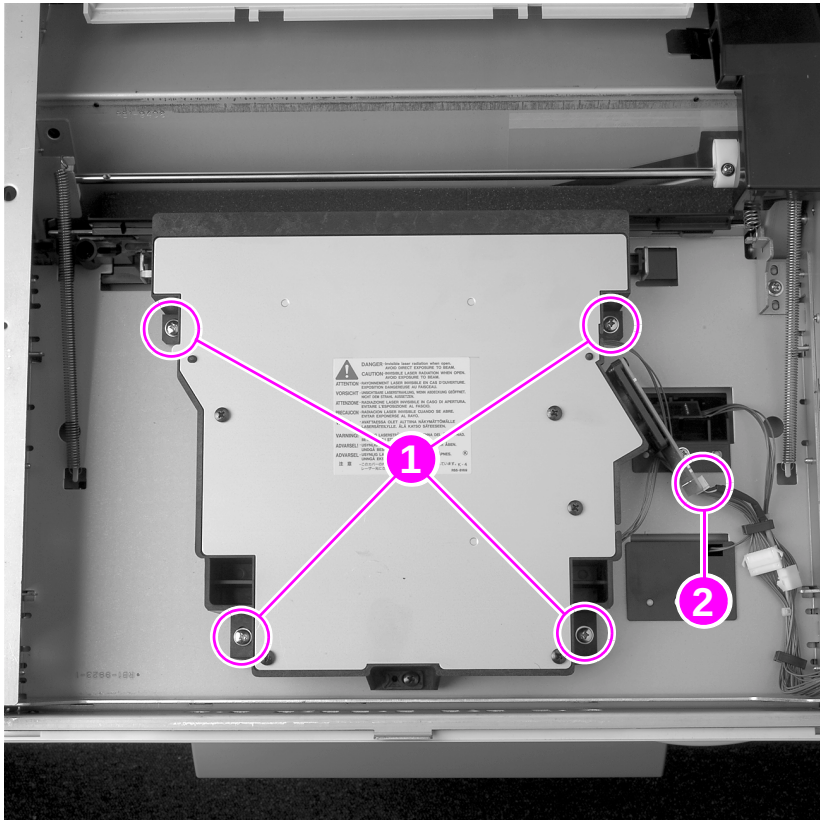


Figure 99. Scanner unit

4 Release the wires from the cable stay.

5 Unplug the two connectors (callout 2).

6 Gently remove the laser/scanner unit and place it in an ESD pouch.

Face-down output assembly

1 Remove the top cover assembly (see page 232).

2 Remove the left rear cover (see page 234).

3 Remove the left upper cover (see page 236)

4 On the top of the printer, remove the black airflow vent by releasing the cut tab (callout 1) and lifting the vent off.

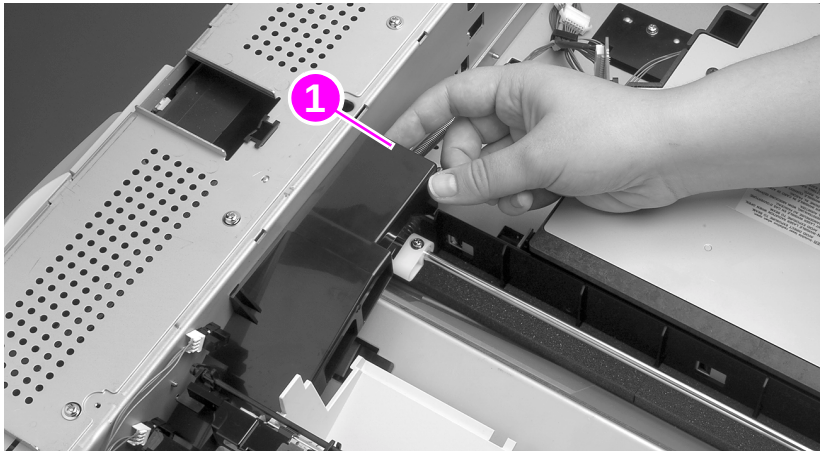


Figure 100. **Upper airflow vent**

5 Remove two screws on the face-down exit sensor rail (callout 2).

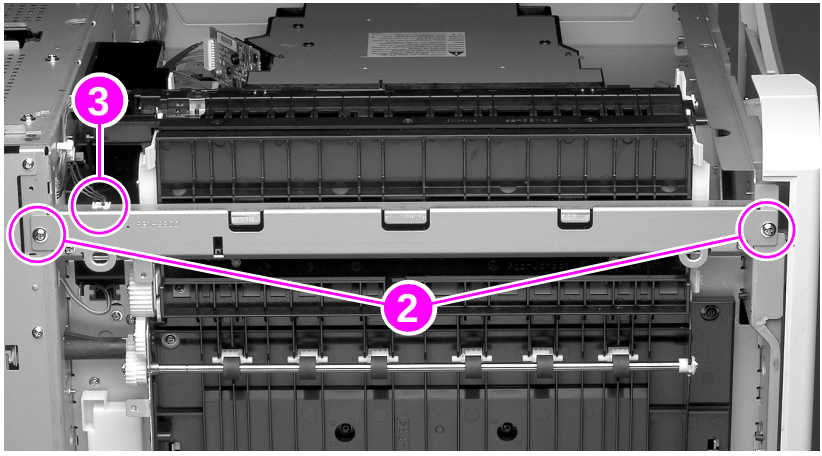


Figure 101. **Face-down exit sensor rail**

6 Unplug the sensor connector on the left side of the rail and release one cable stay (callout 3).

7 Pull the rail away from the chassis.

8 Remove two screws (callout 4).

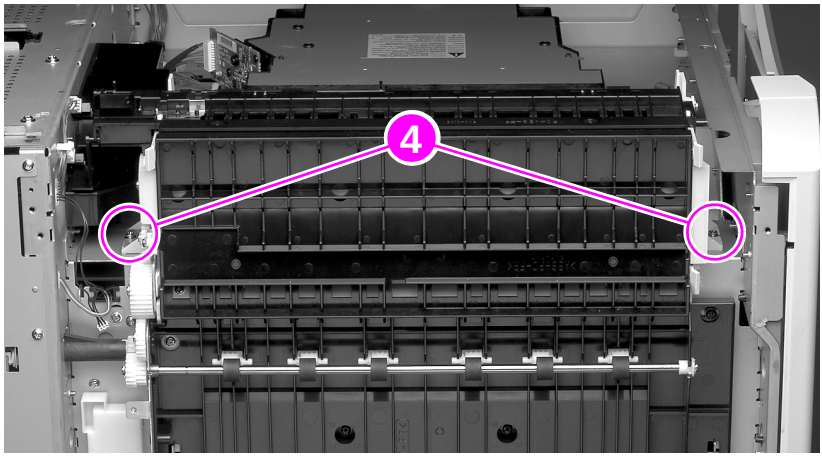


Figure 102. **Face-down output assembly**

9 Lift the right side of the assembly, slide the assembly to the left, and lift it out of the chassis.

Front assemblies

Gain access to the following assemblies from the front of the printer:

- toner lock sensor
- color cartridge sensor
- subrelay PCA

Toner lock sensor and color cartridge sensor

1 Remove the inside left panel (see page 230).

2 Remove one screw on the toner lock sensor (callout 1).

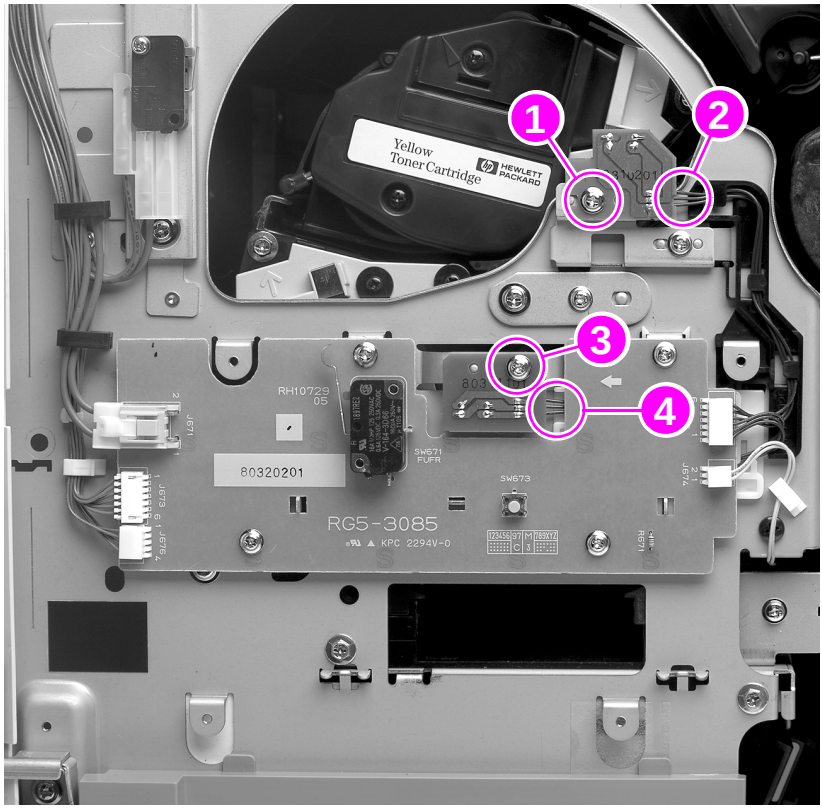


Figure 103. **Toner lock sensor and color cartridge sensor**

3 Remove one connector (callout 2).

4 Remove one screw on the color cartridge sensor (callout 3).

5 Remove one connector (callout 4).

Subrelay PCA

1 Remove the inside left panel (see page 230).

2 Remove the five connectors on the subrelay PCA (callout 1).

3 Remove four screws on the subrelay PCA (callout 2).

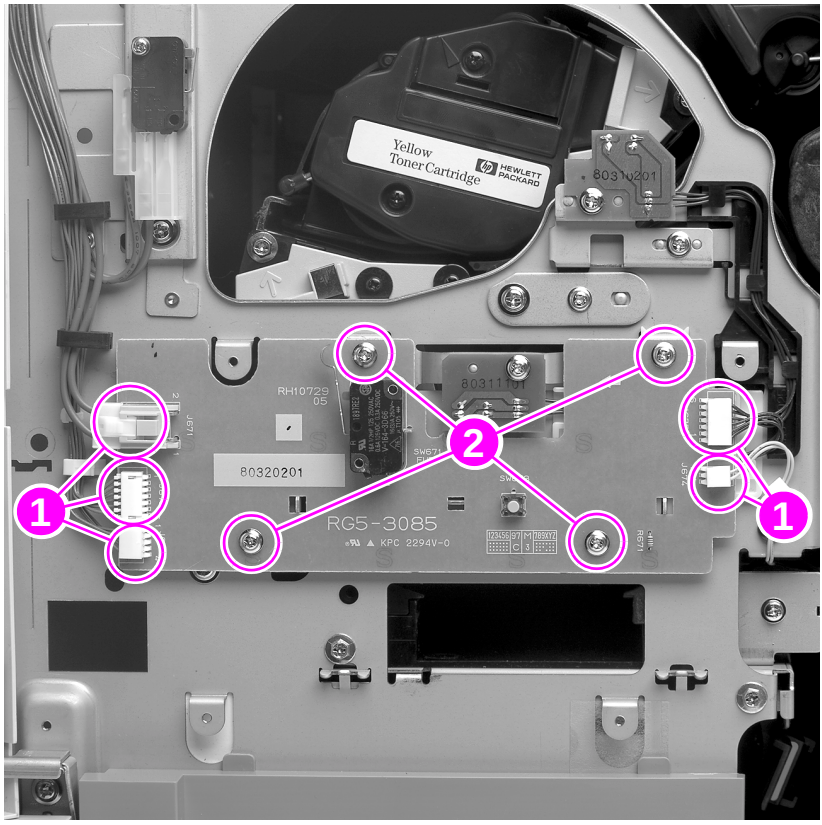


Figure 104. **Subrelay PCA**

Left assemblies

Gain access to the following assemblies from the left side of the printer:

- formatter board
- internal printer hard disk
- feeder assembly
- face-up solenoid
- face-up exit assembly

Multi-bin mailbox/3,000-sheet stapler/stacker/ 3,000-sheet stacker

Remove the paper output accessory before beginning repairs on the left side of the printer.

1. Turn the printer off and unplug the power cable.
2. Unplug the paper output accessory power cable from the printer.
3. Unplug the paper output accessory interface cable from the printer.
4. Holding the paper output accessory by the handle on the top and by the main body towards the bottom, pull the accessory away from the printer.
5. Push down on the end of the guide rail until it releases from the bracket on the 2,000-sheet input unit.
6. Raise the guide rail.

Formatter board

If the formatter board needs to be repaired or replaced, remove the hard drive and retain it to reattach to the formatter board later.

1 Print a configuration page if the printer is able to generate one (see page 415). Use this page to reset the NVRAM values that will be lost if the formatter board is replaced.

2 Loosen the two finger screws (callout 1).

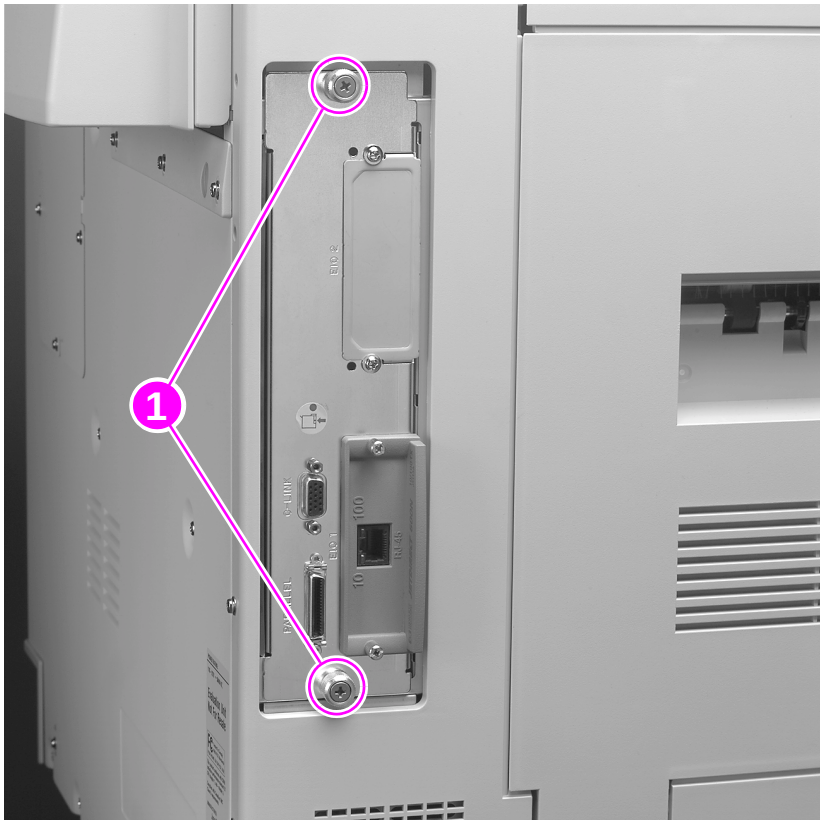


Figure 105. **Formatter board**

3 Pull the formatter board out of the formatter pan. Removing the formatter board from the formatter pan disconnects the formatter board from the chassis.

Notes about reinstalling:

- After reinstalling the formatter board, print a configuration page to compare with the configuration page printed before the formatter board was removed. Look at the following NVRAM values, and reset the NVRAM values to match those on the configuration page that was printed before the formatter board was removed.
  - Serial number
  - Formatter number
  - Page counts (if the controller board is being replaced as well)
  - Transfer kit count (percentage of life remaining)
  - Fuser kit count (percentage of life remaining)
  - Engine settings

Note The last two digits of the engine settings might vary from those found on the sticker inside the front cover. This difference is due to check sum variation and is acceptable.

For information on setting each of these values, see table 26 on page 93.

Internal printer hard disk (DN model)

If the internal printer hard disk needs to be repaired or replaced, all data stored on the hard disk will be lost. Download fonts and other information as necessary.

1 Remove the formatter board from the printer (see page 254).

2 Unplug one connector (callout 1).

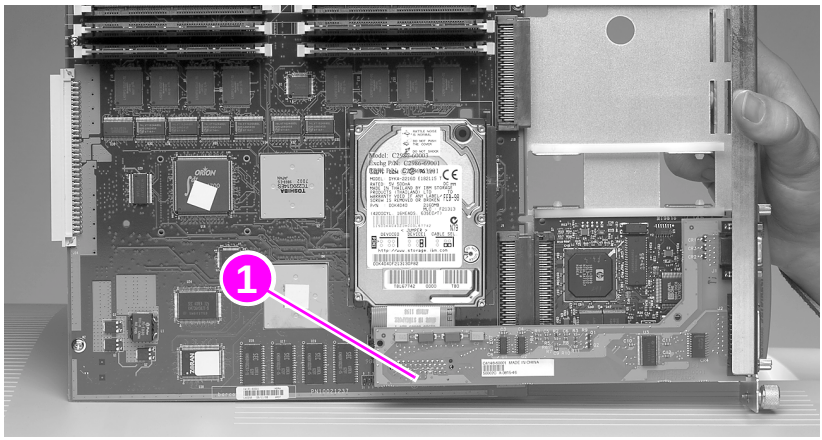


Figure 106. Connector on formatter board

3 On the other side of the formatter board, release the two tabs with your fingers (callout 2).

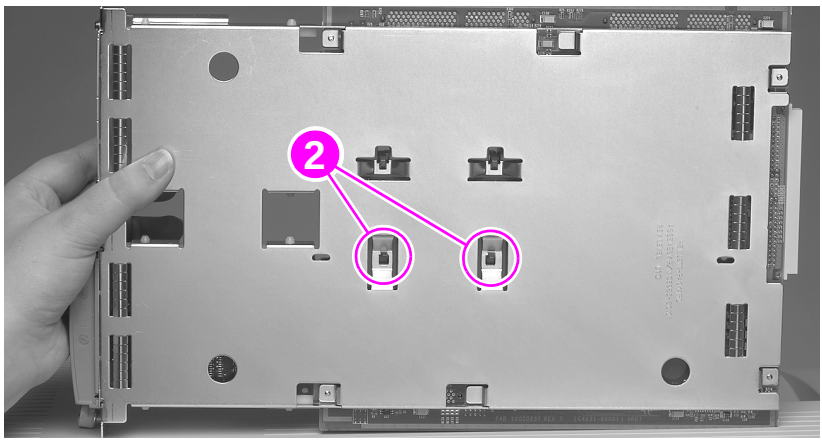


Figure 107. Back side of formatter board

4 With the other hand, pull the hard disk out from the other side.

CAUTION Take care not to damage the plastic retaining clips on the hard disk.

Feeder assembly

The feeder assembly is located inside the left upper door.

1. Open the front door, and the left lower cover.
2. Remove the left rear cover (see page 234).
3. Remove the left upper cover (see page 236).
4. Remove six screws (callout 1).

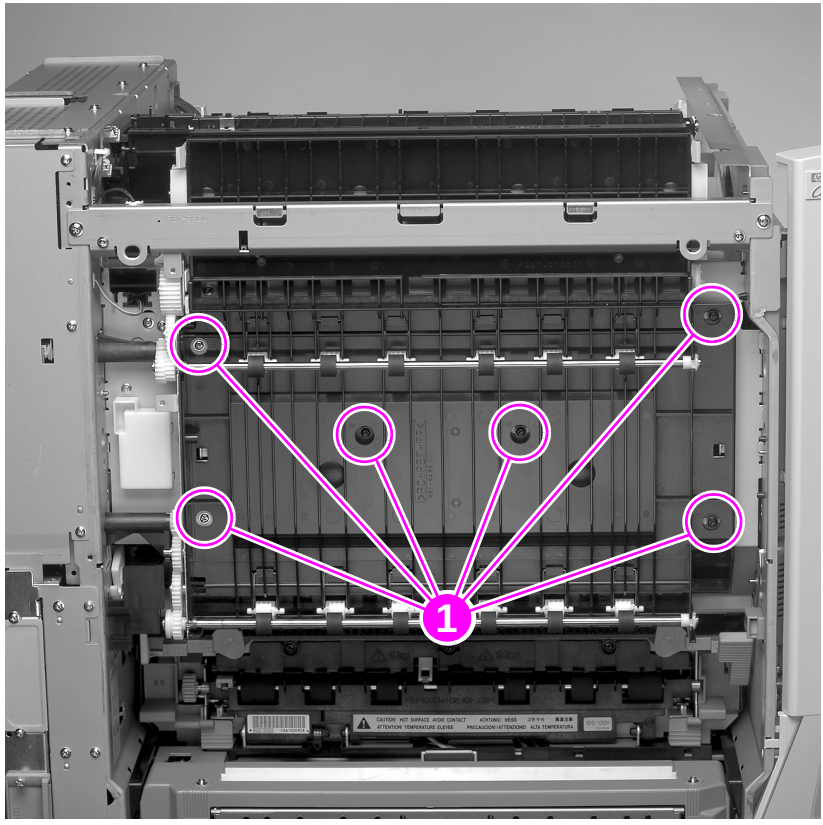


Figure 108. **Feeder assembly**

5. Lift the feeder assembly up and out.

Notes about reinstalling:

- Verify that the gears on the left mesh together on both the top and the bottom of the assembly.
- Replace the screw inside the front door for the right side of the bar.

Face-up solenoid

The face-up solenoid is below the carousel stop.

1. Remove the feeder assembly (see page 257).
2. Remove the face-up output bin.
3. Remove the formatter board and formatter pan (see page 254 and page 272).
4. Remove one screw inside the back of the printer (callout 1).

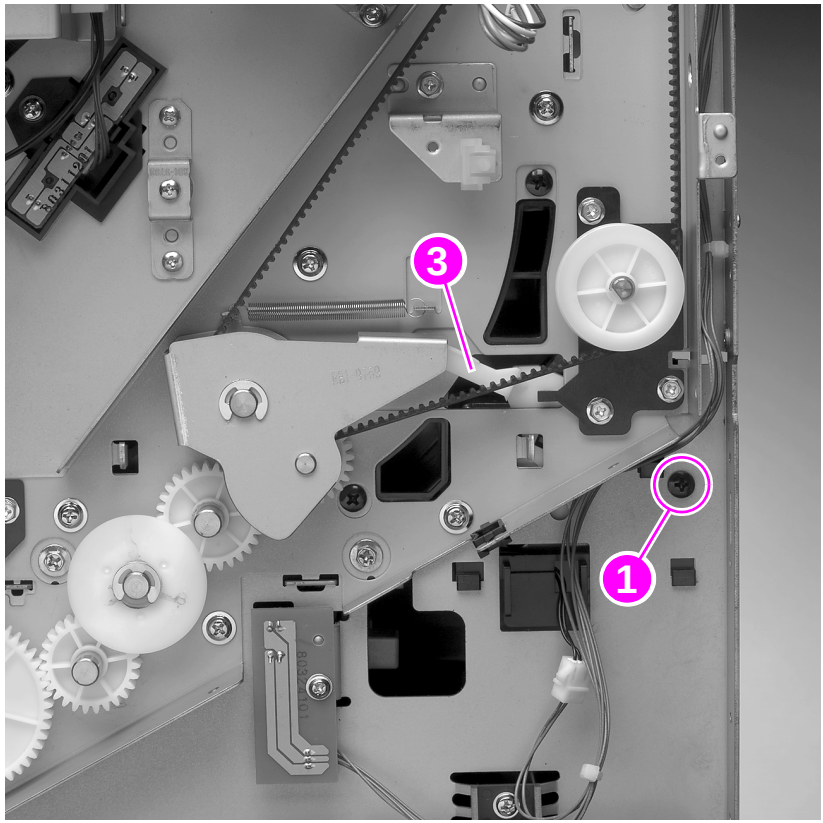


Figure 109. **Face-up solenoid (1 of 2)**

5 Lift the face-up solenoid up to release the tab and pull out to remove the solenoid (callout 2).

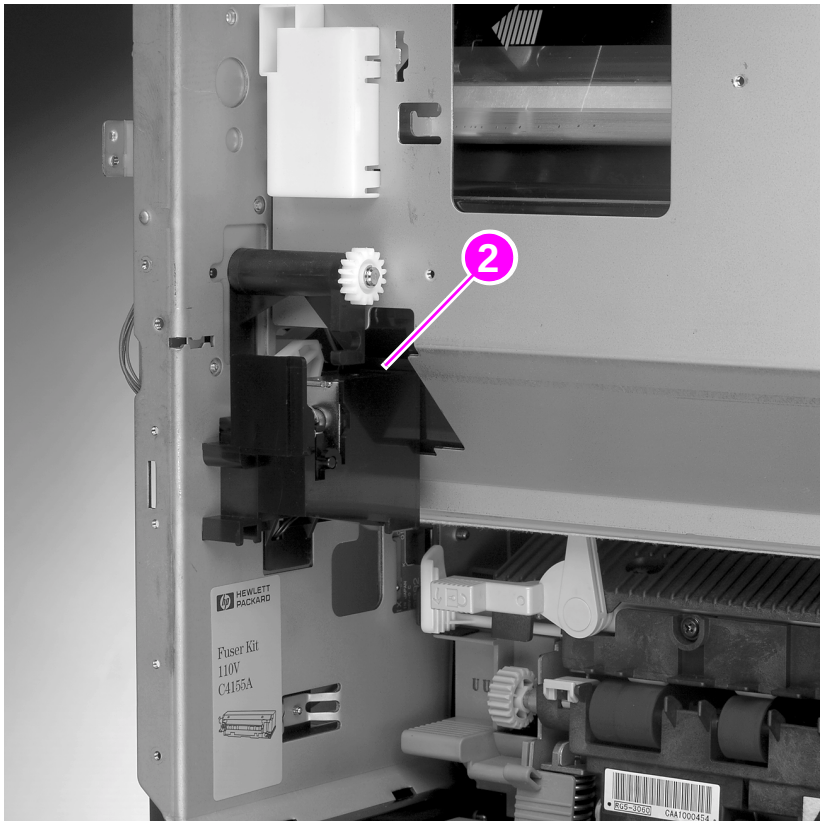


Figure 110. **Face-up solenoid (2 of 2)**

Notes about reinstalling:

- Ensure that the plastic arm from the solenoid is engaged under the delivery drive swing arm (callout 3, figure 109).

Face-up exit assembly

The face-up exit assembly is located on the left lower cover.

1 Remove the left lower cover (see page 237).

2 Remove six screws (callout 1).

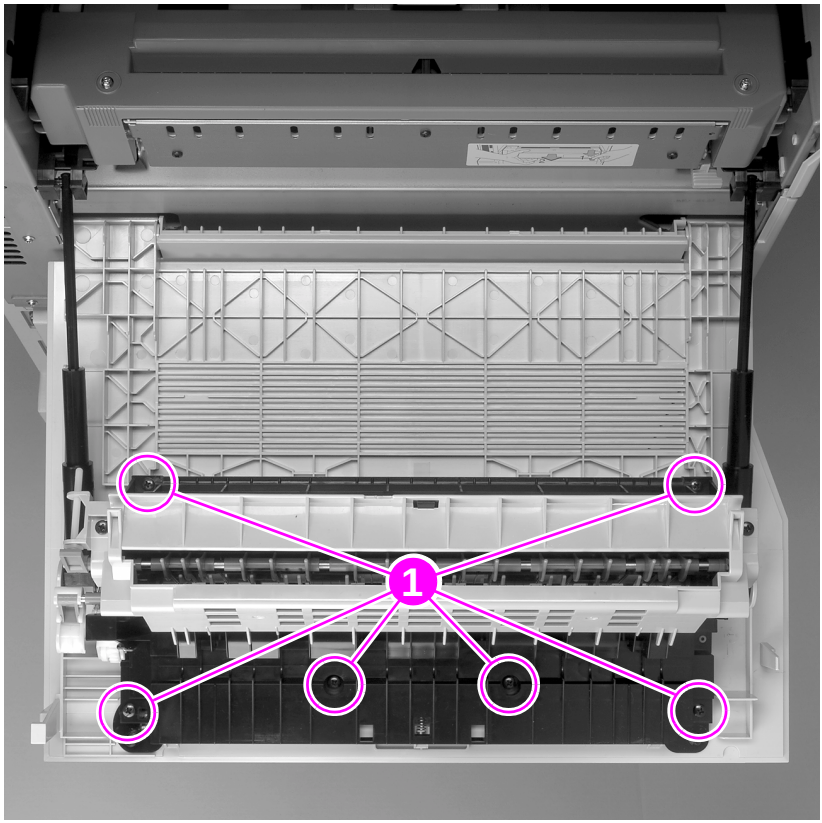


Figure 111. **Screws on the face-up exit assembly**

3 Remove the stopper hinges by popping the peg out of the door assembly.

4 Lift the assembly out.

Notes about reinstalling:

- The larger peg on the stopper hinge fits into the assembly.

Right assemblies

Gain access to the following assemblies from the right side of the printer:

- tray 1
- pick-up roller
- registration roller assembly
- paper photo sensors
- density sensor
- paper pick-up assembly
- tray 1 pick-up assembly

Tray 1

Tray 1 is part of the right upper door. Take the tray off and save it if you are replacing the whole assembly. The new assembly does not include the tray.

1 Open the tray out about 45-degrees.

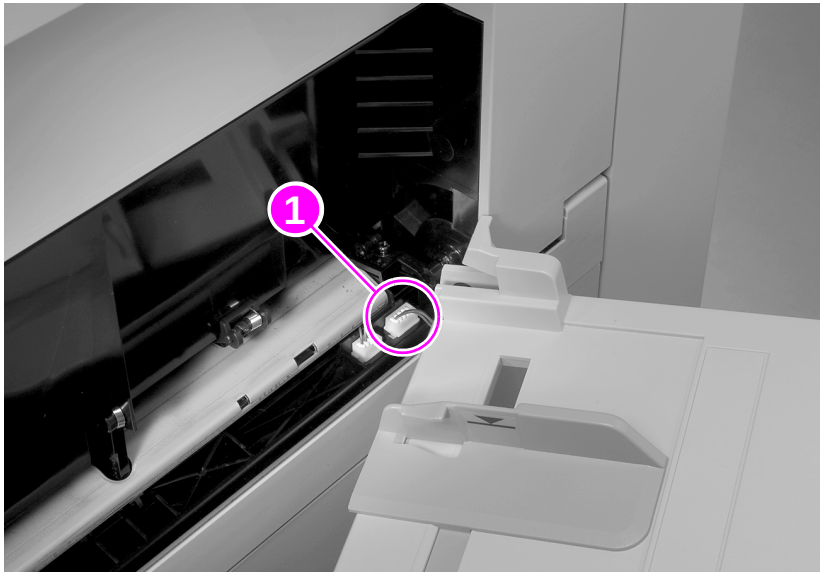


Figure 112. **Tray 1**

2 Open the extender all the way out.

3 Grasp both sides and bend towards the middle. Pull the left side of the tray out first, then pull the right side of the tray out.

4 Unplug one connector on the right side (callout 1).

Pick-up roller

The pick-up roller is located on the tray 1 pick-up assembly.

1. Open the right upper door.
2. Rotate the roller cover back off of the roller.
3. Squeeze the tabs on the roller and pull to the left to remove the roller (callout 1).

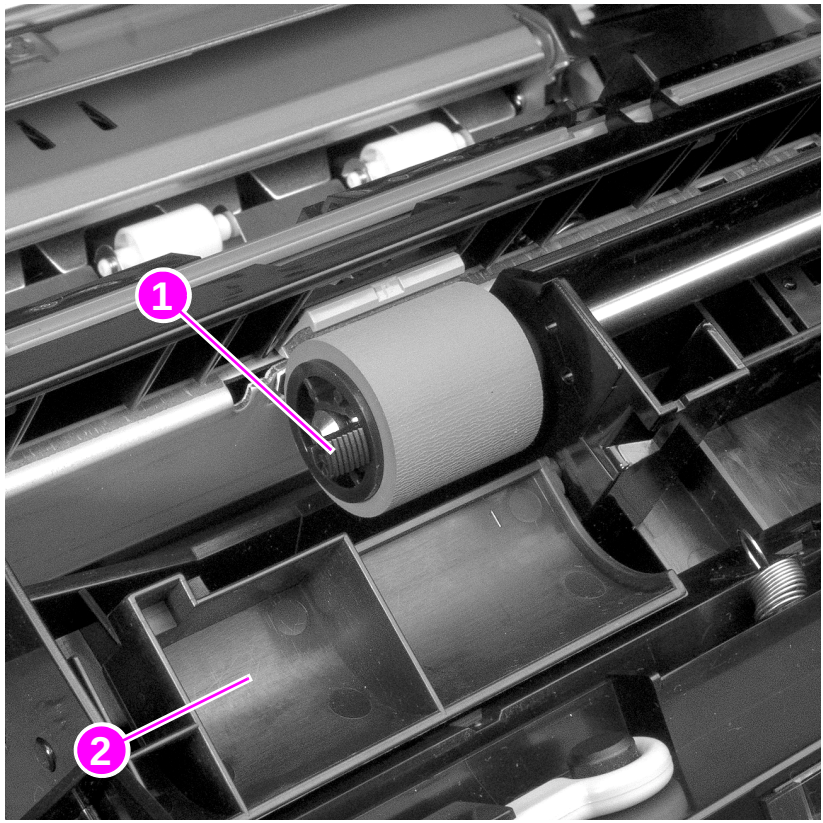


Figure 113. **Pick-up roller**

Note The figure above shows the inside of an HP Color LaserJet 8500 printer. The black plastic piece (callout 2) is eliminated on HP Color LaserJet 8550 printer models.

Registration roller assembly

The registration roller assembly is located inside the right upper door under the transfer belt.

1 Open the front door and the right upper door.

2 Remove the transfer drum.

3 Remove the transfer belt.

4 Lift the paper diverter and remove two screws (callout 1).

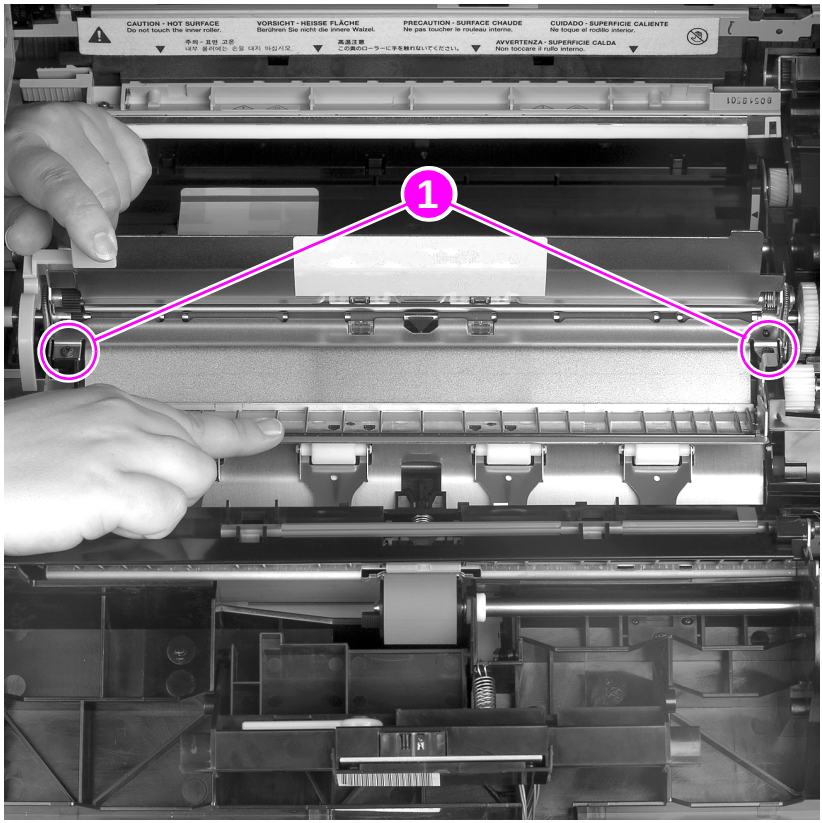


Figure 114. **Registration roller assembly (front)**

5 Remove two screws on the back of the assembly (callout 2).

Hint You might need to use a shorter screwdriver to get the back screws out.

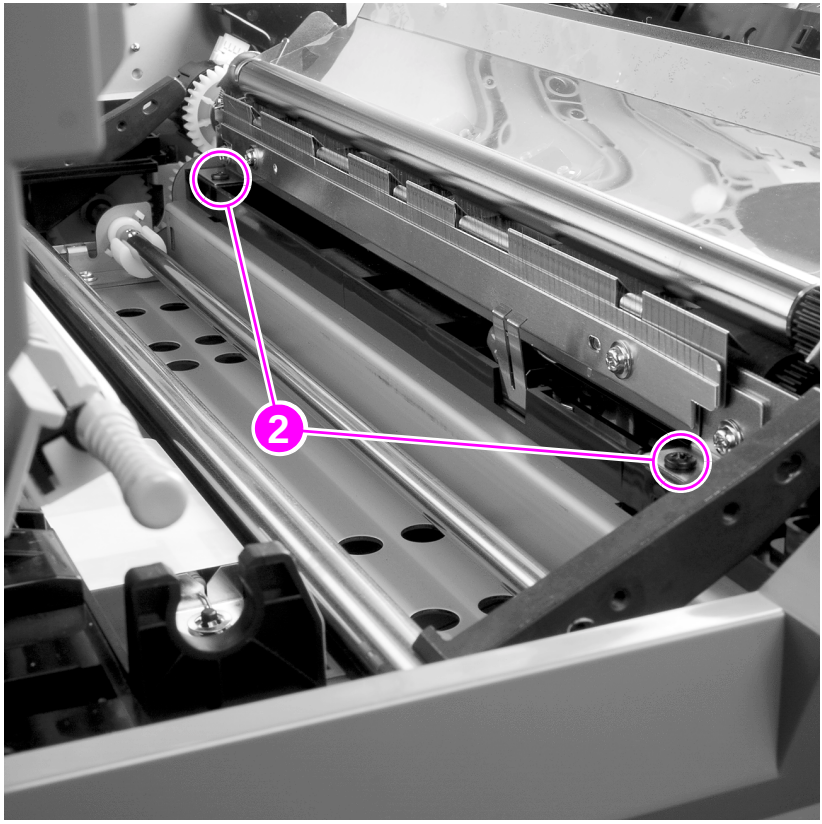


Figure 115. **Registration roller assembly (back)**

6 Release and remove the cover over the connectors on the right side of the registration roller assembly.

7 Unplug the innermost connector on the right side (callout 3).

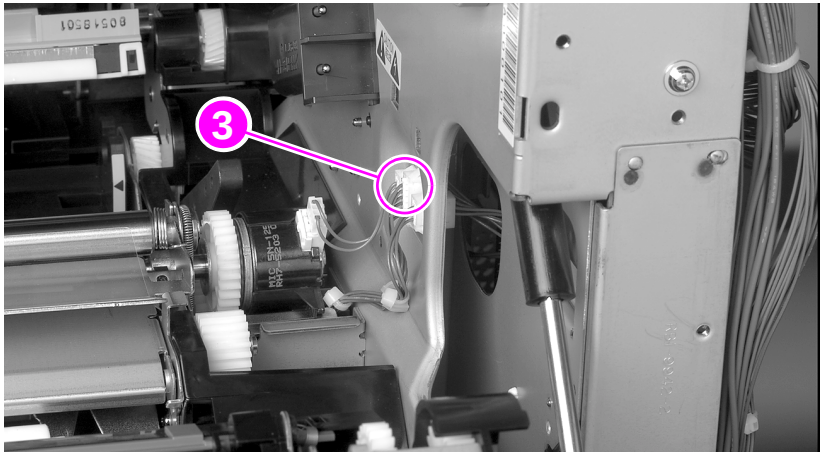


Figure 116. Connectors on registration roller assembly

8 Remove one screw from the green knob on the front of the printer and remove the knob.

9 Pull the registration roller assembly out.

Notes about reinstalling:

- When you replace the registration roller assembly, make sure the gears mesh or you could cause scarring.

Paper photo (OHT) sensors

The paper photo sensors are located under the registration frame assembly and are used to sense overhead transparencies.

1 Remove the registration roller assembly (see page 263).

2 Remove the two paper photo sensors by releasing the two clasps on each sensor and unplugging one connector on each sensor.

Density sensor

The density sensor is located on the right upper door.

1. Open the right upper door.
2. With a flat screwdriver, release the six tabs on the sensor cover (callout 1).

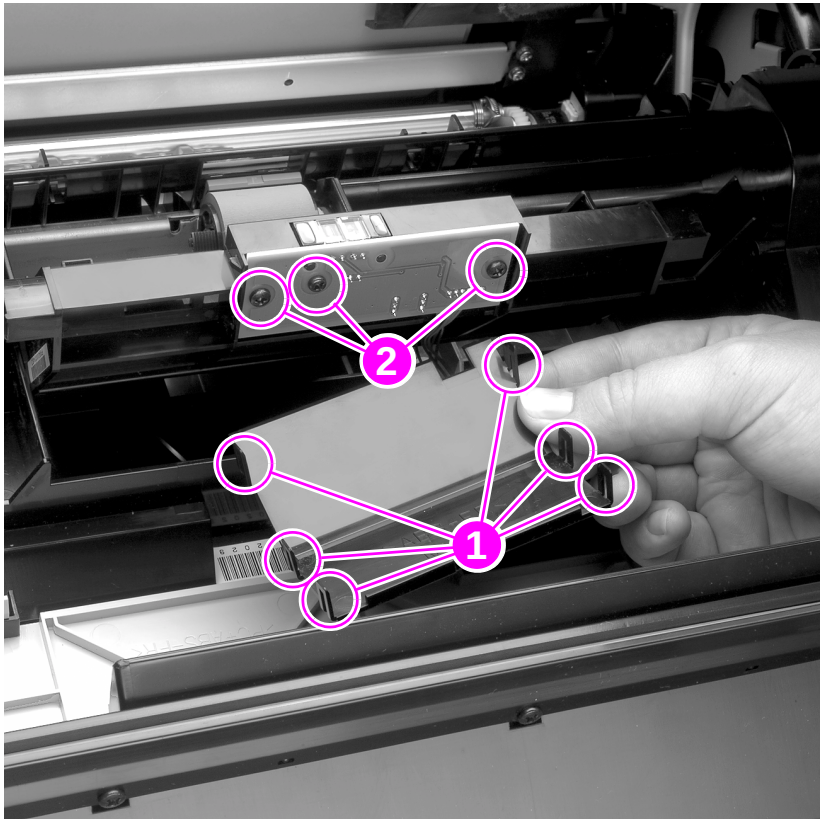


Figure 117. **Density sensor**

3. Remove three screws from the sensor (callout 2).
4. Unplug one connector and remove the sensor.

Paper pick-up assembly

The paper pick-up assembly is located inside the right upper cover assembly.

1 Remove trays 2 and 3.

2 Remove the right upper cover assembly (see page 238).

3 Remove the right lower cover assembly (see page 242).

4 Remove four screws, one in each corner of the paper pick-up assembly (callout 1) and pull the assembly out approximately 5 cm (2 in).

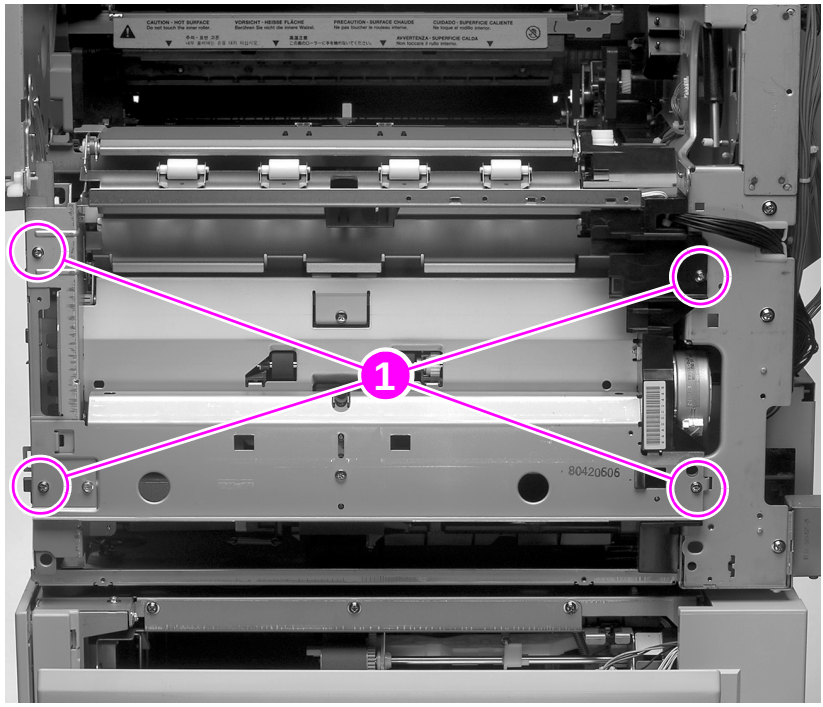


Figure 118. Paper pick-up assembly

5 Unplug one connector on the right that goes to the paper pick-up PCA on the right side of the paper pick-up assembly.

6 Lift out the paper pick-up assembly.

Notes about reinstalling:

- Plug in the connector and reroute the wires before replacing the assembly.

Tray 1 pick-up assembly

The tray 1 pick-up assembly is located on the right upper door.

1 Open the right upper door.

2 Remove the screw on the right side of the assembly (callout 1).

.

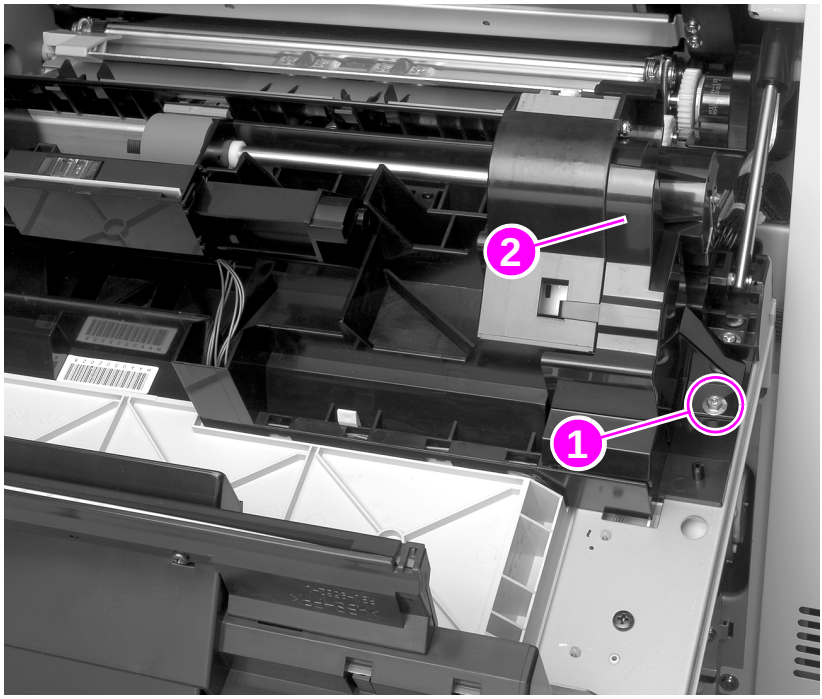


Figure 119. **Tray 1 pick-up assembly (1 of 2)**

3 Remove the cover on the right side of the assembly (callout 2).

4 Unplug the four connectors on the right side (callout 3).

Note Two connectors are plugged into the controller board, and two connectors are inline connectors. It might be easier to disconnect the connectors from the rear of the printer and pull the wires through the printer frame than to unplug the connectors from the right upper door.

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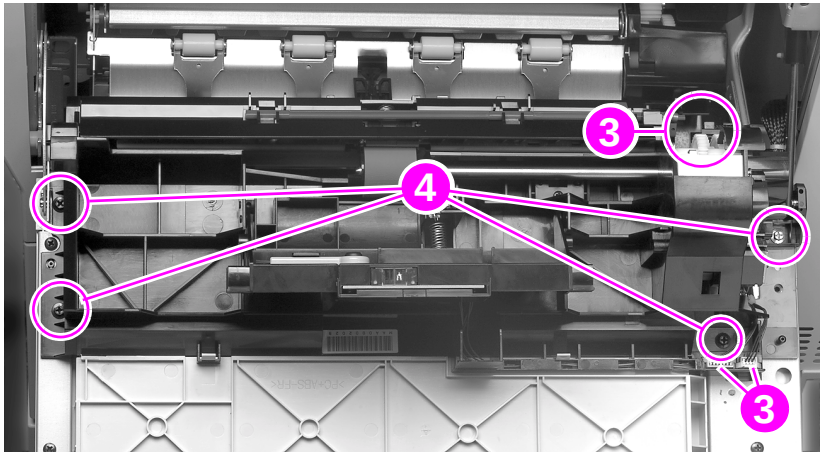

Figure 120. Tray 1 pick-up assembly (2 of 2)

5 Remove four screws (callout 4).

6 Release two clips and lift the assembly off.

Rear assemblies

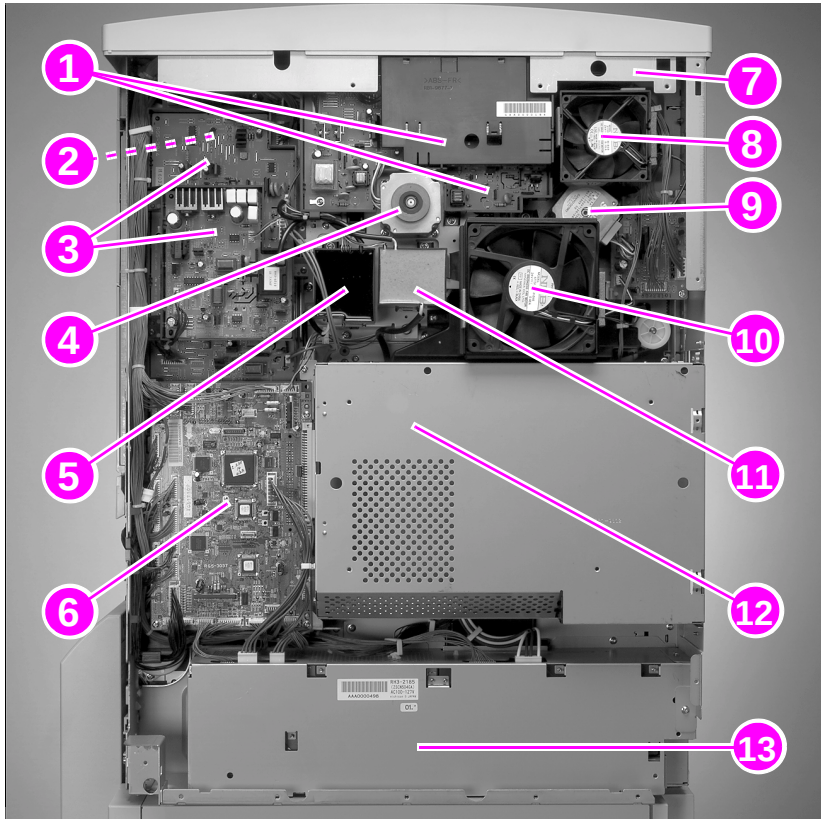

Figure 121. **Rear of printer with cover removed**

1. Developer/imaging drum bias supply (shown in two parts, the upper part is eliminated in all HP Color LaserJet 8550 printer models)
2. Main relay PCA—located behind high-voltage power supply (callout 3)
3. High-voltage power supply
4. Cartridge motor (M3)
5. Post charger high-voltage (HV) module
6. Controller board
7. Sheet metal cover plate
8. Fan 2
9. Carousel motor (M1)
10. Fan 1
11. Cleaning roller HV module
12. Formatter pan
13. Power supply

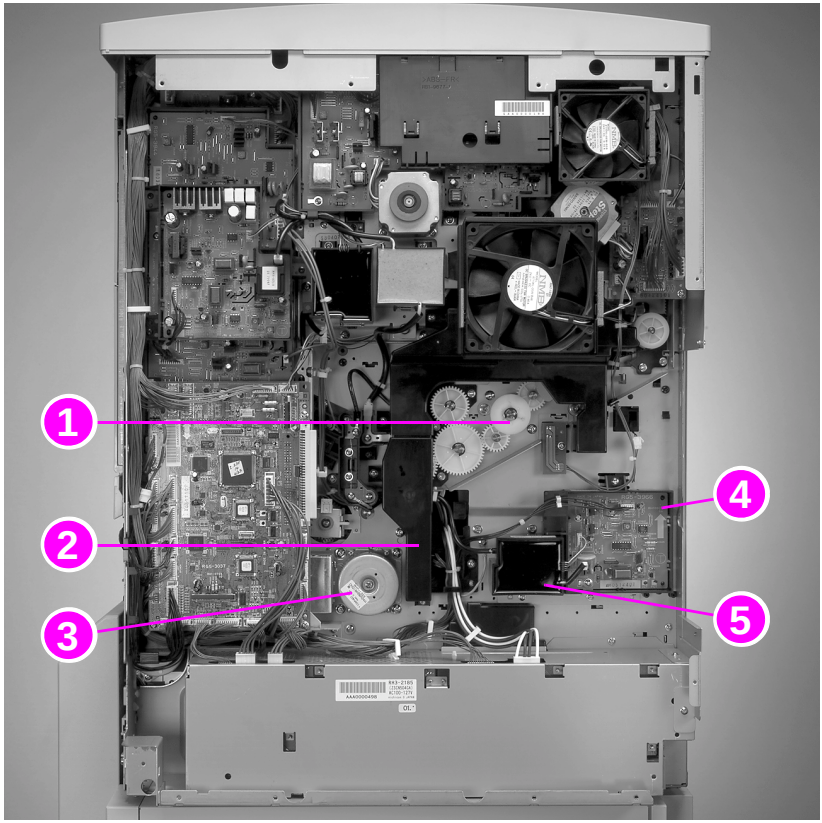

Figure 122. **Rear of printer with formatter pan removed**

1	Delivery drive assembly	**4**	Separation discharge high-voltage converter PCA
2	Lower air duct	**5**	Separation discharge high-voltage converter
3	Main motor (M4)		

- The main relay PCA is behind the high-voltage power supply.
- The main gear assembly is behind the developer/imaging drum bias supply.
- The tray 2 and tray 3 media size sensing PCAs are located behind the power supply.

Formatter pan

1 Remove the rear cover (see page 243).

2 Remove the formatter board from the formatter pan (see page 254).

3 On the back of the printer, remove two screws on the top and three on the bottom of the pan (callout 1).

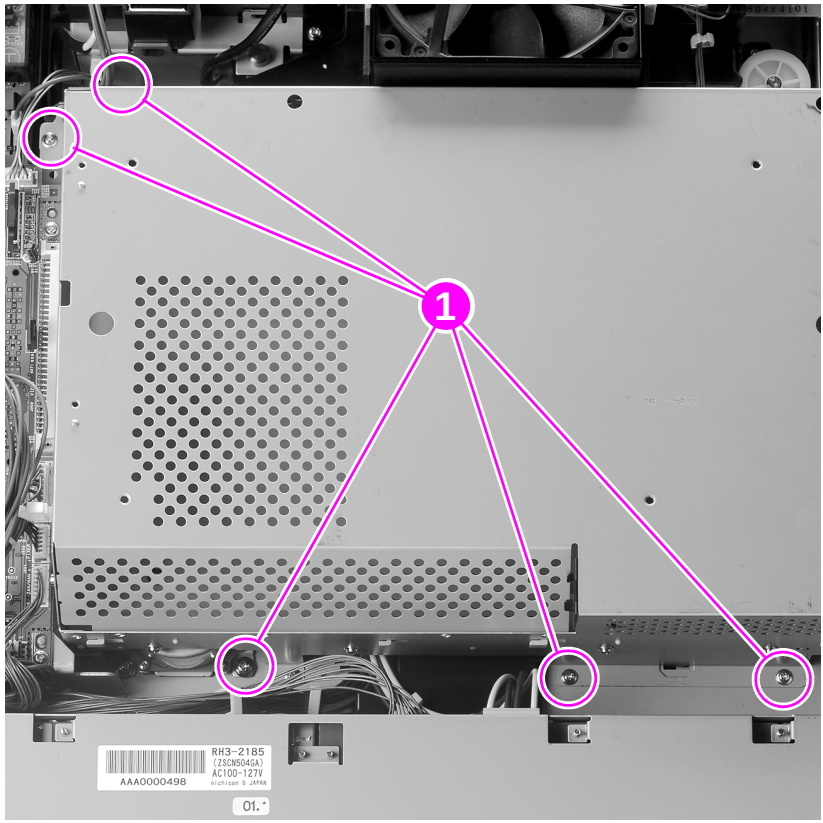

Figure 123. **Formatter pan**

4 Remove five screws on the left side of the printer (callout 2).

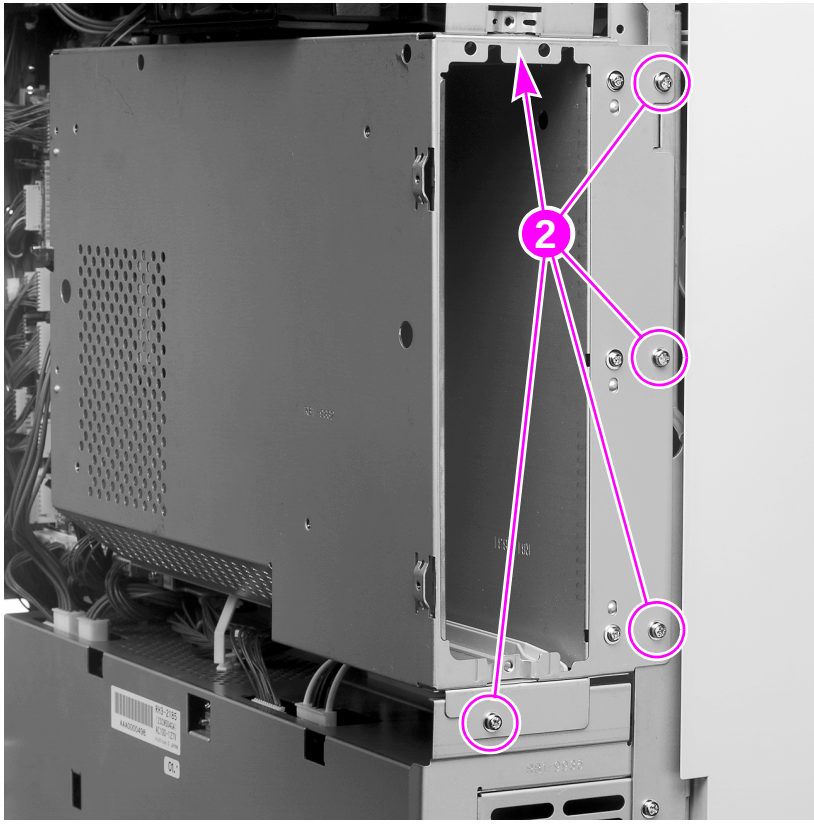

Figure 124. **Formatter pan (left side)**

5 Pull the formatter pan off.

Fan 1

Fan 1 is located on the middle right side of the rear of the printer. For information about removing the fan 1 housing, see page 283 (steps 4 through 6).

1 Remove the rear cover (see page 243).

2 Unplug the fan connector from the PCA (callout 1).

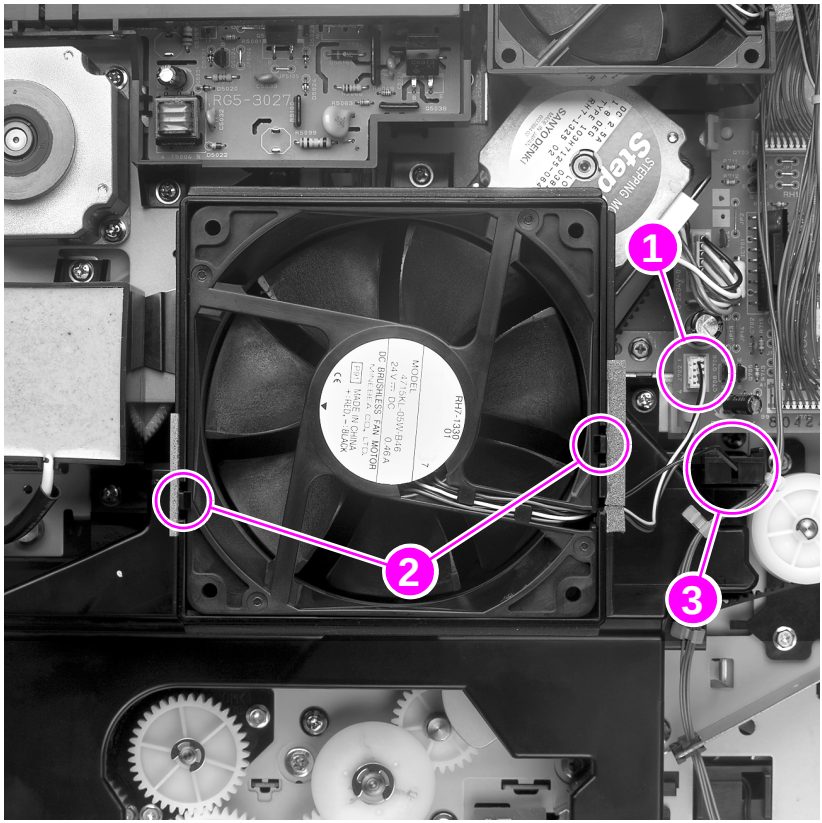

Figure 125. **Fan 1**

3 Push out on the two tabs on the left and right sides of the fan housing (callout 2).

4 Pull the thermistor out (callout 3).

5 Pull the fan out.

Fan 2

Fan 2 is located on the upper right side of the rear of the printer. For information about removing the fan 2 housing, see page 283 (steps 7 through 8).

1 Remove the rear cover (see page 243).

2 Unplug one connector (callout 1).

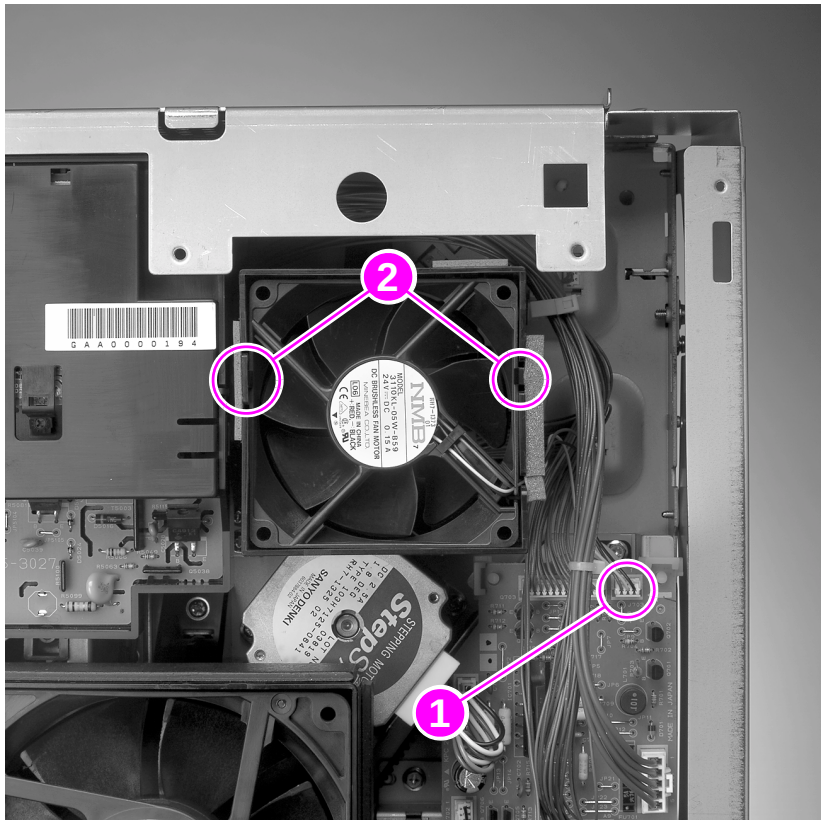

Figure 126. **Fan 2**

3 Push out on the tabs on the left and right sides of the fan housing to release the fan (callout 2).

4 Pull the fan out.

Power supply

The power supply is located on the lower right side of the rear of the printer.

1 Remove the rear cover (see page 243).

2 Remove the formatter board and formatter pan (see page 254 and page 272).

3 Unplug the five connectors.

4 Release one cable stay.

5 Remove five screws (two in the top, one on the left, two on the right) (callout 1).

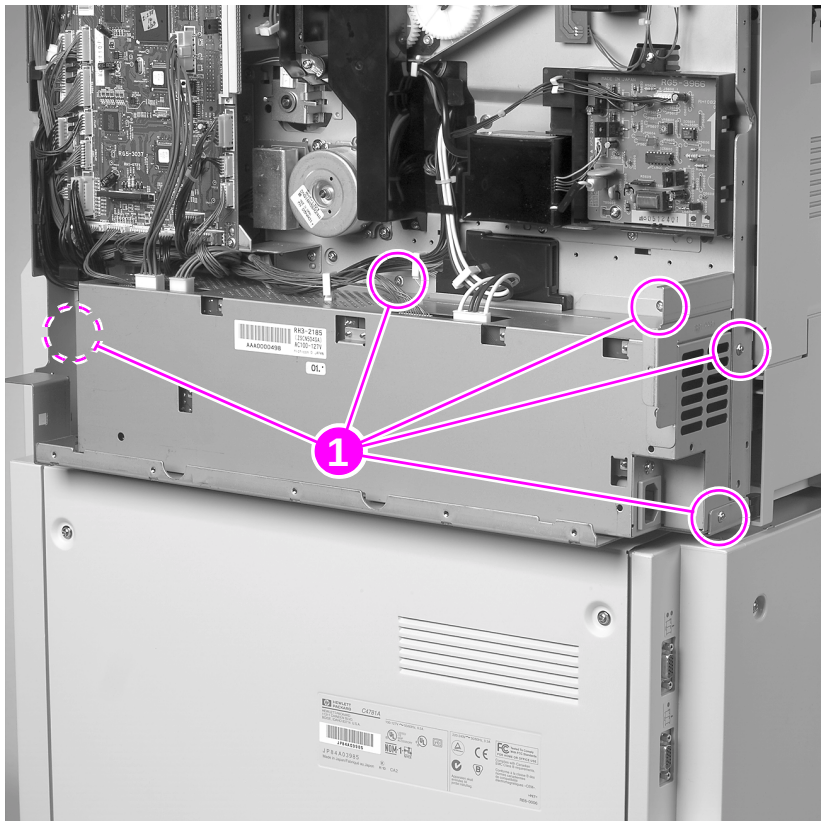

Figure 127. **Power supply**

6 Lift the power supply out of the chassis.

Controller board

The controller board is located on the lower left side of the rear of the printer. Shown in figure 128 is a controller board in an HP Color LaserJet 8550 MFP printer and includes the ECO board cable (callout 1). Compare the controller board to the same part from an HP Color LaserJet 8500 printer, in figure 129 on page 278.

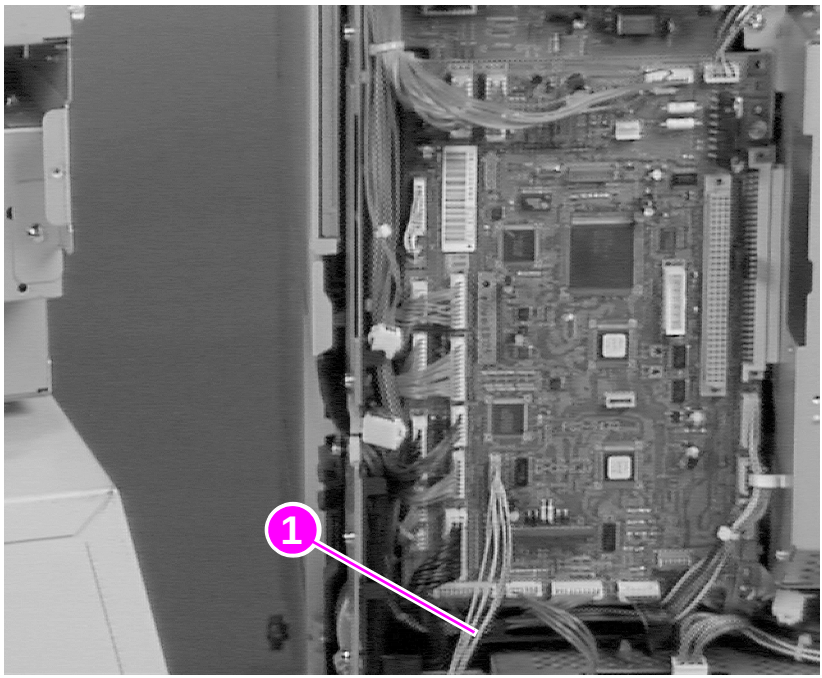

Figure 128. **Controller board, HP Color LaserJet 8550 MFP printer**

Note

Controller board removal procedures, which begin on page 278, change only in the locations of connectors from one printer to another.

Removing the controller board

1. Print a configuration page if the printer is able to generate one (see page 415). This page can be used to reset the page count values that will be lost if the controller board is replaced.
2. Remove the rear cover (see page 243).
3. Remove the formatter board and formatter pan (see page 254 and page 272).
4. Unplug 25 connectors.

Hint All 25 connectors are keyed. Also, it is easier to unplug the connectors before removing the screws from the PCA.

5. Remove four screws (callout 1).

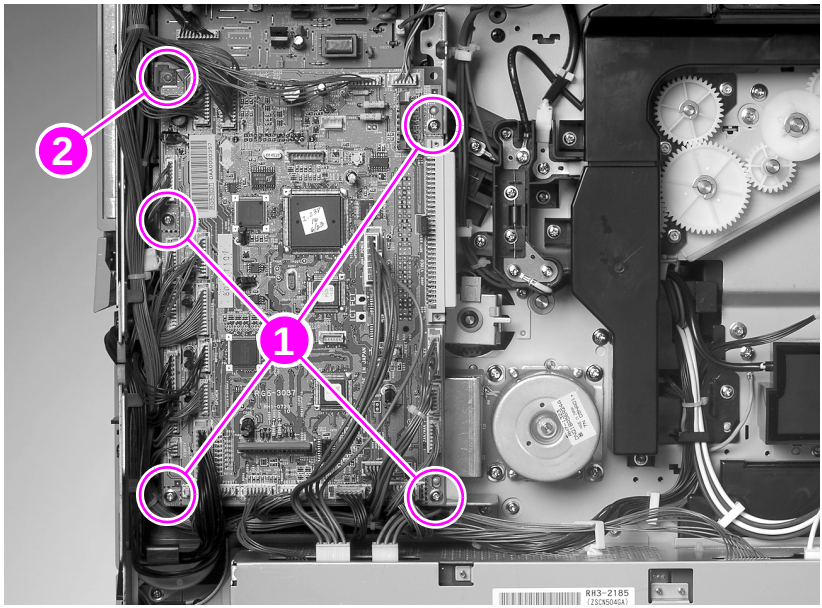

Figure 129. **Controller board, HP Color LaserJet 8500**

6. Push the white plastic holding tab in the upper left corner to the left (callout 2), and pull the controller board straight out.

Notes about reinstalling:

- When putting the controller board back in, the pins on the back connector must be lined up or you might damage the pins.

ECO board

The ECO board is located on the lower left side of the rear of the printer, below the controller board, on HP Color LaserJet GN printer models.

1 Remove the rear cover (see page 243).

2 Remove the formatter board and formatter pan (see page 254 and page 272).

3 Unplug the ECO board connector (callout 1).

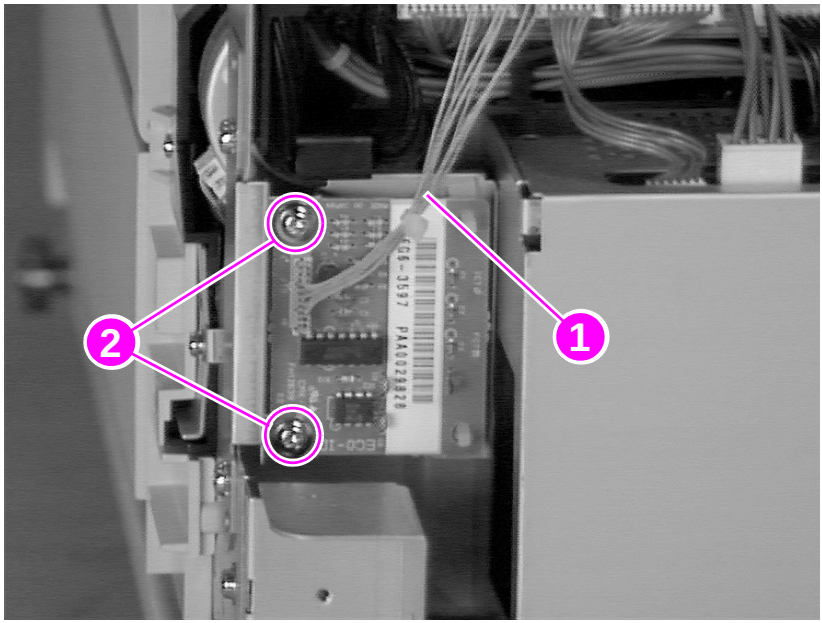

Figure 130. **ECO board**

4 Remove two screws (callout 2) to release the ECO board.

Note You might have to also pinch the plastic tabs on the right side of the ECO board to remove the board.

Cartridge motor (M3)

This motor is located to the left of fan 1.

1 Remove the rear cover (see page 243).

2 Unplug one connector (callout 1).

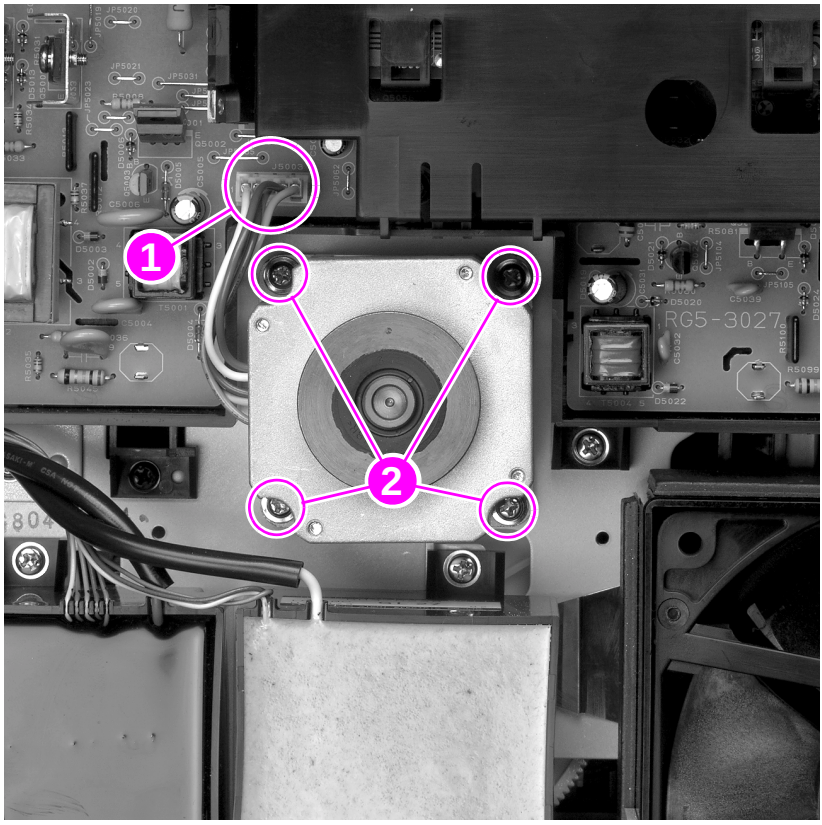

Figure 131. **Cartridge motor**

3 Remove four screws on the motor (callout 2), and pull the motor out.

Main motor (M4)

This motor is located to the right of the controller board, behind the formatter pan.

1 Remove the rear cover (see page 243).

2 Remove the formatter board and formatter pan (see page 254 and page 272).

3 Unplug one connector.

4 Remove four screws (callout 1), and pull the motor away from the chassis.

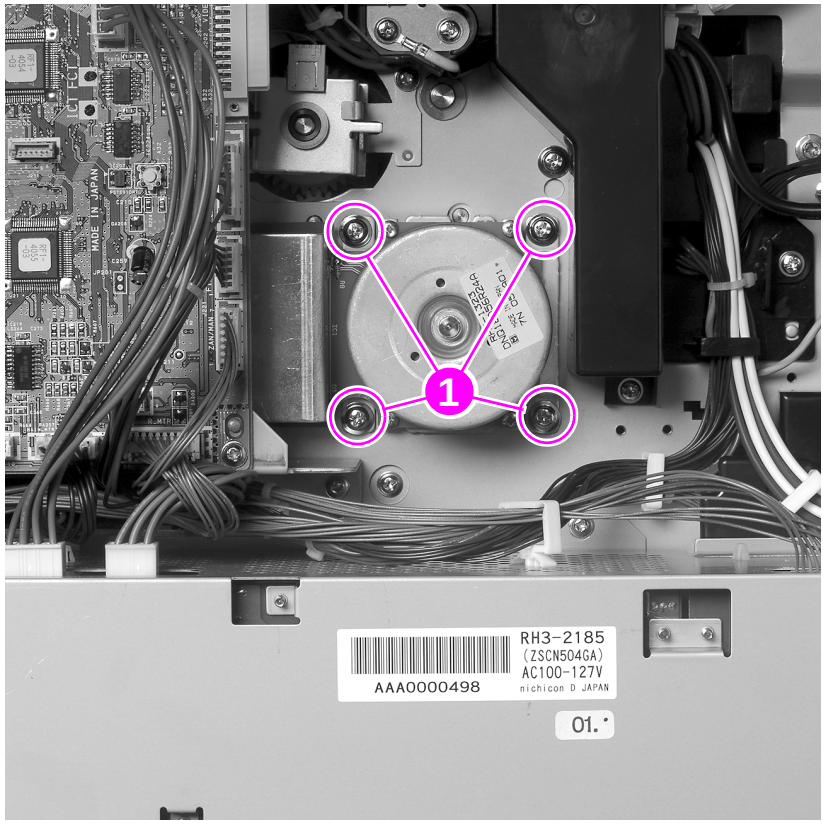

Figure 132. **Main motor**

Carousel motor PCA

This PCA is located on the upper right side of the rear of the printer.

1 Remove the rear cover (see page 243).

2 Unplug six connectors.

3 Remove one screw (callout 1).

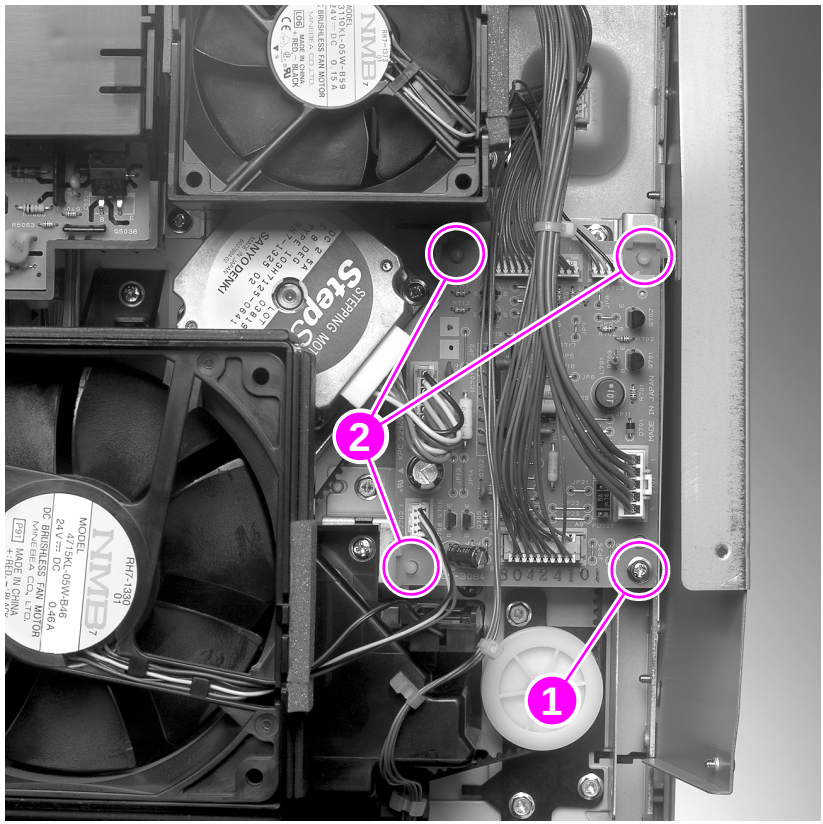

Figure 133. Carousel motor PCA

4 Release three tabs from the PCA (callout 2).

5 Lift the PCA out.

Carousel motor (M1)

The carousel motor is located behind the fan 1 housing.

1. Remove the top cover assembly (see page 232).
2. Remove the rear cover (see page 243).
3. Remove the formatter board and formatter pan (see page 254 and page 272).
4. Remove five screws from the sheet metal cover plate and lift it off.
5. Remove four screws from the fan 1 assembly (callout 1).

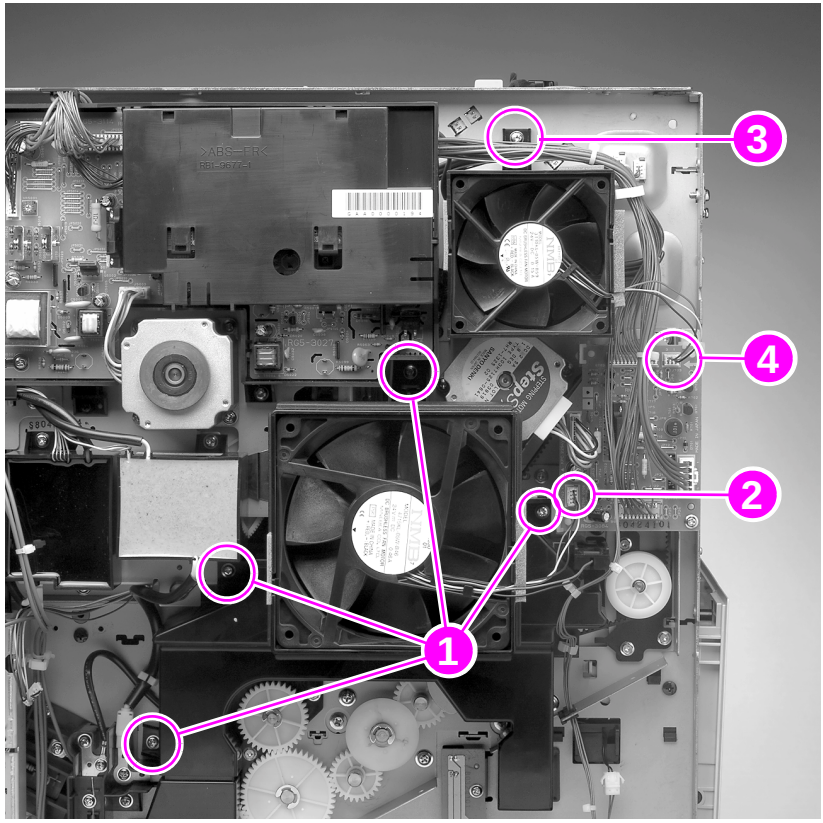

Figure 134. **Fans 1 and 2 housing assemblies**

6. Release two cable stays and unplug one connector on the right side of the assembly (callout 2) to remove the housing.
7. Remove one screw from the fan 2 assembly (callout 3).
8. Release one cable stay and unplug one connector from the fan 2 assembly (callout 4) to remove the housing.

9 On the right side of the carousel motor, unplug one connector (callout 5).

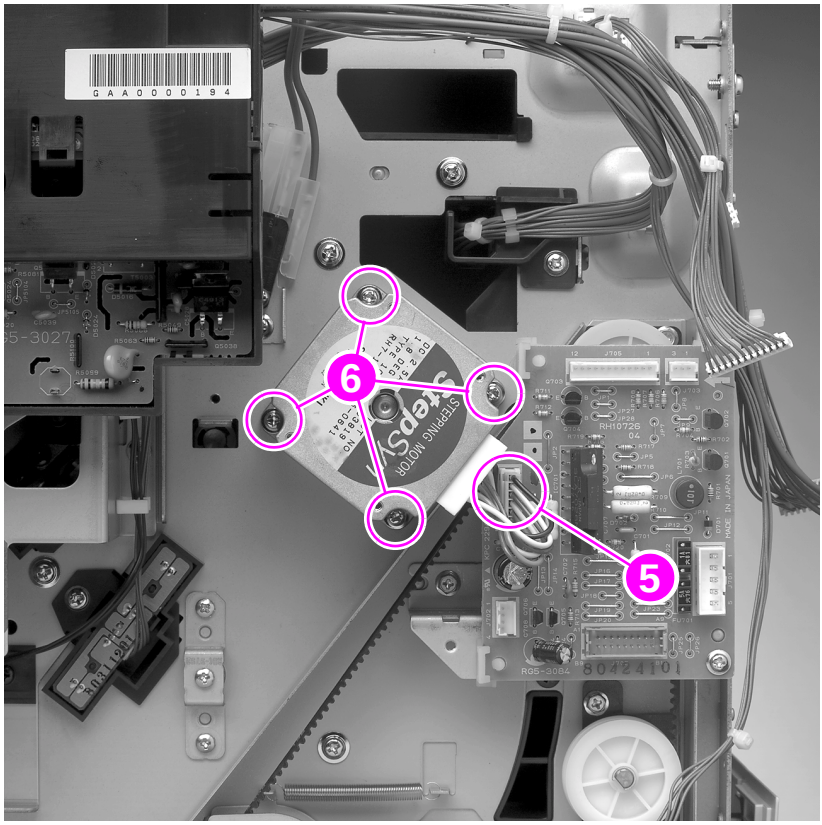

Figure 135. Carousel motor

10 Remove four screws from the motor and lift it out (callout 6).

Delivery drive assembly

The delivery drive assembly is located behind the fan 1 housing and the formatter pan.

1. Remove the carousel motor PCA (see page 282).
2. Remove fan 1 housing (see page 283, steps 4 through 6).
3. Remove two screws (callout 1) from the lower air duct and remove the lower air duct (callout 2).

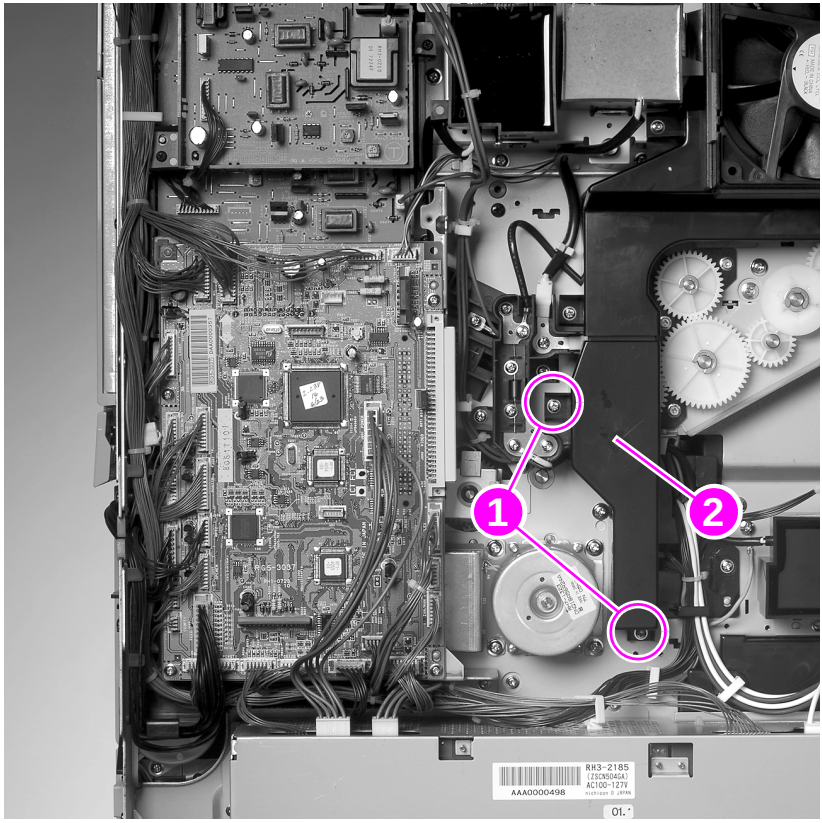

Figure 136. **Lower air duct**

4 Release three cable stays on the bottom of the delivery drive assembly.

5 Remove one screw (callout 3) and the gear cover.

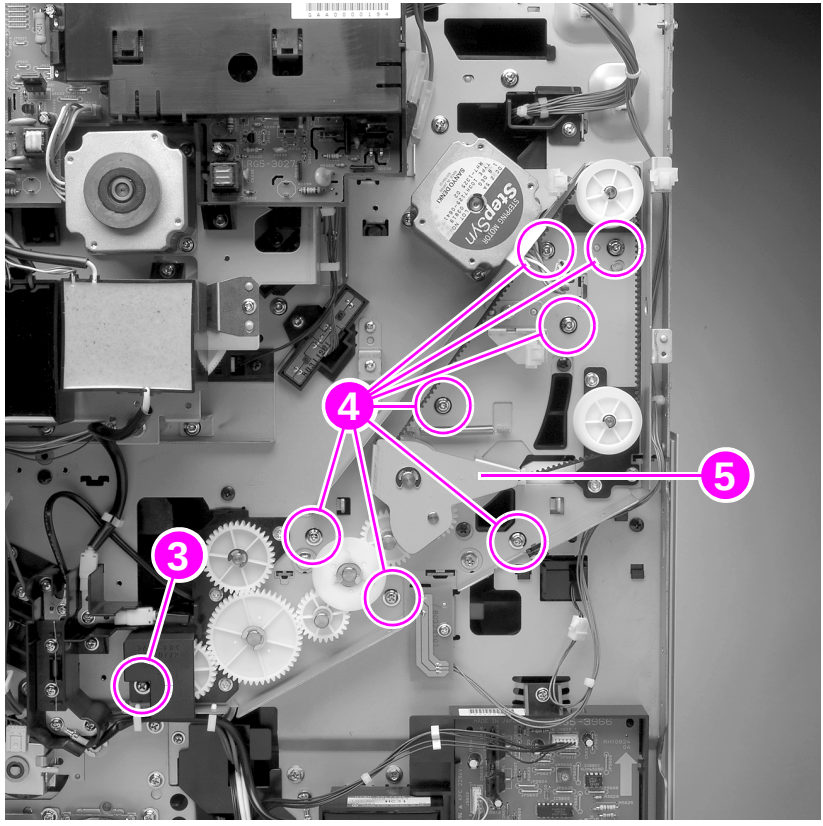

Figure 137. Screws on the delivery drive assembly

6 Remove seven screws from the delivery drive assembly (callout 4).

7 Lift the assembly up and off the tabs.

Notes about reinstalling:

- Ensure that the metal swing arm is above the face-up solenoid (callout 5).

Main gear assembly (not shown)

1. Open the left lower cover and remove the fuser.
2. Open the right upper door and remove the transfer drum.
3. Remove the registration roller assembly (see page 263).
4. Remove the paper pick-up assembly (see page 267).
5. Remove the main motor (M4) (see page 281).
6. Remove the lower air duct (see figure 136 on page 285).
7. Remove the lowest gear (callout 1) on the delivery drive assembly (three screws and one e-ring).

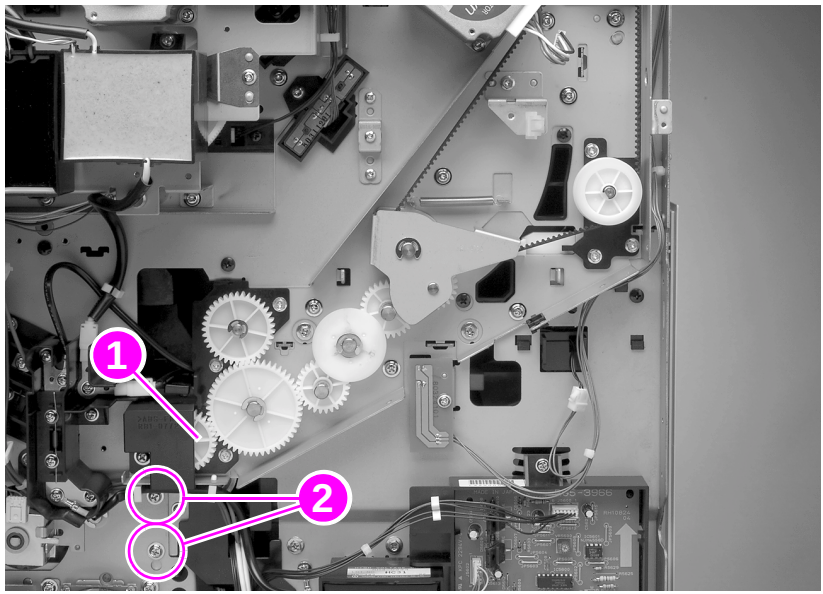

Figure 138. **Access to main gear assembly**

8. Remove tray 2 and tray 3 from the printer.
9. Remove the tray 2 rail from the front of the printer (one screw, two connectors).
10. Remove the inner cover 4 (see reference 4, on page 526).
11. Remove the lower (green) lever (two screws).
12. Remove the pressure lever (two e-rings and two bushings).
13. Remove two screws and pull the main gear assembly (callout 2).

Post charger HV module assemblies

The post charger HV module assemblies are located on the mid-upper of the rear of the printer. Shown in figure 139 below are the assemblies in an HP Color LaserJet 8550 printer. Compare the developer/imaging drum bias supply to the same part from an HP Color LaserJet 8500 printer, in figure 140 on page 289, callouts 1 (the smaller portion) and 2 (the larger portion). The smaller portion is combined with the larger portion in HP Color LaserJet 8550 printer models, and so is not present in these models.

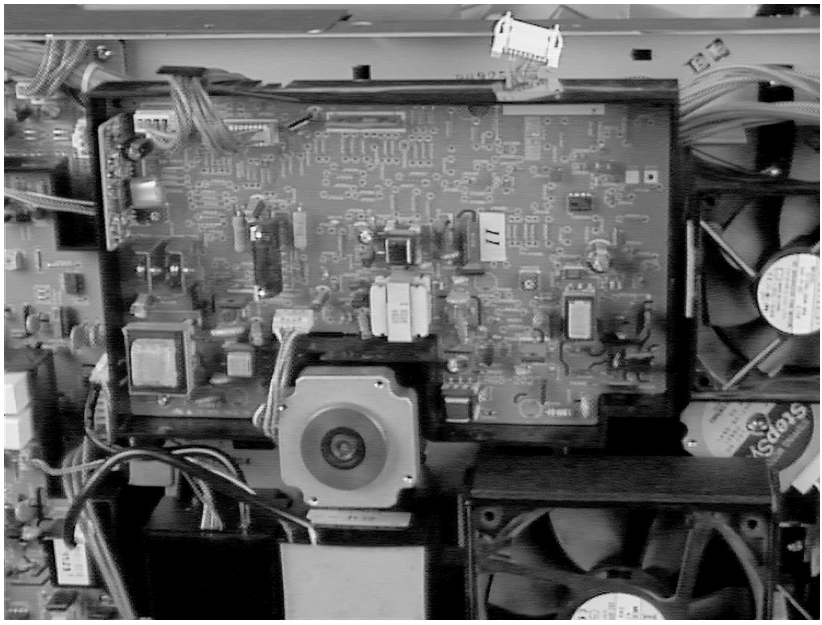

Figure 139. **Developer/imaging drum bias supply, HP Color LaserJet 8550 printer**

Removing developer/imaging drum bias supply

1 Remove the top cover assembly (see page 232) and then remove the rear cover (see page 243).

2 Remove five screws from the sheet metal cover plate and lift it off.

3 Unplug four connectors (callout 3).

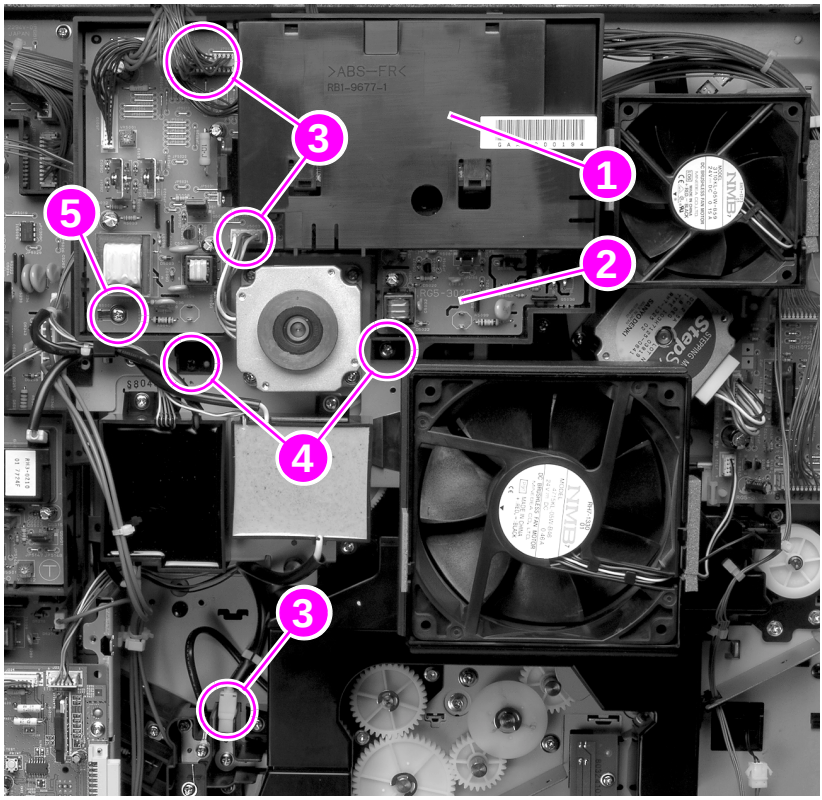

Figure 140. **Developer/imaging drum bias supply**

4 Release two cable stays.

5 Remove two screws on the bottom of the PCA housing (callout 4).

6 Remove one screw on the PCA (callout 5).

7 Lift the PCA up and off.

Removing post charger HV module

1 Remove the high-voltage power supply (see page 291).

2 Remove one screw to release the wire from the open ended diode (callout 1, screw is hidden from view).

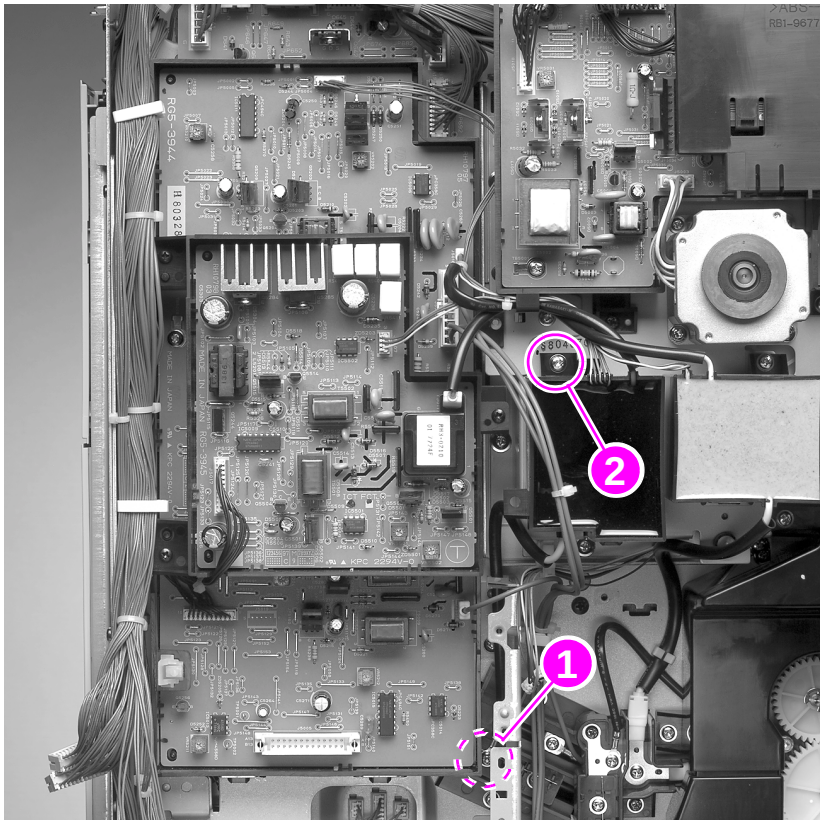

Figure 141. **Post charger HV module**

3 Release two cable stays.

4 Remove one screw on the top of the module (callout 2).

5 Lift the module up and out.

Cleaning roller HV module assemblies

The cleaning roller HV module includes two PCAs stacked on top of each other and is located on the upper left side when facing the rear of the printer.

Removing high-voltage power supply

1. Remove the rear cover (see page 243).
2. Remove the formatter board and formatter pan (see page 254 and page 272).
3. Remove the controller board (see page 277).
4. Unplug six connectors from the PCA (callout 1).

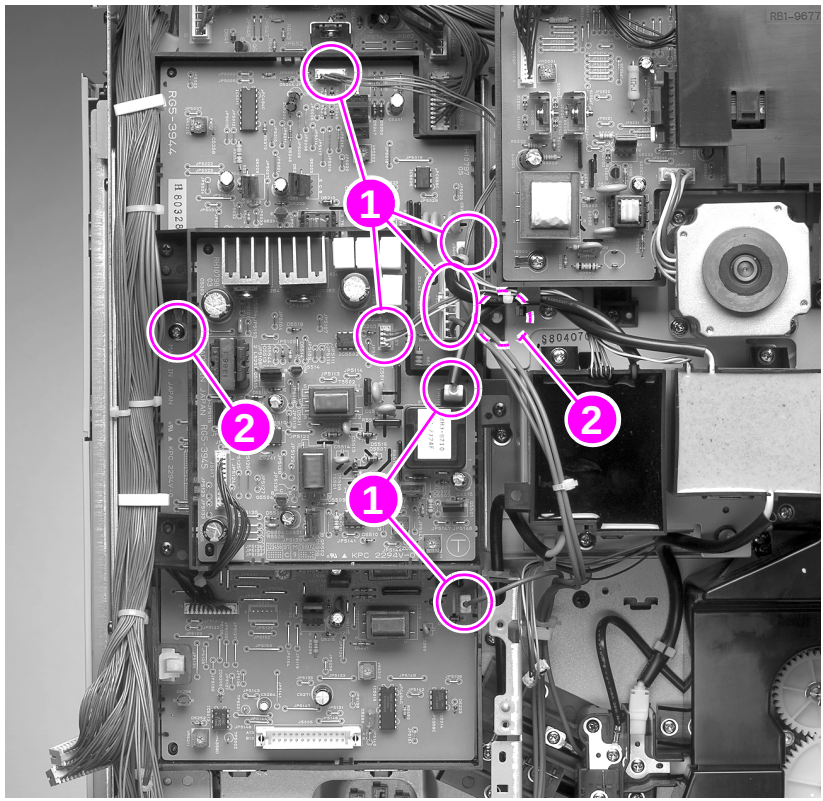

Figure 142. **High-voltage power supply**

5. Release two cable stays.
6. Remove two screws from the PCA (callout 2).
7. Lift the PCA up slightly and out.

Notes about reinstalling:

- Seat the bottom of the PCA first by placing the tabs in the corresponding holes.
- When putting the PCA back in, be sure you do not get any wiring caught behind it.

Removing cleaning roller HV module

1. Remove the rear cover (see page 243).
2. Remove the formatter board and formatter pan (see page 254 and page 272).
3. Unplug two connectors (callout 1).

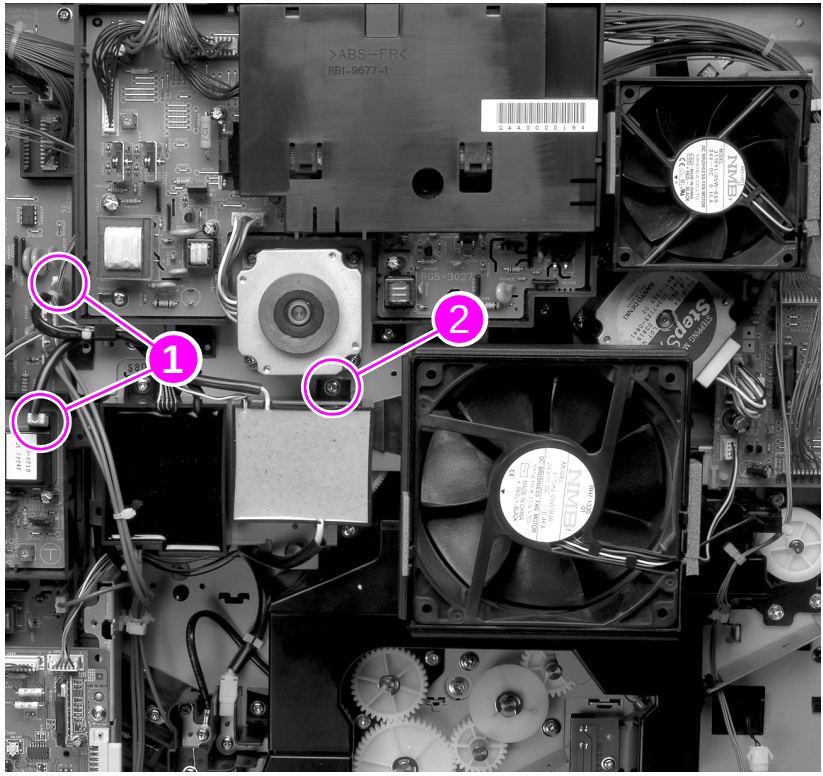

Figure 143. Cleaning roller HV module

4. Release two cable stays.
5. Remove one screw from the top of the module (callout 2).
6. Pull the module out.

Main relay PCA

This PCA is located behind the developer/imaging drum bias supply.

1 Remove the rear cover (see page 243).

2 Remove five screws from the sheet metal cover plate and lift it off.

3 Remove the developer/imaging drum bias supply (see page 291).

4 Unplug eight connectors (callout 1).

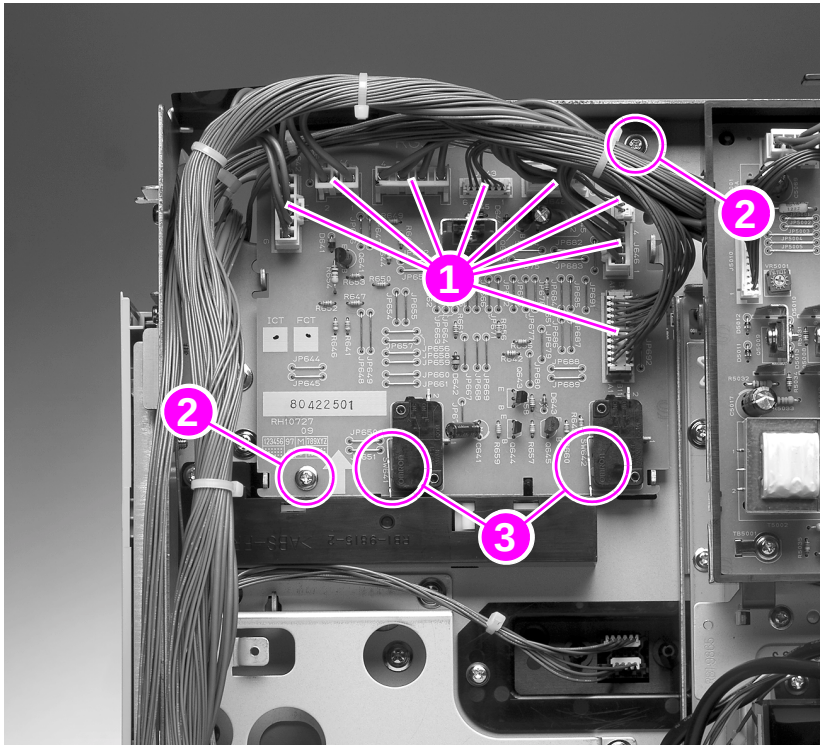

Figure 144. **Main relay PCA**

5 Remove two screws (callout 2).

Note

Take note of where the interlock tabs come out of their casing so that you can reinstall them correctly (callout 3).

6 Lift the PCA up and out.

Drum/cartridge drive assembly

This assembly is behind the high-voltage power supply assembly.

1. Remove the post charger HV module (see page 290).
2. Remove the cleaning roller HV module and the high-voltage power supply (see page 289).
3. Remove the fan 1 housing (see page 283, steps 4 through 6).
4. Release three cable stays.
5. Remove 12 screws (callout 1).

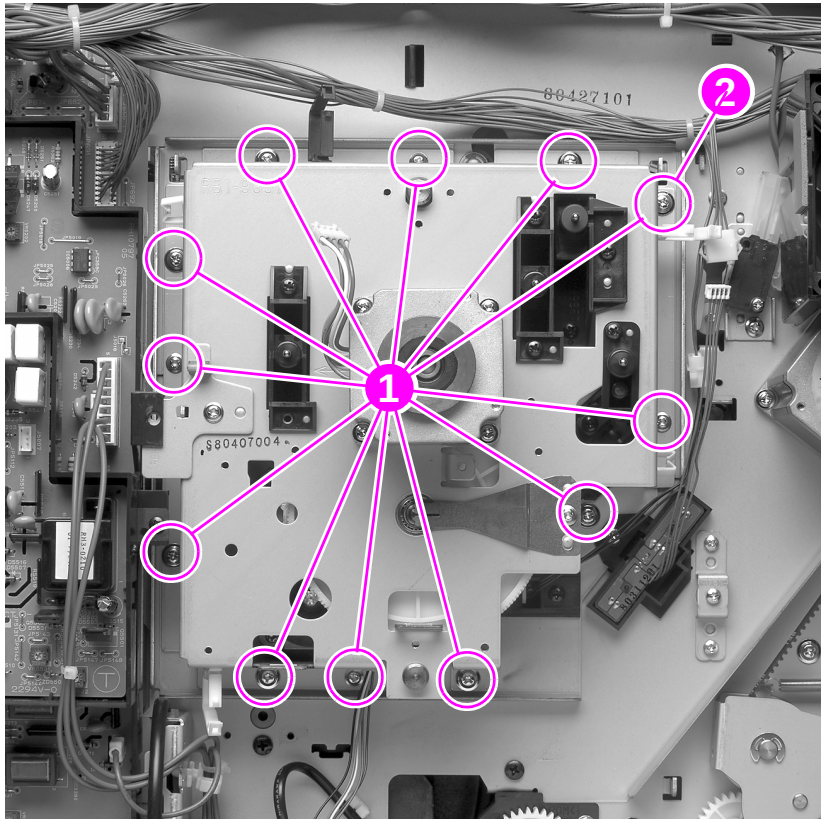

Figure 145. Drum/cartridge drive assembly

6. Lift the assembly up and out.

Notes about reinstalling:

- Replace the screws starting with the callout 2 screw to prevent print defects. Continue to replace screws clockwise around the assembly.

Separation discharge high-voltage converter assemblies

The separation discharge high-voltage converter assemblies are located in the bottom right corner of the rear of the printer.

Removing separation discharge high-voltage converter PCA

1 Remove the rear cover (see page 243).

2 Remove the formatter board and formatter pan (pages 254, 272).

3 Unplug three connectors from the PCA (callout 1).

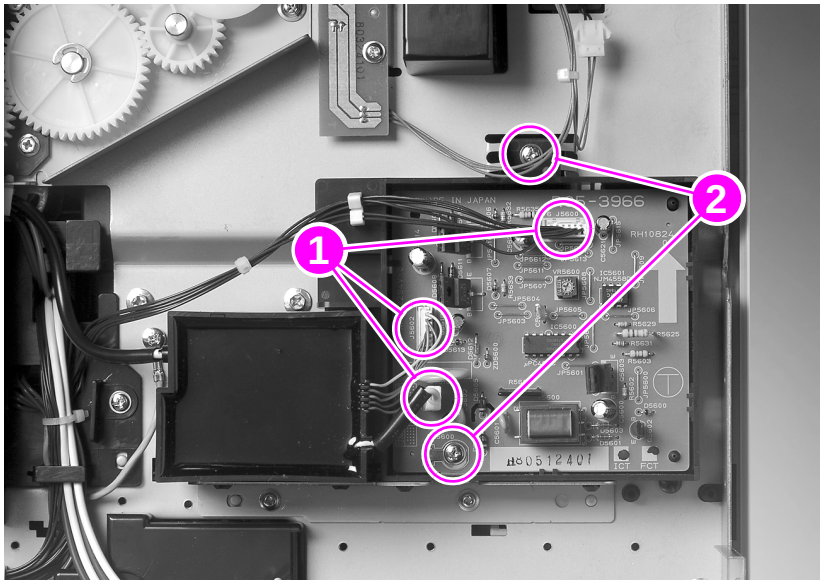

Figure 146. **Separation discharge high-voltage converter**

4 Release one cable stay.

5 Remove two screws (callout 2).

6 Lift the PCA up and off.

Removing separation discharge high-voltage converter

1 Remove the high-voltage converter 3 PCA (see page 295).

2 Unplug one connector.

3 Pull the converter toward you and lift out.

Tray 2 and tray 3 media-size sensing PCAs

1 Remove the rear cover (see page 243).

2 Remove the formatter board and formatter pan (see page 254 and page 272).

3 Remove the power supply (see page 276).

4 Release one cable stay.

5 Remove one screw (callout 1) from the plate and remove the plate.

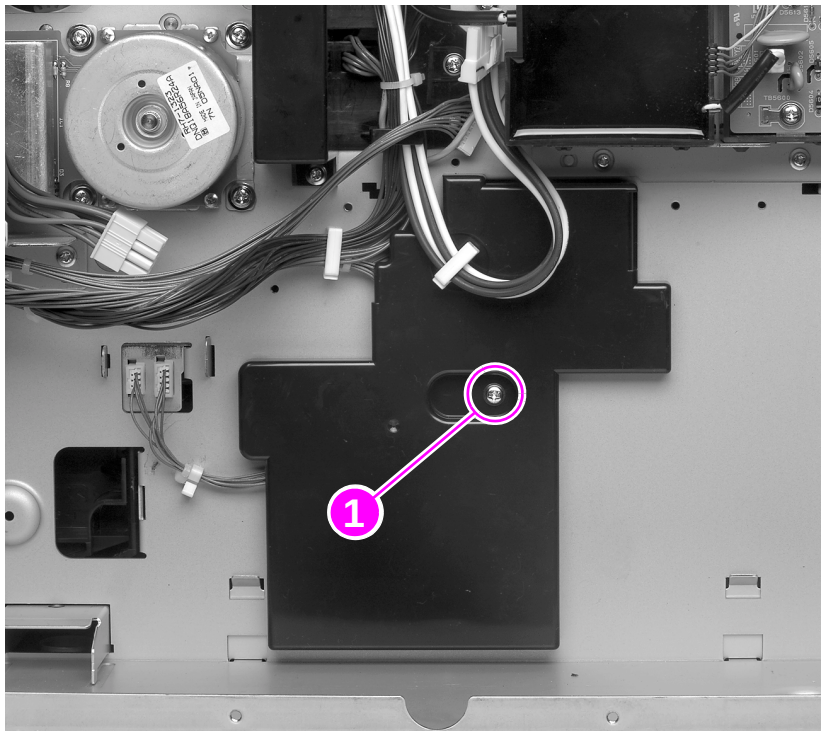

Figure 147. **Plate over media size sensing PCAs**

6 Open the corresponding tray.

7 Remove three screws (callout 2) and unplug one connector on each PCA to remove.

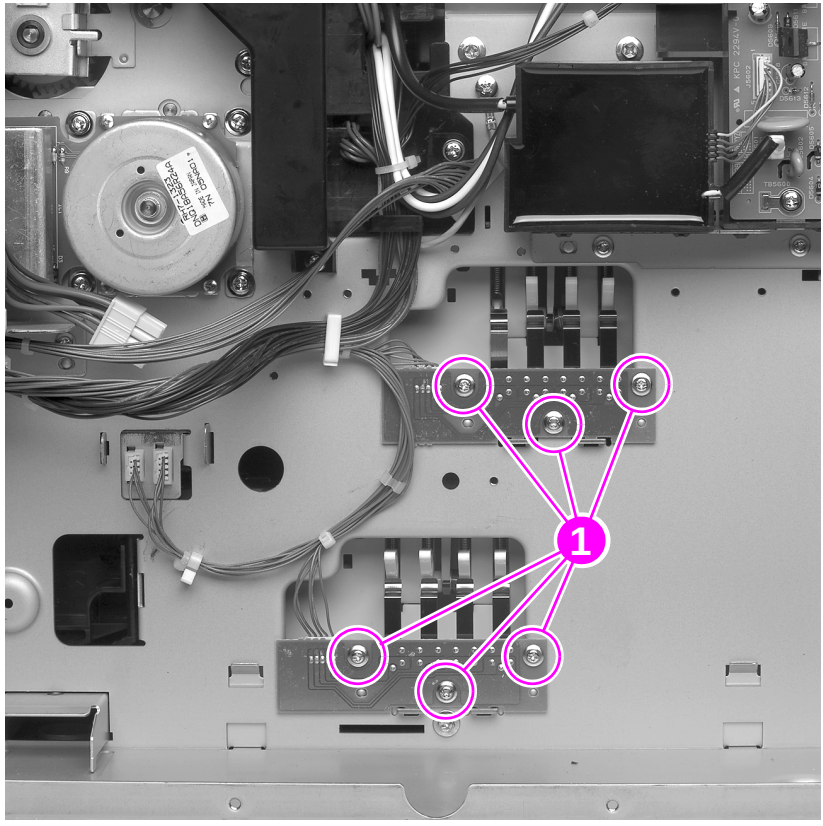

Figure 148. **Media size sensing PCAs**

Note The two PCAs and wire-sensing finger assemblies are interchangeable.

2,000-sheet input unit

You do not have to detach the 2,000-sheet input unit from the printer to service any of the units. The replaceable units are:

- front, back, left, and right covers
- VTU
- tray 4
- paper pick-up assembly
- controller PCA
- front LED PCA assembly
- power supply
- main drive assembly
- paper size sensor assemblies (2)
- tension springs

Front cover

1 Open tray 4 to the stops.

2 Remove the paper limit-back plate from the tray (callout 1).

.

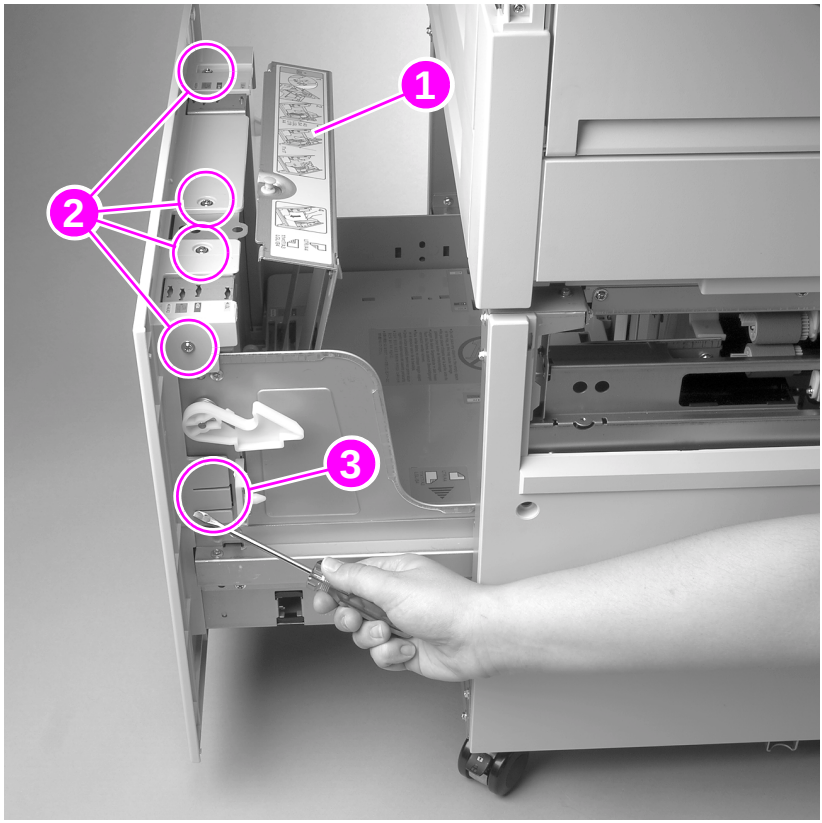

Figure 149. **Front cover of the 2,000-sheet input unit**

3 Remove four screws (callout 2).

4 Use a flat-blade screwdriver to release the plastic retaining tabs on the left- and right-front sides of the tray (callout 3).

5 Carefully lift up on the front cover, and then pull it out to release the plastic retaining tabs that secure the bottom of the front cover to the tray chassis.

Notes about reinstalling:

- Ensure the plastic retaining tabs are replaced properly.

Back cover

1 Unplug the power cord and the C-link interface cables from the 2,000-sheet input unit.

2 Remove four screws (callout 1).

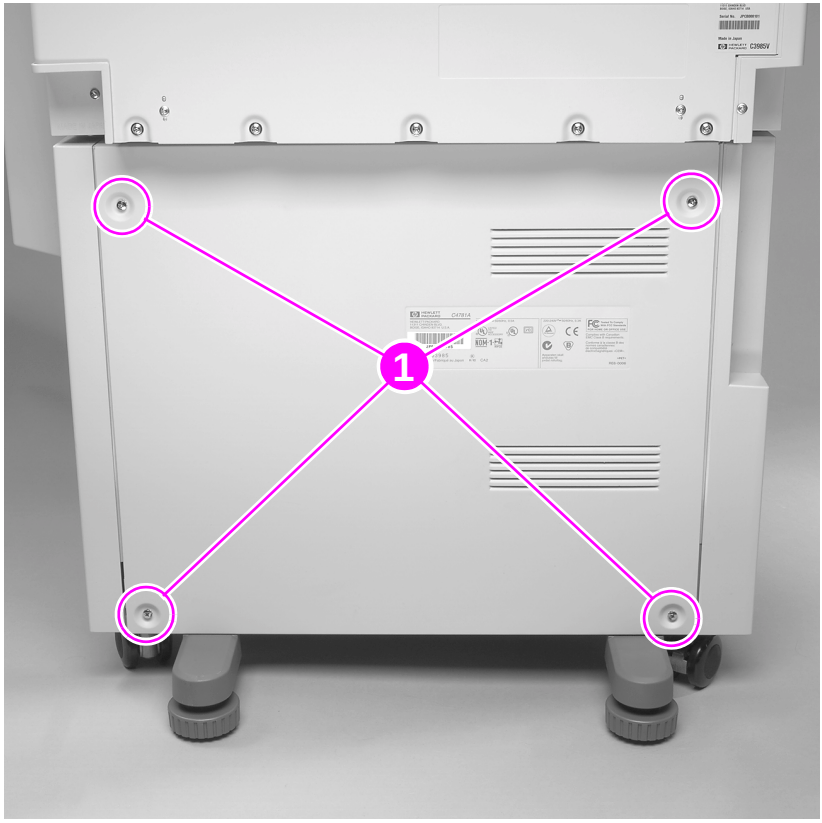

Figure 150. Back cover removal

3 Pull the cover back from the chassis.

Notes about reinstalling:

- Make sure the tab on the lower-left corner is inserted into its alignment slot.

Left cover

1 Unplug the power cord and the C-link interface cables from the 2,000-sheet input unit.

2 Remove two screws (callout 1).

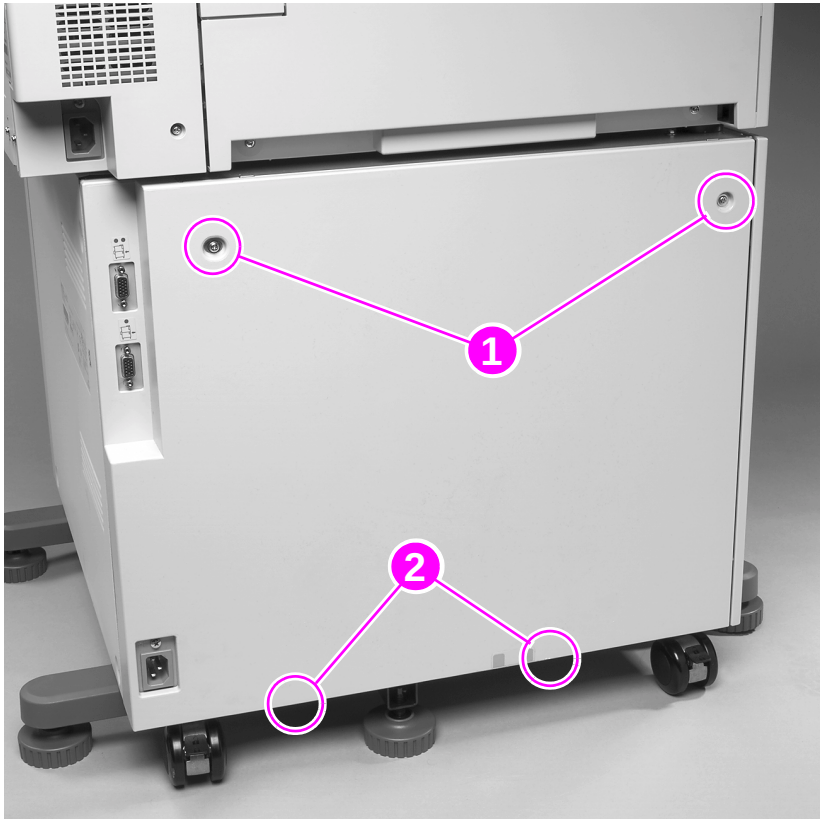

Figure 151. **Left cover removal**

3 Pull out on the top of the cover, and then lift up on the right side of the cover to clear the retaining tabs that are along the bottom edge (callout 2).

4 Pull out on the lower-left corner to release the plastic retainer tab that secures that corner of the cover to the chassis.

Notes about reinstalling:

- Replace the left side first.
- Tilt the right side down and toward the chassis to place the lower retaining tabs over the chassis rail (callout 2).

Vertical transfer unit

Remove the VTU to access the left side of the unit and the paper path mechanisms.

1. Unplug the power cord and the C-link interface cables from the 2,000-sheet input unit.
2. Open the VTU.
3. Rotate the two plastic safety catches on the VTU hinges towards the unit to the “open” position (callout 1).

WARNING! *Do not* release the safety catches from the “open” position while the VTU is removed. The springs on the safety catches are very strong and can cause injury.

4. Unplug two connectors (callout 2).

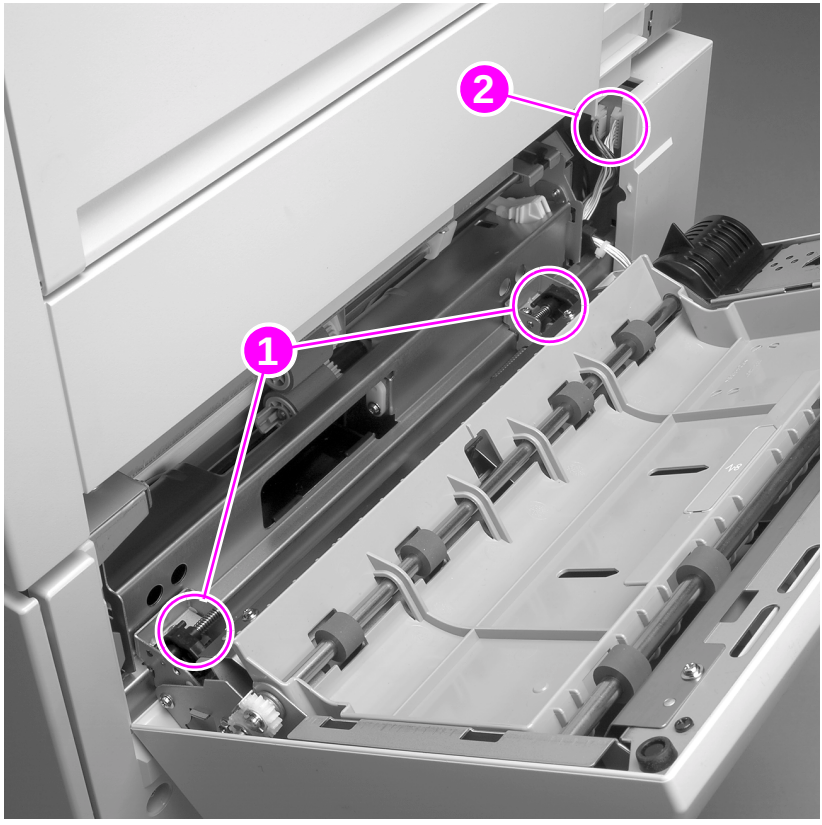

Figure 152. **Vertical transfer unit**

5 Remove two screws, one on the inner side of each safety catch.

6 Pull the door halfway closed, then lift the unit straight up to clear the metal locating tabs on the chassis.

Notes about reinstalling:

- Before tightening the screws, ensure that the metal locating tabs are in place.

WARNING! Release the safety catches only *after* tightening the screws that secure the VTU to the chassis.

Right cover

1 Remove the VTU (see page 302).

2 Remove two screws near the middle of the right cover (callout 1).

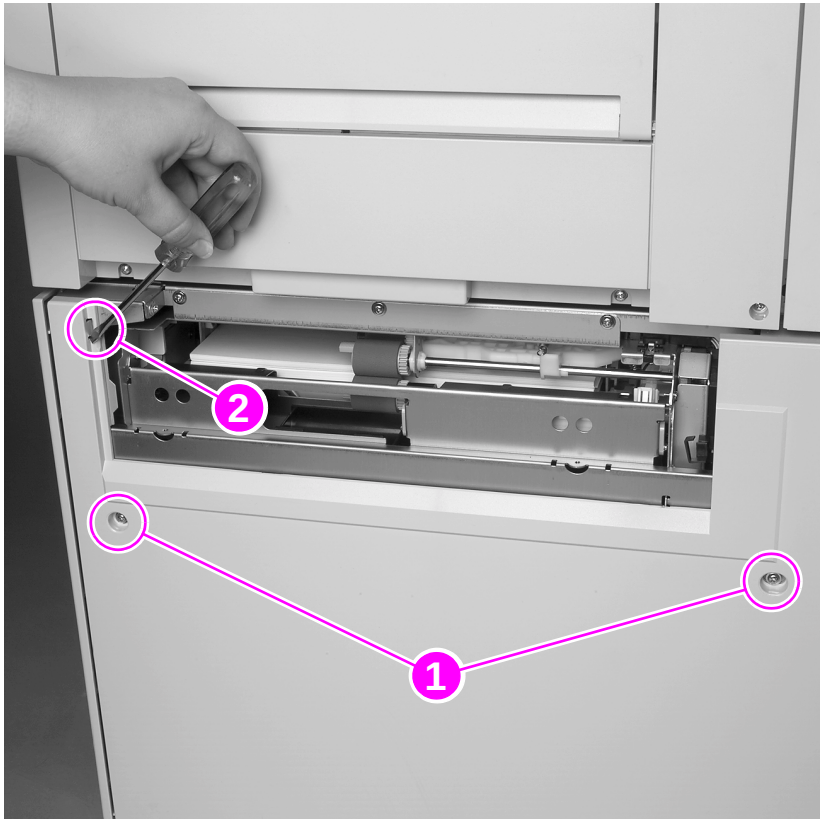

Figure 153. **Right cover with VTU removed**

3 Using a flat-blade screwdriver, release the plastic retaining tab on the upper-left corner of the cover (callout 2).

4 Carefully pull out on the top of the cover while lifting it upward to clear the retaining tabs that are along the cover's bottom edge.

Notes about reinstalling:

- Make sure the retaining tabs that are along the cover's bottom edge are placed over the chassis rail.

Tray 4

1. Open tray 4 and remove any paper.
2. Remove the vertical transfer unit (VTU) (see page 302).
3. Remove the left and right covers (see page 301 and page 304).
4. Remove one screw and one metal retaining tab from each side of the chassis (callout 1).

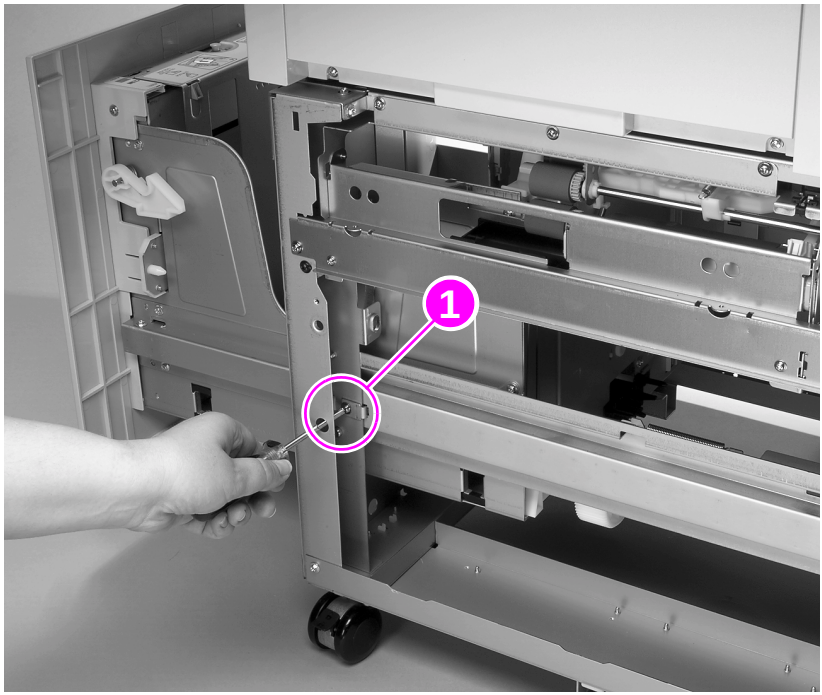

Figure 154. **Tray 4 removal**

5. Support the rear of the tray while sliding it straight out of the chassis.

Paper pick-up assembly

The paper pick-up assembly is located on the right side of the unit.

1. Remove the VTU (see page 302).
2. Remove the right cover (see page 304).
3. Open tray 4 to the stops.
4. Unplug three connectors (callout 1).

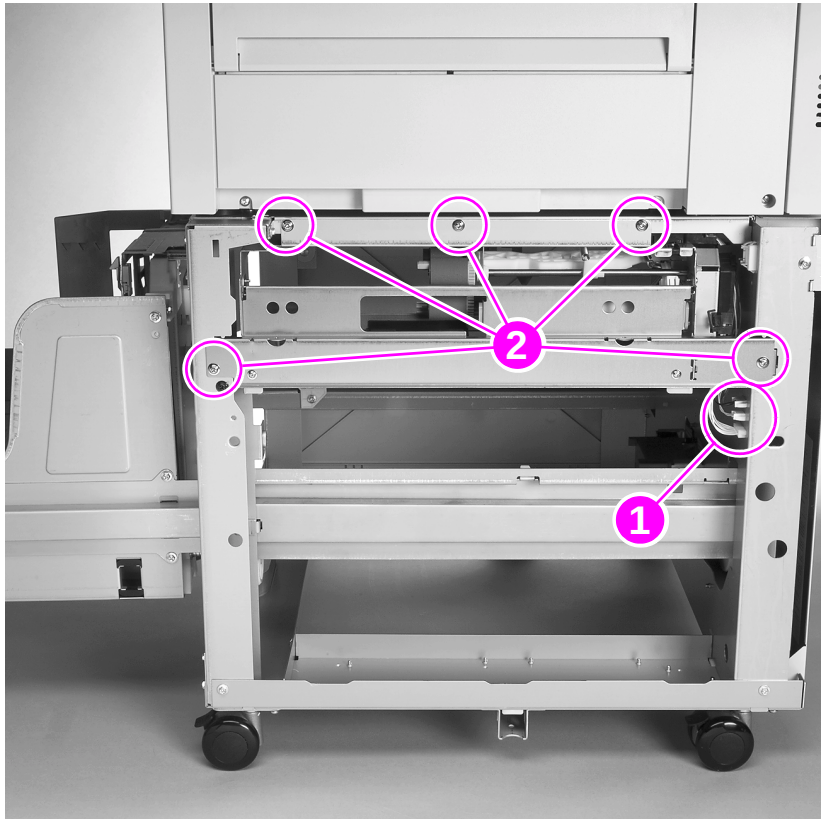

Figure 155. **Paper pick-up assembly**

5. Remove five screws (callout 2).
6. Slide the assembly straight out of the chassis.

Controller PCA

The controller PCA is located on the back of the unit.

1 Remove the back and left covers (see page 300 and page 301).

2 Unplug 11 connectors (callout 1).

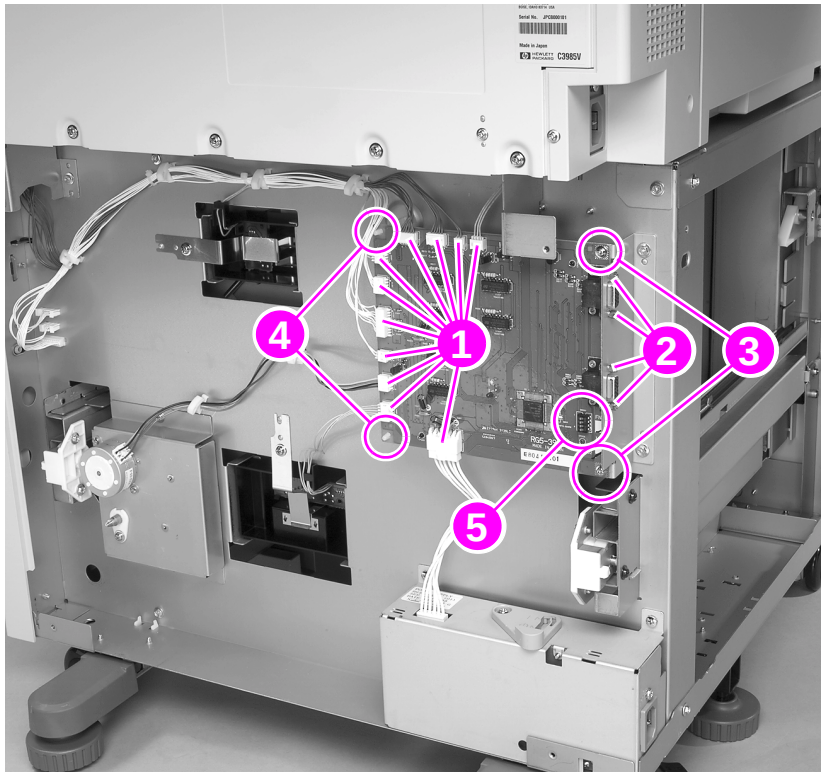

Figure 156. Controller PCA

3 Remove four hex screws from the two C-link cable connectors (callout 2).

4 Remove two screws from the right side of the PCA (callout 3).

5 Release the two plastic retaining posts from the left side of the PCA (callout 4).

6 Pull the PCA out from the chassis.

Notes about reinstalling:

- Ensure that the DIP switches on the PCA are in the Normal Setting (off) (callout 5). For information on DIP switch settings, see page 473.

Front LED PCA assembly

1 Open tray 4 halfway to the stops.

2 On the upper-left corner of the front of the chassis, remove one screw (callout 1).

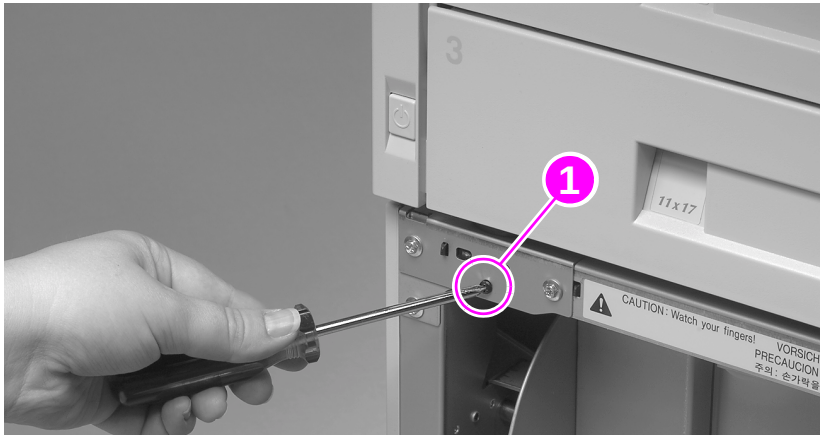

Figure 157. Screw on front LED PCA assembly

3 Reach behind the LED PCA assembly and pull it away from the chassis.

4 Release three plastic retaining tabs that secure the LED PCA to the connector (callout 2).

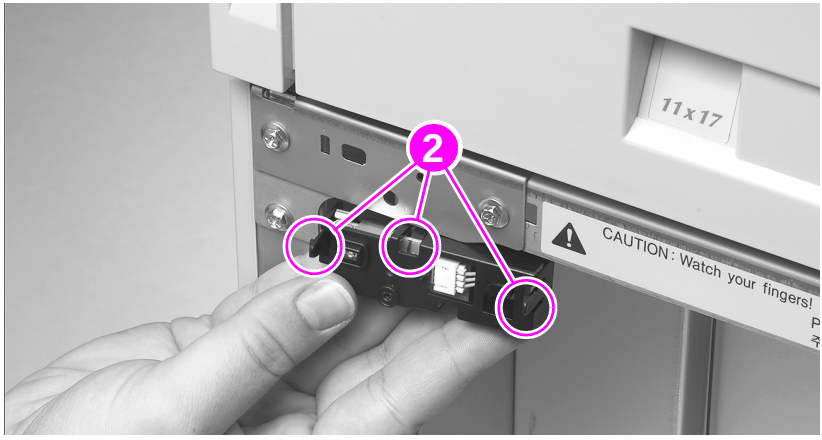

Figure 158. Front LED PCA

5 Unplug the LED PCA from the connector.

Power supply

1 Unplug the power cord and the C-link interface cables from the 2,000-sheet input unit.

2 Remove the back and left covers (see page 300 and page 301).

3 Unplug one connector (callout 1).

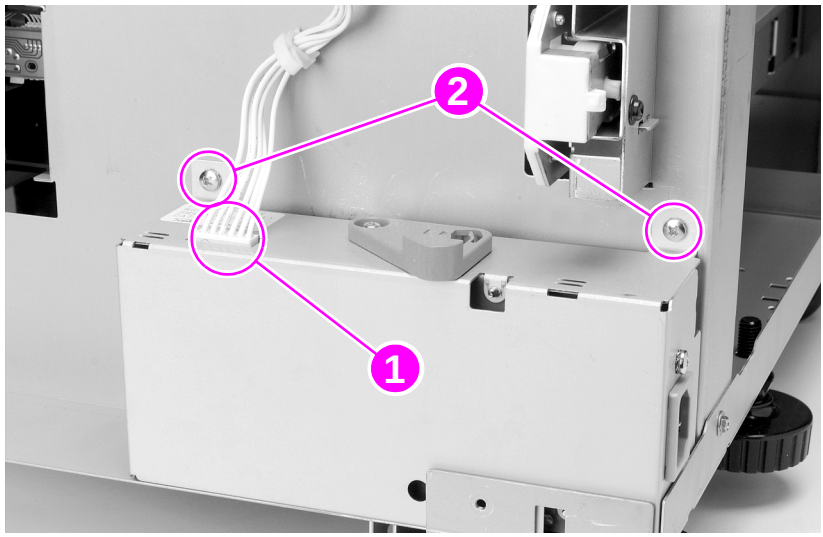

Figure 159. Power supply

4 Remove two screws (callout 2).

5 Lift the power supply upward to clear the locating tabs underneath, and then slide it to the left to free it from the chassis.

Main drive assembly

1 Remove the back cover (see page 300).

2 Unplug one connector from the controller PCA (callout 1).

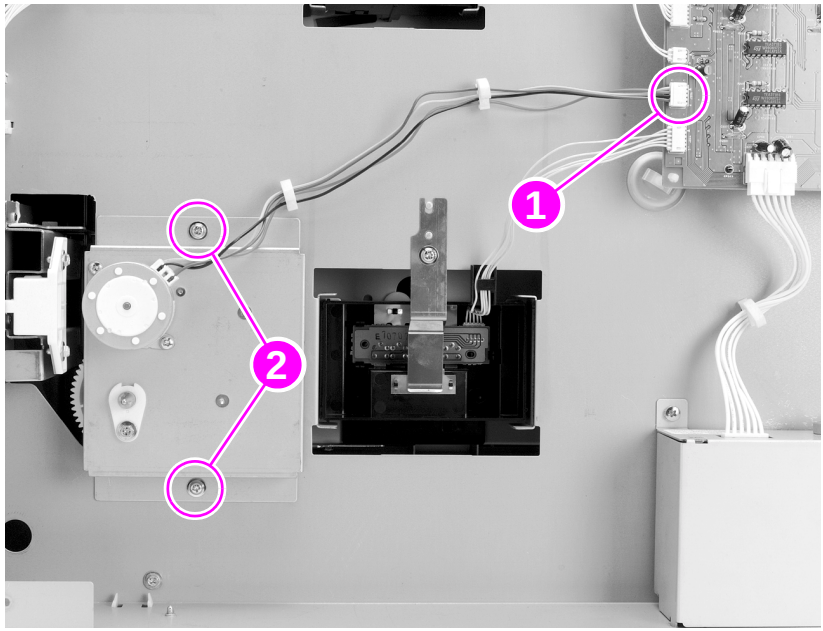

Figure 160. **Main drive assembly**

3 Release two cable stays.

4 Remove one screw on top of the main drive assembly and one screw on the bottom (callout 2).

5 Pull the main drive assembly away from the chassis.

Note Inspect the paper deck drive bushing on the main drive assembly. If the bushing is broken, it can be replaced without replacing the whole drive assembly.

Paper-size sensor assemblies

There are two paper-size sensor assemblies: the quantity switch assembly and the paper-size switch assembly.

Removing the quantity switch assembly

1 Remove the back cover (see page 300).

2 Unplug one connector from the controller PCA (callout 1).

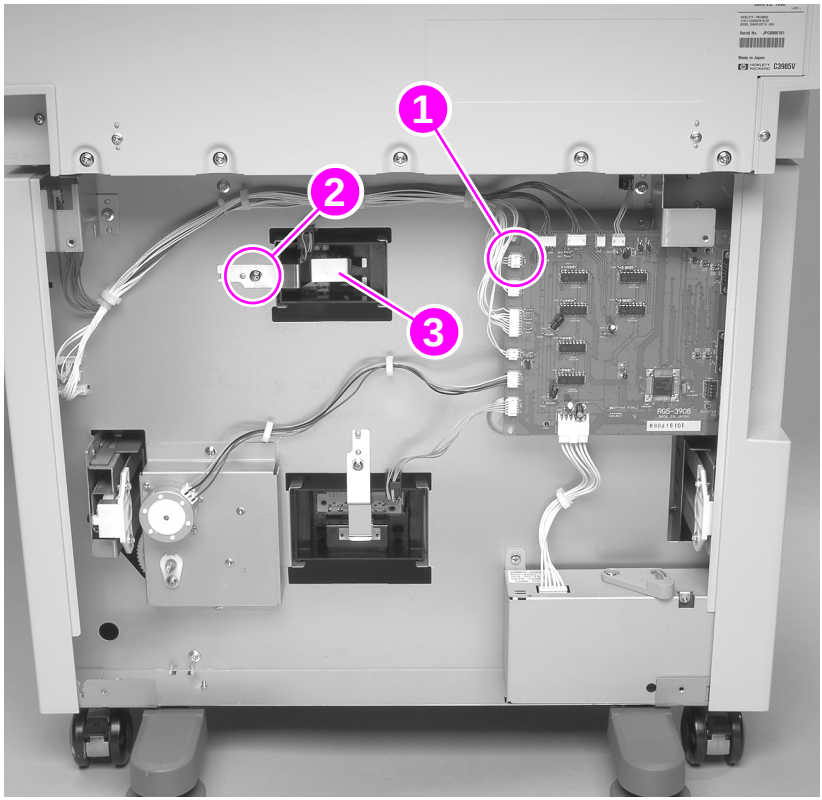

Figure 161. **Paper quantity switch assembly**

3 Release two cable stays.

4 Remove one screw (callout 2) and the metal retaining spring (callout 3) that hold the assembly in place.

5 Remove the assembly.

Notes about reinstalling:

- Seat the retaining spring (callout 3) onto the locating pins that are on the chassis.

Removing the paper-size switch assembly

1 Remove the back cover (see page 300).

2 Unplug one connector from the controller PCA (callout 1).

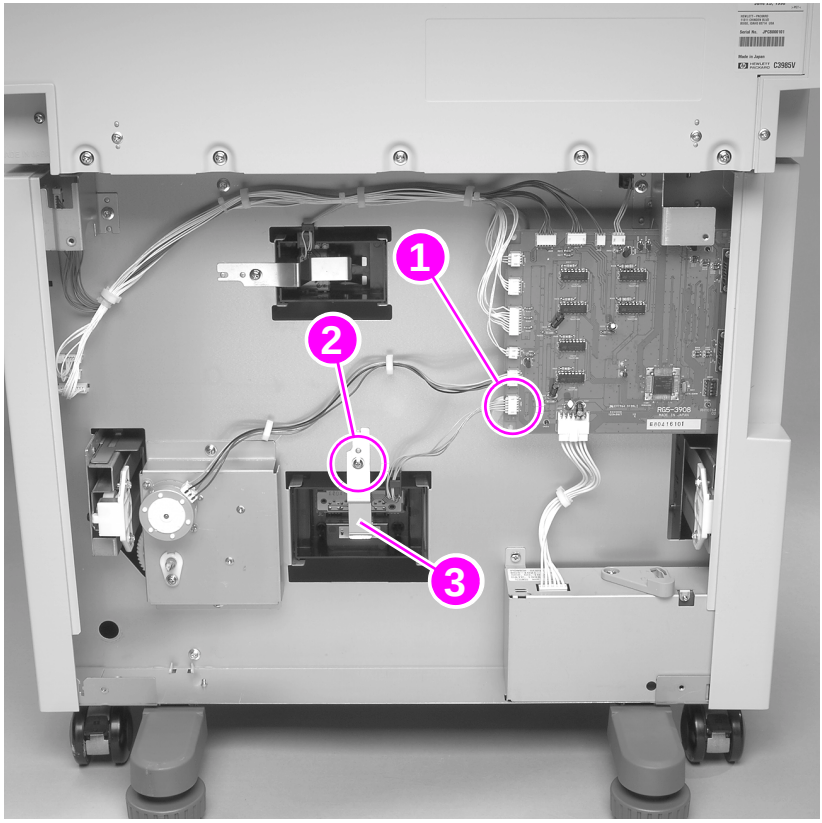

Figure 162. Paper size switch assembly

3 Remove one screw (callout 2) and the metal retaining spring (callout 3) that hold the assembly in place.

4 Remove the assembly.

Notes about reinstalling:

- Seat the retaining spring (callout 3) onto the locating pins that are on the chassis.

Tension springs

1. Remove the left cover (see page 301).
2. Open tray 4 to the stops.
3. Inside the tray, remove one spring on the left runner and one spring on the right runner (callout 1).

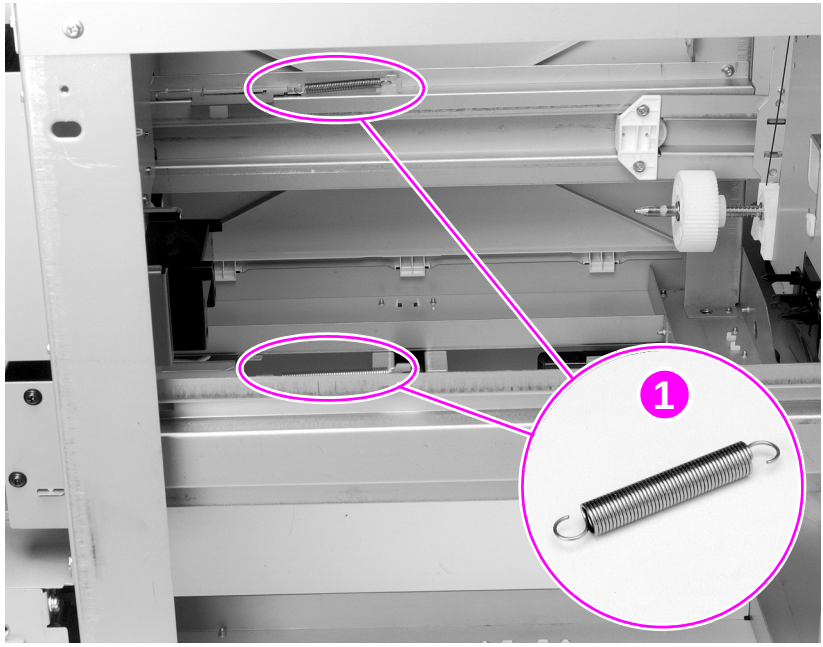

Figure 163. **Tension springs**

Multi-bin mailbox

The following covers and assemblies can be removed from the multi-bin mailbox:

- front, back, and top covers
- power supply
- paper bins and blind cover
- flipper assembly
- delivery head position motor
- transport belt motor
- input paper guide
- metallic tape and housing assembly
- controller PCA
- anti-curl strings
- delivery head assembly
- interlock switch
- diagnostic LED PCA
- user status LED PCA
- attachment assembly

Hint Place the multi-bin mailbox on a table for ease in servicing the unit.

Front and back covers

1 Remove the multi-bin mailbox from the printer.

2 For each cover, use a small flat-blade screwdriver to release the three retaining tabs that secure the cover to the frame (callout 1).

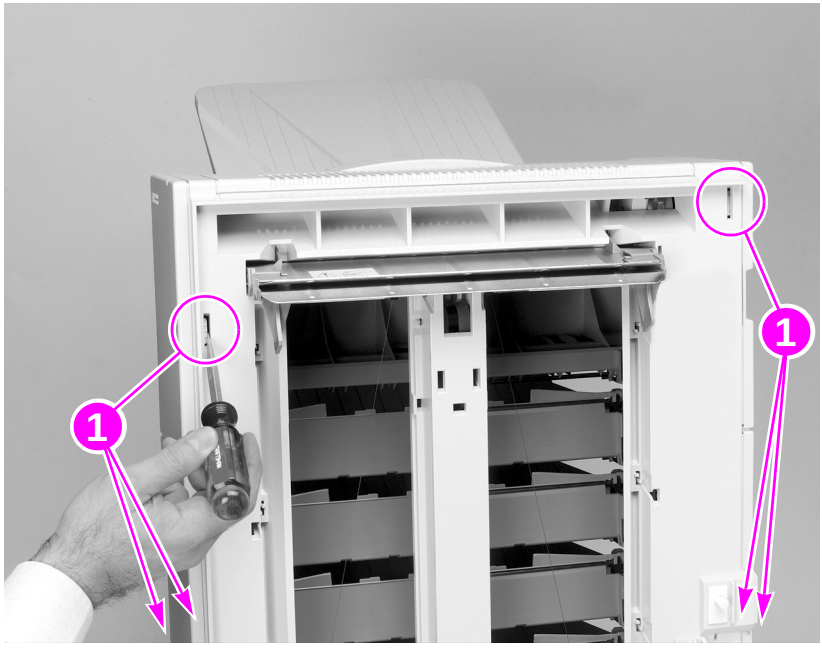

Figure 164. **Front and back covers**

3 Rotate the cover outward to release it from the frame.

Top cover

1 Remove the front and back covers (see page 315).

2 Disconnect the cable from the LED PCA (callout 1, at the upper-front side of the frame).

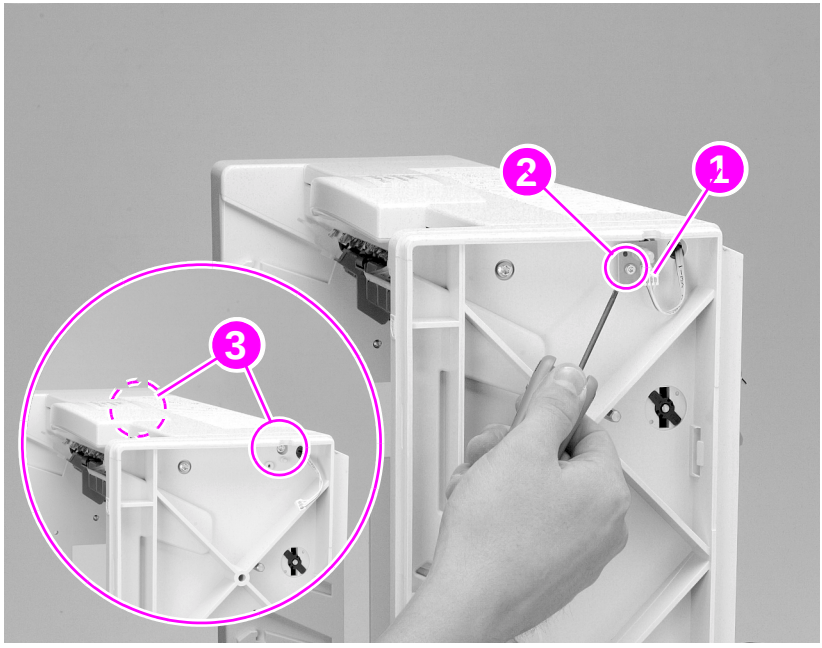

Figure 165. **Top cover**

3 Remove one screw that secures the LED PCA to the frame (callout 2).

4 Remove two screws close to the upper-right side (callout 3).

5 Slide the top cover to the left side of the unit, then lift it up and out of the frame.

Power supply

1 Unplug one connector from the controller PCA (callout 1).

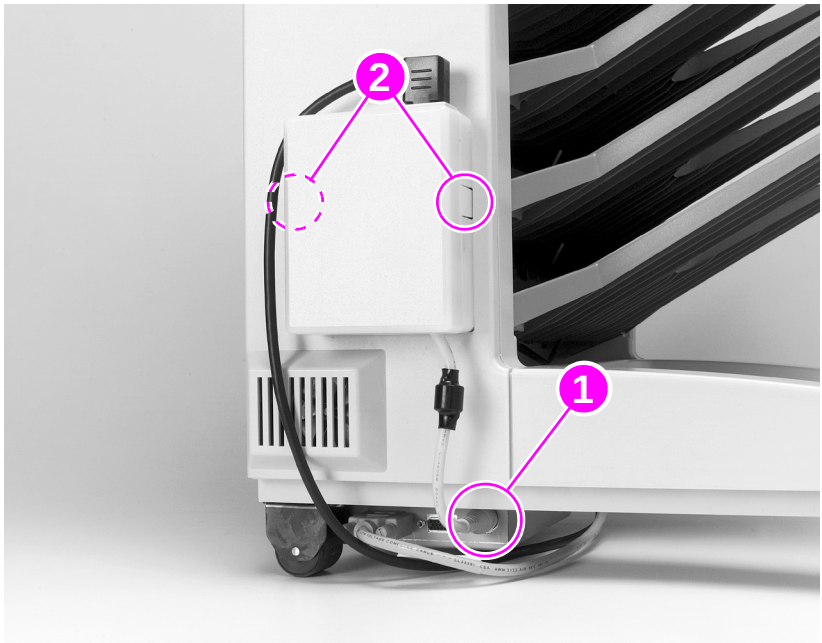

Figure 166. **Power supply**

2 Press the plastic retaining tabs on each side of the power supply to remove it (callout 2).

Paper bins and blind cover

The procedure for removing the paper bins and the blind cover is the same. Each bin rests in its labeled slot.

1. Remove the face-up bin first. Lift the outer edge of the bin to clear the retaining notch in the frame, and then pull the bin away from the frame.
2. Remove the blind cover.

Figure 167. **Paper bins**

3. Remove each face-down bin, starting at the top and working down in sequence.

Notes about reinstalling:

- Slide a bin into its designated slot, and then lower the bin into the retaining notch in the frame.
- Replace the paper bins, beginning with the bottom face-down bin and continuing upward in order. Be sure to place the blind cover between face-down bin 1 and the face-up bin.

Flipper assembly

1 Remove all paper bins and the blind cover (see page 318).

2 Remove the front, back, and top covers (pages 315, 316).

3 Remove two screws closest to the upper-left side (callout 1).

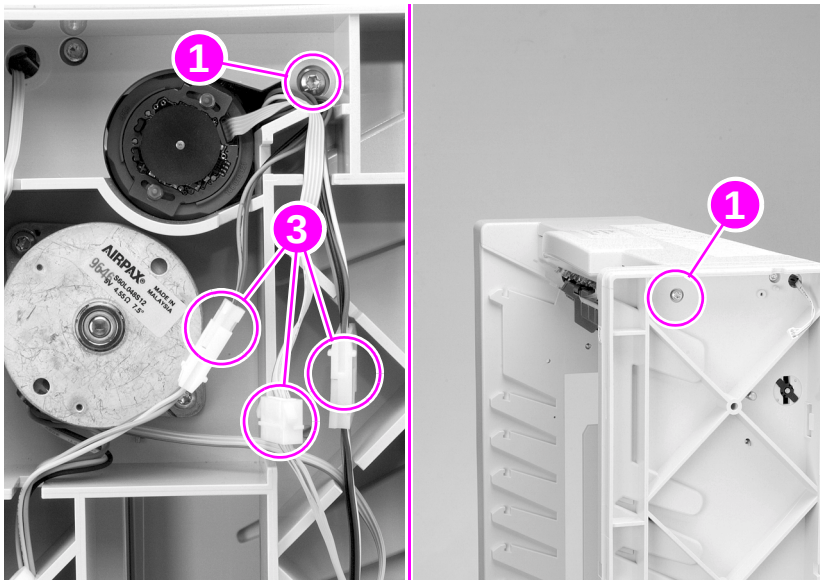

Figure 168. **Flipper assembly (1 of 3)**

4 Hold down the jam access door and unplug the ground wire (callout 2).

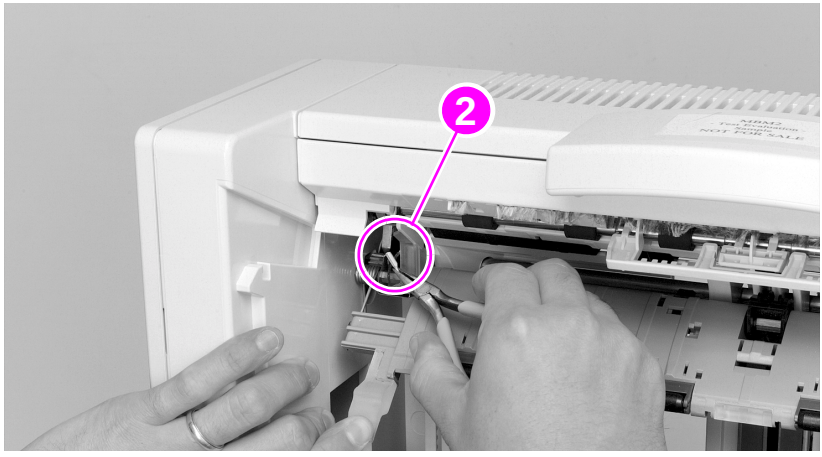

Figure 169. **Flipper assembly (2 of 3)**

5 Unplug three connectors (figure 168, callout 3).

6 Use a flat-blade screwdriver to release the plastic retaining tab that secures the assembly to the top of the frame (callout our).

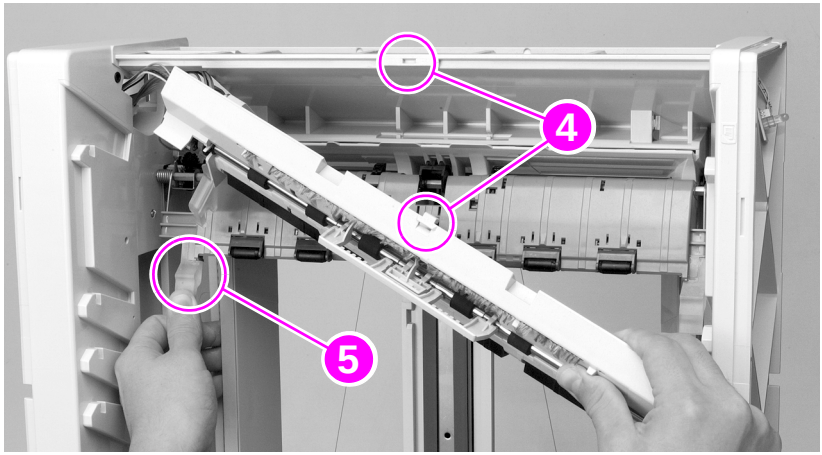

Figure 170. **Flipper assembly (3 of 3)**

7 Hold down the jam access door (callout 5) and pull the assembly out.

Notes about reinstalling:

- Hold down the jam access door to reconnect the ground wire to the flipper motor (callout 2).

CAUTION Do not over-tighten the screws that secure the flipper assembly to the multi-bin mailbox frame. The nuts in the flipper assembly can rotate in their slots.

Delivery head position motor

1 Remove the back cover (see page 315).

2 Unplug one connector (callout 1).

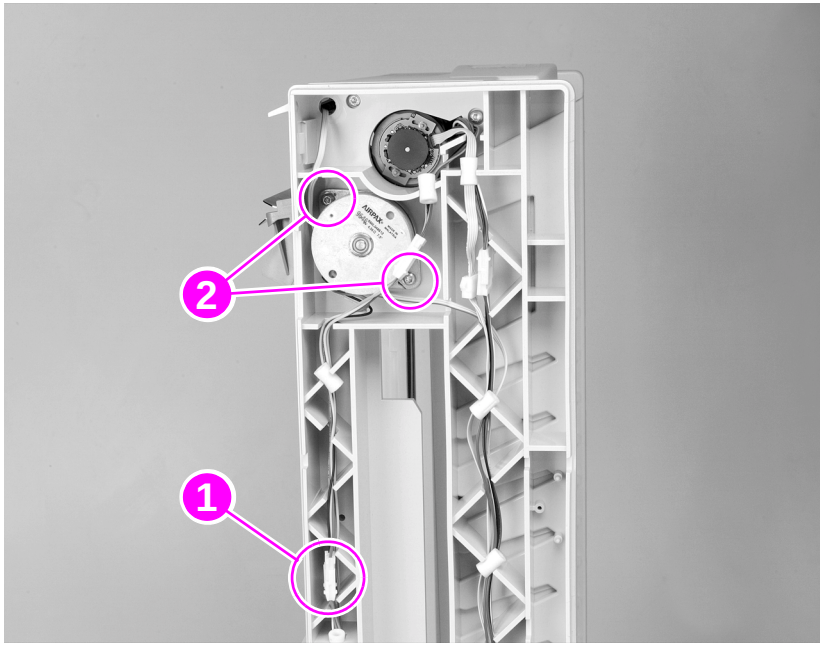

Figure 171. **Delivery head motor**

3 Remove two screws from the motor (callout 2).

4 Pull the motor away from the frame.

Notes about reinstalling:

- Position the motor in the frame so that the cable grommets are face down.

Transport belt motor

1 Remove the back cover (see page 315).

2 Remove all paper bins and the blind cover (see page 318).

3 Release the controller PCA assembly from the bottom of the frame (see page 327, steps 1 through 7).

4 Unplug the J8 connector on the multi-bin mailbox controller PCA (callout 1).

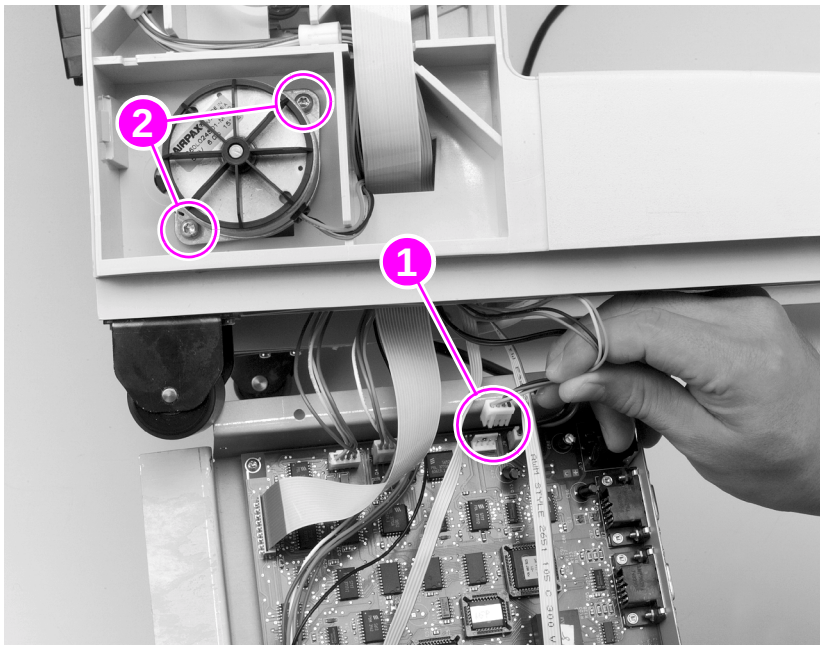

Figure 172. Transport belt motor

5 Remove two screws (and washers) on the transport belt motor (callout 2).

CAUTION When removing the motor, do not damage the internal drive belt.

6 Gently pull out the motor.

Notes about reinstalling:

- Reroute the cable on the transport belt motor behind the flat cable, and connect it to the J8 connector on the multi-bin mailbox controller PCA (callout 1).
- Replace the internal drive belt onto the transport belt motor gear before replacing the screws that secure the motor to the frame.

Input paper guide

1. Remove the multi-bin mailbox from the printer.
2. Remove the face-up bin and the blind cover (see page 318).
3. Hold down the jam access door while unplugging the ground wire (callout 1).

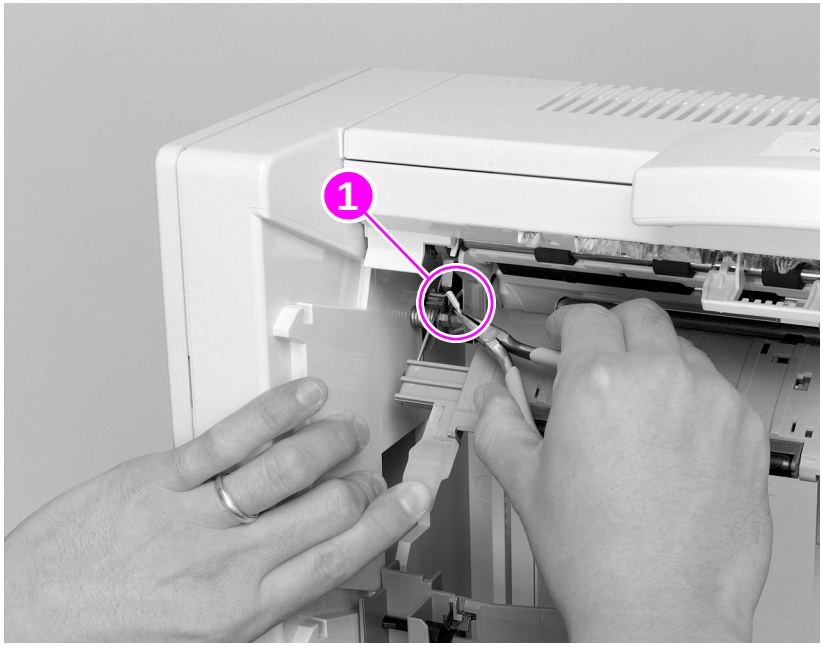

Figure 173. **Input paper guide (1 of 2)**

4 Use a flat-blade screwdriver to release the retaining tabs on the top of the input paper guide (callout 2).

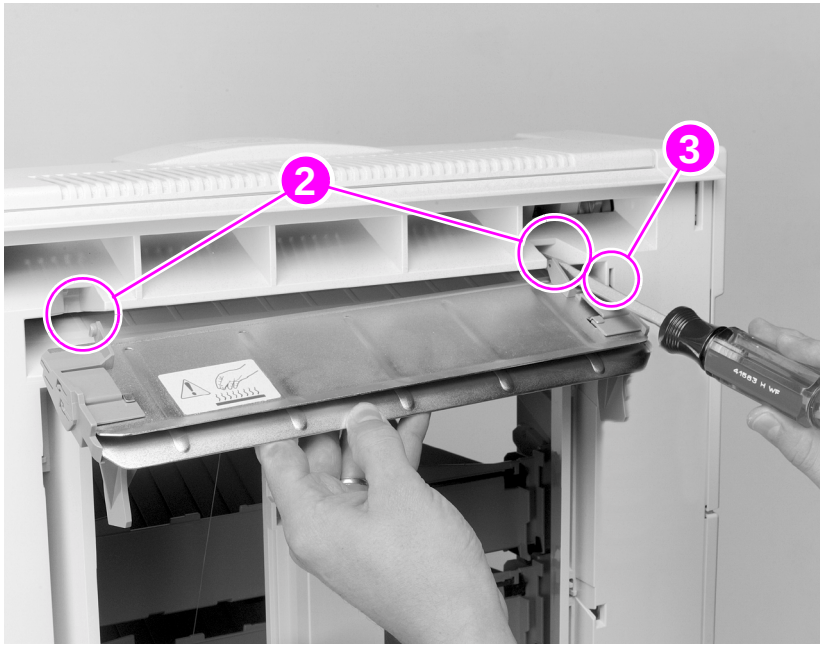

Figure 174. **Input paper guide (2 of 2)**

5 Pull the input paper guide free of the frame while routing the ground wire through the wire access hole (callout 3).

Metallic tape and housing assembly

1 Remove all paper bins and the blind cover (see page 318).

WARNING! The sharp edges of the metal tape can cause serious injury. When rewinding the metal tape into its housing, hold the tape securely and rewind it slowly.

2 With the delivery head assembly at the top of the multi-bin mailbox, hold the metal tape near the end, and push and release the retainer tab that secures the end of the tape to the top of the frame (callout 1). Then let the tape slowly rewind into its housing.

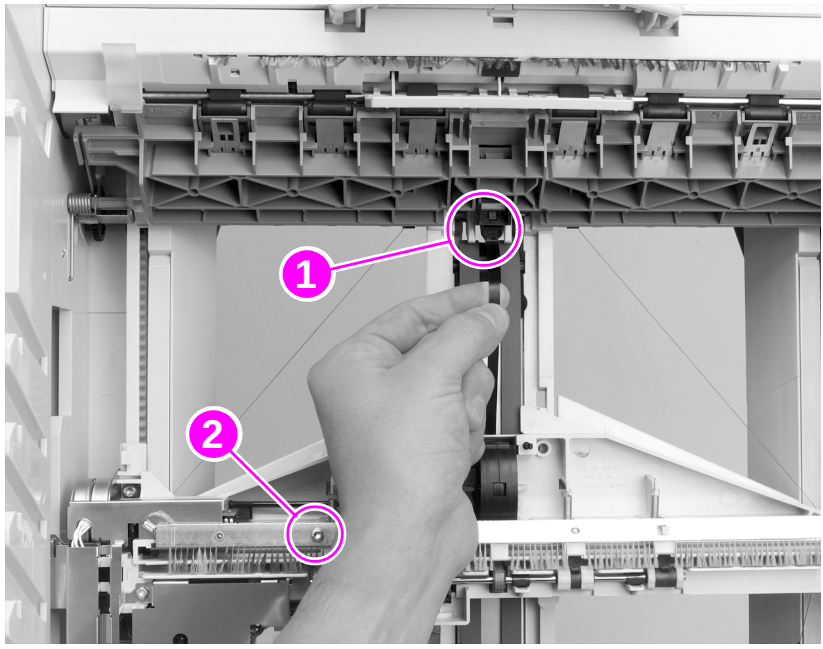

Figure 175. **Metallic tape and housing assembly (1 of 2)**

3 Remove one screw from the static brush (callout 2), and then move the static brush out of the way.

4 Lower the delivery head assembly halfway to the stops.

5 Use a flat-blade screwdriver to release the plastic retaining tabs located on each side of the tape housing (callout 3).

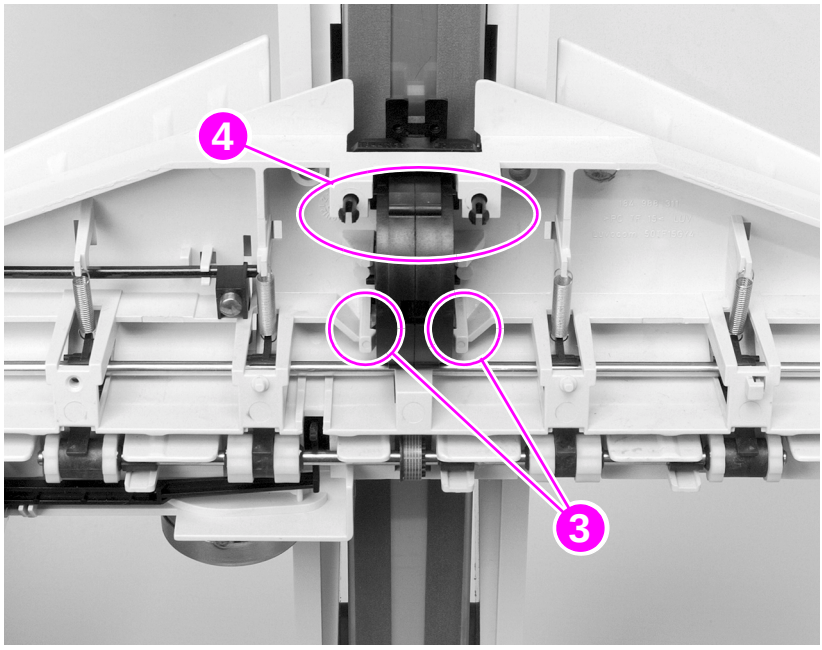

Figure 176. Metallic tape and housing assembly (2 of 2)

6 Gently pull on the delivery head assembly to remove the end of the tape from behind the rollers (callout 4).

7 Pull the tape housing toward you to remove it.

Notes about reinstalling:

- Thread the end of the metal tape behind the rollers (callout 4), and then pull the end of the tape to the top of the multi-bin mailbox and reinsert it into place (callout 1).
- Use the guide pins to reinstall the tape housing (callout 3). When the housing is correctly positioned, it will click into place.

Controller PCA

1 Disconnect the power cable (callout 1).

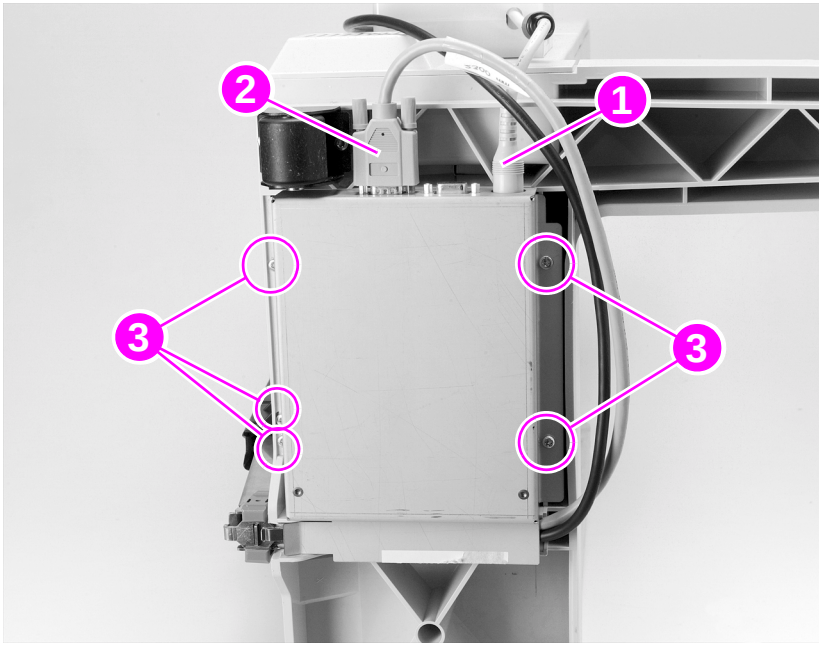

Figure 177. **Controller PCA (1 of 2)**

2 Disconnect the C-link cable (callout 2).

3 Remove all paper bins and the blind cover (see page 318).

4 Carefully lay the multi-bin mailbox on its front side.

5 Loosen one grounding screw and two self-tapping screws on the right side of the PCA cover (callout 3).

6 Remove two self-tapping screws and the grounding cable from the left side of the PCA cover (callout 4).

7 Open the cover to reveal the PCA.

Notes about reinstalling:

- Reinstall the grounding cable.

8 Unplug eight connectors (callout 5) and remove the PCA.

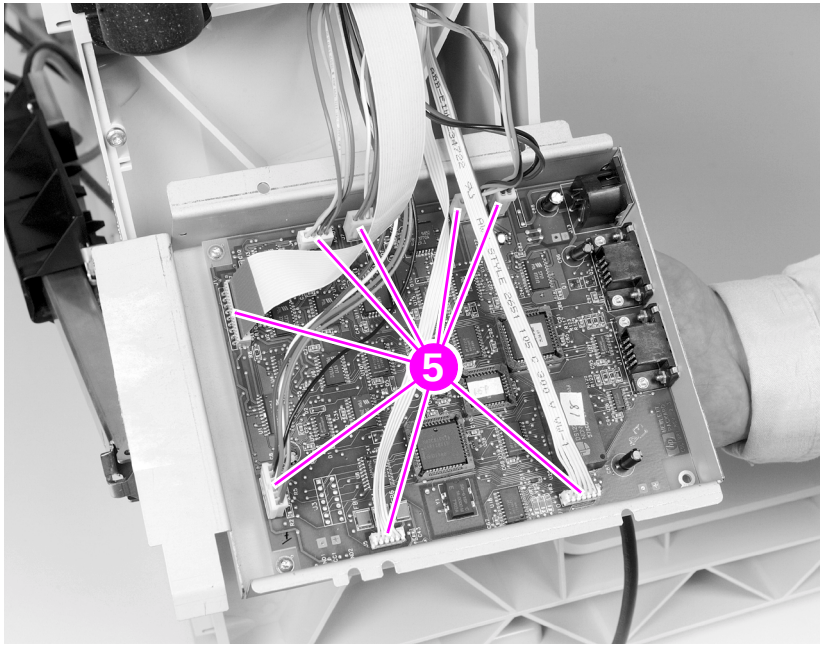

Figure 178. **Controller PCA (2 of 2)**

Anti-curl strings

1 Remove the back cover (see page 315).

2 Remove all the paper bins and the blind cover (see page 318).

3 On the lower-left side of the frame, remove two screws securing the tension springs (callout 1).

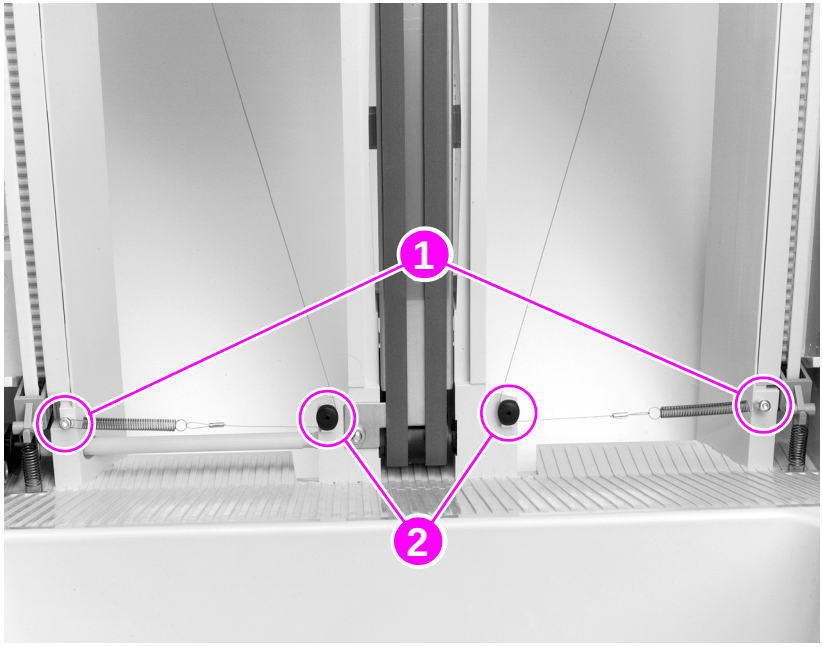

Figure 179. **Anti-curl strings (1 of 2)**

4 Remove the anti-curl strings from the lower pulleys (callout 2).

5 Remove the delivery head assembly (see page 331).

6 Release the upper ends of the anti-curl strings from the jam access door by pushing the retaining tabs that secure the strings to the door (callout 3).

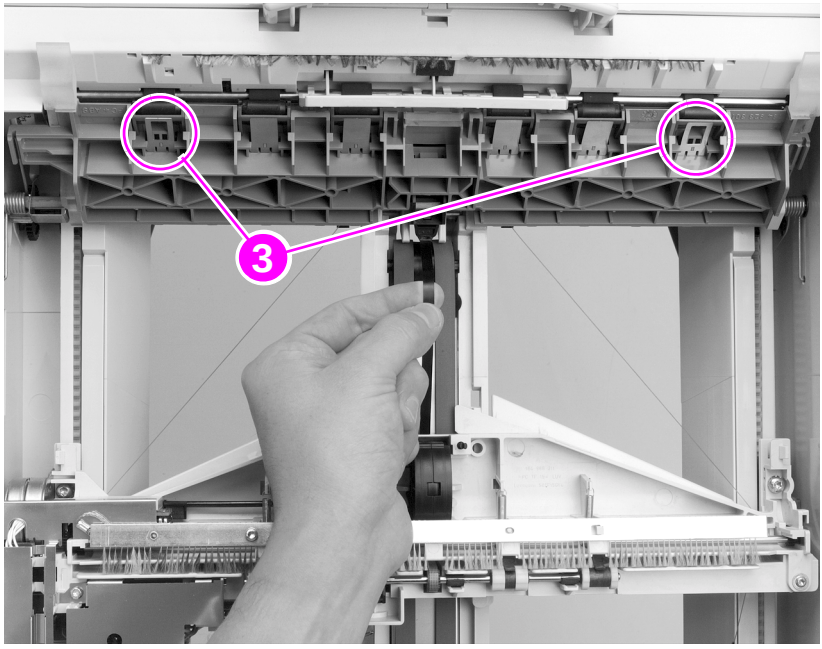

Figure 180. **Anti-curl strings (2 of 2)**

Delivery head assembly

1 Remove the back cover (see page 315).

2 Remove all paper bins and the blind cover (see page 318).

WARNING! The sharp edges of the metal tape can cause serious injury. When rewinding the metal tape into its housing, hold the tape securely and rewind it slowly.

3 With the delivery head assembly at the top of the multi-bin mailbox, hold the metal tape near the end, and release the retainer tab that secures the end of the tape to the top of the frame (callout 1). Then let the tape slowly rewind into its housing.

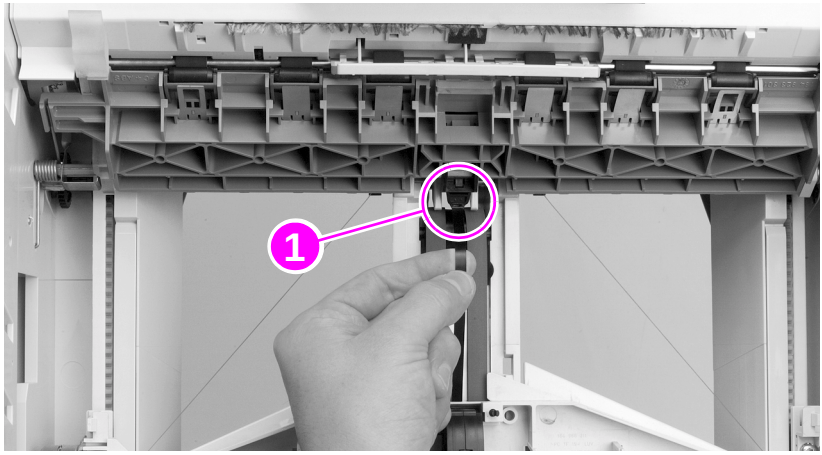

Figure 181. Delivery head assembly (1 of 4)

4 Remove the anticurl strings (see page 329).

5 Release the flat ribbon cable from the cable clip (callout 2), and gently disconnect the cable (callout 3).

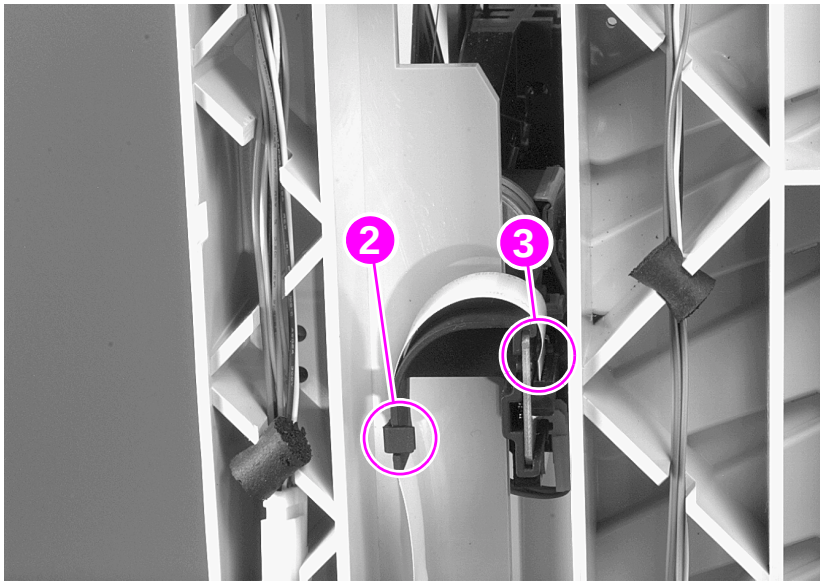

Figure 182. **Delivery head assembly (2 of 4)**

6 Raise the assembly to the top of the frame.

7 Hold up the assembly and remove two screws (callout 4).

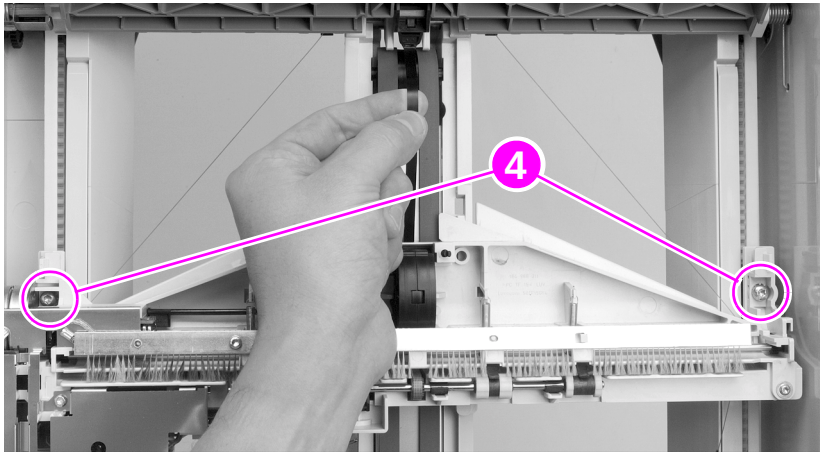

Figure 183. **Delivery head assembly (3 of 4)**

Note The screw that secures the back end is captive.

8 Rotate the assembly clockwise while guiding the back end out of its access opening (see figure 184).

9 Release the anti-curl strings from the pulleys on each end of the assembly (callout 5).

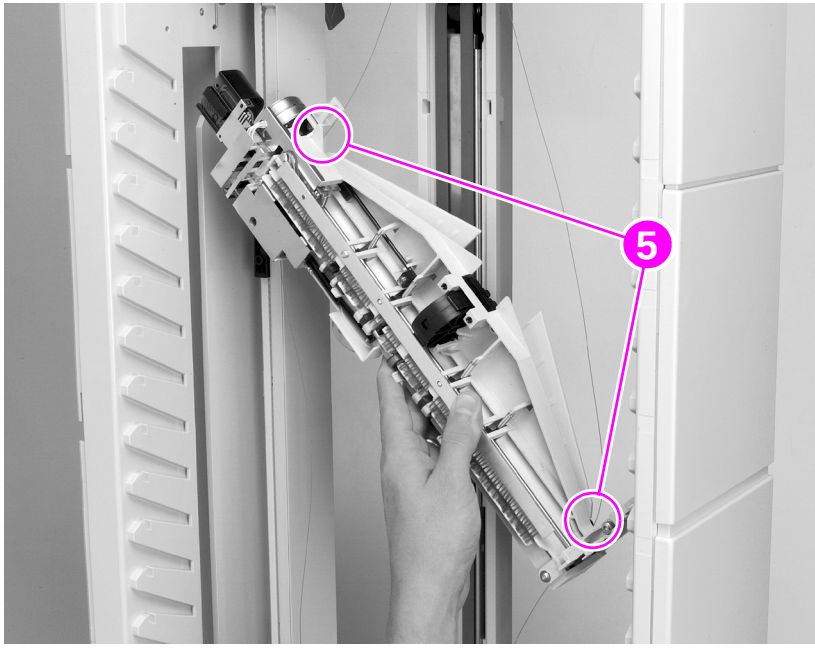

Figure 184. **Delivery head assembly (4 of 4)**

Notes about reinstalling:

- When reinstalling the assembly onto its elevator mounts, ensure that the locating pins are in place.
- Ensure that the assembly moves up and down freely.

Interlock switch

1 Remove the back cover (see page 315).

CAUTION Before removing the wires from the multi-bin mailbox interlock switch, note the location of each wire. Replacing the wires incorrectly can damage the interlock switch.

2 Disconnect two wires from the switch (callout 1).

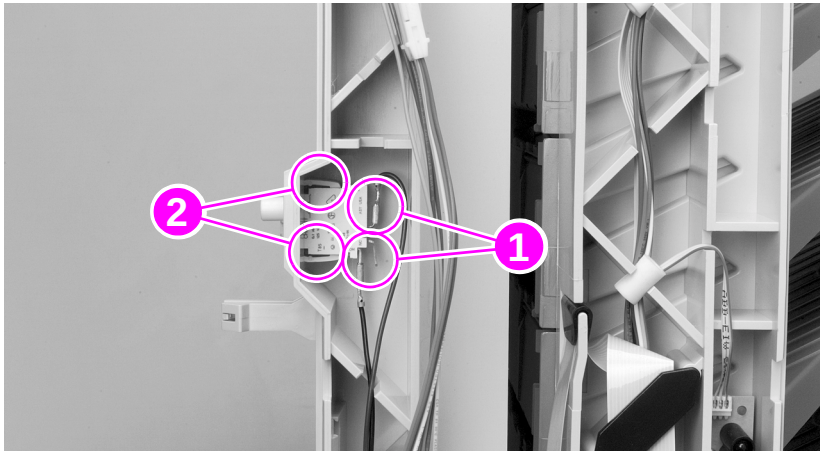

Figure 185. **Interlock switch**

3 Press the two retaining tabs together to remove the switch (callout 2).

Diagnostic LED PCA

1 Remove the back cover (see page 315).

2 Unplug two connectors from the PCA (callout 1).

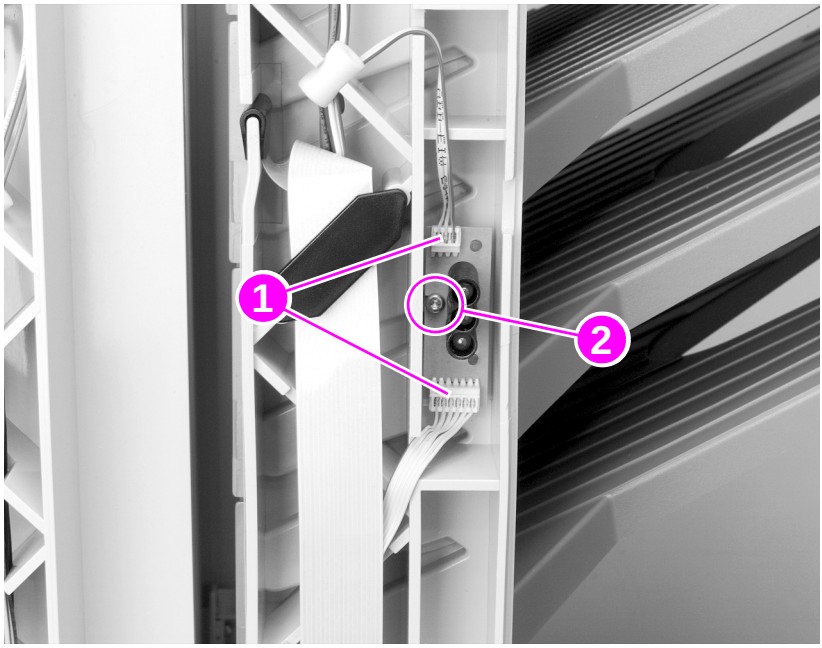

Figure 186. **Diagnostic LED PCA**

3 Remove one screw (callout 2).

4 Pull the PCA away from the frame.

User status LED PCA

1 Remove the front cover (see page 315).

2 Disconnect the cable from the PCA (callout 1).

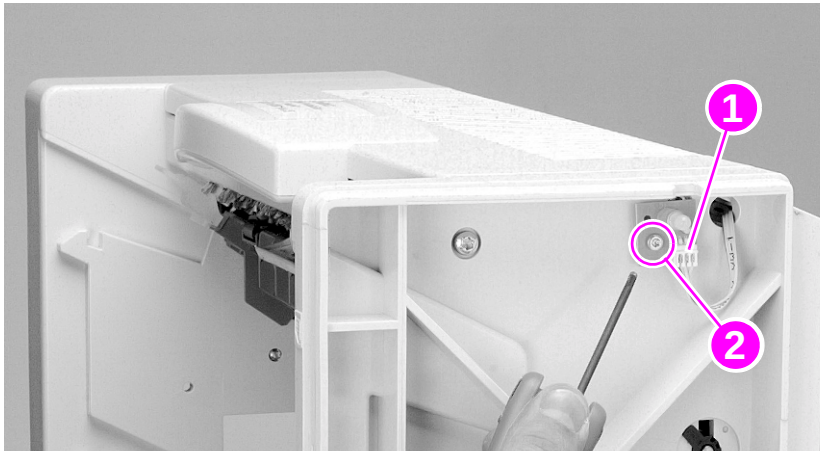

Figure 187. **User status LED PCA**

3 Remove one screw (callout 2).

4 Pull the PCA away from the frame.

Attachment assembly

1 Remove the controller PCA, but leave cables connected (see page 327).

2 Set the controller PCA on top of the unit (callout 1).

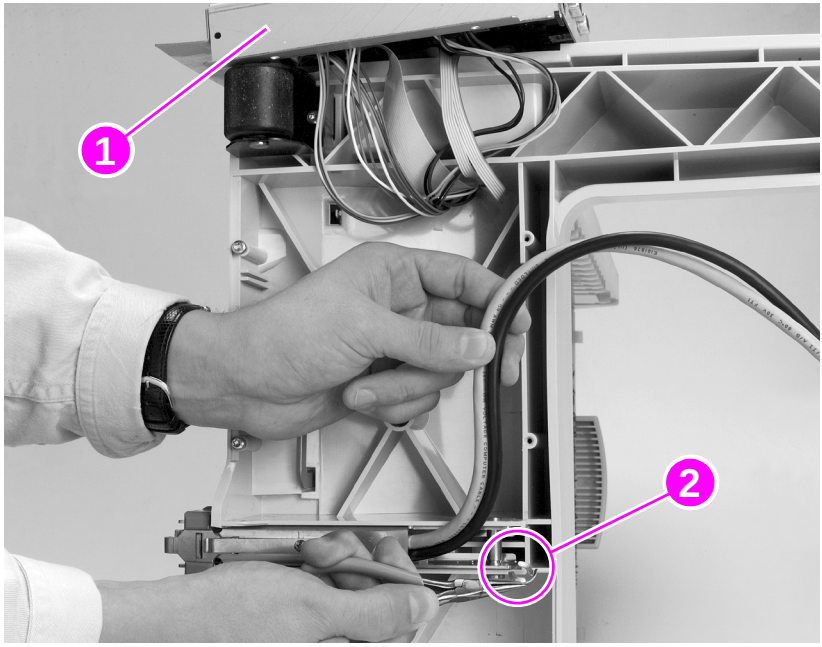

Figure 188. **Attachment assembly**

3 Remove the e-ring (callout 2).

4 Release the pivot pin that holds the attachment assembly rod to the frame.

5 Remove the assembly.

3,000-sheet stapler/stacker and 3,000-sheet stacker

The following covers and assemblies can be removed from the 3,000-sheet stapler/stacker and 3,000-sheet stacker:

- face-up and stapler/stacker bins
- front, back, and foot covers
- stapler door assembly with label[1]/stacker door assembly[2]
- controller PCA cover
- flipper assembly
- carriage assembly[1]
- accumulator assembly[1]
- offset module[2]
- stapler[1]
- controller PCA
- LED PCA
- power supply
- interlock switch
- safety switch assembly
- attachment assembly
- flipper ribbon cable
- stationary and adjustable casters

[1] 3,000-sheet stapler/stacker only
[2] 3,000-sheet stacker only

Bins and covers

Face-up bin

1. Lift slightly the end of the bin (callout 1).
2. Pull the bin away from the product (callout 2).

CAUTION When replacing the bin, make sure you position it under the bin-full flag (callout 3). Placing it over the bin-full flag and then attempting to force the bin into its slots can damage the flag.

Stapler bin/stacker bin

1. Unhook the plastic tabs underneath the bin (callout 4).
2. Carefully lift the bin straight up until it is released from the frame.

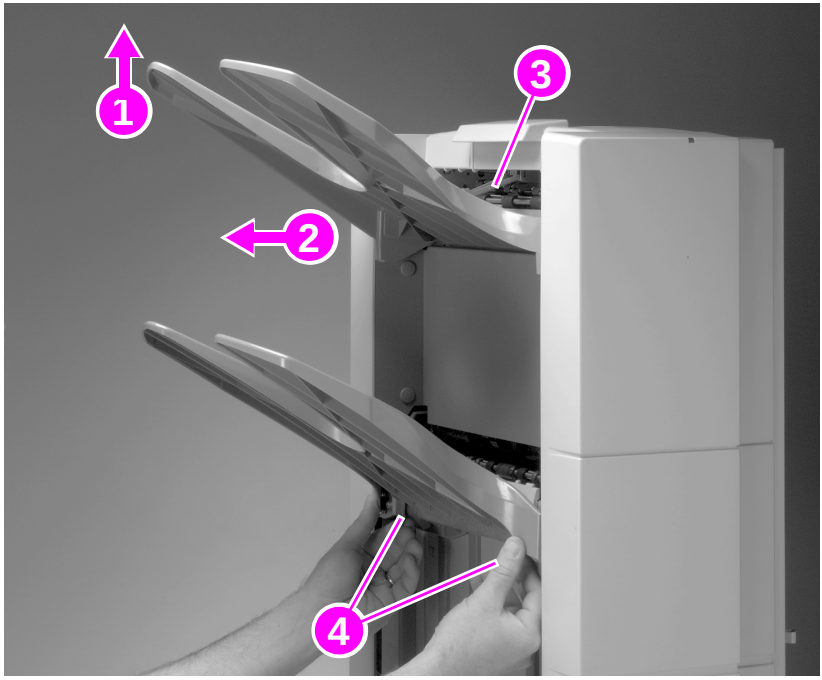

Figure 189. Bins removal

Front cover

1. Use the TX-20 screwdriver to remove three screws (callout 1).
2. Lift the cover straight up until it is released from the product.

Back cover

1. Use the TX-20 screwdriver to remove three screws (callout 2).
2. Press and hold in the interlock switch (callout 3) while lifting the cover straight up until the cover is released from the product.

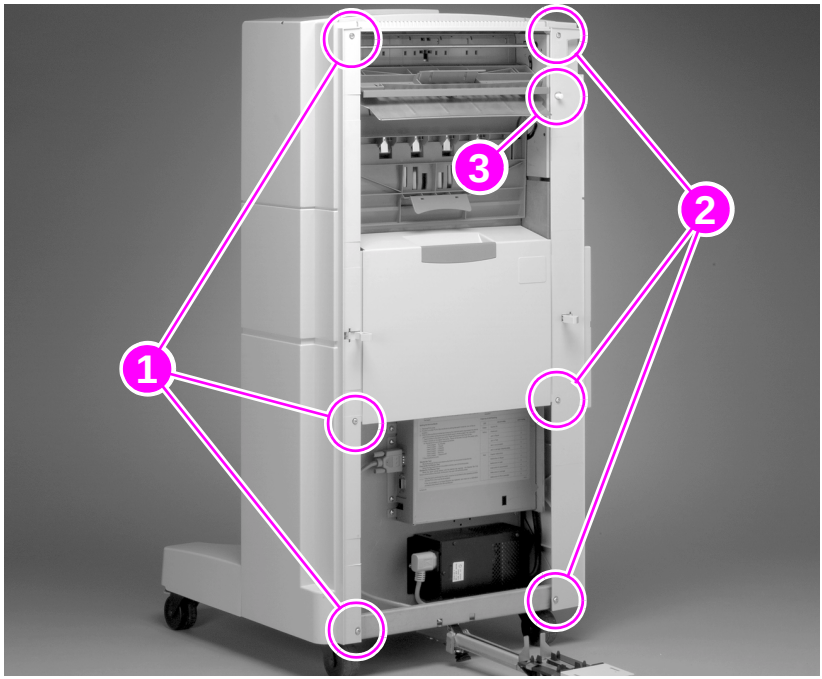

Figure 190. **Front and back covers removal**

Foot cover

1. Remove the front and back covers.
2. Grasp the foot cover on one side, rotate it out slightly, and then lift it up to clear the locating pin. Repeat this step for the opposite side of the foot cover.
3. Lift up the cover and pull it away from the product.

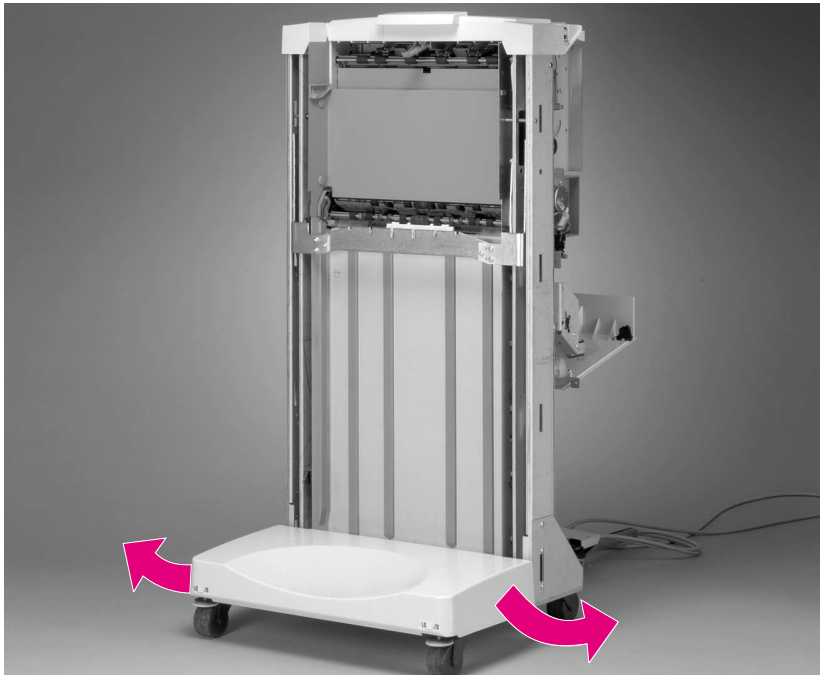

Figure 191. **Foot cover removal**

To reinstall

The cover can be difficult to replace correctly. Make sure you line up the ridges on the bottom of the cover with the grooves on the product.

Stapler door assembly with label/stacker door assembly

1 Open the door assembly and, on a stapler/stacker, center the stapler unit.

2 Use the TX-20 screwdriver to remove two screws (callout 1) from inside the door, one at the front and one at the back of the device.

Note The screws remain attached to the plastic screw holders.

3 Rotate the door down until the flat sides of the hinges are parallel to the floor and pull the door straight away from the product.

Controller PCA cover (with label)

1 Use the TX-20 screwdriver to remove the upper and lower screws (callout 2) from the cover.

2 Rotate the cover to clear the tabs at the back of the product and lift the cover away from the product.

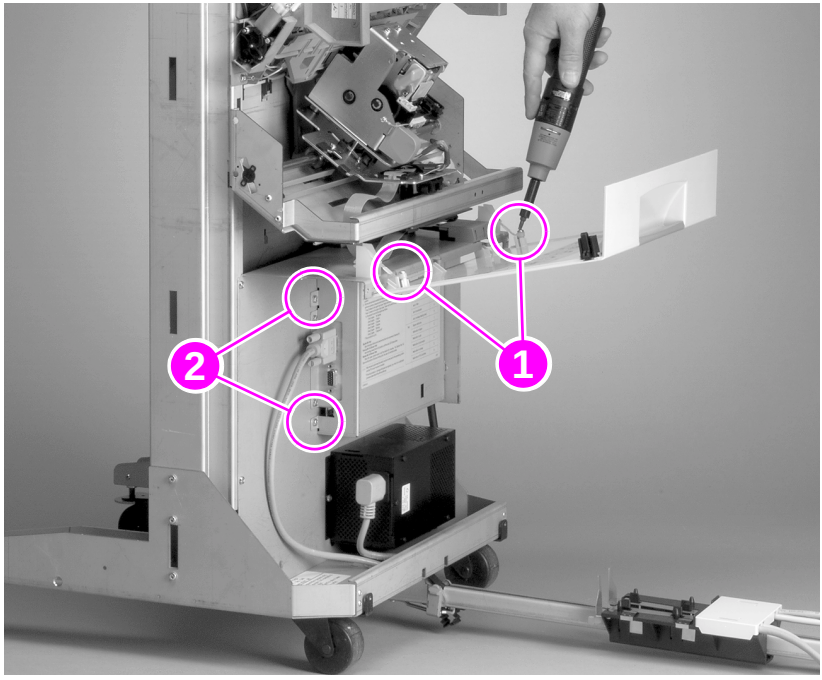

Figure 192. **Stapler door assembly and controller PCA cover removal**

Internal assemblies

Flipper assembly

1. Remove the front and back covers.
2. At the back of the product, disconnect the flipper ribbon cable (callout 1) by pressing the black tabs on the connector to release the cable.
3. Use the TX-20 screwdriver to remove four screws (callout 2), two on each side of the assembly.

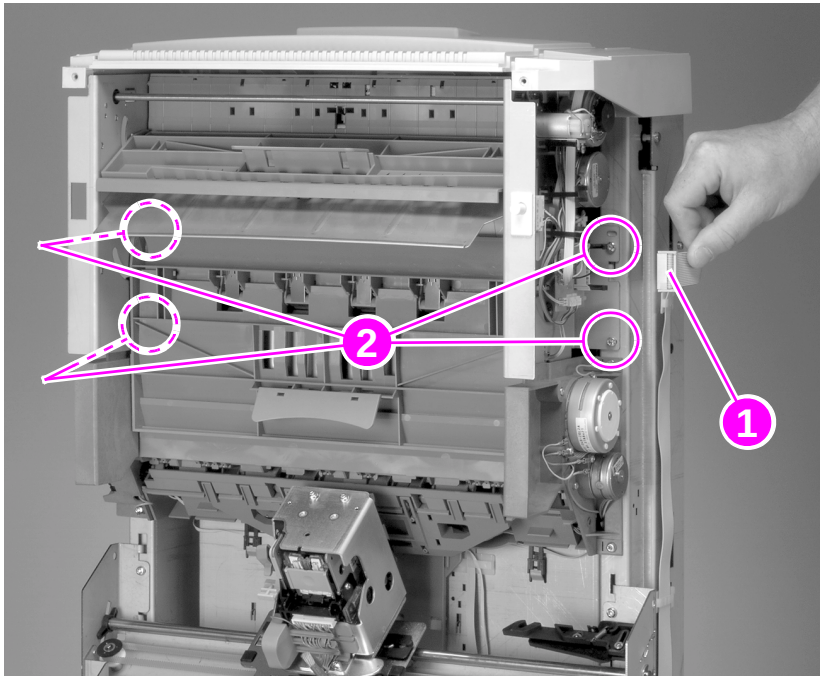

Figure 193. **Flipper assembly removal (1 of 2)**

Note Sheet-metal edges may be sharp.

4 Use both hands to grasp the assembly on each side and, with a firm tug, lift the assembly straight up to clear the tabs (callout 1; one of the two tabs is shown) on each side of the assembly.

5 Pull the assembly straight away from the product, being careful of the bin-full flag.

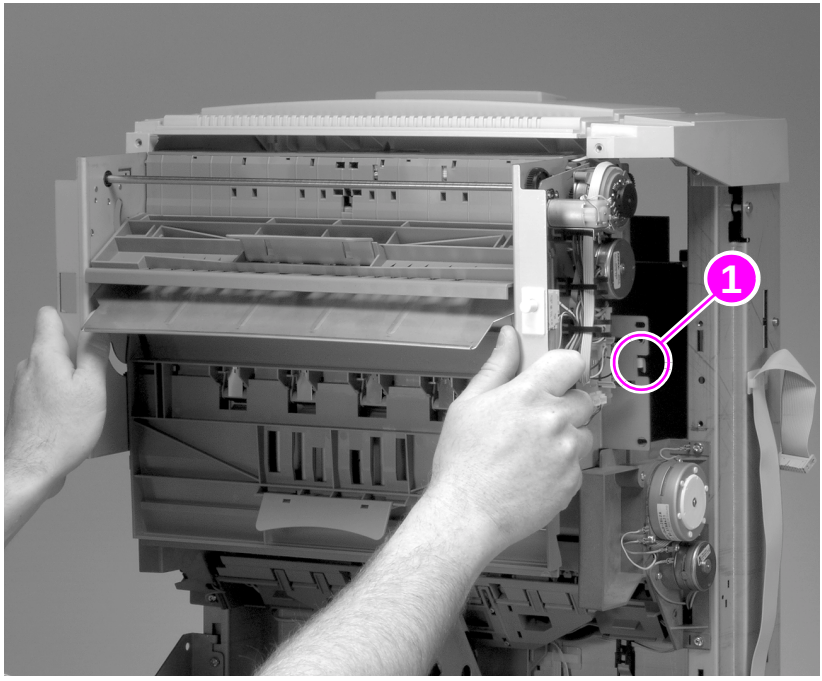

Figure 194. **Flipper assembly removal (2 of 2)**

Carriage assembly (stapler/stacker only)

1 Remove the front cover, the back cover, and the controller PCA cover.

2 Disconnect the ribbon cable (callout 1) from the controller PCA by pressing the black tabs to release the cable.

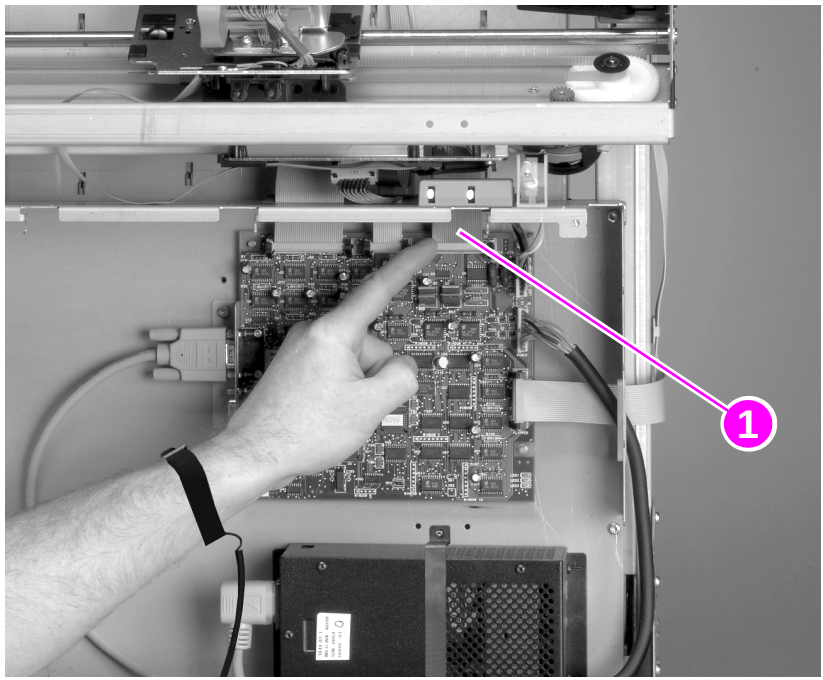

Figure 195. **Carriage assembly removal (1 of 2)**

3 Push the ribbon cable up through the hole.

4 Use the TX-20 screwdriver to remove two screws (callout 1), one on each side of the assembly.

5 Lift the assembly to clear the tabs on each side of the assembly and pull the assembly straight away from the frame.

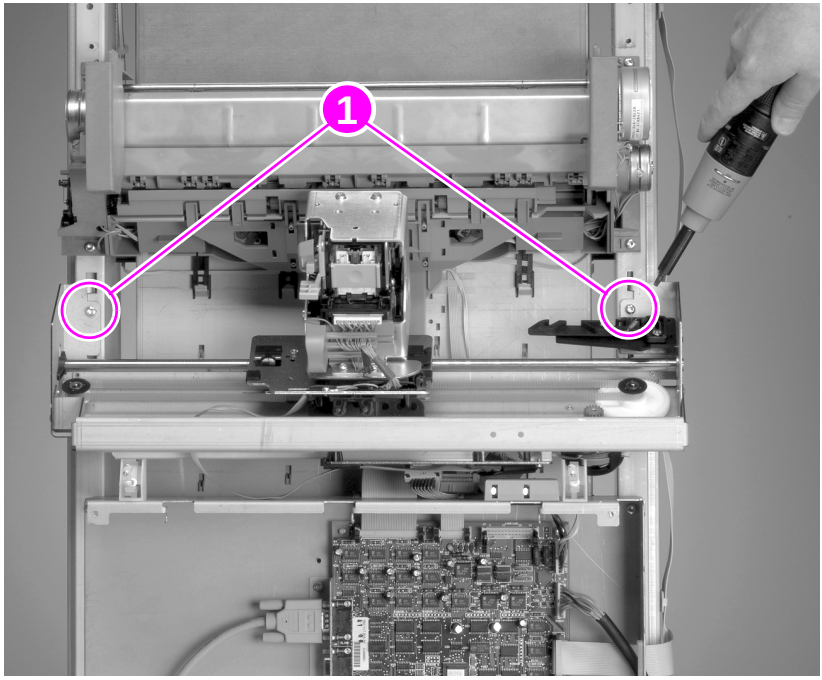

Figure 196. **Carriage assembly removal (2 of 2)**

Accumulator assembly (stapler/stacker only)

1 Remove the front cover, the back cover, the controller PCA cover, the flipper assembly, and the carriage assembly.

Note

While it is possible to remove the accumulator assembly without first removing the carriage assembly, HP strongly recommends that the carriage assembly be removed before removing the accumulator assembly. Otherwise, you might find it very difficult to reposition the accumulator assembly with the carriage assembly in the way.

2 Disconnect the ribbon cable (callout 1) from the controller PCA by pressing the black tabs to release the cable.

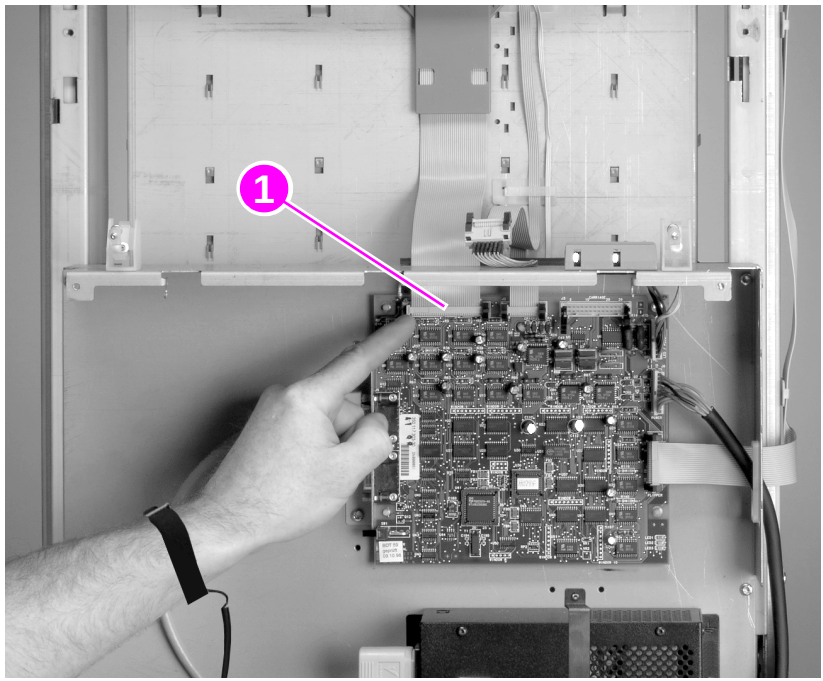

Figure 197. **Accumulator assembly removal (1 of 2)**

3 Push the ribbon cable up through the hole.

4 Use the TX-20 screwdriver to remove four screws (callout 1), two on each side of the assembly.

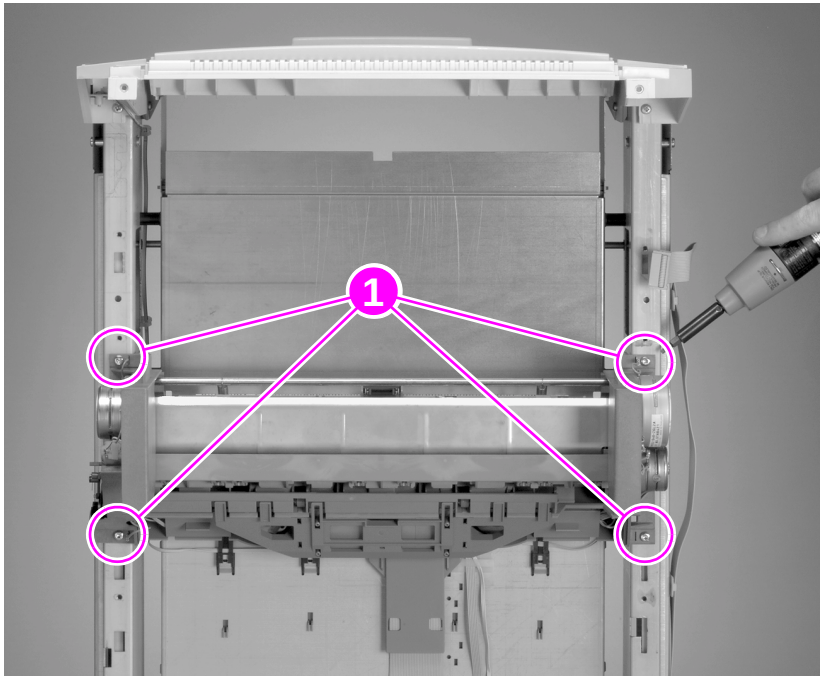

Figure 198. Accumulator assembly removal (2 of 2)

5 Lift the accumulator assembly up to clear the tabs at each side and rotate the top of the assembly down while pulling it away from the product.

Offset module (stacker only)

1. Remove the front cover, the back cover, the controller PCA cover, and the flipper assembly.
2. Disconnect the ribbon cable (callout 1) from the controller PCA by pressing the black tabs to release the cable.
3. Push the ribbon cable up through the hole.
4. Use the TX-20 screwdriver to remove four screws (callout 2), two on each side of the module.

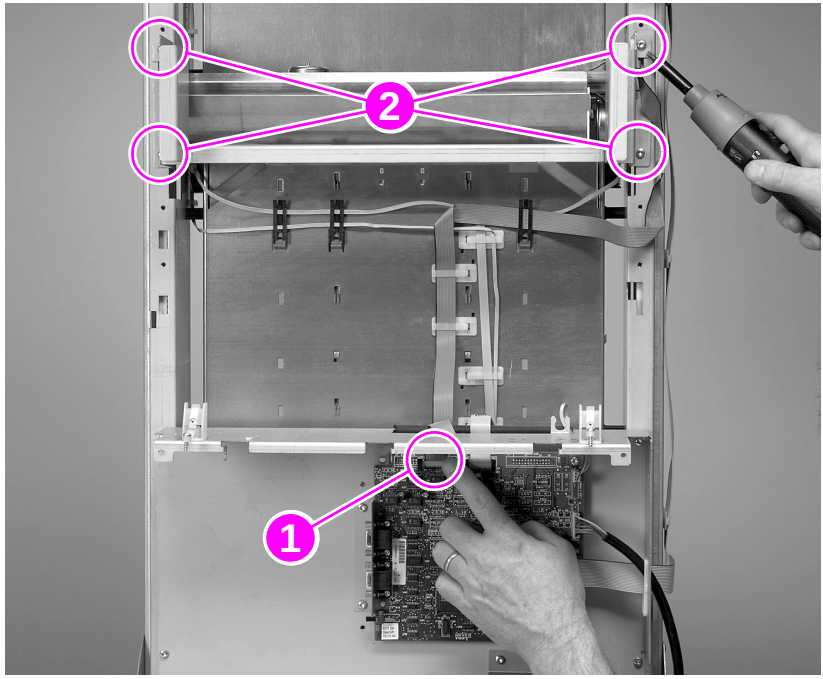

Figure 199. **Offset module removal**

5. Lift the offset module to clear the tabs at each side and rotate the top of the module away from the product while pulling it away from the product.

Stapler (stapler/stacker only)

1. Remove the carriage assembly from the 3,000-Sheet stapler/stacker and place it on a work surface.
2. Remove the staples cartridge from the stapler.
3. Disconnect the cable from its connector and unthread the cable from the cable guides.

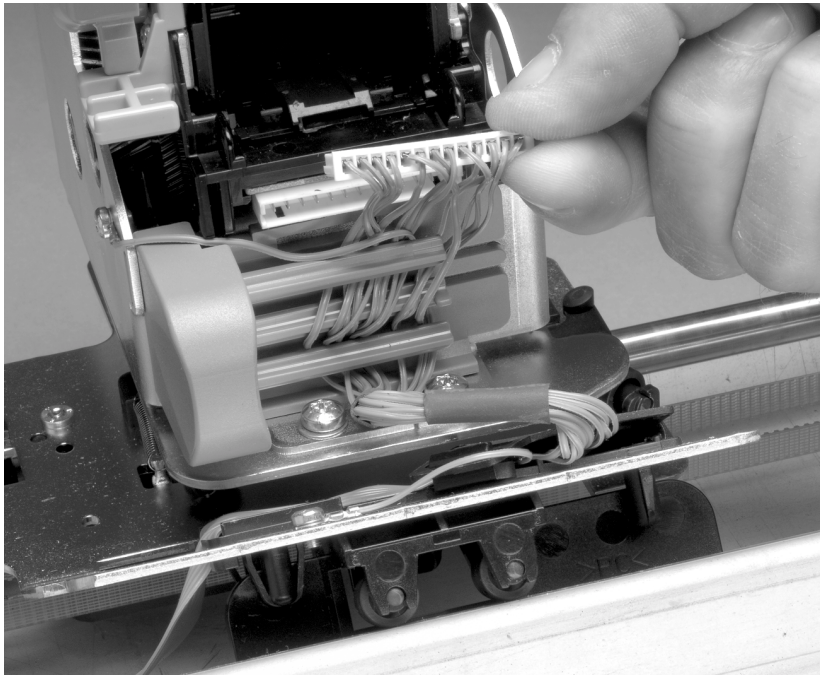

Figure 200. **Stapler removal (1 of 3)**

4 Use the TX-10 screwdriver to remove the grounding screw (callout 1) and release the grounding cable.

5 Use the TX-20 screwdriver to remove two screws and their washers (callout 2) from the stapler.

Note Keep the washers with the screws to make sure they are reinstalled.

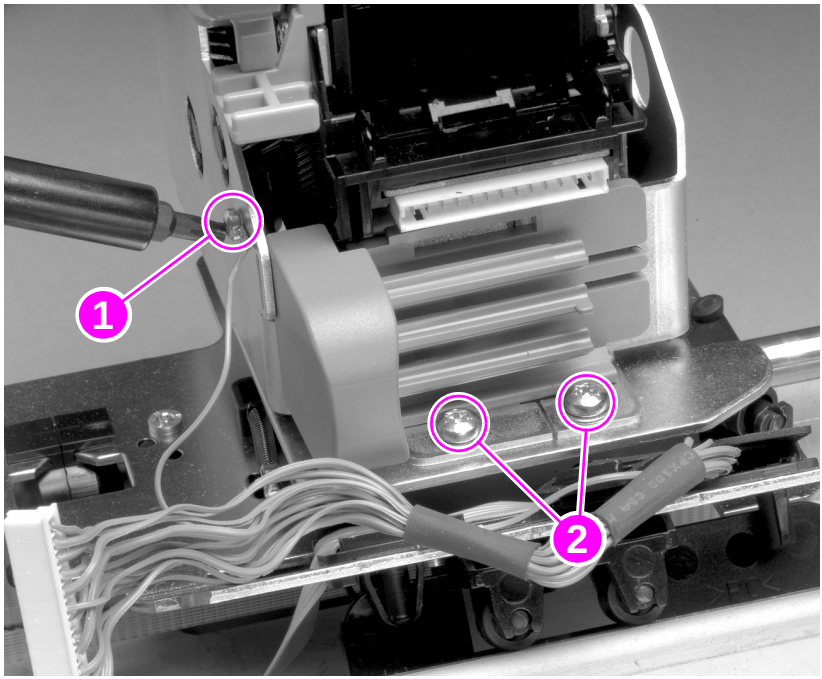

Figure 201. **Stapler removal (2 of 3)**

Note The stapler is affixed tightly to the carriage assembly. Once the two screws have been removed, the stapler is held in place by the two metal tabs located on the side of the stapler opposite the screws.

6 Use firm pressure to slide the stapler toward the tab side of the stapler, clearing the tabs.

7 Lift the stapler away from the carriage.

Note In the figure below, the stapler has been removed from the carriage assembly and is rotated to show the tabs (callout 1) and tab slots (callout 2).

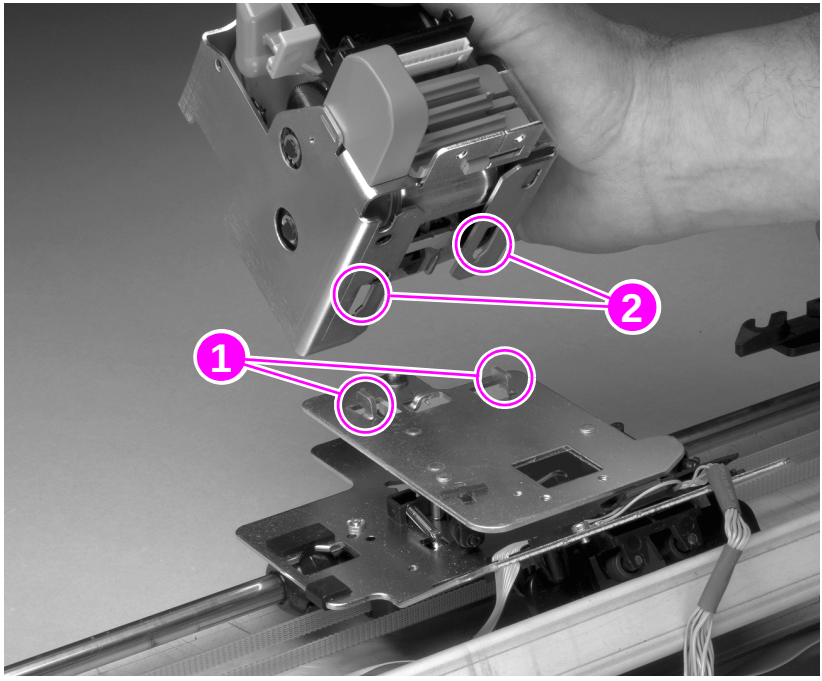

Figure 202. **Stapler removal (3 of 3)**

To reinstall

Place the tabs in the tab holes and use firm pressure to slide the stapler toward the screws side of the stapler, lining up the screw holes. Do not attempt to replace the screws until the screw holes are lined up.

Controller PCA

1. Remove the controller PCA cover.
2. Release the seven cables, including the C-link cable, from their connectors (callout 1) on the stapler/stacker controller PCA.
3. Use the TX-20 screwdriver to remove three screws (callout 2).

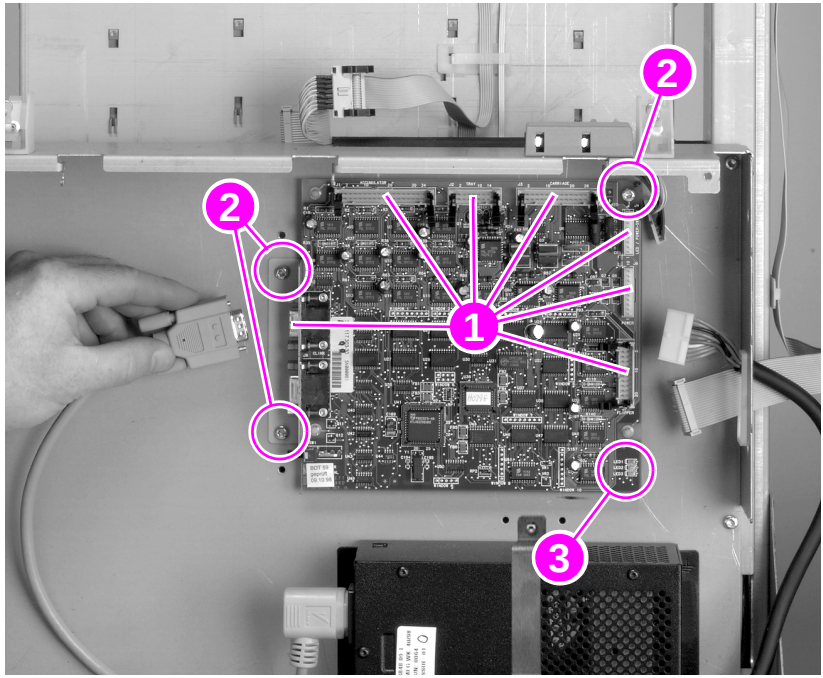

Figure 203. **Stapler/stacker controller PCA or stacker controller PCA removal**

Note You might have to squeeze the three locating pins to allow the holes on the controller PCA to clear the pins.

4. Pull the controller PCA from the product.

Note See chapter 7, Troubleshooting, for information about the service LEDs (callout 3).

CAUTION Placing the controller PCA on a metal surface can damage the controller. Place the controller PCA on an ESD mat.

LED PCA

1. Remove the front cover.
2. Use the TX-10 screwdriver to remove one screw (callout 1) from the LED PCA.
3. Disconnect the cable (callout 2) to release the LED PCA.

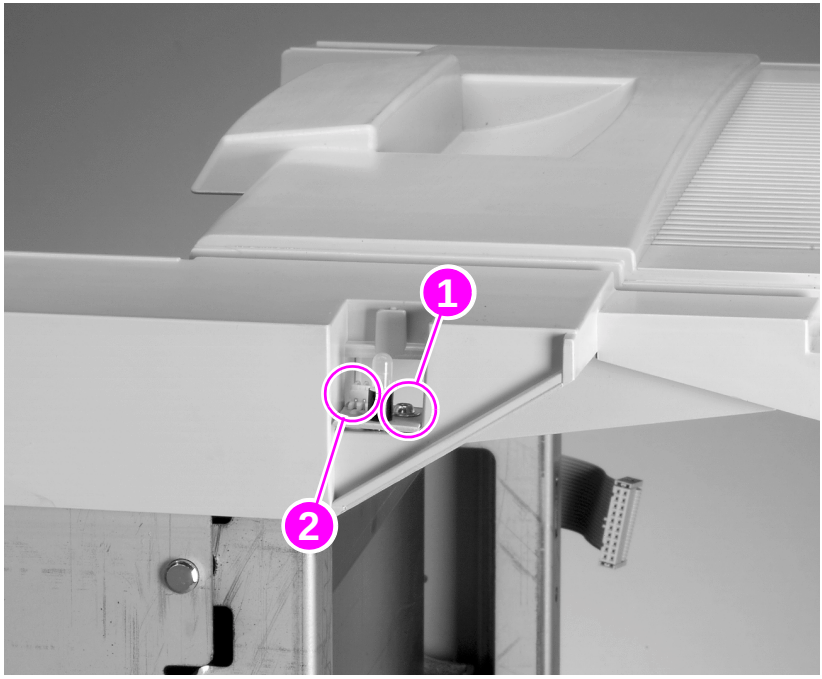

Figure 204. **LED PCA removal**

Power supply

1. Remove the controller PCA cover.
2. Unplug the power cable (callout 1) from the power supply.
3. Disconnect the cable from the controller PCA (callout 2).
4. Use the TX-20 screwdriver to remove one screw (callout 3) from the bracket that holds the power supply in place.

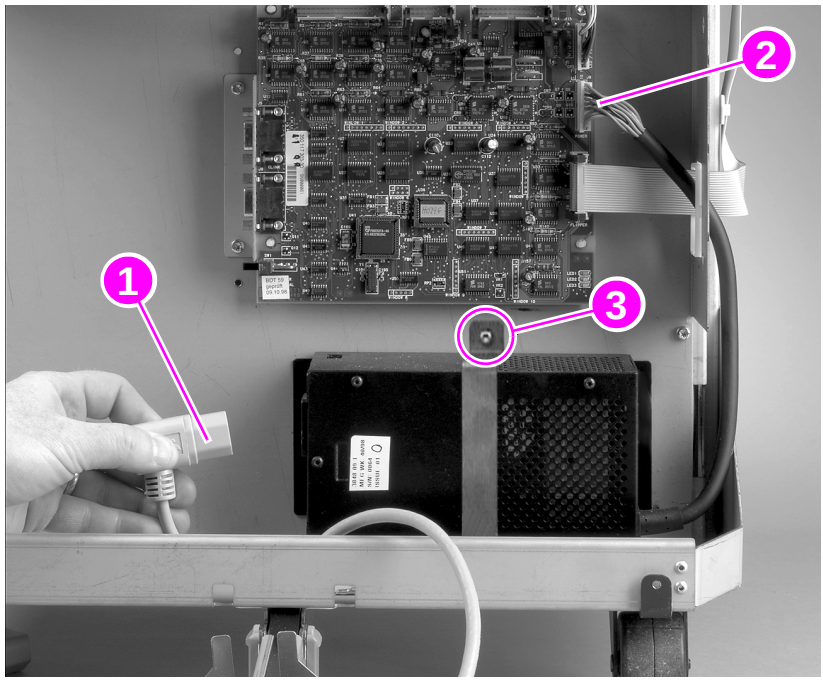

Figure 205. **Power supply removal**

5. Lift the bracket and the power supply out and away from the product.

Interlock switch

1. Remove the back cover.
2. Disconnect two cables (callout 1) from the interlock switch.
3. Squeeze the interlock switch on the top and bottom (callout 2), and slide the interlock through the hole (callout 3).

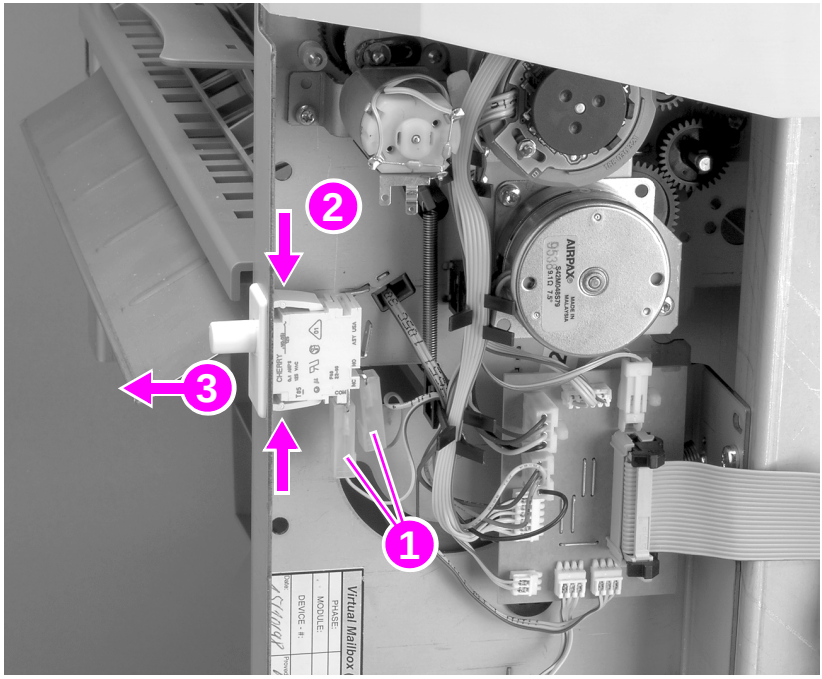

Figure 206. **Interlock switch removal**

Safety switch assembly

1. Remove the front cover, the back cover, and the carriage assembly.
2. Press the two tabs on the sides of the safety switch assembly cover (callout 1) to release it from the frame and lift the cover away from the assembly.
3. Disconnect two cables (callout 2) from the safety switch assembly.
4. Press the tabs on the bottom of the safety switch assembly (one tab on each side—callout 3) to release it from the frame and lift the assembly away from the product.

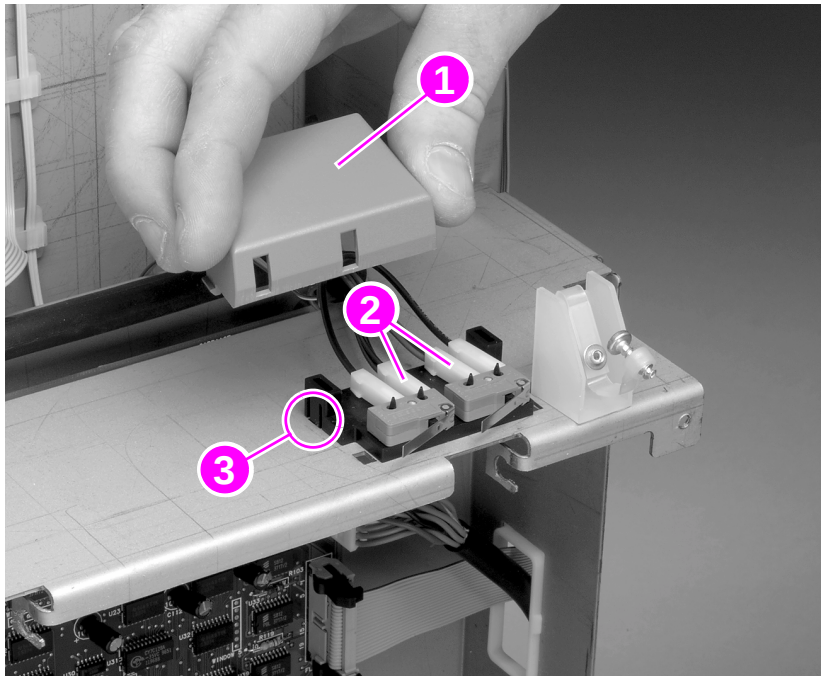

Figure 207. **Safety switch assembly removal**

Attachment assembly (rod, bracket, cables)

1. Unplug the attachment assembly's C-link cable from the controller PCA and power cable from the power supply.
2. Use the TX-20 screwdriver to remove four screws (callout 1) from the attachment assembly.
3. Guide both cables through the hole and pull the assembly away from the product.

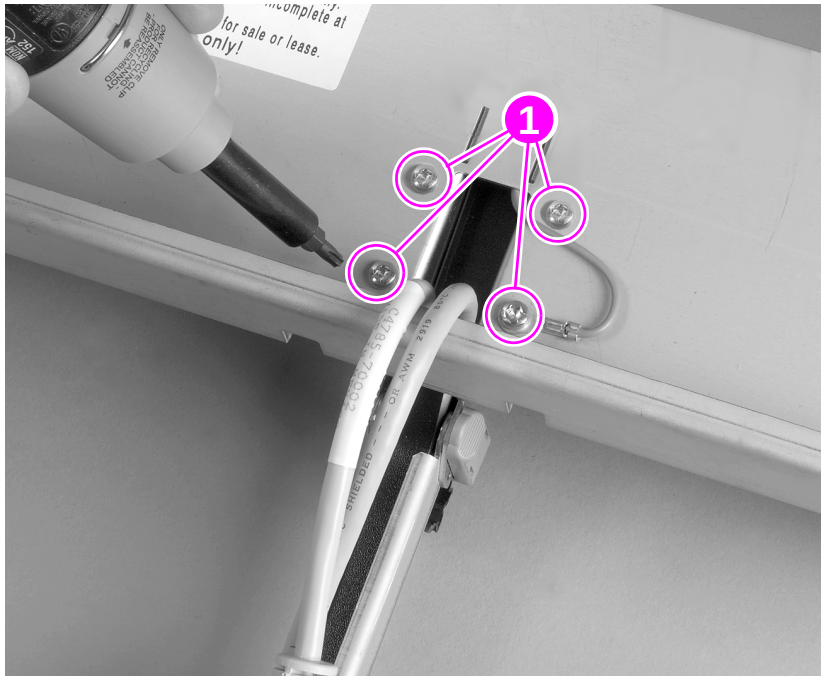

Figure 208. **Attachment assembly removal**

Flipper ribbon cable

1. Remove the back cover and the controller PCA cover.
2. Disconnect the cable (callout 1) at both ends by pressing the black tabs on the connectors.
3. Open the three cable clips (callout 2; two of the three cable clips are shown) to release the cable.

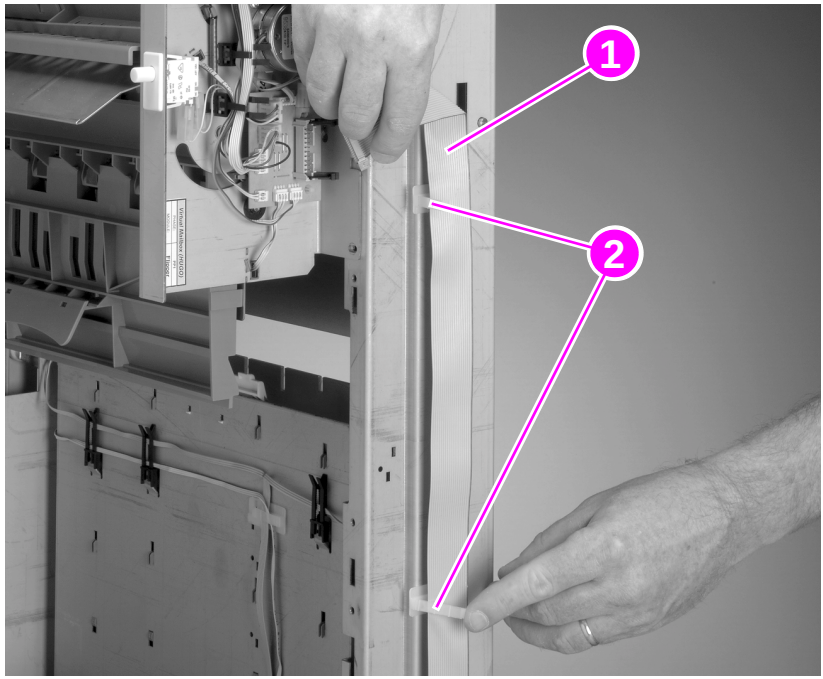

Figure 209. **Flipper ribbon cable removal**

Stationary caster

1. Remove front or back cover, depending upon the caster you want to replace.
2. Lay the stapler/stacker on its front or back side so that the caster being replaced is off the floor.
3. Use the TX-20 screwdriver to remove one screw (callout 1) from the inside of the frame.
4. Rotate the caster 90° to clear the tabs and pull the caster away from the product.

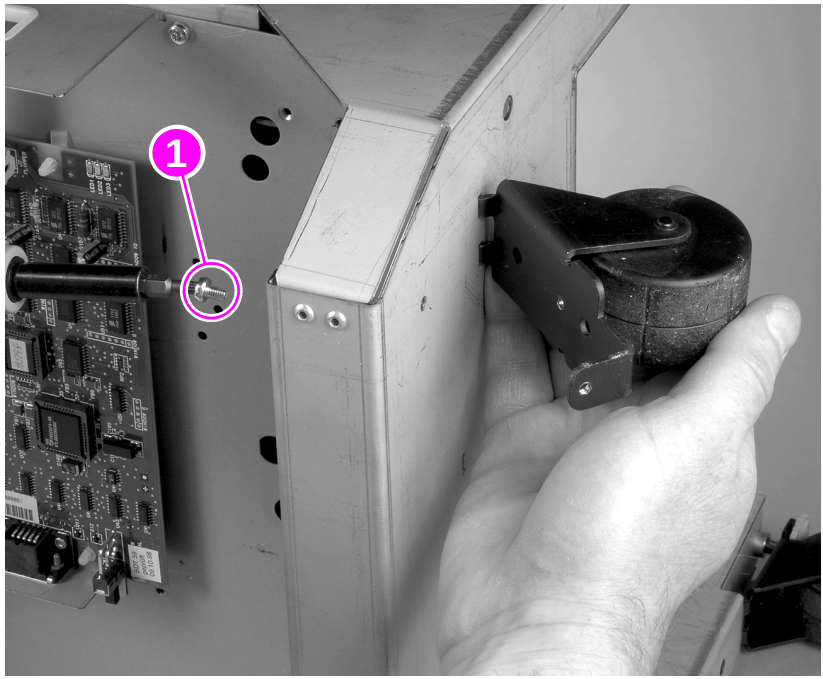

Figure 210. **Stationary caster removal**

Adjustable caster

1. Remove the front cover, the back cover, and the foot cover.
2. Lay the stapler/stacker on its front or back side so that the caster being replaced is off the floor.
3. Use a flat blade screwdriver to snap the e-clip off of the adjusting knob (callout 1).

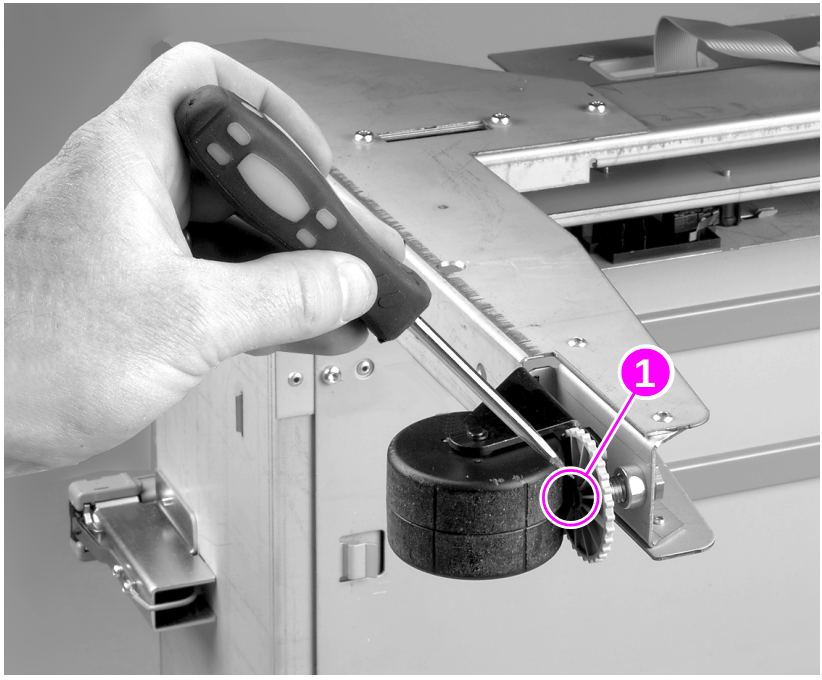

Figure 211. **Adjustable caster removal**

4. Slide the caster out of its position.

7 Troubleshooting

Chapter contents

Pre-troubleshooting checklist

Before troubleshooting any specific printer problem, make sure that the following conditions are met:

- Remove the printer from the network before beginning troubleshooting to make sure that the failure is not associated with the network. For HP Color LaserJet 8550 MFP printers, compare printed pages to copied pages to determine whether the problem is a print engine problem or a copy problem. Use the HP Color LaserJet 8550 MFP printer service manual to troubleshoot copy module and document feeder problems.
- The printer driver is correct for the printer installed.
- The printer is being powered off with the power button, not by the power cable, so that cooling fans run through their entire cycle.
- Overdue maintenance is performed before troubleshooting.
- The maintenance units are within their rated life.

Note

The customer is responsible for ensuring that the items included in the consumable kits are in good condition.

- The printer has been maintained on a regular basis as described in chapter 4. Note the location of spilled or accumulated toner before troubleshooting. Toner contamination might indicate ventilation or printer environment problems.
- The toner catch tray is not overfull. Empty the toner catch tray, if necessary, and identify the source of excessive waste toner.
- The customer is using supported media.
- The operating environment is within the specified parameters listed in chapter 1 of this manual.
- The printer is not exposed to ammonia gas such as that produced by diazo copiers or office cleaning materials.
- The printer is never exposed to direct sunlight.
- The media are stored correctly and within environmental limits.
- The printer is installed on a solid, level surface.
- The line voltage does not vary more than 20% from the nominal rated value specified on the Power Rating Label. Suspect this problem if large motors are used near the printer such that they might cause temporary voltage changes.
- Any non-HP components (toner, memory boards, and EIO cards) are removed from the printer.
- Printer hardware or software configuration has not changed, or the problem is not associated with any specific software. Refer customers to their software vendor for software-related problems.

Printer message troubleshooting

This section contains explanations and recommended actions for messages that appear on the printer control panel.

- **Numbered messages** — table 41 (beginning on this page)
- **Unnumbered messages (in alphabetical order)** — table 42 (beginning on page 388)

Note The action field for each control panel message describes the steps to resolve the message. Each step is a self-contained resolution for the message; however, the steps should be followed in order.

Table 41. Numbered printer messages

******************** **Description:** Displayed during startup as the individual tasks begin initializing and during a low-level self-test. (A character other than "*" indicates an error has occurred.)	**Event log message:** None **Action:** No action is required.
13.00.00 (event log message) Paper jam	See CLEAR PAPER JAM in table 42 on page 394.
13.00.03 (event log message) Fusing delivery paper delay jam	See CLEAR FUSER JAM LOWER LEFT DOOR in table 42 on page 390.
13.00.04 (event log message) Fusing delivery stationary jam	See CLEAR FUSER JAM LOWER LEFT DOOR in table 42 on page 390.
13.00.05 (event log message) Delivery paper delay jam	See CLEAR OUTPUT JAM UPPER LEFT DOOR in table 42 on page 393.
13.00.06 (event log message) Delivery stationary jam	See CLEAR OUTPUT JAM UPPER LEFT DOOR in table 42 on page 393.

Table 41. Numbered printer messages (continued)

13.00.07 (event log message) Two-sided turnaround paper late jam	See CLEAR DUPLEX JAM LOWER LEFT DOOR in table 42 on page 390.
13.00.08 (event log message) Two-sided turnaround paper stopped jam	See CLEAR DUPLEX JAM LOWER LEFT DOOR in table 42 on page 390.
13.00.09 (event log message) Two-sided path paper late jam	See CLEAR DUPLEX JAM LOWER LEFT DOOR in table 42 on page 390.
13.00.10 (event log message) Transfer jam	See CLEAR TRANSFER JAM in table 42 on page 394.
13.00.11 (event log message) Tray 1 jam	See CLEAR UNEXPECTED PAPER SIZE JAM THEN LOAD TRAY 1 <type><size> in table 42 on page 394.
13.11.11 (event log message) Time-out at paper entry sensor (PS31)	See CLEAR INPUT DEVICE JAM in table 42 on page 390.
13.11.1B (event log message) Time-out at paper exit sensor (PS32)	See CLEAR INPUT DEVICE JAM in table 42 on page 390.
13.11.21 (event log message) Page stays too long at paper entry sensor (PS31)	See CLEAR INPUT DEVICE JAM in table 42 on page 391.
13.11.2B (event log message) Page stays too long at paper exit sensor (PS32)	See CLEAR INPUT DEVICE JAM in table 42 on page 391.
13.11.31 (event log message) At power on, paper entry sensor (PS31) in VTU is active.	See CLEAR INPUT DEVICE JAM in table 42 on page 391.
13.11.3B (event log message) At power on, paper exit sensor (PS32) in VTU is active.	See CLEAR INPUT DEVICE JAM in table 42 on page 391.

Table 41. Numbered printer messages (continued)

13.22.01, 13.22.02 (event log messages) Multi-bin mailbox jam	See CLEAR MAILBOX JAM in table 42 on page 392.
13.22.03 (event log message) Multi-bin mailbox jam	See CLEAR MAILBOX JAM in table 42 on page 392.
13.22.04 (event log message) Multi-bin mailbox jam	See CLEAR MAILBOX JAM in table 42 on page 393.
13.22.05 (event log message) Multi-bin mailbox jam	See CLEAR MAILBOX JAM in table 42 on page 393.
20 INSUFFICIENT MEMORY	**Event log message:** 20.00.00
Description: More data has been received from the computer than fits in the printer's internal memory.	**Action:** No action is required. Only the amount of data that fits in the printer's internal memory is printed. If this error occurs frequently or if large or complex print jobs are often sent to the printer, add more memory to the printer. The optimum amount of memory is 128 MB.
22 EIO <n> BUFFER OVERFLOW	**Event log message:** 22.00.01
Description: The EIO buffer has overflowed during a busy state. This might happen if several complex jobs are sent simultaneously via the network and are larger than the overflow will allow. **<n> = EIO slot number:** 1 = Bottom EIO slot 2 = Top EIO slot	**Action:** No action is required. The current data in the print buffer will be lost.
22 PARALLEL I/O BUFFER OVERFLOW	**Event log message:** 22.00.01
Description: Indicates the parallel buffer has overflowed. This might happen if several complex jobs are sent simultaneously via the parallel port and are larger than the overflow will allow.	**Action:** No action is required. The current data in the print buffer will be lost.

Table 41. Numbered printer messages (continued)

30.00.01 (event log message) Hard disk internal self-test routine failure detection	See DISK DEVICE FAILURE in table 42 on page 396.
40.<n> HP EIO ERROR **Description:** An EIO accessory connection has been abnormally broken while transferring data from the computer to the printer. **<n> = EIO slot number** 1 = Bottom EIO slot 2 = Top EIO slot	**Event log message:** 40.00.00 **Action:** **1** Press Go. **2** Print an EIO configuration page to verify that the EIO accessories are installed properly. **3** Check that all cables are connected to the EIO ports and that the EIO accessory is seated properly. **4** Turn the printer off and on to reset it. **5** If possible, print to another network printer to verify the network is working properly. All data in the print buffer will be lost.
40.00.01 (event log message) An EIO accessory is initializing.	See EIO <n> INITIALIZING in table 42 on page 397.
13.11.31 (event log message) At power on, paper entry sensor (PS31) in VTU is active.	See CLEAR INPUT DEVICE JAM in table 42 on page 391.
41.2 PRINTER ERROR **Description:** Indicates that a beam detect laser scanner error has occurred on the previous page. The page will reprint and continue.	**Event log message:** 41.00.02 **Action:** **1** Open and close the front door of the printer to remove any remaining pages from the printer. **2** Turn the printer off and on to reset the printer. **3** Reconnect connector J1001 on the laser driver PCA and connector J205 on the controller board. **4** Reconnect connector J2 on beam detect PCA, relay connector J40, and connector J211 on the controller board. **5** If the problem persists, replace the laser/scanner unit. **6** If, after replacing the laser/scanner unit, the problem persists, replace the controller board.

Table 41. Numbered printer messages (continued)

41.3 UNEXPECTED PAPER SIZE LOAD TRAY 1 <width> <length>

Event log message: 41.00.03

Description:
Tray 1 is configured for a specific media size, but the printer detects a different size being fed from tray 1. For example, the printer was expecting a letter-sized page but detected that an 11-by-17 inch-sized page was fed instead.

<width> = Media width specified in the printer driver or application
<length> = Media length specified in the printer driver or application

Action:

1. Verify the correct size media (width and length) are loaded in tray 1.
2. Verify the paper guides are set correctly.
3. Load the requested size media in tray 1. Or, press Go to print on the default size.
4. Verify that the media width sensor on the paper guides are working properly.
5. Reconnect connector J1701 on the tray 1 width detection PCA, relay connector J33, and connector J208 on the controller board.
6. Replace the tray 1 pick-up assembly.

41.5 UNEXPECTED PAPER TYPE LOAD TRAY <x> <type> <size>

Event log message: 41.00.05

Description:
The printer was expecting one type of medium to be fed from an input tray and a different type was fed. For example, the printer was expecting transparencies and plain paper was fed.

<x> = Input tray number (2, 3, or 4)
<type> = Media type specified in the printer driver or application
<size> = Media size specified in the printer driver or application

Note: The size error in this message applies only to tray 1.

Action:

1. Open and close the front door to remove the page from the printer.
2. Verify that the correct media are loaded in the input tray and the printer control panel is configured correctly.
3. Clean the detection windows of OHT sensors 1 and 2.
4. Reconnect connectors J1801 and J1802 of OHT sensors 1 and 2, connector J214 on the controller board, and relay connector J17.
5. Replace OHT sensors 1 and 2.
6. Replace the controller board.

Table 41. Numbered printer messages (continued)

49.<xxxx> ERROR CYCLE POWER	**Event log message:** 49.<xxxx>
Description: Indicates that a software or data communications error has occurred, or corrupt data was sent to the printer. This can be caused during times of high network traffic or by incomplete or out-of-bounds print data. This error can also occur because of defective EIO devices.	**Action:** **1** Verify that all cables are connected. **2** Turn the printer off and on to reset the printer. **3** Remove all EIO cards and reinstall them to ensure they are seated correctly. **4** If using a parallel connection, verify that the cable is IEEE-1284 compliant. **5** If the error occurs frequently, try adding more memory.
50.1 FUSER ERROR CYCLE POWER	**Event log message:** 50.00.01
Description: Indicates that a low temperature error has occurred in the fuser.	**Action:** **1** Verify the fuser is completely seated inside the printer. **2** Turn the printer off and on to reset the printer. **3** Turn the printer off and remove the fuser. Measure the resistance across fuser connectors J26F-A4 (FXTHU) and J26F-A3 (GND). If it is not in the range of 250 kOhms to 600 kOhms (room temperature), check the wiring from the connector J222 on the controller board up to the upper thermistor. If the wiring is normal, replace the fuser kit. **4** Reconnect connector J222 on the controller board and connector J26 on the fuser. **5** Replace the fuser kit. **6** Replace the power supply.
50.2 FUSER ERROR CYCLE POWER	**Event log message:** 50.00.02
Description: Indicates that a warmup error has occurred in the fuser.	**Action:** **1** Turn the printer off and on to reset the printer. **2** Verify the fuser is completely seated inside the printer. **3** Check for media jams in the fuser. **4** Replace the fuser kit.

Table 41. Numbered printer messages (continued)

50.3 FUSER ERROR CYCLE POWER **Description:** Indicates that a high temperature error has occurred in the fuser. This error is saved in the controller board by an electrical charge in capacitor C259.	**Event log message:** 50.00.03 **Action:** **1** Turn the printer off and on to reset the printer. **2** Turn the printer off and unplug it. Place a flat blade of a screwdriver between the two wires of C259 to short out the capacitor and clear the memory. **3** Replace the fuser kit. **4** Replace the power supply. **5** Replace the controller board.
50.4 FUSER ERROR CYCLE POWER **Description:** Indicates that a fuser drive or power unit error has occurred in the fuser.	**Event log message:** 50.00.04 **Action:** **1** Turn the printer off and on to reset the printer. **2** Verify the fuser is completely seated inside the printer. **3** Replace the fuser kit. **4** Replace the power supply. **5** Replace the controller board.
50.00.05 (event log message) An incompatible fuser is installed.	See INCORRECT FUSER LOWER LEFT DOOR in table 42 on page 399.
50.6 FUSER ERROR CYCLE POWER **Description:** Indicates that a heater error has occurred in the fuser.	**Event log message:** 50.00.06 **Action:** **1** Turn the printer off and on to reset the printer. **2** Verify the fuser is completely seated inside the printer. **3** Reconnect connector J222 on the controller board, connector J26 on the fuser, and connector J101 on the power supply. **4** Replace the fuser kit. **5** Replace the power supply. **6** Replace the controller board.

Table 41. Numbered printer messages (continued)

51 LASER ERROR CYCLE POWER	**Event log message:** 51.00.01
Description: Indicates that a laser malfunction has occurred.	**Action:** **1** Turn the printer off and on to reset the printer. **2** Reconnect connector J1001 on the laser driver PCA and connector J205 on the controller board. **3** Reconnect connector J2 on the beam detect PCA, relay connector J40, and connector J211 on the controller board. **4** If the problem persists, replace the laser/scanner unit. **5** If, after replacing the laser/scanner unit, the problem persists, replace the controller board.
52 SCANNER ERROR CYCLE POWER	**Event log message:** 52.00.00
Description: Indicates that the scanner motor is not turning properly.	**Action:** **1** Turn the printer off and on to reset the printer. **2** Reconnect connector J901 on the scanner motor PCA, relay connector J40, and connector J211 on the controller board. **3** Measure the voltage across connector J647-B11 (+24UH) and J647-4 (GND) on the main relay PCA after the printer is turned on. If the voltage is not 24 V, replace the power supply. **4** Measure the voltage across connector J211-7 (SCND) and J211-6 (GND) on the controller board after the printer is turned on. If the voltage changes from 0 V to 17 V or more, replace the laser/scanner unit. **5** Replace the laser/scanner unit. **6** Replace the controller board.

Table 41. Numbered printer messages (continued)

53.<x><y>.<zz> ERROR DIMM SLOT <n>

Event log message: 53.<x><y>.<zz>

Description:
Indicates that a memory error occurred during the configuration and validation of DIMM memory.

<x> = Hardware type:
0 = ROM
1 = RAM
2 = Font DIMM*

<y> = Hardware device:
0 = Onboard ROM/RAM
1 = DIMM slot 1
2 = DIMM slot 2
3 = DIMM slot 3
4 = DIMM slot 4
5 = DIMM slot 5
6 = DIMM slot 6
7 = DIMM slot 7
8 = DIMM slot 8

<zz> = Error:
00 = Unsupported memory
01 = Unrecognized memory
02 = Unsupported memory size
03 = Failed RAM test
04 = Exceeded maximum RAM size
05 = Exceeded maximum ROM size
06 = Invalid DIMM speed; check DRAM
07 = DIMM is reporting incorrect checksums
10 = DIMM address
11 = PDC XROM out of bounds
12 = Could not make temporary mapping
13 = Invalid RAM type
14 = DIMM not paired properly
15 = Bad firmware upgrade DIMM checksum
16 = More than one set of firmware upgrade DIMMs
17 = Not enough DRAM to run

<n> = EIO slot number:
1 = Bottom EIO slot
2 = Top EIO slot

Action:

1. Verify that the DIMM board is installed correctly and the DIMMs are configured correctly. DRAM DIMMs must be installed in synchronous pairs in adjacent slots, with the same size and speed in both slots. Only SDRAM is supported.
2. Turn the printer off and on to reset the printer.
3. Remove and replace the DIMM that caused the error.

For more information about installing DIMMs, see page 106.

*The HP Color LaserJet 8550 printer supports font DIMMs; the HP Color LaserJet 8500 printer does not support font DIMMs.

Table 41. Numbered printer messages (continued)

54.1 TEMPERATURE SENSOR ERROR CYCLE POWER

Event log message: 54.00.01

Description:
Indicates that the temperature/humidity sensor in the printer has malfunctioned. The temperature/humidity sensor is located below tray 2.

Action:

1. Reconnect connector J801 and relay connector J55 on the temperature/humidity sensor, and connector J206 on the controller board.
2. Replace the cassette crossmember assembly which includes the temperature/humidity sensor.
3. Replace the controller board.

54.2 CAROUSEL ERROR CYCLE POWER

Event log message: 54.00.02

Description:
Indicates that the color toner carousel is not working correctly. This could be caused by an obstruction in the carousel path, such as a loose shutter or disengaged toner cartridge.

Action:

1. Turn the printer off and on to reset the printer.
2. Open the carousel door and waste toner tray. Look for an obstruction, such as a toner cartridge shutter catching on the waste toner tray. Verify the toner lock lever is fully locked. If the message does not clear after closing the doors, turn the printer off and on to reset the printer.
3. Clean the carousel position sensor (PS3) with compressed air. If the problem persists, replace the sensor.
4. Reconnect connector J701 on carousel motor PCA; connectors J641, J642, J644, and J648 on the main relay PCA; connector J672 on the subrelay PCA; and connector J102 on the power supply.
5. Check operation of the carousel stopper arm. Replace the carousel stopper solenoid.
6. Check electrical continuity between connector J641-1 (+24 VB) and J642-3 (PMP) on the main relay PCA when the door switch (SW641) is turned on. If there is no electrical continuity, replace the main relay PCA.
7. Check electrical continuity between connector J644-1 (PBK) and J644-2 (PMP) on the main relay PCA when the door switch (SW644) is turned on. If there is no electrical continuity, replace the black toner cartridge on/off switch.

Table 41. Numbered printer messages (continued)

(54.2 CAROUSEL ERROR CYCLE POWER, continued)	**8** Check electrical continuity between connector J642-1 (PYMC) and J642-2 (PBK) on the subrelay PCA when the door switch (SW673) is turned on. If there is no electrical continuity, replace the toner cartridge cover switch in the subrelay PCA. **9** Check electrical continuity between connector J642-1 (PYMC) and J648-1 (+24 VAR) on the main relay PCA when the door switch (SW642) is turned on. If there is no electrical continuity, replace the main relay PCA. **10** Measure the voltage across connector J648-1 (+24 VAR) and J648-3 (GND) on the main relay PCA after the printer is turned on. If the voltage is not 24 V, replace the main relay PCA. **11** Reconnect connectors J704 and J706 on the carousel motor PCA, and connector J220 on the controller board. **12** Reconnect connector J43 on the carousel position sensor, relay connector J42 and connector J207 on the controller board. **13** Measure the voltage across connector J220-A6 (RLSROT) and J220-B5 (GND) on the controller board after the printer is turned on. If the voltage changes to about 3.5 V from 0 V, replace the carousel motor PCA. **14** Replace the carousel motor (M1). **15** Replace the controller board.
54.00.03 (event log message)	See DUPLEX ERROR CHECK DUPLEXER in table 42 on page 397.
54.3 CALIBRATION WARNING PRESS GO TO CONTINUE **Description:** The process marks in the density sensing pattern are corrupted (see chapter 5 for more information).	**Event log message:** 54.00.03 **Action:** **1** Press Go. **2** Print a configuration page and troubleshoot as an image-quality problem. **3** Check the transfer guide for cracks and replace the transfer guide as needed.

Table 41. Numbered printer messages (continued)

54.4 WASTE TONER SENSOR ERROR CYCLE POWER **Description:** The waste toner sensor has failed. Printing cannot continue.	**Event log message:** 54.00.04 **Action:** **1** Replace the waste toner sensor assembly. **2** Replace the imaging drum.
54.00.05 (event log message) Sensor abnormality.	See CLEAN DENSITY SENSOR CYCLE POWER in table 42 on page 389.
54.00.06 (event log message) Out of range cyan.	See CLEAN DENSITY SENSOR CYCLE POWER in table 42 on page 389.
54.00.07 (event log message) Out of range magenta.	See CLEAN DENSITY SENSOR CYCLE POWER in table 42 on page 389.
54.00.08 (event log message) Out of range yellow.	See CLEAN DENSITY SENSOR CYCLE POWER in table 42 on page 389.
54.00.09 (event log message) Out of range black.	See CLEAN DENSITY SENSOR CYCLE POWER in table 42 on page 389.
55 PRINTER ERROR CYCLE POWER **Description:** Indicates a printer command error. The commands cannot be exchanged between the printer and its controller.	**Event log message:** 55.00.01 **Action:** **1** Turn the printer off and on to reset the printer. **2** Verify the controller board is fully seated.
56.1 ERROR CYCLE POWER **Description:** Indicates an input feed error (such as requesting to feed transparencies through the duplexer), or that the input tray is not installed.	**Event log message:** 56.01.01 **Action:** **1** If the input tray you are trying to print from is not installed, install the input tray. **2** Turn the printer off and on to reset the printer.
56.2 ERROR CYCLE POWER **Description:** Indicates an illegal output error. For example, the multi-bin mailbox is not installed and it was selected as the output destination, or there are transparencies in the duplexer.	**Event log message:** 56.00.02 **Action:** **1** Open the printer and remove media from the paper path. **2** Verify that the media type is set in the printer control panel. **3** Turn the printer off and on to reset the printer.

Table 41. Numbered printer messages (continued)

57.1 FAN FAILURE

Description:
One of the cooling fans failed or is obstructed.

1 = Fan 1 (FM 1)

Event log message: 57.00.01

Action:

Caution: Turn the printer off and do not operate the printer in this condition or it can be seriously damaged.

1 Turn the printer off and on to reset it.

2 Reconnect connectors J702 and J706 on the carousel motor PCA, and connector J220 on the controller board.

3 Reconnect connector J701 on the carousel motor PCA, connectors J648 and J641 on the main relay PCA, and connector J102 on the DC power supply.

4 Measure the voltage across J702-3 (FAN1ON) and J701-2 (GND) on the carousel motor PCA after the printer is turned on. If the voltage changes from 0 V to 24 V, replace fan 1.

5 Measure the voltage across connector J701-1 (+24 VB) and J701-2 (GND) on the carousel motor PCA after the printer is turned on. If the voltage is about 24 V, replace the carousel motor.

6 Measure the voltage across connector J641-1 (+24 VB) and J641-4 (GND) on the main relay PCA after the printer is turned on. If the voltage is not 24 V, replace the main relay PCA.

7 Check the AC power supply.

8 If the problem is not rectified after the printer is turned off and on again, find the cause of activation of the overcurrent/overvoltage detection circuit in the power supply. Wait more than two minutes before turning the power back on.

9 Replace the power supply.

Table 41. Numbered printer messages (continued)

57.2 FAN FAILURE

Description:
One of the cooling fans failed or is obstructed.

2 = Fan 2 (FM 2)

Event log message: 57.00.02

Action:

Caution: Turn the printer off and do not operate the printer in this condition or it can be seriously damaged.

1 Turn the printer off and on to reset it.

2 Reconnect connectors J703 and J706 on the carousel motor PCA and connector J220 on the controller board.

3 Reconnect connector J701 on the carousel motor PCA, connector J648 on the main relay PCA, and connector J102 on the DC power supply.

4 Measure the voltage across connector J703-3 (FAN2ON) and J703-1 (GND) on the carousel motor PCA after the printer is turned on. If the voltage changes from 0 V to 24 V, replace fan 2.

5 Measure the voltage across connector J701-1 (+24 VB) and J701-2 (GND) on the carousel motor PCA after the printer is turned on. If the voltage is about 24 V, replace the carousel motor.

6 Measure the voltage across connector J641-1 (+24 VB) and J641-4 (GND) on the main relay PCA after the printer is turned on. If the voltage is 24 V, replace the main relay PCA.

7 Check the AC power supply.

8 If the problem is not rectified after the printer is turned off and on again, find the cause of activation of the overcurrent/overvoltage detection circuit in the power supply. Wait more than two minutes before turning the printer back on.

9 Replace the power supply.

Table 41. Numbered printer messages (continued)

57.3 FAN FAILURE

Event log message: 57.00.03

Description:
One of the cooling fans failed.

3 = Fan 3 (FM 3)

Action:

Caution: Turn the printer off and do not operate the printer in this condition or it can be seriously damaged.

1. Turn the printer off and on to reset it.
2. Reconnect connectors J645 and J647 on the main relay PCA, J18 and J74 relay connectors, and connector J227 on the controller board.
3. Reconnect connector J641 on the main relay PCA, and connector J102 on the power supply.
4. Measure the voltage across J645-3 (FAN3ON) and J645-1 (GND) on the main relay PCA after the printer is turned on. If the voltage changes from 0 V to 24 V, replace fan 3.
5. Measure the voltage across connector J641-1 (+24 VB) and J641-4 (GND) on the main relay PCA after the printer is turned on. If the voltage is not 24 V, replace the main relay PCA.
6. Measure the voltage across connector J641-1 (-24 VB) and J641-4 (GND) on the main relay PCA after the printer is turned on. If the voltage is not 24 V, replace the main relay PCA.
7. Check the AC power supply.
8. If the problem is not rectified after the printer is turned off and on again, find the cause of activation of the overcurrent/overvoltage detection circuit in the power supply. Wait more than two minutes before turning the printer back on.
9. Replace the controller board.

58.1 ERROR CYCLE POWER

Event log message: 58.00.01

Description:
Indicates that the paper diverter inside the right upper door is out of position, causing an error feeding media from tray 1.

Action:

1. Open the right upper door and check for a media jam or misfed media.
2. Turn the printer off and on to reset the printer.

Table 41. Numbered printer messages (continued)

59.<x> MOTOR ERROR CYCLE POWER

Event log message: 59.00.0<x>

Description:
Indicates that the main motor (M4) is not working properly.

<x> = Description:
0 = General error
1 = Startup error
2 = Rotation error

Action:

1. Turn the printer off and on to reset the printer.
2. Reconnect connector J219 and relay connector J1 on the controller board.
3. Replace the main motor (M4).
4. Reconnect connectors J641 to J643 and J647 on the main relay PCA, connectors J671 and J673 on the subrelay PCA, connector J102 on the power supply, and connector J227 on the controller board.
5. Check electrical continuity between connector J641-1 (+24 VB) and J642-3 (PMP) on the main relay PCA when the door switch (SW641) is turned on. If there is no electrical continuity, replace the main relay PCA.
6. Check electrical continuity between connector J671-2 (PMP) and J671-2 (PFUPR) on the subrelay PCA when the door switch (SW671) is turned on. If there is no electrical continuity, replace the subrelay PCA.
7. Measure the voltage across connector J647-B11 (+24 UH) and J647-4 (GND) on the main relay PCA after the printer is turned on. If the voltage is not 24 V, replace the main relay PCA.
8. Replace the controller board.

62.<x> SERVICE CYCLE POWER

Event log message: 62.00.0<x>

Description:
Indicates that a problem exists with the internal memory.

<x> = Description:
0 = Internal ROM or RAM
1-8 = DIMM slots 1-8

Action:

1. Turn the printer off and on to reset the printer.
2. Perform DRAM DIMM test from the formatter diagnostics in the Service Menu.
3. If the problem persists, replace the bad DIMM.

63 SERVICE CYCLE POWER

Event log message: 63.00.00

Description:
Indicates that the internal RAM memory test failed.

Action:

1. Turn the printer off and on to reset the printer.
2. Perform DRAM DIMM test from the formatter diagnostics in the Service Menu.
3. If the problem persists, replace the bad DIMM.

Table 41. Numbered printer messages (continued)

64 PRINTER ERROR CYCLE POWER **Description:** Indicates a scan buffer error.	**Event log message:** 64.00.00 **Action:** Turn the printer off and on to reset the printer.
65 PRINTER ERROR CYCLE POWER **Description:** Indicates a DRAM controller error.	**Event log message:** 65.00.00 **Action:** **1** Turn the printer off and on to reset the printer. **2** Perform DRAM DIMM test from the formatter diagnostics in the Service Menu. **3** If the problem persists, replace the bad DIMM.
66.<x>0.<yy> C-LINK COMM ERROR CHECK CABLES AND CYCLE POWER **Description:** Indicates a communication error between the 2,000-sheet input unit or the multi-bin mailbox and the printer. <x> = Device number in the link <yy> = Error code from the optional device	**Event log message:** None **Action:** **1** Verify that the C-link and power cables are connected. **2** Turn the printer off and on to reset the printer.
66.11.01 INPUT DEVICE FAILURE CHECK CABLES AND CYCLE POWER **Description:** Indicates a 2,000-sheet input unit lifting motor error.	**Event log message:** 66.11.01 **Action:** **1** Verify that the c-link and power cables are connected. **2** Turn the printer off and on to reset the printer. **3** Verify that there are no objects or paper stored in the left side of the tray. **4** Verify that the lifting plate moves freely by hand. **5** Verify that the paper size plates are installed correctly, and that they are not bent. **6** Replace the paper deck drive assembly bushing. **7** Replace the paper deck drive assembly. **8** Replace the paper tray (tray 4) for the 2,000-sheet input unit.

Table 41. Numbered printer messages (continued)

66.11.02 INPUT DEVICE FAILURE CHECK CABLES AND CYCLE POWER	**Event log message:** 66.11.02
Description: Indicates a 2,000-sheet input unit feed motor error.	**Action:** **1** Verify that the c-link and power cables are connected. **2** Turn the printer off and on to reset the printer. **3** Verify that there are no objects in the left side of the tray. **4** Verify that the paper tray raised sensor (PS34) is working properly (perform a sensor test). **5** Check for proper installation of the pick-up roller. **6** Check the pick-up assembly and the paper deck drive assembly cabling. **7** Replace the pick-up assembly. **8** Replace the paper deck drive assembly.
66.11.03 INPUT DEVICE FAILURE CHECK CABLES AND CYCLE POWER	**Event log message:** 66.11.03
Description: Indicates a 2,000-sheet input unit lifting and feed motor error.	**Action:** **1** Verify that the c-link and power cables are connected. **2** Turn the printer off and on to reset the printer. **3** Verify that there are no objects in the left side of the tray. **4** Verify that the lifting plate moves freely by hand. **5** Verify that the paper size plates are installed correctly, and that they are not bent. **6** Replace the paper deck drive assembly bushing. **7** Replace the paper deck drive assembly. **8** Check that the paper tray raised sensor (PS34) is working properly (perform a sensor test). **9** Check for proper installation of the pick-up roller. **10** Check pick-up assembly cabling. **11** Replace the pick-up assembly.

Table 41. Numbered printer messages (continued)

66.22.08 OUTPUT DEVICE FAILURE CHECK CABLES AND CYCLE POWER	**Event log message:** 66.22.08
Description: Indicates a multi-bin mailbox flipper motor error.	**Action:** **1** Verify that the c-link and power cables are connected. **2** Turn the printer off and on to reset the printer. **3** Check for jams in the flipper assembly area. **4** Replace the flipper assembly. **5** Replace the multi-bin mailbox controller board PCA.
66.22.09 OUTPUT DEVICE FAILURE CHECK CABLES AND CYCLE POWER	**Event log message:** 66.22.09
Description: Indicates a multi-bin mailbox external memory error.	**Action:** **1** Verify that the c-link and power cables are connected. **2** Turn the printer off and on to reset the printer. **3** Replace the multi-bin mailbox controller board PCA.
66.22.<xx> OUTPUT DEVICE FAILURE CHECK CABLES AND CYCLE POWER	**Event log message:** 66.22.<xx>
Description: Indicates a multi-bin mailbox error. <xx> = Error code from the optional device	**Action:** **1** Verify that the c-link and power cables are connected. **2** Turn the printer off and on to reset the printer. **3** Replace the C-link cables. **4** Replace the multi-bin mailbox controller board PCA.
67.<x> ERROR POWER CYCLE	**Event log message:** 67.00.0<x>
Description: Indicates an electronic controller error. **<x> = Description:** 1 = Controller board error 2 = Controller board IC malfunction 3 = Internal communication malfunction	**Action:** **1** Turn the printer off and on to reset the printer. **2** Replace the controller board.

Table 41. Numbered printer messages (continued)

68 NVRAM ERROR SETTINGS CHANGED **Description:** Indicates that a recoverable error has been detected in the NVRAM. Values for some NVRAM settings were found to be illegitimate in form and were set back to their default value.	**Event log message:** 68.00.00 **Action:** **1** Verify the printer control panel settings. One or more fields have been reset to their factory defaults during the error recovery. **2** Perform a factory defaults reset (see page 92). **3** Perform a cold reset (see page 431).
68 NVRAM FULL SETTINGS LOST **Description:** Indicates that the NVRAM is full, and the printer is unable to write new data to the NVRAM.	**Event log message:** 68.00.01 **Action:** Verify the printer control panel settings. One or more fields might have been reset to their factory defaults during error recovery. The next time the printer is turned off and on, NVRAM will be cleared and all factory defaults will be restored.
79 SERVICE <xxxx> CYCLE POWER **Description:** The firmware has detected a hardware failure within the formatter. This failure can be caused by defective EIO devices and communication ports **<xxxx> Description** 01<xx> = IO ASIC register error 02<xx> = Video ASIC register error 03<xx> = IDE ASIC register error	**Event log message:** 79.<xxxx> **Action:** **1** Turn the printer off. Disconnect all communication cables and EIO cards. Turn the printer back on. **2** Run extended formatter diagnostics from the Service Mode Menu to troubleshoot the failure. **3** If the problem persists without the communications connected, replace the formatter board.
8<n>.<xxx> (event log message) EIO card error	See EIO <n> NOT FUNCTIONAL in table 42 on page 398.

Table 42. Unnumbered printer messages

ACCESS DENIED	**Event log message:** None
Description: A user has attempted to select a menu value while printer control panel locking is enabled.	**Action:** See the system administrator for access to the printer control panel. If it is necessary to override the password, perform a cold reset. See page 431 for information about performing a cold reset.
CALIBRATING	**Event log message:** None
Description: The printer is adjusting the print density (see page 160 for more information).	**Action:** No action is required. If the printer does not return to Ready, turn the printer off and on to reset the printer. **Note:** It might take five to six minutes for the printer to complete the calibration.
CANCELING JOB	**Event log message:** None
Description: The printer is canceling the current print job.	**Action:** No action is required. If the printer does not return to Ready, turn the printer off and on to reset the printer.
CHECK CONTROL PANEL SETTINGS	**Event log message:** None
Description: Indicates that the page might not be printing because the control panel setting for media type and/or size does not match the media in the tray.	**Action:** See page 104 for information about configuring media type and size for each input tray.
CHECK TRAY 1 PAPER GUIDES	**Event log message:** None
Description: The width of the guides does not match the size of the media selected for the print job.	**Action:** Adjust the media width guides to the edge of the page. Ensure the media size selected for the print job is the same as the size of media loaded in tray 1.

Table 42. Unnumbered printer messages (continued)

CLEAN DENSITY SENSOR CYCLE POWER	**Event log message:** 54.00.0<x> **<x> = Description:** 5 = Sensor abnormality 6 = Out of range cyan 7 = Out of range magenta 8 = Out of range yellow 9 = Out of range black
Description: The process marks in the density sensing pattern are corrupted (see chapter 5 for more information).	**Action:** **1** Press Go. **2** Print a configuration page and troubleshoot as an image-quality problem. **3** Check the transfer guide for cracks and replace the transfer guide as needed.
CLEAR DUPLEX JAM LOWER LEFT DOOR	**Event log message:** 13.00.0<x> **<x> = Description:** 7 = Two-sided turnaround paper late jam 8 = Two-sided turnaround paper stopped jam 9 = Two-sided path paper late jam
Description: The printer senses a media jam in the duplexer.	**Action:** **1** Open the left lower cover, remove the duplexer, remove the jammed media, reinstall the duplexer, and close the left lower cover. **2** The fusing assembly and diverter assemblies can also cause duplex printing problems. Verify their operation. **3** Open the left lower cover and defeat the delivery cover interlock. Toggle the sensors at the paper exit and entrance. While running the sensor monitor test from the Service Mode Menu, verify sensors that 8 and 9 on the printer control panel indicate 1 (on) when toggled. **Note:** This procedure will not work if the left lower cover interlock is not defeated. **4** Replace the duplexer.

Table 42. Unnumbered printer messages (continued)

CLEAR FUSER JAM LOWER LEFT DOOR

Description:
The printer senses a media jam in the fuser area. The printer expected a page to come through the fuser, but the paper has not toggled PS1903, or PS1903 has been toggled an extended amount of time.

If media jam frequently in the fuser area when duplexing 11-by-17 media or A3-sized media, the duplexer feed roller might have become slick.

See the section about paper path tests under “Aids to Troubleshooting.”

See table 44 on page 436 for an explanation of paper jam detection details.

Event log message: 13.00.0<x>

<x> = Description:
3 = Fusing delivery paper delay jam
4 = Fusing delivery stationary jam

Action:

WARNING! Do not touch the fuser; it could be very hot and could cause burns.

1. Open the left lower cover, remove the jammed media, and close the left lower cover.
2. On the left side of the fuser, check the fuser exit flag and the reflective absorptive sticker that the sensor (PS1903) uses.
3. Perform the sensor monitor test in the Service Mode Menu. Toggle PS1903 and check to make sure that sensor 2 on the printer control panel indicates 1 (on) when toggled.

CLEAR INPUT DEVICE JAM

Description:
There is a jam in the 2,000-sheet input tray.

Review “Media requirements” in Chapter 1 of this manual.

Check the control panel settings for media type.

See the section about paper path tests under “Aids to Troubleshooting.”

Event log message: 13.11.1<x>

<x> Description:
1 = Time-out at paper entry sensor (PS31)
B = Time-out at paper exit sensor (PS32

Action:

1. Open the VTU and remove any media.
2. Verify that the paper entry sensor (PS31) moves freely.
3. Verify that the feed, separation, and pickup rollers are properly seated.
4. If the problem persists, open the VTU and override the VTU closed sensor (PS35). Perform a paper path test feeding from the 2,000-sheet input unit, and verify that the feed rollers are advancing the paper. If rollers do not rotate, verify the connections at the pickup assembly and the controller PCA in the 2,000-sheet input unit.
5. If the rollers rotate and drop down but do not advance the paper, replace the feed and separation rollers using the maintenance kit.
6. If the rollers do not rotate or do not drop down, replace the pickup assembly.
7. If the problem persists, replace the VTU, which includes PS31.

Table 42. Unnumbered printer messages (continued)

CLEAR INPUT DEVICE JAM (continued)	**Event log message:** 13.11.2<x> **<x> Description:** 1 = Page stays too long at paper entry sensor (PS31) B = Page stays too long at paper exit sensor (PS32) **Action:** **1** Open the VTU and remove any media. **2** Verify that the paper entry sensor (PS31) moves freely. **3** Verify that the feed, separation, and pickup rollers are properly seated. **4** If the problem persists, open the VTU and override the VTU closed sensor (PS35). Perform a paper path test feeding from the 2,000-sheet input unit, and verify that the feed rollers are advancing the paper. If rollers do not rotate, verify the connections at the pickup assembly and the controller PCA in the 2,000-sheet input unit. **5** If the rollers rotate and drop down but do not advance the paper, replace the feed and separation rollers using the maintenance kit. **6** If the rollers do not rotate or do not drop down, replace the pickup assembly. **7** If the problem persists, replace the VTU, which includes PS31.
	Event log message: 13.11.3<x> **<x> Description:** 1 = At power on, paper entry sensor (PS31) in VTU is active B = At power on, paper exit sensor (PS32) in VTU is active **Action:** **1** Open the VTU and remove any media. **2** Verify that PS31 and PS32 in the VTU move freely. **3** If either PS31 or PS32 are damaged, replace the VTU.

Table 42. Unnumbered printer messages (continued)

CLEAR INPUT JAM **Description:** The printer senses a media jam in the transfer or registration area, in an input tray, or in the duplexer.	**Event log message:** None **Action:** **1** Open the front door, press the white button on the lower (green) lever, and swing the lever to the right. Open the right upper door, remove the transfer drum, and remove the jammed media from under the metal paper guide. Reinstall the transfer drum, and close the right upper door. Swing the lower (green) lever to the left, and close the front door. **2** Open each input tray, remove any jammed media, and close the input tray. **3** Open the left lower cover, remove the duplexer, remove the jammed media, reinstall the duplexer, and close the left lower cover. **4** Check the entire paper path.
CLEAR MAILBOX JAM **Description:** The printer senses a media jam in the multi-bin mailbox.	**Event log message:** 13.22.01, 13.22.02 **Action:** **1** Open the jam access door and remove any media. **2** Verify that the left (face-up) output bin full sensor (PSFaceFull) flag moves freely. **3** Verify that the flipper shaft is in place. **4** Replace the flipper assembly. **5** Replace the multi-bin mailbox controller board PCA. **Event log message:** 13.22.03 **Action:** **1** Check for a jam at the double-belt system and delivery head assembly. **2** Ensure free movement of the double belt (both belts). **3** Ensure parallel position of the double belt system. **4** Verify that the metallic tape is in place and in good condition. **5** Replace the transport belt motor (M5). **6** Replace the multi-bin mailbox controller board PCA. **7** Replace the delivery head assembly.

Table 42. Unnumbered printer messages (continued)

(CLEAR MAILBOX JAM, continued)	**Event log message:** 13.22.04 **Action:** **1** Check for a jam in the delivery head assembly. **2** Ensure free movement in (PSExit1) sensor flags on the delivery head assembly. **3** Verify that the delivery roller fingers are over the ejector rollers on the delivery head assembly. **4** Replace the flat ribbon cable that connects to the delivery head assembly to the controller board PCA. **5** Replace the multi-bin mailbox controller board PCA. **6** Replace the delivery head assembly.
	Event log message: 13.22.05 **Action:** **1** Check for a jam in the delivery head assembly. **2** Ensure free movement in (PSExit2) sensor flags on the delivery head assembly. **3** Verify that the delivery roller fingers are over the ejector rollers on the delivery head assembly. **4** Replace the flat ribbon cable that connects to the delivery head assembly to the controller board PCA. **5** Replace the multi-bin mailbox controller board PCA. **6** Replace the delivery head assembly.
CLEAR OUTPUT JAM UPPER LEFT DOOR **Description:** The printer senses a media jam in the top (face-down) output bin. This message might be caused by the paper not reaching PS11 or by paper toggling PS11 for an extended period of time. See table 44 on page 436 for an explanation of paper jam detection details.	**Event log message:** 13.00.0<x> **<x> = Description:** 5 = Delivery paper delay jam 6 = Delivery stationary jam **Action:** **1** Open the left upper door, remove the jammed media, and close the left upper door. **2** Verify that PS30, PS10, PS11, and PS3 sensors and the surrounding area are clean. **3** Perform sensor monitor test in the Service Mode Menu to verify all paper path sensors are functioning properly or to locate the jam.

Table 42. Unnumbered printer messages (continued)

CLEAR PAPER JAM

Event log message: 13.00.00

Description:
The printer senses a media jam. Because this is a generic media jam message, the media might be at any point in the paper path.

Action:

1. Open and shut the front door of the printer to clear any media from the printer. Be sure to check the fuser area because media can get wrapped around the fuser and be difficult to find.
2. Check all areas of the printer for jammed media because the printer is unable to determine the location of the media jam.
3. Perform sensor monitor test in the Service Mode Menu to verify all paper path sensors are functioning properly or to locate the paper jam.

CLEAR TRANSFER JAM

Event log message: 13.00.10

Description:
The printer senses a media jam in the transfer drum area when media has not reached PS5. In some cases the media might wrap around the transfer drum and become lodged near the imaging drum.

See table 44 on page 436 for an explanation of paper jam detection sensors.

Action:
Open the right upper door and the front door. Remove the transfer drum. Rotate the green lever at the front of the printer while removing the jammed media. Reinstall the transfer drum and close the front door and the right upper door.

CLEAR TRAY 4 JAM

Event log message: None

Description:
The printer senses a media jam in tray 4.

Action:
Open tray 4 and the VTU, remove the jammed media, and close both.

CLEAR UNEXPECTED PAPER SIZE JAM THEN LOAD TRAY 1 <type> <size>

Event log message: 13.00.11

Description:
The printer senses a media jam in tray 1, or the media fed are longer than what was expected.

<type> = Media type specified in the printer driver or application
<size> = Media size specified in the printer driver or application

The <type> and <size> can be the default media type and size if an automatic paper override has occurred or if Go was pressed during a mount request.

Action:

1. Open the right upper door and remove the jammed media.
2. Load the media type and size indicated on the printer control panel.

Table 42. Unnumbered printer messages (continued)

CLEARING PAPER **FROM PRINTER**	**Event log message:** None
Description: The printer is attempting to remove unusable media (such as a misfed page or media damaged in a media jam).	**Action:** No action is required.
CLOSE **<location> DOOR**	**Event log message:** None
Description: The printer senses that one of the doors is not closed properly. <location> = A printer door	**Action:** **1** Close the door indicated in the message. **2** Check the function of the door interlocks (see page 425 for interlock locations).
COLD RESET	**Event log message:** None
Description: The printer has recognized the key sequence for performing a cold reset. The printer will reset to the factory default settings. **Note:** Before performing a cold reset, print a configuration page as a reference for resetting the printer settings. See page 415 for information about printing a configuration page.	**Action:** No action is required. For more information about factory default settings, see the menu maps beginning on page 82. See page 431 for more information about performing a cold reset.
CONFIG LANGUAGE	**Event log message:** None
Description: The printer has recognized the key sequence for selecting the display language.	**Action:** Wait for the display language options to appear and select the appropriate language. For more information about selecting the display language, see page 97.
CONTINUOUS TEST **PRESS CANCEL JOB**	**Event log message:** None
Description: A continuous configuration page is printing.	**Action:** Press CANCEL JOB to exit the configuration page printout mode. If the printer is in the process of printing when CANCEL JOB is pressed, the printer finishes printing the buffered pages before returning online.
DATA RECIEVED **PRESS GO KEY**	**Event log message:** None
Description: The printer has received and processed data. The printer is waiting for a formfeed.	**Action:** Press GO.

Table 42. Unnumbered printer messages (continued)

DISK DEVICE FAILURE

Event log message: 30.00.01

Description:
The printer hard disk's internal self-test routine has been invoked to read minimum and maximum logical block addresses (with no retries) and has detected a failure. If access to the printer hard disk is not required, printer operation can continue.

Action:
Replace the printer hard disk.

DISK FILE OPERATION FAILED

Event log message: None

Description:
The printer has received an illogical PJL command (such as download to nonexistent directory).

Action:
No action is required.

DISK IS FULL

Event log message: None

Description:
The printer hard disk is full.

Action:

1. From the host computer, delete data from the printer hard disk using the printer drivers or a disk management application.
2. To clear *all* data from the printer hard disk, reformat the printer hard disk from the printer control panel. To reformat the printer hard disk:
   a. Press MENU until CONFIGURATION MENU appears on the display.
   b. Press ITEM until INITIALIZE DISK appears on the display.
   c. Press SELECT to reformat the printer hard disk.

DISK IS WRITE PROTECTED

Event log message: None

Description:
A user has attempted to save to the printer hard disk while the printer hard disk is write-protected.

Action:
See the system administrator for access to the printer hard disk.

DRUM ERROR REPLACE DRUM KIT

Event log message: None

Description:
The printer has detected an error in the imaging drum memory device. Printing can continue but will be stopped as soon as the waste toner signal is triggered. Printing behavior is determined by the TONER LOW control panel setting.

See table 20 on page 88 for information about the TONER LOW setting.

Action:

1. Turn the printer off and on to reset the printer.
2. Reconnect connector J209, and relay connectors J47 and J48 on the controller board.
3. Replace the drum kit.

Table 42. Unnumbered printer messages (continued)

DRUM LIFE LOW ORDER DRUM KIT or DRUM LIFE LOW <20% REMAINING	**Event log message:** None
Description: The imaging drum is almost past its specified life. Printing can continue; however, print quality might be degraded.	**Action:** Printing can continue until DRUM LIFE OUT message appears.
DRUM LIFE OUT REPLACE DRUM KIT	**Event log message:** None
Description: The imaging drum is past its specified life or the waste toner cartridge in the imaging drum is full. Printing cannot continue until the drum kit has been replaced.	**Action:** **1** Replace the drum kit. **2** Remove the drum cartridge from the printer, and clean the waste toner sensor window with a dry cloth. **3** Reconnect connector J221 on the controller board, and connectors J631 to J633 and relay connector J71 on the waste toner sensor. **4** Reconnect connector J209, and relay connectors J47 and J48 on the controller board. **5** Replace the drum cartridge. **6** Replace the waste toner sensor.
DUPLEX ERROR CHECK DUPLEXER	**Event log message:** 54.00.03
Description: The printer has detected an error in the duplexer.	**Action:** **1** Open the left lower cover, press the green tab on the right side of the duplexer, and pull the duplexer out of the printer. Check for and remove any jammed media from the duplexer. Reinstall the duplexer. **2** Turn the printer off and on to reset the printer. **3** Replace the duplexer.
EIO <n> INITIALIZING	**Event log message:** 40.00.01
Description: An EIO accessory is initializing. **<n> = EIO slot number:** 1 = Bottom EIO slot 2 = Top EIO slot	**Action:** No action is required.

Table 42. Unnumbered printer messages (continued)

EIO <n> NOT FUNCTIONAL **Description:** Indicates an EIO card error, but printing can continue. The configuration page will indicate that EIO <n> is not supported. **<n> = EIO slot number:** 1 = Bottom EIO slot 2 = Top EIO slot	**Event log message:** 8<n>.<xxx> <xxx> = Failure code **Action:** **1** Turn the printer off and on to reset the printer. **2** Replace the offending EIO accessory.
ENGINE TEST **Description:** The printer is running an internal test to verify operation. When the printer is finished, the printer returns to the ready state but remains offline.	**Event log message:** None **Action:** Press GO to bring the printer online.
FACE UP OUTPUT BIN FULL **Description:** The top output bin on the multi-bin mailbox is full.	**Event log message:** None **Action:** **1** Remove all media from the top output bin in the multi-bin mailbox to continue printing. **2** Check the functionality of the Bin Full flag.
FUSER LIFE LOW REPLACE KIT **Description:** The fuser and paper rollers are almost past their specified life. The fuser kit has approximately 1,000 pages until the end-of-life warning appears.	**Event log message:** None **Action:** Although printing can continue, the fuser kit should be replaced for optimum printer operation. Replace the fuser kit and reset the fuser counter by pressing SELECT before attempting to print (or use the RESETS menu on the printer control panel).
FUSER LIFE OUT REPLACE KIT **Description:** The fuser and paper rollers are past their specified life. If TONER LOW is set to CONTINUE in the Configuration Menu, printing can continue with degraded print quality. Otherwise printing will be halted.	**Event log message:** None **Action:** Replace the fuser kit and reset the fuser counter by pressing SELECT before attempting to print (or use the RESETS menu on the printer control panel). See table 20 on page 88 for information about the TONER LOW setting.

Table 42. Unnumbered printer messages (continued)

INCORRECT FUSER LOWER LEFT DOOR	**Event log message:** 50.00.05
Description: The printer has detected that an incompatible fuser (possibly the wrong voltage of fuser for the printer) has been installed.	**Action:** **1** Remove the fuser and install the fuser specified for use with this printer. Printing cannot continue until the correct fuser is installed in the printer. For information about ordering a fuser kit, see page 511. **2** Reconnect connector J222 on the controller board and connector J26 on the fuser. **3** Replace the controller board.
INPUT DEVICE PAPER PATH OPEN	**Event log message:** None
Description: The VTU on the 2,000-sheet input unit is open.	**Action:** Close the VTU.
INSTALL <color>	**Event log message:** None
Description: The toner cartridge is not installed, not correctly installed in the printer, or not being detected by the cartridge sensor. <Color> = Cyan, magenta, yellow, or black **Caution:** Use the blue button to rotate the carousel to prevent damage to the printer.	**Action:** **1** Insert the cartridge or make sure the installed cartridge is correctly seated in the printer. **Note:** The color toner carousel will not rotate unless the following conditions are met: • The blue toner lever is locked. • The clear door is closed. • The imaging drum is installed. • The black toner cartridge is installed completely, including removing the orange seal from the black toner cartridge and swinging the upper (blue) lever to the left. • The right upper door is closed. **2** Turn the printer off and on to reset the printer. **3** If the cartridge is installed correctly, check that the sensor PS1901C is functioning properly. **4** Clean the sensor with a toner wipe. **5** Reconnect connector J221 on the controller board, and connector J621 and relay connector J70 on the remaining color toner sensor.

Table 42. Unnumbered printer messages (continued)

(INSTALL <color>, continued)	**6** Make sure that the black toner cartridge is installed. • Install the black toner cartridge if it is not installed. • If the black toner cartridge is already installed, turn the printer off, reinstall the black toner cartridge, and turn the printer on again. **7** Reconnect connectors J641 and J644 on the main relay PCA, and connector J102 on the power supply. **8** Reconnect connector J227 on the controller board, and connector J647 on the main relay PCA. **9** Check electrical continuity between connector J644-1 (PBK) and J644-2 (PMP) when the door switch (SW644) is turned on. If there is no electrical continuity, replace the black toner cartridge on/off switch. **10** Check the upper (blue) lever (black toner cartridge lever) on the printer. Move the lever to the left. Replace the lever if it is cracked. **11** Replace the black toner cartridge if it is deformed or damaged. **12** Replace the remaining color toner sensor. **13** Replace the controller board.
INSTALL FUSER LOWER LEFT DOOR **Description:** The printer has detected that the fuser is not installed.	**Event log message:** None **Action:** **1** Install the fuser and verify that it is working correctly. **2** Reconnect connector J26 on the fuser. **3** Reconnect connector J222 on the controller board. **4** Replace the controller board.

Table 42. Unnumbered printer messages (continued)

INSTALL IMAGING DRUM OPEN FRONT DOOR

Description:
The printer has detected that the imaging drum is not installed.

Note: All doors must be closed for the printer to detect the imaging drum.

Event log message: None

Action:

1 Install the imaging drum before attempting to print. If the condition persists, take the imaging drum out and reinstall it.

Note: The imaging drum must be installed and the upper lever must be to the left in order for the carousel to rotate.

2 Turn the printer off and on to reset the printer.

3 Replace the drum cartridge.

4 Replace the drum cartridge if the drum cartridge on/off switch guide is deformed.

5 Make sure that the drum cartridge is installed.

- Install the drum cartridge if it is not installed.
- If the drum cartridge is already installed, turn the printer off, reinstall the drum cartridge, and turn the printer on again.

6 Reconnect connectors J641 to J643 and J647 on the main relay PCA, connectors J671 and J673 on the subrelay PCA, connector J102 on the power supply, and connector J227 on the controller board.

7 Check electrical continuity between connector J641-1 (+24 VB) and J642-3 (PMP) on the main relay PCA when the door switch (SW641) is turned on. If there is no electrical continuity, replace the right cover switch on the main relay PCA.

8 Check electrical continuity between connector J671-2 (PMP) and J671-2 (PFUPR) on the subrelay PCA when the door switch (SW671) is turned on. If there is no electrical continuity, replace the delivery cover/front cover switches on the subrelay PCA.

9 Measure the voltage across connector J641-1 (+24 VB) and J641-A1 (GND) on the main relay PCA after the printer is turned on. If the voltage is not 24 V, replace the power supply.

10 Measure the voltage across connector J647-B11 (+24UH) and J647-4 (GND) on the main relay PCA after the printer is turned on. If the voltage is not 24 V, replace the main relay PCA.

Table 42. Unnumbered printer messages (continued)

(INSTALL IMAGING DRUM OPEN FRONT DOOR, continued)	**11** Check the drum cartridge on/off switch lever on the printer. Set the lever at the correct position if it is disconnected. Replace the lever if it is cracked. **12** Reconnect connector J209, and relay connectors J47 and J48 on the controller board. **13** Replace the controller board.
INSTALL TRANSFER DRUM OPEN RIGHT DOOR **Description:** The printer has detected that the transfer drum is not installed. **Note:** All doors must be closed for the printer to detect the transfer drum. If the right upper cover interlock is defeated, this error will occur unless the density sensor is covered with paper.	**Event log message:** None **Action:** **1** Install the transfer drum before attempting to print. **2** Take the transfer drum out and reinstall it. **3** Make sure that the transfer drum is installed. • If the transfer drum is not already installed, install the transfer drum. • If the transfer drum is already installed, turn the printer off, verify the transfer drum is in the correct position, and turn the printer on again. **4** Reconnect connector J1101 on the density sensor PCA, intermediate connectors J75 and J46, and connector J206 on the controller board. **5** Measure the voltage across connector J704-1 (+24 VAR) and GND on the density sensor PCA after the printer is turned on. If the voltage is not approximately 24 V, replace the density sensor PCA. **6** Replace the controller board.
LANGUAGE = <xxxx> **Description:** Displayed during start up. The printer has recognized the key sequence for changing the control panel language. <xxxx> = Printer control panel display language	**Event log message:** None **Action:** No action is required. For more information on changing the printer control panel display language, see page 97.

Table 42. Unnumbered printer messages (continued)

LEFT OUTPUT BIN FULL **Description:** The left (face-up) output bin on the printer is full. **Note:** This message appears only if the optional multi-bin mailbox is installed.	**Event log message:** None **Action:** Remove all media from the left (face-up) output bin of the printer to continue printing.
LOCK TONER LEVER **Description:** The blue lever inside the clear door is not locked.	**Event log message:** None **Action:** **1** Open the front door of the printer, open the clear door, and swing the blue toner lock lever on the carousel to the right. **2** Remove the toner cartridge, and then reinstall it, making sure the cartridge is all the way in the printer. **3** Swing the blue toner lock lever on the carousel to the left until it clicks, and then close the clear and front doors.
MAILBOX COMM ERROR CHECK CABLES CYCLE POWER **Description:** Communication with the multi-bin mailbox has been lost.	**Event log message:** None **Action:** **1** Verify all cables are connected correctly. **2** Turn the printer off and on to reset the printer.
MAILBOX <x> OUTPUT BIN FULL **Description:** A mailbox in the multi-bin mailbox is full. <x> = Mailbox 1 through 8	**Event log message:** None **Action:** Remove all media from the multi-bin mailbox to continue printing.
MAILBOX NOT ATTACHED **Description:** The multi-bin mailbox is not correctly attached to the printer. The printer will print to the top (face-down) output bin when in this state.	**Event log message:** None **Action:** Push the multi-bin mailbox up against printer.

Table 42. Unnumbered printer messages (continued)

MANUALLY FEED **<type> <size>**	**Event log message:** None
Description: The printer is requesting that a sheet of media or an envelope be manually fed. <type> = Media type specified in the printer driver or application <size> = Media size specified in the printer driver or application	**Action:** Load the requested media type and size into tray 1. If the proper media is already loaded into tray 1, press GO to initiate printing.
MEMORY SHORTAGE **PAGE SIMPLIFIED**	**Event log message:** None
Description: The printer is compressing the print job so that all of the job will fit into the available printer memory. The print job's appearance might be altered by the compression of the data.	**Action:** **1** If possible, simplify the print job by lowering the resolution of graphics. **2** Install more printer memory. For more information about printer memory options, see page 511.
NO JOB **TO CANCEL**	**Event log message:** None
Description: CANCEL JOB was pressed and there is no job to cancel.	**Action:** No action is required.
NO JOBS **PENDING**	**Event log message:** None
Description: While in the Proof and Print Menu, ITEM was pressed and there are no pending proof and print jobs.	**Action:** No action is required.
OFFLINE	**Event log message:** None
Description: The printer is offline.	**Action:** Press GO to bring the printer online.

Table 42. Unnumbered printer messages (continued)

OUT OF MEMORY **JOB CLEARED**	**Event log message:** None
Description: The printer personality for the current job could not be run in the available memory. The job was canceled, and no pages were printed.	**Action:** **1** Reprint the job. If the message still appears, turn the printer off and on to reset the printer before sending the print job again. **2** Install more printer memory. For more information about printer memory options, see page 511.
PCL MEMORY FULL **STORED DATA LOST**	**Event log message:** None
Description: The resource save area for the printer personality is full. Fonts downloaded to the printer RAM might have been deleted.	**Action:** Turn the printer off and on to clear the printer RAM.
PJL OPERATIONS **FAILED**	**Event log message:** None
Description: The requested PJL operation could not be completed because the option is unavailable or the PJL data was corrupt.	**Action:** No action is required.
PLEASE WAIT	**Event log message:** None
Description: The printer is in the process of going offline or into the menus.	**Action:** No action is required.
POWERSAVE ON	**Event log message:** None
Description: The printer is in Power Save mode. Power Save settings can be changed on the printer control panel through the Configuration Menu (see page 88).	**Action:** Clear this message by pressing any key. **Note:** This message will also be cleared if a print job is sent to the printer or if an error condition is detected by the printer.

Table 42. Unnumbered printer messages (continued)

PRESS SELECT IF FUSER IS NEW **Description:** The printer has detected that a new fuser might have been installed. **Note:** This message will also occur if the printer is turned off and on and the internal fuser count indicates the fuser is near the end of its life, or the fuser door is opened. The message displays for 10 seconds.	**Event log message:** None **Action:** **1** If the fuser has been replaced, press SELECT to reset the internal counter. If the message clears before pressing SELECT, the value can be reset in the RESETS menu. **2** If the fuser has not been replaced, press GO.
PRESS SELECT IF TRANSFER IS NEW **Description:** The printer has detected that a new transfer drum might have been installed. **Note:** This message will also occur if the printer is turned off and on and the internal transfer count indicates the transfer drum is near the end of its life, or the transfer door is opened. The message displays for 10 seconds.	**Event log message:** None **Action:** **1** If the transfer drum has been replaced, press SELECT to reset the internal counter. If the message clears before pressing SELECT, the value can be reset in the RESETS menu. **2** If the transfer drum has not been replaced, press GO.
PRESS SELECT TO INITIALIZE DISK **Description:** The printer hard disk is new or has been formatted for another file system.	**Event log message:** None **Action:** **1** Press SELECT to reformat the printer hard disk. All data currently on the printer hard disk will be lost. **2** If you don't want to initialize the printer hard disk, wait until the message clears (10 seconds) or press GO, and the disk will not be initialized. This will render the disk non-functional, but the configuration page will show that the disk is installed.

Table 42. Unnumbered printer messages (continued)

PRESS SELECT TO LOSE DISK DATA PRESS GO KEY TO CANCEL	**Event log message:** None
Description: This is a request to confirm initialization of the printer hard disk (see PRESS SELECT TO INITIALIZE DISK above). Initialization will perform a high-level check of the disk and register the disk with the disk manager software.	**Action:** **1** If you want to proceed with initialization, press SELECT. **2** If you don't want to initialize the printer hard disk, wait until the message clears (10 seconds) or press GO and the disk will not be initialized. This will render the disk non-functional, but the configuration page will show that the disk is installed.
PRINTER LANGUAGE NOT AVAILABLE JOB CANCELED	**Event log message:** None
Description: PJL encountered a request for a printer personality that does not exist in the printer. The job was canceled and no pages were printed.	**Action:** No action is required.
PRINTING CONFIGURATION	**Event log message:** None
Description: The printer is printing the configuration page. When the configuration page is printed, the printer returns to an online and ready state.	**Action:** No action is required.
PRINTING DEMONSTRATION	**Event log message:** None
Description: The printer is printing a demonstration page. When the demonstration page is printed, the printer returns to an online and ready state.	**Action:** No action is required.
PRINTING EVENT LOG	**Event log message:** None
Description: The printer is printing the event log. When the event log is printed, the printer returns to an online and ready state.	**Action:** No action is required.

Table 42. Unnumbered printer messages (continued)

PRINTING FILE DIRECTORY **Description:** The printer is printing the disk directory. When the file directory is printed, the printer returns to an online and ready state.	**Event log message:** None **Action:** No action is required.
PRINTING FONT LIST **Description:** The printer is printing the font list. When the font list is printed, the printer returns to an online and ready state.	**Event log message:** None **Action:** No action is required.
PRINTING MENU MAP **Description:** The printer is printing the menu map. When the menu map is printed, the printer returns to an online and ready state.	**Event log message:** None **Action:** No action is required.
PROCESSING COPY <x> OF <y> **Description:** The printer is processing a proof-and-print or mopy-print job. <x> = Number of the copy in process <y> = Total number of copies	**Event log message:** None **Action:** No action is required.
PROCESSING JOB **Description:** The printer is actively processing a print job.	**Event log message:** None **Action:** No action is required.
PROCESSING JOB FROM TRAY <x> **Description:** The printer is actively processing a print job. <x> = Input tray (1, 2, 3, or 4).	**Event log message:** None **Action:** No action is required.

Table 42. Unnumbered printer messages (continued)

PS MEMORY FULL **STORED DATA LOST**	**Event log message:** None
Description: The resource save area for the printer personality is full. Fonts downloaded to the printer RAM might have been deleted.	**Action:** Turn the printer off and on to clear the printer RAM.
READY	**Event log message:** None
Description: The printer is online and ready for data. No status or printer attention messages are pending.	**Action:** No action is required.
RESETTING **ACTIVE IO**	**Event log message:** None
Description: The printer is resetting active I/O ports.	**Action:** No action is required.
RESETTING **ALL IO**	**Event log message:** None
Description: The printer is resetting all I/O ports.	**Action:** No action is required.
RESTORING **FACTORY SETTINGS**	**Event log message:** None
Description: The printer is resetting the printer's factory defaults. The printer is in the process of completing a cold reset. When the reset is completed, the printer returns to the ready state but remains offline.	**Action:** Reset the EIO type and configure the printer before bringing the printer online. For more information on factory defaults and configuring the printer control panel, see page 82.
SEPARATOR **OUTPUT BIN FULL**	**Event log message:** None
Description: The multi-bin mailbox output bins are full.	**Action:** Remove all media from the output bins on the multi-bin mailbox to continue printing.
STACKER **OUTPUT BIN FULL**	**Event log message:** None
Description: The multi-bin mailbox output bins are full.	**Action:** Remove all media from the output bins on the multi-bin mailbox to continue printing.

Table 42. Unnumbered printer messages (continued)

TONER LOW **REPLACE <color>**	**Event log message:** None
Description: The printer is almost out of the specified toner. The printer remains online and ready to print; however, the print quality might be degraded. <color> = Cyan, magenta, yellow, or black	**Action:** Although printing can continue, the toner cartridge should be replaced for optimum printer operation. **Note:** Do not shake the toner cartridge in attempts to extend the cartridge life. For more information about configuring the printer response to this message, see the description of the TONER LOW setting on page 88.
TONER OUT **REPLACE <color>**	**Event log message:** None
Description: The printer is out of the specified toner and cannot continue. <color> = Cyan, magenta, yellow, or black	**Action:** **1** Replace the toner cartridge specified. **2** Reconnect connector J226 on the controller board and connector J5001 on high-voltage converter 1 PCA. **3** Check the contact for remaining toner detection on the black toner cartridge and the contact for remaining toner detection on the printer for deformation or damage. • Replace defective parts. (Replace the black toner cartridge if it is defective.) • Check the contacts. If they are disconnected, return them to their correct positions. **4** Replace the high-voltage converter 1 PCA. **5** Replace the controller board.
TOO MANY FILE STORAGE DEVICES REMOVE EITHER DISK	**Event log message:** None
Description: The printer can support only one physical printer hard disk and two have been detected. Printing will not be possible until one of the hard disks has been removed.	**Action:** Turn the printer off and remove the extra printer hard disk. **Note:** The DN model comes with a factory-installed internal hard disk on the formatter board.

Table 42. Unnumbered printer messages (continued)

TOP OUTPUT BIN FULL **Description:** The top (face-down) output bin of the printer is full.	**Event log message:** None **Action:** **1** Remove all media from the top (face-down) output bin on the printer to continue printing. **2** Verify that PS30, PS10, PS11, and PS3 sensors and the surrounding area are clean.
TRANSFER KIT LOW REPLACE KIT **Description:** The transfer drum, transfer belt, cleaning roller, and charcoal filter are almost past their specified life. The transfer kit has approximately 750 color or 1,000 black-and-white images remaining until the printer will signal the end of the kit life.	**Event log message:** None **Action:** Although printing can continue, the transfer kit should be replaced for optimum printer operation. Replace the transfer kit and reset the transfer counter by pressing SELECT before attempting to print (or use the RESETS menu on the printer control panel).
TRANSFER KIT OUT REPLACE KIT **Description:** The transfer drum, transfer belt, cleaning roller, and charcoal filter are past their specified life. If TONER LOW is set to continue, printing can continue with degraded print quality; otherwise printing will be halted.	**Event log message:** None **Action:** Replace the transfer kit and reset the transfer counter by pressing SELECT before attempting to print (or use the RESETS menu on the printer control panel). For more information about configuring the printer response to this message, see the description of the TONER LOW setting on page 88.
TRAY 1 CONTAINS UNKNOWN MEDIA **Description:** Media was stacked in tray 1 for continuous manual feed printing, and the job has been completed. However, media remains in the input tray. The printer considers the input tray not to be configured.	**Event log message:** None **Action:** Configure the media type for tray 1 or remove the remaining media. For more information about configuring the media type, see page 104.

Table 42. Unnumbered printer messages (continued)

TRAY 1 LOAD **<type> <size>**	**Event log message:** None
Description: A user has requested a media size that is not currently installed in tray 1. <type> = Last media type configured for the input tray <size> = Last media size configured for the input tray	**Action:** Load the media type and size specified on the printer control panel display. After tray 1 is loaded, the printer automatically brings itself online. If the correct media type and size are loaded in tray 1 and the media does not feed into the printer, verify that the printer control panel settings for tray 1 (Cassette mode) match the media type and size requested.
TRAY 1 SIZE = <size>	**Event log message:** None
Description: This message is shown when media is placed in tray 1 and the tray is configured for Cassette Mode. <size> = Last media size configured for the input tray	**Action:** **1** Press – VALUE + to view the choices. **2** Press SELECT when the choice you want is shown. **3** Press GO to bring the printer online. If no key is pressed for 30 seconds after the media is detected in the input tray, the displayed size is automatically selected, the message is cleared, and printing begins.
TRAY 4 **COMM ERROR** **CHECK CABLES** **CYCLE POWER**	**Event log message:** None
Description: Communication with the 2,000-sheet input unit has been lost.	**Action:** **1** Verify all cables are connected correctly. **2** Turn the printer off and on to reset the printer.

Table 42. Unnumbered printer messages (continued)

TRAY <x> EMPTY <type> <size> **Description:** An input tray not currently selected has run out of media. <x> = Input tray number (2, 3, or 4) <type> = Last media type configured for the input tray <size> = Last media size configured for the input tray	**Event log message:** None **Action:** **1** Load the media type and size specified on the printer control panel display. **2** Replace the upper/lower cassette lifter (remaining paper sensor lever) if it is damaged or deformed. Also, if the lifter is out of position, set it in its correct position. **3** Reconnect connector J1201 on the pick-up PCA and connector J210 on the controller board. **4** Replace the tray 2 and tray 3 remaining paper sensors 1 and 2. **5** Replace the pick-up PCA. **6** Replace the controller board.
TRAY <x> LIFTING **Description:** The specified input tray is lifting the media into position for printing. <x> = Input tray number (2, 3, or 4)	**Event log message:** None **Action:** No action is required.
TRAY <x> LOAD <type> <size> CHECK CONTROL PANEL SETTING **Description:** A user has requested a media size and type combination that is not currently installed or configured in the printer. This message is also generated when the current input tray runs out of media and no other auto-selectable input trays contain that size and type of media. <x> = Input tray number (1, 2, 3, or 4) <type> = Last media type configured for the input tray <size> = Last media size configured for the input tray	**Event log message:** None **Action:** Load the media type and size specified on the printer control panel display, and configure the media type in the printer control panel. After the requested input tray is loaded, the printer automatically goes online. Pressing Go causes the printer to attempt to print the page on the default type and size media. If the condition persists, check the input tray type and size configuration in the control panel.

Table 42. Unnumbered printer messages (continued)

TRAY <x> NOT FUNCTIONAL **Description:** The installed tray is not supported by the printer. <x> = Input tray number (2, 3, or 4)	**Event log message:** None **Action:** Press GO to continue printing.
TRAY <x> OPEN **Description:** An input tray is open. <x> = Input tray number (2, 3, or 4)	**Event log message:** None **Action:** Close the input tray before resuming printing.
TRAY <x> TYPE = <type> **Description:** This message is shown when media is placed in an input tray. <x> = Input tray number (1, 2, 3, or 4) <type> = Last media type configured for the input tray	**Event log message:** None **Action:** **1** Press – VALUE + to view the choices. **2** Press SELECT when the choice you want is shown. **3** Press GO to bring the printer online. If no key is pressed for 30 seconds after the media is detected in the input tray, the type shown is automatically selected, the message is cleared, and printing begins.
WARMING UP **Description:** The fuser is warming up.	**Event log message:** None **Action:** No action is required.

Aids to troubleshooting

This section describes various tools service personnel can use to diagnose hardware problems.

In addition to the tools described in this section, the service and support CD-ROM included with your service manual contains the user documentation. Use the additional information to supplement the information found in this manual.

Configuration page

Print a configuration page to verify that the printer is set up correctly or to verify information about the printer's configuration. The page includes the following information:

- serial number
- formatter board number
- page counts (use if the controller board is also being replaced)
- transfer kit count for percentage of life remaining
- fuser kit count for percentage of life remaining
- engine settings for verifying that the registration settings are accurate (the last two digits of the engine settings might vary from those found on the sticker)

To print a configuration page

1. Press MENU until INFORMATION MENU appears on the printer control panel display.
2. Press ITEM until PRINT CONFIG PAGE appears on the display.
3. Press SELECT to print the page.

Interpreting a configuration page

The numbers below correspond to the numbered areas on the examples on the following page:

1 **Printer information**—lists the following information:

- printer product number
- serial number
- PCL firmware date code
- PostScript version
- total pages printed during the life of the printer
- number of color pages printed during the life of the printer
- number of black-and-white pages printed during the life of the printer
- number of duplex pages printed during the life of the printer

2 **Installed options**—shows whether options have been installed, such as the printer hard disk, DIMMs, duplexer, multi-bin mailbox, and optional input trays.

3 **Consumables: % of life remaining**—shows the percentage of the maximum rated life remaining for the transfer kit, fuser kit, and drum kit. For HP Color LaserJet 8550 printer models (except for the MFP model), estimates of the amount of toner remaining in each of the four cartridges are also shown.

4 **Memory**—shows the total memory installed in the printer (including the printer hard disk) and the settings that affect how the memory is used.

5 **Paper tray configuration**—lists the types and sizes of media configured for each input tray.

6 **Security**—shows whether the security features have been activated, such as the printer control panel lock, printer control panel password, and printer hard-disk lock. There is also a service information code for service personnel.

7 **Event log**—lists the last three printer events, including media jams, service errors, and other printer actions.

8 **Color adjust**—lists color adjustment halftone settings and the number of pages since the last manual color adjustment.

9 **Duplex registration** (8550 models only)—lists the x- and y-axis coordinates for duplex registration.

10 **HP JetSend** (8550 models only)—lists HP JetSend addresses.

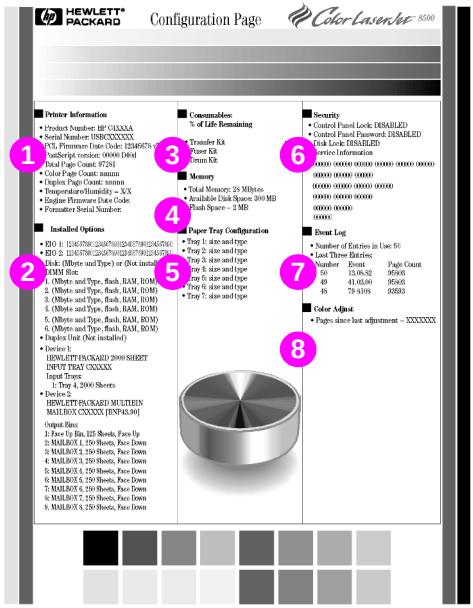

Figure 212. **Example of an HP Color LaserJet 8500 printer configuration page**

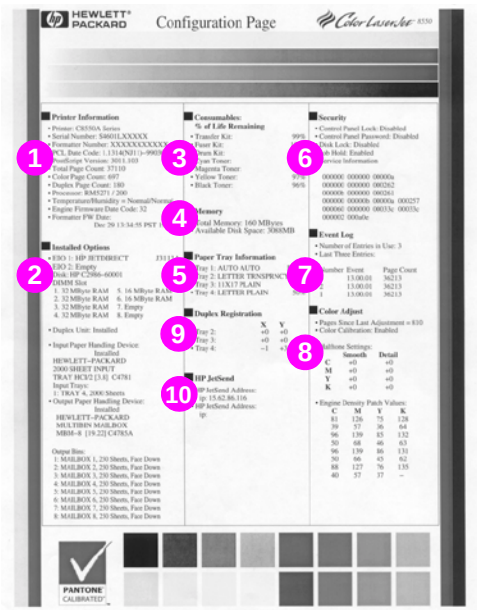

Figure 213. **Example of an HP Color LaserJet 8550 printer configuration page**

Continuous configuration page

Continuous configuration pages can be printed to simulate full color printing in which two pages are developed on the transfer drum per rotation (two-page mode).

Printing a continuous configuration page

1. Press MENU until INFORMATION MENU appears on the printer control panel display.
2. Press ITEM until PRINT CONTINUOUS CONFIG PAGES appears on the display.
3. Press SELECT to print the page.

Note Press CANCEL JOB to stop printing. The printer will print all of the pages in the buffer before stopping.

Demonstration page

Use this page to simulate printing a color image. If the image print quality is in question, a demonstration page should be printed to assure that the problem is not related to software, communications, or file quality.

Printing a demonstration page

1. Press MENU until INFORMATION MENU appears on the printer control panel display.
2. Press ITEM until PRINT LASERJET DEMONSTRATION appears on the display.
3. Press SELECT to print the page.

Event log

Detailed service information is noted in the event log. The following is a list of the types of messages logged in the event log:

- media jam errors
- disk failures
- EIO errors
- catastrophic errors

The last 50 errors are listed, with the most recent error first. Reoccurring events give indications of failing parts or problem areas within the printer. See the printer control panel message descriptions beginning on page 368 for more information on items found in the event log.

Printing the event log

1. Press MENU until INFORMATION MENU appears on the control panel display.
2. Press ITEM until PRINT EVENT LOG appears on the display.
3. Press SELECT to print the page.

Service mode engine diagnostics

Engine diagnostics can be used to perform mechanical tests on the print engine and its related components to help pinpoint components in the printer that need replacement or repair.

WARNING! Take care when you use engine diagnostics — some tests require door interlocks to be defeated, and defeating interlocks can expose potential hazards in the engine. High-voltage supplies and the laser are shut down whenever the printer is in diagnostic mode. However, any defeating of interlocks without entering the engine diagnostic mode results in potential exposure to the laser and high voltages.

Entering the Service Mode Menu

1. From a READY state, press MENU until SERVICE MENU appears.
2. Press ITEM – (the left side of the key) and VALUE – simultaneously.

For a menu map of the Service Mode Menu, see page 93.

Paper path test

The paper path test simulates a page moving through the paper path from input trays 1, 2, and 3 to the output bins. Removing some engine parts (such as the transfer drum) prevents paper from feeding completely. It is possible to select the input and output trays for the test by indicating in the Paper Path Menu which input tray and output bins should be accessed (by selecting ON or OFF). Multiple input trays can be selected, but only a single output can be selected. A page is fed from each input tray to the selected output. If a jam occurs during the test, the test should continue with the next input tray in the list.

CAUTION Jam detection is OFF in this mode and an unattended test might result in damage to the printer.

The pick-up rollers, feed rollers, registration roller, transfer belt press clutch (CL4), cleaning roller press cam and solenoid (SL1), fuser, transfer belt, and output feed roller can be exercised during the paper path test. For safety reasons, the fuser, high-voltage supplies, and scanner are all turned off during testing.

1. From the Service Mode Menu, press MENU until PAPER PATH appears.
2. Press ITEM until REPETITIONS appears.
3. Press – VALUE + to display the number of repetitions (1 to 10).
4. Press SELECT to choose the number of repetitions.
5. Press ITEM until the desired input source appears.
6. Press – VALUE + until ON or OFF appears on the display.
7. Press SELECT.

Note You can select more than one input source for the test.

8. Press ITEM until OUTPUT= appears on the display.
9. Press – VALUE + until TOP OUTPUT BIN or LEFT OUTPUT BIN appears on the display.
10. Press SELECT to choose an output destination.
11. Press ITEM until EXECUTE TEST appears on the display.
12. Press SELECT to perform the paper path test.

Notes To stop the paper path test, press CANCEL JOB.

The transfer drum can be removed with the right upper door open and the right cover interlock defeated (see figure 214 on page 425). However, media might not feed past the transfer area unless 11-by-17 inch or A3-sized media is used.

Developer motor test

Visually and audibly inspect the cartridge motor (M3) and carousel motor (M1) as they rotate during this test. To view the printer components, run the test with the right upper door open and the transfer drum removed and the front cover and right upper door interlocks defeated (see figure 218 on page 427 and figure 214 on page 425). The engine runs this test for a fixed duration and then stops. Multiple repetitions of the test are allowed.

Notes

For safety reasons, the fuser, high-voltage supplies, and scanner are all turned off during testing.

The carousel cannot turn with the imaging drum removed because the supply voltage to the carousel is cut off to avoid a pinch hazard.

1. From the Service Mode Menu, press MENU until DEVELOPER MOTOR appears.
2. Press ITEM until REPETITIONS appears.
3. Press – VALUE + to display the possible number of repetitions.
4. Press SELECT to choose the number of repetitions.
5. Press ITEM until EXECUTE TEST appears on the display.
6. Press SELECT to perform the developer motor test.

Drum motor test

This test activates the drum motor (M2), imaging drum, transfer drum, and imaging drum waste paddle simultaneously. To view the printer components, run the test with the right upper door open, the transfer drum and imaging drum removed, and the right upper door interlock defeated (see figure 214 on page 425). The engine runs this test for a fixed duration and then stops.

Note For safety reasons, the fuser, high-voltage supplies, and scanner are all turned off during testing.

1. From the Service Mode Menu, press MENU until DRUM MOTOR appears.
2. Press ITEM until REPETITIONS appears.
3. Press – VALUE + to display the possible number of repetitions.
4. Press SELECT to choose the number of repetitions.
5. Press ITEM until EXECUTE TEST appears on the display.
6. Press SELECT to perform the drum motor test.

Sensor monitor test

This test allows service personnel to activate and deactivate sensors in the printer to verify that the sensors are working properly.

Note For safety reasons, the fuser, high-voltage supplies, and scanner are all turned off during testing.

1. From the Service Mode Menu, press MENU until SENSOR MONITOR appears.
2. Press ITEM until EXECUTE TEST appears on the display.
3. Press SELECT to perform the sensor monitor test.
4. Determine whether each sensor is working by viewing the test results for each sensor on the printer control panel. A single character in the upper line of the display provides a label for each sensor bit. A 0 (off) or 1(on) is displayed for each sensor bit, indicating whether the sensor is activated or deactivated. See table 43 for an explanation of the test results.

Table 43. Sensor monitor test

Designator	Sensor name
0	Registration roller paper sensor (PS1)
1	Pick-up unit paper sensor (PS17)
2	Separation sensor (PS5)
3	Fusing delivery sensor (PS1903)
4	Top (face-down) output bin delivery sensor (PS11)
5	Tray 1 paper sensor (PS1301)
6	Tray 2 sensor (PS1202) Toggles once. Trays do not lift during test.
7	Tray 3 sensor (PS1201) Toggles once. Trays do not lift during test.
8	Duplex paper sensor (PS24) Paper sensor in the duplexer in the output position (HP Color LaserJet 8550 only)
9	Reverse sensor (PS26) Paper sensor in the duplexer at the reversing position (HP Color LaserJet 8550 only)
A	Bit 0 of temperature/humidity sensor
B	Bit 1 of temperature/humidity sensor The ambient temperature and humidity sensor data are combined into 2 bits showing 4 states of temperature and humidity. 00 = Normal/normal 01 = High/high 10 = Normal/low 11 = Low/low

See figure 57 on page 184 for more information on these sensors.

Exiting the service mode

Exit the service mode by cycling through the menu until EXIT SERVICE MODE is reached, and press SELECT. It is not necessary to turn the printer off and on again unless you have accessed the formatter diagnostics.

Disabling interlocks

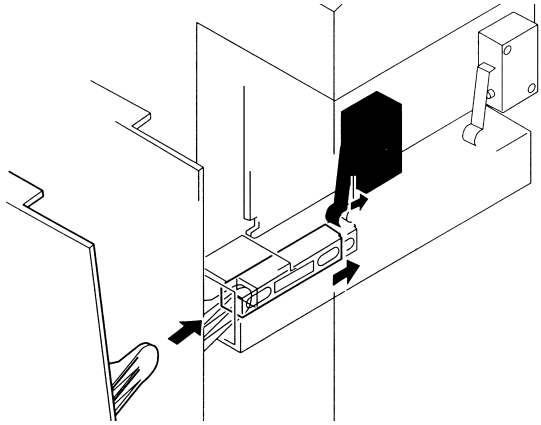

Figure 214. **Right upper cover detection interlock**

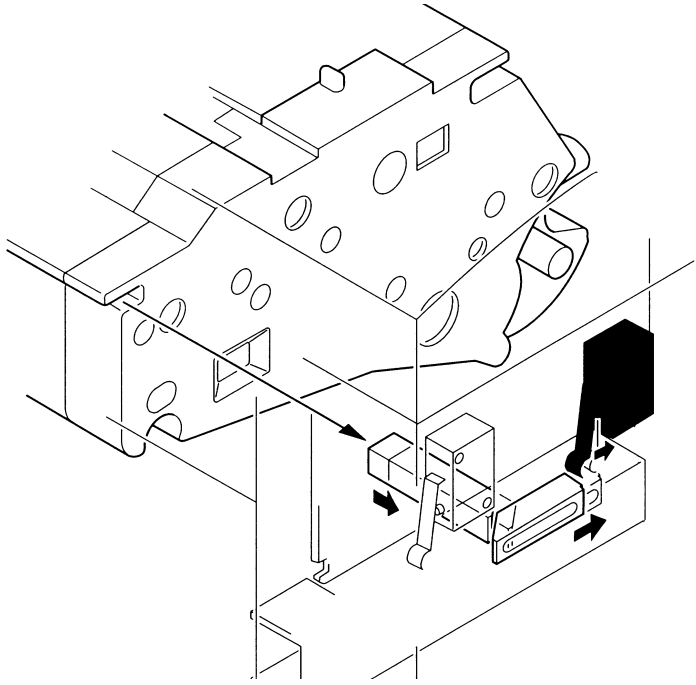

Figure 215. **Drum cartridge detection interlock**

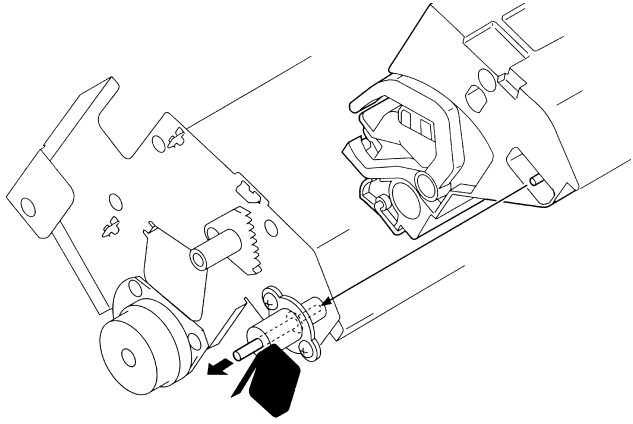

Figure 216. **Black toner cartridge detection interlock**

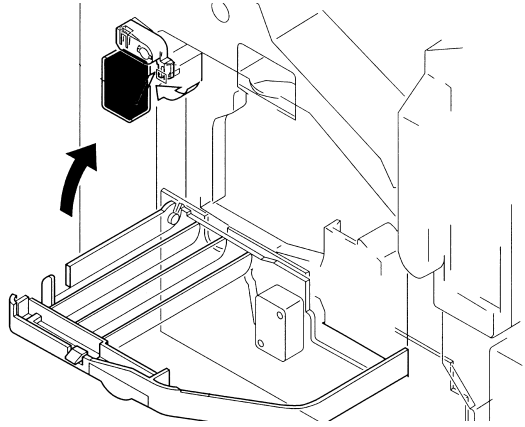

Figure 217. **Toner carousel door detection interlock**

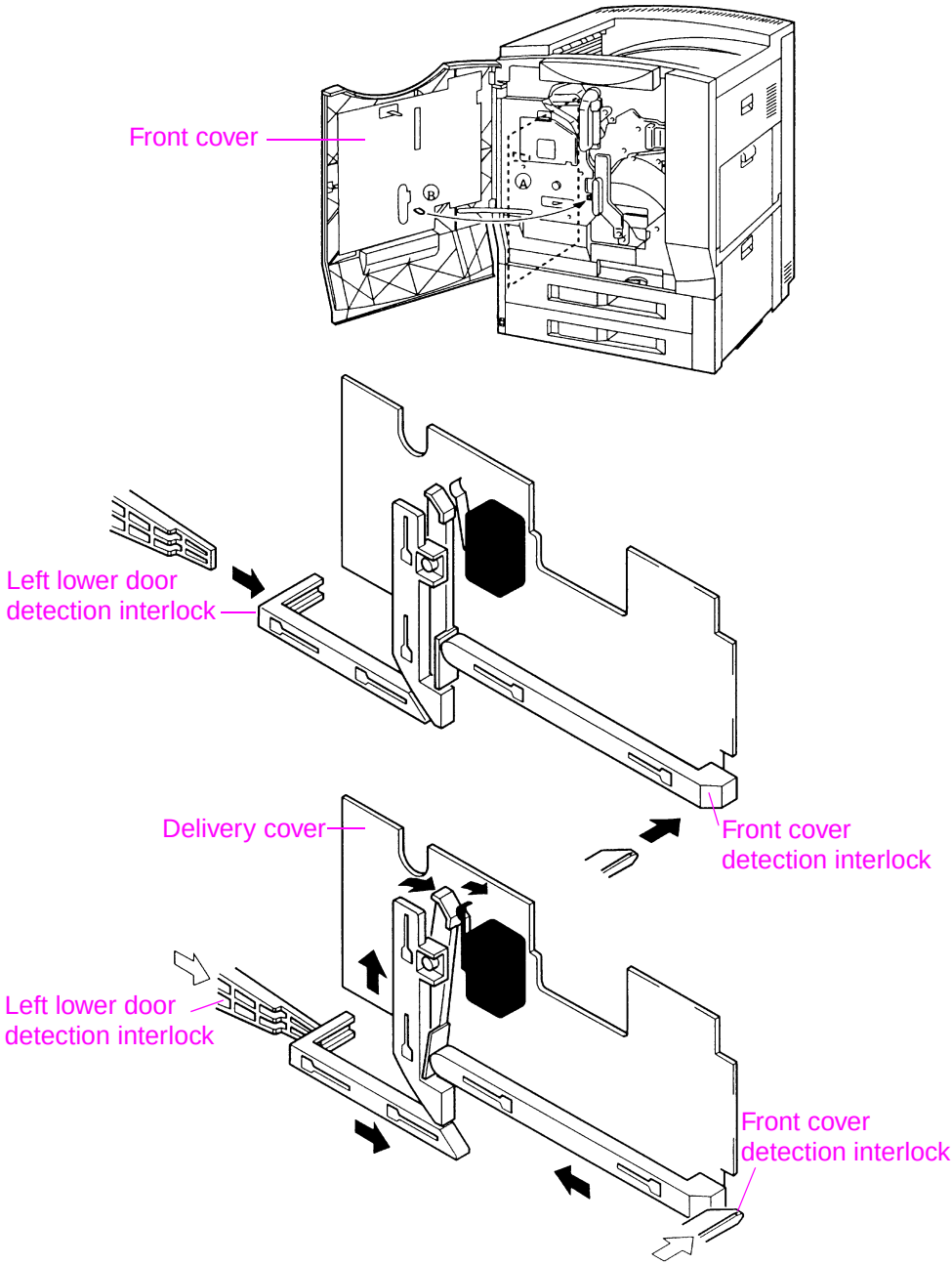

Figure 218. **Front cover/delivery cover detection interlocks**

Laser shutters

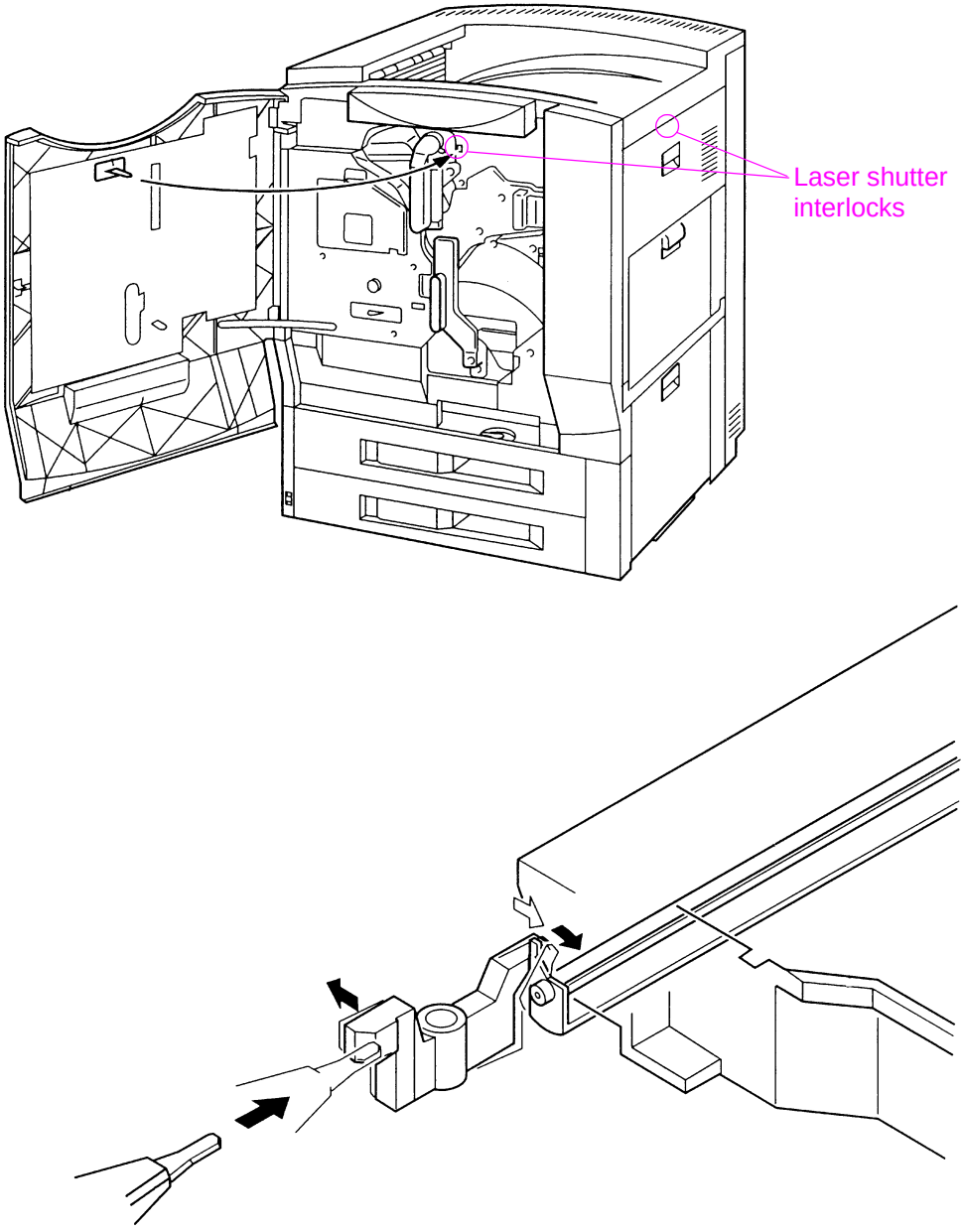

Figure 219. **Laser shutters**

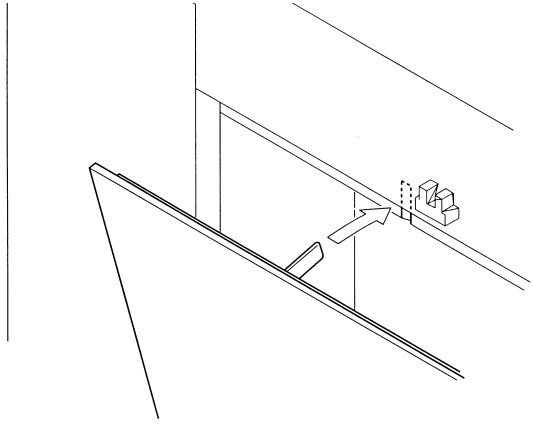

Figure 220. **Left upper cover detection**

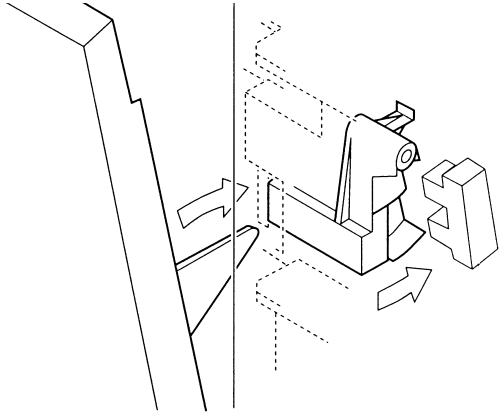

Figure 221. **Right lower cover detection**

Service mode formatter diagnostics

1. From the Service Mode Menu, press MENU until FORMATTER DIAGNOSTICS appears.
2. Press SELECT. WARNING MEMORY LOSS appears on the printer control panel briefly. Then EXECUTE TESTS appears.
3. Press ITEM until one of the following tests appears on the printer control panel:
   - **ROM CRC** — The read-only memory cyclic redundancy check reads the values stored in the firmware ROMs, computes checksum variables based on the read information, and compares the computed checksums with those stored in the ROM.
   - **DRAM DIMMS** — Installed DIMMs are tested to ensure that they are supported by the formatter board and are functioning properly. The time that this test takes to run varies depending on the amount of memory installed. DRAM DIMMs are tested using a pattern test, an address test, and a walking ones test.
   - **IDE ASIC** — This test is performed on the IDE ASIC of the formatter board to ensure read and write integrity. Values are written to the ASIC registers and then read for verification.
   - **DISK** — The disk drive test does the following:
     a instructs the disk drive (if installed) to perform its internal self-test (similar to a power-on test)
     b enters into sleep mode and wakes up again
     c seeks and reads sequential sectors forward for 30 seconds
     d seeks and reads sequential sectors backward for 30 seconds
     e seeks and reads random sectors for 30 seconds
     f performs read and write tests
   - **VX ASIC** — This test is performed on the VX ASIC of the formatter board to ensure read and write integrity. Values are written to the ASIC registers and then read for verification.
4. Press – VALUE + until ON or OFF appears on the display.
5. Press SELECT.
6. Press ITEM until EXECUTE TEST appears on the printer control panel display.
7. Press SELECT.

Note Turn the printer off and on to exit the formatter diagnostics.

Cold reset

The following are effects of performing a cold reset:

- While a cold reset is being performed, all control panel keys are ignored.
- A cold reset changes all user-accessible printer variables stored in NVRAM to their factory defaults except for the following items:
  - page counts
  - fuser life count
  - transfer life count
  - multi-bin mailbox mode
  - display language
- Color adjust values revert to the factory defaults.
- User-accessible EIO values are reset to the factory defaults by a cold reset.
- None of the service mode variables such as the following are affected by a cold reset:
  - serial numbers
  - model name
  - model number
  - registration values
  - cold reset paper size
- The event log is not cleared.

Performing a cold reset

1. Print a configuration page (see page 415) to record the previous printer settings.
2. Turn the printer off.
3. Hold down Go while turning the printer on. Release Go after COLD RESET appears on the printer control panel display.

   COLD RESET (in English) appears on the display for one second to verify that the key sequence has been recognized, followed by the power-on self-test message.

   Once the power-on self-test is finished, the message RESTORING FACTORY SETTINGS displays in English.

Fault log

The fault log is implemented within the formatter diagnostics to record error messages. This log provides service personnel with an account of all errors that occurred while the formatter diagnostics tests were executing. This log is completely separate from the event log. No entries are made in the event log for any diagnostic mode failure.

Error message logging

When a test in formatter diagnostics detects an error, the Attention LED is lit and a message describing the error is added to the fault log. The fault log holds a maximum of 50 entries. When the fault log is full and a new message needs to be added, the oldest message is discarded. The contents of the fault log are erased when the printer is powered off or when the fault log is cleared.

Viewing the fault log

The fault log menu appears as an Item selection only when one or more error messages exist in the log. The fault log menu is entered automatically at the end of a test run if any error messages were recorded. Enter the fault log by using ITEM to view the fault log entry.

Error message format

Each error message has the form:

mm.NAME_t<description>[<data>]

where:

mm	Message number in the fault log, 1 being the oldest message
NAME	Name of the test that found the failure
t	Error number within the test
<description>	Type of failure
<data>	Pertinent data related to the failure

Paper path troubleshooting

General paper path checklist

- Verify the green lever on the fuser is down.
- Check that the post charger cleaner is pushed all the way to the right. Media jams could occur when it is out of place.
- Clean the printer. Toner and paper dust in the paper path inhibit free movement of media through the printer and block the sensors.
- Vary the input and output selections of the printer to determine if the problem is associated with a particular area of the printer.
- Worn separation rollers on the input tray cause last-page multi-feeds. Check the condition of the pick-up rollers and separation rollers when troubleshooting multi-feeds. Bent separation tabs cause misfeeds and multi-feeds. Replace the tray if necessary.
- Defective input tray switches can cause media jams by indicating the wrong size media to the formatter board.
- Scraps of paper left in the paper path can cause intermittent media jams. Always check that the paper path is clear when cleaning the printer and when clearing media jams. Also, remove the fuser and carefully check it for jammed media.
- Reduce curl of black-only transparencies by:
  - placing the transparencies in a presentation sleeve
  - printing to the left (face-up) output bin
- Verify that the media requirements are met (see page 29).

Wrinkled pages

- Verify the green fuser lever is down.
- Verify the media size and type are set correctly in the printer driver and the printer control panel.
- Verify the media meets the specifications listed in the *HP LaserJet Printer Family Paper Specification Guide*.

Sealed envelopes

To prevent envelopes from sealing in the printer, set the envelope size in the printer driver as a custom size. However, setting envelopes as a custom size can cause poor fusing.

Media jams

When troubleshooting media jams, remember that jams are posted as a result of timing errors. That is, media fails to arrive at, or fails to clear, the paper path sensor in the allotted time. The paper path timing is set by the controller board. Stuck or defective sensors cause the paper path timing to post a jam message at power on, as do scraps of paper caught in the paper path.

Use figure 222 to locate the paper path sensors. The media jam message code identifies the sensor that failed to change state in the required time.

Note Check that the paper path sensors are free throughout their full range of travel. All interlock switches must be operational in order for the printer to clear media jam messages.

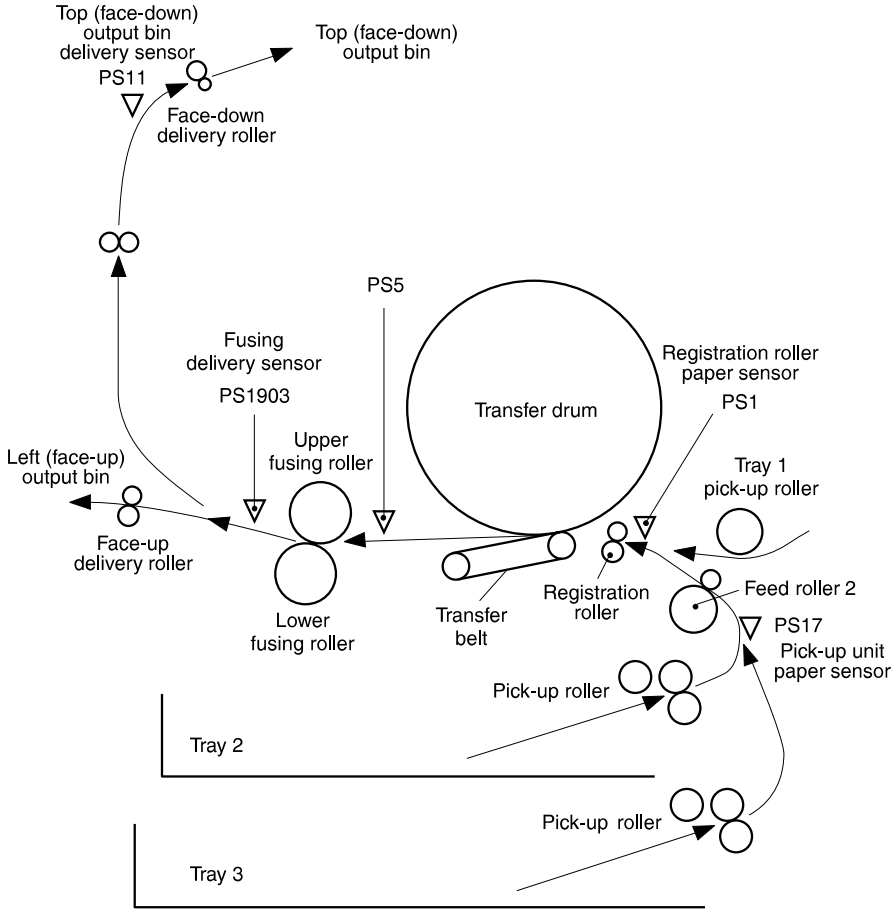

Figure 222. Printer paper path

For information about printer and paper handling accessory sensors, see chapter 5.

Following are possible media jams:

Table 44. Media jam detection

Location of jam	Detected when . . .
Pick-up delay jam 1	The page has not reached the pick-up unit paper sensor (PS17) within about: ● 1.2 seconds after leaving tray 2 ● 1.3 seconds after leaving tray 3
Pick-up delay jam 2	The media does not reach the registration roller paper sensor (PS1) within about: ● 1.9 seconds after leaving tray 2 ● 2.0 seconds after leaving tray 3 ● 1.8 seconds after leaving tray 1
Transfer jam	The separation sensor (PS5) does not detect the media for the specified time or longer within 1.5 to 2.2 seconds after the top of paper signal: ● about 0.1 seconds (normal mode) ● about 0.4 seconds (overhead transparency mode) ● about 0.3 seconds (high-gloss mode)
Fusing delivery paper delay jam	The media has not reached the fusing delivery sensor (PS1903) since the top of paper signal within about: ● 3.2 seconds (normal mode) ● 12.8 seconds (overhead transparency mode) ● 9.6 seconds (high-gloss mode)
Fusing delivery stationary jam	The media has not passed through the fusing delivery sensor (PS1903) after PS1903 detects the leading edge of the media within approximately: ● 2.4 seconds (normal mode/letter-sized media landscape) ● 9.6 seconds (overhead transparency mode/letter-sized media landscape) ● 7.2 seconds (high-gloss mode/letter-sized media landscape) ● 4.2 seconds (normal mode/11-by-17 inch-sized media) ● 17.0 seconds (overhead transparency mode/11-by-17 inch-sized media) ● 12.7 seconds (high-gloss mode/11-by-17 inch-sized media)
Fusing unit paper coil jam	The fusing delivery sensor (PS1903) does not detect the media for the specified time or longer within 0.2 to 1.2 seconds after PS1903 detects the leading edge of the media within approximately: ● 0.8 seconds (normal mode) ● 3.2 seconds (overhead transparency mode) ● 2.4 seconds (high-gloss mode)

Table 44. Media jam detection (continued)

Location of jam	Detected when . . .
Top (face-down) output bin delivery delay media jam	The media has not reached the top (face-down) output bin delivery sensor (PS11) within the specified time after the fusing delivery sensor (PS1903) detects the media: ● about 4.0 seconds (normal mode) ● about 16.0 seconds (overhead transparency mode) ● about 12.0 seconds (high-gloss mode)
Top (face-down) tray delivery stationary jam	The media has not passed through the top (face-down) output bin delivery sensor (PS11) after PS11 detects the media within approximately: ● 2.4 seconds (normal mode/letter-sized media landscape) ● 9.6 seconds (overhead transparency mode/letter-sized media landscape) ● 7.2 seconds (high-gloss mode/letter-sized media landscape) ● 4.2 seconds (normal mode/11-by-17 inch-sized media) ● 17.0 seconds (overhead transparency mode/11-by-17 inch-sized media) ● 12.7 seconds (high-gloss mode/11-by-17 inch-sized media)
Wrong media size feed jam	The controller board detects media size with the registration roller paper sensor (PS1), and it stops the engine if the media size differs more than 15 mm between the specified media size and the actual media size. On the other hand, if the difference is within +7.5 to 15 mm, or -3.7 mm or less, the media is automatically delivered.
Door-open jam	The sensors listed below detect the media when a cover is opened or closed: ● registration paper roller sensor (PS1) ● pick-up unit paper sensor (PS17) ● separation sensor (PS5) ● top (face-down) output bin delivery sensor (PS11) ● fusing delivery sensor (PS1903)
Initial residual jam	The sensors listed below detect the media the specified time after the power switch is turned ON: ● separation sensor (PS5) ● fusing delivery sensor (PS1903)

Image formation troubleshooting

Before beginning image formation troubleshooting:

1. Verify the media type is set correctly in the printer control panel, and that the media type selected in the printer driver matches the media being printed on.
2. Verify that the media meets the specifications listed in the *HP LaserJet Printer Family Paper Specification Guide.* The following media-related items are responsible for many image-formation and print-quality defects:
   - rough paper
   - heavy paper (heavier than 58 lb, or 216 g/m^2 bond)
   - transparencies thicker or thinner than the specified thickness of 5 mil
   - paper that has absorbed moisture from the atmosphere
   - room environment (humidity too high or low)
3. Print a configuration page. The configuration page tests the ability to print each primary and process color. For information about printing a configuration page, see page 415.

   In addition to items listed above, the configuration page does the following:
   - shows that all colors print
   - checks that the room humidity is within specifications
   - shows varying levels of color
   - shows that the formatter board is working properly
4. Print a demonstration page to check the following:
   - image quality
   - half-tones
   - process colors

Understanding color variations

The printed output might not match the computer screen, and the colors printed on successive pages might not match. While color variations are inherent in this printing method, they also might indicate changes in the printing environment, print media, or printer components.

Common causes of color variation

The following list outlines the major causes of color variations between computers, applications, and output devices.

- Half-tone patterns produced on monitors and the types of patterns used in the print jobs are different and might cause apparent differences between the printed output and the screen.
- Different papers have different color, brightness, and gloss, which will affect the color appearance.
- Printed colors with identical CMYK or RGB values but with a different halftone (ColorSmart, text, graphic, or image) might look different when printed. Select the manual color option in the driver and change the halftoning options to vary the shading and quality of the colors.
- The printed output differs from the image on the monitor because the monitor and the print media have different reference values for black and white. The monitor screen has charcoal gray for the black level, and the white on the monitor screen is actually a light blue. Black on the print media is limited only by the fill capability of the printer, and most good-quality paper has a very high white level. In addition, phosphor (used in color monitors) and toner have entirely different spectra characteristics and different color rendering capabilities. Blues generally match better than reds.
- The color of the ambient light changes the perception of color. Fluorescent light emphasizes different colors from incandescent light, and the color range of natural light is broader than any artificial light. When comparing color, choose a standard light source for reference and understand that the perceived color will change as the light changes.
- Long-term color variations occur as the paper ages. Use high-quality paper and protect the paper from sunlight to help minimize discoloration.
- Environmental changes can cause color variation. The development process places a high potential across an air gap to attract toner to the imaging drum. Changes in relative humidity vary the point at which the toner travels to the imaging drum. The

printer has a humidity sensor that adjusts operating parameters as the humidity changes to minimize the effects of environmental changes.

- All consumable components have a finite life span, and as these components reach the end of their useful life, their ability to produce consistent print quality diminishes.
- When printing on transparencies, **OHT** must be selected in the printer driver in order for the colors to be treated properly on the transparencies.

Color selection process

The user selects the color in the application, but the operating system might convert or modify some characteristics of the color before sending the information to the printer driver. The printer driver might also modify color characteristics depending upon the selected output mode.

Any color characteristics not addressed by the printer driver or applications are set to the printer default. The default color might not match the color the user selected.

Some applications (such as Adobe® PageMaker, Illustrator, and Photoshop™) bypass the printer driver altogether. If color information is not sent, the printer has no way of knowing the white point, black point, and chromaticity assumptions used by the application. This mismatch can cause color differences.

Matching screen colors

Matching input, on-screen, and output colors is a very sophisticated process. The input device software and output device each influence the ability to select and produce printed color output. To improve color matching between the printed output and the monitor:

- Turn off any color-matching feature in the software that does not specifically mention ColorSync, ICM, or ICC.
- Calibrate the monitor. One option for monitor calibration is the Colorific software included on the color-productivity CD-ROM.
- If a color management system is being used, make sure the input (monitor) and output (composite) profiles are correct.
- If a color-management system is available, try turning it off or on to see if changing the setting changes the color match.
- Compare monitor and output colors by placing the output in a neutral surrounding 18 to 24 inches (46 to 61 cm) away from the monitor. This will help the eye make the transition from the monitor white point (blue) to the paper white point.

Image orientation

Unless otherwise specified, all references in this section to horizontal or vertical directions of print-quality problems refer to problems found on letter- and A4-sized media. These media sizes are fed into the printer long edge first.

Because media sizes other than letter or A4 are fed into the printer short edge first, the orientations of print quality problems differ from those on letter- or A4-sized media. Print quality problems that appear horizontally on a letter- or A4-sized page when it is held with the short edge up run vertically on other media sizes when the page is held with the short edge up. The same is true for a vertical defect on a letter- or A4- sized page; it will appear as a horizontal defect on other sizes of media.

Figure 223 on the following page shows a print quality problem printed on both a letter- or A4-sized page and the same defect on an 11-by-17 inch or A3-sized page.

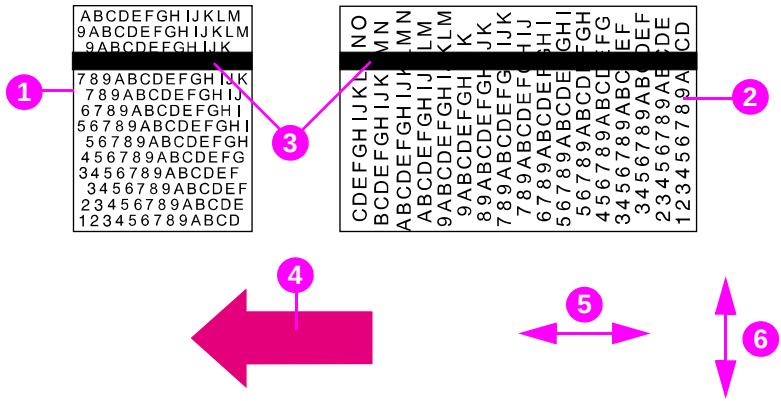

Figure 223. **Image orientation and direction of travel**

1 Letter- or A4-sized media

2 11-by-17 inch or A3-sized media (or any other size of media)

3 Print quality problem (developer streak, in this example)

4 Direction media moves through the printer (process direction)

5 Direction streaks occurs on pages

6 Direction banding occurs on pages

Note PostScript print samples are located on the service and support CD (which is included with your service manual). Print these files by copying them to the parallel port (LPT 1), for example:

```
copy magnta.ps lpt1
```

Image defect examples

Figures 225 through 232 show examples of image defects. Resolutions for these defects follow the illustrations.

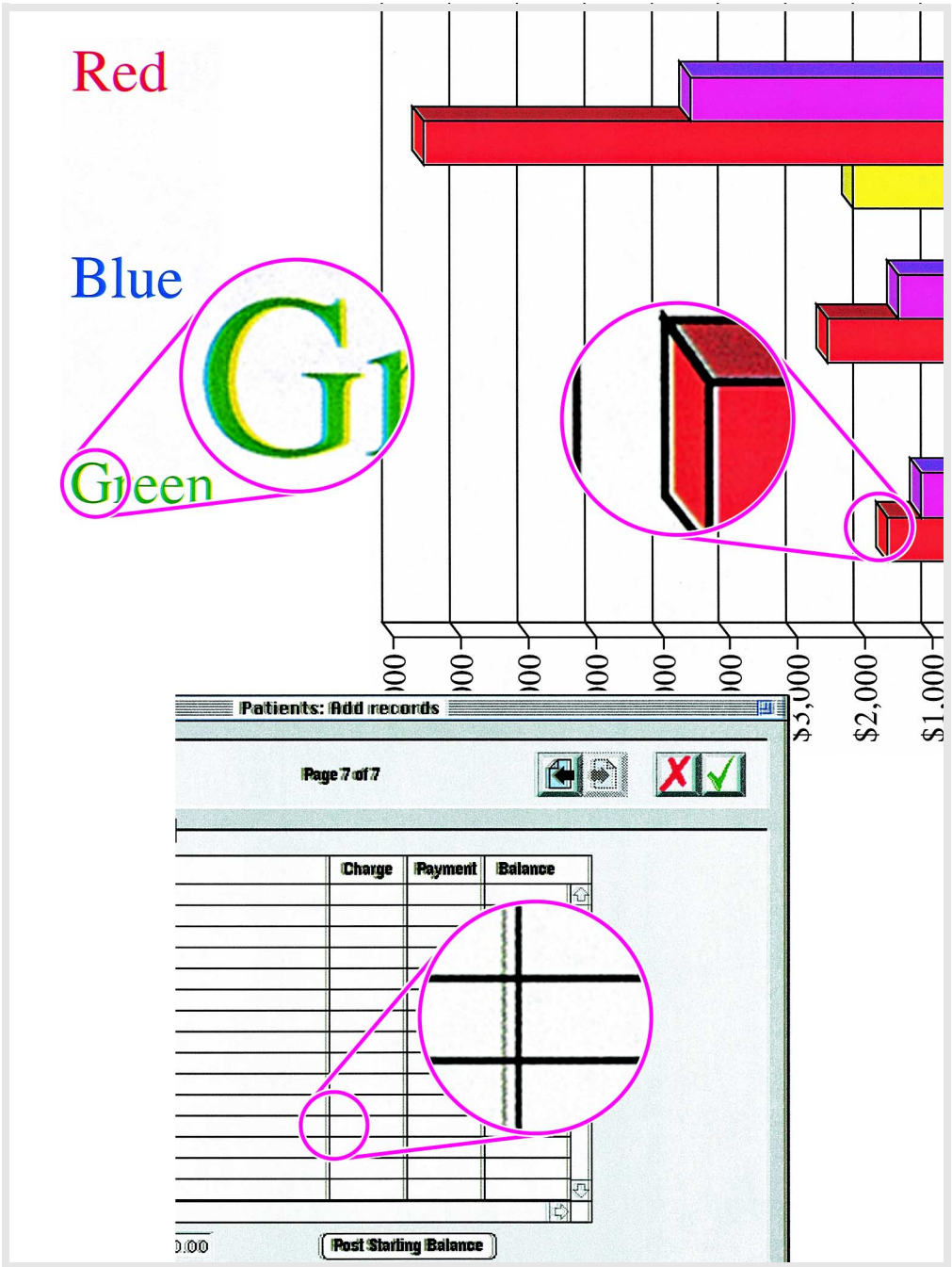

Figure 224. **Color-plane registration**

See page 452 for a resolution to this print defect.

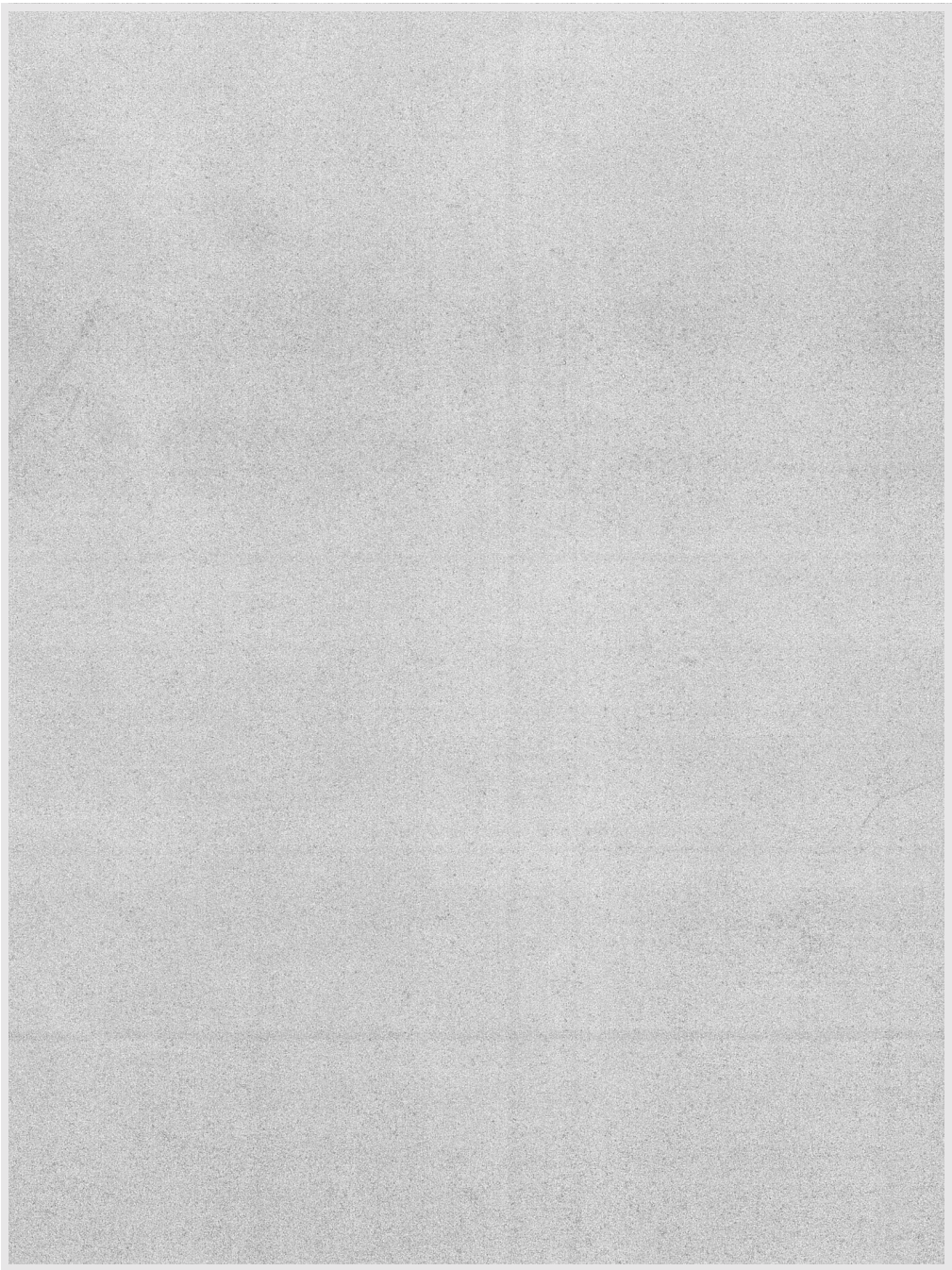

Figure 225. **Developer streak**

See page 453 for a resolution to this print defect.

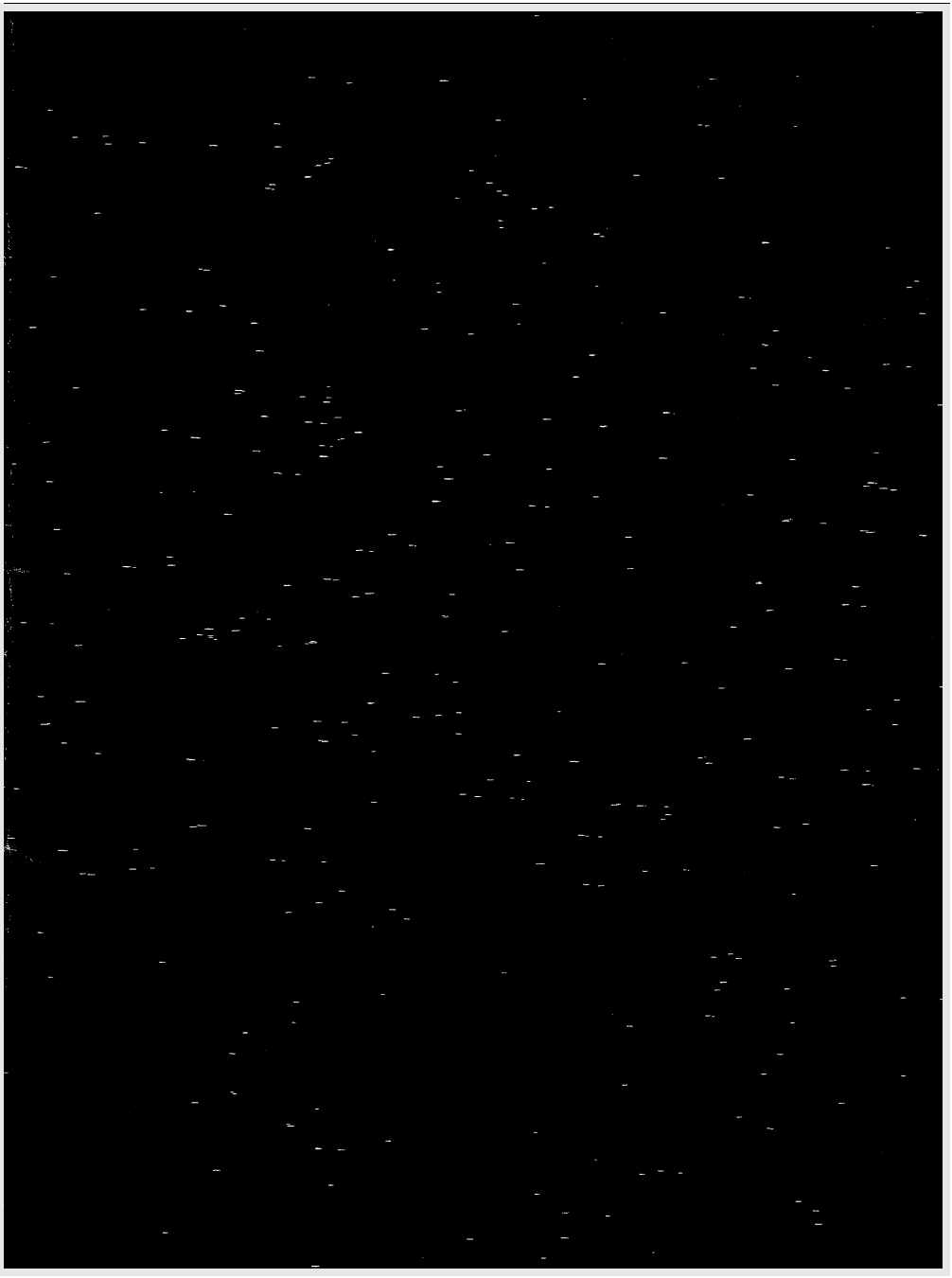

Figure 226. **Rain**

See page 453 for a resolution to this print defect.

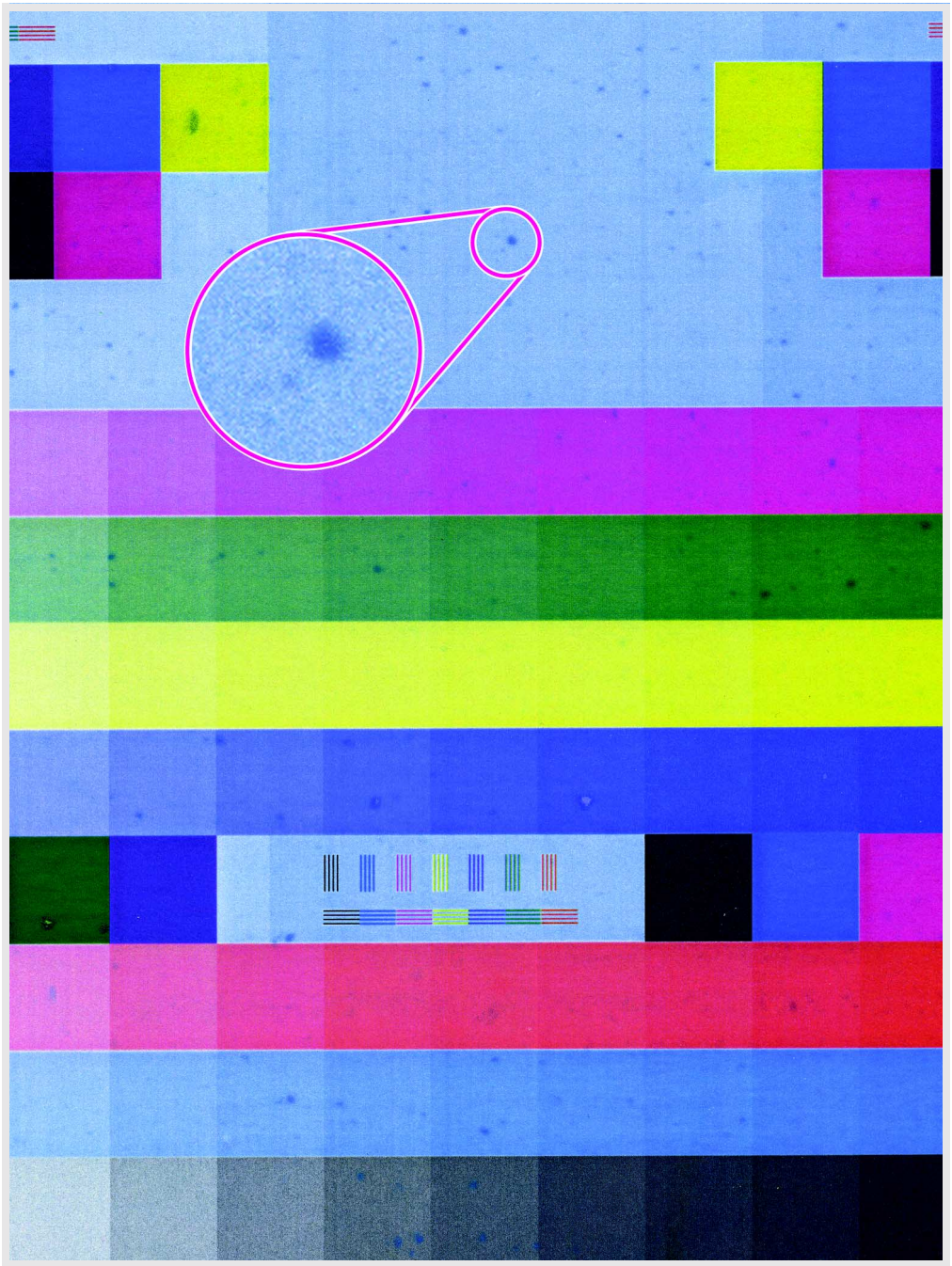

Figure 227. **Toner bubbles**

See page 453 for a resolution to this print defect.

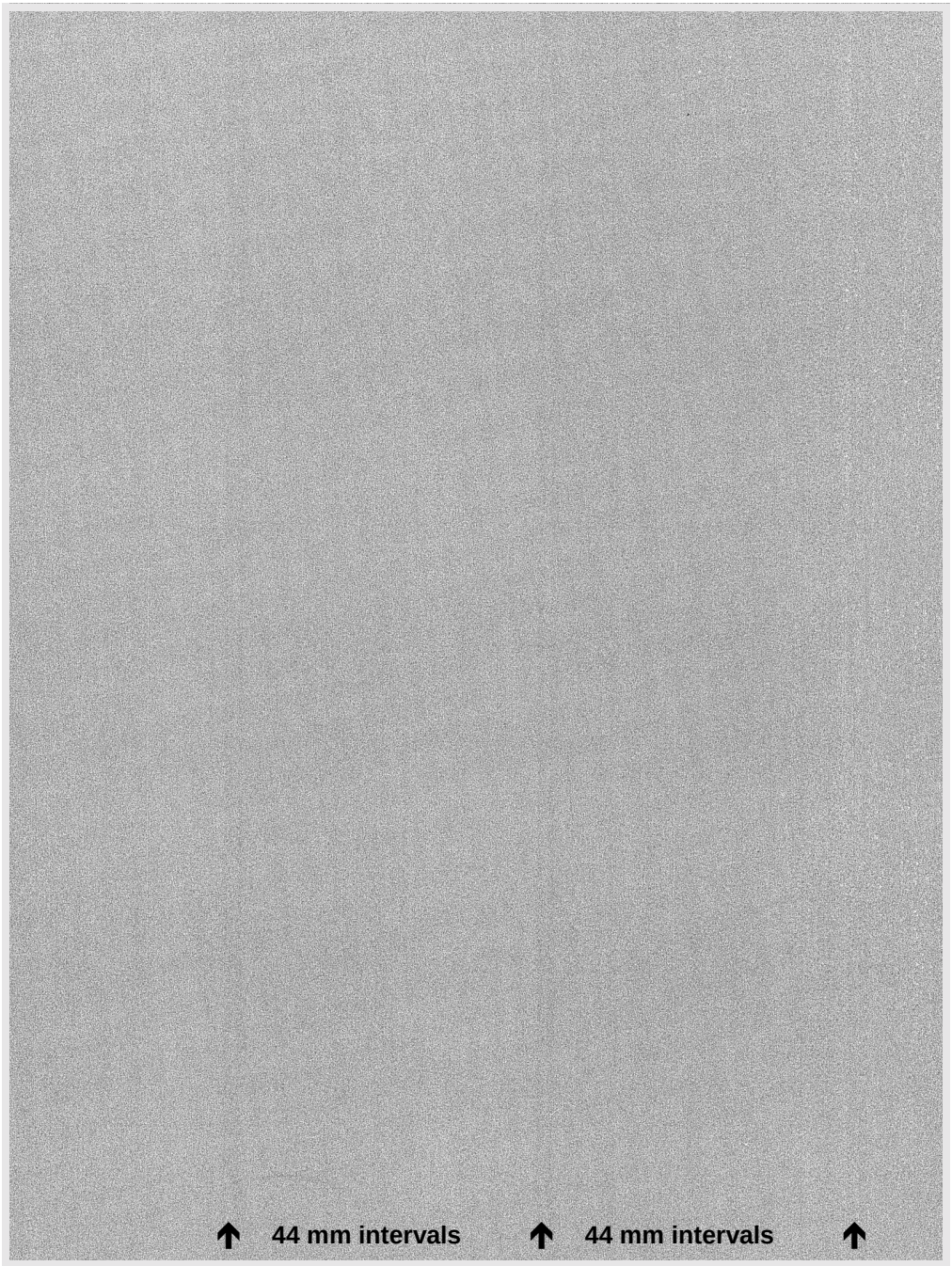

Figure 228. **Charge roller set**

See page 454 for a resolution to this print defect.

Leading edge

Figure 229. **Waves**

See page 454 for a resolution to this print defect.

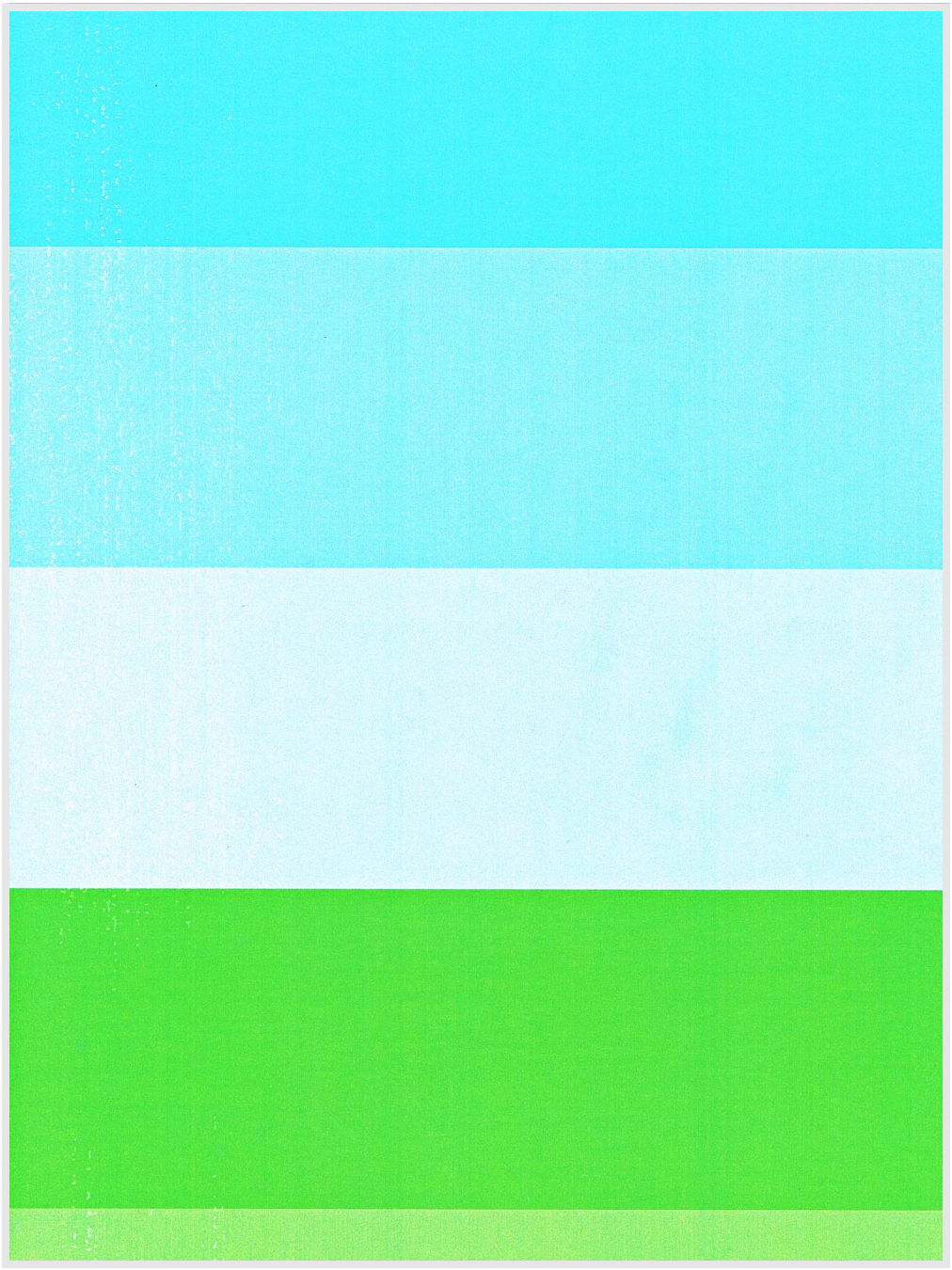

Figure 230. **Missing toner**

See page 454 for a resolution to this print defect.

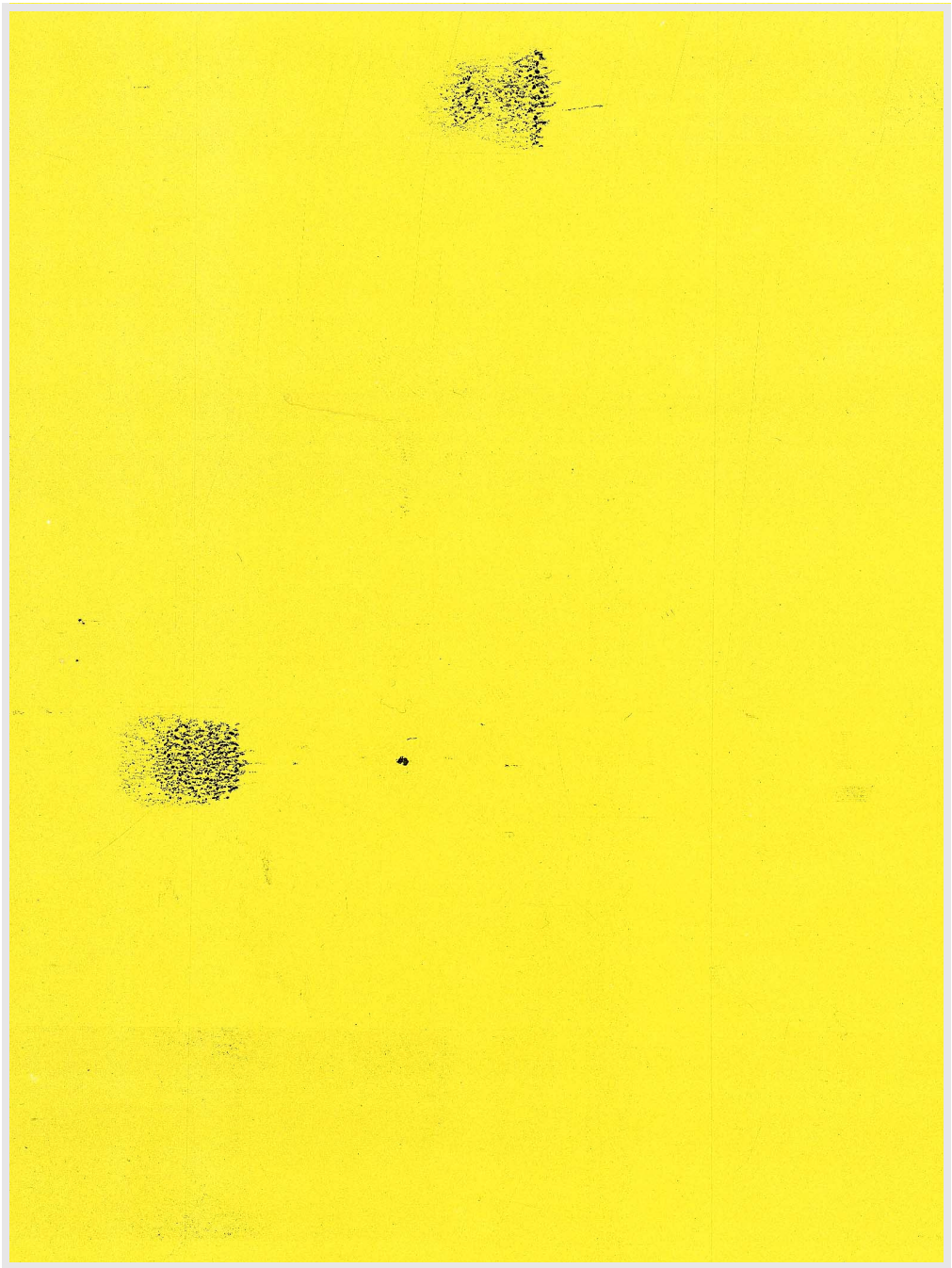

Figure 231. **Hot offset (glossy paper or transparency)**

See page 455 for a resolution to this print defect.

Figure 232. **Fading resulting from broken transfer guide**

See page 455 for a resolution to this print defect.

Color-plane registration

(See figure 224 on page 443 for an example of this print defect.)

Poor color-plane registration is characterized by “bleeding” colors, by apparent gaps in color, and by colors offset from each other or from black. The examples on page 443 show all three types:

- In the upper left, yellow is offset from colors that use yellow.
- In the upper right, colors are offset from black, causing a noticeable gap.
- At the bottom, the double line is caused by black offset from colors.

Use the troubleshooting list below to resolve poor color-plane registration. If the problem still exists after you complete step 1, try step 2. If step 2 fails to solve the problem, try step 3, and so on.

1. Check manufacturing codes on toner cartridges if the problem appears after replacing a color toner cartridge (see "Toner cartridge manufacturing codes" on page 456).
2. Check the green handle (see figure 252 on page 524, reference #6); the locking pins on the back of the handle can break or even can be sheared off if, when the transfer drum is removed, the green handle is not swung all the way to the right.
3. Check the transfer drum guide (see figure 260 on page 540, reference #40) and replace it if it has developed cracks.
4. Check engine settings 1 and 2 in service mode and compare the values to the numbers shown on the engine settings tag (see figure 79 on page 228, callout 3). Correct the settings to match the tag.

Note The last two digits of engine setting 2 might not match; this is normal.

5. Find out if the printer has operated recently in extreme temperature conditions.
6. Replace the transfer drum.

Developer streak

(See figure 225 on page 444 for an example of this print defect.)

Developer streak is characterized by a line of dark or missing toner that stretches from the leading edge to the trailing edge. Replace the toner cartridge corresponding to the color of the developer streak (for example, if the streak is magenta, replace the magenta toner cartridge).

Rain

(See figure 226 on page 445 for an example of this print defect.)

Rain is characterized by small, white, elongated spots in printed areas. Typically, rain begins toward the center of a printed page. Spots are elongated in the print direction.

Rain is caused by particles of color toner scratching the imaging drum in some high-coverage, long-print-job conditions. Once the imaging drum has been damaged, it must be replaced.

Eliminate rain by first checking manufacturer codes on toner cartridges (see "Toner cartridge manufacturing codes" on page 456) and replacing cartridges as needed.

Then, check the imaging drum for pitting or contamination and replace the drum as needed.

Toner bubbles

(See figure 227 on page 446 for an example of this print defect.)

Toner bubbles are characterized by large blotches of color toner on printed pages caused by color toner leaking from cartridges directly onto the transfer drum.

Solve the problem of toner bubbles by checking the manufacturing codes on the toner cartridges (see "Toner cartridge manufacturing codes" on page 456) and replacing cartridges as needed.

Charge roller set

(See figure 228 on page 447 for an example of this print defect.)

Charge roller set print defect, usually only noticeable in lighter halftone colors, is characterized by banding lines at intervals of 44 mm (approximately 1.75 inches). The print defect usually appears immediately after installing a new imaging drum or if the printer has been in storage without power applied for a prolonged period of time.

The conductive rubber charge roller inside the imaging drum cartridge can flatten on one side when the drum sits idle. A charge roller typically returns to a cylindrical shape within 24 hours after installation or after printing approximately 100 pages, so the image defect diminishes with use or time.

Note Do not replace the new imaging drum with another new imaging drum. Doing so can cause the image defect to appear worse. Instead, wait 24 hours or print 100 sheets of a medium-coverage print job.

Waves

(See figure 229 on page 448 for an example of this print defect.)

Waves are characterized by color printing that appears “choppy” in transition from high-coverage to low-coverage areas of the printed page.

Waves can appear late in the life of a color toner cartridge, especially when the cartridge has seen prolonged use at very low coverage; there might still be toner in the cartridge, but it might be “worn out.”

Solve the print defect by replacing the color toner cartridge. For example, if waves appear in magenta or colors that use magenta (reds and blues), replace the magenta cartridge.

Missing toner

(See figure 230 on page 449 for an example of this print defect.)

The “missing toner” print defect is characterized by small speckles, caused by missing toner, that appear usually in lighter colors within two or three centimeters (approximately one inch) of the leading or trailing edge.

To avoid the print defect, use better quality or heavier media. Also try using darker colors and avoiding light colors in these areas.

Hot offset

(See figure 231 on page 450 for an example of this print defect.)

The “hot offset” print defect is characterized by blotches of toner on printed transparencies.

Avoid the print defect by using only thicker transparencies specifically designed for HP Color LaserJet printers.

Fading

(See figure 232 on page 451 for an example of this print defect.)

A broken transfer drum guide (see figure 260 on page 540, reference #40) causes a distinct fading pattern. Print appears normal near one edge (the bottom edge of an A4- or letter-sized portrait-oriented page) and fades to completely missing at the opposite edge. Remnants of the process marks might appear in the middle of the page.

This defect is caused by a broken transfer drum guide. Replace the transfer drum guide.

Toner cartridge manufacturing codes

Heat-stamped on the toner cartridge, opposite the label-end of the cartridge, is a manufacturing code. If a portion of the code does not match the list below, replace the toner cartridge.

Use toner cartridges that contain any of the following manufacturing codes:

- 9I
- 9J
- 9K
- 9L
- any cartridge that begins with the numbers 0 through 6 in place of the 9

Color balance adjustment

CAUTION Adjusting the color balance changes the printer's calibration. Because this procedure adjusts parameters within the printer hardware, it will affect all print jobs.

The printer automatically recalibrates the color settings. However, you can adjust the color manually from the default settings by changing the densities of the four toners (black, cyan, magenta, and yellow). Changing the Detail Half-tone Adjust and Smooth Half-tone Adjust allow you to independently adjust the color of objects on a page that use the smooth and detail half-tones (such as text and graphics). Any settings you change remain in effect until you change them again or restore the factory defaults.

Do not perform the color balance adjustment procedure until all of the following troubleshooting methods have been completed:

- Experiment with the printer driver and application settings to adjust the color output. For more information about application settings, see the online help.
- Clean the density sensor (see page 114).
- Complete the troubleshooting solutions earlier in this chapter for the color printing problem you are experiencing.

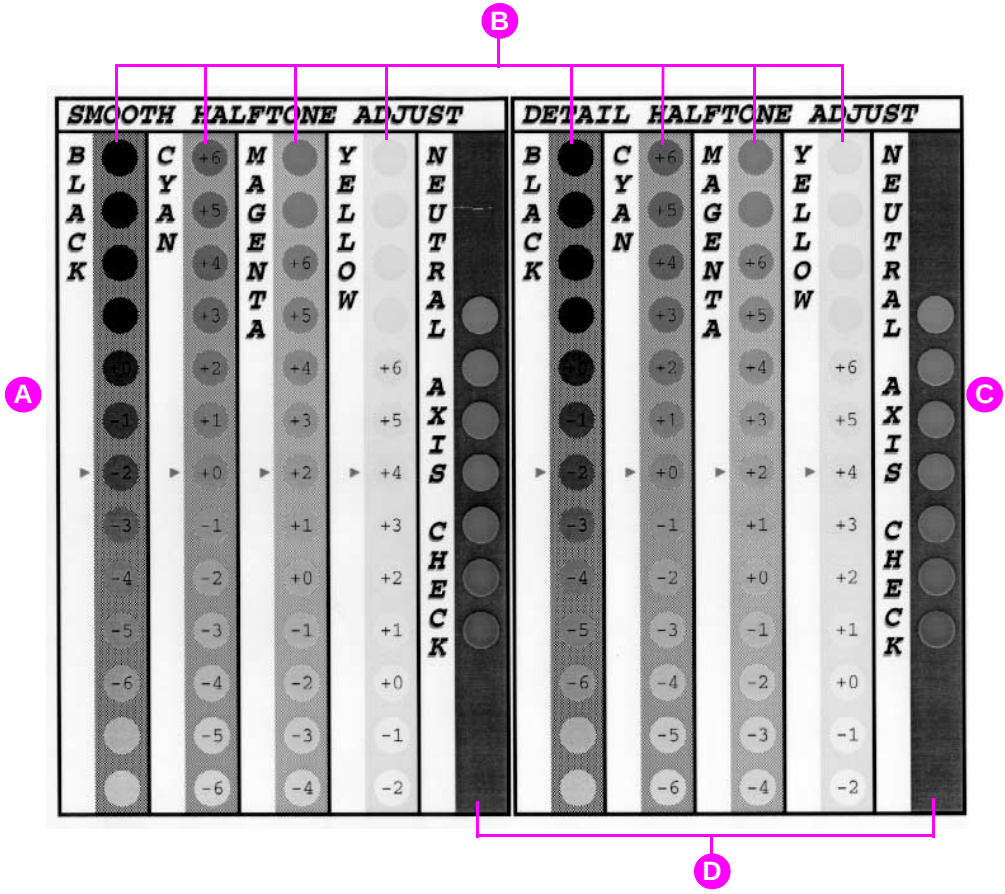

Figure 233. **Color adjust page**

A Smooth Half-tone Adjust section

B Color ramps

C Detail Half-tone Adjust section

D Neutral axis

1 **Print the color adjust page.**

   a Press GO and – VALUE + at the same time. COLOR ADJUST MENU appears on the printer control panel display.

   b Press ITEM until PRINT TEST PAGE appears on the display.

   c Press SELECT to print the color adjust page.

   d Press GO to exit the Color Adjust Menu.

   The color adjust page allows you to adjust the printer's two half-tone screens for each of the four colors (black, cyan, magenta, and yellow), for a total of eight adjustments. Make these adjustments after examining the color adjust page.

   The color adjust page consists of two sections: the Detail Half-tone Adjust section and the Smooth Half-tone Adjust section. Each section shows the adjustment ramps for black, cyan, magenta, and yellow and a neutral axis check ramp, which can be used to verify the adjustment after the correction values have been entered for each of the primary colors. Figure 233 is an example of the color adjust page.

2 **Note the numbers beside the red arrows for later reference.** The color adjust page indicates the last set of saved color settings with a red arrow next to the saved setting. The default for each color is 0 (other possible settings consist of -6 through 6).

3 **Determine the color adjustment numbers for each color in the color ramps.**

   a Examine the color adjust page from a distance of 6 ft (approximately 2 m).

   b Find the circle of each color that most closely matches the background color. It might be necessary to squint slightly to match the colors.

   c Record the number in the circle.

4 **Enter the color adjustment numbers in the printer control panel.**

a Press Go and – Value + at the same time. COLOR ADJUST MENU appears on the display.

b Press Item until the option you want appears on the display. The options are listed below:

- BLACK SMOOTH VALUE =
- CYAN SMOOTH VALUE =
- MAGENTA SMOOTH VALUE =
- YELLOW SMOOTH VALUE =
- BLACK DETAIL VALUE =
- CYAN DETAIL VALUE =
- MAGENTA DETAIL VALUE =
- YELLOW DETAIL VALUE =

c Press – Value + until the number recorded in step 3c appears on the display.

d Press Select to enter the number into the printer memory. An asterisk (*) appears to the right of the selection.

e Repeat steps 4a through 4d to adjust the color screens, as necessary.

5 **Reprint the color adjust page**.

6 **Examine the new color adjust test page and verify that the color adjustment is correct.**

- Verify that each of the color ramps (black, cyan, magenta, and yellow) matches the background for each color and has a red arrow next to the circle. If another circle matches the background more closely, return to step 4 to reset the values on the printer control panel to the number shown in that circle.
- Verify that the circles in the neutral axis areas of the color adjust test page are neutral gray (gray without a color tint), and then verify that one of the circles in the ramp is a color very close to the background. If the circles are not neutral gray, additional corrections to cyan, magenta, or yellow might be necessary. If there is an overall tint of color in the circles, make the adjustments suggested by the following table. However, the most accurate correction is determined by the circles in the individual black, cyan, magenta, and yellow ramps.

Table 45. Neutral axis adjustments

Overall color of circles	Correction if all circles are darker than background	Correction if all circles are lighter than background
Cyan tint	Reduce cyan	Increase magenta and yellow
Magenta tint	Reduce magenta	Increase cyan and yellow
Yellow tint	Reduce yellow	Increase magenta and cyan
Green tint	Reduce yellow and cyan	Increase magenta
Red tint	Reduce yellow and magenta	Increase cyan
Purple or blue tint	Reduce cyan and magenta	Increase yellow

For example, if the circles in the neutral axes show a green tint and the circle appears lighter than the background, the magenta ramp should be examined closely to determine if magenta should be increased.

Note If the color settings are less accurate when you finish the color adjustment than when you started, reset all color values to 0 (zero) in the printer control panel and try the adjustment again.

Repetitive defects troubleshooting

Repetitive defects are defects that occur in the same vertical position on the page, but not necessarily on every page. Most repetitive defects are caused by problems with one of the following, and are indicated by the positioning of the defect on the page:

- developer roller (at 38 mm)
- charging roller (at 44 mm)—see additional information under “Charge roller set” on page 454.
- cleaning roller (at 56 mm)
- developer DSD wheels (at 65 mm)
- transfer roller (at 66 mm)
- transfer drum (occurs once per 11-by-17 inch or A3-sized page, or every other letter- or A4-sized page)
- fuser (at 150.5 mm)
- imaging drum (at 195 mm)
- transfer belt (at 222 mm)

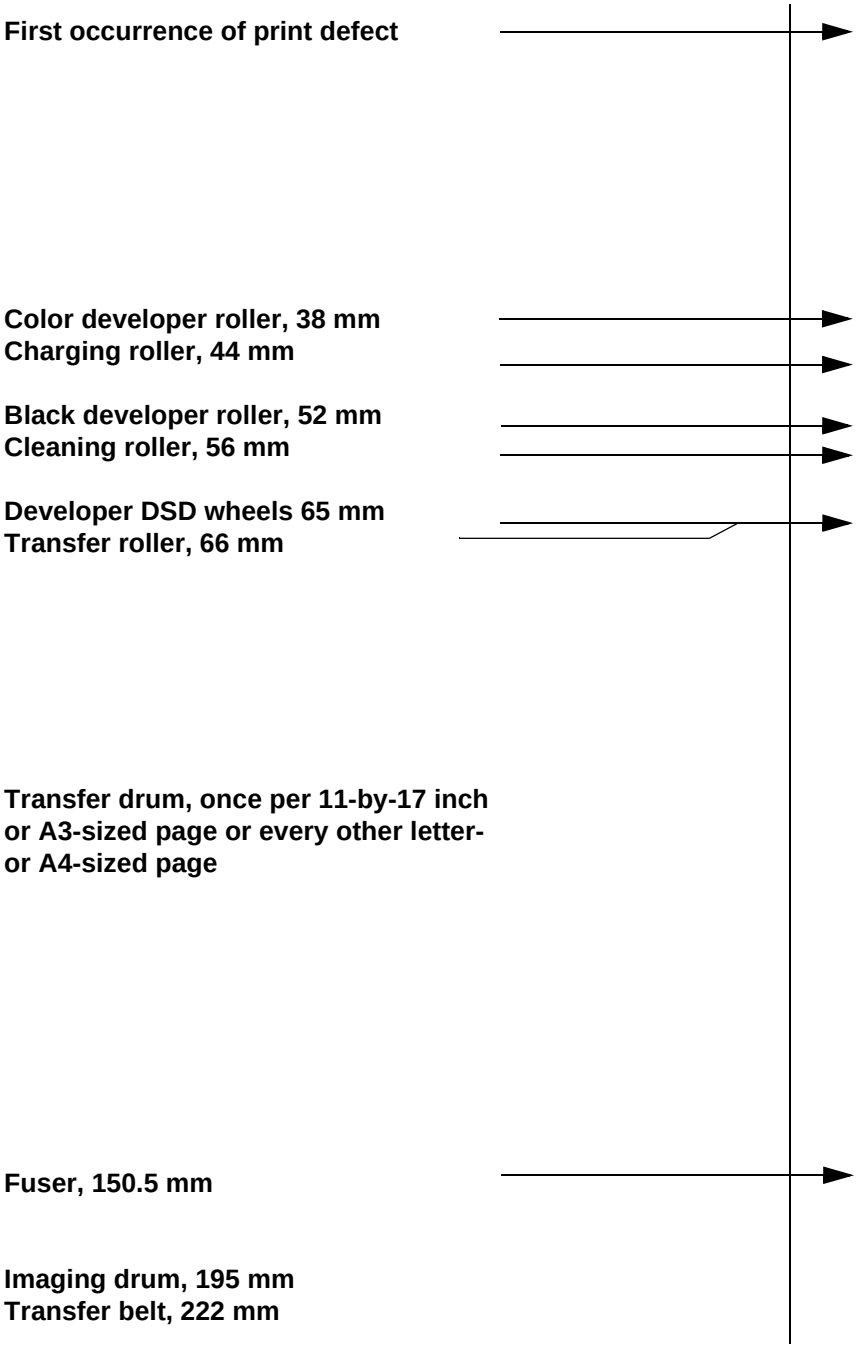

Figure 234. Repetitive defect ruler

Color developer roller

Symptoms: Print defect occurring every 38 mm.

Cause: Dirty or damaged developer roller.

Actions: Replace the toner cartridge.

Charging roller

Symptoms: Print defect occurring every 44 mm.

Cause: Dirty or damaged charging roller.

Actions: Replace the imaging drum.

Black developer roller

Symptoms: Print defect occurring every 38 mm.

Cause: Dirty or damaged developer roller.

Actions: Replace the toner cartridge.

Cleaning roller

Symptoms: Print defects occurring every 56 mm.

Cause: Dirty or damaged cleaning roller.

Actions: Clean the cleaning roller with a hand wipe. If cleaning does not resolve the defect, replace the cleaning roller.

Developer DSD wheels

Symptoms: Print defect occurring every 65 mm.

Cause: Dirty or damaged developer DSD wheels. These wheels are located on the outer ends of the color toner cartridge and appear as a black bushing.

Actions: Replace the toner cartridge of the color producing the repetitive defect.

Transfer roller

Symptoms: Print defect occurring every 66 mm.

Cause: Dirty or damaged transfer roller.

Actions: Clean the transfer roller with isopropyl alcohol and a hand wipe. If cleaning does not resolve the defect, replace the transfer belt.

Transfer drum

Symptoms: Print defect occurring once per page on 11-by-17-inch- or A3-sized media, or on every other letter- or A4- sized page.

Cause: Dirty or damaged transfer drum.

Actions: Clean the transfer drum (see below). If the defect is not resolved by cleaning, replace the transfer drum.

Cleaning the transfer drum

Many, but not all, repetitive defects can be removed using the following procedures. Defects that appear as light spots in dark areas of print are more likely to be corrected by this procedure than dark spots in unprinted areas.

CAUTION If the procedures are performed incorrectly or without proper care, the transfer drum can be permanently damaged.

This procedure requires the following items:

- a print sample showing the repetitive defect
- a clean, flat surface on which to work
- a hand wipe

CAUTION You can also use a dry, clean, soft, lint-free cloth, such as cheesecloth, to clean the transfer drum. To prevent scratches on the drum, do not use any paper products (such as tissue or paper towels) to clean the drum.

1 Turn the printer off and open the front door.

2 Press the button and swing the lower lever to the right.

3 Open the right upper door, and remove the transfer drum.

4 Using the print sample as a reference, inspect the transfer drum for a spot or speck that might be causing the repetitive defects.

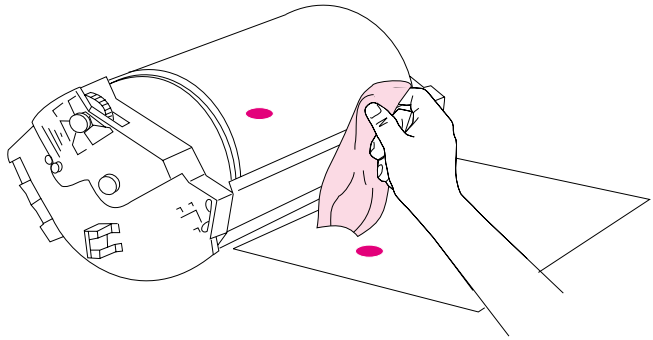

Figure 235. Cleaning the transfer drum

CAUTION Do not clean the transfer drum using force. Do not use any water-based cleaners or alcohol. These actions can permanently damage the transfer drum.

5 Gently rub the spot or speck with a hand wipe.

Note Do not use isopropyl alcohol to clean the transfer drum.

6 Reinstall the transfer drum.

7 Swing the lower lever to the left making sure it clicks into place.

8 Close the right upper and front doors, and turn the printer on.

9 Reprint the print job. If cleaning does not eliminate the repetitive defect, replace the transfer drum.

Fuser

Symptoms: Print defects occurring at about 150.5 mm. The defects will be most visible on overhead transparencies.

Cause: Defect on the upper fuser roller.

Actions:

1. Power the printer off, allow 30 minutes for the fuser to cool, and remove the fuser.
2. Turn the fuser gears and inspect the surface of the upper fusing roller. If the roller has surface defects, replace the fuser assembly.

Imaging drum

Symptoms: Print defects occurring every 195 mm.

Causes:

- Damage such as scratches or dents on the imaging drum. These usually appear as dark or light marks on the page.
- Paper dust adhering to the imaging drum. These usually appear as white marks in the dark printed areas of the page.
- Exposure of portions of the imaging drum to light. This causes dark sections in the printed output. The life of the imaging drum is shortened by exposure to strong light.

Actions:

- Print at least four configuration pages to determine if the defect repeats in the same vertical orientation.
- Inspect the imaging drum for scratches, dents, or other damage. Replace if needed.
- If the problem is dust, remove the dust with 70% isopropyl alcohol applied with a hand wipe. Try this *only* if the print defect is unacceptable and the only other alternative is replacing the imaging drum.
- Defects caused by exposure to light might clear up over time. If severe, replace the imaging drum.

CAUTION Do not expose the imaging drum to direct sunlight, and be careful not to scratch or get fingerprints on the drum surface during cleaning.

Transfer belt

Symptoms: Print defects occurring every 222 mm.

Cause: Defects on the transfer belt surface.

Actions: Remove the transfer belt and inspect the entire belt surface. Use the transfer belt gears to rotate the belt through its travel.

2,000-sheet input unit troubleshooting

This section provides a systematic approach to identifying the causes of malfunctions and errors in the 2,000-sheet input unit.

Ways to troubleshoot the unit

In general, there are three possible sources of malfunction:

- the 2,000-sheet input unit itself
- printer electronics
- the C-link cable that connects the unit and the printer

Begin troubleshooting

1. Print or display the error log. Evaluate the error log for any specific error trends in the last 10,000 printed pages.
2. Print a configuration page to verify the proper installation of the paper-handling accessories.
   - If any of the installed accessories are not shown on the configuration page, check the corresponding cable connections.
   - Verify that the C-link cable is correctly connected and functional.
   - Verify that DC power is available to the paper-handling accessories.
3. If necessary, use one of the following diagnostic tools to isolate the problem:
   - **Status LED on the front of the unit**—Indicates the status of the unit (see page 470).
   - **Service LED inside the back cover**—The pattern of flashing (long and short) isolates the problem (see page 471).
   - **Standalone running test**—Tests whether the unit itself is functioning properly (see page 473).
   - **Motor test**—Checks the motor to see if it is working properly (see page 474).
   - **Sensor tests**—Checks the sensors to see if they are working properly (see page 475).

Status LED descriptions

The status light on the front of the unit provides status information.

Table 46. Status LED on the 2,000-sheet input unit

State	Description	Resolution
Solid green	The unit is on and ready.	None required.
Solid amber	The unit is experiencing a hardware malfunction.	Isolate the problem using one of the other procedures described in this section.
Flashing amber	The unit has a media jam or a page needs to be removed from the 2,000-sheet input unit, even if the page is not jammed.	Clear the jam or remove the page.
	The VTU might be open.	Close the door.
Off	The printer might be in Power Save mode.	Press GO.
	The unit is not receiving power.	Check the power supply and the power cables.

Service LED descriptions

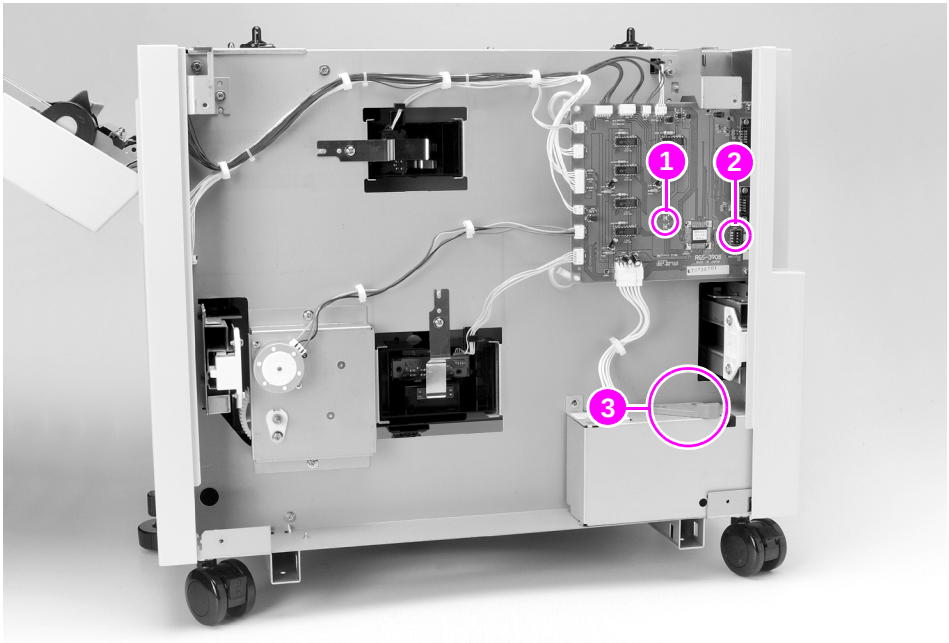

Figure 236. **Rear view of 2,000-sheet input unit**

1 Service LEDs

2 DIP switches

3 Power supply

Note Be sure to turn the power supply off and set all DIP switches to the off position when you finish the test, or the unit will not work.

The DIP switch is ON if it is to the right. The DIP switch is OFF if it is to the left.

Note To go from one test to another or to change the DIP switch settings, turn the power supply on the 2,000-sheet input unit to operational mode. Reset the DIP switches on the controller PCA, and then switch the power supply back to diagnostic mode to enable the new diagnostic test.

Service LED interpretation

If the 2,000-sheet input unit is working properly, it will pick up paper from tray 4 and expel it; the bottom service LED will flash regularly every 0.5 seconds.

Table 47. Patterns of LED flashing (2-second pause between each pattern)

Long (1 sec)	Short (0.3 sec)	Description	Recommended action
3	1	Lifter malfunction	Verify that the tray lifts freely by lifting it by hand. Verify that the paper size plates are installed correctly (in the same corresponding slots) and are not bent. If neither of these is the problem, replace tray 4.
2	1	Registration sensor delay jam	The media does not reach the sensor. Open the VTU door and remove the media. Replace the paper feed (VTU) assembly or the paper pick-up assembly.
2	2	Registration sensor stationary jam/initial jam	Open the VTU door and remove the media. Check the sensors and replace the corresponding field replaceable unit.
2	3	Jam sensor delay jam	The media did not reach the sensor. Open the VTU door and remove the media. Replace the paper feed (VTU) assembly or the paper pick-up assembly.
2	4	Jam sensor stationary jam/initial jam	Open the VTU door and remove the media.
1	1	VTU door is open	Close the door.
1	2	Tray 4 is open Wrong paper size loaded	Close the tray. Load the correct size of paper or check sensors.
1	3	No paper in tray 4	Load paper or check sensors.

Note If the LEDs do not turn on, replace the paper deck PCA or the power supply.

DIP switch settings

The following table shows the position of the DIP switches to run each of the 2,000-sheet input unit diagnostic tests.

Table 48. DIP switch settings for troubleshooting test procedures

DIP switch	Normal setting	Motor test	Standalone running test	Sensor test
1	Off	On	On	Off
2	Off	On	Off	Off
3	Off	Off	Off	On
4	Off	On	On	On

Standalone running test

This test verifies that the 2,000-sheet input unit is functioning properly. For this test, use the service LEDs. (See page 472 for an interpretation of the service LED patterns.)

CAUTION To prevent excessive media jams during this test, feed only six to eight pages.

1. Ensure that paper is in the tray.
2. Set the DIP switches on the 2,000-sheet input unit's controller PCA for the standalone running test. (See page 473 for an explanation of the settings.)
3. Use the switch that is located on the unit's power supply to switch to diagnostic mode.
   - If the unit does not work, there is no paper movement and the lower service LED flashes in a pattern that indicates the problem. (See page 472 for an interpretation of the service LED patterns.)
4. To stop the test, turn the power supply switch back to operational mode and set the DIP switches on the controller PCA to the off position. Open the VTU and remove any media from the paper path.

Motor test

This test verifies that the three motors on the 2,000-sheet input unit are functioning properly.

1. Remove the back cover from the 2,000-sheet input unit (see page 300).
2. Open tray 4 and the vertical transfer unit (VTU).
3. Set the DIP switches on the 2,000-sheet input unit's controller PCA for the motor test. (See page 473 for an explanation of the settings.)
4. Use the switch that is located on the unit's power supply to switch to diagnostic mode.
   - If the motors are working properly, they rotate continuously.
   - If the motors do not rotate, replace the corresponding field replaceable unit: the paper pick-up assembly, the VTU, or the paper deck drive assembly.
5. To stop the test, turn the switch on the power supply back to operational mode and reset the DIP switches on the controller PCA to the off position.

Sensor test

This test verifies that the sensors on the 2,000-sheet input unit are functioning properly.

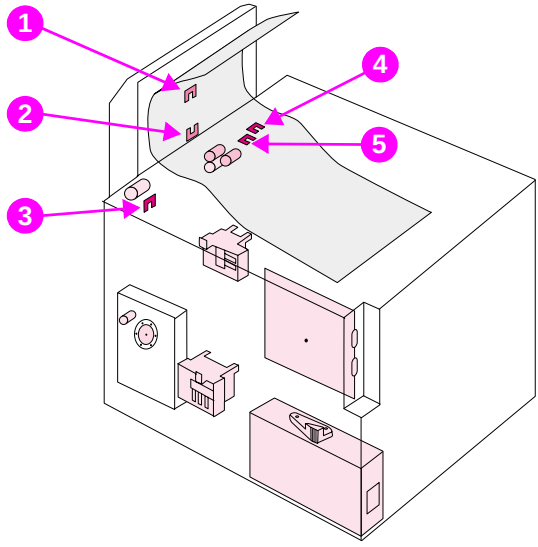

Figure 237. **Location of sensors in the 2,000-sheet input unit**

1 Paper exit sensor (PS32)

2 Paper entry sensor (PS31)

3 VTU closed sensor (PS35)

4 Paper tray raised sensor (PS34)

5 Paper tray empty sensor (PS33)

To perform the test

1 Set the DIP switches on the 2,000-sheet input unit's controller PCA for the sensor test. (See page 473 for an explanation of the settings.)

2 For each paper sensor:

   a Open the paper tray and the VTU on the 2,000-sheet input unit.

   b Remove the metal spring that holds the sensor unit in place (secured by 1 screw) (see figure 161, callout 2, and figure 163, callout 2).

   c Pull out the sensor unit.

3 Use the switch that is located on the unit's power supply to switch to diagnostic mode.

4 Manually activate the sensor.

   - When you activate the sensor, the bottom service LED on the controller PCA comes on. When you release the sensor, the LED goes off.
   - If the LED does not come on, there is a problem with the sensor. Replace the corresponding field replaceable unit.

5 To stop the test, turn the power supply switch back to operational mode and set the DIP switches on the controller PCA to the off position.

Multi-bin mailbox troubleshooting

The multi-bin mailbox standalone diagnostic tool is a troubleshooting aid that verifies how the multi-bin mailbox functions alone. The tests are designed to be used without C-link commands from the EPH controller on the printer.

Switching the multi-bin mailbox to test mode

1. Turn the printer off and remove the multi-bin mailbox from the printer.
2. Move the multi-bin mailbox power supply switch to test mode (callout 1).

Note Reset the power supply switch to normal mode when you finish running diagnostic tests; otherwise, the multi-bin mailbox will not work.

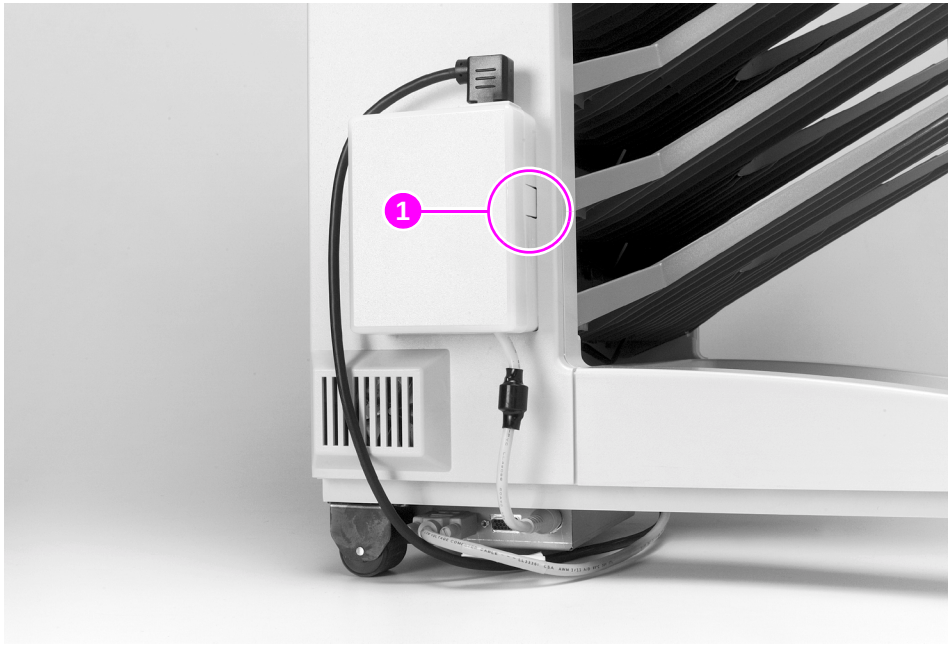

Figure 238. Multi-bin mailbox power supply test mode switch

Power-up sequence test

1 Push in and hold the multi-bin mailbox interlock switch. The multi-bin mailbox begins a power-up test.

- All the motors in the multi-bin mailbox start working, and the delivery head assembly moves up and down the multi-bin mailbox twice, scanning to determine that all the output paper bins are properly installed.
- At the end of the power-up test, the flipper motor remains working and waiting for feeding paper.

2 Check the user status LED on the front and the three service LEDs on the back side of the multi-bin mailbox. If the power-up test is successful, the user status LED remains green and the middle service LED shows solid red. The other two service LEDs remain off.

3 If the service LEDs are blinking in a pattern, indicating an error code, a problem exists (table 49 on page 479 lists the error codes indicated by the blinking pattern).

Paper path test

Note Use only supported media types for the paper path test.

1 Manually feed paper through the input paper guide.

- The paper passes across the flipper assembly and moves down to the bottom paper bin through the transport belt system via the delivery head assembly.

2 Feed several pages, one at a time, through the input paper guide. If the paper path test is successful, reinstall the multi-bin mailbox.

3 If a problem exists, the service LEDs blink in a pattern, indicating an error code (table 49 on page 479 lists the error codes indicated by the blinking pattern).

Multi-bin mailbox LED descriptions

The multi-bin mailbox features a user status LED and three service LEDs.

- The user status LED is a single LED that is located on the front cover of the multi-bin mailbox at the top. The user LED provides information about the power-on status and about the attachment to and alignment of the accessory with the printer.
- The three service LEDs are near the center of the multi-bin mailbox back cover. The service LEDs blink independently of each other, indicating the status of the multi-bin mailbox.

LED status interpretation

Table 49. Status LEDs on the multi-bin mailbox

User LED	Service LEDs	Message description	Recommended action
		**Multi-bin mailbox ready** The multi-bin mailbox was successfully connected and initialized by the printer.	● No action required.
		**Power Save mode** The multi-bin mailbox is in Power Save mode.	● No action required.
		**Test mode** The multi-bin mailbox is in test mode.	● Run the power-on test. ● Run the paper path test.

Table 49. Status LEDs on the multi-bin mailbox (continued)

User LED	Service LEDs	Message description	Recommended action
		**Multi-bin mailbox unlatched from the printer** The multi-bin mailbox is not properly attached to the printer.	• Check alignment of the multi-bin mailbox. • Check the attachment clips. • Check adjustable casters. • Check the interlock switch.
		**Flipper error** During the flipper calibration, an abnormal reference voltage was encountered.	• Check for media jam in the flipper assembly area. • Check cable connections. • Replace flipper assembly. • Replace the multi-bin mailbox controller PCA.
		**Face-up bin is too full** The face-up bin is too full.	• Remove media from the face-up bin. • Check for jammed sensor flag. • Replace the flipper assembly. • Check for proper cable connection.
		**Jam in flipper area** Time-out condition at the entry area.	• Open jam access door and check for media jam or out-of-place flipper assembly shaft. • Check for jammed paper sensor. • Replace the flipper assembly. • Replace the multi-bin mailbox controller PCA.
		**Jam in belt** Time-out condition in the transport belt.	• Check for media jam in the transport belt system/delivery head assembly. • Ensure free movement of the transport belt (both belts). • Ensure that belts are parallel in the transport belt system. • Check that the metal tape is in place and in good condition. • Replace the transport belt motor. • Replace the multi-bin mailbox controller PCA. • Replace the delivery head assembly.
		**Sliders problem at the head assembly** The sliders do not activate the slider photosensor.	• Check for media jam in the delivery head assembly. • Check that all paper bins are seated correctly. • Replace the delivery head assembly.

Table 49. Status LEDs on the multi-bin mailbox (continued)

User LED	Service LEDs	Message description	Recommended action
		**External memory error** Multi-bin mailbox NVRAM damaged.	• Replace the multi-bin mailbox controller PCA.
		**Jam in delivery head assembly** Time-out condition in the PSExit1 sensor.	• Check for media jam in the delivery head assembly. • Check for free movement in both PSExit1 and PSExit2 sensors on the delivery head assembly. • Check that the fingers are over the ejector rollers on the delivery head assembly. • Replace the flat ribbon cable that connects to the delivery head assembly. • Replace the delivery head assembly. • Replace the multi-bin mailbox controller PCA.
		**Jam in the delivery head position system** The elevator motor detects an invalid window when scanning.	• Check that the blind cover and scan bar are installed properly. • Check for media jam in the delivery head assembly. • Check for free movement of the delivery head assembly. • Check that all paper bins are seated correctly. • Check that paper bins and blind cover are not broken. • Replace the delivery head motor. • Replace the delivery head assembly. • Replace the multi-bin mailbox controller PCA.
		**Wrong page request** Page request received with invalid output bin or invalid paper size information.	• Check the bin destination. • Check the paper size configuration. • Power up the system.

3,000-sheet stapler/stacker troubleshooting

Calibrating the staple position

Note Recalibrate the staple position **only** if the accumulator assembly, the carriage assembly, or the controller PCA is replaced. NVRAM located in the controller PCA keeps in memory the configured compensation values for the staple position. When the device is in service mode, you can gain access to the flexible calibration menu.

To calibrate the staple position

1. Turn the printer off.
2. Enter service mode (see “To set the device in service mode” later in this chapter). As the device powers on, the NVRAM receives the calibration values.
3. After successful power on, exit service mode (see “To exit service mode” later in this chapter).
4. Turn the printer on and wait until `Ready` appears on the control panel display. The user LED, located at the top of the front cover, should blink green.
5. Press MENU until `Configuration of Stkr` appears on the control panel display.
6. Press ITEM until `Default of Staples` appears.
7. Press – VALUE + until `One Staple` appears.
8. Press SELECT.
9. Press MENU until `Information Menu` appears.
10. Press ITEM until `Print Paper Path Test` appears.
11. Print a ten-page job to the stapler bin (optional bin 1).
12. Check the staple position of the 10-page print job against the staple position in figure 239 on page 483.
    - If the positions are not comparable, then the device should be recalibrated; continue with step 13 below.
    - If the positions match or are close to a match, the device does not require recalibration; proceed to step 18.
13. Press MENU until `Configuration of Stkr` appears.
14. Press ITEM until `X Compensation/Y Compensation` appears.

15 Press – VALUE + to set the correct compensation (in millimeters).

16 Press SELECT.

17 Repeat steps 9 through 16 until you are comfortable with the staple position.

18 Press MENU until `Configuration of Stkr` appears.

19 Press ITEM until `Calibra Values` appears.

20 Press – VALUE + until `Set` appears.

21 Press SELECT.

22 Press GO.

If you set compensation values, the printer should return to Ready automatically and the user LED should return to the solid green status.

Because you set calibration values, the printer should not allow access to the compensation values in service mode.

If you did not set compensation values, repeat steps 1 through 4 and steps 18 through 22.

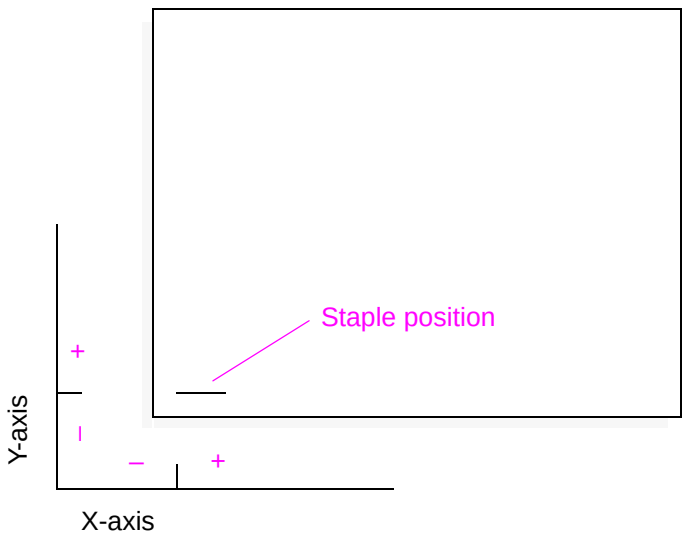

Figure 239. Staple position

Troubleshooting tools

Paper path test

Using the information from the event log, you can verify a specific printer paper path with the paper path test. The paper path test menu allows you to select the paper source and the output destination.

Note See Chapter 5, Theory of Operation, for graphic representations of the paper path.

To perform a paper path test

1. Press MENU until `Information Menu` appears on the control panel display.
2. Press ITEM until `Print Paper Path Test` appears and then press SELECT.
3. Press – VALUE + to choose the correct input tray and then press SELECT.
4. Press – VALUE + to choose the correct destination and then press SELECT.
5. Press – VALUE + to choose the correct duplex mode and then press SELECT.
6. Press – VALUE + to choose the number of copies and then press SELECT.

To stop the paper path test, press CANCEL JOB on the control panel.

Timing

The figure below shows timeouts related to jam declarations. The number in parentheses is the jam's error log code.

Note Jam codes used in the drawing and in the explanation are in hexadecimal representation.

The time is the maximum time allowed between two events. The figure shows the flow of a normal sheet, from entry to the accumulator/offset module.

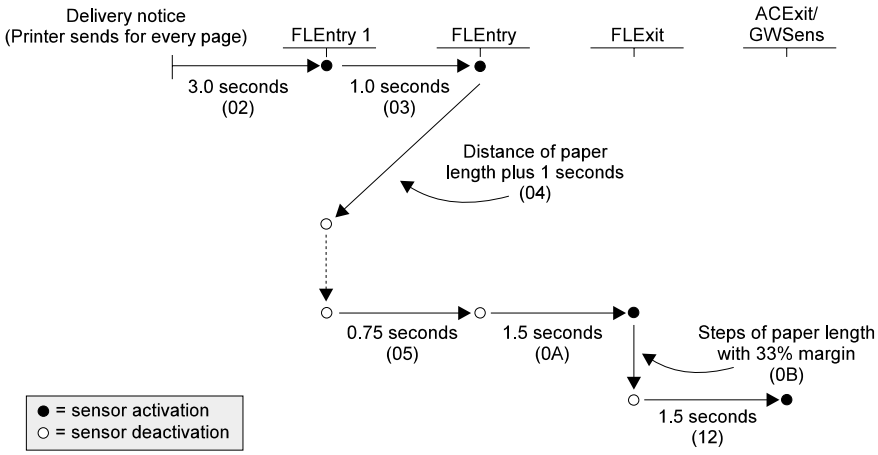

Figure 240. Device timing

The printer sends a delivery notice for each sheet. When the device detects the signal, a timeout of three seconds begins.

FLEntry 1 sensor and FLEntry sensor

If the sheet does not arrive to the FLEntry 1 sensor within three seconds, the device declares a jam 02.

When the sheet arrives at the FLEntry 1 sensor, which means that the sheet is being pushed by the printer and pulled by the device, the timer is reset to timeout in one second. If the sheet does not arrive at FLEntry sensor in one second, the device declares a jam 03.

Next, the FLEntry 1 sensor is deactivated. Because this event depends on the media length and the printer speed, it is independent of time. The device counts steps in the receiving stepper motor. With the proper relation of steps to length, the device knows when the sheet leaves the printer rollers. At that time, the device switches to high speed and begins a timeout of one second. If the sheet fails to leave the FLEntry 1 sensor in one second, the device declares a jam 04.

Once FLEntry 1 is deactivated, a timeout of .75 seconds begins to the next event—deactivation of the FLEntry sensor. If the FLEntry sensor is not deactivated, the device declares a jam 05. If the FLEntry sensor is deactivated, a timeout of 1.5 seconds begins for activation of the FLExit sensor.

FLExit sensor

If the FLExit sensor is not activated within the timeout, the device declares a jam 0A.

FLExit sensor deactivation depends on the internal paper path speed and the media length. The device declares a jam when internal step counter exceeds 133% of number of steps that represent the media length.

If the FLExit sensor is not deactivated, which can occur when sheet stops in the paper path because of an obstruction or slipping, the device declares a jam 0B.

When the FLExit sensor is deactivated correctly, a timeout of 1.5 seconds begins for activation of the registration wheel's sensor.

GWSens sensor/Exit sensor

If the GWSens sensor (in the stapler/stacker) or the Exit sensor (on the stacker) is not activated within the timeout, the device declares a jam 12.

Standalone diagnostic tool

The standalone diagnostic routines differ between the 3,000-sheet stapler/stacker and the 3,000-sheet stacker.

The standalone diagnostic tool tests the device's motors and functionality without the C-link commands from the printer.

The device has a user LED and a set of service LEDs.

- User LED—the single LED located at the top of the front cover provides information about the power-on status and attachment/alignment to the printer.
- Service LEDs (see figure 203 on page 353, callout 3)—three LEDs (green, yellow, and red) located near the bottom of the controller PCA, toward the back of the device, provide additional technical information about the device.

Note To interpret the LED patterns, see the tables later in this chapter.

When service mode is entered, the stapler/stacker performs a power-up sequence. While in service mode, the stapler test/stacker test, stacker bin test, face-up bin full sensor test, and stacker bin full test can be performed.

To set the device in service mode

Note Make sure the printer is turned off before performing this test. If the printer is on when service mode is enabled, some C-link signals might affect the test performance.

1. Unplug the C-link cable that connects the device to the printer.
2. Unplug the power cable that connects the device to the printer and plug the power cable directly into a grounded power source.
3. Remove the controller PCA cover (see page 342 for removal and replacement procedures).
4. Slide the service mode switch on the controller PCA to the “ON” position (toward you).
5. Press and hold in the interlock switch.

To exit service mode

1. Release the interlock switch and slide the service mode switch on the controller PCA back to the normal position.
2. Reinstall the controller PCA cover and C-link and power cables.

Note The user LED blinks green when the printer is turned on after setting and exiting service mode. Perform steps 18 through 22 under “Calibrating the staple position” earlier in this chapter to return to normal operation.

Stapler test/stacker test

For the stapler test/stacker test, use letter- or A4-sized paper. Feed the paper straight, centered, and slowly to avoid skews and jams. If a jam occurs, release the interlock switch and depress it again to reset the device.

Note Any stapler settings or offset settings configured at the printer control panel are ignored during the stapler test/stacker test.

1. Feed two sheets of paper into the paper input area. The sheets are sent to the face-up bin.
2. Feed two sheets at a time into the paper input area.
   - **In the 3,000-sheet stapler/stacker,** the sheets are stapled as shown below and sent to the stacker bin:

     next two sheets: no staples

     next two sheets: 1 staple

     next two sheets: 2 staples

     next two sheets: 3 staples

     next two sheets: 6 staples

     next two sheets: 1 staple, angled at 40°

     next two sheets restart the cycle: to the face-up bin

   - **In the 3,000-sheet stacker,** the sheets are routed as follows:

     next two sheets: to the stacker bin, offset in one direction

     next two sheets: to the face-up bin

     next two sheets: to the stacker bin, offset in the opposite direction

     next two sheets restart the cycle: to the face-up bin

Stacker bin test

Block the upper optical sensor and observe the movement of the stacker bin.

Face-up bin full sensor test

Lift and hold up the bin-full flag until the user LED blinks amber. The user LED should blink amber within a few seconds.

Stacker Bin Full Sensor Test

Block the upper optical sensor until the stacker bin reaches the bottom of its motion, triggering the stacker bin full sensor; the user LED should blink amber.

Service LED flashing patterns

The blinking of the service LEDs will be 0.5 second on and 0.5 second off during the coding sequence. After a two-second delay the sequence will be repeated.

Table 50. Service LED flashing patterns

LED	Meaning	LED blinking pattern (number of blinks)
Solid green	Device OK	
Blinking green	Device detached from the printer	Continuous blinking
Blinking yellow	Staple jam	1
	Jam in flipper	2
	Jam in paper path	3
	Jam in accumulator	4
	Jam in carriage	5
Blinking red	Stapler malfunction	1
	Flipper malfunction	2
	Malfunction in paper path	3
	Accumulator/offset module malfunction	4
	Carriage malfunction	5
	Controller PCA malfunction	6

User LED status interpretation

The blinking of the user LED is continuous.

Table 51. User LED status interpretation

Color	Solid/blinking	Meaning
Off	N/A	Printer in powersave mode or device not receiving power
Green	Solid	Device is on and ready
Green	Blinking	Device is in service mode
Amber	Solid	Device has a hardware malfunction
Amber	Blinking	Device is not correctly attached to printer, one or more bins are full, or device has a paper jam or a staple jam

Printer messages

Control panel messages and errors

Be sure to read the exact text of the control panel message, including the error message number and the text, in order to locate the error message in the tables.

The printer has enhanced information in the control panel.

Printer messages shown on the control panel display provide five categories of information. Each message category is assigned a priority. If more than one condition occurs at the same time, the highest priority message is shown. When it has been cleared, the next priority message will be shown, and so on. The messages and their priorities are:

- Printer status
- Warning messages
- Error messages
- Critical error messages
- External paper-handling device messages

Control panel and event log message format

The format of control panel messages is:

- 13.xy—paper jam in input/output device
- Input/output device condition—xy.zz
- 66.xy.zz—input/output device failure

The format of event log messages is:

- 13.xy zz—input/output device paper jam
- 65.xy.zz—input/output device condition
- 66.xy.zz—input/output device hardware malfunction

For both the control panel and event log messages:

- x is the C-link device number in the daisy chain:

  0 Paper handling controller

  1 First C-link device

  2 Second C-link device

  3 Third C-link device

  4 Fourth C-link device

  5 Fifth C-link device

- y is the C-link device type:

  0 Paper handling controller

  1 Input device

  2 Output device

  3 Finishing device

  4 Other supported device (not in use)

  5 Other supported device (not in use)

- zz is the error code. See the error message tables later in this chapter for more information.

Shown below are examples of control panel messages with their corresponding event log messages and meanings. Recommended actions are not shown; see the error message tables later in this chapter for recommended actions.

Control panel message	Event log	Meaning
13.11 Paper Jam in Input Device	13.11.1B	A jam occurred in the first C-link device configured. It is an input device (2,000-sheet Input Tray or 2 x 500-sheet Input Tray) with an error code 1B. This is normally a timeout at an entry or exit sensor.
66.22.09 Output Device Failure	66.22.09	A hardware malfunction occurred in the second C-link device configured. It is an output device (Mailbox) with an error code 09. This is an external memory error.

Note Print a configuration page to properly identify the input or output device configured. Notice that the error format only identifies the C-link device number and the device type; it does not identify which input or output device is used in the system.

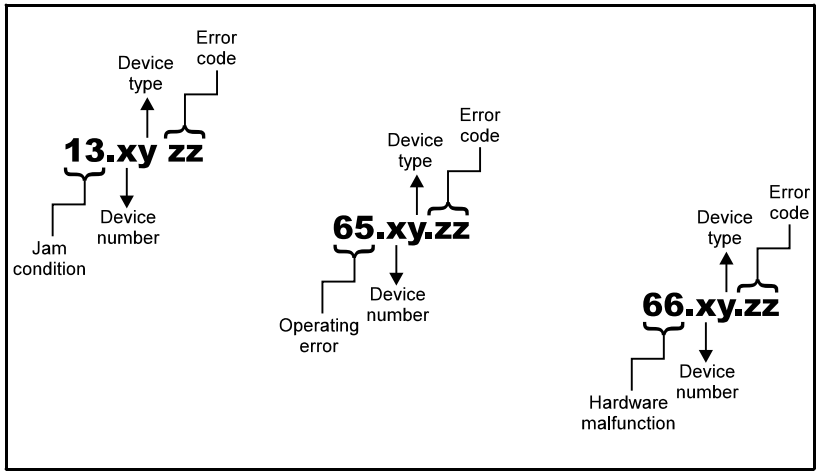

Figure 241. Error format for paper handling

HP 3,000-sheet stapler/stacker error messages

Operating errors

Table 52. Operating errors in the stapler/stacker

Control panel messages	Event log error message	User LED	Service LED	Description	Recommended action
• Output bin full • Clear paper from face up	N/A	Blinking amber (print job or mopy in progress)	N/A	Face up bin is full; 125 sheets have been collected in the face-up bin.	Remove paper from the face-up bin.
• Output bin full • Clear paper from optional bin 1	N/A	Blinking amber (print job or mopy in progress)	N/A	Stapler bin is full; 3,000 sheets have been collected in the stapler bin. -Or- More than 1,500 sheets of 11-by-17 inch or A3-sized paper have been collected in the stapler bin.	Remove paper from the stapler bin.
Stapler low on staples	N/A	N/A	N/A	Only 20 to 50 staples remain.	Refill the stapler.
• Check stapler device • Clear jammed staple	N/A	Blinking amber	Blinking yellow *(one blink)*	A staple is jammed in the stapler.	Clear the jammed staple.
Stapler out of staples	N/A	N/A	N/A	The cartridge is out of staples.	Refill the stapler.
Too many pages in job to staple	N/A	N/A	N/A	The maximum height of stack to be stapled has been exceeded. Print job is completed, but not stapled.	Do not configure the equipment to staple stacks that are thicker than the maximum height allowed; follow the guidelines listed in the user's guide.

Open Doors

Table 53. Open doors in the stapler/stacker

Control panel messages	Event log error message	User LED	Service LED	Description	Recommended action
Stkr: Attach to printer	N/A	Blinking amber	Blinking green	The device is detached from the printer.	Attach the device to the printer and verify that the user LED is green.
Stkr: Close stapler door	N/A	Blinking amber	Blinking green	The stapler door is open.	Close the stapler door.

Jams

Table 54. Jams in the stapler/stacker

Control panel messages	Event log error message	User LED	Service LED	Description	Recommended action
Stkr: Detach and Clear Jam	13.13 01 or 13.23 01	Blinking amber	Blinking yellow *(two blinks)*	When powering on or after clearing a jam, a jam is present at the flipper entry area.	• Clear the jam. • Power cycle the the printer and the computer, if necessary. • If the problem persists, replace the flipper assembly.
	13.13 02 or 13.23 02	Blinking amber	Blinking yellow *(two blinks)*	Media never reached the flipper entry sensors.	• Clear the jam. • Power cycle the printer and the computer, if necessary. • If the problem persists, replace the flipper assembly.
	13.13 03 or 13.23 03	Blinking amber	Blinking yellow *(two blinks)*	Media jammed at flipper entry sensor.	• Clear the jam. • Power cycle the printer and the computer, if necessary. • If the problem persists, replace the flipper assembly.

Table 54. Jams in the stapler/stacker

Control panel messages	Event log error message	User LED	Service LED	Description	Recommended action
`Stkr: Detach and Clear Jam` (continued)	13.13 04 or 13.23 04	Blinking amber	Blinking yellow *(two blinks)*	Media jammed in the flipper area.	• Clear the jam. • Power cycle the printer and the computer, if necessary. • If the problem persists, replace the flipper assembly.
	13.13 05 or 13.23 05	Blinking amber	Blinking yellow *(two blinks)*	Media jammed in the flipper area.	• Clear the jam. • Power cycle the printer and the computer, if necessary. • If the problem persists, replace the flipper assembly.
	13.13 06 or 13.23 06	Blinking amber	Blinking yellow *(two blinks)*	Self-adjustment routine incomplete.	• Check for mechanical interferences in the flipper's rollers area. • If the problem persists, replace the flipper assembly.
	13.13 09 or 13.23 09	Blinking amber	Blinking yellow *(three blinks)*	When powering on or after clearing a jam, a jam is present in the paper path.	• Clear the jam. • Power cycle the printer and computer, if necessary. • If the problem persists, replace the flipper assembly.

Table 54. Jams in the stapler/stacker

Control panel messages	Event log error message	User LED	Service LED	Description	Recommended action
Stkr: Detach and Clear Jam (continued)	13.13 0A or 13.23 0A	Blinking amber	Blinking yellow *(three blinks)*	Media jammed when flipping and not reaching the exit sensor.	• Clear the jam. • Power cycle the printer and the computer, if necessary. • If the problem persists, replace the flipper assembly.
	13.13 0B or 13.23 0B	Blinking amber	Blinking yellow *(three blinks)*	Media jammed when entering the accumulator.	• Clear the jam. Make sure you remove all shreds of media from the path. • Power cycle the printer and the computer, if necessary. • If the problem persists, replace the flipper assembly.
	13.13 11 or 13.23 11	Blinking amber	Blinking yellow *(four blinks)*	When powering on or after clearing a jam, a jam is present in the accumulator assembly.	• Clear the jam. • Power cycle the printer and the computer, if necessary. • Replace the accumulator assembly.
	13.13 12 or 13.23 12	Blinking amber	Blinking yellow *(four blinks)*	Media jammed in the paper path between the flipper and the accumulator.	• Clear the jam. • Power cycle the printer and the computer, if necessary. • Replace the accumulator assembly.

Table 54. Jams in the stapler/stacker

Control panel messages	Event log error message	User LED	Service LED	Description	Recommended action
Stkr: Detach and Clear Jam (continued)	13.13 13 or 13.23 13	Blinking amber	Blinking yellow *(four blinks)*	A jam occurred when trying to eject a print job or mopy.	• Clear the jam. • Power cycle the printer and the computer, if necessary. • Replace the accumulator assembly.
Stkr: Detach and clear staple jam	13.13 19 or 13.23 19	Blinking amber	Blinking yellow *(five blinks)*	Media jammed between the carriage and the stack of paper to be stapled.	• Clear the jam. • Power cycle the printer and the computer. • Verify unit calibration (Y compensation). • Replace the stapler assembly.

Hardware malfunctions

Table 55. Hardware malfunctions in the stapler/stacker

Control panel messages	Event log error message	User LED	Service LED	Description	Recommended action
• Stkr: Call Service • Stkr: Error 04 • 66.13.17 or 66.23.17 Output device failure	66.13.17 or 66.23.17	Solid amber	Blinking red *(four blinks)*	The accumulator assembly malfunctioned. -Or- The DC motor retainer or sensor is damaged.	• Replace the accumulator assembly. • If the problem persists, replace the controller PCA.

Table 55. Hardware malfunctions in the stapler/stacker

Control panel messages	Event log error message	User LED	Service LED	Description	Recommended action
• Stkr: Call Service • Stkr: Error 04 • 66.13.18 or 66.23.18 Output device failure	66.13.18 or 66.23.18	Solid amber	Blinking red *(four blinks)*	The accumulator assembly malfunctioned. -Or- The bearing bracket or gear wheel sensor is damaged.	• Replace the accumulator assembly. • If the problem persists, replace the controller PCA.
• Stkr: Call Service • Stkr: Error 05 • 66.13.25 or 66.23.25 Output device failure	66.13.25 or 66.23.25	Solid amber	Blinking red *(five blinks)*	The stapler is damaged.	• Replace the stapler. • Replace the controller PCA.
• Stkr: Call Service • Stkr: Error 06 • 66.13.33 or 66.23.33 Output device failure	66.13.33 or 66.23.33	Solid amber	Blinking red *(six blinks)*	The controller PCA is damaged. -Or- There is a RAM error.	• Power cycle the printer and the computer. • If the problem persists, replace the controller PCA.
• Stkr: Call Service • Stkr: Error 06 • 66.13.34 or 66.23.34 Output device failure	66.13.34 or 66.23.34	Solid amber	Blinking red *(six blinks)*	The controller PCA is damaged. -Or- There is an EEPROM error.	• Power cycle the printer and the computer. • If the problem persists, replace the controller PCA.

Table 55. Hardware malfunctions in the stapler/stacker

Control panel messages	Event log error message	User LED	Service LED	Description	Recommended action
• Stkr: Call Service • Stkr: Error 06 • 66.13.35 or 66.23.35 Output device failure	66.13.35 or 66.23.35	Solid amber	Blinking red *(six blinks)*	The controller PCA is damaged. -Or- ROM has been corrupted.	• Power cycle the printer and the computer. • If the problem persists, replace the controller PCA.
• Stkr: Call Service • Stkr: Error 06 • 66.13.36 or 66.23.36 Output device failure	66.13.36 or 66.23.36	Solid amber	Blinking red *(six blinks)*	The controller PCA is damaged. -Or- The C-link register is damaged.	• Power cycle the printer and the computer. • If the problem persists, replace the controller PCA.
• Stkr: Call Service • Stkr: Error 06 • 66.13.37 or 66.23.37 Output device failure	66.13.37 or 66.23.37	Solid amber	Blinking red *(six blinks)*	The controller PCA is damaged. -Or- The DAC (digital-to-analog converter) is damaged.	• Power cycle the printer and the computer. • Replace the controller PCA. • Replace the flipper assembly.

Communications troubleshooting

HP network interface support

Unless you have experience with the particular network under repair, seek the help of a qualified network professional before changing any network configuration settings.

If the printer is configured with an HP network interface card (such as an HP JetDirect product), the Response Center is available to help with any problems. Additional information is available from the *HP JetDirect Printer Software Installation Guide* (see page 514 for ordering information).

CAUTION Network interface cards are not directly interchangeable. Do not exchange interface cards without understanding and performing the configuration process for each of the exchanged cards and the network.

Third-party network interface support

If a problem is associated with a third-party network interface card, refer to the documentation that came with the card and the vendor support organization for help in troubleshooting.

Diagrams

This section contains general circuit (wiring) diagrams.

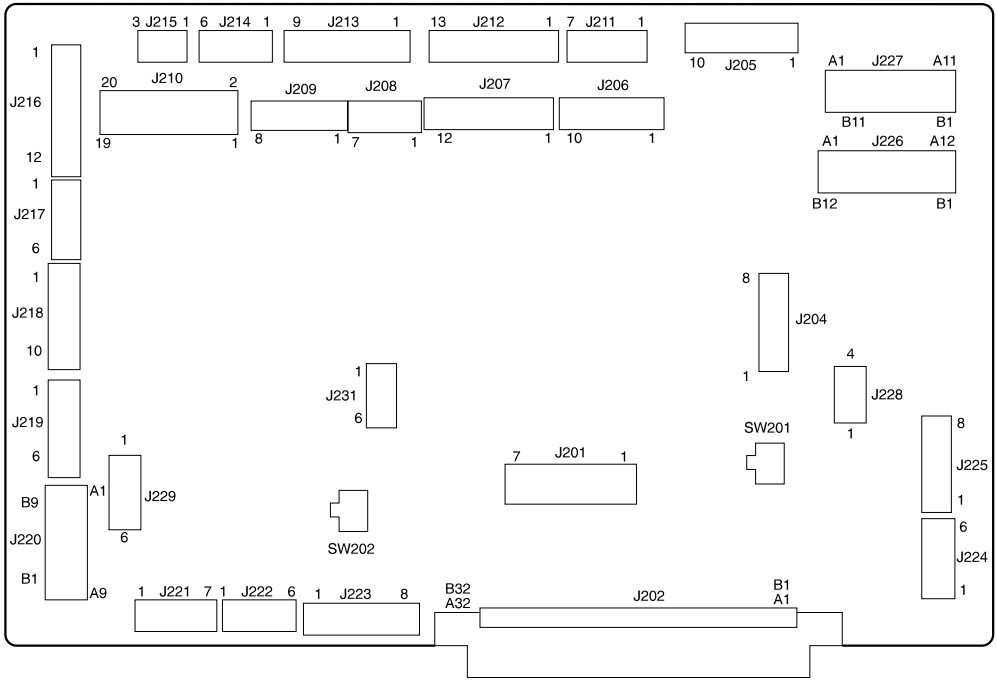

Figure 242. Connectors on the controller board

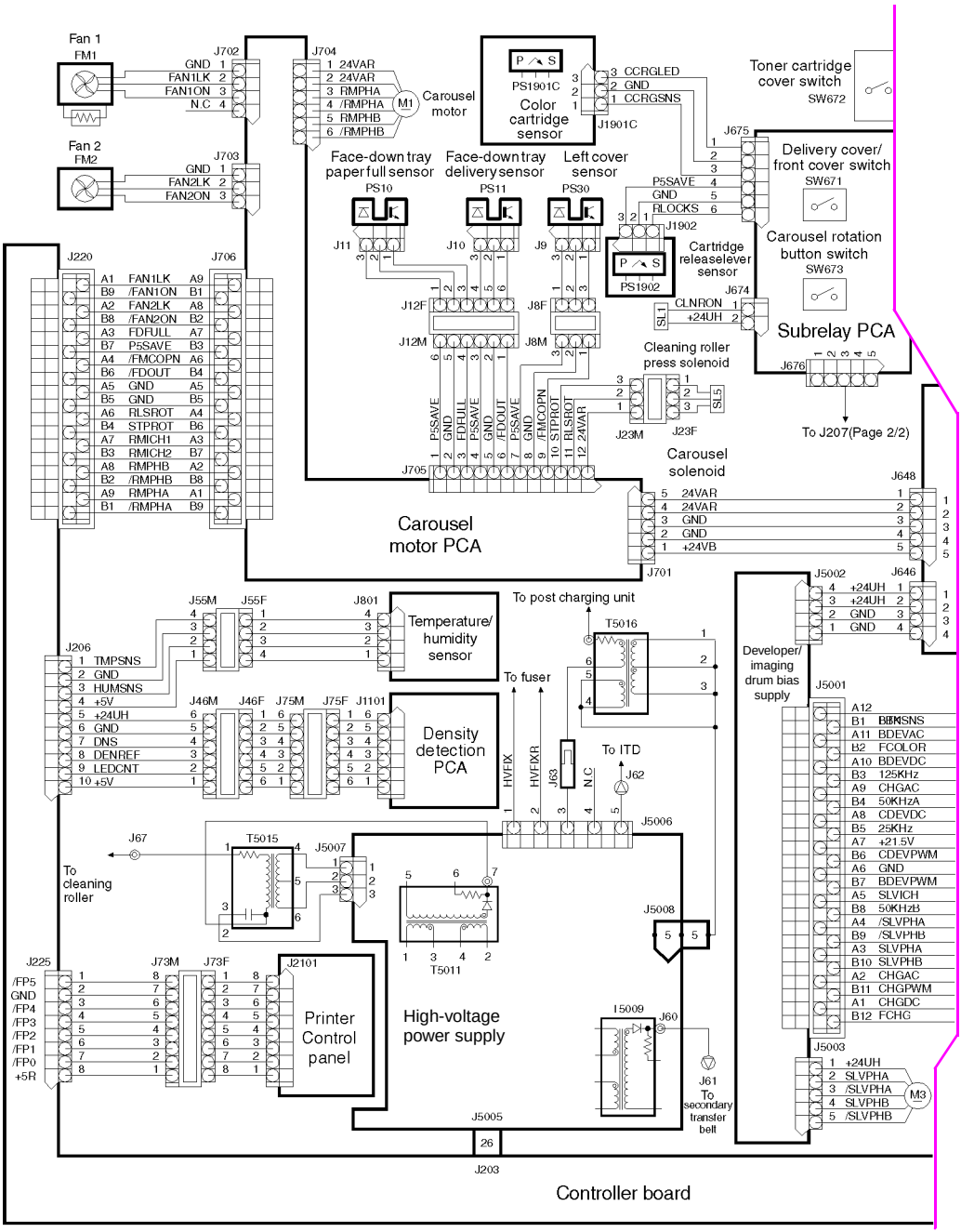

Figure 243. **General printer circuit diagram (1 of 4)**

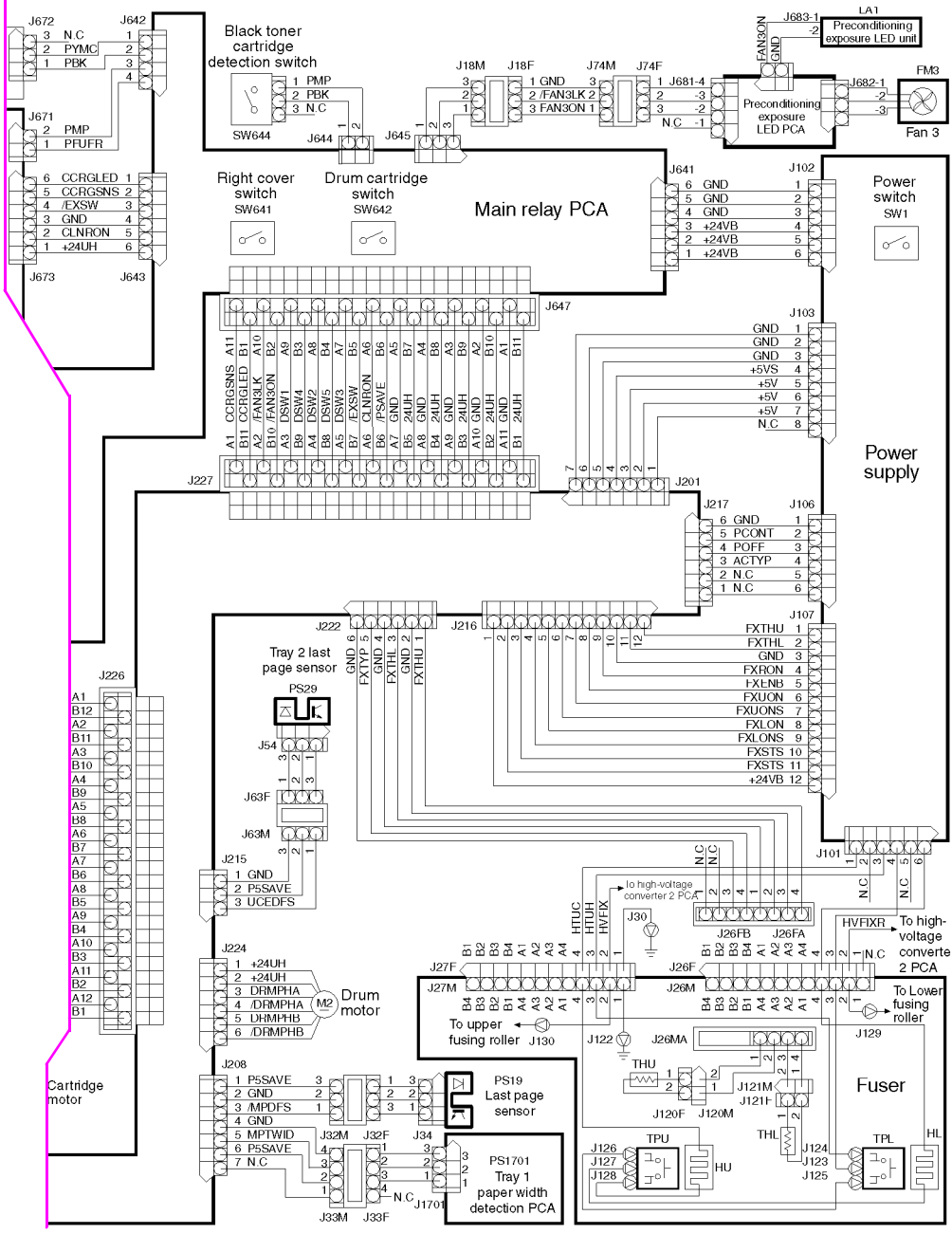

Figure 244. General printer circuit diagram (2 of 4)

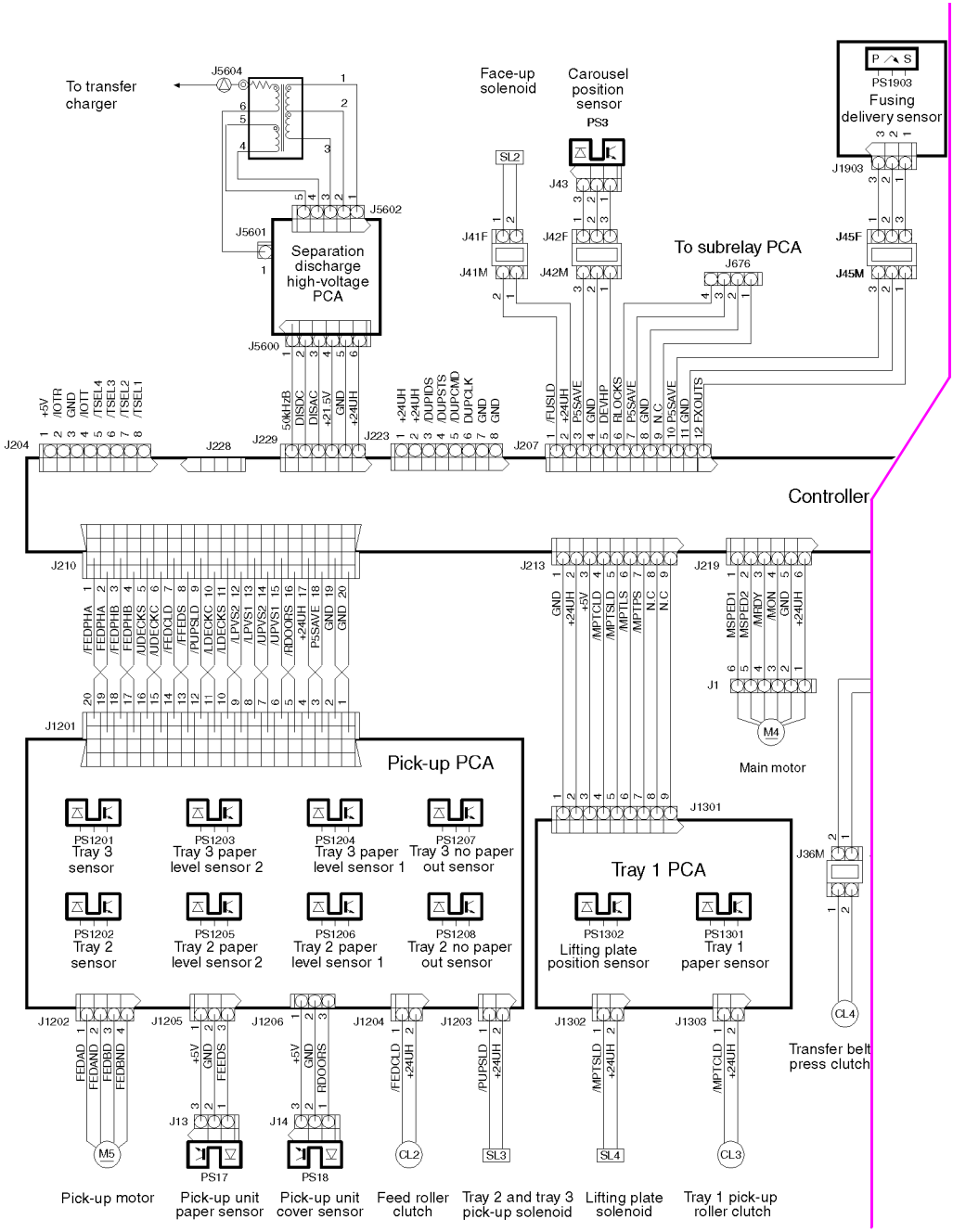

Figure 245. General printer circuit diagram (3 of 4)

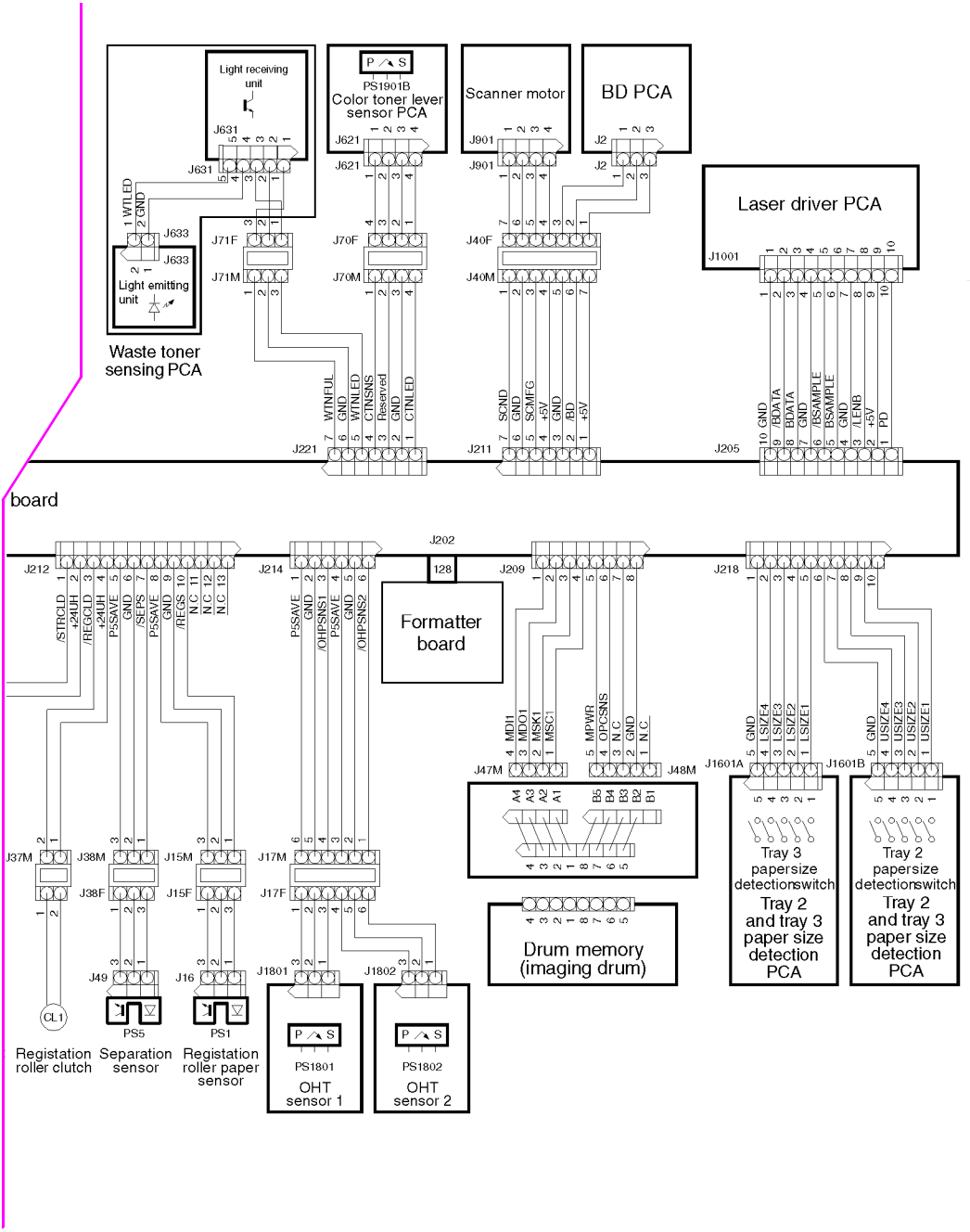

Figure 246. General printer circuit diagram (4 of 4)

8 Parts and diagrams

Chapter contents

Overview

The figures in this chapter illustrate the major assemblies in the printer and their component parts. A table (materials list) follows each exploded assembly diagram. Each table lists a reference number to the illustration, part number, quantity, and description for each part.

Note When looking for a part number, pay careful attention to any voltage listed in the description column to ensure that the part number selected is for the correct printer model.

Ordering parts

All standard part numbers are stocked and can be ordered from Support Materials Organization (SMO) or Support Materials Europe (SME). For information on contacting SMO or SME, see page 62.

Note Parts that have no reference number or no part number are not field replaceable and cannot be ordered.

Consumables, options, and accessories

The items listed in table 56 are available through your local authorized HP dealer. To find a dealer near you (or if your local dealer is temporarily out of stock), call the HP Customer Information Center at (1) (800) 752-0900.

Note Order two sets of DIMMs if upgrading the printer memory; order one set of DIMMs if replacing memory.

Table 56. Accessories and consumables

	Part number	Description
Memory	C2986-60006	Hard disk, internal, 3.2 GB
	C7842A	8-MB synchronous DIMM **NOTE:** For all DIMM products, you must install DRAM DIMMs in synchronized pairs—for example, two 4-MB DIMMs.
	C7843A	16-MB synchronous DIMM
	C7845A	32-MB synchronous DIMM
	C7846A	64-MB synchronous DIMM
EIO accessories	C2985A	EIO hard disk
	J3110A	Ethernet 10Base-T
	J3111A	Ethernet combo (10Base-T, BNC, and LocalTalk)
	J3112A	Token Ring
	J3113A	10/100Base-TX
Paper handling accessories	C4782-60501	Duplexer (product number C4782A)
	C4782-69501	Exchange duplexer
	C4785-60534	Multi-bin mailbox (product number C4785A) **NOTE:** You must have a 2,000-sheet input unit in order to install a multi-bin mailbox.
	C4785-69519	Exchange multi-bin mailbox
	C4788A	3,000-sheet stapler/stacker
	C4779A	3,000-sheet stacker
	C7837A	Automatic document feeder
	C7839A	1,000-sheet input paper deck
	R98-1005-000CN	500-sheet tray 2

Table 56. Accessories and consumables (continued)

	Part number	Description
Consumables	C4149A	Black toner cartridge
	C4150A	Cyan toner cartridge
	C4151A	Magenta toner cartridge
	C4152A	Yellow toner cartridge
	C4153A	Drum kit Imaging drum Two air filters Hand wipe
	C4154A	Transfer kit Transfer drum Transfer belt Cleaning roller Charcoal filter Hand wipe
	C4155A	110-volt fuser kit Fuser Six paper rollers Hand wipe
	C4156A	220-volt fuser kit Fuser Six paper rollers Hand wipe
Cables	92215S	Macintosh DIN-8 printer cable
	92215N	HP LocalTalk cable kit
	C2946A	IEEE-1284 compliant parallel cable of 3 m (approximately 10 ft) with 25-pin male/micro 36-pin male “C” size connector
	C4781-60504	C-link cable (from formatter board to the 2,000-sheet input unit)
Media	C2934A	HP Color LaserJet transparencies (letter-sized), 50 sheets
	C2936A	HP Color LaserJet transparencies (A4-sized), 50 sheets
	C4179A	HP Color LaserJet soft gloss paper (letter-sized), 200 sheets
	C4179B	HP Color LaserJet soft gloss paper (A4-sized), 200 sheets

Table 56. Accessories and consumables (continued)

	Part number	Description
Reference materials	5021-8956	*HP LaserJet Printer Family Paper Specification Guide*
	5021-0337	PCL/PJL Technical Reference Package
	5091-6456	*HP Peripherals Connectivity Solutions Guide*
	5966-5171	*HP JetDirect Software Installation Guide* (English)
	C3989-60115	*HP Color LaserJet 8500, 8500N, 8500 DN Service and Support CD-ROM*
	C3983-67902	*HP Color LaserJet 8500, 8500N, 8500 DN Self-Paced Training Kit (NTSC)*
	C3893-67903	*HP Color LaserJet 8500, 8500N, 8500 DN Self-Paced Training Kit (PAL)*
	C3983-90919	*HP Color LaserJet 8500, 8500 N, 8500 DN Quick Reference Guide* (English)
	C7096-90904	*HP Color LaserJet 8550, 8550 N, 8550 DN, 8550 GN, 8550 MFP Quick Reference Guide* (English)
	C3989-90901	*HP Color LaserJet 8500, 8500 N, 8500 DN Getting Started Guide* (English)
	C7096-90923	*HP Color LaserJet 8550, 8550 N, 8550 DN, 8550 GN, 8550 MFP Getting Started Guide* (English)
	C3989-90937	*HP Color LaserJet 8500, 8500 N, 8500 DN User's Guide* (English)

Miscellaneous parts

Table 57. Miscellaneous parts

Part number	Description
C3983-40001	Control panel overlay, English, 8500 models
C3983-40002	Control panel overlay, Traditional Chinese, 8500 models
C3983-40003	Control panel overlay, Korean, 8500 models
C3983-40004	Control panel overlay, Simplified Chinese, 8500 models
C3983-40005	Control panel overlay, Portuguese, 8500 models
C3983-40006	Control panel overlay, French, 8500 models
C3983-40007	Control panel overlay, German, 8500 models
C3983-40008	Control panel overlay, Spanish, 8500 models
C3983-40009	Control panel overlay, Dutch, 8500 models
C3983-40010	Control panel overlay, Norwegian, 8500 models
C3983-40011	Control panel overlay, Swedish, 8500 models

Table 57. Miscellaneous parts (continued)

Part number	Description
C3983-40012	Control panel overlay, Finnish, 8500 models
C3983-40013	Control panel overlay, Danish, 8500 models
C3983-40014	Control panel overlay, Italian, 8500 models
C3983-40015	Control panel overlay, Russian, 8500 models
C3983-40016	Control panel overlay, Czech, 8500 models
C3983-67905	Formatter assembly
C4781-60500	Power box
C4785-60513	Multi-bin mailbox, repackaging kit
C4785-60531	Multi-bin mailbox, short C-link cable adapter
C4787-60503	Multi-bin mailbox, shipping lock kit
C7096-40001	Control panel overlay, Turkish, 8550 models
C7096-40002	Control panel overlay, Polish, 8550 models
C7096-40003	Control panel overlay, Hungarian, 8550 models
C7096-40004	Control panel overlay, English, 8550 models
C7096-40005	Control panel overlay, Traditional Chinese, 8550 models
C7096-40006	Control panel overlay, Korean, 8550 models
C7096-40007	Control panel overlay, Simplified Chinese, 8550 models
C7096-40008	Control panel overlay, Portuguese, 8550 models
C7096-40009	Control panel overlay, French, 8550 models
C7096-40010	Control panel overlay, German, 8550 models
C7096-40011	Control panel overlay, Spanish, 8550 models
C7096-40012	Control panel overlay, Dutch, 8550 models
C7096-40013	Control panel overlay, Norwegian, 8550 models
C7096-40014	Control panel overlay, Swedish, 8550 models
C7096-40015	Control panel overlay, Finnish, 8550 models
C7096-40016	Control panel overlay, Danish, 8550 models
C7096-40017	Control panel overlay, Italian, 8550 models
C7096-40018	Control panel overlay, Russian, 8550 models
C7096-40019	Control panel overlay, Czech, 8550 models
J3113-61003	PCA, 10/100Base-T
RY7-5044-000CN	Screw kit (2,000-sheet input unit)

Table 57. Miscellaneous parts (continued)

Part number	Description
XA9-0836-000CN	Screw, TP, M3 x 6, quantity=10
XA9-0926-000CN	Screw, TP, M4 x 8, quantity=10
XA9-0940-000CN	Screw, w/washer, M4 x 12, quantity=4
XA9-0951-000CN	Screw, w/washer, M3 x 8, quantity=10

Illustrations and parts lists

The following illustrations and their assorted parts tables list the field replaceable units (FRUs) for this printer. At the end of this chapter are two cross-reference tables of all of the parts listed in this chapter: table 91 on page 574 lists the parts in numerical order by part number, and table 92 on page 587 lists the parts in alphabetical order. Both tables are cross-referenced to the appropriate figure and reference number in this chapter.

Compatible parts

The table below lists parts that have changed from HP Color LaserJet 8500 printers to HP Color LaserJet 8550 printers. These parts are forward and backward compatible. Formatters, however, are not interchangeable between models of printers.

Part	HP CLJ 8500 part #	HP CLJ 8550 part #
PCA, controller board	RG5-3037-000CN	RG5-3037-120CN
Developer/imaging drum bias supply	RG5-3026-000CN	RG5-3026-030CN
High-voltage power supply	RG5-3943-000CN	RG5-3943-000CN
Density sensor assembly	RG5-3057-000CN	RG5-3057-000CN
PCA, carousel motor (M1)	RG5-3084-000CN	RG5-3084-020CN

Major assembly locations

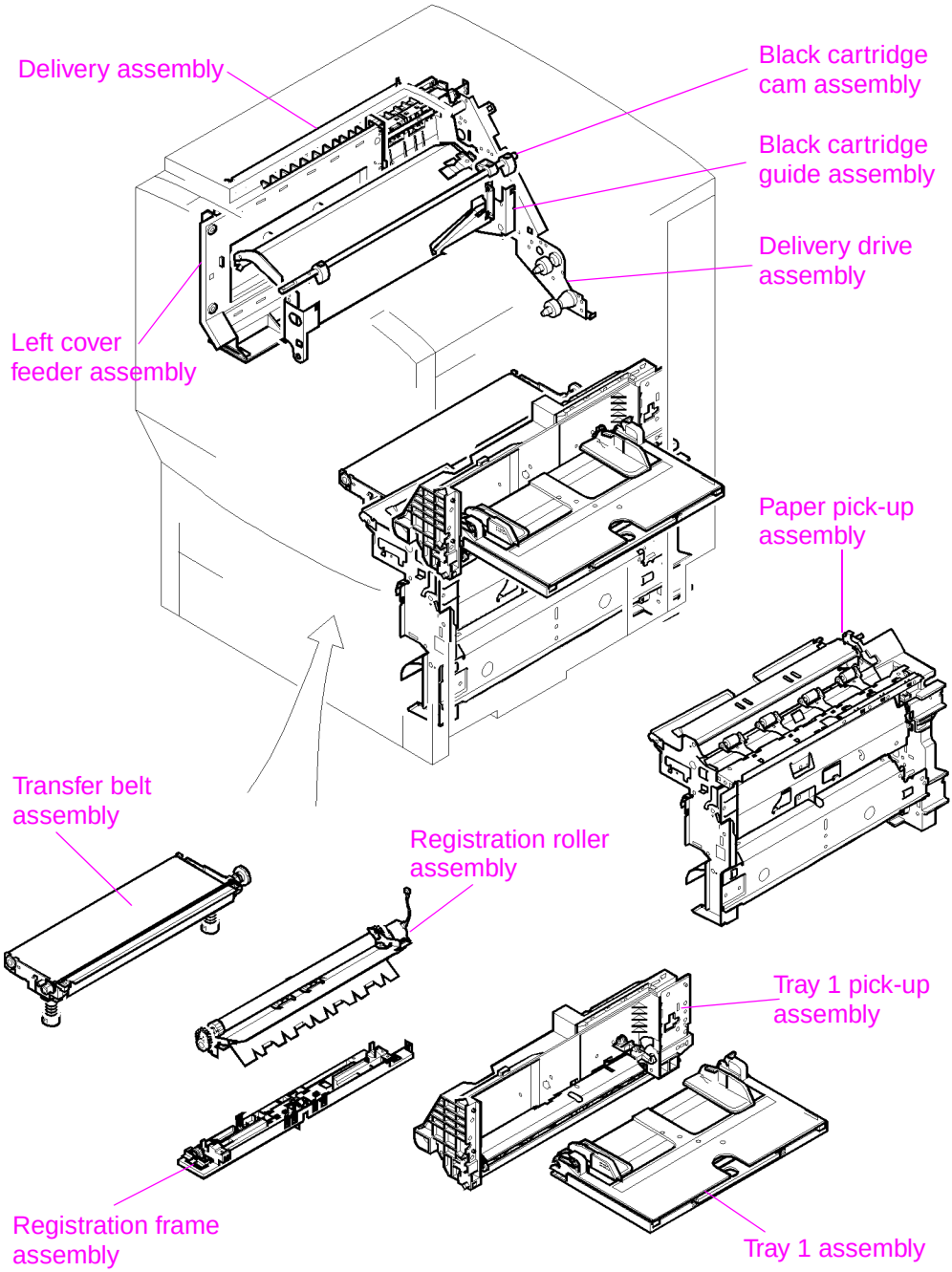

Figure 247. **Major assembly locations (1 of 2)**

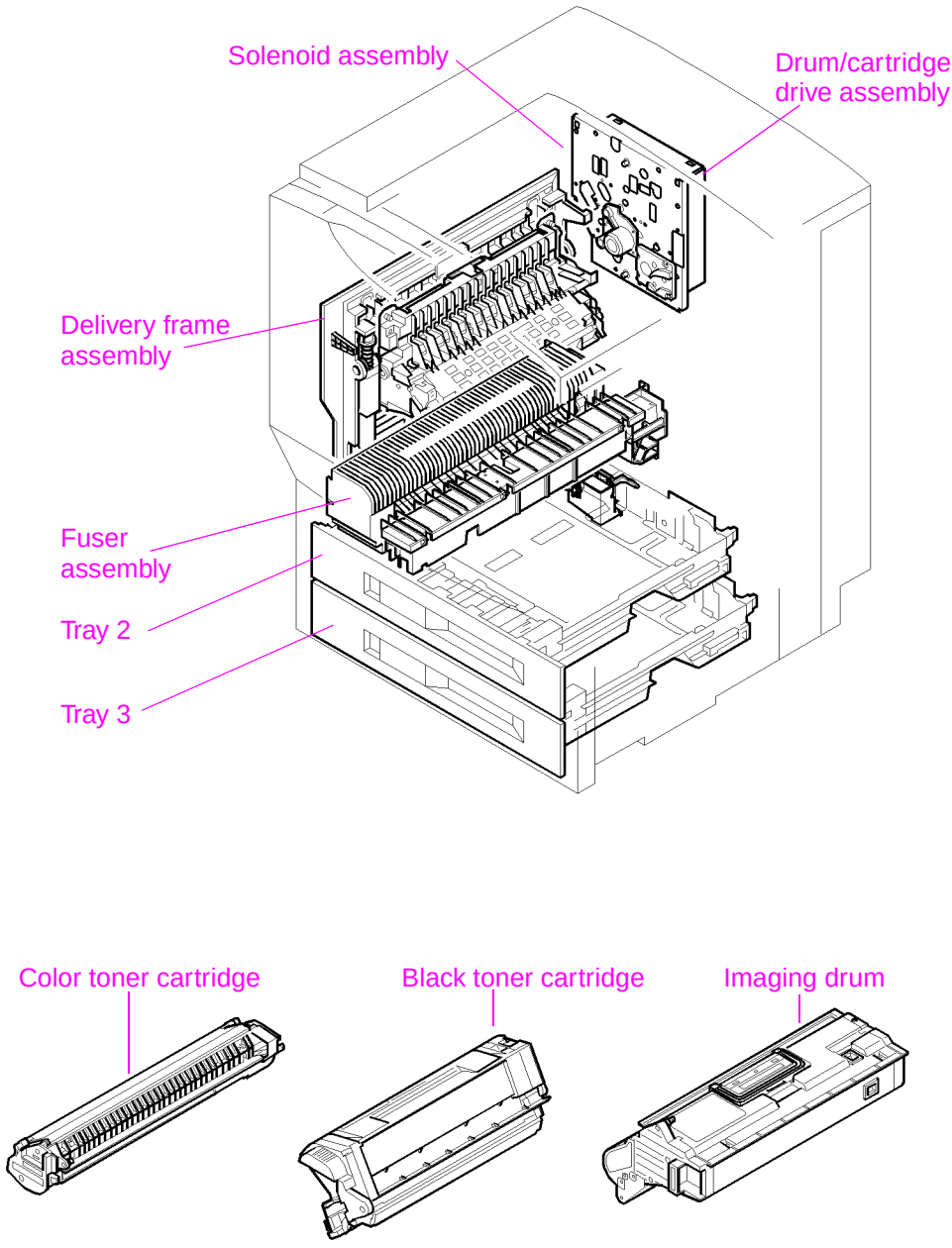

Figure 248. **Major assembly locations (2 of 2)**

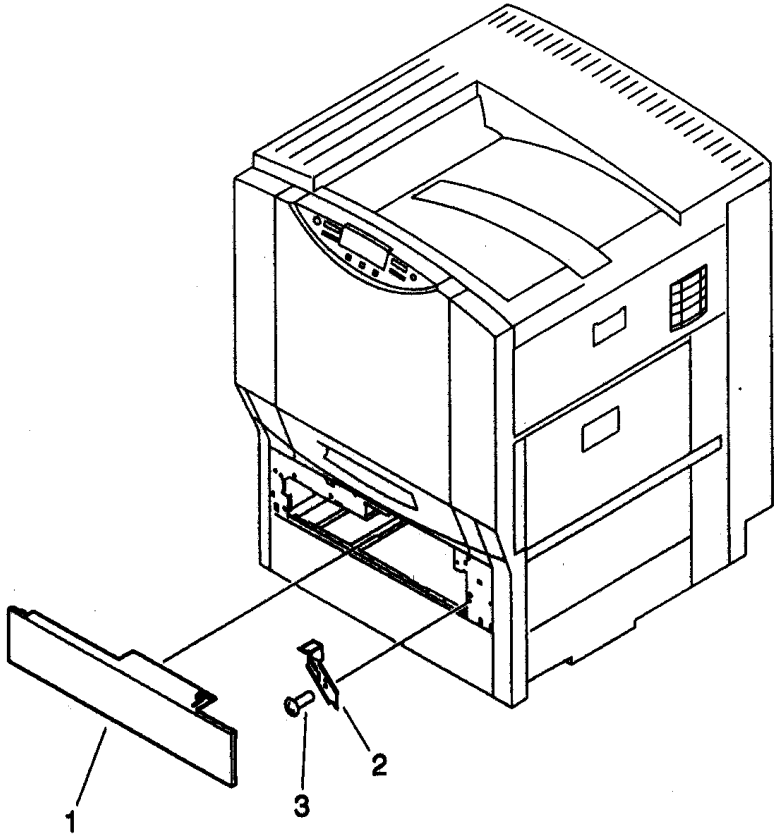

Figure 249. **Printer covers and doors (1 of 4)—Filler panel for tray 2 (HP Color LaserJet 8550 base model only)**

Table 58. Printer covers and doors (1 of 4)—Filler panel for tray 2

Ref.	Description	Part number	Qty.
1	Filler panel for tray 2	RB2-0207-000CN	1
2	Filler panel bracket for tray 2	RB2-0208-000CN	1
3	Screw, filler panel bracket, M4X8	XA9-0926-000CN	1

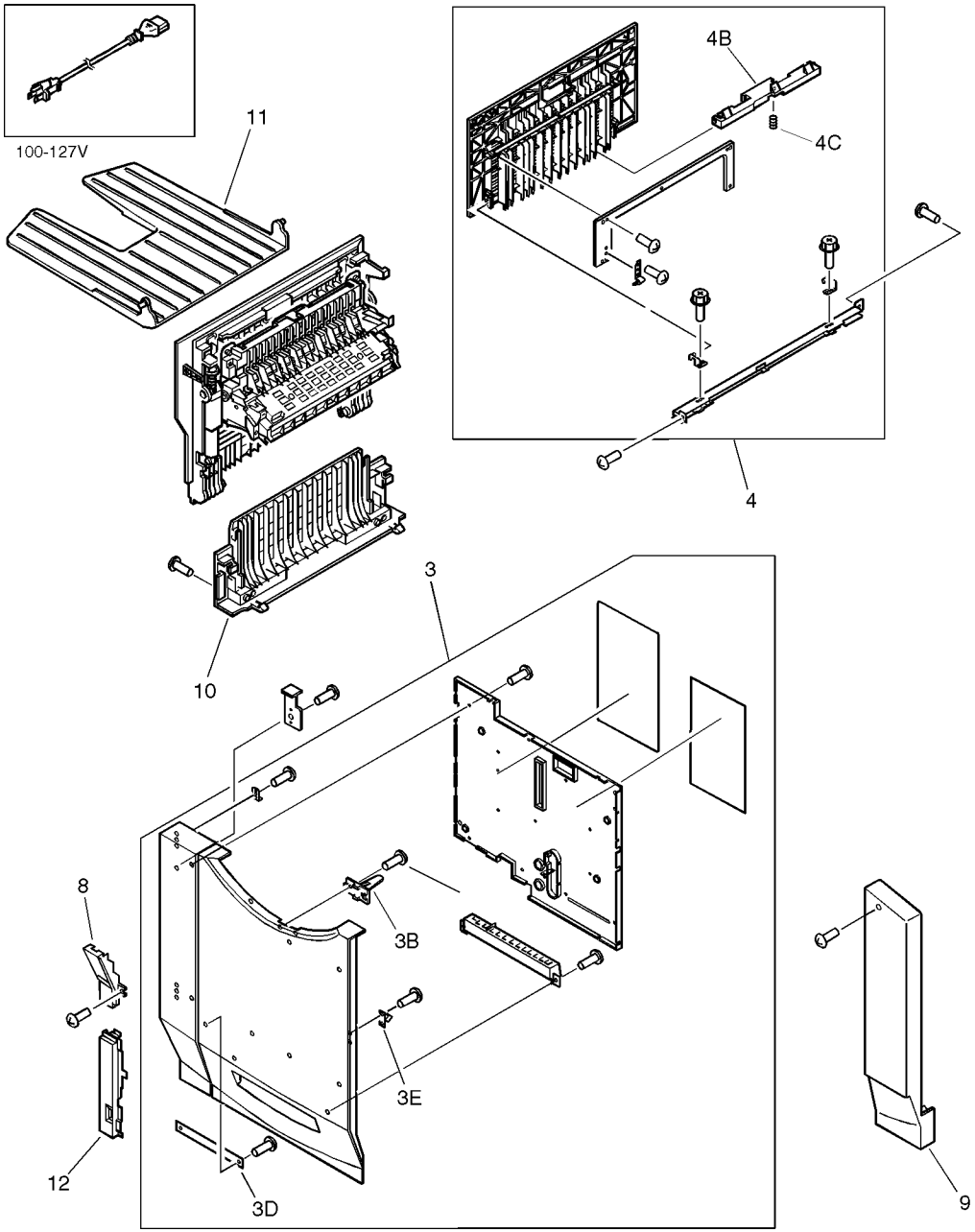

Figure 250. **Printer covers and doors (2 of 4)**

Table 59. Printer doors and covers (2 of 4)

Ref.	Description	Part number	Qty.
3	Cover assembly, front	RG0-0112-000CN	1
3B	Lever, shutter	RA0-0008-000CN	1
3D	Strap, front door support	RB1-4497-000CN	1
3E	Latch, roller action	RB1-5153-000CN	1
4	Cover assembly, left upper	RG0-0113-000CN	1
4B	Lever, left upper door	RB1-6485-000CN	1
4C	Spring, left upper door lever	RB1-6486-000CN	1
8	Cover, hinge	RA0-0068-000CN	1
9	Cover, front right	RA0-0069-000CN	1
10	Cover, left lower	RB1-6480-000CN	1
11	Tray, face-up	RB1-6491-000CN	1
12	Cover, power switch	RB1-6492-000CN	1
	Filler panel for tray 2	RB2-0207-000CN	1
	Filler panel bracket for tray 2	RB2-0208-000CN	1
	Filler panel bracket screw for tray 2	XA9-0926-000CN	1

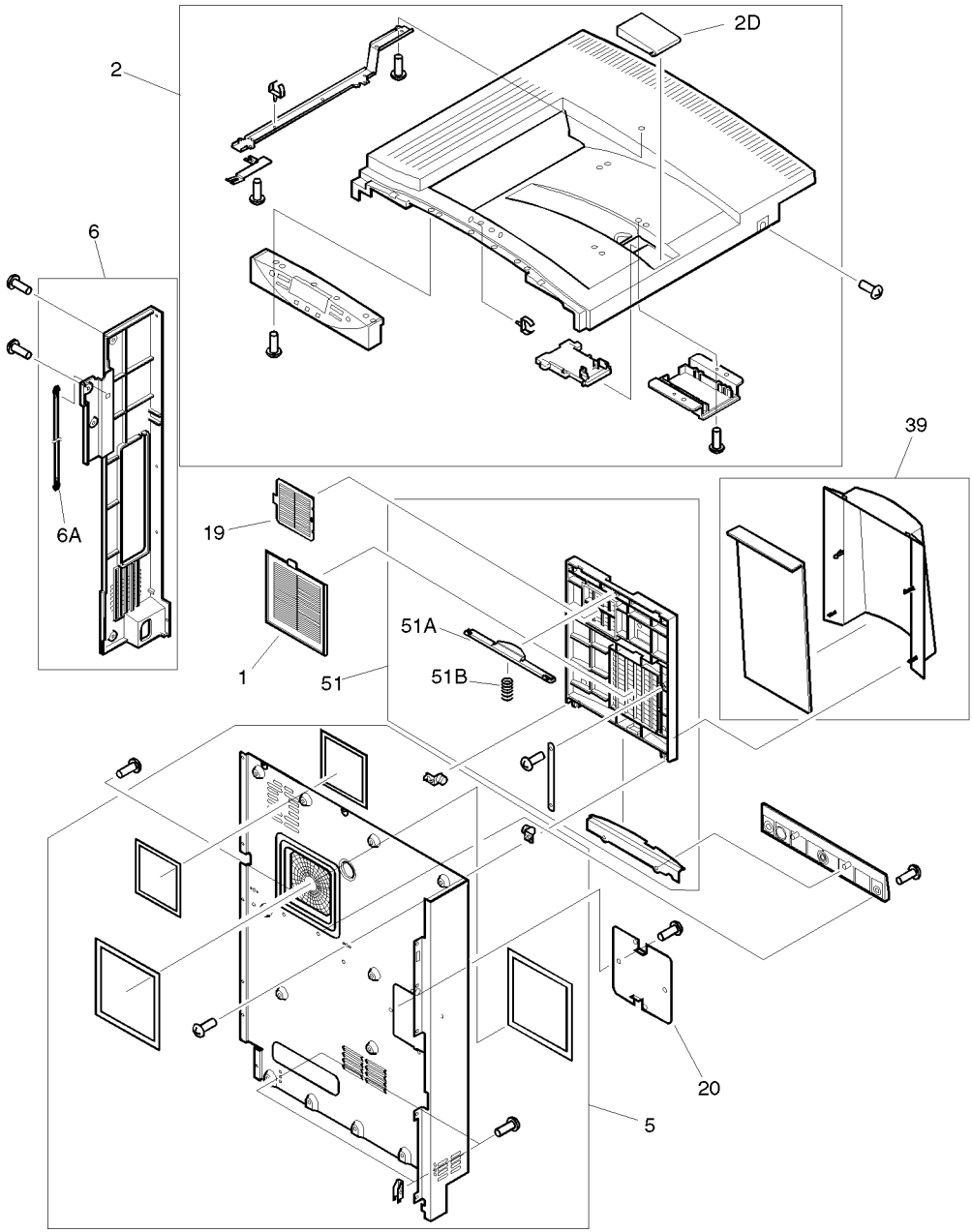

Figure 251. **Printer covers and doors (3 of 4)**

Table 60. Printer doors and covers (3 of 4)

Ref.	Description	Part number	Qty.
1	Filter, large air	RB1-9807-000CN	1
2	Cover assembly, top	RG0-0111-000CN	1
2	Cover assembly, top (HP CLJ 8550 MFP only) **Note** This cover is the molded plastic ONLY; electronics are not attached. The cover allows for attachment of the copy module frame.		1
2D	Stop, flip-up media	RA0-0073-000CN	1
5	Cover assembly, rear	RG0-0115-000CN	1
6	Cover, left rear	RA0-0065-000CN	1
6A	Stopper, open/close	RB1-6484-000CN	1
19	Filter, small air	RB1-9808-000CN	1
20	Cover, auxiliary	RA0-0078-000CN	1
39	Cover, fan	RF0-0012-000CN	1
51	Cover, rear fan housing	RG0-0017-000CN	1
51A	Support, cover	RA0-0079-000CN	1
51B	Spring, compression	RS5-2719-000CN	1

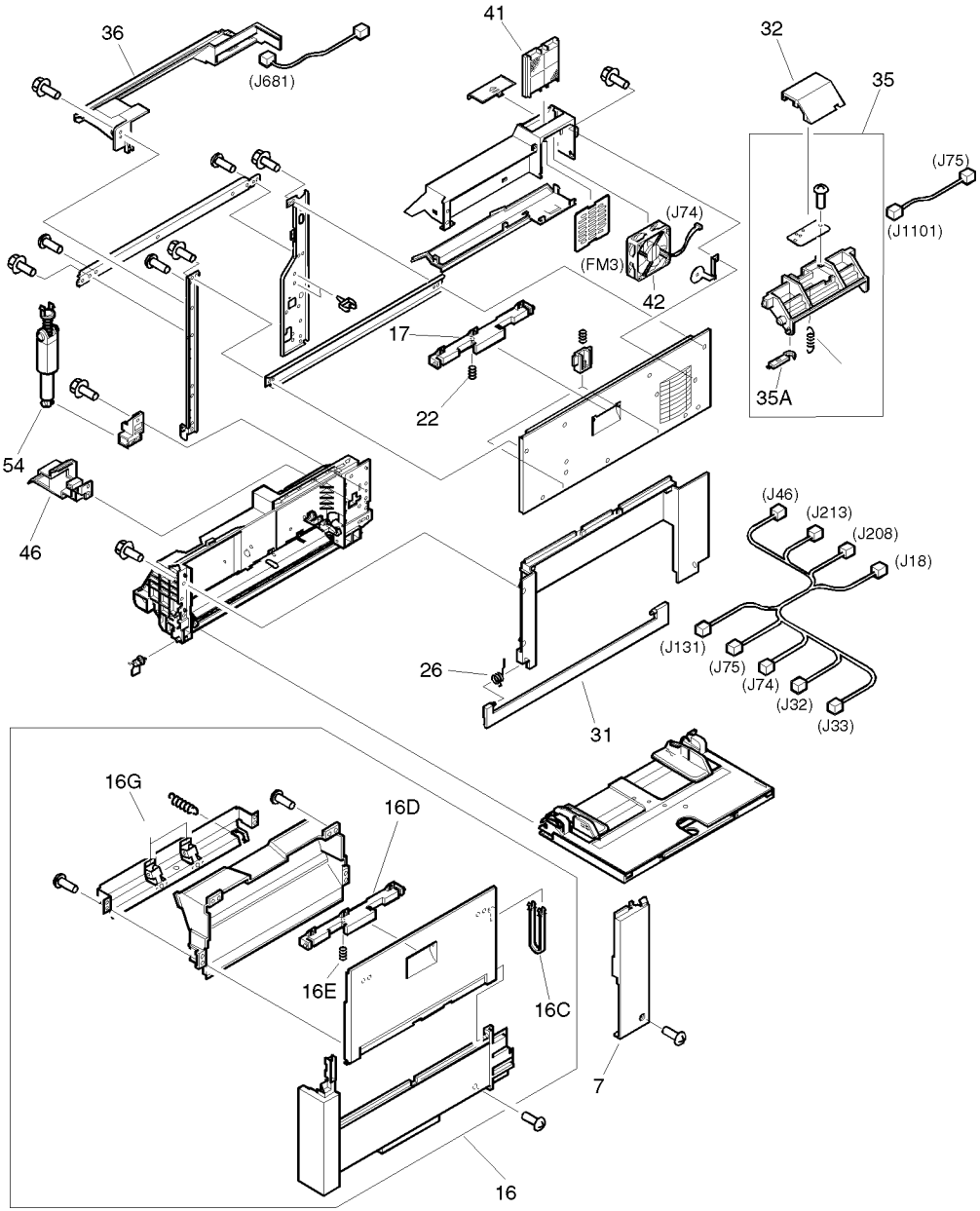

Figure 252. **Printer covers and doors (4 of 4)**

Table 61. Printer covers and doors (4 of 4)

Ref.	Description	Part number	Qty.
7	Cover, right rear	RA0-0067-000CN	1
16	Cover assembly, right lower	RG5-3096-000CN	1
16C	Stopper, open/close	RB1-6484-000CN	1
16D	Lever, right lower cover	RB1-6485-000CN	1
16E	Spring, compression	RB1-6486-000CN	1
16G	Roller, paper	RB1-6488-000CN	2
17	Lever, right upper door	RB1-6485-000CN	1
22	Spring, right lower door lever	RB1-6486-000CN	1
26	Spring, torsion	RB1-9798-000CN	1
31	Cover, right subassembly	RF5-1995-000CN	1
32	Cover, density sensor	RB1-9537-000CN	1
35	Density sensor assembly	RG5-3057-000CN	1
35A	Brush, cleaning	RB1-9617-000CN	1
36	Preconditioning exposure LED assembly	RG5-3980-000CN	1
41	Filter, charcoal	RB1-9836-000CN	1
42	Fan 3 (FM3)	RH7-1393-000CN	1
46	Cover, tray 1 side gear	RB1-9547-000CN	1
54	Hinge, stopper (tray 1 delivery assembly)	RG5-3962-000CN	1

Internal cover assembly

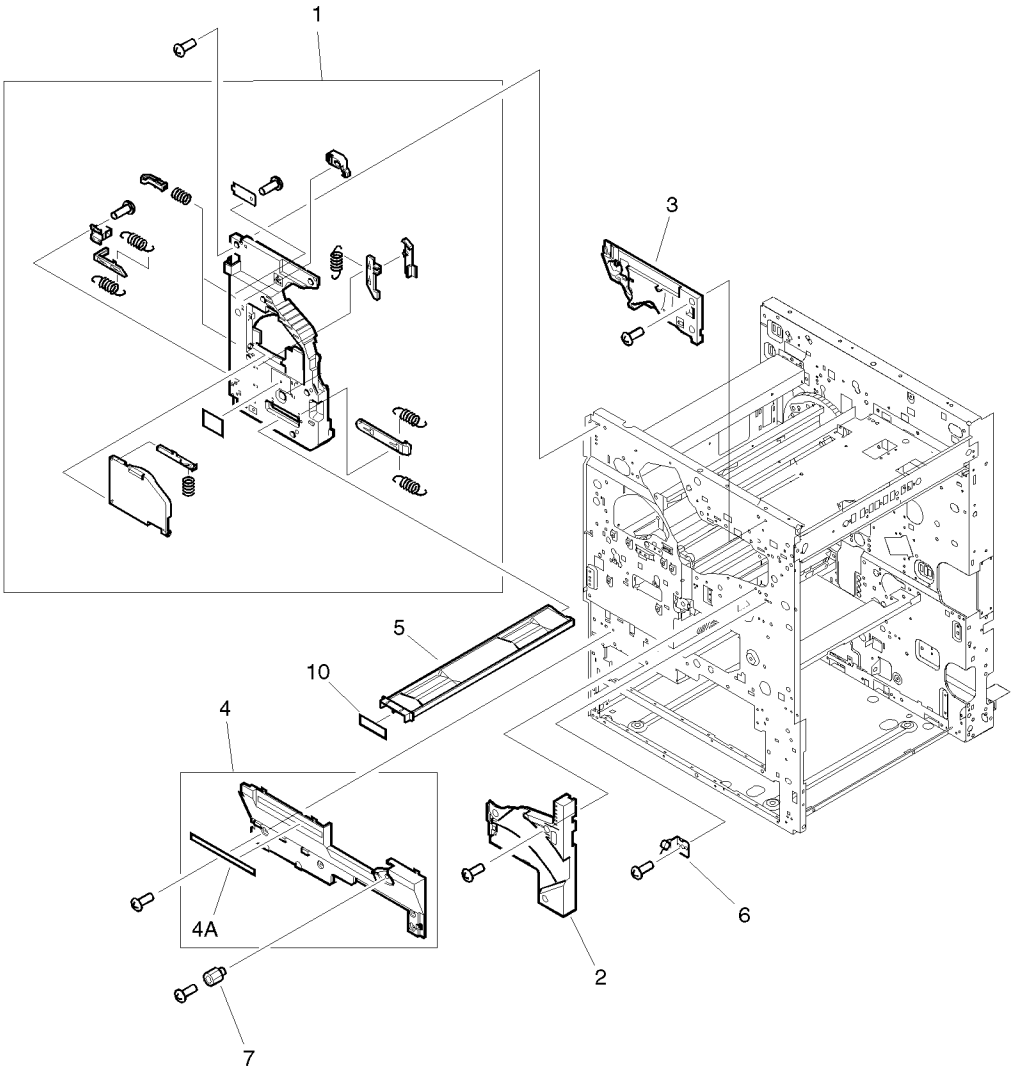

Figure 253. **Internal cover assembly**

Table 62. Internal cover assembly parts

Ref.	Description	Part number	Qty.
1	Cover assembly, inner left	RG0-0104-000CN	1
2	Cover, inner 2	RA0-0026-000CN	1
3	Cover, inner 3	RA0-0027-000CN	1
4	Cover, inner 4	RF0-0013-000CN	1
4A	Label, “CAUTION”	RS5-8380-000CN	1
5	Waste toner tray	RB1-9804-000CN	1
6	Latch, roller action	RF0-0003-000CN	1
7	Media jam knob	RB1-9928-000CN	1
10	Cover, waste toner tray	RA0-0083-000CN	1

Internal components

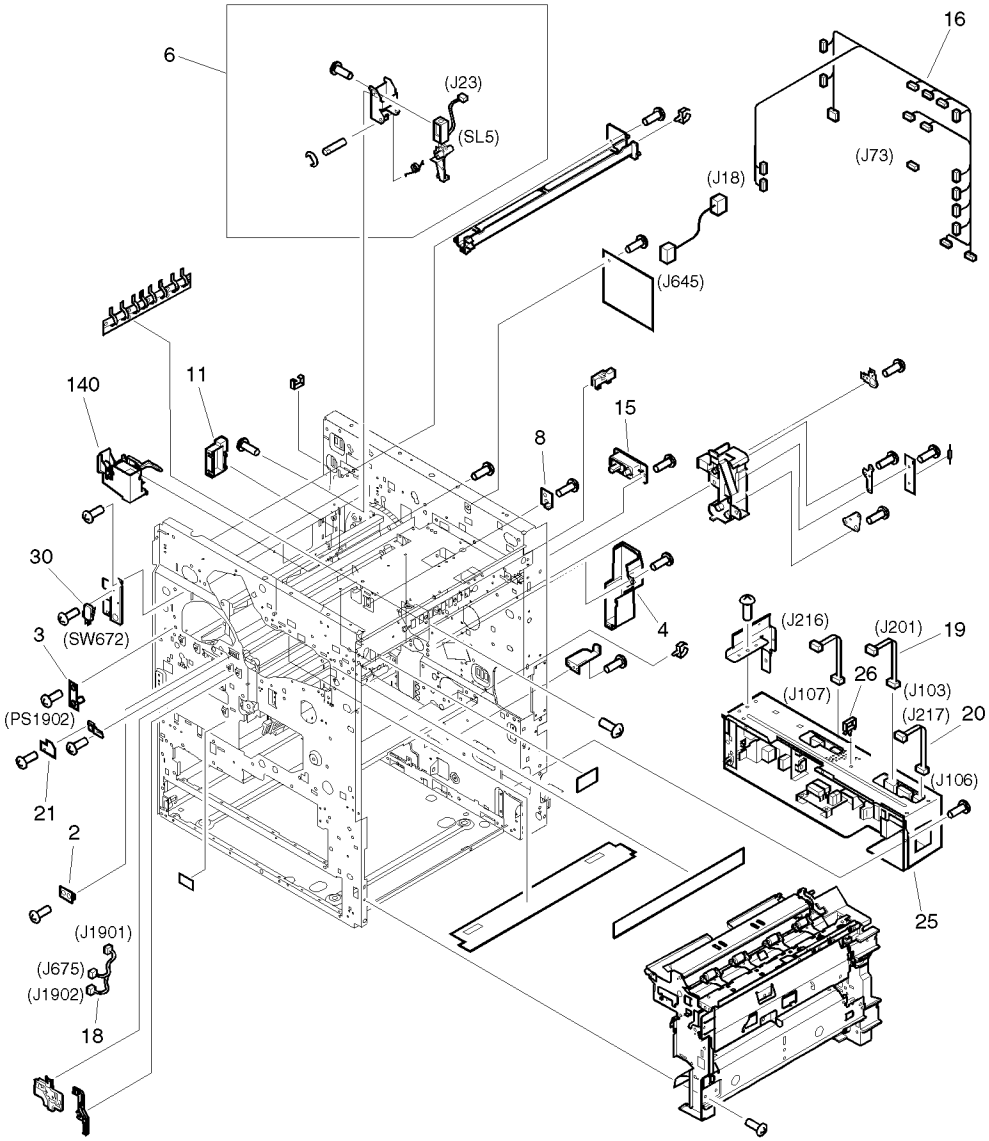

Figure 254. **Internal components (1 of 6)**

Table 63. Internal components parts (1 of 6)

Ref.	Description	Part number	Qty.
2	PCA, photosensor	RG5-3080-000CN	1
3	Plate, duct mount	RF5-2036-000CN	1
4	Duct, rear lower air	RB1-9401-000CN	1
6	Carousel stop assembly	RG5-3053-000CN	1
8	PCA, fusing delivery sensor	RG5-3992-000CN	1
11	Cover, carousel stop	RB1-9789-000CN	1
15	Connector holder assembly	RG5-3031-000CN	1
16	Cable, main	RG5-3097-000CN	1
18	Cable, sensor	RG5-3144-000CN	1
19	Cable, DC power	RG5-3921-000CN	1
20	Cable, power signal	RG5-3922-000CN	1
21	PCA, cartridge release lever	RG5-3961-000CN	1
25	Power supply assembly (110 V) Power supply assembly (220 V)	RH3-2185-000CN RH3-2187-000CN	1
30	Switch, toner cartridge cover (SW672)	WC4-5150-000CN	1
140	Face-up solenoid assembly	RG5-3022-000CN	1

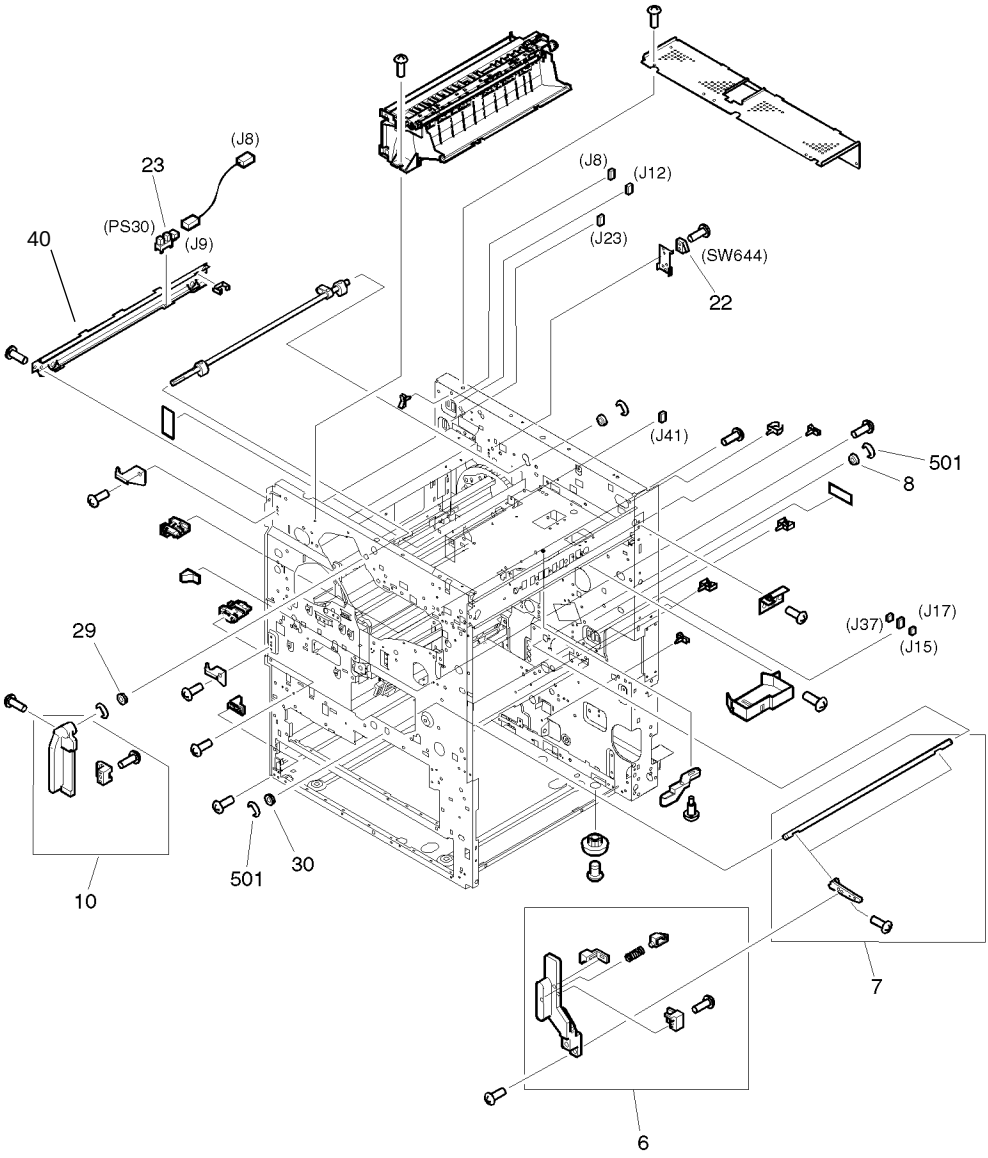

Figure 255. **Internal components (2 of 6)**

Table 64. Internal components parts (2 of 6)

Ref.	Description	Part number	Qty.
6	Lever assembly, transfer drum	RG5-3046-000CN	1
7	Lever assembly, pressure	RG5-3045-000CN	1
8	Bushing	RS5-1119-000CN	1
10	Lever assembly, black cartridge	RG5-3087-000CN	1
22	Switch, black toner cartridge (SW644)	WC4-5136-000CN	1
23	Photo-interrupter, IC, TLP1240	WG8-5210-000CN	1
29	Bushing	RS5-1317-000CN	1
30	Bushing	RS5-1317-000CN	1
40	Crossmember	RB1-0010-000CN	1
501	Ring, E	XD2-1100-642CN	2

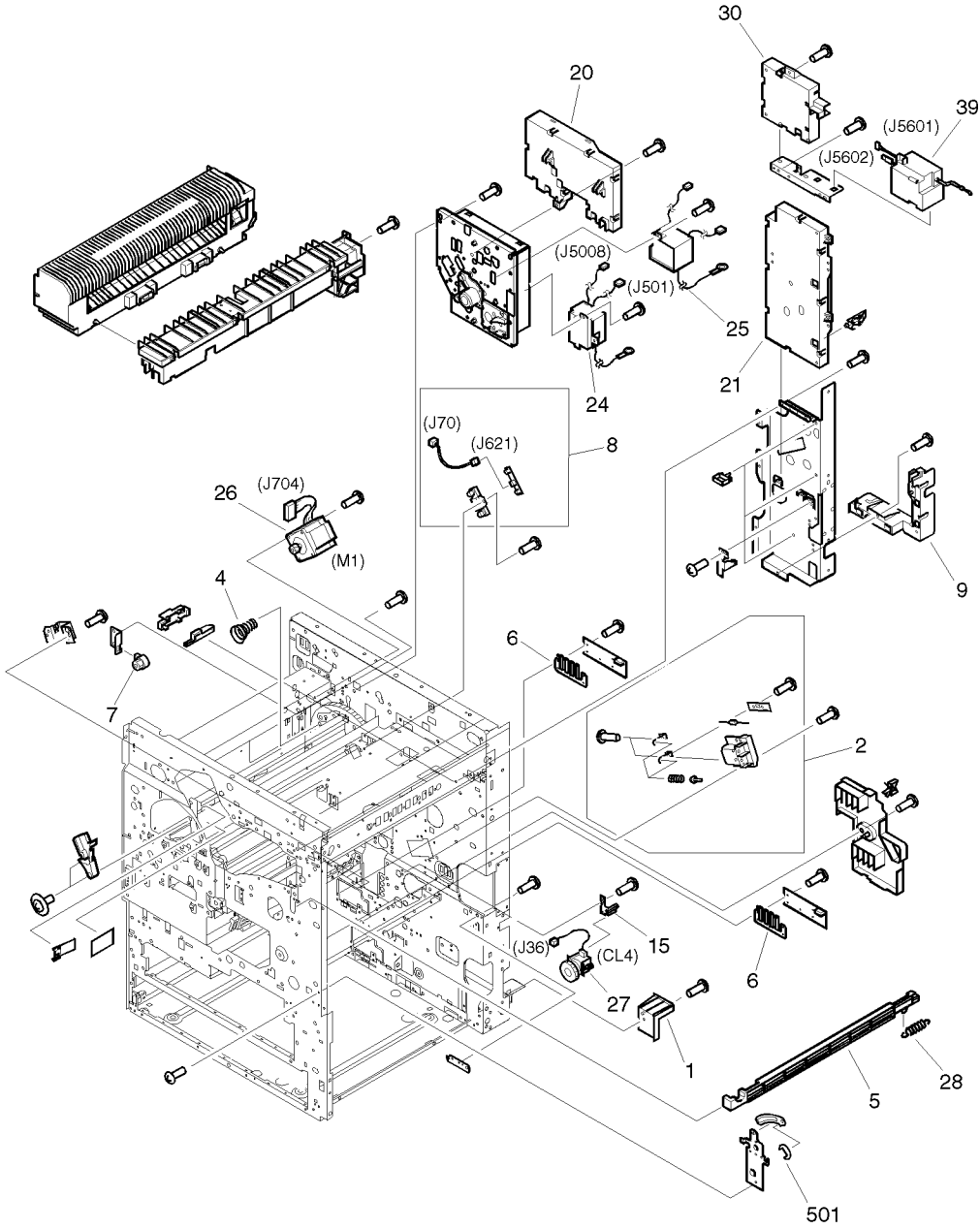

Figure 256. **Internal components (3 of 6)**

Table 65. Internal components parts (3 of 6)

Ref.	Description	Part number	Qty.
1	Cover, right rear lower corner	RA0-0074-000CN	1
2	Transfer drum contact assembly	RG5-3044-000CN	1
4	Spring, compression	RB1-9675-000CN	3
5	Rod, power switch	RB1-6463-000CN	1
6	Spring, leaf	RB1-6909-000CN	1
7	Gear, 11T	RB1-9424-000CN	1
8	Sensor assembly, color toner	RG5-3034-000CN	1
9	Cover, cable	RB1-9805-000CN	1
15	Mount, clutch	RB1-9828-000CN	1
20	Developer/imaging drum bias supply	RG5-3026-030CN	1
21	High-voltage power supply	RG5-3943-000CN	1
24	Post charger HV module	RH3-0211-000CN	1
25	Cleaning roller HV module	RH3-0228-000CN	1
26	Motor, carousel (M1)	RH7-1325-000CN	1
27	Clutch, transfer belt press (CL4)	RH7-5168-000CN	1
28	Spring, tension	RS5-2465-000CN	1
30	Separation discharge high-voltage converter PCA	RG5-3966-000CN	1
39	Separation discharge high-voltage converter	RH3-0234-000CN	1
501	Ring, E	XD2-1100-502CN	2

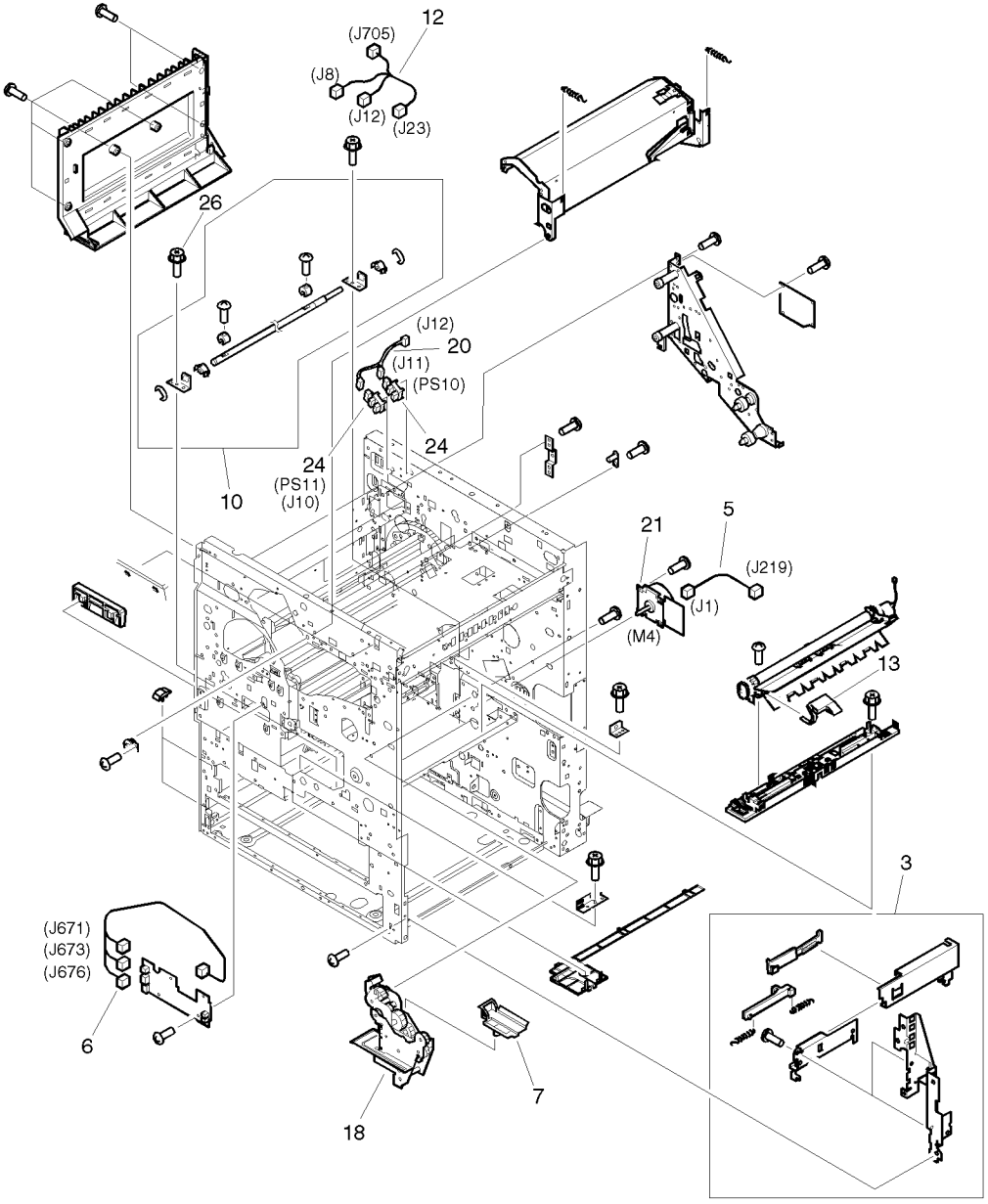

Figure 257. **Internal components (4 of 6)**

Table 66. Internal components parts (4 of 6)

Ref.	Description	Part number	Qty.
3	Tray rail assembly	RG5-1851-000CN	1
5	Cable, main motor	RG5-3942-000CN	1
6	Cable, carousel	RG5-3923-000CN	1
7	Cover, gear	RB1-9403-000CN	1
10	Transfer swing assembly	RG5-3010-000CN	1
12	Cable, delivery connector	RG5-3147-000CN	1
13	Lever, registration roller	RB1-9580-000CN	1
18	Main drive assembly	RG5-3066-000CN	1
20	Cable, delivery	RG5-3104-000CN	1
21	Motor, main (M4)	RH7-1323-000CN	1
24	Photo-interrupter, IC, TLP1241	WG8-5362-000CN	1
26	Screw, RS, M3 x 6	XA9-0849-000CN	10

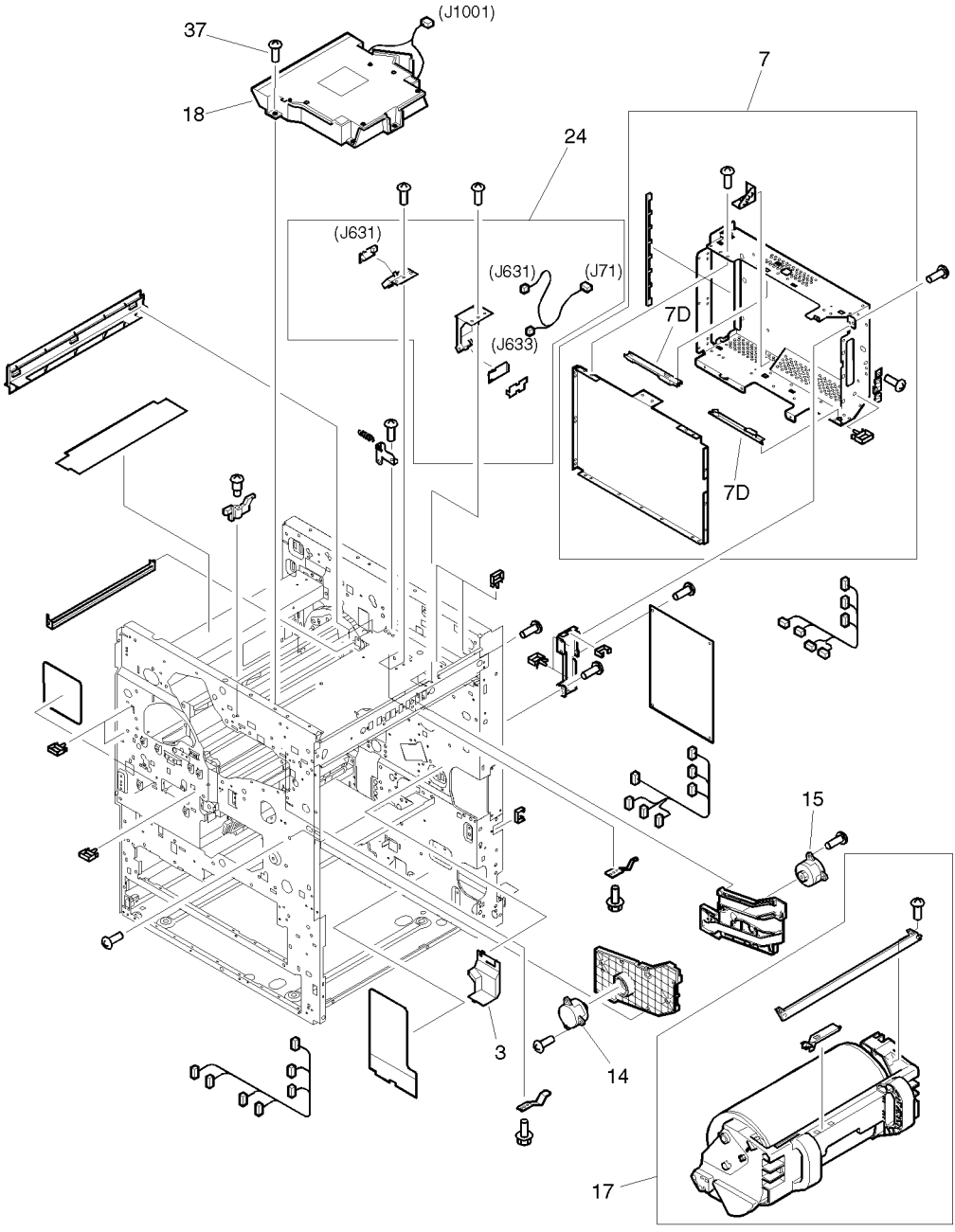

Figure 258. **Internal components (5 of 6)**

Table 67. Internal components parts (5 of 6)

Ref.	Description	Part number	Qty.
3	Cover, cable	RB1-9948-000CN	1
7	Shield case assembly	RG5-3023-000CN	1
7D	Rail, PCA	RB2-0005-000CN	1
14	Gear, 14T	RB1-9955-000CN	1
15	Gear, 14T	RB1-9956-000CN	1
17	Transfer drum	RG5-3039-000CN	1
18	Laser/scanner unit	RG5-3936-000CN	1
24	Sensor assembly, toner waste	RG5-3934-000CN	1
37	Screw, w/washer, M4 x 12	XA9-0940-000CN	4

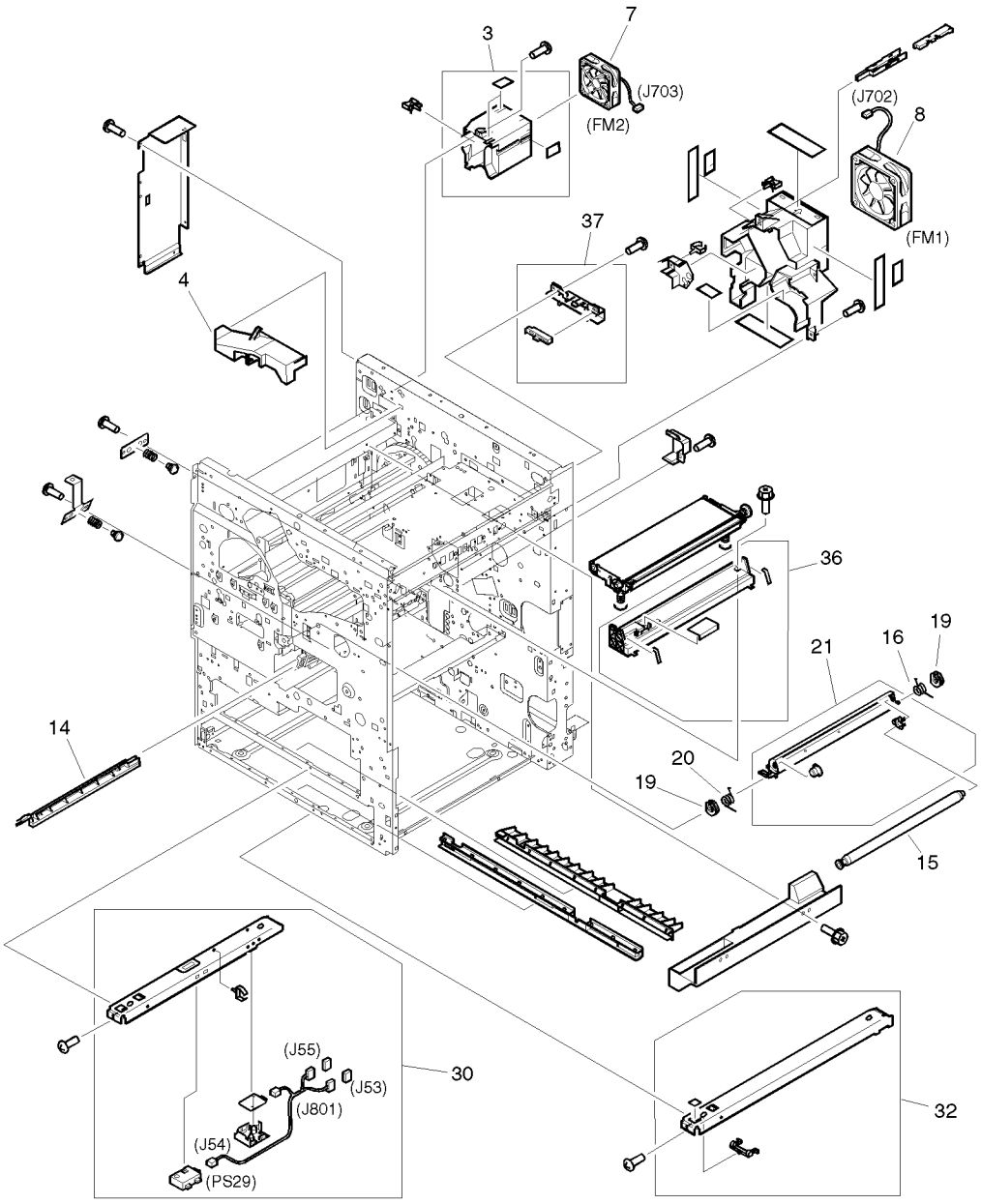

Figure 259. **Internal components (6 of 6)**

Table 68. Internal components parts (6 of 6)

Ref.	Description	Part number	Qty.
3	Holder, fan	RF5-2025-000CN	1
4	Duct	RB1-9682-000CN	1
7	Fan 2 (FM2)	RH7-1373-000CN	1
8	Fan 1 (FM1)	RH7-1330-000CN	1
14	Static charge eliminator assembly	RG5-3973-000CN	1
15	Cleaning roller assembly	RG5-3975-000CN	1
16	Spring, torsion	RS5-2698-000CN	1
19	Bushing	RS5-1319-000CN	2
20	Spring, torsion	RS5-2697-000CN	1
21	Transfer drum cleaner holder assembly	RG5-3111-000CN	1
30	Cassette crossmember assembly	RG5-3089-000CN	1
32	Rail, tray 3	RF5-1396-000CN	1
36	Transfer mount assembly	RG5-3008-000CN	1
37	Sensor slider assembly	RG5-3131-000CN	1

Drum/cartridge drive assembly

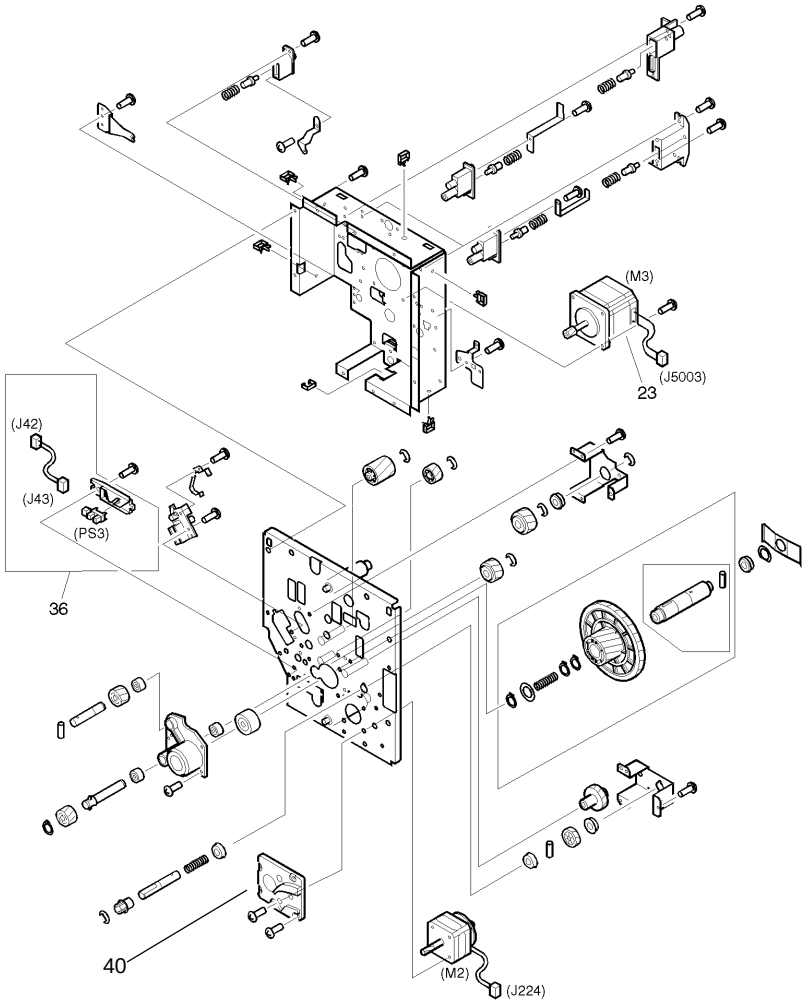

Figure 260. Drum/cartridge drive assembly

Table 69. Drum/cartridge drive assembly parts

Ref.	Description	Part number	Qty.
—	Drum/cartridge drive assembly	RG5-3065-000CN	1
23	Motor, cartridge (M3)	RH7-1328-000CN	1
36	Developing rotary	RG5-3033-000CN	1
40	ITD Guide	RB2-010-000CN	1

Delivery drive assembly

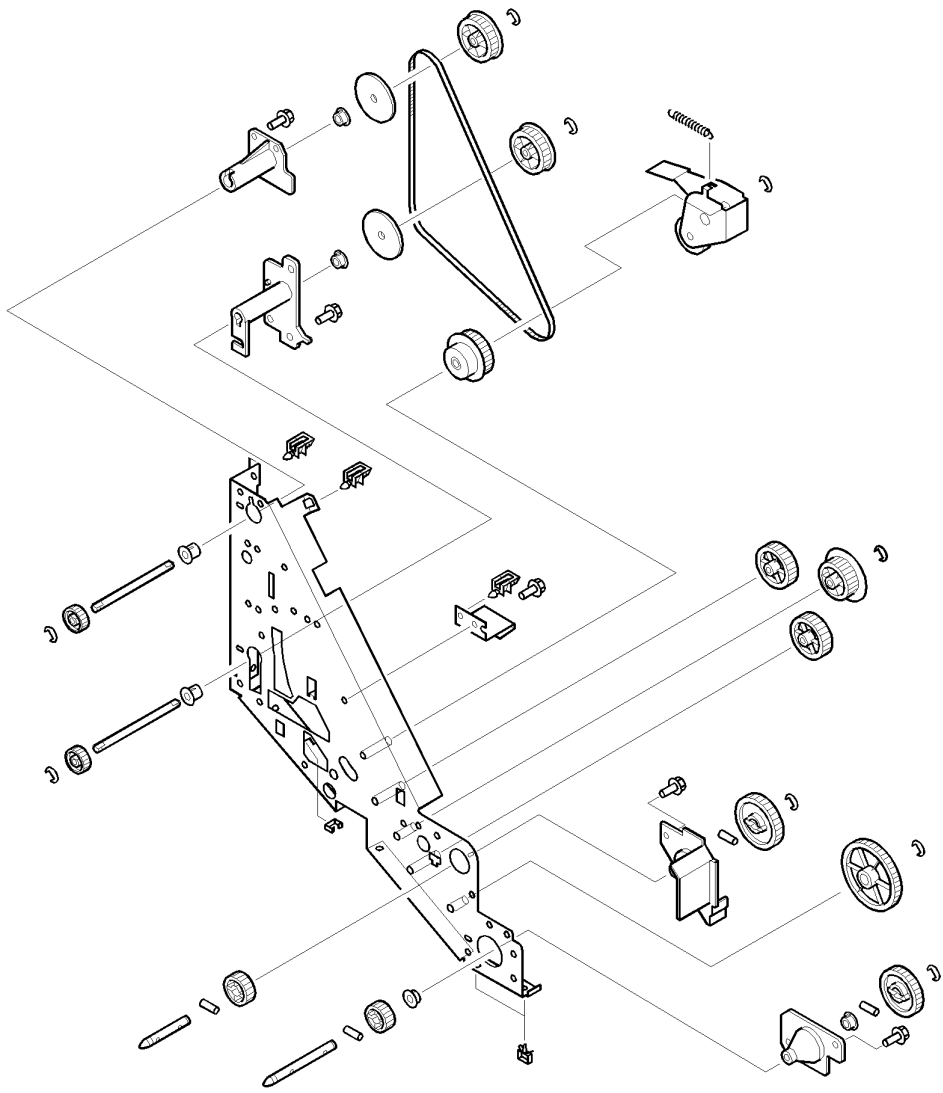

Figure 261. **Delivery drive assembly**

Table 70. Delivery drive assembly parts

Ref.	Description	Part number	Qty.
—	Delivery drive assembly	RG5-3067-000CN	1

Tray 3 assembly

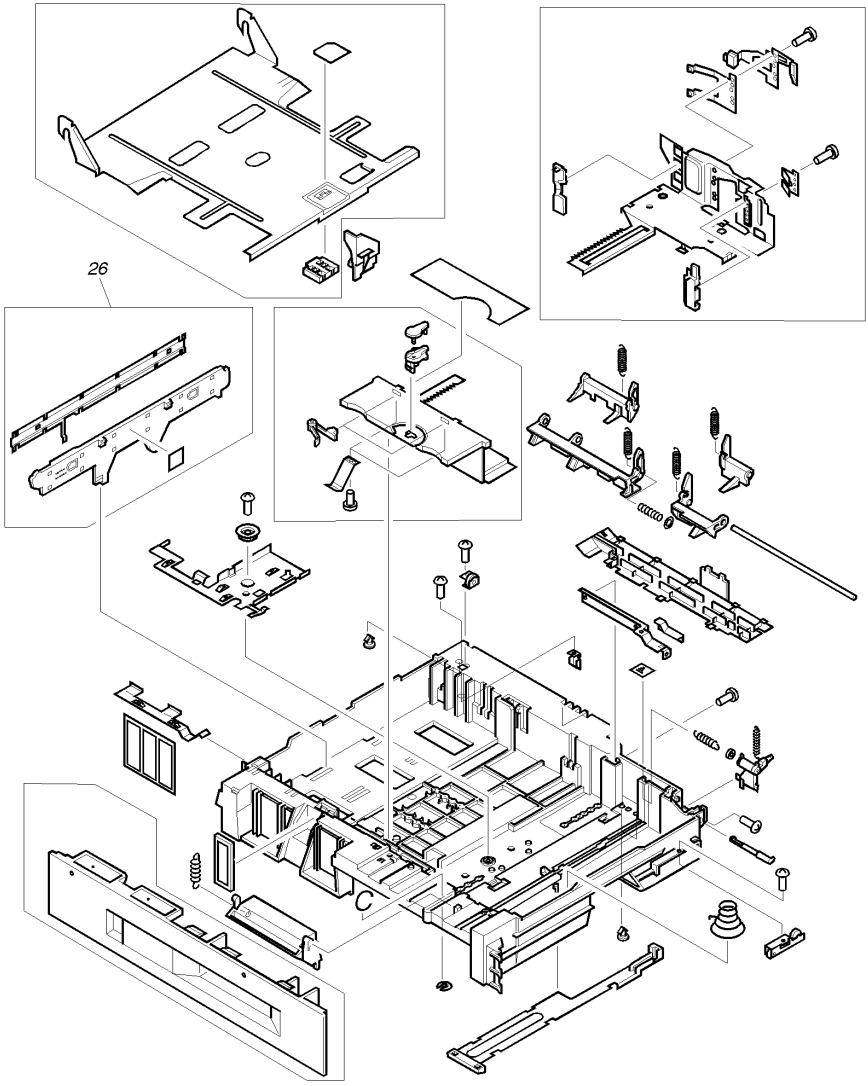

Figure 262. **Tray 3 assembly**

Table 71. Tray 3 assembly parts

Ref.	Description	Part number	Qty.
—	Tray 3	—	1
26	Plate, end	RF5-1484-000CN	1

Tray 2 assembly

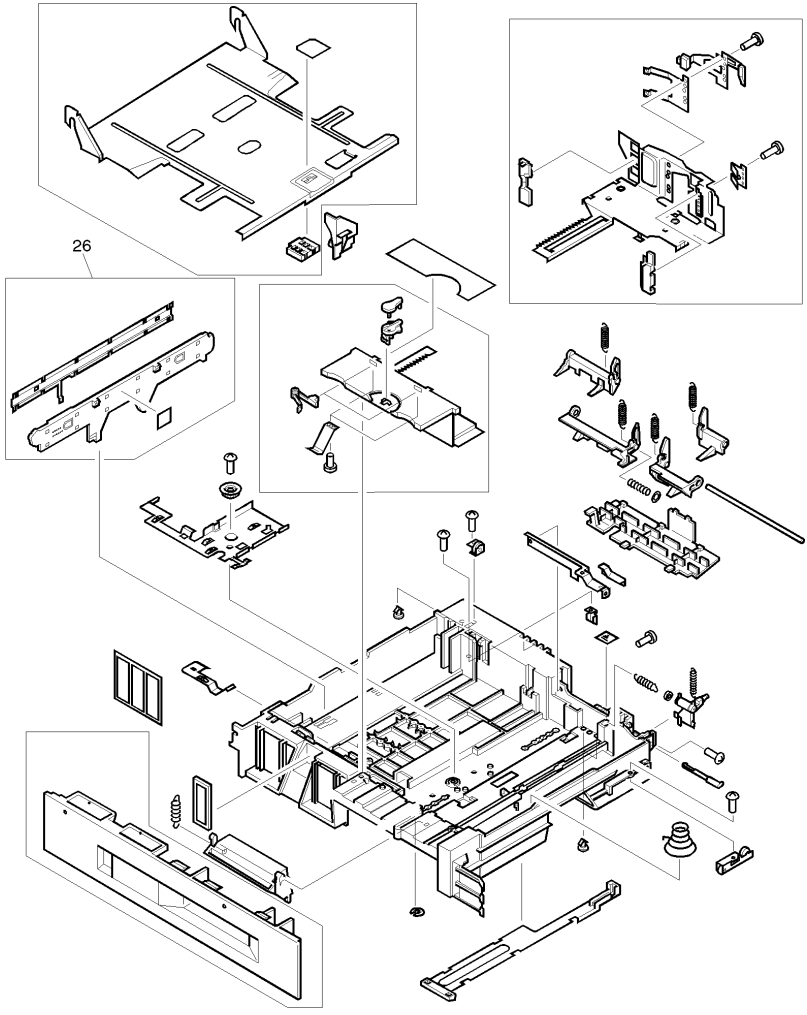

Figure 263. **Tray 2 assembly**

Table 72. Tray 2 assembly

Ref.	Description	Part number	Qty.
—	Tray 2	R98-1005-000CN	1
26	Plate, end	RF5-1484-000CN	1

Paper pick-up assembly

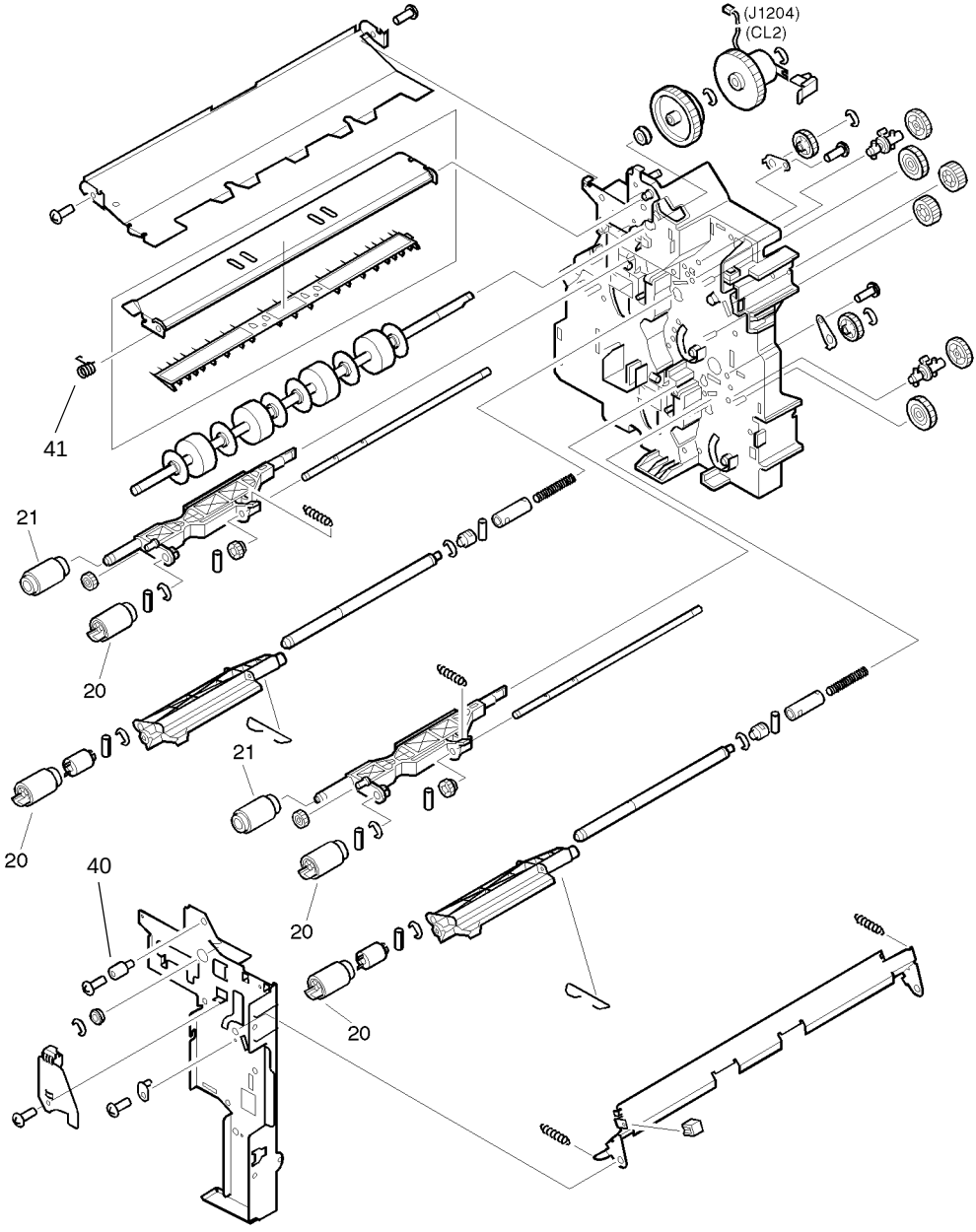

Figure 264. **Paper pick-up assembly (1 of 3)**

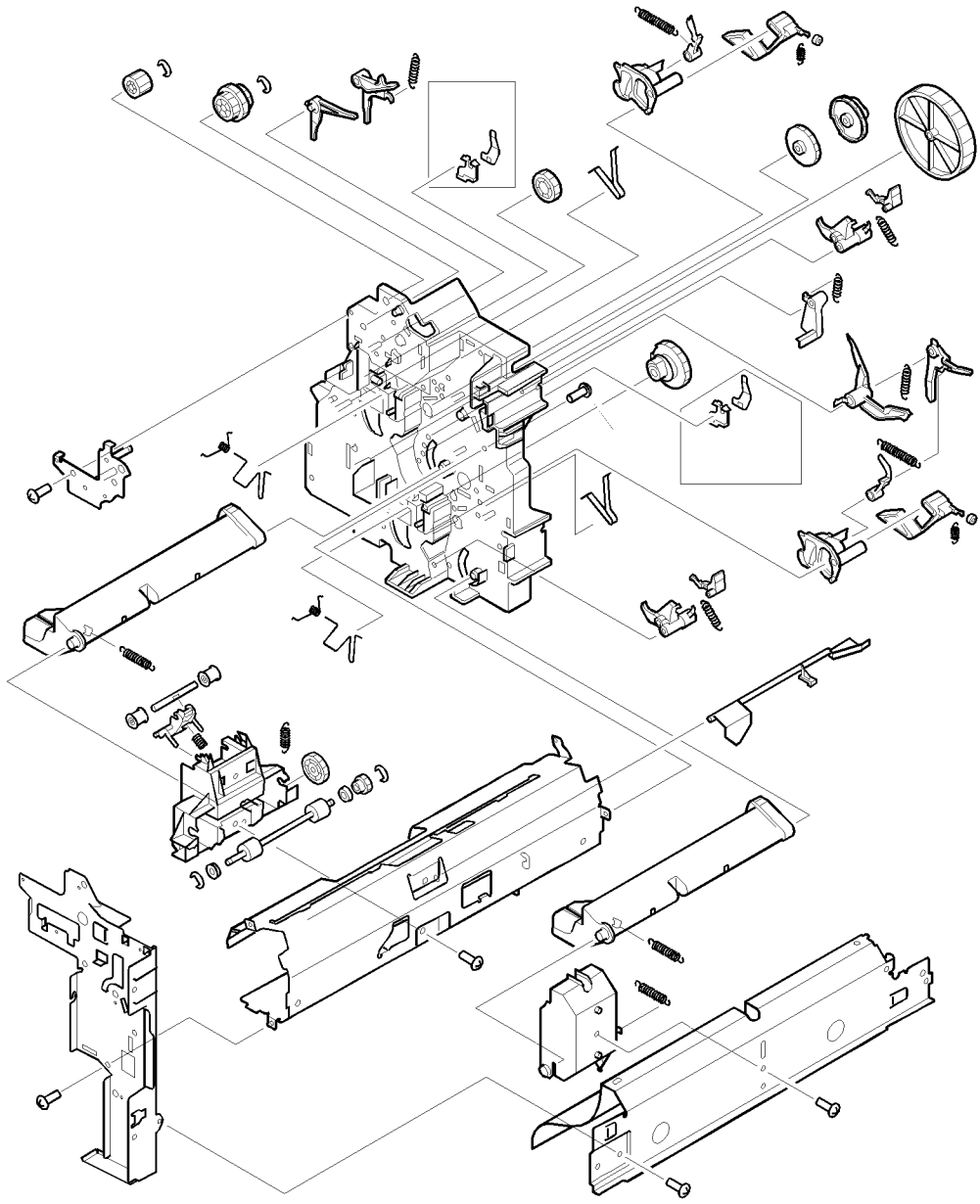

Figure 265. **Paper pick-up assembly (2 of 3)**

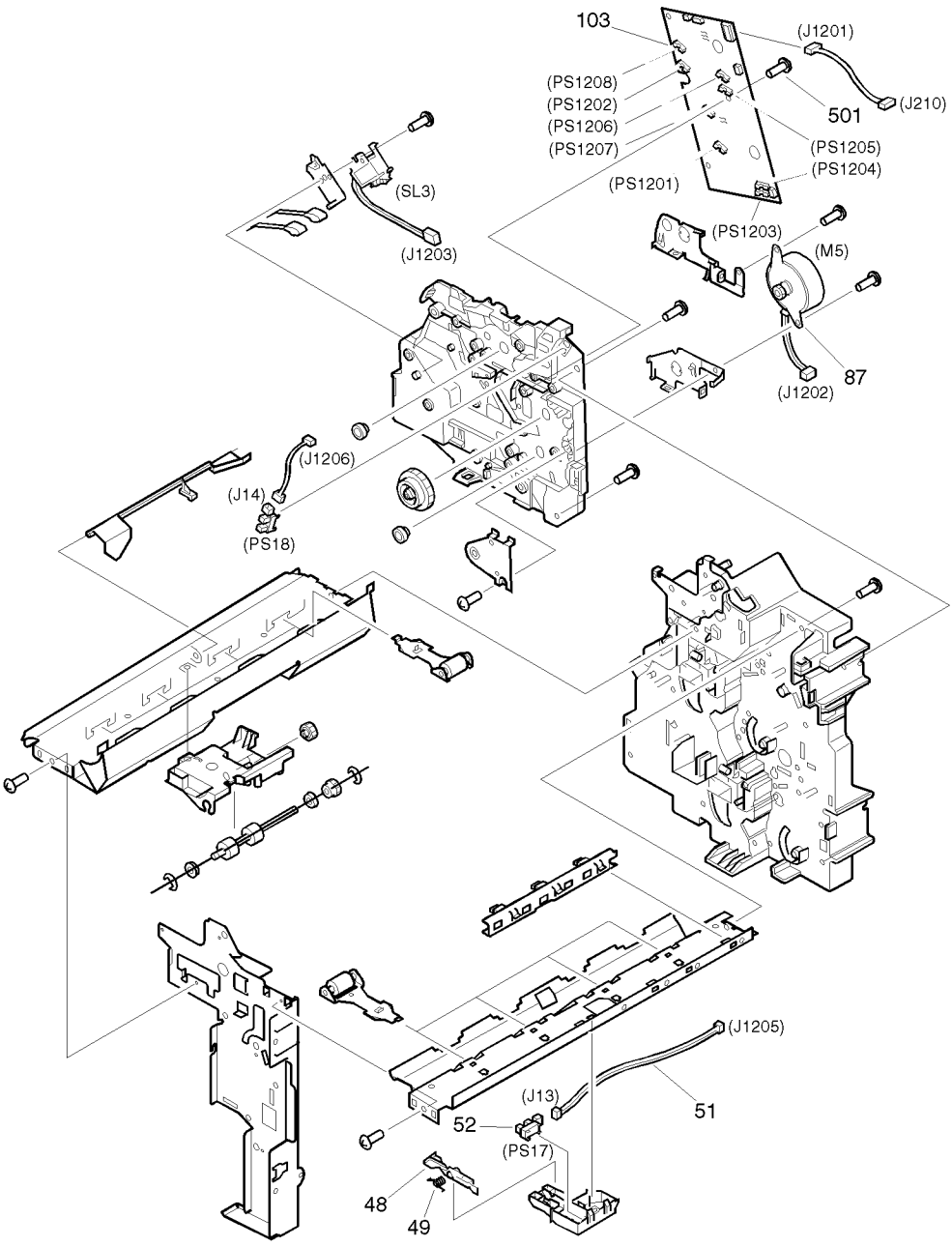

Figure 266. **Paper pick-up assembly (3 of 3)**

Table 73. Paper pick-up assembly parts

Ref.	Description	Part number	Qty.
—	Paper pick-up assembly	RG5-3132-000CN	1
20	Roller, feed	RF5-1834-000CN	1
21	Roller, pick-up	RF5-1835-000CN	2
40	Pin	RB1-0153-000CN	1
41	Torsion spring	RB1-6589-000CN	1
48	Flag, paper sensing	RB1-6557-000CN	1
49	Spring, torsion	RB1-6558-020CN	1
51	Arm, sensor	RG5-1859-000CN	1
52	Photo-interrupter, IC, TLP1230	WG8-0291-000CN	1
87	Motor, pick-up (M5)	RH7-1350-000CN	1
103	PCA, paper pick-up	RG5-1860-000CN	1
501	Screw, tapping, pan head, M4 x 10	XB4-7401-007CN	6

Registration frame assembly

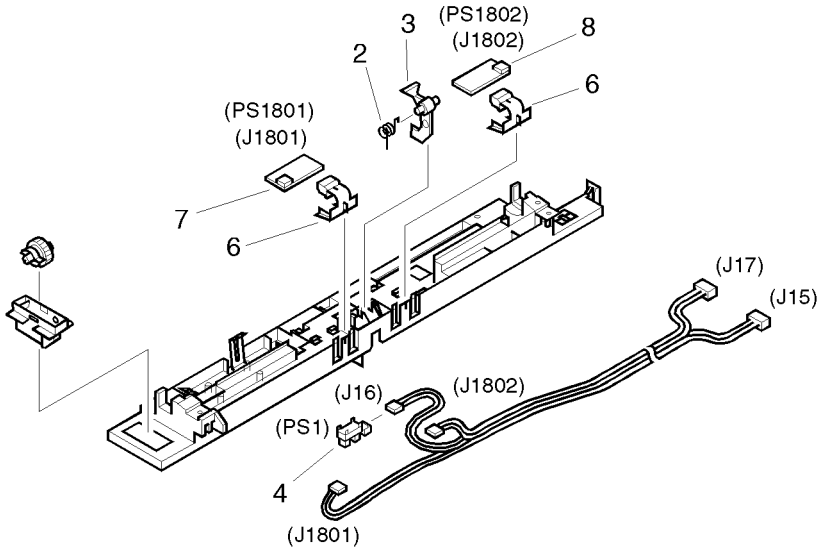

Figure 267. Registration frame assembly

Table 74. Registration frame assembly parts

Ref.	Description	Part number	Qty.
—	Registration frame assembly	RG5-3007-000CN	1
2	Spring, torsion	RB1-6409-000CN	1
3	Arm, sensor	RB1-6417-000CN	1
4	PCA, photo-interrupter, IC, TLP1240	WG8-5210-000CN	1
6	Cover, sensor	RB1-9586-000CN	1
7	PCA, photosensor	RG5-3032-000CN	1
8	PCA, photosensor	RG5-3079-000CN	1

Registration roller assembly

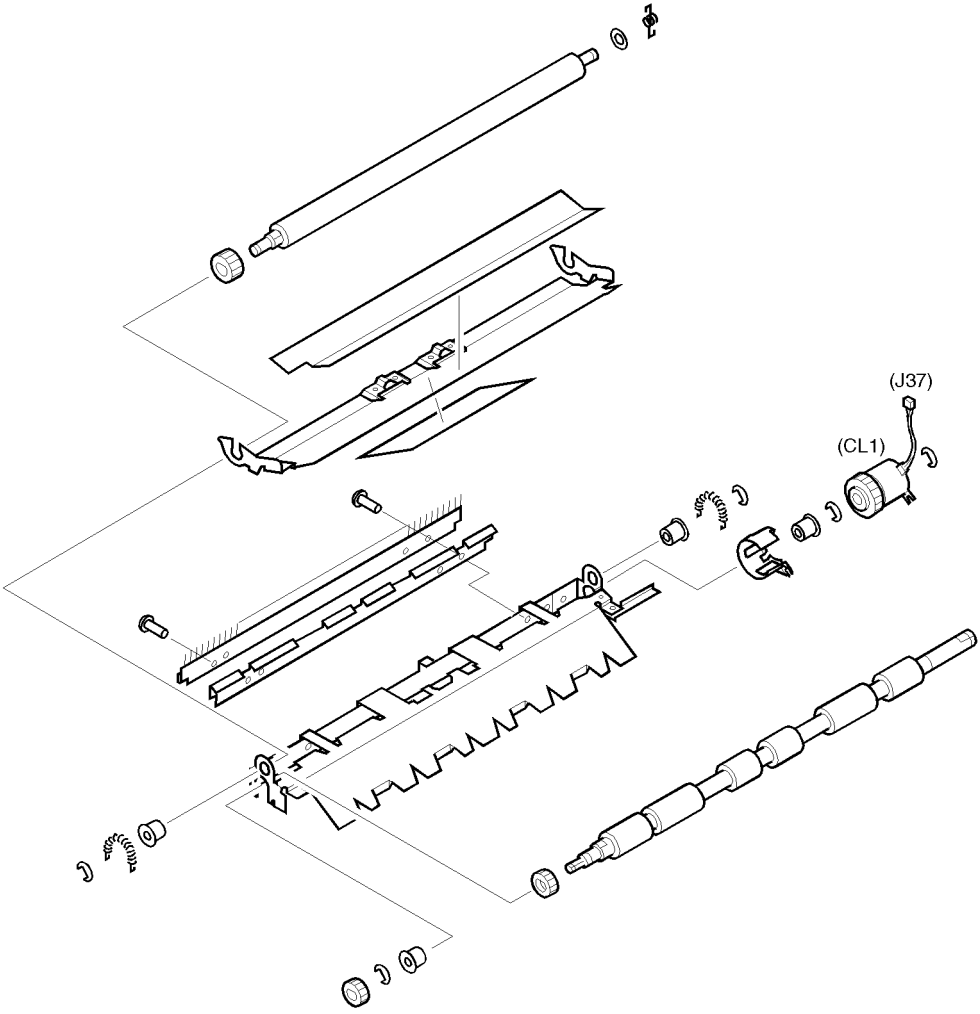

Figure 268. **Registration roller assembly**

Table 75. Registration roller assembly parts

Ref.	Description	Part number	Qty.
—	Registration roller assembly	RG5-3009-000CN	1

Feeder assembly

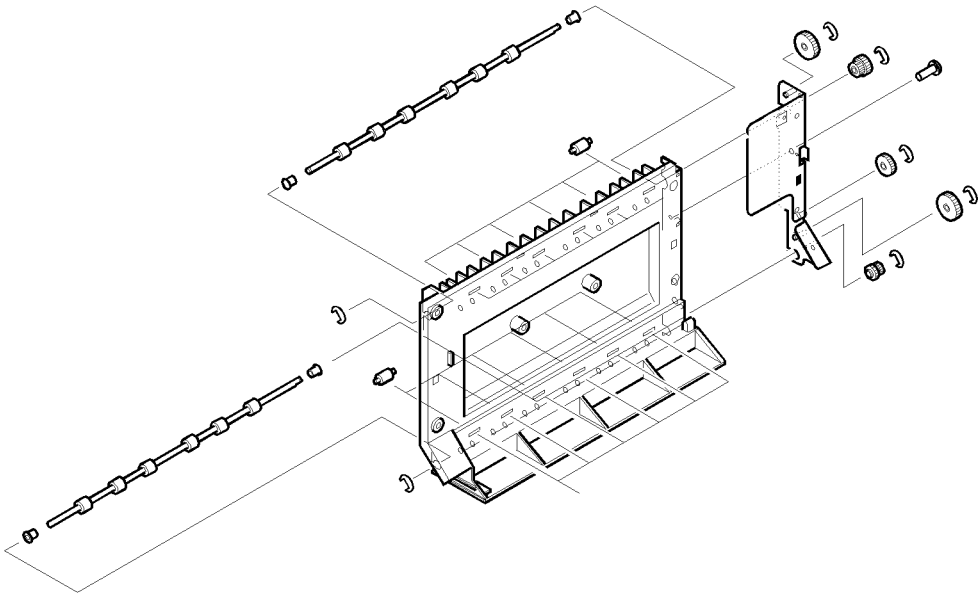

Figure 269. **Feeder assembly**

Table 76. Feeder assembly parts

Ref.	Description	Part number	Qty.
—	Feeder assembly	RG5-3059-000CN	1

Tray 1 pick-up assembly

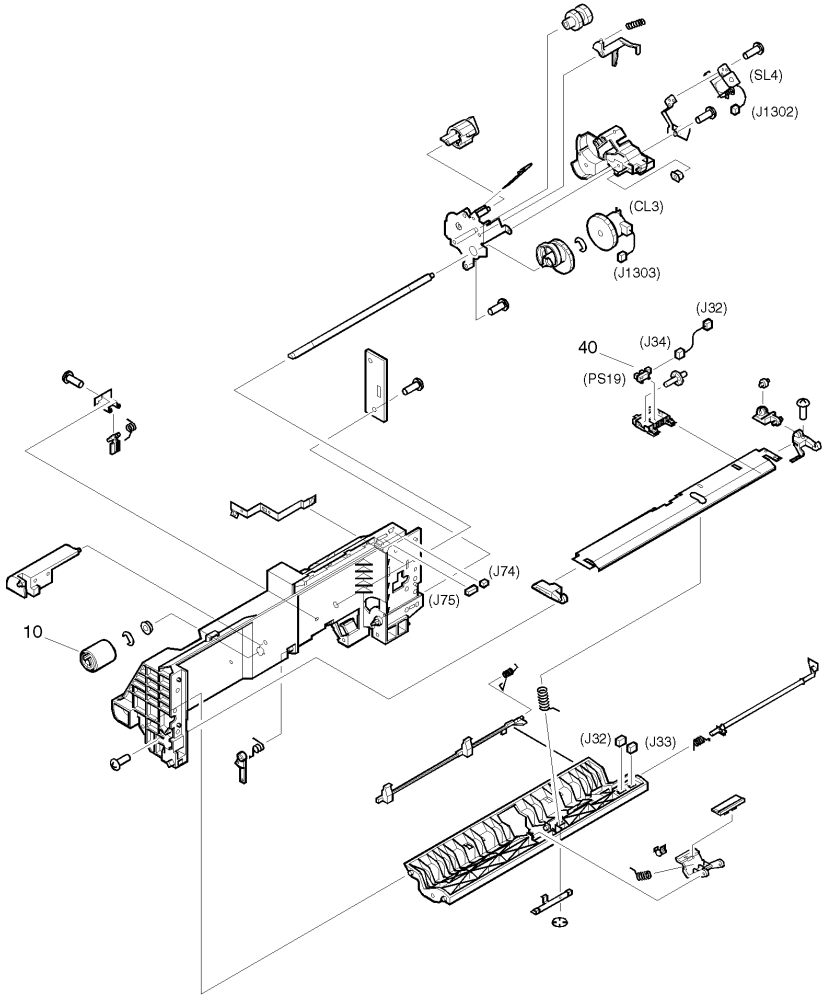

Figure 270. **Tray 1 pick-up assembly**

Table 77. Tray 1 pick-up assembly parts

Ref.	Description	Part number	Qty.
—	Tray 1 pick-up assembly	RG5-3054-000CN	1
10	Roller, tray 1 pick-up	RB1-9526-000CN	1
40	Photo-interrupter, IC, TLP1240	WG8-5210-000CN	1

Tray 1 assembly

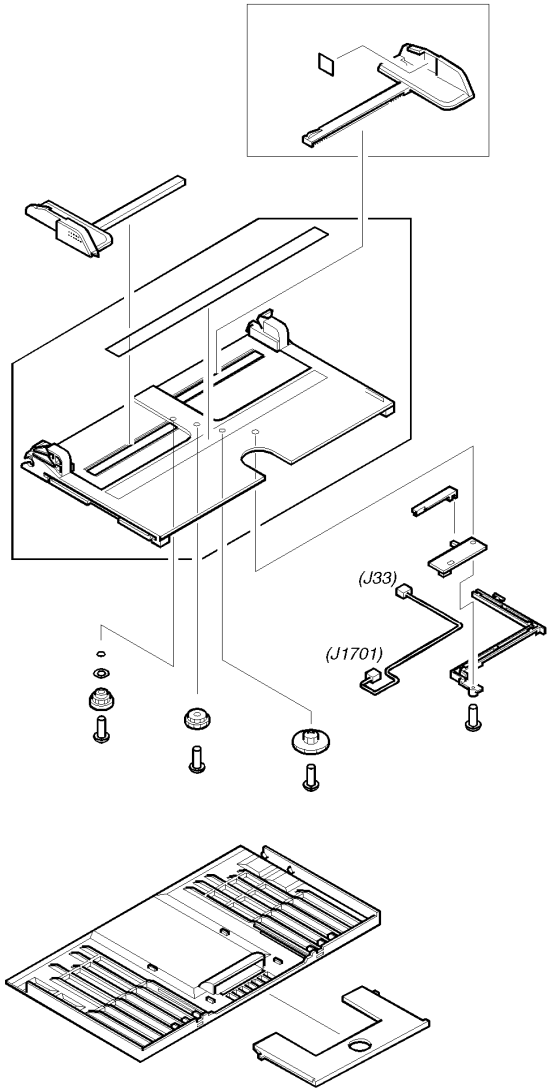

Figure 271. **Tray 1 assembly**

Table 78. Tray 1 assembly parts

Ref.	Description	Part number	Qty.
—	Tray 1 assembly	RG5-3134-000CN	1

Delivery assembly

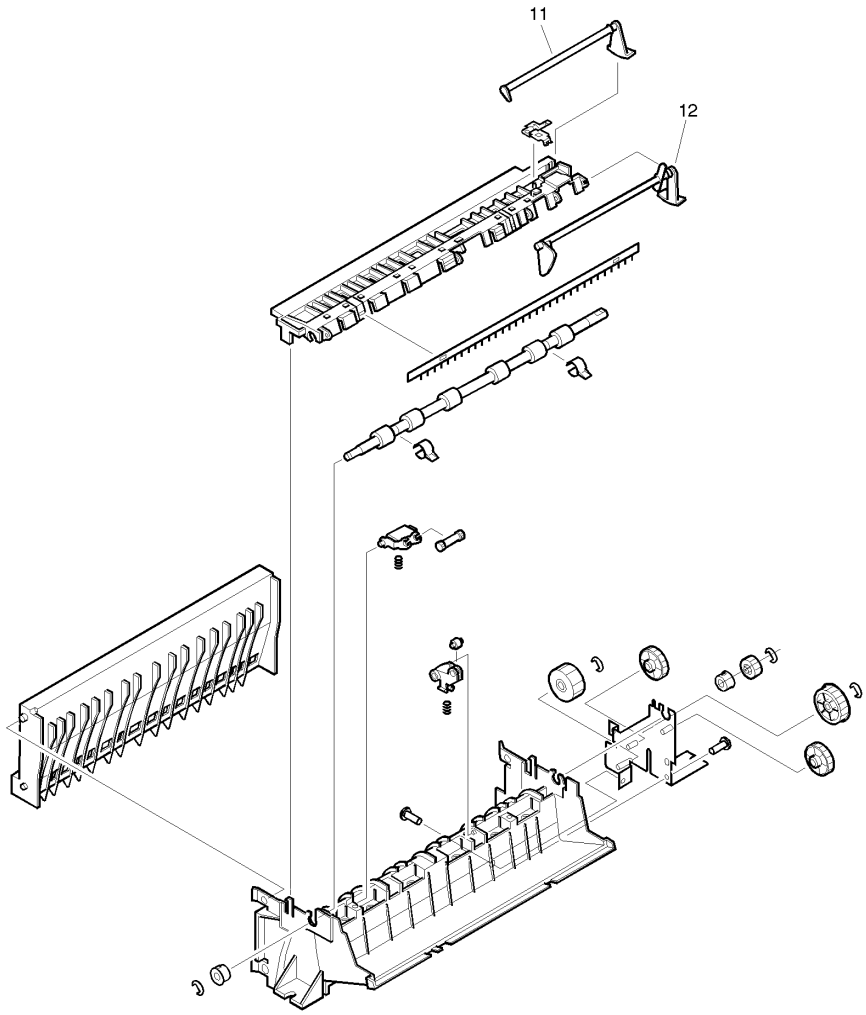

Figure 272. Delivery assembly

Table 79. Delivery assembly parts

Ref.	Description	Part number	Qty.
—	Delivery assembly	RG0-0110-000CN	1
11	Lever, paper sensing	RB1-6692-000CN	1
12	Lever, paper height	RA0-0112-000CN	1

Delivery cover assembly

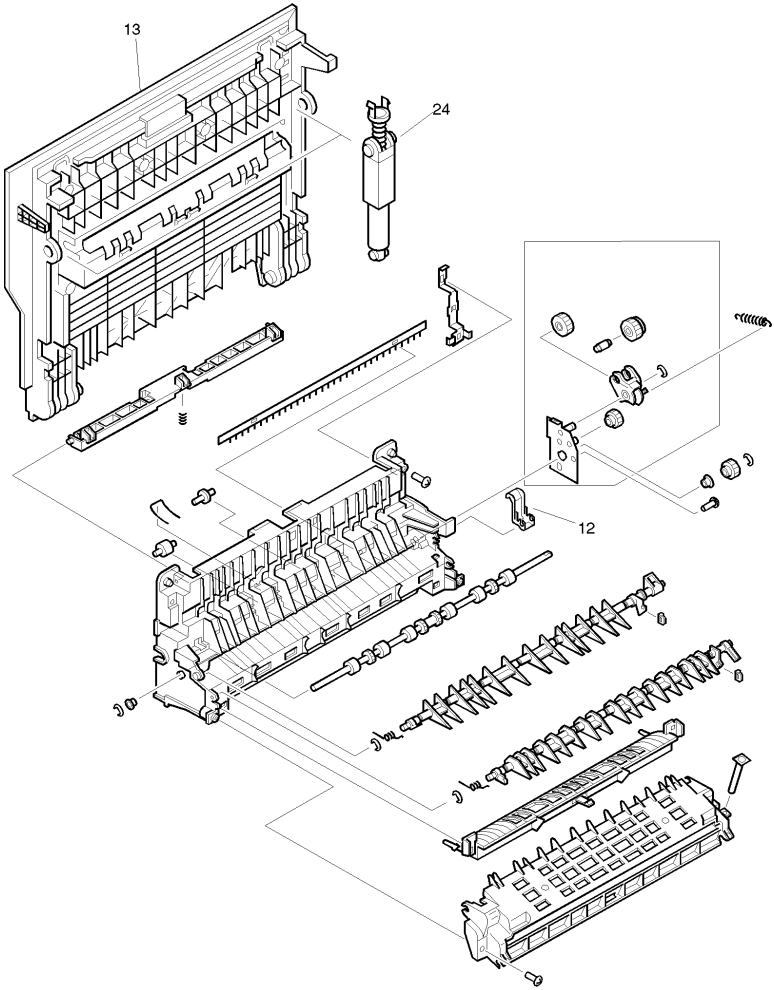

Figure 273. **Delivery cover assembly**

Table 80. Delivery cover assembly parts

Ref.	Description	Part number	Qty.
—	Delivery cover assembly	RG5-3108-000CN	1
12	Holder, flapper	RB1-9751-000CN	1
13	Cover, left upper	RB2-0057-000CN	1
24	Hinge, stopper (delivery)	RF5-2701-000CN	1

Transfer belt assembly

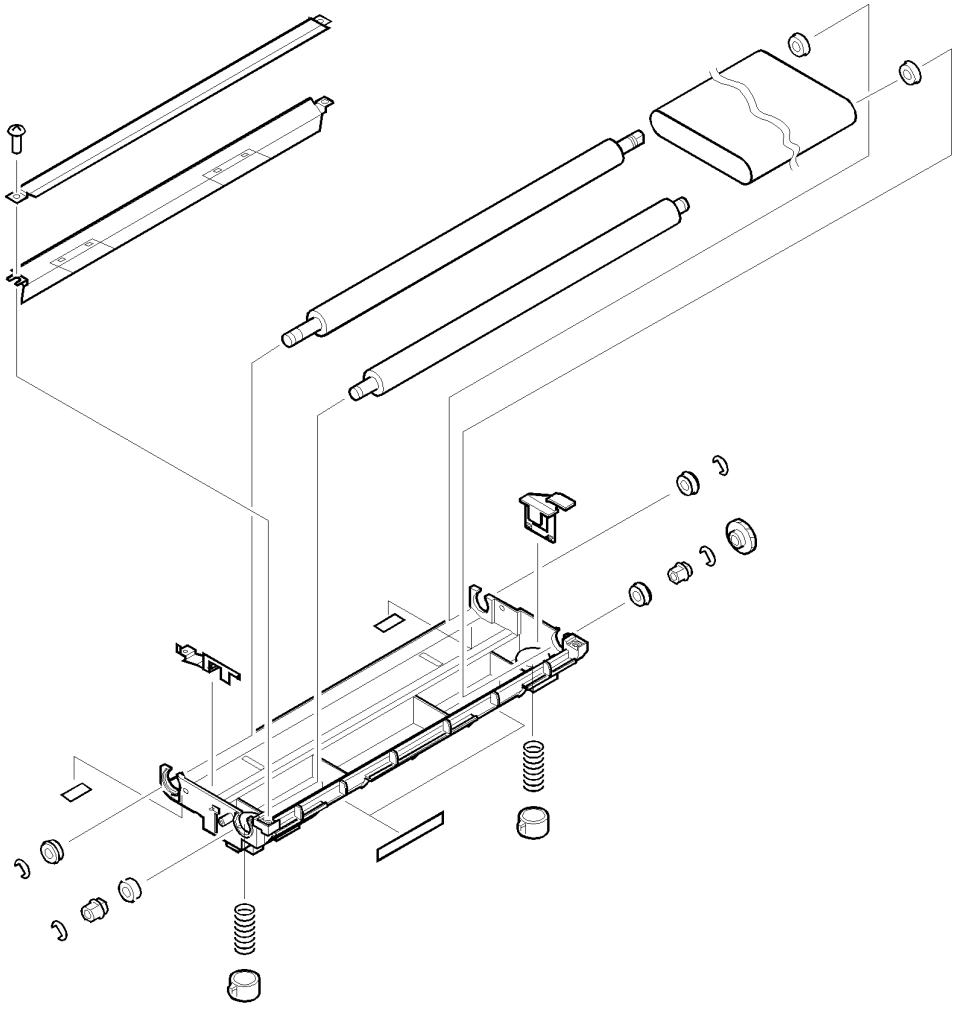

Figure 274. **Transfer belt assembly**

Table 81. Transfer belt assembly parts

Ref.	Description	Part number	Qty.
—	Transfer belt assembly	RG5-3047-000CN	1

Fuser assembly

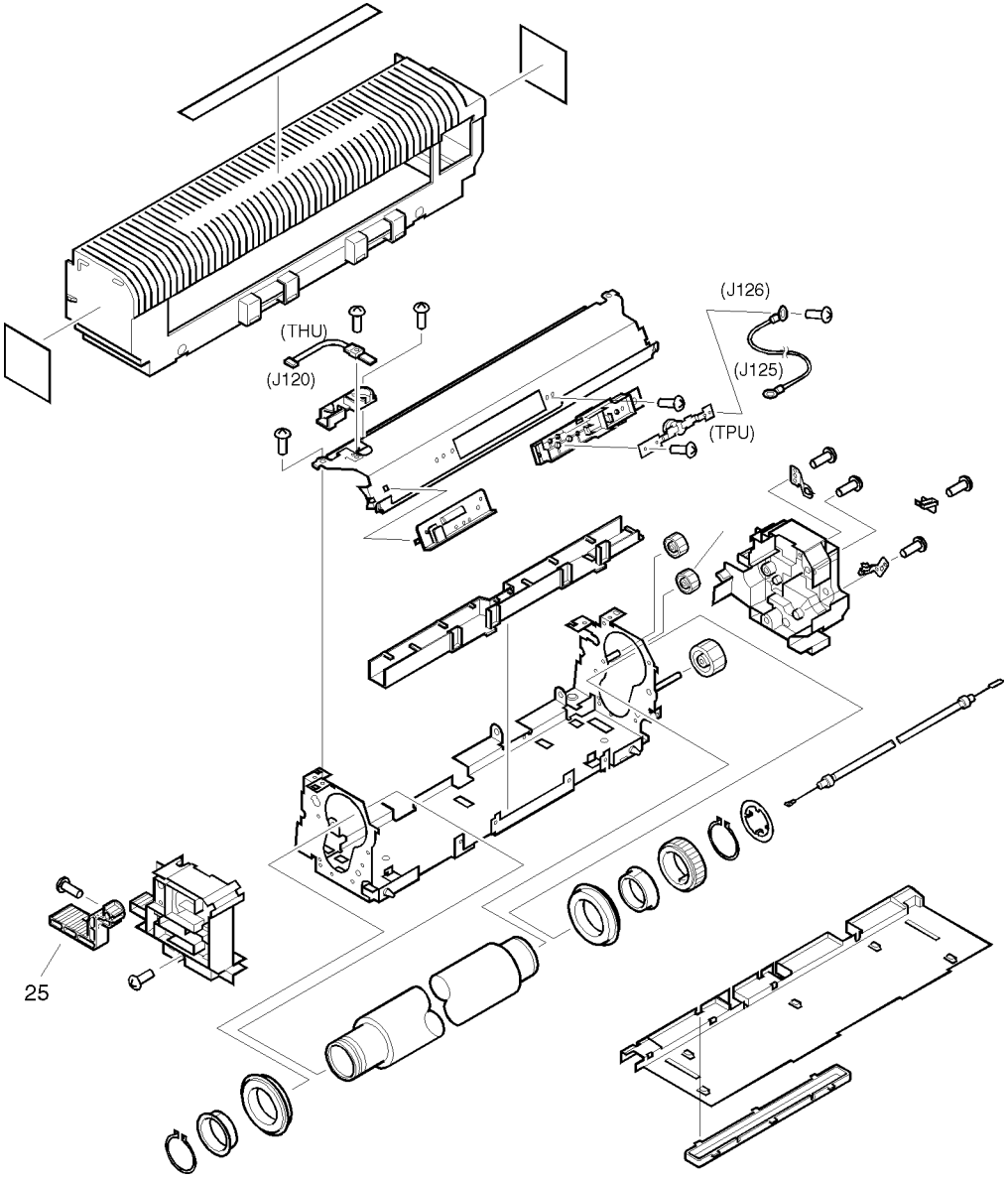

Figure 275. **Fuser assembly (1 of 2)**

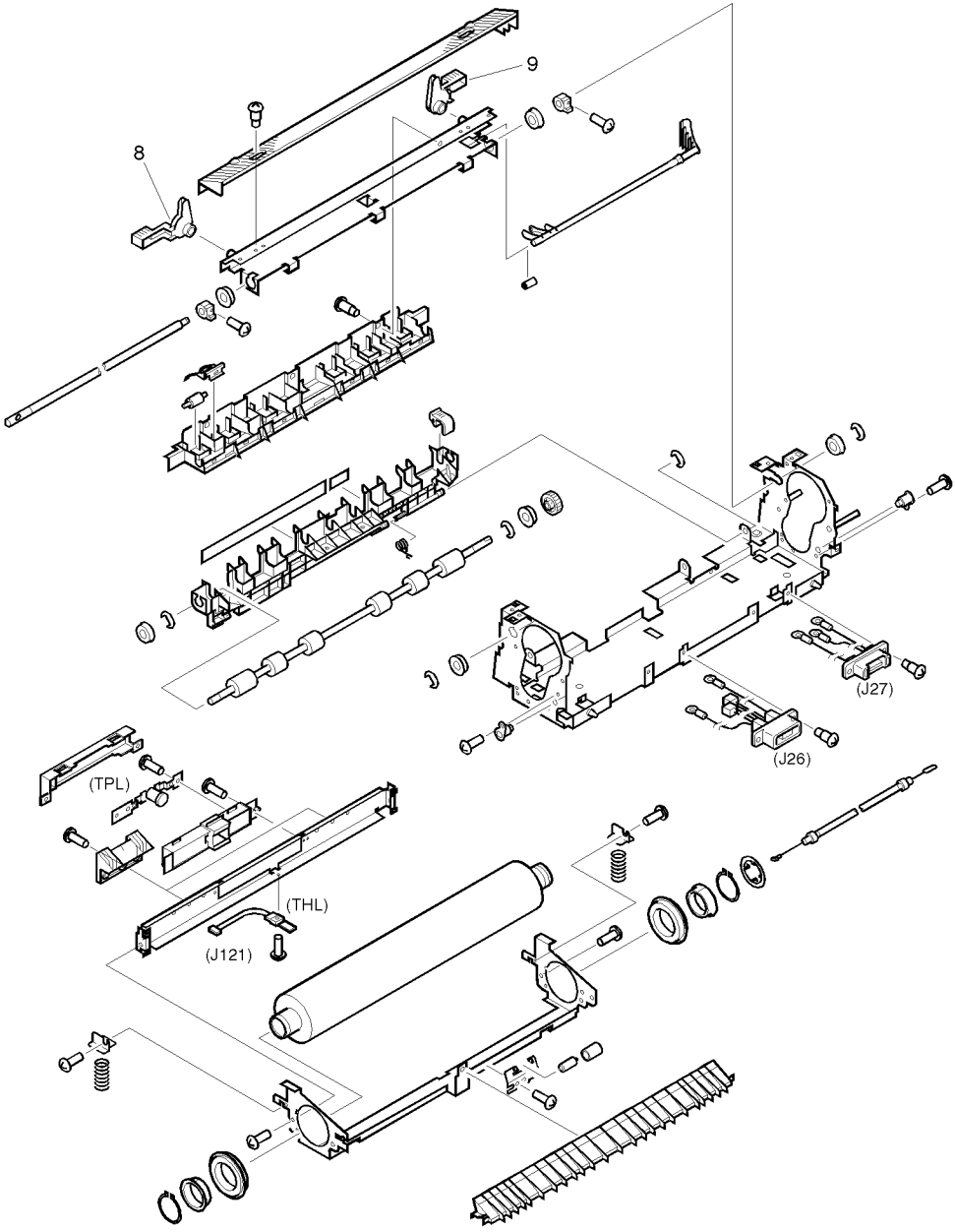

Figure 276. Fuser assembly (2 of 2)

Table 82. Fuser assembly parts

Ref.	Description	Part number	Qty.
—	Fuser assembly (120 V) Fuser assembly (220 V)	RG5-3060-000CN RG5-3061-000CN	1
8	Lever, holding, right	RB1-9704-000CN	1
9	Lever, holding, left	RB1-9705-000CN	1
25	Lever, release	RB1-9748-000CN	1

PCA assemblies

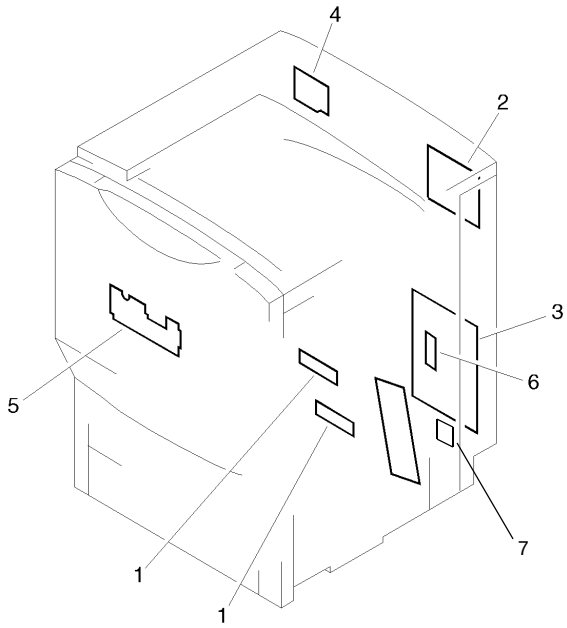

Figure 277. PCA assemblies

Table 83. PCA assembly parts

Ref.	Description	Part number	Qty.
1	PCA, cassette-size sensing	RG5-1845-000CN	1
2	PCA, main relay	RG5-3036-000CN	1
3	PCA, controller board PCA, controller board for HP CLJ 8550 MFP	RG5-3037-000CN FG2-9470-000CN	1
4	PCA, carousel motor (M1)	RG5-3084-020CN	1
5	PCA, subrelay	RG5-3085-000CN	1
6	PCA, tray 1	RG5-1884-000CN	1
7	PCA, ECO-2 assembly (HP CLJ 8550 MPF)	FG6-3597-000CN	
	Interface PCB assembly (HP CLJ 8550 MPF)	FG2-9545-000CN	
	Interface cable (HP CLJ 8550 MPF)	FG2-9479-000CN	
	IOT cable (HP CLJ 8550 MPF)	FG2-9476-000CN	
	ECO-2 cable (HP CLJ 8550 MPF)	FG2-9543-000CN	

2,000-sheet input unit components

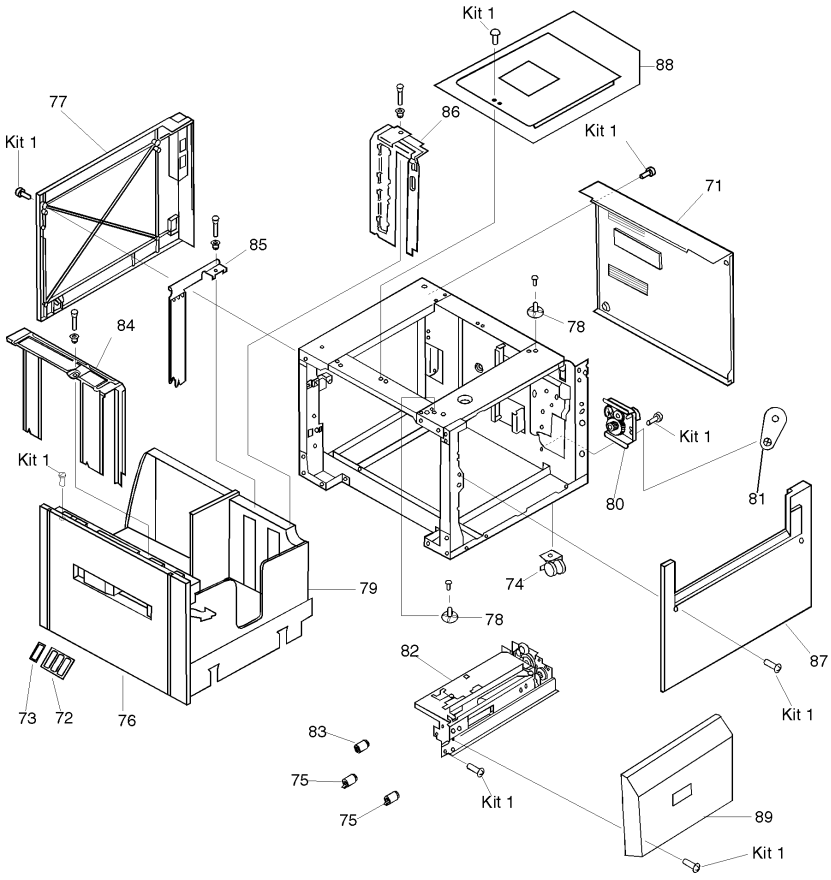

Figure 278. **2,000-sheet input unit covers and doors**

Table 84. 2,000-sheet input unit cover and door parts

Ref.	Description	Part number	Qty.
71	Cover, back	RB2-2519-000CN	1
72	Cassette size labels	RS5-8611-000CN	1
73	Cassette size plate	RB1-6894-000CN	1
74	Casters	XZ9-0442-000CN	4
75	Feed and separation rollers	RF5-1834-000CN	2
76	Cover, front (with LED window)	RF5-2568-000CN	1
77	Cover, left	RF5-2646-000CN	1
78	Locating pin, metal (positioning)	RF5-2556-000CN	3
79	Tray 4	RG5-3845-000CN	1
80	Paper deck drive assembly	RG5-3851-000CN	1
81	Paper deck drive bushing	RS5-1399-000CN	1
82	Paper pick-up assembly	RG5-3843-000CN	1
83	Roller, pick-up	RF5-1835-000CN	1
84	Plate paper limit back	RG5-4201-000CN	1
85	Plate paper limit middle	RG5-3849-000CN	1
86	Plate paper reference front	RF5-3850-000CN	1
87	Cover, rIght	RB1-7832-020CN	1
88	Cover, top (label included)	RG5-2644-000CN	1
89	Vertical transfer unit (VTU)	RG5-3854-000CN	1
Kit 1	Screws kit (2,000-sheet input unit)	RY7-5044-000CN	1

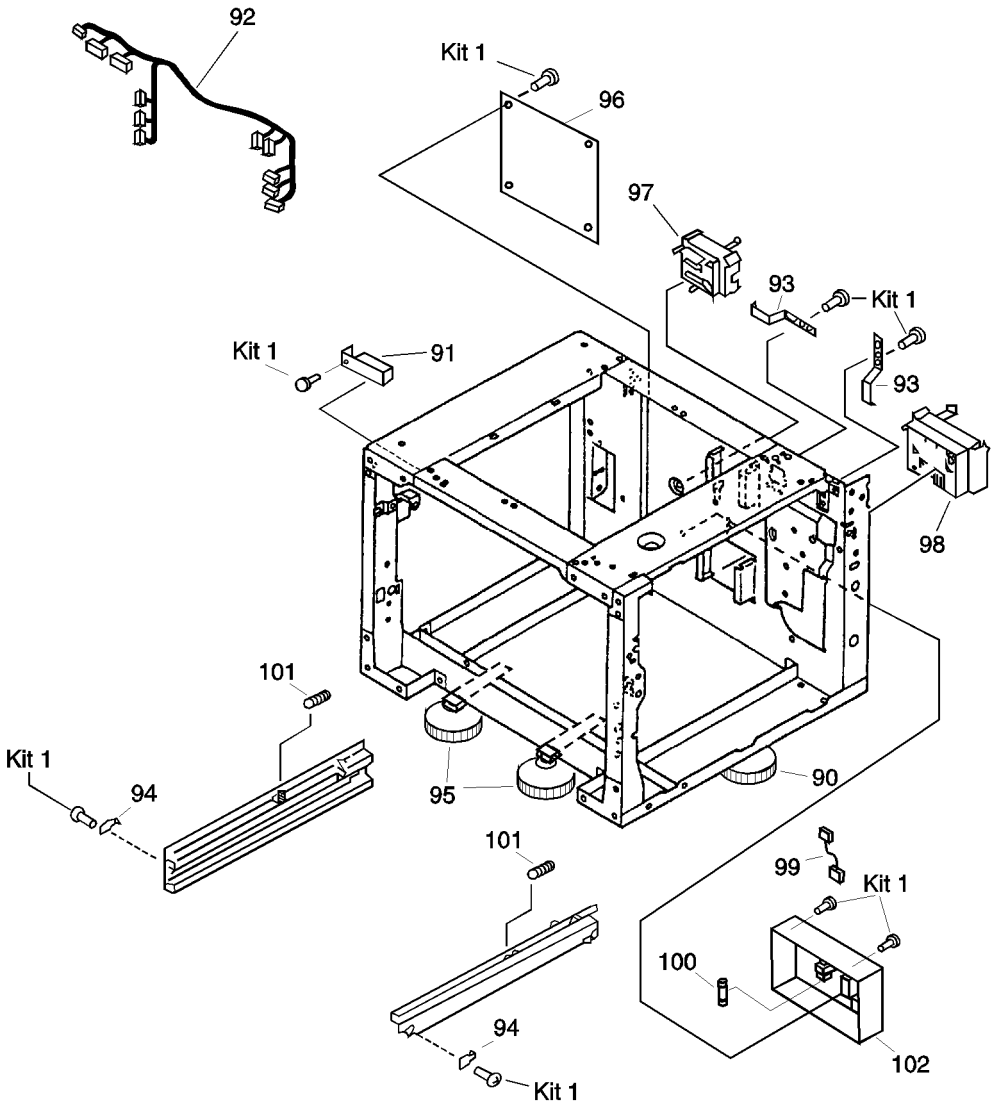

Figure 279. **2,000-sheet input unit internal components**

Table 85. 2,000-sheet input unit internal component parts

Ref.	Description	Part number	Qty.
91	Front LED PCA with holder and cable	RG5-4204-000CN	1
92	Cable, main	RG5-3919-000CN	1
93	Metallic retaining spring (spring leaf)	RB1-7835-000CN	2
94	Metallic retaining tab (plate stop)	RB1-7677-000CN	2
95	Outriggers	RG5-4205-000CN	1
96	Paper deck PCA	RG5-3908-000CN	1
97	Paper quantity sensor PCA assembly	RG5-2166-000CN	1
98	Paper size sensor PCA assembly	RG5-2168-000CN	1
99	Power supply cable	RG5-3909-000CN	1
100	Power supply fuse 250 V, 3.15 A	VD7-1893-151CN	1
101	Spring, tension	RS5-2561-000CN	2
102	Universal power supply assembly	RG5-4021-000CN	1
Kit 1	Screws kit (2,000-sheet input unit)	RY7-5044-000CN	1

Multi-bin mailbox components

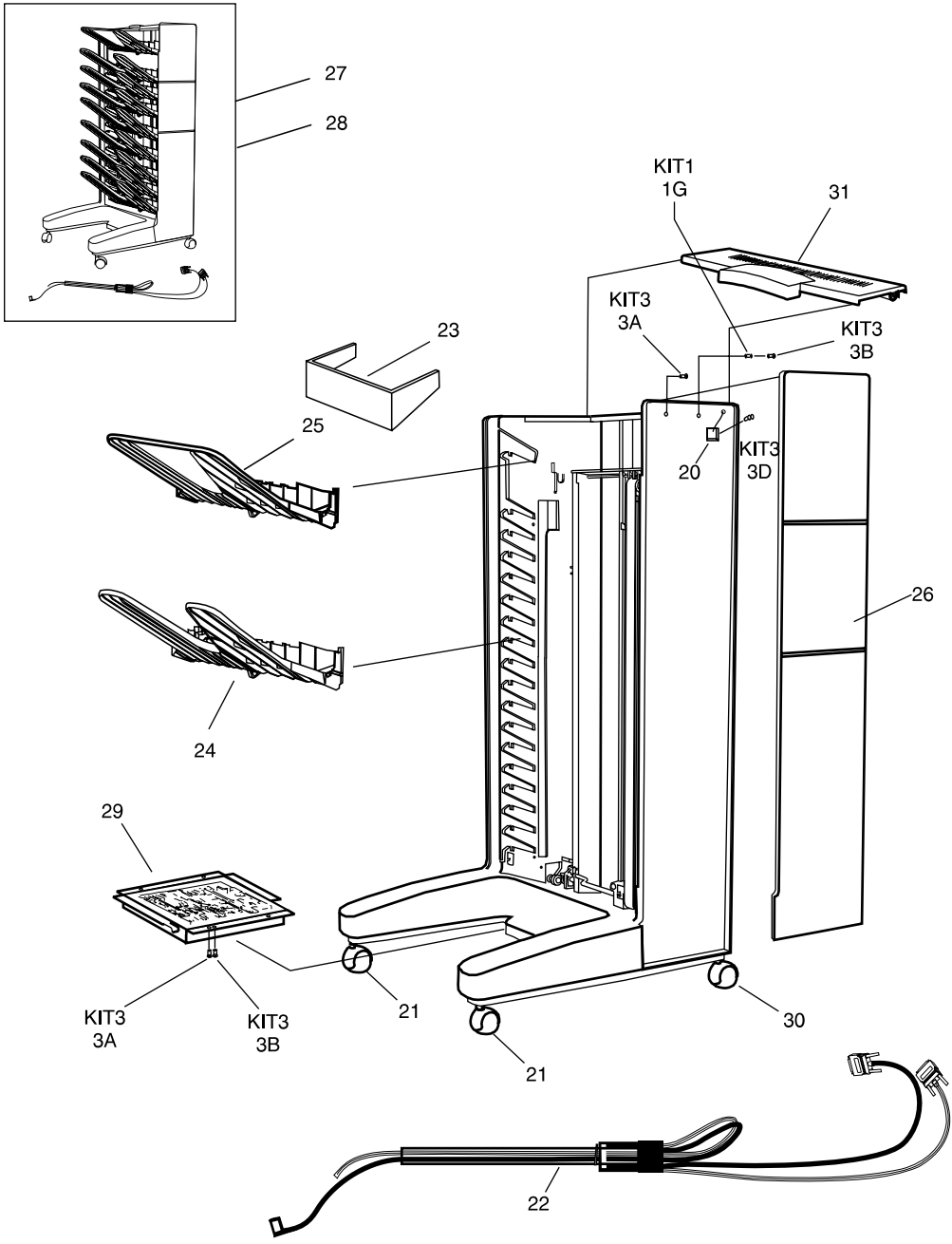

Figure 280. **Multi-bin mailbox components (1 of 3)**

Table 86. Multi-bin mailbox component parts (1 of 3)

Ref.	Description	Part number	Qty.
20	User LED PCA (with cable)	C4785-60515	1
21	Adjustable fixed caster	C4785-60511	2
22	Attachment assembly (rod, bracket, cables)	C4785-60516	1
23	Blind cover	C4785-60503	1
24	Face-down bin	C4785-60502	1
25	Face-up bin	C3764-60505	1
26	Cover, front	C4785-60504	1
27	Exchange multi-bin mailbox assembly **Note:** You must have a 2,000-sheet input unit in order to install a multi-bin mailbox.	C4785-69519	1
28	Multi-bin mailbox assembly (product number C4785A) **Note:** You must have a 2,000-sheet input unit in order to install a multi-bin mailbox.	C4785-60534	1
29	Multi-bin mailbox controller (with metal box)	C4785-60532	1
30	Caster, fixed	C4785-60510	2
31	Cover, top	C3764-60555	1
Kit 1	Plastic parts 1G Spacer plastic	C4785-60519	1
Kit 3	Hardware 3A Screw, Torx 3B Screw, Torx, T20, M4 x 10 3D Screw, Torx, T20, M4 x 12	C4785-60521	1
	Kit of rollers for jam access door	C4785-60526	1

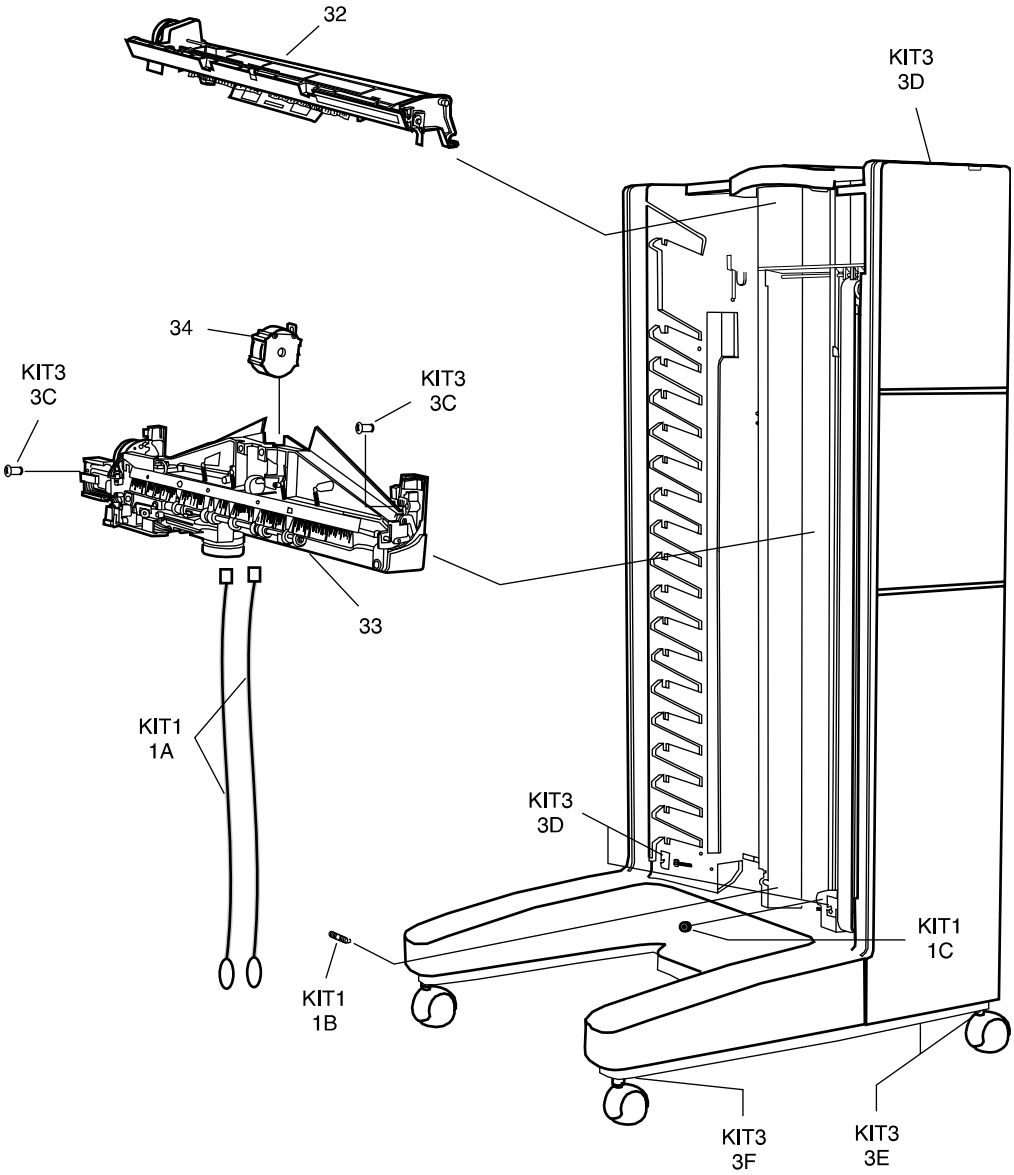

Figure 281. **Multi-bin mailbox components (2 of 3)**

Table 87. Multi-bin mailbox component parts (2 of 3)

Ref.	Description	Part number	Qty.
32	Flipper assembly (with cable “request”)	C4785-60529	1
33	Head assembly (with metallic tape)	C4785-60506	1
34	Metallic tape and housing assembly	C4785-60507	1
Kit 1	Plastic parts 1A Anti-curl string 1B Spring for anti-curl string 1C Pulley, small bottom	C4785-60519	1
Kit 3	Hardware 3C Screw, Torx, Tapping T20, M4 x 10 3D Screw, Torx, T20, M4 x 12 3E Screw, Torx, Tapping T10 3F Screw, Caster	C4785-60521	1

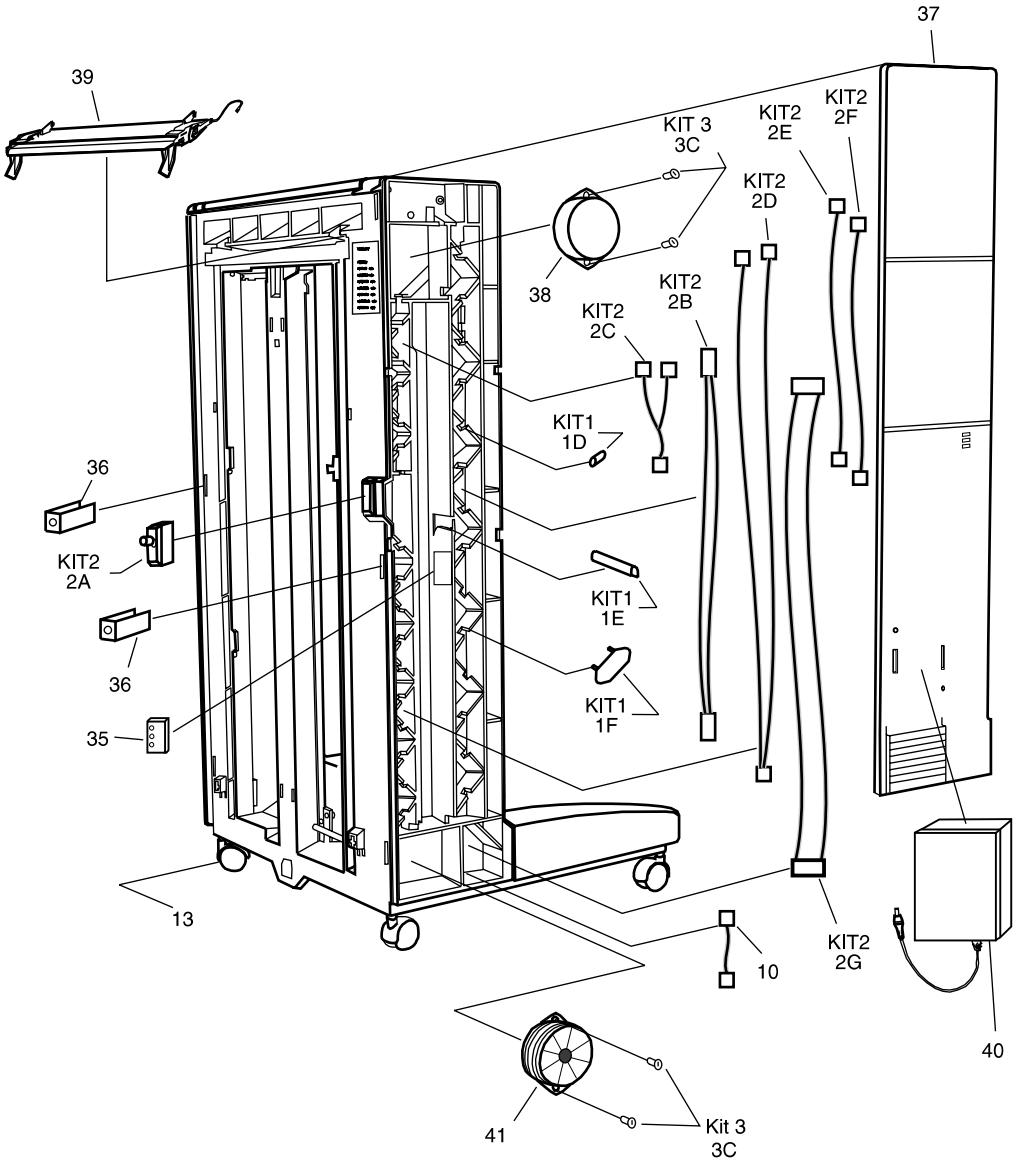

Figure 282. **Multi-bin mailbox components (3 of 3)**

Table 88. Multi-bin mailbox component parts (3 of 3)

Ref.	Description	Part number	Qty.
35	Diagnostic LED PCA (with cable)	C4785-60514	1
36	Attachment clip	C4785-60512	2
37	Back cover	C4785-60505	1
38	Delivery head position motor	C3764-60507	1
39	Input paper guide (nosepiece)	C3764-60561	1
40	Power supply	C4785-60501	1
41	Transport belt motor (with fan)	C4785-60518	1
Kit 1	Plastic parts 1D Cable holder round gasket 1E Flat cable holder edge 1F Flat cable holder	C4785-60519	1
Kit 2	Cables 2A Switch, interlock 2B Delivery head motor cable 2C Flipper sensor controller cable 2D Flipper encoder controller 2E Flipper motor controller 2F ESD cable 2G Delivery head assembly, flat cable	C4785-60520	1
Kit 3	Hardware 3C Screw, Torx, Tapping T20, M4 x 10	C4785-60521	1

3,000-sheet stapler/stacker components

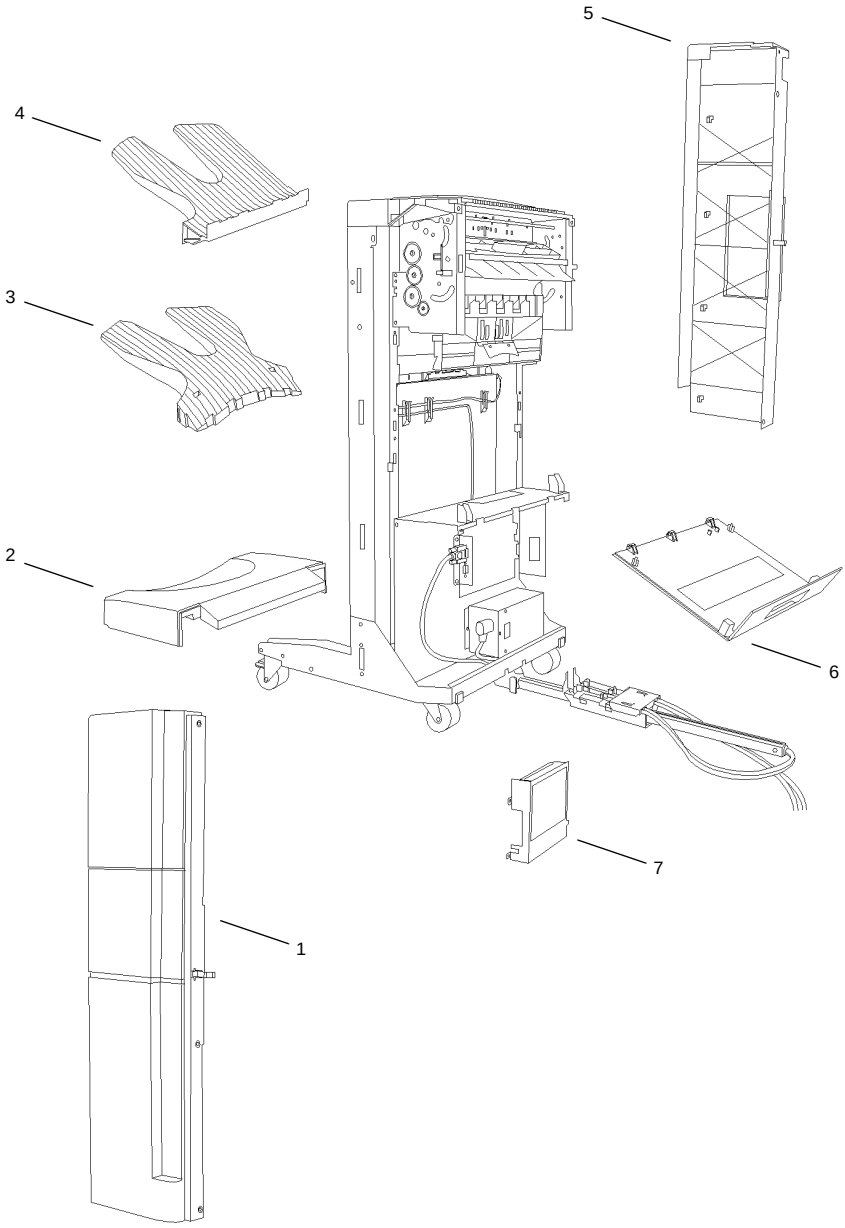

Figure 283. **3,000-sheet stapler/stacker components (1 of 2)**

Table 89. 3,000-sheet stapler/stacker components (1 of 2)

Ref.	Description	Part number	Qty.
1	Front cover	C4788-60505	1
2	Foot cover	C4788-60525	1
3	Stapler bin (for stapler/stacker) Stacker bin (for stacker)	C4788-60528 C4779-60505	1 1
4	Face-up bin	C4788-60512	1
5	Back cover	C4788-60504	1
6	Stapler door assembly with label (for stapler/stacker) Stacker door assembly (for stacker)	C4788-60507 C4779-60502	1 1
7	Controller PCA cover (with label) (for stapler/stacker) Controller PCA cover (with label) (for stacker)	C4788-60508 C4779-60503	1 1

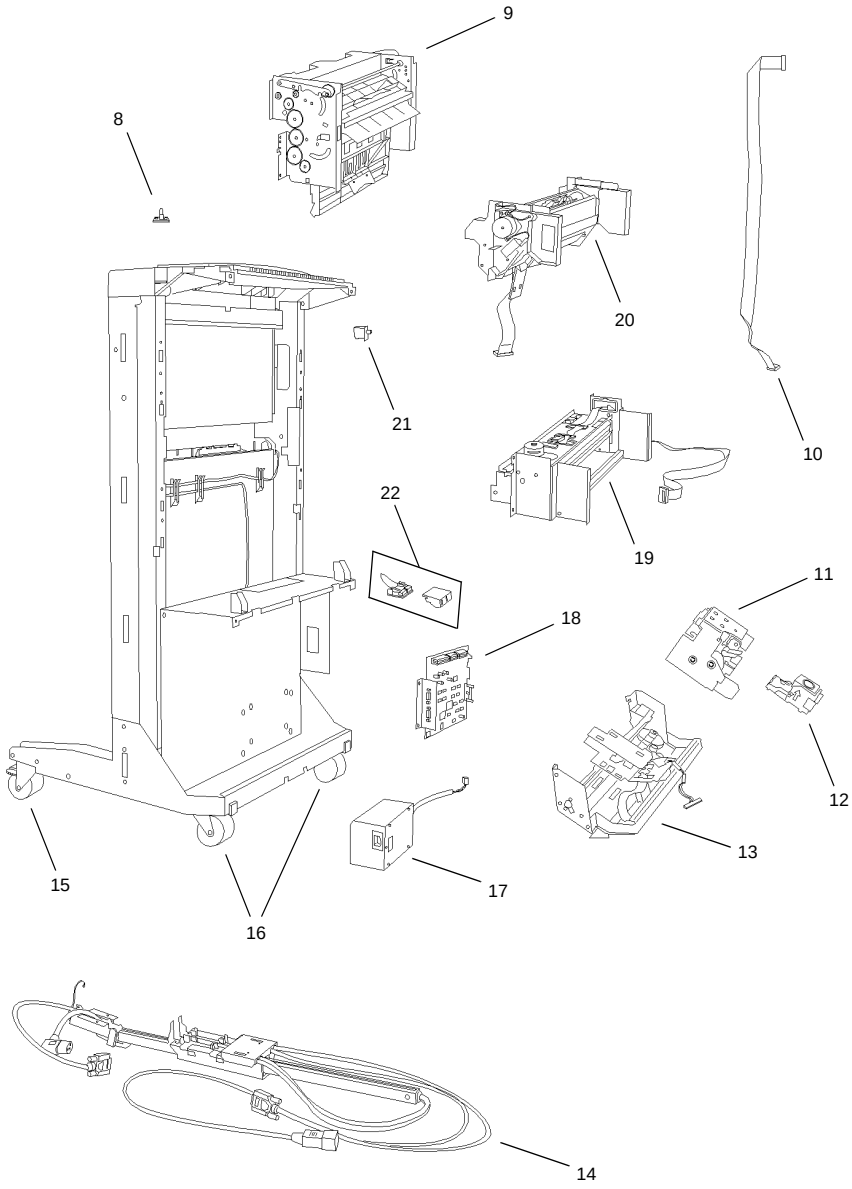

Figure 284. **3,000-sheet stapler/stacker components (2 of 2)**

Table 90. 3,000-sheet stapler/stacker components (2 of 2)

Ref.	Description	Part number	Qty.
8	LED PCA	C4788-60510	1
9	Flipper assembly	C4788-60501	1
10	Flipper ribbon cable	C4788-60524	1
11	Stapler (applies only to stapler/stacker)	C4788-60519	1
12	Stapler refill housing	C4788-60522	1
13	Carriage assembly (applies only to stapler/ stacker)	C4788-60503	1
14	Attachment assembly (rod, bracket, cables)	C4788-60523	1
15	Adjustable caster	C4788-60516	2
16	Stationary caster	C4788-60515	2
17	Power supply	C4788-60511	1
18	Stapler controller PCA (for stapler/stacker) Stacker controller PCA (for stacker)	C4788-60509 C4779-60507	1 1
19	Offset module (for stacker)	C4779-60508	1
20	Accumulator assembly (for stapler/stacker)	C4788-60502	1
21	Interlock	C4788-60514	1
22	Safety switch assembly	C4788-60517	1
	Wings kit (stapler/stacker)	C4788-60521	1
	Paper stacker clip	C4788-60527	1
	Optical sensors kit	C4779-60509	1

Numerical parts list

Table 91. Numerical parts list

Part number	Description	Figure	Ref.
J3113-61003	PCA, 10/100Base-T	—	—
C3983-40016	Control panel overlay, Czech, 8500 models	—	—
C3983-40001	Control panel overlay, English, 8500 models	—	—
C3983-40006	Control panel overlay, French, 8500 models	—	—
C3983-40011	Control panel overlay, Swedish, 8500 models	—	—
C3989-90901	*HP Color LaserJet 8500, 8500 N, 8500 DN Getting Started Guide* (English)	—	—
C4785-60526	Kit of rollers—jam access door (multi-bin mailbox)	280	—
C4785-60507	Metallic tape and housing assembly	281	34
C4785-60501	Power supply	282	40
C4785-60515	User LED PCA (with cable)	280	20
C4788-60504	Back cover	283	5
C4788-60525	Foot cover	283	2
C4788-60510	LED PCA	284	8
C4788-60517	Safety switch assembly	284	22
5021-8956	*HP LaserJet Printer Family Paper Specification Guide*	—	—
5021-0337	PCL/PJL Technical Reference Package	—	—
5091-6456	*HP Peripherals Connectivity Solutions Guide*	—	—
5966-5171	*HP JetDirect Software Installation Guide* (English)	—	—
C7096-40003	Control panel overlay, Hungarian, 8550 models	—	—
C7096-40013	Control panel overlay, Norwegian, 8550 models	—	—
C7096-40008	Control panel overlay, Portuguese, 8550 models	—	—
C7096-40018	Control panel overlay, Russian, 8550 models	—	—
92215N	HP LocalTalk cable kit	—	—
92215S	Macintosh DIN-8 printer cable	—	—

Table 91. Numerical parts list (continued)

Part number	Description	Figure	Ref.
C2934A	HP Color LaserJet transparencies (letter-sized), 50 sheets	—	—
C2936A	HP Color LaserJet transparencies (A4-sized), 50 sheets	—	—
C2946A	IEEE-1284 compliant parallel cable of 3 m (approximately 10 ft) with 25-pin male/micro 36-pin male “C” size connector	—	—
C2985A	EIO hard disk	—	—
C2986-60006	Hard disk, internal, 3.2 GB	—	—
C3764-60505	Face-up bin	280	25
C3764-60507	Delivery head position motor	282	38
C3764-60555	Cover, top	280	31
C3764-60561	Input paper guide (nosepiece)	282	39
C3893-67903	*HP Color LaserJet 8500, 8500N, 8500 DN Self-Paced Training Kit (PAL)*	—	—
C3913A	64-MB synchronous DIMM	—	—
C3983-40002	Control panel overlay, Traditional Chinese, 8500 models	—	—
C3983-40003	Control panel overlay, Korean, 8500 models	—	—
C3983-40004	Control panel overlay, Simplified Chinese, 8500 models	—	—
C3983-40005	Control panel overlay, Portuguese, 8500 models	—	—
C3983-40007	Control panel overlay, German, 8500 models	—	—
C3983-40008	Control panel overlay, Spanish, 8500 models	—	—
C3983-40009	Control panel overlay, Dutch, 8500 models	—	—
C3983-40010	Control panel overlay, Norwegian, 8500 models	—	—
C3983-40012	Control panel overlay, Finnish, 8500 models	—	—
C3983-40013	Control panel overlay, Danish, 8500 models	—	—
C3983-40014	Control panel overlay, Italian, 8500 models	—	—
C3983-40015	Control panel overlay, Russian, 8500 models	—	—
C3983-67902	*HP Color LaserJet 8500, 8500N, 8500 DN Self-Paced Training Kit (NTSC)*	—	—
C3983-67905	Formatter assembly	—	—

Table 91. Numerical parts list (continued)

Part number	Description	Figure	Ref.
C3983-90919	*HP Color LaserJet 8500, 8500 N, 8500 DN Quick Reference Guide* (English)	—	—
C3989-60115	*HP Color LaserJet 8500, 8500N, 8500 DN Service and Support CD-ROM*	—	—
C3989-90937	*HP Color LaserJet 8500, 8500 N, 8500 DN User's Guide* (English)	—	—
C4149A	Black toner cartridge	—	—
C4150A	Cyan toner cartridge	—	—
C4151A	Magenta toner cartridge	—	—
C4152A	Yellow toner cartridge	—	—
C4153A	Drum kit Imaging drum Two air filters Hand wipe	—	—
C4154A	Transfer kit Transfer drum Transfer belt Cleaning roller Charcoal filter Hand wipe	—	—
C4155A	110-volt fuser kit Fuser Six paper rollers Hand wipe	—	—
C4156A	220-volt fuser kit Fuser Six paper rollers Hand wipe	—	—
C4179A	HP Color LaserJet soft gloss paper (letter-sized), 200 sheets	—	—
C4179B	HP Color LaserJet soft gloss paper (A4-sized), 200 sheets	—	—
C4779-60502	Stacker door assembly (for stacker)	283	6
C4779-60503	Controller PCA cover (with label) (for stacker)	283	7
C4779-60505	Stacker bin (for stacker)	283	3
C4779-60507	Stacker controller PCA (stacker)	284	18
C4779-60508	Offset module (stacker)	284	19
C4779-60509	Optical sensors kit	284	—

Table 91. Numerical parts list (continued)

Part number	Description	Figure	Ref.
C4781-60500	Power box	—	—
C4781-60504	C-link cable (from formatter board to the 2,000-sheet input unit)	—	—
C4782-60501	Duplexer (product number C4782A)	—	—
C4782-69501	Exchange duplexer	—	—
C4785-60502	Face-down bin	280	24
C4785-60503	Blind cover	280	23
C4785-60504	Cover, front	280	26
C4785-60505	Cover, back	282	37
C4785-60506	Head assembly (with metallic tape)	281	33
C4785-60510	Fixed casters	280	30
C4785-60511	Adjustable fixed caster	280	21
C4785-60512	Attachment clip	282	36
C4785-60513	Multi-bin mailbox, repackaging kit	—	—
C4785-60514	Diagnostic LED PCA (with cable)	282	35
C4785-60516	Attachment assembly (rod, bracket, cables)	280	22
C4785-60518	Transport belt motor (with fan)	282	41
C4785-60519	Plastic parts 1A Anti-curl string 1B Spring for anti-curl string 1C Pulley, small bottom 1D Cable holder round gasket 1E Flat cable holder edge 1F Flat cable holder 1G Spacer plastic	281	Kit 1
C4785-60520	Cables 2A Switch, interlock 2B Delivery head motor cable 2C Flipper sensor controller cable 2D Flipper encoder controller 2E Flipper motor controller 2F ESD cable 2G Delivery head assembly, flat cable	282	Kit 2

Table 91. Numerical parts list (continued)

Part number	Description	Figure	Ref.
C4785-60521	Hardware 3A Screw, Torx 3B Screw, Torx, T20, M4 x 10 3C Screw, Torx, Tapping T20, M4 x 10 3D Screw, Torx, T20, M4 x 12 3E Screw, Torx, Tapping T10 3F Screw, Caster	281	Kit 3
C4785-60529	Flipper assembly (with cable “request”)	281	32
C4785-60531	Multi-bin mailbox, short C-link cable adapter (extension)	—	—
C4785-60532	Multi-bin mailbox controller (with metal box)	280	29
C4785-60534	Multi-bin mailbox assembly (product number C4785A) **Note:** You must have a 2,000-sheet input tray in order to install a multi-bin mailbox.	280	28
C4785-69519	Exchange multi-bin mailbox assembly **NOTE:** You must have a 2,000-sheet input unit in order to install a multi-bin mailbox.	280	27
C4787-60503	Multi-bin mailbox, shipping lock kit	—	—
C4788-60501	Flipper assembly	284	9
C4788-60502	Accumulator assembly (stapler/stacker)	284	20
C4788-60503	Carriage assembly (stapler/stacker)	284	13
C4788-60505	Front cover	283	1
C4788-60507	Stapler door assembly with label (for stapler/stacker)	283	6
C4788-60508	Controller PCA cover (with label) (for stapler/stacker)	283	7
C4788-60509	Stapler controller PCA (stapler/stacker)	284	18
C4788-60511	Power supply	284	17
C4788-60512	Face-up bin	283	4
C4788-60514	Interlock	284	21
C4788-60515	Stationary caster	284	16
C4788-60516	Adjustable caster	284	15
C4788-60519	Stapler (stapler/stacker)	284	11
C4788-60521	Wings kit (stapler/stacker)	284	—
C4788-60522	Stapler refill housing	284	12

Table 91. Numerical parts list (continued)

Part number	Description	Figure	Ref.
C4788-60523	Attachment assembly (rod, bracket, cables)	284	14
C4788-60524	Flipper ribbon cable	284	10
C4788-60527	Paper stacker clip	284	—
C4788-60528	Stapler bin (for stapler/stacker)	283	3
C7096-40001	Control panel overlay, Turkish, 8550 models	—	—
C7096-40002	Control panel overlay, Polish, 8550 models	—	—
C7096-40004	Control panel overlay, English, 8550 models	—	—
C7096-40005	Control panel overlay, Traditional Chinese, 8550 models	—	—
C7096-40006	Control panel overlay, Korean, 8550 models	—	—
C7096-40007	Control panel overlay, Simplified Chinese, 8550 models	—	—
C7096-40009	Control panel overlay, French, 8550 models	—	—
C7096-40010	Control panel overlay, German, 8550 models	—	—
C7096-40011	Control panel overlay, Spanish, 8550 models	—	—
C7096-40012	Control panel overlay, Dutch, 8550 models	—	—
C7096-40014	Control panel overlay, Swedish, 8550 models	—	—
C7096-40015	Control panel overlay, Finnish, 8550 models	—	—
C7096-40016	Control panel overlay, Danish, 8550 models	—	—
C7096-40017	Control panel overlay, Italian, 8550 models	—	—
C7096-40019	Control panel overlay, Czech, 8550 models	—	—
C7842A	8-MB synchronous DIMM **NOTE:** For all DIMM products, you must install DRAM DIMMs in synchronized pairs—for example, two 4-MB DIMMs.	—	—
C7843A	16-MB synchronous DIMM	—	—
C7845A	32-MB synchronous DIMM	—	—
C7846A	64-MB synchronous DIMM	—	—
J3110A	Ethernet 10Base-T	—	—
J3111A	Ethernet combo (10Base-T, BNC, and LocalTalk)	—	—
J3112A	Token Ring	—	—
J3113A	10/100Base-TX	—	—
RA0-0008-000CN	Lever, shutter	250	3B

Table 91. Numerical parts list (continued)

Part number	Description	Figure	Ref.
RA0-0026-000CN	Cover, inner 2	253	2
RA0-0027-000CN	Cover, inner 3	253	3
RA0-0065-000CN	Cover, left rear	251	6
RA0-0067-000CN	Cover, right rear	252	7
RA0-0068-000CN	Cover, hinge	250	8
RA0-0069-000CN	Cover, front right	250	9
RA0-0073-000CN	Stop, flip-up media	251	2D
RA0-0074-000CN	Cover, right rear lower corner	256	1
RA0-0078-000CN	Cover, auxiliary	251	20
RA0-0079-000CN	Support, cover	251	51A
RA0-0083-000CN	Cover, waste toner tray	253	10
RA0-0112-000CN	Lever, paper height	272	12
RB1-0153-000CN	Pin	264	40
RB1-4497-000CN	Strap, front door support	250	3D
RB1-5153-000CN	Latch, roller action	250	3E
RB1-6409-000CN	Spring, torsion	267	2
RB1-6417-000CN	Arm, sensor	267	3
RB1-6463-000CN	Rod, power switch	256	5
RB1-6480-000CN	Cover, left lower	250	10
RB1-6484-000CN	Stopper, open/close	251, 252	6A, 16C
RB1-6485-000CN	Lever, left upper door	250	4B
RB1-6485-000CN	Lever, right lower cover	252	16D
RB1-6485-000CN	Lever, right upper door	252	17
RB1-6486-000CN	Spring, compression	252	16E
RB1-6486-000CN	Spring, left upper door lever	250	4C
RB1-6486-000CN	Spring, right lower door lever	252	22
RB1-6488-000CN	Roller, paper	252	16G
RB1-6491-000CN	Tray, face-up	250	11
RB1-6492-000CN	Cover, power switch	250	12
RB1-6557-000CN	Flag, paper sensing	264	48
RB1-6558-020CN	Spring, torsion	264	49

Table 91. Numerical parts list (continued)

Part number	Description	Figure	Ref.
RB1-6589-000CN	Torsion spring	264	41
RB1-6692-000CN	Lever, paper sensing	272	11
RB1-6894-000CN	Cassette size plate	278	73
RB1-6909-000CN	Spring, leaf	256	6
RB1-7677-000CN	Metallic retaining tab (plate stop)	279	94
RB1-7832-020CN	Cover, right	278	87
RB1-7835-000CN	Metallic retaining spring (spring leaf)	279	93
RB1-9401-000CN	Duct, rear lower air	254	4
RB1-9403-000CN	Cover, gear	257	7
RB1-9424-000CN	Gear, 11T	256	7
RB1-9526-000CN	Roller, tray 1 pick-up	270	10
RB1-9537-000CN	Cover, density sensor	252	32
RB1-9547-000CN	Cover, tray 1 side gear	252	46
RB1-9580-000CN	Lever, registration roller	257	13
RB1-9586-000CN	Cover, sensor	267	6
RB1-9617-000CN	Brush, cleaning	252	35A
RB1-9675-000CN	Spring, compression	256	4
RB1-9682-000CN	Duct	259	4
RB1-9704-000CN	Lever, holding, right	275	8
RB1-9705-000CN	Lever, holding, left	275	9
RB1-9748-000CN	Lever, release	275	25
RB1-9751-000CN	Holder, flapper	273	12
RB1-9789-000CN	Cover, carousel stop	254	11
RB1-9798-000CN	Spring, torsion	252	26
RB1-9800-000CN	Crossmember	255	40
RB1-9804-000CN	Waste toner tray	253	5
RB1-9805-000CN	Cover, cable	256	9
RB1-9807-000CN	Filter, large air	251	1
RB1-9808-000CN	Filter, small air	251	19
RB1-9828-000CN	Mount, clutch	256	15
RB1-9836-000CN	Filter, charcoal	252	41

Table 91. Numerical parts list (continued)

Part number	Description	Figure	Ref.
RB1-9928-000CN	Media jam knob	253	7
RB1-9948-000CN	Cover, cable	258	3
RB1-9955-000CN	Gear, 14T	258	14
RB1-9956-000CN	Gear, 14T	258	15
RB2-0005-000CN	Rail, PCA	258	7D
RB2-0010-000CN	ITD guide	260	40
RB2-0057-000CN	Cover, left upper	273	13
RB2-0207-000CN	Filler panel for tray 2	249	1
RB2-0208-000CN	Filler panel bracket for tray 2	249	2
RB2-2519-000CN	Cover, back	278	71
RF0-0003-000CN	Latch, roller action	253	6
RF0-0012-000CN	Cover, fan	251	39
RF0-0013-000CN	Cover, inner 4	253	4
RF5-1396-000CN	Rail, tray 3	259	32
RF5-1484-000CN	Plate, end	262, 263	26
RF5-1834-000CN	Feed and separation rollers	278	75
RF5-1834-000CN	Roller, feed	264	20
RF5-1835-000CN	Roller, pick-up	264, 278	21, 83
RF5-1995-000CN	Cover, right subassembly	252	31
RF5-2025-000CN	Holder, fan	259	3
RF5-2036-000CN	Plate, duct mount	254	3
RF5-2556-000CN	Locating pin, metal (positioning)	278	78
RF5-2568-000CN	Cover, front (with LED window)	278	76
RF5-2646-000CN	Cover, left	278	77
RF5-2701-000CN	Hinge, stopper (delivery)	273	24
RF5-3850-000CN	Plate paper reference front	278	86
RG0-0017-000CN	Cover, rear fan housing	251	51
RG0-0104-000CN	Cover assembly, inner left	253	1
RG0-0110-000CN	Delivery assembly	272	—
RG0-0111-000CN	Cover assembly, top	251	2
RG0-0112-000CN	Cover assembly, front	250	3

Table 91. Numerical parts list (continued)

Part number	Description	Figure	Ref.
RG0-0113-000CN	Cover assembly, left upper	250	4
RG0-0115-000CN	Cover assembly, rear	251	5
RG5-1845-000CN	PCA, cassette-size sensing	277	1
RG5-1851-000CN	Tray rail assembly	257	3
RG5-1859-000CN	Arm, sensor	264	51
RG5-1860-000CN	PCA, paper pick-up	264	103
RG5-1884-000CN	PCA, tray 1	277	6
RG5-2166-000CN	Paper quantity sensor PCA assembly	279	97
RG5-2168-000CN	Paper size sensor PCA assembly	279	98
RG5-2644-000CN	Cover, top (label included)	278	88
RG5-3007-000CN	Registration frame assembly	267	—
RG5-3008-000CN	Transfer mount assembly	259	36
RG5-3009-000CN	Registration roller assembly	268	—
RG5-3010-000CN	Transfer swing assembly	257	10
RG5-3022-000CN	Face-up solenoid assembly	254	140
RG5-3023-000CN	Shield case assembly	258	7
RG5-3026-030CN	Developer/imaging drum bias supply	256	20
RG5-3031-000CN	Connector holder assembly	254	15
RG5-3032-000CN	PCA, photosensor	267	7
RG5-3033-000CN	Developing rotary	260	36
RG5-3034-000CN	Sensor assembly, color toner	256	8
RG5-3036-000CN	PCA, main relay	277	2
RG5-3037-000CN	PCA, controller board, 8500 models	277	3
RG5-3037-0120CN	PCA, controller board, 8550 models	277	3
RG5-3039-000CN	Transfer drum	258	17
RG5-3044-000CN	Transfer drum contact assembly	256	2
RG5-3045-000CN	Lever assembly, pressure	255	7
RG5-3046-000CN	Lever assembly, transfer drum	255	6
RG5-3047-000CN	Transfer belt assembly	274	—
RG5-3053-000CN	Carousel stop assembly	254	6
RG5-3054-000CN	Tray 1 pick-up assembly	270	—

Table 91. Numerical parts list (continued)

Part number	Description	Figure	Ref.
RG5-3057-000CN	Density sensor assembly	252	35
RG5-3059-000CN	Feeder assembly	269	—
RG5-3060-000CN	Fuser assembly (120 V)	275	—
RG5-3061-000CN	Fuser assembly (220 V)	275	—
RG5-3065-000CN	Drum/cartridge drive assembly	260	—
RG5-3066-000CN	Main drive assembly	257	18
RG5-3067-000CN	Delivery drive assembly	261	—
RG5-3079-000CN	PCA, photosensor	267	8
RG5-3080-000CN	PCA, photosensor	254	2
RG5-3084-020CN	PCA, carousel motor (M1)	277	4
RG5-3085-000CN	PCA, subrelay	277	5
RG5-3087-000CN	Lever assembly, black cartridge	255	10
RG5-3089-000CN	Cassette crossmember assembly	259	30
RG5-3096-000CN	Cover assembly, right lower	252	16
RG5-3097-000CN	Cable, main	254	16
RG5-3104-000CN	Cable, delivery	257	20
RG5-3108-000CN	Delivery cover assembly	273	—
RG5-3111-000CN	Transfer drum cleaner holder assembly	259	21
RG5-3131-000CN	Sensor slider assembly	259	37
RG5-3132-000CN	Paper pick-up assembly	264	—
RG5-3134-000CN	Tray 1 assembly	271	—
RG5-3144-000CN	Cable, sensor	254	18
RG5-3147-000CN	Cable, delivery connector	257	12
RG5-3843-000CN	Paper pick-up assembly	278	82
RG5-3845-000CN	Tray 4	278	79
RG5-3849-000CN	Plate paper limit middle	278	85
RG5-3851-000CN	Paper deck drive assembly	278	80
RG5-3854-000CN	Vertical transfer unit (VTU)	278	89
RG5-3908-000CN	Paper deck PCA	279	96
RG5-3909-000CN	Power supply cable	279	99
RG5-3919-000CN	Cable, main	279	92

Table 91. Numerical parts list (continued)

Part number	Description	Figure	Ref.
RG5-3921-000CN	Cable, DC power	254	19
RG5-3922-000CN	Cable, power signal	254	20
RG5-3923-000CN	Cable, carousel	257	6
RG5-3934-000CN	Sensor assembly, toner waste	258	24
RG5-3936-000CN	Laser/scanner unit	258	18
RG5-3942-000CN	Cable, main motor	257	5
RG5-3943-000CN	High-voltage power supply	256	21
RG5-3961-000CN	PCA, cartridge release lever	254	21
RG5-3962-000CN	Hinge, stopper (tray 1 delivery assembly)	252	54
RG5-3966-000CN	Separation discharge high-voltage converter PCA	256	30
RG5-3973-000CN	Static charge eliminator assembly	259	14
RG5-3975-000CN	Cleaning roller assembly	259	15
RG5-3980-000CN	Preconditioning exposure LED assembly	252	36
RG5-3992-000CN	PCA, fusing delivery sensor	254	8
RG5-4021-000CN	Universal power supply assembly	279	102
RG5-4201-000CN	Plate paper limit back	278	84
RG5-4204-000CN	Front LED PCA with holder and cable	279	91
RG5-4205-000CN	Outriggers	279	95
RH3-0211-000CN	Post charger HV module	256	24
RH3-0228-000CN	Cleaning roller HV module	256	25
RH3-0234-000CN	Separation discharge high-voltage converter	256	39
RH3-2185-000CN	Power supply assembly (110 V)	254	25
RH3-2187-000CN	Power supply assembly (220 V)	254	25
RH7-1323-000CN	Motor, main (M4)	257	21
RH7-1325-000CN	Motor, carousel (M1)	256	26
RH7-1328-000CN	Motor, cartridge (M3)	260	23
RH7-1330-000CN	Fan 1 (FM1)	259	8
RH7-1350-000CN	Motor, pick-up (M5)	264	87
RH7-1373-000CN	Fan 2 (FM2)	259	7
RH7-1393-000CN	Fan 3 (FM3)	252	42

Table 91. Numerical parts list (continued)

Part number	Description	Figure	Ref.
RH7-5168-000CN	Clutch, transfer belt press (CL4)	256	27
RS5-1119-000CN	Bushing	255	8
RS5-1317-000CN	Bushing	255	29, 30
RS5-1319-000CN	Bushing	259	19
RS5-1399-000CN	Bushing, paper deck drive	278	81
RS5-2465-000CN	Spring, tension	256	28
RS5-2561-000CN	Spring, tension	279	101
RS5-2697-000CN	Spring, torsion	259	20
RS5-2698-000CN	Spring, torsion	259	16
RS5-2719-000CN	Spring, compression	251	51B
RS5-8380-000CN	Label, “CAUTION”	253	4A
RS5-8611-000CN	Cassette size labels	278	72
RY7-5044-000CN	Screw kit (2,000-sheet input unit)	278, 279	Kit 1
VD7-1893-151CN	Power supply fuse 250 V, 3.15 A	279	100
WC4-5136-000CN	Switch, black toner cartridge (SW644)	255	22
WC4-5150-000CN	Switch, toner cartridge cover (SW672)	254	30
WG8-0291-000CN	Photo-interrupter, IC, TLP1230	264	52
WG8-5210-000CN	Photo-interrupter, IC, TLP1240	255, 267, 270	23, 4, 40
WG8-5362-000CN	Photo-interrupter, IC, TLP1241	257	24
XA9-0836-000CN	Screw, TP, M3 x 6, quantity=10	—	—
XA9-0849-000CN	Screw, RS, M3 x 6	257	26
XA9-0926-000CN	Screw, TP, M4 x 8, filler panel bracket for tray 2	250	3
XA9-0926-000CN	Screw, TP, M4 x 8, quantity=10	—	—
XA9-0926-000CN	Screw, filler panel bracket, M4 x 8	249	3
XA9-0940-000CN	Screw, w/washer, M4 x 12, quantity=4	258	37
XA9-0951-000CN	Screw, w/washer, M3 x 8, quantity=10	—	—
XB4-7401-007CN	Screw, tapping, pan head, M4 x 10	264	501
XD2-1100-502CN	Ring, E	256	501
XD2-1100-642CN	Ring, E	255	501
XZ9-0442-000CN	Casters	278	74

Alphabetical parts list

Table 92. Alphabetical parts list

Description	Part number	Figure	Ref.
10/100Base-TX	J3113A	—	—
110-volt fuser kit Fuser Six paper rollers Hand wipe	C4155A	—	—
16-MB synchronous DIMM	C7843A	—	—
220-volt fuser kit Fuser Six paper rollers Hand wipe	C4156A	—	—
32-MB synchronous DIMM	C7845A	—	—
64-MB synchronous DIMM	C3913A	—	—
64-MB synchronous DIMM	C7846A	—	—
8-MB synchronous DIMM **NOTE:** For all DIMM products, you must install DRAM DIMMs in synchronized pairs—for example, two 4-MB DIMMs.	C7842A	—	—
Accumulator assembly (stapler/stacker)	C4788-60502	284	20
Adjustable caster	C4788-60516	284	15
Adjustable fixed caster	C4785-60511	280	21
Arm, sensor	RB1-6417-000CN	267	3
Arm, sensor	RG5-1859-000CN	264	51
Attachment assembly (rod, bracket, cables)	C4785-60516	280	22
Attachment assembly (rod, bracket, cables)	C4788-60523	284	14
Attachment clip	C4785-60512	282	36
Back cover	C4788-60504	283	5
Black toner cartridge	C4149A	—	—
Blind cover	C4785-60503	280	23
Brush, cleaning	RB1-9617-000CN	252	35A
Bushing	RS5-1119-000CN	255	8
Bushing	RS5-1317-000CN	255	29, 30

Table 92. Alphabetical parts list (continued)

Description	Part number	Figure	Ref.
Bushing	RS5-1319-000CN	259	19
Bushing, paper deck drive	RS5-1399-000CN	278	81
Cable, carousel	RG5-3923-000CN	257	6
Cable, DC power	RG5-3921-000CN	254	19
Cable, delivery	RG5-3104-000CN	257	20
Cable, delivery connector	RG5-3147-000CN	257	12
Cable, main	RG5-3097-000CN	254	16
Cable, main	RG5-3919-000CN	279	92
Cable, main motor	RG5-3942-000CN	257	5
Cable, power signal	RG5-3922-000CN	254	20
Cable, sensor	RG5-3144-000CN	254	18
Cables 2A Switch, interlock 2B Delivery head motor cable 2C Flipper sensor controller cable 2D Flipper encoder controller 2E Flipper motor controller 2F ESD cable 2G Delivery head assembly, flat cable	C4785-60520	282	Kit 2
Carousel stop assembly	RG5-3053-000CN	254	6
Carriage assembly (stapler/stacker)	C4788-60503	284	13
Cassette crossmember assembly	RG5-3089-000CN	259	30
Cassette size labels	RS5-8611-000CN	278	72
Cassette size plate	RB1-6894-000CN	278	73
Casters	XZ9-0442-000CN	278	74
Cleaning roller assembly	RG5-3975-000CN	259	15
Cleaning roller HV module	RH3-0228-000CN	256	25
C-link cable (from formatter board to the 2,000-sheet input unit)	C4781-60504	—	—
Clutch, transfer belt press (CL4)	RH7-5168-000CN	256	27
Connector holder assembly	RG5-3031-000CN	254	15
Control panel overlay, Czech, 8500 models	C3983-40016	—	—
Control panel overlay, Czech, 8550 models	C7096-40019	—	—
Control panel overlay, Danish, 8500 models	C3983-40013	—	—

Table 92. Alphabetical parts list (continued)

Description	Part number	Figure	Ref.
Control panel overlay, Danish, 8550 models	C7096-40016	—	—
Control panel overlay, Dutch, 8500 models	C3983-40009	—	—
Control panel overlay, Dutch, 8550 models	C7096-40012	—	—
Control panel overlay, English, 8500 models	C3983-40001	—	—
Control panel overlay, English, 8550 models	C7096-40004	—	—
Control panel overlay, Finnish, 8500 models	C3983-40012	—	—
Control panel overlay, Finnish, 8550 models	C7096-40015	—	—
Control panel overlay, French, 8500 models	C3983-40006	—	—
Control panel overlay, French, 8550 models	C7096-40009	—	—
Control panel overlay, German, 8500 models	C3983-40007	—	—
Control panel overlay, German, 8550 models	C7096-40010	—	—
Control panel overlay, Hungarian, 8550 models	C7096-40003	—	—
Control panel overlay, Italian, 8500 models	C3983-40014	—	—
Control panel overlay, Italian, 8550 models	C7096-40017	—	—
Control panel overlay, Korean, 8500 models	C3983-40003	—	—
Control panel overlay, Korean, 8550 models	C7096-40006	—	—
Control panel overlay, Norwegian, 8500 models	C3983-40010	—	—
Control panel overlay, Norwegian, 8550 models	C7096-40013	—	—
Control panel overlay, Polish, 8550 models	C7096-40002	—	—
Control panel overlay, Portuguese, 8500 models	C3983-40005	—	—
Control panel overlay, Portuguese, 8550 models	C7096-40008	—	—
Control panel overlay, Russian, 8500 models	C3983-40015	—	—
Control panel overlay, Russian, 8550 models	C7096-40018	—	—
Control panel overlay, Simplified Chinese, 8500 models	C3983-40004	—	—
Control panel overlay, Simplified Chinese, 8550 models	C7096-40007	—	—
Control panel overlay, Spanish, 8500 models	C3983-40008	—	—
Control panel overlay, Spanish, 8550 models	C7096-40011	—	—
Control panel overlay, Swedish, 8500 models	C3983-40011	—	—
Control panel overlay, Swedish, 8550 models	C7096-40014	—	—

Table 92. Alphabetical parts list (continued)

Description	Part number	Figure	Ref.
Control panel overlay, Traditional Chinese, 8500 models	C3983-40002	—	—
Control panel overlay, Traditional Chinese, 8550 models	C7096-40005	—	—
Control panel overlay, Turkish, 8550 models	C7096-40001	—	—
Controller PCA cover (with label) (for stacker)	C4779-60503	283	7
Controller PCA cover (with label) (for stapler/ stacker)	C4788-60508	283	7
Cover assembly, front	RG0-0112-000CN	250	3
Cover assembly, inner left	RG0-0104-000CN	253	1
Cover assembly, left upper	RG0-0113-000CN	250	4
Cover assembly, rear	RG0-0115-000CN	251	5
Cover assembly, right lower	RG5-3096-000CN	252	16
Cover assembly, top	RG0-0111-000CN	251	2
Cover, auxiliary	RA0-0078-000CN	251	20
Cover, back	C4785-60505	282	37
Cover, back	RB2-2519-000CN	278	71
Cover, cable	RB1-9805-000CN	256	9
Cover, cable	RB1-9948-000CN	258	3
Cover, carousel stop	RB1-9789-000CN	254	11
Cover, density sensor	RB1-9537-000CN	252	32
Cover, fan	RF0-0012-000CN	251	39
Cover, front	C4785-60504	280	26
Cover, front (with LED window)	RF5-2568-000CN	278	76
Cover, front right	RA0-0069-000CN	250	9
Cover, gear	RB1-9403-000CN	257	7
Cover, hinge	RA0-0068-000CN	250	8
Cover, inner 2	RA0-0026-000CN	253	2
Cover, inner 3	RA0-0027-000CN	253	3
Cover, inner 4	RF0-0013-000CN	253	4
Cover, left	RF5-2646-000CN	278	77
Cover, left lower	RB1-6480-000CN	250	10

Table 92. Alphabetical parts list (continued)

Description	Part number	Figure	Ref.
Cover, left rear	RA0-0065-000CN	251	6
Cover, left upper	RB2-0057-000CN	273	13
Cover, power switch	RB1-6492-000CN	250	12
Cover, rear fan housing	RG0-0017-000CN	251	51
Cover, right	RB1-7832-020CN	278	87
Cover, right rear	RA0-0067-000CN	252	7
Cover, right rear lower corner	RA0-0074-000CN	256	1
Cover, right subassembly	RF5-1995-000CN	252	31
Cover, sensor	RB1-9586-000CN	267	6
Cover, top	C3764-60555	280	31
Cover, top (label included)	RG5-2644-000CN	278	88
Cover, tray 1 side gear	RB1-9547-000CN	252	46
Cover, waste toner tray	RA0-0083-000CN	253	10
Crossmember	RB1-9800-000CN	255	40
Cyan toner cartridge	C4150A	—	—
Delivery assembly	RG0-0110-000CN	272	—
Delivery cover assembly	RG5-3108-000CN	273	—
Delivery drive assembly	RG5-3067-000CN	261	—
Delivery head position motor	C3764-60507	282	38
Density sensor assembly	RG5-3057-000CN	252	35
Developer/imaging drum bias supply	RG5-3026-030CN	256	20
Developing rotary	RG5-3033-000CN	260	36
Diagnostic LED PCA (with cable)	C4785-60514	282	35
Drum kit Imaging drum Two air filters Hand wipe	C4153A	—	—
Drum/cartridge drive assembly	RG5-3065-000CN	260	—
Duct	RB1-9682-000CN	259	4
Duct, rear lower air	RB1-9401-000CN	254	4
Duplexer (product number C4782A)	C4782-60501	—	—
EIO hard disk	C2985A	—	—

Table 92. Alphabetical parts list (continued)

Description	Part number	Figure	Ref.
Ethernet 10Base-T	J3110A	—	—
Ethernet combo (10Base-T, BNC, and LocalTalk)	J3111A	—	—
Exchange duplexer	C4782-69501	—	—
Exchange multi-bin mailbox assembly **NOTE:** You must have a 2,000-sheet input unit in order to install a multi-bin mailbox.	C4785-69519	280	27
Face-down bin	C4785-60502	280	24
Face-up bin	C3764-60505	280	25
Face-up bin	C4788-60512	283	4
Face-up solenoid assembly	RG5-3022-000CN	254	140
Fan 1 (FM1)	RH7-1330-000CN	259	8
Fan 2 (FM2)	RH7-1373-000CN	259	7
Fan 3 (FM3)	RH7-1393-000CN	252	42
Feed and separation rollers	RF5-1834-000CN	278	75
Feeder assembly	RG5-3059-000CN	269	—
Filler panel bracket for tray 2	RB2-0208-000CN	249	2
Filler panel for tray 2	RB2-0207-000CN	249	1
Filter, charcoal	RB1-9836-000CN	252	41
Filter, large air	RB1-9807-000CN	251	1
Filter, small air	RB1-9808-000CN	251	19
Fixed casters	C4785-60510	280	30
Flag, paper sensing	RB1-6557-000CN	264	48
Flipper assembly	C4788-60501	284	9
Flipper assembly (with cable “request”)	C4785-60529	281	32
Flipper ribbon cable	C4788-60524	284	10
Foot cover	C4788-60525	283	2
Formatter assembly	C3983-67905	—	—
Front cover	C4788-60505	283	1
Front LED PCA with holder and cable	RG5-4204-000CN	279	91
Fuser assembly (120 V)	RG5-3060-000CN	275	—
Fuser assembly (220 V)	RG5-3061-000CN	275	—
Gear, 11T	RB1-9424-000CN	256	7

Table 92. Alphabetical parts list (continued)

Description	Part number	Figure	Ref.
Gear, 14T	RB1-9955-000CN	258	14
Gear, 14T	RB1-9956-000CN	258	15
Hard disk, internal, 3.2 GB	C2986-60006	—	—
Hardware 3A Screw, Torx 3B Screw, Torx, T20, M4 x 10 3C Screw, Torx, Tapping T20, M4 x 10 3D Screw, Torx, T20, M4 x 12 3E Screw, Torx, Tapping T10 3F Screw, Caster	C4785-60521	281	Kit 3
Head assembly (with metallic tape)	C4785-60506	281	33
High-voltage power supply	RG5-3943-000CN	256	21
Hinge, stopper (delivery)	RF5-2701-000CN	273	24
Hinge, stopper (tray 1 delivery assembly)	RG5-3962-000CN	252	54
Holder, fan	RF5-2025-000CN	259	3
Holder, flapper	RB1-9751-000CN	273	12
HP Color LaserJet 8500, 8500 N, 8500 DN Getting Started Guide (English)	C3989-90901	—	—
HP Color LaserJet 8500, 8500 N, 8500 DN Quick Reference Guide (English)	C3983-90919	—	—
HP Color LaserJet 8500, 8500 N, 8500 DN User's Guide (English)	C3989-90937	—	—
HP Color LaserJet 8500, 8500N, 8500 DN Self-Paced Training Kit (NTSC)	C3983-67902	—	—
HP Color LaserJet 8500, 8500N, 8500 DN Self-Paced Training Kit (PAL)	C3893-67903	—	—
HP Color LaserJet 8500, 8500N, 8500 DN Service and Support CD-ROM	C3989-60115	—	—
HP Color LaserJet soft gloss paper (A4-sized), 200 sheets	C4179B	—	—
HP Color LaserJet soft gloss paper (letter-sized), 200 sheets	C4179A	—	—
HP Color LaserJet transparencies (A4-sized), 50 sheets	C2936A	—	—
HP Color LaserJet transparencies (letter-sized), 50 sheets	C2934A	—	—

Table 92. Alphabetical parts list (continued)

Description	Part number	Figure	Ref.
HP JetDirect Software Installation Guide (English)	5966-5171	—	—
HP LaserJet Printer Family Paper Specification Guide	5021-8956	—	—
HP LocalTalk cable kit	92215N	—	—
HP Peripherals Connectivity Solutions Guide	5091-6456	—	—
IEEE-1284 compliant parallel cable of 3 m (approximately 10 ft) with 25-pin male/micro 36-pin male “C” size connector	C2946A	—	—
Input paper guide (nosepiece)	C3764-60561	282	39
Interlock	C4788-60514	284	21
ITD guide	RB2-0010-000CN	260	40
Kit of rollers—jam access door (multi-bin mailbox)	C4785-60526	280	—
Label, “CAUTION”	RS5-8380-000CN	253	4A
Laser/scanner unit	RG5-3936-000CN	258	18
Latch, roller action	RB1-5153-000CN	250	3E
Latch, roller action	RF0-0003-000CN	253	6
LED PCA	C4788-60510	284	8
Lever assembly, black cartridge	RG5-3087-000CN	255	10
Lever assembly, pressure	RG5-3045-000CN	255	7
Lever assembly, transfer drum	RG5-3046-000CN	255	6
Lever, holding, left	RB1-9705-000CN	275	9
Lever, holding, right	RB1-9704-000CN	275	8
Lever, left upper door	RB1-6485-000CN	250	4B
Lever, paper height	RA0-0112-000CN	272	12
Lever, paper sensing	RB1-6692-000CN	272	11
Lever, registration roller	RB1-9580-000CN	257	13
Lever, release	RB1-9748-000CN	275	25
Lever, right lower cover	RB1-6485-000CN	252	16D
Lever, right upper door	RB1-6485-000CN	252	17
Lever, shutter	RA0-0008-000CN	250	3B
Locating pin, metal (positioning)	RF5-2556-000CN	278	78

Table 92. Alphabetical parts list (continued)

Description	Part number	Figure	Ref.
Macintosh DIN-8 printer cable	92215S	—	—
Magenta toner cartridge	C4151A	—	—
Main drive assembly	RG5-3066-000CN	257	18
Media jam knob	RB1-9928-000CN	253	7
Metallic retaining spring (spring leaf)	RB1-7835-000CN	279	93
Metallic retaining tab (plate stop)	RB1-7677-000CN	279	94
Metallic tape and housing assembly	C4785-60507	281	34
Motor, carousel (M1)	RH7-1325-000CN	256	26
Motor, cartridge (M3)	RH7-1328-000CN	260	23
Motor, main (M4)	RH7-1323-000CN	257	21
Motor, pick-up (M5)	RH7-1350-000CN	264	87
Mount, clutch	RB1-9828-000CN	256	15
Multi-bin mailbox assembly (product number C4785A) **Note:** You must have a 2,000-sheet input tray in order to install a multi-bin mailbox.	C4785-60534	280	28
Multi-bin mailbox controller (with metal box)	C4785-60532	280	29
Multi-bin mailbox, repackaging kit	C4785-60513	—	—
Multi-bin mailbox, shipping lock kit	C4787-60503	—	—
Multi-bin mailbox, short C-link cable adapter (extension)	C4785-60531	—	—
Offset module (stacker)	C4779-60508	284	19
Optical sensors kit	C4779-60509	284	—
Outriggers	RG5-4205-000CN	279	95
Paper deck drive assembly	RG5-3851-000CN	278	80
Paper deck PCA	RG5-3908-000CN	279	96
Paper pick-up assembly	RG5-3132-000CN	264	—
Paper pick-up assembly	RG5-3843-000CN	278	82
Paper quantity sensor PCA assembly	RG5-2166-000CN	279	97
Paper size sensor PCA assembly	RG5-2168-000CN	279	98
Paper stacker clip	C4788-60527	284	—
PCA, 10/100Base-T	J3113-61003	—	—

Table 92. Alphabetical parts list (continued)

Description	Part number	Figure	Ref.
PCA, carousel motor (M1)	RG5-3084-020CN	277	4
PCA, cartridge release lever	RG5-3961-000CN	254	21
PCA, cassette-size sensing	RG5-1845-000CN	277	1
PCA, controller board, 8500 models	RG5-3037-000CN	277	3
PCA, controller board, 8550 models	RG5-3037-0120CN	277	3
PCA, fusing delivery sensor	RG5-3992-000CN	254	8
PCA, main relay	RG5-3036-000CN	277	2
PCA, paper pick-up	RG5-1860-000CN	264	103
PCA, photosensor	RG5-3079-000CN	267	8
PCA, photosensor	RG5-3080-000CN	254	2
PCA, photosensor	RG5-3032-000CN	267	7
PCA, subrelay	RG5-3085-000CN	277	5
PCA, tray 1	RG5-1884-000CN	277	6
PCL/PJL Technical Reference Package	5021-0337	—	—
Photo-interrupter, IC, TLP1230	WG8-0291-000CN	264	52
Photo-interrupter, IC, TLP1240	WG8-5210-000CN	255, 267, 270	23, 4, 40
Photo-interrupter, IC, TLP1241	WG8-5362-000CN	257	24
Pin	RB1-0153-000CN	264	40
Plastic parts 1A Anti-curl string 1B Spring for anti-curl string 1C Pulley, small bottom 1D Cable holder round gasket 1E Flat cable holder edge 1F Flat cable holder 1G Spacer plastic	C4785-60519	281	Kit 1
Plate paper limit back	RG5-4201-000CN	278	84
Plate paper limit middle	RG5-3849-000CN	278	85
Plate paper reference front	RF5-3850-000CN	278	86
Plate, duct mount	RF5-2036-000CN	254	3
Plate, end	RF5-1484-000CN	262, 263	26
Post charger HV module	RH3-0211-000CN	256	24
Power box	C4781-60500	—	—

Table 92. Alphabetical parts list (continued)

Description	Part number	Figure	Ref.
Power supply	C4785-60501	282	40
Power supply	C4788-60511	284	17
Power supply assembly (110 V)	RH3-2185-000CN	254	25
Power supply assembly (220 V)	RH3-2187-000CN	254	25
Power supply cable	RG5-3909-000CN	279	99
Power supply fuse 250 V, 3.15 A	VD7-1893-151CN	279	100
Preconditioning exposure LED assembly	RG5-3980-000CN	252	36
Rail, PCA	RB2-0005-000CN	258	7D
Rail, tray 3	RF5-1396-000CN	259	32
Registration frame assembly	RG5-3007-000CN	267	—
Registration roller assembly	RG5-3009-000CN	268	—
Ring, E	XD2-1100-502CN	256	501
Ring, E	XD2-1100-642CN	255	501
Rod, power switch	RB1-6463-000CN	256	5
Roller, feed	RF5-1834-000CN	264	20
Roller, paper	RB1-6488-000CN	252	16G
Roller, pick-up	RF5-1835-000CN	264, 278	21, 83
Roller, tray 1 pick-up	RB1-9526-000CN	270	10
Safety switch assembly	C4788-60517	284	22
Screw kit (2,000-sheet input unit)	RY7-5044-000CN	278, 279	Kit 1
Screw, RS, M3 x 6	XA9-0849-000CN	257	26
Screw, tapping, pan head, M4 x 10	XB4-7401-007CN	264	501
Screw, TP, M3 x 6, quantity=10	XA9-0836-000CN	—	—
Screw, TP, M4 x 8, filler panel bracket for tray 2	XA9-0926-000CN	249	3
Screw, TP, M4 x 8, quantity=10	XA9-0926-000CN	—	—
Screw, w/washer, M3 x 8, quantity=10	XA9-0951-000CN	—	—
Screw, w/washer, M4 x 12, quantity=4	XA9-0940-000CN	258	37
Sensor assembly, color toner	RG5-3034-000CN	256	8
Sensor assembly, toner waste	RG5-3934-000CN	258	24
Sensor slider assembly	RG5-3131-000CN	259	37
Separation discharge high-voltage converter	RH3-0234-000CN	256	39

Table 92. Alphabetical parts list (continued)

Description	Part number	Figure	Ref.
Separation discharge high-voltage converter PCA	RG5-3966-000CN	256	30
Shield case assembly	RG5-3023-000CN	258	7
Spring, compression	RB1-6486-000CN	252	16E
Spring, compression	RB1-9675-000CN	256	4
Spring, compression	RS5-2719-000CN	251	51B
Spring, leaf	RB1-6909-000CN	256	6
Spring, left upper door lever	RB1-6486-000CN	250	4C
Spring, right lower door lever	RB1-6486-000CN	252	22
Spring, tension	RS5-2465-000CN	256	28
Spring, tension	RS5-2561-000CN	279	101
Spring, torsion	RB1-6409-000CN	267	2
Spring, torsion	RB1-6558-020CN	264	49
Spring, torsion	RB1-9798-000CN	252	26
Spring, torsion	RS5-2697-000CN	259	20
Spring, torsion	RS5-2698-000CN	259	16
Stacker bin (for stacker)	C4779-60505	283	3
Stacker controller PCA (stacker)	C4779-60507	284	18
Stacker door assembly (for stacker)	C4779-60502	283	6
Stapler (stapler/stacker)	C4788-60519	284	11
Stapler bin (for stapler/stacker)	C4788-60528	283	3
Stapler controller PCA (stapler/stacker)	C4788-60509	284	18
Stapler door assembly with label (for stapler/stacker)	C4788-60507	283	6
Stapler refill housing	C4788-60522	284	12
Static charge eliminator assembly	RG5-3973-000CN	259	14
Stationary caster	C4788-60515	284	16
Stop, flip-up media	RA0-0073-000CN	251	2D
Stopper, open/close	RB1-6484-000CN	251, 252	6A, 16C
Strap, front door support	RB1-4497-000CN	250	3D
Support, cover	RA0-0079-000CN	251	51A
Switch, black toner cartridge (SW644)	WC4-5136-000CN	255	22

Table 92. Alphabetical parts list (continued)

Description	Part number	Figure	Ref.
Switch, toner cartridge cover (SW672)	WC4-5150-000CN	254	30
Token Ring	J3112A	—	—
Torsion spring	RB1-6589-000CN	264	41
Transfer belt assembly	RG5-3047-000CN	274	—
Transfer drum	RG5-3039-000CN	258	17
Transfer drum cleaner holder assembly	RG5-3111-000CN	259	21
Transfer drum contact assembly	RG5-3044-000CN	256	2
Transfer kit Transfer drum Transfer belt Cleaning roller Charcoal filter Hand wipe	C4154A	—	—
Transfer mount assembly	RG5-3008-000CN	259	36
Transfer swing assembly	RG5-3010-000CN	257	10
Transport belt motor (with fan)	C4785-60518	282	41
Tray 1 assembly	RG5-3134-000CN	271	—
Tray 1 pick-up assembly	RG5-3054-000CN	270	—
Tray 4	RG5-3845-000CN	278	79
Tray rail assembly	RG5-1851-000CN	257	3
Tray, face-up	RB1-6491-000CN	250	11
Universal power supply assembly	RG5-4021-000CN	279	102
User LED PCA (with cable)	C4785-60515	280	20
Vertical transfer unit (VTU)	RG5-3854-000CN	278	89
Waste toner tray	RB1-9804-000CN	253	5
Wings kit (stapler/stacker)	C4788-60521	284	—
Yellow toner cartridge	C4152A	—	—

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