HP Color LaserJet CM3530 MFP Series
Service Manual

Removal and replacement

Solve problems

Parts list

Additional product information:

www.hp.com/support/cljcm3530mfp
www.hp.com/go/usemyMFP

HP Color LaserJet CM3530 MFP Series

Service Manual

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1 Product basics

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Conventions used in this guide

☀ **TIP:**   Tips provide helpful hints or shortcuts.

✎ **NOTE:**   Notes provide important information to explain a concept or to complete a task.

△ **CAUTION:**   Cautions indicate procedures that you should follow to avoid losing data or damaging the product.

△ **WARNING!**   Warnings alert you to specific procedures that you should follow to avoid personal injury, catastrophic loss of data, or extensive damage to the product.

Product comparison

Model	Features
HP Color LaserJet CM3530 MFP	• 100-sheet multipurpose input tray (Tray 1)
	• 250-sheet input tray (Tray 2)
	• Automatic duplex printing
	• Automatic document feeder (ADF) that holds up to 50 pages, face-up
	• 250-sheet, face-down output bin
	• Hi-speed USB 2.0 port
	• HP Jetdirect embedded print server for connecting to a 10/100Base-TX network
	• 512 megabytes (MB) of random access memory (RAM)
	• Hard drive
HP Color LaserJet CM3530fs MFP	• 100-sheet multipurpose input tray (Tray 1)
	• 250-sheet input tray (Tray 2)
	• Automatic duplex printing
	• Automatic document feeder (ADF) that holds up to 50 pages, face-up
	• 250-sheet, face-down output bin
	• Hi-speed USB 2.0 port
	• HP Jetdirect embedded print server for connecting to a 10/100Base-TX network
	• 512 megabytes (MB) of random access memory (RAM)
	• Hard drive
	• Analog fax
	• Convenience stapler that can staple up to 20 sheets of paper

Product features

Table 1-2 Features

Speed and throughput	• Print up to 31 pages per minute (ppm) on letter-size paper and 30 ppm on A4-size paper.
	• Less than 11 seconds to print the first page
	• Recommended maximum monthly print volume of 2,000 to 6,000 pages
	• A 515 megahertz (MHz) microprocessor
	• Duplex at 75% speed from Tray 2 and 50% speed from Tray 1
Resolution	• 600 dots per inch (dpi) with Image Resolution Enhancement technology 3600 for optimum overall imaging
	• 1200 x 600 dpi for detailed line work and small text
Memory	• 512 MB of random-access memory (RAM), expandable to 1 gigabyte (GB) by using 200-pin small outline dual inline memory modules (SODIMM) that support 128, 256, or 512 MB of RAM.
	• Memory Enhancement technology (MEt) automatically compresses data to use RAM more efficiently.
User interface	• HP Easy Select full color control panel
	• An embedded Web server to gain access to support and order supplies (for network-connected products)
	• HP Easy Printer Care software (a Web-based status and troubleshooting tool)
	• Internet-enabled supply-ordering capabilities through HP Easy Printer Care software and embedded Web server
Languages and fonts	• HP Printer Control Language (PCL) 6
	• HP PCL 5
	• HP postscript level 3 emulation
	• Printer Management Language
	• 80 scalable TrueType PS typefaces
Print cartridges	• For information regarding print cartridges, see www.hp.com/go/learnaboutsupplies.
	• Authentic HP print cartridge detection
	• Automatic toner strip remover
Paper-handling	• **Tray 1 (multipurpose tray):** A multipurpose tray for paper, transparencies, labels, envelopes and other paper types. The tray holds up to 100 sheets of paper, 50 transparencies, or 10 envelopes.
	• **Tray 2:** 250-sheet tray. This tray automatically detects common paper sizes. Holds standard and custom-size paper.
	• **Optional Tray 3:** 500-sheet paper and heavy media tray.
	• **Automatic document feeder (ADF):** Holds up to 50 sheets of paper.
	• **Duplex printing:** Provides automatic two-sided printing (printing on both sides of the paper).

Table 1-2 Features (continued)

	ADF duplex scanning: The ADF has an automatic duplexer for scanning two-sided documents. **Standard output bin:** The standard output bin is located beneath the scanner. This bin can hold up to 250 sheets of paper. The product has a sensor that indicates when the bin is full. For information about supported paper sizes, see Supported paper and print media on page 56. For information about supported paper types, see Supported paper and print media types on page 58.
Supported operating systems **NOTE:** IPv4 and IPsec on IPv4 available on all listed Windows operating systems IPv6 and IPsec on IPv6 only supported on Windows Vista and Windows Server 2008.	- Windows 2000® - Windows XP® Home - Windows XP® Professional - Windows XP® Professional x64 - Windows Server 2003® (32/64 bit) - Windows Vista™ (compatible) - Windows Vista™ Premium - Windows Server 2008® (32/64 bit) - Macintosh OS X V10.3 and later - Novell 5.1 and later - Red Hat Linux 7.x and later - SuSE Linux 8.x and later - HP-UX 10.20, 11.x, and 11.i - Solaris 2.5 and later (SPARC systems only) - IBM AIX 3.2.5 and later (requires software from the NOS vendor) - MPE-iX - Citrix MetaFrame Server - Windows Terminal Services
Connectivity	- Local area network (LAN) connector (RJ-45) for the embedded HP Jetdirect print server - One enhanced input/output (EIO) slot - USB 2.0 connection - Host USB port for third-party solutions - A Foreign Interface Harness (FIH) connection (AUX) for connecting other devices - Optional analog fax card (included with the HP Color LaserJet CM3530fs MFP) - Optional HP Digital Sending Software (DSS)
Environmental features	- Sleep setting saves energy. - High content of recyclable components and materials. - Instant-on technology

Table 1-2 Features (continued)

	• Energy Star® compliance (except in EMEA)
	• Blue Angel certification (EMEA)
	• Cartridge and toner collection unit recycling with HP Planet Partners
	• Automatic color sensing
Security features	• Secure Disk Erase
	• Security lock (optional)
	• Job storage
	• User PIN authentication for stored jobs
	• Digital Send Software (DSS) authentication
	• IPsec security
	• Support for HP High Performance hard disks
Copying and sending	• Automatic color sensing for copies
	• Modes for text, graphics, and mixed text and graphics formats
	• Job-interrupt feature
	• Multiple pages per sheet
	• Control panel animations (for example, jam recovery)
	• Scan and send to e-mail
	◦ Local address book for e-mail and fax
	◦ LDAP addressing
	• Send to folder
	• Automatic duplex (two-sided) scanning

Product view

Product front view
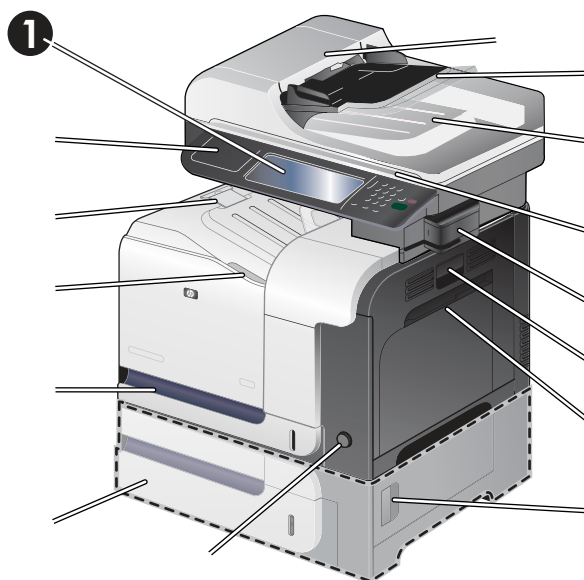
1	Color control panel
2	Document-feeder top-cover (lift open to clear jams)
3	Automatic document-feeder (ADF)
4	Document-feeder output bin
5	Scanner
6	Convenience stapler (only for the HP Color LaserJet CM3530fs MFP)
7	Right-side door (access for clearing jams)
8	Tray 1 (pull the handle to open the tray)
9	Lower-right door (access for clearing jams)
10	On/off button
11	Optional Tray 3
12	Tray 2
13	Front door (access to print cartridges and toner collection unit)
14	Standard output bin
15	Hardware integration port

Product back view
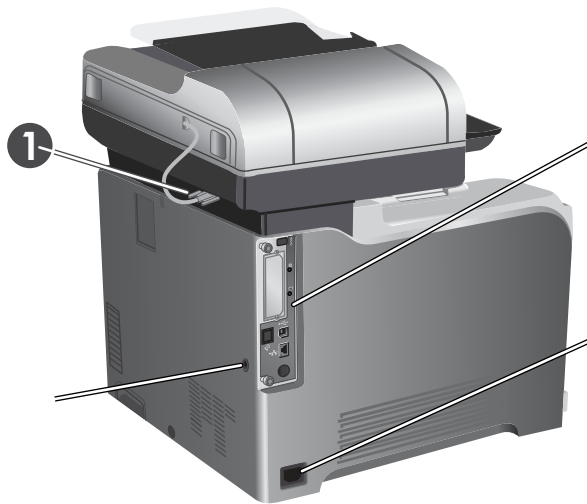
1	Connector for the ADF
2	Interface ports
3	Power connection
4	Slot for a cable-type security lock

Interface ports
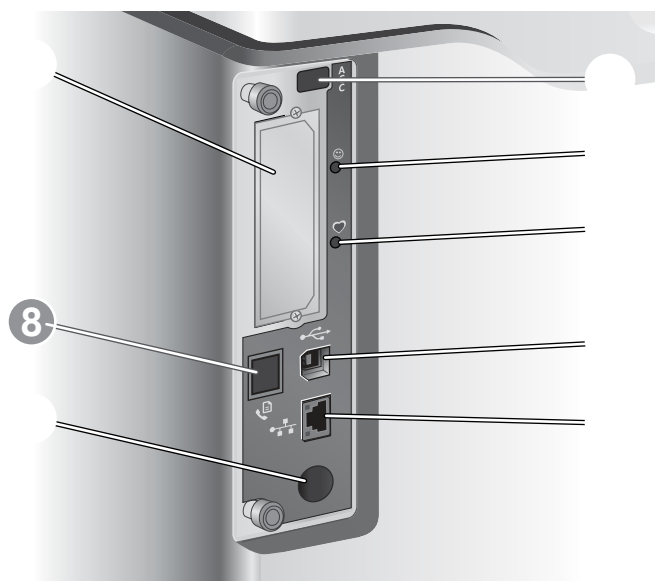
1	EIO interface expansion slot
2	Host USB port (for third-party solutions)
3	Formatter connectivity LED (lit when the formatter is properly seated)
4	Heartbeat LED (blinks when the formatter is working correctly)
5	Hi-Speed USB 2.0 port
6	RJ-45 network port (includes HP Jetdirect LEDs)
7	Foreign-interface harness (for connecting third-party solutions)
8	Fax connection (only for the HP Color LaserJet CM3530fs MFP)

Serial number and model number location
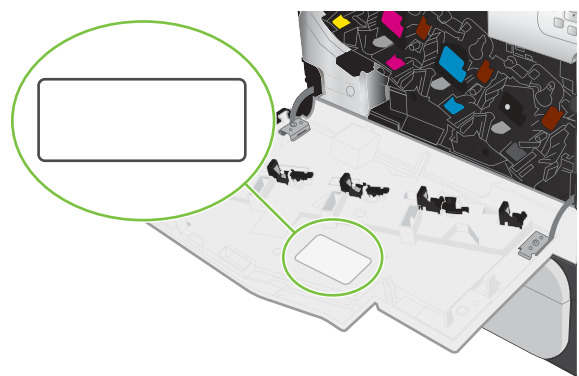
Model name	Model number
HP Color LaserJet CM3530 MFP	CC519A
HP Color LaserJet CM3530fs MFP	CC520A

2 Control panel

Use the control panel

The control panel has a VGA touchscreen that provides access to all product functions. Use the buttons and numeric keypad to control jobs and the product status. The LEDs indicate overall product status.

Control-panel layout

The control panel includes a touchscreen graphical display, job-control buttons, a numeric keypad, and three light-emitting diode (LED) status lights.
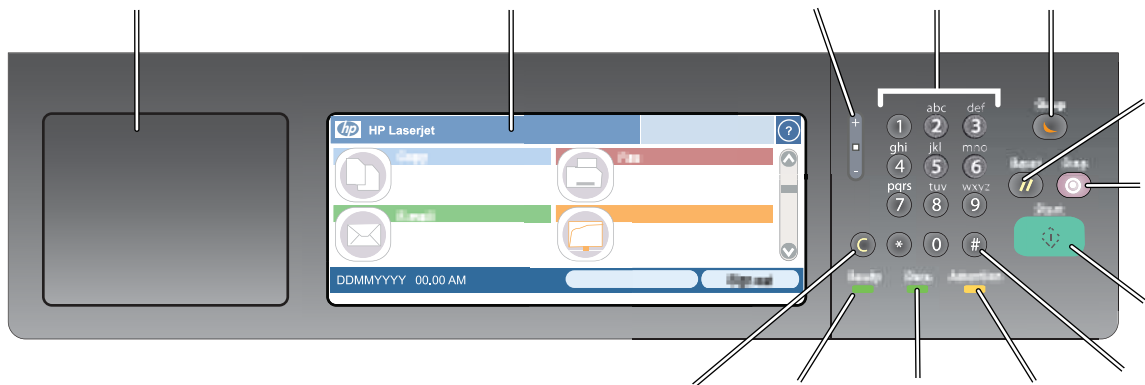
1	Hardware integration port	Area for adding third-party security devices
2	Touchscreen graphical display	Use the touchscreen to open and set up all product functions.
3	Brightness-adjustment button	Use this button to increase or decrease the brightness of the touchscreen display.
4	Numeric keypad	Use this area to specify the number of copies and other numeric values.
5	Sleep button	If the product is inactive for a long period of time, it automatically enters a sleep mode. To place the product into sleep mode or to reactivate the product, press the Sleep button.
6	Reset button	Resets the job settings to factory or user-defined default values.
7	Stop button	Stops the active job and opens the Job Status screen.
8	Start button	Begins a copy job, starts digital sending, starts a fax job, or continues a job that has been interrupted.
9	# button	Use this button to indicate a required pause for a fax number.
10	Attention light	The Attention light indicates that the product has a condition that requires intervention. Examples include an empty paper tray or an error message on the touchscreen.
11	Data light	The Data light indicates that the product is receiving data.

12	Ready light	The Ready light indicates that the product is ready to begin processing any job.
13	Clear button	Return values to their defaults.

Home screen

The home screen provides access to the product features, and it indicates the current status of the product.

NOTE: Depending on how the product has been configured, the features that appear on the home screen can vary.

1	Features	Depending on how the product is configured, the features that appear in this area can include any of the following items:
		● Copy
		● Fax
		● E-mail
		● Secondary E-Mail
		● Job Status
		● Network Folder
		● Job Storage
		● Workflow
		● Supplies Status
		● Administration
2	Product status line	The status line provides information about the overall product status. Various buttons appear in this area, depending on the current status. For a description of each button that can appear in the status line, see Buttons on the touchscreen on page 15.
3	Copy type	Shows whether copies are color.
4	Copy count	The copy count box indicates the number of copies that the product is set to make.
5	Help button	Touch the Help button to open the embedded help system.
6	Scroll bar	Touch the up or down arrows on the scroll bar to see the complete list of available features.
7	Sign Out	Touch Sign Out to sign out of the product if you have signed in for access to restricted features. After you sign out, the product restores all options to the default settings.
8	Network Address	Touch Network Address to find information about the network connection.
9	Date and time	The current date and time appear here. You can select the format that the product uses to show the date and time, for example 12-hour format or 24-hour format.

Buttons on the touchscreen

The status line on the touchscreen provides information about the product status. Various buttons can appear in this area. The following table describes each button.

	Home button. Touch the home button to go to the Home screen from any other screen.
	Start button. Touch the Start button to begin the action for the feature that you are using. **NOTE:** The name of this button changes for each feature. For example, in the Copy feature, the button is named Start Copy.
	Stop button. If the product is processing a print or fax job, the Stop button appears instead of the Start button. Touch the Stop button to halt the current job. The product prompts you to cancel the job or to resume it.
	Error button. The error button appears whenever the product has an error that requires attention before it can continue. Touch the error button to see a message that describes the error. The message also has instructions for solving the problem.
	Warning button. The warning button appears when the product has a problem but can continue functioning. Touch the warning button to see a message that describes the problem. The message also has instructions for solving the problem.
	Help button. Touch the help button to open the built-in online Help system. For more information, see Control-panel help system on page 15.

Control-panel help system

The product has a built-in Help system that explains how to use each screen. To open the Help system, touch the Help button ○ in the upper-right corner of the screen.

For some screens, the Help opens to a global menu where you can search for specific topics. You can browse through the menu structure by touching the buttons in the menu.

For screens that contain settings for individual jobs, the Help opens to a topic that explains the options for that screen.

If the product alerts you of an error or warning, touch the error ▮ or warning ⚠ button to open a message that describes the problem. The message also contains instructions to help solve the problem.

Navigate the Administration menu

From the Home screen, touch Administration to open the menu structure. You might need to scroll to the bottom of the Home screen to see this feature.

The Administration menu has several sub-menus, which are listed on the left side of the screen. Touch the name of a menu to expand the structure. A plus sign (+) next to a menu name means that it contains sub-menus. Continue opening the structure until you reach the option that you want to configure. To return to the previous level, touch Back.

To exit the Administration menu, touch the Home button ▭ in the upper-left corner of the screen.

The product has built-in Help that explains each of the features that are available through the menus. Help is available for many menus on the right-hand side of the touchscreen. Or, to open the global Help system, touch the Help button ○ in the upper-right corner of the screen.

The tables in the sections that follow indicate the overall structure of each menu under the Administration menu.

Information menu

Administration > Information

Use this menu to print information pages and reports that are stored internally on the product.

Table 2-1 Information menu

Menu item	Sub-menu item	Sub-menu item	Values	Description
Configuration/Status Pages	Administration Menu Map		Print	Shows the basic structure of the Administration menu and current administration settings.
	Configuration Page		Print	A set of configuration pages that show the current product settings.
	Supplies Status Page		Print	Shows the status of supplies such as cartridges, maintenance kits, and staples.
	Usage Page		Print	Shows information about the number of pages that have been printed on each paper type and size.
	Color Usage Job Log		Print	A directory page that contains job-by-job color usage information. Page content includes the user name, application name, and number of black-only pages and color pages.
	File Directory		Print	A directory page that contains information for any mass-storage devices, such as flash drives, memory cards, or hard disks, that are installed in this product.
Fax Reports	Fax Activity Log		Print	Contains a list of the faxes that have been sent from or received by this product.
	Fax Call Report	Fax Call Report	Print	A detailed report of the last fax operation, either sent or received.
		Thumbnail on Report	Yes No (default)	Choose whether or not to include a thumbnail of the first page of the fax on the call report.
		When to Print Report	Never auto print Print after any fax job Print after fax send jobs Print after any fax error (default) Print after send errors only Print after receive errors only	
	Billing Codes Report		Print	A list of billing codes that have been used for outgoing faxes. This report shows how many sent faxes were billed to each code.
	Blocked Fax List		Print	A list of phone numbers that are blocked from sending faxes to this product.
	Speed Dial List		Print	Shows the speed dials that have been set up for this product.

Table 2-1 Information menu (continued)

Menu item	Sub-menu item	Sub-menu item	Values	Description
Sample Pages/Fonts	Demonstration Page		Print	Printout of a page highlighting the print capabilities of the product.
	RGB Samples		Print	Printout of color samples for different RGB values. The samples act as a guide for color matching.
	CMYK Samples		Print	Printout of color samples for different CMYK values. The samples act as a guide for color matching.
	PCL Font List		Print	A list of printer control language (PCL) fonts that are currently available on the product.
	PS Font List		Print	A list of PostScript (PS) fonts that are currently available on the product.

Default Job Options menu

Use this menu to define the default job options for each function. These are used if the user does not specify other options when creating the job.

Default Options for Originals

Table 2-2 Default Options For Originals menu

Menu item	Values	Description
Paper Size	Select a paper size from the list.	Select the paper size that is most often used for copy or scan originals.
Number of Sides	1	Select whether copy or scan originals are most often single-sided or double-sided.
	2	
Orientation	Portrait	Select the orientation that is most often used for copy or scan originals. Select Portrait if the short edge is at the top or select Landscape if the long edge is at the top.
	Landscape	
Optimize Text/Picture	Manually Adjust	Optimize the output for a particular type of original: text, pictures, or a mixture of both.
	Text	
	Printed Picture	If you select Manually Adjust, specify the mix of text and pictures that is used most often.
	Photograph	

Image adjustment

Administration > Default Job Options > Image Adjustment

Table 2-3 Image Adjustment menu

Menu item	Values	Description
Darkness	Select a value.	Select the level of density (darkness) for the output.
Background Cleanup	Adjust the value within the range.	Increase the Background Cleanup setting to remove faint images from the background or to remove a light background color.
Sharpness	Adjust the value within the range.	Adjust the Sharpness setting to clarify or soften the image.

Default Copy Options

Table 2-4 Default Copy Options menu

Menu item	Sub-menu item	Values	Description
Number of Copies		Type the number of copies. The factory default setting is 1.	Set the default number of copies for a copy job.
Number of Sides		1	Set the default number of sides for copies.
		2	
Color/Black		Auto Detect	Choose whether the default copy mode is color, black, or automatically detected, based on the original.
		Color	
		Black (default)	
Collate		Off	Set up the option for collating sets of copies.
		On (default)	If On is selected, the product prints a complete copy of the print job before starting on the next copy. Otherwise, the product prints the first page of all copies before printing the second page, and so on.
Edge-To-Edge		Normal (recommended) (default)	If the original document is printed close to the edges, use the Edge-To-Edge feature to avoid shadows along the edges. Combine this feature with the Reduce/Enlarge feature to ensure that the entire page appears on the copies.
		Edge-To-Edge Output	
Auto Include Margins		Off (default)	This feature automatically reduces the image size during scanning so the margins are included.
		On	

Default Fax Options

Administration > Default Job Options > Default Fax Options

📝 **NOTE:** This menu is available only for the HP Color LaserJet CM3530fs MFP.

Table 2-5 Fax Send menu

Menu item	Sub-menu item	Values	Description
Resolution		Standard (100x200dpi) (default)	Set the resolution for sent documents. Higher resolution images have more dots per inch (dpi), so they show more detail. Lower resolution images have fewer dots per inch and show less detail, but the file size is smaller.
		Fine (200x200dpi)	
		Superfine (300x300dpi)	
Fax Header		Prepend (default)	Select the position of the fax header on the page.
		Overlay	Select Prepend to print the fax header above the fax content and move the fax content down on the page. Select Overlay to print the fax header over the top of the fax contents without moving the contents down. Using this option could prevent a single-page fax from flowing onto another page.

Table 2-6 Fax Receive menu

Menu item	Sub-menu item	Values	Description
Fax Forwarding	Fax Forwarding	Off (default)	To forward received faxes to another fax device, select Fax Forwarding and Custom. Then type the number of the other fax device into the Fax Forwarding Number field. When you select the Fax Forwarding menu item for the first time, you are prompted to set up a PIN. Type that PIN every time you use this menu. This PIN is also used to access the Fax Printing menu.
		Custom	
	Change PIN		Use this option to change the PIN for the Fax Forwarding menu.
Stamp Received Faxes	Enabled		Add the date, time, senders phone number, and page number to each page of the faxes that this product receives.
	Disabled (default)		
Fit to Page	Enabled (default)		Shrink faxes that are larger than Letter-size or A4-size so that they can fit onto a Letter-size or A4-size page. If it this feature set to Disabled, faxes larger than Letter or A4 will flow across multiple pages.
	Disabled		
Fax Paper Tray	Select from the list of trays. The default setting is Automatic.		Select the tray that holds the size and type of paper that you want to use for incoming faxes.

Default E-mail Options

Administration > Default Job Options > Default E-mail Options

Menu item	Values	Description
Document File Type	PDF (default)	Select the file format for the e-mail.
	JPEG	
	TIFF	
	M-TIFF	
Output Quality	High (large file)	Selecting higher quality for output increases the size of the output file.
	Medium (default)	
	Low (small file)	
Resolution	300 DPI	Select the resolution. Use a lower setting to create smaller files.
	200 DPI	
	150 DPI (default)	
	75 DPI	
Color/Black	Color scan (default)	Specify whether the e-mail will be in black or in color.
	Black/white scan	
TIFF Version	TIFF 6.0 (default)	Specify the TIFF version to use when saving scanned files.
	TIFF (Post 6.0)	

Default Send to Folder Options

Menu item	Values	Description
Color/Black	Color scan	Specify whether the file will be in black or in color.
	Black/white scan (default)	
Document File Type	PDF (default)	Select the file format for the file.
	M-TIFF	
	TIFF	
	JPEG	
TIFF Version	TIFF 6.0 (default)	Specify the TIFF version to use when saving scanned files.
	TIFF (Post 6.0)	
Output Quality	High (large file)	Selecting higher quality for output increases the size of the output file.
	Medium (default)	
	Low (small file)	
Resolution	75 DPI	Select the resolution. Use a lower setting to create smaller files.
	150 DPI (default)	
	200 DPI	
	300 DPI	
	400 DPI	
	600 DPI	

Default Print Options

Administration > Default Job Options > Default Print Options

Table 2-7 Default Print Options menu

Menu item	Sub-menu item	Values	Description
Copies Per Job		Type a value.	Set the default number of copies for print jobs.
Default Paper Size		(List of supported sizes)	Select a paper size.
Default Custom Paper Size	Unit of measure	Millimeters Inches	Configure the default paper size that is used when the user selects Custom as the paper size for a print job.
	X Dimension		Configure the width measurement for the Default Custom Paper Size.
	Y Dimension		Configure the height measurement for the Default Custom Paper Size.
Print Sides		1-sided 2-sided	Select whether print jobs are single-sided or double-sided by default.
2-Sided Format		Long Edge (Default) Short Edge	Use this feature to configure the default style for 2-sided print jobs. If Long Edge is selected and the job has a portrait orientation, the job will result in a book style. If the job is landscape, a calendar style (flipping up the pages) will result. If Short Edge is selected and the job has a portrait orientation, the job will result in a calendar style. If the job is landscape, a booklet style will result.

Time/Scheduling menu

Use this menu to set options for setting the time and for setting the product to enter and exit sleep mode.

NOTE: Values shown with "(default)" are the factory-default values. Some menu items have no default.

Table 2-8 Time/Scheduling menu

Menu item	Sub-menu item	Sub-menu item	Values	Description
Date/Time	Date Format		YYYY/MMM/DD (default) MMM/DD/YYYY DD/MMM/YYYY	Use this feature to set the current date and time, and to set the date format and time format that are used to time-stamp outgoing faxes.
	Date	Month Day Year		
	Time Format		12 hour (AM/PM) (default) 24 hour	
	Time	Hour Minute AM PM		
Time Zone			Select a time zone from the list.	Select the time zone where the product is located.
	Adjust for Daylight Savings		Enabled Disabled	
Sleep Delay			1 Minute 15 Minutes 20 minutes 30 minutes (default) 45 minutes 1 hour (60 minutes) 90 minutes 2 hours 4 Hours	Use this feature to select the time interval that the product should remain inactive before entering Sleep Mode.
Wake Time	Monday Tuesday		Off (default) Custom	Select Custom to set a wake time for each day of the week. The product exits sleep mode according to this schedule. Using a sleep schedule helps conserve energy and

Table 2-8 Time/Scheduling menu (continued)

Menu item	Sub-menu item	Sub-menu item	Values	Description
	Wednesday			prepares the product for use so that users do not have to wait for it to warm up.
	Thursday			
	Friday			
	Saturday			
	Sunday			
Sleep Time	Monday		Off (default)	Use this feature to set a sleep time for each day of the week for periods when the product will not likely be in use (for example, at a certain time each evening). Setting a sleep time makes the product automatically go into a low-power mode. Select a day and then select Custom to set up a custom sleep time schedule.
	Tuesday		Custom	
	Wednesday			
	Thursday			
	Friday			
	Saturday			
	Sunday			
Fax Printing	Fax Printing Mode	Store all received faxes		If you have concerns about the security of private faxes, use this feature to store faxes rather than having them automatically print by creating a printing schedule. When you select this menu item for the first time, you are prompted to set up a PIN. Type that PIN every time you use this menu.
		Print all received faxes (default)		Select Print all received faxes to print all incoming received faxes at the time they are received.
		Use Fax Printing Schedule	Create Fax Printing Schedule	Select Use Fax Printing Schedule to get to the Create Fax Printing Schedule menu options that allow you to set up a schedule for printing received faxes.
	Change PIN			Select Change PIN to change the PIN number that users must provide to print faxes.

Management menu

Administration > Management

Use this menu to set up global product-management options.

📝 **NOTE:** Values shown with "(default)" are the factory-default values. Some menu items have no default.

Table 2-9 Management menu

Menu item	Sub-menu item	Values	Description
Network Address Button	Display		Use this feature to display the Network Address button on the Home screen.
	Hide (default)		
Stored Job Management	Quick Copy Job Storage Limit	Select the maximum number of jobs to store	Use this menu to view and manage any jobs that are stored on the product.
	Quick Copy Job Held Timeout	Off (default)	
		1 Hour	
		4 Hours	
		1 Day	
		1 Week	
	Stored Jobs List Order	Alphabetical	
		Chronological	
Sleep mode		Disable	Use this feature to customize the sleep mode settings for this product.
		Use Sleep Delay (default)	Select Use Sleep Delay to set the product to enter sleep mode after the delay that is specified in the Time/Scheduling menu.
Manage Supplies	Replace Supplies		Sets the product behavior for when a supply item is low.
			The product displays an "Order supplies" message when a supply item is running low and a "Replace supplies" message when a supply item has reached its estimated end of life. To ensure optimal print quality, HP recommends replacing a supply item when the "Replace supplies" message is displayed. The supply does not have to be replaced at this point unless the print quality is no longer acceptable. Printing beyond this point is possible using Override at out 1 or Override at out 2. The Override options allow the product to continue using a supply item that has reached its estimated end of life.
	Stop at low		Choose Stop at low to stop printing when a supply reaches a low condition.
	Stop at out (default)		Choose Stop at out to stop printing when the estimated end of life has been reached for a supply. Printing beyond this point is possible using Override at out 1 or Override at out 2. The supply does not need to be replaced now unless the print quality is no longer acceptable.

Table 2-9 Management menu (continued)

Menu item	Sub-menu item	Values	Description
		Override at out 1 Override at out 2	Choose Override at out 1 to allow the product to continue printing when supply items, other than the toner collection unit, have reached the end of their estimated life. Using this option will eventually result in unacceptable print quality. Consider having a replacement cartridge available for when the print quality becomes unacceptable. Choose Override at out 2 to allow the product to continue printing when any color supply is past the end of its estimated capacity, including the toner collection unit. This option is not recommended because of the risk of overfilling the toner collection unit, which could result in the need to service the product. Information about the remaining toner is not available when printing in Override mode. Once an HP supply has reached the end of its estimated life, HP's Premium Protection Warranty on that supply has ended. For Warranty information, see Print cartridge limited warranty statement on page 571. The Override options can be enabled or disabled at any time, and they do not have to be re-enabled for each supply item. The product automatically continues printing when a supply item reaches the end of its estimated life. The message "Replace supply Override in use" displays on the control panel while a supply is used in Override mode. When the supply item is replaced with a new supply, Override is de-activated until another supply item reaches the end of its estimated life.
		Page Limit Range of 0 to 100000	This menu displays if you select Yes, Use Override for either override option. Select the number of pages the product continues to print while in override mode. The default is 1500.
	Supply Low/Order Threshold	Select a value in the range. The default is 5%.	Use this menu to carry out administrative supply management tasks such as changing the threshold when supplies should be ordered.
	Color Supply Out	Stop (default) Auto-continue black	This menu sets the product behavior when a color supply has reached its estimated end of life. When Auto-continue black is selected, the product will continue printing using black toner only.
Restrict Color Use	Color printing access	Enable Color (default) Color If Allowed Disable Color	This item allows the administrator to disable or restrict color printing. To use the Color If Allowed setting, set up user permissions and/or application permissions in the embedded Web server, HP Easy Printer Care software, or Web Jetadmin.
	Color copying access	Enable Color (default) Disable Color	This item allows the administrator to disable or restrict color copying.
Color/Black Mix		Auto (default) Mostly color pages Mostly black pages	This item controls how the engine switches from color mode to monochrome mode for maximum performance and print cartridge life.

Table 2-9 Management menu (continued)

Menu item	Sub-menu item	Values	Description
			Select Auto to reset the product to the factory default setting.
			Select Mostly color pages if nearly all your print jobs are color with high page coverage.
			Select Mostly black pages if you print mostly monochrome jobs or a combination of color and monochrome jobs.

Initial Setup menu

Administration > Initial Setup

📝 **NOTE:** Values shown with "(default)" are the factory-default values. Some menu items have no default.

Networking and I/O

Administration > Initial Setup > Networking and I/O

Table 2-10 Networking and I/O

Menu item	Sub-menu item	Values	Description
I/O Timeout		Select a value in the range. The factory default setting is 15 seconds.	I/O timeout refers to the elapsed time before a print job fails. If the stream of data that the product receives for a print job gets interrupted, this setting indicates how long the product will wait before it reports that the job has failed.
Parallel Input NOTE: This item appears only if an EIO accessory is installed.	High Speed	No Yes (default)	Use the High Speed setting to configure the speed that the parallel port uses to communicate with the host.
	Advanced Functions	Enabled (default) Disabled	Use the Advanced Functions setting to enable or disable bidirectional parallel communication.
Embedded Jetdirect	See Table 2-11 Jetdirect menus on page 31 for the list of options.		
EIO <X> Jetdirect			

Table 2-11 Jetdirect menus

Menu item	Sub-menu item	Sub-menu item	Values and Description
TCP/IP	Enable		Off: Disable the TCP/IP protocol. On (default): Enable the TCP/IP protocol.
	Host Name		An alphanumeric string, up to 32 characters, used to identify the product. This name is listed on the HP Jetdirect configuration page. The default host name is NPIxxxxxx, where xxxxxx is the last six digits of the LAN hardware (MAC) address.
	IPV4 Settings	Config Method	Specifies the method that TCP/IPv4 parameters will be configured on the HP Jetdirect print server. Bootp: Use BootP (Bootstrap Protocol) for automatic configuration from a BootP server. DHCP: Use DHCP (Dynamic Host Configuration Protocol) for automatic configuration from a DHCPv4 server. If selected and a DHCP lease exists, DHCP Release and DHCP Renew menus are available to set DHCP lease options. Auto IP: Use automatic link-local IPv4 addressing. An address in the form 169.254.x.x is assigned automatically.

Table 2-11 Jetdirect menus (continued)

Menu item	Sub-menu item	Sub-menu item	Values and Description
			Manual: Use the Manual Settings menu to configure TCP/IPv4 parameters.
		Default IP	Specify the IP address to default to when the print server is unable to obtain an IP address from the network during a forced TCP/IP reconfiguration (for example, when manually configured to use BootP or DHCP).
			Auto IP: A link-local IP address 169.254.x.x is set.
			Legacy: The address 192.0.0.192 is set, consistent with older HP Jetdirect products.
		DHCP Release	This menu appears if Config Method was set to DHCP and a DHCP lease for the print server exists.
			No (default): The current DHCP lease is saved.
			Yes: The current DHCP lease and the leased IP address are released.
		DHCP Renew	This menu appears if Config Method was set to DHCP and a DHCP lease for the print server exists.
			No (default): The print server does not request to renew the DHCP lease.
			Yes: The print server requests to renew the current DHCP lease.
		Manual Settings	(Available only if Config Method is set to Manual) Configure parameters directly from the printer control panel:
			IP Address: The unique IP address of the printer (n.n.n.n), where n is a value from 0 to 255.
			Subnet Mask: The subnet mask for the printer (m.m.m.m), where m is a value from 0 to 255.
			Syslog Server: The IP address of the syslog server used to receive and log syslog messages.
			Default Gateway: The IP address of the gateway or router used for communications with other networks.
			Idle Timeout: The time period, in seconds, after which an idle TCP print data connection is closed (default is 270 seconds, 0 disables the timeout).
		Primary DNS	Specify the IP address (n.n.n.n) of a Primary DNS Server.
		Secondary DNS	Specify the IP address (n.n.n.n) of a Secondary Domain Name System (DNS) Server.
	IPV6 Settings	Enable	Use this item to enable or disable IPv6 operation on the print server.
			Off: IPv6 is disabled.
			On (default): IPv6 is enabled.

Table 2-11 Jetdirect menus (continued)

Menu item	Sub-menu item	Sub-menu item	Values and Description
		Address	**Manual Settings**: Use this item to manually set IPv6 addresses on the print server.
			Enable: Select this item and choose **On** to enable manual configuration, or **Off** to disable manual configuration.
			Address: Use this item to type a 32 hexadecimal digit IPv6 node address that uses the colon hexadecimal syntax.
		DHCPV6 Policy	**Router Specified**: The stateful auto-configuration method to be used by the print server is determined by a router. The router specifies whether the print server obtains its address, its configuration information, or both from a DHCPv6 server.
			Router Unavailable: If a router is not available, the print server should attempt to obtain its stateful configuration from a DHCPv6 server.
			Always: Whether or not a router is available, the print server always attempts to obtain its stateful configuration from a DHCPv6 server.
		Primary DNS	Use this item to specify an IPv6 address for a primary DNS server that the print server should use.
		Secondary DNS	Use this item to specify an IPv6 address for a secondary DNS server that the print server should use.
	Proxy Server		Specifies the proxy server to be used by embedded applications in the product. A proxy server is typically used by network clients for Internet access. It caches Web pages, and provides a degree of Internet security, for those clients.
			To specify a proxy server, enter its IPv4 address or fully-qualified domain name. The name can be up to 255 octets.
			For some networks, you may need to contact your Independent Service Provider (ISP) for the proxy server address.
	Proxy Port		Type the port number used by the proxy server for client support. The port number identifies the port reserved for proxy activity on your network, and can be a value from 0 to 65535.
	Idle Timeout		This is the time period, in seconds, after which an idle TCP print data connection is closed. The default is 270 seconds. To disable the timeout, specify 0.
IPX/SPX	Enable		**Off**: Disable the IPX/SPX protocol.
			On (default): Enable the IPX/SPX protocol.
	Frame Type		Selects the frame-type setting for your network.
			Auto: Automatically sets and limits the frame type to the first one detected.
			EN_8023, **EN_II**, **EN_8022**, and **EN_SNAP**: Frame-type selections for Ethernet networks.

Table 2-11 Jetdirect menus (continued)

Menu item	Sub-menu item	Sub-menu item	Values and Description
AppleTalk	Enable		Off: Disable the AppleTalk protocol.
			On (default): Enable the AppleTalk protocol.
DLC/LLC	Enable		Off: Disable the DLC/LLC protocol.
			On (default): Enable the DLC/LLC protocol.
Security	Print Sec Page		Yes (default): Prints a page that contains the current security settings on the HP Jetdirect print server.
			No: A security settings page is not printed.
	Secure Web		For configuration management, specify whether the embedded Web server will accept communications using HTTPS (Secure HTTP) only, or both HTTP and HTTPS.
			HTTPS Required (default): For secure, encrypted communications, only HTTPS access is accepted. The print server will appear as a secure site.
			HTTPS Optional: Access using either HTTP or HTTPS is permitted.
	IPSec		Specify the IPSec status on the print server.
			Keep: IPSec status remains the same as currently configured.
			Disable: IPSec operation on the print server is disabled.
	Reset Security		Specify whether the current security settings on the print server will be saved or reset to factory defaults.
			No: The current security settings are maintained.
			Yes: Security settings are reset to factory defaults.
Diagnostics	Embedded Tests		This menu provides tests to help diagnose network hardware or TCP/IP network connection problems.
			Embedded tests help to identify whether a network fault is internal or external to the product. Use an embedded test to check hardware and communication paths on the print server. After you select and enable a test and set the execution time, you must select Execute to initiate the test.
			Depending on the execution time, a selected test runs continuously until either the product is turned off, or an error occurs and a diagnostic page is printed.
		LAN HW Test	CAUTION: Running this embedded test will erase your TCP/IP configuration.
			This test performs an internal loopback test. An internal loopback test will send and receive packets only on the internal network hardware. There are no external transmissions on your network.
			Select Yes to choose this test, or No to not choose it.

Table 2-11 Jetdirect menus (continued)

Menu item	Sub-menu item	Sub-menu item	Values and Description
		HTTP Test	This test checks operation of HTTP by retrieving predefined pages from the product, and tests the embedded Web server.
			Select Yes to choose this test, or No to not choose it.
		SNMP Test	This test checks operation of SNMP communications by accessing predefined SNMP objects on the product.
			Select Yes to choose this test, or No to not choose it.
		Data Path Test	This test helps to identify data path and corruption problems on an HP postscript level 3 emulation product. It sends a predefined PS file to the product, However, the test is paperless; the file will not print.
			Select Yes to choose this test, or No to not choose it.
		Select All Tests	Use this item to select all available embedded tests.
			Select Yes to choose all tests. Select No to select individual tests.
		Execution Time [H]	Use this item to specify the length of time (in hours) that an embedded test will be run. You can select a value from 1 to 60 hours. If you select zero (0), the test runs indefinitely until an error occurs or the product is turned off.
			Data gathered from the HTTP, SNMP, and Data Path tests is printed after the tests have completed.
		Execute	No: Do not initiate the selected tests.
			Yes: Initiate the selected tests.
	Ping Test		This test is used to check network communications. This test sends link-level packets to a remote network host, then waits for an appropriate response. To run a ping test, set the following items:
		Dest Type	Specify whether the target product is an IPv4 or IPv6 node.
		Dest IPv4	Type the IPv4 address.
		Dest IPv6	Type the IPv6 address.
		Packet Size	Specify the size of each packet, in bytes, to be sent to the remote host. The minimum is 64 (default) and the maximum is 2048.
		Timeout	Specify the length of time, in seconds, to wait for a response from the remote host. The default is 1 and the maximum is 100.
		Count	Specify the number of ping test packets to send for this test. Select a value from 1 to 100. To configure the test to run continuously, select 0.
		Print Results	If the ping test was not set for continuous operation, you can choose to print the test results. Select Yes to print results. If you select No (default), results are not printed.

Table 2-11 Jetdirect menus (continued)

Menu item	Sub-menu item	Sub-menu item	Values and Description
		Execute	Specify whether to initiate the ping test. Select Yes to initiate the test, or No to not run the test.
	Ping Results		Use this item to view the ping test status and results using the control panel display. You can select the following items:
		Packets Sent	Shows the number of packets (0 - 65535) sent to the remote host since the most recent test was initiated or completed.
		Packets Received	Shows the number of packets (0 - 65535) received from the remote host since the most recent test was initiated or completed.
		Percent Lost	Shows the percent of ping test packets that were sent with no response from the remote host since the most recent test was initiated or completed.
		RTT Min	Shows the minimum detected roundtrip- time (RTT), from 0 to 4096 milliseconds, for packet transmission and response.
		RTT Max	Shows the maximum detected roundtrip- time (RTT), from 0 to 4096 milliseconds, for packet transmission and response.
		RTT Average	Shows the average round-trip-time (RTT), from 0 to 4096 milliseconds, for packet transmission and response.
		Ping In Progress	Shows whether a ping test is in progress. Yes indicates a test in progress, and No indicates that a test completed or was not run.
		Refresh	When viewing the ping test results, this item updates the ping test data with current results. Select Yes to update the data, or No to maintain the existing data. However, a refresh automatically occurs when the menu times out or you manually return to the main menu.
Link Speed			The link speed and communication mode of the print server must match the network. The available settings depend on the product and installed print server. Select one of the following link configuration settings:
			CAUTION: If you change the link setting, network communications with the print server and network product might be lost.
			Auto (default): The print server uses auto-negotiation to configure itself with the highest link speed and communication mode allowed. If auto-negotiation fails, either 100TX Half or 10T Half is set depending on the detected link speed of the hub/switch port. (A 1000T half-duplex selection is not supported.)
			10T Half: 10 Mbps, half-duplex operation.
			10T Full: 10 Mbps, Full-duplex operation.
			100TX Half: 100 Mbps, half-duplex operation.
			100TX Full: 100 Mbps, full-duplex operation.

Table 2-11 Jetdirect menus (continued)

Menu item	Sub-menu item	Sub-menu item	Values and Description
			100TX Auto: Limits auto-negotiation to a maximum link speed of 100 Mbps.
			1000TX Full: 1000 Mbps, full-duplex operation.
Print Protocols			Use this item to print a page that lists the configuration of the following protocols: IPX/SPX, Novell NetWare, AppleTalk, DLC/LLC.

Fax Setup

Administration > Initial Setup > Fax Setup

📝 **NOTE:** This menu is available only for the HP Color LaserJet CM3530fs MFP.

Table 2-12 Fax Setup menu

Menu item	Sub-menu item	Sub-menu item	Values	Description
Fax Setup Wizard				Use this wizard to set up options for sending faxes if the analog fax accessory is installed.
Required Settings	Country/Region		(Countries/regions listed)	Configure the settings that are legally required for outgoing faxes.
	Date/Time			
	Fax Header Information	Telephone Number		
		Company Name		
PC Fax Send			Disabled	Use this feature to enable or disable PC Fax Send. PC Fax Send enables users to send faxes through the product from their computers if they have the Send Fax driver installed on their PC.
			Enabled (default)	

Table 2-12 Fax Setup menu (continued)

Menu item	Sub-menu item	Sub-menu item	Values	Description
Fax Send Settings	Fax Dial Volume		Off Low (default) High	Use this feature to set the volume of the tones that you hear while the product dials the fax number.
	Error Correction Mode		Enabled (default) Disabled	When Error Correction Mode is enabled and an error occurs during fax transmission, the product sends or receives the error portion again.
	JBIG Compression		Enabled (default) Disabled	JBIG compression reduces fax-transmission time, which can result in lower phone charges. However, using JBIG compression sometimes causes compatibility problems with older fax machines. If this occurs, turn off JBIG compression.
	Maximum Baud Rate		Select a value from the list. The default is 33.6K.	Use this feature to set the maximum baud rate for receiving faxes. This can be used as a diagnostic tool for troubleshooting fax problems.
	TCF T.30 Delay Timer		Default (default) Custom	This setting should be left at the default value and only changed when directed by an HP technical support agent. Adjustment procedures associated with this setting are beyond the scope of this guide.
	TCF Extend		Default (default) Custom	This setting should be left at the default value and only changed when directed by an HP technical support agent. Adjustment procedures associated with this setting are beyond the scope of this guide.
	Dialing Mode		Tone (default) Pulse	Select whether the product should use tone or pulse dialing.
	Redial On Busy		The range is between 0 and 9. The factory default is 3 times.	Type the number of times the product should attempt to redial if the line is busy.
	Redial On No Answer		Never (default) Once Twice	Use this feature to specify the number of times the product should attempt to dial if the recipient fax number does not answer. **NOTE:** Twice is available in locations other than the United States and Canada.

Table 2-12 Fax Setup menu (continued)

Menu item	Sub-menu item	Sub-menu item	Values	Description
	Redial Interval		The range is between 1 and 5 minutes. The factory default is 5 minutes.	Use this feature to specify the number of minutes between dialing attempts if the recipient number is busy or not answering.
	Detect Dial Tone		Enabled Disabled (default)	Use this feature to specify whether the product should check for a dial tone before sending a fax.
	Dialing Prefix		Off (default) Custom	Use this feature to specify a prefix number that must be dialed when sending faxes from the product.
	Billing Codes		Off (default) Custom	When billing codes are enabled, a prompt appears that asks the user to enter the billing code for an outgoing fax. The range is between 1 and 16 digits. The default is 1 digit.
Fax Receive Settings	Rings To Answer		The range varies by location. The factory default is 2 rings.	Use this feature to specify the number of rings that must occur before the fax modem answers.
	Ring Interval		Default (default) Custom	This setting is used to adjust for some PBX ring signals. Change this setting only when directed by an HP technical support agent.
	Ring Frequency		Default (default) Custom	This setting should be left at the default value and only changed when directed by an HP technical support agent. Adjustment procedures associated with this setting are beyond the scope of this guide.
	Ringer Volume		Off Low (default) High	Set the volume for the fax ring-tone.
	Blocked Fax Numbers	Add Blocked Numbers	Type the fax number to add.	Use this feature to add or delete numbers from the blocked fax list. The blocked fax list can contain up to 30 numbers. When the product receives a call from one of the blocked fax numbers, it deletes the incoming fax. It also logs the blocked fax in the activity log along with job-accounting information.
		Remove Blocked Numbers	Select a fax number to remove.	
		Clear All Blocked Numbers	No (default) Yes	

E-mail Setup

Use this menu to enable the e-mail feature and to configure basic e-mail settings.

NOTE: To configure advanced e-mail settings, use the embedded Web server. For more information, see Embedded Web server on page 85.

Table 2-13 E-mail Setup menu

Menu item	Values	Description
E-mail Setup Wizard		Use this wizard to set up basic options for the e-mail feature.
Address Validation	On (default) Off	This option enables the product to check e-mail syntax when you type an e-mail address. Valid e-mail addresses require the "@" sign and a ".".
Find Send Gateways	Find	Search the network for SMTP gateways that the product can use to send e-mail.
SMTP Gateway	Enter a value.	Specify the IP address of the SMTP gateway that is used to send e-mail from the product.
Test Send Gateway	Test	Test the configured SMTP gateway to see if it is functional.

Send Setup menu

Table 2-14 Send Setup menu

Menu item	Values	Description
Replicate MFP	Enter a value (IP Address).	Copy the local Send settings from one product to another.
Allow Transfer to New DSS	Off On (default)	Use this feature to allow the transfer of the product from one HP Digital Sending Software (DSS) server to another. HP DSS is a software package that handles digital sending tasks such as faxing, e-mail, and sending a scanned document to a network folder.
Allow Use of Digital Send Service	Off On (default)	This feature allows you to configure the product for use with an HP Digital Sending Software (DSS) server.
Fax Number Confirmation	Disable (default) Enable	When fax number confirmation is enabled, you are prompted to enter the fax number twice to verify that it has been typed correctly.
Fax Number Speed Dial Matching	Disable (default) Enable	If set to Enable, a screen is displayed if the fax numbers entered match a speed dial that is configured to that number. The numbers do not have to match as a group; the number must match individually. That is, if one of the fax numbers matches speed dial 2 and speed dial 6, then the screen is displayed for that fax number. When you touch Yes on the dialog, then the fax is sent or the fax number is added to the distribution list.

Device Behavior menu

Administration > Device Behavior

Table 2-15 Device Behavior menu

Menu item	Sub-menu item	Sub-menu item	Values	Description
Language			Select the language from the list.	Select a different language for control-panel messages. When you select a new language, the keyboard layout might also change.
Keyboard Layout			Select the keyboard layout from the list	Select a keyboard layout regardless of the Language setting. Select Default if you want the keyboard layout to change when the Language setting changes. This is the default setting.
Keyboard Layout Button			Display Hide	When displayed, you can use this option to select an alternate keyboard layout. The keyboard returns to the default layout after the product returns to the Ready state or if you press the Reset button.
Key Press Sound			On (default) Off	Use this feature to specify whether you hear a sound when you touch the screen or press buttons on the control panel.
Inactivity Timeout			Type a value between 10 and 300 seconds. The factory default is 60 seconds.	Specify the amount of time that elapses between any activity on the control panel and the product resetting to the default settings.
Warning/Error Behavior	Clearable Warnings		On Job (default)	Set the amount of time that a clearable warning appears on the control panel.
	Continuable Events		Auto continue (10 seconds) (default) Touch OK to continue	Configure the product behavior when the product encounters certain errors.
	Jam Recovery		Auto (default) Off On	Configure how the product handles pages that are lost during a jam.

Table 2-15 Device Behavior menu (continued)

Menu item	Sub-menu item	Sub-menu item	Values	Description
Tray Behavior	Use Requested Tray		Exclusively (default) First	Control how the product handles jobs that have specified a specific input tray.
	Manually Feed Prompt		Always (default) Unless Loaded	Specify how a prompt should appear when the type or size for a job does not match the specified tray and the product pulls from the multipurpose tray instead.
	PS Defer Media		Enabled (default) Disabled	Select either the PostScript (PS) or HP paper-handling model.
	Use Another Tray		Enabled (default) Disabled	Turn on or off the control-panel prompt to select another tray when the specified tray is empty.
	Alternative Letterhead Mode		On Off (default)	Use this feature so that you can load letterhead or preprinted paper into the tray the same way for all print or copy jobs, whether you are printing or copying to one side of the sheet or to both sides of the sheet.
	Size/Type Prompt		Display (default) Do not display	Control whether the tray configuration message appears whenever a tray is opened or closed.
	Duplex Blank Pages		Auto (default) Yes	Control how the product handles two-sided jobs (duplexing).
General Copy Behavior	Hold off print job		On Off	Prevents print jobs from beginning to print while a walk-up user is setting up a job.
	Hold off time			Prevents non-copy print jobs from starting for a specified time after a copy job is completely printed.
	Scan Ahead		Enabled (default) Disabled	Turn on no-wait scanning. With Scan Ahead enabled, the pages in the original document are scanned to disk and held until the product becomes available.
	Auto Print Interrupt		Enabled Disabled (default)	When this feature is enabled, copy jobs can interrupt print jobs that are set to print multiple copies. The copy job is inserted into the print queue at the end of one copy of the print job. After the copy job is complete, the product continues printing the remaining copies of the print job.
	Copy Interrupt		Enabled Disabled (default)	When this feature is enabled, a copy job that is currently printing can be interrupted when a new copy job is started. You are prompted to confirm that you want to interrupt the current job.
	Alternative Letterhead Mode		Off (default) On	This option allows loading of letterhead or preprinted paper the same way for all copy jobs, whether copying to one side of the paper or to both sides of the paper.

Table 2-15 Device Behavior menu (continued)

Menu item	Sub-menu item	Sub-menu item	Values	Description
General Printing Behavior	Override A4/Letter		No Yes (default)	When this feature is enabled, the job prints on letter-size paper when an A4 job is sent but no A4-size paper is loaded in the product (or prints on A4 paper when a letter-size job is sent but no letter-size paper is loaded). This option also overrides A3 with ledger-size paper and ledger with A3-size paper.
	Manual Feed		Enabled Disabled (default)	When this feature is enabled, the user can select manual feed from the control panel as the paper source for a job.
	Courier Font		Regular (default) Dark	Select which version of the Courier font you want to use.
	Wide A4		Enabled Disabled (default)	Change the printable area of A4-size paper. If you enable this option, eighty 10-pitch characters can be printed on a single line of A4 paper.
	Print PS Errors		Enabled Disabled (default)	Select whether a PostScript (PS) error page is printed when the product encounters a PS error.
	Print PDF Errors		Enabled Disabled (default)	Select whether a PDF error page is printed when the product encounters a PDF error.
	Personality		Auto (default) PCL PDF PS	Select the printer language that the product should use. *Normally, you should not change the language.* If you change the setting to a specific language, the product does not automatically switch from one language to another unless specific software commands are sent to the product.

Table 2-15 Device Behavior menu (continued)

Menu item	Sub-menu item	Sub-menu item	Values	Description
	PCL	Form Length	Type a value between 5 and 128 lines. The factory default is 60 lines.	PCL is a set of printer commands that Hewlett-Packard developed to provide access to printer features.
		Orientation	Portrait (default) Landscape	Select the orientation that is most often used for print jobs. Select Portrait if the short edge is at the top or Landscape if the long edge is at the top.
		Font Source	Select the source from the list.	Select the font source for the user-soft default font.
		Font Number	Type the font number. The range is between 0 and 102. The factory default is 0.	Specify the font number for the user soft default font by using the source that is specified in the Font Source menu item. The product assigns a number to each font and lists it on the PCL font list (available from the Administration menu).
		Font Pitch	Type a value between 0.44 and 99.99. The factory default is 10.00.	If Font Source and Font Number indicate a contour font, use this feature to select a default pitch (for a fixed-spaced font).
		Font Point Size	Type a value between 4.00 and 999.75. The factory default is 12.00.	If Font Source and Font Number indicate a contour font, use this feature to select a default point size (for a proportional-spaced font).
		Symbol Set	PC-8 (default) (50 additional symbol sets from which to choose)	Select any one of several available symbol sets from the control panel. A symbol set is a unique grouping of all the characters in a font.
		Append CR to LF	No (default) Yes	Configure whether a carriage return (CR) is appended to each line feed (LF) encountered in backwards-compatible PCL jobs (pure text, no job control).
		Suppress Blank Pages	No (default) Yes	This option is for users who are generating their own PCL, which could include extra form feeds that cause blank pages to be printed. When Yes is selected, form feeds are ignored if the page is blank.
		Media Source Mapping	Standard (default) Classic	Select and maintain input trays by number when you are not using the printer driver, or when the software program has no option for tray selection.

Print Quality menu

Administration > Print Quality

Table 2-16 Print Quality menu

Menu item	Sub-menu item	Values	Description
Adjust Color	Highlights	Cyan Density. Magenta Density. Yellow Density. Black Density **+5** to **–5**. Default is **0**.	Adjust the darkness or lightness of highlights on a printed page. Lower values represent lighter highlights on a printed page, and higher values represent darker highlights on a printed page.
	Midtones	Cyan Density. Magenta Density. Yellow Density. Black Density **+5** to **–5**. Default is **0**.	Adjust the darkness or lightness of midtones on a printed page. Lower values represent lighter midtones on a printed page, and higher values represent darker midtones on a printed page.
	Shadows	Cyan Density. Magenta Density. Yellow Density. Black Density **+5** to **–5**. Default is **0**.	Adjust the darkness or lightness of shadows on a printed page. Lower values represent lighter shadows on a printed page, and higher values represent darker shadows on a printed page.
	Restore Color Values	Restore	Sets all the density values back to the factory default settings.
Set Registration	Test Page	Print	Shift the margin alignment to center the image on the page from top to bottom and from left to right. You can also align the image on the front with the image printed on the back. Print a test page for setting the registration.
	Source	All trays Tray <X>: <contents> (choose a tray)	Select the source input tray for printing the Set Registration page.
	Adjust Tray <X>	Shift from -20 to 20 along the X or Y axes. 0 is the default.	Perform the alignment procedure for each tray. When it creates an image, the product *scans* across the page from side to side as the sheet *feeds* from top to bottom into the product. The scan direction is referred to as X. X1 is the scan direction for the first side of a 2-sided page. X2 is the scan direction for the second side of a 2-sided page. The feed direction is referred to as Y.
Print Modes	<Paper Type>		Configure which mode is associated with which paper type.
	Restore Modes	Restore	Return all print-mode settings to the factory-default settings.
Auto Sense Mode	Tray 1 Sensing	Full Sensing (default) Transparency Only	Sets the sensing option for Tray 1 for paper types when using Auto Sense Mode. When Full Sensing is selected, the product senses every page and switches modes accordingly. The product recognizes overhead transparency and non-overhead transparency types.

Table 2-16 Print Quality menu (continued)

Menu item	Sub-menu item	Values	Description
			When Transparency Only is selected, the product senses only the first page and recognizes only overhead transparency types.
Optimize	Background	Normal (default)	Adjust this setting if you are having problems with an overall gray background on pages.
		Alternate 1	
		Alternate 2	
		Alternate 3	
	Registration	Normal (default)	Adjust this setting if you are having problems with color misregistration.
		Alternate	
	Transfer Control	Normal (default)	Adjust this setting if you are having problems with faint images repeated on the page.
		Alternate 1	
		Alternate 2	
		Alternate 3	
	Tray 1	Normal (default)	Select the Alternate setting if you are having problems with marks on the back side of the paper when printing from Tray 1. This increases the frequency of the cleaning cycle.
		Alternate	
	Environment	Normal (default)	Adjust this setting if you are having problems printing in low temperature and low humidity environments.
		Low Temp	
	Line Voltage	Normal (default)	Adjust this setting if the product is operating in a low-voltage environment and you are having problems with print quality such as blisters in the printed image.
		Low Voltage	
	Tracking Control	On (default)	Do not adjust this setting unless an HP-authorized support person recommends it.
		Off	
	Uniformity Control	Normal (default)	Adjust this setting if printed images have a mottled appearance.
		Alternate 1	
		Alternate 2	
		Alternate 3	
	Normal Paper	Standard (default)	Adjust this setting if you are printing on normal-weight paper that is very smooth.
		Smooth	
	Heavy Paper	Standard (default)	Adjust this setting if you are printing on heavy-weight paper that is very smooth.
		Smooth	
	Envelope Mode	Normal (default)	Adjust this setting if envelopes are partially sealed after printing.
		Reduced Temp	
	Resistance Mode	Normal (default)	Adjust this setting if you are in a low-humidity environment and you are having problems with loose toner particles after printing.
		Up	
		Down	

Table 2-16 Print Quality menu (continued)

Menu item	Sub-menu item	Values	Description
	Humidity Mode	Normal (default) High	Adjust this setting if you are in a high-humidity environment and you are having problems with light density in the printed image.
	Pre-rotation	Off (default) On	Adjust this setting if you are having problems with horizontal streaks on printed pages. Using this feature increases the warm-up time for the product.
	Fuser Temp	Normal (default) Up Down	Adjust this setting upward if toner is not fusing well. Adjust it downward if you are seeing a faint image of the page repeated at the bottom of the page or on the next page.
	Paper Curl	Normal (default) Reduced	Adjust this setting if paper is curling in a high-temperature and high-humidity environment.
	Restore Optimize		Return all the settings in the Optimize menu to the factory-default values.
Resolution	Image REt 3600 1200x600dpi		Select Image REt 3600 to produce fast, high-quality printing that is appropriate for most print jobs Select 1200x600dpi to produce the highest-quality printing available, but it may slow print speed. This setting may be useful for jobs that contain very thin lines or fine graphics.
Color REt		Enabled (default) Disabled	Enable or disable Resolution Enhancement technology (REt), which produces print output with smooth angles, curves, and edges.
Calibration/Cleaning	Auto Cleaning	Enabled Disabled (default)	When auto-cleaning is on, the product prints a cleaning page when the page count reaches the value that is set in Cleaning Interval.
	Cleaning Interval	1000 (default) 2000 5000 10000 20000	Use this feature to set the interval when the cleaning page is printed. The interval is measured by the number of pages printed.
	Auto Cleaning Size	Letter A4	Use this feature to select the size of paper used for the cleaning page.
	Process Cleaning Page	Process	Use this feature to create and process a cleaning page for cleaning excess toner off the pressure roller in the fuser. The process takes up to 2.5 minutes.
	Quick Calibration	Calibrate	Performs partial product calibrations.

Table 2-16 Print Quality menu (continued)

Menu item	Sub-menu item	Values	Description
	Full Calibration	Calibrate	Performs all product calibrations.
	Delay Calibration at Wake/Power On	No Yes (default)	This menu controls the timing of the calibration when the printer wakes up or is turned on. ● Select No to have the printer calibrate immediately when it wakes up or is turned on. The product will not print any jobs until it finishes calibrating. ● Select Yes to enable a product that is asleep to accept print jobs before it calibrates. The product only accepts new jobs for a short time. It may start calibrating before it has printed all the jobs it has received. NOTE: For the best results, allow the product to calibrate before printing. Print jobs performed before calibration may not be of the highest quality.

Troubleshooting menu

Administration > Troubleshooting

📝 **NOTE:** Many of the menu items under the Troubleshooting menu are for advanced troubleshooting purposes.

Table 2-17 Troubleshooting menu

Menu item	Sub-menu item	Sub-menu item	Values	Description
Event Log			Print	This shows the event codes and their corresponding engine cycles on the control-panel display.
Calibrate Scanner			Calibrate	Use this feature to compensate for offsets in the scanner imaging system (carriage head) for ADF and flatbed scans.
				You might need to calibrate the scanner if it is not capturing the correct sections of scanned documents.
PQ Troubleshooting			Print	Print various diagnostic pages that help solve print-quality problems.
Fax T.30 Trace	T.30 Report		Print	Print or configure the fax T.30 trace report. T.30 is the standard that specifies handshaking, protocols, and error correction between fax machines.
	When to Print Report		Never auto print (default)	
			Print after any fax job	
			Print after fax send jobs	
			Print after any fax error	
			Print after send errors only	
			Print after receive errors only	
Fax Transmit Signal Loss			A value between 0 and 30. The default is 0.	Set loss levels to compensate for phone-line signal loss. Do not modify this setting unless requested to do so by an HP service representative because it could cause the fax to stop functioning.
Fax V.34			Normal (default) Off	Disable V.34 mode if several fax failures have occurred or if phone line conditions require it.
Fax Speaker Mode			Normal (default) Diagnostic	A technician can use this feature technician to evaluate and diagnose fax issues by listening to the sounds of fax modulations.
Diagnostic Page			Print	Print a diagnostic page that includes color swatches and the EP parameters table.
Disable Cartridge Check				Use this item to enter a mode where a cartridge (or color pair of cartridge and drum) can be removed to determine which particular

Table 2-17 Troubleshooting menu (continued)

Menu item	Sub-menu item	Sub-menu item	Values	Description
				color is the source of a problem. In this mode, all consumable-related errors are ignored.
Paper Path Sensors				Initiate a test of the paper-path sensors.
Paper Path Test	Test Page		Print	Generate a test page for testing the paper-handling features. Define the path for the test in order to test specific paper paths.
	Source		All trays	Specify whether the test page is printed from all trays or from a specific tray.
			Tray 1	
			Tray 2	
			(Additional trays are shown, if applicable.)	
	Duplex		Off (default)	Select whether the duplexer should be included in the test.
			On	
	Copies		Range: 1-500, Default is 1.	Select how many pages should be sent from the specified source as part of the test.
Manual Sensor Test				This item performs tests to determine whether the paper-path sensors are operating correctly.
Component Test	A list of available components appears.			Exercise individual parts independently to isolate noise, leaking, or other issues. To start the test, select one of the components. The test runs the number of times specified in the Repeat option. You might be prompted to remove parts from the product during the test. Press the Stop button to abort the test.
	Repeat		Once (default)	Determines the number of times the test runs.
			Continuous	
Print/Stop Test			Continuous value from 0 to 60,000 milliseconds. Default: 0	Isolate faults by stopping the product during the print cycle and observing where in the process the image degrades. To run the test, specify a stop time. The next job that is sent to the product stops at the specified time in the process.
Color Band Test	Test Page		Print	Prints a page that helps identify arcing in the high-voltage power supplies.
	Copies		Continuous value from 1 to 30. Default: 1	Specify the number of copies to print for the Color Band test.
Scanner Tests	A list of available scanner tests appears.			A service technician can use this menu item to diagnose potential problems with the product scanner.

Table 2-17 Troubleshooting menu (continued)

Menu item	Sub-menu item	Sub-menu item	Values	Description
Control Panel	LEDs			Verify that the components of the control panel are functioning correctly.
	Display			
	Buttons			
	Touchscreen			

Resets menu

Administration > Resets

Table 2-18 Resets menu

Menu item	Values	Description
Clear Local Address Book	Clear	Use this feature to clear all addresses from the address books that are stored on the product.
Clear Fax Activity Log	Yes No (default)	Use this feature to clear all events from the Fax Activity Log.
Restore Factory Telecom Setting	Restore	Use this option to restore the following settings to their factory default settings: Transmit Signal Loss, V34, Maximum Baud Rate, Speaker Mode.
Restore Factory Settings	Restore	Use this feature to restore all product settings to their factory defaults.
Reset Supplies	New Fuser Kit (Yes/No)	Notify the product that a new fuser kit has been installed.

Service menu

The Service menu is locked and requires a PIN for access. This menu is intended for use by authorized service personnel. For inforamtion about the Service menu, see Service mode functions on page 503.

3 Paper and print media

Supported paper and print media

This product supports a number of paper sizes, and it adapts to various media.

NOTE: To obtain best results, select the correct paper size and type in the printer driver before printing.

Table 3-1 Supported paper and print media sizes

Size and dimensions	Tray 1	Tray 2	Tray 3 (optional)
Letter 216 x 279 mm (8.5 x 11 in)	✔	✔	✔
Legal 216 x 356 mm (8.5 x 14 in)	✔		✔
A4 210 x 297 mm (8.27 x 11.69 in)	✔	✔	✔
RA4 215 x 305 mm (8.5 x 12.0 in)	✔		✔
A5 148 x 210 mm (5.83 x 8.27 in)	✔	✔	✔
B5 (JIS) 182 x 257 mm (7.17 x 10.12 in)	✔	✔	✔
B6 (JIS) 128 x 182 mm (5.04 x 7.17 in)	✔		
Executive 184 x 267 mm (7.24 x 10.51 in)	✔	✔	✔
Statement 140 x 216 mm (5.5 x 8.5 in)	✔		
5x7 127 x 178 mm (5 x 7 in)	✔		
5x8 127 x 203 mm (5 x 8 in)	✔		
A6 105 x 148 mm (4.13 x 5.83 in)	✔		
Postcard (JIS) 100 x 148 mm (3.9 x 5.8 in)	✔		
Double Postcard (JIS) 148 x 200 mm (5.8 x 7.9 in)	✔		
16K	✔	✔	✔

Table 3-1 Supported paper and print media sizes (continued)

Size and dimensions	Tray 1	Tray 2	Tray 3 (optional)
184 x 260 mm (7.2 x 10.2 in)			
16K 195 x 270 mm (7.7 x 10.6 in)	✔	✔	✔
16K 197 x 273 mm (7.8 x 10.8 in)	✔	✔	✔
8.5 x 13 216 x 330 mm (8.5 x 13 in)	✔		✔
Envelope Commercial #10 105 x 241 mm (4.13 x 9.49 in)	✔		
Envelope #9 100 mm x 226 mm (3.9 x 8.9 in)	✔		
Envelope B5 176 x 250 mm (6.93 x 9.84 in)	✔		
Envelope C5 ISO 162 x 229 mm (6.93 x 9.84 in)	✔		
Envelope C6 114 x 162 mm (4.49 x 6.38 in)	✔		
Envelope DL ISO 110 x 220 mm (4.33 x 8.66 in)	✔		
Envelope Monarch 98 x 191 mm (3.9 x 7.5 in)	✔		
Custom 98.4 x 148 mm to 216 x 356 mm (3.9 x 5.8 in to 8.5 x 14 in)	✔		
Custom 148 x 210 mm to 216 x 297 mm (5.83 x 8.27 in to 8.5 x 11.69 in)		✔	
Custom 148 x 210 mm to 216 x 356 mm (5.83 x 8.27 in to 8.5 x 14 in)			✔

Supported paper and print media types

For a complete list of specific HP-brand paper that this product supports, go to www.hp.com/support/cljcm3530mfp.

Paper type	Tray 1	Tray 2	Tray 3 (optional)
Plain Paper	✔	✔	✔
Light 60–74 g/m²	✔	✔	✔
Midweight (96–110 g/m²)	✔	✔	✔
Heavy (111–130 g/m²)	✔	✔	✔
Extra Heavy (131–175 g/m²)	✔		✔
Color Transparency	✔	✔	✔
Labels	✔		✔
Letterhead	✔	✔	✔
Preprinted	✔	✔	✔
Prepunched	✔	✔	✔
Colored	✔	✔	✔
Rough	✔	✔	✔
Bond	✔	✔	✔
Recycled	✔	✔	✔
Envelope	✔		
Cardstock	✔		✔
Mid-weight glossy (96–110 g/m²)	✔	✔	✔
Heavy glossy (111–130 g/m²)	✔	✔	✔
Extra-heavy glossy (131–175 g/m²)	✔	✔	✔
Card glossy (176–220 g/m²)	✔	✔	✔
Opaque film	✔	✔	✔
HP Tough Paper	✔	✔	✔
HP Soft Gloss (120 g/m²)	✔	✔	✔

Paper type	Tray 1	Tray 2	Tray 3 (optional)
HP Glossy (130 g/m^2)	✔	✔	✔
HP Glossy (160 g/m^2)	✔	✔	✔
HP Glossy (220 g/m^2)	✔	✔	✔

Tray and bin capacity

Tray or bin	Paper type	Specifications	Quantity
Tray 1	Paper	Range: 60 g/m² (16 lb) bond to 220 g/m² (59 lb) bond	Maximum stack height: 10 mm (0.39 in) Equivalent to 100 sheets of 75 g/m² (20 lb) bond
	Envelopes	Less than 60 g/m² (16 lb) bond to 90 g/m² (24 lb) bond	Up to 10 envelopes
	Labels	Maximum 0.102 mm (0.004 in) thick	Maximum stack height: 10 mm (0.39 in)
	Transparencies	Minimum 0.102 mm (0.004 in) thick	Maximum stack height: 10 mm (0.39 in) Up to 50 sheets
	Glossy paper	Range: 96 g/m² (26 lb) bond to 220 g/m² (59 lb) bond	Maximum stack height: 10 mm (0.39 in) Up to 50 sheets
Tray 2	Paper	Range: 60 g/m² (16 lb) bond to 220 g/m² (59 lb) bond	Maximum stack height: 25 mm (0.98 in) Equivalent to 250 sheets of 75 g/m² (20 lb) bond Maximum stack height for A6 paper: 15 mm (0.59 in)
	Transparencies	Minimum 0.102 mm (0.004 in) thick	Maximum stack height: 25 mm (0.98 in)
	Glossy paper	Range: 96 g/m² (26 lb) bond to 220 g/m² (59 lb) bond	Maximum stack height: 25 mm (0.98 in)
Tray 3 (optional)	Paper	Range: 60 g/m² (16 lb) bond to 220 g/m² (59 lb) bond	Equivalent to 500 sheets of 75 g/m² (20 lb) bond Maximum stack height: 56 mm (2.2 in)
	Transparencies	Minimum 0.102 mm (0.004 in) thick	Maximum stack height: 56 mm (2.2 in)
	Glossy paper	Range: 96 g/m² (26 lb) bond to 220 g/m² (59 lb) bond	Maximum stack height: 56 mm (2.2 in)
Output bin	Paper		Up to 250 sheets of 75 g/m² (20 lb) bond

Custom paper sizes

This product supports a variety of custom paper sizes. Supported custom sizes are sizes that are within the minimum- and maximum-size guidelines for the product but are not listed in the supported paper sizes table. When using a supported custom size, specify the custom size in the print driver, and load the paper in a tray that supports custom sizes.

Load paper and print media

You can load different media in the trays and then request media by type or size by using the control panel.

Paper orientation for loading trays
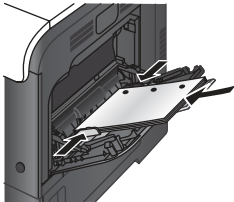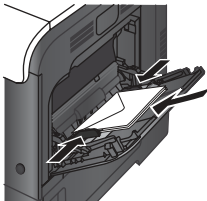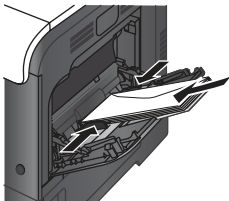
If you are using paper that requires a specific orientation, load it according to the information in the following tables.
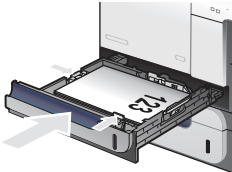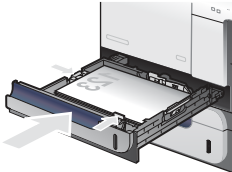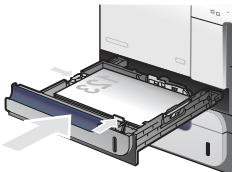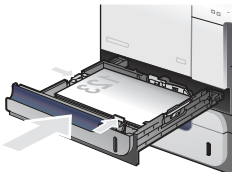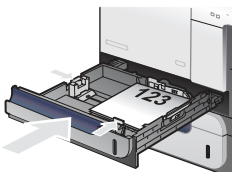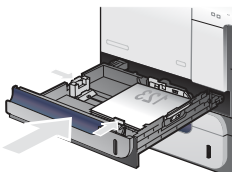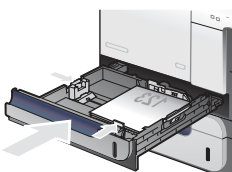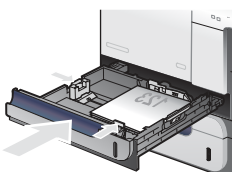
NOTE: The Alternative Letterhead Mode setting affects the way you load letterhead or preprinted paper. This setting is turned off by default. For more information, see Device Behavior menu on page 42.

Tray 1

Paper type	Image orientation	Duplex mode	How to load paper Alternative Letterhead Mode = Off	How to load paper Alternative Letterhead Mode = On
Preprinted or letterhead	Portrait	1-sided printing	Face down Top edge leading into the product 	Face up Bottom edge leading into the product
		2-sided printing	Face up Bottom edge leading into the product 	Face up Bottom edge leading into the product
	Landscape	1-sided printing	Face down Top edge toward the back of the product 	Face up Top edge toward the back of the product
		2-sided printing	Face up Top edge toward the back of the product 	Face up Top edge toward the back of the product
Prepunched	Portrait or landscape	1- or 2-sided printing	Holes toward the back of the product	Not applicable

Paper type	Image orientation	Duplex mode	How to load paper Alternative Letterhead Mode = Off	How to load paper Alternative Letterhead Mode = On
Envelopes	Long edge of the envelope feeding into the product	1-sided printing	Face down Top edge leading into the product	Not applicable
	Short edge of the envelope feeding into the product	1-sided printing	Face down Top edge toward the back of the product	Not applicable

Tray 2 or optional Tray 3

Paper type	Image orientation	Duplex mode	How to load paper Alternative Letterhead Mode = Off	How to load paper Alternative Letterhead Mode = On
Preprinted or letterhead	Portrait	1-sided printing	Face up Top edge at the right side of the tray	Face down Top edge at the left side of the tray
		2-sided printing	Face down Top edge at the left side of the tray	Face down Top edge at the left side of the tray
	Landscape	1-sided printing	Face up Top edge toward the back of the product	Face down Top edge toward the back of the product
		2-sided printing	Face down Top edge toward the back of the product	Face down Top edge toward the back of the product
Prepunched	Portrait or landscape	1- or 2-sided printing	Holes toward the back of the product	Not applicable

Paper type	Image orientation	Duplex mode	How to load paper	How to load paper
			Alternative Letterhead Mode = Off	Alternative Letterhead Mode = On
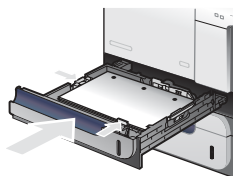
Load Tray 1

△ **CAUTION:** To avoid jams, never add or remove paper from Tray 1 during printing.

1. Open Tray 1.
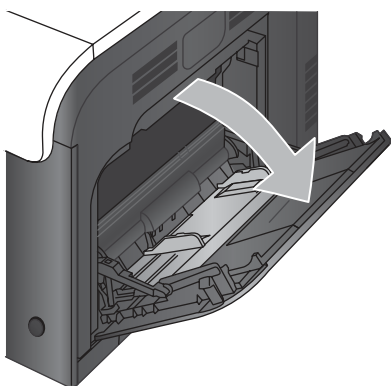
2. Fold out the tray extension to support the paper and set the side guides to the correct width.
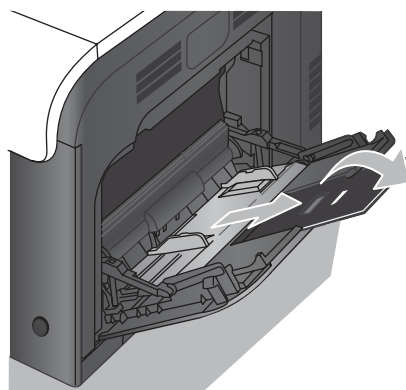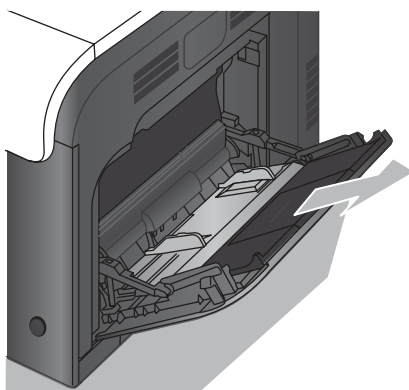
3. Load paper in the tray face down and the short, top edge going into the product first.
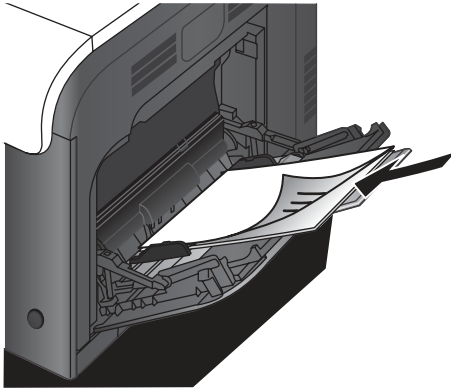
4. Make sure the stack fits under the tabs on the guides and does not exceed the load-level indicators.
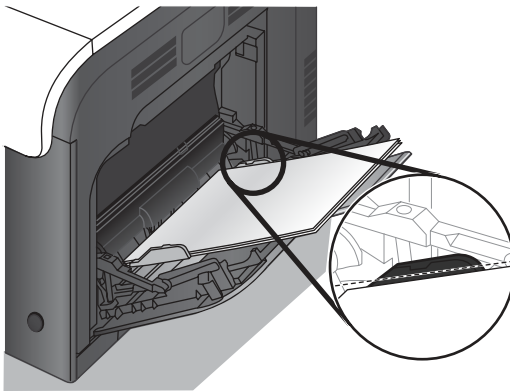
5. Adjust the side guides so that they lightly touch the paper stack but do not bend it.
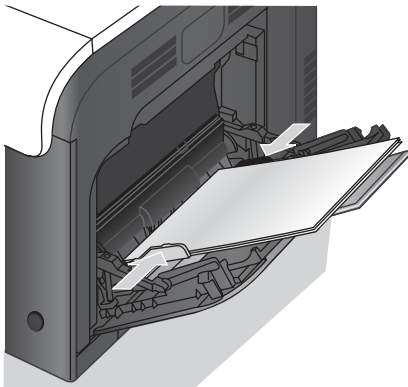
Print envelopes

If your software does not automatically format an envelope, specify **Landscape** for page orientation in your software program or printer driver. Use the following guidelines to set margins for return and destination addresses on Commercial #10 or DL envelopes:

Address type	Left margin	Top margin
Return	15 mm (0.6 in)	15 mm (0.6 in)
Destination	102 mm (4 in)	51 mm (2 in)

For envelopes of other sizes, adjust the margin settings accordingly.

Load Tray 2

This tray holds up to 250 sheets of 75 g/m² (20 lb) paper. If the paper is heavier, the tray does not hold as many sheets. Do not overfill the tray.

CAUTION: Do not print envelopes, labels, postcards, or unsupported sizes of paper from the Tray 2. Print these types of paper only from Tray 1.

☼ **TIP:** To see an animation of this procedure go to this Web site: www.hp.com/go/cljcm3530mfp-load-tray2.

1. Slide open the tray.

   📝 **NOTE:** Do not open the tray while it is in use.
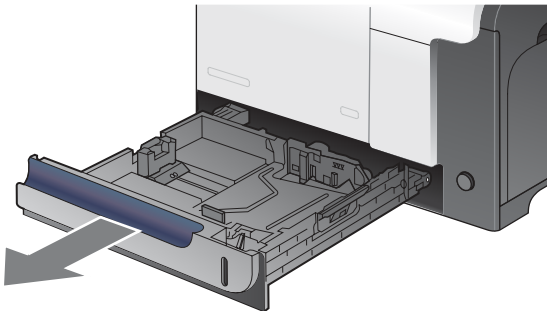
2. Adjust the paper-length and paper-width guides by squeezing the adjustment latch and sliding the guides to the size of the paper being used.
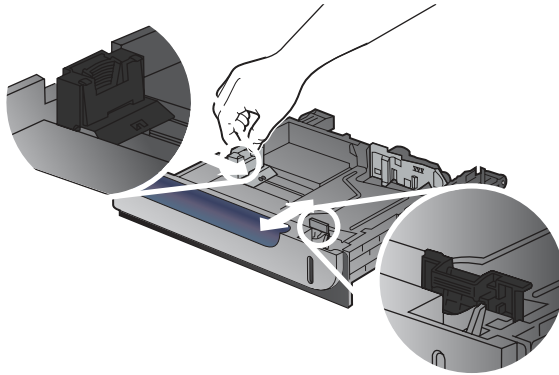
3. Load paper into the tray face up. Check the paper to verify the guides lightly touch the stack, but do not bend it.

NOTE: To prevent jams, do not overfill the tray. Be sure the top of the stack is below the tray full indicator.
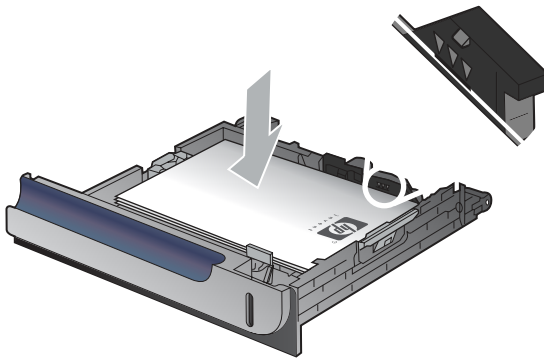
NOTE: If the tray is not adjusted correctly, an error message might appear during printing or the paper might jam.

4. Slide the tray into the product.

5. The control panel shows the tray's paper type and size. If the configuration is not correct, follow the instructions on the control panel to change the size or type.

Load the optional 500-sheet paper and heavy media tray (Tray 3)

Tray 3 holds up to 500 sheets of standard paper.

The product automatically detects the following standard sizes of paper in Tray 3: Letter, Legal, Executive, A4, A5, and B5 (JIS).

CAUTION: Do not print envelopes or unsupported sizes of paper from Tray 3. Print these types of paper only from Tray 1.

Load standard-sized paper into Tray 3

TIP: To see an animation of this procedure go to this Web site: www.hp.com/go/cljcm3530mfp-load-tray3.

1. Slide open the tray.

NOTE: Do not open the tray while it is in use.

2. Adjust the paper-length and paper-width guides by squeezing the adjustment latches and sliding the guides to the size of the paper being used.

3. Load paper into the tray face up. Check the paper to verify the guides lightly touch the stack, but do not bend it.

NOTE: To prevent jams, do not overfill the tray. Be sure the top of the stack is below the tray full indicator.

NOTE: If the tray is not adjusted correctly, an error message might appear during printing or the paper might jam.

4. Slide the tray into the product.

5. The control panel shows the tray's paper type and size. If the configuration is not correct, follow the instructions on the control panel to change the size or type.

Load custom-size paper into Tray 3

To use custom media, change the size setting on the control panel to Custom and set the unit of measure, X Dimension and Y Dimension.

1. Slide open the tray.
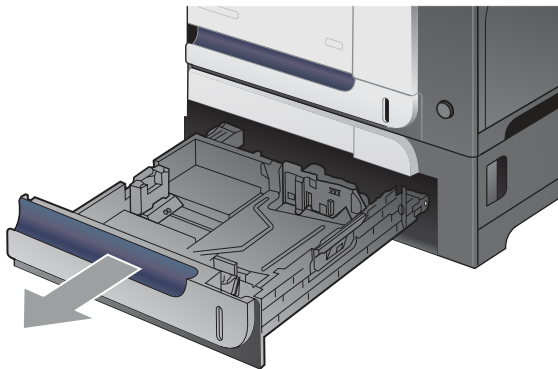
2. Adjust the paper-length and paper-width guides by squeezing the adjustment latches and sliding the guides to the size of the paper being used.
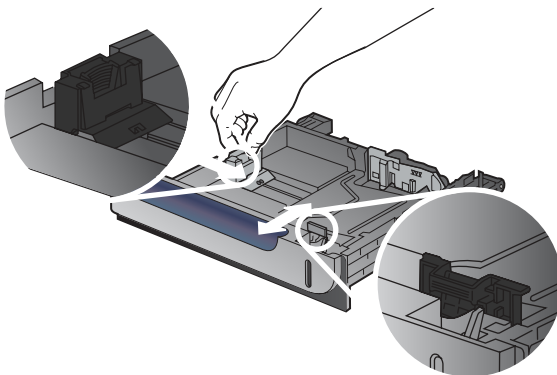
3. Load paper into the tray face up. Check the paper to verify the guides lightly touch the stack, but do not bend it.
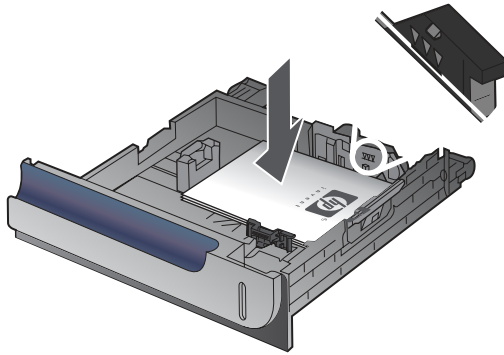
4. Slide the tray into the product. The control panel shows the paper type and size.
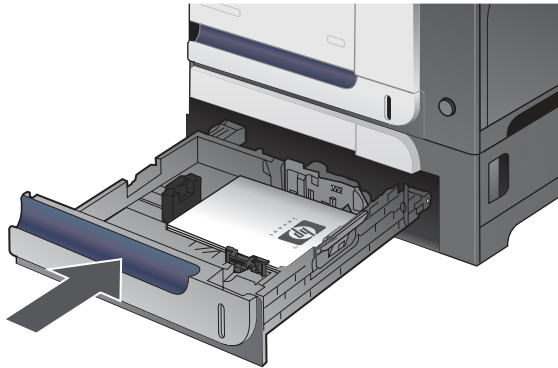
5. The control panel prompts you to set the paper size and type. Select the Custom setting, and then configure the X and Y dimensions of the custom paper size.
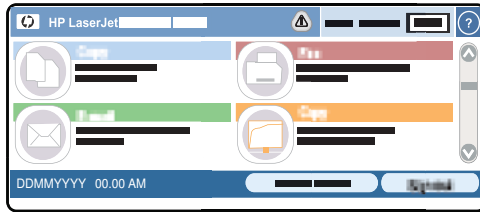
NOTE: See the label in the paper tray, or the following illustration, to determine the X and Y dimensions.
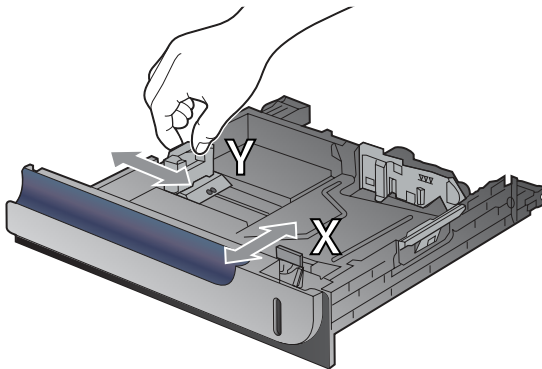
Configure trays

The product automatically prompts you to configure a tray for type and size in the following situations:

- When you load paper into the tray

- When you specify a particular tray or media type for a print job through the printer driver or a software program and the tray is not configured to match the print-job's settings

The following message appears on the control panel: **Tray <x> [type] [size] To change size or type, touch "Modify". To accept, touch "OK"**.

NOTE: The prompt does not appear if you are printing from Tray 1 and Tray 1 is configured for **Any Custom** and **Any Type**.

NOTE: If you have used other HP LaserJet product models, you might be accustomed to configuring Tray 1 to **First** mode or **Cassette** mode. For this product, setting Tray 1 size to **Any Custom** is equivalent to **First** mode. Setting size for Tray 1 to a setting other than **Any Custom** is equivalent to **Cassette** mode.

Configure a tray when loading paper

1. Load paper in the tray. Close the tray if you are using Tray 2 or 3.

2. The tray configuration message appears.

3. Touch OK to accept the detected size and type, or touch Modify to choose a different paper size or type.

4. Select the correct size and type and then touch OK.

Configure a tray to match print job settings

1. In the software program, specify the source tray, the paper size, and the paper type.

2. Send the job to the product.

   If the tray needs to be configured, the tray configuration message appears.

3. Load the tray with the specified type and size of paper, and then close the tray.

4. Touch OK to accept the detected size and type, or touch Modify to choose a different paper size or type.

5. Select the correct size and type and then touch OK.

Automatic overhead transparency sensing (auto sense mode)

The automatic media type sensor functions only when that tray is configured to the **Any Type** setting. Configuring a tray to any other type, such as Bond or Glossy, deactivates the media sensor in that tray.

The product can automatically classify paper types into one of two categories:

- Non-transparency

- Transparency

For more control, a specific type must be selected in the job or configured in a tray.

Auto-sense settings

Full sensing (Tray 1 only)

- The product distinguishes between transparencies (Transparency mode) and paper (Normal mode).

- Each time the product prints a page, it senses transparencies or non-transparencies.

- This is the slowest mode.

Transparency only

- The product distinguishes between transparencies (Transparency mode) and paper (Normal mode).

- The product assumes that the second and all subsequent pages are of the same media type as the first page.

- This is the fastest mode and is useful for high-volume printing in Normal mode.

For more information about setting these options, see .

Select the paper by source, type, or size

In the Microsoft Windows operating system, three settings affect how the printer driver tries to pull media when you send a print job. *Source*, *Type*, and *Size* settings appear in the **Page Setup**, **Print**, or **Print Properties** dialog boxes in most software programs. Unless you change these settings, the product automatically selects a tray using the default settings.

Source

To print by *Source* select a specific tray for the product to pull from. If you select a tray that is configured for a type or size that does not match your print job, the product prompts you to load the tray with the type or size of print media for your print job before printing it. When you load the tray, the product begins printing.

Type and Size

Printing by *Type* or *Size* means that you want the product to pull from the tray that is loaded with the correct type and size of media. Selecting media by type rather than source is similar to locking out trays and helps protect special media from accidental use. For example, if a tray is configured for letterhead and you select plain paper, the product will not pull the letterhead from that tray. Instead, it will pull from a tray that has plain paper loaded and is configured for plain paper on the product control panel. Selecting media by Type and Size results in significantly better print quality for heavy paper, glossy paper, and transparencies. Using the wrong setting might result in unsatisfactory print quality. Always print by Type for special print media, such as labels or transparencies. Print by Size for envelopes, if possible.

- To print by Type or Size, select the Type or Size from the **Page Setup** dialog box, the **Print** dialog box, or the **Print Properties** dialog box, depending on the software program.

- If you often print on a certain type or size of media, configure a tray for that type or size. Then, when you select that type or size as you print a job, the product automatically pulls media from the tray that is configured for that type or size.

Choose an output bin

The product has an ADF output bin and the standard output bin for printed pages.

1	Standard output bin
2	ADF output bin (for copy originals)

When you scan or copy documents by using the ADF, the originals are automatically delivered to the ADF output bin.

When you send print jobs to the product from a computer, the output is to the standard output bin.

4 Manage and maintain

- ● [Print information pages](#)
- ● [HP Easy Printer Care](#)
- ● [Embedded Web server](#)
- ● [Use HP Web Jetadmin software](#)
- ● [Product security features](#)
- ● [Manage supplies](#)
- ● [Clean the product](#)
- ● [Product updates](#)

Print information pages

Information pages provide details about the product and its current configuration. The following table provides the instructions for printing the information pages.

Page description	How to print the page from the product control panel
Administration Menu Map Shows the control-panel menus and available settings.	1. At the product control panel, touch the down arrow until the Administration menu displays. 2. Touch the Administration menu to open it. 3. Touch the Information menu to open it. 4. Touch the Configuration/Status Pages menu to open it. 5. Touch the Administration Menu Map option, and then touch the Print button. The content of the menu map varies, depending on the options currently installed in the product. For a complete list of control panel menus and possible values, see Control panel on page 11.
Configuration Page Shows product settings and installed accessories.	1. At the product control panel, touch the down arrow until the Administration menu displays. 2. Touch the Administration menu to open it. 3. Touch the Information menu to open it. 4. Touch the Configuration/Status Pages menu to open it. 5. Touch the Configuration Page option, and then touch the Print button. **NOTE:** If the product contains an HP Jetdirect print server or an optional hard disk drive, additional configuration pages print that provide information about those devices.
Supplies Status Page Shows print-cartridge toner levels.	1. At the product control panel, touch the down arrow until the Administration menu displays. 2. Touch the Administration menu to open it. 3. Touch the Information menu to open it. 4. Touch the Configuration/Status Pages menu to open it. 5. Touch the Supplies Status Page option, and then touch the Print button. **NOTE:** If you are using non-HP supplies, the supplies status page might not show the remaining life for those supplies.
Usage Page Shows a page count for each size of paper printed, the number of one-sided (simplexed) or two-sided (duplexed) pages, and the average percentage of coverage.	1. At the product control panel, touch the down arrow until the Administration menu displays. 2. Touch the Administration menu to open it. 3. Touch the Information menu to open it. 4. Touch the Configuration/Status Pages menu to open it. 5. Touch the Usage Page option, and then touch the Print button.

Page description	How to print the page from the product control panel
Color Usage Job Log Shows job-by-job color usage information.	1. At the product control panel, touch the down arrow until the Administration menu displays. 2. Touch the Administration menu to open it. 3. Touch the Information menu to open it. 4. Touch the Configuration/Status Pages menu to open it. 5. Touch the Color Usage Job Log option, and then touch the Print button.
File Directory Contains information for any mass storage devices, such as flash drives, memory cards, or hard disks, that are installed in the product.	1. At the product control panel, touch the down arrow until the Administration menu displays. 2. Touch the Administration menu to open it. 3. Touch the Information menu to open it. 4. Touch the Configuration/Status Pages menu to open it. 5. Touch the down arrow until the File Directory option displays. 6. Touch the File Directory option, and then touch the Print button.

Fax Reports
 	
Five reports show fax activity, fax calls, billing codes, blocked fax numbers, and speed-dial numbers.
 	
NOTE: Fax reports are available only on product models that have fax capabilities.
	1. At the product control panel, touch the down arrow until the Administration menu displays.
	
	2. Touch the Administration menu to open it.
	
	3. Touch the Information menu to open it.
	
	4. Touch the Fax Reports menu to open it.
	
	5. Touch one of the following buttons to print the corresponding report:
	
	  ◦ Fax Activity Log
	
	  ◦ Fax Call Report
	
	  ◦ Billing Codes Report
	
	  ◦ Blocked Fax List
	
	  ◦ Speed Dial List
	
	6. Touch the Print button.
	
	For more information, see the fax guide that came with the product.

Sample Pages/Fonts Shows which fonts are installed in the product.	1. At the product control panel, touch the down arrow until the Administration menu displays. 2. Touch the Administration menu to open it. 3. Touch the Information menu to open it. 4. Touch Sample Pages/Fonts. 5. Touch the down arrow to scroll to the PCL Font List or PS Font List option. 6. Touch the PCL Font List or PS Font List option, and then touch the Print button. **NOTE:** The font lists also show which fonts reside on a hard disk accessory or DIMM.

HP Easy Printer Care

Open the HP Easy Printer Care software

Use one of the following methods to open the HP Easy Printer Care software:

- On the **Start** menu, select **Programs**, select **Hewlett-Packard**, select **HP Easy Printer Care**, and then click **Start HP Easy Printer Care**.

- In the Windows system tray (in the lower-right corner of the desktop), double-click the HP Easy Printer Care icon.

- Double-click the desktop icon.

HP Easy Printer Care software sections

HP Easy Printer Care software can provide information about multiple HP products that are on your network as well as any products that are directly connected to your computer. Some of the items that are in the following table might not be available for every product.

The Help button (**?**) in the upper-right corner of each page provides more detailed information about the options on that page.

Section	Options
Device List tab When you open the software, this is the first page that appears. **NOTE:** To return to this page from any tab, click **My HP Printers** in the left side of the window.	• **Devices** list: Shows the products that you can select. **NOTE:** The product information appears either in list form or as icons, depending on the setting for the **View as** option. • The information on this tab includes current alerts for the product. • If you click a product in the list, the HP Easy Printer Care opens the **Overview** tab for that product.
Compatible Printers	Provides a list of all the HP products that support HP Easy Printer Care software.
Find Other Printers window Add more products to the **My HP Printers** list	Click the **Find Other Printers** link in the **Devices** list to open the **Find Other Printers** window. The **Find Other Printers** window provides a utility that detects other network printers so that you can add them to the **My HP Printers** list and then monitor those products from your computer.
Overview tab Contains basic status information for the product	• **Device Status** section: This section shows product-identification information and the product status. It indicates product-alert conditions, such as when a print cartridge has reached is estimated end of life. After you correct a problem with the product, click the refresh button ♻ in the upper-right corner of the window to update the status. • **Supplies Status** section: Shows detailed supplies status, such as the estimated life remaining in the print cartridge and the status of the paper that is loaded in each tray. • **Supplies Details** link: Opens the supplies status page to view more detailed information about product supplies, ordering information, and recycling information.

Section	Options
Support tab Provides links to support information	• **Device Status** section: This section shows product-identification information and the product status. It indicates product-alert conditions, such as a print cartridge that is at its estimated end of life. After you correct a problem with the product, click the refresh button ↻ in the upper-right corner of the window to update the status. • **Device Management** section: Provides links to information about HP Easy Printer Care, to advanced product settings, and to product usage reports. • **Troubleshooting and Help**: Provides links to tools that you can use to resolve problems, to online product support information, and to online HP experts.
Settings tab Configure product settings, adjust print-quality settings, and find information about specific product features **NOTE:** This tab is not available for some products.	• **About**: Provides general information about this tab. • **General**: Provides information about the product, such as the model number, serial number, and the settings for date and time, if they are available. • **Information Pages**: Provides links to print the information pages that are available for the product. • **Capabilities**: Provides information about product features, such as duplexing, the available memory, and the available printing personalities. Click **Change** to adjust the settings. • **Print Quality**: Provides information about print-quality settings. Click **Change** to adjust the settings. • **Trays** / **Paper**: Provides information about the trays and how they are configured. Click **Change** to adjust the settings. • **Restore Defaults**: Provides a way to restore the product settings to the factory defaults. Click **Restore** to restore the settings to the defaults.
HP Proactive Support **NOTE:** This item is available from the **Overview** and **Support** tabs.	When enabled, HP Proactive Support routinely scans your printing system to identify potential problems. Click the **more info** link to configure how frequently the scans occur. This page also provides information about available updates for product software, firmware, and HP printer drivers. You can accept or decline each recommended update.
Supplies Ordering button Click the **Supplies Ordering** button on any tab to open the **Supplies Ordering** window, which provides access to online supplies ordering. **NOTE:** This item is available from the **Overview** and **Support** tabs.	• Ordering list: Shows the supplies that you can order for each product. To order a certain item, click the **Order** check box for that item in the supplies list. You can sort the list by product, or by the supplies that need to be ordered the soonest. The list contains supplies information for every product that is in the **My HP Printers** list. • **Shop Online for Supplies** button: Opens the HP SureSupply Web site in a new browser window. If you have checked the **Order** check box for any items, the information about those items can be transferred to the Web site, where you will receive information on options for purchasing your selected supplies. • **Print Shopping List** button: Prints the information for the supplies that have the **Order** check box selected.

Section	Options
Alert Settings link **NOTE:** This item is available from the **Overview** and **Support** tabs.	Click **Alert Settings** to open the Alert Settings window, in which you can configure alerts for each product. ● Alerting is on or off: Activates or deactivates the alerts feature. ● **Printer Alerts**: Select the option to receive alerts for critical errors only, or for any error. ● **Job Alerts**: For products that support it, you can receive alerts for specific print jobs.
Color Access Control **NOTE:** This item is available only for HP color products that support Color Access Control. **NOTE:** This item is available from the **Overview** and **Support** tabs.	Use this feature to permit or restrict color printing.

Embedded Web server

Use the embedded Web server to view product and network status and to manage printing functions from your computer instead of from the product control panel. The following are examples of what you can do using the embedded Web server:

NOTE: When the printer is directly connected to a computer, use the HP Easy Printer Care to view the printer status.

- View product status information.

- Set the type of media that is loaded in each tray.

- Determine the remaining life for all supplies and order new ones.

- View and change tray configurations.

- View and change the product control-panel menu configuration.

- View and print internal pages.

- Receive notification of product and supplies events.

- View and change network configuration.

To use the embedded Web server, you must have Microsoft Internet Explorer 5.01 or later or Netscape 6.2 or later for Windows, Mac OS, and Linux (Netscape only). Netscape Navigator 4.7 is required for HP-UX 10 and HP-UX 11. The embedded Web server works when the product is connected to an IP-based network. The embedded Web server does not support IPX-based product connections. You do not have to have Internet access to open and use the embedded Web server.

When the product is connected to the network, the embedded Web server is automatically available.

NOTE: For complete information about using the embedded Web server, see the *Embedded Web Server User Guide*, which is on the product Administrator CD.

Open the embedded Web server by using a network connection

1. In a supported Web browser on your computer, type the product IP address or host name in the address/URL field. To find the IP address or host name, print a configuration page. See Print information pages on page 80.

   NOTE: After you open the URL, you can bookmark it so that you can return to it quickly in the future.

2. The embedded Web server has four tabs that contain settings and information about the product: the **Information** tab, the **Settings** tab, the **Networking** tab, and the **Digital Sending** tab. Click the tab that you want to view.

   See Embedded Web server sections on page 86 for more information about each tab.

Embedded Web server sections

Tab or section	Options
Information tab Provides product, status, and configuration information	● **Device Status**: Shows the product status and shows the life remaining of HP supplies, with 0% indicating that a supply is empty. The page also shows the type and size of print paper set for each tray. To change the default settings, click **Change Settings**.
	● **Configuration Page**: Shows the information found on the configuration page.
	● **Supplies Status**: Shows the life remaining of HP supplies, with 0% indicating that a supply has reached its estimated end of life. This page also provides supplies part numbers. To order new supplies, click **Shop for Supplies** in the **Other Links** area on the left side of the window.
	● **Event Log**: Shows a list of all product events and errors.
	● **Usage Page**: Shows a summary of the number of pages the product has printed, grouped by size and type.
	● **Diagnostics Page**: Allows you to name the product, show the company name, assign an asset number to the product, and name the primary contact who manages the product. An HP-authorized support person might ask for this information.
	● **Device Information**: Shows the product network name, address, and model information. To customize these entries, click **Device Information** on the **Settings** tab.
	● **Control Panel**: Shows messages from the control panel, such as **Ready** or **Sleep mode on**.
	● **Color Usage Job Log**: Shows the total pages printed, the number of pages printed in color, and the number of pages printed in black only.
	● **Print**: Allows you to send print-ready jobs to the product.
Settings tab Provides the ability to configure the product from your computer	● **Configure Device**: Allows you to configure product default settings. This page contains the traditional menus found on the control-panel display.
	● **Tray Sizes/Types**: Shows the size and type of paper and print media allowed for each input tray.
	● **E-mail Server**: Network only. Used in conjunction with the **Alerts** page to set up e-mail alerts.
	● **Alerts**: Network only. Allows you to set up to receive e-mail alerts for various product and supplies events.
	● **AutoSend**: Allows you to configure the product to send automated e-mails regarding product configuration and supplies to specific e-mail addresses.
	● **Security**: Allows you to set a password that must be entered to gain access to the **Settings** and **Networking** tabs. Enable and disable certain features of the embedded Web server.
	● **Authentication Manager**: Allows you to determine which product functions will require a user to provide log-in information in order to use those functions.
	● **LDAP Authentication**: Allows you to configure a Lightweight Directory Access Protocol (LDAP) server to limit product access to certain users. The LDAP server will require a user to provide log-in information in order to gain access to the product.
	● **Kerberos Authentication**: Allows you to configure a Kerberos network authentication protocol, which provides strong authentication for client/server applications by using secret-key cryptography.

Tab or section	Options
	• **Device PIN**: Allows you to configure the PIN numbers that are required to access various product functions. Use the **Authentication Manager** page to select **Group 1 PIN** or **Group 2 PIN** for the various functions. For example, you could configure the **Copy** option to require **Group 1 PIN** and configure the **Send to E-mail** option to require **Group 2 PIN**.
	• **User PIN**: Allows you to add, edit, or delete individual users who are allowed to use various product functions such as copy, fax, and digital sending.
	• **Edit Other Links**: Allows you to add or customize a link to another Web site. This link is displayed in the **Other Links** area on all embedded Web server pages.
	• **Device Information**: Allows you to name the product and assign an asset number to it. Enter the name and e-mail address for the primary contact who will receive information about the product.
	• **Language**: Allows you to determine the language in which to display the embedded Web server information.
	• **Date & Time**: Allows time synchronization with a network time server.
	• **Sleep Schedule**: Allows you to set or edit a wake time, sleep time, and sleep delay for the product.
	• **Restrict Color**: Allows you to permit or restrict color printing. You can specify permissions for individual users or for jobs that are sent from specific software programs.
	• **Home Screen Setup**: Allows you to configure which features display on the Home screen and the order in which they display.
	NOTE: The **Settings** tab can be password-protected. If this product is on a network, always consult with the system administrator before changing settings on this tab.
Digital Sending tab	Use the pages on the **Digital Sending** tab to configure the digital-sending features.
	NOTE: If the product is configured to use the optional HP Digital Sending Software, the options on these tabs are not available. Instead, all digital-sending configuration is performed by using the HP Digital Sending Software.
	• **General**. Set up contact information for the system administrator.
	• **Send to Folder**. Allows you to enable, disable, and configure the Send to Folder capabilities on the product. It is also used to link the product to individual folder destinations that exist in the network. As a first step, you must create and configure destination folders. These destination folders need to be operational before using this page to add the destinations to the product.
	• **E-mail Settings**. Configure the e-mail settings for digital sending. You can specify the SMTP server, the default "From" address, and the default subject. You can also set the maximum file size that is allowed for attachments.
	• **E-mail Address Book**. The **E-mail Address Book** page enables you to add e-mail addresses into the product one at a time, and to edit e-mail addresses that have already been saved in the product. You can also use the **Import/Export** tab to load a large list of frequently-used e-mail addresses on to the product all at once, rather than adding them one at a time.
	• **LDAP Settings**. Allows you to configure the e-mail addresses where scanned documents can be sent.
	• **Import/Export**. Use this tab to import or export .CSV files containing e-mail addresses, fax numbers, or user records, so that they can be accessed on this product. You can also export e-mail, fax, or user records from the product into a file

Tab or section	Options
	on your computer. You can then use this file as a data backup, or you can use it to import the records onto another HP product.
	● **Log**. View the digital-sending activity log for the product. The log contains digital-sending job information, including any errors that occur.
	● **Preferences**. Configure digital-sending defaults such as the default page-size and the default settings-reset delay. You can also configure these settings by using the product control-panel menus.
Fax tab	The **Fax** tab contains options to configure and use the fax capabilities of the product. For additional information about fax functions, see the Fax User Guide.
	NOTE: This tab is available only for the HP Color LaserJet CM3530fs MFP.
	● Use the **Fax Settings** screen to configure the send-to-fax features for the product.
	● The **Fax Address Book** page enables you to add fax numbers into the product one at a time, and to edit fax numbers that have already been saved in the product. You can also use the **Import/Export** feature on the **Digital Sending** tab to load a large list of frequently-used fax numbers on to the product all at once, rather than adding them one at a time.
	● Use the **Fax Speed Dials** screen to add, edit, or delete fax speed dial entries to and from the product. You can use fax speed dials to store frequently used fax numbers or lists of up to 100 fax numbers. Up to 100 speed dial entries can be configured.
Networking tab Provides the ability to change network settings from your computer	Network administrators can use this tab to control network-related settings for the product when it is connected to an IP-based network. This tab does not appear if the product is directly connected to a computer, or if the product is connected to a network using anything other than an HP Jetdirect print server.
	NOTE: The **Networking** tab can be password-protected.
Other Links Contains links that connect you to the Internet	● **hp instant support**: Connects you to the HP Web site to help you find solutions to product problems.
	● **Shop for Supplies**: Connects to the HP SureSupply Web site, where you will receive information on options for purchasing original HP supplies, such as print cartridges and paper.
	● **Product Support**: Connects to the support site for the product, from which you can search for help regarding various topics.
	● **Show Me How**: Connects to information that demonstrates specific tasks for the product.
	NOTE: You must have Internet access in order to use any of these links. If you use a dial-up connection and did not connect when you first opened the embedded Web server, you must connect before you can visit these Web sites. Connecting might require that you close the embedded Web server and reopen it.

Use HP Web Jetadmin software

HP Web Jetadmin is a Web-based software solution for remotely installing, monitoring, and troubleshooting network-connected peripherals. Management is proactive, allowing network administrators the ability to resolve issues before users are affected. Download this free, enhanced-management software at www.hp.com/go/webjetadmin.

Device plug-ins can be installed into HP Web Jetadmin to provide support for specific product features. The HP Web Jetadmin software can automatically notify you when new plug-ins are available. On the **Product Update** page, follow the directions to automatically connect to the HP Web site and install the latest device plug-ins for your product.

NOTE: Browsers must be Java™-enabled. Browsing from an Apple PC is not supported.

Product security features

Secure the embedded Web server

Assign a password for access to the embedded Web server so that unauthorized users cannot change the product settings.

1. Open the embedded Web server. See Embedded Web server on page 85.

2. Click the **Settings** tab.

3. On the left side of the window, click the **Security** menu.

4. Click the **Device Security Settings** button.

5. In the **Device Password** area, type the password next to **New Password**, and type it again next to **Verify Password**.

6. Click **Apply**. Make note of the password and store it in a safe place.

HP Encrypted High Performance Hard Disks

This product supports an optional encrypted hard disk that you can install in the EIO accessory slot. This hard disk provides hardware-based encryption so you can securely store sensitive print, copy, and scan data without impacting product performance. This hard disk uses the latest Advanced Encryption Standard (AES) and has versatile time-saving features and robust functionality.

For information about ordering these accessories see Part numbers on page 511.

Secure Disk Erase

To protect deleted data from unauthorized access on the product hard drive, use the Secure Disk Erase feature in the HP Web Jetadmin software. This feature can securely erase print jobs from the hard drive.

Secure Disk Erase offers the following levels of disk security:

● **Non-Secure Fast Erase**. This is a simple file-table erase function. Access to the file is removed, but actual data is retained on the disk until it is overwritten by subsequent data-storage operations. This is the fastest mode. Non-Secure Fast Erase is the default erase mode.

● **Secure Fast Erase**. Access to the file is removed, and the data is overwritten with a fixed identical character pattern. This is slower than Non-Secure Fast Erase, but all data is overwritten. Secure Fast Erase meets the U.S. Department of Defense 5220-22.M requirements for the clearing of disk media.

● **Secure Sanitizing Erase**. This level is similar to the Secure Fast Erase mode. In addition, data is repetitively overwritten by using an algorithm that prevents any residual data persistence. This mode will impact performance. Secure Sanitizing Erase meets the U.S. Department of Defense 5220-22.M requirements for the sanitization of disk media.

Data affected

Data affected (covered) by the Secure Disk Erase feature includes temporary files that are created during the print process, stored jobs, proof and hold jobs, disk-based fonts, disk-based macros (forms), address books, and HP and third-party applications.

NOTE: Stored jobs will be securely overwritten only when they have been deleted through the **Retrieve Job** menu on the product after the appropriate erase mode has been set.

This feature will not impact data that is stored on flash-based product non-volatile RAM (NVRAM) that is used to store default settings, page counts, and similar data. This feature does not affect data that is stored on a system RAM disk (if one is used). This feature does not impact data that is stored on the flash-based system boot RAM.

Changing the Secure Disk Erase mode does not overwrite previous data on the disk, nor does it immediately perform a full-disk sanitization. Changing the Secure Disk Erase mode changes how the product cleans up temporary data for jobs after the erase mode has been changed.

Additional Information

For additional information about the HP Secure Disk Erase feature, see the HP support flyer or go to www.hp.com/go/webjetadmin.

Job storage

To securely print a private job, use the personal job feature. The job can only be printed when the correct PIN is entered at the control panel.

DSS authentication

Optional Digital Sending Software (DSS) for the product is available for purchase separately. The software provides an advanced sending program that contains an authentication process. This process requires users to type a user identification and a password before they can use any of the DSS features that require authentication.

Lock the control-panel menus

To prevent someone from changing the product configuration, you can lock the control-panel menus. This prevents unauthorized users from changing the configuration settings such as the SMTP server.

You can use HP Web Jetadmin to lock the control-panel menus on several products simultaneously. Browse to www.hp.com/go/webjetadmin to access white papers discussing security features, such as control-panel lock, that allow you to secure the product against unwanted access.

1. Open the HP Web Jetadmin program.

2. Open the **DEVICE MANAGEMENT** folder in the drop-down list in the **Navigation** panel. Navigate to the **DEVICE LISTS** folder.

3. Select the product.

4. In the **Device Tools** drop-down list, select **Configure**.

5. Select **Security** from the **Configuration Categories** list.

6. Type a **Device Password**.

7. In the **Control Panel Access** section, select **Maximum Lock**. This prevents unauthorized users from gaining access to configuration settings.

Lock the formatter cage

The formatter cage, on the back of the product, has a slot that you can use to attach a security cable. Locking the formatter cage prevents someone from removing valuable components from the formatter.

Figure 4-1 Slot for the security cable
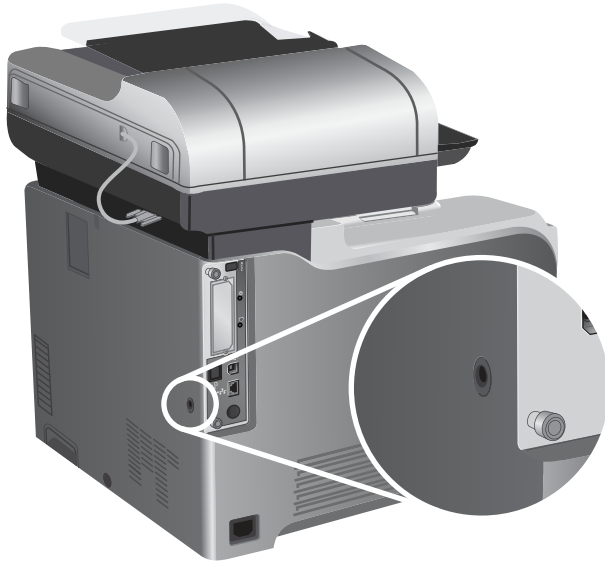
Manage supplies

Use genuine HP print cartridges for the best printing results.

Print-cartridge storage

Do not remove the print cartridge from its package until you are ready to use it.

CAUTION: To prevent damage to the print cartridge, do not expose it to light for more than a few minutes.

HP policy on non-HP print cartridges

Hewlett-Packard Company cannot recommend the use of non-HP print cartridges, either new or remanufactured.

NOTE: Any damage caused by a non-HP print cartridge is not covered under the HP warranty and service agreements.

To install a new HP print cartridge, see Change print cartridges on page 94. To recycle the used cartridge, follow the instructions included with the new cartridge. For more information about recycling, see the product user guide.

HP fraud hotline and Web site

Call the HP fraud hotline (1-877-219-3183, toll-free in North America) or go to www.hp.com/go/anticounterfeit when you install an HP print cartridge and the control-panel message says the cartridge is non-HP. HP will help determine if the cartridge is genuine and take steps to resolve the problem.

Your print cartridge might not be a genuine HP print cartridge if you notice the following:

- You are experiencing a high number of problems with the print cartridge.

- The cartridge does not look like it usually does (for example, the orange pull tab is missing, or the packaging differs from HP packaging).

Replace supplies

When you use genuine HP supplies, the product automatically notifies you when supplies are reaching their estimated end of life. The notification to order supplies allows ample time to order new supplies before they need to be replaced. For more information about ordering supplies, see Order parts, accessories, and supplies on page 510

Supplies life

For information regarding specific product yield, see www.hp.com/go/learnaboutsupplies.

To order supplies, see Parts and diagrams on page 509.

Locate supplies

Supplies are identified by their labeling and their blue plastic handles.

The following figure illustrates the location of each supply item.

Figure 4-2 Supply item locations
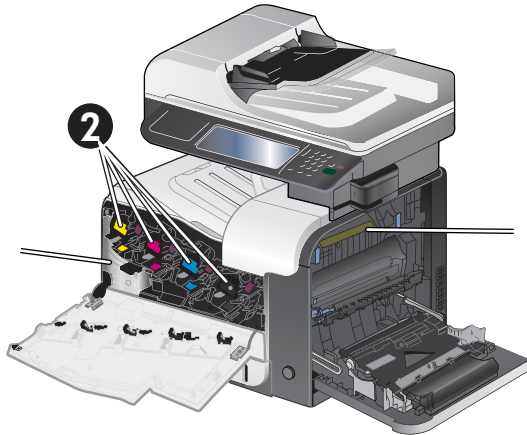
1	Toner collection unit
2	Print cartridges
3	Fuser

Supply replacement guidelines

To facilitate the replacement of supplies, keep the following guidelines in mind when setting up the product.

● Allow sufficient space in the front and on the right side of the product for removing supplies.

● The product should be located on a flat, sturdy surface.

For instructions on installing supplies, see the label on each supply item or see www.hp.com/go/learnaboutsupplies.

Change print cartridges

When a print cartridge approaches the end of its estimated useful life, the control panel displays a message recommending that you order a replacement. The product can continue to print using the current print cartridge until the control panel displays a message instructing you to replace the cartridge, unless you have selected the option to override the message by using the Replace Supplies menu. For more information about the Replace Supplies menu, see Management menu on page 28.

The product uses four colors and has a different print cartridge for each color: black (K), magenta (M), cyan (C), and yellow (Y).

You can replace a print cartridge when the control panel displays a **Replace <color> Cartridge** message. The control panel display also indicates the color of the cartridge that has reached the end

of its estimated useful life (if a genuine HP cartridge is currently installed). Replacement instructions are provided on the label on the print cartridge.

CAUTION: If toner gets on clothing, wipe it off with a dry cloth and wash the clothes in cold water. Hot water sets toner into fabric.

NOTE: Information about recycling used print cartridges is on the print-cartridge box. See the product user guide.

TIP: To see an animation of this procedure go to this Web site: www.hp.com/go/cljcm3530mfp-replace-print-cartridges.

Replace print cartridges

1. Open the front door. Make sure that the door is completely open.
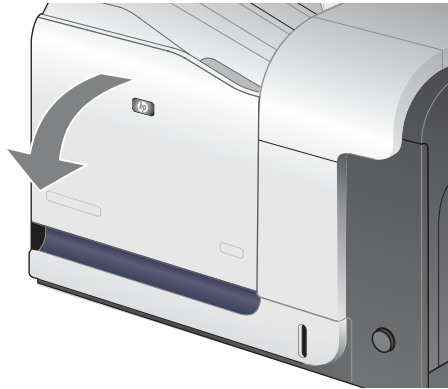
2. Grasp the handle of the used print cartridge and pull out to remove.
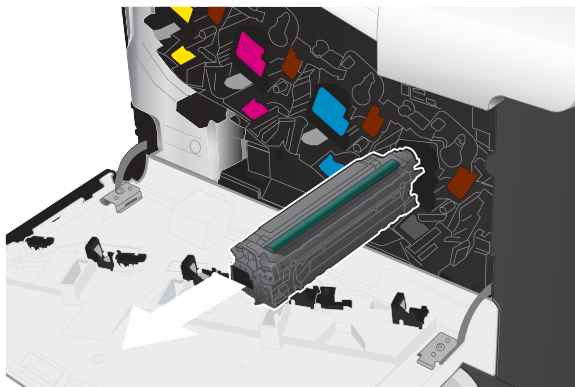
3. Store the used print cartridge in a protective bag. Information about recycling used print cartridges is on the print-cartridge box.

4. Remove the new print cartridge from its protective bag.
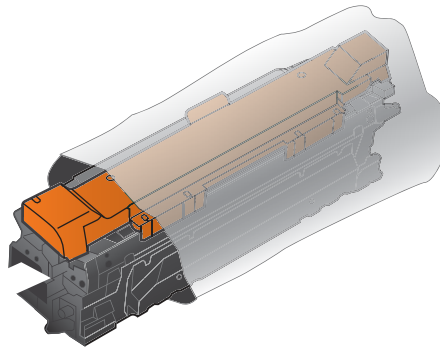
📝 **NOTE:** Be careful not to damage the memory tag on the print cartridge.
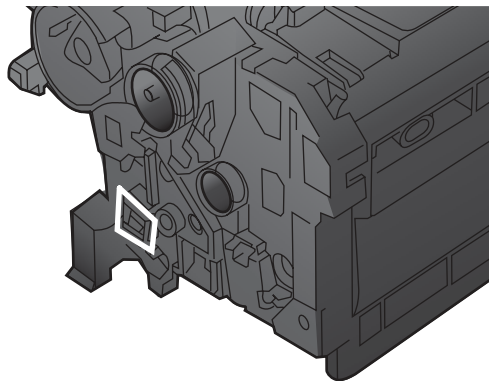
5. Grasp both sides of the print cartridge and distribute the toner by gently rocking the print cartridge.
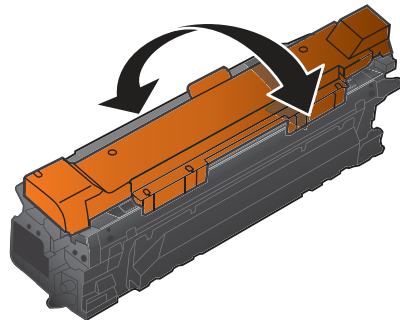
6. Remove the orange protective cover from the print cartridge.
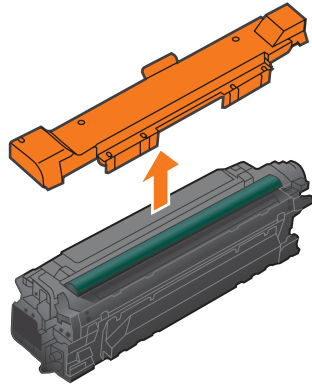
CAUTION: Avoid prolonged exposure to light.

CAUTION: Do not touch the green roller. Doing so can damage the cartridge.

7. Align the print cartridge with its slot and insert the print cartridge until it clicks into place.
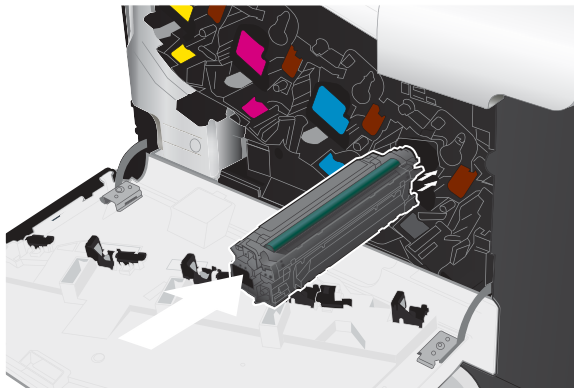
8. Close the front door.
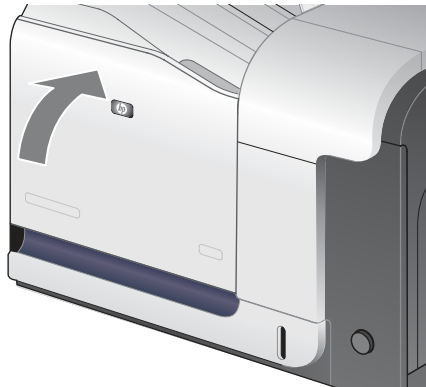
Change the toner collection unit

Replace the toner collection unit when the control panel prompts you.

NOTE: The toner collection unit is designed for a single use. Do not attempt to empty the toner collection unit and reuse it. Doing so could lead to toner being spilled inside the product, which could result in reduced print quality. After use, return the toner collection unit to HP's Planet Partners program for recycling.

TIP: To see an animation of this procedure go to this Web site: www.hp.com/go/cljcm3530mfp-replace-toner-collection-unit.

Replace the toner collection unit

1. Open the front door. Make sure that the door is completely open.
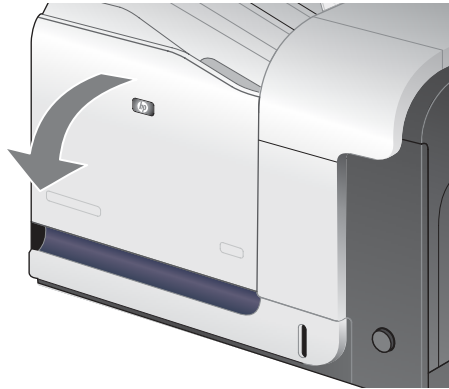
2. Grasp the blue label at the top of the toner collection unit and remove it from the product.
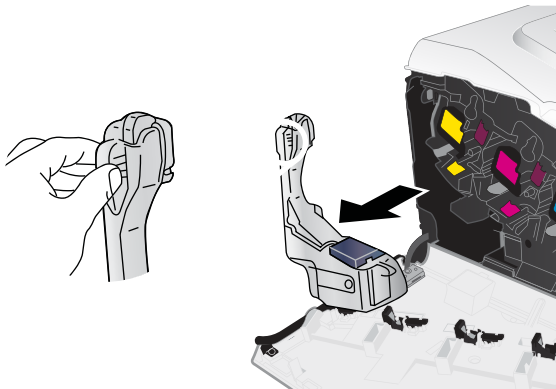
3. Place the attached blue cap over the blue opening at the top of the unit.
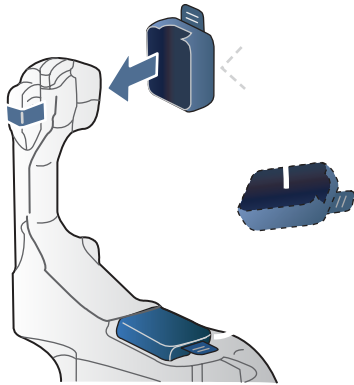
4. Remove the new toner collection unit from its packaging.
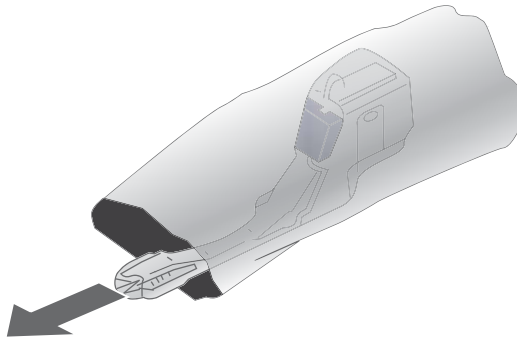
5. Insert the bottom of the new unit into the product first and then push the top of the unit until it clicks into place.
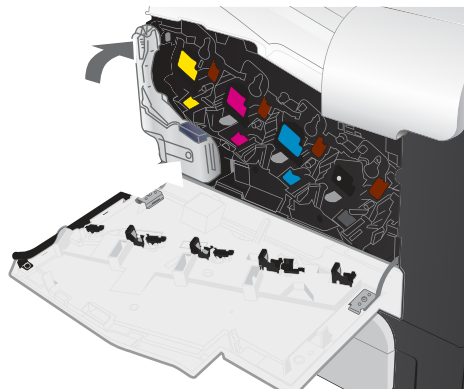
6. Close the front door.
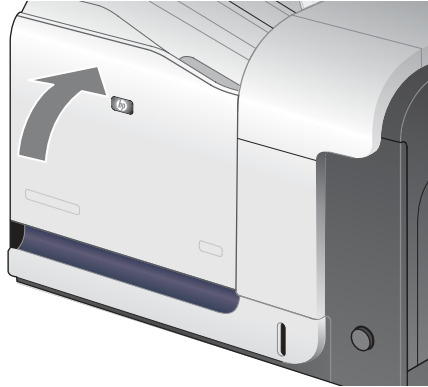
📝 **NOTE:** If the toner collection unit is not installed correctly, the front door does not close completely.

To recycle the used toner collection unit, follow the instructions included with the new toner collection unit.

Install memory

You can install more memory for the product.

⚠ **CAUTION:** Static electricity can damage DIMMs. When handling DIMMs, either wear an antistatic wrist strap, or frequently touch the surface of the DIMM antistatic package and then touch bare metal on the product.

Install DDR memory DIMMs

1. Turn the product off.
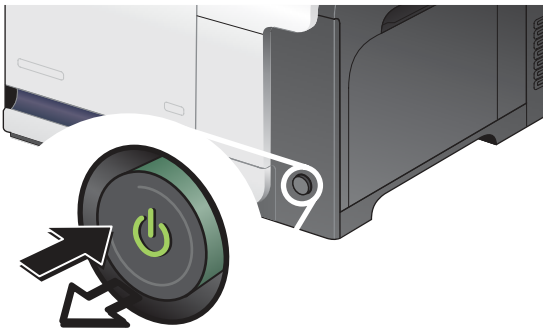
2. Disconnect all power and interface cables.

📝 **NOTE:** This illustration might not show all the cables.
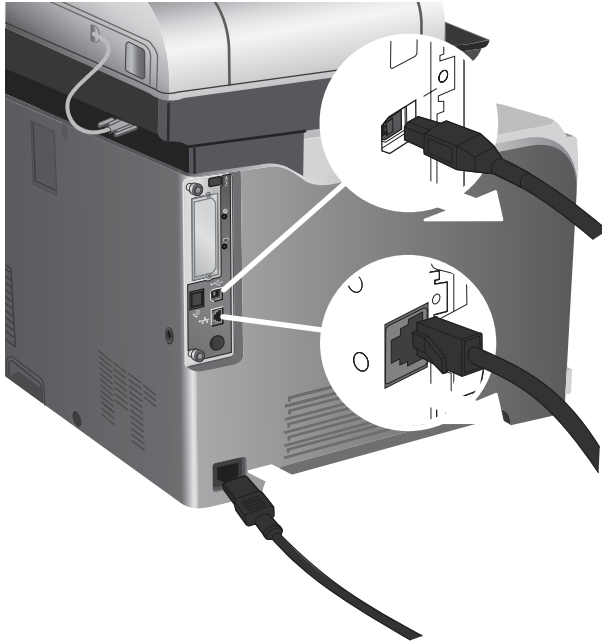
3. Locate the thumb screws on the formatter board in the rear of the product.
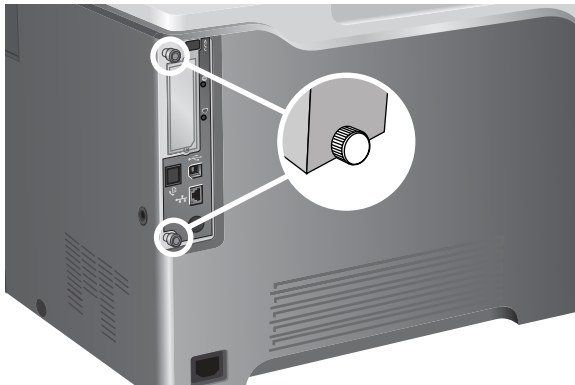
4. Unscrew the thumb screws and then pull the formatter board from the product. Place the formatter board on a clean, flat, grounded surface.
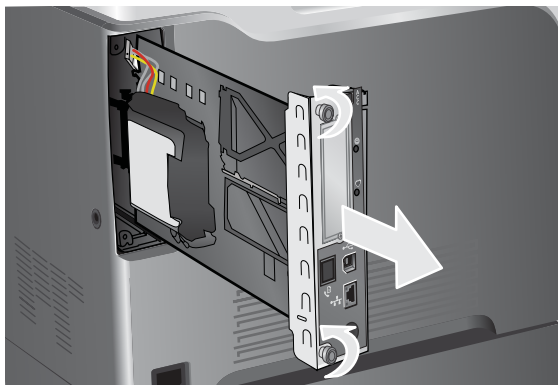
5. Release bracket that holds the hard drive, and swing it open.
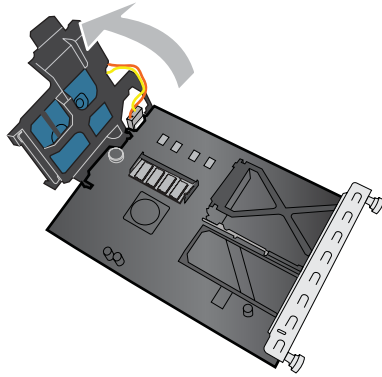
6. To replace a DIMM that is currently installed, spread the latches apart on each side of the DIMM slot, lift the DIMM up at an angle, and pull it out.
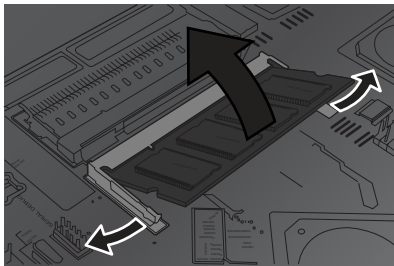
7. Remove the new DIMM from the antistatic package. Locate the alignment notch on the bottom edge of the DIMM.
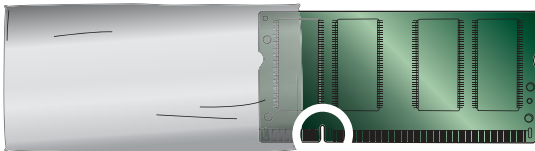
8. Holding the DIMM by the edges, align the notch on the DIMM with the bar in the DIMM slot at an angle and firmly press the DIMM into the slot until it is fully seated. When installed correctly, the metal contacts are not visible.
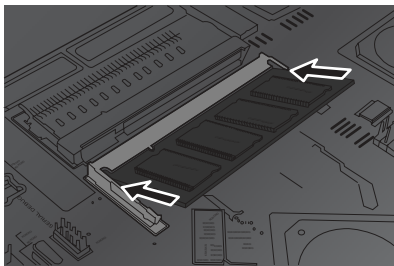
9. Push down on the DIMM until both latches engage the DIMM.
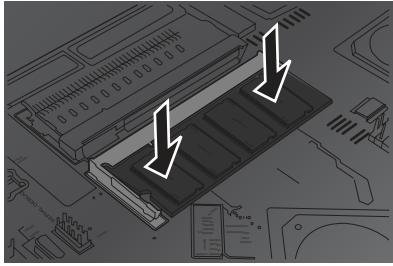
NOTE: If you have difficulty inserting the DIMM, make sure the notch on the bottom of the DIMM is aligned with the bar in the slot. If the DIMM still does not go in, make sure you are using the correct type of DIMM.

10. Align the formatter board in the tracks at the bottom of the slot, and then slide the board back into the product.

NOTE: To prevent damage to the formatter board, ensure the formatter board is aligned in the tracks at the top and the bottom of the opening.
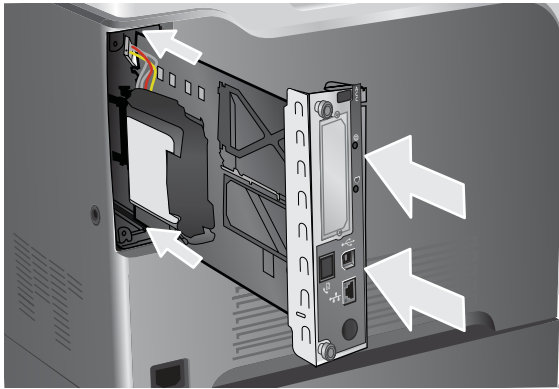
11. Reconnect the power cable and interface cables, and turn the product on.
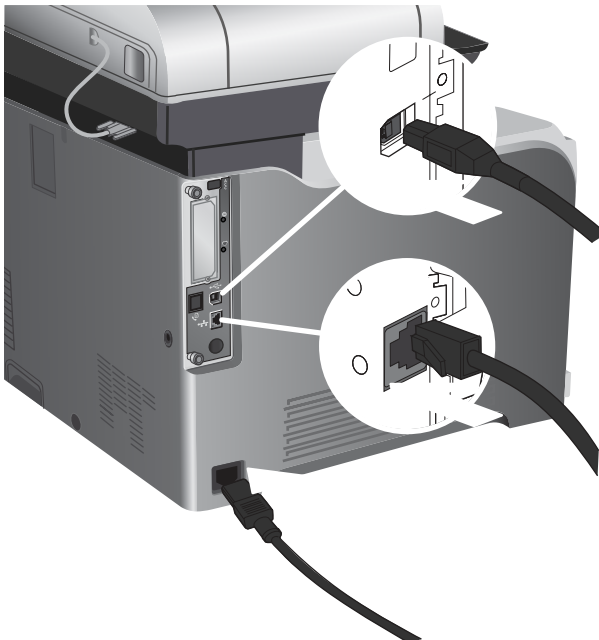
Enable memory for Windows

1. **Windows XP and Windows Server 2003 (using the default Start menu view)**: Click **Start**, click **Settings**, and then click **Printers and Faxes**.

   -or-

   Windows 2000, Windows XP, and Windows Server 2003 (using the Classic Start menu view): Click **Start**, click **Settings**, and then click **Printers**.

   -or-

   Windows Vista: Click **Start**, click **Control Panel**, and then in the category for **Hardware and Sound** click **Printer**.

2. Right-click the driver icon, and then select **Properties**.

3. Click the **Device Settings** tab.

4. Expand the area for **Installable Options**.

5. Next to **Printer Memory**, select the total amount of memory that is installed.

6. Click **OK**.

Install an HP Jetdirect or EIO print server card or EIO hard disk

This product is equipped with an external I/O (EIO) slot. You can install an additional HP Jetdirect print server card or external EIO hard drive in the available EIO slot.

NOTE: This example shows installing an HP Jetdirect print server card.

1. Turn the product off.
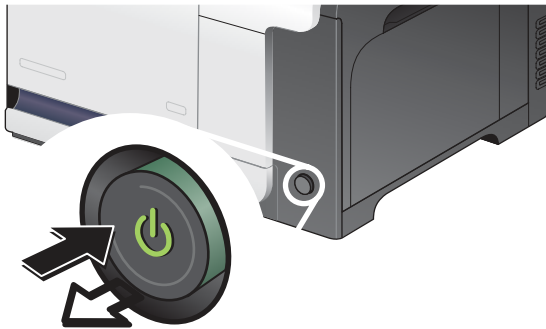
2. Disconnect all power and interface cables.
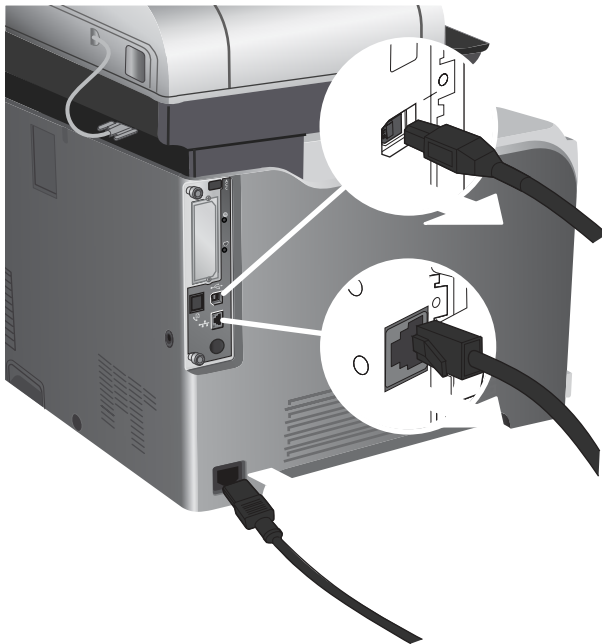
3. Loosen and remove the two retaining screws holding the cover for the EIO slot, and then remove the cover. You will not need these screws and the cover again. They can be discarded.
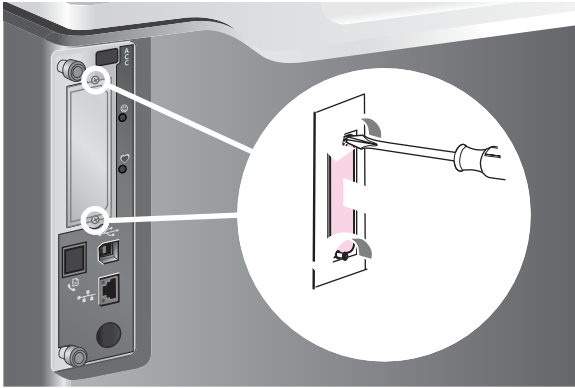
4. Firmly insert the HP Jetdirect print server card into the EIO slot.
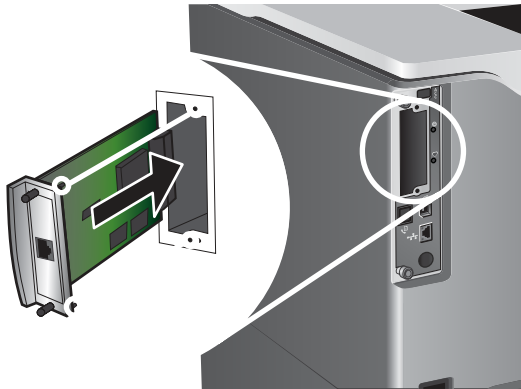
5. Insert and tighten the retaining screws that came with the print server card.
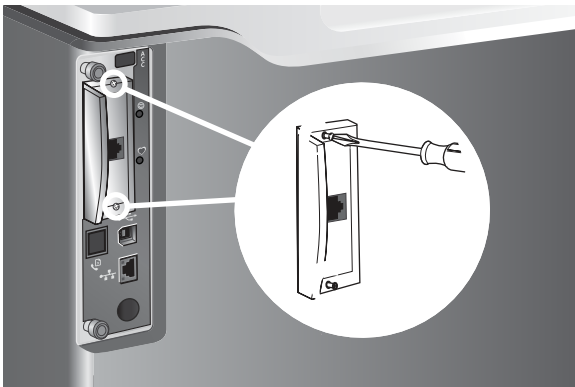
6. Reconnect the power cable and remaining interface cables, and turn the product on.
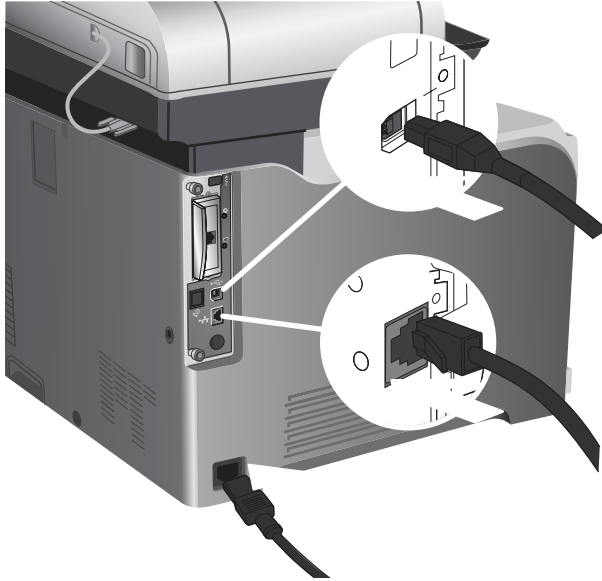
7. Print a configuration page. An HP Jetdirect configuration page that contains network configuration and status information should also print.

If it does not print, turn the product off, and then uninstall and reinstall the print server card to ensure that it is completely seated in the slot.

8. Perform one of these steps:

- Choose the correct port. See the computer or operating system documentation for instructions.

- Reinstall the software, choosing the network installation this time.

Clean the product

To maintain print quality, clean the product thoroughly every time you replace the print cartridge and whenever print-quality problems occur.

WARNING! Avoid touching the fusing area when cleaning the product. It can be hot.

CAUTION: To avoid permanent damage to the print cartridge, do not use ammonia-based cleaners on or around the product except as directed.

Clean the outside of the product

- Clean the outside of the product if it is visibly marked.

- Use a soft, lint-free cloth dampened with water, or water and a mild detergent.

Clean the touchscreen

Clean the touchscreen whenever it is necessary to remove fingerprints or dust. Wipe the touchscreen gently with a clean, water-dampened, lint-free cloth.

CAUTION: Use water only. Solvents or cleaners can damage the touchscreen. Do not pour or spray water directly onto the touchscreen.

Clean the scanner glass

- Clean the scanner glass only if dirt is visible, or if you are experiencing a decrease in copy quality, such as streaking.

- Clean the scanner glass by wiping it gently with a clean, slightly damp, lint-free cloth. Use an ammonia-based surface cleaner only when a water-dampened cloth does not clean the scanner glass.

CAUTION: Do not pour or spray liquids directly onto the scanner glass. Do not press hard on the glass surface. (You could break the glass).

Clean the document feeder

Ink and corrrection fluid can leave residue on the narrow glass strip to the left of the large scanner glass. If you are having problems with streaks on copies, clean the narrow glass strip.

Clean the document-feeder backing

1. Open the scanner lid.

2. Locate the white, vinyl document-feeder backing.

3. Clean the document-feeder backing by wiping it with a clean, damp, lint-free cloth. Use an ammonia-based surface cleaner only when a water-dampened cloth does not clean the components.

4. Close the scanner lid.

Clean the document-feeder rollers

You should clean the rollers in the document feeder if you are experiencing misfeeds or if your originals show marks as they exit the document feeder.

CAUTION: Clean the rollers only if you experience misfeeds or marks on the originals, and you notice dust on the rollers. Cleaning the rollers frequently could introduce dust into the product.

1. Pull the release lever to open the document-feeder cover.
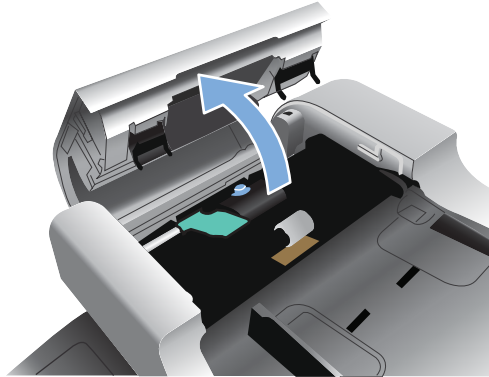
2. Locate the rollers.
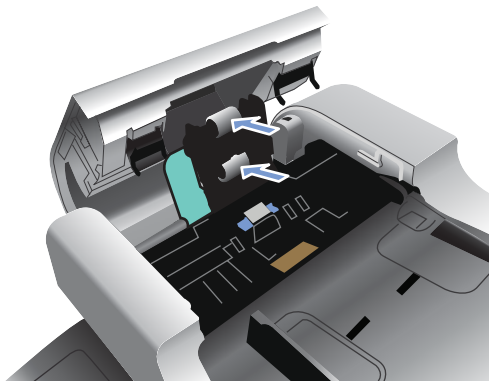
3. Wipe the rollers with a clean, water-dampened, lint-free cloth.

CAUTION: Do not pour water directly onto the rollers. Doing so might damage the product.

4. Locate the separation pad.

5. Wipe the pad with a clean, water-dampened, lint-free cloth.

6. Close the document-feeder cover.
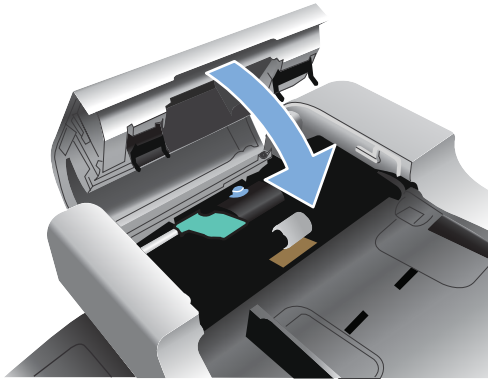
Clean the fuser

Run the product cleaning page to keep the fuser free of toner and paper particles that can sometimes accumulate. Accumulation of toner and particles can cause specks to appear on the front or back side of your print jobs.

HP recommends that you use the cleaning page when there is a print quality issue.

A **Cleaning** message appears on the product control panel display while the cleaning is taking place.

In order for the cleaning page to work correctly, print the page on copier-grade paper (not bond, heavy, or rough paper).

Create and use the cleaning page

1. Scroll to and touch Administration.

2. Scroll to and touch Print Quality

3. Touch Calibration/cleaning.

4. Touch Process cleaning page.

Product updates

This product has remote firmware update (RFU) capability. Use this information to upgrade the product firmware.

Determine the current firmware version

1. At the product control panel, touch the down arrow until the Administration menu displays.

2. Touch the Administration menu to open it.

3. Touch the Information menu to open it.

4. Touch the Configuration Page option, and then touch the Print button.

The firmware datecode is listed on the Configuration page in the section called **Device Information**. The firmware datecode has this format: YYYYMMDD XX.XXX.X.

- The first string of numbers is the date, where YYYY represents the year, MM represents the month, and DD represents the date. For example, a firmware datecode that begins with `20061125` represents November 25, 2006.

- The second string of numbers is the firmware version number, in decimal format.

Download new firmware from the HP Web site

To find the most recent firmware upgrade for the product, go to www.hp.com/go/cljcm3530mfp_firmware. This page provides instructions for downloading the new firmware version.

Transfer the new firmware to the product

📝 **NOTE:** The product can receive an .RFU file update when it is in a "ready" state.

The following conditions can affect the time required to transfer the file.

- The speed of the host computer that is sending the update.

- Any jobs that are ahead of the .RFU job in the queue are completed before the update is processed.

- If the process is interrupted before the firmware is downloaded, you must send the firmware file again.

- If power is lost during the firmware update, the update is interrupted and the message **Resend upgrade** appears (in English only) on the control-panel display. In this case, you must send the upgrade by using the USB port.

📝 **NOTE:** The firmware update involves a change in the format of nonvolatile random-access memory (NVRAM). Any menu settings that are changed from the default settings might return to default settings and must be changed again if you want settings that are different from the defaults.

Use the flash executable file to update the firmware

This product has flash-based memory, so you can use the flash firmware executable (.EXE) file to upgrade the firmware. Download this file from www.hp.com/go/cljcm3530mfp_firmware.

NOTE: To use this method, connect the product directly to your computer through a USB cable, and install the printer driver for this product on your computer.

1. Print a configuration page and note the TCP/IP address.

2. Find the .EXE file on your computer, and double-click it to open the file.

3. From the **Select Printer to Update** drop-down list, select this product. Click the **Start** button to begin the update process.

   ⚠ **CAUTION:** Do not turn the product off or try to send a print job during this process.

4. When the process is complete, a smiling face icon displays in the dialog box. Click the **Exit** button to close the dialog box.

5. Turn the product off and then on.

6. Print another configuration page and verify that the new firmware datecode is listed.

Use FTP to upload the firmware through a browser

1. Make sure the Internet browser you are using is configured for viewing folders from FTP sites. These instructions are for Microsoft Internet Explorer.

   a. Open the browser and click **Tools**, and then click **Internet Options**.

   b. Click the **Advanced** tab.

   c. Select the box labeled **Enable folder view for FTP sites**.

   d. Click **OK**.

2. Print a configuration page and note the TCP/IP address.

3. Open a browser window.

4. In the address line of the browser, type `ftp://<ADDRESS>`, where <ADDRESS> is the address of the product. For example, if the TCP/IP address is 192.168.0.90, type `ftp://192.168.0.90`.

5. Locate the downloaded .RFU file for the product.

6. Drag and drop the .RFU file onto the **PORT** icon in the browser window.

NOTE: The product turns off and then on automatically to activate the update. When the update process is complete, a Ready message displays on the product control panel.

Use FTP to upgrade the firmware on a network connection

1. Take note of the IP address on the HP Jetdirect page. The HP Jetdirect page is the second page that prints when you print the configuration page.

   NOTE: Before upgrading the firmware, make sure that the product is not in Sleep mode. Also make sure that any error messages are cleared from the control-panel display.

2. Click **Start**, click **Run**, and then type `cmd` to open the command window.

3. Type: `ftp <TCP/IP ADDRESS>`. For example, if the TCP/IP address is 192.168.0.90, type `ftp 192.168.0.90`.

4. Go to the folder where the firmware file is stored.

5. Press Enter on the keyboard.

6. When prompted for the user name, press Enter.

7. When prompted for the password, press Enter.

8. Type `bin` at the command prompt.

9. Press Enter. The message **200 Types set to I, Using binary mode to transfer files** appears in the command window.

10. Type `put` and then the file name. For example, if the file name is cljcm3530.rfu, type `put cljcm3530.rfu`.

11. The download process begins and the firmware is updated on the product. This can take several minutes. Let the process finish without further interaction with the product or computer.

    📝 **NOTE:** The product automatically turns off and then on again after processing the upgrade.

12. At the command prompt, type: `bye` to exit the ftp command.

13. At the command prompt, type: `exit` to return to the Windows interface.

Use HP Web Jetadmin to upgrade the firmware

To learn how to use HP Web Jetadmin to upgrade the product firmware, go to www.hp.com/go/webjetadmin

Use Microsoft Windows commands to upgrade the firmware

To update the firmware by using a network connection, follow these instructions.

1. Click **Start**, click **Run**, and then type `cmd` to open the command window.

2. Type the following: `copy /B <FILENAME> \\<COMPUTERNAME>\<SHARENAME>`, where <FILENAME> is the name of the .RFU file (including the path), <COMPUTERNAME> is the name of the computer from which the product is being shared, and <SHARENAME> is the product share name. For example: `C:\>copy /b C:\cljcm3530.rfu \\YOUR_SERVER \YOUR_COMPUTER`.

    📝 **NOTE:** If the file name or path includes a space, you must enclose the file name or path in quotation marks. For example, type: `C:\>copy /b "C:\MY DOCUMENTS\cljcm3530.rfu" \\YOUR_SERVER\YOUR_COMPUTER`.

3. Press Enter on the keyboard. The control panel shows a message that indicates the progress of the firmware upgrade. At the end of the upgrade process, the control panel shows the **Ready** message. The message **One File Copied** appears on the computer screen.

5 Theory of operation

- Basic operation
- Engine-control system
- Laser/scanner system
- Image-formation system
- Pickup, feed, and delivery system
- Jam detection
- Optional paper feeder
- Scanning/image capture system system

Basic operation

The product routes all high-level processes through the formatter, which stores font information, processes the print image, and communicates with the host computer.

The basic product operation comprises the following systems:

- The engine-control system, which includes the power supply and the DC controller printed circuit assembly (PCA)

- The laser/scanner system, which forms the latent image on the photosensitive drum

- The image-formation system, which transfers a toner image onto the paper

- The media feed system, which uses a system of rollers and belts to transport the paper through the product

- Option (optional paper feeder)

Figure 5-1 Relationship between the main product systems

Engine control system	⟷	Laser/scanner system
	⟷	Image-formation system
	⟷	Media-feed system
	⟷	Option
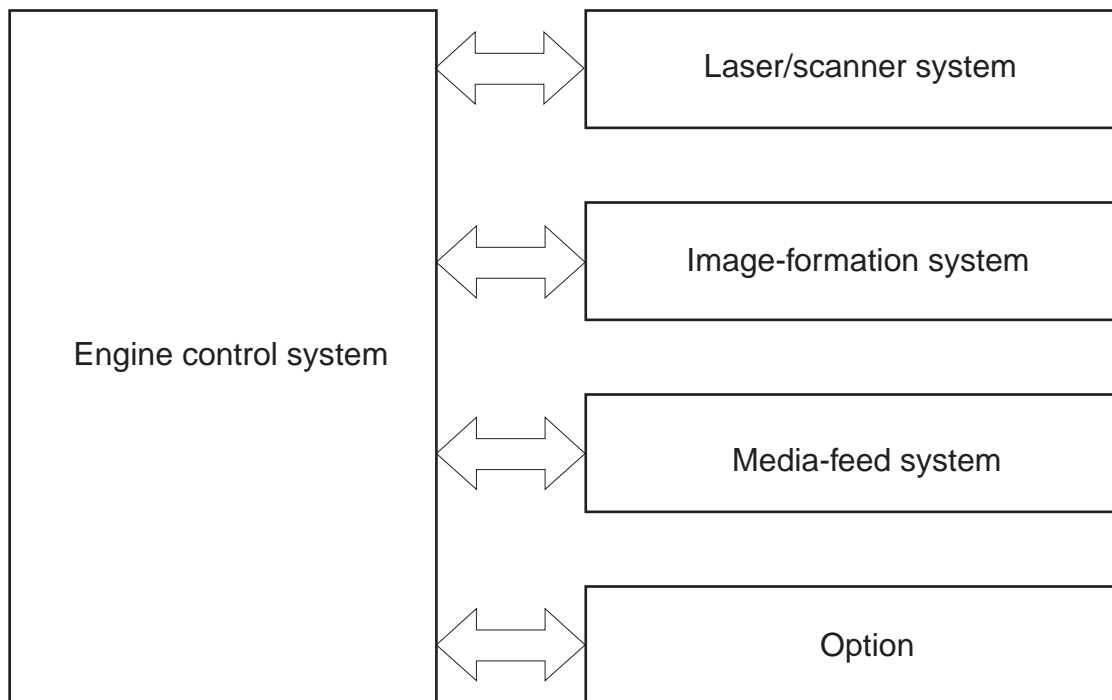
Sequence of operation

The DC controller PCA controls the operating sequence, as described in the following table.

NOTE: The terms fusing and fixing are synonymous.

Table 5-1 Sequence of operation

Period	Duration	Description
Waiting	From the time the power is turned on, the door is closed, or when the product exits Sleep mode until the product is ready for printing	- Heats the fuser sleeve - Pressurizes the fuser pressure roller - Detects the print cartridges - Detects the home position for the primary transfer roller and the developing unit - Cleans the secondary transfer roller
Standby	From the end of the waiting sequence or the last rotation until the formatter receives a print command or until the product is turned off	- The product is in the **READY** state. - The product enters Sleep mode after the specified length of time. - The product calibrates if it is time for an automatic calibration.
Initial rotation	From the time the formatter receives a print command until the paper enters the paper path	- Activates the high-voltage power supply - Prepares each laser/scanner unit - Warms the fuser to the correct temperature
Printing	From the time the first sheet of paper enters the paper path until the last sheet has passed through the fuser	- Forms the image on the photosensitive drums - Transfers the toner to the paper - Fuses the toner image onto the paper - Performs calibration after a specified number of pages
Last rotation	From the time the last sheet of paper exits the fuser until the motors stop rotating	- Moves the last printed sheet into the output bin - Stops each laser/scanner unit - Discharges the bias from the high-voltage power supply

Engine-control system

The engine-control system receives commands from the formatter and interacts with the other main systems to coordinate all product functions. The engine-control system consists of the following components:

- DC controller

- High-voltage power supply

- Low-voltage power supply

Figure 5-2 Engine-control system
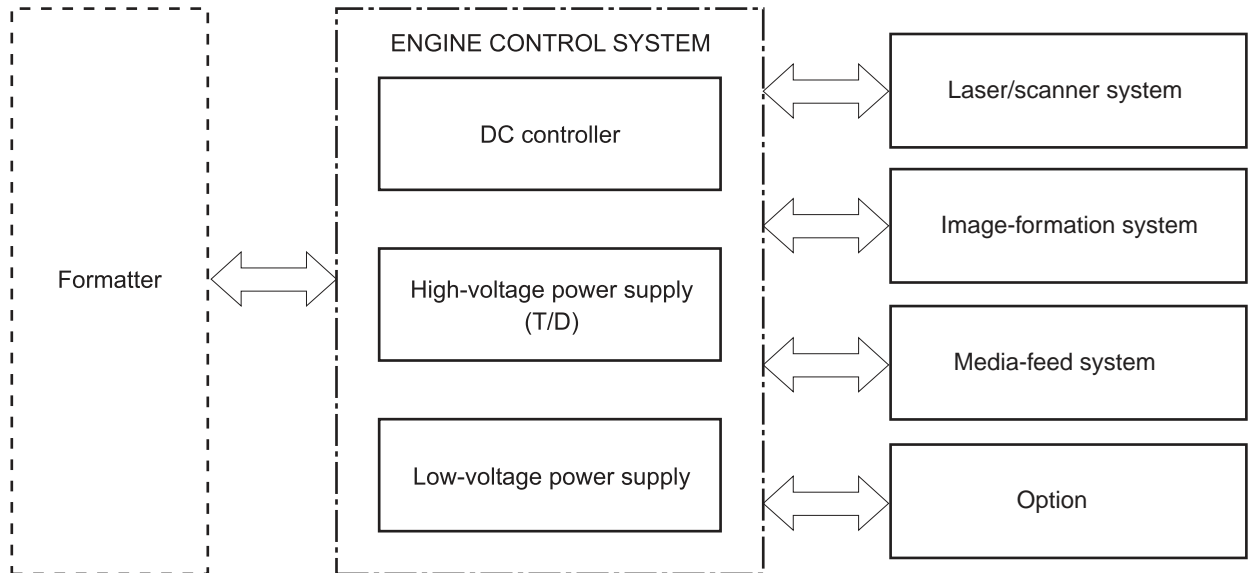
DC controller

The DC controller controls the operational sequence of the printer.

Figure 5-3 DC controller block diagram
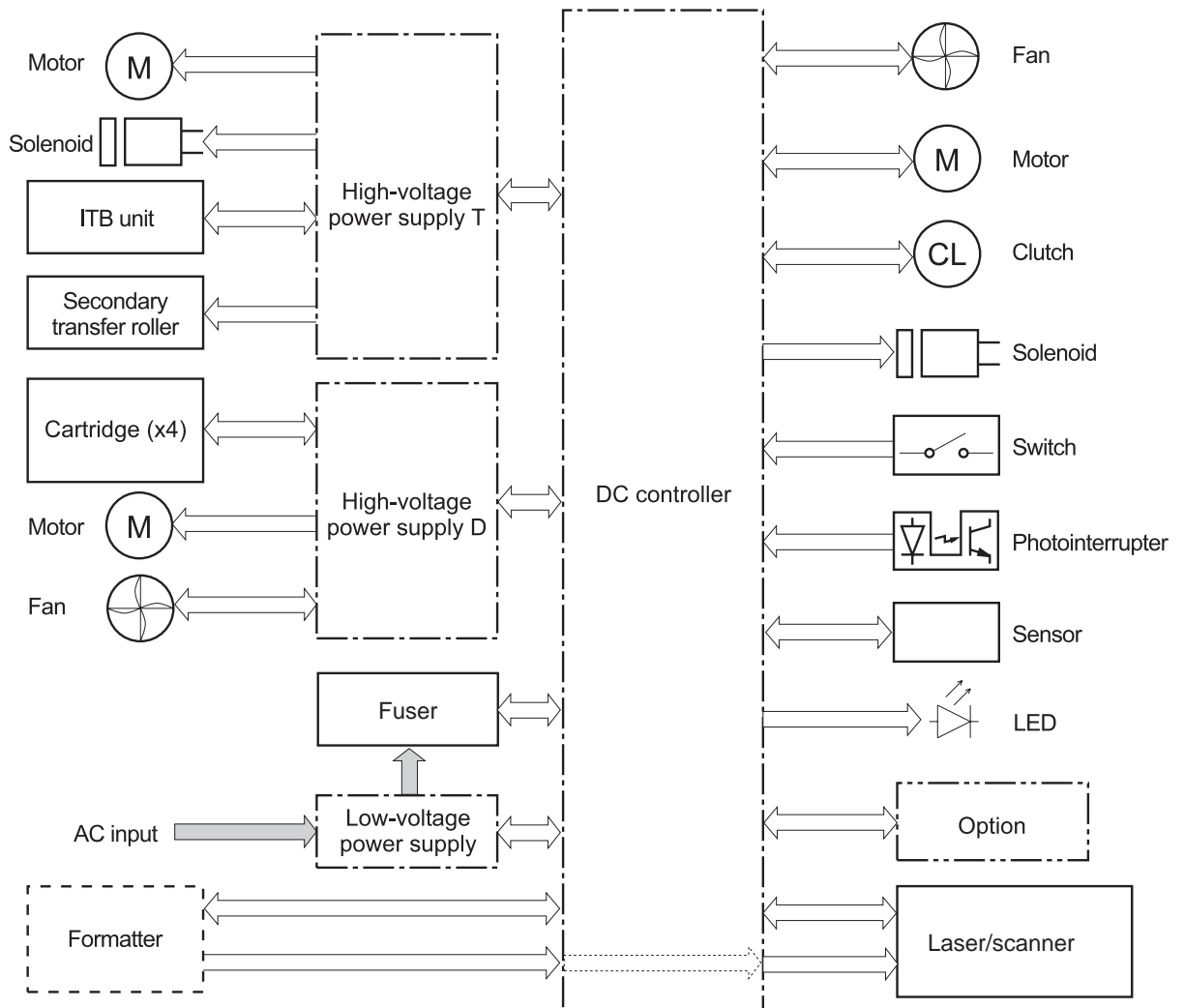
Solenoids

Table 5-2 Solenoids

Component abbreviation	Component name
SL1	Primary transfer roller disengagement solenoid
SL2	Duplex reverse solenoid
SL3	Multipurpose-tray pickup solenoid
SL4	Cassette pickup solenoid

Clutches

Component abbreviation	Component name
CL1	Duplex re-pickup clutch

Switches

Table 5-3 **Switches**

Component abbreviation	Component name
SW1, SW2	5V interlock switch
SW3	24V interlock switch
SW4	Power switch
	Test print switch

Sensors

Table 5-4 Sensors

Component abbreviation	Component name
SR1	Drum home position sensor 1
SR2	Drum home position sensor 2
SR3	Drum home position sensor 3
SR5	Fuser (fixing) delivery sensor
SR6	Delivery tray media full sensor
SR7	Fuser (fixing) pressure release sensor
SR8	TOP (top of page) sensor
SR9	Cassette-media-stack surface sensor
SR11	Developing home position sensor
SR13	Cassette presence sensor
SR14	Loop sensor 1
SR15	Loop sensor 2
SR17	Primary-transfer-roller disengagement sensor
SR20	Cassette-media presence sensor
SR21	MP-tray-media-presence sensor
SR22	Duplex re-pickup sensor
	OHT sensor (in)
	OHT sensor (out)
	RD sensor (front)
	RD sensor (rear)
	Environmental sensor (temperature and humidity)
	Yellow toner-level sensor
	Magenta toner-level sensor
	Cyan toner-level sensor
	Black toner-level sensor
	Toner collection-box-full sensor
	Fuser (fixing) home-position sensor

Motors and fans

The product has 11 motors and three fans. The motors drive the components in the paper-feed and image-formation systems. The fan motors cool the inside of the product.

Table 5-5 Motors

Abbreviation	Name	Purpose	Type	Failure detection
M2	Fuser (fixing) motor	Drives the Fuser (fixing) roller, the delivery roller, and the Fuser (fixing) pressure roller	DC motor	Yes
M3	Drum motor 1	Drives the photosensitive drum (yellow/magenta), developing unit (yellow), and primary charging roller (yellow/magenta)	DC motor	Yes
M4	Drum motor 2	Drives the photosensitive drum (cyan), developing unit (magenta/cyan), and primary charging roller (cyan)	DC motor	Yes
M5	Drum motor 3	Drives the photosensitive drum (black), developing unit (black), and ITB drive roller, and secondary transfer roller	DC motor	Yes
M7	Lifter motor	Drives the lifter for the cassette	DC motor	Yes
M8	Cyan/black scanner motor	Drives the scanner mirror in the cyan/black laser scanner	DC motor	Yes
M9	Yellow/magenta scanner motor	Drives the scanner mirror in the yellow/magenta laser scanner	DC motor	Yes
M10	Developing disengagement motor	Drives the developing unit disengagement	Stepping motor	No
M11	Duplex reverse motor	Drives the duplex reverse roller and duplex feed roller	Stepping motor	No
M12	Residual toner-feed motor	Drives the residual toner feed screw	DC motor	Yes
M13	Pickup motor	Drives the cassette pickup roller, MP tray pickup roller, feed roller, registration roller, and re-pickup roller	Stepping motor	No

Table 5-6 Fans

Abbreviation	Name	Cooling area	Type	Speed
FM1	Power supply fan	Around the power supply unit	Intake	Full/half
FM2	Cartridge fan	Around the cartridges	Intake	Full/half
FM3	Delivery fan	Around the delivery unit	Intake	Full/half

High-voltage power supply

The high-voltage power supply delivers the high-voltage biases to the following components used to transfer toner during the image-formation process:

- Primary-charging roller (in the cartridge)

- Developing roller (in the cartridge)

- Primary-transfer roller

- Secondary-transfer roller

Figure 5-4 High-voltage power supply circuits
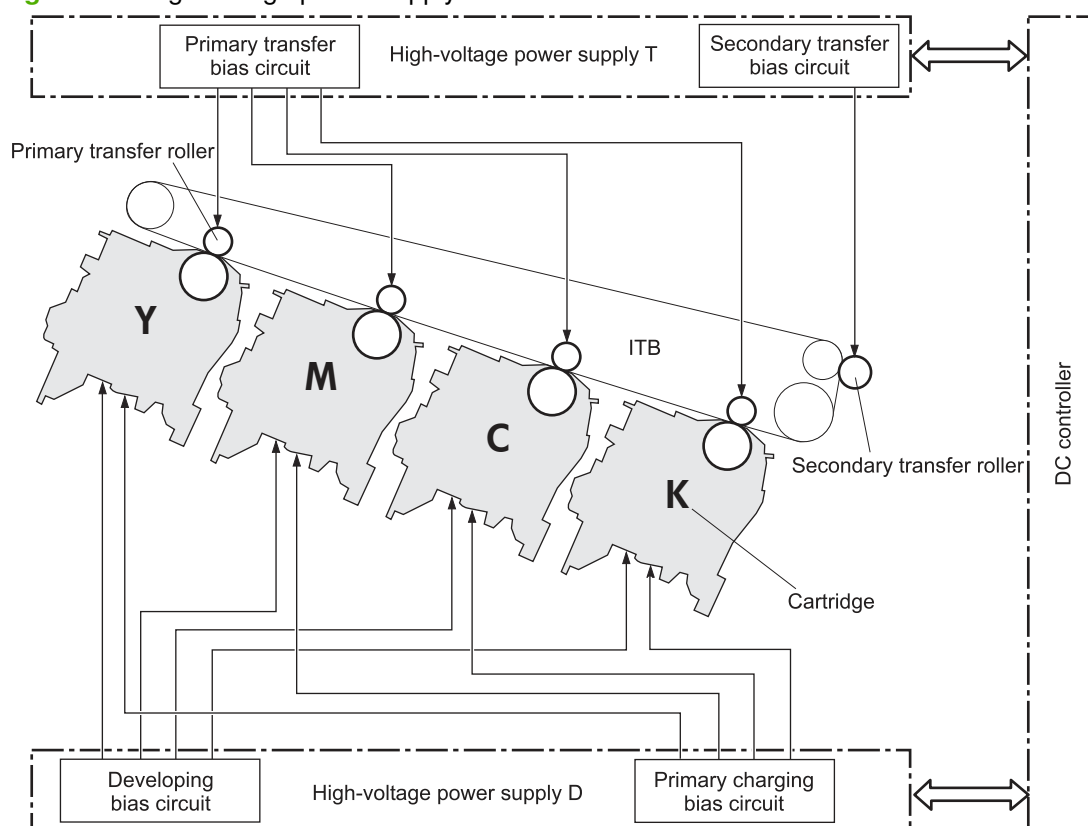
The high-voltage power supply contains several separate circuits.

Table 5-7 High-voltage power supply circuits

Circuit	Description
Primary-charging-bias generation	DC negative bias is applied to the surface of the photosensitive drum to prepare it for image formation.
Developing-bias generation	DC negative bias adheres the toner to each photosensitive drum during the image-formation process.
Primary-transfer-bias generation	DC positive bias transfers the latent toner image from each photosensitive drum onto the ITB.
Secondary-transfer-bias generation	Two DC biases, one positive and one negative, transfer the toner from the ITB onto the paper.

Low-voltage power supply

The low-voltage power-supply circuit converts the AC power from the wall receptacle into the DC voltage that the product components use. The product has two low-voltage power-supplies for 110 Volt or 220 Volt input.

Figure 5-5 Low-voltage power-supply circuit
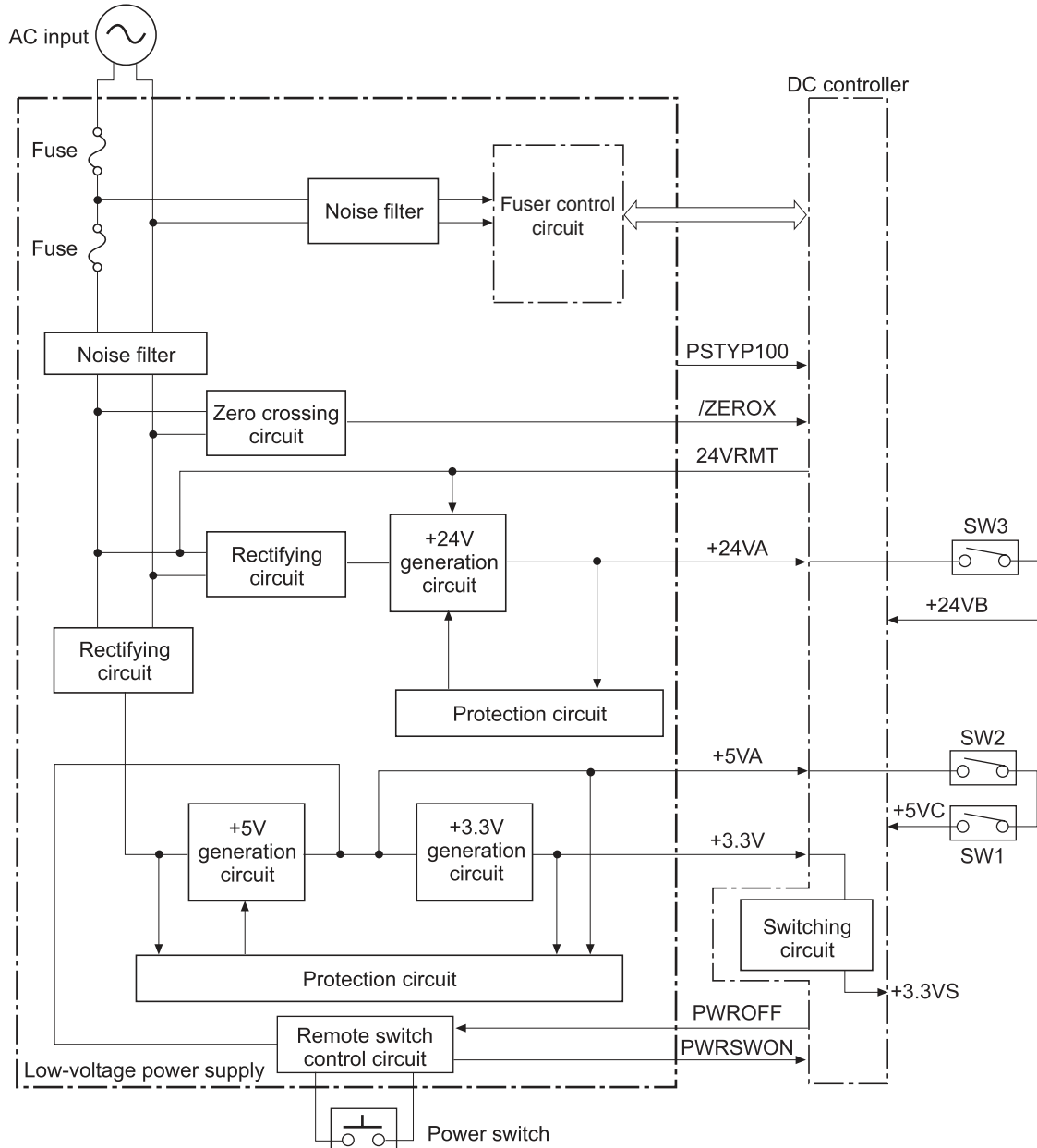
The low-voltage power supply converts the AC power into three DC voltages, which it then subdivides, as described in the following table.

Table 5-8 Converted DC voltages

Main DC voltage	Sub-voltage	Behavior
+24 V	+24VA	Constantly supplied

Table 5-8 Converted DC voltages (continued)

Main DC voltage	Sub-voltage	Behavior
	+24VB	Interrupted when the front door or right door open
		Stopped during Sleep (powersave) mode
+5 V	+5VA	Constantly supplied
	+5VC	Interrupted when the front door or right door open
+3.3 V	3.3V	Constantly supplied
	3.3VS	Stopped during Sleep (powersave) mode

Overcurrent/overvoltage protection

The low-voltage power supply stops supplying the DC voltage to the product components whenever it detects excessive current or abnormal voltage from the power source.

Safety

For personal safety, the low-voltage power supply interrupts power to the fuser, the high-voltage power supply, and the motors when the front door or right door open.

Voltage detection

The printer detects the power supply voltage that is connected to the printer. The DC controller monitors the input voltage from the power source so it can control the voltage to the fuser.

Sleep (powersave) mode

Sleep mode conserves energy by stopping the power to several components when the product is idle. If the DC controller detects voltage that is too high when the product is in Sleep mode, it determines that the low-voltage power supply has failed, and it notifies the formatter.

Low-voltage power supply failure

The DC controller determines a low-voltage power supply failure and notifies the formatter when the low-voltage power supply does not supply +24 V.

Fuser (fixing) control

The fuser-control circuit controls the fuser temperature. The product uses an on-demand fusing method.

Figure 5-6 Fuser (fixing) components
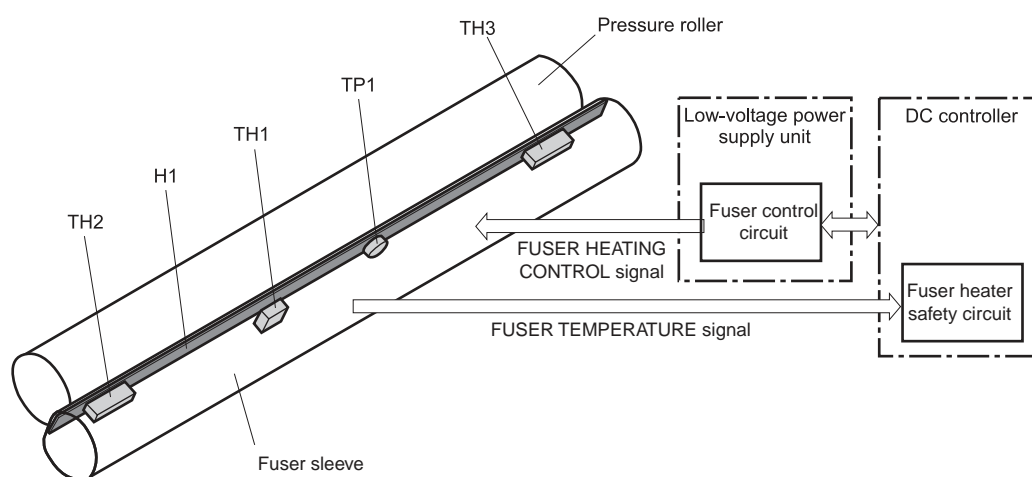
Table 5-9 Fuser (fixing) components

Type of component	Abbreviation	Name	Function
Heaters	H1	Fuser heater	Heats the fuser sleeve.
Thermistors (Contact type)	TH1	Main thermistor	Each thermistor detects the center temperature of the fuser sleeve.
	TH2 TH3	Sub thermistor	Each thermistor detects the side temperature of the fuser heater.
Thermoswitches (Non-contact type)	TP1	For the fuser heater	Controls the fuser-roller main heater

Fuser (fixing) temperature-control circuit

The temperatures of the two rollers in the fuser fluctuate according to the stage of the printing process. The DC controller sends commands to the fuser-control circuit to adjust temperatures.

Figure 5-7 Fuser temperature-control circuit
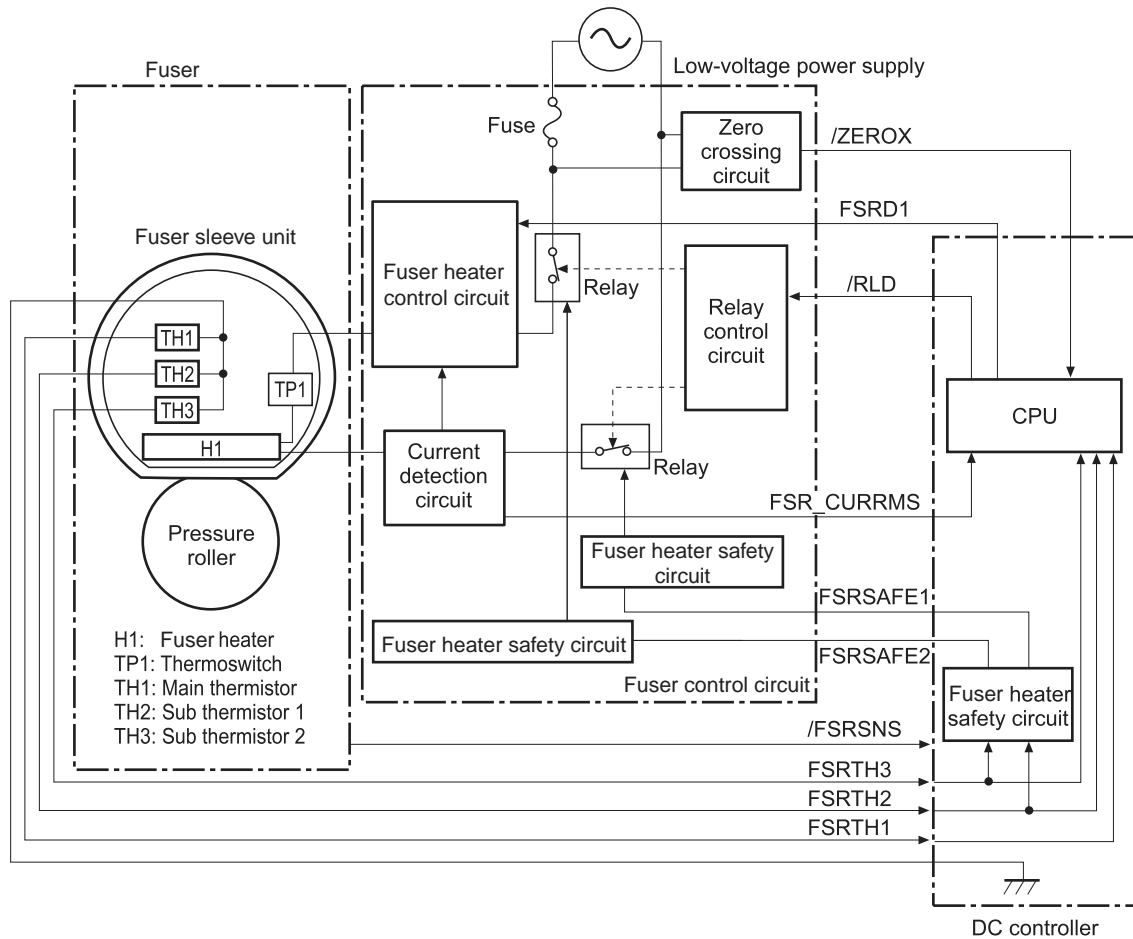
Fuser (fixing) over-temperature protection

To protect the fuser from excessive temperatures, the product has four layers of protective functions. If one function fails, the subsequent functions should detect the problem.

- **DC controller**: When a thermistor or thermopile detects a temperature above a certain threshold, the DC controller interrupts power to the specific heater. Following are the thresholds for each component:

  ◦ TH1: 230° C (446° F) or higher

  ◦ TH2: 285° C (545° F) or higher

  ◦ TH3: 285° C (545° F) or higher

- **Fuser (fixing)-heater safety circuit**: If the DC controller fails to interrupt the power to the heaters at the prescribed temperatures, the fuser-heater safety circuit deactivates the triac-drive circuit and releases the relay, which causes the heaters to stop at slightly higher temperature thresholds.

  ◦ TH2: 290° C (554° F) or higher

  ◦ TH3: 290° C (554° F) or higher

- **Current-detection protection circuit**: If current flowing in each triac exceeds a specific value, the current-detection protection circuit deactivates the triac-drive circuit and releases the relay, which interrupts the power supply to the heaters.

- **Thermoswitch**: If the temperature in the heaters is abnormally high, and the temperature in the thermoswitches exceeds a specified value, the contact to the thermoswitch breaks. Breaking this contact deactivates the triac-drive circuit and releases the relay, which interrupts the power supply to the heaters. Following are the thresholds for each thermoswitch:

  ◦ TP1: 270° C (518° F) or higher

NOTE: When the thermoswitches reach this temperature, the temperature on the fuser rollers is about 320° C (608° F).

Fuser (fixing)-failure detection

When the DC controller detects any of the following conditions, it determines that the fuser has failed. The DC controller then interrupts power to the fuser heaters and notifies the formatter.

- **Abnormally high temperatures**: Temperatures are too high for any of the following components, at any time:

  ◦ TH1: 230° C (446° F) or higher

  ◦ TH2: 285° C (545° F) or higher

  ◦ TH3: 285° C (545° F) or higher

- **Abnormally low temperatures**: Temperatures are too low at any of the following components after the product has initialized.

  ◦ TH1: 120° C (248° F) or lower

  ◦ TP2 or TP3: 100° C (212° F) or lower

  Or, the temperature drops in either of the thermopiles (TP1 and TP2) by 30° C (86° F) or more within a specified length of time.

- **Abnormal temperature rise**: The DC controller determines an abnormal temperature rise if the detected temperature of TH1 does not rise 2° C within a specified time period after the fuser (fixing) motor is turned on, or if the detected temperature of the thermistors does not rise to a specified temperature for a specified time after the fuser (fixing) motor is turned on.

- **Thermistor open**: The DC controller determines a thermistor open if:

  - The detected temperature of TH1 is kept at 12° C (53° F) or lower for a specified time after the fuser (fixing) motor is turned on.

  - The detected temperature of TH2 is kept at 4° C (39° F) or lower for a specified time.

  - The detected temperature of TH3 is kept at 4° C (39° F) or lower for a specified time.

- **Drive-circuit failure**: The DC controller determines a drive-circuit failure:

  - If the detected power supply frequency is out of a specified range when the printer is turned on or during the standby period

  - If the current detection circuit detects an out of specified current value

- **Fuser (fixing) discrepancy**: The DC controller determines a fuser type mismatch when it detects an unexpected fuser (fixing) unit presence signal. The product has two fusers for 110 V or 220 V input power.

Laser/scanner system

The laser/scanner system forms the latent electrostatic image on the photosensitive drums according to the VIDEO signals sent from the formatter. The product has two laser/scanners: one for yellow and magenta and the other for cyan and black.

The formatter sends the DC controller instructions for the image of the page to be printed. The DC controller signals the lasers to emit light, and the laser beams pass through lenses and onto the scanner mirror, which rotates at a constant speed. The mirror reflects the beam onto the photosensitive drum in the pattern necessary for the image, exposing the surface of the drum so it can receive toner.

Figure 5-8 Laser/scanner system
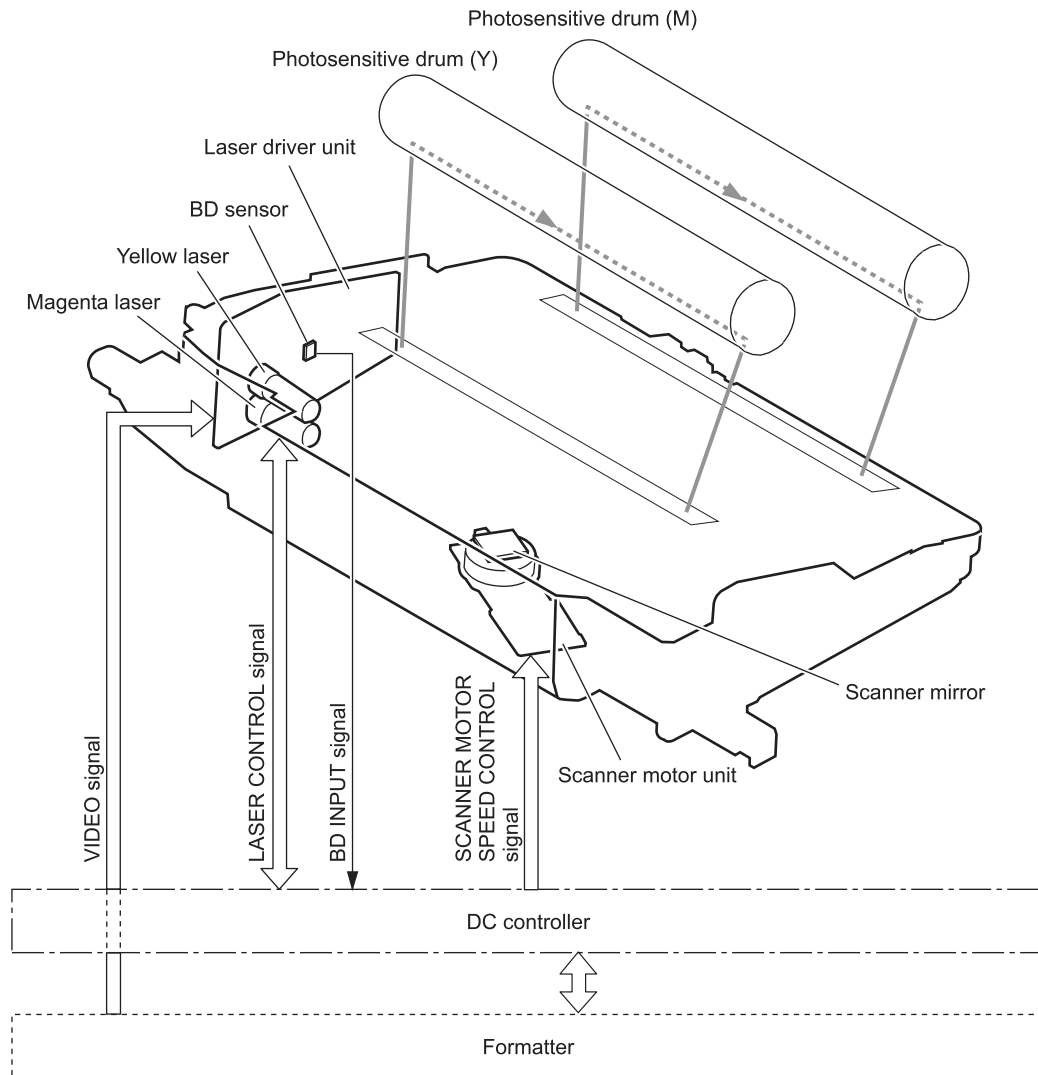
The DC controller determines that a laser/scanner has failed when any of the following conditions occurs:

- **Laser failure**: The detected laser intensity does not match a specified value when the product initializes.

- **Beam-detect (BD) failure**: The BD interval is outside a specified range during printing.

- **Scanner-motor failure**: The scanner motor does not reach a specified rotation speed within a certain time after it begins rotating.

Image-formation system

The image-formation system creates the printed image on the paper. The system consists of the laser/scanners, print cartridges, imaging drums, ITB, and fuser.

Figure 5-9 Image-formation system
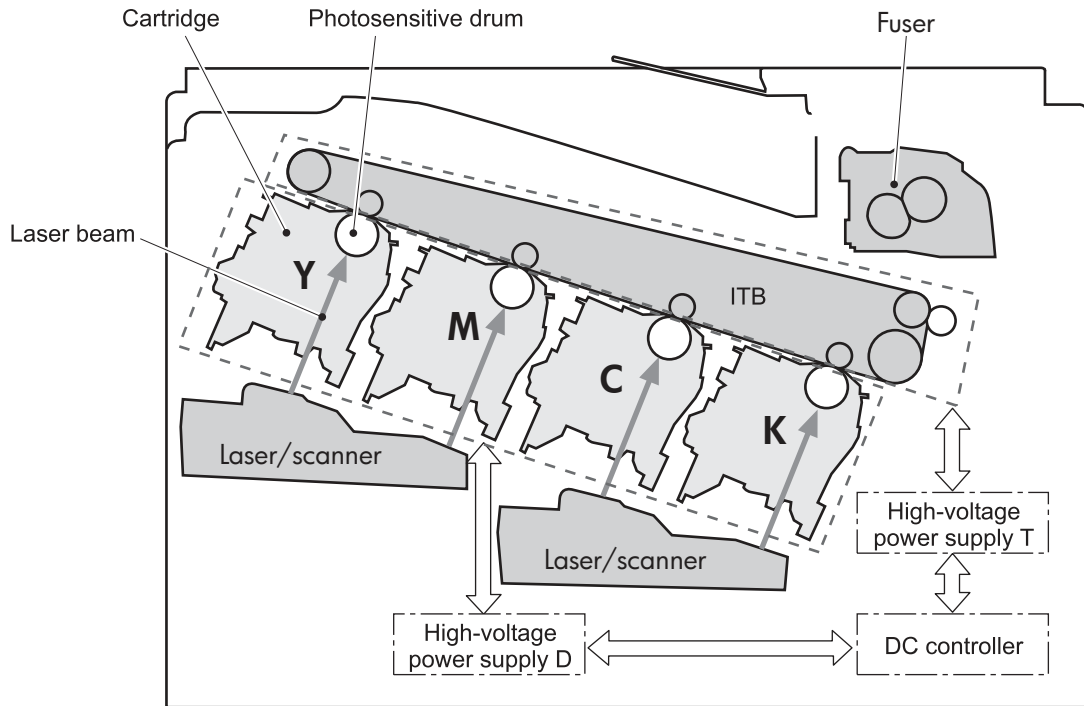
Image-formation process

The image-formation system consists of ten steps divided into six functional blocks.

Figure 5-10 Image-formation process
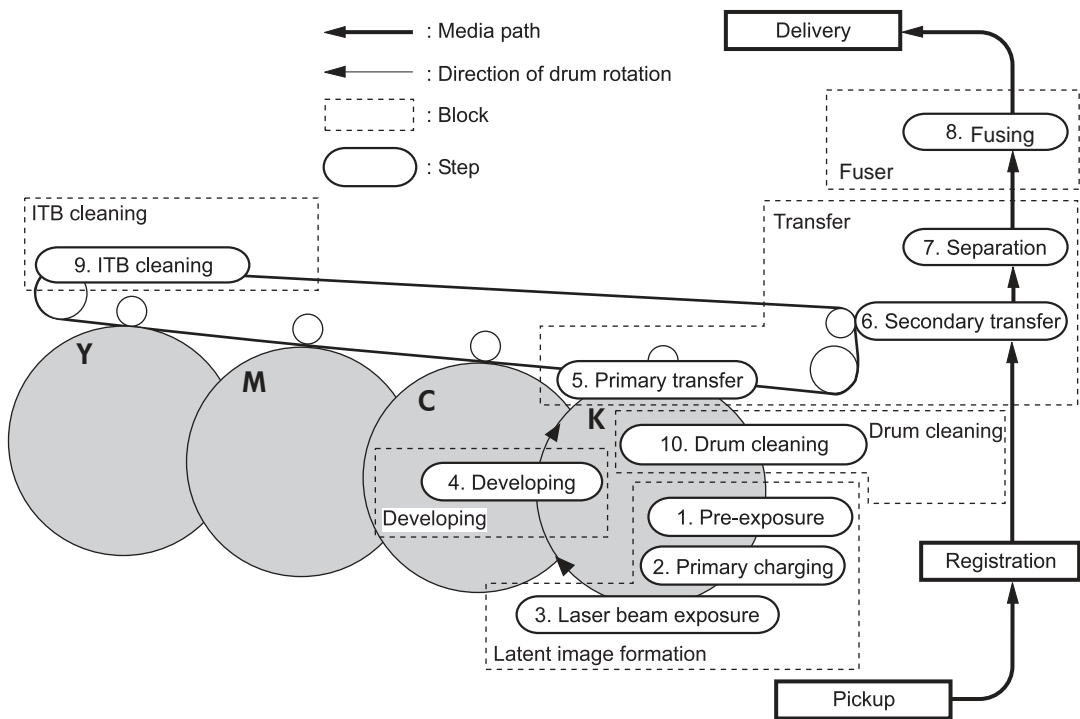
Functional block	Steps	Description
Latent image formation	1. Pre-exposure 2. Primary charging 3. Laser-beam exposure	An invisible latent image forms on the surface of the photosensitive drums.
Development	4. Development	Toner adheres to the electrostatic latent image on the photosensitive drums.
Transfer	5. Primary transfer 6. Secondary transfer 7. Separation	The toner image transfers to the ITB and subsequently to the paper.
Fusing	8. Fusing	The toner fuses to the paper to make a permanent image.
ITB cleaning	9. ITB cleaning	Residual toner is removed from the ITB.
Drum cleaning	10. Drum cleaning	Residual toner is removed from the photosensitive drums.

Step 1: Pre-exposure

Light from the pre-exposure LED strikes the surface of the photosensitive drum to remove any residual electrical charges from the drum surface.

Figure 5-11 Pre-exposure
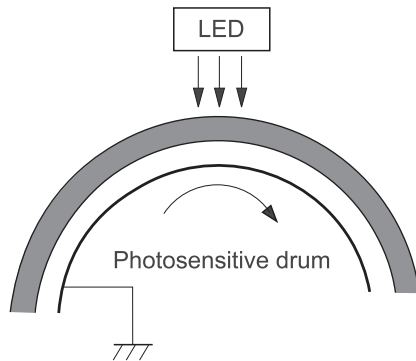
Step 2: Primary charging

The primary-charging roller contacts the photosensitive drum and charges the drum with negative potential.

Figure 5-12 Primary charging
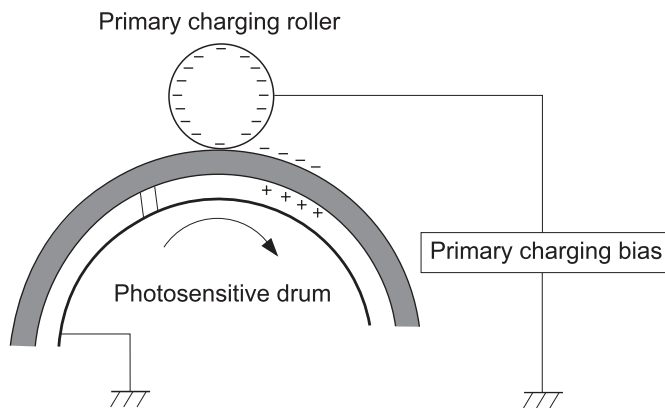
Step 3: Laser-beam exposure

The laser beam strikes the surface of the photosensitive drum in the areas where the image will form. The negative charge neutralizes in those areas, which are then ready to accept toner.

Figure 5-13 Laser-beam exposure
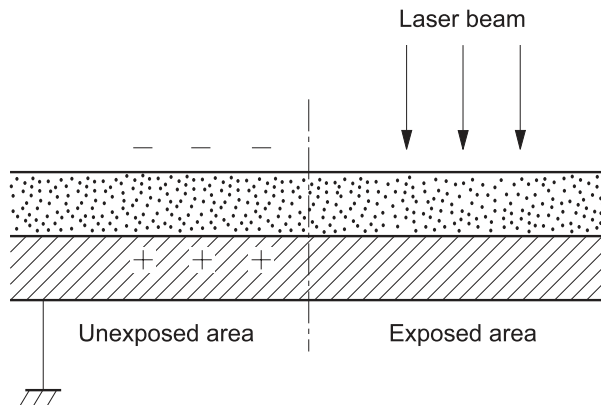
Step 4: Development

Toner acquires a negative charge as the developing cylinder contacts the developing blade. Because the negatively charged surface of the photosensitive drums have been neutralized where they have been struck by the laser beam, the toner adheres to those areas on the drums. The latent image becomes visible on the surface of each drum.

Figure 5-14 Development
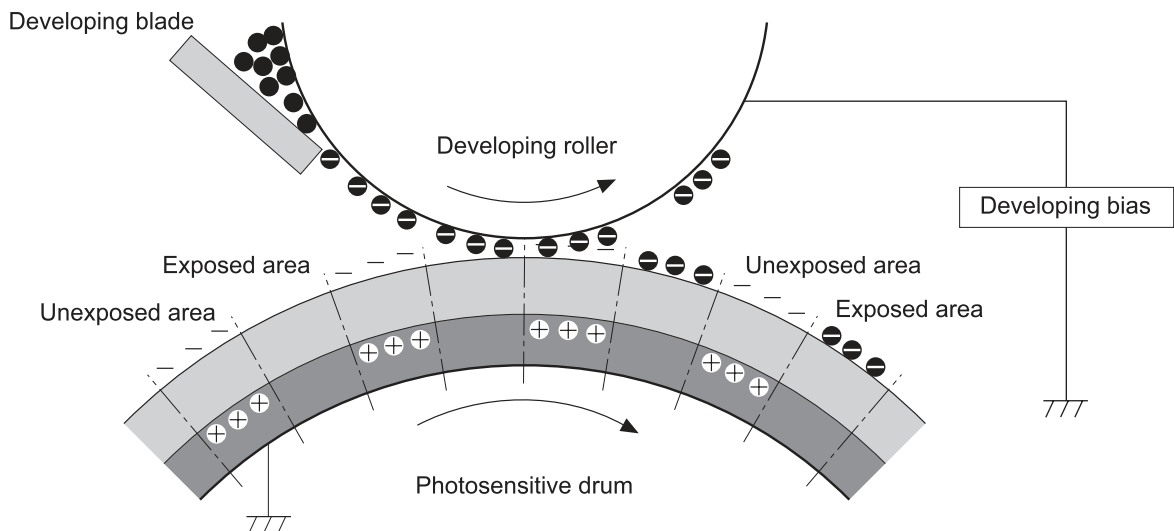
Step 5: Primary transfer

The positively charged primary-transfer rollers contact the ITB, giving the ITB a positive charge. The ITB attracts the negatively charged toner from the surface of each photosensitive drum, and the

complete toner image transfers onto the ITB, beginning with yellow, followed by magenta, cyan, and black.

Figure 5-15 Primary transfer
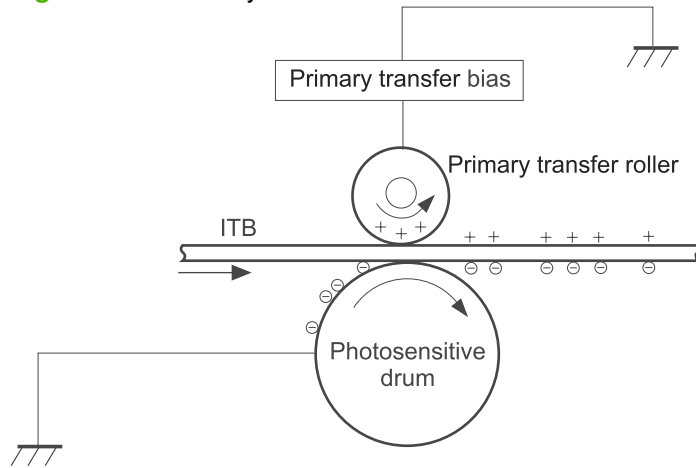
Step 6: Secondary transfer

The paper acquires a positive charge from the secondary-transfer roller, and so it attracts the negatively charged toner from the surface of the ITB. The complete toner image transfers onto the paper.

Figure 5-16 Secondary transfer
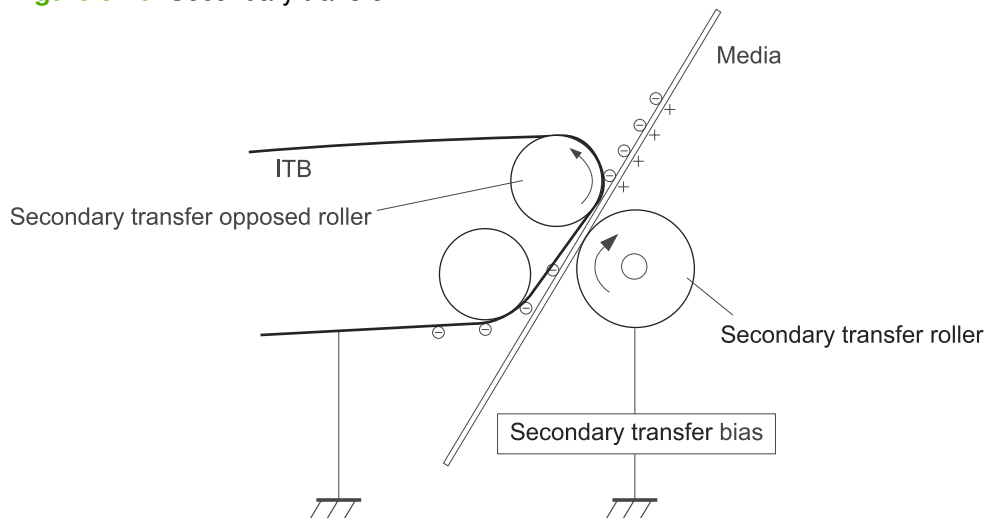
Step 7: Separation

The stiffness of the paper causes it to separate from the ITB as the ITB bends. The static-charge eliminator removes excess charge from the paper to ensure that the toner fuses correctly.

Figure 5-17 Separation
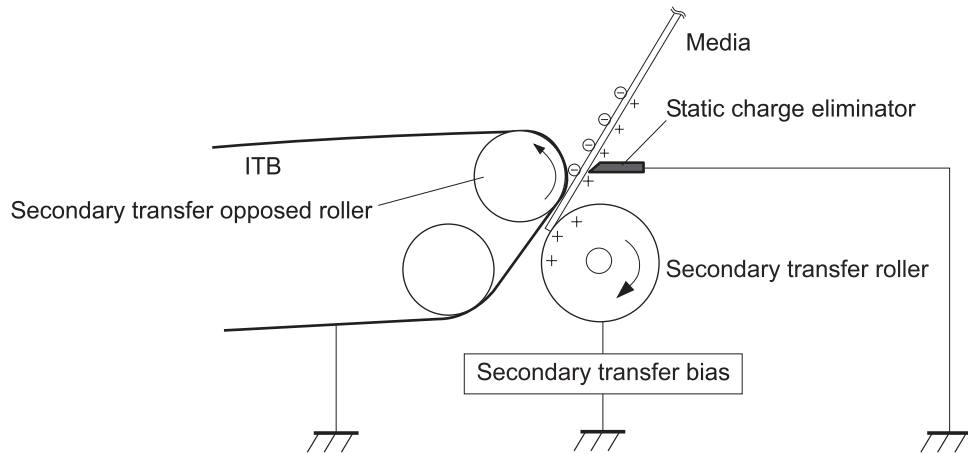
Step 8: Fusing

To create the permanent image, the paper passes through heated, pressurized rollers to melt the toner onto the page.

Figure 5-18 Fusing
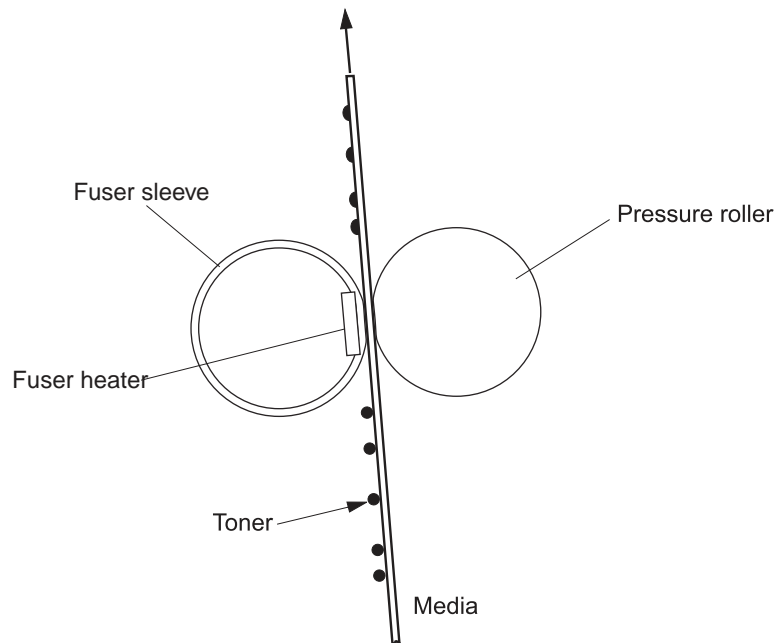
Step 9: ITB cleaning

The cleaning blade scrapes the residual toner off the surface of the ITB. The residual toner feed screw deposits residual toner in the toner collection box.

Figure 5-19 ITB cleaning
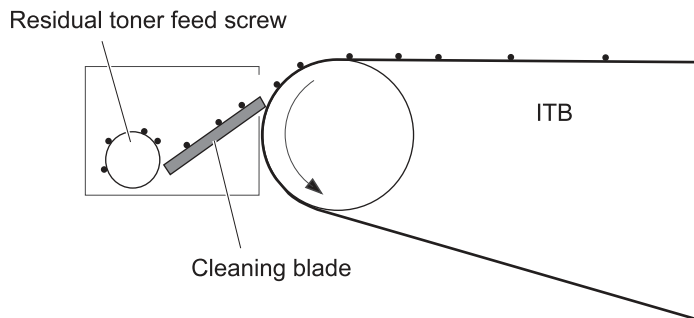
Step 10: Drum cleaning

Inside the print cartridge, the cleaning blade removes residual toner from the surface of the drum to prepare it for the next image. The waste toner falls into the hopper in the print cartridge.

Figure 5-20 Drum cleaning
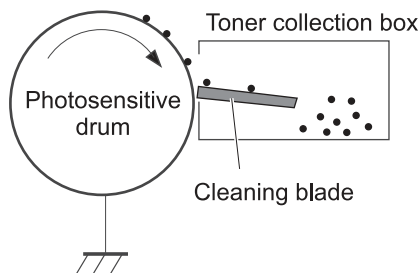
Print cartridge

The product has four print cartridges, one for each color. Each print cartridge contains a reservoir of toner and the following components:

● Photosensitive drum

● Developing roller

● Primary-charging roller

The DC controller rotates the drum motor to drive the photosensitive drum, developing roller, and the primary-charging roller.

Figure 5-21 Print-cartridge system
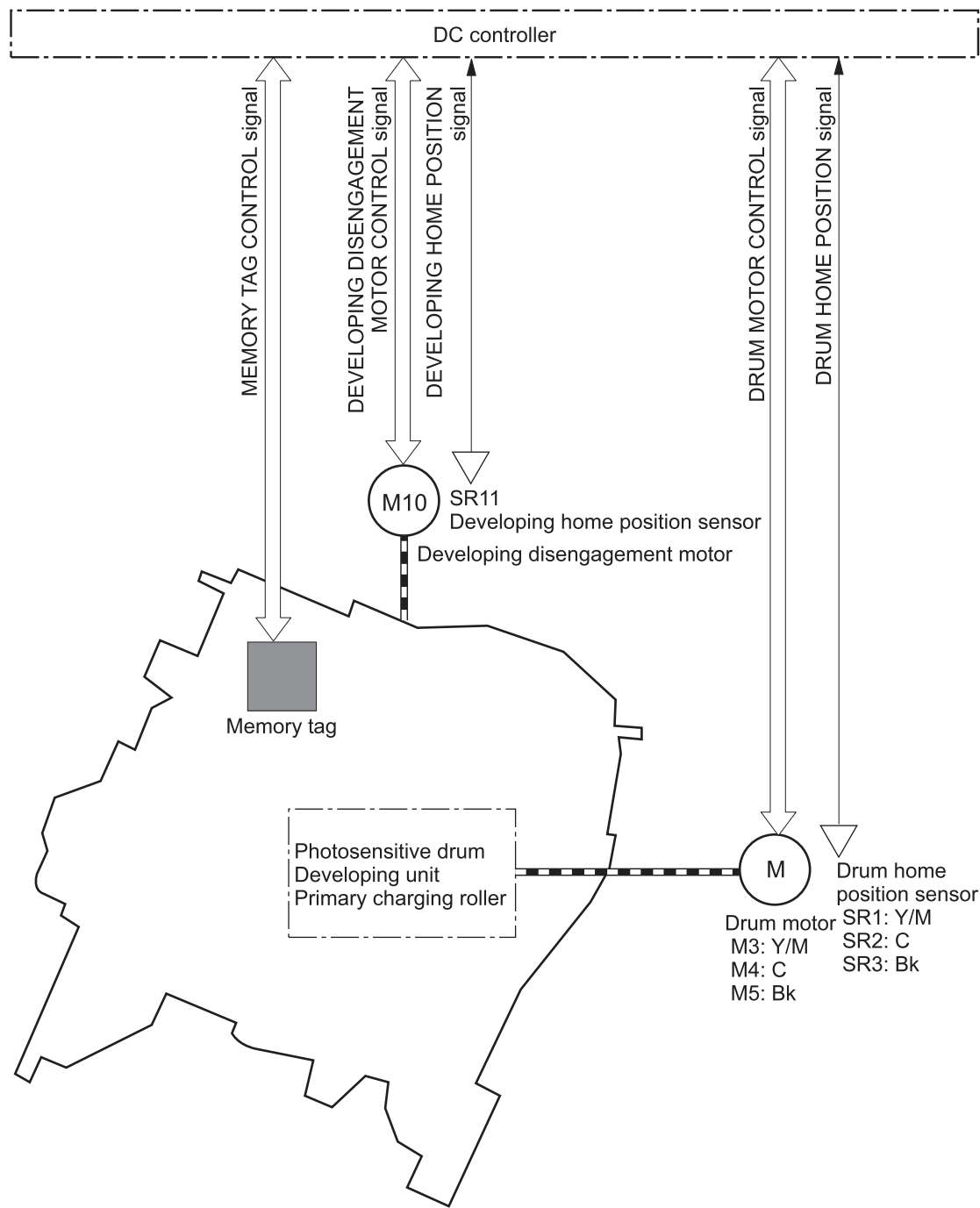
The DC controller rotates the drum motor to drive the photosensitive drum, developing unit, and primary charging roller.

The memory tag is a non-volatile memory chip that stores information about the usage for the print cartridge.

The DC controller notifies the formatter of an error if any of the following conditions exist:

- The memory tag fails to either read to or write from the DC controller

- The RD sensors detect a missing or incorrectly installed print cartridge.

- The accumulated print time reaches a specified time period or the cartridge runs out of toner.

- The toner level in any of the print cartridges drops below a certain level

Developing-roller engagement and disengagement

The product can print in full-color mode or in black-only mode. To print in black-only mode, the product disengages the developing rollers in the cyan, magenta, and yellow print cartridges. This maximizes the life of the cartridges.

Figure 5-22 Developing-roller engagement and disengagement control
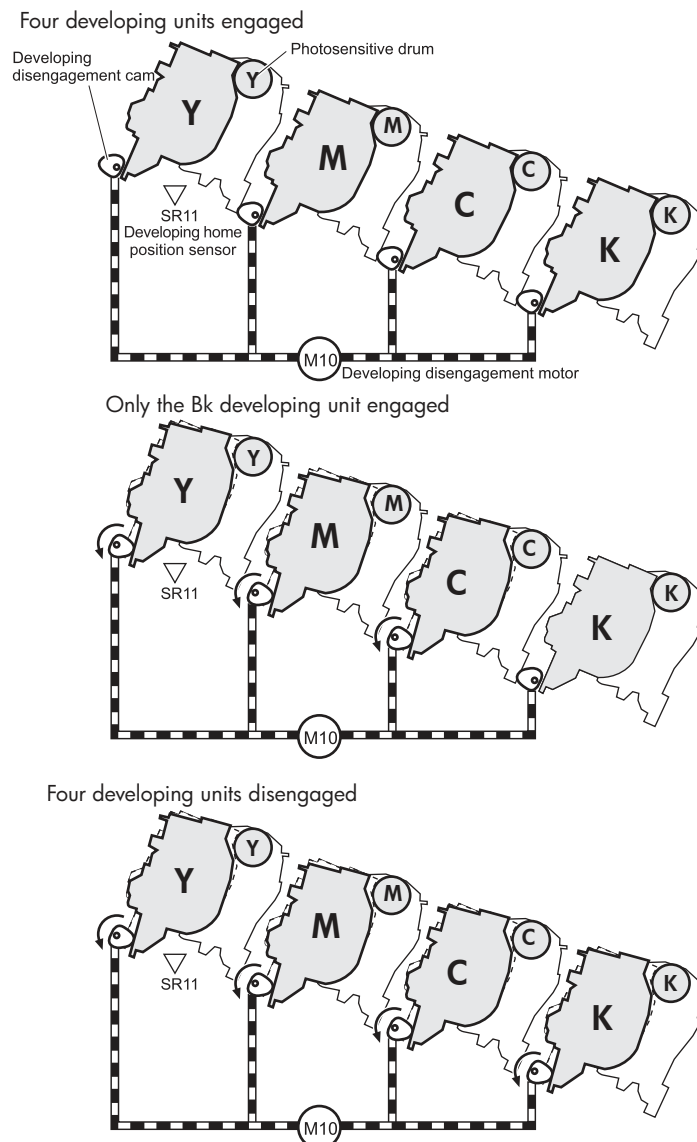
The DC controller rotates the developing disengagement motor and changes the direction of the cam according to the instructions from the formatter for each print job.

When the product is turned on and at the end of each print job, all four of the developing rollers disengage from the photosensitive drums. If the next print job is full-color mode, each of the developing rollers engage. If the next print job is black-only mode, only the black developing roller engages.

If the DC controller does not detect any output from the developing home-position sensor, it determines that the developing-disengagement motor has failed.

Intermediate transfer belt (ITB) unit

The ITB unit accepts the toner images from the photosensitive drums and transfers the completed image to the paper. The ITB unit has these main components:

- ITB
- ITB drive roller
- ITB-driven roller
- Primary-transfer rollers
- ITB cleaner

The ITB motor drives the ITB drive roller, which rotates the ITB. The motion of the ITB causes the primary transfer rollers to rotate. The ITB cleaner cleans the ITB surface.

Figure 5-23 ITB unit
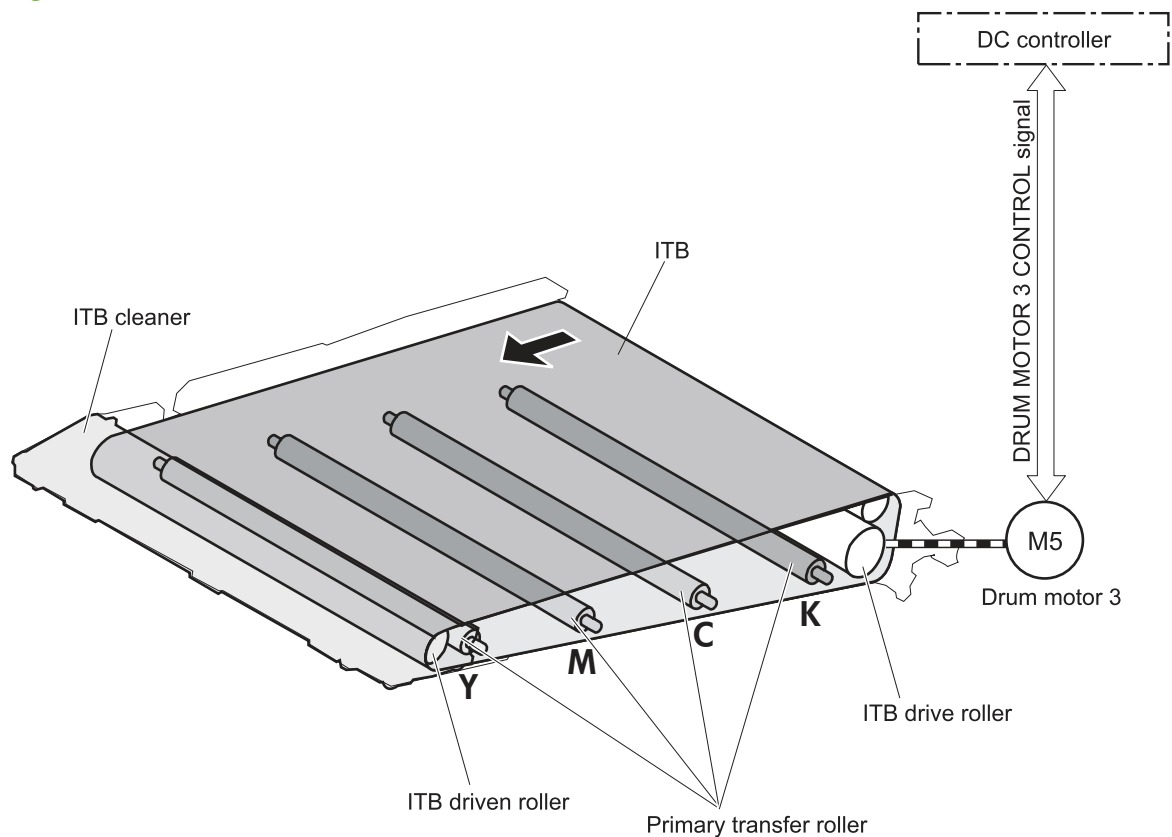
Primary-transfer-roller engagement and disengagement

Depending on the requirements of the print job, the primary-transfer rollers engage with the ITB so it can receive toner from the photosensitive drums.

Table 5-10 Primary-transfer-roller engagement states

All rollers disengaged	The home position for the ITB unit
All rollers engaged	The state for a full-color print job
Black roller engaged	The state for a black-only print job

The primary-transfer-roller disengagement motor rotates or reverses to place the primary-transfer-roller disengagement cam into one of three positions. The cam causes the transfer-roller slide plate to move to the right or left. This movement causes the primary-transfer rollers to move up to engage the ITB with the photosensitive drum or down to disengage it.

If the DC controller does not receive the expected signal from the ITB home-position sensor when the primary-transfer-roller engages or disengages, but the primary-transfer-roller disengagement motor is

rotating, the DC controller determines that the primary-transfer-disengagement mechanism has failed, and notifies the formatter.

Figure 5-24 Three states of primary-transfer-roller engagement and disengagement
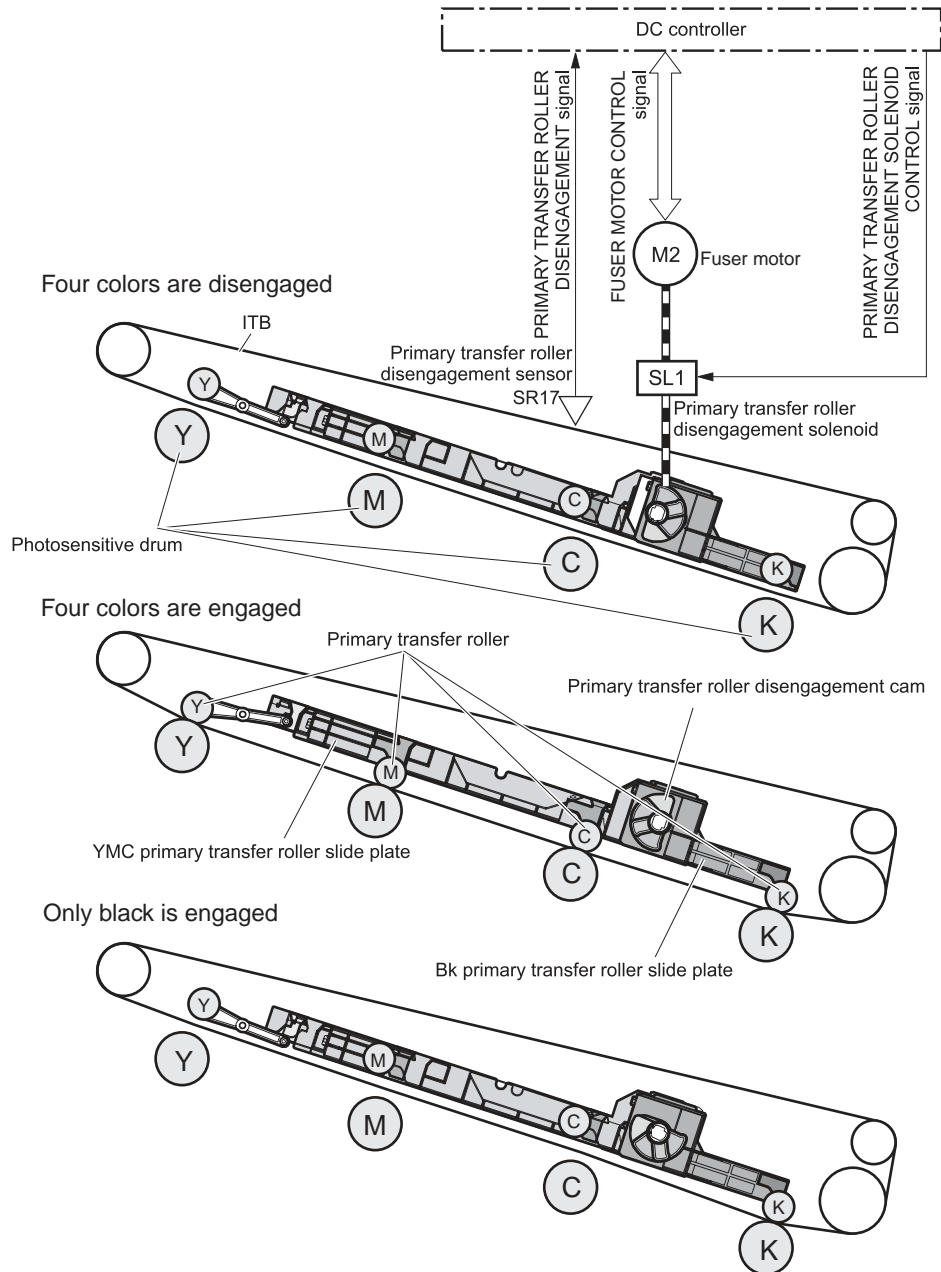
ITB cleaning

The cleaning blade in the ITB cleaner scrapes the residual toner off the ITB surface. The drum motor (M5) drives the residual toner feed screw. The screw feeds the residual toner to the residual toner feed unit. The residual toner feed motor (M12) drives the residual toner feed screw. The residual toner feed

screw deposits the residual toner in the toner collection box. The DC control detects whether the toner collection box is full, using the toner collection-box-full sensor, and then notifies the formatter.

Figure 5-25 ITB cleaning process
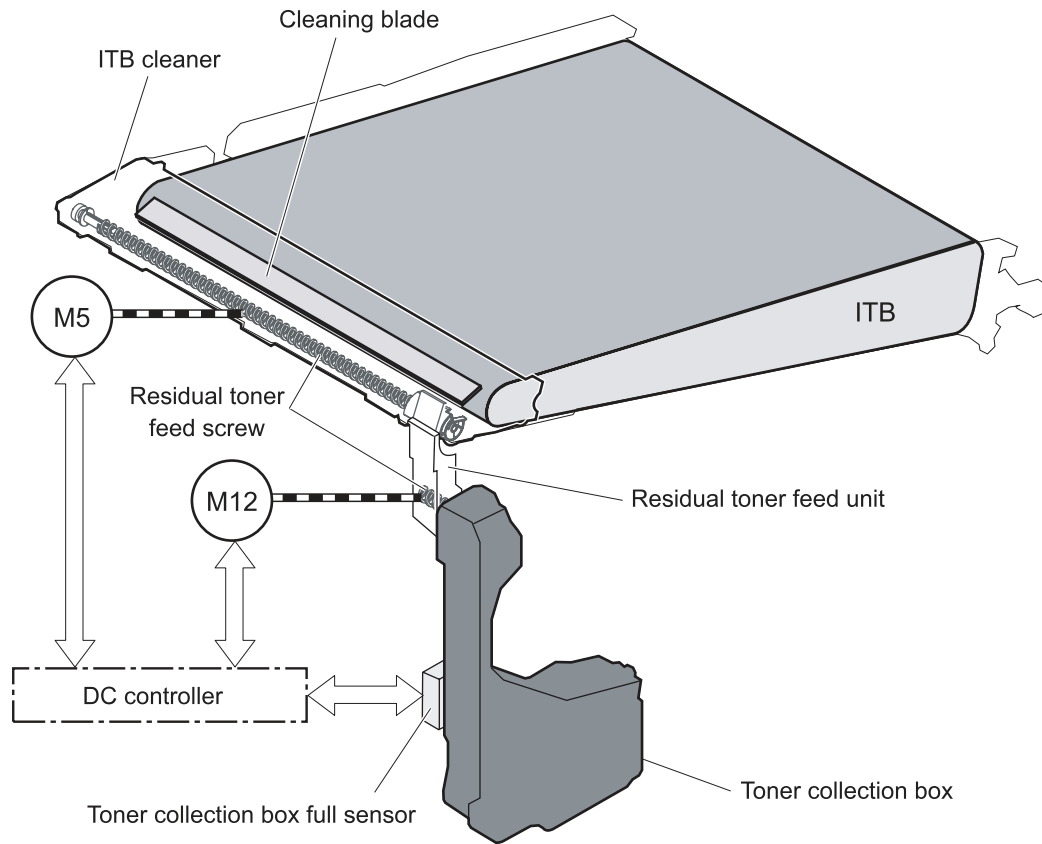
Calibration

The product calibrates itself to maintain excellent print quality. Calibration corrects color-misregistration and color-density variation.

During calibration, the product places a specific pattern of toner on the surface of the ITB. Sensors at the end of the ITB read the toner pattern to determine if adjustments are necessary.

Figure 5-26 Toner patterns for calibration
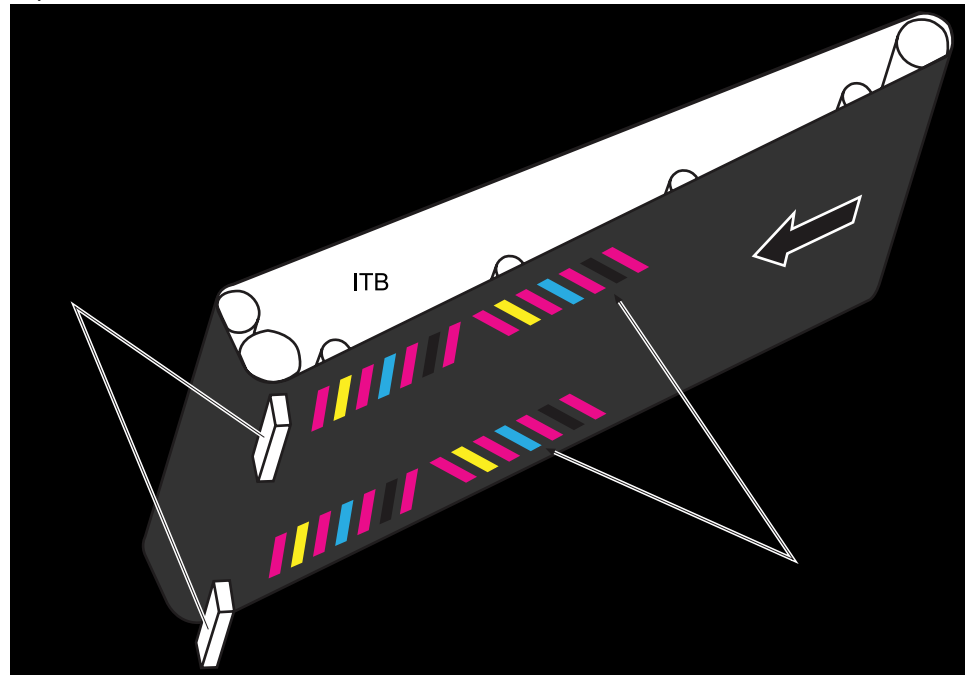
Color-misregistration control

Internal variations in the laser/scanners can cause the toner images to become misaligned. The color-misregistration control corrects the following problems:

- Horizontal scanning start position

- Horizontal scanning magnification

- Vertical scanning start position

The calibration occurs when any of the following occurs:

- A cartridge is replaced

- The temperature of the sub thermistor is 50 C (122 F) or lower when the product recovers from sleep mode after a specific number of pages print.

- A specified number of pages have printed.

- The formatter sends a command.

- The user requests a calibration by using the control-panel menus.

If data from the color-misregistration and image-density sensors is outside a specified range when the product is turned on or when it is beginning the calibration sequence, the DC controller determines that these sensors have failed, and it notifies the formatter.

Image-stabilization control

Environmental changes or deterioration of the photosensitive drums and toner can cause variations in the image density. The image-stabilization control reduces these fluctuations.

Table 5-11 Image-stabilization controls

Environment change control	The DC controller monitors environmental information from internal temperature and humidity sensors. The DC controller adjusts the high-voltage bias to accommodate environmental changes. This control occurs under the following circumstances: ● The product is turned on. ● The print cartridge is replaced. ● A change in environmental conditions occurs. The DC controller notifies the formatter when it encounters a communication error with the environmental sensor.
Image density control (DMAX)	This control corrects variations in image density related to deterioration of the photosensitive drum or the toner. The DC controller adjusts the high-voltage biases to correct the problem under the following conditions: ● The sub thermistor detects a temperature that is too low when the product is turned on. ● A print cartridge is replaced. ● A specified number of pages print after replacing the print cartridge. ● A specified number of pages have printed. ● The formatter sends a command ● The product recovers from sleep mode ● After a specific period of the completion of a print operation ● The environment is relatively charged.
Image halftone control (DHALF)	The formatter performs this control to calibrate the halftone, based on the halftone-density measurements, under the following conditions: ● The formatter sends a command. ● DMAX is completed.

The DC controller determines a RD sensor failure and notifies the formatter if it detects an out-of-specified-data value from the RD sensor when the product is turned on or when the color misregistration control starts.

Pickup, feed, and delivery system

The pickup, feed, and delivery system uses a series of rollers to move the paper through the product.

Figure 5-27 Switches and sensors for the pickup, feed, and delivery system

■ : Duplex model only

┅┅┅ : Duplex media path

──── : Simplex media path
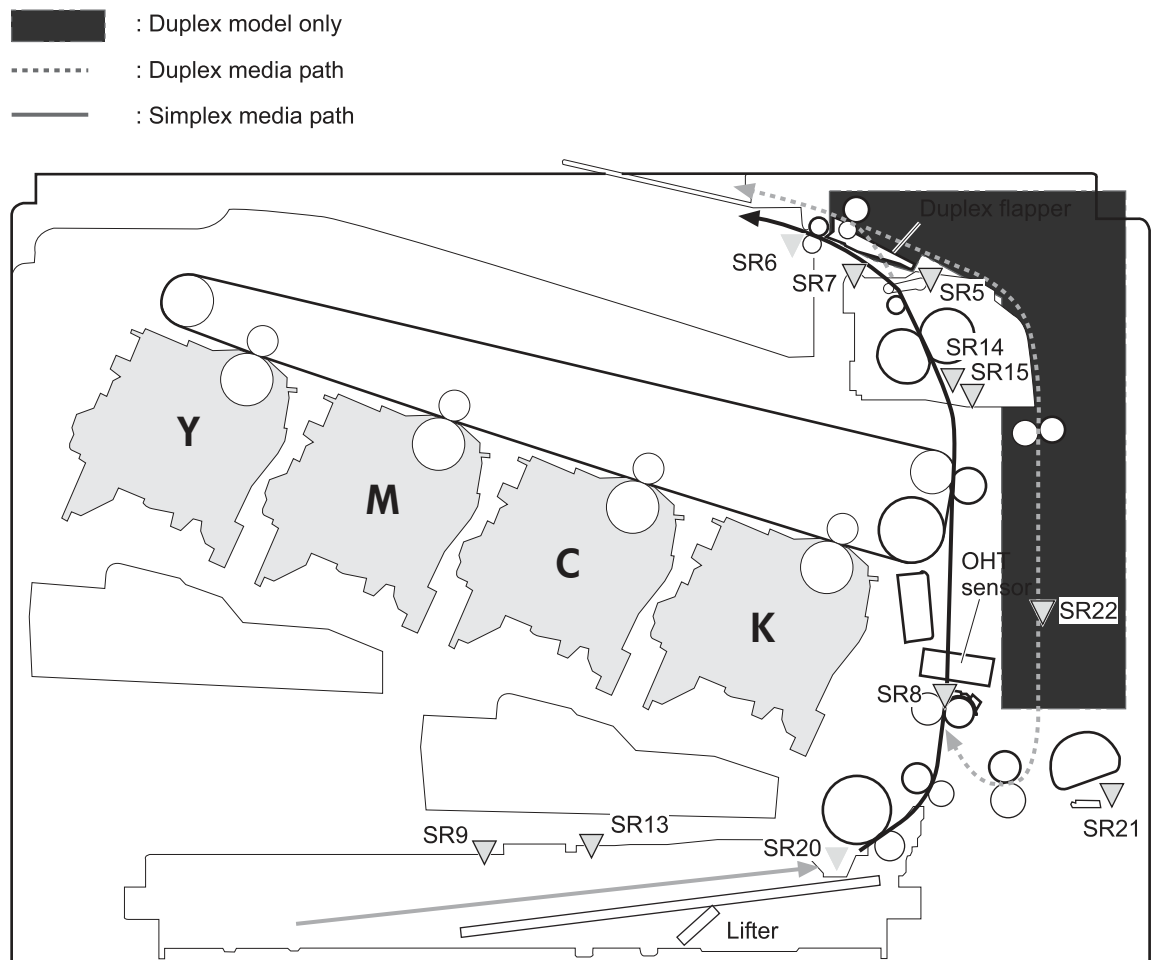
Table 5-12 Switches and sensors for the pickup, feed, and delivery system

Abbreviation	Component
SR5	Fuser (fixing) delivery sensor
SR6	Delivery tray media full sensor
SR7	Fuser (fixing) pressure release sensor
SR8	TOP (top of page) sensor
SR9	Cassette-media stack-surface sensor
SR13	Cassette presence sensor
SR14	Loop sensor 1
SR15	Loop sensor 2
SR20	Cassette media-presence sensor

Abbreviation	Component
SR21	MP tray media-presence sensor
SR22	Duplex re-pickup sensor (duplex models only)

Figure 5-28 Motors and solenoids for the pickup, feed, and delivery system
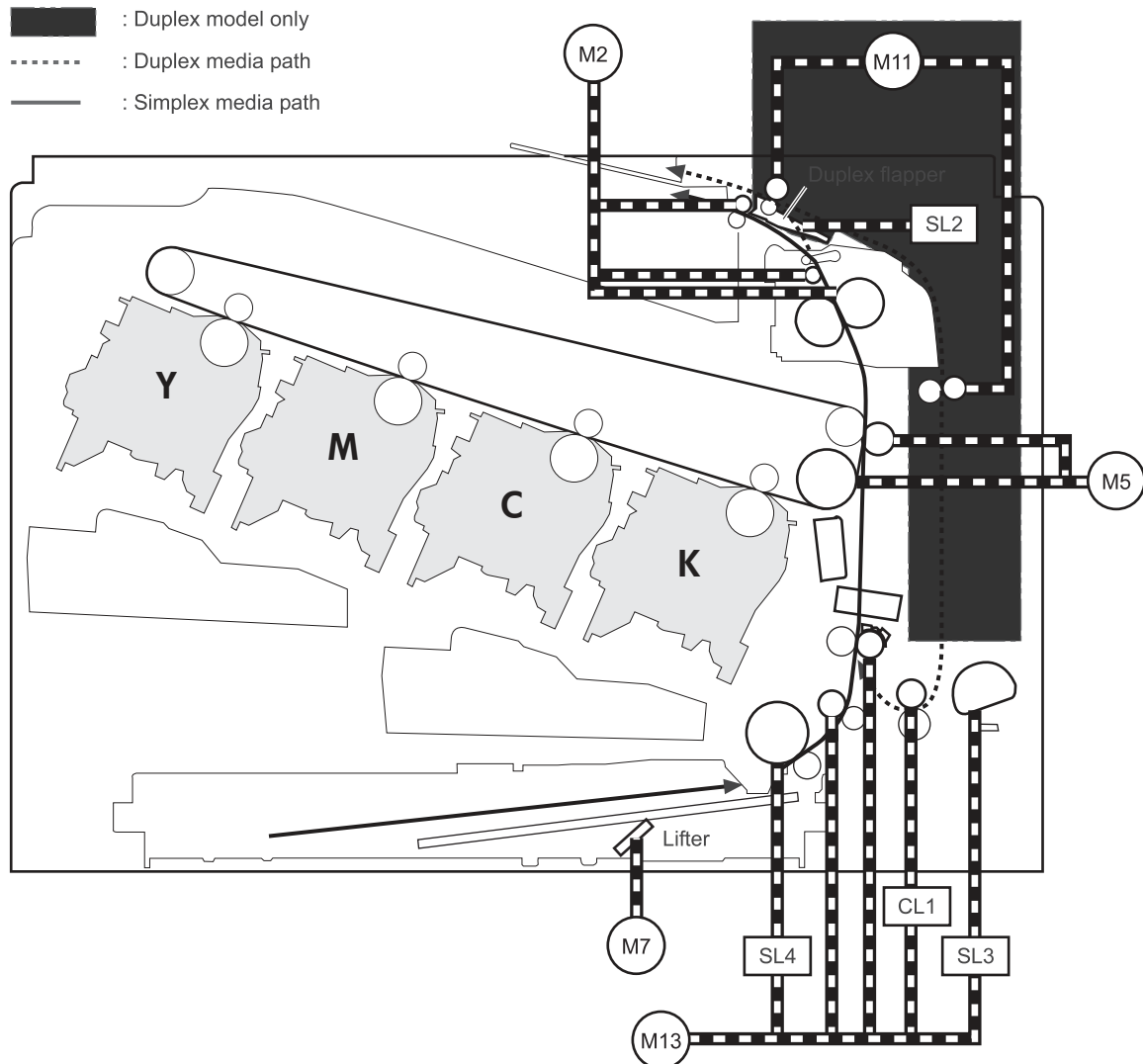
Table 5-13 Motors and solenoids for the pickup, feed, and delivery system

Abbreviation	Component
M2	Fuser (fixing) motor
M5	Drum motor 3
M7	Lifter motor
M11	Duplex reverse motor (duplex models only)
M13	Pickup motor
CL1	Duplex re-pickup clutch (duplex models only)

Table 5-13 Motors and solenoids for the pickup, feed, and delivery system (continued)

Abbreviation	Component
SL2	Duplex reverse solenoid (duplex models only)
SL3	Multipurpose tray pickup solenoid
SL4	Cassette pickup solenoid

Figure 5-29 Three main units of the pickup, feed, and delivery system
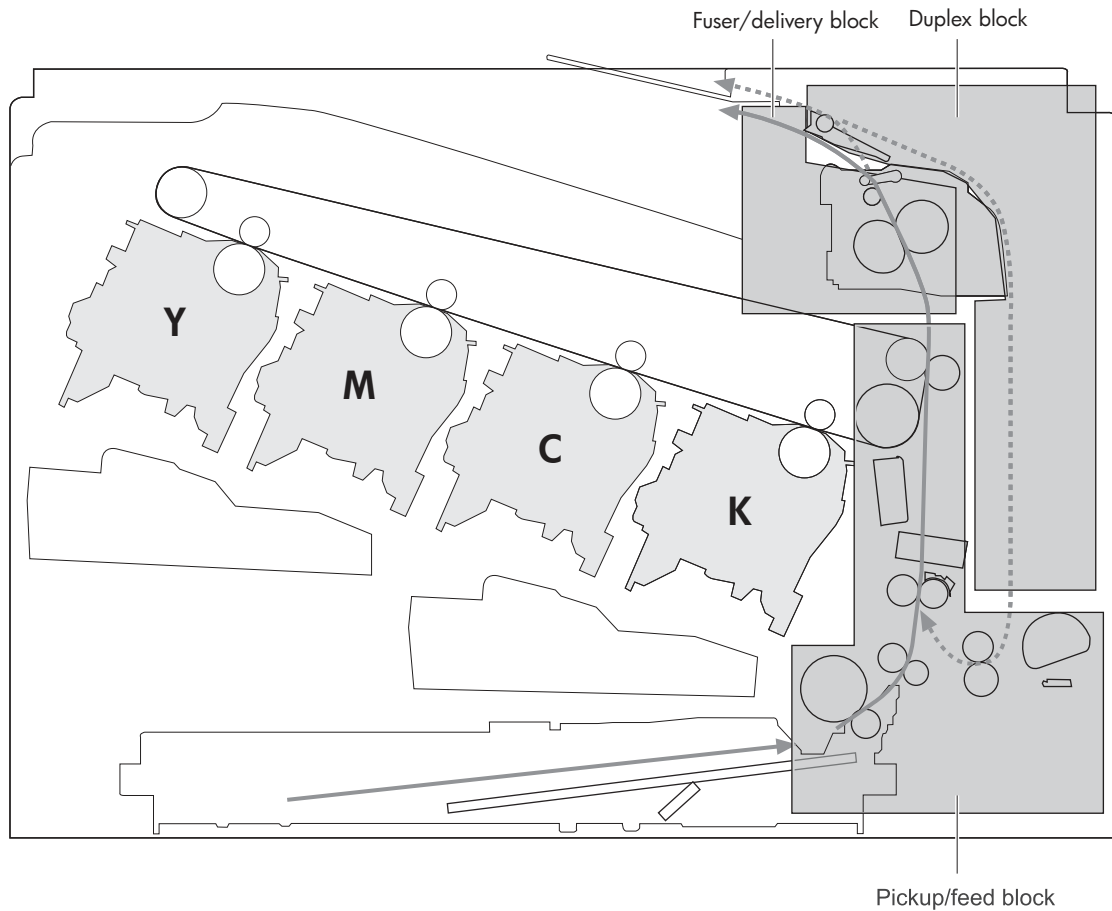
Pickup-and-feed unit

The pickup-and-feed unit picks an individual sheet of paper from the multipurpose tray or the cassettes, carries it through the secondary-transfer unit, and feeds it into the fuser.

Figure 5-30 Pickup and feed unit

Pickup/feed block
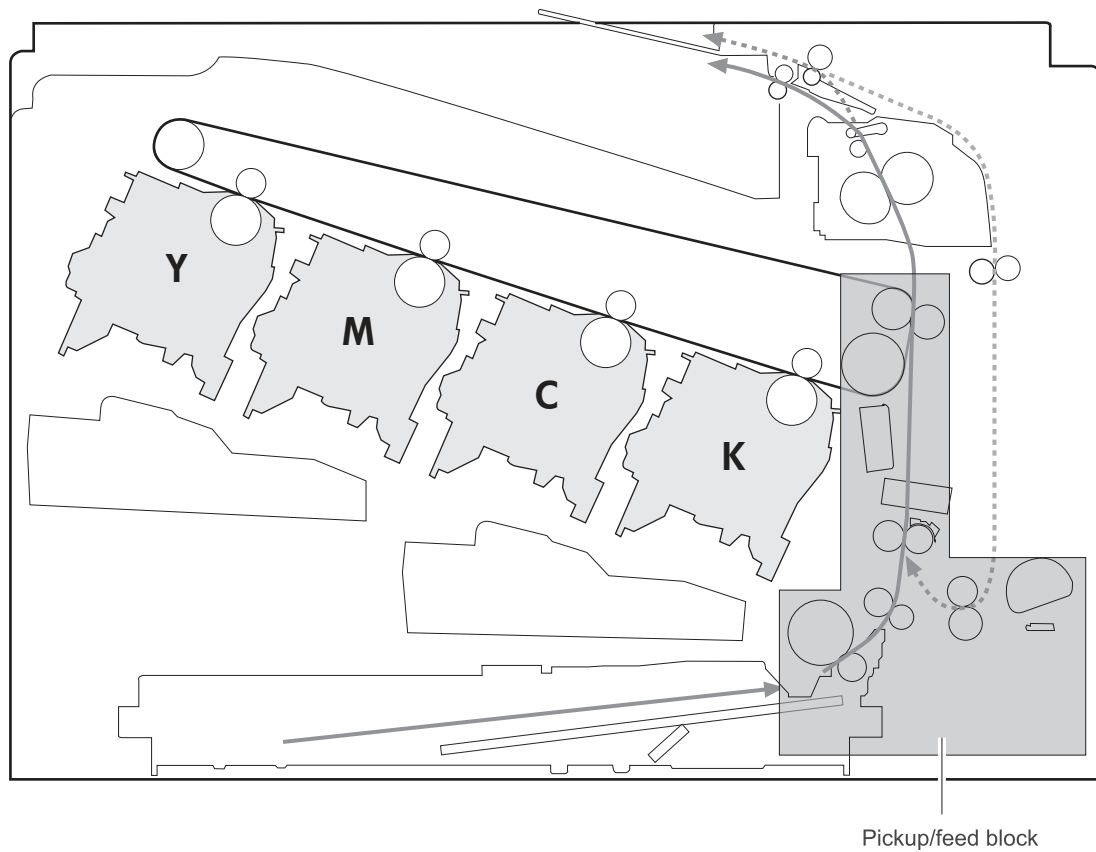
Cassette pickup

The sequence of steps for the cassette-tray pickup operation is the following:

1. When the product starts or the tray closes, the lifting mechanism lifts the paper stack so it is ready.

2. After receiving a print command from the formatter, the DC controller rotates the pickup motor, which causes the cassette pickup roller, cassette feed roller, and cassette separation roller to rotate.

3. The DC controller drives the cassette pickup solenoid, which rotates the cassette pickup cam. As the pickup cam rotates, the pickup arm moves down, and the cassette pickup roller touches the surface of the paper stack. The cassette pickup roller then picks up one sheet of paper.

Figure 5-31 Cassette-pickup mechanism
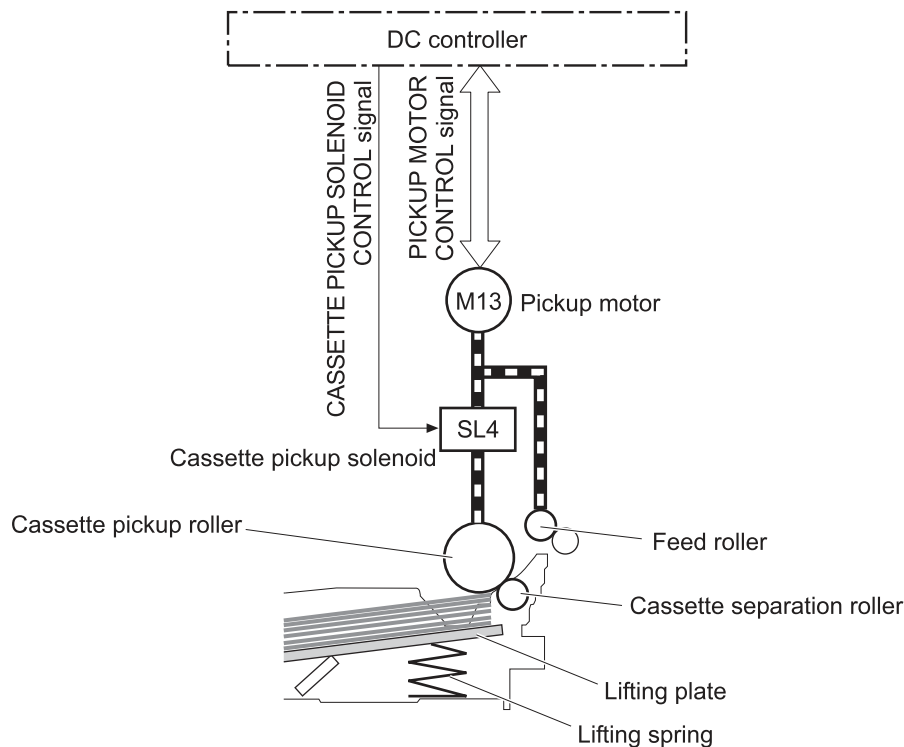
NOTE: The lift-up operation lifts the lifting plate to keep the stack surface of the media at a pickup position. The lifting spring helps support the lifting plate depending on the media size and amount.

Cassette-presence detection

The cassette presence sensor is in the lifter drive unit. The sensor detects the cassette-presence sensor flag and determines whether the cassette is installed correctly.

Figure 5-32 Cassette presence sensor

Cassette presence sensor flag

Lifter drive unit

Cassette presence sensor
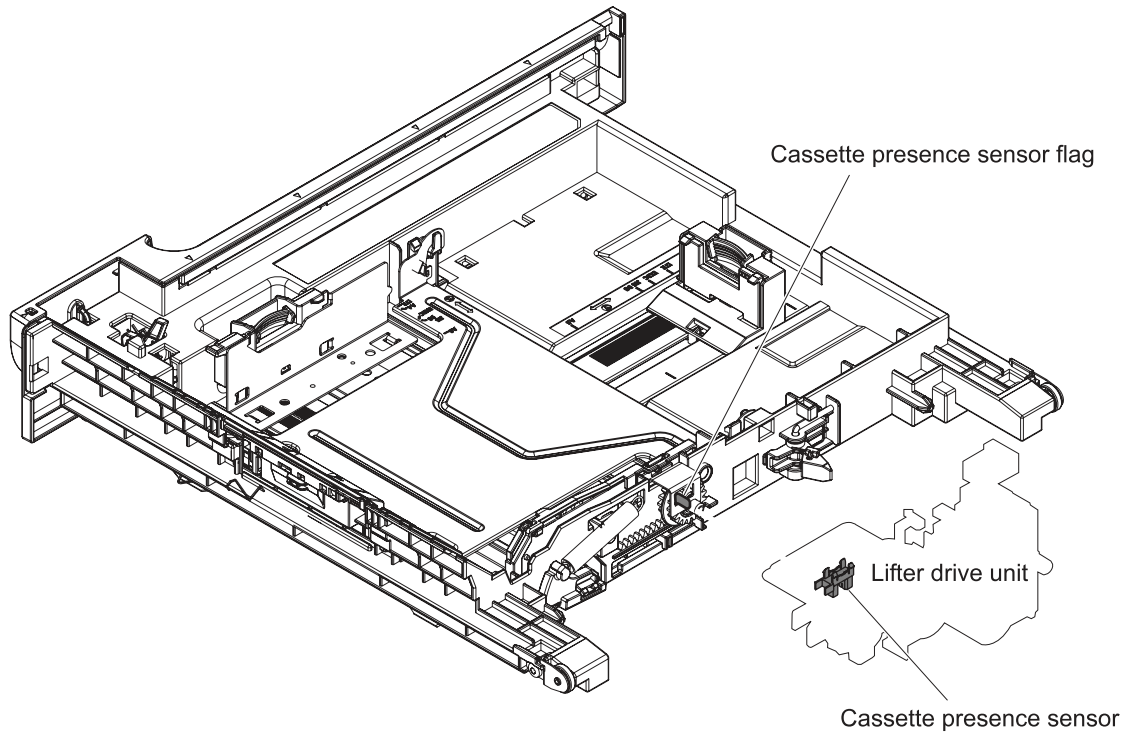
Cassette lift operation

The DC controller rotates the lifter motor (M7) and moves the lifter rack until the cassette media-stack surface sensor (SR9) detects it. The lifter lifts, and the lifting plate moves up to the position where the media can be picked up. The lift operation is performed by monitoring the cassette media-stack-surface sensor when the printer is turned on, when the cassette is installed, or as needed during a print operation.

If the paper-stack surface sensor does not detect the paper within a specified time after the lifter motor begins rotating, the DC controller notifies the formatter that the lifter motor has failed.

The DC controller lowers the lifting plate when no printing occurs to prevent media damage and pickup failure. If a print operation does not occur for a specified time, the DC controller reverses the lifter motor and moves the lifter rack until the cassette media-stack surface sensor stops detecting it.

Figure 5-33 Cassette lift mechanism
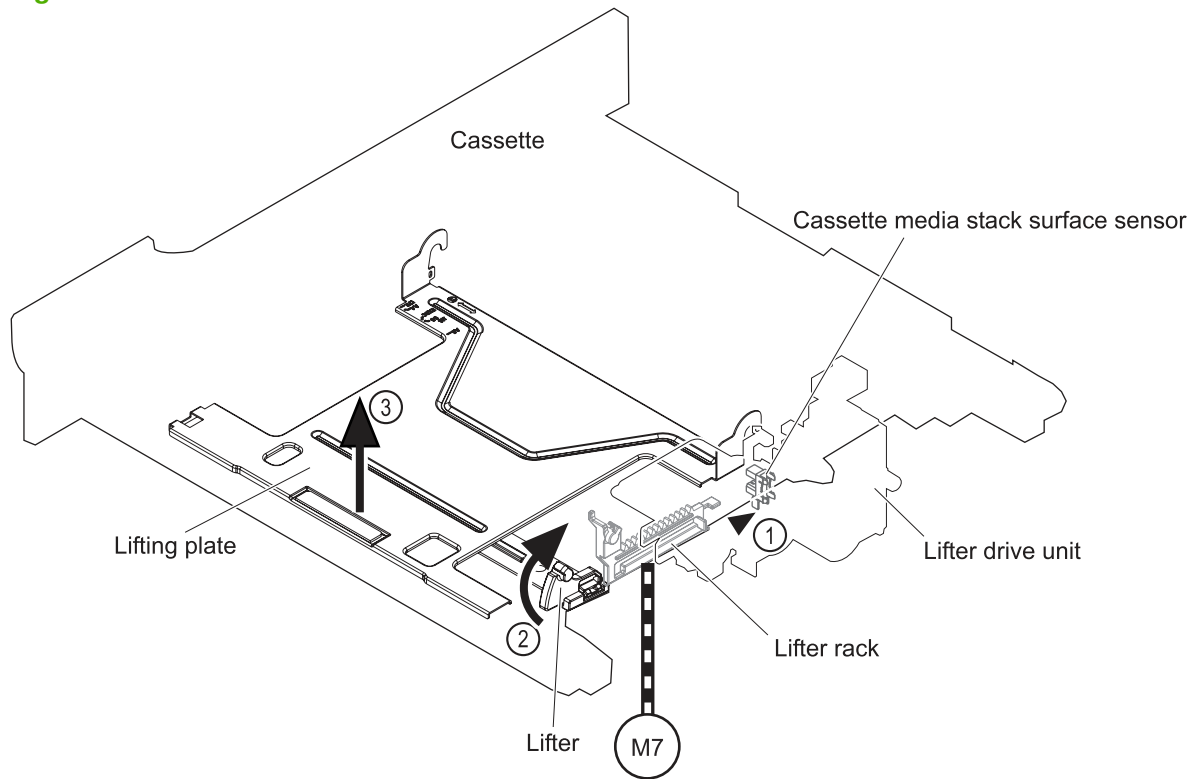
Cassette paper-presence detection

The cassette media-presence sensor detects whether paper is in the cassette.

Figure 5-34 Paper-level-detection mechanism
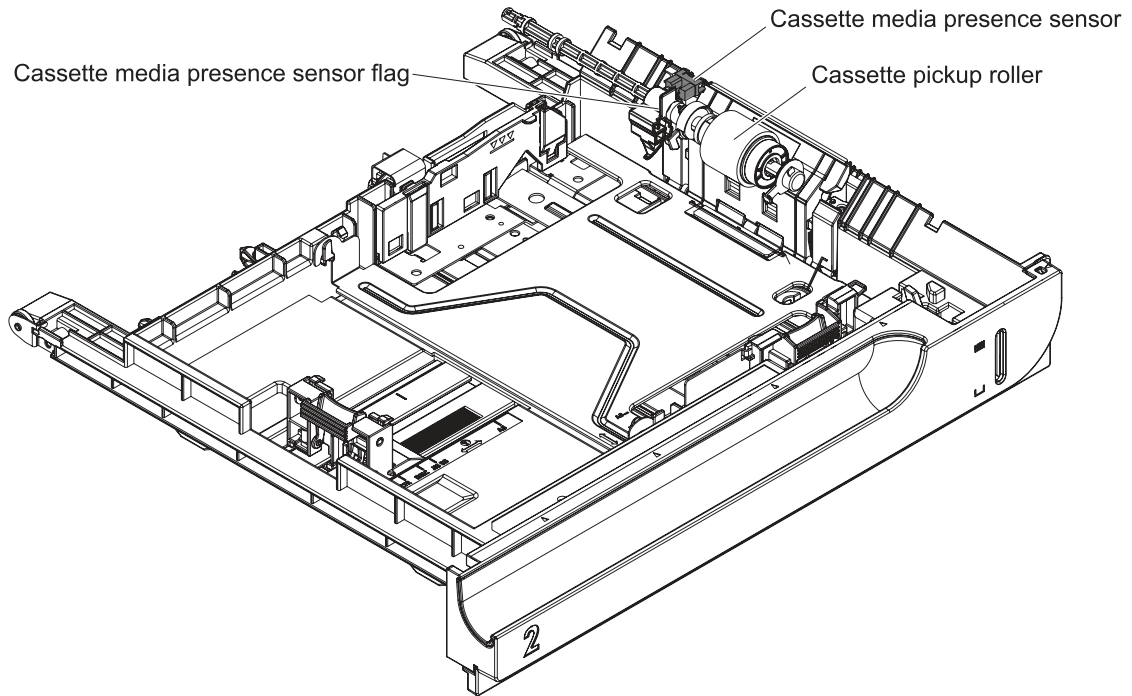
Multifeed prevention

In the cassette, a separation roller prevents multiple sheets of paper from entering the paper path. The cassette pickup roller drives the separation roller through a sheet of paper.

The low friction force between the sheets weakens the driving force from the cassette pickup roller. Because some braking force is applied to the cassette separation roller, the weak rotational force of the pickup roller is not enough to rotate the separation roller. Therefore, the separation roller holds back any multiple-fed sheets, and one sheet of media is fed into the printer.

Figure 5-35 Multifeed prevention
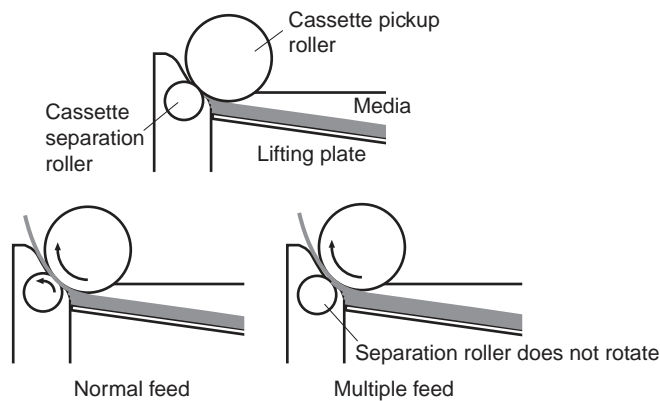
Multipurpose tray pickup

The multipurpose tray paper-presence sensor detects whether paper is in the tray. If no paper is present, the DC controller notifies the formatter. Printing does not occur until paper is in the tray.

The sequence of steps for the multipurpose tray pickup operation as follows:

1. After receiving a print command from the formatter, the DC controller reverses the pickup motor, which causes the multipurpose tray separation roller to rotate.

2. The DC controller turns on the multipurpose tray pickup solenoid (SL3), causing the multipurpose tray pickup roller to rotate.

3. The multipurpose tray separation roller isolates a single sheet of paper in case more than one sheet was picked. The single sheet of paper feeds into the product.

The MP-tray media-presence sensor (SR21) detects whether the media is present in the MP tray. No printing occurs if no media is loaded.

Figure 5-36 Multipurpose tray pickup mechanism
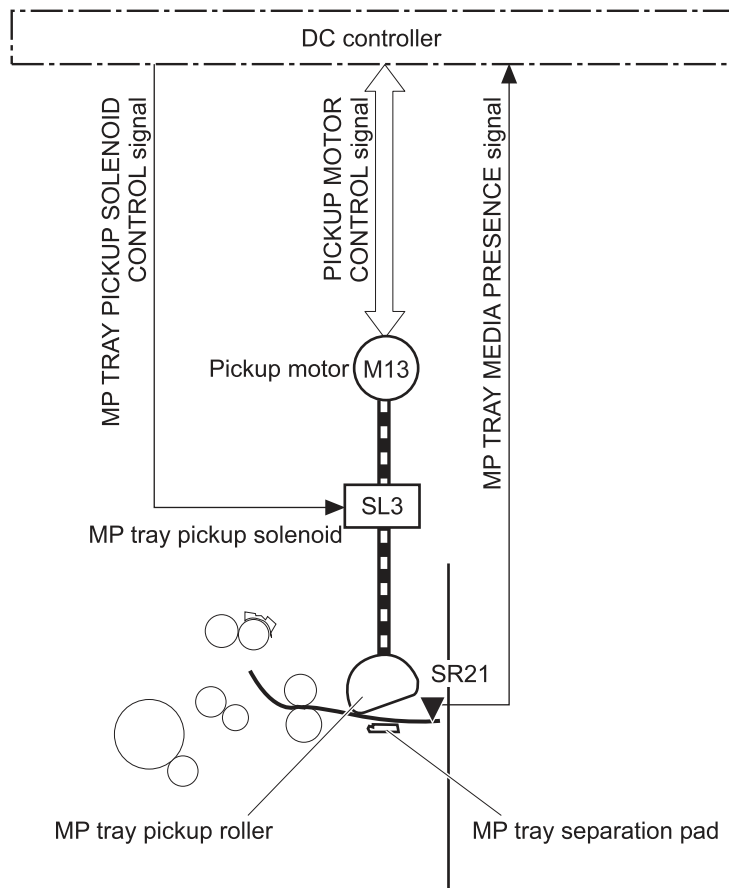
Paper feed

After the pickup operation, the paper feeds through the product and into the fuser.

1. The paper passes through the feed rollers. The registration shutter aligns the paper correctly to prevent skewed printing.

2. The DC controller detects the leading edge of paper by the Top sensor (SR8) and controls the rotational speed of the pickup motor to align with the leading edge of image on the ITB.

3. The DC controller detects whether or not the media is overhead transparency, using the OHT sensor.

4. The toner image on the ITB transfers onto the media, which feeds to the fuser.

Figure 5-37 Paper-feed mechanism
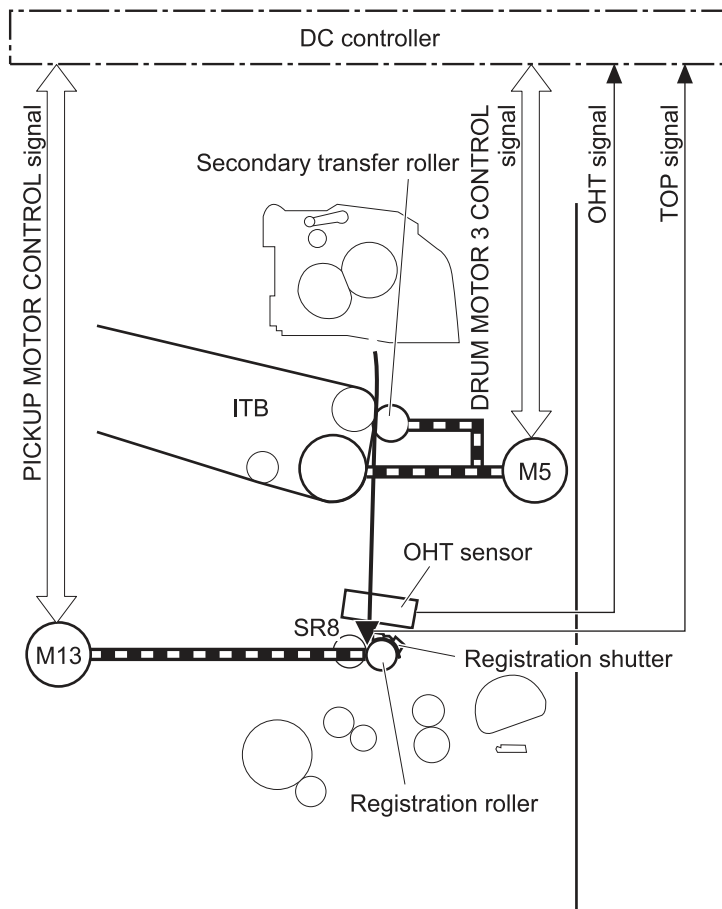
Skew-feed prevention

The product can straighten the paper without slowing the feed operation.

1. As the paper enters the paper path, the leading edge strikes the registration shutter, which straightens the paper. The paper does not pass through the shutter .

2. The feed rollers keep pushing the paper, which creates a force on the leading edge against the registration shutter.

3. When the force is great enough, the registration shutter opens and the paper passes through.

Figure 5-38 Skew-feed prevention
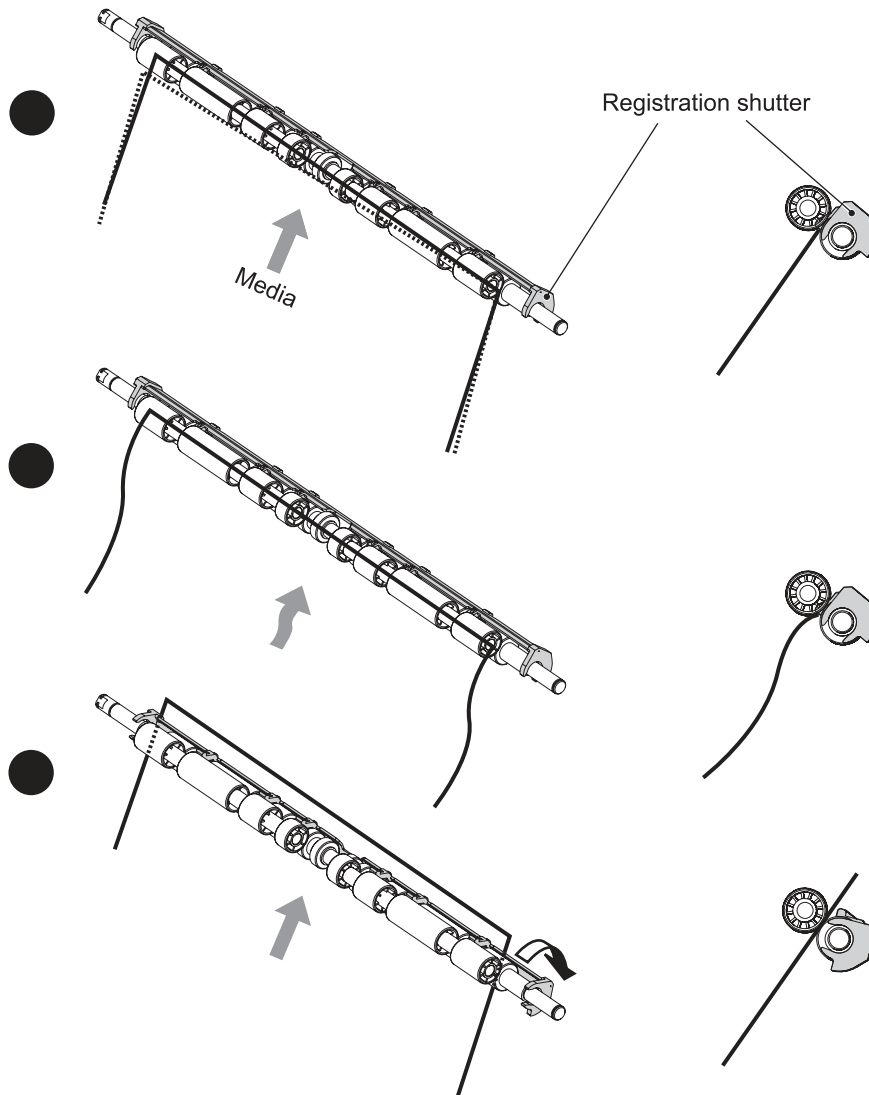
OHT detection

The OHT sensor detects overhead transparencies. The OHT sensor is a transmission sensor that uses an LED. The DC controller determines a media mismatch and notifies the formatter when the media type differs from the media type detected by the OHT sensor. The DC controller turns the LED in the

OHT sensor on and off during the wait or initial rotation period. If the intensity of the light does not match the specified value, the DC controller determines that the OHT sensor has failed.

Fusing and delivery unit

The fusing and delivery unit fuses the toner onto the paper and delivers the printed page into the output bin. The following controls ensure optimum print quality:

- Loop control

- Pressure roller pressurization/depressurization control

A sensor detects when the output bin is full, and the DC controller notifies the formatter.

Figure 5-39 Fuser and delivery unit
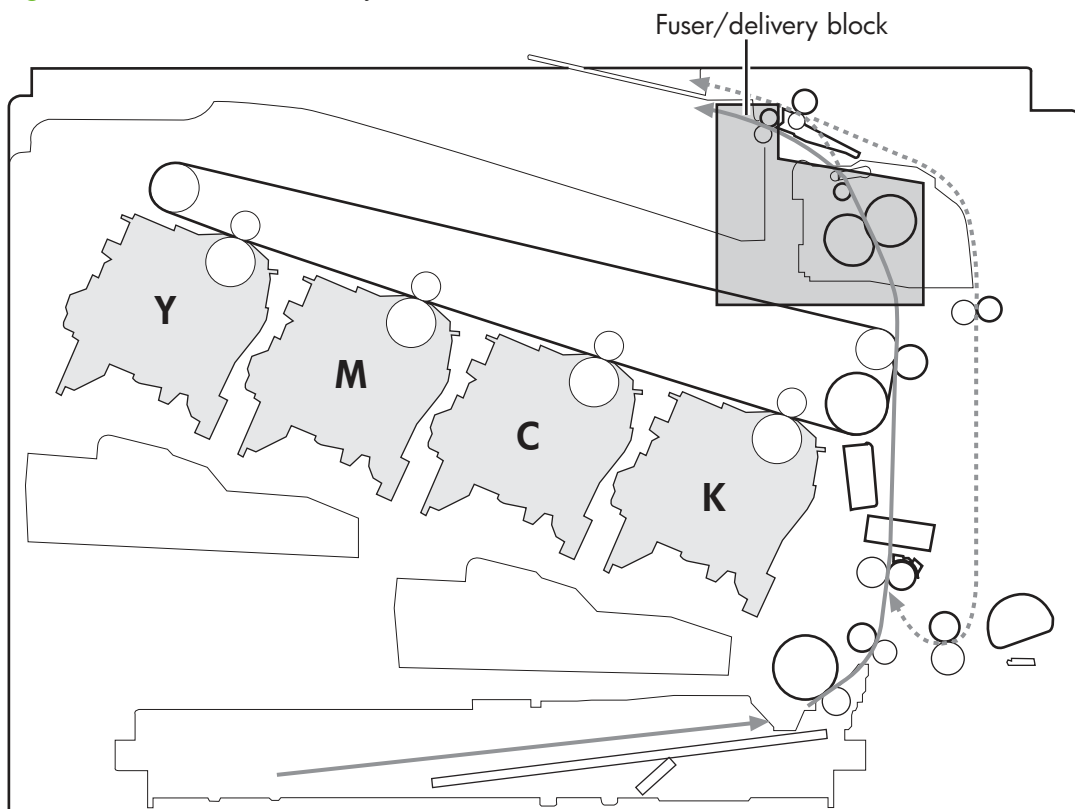
Loop control

The loop control monitors the tension of the paper between the second-transfer roller and the fuser.

- If the fuser rollers rotate more slowly than the secondary transfer rollers, the paper warp increases and an image defect or paper crease occurs.

- If the fuser rollers rotate faster than the secondary transfer rollers, the paper warp decreases and the toner image fails to transfer to the paper correctly, causing color misregistration.

To prevent these problems, the loop sensors, which are located between the secondary transfer rollers and the fuser rollers, detect whether the paper is sagging or is too taut. The DC controller adjusts the speed of the fuser motor.

Figure 5-40 Loop-control mechanism

When the pressure roller rotates faster than the secondary transfer roller,

⇓

Loop sensor: off

When the pressure roller rotates slower than the secondary transfer roller,

⇓

Loop sensor: on
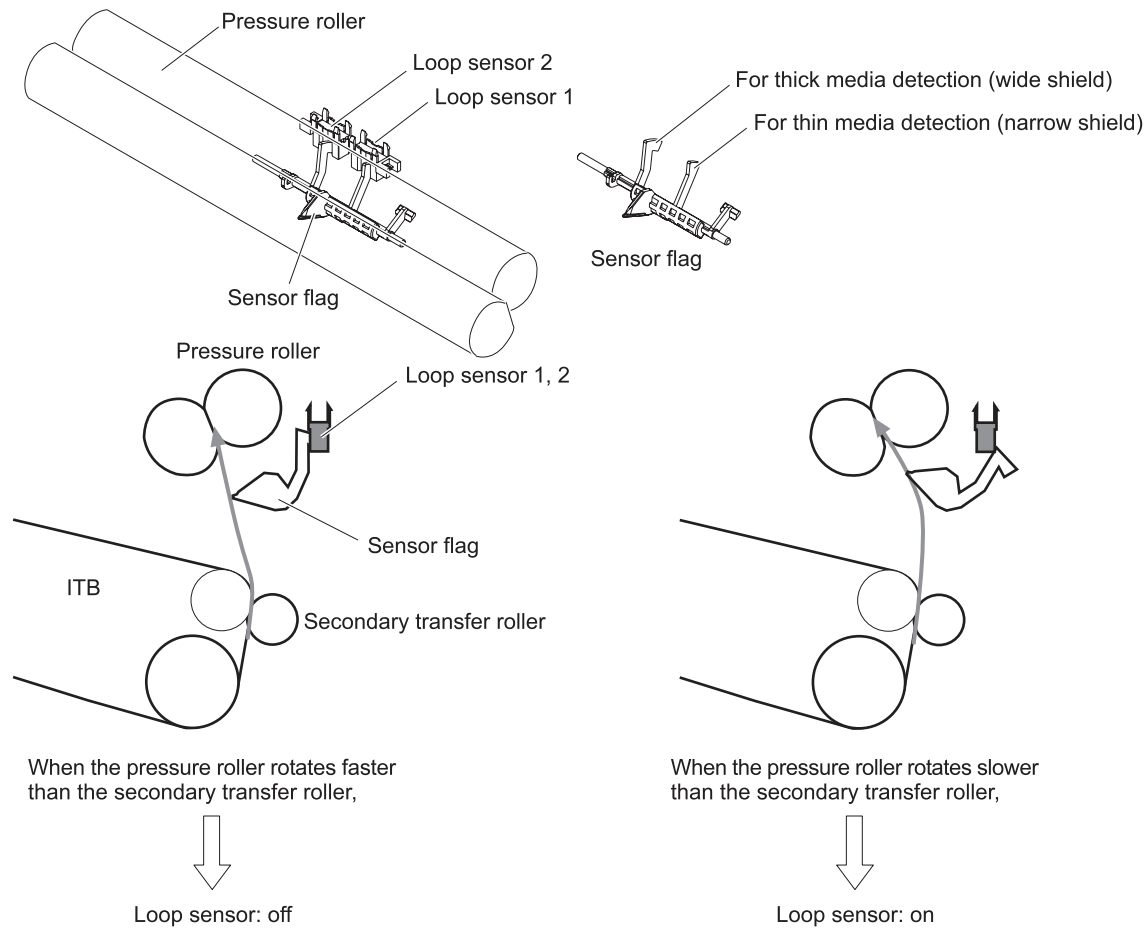
Pressure-roller pressurization control

To prevent excessive wear on the pressure roller and help with jam-clearing procedures, the pressure roller pressurizes only during printing and standby. The DC controller reverses the fuser motor. The fuser motor rotates the fuser pressure-release cam.

Figure 5-41 Pressure-roller pressurization control

<Pressurized>   <Released>
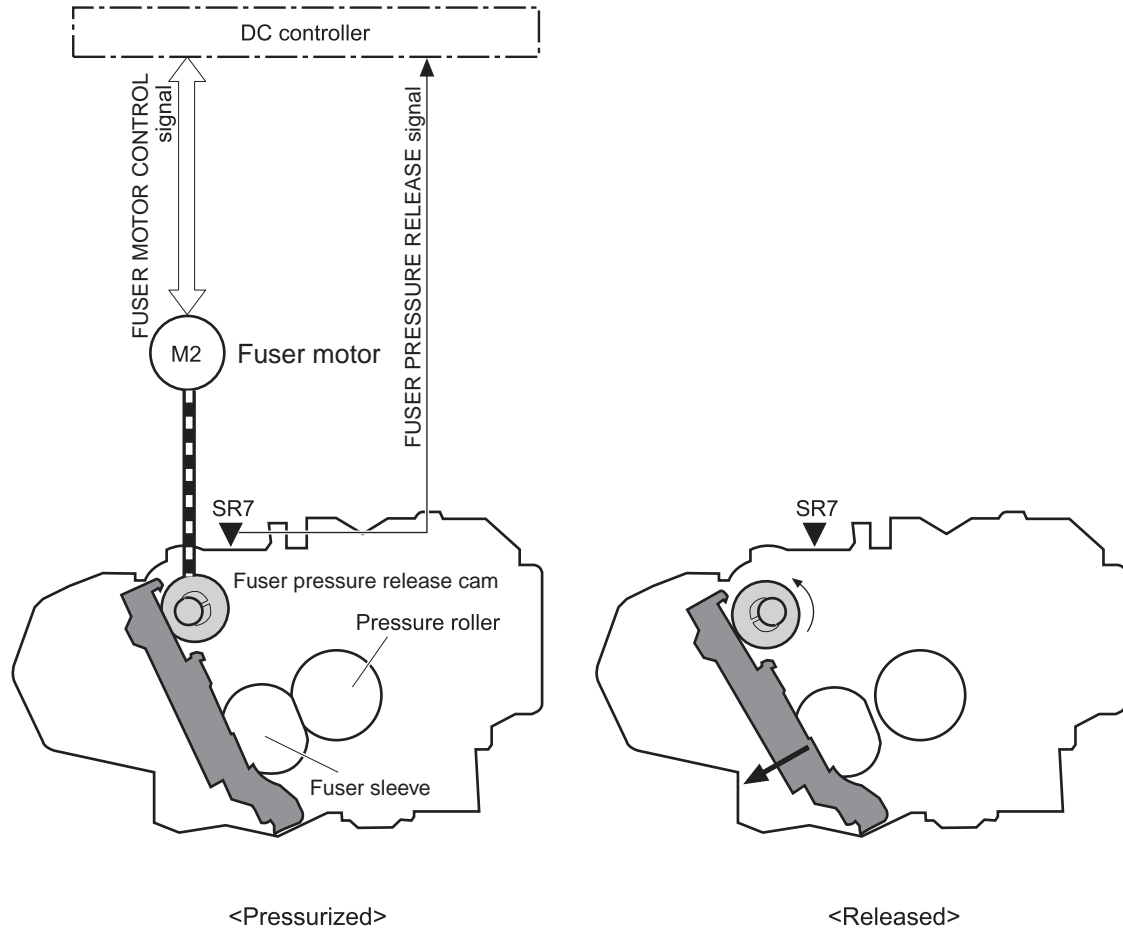
The pressure roller depressurizes under the following conditions:

● The product is turned off with the on/off switch

● Any failure occurs other than a fuser pressure-release mechanism failure

● During powersave mode

● When a paper jam is detected

If the DC controller does not sense the fuser pressure-release sensor for a specified period after it reverses the fuser motor, it notifies the formatter that a fuser pressure-release mechanism failure has occurred.

NOTE: The fuser remains pressurized if the power is interrupted when the power cord is removed or the surge protector is turned off, or if the fuser is removed without turning off the product.

Duplexing unit

The duplexing unit reverses the paper and feeds it through the paper path to print the second side. The duplexing unit consists of the following components:

- **Duplexing-reverse unit**: Installed on top of the product
- **Duplexing-feed unit**: Along the right side

The DC controller controls the operational sequence of the duplex block. The DC controller drives each load, such as motors, solenoid, and clutch, depending on the duplex reverse unit and duplex feed unit controls.

Figure 5-42 Duplexing unit
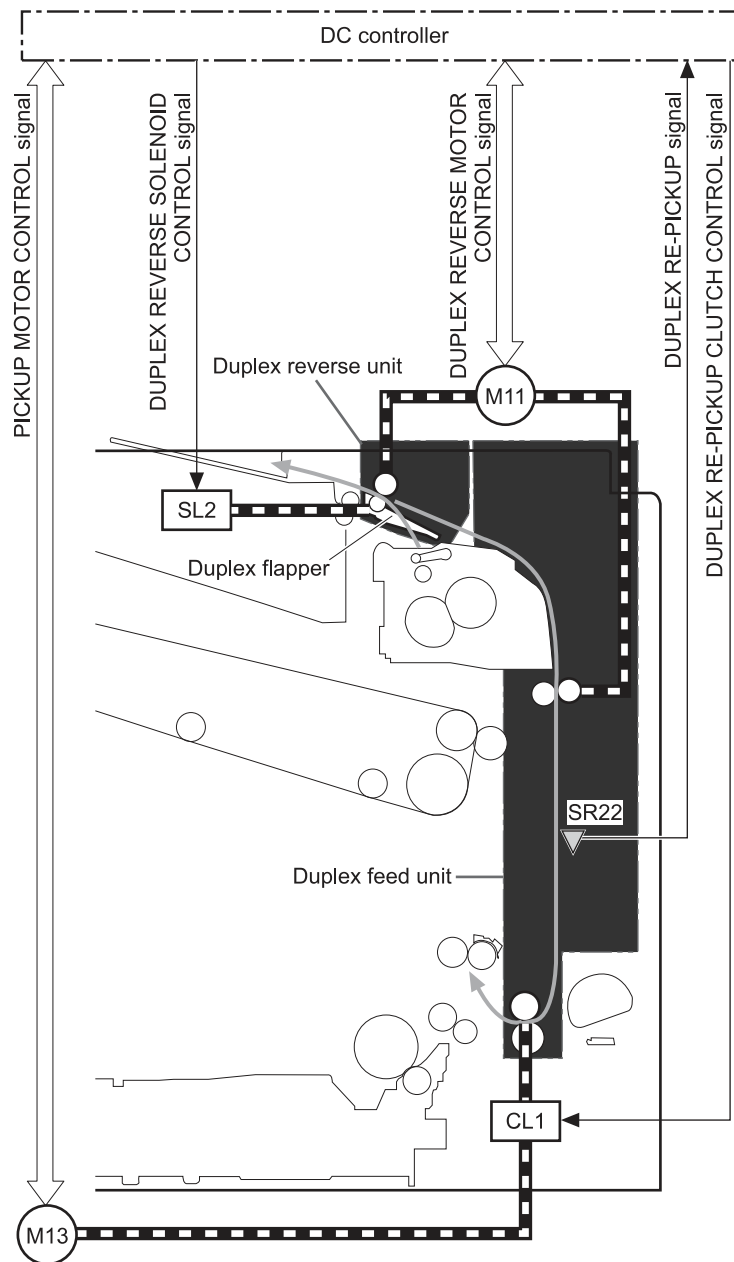
Duplexing reverse and feed control

The duplexing reverse procedure pulls the paper into the duplexing unit after it exits the fuser. The duplexing feed procedure moves the paper through the duplexer so it can enter the product paper path to print the second side of the page.

1. After the first side has printed, the duplexing flapper solenoid opens, which creates a paper path into the duplexing-reverse unit.

2. After the paper has fully entered the duplexing-reverse unit, the duplexing-reverse motor reverses and directs the paper into the duplexing-feed unit.

3. The duplexing re-pickup motor and duplexing feed motor move the paper into the duplexing re-pickup unit.

4. To align the paper with the toner image on the ITB, the duplexing re-pickup motor stops and the paper pauses.

5. The paper re-enters the paper path, and the second side prints.

Duplex pickup operation

The product has the following two duplex-media-feed modes depending on the media sizes:

●   One-sheet mode: Prints one sheet that is printed on two sides in one duplex print operation

●   Two-sheet mode: Prints two sheets that are printed on two-sides in one duplex print operation (maximum paper size is A4)

The formatter specifies the duplex-media-feed mode.

Jam detection

The product uses the following sensors to detect the paper as it moves through the paper path and to report to the DC controller if the paper has jammed.

- Fuser (fixing) delivery sensor (SR5)
- TOP (top of page) sensor (SR8)
- Loop sensor 1 (SR14)
- Loop sensor 2 (SR15)
- Duplex re-pickup sensor (SR22)

Figure 5-43 Jam detection sensors

The product determines that a jam has occurred if one of these sensors detects paper at an inappropriate time. The DC controller stops the print operation and notifies the formatter.

Table 5-14 Jams that the product detects

Jam	Description
Pickup delay jam 1	**Cassette pickup**: The TOP sensor does not detect the leading edge of the paper within a specified period after the cassette pickup solenoid has turned on.
	Multipurpose tray pickup: The TOP sensor does not detect the leading edge of the paper within a specified period after the multipurpose tray solenoid has turned on.
Pickup stationary jam	The TOP sensor does not detect the trailing edge of the paper within a specified time from when it detects the leading edge.
Fuser delivery delay jam	The fuser delivery paper-feed sensor does not detect the leading edge of the paper within a specified period after the TOP sensor detects the leading edge.

Table 5-14 Jams that the product detects (continued)

Jam	Description
Fuser delivery stationary jam	The fuser delivery paper-feed sensor does not detect the trailing edge of the paper within a specified period after it detects the leading edge.
Wrapping jam	After detecting the leading edge of the paper, the fuser delivery paper-feed sensor detects the absence of paper, and it has not yet detected the trailing edge.
Residual paper jam	One of the following sensors detects paper presence during the initialization sequence: ● Fuser delivery paper-feed sensor ● TOP senosor ● Loop sensor 1 ● Loop sensor 2
Door open jam	A door is open while paper is moving through the product.
Duplexing re-pickup jam 1	The duplex re-pickup sensor does not detect the leading edge of the paper within a specified period after the media reverse operation starts in the duplex reverse unit.
Duplexing re-pickup jam 2	The TOP sensor does not detect the leading edge of the paper within a specified period after the paper is re-picked.

After a jam, some sheets of paper might remain inside the product. If the DC controller detects residual paper after a door closes or after the product is turned on, the product automatically clears itself of those residual sheets.

Optional paper feeder

The 1x500-sheet paper feeder is optionally installed at bottom of the printer. The paper feeder picks up the print media and feeds it to the printer.

NOTE: These optional trays are *not* identical to the main cassette (Tray 2).

Figure 5-44 Optional paper feeder
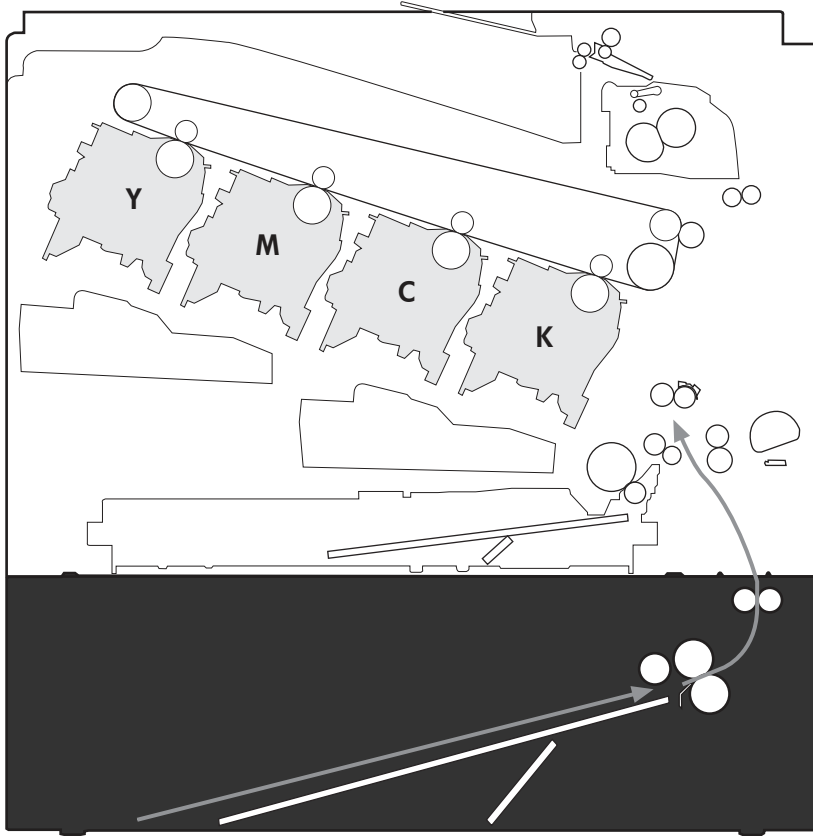
The paper-deck drivers contain a microcomputer and control the paper feeder. The paper-deck drivers receive commands from the DC controller. If the DC controller is unable to communicate with a paper-deck driver, it notifies the formatter that the optional paper feeders is not connected correctly.

Figure 5-45 Signals for the paper feeder
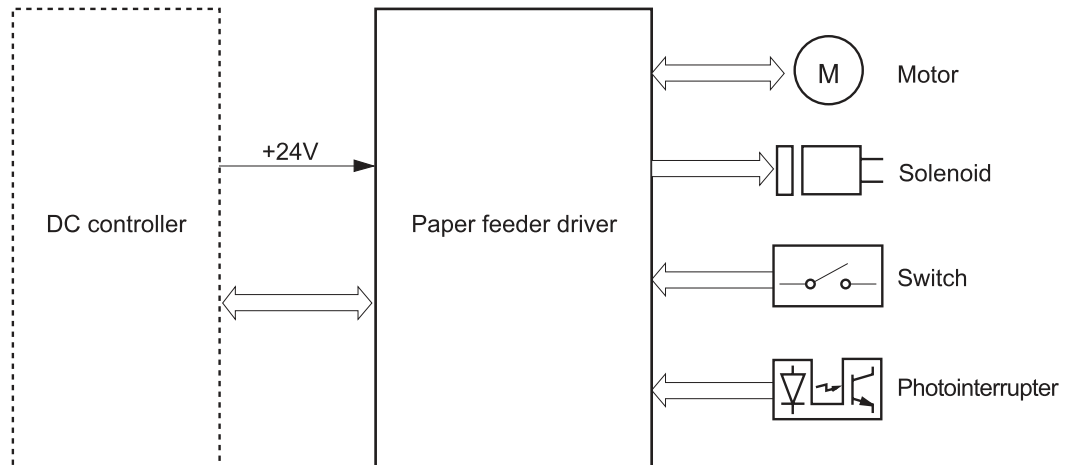
The input trays contain several motors, solenoids, sensors, and switches, as described in the following table.

Table 5-15 Electrical components for the paper feeder

Component type	Abbreviation	Component name
Motors	M1	Paper feeder motor
	M2	Paper feeder lift motor
Solenoids	SL1	Paper feeder pickup solenoid
Sensors	SR1	Paper-feeder media-stack surface sensor 1
	SR2	Paper-feeder media-stack surface sensor 2
	SR3	Paper-feeder cassette media-presence sensor
	SR4	Paper-feeder media-feed sensor
Switches	SW1	Paper feeder cassette media-size switch
	SW2	Paper-feeder door switch

Paper-feeder pickup and feed operation

The paper feeder picks up one sheet from the paper-feeder cassette and feeds it to the product.

Figure 5-46 Paper-feeder pickup and feed operation
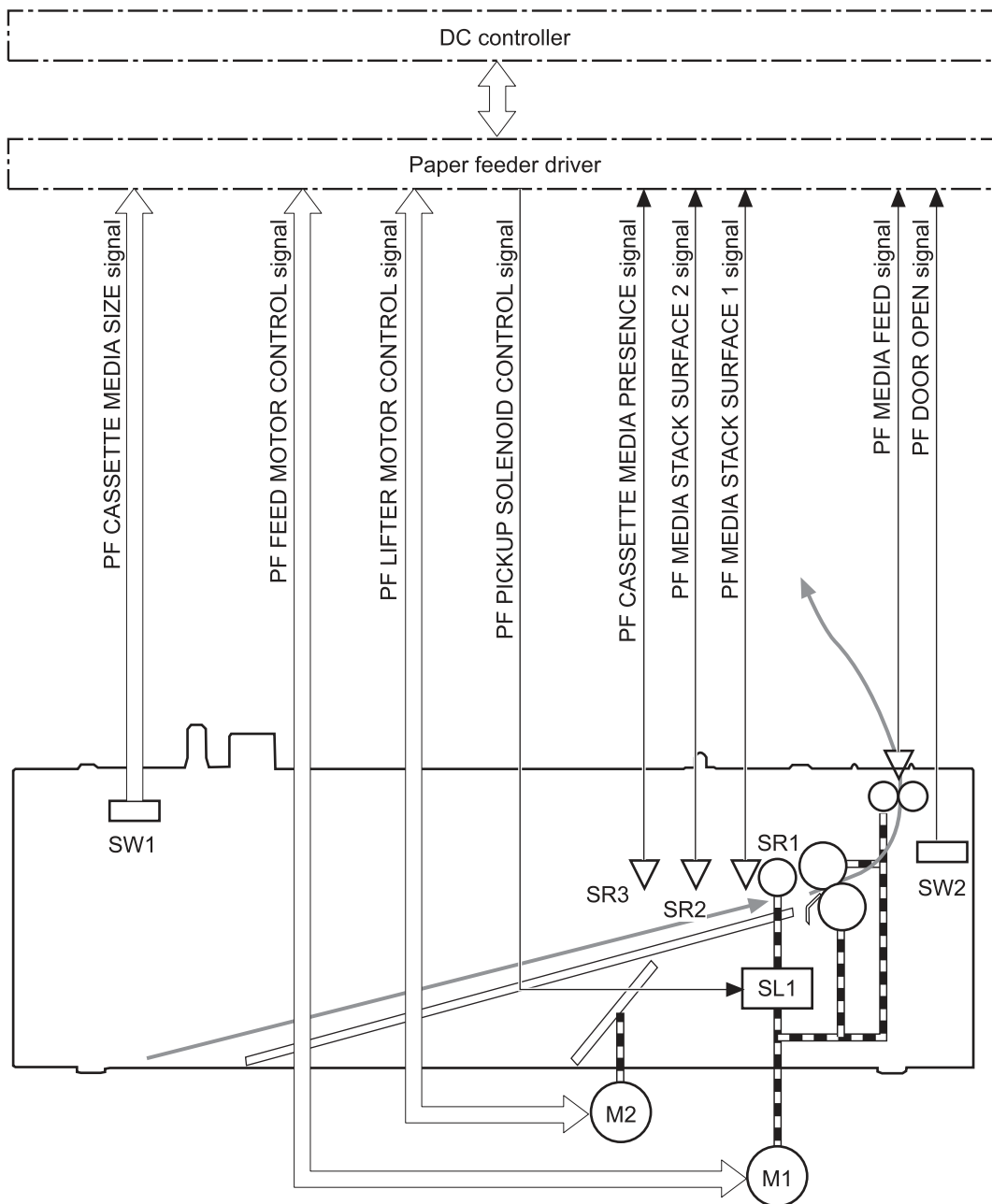
Paper-size detection and cassette-presence detection

The paper-feeder cassette media-size switch (SW1) detects the size of paper loaded in the paper-feeder cassette. The paper-feeder driver determines the media size by monitoring the combination of the switches.

Figure 5-47 Paper size detection
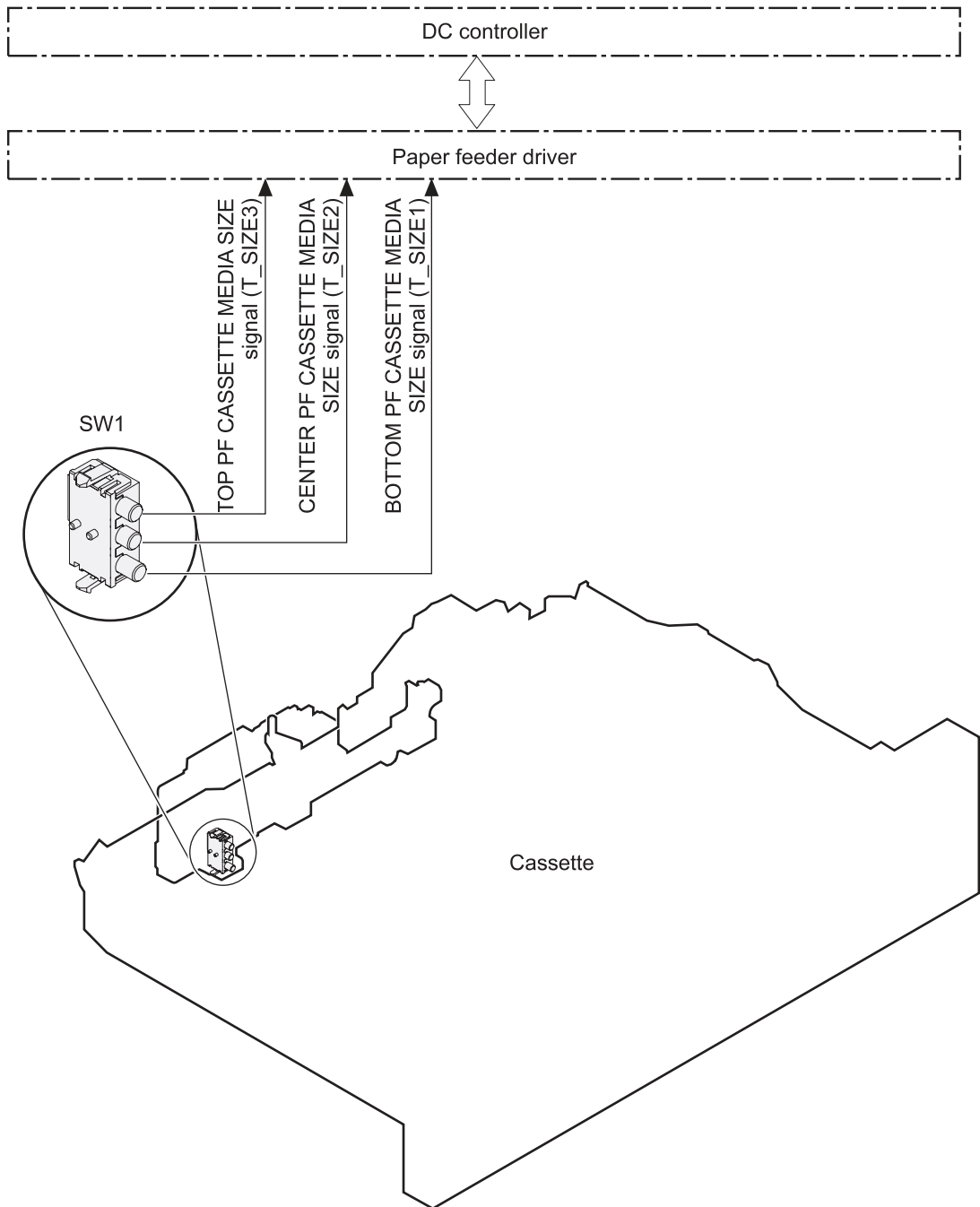
Paper size	Paper-feeder cassette media-size switch settings		
	Top switch	**Center switch**	**Bottom switch**
Universal	On	On	On

Paper size	Paper-feeder cassette media-size switch settings		
	Top switch	Center switch	Bottom switch
A5	On	Off	Off
B5	Off	On	On
Executive	On	Off	On
Letter	Off	On	Off
A4	Off	Off	On
Legal	On	On	Off
No cassette	Off	Off	Off

The paper-feeder cassette media size switch (SW1) detects whether the paper-feeder cassette is installed correctly. The paper-feeder driver determines if a cassette is absent when all three switches are turned off. The paper-feeder driver determines a cassette presence when one of the switches is turned on.

Paper-feeder cassette lift operation

The cassette lift operation keeps the stack surface of paper at a specified height to maintain stable media feeding. The paper-feeder driver controls the paper-feeder lifter motor (M2) and monitors the paper-feeder media stack surface sensors (SR1, SR2) to adjust the stack height when the printer is turned on, when the printer recovers from sleep mode, when the paper-feeder cassette is installed or as needed during a print operation. The paper feeder has two paper-feeder media-stack surface sensors. The paper-feeder media stack surface sensor 1 detects the stack height during a print operation. The paper-feeder media-stack surface sensor 2 detects the stack height when the printer is turned on, when the

printer recovers from sleep mode and when the paper-feeder cassette is installed. The operational sequence of the lift operation is as follows:

1. The paper-feeder driver rotates the paper-feeder lifter motor to lift the lifting plate.

2. The paper-feeder driver stops the paper-feeder lifter motor when the paper-feeder media-stack surface sensor 2 detects the stack surface.

3. The paper-feeder driver rotates the lifter motor again when paper-feeder media stack surface 1 detects that the media surface is lowered during a print operation.

Figure 5-48 Paper-feeder cassette lift
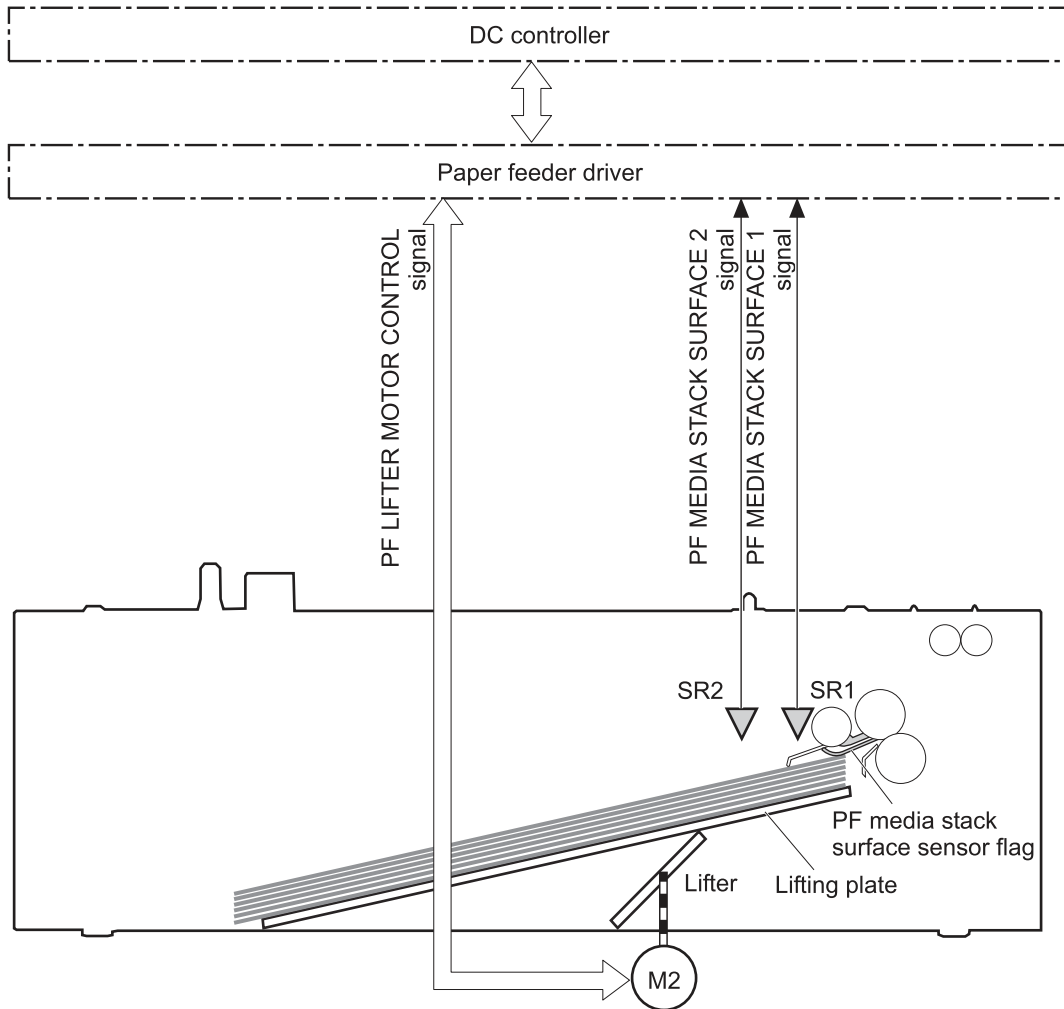
The paper-feeder driver notifies the formatter if either of the paper-feeder media-stack surface sensors fails to detect the stack surface within a specified period from when a lift-up operation starts.

Paper-feeder presence detection

The paper-feeder cassette media-presence sensor (SR3) detects whether the paper is present in the paper-feeder cassette.

Paper-feeder multiple feed prevention

The paper-feeder uses a separation roller to prevent multiple sheets of paper from entering the printer. The separation roller prevents multiple feeds of paper by allowing the paper-feeder separation roller to rotate in the same direction as the paper-feeder feed roller 1. The paper-feeder separation roller is equipped with the torque limiter. If multiple sheets of paper are picked up, the torque limiter takes control of the paper-feeder separation roller, and pushes the extra sheets back to the paper-feeder cassette. That way, only the top sheet is fed to the printer.

Figure 5-49 Paper-feeder multiple feed prevention

No-load	Rotational force for paper-feeder separation roller: Pushes back the media into the paper-feeder cassette
	Rotational force for paper-feeder feed roller 1: Feeds media into the printer
Normal feed	Rotational force for paper-feeder separation roller: Pushes back the media into the paper-feeder cassette
	Rotational force for paper-feeder feed roller 1: Feeds media into the printer
Multiple-feed	The low friction force between the sheets weakens the rotational force from the paper-feeder feed roller 1.
	The paper-feeder separation roller rotates by its own rotational force and removes the extra sheet.

Paper feeder jam detection

The paper feeder uses the paper-feeder media-feed sensor (SR4) to detect the presence of paper and to check whether paper has jammed.

Figure 5-50 Jam detection
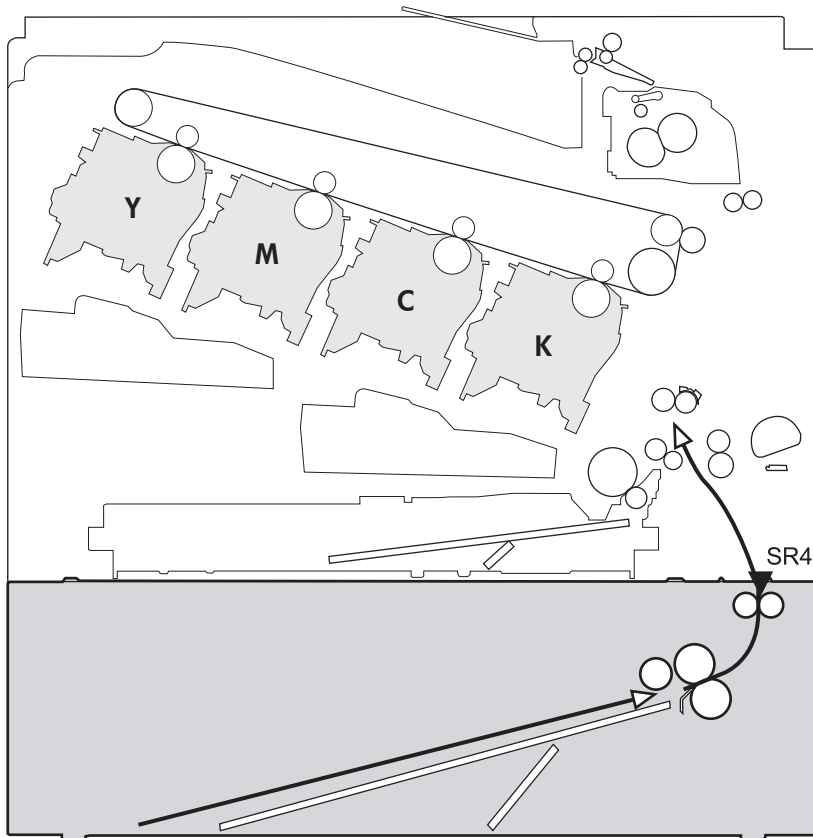
The paper-feeder driver identifies a jam if the sensor detects paper at a specified timing stored in the paper-feeder driver. The paper-feeder driver stops printing and notifies the formatter through the DC controller of the jam. The paper feeder detects the following jams:

● Pickup delay jam: The paper-feeder media-feed sensor does not detect the leading edge of media within a specified period from when the paper-feeder pickup solenoid is turned on.

● Pickup stationary jam: The paper-feeder media-feed sensor does not detect the trailing edge of media within a specified time period from when the sensor detects the leading edge.

Scanning/image capture system system

Optical assembly

The scanner is a carriage-type platen scanner which includes the frame, glass, LED optics, and a scanner controller board (SCB) attached to the bottom of the assembly. The scanner has a sensor to detect legal-sized media and a switch to indicate when the ADF is opened.

The ADF and control-panel assembly are attached to the scanner assembly. If the scanner fails, it can be replaced as a whole unit. The scanner replacement part does not include the ADF, SCB, or control-panel assembly.

The HP Color LaserJet CM3530 contains an interconnect board (ICB) which has an NVRAM component that is used to store critical engines values and formatter data. This NVRAM allows for simpler save/restore process. When a formatter or DC controller is replaced, the critical engine values are copied from NVRAM on the ICB to the new component.

Automatic document feed system

If the ADF fails, it can be replaced as a whole-unit replacement part.

Control panel

The control panel is a USB connected device with its own diagnostic capabilities. Calibration of the control-panel touch screen does not require a special boot-key sequence. See .

The control panel also includes a hardware integration pocket where third-party USB solutions, such as card readers, can be installed.

Sensors in the ADF

The ADF contains the following sensors:

- **ADF-cover sensor.** Detects whether the ADF cover is open or closed.

- **Top-of-page sensor.** Detects the top of the page before sending a page through the ADF and the end of the page after feeding/scanning is complete.

- **Paper-present sensor.** Detects whether a document is present in the ADF. If paper is present in the ADF when copies are made, the product scans the document using the ADF. If no paper is present when copies are made, the product scans the document using the scanner glass.

ADF paper path

The ADF feeds documents past the ADF glass for scanning. See Figure 5-51 ADF path for single-sided documents on page 175.

Figure 5-51 ADF path for single-sided documents
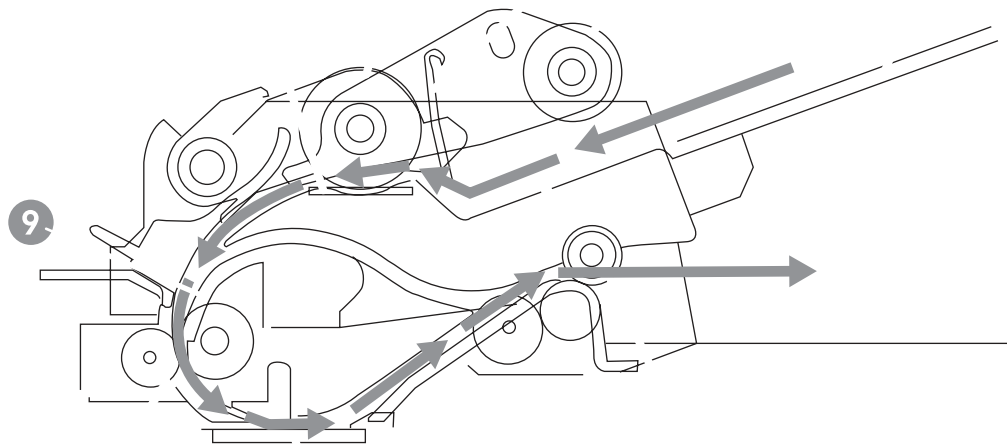
1	Separation pad	5	ADF input tray
2	Pickup roller	6	Delivery/duplex-feed rollers
3	Stack stop	7	ADF glass
4	Pre-pick roller	8	ADF feed rollers

For two-sided documents, the delivery rollers reverse the direction of each page to feed the second side of the document past the ADF glass. See Figure 5-52 ADF path for two-sided documents on page 176.

Figure 5-52 ADF path for two-sided documents
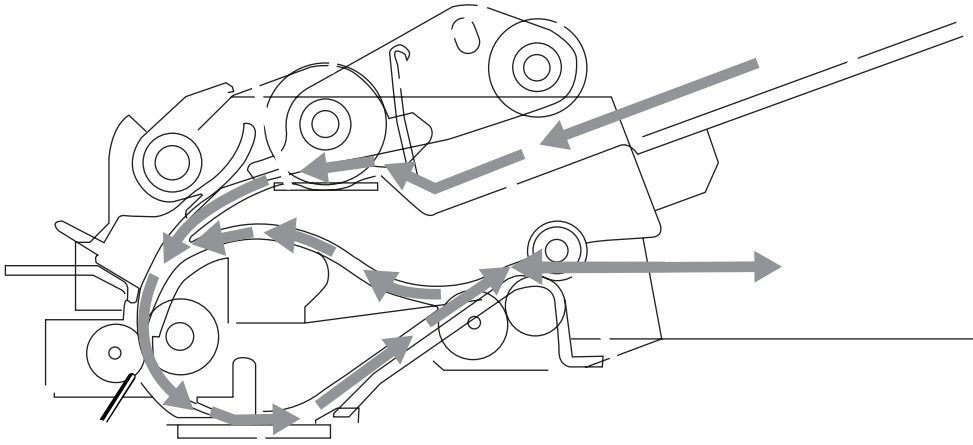
📝 **NOTE:** Callouts in Figure 5-52 ADF path for two-sided documents on page 176 are identical to callouts in Figure 5-51 ADF path for single-sided documents on page 175 .

Stapler

The HP Color LaserJet CM3530fs MFP includes a stapler capable of stapling 20 sheets of (80 g/m^2) (20 lb) paper. The stapler has an AC power connection to the LVPS. Because there are no logic connections to the product, error conditions or out-of-staples indications are not displayed on the control panel.

6 Removal and replacement

NOTE: Your product might not appear exactly as the one shown in the photos in this chapter. Although some photos do not show the ADF/scanner unit, the procedures in this chapter are appropriate for your product.

- Introduction
- Removal and replacement strategy
- Electrostatic discharge
- Required tools
- Before performing service
- After performing service
- Post-service test
- DC controller PCA
- Parts removal order
- Customer self repair (CSR) components
- External panels, covers, doors, and scanner assembly
- Internal assemblies

Introduction

This chapter describes the removal and replacement of field-replaceable units (FRUs) only.

Replacing FRUs is generally the reverse of removal. Occasionally, notes and tips are included to provide directions for difficult or critical replacement procedures.

HP does *not* support repairing individual subassemblies or troubleshooting to the component level.

Note the length, diameter, color, type, and location of each screw. Be sure to return each screw to its original location during reassembly.

Incorrectly routed or loose wire harnesses can interfere with other internal components and can become damaged or broken. Frayed or pinched harness wires can be difficult to find. When replacing wire harnesses, always use the provided wire loops, lance points, or wire-harness guides and retainers.

Removal and replacement strategy

WARNING! Turn the product off, wait 5 seconds, and then remove the power cord before attempting to service the product. If this warning is not followed, severe injury can result, in addition to damage to the product. The power must be on for certain functional checks during troubleshooting. However, disconnect the power supply during parts removal.

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

The sheet-metal parts can have sharp edges. Be careful when handling sheet-metal parts.

CAUTION: Do not bend or fold the flat flexible cables (FFCs) during removal or installation. Also, do not straighten pre-folds in the FFCs. You *must* fully seat all FFCs in their connectors. Failure to fully seat an FFC into a connector can cause a short circuit in a PCA.

NOTE: To install a self-tapping screw, first turn it counterclockwise to align it with the existing thread pattern, and then carefully turn it clockwise to tighten. Do not overtighten. If a self-tapping screw-hole becomes stripped, repair the screw-hole or replace the affected assembly.

TIP: For clarity, some photos in this chapter show components removed that would not be removed to service the product. If necessary, remove the components listed at the beginning of a procedure before proceeding to service the product.

Electrostatic discharge

CAUTION: Some parts are sensitive to electrostatic discharge (ESD). Look for the ESD reminder when removing product parts. Always perform service work at an ESD-protected workstation or mat, or use an ESD strap. If an ESD workstation, mat, or strap is not available, ground yourself by touching the sheet-metal chassis *before* touching an ESD-sensitive part.

Protect the ESD-sensitive parts by placing them in ESD pouches when they are out of the product.

Required tools

- #1 Phillips screwdriver with a magnetic tip and a 152-mm (6-inch) shaft length

- #2 Phillips screwdriver with a magnetic tip and a 152-mm (6-inch) shaft length

- Small flat blade screwdriver

- Needle-nose pliers

- ESD mat or ESD strap (if one is available)

- Penlight (optional)

CAUTION: Always use a Phillips screwdriver (callout 1). Do not use a pozidrive screwdriver (callout 2) or any motorized screwdriver. These can damage screws or screw threads.

Figure 6-1 Phillips and pozidrive screwdriver comparison
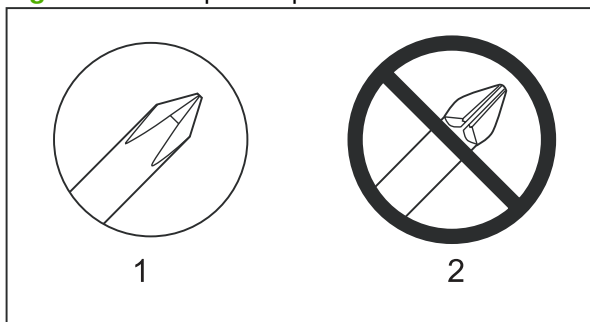
Before performing service

- Remove all media from the product.

- Turn off the power using the power switch.

- Unplug the power cable and interface cable or cables.

- Place the product on an ESD workstation or mat, or use an ESD strap (if one is available). If an ESD workstation, mat, or strap is not available, ground yourself by touching the sheet-metal chassis *before* touching an ESD-sensitive part.

- Remove the print cartridges. See Print cartridges on page 186.

- Remove the tray cassette or cassettes. See Tray cassette on page 199.

After performing service

- Plug in the power cable.

- Reinstall the print cartridges.

- Reinstall the tray cassette or cassettes.

- If the optional paper feeder was installed, place the product on the feeder.

NOTE: Your product might not appear exactly as the one shown in the photos in this chapter. Although some photos do not show the ADF/scanner unit, the procedures in this chapter are appropriate for your product.

Post-service test

Perform the following test to verify that the repair or replacement was successful.

NOTE: Your product might not appear exactly as the one shown in the photos in this chapter. Although some photos do not show the ADF/scanner unit, the procedures in this chapter are appropriate for your product.

Print-quality test

1. Verify that you have completed the necessary reassembly steps.

2. Make sure that the tray contains clean, unmarked paper.

3. Attach the power cord and interface cable or interface cables, and then turn on the product.

4. Verify that the expected startup sounds occur.

5. Print a configuration page, and then verify that the expected printing sounds occur.

6. Print a demo page, and then verify that the print quality is as expected.

7. Send a print job from the host computer, and then verify that the output meets expectations.

8. If necessary, restore any customer-specified settings.

9. Clean the outside of the product with a damp cloth.

Copy-quality test

1. Verify that you have completed the necessary reassembly steps.

2. Ensure that the input tray contains clean, unmarked paper.

3. Attach the power cord, and then turn on the product.

4. Verify that the expected start-up sounds occur.

5. Print a configuration page, and then verify that the expected printing sounds occur.

6. Place the configuration page in the ADF.

7. Print a copy job, and then verify the results.

8. Place the configuration page on the scanner glass.

9. Print a copy job, and then verify the results.

10. Clean the outside of the product with a damp cloth.

DC controller PCA

Figure 6-2 DC controller PCA
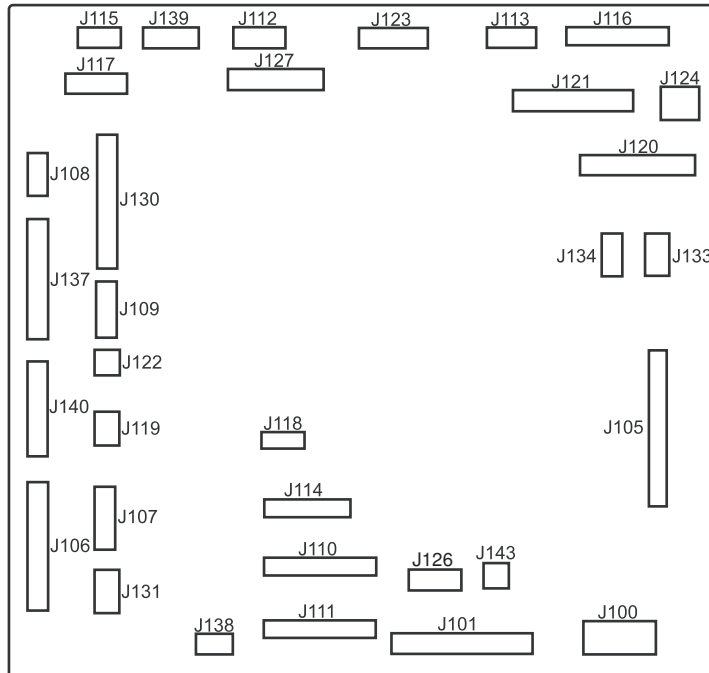
Table 6-1 DC controller connectors

J100: 24 v from low-voltage power supply (LVPS) and interlock	**J114**: HVPS lower	**J126**: memory tag connector
J101: LVPS	**J115**: fuser sensors	**J127**: pre-exposure LEDs (rear), SR17, SL1
J105: interconnect board (ICB)	**J116**: HVPS upper	**J130**: registration density (RD) sensors (front and rear)
J106: 500-sheet feeder, developing home position, laser motors	**J117**: fuser motor	**J131**: pickup motor
J107: duplex sensor, tray 1 solenoid, paper present sensor	**J118**: 5 v interlock	**J133**: not used
J108: environmental sensor	**J119**: LVPS fan	**J134**: not used
J109: duplex clutch, overhead transparency (OHT) in, top-of-page sensor	**J120**: drum motor 1 and drum motor 2	**J137**: toner collection unit (TCU) full, TCU motor, toner level detection
J110: YM laser	**J121**: drum motor 3, drum position 1,2,3	**J138**: 24 v to HVPS lower
J111: CK laser	**J122**: OHT out	**J139**: fuser sensors
J112: pre-exposure LEDs (front)	**J123**: pressure release, bin full, fuser delivery	**J140**: lift motor, tray present, stack surface
J113: 24 v to high-voltage power supply (HVPS) upper	**J124**: 24 v to scanner-control board (SCB)	**J143**: 24 v present from LVPS

Parts removal order

Figure 6-3 Parts removal order (1 of 2)

Component	Remove	Remove	Remove	Remove	Remove	Remove	Remove
Print cartridges							
Toner collection unit (TCU)							
Automatic document feeder (ADF)							
Scanner assy							
Formatter							
Memory DIMMS							
Fuser							
Tray 1 pickup roller	Roller cover						
Tray 2 pickup and separation rollers							
Tray 3 pickup feed, and separation rollers							
Transfer roller							
Front-door assy							
Right-door assy							
Right-rear cover							
Left Cover							
Control panel							
Right-front cover	Control panel						
Front-top cover	Left cover	Control panel					
Rear cover	Right-rear cover	Left cover					
Upper-rear cover	Right-rear cover	Left cover	Rear cover				
Rear-top cover	Left cover	Control panel	Front -top cover	Rear cover			
Secondary transfer assy (T2)							
Intermediate transfer belt (ITB)							
Residual-toner feed motor	TCU	ITB	Left cover				
Registration density (RD) sensor	Right-rear cover	Left cover	Rear cover	T2	ITB		
Power-supply (PS) fan and fan duct	Right-rear cover	Left cover	Rear cover				
Interconnect board (ICB)	Formatter	Right-rear cover	Left cover	Rear cover			
DC controller (DCC)	Formatter	Right-rear cover	Left cover	Rear cover	ICB		
Low-voltage power supply (LVPS)	Formatter	Right-rear cover	Left cover	Rear cover	ICB		
Registration assy	Right-rear cover	Left cover	Rear cover	T2	ITB	RD Sensor	
High-voltage power supply (HVPS)-lower	Formatter	Right-rear cover	Left cover	Rear cover	ICB	LVPS	
High-voltage power supply (HVPS)-upper	Formatter	Right-rear cover	Left cover	Rear cover	ICB	DCC	
Developing-disengagement motor	Formatter	Right-rear cover	Left cover	Rear cover	ICB	LVPS	
Pickup motor	Formatter	Right-rear cover	Left cover	Rear cover	ICB	LVPS	
Lifter-drive assy	Formatter	Right-rear cover	Left cover	Rear cover	ICB	LVPS	
Cassette-pickup drive assy	Formatter	Right-rear cover	Left cover	Rear cover	ICB	LVPS	
Cassette-pickup assy	Formatter	Right-rear cover	Left cover	Rear cover	Registration assy	ICB	
Delivery fan, cartridge fan and environmental sensor	Formatter	Right-rear cover	Left cover	Rear cover	ICB	LVPS	
Laser scanner (Y/M)	TCU	Formatter	Right-rear cover	Left cover	Rear cover	ICB	
Laser Scanner (C/Bk)	TCU	Formatter	Right-rear cover	Left cover	Rear cover	ICB	
Drum Motor 1	Right-rear cover	Left cover	Rear cover	ICB	LVPS	HVPS-upper	
Drum motor 2 or drum motor 3	Right-rear cover	Left cover	Rear cover	ICB	LVPS	HVPS-upper	
Main-drive assy	Formatter	T2	ITB	Right-rear cover	Left cover	Rear cover	
Fuser motor	Formatter	Right-rear cover	Left cover	Rear cover	ICB	DCC and tray	
Fuser-drive assy	Formatter	Fuser	T2	Right-rear cover	Left cover	Control panel	
Delivery assy	Fuser	T2	Right-rear cover	Left cover	Control panel	Rear cover	Scanner and ADF assy
Duplex-drive assy	Fuser	T2	Right-rear cover	Left cover	Control panel	Rear cover	Scanner and ADF assy

Figure 6-4 Parts removal order (2 of 2)

Remove	Remove	Remove	Remove	Remove	Remove	Remove	Remove	Remove	Remove
PS fan and fan duct									
LVPS									
HVPS-lower									
HVPS-lower									
HVPS-lower									
HVPS-lower									
LVPS		HVPS-lower	Cassette pick-up drive assy						
HVPS-lower									
LVPS		HVPS-lower							
LVPS		HVPS-lower	Lifter-drive assy	Laser/scanner assy (Y/M)					
PS fan and fan duct	ICB		DCC and tray	LVPS	HVPS-lower and upper				
LVPS		HVPS-upper							
Rear cover	Scanner and ADF assy	Front-top cover	Rear-top cover	PS fan and fan duct	ICB	DCC and tray	LVPS	HVPS-upper	Main-drive assy
Front-top cover			Rear-top cover	PS fan and fan duct	ICB	LVPS	HVPS-lower and upper	Main-drive assy	Fuser-drive assy
Front-top cover			Rear-top cover	PS fan and fan duct	ICB	LVPS	HVPS-lower and upper	Main-drive assy	Fuser-drive assy	Delivery assy

Customer self repair (CSR) components

NOTE: Your product might not appear exactly as the one shown in the photos in this chapter. Although some photos do not show the ADF/scanner unit, the procedures in this chapter are appropriate for your product.

Print cartridges

△ **CAUTION:** If toner gets on your clothing, wipe it off with a dry cloth and wash clothing in cold water. *Hot water sets toner into fabric*.

1. Open the front door. Make sure that the door is completely open.

   Figure 6-5 Remove the print cartridge (1 of 2)

2. Grasp the print-cartridge handle and pull out to remove.

CAUTION: Do not touch the green roller. Doing so can damage the cartridge. Do not expose the cartridge to strong light. Cover the cartridge with a sheet of paper to protect it from light.

Reinstallation tip Align the print cartridge with its slot and insert the print cartridge until it clicks into place.

Figure 6-6 Remove the print cartridge (2 of 2)
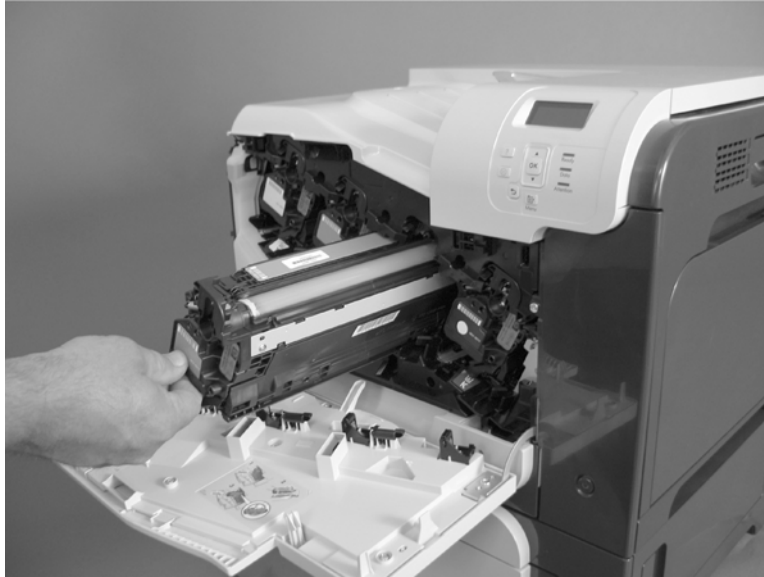
Stapler cartridge

Open the stapler door, and then remove the stapler cartridge.

Figure 6-7 Remove the stapler cartridge

Duplex-reverse guide

1. Grasp the duplex-reverse guide and pull it away from the product to release it.

    Figure 6-8 Remove the duplex-reverse guide (1 of 2)

2. Remove the guide.

    Figure 6-9 Remove the duplex-reverse guide (2 of 2)

Toner-collection unit

NOTE: The toner-collection unit is designed for a single use. Do not try to empty the toner-collection unit and reuse it. Doing so could cause toner to spill inside the product and result in reduced print quality. For recycling information, see the product user guide.

1. Open the front door. Make sure that the door is completely open.

Figure 6-10 Remove the toner-collection unit (1 of 4)

2. Grasp the blue label at the top of the toner-collection unit and remove it from the product.

Reinstallation tip Insert the bottom of the replacement unit into the product first and then push the top of the unit until it clicks into place. If the toner-collection unit is installed incorrectly, the front door will not close completely.

Figure 6-11 Remove the toner-collection unit (2 of 4)
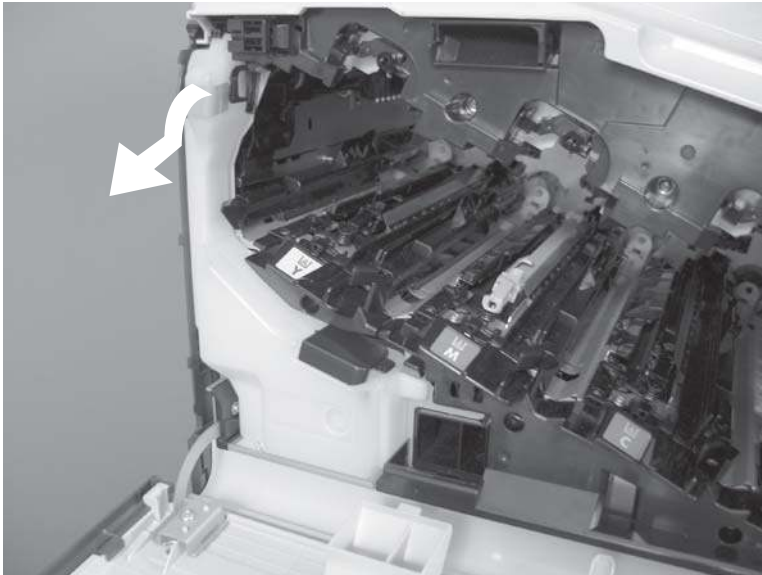
3. To prevent toner spills, place the blue cap (callout 1) over the blue opening at the top of the unit (callout 2).

Figure 6-12 Remove the toner-collection unit (3 of 4)

Figure 6-13 Remove the toner-collection unit (4 of 4)

Formatter PCA

CAUTION: ⚠ ESD sensitive component.

1. Turn the product off and disconnect the power and interface cable or interface cables.

2. Unscrew the formatter thumb screws, and then firmly pull the formatter from the product. Place the formatter on a clean, flat, grounded surface.

Figure 6-14 Remove the formatter

NOTE: When reinstalling the formatter, push firmly on the right side to make sure the formatter is seated.

Memory DIMM

Before proceeding, remove the following components:

- Formatter PCA. See <u>Formatter PCA on page 192</u>.

Remove the memory DIMM

⚠ **CAUTION:** ESD sensitive component.

📝 **NOTE:** See <u>Enable memory for Windows on page 194</u> after installing a new memory DIMM.

1. Place the formatter on a clean, flat, grounded surface.

2. Release on tab, and raise the hard drive mounting bracket to access the memory DIMM.

   Figure 6-15 Remove the memory DIMM (1 of 2)

3.   Spread the latches apart on each side of the DIMM slot. Lift the DIMM up at an angle, and pull it out.

💡 **Reinstallation tip**   Hold the DIMM by the edges. Align the notch on the DIMM with the bar in the DIMM slot at an angle and firmly press the DIMM into the slot until it is fully seated. When installed correctly, the metal contacts are not visible. Push down on the DIMM until both latches engage the DIMM.

Figure 6-16 Remove the memory DIMM (2 of 2)

Enable memory for Windows

Use the following procedure to enable the memory if you are installing a new DIMM.

1.   **Windows XP, Windows Server 2003, and Windows Server 2008 (using the default Start menuview)**: Click **Start**, click **Settings**, and then click **Printers and Faxes**.

      -or-

      Windows XP, Windows Server 2003, and Windows Server 2008 (using the Classic Start menuview): Click **Start**, click **Settings**, and then click **Printers**.

      -or-

      Windows Vista: Click **Start**, click **Control Panel**, and then in the category for **Hardware and Sound** click **Printer**.

2.   Right-click the driver icon, and then select **Properties**.

3.   Click the **Device Settings** tab.

4.   Expand the area for **Installable Options**.

5.   Select the total amount of memory installed in the product.

6.   Next to **Automatic Configuration**, select **Update Now**.

7.   Click **OK**.

Hard drive and Serial Advanced Technology Attachment (SATA) cable

Before proceeding, remove the following components:

● Formatter PCA. See Formatter PCA on page 192.

Remove the hard drive and SATA cable

⚠ **CAUTION:** ▣ ESD sensitive component.

1. Disconnect one connector.

⚠ **CAUTION:** Use your finger to secure the connector base to the PCA. The connector base can be dislodged and damaged when the connector is removed.

Figure 6-17 Remove the hard drive and SATA cable (1 of 3)

2. Disconnect one connector and release the wire harnesses from the guide.

Figure 6-18 Remove the hard drive and SATA cable (2 of 3)

3. Release one tab and then slide the hard drive toward the bottom of the formatter to release it. Remove the hard drive.

📝 **NOTE:** If necessary, disconnect the SATA cable from the hard drive.

Figure 6-19 Remove the hard drive and SATA cable (3 of 3)

Fax PCA and cable

Before proceeding, remove the following components:

● Formatter PCA. See Formatter PCA on page 192.

Remove the fax PCA and cable

△

CAUTION: ESD sensitive component.

1. Disconnect one connector.

Figure 6-20 Remove the fax PCA and cable (1 of 2)

2. Release one tab, and then rotate the fax PCA away from the formatter to release it. Remove the fax PCA.

> **NOTE:** If necessary, disconnect the cable from the fax PCA.

Figure 6-21 Remove the fax PCA and cable (2 of 2)

Tray cassette

NOTE: Use this procedure to remove the Tray 2 or optional Tray 3 cassette.

1. Pull the tray straight out of the product until it stops.

   Figure 6-22 Remove the tray cassette (1 of 2)
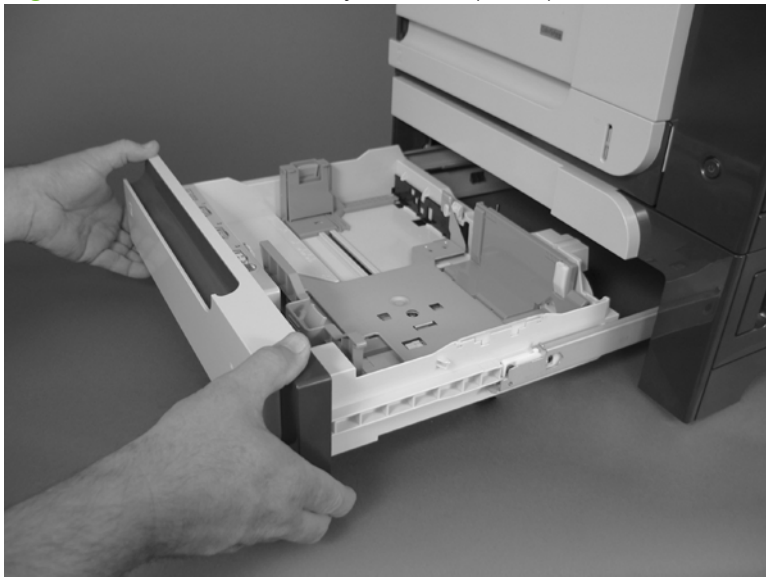
2. Carefully lift up on the tray to release it, and then remove the tray.

   Figure 6-23 Remove the tray cassette (2 of 2)
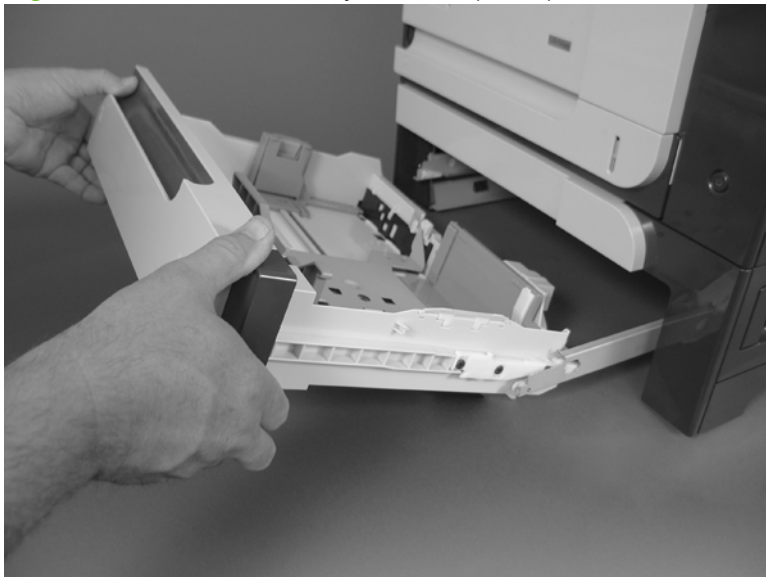
Fuser

CAUTION: The fuser might be hot. Allow enough time after turning off the product power for the fuser to cool.

---

1. Open the right-door assembly.

    Figure 6-24 Remove the fuser (1 of 2)

2. Grasp the handles and squeeze the blue release levers.

    Pull the fuser straight out of the product to remove it.

    Figure 6-25 Remove the fuser (2 of 2)
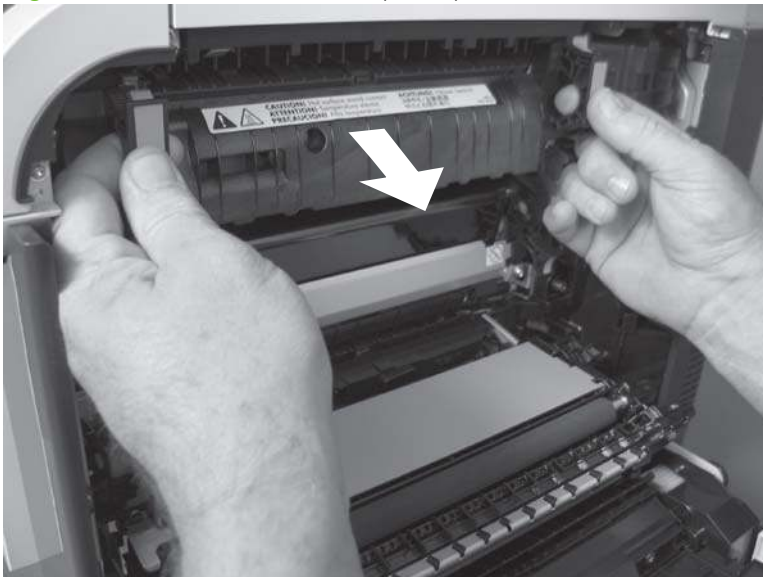
Pickup roller (Tray 2)

CAUTION: Do not touch the spongy roller surface unless you are replacing the roller. Skin oils on the roller can cause paper pickup problems.

1. Look up into the Tray 2 cavity (where the cassette would be installed), and pull down to release the blue roller-locking lever.

☀ **Reinstallation tip** When the roller is reinstalled, rotate the roller shaft several times to make sure that the shaft correctly engages the drive mechanism. You should hear a click when the shaft engages the drive mechanism.

Figure 6-26 Remove the pickup roller (Tray 2) (1 of 4)

2. Pull the roller toward the front of the product to release the rear of the roller shaft.

Figure 6-27 Remove the pickup roller (Tray 2) (2 of 4)

3. Rotate the roller shaft down and away from the product, and then slide the roller toward the rear of the product to release the front of the roller shaft.

Figure 6-28 Remove the pickup roller (Tray 2) (3 of 4)

4. Remove the pickup roller.

☼ **Reinstallation tip** Make sure that the roller is orientated correctly when it is reinstalled (the large white collar should be positioned toward the front of the product.

Figure 6-29 Remove the pickup roller (Tray 2) (4 of 4)

Pickup and feed rollers (Tray 3)

CAUTION: Do not touch the spongy roller surface unless you are replacing the roller. Skin oils on the roller can cause paper pickup problems.

1. Locate the Tray 3 pickup and feed rollers.

☀ **TIP:** The feeder is shown front side up in this procedure for clarity. You do not have to separate the product from the feeder to remove these rollers. Remove the cassette, and then reach up into the cavity to remove the rollers.

Figure 6-30 Remove the Pickup and feed rollers (Tray 3) (1 of 2)
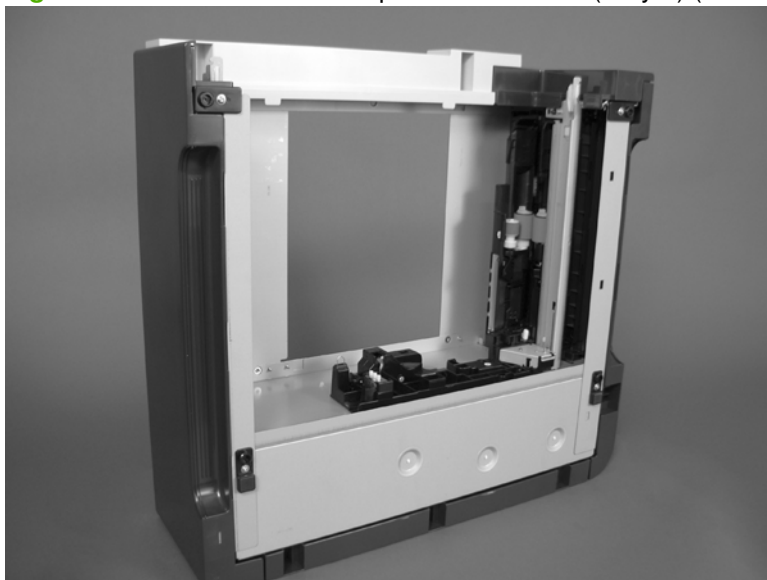
2. Release three tabs (callout 1), and then remove the rollers.

☀ **Reinstallation tip** When you reinstall the rollers, make sure that the rollers snap into place.

Figure 6-31 Remove the Pickup and feed rollers (Tray 3) (2 of 2)

Separation roller (Tray 2)

CAUTION: Do not touch the spongy roller surface unless you are replacing the roller. Skin oils on the roller can cause paper pickup problems.

NOTE: Remove the Tray 2 cassette if not already removed for service. See Tray cassette on page 199.

Remove two screws (callout 1), and then remove the separation roller assembly (callout 2).

Figure 6-32 Remove the separation roller (Tray 2)

Secondary transfer roller

CAUTION: Do not touch the spongy roller surface unless you are replacing the roller. Skin oils on the roller can cause image quality problems.

1. Open the right-door assembly.

   Figure 6-33 Remove the transfer roller (1 of 3)

2. Use the blue lever (callout 1) to lower the secondary transfer assembly.

   Figure 6-34 Remove the transfer roller (2 of 3)

   1

3. Grasp the roller shaft collars, and lift the transfer roller off of the product.

Figure 6-35 Remove the transfer roller (3 of 3)

Reinstall the transfer roller

When you reinstall the transfer roller, make sure that the pins on the shaft collars (callout 1) align with the holes in the mounting assembly.

Figure 6-36 Reinstall the transfer roller

Secondary transfer assembly

The secondary transfer assembly includes the transfer roller.

1. Open the right-door assembly.

2. Use the blue lever (callout 1) to lower the secondary transfer assembly.

   Figure 6-37 Remove the transfer roller (2 of 3)

3. Push the pin on the release-lever side of the assembly toward the inside of the product to release it, and then lift the assembly up.

   Figure 6-38 Remove the secondary transfer assembly (1 of 2)
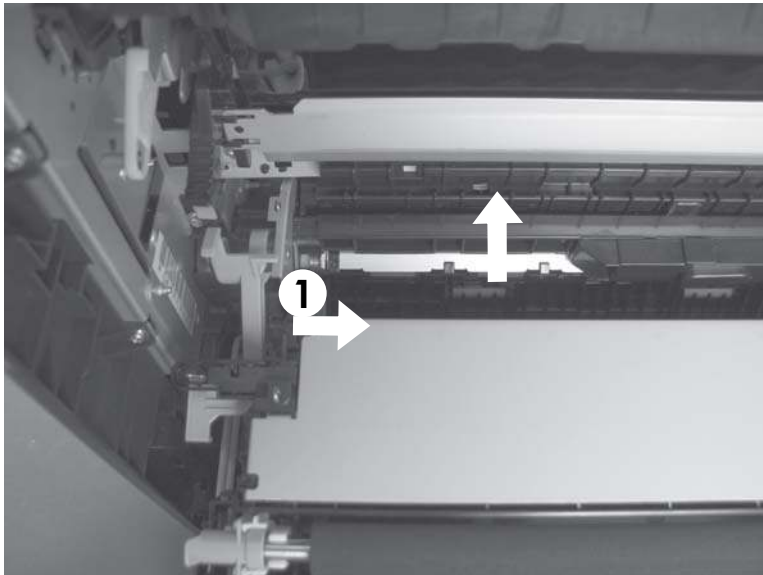
4. Pull the assembly straight out of the product to remove it.

Figure 6-39 Remove the secondary transfer assembly (2 of 2)

Reinstall the secondary transfer assembly

Press and hold down the blue release lever when you reinstall the assembly.

Figure 6-40 Reinstall the secondary transfer assembly
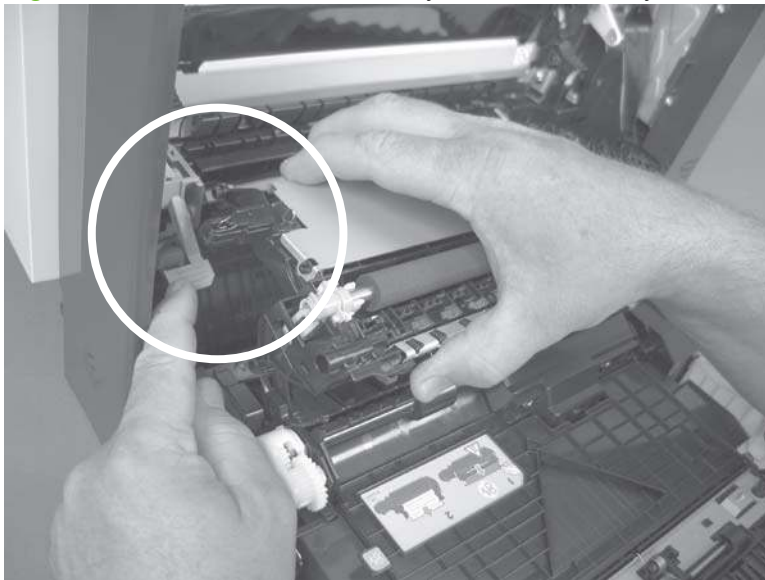
Intermediate transfer belt (ITB)

CAUTION: Do not touch the black-plastic belt. Skin oils and fingerprints on the belt can cause print-quality problems. Always place the ITB on a flat surface in a safe and protected location.

1. Open the right-door assembly.

2. Use the blue lever (callout 1) to lower the secondary transfer assembly.

Figure 6-41 Remove the intermediate transfer belt (1 of 3)

3. Grasp the small handles on the ITB and then pull the ITB out of the product until two large handles expand along the right- and left-side of the ITB.

Figure 6-42 Remove the intermediate transfer belt (2 of 3)
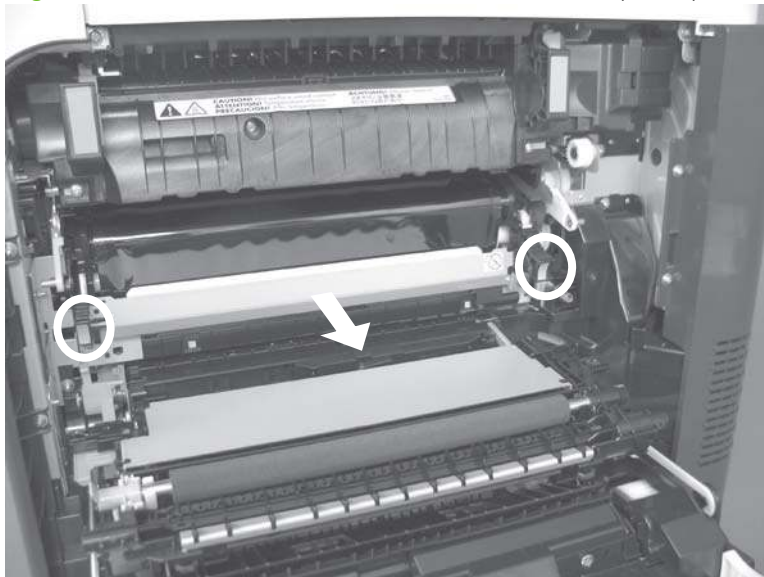
4. Grasp the large handles on the ITB and then pull the ITB straight out of the product to remove it.

> **CAUTION:** The ITB is a sensitive component. Be careful when handling the ITB so that it is not damaged. Always place the ITB in a safe and protected location.

Figure 6-43 Remove the intermediate transfer belt (3 of 3)
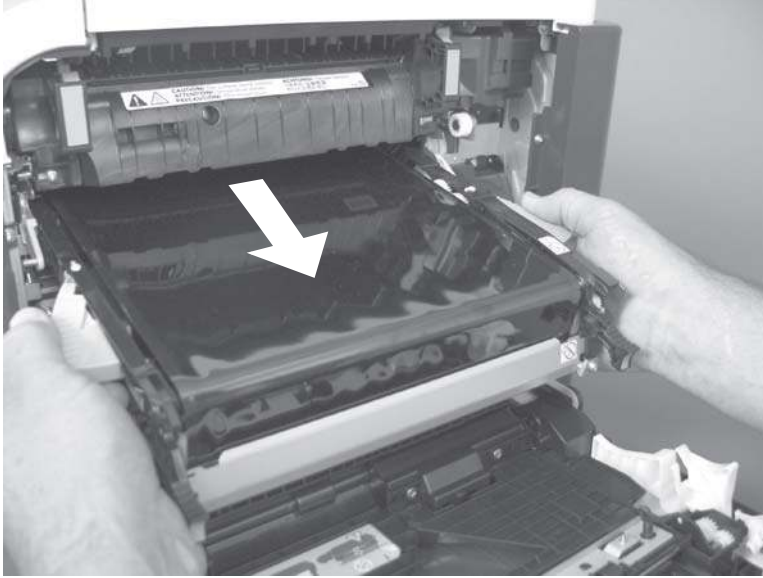
> ☼ **Reinstallation tip** If you are installing a replacement ITB, make sure that you remove all of the packing tape (callout 1) and the protective cover sheet (callout 2).
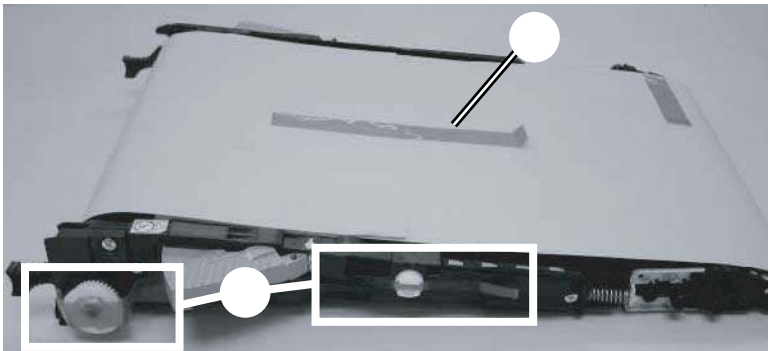
Front-door assembly

1. Open the front door.

   Figure 6-44 Remove the front-door assembly (1 of 2)

2. Remove two screws (callout 1), and then remove the front-door assembly.

   NOTE: A small sheet-metal bracket on the left side of the door is not captive. Do not lose the bracket when you remove the screw.

   Figure 6-45 Remove the front-door assembly (2 of 2)

3. If you are installing a replacement front-door assembly, install the HP name tag and the appropriate product model number tag on the assembly.

Automatic document feeder (ADF)

NOTE: After removing the ADF assembly, place it on a clean, dry, and smooth surface.

You must calibrate the ADF and scanner after installing the ADF. See Calibrate a replacement ADF assembly on page 214.

1. Release two thumb screws, and then disconnect one connector.

Figure 6-46 Remove the ADF assembly (1 of 4)

2. Open the ADF.

Figure 6-47 Remove the ADF assembly (2 of 4)

3. Lift the ADF straight up until it stops, and then slightly tilt it toward the rear of the product. Continue lifting the ADF straight up to remove it.

Figure 6-48 Remove the ADF assembly (3 of 4)

4. Remove the ADF.

Figure 6-49 Remove the ADF assembly (4 of 4)
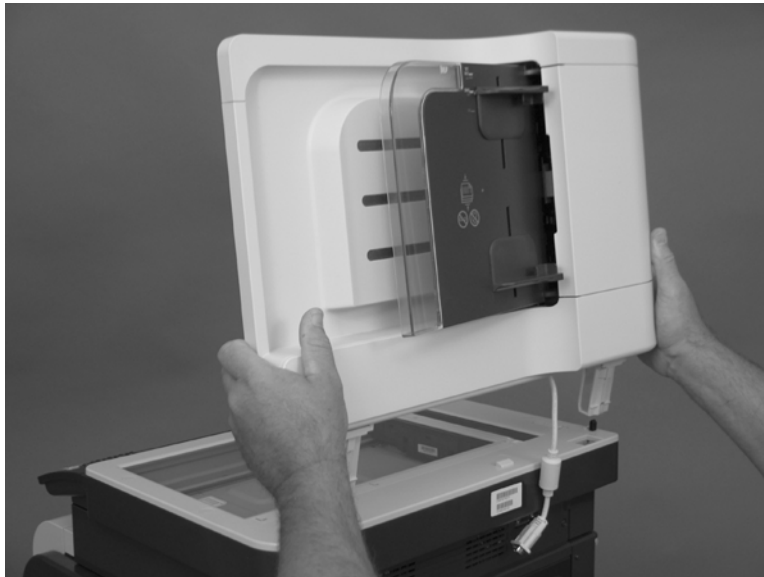
Calibrate a replacement ADF assembly

1. On the control-panel Home screen, scroll to and touch Administration.

2. Touch Troubleshooting.

3. Touch Calibrate Scanner.

4. Touch Calibrate to print the first pass of the calibration target.

5. Follow the instructions on the control-panel display. For more information, see Calibrate the product on page 430.

ADF roller assembly and separation pad

CAUTION: Do not touch the spongy roller surface unless you are replacing the roller. Skin oils on the roller can cause paper pickup problems.

1. Open the ADF jam door.

   Figure 6-50 Remove the ADF roller assembly and separation pad (1 of 5)

2. Lift the green handle.

   Figure 6-51 Remove the ADF roller assembly and separation pad (2 of 5)

3. Push the blue button.

Figure 6-52 Remove the ADF roller assembly and separation pad (3 of 5)

4. Remove the ADF roller assembly.

Figure 6-53 Remove the ADF roller assembly and separation pad (4 of 5)

5. Remove two screws (callout 1), and then remove the separation-pad assembly (callout 2).

☼ **TIP:** Use a #1 Phillips screwdriver to remove these screws.

Figure 6-54 Remove the ADF roller assembly and separation pad (5 of 5)

Reinstall the ADF roller assembly

Securely attach the ADF roller assembly to the blue hooks.

Figure 6-55 Reinstall the ADF roller assembly

Control-panel overlay

1. Gently pull up on the control-panel overlay.

   Figure 6-56 Remove the control-panel overlay (1 of 2)

2. Remove the control-panel overlay.

   Figure 6-57 Remove the control-panel overlay (2 of 2)

Control-panel assembly

Before proceeding, remove the following components:

● Control-panel overlay. See <u>Control-panel overlay on page 218</u>.

Remove the control-panel assembly

1. Release six tabs.

Figure 6-58 Remove the control-panel assembly (1 of 3)

2. Pull the control-panel assembly toward the front of the product and rotate it up.

Figure 6-59 Remove the control-panel assembly (2 of 3)

3. Disconnect two connectors (callout 1), and then remove the control-panel assembly.

Figure 6-60 Remove the control-panel assembly (3 of 3)

1

Right door (optional paper feeder)

1. Open the right door.

   Figure 6-61 Remove the right door; optional paper feeder (1 of 3)
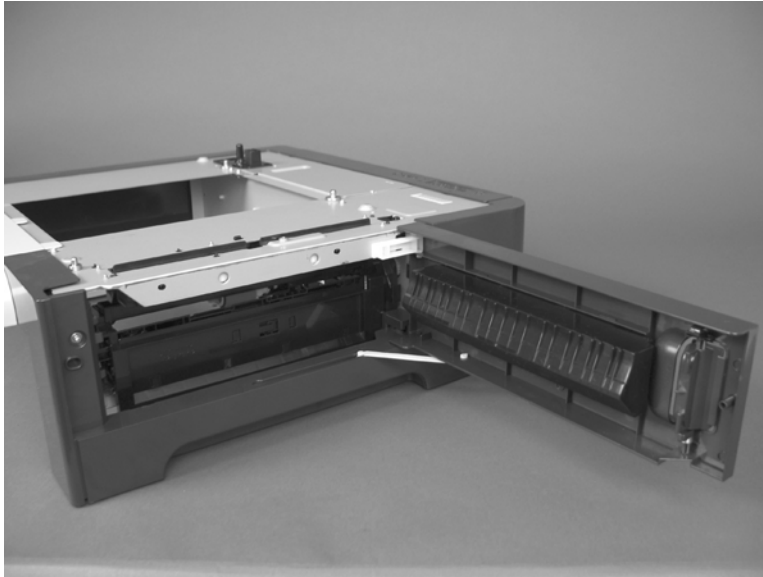
2. Release one tab (callout 1), and then slide the stopper toward the right side of the product to remove it.

   Figure 6-62 Remove the right door; optional paper feeder (2 of 3)

   1

3. Support the door, and then release the door-retainer arm at the bottom of the door. Raise the door to release the lower hinge pin, and then remove the door.

Figure 6-63 Remove the right door; optional paper feeder (3 of 3)

External panels, covers, doors, and scanner assembly

Identification and location

NOTE: Your product might not appear exactly as the one shown in the photos in this chapter. Although some photos do not show the ADF/scanner unit, the procedures in this chapter are appropriate for your product.

Figure 6-64 External panels, covers, doors, and scanner assembly; identification and location
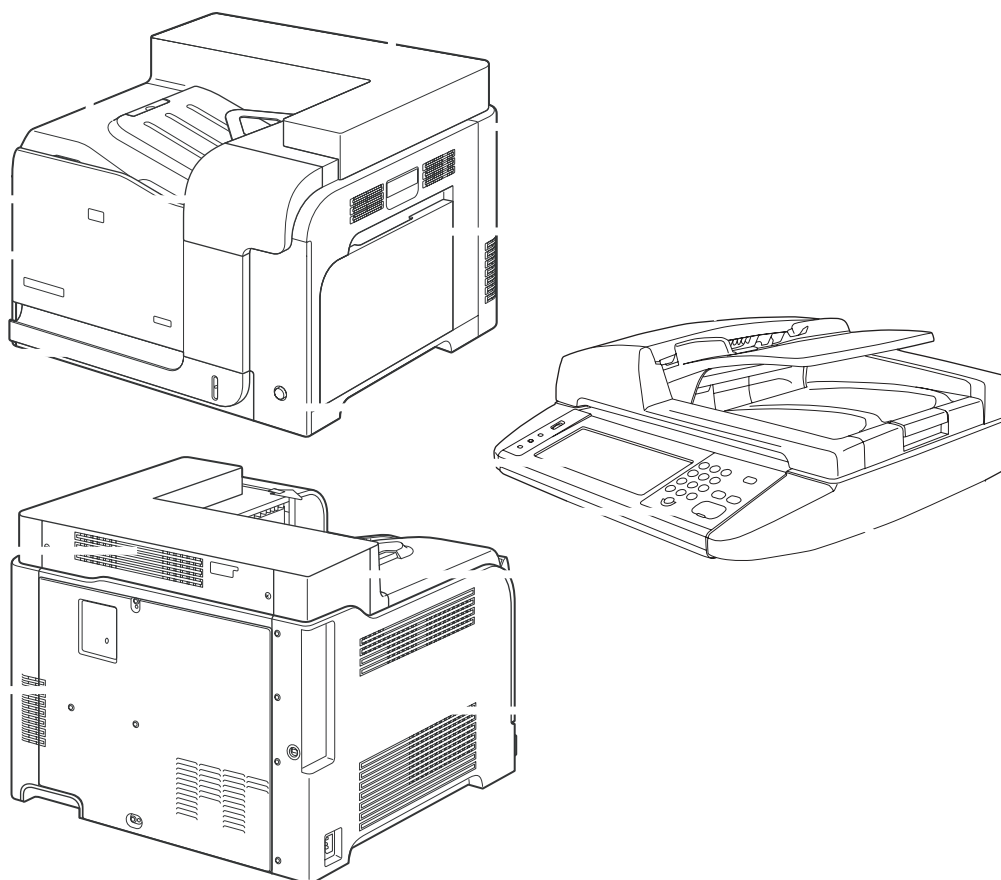
Table 6-2 External panels, covers, doors, and scanner assembly; identification and location

Item	Description
1	Front-top cover (see Front-top cover on page 261)
2	Right-top cover (see Right-top cover on page 258)
3	Right-rear cover (see Right-rear cover on page 231)
4	Right-door assembly (see Right-door assembly on page 227)
5	Right-front cover (see Right-front cover on page 239)
6	Left-upper cover (see Left-upper cover on page 247)
7	Left cover (see Left cover on page 233)
8	Rear cover (see Rear cover on page 238)

Table 6-2 External panels, covers, doors, and scanner assembly; identification and location (continued)

Item	Description
9	Rear-upper cover (see Rear-upper cover on page 236)
10	Tray cassette (see Tray cassette on page 199)
11	Front-door assembly (see Front-door assembly on page 211)
12	Front-upper cover (see Front-upper cover on page 225)
13	Control-panel assembly (see Control-panel assembly on page 219)
14	Control-panel overlay (see Control-panel overlay on page 218)
15	Automatic Document Feeder (see ADF roller assembly and separation pad on page 215)
16	Scanner (see Scanner assembly on page 242)

Front-upper cover

1. Open the right door and front door.

   Figure 6-65 Remove the front-upper cover (1 of 4)

2. Remove one screw.

   Figure 6-66 Remove the front-upper cover (2 of 4)

3. Remove one screw.

Figure 6-67 Remove the front-upper cover (3 of 4)

4. Lift the cover up, and then remove the front-upper cover.

📝 **NOTE:** The cover might be difficult to remove. It might require some flexing to release it.

Figure 6-68 Remove the front-upper cover (4 of 4)

Right-door assembly

1. Open the right-door assembly

   Figure 6-69 Remove the right-door assembly (1 of 8)

2. Close the secondary transfer assembly.

   Figure 6-70 Remove the right-door assembly (2 of 8)

3. Remove three screws (callout 1).

Figure 6-71 Remove the right-door assembly (3 of 8)

4. Carefully release one link arm.

Figure 6-72 Remove the right-door assembly (4 of 8)
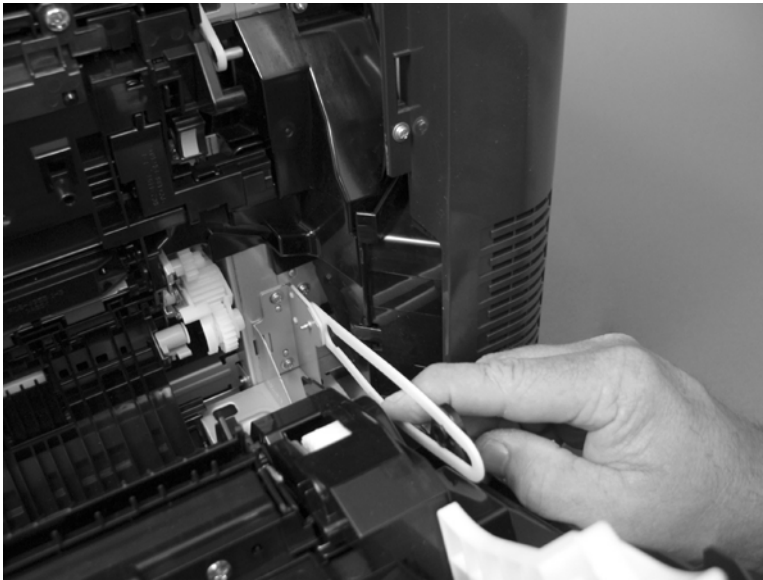
5. Remove one screw (callout 2), and then remove the cover (callout 3).

Figure 6-73 Remove the right-door assembly (5 of 8)

6. Disconnect two connectors (callout 4), and then release the wire harness from the guide (callout 5).

☼ **TIP:** It is easier to disconnect the lower connector if you first remove the wire harnesses from the guide.

Figure 6-74 Remove the right-door assembly (6 of 8)

7. Remove two screws (callout 6).

Figure 6-75 Remove the right-door assembly (7 of 8)

8. Remove the right-door assembly.

Figure 6-76 Remove the right-door assembly (8 of 8)
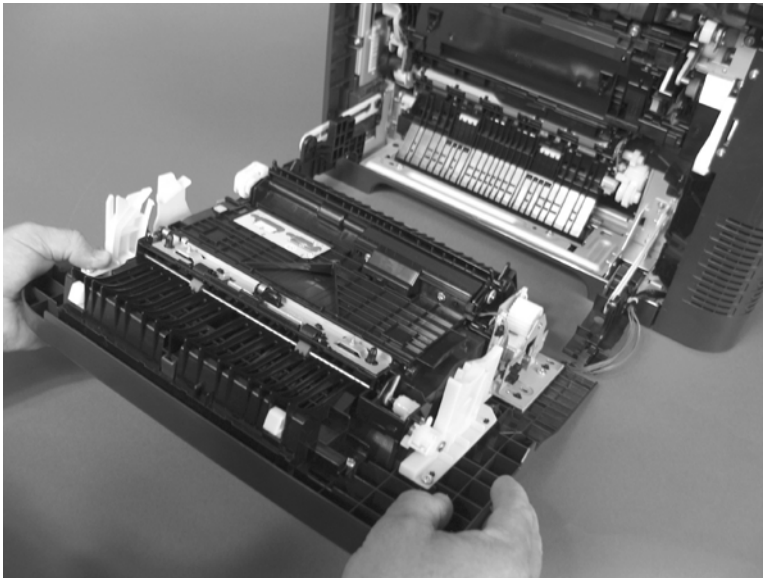
Right-rear cover

1. Open the right-door assembly.

Figure 6-77 Remove the right-rear cover (1 of 3)

2. Remove two screws (callout 1) and release one tab (callout 2).

Figure 6-78 Remove the right-rear cover (2 of 3)

3. Rotate the bottom of the cover away from the product, and then remove the cover.

Figure 6-79 Remove the right-rear cover (3 of 3)
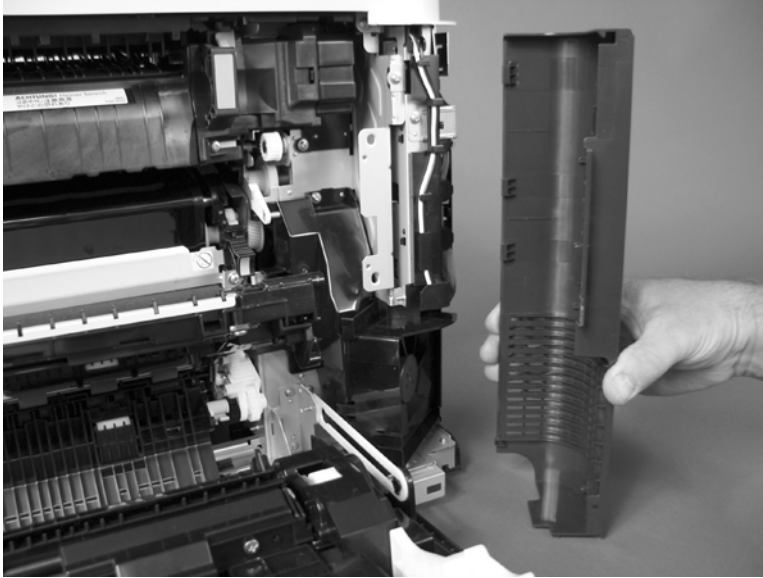
Left cover

1. Remove four screws (callout 1).

   Figure 6-80 Remove the left cover (1 of 5)

2. Release the rear edge of the cover, and slightly separate the cover from the product.

   Figure 6-81 Remove the left cover (2 of 5)

3. The figure below shows the cover removed so that you can see the tab locations. **Before proceeding**, note the location of the mounting tabs.

CAUTION: One tab (callout 2) is easily damaged when removing the cover. Be careful when removing the cover.

Figure 6-82 Remove the left cover (3 of 5)

2
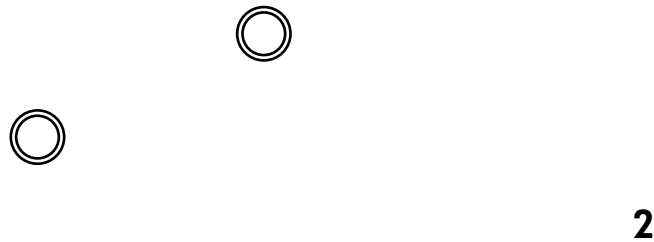
4. Use your thumb to press in on the lower-front portion of the cover (near the dashed circle in the figure below), and then slightly slide the cover away from the front door to release one tab.

CAUTION: You must flex the cover enough to release the front edge of the cover, but do not damage the tab at the bottom-front edge of the cover. See callout 2 in Figure 6-82 Remove the left cover (3 of 5) on page 234.

Figure 6-83 Remove the left cover (4 of 5)

5. Slide the cover toward the rear of the product and rotate it away from the product and then remove the cover.

Figure 6-84 Remove the left cover (5 of 5)
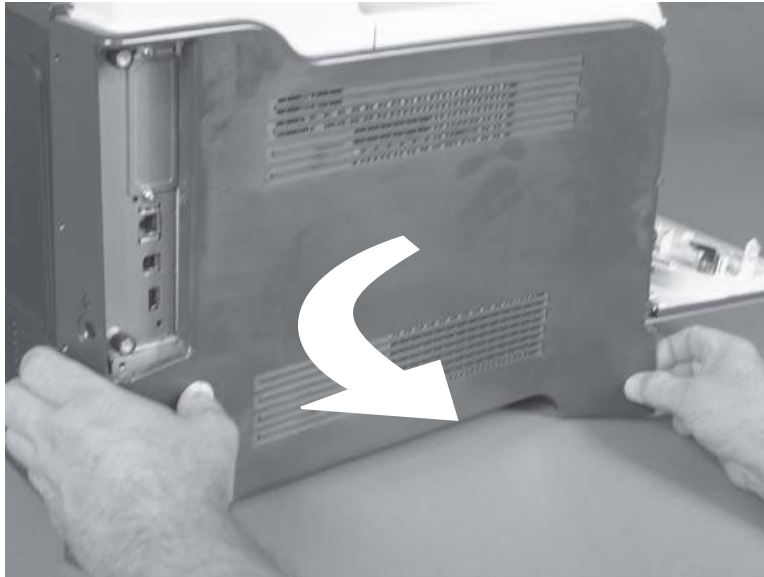
Rear-upper cover

1. Release two thumb screws, and then disconnect one connector.

   Figure 6-85 Remove the rear-upper cover (1 of 4)

2. Remove two screws.

   Figure 6-86 Remove the rear-upper cover (2 of 4)

3. Rotate the rear-upper cover away from the product (callout 1), and then slide it toward the right (callout 2) to release one tab.

Figure 6-87 Remove the rear-upper cover (3 of 4)

4. Remove the rear-upper cover.

Figure 6-88 Remove the rear-upper cover (4 of 4)

Rear cover

Before proceeding, remove the following components:

● Right-rear cover. See Right-rear cover on page 231.

● Left cover. See Left cover on page 233.

● Rear-upper cover. See Rear-upper cover on page 236.

Remove the rear cover

1. Remove eight screws (callout 1).

   Figure 6-89 Remove the rear cover (1 of 2)
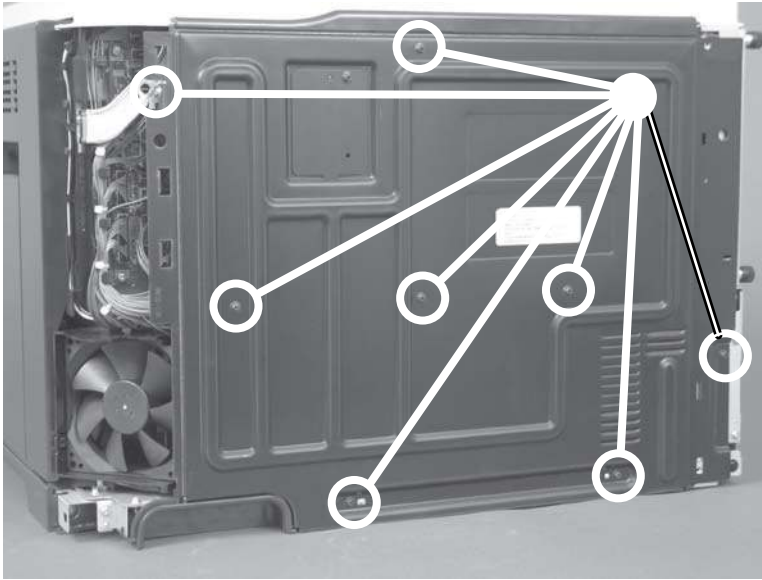
2. Slide the cover toward the fan side of the product, and then remove the rear cover.

   Figure 6-90 Remove the rear cover (2 of 2)

Right-front cover

Before proceeding, remove the following components:

● Front-upper cover. See Front-upper cover on page 225.

Remove the right-front cover

📝 **NOTE:** Be careful. When removing the cover, do not dislodge the power button. If the button is dislodged, see Reinstall the power button on page 241 to reinstall it.

1. Remove one screw (callout 1).

Figure 6-91 Remove the right-front cover (1 of 5)
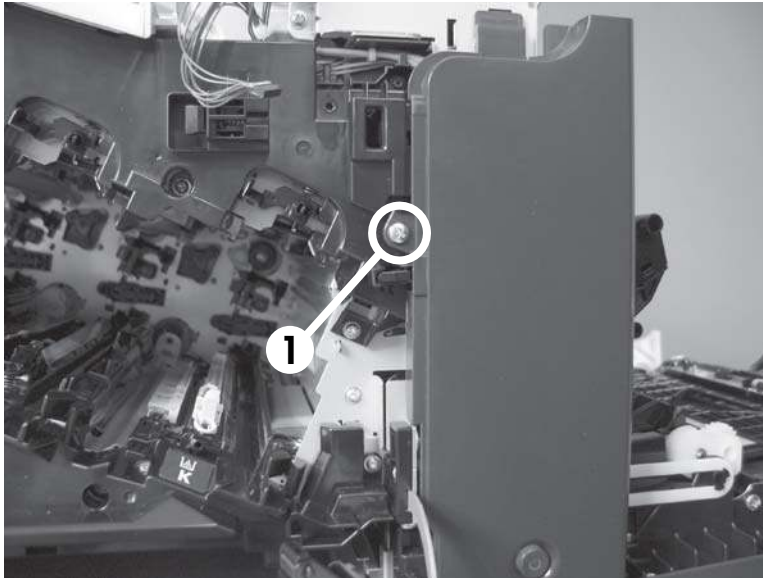
2. Remove two screws (callout 2).

Figure 6-92 Remove the right-front cover (2 of 5)
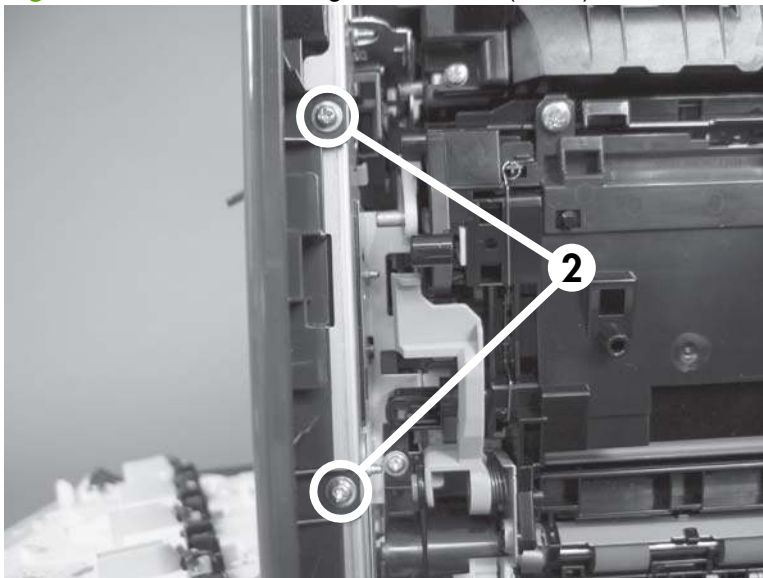
3. Before you proceed, take note of the tab locations at the bottom of the cover.

Figure 6-93 Remove the right-front cover (3 of 5)
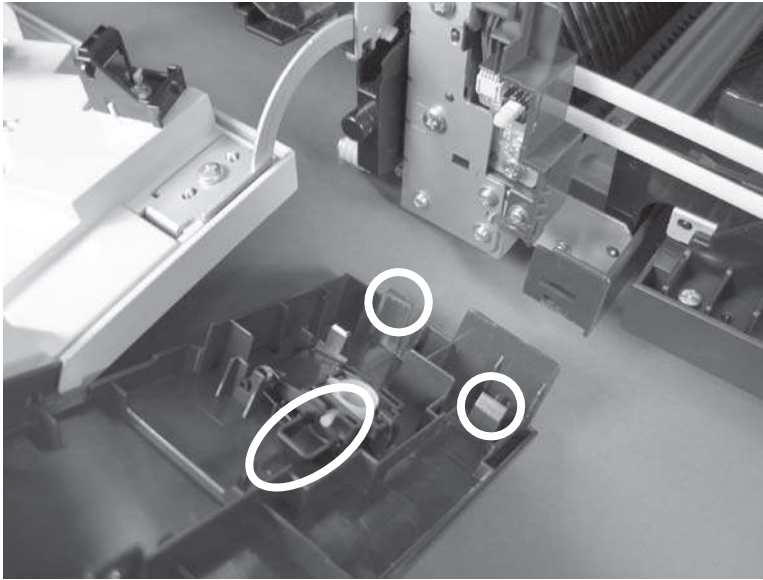
4. Pull down on the cover to release three tabs (callout 3).

☼ **TIP:** It might be easier if you position the product at the edge of the work surface so that there is a space for the cover to slide downward. Or, you might try inserting a small flat blade screwdriver behind the cover, and carefully pry the cover away from the product as you pull down on the cover to release the tabs.

Figure 6-94 Remove the right-front cover (4 of 5)
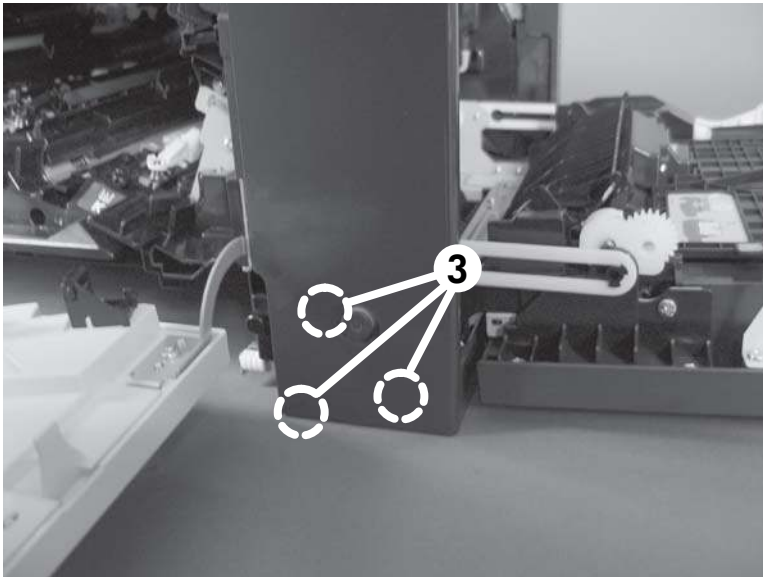
5. Rotate the bottom of the cover away from the product, and then pull down on the cover to remove it.

Figure 6-95 Remove the right-front cover (5 of 5)
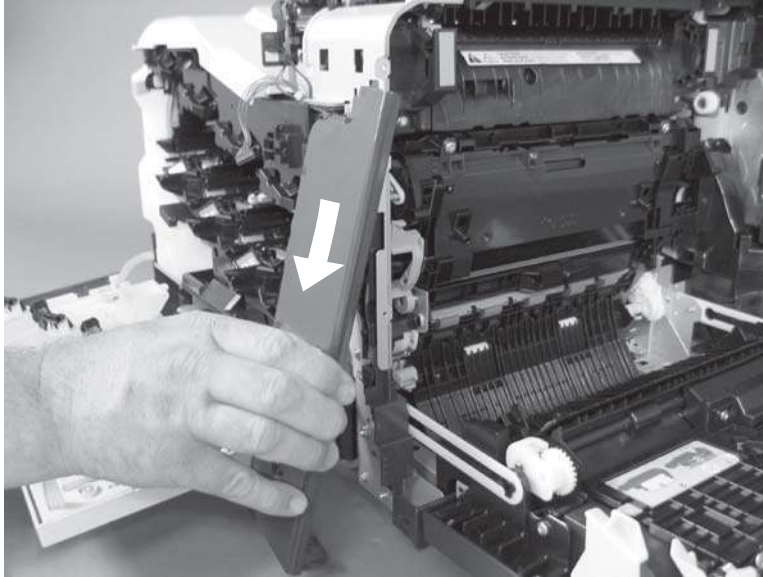
Reinstall the power button

Snap the power button into the holders on the cover. Make sure that the spring is correctly installed.

Figure 6-96 Reinstall the power button
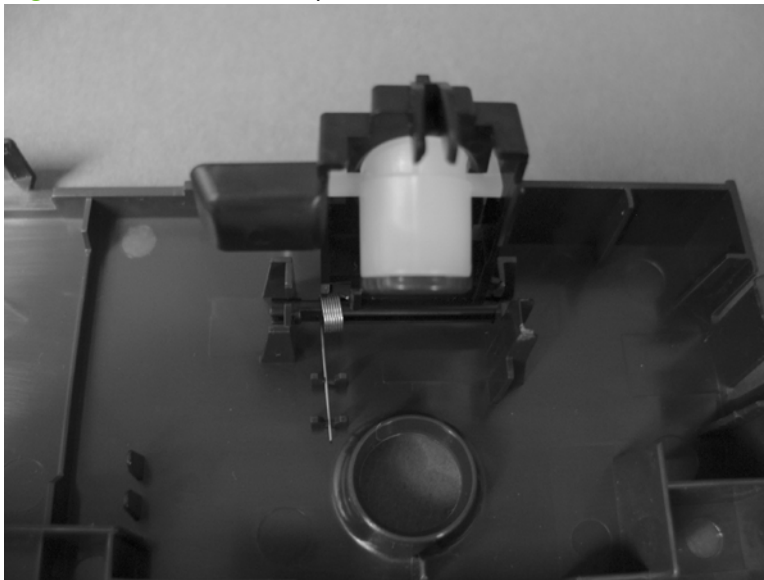
Scanner assembly

Before proceeding, remove the following components:

- Control-panel overlay. See Control-panel overlay on page 218
- Control-panel assembly. See Control-panel assembly on page 219.
- Rear-upper cover. See Rear-upper cover on page 236.

Remove the scanner assembly

1. Remove two screws.

   Figure 6-97 Remove the scanner assembly (1 of 6)

2. Remove two screws.

   Figure 6-98 Remove the scanner assembly (2 of 6)

3. Lift the right side of the scanner assembly, and then move it slightly to the rear.

Figure 6-99 Remove the scanner assembly (3 of 6)

4. Place the scanner assembly on top of the base.

Figure 6-100 Remove the scanner assembly (4 of 6)
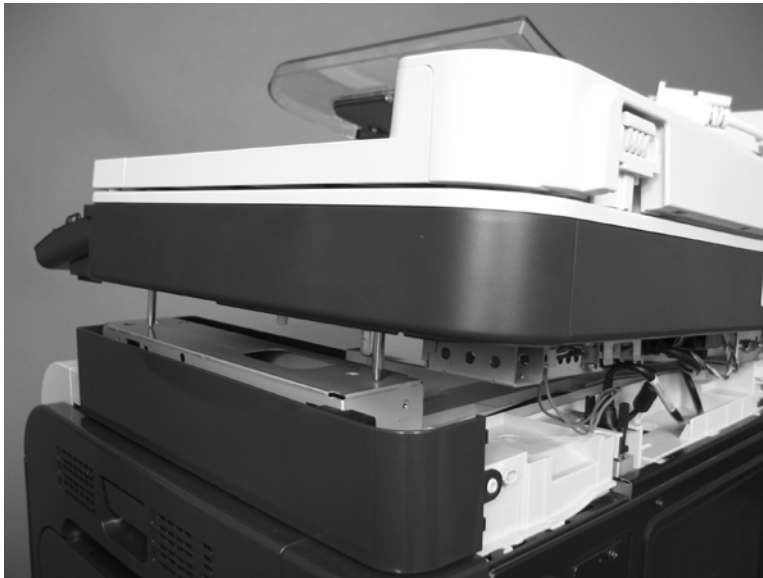
5. Disconnect one connector (callout 1), remove two thumb screws (callout 2), and then release one cable (callout 3).

Figure 6-101 Remove the scanner assembly (5 of 6)

6. Remove the scanner assembly.

Figure 6-102 Remove the scanner assembly (6 of 6)

Delivery cover

Before proceeding, remove the following components:

- Control-panel overlay. See Control-panel overlay on page 218.

- Control-panel assembly. See Control-panel assembly on page 219.

- Front-upper cover. See Front-upper cover on page 225.

- Rear-upper cover. See Rear-upper cover on page 236.

- Scanner assembly. See Scanner assembly on page 242.

- Right-top cover. See Right-top cover on page 258.

Remove the delivery cover

1. Remove three screws.

   Figure 6-103 Remove the delivery cover (1 of 3)

2. Lift up (callout 1) and slide the delivery cover (callout 2).

Figure 6-104 Remove the delivery cover (2 of 3)

3. Remove the delivery cover.

Figure 6-105 Remove the delivery cover (3 of 3)
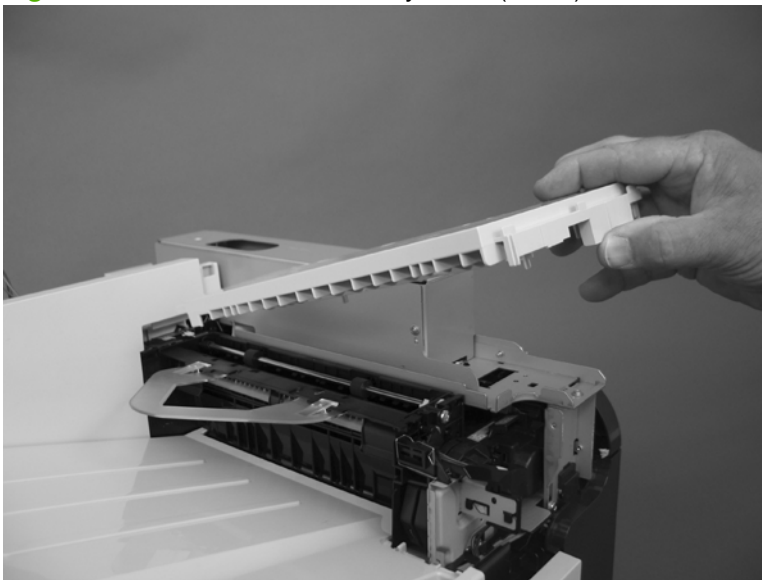
Left-upper cover

Before proceeding, remove the following components:

- Formatter PCA. See Formatter PCA on page 192.

- Control-panel overlay. See Control-panel overlay on page 218.

- Control-panel assembly. See Control-panel assembly on page 219.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Scanner assembly. See Scanner assembly on page 242.

Remove the left-upper cover

1. Remove one screw (callout 1) and one tab (callout 2).

   Figure 6-106 Remove the left-upper cover (1 of 2)

2. Remove the left-upper cover.

Figure 6-107 Remove the left-upper cover (2 of 2)
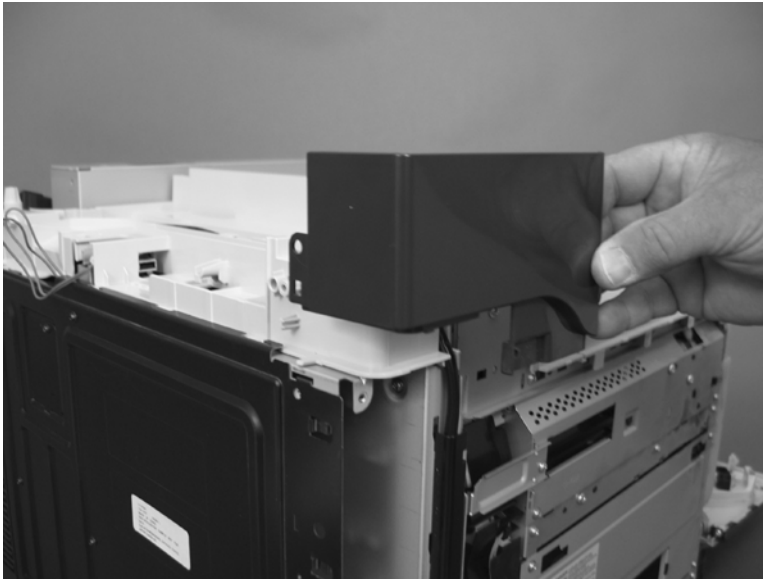
Front stapler cover and right-side stapler cover

Before proceeding, remove the following components:

- Control-panel overlay. See Control-panel overlay on page 218.

- Control-panel assembly. See Control-panel assembly on page 219.

- Rear-upper cover. See Rear-upper cover on page 236.

- Scanner assembly. See Scanner assembly on page 242.

Remove the front stapler cover and right-side stapler cover

1. Open the stapler door, and then remove the stapler cartridge.

   Figure 6-108 Remove the front stapler cover and right-side stapler cover (1 of 13)
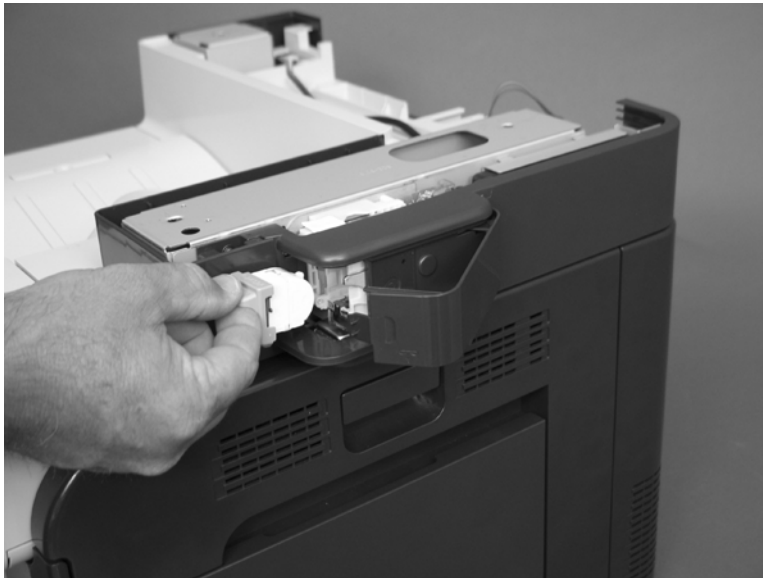
2. Remove two screws.

Figure 6-109 Remove the front stapler cover and right-side stapler cover (2 of 13)

3. Slide the cover toward the front of the product while releasing two tabs.

Figure 6-110 Remove the front stapler cover and right-side stapler cover (3 of 13)

4. Slighty raise the cover and then release one tab.

5. Rotate the cover up, and then remove the cover.
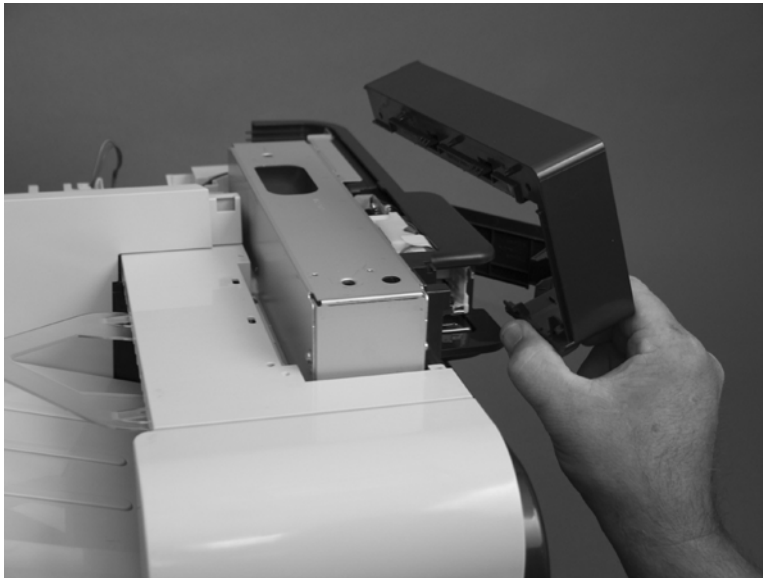
6. Remove one screw.

Figure 6-113 Remove the front stapler cover and right-side stapler cover (6 of 13)

7. Remove two screws.

Figure 6-114 Remove the front stapler cover and right-side stapler cover (7 of 13)

8. Remove one screw.

   Figure 6-115 Remove the front stapler cover and right-side stapler cover (8 of 13)

9. Release one tab.

   Figure 6-116 Remove the front stapler cover and right-side stapler cover (9 of 13)

10. Rotate the cover.

Figure 6-117 Remove the front stapler cover and right-side stapler cover (10 of 13)

11. Disconnect one connector.

Figure 6-118 Remove the front stapler cover and right-side stapler cover (11 of 13)

12. Remove three screws (callout 1), and then remove the sheet-metal cover (callout 2).

Figure 6-119 Remove the front stapler cover and right-side stapler cover (12 of 13)

13. Separate the stapler power supply from the cover, and then remove the cover.

Figure 6-120 Remove the front stapler cover and right-side stapler cover (13 of 13)

External panels, covers, doors, and scanner assembly

Reinstall the right-side stapler cover

1.   Insert one tab.

     Figure 6-121 Reinstall the right-side stapler cover (1 of 3)

2.   Carefully bend the right-upper cover A around the chassis.

     Figure 6-122 Reinstall the right-side stapler cover (2 of 3)
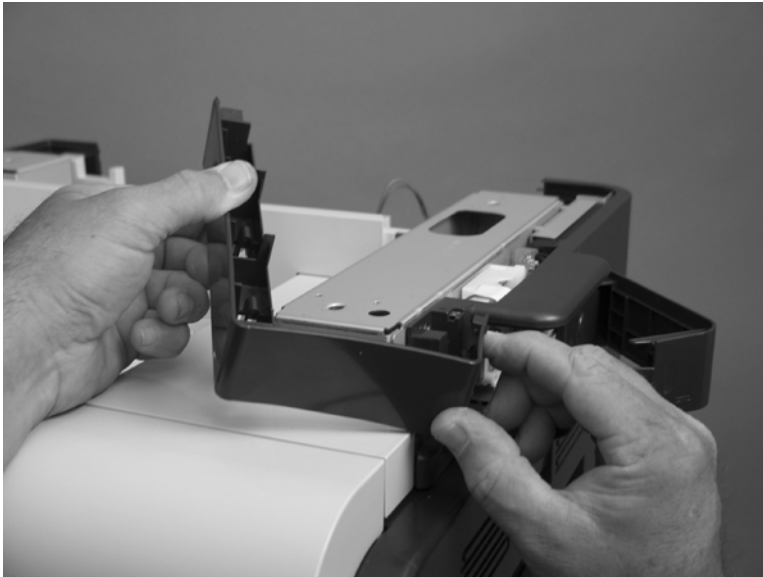
3. Insert three tabs (callout 1) into three slots (callout 2).

Figure 6-123 Reinstall the right-side stapler cover (3 of 3)

Right-top cover

Before proceeding, remove the following components:

- Automatic document feeder (ADF). See Automatic document feeder (ADF) on page 212

- Control-panel overlay. See Control-panel overlay on page 218.

- Control-panel assembly. See Control-panel assembly on page 219.

- Rear-upper cover. See Rear-upper cover on page 236.

- Scanner assembly. See Scanner assembly on page 242.

Remove the right-top cover

1. Remove four screws.

Figure 6-124 Remove the right-top cover (1 of 5)

2. Release one tab.

Figure 6-125 Remove the right-top cover (2 of 5)

3. Release three tabs.

Figure 6-126 Remove the right-top cover (3 of 5)

External panels, covers, doors, and scanner assembly

4. Release two tabs.

Figure 6-127 Remove the right-top cover (4 of 5)

5. Remove the right-top cover.

Figure 6-128 Remove the right-top cover (5 of 5)
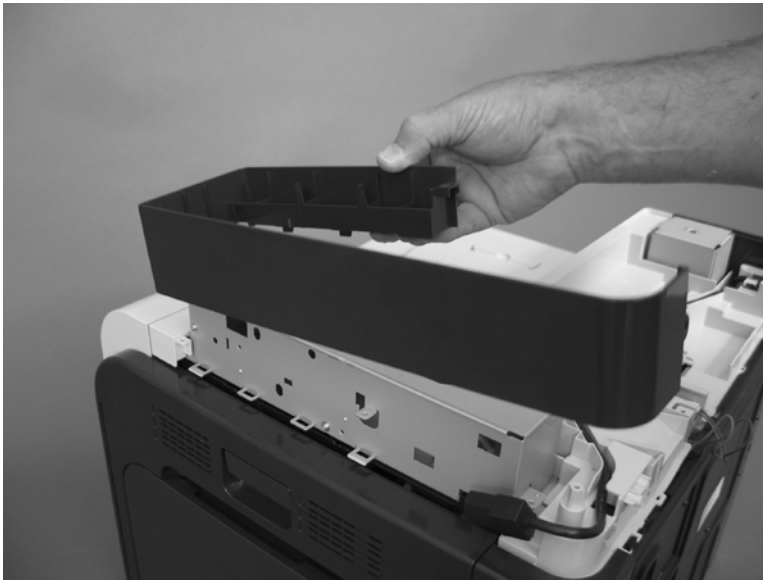
Front-top cover

Before proceeding, remove the following components:

- Front-upper cover. See Front-upper cover on page 225.

- Left cover. See Left cover on page 233.

- Scanner assembly. See Scanner assembly on page 242.

Remove the front-top cover

1. Remove one screw (callout 1).

   Figure 6-129 Remove the front-top cover (1 of 2)
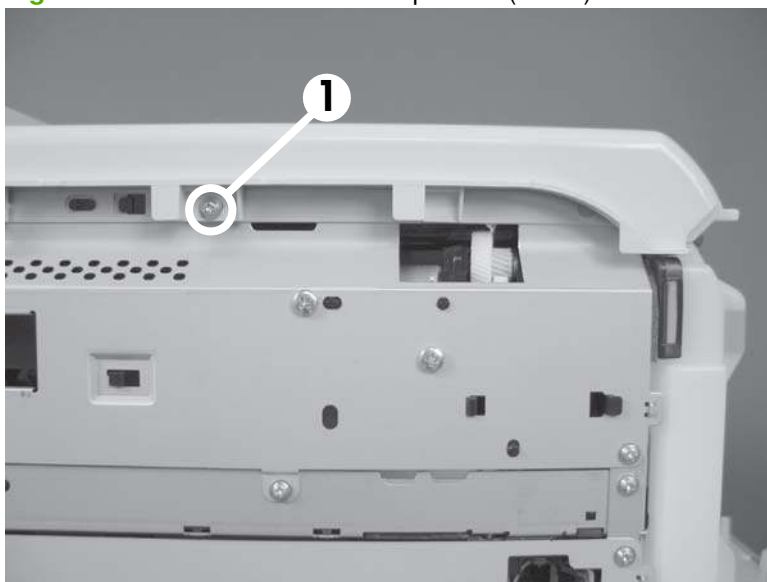
2. Slide the cover toward the left side of the product to release it, and then remove the cover.

   Figure 6-130 Remove the front-top cover (2 of 2)
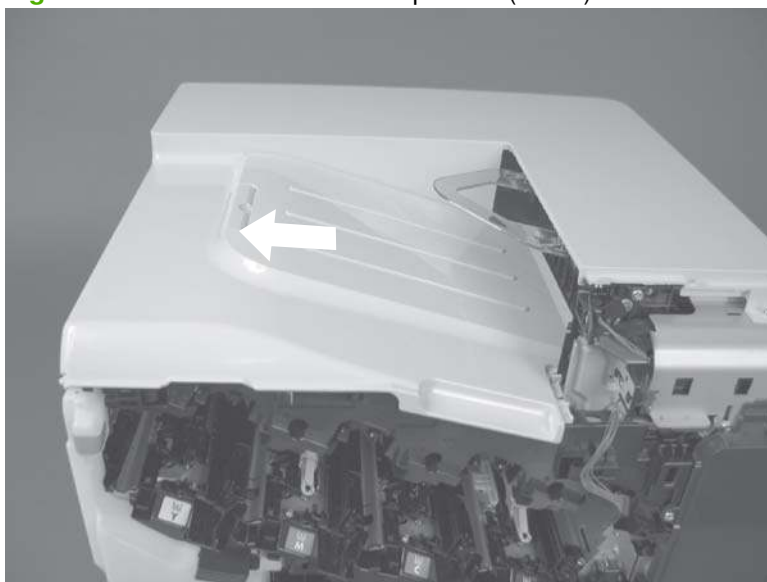
Rear-top cover

Before proceeding, remove the following components:

- Rear-upper cover. See <u>Rear-upper cover on page 236</u>.

- Rear cover. See <u>Rear cover on page 238</u>.

- Scanner assembly. See <u>Scanner assembly on page 242</u>.

- Delivery cover. See <u>Delivery cover on page 245</u>.

- Left-upper cover. See <u>Left-upper cover on page 247</u>.

- Front-top cover. See <u>Front-top cover on page 261</u>.

Remove the rear-top cover

1. Release the stapler power supply cable and one wire harness from the retainers (callout 1).

   📝 **NOTE:** You might have to disconnect one end of the power supply cable to release it from the retainers.

   Figure 6-131 Remove the rear-top cover (1 of 2)

2. Remove two screws (callout 2), and then remove the cover.

Figure 6-132 Remove the rear-top cover (2 of 2)

External panels, covers, doors, and scanner assembly   263

Internal assemblies

☀ **TIP:** For clarity, some photos in this chapter show components removed that would not be removed to service the product. If necessary, remove the components listed at the beginning of a procedure before proceeding to service the product.

Stapler assembly

Before proceeding, remove the following components:

● Automatic document feeder (ADF) assembly. See Automatic document feeder (ADF) on page 212.

● Control-panel overlay. See Control-panel overlay on page 218.

● Control-panel assembly. See Control-panel assembly on page 219.

● Rear-upper cover. See Rear-upper cover on page 236.

● Scanner assembly. See Scanner assembly on page 242.

● Front stapler cover and right-side stapler cover. See Front stapler cover and right-side stapler cover on page 249.

Remove the stapler assembly

1. Remove two screws.

   Figure 6-133 Remove the stapler assembly (1 of 2)

2. Lift up (callout 1) and remove the stapler assembly (callout 2).

Figure 6-134 Remove the stapler assembly (2 of 2)

Reinstall the stapler assembly

Insert the hooks on the stapler assembly (callout 1) into the chassis (callout 2), and then slide the stapler assembly down to engage the hooks.

Figure 6-135 Reinstall the stapler assembly

Stapler power supply

Before proceeding, remove the following components:

- Automatic document feeder (ADF) assembly. See Automatic document feeder (ADF) on page 212.

- Control-panel overlay. See Control-panel overlay on page 218.

- Control-panel assembly. See Control-panel assembly on page 219.

- Rear-upper cover. See Rear-upper cover on page 236.

- Scanner assembly. See Scanner assembly on page 242.

- Front stapler cover and right-side stapler cover. See Front stapler cover and right-side stapler cover on page 249.

Remove the stapler power supply

Disconnect one connector, and then remove the power supply.

Figure 6-136 Remove the stapler power supply

Interconnect board (ICB)

> **WARNING!** **Do not** remove the ICB from a product and then install it into a **different** product. Failure to follow this warning will result in severe damage to that product and cause it to be unusable. HP recommends that if you remove and replace the ICB, you should destroy the discarded ICB so that it can not accidentally be installed in a different product.

Before proceeding, remove the following components:

- Formatter PCA. See Formatter PCA on page 192.

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

Remove the ICB

> **NOTE:** To locate DC controller connector locations, see DC controller PCA on page 183.

1. Disconnect one connector (callouts 1; J105), and then remove one screw (callout 2).

   Figure 6-137 Remove the ICB (1 of 3)

   2

   1

2. Carefully rotate and slide the ICB up and away from the chassis, and then disconnect one connector (callout 3).

Figure 6-138 Remove the ICB (2 of 3)

3. Remove the ICB.

Figure 6-139 Remove the ICB (3 of 3)
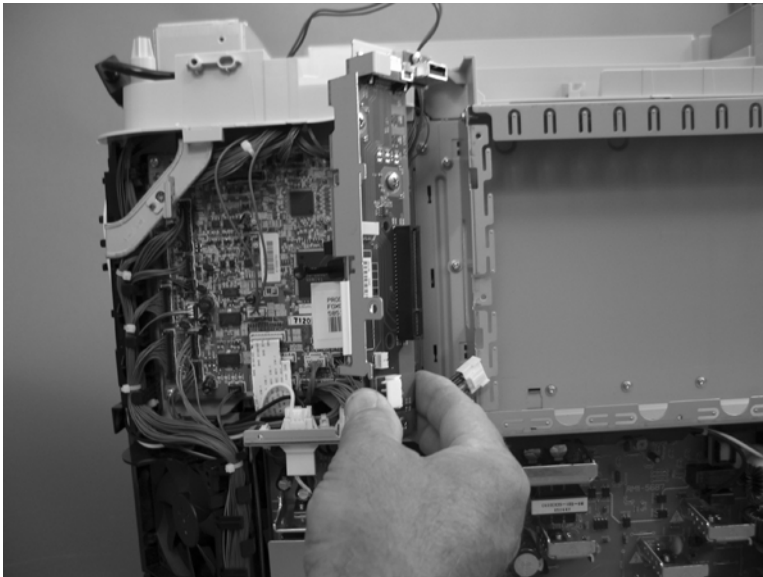
Reinstall the ICB

The ICB bracket (callout 1) must be properly engaged on the chassis (callout 2).

Figure 6-140 Reinstall the ICB

DC controller PCA and tray

Before proceeding, remove the following components:

- Formatter PCA. See Formatter PCA on page 192.

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

Remove the DC controller PCA and tray

⚠️ **CAUTION:** ESD-sensitive part.

💡 **TIP:** To access components behind the DC controller PCA, remove the PCA and the sheet-metal tray together. Disconnect all of the connectors on the PCA, and then remove five screws and the bracket, see Figure 6-141 Remove the DC controller PCA and tray (1 of 4) on page 270 and Figure 6-144 Remove the DC controller PCA and tray (4 of 4) on page 272.

1. Remove one screw (callout 1), and then remove the sheet-metal bracket (callout 2).

Figure 6-141 Remove the DC controller PCA and tray (1 of 4)

2

1

2. Disconnect all the connectors.

☼ **Reinstallation tip** The connector locations J133 and J134 are not used.

Figure 6-142 Remove the DC controller PCA and tray (2 of 4)

3. Remove four screws (callout 3), and then remove the DC controller PCA.

Figure 6-143 Remove the DC controller PCA and tray (3 of 4)

3

4. If necessary, remove four screws (callout 4), remove the wire guide (callout 5), and then remove the sheet-metal tray.

Figure 6-144 Remove the DC controller PCA and tray (4 of 4)
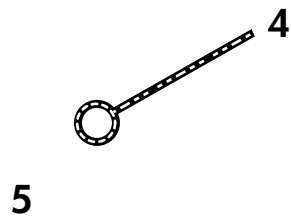
Low-voltage power supply (LVPS)

Before proceeding, remove the following components:

- Formatter PCA. See Formatter PCA on page 192.

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

NOTE: If you are removing the power supply for internal product access, it is recommended that you leave the ICB installed on the power supply assembly.

Remove the LVPS

△ **CAUTION:** ESD-sensitive part.

NOTE: The formatter cage is attached to the LVPS. Both components are removed as an assembly, and then the formatter cage is removed from the LVPS.

1. Disconnect six connectors (callout 1; J100, J101, J143 on the DC controller PCA).

NOTE: To locate DC controller connector locations, see DC controller PCA on page 183.

NOTE: If you are removing the power supply for internal product access, it is recommended that you leave the ICB installed on the power-supply assembly.

Figure 6-145 Remove the LVPS (1 of 10)

1

2. Push in on the locking tab to release the retainer (callout 2), and then separate the retainer from the assembly.

    📝 **NOTE:** The retainer remains attached to the wire harness, and is disengaged from the assembly.

    Figure 6-146 Remove the LVPS (2 of 10)

2

3. Remove three screws (callout 3), and then remove the handle (callout 4).

    Figure 6-147 Remove the LVPS (3 of 10)

4

3

4. Remove five screws (callout 5).

📝 **NOTE:** The illustration below shows the ICB removed.

Figure 6-148 Remove the LVPS (4 of 10)

5

5. Disconnect one connector (callout 6), and then remove the wire from the guide (callout 7).

Figure 6-149 Remove the (5 of 10)

6. Release one tab and lift up the wire cover.

Figure 6-150 Remove the (6 of 10)

7. Remove three screws (callout 8).

Figure 6-151 Remove the LVPS (7 of 10)

8

8. Rotate the formatter cage away from the top of the product.

Figure 6-152 Remove the LVPS (8 of 10)

9. Remove the assembly.

Figure 6-153 Remove the LVPS (9 of 10)
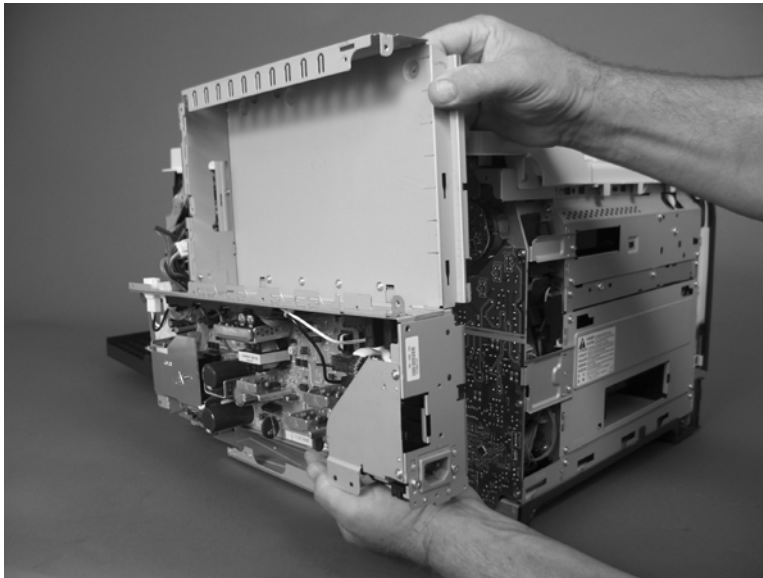
10. Remove four screws (callout 9), and then separate the formatter cage from the low-voltage power supply.

Figure 6-154 Remove the LVPS (10 of 10)

9

Scanner-control board (SCB)

Before proceeding, remove the following components:

- Automatic document feeder (ADF). See Automatic document feeder (ADF) on page 212.

- Control-panel overlay. See Control-panel overlay on page 218.

- Control-panel assembly. See Control-panel assembly on page 219.

- Rear-upper cover. See Rear-upper cover on page 236.

- Scanner assembly. See Scanner assembly on page 242.

Remove the SCB

NOTE: To replace the Peripheral Component Interconnect Express (PCI-E) cable, locate and remove the cable that connects the SCB to the ICB.

1. Place the scanner assembly glass-side down on a clean surface or piece of paper.

   CAUTION: Dust or debris can scratch the scanner glass and cause print-quality problems. If possible, place the scanner on a clean lint-free cloth.

2. Release two thumb screws, and then remove one cable.

   Figure 6-155 Remove the SCB (1 of 8)

3. Release one retainer (callout 1), disconnect two connectors (callout 2), and then release the wires from the guides (callout 3).

Figure 6-156 Remove the SCB (2 of 8)

4. Release one tab (callout 1), and then disengage the ferrite assembly (callout 2).

Figure 6-157 Remove the SCB (3 of 8)

5. Disconnect one FFC, and then remove the ferrite assembly from the FFC.

Figure 6-158 Remove the SCB (4 of 8)

6. Release two retainers (callout 1), disconnect two connectors (callout 2), and then move the wires to the side.

Figure 6-159 Remove the (5 of 8)

7. Remove two screws.

Figure 6-160 Remove the SCB (6 of 8)

8. Gently slide the SCB, and then release two wire harnesses (callout 1).

Figure 6-161 Remove the SCB (7 of 8)

9. Remove the SCB.

Figure 6-162 Remove the SCB (8 of 8)

Reinstall the SCB

When reinstalling the SCB, fully engage the guides on both sides of the SCB with the slots on the scanner assembly.

☼ **Reinstallation tip**   Make sure that the control-panel USB cable is properly routed. The scanner assembly will not correctly seat on the product if the cable is not properly routed.

Figure 6-163 Reinstalling the SCB

Pickup roller (Tray 1)

CAUTION: Do not touch the spongy roller surface unless you are replacing the roller. Skin oils on the roller can cause paper pickup problems.

1. Open Tray 1, release two tabs (callout 1), and then rotate the roller cover away from the product to remove it.

   TIP: Push down along the top edge of the cover to easily release the tabs.

   Figure 6-164 Remove the pickup roller (Tray 1) (1 of 2)

2. Release two tabs and rotate the roller body away from the product to remove it.

   TIP: It might be easier to release the Tray 1 pickup-roller solenoid plate, and then manually rotate the roller into the correct position to remove the roller.

   Figure 6-165 Remove the pickup roller (Tray 1) (2 of 2)

Delivery fan, cartridge fan, and environmental sensor

Before proceeding, remove the following components:

● Left cover. See .

Remove the delivery fan, cartridge fan, and environmental sensor

1. Remove five screws (callout 1), and then remove the sheet-metal plate (callout 2).

   Figure 6-166 Remove the delivery fan, cartridge fan, and environmental sensor (1 of 9)
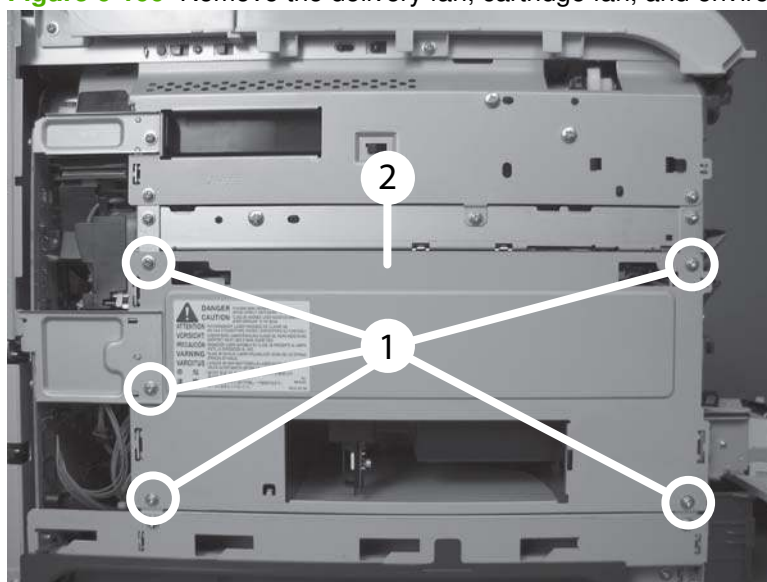
2. Disconnect five connectors (callout 3).

   NOTE: Disconnect the larger connector on the right side from the bottom. Disconnect the two smaller connectors on the right side from the top.

   Figure 6-167 Remove the delivery fan, cartridge fan, and environmental sensor (2 of 9)
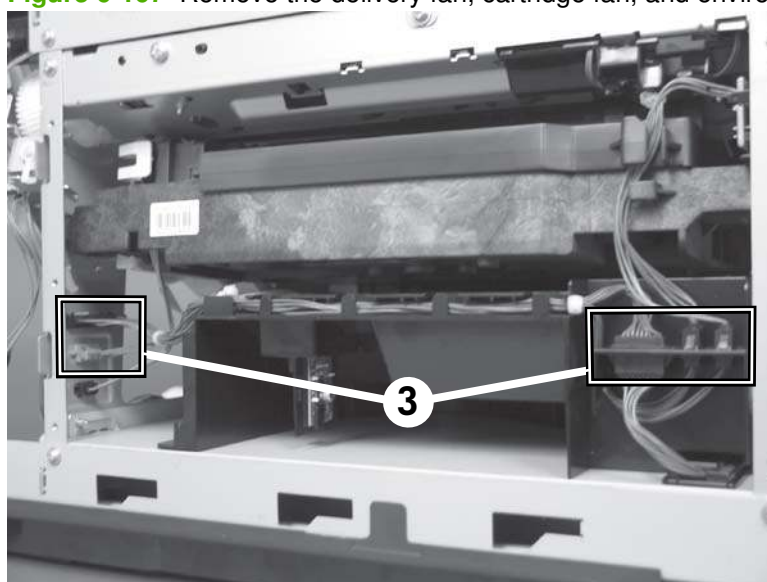
3. Release two tabs (callout 4), and then slide the delivery-fan and cartridge-fan assembly toward the power-supply side of the product to release it.

Figure 6-168 Remove the delivery fan, cartridge fan, and environmental sensor (3 of 9)
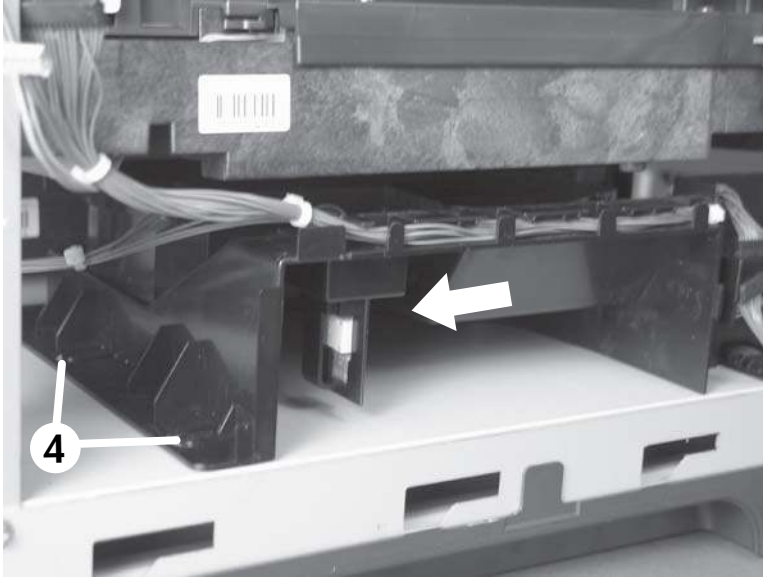
4. Pull the assembly slightly out of the product, disconnect two connectors (callout 5), and then to remove the assembly.

Figure 6-169 Remove the delivery fan, cartridge fan, and environmental sensor (4 of 9)

5

5. Remove one screw (callout 6), and then remove the cover (callout 7).

Figure 6-170 Remove the delivery fan, cartridge fan, and environmental sensor (5 of 9)
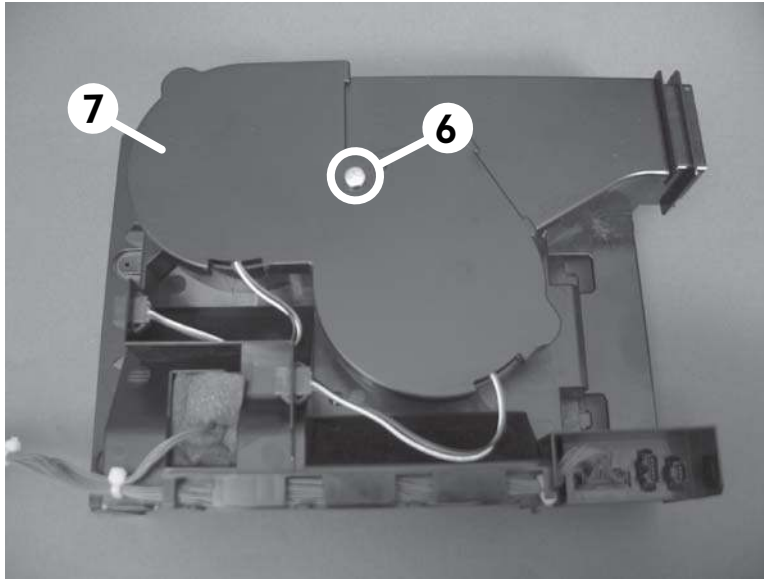
6. Disconnect two connectors (callout 8), and then remove the fans (callout 9).

Figure 6-171 Remove the delivery fan, cartridge fan, and environmental sensor (6 of 9)
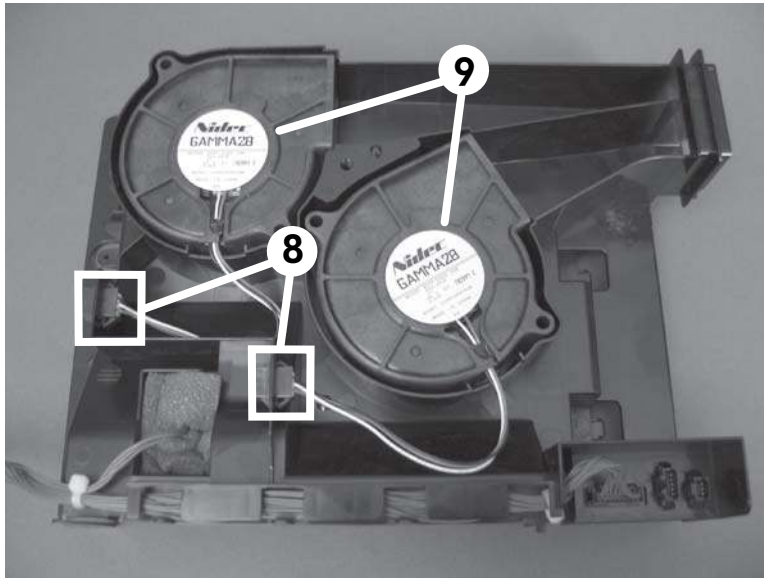
7. Remove the antistatic foam (callout 10).

Figure 6-172 Remove the delivery fan, cartridge fan, and environmental sensor (7 of 9)
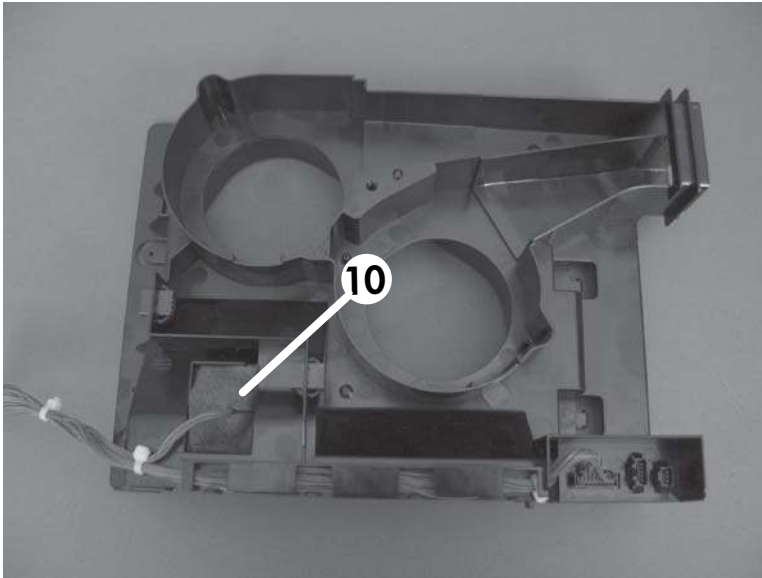
8. Release one tab (callout 11).

Figure 6-173 Remove the delivery fan, cartridge fan, and environmental sensor (8 of 9)
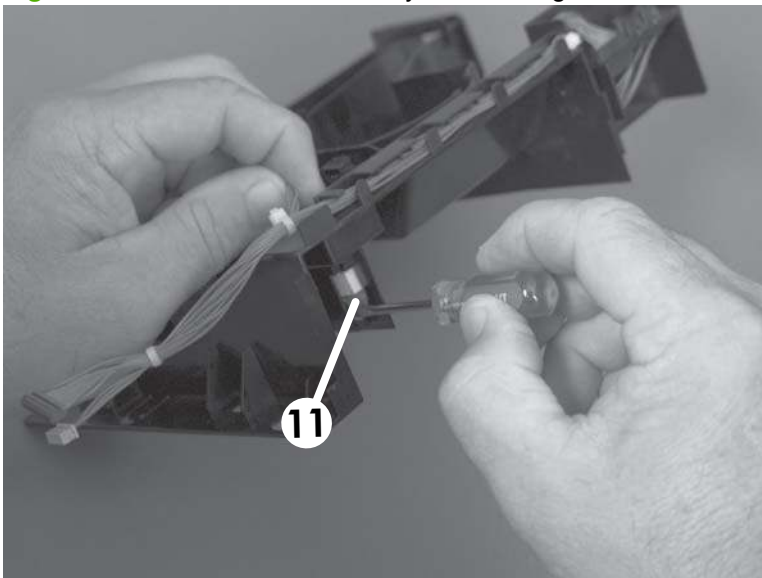
9. Disconnect one connector (callout 12), and then remove the environmental sensor.

CAUTION: ⚠ ESD-sensitive part.

Figure 6-174 Remove the delivery fan, cartridge fan, and environmental sensor (9 of 9)
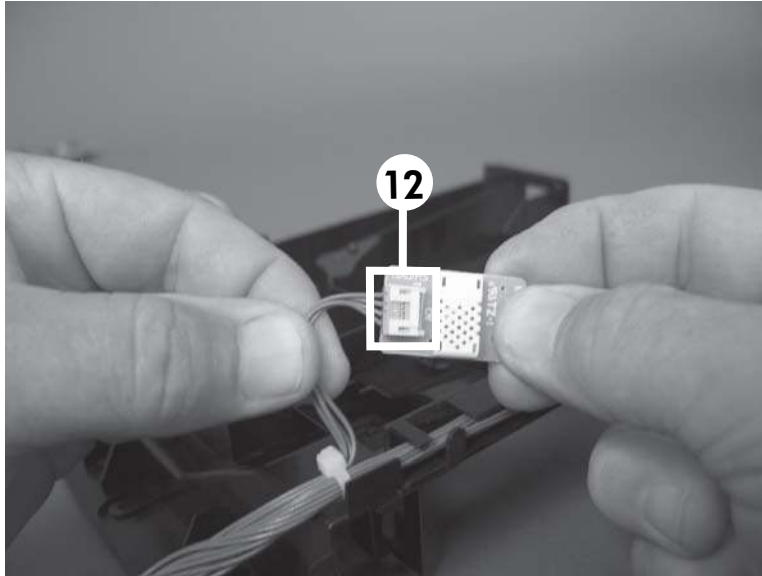
Toner-collection sensor

Before proceeding, remove the following components:

- Toner-collection unit. See .

- Left cover. See .

Remove the toner-collection sensor

1. Remove five screws (callout 1), and then remove the sheet-metal plate (callout 2).

   Figure 6-175 Remove the toner-collection sensor (1 of 4)
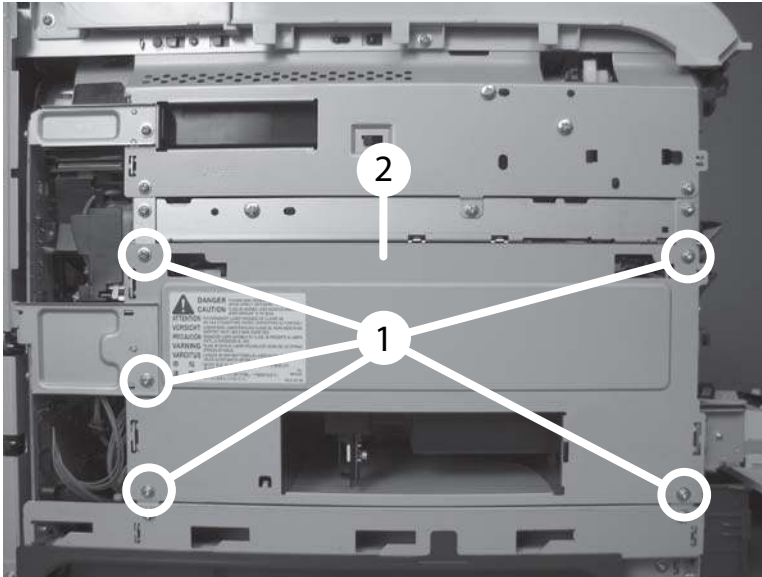
2. Disconnect one connector (callout 3).

   Figure 6-176 Remove the toner-collection sensor (2 of 4)
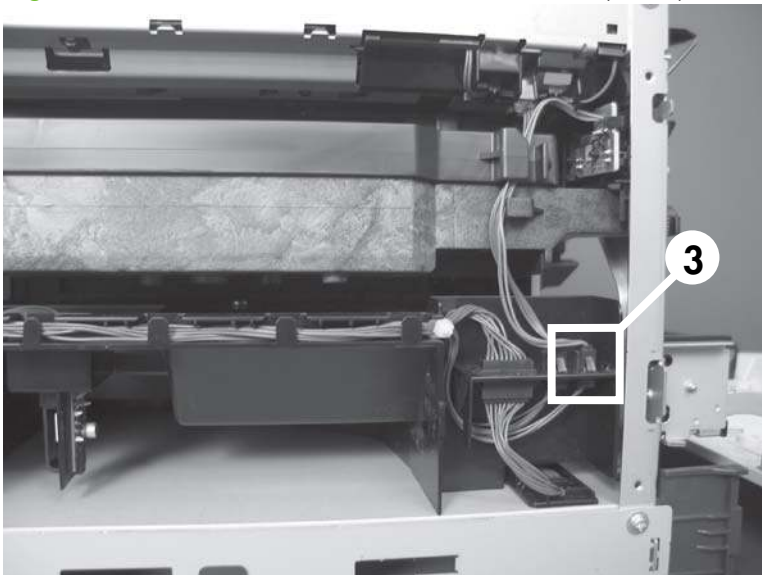
3. Remove one screw (callout 4).

☼ **Reinstallation tip** When you reinstall the sensor, make sure that the tab (callout 5) on the sensor body completely engages the slot in the product chassis.

Figure 6-177 Remove the toner-collection sensor (3 of 4)
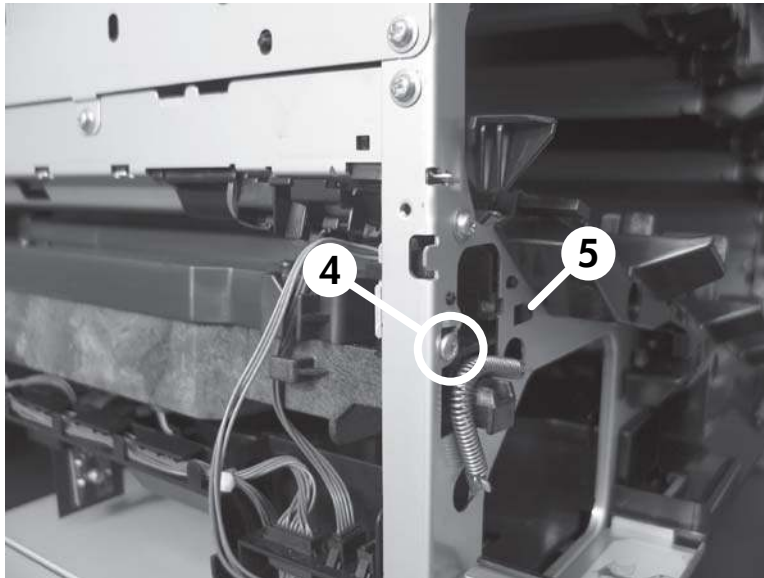
4. Remove the toner-collection sensor.

Figure 6-178 Remove the toner-collection sensor (4 of 4)
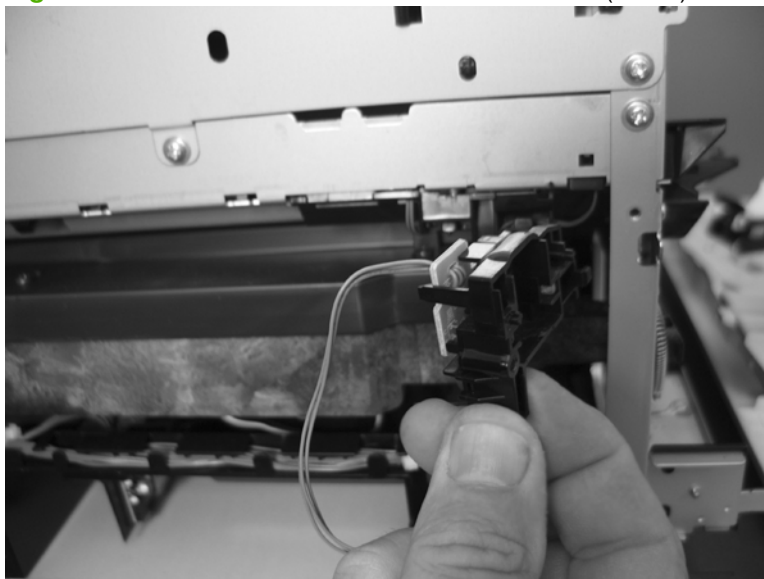
Residual-toner-feed motor

Before proceeding, remove the following components:

- Toner-collection unit. See Toner-collection unit on page 190.

- Intermediate transfer belt (ITB). See Intermediate transfer belt (ITB) on page 209.

- Left cover. See Left cover on page 233.

Remove the residual-toner-feed motor

📝 **NOTE:** Be careful. Do not dislodge the residual-toner collection door when you remove the assembly. If the door becomes dislodged, see Reinstall the residual-toner collection door on page 296 to reinstall it.

1. Release one tab (callout 1) while you support the cover (callout 2).

   Figure 6-179 Remove the residual-toner-feed motor (1 of 7)

   1

   2

2. Remove the cover.

Figure 6-180 Remove the residual-toner-feed motor (2 of 7)
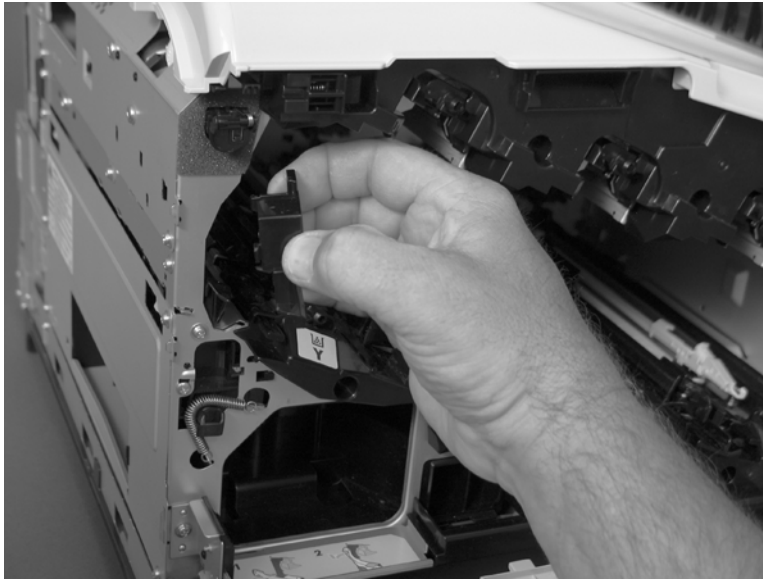
3. Disconnect one connector (callout 3).

Figure 6-181 Remove the residual-toner-feed motor (3 of 7)

3

4. Support the assembly, and then remove two screws (callout 4).

Figure 6-182 Remove the residual-toner-feed motor (4 of 7)

4

5. Be careful. Do not dislodge the residual-toner collection door when you remove the assembly. If the door becomes dislodged, see to reinstall it.

Figure 6-183 Remove the residual-toner-feed motor (5 of 7)

6. Push the assembly into the product to release it.

Figure 6-184 Remove the residual-toner-feed motor (6 of 7)
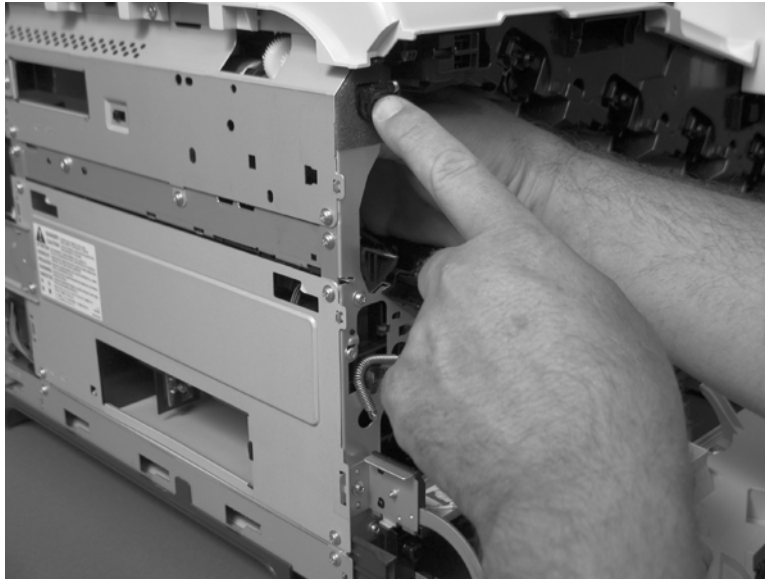
7. Remove the motor.

Figure 6-185 Remove the residual-toner-feed motor (7 of 7)

Reinstall the residual-toner collection door

Snap the residual-toner collection door into the holders on the assembly. Make sure that the spring is correctly installed.

Figure 6-186 Reinstall the residual-toner collection door

Registration density (RD) sensor assembly

Before proceeding, remove the following components:

- Secondary transfer assembly. See Secondary transfer assembly on page 207.

- Intermediate transfer belt (ITB). See Intermediate transfer belt (ITB) on page 209.

Remove the RD sensor assembly

1. Remove two screws (callout 1).

   Figure 6-187 Remove the RD sensor assembly (1 of 6)
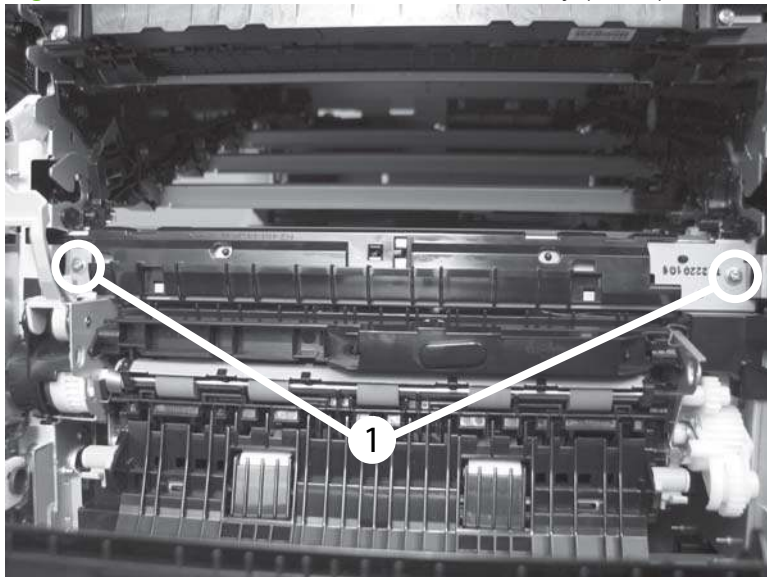
2. Slide the shutter toward the right side of the product. Keep the shutter in this position for the following step.

   Figure 6-188 Remove the RD sensor assembly (2 of 6)
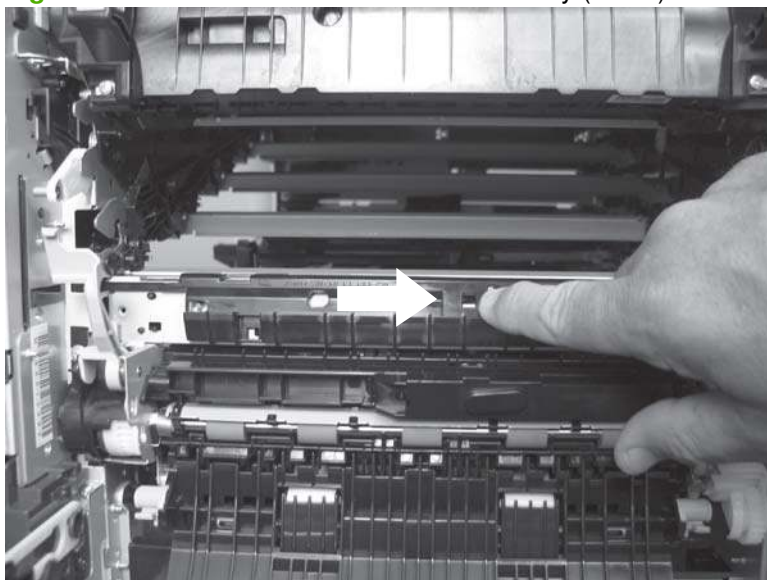
3. Carefully separate the assembly from the product. The assembly wire harnesses are still attached to the product.

CAUTION: Do not damage the shutter as it passes through the chassis.

Figure 6-189 Remove the RD sensor assembly (3 of 6)
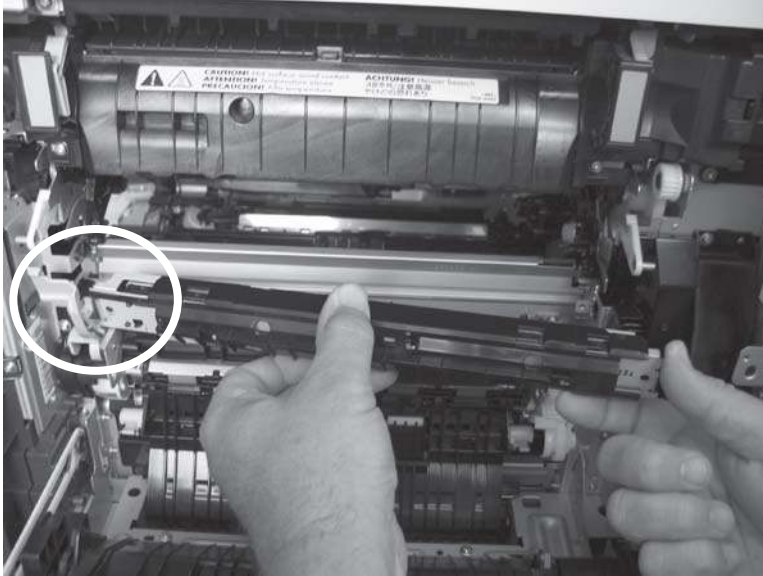
4. Disconnect two connectors (callout 2) on the back side of the assembly.

Figure 6-190 Remove the RD sensor assembly (4 of 6)
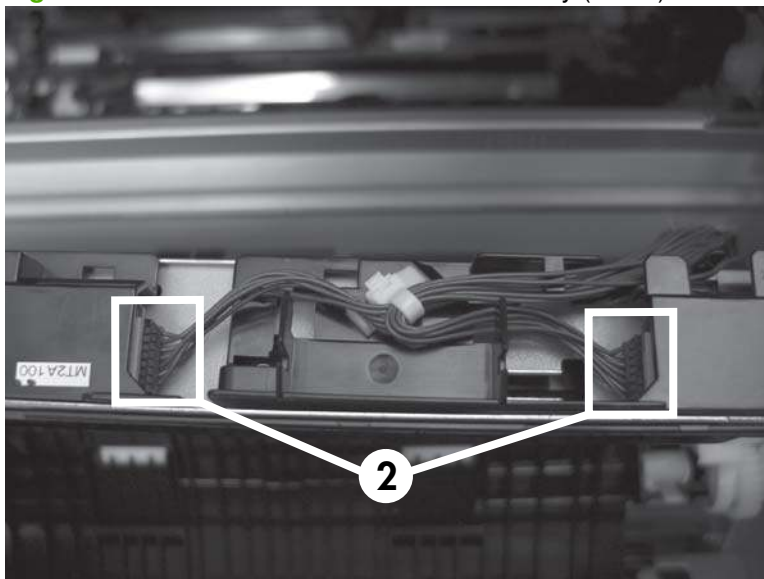
5. Push in on the locking tab to release the retainer (callout 3), and then separate the retainer from the assembly.

NOTE: The retainer remains attached to the wire harness, and disengages from the assembly.

Figure 6-191 Remove the RD sensor assembly (5 of 6)
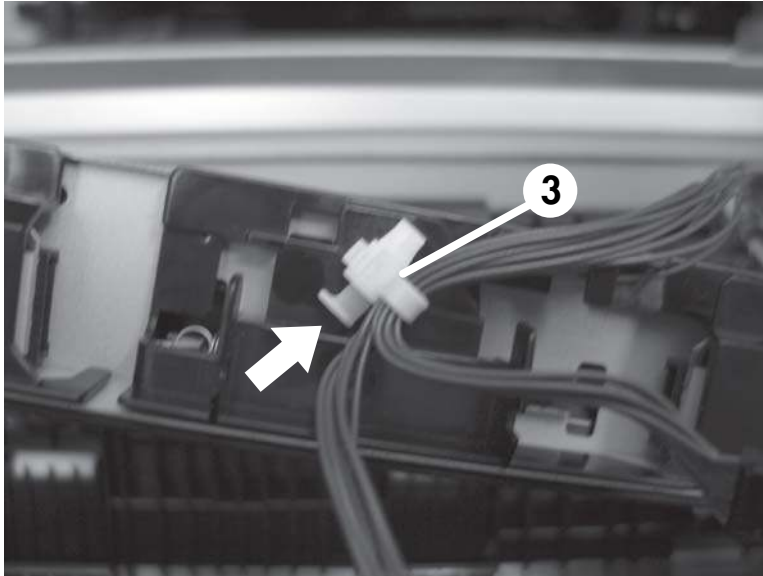
6. Remove the assembly.

Figure 6-192 Remove the RD sensor assembly (6 of 6)

Power-supply fan and fan duct

Before proceeding, remove the following components:

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

Remove the power-supply fan and fan duct

1. Disconnect one connector (callout 1; J119) and release the wire harnesses from the guide (callout 2).

   NOTE: To locate DC controller connector locations, see DC controller PCA on page 183.

   Figure 6-193 Remove the power-supply fan (1 of 4)

1

2

2. **To remove the fan only**: Release two tabs (callout 3), and then remove the fan from the fan duct.

☼ **Reinstallation tip** When the fan is reinstalled, the air must flow into the product. Look at the arrows embossed on the fan frame that indicate air flow direction.

Figure 6-194 Remove the power-supply fan (2 of 4)

3

3. **To remove the fan and fan duct**: Remove one screw (callout 4), and then release the wire harnesses from the guides on the fan duct.

Figure 6-195 Remove the power-supply fan (3 of 4)

4

4. **To remove the fan and fan duct**: Release one tab (callout 5), and then remove the fan and fan duct (callout 6).

    Figure 6-196 Remove the power-supply fan (4 of 4)

    6

    5

Registration assembly

Before proceeding, remove the following components:

- Secondary transfer assembly. See <u>Secondary transfer assembly on page 207</u>.

- Intermediate transfer belt (ITB). See <u>Intermediate transfer belt (ITB) on page 209</u>.

- Right-rear cover. See <u>Right-rear cover on page 231</u>.

- Left cover. See <u>Left cover on page 233</u>.

- Rear cover. See <u>Rear cover on page 238</u>.

- Rear-upper cover. See <u>Rear-upper cover on page 236</u>.

- Registration density (RD) sensor assembly. See <u>Registration density (RD) sensor assembly on page 297</u>.

  ☼ **TIP:** Removing the RD sensor assembly makes it much easier to reinstall the registration assembly.

- Power-supply fan and fan duct. See <u>Power-supply fan and fan duct on page 300</u>.

Remove the registration assembly

NOTE: If a replacement registration assembly is installed, you must use the control-panel menus to reset the registration-roller count.

1. Remove two screws (callout 1).

   Figure 6-197 Remove the registration assembly (1 of 8)

1

2. Pull down on the cover to release one tab, and then rotate the cover away from the product to remove it.

Figure 6-198 Remove the registration assembly (2 of 8)

3. Release two green latches (callout 2), and then lower the feed guide.

💡 **Reinstallation tip**   Make sure that the feed guide snaps into the closed position when you reinstall the registration assembly.

Figure 6-199 Remove the registration assembly (3 of 8)

2

4. Remove three screws (callout 3).

Figure 6-200 Remove the registration assembly (4 of 8)

3

5. Separate the assembly from the product, release one tab (callout 4), and then remove the cover (callout 5).

CAUTION: The assembly is still attached to the product by the wire harnesses.

Figure 6-201 Remove the registration assembly (5 of 8)

4

5

6. Disconnect one connector (callout 6), and then release the wire harness from the retainer.

Figure 6-202 Remove the registration assembly (6 of 8)

6

7. Disconnect three connectors (callout 7) on the back side of the assembly, and then release the wires from the retainers.

Figure 6-203 Remove the registration assembly (7 of 8)

7

8. Remove the assembly.

💡 **Reinstallation tip** When you reinstall the registration assembly, make sure that it is correctly positioned in the product. The tabs on the assembly must fit into the slots in the product chassis and the assembly should fit securely up against the product chassis.

Figure 6-204 Remove the registration assembly (8 of 8)
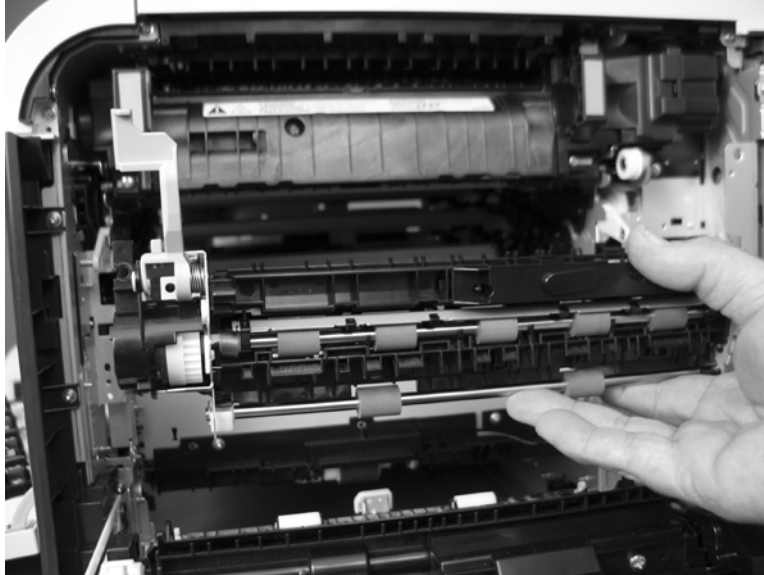
High-voltage power supply lower

Before proceeding, remove the following components:

- Formatter PCA. See Formatter PCA on page 192.

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

  ☼ **TIP:** For internal product access, you can remove the ICB and the low-voltage power supply as a single component.

- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 273.

Remove the high-voltage power supply lower

△ **CAUTION:** 　ESD-sensitive part.

1. Disconnect two connectors (callout 1), and then remove three screws (callout 2).

   Figure 6-205 Remove the high-voltage power supply lower (1 of 4)

   2

   1

2. Use a small flat blade screwdriver to carefully remove three locking clips (callout 3).

CAUTION: Do not damage the PCA with the screwdriver.

Figure 6-206 Remove the high-voltage power supply lower (2 of 4)

3

3. Disconnect one connector (callout 4; J114), and then release five clips (callout 5).

NOTE: To locate DC controller connector locations, see DC controller PCA on page 183.

Figure 6-207 Remove the high-voltage power supply lower (3 of 4)

4

5

4. Rotate the top of the power supply away from the chassis, and then disconnect one connector (callout 6). Remove the power supply

Figure 6-208 Remove the high-voltage power supply lower (4 of 4)

6

Reinstall the high-voltage power supply lower

When you reinstall the power supply, look through the holes in the PCA and make sure that the high-voltage contact springs are correctly seated against the PCA.

Figure 6-209 Reinstall the high-voltage power supply lower

Developing-disengagement motor

Before proceeding, remove the following components:

- Formatter PCA. See Formatter PCA on page 192.

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

☼ **TIP:** For internal product access, you can remove the ICB and the low-voltage power supply as a single component.

- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 273.

- High-voltage power supply lower. See High-voltage power supply lower on page 308.

Remove the developing-disengagement motor

1. Remove two screws (callout 1).

   Figure 6-210 Remove the developing-disengagement motor (1 of 2)

   1

2. Remove the motor.

Figure 6-211 Remove the developing-disengagement motor (2 of 2)
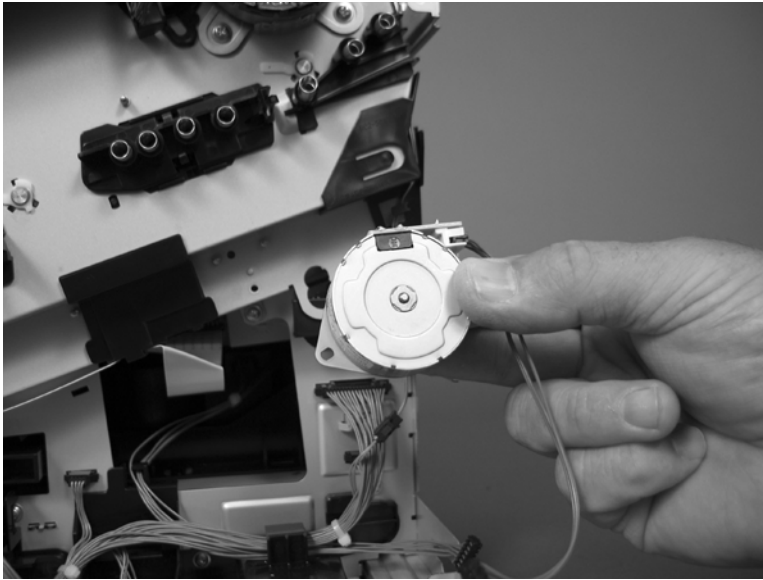
Pickup motor

Before proceeding, remove the following components:

- Formatter PCA. See Formatter PCA on page 192.

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

☼ **TIP:** For internal product access, you can remove the ICB and the low-voltage power supply as a single component.

- Low-voltage power supply. See Low-voltage power supply (LVPS) on page 273.

- High-voltage power supply lower. See High-voltage power supply lower on page 308.

Remove the pickup motor

Disconnect one connector (callout 1), remove two screws (callout 2), and then remove the motor.

Figure 6-212 Remove the pickup motor

Lifter-drive assembly

Before proceeding, remove the following components:

- Formatter PCA. See Formatter PCA on page 192.

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

☼ **TIP:** For internal product access, you can remove the ICB and the low-voltage power supply as a single component.

- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 273.

- High-voltage power supply lower. See High-voltage power supply lower on page 308.

Remove the lifter-drive assembly

1. Disconnect three connectors (callout 1), and then release the wire harness from the retainers.

Figure 6-213 Remove the lifter-drive assembly (1 of 2)

1

2. Remove five screws (callout 2), and then remove the assembly.

Figure 6-214 Remove the lifter-drive assembly (2 of 2)

2

Cassette-pickup drive assembly

Before proceeding, remove the following components:

- Formatter PCA. See Formatter PCA on page 192.

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

    ☼ **TIP:** For internal product access, you can remove the ICB and the low-voltage power supply as a single component.

- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 273.

- High-voltage power supply lower. See High-voltage power supply lower on page 308.

Remove the cassette-pickup drive assembly

📝 **NOTE:** To remove the pickup motor only, see Pickup motor on page 313.

1. Remove one screw (callout 1), and then remove the sheet-metal bracket (callout 2).

    Figure 6-215 Remove the cassette-pickup drive assembly (1 of 10)

2

1

2. Disconnect six connectors (callout 3; J106, J107, J108, J137, J138, J140).

📝 **NOTE:** To locate DC controller connector locations, see DC controller PCA on page 183.

Figure 6-216 Remove the cassette-pickup drive assembly (2 of 10)

3

3. Disconnect one connector (callout 4; J119), remove one screw (callout 5), and then release the wire harness from the guides.

📝 **NOTE:** To locate DC controller connector locations, see DC controller PCA on page 183.

Figure 6-217 Remove the cassette-pickup drive assembly (3 of 10)

4

5

4. Release one tab (callout 6), and then remove the fan and fan duct (callout 7).

Figure 6-218 Remove the cassette-pickup drive assembly (4 of 10)

7

6

5. Disconnect five connectors (callout 8; J110, J111 on the DC controller PCA), release the FFCs from the guide (callout 9), and then release the wire harnesses from the guides.

NOTE: To locate DC controller connector locations, see DC controller PCA on page 183.

Figure 6-219 Remove the cassette-pickup drive assembly (5 of 10)

8

9
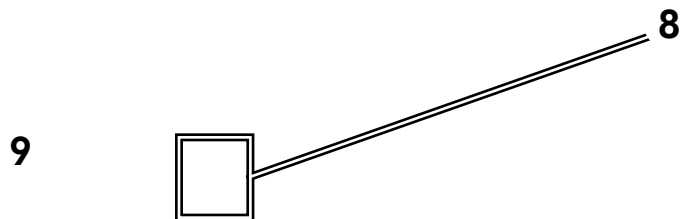
6. Release one tab (callout 10), and then remove the guide.

Figure 6-220 Remove the cassette-pickup drive assembly (6 of 10)

10

7. Release one tab (callout 11), and then remove the guide.

Figure 6-221 Remove the cassette-pickup drive assembly (7 of 10)
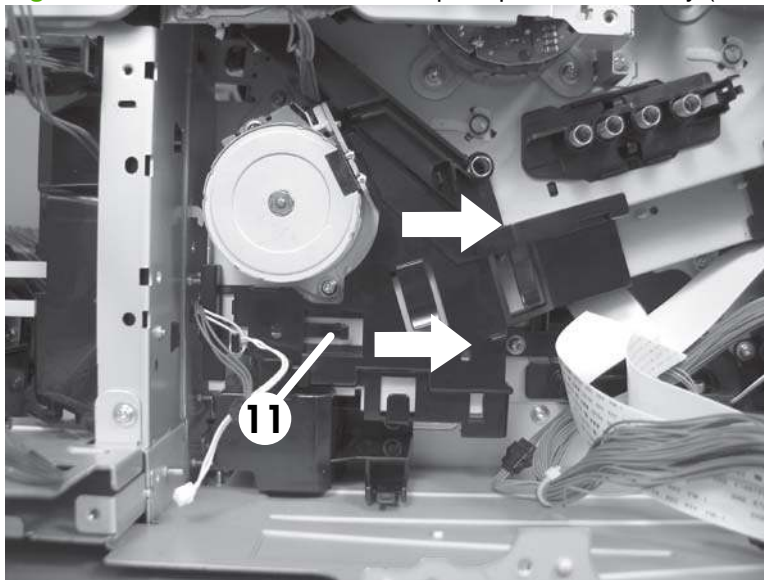
8. Remove two screws (callout 12), and then remove the high-voltage bracket (callout 13).

Figure 6-222 Remove the cassette-pickup drive assembly (8 of 10)
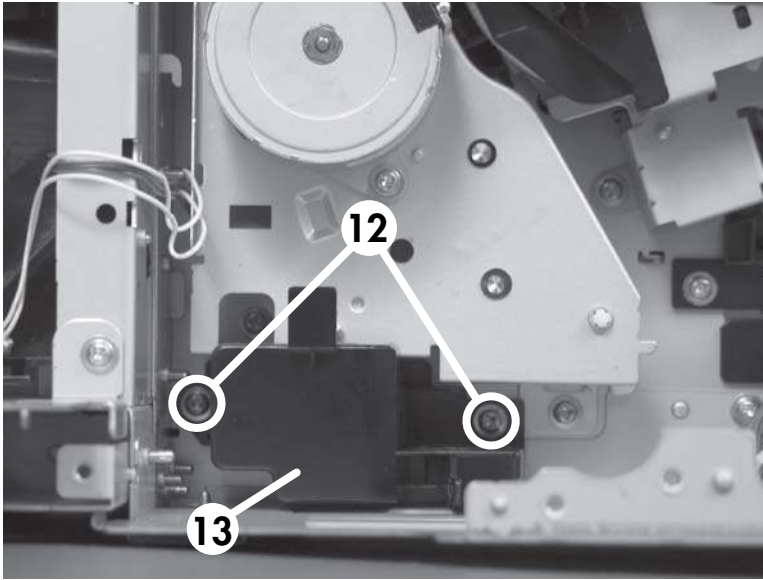
9. Remove three screws (callout 14).

Figure 6-223 Remove the cassette-pickup drive assembly (9 of 10)
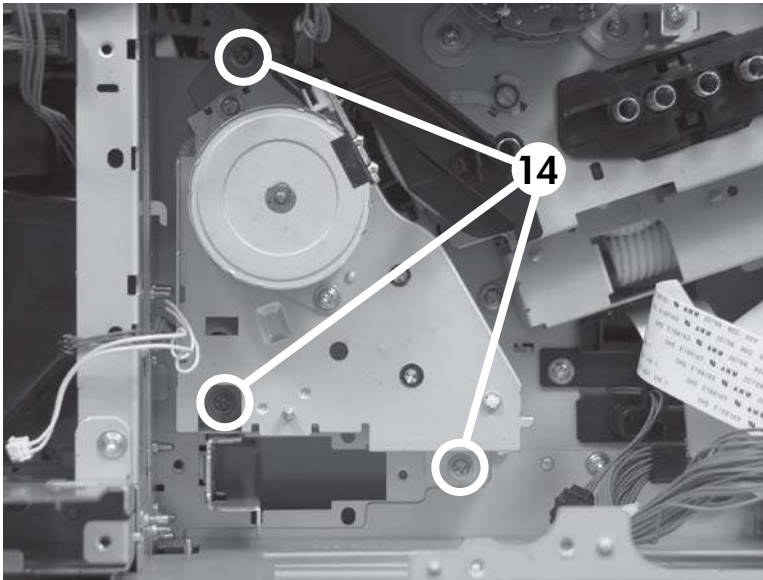
10. Carefully remove the assembly.

CAUTION: The gears, arm, and spring on the assembly are not captive. Use your finger to secure the arm and spring as you remove the assembly. If the gears, arm, or spring become dislodged, see .

Figure 6-224 Remove the cassette-pickup drive assembly (10 of 10)
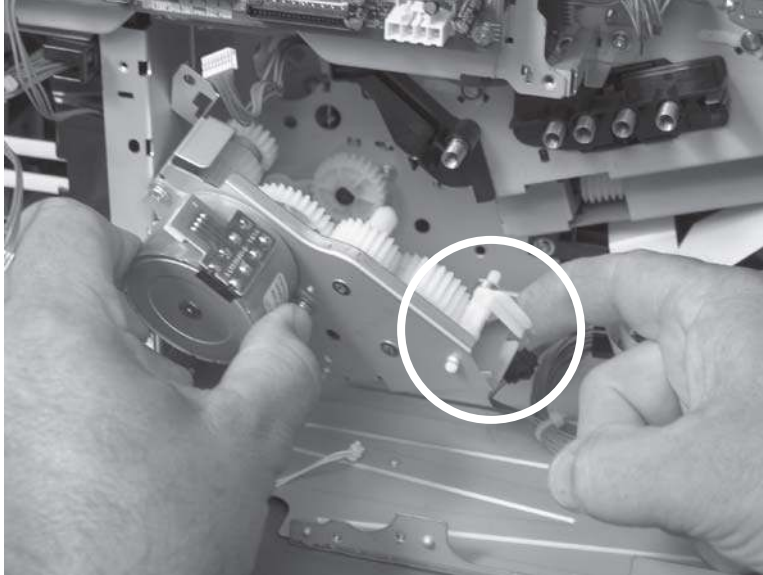
Reinstall the cassette-pickup drive assembly

1. Make sure that the spring-loaded gear (callout 1) is correctly installed.

Figure 6-225 Reinstall the cassette-pickup drive assembly (1 of 3)
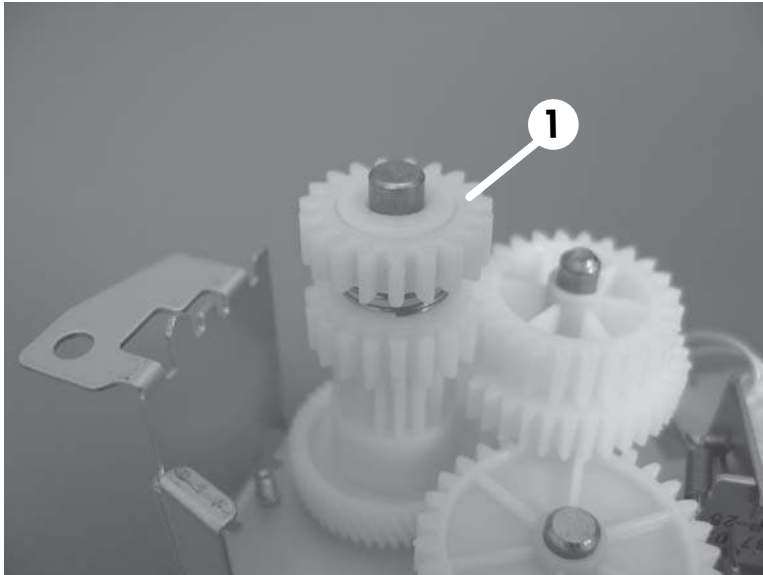
2. Make sure that the spring (callout 2) is correctly installed.

Figure 6-226 Reinstall the cassette-pickup drive assembly (2 of 3)
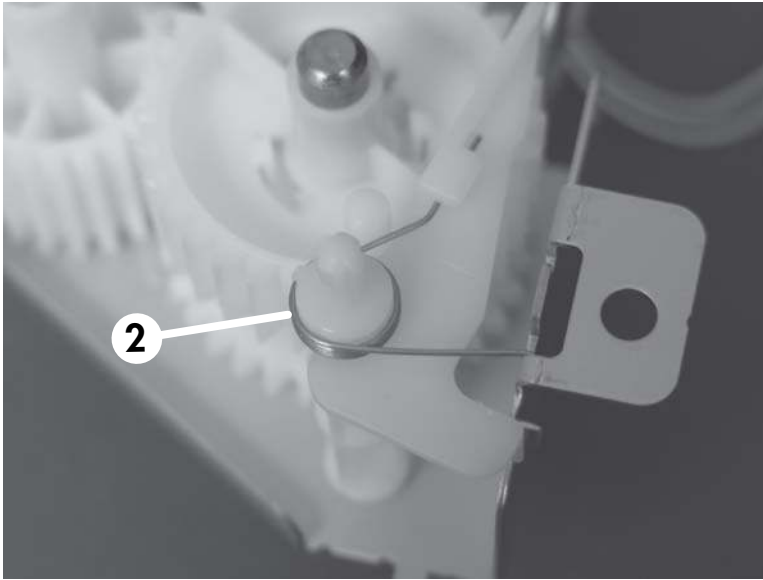
3. Make sure that the gears, arm, and spring are correctly installed.

Figure 6-227 Reinstall the cassette-pickup drive assembly (3 of 3)
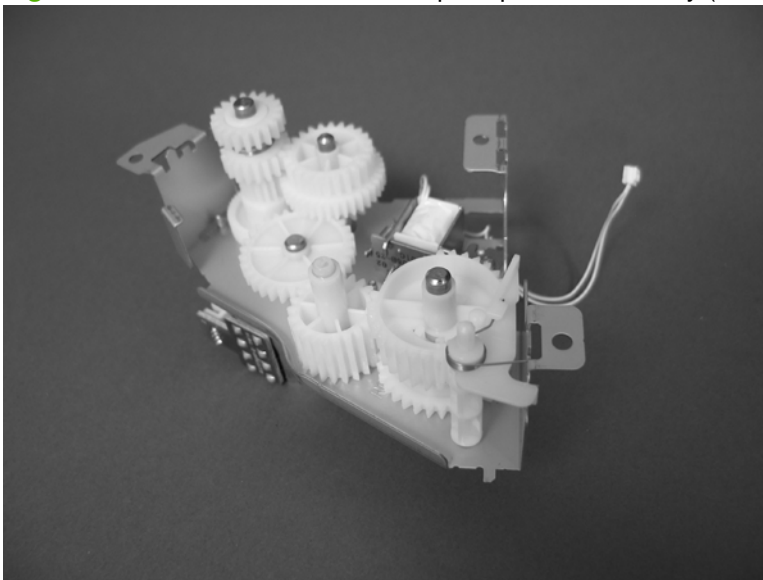
Cassette-pickup assembly

Before proceeding, remove the following components:

- Formatter PCA. See Formatter PCA on page 192.

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

☼ **TIP:** For internal product access, you can remove the ICB and the low-voltage power supply as a single component.

- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 273.

- Registration assembly. See Registration assembly on page 303.

- High-voltage power supply lower. See High-voltage power supply lower on page 308.

- Cassette-pickup drive assembly. See Cassette-pickup drive assembly on page 316.

Remove the cassette-pickup assembly

1. Release one tab (callout 1), and then remove the gear (callout 2).

   Figure 6-228 Remove the cassette-pickup assembly (1 of 3)

2

1

2. Remove two screws (callout 3).

Figure 6-229 Remove the cassette-pickup assembly (2 of 3)

3

3. Remove the assembly.

Figure 6-230 Remove the cassette-pickup assembly (3 of 3)

Laser/scanner assembly (Y/M)

Before proceeding, remove the following components:

- Toner collection unit. See Toner-collection unit on page 190.

- Formatter PCA. See Formatter PCA on page 192.

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

  ☆ **TIP:** For internal product access, you can remove the ICB and the low-voltage power supply as a single component.

- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 273.

- High-voltage power supply lower. See High-voltage power supply lower on page 308.

Remove the laser/scanner assembly (Y/M)

1. Remove five screws (callout 1), and then remove the sheet-metal plate (callout 2).

Figure 6-231 Remove the laser/scanner assembly (Y/M) (1 of 12)
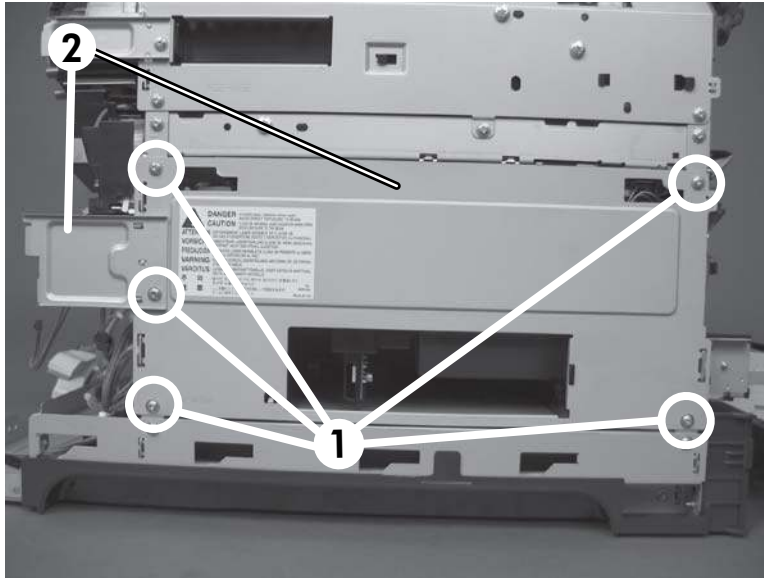
2. Disconnect in-line one connector (callout 3), and then release the wire harnesses from the guide (callout 4).

Figure 6-232 Remove the laser/scanner assembly (Y/M) (2 of 12)
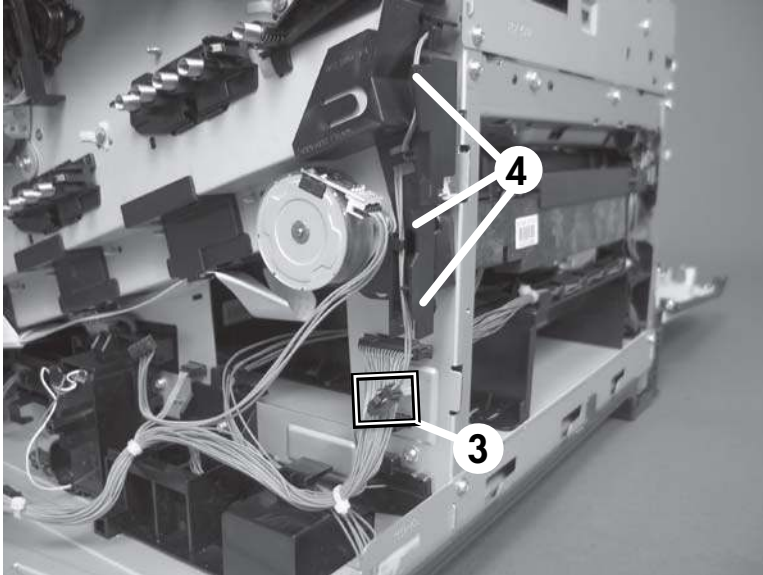
3. Release one tab (callout 5), and then remove the guide (callout 6).

Figure 6-233 Remove the laser/scanner assembly (Y/M) (3 of 12)
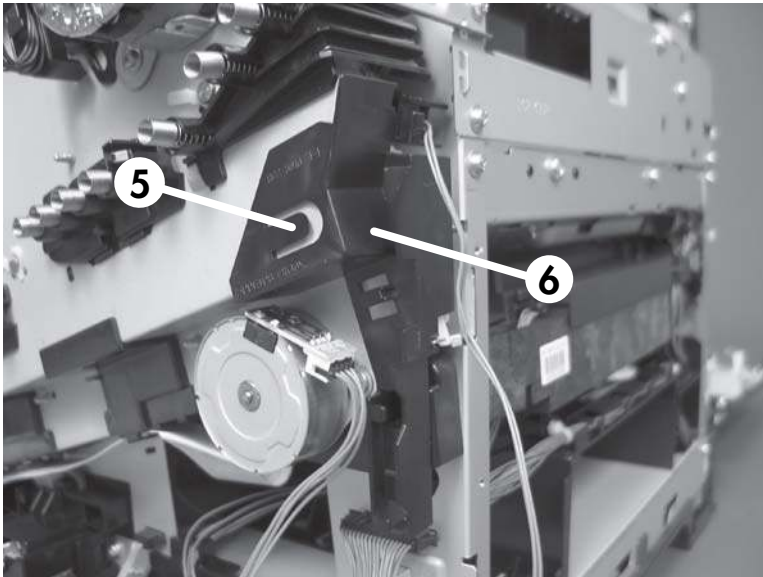
4. Remove one screw (callout 7), and then remove the cover (callout 8).

Figure 6-234 Remove the laser/scanner assembly (Y/M) (4 of 12)
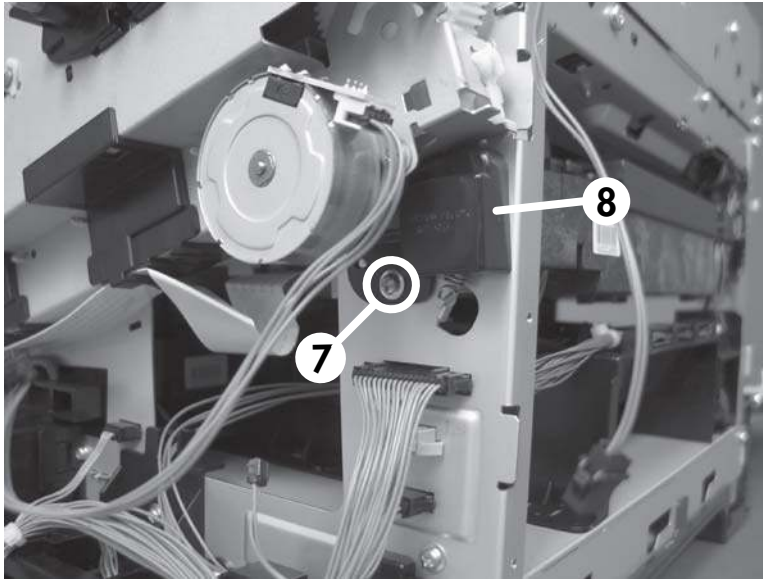
5. Disconnect one FFC (callout 9), and then release one spring (callout 10).

CAUTION: The spring is not captive. Do not lose the spring when it is removed. Use a pair of needle-nose pliers to safely retain the spring when it is removed. Do not use a flat blade screwdriver to remove the spring; the spring could forcibly leave the product and strike you.

Reinstallation tip When you reinstall the spring, make sure that the laser/scanner fits tightly up against the product chassis, and make sure that the FFC is fully seated in the connector. The locator tabs on the front and rear of the scanner must be firmly seated in the slots in the chassis.

Figure 6-235 Remove the laser/scanner assembly (Y/M) (5 of 12)
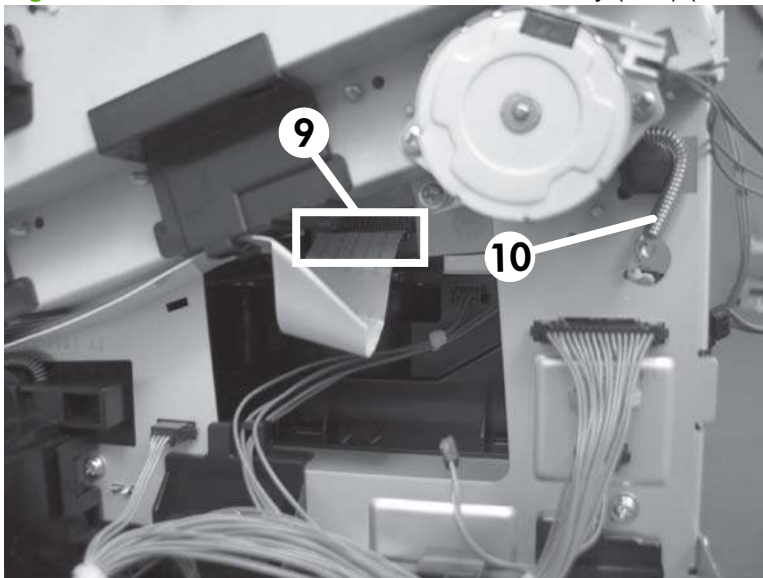
6. Disconnect six connectors (callout 11).

📝 **NOTE:** Disconnect the larger connector on the right side from the bottom. Disconnect the two smaller connectors on the right side from the top.

Figure 6-236 Remove the laser/scanner assembly (Y/M) (6 of 12)
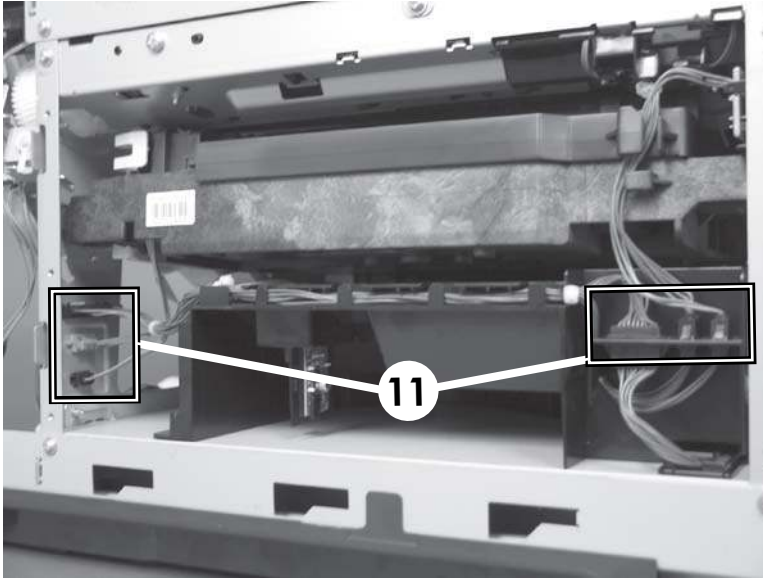
7. Release two tabs (callout 12), and then slide the fan assembly toward the power-supply side of the product to release it.

Figure 6-237 Remove the laser/scanner assembly (Y/M) (7 of 12)
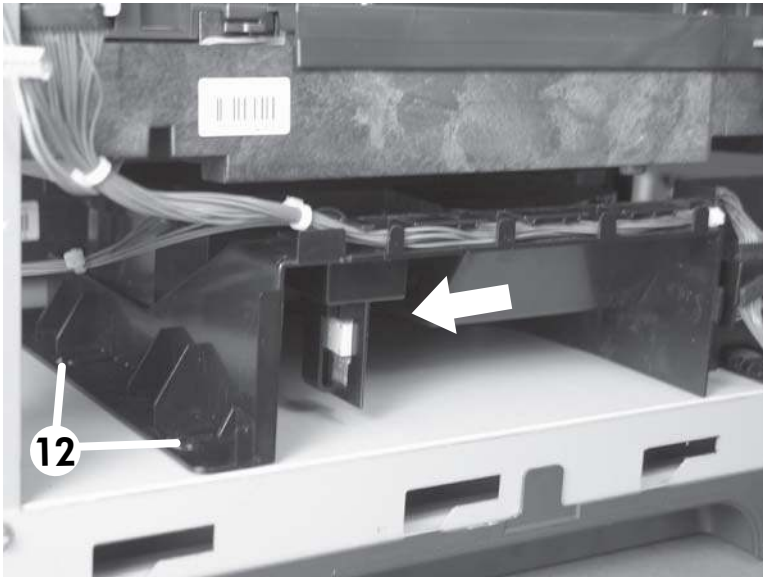
8. Pull the fan assembly slightly out of the product, disconnect two connectors (callout 13), and then remove the assembly.

Figure 6-238 Remove the laser/scanner assembly (Y/M) (8 of 12)

13

9. Remove one screw (callout 14), and then release one spring (callout 15).

CAUTION: The spring is not captive. Do not lose the spring when it is removed. Use a pair of needle-nose pliers to safely retain the spring when it is removed. Do not use a flat blade screwdriver to remove the spring; the spring could forcibly leave the product and strike you.

Reinstallation tip When the laser/scanner is properly positioned in the chassis, the plastic parts which protrude at the front and rear of the product will be firmly seated against the locator tabs on the chassis. Verify that the assembly is correctly seated, and then install the spring.

Figure 6-239 Remove the laser/scanner assembly (Y/M) (9 of 12)
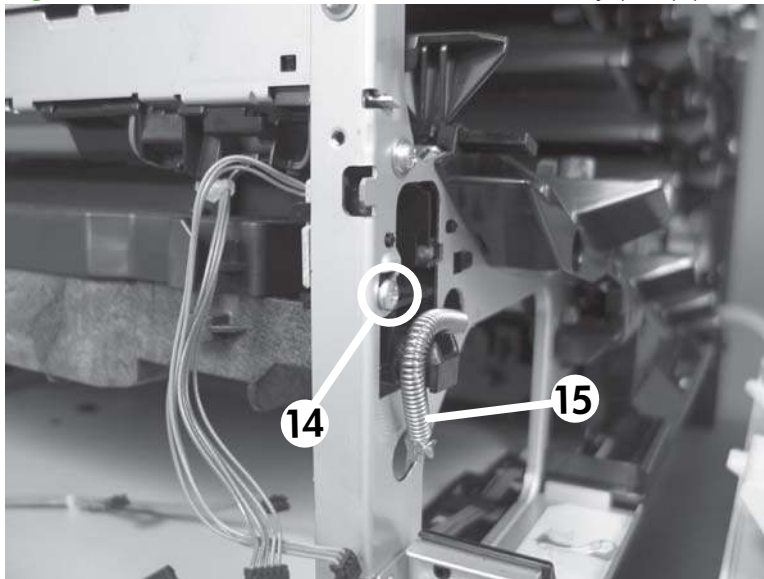
10. Remove the toner collection sensor.

Figure 6-240 Remove the laser/scanner assembly (Y/M) (10 of 12)
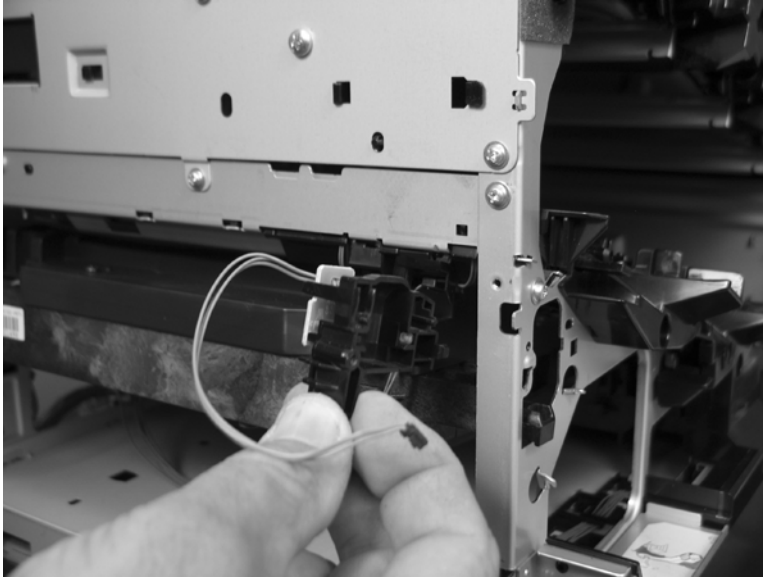
11. Rotate the front of the laser/scanner assembly down (callout 1), and then slide it toward the right (callout 2). Lower the left corner, and then rotate the left corner out of the product (callout 3).

Figure 6-241 Remove the laser/scanner assembly (Y/M) (11 of 12)

12. Pull the laser/scanner assembly straight out of the product to remove it.

Figure 6-242 Remove the laser/scanner assembly (Y/M) (12 of 12)

Laser/scanner assembly (C/Bk)

Before proceeding, remove the following components:

- Toner collection unit. See Toner-collection unit on page 190.

- Formatter PCA. See Formatter PCA on page 192.

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 273.

- High-voltage power supply lower. See High-voltage power supply lower on page 308.

- Lifter drive assembly. See Lifter-drive assembly on page 314.

- Laser/scanner assembly (Y/M). See Laser/scanner assembly (Y/M) on page 325.

Remove the laser/scanner assembly (C/Bk)

1. Release one spring (callout 1), and then disconnect one connector (callout 2).

   △ **CAUTION:** The spring is not captive. Do not lose the spring when it is removed. Use a pair of needle-nose pliers to safely retain the spring when it is removed. Do not use a flat blade screwdriver to remove the spring; the spring could forcibly leave the product and strike you.

   ☼ **Reinstallation tip** When you reinstall the spring, make sure that the laser/scanner fits tightly up against the product chassis, and make sure that the FFC is fully seated in the connector. The locator tabs on the front of the scanner must be firmly seated in the slots in the chassis.

   Figure 6-243 Remove the laser/scanner assembly (C/Bk) (1 of 7)

   2

   1

2. Disconnect one connector (callout 3).

Figure 6-244 Remove the laser/scanner assembly (C/Bk) (2 of 7)

3

3. Remove two screws (callout 4) located below the front door.

Figure 6-245 Remove the laser/scanner assembly (C/Bk) (3 of 7)

4

4. Open the front door, and then remove one screw (callout 5) and the cover (callout 6).

Figure 6-246 Remove the laser/scanner assembly (C/Bk) (4 of 7)

6

5

5. Remove two screws (callout 7). Use your finger to release the locking tab (callout 8), and then remove the cover.

CAUTION: Be careful. The PGC actuators are easily dislodged when the cover is removed. See Figure 6-250 Reinstall the PGC actuators (1 of 5) on page 336. To reinstall the actuators, see Reinstall the protective glass cleaner (PGC) actuators on page 336.

Figure 6-247 Remove the laser/scanner assembly (C/Bk) (5 of 7)

8

7

6. Release one spring (callout 9).

CAUTION: The spring is not captive. Do not lose the spring when it is removed. Use a pair of needle-nose pliers to safely retain the spring when it is removed. Do not use a flat blade screwdriver to remove the spring; the spring could forcibly leave the product and strike you.

☼ **Reinstallation tip** When you reinstall the spring, make sure that the laser/scanner fits tightly up against the product chassis.

Figure 6-248 Remove the laser/scanner assembly (C/Bk) (6 of 7)

9

7. Rotate the corner of the assembly away from the product until you can see the PCA, and then remove the assembly from the product.

☼ **Reinstallation tip** When the laser/scanner is properly positioned in the chassis, the plastic parts which protrude at the front and rear of the product will be firmly seated against the locator tabs on the chassis. Verify that the assembly is correctly seated, and then install the spring.

Figure 6-249 Remove the laser/scanner assembly (C/Bk) (7 of 7)

Reinstall the protective glass cleaner (PGC) actuators

1. The following figure shows a dislodged PGC actuator.

   ☼ **TIP:** If the actuator and spring are only slightly dislodged, you might be able to easily push them back into place.

   Figure 6-250 Reinstall the PGC actuators (1 of 5)

2. Remove the actuator and spring from the product. Install the spring on the actuator.

   Figure 6-251 Reinstall the PGC actuators (2 of 5)
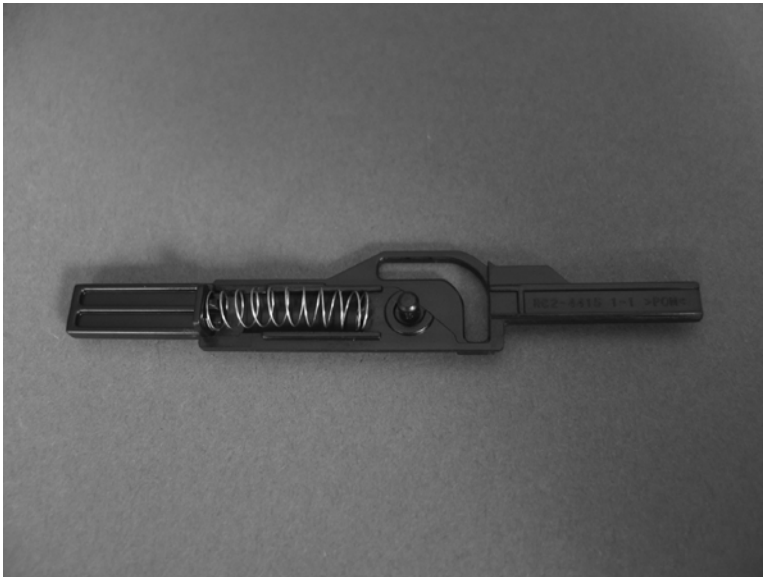
3. Before proceeding, take note of the following:

   - **Callout 1**: The pin on the actuator will be installed into the slot in the chassis.

   - **Callout 2**: The pin on the pivot arm will be installed into the slot on the actuator.

   - **Callout 3**: The end of the spring will be installed onto the tab on the chassis.

   Figure 6-252 Reinstall the PGC actuators (3 of 5)
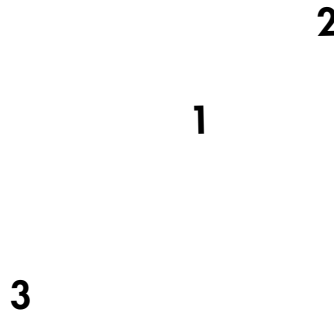
4. Place the end of the actuator into the PGC rod, and then use a small flat blade screw driver to fasten the end of the spring on the tab on the chassis.

   Figure 6-253 Reinstall the PGC actuators (4 of 5)
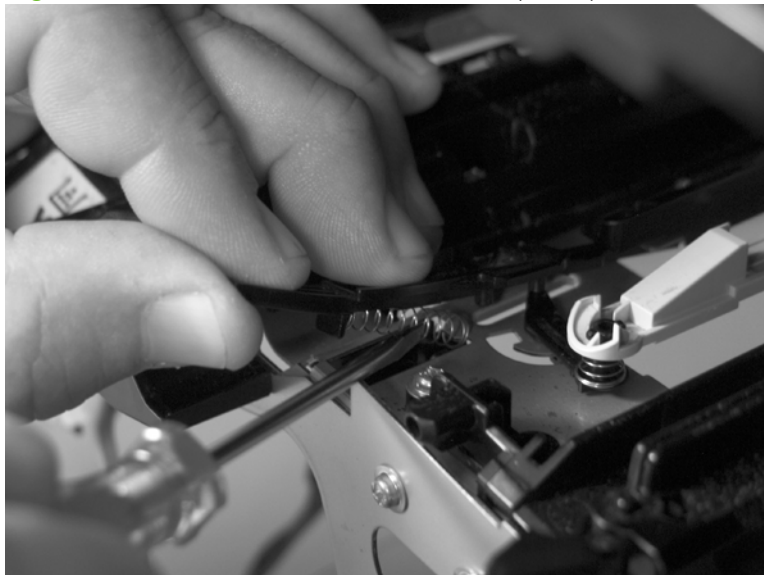
5. Push down on the actuator to seat it into place. Verify that the actuators is correctly installed. The PGC actuator should freely move when you push in on the actuator.

Figure 6-254 Reinstall the PGC actuators (5 of 5)

High-voltage power supply upper

Before proceeding, remove the following components:

- Formatter PCA. See Formatter PCA on page 192.

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

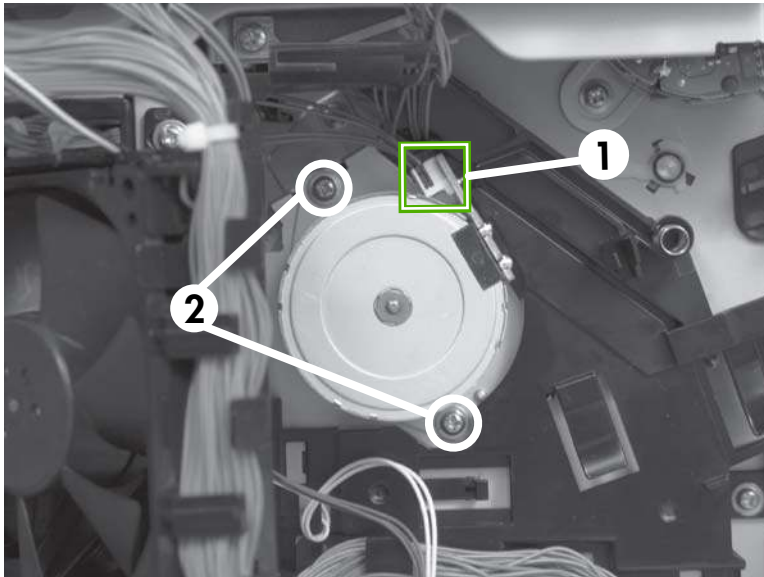- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

- DC controller. See DC controller PCA and tray on page 270.

- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 273.

Remove the high-voltage power supply upper

△ **CAUTION:** ESD-sensitive part.

1. Remove one screw (callout 1).

Figure 6-255 Remove the high-voltage power supply upper (1 of 5)

1

2. Remove four screws (callout 2), and then rotate the sheet-metal plate away from the power supply.

📝 **NOTE:** You do not need to completely remove the sheet-metal plate to access the power supply.

Figure 6-256 Remove the high-voltage power supply upper (2 of 5)

2

3. Disconnect two connectors (J201, J202; callout 3) from the back side of the power supply.

📝 **NOTE:** For clarity, the figure in this step shows the ADF and scanner removed. Carefully reach under these components to access the two connectors.

Figure 6-257 Remove the high-voltage power supply upper (3 of 5)

3

4. Remove three screws (callout 4).

Figure 6-258 Remove the high-voltage power supply upper (4 of 5)

4

5. Release four tabs (callout 5), and then remove the power supply.

Figure 6-259 Remove the high-voltage power supply upper (5 of 5)

5

Reinstall the high-voltage power supply upper

When you reinstall the power supply, look through the holes in the PCA and make sure that the high-voltage contact springs are correctly seated against the PCA.

NOTE: One wire harness (callout 1) is disconnected at both ends. Do not lose the wire harness.

Position the FFC (callout 2) *over* the cable guide when you reinstall the power supply.

Figure 6-260 Reinstall the high-voltage power supply upper

Drum motor 1

Before proceeding, remove the following components:

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Interconnect board (ICB). See Reinstall the ICB on page 269.

☆ **TIP:** For internal product access, you can remove the ICB and the low-voltage power supply as a single component.

- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 273.

- High-voltage power supply upper. See High-voltage power supply upper on page 339.

Remove the drum motor 1

▲ Disconnect one connector (callout 1), remove four screws (callout 2), and then remove the motor.

Figure 6-261 Remove the drum motor 1

Drum motor 2 or drum motor 3

Before proceeding, remove the following components:

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

☼ **TIP:** For internal product access, you can remove the ICB and the low-voltage power supply as a single component.

- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 273.

- High-voltage power supply upper. See High-voltage power supply upper on page 339.

Remove the drum motor 2 or drum motor 3

▲ Do one of the following:

- Remove drum motor 2: Disconnect one connector (callout 1), remove four screws (callout 2), and then remove the motor.

- Remove drum motor 3: Disconnect one connector (callout 3), remove four screws (callout 4), and then remove the motor.

Figure 6-262 Remove the drum motor 2 or drum motor 3

2

4   **3**   **1**
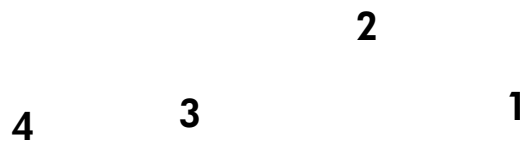
Fuser motor

Before proceeding, remove the following components:

- Formatter PCA. See Formatter PCA on page 192

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

☼ **TIP:** For internal product access, you can remove the ICB and the low-voltage power supply as a single component.

- DC controller PCA and tray. See DC controller PCA and tray on page 270.

- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 273.

- High-voltage power supply upper. See High-voltage power supply upper on page 339.

Remove the fuser motor

Disconnect one connector (callout 1), remove three screws (callout 2), and then remove the motor.

Figure 6-263 Remove the fuser motor

1

2

Main-drive assembly

Before proceeding, remove the following components:

- Formatter PCA. See Formatter PCA on page 192.

- Secondary transfer assembly. See Secondary transfer assembly on page 207.

- Intermediate transfer belt (ITB). See Intermediate transfer belt (ITB) on page 209.

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

☼ **TIP:** For internal product access, you can remove the ICB and the low-voltage power supply as a single component.

- DC controller PCA. See DC controller PCA and tray on page 270.

- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 273.

- Power-supply fan and fan duct. See Power-supply fan and fan duct on page 300.

- High-voltage power supply lower. See High-voltage power supply lower on page 308.

- High-voltage power supply upper. See High-voltage power supply upper on page 339.

Remove the main-drive assembly

1. Remove two screws (callout 1), and then remove the cover (callout 2).

   Figure 6-264 Remove the main-drive assembly (1 of 7)

1

2

2. Release the wire harnesses from the guide (callout 3), and then remove one screw (callout 4).

Figure 6-265 Remove the main-drive assembly (2 of 7)

4

3

3. Lift the high-voltage bracket up to release it, and then remove the bracket.

Figure 6-266 Remove the main-drive assembly (3 of 7)
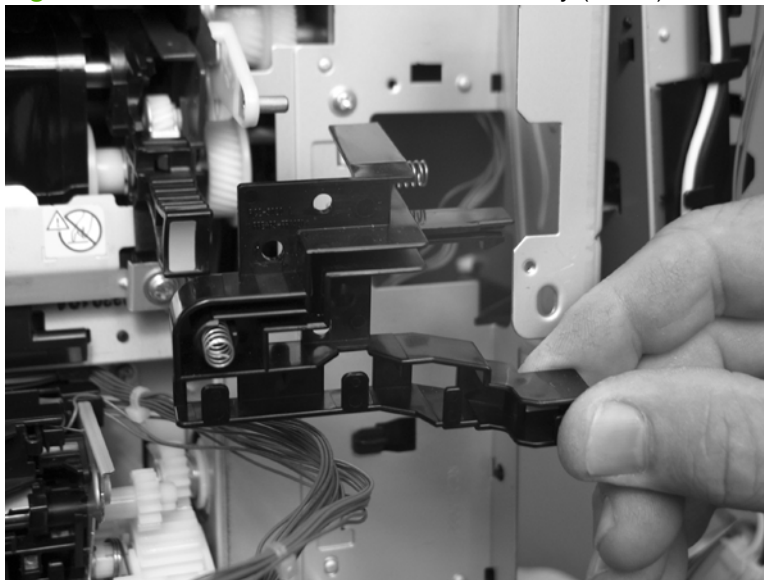
4. Disconnect seven connectors (callout 5), and then release the wire harnesses from the guides.

Figure 6-267 Remove the main-drive assembly (4 of 7)

5
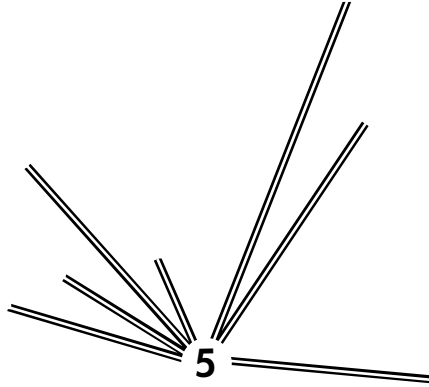
5. Remove two screws (callout 6), and then remove the sheet-metal plates (callout 7).

Figure 6-268 Remove the main-drive assembly (5 of 7)

7   **6**

6. Release the FFCs and lower wiring harness from the guide, and then release one tab (callout 8) and remove the guide.

Figure 6-269 Remove the main-drive assembly (6 of 7)

8

7. Remove ten screws (callout 9), and then carefully remove the assembly.

CAUTION: Be careful when you remove the assembly. The cams on the backside of the assembly can be dislodged. If the cams become dislodged, install them on the shafts as shown in Figure 6-272 Reinstall the main-drive assembly (2 of 11) on page 350.

The black cam must be installed on the shaft furthest away from the developing-disengagement motor. The white cams are interchangeable.

Figure 6-270 Remove the main-drive assembly (7 of 7)

Reinstall the main-drive assembly

1. Remove the bracket (callout 1), two guides (callout 2), and the developing-disengagement motor (callout 3).

    Install the bracket and guides on the replacement main-drive assembly.

    📝 **NOTE:** Do not install the developing-disengagement motor on the assembly (this motor must be removed from the assembly to align the main-drive cams).

    Figure 6-271 Reinstall the main-drive assembly (1 of 11)

    1

    3

    2

2. Locate the cams (callout 4) on the back side of the assembly.

    Figure 6-272 Reinstall the main-drive assembly (2 of 11)

    4

3. Slowly rotate the shaft near the black cam.

WARNING! Do not touch the plastic gears or cams. You must not wipe away any of the grease that is applied to these components. Always rotate the gears and cams by rotating the metal drive shaft.

Figure 6-273 Reinstall the main-drive assembly (3 of 11)

4. Continue to rotate the shaft until the holes in the black-cam gear align as shown below.

When correctly aligned, the *bottom-most* hole in the gear is aligned with a hole in the sheet-metal chassis.

NOTE: The holes in the other cam gears have a different alignment. You must make sure that the holes in the black-cam gear are correctly aligned.

Figure 6-274 Reinstall the main-drive assembly (4 of 11)

5. Verify that the cams (callout 5) align correctly.

☼ **TIP:** The second cam in from the right (the white cam to the left of the black cam), should have the *second* hole aligned with the hole in the sheet-metal chassis.

The third cam in from the right, should have the *third* hole aligned with the hole in the sheet-metal chassis.

The fourth cam in from the right (the cam nearest the developing-disengagement motor), should have the *fourth* hole aligned with the hole in the sheet-metal chassis.

If the second, third, or fourth cams do not correctly align, do the following. Hold the long drive shaft, gently tilt the cam and gear away from the shaft to allow clearance to rotate the gear until the correct hole in the gear aligns with the hole in the chassis.

Figure 6-275 Reinstall the main-drive assembly (5 of 11)

5

6. When the cams align correctly, they easily fit into the holes in the chassis.

Figure 6-276 Reinstall the main-drive assembly (6 of 11)

7. When the assembly is placed on the chassis, the pin on the swing gear and on the bracket (callout 6), must align with the holes in the chassis (callout 7).

Figure 6-277 Reinstall the main-drive assembly (7 of 11)

7

6

8. Position the assembly on the chassis.

Figure 6-278 Reinstall the main-drive assembly (8 of 11)
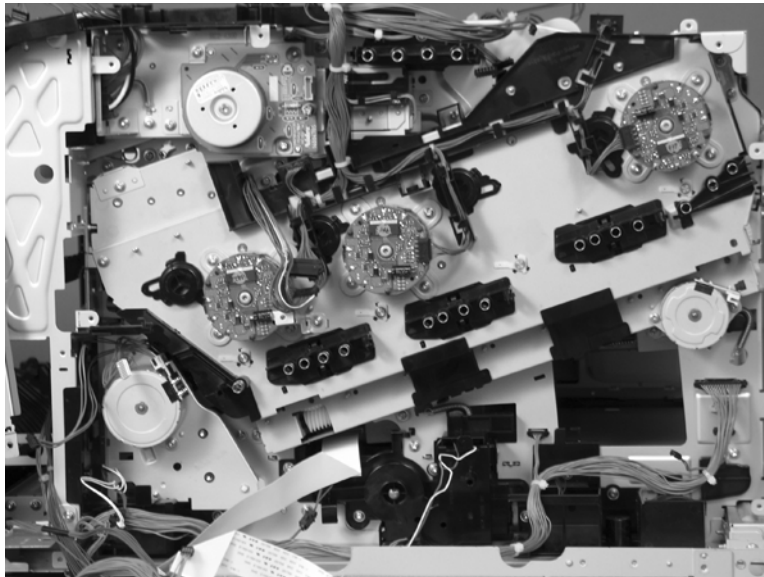
9. Use your finger to push in on the assembly, and use a small flat blade screwdriver to align the pin on the swing gear with the hole in the chassis.

Figure 6-279 Reinstall the main-drive assembly (9 of 11)

10. When the assembly is correctly installed against the chassis, the pin above the swing gear protrudes through the hole in the chassis.

Figure 6-280 Reinstall the main-drive assembly (10 of 11)

11. Install the main-drive assembly mounting screws, and then reinstall the developing-disengagement motor (callout 8).

☼ **TIP:** After reassembling the product, use the Diagnostics menu to print a Color Band Test page.

If the test page shows one or more color planes are not printing (usually in the upper left corner of the page), the cam or cams for the missing color plane are not correctly aligned. Repeat the reinstall the main-drive assembly procedure.

Figure 6-281 Reinstall the main-drive assembly (11 of 11)

8

Fuser-drive assembly

Before proceeding, remove the following components:

- Formatter PCA. Formatter PCA on page 192.

- Fuser. See Fuser on page 200.

- Secondary transfer assembly. See Secondary transfer assembly on page 207.

- Front-upper cover. See Front-upper cover on page 225

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Scanner assembly. See Scanner assembly on page 242.

- Front-top cover. See Front-top cover on page 261.

- Rear-top cover. See Rear-top cover on page 262

- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

☼ **TIP:** For internal product access, you can remove the ICB and the low-voltage power supply as a single component.

- DC controller PCA. See DC controller PCA and tray on page 270.

- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 273.

- Power-supply fan and fan duct. See Power-supply fan and fan duct on page 300.

- High-voltage power supply lower. See High-voltage power supply lower on page 308.

- High-voltage power supply upper. See High-voltage power supply upper on page 339.

- Main-drive assembly. See Main-drive assembly on page 346.

Remove the fuser-drive assembly

1. Disconnect one connector (callout 1), and then release the wire harnesses from the guide (callout 2).

   Figure 6-282 Remove the fuser-drive assembly (1 of 6)

   2

   1

2. Remove two screws (callout 3), and then remove the guide (callout 4).

   Figure 6-283 Remove the fuser-drive assembly (2 of 6)

   3

   4

3. Remove one screw (callout 5), and then remove the sheet-metal plate (callout 6).

Figure 6-284 Remove the fuser-drive assembly (3 of 6)

6

5

4. Remove one screw (callout 7), and then remove the cover (callout 8).

Figure 6-285 Remove the fuser-drive assembly (4 of 6)

8

7

5. Remove five screws (callout 9).

Figure 6-286 Remove the fuser-drive assembly (5 of 6)

9

6. Carefully remove the assembly.

> **CAUTION:** A gear on the assembly is not captive. Do not lose the gear when you remove the assembly. If the gear becomes dislodged, see Reinstall the fuser-drive assembly on page 360.

Figure 6-287 Remove the fuser-drive assembly (6 of 6)
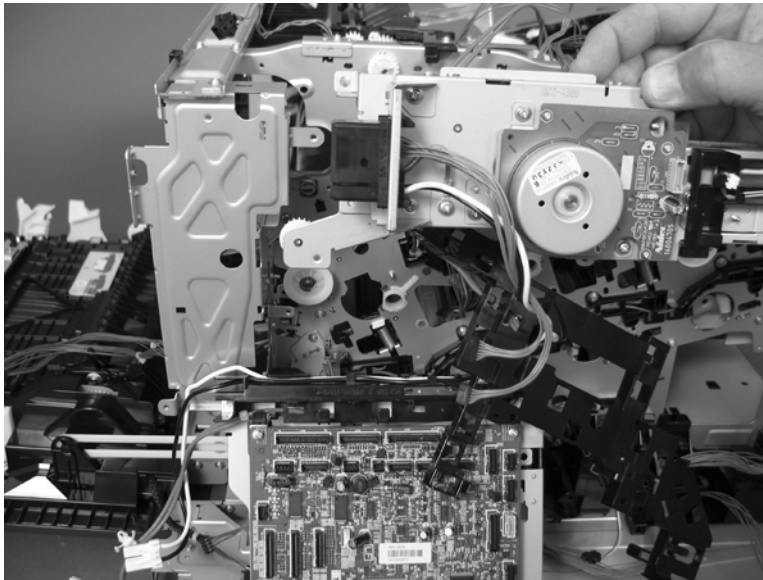
Reinstall the fuser-drive assembly

If the gear (callout 1) is dislodged when the assembly is removed, use the figure below to correctly install it on the assembly.

Figure 6-288 Reinstall the fuser-drive assembly

1

Delivery assembly

Before proceeding, remove the following components:

- Fuser. See Fuser on page 200.

- Secondary transfer assembly. See Secondary transfer assembly on page 207.

- Front-upper cover. See Front-upper cover on page 225

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Scanner assembly. See Scanner assembly on page 242.

- Front-top cover. See Front-top cover on page 261.

- Rear-top cover. See Rear-top cover on page 262

- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

- DC controller PCA. See DC controller PCA and tray on page 270.

- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 273.

- Power-supply fan and fan duct. See Power-supply fan and fan duct on page 300.

- High-voltage power supply lower. See High-voltage power supply lower on page 308.

- High-voltage power supply upper. See High-voltage power supply upper on page 339.

- Main-drive assembly. See Main-drive assembly on page 346.

- Fuser-drive assembly. See Fuser-drive assembly on page 356.

Remove the delivery assembly

1. Remove two screws (callout 1), and then remove the guide (callout 2).

   Figure 6-289 Remove the delivery assembly (1 of 5)

   2

   1

2. Remove two screws (callout 3).

   Figure 6-290 Remove the delivery assembly (2 of 5)

   3

3. Release one tab (callout 4), and then remove the gear (callout 5).

Figure 6-291 Remove the delivery assembly (3 of 5)

5

4

4. Release one tab (callout 6), and then rotate the locking clip until the tab on the clip aligns with the slot in the chassis.

Figure 6-292 Remove the delivery assembly (4 of 5)
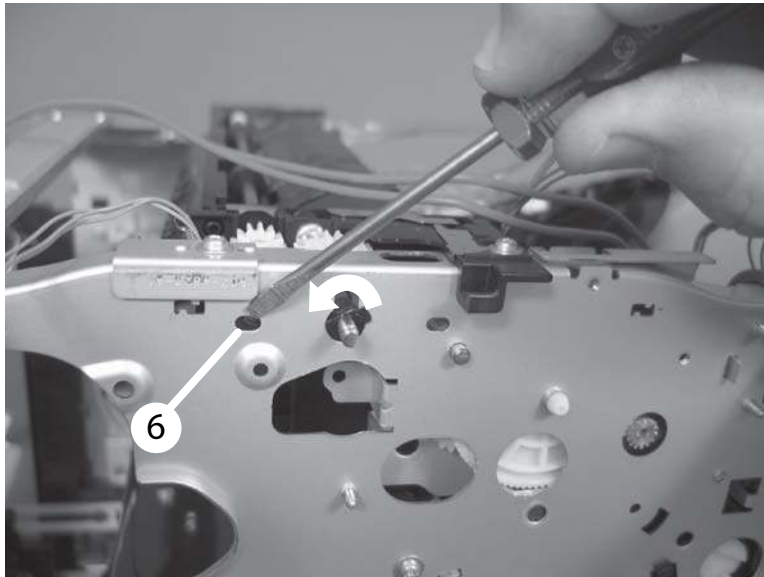
5. Disconnect one connector (callout 7), remove two screws (callout 8), and then carefully lift the assembly (callout 9) off of the product to remove it.

> **CAUTION:** A solenoid arm (on the right side) and a spring (on the left side) on the assembly are not captive. Do not lose the solenoid arm or spring when you remove the assembly. If the solenoid arm or spring become dislodged, see .

Figure 6-293 Remove the delivery assembly (5 of 5)

Reinstall the delivery assembly

1. Make sure that the solenoid arm is correctly installed on the assembly.

Figure 6-294 Reinstall the delivery assembly (1 of 2)

2. Make sure that the spring is correctly installed on the assembly.

Figure 6-295 Reinstall the delivery assembly (2 of 2)
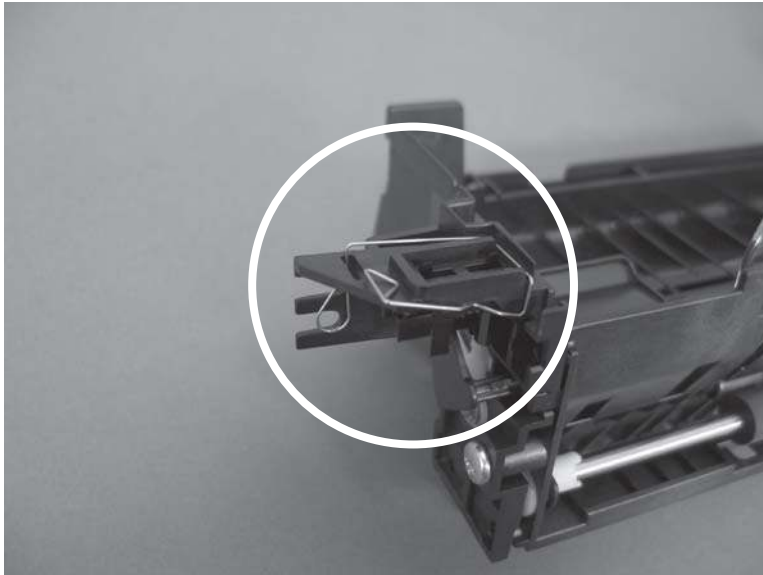
Duplex-drive assembly

Before proceeding, remove the following components:

- Fuser. See Fuser on page 200.

- Secondary transfer assembly. See Secondary transfer assembly on page 207.

- Intermediate transfer belt. See Intermediate transfer belt (ITB) on page 209

- Front-upper cover. See Front-upper cover on page 225

- Right-rear cover. See Right-rear cover on page 231.

- Left cover. See Left cover on page 233.

- Rear-upper cover. See Rear-upper cover on page 236.

- Rear cover. See Rear cover on page 238.

- Scanner assembly. See Scanner assembly on page 242.

- Front-top cover. See Front-top cover on page 261.

- Rear-top cover. See Rear-top cover on page 262

- Interconnect board (ICB). See Interconnect board (ICB) on page 267.

- DC controller PCA. See DC controller PCA and tray on page 270.

- Low-voltage power supply (LVPS). See Low-voltage power supply (LVPS) on page 273.

- Power-supply fan and fan duct. See Power-supply fan and fan duct on page 300.

- High-voltage power supply lower. See High-voltage power supply lower on page 308.

- High-voltage power supply upper. See High-voltage power supply upper on page 339.

- Main-drive assembly. See Main-drive assembly on page 346.

- Fuser-drive assembly. See Fuser-drive assembly on page 356.

- Delivery assembly. See Delivery assembly on page 361.

Remove the duplex-drive assembly

1. Disconnect two connectors (callout 1), and then remove three screws (callout 2).

Figure 6-296 Remove the duplex-drive assembly (1 of 2)
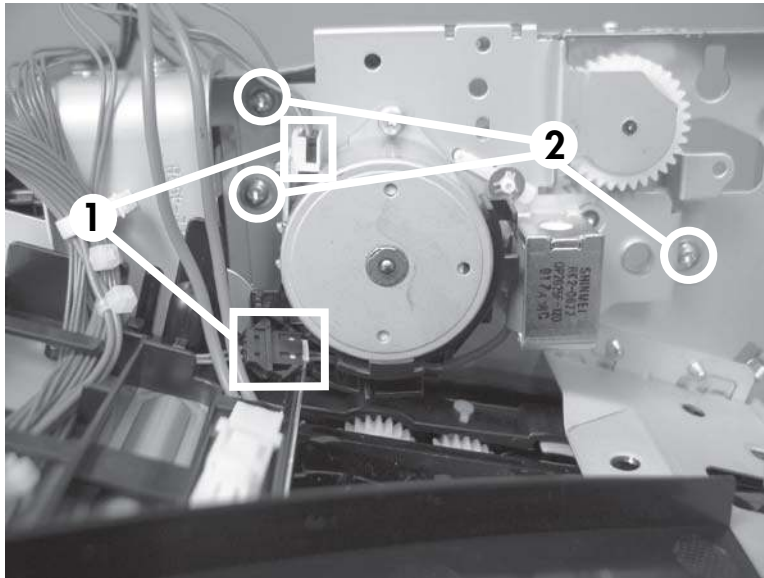
2. Remove the assembly.

Figure 6-297 Remove the duplex-drive assembly (2 of 2)
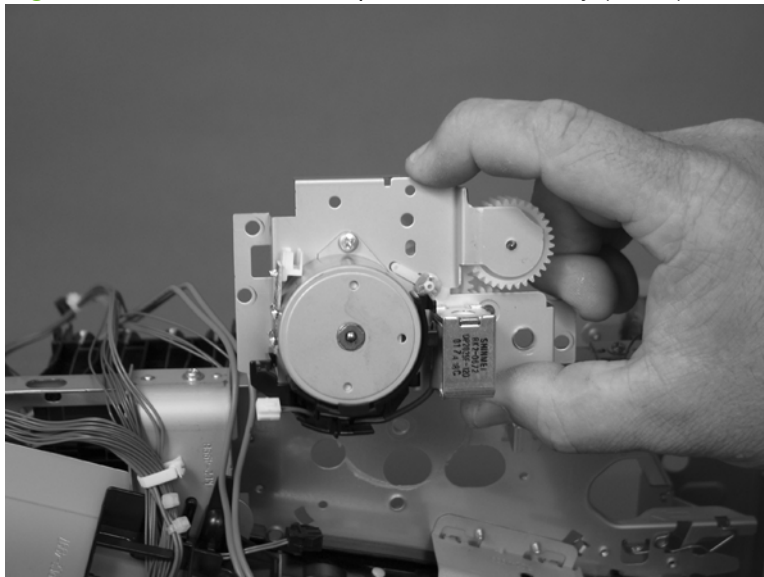
Optional paper feeder assembly (Tray 3)

NOTE: For information about removing the Tray 3 pickup roller, see Pickup and feed rollers (Tray 3) on page 203.

For information about removing the Tray 3 cassette, see Tray cassette on page 199.

For information about removing the right door (optional paper feeder), see Right door (optional paper feeder) on page 221

Drawer connector

1. With a small screwdriver, lift one tab and then slide the drawer connector to release.

2. Remove one connector (callout 1).

   Figure 6-298 Remove the drawer connector; optional paper feeder

7 Solve problems

To use the information in this chapter, you should have a basic understanding of the HP LaserJet printing process. Explanations of each mechanical assembly, the product systems, and the basic theory of operation are contained in Theory of operation on page 115. Do not perform any of these troubleshooting processes unless you understand the function of each product component.

- Solve problems checklist
- Menu map
- Troubleshooting process
- Tools for troubleshooting
- Control-panel messages
- Event log messages
- Clear paper jams
- Solve paper-handling problems
- Use manual print modes
- Solve image-quality problems
- Solve performance problems
- Solve connectivity problems
- Service mode functions
- Solve fax problems
- Solve e-mail problems

Solve problems checklist

If the product is not responding correctly, complete the steps in the following checklist, in order. If the product does not pass a step, follow the corresponding troubleshooting suggestions. If a step resolves the problem, you can stop without performing the other steps on the checklist.

1. Make sure one of the following messages display on the control panel: **Ready**, **Paused**, or **Sleep Mode On**. If no lights are on or the display does not say **Ready**, **Paused**, or **Sleep Mode On**, see Power subsystem on page 376.

2. Check the cables.

    a. Check the cable connection between the product and the computer or network port. Make sure that the connection is secure.

    b. Make sure that the cable itself is not faulty by using a different cable, if possible.

    c. Check the network connection. See Solve connectivity problems on page 501.

3. Ensure that the print media that you are using meets specifications. See Supported paper and print media on page 56.

4. Print a configuration page. See Configuration pages on page 436. If the product is connected to a network, an HP Jetdirect page also prints.

    a. If the pages do not print, check that at least one tray contains print media.

    b. If the page jams in the product, see Clear paper jams on page 472.

5. If the configuration page prints, check the following items.

    a. If the page prints correctly, then the product hardware is working. The problem is with the computer you are using, with the printer driver, or with the program.

    b. If the page does not print correctly, the problem is with the product hardware.

6. Does the image quality meet the user's requirements? If yes, go to step 7. If no, check the following items:

    ●   Print the print-quality (PQ) troubleshooting pages See Print-quality-troubleshooting pages on page 431 in this chapter.

    ●   Solve the print-quality problems, and then go to step 7.

7. At the computer, check to see if the print queue is stopped, paused, or set to print offline.

    Windows: Click **Start**, click **Settings**, and then click **Printers** or **Printers and Faxes**. Double-click **HP Color LaserJet CM3530**.

    -or-

    Mac OS X: Open **Printer Setup Utility**, and then double-click the line for the **HP Color LaserJet CM3530**.

8. Verify that you have installed the HP Color LaserJet CM3530 MFP Series printer driver. Check the program to make sure that you are using the HP Color LaserJet CM3530 MFP Series printer driver.

9. Print a short document from a different program that has worked in the past. If this solution works, then the problem is with the program you are using. If this solution does not work (the document does not print) complete these steps:

   a. Try printing the job from another computer that has the product software installed.

   b. If you connected the product to the network, connect the product directly to a computer with a USB cable. Redirect the product to the correct port, or reinstall the software, selecting the new connection type that you are using.

Menu map

The menu map can be an important troubleshooting tool. It shows each control-panel menu and submenu to aid navigation through the menu system. Print the menu map from the control panel by completing the following steps.

1. Touch Administration.

2. Touch Information.

3. Touch Configuration/Status Pages.

4. Touch Administration Menu Map.

5. Touch Print.

Troubleshooting process

Determine the problem source

When the product malfunctions or encounters an unexpected situation, the product control panel alerts you to the situation. This section contains a pre-troubleshooting checklist to filter out many possible causes of the problem. A troubleshooting flowchart helps you diagnose the root cause of the problem. The remainder of this chapter provides steps for correcting problems.

- Use the pre-troubleshooting checklist to evaluate the source of the problem and to reduce the number of steps that are required to fix the problem.

- Use the troubleshooting flowchart to pinpoint the root cause of hardware malfunctions. The flowchart guides you to the section of this chapter that contains steps for correcting the malfunction.

Before beginning any troubleshooting procedure, check the following issues:

- Are supply items within their rated life?

- Does the configuration page reveal any configuration errors?

NOTE: The customer is responsible for checking supplies and for using supplies that are in good condition.

Pre-troubleshooting checklist

The list below describes basic questions to ask the customer to help quickly define the problem.

Table 7-1 Pre-troubleshooting checklist

Environment	
	● Is the product installed on a solid, level surface?
	● Is the product exposed to particle matter or dust?
	● Is the power-supply voltage within ± 10 volts of the specified power source?
	● Is the power supply plug inserted in the product and directly to the wall outlet (not a power strip)?
	● Is the operating environment within the specified parameters, as listed in the appendix of this manual?
	● Is the product exposed to ammonia gas, such as that produced by diazo copiers or office cleaning materials?
	● Is the product exposed to direct sunlight?
Media	● Does the customer use only supported media?
	● Is the media in good condition (contains no curls, folds, and so forth)?
	● Is the media stored correctly and within environmental limits?
Input trays	● Is the amount of media in the tray within specifications?
	● Is the media correctly placed in the tray?

Table 7-1 Pre-troubleshooting checklist (continued)

	● Are the paper guides aligned with the stack?
	● Is the paper tray correctly installed in the product?
Print cartridges	● Is each print cartridge installed correctly?
	● Are original HP print cartridges installed?
	● Are the cartridges damaged?
ITB and fuser	● Are the ITB and fuser correctly installed?
	● Is the ITB or fuser damaged?
Covers	● Are the top cover and front cover closed?
Condensation	● Does condensation occur following a temperature change (particularly in winter following cold storage)? If so, wipe the affected area dry or leave the product on for 10 to 20 minutes.
	● Was a print cartridge opened soon after being moved from a cold to a warm room? If so, allow the product to sit at room temperature for one to two hours.
Miscellaneous	● Check for and remove any non-HP components (print cartridges, memory modules, and EIO cards) from the product.
	● Remove the product from the network, and ensure that the failure is associated with the product before beginning troubleshooting.
	● For any print-quality issues, calibrate the product. See Calibrate the product on page 430.

Troubleshooting flowchart

This flowchart highlights the general processes that you can follow to quickly isolate and solve product hardware problems.

Each row depicts a major troubleshooting step. A "yes" answer to a question allows you to proceed to the next major step. A "no" answer indicates that additional testing is needed. Proceed to the appropriate section in this chapter, and follow the instructions there. After completing the instructions, proceed to the next major step in this troubleshooting flowchart.

Table 7-2 Troubleshooting flowchart

1 **Power on**	Is the product on and does a readable message display?		Follow the power-on troubleshooting checks. See Power subsystem on page 376. After the control-panel display is functional, go to step 2.
	Yes ↓	No →	
2 **Control panel messages**	Does the message **Ready** display on the control panel?		If an error message appears, see Control-panel messages on page 441. After the errors have been corrected, go to step 3.
	Yes ↓	No →	
3 **Event log**	Open the **Troubleshooting** menu and print an event log to see the history of errors with this product. Does the event log print?		If the event log does not print, see Print an event log on page 468. If paper jams inside the product, see Clear paper jams on page 472. If error messages appear on the control-panel display when you try to print an event log, see Control-panel messages on page 441. After successfully printing and evaluating the event log, go to step 4.
	Yes ↓	No →	
4 **Information pages**	Open the **Information** menu and print the configuration pages to verify that all of the accessories are installed. Are all the accessories installed?		If accessories that are installed are not listed on the configuration page, remove the accessory and reinstall it. After evaluating the configuration pages, go to step 5.
	Yes ↓	No →	
5 **Image quality**	Does the print quality meet the customer's requirements?		Compare the images with the sample defects in the image defect tables. See Image defects table on page 494. After the print quality is acceptable, go to step 6.
	Yes ↓	No →	
6 **Interface**	Can the customer print successfully from the host computer?		Verify that all I/O cables are connected correctly and that a valid IP address is listed on the Jetdirect configuration page.
	Yes. This is the end of the troubleshooting process.	No →	If error messages display on the control panel, see Control-panel messages on page 441. When the customer can print from the host computer, this is the end of the troubleshooting process.

Power subsystem

Power-on checks

The basic product functions should start up when the product is plugged into an electrical outlet and the power switch is pushed to the *on* position. If the product does not start, use the information in this section to isolate and solve the problem.

Power-on troubleshooting overview

Turn on the product power. If the control panel display remains blank, random patterns display, or the normal initialization display does not appear, perform power-on checks to find the cause of the problem.

Power-on sequence

- 00 seconds: power on button LED (+5 VA from LVPS)

- 02 seconds: control-panel display with HP logo (check USB cable from ICB, 12 v from formatter)

- 04 seconds: output bin LED (+5 v from SCB)

- 06 seconds: scanner lamp and initialization (24 v from LVPS)

- 10 seconds: ADF initialization (check ADF cable)

- 12 seconds: LVPS fan (right rear corner, 24 v from LVPS)

- 22 seconds: engine initialization

📝 **NOTE:** The LVPS includes an over current and over voltage crowbar circuit. If the power supply does not come on, unplug the power cord, wait five minutes, and then plug the power cord in and try turning the product on again.

If the fan and main motor are operating correctly, the next troubleshooting step is to isolate print engine, formatter, and control panel problems. Perform an engine test (see Engine-test button on page 386). If the formatter is damaged, it might interfere with the engine test. If the engine-test page does not print, try removing the formatter and then performing the engine test again. If the engine test is then successful, the problem is almost certainly with the formatter, the control panel, or the cable that connects them.

If the control panel is blank when you turn on the product, check the following items.

1. Make sure that the product is plugged directly into an active electrical outlet (not a power strip) that delivers the correct voltage.

2. Make sure that the power switch is in the *on* position.

3. Make sure that the fan runs briefly, which indicates that the power supply is operational.

4. Make sure that the control panel display wire harness is connected.

5. Make sure that the formatter is seated and operating correctly. Turn off the product and remove the formatter. Reinstall the formatter, and then verify that the heartbeat LED is flashing.

6. Remove any HP Jetdirect or other EIO cards, and then try to turn the product on again.

NOTE: If the control panel remains blank, lift the control and verify the USB cable is seated. Next, remove the rear upper cover and check the other end of the control panel USB cable where it connects to the ICB.

The control panel operates on +12 v which originates on the formatter and is delivered through connections on the ICB.

The control panel diagnostic mode can be accessed to verify functionality. Touching "+" and "*" together at any time accesses the diagnostic mode.

Tools for troubleshooting

The section describes the tools that can help you solve problems with the product.

Individual component diagnostics

LED diagnostics

LED, engine, and individual diagnostics can identify and troubleshoot product problems.

Understand lights on the formatter

Three LEDs on the formatter indicate that the product is functioning correctly.
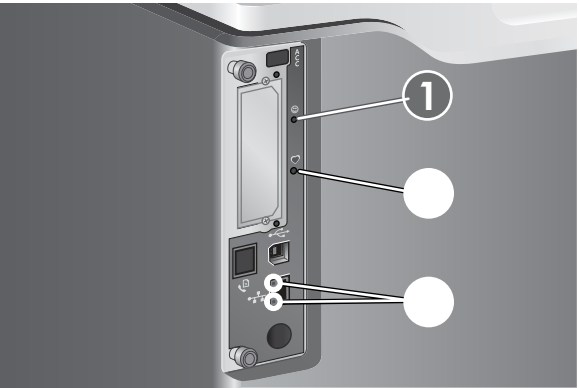
1	Formatter connectivity LED (lit when formatter is correctly seated)
2	Heartbeat LED
3	HP Jetdirect LEDs

Formatter connectivity LED

The formatter connectivity LED indicates when the formatter is correctly seated in the product. If the LED is not lit, follow this procedure to correct the problem.

1. Turn the product off.
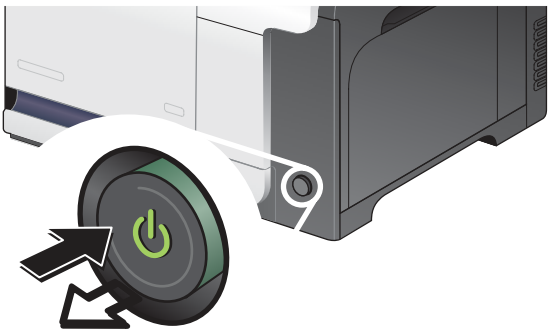
2. Disconnect all power and interface cables.

📝 **NOTE:** This illustration might not show all the cables.
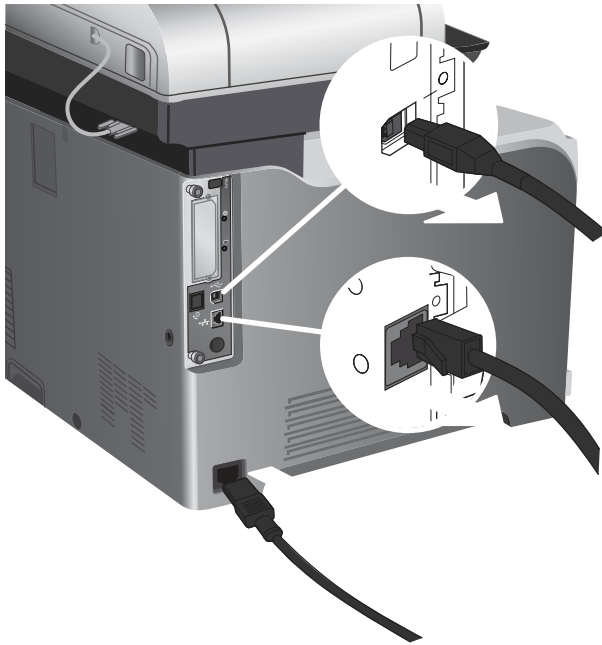
3. Locate the thumb screws on the formatter in the rear of the product.
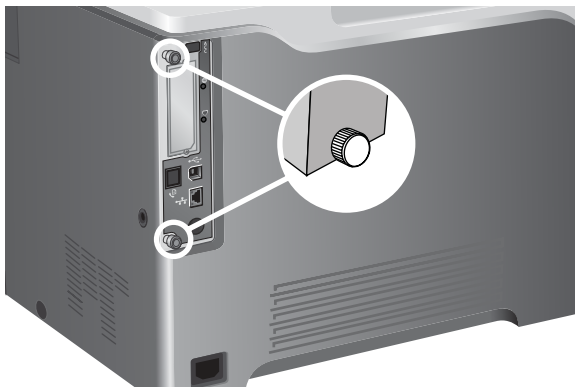
4. Unscrew the thumb screws and pull the formatter from the product.
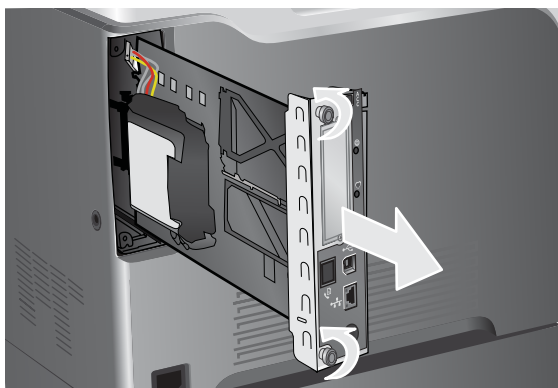
5. Align the formatter in the tracks at the bottom of the slot, and then slide it back into the product. Push firmly on the right side of the formatter to make sure it is fully inserted.

> **NOTE:** To prevent damage to the formatter, ensure the formatter is aligned in the tracks at the top and the bottom of the opening.

> **Reinstallation tip** To prevent the formatter from flexing and not fully seating, firmly push in on the formatter along the edge opposite of the thumb screws.
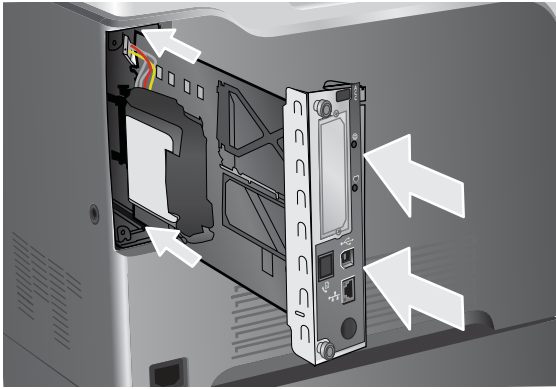
6. Reconnect the power cable and interface cables, and turn the product on.
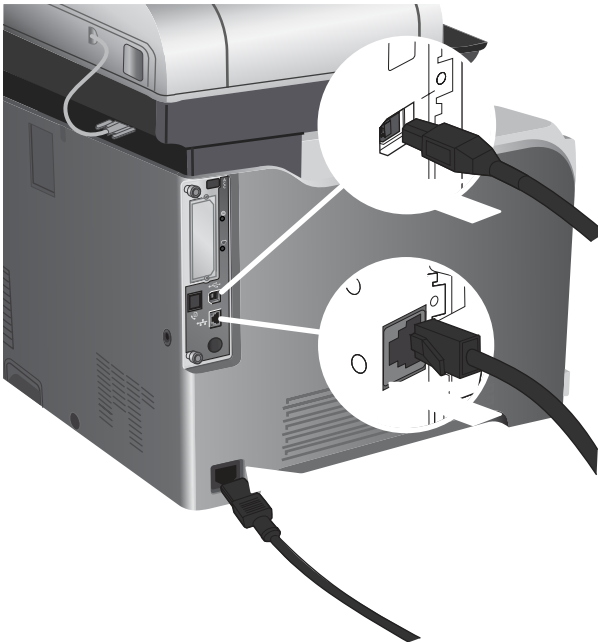
Heartbeat LED

The heartbeat LED indicates that the formatter is functioning correctly. While the product is initializing after you turn it on, the LED blinks rapidly, and then turns off. When the product has finished the initialization sequence, the heartbeat LED pulses on and off.

If the heartbeat LED is off, the formatter might have a problem. Turn the product off and then on. If the LED is still off, replace the formatter. See Formatter PCA on page 192.

HP Jetdirect LEDs

The embedded HP Jetdirect print server has two LEDs. The yellow LED indicates network activity, and the green LED indicates the link status. A blinking yellow LED indicates network traffic. If the green LED is off, a link has failed.

For link failures, check all the network cable connections. In addition, you can try to manually configure the link settings on the embedded print server by using the product control-panel menus.

1. Scroll to and touch Administration.

2. Touch Initial Setup.

3. Touch Networking and I/O.

4. Touch Embedded Jetdirect or EIO <X> Jetdirect.

5. Touch Link Speed.

6. Select the appropriate link speed.

7. Touch Save.

Engine diagnostics

This section provides an overview of the engine diagnostics that are available in the HP Color LaserJet CM3530 MFP Series product. The product contains extensive internal diagnostics that help in troubleshooting print quality, paper path, noise, component, and timing issues.

Troubleshooting menu

The Troubleshooting menu allows you to run tests that can help you identify and solve problems with the product.

Menu item	Description
Event Log	This shows the event codes and their corresponding engine cycles on the control-panel display. See Event log messages on page 468.
Calibrate Scanner	Use this feature to compensate for offsets in the scanner imaging system (carriage head) for ADF and flatbed scans. You might need to calibrate the scanner if it is not capturing the correct sections of scanned documents.
PQ Troubleshooting	This item prints a series of eight pages that include instructions, pages for each color, a demo page, and a configuration page. These pages can help isolate print-quality problems. See Solve image-quality problems on page 494.
Fax T.30 Trace	Print or configure the fax T.30 trace report. T.30 is the standard that specifies handshaking, protocols, and error correction between fax machines. See Solve fax problems on page 507.
Fax Transmit Signal Loss	Set loss levels to compensate for phone-line signal loss. Do not modify this setting unless requested to do so by an HP service representative because it could cause the fax to stop functioning. See Solve fax problems on page 507.
Fax V.34	Disable V.34 mode if several fax failures have occurred or if phone line conditions require it. See Solve fax problems on page 507.

Menu item	Description
Fax Speaker Mode	A technician can use this feature to evaluate and diagnose fax issues by listening to the sounds of fax modulations. See Solve fax problems on page 507 .
Diagnostic Page	Print a diagnostic page that includes color swatches and the EP parameters table. See Diagnostics page on page 434.
Disable Cartridge Check	This item allows you to remove a print cartridge to help determine which cartridge is the source of a problem. See Disable cartridge check on page 385.
Paper Path Sensors	This item displays the status of each sensor in the paper path. See Paper-path sensors test on page 408.
Paper Path Test	This item tests the paper handling features of the product, such as the configuration of the trays. See Paper-path test on page 386.
Manual Sensor Test	This item displays the status of each sensor, and allows manual testing of the sensors. See Manual sensor test (special-mode test) on page 387.
Component Test	This item activates individual parts independently to isolate noise, leaking, and other hardware issues. See Component tests on page 409.
Print/Stop Test	This item isolates print-quality faults more accurately by stopping the product in mid-print cycle. Stopping the product in mid print cycle allows you to see where the image begins to degrade. It also causes a jam that might need to be manually removed. A service representative should perform this test. See Print/Stop test on page 409.
Color Band Test	Print a color-band test page to identify arcing in the high-voltage power supply. See Color-band test on page 440.

Scanner Tests	Use this item to diagnose potential problems with the product scanner. See Troubleshooting menu on page 50.
	
	● Lower-lamp
	
	● ADF read motor
	
	● Sensors
	
	  ◦ ADF empty sensor
	
	  ◦ Top-of-page sensor
	
	  ◦ Register/deskew sensor
	
	  ◦ ADF width sensor
	
	  ◦ ADF jam cover sensor
	
	  ◦ ADF length sensor
	
	  ◦ Flatbed cover sensor
	
	  ◦ Flatbed width sensor
	
	  ◦ Flatbed length sensor
	
	● ADF read motor reverse
	
	● ADF input motor
	
	● ADF duplex solenoid
	
	● ADF input reverse

Menu item	Description
	● ADF indicator light
	● Flatbed motor
Control Panel	Use this item to make sure that the control-panel is functioning. See Troubleshooting menu on page 50.
	● test control-panel LEDs by turning them on and off
	● display a test pattern on the display (if the test pattern does not display the control panel is not correctly functioning)
	● test the functionality of the control-panel buttons
	● display a test grid on the touch screen (touch each section of the grid to verify touch screen sensitivity)
PTT test mode	Manufacturing test only. Not a service test.

Defeating interlocks

Different tests can be used to isolate different types of issues. For component or noise isolation, you can run the diagnostic test after removing the covers for a better view of the areas that are being tested. To operate the product with the covers removed, the door-switch levers (SW1, callout 1) must be depressed (this is the door-closed position) with a folded piece of paper.

WARNING!   Be careful when performing product diagnostics to avoid the risk of injury. Only trained service personnel should open and run the diagnostics with the covers removed or with the door switch levers depressed. Never touch any of the power supplies when the product is turned on.

WARNING!   If the front- or right-door switch levers are depressed, the laser/scanners can be activated while a door is open.

Figure 7-1 Front-door interlock

Figure 7-2 Right-door interlock

NOTE: Anytime that a cartridge is installed or removed while the covers are removed, the door interlock must be manually cycled to simulate opening and closing the top cover in order for the engine to recognize the change. When the covers are installed, the door switch and fuser interlock are automatically operated.

Disable cartridge check

Use this diagnostic test to print internal pages or send an external job to the product when one or more print cartridges or image drum pairs are removed or exchanged. While the product is in this diagnostics mode, consumable supply errors are ignored, and you can navigate the menus. This test can be used to isolate problems, such as noise, and to isolate print-quality problems that are related to individual print cartridges.

NOTE: Do not remove or exchange print cartridges until **after** you start the disable cartridge check diagnostic.

NOTE: Anytime a print cartridge is installed or removed while the covers are removed, the front door interlock must be manually cycled to simulate opening and closing the front door in order for the engine to recognize the change. When the covers are installed, the front-door switch is automatically operated.

1. Touch Administration.

2. Scroll to and touch Troubleshooting.

3. Touch Disable Cartridge Check.

Engine-test button

To verify that the product engine is functioning, print an engine-test page. Use a small pointed object to depress the test-page switch located on the back of the product. The test page should have a series of horizontal lines. The test page can use only Tray 2 as the paper source, so make sure that paper is loaded in Tray 2.

Figure 7-3 Engine-test button

Paper-path test

This diagnostic test generates one or more test pages that you can use to isolate the cause of jams.

To isolate a problem, specify which input tray to use, specify whether to use the duplex path, and specify the number of copies to print. Multiple copies can be printed to help isolate intermittent problems. The following options become available after you open the diagnostic feature:

● Print Test Page. Run the paper-path test from the default settings: Tray 2, no duplex, and one copy. To specify other settings, scroll down the menu and select the setting, and then scroll back up and select Print Test Page to start the test.

● Source. Select Tray 1, Tray 2, or the optional trays.

● Duplex. Enable or disable 2-sided printing.

● Copies. Set the number of copies to be printed; the choices are 1,10, 50, 100, or 500.

1. Touch Administration.

2. Scroll to and touch Troubleshooting.

3. Touch Paper Path Test.

4. Select the paper-path test options for the test you want to run.

Manual sensor test (special-mode test)

Use this diagnostic test to test the product sensors and switches. Each sensor is represented by a letter and number on the control panel display. Following is the default state of the sensors when the test is accessed (J is not used on this product).

- A1 B1 C1 D1 E0 F0 G0 H1 I0 K0 L1 M0 N1 O0 P0 Q0 R0 S0 T0 U0

NOTE: For the *K right and front door interlock switches* test: Sensor K displays as **0** when *both* the front and side doors are closed. When *either* door is opened, sensor K displays as **1**.

There is only one interlock switch for both doors. If sensor K displays as **1**, check both door actuators. If the actuators are not damaged, check connector J118 on the DC controller.

TIP: If a sensor test fails and the solution is to replace an assembly, try the following. Before you replace the entire assembly, try replacing the failed sensor with the sensor from a replacement assembly. If the problem persists, replace the indicated assembly.

1. Touch Administration.

2. Scroll to and touch Troubleshooting.

3. Scroll to and touch Manual Sensor Test.

4. To exit this test, touch Exit on the touchscreen.

Table 7-3 Manual sensor diagnostic tests

Sensor or switch name	Sensor or switch number
Top (A)	SR8
Loop 1 (B)	SR14
Loop 2 (C)	SR15
Fuser delivery (D)	SR5
Duplex re-feed (E)	SR22
Output bin full (F)	SR6
Developing home position sensor (G)	SR11
Fuser pressure release sensor (H)	SR7
ITB alienation sensor (I)	SR17
Front and side door switchs (K)	SW1, SW2
Tray 1 (L)	SR9
Tray 2 paper present (M)	SR3
Tray 2 installed (N)	SR4
Tray 2 lift motor (O)	SR1
Tray 3 paper present (P)	SR3
Tray 3 feed (Q)	SR4
Tray 3 installed (R)	SR1
Tray 3 size (bottom) button (S)	SW1

Table 7-3 Manual sensor diagnostic tests (continued)

Sensor or switch name	Sensor or switch number
Tray 3 (middle) button (T)	SW1
Tray 3 (top) button (U)	SW1

A TOP (top of page) sensor

1. Open the right door.

2. Lower the secondary transfer assembly.

3. Open the registration shutter.

4. Insert a piece of paper to activate the TOP sensor.

   Figure 7-4 Test the TOP sensor

5. Check the control-panel display for sensor response.

6. If no response, replace the registration assembly.

B and C loop sensors

1. Open the right door.

2. Lower the secondary transfer assembly.

3. Slowly insert a piece of paper to activate the B and C loop sensors underneath the fuser.

   Figure 7-5 Test the loop sensors

4. Check the control-panel display for a sensor response.

5. If there is no response, replace fuser. See Fuser on page 200.

D fuser (fixing) delivery sensor

1. Open the right door.

2. Lower the secondary transfer assembly.

3. Remove the fuser assembly, and then verify that the sensor flag on the fuser assembly moves freely. If the sensor flag does not move freely, replace the fuser. See .

   Figure 7-6 Test the fuser delivery sensor (1 of 2)

4. Insert a piece of paper to activate the fuser (fixing) delivery sensor.

   Figure 7-7 Test the fuser (fixing) delivery sensor (2 of 2)

5. Check the control-panel display for a sensor response.

6. If there is no response, replace the fuser (fixing) delivery sensor.

E duplex re-pickup sensor

1. Open the right door.

2. Use the green handle to lift the duplex jam cover.

3. Insert a piece of paper to activate the duplex re-pickup sensor (8492).

   Figure 7-8 Test the duplex re-pickup sensor

4. Check the control-panel display for sensor response.

5. If no response, replace the right door assembly. See Right-door assembly on page 227.

F output bin full sensor

1. Open the right door.

2. Lower the secondary transfer assembly.

3. Remove the fuser.

4. Move the output-bin full sensor flag.

   Figure 7-9 Test the output-bin-full sensor

5. Check the control-panel display for sensor response.

6. If no response, remove the control panel and verify that the flag is moving. If not, replace the delivery assembly. If the sensor is malfunctioning, replace the delivery assembly. See Delivery assembly on page 361.

G developing home-position sensor

The normal status of sensor G is 0. Testing the sensor requires the following steps:

1. Turn off the product and then remove the formatter and left side cover.

2. Reinstall the formatter and turn on the product. Resume the manual sensor test.

3. Disconnect the 3-pin connector to the right of the power cord connection. Sensor G should change to 1.

4. Reconnect the connector. Sensor G should change to 0.

5. If sensor G does not change, replace the main drive assembly. See Main-drive assembly on page 346.

H fuser (fixing) pressure-release sensor

1. Open the right door.

2. Lower the secondary transfer assembly.

3. Remove the fuser, and then rotate the gear (callout 1) to move the flag (callout 2). If the flag does not actuate, replace the fuser. See Fuser on page 200.

   Figure 7-10 Test the fuser (fixing) pressure-release sensor (1 of 2)

4. Insert a piece of paper to activate the fuser (fixing) pressure-release sensor.

   Figure 7-11 Test the fuser (fixing) pressure-release sensor (2 of 2)

5. Check the control-panel display for sensor response.

6. If there is no response, replace fuser (fixing) pressure-release sensor.

I primary transfer-roller disengagement sensor

1. Open the right door.

2. Lower the secondary transfer assembly.

3. Remove the ITB.

4. Rotate the gear (callout 1) to move the flag (callout 2). If the flag does not actuate, replace the ITB. See .

   Figure 7-12 Test the primary transfer-roller disengagement sensor (1 of 2)

5. Remove all print cartridges.

   📝 **NOTE:** Cover all removed print cartridges with paper.

6. Locate the sensor behind the cyan OPC drum position.

7. Insert a piece of paper to activate the primary transfer-roller disengagement sensor.

Figure 7-13 Test the primary transfer-roller disengagement sensor (2 of 2)

8. Check the control-panel display for sensor response.

9. If no response, replace the sensor.

K right and front door interlock switches

1. Open the right door (callout 1) to disengage the right-door switch (callout 2).

   Figure 7-14 Test the right- and front-door interlock switches (1 of 4)

2. Close the right door and check the control panel on the product for sensor response.

3. Open the front door (callout 3) to disengage the front-door switch (callout 4).

   Figure 7-15 Test the right- and front-door interlock switches (2 of 4)

4. Close the front door and check the control panel on the product for sensor response.

5. If either interlock switch failed to respond, remove the upper-front cover and right-front cover. By removing the right-front cover, you can tell if the linkages are properly closing the switches.

6. Close the right door and front door to verify that the switches close.

Figure 7-16 Test the right- and front-door interlock switches (3 of 4)

7. Open the right door and front door to verify that the switches open.

Figure 7-17 Test the right- and front-door interlock switches (4 of 4)

8. If the switches do not close, check the connectors on the DC controller PCA.

9. If the switches are opening/closing correctly when either door is open or closed, then check J118 on the DC controller.

10. If the connectors are securely connected to the DC controller PCA and the switches still do not close, replace the DC controller PCA. See DC controller PCA and tray on page 270.

L Tray 1 media present sensor

1. Open Tray 1.

2. Move the Tray 1 media-present sensor flag.

   Figure 7-18 Test the Tray 1 media-present sensor

3. Check the control-panel display for sensor response.

4. If no response, replace Tray 1.

M Tray 2 paper out sensor

    1. Remove Tray 2.

    2. Move the tray 2 paper-out sensor flag.

       Figure 7-19 Test the tray 2 paper-out sensor

    3. Check the control-panel display for sensor response.

    4. If there is no response, replace the tray 2 paper-out sensor.

N Tray 2 closed sensor

1. Remove Tray 2.

   📝 **NOTE:** The Tray 2 closed sensor flag is on the back of Tray 2. Inspect the flag to verify that it is aligned correctly. If it is bent upward, it might miss the sensor when installed.

   Figure 7-20 Test the Tray 2 closed sensor (1 of 2)

2. Insert a piece of paper in the Tray 2 closed sensor.

   Figure 7-21 Test the Tray 2 closed sensor (2 of 2)
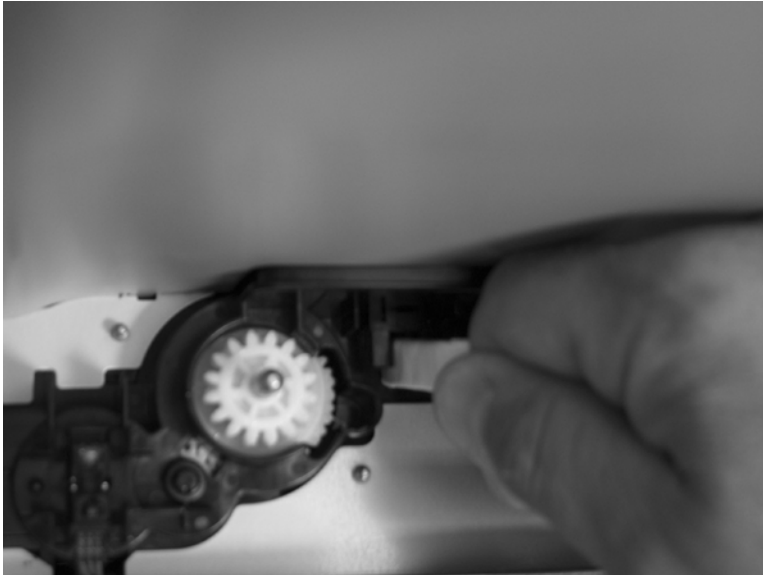
3. Check the control-panel display for sensor response.

4. If there is no response, replace the lifter-drive assembly. See Lifter-drive assembly on page 314.

O Tray 2 stack-surface sensor

1. Remove Tray 2.

2. Move the Tray 2 stack-surface sensor flag.

   Figure 7-22 Test the Tray 2 stack-surface sensor

3. Check the control-panel display for sensor response.

4. If no response, replace the lifter-drive assembly. See Lifter-drive assembly on page 314.

P optional Tray 3-empty sensor

1. Remove the optional Tray 3 cassette.

2. Move the optional Tray 3-empty sensor flag.

   Figure 7-23 Test the optional Tray 3-empty sensor

3. Check the control-panel display for sensor response.

4. If no response, replace the optional Tray 3.

Q optional Tray 3 media-feed sensor (Q)

1. Open the right door on optional Tray 3.

2. Insert a piece of paper to activate the optional Tray 3 media-feed sensor

Figure 7-24 Test the optional Tray 3 media-feed sensor

3. Check the control-panel display for sensor response.

4. If there is no response, replace the optional Tray 3.

R optional Tray 3 stack-surface sensor (R)

1. Remove the optional Tray 3 cassette.

2. Push the lever to activate the sensor arms.

   Figure 7-25 Test the optional Tray 3 stack-surface sensor

3. If there is no response, replace the optional Tray 3.

S, T, and U optional Tray 3 media-size sensors

1. Push any of the three buttons to see if the control panel changes for sensors S, T or U.

   - S: top button on size switch

   - T: middle button on size switch

   - U: bottom button on size switch

   Figure 7-26 Test the optional Tray 3 media-size sensors

2. If any of the tests fail, replace the 500-sheet feeder

Paper-path sensors test

This test displays the status of each paper-path sensor and allows viewing of sensor status while printing internal pages.

1. Touch Administration.

2. Scroll to and touch Troubleshooting.

3. Touch Paper Path Test.

4. Select the paper-path test options for the test you want to run.

NOTE: The default state of the sensors when first entering the test is shown below. Sensor J is not used on this product.

A1 B1 C1 D1 E0 F0 G0 H1 I0 K0 L1 M0 N1 O0 P0 Q0 R0 S0 T0 U0

Table 7-4 Paper-path sensors diagnostic tests

Sensor name	Sensor number
TOP (A)	SR8
Loop 1 (B)	SR14
Loop 2 (C)	SR15
Fusing delivery (D)	SR5
Duplex re-feed (E)	SR22
Output bin full (F)	SR6
Developing home position sensor (G)	SR11
Fuser pressure release sensor (H)	SR7
Alienation sensor (I)	SR17
Front and side door switches (K)	SW1, SW2
MP Tray 1 (L)	SR21
Tray 2 paper present (M)	SR20
Tray 2 installed (N)	SR13
Tray 2 lift motor (O)	SR9
Tray 3 paper present (P)	SR3
Tray 3 feed (Q)	SR4
Tray 3 installed (R)	SR1
Tray 3 size (bottom) button (S)	
Tray 3 (middle) button (T)	
Tray 3 (top) button (U)	

Print/Stop test

Use this diagnostic test to isolate the cause of problems such as image-formation defects and jams in the engine. During this test you can stop the paper anywhere along the product-paper path. The test can be programmed to stop printing internal pages or an external print job when the paper reaches a certain position. The test can also be programmed to stop from 0 to 60,000 mS. If the timer is set to a value that is greater than the job-print time, you can recover the product in one of two ways.

1. Touch Administration.

2. Scroll to and touch Troubleshooting.

3. Scroll to and touch Print/Stop Test.

4. Select the number of milliseconds and then touch OK.

Component tests

Component test (special mode test)

This test activates individual parts independently to isolate problems.

Each component test can be performed once or repeatedly. If you select **CONTINUOUS** from the drop-down menu as the repeat option, the test cycles the component on and off. This process continues for two minutes, and then the test ends.

📝 **NOTE:** The door interlock switch must be defeated to run any of the component tests. If covers are removed, the door switch must be manually cycled during some tests in order for the engine to recognize a change. Print cartridges can be installed or removed during certain tests. The control-panel display prompts you to remove some or all cartridges during certain tests to rotate and isolate certain components, and to protect the cartridges and ITB.

1. Touch Administration.

2. Scroll to and touch Troubleshooting.

3. Touch Component Test.

4. Select the component test options for the test you want to run.

Table 7-5 Component test details

Component test	Motor or solenoid number	Comments
TRANSFER MOTOR	M5	
BELT ONLY	M10	Rotates the transfer belt.
CARTRIDGE MOTOR	● M3: yellow ● M4: magenta and cyan ● M5: black	Activates three drum motors at a specified speed for 10 seconds.
BLACK LASER SCANNER	M8	Activates the black/cyan scanner motor for 10 seconds.
CYAN LASER SCANNER	M8	Activates the black/cyan scanner motor for 10 seconds.
MAGENTA LASER SCANNER	M9	Activates the yellow/magenta scanner motor for 10 seconds.

Table 7-5 Component test details (continued)

Component test	Motor or solenoid number	Comments
YELLOW LASER SCANNER	M9	Activates the yellow/magenta scanner motor for 10 seconds.
FUSER MOTOR	M2	Activate the fuser motor at a specified speed for 10 seconds.
FUSER PRESSURE RELEASE MOTOR	M2 reverse	Reverses the fuser motor and pressurizes or depressurizes the pressure release motor.
ALIENATION MOTOR	M10	Disengages the developer from the primary charge roller.
ITB CONTACT ALIENATION MOTOR	M2	Activates the ITB drive motor at a specified speed for 10 seconds.
TCU MOTOR	M12	Activates the motor at a specified speed for 10 seconds.
TRAY 1 PICKUP SOLENOID	SL3	Activates the solenoid for 10 seconds.
TRAY 2 PICKUP MOTOR	M13	Activates the motor at a specified speed for 10 seconds.
TRAY 2 PICKUP SOLENOID	SL4	Activates the solenoid for 10 seconds.
TRAY 3 PICKUP MOTOR	M1	Activates the motor at a specified speed for 10 seconds.
TRAY 3 PICKUP SOLENOID	SL1	Activates the solenoid for 10 seconds.
DUPLEX PICKUP MOTOR	M11	Activates the motor at a specified speed for 10 seconds.
DUPLEX REFEED CLUTCH SOLENOID	CL1, SL2	Activates the clutch for 10 seconds.

Diagrams

Formatter PCA

Figure 7-27 Formatter PCA

Table 7-6 Formatter PCA

Item	Description
1	Hard drive
2	Hard drive cable
3	DIMM slot (under the hard drive)
4	Fax card and cable
5	EIO slot
6	Internal USB ports

Location of connectors

DC controller PCA

Figure 7-28 DC controller PCA
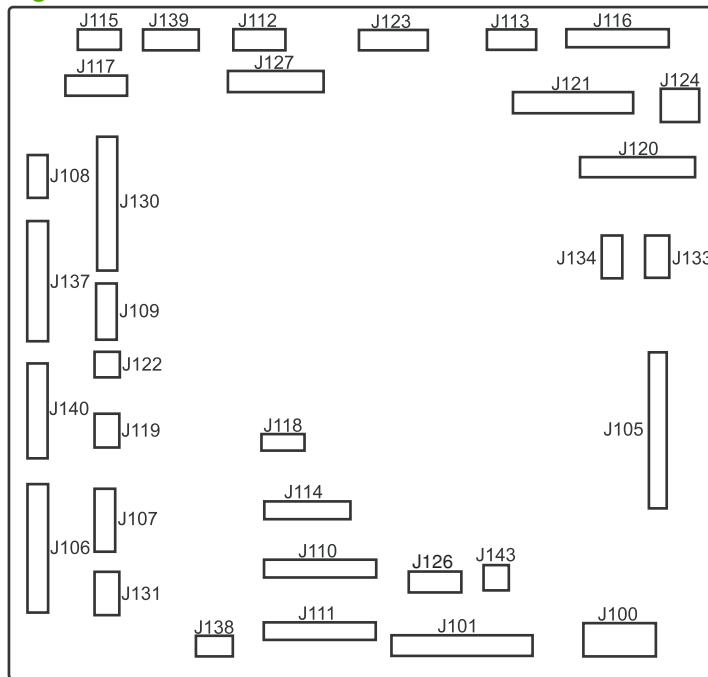
Table 7-7 DC controller connectors

J100: 24 v from low-voltage power supply (LVPS) and interlock	**J114**: HVPS lower	**J126**: memory tag connector
J101: LVPS	**J115**: fuser sensors	**J127**: pre-exposure LEDs (rear), SR17, SL1
J105: interconnect board (ICB)	**J116**: HVPS upper	**J130**: registration density (RD) sensors (front and rear)
J106: 500-sheet feeder, developing home position, laser motors	**J117**: fuser motor	**J131**: pickup motor
J107: duplex sensor, tray 1 solenoid, paper present sensor	**J118**: 5 v interlock	**J133**: not used
J108: environmental sensor	**J119**: LVPS fan	**J134**: not used
J109: duplex clutch, overhead transparency (OHT) in, top-of-page sensor	**J120**: drum motor 1 and drum motor 2	**J137**: toner collection unit (TCU) full, TCU motor, toner level detection
J110: YM laser	**J121**: drum motor 3, drum position 1,2,3	**J138**: 24 v to HVPS lower
J111: CK laser	**J122**: OHT out	**J139**: fuser sensors
J112: pre-exposure LEDs (front)	**J123**: pressure release, bin full, fuser delivery	**J140**: lift motor, tray present, stack surface
J113: 24 v to high-voltage power supply (HVPS) upper	**J124**: 24 v to scanner-control board (SCB)	**J143**: 24 v present from LVPS

Paper feeder driver PCA

Figure 7-29 Paper feeder driver PCA
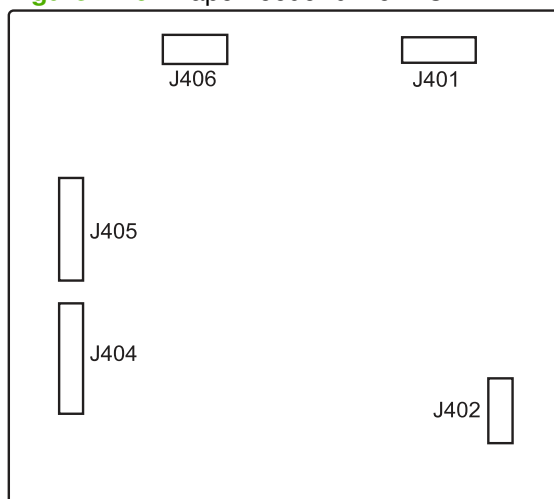
Table 7-8 Paper feeder driver PCA connectors

J401: engine connector

J402: not used

J404: SW1, SW2, lifter motor

J405: SR1, SR2, SR3, SR4, SL1

J406: feed motor

PCAs, motors, fans, switches, solenoids, and clutches

Use the diagrams to locate components. For a list of components, see Table 7-9 PCAs, motors, fans, switches, solenoids, and clutches on page 418

Base product

Figure 7-30 Component locations (1 of 5)
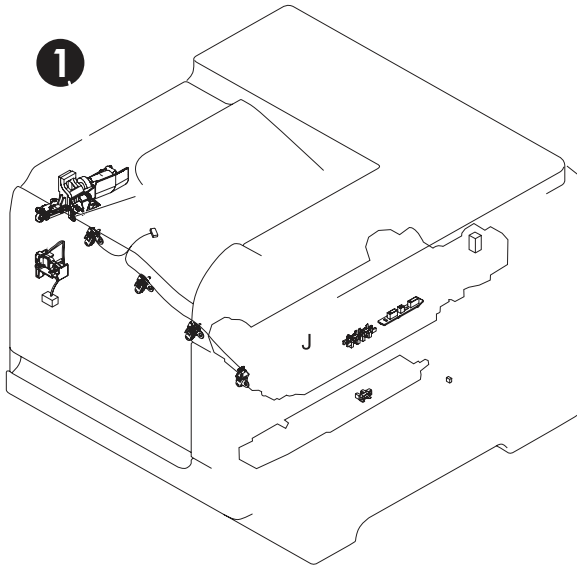
Figure 7-31 Component locations (2 of 5)
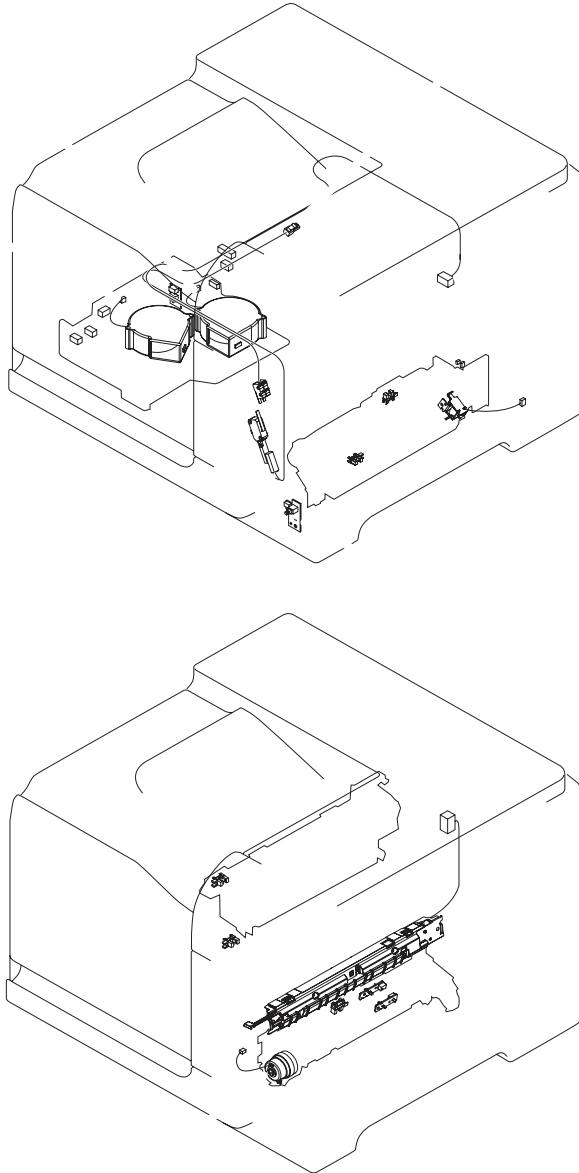
Figure 7-32 Component locations (3 of 5)
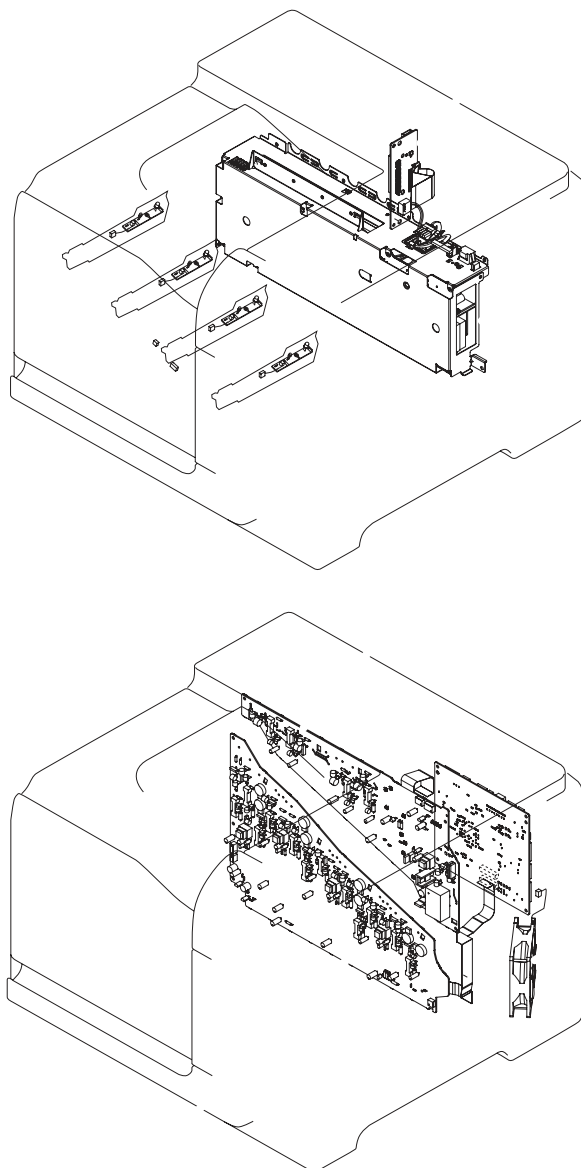
Figure 7-33 Component locations (4 of 5)
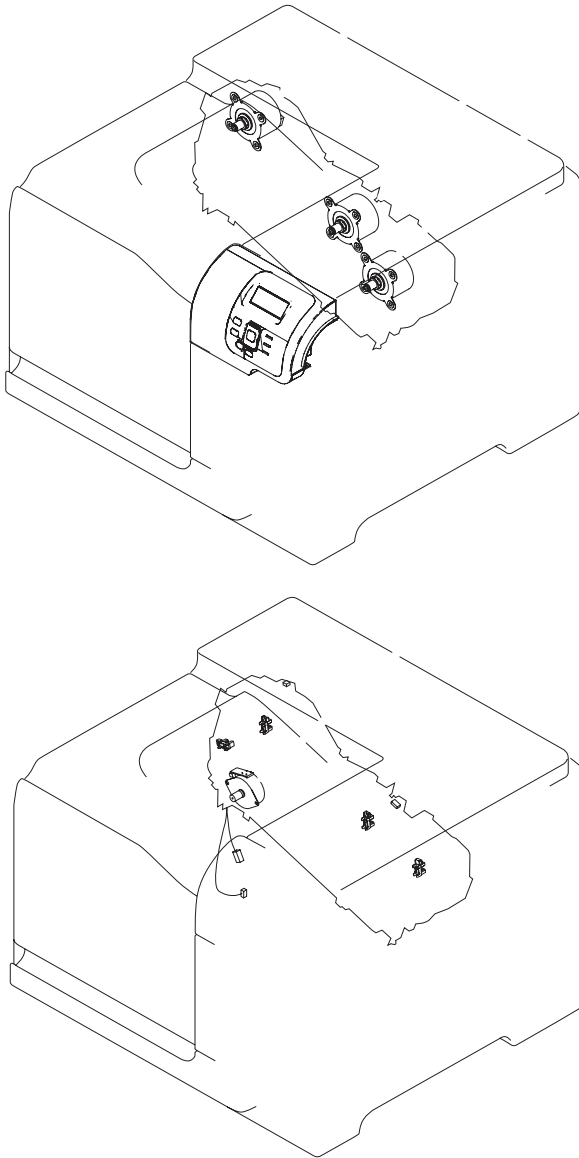
Figure 7-34 Component locations (5 of 5)
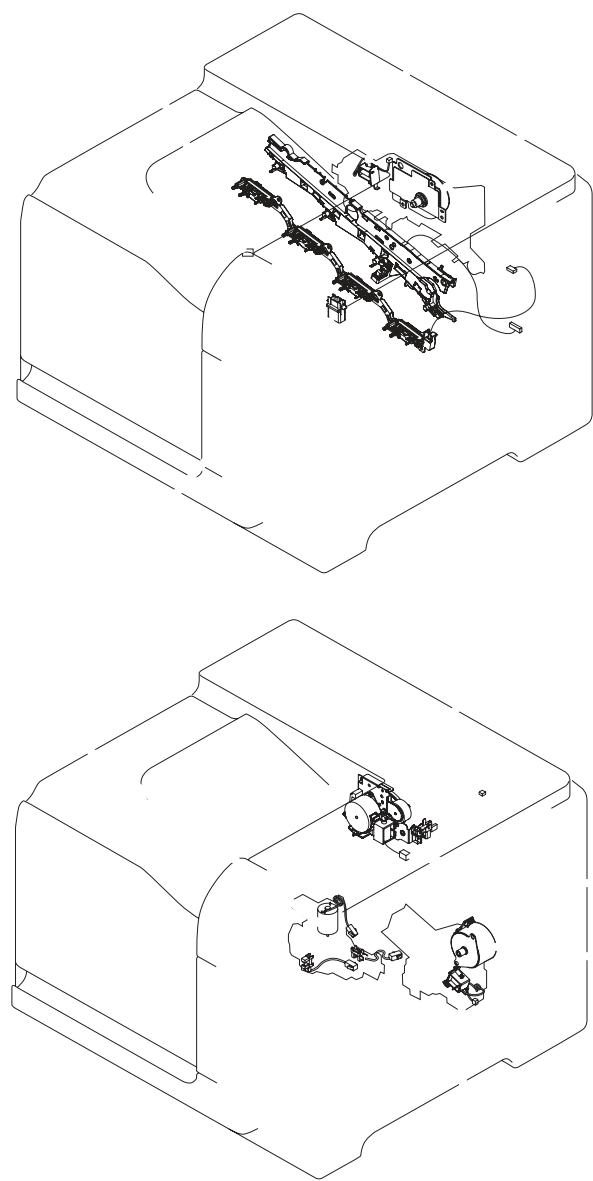
Table 7-9 PCAs, motors, fans, switches, solenoids, and clutches

Location	Connector	Component abbreviation	Component name
1	J89	M12	Residual toner-feed motor
2	J26	FM2	Cartridge fan
3	J27	FM3	Delivery fan
4	J62	SW3	24V interlock switch
5	J118	SW1, SW2	5V interlock switch
6	J84	SL3	Multipurpose-tray pickup solenoid
7	J780	SW4	Power switch
8	J86	CL1	Duplex re-pick clutch

Location	Connector	Component abbreviation	Component name
9		ICB	Interconnect board (ICB)
10		LVPS	Low-voltage power supply
11		HVPS (t)	HVPS-T upper
12		DCC	DC Controller
13	J119	FM1	Power-supply fan
14		HVPS (d)	HVPS-D (lower)
15	J41	M3	Drum motor 1
16	J40	M4	Drum motor 2
17	J42	M5	Drum motor 3
18	J25	M10	Development-disengagement motor
19	J8	SL1	Primary transfer roller disengagement solenoid
20	J15	M2	Fuser motor
21	J55	M9	Yellow/magenta scanner motor
22	J56	M8	Cyan/black scanner motor
23	J20	M11	Duplex reverse motor
24	J21	SL2	Duplex reverse solenoid
25	J6	M13	Pickup motor
26	J83	SL4	Cassette-pickup solenoid
27	J79	M7	Tray 2 lifter motor

1 x 500 paper feeder

Figure 7-35 1 x 500 paper feeder
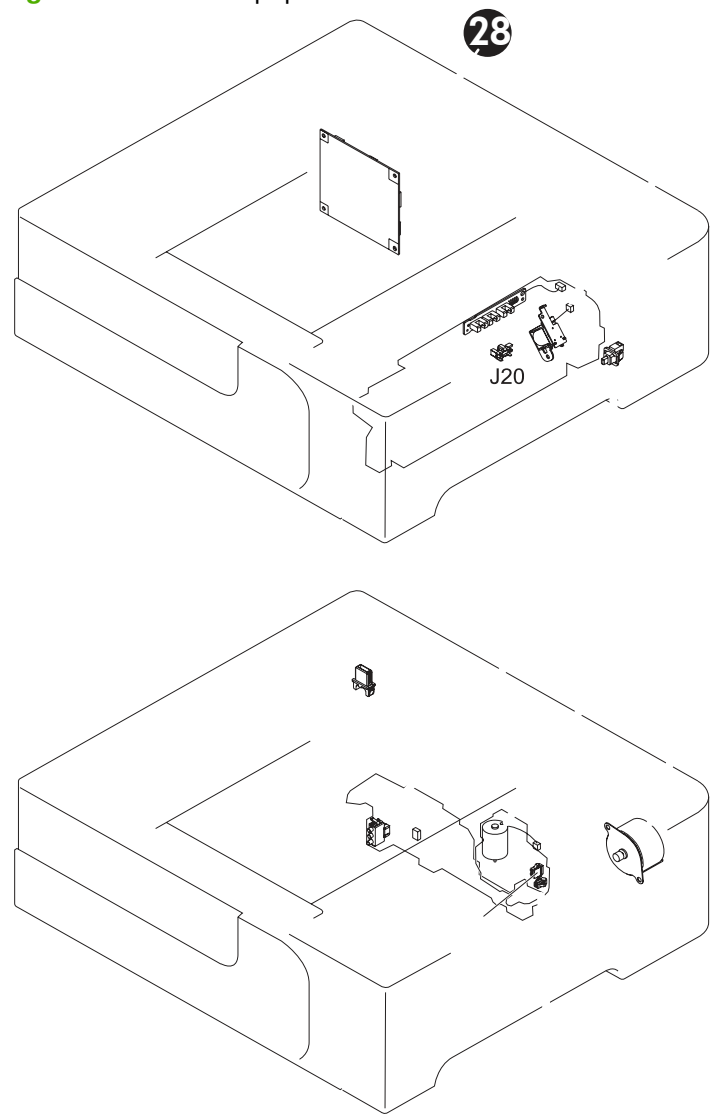
Location	Connector	Component abbreviation	Component name
28		PF PCA	Paper-feeder driver PCA
29, 34	J18	SL1	Paper-feeder pickup solenoid
30	J21	SW2	Paper-feeder door switch
31	J16	SW1	Paper feeder cassette media size switch
32	J15	M2	Paper-feeder lifter motor
33	J14	M1	Paper-feeder motor

Sensors

Figure 7-36 Sensors
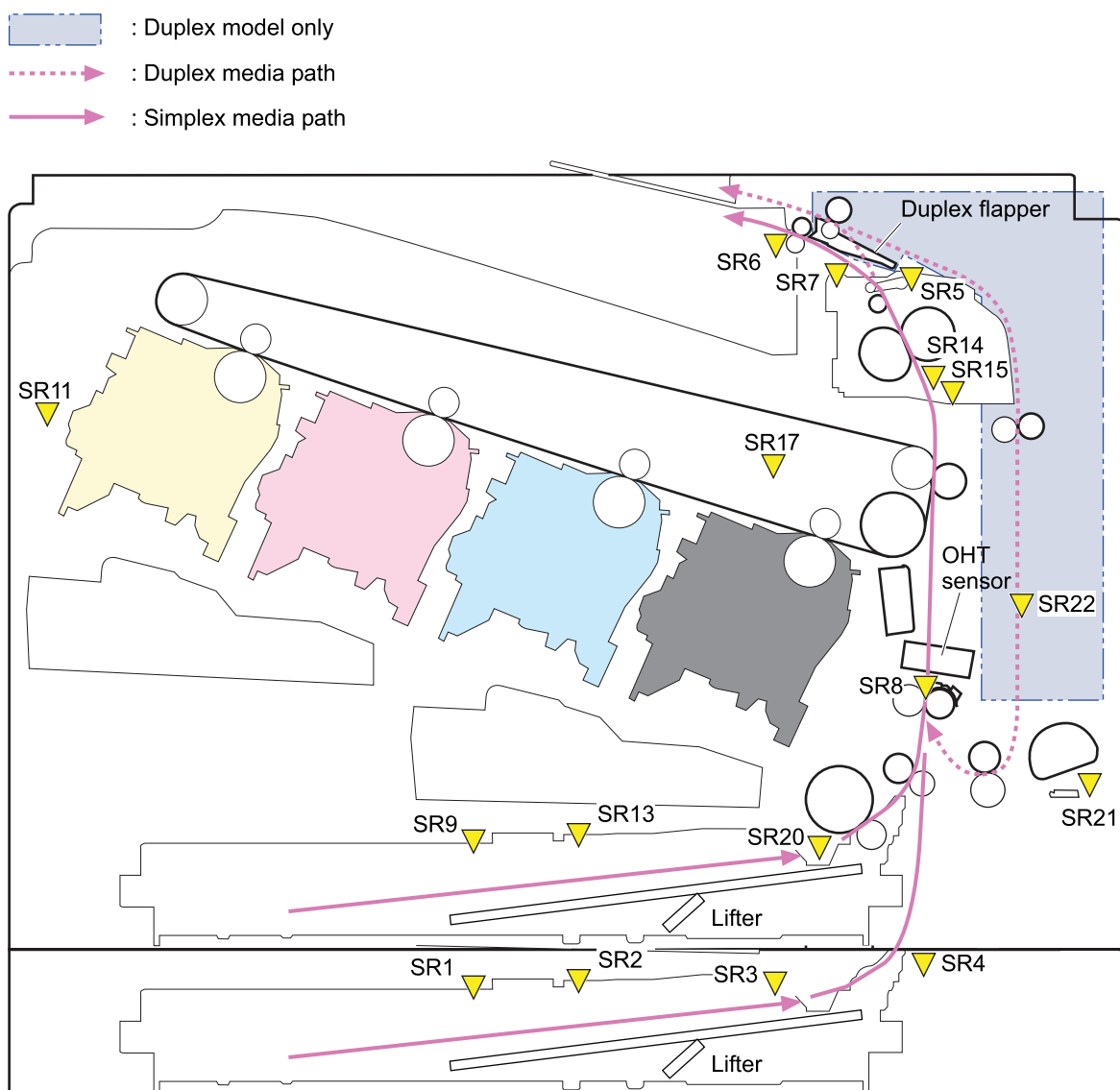
Table 7-10 Sensors

Component abbreviation	Component name
SR1	Tray 3 paper surface sensor 1
SR2	Tray 3 paper surface sensor 2
SR3	Tray 3 paper sensor
SR4	Tray 3 feed sensor
SR5	Fuser (fixing) output sensor
SR6	Output bin full sensor
SR7	Fuser (fixing) pressure release sensor
SR8	TOP sensor

Table 7-10 Sensors (continued)

Component abbreviation	Component name
SR9	Tray 2 lift sensor
SR11	Developing home position sensor
SR13	Cassette presence sensor
SR14	Loop sensor 1
SR15	Loop sensor 2
SR17	ITB disengagement sensor
SR20	Cassette-media presence sensor
SR21	MP-tray-media-presence sensor
SR22	Duplex re-pickup sensor

General timing chart

Figure 7-37 General timing chart

	Operation	STBY	INTR	PRINT	LSTR	STBY
1	Cassette pickup solenoid					
2	TOP sensor					
3	Fixing delivery sensor					
4	Fixing motor					
5	Scanner motor					
6	TOP signal					
7	Drum motor 1					
8	Drum motor 2					
9	Drum motor 3					
10	Pickup motor					
11	Primary charging bias Y					
12	Primary charging bias M					
13	Primary charging bias C					
14	Primary charging bias Bk					
15	Developing bias Y					
16	Developing bias M					
17	Developing bias C					
18	Developing bias Bk					
19	Primary transfer bias Y					
20	Primary transfer bias M					
21	Primary transfer bias C					
22	Primary transfer bias Bk					
23	Secondary transfer bias					

Timing chart is two consecutive print jobs on letter-size paper (full color using one-to-one speed mode)

Circuit diagrams

Figure 7-38 General circuit diagram (1 of 2)

Figure 7-39 General circuit diagram (2 of 2)

Figure 7-40 Product circuit block diagram

Figure 7-41 Paper feeder circuit diagram
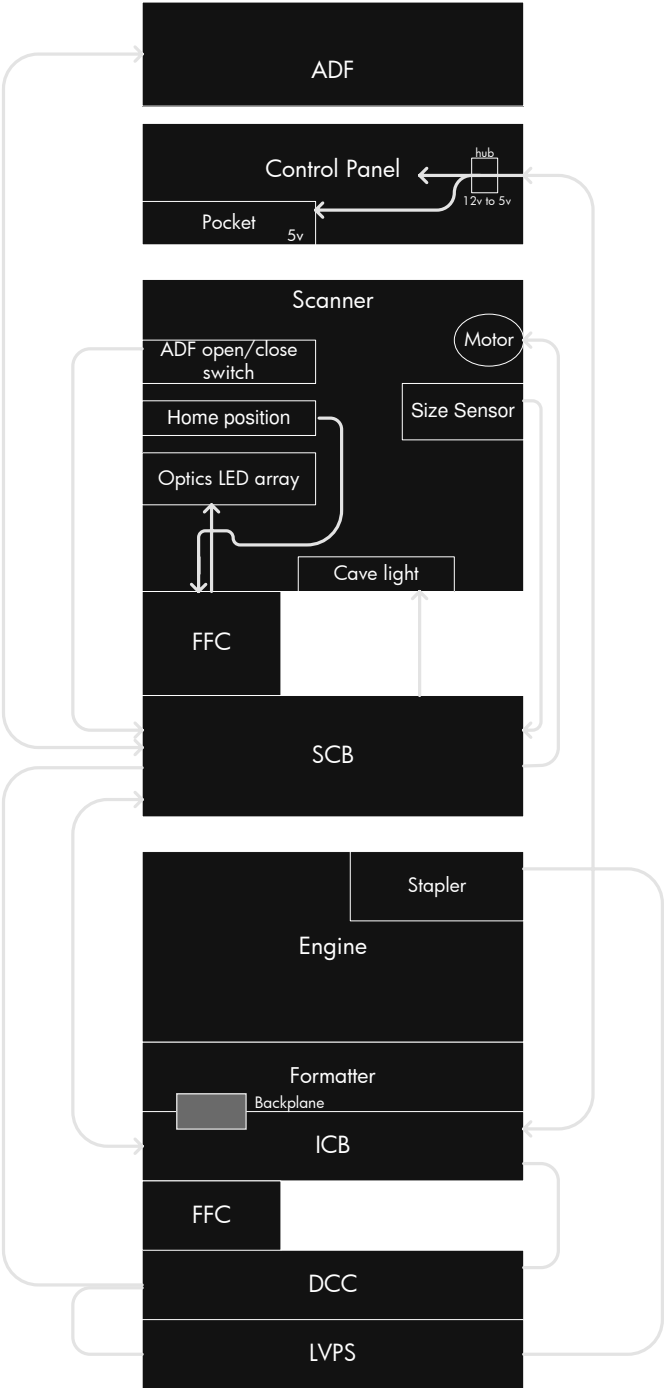
Figure 7-41 Paper feeder circuit diagram
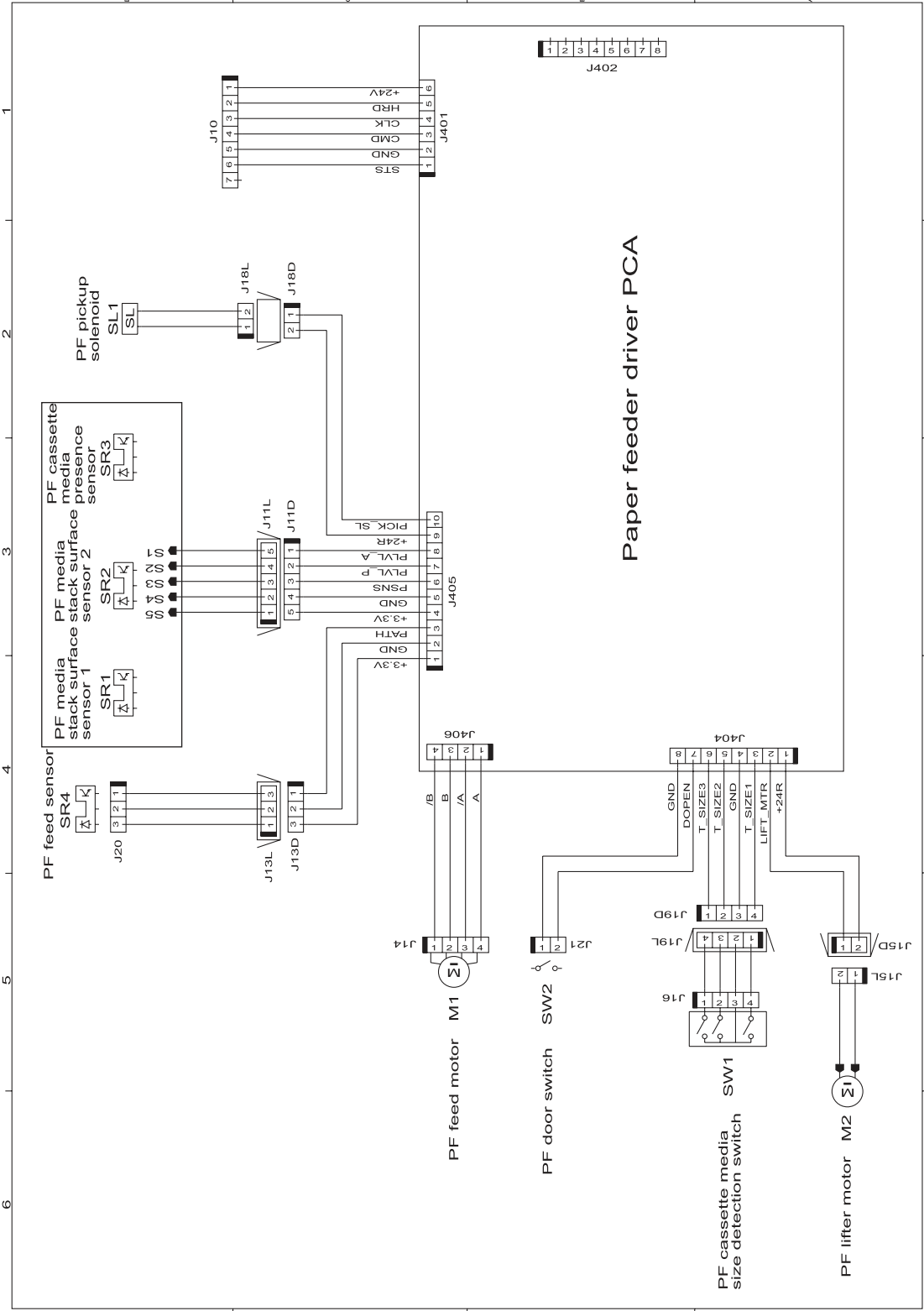
Print-quality troubleshooting tools

Repetitive defects ruler

If defects repeat at regular intervals on the page, use this ruler to identify the cause of the defect. Place the top of the ruler at the first defect. The marking that is beside the next occurrence of the defect indicates which component needs to be replaced.

Figure 7-42 Repetitive defects ruler
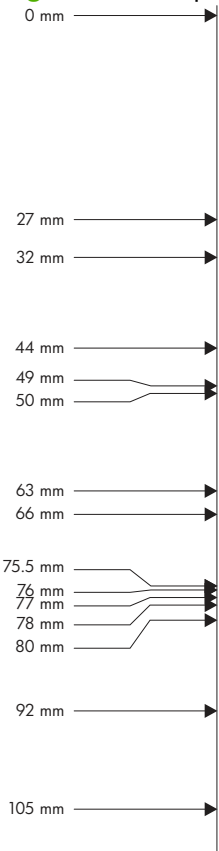
Distance between defects	Product components that cause the defect
27 mm	Print cartridge: primary charge roller
32 mm	Print cartridge: developer roller
44 mm	Printer: primary transfer roller
49 mm	Print cartridge: RS roller
50 mm	Printer: secondary transfer roller
63 mm	ITB: secondary transfer backing roller
66 mm	Printer: distance from secondary transfer roller to fuser
75.5 mm	Print cartridge: OPC drum
76 mm	ITB: driven roller
77 mm	Fuser sleeve
78 mm	Fuser pressure roller

Distance between defects	Product components that cause the defect
80 mm	Printer: distance from primary transfer roller to secondary transfer roller for black
92 mm	Print cartridge station to station pitch: distance from the centerline of one OPC to the centerline of the adjacent OPC ITB: drive roller
105 mm	Printer: distance from registration to secondary transfer roller

Calibrate the product

📝 **NOTE:** The procedure below is used to calibrate the scanner portion of the product. To perform an internal print-quality calibration from the control panel, open the Print Quality menu.

Calibrate the scanner to compensate for offsets in the scanner imaging system (carriage head) for ADF and flatbed scans. Because of mechanical tolerances, the scanner's carriage head might not read the position of the image accurately. During the calibration procedure, scanner offset values are calculated and stored. The offset values are then used when producing scans so that the correct portion of the document is captured.

Scanner calibration should be carried out only if you notice offset problems with the scanned images. The scanner is calibrated before it leaves the factory. It needs to be calibrated again only rarely.

Before calibrating the scanner, print the calibration target.

1. Place letter- or A4-size paper in tray 1, and adjust the side guides.

2. On the control-panel Home screen, scroll to and touch Administration.

3. Touch Troubleshooting.

4. Touch Calibrate Scanner.

5. Touch Calibrate to print the first pass of the calibration target.

6. Place the first pass of the calibration target face-down in tray 1 so that the arrows are facing into the product.

7. Touch Start to print the second pass. The final calibration target *must* look similar to the following figure.
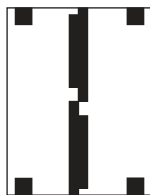
△ **CAUTION:** If the calibration target does not look similar to the figure shown here, the calibration process will fail and the quality of scans will be degraded. *The black areas must extend completely to the short edges of the page. If they do not, use a black marker to extend the black areas to the edge of the page.* Make sure that the paper is loaded correctly.

8. Place the calibration target face-up into the ADF, and adjust the side guides.

9. After the calibration target has passed through the ADF once, reposition it face down in the ADF and touch Start.

10. Place the calibration target face-down on the scanner glass, touch Start, and scan the page. After this pass, the calibration is complete.

Internal print-quality test pages

Print-quality-troubleshooting pages

Use the built-in print-quality-troubleshooting pages to help diagnose and solve print-quality problems.

1. Scroll to and touch Administration.

2. Scroll to and touch Troubleshooting.

3. Touch PQ Troubleshooting.

4. Touch Print.

The product returns to the **Ready** state after printing the print-quality-troubleshooting pages. Follow the instructions on the pages that print out.

Figure 7-43 Print-quality troubleshooting procedure

Figure 7-44 Yellow print-quality troubleshooting page
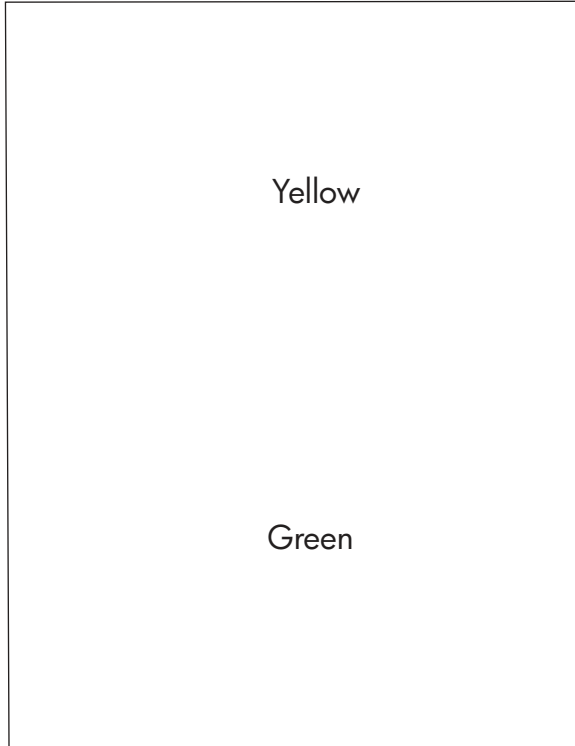
Yellow

Green

Figure 7-45 Yellow comparison page

Green

Yellow

Yellow cannot be easily seen unless combined with cyan, so half of each page is yellow and the other half is an amplified version of yellow problems (green half). Compare the yellow on page one with the corresponding green on page two for defects. You can also check the cyan page for defects.

Figure 7-46 Black print-quality troubleshooting page

1. Grids	The grids are in inches and millimeters. They are label with letters and numbers so that defects can be described by position and by distance between repeats.
2. Color plane registration (CPR) bars	After printing, the box with no extra color in each area on each page shows how far off the CPR of that color is. Each page has two process direction areas and three scan direction areas that are labeled x and y and 1–11. The page should be fed by the long edge. Each square from the center equals 42 microns.
3. Color ramp patches	Used to detect offset for the OPC or developer in the image drum or offset in the fuser.

Diagnostics page

Use the diagnostics page to evaluate problems with color-plane registration, EP parameters, and print quality.

1. Touch Administration.

2. Touch Troubleshooting.

3. Touch Diagnostics Page.
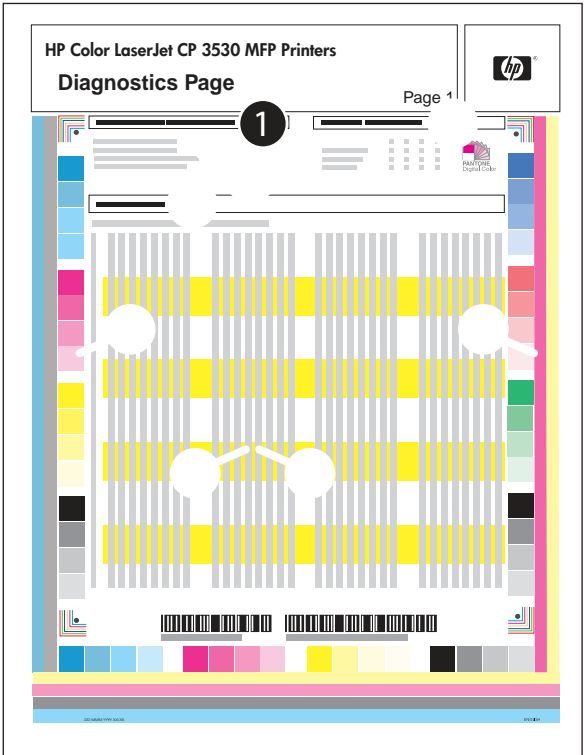
1	Calibration information
2	Parameters
3	Color density
4	Color-plane registration
5	Primary colors
6	Secondary colors
7	Temperature values (22 M)
8	Humidity values (22 N)

Cleaning page

Run the product cleaning page to keep the fuser free of toner and paper particles that can sometimes accumulate and cause specks to appear on the front or back side of your print jobs.

HP recommends that you use the cleaning page when there is a print-quality issue.

A **Cleaning** message appears on the product control-panel display while the cleaning is taking place.

In order for the cleaning page to work correctly, print the page on copier-grade paper (not bond, heavy, or rough paper).

Create and use the cleaning page

1. Scroll to and touch Administration.

2. Scroll to and touch Print Quality.

3. Touch Calibration/cleaning.

4. Touch Process cleaning page.

Configuration pages

Depending on the model, up to three pages print when you select **PRINT CONFIGURATION**. In addition to the main configuration page, an embedded Jetdirect configuration page also prints.

Configuration page

Use the configuration page to view current product settings, to help troubleshoot product problems, or to verify installation of optional accessories, such as memory (DIMMs), paper trays, and printer languages.

1. Touch Administration.

2. Touch Information.

3. Touch Configuration/Status Pages.

4. Touch Configuration Page.

5. Touch Print.

The message **Printing Configuration** displays on the control panel until the product finishes printing the configuration page. The product returns to the **Ready** state after printing the configuration page.

> **NOTE:** If the product is configured with EIO cards (for example, an HP Jetdirect Print Server) or an optional hard-disk drive, an additional configuration page will print that provides information about those devices.

Figure 7-47 Configuration page
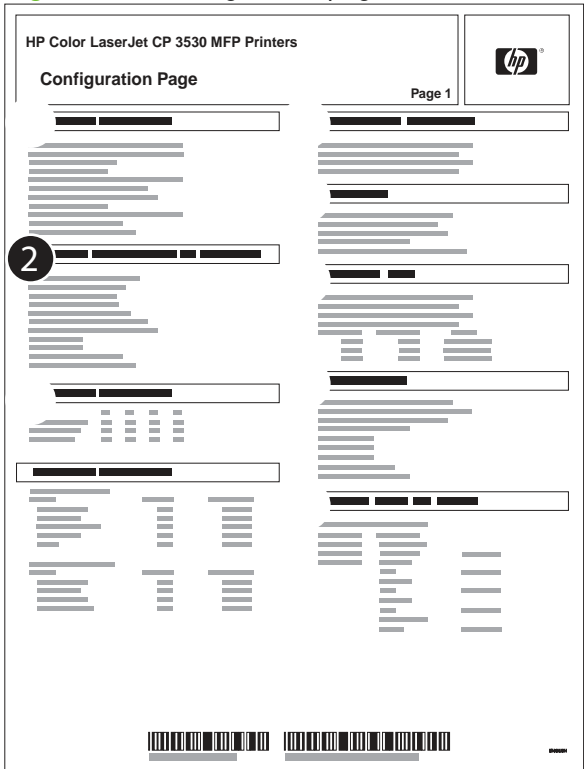
| 1 | Printer information |
| 2 | Installed personalities and options |

3	Color density
4	Calibration information
5	Memory
6	Event log
7	Security
8	Paper trays and options

HP embedded Jetdirect page

The second configuration page is the HP embedded Jetdirect page, which contains the following information:

Figure 7-48 HP embedded Jetdirect page
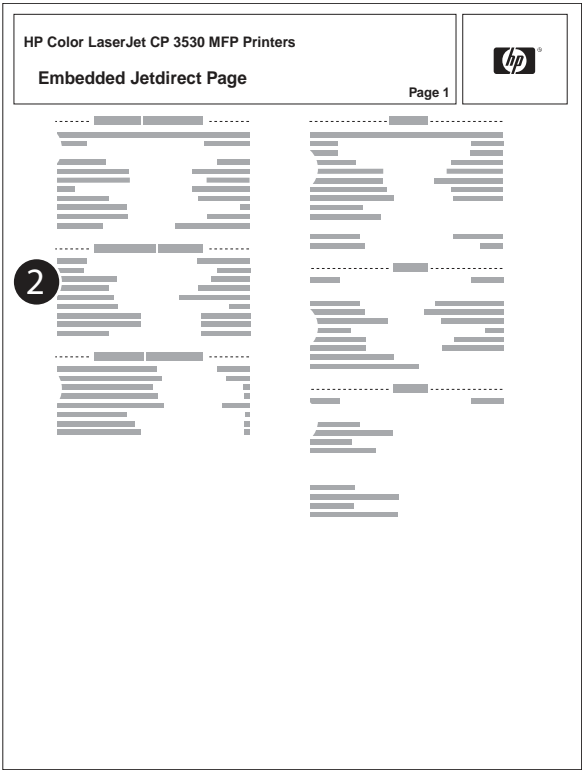
1	**HP Jetdirect Configuration** indicates the product status, model number, hardware firmware version, port select, port configuration, auto negotiation, manufacturing identification, and manufactured date.
2	**Security Settings** information
3	**Network Statistics** indicates the total packets received, unicast packets received, bad packets received, framing errors received, total packets transmitted, unsendable packets, transmit collisions, and transmit late collisions.
4	**TCP/IP** information, including the IP address
5	**IPv4** information
6	**IPv6** information

Always make sure the status line under the HP Jetdirect configuration lines indicates "I/O Card Ready".

Embedded protocol page

The embedded protocol page contains the following information:

Figure 7-49 Embedded protocol page
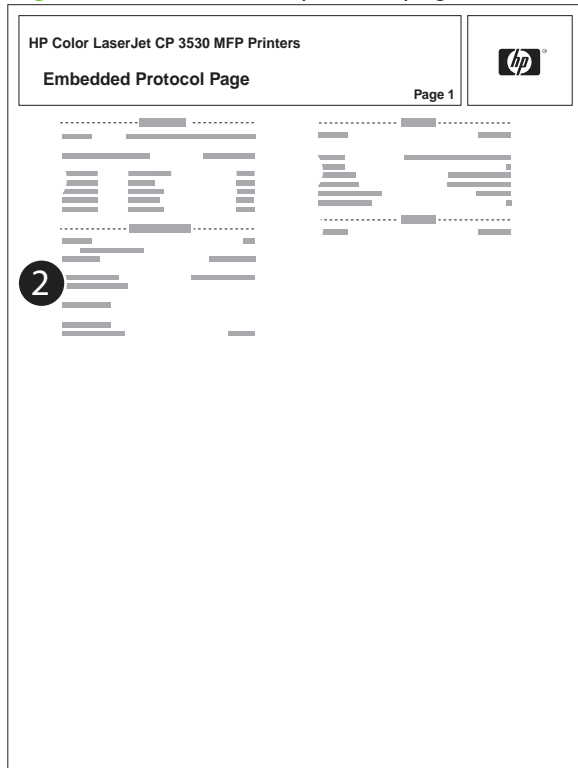
1	IPX/SPX
2	Novell/NetWare
3	AppleTalk
4	DLC/LLC

Finding important information on the configuration pages

Certain information, such as the firmware date codes, the IP address, and the e-mail gateways, is especially helpful while servicing the product. This information is on the various configuration pages.

Table 7-11 Important information on the configuration pages

Type of information	Specific information	Configuration page
Firmware date codes When you use the remote firmware upgrade procedure, all of these firmware components are upgraded.	DC controller	Look on the main configuration page, under "Device Information."
	Firmware datecode	Look on the main configuration page, under "Device Information."
	Embedded Jetdirect firmware version	Look on the embedded Jetdirect page, under "HP Jetdirect Configuration."
Accessories and internal storage All optional devices that are installed on the product should be listed on the main configuration page. In addition, separate pages print for the optional paper handling devices and the fax accessory. These pages list more-detailed information for those devices.	External disk (optional)	Look on the main configuration page, under "Installed Personalities and Options." Shows model and capacity.
	Embedded HP Jetdirect	Look on the main configuration page, under "Installed Personalities and Options." Shows model and ID.
	Total RAM	Look on the main configuration page, under "Memory."
	Duplex unit	Look on the main configuration page, under "Paper Trays and Options."
Additional 500-sheet feeders	Additional 500-sheet feeders	Look on the main configuration page, under "Paper Trays and Options."
Engine cycles and event logs Total page counts and maintenance kit counts are important for ongoing product maintenance. The configuration page lists only the three most recent errors. To see a list of the 50 most recent errors, print an event log from the **Diagnostics** menu.	Engine cycles	Look on the main configuration page, under "Device Information."
Pages since last maintenance (print engine maintenance count)	Pages since last maintenance (print engine maintenance count)	Look on the main configuration page, under "Device Information."
Event-log information	Event-log information	Look on the main configuration page, under "Event log."

Color-band test

The color-band test page shows bands of colors that can indicate whether or not the product is producing colors correctly.

1.   Scroll to and touch Administration.

2.   Touch Troubleshooting.

3.   Touch Color Band Test.

4.   Touch Print.

Control-panel messages

Table 7-12 Control-panel messages

Control panel message	Description	Recommended action
Output Bin Full Remove all paper from bin	The output bin is full and must be emptied for printing to continue.	Empty the bin to continue printing.
10.00.YY Supply memory error	The product is unable to read the cartridge data. The print cartridge is present but defective. ● 10.00.00 Supply memory error (black print cartridge) ● 10.00.01 Supply memory error (cyan print cartridge) ● 10.00.02 Supply memory error (magenta print cartridge) ● 10.00.03 Supply memory error (yellow print cartridge) ● 10.10.00 Supply memory error (e-label for the black print cartridge) ● 10.10.01 Supply memory error (e-label for the cyan print cartridge) ● 10.10.02 Supply memory error (e-label for the magenta print cartridge) ● 10.10.03 Supply memory error (e-label for the yellow print cartridge) ● 10.10.05 Supply memory error (e-label for the black image drum) ● 10.10.06 Supply memory error (e-label for the cyan image drum) ● 10.10.07 Supply memory error (e-label for the magenta image drum) ● 10.10.08 Supply memory error (e-label for the yellow image drum)	1. Open the front door and remove the print cartridge, and then reinsert it. 2. Close the front door. If the message reappears, turn the product off and then on. 3. If the error reappears, replace the print cartridge.
11.XX Internal clock error To continue touch OK	The product's real time clock experienced an error.	Whenever the product is turned off and then turned on again, set the time and date at the control panel. See the user guide for more information. If the error persists, you might need to replace the formatter.
13.01 Jam In Tray 3	The leading edge of the paper fed from Tray 3 stopped before reaching the media feed sensor (SR4).	Follow the onscreen instructions to locate and remove the paper or obstruction.
13.04 Jams inside right door	The paper stopped at the registration sensor (A).	Follow the onscreen instructions to locate and remove the paper or obstruction.
13.05 Fuser area jam	The leading edge of the paper stopped between registration and the input to the	Follow the onscreen instructions to locate and remove the paper or obstruction.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
	fuser. The paper did not reach the loop sensors (SR14, SR15)	
13.06 Fuser area jam	The paper stopped at the fuser-delivery sensor (D).	Follow the onscreen instructions to locate and remove the paper or obstruction.
13.12 Jam inside right door	The duplex refeed paper stopped before it reached duplex re-pickup sensor (SR22).	Follow the onscreen instructions to locate and remove the paper or obstruction.
13.13 Jam inside right door	The duplex refeed paper stopped between the duplex re-pickup sensor (SR22) and registration.	Follow the onscreen instructions to locate and remove the paper or obstruction.
13.1C Fuser Wrap Jam	The paper is stopped in the fuser.	Follow the onscreen instructions to locate and remove the paper or obstruction.
13.20 Jams inside right door	The paper is stopped at either the registration sensor (SR8), the loop sensors (SR14,SR15) or the fuser-delivery sensor (SR5).	Follow the onscreen instructions to locate and remove the paper or obstruction.
13.21 Jams inside right door	Either the front or right side door was opened while paper was in the path.	Follow the onscreen instructions to locate and remove the paper or obstruction.
13.2E Paper Late Jam Near Fuser at Sensors F - J	The paper stopped between the fuser-output sensor (F) and the output-bin-full sensor (J).	Follow the onscreen instructions to locate and remove the paper or obstruction.
13.30.00 Jam in Tray 1	Paper being fed from Tray 1 did not reach registration sensor.	Follow the onscreen instructions to locate and remove the paper or obstruction.
13.30.00 Jam in Tray 2	Paper from Tray 2 did not reach registration sensor (SR8).	Follow the onscreen instructions to locate and remove the paper or obstruction.
13.30.00 Jam inside lower right door	Paper being fed from Tray 3 did not reach registration sensor.	Follow the onscreen instructions to locate and remove the paper or obstruction.
20 INSUFFICIENT MEMORY To continue touch OK	The product does not have enough memory to print the page.	Touch OK to print a partial page. Reduce the page complexity or add product memory.
22 - USB I/O buffer overflow To continue touch OK	The product's USB buffer overflowed during a busy state.	Touching OK resumes printing but results in a loss of data.
22 EMBEDDED I/O BUFFER OVERFLOW To continue touch OK	Too much data was sent to the embedded HP Jetdirect print server. An incorrect communications protocol might be in use.	Touch OK to print the transferred data. Some data might be lost. Check the host configuration.
30.01.02 Scanner failure	The document feeder is jammed.	1. Remove all originals from the document feeder. 2. Open the document feeder top cover and check for torn paper or other objects, such as paper clips.
30.01.03 Scanner failure	An ADF pickup failure occurred.	1. Verify that the original documents are not damaged. If one edge is damaged, try rotating the originals. 2. Verify that the document feeder guides are not too tight against the stack of originals. 3. Clean or replace the document feeder rollers and the separation pad.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
30.01.08 Scanner failure	The scanner carriage is locked or it has not returned to the home position within the expected time.	1. Verify that the scanner is not locked. 2. Verify that the scanner carriage can move freely. If it cannot move, replace the scanner. See Scanner assembly on page 242.
30.01.14 Scanner failure	The SCB firmware failed.	1. Turn the product off and then on. 2. Replace the SCB. See Scanner-control board (SCB) on page 279.
30.01.18 Scanner failure	The SCB ASIC failed.	1. Turn the product off and then on. 2. Replace the SCB. See Scanner-control board (SCB) on page 279.
30.01.19 Scanner failure	The scanner lamp failed.	1. Turn the product off and then on. 2. Replace the scanner. See Scanner assembly on page 242.
30.01.23 Scanner failure	A scanner calibration error has occurred.	1. Turn the product off and then on. 2. Replace the scanner. See Scanner assembly on page 242.
30.01.25 Scanner failure	The scanner-control board (SCB) cannot communicate with the product.	1. Turn the product off and then on. 2. Check the SCB LED. 3. Verify that the SCB connections are correct. 4. Verify the cable from the scanner to the formatter is not plugged in backwards. 5. Replace the SCB. See Scanner-control board (SCB) on page 279.
30.01.36 Scanner failure	An error occurred during the SCB firmware upgrade.	1. Turn the product off and then on. 2. Resend the firmware upgrade. 3. Replace the SCB. See Scanner-control board (SCB) on page 279.
30.01.39 Scanner failure	There was an AFE1 (analog front-end) failure.	1. Turn the product off and then on. 2. Replace the scanner. See Scanner assembly on page 242.
30.01.40 Scanner failure	The scanner AFE 2 failed.	1. Turn the product off and then on. 2. Replace the scanner. See Scanner assembly on page 242.
30.01.41 Scanner failure	There was a SCB error.	1. Turn the product off and then on. 2. Replace the SCB. See Scanner-control board (SCB) on page 279.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
30.01.42 Scanner failure	The PCI-E (peripheral component interconnect express) cable is faulty or disconnected.	1. Turn the product off and then on. 2. Check the PCI-E cable connections at the SCB and the ICB. 3. Replace the PCI-E cable. See Scanner-control board (SCB) on page 279.
30.01.43 Scanner failure	The SCB memory has failed.	1. Turn the product off and then on. 2. Replace the SCB. See Scanner-control board (SCB) on page 279.
30.01.44 Scanner failure	Communication failed on the SCB.	1. Turn the product off and then on. 2. Replace the SCB. See Scanner-control board (SCB) on page 279.
30.01.45 Scanner failure	The SCB has failed.	1. Turn the product off and then on. 2. Replace the SCB. See Scanner-control board (SCB) on page 279.
30.01.46 Scanner failure	The SCB enumeration failed.	1. Turn the product off and then on. 2. Check the PCI cable at the scanner and formatter. 3. Check the SCB connections. 4. Replace the SCB. See Scanner-control board (SCB) on page 279.
40 Embedded I/O Bad Transmission To continue touch OK	A temporary printing error occurred. The connection between the product and the EIO card in the specified slot has been broken.	Touch OK to clear the error message and continue printing. Turn the product off and then on.
41.3 Load Tray <XX>: [Type] [Size]	The specified tray is loaded with media that is longer or shorter in the feed direction than the size adjusted for the tray. This message also appears if two or more sheets of media stick together in the product or if the tray is not adjusted correctly. If using glossy paper, ensure that it has been acclimated.	Touch OK to use another tray. Reconfigure the size in a tray so that the product will use a tray that is loaded with the correct media size. If the message does not clear automatically from the control-panel display, turn the product off and then on.
41.5 Load Tray <XX>: [Type], [Size] To use another tray, touch OK	The product detected an unexpected paper size. There is a tray type mismatch. The tray is a cassette and there is another tray available for use.	To continue, load the tray with the size and type indicated. Or, if another tray is available, touch OK to use it. This problem affects printing, but some scan functions might still be available.
41.X ERROR	A temporary printing error occurred.	Touch OK to clear the error. If the error is not cleared, turn the product off and then on.
49.XXXXX ERROR To continue turn off then on	A firmware error has occurred. This type of error can be caused by corrupted print jobs or software program issues, non product-specific printer drivers, poor-quality USB or network cables, bad network connections or incorrect network configurations, invalid firmware operations, or unsupported accessories.	The following steps should help to identify possible causes and a resolution to the error condition: 1. Turn the product off then on. If the error returns, disconnect all interface cables and turn the product off and then on again.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
		If the error recurs only after connecting one of the interface cables or it happens randomly, go to step 2.
		If the error returns after the second time you turn the product off and on, follow these steps:
		a. The error has been isolated to when the product is in stand-alone condition. Turn the product off and remove the hard drive, fax card (if equipped), any HP paper-handling accessories, all third-party DIMMs (leave the minimum HP memory installed), and all third-party accessories.
		b. After you have removed all components, turn the product on and print a configuration page. If the configuration page prints, the error has been isolated to one or more components you removed. Go to step **c**. If the configuration page does not print, go to step **e**.
		c. Turn the product off, reinstall one of the components onto the formatter, and turn the product on. Print the configuration page after the individual component is added.
		d. Continue reinstalling one component at a time and printing the configuration page until you identify the faulty component. Replace the faulty component, or contact the third-party accessory supplier.
		e. If the configuration page did not print in step **b**, turn the product off and reinstall all components removed from the formatter. Reinstall the formatter.
		f. Perform a Cold Reset, Disk INIT and NVRAM INIT. **NOTE:** Customer settings or data from the disk might be lost.
		g. If the product does not come to a ready state after performing all steps listed above, contact your Hewlett Packard support center.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
		NOTE: HP LaserJet formatter PCAs are rarely the cause of 49 service errors. Do not replace the formatter unless troubleshooting identifies it as the cause.
		2. If the error clears after turning the product off and then on, it is possible that a print job, an action performed on the product, or a connectivity issue is responsible for the error.
		a. If the error recurs only after connecting an interface cable try the following actions, if applicable:
		● Try a new cable.
		● Move the product to a new network port, fax-line port, or USB port.
		● Verify that all unused network protocols are disabled and that all settings are correctly set for the network configuration being used.
		● Reset the fax settings to factory defaults. Configure only the basic settings needed to operate: country/region, company name, and fax number.
		● Verify that the fax card firmware revision is the correct version for the formatter firmware version on the product.
		b. If the error happens only when performing certain actions, such as making a copy, sending an e-mail, or sending a fax, try the following actions, if applicable:
		● Try different configuration settings
		● Increase or decrease the file resolution
		● Use black and white file format instead of color, or vice-versa.
		● Use different file formats, for example .PDF or .TIFF.
		● Use different copy settings, such as eliminating duplex printing or printing multiple pages on one sheet.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
		● Reduce the number of originals.
		● Reset the fax settings to factory defaults. Configure only the basic settings needed to operate: country/region, company name, and fax number.
		● Verify that the fax card firmware revision is the correct version for the formatter firmware version on the product.
		c. If the error occurs only when printing a job, try the following actions:
		● Verify that the printer driver is correct for your product.
		● Try printing another file from the same software program or from another software program.
		● Reduce the number of features being used in the print job, such as printing watermarks, printing multiple pages on one sheet, or using job-storage features.
		● If other files or software programs are successful, try making changes to the file, such using different fonts, changing driver settings, or printing with another driver language, such as PCL 6.
		d. If the error continues to occur, update the product firmware. Obtain the latest firmware from www.hp.com/go/cljcm3530mfp_firmware.
		3. If the error persists after performing these steps, contact your Hewlett Packard support center.
50.1 FUSER ERROR	The fuser has experienced a low-temperature error.	1. Remove any paper jams from the fuser area.
		2. Remove the fuser. Check the connector (J50) between the fuser and the product. Replace the cable or fuser if the connector is damaged.
		3. If the problem persists, replace the fuser. See Fuser on page 200.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
50.2 FUSER ERROR	The fuser has experienced a warm-up error.	1. Reinstall the fuser. Check the connector (J50) between the fuser and the product. Replace the cable or fuser if the connector is damaged. 2. Reconnect the connectors (J138, J115) of the DC controller PCA˙. Reconnect connector (J60), on the power line between the low voltage power supply and the fuser. 3. If the problem persists, replace the fuser. See Fuser on page 200.
50.3 FUSER ERROR	The fuser has experienced a high-temperature error.	1. Reinstall the fuser. Check the connector (J50) between the fuser and the product. Replace the cable or fuser if the connector is damaged. 2. If the problem persists, replace the fuser. See Fuser on page 200.
50.4 FUSER ERROR	The fuser driver circuit has experienced an error.	1. Check the power source. If a power generator is used, improve the situation. **NOTE:** If the product does not meet the power requirement of 43 to 67Hz frequency, the fuser temperature control does not work, which causes a malfunction. 2. Reconnect connector (J101) on the DC controller PCA. 3. If the problem persists, replace the low-voltage power supply. See Low-voltage power supply (LVPS) on page 273.
50.5 FUSER ERROR	The fuser has experienced a type-mismatch error.	1. Reinstall the fuser. Check the connector (J50) between the fuser and the product. Replace the cable or fuser if the connector is damaged. 2. Reconnect the connector (J139) on the DC controller PCA. 3. If the problem persists, replace the fuser. See Fuser on page 200.
50.7 FUSER ERROR	The fuser has experienced a pressure release mechanism error.	1. Reconnect the connectors (J117, J123) on the DC controller PCA. 2. Run the sensor test to test the fuser pressure-release sensor (H) SR7. If the sensor is defective, replace the fuser. See Fuser on page 200.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
50.8 FUSER ERROR	The fuser has experienced a low-temperature error.	1. Remove any paper jams from the fuser area. 2. Reinstall the fuser. Check the connector (J50) between the fuser and the product. Replace the cable or fuser if the connector is damaged. 3. If the problem persists, replace the fuser. See Fuser on page 200.
50.9 FUSER ERROR	The fuser has experienced a high-temperature error.	1. Reinstall the fuser. Check the connector (J150) between the fuser and the product. Replace the cable or fuser if the connector is damaged. 2. If the problem persists, replace the fuser. See Fuser on page 200.
51.1Y Error To continue turn off and then on ● 51.10=black ● 51.11=cyan ● 51.12=magenta ● 51.13=yellow	There is a beam detect error.	1. Turn the product off and then on. 2. Check the flat flexible cable (FFC) connections to the laser scanners. Also check connectors J111 and J110 at the DC controller, and check connectors J503 and J501 at the laser scanners 3. Replace the specific laser scanner. See Laser/scanner assembly (C/Bk) on page 332 or Laser/scanner assembly (Y/M) on page 325.
51.2Y Error To continue turn off and then on ● 51.20=black ● 51.21=cyan ● 51.22=magenta ● 51.23=yellow	There is a laser error.	1. Turn the product off and then on. 2. Check the connectors on the laser scanner. 3. Replace the specific laser scanner. See Laser/scanner assembly (C/Bk) on page 332 or Laser/scanner assembly (Y/M) on page 325.
52.00 Error To continue turn off and then on	The laser scanner experienced a startup error.	1. Perform the laser scanner component tests in the Troubleshooting menu. 2. Depending on the test results, perform one of the following steps: 　◦ If the cyan or black component tests showed a startup failure, reconnect the connectors of the cyan/black scanner motor (J56 and J58) and the DC controller PCA (J106). 　◦ If the yellow or magenta component tests showed a startup failure, reconnect the connectors of the yellow/magenta scanner motor (J55 and J57) and the DC controller PCA (J106). 3. Replace the cyan/black laser scanner unit or the yellow/magenta laser

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
		scanner unit. See Laser/scanner assembly (C/Bk) on page 332 or Laser/scanner assembly (Y/M) on page 325.
52.20 Error To continue turn off and then on	The laser scanner experienced a rotational error.	1. Perform the laser scanner component tests in the Troubleshooting menu.
		2. Depending on the test results, perform one of the following steps:
		◦ If the cyan or black component tests showed a startup failure, reconnect the connectors of the cyan/black scanner motor (J56 and J58) and the DC controller PCA (J106).
		◦ If the yellow or magenta component tests showed a startup failure, reconnect the connectors of the yellow/magenta scanner motor (J55 and J57) and the DC controller PCA (J106).
		3. Replace the cyan and black laser-scanner assembly or the yellow and magenta laser-scanner assembly. See Laser/scanner assembly (C/Bk) on page 332 or Laser/scanner assembly (Y/M) on page 325.
53.10.0X Unsupported DIMM	An unsupported DIMM is installed.	Turn the product off, and then replace the DIMM that caused the error.
54.01 Error	The environmental sensor experienced an error.	1. Reconnect the connector of the DC controller PCA (J108).
		2. Replace the environmental sensor. See Delivery fan, cartridge fan, and environmental sensor on page 285.
55.00.YY DC Controller Communication Error To continue turn off and then on	The DC controller experienced a communication error.	1. Turn the product off and then on.
		2. Perform an engine test. See Engine-test button on page 386.
		3. Verify the connectors on the DC controller.
		4. Replace the DC controller. See DC controller PCA and tray on page 270.
55.01.YY DC Controller Memory Error To continue turn off and then on	There is an error with the DC controller memory.	1. Turn the product off and then on.
		2. Perform an engine test. See Engine-test button on page 386..
		3. Verify the connectors on the DC controller.
		4. Replace the DC controller. See DC controller PCA and tray on page 270.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
55.02.YY Outgoing Parity Error To continue turn off and then on	There is a DC controller outgoing parity error.	1. Turn the product off and then on. 2. Perform an engine test. See Engine-test button on page 386. 3. Verify the connectors on the DC controller. 4. Replace the DC controller. See DC controller PCA and tray on page 270.
55.03.YY No Engine Response To continue turn off and then on	DC controller no response error.	1. Turn the product off and then on. 2. Perform an engine test. See Engine-test button on page 386. 3. Verify the connectors on the DC controller. 4. Replace the DC controller. See DC controller PCA and tray on page 270.
55.04.YY Communications Timeout To continue turn off and then on	There was a DC controller communications time out.	1. Turn the product off and then on. 2. Perform an engine test. See Engine-test button on page 386. 3. Verify the connectors on the DC controller. 4. Replace the DC controller. See DC controller PCA and tray on page 270.
55.05 ENGINE FIRMWARE RFU ERROR	Firmware upgrade failed.	1. Turn the product off and then on. 2. Remove any third-party hardware. 3. Resend the firmware upgrade.
56.01 - Illegal input To continue turn off and then on	There was an illegal input.	1. Turn the product off and then on. 2. Remove any third-party hardware. 3. Attempt the remote firmware update again. 4. Replace the DC controller.
56.02 - Illegal output To continue turn off and then on	There was an illegal output.	Turn the product off and then on.
57.03 Error To continue turn off and then on	The cartridge area cooling fan (FM2) experienced an error.	1. Reconnect the connector J26 of the cartridge fan, connector J262 on the high voltage power supply D PCA, and connector J114 on the DC controller PCA. 2. Immediately after turning on the product, measure the voltage between the connector J262-1 and J262-3 on the high-voltage power supply D PCA. If the voltage changes from 0 V to approximately 24 V, replace the cartridge fan.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
57.04 Error To continue turn off and then on	The low-voltage power-supply fan (FM1) experienced an error.	1. Reconnect the connector J119 on the DC controller PCA. 2. Immediately after turning on the product, measure the voltage between the connector J119-1 and J119-3 on the DC controller PCA. If the voltage changes from 0 V to approximately 24 V, replace the power-supply fan.
57.07 Error To continue turn off and then on	The delivery area cooling fan (FM3) experienced an error.	1. Reconnect the connector J27 of the delivery fan, connector J262 on the high voltage power supply D PCA, and connector J114 on the DC controller PCA. 2. Immediately after turning on the product, measure the voltage between the connector J262-4 and J262-6 on the high-voltage power supply D PCA. If the voltage changes from 0 V to approximately 24 V, replace the delivery fan.
59.30 Error To continue turn off and then on	The fuser motor experienced a startup error.	1. Perform the fuser motor component test in the **Troubleshooting** menu. 2. Reconnect the connector J117 on the DC controller PCA. 3. Replace the fuser motor. See Fuser motor on page 345.
59.40 Error To continue turn off and then on	The fuser motor experienced a rotational error.	1. Perform the fuser motor component test in the **Troubleshooting** menu. 2. Reconnect the connector J117 on the DC controller PCA. 3. Replace the fuser motor. See Fuser motor on page 345.
59.5Y ERROR **To continue turn off then on**	A drum motor has experienced a startup error. ● Y=0: Black (drum motor 3) (M5) (J121) ● Y=1: Cyan (drum motor 2) (M4) (J120) ● Y=2: Magenta (drum motor 1) (M3) (M4) (J120) ● Y=3: Yellow (drum motor 1) (M3) (J120)	1. Perform the drum-motors component test in the **DIAGNOSTICS** menu. 2. Reconnect the connectors J120 or J121 on the DC controller PCA. 3. Replace the appropriate drum motor. See Drum motor 1 on page 343 or Drum motor 2 or drum motor 3 on page 344.
59.6Y ERROR **To continue turn off then on**	A drum motor has experienced a rotational error. ● Y=0: Black (drum motor 3) (M5) (J121) ● Y=1: Cyan (drum motor 2) (M4) (J120)	1. Perform the drum-motors component test in the **DIAGNOSTICS** menu. 2. Reconnect the connectors J120 or J121 on the DC controller PCA. 3. Replace the appropriate drum motor. See Drum motor 1 on page 343 or Drum motor 2 or drum motor 3 on page 344.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
	• Y=2: Magenta (drum motor 1) (M3) (M4) (J120)	
	• Y=3: Yellow (drum motor 1) (M3) (J120)	
59.B0 ERROR **To continue turn off then on**	The toner-collection unit is full.	Replace the toner-collection unit. See Toner-collection unit on page 190
59.BO CLEANING MOTOR ERROR **REPLACE TONER COLLECTION UNIT**	This message displays for one of the following reasons: • The cleaning motor is stuck. • The toner-collection unit is full. • The chute at the top of the toner collection unit is clogged.	Replace the toner-collection unit. See Toner-collection unit on page 190.
59.C0 Error To continue turn off and then on	The developer-disengagement motor experienced a rotational error.	1. Perform the **Alienation Motor** test in the **Component Tests** menu in the **Troubleshooting** menu. Verify that the cartridges are being correctly alienated. 2. Check the following connectors: J25 at the motor (M10), J261 and J251 on the high voltage power supply-D PCA, and connectors J138 and J106 on the DC controller PCA. 3. Perform the **Manual Sensor Test** and observe item G. The normal state is "0". Locate the in-line connector J70 in the cable that is connected to developing-home-position sensor (SR11). To find this connector, remove the left-side cover and look in the area below the support plate. Disconnect the in-line connector. The state of item G should change to "1". 4. If the motor is defective, replace motor M10. If the sensor is defective, replace the main-drive assembly.
59.F0 ERROR	The transfer unit is missing or a motor error has occurred.	1. Verify that the ITB is installed correctly. Remove the ITB and manually test the alienation mechanism. 2. The position of the alienation mechanism in the ITB is monitored by the primary transfer roller disengagement sensor (SR17), which is located in the rear of the black cartridge slot. Perform the manual sensor test while the ITB is removed, and observe the state of sensor "I". The normal state is "0". When you insert a piece of paper into the sensor, the state should change to "1." 3. Open the right door and defeat the interlock. Perform the **ITB Contact**/**Alienation** test in the **Component**

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
		Test menu. Observe the alienation-drive hub, which is above the cyan cartridge.
		4. If the sensor (SR17) fails, order the rear pre-exposure assembly and replace the faulty sensor with the new sensor from the assembly.
		5. If the alienation drive hub does not rotate, the problem could be the fuser motor or the fuser-drive assembly.
59.XY ERROR To continue turn off then on	A temporary printing error occurred.	Turn the product off and then on.
60.02 Tray 2 lifting error	The Tray 2 lifter motor experienced an error.	**1.** Check the Tray-2 paper-surface sensor in the Manual Sensor Test 2 menu in the **Troubleshooting** menu. **2.** Reconnect the connectors of the cassette lifter motor (J1920) and the DC controller PCA (J112). **3.** Replace the lifter drive unit. See Lifter-drive assembly on page 314.
60.03 Tray 3 lifting error	The Tray 3 lifter motor experienced an error.	**1.** Check the Tray-3 paper-surface sensor in the Manual Sensor Test 2 menu in the **Troubleshooting** menu. **2.** Reconnect the connectors of the cassette lifter motor (J1920) and the DC controller PCA (J112). **3.** Replace the lifter drive unit. See Lifter-drive assembly on page 314.
68.X Storage error settings changed To continue, touch OK.	At least one of the settings saved in the non-volatile storage device is invalid and was reset to its factory default. Printing can continue, but there may be some unexpected behavior because an error occurred in permanent storage. ● 68.0: The onboard NVRAM failed. ● 68.1: The removable disk (flash or hard) failed.	Touch OK to clear the message.
69.X Error To continue, touch OK.	A duplex error occurred.	Turn the product off and then on. This problem affects printing, but some scan functions might still be available. Touch Hide to remove this message and use other features.
79.XXXX - ERROR To continue turn off and then on	A critical hardware error occurred.	Turn the product off and then on.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
8X.YYYY EIO ERROR To continue turn off and then on	The EIO accessory card encountered a critical error, as specified by **YYYY**.	Try the following actions to clear the message: 1. Turn the product off and then on. 2. Turn the product off, reseat the EIO accessory, and then turn the product on. 3. Replace the EIO accessory. See Formatter PCA on page 192.
8X.YYYY EMBEDDED JETDIRECT ERROR	The embedded HP Jetdirect print server encountered a critical error, as specified by **YYYY**.	Turn the product off and then on.
ABCDEFGHIJK 100000000000	The product is performing the paper path test.	To exit press the Stop button.
ACTION NOT CURRENTLY AVAILABLE FOR TRAY X TRAY SIZE CANNOT BE ANY SIZE/ANY CUSTOM	A duplexed (2-sided) document was requested from a tray that is set to **Any Size** or **Any Custom**. Duplexing is not allowed from a tray configured to **Any Size** or **Any Custom**.	Select another tray or reconfigure the tray.
Authentication required	Authentication is enabled for this feature or destination. A user name and password are required.	Type the user name and password, or contact the network administrator.
Authentication required to use this feature	A user name and password are required.	Type the user name and password, or contact the network administrator.
Bad optional tray connection	The optional tray is not connected properly and must be reconnected before printing can continue.	1. Turn the product off. 2. Remove and then reinstall optional tray.
Calibrating...	The product is calibrating.	No action is necessary.
Cancelling	The product is canceling a job.	No action is necessary.
Card Slot Device Failure - To Clear Touch OK	The specified device failed.	Touch OK to clear.
Card Slot file operation failed To clear touch OK	A PJL file system command was received that attempted to perform an illogical operation, such as downloading a file to a non-existent directory.	Touch OK to clear.
Card Slot is write protected To clear touch OK	The device is protected and no new files can be written to it.	Touch OK to clear message.
Card Slot Not Initialized	The file system device must be initialized before it can be used.	Initialize the device.
Cartridge Error – Replace Black Cartridge	Toner has settled in the black print cartridge and the auger cannot turn.	Replace the black cartridge. After replacing the cartridge, turn the power off and then on to continue
Cartridge Error-Replace color cartridges Reinstall, then turn off and then on	The cyan, magenta, or yellow print cartridges are defective and need to be replaced.	Replace the defective print cartridges and turn the product off and then on.
Checking engine	The product is checking the engine.	No action is necessary.
Checking paper path	The engine is checking the rollers for possible paper jams.	No action is necessary.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
Chosen personality not available. To continue touch OK.	A print job requested a product language (personality) that is not available for this product. The job will not print and will be cleared from memory.	Print the job by using a printer driver for a different printer language, or add the requested language to the product (if possible). To see a list of available personalities, print a configuration page.
Cleaning	The cleaning page is being processed.	No action is necessary.
Cleaning disk <X>% complete Do not power off	A storage device is being sanitized or cleaned.	Do not turn off the product. The product's functions are unavailable. The product will automatically restart when finished.
Clearing activity log	The corresponding fax menu item has been triggered.	No action is necessary.
Clearing all blocked numbers	The corresponding fax menu item has been triggered.	No action is necessary.
Clearing event log	The event log is being cleared.	No action is necessary.
Clearing paper path	The product jammed or was turned on and paper was detected where it should not be. It is attempting to eject these pages automatically.	No action is necessary.
Close front or right doors	Either the front or right door is open.	1. Close the door. 2. Inspect the interlock on both the front and right doors. 3. Use the manual sensor test to verify that the interlock switches are working correctly.
Close lower-right door	The lower-right door is open.	Close the lower-right door.
Cooling device	This product recently experienced a period of heavy usage. In order to maintain a supported operating temperature, the product cycles through intervals of printing and pausing.	No action is necessary.
Creating cleaning page	A two-step page is being processed after having been created. This message is also used for products with duplexers that create and process the cleaning page in one step.	No action is necessary.
Data received	The product is waiting for the command to print the last page. The last page will print in a few moments.	No action is necessary.
Deleting...	The product is currently deleting a stored job.	No action is necessary.
Disk spinning up	The EIO disk product in slot <X> is spinning up.	No action is necessary.
Document feeder cover open	The document feeder cover is open.	Close the document feeder cover. Follow the instructions in the onscreen dialog box.
DOCUMENT FEEDER EMPTY	The document feeder is empty.	1. Place originals in the document feeder or on the glass. 2. Press the Start button.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
Document feeder pick error	The document feeder experienced an error while picking media.	1. Open the document feeder cover. 2. If necessary, roll the green wheel to the left to advance the paper. Remove all paper found. 3. Lift the green tab to open the paper guide. Remove all paper found. 4. Close the paper guide. Close the document feeder cover. 5. Reinsert the original pages into the document feeder. Align the paper guides with the edges of the paper. 6. To continue, press the Start button. **NOTE:** If this jam occurs frequently, try scanning from the flatbed glass. Some paper types cause jams in the document feeder. If the original document contains both Letter and Legal size pages, select "Mixed Letter/Legal" as the original size.
Duplexing... do not grab paper	The product is printing a duplex job, and the paper is accessible.	No action is necessary.
E-MAIL GATEWAY DID NOT ACCEPT THE JOB BECAUSE THE ATTACHMENT WAS TOO LARGE	The scanned documents have exceeded the size limit of the server.	Send the job again using a lower resolution, smaller file size setting, or fewer pages. Contact the network administrator to enable sending the scanned documents by using multiple e-mails.
E-MAIL GATEWAY DID NOT RESPOND	A gateway exceeded the time-out value.	Validate the SMTP IP address.
E-MAIL GATEWAY REJECTED THE JOB BECAUSE OF THE ADDRESSING INFORMATION	One or more of the e-mail addresses is incorrect.	Send the job again with the correct addresses.
EIO <X> Disk initializing	The EIO disk product in slot <X> is initializing.	No action is necessary.
EIO <X> disk not functional	The EIO disk in slot <X> is not working correctly.	Turn the product off. Remove the disk from the slot indicated, and replace it with a new disk. Turn the product on.
EIO Device Failure - To Clear Touch OK	The specified device failed.	Touch OK to clear.
EIO file operation failed To clear touch OK	A PJL file system command attempted to perform an illogical operation, such as downloading a file to a directory that does not exist.	Touch OK to clear.
EIO is write protected To clear touch OK	The device is protected and no new files can be written to it.	Touch OK to clear message.
EIO Not initialized	The file system device must be initialized before it can be used.	Initialize the device.
Entering internal application <X>	The product is opening an internal program.	No action is necessary.
Error	The directory or file is not readable.	To activate a fax, complete the required fax settings available through the Administration menu.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
ERROR EXECUTING DIGITAL SEND JOB	A digital send job failed and cannot be delivered.	Try to send the job again.
External device initializing	An external product is initializing.	No action is necessary.
Fax is disabled ignoring call	The product received a call, but the fax feature was not configured with the required settings (country/region, date/time, company name, fax number, etc.). The fax icon on the control panel is grayed out.	Configure the fax with the required settings from the Administration menu on the control panel.
Flatbed cover open	The flatbed scanner cover is open.	Close the flatbed cover.
Found SMTP gateway	The Find SMTP Gateway menu has been selected.	No action is necessary
Gateways failed	The gateway configuration is incorrect.	See Solve connectivity problems on page 501.
Gateways OK	The gateway configuration is correct.	No action is necessary.
Genuine HP supplies installed	A new HP cartridge has been installed. This message appears for approximately 6 seconds before the returns to the **Ready** state.	No action is necessary.
HP DIGITAL SENDING: DELIVERY ERROR	A digital send job failed and cannot be delivered.	Try to send the job again.

HP SECURE HARD DRIVE DISABLED	The HP high-performance hard disk is disabled, or the product does not recognize the hard disk.
	
	After an encrypted hard disk is paired with a specific product, it cannot be used in another product unless it is reinitialized.
	
	NOTE: After the encrypted hard disk is paired to the product, all other hard disks are disabled.
		Use the embedded Web server to configure the hard disk.
		
		1. Open the embedded Web Server by typing the product IP address into a Web browser.
		
		2. Click the **Digital Sending** tab.
		
		3. Select the **Security** link from the left navigation menu, and open the **Hard Disk and Mass Storage Security Settings** section.
		
		4. The following options are available:
		
		  ◦ **Disk Init**: This option does not affect the disk encryption status.
		
		  ◦ **NVram Init**: This option does not affect the disk encryption status.
		
		  ◦ **Disable Hard Disk Encryption and Reboot**: This option completely erases the hard disk including all stored jobs, digital-send settings, and authentication settings. All pre-loaded fonts, after-market fonts, and other programs must be reloaded.
		
		  ◦ **Reinitialize Hard Disk**: This option has the same effect as the **Disable Hard Disk Encryption**

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
		and Reboot, but it does not restart the product.
Image CRC error	This message is displayed before the firmware is loaded at startup when an error occurs during a firmware upgrade.	Resend the upgrade.
Incompatible fuser	The wrong fuser is installed. The product will not print, even though the fuser fits the product.	Install the correct fuser. See Fuser on page 200.
Incompatible supplies	Two or more incompatible supplies are installed. The product will not print, even though the supplies fit the product.	Install the correct supply.
INFLATE FAILURE	An error occurred during the firmware upgrade.	Resend the upgrade.
Initializing permanent storage	Product is initializing permanent storage.	No action is necessary.
Initializing scanner	The scanner is initializing.	Wait until the scanner is **Ready** before proceeding to scan.
Install <color> cartridge	The print cartridge has been removed or has been installed incorrectly.	Replace or reinstall the print cartridge correctly to continue printing.
Install fuser	The fuser is either not installed or not installed correctly.	Install the fuser. See Fuser on page 200.
Install supplies	At least two supplies are missing.	Replace the missing supplies or make sure the installed supplies are fully seated.
Install transfer unit	The ITB is either not installed or not installed correctly.	Replace the ITB. See Intermediate transfer belt (ITB) on page 209.
Insufficient memory to load fonts/data <device> To continue touch OK	The product does not have enough memory to load the data (for example, fonts or macros) from the location specified.	Touch **OK** to continue without this information. If the message persists, add memory.
Internal Disk Device Failure - To Clear Touch OK	The specified device failed.	Touch OK to clear the message.
Internal disk file operation failed To clear touch OK	A PJL file system command attempted to perform an illogical operation, such as downloading a file to a non-existent directory.	Touch OK to clear.
Internal Disk Initializing	The internal disk is initializing.	No action is necessary.
Internal disk is write protected To clear touch OK	The product is protected and no new files can be written to it.	Touch OK to clear the message.
Internal disk not found	Internal disk not found.	Turn the product off and then on.
Internal disk not functional	The internal disk is not functional.	Copy and send is disabled. Turn the product off and then on.
Internal disk not initialized	The internal disk is not initialized.	Initialize the disk.
Internal disk spinning up	The internal disk is spinning up its platter. It usually shows for approximately 15 seconds when the product comes out of power-save mode. Jobs can still print, but jobs that require disk access (i.e., stored jobs) must wait.	No action is necessary.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
Jam in document feeder	Paper is jammed in the document feeder.	1. Open the document feeder cover. 2. If necessary, roll the green wheel to the left to advance the paper. Remove all paper found. Lift the green tab to open the paper guide. Remove all paper found. Close the paper guide. Close the document feeder cover. 3. Reinsert the original pages into the document feeder. Align the paper guides with the edges of the paper. To continue, press the Start button. **NOTE:** If this jam occurs frequently, try scanning from the flatbed glass. Some paper types cause jams in the document feeder. If the original document contains both letter- and legal-size pages, select Mixed Letter/Legal as the original size.
Job is being saved to disk	Job is being saved.	No action is necessary.
LED is on To continue, touch OK	This message appears when the LED is component tested.	Touch OK to continue.
Load Tray 1 <type> <size>	The tray is empty or configured for a different size than the size requested.	Follow the instructions in the onscreen dialog box.
Load Tray 1: [Type], [Size] To continue, touch OK	Tray 1 is empty.	Load Tray 1 with the requested paper. Or, if paper is already in Tray 1, touch OK to print. If paper is in another tray, remove the paper and insert it in Tray 1, and then touch OK.
Load Tray <XX> <type> <size> To use another tray, touch OK	A cassette tray is empty, and there is another tray available.	Load the tray with the requested paper or adjust the paper guides. If another tray is available, touch OK to select.
Load Tray <XX>: [type], [size]	A cassette tray is empty, and there is no other tray available.	Load the tray with the requested paper or adjust the paper guides.
Loading program <XX> Do not power off	Programs and fonts are being loaded into the product's file system.	No action is necessary.
Manually feed <type> <size>	The specified job requires manual feed from Tray 1.	Load the requested media into Tray 1. Touch OK to use paper in another tray.
Manually feed output stack Then touch OK to print second sides	The first side of a manual duplex job printed and the product is waiting for the user to insert the output stack to complete the second side. For the normal **Manually Feed** message, printing continues automatically when the paper is reinserted. With this message, printing stops until the user touches the OK button, which allows time for straightening the output stack.	The even-numbered pages of the two-sided document have printed. Follow the next steps to print the odd-numbered pages. 1. Maintaining the same orientation, remove the document from the output bin. Do not discard blank pages. 2. Flip the document over so it is face up. 3. Load Tray 1 with the face-up document. 4. To continue printing, touch OK.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
Manually Feed: [Type], [Size] To continue, touch OK	A job has specified manual feed, and Tray 1 is loaded.	Touch OK to resume printing.
Manually Feed: [Type], [Size] To use another tray, touch OK	The job specified manual feed, the MP-tray is empty, and there is another tray available to use.	Touch OK to switch to another tray and resume printing.
Moving solenoid To exit press STOP	The solenoid and a motor are moving as part of a component test.	No action is necessary.
No job to cancel	This message appears when the Stop button is pressed.	No action is necessary.
Non-HP supply installed	A refilled color or a cloned color/mono cartridge was installed, and the product previously used all genuine HP supplies. Or, an unauthorized cartridge was installed, and the product previously used all genuine supplies.	Install a genuine HP cartridge, or touch OK to override the condition.
Non-HP supply in use	This message appears when the override button is pressed (on the non-HP supply installed error).	No action is necessary.
Order <color> Cartridge	The identified print cartridge is nearing the end of its useful life. The product is ready and will continue for the estimated number of pages indicated. Estimated pages remaining is based upon the historical page coverage of this product. Printing will continue until a supply needs to be replaced.	Order a replacement print cartridge.
Order Fuser Kit	The fuser is near the end of life. The product is ready and will continue for the estimated number of pages indicated. Printing will continue until a supply needs to be replaced.	Order a replacement fuser kit.
Order roller kit-Less than XXXX pages	The roller kit is low due to rotations.	Order a replacement roller kit.
Order Supplies	One or more supplies need to be replaced.	Replace the supply.
Order toner collection unit	The toner collection unit is almost full.	Order a replacement toner collection unit.
Order Transfer Kit	The transfer kit is near the end of life. Printing can continue.	Order a replacement transfer kit.
Order transfer kit Less than XXXX pages	The number of pages remaining for this supply has reached the low threshold. Printing can continue.	Order a replacement transfer kit. Approximate pages remaining will vary depending on the types of documents printed.
Performing Color Band Test	The color-band test is being performed.	No action is necessary.
Performing paper path test Press stop to cancel	The product is performing a paper-path test.	No action is necessary.
Performing upgrade <Device>	The product is performing a product upgrade.	Do not turn the product off or press any buttons. The product will automatically restart when the upgrade is finished.
Please wait	The product is going offline.	No action is necessary.
Printing	The page is being printed.	No action is necessary.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
Printing CMYK Samples	The CMYK-samples page is being generated. The product will return to the ready state when the page is complete.	No action is necessary.
PRINTING COLOR USAGE LOG	The color-usage-log page is being generated. The product will return to the ready state when the page is complete.	No action is necessary.
Printing configuration	The product is generating the internal configuration page.	No action is necessary.
PRINTING DEMONSTRATION	The demo page is being generated. The product will return to the ready state when the page is complete.	No action is necessary.
PRINTING DIAGNOSTICS PAGE	The diagnostics page is being generated. The product will return to the ready state when the page is complete.	No action is necessary.
Printing event log	The event log page is being generated.	No action is necessary.
Printing file directory	The product is generating the file directory page.	No action is necessary.
Printing font list	The product is generating the font list.	No action is necessary.
Printing menu map	The product is generating the menu map.	No action is necessary.
Printing mopy status	The product is generating the mopy status report.	No action is necessary.
PRINTING PQ TROUBLESHOOTING	The print-quality troubleshooting test is being generated. The product will return to the ready state when the test completes.	No action is necessary.
Printing registration page	The product is generating the registration page.	No action is necessary.
PRINTING RGB SAMPLES	The print-quality troubleshooting test is being generated. The product will return to the ready state when the test completes.	No action is necessary.
Printing stopped To continue, touch OK	A Print/Stop test is running.	No action is necessary.
Printing supplies status	The product is generating the supplies status page.	No action is necessary.
Printing usage page	The product is generating the usage page.	No action is necessary.
Processing copy <X> of <Y>...	The product is currently processing or printing collated copies.	No action is necessary.
Processing digital send job	The product is processing a digital send job.	No action is necessary.
Processing duplex job	The product is processing a duplex job.	No action is necessary.
Processing from tray <X>	The product is processing a job. The <X> stands for the chosen paper tray.	No action is necessary.
Processing-intermittent mode	The internal temperature of the product is too hot, and the product is processing a job(s).	No action is necessary.
Processing. . .	The product is processing the current job but has not begun to pick up pages yet.	No action is necessary.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
RAM Disk Device Failure - To Clear Touch OK	The specified device failed.	Touch OK to clear the message.
RAM Disk file operation failed To clear touch OK	A PJL file system command was received that attempted to perform an illogical operation, such as downloading a file to a non-existent directory.	Touch OK to clear the message.
RAM Disk is write protected To clear touch OK	The device is protected and no new files can be written to it.	Touch OK to clear the message.
RAM disk not initialized	The file system device must be initialized before it can be used.	Initialize the device.
Ready	The product is online and ready to receive data.	No action is necessary.
Receiving upgrade	The product is receiving a firmware update.	No action is necessary.
Remove All Print Cartridges	The product is executing a component test and the component selected is belt only.	Remove all print cartridges.
Remove At Least One Print Cartridge	The product is executing a disable-cartridge check or component test and the component selected is the cartridge motor.	Remove one print cartridge.
REMOVE CARTRIDGE LOCKS	At least one print-cartridge lock is installed.	1. Open the front door. 2. Remove the cartridge locks from the front of each cartridge. 3. Close the front door.
Replace <color> Cartridge	The identified print cartridge has reached the end of life. Printing can continue.	Replace the specified print cartridge.
Replace <color> cartridge - To continue, touch "OK"	A print cartridge has reached the low threshold, and the Replace Supplies menu is set to stop at low.	Order a replacement print cartridge. Touch OK to continue printing.
Replace DIMM <X> MEM test failure	The listed DIMM is not functioning properly and must be replaced.	Replace the DIMM.
Replace document feeder kit	This warning message appears one month before the end of life when the maintenance interval has been reached.	Follow instructions included with the document feeder kit to install.
Replace fuser kit	The fuser kit has reached the low threshold.	Replace the fuser. See Fuser on page 200.
Replace fuser kit To continue, touch OK	The fuser is nearing the end of its useful life. Printing can continue.	Replace the fuser kit. See Fuser on page 200.
Replace roller kit	The roller kit has reached the low threshold.	Replace the roller kit. Secondary transfer assembly on page 207.
Replace Supplies - Override in Use	The product is set to continue printing even though a supply has reached the end of life. CAUTION: Using the override mode can result in unsatisfactory print quality. HP recommends replacing the supply when this message appears. The HP Supplies Premium Protection Warranty coverage ends when a supply is used in override mode.	No action is necessary.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
Replace Supplies - Using black	A color supply (or supplies) has reached the out condition and the Color Supply Out menu item is set to Autocontinue black.	No user input is required for printing to continue. Printing continues in black.
Replace transfer kit	The supply has reached the end of life. Printing can continue.	Replace transfer kit. See Intermediate transfer belt (ITB) on page 209.
Replace transfer kit To continue, touch OK	The transfer kit is at the end of life. Printing can continue, but print quality might be reduced.	The product is set to stop printing when a supply needs to be ordered. To continue printing, touch OK. Replace the ITB. See Intermediate transfer belt (ITB) on page 209.
Request Accepted Please Wait	This message appears when a request to print an internal page is accepted but cannot print.	Wait for the internal page to print.
Resend external accessory firmware	An external accessory requires a firmware upgrade. Printing can continue, but jams may occur if the job uses the external accessory.	Perform a firmware upgrade.
Resend upgrade	A firmware upgrade did not complete successfully.	Upgrade the firmware again.
Restoring factory settings	A Restore Factory Settings reset is being performed.	No action is necessary.
Restoring…	A Restore Last Saved State, Restore Print Modes, Restore Optimization, or Restore Color Values operation is being performed.	No action is necessary.
Restricted from printing in color	The print job is being forced to print in black either because the product is set to print only in black or because the user ID and application ID do not have color printing permissions.	No action is necessary.
RFU LOAD ERROR	A failure occurred during the remote firmware upgrade.	Resend the upgrade.
ROM Disk Device Failure - To Clear Touch OK	The specified device failed.	Touch OK to clear.
ROM Disk file operation failed To clear touch OK	A PJL file system command was received that attempted to perform an illogical operation, such as downloading a file to a non-existent directory.	Touch OK to clear the message.
ROM Disk is write protected To clear touch OK	The device is protected and no new files can be written to it.	Touch OK to clear the message.
ROM Disk Not Initialized	The file system device must be initialized before it can be used.	Initialize the device.
Rotating <color> Motor	A component test is in progress; the component selected is the <color> cartridge motor.	Press Stop to stop the test.
Rotating Motor - To exit press STOP	The product is executing a component test and the component selected is a motor.	Press Stop to stop the test.
Sanitizing Disk <X>% Complete Do not power off	The hard disk is being cleaned.	Contact the network administrator.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
SCAN FAILURE	The scan was unsuccessful and the document needs to be scanned again.	If necessary, reposition the document to scan again, and then press Start.
Scanning...page <X>	The product is scanning a job in the ADF.	No action is necessary.
Scanning...page from glass	The product is scanning from the glass.	No action is necessary.
Searching... please wait	The product is searching.	No action is necessary.
Send complete	The send process is complete.	No action is necessary.
Sending digital send job	The product is sending a digital-send job.	No action is necessary.
Sending to external destinations	The product is sending a digital-send job.	No action is necessary.
Size mismatch in tray XX	The media in the listed tray does not match the size specified for that tray.	Load the correct media.
Sleep mode on	The product is in sleep mode.	No action is necessary.
SMTP Gateways OK	The status of the SMTP gateways is normal.	No action is necessary.
Testing Please wait	The product is temporarily unavailable.	No action is necessary.
To return to ready press STOP	The product is paused, and there are no error messages pending at the display.	No action is necessary.
Total images: <X>	The product has processed the number of images indicated by <X>.	No action is necessary.
Tray <X>: [Type], [Size]	The tray is closed if the Size/Type Prompt menu is set to Display.	No action is necessary.
Tray <XX> empty: [type], [size]	The specified tray is empty and needs to be loaded, but the current job does not need this tray to print.	Load the tray.
Tray <XX> open	The specified tray is open or not closed completely; the tray is not required to print and is not blocking the paper path of a tray required for printing.	Close the tray.
Type Mismatch In Tray <XX>	The specified tray contains a media type that does not match the configured type.	The specified tray will not be used until this condition is addressed. Printing can continue from other trays.
Unable to connect		To temporarily hide this message in order to fax or send to e-mail, touch Hide.
UNABLE TO COPY	The product was unable to copy the document.	To temporarily hide this message in order to fax or send to e-mail, touch Ignore.
Unable to mopy job	Because of a memory, disk, or configuration problem, a mopy job cannot be mopied. Only one copy will be produced.	Try increasing the product memory or reducing the complexity of the job.
UNABLE TO SEND		To temporarily hide this message in order to fax or send to e-mail, touch Ignore.
UNABLE TO SEND FAX	The product was unable to send the fax.	Contact the network administrator.
Unauthorized supply in use	The product is using a non-HP supply.	Any product repair required as a result of using non-HP or unauthorized supplies is not covered under warranty. HP cannot ensure the accuracy or the availability of certain features.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
Unsupported data on [FS] DIMM in slot	The data on the DIMM is not supported.	The DIMM may need to be replaced. Turn off the product before removing it. To clear this warning, touch OK.
Unsupported USB accessory detected	The USB accessory is not recognized and cannot be used by this product.	Remove the USB accessory. To clear this message, touch OK.
Upgrade complete To continue, turn off and then on	Upgrade complete.	Turn the product off and then on.
USB ACCESSORY UNAVAILABLE	The USB accessory was installed after the product was turned on. The product does not support plug-and-play operation.	1. Remove the USB accessory. 2. Turn the product off, and then plug in the USB accessory. 3. Turn the product on.
USB Device Failure - To Clear Touch OK	The specified device failed.	Touch OK to clear.
USB file operation failed To clear touch OK	A PJL file system command was received that attempted to perform an illogical operation, such as downloading a file to a non-existent directory.	Touch OK to clear the message.
USB HUBS NOT FULLY SUPPORTED	Some USB hubs require more power than the product has available.	1. Remove the USB hub.
USB is write protected To clear touch OK	The device is protected and no new files can be written to it.	Touch OK to clear the message.
USB needs too much power	Power requirements for the USB accessory attached to this product are beyond supported limits.	Detach the accessory, and then turn the product off and then on. Try a similar accessory that has its own power supply or requires less power.
USB Not Initialized	The file system device must be initialized before it can be used.	Initialize the device.
USB storage <X> is initializing	The designated USB storage unit is initializing.	No action is necessary.
USB storage <X> is not functional	A parameter in the USB storage is not working correctly.	Turn the product off. Disconnect the USB storage accessory, and replace with a new USB storage accessory.
USB storage <X> removed	A USB storage accessory has been disconnected since the product was turned on.	To continue using the USB accessory, turn the product off and reconnect it. Turn the product off and then on to clear the message.
USED SUPPLY IN USE	One or more used supplies have been installed.	1. Install new supplies. 2. If you believe you purchased a genuine HP supply, visit us at www.hp.com/go/anticounterfeit. Any repair required as a result of using used cartridges is not covered under warranty. Supply status and features depending on supply status are not available.
Wait for printer to reinitialize	The user changed the RAMDISK settings. The product automatically restarts.	No action is necessary.
Waiting for tray <XX> to lift	The tray number specified by <XX> is in the process of lifting the paper to the top of the tray for proper feeding.	No action is necessary.

Table 7-12 Control-panel messages (continued)

Control panel message	Description	Recommended action
Warming up	The product is coming out of sleep-delay mode. Printing will continue once the product completely warms up.	No action is necessary.
Warming up scanner	The scanner is warming up.	No action is necessary.
Windows login required to use this feature	A Windows login is required.	Enter a Windows login.

Event log messages

Print an event log

Print the event log

1. Touch Administration.

2. Scroll to and touch Troubleshooting.

3. Touch Print Event Log.

Show an event log

View the event log from the control panel

1. Touch Administration.

2. Scroll to and touch Troubleshooting.

3. Touch Show Event Log.

Clear the event log

Use the **Service** menu to clear the event log.

Clear the event log

1. Touch Administration.

2. Scroll to and touch Service.

3. Touch Clear Event Log.

Event log message table

Event log message	Description	Comments
10.40.00	Genuine HP Supplies Installed	Transition from at least one non-HP to all genuine HP supplies. (no control panel message)
10.50.23	Fuser kit life reset above order threshold.	For products without fusible link
10.80.YY	Override not in use due to user limit ● YY = 00 black print cartridge (K) ● YY = 01 cyan print cartridge (C) ● YY = 02 magenta print cartridge (M) ● YY = 03 yellow print cartridge (Y)	The cartridge out override is deactivated because the user limit was reached on at least one cartridge.
10.81.00	Not printing black only	Printing monochrome after the color cartridge out was deactivated

Event log message	Description	Comments
10.88.YY 10.89.YY	Override not in use ● YY = 00 black print cartridge (K) ● YY = 01 cyan print cartridge (C) ● YY = 02 magenta print cartridge (M) ● YY = 03 yellow print cartridge (Y)	The cartridge out override was deactivated because the limit was reached on at least one cartridge.
13.02.00	PAPER STOP JAM IN TRAY 2 AT SENSOR D	
13.05.00	PAPER LATE JAM BETWEEN SENSORS D AND F	
13.06.00	PAPER JAM IN FUSER	
13.10.00	PAPER LATE JAM IN DUPLEX AREA SENSORS F-G	
13.11.00	PAPER STOP JAM IN DUPLEX AREA AT SENSOR G	
13.12.00	PAPER LATE JAM IN DUPLEX AREA SENSORS H-D	
13.13.00	PAPER STOP JAM IN DUPLEX AREA SENSORS G-H	
13.1C.00	FUSER WRAP JAM, PAPER IN FUSER	
13.20.00	PAPER EJECT JAM AT SENSORS E, F-G	
13.21.00	DOOR OPEN JAM	
13.2B.00	NON-SPECIFIC PAPER JAM	
13.2C.00	NON-SPECIFIC PAPER JAM	
13.2D.00	NON-SPECIFIC PAPER JAM	
13.2E.00	PAPER LATE JAM NEAR FUSER AT SENSORS F-J	
13.30.00	PAPER LATE JAM, JAM IN CASSETTE	
14.X	Feed roller error ● X = 2 Tray 2 (upper cassette) ● X = 3 Tray 3 (lower cassette)	Feed roller life warning
54.05	Printer error OHT sensor out of range	Waste toner sensor failure
54.0D.XX	Halftone calibration errors ● XX=00: Black density-measurement abnormality ● XX=01: Cyan density-measurement abnormality	1. Scroll to and touch Administration. 2. Scroll to and touch Print Quality. 3. Touch Calibration/Cleaning.

Event log message	Description	Comments
	• XX=02: Magenta density-measurement abnormality • XX=03: Yellow density-measurement abnormality	4. Touch Full Calibration. 5. Touch Calibrate.
54.0F.XX	• XX=00: Black misregistration is out of range. • XX=01: Cyan misregistration is out of range. • XX=02: Magenta misregistration is out of range. • XX=03: Yellow misregistration is out of range.	1. Scroll to and touch Administration. 2. Scroll to and touch Print Quality. 3. Touch Calibration/Cleaning. 4. Touch Full Calibration. 5. Touch Calibrate.
54.14	CPR sensor abnormality	1. Scroll to and touch Administration. 2. Scroll to and touch Print Quality. 3. Touch Calibration/Cleaning. 4. Touch Full Calibration. 5. Touch Calibrate.
54.1E.XX	Halftone calibration error.	1. Scroll to and touch Administration. 2. Scroll to and touch Print Quality. 3. Touch Calibration/Cleaning. 4. Touch Full Calibration. 5. Touch Calibrate.
55.06.01	The DC controller NVRM has an abnormal read/write.	1. Turn the product off then on. 2. If the error persists, replace the DC Controller. See DC controller PCA and tray on page 270.
55.06.02	The DC controller NVRM is not accessible.	1. Turn the product off then on. 2. If the error persists, replace the DC Controller. See DC controller PCA and tray on page 270.
55.901C	DCC restored	DCC NVRAM was restored from the formatter.
61.00.01	Color table error	This event occurs when the color table cannot read a table from the disk and the component reverts to the version in RAM. The file could be corrupt, missing, or the disk could have failed. No messages display on the control panel.
67.XX.00		A system variable (XX) is out of range.
68 8X01	Permanent storage was reset to factory default because the current value was not valid.	

Event log message	Description	Comments
68 8X02	The permanent storage is full.	
8x7345	Disk was successfully cleaned or sanitized.	
8x7346	The disk cleaning or sanitization failed.	
88.00	The engine self-test failed.	
99.00.01	Upgrade not performed, file is corrupt.	CRC error in the firmware image (bad image)
99.00.02	Upgrade not performed, timeout during receive.	IO timeout when reading header number and size
99.00.03	Upgrade not performed, error writing to disk	Disk error: write operation failed
99.00.04	Upgrade not performed, timeout during receive.	IO timeout when reading rest of header
99.00.05	Upgrade not performed, timeout during receive.	IO timeout when reading image data
99.00.06	Upgrade not performed, error reading upgrade.	Unexpected read error when reading header number and size
99.00.07	Upgrade not performed, error reading upgrade.	Unexpected read error when reading rest of header
99.00.14	Upgrade not performed, the file is invalid	The header number is greater than 2, but the header size is too small for this future header version.

Clear paper jams

Common causes of jams

The product is jammed.

Cause	Solution
The paper does not meet specifications.	Use only paper that meets HP specifications. See Supported paper and print media on page 56.
A component is installed incorrectly.	Verify that the transfer belt and transfer roller are correctly installed.
You are using paper that has already passed through a product or copier.	Do not use paper that has been previously printed on or copied.
An input tray is loaded incorrectly.	Remove any excess paper from the input tray. Make sure that the stack is below the maximum stack height mark in the tray. See Load paper and print media on page 62.
The paper is skewed.	The input-tray guides are not adjusted correctly. Adjust them so they hold the stack firmly in place without bending it.
The paper is binding or sticking together.	Remove the paper, flex it, rotate it 180°, or flip it over. Reload the paper into the input tray.
The paper is removed before it settles into the output bin.	Reset the product. Wait until the page completely settles in the output bin before removing it.
During two-sided printing, you removed the paper before the second side of the document was printed.	Reset the product and print the document again. Wait until the page completely settles in the output bin before removing it.
The paper is in poor condition.	Replace the paper.
The internal tray rollers are not picking up the paper.	If the paper is heavier than 220 g/m^2 (58 lb), it might not be picked from the tray. The rollers are worn. Replace the rollers.
The paper has rough or jagged edges.	Replace the paper.
The paper is perforated or embossed.	Perforated or embossed paper does not separate easily. Feed single sheets from Tray 1.
Paper was not stored correctly.	Replace the paper in the trays. Paper should be stored in the original packaging in a controlled environment.
Not all product packing material was removed.	Verify that the packing tape, cardboard, and plastic shipping locks have been removed from the product.

Jam locations

Use this illustration to identify locations of jams. In addition, instructions appear on the control panel to direct you to the location of jammed paper and how to clear it.

NOTE: Internal areas of the product that might need to be opened to clear jams have green handles or green labels.

Figure 7-50 Jam locations
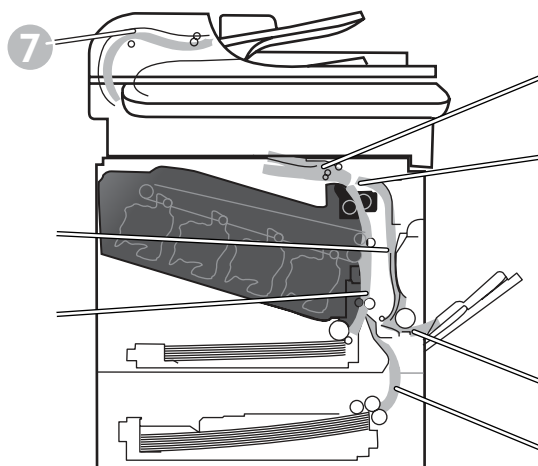
1	Output-bin area
2	Fuser area
3	Tray 1 area
4	Optional 500-sheet paper and heavy media tray (Tray 3)
5	Tray 2 pickup area
6	Duplexing area
7	Document feeder area

Clear jams

When a jam occurs, a message appears on the control-panel display that describes the location of the jam.

WARNING! To avoid electrical shock, remove any necklaces, bracelets, or other metal items before reaching into the inside of the product.

Type of jam	Procedure
13.XX.YY - Jam inside right door	See Clear jams in the right door on page 475
13.XX.YY - Jams inside right door	
13.XX.YY - Fuser area jam	See Clear jams in the right door on page 475.
13.XX.YY - Fuser wrap jam	
13.XX.YY - Jam below control panel	See Clear jams in the output bin area on page 479.

Type of jam	Procedure
13.XX.YY - Jam in tray 1	See [Clear jams in Tray 1 on page 480](#).
13.XX.YY - Jam in tray 2	See [Clear jams in Tray 2 on page 482](#).
13.XX.YY - Jam in tray 3	See [Clear jams in the optional 500-sheet paper and heavy media tray (Tray 3) on page 483](#)
13.XX.YY - Jam inside lower-right door	See [Clear jams in the lower right door (Tray 3) on page 484](#).

Clear jams in the right door

CAUTION: The fuser can be hot while the product is in use. Wait for the fuser to cool before handling it.

TIP: To see an animation of this procedure go to this Web site: www.hp.com/go/cljcm3530mfp-right-door-jams.

1. Open the right door.
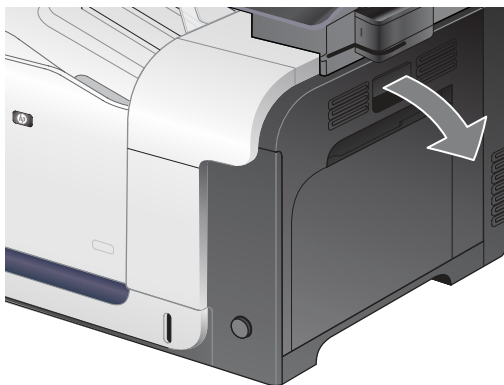
2. If paper is jammed as it enters the output bin, gently pull the paper downward to remove it.
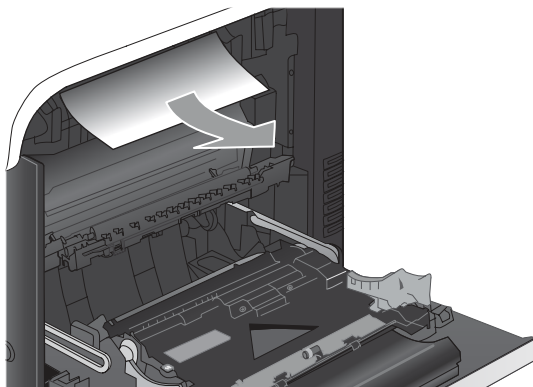
3. If paper is jammed inside the right door, gently pull the paper to remove it.
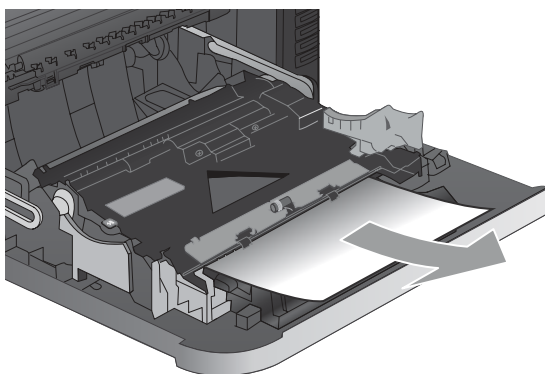
4. Lift the paper-feed cover on the inside of the right door. If jammed paper is present, gently pull the paper straight out to remove it.
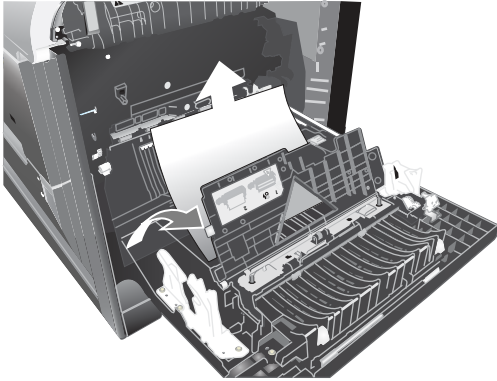
5. Close the paper-feed cover.
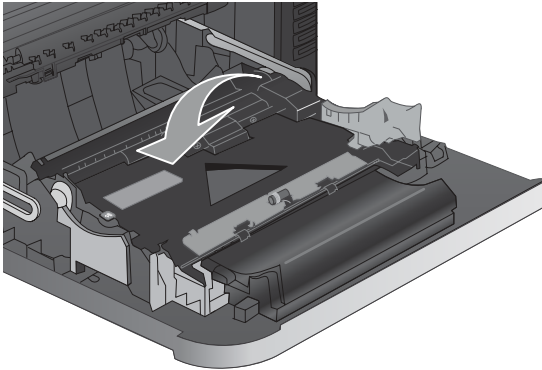
6. Gently pull the paper out of the pickup area.
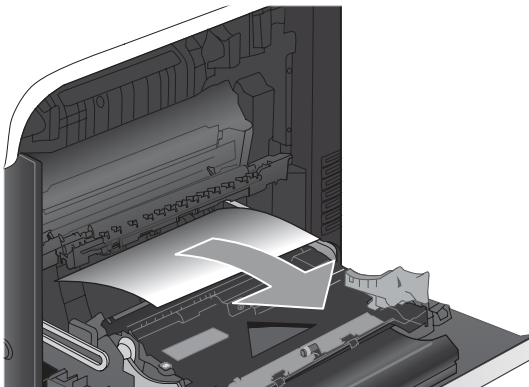
7. Look for paper in the Tray 2 roller area. Near the bottom of the right side, squeeze the two green levers upward to release the jam-access door. Remove any jammed paper, and close the door.
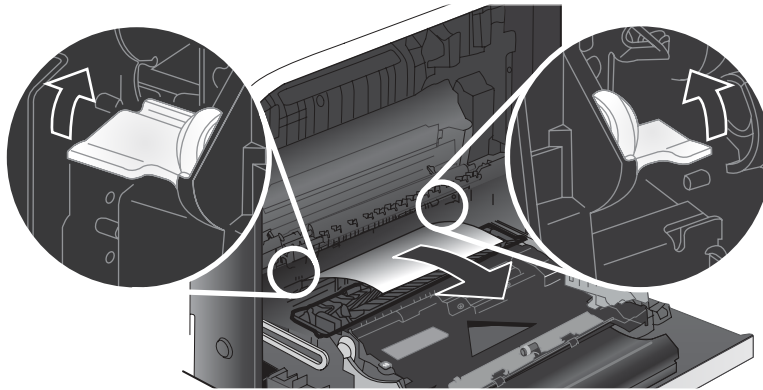
8. If paper is visible entering the bottom of the fuser, gently pull downward to remove it.
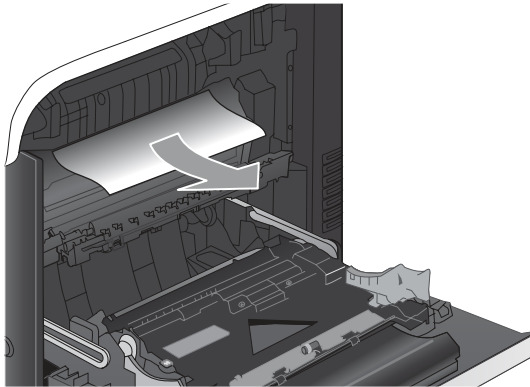
CAUTION: Do not touch the rollers on the transfer roller. Contaminates can affect print quality.

9. Paper could be jammed inside the fuser where it would not be visible. Remove the fuser to check for jammed paper inside.

CAUTION: The fuser can be hot while the product is in use. Wait for the fuser to cool before handling it.

a. Grasp the fuser handles, lift up slightly, and pull straight out to remove the fuser.
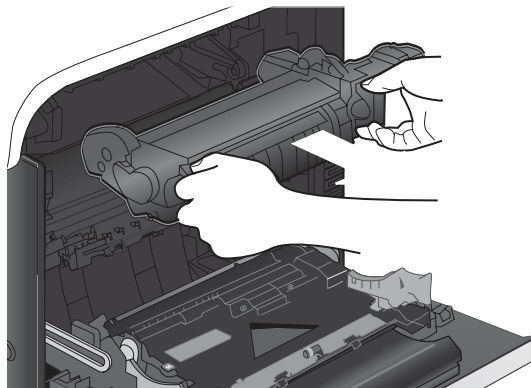
b. Open the jam-access door. If paper is jammed inside the fuser, gently pull it straight up to remove it. If the paper tears, remove all paper fragments.

> **CAUTION:** Even if the body of the fuser has cooled, the rollers that are inside could still be hot. Do not touch the fuser rollers until they have cooled.
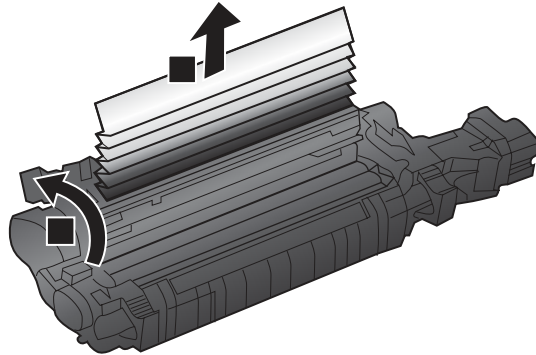
1	Open the jam-access door.
2	Remove the jammed paper.

c. Close the jam-access door, and push the fuser completely into the product.
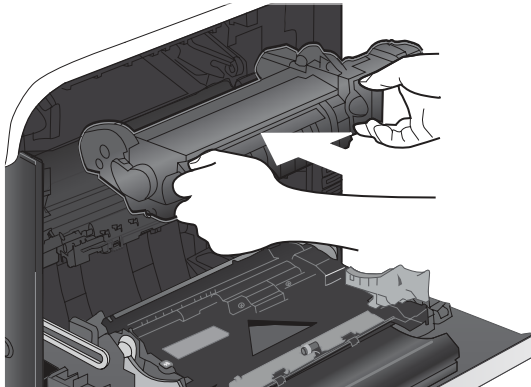
10. Close the right door.
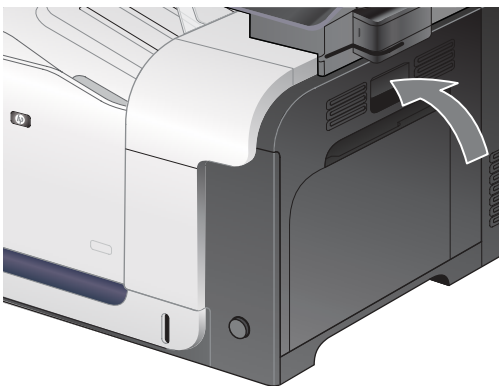
Clear jams in the output bin area

☼ **TIP:** To see an animation of this procedure go to this Web site: www.hp.com/go/cljcm3530mfp-output-jams.

1. If paper is visible from the output bin, grasp the leading edge and remove it.

2. If jammed paper is visible in the duplex output area, gently pull it to remove it.

Clear jams in Tray 1

💡 **TIP:** To see an animation of this procedure go to this Web site: www.hp.com/go/cljcm3530mfp-tray1-jams.

1. If jammed paper is visible in Tray 1, clear the jam by gently pulling the paper straight out. Touch the OK button to clear the message.
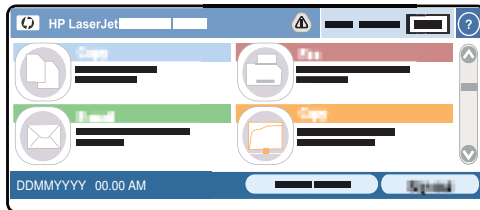
2. If you cannot remove the paper, or if no jammed paper is visible in Tray 1, close Tray 1 and open the right door.
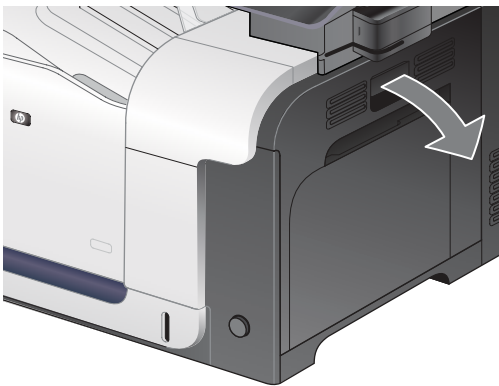
3. If paper is visible inside the right door, gently pull the trailing edge to remove it.
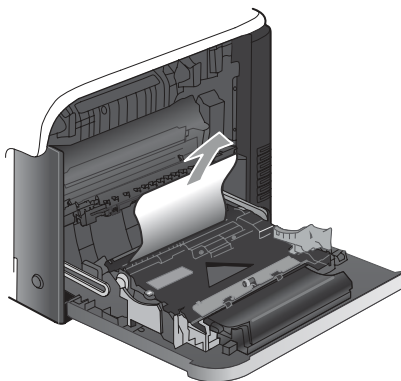
4. Gently pull the paper out of the pick up area.
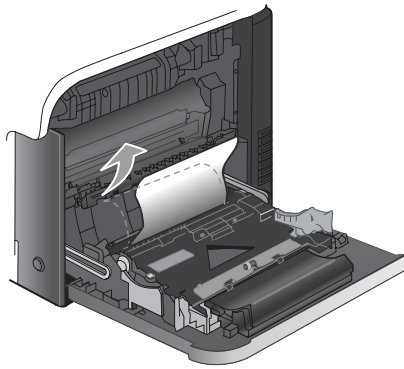
5. Close the right door.
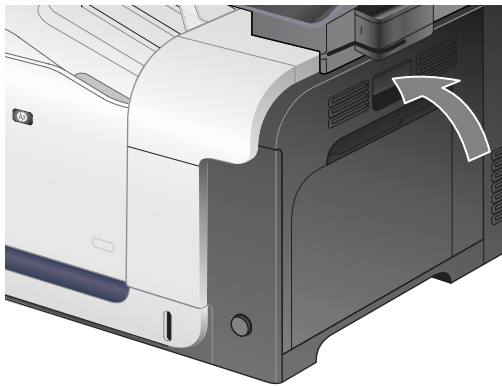
Clear jams in Tray 2

CAUTION: Opening a tray when paper is jammed can cause the paper to tear and leave pieces of paper in the tray, which might cause another jam. Be sure to clear jams before opening the tray.

TIP: To see an animation of this procedure go to this Web site: www.hp.com/go/cljcm3530mfp-tray2-jams.

1. Open Tray 2 and make sure that the paper is stacked correctly. Remove any jammed or damaged sheets of paper.
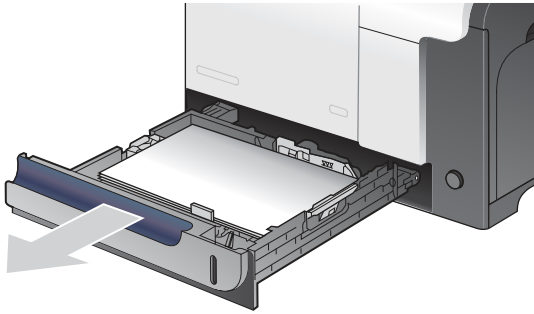
2. Close the tray.
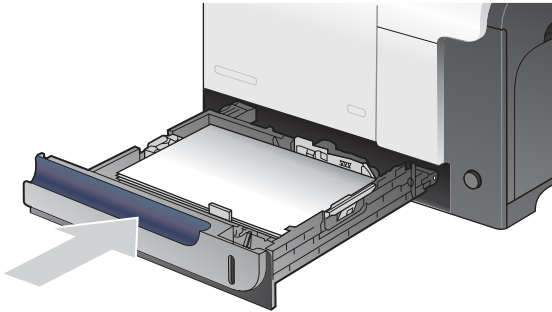
Clear jams in the optional 500-sheet paper and heavy media tray (Tray 3)

1. Open Tray 3 and make sure that the paper is stacked correctly. Remove any damaged or jammed sheets of paper.
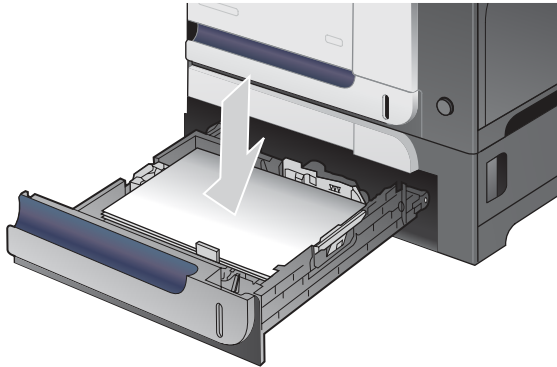
2. Close Tray 3.
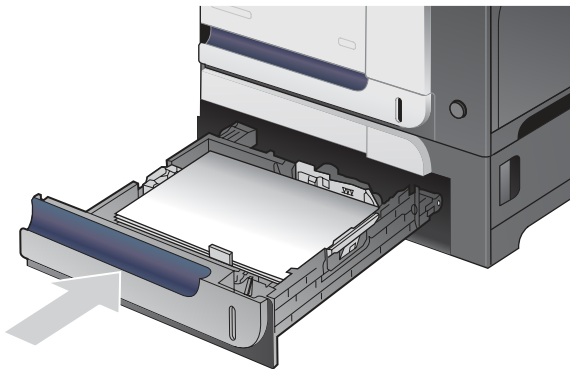
Clear jams in the lower right door (Tray 3)

💡 **TIP:** To see an animation of this procedure go to this Web site: www.hp.com/go/cljcm3530mfp-lower-right-door-jams.

1. Open the lower right door.
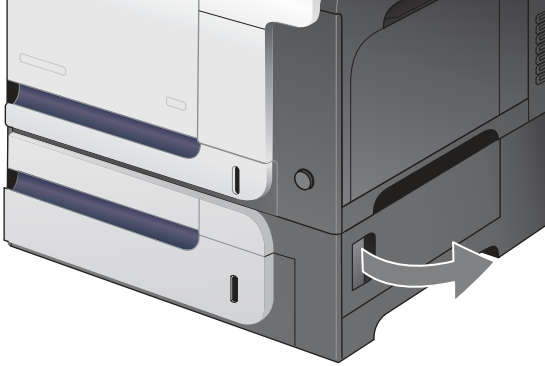
2. If paper is visible, gently pull the jammed paper up or down to remove it.
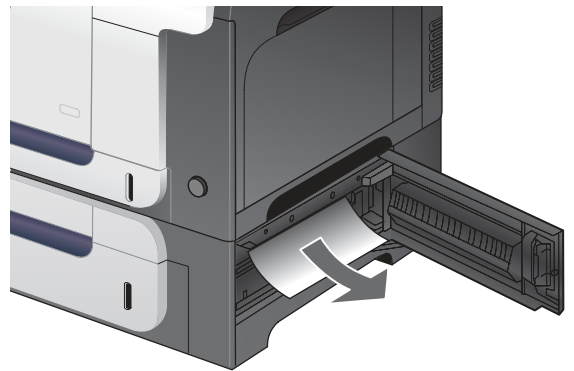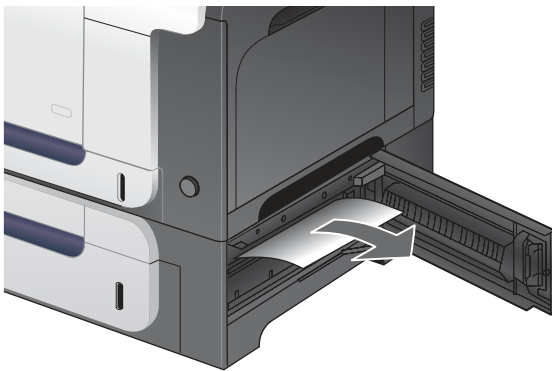
3. Close the lower right door.
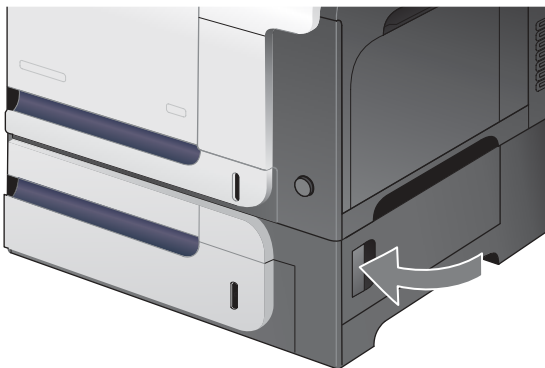
Clear jams in the document feeder

☆ **TIP:** To see an animation of this procedure go to this Web site: www.hp.com/go/cljcm3530mfp-adf-jams.

1. Open the document feeder cover.
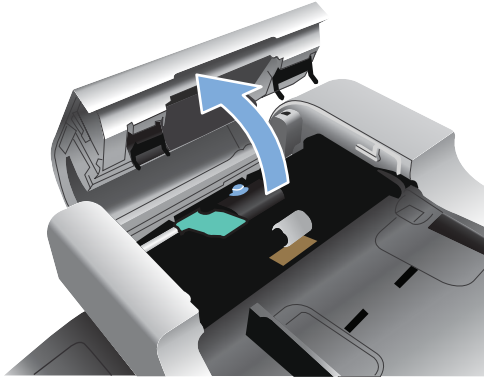
2. Lift the rollers.
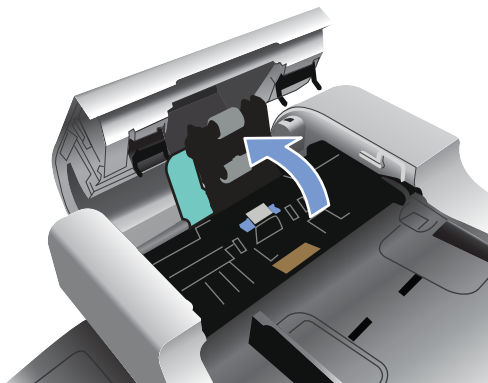
3. Remove any jammed paper.
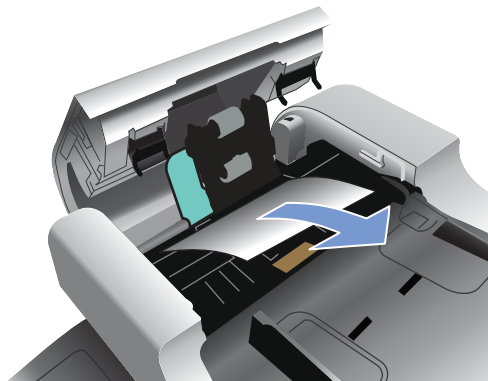
4. Close the document feeder cover.
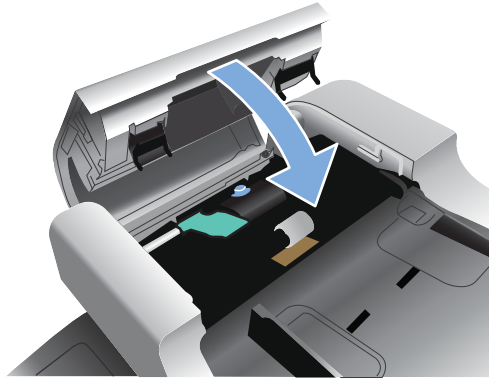
Jam recovery

This product provides jam recovery, a feature that reprints jammed pages. The following options are available:

- Auto setting — The product attempts to reprint jammed pages when sufficient memory is available.

- Off setting — The product does not attempt to reprint jammed pages. Because no memory is used to store the most recent pages, performance is optimal.

> **NOTE:** When using this option, if the product runs out of paper and the job is being printed on both sides, some pages can be lost.

- On setting — The product always reprints jammed pages. Additional memory is allocated to store the last few pages printed. This might cause overall performance to suffer.

Set the jam recovery feature

1. Touch the Administration menu and then touch the Device Behavior setting.

2. Touch the Warning/Error Behavior setting and then touch the Jam Recovery setting.

3. Touch an option and then touch the Save button.

Solve paper-handling problems

Use only paper that meets the specifications outlined in the *HP LaserJet Printer Family Print Media Guide*. Always configure the paper type on the control panel to match the type of paper that is loaded in the tray.

Product feeds multiple sheets

Product feeds multiple sheets

Cause	Solution
The input tray is overfilled. Open the tray and verify that the paper stack is below the maximum stack height mark.	Remove excess paper from the input tray.
Print paper is sticking together.	Remove paper, flex it, rotate it 180 degrees or flip it over, and then reload it into the tray. **NOTE:** Do not fan paper. Fanning can cause static electricity, which can cause paper to stick together.
Paper does not meet the specifications for this product.	Use only paper that meets HP paper specifications for this product.
Trays are not properly adjusted.	Make sure that the paper guides match the size of paper being used.

Product feeds incorrect page size

Product feeds incorrect page size

Cause	Solution
The correct size paper is not loaded in the input tray.	Load the correct size paper in the input tray.
The correct size paper is not selected in the software program or printer driver.	Confirm that the settings in the software program and printer driver are correct, because the software program settings override the printer driver and control panel settings, and the printer driver settings override the control panel settings.
The correct size paper for the tray is not selected in the product control panel.	From the control panel, select the correct size paper for the tray.
The paper size is not configured correctly for the input tray.	Print a configuration page or use the control panel to determine the paper size for which the tray is configured.
The guides in the tray are not against the paper.	Verify that the paper guides are touching the paper.

Product pulls from incorrect tray

Product pulls from incorrect tray

Cause	Solution
You are using a driver for a different product.	Use a driver for this product.
The specified tray is empty.	Load paper in the specified tray.

Product pulls from incorrect tray

Cause	Solution
The paper size is not configured correctly for the input tray.	Print a configuration page or use the control panel to determine the paper size for which the tray is configured.
The guides in the tray are not against the paper.	Verify that the guides are touching the paper.

Paper does not feed automatically

Paper does not feed automatically

Cause	Solution
Manual feed is selected in the software program.	Load Tray 1 with paper, or, if the paper is loaded, press the checkmark button ✓.
The correct size paper is not loaded.	Load the correct size paper.
The input tray is empty.	Load paper into the input tray.
Paper from a previous jam has not been completely removed.	Open the product and remove any paper in the paper path.
The paper size is not configured correctly for the input tray.	Print a configuration page or use the control panel to determine the paper size for which the tray is configured.
The guides in the tray are not against the paper.	Verify that the rear and width paper guides are touching the paper.
The manual-feed prompt is set to **ALWAYS**. The product always prompts for manual feed, even if the tray is loaded.	Open the tray, reload the media, and then close the tray. Or, change the manual-feed prompt setting to **UNLESS LOADED**, so that the product prompts for manual feed only when the tray is empty.
The **USE REQUESTED TRAY** setting on the product is set to **EXCLUSIVELY**, and the requested tray is empty. The product will not use another tray.	Load the requested tray. Or, change the setting from **EXCLUSIVELY** to **FIRST** on the **CONFIGURE DEVICE** menu. The product can use other trays if no media is loaded in the specified tray.

Paper does not feed from Tray 2 or 3

Paper does not feed from Tray 2 or 3

Cause	Solution
The correct size paper is not loaded.	Load the correct size paper.
The input tray is empty.	Load paper in the input tray.
The correct paper type for the input tray is not selected in the product control panel.	From the product control panel, select the correct paper type for the input tray.
Paper from a previous jam has not been completely removed.	Open the product and remove any paper in the paper path. Closely inspect the fuser area for jams.
None of the optional trays appear as input tray options.	The optional trays only display as available if they are installed. Verify that any optional trays are correctly installed. Verify that

Paper does not feed from Tray 2 or 3

Cause	Solution
	the printer driver has been configured to recognize the optional trays.
An optional tray is incorrectly installed.	Print a configuration page to confirm that the optional tray is installed. If not, verify that the tray is correctly attached to the product.
The paper size is not configured correctly for the input tray.	Print a configuration page or use the control panel to determine the paper size for which the tray is configured.
The guides in the tray are not against the paper.	Verify that the guides are touching the paper.

Transparencies or glossy paper will not feed

Transparencies or glossy paper will not feed

Cause	Solution
The correct paper type is not specified in the software or printer driver.	Verify that the correct paper type is selected in the software or printer driver.
The input tray is overfilled.	Remove excess paper from the input tray. Do not exceed the maximum stack height marks for the tray.
Paper in another input tray is the same size as the transparencies, and the product is defaulting to the other tray.	Make sure that the input tray containing the transparencies or glossy paper is selected in the software program or printer driver. Use the product control panel to configure the tray to the paper type loaded.
The tray containing the transparencies or glossy paper is not configured correctly for type.	Make sure that the input tray containing the transparencies or glossy paper is selected in the software program or printer driver. Use the product control panel to configure the tray to the paper type loaded.
Transparencies or glossy paper might not meet supported paper specifications.	Use only paper that meets the HP paper specifications for this product.
High-humidity environments may cause glossy paper not to feed, or to feed too many sheets.	Avoid printing glossy paper in high humidity conditions. When printing glossy paper, removing the paper from the wrapper and letting it rest for a few hours can improve feeding into the product. However, letting paper rest in humid environments may also cause blisters.

Envelopes jam or will not feed in the product

Envelopes jam or will not feed in the product

Cause	Solution
Envelopes are loaded in an unsupported tray. Only Tray 1 can feed envelopes.	Load envelopes into Tray 1.
Envelopes are curled or damaged.	Try using different envelopes. Store envelopes in a controlled environment.
Envelopes are sealing because the moisture content is too high.	Try using different envelopes. Store envelopes in a controlled environment.

Envelopes jam or will not feed in the product

Cause	Solution
Envelope orientation is incorrect.	Verify that the envelope is loaded correctly.
This product does not support the envelopes being used.	Refer to the *HP LaserJet Printer Family Print Media Guide*.
Tray 1 is configured for a size other than envelopes.	Configure Tray 1 size for envelopes.

Output is curled or wrinkled

Output is curled or wrinkled

Cause	Solution
Paper does not meet the specifications for this product.	Use only paper that meets the HP paper specifications for this product.
Paper is damaged or in poor condition.	Remove paper from the input tray and load paper that is in good condition.
Product speed needs to be reduced.	Set the **PAPER CURL** option in the Print Quality menu to **REDUCED** to decrease full speed to 10 ppm (instead of 40 ppm) and 3/4 speed to 7.5 ppm (instead of 30 ppm).
Product is operating in an excessively humid environment.	Verify that the printing environment is within humidity specifications.
You are printing large, solid-filled areas.	Large, solid-filled areas can cause excessive curl. Try using a different pattern.
Paper used was not stored correctly and might have absorbed moisture.	Remove paper and replace it with paper from a fresh, unopened package.
Paper has poorly cut edges.	Remove paper, flex it, rotate it 180 degrees or turn it over, and then reload it into the input tray. Do not fan paper. If the problem persists, replace the paper.
The specific paper type was not configured for the tray or selected in the software.	Configure the software for the paper (see the software documentation). Configure the tray for the paper, see Load paper and print media on page 62.
The paper has previously been used for a print job.	Do not re-use paper.

Product will not duplex or duplexes incorrectly

Product will not duplex (print 2-sided jobs) or duplexes incorrectly

Cause	Solution
You are trying to duplex on unsupported paper.	Verify that the paper is supported for duplex printing.
The printer driver is not set up for duplex printing.	Set up the printer driver to enable duplex printing.

Product will not duplex (print 2-sided jobs) or duplexes incorrectly

Cause	Solution
The first page is printing on the back of preprinted forms or letterhead.	Load preprinted forms and letterhead in Tray 1 with the letterhead or printed side down, with the top of the page leading into the product. For Tray 2 and 3, load the paper printed side up with the top of the page toward the right of the product.
The product configuration is not set for duplexing.	In Windows, run the automatic configuration feature: 1. Click the **Start** button, point to **Settings**, and then click **Printers** (for Windows 2000) or **Printers and Faxes** (for Windows XP). 2. Right-click the HP product icon, and then click **Properties** or **Printing Preferences**. 3. Click the **Device Settings** tab. 4. Under **Installable Options**, click **Update Now** in the **Automatic Configuration** list.

Use manual print modes

Try the following multi-purpose (MP) modes to see if they solve the image-quality problems. At the control panel, touch Administration, and then Print Quality, and then scroll to the Print Modes or Optimize submenus.

If you are having print-quality problems when using a specific paper type, use the Print Modes submenu to override the factory-default mode setting can sometimes resolve the print quality problems. You can associate a different print mode with each paper type.

Use the Optimize submenu to optimize print engine parameters to get the best possible print quality for all the jobs rather than printing by media type. Use the Restore Optimize option to reset all of the Optimize parameters back to the factory default settings

Table 7-13 MP modes under the Adjust paper types> sub menu

PRINT MODE	
	● **Plain**
	● **Light 60-74g**
	● **Intermediate 85-95g**
	● **Bond**
	● **Recycled**
	● **Mid-Weight 96-110g**
	● **Heavy 111-130g**
	● **Mid-Wt Glossy 96-110**
	● **Hvy Glossy 111-130g**
	● **Extra Heavy 131-175**
	● **Xhvy Glossy 131-175g**
	● **Card Stock 176-220g**
	● **Card Glossy 176-220**
	● **Transparency**
	● **Labels**
	NOTE: Not all print modes are available for all paper types.

Table 7-14 MP modes under the Optimize submenu

BACKGROUND	Set to **ALTERNATIVE 1** when a background occurs all over the page. Set to **ALTERNATIVE 2** when thin vertical lines appear on the page. Set to **ALTERNATIVE 3** when the other alternatives do not correct the problem.
REGISTRATION	Set to **ALTERNATIVE** when color misregistration occurs.
TRANSFER CONTROL	Set to **ALTERNATIVE 1** to reduce primary transfer bias and to resolve low density or blotchy images. Set to **ALTERNATIVE 2** to resolve ghosting outlines that look like a finger or fingers. Set to **ALTERNATIVE 3** when the other alternatives do not correct the problem.

Table 7-14 MP modes under the Optimize submenu (continued)

TRAY1	Set the mode to **ALTERNATE** if you are seeing marks on the back side of the paper when printing from Tray 1. This sets the product to initiate a clean sequence every time a job finishes when the product is set for Any Size and **Any Type** for Tray 1.
ENVIRONMENT	Set to **LOW TEMP** if the product is operating in a low-temperature environment and you are having problems with print quality such as blisters in the printed image.
LINE VOLTAGE	Set to **LOW VOLTAGE** if the product is operating in a low-voltage environment and you are having problems with print quality such as blisters in the printed image.
TRACKING CONTROL	Improves color stability by adjusting the bias voltage. Make sure this mode is set to **ON**.
UNIFORMITY CONTROL	Set to **ALTERNATIVE 1** to improve uniformity on any paper type. Set to **ALTERNATIVE 2** to improve uniformity on normal and light paper types. Set to **ALTERNATIVE 3** when the other alternatives do not correct the problem.
NORMAL PAPER	Set to **SMOOTH** when printing on smooth paper of normal weight.
HEAVY PAPER	Set to **SMOOTH** when printing on smooth, heavy media types.
ENVELOPE MODE	Set to **REDUCED TEMP** if envelopes are sticking due to moisture in the envelop adhesive.
RESISTANCE MODE	Set to Up to resolve print-quality issues caused by poor secondary transfer in low-humidity environments with resistive or rough surface media.
HUMIDITY MODE	With glossy film, set to High when the product is in a high-humidity environment and print-quality defects occur on HP Tough Paper or Opaque film. With transparencies, set to High when the product is in a high-humidity environment and print-quality defects occur on color transparencies on the first page of a print job. With all other paper types, set to High when the product is in a high-humidity environment and light density occurs on the first page of a print job.
PRE-ROTATION MODE	Set this feature to **ON** if horizontal banding occurs on pages.
FUSER TEMP MODE	If you are seeing a faint image of the page repeated at the bottom of the page or on the following page, first make sure the Paper Type and Print Mode settings are correct for the type of paper you are using. If you continue to see ghost images on your print jobs, set the Fuser Temp feature to one of the Alternate settings . Try the **ALTERNATE 1** setting first and see if it solves the problem. If you continue to see the problem, try **ALTERNATE 2** and then **ALTERNATE 3**. Using the **ALTERNATE 2** and **ALTERNATE 3** settings might cause an extra delay between jobs.
PAPER CURL MODE	Use in high-humidity and high-temperature environments. The **REDUCED** setting decreases fuser temperature and increases the interpage gap.
RESTORE OPTIMIZE	Return all settings to the factory-default settings.

Solve image-quality problems
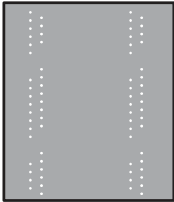
This section helps you define print-quality problems and what to do to correct them. Often print-quality problems can be handled easily by making sure that the product is properly maintained, using paper that meets HP specifications, or running a cleaning page.
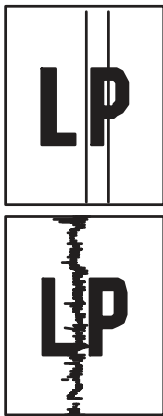
Image defects table
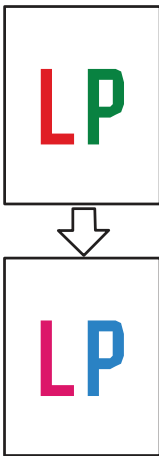
The following examples depict letter-size paper that has passed through the product short-edge first. These examples illustrate problems that would affect all of the pages that you print, whether you print in color or in black only. The topics that follow list the typical cause and solution for each of these examples.
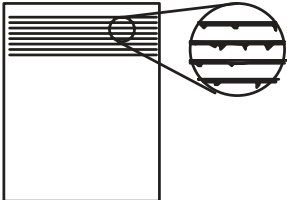
For ADF image-quality problems, verify that the scanner is scanning from the ADF and not the scanner glass. If it is scanning from the glass, you should see the scanner illuminate and the optical head move the entire length of the glass. If no document is on the glass, a blank page is produced.
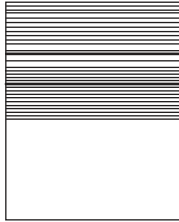
Problem	Cause	Solution
Print is light or faded on entire page.	Poor contacts exist on the ITB unit and the product grounding unit.	Clean the grounding contacts. If the problem remains after cleaning, check the contacts for damage. Replace any deformed or damaged parts.
	Poor secondary transfer contacts with exist on the secondary transfer roller and the ITB.	Clean the contacts. If the problem remains after cleaning, check the contacts for damage. Replace any deformed or damaged parts.
Print is light or faded in a particular color.	Poor primary transfer bias contacts on the ITB unit and product.	Clean the contacts of the color that produces the light print. If the problem remains after cleaning, check the contacts for damage. Replace any deformed or damaged parts.
	Poor primary charging bias contacts with the print cartridge and product.	
	Poor developing bias contacts with the print cartridge and product.	
Image is too dark.	The image-density sensor is defective.	Replace the color misregistration/image-density sensor unit.

Problem	Cause	Solution
Page is blank.	The source document was not placed in the ADF input tray face-up.	Verify that the source document is face-up in the ADF input tray.
	The source document was not detected in the ADF input tray.	Remove and then reinsert the source document into the ADF, making sure that it is placed face-up.
	A source document was not picked up when attempting to feed multiple documents.	Inspect the ADF pickup and feed rollers and the ADF separation pad for damage. Clean the rollers if they are dirty. If the ADF separation pad or rollers are warn, replace them. See ADF roller assembly and separation pad on page 215.
	The high-voltage power-supply lower is defective (no developing bias output).	Replace the high-voltage power-supply lower. See High-voltage power supply lower on page 308.
The page is all black or a solid color.	Poor contact exists in the primary charging bias or developing bias contacts between the print cartridge and the product.	Clean each contact of the color that produces the all black or solid color. If the problem remains after cleaning, check the contacts for damage. Replace any deformed or damaged parts.
White spots appear in an image	The static charge eliminator is dirty.	Clean the static charge eliminator.
	The primary transfer roller is deformed or has deteriorated.	Replace the ITB. See Intermediate transfer belt (ITB) on page 209.
	The secondary transfer roller is deformed or has deteriorated.	Replace the secondary-transfer-roller. See Secondary transfer roller on page 205.
The back of the page is dirty.	The secondary transfer roller is dirty.	Replace the secondary transfer roller. See Secondary transfer roller on page 205.
	The fuser inlet guide or separation guide is dirty.	Clean the dirty parts. If the dirt does not come off, replace the guide.
	The pressure roller is dirty.	Execute the cleaning page. If the dirt does not come off, replace the fuser.

Problem	Cause	Solution
Vertical streaks or bands appear on the page.	The ADF small glass might be dirty.	Clean the ADF small glass.
	Scratches are present on the circumference of the photosensitive drum.	Replace the print cartridge of the color that matches the defect.
	Scratches are present on the circumference of the fuser roller.	Replace the fuser. See Fuser on page 200.
	Scratches are present on the circumference of the ITB.	Replace the ITB. See Intermediate transfer belt (ITB) on page 209.
	The ITB drive roller is deformed or has deteriorated.	
	The ITB cleaning mechanism is malfunctioning.	
Vertical white lines appear in a particular color.	The laser beam window is dirty.	Clean the window and remove any foreign substances.
	Scratches are present on the circumference of the developing cylinder or photosensitive drum.	Replace the print cartridge of the color that matches the defect.
	The laser/scanner-unit mirror is dirty.	Replace the laser/scanner assembly. See Laser/scanner assembly (Y/M) on page 325 or Laser/scanner assembly (C/Bk) on page 332.
Vertical white lines appear in all colors.	Horizontal scratches on the fuser roller.	Replace the fuser. See Fuser on page 200.
	Scratches are present on the circumference of the ITB.	Replace the ITB. See Intermediate transfer belt (ITB) on page 209.
Horizontal lines appear on the page.	Repetitive horizontal lines appear.	Use the repetitive defects ruler to identify the dirty roller. Clean the roller. If the roller cannot be cleaned, replace the roller.
	Horizontal scratches are present on the photosensitive drum.	Replace the print cartridge of the color that matches the defect.
	Horizontal scratches are present on the fuser roller.	Replace the fuser. See Fuser on page 200.
A horizontal white line appears on the page.	Repetitive horizontal white lines appear.	Use the repetitive defects ruler to identify the dirty roller. Clean the roller. If the roller cannot be cleaned, replace the roller.
	Horizontal scratches are present on the photosensitive drum.	Replace the print cartridge of the color that matches the defect.
	Scratches are present on the circumference of the ITB.	Replace the ITB. See Intermediate transfer belt (ITB) on page 209.

Problem	Cause	Solution
Image in a particular color does not print in the correct color.	Poor contact exists in the primary charging bias or developing bias contacts between the print cartridge and the product.	Clean each contact of the color that produces the missing color. If the problem remains after cleaning, check the contacts for damage. Replace any deformed or damaged parts.
	The print cartridge (primary charging roller, developing roller, or photosensitive drum) is defective.	Replace the print cartridge of the color that matches the defect.
	The high-voltage power-supply lower is defective (no primary charging bias or developing bias output).	Replace the high-voltage power-supply lower. See High-voltage power supply lower on page 308.
	The laser/scanner unit is defective.	Replace the laser/scanner assembly. See Laser/scanner assembly (Y/M) on page 325 or Laser/scanner assembly (C/Bk) on page 332.
Dropouts appear.	The secondary transfer roller is deformed or has deteriorated.	Replace the secondary-transfer-roller. See Secondary transfer roller on page 205.
	The primary charging roller, developing roller,, or photosensitive drum is deformed or has deteriorated.	Replace the print cartridge of the color that matches the defect.
	The fuser roller is deformed or has deteriorated.	Replace the fuser.
	The high-voltage power-supply T PCA is defective (no transfer bias output).	Replace the high-voltage power-supply upper. See High-voltage power supply upper on page 339.
The toner is not fully fused to the paper.	The fuser roller or pressure roller is scarred or deformed.	Replace the fuser. See Fuser on page 200.
	The fuser control PCA is defective.	Replace the low-voltage power supply. See Fuser on page 200.
	The thermistor is defective.	Replace the fuser. See Fuser on page 200.
	The fuser heater is defective.	

Problem	Cause	Solution
Some color is misregistered.	The product is incorrectly calibrated.	Calibrate the product.
	The ITB unit is defective.	If the ITB does not rotate smoothly or a cleaning malfunction occurs (ITB is dirty), replace the ITB. See Intermediate transfer belt (ITB) on page 209.
	The drive gear of the ITB motor is worn or chipped.	Check each drive gear between the ITB drive roller and the ITB motor. If the gear is worn or chipped, replace the drive unit.
	The RD sensor is defective.	Open the close the front door several times to clean the RD sensor. If the problem persists, replace the RD sensor. See Registration density (RD) sensor assembly on page 297.
	The laser/scanner unit is defective.	Replace the laser/scanner assembly. See Laser/scanner assembly (Y/M) on page 325 or Laser/scanner assembly (C/Bk) on page 332.
	The print cartridge is defective.	Replace the print cartridge of the affected color.
Toner smears appear on the media.	The product has residual media.	Remove the residual media.
	Poor grounding contacts exist between each print cartridge and the product.	Clean the grounding contacts on each print cartridge and the product. If the problem remains after cleaning, check the contacts for damage. Replace any deformed or damaged parts.
	The fuser inlet guide is dirty.	Clean the fuser inlet guide.
The printed page contains misformed characters.	The ADF white backing is not uniformly pressing the source document against the flatbed glass.	Check the ADF white backing for damage or warping. Replace the ADF if necessary. See Automatic document feeder (ADF) on page 212.
	The product is experiencing page skew.	See the "Text or graphics are skewed on the printed page" row in this table.
	The laser/scanner unit is defective.	Replace the laser/scanner assembly. See Laser/scanner assembly (Y/M) on page 325 or Laser/scanner assembly (C/Bk) on page 332.
Text or graphics are skewed on the printed page.	The ADF input tray guides are not correctly adjusted.	Make sure that the ADF input tray guides are adjusted so that they are lightly touching the sides of the paper stack.
	A source document was not picked up when attempting to feed multiple documents.	Inspect the ADF pickup and feed rollers and the ADF separation pad for damage. Clean the rollers if they are dirty. If the ADF separation pad or rollers are warn, replace them. See ADF roller assembly and separation pad on page 215.
	The registration shutter spring is unhooked.	Check the spring and place it in the correct position.
	The registration shutter spring is deformed.	Replace the registration assembly. See Registration assembly on page 303.

Problem	Cause	Solution
The printed page contains wrinkles or creases.	The roller or media feed guide is dirty.	Clean any dirty components.
	A roller is deformed or has deteriorated.	Replace any deformed or deteriorated rollers.
	The paper feed guide is damaged.	Replace the paper-feed-guide unit.
The front of the page is dirty.	The photosensitive drum is dirty.	Replace the print cartridge.
	The fuser roller or pressure roller is dirty.	Execute a **Pressure roller clean mode**. If the dirt does not come off, replace the fuser. See Fuser on page 200.
Unexpected image	The copied image does not look like the source document.	If the copy was made using the ADF, make sure that no media is on the flatbed glass from a previous copy job.
	The scanner-control board (SCB) has failed.	Replace the SCB. See Scanner-control board (SCB) on page 279.

Solve performance problems

Problem	Cause	Solution
Pages print but are totally blank.	The document might contain blank pages.	Check the document that you are printing to see if content appears on all of the pages.
	The product might be malfunctioning.	To check the product, print a Configuration page.
Pages print very slowly.	Heavier paper types can slow the print job.	Print on a different type of paper.
	Complex pages can print slowly.	Proper fusing may require a slower print speed to ensure the best print quality.
Pages did not print.	The product might not be pulling paper correctly.	Make sure paper is loaded in the tray correctly.
	The paper is jamming in the product.	Clear the jam. See Clear paper jams on page 472.
	The USB cable might be defective or incorrectly connected.	● Disconnect the USB cable at both ends and reconnect it. ● Try printing a job that has printed in the past. ● Try using a different USB cable.
	Other devices are running on your computer.	The product might not share a USB port. If you have an external hard drive or network switchbox that is connected to the same port as the product, the other device might be interfering. To connect and use the product, you must disconnect the other device or you must use two USB ports on the computer.

Solve connectivity problems

Solve direct-connect problems

If you have connected the product directly to a computer, check the cable.

- Verify that the cable is connected to the computer and to the product.

- Verify that the cable is not longer than 2 meters (6 feet). Replace the cable if necessary.

- Verify that the cable is working correctly by connecting it to another product. Replace the cable if necessary.

Solve network problems

Check the following items to verify that the product is communicating with the network. Before beginning, print a configuration page. See Print information pages on page 80.

1. Are there any physical connection problems between the workstation or file server and the product?

   Verify that the network cabling, connections, and router configurations are correct. Verify that the network cable lengths meet network specifications.

2. Are your network cables connected properly?

   Make sure that the product is attached to the network using the appropriate port and cable. Check each cable connection to make sure it is secure and in the right place. If the problem continues, try a different cable or ports on the hub or transceiver. The amber activity light and the green link status light next to the port connection on the back of the product should be lit.

3. Are the link speed and duplex settings set correctly?

   Hewlett-Packard recommends leaving this setting in automatic mode (the default setting). See Networking and I/O on page 31.

4. Can you "ping" the product?

   Use the command prompt to ping the product from your computer. For example:

   ```
   ping 192.168.45.39
   ```

   Ensure that the ping displays round-trip times.

   If you are able to ping the product, verify that the IP address configuration for the product is correct on the computer. If it is correct, delete and then add the product again.

   If the ping command failed, verify that the network hubs are on, and then verify that the network settings, the product, and the computer are all configured for the same network.

5. Have any software applications been added to the network?

   Make sure they are compatible and that they are installed correctly with the correct printer drivers.

6. Are other users able to print?

   The problem may be workstation-specific. Check the workstation network drivers, printer drivers, and redirection (capture in Novell NetWare).

7. If other users are able to print, are they using the same network operating system?

Check your system for proper network operating system setup.

8. Is your protocol enabled?

   Check the status of your protocol on the Configuration page. You can also use the embedded Web server to check the status of other protocols. See Embedded Web server on page 85.

9. Does the product appear in HP Web Jetadmin or other management application?

   ● Verify network settings on the Network configuration page.

   ● Confirm the network settings for the product using the product control panel (for products with control panels).

Service mode functions

Service menu

The **Service** menu is PIN-protected for added security. Only authorized service people have access to the **Service** menu. When you select **Service** from the list of menus, the product prompts you to type an eight-digit PIN number. The PIN for the HP Color LaserJet CM3530 MFP Series is 11353008.

NOTE: The product automatically exits the Service menu after about one minute if no items are selected or changed.

1. Scroll to and touch Administration.

2. Scroll to and touch Service.

3. Touch the Service use only: text box near the center of the control-panel display. The touchscreen numeric keypad appears.

4. Touch the touchscreen numeric keypad buttons to type the PIN (11353008).

5. Touch OK to save the PIN or Cancel to exit the screen.

6. The PIN displays in the Service use only: text box as ********.

7. Touch OK to open the **Service** menu or Cancel to exit the screen.

The following menu items appear in the **Service** menu:

Menu item	Sub-menu item	Description
Clear Event Log		Use this item to clear the product event log.
Mono Cycle Count		The page count that is stored in NVRAM and printed on the configuration page represents the number of pages that the formatter has formatted (not including engine-test prints).
Color Cycle Count		The page count that is stored in NVRAM and printed on the configuration page represents the number of pages that the formatter has formatted (not including engine-test prints).
Refurbish Cycle Count		Use this item to record the page count when the product was refurbished.
Document Feeder Kit Count:		Set the total number of pages that have been fed through the ADF.
Document Feeder Kit Interval		Total number of pages since the document feeder kit was replaced.
ADF Count		Set the total pages fed through the ADF.
Flatbed Count		Set the total pages scanned from the flatbed.
ADF Simplex Count		Set the total single-sided pages fed through the ADF.
ADF Duplex Count		Set the total two-sided pages fed through the ADF.
Copy Scan Count		Set the total copy pages that have been scanned.
Send Scan Count		Set the number of scanned pages sent to e-mail.
Copy Pages Count		Set the number of scanned pages that have been printed.

Menu item	Sub-menu item	Description
Scanner Settings	ADF Settings	Set the calibration values.
	Glass Settings	Set the calibration values.
Serial number		Set the serial number.
SERVICE ID		Use this item to show the date that the product was first used on the control panel. This eliminates the need for users to keep paper receipts for proof of warranty. **Restore the service ID** If you replace the formatter, the date is lost. Use this menu item to reset the date to the original date that the product was first used. The date format is YYDDD. Use the following formula to calculate the dates: 1. To calculate YY, subtract 1990 from the calendar year. For instance, if the product was first used in 2002, calculate YY as follows: 2002 - 1990 = 12. YY = 12. 2. Subtract 1 from 10 (October is the tenth month of the year): 10 - 1 = 9. ◦ Multiply 9 by 30: 9 x 30 = 270 or add 17 to 270: 270 + 17 = 287. Thus, DDD = 287. **Convert the service ID to an actual date** You can use the product Service ID number to determine whether the product is still under warranty. Use the following formula to convert the Service ID into the installation date as follows: 1. Add 1990 to YY to get the actual year that the product was installed. 2. Divide DDD by 30. If there is a remainder, add 1 to the result. This is the month. 3. The remainder from the calculation in step 2 is the date. Using the Service ID 12287 as an example, the date conversion is as follows: 1. 12 + 1990 = 2002, so the year is 2002. 2. 287 divided by 30 = 9 with a remainder of 17. Since there is a remainder, add 1 to 9 to get 10, which represents October. 3. The remainder in step 2 is 17, so that is the date. 4. The complete date is 17-October-2002. **NOTE:** A six-day grace period is built into the date system.
Cold Reset Paper		When you perform a cold reset, the paper size that is stored in NVRAM is reset to the default factory setting. If you replace a formatter board in a country/region that uses A4 as the standard paper size, use this menu to reset the default paper size to A4. LETTER and A4 are the only available values.

Product resets

Restore factory settings

Use the Resets menu to restore factory settings.

1. Scroll to and touch Administration and then touch Resets.

2. Touch Restore Factory Settings and then touch Reset.

For more information, see Resets menu on page 53.

Hard disk initialization (optional)

A hard disk initialization will erase and reformat the product's hard disk. Perform hard disk initialization only if an error code displays on the control panel indicating a disk error. Always try initializing the hard disk before replacing it.

1. Turn the product on.

2. As the product performs its power-on sequence, press and hold the Start button until all lights on the control panel are lit.

3. Press the 5 key. The **INITIALIZE DISKS** menu item appears.

4. Press the 6 key. The product initializes the hard disk and continues its power-on sequence.

NVRAM initialization

> **CAUTION:** Initializing NVRAM resets the serial number, the event log, the page counts, the calibration settings, and the EIO card. Use the **Service** menu to restore the serial number and page counts. You also need to reconfigure any computers that print to this product to recognize the product. Initialize NVRAM only when absolutely necessary. In most situations, use a cold reset to reset product variables but still retain the needed values in the **Service** menu.

> **NOTE:** Before performing an NVRAM initialization, print a menu map and a configuration page. Use the information on these pages to reset any customer-specific settings.

From the configuration page and supplies status page, gather the following information:

- Total page count and color page count

- Serial number

1. Turn the product off.

2. Press and hold 9, turn the power on, wait for all three LEDs to stay on. This might take up to 20 seconds (release the 9 key).

3. Press and release 3, and then press and release Start.

4. Use the 3 and 9 keys to scroll to **NVRAM INIT** (this message appears in the upper-left corner of the display).

5. Press and release 6 to start the initialization.

Restore factory settings (cold reset)

Before beginning, print a configuration page and supplies status page. Use these pages to verify that the resets have occurred.

1. Turn the product offn.

2. Press and hold 6, turn the power on, wait for all three LEDs to stay on. This might take up to 20 seconds (release the 6 key).

3. Use the 3 and 9 keys to scroll to **Cold Reset** (this message appears in the upper-left corner of the display).

4. Press the 6 key to start the cold reset.

Solve fax problems

See the *HP LaserJet MFP Analog Fax Accessory 500 Fax Guide* and the *HP LaserJet MFP Analog Fax Accessory 500 Send Fax Driver Guide*, which are included on the product User CD. The guides are also available for download from www.hp.com/go/mfpfaxaccessory500.

Solve e-mail problems

If you are unable to send e-mails by using the digital-send feature, you might need to reconfigure the SMTP gateway address or the LDAP gateway address. Print a configuration page to find the current SMTP and LDAP gateway addresses. See Print information pages on page 80. Use the following procedures to check if the SMTP and LDAP gateway addresses are valid.

Validate the SMTP gateway address

NOTE: This procedure is for Windows operating systems.

1. Open an MS-DOS command prompt: click **Start**, click **Run**, and then type `cmd`.

2. Type `telnet` followed by the SMTP gateway address and then the number 25, which is the port over which the product is communicating. For example, type `telnet 123.123.123.123 25` where "123.123.123.123" represents the SMTP gateway address.

3. Press Enter. If the SMTP gateway address is *not* valid, the response contains the message `Could not open connection to the host on port 25: Connect Failed.`

4. If the SMTP gateway address is not valid, contact the network administrator.

Validate the LDAP gateway address

NOTE: This procedure is for Windows operating systems.

1. Open Windows Explorer. In the address bar, type `LDAP://` immediately followed by the LDAP gateway address. For example, type `LDAP://12.12.12.12` where "12.12.12.12" represents the LDAP gateway address.

2. Press Enter. If the LDAP gateway address is valid, the **Find People** dialog box opens.

3. If the LDAP gateway address is not valid, contact the network administrator.

8 Parts and diagrams

Order parts, accessories, and supplies

You can obtain the following items directly from HP:

- **Replacement parts:** To order replacement parts in the U.S., go to www.hp.com/go/hpparts/. Outside the United States, order parts by contacting your local authorized HP service center.

- **Supplies and accessories:** To order supplies in the U.S., go to www.hp.com/go/ljsupplies. To order supplies worldwide, go to www.hp.com/ghp/buyonline.html. To order accessories, go to www.hp.com/support/cljcm3530mfp.

Part numbers

The following list of accessories was current at the time of printing. Ordering information and availability of the accessories might change during the life of the product.

Customer self-repair (CSR) components

Table 8-1 Customer self-repair (CSR) components

Item	Part number
Formatter kit	CC519-67903
128 MB memory kit	CC519-67910
256 MB memory kit	CC519-67911
512 MB memory kit	CC519-67912
Hard drive kit	CC519-67904
Hard drive cable kit	CC519-67905
Fax PCA	CC456-60001
Fax cable kit	CC519-67907
Toner collection unit kit	CC468-67910
Pick/feed and separation pad kit	CC468-67911
ITB kit	CC468-67907
110V fuser kit	CC519-67901
220V fuser kit	CC519-67902
Duplex reverse guide kit	CC468-67913
Secondary transfer roller kit	CC468-67914
Secondary transfer assembly kit (duplex)	CC468-67915
Fuser cleaning kit (letter)	CC468-67919
Front door assembly and nameplate	CC519-67916
500 sheet feeder replacement kit	CC468-67905
500 sheet feeder right door kit	CC468-67906
Control panel kit	CC519-67908
ADF kit	CC483-67902
ADF roller kit	CC519-67909
Stapler cartridge	Q7432-67901
250-sheet cassette	RM1-4962-000CN
500-sheet cassette	RM1-6198-000CN
Control panel overlay—English	CC519-40003
Control panel overlay—French	CC519-40004
Control panel overlay—Italian	CC519-40005

Table 8-1 **Customer self-repair (CSR) components (continued)**

Item	Part number
Control panel overlay—German	CC519-40006
Control panel overlay—Spanish	CC519-40007
Control panel overlay—Portuguese	CC519-40009
Control panel overlay—Norwegian	CC519-40010
Control panel overlay—Swedish	CC519-40011
Control panel overlay—Finnish	CC519-40012
Control panel overlay—Danish	CC519-40013
Control panel overlay—Polish	CC519-40014
Control panel overlay—Russian	CC519-40015
Control panel overlay—Czech	CC519-40016
Control panel overlay—Hungarian	CC519-40017
Control panel overlay—Turkish	CC519-40018
Control panel overlay—Hebrew	CC519-40019
Control panel overlay—Greek	CC519-40020
Control panel overlay—Arabic	CC519-40021
Control panel overlay—Croatian	CC519-40022
Control panel overlay—Romanian	CC519-40023
Control panel overlay—Slovak	CC519-40024
Control panel overlay—Slovenian	CC519-40025
Control panel overlay—Catalan	CC519-40026
Control panel overlay—Chinese, traditional	CC519-40027
Control panel overlay—Chinese, simplified	CC519-40028
Control panel overlay—Korean	CC519-40030
Control panel overlay—Japanese	CC519-40031
Control panel overlay—Thai	CC519-40032
Control panel overlay—Bahasa Indonesian	CC519-40033

Accessories and products

Table 8-2 **Accessories**

Item	Description	Part number	Product part number
Stapler cartridge	Replacement staple cartridge	Q7432-67901	Q7432A
1 x 500 paper feeder	500-sheet paper and heavy media tray	CC468-67905	CE522A

Table 8-2 Accessories (continued)

Item	Description	Part number	Product part number
Fax PCA	HP LaserJet MFP analog fax accessory 500	CC456-60001	CC487A
Digital send software	HP Digital Sending Software 4	NA	T1936AA
Print server	HP Jetdirect 630n IPv6 Gigabit Ethernet print server	NA	J7997G
	HP Jetdirect 635n IPv6/IPSec print server	NA	J7961G
Parallel card	HP 1284B parallel card	NA	J7972G

Print cartridges and toner collection unit

Table 8-3 Print cartridges and toner collection unit

Item	Description[1]	Part number	Product part number
HP Color LaserJet black print cartridge	Standard black cartridge	CE250-67901	CE250A
HP Color LaserJet black print cartridge	High-capacity black cartridge	CE250-67902	CE250X
HP Color LaserJet cyan print cartridge	Cyan cartridge	CE251-67901	CE251A
HP Color LaserJet yellow print cartridge	Yellow cartridge	CE252-67901	CE252A
HP Color LaserJet magenta print cartridge	Magenta cartridge	CE253-67901	CE253A
Toner collection unit	Waste toner box assembly Waste toner installation instructions Toner cleaning cloth	CC468-67910	CE254A

[1] For more information, go to www.hp.com/go/learnaboutsupplies

Memory

Table 8-4 Memory

Item	Description	Product part number
200-pin DDR DIMM	128MB	CC409AX
Boosts the ability of the product to handle large or complex print jobs.	256MB	CC410AX
	512MB	CC411AX
HP Encrypted High Performance hard disks	HP high-performance secure hard disk	J8018A
HP Encrypted High Performance hard disks	HP high-performance secure EIO hard disk	J8019A

Cables and interfaces

Table 8-5 Cables and interfaces

Item	Description	Part number
Enhanced I/O (EIO) card	HP Jetdirect 635n IPv6/IPsec Print Server	J7961G
USB cable	2-meter standard USB-compatible device connector	C6518A
Power cord North America	PWR-CORD OPT-903 3-COND 1.9-M-LG ROHS	8121-0740
Power cord Taiwan	PWR-CORD OPT-934 3-COND 1.9-M-LG ROHS	8121-0964
Power cord Europe (generic)	PWR-CORD OPT-902 3-COND 1.9-M-LG ROHS	8121-0731
Power cord China	PWR-CORD OPT-922 3-COND 1.9-M-LG ROHS	8121-0943
Power cord	PWR-CORD OPT-901 3-COND 1.9-M-LG ROHS	8121-0837
Power cord Japan (7A)	PWR-CORD OPT-918 3-COND 1.9-M-LG ROHS	8121-0736
Power cord United Kingdom; Singapore; Hong Kong SAR; Malaysia	PWR-CORD OPT-900 3-COND 1.9-M-LG 5A ROHS	8121-0739
Power cord Denmark	PWR-CORD OPT-912 3-COND 1.9-M-LG ROHS	8121-0733
Power cord Argentina	PWR-CORD OPT-920 3-COND 1.9-M-LG ROHS	8121-0729
Power cord India (<= 6 A)	PWR-CORD OPT-923 3-COND 1.9-M-LG ROHS	8121-0564
Power cord Chile	PWR-CORD OPT-921 3-COND 1.9-M-LG ROHS	8121-0735
Power cord South Africa	PWR-CORD OPT-917 3-COND 1.9-M-LG ROHS	8121-0737
Power cord Israel	PWR-CORD OPT-919 3-COND 1.9-M-LG ROHS	8121-1004
Power cord Switzerland	PWR-CORD OPT-906 3-COND 1.9-M-LG ROHS	8121-0738

Table 8-5 Cables and interfaces (continued)

Item	Description	Part number
Power cord Thailand; Philippine Islands	PWR-CORD OPT-927 3-COND 1.9-M-LG ROHS	8121-0734
Phone cord United States	PHN-CORD OPT-501 US 3.0-M-LG ROHS	8121-0811
Phone cord Republic of Korea	PHN-CORD OPT-516 KR 3.0-M-LG ROHS	8120-8908
Phone cord Turkey	PHN-CORD OPT-507 TR 3.0-M-LG ROHS	8120-8920
Phone cord Estonia	PHN-CORD OPT-520 EE 3.0-M-LG ROHS	8120-8922
Phone cord Australia	PHN-CORD OPT-519 AU 3.0-M-LG ROHS	8120-8907
Phone cord United Kingdom; Hong Kong SAR; New Zealand	PHN-CORD OPT-505 UK/HK/NZ 3.0-M-LG ROHS	8120-8921
Phone cord Denmark	PHN-CORD OPT-506 DK 3.0-M-LG ROHS	8120-8911
Phone cord Australia	PHN-CORD OPT-515 AT 3.0-M-LG ROHS	8120-8909
Phone cord Italy	PHN-CORD OPT-514 IT 3.0-M-LG ROHS	8120-8914
Phone cord Switzerland	PHN-CORD OPT-512 CH 3.0-M-LG ROHS	8121-0844
Phone cord Norwegian; Finnish	PHN-CORD OPT-510 NO/FI 3.0-M-LG ROHS	8120-8916
Phone cord Sweden	PHN-CORD OPT-511 SE 3.0-M-LG ROHS	8120-8918

Service kits

Table 8-6 Service kit contents

Item	Description	Part number
500 sheet feeder replacement kit	500 sheet feeder assembly (CE222A) 500 sheet feeder instructions	CC468-67905
500 sheet feeder right door kit	Door stopper	CC468-67906

Table 8-6 Service kit contents (continued)

Item	Description	Part number
	Right door link	
	Right door assembly	
	Right door installation instructions	
ADF kit	ADF assembly	CC483-67903
	ADF installation instructions	
ADF roller kit	ADF roller assembly	CC519-67909
	ADF separation pad	
	ADF roller kit installation instructions	
128MB memory kit	128MB DDR DIMM	CC519-67910
	Installation instructions	
256MB memory kit	256MB DDR DIMM	CC519-67911
	Installation instructions	
512MB memory kit	512MB DDRDIMM	CC519-67912
	Installation instructions	
Toner collection unit kit (Maintenance kit)	Waste toner box assembly	● Part number: CC468-67910
	Waste toner installation instructions	● Product number: TCU CE254A
	Toner cleaning cloth	
Hard drive kit	Hard Drive, 80GB disc 2.5" SATA ROHS	CC519-67904
	Left rail, plastic	
	Right rail, snap plastic	
	Hard drive installation instructions	
Hard drive cable kit	SATA hard drive power/data cable	CC519-67905
	Hard drive installation instructions	
Fax cable kit	Fax cable	CC519-67907
	Fax cable installation instructions	
Control panel kit	Control-panel assembly	CC519-67908
	Installation instructions	
Duplex reverse guide kit	Duplexing reverse guide	CC468-67913
	Duplexing guide installation instructions	
Front door kit	Front door	CC519-67916
	Nameplate CLJ CM3530 MFP	
	Nameplate CLJ CM3530fs MFP	
	HP logo	

Table 8-6 Service kit contents (continued)

Item	Description	Part number
	Front door assembly installation instructions	
Fuser cleaning kit (letter)	50 sheets of HP Tough Paper	CC468-67919
	Cleaning instructions	
Fuser kit (Maintenance kit)	110V service fuser kit ● Fuser assembly, 110V ● Fuser installation instructions ● Recycle flyer ● Return label	● Part number: CC519-67901 ● Product number: CE484A
	220V service fuser kit ● Fuser assembly, 220V ● Fuser installation instructions ● Recycle flyer ● Return label	● Part number: CC519-67902 ● Product number: CE506A
ITB kit	Intermediate transfer belt assembly	CC468-67907
	ITB installation instructions	
	Secondary transfer roller assembly	
	Secondary transfer roller installation instructions	
Main drive assembly kit	Main drive assembly	CC468-67918
	Main drive assembly installation instructions	
Formatter kit	Formatter assembly	CC519-67903
	Formatter sheet metal tray assembly	
	Screw, M3 x 0.5	
	EIO card guide	
	Disk drive cradle	
	Fax cable	
	Formatter installation instructions	
Pick/feed and separation pad kit	250-sheet tray paper pickup roller	CC468-67911
	Paper feed roller assembly (500 SF)	
	Paper pickup roller (500 SF)	
	Replacement and installation instructions	
Laser/scanner assembly kit	Laser/scanner assembly	CC468-67917

Table 8-6 Service kit contents (continued)

Item	Description	Part number
	Scanner installation instructions	
Secondary transfer assembly kit	Secondary transfer assembly	CC468-67915
	Secondary transfer assembly installation instructions	
Secondary transfer (T2) roller kit	Secondary transfer roller assembly	CC468-67914
	Secondary transfer roller installation instructions	
Preventative maintenance kit	110 v	CE484A
	220 v	CE506A

Service manuals and user documentation

Table 8-7 Service manuals and user documentation

Item	Part number
Service manual—English (entire manual)	CC519-91013
Service manual—French (troubleshooting and replacement only)	CC519-91014
Service manual—Italian (troubleshooting and replacement only)	CC519-91015
Service manual—German (troubleshooting and replacement only)	CC519-91016
Service manual—Spanish (troubleshooting and replacement only)	CC519-91017
Service manual—Korean (troubleshooting and replacement only)	CC519-91018
Service manual—Chinese, simplified (troubleshooting and replacement only)	CC519-91019
Administrator guide	CC519-60105
User guide	CC519-60106

Screws
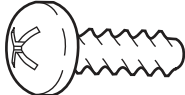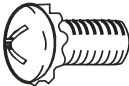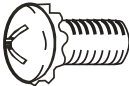
NOTE: The screw illustrations in the following table are for reference only. Screws might vary in size and appearance from those shown in this table.

Table 8-8 Common fasteners

Example	Description	Size	Part Number
	Screw, with washer	M3x8	XA9-1420-000CN
	Screw, tapping, truss head	M4x10	XB4-7401-005CN
	Screw, tap	M3x6	XA9-1503-000CN
	Screw, D	M3x8	XA9-1671-000CN
	Screw, tooth washer	M4x6	XB2–7400-606CN

6 mm   8 mm   10 mm   **12 mm**   M 3   M 4

How to use the parts lists and diagrams

The figures in this chapter show the major subassemblies in the product and their component parts. A parts list table follows each exploded view assembly diagram. Each table lists the item number, the associated part number, and the description of each part. If a part is not listed in the table, then it is not a field replacement unit (FRU).

CAUTION: Be sure to order the correct part. When looking for part numbers for electrical components, pay careful attention to the voltage that is listed in the description column. Doing so will ensure that the part number selected is for the correct all-in-one model.

NOTE: In this manual, the abbreviation "PCA" stands for "printed circuit-board assembly." Components described as a PCA might consist of a single circuit board or a circuit board plus other parts, such as cables and sensors.

ADF and scanner assemblies

Figure 8-1 ADF/scanner assembly
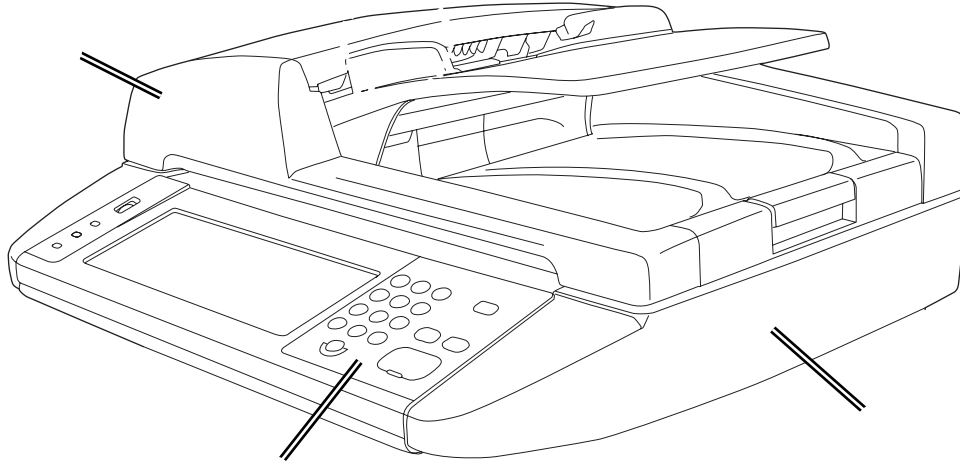
Table 8-9 ADF/scanner assembly

Ref	Description	Part number	Qty
1	Control panel assembly	CC519-60115	1
Not shown	Control-panel cable	CC519-60107	1
2	ADF feed roller kit	CC519-67909	1
3	ADF assembly	CC483-60103	1
4	Scanner assembly (ADF assembly and SCB PCA are *not* included)	CC519-67914	1
Not shown	Scanner controller board (SCB)	CC454-60002	1
Not shown	PCI express RoHS cable	5851-3141	1

External covers, panels, and doors

Figure 8-2 External covers, panels, and doors
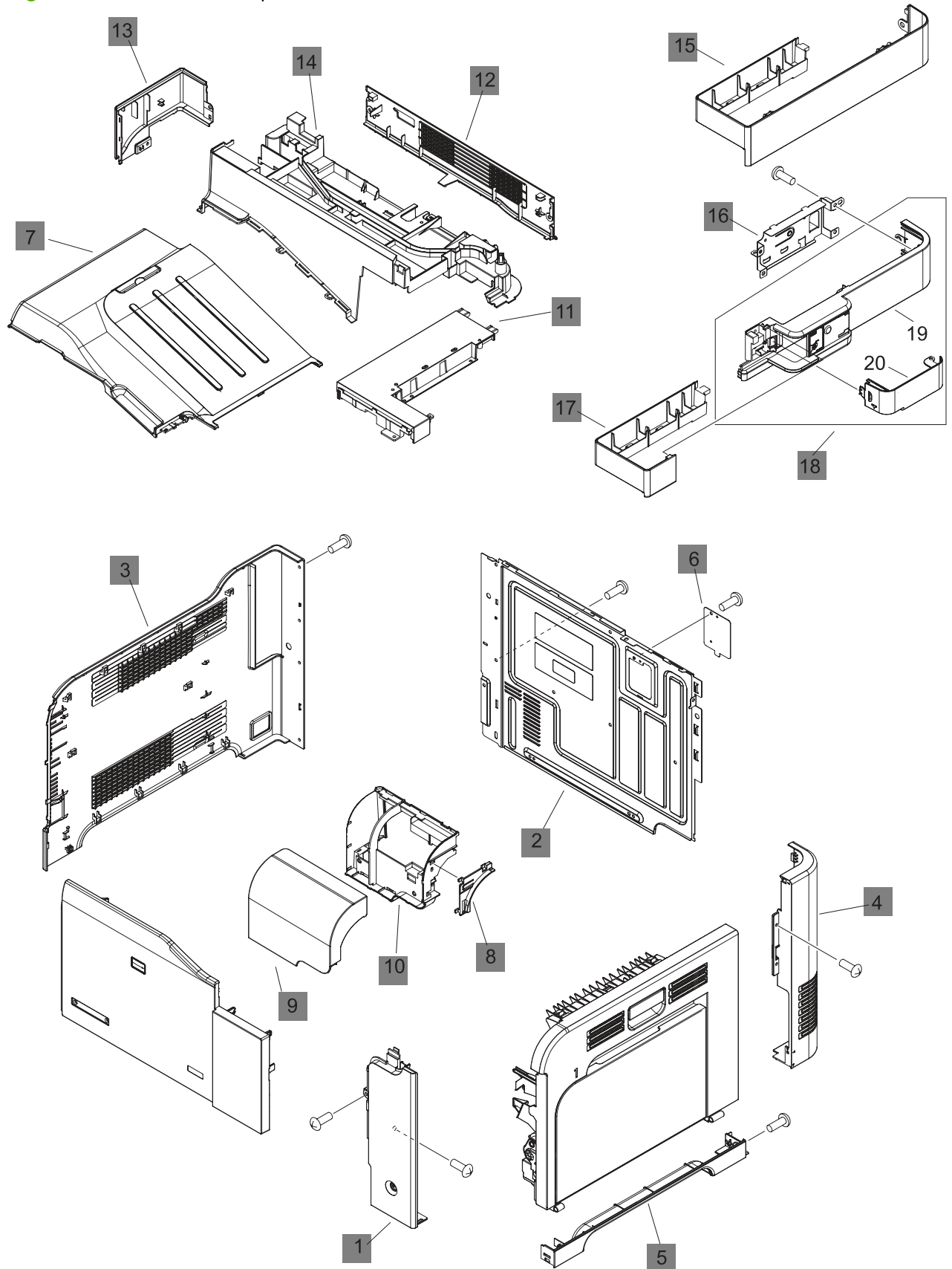
Table 8-10 External covers, panels, and doors;

Ref	Description	Part number	Qty
1	Cover, right front	RC2-5056-000CN	1
2	Cover, rear	RC2-5048-000CN	1
3	Cover, left	RC2-5052-000CN	1
4	Cover, rear right	RC2-5057-000CN	1
5	Cover, right lower	RC2-5059-000CN	1
6	Plate, blanking	RC2-5938-000CN	1
7	Tray, paper delivery	RL1-1941-000CN	1
8	Rib, Control panel	RC2-5179-000CN	1
9	Cover, control panel	RC2-5180-000CN	1
10	Cover, control panel, rear	RC2-5181-000CN	1
11	Cover, upper right	RC2-5182-000CN	1
12	Cover, rear, upper	RC2-5185-000CN	1
13	Cover, left rear	RC2-5188-000CN	1
14	Cover, upper rear	RL1-1953-000CN	1
15	Cover, right (without stapler)	RC2-5189-000CN	1
16	Holder, AC	RC2-5194-000CN	1
17	Cover, right (with stapler)	RC2-5192-000CN	1
18	Stapler, right cover assembly	RM1-5033-000CN	1

Right door assembly
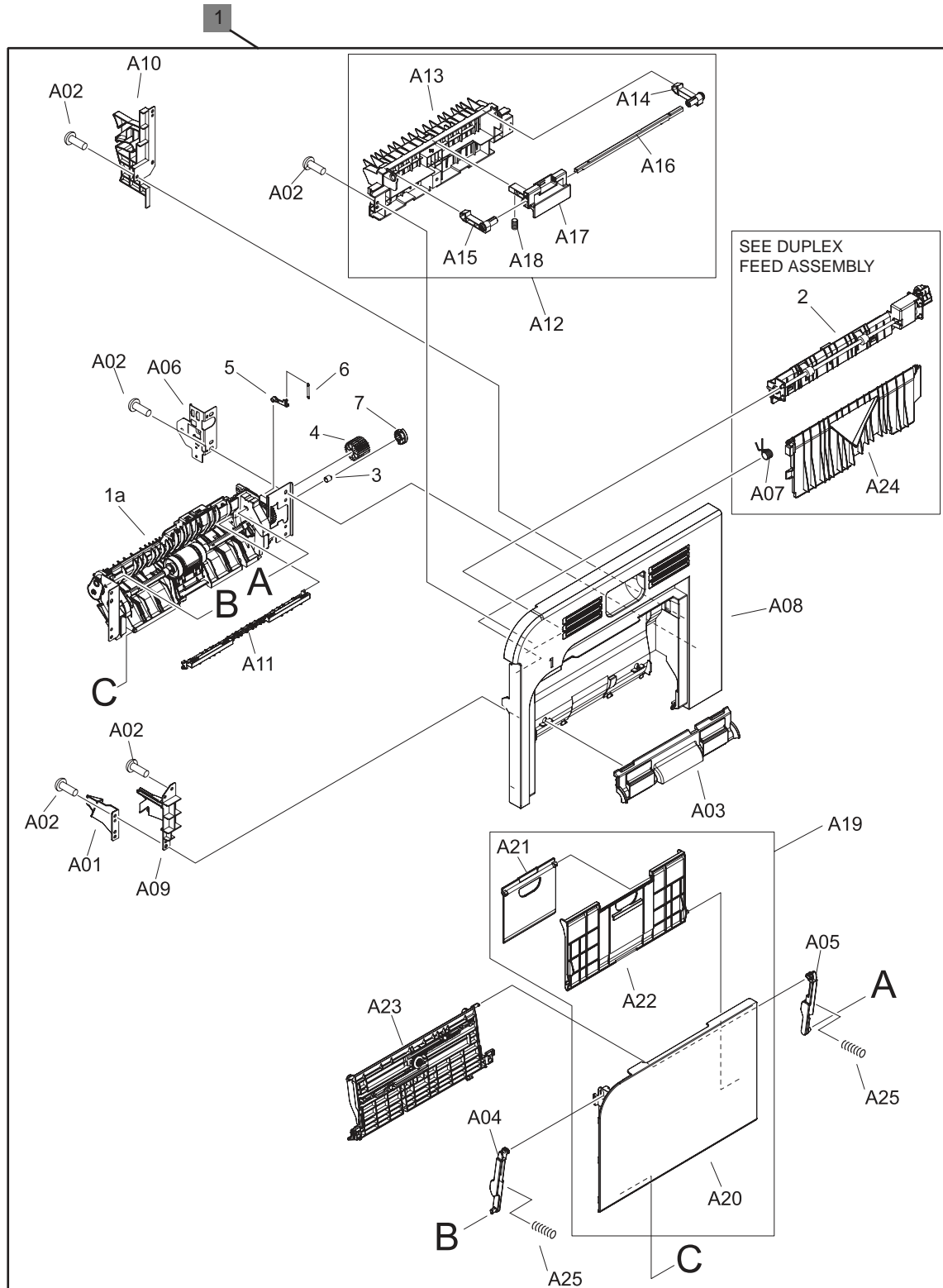
Table 8-11 **Right door assembly**

Ref	Description	Part number	Qty
1	Right door assembly	RM1-4957-000CN	1
Not shown	Tray 1 pickup roller	RL1-1928-000CN	1

Internal components

Internal components (1 of 5)

Figure 8-4 Internal components (1 of 5)

Table 8-12 Internal components (1 of 5)

Ref	Description	Part number	Qty
1	Lifter cable assembly	RM1-5742-000CN	1
3	Cover, front inner lower	RL1-1914-000CN	1
5	Cover, front inner upper	RC2-5006-000CN	1
6	Cover, front inner lower	RL1-1915-000CN	1
8	Cover, left lower	RC2-5069-000CN	1
12	Waste toner detect assembly	RM1-5696-000CN	1
13	Waste toner duct assembly (motor)	RM1-4977-000CN	1
17	Spring, tension	RU6-2236-000CN	4
18	Spring, ground	RU6-2237-000CN	4
19	Lever, cartridge pressure front	RC2-3983-000CN	4
21	Seal, waste toner box	RC2-4780-000CN	1
24	Lock, door	RC2-5937-000CN	1
26	Lever, box presence detect	RC2-5951-000CN	1
27	Spring, compression	RU6-2568-000CN	1

Figure 8-5 Internal components (2 of 5)
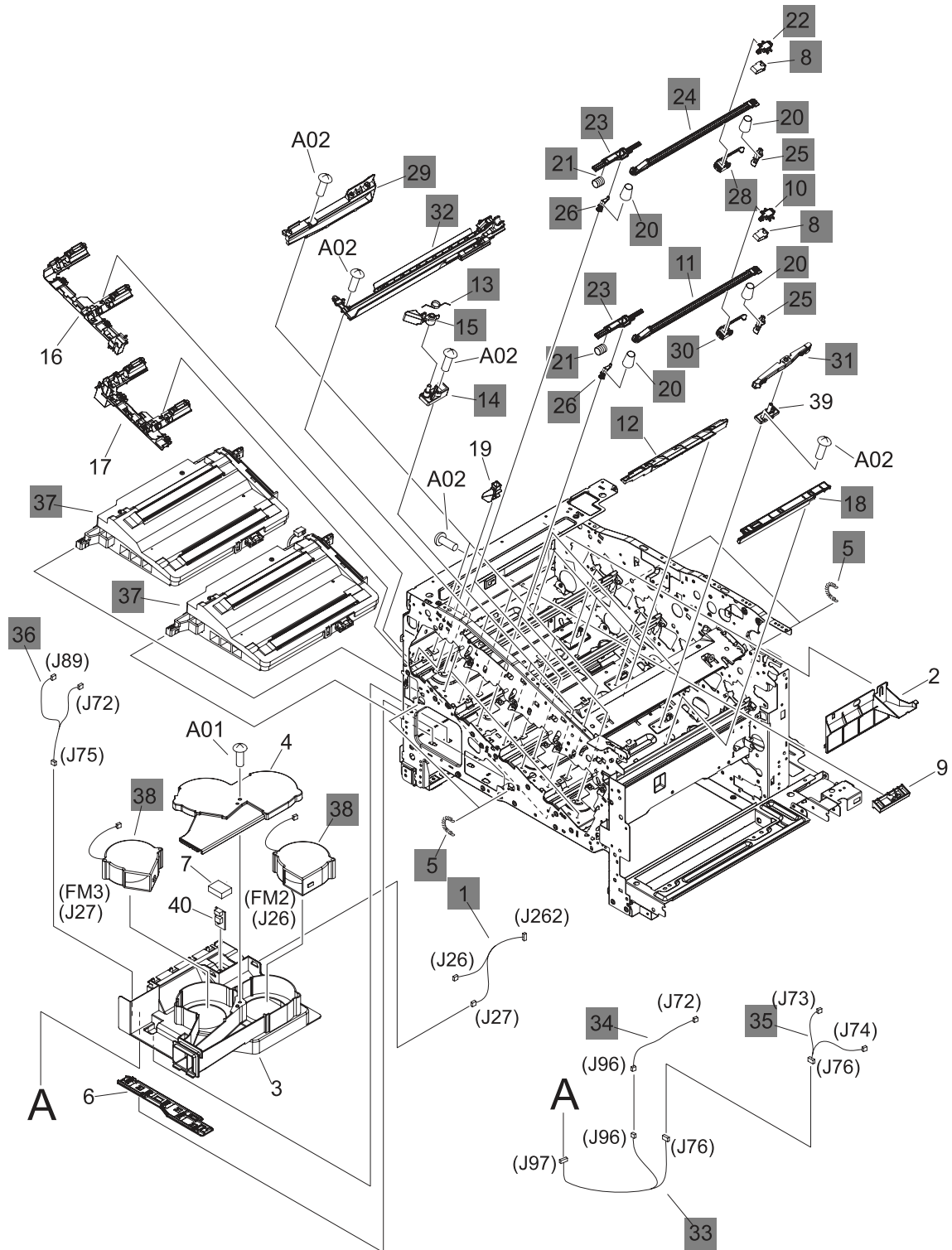
Table 8-13 Internal components (2 of 5)

Ref	Description	Part number	Qty
1	Fan cable assembly	RM1-5746-000CN	1
5	Spring, tension	RU6-2436-000CN	4
8	Spring, leaf	RC2-5970-000CN	4
10	Tab	RC2-5909-000CN	2
11	Shutter	RC2-5910-000CN	2
12	Cover	RC2-5912-000CN	3
13	Spring, torsion	RC2-5958-000CN	3
14	Holder, cartridge lock lever	RC2-5955-000CN	3
15	Lever, cartridge lock	RC2-5954-000CN	3
18	Cover	RC2-5962-000CN	3
20	Spring, compression	RU6-2318-000CN	8
21	Spring, compression	RU6-2316-000CN	4
22	Tab	RC2-4428-000CN	2
23	Lever, shutter	RU6-4415-000CN	4
24	Shutter	RC2-4413-000CN	2
25	Shutter rear arm	RC2-4407-000CN	4
26	Shutter front arm	RC2-4406-000CN	4
27	Sensor unit, Tmp/Hum sensor	RK2-2229-000CN	1
28	Base	RL1-2144-000CN	2
29	Toner sensor holder assembly	RM1-5700-000CN	4
30	Base	RL1-1923-000CN	2
31	Base assembly	RM1-4979-000CN	4
32	Lower cartridge guide assembly	RM1-4984-000CN	4
33	Connecting cable assembly	RM1-5749-000CN	1
34	Sensor cable assembly	RM1-5740-000CN	1
35	Sensor cable assembly	RM1-5741-000CN	1
36	Motor/sensor cable assembly	RM1-5752-000CN	1
38	Fan	RK2-2418-000CN	2

Internal components (3 of 5)

Figure 8-6 Internal components (3 of 5)
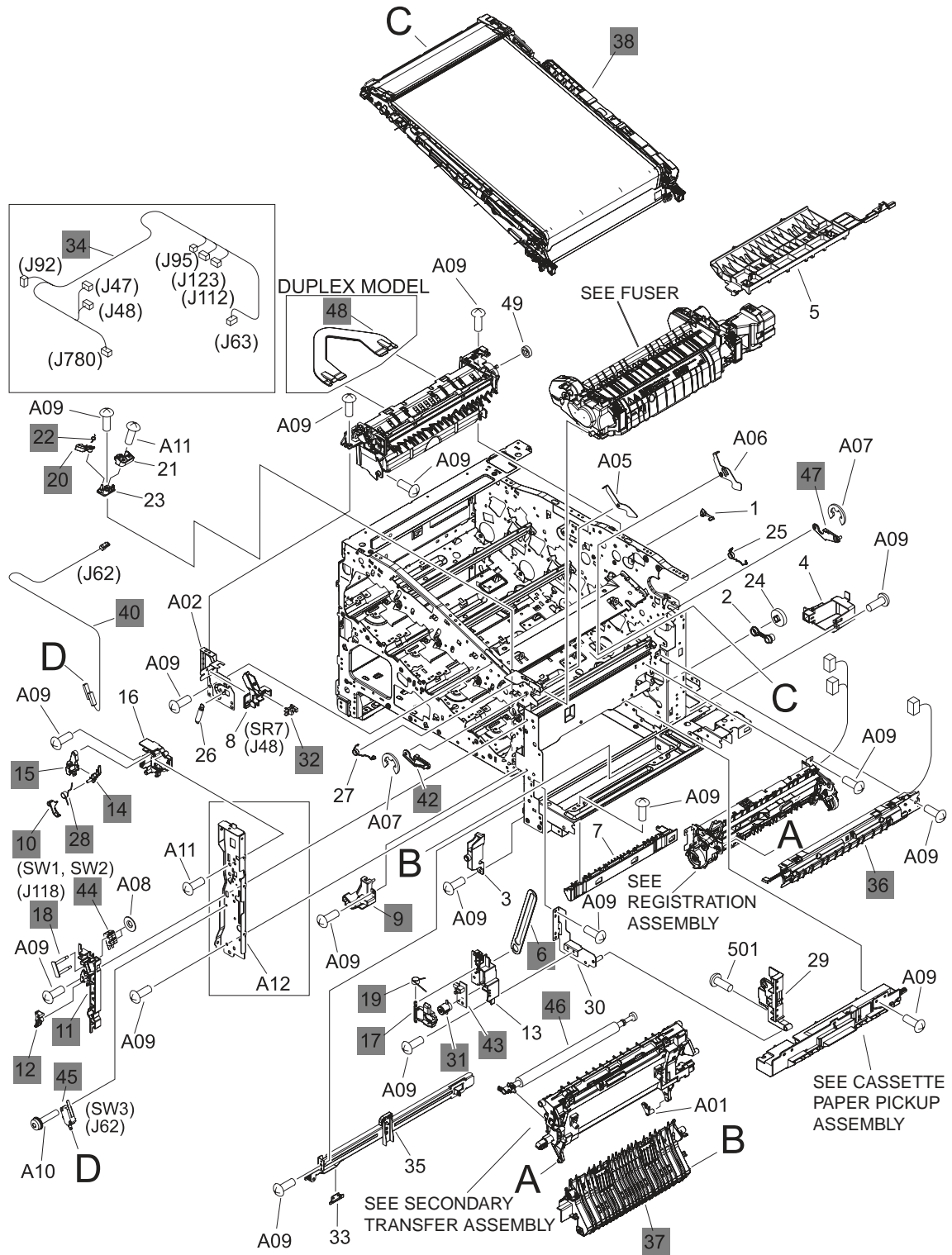
Table 8-14 Internal components (3 of 5)

Ref	Description	Part number	Qty
6	Link, door stopper right	RC2-4916-000CN	1
9	Cover, right lower inner	RC2-5019-000CN	1
10	Interlock link	RC2-5120-000CN	1
11	Interlock switch mount	RC2-5123-000CN	1
12	Interlock link switch arm	RC2-5121-000CN	1
14	Interlock link	RC2-5119-000CN	1
15	Interlock link	RC2-5118-000CN	1
17	Switch lever	RC2-5124-000CN	1
18	Shaft	RC2-5913-000CN	1
19	Spring, torsion	RC2-5934-000CN	1
20	Cartridge lock lever	RC2-5954-000CN	1
22	Spring, torsion	RC2-5958-000CN	1
28	Interlock link	RC2-5122-000CN	1
31	Power supply button	RL1-1947-000CN	1
32	Photo interrupter, TLP1243	WG8-5696-000CN	1
34	Front cable assembly	RM1-6998-000CN	1
36	Density detect sensor assembly	RM1-4953-000CN	1
37	Lower pick up guide assembly	RM1-4980-000CN	1
38	ITB assembly service kit	CC468-67907	1
40	Switch cable assembly	RM1-5718-000CN	1
42	Front lock arm assembly	RM1-5532-000CN	1
43	Power supply switch assembly	RM1-5697-000CN	1
44	Door switch assembly	RM1-5732-000CN	1
45	Switch	WC4-5171-000CN	1
46	Transfer roller assembly service kit	CC468-67914	
47	Rear lock arm assembly	RM1-5533-000CN	1

Figure 8-7 Internal components (4 of 5)
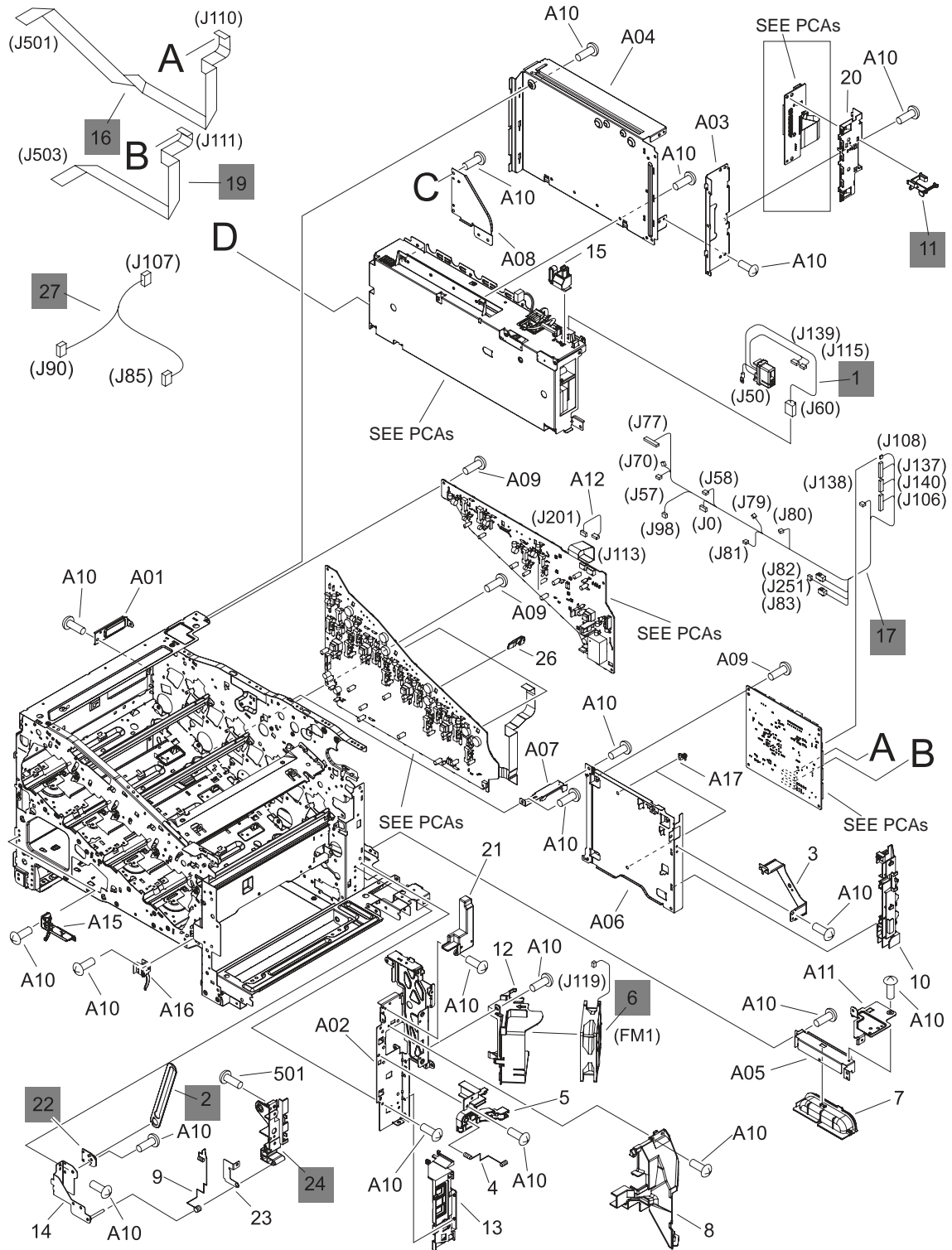
Table 8-15 Internal components (4 of 5)

Ref	Description	Part number	Qty
1	Fusing connecting cable assembly	RM1-5714-000CN	1
2	Door stopper right link	RC2-4916-000CN	2
6	Fan	RK2-2416-000CN	1
11	Switch arm	RC2-5943-000CN	1
16	Scanner flat cable (FFC)	RK2-2506-000CN	1
17	Rear cable assembly	RM1-5721-000CN	1
19	Scanner flat cable (FFC)	RK2-2508-000CN	1
24	Right door rear hinge	RC2-4895-000CN	1
27	Multipurpose tray sensor cable assembly	RM1-5737-000CN	1
28	Cable, AC (stapler power)	RK2-2501-000CN	1
Not shown	Stapler mechanism	CC483-60107	1
Not shown	Stapler power supply	Q7429-60501	1

Internal components (5 of 5)

Figure 8-8 Internal components (5 of 5)
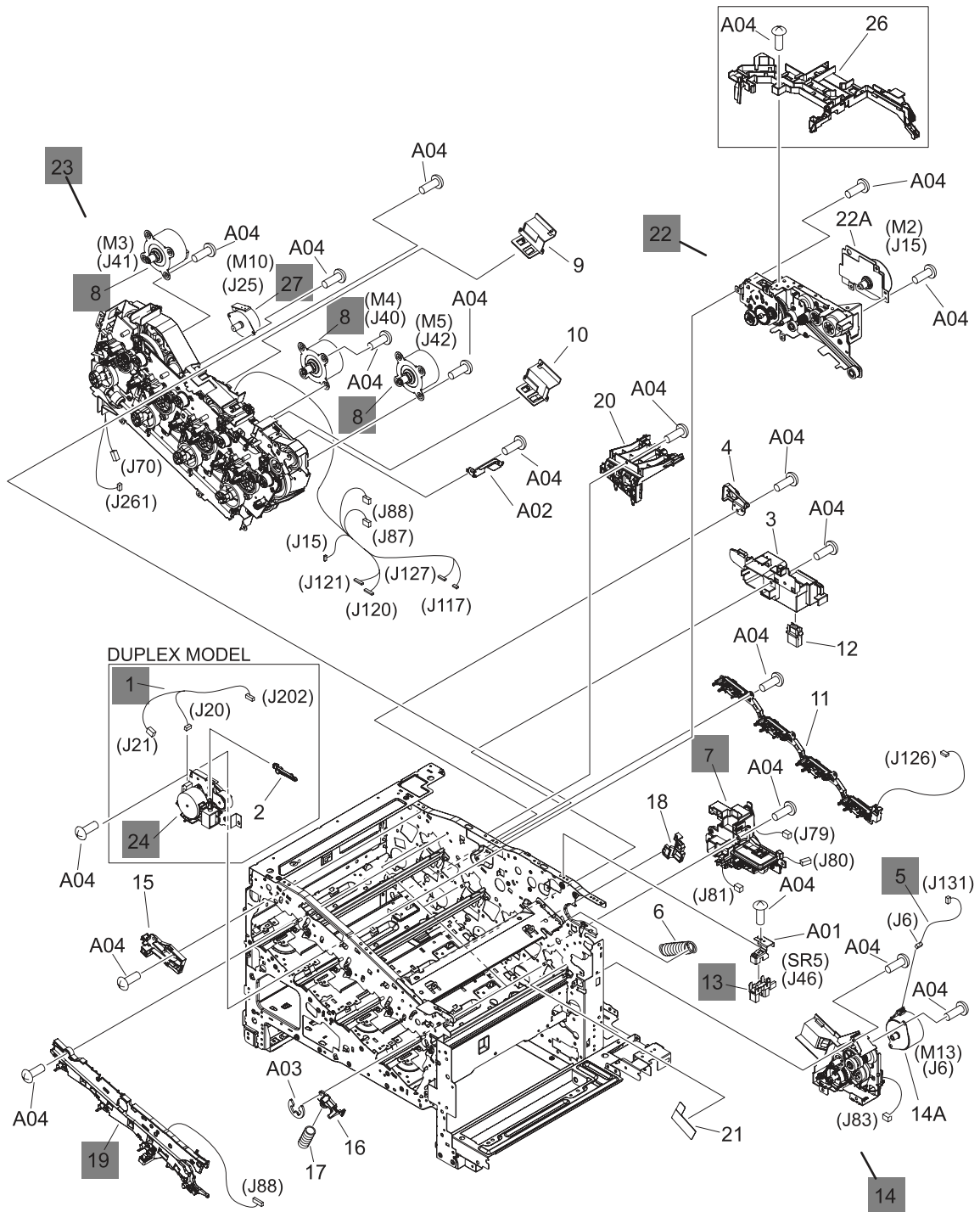
Table 8-16 Internal components (5 of 5)

Ref	Description	Part number	Qty
1	Duplexing unit cable assembly	RM1-5730-000CN	1
5	Pickup motor cable assembly	RM1-5731-000CN	1
7	Lifter drive assembly	RM1-4976-000CN	1
8	Drum motor assembly	RM1-4988-000CN	3
13	Photo interrupter, TLP1243	WG8-5696-000CN	1
14	Cassette paper pick up drive assembly with motor	RM1-4975-000CN	1
19	Rear pre-exposure PCA	RM1-5705-000CN	1
22	Fusing drive assembly with motor	RM1-4974-000CN	1
24	Duplexing drive assembly	RM1-4973-000CN	1
27	Stepping motor, DC (developing disengagement)	RK2-2415-000CN	1

Fuser

Figure 8-9 Fuser
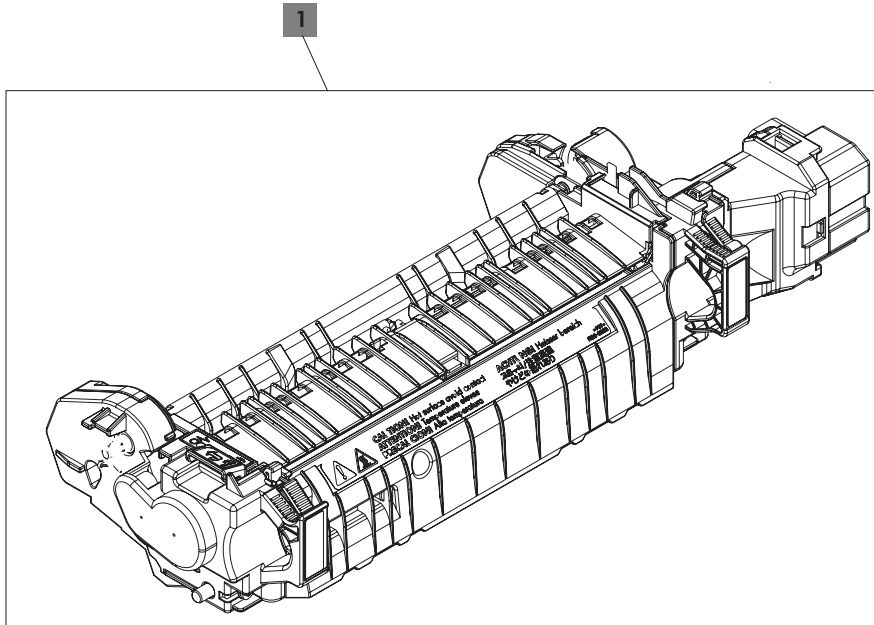
Table 8-17 **Fuser**

Ref	Description	Part number	Qty
1	Fuser/Fixing service kit110 v	CC519-67901	1
1	Fuser/Fixing service kit 220 v	CC519-67902	1

250-sheet cassette

Figure 8-10 250-sheet cassette
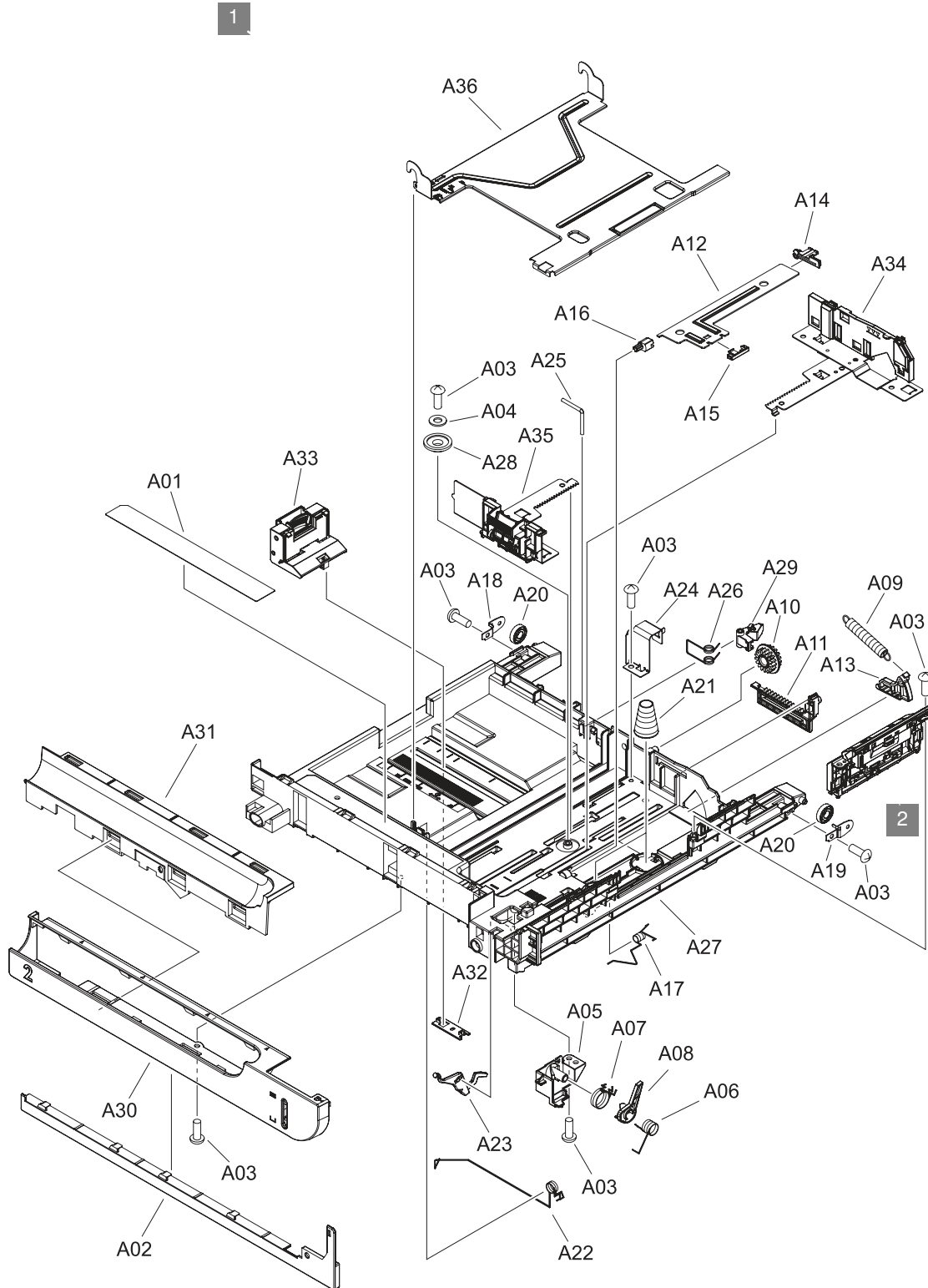
Table 8-18 250-sheet cassette

Ref	Description	Part number	Qty
1	250-sheet cassette	RM1-4962-000CN	1
2	Separation roller assy	RM1-4966-000CN	1

250-sheet cassette paper pickup assembly

Figure 8-11 250-sheet cassette paper pickup assembly
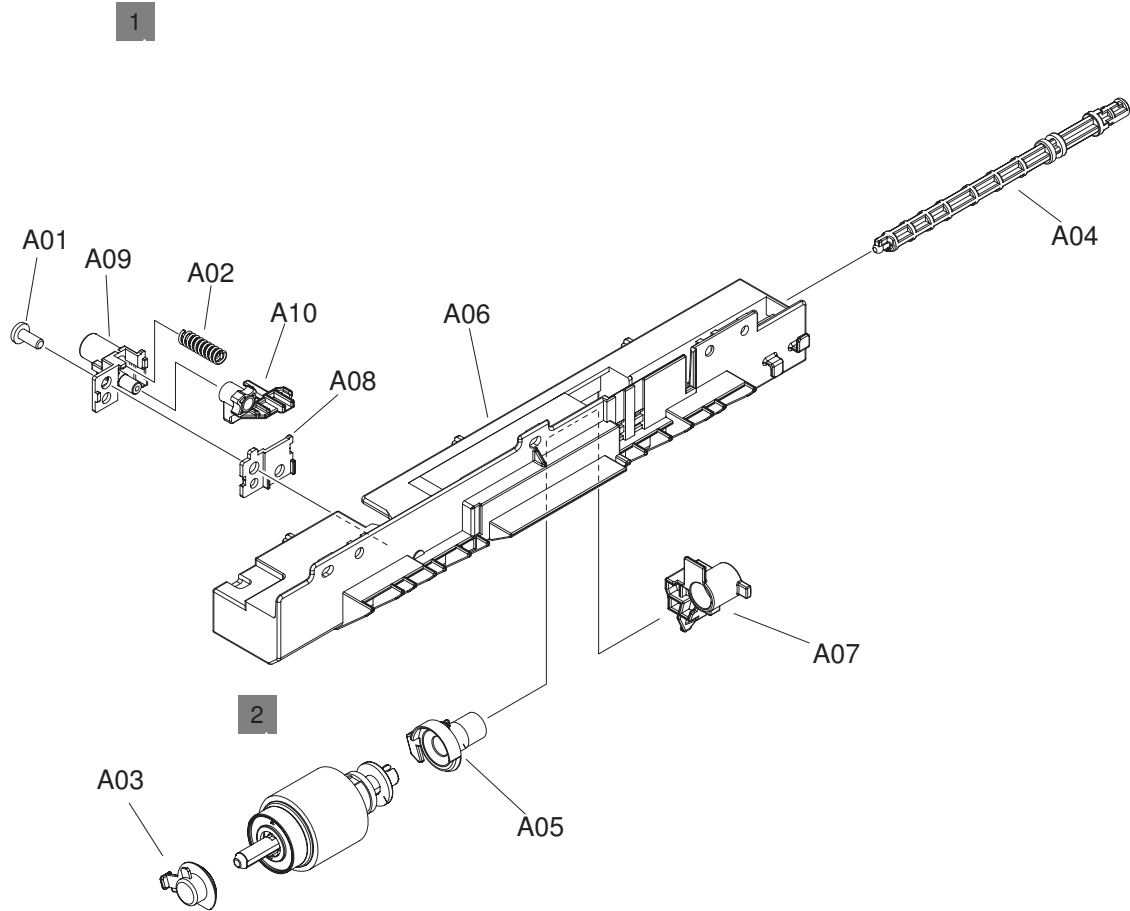
Table 8-19 250-sheet cassette paper pickup assembly

Ref	Description	Part number	Qty
1	250-sheet cassette paper pickup assembly	RM1-4967-000CN	1
2	250-sheet cassette paper pickup roller	RM1-4968-000CN	

Registration assembly
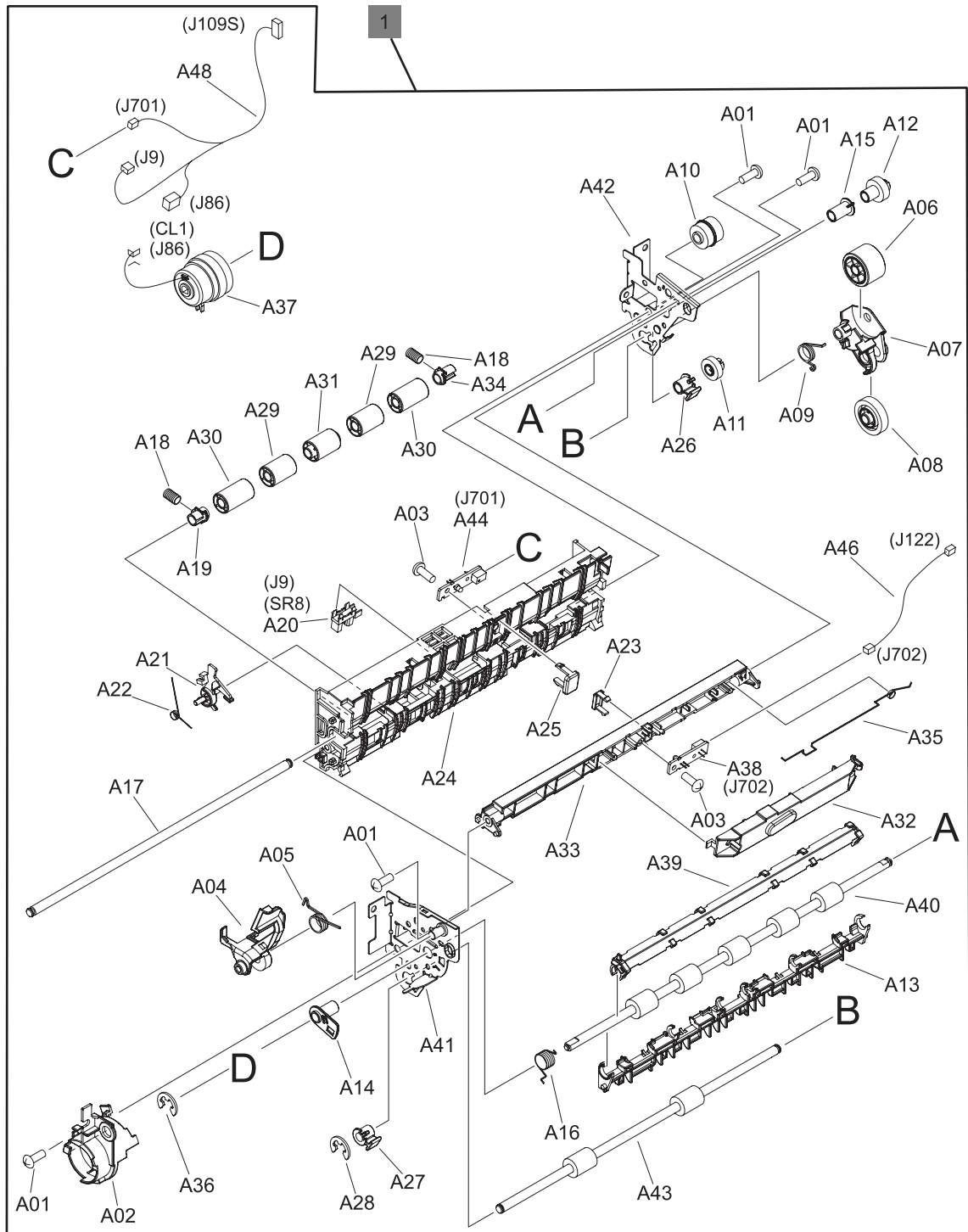
Table 8-20 Registration assembly

Ref	Description	Part number	Qty
1	Registration assembly	RM1-4969-000CN	1

Paper-delivery assembly

Figure 8-13 Paper-delivery assembly
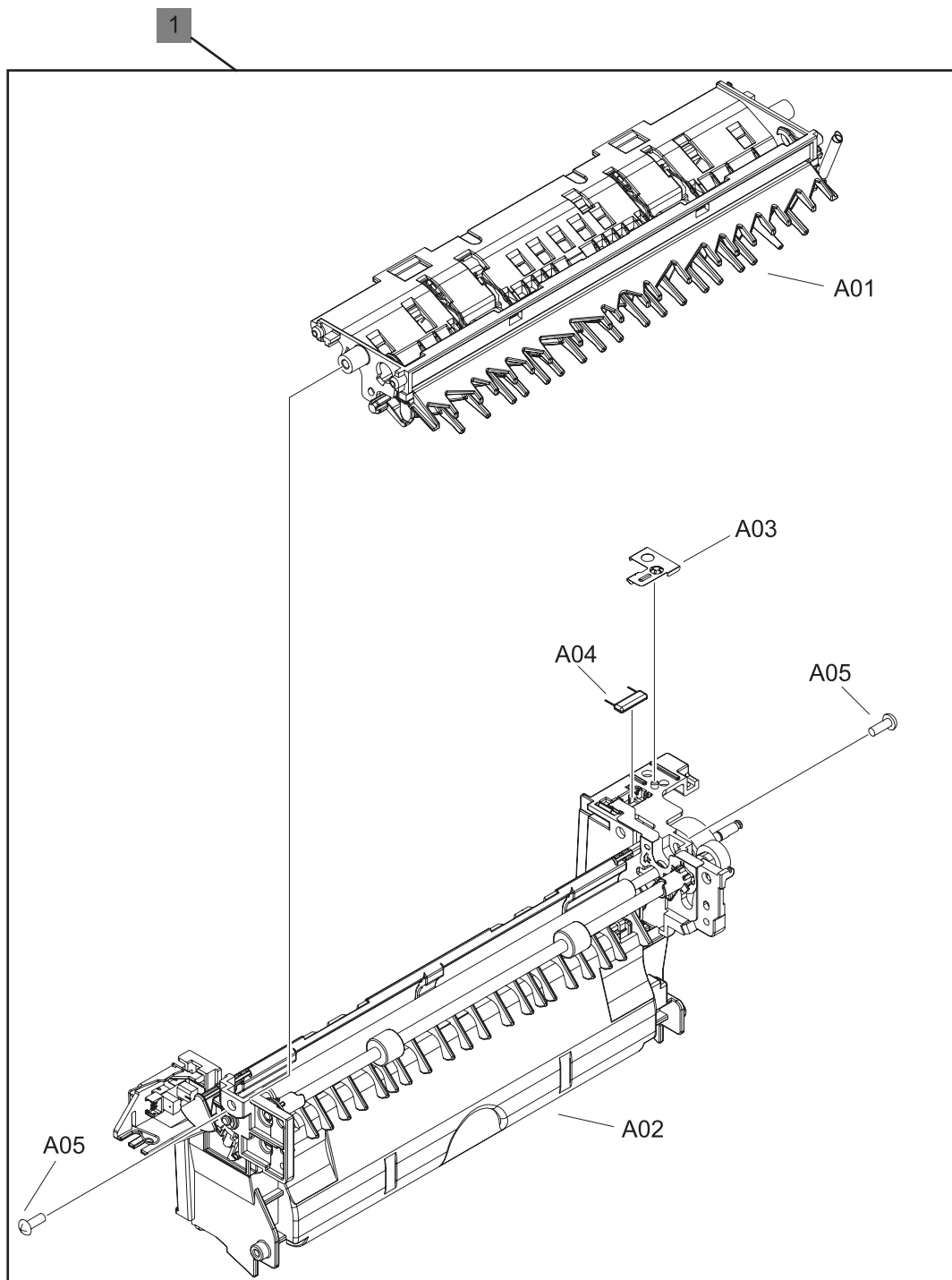
Table 8-21 Paper-delivery assembly

Ref	Description	Part number	Qty
1	Paper-delivery assembly	RM1-4970-000CN	1

PCAs
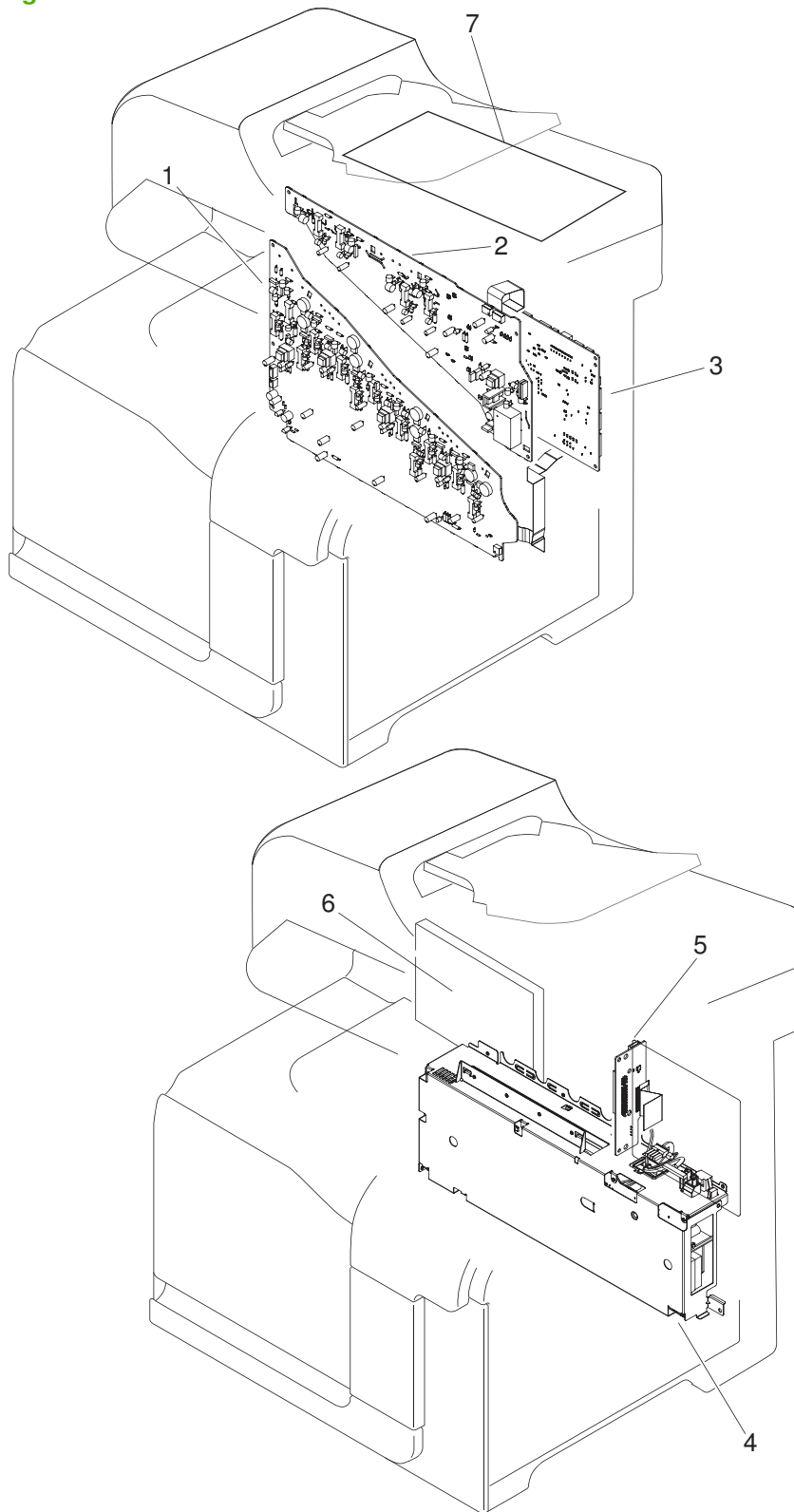
Table 8-22 PCAs

Ref	Description	Part number	Qty
1	High-voltage power supply lower PCA (HVPS-D)	RM1-5680-000CN	1
2	High-voltage power supply upper PCA (HVPS-T)	RM1-5681-000CN	1
3	DC controller PCA	RM1-5678-000CN	1
4	Low-voltage power supply PCA(110 v)	RM1-5689-000CN	1
4	Low-voltage power supply PCA(220 v)	RM1-5690-000CN	1
5	Interconnect board (ICB)	CC453-60001	1
6	Formatter PCA	CC452-60001	1
7	Scanner controller board (SCB)	CC454-60002	1

Formatter components

Figure 8-15 Formatter components

Table 8-23 Formatter components

Ref	Description	Part number	Qty
1	Hard drive, 80GB 2.5-inch SATA ROHS	CC519-67904	1
2	SATA hard drive cable power/data	CC519-67905	1
3	Fax controller PCA	CC456-60001	1
4	Fax cable	CC519-67907	1

Accessories

500-sheet paper feeder

Figure 8-16 500-sheet paper feeder
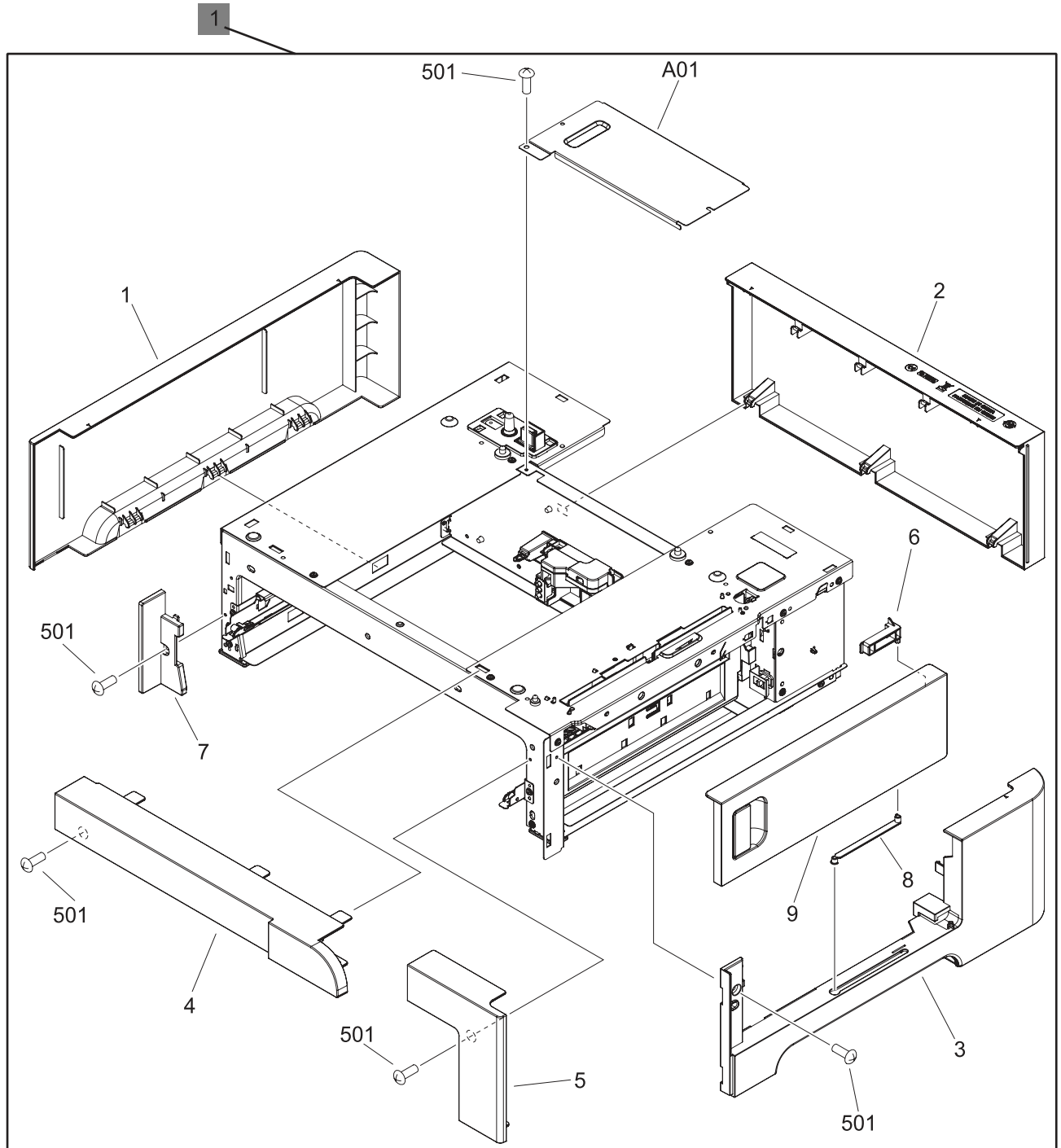
Table 8-24 500-sheet paper feeder

Ref	Description	Part number	Qty
1	500-sheet feeder replacement	CE222-67901	1
Not shown	500-sheet paper feeder right door kit	CC468-67906	1
Not shown	500-sheet cassette	RM1-6198-000CN	1

Paper feeder main body

Figure 8-17 Paper feeder main body
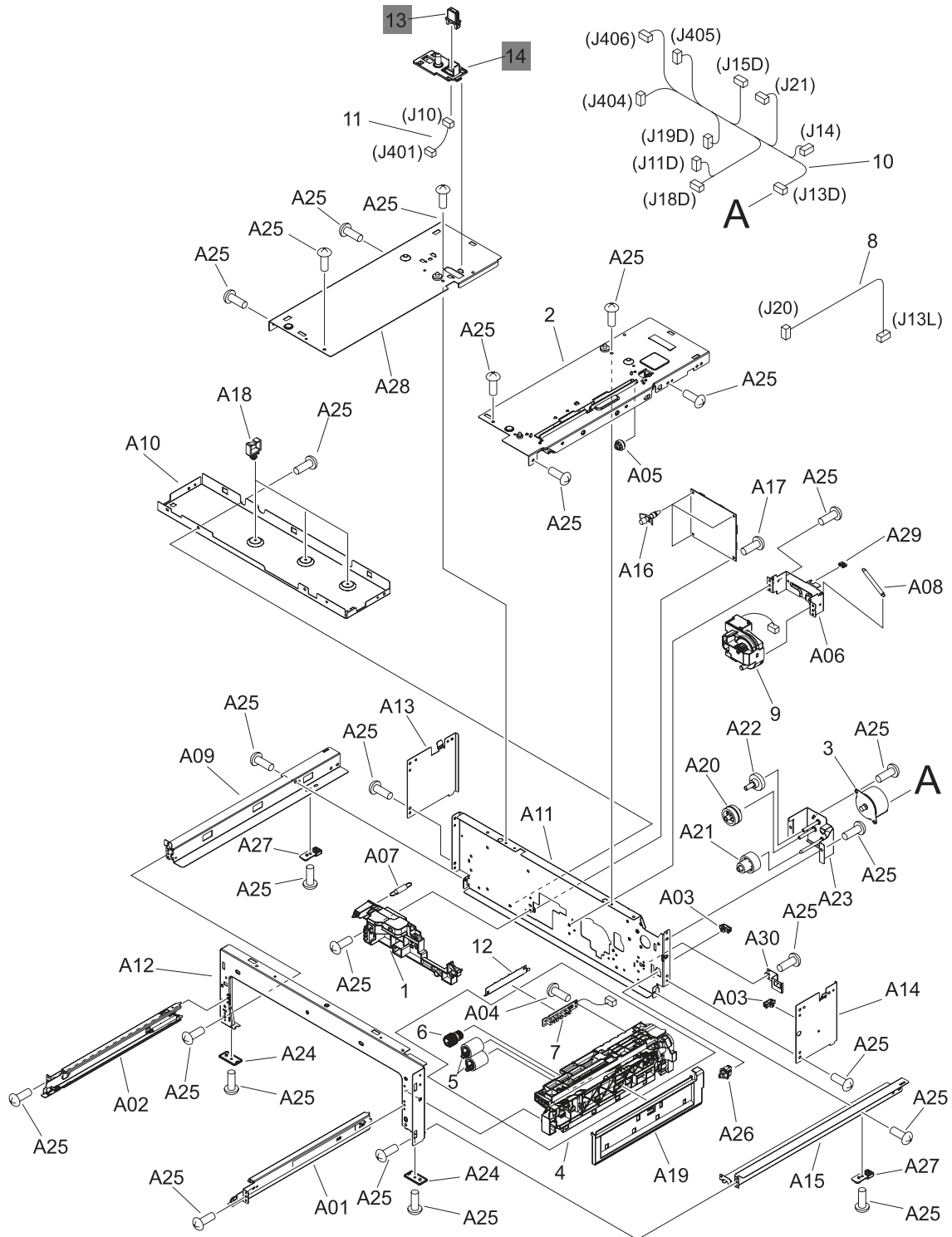
Table 8-25 Paper feeder main body

Ref	Description	Part number	Qty
13	Drawer connector (Tray 3)	VS1-7257-007CN	1
14	Drawer connector holder (Tray 3)	RC2-5416-000CN	1

Alphabetical parts list

Table 8-26 Alphabetical parts list

Description	Part number	Table and page
250-sheet cassette	RM1-4962-000CN	250-sheet cassette on page 539
250-sheet cassette paper pickup assembly	RM1-4967-000CN	250-sheet cassette paper pickup assembly on page 541
250-sheet cassette paper pickup roller	RM1-4968-000CN	250-sheet cassette paper pickup assembly on page 541
500-sheet cassette	RM1-6198-000CN	500-sheet paper feeder on page 551
500-sheet feeder replacement	CE222-67901	500-sheet paper feeder on page 551
500-sheet paper feeder right door kit	CC468-67906	500-sheet paper feeder on page 551
ADF assembly	CC483-60103	ADF/scanner assembly on page 521
ADF feed roller kit	CC519-67909	ADF/scanner assembly on page 521
Base	RL1-2144-000CN	Internal components (2 of 5) on page 529
Base	RL1-1923-000CN	Internal components (2 of 5) on page 529
Base assembly	RM1-4979-000CN	Internal components (2 of 5) on page 529
Cable, AC (stapler power)	RK2-2501-000CN	Internal components (4 of 5) on page 533
Cartridge lock lever	RC2-5954-000CN	Internal components (3 of 5) on page 531
Cassette paper pick up drive assembly with motor	RM1-4975-000CN	Internal components (5 of 5) on page 535
Connecting cable assembly	RM1-5749-000CN	Internal components (2 of 5) on page 529
Control panel assembly	CC519-60115	ADF/scanner assembly on page 521
Control-panel cable	CC519-60107	ADF/scanner assembly on page 521
Cover	RC2-5912-000CN	Internal components (2 of 5) on page 529
Cover	RC2-5962-000CN	Internal components (2 of 5) on page 529
Cover, control panel	RC2-5180-000CN	External covers, panels, and doors; on page 523
Cover, control panel, rear	RC2-5181-000CN	External covers, panels, and doors; on page 523

Table 8-26 Alphabetical parts list (continued)

Description	Part number	Table and page
Cover, front inner lower	RL1-1914-000CN	Internal components (1 of 5) on page 527
Cover, front inner lower	RL1-1915-000CN	Internal components (1 of 5) on page 527
Cover, front inner upper	RC2-5006-000CN	Internal components (1 of 5) on page 527
Cover, left	RC2-5052-000CN	External covers, panels, and doors; on page 523
Cover, left lower	RC2-5069-000CN	Internal components (1 of 5) on page 527
Cover, left rear	RC2-5188-000CN	External covers, panels, and doors; on page 523
Cover, rear	RC2-5048-000CN	External covers, panels, and doors; on page 523
Cover, rear right	RC2-5057-000CN	External covers, panels, and doors; on page 523
Cover, rear, upper	RC2-5185-000CN	External covers, panels, and doors; on page 523
Cover, right (with stapler)	RC2-5192-000CN	External covers, panels, and doors; on page 523
Cover, right (without stapler)	RC2-5189-000CN	External covers, panels, and doors; on page 523
Cover, right front	RC2-5056-000CN	External covers, panels, and doors; on page 523
Cover, right lower	RC2-5059-000CN	External covers, panels, and doors; on page 523
Cover, right lower inner	RC2-5019-000CN	Internal components (3 of 5) on page 531
Cover, upper rear	RL1-1953-000CN	External covers, panels, and doors; on page 523
Cover, upper right	RC2-5182-000CN	External covers, panels, and doors; on page 523
DC controller PCA	RM1-5678-000CN	PCAs on page 547
Density detect sensor assembly	RM1-4953-000CN	Internal components (3 of 5) on page 531
Door stopper right link	RC2-4916-000CN	Internal components (4 of 5) on page 533
Door switch assembly	RM1-5732-000CN	Internal components (3 of 5) on page 531
Drawer connector (Tray 3)	VS1-7257-007CN	Paper feeder main body on page 553
Drawer connector holder (Tray 3)	RC2-5416-000CN	Paper feeder main body on page 553

Table 8-26 Alphabetical parts list (continued)

Description	Part number	Table and page
Drum motor assembly	RM1-4988-000CN	Internal components (5 of 5) on page 535
Duplexing drive assembly	RM1-4973-000CN	Internal components (5 of 5) on page 535
Duplexing unit cable assembly	RM1-5730-000CN	Internal components (5 of 5) on page 535
Fan	RK2-2418-000CN	Internal components (2 of 5) on page 529
Fan	RK2-2416-000CN	Internal components (4 of 5) on page 533
Fan cable assembly	RM1-5746-000CN	Internal components (2 of 5) on page 529
Fax cable	CC519-67907	Formatter components on page 549
Fax controller PCA	CC456-60001	Formatter components on page 549
Formatter PCA	CC452-60001	PCAs on page 547
Front cable assembly	RM1-6998-000CN	Internal components (3 of 5) on page 531
Front lock arm assembly	RM1-5532-000CN	Internal components (3 of 5) on page 531
Fuser/Fixing service kit 220 v	CC519-67902	Fuser on page 537
Fuser/Fixing service kit110 v	CC519-67901	Fuser on page 537
Fusing connecting cable assembly	RM1-5714-000CN	Internal components (4 of 5) on page 533
Fusing drive assembly with motor	RM1-4974-000CN	Internal components (5 of 5) on page 535
Hard drive, 80GB 2.5-inch SATA ROHS	CC519-67904	Formatter components on page 549
High-voltage power supply lower PCA (HVPS-D)	RM1-5680-000CN	PCAs on page 547
High-voltage power supply upper PCA (HVPS-T)	RM1-5681-000CN	PCAs on page 547
Holder, AC	RC2-5194-000CN	External covers, panels, and doors; on page 523
Holder, cartridge lock lever	RC2-5955-000CN	Internal components (2 of 5) on page 529
Interconnect board (ICB)	CC453-60001	PCAs on page 547
Interlock link	RC2-5120-000CN	Internal components (3 of 5) on page 531
Interlock link	RC2-5119-000CN	Internal components (3 of 5) on page 531
Interlock link	RC2-5118-000CN	Internal components (3 of 5) on page 531

Table 8-26 Alphabetical parts list (continued)

Description	Part number	Table and page
Interlock link	RC2-5122-000CN	Internal components (3 of 5) on page 531
Interlock link switch arm	RC2-5121-000CN	Internal components (3 of 5) on page 531
Interlock switch mount	RC2-5123-000CN	Internal components (3 of 5) on page 531
ITB assembly service kit	CC468-67907	Internal components (3 of 5) on page 531
Lever, box presence detect	RC2-5951-000CN	Internal components (1 of 5) on page 527
Lever, cartridge lock	RC2-5954-000CN	Internal components (2 of 5) on page 529
Lever, cartridge pressure front	RC2-3983-000CN	Internal components (1 of 5) on page 527
Lever, shutter	RU6-4415-000CN	Internal components (2 of 5) on page 529
Lifter cable assembly	RM1-5742-000CN	Internal components (1 of 5) on page 527
Lifter drive assembly	RM1-4976-000CN	Internal components (5 of 5) on page 535
Link, door stopper right	RC2-4916-000CN	Internal components (3 of 5) on page 531
Lock, door	RC2-5937-000CN	Internal components (1 of 5) on page 527
Low-voltage power supply PCA(110 v)	RM1-5689-000CN	PCAs on page 547
Low-voltage power supply PCA(220 v)	RM1-5690-000CN	PCAs on page 547
Lower cartridge guide assembly	RM1-4984-000CN	Internal components (2 of 5) on page 529
Lower pick up guide assembly	RM1-4980-000CN	Internal components (3 of 5) on page 531
Motor/sensor cable assembly	RM1-5752-000CN	Internal components (2 of 5) on page 529
Multipurpose tray sensor cable assembly	RM1-5737-000CN	Internal components (4 of 5) on page 533
Paper-delivery assembly	RM1-4970-000CN	Paper-delivery assembly on page 545
PCI express RoHS cable	5851-3141	ADF/scanner assembly on page 521
Photo interrupter, TLP1243	WG8-5696-000CN	Internal components (3 of 5) on page 531
Photo interrupter, TLP1243	WG8-5696-000CN	Internal components (5 of 5) on page 535
Pickup motor cable assembly	RM1-5731-000CN	Internal components (5 of 5) on page 535

Table 8-26 Alphabetical parts list (continued)

Description	Part number	Table and page
Plate, blanking	RC2-5938-000CN	External covers, panels, and doors; on page 523
Power supply button	RL1-1947-000CN	Internal components (3 of 5) on page 531
Power supply switch assembly	RM1-5697-000CN	Internal components (3 of 5) on page 531
Rear cable assembly	RM1-5721-000CN	Internal components (4 of 5) on page 533
Rear lock arm assembly	RM1-5533-000CN	Internal components (3 of 5) on page 531
Rear pre-exposure PCA	RM1-5705-000CN	Internal components (5 of 5) on page 535
Registration assembly	RM1-4969-000CN	Registration assembly on page 543
Rib, Control panel	RC2-5179-000CN	External covers, panels, and doors; on page 523
Right door assembly	RM1-4957-000CN	Right door assembly on page 525
Right door rear hinge	RC2-4895-000CN	Internal components (4 of 5) on page 533
SATA hard drive cable power/data	CC519-67905	Formatter components on page 549
Scanner assembly (ADF assembly and SCB PCA are *not* included)	CC519-67914	ADF/scanner assembly on page 521
Scanner controller board (SCB)	CC454-60002	ADF/scanner assembly on page 521
Scanner controller board (SCB)	CC454-60002	PCAs on page 547
Scanner flat cable (FFC)	RK2-2506-000CN	Internal components (4 of 5) on page 533
Scanner flat cable (FFC)	RK2-2508-000CN	Internal components (4 of 5) on page 533
Seal, waste toner box	RC2-4780-000CN	Internal components (1 of 5) on page 527
Sensor cable assembly	RM1-5740-000CN	Internal components (2 of 5) on page 529
Sensor cable assembly	RM1-5741-000CN	Internal components (2 of 5) on page 529
Sensor unit, Tmp/Hum sensor	RK2-2229-000CN	Internal components (2 of 5) on page 529
Separation roller assy	RM1-4966-000CN	250-sheet cassette on page 539
Shaft	RC2-5913-000CN	Internal components (3 of 5) on page 531

Table 8-26 Alphabetical parts list (continued)

Description	Part number	Table and page
Shutter	RC2-5910-000CN	Internal components (2 of 5) on page 529
Shutter	RC2-4413-000CN	Internal components (2 of 5) on page 529
Shutter front arm	RC2-4406-000CN	Internal components (2 of 5) on page 529
Shutter rear arm	RC2-4407-000CN	Internal components (2 of 5) on page 529
Spring, compression	RU6-2568-000CN	Internal components (1 of 5) on page 527
Spring, compression	RU6-2318-000CN	Internal components (2 of 5) on page 529
Spring, compression	RU6-2316-000CN	Internal components (2 of 5) on page 529
Spring, ground	RU6-2237-000CN	Internal components (1 of 5) on page 527
Spring, leaf	RC2-5970-000CN	Internal components (2 of 5) on page 529
Spring, tension	RU6-2236-000CN	Internal components (1 of 5) on page 527
Spring, tension	RU6-2436-000CN	Internal components (2 of 5) on page 529
Spring, torsion	RC2-5958-000CN	Internal components (2 of 5) on page 529
Spring, torsion	RC2-5934-000CN	Internal components (3 of 5) on page 531
Spring, torsion	RC2-5958-000CN	Internal components (3 of 5) on page 531
Stapler mechanism	CC483-60107	Internal components (4 of 5) on page 533
Stapler power supply	Q7429-60501	Internal components (4 of 5) on page 533
Stapler, right cover assembly	RM1-5033-000CN	External covers, panels, and doors; on page 523
Stepping motor, DC (developing disengagement)	RK2-2415-000CN	Internal components (5 of 5) on page 535
Switch	WC4-5171-000CN	Internal components (3 of 5) on page 531
Switch arm	RC2-5943-000CN	Internal components (4 of 5) on page 533
Switch cable assembly	RM1-5718-000CN	Internal components (3 of 5) on page 531
Switch lever	RC2-5124-000CN	Internal components (3 of 5) on page 531

Table 8-26 Alphabetical parts list (continued)

Description	Part number	Table and page
Tab	RC2-5909-000CN	Internal components (2 of 5) on page 529
Tab	RC2-4428-000CN	Internal components (2 of 5) on page 529
Toner sensor holder assembly	RM1-5700-000CN	Internal components (2 of 5) on page 529
Transfer roller assembly service kit	CC468-67914	Internal components (3 of 5) on page 531
Tray, paper delivery	RL1-1941-000CN	External covers, panels, and doors; on page 523
Tray 1 pickup roller	RL1-1928-000CN	Right door assembly on page 525
Waste toner detect assembly	RM1-5696-000CN	Internal components (1 of 5) on page 527
Waste toner duct assembly (motor)	RM1-4977-000CN	Internal components (1 of 5) on page 527

Numerical parts list

Table 8-27 Numerical parts list

Part number	Description	Table and page
5851-3141	PCI express RoHS cable	ADF/scanner assembly on page 521
CC452-60001	Formatter PCA	PCAs on page 547
CC453-60001	Interconnect board (ICB)	PCAs on page 547
CC454-60002	Scanner controller board (SCB)	ADF/scanner assembly on page 521
CC454-60002	Scanner controller board (SCB)	PCAs on page 547
CC456-60001	Fax controller PCA	Formatter components on page 549
CC468-67906	500-sheet paper feeder right door kit	500-sheet paper feeder on page 551
CC468-67907	ITB assembly service kit	Internal components (3 of 5) on page 531
CC468-67914	Transfer roller assembly service kit	Internal components (3 of 5) on page 531
CC483-60103	ADF assembly	ADF/scanner assembly on page 521
CC483-60107	Stapler mechanism	Internal components (4 of 5) on page 533
CC519-60107	Control-panel cable	ADF/scanner assembly on page 521
CC519-60115	Control panel assembly	ADF/scanner assembly on page 521
CC519-67901	Fuser/Fixing service kit110 v	Fuser on page 537
CC519-67902	Fuser/Fixing service kit 220 v	Fuser on page 537
CC519-67904	Hard drive, 80GB 2.5-inch SATA ROHS	Formatter components on page 549
CC519-67905	SATA hard drive cable power/data	Formatter components on page 549
CC519-67907	Fax cable	Formatter components on page 549
CC519-67909	ADF feed roller kit	ADF/scanner assembly on page 521
CC519-67914	Scanner assembly (ADF assembly and SCB PCA are *not* included)	ADF/scanner assembly on page 521
CE222-67901	500-sheet feeder replacement	500-sheet paper feeder on page 551
Q7429-60501	Stapler power supply	Internal components (4 of 5) on page 533

Table 8-27 Numerical parts list (continued)

Part number	Description	Table and page
RC2-3983-000CN	Lever, cartridge pressure front	Internal components (1 of 5) on page 527
RC2-4406-000CN	Shutter front arm	Internal components (2 of 5) on page 529
RC2-4407-000CN	Shutter rear arm	Internal components (2 of 5) on page 529
RC2-4413-000CN	Shutter	Internal components (2 of 5) on page 529
RC2-4428-000CN	Tab	Internal components (2 of 5) on page 529
RC2-4780-000CN	Seal, waste toner box	Internal components (1 of 5) on page 527
RC2-4895-000CN	Right door rear hinge	Internal components (4 of 5) on page 533
RC2-4916-000CN	Link, door stopper right	Internal components (3 of 5) on page 531
RC2-4916-000CN	Door stopper right link	Internal components (4 of 5) on page 533
RC2-5006-000CN	Cover, front inner upper	Internal components (1 of 5) on page 527
RC2-5019-000CN	Cover, right lower inner	Internal components (3 of 5) on page 531
RC2-5048-000CN	Cover, rear	External covers, panels, and doors; on page 523
RC2-5052-000CN	Cover, left	External covers, panels, and doors; on page 523
RC2-5056-000CN	Cover, right front	External covers, panels, and doors; on page 523
RC2-5057-000CN	Cover, rear right	External covers, panels, and doors; on page 523
RC2-5059-000CN	Cover, right lower	External covers, panels, and doors; on page 523
RC2-5069-000CN	Cover, left lower	Internal components (1 of 5) on page 527
RC2-5118-000CN	Interlock link	Internal components (3 of 5) on page 531
RC2-5119-000CN	Interlock link	Internal components (3 of 5) on page 531
RC2-5120-000CN	Interlock link	Internal components (3 of 5) on page 531
RC2-5121-000CN	Interlock link switch arm	Internal components (3 of 5) on page 531
RC2-5122-000CN	Interlock link	Internal components (3 of 5) on page 531

Table 8-27 Numerical parts list (continued)

Part number	Description	Table and page
RC2-5123-000CN	Interlock switch mount	Internal components (3 of 5) on page 531
RC2-5124-000CN	Switch lever	Internal components (3 of 5) on page 531
RC2-5179-000CN	Rib, Control panel	External covers, panels, and doors; on page 523
RC2-5180-000CN	Cover, control panel	External covers, panels, and doors; on page 523
RC2-5181-000CN	Cover, control panel, rear	External covers, panels, and doors; on page 523
RC2-5182-000CN	Cover, upper right	External covers, panels, and doors; on page 523
RC2-5185-000CN	Cover, rear, upper	External covers, panels, and doors; on page 523
RC2-5188-000CN	Cover, left rear	External covers, panels, and doors; on page 523
RC2-5189-000CN	Cover, right (without stapler)	External covers, panels, and doors; on page 523
RC2-5192-000CN	Cover, right (with stapler)	External covers, panels, and doors; on page 523
RC2-5194-000CN	Holder, AC	External covers, panels, and doors; on page 523
RC2-5416-000CN	Drawer connector holder (Tray 3)	Paper feeder main body on page 553
RC2-5909-000CN	Tab	Internal components (2 of 5) on page 529
RC2-5910-000CN	Shutter	Internal components (2 of 5) on page 529
RC2-5912-000CN	Cover	Internal components (2 of 5) on page 529
RC2-5913-000CN	Shaft	Internal components (3 of 5) on page 531
RC2-5934-000CN	Spring, torsion	Internal components (3 of 5) on page 531
RC2-5937-000CN	Lock, door	Internal components (1 of 5) on page 527
RC2-5938-000CN	Plate, blanking	External covers, panels, and doors; on page 523
RC2-5943-000CN	Switch arm	Internal components (4 of 5) on page 533
RC2-5951-000CN	Lever, box presence detect	Internal components (1 of 5) on page 527
RC2-5954-000CN	Lever, cartridge lock	Internal components (2 of 5) on page 529

Table 8-27 Numerical parts list (continued)

Part number	Description	Table and page
RC2-5954-000CN	Cartridge lock lever	Internal components (3 of 5) on page 531
RC2-5955-000CN	Holder, cartridge lock lever	Internal components (2 of 5) on page 529
RC2-5958-000CN	Spring, torsion	Internal components (2 of 5) on page 529
RC2-5958-000CN	Spring, torsion	Internal components (3 of 5) on page 531
RC2-5962-000CN	Cover	Internal components (2 of 5) on page 529
RC2-5970-000CN	Spring, leaf	Internal components (2 of 5) on page 529
RK2-2229-000CN	Sensor unit, Tmp/Hum sensor	Internal components (2 of 5) on page 529
RK2-2415-000CN	Stepping motor, DC (developing disengagement)	Internal components (5 of 5) on page 535
RK2-2416-000CN	Fan	Internal components (4 of 5) on page 533
RK2-2418-000CN	Fan	Internal components (2 of 5) on page 529
RK2-2501-000CN	Cable, AC (stapler power)	Internal components (4 of 5) on page 533
RK2-2506-000CN	Scanner flat cable (FFC)	Internal components (4 of 5) on page 533
RK2-2508-000CN	Scanner flat cable (FFC)	Internal components (4 of 5) on page 533
RL1-1914-000CN	Cover, front inner lower	Internal components (1 of 5) on page 527
RL1-1915-000CN	Cover, front inner lower	Internal components (1 of 5) on page 527
RL1-1923-000CN	Base	Internal components (2 of 5) on page 529
RL1-1928-000CN	Tray 1 pickup roller	Right door assembly on page 525
RL1-1941-000CN	Tray, paper delivery	External covers, panels, and doors; on page 523
RL1-1947-000CN	Power supply button	Internal components (3 of 5) on page 531
RL1-1953-000CN	Cover, upper rear	External covers, panels, and doors; on page 523
RL1-2144-000CN	Base	Internal components (2 of 5) on page 529
RM1-4953-000CN	Density detect sensor assembly	Internal components (3 of 5) on page 531

Table 8-27 Numerical parts list (continued)

Part number	Description	Table and page
RM1-4957-000CN	Right door assembly	Right door assembly on page 525
RM1-4962-000CN	250-sheet cassette	250-sheet cassette on page 539
RM1-4966-000CN	Separation roller assy	250-sheet cassette on page 539
RM1-4967-000CN	250-sheet cassette paper pickup assembly	250-sheet cassette paper pickup assembly on page 541
RM1-4968-000CN	250-sheet cassette paper pickup roller	250-sheet cassette paper pickup assembly on page 541
RM1-4969-000CN	Registration assembly	Registration assembly on page 543
RM1-4970-000CN	Paper-delivery assembly	Paper-delivery assembly on page 545
RM1-4973-000CN	Duplexing drive assembly	Internal components (5 of 5) on page 535
RM1-4974-000CN	Fusing drive assembly with motor	Internal components (5 of 5) on page 535
RM1-4975-000CN	Cassette paper pick up drive assembly with motor	Internal components (5 of 5) on page 535
RM1-4976-000CN	Lifter drive assembly	Internal components (5 of 5) on page 535
RM1-4977-000CN	Waste toner duct assembly (motor)	Internal components (1 of 5) on page 527
RM1-4979-000CN	Base assembly	Internal components (2 of 5) on page 529
RM1-4980-000CN	Lower pick up guide assembly	Internal components (3 of 5) on page 531
RM1-4984-000CN	Lower cartridge guide assembly	Internal components (2 of 5) on page 529
RM1-4988-000CN	Drum motor assembly	Internal components (5 of 5) on page 535
RM1-5033-000CN	Stapler, right cover assembly	External covers, panels, and doors; on page 523
RM1-5532-000CN	Front lock arm assembly	Internal components (3 of 5) on page 531
RM1-5533-000CN	Rear lock arm assembly	Internal components (3 of 5) on page 531
RM1-5678-000CN	DC controller PCA	PCAs on page 547
RM1-5680-000CN	High-voltage power supply lower PCA (HVPS-D)	PCAs on page 547
RM1-5681-000CN	High-voltage power supply upper PCA (HVPS-T)	PCAs on page 547
RM1-5689-000CN	Low-voltage power supply PCA(110 v)	PCAs on page 547
RM1-5690-000CN	Low-voltage power supply PCA(220 v)	PCAs on page 547

Table 8-27 Numerical parts list (continued)

Part number	Description	Table and page
RM1-5696-000CN	Waste toner detect assembly	Internal components (1 of 5) on page 527
RM1-5697-000CN	Power supply switch assembly	Internal components (3 of 5) on page 531
RM1-5700-000CN	Toner sensor holder assembly	Internal components (2 of 5) on page 529
RM1-5705-000CN	Rear pre-exposure PCA	Internal components (5 of 5) on page 535
RM1-5714-000CN	Fusing connecting cable assembly	Internal components (4 of 5) on page 533
RM1-5718-000CN	Switch cable assembly	Internal components (3 of 5) on page 531
RM1-5721-000CN	Rear cable assembly	Internal components (4 of 5) on page 533
RM1-5730-000CN	Duplexing unit cable assembly	Internal components (5 of 5) on page 535
RM1-5731-000CN	Pickup motor cable assembly	Internal components (5 of 5) on page 535
RM1-5732-000CN	Door switch assembly	Internal components (3 of 5) on page 531
RM1-5737-000CN	Multipurpose tray sensor cable assembly	Internal components (4 of 5) on page 533
RM1-5740-000CN	Sensor cable assembly	Internal components (2 of 5) on page 529
RM1-5741-000CN	Sensor cable assembly	Internal components (2 of 5) on page 529
RM1-5742-000CN	Lifter cable assembly	Internal components (1 of 5) on page 527
RM1-5746-000CN	Fan cable assembly	Internal components (2 of 5) on page 529
RM1-5749-000CN	Connecting cable assembly	Internal components (2 of 5) on page 529
RM1-5752-000CN	Motor/sensor cable assembly	Internal components (2 of 5) on page 529
RM1-6198-000CN	500-sheet cassette	500-sheet paper feeder on page 551
RM1-6998-000CN	Front cable assembly	Internal components (3 of 5) on page 531
RU6-2236-000CN	Spring, tension	Internal components (1 of 5) on page 527
RU6-2237-000CN	Spring, ground	Internal components (1 of 5) on page 527
RU6-2316-000CN	Spring, compression	Internal components (2 of 5) on page 529

Table 8-27 Numerical parts list (continued)

Part number	Description	Table and page
RU6-2318-000CN	Spring, compression	Internal components (2 of 5) on page 529
RU6-2436-000CN	Spring, tension	Internal components (2 of 5) on page 529
RU6-2568-000CN	Spring, compression	Internal components (1 of 5) on page 527
RU6-4415-000CN	Lever, shutter	Internal components (2 of 5) on page 529
VS1-7257-007CN	Drawer connector (Tray 3)	Paper feeder main body on page 553
WC4-5171-000CN	Switch	Internal components (3 of 5) on page 531
WG8-5696-000CN	Photo interrupter, TLP1243	Internal components (3 of 5) on page 531
WG8-5696-000CN	Photo interrupter, TLP1243	Internal components (5 of 5) on page 535

A Service and support

- [Hewlett-Packard limited warranty statement](#)
- [Print cartridge limited warranty statement](#)
- [HP Color LaserJet Fuser Kit Limited Warranty Statement](#)
- [End User License Agreement](#)
- [Customer self-repair warranty service](#)
- [Customer support](#)

Hewlett-Packard limited warranty statement

HP PRODUCT	DURATION OF LIMITED WARRANTY
HP Color LaserJet CM3530 Series MFP	One-year limited warranty

HP warrants to you, the end-user customer, that HP hardware and accessories will be free from defects in materials and workmanship after the date of purchase, for the period specified above. If HP receives notice of such defects during the warranty period, HP will, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or equivalent in performance to new.

HP warrants to you that HP software will not fail to execute its programming instructions after the date of purchase, for the period specified above, due to defects in material and workmanship when properly installed and used. If HP receives notice of such defects during the warranty period, HP will replace software which does not execute its programming instructions due to such defects.

HP does not warrant that the operation of HP products will be uninterrupted or error free. If HP is unable, within a reasonable time, to repair or replace any product to a condition as warranted, you will be entitled to a refund of the purchase price upon prompt return of the product.

HP products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use.

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Print cartridge limited warranty statement

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This warranty does not apply to products that (a) have been refilled, refurbished, remanufactured or tampered with in any way, (b) experience problems resulting from misuse, improper storage, or operation outside of the published environmental specifications for the printer product or (c) exhibit wear from ordinary use.

To obtain warranty service, please return the product to place of purchase (with a written description of the problem and print samples) or contact HP customer support. At HP's option, HP will either replace products that prove to be defective or refund your purchase price.

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HP Color LaserJet Fuser Kit Limited Warranty Statement

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Rev. 11/06

Customer self-repair warranty service

HP products are designed with many Customer Self Repair (CSR) parts to minimize repair time and allow for greater flexibility in performing defective parts replacement. If during the diagnosis period, HP identifies that the repair can be accomplished by the use of a CSR part, HP will ship that part directly to you for replacement. There are two categories of CSR parts: 1) Parts for which customer self repair is mandatory. If you request HP to replace these parts, you will be charged for the travel and labor costs of this service. 2) Parts for which customer self repair is optional. These parts are also designed for Customer Self Repair. If, however, you require that HP replace them for you, this may be done at no additional charge under the type of warranty service designated for your product.

Based on availability and where geography permits, CSR parts will be shipped for next business day delivery. Same-day or four-hour delivery may be offered at an additional charge where geography permits. If assistance is required, you can call the HP Technical Support Center and a technician will help you over the phone. HP specifies in the materials shipped with a replacement CSR part whether a defective part must be returned to HP. In cases where it is required to return the defective part to HP, you must ship the defective part back to HP within a defined period of time, normally five (5) business days. The defective part must be returned with the associated documentation in the provided shipping material. Failure to return the defective part may result in HP billing you for the replacement. With a customer self repair, HP will pay all shipping and part return costs and determine the courier/carrier to be used.

Customer support

Get telephone support, free during your warranty period, for your country/region Have the product name, serial number, date of purchase, and problem description ready.	Country/region phone numbers are on the flyer that was in the box with your product or at www.hp.com/support/.
Get 24-hour Internet support	www.hp.com/support/cljcm3530mfp
Get support for products used with a Macintosh computer	www.hp.com/go/macosx
Download software utilities, drivers, and electronic information	www.hp.com/go/cljcm3530mfp_software
Order additional HP service or maintenance agreements	www.hp.com/go/carepack

B   Product specifications

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Physical specifications

Table B-1 Product dimensions

Product	Height	Depth	Width	Weight
HP Color LaserJet CM3530n	358 mm (14.1 in)	491 mm (19.3 in)	514 mm (20.2 in)	47.6 kg (105.0 lb)
HP Color LaserJet CM3530dn	358 mm (14.1 in)	491 mm (19.3 in)	514 mm (20.2 in)	47.6 kg (105.0 lb)
HP Color LaserJet CM3530x	520 mm (20.5 in)	491 mm (19.3 in)	514 mm (20.2 in)	48.4 kg (106.6 lb)

Table B-2 Product dimensions, with all doors and trays fully opened

Product	Height	Depth	Width
HP Color LaserJet CM3530n	358 mm (14.1 in)	739 mm (29.1 in)	822 mm (32.4 in)
HP Color LaserJet CM3530dn	358 mm (14.1 in)	739 mm (29.1 in)	822 mm (32.4 in)
HP Color LaserJet CM3530x	520 mm (20.5 in)	739 mm (29.1 in)	822 mm (32.4 in)

Electrical specifications

WARNING! Power requirements are based on the country/region where the product is sold. Do not convert operating voltages. This can damage the product and void the product warranty.

Table B-3 Power requirements

Specification	110-volt models	220-volt models
Power requirements	115 to 127 volts (± 10%)	220 to 240 volts (± 10%)
	50/60 Hz (± 2 Hz)	50/60 Hz (± 2 Hz)
Rated current	8.5 Amps	4.5 Amps

Table B-4 Power consumption (average, in watts)[1246]

Product model	Copy/scan	Printing	Ready	Sleep 1	Sleep 2	Off
HP Color LaserJet CM3530 models	666 W	652 W	87.4 W	72.2 W	18.1 W	0.84 W

[1] Values subject to change. See www.hp.com/support/cljcm3530mfp for current information.

[2] Power numbers are the highest values measured using all standard voltages.

[3] Default time from Ready mode to Sleep 2 = 30 minutes.

[4] Heat dissipation in Ready mode = 298.3 BTU/hour.

[6] HP Color LaserJet CM3530 speed is 31 ppm Letter size.

Acoustic specifications

Table B-5 HP Color LaserJet CM3530 MFP Series[13]

Sound power level	Declared per ISO 9296
Printing	L_{WAd}= 6.8 Bels (A) [68 dB(A)]

Table B-5 HP Color LaserJet CM3530 MFP Series (continued)

Sound power level	Declared per ISO 9296
ADF copying	L_{WAd}= 7.0 Bels (A) [70 dB(A)]
Ready	L_{WAd}= 4.8 Bels (A) [48 dB(A)]
Sound pressure level - bystander position	**Declared per ISO 9296**
Printing	L_{pAm}=53 dB (A)
ADF copying	L_{pAm}=55 dB (A)
Ready	L_{pAm}=34 dB (A)

[1]   Values are based on preliminary data. See www.hp.com/support/cljcm3530mfp for current information.

[3]   Configuration tested: HP Color LaserJet CM3530 printer printing on A4-size paper in simplex mode

Environmental specifications

Environmental condition	Recommended	Storage
Temperature (product and print cartridge)	15° to 27°C (59° to 80.6°F)	0° to 35°C (32° to 95°F)
Relative humidity	20% to 60% relative humidity (RH)	10% to 90% RH
Altitude	N/A	0 meters (0 feet) to 2500 meters (8000 feet)

C   Regulatory information

- FCC regulations
- Declaration of Conformity
- Safety statements

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 FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If this equipment is not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase separation between equipment and receiver.

- Connect equipment to an outlet on a circuit different from that to which the receiver is located.

- Consult your dealer or an experienced radio/TV technician.

📝 **NOTE:** Any changes or modifications to the printer that are 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 Class B limits of Part 15 of FCC rules.

Declaration of Conformity

Declaration of Conformity

according to ISO/IEC 17050–1 and EN 17050–1, DoC#: BOISB-0802-00-rel.1.0

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 CM3530 series
Regulatory Model Number:[2]	BOISB-0802-00
	Including: CE522A — Optional 500-Sheet Paper and Heavy Media Tray
Product Options:	ALL
	Print Cartridges: CE250X, CE250A, CE251A, CE252A, CE253A

conforms to the following Product Specifications:

Safety:	IEC 60950-1:2001 / EN60950-1: 2001 + A11
	IEC 60825-1:1993 +A1 +A2 / EN 60825-1:1994 +A1 +A2 (Class 1 Laser/LED Product)
	GB4943-2001
EMC:	CISPR 22:2005 / EN 55022:2006 – Class B[1]
	EN 61000-3-2:2000 +A2
	EN 61000-3-3:1995 + A1
	EN 55024:1998 +A1 + A2
	FCC Title 47 CFR, Part 15 Class B/ ICES-003, Issue 4
	GB9254-1998, GB17625.1–2003

Supplementary Information:

The product herewith complies with the requirements of the EMC Directive 2004/108/EC and the Low Voltage Directive 2006/95/EC, and

carries the CE-Marking $C\epsilon$ accordingly.

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.

1) The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.

2) For regulatory purposes, this product is assigned a Regulatory model number. This number should not be confused with the product name or the product number(s).

Boise, Idaho , USA

December 19, 2007

For regulatory topics only:

European Contact:	Your Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE / Standards Europe, Herrenberger Straße 140, D-71034 Böblingen, Germany, (FAX: +49-7031-14-3143), http://www.hp.com/go/certificates
USA Contact:	Product Regulations Manager, Hewlett-Packard Company, PO Box 15, Mail Stop 160, Boise, Idaho 83707-0015, USA, (Phone: 208-396-6000)

Safety statements

Laser safety

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. The device 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. Since radiation emitted inside the device is completely confined within protective housings and external covers, the laser beam cannot escape during any phase of normal user operation.

WARNING!   Using controls, making adjustments, or performing procedures other than those specified in this user guide may result in exposure to hazardous radiation.

Canadian DOC regulations

Complies with Canadian EMC Class B requirements.

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

VCCI statement (Japan)

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。

Power cord statement (Japan)

製品には、同梱された電源コードをお使い下さい。
同梱された電源コードは、他の製品では使用出来ません。

EMC statement (Korea)

B급 기기	이 기기는 가정용(B급)으로 전자파적합등록을 한 기
(가정용 방송통신기기)	기로서 주로 가정에서 사용하는 것을 목적으로 하
	며, 모든 지역에서 사용할 수 있습니다.

Laser statement for Finland

Luokan 1 laserlaite

Klass 1 Laser Apparat

HP Color LaserJet CM3530, CM3530fs, 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 Color LaserJet CM3530, CM3530fs - 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 näkymättömällelasersäteilylle 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 m W Luokan 3B laser.

Substances Table (China)

有毒有害物质表

根据中国电子信息产品污染控制管理办法的要求而出台

部件名称	有毒有害物质和元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
打印引擎	X	0	X	0	0	0
复印机组件	X	0	0	0	0	0
控制面板	0	X	0	0	0	0
塑料外壳	0	0	0	0	0	0
格式化板组件	X	0	0	0	0	0
碳粉盒	X	0	0	0	0	0

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0：表示在此部件所用的所有同类材料中，所含的此有毒或有害物质均低于 SJ/T11363-2006 的限制要求。

X：表示在此部件所用的所有同类材料中，至少一种所含的此有毒或有害物质高于 SJ/T11363-2006 的限制要求。

注：引用的"环保使用期限"是根据在正常温度和湿度条件下操作使用产品而确定的。

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