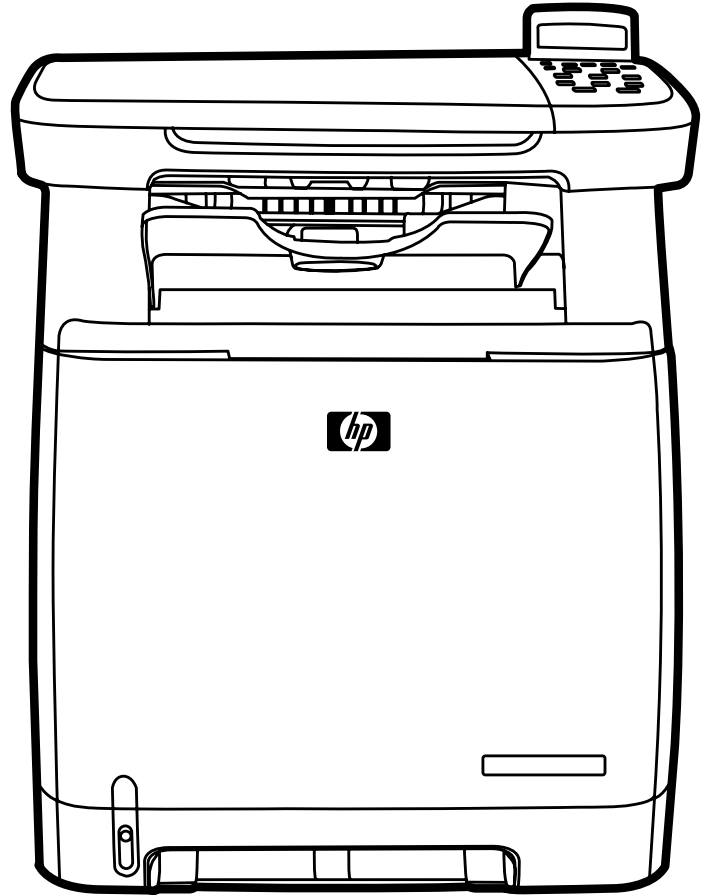


HP Color LaserJet CM1015/CM1017 MFP

Service Manual



HP Color LaserJet CM1015/CM1017 MFP

Service Manual



Copyright and License

© 2006 Copyright Hewlett-Packard Development Company, L.P.

Reproduction, adaptation, or translation without prior written permission is prohibited, except as allowed under the copyright laws.

The information contained in this document is subject to change without notice.

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Part number CB394-90930

Edition 1, 10/2006

Trademark Credits

PostScript® is a trademark of Adobe Systems Incorporated.

Microsoft® and Windows® are U.S. registered trademarks of Microsoft Corporation.

Pentium® is a registered trademark of Intel corporation or its subsidiaries in the United States and other countries.

ENERGY STAR® and the ENERGY STAR logo® are U.S. registered marks of the United States Environmental Protection Agency. Details on the proper use of the marks are explained in the "Guidelines for Proper use of the ENERGY STAR® Name and International Logo."



Table of contents

1 Product information

HP Color LaserJet CM1015/1017 MFP configurations	2
HP Color LaserJet CM1015/1017 MFP features	3
Walkaround	5
Software	8
Software and supported operating systems	8
Media specifications	9
Media supported on this MFP	9
Select print media	10
Media that can damage the printer	11
Media to avoid	11

2 Installation

Site preparation	14
Operating environment	14
Minimum system requirements	15
Requirements for PC systems	15
Requirements for Macintosh systems	15
Package contents	16
Installing optional tray 3	17
Installing memory DIMMs	18

3 Managing and maintenance

Managing supplies	24
Life expectancies of supplies	24
Check and order supplies	24
Check supply status and order using the control panel	24
Check and order supplies using HP ToolboxFX	24
Check and order supplies using HP Solution Center	24
Storing supplies	25
Replacing and recycling supplies	25
HP policy on non-HP supplies	25
Reset the MFP for non-HP supplies	25
HP anti-counterfeit supplies Web site	26
Cleaning the MFP	27
Clean the paper path using HP ToolboxFX	27
Clean the scanner glass	27
Calibrating the MFP	29
Calibrate the MFP from the front control panel.	29

Calibrate the MFP from HP ToolboxFX	29
Management tools	30
Special pages	30
Demo page	30
Configuration page	30
Supplies Status page	31
Networking page (CM1017 only)	32
Fonts pages	33
Usage page	34
Service page	34
Menu map	34
HP ToolboxFX	35
Open HP ToolboxFX	35
Status	36
Event log	36
Alerts	37
Set up status alerts	37
Set up e-mail alerts	37
Help	37
System settings	38
Device information	38
Paper handling	39
Print quality	39
Print density	39
Paper types	40
System setup	40
Service	40
Device Polling Page	40
Print Settings	40
Printing	41
PCL5c	41
PostScript	41
Memory card (HP Color LaserJet CM1017 MFP only)	41
Network settings	41
Other links found in HP ToolboxFX	42
Embedded Web server	42
Open the embedded Web server	43
Status tab	43
System tab	43
Print tab	44
Networking tab	44

4 Operational theory

Engine control system	46
Basic sequence of operation	46
Power-on sequence	47
Motors and fans	47
Main-motor failure detection (59.x errors)	48
Fan motor failure detection	48
Image formation system	49

Pickup and feed system	50
Manual feed slot pickup mechanism	51
Paper feed mechanism	52
Skew correction by the registration shutter	52
Jam detection	53
Printed circuit assembly locations	53
250-sheet tray solenoid and printed circuit locations	54
Scanner system	56
Scanner power-on sequence of events	56
Copy or scan-to-computer sequence of events	57
Service-only tools	58
General timing chart	58
Printer calibration	59

5 Removal and replacement

Overview	62
Service approach	63
Pre-service procedures	63
Post-repair tests	63
Removal and replacement procedures	65
Print cartridge replacement	66
ETB removal and replacement	69
Scanner removal and replacement	77
Face-up mechanism removal and replacement	79
Upper-cover assembly removal and replacement	81
Side cover removal and replacement	81
Fuser removal and replacement	83
Formatter removal and replacement	89
DC controller removal and replacement	91
Separation assembly removal and replacement	94
Paper-pickup roller removal and replacement	95
Control panel removal and replacement	98
Memory-card assembly removal and replacement (HP Color LaserJet CM1017 MFP only)	99
Memory-card-reader cover removal and replacement	101
Scanner lid removal and replacement	102

6 Troubleshooting

Unpack/power-on checklist	106
Control-panel messages	108
Clearing jams	118
Where to look for jams	118
Clear jams from inside the MFP	119
Clear jams from tray output area	121
Clear jams from the back of the MFP	122
Clear jams from tray 2 or optional tray 3	123
E-Label-reader guide pin damage	125
Print problems	126
Print-quality problems	126
Identifying and correcting print defects	126

Print-quality checklist	126
General print-quality issues	127
Solve issues with printing color documents	131
Media-handling problems	132
Print-media guidelines	132
Solve print-media problems	133
Performance problems	134
Scan problems	136
Copy problems	139
Memory-card problems	143
Functional tests (SERVICE ONLY)	145
Engine-test print	145
Service mode functions (SERVICE ONLY)	147
Cold reset	147
Restore defaults	147
Cleaning mode	147
USB speed	147
Less paper curl	148
Archive print	148
NVRAM initialization	148
Continuous self-test	149
Scan calibration	149
Display test	150
Control-panel button test	151
Show FW version	151
Color calibration	151
Memory cards	152
Cleaning the ETB	153
Troubleshooting tools	154
Device pages	154
Demo page	154
Configuration page	154
Supplies Status page	154
Error report	154
HP ToolboxFX	154
View HP ToolboxFX	155
Troubleshooting tab	155
Repetitive-image-defect ruler	156
Firmware and software updates	157

7 Parts and diagrams

Overview	160
Assembly locations	162
Upper Cover Assembly	170
Internal assemblies	172
Diagrams	192
Alphabetical parts list	193
Numerical parts list	199

Appendix A Specifications

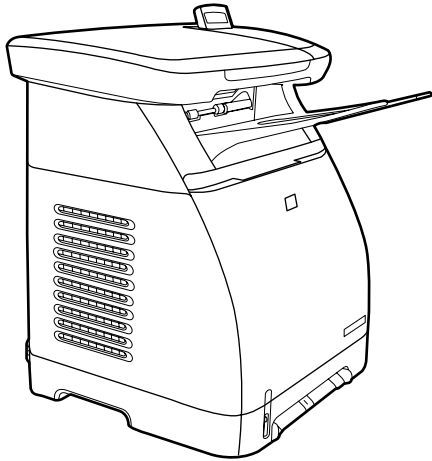
Multifunction peripheral (MFP) specifications	206
Appendix B Service and support	
Hewlett-Packard limited warranty statement	210
Print cartridge limited warranty statement	211
HP customer care	212
Availability of support and service	213
HP Care Pack™ Services and Service Agreements	213
Appendix C Regulatory information	
Introduction	216
FCC regulations	217
Environmental Product Stewardship program	218
Protecting the environment	218
Ozone production	218
Power consumption	218
HP LaserJet printing supplies	218
Disposal of waste equipment by users in private households in the European Union ...	220
Material safety data sheet	220
Declaration of conformity	221
Country/region-specific safety statements	222
Laser safety statement	222
Canadian DOC statement	222
Korean EMI statement	222
VCCI statement (Japan)	222
Japanese Power Cord Statement	223
Finnish laser statement	224
Index	225

1 Product information

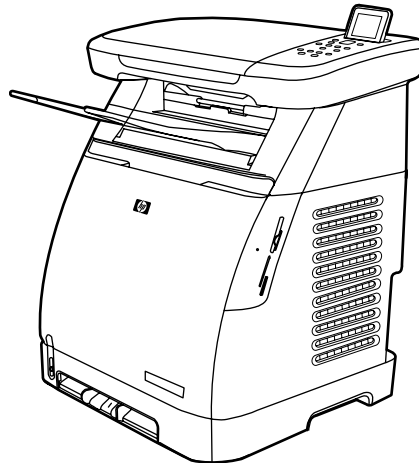
- [HP Color LaserJet CM1015/1017 MFP configurations](#)
- [HP Color LaserJet CM1015/1017 MFP features](#)
- [Walkaround](#)
- [Software](#)
- [Media specifications](#)

HP Color LaserJet CM1015/1017 MFP configurations

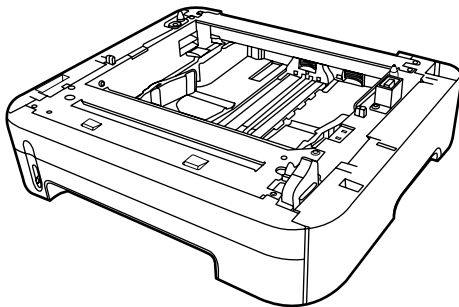
HP Color LaserJet CM1015



HP Color LaserJet CM1017



- **Speed.** Prints 8 pages per minute (ppm) in color or monochrome (black)
 - **Trays.** The MFPs include a single-sheet priority-feed slot (tray 1) and a 250-sheet universal tray (tray 2)
 - **Connectivity.** Hi-Speed USB 2.0 port
 - **Memory.** 96MB of synchronous dynamic random-access memory (SDRAM)
 - **Display.** Tilt screen two-line display
- All the CM1015 MFP features plus the following:
 - **Photo memory-card slots.** CompactFlash, Memory Stick / Memory Stick PRO, MultiMedia, Secure Digital (SD), SmartMedia, and xD cards are supported.
 - **Display.** Tilt screen graphical display
 - **Connectivity.** On-board networking



Optional 250-sheet tray 3

HP Color LaserJet CM1015/1017 MFP features

HP Color LaserJet CM1015/1017 MFP Series	
Color printing	<ul style="list-style-type: none"> Full color laser printing using the four process colors: cyan, magenta, yellow, and black (CMYK).
Excellent print quality	<ul style="list-style-type: none"> HP print cartridges with ColorSphere toner achieve high gloss for a range of bright colors. ImageREt 2400 is a system of key color laser technologies that offer excellent print quality. True 600 by 600 dots per inch (dpi) text and graphics. Adjustable settings to optimize print quality.
Ease of use	<ul style="list-style-type: none"> The few supplies are easy to install. Convenient access to MFP information and settings using the HP Solution Center and HP ToolboxFX software. Convenient access to all supplies and to the paper path through the front door. HP Photosmart Premier Adjust paper trays with one hand.
Flexible paper handling	<ul style="list-style-type: none"> Trays 1 and 2 for letterhead, envelopes, labels, transparencies, custom-sized media, postcards, HP LaserJet glossy paper, HP LaserJet Tough paper, heavy paper, and HP Laser Photo paper. A 125-sheet top output bin. Print on both sides (manually).
Printer drivers	<ul style="list-style-type: none"> HP PCL6 HP postscript® level 3 emulation <p>Includes 35 built-in HP postscript level 3 language fonts.</p>
Interface connections	<ul style="list-style-type: none"> Hi-Speed 2.0 USB port. Built-in internal print server for connecting to a 10/100Base-T network. (HP Color LaserJet CM1017 MFP only)
Energy savings	<ul style="list-style-type: none"> The MFP automatically conserves electricity by substantially reducing power consumption when it is not printing. Meets ENERGY STAR® guidelines for energy efficiency.
Economical printing	<ul style="list-style-type: none"> N-up printing (printing more than one page on a sheet) and Printing on Both Sides features save paper.
Archive printing	<p>When printing pages that are to be stored long-term, this option sets the printer to a mode that reduces toner smearing and dusting.</p> <p>The default setting is Off.</p>

HP Color LaserJet CM1015/1017 MFP Series	
Supplies	<ul style="list-style-type: none"> • A Supplies Status page with print cartridge gauges that estimate remaining supply level. Not available for non-HP supplies. • No-shake cartridge design. • Authentication for original HP print cartridges. • Easy ordering for replacement supplies.
Accessibility	<ul style="list-style-type: none"> • Online user guide compatible with text screen-readers. • All doors and covers can be opened by using one hand.
Expandability	<ul style="list-style-type: none"> • Optional tray 3. This 250-sheet universal tray prevents the need to frequently add paper to the MFP. Only one additional 250-sheet tray can be installed on the MFP. • One DIMM slot for adding memory.
Memory card slots (HP Color LaserJet CM1017 MFP only)	Supports a variety of memory cards.
Copy	<ul style="list-style-type: none"> • Provides full-color copying from letter/A4- sized scanner glass. • Control panel buttons available for color and monochromatic copying.
Scan	<ul style="list-style-type: none"> • Provides 1200 pixels per inch (ppi), 24-bit full-color scanning from letter/A4-sized scanner glass. • Scan-to Email • Scan-to Folder

Walkaround

The following figures show the locations and names of key MFP components.

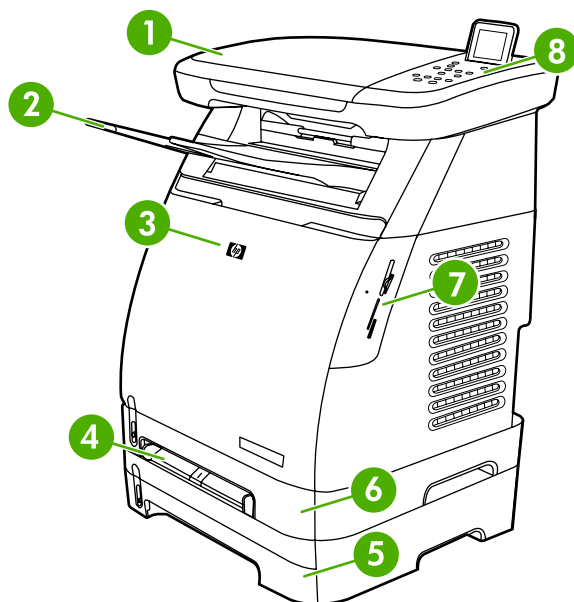


Figure 1-1 Front view (HP Color LaserJet CM1017 shown)

1	Scanner
2	Output bin
3	Front door
4	Tray 1 (single sheet priority feed slot)
5	Tray 3 (optional; 250 sheets)
6	Tray 2 (250 sheets)
7	Memory card slots (HP Color LaserJet CM1017 MFP)
8	MFP control panel

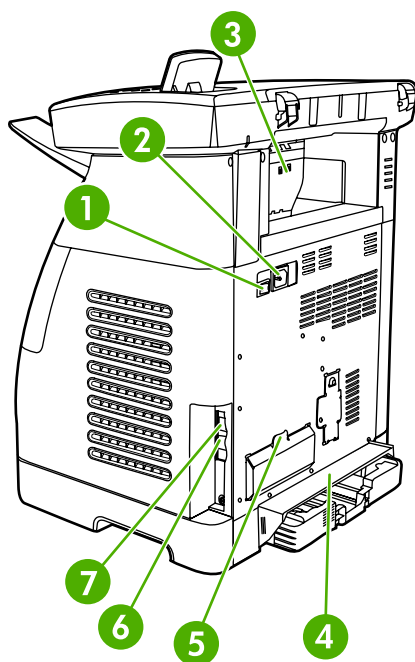


Figure 1-2 Back and side view

1	On/off switch
2	Power connection
3	Jam access door
4	Dust cover
5	DIMM access door
6	Network connection to 10/100 Base-T network (HP Color LaserJet CM1017 MFP only)
7	USB connection

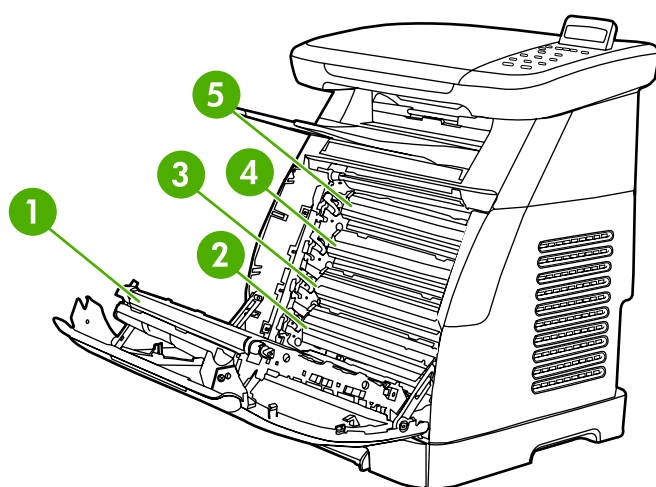


Figure 1-3 Transfer belt view (HP Color LaserJet CM1015 MFP)

1	Transfer belt (ETB)
---	---------------------

2	Magenta cartridge
3	Cyan cartridge
4	Yellow cartridge
5	Black cartridge



CAUTION Do not place anything on the transfer belt located on the inside of the front door. Doing so can damage the MFP, adversely affecting print quality.

Software

Software and supported operating systems

HP strongly recommends installing all of the software provided. Some software is not available in all languages. See the *Getting Started Guide* for installation instructions, and see the Install Notes file for the latest software information.

The most recent drivers, additional drivers, and other software are available from the Internet and other sources.

The MFP supports the following operating systems:

- Microsoft® Windows® 2000 and Windows XP (32-bit and x64-bit support)
- Macintosh OS X V10.3 and later
- Microsoft Windows Server 2003 (32-bit and 64-bit, driver only)



NOTE Download the printer driver at http://www.hp.com/support/cljCM1015_1017.

Table 1-1 HP Color LaserJet CM1015/CM1017 MFP software

Feature	Microsoft Windows Server 2003	Windows 2000 and XP	Macintosh OS X V10.3 and later
Windows Installer		✓	
HP PCL6 printer driver	✓	✓	
HP postscript level 3 emulation printer driver	✓	✓	
HP ToolboxFX software		✓	
HP imaging software (HP Color LaserJet CM1017 MFP only)		✓	
Macintosh Installer			✓
Macintosh printer drivers			✓
Scan driver	✓	✓	✓
Mass Storage Driver (HP Color LaserJet CM1017 MFP only and with USB connection)	✓	✓	✓
HP Solution Center		✓	
HP Director			✓

Media specifications

Media supported on this MFP

Before purchasing large quantities of print media, always test a sample and make sure that the print media meets the requirements specified in this user guide and in the *HP LaserJet Printer Family Print Media Guide* at <http://www.hp.com/support/ljpaperguide>.



CAUTION Using print media that does not meet HP specifications can damage the MFP, requiring repair. This repair is not covered by the Hewlett-Packard warranty or service agreements.

CAUTION Do not use HP Inkjet photo paper with this MFP.




NOTE Remember to choose the correct printer-driver settings and paper settings from the control panel or HP ToolboxFX when using special media.

This MFP accepts these types of media:

- Letter
- Legal
- A4
- Executive
- Com10 envelope
- Monarch
- C5 envelope
- DL envelope
- B5 (ISO)
- B5 envelope
- Custom (3"x5" - 8.5" x 14")
- JIS B5
- J-Postcard
- J-Double Postcard
- A5
- 8.5" x 13"
- 16K (7.75" x 10.75")
- 16K (184 x 260mm)
- 16K (195 x 270mm)

Table 1-2 Tray specifications

Media Type	Dimensions ¹	Weight	Capacity ²
Paper	Minimum: 76 x 127 mm (3 x 5 inches) Maximum: 216 x 356 mm (8.5 x 14 inches)	60 to 163 g/m ² (16 to 43 lb) Up to 176 g/m ² (47 lb) for postcards	Tray 1: Single sheet of paper Trays 2: Up to 250 sheets Optional tray 3: Up to 250 sheets <div>  NOTE Tray 3 does not accept postcards, envelopes, or other special media. </div>
HP LaserJet glossy paper and HP LaserJet Photo paper ⁴	Identical to Paper	75 to 220 g/m ² (20 to 58 lb)	Tray 1: Single sheet of HP LaserJet glossy paper or HP LaserJet Photo paper Tray 2: Up to 25 mm (0.99 inch) stack height
HP Premium Cover paper ⁴	Identical to Paper	200 g/m ² (53 lb) cover	Tray 1: Single sheet of HP Cover paper Tray 2: Up to 25 mm (0.99 inch) stack height
Transparencies and opaque film	Identical to Paper	Thickness: 0.10 to 0.13 mm (3.9 to 5.1 mils)	Tray 1: Single sheet of transparency or opaque film Tray 2: Up to 50 sheets for tray 2
Labels ³	Identical to Paper	Thickness: up to 0.23 mm (up to 9 mils)	Tray 1: Single sheet of labels Tray 2: Up to 25 mm (0.99 inch) stack height
Envelopes		Up to 90 g/m ² (up to 24 lb)	Tray 1: Single envelope Tray 2: Up to ten envelopes

¹ The MFP supports a wide range of standard and custom sizes of print media. Check the printer driver for supported sizes.

² Capacity can vary depending on media weight and thickness, and environmental conditions.

³ Smoothness: 100 to 250 (Sheffield).

⁴ Hewlett-Packard does not guarantee results when printing with other types of heavy paper.

Select print media

Consider these factors when choosing print media.

Media that can damage the printer

Do not use media that can damage the printer.

- Do not use media with staples attached.
- Do not use transparencies, labels, photo, or glossy paper designed for inkjet printers or other low temperature printers. Use only media that is specified for use with HP Color LaserJet printers.
- Do not use paper that is embossed or coated and is not designed for the temperatures of the fuser.
- Do not use letterhead paper with low temperature dyes or thermography. Preprinted forms or letterhead must use inks that are designed for the temperatures of heat of the fuser.
- Do not use any media that produces hazardous emissions, or that melts, offsets, or discolors when exposed to the temperature of the fuser.
- Do not print on the back side of media that is designed to be printed on one side only.

To order HP LaserJet printing supplies, go to <http://www.hp.com/go/ljsupplies/> in the U.S. or to <http://www.hp.com/ghp/buyonline.html/> worldwide.

Media to avoid

Media outside the printer specifications will cause a loss of print quality and increase the occurrence of jams.

- Do not use paper that is too rough. Use paper less than 250 Sheffield smoothness tested.
- Do not use paper with cutouts or perforations other than standard 3-hole punched paper.
- Do not use multi-part or multi-page forms.
- To ensure even color, do not use paper with a watermark if printing solid patterns.

2 Installation

This chapter contains information about the following topics:

- [Site preparation](#)
- [Package contents](#)
- [Installing optional tray 3](#)
- [Installing memory DIMMs](#)

Site preparation

Below are recommendations for the printer location and placement.

Operating environment

The printer must be kept in a proper location to maintain the performance level that has been set at the factory. In particular, be sure that the environment adheres to the specifications listed in this chapter.

The printer must have 2 inches of space above and around it.

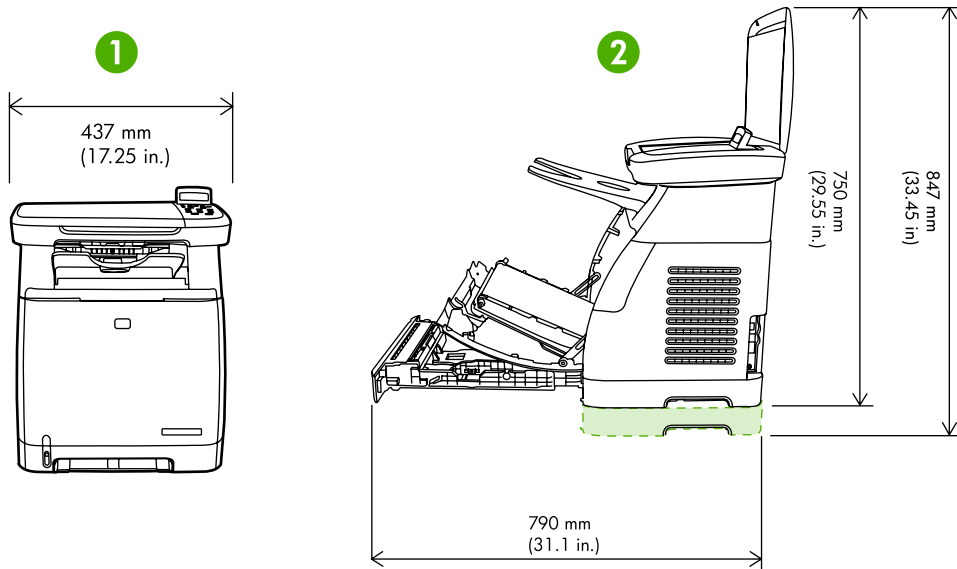


Figure 2-1 Printer dimensions

1	Front view
2	Side view

Make sure the printer is in a location that has the following:

- A well-ventilated, dust-free area
- A surface that will support up to 18 kg (40 lbs)
- A constant temperature and humidity (Do not install near water sources, humidifiers, air conditioners, refrigerators, or other major appliances.)
- A hard, level surface (not more than a 2° angle)

Make sure to keep the printer away from the following:

- Direct sunlight, dust, open flames, or water
- Direct flow of exhaust from air ventilation systems
- Magnets and devices that emit a magnetic field

- Areas subject to vibration
- Walls or other objects. There must be enough space around the printer for proper access and ventilation

Minimum system requirements

The minimum system requirements for the HP Color LaserJet CM1015/CM1017 MFP are listed below:

- 300 MB of free hard disk space
- CD-ROM drive
- USB port and USB cable

Requirements for PC systems

- Windows 2000, XP (32-bit Home and Professional), or Server 2003
- Pentium® II processor (Pentium III or greater recommended)
- 192 MB RAM

Requirements for Macintosh systems

- Mac OS X V10.3 and later
- G3 processor (G4 processor recommended)
- 128 MB RAM

Package contents

Figure 2-2 Package contents on page 16 lists the package contents for the HP Color LaserJet CM1015/CM1017 MFP.

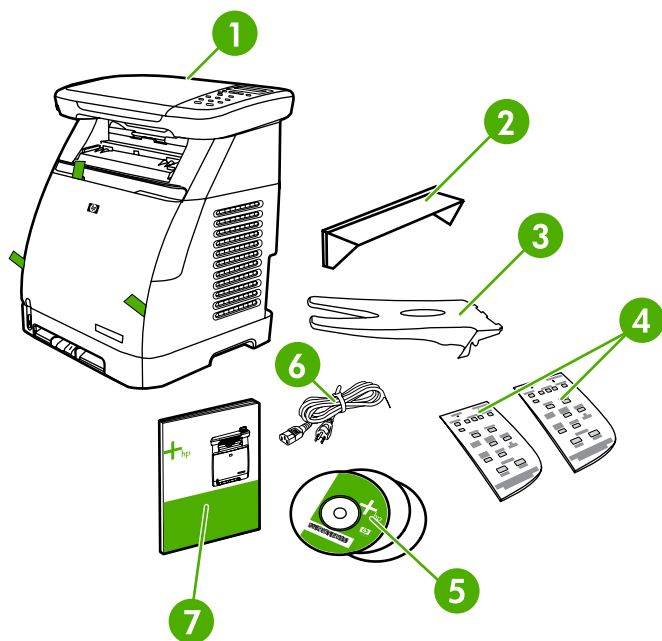
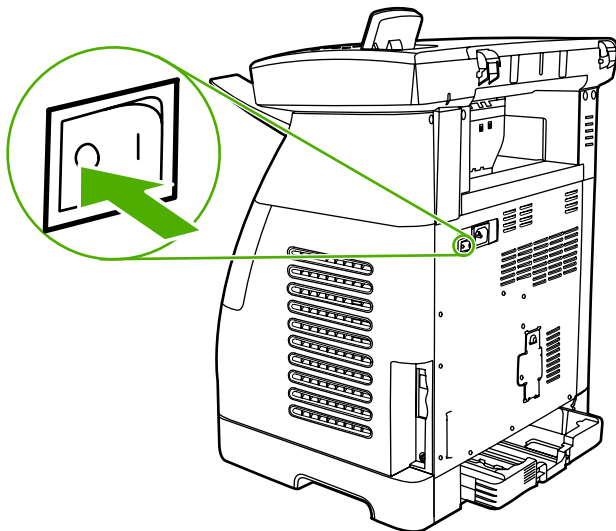


Figure 2-2 Package contents

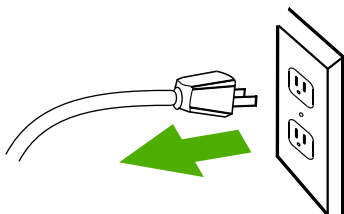
1	HP Color LaserJet CM1015/CM1017 MFP
2	Dust cover
3	Paper delivery tray
4	Control-panel overlays
5	Software and user documentation CD-ROM
6	Power cable
7	<i>Getting Started Guide</i>

Installing optional tray 3

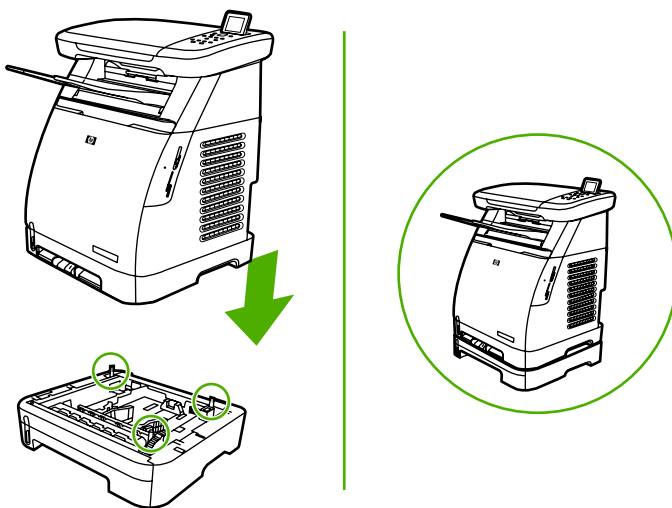
1. Turn off the power switch on the MFP.



2. Unplug the power cable.



3. Place the MFP on optional tray 3, aligning the three pegs on tray 3 with the holes on the MFP.



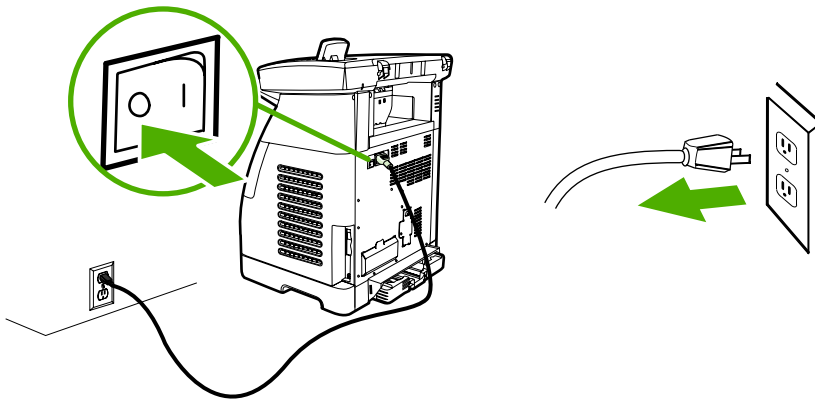
WARNING! The MFP weighs 18 kg (40 lbs). Always have another person assist you when lifting the MFP.

Installing memory DIMMs

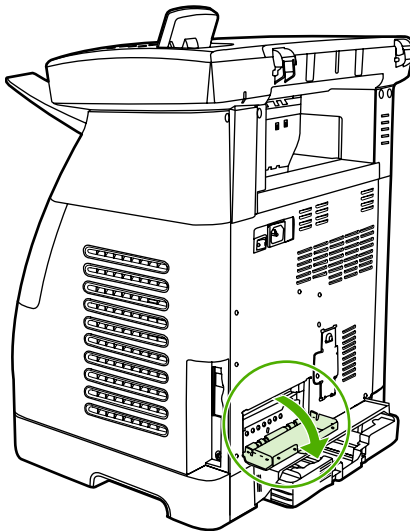
When installing more memory for the MFP, it is possible to install a DIMM to print characters for languages such as Chinese, or for the Cyrillic alphabet.

CAUTION Static electricity can damage DIMMs. When handling DIMMs, wear an antistatic wrist strap, or frequently touch the surface of the DIMM antistatic package then touch bare metal on the MFP.

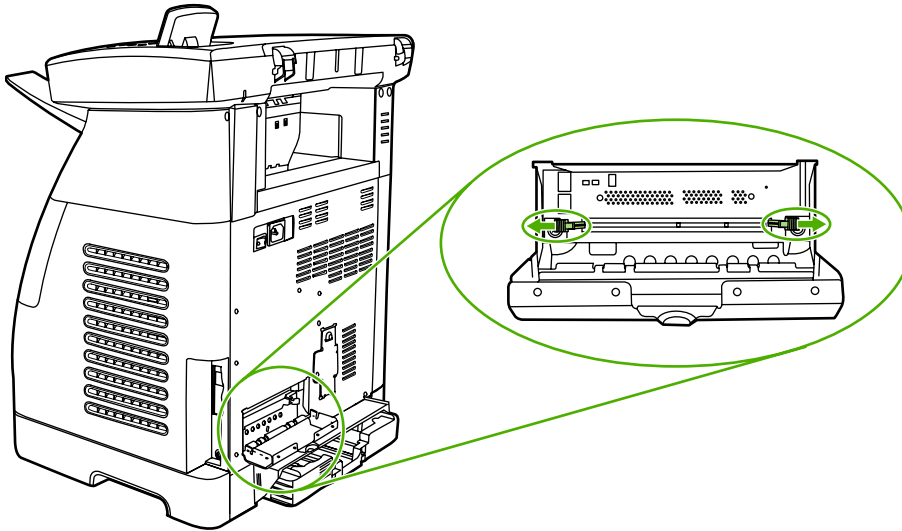
1. Print a Configuration page by pressing **OK** and **Cancel** simultaneously. (A Supplies Status may also page print.)
2. After the Configuration page prints, turn the MFP off and disconnect the power cable.



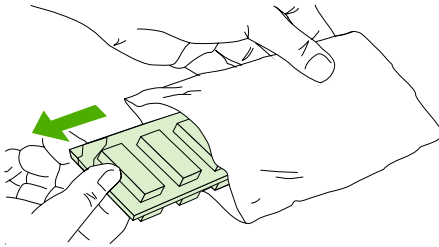
3. On the left rear side of the MFP, open the DIMM door.



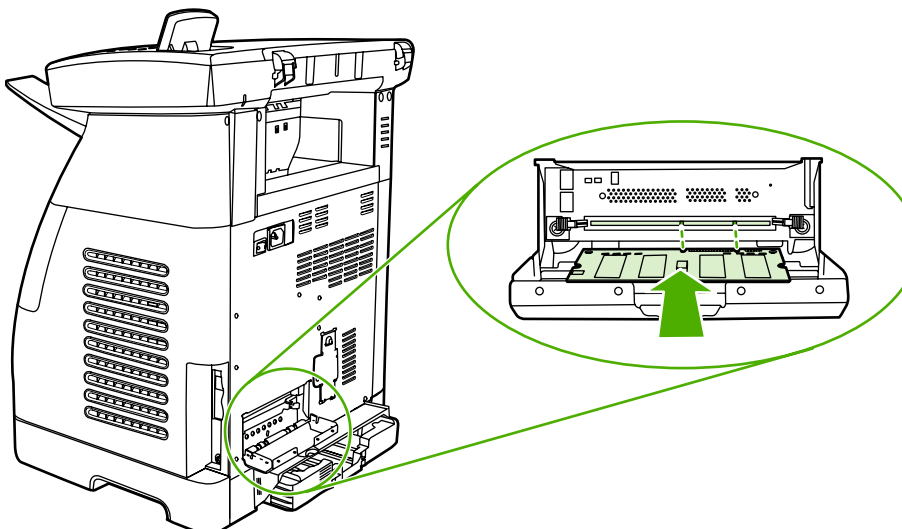
4. Release the locks on each side of the DIMM slot.



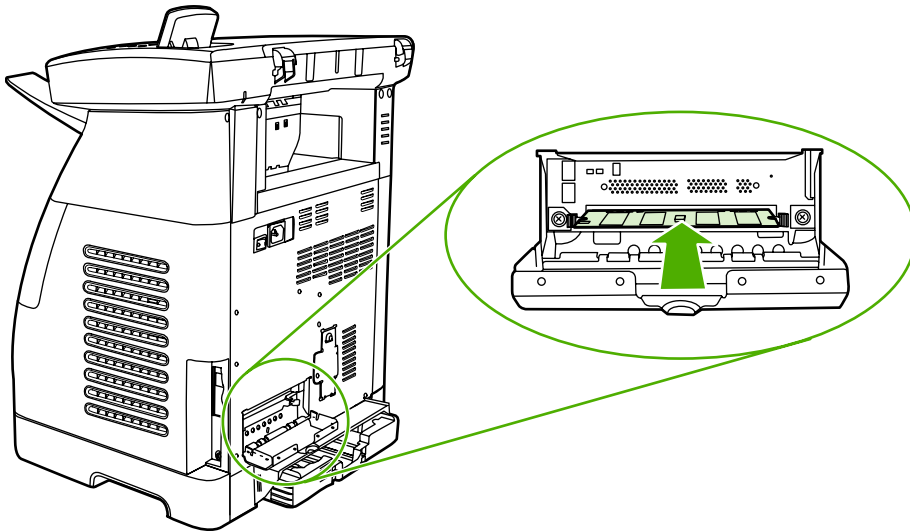
5. Remove the DIMM from the antistatic package.



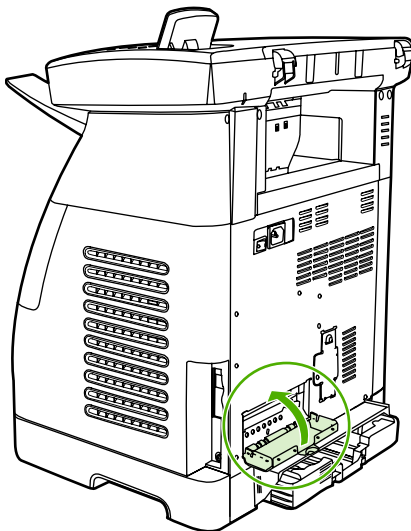
6. Holding the DIMM by the edges as shown in the illustration, align the notches on the DIMM with the DIMM slot.



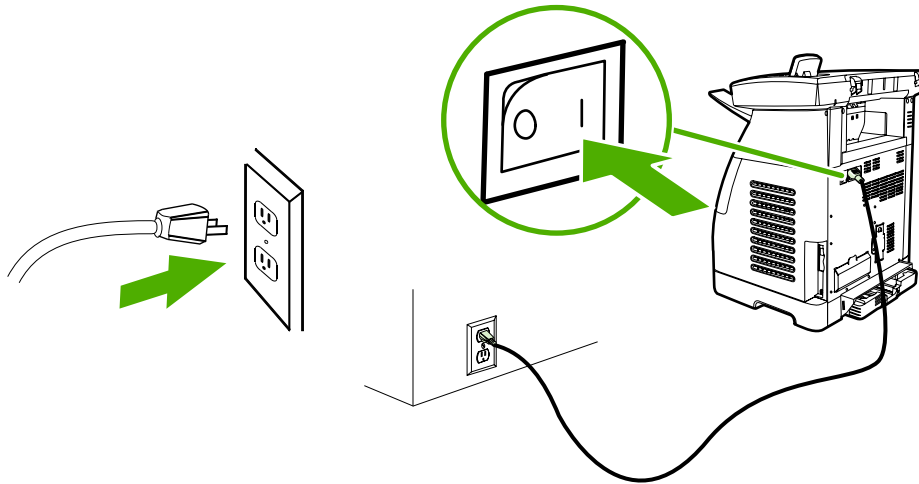
7. Firmly press the DIMM straight into the slot. Firmly close the locks on each side of the DIMM until they snap into place.



8. Close the DIMM door.



9. Reconnect the power cable and turn on the MFP.



3 Managing and maintenance

This chapter contains information about these maintenance topics:

- [Managing supplies](#)
- [Cleaning the MFP](#)
- [Calibrating the MFP](#)
- [Management tools](#)

Managing supplies

Life expectancies of supplies

The life of a print cartridge depends on the amount of toner that print jobs require. When printing text at approximately 5% coverage, a cyan, magenta, or yellow print cartridge for the HP Color LaserJet CM1015/CM1017 MFP lasts an average of 2,000 pages, and a black print cartridge lasts an average of 2,500 pages. A typical business letter has 5% coverage.

Check and order supplies

Check the supplies status from the control panel by printing a Supplies Status page, or viewing the HP ToolboxFX. Hewlett-Packard recommends that placing an order for a replacement print cartridge when the Low message for a print cartridge first displays. For typical use, the Order message indicates that approximately two weeks of life remains. When using a new, authentic HP print cartridge, it is possible to obtain the following types of supplies information:

- Amount of cartridge remaining
- Estimated number of pages remaining
- Number of pages printed
- Other supplies information



NOTE If the MFP is connected to the network, it is possible to set up HP ToolboxFX to send an e-mail notification when a print cartridge is low or is near the end of its useful life. If the MFP is directly connected to a computer, set the HP ToolboxFX to notify you when supplies are low.

Check supply status and order using the control panel

Do one of the following:

- Check the supplies status gauges on the control panel. These gauges indicate when a print cartridge is low or empty. The "?" also indicates when a non-HP print cartridge is first installed.
- To print the Supplies Status page from the MFP, select **Reports Menu**, then **Supplies Status**.

If the supplies levels are low, reorder supplies through the local HP dealer, by telephone, or online. See <http://www.hp.com/go/ljsupplies> to order online.

Check and order supplies using HP ToolboxFX

Order supplies from HP ToolboxFX by clicking the **Shop for Supplies** link in the top-right of the HP ToolboxFX window. Internet access is required to connect to the Web site.

Check and order supplies using HP Solution Center

In HP Solution Center, select the MFP. The device status page shows supplies information. To order use the HP ToolboxFX.

Storing supplies

Follow these guidelines for storing print cartridges:

- Do not remove the print cartridge from its package until it is ready for use.



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

- Store the supply in a location where the temperature is within the recommended temperature range.
- Store the supply in a horizontal position.
- Store the supply in a dark, dry location away from heat and magnetic sources.

Replacing and recycling supplies

When installing a new HP print cartridge, follow the instructions included on the new supply's box, or see the *Getting Started Guide*.

When recycling supplies:

- Place the used supply in the box in which the new supply arrived
- Complete the enclosed return label
- Send the used supply to HP for recycling

For complete information, see the recycling guide included with each new HP supply item.

HP policy on non-HP supplies

Hewlett-Packard Company cannot recommend the use of non-HP supplies, either new or remanufactured. When they are not HP products, HP cannot influence the product design or quality. Service or repair required as a result of using a non-HP supply is *not* covered under the MFP warranty.

When inserting a supply into the MFP, the MFP displays whether or not the supply is a genuine HP supply. When a genuine HP is inserted and that supply has reached the low state from another HP MFP, the MFP identifies the supply as non-HP. Simply return the supply to the original MFP to reactivate HP features and functionality.

Reset the MFP for non-HP supplies

When a non-HP print cartridge is installed, a question mark appears in the displays above the cartridge that is non-HP. To print with this supply press **OK** the first time this non-HP supply is installed. The status gauges do not indicate when this type of supply is low or empty.



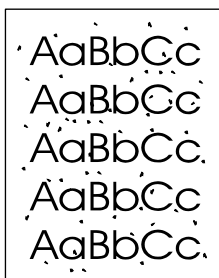
CAUTION The MFP may not stop printing with non-HP supplies. MFP damage can occur if the MFP prints with an empty print cartridge.

HP anti-counterfeit supplies Web site

Visit the HP anti-counterfeit supplies Web site at <http://www.hp.com/go/anticounterfeit> if the supplies status gauges or HP ToolboxFX indicates that the print cartridge is not an HP print cartridge and you think that it is genuine.

Cleaning the MFP

During the printing process, paper, toner and dust particles can accumulate inside the MFP. Over time, this buildup can cause print-quality problems such as toner specks or smearing. This MFP has a cleaning mode that can correct and prevent these types of problems.



Clean the paper path using HP ToolboxFX



NOTE Use the following procedure to clean the paper path using the HP ToolboxFX. To clean the engine when the computer is running an operating system that does not support HP ToolboxFX, browse to the \UTIL\CLEANPAGE directory on the MFP CD-ROM for instructions on cleaning the paper path.

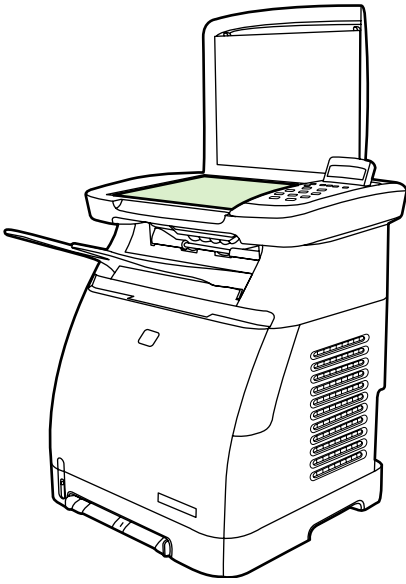
1. Ensure the MFP is turned on and in the Ready state.
2. Open HP ToolboxFX.
3. In the menu tree for the HP Color LaserJet CM1015/1017 MFP, expand the **Help** folder, and then click the **Troubleshooting** page.
4. In the **Cleaning Page** section, click **Print Page**. A cleaning page prints.
5. Insert the cleaning page in tray 1 with the printed side up.
6. In the **Cleaning Page** section, click **Clean**.
7. Follow the instructions on the control panel.

Clean the scanner glass

Dirty glass from debris may cause scan and copy image defects.

1. Turn device off, unplug the power cord from the electrical socket, and raise the lid.

2. Clean the glass by using a soft lint-free cloth that has been moistened with nonabrasive glass cleaner.



CAUTION Do not use abrasives, acetone, benzene, ammonia, ethyl alcohol, or carbon tetrachloride on any part of the device; these can damage the device. Do not place liquids directly on the glass. They might seep under it and damage the device.

3. To prevent spotting, dry the glass using a soft lint-free cloth.

Calibrating the MFP

The MFP automatically self-calibrates, but calibration settings can be manually adjusted by using the HP ToolboxFX.

Environmental differences or aging print cartridges might cause fluctuations in image density. The MFP accounts for this with image stabilization control. The MFP automatically calibrates at various times to maintain the highest level of print quality. Also request a calibration by using the HP ToolboxFX.

The MFP does not interrupt a print job to calibrate. It waits until the job is complete before calibrating or cleaning. While the MFP is calibrating, it pauses printing for the time that is required to complete the calibration.

Calibrate the MFP from the front control panel.

1. Press **Menu**.
2. Press the navigation arrows until the display reads **System setup**.
3. Press **OK**.
4. Press the navigation arrows until the display reads **Print quality**.
5. Press **OK**.
6. Press the navigation arrows until the display reads **Calibrate color**.
7. Press **OK**.
8. Press the navigation arrows until the display reads **Calibrate now**.
9. Press **OK**.
10. Press **OK** to confirm **Calibrate now**.

Calibrate the MFP from HP ToolboxFX

1. Open HP ToolboxFX in one of these ways:
 - On the desktop, double-click the **HP ToolboxFX** icon.
 - On the **Start** menu, point to **Programs**, point to **HP**, point to **HP Color LaserJet CM1015/1017 MFP Series**, and click **HP ToolboxFX**.
2. In the menu tree for the HP Color LaserJet CM1015/1017 MFP, expand the **System Settings** folder, and then click the **Print Quality** page.
3. In the Color Calibration section, click **Calibrate**.

Management tools

This printer comes with several software tools that help you monitor, troubleshoot problems with, and maintain the printer. Information about using these tools is in the following sections:

- [Special pages](#)
- [Menu map](#)
- [HP ToolboxFX](#)
- [Embedded Web server](#)

Special pages

Special pages reside within the MFP memory. These pages help diagnose and solve MFP problems.



NOTE If the MFP language was not correctly set during installation, set the language manually so that the pages print in one of the supported languages. Change the language by using the control panel or the embedded Web server.

Demo page

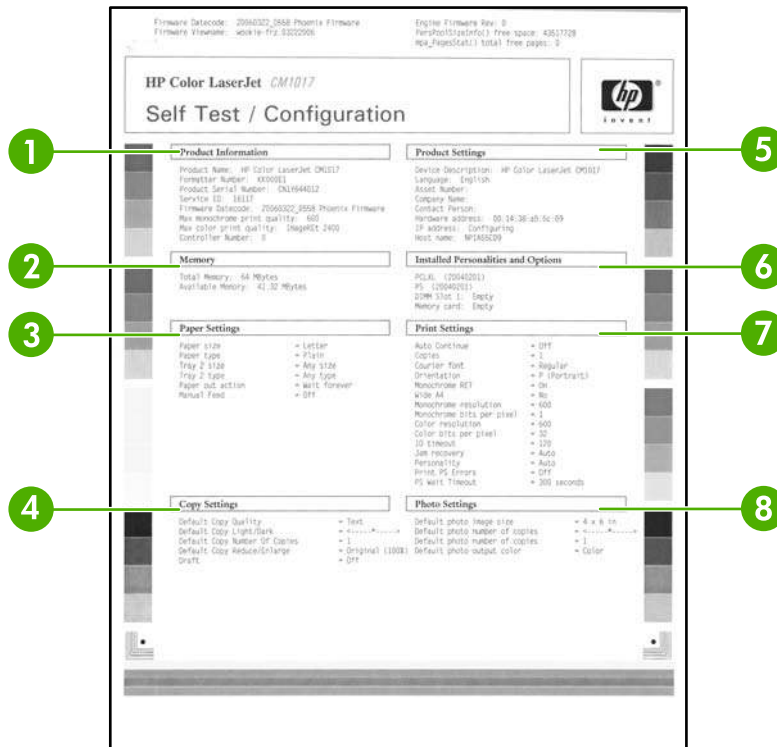
To print the Demo page, press **Scan To** and **Start Scan** simultaneously. A demo page can also be printed from the HP ToolboxFX.

Configuration page

The Configuration page lists the current MFP settings and properties. Print a Configuration page from the MFP or the HP ToolboxFX.

To print the Configuration page from the control panel

1. Press **Menu**.
2. Press the navigation arrows to select **Reports**.
3. Press **OK**.
4. Press the navigation arrows to select **Configuration report**.
5. Press **OK** to print the Configuration report page.



1. **Product Information.** Displays basic information about the MFP, such as the product name and the serial number.
2. **Memory.** Lists memory-related information, such as the total memory that is installed.
3. **Paper Settings.** Lists information about the media type for each tray and about the type settings for all the media that the MFP supports.
4. **Copy Settings.** Lists current MFP default copy information.
5. **Product Settings.** Lists information about the MFP, including the language and the company name.
6. **Installed Personalities and Options.** Contains current MFP font, DIMM memory, and memory card information.
7. **Print Settings.** Displays MFP printer settings, such as color options, copies, and jam recovery information.
8. **Photo Settings (CM1017 only).** Displays default photo information such as image size, number of copies, and output color.

Supplies Status page

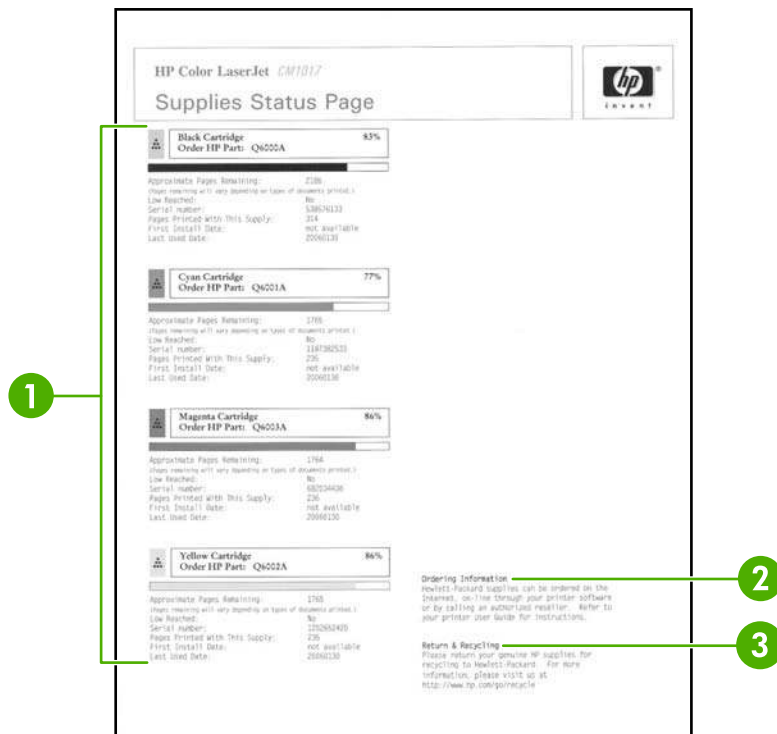
The Supplies Status page lists the remaining life of HP print cartridges. It also lists the estimated pages remaining, number of pages printed, and other supplies information. A Supplies Status page can be obtained from the MFP or the HP ToolboxFX.

To print the Supplies Status page from the control panel

1. Press **Menu**.
2. Press the navigation arrows to select the **Reports** menu.
3. Press **OK**.
4. Press the navigation arrows to select **Supplies Status** page.
5. Press **OK** to print the Supplies Status page.



NOTE Supplies information is also available through the HP ToolboxFX.



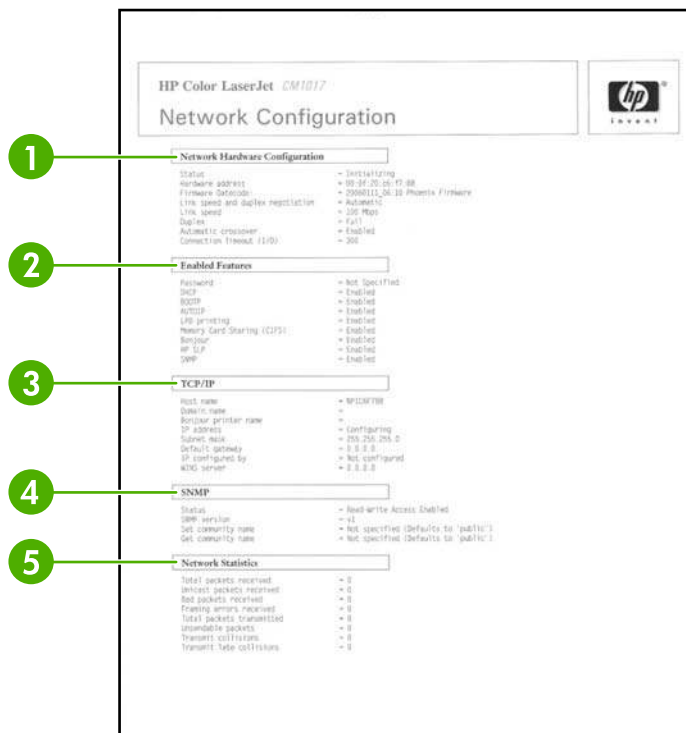
1. **Print cartridge area.** Displays a section for each of the print cartridges and provides information about HP print cartridges. This information includes the part number for each print cartridge, whether each print cartridge is low, and the life remaining for each print cartridge, which is expressed as a percentage, as a graphic, and as the estimated number of pages remaining. This information might not be provided for non-HP supplies. In some cases, if a non-HP supply is installed, an alert message displays instead.
2. **Ordering Information.** Displays basic information about how to order new HP supplies.
3. **Return & Recycling.** Displays a link to the Web site that contains information about recycling.

Networking page (CM1017 only)

The Networking report option prints a Network configuration report.

To print the Network configuration report from the control panel

1. Press **Menu**.
2. Press the navigation arrows to select the **Reports** menu.
3. Press **OK**.
4. Press the navigation arrows to select **Network report**.
5. Press **OK** to print the Network Configuration page.



1. **Network Hardware Configuration.** Displays current MFP hardware configuration such as status, hardware address, firmware datecode, link speed information, and connection timeout.
2. **Enabled Features.** Displays password, network protocol, memory card, LPD printing, Bonjour, and HP SLP settings.
3. **TCP/IP.** Displays host, domain, and printer name, and other IP information.
4. **SNMP.** Displays status, version, and set/get community names.
5. **Network Statistics.** Displays packet and collision information.

Fonts pages

The Fonts pages provide lists of the available fonts on the MFP, including HP postscript level 3 fonts, PCL fonts, and PCL6 fonts.

To print a fonts page from the control panel

1. Press **Menu**.
2. Press the navigation arrows to select the **Reports** menu.
3. Press **OK**.
4. Press the navigation arrows to select **PS font list**, **PCLXL font list**, or **PCL font list**.
5. Press **OK** to print the selected Fonts page.

Usage page

The Usage Page provides information on the number and types of pages printed by the MFP.

To print a usage page from the control panel

1. Press **Menu**.
2. Press the navigation arrows to select the **Reports** menu.
3. Press **OK**.
4. Press the navigation arrows to select the **Usage page**.
5. Press **OK** to print the Usage page.

Service page

The Service page provides information about paper types, copy settings, and miscellaneous settings.

To print a Service page from the control panel

1. Press **Menu**.
2. Press the navigation arrows to select the **Reports** menu.
3. Press **OK**.
4. Press the navigation arrows to select the **Service page**.
5. Press **OK** to print the Service page.

Menu map

The menu map lists the menu structure for each option available on the control panel.

To print a menu map

1. Press **Menu**.
2. Press the navigation arrows to select the **Reports** menu.
3. Press **OK**.
4. Press the navigation arrows to select **Menu structure**.
5. Press **OK** to print the Menu map.

HP ToolboxFX

HP ToolboxFX is a software program that performs these tasks:

- Checks the MFP status.
- Configures the MFP settings.
- Displays problem solving information.
- Displays online documentation.

You can open HP ToolboxFX when the MFP is directly connected to the computer or when it is connected to the network.



NOTE HP ToolboxFX is not supported for Windows Server 2003 or Macintosh operating systems.

NOTE Internet access is not required to open and use the HP ToolboxFX.

Open HP ToolboxFX

Open HP ToolboxFX in one of the following ways:

- In the Windows program group entry and the system tray icon, double-click HP ToolboxFX icon.
- On the Windows **Start** menu, click **Programs** (or **All Programs** in Windows XP), click **HP**, then click **HP ToolboxFX**.

The HP ToolboxFX software contains the following sections:

- [Status on page 36](#)
- [Alerts on page 37](#)
- [Help on page 37](#)
- [System settings on page 38.](#)
- [Print Settings on page 40](#)
- [Network settings on page 41](#)

Status

The HP ToolboxFX **Status** folder contains links to the following main pages:

- **Device Status.** View MFP status information. This page indicates MFP conditions such as a jam or an empty tray. When a problem is corrected with the MFP, click **Refresh** button to update the MFP status.
- **Supplies Status Page.** View detailed supplies status such as the estimated percent of toner remaining in the print cartridge and the number of pages that have been printed with the current print cartridge. This page also has links to order supplies and to find recycling information.
- **Device Configuration.** View a detailed description of the current MFP configuration, including the amount of memory installed and whether optional trays are installed.
- **Network config.** View a detailed description of the current network configuration, including the IP address and network status.
- **Print Info Pages.** Print the Configuration page and various other information pages that are available for the MFP, such as the Supplies Status page and the Demo page.
- **Event Log.** View a history of MFP errors. The most recent error is at the top of the list.

Event log

The Event log is a four-column table where the MFP events are logged for reference. The log contains codes that correspond to the error messages that appears on the MFP control-panel display. The number in the Page Count column specifies the total number of pages that the MFP had printed when the error occurred. The Event log also contains a brief description of the error.

Alerts

The HP ToolboxFX **Alerts** tab folder contains links to the following main pages:

- **Set Up Status Alerts.** Set up the MFP to send pop-up alerts for certain events, such as low toner levels.
- **Set Up Email Alerts.** Set up the MFP to send e-mail alert messages for certain events, such as low toner levels.

Set up status alerts

Use HP ToolboxFX to set up the MFP so that it issues pop-up alerts to the computer when certain events occur. Events that trigger alerts include jams, low levels of toner in HP print cartridges, non-HP print cartridge in use, empty input trays, and specific error messages.

Select the pop-up format, the system tray icon format, the desktop format, or all three for the alerts. The pop-up alerts only appear when the MFP is printing from the computer on which you set up the alerts.



NOTE Click **Apply** to make the changes take effect.

Set up e-mail alerts

Use HP ToolboxFX to configure a maximum of two e-mail addresses to receive alerts when certain events occur. It is possible to specify different events for each e-mail address. Enter the information for the e-mail server that will send out the e-mail alert messages for the MFP.



NOTE Click **Apply** to make the changes take effect.

Help

The HP ToolboxFX **Help** folder contains links to the following main pages:

- **Troubleshooting.** Print troubleshooting pages, clean the MFP, and display Microsoft Office Basic Colors.
- **How Do I.** View the How Do I? Help.
- **Animated Demonstrations**
- **User Guide.** View information about the MFP usage, warranty, specifications, and support. The user guide is available in both HTML and PDF format.

System settings

The HP ToolboxFX **System Settings** folder contains links to the following main pages:

- **Device information.** View information about the MFP, such as the description and a contact person.
- **Paper handling.** Change the MFP paper-handling settings, such as default paper size and default paper type.
- **Print quality.** Change the MFP print-quality settings.
- **Print density.** Change the print density settings, such as contrast, highlights, midtones, and shadows.
- **Paper types.** Change the MFP mode settings for each media type, such as letterhead, prepunched, or glossy paper.
- **System Setup.** Change the MFP system settings, such as MFP language and jam recovery.
- **Service.** Gain access to various procedures required to maintain the MFP.
- **Device Polling.** The HP ToolboxFX periodically communicates with your device to determine device status and enable features.
- **Save and restore settings.** Save the current MFP settings to a file on the computer. Use this file to load the same settings onto another printer or MFP to restore these settings to this MFP at a later time.
- **Password.** Set a password for the MFP. If set, the password is required to change any Network Settings configuration items.

Device information

Save the HP ToolboxFX Device information for future reference about the MFP. The information that is typed in these fields appears on the Configuration page. It is possible to type any character in each of these fields.



NOTE Click **Apply** to make the changes take effect.

Paper handling

Use the HP ToolboxFX paper-handling options to configure the default settings. These are the same options that are available on the **System setup** and **Paper setup** menus on the control panel.

Three options accommodate handling print jobs when the product is out of media:

- Select **Wait for paper to be loaded**.
- Select **Cancel** from the **Paper out action** drop-down list to cancel the print job.
- Select **Override** from the **Paper out time** drop-down list to send the print job to another paper tray.

The **Paper out time** field specifies how long the MFP waits before acting on your selections. It is possible to specify from 0 to 3600 seconds.



NOTE Click **Apply** to make the changes take effect.

Print quality

Use the HP ToolboxFX print-quality options to improve the print job appearance. These same options are available on the **System setup** and **Print quality** menus on the control panel.

These options control print quality.

- Color Calibration.
 - Power On Calibration
 - Calibration Timing
 - Calibrate Now
- Grayscale Printing.

Grayscale printing options	Description
Resolution	Select 600 resolution for average print jobs and Fast Res 1200 for higher-quality print jobs. Select ProRes 1200 for the highest-quality print job, but a longer printing time.
REt	Choose REt which HP provides for improved print quality.



NOTE Click **Apply** to make the changes take effect.

Print density

The print density settings control making fine adjustments to the density (amount) of cyan, magenta, yellow, and black toner in images, pages, and documents.

Print density settings	Description
Contrasts	Contrast is the density difference between light (highlight) and dark (shadow) colors. To increase the difference

Print density settings	Description
	between light and dark colors (equivalent to a negative highlight adjustment and a positive shadow adjustment), use a positive contrast setting. To decrease the difference between light and dark colors (equivalent to a positive highlight adjustment and a negative shadow adjustment), use a negative contrast setting.
Highlights	Highlight colors are colors near white. To make highlight colors darker, use a positive highlight setting, and to make highlight colors lighter use a negative highlight setting. This adjustment does not affect midtone or shadow colors.
Midtones	Midtone colors are about halfway between white and solid density. To make midtone colors darker, use a positive midtone setting, and to make midtone colors lighter use a negative highlight setting. This adjustment does not affect highlight or shadow colors.
Shadows	Shadow colors are colors near solid density. To make shadow colors darker, use a positive shadow setting, and to make shadow colors lighter use a negative shadow setting. This adjustment does not affect highlight or midtone colors.

Paper types

Use these HP ToolboxFX **Paper types** options to configure print modes that correspond to the various media types. When selecting **Restore modes**, all of the modes are reset to the factory settings.



NOTE Click **Apply** to make the changes take effect.

System setup

Use the HP ToolboxFX system settings options to configure miscellaneous print settings. These settings are not available from the control panel.



NOTE Click **Apply** to make the changes take effect.

Service

During the printing process, paper, toner, and dust particles can accumulate inside the MFP. Over time, this buildup can cause print-quality problems such as toner specks or smearing. HP ToolboxFX provides an easy method for cleaning the paper path.

Device Polling Page

The HP ToolboxFX periodically communicates with your device to determine device status and enable features. Use the Polling Page to turn off pop-up alerts and the **Scan To** and **Start Scan** buttons located on the device.

Print Settings

The HP ToolboxFX Print Settings folder contains links to the following main pages:

Printing

Use the HP ToolboxFX printing settings options to configure the settings for all print functions. These are the same options that are available on the **Print settings** menu on the control panel.



NOTE Click **Apply** to make the changes take effect.

PCL5c

Configure these PCL5c settings:

- Font number
- Font pitch
- Font point size
- Symbol set
- Append CR to LF
- Form length

PostScript

Use the PostScript option when using the PostScript print personality. When the **Print PostScript error** option is turned on, the PostScript error page automatically prints when PostScript errors occur.



NOTE Click **Apply** to make the changes take effect.

Memory card (HP Color LaserJet CM1017 MFP only)

Use the three HP ToolboxFX memory card options to configure print settings when using memory cards.

- **Enable memory cards.** Enable or disable memory-card functionality.
- **Photo image size.** Select the size photos to print from the drop-down list.
- **Photo number of copies.** Type the number of copies from 0 to 99 to print for each image.
- **Photo output color.** Select either **Color** or **Monochrome** from the drop-down list.

Click **Apply** to save the settings.

Network settings

The network administrator can use the HP ToolboxFX **Network Settings** folder to control the network-related MFP settings when it is connected to an IP-based network.

The settings are:

- IP Configuration
- Advanced

- SNMP
- Network Summary



NOTE For more information about network settings, see the *HP Color LaserJet CM1015/CM1017 MFP User Guide*.

Other links found in HP ToolboxFX

Internet access is required to use any of these links.

- **HP Instant Support™.** Connects to the HP Web site to help find solutions. This service analyzes the MFP error log and configuration information to provide diagnostic and support information specific to the MFP.
- **Product Registration.** Click to connect with the HP Web site to register the product.
- **Product Support.** Connects to the support site for the HP Color LaserJet CM1015/CM1017 MFP to search for help regarding general topics.

Embedded Web server

The embedded Web server displays MFP and network status and manages printing functions from the computer instead of the MFP control panel. The embedded Web server allows you to perform the following actions:

- View MFP status information.
- Set the type of paper loaded in each tray.
- Determine the remaining life on all supplies and order new ones.
- View and change tray configurations.
- View and change MFP settings.
- View and print internal information pages.
- View and change network configuration.

When the MFP is connected to the network, the embedded Web server is automatically available. Access the embedded Web server from any supported browser.

The embedded Web server supports these browsers for Windows:

Windows	Macintosh
Microsoft Internet Explorer 6.0 and later	Safari 1.2 or later
Netscape 7.0 or later	Netscape 7.0 or later
Opera 7.0 or later	Opera 7.0 or later
Firefox 1.0 or later	Firefox 1.0 or later
Mozilla 1.6 or later	Mozilla 1.6 or later

The embedded Web server works when the MFP is connected to an IP-based network. The embedded Web server does not support IPX-based or AppleTalk MFP connections. Internet access is not required to open and use the embedded Web server.

Open the embedded Web server

To open the embedded Web server, open a supported Web browser and type the device IP address in the address/URL field. (To find the IP address, print a Configuration page.)



NOTE If there is no access to the embedded Web server using the IP address, try using the host name.

NOTE After the URL is open, bookmark it for easy return.

The embedded Web server has four tabs that contain MFP settings and information:

- **Status** tab
- **System** tab
- **Print** tab
- **Networking** tab

Status tab

The **Status** tab consists of the following pages:

- **Device Status.** Displays the remaining life of HP supplies. Zero percent (0%) indicates that a supply is empty.
- **Supplies Status.** Displays the remaining life of HP supplies. , along with supplies serial numbers and usage information. To order new supplies, click **Order Supplies** in the top-right portion of the page. Internet access is required to visit any Web site.
- **Device Configuration.** Displays the product information found on the MFP Configuration page, such as page counts, print settings, and paper options.
- **Network Summary.** Displays network hardware configuration, enabled network features, TCP/IP settings, and other network-related information.
- **Print Info Pages.** Provides a remote way to print a PCL font list, PCL6 font list, PS font list, or Supplies page.
- **Event Log.** Displays the MFP event log.

System tab

This tab allows MFP configuration from a computer. The **System** tab can be password protected. If this MFP is networked, always consult with the MFP administrator before changing settings on this tab.

The **System** tab contains these pages:

- **Device Information.** Configure device naming and ownership information from this page.
- **Paper Handling.** Configure paper handling settings from this page.

- **Print Quality.** Configure color calibration and optimize settings.
- **Print Density.** Configure print density settings including contrast, highlights, midtones, and shadows.
- **Paper Types.** Configure paper types
- **System Setup.** Configure the jam recovery, auto continue, I/O timeout, cartridge-low threshold, and MFP language settings.

Print tab

This tab allows print configuration from a computer.

The **Print** tab contains these pages:

- **Printing.** Configure default print settings.
- **PCL5c.** Configure PCL5c print settings.
- **PostScript.** Configure whether PostScript errors are printed.
- **Memory Card** (HP Color LaserJet CM1017 only). Configure memory-card defaults.

Networking tab

This tab allows the network administrator to control MFP network-related settings when the MFP is connected to an IP-based network.

- **IP Configuration.** Configure IP settings.
- **Advanced.** Enable network features such as SLP Config, DHCP, BOOTP, and AutoIP.
- **Bonjour.** Enable Bonjour.
- **SNMP.** Set SNMP protocols.
- **Network Summary.** Displays network hardware configuration, enabled network features, TCP/IP settings, and other network-related information.
- **Password.** Set or change the administrator password.

4 Operational theory

This chapter contains information about the following topics:

- [Engine control system](#)
- [Image formation system](#)
- [Pickup and feed system](#)
- [Scanner system](#)
- [Service-only tools](#)

Engine control system

Basic sequence of operation

The operational sequence of the printer is controlled by the microcomputer on the DC controller printed circuit assembly (PCA). The purposes of each period, from power-on until the main motor stops after the completion of printing, are listed below.

Table 4-1 Basic operational sequence

	Period	Purpose	Remarks
WAIT (wait period)	From power-on until the end of the main motor initial drive.	To clear the drum surface potential and to clean the ETB.	Detects whether or not the print cartridge is installed.
STBY (standby period)	From the end of WAIT or LSTR until the input of print command from the formatter. Or, from the end of LSTR until power-off.	To keep the printer ready to print.	
INTR (initial rotation period)	From the input of print command from the formatter until the pick-up solenoid is turned on.	To stabilize the photosensitive drum sensitivity for print preparation.	
PRINT (print period)	From the end of INTR until the developing high-voltage is off.	To form the image on the photosensitive drum based on the VIDEO signals input from the formatter, and to transfer the toner image onto paper.	
LSTR (last rotation period)	From the developing high-voltage off until the main motor stops rotating.	To deliver the last page completely. Also used to clean the ETB.	The printer enters INTR after the end of LSTR, when the print command is input from the formatter.

The engine control system coordinates all printer functions. It drives the laser/scanner system, the image formation system, and the pickup and feed system. The engine control system contains the following components:

- DC controller PCA
- Low-voltage power supply unit
- High-voltage power supply PCA

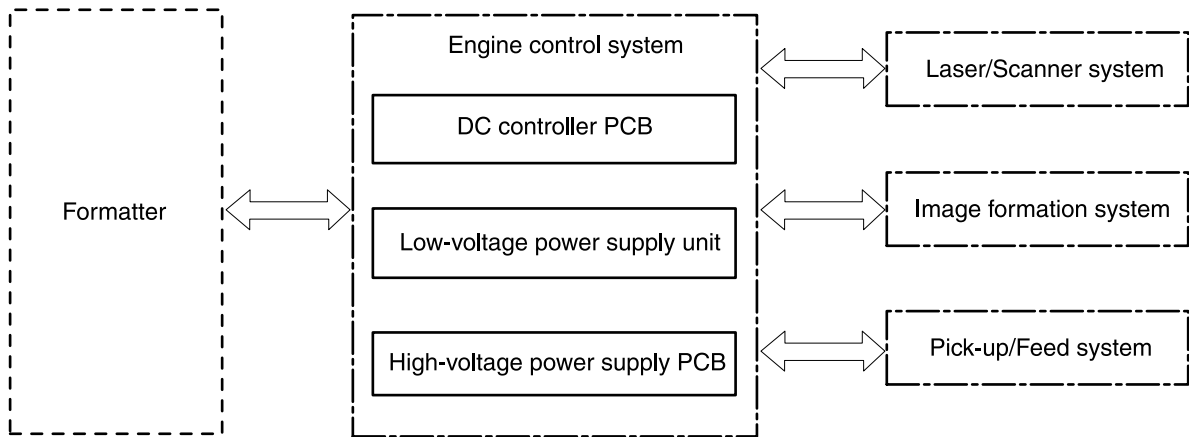


Figure 4-1 Engine control system

Power-on sequence

The power-on sequence is for the purpose of the printer initialization and checking for possible malfunctions.

The following is the sequence from when the printer is turned on until it enters STBY mode.

1. Power on
2. Central processing unit (CPU) initialization on the DC controller
3. ASIC initialization on the formatter
4. Video interface communication start, scanner initialization and calibration
5. Residual paper check by each sensor signaling paper presence
6. Initial drive for main motor, pickup motor, and fuser/delivery motor
7. Fuser heater initial drive by controlling fuser temperature targeting for 100°C
8. Initial drive for laser scanner motor
9. Failure/Abnormality check
 - Detect scanner failure
 - Fuser failure
 - Door open during the above periods
10. Communication with memory tag
11. Cartridge presence detection

Motors and fans

The DC controller PCA controls four motors.

The specifications of each motor are listed in the following table.

Table 4-2 Motor specifications

Name		Purpose	Type	Direction of rotation	Failure detection
Motor	Main motor (M1)	Drive ETB belt, photosensitive drum and developing cylinder	DC motor	CW	Yes
	Fuser/delivery motor (M2)	Drive fuser pressure roller, delivery roller and automatic release of fuser pressure	Stepping motor	CW/CCW	No
	Pickup motor (M3)	Drive pickup roller and registration roller	Stepping motor	CW	No
	Fan (FM1)	Circulate air around cartridge	DC motor	—	Yes

Main-motor failure detection (59.x errors)

The DC controller CPU stops the printer and notifies the formatter of the error status when it detects the following motor-failure conditions:

- **Main motor startup abnormality:** The motor does not get to the target rotation speed within a specified time.
- **Main motor rotation abnormality:** After the target rotation speed is achieved, this speed is not maintained.

Fan motor failure detection

The CPU detects a fan-motor failure and notifies the formatter when it encounters the following condition: The FAN LOCK signal (FANLCK) is “H” for approximately 10 seconds or longer during fan motor rotation.

Image formation system

The image-formation system, which forms a toner image on media, consists of several interdependent systems:

- Electrostatic latent-image formation
- Developing
- Transfer
- Fuser
- Drum cleaning

The MFP includes four print cartridges that contain the toner that is used to create the image on the media. Toner is applied in the following order, using only the colors necessary for a specific image: magenta (M), cyan (C), yellow (Y), and black (Bk).

The following figure illustrates the image formation system.

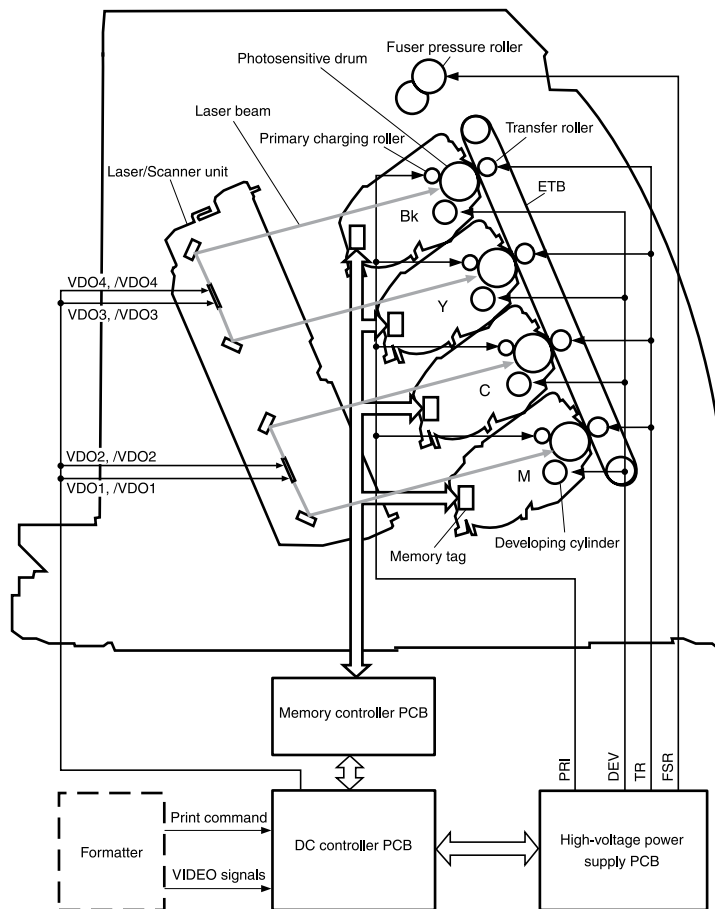


Figure 4-2 Image formation system

Pickup and feed system

The pickup and feed system, which picks up and feeds paper, consists of the various feed rollers. This printer has two pickup sources (the cassette and the single-sheet priority feed slot) and one delivery source (the face-up tray). The following components are part of the pickup and feed system:

- Manual feed slot paper sensor (SR3): detects the presence of paper in the single-sheet priority feed slot
- Cassette paper sensor (SR2): detects the presence of paper in the cassette
- DC controller controls the following to drive each feed roller:
 - Main motor (M1)
 - Fuser/delivery motor (M2)
 - Pickup motor (M3)
 - Solenoid (SL1)
 - Solenoid (SL2)
 - Solenoid (SL3)
- Photo sensors:
 - SR1, SR4, and SR5 on the paper transport path detect the arrival and passage of paper
 - SR9 detects the fuser pressure roller alienation in the fuser
 - SR8 detects the paper width

The figure below illustrates the motors, solenoids, and sensors.



NOTE There is a short pause before the paper is picked up.

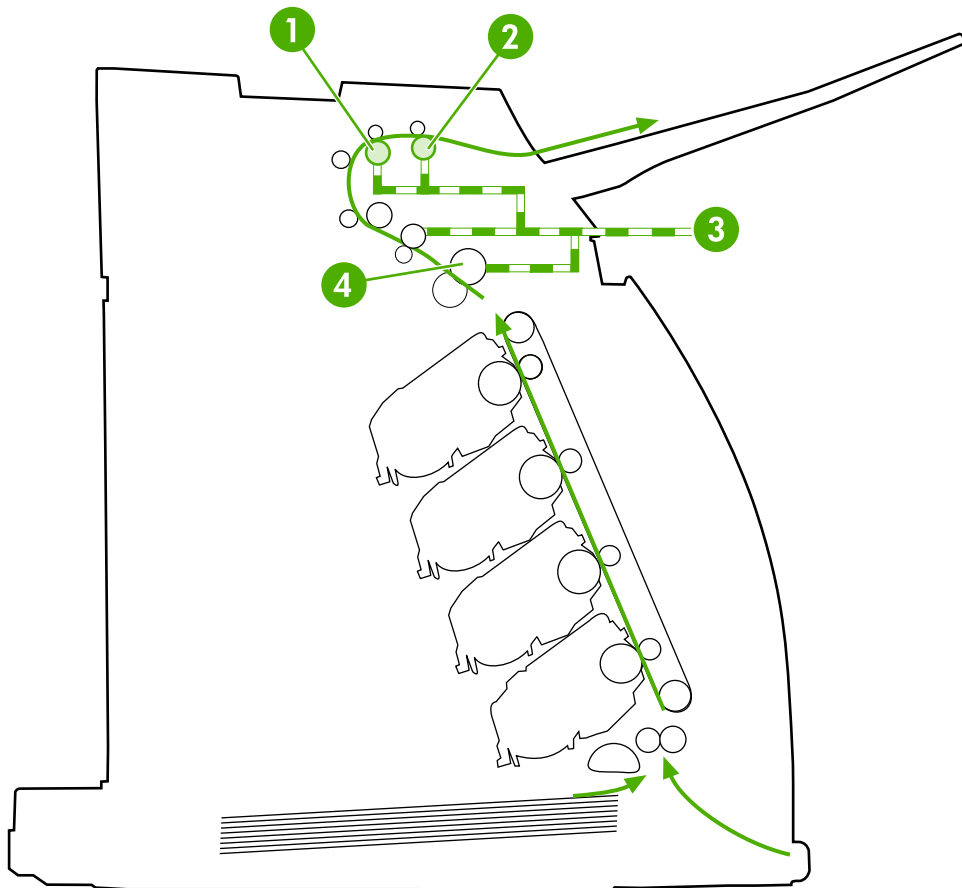


Figure 4-3 Paper pickup and feed system

1	Face-up delivery roller #1
2	Face-up delivery roller #2
3	Fusing/delivery motor
4	Fusing pressure roller

Manual feed slot pickup mechanism

This mechanism picks up one sheet of paper only that is inserted into the single-sheet priority feed slot and then into the printer. This printer does not have a pickup roller in the single-sheet priority feed slot. Instead of a pickup roller, the registration roller picks up paper. The presence of paper in the single-sheet priority feed slot is detected by the single-sheet priority feed slot paper sensor (SR3). The following is the operational sequence of the single-sheet priority feed slot pickup.

1. If paper is set into the single-sheet priority feed slot during STBY mode, the single-sheet priority feed slot paper sensor (SR3) detects it.
2. When the paper is detected, the DC controller drives the pickup motor (M3) for 5 seconds. The paper is fed approximately 5 mm (0.2 inch) and is then caught by the registration roller.
3. After the above operational sequence, the paper is fed by the drive of the registration roller.

Paper feed mechanism

This mechanism feeds one sheet of picked-up paper to the fuser. There is a paper length sensor in the paper transport path to prevent temperature rise at the end of the fuser. It detects paper lengths shorter than 190 mm (7.5 inches). The following is the operational sequence of paper feed.

1. Paper skew is corrected by the registration shutter when the paper is fed into the printer.
2. Toner is transferred to the paper from the photosensitive drum and then the paper is fed to the fuser/delivery stage.

Skew correction by the registration shutter

If the paper fed into the printer is skewed, it will be adjusted when it hits the registration shutter.

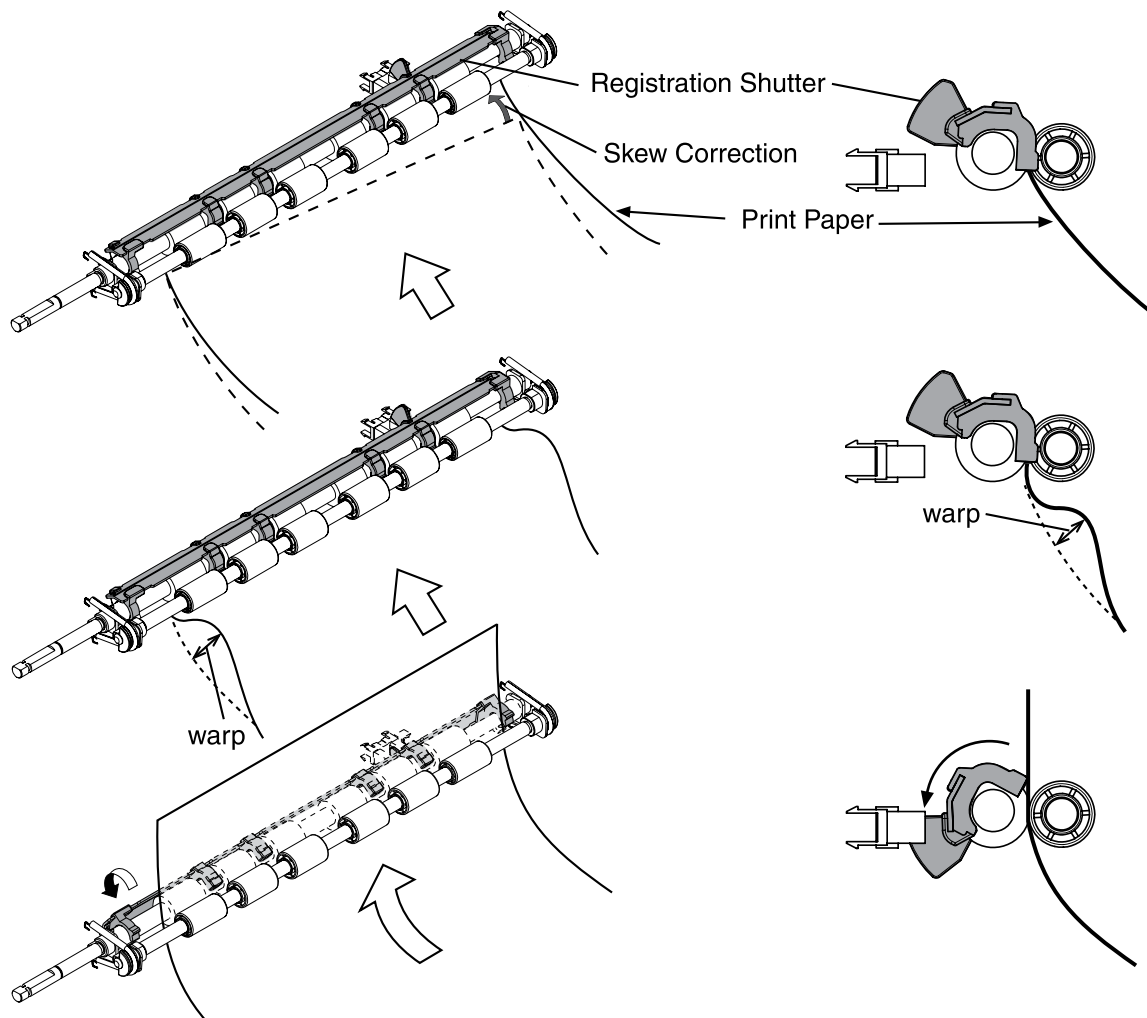


Figure 4-4 Skew correction

Jam detection

This printer is provided with the following paper detection sensors to detect the presence of paper and whether or not the paper feed is operating normally.

- Registration paper sensor (SR1)
- Pre-fuser paper sensor (SR5)
- Fuser delivery paper sensor (SR4)

The CPU on the DC controller determines a paper jam by checking whether or not paper is present at the sensor at the check timing. The check timing is stored in the memory of the CPU. If the CPU determines a jam, it stops the print operation and notifies the formatter of a jam occurrence.

Printed circuit assembly locations

The following illustration shows the locations of the printed circuit assemblies.

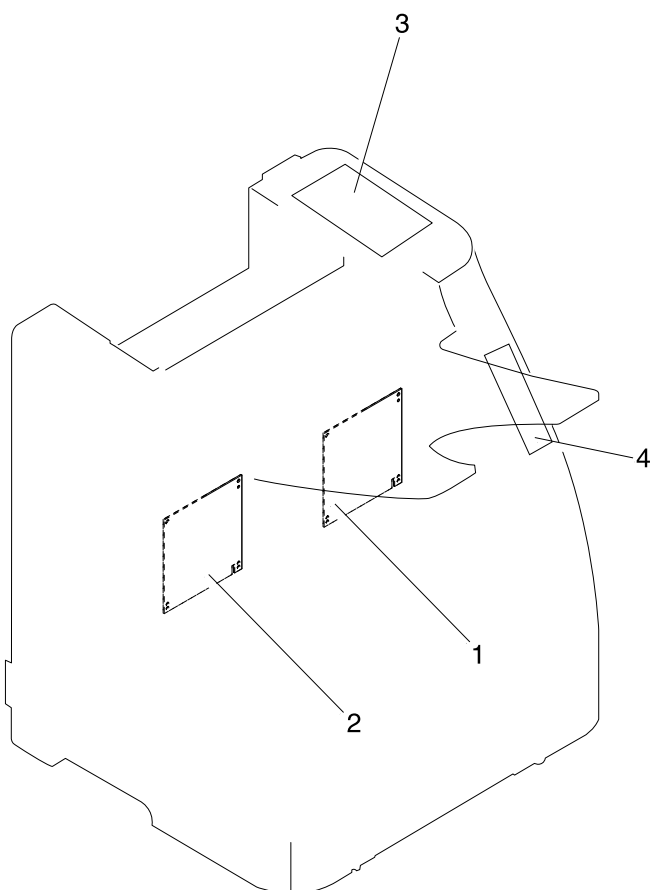


Figure 4-5 Location of printed circuit assemblies

1	Formatter PCA
2	DC controller PCA
3	Control-panel PCA
4	Memory-card PCA

250-sheet tray solenoid and printed circuit locations

The following illustration shows the locations of the 250-sheet tray solenoid and printed circuit assembly.

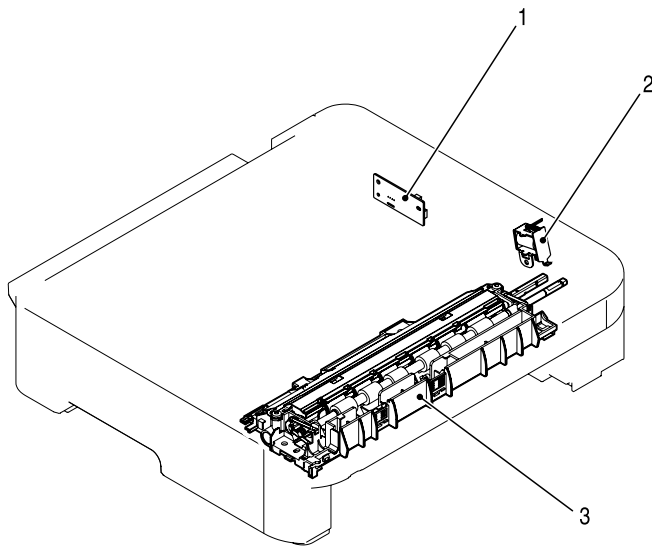


Figure 4-6 Location of 250-sheet tray solenoid and printed circuit assembly

1	Paper feeder PCA
2	Paper feeder pickup solenoid
3	Paper-pickup feeder unit

Scanner system

The flatbed image scanner captures an electronic image of the document on the glass. The scanner does this by illuminating the document with LEDs (red, green, and blue) and capturing the image in the image sensor to create an electronic format of the document. The flatbed scanner consists of three main elements

- **CIS scanner.** The CIS (contact image sensor) scanner captures an image using the device's optical path. Red, green, and blue LEDs sequentially illuminate a small strip of the document (often called a raster line), and the optical system captures each color in a single row of CCD sensors that cover the entire page width. Because only one color is captured for each line per exposure, the three colors are recombined electronically to create the full color image. For monochromatic scans or copies, all three LEDs are illuminated to create a white light for the scan so the raster line can be captured in one exposure.
- **Mechanical carriage drive.** The carriage drive moves the CIS scan head along the document length to create the image. In this device, a small DC motor with an optical encoder creates this motion. The speed of the carriage drive is proportional to the scan resolution (300 ppi is much faster than 1200 ppi) and also proportional to the type of scan (color scans are three-times slower than monochromatic scans). A 1200 ppi color scan moves so slowly that the product may appear to not be working, whereas a monochromatic copy scan moves at fifty-times that speed and will be a little noisy.
- **Image processing system (formatter).** The formatter processes the scanner data into either a copy or a scan to the computer. For copies, the image data is sent directly to the printer without being transmitted to the computer. Depending on user selections for the copy settings, the formatter enhances the scanner data significantly before sending it to the printer. Image data is captured at 300 ppi for copies and is user selectable for scans to the computer. Each pixel is represented by 8 bits for each of the three colors (256 levels for each color), for a total of 24 bits per pixel (24-bit color).

Scanner power-on sequence of events

When the device is turned on, it performs the following tests:

- **Motor test.** The device moves the motor left and right to confirm operation. It reports a scanner error 12 if no motion is detected in the motor encoder system.
- **Wall find.** The scan carriage moves slowly to the right while watching an encoder on the carriage motor to determine when the carriage has found the right side wall or stop. This enables the device to identify the document origin (position of the original). It reports a scanner error 13 if this process fails.
- **LED check.** The device moves the carriage to the white calibration label under the right side of the flatbed image scanner, and it verifies that the minimum and maximum response is acceptable. It reports a scanner error 14 if the response is unacceptable.
- **Home find.** The scan carriage uses the optical scanner to find physical reference features that relate to the document origin at the right side of the image glass. This process ensures accurate location of the first document pixels so that the user documents will have an accurate placement of the image on scans and copies. It reports a scanner error 6 message if the reference features are not found.
- **Calibration.** This test, also known as scanner color calibration, enables the device to identify the black and white on every pixel in the CCD. Calibration occurs in two major processes: a broad (analog) adjustment of all pixels to bring them into the target output range, and a pixel-by-

pixel adjustment (digital) to fine tune the actual black and white response. The calibration process occurs under the right side of flatbed image scanner where there is a special white calibration label.

Calibration is the most important step in creating a high quality image. Calibration problems can include color inaccuracies, brightness inaccuracies, and vertical streaks through the image. The calibration process identifies any bad pixels and enables the image formatter to recreate the lost information from adjacent pixels. Extreme cases of this problem can appear as large vertical streaks or image smears. The user has no control over the calibration process itself or this pixel-replacement process.

Copy or scan-to-computer sequence of events

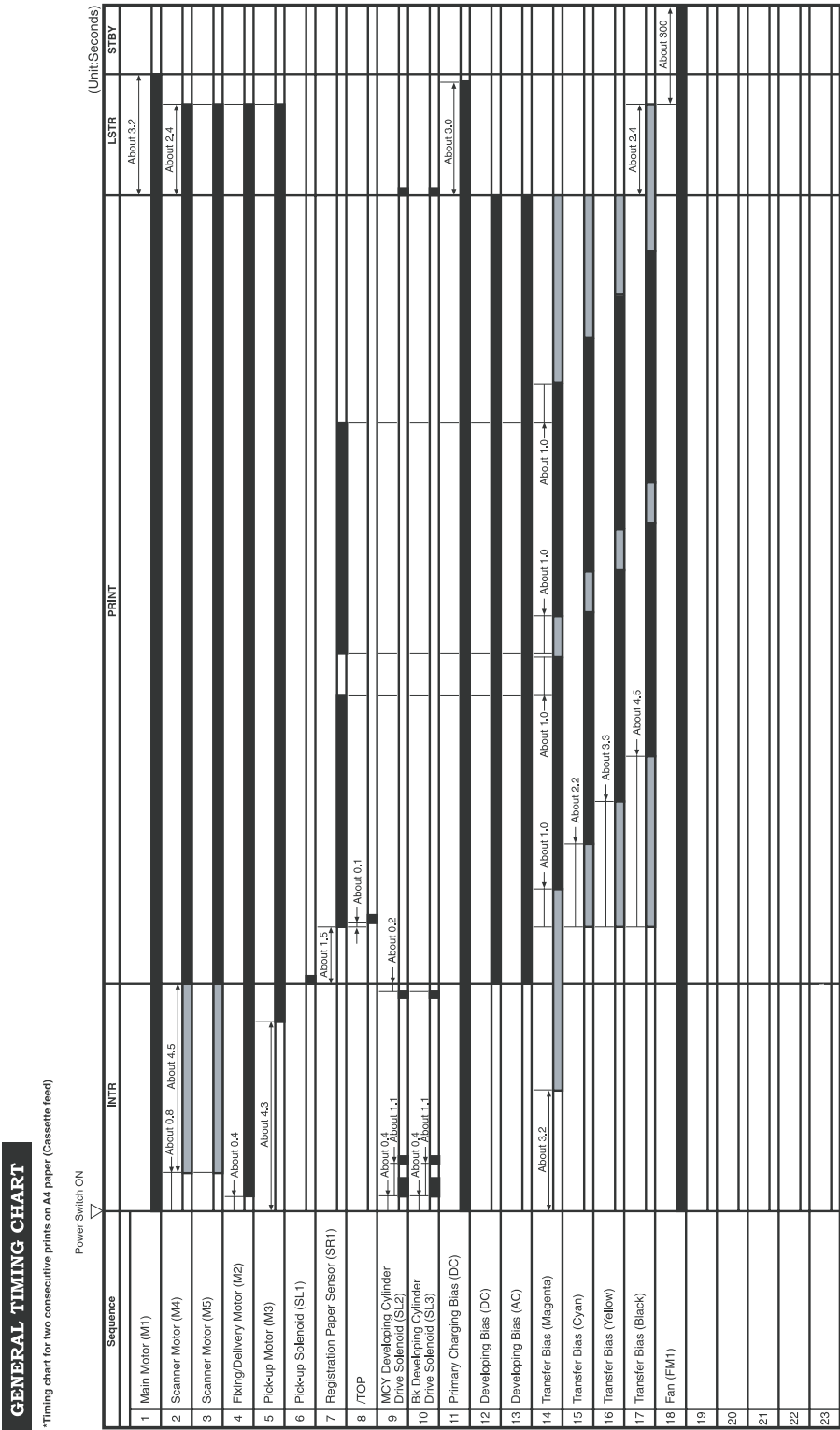
To create an accurate rendition of a document, the scanner must be calibrated for the requested operation. If the user selects a scan at 600 ppi color, the flatbed image scanner calibrates for that specific operational mode. Subsequently, the flatbed image scanner automatically re-calibrates for the next requested operation. Calibration does not occur for every new copy request.

Normal sequence of operation for a flatbed copy or scan includes:

1. LEDs illuminate.
2. Carriage motion begins moving the CIS scanner toward the left.
3. Image capture continues for the entire page or length requested in a scan-to-computer operation.
4. Carriage returns to the home position on the right.

Service-only tools

General timing chart



Printer calibration

Calibration settings are configured with Printer Management Language (PML)/Printer Job Language (PJP) commands, except for new cartridge installation. Calibration can also be configured using the embedded Web server and HP ToolboxFX. Calibration occurs during the following conditions and intervals:

- **Power-on calibration**

Calibration during power-on can be configured for the following intervals:

- Always calibrate at power-on
- Never calibrate at power-on
- Calibrate after 1-6 minutes (default is 15 minutes) of idle time after the first job since the printer was turned on or 12, 24, 48, 96, or 168 hours (default is 48 hours) of idle time.

- **Page count calibration**

Calibration occurs at the end of the first job that passes 150 color pages since the previous calibration occurred. Page count calibration settings can be configured for the following intervals:

- Do not do page count calibrations
- Calibrate after 150 pages have been printed since the last calibration. This is the default setting.



NOTE Page count calibration cannot be set using the embedded Web server.

- **Elapsed time calibration**

Elapsed time calibration will occur when the first job is sent after the elapsed time is exceeded. Use PML/PJP commands to configure the following intervals:

- Do not perform elapsed time calibration
- After 12, 24, 48, 96, or 168 hours (default is 48 hours) or more have elapsed since the last calibration (or power-on), and after 1-6 minutes (default is 15 minutes) of idle time from the first job after 12, 24, 48, 96, or 168 hours (default is 48 hours) have elapsed.

- **On-demand calibration**

Calibrate the printer using the printer control panel.

- **New consumable calibration**

When a new print cartridge is installed, the printer calibrates.



NOTE When a new black print cartridge is replaced, a cleaning page will print before the printer calibrates.

If printing stops when the cartridge is out, requiring the user to either install a new cartridge or select to print with toner out override, a calibration will not occur until the depleted cartridge is replaced, printing resumes, and all jobs currently in the queue are completed or cancelled. This could result in an interval of several pages where a new cartridge is using the old cartridge's calibration data.

5 Removal and replacement

This chapter contains information about the following topics:

- [Overview](#)
- [Service approach](#)
- [Removal and replacement procedures](#)

Overview

Removal and replacement strategy

Replace parts in the reverse order of their removal. Directions for difficult or critical replacement procedures are included in this section.



WARNING! The sheet-metal edges of the product can be sharp. Use caution when working on the product.



NOTE 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 locate. When replacing wire harnesses, always use the provided wire loops, lance points, or wire harness guides.

Electrostatic discharge



CAUTION The printer contains parts that are sensitive to electrostatic discharge (ESD). Protect the parts that are sensitive to ESD by placing them in protective ESD pouches.

Required tools

Before servicing the printer, gather the following tools:

- Phillips #2 magnetized screwdriver (152-mm (6-inch) shaft)
- Small flat-blade screwdriver
- Small needle-nose pliers
- ESD strap
- Penlight (optional)

Service approach

Repair on this printer is limited to a recommended time of 45 minutes, which includes troubleshooting, teardown, and repair. Repairs that require more time should not be made, and the printer should be replaced.

Pre-service procedures

Follow the pre-service procedures before you perform service.

1. Use the power switch to turn off the printer.
2. Remove all media from the product.
3. Place the product on an ESD mat. If an ESD mat or an ESD-protected workstation is not available, discharge body static and ground the product chassis before servicing the product.
4. Remove the print cartridges.
5. Unplug the power cord and the interface cable.

Post-repair tests

After service is complete, the following tests can be used to verify that the repair or replacement was successful.

Test 1: print quality test

1. Verify that all reassembly steps are complete.
2. Verify that clean, unprinted paper is in the input trays.
3. Attach the power cord, and turn on the MFP.
4. Verify that the expected startup sounds occur.
5. Perform a control panel test from the secondary service menu.
6. Print a Demo page and verify that the expected printing sounds occur.
7. Verify that the Demo page displays the expected print quality.
8. Send a print job to the MFP from the host PC.
9. Clean the outside of the printer with a damp cloth.

Test 2: copy quality test

1. Verify that all reassembly steps are complete.
2. Verify that clean, unprinted paper is in the input trays.
3. Attach the power cord, and turn on the MFP.
4. Print a Configuration page and verify that the expected printing sounds occur.
5. Take the Configuration page and place it face-down on the flatbed glass.

6. Make a color copy, and then verify that the copy has no defects.
7. Clean the outside of the printer with a damp cloth.

Test 3: memory-card test (CM1017 MFP only)

1. Insert a photo memory card into a slot.
2. Verify that a proof sheet can be created.
3. Select an image from proof sheet and print it.
4. Verify that the output displays the expected quality.

Removal and replacement procedures

The following sections provide information about the assemblies that can be replaced on this MFP:

- [Print cartridge replacement](#)
- [ETB removal and replacement](#)
- [Scanner removal and replacement](#)
- [Face-up mechanism removal and replacement](#)
- [Upper-cover assembly removal and replacement](#)
- [Side cover removal and replacement](#)
- [Fuser removal and replacement](#)
- [Formatter removal and replacement](#)
- [DC controller removal and replacement](#)
- [Separation assembly removal and replacement](#)
- [Paper-pickup roller removal and replacement](#)
- [Control panel removal and replacement](#)
- [Memory-card assembly removal and replacement \(HP Color LaserJet CM1017 MFP only\)](#)
- [Memory-card-reader cover removal and replacement](#)
- [Scanner lid removal and replacement](#)

If troubleshooting or a control-panel message indicates that a failure is not associated with one of these assemblies, do not attempt to repair the printer. Instead, replace the unit.

Print cartridge replacement

1. Open the front door.

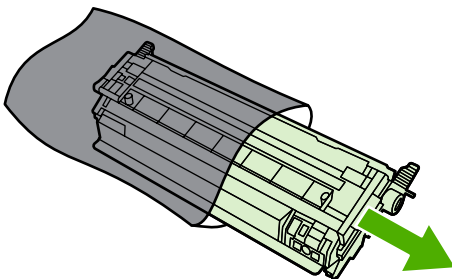


CAUTION Do not place anything on the transfer belt (ETB) located on the inside of the front door.

2. Remove the used print cartridge from the printer.



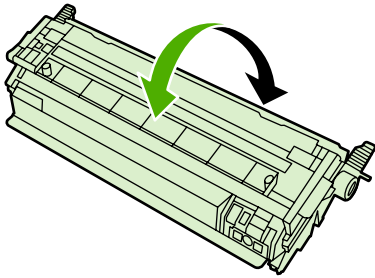
3. Remove the new print cartridge from the bag. Place the used print cartridge in the bag for recycling.



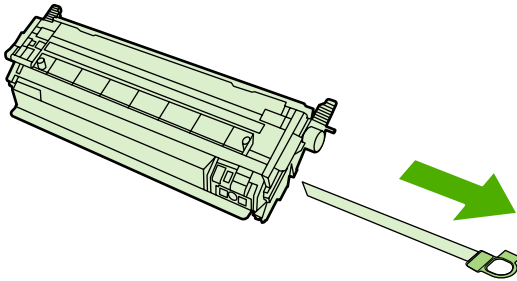
4. Grasp the blue handle on each side of the print cartridge and distribute the toner by gently rocking the print cartridge from back to front.



CAUTION Do not touch the shutter or the surface of the roller.



5. Remove the orange shipping locks and the orange shipping tape from the new print cartridge. Discard the shipping tape and shipping locks according to local regulations.



6. Align the print cartridge with the tracks inside the printer, and using the handles, insert the print cartridge until it is firmly seated.



WARNING! Inserting the print cartridge at an angle (left side or right side ahead of the other) can cause damage to the E-label-reader guide pin. If the E-label-reader guide pin is broken, the control panel displays a 10.000x Supply error.

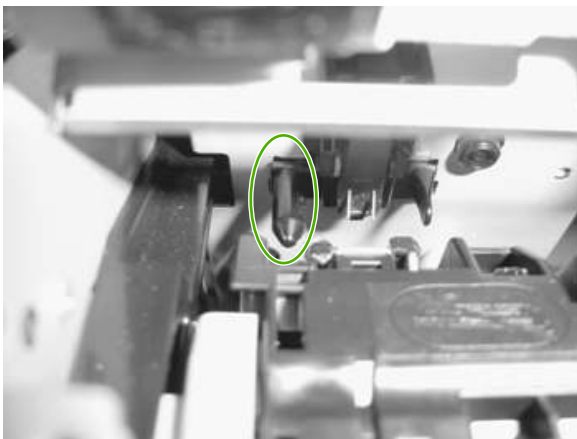


Figure 5-1 E-label-reader guide pin

7. Firmly close the front door.

After a short time, the control panel should display **Ready**.



NOTE If a cartridge is in the wrong slot or is the wrong type for the printer, the control panel will display one of the following messages: **Incorrect yellow**, **Incorrect magenta**, **Incorrect cyan**, or **Incorrect black**.

8. Installation is complete. Place the used print cartridge in the box in which the new cartridge arrived. See the enclosed recycling guide for recycling instructions.
9. If you are using a non-HP print cartridge, check the printer control panel for further instructions.



NOTE When replacing or changing a black print cartridge, a cleaning page automatically prints. This helps prevent speckles on the front or back of printed documents.

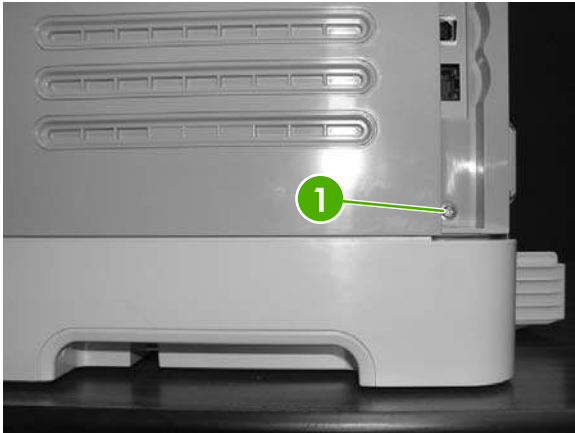
ETB removal and replacement

Use the following procedure to remove the ETB.

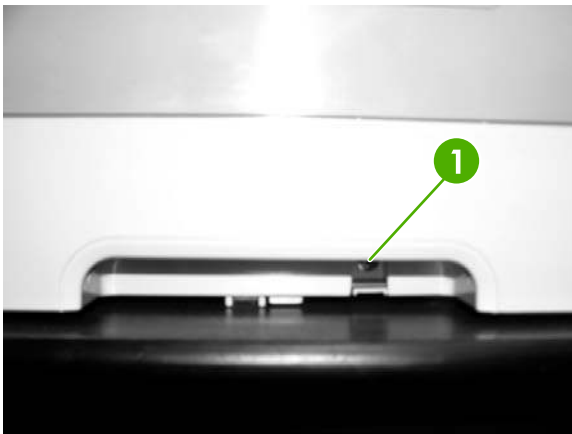
1. Remove or slightly pull out Tray 2.



2. Remove two screws: one from the right cover assembly and one from the left cover assembly.



- 1 | One screw on right cover assembly



- 1 | One screw on left cover assembly

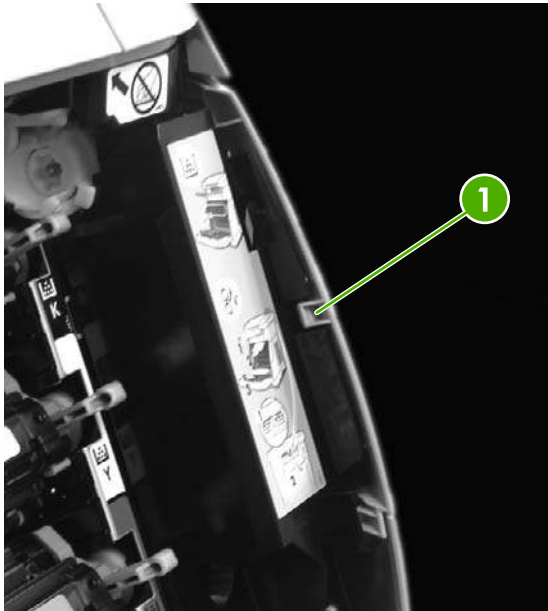
3. Open the front door.



4. Remove the right cover, carefully twisting the front edges of the side cover outward.



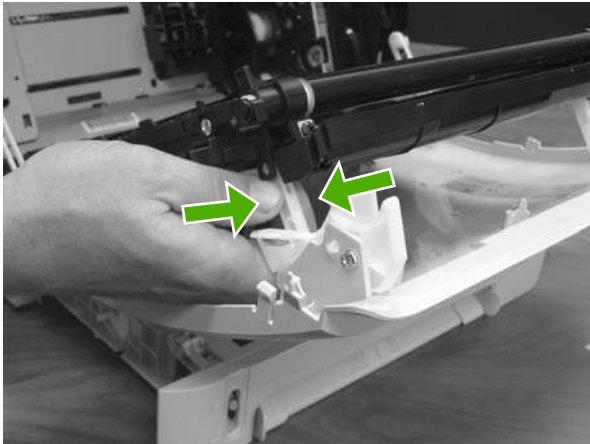
NOTE To make the removal of the right-cover assembly easier, release the tab (1) on the inside of the cover.



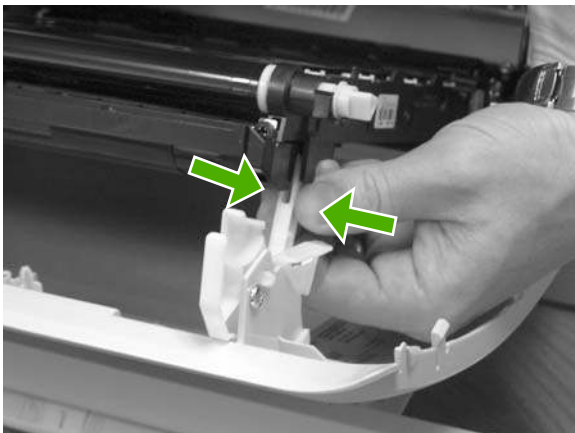
5. Remove the left cover.



6. Squeeze and unhook the white link lever on the left side.



7. Squeeze and unhook the white link lever on the right side.



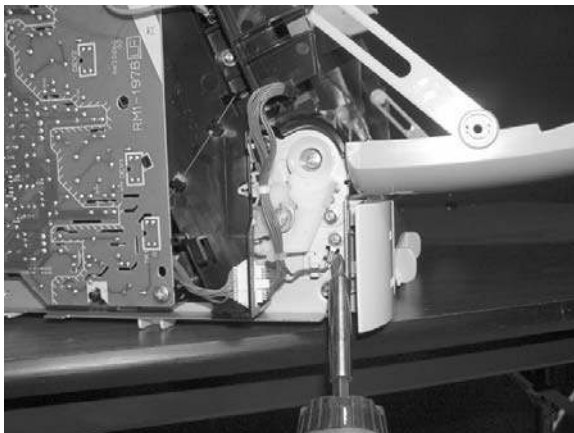
8. Close the ETB.



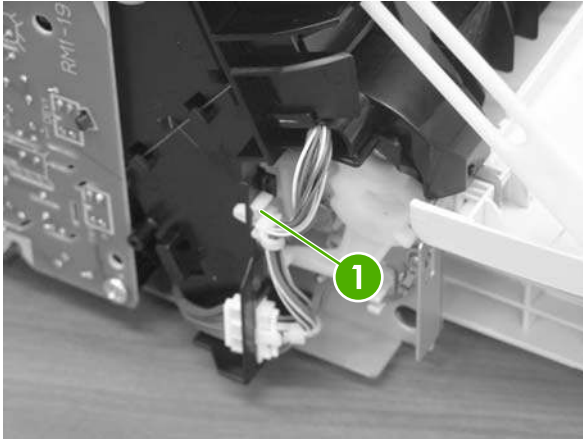
9. Remove the small black cable cover on the left side of the printer by carefully snapping it out of place.



10. Remove one grounding screw from the ETB harness.

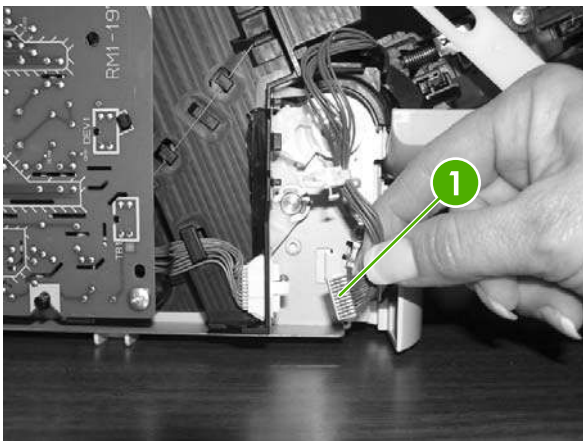


11. Pull out the white wire holder (1) by pushing the release tab down.



1 White wire holder

12. Pull out the ETB connector.

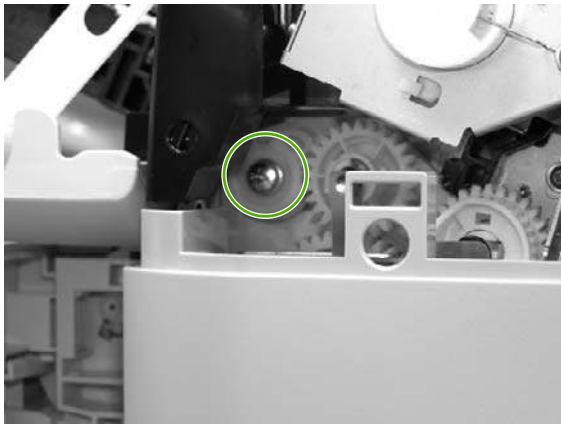
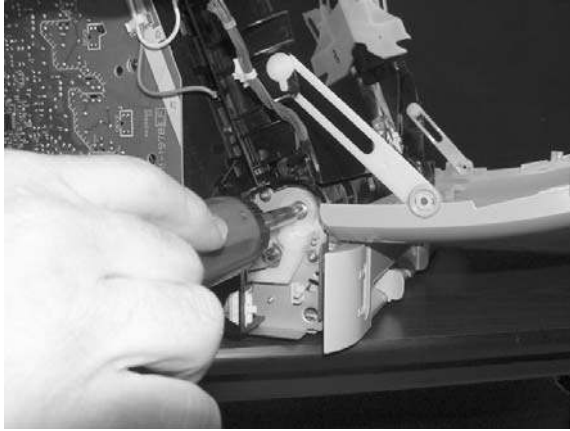


1 ETB connector

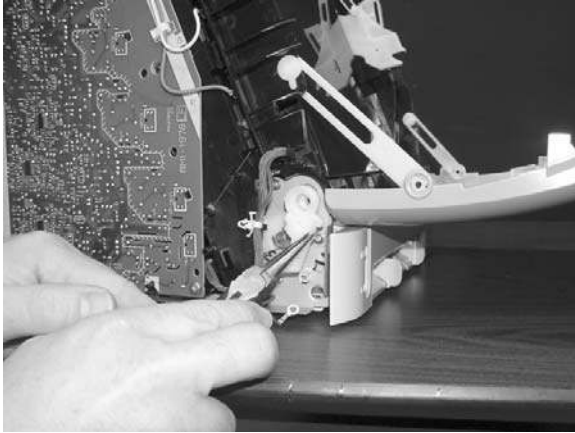


CAUTION Before proceeding, verify that the ETB is still in the closed position.

13. Remove one screw from each hinge cam on both sides.



14. Using needle-nose pliers, remove the left hinge cam and the right hinge cam.

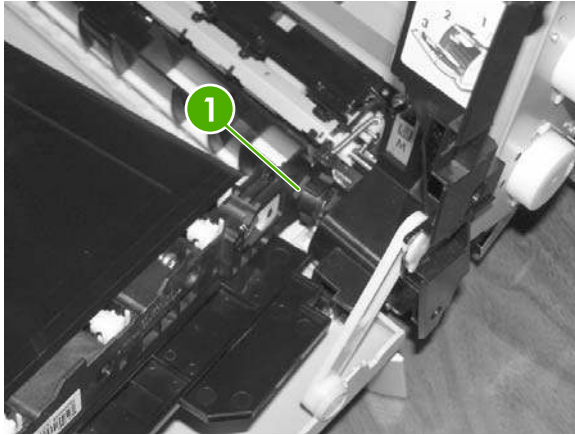


15. Remove the ETB.



Use the following procedure to replace the ETB.

1. Align each foot of the ETB with the respective holes, securing the right side first and then the left side.



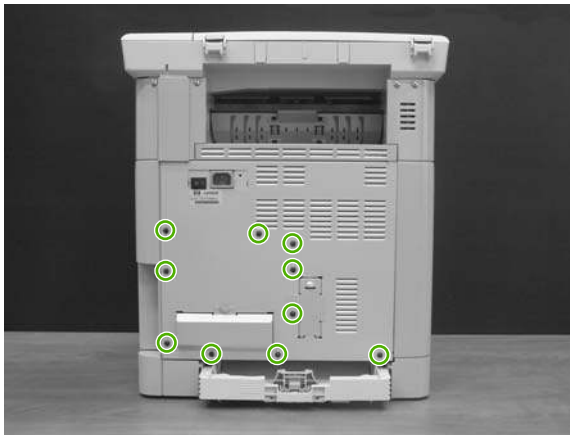
- 1 | Alignment location

2. Complete replacement by following the removal steps in reverse order.

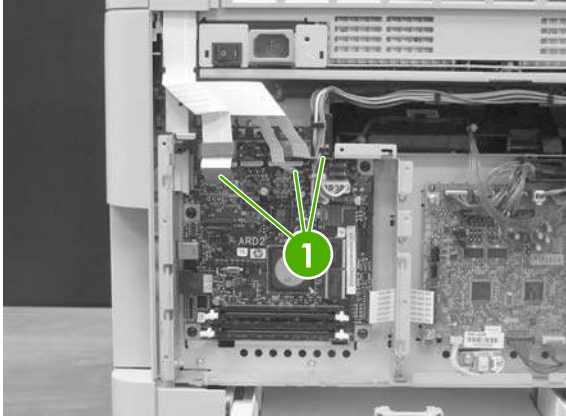
Scanner removal and replacement

Use the following procedure to remove the scanner.

1. Unplug the power cable.
2. Remove 10 screws and take off the rear plate.

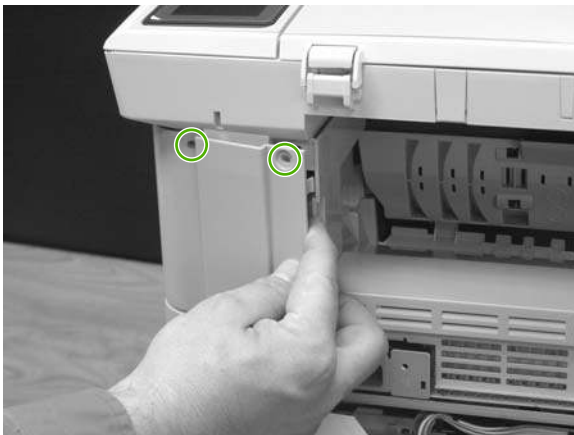


3. Disconnect two (CM1015) or three (CM1017) flat-flex cables (1) from the formatter.



1 Flat-flex cables

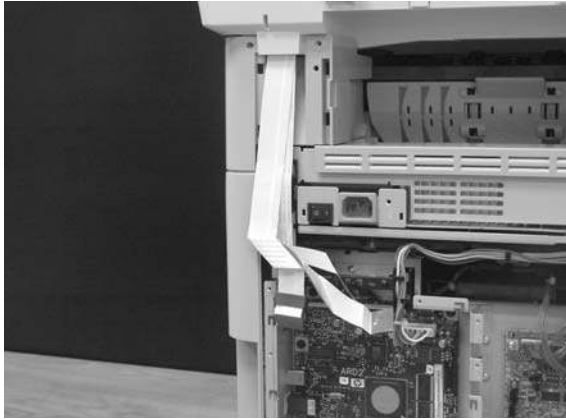
4. Remove two screws, and then remove the cable-guide cover.



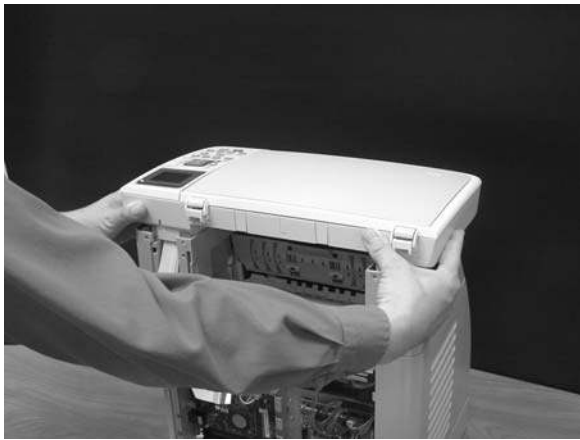
5. Remove two screws.



6. Unthread the scanner flat-flex cables from the cable guides.



7. Slide the scanner forward about 18mm, and then lift it off the MFP.



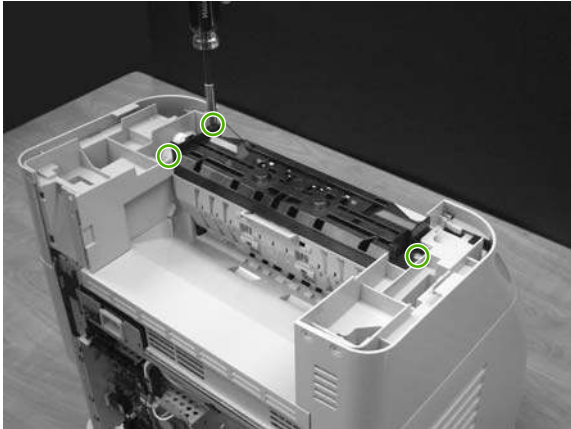
To replace the scanner, follow the removal steps in reverse order. When re-bundling the flat-flex cables, make sure the cable with the ferrite bead is on top, the next-widest flat-flex cable is in the middle, and the narrowest flat-flex cable is on the bottom.

Face-up mechanism removal and replacement

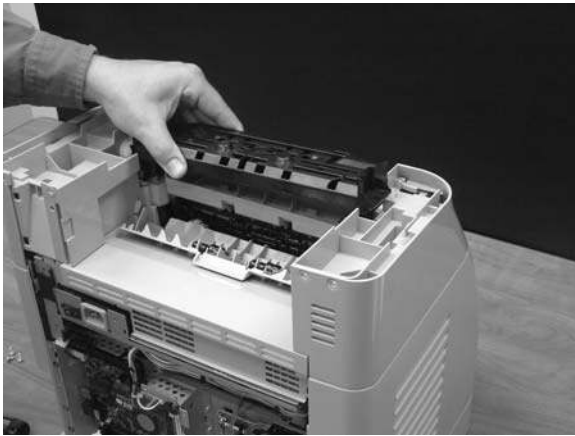
Use the following procedure to remove the face-up mechanism.

1. Remove the scanner.

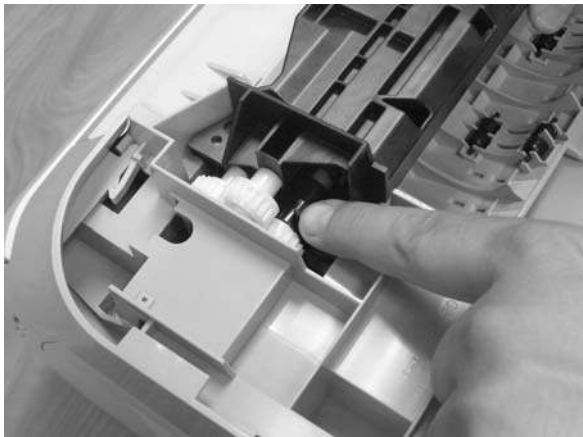
2. Remove three screws.



3. Open the rear jam-clearance door, and then lift the mechanism up and out.



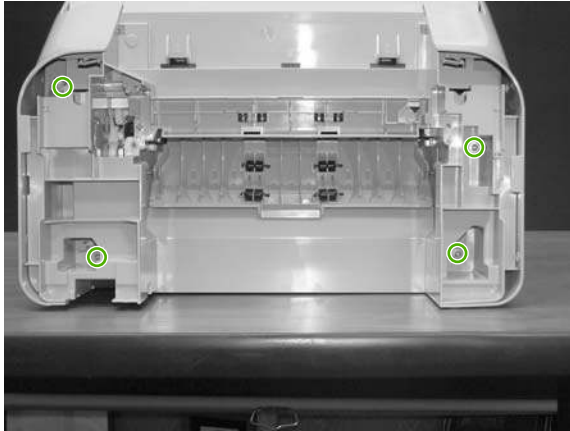
NOTE When replacing the face-up mechanism, push on the swing-gear lever when re-inserting the mechanism so that the mechanism engages properly.



Upper-cover assembly removal and replacement

Use the following procedure to remove the upper-cover assembly.

1. Remove the scanner.
2. Remove the face-up mechanism.
3. Remove four screws from the top of the cover.



4. Lift up the upper-cover assembly.



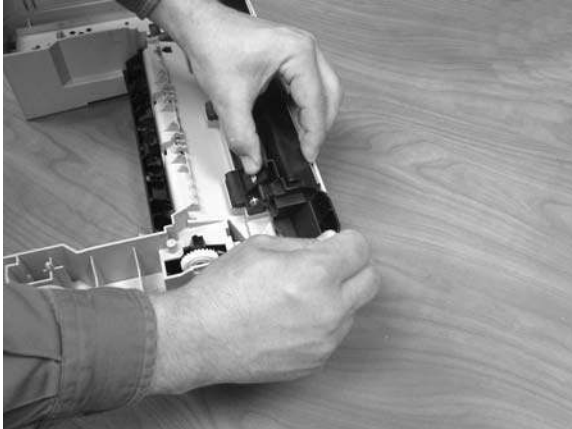
To replace the upper-cover assembly, follow the removal steps in reverse order.

Side cover removal and replacement

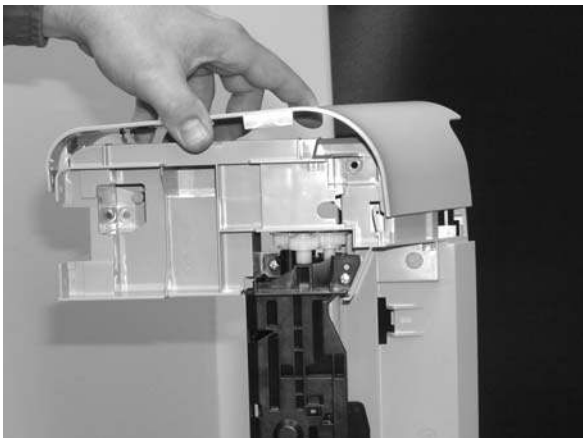
Use the following procedure to remove the side covers.

1. Remove the upper-cover assembly.
2. Turn over the upper-cover assembly.

3. Remove the upper inside cover by pushing the two release levers and pulling up.



4. Tilt the upper-cover assembly on its end.
5. Press the release tabs on the top and bottom, and pull the side cover straight up.

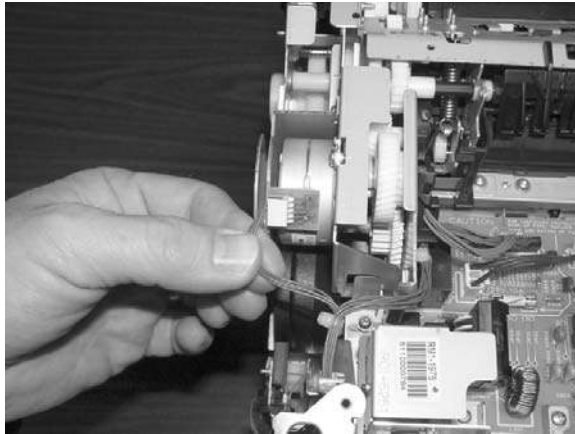


To replace the side covers, follow the removal steps in reverse order.

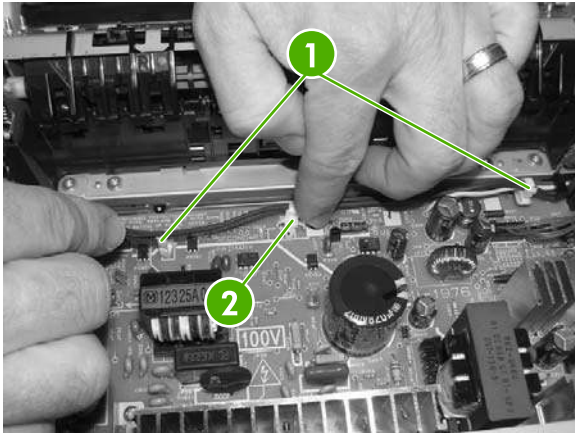
Fuser removal and replacement

Use the following procedure to remove the fuser.

1. Remove the scanner.
2. Remove the upper-cover assembly.
3. Unplug the harness from the fuser motor.

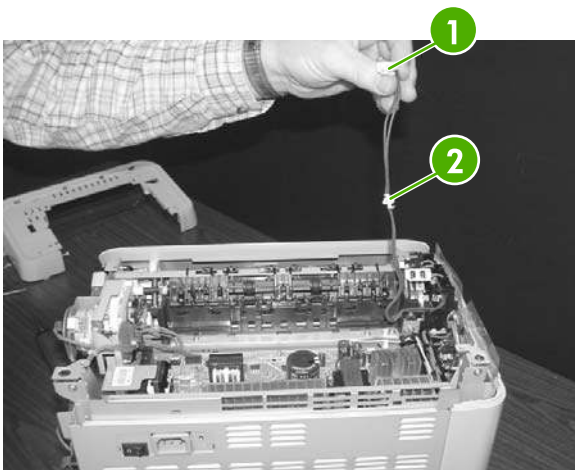


4. Open two clips and remove one clip to remove the fuser connector.



1 Open clips

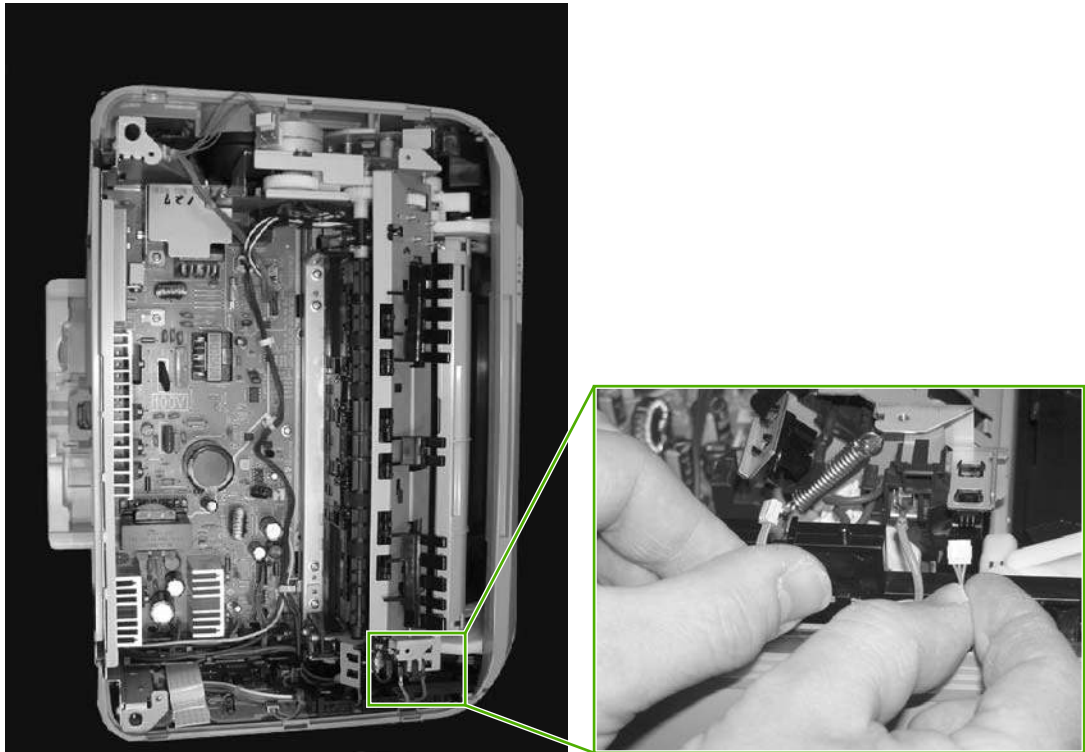
2 Remove clip



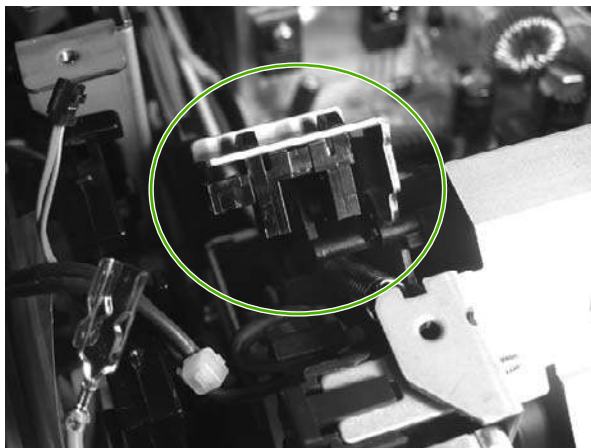
1 Fuser connector

2 Remove clip from the board by pulling up

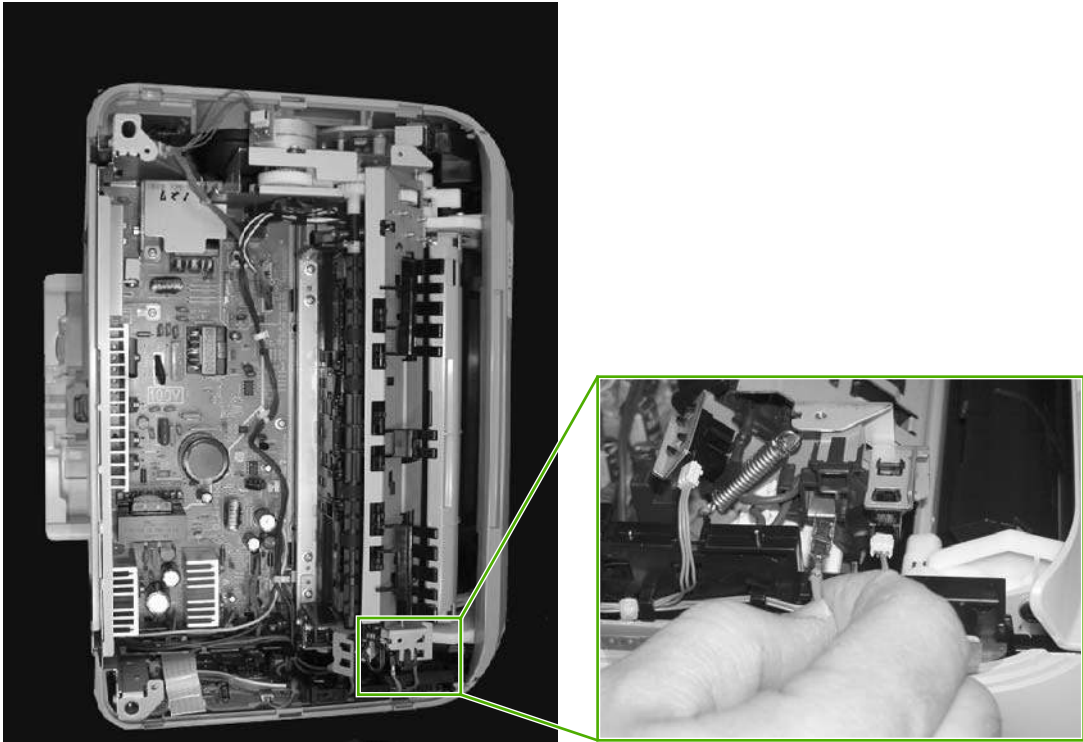
5. Unplug two three-pin sensor wires.



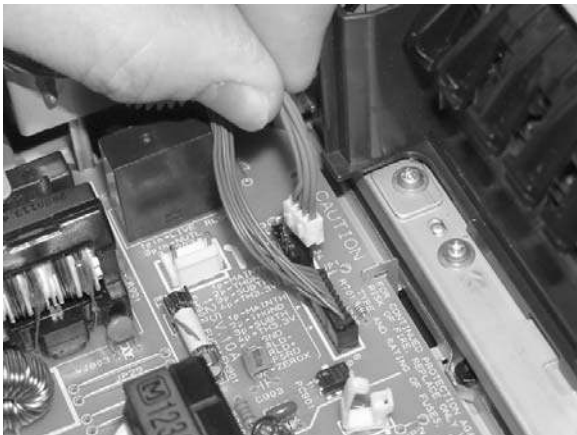
NOTE When replacing the rear-most sensor wire, be careful not to pop the plastic sensor receptacle out of the fuser frame.



6. Unplug the red high-voltage bias wire.



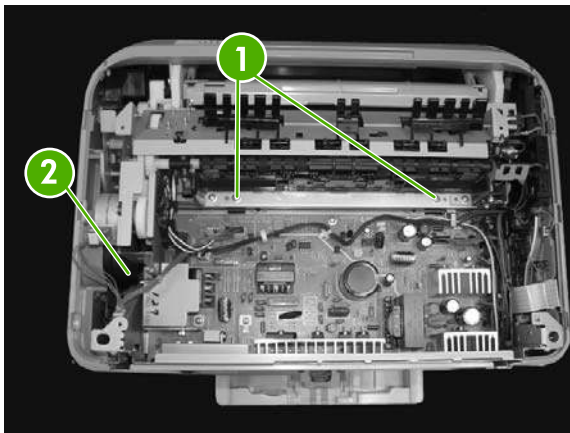
7. Remove the thermistor wires.



8. Unthread the thermistor wires from the wiring harness.

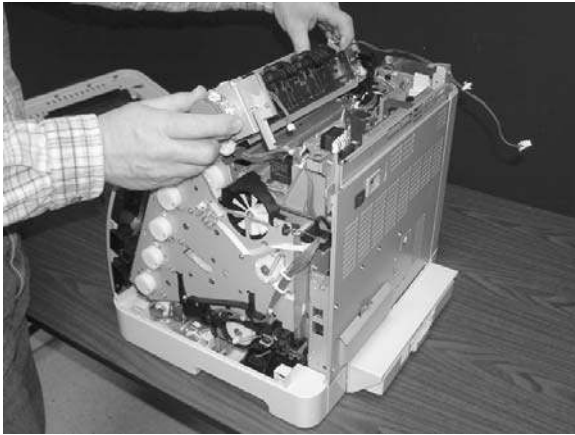


9. At the top of the MFP, remove three screws from the fuser chassis: the two inside screws on the back of the fuser, and one screw on the side.



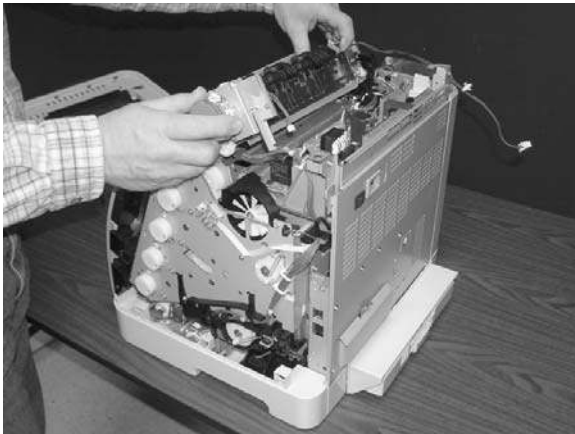
- | | |
|---|--|
| 1 | Two inside screws on the back of the fuser chassis |
| 2 | One screw on the side of the fuser chassis |

10. Gently rocking it if necessary, roll the fuser forward to remove.



Use the following procedure to replace the fuser.

1. Insert the front-facing part of the fuser into the fuser cradle.



2. Rotate the rear-facing part of the fuser slightly up, and then push the front of the fuser into place so that the rear rotates down onto the guide pins on the printer frame.
3. Complete the replacement by following steps 1 through 9 above in reverse order.



NOTE When replacing the right cover, align the tabs on the upper edge of the right cover and lower edge of the face-up cover with their respective slots.

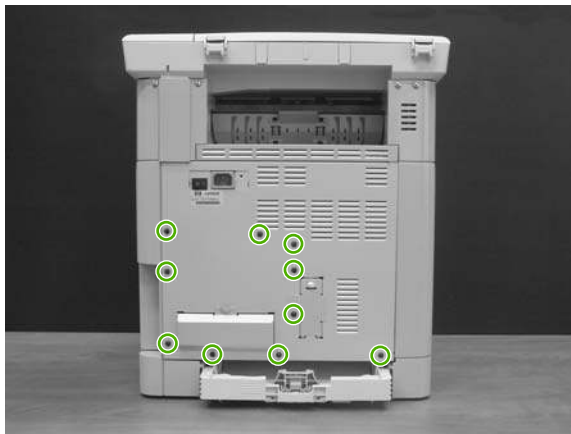
Formatter removal and replacement

Use the following procedure to remove the formatter.

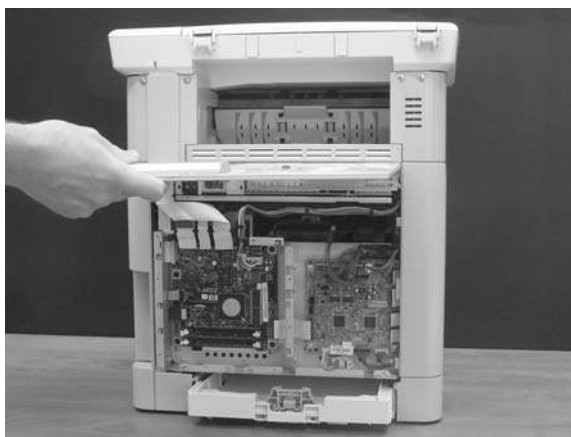
1. Remove the cassette dust cover.



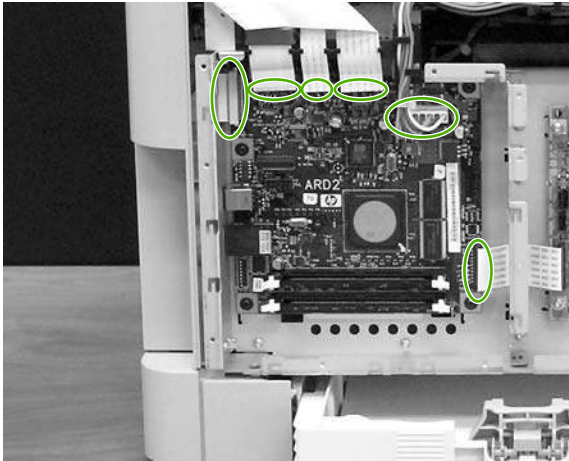
2. Remove 10 screws from the rear plate.



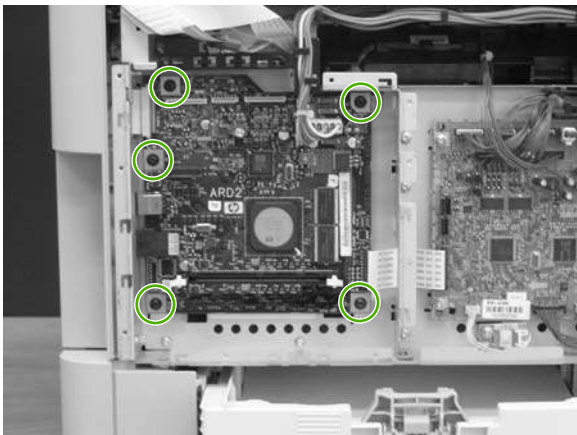
3. Remove the rear plate.



4. Unplug four connectors (CM1015) or six connectors (CM1017).



5. Remove five black screws from the formatter.



6. Lift and remove the formatter.



CAUTION The formatter is sensitive to electrostatic discharge (ESD). Wear an anti-static wrist strap when handling the formatter, and always store the formatter in a protective ESD pouch.

To replace the formatter, follow steps 1 through 6 above in reverse order.



NOTE When replacing the right cover, align the tabs on the upper edge of the right cover and lower edge of the face-up cover with their respective slots.

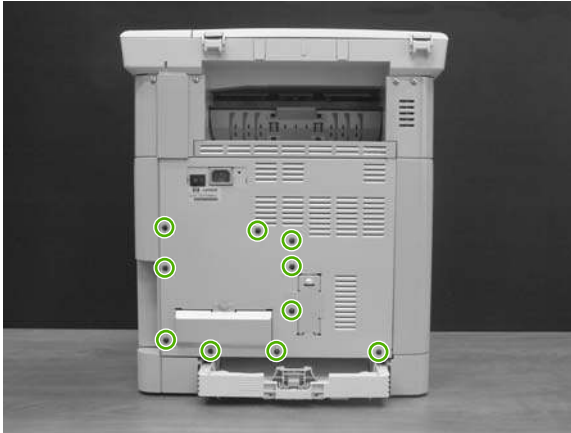
DC controller removal and replacement

Use the following procedure to remove the DC controller.

1. Remove the cassette dust cover.



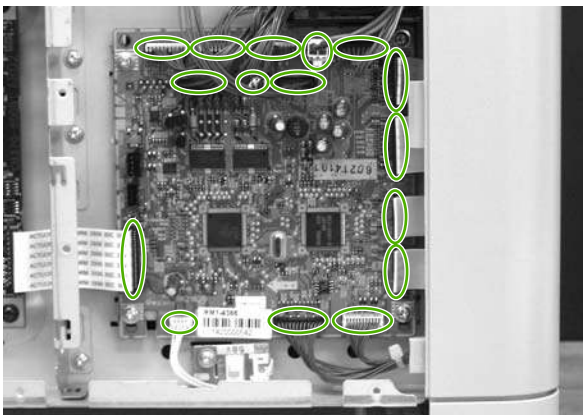
2. Remove 10 screws from the rear plate.



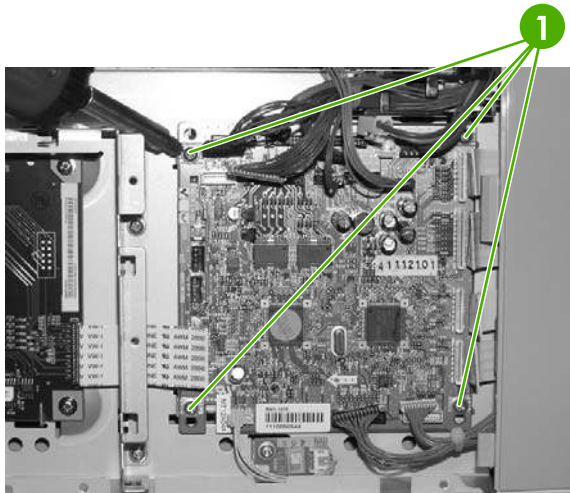
3. Remove the rear plate.



4. Gently unplug 16 connectors.



5. Remove four silver screws from the DC controller.



6. Remove the DC controller PCA assembly.

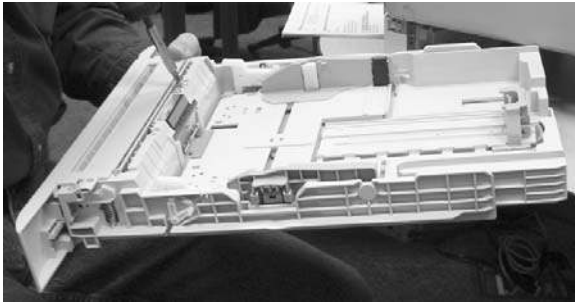


To replace the DC controller, follow steps 1 through 6 above in reverse order.

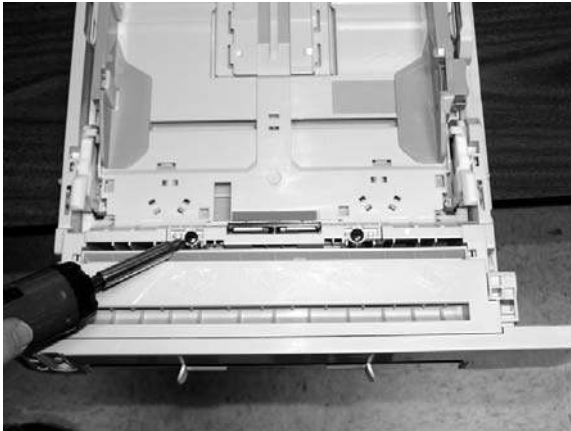
Separation assembly removal and replacement

Use the following procedure to remove the separation assembly.

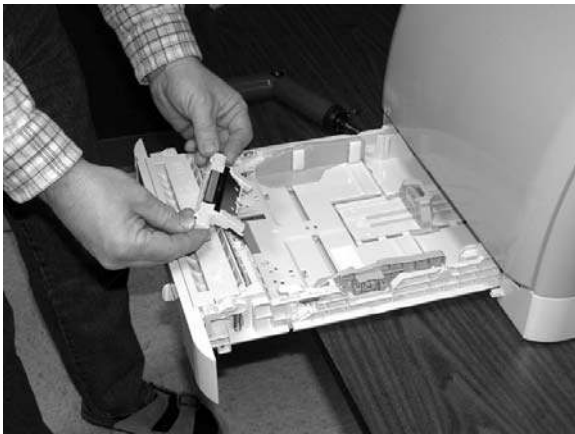
1. Remove Tray 2 (shown) or optional Tray 3.



2. Remove two screws that attach the separation assembly.



3. Remove the separation assembly.



To replace the separation assembly, follow steps 1 through 3 above in reverse order.



NOTE Align the tabs with the two slots and then replace the separation assembly.

Paper-pickup roller removal and replacement

Use the following procedures to remove the paper-pickup roller.

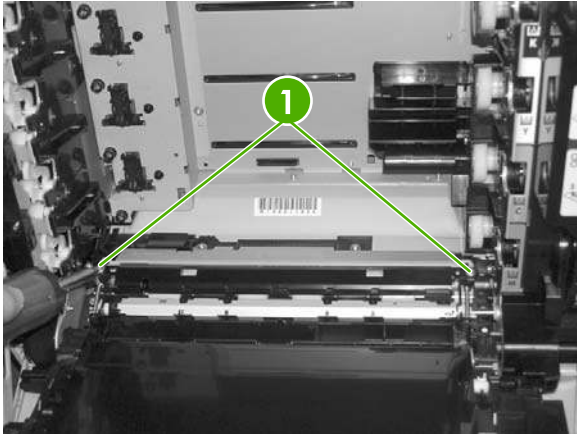
1. Open the front door.



2. Remove the print cartridges.



3. Remove two screws.

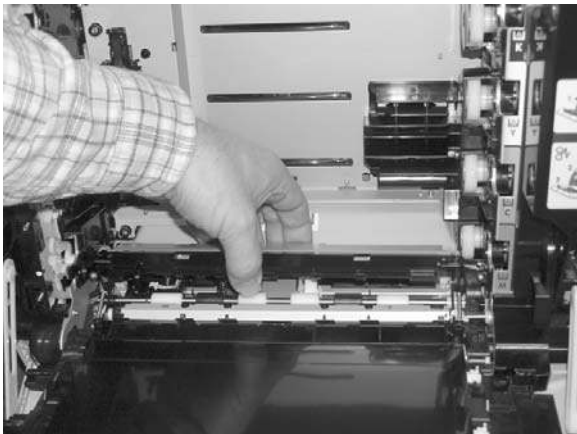


1 Two screws

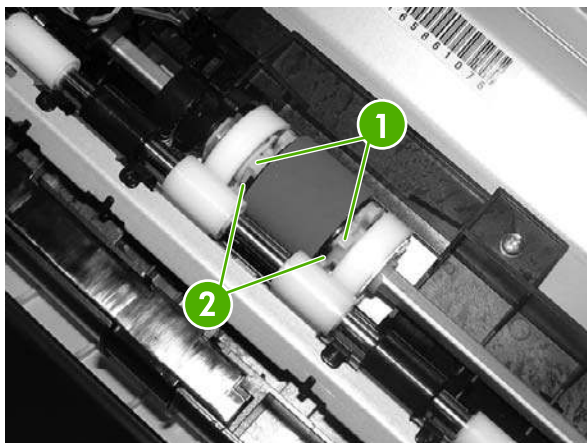


CAUTION Do not place or drop anything on the ETB.

4. Remove the pre-transfer guide.

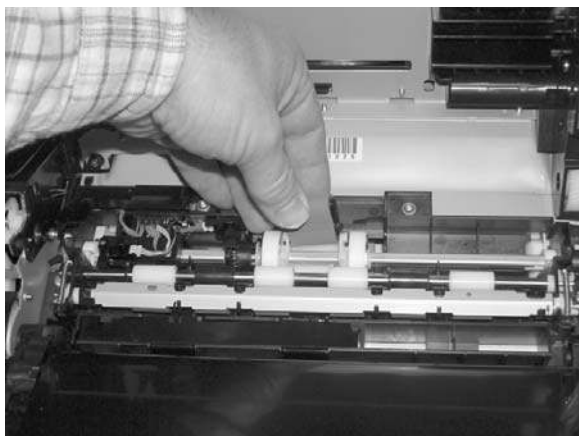


5. Using your thumbs or two small screwdrivers, simultaneously press out on the two white tabs that restrain the black tabs on the pickup roller. When performed correctly, the bottom end of the pickup roller releases from its seat.



1	White tabs
2	Black tabs

6. Rotate the paper pickup roller toward the back and remove it.



To replace the paper-pickup roller, follow steps 1 through 6 above in reverse order.

Control panel removal and replacement

Use the following procedure to remove the control panel.

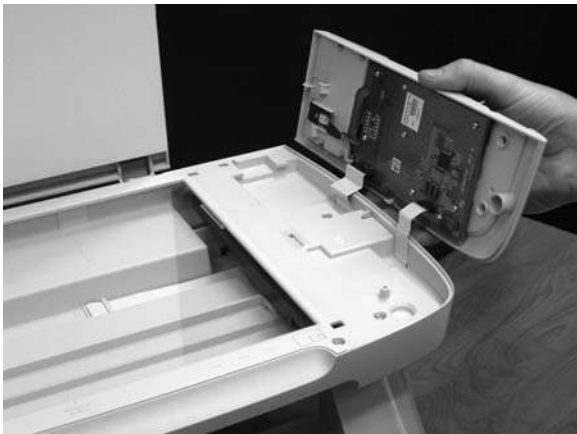
1. Remove the bezel.



2. Remove one screw.



3. Lift the control-panel assembly.



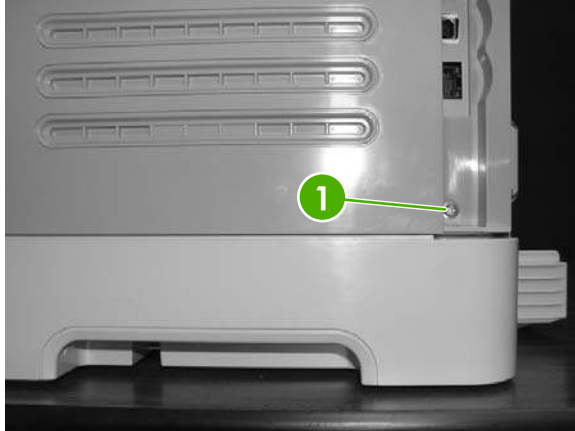
4. Disconnect one (CM1015) or two (CM1017) flat-flex cables.

To replace the control panel, follow steps 1 through 4 above in reverse order.

Memory-card assembly removal and replacement (HP Color LaserJet CM1017 MFP only)

Use the following procedure to remove the memory-card assembly.

1. Remove one screw from the right cover assembly.



1

One screw

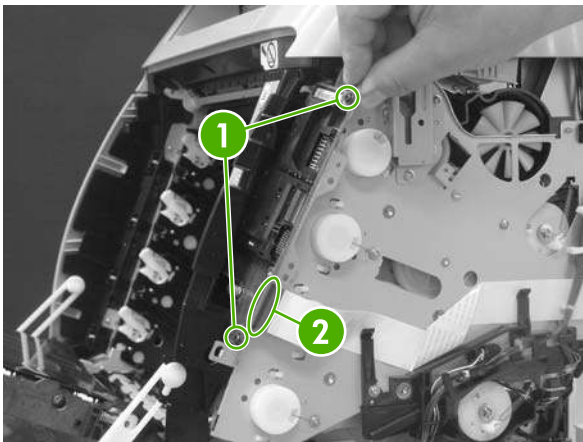
2. Open the front door.



3. Remove the right cover by popping the front edge off the two tabs and pulling it away.



4. Remove two black screws, unplug the flat-flex cable, and remove the memory-card ready assembly from the MFP.



1	Two black screws
2	Flat-flex cable

To replace the memory-card assembly, follow the removal steps in reverse order.

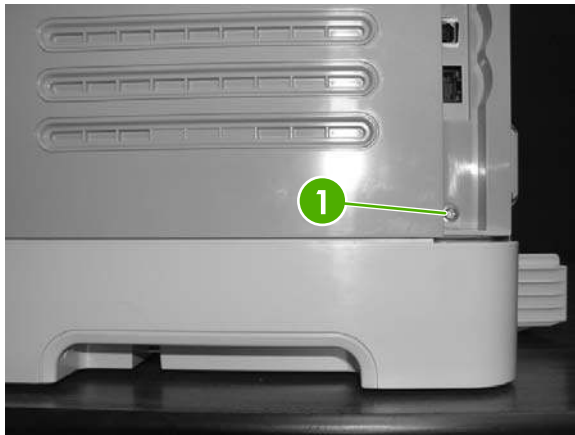


NOTE When replacing the right cover, align the tabs on the upper edge of the right cover and lower edge of the face-up cover with their respective slots.

Memory-card-reader cover removal and replacement

Use the following procedure to remove the memory-card-reader cover.

1. Remove one screw from the right cover.



1

One screw

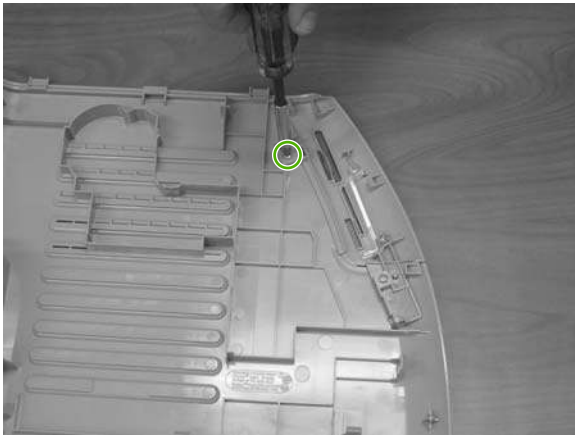
2. Open the front door.



3. Remove the right cover by popping the front edge off the two tabs and pulling it away.



4. Remove one screw.



5. Remove the memory-card-reader cover from the right-side cover.

To replace the memory-card cover, follow the removal steps in reverse order.

Scanner lid removal and replacement

Use the following procedure to remove the scanner lid.

1. Open the scanner lid.

2. Lift the scanner lid out of the hinges.



To replace the scanner lid, follow the removal steps in reverse order.

6 Troubleshooting

This troubleshooting information is organized to help you resolve printing problems. Choose the general topic or type of problem from the following list.

- [Unpack/power-on checklist](#)
- [Control-panel messages](#)
- [Clearing jams](#)
- [E-Label-reader guide pin damage](#)
- [Print problems](#)
- [Scan problems](#)
- [Copy problems](#)
- [Memory-card problems](#)
- [Functional tests \(SERVICE ONLY\)](#)
- [Service mode functions \(SERVICE ONLY\)](#)
- [Troubleshooting tools](#)
- [Repetitive-image-defect ruler](#)
- [Firmware and software updates](#)

Unpack/power-on checklist

When you receive the MFP for service, begin the troubleshooting process by following this unpack/power-on checklist.

Table 6-1 Unpack/power-on checklist







Step	Diagnosis	Action
1. Does the box have visible signs of damage?		Note the location of damage on the box so you can relate it to possible damage to the MFP in the corresponding location. Unpack the MFP using the instructions on the box. Save the carton packing components if they are reusable. Proceed to step 2.
2. Evaluate the exterior of the MFP for obvious signs of shipping damage or abuse.	Is the scanner glass broken?	Determine the extent of damage to the remaining parts of the MFP. If the engine appears undamaged, with no broken covers, cracks, or excessive toner leakage, replace the scanner subassembly and proceed to step 3. If the engine is damaged in addition to the scanner glass, replace the whole MFP.
	Is the control panel broken, cracked, or damaged, but no other damage is evident?	Replace the control panel, bezel, or both, and then proceed to step 3.
	Is the MFP frame cracked or bent, or do any of the covers show signs of impact, cracking, or bending?	If a cover is damaged, replace it. Otherwise replace the whole MFP.
3. Open the front door and examine the interior.	If toner was shipped in the MFP, has toner leaked out of the cartridges and spread throughout the imaging area?	Replace the whole MFP.
	Does the ETB have any dents, broken parts, or other damage?	Replace the ETB or hinge parts if required. Proceed to step 4.
	Is the MFP frame cracked or bent, or do any covers show signs of impact, cracking, or bending?	If a cover is damaged, replace it. Otherwise replace the whole MFP.
4. Remove the toner cartridges if they are installed.	Evaluate the cartridges for damage, such as broken plastic, leaking, dents, or gouges on the rollers.	Locate replacement cartridge(s) if needed, place them in your working area, and then proceed to step 5.

Table 6-1 Unpack/power-on checklist (continued)

Step	Diagnosis	Action
5. Look for loose plastic parts or portions of the printed circuit boards at the bottom of the MFP.		<p>If broken parts are found, replace the whole MFP.</p> <p>If no broken parts are found, insert known-good cartridges. Then proceed to step 6</p>
6. Plug the MFP in and turn on the power.	When the MFP initializes, can you hear grinding noises, significant squeaks, arcing, or other abnormal noises?	<p>If arcing is heard or smoke is seen, turn off the MFP immediately. Replace the whole MFP.</p> <p>If you can hear grinding and squeaking:</p> <ol style="list-style-type: none"> 1. Turn the MFP off, remove the toner cartridges, and then turn the power on. If the noises are no longer present, isolate and replace the damaged cartridge(s). 2. If noise is still present with the cartridges removed, evaluate the ETB for smooth movement. Replace the ETB if it is the source of the noise. 3. If the noise is in the fuser area, replace the fuser. 4. If you still cannot isolate the source of the noise, replace the whole MFP. <p>If abnormal startup sounds are heard and the source of the noise cannot be found within ten minutes, replace the whole MFP.</p> <p>If there are no abnormal noises, note any control-panel messages and use the control-panel messages table to continue troubleshooting.</p>

Control-panel messages

The following are control-panel warning icons that may be seen on the HP Color LaserJet CM1017 MFP.

	General error
	Memory card error
	Paper error
	Paper jam
	Attention
	Scanner error

The following tables display information about control-panel error messages. The messages are grouped by general error type.



NOTE For all supplies-related issues, open the front door of the MFP and perform a physical inspection of the cartridges for damage such as broken parts, gouges/scratches on the developer rolls, or excessive leaking. Replace the cartridge if any of the above are found. If possible, print a Configuration page and note any errors listed.

Table 6-2 Supplies control-panel messages

Control panel message	Description	Recommended action
HP supplies installed	This message appears when non-HP toner cartridges have been replaced by genuine HP toner cartridges.	No action required. If the error persists, verify that the E-label-reader guide pins are not broken.
10.000x Supply error	E-label cannot be read or print cartridge is not properly installed. 10.0000 = Black print cartridge 10.0001 = Cyan print cartridge 10.0002 = Magenta print cartridge 10.0003 = Yellow print cartridge	See <i>Supplies group corrective action</i> , below.

Table 6-2 Supplies control-panel messages (continued)

Control panel message	Description	Recommended action
10.100x Supply error Reinstall The supplies gauge displays the consumption levels of print cartridges.	A print cartridge is missing. 10.1000 = Black print cartridge 10.1001 = Cyan print cartridge 10.1002 = Magenta print cartridge 10.1003 = Yellow print cartridge	See <i>Supplies group corrective action</i> , below.
54.xx	Toner sensor error.	See <i>Supplies group corrective action</i> , below.
Incorrect <color> cartridge The supplies gauge displays the consumption levels of print cartridges.	The <color> print cartridge may be crooked, or installed in the wrong print cartridge slot. One of the following messages may display: Incorrect black cartridge Incorrect cyan cartridge Incorrect magenta cartridge Incorrect yellow cartridge	See <i>Supplies group corrective action</i> , below.
Install <color> cartridge The supply gauge indicates the supply or supplies that are out of toner.	One of the following messages may display: <ul style="list-style-type: none"> ● Install black cartridge ● Install cyan cartridge cartridge ● Install magenta cartridge ● Install yellow cartridge 	See <i>Supplies group corrective action</i> , below.
Install supplies The supplies gauge displays the consumption levels of print cartridges.	Multiple supplies are not installed.	See <i>Supplies group corrective action</i> , below.
Non-HP supply in use in use Ready The supplies gauge displays the consumption levels of print cartridges.	A non-HP (cloned or refilled) supply has been installed and was overridden.	See <i>Supplies group corrective action</i> , below.
Order supplies Ready The supplies gauge displays the consumption levels of print cartridges.	Multiple supplies are low.	See <i>Supplies group corrective action</i> , below.
Order supplies	The <color> print cartridge is low. One of the following messages may display: <ul style="list-style-type: none"> ● Order black cartridge. Ready light is on. ● Order cyan cartridge. Ready light is on. 	See <i>Supplies group corrective action</i> , below.

Table 6-2 Supplies control-panel messages (continued)

Control panel message	Description	Recommended action
	<ul style="list-style-type: none"> • Order magenta cartridge. Ready light is on. • Order yellow cartridge. Ready light is on. 	
Replace supplies The supplies gauge displays the consumption levels of print cartridges.	The cartridge is out of toner.	See <i>Supplies group corrective action</i> , below.
Replace supplies. Override in use. Ready The supplies gauge displays the consumption levels of print cartridges. This is the message that displays when the non-HP supply is first installed.	Supply override in use. The user has decided to continue printing beyond the out point. A supply is low and using Override may result in unsatisfactory print quality. This message also displays the entire time multiple non-HP supplies are used in the MFP.	See <i>Supplies group corrective action</i> , below.
Replace supply. Override in use. Ready The supplies gauge displays the consumption levels of print cartridges.	Supply override in use. The user has decided to continue printing beyond the out point. A supply is low and using Override may result in unsatisfactory print quality. This message also displays the entire time a single non-HP supply is used. It displays after the Unauthorized Supply message displays and after the user presses the override.	See <i>Supplies group corrective action</i> , below.
Non-HP <color> installed	A non-HP <color> cartridge is installed. Displays one of the following messages: <ul style="list-style-type: none"> • Non HP black installed. Press OK to accept. • Non HP magenta installed. Press OK to accept. • Non-HP cyan installed. Press OK to accept. • Non-HP yellow installed. Press OK to accept. 	See <i>Supplies group corrective action</i> , below.
Unauthorized supply in use alternates with Ready The supplies gauge displays the consumption levels of print cartridges.	Displays this message when the non-HP supply is first installed: A new non-HP supply has been installed and was overridden.	See <i>Supplies group corrective action</i> , below.
Unauthorized <color>	A new non-HP supply has been installed. One of these four messages is displayed	See <i>Supplies group corrective action</i> , below.

Table 6-2 Supplies control-panel messages (continued)

Control panel message	Description	Recommended action
	<p>until an HP supply is installed or until OK is pressed.</p> <ul style="list-style-type: none"> • Unauthorized black cartridge • Unauthorized magenta cartridge • Unauthorized cyan cartridge • Unauthorized yellow cartridge 	<p>Supplies group corrective action</p> <p>If official HP cartridges are installed and the supplies-related message continues to display, use the following procedure to determine what is defective.</p> <ol style="list-style-type: none"> 1. If a specific cartridge is identified as defective, replace that cartridge with a genuine HP cartridge that does not cause this error in another MFP. 2. If the error continues, inspect the E-label-reader guide pins in the MFP engine. If a pin is damaged or broken, replace the whole MFP. 3. If the E-label-reader guide pins are in serviceable condition, replace the DC controller. 4. Perform post-repair tests #1 and #2. 5. If the issue persists, replace the whole MFP.

Table 6-3 Paper-path control-panel messages

Control panel message	Description	Recommended action
Jam	<p>A jam occurred in:</p> <ul style="list-style-type: none"> • print/paper path • tray 1 • tray 2 • output bin 	See <i>Paper-path group corrective action 1</i> , below.
Unexpected size in tray X	Unexpected paper size error. The media size loaded in the tray does not match the media size configured for the tray.	See <i>Paper-path group corrective action 1</i> , below.
Load paper	The HP Color LaserJet CM1015/CM1017 MFP is out of paper.	See <i>Paper-path group corrective action 1</i> , below.
Load Tray X [TYPE] [SIZE]	The MFP is processing the job, but the tray indicator is empty.	See <i>Paper-path group corrective action 1</i> , below.

Table 6-3 Paper-path control-panel messages (continued)

Control panel message	Description	Recommended action
Paper-path group corrective action 1 Use the following procedure to determine what is defective.		
<ol style="list-style-type: none"> 1. Check all jam locations in the MFP. If the control panel displays any message except Load paper before any paper is loaded in the MFP, proceed to step 2. 2. Check the paper path for small scraps of paper. Remove any that are found. 3. If paper continually jams at the rear-jam clearance area, replace the face-up paper delivery assembly. 4. If jams persist at the ETB, check the ETB for damage. Replace the ETB if it is damaged. 5. If jams occur in the tray 1 and tray 2 input areas, replace the feed roll and separation pad. 6. Perform post-repair tests #1 and #2. 7. If the error message persists and you have verified that the correct type/size of paper is being used and there are no small scraps of paper in the paper path, replace the whole MFP. 		
No media pickup. Press [OK].	The print engine has failed to pick up a piece of media.	See <i>Paper-path group corrective action 2</i> , below.
Manual feed Press [OK]	The MFP is waiting for paper in the tray indicated.	See <i>Paper-path group corrective action 2</i> , below.
Paper-path group corrective action 2 Use the following procedure to determine what is defective.		
<ol style="list-style-type: none"> 1. Evaluate the paper tray for damage and serviceability. Replace it if necessary. 2. Replace the pickup roller and separation pad. 3. Perform post-repair tests #1 and #2. 4. If the problem persists, replace the whole MFP. 		

Table 6-4 Hardware control-panel messages

Control panel message	Description	Recommended action
50.x Fuser error	The device has experienced an internal hardware error. 50.1 Fuser Error —low temperature 50.3 Fuser Error —slow fuser 50.2 Fuser Error —high temperature	<ol style="list-style-type: none"> 1. Power-cycle the MFP. 2. If the message persists, replace the fuser. 3. If the message persists, replace the DC controller. 4. Perform post-repair tests #1 and #2. 5. If the message persists, replace the whole MFP.
51.20 Error	The device has experienced an internal hardware error. 51.20 Error —black scanner error 51.21 Error —cyan scanner error 51.22 Error —magenta scanner error 51.23 Error —yellow scanner error	See <i>Hardware corrective action 1</i> , below.
55.0 Error	DC controller error. The device has experienced an internal hardware error.	See <i>Hardware corrective action 1</i> , below.
57 Fan Error Turn off and then turn on	The device has experienced a problem with its internal fan.	See <i>Hardware group corrective action 1</i> , below.
59 motor error	The device has experienced an internal hardware error.	See <i>Hardware group corrective action 1</i> , below.
Device error. Press [OK].	An internal error occurred in the device.	See <i>Hardware group corrective action 1</i> , below.
Door open	The MFP door is open.	See <i>Hardware group corrective action 1</i> , below.
Engine communication error	The device experienced an internal communication error.	See <i>Hardware group corrective action 1</i> , below.
		Hardware group corrective action 1 <ol style="list-style-type: none"> 1. Power-cycle the MFP. 2. Verify that the flat-flex cable connecting the DC controller to the formatter is securely connected. 3. If the message persists, replace the DC controller. 4. Perform post-repair tests #1 and #2. 5. If the message persists, replace the whole MFP.
Calibrating...	The MFP is calibrating.	See <i>Hardware group corrective action 2</i> , below.

Table 6-4 Hardware control-panel messages (continued)

Control panel message	Description	Recommended action
Cleaning...	The MFP is in cleaning mode.	See <i>Hardware group corrective action 2</i> , below.
		Hardware group corrective action 2 <ol style="list-style-type: none"> 1. If the message is persistent, perform an NVRAM initialization. 2. If the message persists, replace the DC controller. 3. If the message persists, replace the formatter. 4. If the message persists, replace the ETB assembly. 5. Perform post-repair tests #1, #2, and #3. 6. If the message persists, replace the whole MFP.

Table 6-5 Firmware control-panel messages

Control panel message	Description	Recommended action
79 Error Turn off and then turn on	The device has experienced an internal firmware error.	<ol style="list-style-type: none"> 1. Verify that the most current firmware is installed on the MFP. Load the most current version if necessary. 2. Power-cycle the MFP. 3. If the message persists, perform an NVRAM initialization. 4. If the message persists, replace the formatter. 5. Perform post-repair tests #1, #2, and #3.
Invalid entry	Invalid data or response.	<ol style="list-style-type: none"> 1. Verify that the most current firmware is installed on the MFP. Load the most current version if necessary. 2. If the message persists regardless of which button is pressed, replace the control panel. 3. If the message persists, replace the formatter. 4. Perform post-repair tests #1, #2, and #3.
Memory is low. Press [OK].	The device memory has been almost completely filled or is full.	See <i>Firmware group corrective action</i> , below.

Table 6-5 Firmware control-panel messages (continued)




Control panel message	Description	Recommended action
	 NOTE This error occurs most often when printing from a host PC. The printer test page might not produce this error.	
Memory low. Only one copy made.	The device does not have enough memory to complete the collated copy job.  NOTE This error occurs most often when printing from a host PC. The printer test page might not produce this error.	See <i>Firmware group corrective action</i> , below.
Page too complex Press OK	The device could not print the current page because of its complexity.  NOTE This error occurs most often when printing from a host PC. The printer test page might not produce this error.	See <i>Firmware group corrective action</i> , below.
Misprint. Press [OK].	The printed pages have been incorrectly placed on the paper.	See <i>Firmware group corrective action</i> , below.
Firmware group corrective action		
<ol style="list-style-type: none"> 1. Verify that the most current firmware is installed on the MFP. Load the most current version if necessary. 2. Perform an NVRAM initialization. 3. Add memory to the MFP. 		

Table 6-6 Memory-card control-panel messages

Control panel message	Description	Recommended action
Insert only 1 memory card at a time	More than one memory card has been inserted.	See <i>Memory-card group corrective action</i> , below.
Memory card is in backwards	The memory card was inserted backwards into the card slot.	See <i>Memory-card group corrective action</i> , below.
Memory card is unsupported	The memory card that you have inserted is not a type that is supported. The HP Color LaserJet CM1017 MFP supports the following cards: <ul style="list-style-type: none"> • CompactFlash • Ultra CompactFlash • Smart Media • Memory Stick 	See <i>Memory-card group corrective action</i> , below.

Table 6-6 Memory-card control-panel messages (continued)

Control panel message	Description	Recommended action
	<ul style="list-style-type: none"> Secure Digital Multi Media Card XD Card 	
Unknown Memory Card Error	There is an issue with either the memory card or the device memory-card reader.	See <i>Memory-card group corrective action</i> , below.
		Memory-card group corrective action <ol style="list-style-type: none"> 1. Verify that only one photo card is inserted. 2. Verify that the card contains .JPG files. This is the only file format recognized by the MFP. 3. Verify that the memory-card-reader LED illuminates when the card is inserted. Also verify that the graphical display indicates that the MFP is reading the card. 4. Verify that the ribbon cable connecting the memory-card-reader assembly to the formatter is not damaged and is securely connected on both ends. Replace the cable if necessary. 5. If the message persists, replace the memory-card-reader assembly. 6. If the message persists, replace the formatter. 7. Perform post-repair tests #1, #2, and #3.

Table 6-7 Scanner control-panel messages

Control panel message	Description	Recommended action
Scanning error.	<p>The device cannot transmit scan information to a computer.</p> <p>The following errors can occur during scanning:</p> <ul style="list-style-type: none"> • Scanner Error 1 = ScannerError_DarkFind • Scanner Error 2 = ScannerError_LMWTempFind • Scanner Error 3 = ScannerError_BulbWarmupFromOff 	<ol style="list-style-type: none"> 1. If any of these messages appear, replace the scanner subassembly. 2. Perform post-repair tests #1 and #2.

Table 6-7 Scanner control-panel messages (continued)

Control panel message	Description	Recommended action
	<ul style="list-style-type: none">• Scanner Error 4 = ScannerError_BulbWarmupFromCoarse• Scanner Error 5 = ScannerError_CallLabelFind• Scanner Error 6 = ScannerError_DocOriginFind• Scanner Error 7 = ScannerError_LMWFinalFind• Scanner Error 8 = ScannerError_CallLabelFindAfterScan• Scanner Error 9 = ScannerError_CallLabelFindPriorToStandby• Scanner Error 10 = ScannerError_DocOriginFindPriorToStandby• Scanner Error 11 = ScannerError_BulbWarmupFromStandby• Scanner Error 12 = Motor test failure (ERR_MTR_TEST)• Scanner Error 13 = Ram Wall failure (ERR_RAM_WALL)• Scanner Error 14 = LED test failure (ERR_LED_TEST)	

Clearing jams

Occasionally, paper or other print media can become jammed during a print job. Some causes include the following events:



CAUTION Do **NOT** use any tool or sharp object to help remove paper jams.

- The input trays are loaded improperly or overfilled.
- Tray 2 or optional tray 3 is opened during a print job.
- Too many sheets accumulated in the output area, or sheets blocked the output area.
- The print media being used does not meet HP specifications.
- The environment in which the print media was stored is too humid or too dry.

Where to look for jams

Jams can occur in these locations:

- Inside the MFP.
- In input areas.
- In the output area.

Find and remove the jam by using the instructions on the following pages. If the location of the jam is not obvious, first look inside the MFP.

Loose toner might remain in the MFP after a jam. This could cause print-quality problems characterized by extra toner on the page. This problem should resolve itself after a few sheets have been printed.

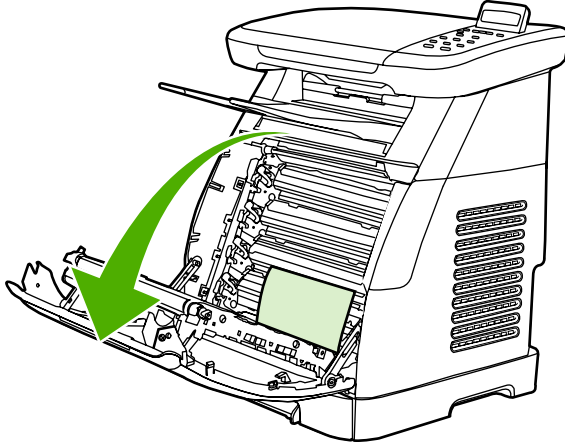
Each section below corresponds to an area where a paper jam could occur. Use the following procedures to clear the jam. In all cases, grasp the jammed paper by both corners and pull slowly to remove the paper.

Clear jams from inside the MFP



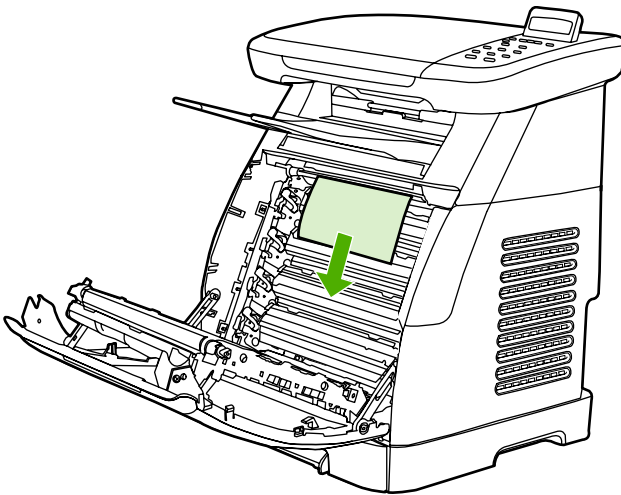
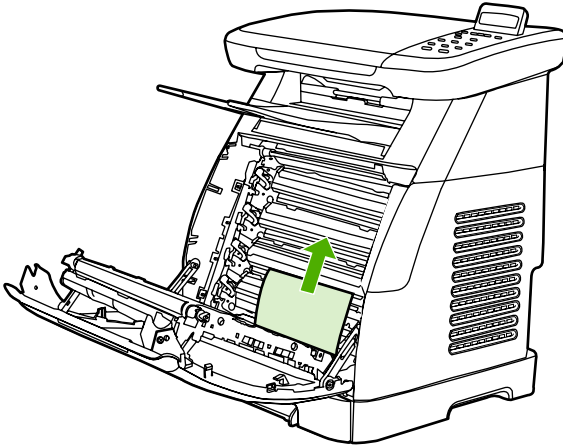
CAUTION Jams in this area might result in loose toner on the page. If toner gets on clothes or hands, wash them in cold water. (Hot water sets the toner into the fabric.)

1. Open the front door.

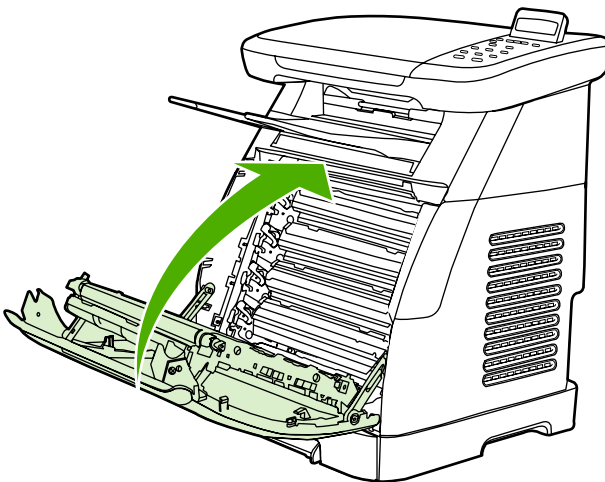


CAUTION Do not place anything on the transfer belt, which is located on the inside of the front door. Otherwise the MFP can be adversely damaged, affecting print quality.

2. Carefully grasp the jammed paper by both corners and pull slowly to remove the paper.



3. Close the front door.

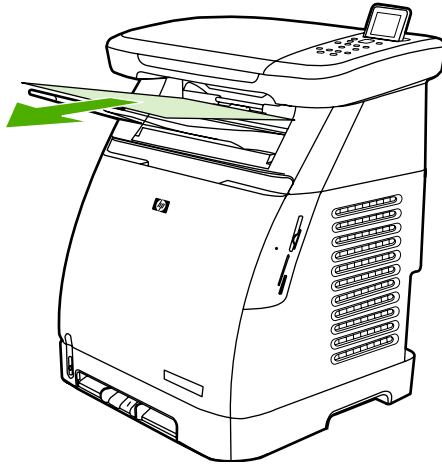


Clear jams from tray output area

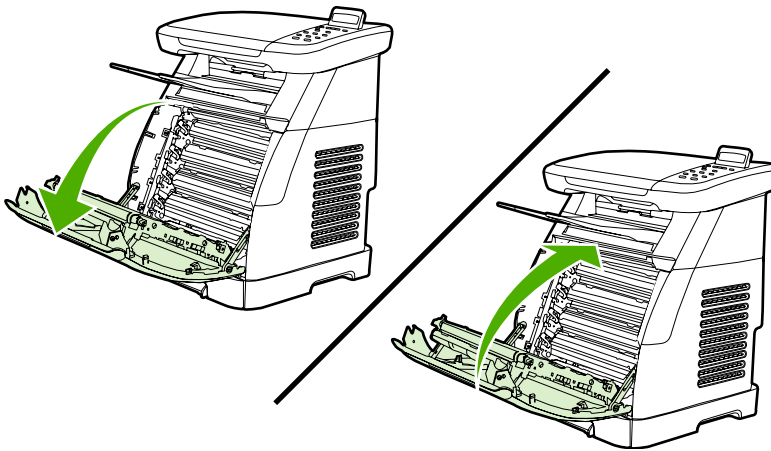


CAUTION Jams in these areas might result in loose toner on the page. If toner gets on clothes or hands, wash them in cold water. (Hot water sets the toner into the fabric.)

1. Carefully grasp the jammed paper by both corners and pull slowly to remove the paper from the top bin.

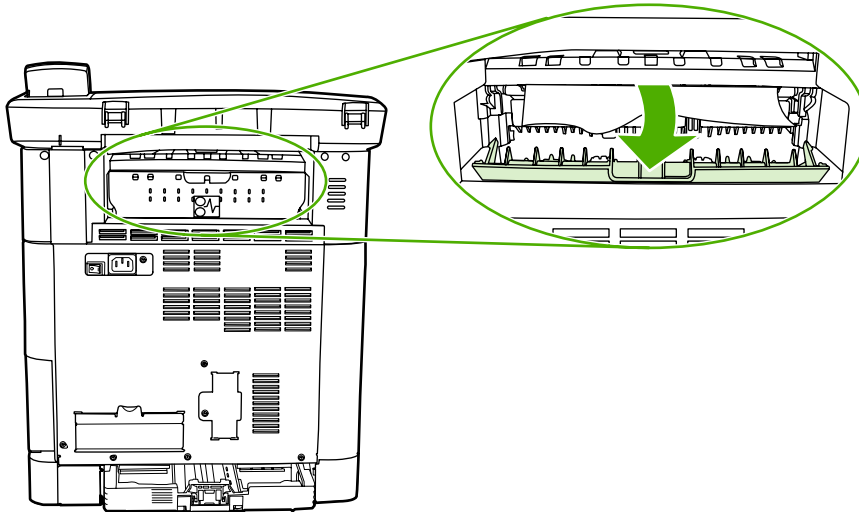


2. Open and close the front door.



Clear jams from the back of the MFP

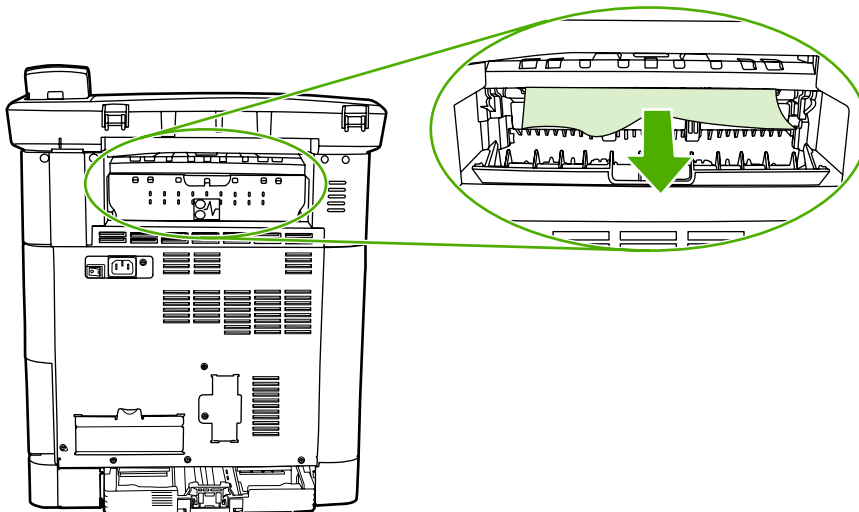
1. Open the back cover.



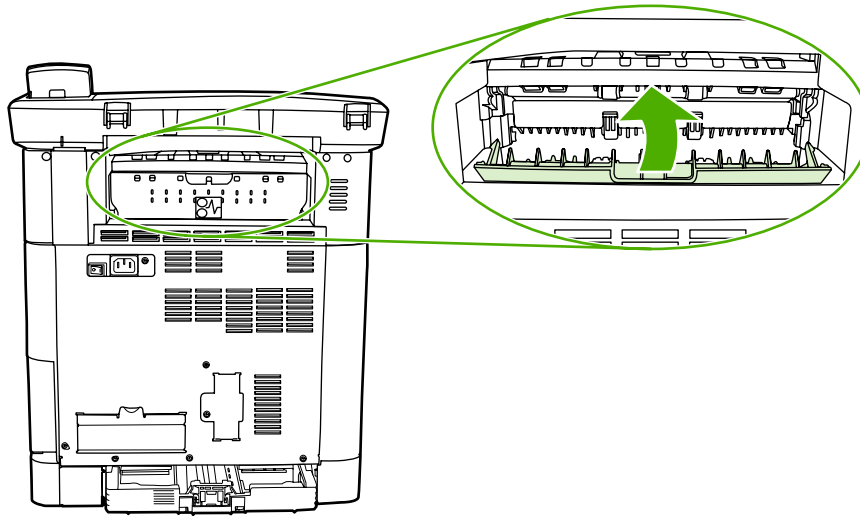
2. Remove any jammed paper.



NOTE Pull gently and evenly on the jammed paper to avoid damaging the fuser film.



3. Close the back cover.

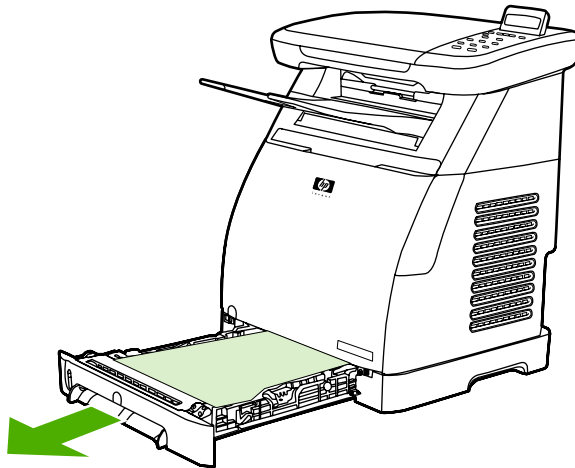


Clear jams from tray 2 or optional tray 3



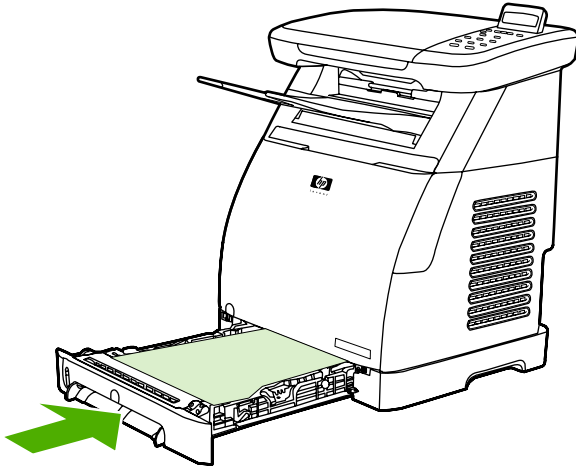
NOTE Before attempting to clear jams from tray 2 or optional tray 3, remove any jams inside the MFP.

1. Pull tray 2 or optional tray 3 out of the MFP.

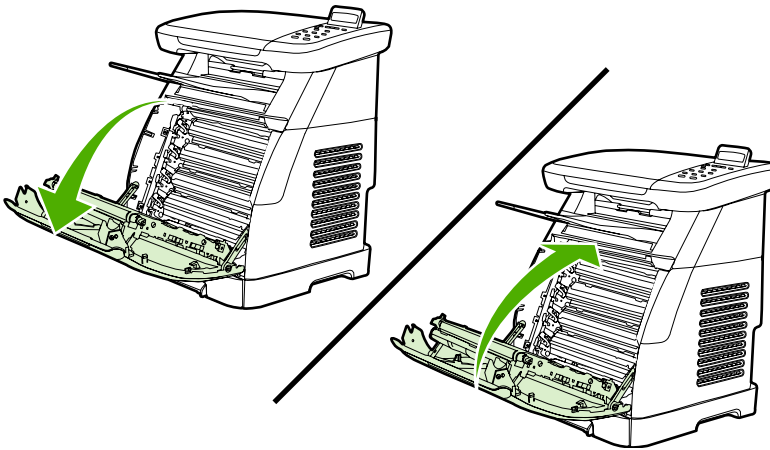


2. Carefully grasp the jammed paper by both corners and pull slowly to remove the paper.

3. Slide the tray into the MFP.



4. Open and close the front door.



E-Label-reader guide pin damage

When installing a print cartridge, be sure to insert the cartridge straight into the cartridge guides.



Installing the cartridge at an angle can damage or break the E-label-reader guide pin.

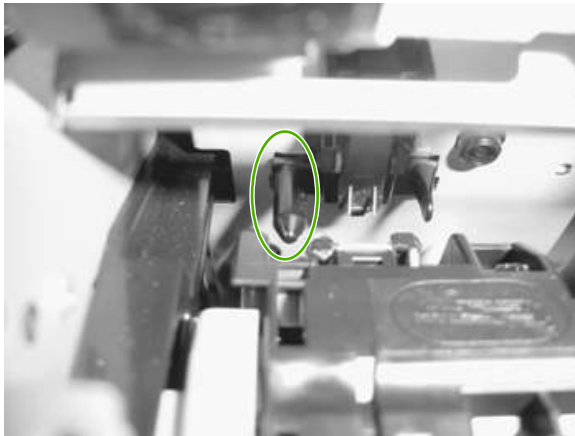


Figure 6-1 E-label-reader guide pin

If the E-label-reader guide pin is damaged or broken, the control panel displays a 10.00X supply error. No service parts are available for the E-label assembly, so a whole-unit replacement or exchange of the MFP is required.

Print problems

Print-quality problems

The following sections help identify and resolve print-quality issues.



NOTE The following print-quality tests might require the MFP to be connected to a test PC. If connecting by USB, use the installer on the software CD. When prompted, choose the **Complete Install** option so that HP ToolboxFX is installed. For a network connection, use the **Add Printer** option in the **Printers and Faxes** dialog. Use the CM1015/1017mfp print driver from the software CD.



CAUTION Connecting the USB cable to the MFP before installing the software on the test PC can result in an unstable PC/printer environment.

Identifying and correcting print defects

Use the checklist and print-quality issues charts in this section to solve print-quality problems.

Print-quality checklist

Resolve general print-quality problems by using this checklist:

1. Ensure the paper or print media used meets specifications. Generally, smoother paper provides better results. Download the *HP LaserJet Print Media Guide* from <http://www.hp.com/support/ljpaperguide>.
2. When using a special print media such as labels, transparencies, glossy, or letterhead, ensure that you have selected the correct media size and type.
3. Remove any toner build-up and run a cleaning page.
4. Print a Configuration page and Supplies Status page at the MFP.
 - Check the Supplies Status page to verify that supplies are not low or empty. No information is provided for non-HP print cartridges.
 - If the Configuration and Supplies Status pages do not print correctly, the problem might be with the hardware.

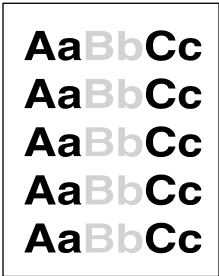
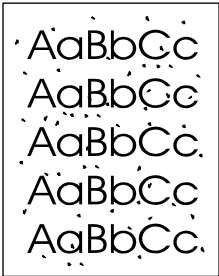
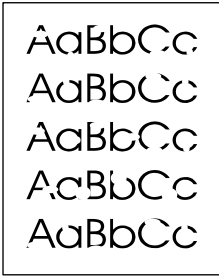
To determine the hardware problem, first load at least three sheets of paper in tray 2. Then lightly press the engine test switch located behind the small door (secured with a screw) on the rear panel. The device should print a sheet with horizontal lines of all four colors. If one or more colors are missing, inspect the device imaging system. If all colors are printed, troubleshoot for a formatter issue.
5. Print a Demo page from the HP ToolboxFX. If the page prints, the problem is with the printer driver. Try printing from the other printer driver. For example, when using the PCL 6 printer driver, print from the HP postscript level 3 printer driver.

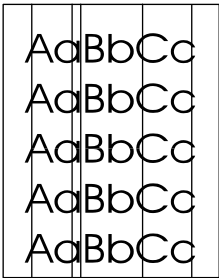
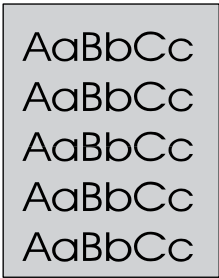

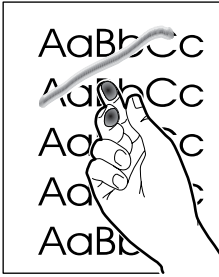
Use the Add Printer Wizard in the **Printers** folder in Windows XP dialog box to install the HP postscript level 3 emulation printer driver.

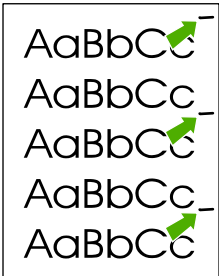
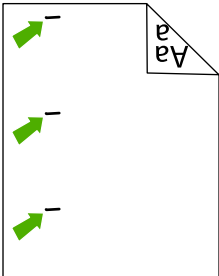
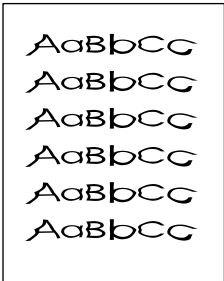
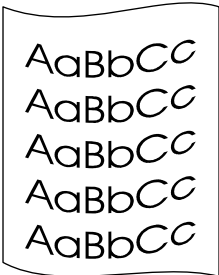
6. Try printing from a different program. If the page prints correctly, the problem is with the program from which you were printing.
7. Restart the computer and the MFP and try printing again. If the problem is not resolved, choose one of these options:
 - If the problem is affecting all printed pages, see *General print-quality issues*.
 - If the problem is affecting only pages printed in color, see *Solve issues with printing color documents*.

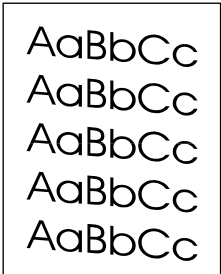
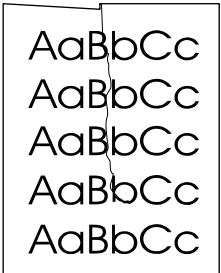
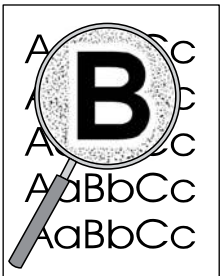

General print-quality issues

The following examples depict letter-size paper that has passed through the MFP short edge first. These examples illustrate problems that could affect all of the pages that printed, whether it is color printing or black only. These topics list the typical cause and solution for each of these examples.

Problem	Cause	Solution
Print is light or faded. 	The media might not meet HP specifications. One or more print cartridges might be low. When using non-HP print cartridges, no messages appear on the control panel or in the HP ToolboxFX.	Use media that meets HP specifications. Replace any low print cartridges. If none of the print cartridges is low or empty, remove the print cartridges one at a time and inspect the toner roller in each to see if the roller is damaged. If so, replace the print cartridge. Print the Supplies Status page to check the remaining life.
Toner specks appear. 	The media might not meet HP specifications. The paper path might need cleaning.	Use media that meets HP specifications. Clean the paper path. See the HP ToolboxFX online help.
Dropouts appear. 	A single sheet of print media might be defective. The moisture content of the paper is uneven or the paper has moist spots on its surface. The paper lot is flawed. The manufacturing processes can cause some areas to reject toner.	Try reprinting the job. Try different paper, such as high-quality paper that is intended for color laser MFPs. Try different paper, such as high-quality paper that is intended for color laser MFPs.
Vertical streaks or bands appear on the page.	One or more print cartridges might be low or defective. If non-HP print	Replace any low print cartridges.

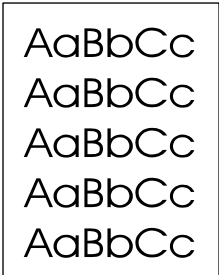


Problem	Cause	Solution
	cartridges are used, no messages appear on the control panel or in the HP ToolboxFX.	
The amount of background toner shading becomes unacceptable.	The media might not meet HP specifications.	Use a different paper with a lighter basis weight.
	<p>Very dry (low humidity) conditions can increase the amount of background shading.</p> <p>One or more print cartridges might be low. If non-HP print cartridges are used, no messages appear on the control panel or in the HP ToolboxFX.</p>	<p>Check the MFP environment.</p> <p>Replace any low print cartridges.</p>
Toner smears appear on the media.	The media might not meet HP specifications.	Use media that meets HP specifications.
	If toner smears appear on the leading edge of the paper, the media guides are dirty, or debris has accumulated in the print path.	Clean the media guides and the paper path.
The toner smears easily when touched.	The MFP is not set to print on the type of media on which you want to print.	In the printer driver, select the Paper tab and set Type is to match the type of media on which you want to print. Print speed might be slower when using heavy paper.
	<p>The media might not meet HP specifications.</p> <p>The fuser is damaged.</p>	<p>Use media that meets HP specifications.</p> <p>Replace the fuser.</p>

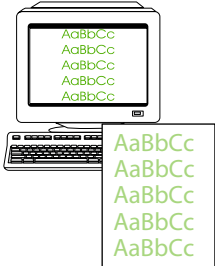

Problem	Cause	Solution
<p>Marks repeatedly appear at even intervals on the printed side of the page.</p> 	<p>A print cartridge might have a problem.</p> <p>Internal parts might have toner on them.</p> <p>The paper path might need cleaning.</p> <p>The fuser might be damaged or dirty.</p>	<p>To determine which cartridge has a problem, print the PQ diagnostics page from HP ToolboxFX.</p> <p>The problem typically corrects itself after a few more pages.</p> <p>Clean the MFP through HP ToolboxFX.</p> <p>Clean the MFP through HP ToolboxFX.</p> <p>Replace the fuser. See <i>Replacing the fuser assembly</i>.</p>
<p>Marks repeatedly appear at even intervals on the unprinted side of the page.</p> 	<p>Internal parts might have toner on them.</p> <p>The paper path might need cleaning.</p> <p>The fuser might be damaged or dirty.</p>	<p>The problem typically corrects itself after a few more pages.</p> <p>Clean the MFP through HP ToolboxFX.</p> <p>Clean the MFP through HP ToolboxFX.</p> <p>Replace the fuser. See <i>Replacing the fuser assembly</i>.</p>
<p>The printed page contains misformed characters.</p> 	<p>The media might not meet HP specifications.</p> <p>If characters are incorrectly formed so that they produce a wavy effect, the laser scanner might need service.</p>	<p>Use a different paper, such as high-quality paper that is intended for color laser MFPs.</p> <p>Verify that the problem also occurs on the Configuration page. If so, replace the whole MFP.</p>
<p>The printed page is curled or wavy.</p> 	<p>The MFP is not set to print on the type of media on which you want to print.</p> <p>The media might not meet HP specifications.</p> <p>Both high temperature and humidity can cause paper curl.</p>	<p>In the printer driver, select the Paper tab and set Type is to match the type of paper on which you want to print. Print speed might be slower when using heavy paper.</p> <p>Use a different paper, such as high-quality paper that is intended for color laser MFPs.</p> <p>Check the MFP environment.</p>

Problem	Cause	Solution
Text or graphics are skewed on the printed page. 	<p>The media might be loaded incorrectly.</p> <hr/> <p>The paper path might be skewing the media.</p> <hr/> <p>The media might not meet HP specifications.</p>	<p>Make sure that the paper or other print media is loaded correctly and that the media guides are not too tight or too loose against the stack.</p> <hr/> <p>Inspect the ETB for obvious damage, and replace it if necessary. If the error persists, replace the whole MFP.</p> <hr/> <p>Use a different paper, such as high-quality paper that is intended for color laser MFPs.</p>
The printed page contains wrinkles or creases. 	<p>The media might be loaded incorrectly.</p> <hr/> <p>The fuser might be damaged.</p> <hr/> <p>The media might not meet HP specifications.</p>	<p>Verify that the media is loaded correctly and that the media guides are not too tight or too loose against the stack.</p> <hr/> <p>Turn over the stack of paper in the input tray, or try rotating the paper 180° in the input tray.</p> <hr/> <p>Replace the fuser.</p> <hr/> <p>Use a different paper, such as high-quality paper that is intended for color laser MFPs.</p>
Toner appears around the printed characters. 	<p>The media might be loaded incorrectly.</p> <hr/> <p>The area around the MFP might be too warm or too humid.</p> <hr/> <p>If large amounts of toner have scattered around the characters, the paper might have high resistivity.</p>	<p>Turn over the stack of paper in the tray.</p> <hr/> <p>Move the MFP to a location with better environmental conditions.</p> <hr/> <p>Use a different paper, such as high-quality paper that is intended for color laser MFPs.</p>
An image that appears at the top of the page (in solid black) repeats farther down the page (in a gray field). 	<p>Software settings might affect image printing.</p> <hr/> <p>The order of images printed might affect printing.</p> <hr/> <p>The fuser might be contaminated.</p>	<p>In the software program, change the tone (darkness) of the field in which the repeated image appears.</p> <hr/> <p>In the software program, rotate the whole page 180° to print the lighter image first.</p> <hr/> <p>Change the order in which the images are printed. For example, have the lighter image at the top of the page, and the darker image farther down the page.</p> <hr/> <p>Run the MPF cleaning utility from HP ToolboxFX.</p>

Solve issues with printing color documents

This section describes issues that can occur when printing in color.

Problem	Cause	Solution
Only black is printing when the document should be printing in color.	Color mode is not selected in the program or printer driver.	Select color mode instead of grayscale mode.
	The correct printer driver might not be selected in the program.	Select the correct printer driver.
One or more colors are not printing, or are inaccurate.	Sealing tape might be on the print cartridges.	Verify that the sealing tape has been completely removed from the print cartridges.
	The media might not meet HP specifications.	Use a different paper, such as high-quality paper that is intended for color laser MFPs.
	The MFP might be operating in excessively humid conditions.	Verify that the MFP environment is within humidity specifications.
	One or more print cartridges might be low. When using non-HP print cartridges, no messages appear on the control panel or in the HP ToolboxFX.	Replace any low print cartridges.
A color is printing inconsistently after loading a new print cartridge.	Another print cartridge might be low. When using a non-HP print cartridge, it might be low or empty but you receive no indication.	Remove the print cartridge for the color that is printing inconsistently and reinstall it.
	The control panel is set for override.	Replace low or empty print cartridges.
	Media might not meet specifications.	Consult the media specifications table.

Problem	Cause	Solution
<p>The colors on the printed page do not match the colors as they appear on the screen.</p> 	The colors on the computer monitor might differ from the MFP output.	Select Screen Match in the Color tab of the printer driver.
	One or more print cartridges could be low.	Replace print cartridges.
	If extremely light colors or extremely dark colors on screen are not printing, the software program might interpret extremely light colors as white or extremely dark colors as black.	If possible, avoid using extremely light or extremely dark colors.
<p>The finish on the printed color page is inconsistent.</p> 	The media might not meet HP specifications.	Use a different paper, such as high-quality paper that is intended for color laser MFPs.
	The media might be too rough.	Use a smooth paper or print media, such as a high-quality paper that is made for color laser MFPs. Generally, smoother media produces better the results.
<p>The finish on the printed or copied color page has light colored spots.</p>	An improper fuser mode is selected.	Select the proper paper type, such as heavy, glossy rough, or card stock. Also inspect the fuser film for damage, and replace the fuser if damage is found.
	The media may have been bent when loaded, or the ETB may be damaged.	Load new paper and reprint or copy the document. If the problem persists, look for dents or damage to the ETB and replace it if necessary.

Media-handling problems

Use the information in this section when the MFP experiences media-handling problems.

Print-media guidelines

- For best results, make sure that the paper is of good quality, and free of cuts, nicks, tears, spots, loose particles, dust, wrinkles, voids, staples, and curled or bent edges.
- For best-quality color printing, use a smooth type of paper. Generally, smoother media produces better results.
- Check the paper package label to ensure the type of paper you are loading (such as bond or recycled) is correct.
- Do not use media that is designed for Inkjet MFPs only. Use media that is designed for color LaserJet MFPs.
- Do not use letterhead paper that is printed with low-temperature inks, such as those used in some types of thermography.

- Do not use raised or embossed letterhead.
- The MFP uses heat and pressure to fuse toner to the paper. Make sure that any colored paper or preprinted forms use inks that are compatible with this fusing temperature 210°C (410°F) for 0.1 seconds.



CAUTION Failure to follow these guidelines could cause jams or damage to the MFP.

Solve print-media problems

The following problems with paper cause print-quality deviations, jamming, or even damage to the MFP.

Problem	Cause	Solution
Poor print quality or toner adhesion	The paper is too moist, too rough, too heavy or too smooth, or it is embossed or from a faulty paper lot.	Verify that the appropriate media type was selected in the printer driver. Try another kind of paper, between 100 and 250 Sheffield, 4% to 6% moisture content.
Dropouts, jamming, or curl	The paper has been stored incorrectly.	Store paper flat in its moisture-proof wrapping.
	The paper has variability from one side to the other.	Turn the paper over.
Excessive curl	The paper is too moist, has the wrong grain direction, or is of short-grain construction.	Verify that the appropriate media type was selected in the printer driver. Try printing on media from a new or different package. Use long-grain paper.
	The paper varies from side-to-side.	Turn the paper over.
Jamming, damage to MFP	The paper has cutouts or perforations.	Use paper that is free of cutouts or perforations.
Problems with feeding	The paper has ragged edges.	Use high-quality paper that is made for color laser printers.
	The paper varies from side-to-side.	Turn the paper over.
	The paper is too moist, too rough, too heavy or too smooth, has the wrong grain direction, or is of short-grain construction or it is embossed or from a faulty paper lot.	Try another kind of paper, between 100 and 250 Sheffield, 4 to 6% moisture content. Use long-grain paper.
Print is skewed (crooked)	The media guides might be incorrectly adjusted.	Remove all media from the input tray, straighten the stack, then load the media in the input tray again. Adjust the media guides to the width and length of the media being used and try printing again.

Problem	Cause	Solution
More than one sheet feeds at one time.	The media tray might be overloaded.	Remove some of the media from the tray.
	The media might be wrinkled, folded, or damaged.	Verify that the media is not wrinkled, folded, or damaged. Try printing on media from a new or different package.
MFP does not pull media from the media input tray.	The MFP might be in manual feed mode.	<ul style="list-style-type: none"> • If Manual feed appears on the MFP control-panel display, press OK to print the job. • Verify that the MFP is not in manual feed mode and print the job again.
	The media tray might be overloaded.	Remove some of the media from the tray.
	The paper-length adjustment control in tray 2 or optional tray 3 is set at a length that is greater than the media size.	Adjust the paper-length adjustment control to the correct length.
	The pickup roller might be dirty or damaged.	Clean or replace the pickup roller.

Performance problems

Try the tips in this section if pages exit the MFP but have nothing printed on them, or when the MFP does not print any pages.

Problem	Cause	Solution
Pages print but are totally blank.	The sealing tape might still be in the print cartridges.	Verify that the sealing tape has been completely removed from the print cartridges.
	The document might contain blank pages.	Check the document that is printing to see if content appears on all of the pages.
	The MFP might be malfunctioning.	To check the MFP, print a Configuration page.
Pages print very slowly.	Heavier media types can slow the print job.	Print on a different type of media.
	Complex pages print more slowly.	Proper fusing requires a slower print speed to ensure the best print quality.

Problem	Cause	Solution
Pages did not print.	The MFP might not be pulling media correctly.	See <i>Media handling problems</i> .
	The media is jamming in the MFP.	Clear the jam.
	The USB cable might be defective or incorrectly connected.	<ul style="list-style-type: none"> • 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 the computer.	The device might not share a USB port. When there is an external hard drive or network switchbox connected to the same port as the MFP, the other device might be interfering. To connect and use the MFP, disconnect the other device or use two USB ports on the computer.

Scan problems

Use the table to solve image-scan issues.

Problem	Cause	Solution
The scanned image is of poor quality.	The original might be a second-generation photo or picture.	<ul style="list-style-type: none"> To eliminate the patterns, try reducing the size of the image after scanning. Print the scanned image to see if the quality is better. Verify that the resolution and color settings are correct for the type of scan job being performed.
	If the scanned page has a background but the original document does not, the original might be too thin to scan or copy cleanly.	On the flatbed scanner, place three sheets of clean paper on top of the original, close the flatbed scanner cover, then re-scan the original.
	The image that appears on the screen might not be an accurate representation of the quality of the scan.	<ul style="list-style-type: none"> Try adjusting the computer monitor settings to use more colors (or levels of gray). Make this adjustment by opening Display in Windows Control Panel. Try adjusting the resolution and color settings in the scanner software.
	The original might have been loaded incorrectly.	Verify originals are properly loaded onto the flatbed scanner.
	The scanner glass might be dirty.	Clean the scanner glass.
	The graphics settings might not be suitable for the type of scan job that being performed.	Try changing the graphics settings or the scan mode.
Part of the image did not scan.	The original might have been loaded incorrectly.	Verify originals are properly loaded onto the flatbed scanner.
	A colored background might be causing images in the foreground to blend into the background.	Try adjusting the settings before scanning the original or enhancing the image after scanning the original.
	The original is longer than 298 mm (11.75 inches).	The maximum flatbed scannable length is 298 mm (11.75 inches). If the page exceeds the maximum length, the scanner stops.
	The original is too small.	The minimum size that the flatbed scanner supports is 25 by 25 mm (1 by 1 inch).
	The media size is incorrect.	In Scan settings, make sure that the input media size is large enough for the document that being scanned.

Problem	Cause	Solution
The scan takes too long.	The resolution or color level is set too high.	Change the resolution and color level settings to the correct settings for the job.
	The software is set to scan in color.	The system default is color, which takes longer to scan even when scanning a monochrome original. If you acquire an image through TWAIN or WIA, you can change the settings so that the original scans in grayscale or black-and-white. See the device software Help for details.
	A print job or copy job was sent before you tried to scan.	If someone sent a print job or copy job before you tried to scan, the scan starts if the scanner is not busy. However, because the printer and scanner share memory, the scan might be slower.

Resolve scan-quality problems using the table.

Problem	Cause	Solution
Blank pages	The original might have been loaded upside down.	On the flatbed scanner, place the original document face-down with the upper-left corner of the document at the lower-right corner of the glass.
	The scanner bulb might not be working.	If the scanner bulb does not light, verify that the cables from the scanner to the formatter are connected correctly. If the error persists, replace parts one at a time in the following order until the problem is resolved: scanner assembly, and finally the formatter.
Too light or dark	The resolution and color levels may be set incorrectly.	<p>Verify the resolution and color settings.</p> <ul style="list-style-type: none"> • Use the Text setting for items that contain mostly text. • Use the Film photo setting when making a copy of a photograph. • Use Picture when making a copy of a graphic. • Use the Mixed setting for documents that include both text and graphics.
Black dots or streaks	Ink, glue, correction fluid, or an unwanted substance might be on the glass.	Clean the flatbed scanner surface.

Problem	Cause	Solution
Unclear text	The resolution and color levels may be set incorrectly.	Verify the correct resolution and color settings.
The scanned page has a background but the original document does not.	The original might be too thin to scan cleanly.	On the flatbed scanner, place three sheets of clean paper on top of the original, close the flatbed scanner cover, then re-scan the original.

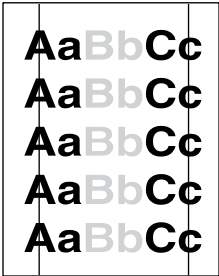
Copy problems

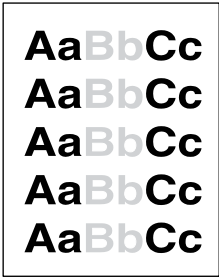
The following are a few simple steps that can improve copy quality:

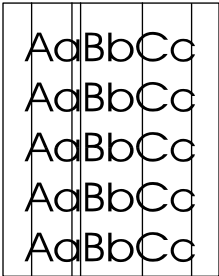
- Use quality originals.
- Adjust the control-panel settings for the type of original.
 - Use the **Text** setting for items that contain mostly text. This is the default setting.
 - Use the **Film photo** setting when making a copy of a photograph.
 - Use **Picture** when making a copy of a graphic.
 - Use the **Mixed** setting for documents that include both text and graphics.

Use the following table to Identify and resolve imaging problems.

Problem	Cause	Solution
Copy edges are cropped	Original is edge-to-edge or has margins smaller than those supported by this MFP.	<div>1. Position the original 1/6" away from the top and right edges of the scanner glass.</div> <div>2. Select Reduce/Enlarge, and press the navigation arrows to select Full page = 91%, then press Start Black or Start Color</div>



Problem	Cause	Solution
Images are missing or faded.	One or more print cartridges might be low.	Replace any low print cartridges.
	The device might have calibrated incorrectly after installing a print cartridge.	Calibrate the device.
	The original might be of poor quality.	If the original is too light or damaged, the copy might not be able to compensate, even when adjusting the contrast. If possible, find an original document in better condition.
	The original might have a colored background.	Colored backgrounds might cause images in the foreground to blend into the background, or the background might appear in a different shade. If possible, use an original document without a colored background.
Vertical white or faded stripes appear on the copy.	The media might not meet HP specifications.	Use media that meets HP specifications.
	One or more print cartridges might be low.	Replace any low print cartridges. If the error persists, inspect the print cartridges for defects in the printing area.
	If the error persists, replace the scanner subassembly.	

Problem	Cause	Solution
Unwanted lines appear on the copy.	Tray 1 might not be placed correctly.	Verify that tray 1 is in place.
	The flatbed scanner might be dirty.	Clean the paper path.
	An image exists on the back of the original, or defects exist on the scanner cover.	On the flatbed scanner, place three sheets of clean paper on top of the original, close the flatbed scanner cover, then re-scan the original.
	If the error persists, print a document from the computer. If the printed page is free of the unwanted lines, and if the flatbed glass is clean, replace the scanning assembly. See <i>Removing the scanning assembly</i> .	
	Ink, glue, correction fluid, or an unwanted substance might be on the flatbed scanner.	Clean the MFP.
Copies are too light or dark.	The device settings may be incorrect.	Verify that the quality settings are correct on the device control panel. See the device software Help for more information about changing the settings.
	The device might not be calibrated correctly.	Calibrate the device.

Problem	Cause	Solution
Text is unclear.	The device settings may be incorrect.	Verify that the quality settings are correct on the device control panel. See the device software Help for more information about changing the settings.
	The device might not be calibrated correctly.	Calibrate the device.
	The original is of poor quality.	Try copying another document. If the copy is free of defects, obtain a better-quality original.
	If the error persists, print a document from the computer. If the printed page is free of unclear text, and if the flatbed glass is clean, replace the scanning assembly. See <i>Removing the scanning assembly</i> .	

Memory-card problems

Use the following table to Identify and resolve memory-card problems.



NOTE For information about memory-card control-panel error messages and hardware replacement, see the *Control-panel messages* section.

Problem	Cause	Solution
Device cannot detect files on the memory card.	The memory card might be missing or inserted incorrectly.	Verify that the memory card is inserted correctly.
	The files might not be in the correct format.	To print from the device control panel, the files must be in the sRGB JPEG format. To print other formats, use a software program on the computer.
	More than one memory card might have inserted.	Only one card slot can be occupied for the device to detect JPEG files. Verify that only one card is inserted.
The index page will not print.	The memory card might have been removed before the device could print the page.	Reinsert the card and reprint the index page.
	More than one memory card might have inserted.	Only one card slot can be occupied for the device to detect JPEG files. Verify that only one card is inserted.
	One or more print cartridges might be low.	Replace any low print cartridges.
The proof sheet will not print.	The memory card might have been removed before the device could print the page.	Reinsert the card and reprint the proof sheet.
	More than one memory card might have inserted.	Only one card slot can be occupied for the device to detect JPEG files. Verify that only one card is inserted.
	One or more print cartridges might be low.	Replace any low print cartridges.
The proof sheet will not scan correctly.	The flatbed scanner glass might be dirty.	Clean the flatbed scanner glass.
	The scanner might not be able to read the photo selections. This feature has been optimized and tested for use with Genuine HP Toner Supplies (variations in color shading can impact the performance of this feature).	Verify that the bubbles are colored darkly enough for the scanner to read.
	The proof sheet might be loaded incorrectly.	On the flatbed scanner, place the original document face-down with the upper-left corner of the document at the lower right corner of the glass.
The wrong photo printed.	An incorrect memory card might be inserted.	Verify that the correct memory card is inserted.
	The wrong number from the memory card might have selected.	Print an index page to verify the file number, if couldn't remember the number of the photo that to print.

Problem	Cause	Solution
The photo did not print.	The media input tray might be empty.	Load media into the input tray.
	The memory card might have been removed before the device could print the photo.	Reinsert the card and reprint the photo.
	The proof sheet is skewed.	Verify that the paper guides are positioned correctly against the paper in the input tray. Reprint the proof sheet. Verify that the images on the proof sheet are aligned properly, and then reselect the images which has to be print.
	The proof sheet is not aligned properly on the scanner.	Realign the proof sheet facedown on the flatbed scanner, with the upper-left corner of the document located in the lower right corner of the glass.
The photo quality is unacceptable.	The original photo quality might be poor.	Use a software program to enhance photo quality, and then print the photo from the computer.
	The default settings on the printer might not produce the desired quality.	Use a software program to print the photo at the desired settings.
The photo is the wrong size.	The appropriate job size might not be available from the device control panel.	Use a software program to resize the photo at the desired settings, and then print the photo from the computer.
	Incorrect job size might have selected.	Verify that the correct setting is selected at the device control panel.
Cannot edit, save, or delete images on the memory card.	The device cannot read the memory card.	Verify that the memory card is properly inserted and that the card is one that is supported.
Scanner did not read proof sheet.	The device is using non-HP supplies. This feature has been optimized and tested for use with Genuine HP Toner Supplies (variations in color shading can impact the performance of this feature).	Use a software program to print the photo from the computer.
		Print photos directly from the memory card by using the control panel.
		Install HP supplies in the device and reprint the proof sheet.

Functional tests (SERVICE ONLY)

Engine-test print

The engine-test print confirms whether the printing function (as performed by the DC controller) is operating correctly.

1. Verify the printer is in Ready mode.
2. Remove the screw from the test-switch cover (1) on the back panel of the MFP, and then remove the cover.

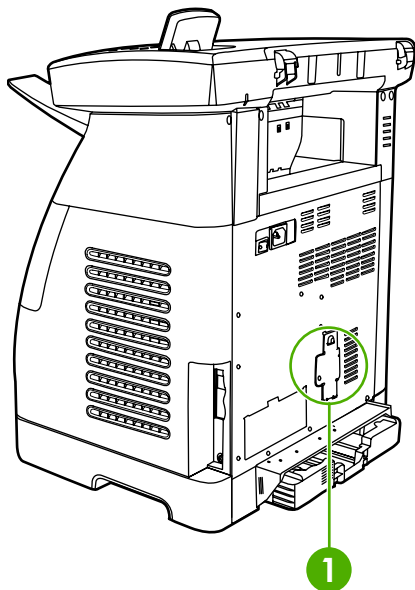


Figure 6-2 Engine-test switch cover

3. Press the engine-test switch.

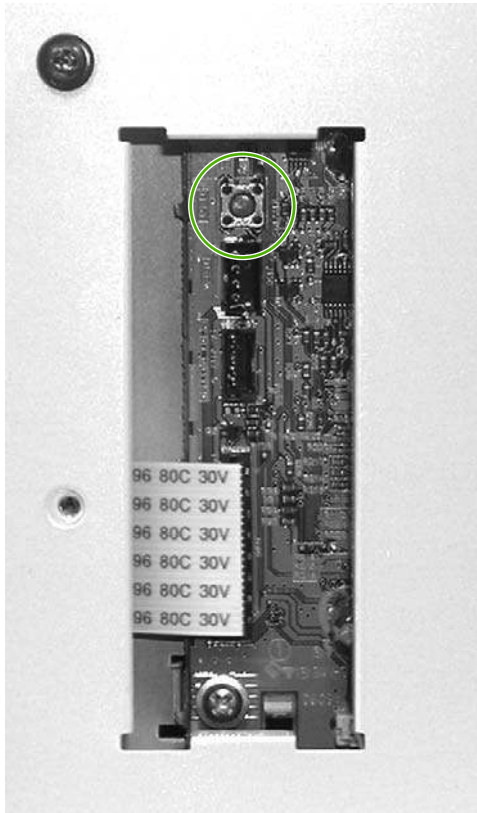


Figure 6-3 Engine-test switch

The MFP prints a one-page test pattern of horizontal lines.

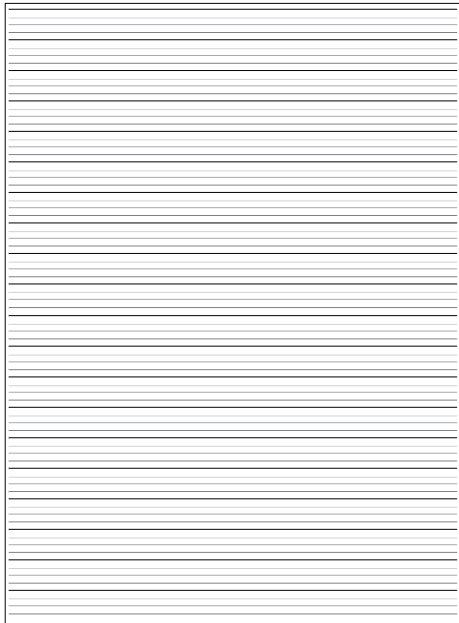


Figure 6-4 Test page

Service mode functions (SERVICE ONLY)

Cold reset

Cold reset is not supported by this MFP. Use the Restore defaults feature instead.

Restore defaults

This feature resets all menu settings to the factory default settings. It does not reset factory-settable settings such as formatter number, page counts, factory paper settings, language, network address, etc.

1. Press **Menu**.
2. Press the navigation arrows to select **Service**.
3. Press **OK**.
4. Press the navigation arrows to select **Restore defaults**.
5. Press **OK**.

Cleaning mode

The Cleaning mode feature removes dust and toner from the print paper path. This process should be used if the user sees toner specks and dots on the printed page. This process produces page-toner debris, which should be discarded.

1. Press **Menu**.
2. Press the navigation arrows to select **Service**.
3. Press **OK**.
4. Press the navigation arrows to select **Cleaning mode**.
5. Press **OK**.
6. When prompted, load plain letter in tray 1.
7. Press **OK** to begin the cleaning process.

USB speed

This option sets the USB speed to high or full. For the device to operate at high speed, it must have high speed enabled and be connected to an EHCI host controller that is also operating at high speed.

1. Press **Menu**.
2. Press the navigation arrows to select **Service**.
3. Press **OK**.
4. Press the navigation arrows to select **USB speed**.
5. Press **OK**.

6. Press the navigation arrows to select **High** or **Full**.
7. Press **OK**.
8. Press **OK** again to confirm the choice.

Less paper curl

The device can be put into a mode that reduces the paper curl produced by the print engine. This mode essentially sets the default paper type to “Light”. The default is off.

1. Press **Menu**.
2. Press the navigation arrows to select **Service**.
3. Press **OK**.
4. Press the navigation arrows to select **Less paper curl**.
5. Press **OK**.
6. Press the navigation arrows to select **Off** or **On**.
7. Press **OK**.

Archive print

The device can be put into a mode that produces output less susceptible to toner smearing and dusting so it can be preserved and archived. It essentially sets the default paper type to “Heavy”. The default is off.

1. Press **Menu**.
2. Press the navigation arrows to select **Service**.
3. Press **OK**.
4. Press the navigation arrows to select **Archive print**.
5. Press **OK**.
6. Press the navigation arrows to select **Off** or **On**.
7. Press **OK**.

NVRAM initialization



CAUTION NVRAM initialization will erase all network settings. Before performing NVRAM initialization, print a Network Configuration page, which contains network-setting information.

NVRAM initialization performs the following actions:

- Resets all customer-accessible menu settings via control panel and software back to the factory default settings
- Resets the language to the value set at the factory

- Resets the default media size to cold reset media size
- Resets the symbol set to PC-8



NOTE The following steps reset the same NVRAM locations that are reset using the **Restore Defaults** option in the control panel Service menu. The following process should be used if the MFP does not come to a **Ready** state and an NVRAM initialization is desired.

Use the following procedure to perform an NVRAM initialization.

1. Turn off the printer.
2. Press and hold the **Right arrow** and **Cancel** buttons simultaneously.
3. Turn on the printer.
4. When you see the message **Permanent storage init**, release the **Right arrow** and **Cancel** buttons.

When the NVRAM init is complete, the printer returns to the **Ready** state.

Continuous self-test

This feature allows you to put the printer in continuous printing mode without having to send jobs to it. When the continuous self-test is running, the MFP continually prints the Self Test / Configuration report.



NOTE If the 2ndary Service menu is already unlocked, skip to step 4.

1. Press **Menu**.
2. Press and hold the **Left arrow** and **Cancel** buttons simultaneously.
3. Release the **Left arrow** and **Cancel** buttons.
4. Press **Menu**.
5. Press the navigation arrows to select **2ndary Service**.
6. Press **OK**.
7. Press the navigation arrows to select **Service Reports**.
8. Press **OK**.
9. Press the navigation arrows to select **Cont. Self-Test**.
10. Press **OK** to begin the continuous self-test.

Press **Cancel** to stop the continuous self-test.

Scan calibration

This feature allows you to re-calibrate the scanner. It does not affect image quality, but it does print out a useful graph for detecting scan problems.



NOTE If the 2ndary Service menu is already unlocked, skip to step 4.

1. Press **Menu**.
2. Press and hold the **Left arrow** and **Cancel** buttons simultaneously.
3. Release the **Left arrow** and **Cancel** buttons.
4. Press **Menu**.
5. Press the navigation arrows to select **2ndary Service**.
6. Press **OK**.
7. Press the navigation arrows to select **Scan calibration**.
8. Press **OK**.
9. Press the navigation arrows to select **Calibrate**.
10. Press the navigation arrows to select the desired calibration option. The following choices are available:
 - **300 mono copy**
 - **600 scan to host**
 - **1200 scan to host**
 - **300 color copy**
11. Press **OK** to generate the calibration graph.

Display test

The test verifies that all LEDs and control-panel characters display correctly. First the LEDs illuminate one at a time. Then the pixels in each line are tested. Finally, the CM1015 control panel displays all 255 characters in screens of 16 characters; the CM1017 control panel displays **?????** instead of characters.



NOTE If the 2ndary Service menu is already unlocked, skip to step 4.

1. Press **Menu**.
2. Press and hold the **Left arrow** and **Cancel** buttons simultaneously.
3. Release the **Left arrow** and **Cancel** buttons.
4. Press **Menu**.
5. Press the navigation arrows to select **2ndary Service**.
6. Press **OK**.
7. Press the navigation arrows to select **Display Test**.
8. Press **OK**.
9. Follow the prompts on the control panel.

Control-panel button test

This test verifies that all of the buttons on the control panel function correctly.



NOTE If the 2ndary Service menu is already unlocked, skip to step 4.

1. Press **Menu**.
2. Press and hold the **Left arrow** and **Cancel** buttons simultaneously.
3. Release the **Left arrow** and **Cancel** buttons.
4. Press **Menu**.
5. Press the navigation arrows to select **2ndary Service**.
6. Press **OK**.
7. Press the navigation arrows to select **Button Test**.
8. Press **OK**.
9. Follow the prompts on the control panel to test all the buttons.

Show FW version

This test displays the date code of the device firmware.



NOTE If the 2ndary Service menu is already unlocked, skip to step 4.

1. Press **Menu**.
2. Press and hold the **Left arrow** and **Cancel** buttons simultaneously.
3. Release the **Left arrow** and **Cancel** buttons.
4. Press **Menu**.
5. Press the navigation arrows to select **2ndary Service**.
6. Press **OK**.
7. Press the navigation arrows to select **Show FW Version**.
8. Press **OK**.
9. Follow the prompts on the control panel to test all the buttons.

Color calibration

This feature allows you to perform manual Color Pane Registration (CPR) and density calibration.



NOTE If the 2ndary Service menu is already unlocked, skip to step 4.

1. Press **Menu**.
2. Press and hold the **Left arrow** and **Cancel** buttons simultaneously.
3. Release the **Left arrow** and **Cancel** buttons.
4. Press **Menu**.
5. Press the navigation arrows to select **2ndary Service**.
6. Press **OK**.
7. Press the navigation arrows to select **Color cal.**.
8. Press **OK**.
9. Press the navigation arrows to select **Adjust color**.
10. Press the navigation arrows to select the desired calibration choice.
 - **Contrasts**
 - **Highlights**
 - **Midtones**
 - **Shadows**
11. Press **OK**.
12. Press the navigation arrows to select the desired color density.
 - **Cyan**
 - **Magenta**
 - **Yellow**
 - **Black**
13. Press **OK**.
14. Press the navigation arrows to select the desired color setting.
15. Press **OK**.

Memory cards

This feature allows you to enable or disable the photo memory-card slots.



NOTE If the 2ndary Service menu is already unlocked, skip to step 4.

1. Press **Menu**.
2. Press and hold the **Left arrow** and **Cancel** buttons simultaneously.

3. Release the **Left arrow** and **Cancel** buttons.
4. Press **Menu**.
5. Press the navigation arrows to select **2ndary Service**.
6. Press **OK**.
7. Press the navigation arrows to select **Memory Cards**.
8. Press **OK**.
9. Press the navigation arrows to select **Enabled** or **Disabled**.
10. Press **OK**.

Cleaning the ETB

To clean the ETB, use the following procedure:



NOTE If the 2ndary Service menu is already unlocked, skip to step 4.

1. Press **Menu**.
2. Press and hold the **Left arrow** and **Cancel** buttons simultaneously.
3. Release the **Left arrow** and **Cancel** buttons.
4. Press **Menu**.
5. Press the navigation arrows to select **2ndary Service**.
6. Press **OK**.
7. Press the navigation arrows to select **Clean ETB**.
8. Press **OK**.
9. Press **OK** again to begin the cleaning process.

Troubleshooting tools

The section describes the tools that can help solve problems with the MFP.

Device pages

This section describes the pages and reports that help diagnose and solve MFP problems.

Demo page

To verify that the MFP is functioning properly, print a Demo page.

Configuration page

The Configuration page lists the current settings and properties of the MFP. Use this page to check for color plane registration and cartridge half tones. It is possible to print a Configuration page from the MFP or HP ToolboxFX.

Supplies Status page

The Supplies Status page lists the remaining life of the HP print cartridges. It also lists the estimated pages remaining, number of pages printed, and other supplies information. Print a Supplies Status page from the MFP or HP ToolboxFX.

Error report

The 2ndary Service menu contains an error report that can help diagnose problems.



NOTE If the 2ndary Service menu is already unlocked, skip to step 4.

1. Press **Menu**.
2. Press and hold the **Left arrow** and **Cancel** buttons simultaneously.
3. Release the **Left arrow** and **Cancel** buttons.
4. Press **Menu**.
5. Press the navigation arrows to select **2ndary Service**.
6. Press **OK**.
7. Press the navigation arrows to select **Service Reports**.
8. Press **OK**.
9. Press the navigation arrows to select **Error Report**.
10. Press **OK** to print the report.

HP ToolboxFX

HP ToolboxFX is a software application used for problem solving tasks.

View HP ToolboxFX

Open HP ToolboxFX in one of these ways:

- On the Windows desktop, double-click the HP ToolboxFX system tray icon or program group entry.
- On the Windows **Start** menu, click **Programs (All Programs** in Windows XP), click **HP**, click **HP Color LaserJet CM1015/1017 series**, then click **HP ToolboxFX**.

Troubleshooting tab

HP ToolboxFX includes a **Troubleshooting** tab that contains links to the following main pages:

- **Control Panel Messages.** View descriptions of MFP control-panel messages.
- **Clearing Jams.** View information about locating and clearing jams.
- **Print Problems.** View Help topics that can help solve print problems.
- **Memory Card Problems.** View Help topics that can help solve memory-card problems.
- **Connectivity Problems.** View Help topics that can help solve networking problems.
- **Troubleshooting Tools.** Employ such troubleshooting tools as a cleaning page or a color troubleshooting page to maintain the MFP.

Repetitive-image-defect ruler

Use a repetitive-image-defect ruler to measure occurrences of repetitive image defects. Place the ruler next to the first occurrence of the defect on the page. Find the distance between identical defects and see the [Table 6-8 Repetitive image defects on page 156](#) table to identify the component that is causing the defect.

Table 6-8 Repetitive image defects

Measurement	Component
24.7 mm (0.97 inch)	Developer sleeve
26.7 mm (1.05 inches)	Charge roller
32.9 mm (1.3 inches)	RS roller
37.7 mm (1.48 inches)	Transfer roller
54.5 mm (2.15 inches)	ETB rollers
56.6 mm (2.22 inches)	Fuser sleeve
62.8 mm (2.47 inches)	Pressure roller
75.4 mm (2.97 inches)	OPC

Firmware and software updates

Use the following procedure to download firmware and software updates.

1. Go to http://www.hp.com/support/cljCM1015_CM1017.
2. Select **Download drivers and software**, and then select the appropriate operating system for your computer.
3. Follow the instructions provided on the download pages.

7 Parts and diagrams



NOTE In this chapter, part numbers are only listed for available replaceable parts.

This section contains the following information.

- [Overview](#)
- [Assembly locations](#)
- [Upper Cover Assembly](#)
- [Internal assemblies](#)
- [Diagrams](#)
- [Alphabetical parts list](#)
- [Numerical parts list](#)

Overview

Replaceable parts

Order replacement parts from the following Web site:

<http://www.partsdirect.hp.com>

Related documentation and software

Documentation and software are available at the following Web sites.

Table 7-1 Technical support Web sites

HP Customer Care Online	http://www.hp.com/support
Software drivers, support documentation, and answers to frequently asked questions	
HP Technical Training	http://www.hp.com/education

Supplies

Consumables are available directly from HP at the following numbers.

- US: 1-800-538-8787
- Canada: 1-800-387-3154

Contact your local HP Parts Coordinator for other local phone numbers.

Print cartridges

Table 7-2 Print cartridges

Description	Part number
CLJ BLACK PRINT CARTRIDGE	Q6000-67902
CLJ CYAN PRINT CARTRIDGE	Q6001-67902
CLJ YELLOW PRINT CARTRIDGE	Q6002-67902
CLJ MAGENTA PRINT CARTRIDGE	Q6003-67902

Accessories

Table 7-3 Accessories

Product name	Description	Product number	Part number	Exchange number (replacement number)
Optional 250-sheet tray	Optional Tray 3	Q6459A	Q6459-69002	RM1-1916-080

Replacement engines

Table 7-4 Replacement engines

Description	Part number
Replacement printer unit 110V CM1015 (no toner)	CB394-67001
Replacement printer unit 220V CM1015 (no toner)	CB394-67002
Replacement printer unit 110V CM1017 (no toner)	CB395-67001
Replacement printer unit 210V CM1017 (no toner)	CB395-67002
Replacement W/U 110V CM1015 (with toner)	CB394-67056
Replacement W/U 220V CM1015 (with toner)	CB394-67055
Replacement W/U 110V CM1017 (with toner)	CB395-67056
Replacement W/U 220V CM1017 (with toner)	CB395-67055
Refurbished W/U 110V CM1015 (with toner)	CB394-69056
Refurbished W/U 220V CM1015 (with toner)	CB394-69055
Refurbished W/U 110V CM1017 (with toner)	CB395-69056
Refurbished W/U 220V CM1017 (with toner)	CB395-69055

Assembly locations

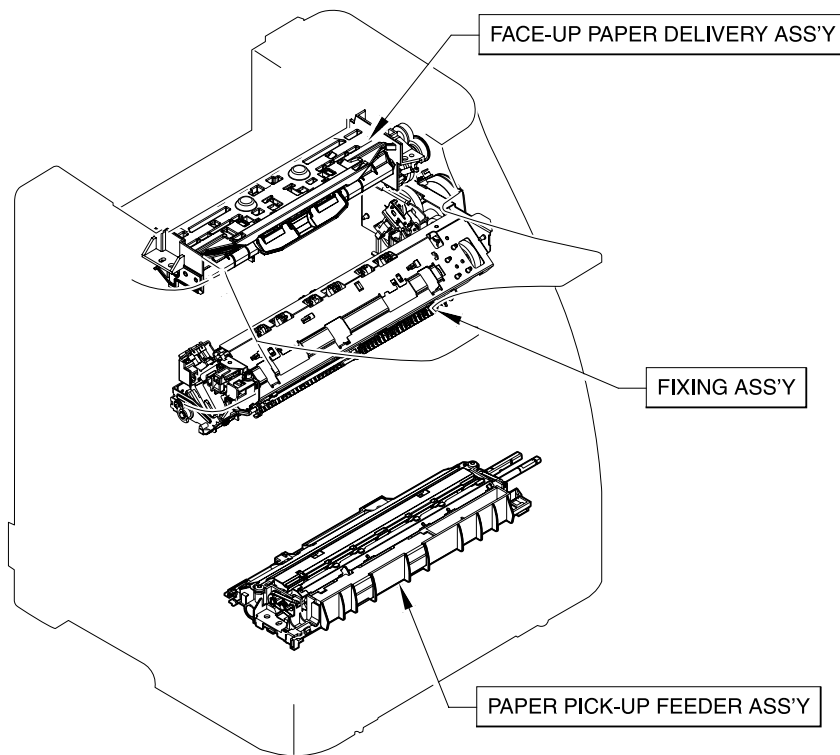


Figure 7-1 Assembly locations (1 of 3)

Table 7-5 Assembly locations (1 of 3)

Ref	Description	Part number	Qty
1	FACE-UP PAPER DELIVERY ASSEMBLY	RM1-4312-000CN	
2	FUSER ASSEMBLY	RM1-4310-000CN (110v) or RM1-4313-000CN (220v)	
3	PAPER PICK-UP FEEDER ASSEMBLY	RM1-1923-000CN	

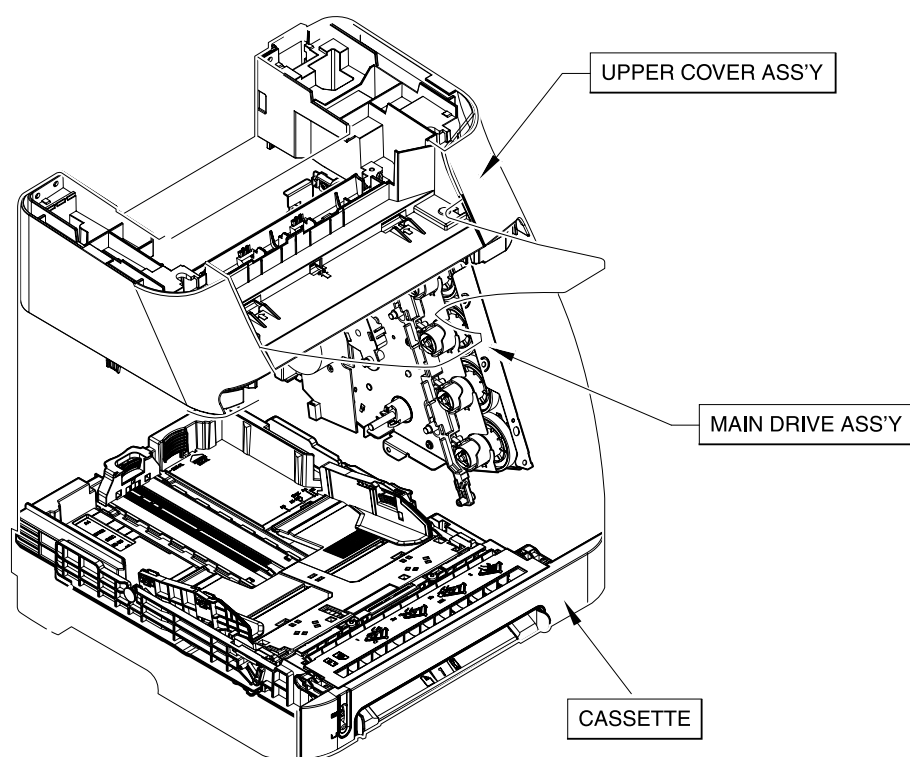


Figure 7-2 Assembly locations (2 of 3)

Table 7-6 Assembly locations (2 of 3)

Ref	Description	Part number	Qty
	UPPER COVER ASSEMBLY	RM1-4311-000CN	
	MAIN DRIVE ASSEMBLY	RM1-1895-120CN	
	CASSETTE	RM1-1916-080CN	

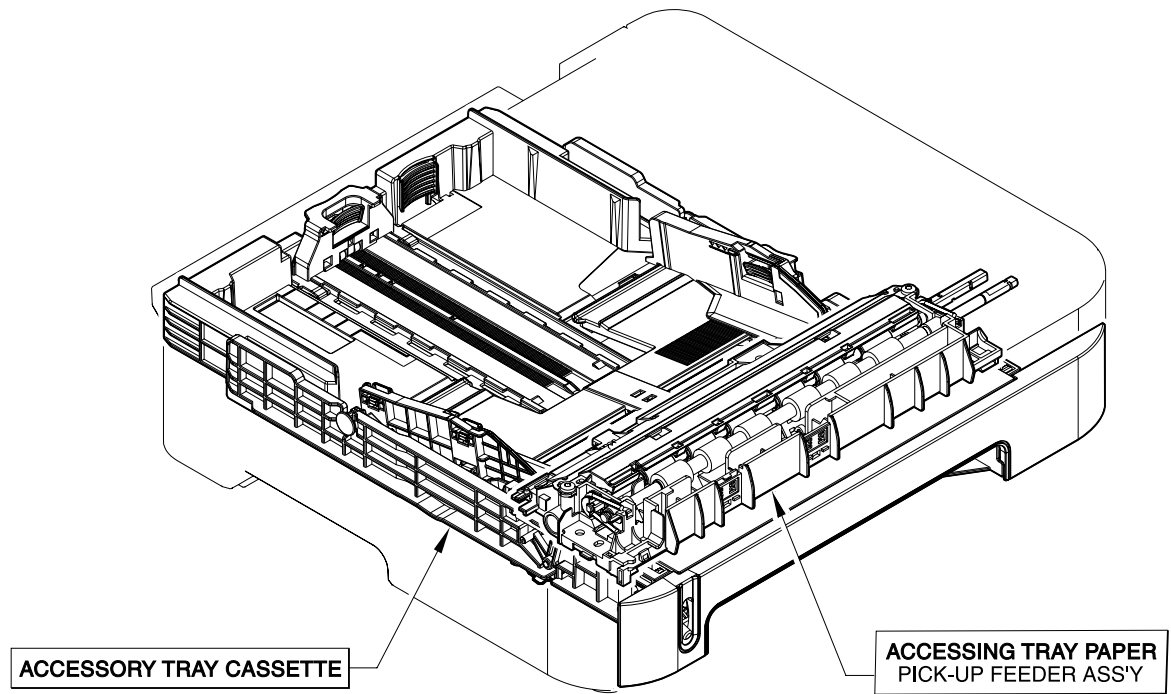


Figure 7-3 Assembly locations (3 of 3)

Table 7-7 Assembly locations (3 of 3)

Ref	Description	Part number	Qty
	ACCESSORY TRAY CASSETTE	RM1-1945-000CN	
	ACCESSORY TRAY PAPER PICKUP FEEDER ASSEMBLY	Q6459-67902	

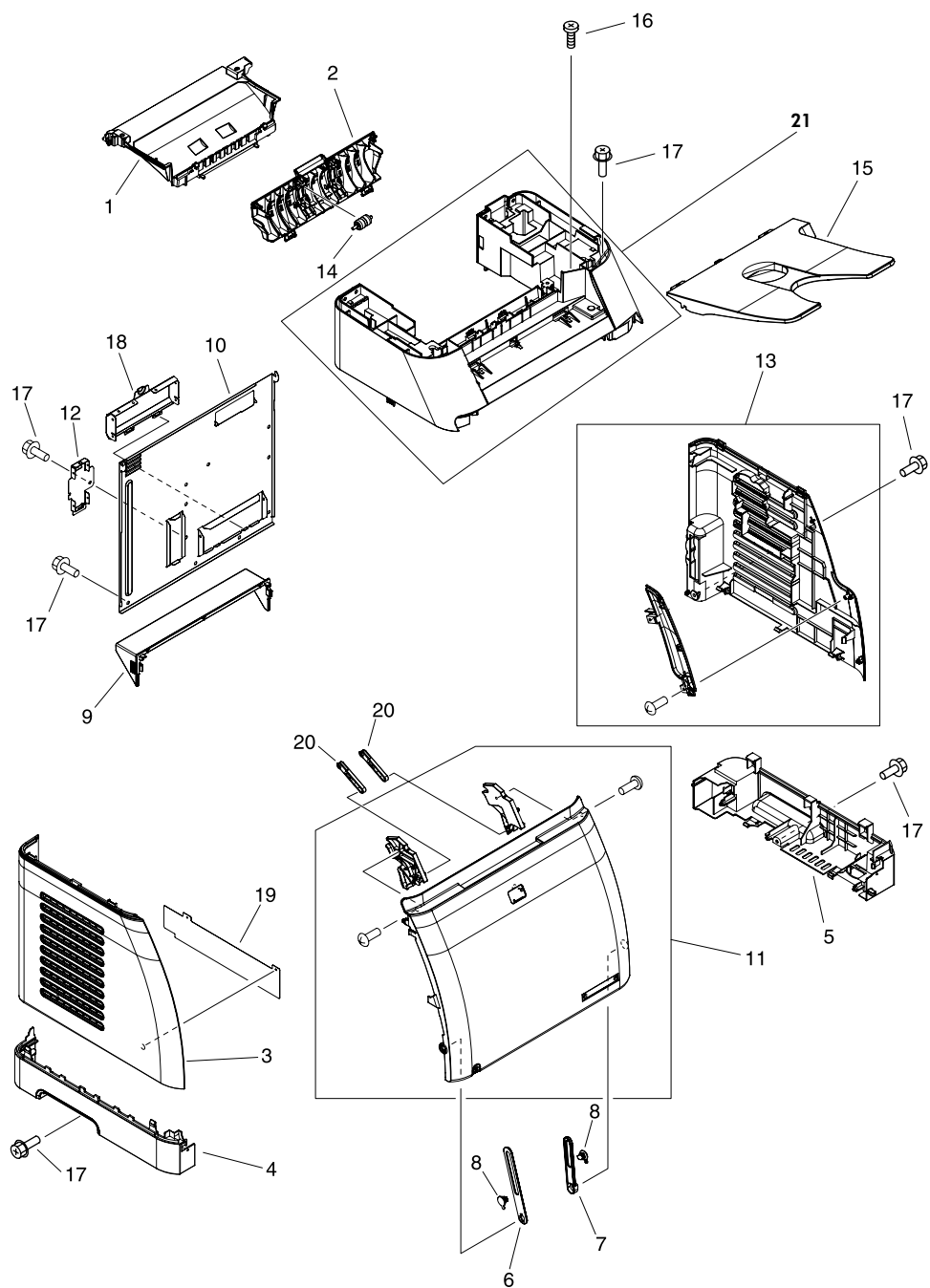


Figure 7-4 External panels and covers

Table 7-8 External panels and covers

Ref	Description	Part number	Qty
	PANEL FRONT (TRAY 2 FRONT COVER)	RC1-5346-000CN	
	RIGHT FRONT PHOTO MEMORY COVER	CB395-67910	
1	COVER, FACE-DOWN	RC2-1672-000CN	2
2	COVER, FACE-UP, REAR	RC2-1675-000CN	1
3	COVER, LEFT	RC1-5183-000CN	1
4	COVER, CASSETTE, LEFT	RC2-1691-000CN	1
5	COVER, CASSETTE RIGHT	RC2-1692-000CN	1
6	ARM, FRONT DOOR, LEFT	RC1-5192-000CN	1
7	ARM, FRONT DOOR, RIGHT	RM1-5193-000CN	1
8	SHAFT, FRONT DOOR ARM	RC1-5194-000CN	2
9	COVER, CASSETTE DUST	RC1-5200-000CN	1
10	PLATE, REAR	RC2-1687-000CN	1
11	FRONT DOOR ASSEMBLY	RM1-4314-000CN	1
12	LID, CONTROLLER	RC1-5229-000CN	1
13	RIGHT COVER ASSEMBLY	RM1-1858-000CN	1
14	ROLLER, FACE-UP	RC2-1682-000CN	4
15	TRAY, FACE-UP	RC2-1671-000CN	1
16	SCREW, TAPPING, TRUSS HEAD M4x10	XB4-7401-005CN	3
17	SCREW RS, M3x8	XA9-1500-000CN	10
18	COVER, CONTROLLER	RC1-5228-000CN	1
19	SHEET, LEFT PANEL, LOWER	RC1-5204-000CN	1
20	LEVER, LINK	RC1-5272-000CN	2
21	UPPER COVER ASSEMBLY	RM1-4311-000CN	1

Upper Cover Assembly

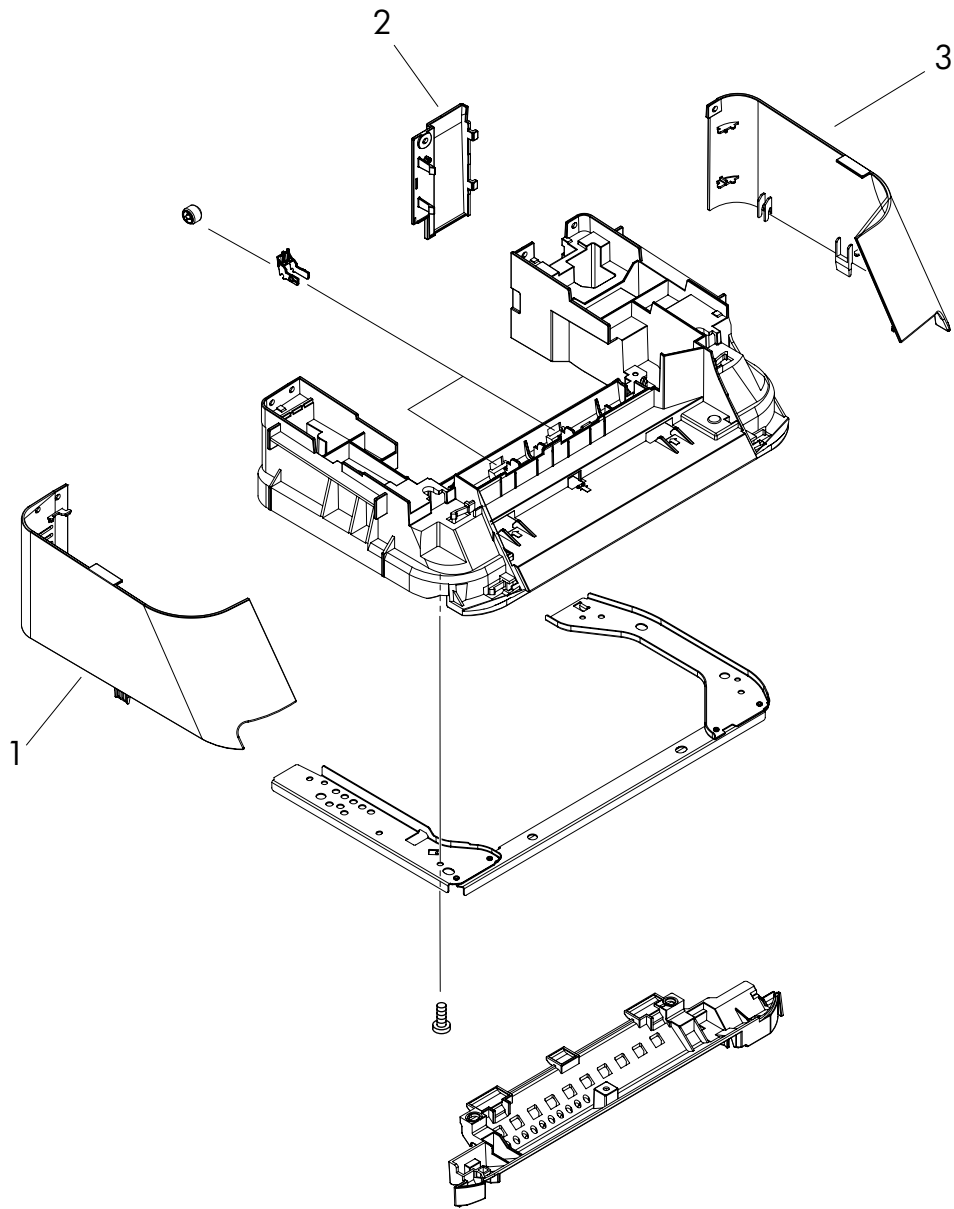


Figure 7-5 Upper cover assembly

Table 7-9 Upper cover assembly

Ref	Description	Part number	Qty
	UPPER COVER ASSEMBLY	RM1-4311-000CN	
1	COVER, UPPER, LEFT	RC2-1664-000CN	
2	COVER, CABLE	RC2-1665-000CN	
3	COVER, UPPER, RIGHT	RC2-1663-000CN	

Internal assemblies

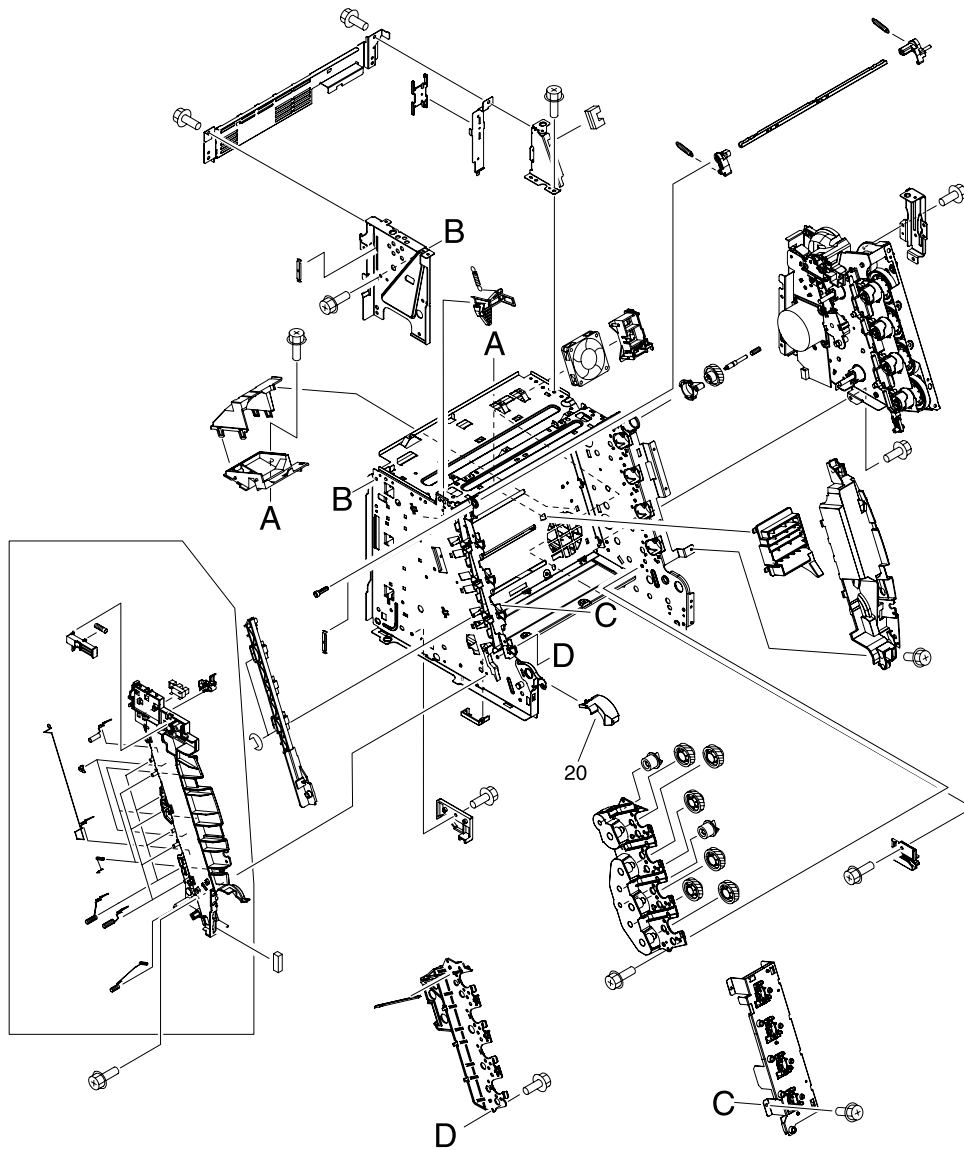


Figure 7-6 Internal components (1 of 3)

Table 7-10 Internal components (1 of 3)

Ref	Description	Part number	Qty
	FERRITE BEAD (FORMATTER AREA)	9170-2083	
	FERRITE BEAD (COLUMN AREA)	9170-2120	
20	COVER, CABLE, UNIT	RC1-5147-000CN	1

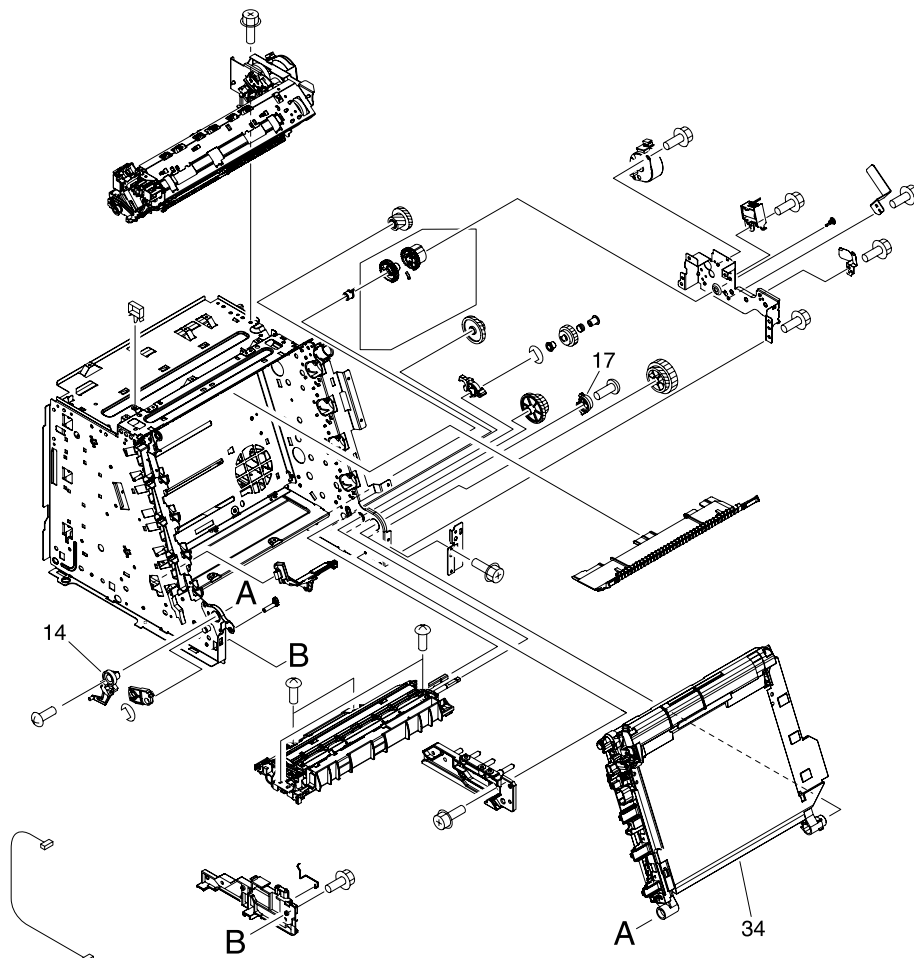


Figure 7-7 Internal components (2 of 3)

Table 7-11 Internal components (2 of 3)

Ref	Description	Part number	Qty
14	CAM, LEFT	RC1-5249-000CN	1
17	CAM, HINGE, RIGHT	RC1-5311-000CN	1
34	ELECT.TRANSPORT BELT ASSEMBLY	RM1-1885-020CN	1

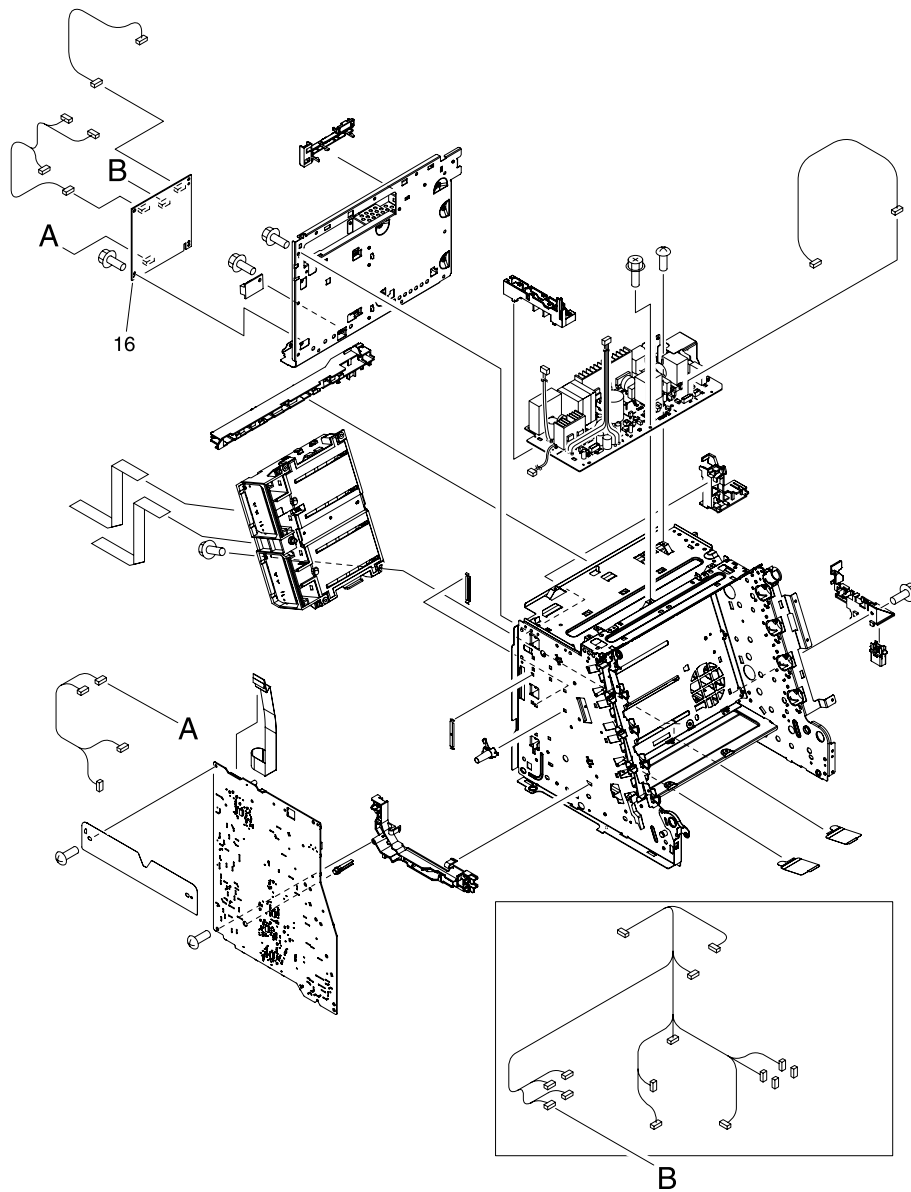


Figure 7-8 Internal components (3 of 3)

Table 7-12 Internal components (3 of 3)

Ref	Description	Part number	Qty
16	FORMATTER (CM1015)	CB394-67902	1
	FORMATTER (CM1017)	CB395-67902	
	FLAT FLEX CABLE - DCC FORMATTER	Q6456-60101	
	DC CONTROLLER PCB ASSEMBLY	RM1-4366-000CN	

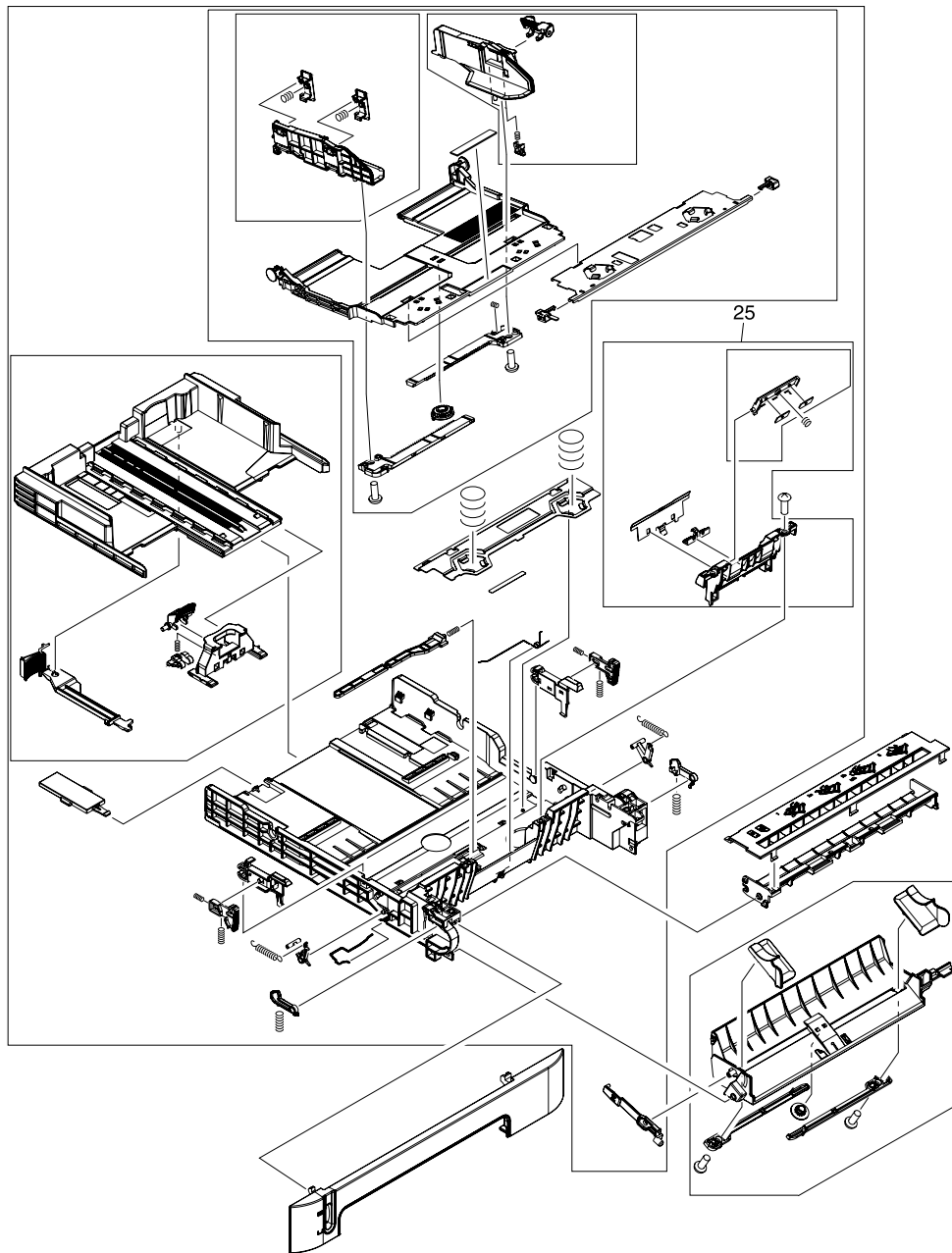


Figure 7-9 Cassette

Table 7-13 Cassette

Ref	Description	Part number	Qty
	CASSETTE	RM1-1916-080CN	1
25	SEPARATION ASSEMBLY	RM1-1922-000CN	1

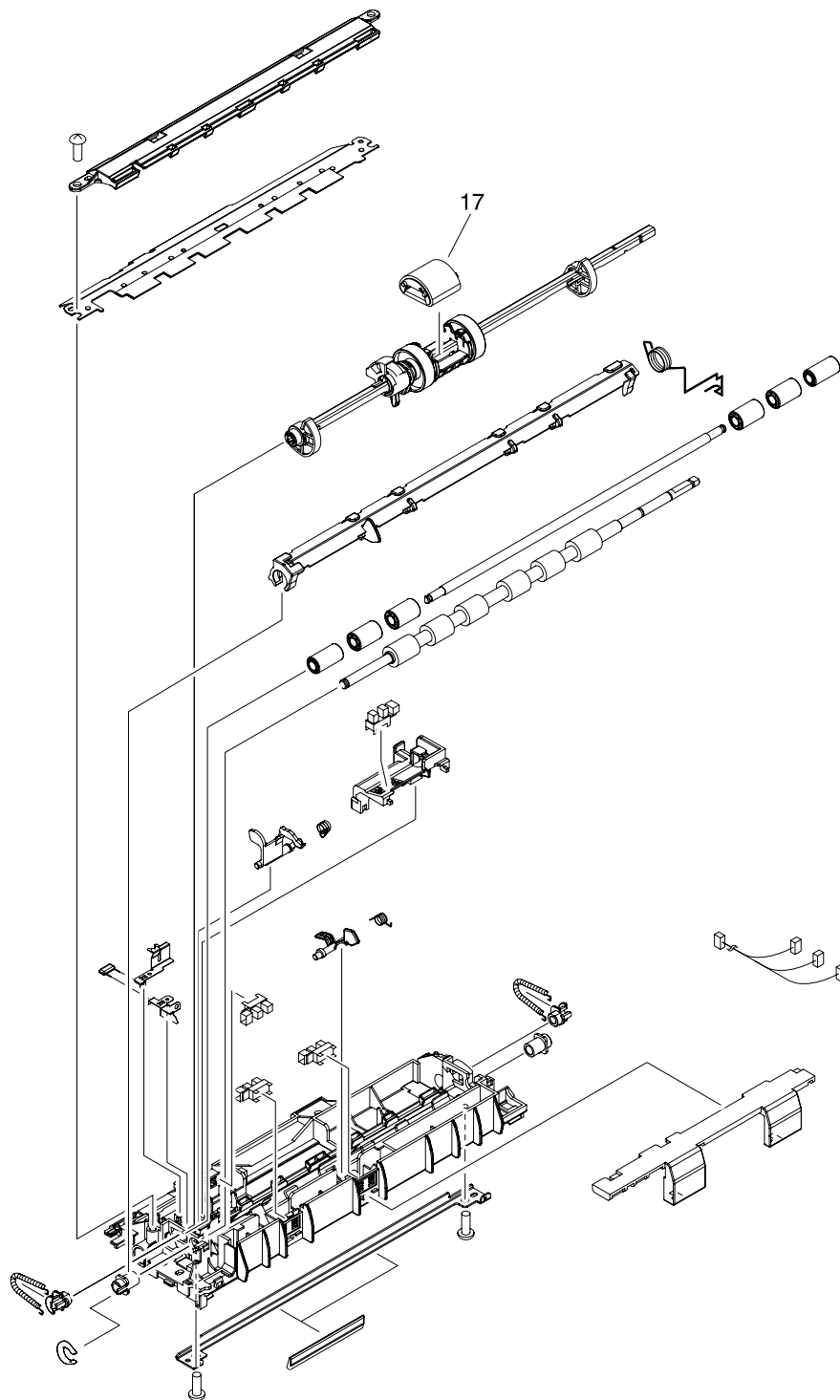


Figure 7-10 Paper pick-up feeder assembly (tray 2)

Table 7-14 Paper pick-up feeder assembly (tray 2)

Ref	Description	Part number	Qty
	PAPER PICK-UP FEEDER ASSEMBLY	RM1-1928-030CN	1
17	ROLLER, PAPER PICK-UP	RC1-5440-000CN	1

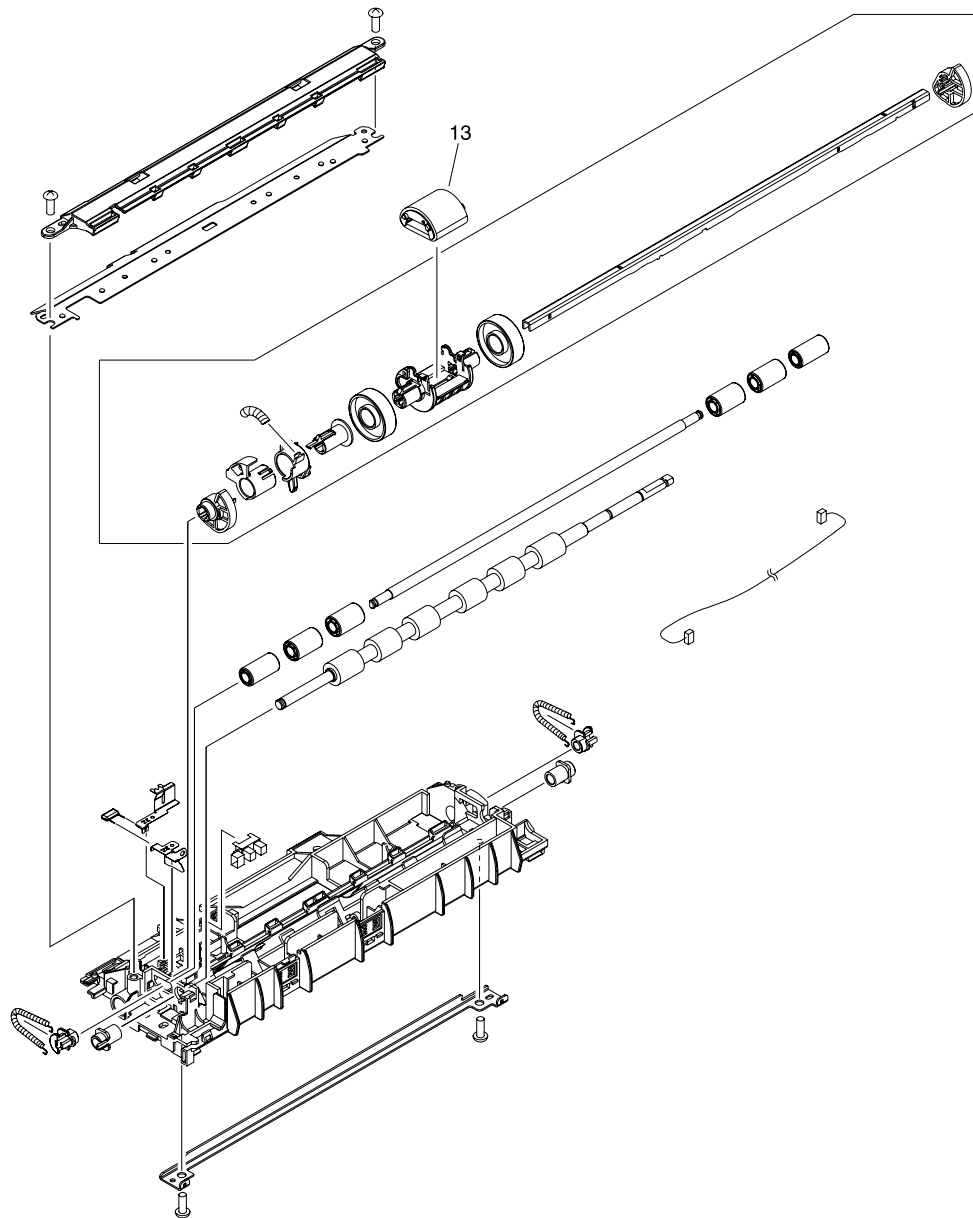


Figure 7-11 Paper pick-up feeder assembly (tray 3)

Table 7-15 Paper pickup feeder assembly (Tray 3)

Ref	Description	Part number	Qty
13	ROLLER, PAPER PICK-UP	RC1-5440-000CN	1

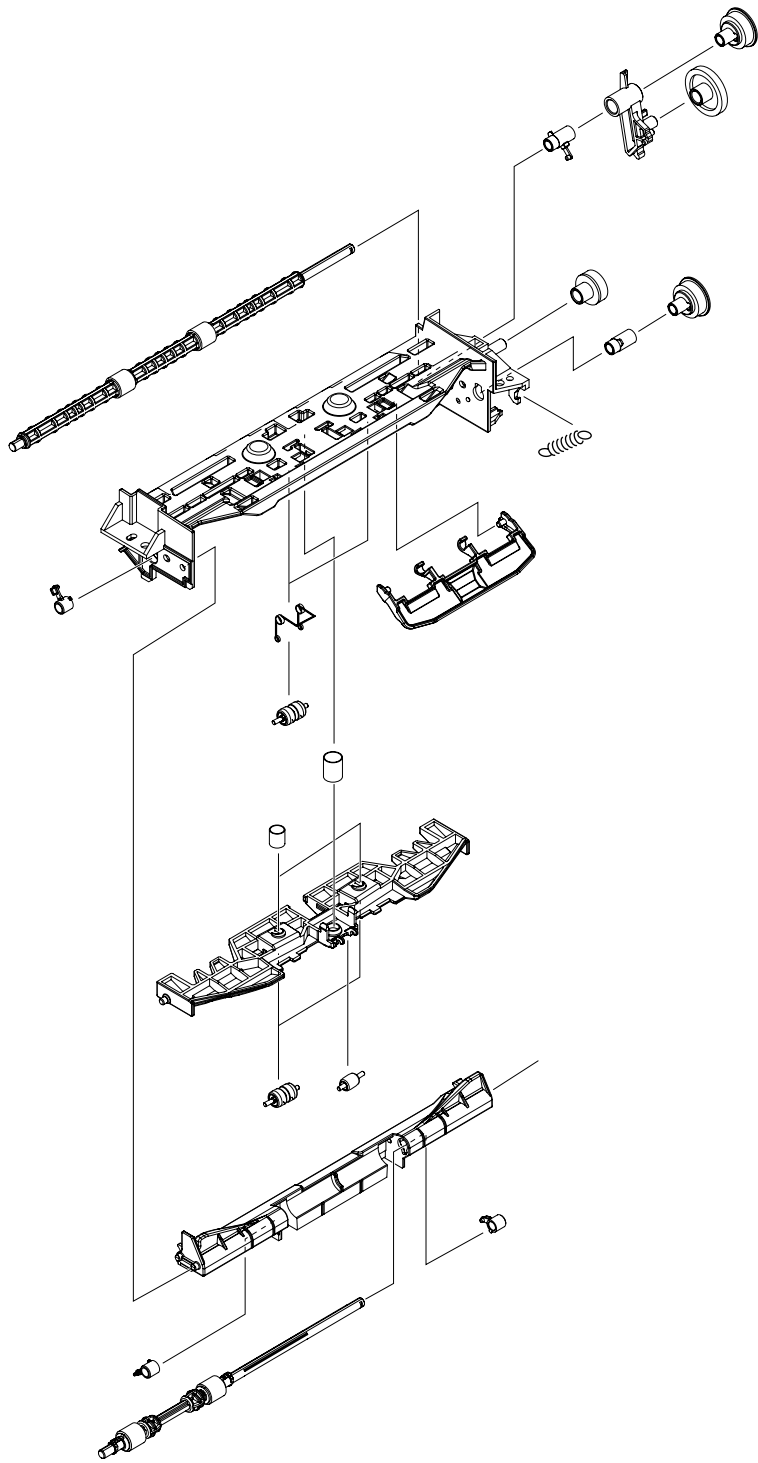


Figure 7-12 Face-up paper delivery assembly

Table 7-16 Face-up paper delivery assembly

Ref	Description	Part number	Qty
	FACE-UP PAPER DELIVERY ASSEMBLY	RM1-4312-000CN	

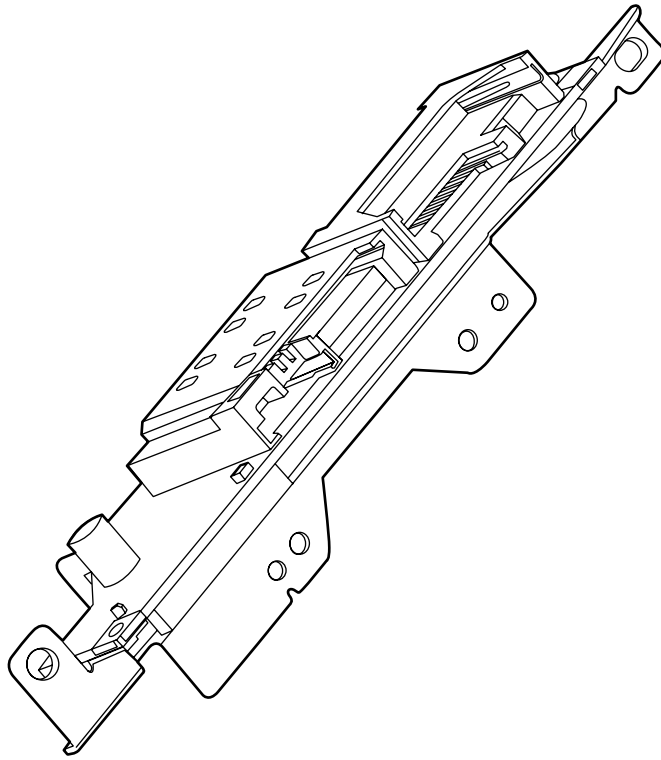


Figure 7-13 Memory-card reader assembly

Table 7-17 Memory-card reader assembly

Ref	Description	Part number	Qty
	MEMORY-CARD READER ASSEMBLY	Q7821-67901 (CM1017 only)	
	FLAT FLEX CABLE, MEMORY-CARD ASSEMBLY	CB394-60104	

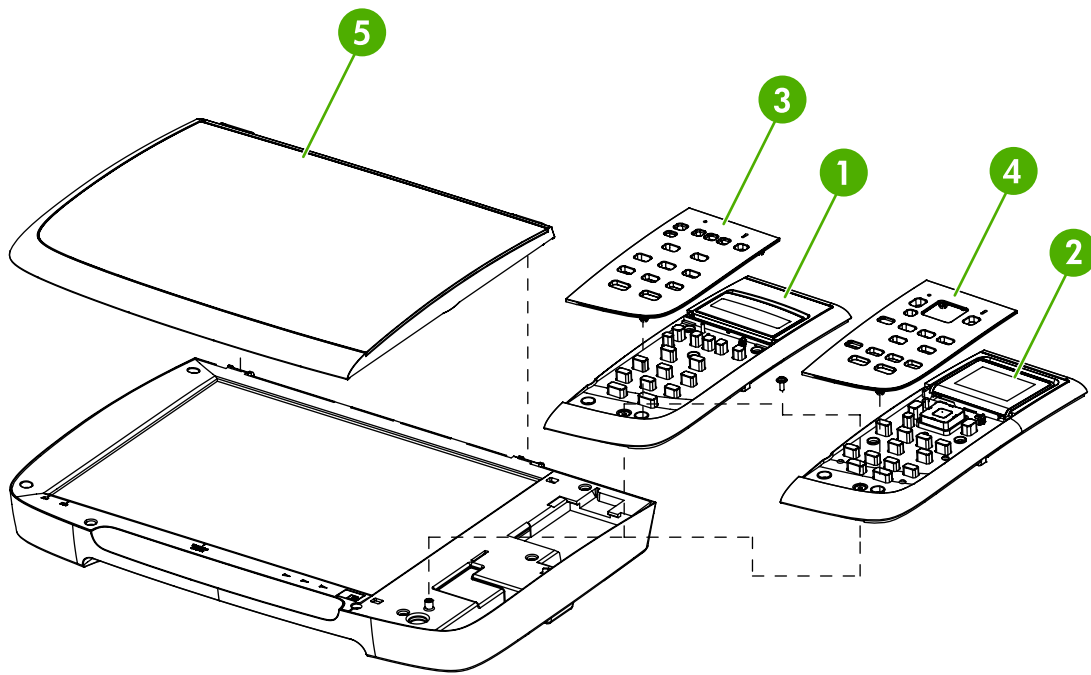


Figure 7-14 Scanner assembly

Table 7-18 Scanner assembly

Ref	Description	Part number	Qty
	SCANNER ASSEMBLY (CM1015)	CB394-67901	
	SCANNER ASSEMBLY (CM1017)	CB395-67901	
1	CONTROL-PANEL ASSEMBLY LCD (CM1015)	CB394-60101	1
2	CONTROL-PANEL ASSEMBLY GCD (CM1017)	CB395-60101	1
3	BEZEL, CONTROL PANEL LCD EN (CM1015)	CB394-40014	1
3	BEZEL, CONTROL PANEL LCD ES (CM1015)	CB394-40015	1
3	BEZEL, CONTROL PANEL LCD PT (CM1015)	CB394-40016	1
3	BEZEL, CONTROL PANEL LCD DE (CM1015)	CB394-40017	1
3	BEZEL, CONTROL PANEL LCD FR (CM1015)	CB394-40018	1
3	BEZEL, CONTROL PANEL LCD NL (CM1015)	CB394-40019	1
3	BEZEL, CONTROL PANEL LCD IT (CM1015)	CB394-40020	1
3	BEZEL, CONTROL PANEL LCD SV (CM1015)	CB394-40021	1
3	BEZEL, CONTROL PANEL LCD NO (CM1015)	CB394-40022	1
3	BEZEL, CONTROL PANEL LCD FI (CM1015)	CB394-40023	1
3	BEZEL, CONTROL PANEL LCD DA (CM1015)	CB394-40024	1
3	BEZEL, CONTROL PANEL LCD RU (CM1015)	CB394-40025	1
3	BEZEL, CONTROL PANEL LCD CS (CM1015)	CB394-40026	1
3	BEZEL, CONTROL PANEL LCD HU (CM1015)	CB394-40027	1
3	BEZEL, CONTROL PANEL LCD PL (CM1015)	CB394-40028	1
3	BEZEL, CONTROL PANEL LCD SK (CM1015)	CB394-40029	1
3	BEZEL, CONTROL PANEL LCD TR (CM1015)	CB394-40030	1
3	BEZEL, CONTROL PANEL LCD EL (CM1015)	CB394-40031	1
3	BEZEL, CONTROL PANEL LCD HE (CM1015)	CB394-40032	1
3	BEZEL, CONTROL PANEL LCD AR (CM1015)	CB394-40033	1
3	BEZEL, CONTROL PANEL LCD ZHTW (CM1015)	CB394-40034	1
3	BEZEL, CONTROL PANEL LCD KO (CM1015)	CB394-40035	1
3	BEZEL, CONTROL PANEL LCD ZHCN (CM1015)	CB394-40036	1
3	BEZEL, CONTROL PANEL LCD TH (CM1015)	CB394-40037	1
3	BEZEL, CONTROL PANEL LCD VI (CM1015)	CB394-40038	1
3	BEZEL, CONTROL PANEL GCD EN (CM1017)	CB395-40005	1
4	BEZEL, CONTROL PANEL GCD ES (CM1017)	CB395-40006	1
4	BEZEL, CONTROL PANEL GCD PT (CM1017)	CB395-40007	1
4	BEZEL, CONTROL PANEL GCD DE (CM1017)	CB395-40008	1
4	BEZEL, CONTROL PANEL GCD FR (CM1017)	CB395-40009	1

Ref	Description	Part number	Qty
4	BEZEL, CONTROL PANEL GCD NL (CM1017)	CB395-40010	1
4	BEZEL, CONTROL PANEL GCD IT (CM1017)	CB395-40011	1
4	BEZEL, CONTROL PANEL GCD SV (CM1017)	CB395-40012	1
4	BEZEL, CONTROL PANEL GCD NO (CM1017)	CB395-40013	1
4	BEZEL, CONTROL PANEL GCD FI (CM1017)	CB395-40014	1
4	BEZEL, CONTROL PANEL GCD DA (CM1017)	CB395-40015	1
4	BEZEL, CONTROL PANEL GCD RU (CM1017)	CB395-40016	1
4	BEZEL, CONTROL PANEL GCD CS (CM1017)	CB395-40017	1
4	BEZEL, CONTROL PANEL GCD HU (CM1017)	CB395-40018	1
4	BEZEL, CONTROL PANEL GCD PL (CM1017)	CB395-40019	1
4	BEZEL, CONTROL PANEL GCD SK (CM1017)	CB395-40020	1
4	BEZEL, CONTROL PANEL GCD TR (CM1017)	CB395-40021	1
4	BEZEL, CONTROL PANEL GCD EL (CM1017)	CB395-40022	1
4	BEZEL, CONTROL PANEL GCD HE (CM1017)	CB395-40023	1
4	BEZEL, CONTROL PANEL GCD AR (CM1017)	CB395-40024	1
4	BEZEL, CONTROL PANEL GCD ZHTW (CM1017)	CB395-40025	1
4	BEZEL, CONTROL PANEL GCD KO (CM1017)	CB395-40026	1
4	BEZEL, CONTROL PANEL GCD ZHCN (CM1017)	CB395-40027	1
4	BEZEL, CONTROL PANEL GCD TH (CM1017)	CB395-40028	1
4	BEZEL, CONTROL PANEL GCD VI (CM1017)	CB395-40029	1
5	SCANNER LID	CB394-60106	1

Diagrams

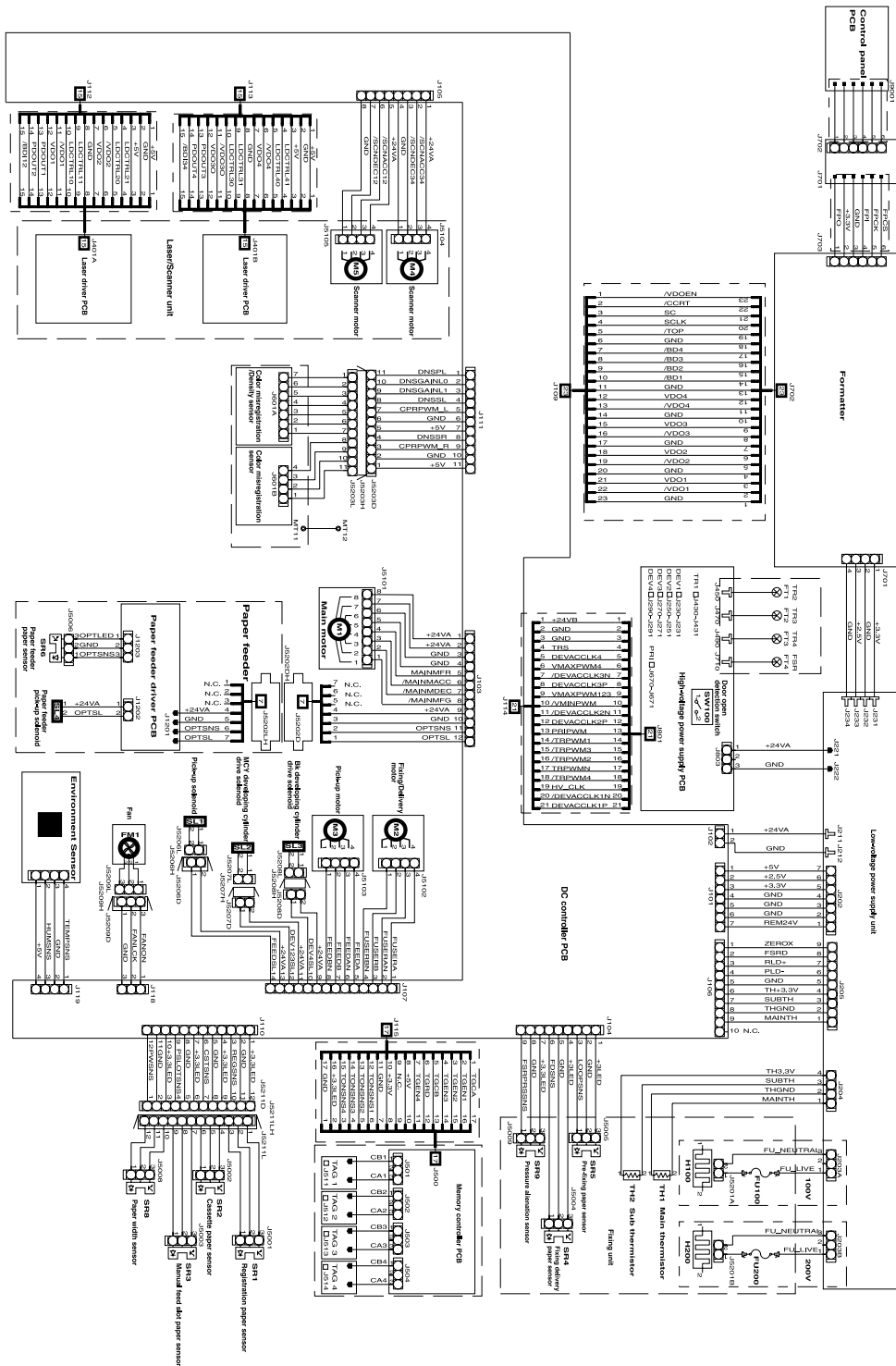


Figure 7-15 General circuit diagram

Alphabetical parts list

Table 7-19 Alphabetical parts list

Description	Part number	Table and page
ACCESSORY TRAY CASSETTE	RM1-1945-000CN	Assembly locations (3 of 3) on page 167
ACCESSORY TRAY PAPER PICKUP FEEDER ASSEMBLY	Q6459-67902	Assembly locations (3 of 3) on page 167
ARM, FRONT DOOR, LEFT	RC1-5192-000CN	External panels and covers on page 169
ARM, FRONT DOOR, RIGHT	RM1-5193-000CN	External panels and covers on page 169
BEZEL, CONTROL PANEL GCD AR (CM1017)	CB395-40024	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD CS (CM1017)	CB395-40017	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD DA (CM1017)	CB395-40015	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD DE (CM1017)	CB395-40008	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD EL (CM1017)	CB395-40022	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD EN (CM1017)	CB395-40005	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD ES (CM1017)	CB395-40006	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD FI (CM1017)	CB395-40014	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD FR (CM1017)	CB395-40009	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD HE (CM1017)	CB395-40023	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD HU (CM1017)	CB395-40018	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD IT (CM1017)	CB395-40011	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD KO (CM1017)	CB395-40026	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD NL (CM1017)	CB395-40010	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD NO (CM1017)	CB395-40013	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD PL (CM1017)	CB395-40019	Scanner assembly on page 189

Table 7-19 Alphabetical parts list (continued)

Description	Part number	Table and page
BEZEL, CONTROL PANEL GCD PT (CM1017)	CB395-40007	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD RU (CM1017)	CB395-40016	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD SK (CM1017)	CB395-40020	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD SV (CM1017)	CB395-40012	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD TH (CM1017)	CB395-40028	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD TR (CM1017)	CB395-40021	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD VI (CM1017)	CB395-40029	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD ZHCN (CM1017)	CB395-40027	Scanner assembly on page 189
BEZEL, CONTROL PANEL GCD ZHTW (CM1017)	CB395-40025	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD AR (CM1015)	CB394-40033	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD CS (CM1015)	CB394-40026	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD DA (CM1015)	CB394-40024	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD DE (CM1015)	CB394-40017	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD EL (CM1015)	CB394-40031	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD EN (CM1015)	CB394-40014	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD ES (CM1015)	CB394-40015	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD FI (CM1015)	CB394-40023	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD FR (CM1015)	CB394-40018	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD HE (CM1015)	CB394-40032	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD HU (CM1015)	CB394-40027	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD IT (CM1015)	CB394-40020	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD KO (CM1015)	CB394-40035	Scanner assembly on page 189

Table 7-19 Alphabetical parts list (continued)

Description	Part number	Table and page
BEZEL, CONTROL PANEL LCD NL (CM1015)	CB394-40019	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD NO (CM1015)	CB394-40022	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD PL (CM1015)	CB394-40028	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD PT (CM1015)	CB394-40016	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD RU (CM1015)	CB394-40025	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD SK (CM1015)	CB394-40029	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD SV (CM1015)	CB394-40021	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD TH (CM1015)	CB394-40037	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD TR (CM1015)	CB394-40030	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD VI (CM1015)	CB394-40038	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD ZHCN (CM1015)	CB394-40036	Scanner assembly on page 189
BEZEL, CONTROL PANEL LCD ZHTW (CM1015)	CB394-40034	Scanner assembly on page 189
CAM, HINGE, RIGHT	RC1-5311-000CN	Internal components (2 of 3) on page 175
CAM, LEFT	RC1-5249-000CN	Internal components (2 of 3) on page 175
CASSETTE	RM1-1916-080CN	Assembly locations (2 of 3) on page 165
CASSETTE	RM1-1916-080CN	Cassette on page 179
CONTROL-PANEL ASSEMBLY GCD (CM1017)	CB395-60101	Scanner assembly on page 189
CONTROL-PANEL ASSEMBLY LCD (CM1015)	CB394-60101	Scanner assembly on page 189
COVER, CABLE	RC2-1665-000CN	Upper cover assembly on page 171
COVER, CABLE, UNIT	RC1-5147-000CN	Internal components (1 of 3) on page 173
COVER, CASSETTE DUST	RC1-5200-000CN	External panels and covers on page 169
COVER, CASSETTE RIGHT	RC2-1692-000CN	External panels and covers on page 169

Table 7-19 Alphabetical parts list (continued)

Description	Part number	Table and page
COVER, CASSETTE, LEFT	RC2-1691-000CN	External panels and covers on page 169
COVER, CONTROLLER	RC1-5228-000CN	External panels and covers on page 169
COVER, FACE-DOWN	RC2-1672-000CN	External panels and covers on page 169
COVER, FACE-UP, REAR	RC2-1675-000CN	External panels and covers on page 169
COVER, LEFT	RC1-5183-000CN	External panels and covers on page 169
COVER, UPPER, LEFT	RC2-1664-000CN	Upper cover assembly on page 171
COVER, UPPER, RIGHT	RC2-1663-000CN	Upper cover assembly on page 171
DC CONTROLLER PCB ASSEMBLY	RM1-4366-000CN	Internal components (3 of 3) on page 177
ELECT. TRANSPORT BELT ASSEMBLY	RM1-1885-020CN	Internal components (2 of 3) on page 175
FACE-UP PAPER DELIVERY ASSEMBLY	RM1-4312-000CN	Assembly locations (1 of 3) on page 163
FACE-UP PAPER DELIVERY ASSEMBLY	RM1-4312-000CN	Face-up paper delivery assembly on page 185
FERRITE BEAD (COLUMN AREA)	9170-2120	Internal components (1 of 3) on page 173
FERRITE BEAD (FORMATTER AREA)	9170-2083	Internal components (1 of 3) on page 173
FLAT FLEX CABLE - DCC FORMATTER	Q6456-60101	Internal components (3 of 3) on page 177
FLAT FLEX CABLE, MEMORY-CARD ASSEMBLY	CB394-60104	Memory-card reader assembly on page 187
FORMATTER (CM1015)	CB394-67902	Internal components (3 of 3) on page 177
FORMATTER (CM1017)	CB395-67902	Internal components (3 of 3) on page 177
FRONT DOOR ASSEMBLY	RM1-4314-000CN	External panels and covers on page 169
FUSER ASSEMBLY	RM1-4310-000CN (110v) or RM1-4313-000CN (220v)	Assembly locations (1 of 3) on page 163
LEVER, LINK	RC1-5272-000CN	External panels and covers on page 169
LID, CONTROLLER	RC1-5229-000CN	External panels and covers on page 169

Table 7-19 Alphabetical parts list (continued)

Description	Part number	Table and page
MAIN DRIVE ASSEMBLY	RM1-1895-120CN	Assembly locations (2 of 3) on page 165
MEMORY-CARD READER ASSEMBLY	Q7821-67901 (CM1017 only)	Memory-card reader assembly on page 187
PANEL FRONT (TRAY 2 FRONT COVER)	RC1-5346-000CN	External panels and covers on page 169
PAPER PICK-UP FEEDER ASSEMBLY	RM1-1923-000CN	Assembly locations (1 of 3) on page 163
PAPER PICK-UP FEEDER ASSEMBLY	RM1-1928-030CN	Paper pick-up feeder assembly (tray 2) on page 181
PLATE, REAR	RC2-1687-000CN	External panels and covers on page 169
RIGHT COVER ASSEMBLY	RM1-1858-000CN	External panels and covers on page 169
RIGHT FRONT PHOTO MEMORY COVER	CB395-67910	External panels and covers on page 169
ROLLER, FACE-UP	RC2-1682-000CN	External panels and covers on page 169
ROLLER, PAPER PICK-UP	RC1-5440-000CN	Paper pick-up feeder assembly (tray 2) on page 181
ROLLER, PAPER PICK-UP	RC1-5440-000CN	Paper pickup feeder assembly (Tray 3) on page 183
SCANNER ASSEMBLY (CM1015)	CB394-67901	Scanner assembly on page 189
SCANNER ASSEMBLY (CM1017)	CB395-67901	Scanner assembly on page 189
SCANNER LID	CB394-60106	Scanner assembly on page 189
SCREW RS, M3x8	XA9-1500-000CN	External panels and covers on page 169
SCREW, TAPPING, TRUSS HEAD M4x10	XB4-7401-005CN	External panels and covers on page 169
SEPARATION ASSEMBLY	RM1-1922-000CN	Cassette on page 179
SHAFT, FRONT DOOR ARM	RC1-5194-000CN	External panels and covers on page 169
SHEET, LEFT PANEL, LOWER	RC1-5204-000CN	External panels and covers on page 169
TRAY, FACE-UP	RC2-1671-000CN	External panels and covers on page 169
UPPER COVER ASSEMBLY	RM1-4311-000CN	Assembly locations (2 of 3) on page 165

Table 7-19 Alphabetical parts list (continued)

Description	Part number	Table and page
UPPER COVER ASSEMBLY	RM1-4311-000CN	External panels and covers on page 169
UPPER COVER ASSEMBLY	RM1-4311-000CN	Upper cover assembly on page 171

Numerical parts list

Table 7-20 Numerical parts list

Part number	Description	Table and page
9170-2083	FERRITE BEAD (FORMATTER AREA)	Internal components (1 of 3) on page 173
9170-2120	FERRITE BEAD (COLUMN AREA)	Internal components (1 of 3) on page 173
CB394-40014	BEZEL, CONTROL PANEL LCD EN (CM1015)	Scanner assembly on page 189
CB394-40015	BEZEL, CONTROL PANEL LCD ES (CM1015)	Scanner assembly on page 189
CB394-40016	BEZEL, CONTROL PANEL LCD PT (CM1015)	Scanner assembly on page 189
CB394-40017	BEZEL, CONTROL PANEL LCD DE (CM1015)	Scanner assembly on page 189
CB394-40018	BEZEL, CONTROL PANEL LCD FR (CM1015)	Scanner assembly on page 189
CB394-40019	BEZEL, CONTROL PANEL LCD NL (CM1015)	Scanner assembly on page 189
CB394-40020	BEZEL, CONTROL PANEL LCD IT (CM1015)	Scanner assembly on page 189
CB394-40021	BEZEL, CONTROL PANEL LCD SV (CM1015)	Scanner assembly on page 189
CB394-40022	BEZEL, CONTROL PANEL LCD NO (CM1015)	Scanner assembly on page 189
CB394-40023	BEZEL, CONTROL PANEL LCD FI (CM1015)	Scanner assembly on page 189
CB394-40024	BEZEL, CONTROL PANEL LCD DA (CM1015)	Scanner assembly on page 189
CB394-40025	BEZEL, CONTROL PANEL LCD RU (CM1015)	Scanner assembly on page 189
CB394-40026	BEZEL, CONTROL PANEL LCD CS (CM1015)	Scanner assembly on page 189
CB394-40027	BEZEL, CONTROL PANEL LCD HU (CM1015)	Scanner assembly on page 189
CB394-40028	BEZEL, CONTROL PANEL LCD PL (CM1015)	Scanner assembly on page 189
CB394-40029	BEZEL, CONTROL PANEL LCD SK (CM1015)	Scanner assembly on page 189
CB394-40030	BEZEL, CONTROL PANEL LCD TR (CM1015)	Scanner assembly on page 189
CB394-40031	BEZEL, CONTROL PANEL LCD EL (CM1015)	Scanner assembly on page 189

Table 7-20 Numerical parts list (continued)

Part number	Description	Table and page
CB394-40032	BEZEL, CONTROL PANEL LCD HE (CM1015)	Scanner assembly on page 189
CB394-40033	BEZEL, CONTROL PANEL LCD AR (CM1015)	Scanner assembly on page 189
CB394-40034	BEZEL, CONTROL PANEL LCD ZHTW (CM1015)	Scanner assembly on page 189
CB394-40035	BEZEL, CONTROL PANEL LCD KO (CM1015)	Scanner assembly on page 189
CB394-40036	BEZEL, CONTROL PANEL LCD ZHCN (CM1015)	Scanner assembly on page 189
CB394-40037	BEZEL, CONTROL PANEL LCD TH (CM1015)	Scanner assembly on page 189
CB394-40038	BEZEL, CONTROL PANEL LCD VI (CM1015)	Scanner assembly on page 189
CB394-60101	CONTROL-PANEL ASSEMBLY LCD (CM1015)	Scanner assembly on page 189
CB394-60106	SCANNER LID	Scanner assembly on page 189
CB394-60104	FLAT FLEX CABLE, MEMORY-CARD ASSEMBLY	Memory-card reader assembly on page 187
CB394-67901	SCANNER ASSEMBLY (CM1015)	Scanner assembly on page 189
CB394-67902	FORMATTER (CM1015)	Internal components (3 of 3) on page 177
CB395-40005	BEZEL, CONTROL PANEL GCD EN (CM1017)	Scanner assembly on page 189
CB395-40006	BEZEL, CONTROL PANEL GCD ES (CM1017)	Scanner assembly on page 189
CB395-40007	BEZEL, CONTROL PANEL GCD PT (CM1017)	Scanner assembly on page 189
CB395-40008	BEZEL, CONTROL PANEL GCD DE (CM1017)	Scanner assembly on page 189
CB395-40009	BEZEL, CONTROL PANEL GCD FR (CM1017)	Scanner assembly on page 189
CB395-40010	BEZEL, CONTROL PANEL GCD NL (CM1017)	Scanner assembly on page 189
CB395-40011	BEZEL, CONTROL PANEL GCD IT (CM1017)	Scanner assembly on page 189
CB395-40012	BEZEL, CONTROL PANEL GCD SV (CM1017)	Scanner assembly on page 189
CB395-40013	BEZEL, CONTROL PANEL GCD NO (CM1017)	Scanner assembly on page 189
CB395-40014	BEZEL, CONTROL PANEL GCD FI (CM1017)	Scanner assembly on page 189

Table 7-20 Numerical parts list (continued)

Part number	Description	Table and page
CB395-40015	BEZEL, CONTROL PANEL GCD DA (CM1017)	Scanner assembly on page 189
CB395-40016	BEZEL, CONTROL PANEL GCD RU (CM1017)	Scanner assembly on page 189
CB395-40017	BEZEL, CONTROL PANEL GCD CS (CM1017)	Scanner assembly on page 189
CB395-40018	BEZEL, CONTROL PANEL GCD HU (CM1017)	Scanner assembly on page 189
CB395-40019	BEZEL, CONTROL PANEL GCD PL (CM1017)	Scanner assembly on page 189
CB395-40020	BEZEL, CONTROL PANEL GCD SK (CM1017)	Scanner assembly on page 189
CB395-40021	BEZEL, CONTROL PANEL GCD TR (CM1017)	Scanner assembly on page 189
CB395-40022	BEZEL, CONTROL PANEL GCD EL (CM1017)	Scanner assembly on page 189
CB395-40023	BEZEL, CONTROL PANEL GCD HE (CM1017)	Scanner assembly on page 189
CB395-40024	BEZEL, CONTROL PANEL GCD AR (CM1017)	Scanner assembly on page 189
CB395-40025	BEZEL, CONTROL PANEL GCD ZHTW (CM1017)	Scanner assembly on page 189
CB395-40026	BEZEL, CONTROL PANEL GCD KO (CM1017)	Scanner assembly on page 189
CB395-40027	BEZEL, CONTROL PANEL GCD ZHCN (CM1017)	Scanner assembly on page 189
CB395-40028	BEZEL, CONTROL PANEL GCD TH (CM1017)	Scanner assembly on page 189
CB395-40029	BEZEL, CONTROL PANEL GCD VI (CM1017)	Scanner assembly on page 189
CB395-60101	CONTROL-PANEL ASSEMBLY GCD (CM1017)	Scanner assembly on page 189
CB395-67901	SCANNER ASSEMBLY (CM1017)	Scanner assembly on page 189
CB395-67902	FORMATTER (CM1017)	Internal components (3 of 3) on page 177
CB395-67910	RIGHT FRONT PHOTO MEMORY COVER	External panels and covers on page 169
Q6456-60101	FLAT FLEX CABLE - DCC FORMATTER	Internal components (3 of 3) on page 177
Q6459-67902	ACCESSORY TRAY PAPER PICKUP FEEDER ASSEMBLY	Assembly locations (3 of 3) on page 167
Q7821-67901 (CM1017 only)	MEMORY-CARD READER ASSEMBLY	Memory-card reader assembly on page 187

Table 7-20 Numerical parts list (continued)

Part number	Description	Table and page
RC1-5147-000CN	COVER, CABLE, UNIT	Internal components (1 of 3) on page 173
RC1-5183-000CN	COVER, LEFT	External panels and covers on page 169
RC1-5192-000CN	ARM, FRONT DOOR, LEFT	External panels and covers on page 169
RC1-5194-000CN	SHAFT, FRONT DOOR ARM	External panels and covers on page 169
RC1-5200-000CN	COVER, CASSETTE DUST	External panels and covers on page 169
RC1-5204-000CN	SHEET, LEFT PANEL, LOWER	External panels and covers on page 169
RC1-5228-000CN	COVER, CONTROLLER	External panels and covers on page 169
RC1-5229-000CN	LID, CONTROLLER	External panels and covers on page 169
RC1-5249-000CN	CAM, LEFT	Internal components (2 of 3) on page 175
RC1-5272-000CN	LEVER, LINK	External panels and covers on page 169
RC1-5311-000CN	CAM, HINGE, RIGHT	Internal components (2 of 3) on page 175
RC1-5440-000CN	ROLLER, PAPER PICK-UP	Paper pick-up feeder assembly (tray 2) on page 181
RC1-5440-000CN	ROLLER, PAPER PICK-UP	Paper pickup feeder assembly (Tray 3) on page 183
RC1-5346-000CN	PANEL FRONT (TRAY 2 FRONT COVER)	External panels and covers on page 169
RC2-1663-000CN	COVER, UPPER, RIGHT	Upper cover assembly on page 171
RC2-1664-000CN	COVER, UPPER, LEFT	Upper cover assembly on page 171
RC2-1665-000CN	COVER, CABLE	Upper cover assembly on page 171
RC2-1671-000CN	TRAY, FACE-UP	External panels and covers on page 169
RC2-1672-000CN	COVER, FACE-DOWN	External panels and covers on page 169
RC2-1675-000CN	COVER, FACE-UP, REAR	External panels and covers on page 169
RC2-1682-000CN	ROLLER, FACE-UP	External panels and covers on page 169
RC2-1687-000CN	PLATE, REAR	External panels and covers on page 169

Table 7-20 Numerical parts list (continued)

Part number	Description	Table and page
RC2-1691-000CN	COVER, CASSETTE, LEFT	External panels and covers on page 169
RC2-1692-000CN	COVER, CASSETTE RIGHT	External panels and covers on page 169
RM1-1858-000CN	RIGHT COVER ASSEMBLY	External panels and covers on page 169
RM1-1885-020CN	ELECT.TRANSPORT BELT ASSEMBLY	Internal components (2 of 3) on page 175
RM1-1895-120CN	MAIN DRIVE ASSEMBLY	Assembly locations (2 of 3) on page 165
RM1-1916-080CN	CASSETTE	Assembly locations (2 of 3) on page 165
RM1-1916-080CN	CASSETTE	Cassette on page 179
RM1-1922-000CN	SEPARATION ASSEMBLY	Cassette on page 179
RM1-1923-000CN	PAPER PICK-UP FEEDER ASSEMBLY	Assembly locations (1 of 3) on page 163
RM1-1928-030CN	PAPER PICK-UP FEEDER ASSEMBLY	Paper pick-up feeder assembly (tray 2) on page 181
RM1-1945-000CN	ACCESSORY TRAY CASSETTE	Assembly locations (3 of 3) on page 167
RM1-4310-000CN (110v) or RM1-4313-000CN (220v)	FUSER ASSEMBLY	Assembly locations (1 of 3) on page 163
RM1-4311-000CN	UPPER COVER ASSEMBLY	Assembly locations (2 of 3) on page 165
RM1-4311-000CN	UPPER COVER ASSEMBLY	External panels and covers on page 169
RM1-4311-000CN	UPPER COVER ASSEMBLY	Upper cover assembly on page 171
RM1-4312-000CN	FACE-UP PAPER DELIVERY ASSEMBLY	Assembly locations (1 of 3) on page 163
RM1-4312-000CN	FACE-UP PAPER DELIVERY ASSEMBLY	Face-up paper delivery assembly on page 185
RM1-4314-000CN	FRONT DOOR ASSEMBLY	External panels and covers on page 169
RM1-4366-000CN	DC CONTROLLER PCB ASSEMBLY	Internal components (3 of 3) on page 177
RM1-5193-000CN	ARM, FRONT DOOR, RIGHT	External panels and covers on page 169
XA9-1500-000CN	SCREW RS, M3x8	External panels and covers on page 169
XB4-7401-005CN	SCREW, TAPPING, TRUSS HEAD M4x10	External panels and covers on page 169

A Specifications

This section contains information about MFP specifications.

- [Multifunction peripheral \(MFP\) specifications](#)

Multifunction peripheral (MFP) specifications

Table A-1 Physical Specifications

Specifications	HP Color LaserJet CM1015 MFP	HP Color LaserJet CM1017 MFP
Device weight (without cartridges)	19.4 kg	19.6 kg
	42.75 lb	43.2 lb
Device weight, including 4 cartridges	22 kg	22.2 kg
	48.5 lb	48.9 lb
Device height, desktop to top of fully tilted display ¹	525 mm	540 mm
	20.7 in	21.3 in
Device height, desktop to top of scanner cover with display folded down	490 mm	490 mm
	19.3 in	19.3 in
Device height, desktop to top edge of open scanner lid	750 mm	750 mm
	29.55 in	29.55 in
Depth from front of removable face up output tray to the back of the main input tray, letter paper (input tray extended)	508 mm	508 mm
	20.0 in	20.0 in
Depth, from front of removable face up output tray to back of main input tray, legal paper (input tray extended)	563 mm	563 mm
	22.2 in	22.2 in
Depth, from front of fully extended open input tray to back of device	790 mm	790 mm
	31.1 in	31.1 in
Device width at the scanner	437 mm	437 mm
	17.25 in	17.25 in

¹ Only dimensional difference between HP Color LaserJet CM1015 MFP and HP Color LaserJet CM1017 MFP.

Table A-2 Supplies specifications

Print-cartridge life (based on approximately 5% coverage)	Black: 2,500 pages
	Yellow, cyan, and magenta: 2,000 pages each

Table A-3 Electrical specifications

Item	110-Volt models	220-Volt models
Power requirements¹	110-127V (+/-10%)	220-240V (+/-10%)
	50/60 Hz (+/- 2 Hz)	50/60 Hz (+/- 2 Hz)
Rated current	4.0 Amps	2.5 Amps

Table A-4 Power consumption (average, in watts)¹

Product model	Printing (Color) ²	Printing (Black and White) ²	Copying ²	Ready ²	PowerSave	Off
HP Color LaserJet CM1015 MFP	200 W	190 W	150 W	18 W	18 W	0 W
HP Color LaserJet CM1017 MFP	200 W	190 W	150 W	18 W	18 W	0 W

¹ Values subject to change, see http://www.hp.com/support/cljCM1015_1017 for current information.

² Power reported is highest values measured for color and monochrome printing/copying using all standard voltages.

³ Default time from Ready Mode to Power Save = 0 minutes.

⁴ Recovery time from Power Save to start of printing = 14 seconds

⁵ Maximum heat dissipation for all models in Ready Mode = 62 BTU/Hour

⁶ HP Color LaserJet CM1015 MFP and HP Color LaserJet CM1017 MFP speed is 8 PPM Letter and A4 size.



WARNING! Power requirements are based on the country/region where the MFP is sold. Do not convert operating voltages. This can damage the MFP and void the product warranty.

Table A-5 Environmental specifications

	Recommended ¹	Operating ¹	Storage ¹
(MFP and print cartridge)	20° to 27°C (68° to 81°F)	15° to 32.5°C (59° to 90.5°F)	-20° to 40°C (-4° to 104°F)
Temperature			
Relative humidity	20% to 70%	10% to 80%	95% or less

¹ Values are subject to change. See http://www.hp.com.support/cljCM1015_1017 for current information.

Table A-6 Acoustic emissions¹

Sound Power Level	Declared Per ISO 9296 ¹
Printing/Copying (8 PPM) ²	L _{WAd} = 5.8 Bels (A) [58 dB (A)]
Ready	Inaudible
Sound Pressure Level (SPL)-Bystander Position	Declared Per ISO 9296 ¹

Table A-6 Acoustic emissions (continued)

Printing/Copying (8 PPM) ²	$L_{pAm} = 46 \text{ dB(A)}$
Ready	Inaudible

¹ Values are subject to change. See http://www.hp.com/support/cljCM1015_CM1017 for current information.

² Configuration tested: HP Color LaserJet CM1017 MFP, continuous monochrome printing on A4 paper at 8 PPM.

³ HP Color LaserJet CM1015 MFP and HP Color LaserJet CM1017 MFP speed is 8 PPM Letter and A4 size.

Table A-7 Paper and print media support specifications table

Category	Specifications
Acid content	5.5 pH to 8.0 pH
Caliper	0.094 to 0.18 mm (3.0 to 7.0 mils)
Curl in ream	Flat within 5 mm (0.2 inch)
Cut-edge conditions	Cut with sharp blades with no visible fray
Fusing compatibility	Must not scorch, melt, offset, or release hazardous emissions when heated to 210°C (410°F) for 0.1 second
Grain	Long Grain
Moisture content	4% to 6% by weight
Smoothness	100 to 250 Sheffield

For complete print media specifications for all HP LaserJet Printers, see the *HP LaserJet PrinterFamily Print Media Guide*. To download the guide in PDF format, go to <http://www.hp.com/support/ljpaperguide>.

Table A-8 Media registration and image placement accuracy

	Cut sheet simplex ¹	Envelopes and postcards
Skew - vertical	$\leq 1.5 \text{ mm} / 260 \text{ mm}$	$\leq 4.0 \text{ mm} / 220 \text{ mm}$
First line / leading edge position	$5.0 \text{ mm} \pm 2.0 \text{ mm}$	$15.0 \text{ mm} \pm 3.5$
Left margin accuracy	$5.0 \text{ mm} \pm 2.0 \text{ mm}$	$10 \text{ mm} \pm 2.5 \text{ mm}$
Parallelism	$\leq 1.5 \text{ mm}$	N/A
Image or text stretching - vertical	$\leq 1.0 \%$	N/A
Image or text stretching - horizontal	$\leq 1.0 \%$	N/A

¹ Xerox 4024 (#20) should be used for measurement.

B Service and support

Hewlett-Packard limited warranty statement

HP PRODUCT

HP Color LaserJet CM1015/CM1017 MFP

DURATION OF LIMITED WARRANTY

1 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 can 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 contain remanufactured parts equivalent to new in performance or have been subject to incidental use.

Warranty does not apply to defects resulting from (a) improper or inadequate maintenance or calibration, (b) software, interfacing, parts or supplies not supplied by HP, (c) unauthorized modification or misuse, (d) operation outside of the published environmental specifications for the product, or (e) improper site preparation or maintenance.

TO THE EXTENT ALLOWED BY LOCAL LAW, THE ABOVE WARRANTIES ARE EXCLUSIVE AND NO OTHER WARRANTY OR CONDITION, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED AND HP SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE. Some countries/regions, states or provinces do not allow limitations on the duration of an implied warranty, so the above limitation or exclusion might not apply to you. This warranty gives you specific legal rights and you might also have other rights that vary from country/region to country/region, state to state, or province to province. HP's limited warranty is valid in any country/region or locality where HP has a support presence for this product and where HP has marketed this product. The level of warranty service you receive vary according to local standards. HP will not alter form, fit or function of the product to make it operate in a country/region for which it was never intended to function for legal or regulatory reasons.

TO THE EXTENT ALLOWED BY LOCAL LAW, THE REMEDIES IN THIS WARRANTY STATEMENT ARE YOUR SOLE AND EXCLUSIVE REMEDIES. EXCEPT AS INDICATED ABOVE, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR LOSS OF DATA OR FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE. Some countries/regions, states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion not apply to you.

THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

Print cartridge limited warranty statement

This HP product is warranted to be free from defects in materials and workmanship.

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 MFP 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.

TO THE EXTENT ALLOWED BY LOCAL LAW, THE ABOVE WARRANTY IS EXCLUSIVE AND NO OTHER WARRANTY OR CONDITION, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED AND HP SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE.

TO THE EXTENT ALLOWED BY LOCAL LAW, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE.

THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

HP customer care

Online services

For 24-hour access to information by using a modem or Internet connection

World Wide Web: Updated HP MFP software, product and support information, and printer drivers in several languages can be obtained from http://www.hp.com/support/cljCM1015_CM1017. (The site is in English.)

Online troubleshooting tools

HP Instant Support Professional Edition (ISPE) is a suite of Web-based problem solving tools for desktop computing and printing products. ISPE helps you quickly identify, diagnose, and resolve computing and printing problems. The ISPE tools can be accessed from <http://instantsupport.hp.com>.

Telephone support

Hewlett-Packard provides free telephone support during the warranty period. When you call, you will be connected to a responsive team that is waiting to help you. For the telephone number for your country/region, see the flyer that came in the box with the product, or visit <http://www.hp.com> then click **Contact HP**. Before calling HP, have the following information ready: product name and serial number, date of purchase, and description of the problem.

You can also find support on the Internet at http://www.hp.com/support/cljCM1015_CM1017. Click the **support & drivers** block.

Software utilities, drivers, and electronic information

Go to http://www.hp.com/support/cljCM1015_CM1017. (The site is in English, but printer drivers can be downloaded in several languages.)

For information over the telephone, see the flyer that came in the box with the MFP.

HP direct ordering for accessories or supplies

Order supplies from the following Web sites:

North America: <https://www.hp.com/post-embed/ordersupplies-na>

Latin America: <https://www.hp.com/post-embed/ordersupplies-la>

Europe and Middle East: <https://www.hp.com/post-embed/ordersupplies-emea>

Asia Pacific countries/regions: <https://www.hp.com/post-embed/ordersupplies-ap>

Order accessories from <http://www.hp.com> and click **Supplies & Accessories**.

To order supplies or accessories over the telephone, call the following numbers:

United States: 1-800-538-8787

Canada: 1-800-387-3154

To find the telephone numbers for other countries/regions, see the flyer that came in the box with the MFP.

HP service information

To locate HP-Authorized Dealers in the United States or Canada, call 1-800-243-9816 (United States) or 1-800-387-3867 (Canada). Or, go to <http://www.hp.com/go/cposupportguide>.

For service for your HP product in other countries/regions, call the HP Customer Support telephone number for your country/region. See the flyer that came in the box with the MFP.

HP service agreements

Call: 1-800-HPINVENT [1-800-474-6836 (U.S.)] or 1-800-268-1221 (Canada).

Out-of-Warranty Service: 1-800-633-3600.

Extended Service: Call 1-800-HPINVENT 1-800-474-6836 (U.S.) or 1-800-268-1221 (Canada). Or, go to the HP Supportpack and Carepaq™ Services Web site at <http://www.hpexpress-services.com/10467a>.

Availability of support and service

Around the world, HP provides a variety of service and support options for purchase. Availability of these programs will vary depending upon your location.

HP Care Pack™ Services and Service Agreements

HP has various service and support options that meet a wide range of needs. These options are not part of the standard warranty. Support services vary by location. For most MFPs HP offers both in-warranty and post-warranty HP Care Pack Services and Service Agreements.

To identify service and support options for this MFP go to <http://www.hpexpress-services.com/10467a> and type the MFP model number. In North America, Service Agreement information can be obtained through HP Customer Care. Call 1-800-HPINVENT 1-800-474-6836 (U.S.) or 1-800-268-1221 (Canada). In other countries/regions please contact your country/region specific HP Customer Care Center. See the inbox flyer or go to <http://www.hp.com> for the HP Customer Care telephone number in your country/region.

C Regulatory information

This section contains the following information:

- [Introduction](#)
- [FCC regulations](#)
- [Environmental Product Stewardship program](#)
- [Declaration of conformity](#)
- [Country/region-specific safety statements](#)

Introduction

This section contains the following regulatory information:

- [FCC regulations on page 217](#)
- [Environmental Product Stewardship program on page 218](#)
- [Service and support on page 209](#)
- [Declaration of conformity on page 221](#)
- [Laser safety statement on page 222](#)
- [Canadian DOC statement on page 222](#)
- [Korean EMI statement on page 222](#)
- [VCCI statement \(Japan\) on page 222](#)
- [Finnish laser statement on page 224](#)

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 can cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation; the presence of interference can be determined by turning the equipment off and on. If this equipment does cause harmful interference to radio or television communications, 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 distance 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/television technician.



NOTE Any changes or modifications to the MFP 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.

Environmental Product Stewardship program

Protecting the environment

Hewlett-Packard Company is committed to providing quality products in an environmentally sound manner. This product has been designed with several attributes to minimize impacts on our environment.

Ozone production

This product generates no appreciable ozone gas (O₃).

Power consumption

Power usage drops significantly while in sleep mode, which saves natural resources and saves money without affecting the high performance of this product. This product qualifies for ENERGY STAR® (Version 3.0), which is a voluntary program to encourage the development of energy-efficient office products.



ENERGY STAR® and the ENERGY STAR mark are U.S. registered marks. As an ENERGY STAR® partner, Hewlett-Packard Company has determined that this product meets ENERGY STAR® Guidelines for energy efficiency. For more information, see <http://www.energystar.gov/>.

Paper use

This product's duplex feature (two-sided printing) and N-up printing (multiple pages printed on one page) capability can reduce paper usage and the resulting demands on natural resources.

Plastics

Plastic parts over 25 grams are marked according to international standards that enhance the ability to identify plastics for recycling purposes at the end of the product's life.

HP LaserJet printing supplies

It is easy to return and recycle your empty HP LaserJet print cartridges—free of charge—with HP Planet Partners. HP is committed to providing inventive, high-quality products and services that are environmentally sound, from product design and manufacturing to distribution, operation and recycling processes. We ensure your returned HP LaserJet print cartridges are recycled properly, processing them to recover valuable plastics and metals for new products and diverting millions of tons of waste from landfills. Since this cartridge is being recycled and used in new materials, it will not be returned to you. Your empty HP LaserJet print cartridges are recycled responsibly when you participate in the HP Planet Partners program. Thank you for being environmentally responsible!

In many countries/regions, this product's printing supplies (for example, print cartridge) can be returned to HP through the HP Printing Supplies Returns and Recycling Program. An easy-to-use and free takeback program is available in over 35 countries/regions. Multi-lingual program

information and instructions are included in every new HP LaserJet print cartridge and supplies package.

HP Printing Supplies Returns and Recycling Program Information

Since 1992, HP has offered HP LaserJet supplies return and recycling free of charge. In 2004, HP Planet Partners for LaserJet Supplies was available in 85% of the world market where HP LaserJet supplies are sold. Postage-paid and pre-addressed labels are included within the instruction guide in most HP LaserJet print cartridge boxes. Labels and bulk boxes are also available through the Web site: <http://www.hp.com/recycle>.

Use the label to return empty, original HP LaserJet cartridges only. Please do not use this label for, non-HP cartridges, refilled or remanufactured cartridges or warranty returns. Printing supplies or other objects inadvertently sent to the HP Planet Partners program cannot be returned.

More than 10 million HP LaserJet print cartridges were recycled globally in 2004 through the HP Planet Partners supplies recycling program. This record number represents 26 million pounds of print cartridge materials diverted from landfills. Worldwide, in 2004, HP recycled an average of 59% of the print cartridge by weight consisting primarily of plastic and metals. Plastics and metals are used to make new products such as HP products, plastic trays and spools. The remaining materials are disposed of in an environmentally responsible manner.

U.S. returns

For a more environmentally responsible return of used cartridges and supplies, HP encourages the use of bulk returns. Simply bundle two or more cartridges together and use the single, pre-paid, pre-addressed UPS label that is supplied in the package. For more information in the U.S., call 1-800-340-2445 or visit the HP Printing Supplies Returns and Recycling Program Web site at: <http://www.hp.com/go/recycle>.

Non-U.S. returns

Non-U.S. customers should visit the <http://www.hp.com/go/recycle> Web site for further information regarding availability of the HP Supplies Returns and Recycling program.

Paper

This product is capable of using recycled papers, when the paper meets the guidelines outlined in the *HP LaserJet Printer Family Print Media Guide*. Go to <http://www.hp.com/support/ljpaperguide> to download this guide in PDF format. This product is suitable for the use of recycled paper according to EN12281:2002.

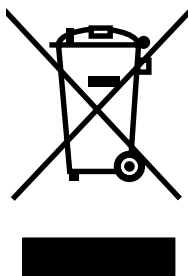
Material restrictions

This product does not contain added mercury.

This product does not contain batteries.

For recycling information, you can contact <http://www.hp.com/go/recycle> or contact your local authorities or the Electronics Industry Alliance at <http://www.eiae.org>.

Disposal of waste equipment by users in private households in the European Union



This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Material safety data sheet

Material Safety Data Sheets (MSDS) for supplies containing chemical substances, such as toner, can be obtained by contacting the HP Web site at <http://www.hp.com/go/msds> or <http://www.hp.com/hpinfo/community/environment/productinfo/safety>.

Extended warranty

HP Care Pack provides coverage for the HP hardware product and all HP supplied internal components, excluding consumable items. The hardware maintenance covers a specified period of time from date of the HP product purchase. The customer can either purchase HP Care Pack within the standard HP product warranty period, or purchase a post-warranty Care Pack if the standard warranty has expired. For more information, contact the HP Customer Care Service and HP Customer Support group.

Spare parts and consumable supplies for this product will be available for at least five years after production has stopped.

For more information

To obtain information about these environmental topics:

- Product environmental profile sheet for this and many related HP products
- HP's commitment to the environment
- HP's environmental management system
- HP's end-of-life product return and recycling program
- MSDS

See: <http://www.hp.com/go/environment> or <http://www.hp.com/hpinfo/community/environment/productinfo/safety>.

Declaration of conformity

Declaration of Conformity

according to ISO/IEC Guide 22 and EN 45014

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

declares, that the product

Product Name: HP LaserJet CM 1015/1017
Regulatory Model Number³⁾: BOISB-0409-03

Product Options: Including: Q6459A —Optional 250-Sheet Input Tray
All
Toner Cartridges: Q6000A, Q6001A, Q6002A, Q6003A

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: CISPR22:1993 +A1 +A2 / EN55022:1994 +A1 +A2 Class B¹⁾
EN 61000-3-2:2000
EN 61000-3-3:1995 +A1
EN 55024:1998 +A1 +A2
FCC Title 47 CFR, Part 15 Class B²⁾ / ICES-003, Issue 4
GB9254-1998, GB17625.1-2003

Supplementary Information:

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

- 1) The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.
- 2) This Device complies with Part 15 of the FCC Rules. Operation is subject to the following two Conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- 3) 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 83714-1021, USA

January 4, 2006

For regulatory topics only:

Australia Contact: Product Regulations Manager, Hewlett-Packard Australia Ltd., 31-41 Joseph Street, Blackburn, Victoria 3130, Australia.
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)
USA Contact: Product Regulations Manager, Hewlett-Packard Company, PO Box 15, Mail Stop 160, Boise, Idaho 83707-0015, USA, (Phone: 208-396-6000)

Country/region-specific safety statements

Laser safety statement

The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration has implemented regulations for laser products manufactured since August 1, 1976. Compliance is mandatory for products marketed in the United States. The MFP 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 MFP 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 can result in exposure to hazardous radiation.

Canadian DOC statement

Complies with Canadian EMC Class B requirements.

« Conforme à la classe B des normes canadiennes de compatibilité électromagnétiques (CEM). »

Korean EMI statement

B급 기기 (가정용 정보통신기기)

이 기기는 가정용으로 전자파적합등록을 한 기기로서
주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.

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B情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。

Japanese Power Cord Statement

Please use the attached power cord. The attached power cord is not allowed to use with other product.

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。

Finnish laser statement

LASERTURVALLISUUS

LUOKAN 1 LASERLAITE

KLASS 1 LASER APPARAT

HP Color LaserJet CM1015 and CM1017 -laserkirjoitin on käyttäjän kannalta turvallinen luokan 1 laserlaite. Normaalissa käytössä kirjoittimen suojakoteloointi estää lasersäteen pääsyn laitteen ulkopuolelle.

Laitteen turvallisuusluokka on määritetty standardin EN60825-1 (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 CM1015/CM1017 MFP -kirjoittimen sisällä ei ole käyttäjän huollettavissa olevia kohteita. Laitteen saa avata ja huoltaa ainoastaan sen huoltamiseen koulutettu henkilö. Tällaiseksi huoltotoimenpiteeksi ei katsota väriainekasetin vaihtamista, paperiradan puhdistusta tai muita käyttäjän käsikirjassa lueteltuja, käyttäjän tehtäväksi tarkoitettuja ylläpitotoimia, jotka voidaan suorittaa ilman erikoistyökaluja.

VARO!

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

VARNING!

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

Tiedot laitteessa käytettävän laserdiodin säteilyominaisuuksista:

Aallonpituus 770-800 nm

Teho 5 mW

Luokan 3B laser

Index

A

- accessories
 - ordering 160
- adhesive labels
 - specifications 10
- agreements,
 - maintenance 213, 220
- alerts, setting up 36
- Archive print 148
- assembly
 - locations 162
 - parts list 162

B

- background, gray 128
- bands, resolve problems 127
- battery specifications 219
- bins, output
 - features 3
 - jams, clearing 121
- black and white printing
 - resolve problems 131
- Black cartridge
 - life expectancy 24
- blank pages ,resolve problems 134
- blank scans, resolve problems 137
- Bonjour 44
- built-in networking
 - information page, printing 30
- Button test 151

C

- cables
 - USB, resolve problems 135
- calibrating printer 59
- Calibration, color 151
- Calibration, scan 149
- cardstock
 - specifications 10

- cartridges
 - HP fraud hotline 26
 - life expectancy 24
 - recycling 218
 - replacing 25, 66
 - status page, printing 31
 - status, viewing with HP ToolboxFX 36
 - storage specifications 207
- characters, resolve problems 129
- cleaning
 - ETB 153
- Cleaning mode 147
- clearing jams
 - common locations 118
 - input areas 123
 - inside MFP 119, 122
 - output areas 121
- cold reset 147
- color
 - resolve problems 131
- Color calibration 151
- components
 - locating 5
- Configuration page
 - printing 30
- configurations, MFP 2
- consumables
 - life expectancies 24
 - recycling 218
 - specifications 206
 - status page, printing 31
- Continuous self-test 149
- contracts, maintenance 213, 220
- control panel
 - HP ToolboxFX settings 40
 - messages, resolve problems 108
 - removal and replacement 98
- Control-panel button test 151

- covers
 - locations 170
 - parts list 170
- covers, document
 - paper specifications 10
- creases, resolve problems 130
- crooked pages 130, 133
- curled media 129
- customer support
 - maintenance agreements 213, 220
- Cyan cartridge
 - life expectancy 24

D

- dark copies, resolve problems 141
- DC controller
 - removal and replacement 91
- declaration of conformity 221
- defaults, restoring 147
- defects
 - repetitive image defects 156
- Demo page, printing 30
- diagnostic tools
 - repetitive image defect ruler 156
- diagrams
 - assemblies 162
 - covers 170
 - general circuit 192
 - internal assemblies 172
- documentation
 - ordering 160
- Documentation tab,
 - HP ToolboxFX 37
- dots per inch (dpi)
 - specifications 3
- dots, resolve problems 127
- dpi (dots per inch)
 - specifications 3

drivers
operating systems supported 8

E

E-label reader 68, 125
e-mail alerts, setting up 36
electrical specifications 207
embedded Web server
opening 43
using 42
energy consumption 207
engine control system 46
engine test print 145
engine, cleaning 27
envelopes
specifications 10
environmental
features 218
MFP specifications 207
error messages
control panel 108
ETB
removal and replacement 69
Event log 36
extended warranty 213, 220

F

faded print 127
FCC statements 217
feeding problems ,resolve
problems 134
firmware updates 157
Firmware version, viewing 151
formatter
removal and replacement 89
fraud hotline 26
fuser
removal and replacement 83

G

general circuit diagram 192
general timing chart 58
gray background, resolve
problems 128
grayscale
resolve problems 131

H

heavy paper
specifications 10
Help tab, HP ToolboxFX 37

HP built-in networking
information page, printing 30
HP customer care 212
HP Director 8
HP fraud hotline 26
HP Printing Supplies Returns and
Recycling Program 218
HP Solution Center 8
HP SupportPack 213, 220
HP ToolboxFX
calibrating MFP 29
Documentation tab 37
Help tab 37
Network Settings tab 41
operating systems supported 8
Status tab 36
System Settings tab 38
toner level, checking from 24
humidity specifications
MFP environment 207

I

image formation system 49
image placement accuracy 208
image quality
HP ToolboxFX settings 39
print, resolve problems 126
scans, resolve problems 136
input trays
features 3
feeding problems, resolve
problems 134
jams, clearing 123
installing DIMM 18
installing memory 18
interface ports
types included 3
internal assembly
locations 172
parts list 172

J

jams
back of MFP 122
causes of 118
input areas 123
inside MFP 119
output areas 121
top output area 122

L

labels
specifications 10
language
information pages 30
laser safety statements 222
Less paper curl 148
life expectancies, supplies 24
light copies, resolve problems 141
light print, resolve problems 127
lightness
faded print resolve
problems 127
lines, resolve problems
printed pages 127
lines, s
copies 141
location
printed circuit
assemblies 53, 54
solenoid 54
loose toner, resolve problems 128

M

Macintosh
drivers 8
features supported 8
scan driver 8
Macintosh Installer
operating systems supported 8
Magenta cartridge
life expectancy 24
mailing labels
specifications 10
maintenance
agreements 213, 220
replacing print cartridges 24
Material Safety Data Sheet 220
media
curled, resolve problems 129
HP Solution Center settings 40
jams 118
resolve problems 132
selecting 9
specifications 208
types that may damage the
printer 11
types to avoid 11
wrinkled 130
media registration accuracy 208

- memory
 - installing 18
 - slots 4
- Memory cards
 - disabling 152
 - enabling 152
- memory cards
 - error messages 116
- memory-card assembly
 - removal and replacement 99
- mercury specifications 219
- messages
 - control panel 108

N

- Network Settings tab,
 - HP ToolboxFX 41
- networks
 - information pages, printing 30
- non-HP print cartridges 25
- NVRAM initializer 148

O

- on-site service agreements 220
- online customer support 212
- operating environment,
 - specifications 207
- operating systems supported 8
- ordering
 - accessories 160
 - parts 160
- output bin
 - features 3
- output bin extender 5
- output bins
 - jams, clearing 121
- output quality
 - HP ToolboxFX settings 39
 - print, resolve problems 126
 - scan, ,resolve problems 136
- overhead transparencies
 - specifications 10
- ozone specifications 218

P

- pages
 - blank 134
 - not printing 135
 - printing slowly 134
 - skewed 130, 133

- paper
 - curled, resolve problems 129
 - HP Solution Center settings 40
 - jams 118
 - resolve problems 132
 - selecting 9
 - specifications 208
 - wrinkled 130
- Paper curl, reducing 148
- paper input trays
 - features 3
 - feeding problems, resolve
 - problems 134
 - jams, clearing 123
- paper output bin
 - features 3
- paper output bins
 - jams, clearing 121
- paper pickup roller
 - removal and replacement 95
- parts
 - assembly locations 162
 - cover locations 170
 - internal assembly locations 172
 - ordering 160
 - removal and replacement 61
 - replaceable 160
- password 44
- PCL5c 44
- phone numbers
 - HP fraud hotline 26
 - HP Printing Supplies Returns
 - and Recycling Program 219
 - support 212
- photo memory cards 4
- photos, resolve problems
 - scanning 136
- pickup and feed system 50
- platforms supported 8
- ports
 - types included 3
- post-repair tests 63
- PostScript driver, HP ToolboxFX
 - settings 41
- power
 - requirements 207
- power-on checklist 106
- print cartridges
 - HP fraud hotline 26
 - life expectancy 24

- recycling 218
- replacing 25
- status page, printing 31
- status, viewing with
 - HP ToolboxFX 36
- storage specifications 207
- print driver
 - PostScript 3
- print quality
 - HP ToolboxFX settings 39
 - resolve problems 126
 - specifications 3
- print servers
 - information page, printing 30
- printer
 - calibrating 59
 - dimensions 14
- printer- drivers
 - operating systems supported 8
- printing
 - resolve problems 134, 135
- procedure
 - pre-service 63

Q

- quality
 - HP ToolboxFX settings 39
 - print, resolve problems 126
 - scans, resolve problems 136
 - specifications 3

R

- rear output door
 - features 3
- recycling
 - plastics 218
 - print cartridges 218
- refilled print cartridges 25
- refurbished units 161
- regulatory statements
 - declaration of conformity 221
 - FCC 217
 - laser safety 222
 - Material Safety Data Sheet 220
- removal
 - control panel 98
 - DC controller 91
 - ETB 69
 - formatter 89
 - fuser 83

- memory-card assembly 99
- paper pickup roller 95
- print cartridges 66
- separation pad 94
- removal and replacement 61
- repetitive defects, resolve problems 130
- repetitive image defect ruler 156
- replaceable parts 160
- replacement units 161
- replacing
 - control panel 98
 - DC controller 91
 - ETB 69
 - formatter 89
 - fuser 83
 - memory-card assembly 99
 - paper pickup roller 95
 - print cartridges 66
 - separation pad 94
- replacing print cartridges 25
- reports, printing 30
- reset, cold 147
- resolution
 - specifications 3
- resolve problems
 - blank pages 134
 - color 131
 - Configuration page, printing 30
 - control panel messages 108
 - curled media 129
 - Demo page, printing 30
 - faded print 127
 - feeding problems 134
 - jams 118
 - lines, printed pages 127
 - loose toner 128
 - pages not printing 135
 - pages printing slowly 134
 - paper 132
 - print quality 126
 - repetitive defects 130
 - replacing print cartridges 25
 - scan quality 136
 - skewed pages 130, 133
 - text 129
 - toner scatter 130
 - toner smear 128
 - toner specks 127
- USB cables 135
- wrinkles 130
- Restore defaults 147
- restoring
 - page counts 147
 - serial number 147
- S**
- s
 - lines, copies 141
- Scan calibration 149
- scanning
 - blank pages, resolve problems 137
 - quality, resolve problems 136
 - speed, resolve problems 137
- scatter, resolve problems 130
- selection guidelines
 - media 9
- Self-test, continuous 149
- separation pad
 - removal and replacement 94
- sequence of operation 46
- servers
 - information page, printing 30
- service
 - agreements 213, 220
 - HP ToolboxFX settings 40
- service approach 63
- service mode functions
 - cleaning mode 147, 153
 - cold reset 147
 - NVRAM initializer 147
 - super NVRAM initializer 147
- settings
 - HP ToolboxFX 38
- Show firmware version 151
- site preparation 14
- skewed pages 130, 133
- slots
 - memory 4
- slow speed, resolve problems
 - scanning 137
- smear, resolve problems 128
- SNMP 44
- software
 - HP ToolboxFX 35
 - operating systems supported 8
- ordering 160
- updates 157
- solenoid 54
- space requirements 14
- special media
 - specifications 10
- special pages, printing 30
- specifications
 - environmental 207
 - Material Safety Data Sheet 220
 - MFP 206
 - MFP features 3
 - motors and fans 47
 - paper 208
- specks, resolve problems 127
- speed
 - scanning, resolve problems 137
- spots, resolve problems 127
- status
 - alerts, HP ToolboxFX 36
 - Supplies Status page, printing 31
 - viewing with HP ToolboxFX 36
- Status tab, HP ToolboxFX 36
- storing
 - MFP 207
 - print cartridges 25
- streaks, resolve problems 127
- supplies
 - life expectancies 24
 - ordering 160
 - recycling 218
 - specifications 206
 - status page 31
 - status, viewing with HP ToolboxFX 36
- support
 - maintenance
 - agreements 213, 220
 - SupportPack, HP 213, 220
- system requirements 15
- System Settings tab, HP ToolboxFX 38
- systems
 - engine control 46
 - image formation 49
 - pickup and feed 50

T

- technical support
 - maintenance
 - agreements 213, 220
 - web sites 160
 - telephone numbers
 - HP fraud hotline 26
 - HP Printing Supplies Returns and Recycling Program 219
 - support 212
 - temperature specifications
 - MFP environment 207
 - tests, post-repair 63
 - text, resolve problems
 - misformed characters 129
 - timing chart 58
 - toner
 - loose, resolve problems 128
 - scatter, resolve problems 130
 - smeared, resolve problems 128
 - specks, 127
 - Toolbox. *See* HP ToolboxFX
 - ToolboxFX
 - operating systems supported 8
 - top output bin
 - features 3
 - transparencies
 - specifications 10
 - trays
 - features 3
 - feeding problems, resolve problems 134
 - jams, clearing 123
 - troubleshooting
 - process 106
 - types, media
 - HP Solution Center settings 40

U

- unpack checklist 106
- updates
 - software and firmware 157
- USB port
 - resolve problems 135
 - type included 3
- USB speed 147

V

- vertical lines, resolve problems 127

- vertical white or faded stripes 140
- voltage requirements 207

W

- warranty
 - extended 213, 220
 - print cartridge 211
 - product 209, 210
- wavy paper, resolve problems 129
- Web sites
 - customer support 212
 - HP Printing Supplies Returns and Recycling Program 219
 - Material Safety Data Sheet 220
- white or faded stripes 140
- Windows
 - scan driver 8
 - Versions supported 8
- wrinkles, resolve problems 130

Y

- Yellow cartridge
 - life expectancy 24



CB394-90930