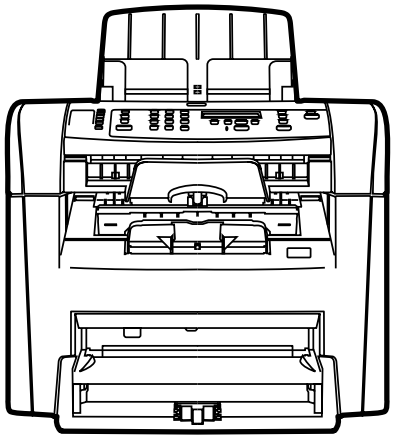
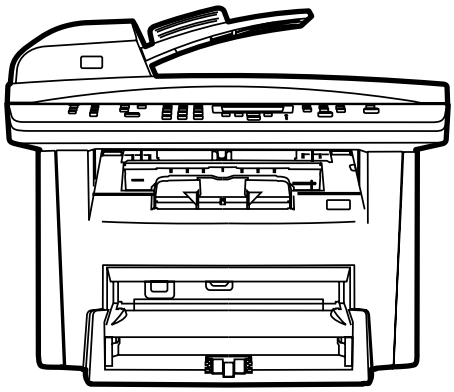
HP LaserJet 3050/3052/3055 All-in-One
Service Manual





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HP LaserJet 3050/3052/3055 All-in-One

Service Manual

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1 Product information

- All-in-one configurations
- All-in-one features
- All-in-one parts
- Software installation
- Choosing paper and other print media

All-in-one configurations

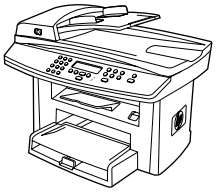
The all-in-one is available in the following configurations.

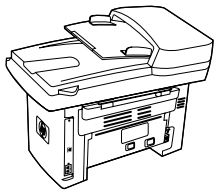
HP LaserJet 3050 all-in-one

HP LaserJet 3050 all-in-one printer, fax, copier, scanner

- Prints letter-size pages at speeds up to 19 pages per minute (ppm) and A4-size pages at speeds up to 18 ppm
- PCL 5e and PCL 6 printer drivers and HP postscript level 3 emulation.
- The priority input slot holds up to 10 pages.
- Tray 1 holds up to 250 sheets of print media or 10 envelopes.
- Average yield for the standard black print cartridge is 2,000 pages in accordance with ISO/IEC 19752; actual yield depends on specific use.
- Hi-Speed universal serial bus (USB) 2.0 port
- V.34 fax modem and 2-megabyte (MB) flash fax-storage memory
- 64-MB random-access memory (RAM)
- 30-page automatic document feeder (ADF)

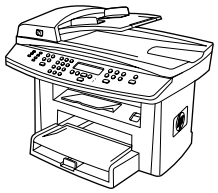
HP LaserJet 3052/3055 all-in-one





HP LaserJet 3052 all-in-one printer, scanner, copier

- Prints letter-size pages at speeds up to 19 ppm and A4-size pages at speeds up to 18 ppm
- PCL 5e and PCL 6 printer drivers and HP postscript level 3 emulation
- The priority input slot holds up to 10 pages.
- Tray 1 holds up to 250 sheets of print media or 10 envelopes.
- Average yield for the standard black print cartridge is 2,000 pages in accordance with ISO/IEC 19752; actual yield depends on specific use.
- Hi-Speed USB 2.0 port and port for connecting to a 10/100Base-T network
- 64-MB RAM
- 50-page automatic document feeder (ADF)



The **HP LaserJet 3055 all-in-one printer, fax, copier, scanner** has all of the features of the HP LaserJet 3052 all-in-one, plus:

- V.34 fax modem and 2-MB flash fax-storage memory

All-in-one features

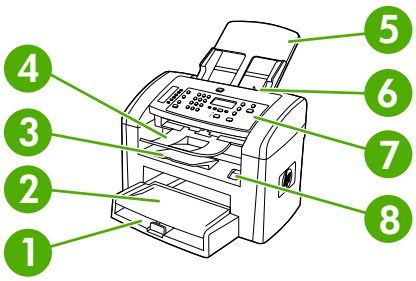
Excellent print quality	• 1200 dots per inch (dpi) with Image REt 2400 text and graphics • Adjustable settings to optimize print quality • The HP UltraPrecise print cartridge has a finer toner formulation that provides sharper text and graphics.
Fax (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)	• Full-functionality fax capabilities with a V.34 fax; includes a phone book, fax polling, and delayed-fax features For more information, see the online user guide.
Copy	• Includes an ADF that accommodates faster, more efficient copy jobs with multiple-page documents For more information, see the online user guide.
Scan	• The HP LaserJet 3050 all-in-one provides 600 pixels per inch (ppi), 24-bit full-color scanning from the contact image sensor through the ADF. • The HP LaserJet 3052/3055 all-in-one provides 1200 ppi, 24-bit full-color scanning from letter/A4-size scanner glass. • All models include an ADF that allows faster, more efficient scan jobs with multiple-page documents. For more information, see the online user guide.
Networking (HP LaserJet 3052/3055 all-in-one only)	• TCP/IP • LPD • 9100
Printer-driver features	• Fast printing performance, built-in Intellifont and TrueType scaling technologies, and advanced imaging capabilities are benefits of the PCL 6 printer language.
Automatic language-switching	• The all-in-one automatically determines and switches to the appropriate printer language (such as PS or PCL 6) for the print job.
Interface connections	• Hi-Speed USB 2.0 port • 10/100 ethernet (RJ45) network port (HP LaserJet 3052/3055 all-in-one only)
Environmental features	• PowerSave mode (HP LaserJet 3052/3055 all-in-one only) • ENERGY STAR® qualified
Economical printing	• N-up printing (printing more than one page on a sheet). For more information, see the online user guide. • The Economode setting uses less toner.
Supplies	• No-shake cartridge design
Accessibility	• The online user guide is compatible with text screen-readers. • Print cartridges can be installed and removed by using one hand. • All doors and covers can be opened by using one hand.

All-in-one parts

Before using the all-in-one, familiarize yourself with its parts.

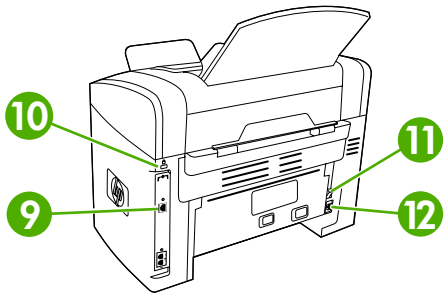
HP LaserJet 3050 all-in-one parts

Front view



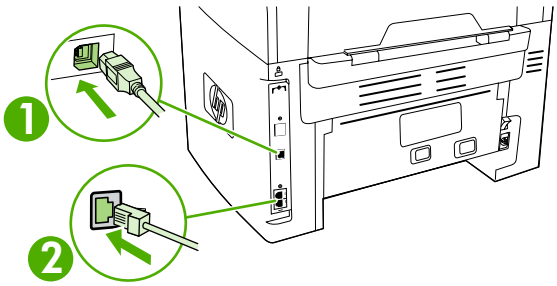
1	Tray 1
2	Priority input slot
3	Output bin
4	ADF output bin
5	ADF input tray
6	ADF media lever
7	Control panel
8	Cartridge-door release

Back view



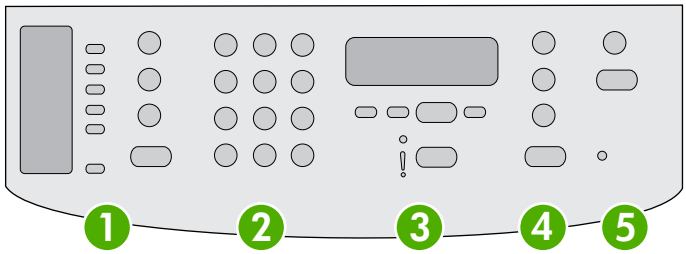
9	Interface ports
10	Security-lock slot
11	Power switch
12	Power receptacle

Interface ports



1	Hi-Speed USB 2.0 port
2	Fax ports

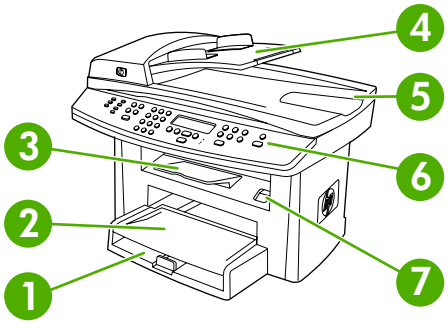
Control panel



1	**Fax controls.** Use the fax controls to change commonly used fax settings. For information about using the fax controls, see the online user guide.
2	**Alphanumeric buttons.** Use the alphanumeric buttons to type data into the all-in-one control-panel display and dial telephone numbers for faxing. For information about using alphanumeric key characters, see the online user guide.
3	**Menu and cancel controls.** Use these controls to select menu options, determine the all-in-one status, and cancel the current job.
4	**Copy controls.** Use these controls to change commonly used default settings and to start copying. For information about copying, see the online user guide.
5	**Scan controls.** Use these controls to scan to e-mail or to a folder. For information about scanning, see the online user guide.

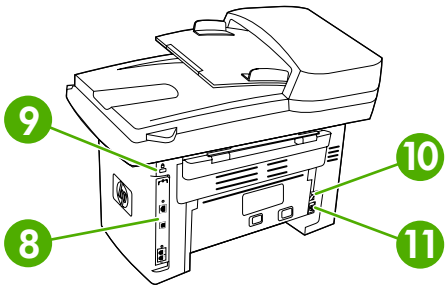
HP LaserJet 3052/3055 all-in-one parts

Front view



1	Media input tray (tray 1)
2	Priority input slot
3	Output bin
4	Automatic document feeder (ADF) input tray
5	ADF output bin
6	Control panel **NOTE** The control panel for the HP LaserJet 3055 all-in-one, with fax controls, is shown. The control panel for the HP LaserJet 3052 all-in-one does not have fax controls.
7	Cartridge-door release

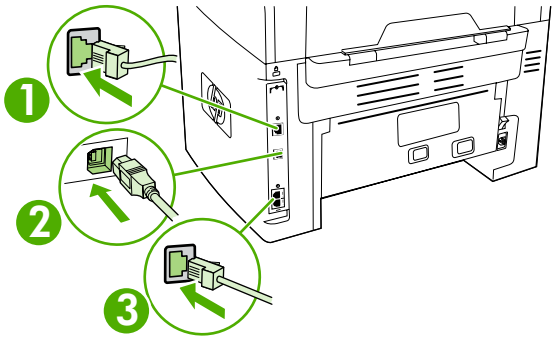
Back view



8	Interface ports
9	Security-lock slot
10	Power switch
11	Power receptacle

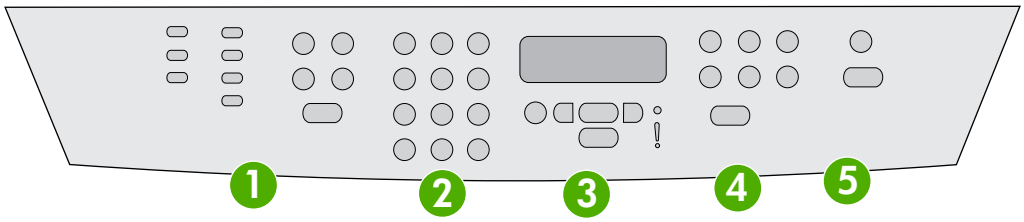
Interface ports

The HP LaserJet 3052/3055 all-in-one has two interface ports: a 10/100Base-T (RJ-45) network port and a Hi-Speed USB 2.0 port. The HP LaserJet 3055 all-in-one also has fax ports.



1	Network port
2	Hi-Speed USB 2.0 port
3	Fax ports (HP LaserJet 3055 all-in-one only)

Control panel



1	**Fax controls (HP LaserJet 3055 all-in-one only; the HP LaserJet 3052 all-in-one does not have fax controls).** Use the fax controls to change commonly used fax settings. For information about using the fax controls, see the online user guide.
2	**Alphanumeric buttons.** Use the alphanumeric buttons to type data into the all-in-one control-panel display and dial telephone numbers for faxing. For information about using alphanumeric key characters, see the online user guide.
3	**Menu and cancel controls.** Use these controls to select menu options, determine the all-in-one status, and cancel the current job.
4	**Copy controls.** Use these controls to change commonly used default settings and to start copying. For instructions about copying, see the online user guide.
5	**Scan controls.** Use these controls to scan to e-mail or to a folder. For instructions about scanning, see the online user guide.

Model and serial numbers

An identification label is located on the back of the all-in-one. This label contains the model and serial numbers. The serial number contains information about the country/region of origin, revision level, production code, and production number of the all-in-one. The label also contains power-rating and regulatory information.

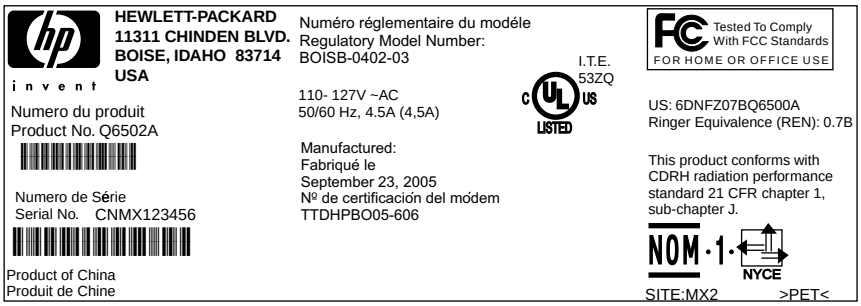


Figure 1-1 HP LaserJet 3050/3052/3055 all-in-one identification label

Software installation

If the computer meets the recommended minimum requirements, you have two options when installing the software from the CDs that came with the all-in-one.

Typical installation

The following software is included with a typical installation:

- HP ToolboxFX
- HP LaserJet Fax setup utility
- HP LaserJet Scan program and driver
- HP LaserJet Fax
- Readiris OCR (not installed with other software; separate installation is required)
- Printer drivers (PCL 6, PCL 5e, PostScript® Level 2 emulation [PS])
- HP Director (Macintosh)
- HP All-in-One Setup Assistant (Macintosh)

Minimum installation

The following software is included with a minimum installation:

- PCL 6 printer driver
- HP LaserJet Scan program and driver
- HP LaserJet Fax setup utility

NOTE Minimum installation supports faxing from the control panel.

Printer drivers

The all-in-one comes with software that allows the computer to communicate with the all-in-one (by using a printer language). This software is called a printer driver. Printer drivers provide access to all-in-one features, such as printing on custom-sized paper, resizing documents, and inserting watermarks.

Supported printer drivers

The following printer drivers are provided for the all-in-one. If the printer driver that you want is not on the all-in-one CD or is not available on www.hp.com, contact the manufacturer or distributor of the program that you are using, and request a driver for the all-in-one.

NOTE The most recent drivers are available at www.hp.com. Depending on the configuration of Windows-based computers, the installation program for the all-in-one software automatically checks the computer for Internet access in order to obtain the latest drivers.

Operating system[1]	Fax driver	PCL 6 printer driver	PCL 5 printer driver	PS printer driver	PPD[2] printer driver
Microsoft® Windows® 98		X	X	X	
Windows Millennium Edition (Me)		X	X	X	
Windows 2000	X	X	X	X	
Windows XP	X	X	X	X	
Windows Server 2003		X	X	X	
Mac OS X V10.3 and Mac OS X V10.4	X			X	X

1 Not all all-in-one features are available from all drivers or operating systems. See the context-sensitive help in the printer driver for available features.

2 A Macintosh printer driver and the necessary PostScript (PS) Printer Description files (PPDs) are included with the all-in-one.

Additional drivers

The following drivers are not included on the CD, but are available from the Internet.

- UNIX® model scripts
- Linux drivers
- Windows XP 64-bit drivers

You can obtain Model Scripts for UNIX and Linux by downloading them from the Internet or by requesting them from an HP-authorized service or support provider. For Linux support see www.hp.com/go/linux. For UNIX support see www.hp.com/go/jetdirectunix_software.

Select the correct printer driver

Select a printer driver based on the operating system in use and the way that all-in-one is used. See the printer-driver Help for more information.

- The PCL 6 printer driver can provide the best overall performance and access to the all-in-one features.
- The PCL 5 printer driver is recommended for general office monochrome and color printing.
- Use the PS driver when printing primarily from PostScript-based programs such as Adobe PhotoShop® and CorelDRAW®, for compatibility with PostScript Level 3 needs, or for PS flash font support.

NOTE The all-in-one automatically switches between PS and PCL printer languages.

Printer-driver Help (Windows)

The printer-driver Help is separate from program Help. The printer-driver Help provides explanations for the buttons, check boxes, and drop-down lists that are in the printer driver. It also includes instructions for performing common printing tasks, such as printing on both sides, printing multiple pages on one sheet, and printing the first page or covers on different paper.

Activate the printer-driver Help screens in one of the following ways:

- Click the **Help** button.
- Press the F1 key on the computer keyboard.
- Click the question-mark symbol in the upper-right corner of the printer driver.
- Right-click on any item in the driver, and then click **What's This?**.

Gaining access to the printer drivers

Use one of the following methods to open the printer drivers from the computer:

Operating System	To change the settings for all print jobs until the software program is closed	To change the print job default settings (for example, turn on Print on Both Sides by default)	To change the configuration settings (for example, add a tray or enable/disable Manual Duplexing)
Windows 98 and Windows Me	1. On the **File** menu in the software program, click **Print**. 2. Select the name of the all-in-one, and then click **Properties**. The steps can vary; this procedure is the most common.	1. Click **Start**, click **Settings**, and then click **Printers**. 2. Right-click the all-in-one icon, and then select **Properties**.	1. Click **Start**, click **Settings**, and then click **Printers**. 2. Right-click the all-in-one icon, and then select **Properties**. 3. Click the **Configure** tab.
Windows 2000, XP, and Server 2003	1. On the **File** menu in the software program, click **Print**. 2. Select the name of the all-in-one, and then click **Properties** or **Preferences**. The steps can vary; this procedure is the most common.	1. Click **Start**, click **Settings**, and then click **Printers** or **Printers and Faxes**. 2. Right-click the all-in-one icon, and then select **Printing Preferences**.	1. Click **Start**, click **Settings**, and then click **Printers** or **Printers and Faxes**. 2. Right-click the all-in-one icon, and then select **Properties**. 3. Click the **Device Settings** tab.
Mac OS X V10.3 and Mac OS X V10.4	1. On the **File** menu, click **Print**. 2. Change the settings that you want on the various pop-up menus.	1. On the **File** menu, click **Print**. 2. Change the settings that you want on the various pop-up menus. 3. On the **Presets** pop-up menu, click **Save as** and type a name for the preset. These settings are saved in the **Presets** menu. To use the new settings, select the saved preset option every time you open a program and print.	1. Open **Printer Setup Utility** by selecting the hard drive, clicking **Applications**, clicking **Utilities**, then double-clicking **Printer Setup Utility**. 2. Click on the print queue. 3. On the **Printers** menu, click **Show Info**. 4. Click the **Installable Options** menu.

What other software is available?

The all-in-one CDs include the HP scanning software. See the readme file on the all-in-one CD for additional included software and for supported languages.

Software for Windows

When you install the software for Windows, you can directly connect the all-in-one to a computer by using a USB cable, or you can connect the all-in-one to the network (HP LaserJet 3052/3055 all-in-one only) by using the internal print server. See the getting started guide for installation instructions, and see the readme file for the latest software information.

The following software is available to all all-in-one users, whether you connect the all-in-one directly to a computer by using a USB cable or to the network by using a print server.

Software components for Windows

HP ToolboxFX

Perform a typical installation in order to use HP ToolboxFX.

HP ToolboxFX provides links to all-in-one status information and help information, such as this user guide, and tools for diagnosing and solving problems. See HP ToolboxFX on page 53 for more information.

Embedded Web server (EWS)

NOTE The EWS is not available for the HP LaserJet 3050 all-in-one.

The EWS is a Web-based interface that provides simple access to all-in-one status and configurations, including network configurations and Smart Printing Supplies (SPS) functionality.

Gain access to the EWS through the network connection to the all-in-one. Type the all-in-one IP address in a Web browser to open the all-in-one EWS homepage. From the homepage, use the tabs and left navigation menu to check the status of the all-in-one, configure the all-in-one, or check the status of the supplies.

The following are supported browsers:

- Internet Explorer 5.0 or later
- Netscape Navigator 4.75 or later
- Opera 6.05 or later
- Safari 1.2 or later

Using Add or Remove Programs to uninstall

Use the **Add or Remove Programs** method in Windows to remove the all-in-one software. This method does *not* require you to have the software CD.

1. Click **Start**, point to **Settings**, and click **Control Panel**.

   -or-

   In Windows XP, click **Start** and then click **Control Panel**.

2. Double-click **Add or Remove Programs**.

3. Scroll through the list of software programs and click **HP LaserJet 3050/3052/3055 all-in-one**.
4. Click **Remove**.

Software for Macintosh

For Mac OS X V10.3 and Mac OS X V10.4, use Print Center to print.

The all-in-one includes the following software for Macintosh computers.

NOTE For Macintosh computers, HP ToolboxFX is not supported.

HP Director

HP Director is a software program that is used when working with documents. When the document is loaded into the ADF and the computer is connected directly to the all-in-one, HP Director appears on the computer screen to initiate faxing, scanning, or changing settings on the all-in-one through Macintosh Configure Device.

Also included is the HP all-in-one Setup Assistant, which sets up the fax and print queues.

Macintosh Configure Device (Mac OS X V10.3 and Mac OS X V10.4)

Macintosh Configure Device is a Web-based program that provides access to information about the all-in-one (for example, information about supplies status and all-in-one settings). Use Macintosh Configure Device to monitor and manage the all-in-one from the computer

NOTE Perform a complete software installation in order to use Macintosh Configure Device.

- Check the all-in-one status and print information pages.
- Check and change all-in-one system settings.
- Check default print settings.
- Check and change fax settings, including fax send, fax receive, fax phone book and speed-dial settings, and fax reports.
- Check and change network settings, including IP configuration, Advanced, mDNS, SNMP, network configuration, and password.

You can view Macintosh Configure Device when the all-in-one is directly connected to the computer or when it is connected to the network.

NOTE You do not have to have Internet access to open and use Macintosh Configure Device.

To view Macintosh Configure Device when the all-in-one is directly connected to the computer

NOTE The embedded Web server (EWS) is only available for the HP LaserJet 3052/3055 all-in-one when using an operating system other than the Macintosh operating system. If you are using the Macintosh operating system, the EWS is available for all of the all-in-one models.

1. Open HP Director by clicking the **HP Director** icon in the dock.
2. In HP Director, click **Settings**.
3. Select **Configure device** to open the Macintosh Configure Device home page in a browser.

To view Macintosh Configure Device when the all-in-one is connected to a network

1. Open one of the following supported Web browsers:
   - Safari 1.2 or later
   - Microsoft Internet Explorer 5.0 or later
   - Netscape Navigator 4.75 or later
   - Opera 6.05 or later
2. Type the IP address of the all-in-one into the Web browser to open the Macintosh Configure Device home page.

PDEs (Mac OS X V10.3 and Mac OS X V10.4)

PDEs are code plug-ins that provide access to all-in-one features, such as information about the number of copies, two-sided printing, and quality settings. An installation program for the PDEs and other software is provided on the HP LaserJet 3050/3052/3055 all-in-one CD for Macintosh.

Installing software for Macintosh

Installing Macintosh printing system software for direct connections (USB)

This section explains how to install the printing system software for Mac OS X V10.3 and Mac OS X V10.4.

The Apple PostScript driver must be installed in order to use the PPD files. Use the Apple PostScript driver that came with theMacintosh computer.

To install the printing system software

1. Connect a USB cable between the USB port on the all-in-one and the USB port on the computer. Use a standard 2-meter (6.56-foot) USB cable.
2. Insert the all-in-one CD into the CD-ROM drive and run the installer.
3. Double-click the CD icon on the desktop
4. Double-click the **Installer** icon.
5. Follow the instructions on the computer screen.
6. USB queues are created automatically when the all-in-one is attached to the computer. However, the queue will use a generic PPD if the installer was not run before the USB cable was connected. To change the queue PPD, open the Print Center or Printer Setup Utility, select the correct printer queue, and then click **Show Info** to open the **Printer Info** dialog box. In the pop-up menu, select **Printer Model**, and then, in the pop-up menu in which **Generic** is selected, select the correct PPD for the all-in-one.
7. Print a test page or a page from any software program to make sure that the all-in-one software is correctly installed.

   If installation fails, reinstall the all-in-one software. If this fails, see the installation notes or late-breaking readme files on the CD or the flyer that came in the box, or go to the appropriate support Web site for help or more information (see HP Customer Care in the user guide).

Installing Macintosh printing system software for networks

To install printer drivers for Mac OS X V10.3 and Mac OS X V10.4

1. Connect the network cable between the HP LaserJet 3052/3055 all-in-one and a network port.
2. Insert the CD into the CD-ROM drive, and then double-click the CD icon on the desktop.
3. Double-click the **Installer** icon in the HP LaserJet Installer folder.
4. Follow the HP all-in-one setup assistant instructions on the computer screen.

NOTE The setup assistant should prompt you to restart the computer and to provide the IP address of the all-in-one to complete the network installation.

To remove software from Macintosh operating systems

To remove the printing software from your Macintosh computer, open the **Finder**, navigate to **Applications/HP LaserJet aio/HP Uninstaller**, and then run the uninstaller program.

Choosing paper and other print media

The HP LaserJet all-in-one produces documents that have excellent print quality. You can print on a variety of media, such as paper (including up to 100% recycled fiber content paper), envelopes, labels, transparencies, and custom-size media.

Properties such as weight, grain, and moisture content are important factors that affect performance and quality. To achieve the best possible print quality, only use high-quality media that is designed for laser printers. See Supported media weights and sizes on page 21 for detailed paper and media specifications.

NOTE Always test a sample of the media before you purchase large quantities. Your media supplier should understand the requirements specified in the *HP LaserJet Printer Family Print Media Guide* (HP part number 5963-7863).

Supported media weights and sizes

For optimum results, use conventional 80 to 90 g/m^2 (20 to 24 lb) photocopy paper. Verify that the paper is of good quality and is free of cuts, nicks, tears, spots, loose particles, dust, wrinkles, curls, and bent edges.

NOTE The all-in-one supports a wide range of standard and custom sizes of print media. The capacity of trays and bins can vary depending on media weight and thickness and on environmental conditions. Use only transparencies that are designed for use with HP LaserJet printers. Inkjet and monochrome transparencies are *not* supported for the all-in-one.

Table 1-1 Priority input slot specifications, HP LaserJet 3050/3052/3055 all-in-one

Media	Dimensions[1]	Weight	Capacity[2]
Paper	Minimum: 76 x 127 mm (3 x 5 inches)	60 to 163 g/m^2 (16 to 43 lb)	Up to 10 sheets of 80 g/m^2 or 20 lb paper
	Maximum: 216 x 356 mm (8.5 x 14 inches)		
HP Cover paper[3]	Same as the preceding listed minimum and maximum sizes	203 g/m^2 (75 lb cover)	1 sheet
Transparencies and opaque film		Thickness: 0.10 to 0.13 mm (3.9 to 5.1 mils)	1 transparency
Labels[4]		Thickness: up to 0.23 mm (up to 9 mils)	1 sheet of labels
Envelopes		Up to 90 g/m^2 (16 to 24 lb)	Up to 10

1 The all-in-one 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 Hewlett-Packard does not guarantee results when printing with other types of heavy paper.
4 Smoothness: 100 to 250 (Sheffield).

Table 1-2 Media input tray (tray 1) specifications, HP LaserJet 3050/3052/3055 all-in-one

Media	Dimensions[1]	Weight	Capacity[2]
Minimum size	76 x 127 mm (3.0 x 5.0 inches)	60 to 163 g/m^2 (16 to 43 lb)	250 sheets of 80 g/m^2 or 20 lb paper
Maximum size	216 x 356 mm (8.5 x 14 inches)		
Letter	216 x 279 mm (8.5 x 11 inches)		
A4	210 x 297 mm (8.3 x 11.7 inches)		
Legal	216 x 356 mm (8.5 x 14 inches)		
16K (195 x 270 mm)	195 x 270 mm (7.7 x 10.6 inches)		
16K (7.75 x 10.75 inch)	197 x 273 mm (7.8 x 10.7 inches)		
16K (184 x 260 mm)	184 x 260 mm (7.2 x 10.2 inches)		
A5	148 x 210 mm (5.8 x 8.3 inches)		
B5 (ISO)	176 x 250 mm (6.9 x 9.9 inches)		
B5 (JIS)	182 x 257 mm (7.2 x 10 inches)		
Double postcard (JIS)	148 x 200 mm (5.83 x 7.87 inches)		
Executive	191 x 267 mm (7.3 x 10.5 inches)		
8.5 x 13 inches	216 x 330 mm (8.5 x 13 inches)		
Envelope, monarch	98 x 191 mm (3.875 x 7.7 inches)		
Envelope, DL	110 x 220 mm (4.33 x 8.66 inches)		
Envelope, C5	162 x 229 mm (6.38 x 9.01 inches)		
Envelope, B5	176 x 250 mm (6.93 x 9.84 inches)		
Envelope, # 10	104.9 x 241.3 mm (4.125 x 9.5 inches)		

[1] The all-in-one 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 the media weight and thickness, and environmental conditions.

Table 1-3 ADF specifications, HP LaserJet 3050 all-in-one

Media	Dimensions	Weight or thickness	Capacity
Minimum size	148 x 105 mm (5.83 x 4.13 inches)	60 to 105 g/m^2 (16 to 28 lb)	30 sheets of 80 g/m^2 or 20 lb bond
Maximum size	216 x 381 mm (8.5 x 15 inches)[1]		

[1] For legal-sized (216 x 356 mm; 8.5 x 14 inches) and larger media, feed one sheet at a time through the ADF.

Table 1-4 ADF specifications, HP LaserJet 3052/3055 all-in-one

Media	Dimensions	Weight or thickness	Capacity
Minimum-size	127 x 127 mm (5 x 5 inches)	60 to 90 g/m^2 (16 to 24 lb bond)	50 sheets of 80 g/m^2 or 20 lb bond
Maximum-size	216 x 381 mm (8.5 x 15 inches)		

NOTE When faxing, copying, or scanning using the HP LaserJet 3052/3055 all-in-one, use the flatbed scanner if the original is fragile, thin, thick, too small for the ADF, or a photograph. Also use the flatbed scanner for the fit-to-page copying feature. The flatbed scanner provides the best fax, copy, and scan resolution.

Media to avoid

The all-in-one can handle many types of media. Using media that is outside the specifications degrades print quality and increases the chance of jams occurring.

- Do not use media that is too rough.
- Do not use media that contains cutouts or perforations other than standard 3-hole punched paper.
- Do not use multipart forms.
- Do not use paper that contains a watermark if you are printing solid patterns.

Media that can damage the all-in-one

In rare circumstances media can damage the all-in-one. Avoid the following types of media to prevent possible damage:

- Do not use media with staples attached.
- Do not use transparencies that are designed for inkjet printers or other low-temperature printers. Use only transparencies that are specified for use with HP LaserJet printers.
- Do not use photo paper intended for inkjet printers.
- Do not use paper that is embossed or coated and is not designed for the temperature of the image-fuser. Select media that can tolerate temperatures of 200°C (392°F) for 0.1 second.
  HP manufactures a media that is designed for the all-in-one.
- Do not use letterhead paper that was produced with low-temperature dyes or thermography. Preprinted forms or letterhead must use inks that can tolerate temperatures of 200°C (392°F) for 0.1 second.
- Do not use any media that produces emissions, or that melts, offsets, or discolors when exposed to 200°C (392°F) for 0.1 second.

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

2 Operation

- Site preparation
- Unpacking
- Installing input devices
- Installing the print cartridge
- Loading media into the input trays

Site preparation

Prepare the location

Place the all-in-one on a sturdy, level surface in a well-ventilated area. Make sure that the air vents are not blocked and all doors can open freely.

Operating environment

Place the product on a sturdy, level surface in a well-ventilated area that meets the following environmental requirements:

- Temperature (operating): 15° to 32.5°C (59° to 90.5°F)

  Temperature (storage): -20° to 40°C (-4° to 104°F)

- Humidity (operating): 10% to 80% relative humidity (no condensation)

  Humidity (storage): less than 95% relative humidity (no condensation)

- Away from direct sunlight, open flames, and ammonia fumes

- Sufficient space around the product to allow for access and ventilation

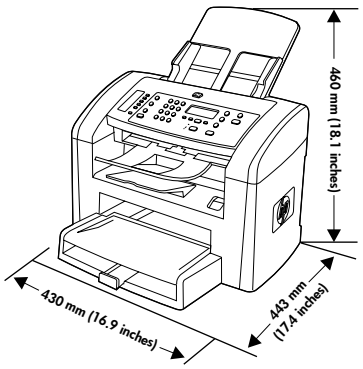


Figure 2-1 HP LaserJet 3050 all-in-one dimensions

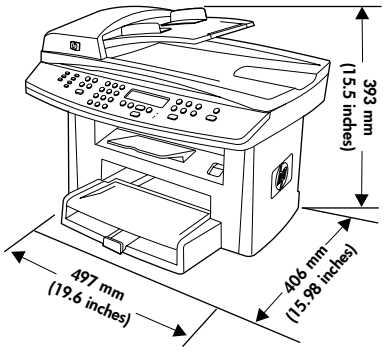


Figure 2-2 HP LaserJet 3052/3055 all-in-one dimensions

Minimum system requirements

- Windows® 2000
- Windows XP
- Windows Millennium Edition (Me)
- Windows Server 2000
- Windows 98
- Mac OS X V10.3 and later
- 128 MB RAM for Windows operating systems
- 32 MB RAM for Macintosh operating systems
- 250 MB hard-disk space (full installation)
- CD-ROM drive
- USB port

Unpacking

Contents of the HP LaserJet 3050 all-in-one box

A new HP LaserJet 3050 all-in-one printer, fax, copier, scanner should contain all of the items shown in Figure 2-3 HP LaserJet 3050 all-in-one box contents on page 28.

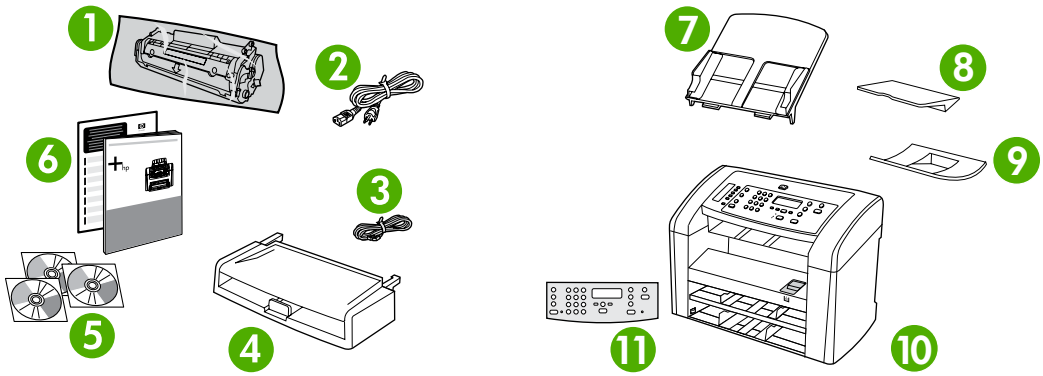


Figure 2-3 HP LaserJet 3050 all-in-one box contents

1	Print cartridge
2	Power cord
3	Fax cord
4	Media input tray (tray 1)
5	Software and the online user guide on CD
6	Start guide and support flyer
7	ADF input tray
8	Output bin support
9	ADF output support
10	HP LaserJet 3050 all-in-one printer, fax, copier, scanner
11	Control-panel overlay (if not already installed)

NOTE The USB cable is not included.

Contents of the HP LaserJet 3052/3055 all-in-one box

A new HP LaserJet 3052 all-in-one printer, scanner, copier or HP LaserJet 3055 all-in-one printer, fax, copier, scanner should contain all of the items shown in Figure 2-4 HP LaserJet 3052/3055 all-in-one box contents on page 29.

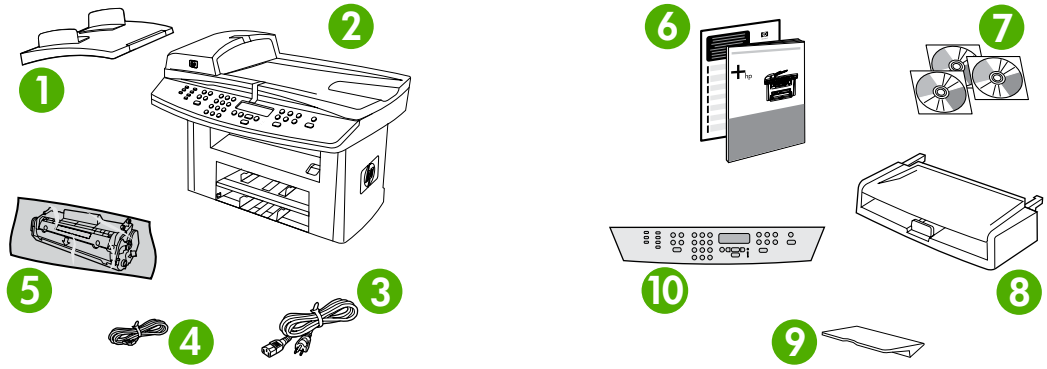


Figure 2-4 HP LaserJet 3052/3055 all-in-one box contents

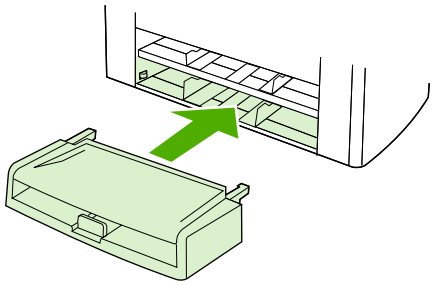
1	ADF input tray
2	HP LaserJet 3052 all-in-one printer, scanner, copier or HP LaserJet 3055 all-in-one printer, fax, copier, scanner
3	Power cord
4	Fax cord (HP LaserJet 3055 all-in-one only)
5	Print cartridge
6	Start guide and support flyer
7	Software and online user guide on CD
8	Media input tray (tray 1)
9	Output bin support
10	Control-panel faceplate (if not already installed)

NOTE The USB and network cables are not included.

Installing input devices

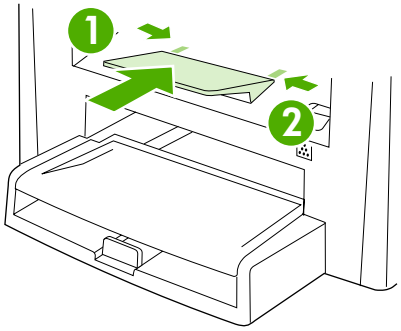
To install the media input tray

1. Remove any shipping tape from the inside and outside of the tray.
2. Slide the tray in until it fits securely.



To install the output bin support

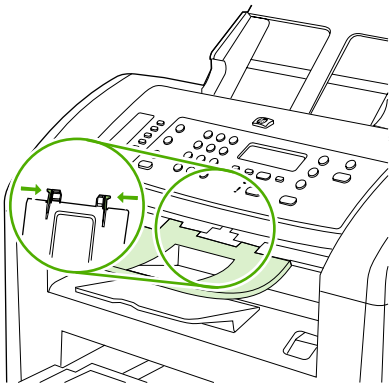
1. Insert the pin on one side of the support into the hole in the all-in-one.
2. Flex the pin on the other side inward, and insert it into the hole.



To install the ADF output support (HP LaserJet 3050 all-in-one only)

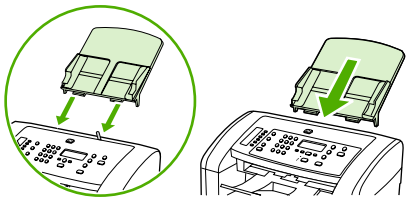
1. Insert the pin on one side of the support into the hole in the all-in-one.

2. Flex the pin on the other side inward, and insert it into the hole.

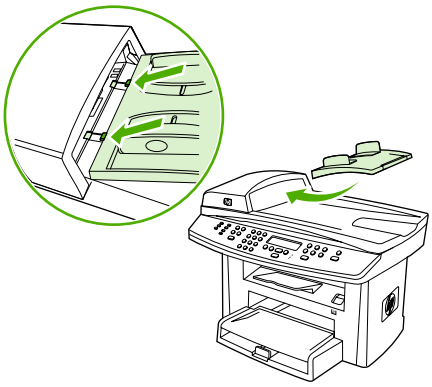


To install the automatic document feeder (ADF) input tray

1. Align the two tabs on the input tray with the two grooves in the ADF lid.
2. Slide the tray into the grooves until the tray snaps into place.



HP LaserJet 3050

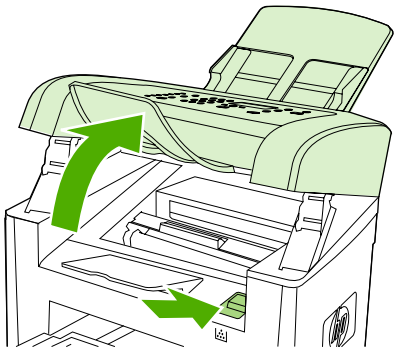


HP LaserJet 3052/3055

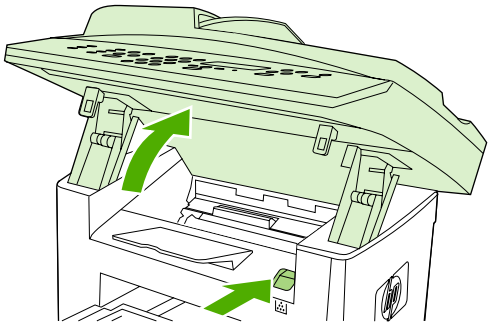
Installing the print cartridge

To install the print cartridge

1. Press the cartridge-door release to open the print-cartridge door.

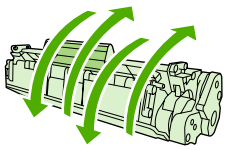


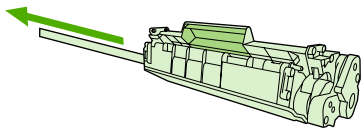
HP LaserJet 3050



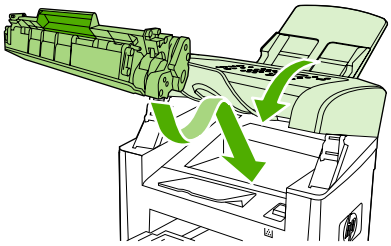
HP LaserJet 3052/3055

2. Remove the print cartridge from its packaging, and then rock the cartridge gently five or six times.
3. Bend the plastic tab at the end of the cartridge.
4. Pull the tab until all of the sealing tape is removed from the cartridge.

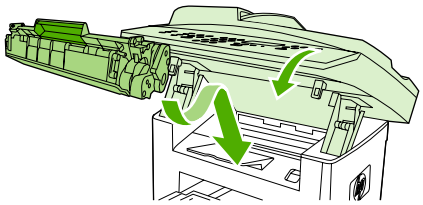




5. Hold the print cartridge by the handle and insert it into the all-in-one and then close the print-cartridge door.



HP LaserJet 3050



HP LaserJet 3052/3055

CAUTION If toner gets on your clothing, wipe the toner off with a clean cloth, and then wash the items in cold water and air dry them. Hot water or heat from a dryer sets the toner in the fabric.

NOTE Hewlett-Packard Company cannot recommend using non-HP print cartridges, whether they are new, refilled, or remanufactured. Because they are not HP products, HP cannot influence their design or control their quality.

Loading media into the input trays

The following sections describe how to load media into the different input trays.

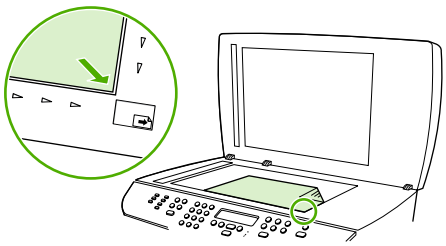
CAUTION Printing on wrinkled, folded, or damaged media can cause jams. See Media to avoid on page 23 for more information.

Loading documents to fax, copy, or scan

Use these instructions to load originals into the all-in-one for scanning. For the best quality scans, use the flatbed scanner.

To load originals onto the flatbed scanner (HP LaserJet 3052/3055 all-in-one only)

1. Make sure that the ADF contains no media.
2. Lift the flatbed scanner cover.
3. Place the original document face-down on the flatbed scanner with the upper-left corner of the document at the lower-right corner of the glass.



4. Gently close the lid.

   The document is ready to be faxed/copied/scanned.

To load originals into the automatic document feeder (ADF)

NOTE The ADF capacity for the HP LaserJet 3050 all-in-one is up to 30 sheets of 80 g/m^2 or 20 lb media. The ADF capacity for the HP LaserJet 3052/3055 all-in-one is up to 50 sheets of 80 g/m^2 or 20 lb media.

CAUTION To prevent damage to the all-in-one, do not use an original that contains correction tape, correction fluid, paper clips, or staples. Also, do not load photographs, small originals, or fragile originals into the ADF.

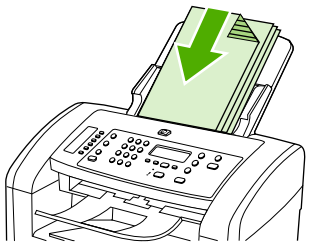
1. For the HP LaserJet 3050 all-in-one, insert the top-end of the stack of originals into the ADF input tray, with the media stack face-down and the first page to be copied at the bottom of the stack.

   If you are using heavy media (for example, cardstock) make sure that the ADF media lever is positioned in the single-page setting (only load one page of heavy media). For all other media types, make sure that the ADF media lever is positioned in the multiple-page setting (no matter how many pages will be loaded).

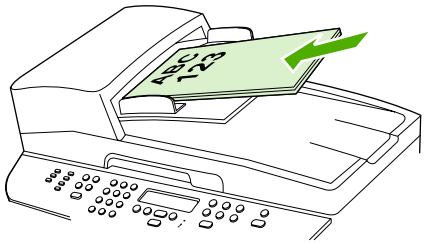
   -or-

   For the HP LaserJet 3052/3055 all-in-one, insert the top-end of the stack of originals into the ADF input tray, with the media stack face-up and the first page to be copied on top of the stack.

2. Slide the stack into the ADF until it does not move any farther.



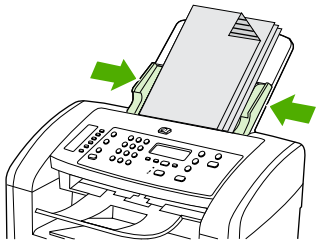
HP LaserJet 3050



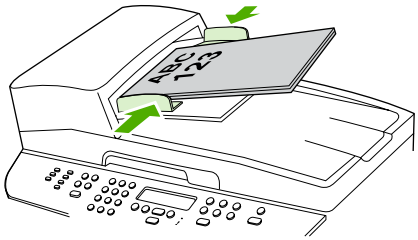
HP LaserJet 3052/3055

   Document Loaded appears on the control-panel display.

3. Adjust the media guides until they are snug against the media.



HP LaserJet 3050

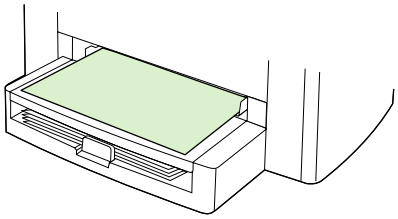


HP LaserJet 3052/3055

4. The document is now ready to be faxed/copied/scanned.

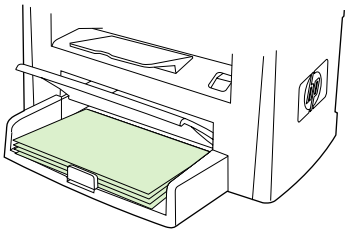
Loading input trays

Priority input slot



The priority input slot holds up to 10 sheets of media up to 163 g/m^2 (43 lb) in weight or 1 envelope, transparency, or card. Load media with the top forward and the side to be printed facing up. To prevent jams and skewing, always adjust the side media guides before feeding the media.

250-sheet input tray (tray 1)



The input tray holds up to 250 pages of 80 g/m^2 or 20 lb paper, or fewer pages of heavier media (25 mm [0.9 inch] or shorter stack height). Load media with the top forward and the side to be printed facing down. To prevent jams and skewing, always adjust the side and rear media guides.

NOTE When you add new media, make sure that you remove all of the media from the input tray and straighten the stack of new media. This helps to prevent multiple sheets of media from feeding into the all-in-one, which can cause jams.

3 Maintenance

- Managing supplies
- Cleaning the all-in-one
- Calibrating the scanner
- Managing and maintaining the all-in-one

Managing supplies

Life expectancies of print cartridges and parts that wear

Inspect any parts that wear when servicing the product. Replace them as needed, based on failure or wear rather than on usage.

The following table lists approximate schedules for replacing consumables.

Table 3-1 Life expectancies

Product name	Description	Part number
HP LaserJet 3050/3052/3055 all-in-one	10,000 pages-per-month 50,000 pages lifetime	NA
Black print cartridge[1]	Average yield for the standard print cartridge is approximately 2,000 pages. Actual yield depends on use.	Q2612A
Separation pad and pickup rollers	Replace when the all-in-one is picking up multiple sheets or no sheets and trying different media did not resolve the problem.	See Parts and diagrams on page 281 for ordering information.

[1] The estimated print-cartridge life is based on using letter- or A4-sized paper with an average of 5% toner coverage and a medium density-setting. Print-cartridge life can be extended by using draft-mode settings to conserve toner.

Ordering supplies

HP direct ordering for accessories or supplies

- United States: www.hp.com/sbso/product/supplies
- Canada: www.hp.ca/catalog/supplies
- Europe: www.hp.com/supplies
- Asia-Pacific: www.hp.com/paper/

To order genuine HP parts or accessories, go to the HP Parts Store at www.hp.com/buy/parts (U.S. and Canada only), or call 1-800-538-8787 (U.S.) or 1-800-387-3154 (Canada).

Storing print cartridges

Follow these guidelines for storing print cartridges:

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

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

- See Environmental specifications on page 349 for operating and storage temperature ranges.
- 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

Changing the print cartridge

For information about how to install a new print cartridge, see To install the print cartridge on page 32.

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

NOTE To recycle supplies, place the used supply in the box in which the new supply arrived. Use the enclosed return label to send the used supply to HP for recycling. For complete information, see the recycling guide that is included with each new HP supply item. See HP LaserJet printing supplies on page 358 for more information about HP's recycling program.

Changing the ADF pickup roller and load-arm assembly (HP LaserJet 3052/3055 all-in-one)

For information about how to install pickup roller and load-arm assembly, see ADF pickup roller and load-arm assembly (HP LaserJet 3052/3055 all-in-one) on page 143.

HP policy on non-HP supplies

Hewlett-Packard Company cannot recommend the use of non-HP supplies, either new or remanufactured. Because they are not HP products, HP cannot influence their design or control their quality. Service or repairs required as a result of using a non-HP supply will *not* be covered under the warranty.

When you insert a supply into the all-in-one, the all-in-one will generate a message if the supply is not a genuine HP supply. If you insert a used, genuine HP supply that is nearing the end of its useful life, then the all-in-one identifies the supply as non-HP. Simply return the supply to the original device to reactivate the HP features and functionality.

HP fraud hotline

Call the HP fraud hotline if the all-in-one or HP ToolboxFX indicates that the print cartridge is not an HP print cartridge and you think that it is genuine. HP will help determine if the product is genuine and take steps to resolve the problem.

The print cartridge might not be a genuine HP one if you notice the following issues:

- A large number of problems occur with the print cartridge.
- The print cartridge does not look like it usually does (for example, the pull tab or the box is different).

In the United States, call toll-free: 1-877-219-3183.

Outside the United States, you can call collect. Dial the operator and ask to place a collect call to this telephone number: 1-770-263-4745. If you do not speak English, a representative at the HP fraud hotline who speaks your language will assist you. Or, if someone who speaks your language is not available, a language-line interpreter will connect approximately 1 minute after the beginning of the call. The language line interpreter is a service that will translate between you and the representative for the HP fraud hotline.

Cleaning the all-in-one

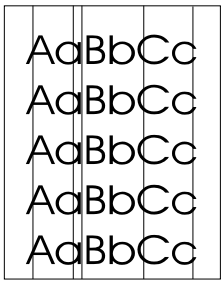
To clean the exterior

Use a soft, damp, lint-free cloth to wipe dust, smudges, and stains off of the exterior of the all-in-one.

To clean the ADF scanner glass and white platen (HP LaserJet 3050 all-in-one)

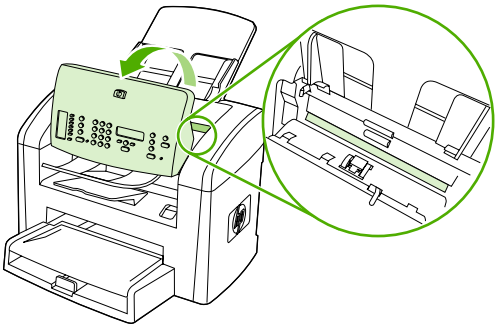
Over time, specks of debris might collect on the ADF scanner glass and white platen, which can affect performance. Use the following procedure to clean the ADF scanner glass and white platen.

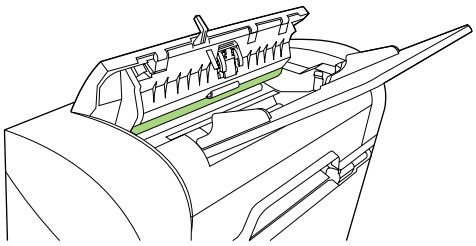
NOTE When vertically-aligned black streaks or smears appear on successive copies produced by using the ADF, the ADF scanner glass or white platen needs to be cleaned.



1. Use the power switch to turn off the all-in-one, and then unplug the power cord.
2. Tilt the control panel forward.

3. Clean the ADF scanner glass and the white platen with a soft cloth or sponge 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 all-in-one; these can damage the all-in-one. Do not place liquids directly on the glass or platen. They might seep and damage the all-in-one.

4. Dry the glass and platen with a chamois or a cellulose sponge to prevent spotting.

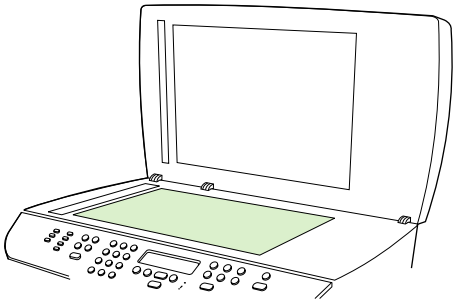
5. Plug in the all-in-one and then turn it on.

To clean the flatbed glass and the ADF scanner glass (HP LaserJet 3052/3055 all-in-one)

Dirty glass, from fingerprints, smudges, hair, and other causes, slows down performance and affects the accuracy of special features such as fit-to-page and copy.

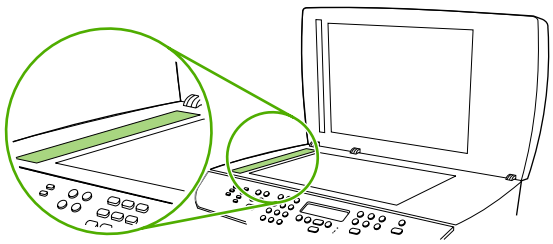
NOTE If streaks or other defects appear only on copies produced by using the ADF, clean the ADF scanner glass (step 3). It is not necessary to clean the flatbed glass.

1. Turn off the all-in-one, unplug the power cord, and then raise the lid.
2. Clean the flatbed glass by using a soft cloth or sponge 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 all-in-one; these can damage the all-in-one. Do not place liquids directly on the glass. They might seep under it and damage the all-in-one.

3. Clean the ADF scanner glass by using a soft cloth or sponge that has been moistened with nonabrasive glass cleaner.

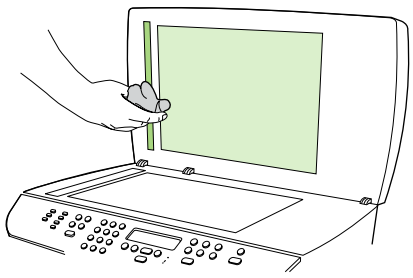


4. To prevent spotting, dry the glass by using a chamois or cellulose sponge.

To clean the lid backing (HP LaserJet 3052/3055 all-in-one)

Minor debris can accumulate on the white document lid backing that is located underneath the all-in-one lid.

1. Turn off the all-in-one, unplug the power cord, and then raise the lid.
2. Clean the white document lid backing by using a soft cloth or sponge that has been moistened with a mild soap and warm water. Also clean the white strip next to the lid backing.



3. Wash the backing gently to loosen debris; do not scrub the backing.
4. Dry the backing by using a chamois or soft cloth.

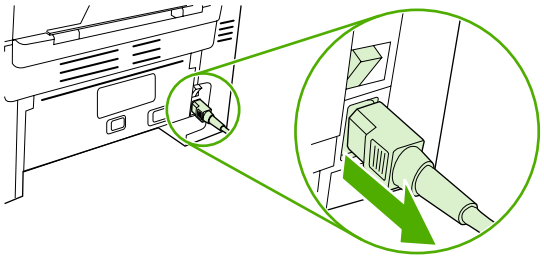
> **CAUTION** Do not use paper-based wipes, because they might scratch the backing.

5. If this does not clean the backing well enough, repeat the previous steps and use isopropyl alcohol to dampen the cloth or sponge, and then wipe the backing thoroughly with a damp cloth to remove any residual alcohol.

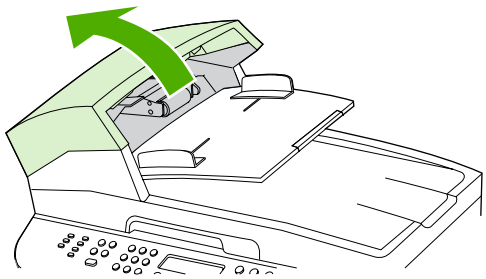
To clean the ADF pickup-roller assembly (HP LaserJet 3052/3055 all-in-one)

If the ADF has trouble feeding documents, you can clean the ADF pickup-roller assembly.

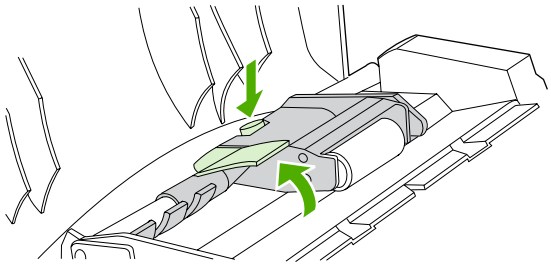
1. Turn off the all-in-one and unplug the power cord.



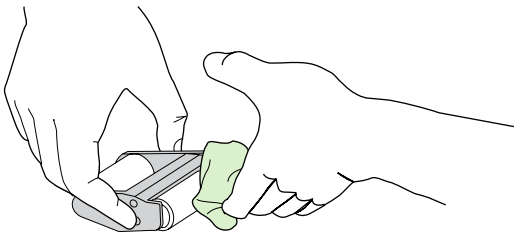
2. Open the ADF cover.



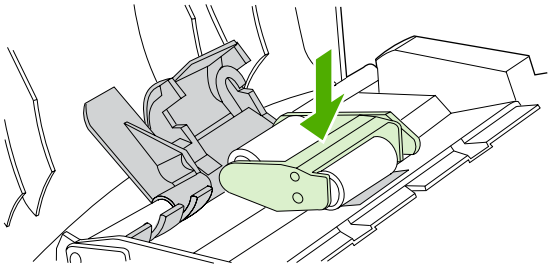
3. Press the round green button while lifting the green lever. Rotate the green lever until it stops in the open position. The pickup-roller assembly should remain on the surface.



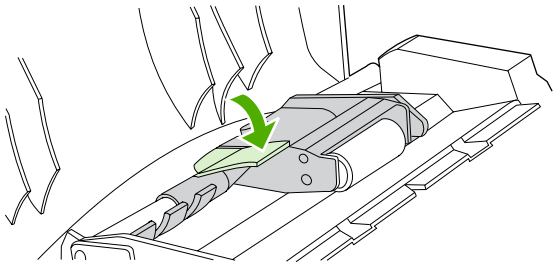
4. Remove the assembly, and then wipe it with a soft, dry cloth.



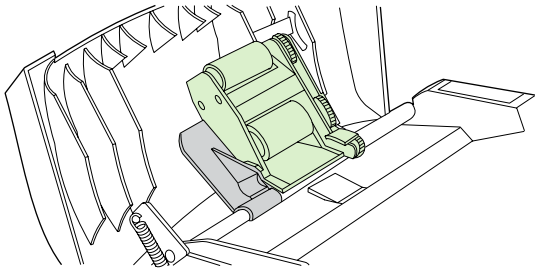
5. Return the assembly to the same place in the ADF. The largest roller goes in back, and the gear side is away from you.



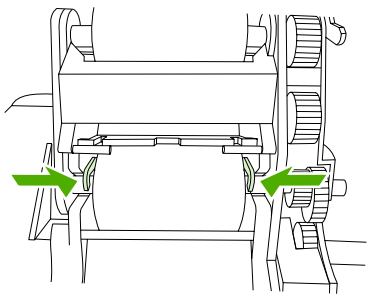
6. Lower the green lever until the flat green part fits in between the rollers. Press down on the green lever until you hear a snap.



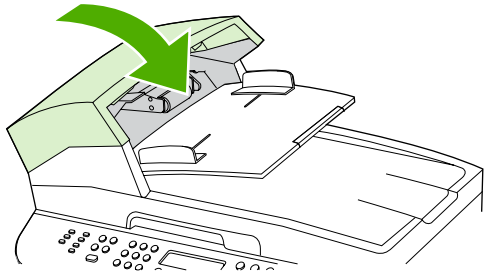
7. To check for correct installation, lift the green lever until it remains open. The pickup-roller assembly should be secured to the lever assembly and should not fall out.



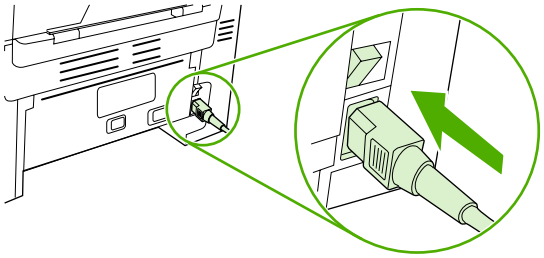
8. Make sure that the green hooks secure both sides of the assembly.



9. Lower the green lever assembly and close the ADF cover.

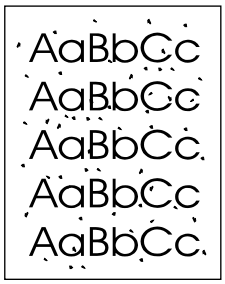


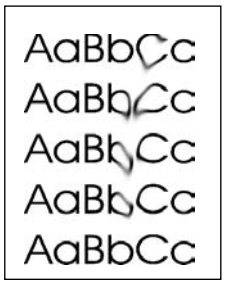
10. Plug in the all-in-one, and then turn it on.



Cleaning the paper path

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





To clean the paper path from HP ToolboxFX

Use HP ToolboxFX to clean the paper path. This is the recommended cleaning method. If you do not have access to HP ToolboxFX, use the method in To clean the paper path from the all-in-one control panel on page 48.

1. Make sure that the all-in-one is turned on and in the Ready state.
2. Open HP ToolboxFX.
3. On the **System Settings** tab, click **Service**, click **Begin cleaning mode**, and then click **Start**. A page with a pattern prints from the all-in-one.
4. At the all-in-one, remove any print media that might be in tray 1. Load the page that printed face-down into tray 1.
5. Press ✓ to begin the cleaning process.

To clean the paper path from the all-in-one control panel

If you do not have access to HP ToolboxFX, you can print and use a cleaning page from the all-in-one control panel.

1. Press Menu.
2. Use the < or the > button to find the **Service** menu, and then press ✓.
3. Use the < or the > button to find **Cleaning Mode**, and then press ✓.
4. Load plain letter or A4 paper when you are prompted.
5. Press ✓ again to begin the cleaning process.

   A page feeds slowly through the all-in-one. Discard the page when the process is completed.

Calibrating the scanner

The scanner calibrates itself automatically at the start of scan of copy jobs. Normally, you do not need to initiate the calibration, but you can initiate the calibration through the secondary service menu and produce a report that shows the calibration results. See Secondary service menu on page 251.

Managing and maintaining the all-in-one

Information pages

Information pages reside within the all-in-one memory. These pages help you to diagnose and solve problems with the all-in-one.

NOTE If the all-in-one language was not correctly set during installation, you can set the language manually so that the information pages print in one of the supported languages. Change the language by using HP ToolboxFX. See HP ToolboxFX on page 53.

Demo page

1. On the all-in-one control panel, press Menu.
2. Use the < or > button to select **Reports**, and then press ✓.
3. Use the < or > button to select **Demo page**, and then press ✓.

You can also view this page from HP ToolboxFX.

Usage page

1. On the all-in-one control panel, press Menu.
2. Use the < or > button to select **Reports**, and then press ✓.
3. Use the < or > button to select **Usage page**, and then press ✓.

Configuration page

The configuration page lists the current settings and properties of the all-in-one. To print the configuration page from the all-in-one, complete the following steps.

Figure 3-1 Sample configuration page on page 51 shows a sample configuration page. Descriptions of the sections on a configuration page appear below the figure.

1. On the all-in-one control panel, press Menu.
2. Use the < or > button to select **Reports**, and then press ✓.
3. Use the < or > button to select **Config report**, and then press ✓.

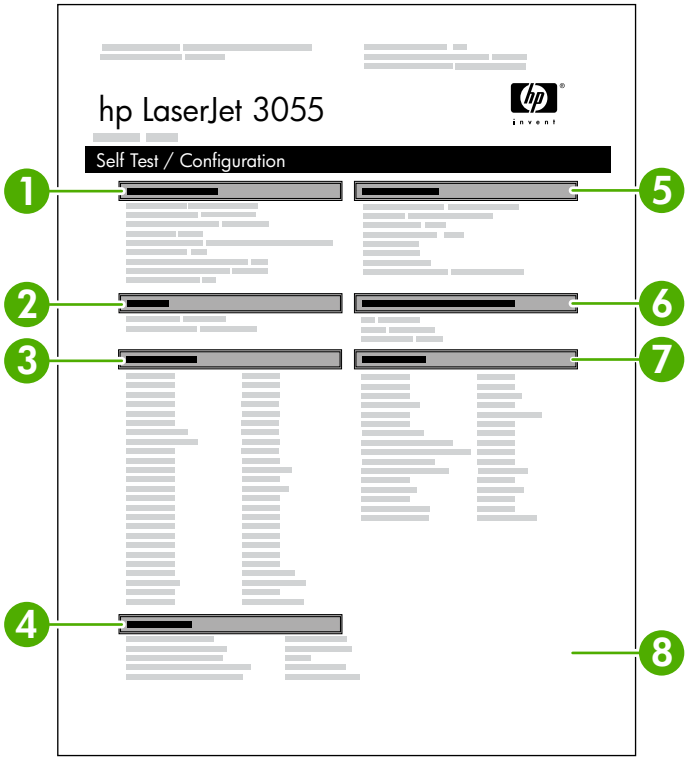


Figure 3-1 Sample configuration page

1. **Product Information**. This section contains basic information about the all-in-one, such as the product name and the serial number.
2. **Memory**. This section lists memory-related information, such as the total memory that is installed.
3. **Paper Settings**. This section lists information about the media type for each tray and about the type settings for all the media that the all-in-one supports.
4. **Copy Settings**. This section lists the all-in-one default copy settings.
5. **Product Settings**. This section lists information that is gathered during software installation, including the language and the company name.
6. **Installed Personalities and Options**. This section contains information about installed print drivers.

7. **Print Settings**. This section contains information about all-in-one settings that are configured in the printer driver or in HP ToolboxFX.

8. **Status Log**. This section contains information about all-in-one errors.

A second page also prints. On that page, the **Fax Settings** section provides details about the all-in-one fax settings.

Network configuration page

The network configuration page lists the all-in-one network settings. To print from the all-in-one, complete the following steps:

1. On the all-in-one control panel, press ✓.
2. Use the < or > button to select **Reports**, and then press ✓.
3. Use the < or > button to select **Network config.**, and then press ✓.

Fax logs and reports

For information about fax logs and reports, see the online user guide.

HP ToolboxFX

HP ToolboxFX is a Web-based program that you can use to complete the following tasks:

- Check the all-in-one status.
- Configure the all-in-one settings.
- View troubleshooting information.
- View online documentation.

You can view HP ToolboxFX when the all-in-one is directly connected to a computer or when it is connected to a network. You must perform a typical software installation in order to use HP ToolboxFX.

NOTE HP ToolboxFX is not supported for Windows 98 SE or Macintosh operating systems. To use HP ToolboxFX, the TCP/IP protocol must be installed on the computer.

NOTE You do not have to have Internet access to open and use HP ToolboxFX.

To view HP ToolboxFX

Open HP ToolboxFX in one of these ways:

- In the Windows system tray or on your desktop, double-click the HP ToolboxFX icon.
- On the Windows **Start** menu, click **Programs** (or **All Programs** in Windows XP), click **HP**, click **HP LaserJet 3050/3052/3055 all-in-one**, and then click **HP ToolboxFX**.

The HP ToolboxFX software contains the following sections, which are described in this document:

- Status on page 54
- Fax on page 55
- Help on page 57
- System settings on page 58
- Print settings on page 60
- Network settings on page 60

Status

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

- **Device Status**. View all-in-one status information. This page indicates all-in-one conditions such as a jam or an empty tray. After you correct a problem with the all-in-one, click **Refresh Status** to update the all-in-one status.
- **Supplies status**. View all-in-one supplies status information.
- **Device Configuration**. View a detailed description of the current all-in-one configuration, including the amount of memory installed and whether optional trays are installed.
- **Network Configuration**. 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 all-in-one, such as the demo page.
- **Event Log**. View a history of all-in-one errors. The most recent error is at the top of the list.

Event log

The Event log is a four-column table where the all-in-one events are logged for your reference. The log contains codes that correspond to the error messages that appears on the all-in-one control-panel display. The number in the Page Count column specifies the total number of pages that the all-in-one had printed when the error occurred. The Event log also contains a brief description of the error. For more information about error messages, see Control-panel messages on page 199.

Fax

Use the HP ToolboxFX **Fax** tab to perform fax tasks from the computer. The **Fax** tab contains links to the following main pages:

- **Fax Tasks**. Perform such tasks as sending a fax or clearing the fax memory, or set the fax-receive mode.
- **Fax Phone Book**. Add, edit, or delete entries in the all-in-one phone book.
- **Fax Send Log**. View all of the recent faxes that have been sent from the all-in-one.
- **Fax Receive Log**. View all of the recent faxes that have been received by the all-in-one.
- **Fax Data Properties**. Manage the space used to store faxes on a computer. These settings apply only if you have chosen to send or receive faxes remotely from the computer.

Fax tasks

The following three options are available when receiving a fax:

- Print the fax. An option is available to have a message appear on the computer to notify when the fax was printed.
- Receive the fax on the computer. An option is available to have a message appear on the computer to notify when the fax arrives. If the fax machine is connected to multiple computers, only one computer can be designated to receive faxes.
- Forward the fax to another fax machine.

For more information about fax tasks, see the online user guide.

NOTE You must click **Apply** before the changes take effect.

Fax phone book

Use the HP ToolboxFX Fax phone book to add and remove individuals or groups on a speed-dial list, import phone books from a variety of sources, and update and maintain a contact list.

- To add an individual contact to a speed-dial list, select the check box next to the speed dial number that you want to specify. Type the contact name in the **Contact name** window. Type the fax number in the **Fax number** window. Click **Add/Edit**.
- To add a group of contacts to a speed-dial list, select the check box next to the speed-dial number that you want to specify. Click **New/Edit Group**. Double-click a contact name from the list on the left to move it to the group list on the right, or select a name on the left and then click the appropriate arrow to move it to the group list on the right. You can also use those two methods to move names from right to left. When you have created a group, type a name in the **Group name** window, and then click **OK**.
- To edit an existing individual speed-dial entry, click anywhere on the row containing the contact name to select it, type changes in the appropriate windows, and then click **Add/Edit**. You can also make changes directly in the phone book directory list by clicking the entry and typing the changes. Make sure that you do *not* have a check mark in the **Select** column.
- To edit an existing group-speed-dial entry, click anywhere on the row containing the group name to select it, and then click **New/Edit Group**. Make any required changes, and then click **OK**. You

can make changes to the name of the group directly in the phone book directory list by clicking the entry and typing the changes. Make sure that you do *not* have a check mark in the **Select** column.

- To delete an entry from the speed-dial list, select the item and then click **Delete**.
- To move speed dial entries, select the entry and then click **Move**, or select **Move** and then specify the entry in the dialog box. Either select **Next empty row** or specify the number of the row where you want to move the entry.

  NOTE If you specify a row that is occupied, the new entry will overwrite the existing entry.

- To import contacts from a phone book that exists in Lotus Notes, Outlook, or Outlook Express, click **Import Phone Book**. Select the appropriate software program, navigate to the appropriate file, and then click **OK**. You can also select individual entries from the phone book instead of importing the entire phone book.
- To select all of the entries in a speed-dial list, click the **Select** column heading.

In addition to numerical digits, the following are valid characters for fax numbers:

- (
-)
- +
- -
- *
- #
- R
- W
- .
- ,
- <space>

NOTE You must click **Apply** before your changes take effect.

For more information about faxes, see the online user guide.

Fax Send Log

The HP ToolboxFX Fax send log lists all recently sent faxes and information about them, including the date and time sent, job number, fax number, page count, and the results.

When you send a fax from a computer that is connected to the all-in-one, the fax contains a **View** link. Clicking this link opens a new page that provides information about the fax.

Click any column heading in the Fax send log to re-sort the information in that column in ascending or descending order.

The Results column provides the status of the fax. If the fax attempt was unsuccessful, this column provides a description of why the fax was not sent.

NOTE You must click **Apply** before your changes take effect.

For more information about faxes, see the online user guide.

Fax Receive Log

The HP ToolboxFX Fax receive log provides a list of all recently received faxes and information about them including the date and time received, job number, fax number, page count, results, and an abbreviated fax image.

When you receive a fax on a computer that is connected to the all-in-one, the fax contains a **View** link. Clicking this link opens a new page that provides information about the fax.

Click on any column heading in the Fax receive log to re-sort the information in that column in ascending or descending order.

The Results column provides the status of the fax. If the fax attempt was unsuccessful, this column provides a description of why the fax was not received.

NOTE You must click **Apply** before your changes take effect.

For more information about faxes, see the online user guide.

Help

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

- **Troubleshooting**
- **How Do I?** View the How Do I? Help for help with specific tasks.
- **Animated demonstrations**
- **User Guide**. View information about the all-in-one usage, warranty, specifications, and support. The user guide is available in both HTML and PDF format.
- **ReadMe**. View important information about the all-in-one that is not available in the user guide. The late-breaking Install Notes contain last-minute information about the all-in-one (in English only).

System settings

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

- **Device information**. Change the device information settings for the all-in-one.
- **Paper handling**. Change the all-in-one paper-handling settings, such as default paper size and default paper type.
- **Print quality**. Change the all-in-one print-quality settings.
- **Paper types**. Change the all-in-one mode settings for a each media type, such as letterhead, prepunched, or glossy paper.
- **System setup**. Change the all-in-one system settings, such as all-in-one language and jam recovery.
- **Service**. Gain access to the cleaning mode procedure for the all-in-one.
- **Device polling**. Change the all-in-one polling settings, which determine how often HP ToolboxFX collects data from the all-in-one.
- **Save/restore settings**. Save the current settings for the all-in-one to a file on your computer. Use this file to load the same settings onto another all-in-one or to restore these settings to this all-in-one at a later time.

Device information

The HP ToolboxFX Device information page stores data about the all-in-one for future reference. The information that you type in these fields appears on the configuration page. You can type any character in each of these fields.

NOTE You must click **Apply** before your changes take effect.

Paper handling

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

You must set the asset number. The asset number is not set at the factory. This number is stored in the all-in-one for identification purposes.

Three options are available for 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. (Open the **System setup** menu, and select **Paper setup** submenu.)

NOTE You must click **Apply** before your changes take effect.

Print quality

Use the HP ToolboxFX print-quality options to improve the appearance of print jobs.

The four options provided for controlling print quality are resolution, REt (Resolution Enhancement technology), print density, and Economode.

- **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**. You can turn on REt, which HP provides for improved print quality.
- **Print density**. For increased print density, select a higher number. For decreased print density, select a lower number.
- **Economode**. Turn Economode on when printing average print jobs. Economode reduces print quality, but increases the life of the print cartridge. To increase print quality, turn Economode off. HP does not recommend full-time use of Economode.

NOTE You must click **Apply** before your changes take effect.

Paper types

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

NOTE You must click **Apply** before your changes take effect.

System setup

Use the HP ToolboxFX system settings options to configure the settings for copy, fax, scan, and print. These are the same options that are available on the **System Settings** menu on the control panel.

NOTE You must click **Apply** before your changes take effect.

Service

During the printing process, paper, toner, and dust particles can accumulate inside the all-in-one. 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. For more information, see To clean the paper path from HP ToolboxFX on page 47.

Device polling

You can turn off HP ToolboxFX device polling to reduce network traffic, but you will also disable some HP ToolboxFX features: pop-up alerts, fax log updates, the ability to receive faxes to this computer, and scanning by using the Scan To button.

To turn device polling on, do both of the following:

- Clear **Turn off device polling** in HP ToolboxFX.
- Turn on one of the disabled device-polling features in HP ToolboxFX.

NOTE You must click **Apply** before your changes take effect.

Print settings

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

- **Printing**. Change the default all-in-one print settings, such as number of copies and media orientation.
- **PCL5e**. View and change the PCL5e settings.
- **PostScript**. View and change the PS settings.

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 You must click **Apply** before your changes take effect.

PCL5e

Use the PCL5e options to configure the settings when using the PCL5e print personality.

NOTE You must click **Apply** before your changes take effect.

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 You must click **Apply** before your changes take effect.

Network settings

The network administrator can use the HP ToolboxFX **Network Settings** tab to control the network-related settings for the all-in-one when it is connected to an IP-based network.

Macintosh Configure Device (Mac OS X V10.3 and Mac OS X V10.4)

Macintosh Configure Device is a Web-based program that provides access to information about the all-in-one (for example, information about supplies status and all-in-one settings). Use Macintosh Configure Device to monitor and manage the all-in-one from the computer

NOTE You must perform a complete software installation to use Macintosh Configure Device.

- Check the all-in-one status and print information pages.
- Check and change all-in-one system settings.
- Check default print settings.
- Check and change fax settings, including fax send, fax receive, fax phone book and speed-dial settings, and fax reports.
- Check and change network settings, including IP configuration, Advanced, mDNS, SNMP, network configuration, and password.

You can view Macintosh Configure Device when the all-in-one is directly connected to the computer or when it is connected to the network.

NOTE You do not have to have Internet access to open and use Macintosh Configure Device.

To view Macintosh Configure Device when the all-in-one is directly connected to the computer

1. Open HP Director by clicking the **HP Director** icon in the dock.
2. In HP Director, click **Settings**.
3. Select **Configure device** to open the Macintosh Configure Device home page in a browser.

To view Macintosh Configure Device when the all-in-one is connected to a network

1. Open one of the following supported Web browsers:
   - Safari 1.2 or later
   - Microsoft Internet Explorer 5.0 or later
   - Netscape Navigator 4.75 or later
   - Opera 6.05 or later
2. Type the IP address of the all-in-one into the Web browser to open the Macintosh Configure Device home page.

Embedded Web server

NOTE The embedded Web server (EWS) is only available for the HP LaserJet 3052 all-in-one and the HP LaserJet 3055 all-in-one when you are using an operating system other than the Macintosh operating system. If you are using the Macintosh operating system, the EWS is available for all of the all-in-one models.

This all-in-one is equipped with an embedded Web server, which provides access to information about all-in-one and network activities. A Web server provides an environment in which web programs may run, much in the same way that an operating system, such as Windows, provides an environment for programs to run on your computer. The output from these programs can then be displayed by a Web browser, such as Microsoft Internet Explorer, Safari, or Netscape Navigator.

An “embedded” Web server resides on a hardware device (such as an all-in-one) or in firmware, rather than as software that is loaded on a network server.

The advantage of an EWS is that it provides an interface to the all-in-one that anyone with a network-connected all-in-one and computer can use. There is no special software to install or configure, but you must have a supported Web browser on your computer. To gain access to the EWS, type the IP address for the all-in-one in the address line of the browser. (To find the IP address, print a configuration page. For more information about printing a configuration page, see Configuration page on page 51.)

NOTE For Macintosh operating systems, you can use the EWS over a USB connection after installing the Macintosh software included with the all-in-one.

Features

Use EWS to view all-in-one and network status and manage printing functions from a computer. With the EWS, you can complete the following tasks:

- View all-in-one status information.
- Determine the remaining life on all supplies and order new ones.
- View and change part of the all-in-one configuration.
- View and print some internal pages.
- Select the Language in which to display the EWS pages.
- View and change network configuration.

4 Theory of operation

- Basic operation
- Formatter system
- Printer (product base) functions
- HP LaserJet 3050 all-in-one unique components
- HP LaserJet 3052/3055 all-in-one unique components
- Fax functions and operation (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)

Basic operation

This chapter presents a functional overview of the HP LaserJet 3050/3052/3055 all-in-one. The following systems are discussed:

- All-in-one functions and operation
  - Engine controller unit (ECU) system/power system
  - Laser/scanner system
  - Image-formation system
  - Paper-feed system (printer/product base) and document-feed system (document scanner)
- Formatter functions
- Scanner and ADF functions and operation
- Fax functions and operation (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)

The all-in-one consists of the following components:

- The scanner and ADF
  - The HP LaserJet 3050 all-in-one uses a fixed contact image scanner (CIS).
  - The HP LaserJet 3052/3055 all-in-one use a flatbed charged-coupled device (CCD).
- The printer (product base)
- The formatter
- The line interface unit (LIU) (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)

Each of these systems brings its own characteristic functionality to the all-in-one: scanning, printing, and telecommunications (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only), respectively. These systems interact to provide copying and faxing capability (only the HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one have faxing capability).

- The document scanner and printer (product base) work together to make copies.
- The scanner and LIU work together to send faxes (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only).
- The LIU and printer (product base) work together to receive faxes (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only).

The ECU controls the operation sequences of the all-in-one. The formatter controls the operation sequences of the LIU (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only) and document scanner.

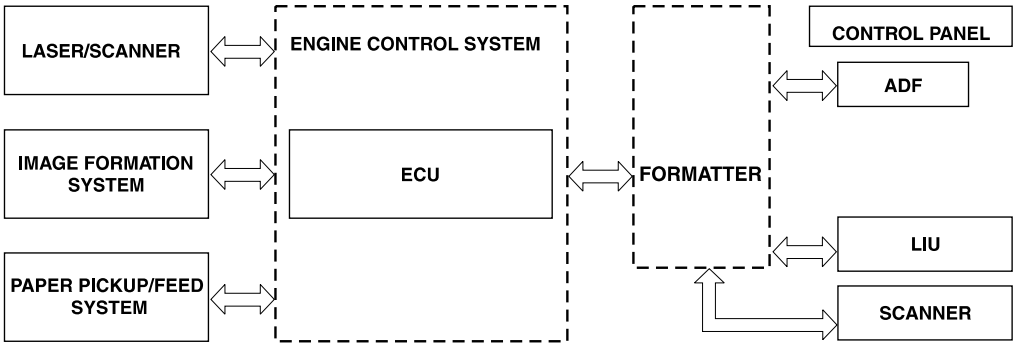


Figure 4-1 All-in-one configuration

Sequence of operation

The microprocessor (CPU) on the ECU controls the operation sequence of the all-in-one. The following events take place during normal all-in-one operation:

Sequence of operation, HP LaserJet 3050 all-in-one scanner

Table 4-1 HP LaserJet 3050 all-in-one basic sequence of operation

Period	Purpose	Remarks
WAIT. After the all-in-one is turned on until Ready appears on the control-panel display.	To perform the firmware initialization.	Tests RAM and establishes and communication with the control panel.
READY. From the end of the WAIT period until the user initiates action or a fax is received.	To keep the all-in-one ready to print, copy, scan, or fax.	
CALIBRATION. From the time the copy, scan, or fax button is pressed until the STAGE period.	To compensate for variables in the scanning system.	This occurs before media moves past the scanner.
STAGE. From the end of the CALIBRATION period until the SCAN period.	To position the leading edge of the original document at the scanning position.	The page feeds partway into the scanner, and then briefly stops.
SCAN. From the end of the brief pause during the STAGE period until the EJECT or following-page STAGE period.	To scan one page of the original document.	Another STAGE period follows if another page of the original document is present in the ADF. Otherwise, the EJECT period begins.
EJECT. From the end of the SCAN period until the original document page is completely ejected from the scanner.	To clear the last page of the original document from the scanner.	The all-in-one returns to the READY period at the end of the EJECT period.

Sequence of operation, HP LaserJet 3052/3055 all-in-one scanner

Table 4-2 HP LaserJet 3052/3055 all-in-one basic sequence of operation

Period	Purpose	Remarks
WAIT. After the all-in-one is turned on until the message **Scanner Bulb warming up** appears on the control-panel display.	To perform the firmware initialization.	Tests RAM and establishes communication with the control panel.
AMBIENT LIGHT DETECT. From the end of the WAIT period until the scanner bulb is turned on.	To determine the level of ambient light in the environment.	The scanner makes a short move toward the ADF. If ambient light is too bright, the scanner moves away from the ADF until it is under the bezel (in shadow). At the end of this period, the scanner bulb is turned on.
INITIAL WARMUP. From the end of the AMBIENT LIGHT DETECT period until the scanner begins moving.	To warm up the scanner bulb.	The length of this period varies depending on age and environmental conditions of the all-in-one. However, this period will timeout (end) if the scanner bulb does not warm up within 2 minutes, and an error message appears on the control panel.
HOME FIND. From the end of INITIAL WARMUP until the **Ready** message appears on the control-panel display.	To position the scanner at the home position under the bezel at the document-origin end of the flatbed, and to perform the final lamp warmup checks.	The scanner performs several back-and-forth movements during this period. The scanner finds its home position by scanning, not by using any sort of sensor.
READY. From the end of HOME FIND until the STANDBY period.	To keep the all-in-one ready to print, scan, copy, or fax with no scanner warmup delay.	The scanner remains in the READY state for 10 minutes following HOME FIND or following the last scanner usage.
STANDBY. Occurs 10 minutes after the start of the READY period, or 10 minutes after the last scanner usage (copy/scan/fax).	To reduce power consumption and increase scanner bulb life.	The scanner performs a HOME FIND before going into standby.
POWERSAVE. Occurs a minimum of 2 hours and a maximum of 12 hours (user configurable) after the start of the READY period, or after the last scanner usage.	To reduce power consumption and increase scanner-bulb life beyond what can be achieved with STANDBY.	A workday modeling algorithm governs the actual powersave behavior.
CALIBRATION. From the time the copy/scan/fax button is pressed until the STAGE period.	To compensate for variability in the scanning system.	Calibration is performed by moving the scanner back-and-forth several times near the home position. If the previous period was STANDBY or POWERSAVE, a short delay occurs. The message **Scanner Bulb warming up** appears on the control-panel display during this delay.
STAGE. From the end of CALIBRATION until the SCAN period.	For an ADF scan: to position the scanner under the ADF scanning window, and then to position the original document's leading edge at the scanning position. For a flatbed scan: to position the scanner at the document-origin position before scanning the original.	For an ADF scan, the page feeds partway into the scanner, then stops briefly. For a flatbed scan, the STAGE period is built-in to the SCAN period, so STAGE is not visible externally.

Table 4-2 HP LaserJet 3052/3055 all-in-one basic sequence of operation (continued)

Period	Purpose	Remarks
SCAN. For an ADF scan: From the end of the brief pause that follows the STAGE period until the EJECT or following-page STAGE period. For a flatbed scan: From the end of CALIBRATION until the REHOME period.	To scan one page of the original document.	For an ADF scan: another STAGE period follows this period if another page of the original document is present in the ADF. Otherwise, the EJECT period follows. For a flatbed scan: The REHOME period follows this period.
EJECT. (ADF only) From the end of the SCAN period until the original document page is completely ejected from the scanner.	To clear the last page of the original document from the scanner.	
REHOME. From the end of the EJECT period (ADF) or the SCAN period (flatbed) until the **Ready** message appears on the control-panel display.	To return the scanner to the home position.	A short back-and-forth sequence occurs as the scanner reaches the home position before the **Ready** message appears on the control-panel display.

Sequence of operation, HP LaserJet 3050/3052/3055 all-in-one printer (product base)

Table 4-3 HP LaserJet 3050/3052/3055 all-in-one basic sequence of operation—printer (product base)

Period	Purpose	Remarks
WAIT After the all-in-one is turned on until the end of the initial rotation of the main motor.	To clear the drum surface of potential and to clean the primary charging roller.	Detects whether or not the cartridge is installed.
STBY (Standby) From the end of the WAIT period or the LSTR period until the pickup command is sent from the formatter. Or, from the end of the LSTR period until the all-in-one is turned off.	To pause until the all-in-one is ready to print.	
INTR (Initial Rotation Period) After the pickup command has been sent from the formatter until the media reaches the top-of-page sensor (PS801).	To stabilize the photosensitive drum sensitivity in preparation for printing. Also to clean the primary charging roller.	
PRINT (Print) From the end of the initial rotation until the primary voltage goes OFF.	To form images on the photosensitive drum based on the VIDEO signals (/VDO, VDO) sent from the formatter and to transfer the toner image onto the media.	
LSTR (Last Rotation Period) After the primary voltage goes OFF until the main motor stops rotating.	To deliver the last page. Also to clean the primary charging roller.	When the pickup command is sent from the video controller, the all-in-one enters the INTR period immediately after the end of the LSTR period.

HP LaserJet 3050/3052/3055 all-in-one timing diagram—printer (product base)

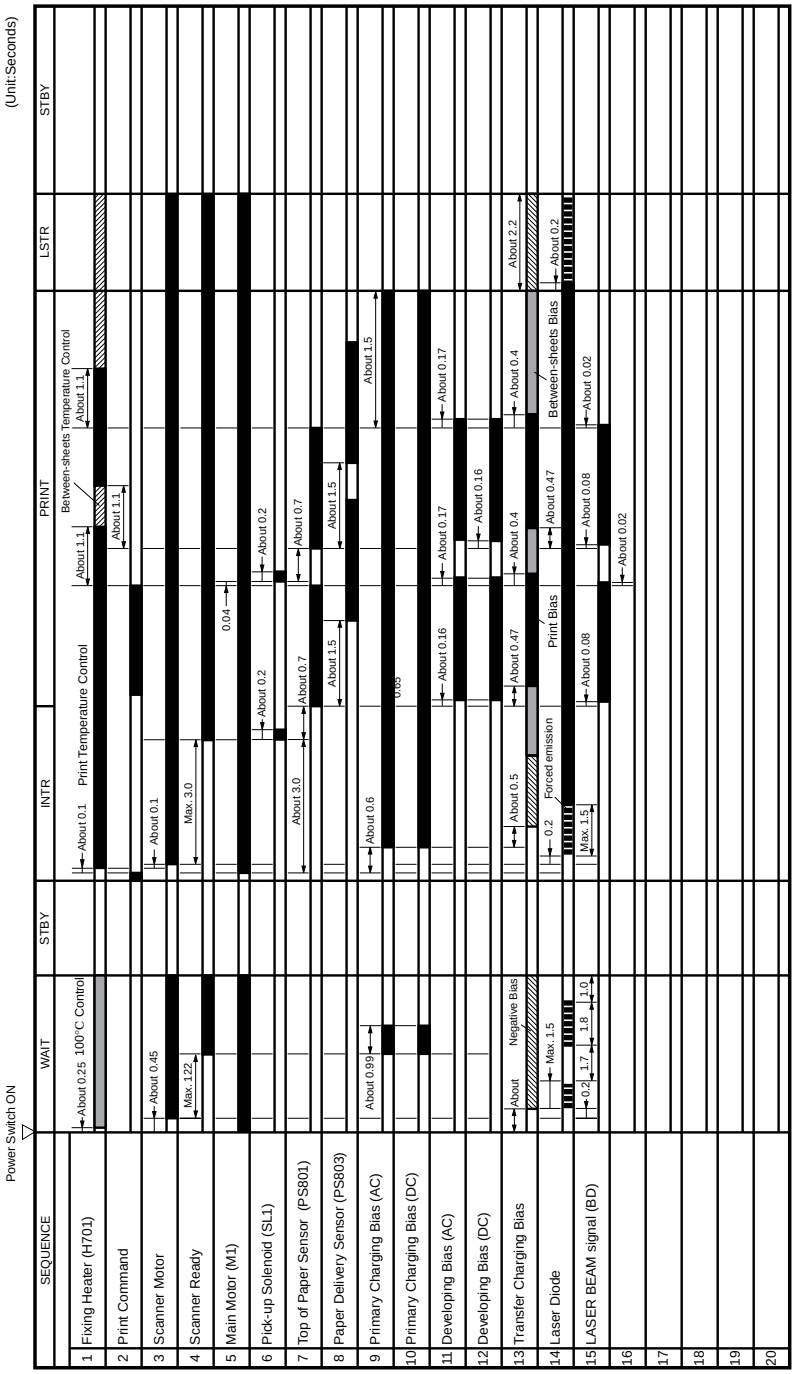


Figure 4-2 HP LaserJet 3050/3052/3055 all-in-one timing diagram—printer (product base)

Formatter system

The formatter coordinates the major systems. It is responsible for the following tasks or actions:

- Formatting and controlling copies
- Receiving and processing print data from the all-in-one interface
- Monitoring the control panel and relaying all-in-one-status information
- Developing and coordinating data placement and timing with the print engine
- Communicating with the host computer through the bidirectional interface
- Communicating fax data to and from the LIU (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)

The formatter receives print data from the bidirectional ECP mode interface or USB interface and converts it into a dot image. The ECU synchronizes the image-formation system with the paper-feed system and signals the formatter to send the print-image data. The formatter sends the print-image data (dots) in the form of a video signal, and the printing process begins.

Central processing unit

The formatter incorporates an embedded Coldfire V4 processor operating at 133 MHz.

Line interface unit (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)

The line interface unit (LIU) provides the required safety isolation, signal coupling, and impedance matching between the telephone line and the modem chipset that is located on the formatter.

Standard startup process

When the all-in-one is unplugged or the power is off, the firmware code is stored on the formatter in two blocks. The first block of code is an executable boot block (about 64K of code). The second block of code is a compressed version of the all-in-one control code.

When the all-in-one is turned on, the boot block decompresses the all-in-one control code and stores it in RAM. Then the all-in-one performs a full startup with the control code running from RAM.

All-in-one startup messages

The LED display contains different messages depending upon the progress of the boot process.

Table 4-4 All-in-one startup messages

Message	Cause	Solution
-blank- [blank display for many seconds after power-on]	Boot-block failure	Use the power switch to turn the power to the all-in-one off. Check all wire-harness connectors and FFCs to make sure that they are firmly connected. Replace the formatter. See Formatter and line interface unit (LIU) on page 178.
Contact Service	Control-code failure	Replace the formatter. See Formatter and line interface unit (LIU) on page 178.
Hewlett-Packard **<<<** [moving-cursor HP display]	The all-in-one is starting up.	Wait for the **Ready** message.
Ready.....	Startup is complete and the all-in-one is ready for use.	Begin using the all-in-one.

RAM

The all-in-one contains two types of random-access memory (RAM):

- One bank of nonvolatile RAM (NVRAM) stores parameters.
- Dynamic random access memory (DRAM) provides temporary storage of the all-in-one program code along with copy, scan, and print data.

USB interface

The formatter receives incoming data through its USB interface. This interface provides high-speed, two-way communication between the all-in-one and the host, allowing you to change all-in-one settings and monitor all-in-one status from the host computer.

Control panel

The control panel consists of the following features:

- Groups of buttons to control fax, copy, scan, and configuration functionality (only the HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one have fax capability)
- A 2-by-16 LCD display that shows status, menus, and messages
- Front-panel status lights

Economode

When you select Economode (draft) in the printer driver, the all-in-one uses less toner, which extends the life of the print cartridge.

NOTE Because less toner is applied to the page in Economode, image quality (both clarity and contrast) is considerably decreased.

MEt

HP Memory Enhancement technology (MEt) effectively doubles the standard memory through a variety of font- and data-compression methods.

Enhanced I/O

The enhanced I/O (EIO) feature allows all-in-one memory to be used for storing data received from the host computer. When EIO is enabled, more data can be sent to the all-in-one in shorter amounts of time so that the user can return to the software program more quickly. The EIO feature has the following options:

- **Auto**. The all-in-one uses EIO memory allocation to increase the speed of data transfer from the host computer to the all-in-one, if necessary. The default setting is Auto.
- **Off**. The minimum amount of all-in-one memory is used to store data that is sent from the host computer.
- **Page Protect**. The formatter creates the entire page image in page-buffer memory before physically moving the media through the all-in-one. This process ensures that the entire page is printed.

Page complexity (ruling lines, complex graphics, or dense text) can exceed the ability of the all-in-one to create the page image fast enough to keep pace with the image-formation process. If Page Protect is disabled and a page is too complex, the page might print in sections (for example, the top half on one page and the bottom half on the next page). Some print-data loss is likely in these instances, and an error message will appear on the control-panel display.

PJL overview

Printer job language (PJL) is an integral part of configuration, in addition to the standard printer command language (PCL). With standard ECP cabling, the all-in-one can use PJL to perform the following functions:

- **Two-way communication** with the host computer through a USB connection. The all-in-one can communicate information to the host (such as the control-panel status).
- **Isolation of print environment settings** from one print job to the next. For example, if a print job is sent to the all-in-one in landscape mode, the subsequent print jobs print in landscape only if they are formatted for landscape printing.

Printer (product base) functions

Printing functions are divided into five groups:

- Engine control
- Formatter
- Image formation
- Laser/scanner
- Pickup and feed

The following figure is a block diagram of the printer (product base):

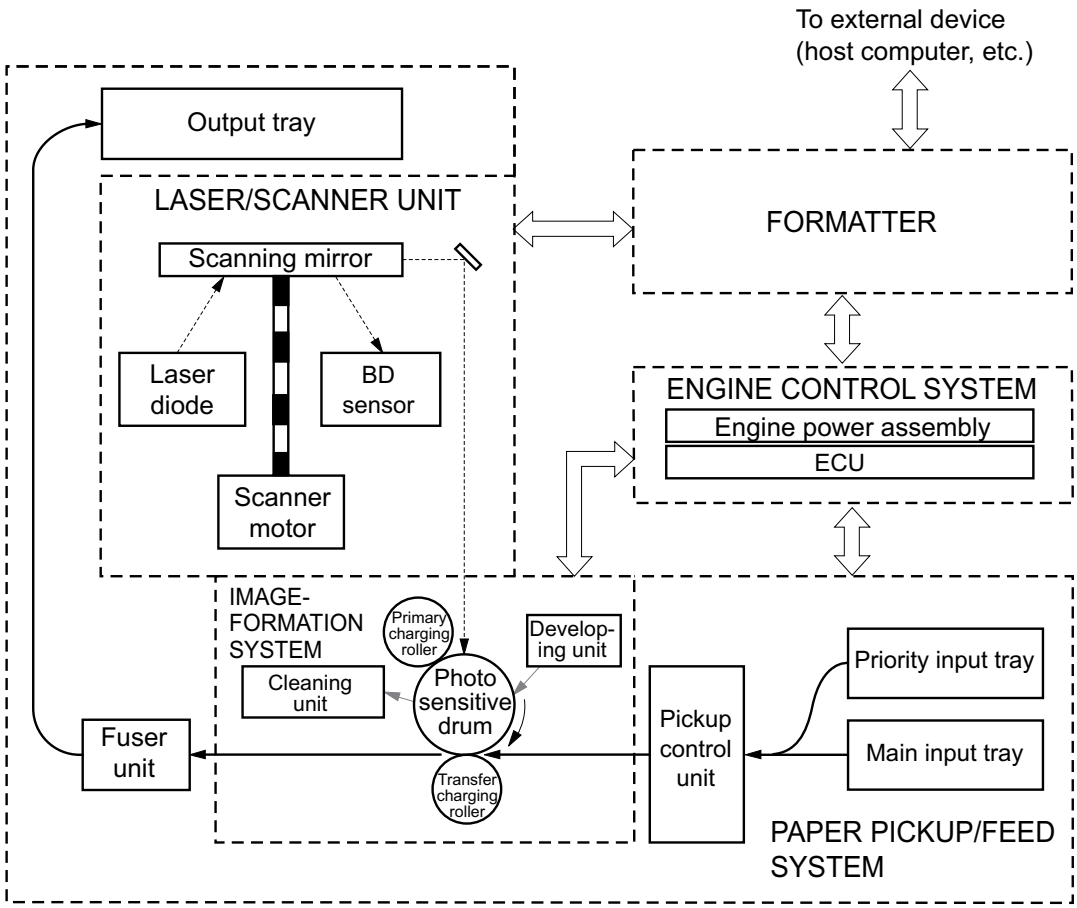


Figure 4-3 Printer (product base) functional block diagram

Engine control system (engine control unit and power-supply assembly)

The engine control system coordinates all print engine activities. The engine control system includes both the engine control unit (ECU) printed circuit assembly (PCA) and the power-supply assembly PCA.

NOTE In other HP LaserJet products, the ECU and power functions are combined onto one PCA known as the controller PCA or the DC controller PCA. In the HP LaserJet 3050/3052/3055 all-in-one, the control functions are primarily relegated to the ECU PCA and the power functions to the power-supply assembly PCA.

The ECU controls the following systems and functions:

- **Print-engine control**
  - Paper-motion monitoring and control (printing)
  - Motor
- **Printer (product base) laser/scanner**

The power-supply assembly provides the following functions to the power system:

- Ac power distribution
- Dc power distribution
- Overcurrent/overvoltage protection
- High-voltage power distribution

Print-engine control system

Paper motion monitoring and control. The ECU controls paper motion in the all-in-one by continuously monitoring the two paper sensors and coordinating the timing with the other print processes.

Motor. The ECU controls the motor. The motor drives all of the all-in-one paper movement.

Printer (product base) laser/scanner

The ECU sends signals to the laser/scanner assembly to modulate the laser-diode on and off modes and to drive the laser/scanner motor.

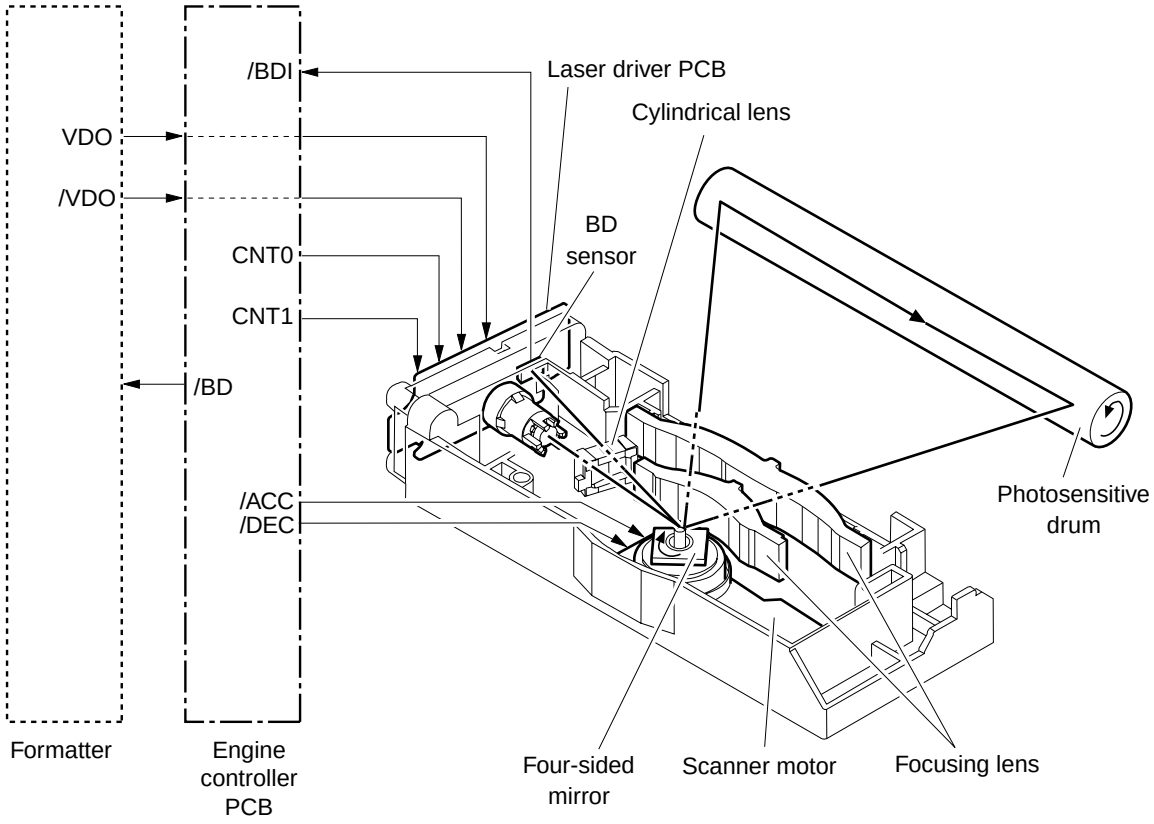


Figure 4-4 Laser/scanner operation

Power system on the power-supply assembly

The power-supply assembly supplies the ac, dc, and high-voltage power-supply circuits.

Ac power distribution

The ac power circuitry supplies ac voltage whenever the power cord is connected to the ac power source and the power switch is on. The ac voltage is distributed to the dc power supply circuitry and to the ac driver circuitry, which controls ac voltage to the fuser-assembly heating element.

Dc power distribution

The dc power distribution circuitry, located on the printer (product base) power assembly, distributes +3.3 Vdc, +5 Vdc, and +24 Vdc as shown in Table 4-5 Dc power distribution on page 77:

Table 4-5 Dc power distribution

+3.3 Vdc	ECU, sensors, formatter
+5 Vdc	ADF motor and scanner
+24 Vdc	Main motor, laser/scanner motor, solenoid, high-voltage power supply, fuser, safety circuit, door switch

Overcurrent/overvoltage

There are two overvoltage devices in this all-in-one:

- Fuse F101 provides overcurrent protection for the fusing-system circuitry.
- Fuse F102 (110 V all-in-one models only) provides overcurrent protection to the all-in-one dc power-supply circuitry.

You can check or replace the fuses by removing the left cover.

NOTE If either of these fuses fails, replace the power supply. See Power supply on page 175.

High-voltage power distribution

The high-voltage power supply applies an overlap of dc and ac voltage to the primary charging roller and to the developing roller. This circuit also applies a positive or negative dc voltage to the transfer roller according to the instructions from the ECU.

This circuit also controls the image density by changing the primary ac voltage and the developing ac bias according to the print-density setting (which is set by using HP ToolboxFX). High voltage is disabled when the print-cartridge door is open. Figure 4-5 High-voltage power supply circuit on page 78 shows this process.

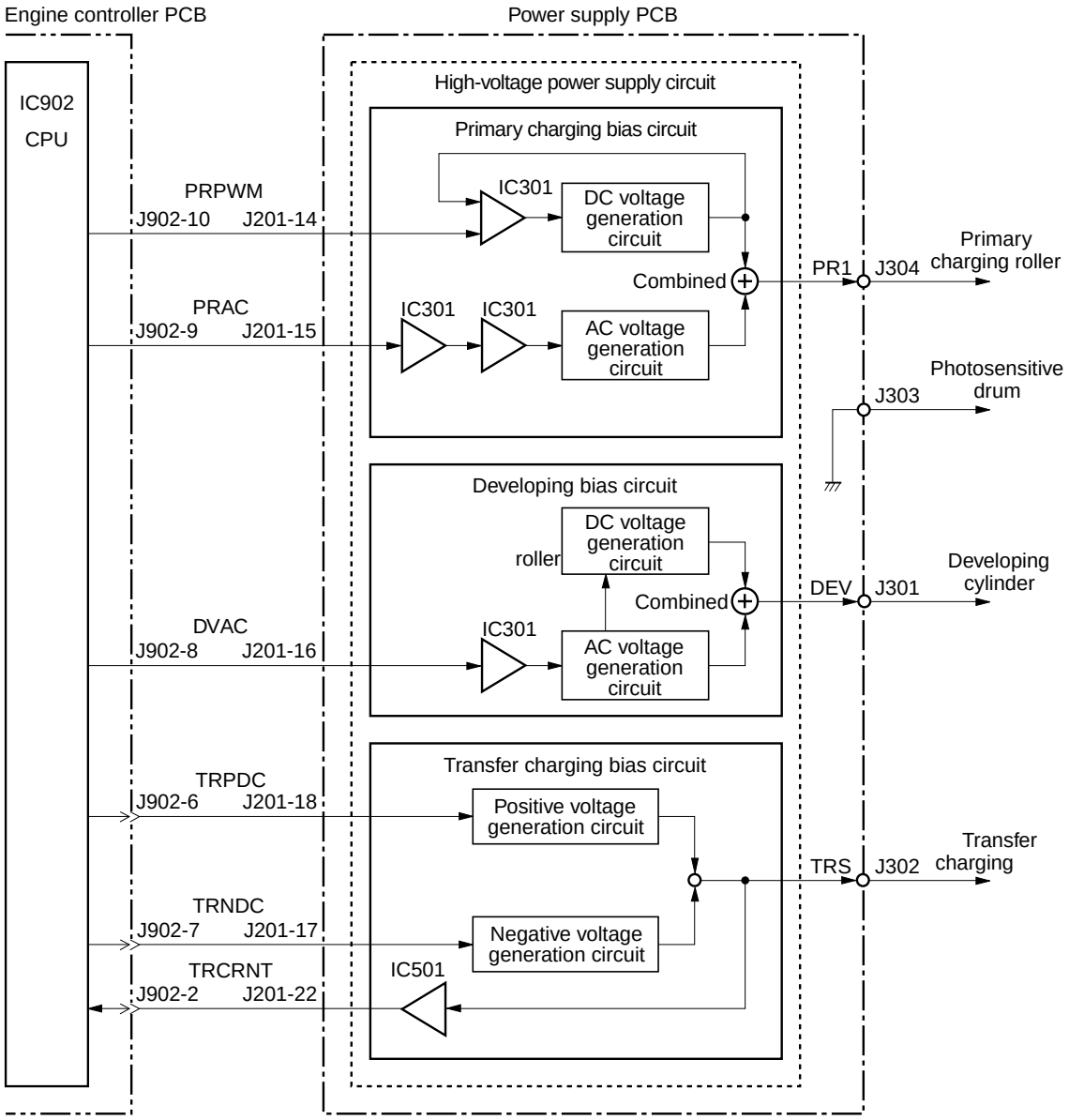


Figure 4-5 High-voltage power supply circuit

Image-formation system

Laser printing requires the interaction of several different technologies including electronics, optics, and electrophotographics to provide a printed page. Each process functions independently and must be coordinated with the other all-in-one processes. Image formation consists of seven processes:

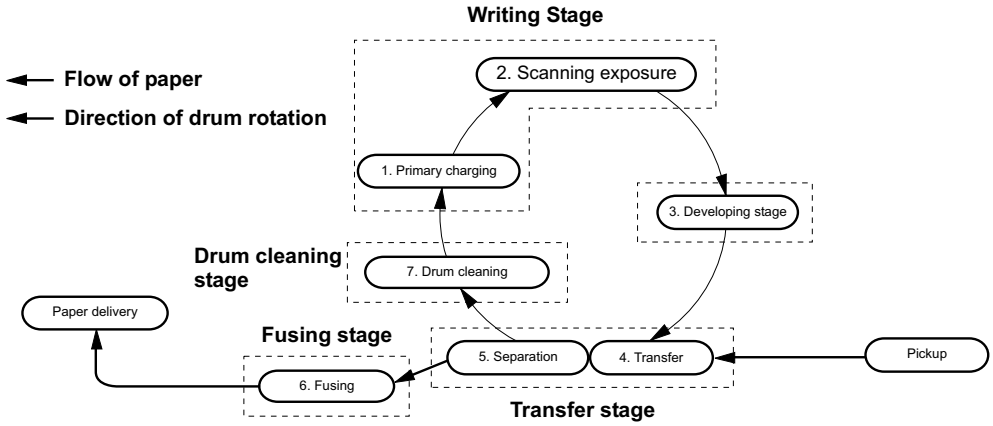


Figure 4-6 Image-formation block diagram

The seven image-formation processes

1. **Conditioning stage (primary charging)**—This process applies a uniform negative charge to the surface of the drum with the primary charging roller, which is located in the print cartridge. The primary charging roller is coated with conductive rubber. An ac bias is applied to the roller to erase any residual charges from any previous image. In addition, the primary charging roller applies a negative dc bias to create a uniform negative potential on the drum surface. The print density setting modifies the dc voltage.

2. **Writing stage (scanning exposure)**—During this process, a modulated laser diode projects the beam onto a rotating scanning mirror. As the mirror rotates, the beam reflects off the mirror, first through a set of focusing lenses, then off a mirror, and finally through a slot in the top of the print cartridge, and onto the photosensitive drum. The beam sweeps the drum from left to right, discharging the negative potential wherever the beam strikes the surface. This creates a latent electrostatic image, which later is developed into a visible image. Because the beam sweeps the entire length of the drum while the drum rotates, the entire surface area of the drum can be covered. At the end of each sweep, the beam strikes the beam-detect lens, generating the beam-detect signal (BD signal). The BD signal is sent to the ECU where it is converted to an electrical signal used to synchronize the output of the next scan line of data.

3. **Developing stage**—During this process, the latent electrostatic image is present on the drum. The toner particles obtain a negative surface charge by rubbing against the developing cylinder, which is connected to a negative dc supply. The negatively charged toner is attracted to the discharged (exposed, grounded) areas of the drum, and it is repelled from the negatively charged (unexposed) areas.

4. **Transfer stage**—During this process, the toner image on the drum surface is transferred to the media. The transfer roller applies a positive charge to the back of the media, which attracts the negatively charged toner on the drum surface to the media. After separation, the drum is cleaned and conditioned for the next image.

5. **Separation stage**—During this process, the media separates from the drum. To stabilize the feed system and prevent toner dropouts on the printed image at low temperature and humidity, the static eliminator reduces the charge on the back of the media.

6. **Fusing stage**—During this process, the heat and pressure fuse the toner into the media to produce a permanent image. The media passes between a heated fusing element and a soft pressure roller, which melt the toner and press it into the media.

7. **Drum-cleaning stage**—During this process, the cleaning blade is in contact with the surface of the drum at all times. As the drum rotates during printing, the cleaning blade wipes excess toner off the drum and stores it in the waste toner receptacle.

Print cartridge

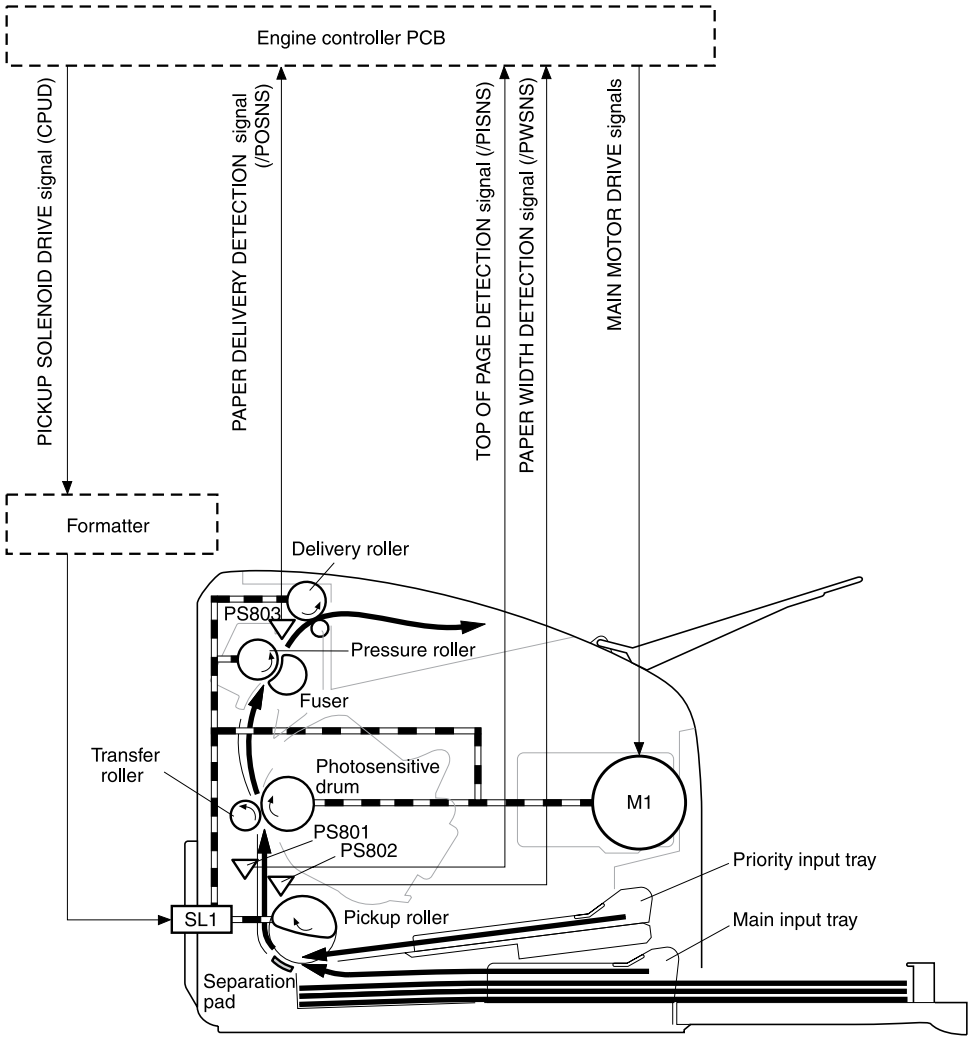
As the focal point of the image-formation system, the print cartridge contains toner and houses the cleaning, conditioning, and developing stages of the process. The print cartridge contains the photosensitive drum, primary charging roller, developing station, toner cavity, and cleaning station. By including these components (which wear, degrade, or are consumed) in the replaceable print cartridge, the need for many service calls is eliminated. The special photosensitive properties of the drum form an image on the drum surface and then transfer the image to media.

CAUTION The print cartridge does not include a light-blocking shutter. Do not expose the drum to light, which can permanently damage the drum. Protect the print cartridge whenever you remove it by covering it with paper.

Printer (product base) paper-feed system

The main input tray and the priority input tray merge into one main input area. The all-in-one uses the top-of-page sensor (PS801) to senses the paper as it enters the paper-feed path. It does not sense the presence of media before beginning the print cycle. The following steps occur when the all-in-one receives a print job.

Step 1	The ECU activates the motor (M1). Paper motion begins when the ECU energizes the pickup solenoid (SL1).
Step 2	The pickup roller rotates once. The-lift plate pushes the media against the pickup roller.
Step 3	The friction of the pickup roller grabs the top sheet and advances it to the feed-assembly drive rollers. To ensure that only one sheet is fed, a main separation pad holds the remainder of the stack in place.
Step 4	The feed-assembly drive rollers advance the media to the top-of-page sensor (PS801). This sensor informs the ECU of the exact location of the leading edge of media, so that the image being written on the photosensitive drum can be precisely positioned on the page.
Step 5	The feed assembly drive rollers then advance the media to the transfer area where the toner image on the photosensitive drum is transferred to the media.
Step 6	After the image is transferred, the media enters the fuser assembly where heat from the fuser and pressure from the pressure roller permanently bond the toner image to media. The paper-delivery sensor (PS803) determines that the media has successfully moved out of the fusing area.
Step 7	The fuser-assembly exit rollers deliver media to the output bin face-down.



PS801: Top-of-page sensor
PS802: Paper-width sensor
PS803: Paper-delivery sensor
M1: Main motor
SL1: Pickup solenoid

Figure 4-7 Printer (product base) paper path

Jam detection in the all-in-one

The top-of-page sensor (PS801) and the paper-delivery sensor (PS803) detect media moving through the all-in-one. If a jam is detected, the ECU immediately stops the printing process and the Attention (Cancel) light illuminates on the control panel.

Conditions of jam detection

- **Pickup delay jam**—Paper does not reach the top-of-page sensor (PS801) within 1.4 seconds after the pickup solenoid (SL1) has been turned on, a second pickup operation is attempted, and paper again does not reach the top-of-page sensor within 1.4 seconds.
- **Pickup stationary jam**—The top-of-page sensor (PS801) does not detect the trailing edge of media within 4.6 seconds of detecting the leading edge.
- **Delivery-delay jam**—The paper-delivery sensor (PS803) does not detect the leading edge of media within 2.1 seconds after the top-of-page sensor (PS801) detects the leading edge.
- **Wrapping jam**—The paper-delivery sensor (PS803) does not detect the trailing edge of the media within 1.5 seconds after the top-of-page sensor (PS801) detects the leading edge and within ten seconds after the paper-delivery sensor (PS803) detects the leading edge.
- **Delivery-stationary jam**—The paper-delivery sensor (PS803) does not detect the leading edge of media within 2.2 seconds after the top-of-page sensor (PS801) detects the trailing edge.
- **Residual-paper jam**—The top-of-page sensor (PS801) or the paper-delivery sensor (PS803) detects media in the initial rotation period.
- **Door-open jam**—The top-of-page sensor (PS801) or the paper-delivery sensor (PS803) detects media while the print-cartridge door is open.

HP LaserJet 3050 all-in-one unique components

This section presents an overview of the relationships between unique major components in the HP LaserJet 3050 all-in-one. This section describes the optical scanning system and ADF pickup and feed system used in the HP LaserJet 3050 all-in-one. It does *not* describe the image-formation system that is common to the HP LaserJet 3050/3052/3055 all-in-one. For information about image formation, see Image-formation system on page 79.

Basic operation

The HP LaserJet 3050 all-in-one uses a pickup and feed system (document transportation) and an optical scanning system. Figure 4-8 Basic operation block diagram on page 83 shows the relationship of the two systems.

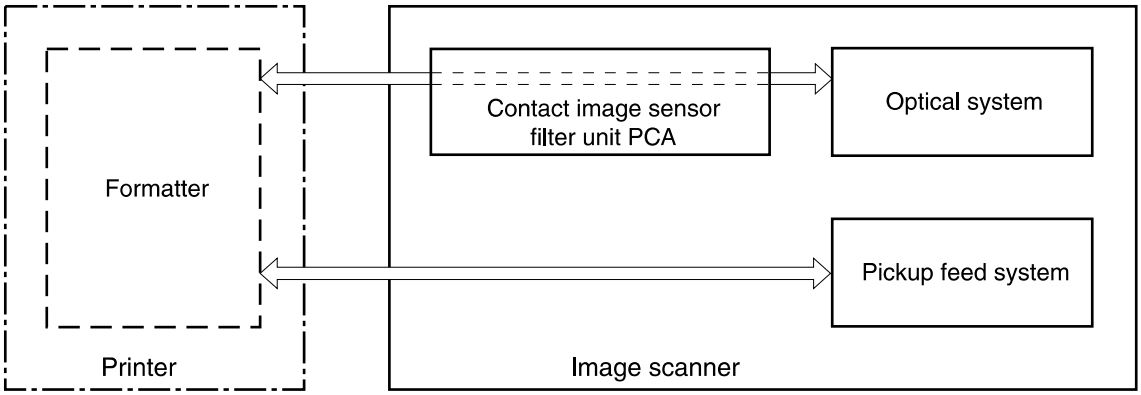


Figure 4-8 Basic operation block diagram

A document is placed into the ADF tray. When the formatter sends a signal to the optical scanning system, the document is picked up and fed into the optical system through a series of rollers and a separation pad (the separation pad prevents the pickup system from feeding multiple pages if more than one page is loaded in the ADF tray).

As the document passes the contact image scanner, the scanner illuminates the document. The optical scanning system captures and amplifies the reflected light and converts it to a digital signal, and then sends the digital signal to the formatter for image-processing.

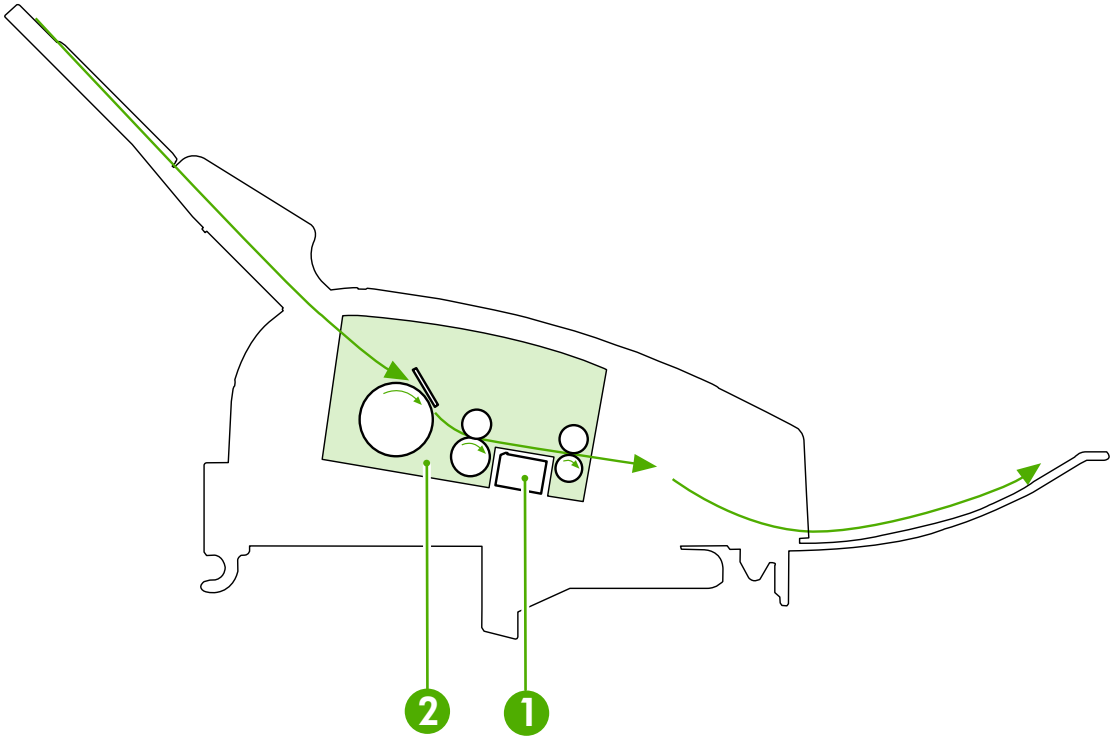


Figure 4-9 HP LaserJet 3050 all-in-one optical and feed systems

1	Optical scanning system
2	ADF pickup-and-feed system

ADF pickup-and-feed system

The ADF pickup-and-feed system uses a pickup roller, a feed roller, and a delivery roller to transport the document into, through, and out of the optical scanning system. The optical scanning system motor drives the rollers when the formatter signals the optical scanning system that a job to print or copy is present.

The ADF pickup-and-feed path has two sensors. The document sensor (PS1201) detects the presence of a document in the ADF input tray. The document-top sensor (PS202) detects the document in the ADF paper path. The formatter processes the signals from the sensors and the all-in-one operates accordingly.

When the contact image scanner motor rotates, it causes the pickup, feed, and delivery rollers to rotate. The ADF document pickup roller pushes a document into the ADF paper path. The separation pad prevents multiple pages from entering the ADF paper path by creating friction against the document and the pickup roller. The document feed roller advances the document past the contact image sensor (CIS). The document delivery roller advances the document out of the ADF paper path to the output area.

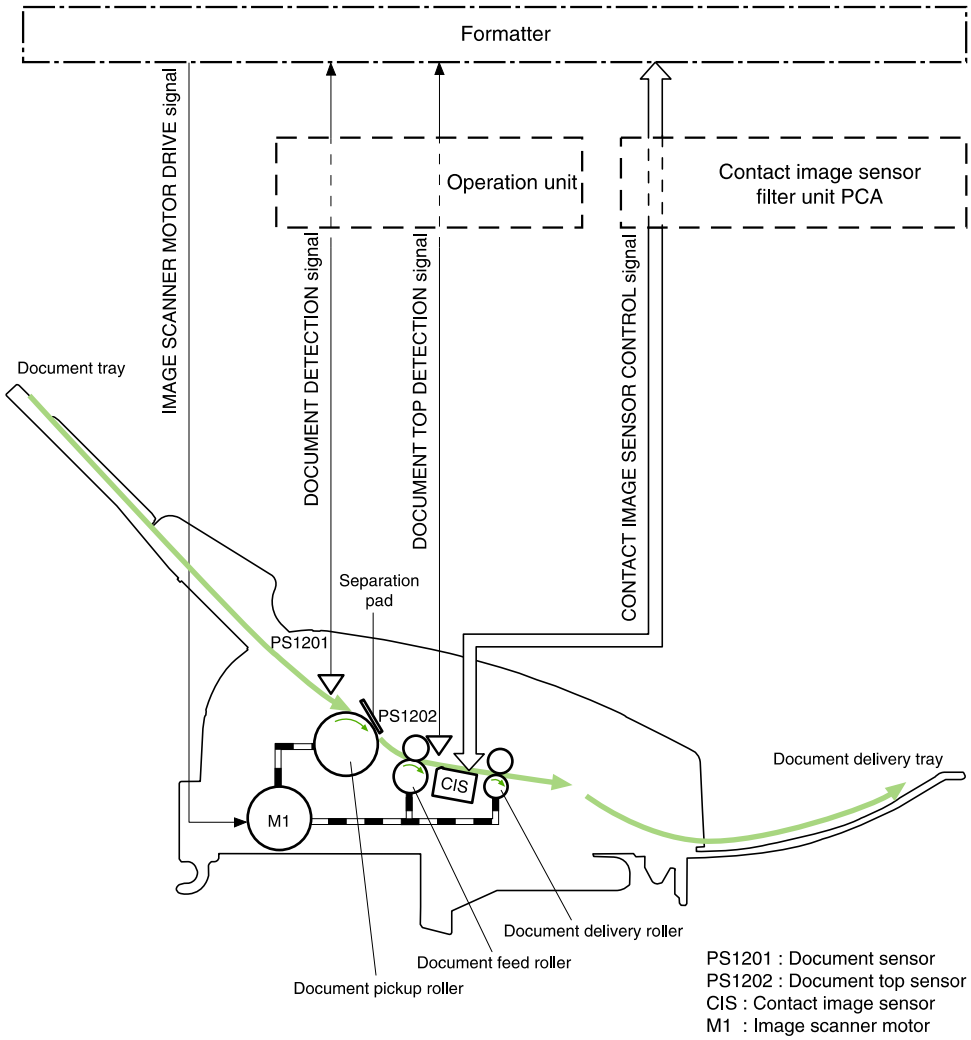


Figure 4-10 HP LaserJet 3050 all-in-one feed control (1 of 2)

The contact image scanner motor drives the pickup roller, the feed roller, a one-way clutch, and the delivery roller. A gear differential causes the pickup roller to rotate at a slower speed than the feed roller.

The slower speed allows for a consistent space between pages of a multiple-page document, which is necessary for correct document scanning. The one-way clutch varies the rotation speeds of the pickup roller and feed roller to prevent the rollers from tearing the document.

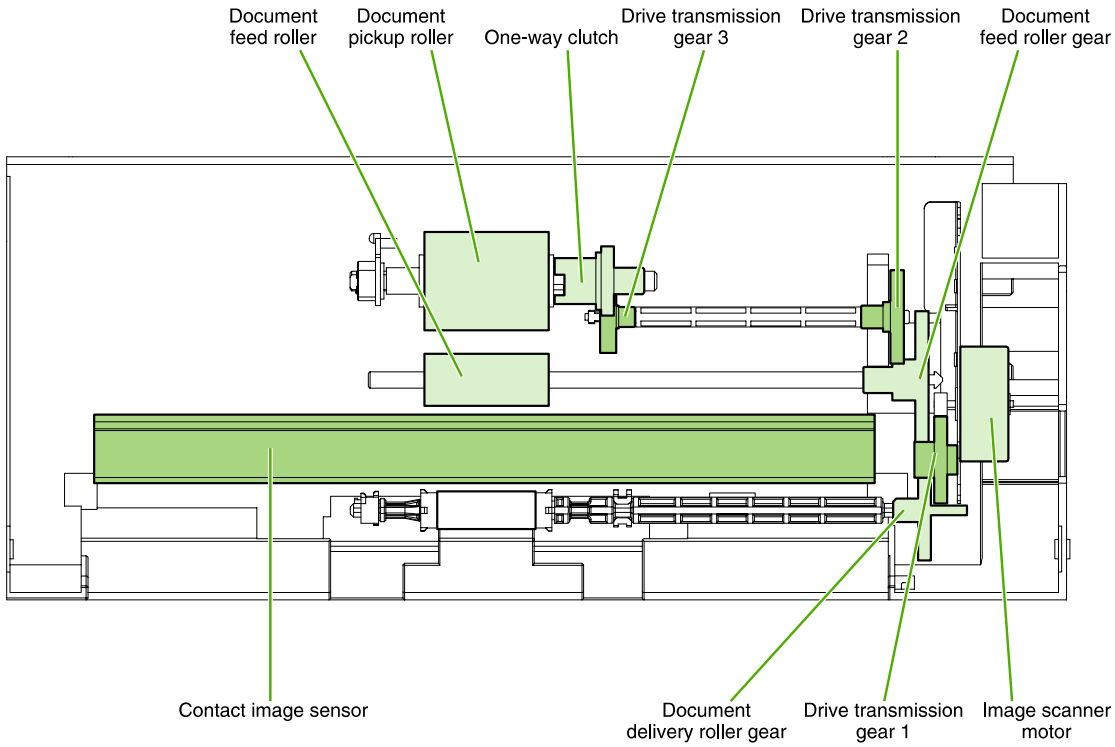


Figure 4-11 HP LaserJet 3050 all-in-one feed control (2 of 2)

Optical scanning system

The contact image sensor (CIS) is the major component of the optical scanning system. The CIS consists of three LEDs (red, green, and blue), a light guide, the scanning glass, the rod lens array, and a sensor array. When the CIS scans a document, the CIS does not move. Instead, documents move past the CIS.

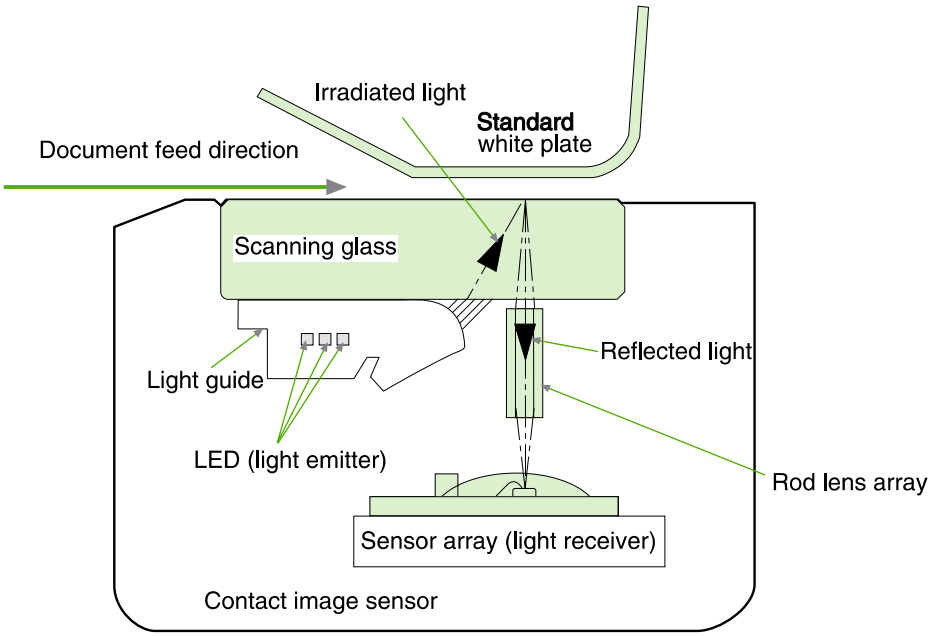


Figure 4-12 HP LaserJet 3050 all-in-one optical system (1 of 2)

The formatter controls the CIS. To begin scanning, the formatter sends a signal to the CIS. The LEDs illuminate and the light passes through the light guide and scanning glass and strikes the document. Light that the document reflects passes back through the scanning glass and rod lens array into the sensor array. The sensor array consists of 5,148 photosensors (468 photosensors on each of 11 sensor driver circuits). The sensor array collects and amplifies the reflected light and converts it into serial data in the driver circuits. The CIS sends the data to the formatter for image formation.

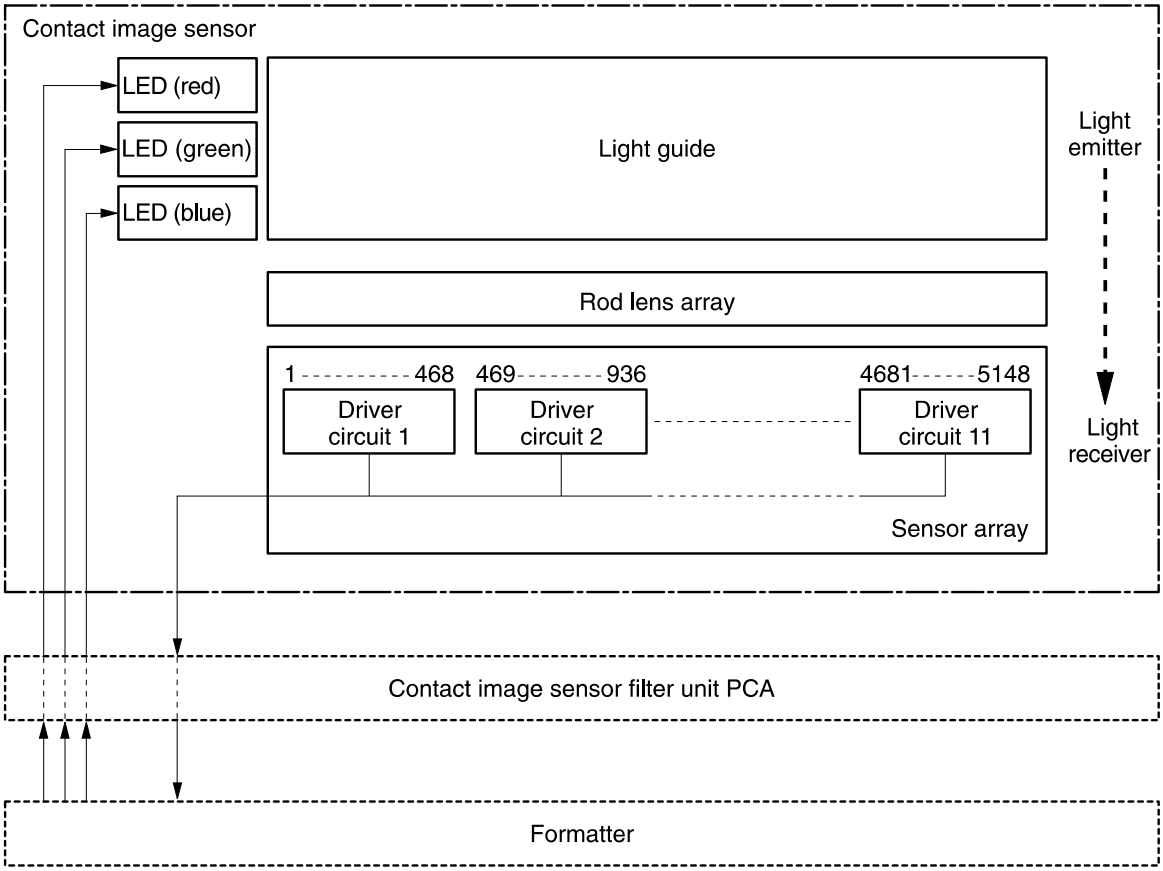


Figure 4-13 HP LaserJet 3050 all-in-one optical system (2 of 2)

HP LaserJet 3052/3055 all-in-one unique components

This section presents an overview of the relationships between unique major components in the HP LaserJet 3052/3055 all-in-one. This section describes the optical scanning system and ADF pickup and feed system used in the HP LaserJet 3052/3055 all-in-one. It does *not* describe the image-formation system that is common to the HP LaserJet 3050/3052/3055 all-in-one. For information about image formation, see Image-formation system on page 79.

Scanner and ADF functions and operation

The following sections describe how the document scanner and the ADF function.

Scanner functions

The scanner uses a light source, a color-separation method, and a charge-coupled device array (CCD) to collect optical information about the document and transform that into an image file. The scanner consists of these elements:

- A lamp (cold-cathode fluorescent bulb)
- Five mirrors and a lens
- A CCD

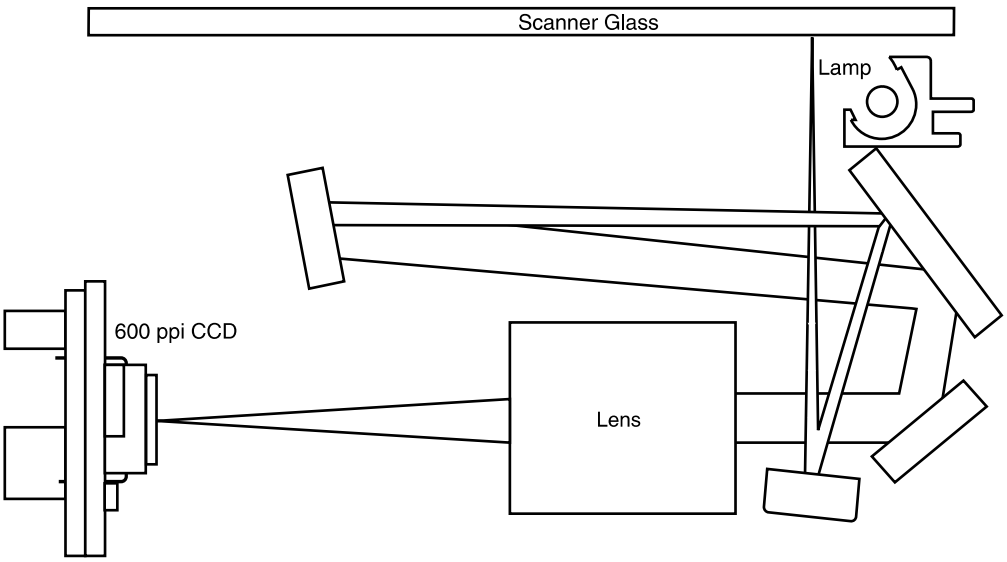


Figure 4-14 HP LaserJet 3052/3055 all-in-one optical system

The scanner lamp illuminates a small strip of the document (called the *raster line*). The mirrors direct the light through the lens to the CCD. The CCD senses and records the light, creating an analog representation of the raster line. If the ADF is being used, the document then advances in the ADF to the next raster line. If the flatbed is being used, the scanner module advances to the next raster line. This advancing and collection process continues to the end of the sheet.

The image data is collected in the motor controller board, where it is processed and sent to the formatter. The formatter then handles the image data, outputting it as a copy, sending it through the LIU as a fax (in the HP LaserJet 3055 all-in-one), or directing it to the computer as scanner output.

The image data CCD sensor uses a 300 ppi array and two half-pixel-offset 600 ppi arrays which are capable of collecting data at 600 ppi or 1200 ppi (600 ppi if one array is used or 1200 ppi if both arrays are used).

Scanner operation

At startup and periodically at other times, the scanner assembly moves systematically to locate its home position. It then calibrates to a white strip located under the glass at the right end of the scan tub.

If the all-in-one detects a document in the ADF when a copy or scan is initiated (from the software or the control panel), the scan module moves to the left side of the scan tub and stops. The image is acquired as the paper is fed through the ADF past the scanner module.

If no document is detected in the ADF, or if the model does not have an ADF, the scan module acquires the image from the flatbed glass while slowly moving within the scan tub.

ADF operation

Standby (paper-loading) mode: In standby mode, the pickup roller is up and the stack-stop is down, preventing the user from inserting the original document too far. When a document is inserted correctly, the paper-present sensor detects its presence.

The standard operation of the ADF consists of the pick, feed, and lift steps.

Pick: When it receives a copy or scan command, the ADF motor engages the gear train to lower the pickup-roller assembly and raise the stack-stop. The first roller, called the pre-pick roller, moves the top few sheets forward into the ADF. The next roller is the pickup roller. This roller contacts the ADF separation pad, which separates multiple pages into single sheets.

Feed: The single sheet continues through the path. Along the way, the form sensor, which is a set distance from the ADF glass, detects the sheet. This alerts the scanner to start when the page reaches the glass. The scanner acquires the image, one raster line at a time, until it detects the end of the page. The page is then ejected. The pick and feed steps are repeated as long as paper is detected in the ADF input tray.

Lift: When no more paper is detected in the ADF input tray and the form sensor detects the trailing edge of the last page, the last sheet is ejected and the motor turns in a sequence that lifts the pick roller assembly to standby (paper-loading) mode again.

The ADF will not function when the ADF lid is open. The paper path is incomplete if the ADF lid is lifted from the glass.

ADF paper path and ADF sensors

The following diagram shows the ADF paper path.

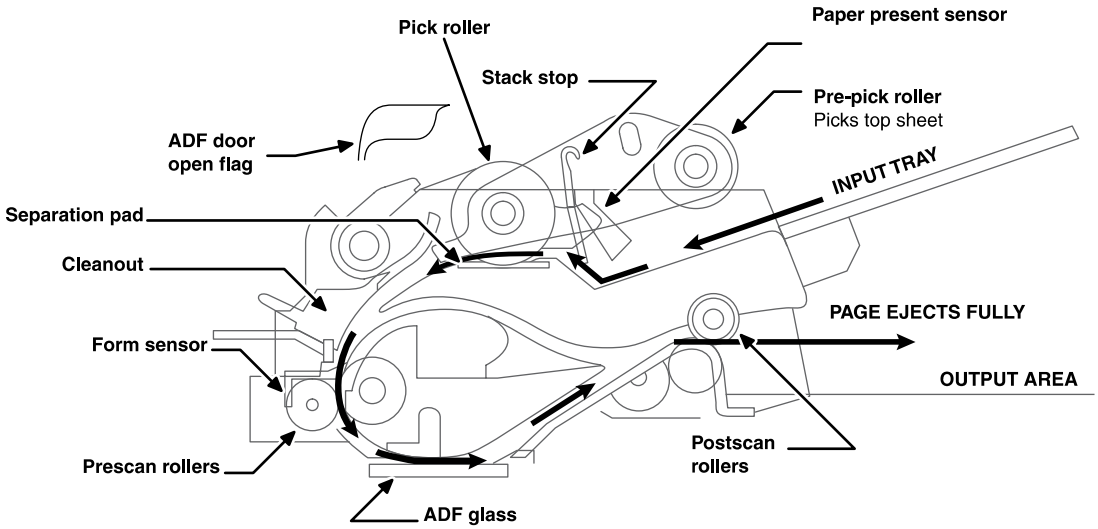


Figure 4-15 HP LaserJet 3052/3055 all-in-one ADF path

The paper-present sensor determines if paper is in the ADF. The form sensor detects the top and bottom edges of the document. One other sensor detects an open ADF door.

ADF jam detection

The ADF has two sensors that detect paper. The paper-present sensor detects the presence of media in the ADF input tray. The form sensor detects media moving through the ADF. If a jam is detected, the ADF immediately stops the paper feeding and a jam message appears on the control-panel display.

A jam can be detected under any of the following conditions:

- **Document-feeder jam**—When documents are detected in the ADF input tray, and a command to copy, scan or fax is received, the scan module travels to the left side of the scan assembly and stops beneath the ADF scanner glass. The ADF then attempts three times, or for about ten seconds, to advance the paper to the form sensor. If the paper does not advance, the scan module travels back to the home position on the right side of the scanner assembly. The message **Document feeder mispick. Reload** appears on the control-panel display.
- **Long-document jam**—If the paper has advanced to trigger the form sensor, but the trailing edge is not detected within the time allowed for a 381-mm (15-inch) document (the maximum allowable page length for the ADF), the scanner returns to the home position at the right side of the scanner assembly. The message **Doc feeder jam Clear, Reload** appears on the control-panel display.
- **Stall jam**—When a page that is less than 381 mm (15 inches) long has advanced to the form sensor but has not left it within the expected time, the paper has probably stalled or jammed. The scanner returns to the home position at the right side of the scanner assembly. The message **Doc feeder jam Clear, Reload** appears on the control-panel display.
- **Other**—If the paper stops in the ADF and the scan module remains under the ADF scanner glass, an internal firmware error has probably occurred. This is usually remedied by cycling the power.

Fax functions and operation (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)

The following sections describe the all-in-one fax capabilities.

Computer and network security features

The HP LaserJet 3050/3055 all-in-one can send and receive fax data over telephone lines that conform to public switch telephone network (PSTN) standards. The secure fax protocols make it impossible for computer viruses to be transferred from the telephone line to a computer or network.

The following all-in-one features prevent virus transmission:

- No direct connection exists between the fax line and any devices that are connected to the USB or Ethernet ports.
- The internal firmware cannot be modified through the fax connection.
- All fax communications go through the fax subsystem, which does not use Internet data-exchange protocols.

PSTN operation

The public switched telephone network (PSTN) operates through a central office (CO) that generates a constant voltage on the TIP and RING wires (48 V, usually). A device goes on-hook by connecting impedance (such as 600 ohms for the U.S.) across the TIP and RING so that a line current can flow. The CO can detect this current and can send impulses like dial tones. The all-in-one generates more signaling tones, such as dialing digits, to tell the CO how to connect the call. The all-in-one can also detect tones, such as a busy tone from the CO, that tell it how to behave.

When the call is finally connected, the CO behaves like a piece of wire connecting the sender and receiver. This is the period during which all of the fax signaling and data transfer occurs. When a call is completed, the circuit opens again and the line-current flow ceases, removing the CO connection from both the sender and the receiver.

On most phone systems, the TIP and RING wires appear on pins 3 and 4 of the RJ-11 modular jack (the one on the LIU). These two wires do not have to be polarized because all the equipment works with either TIP or RING on pin 3 and the other wire on pin 4. This means that cables of either polarity can interconnect and will still work.

These basic functions of PSTN operation are assumed in the design of the fax subsystem. The all-in-one generates and detects the signaling tones, currents, and data signals that are required to transmit and receive faxes on the PSTN.

Distinctive ring function

Distinctive ring is a service that a telephone company provides. The distinctive ring service allows three phone numbers to be assigned to one phone line. Each phone number has a distinctive ring. The first phone number has a single ring, the second phone number has a double ring, and the third phone number has a triple ring.

If the distinctive ring service is used, the fax phone number should be the phone number that uses the double or triple ring.

NOTE The all-in-one has not been tested with all of the distinctive-ring services that telephone companies provide in all countries/regions. HP does not guarantee that the distinctive-ring function will operate correctly in all countries/regions.

To set up the distinctive ring function

1. Press Menu. Use the < or > button to scroll to **Fax setup** and then press ✓.
2. Use the < or > button to scroll to **Fax Recv. setup** and then press ✓.
3. Use the < or > button to scroll to **Fax Recv. setup Answer Ring Type** and then press ✓.
4. Use the < or > button to scroll to one of the following options:
   - **All Rings** (default setting)
   - **Single**
   - **Double**
   - **Triple**
   - **Double&Triple**

   Press ✓ to save the setting.

Faxing with Voice over IP services

Voice over IP (VoIP) services provide normal telephone service, including long distance service through a broadband Internet connection. These services use packets to break up the voice signal on a telephone line and transmit it digitally to the receiver, where the packets are reassembled. The VoIP services are often not compatible with fax machines. The VoIP provider must state the service supports fax over IP services.

Because the installation process varies, the VoIP service provider will have to assist in installing the all-in-one fax component.

Although a fax might work on a VoIP network, it can fail when the following events occur:

- Internet traffic becomes heavy and packets are lost.
- Latency (the time it takes for a packet to travel from its point of origin to its point of destination) becomes excessive.

If you experience problems using the fax feature on a VoIP network, ensure that all of the all-in-one cables and settings are correct. Configuring the V.34 setting to **Disable** (**Enable** is the default setting) can also improve your ability to send a fax over a VoIP network.

If you continue to have problems faxing, contact your VoIP provider.

The fax subsystem

The formatter, LIU, firmware, and software all contribute to the fax functionality. The designs of the formatter and LIU, along with parameters in the firmware, determine the majority of the regulatory requirements for telephony on the all-in-one.

The fax subsystem is designed to support V.34 fax transmission, lower speeds (such as V.17 fax), and older fax machines.

Formatter in the fax subsystem

The formatter contains the modem chipset (DSP and CODEC) that controls the basic fax functions of tone generation and detection, along with channel control for the fax transmissions.

The CODEC and its associated circuitry act to control transmit and receive gains, and to compensate for transmission signal coupling into the receive channel. The formatter also contains circuitry that adds termination impedance to help match the telephone network impedance.

LIU in the fax subsystem

Two versions of LIU are used in the HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one. One is used in the North American, South American, and Asian countries/regions. The other is used primarily in European countries/regions.

The following are features that are different in the European version:

- A different voltage-protection device
- Current limiting of the dc current
- Filtering for the countries/regions that use billing or metering tones
- Control of the impedance of the dc circuit through the SHUNT signal

Because the TIP and RING are not polarized, all LIU circuitry that connects to TIP and RING is bidirectional. The LIU operates identically when TIP and RING are reversed.

Safety isolation

The most important function of the LIU is the safety isolation between the high-voltage, transient-prone environment of the telephone network (TNV [telephone network voltage]) and the low-voltage analog and digital circuitry of the formatter (SELV [secondary extra-low voltage]). This safety isolation provides both customer safety and all-in-one reliability in the telecom environment.

Any signals that cross the isolation barrier do so either optically or magnetically. The breakdown voltage rating of barrier-critical components is greater than 1.5 kV.

Safety-protection circuitry

In addition to the safety barrier, the LIU protects against RING and overcurrent events.

Telephone over-voltages can be either differential mode or common mode. The RING can be transient in nature (a lightning-induced surge or ESD) or continuous (a power line crossed with a phone line). The LIU protection circuitry provides margin against combinations of RING events.

Common mode protection is provided by the selection of high-voltage-barrier critical components (transformer, relay, and optoisolators). The safety barrier of the LIU PCB traces and the clearance between the LIU and surrounding components also contribute to common mode protection.

A voltage suppressor (a crowbar-type SIDACTOR) provides differential protection. This device becomes low impedance at approximately 300 V differential, and crowbars to a low voltage. A series thermal switch works in conjunction with the crowbar for continuous RING events, such as crossed power lines.

When the differential RING is continuous, the resulting overcurrent causes the thermal switch to become high impedance, disconnecting RING from the network and protecting the crowbar from thermal overload. The thermal switch automatically resets to low impedance after the overcurrent condition is removed, reconnecting RING to the network.

Data path

The magnetically coupled signals that cross the isolation barrier go either through a transformer or a relay. The TIP and RING signals use a transformer to cross the isolation barrier.

TIP and RING are the two-wire paths for all signals from the telephone network. All signaling and data information comes across them, including fax tones and fax data.

The telephone network uses dc current to determine the hook state of the telephone, so line current must be present during a call. On some line interfaces this current flows through the transformer, but on the LIU, a capacitor blocks the current from going into the transformer.

Blocking the current with a capacitor prevents the core of the transformer from being saturated by the high dc voltage, which can affect the ac signal quality. Rather than permitting the current to flow through the transformer, this LIU directs the current through another circuit called a gyrator or dc hold circuit. This creates the path for the central office-current flow when a call is in progress.

Hook state

Another magnetically coupled signal is the control signal that disconnects the downstream telephone devices (such as a phone or answering machine). A control signal originating on the formatter can change the relay state, causing the auxiliary jack (downstream jack) to be disconnected from the circuit.

The all-in-one takes control of calls that it recognizes as fax calls. If the all-in-one does not directly pick up the call, it monitors incoming calls for the fax tone or for the user to direct it to receive a fax. This idle mode is also called eavesdropping. This mode is active when the all-in-one is on-hook but current exists in the downstream phone line because another device is off-hook. During eavesdropping, the receive circuit is enabled but has a different gain from the current that is generated during normal fax transmissions.

The all-in-one does not take control of the line unless it detects a fax tone or the operator tells it to connect manually. This feature allows the user to make voice calls from a phone that is connected to the all-in-one without being cut off if a fax is received.

Downstream current detection

The aux phone detect signal is optically coupled. This signal tells the firmware that an active phone (or modem or answering machine) is connected to the auxiliary port of the all-in-one (the right side of the RJ-11 jack).

A circuit that can detect current above a certain threshold generates the downstream-current-detection signal. The downstream current goes through a resistor, generating a voltage. If this voltage is above the threshold level, the signal changes state.

The downstream-current-detection signal is coupled back to the formatter through an optoisolator and across the safety isolation barrier. The firmware uses this signal to ensure that the all-in-one does not go off-hook (and disconnect a downstream call) until it has been authorized to do so (by a manual fax start or detection of the appropriate tones).

Hook switch control

Another optically coupled signal is the hook switch control. This signal from the formatter causes an optoisolator on the LIU to activate (making an open circuit into a short circuit). When shorted, the circuit is drawing dc current from the central office and is considered “on-hook.” When open, no dc current flows and the state is considered to be “off-hook.”

For pulse dialing, the optoisolator is toggled on and off with a particular timing sequence to generate pulses that the central offices of the telephone company recognizes as dialing digits.

Ring detect

Another optically coupled signal on the LIU is ring detect. Ring detect is a combination of voltage levels and cadence (time on and time off). Both must be present in order for the all-in-one to detect a valid ring.

The LIU works with the firmware to determine if an incoming signal is an answerable ring. When circuits on the LIU detect a ring voltage above a certain threshold, a corresponding signal is passed to the formatter to indicate that the ring is above the threshold. The firmware then measures the amount of time that the signal is high and low, and qualifies the cadence to determine whether it is a valid ring.

Line-current control

The dc current from the CO needs to have a path to flow from TIP to RING. Because the current does not flow in the transformer, a path through some transistors and diodes (the dc hold circuit) acts like a simulated inductor (thus replacing the function of the transformer). This dc hold circuit is the main component of the voltage-current characteristic between TIP and RING.

Two other functions of this block of circuits are the current limit and the SHUNT for Europe. Current limit basically maintains a constant current from TIP to RING after the voltage reaches about 50 mA. Even if the voltage varies, the current will remain the same.

The SHUNT function changes the impedance (the current-voltage characteristic) during certain special events, such as pulse dialing and when the devices goes on-hook.

During such an event, the firmware tells the DSP on the formatter to activate SHUNT. A signal goes to the LIU through an optoisolator (optically coupled), which changes the state of some transistors so that the board has a linear current characteristic (normally, it is current-limited). Then more current can flow to the network, as required by these special events.

Billing- (metering-) tone filters

Switzerland and Germany provide high-frequency ac signals on the phone line in order to bill customers. The LC (inductor, capacitor) notch filters are provided on the European LIUs to prevent these billing signals from adversely affecting the data path and the dc hold circuit.

An additional filter in the cable (for certain countries/regions) can, in some cases, supplement these LC notch filters. Because these billings signals are not used in the U.S., these filters are not present on the U.S. LIU.

Fax page storage in flash memory

Fax pages are the electronic images of the document page. They can be created in any of three ways: scanned to be sent to another fax machine, generated to be sent by the computer, or received from a fax machine to be printed.

The all-in-one stores all fax pages in flash memory automatically. After these pages are written into flash memory they are stored until the pages are sent to another fax machine, printed on the all-in-one, transmitted to the computer, or erased by the user.

These pages are stored in flash memory, which is the nonvolatile memory that can be repeatedly read from, written to, and erased. The all-in-one has 2 MB of flash memory, of which XX MB is available for fax storage. The remaining XX MB is used for the file system and reclamation. Adding RAM does not affect the fax page storage because the all-in-one does not use RAM for storing fax pages.

Stored fax pages

The user can reprint stored fax pages in case of errors. The all-in-one will re-send stored fax pages after a busy signal, a comm error, no answer, or a power failure. Other fax devices store fax pages in either normal RAM or short-term RAM. Normal RAM immediately loses its data when a power failure occurs. Short-term RAM loses its data about 60 minutes after a power failure. Flash memory maintains its data for years without any applied power.

Advantages of flash-memory storage

Fax pages stored in flash memory are persistent. They are not lost as a result of a power failure, no matter how long the power is off. Users can reprint faxes in case the print cartridge runs out of toner or the all-in-one experiences other errors while printing faxes.

The all-in-one also has scan-ahead functionality that makes use of flash memory. Scan-ahead automatically scans pages into flash memory before a fax job is sent. This allows the sender to pick up the original document immediately after it is scanned, eliminating the need to wait until the fax is transmission is complete.

Because fax pages are stored in flash memory rather than in RAM, more RAM is available to handle larger and more complicated copy and print jobs.

5 Removal and replacement

- Removal and replacement strategy
- HP LaserJet 3050 all-in-one
- HP LaserJet 3052/3055 all-in-one
- Printer (product base)

Removal and replacement strategy

This chapter documents the removal and replacement of field-replaceable parts (FRUs) only. Reinstallation is generally the reverse of removal. Occasionally, notes and hints are included to provide directions for difficult or critical replacement procedures.

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

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

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

WARNING! Unplug the power cord from the power outlet (at the wall receptacle) before attempting to service the all-in-one. It this warning is not followed, severe injury can result. Certain functional checks during troubleshooting must be performed with power supplied to the all-in-one. However, the power supply should be disconnected during removal.

Sheet-metal and plastic edges in the all-in-one can be sharp. Use caution when servicing this all-in-one.

Never operate or service the all-in-one with the protective cover removed from the laser/scanner assembly. The invisible reflected beam can damage your eyes.

CAUTION Do not bend or fold the FFCs during the removal or reinstallation process. Also, do not straighten pre-folds in the FFCs. You *must* make sure that all FFCs are fully seated in their connectors. Failure to fully seat an FFC into a connector can cause a short circuit in a PCA.

NOTE For service purposes, the upper part of the all-in-one is, in effect, the "scanner" and the base part is the "printer." Together, they also act as a photocopier (all models of the HP LaserJet 3050/3052/3055 all-in-one) or fax machine (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one), but the service description here is simplified by referring to copier or fax functionality only when specifically necessary.

Hint To install a self-tapping screw, first turn it counterclockwise to align it with the existing thread pattern, then carefully turn it clockwise to tighten. Do not overtighten.

Electrostatic discharge

CAUTION The all-in-one contains components that are sensitive to electrostatic discharge (ESD). Always perform service work an ESD-protected workstation. If an ESD-protected workstation is not available, discharge body static by grasping the print engine chassis before touching an ESD-sensitive component. Ground the print engine chassis *before* servicing the all-in-one.

Required tools

- #2 Phillips screwdriver with magnetic tip
- Small flat-blade screwdriver
- Long flat-blade screwdriver
- #8 and #10 torx screwdrivers
- Needle-nose pliers
- ESD mat (if one is available)
- Penlight (optional)

CAUTION Do not use a pozidrive screwdriver or any motorized screwdriver. These can damage screws or screw threads on the all-in-one.

Before performing service

- If possible, print a configuration page (to record customer settings) and menu structure report. See Troubleshooting tools on page 259.
- Remove all media from the all-in-one and remove the main input tray.
- Turn off the power by using the power switch.
- Unplug the power cord from the wall receptacle.
- Place the all-in-one on an ESD mat, if one is available. If an ESD-protected workstation is not available, discharge body static and ground the print engine chassis *before* touching an ESD-sensitive part.
- Remove the print cartridge. See Print cartridge on page 158.

After performing service

- Replace the print cartridge.
- Reload the input tray with media.
- Restore customer configuration settings.

Post-service tests

After service has been completed, the following tests can be used to verify that the repair or replacement was successful.

Test 1 (print-quality test)

1. Verify that you have completed the necessary reassembly steps.
2. Ensure that the input tray contains clean, unmarked paper.
3. Attach the power cord and interface cable, and then turn on the device.
4. Verify that the expected start-up sounds occur.

5. Perform a control-panel test from the secondary service menu (see Secondary service menu on page 251). Verify that the control-panel buttons beep when they are pressed.

   NOTE If the control-panel buttons do not beep, verify that the user did not disable this function on the device control panel.

6. Print a configuration page, and then verify that the expected printing sounds occur.
7. Print a demo page, and then verify that the print quality is as expected.
8. Send a print job from the host computer, and then verify that the output meets expectations.
9. If necessary, restore any customer device settings.
10. Clean the outside of the device with a damp cloth.

Test 2 (copy-quality test)

1. Verify that you have completed the necessary reassembly steps.
2. Ensure that the input tray contains clean, unmarked paper.
3. Attach the power cord and interface cable, and then turn on the device.
4. Verify that the expected start-up sounds occur.
5. Print a configuration page, and then verify that the expected printing sounds occur.
6. Place the configuration page in the automatic document feeder (ADF).
7. Print a copy job, and then verify the results.
8. Place the configuration page on the scanner glass.
9. Print a copy job, and then verify the results.
10. Clean the outside of the device with a damp cloth.

Test 3 (fax-quality test)

NOTE This test applies to the HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only

1. Place the configuration page in the ADF.
2. Enter a valid fax number and send the fax job.
3. Verify that the send quality and receive quality meet expectations.

Parts removal order

Use the following diagrams to determine which parts of the all-in-one must be removed before servicing.

NOTE **HP LaserJet 3052/3055 all-in-one**: The scanner assembly might be contaminated if it is opened outside of a cleanroom environment. For this reason, the entire scanner assembly is replaceable only as a unit. Replacing the scanner assembly as an entire assembly replaces the CIS or CCD scan module, the CCD scan motor, and the cable. If the ADF fails, it too is replaceable only as an entire assembly. Replacing the ADF includes replacing the ADF cable and other ADF submechanisms.

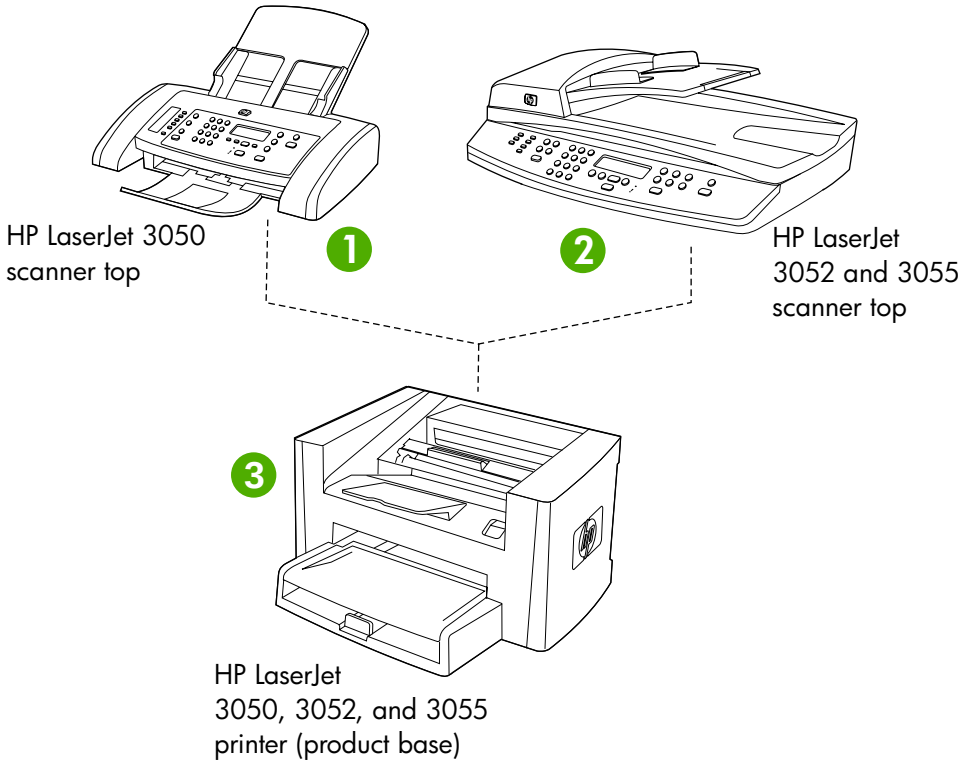


Figure 5-1 HP LaserJet 3050/3052/3055 all-in-one

1	Product number Q6504A (HP LaserJet 3050 all-in-one)
2	Product number Q6502A (HP LaserJet 3052 all-in-one) or Q6503A (HP LaserJet 3055 all-in-one)
3	The printer (product base) does not have a product number, but is similar to product number Q2665A (HP LaserJet 3015/3020/3030 all-in-one).

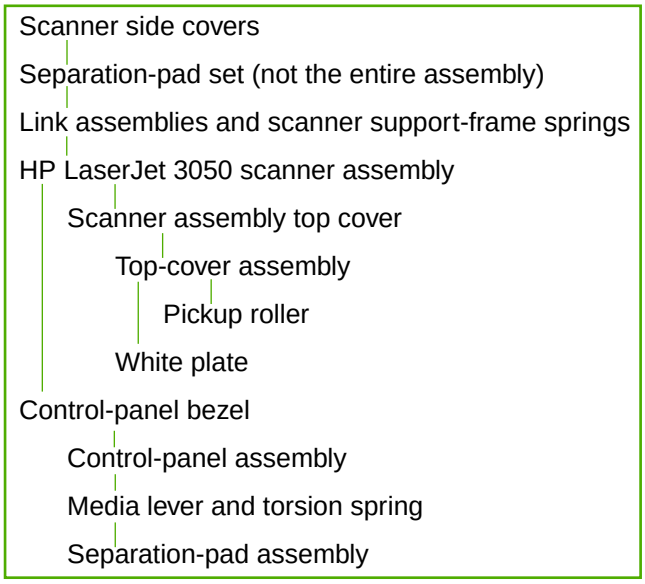


Figure 5-2 Parts removal order for the HP LaserJet 3050 all-in-one

NOTE The *separation-pad set* and the *separation-pad assembly* are two different assemblies.

The separation-pad set consists of the pad, clear plastic sheet, and the pad cover. The separation-pad set *is* a user-replaceable assembly.

The separation-pad assembly consists of the separation lever, tension spring, feed arm, and the components of the separation-pad set. The separation-pad assembly *is not* a user-replaceable assembly.

Only trained service personnel should attempt to replace the separation-pad assembly.

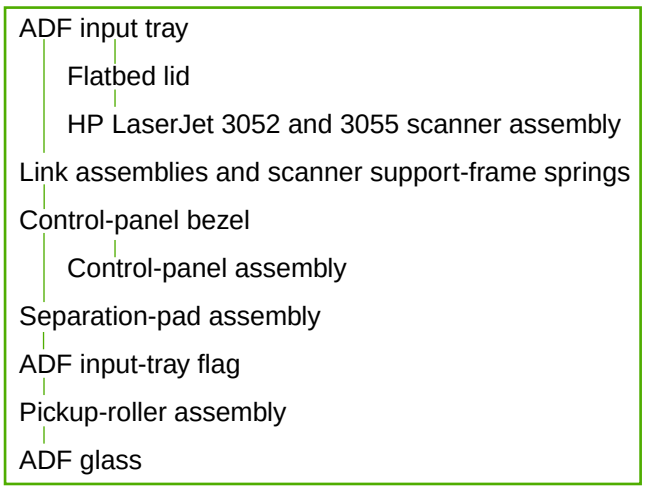


Figure 5-3 Parts removal order for the HP LaserJet 3052/3055 all-in-one

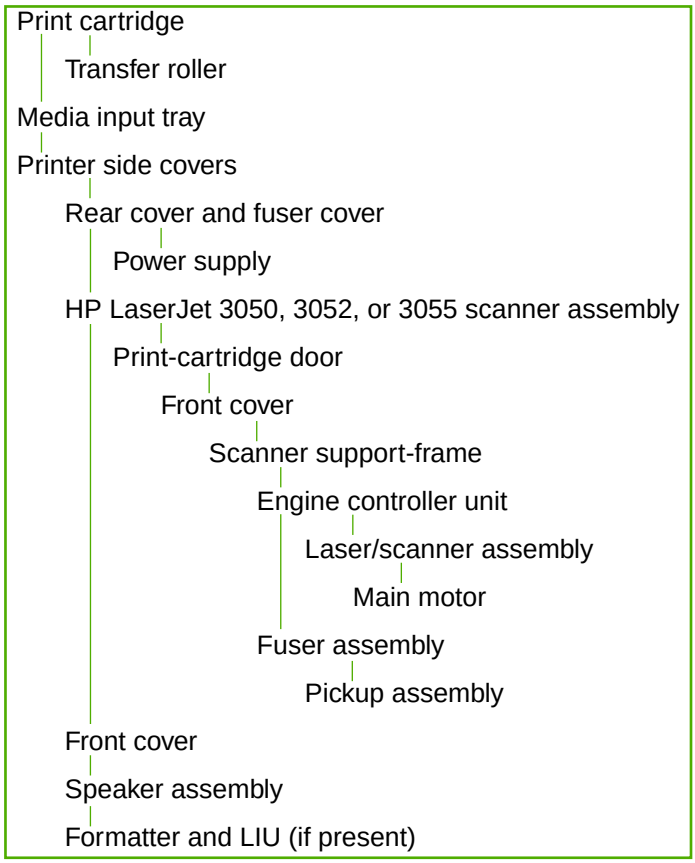


Figure 5-4 Parts removal order for the printer (product base, all models)

NOTE In Figure 5-4 Parts removal order for the printer (product base, all models) on page 105, the front cover is listed twice

HP LaserJet 3050 all-in-one

This section documents removal and replacement instructions for components that are unique to the HP LaserJet 3050 all-in-one. Use the following diagram to determine the parts removal order.

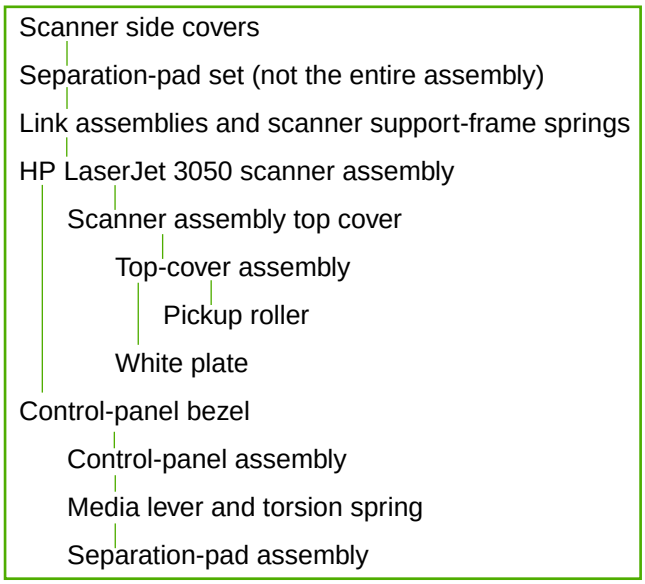


Figure 5-5 Parts removal order, HP LaserJet 3050 all-in-one scanner assembly

NOTE The *separation-pad set* and the *separation-pad assembly* are two different assemblies.

The separation-pad set consists of the pad, clear plastic sheet, and the pad cover. The separation-pad set *is* a user-replaceable assembly.

The separation-pad assembly consists of the separation lever, tension spring, feed arm, and the components of the separation-pad set. The separation-pad assembly *is not* a user-replaceable assembly.

Only trained service personnel should attempt to replace the separation-pad assembly.

Link assemblies and scanner support-frame springs

1. Push the print-cartridge-door release and raise the scanner assembly until it is locked open.
2. Use a small flat-blade screwdriver to release the link tabs on each link assembly.

WARNING! When the link assemblies are disengaged, the scanner assembly can easily fall off of the product base if it is rotated too far towards the back of the all-in-one.

CAUTION Do not push too hard on the link tabs or the tab might break.

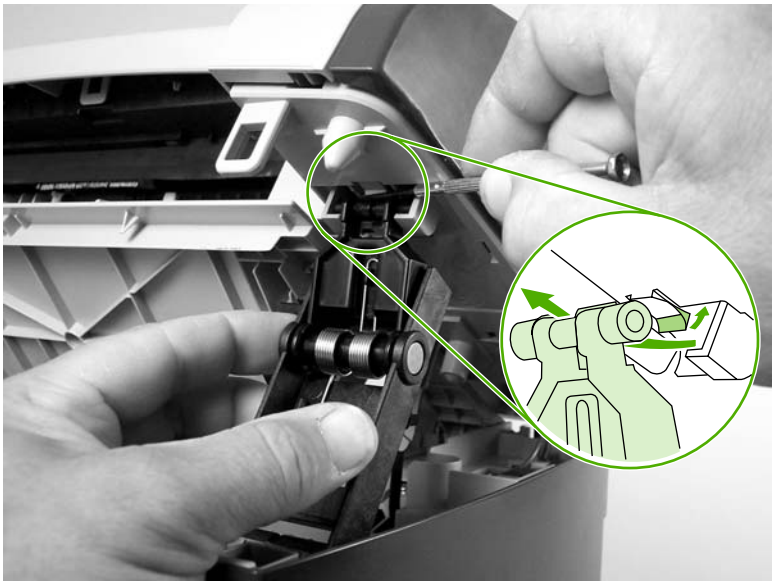


Figure 5-6 Removing the link assemblies and scanner support-frame springs (1 of 4)

3. Rotate one of the link assemblies toward the front of the all-in-one until the link disengages from the scanner support-frame.

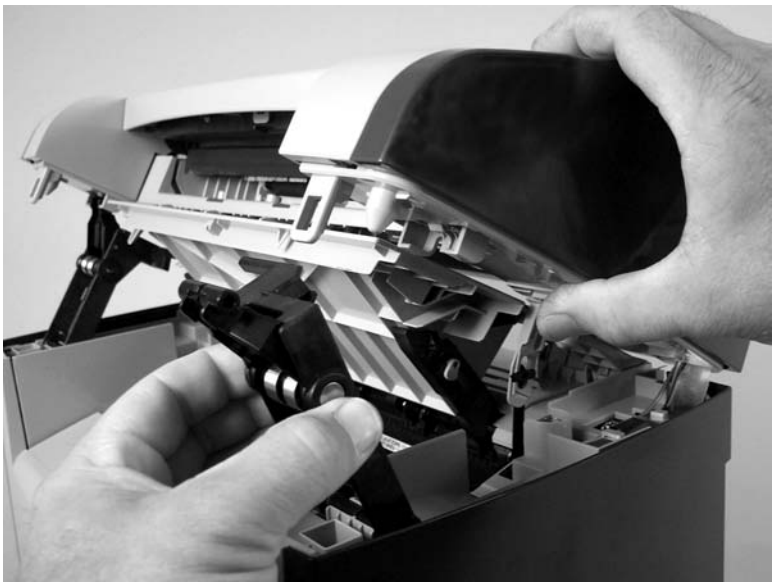


Figure 5-7 Removing the link assemblies and scanner support-frame springs (2 of 4)

4. Remove the link assembly. Repeat this step with the remaining link.

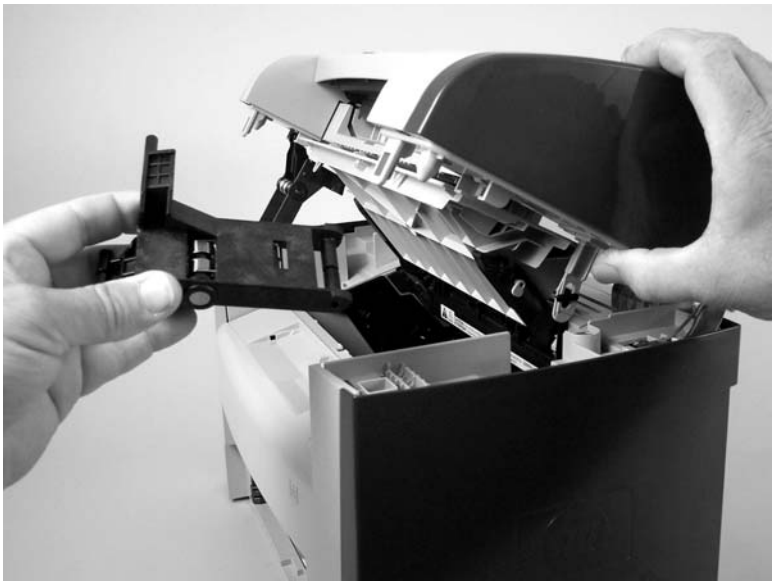


Figure 5-8 Removing the link assemblies and scanner support-frame springs (3 of 4)

5. Use needle-nose pliers to remove the scanner support-frame spring. Repeat this step for the other scanner support-frame spring.

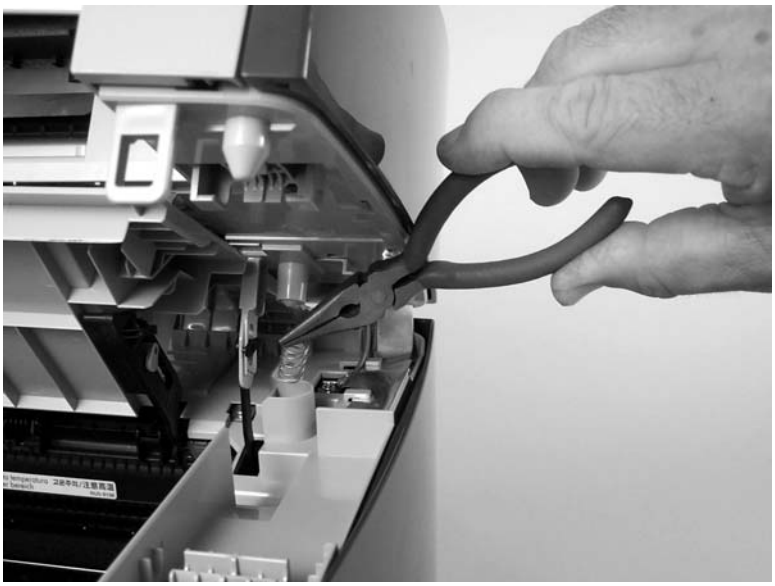
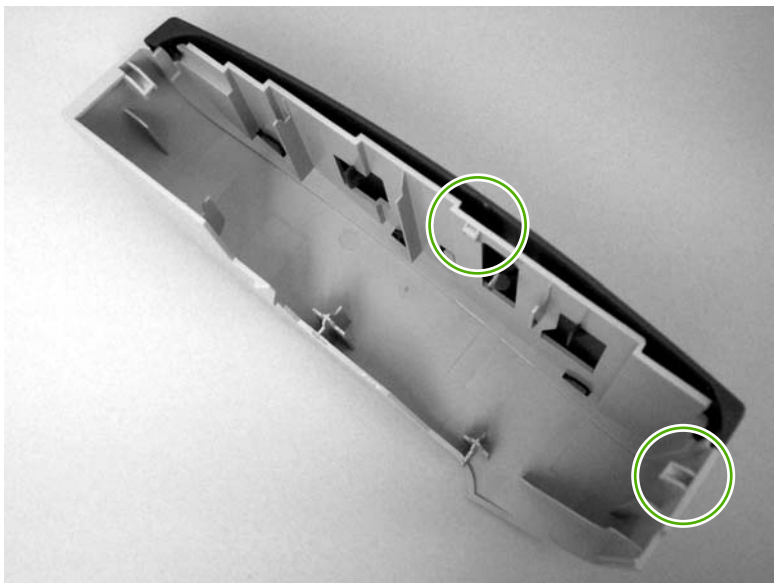


Figure 5-9 Removing the link assemblies and scanner support-frame springs (4 of 4)

Scanner side covers

NOTE In the following figure, examine the locations of the of the locking tabs on the scanner cover before you remove the cover.



1. Use a small flat-blade screwdriver to release the right-side cover-locking tab.

Figure 5-10 Removing the scanner side covers (1 of 2)

2. Rotate the right-side cover away from the all-in-one, and then slide it toward the front of the all-in-one to remove it.

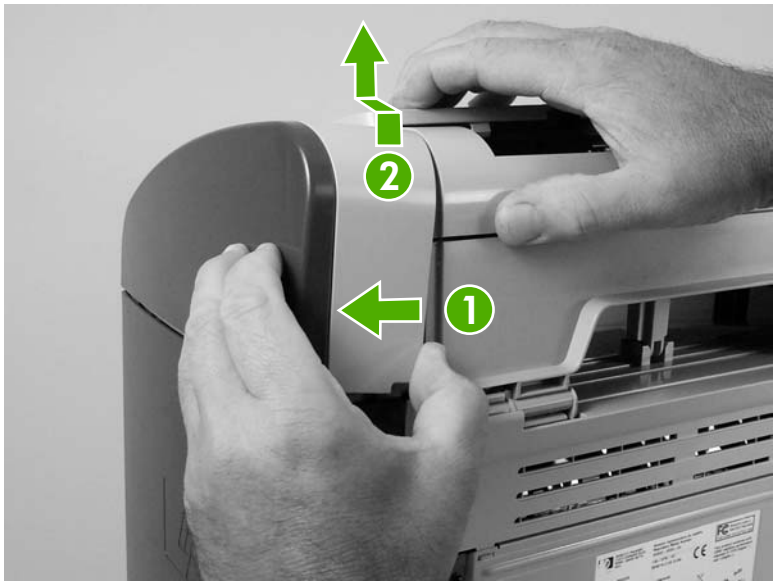


Figure 5-11 Removing the scanner side covers (2 of 2)

3. Repeat this procedure for the left-side cover.

Separation-pad set

NOTE The *separation-pad set* and the *separation-pad assembly* are two different assemblies.

The separation-pad set consists of the pad, clear plastic sheet, and the pad cover. The separation-pad set *is* a user-replaceable assembly.

The separation-pad assembly consists of the separation lever, tension spring, feed arm, and the components of the separation-pad set. The separation-pad assembly *is not* a user-replaceable assembly.

Only trained service personnel should attempt to replace the separation-pad assembly.

1. Open the scanner top cover.
2. Carefully pry the separation-pad set away from the guide assembly.

CAUTION When installing the replacement pad, be careful not to bend or break the retainer-clip pins.

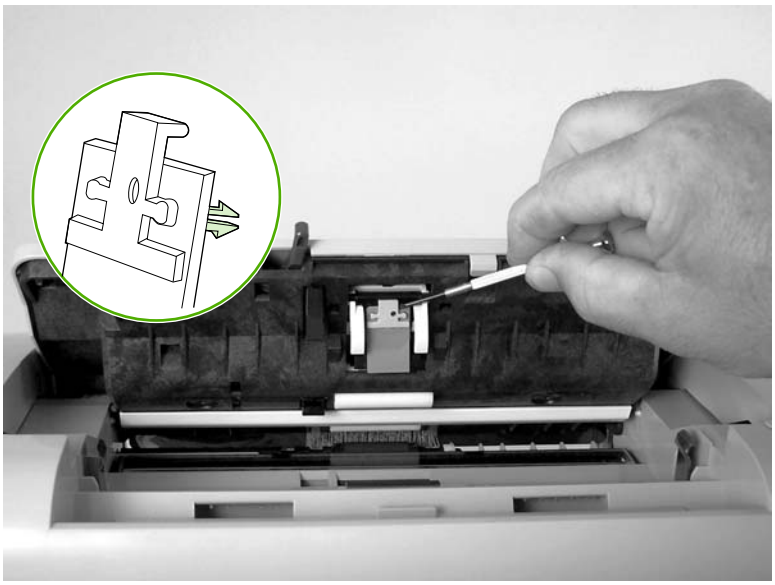


Figure 5-12 Removing the separation pad

Control-panel bezel

1. Carefully release three locking tabs, one at the front and one on each side (callout 1).

Figure 5-13 Removing the control-panel bezel (1 of 3)

2. Slightly raise the control-panel bezel. Then disconnect one FFC (callout 2) and one wire-harness connector (callout 3).

> **CAUTION** Do not bend or fold the FFCs during the removal or reinstallation process.

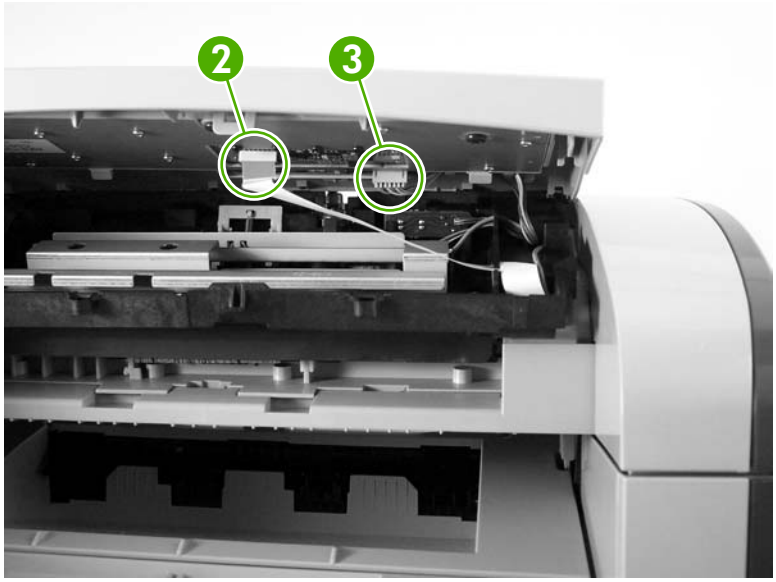


Figure 5-14 Removing the control-panel bezel (2 of 3)

3. Push the control-panel bezel toward the back of the all-in-one to release the three rear locking tabs and then remove it.

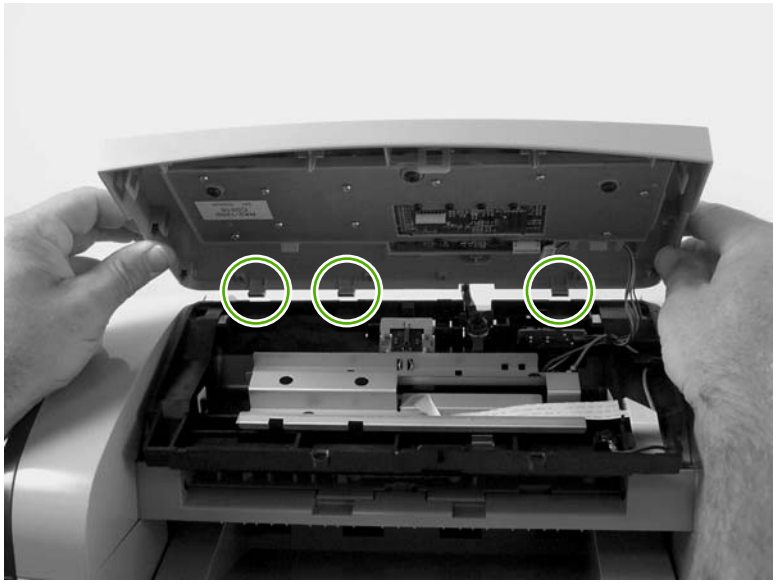
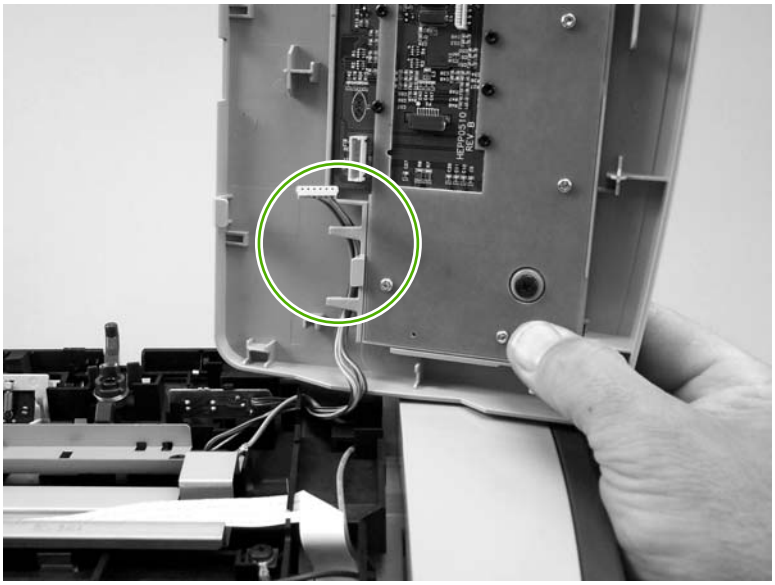


Figure 5-15 Removing the control-panel bezel (3 of 3)

NOTE You must release the wire-harness from two retainers on the control-panel bezel.



Control-panel assembly

CAUTION The control panel is an ESD-sensitive component.

1. Remove the control-panel bezel. See Control-panel bezel on page 112.
2. Remove three screws (callout 1).

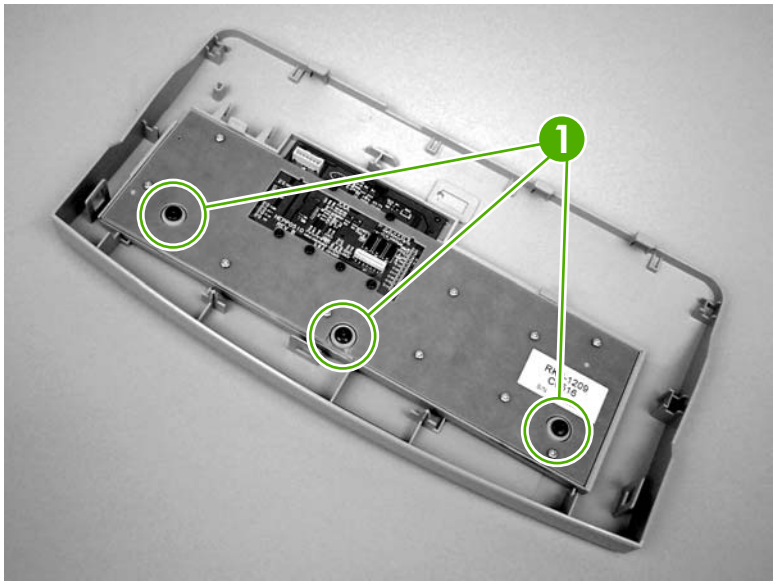


Figure 5-16 Removing the control-panel assembly (1 of 2)

3. Rotate the control-panel button assembly away from the control-panel cover and remove it.

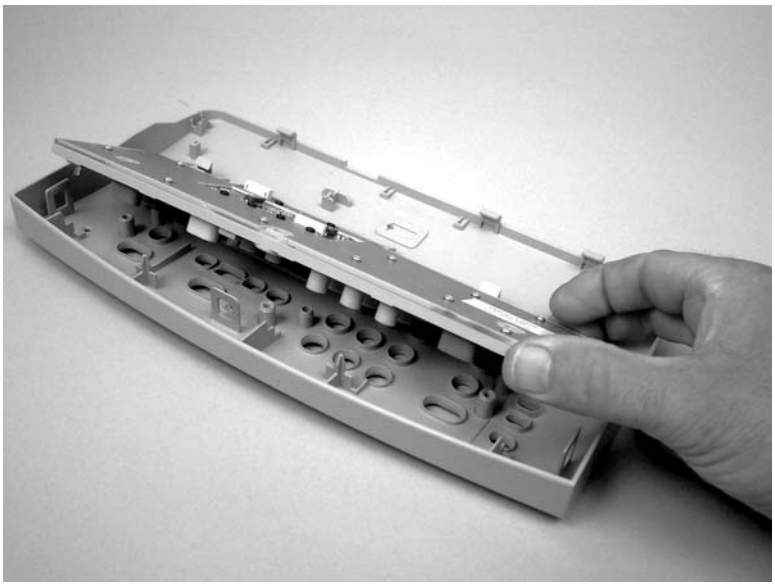


Figure 5-17 Removing the control-panel assembly (2 of 2)

Media lever and media-lever torsion spring

1. Remove the control-panel bezel. See Control-panel bezel on page 112.
2. Carefully dislodge and remove the media-lever torsion spring.

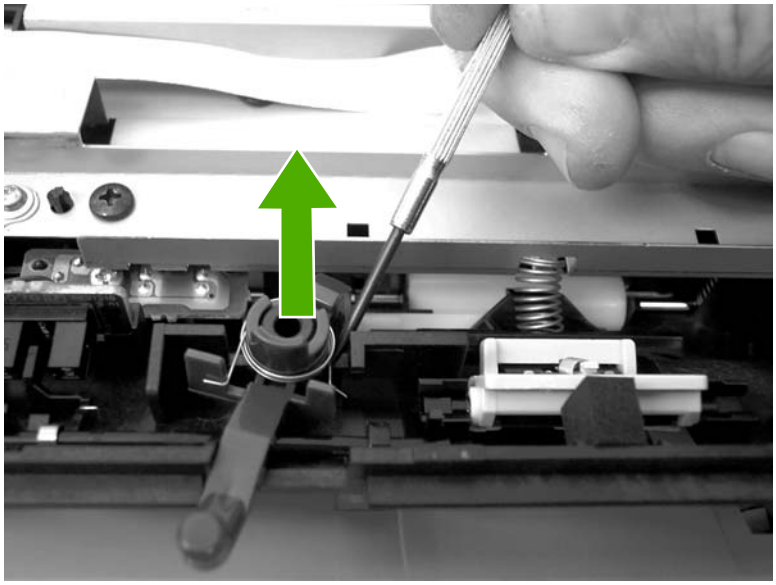


Figure 5-18 Removing the media lever and media-lever torsion spring

Separation-pad assembly

1. Remove the control-panel bezel. See Control-panel bezel on page 112.
2. Remove five screws (callout 1) and the sheet-metal plate.

CAUTION Do not touch the grey separation pad. Skin oils and fingerprints on the separation pad might cause paper-feed problems.

Press down on the plate as the screws are removed. Four compression springs are under the plate. The separation-pad assembly also has one compression spring attached to the shield. Be careful not to lose any springs when you remove the shield.

NOTE The *separation-pad set* and the *separation-pad assembly* are two different assemblies.

The separation-pad set consists of the pad, clear plastic sheet, and the pad cover. The separation-pad set *is* a user-replaceable assembly.

The separation-pad assembly consists of the separation lever, tension spring, feed arm, and the components of the separation-pad set. The separation-pad assembly *is not* a user-replaceable assembly.

Only trained service personnel should attempt to replace the separation-pad assembly.

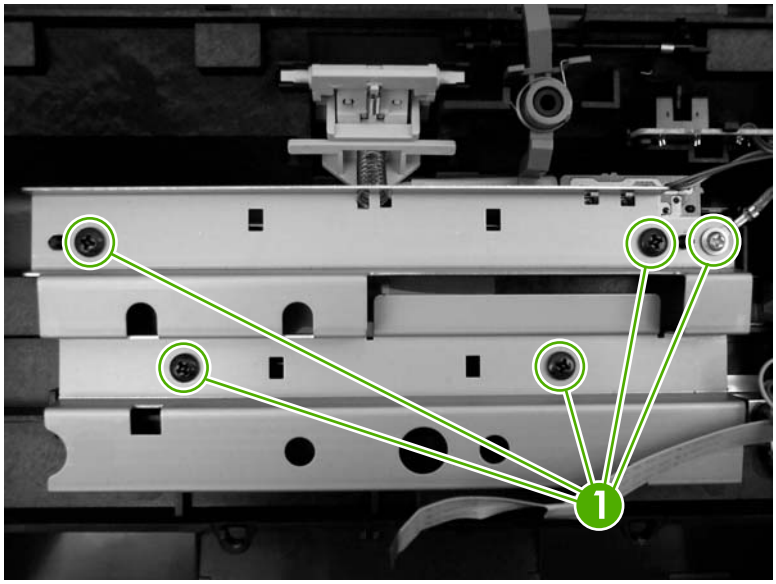


Figure 5-19 Removing the separation-pad assembly (1 of 3)

3. Rotate the separation-pad assembly up until the keyed hinges can clear the hinge retainers.

Figure 5-20 Removing the separation-pad assembly (2 of 3)

4. Remove the separation-pad assembly.

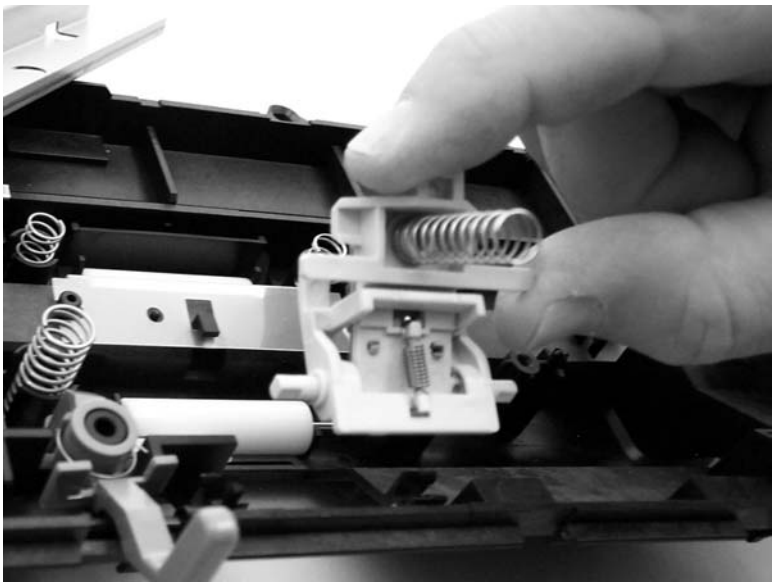


Figure 5-21 Removing the separation-pad assembly (3 of 3)

Scanner assembly

1. Rotate the ADF input tray assembly toward the front of the all-in-one, and then lift it up and off of the all-in-one.

Figure 5-22 Removing the scanner assembly (1 of 14)

2. Rotate the ADF output bin up and then squeeze the locking tabs until the they clear the mounting holes in the scanner assembly.

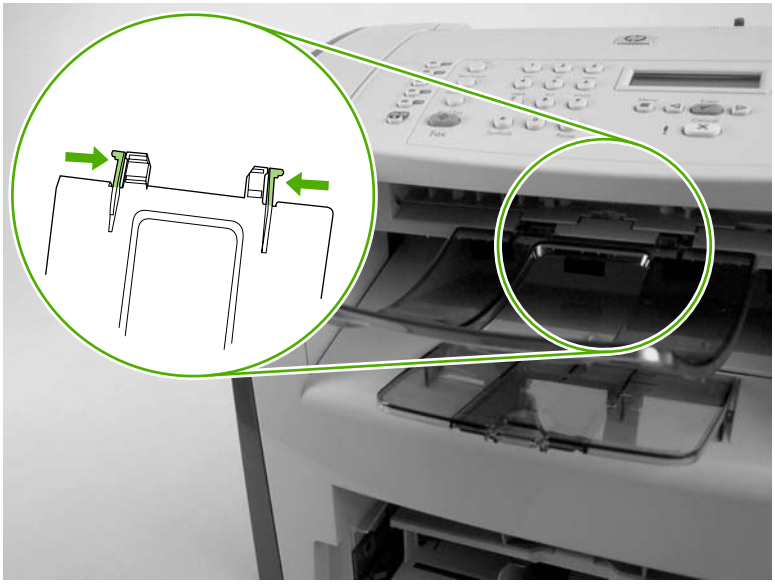


Figure 5-23 Removing the scanner assembly (2 of 14)

3. Remove the right-side cover-mounting screw (callout 1).

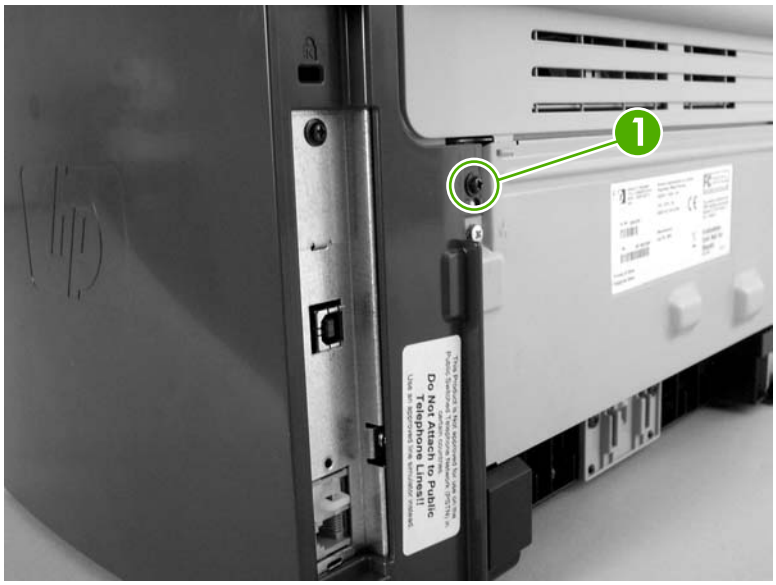


Figure 5-24 Removing the scanner assembly (3 of 14)

4. Release the back of the cover.

Figure 5-25 Removing the scanner assembly (4 of 14)

5. Release the bottom tab (callout 2).

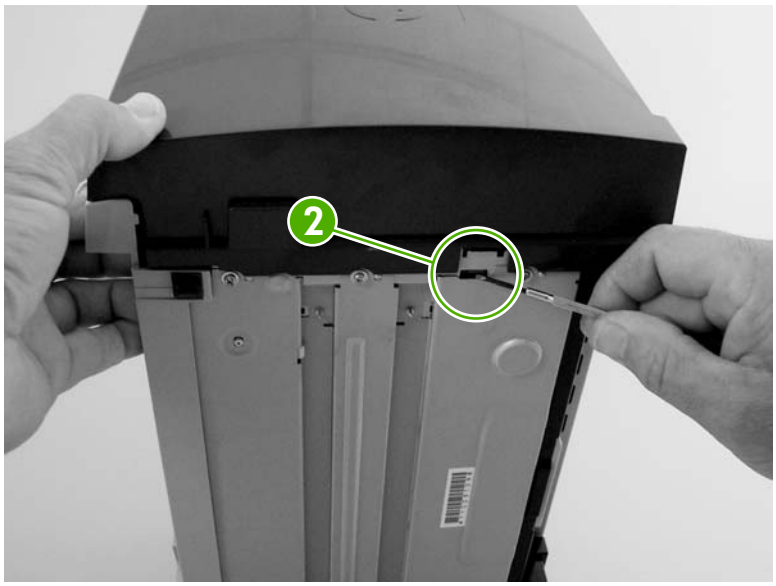


Figure 5-26 Removing the scanner assembly (5 of 14)

6. Rotate the back side of the cover away from the all-in-one, and then slide the cover toward the front of the all-in-one to remove it

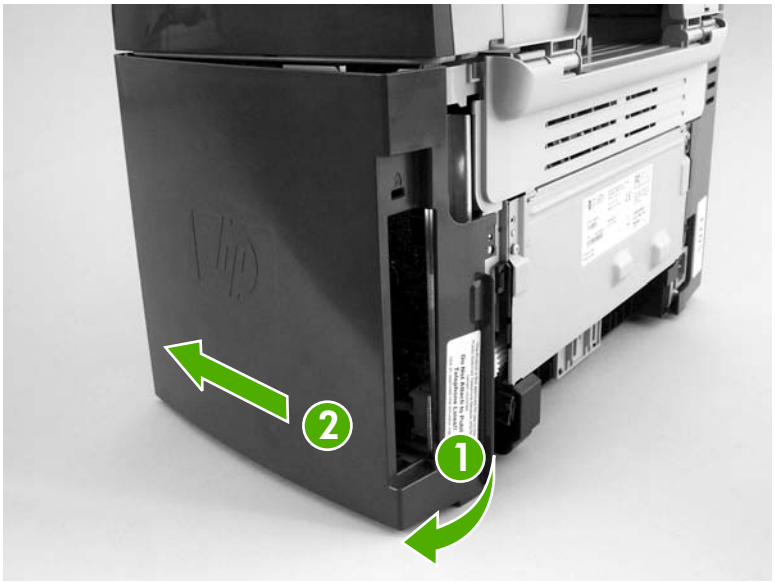


Figure 5-27 Removing the scanner assembly (6 of 14)

7. Disconnect two flat, flexible cables (FFCs; callout 3) and one wire-harness connector (callout 4).

CAUTION Do not bend or fold the FFCs during the removal or reinstallation process.

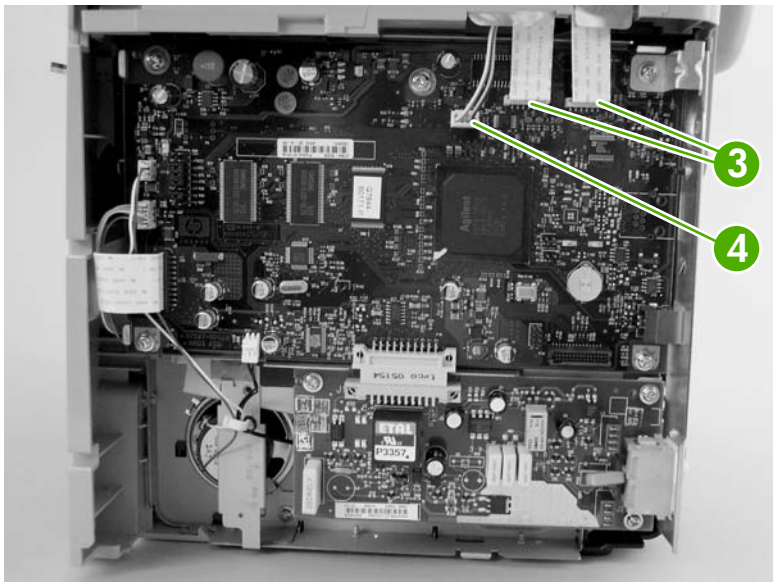


Figure 5-28 Removing the scanner assembly (7 of 14)

8. Push the blue print-cartridge-door release button and then raise the scanner assembly until it locks open.

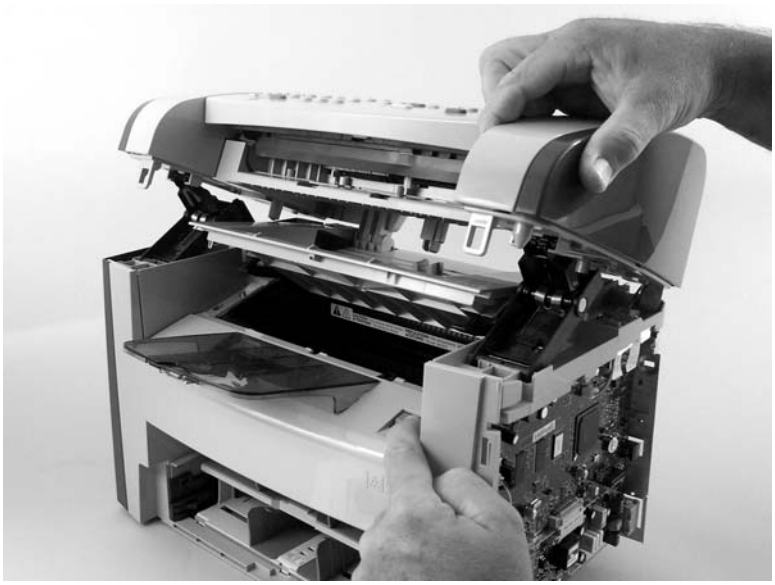


Figure 5-29 Removing the scanner assembly (8 of 14)

9. Grasp the tab on the gear-drive arm bracket and carefully flex it away from the scanner assembly to release the bracket.

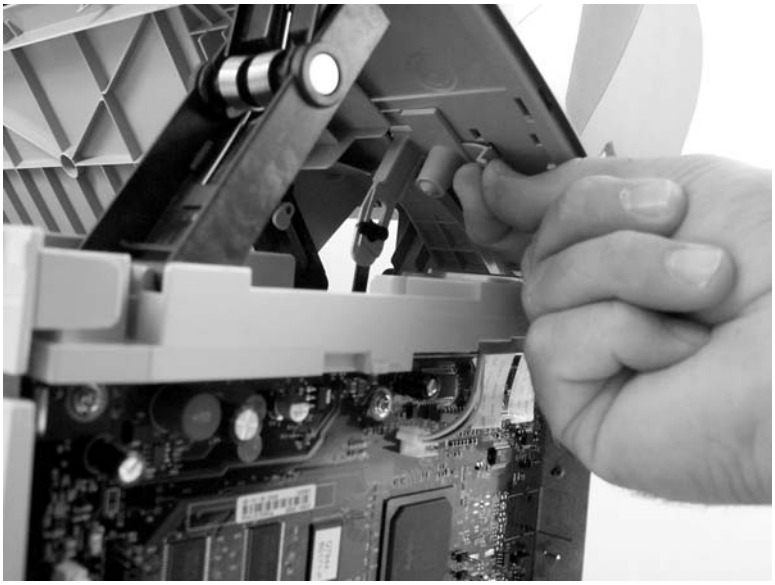


Figure 5-30 Removing the scanner assembly (9 of 14)

10. Pull the bracket toward the right side of the all-in-one until its mounting tabs clear the holes in the scanner assembly.

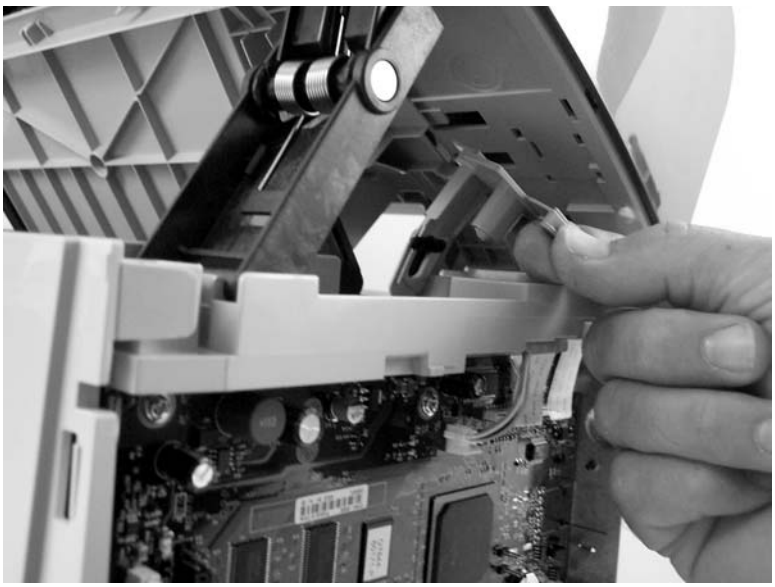


Figure 5-31 Removing the scanner assembly (10 of 14)

11. Use a small flat-blade screwdriver to release the link tabs on each link assembly.

WARNING! When the link assemblies are disengaged, the scanner assembly can easily fall off of the product base if it is rotated too far towards the back of the all-in-one.

CAUTION Do not push too hard on the link tabs or the tabs might break.

NOTE it is not necessary to completely remove the link arms. However, the link arms are not captive when they are disengaged from the scanner assembly.

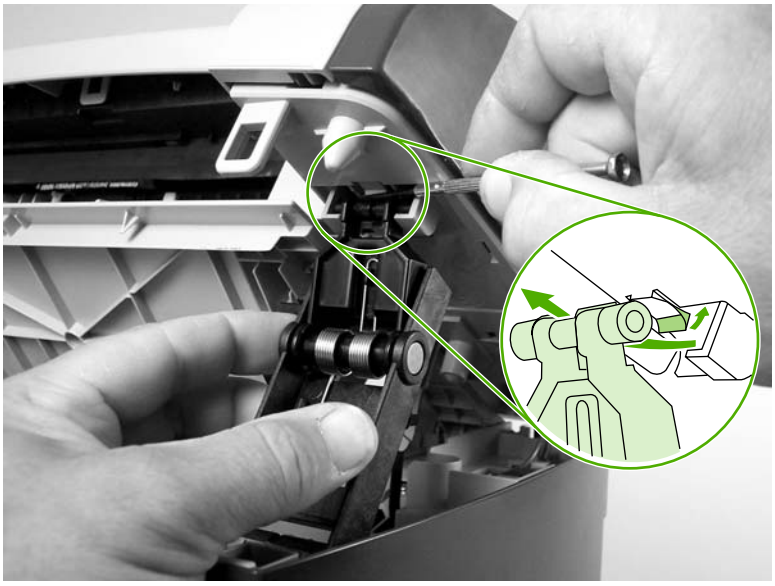


Figure 5-32 Removing the scanner assembly (11 of 14)

12. Use one of the following three separate methods to support the scanner assembly so that it does not fall off of the product base.

- **A** Use the HP scanner-hinge tool (part number: 5185-7441).

  NOTE Remove the left-side link before using the scanner-hinge tool.

- **B** Rest the scanner assembly against a wall.
- **C** Rest the scanner assembly against your chest.

NOTE Also see Figure 5-33 Removing the scanner assembly (12 of 14) on page 124.

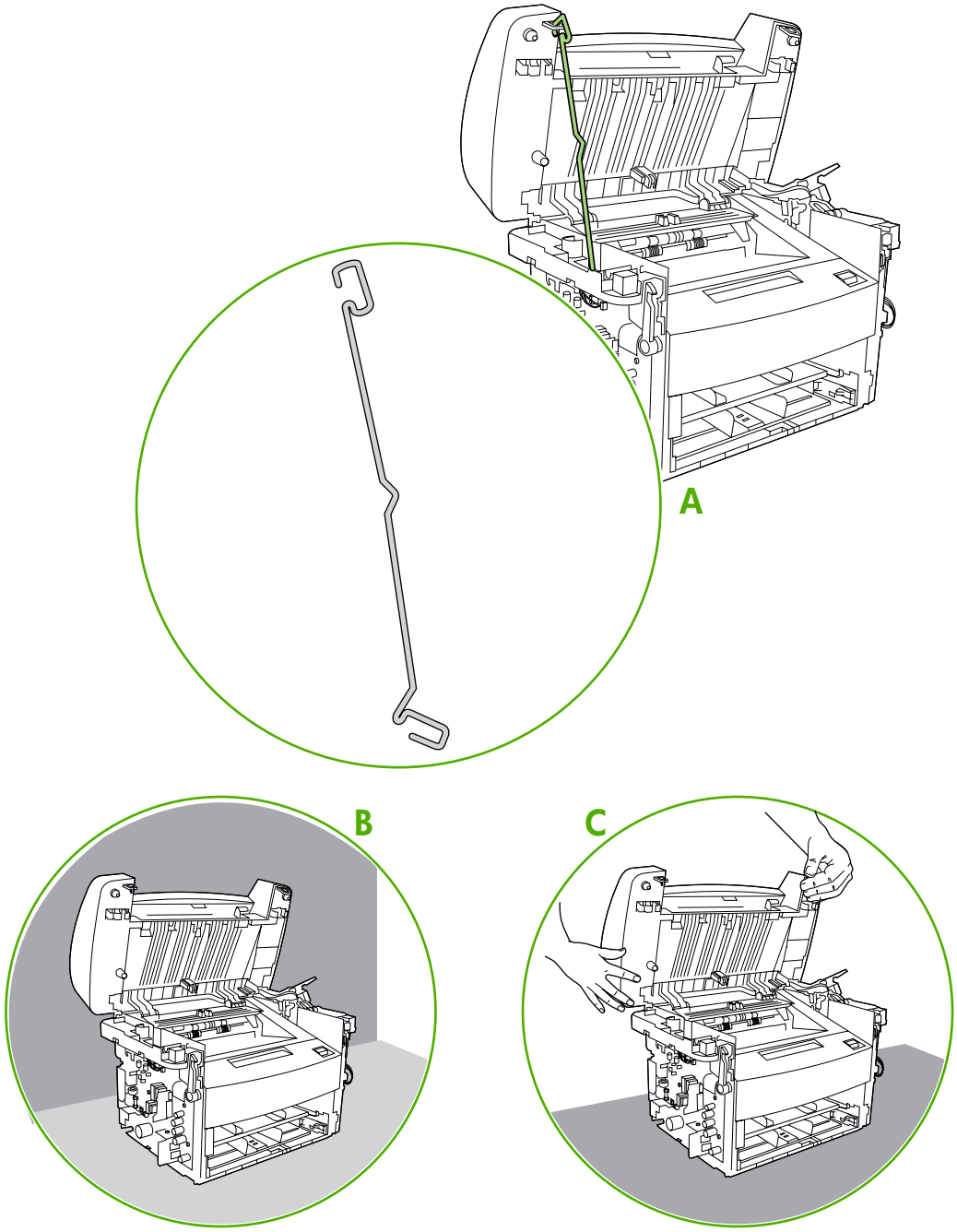


Figure 5-33 Removing the scanner assembly (12 of 14)

13. Remove one screw (callout 5). Carefully remove the grounding shield (callout 6) from the wire loom. Feed the two FFCs and the wire-harness through the hole in the chassis, and remove them from the wire loom.

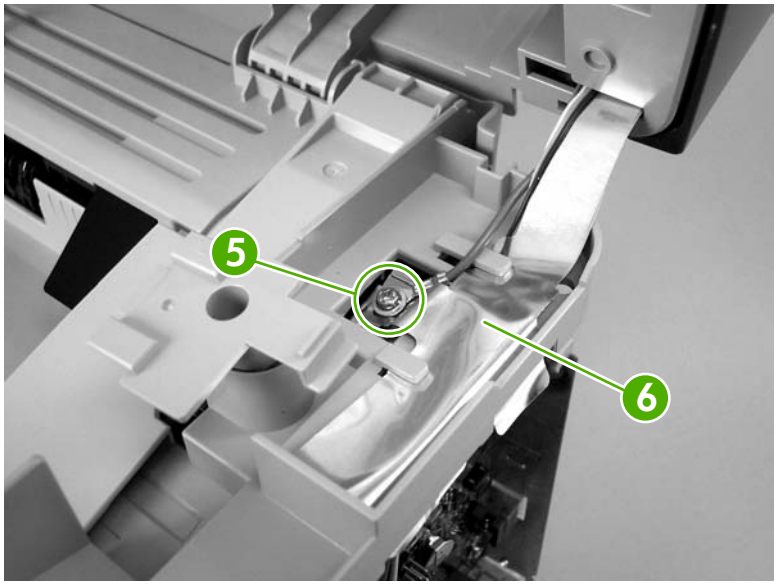


Figure 5-34 Removing the scanner assembly (13 of 14)

14. Rotate the scanner assembly toward the rear of the all-in-one until the rear hinges clear the chassis hinge pins. Lift the scanner assembly off of the product base.

NOTE Do not lose the two scanner cushions located in the scanner support-frame (callout 7; left-side location shown).

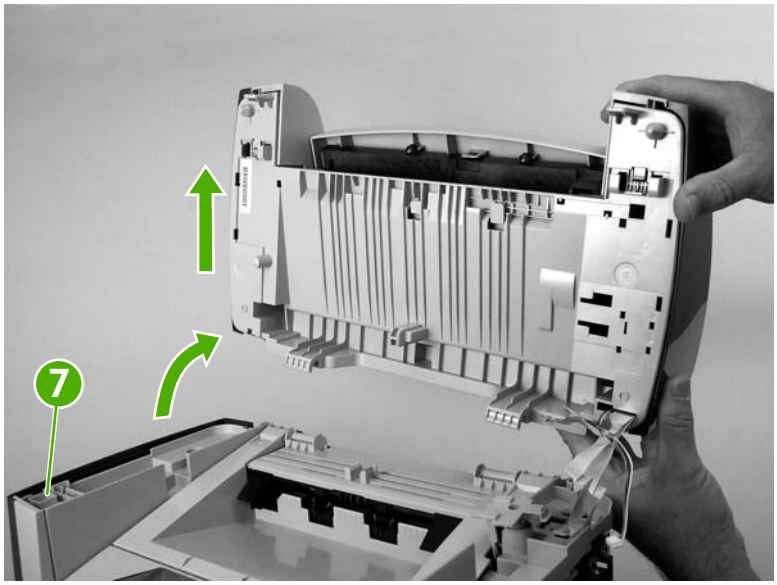


Figure 5-35 Removing the scanner assembly (14 of 14)

Scanner assembly top cover

1. Remove the following assemblies or components:
   - Scanner assembly. See Scanner assembly on page 118.
   - Scanner side covers. See Scanner side covers on page 109.
2. Remove four screws (callout 1).

CAUTION The PCB is an ESD-sensitive component.

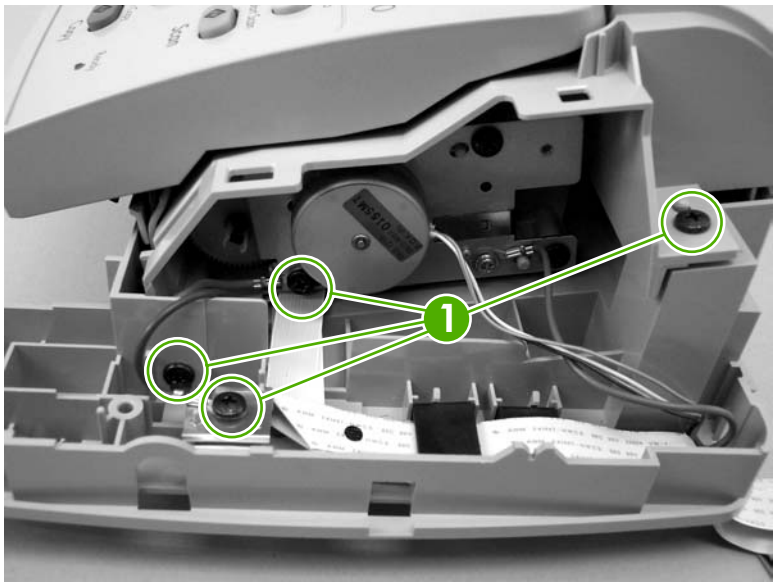


Figure 5-36 Removing the scanner assembly top cover (1 of 4)

3. Feed the FFCs, the wire connectors, and the ground strap through the opening in the scanner-assembly base.

CAUTION Examine how the FFCs and wire-harnesses are routed *before* moving them.

Do not bend or fold the FFCs during the removal or reinstallation process.

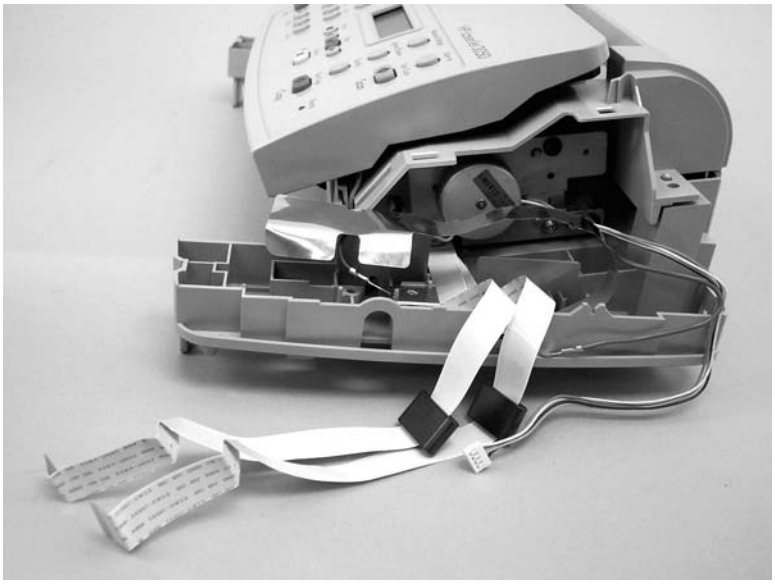


Figure 5-37 Removing the scanner assembly top cover (2 of 4)

Reinstallation tip When reinstalling the FFCs, make sure that the ferrites snap into the clips in the base.

4. Remove the two left-side mounting screws (callout 2).

Reinstallation tip When reinstalling the scanner assembly top cover make sure that it is seated on the alignment pins (the plastic pin is behind the screw [callout 3] in the following figure).

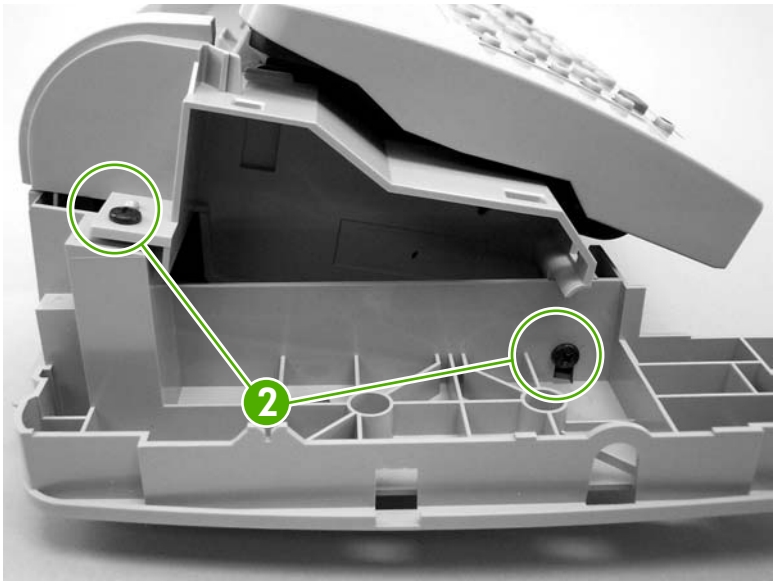


Figure 5-38 Removing the scanner assembly top cover (3 of 4)

5. Lift up on the scanner assembly top cover to separate it from the scanner-assembly base.

CAUTION Separating the scanner assembly top cover from the base frame assembly might require considerable force. Be careful to not damage or drop either assembly when you separate them.

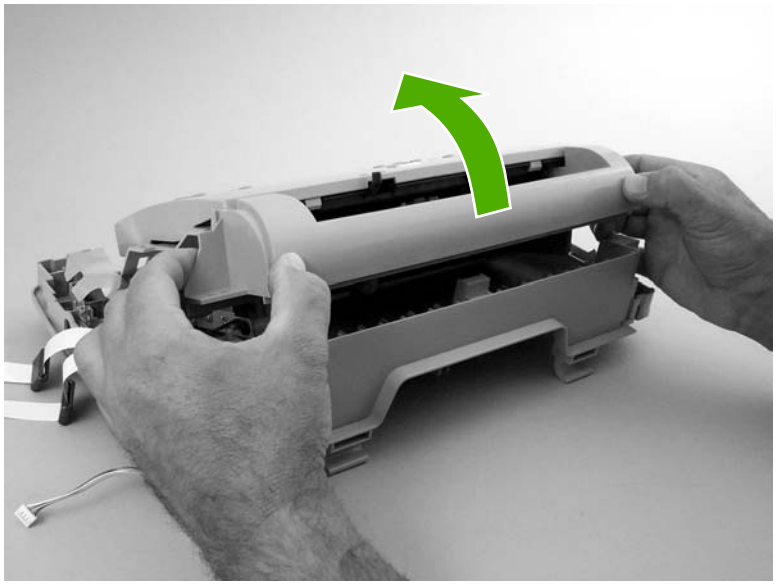


Figure 5-39 Removing the scanner assembly top cover (4 of 4)

Top-cover assembly

1. Remove the following assemblies:
   - Scanner assembly See Scanner assembly on page 118.
   - Scanner assembly top cover. See Scanner assembly top cover on page 126.
2. Rotate the top-cover assembly (callout 1) away from the frame assembly (callout 2).

Figure 5-40 Removing the top-cover assembly (1 of 2)

3. Pull the left-end hinge out of the slot in the frame assembly, and slide the top cover to the left until the right-side hinge clears the hole in the frame assembly. Remove the top cover.

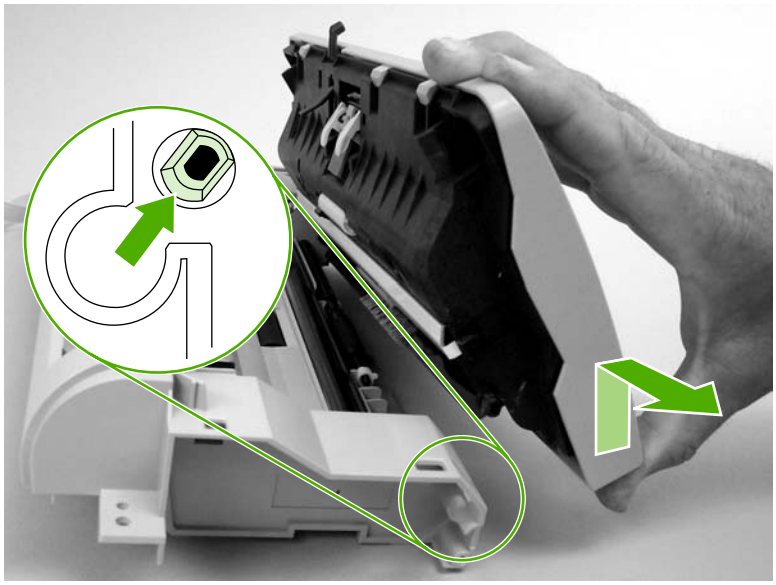


Figure 5-41 Removing the top-cover assembly (2 of 2)

Pickup roller

1. Remove the following assemblies:
   - Scanner assembly. See Scanner assembly on page 118.
   - Scanner assembly top cover. See .Scanner assembly top cover on page 126
2. Unclip the pickup-roller retainer (callout 1) and rotate it until the flat sides of the clip align with the mounting slot on the frame assembly.

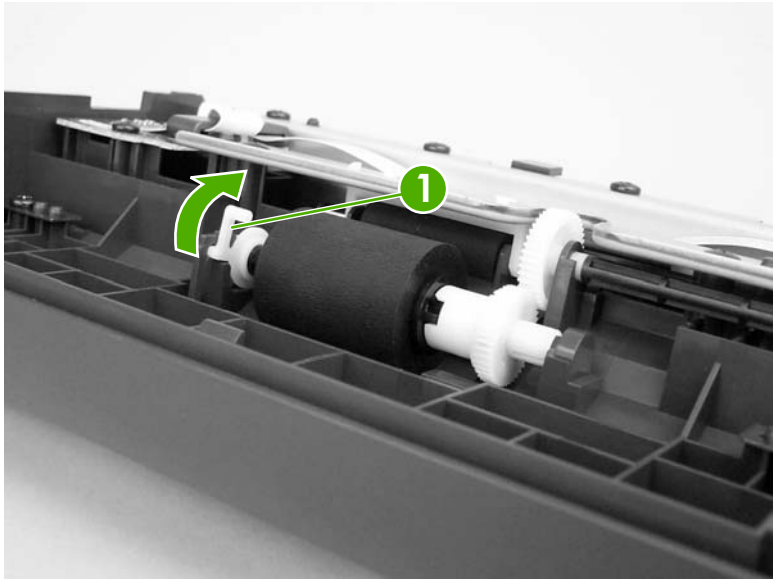


Figure 5-42 Removing the pickup roller (1 of 2)

3. Lift the right side of the pickup roller shaft out of the mounting slot, and then pull it to the right until the left end of the shaft clears the mounting hole on the left side of the frame assembly.

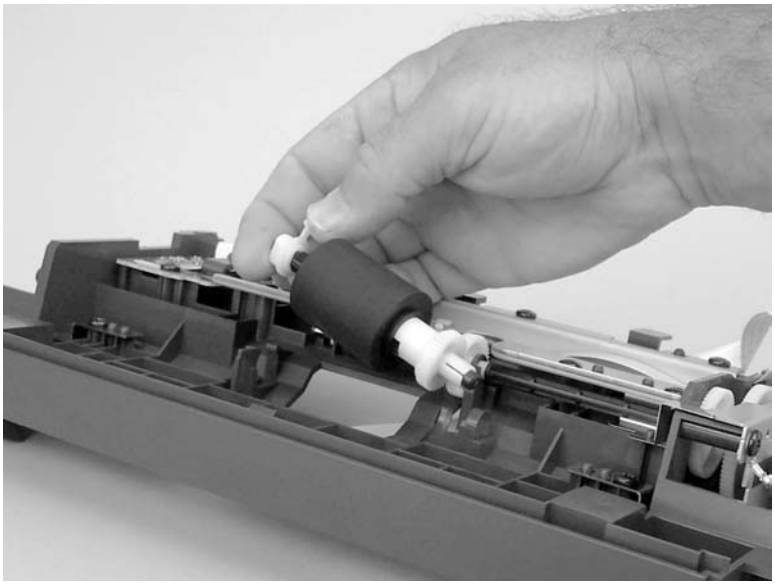


Figure 5-43 Removing the pickup roller (2 of 2)

White platen

1. Remove the following assemblies:
   - Scanner assembly. See Scanner assembly on page 118
   - Scanner assembly top cover. See Top-cover assembly on page 129
   - Top-cover assembly. See Top-cover assembly on page 129
2. Use a small flat-blade screwdriver to carefully pry the white-platen retainer tabs (callout 1) off of the posts on the guide assembly.

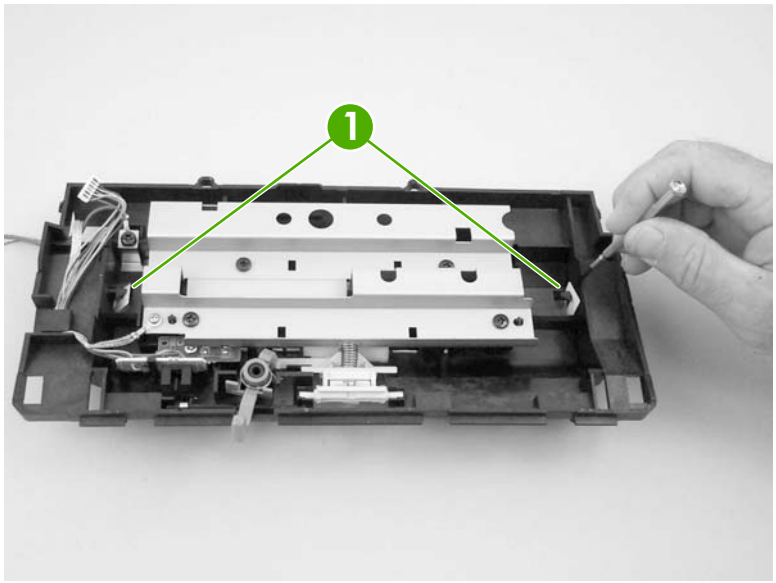


Figure 5-44 Removing the white platen (1 of 2)

3. Lift the guide assembly up and off of the white platen.

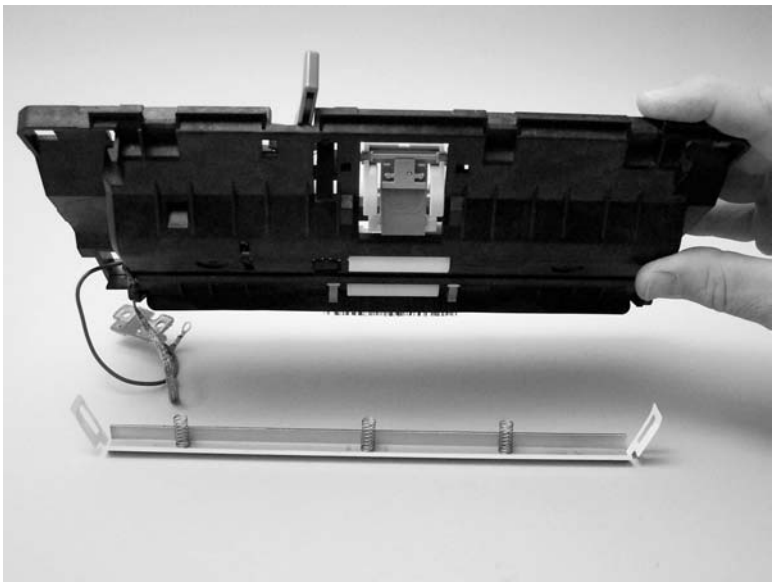


Figure 5-45 Removing the white platen (2 of 2)

HP LaserJet 3052/3055 all-in-one

This section documents removal and replacement instructions for components that are unique to the HP LaserJet 3052/3055 all-in-one. Use the following diagram to determine the parts removal order.

NOTE The scanner assembly might be contaminated if it is opened outside of a cleanroom environment. For this reason, the entire scanner assembly is replaceable only as a unit. Replacing the scanner assembly as an entire assembly replaces the CIS or CCD scan module, the CCD scan motor, and the cable. If the ADF fails, it too is replaceable only as an entire assembly. Replacing the ADF replaces the ADF cable and other ADF submechanisms.

- ADF input tray
  - Flatbed lid
  - HP LaserJet 3052 and 3055 scanner assembly
- Link assemblies and scanner support-frame springs
- Control-panel bezel
  - Control-panel assembly
- Separation-pad assembly
- ADF input-tray flag
- Pickup-roller assembly
- ADF glass

Figure 5-46 Parts removal order, HP LaserJet 3052/3055 all-in-one scanner assembly

ADF input tray

Open the ADF lid and grasp the ADF input tray. Rotate the input tray up and pull it away from the ADF.

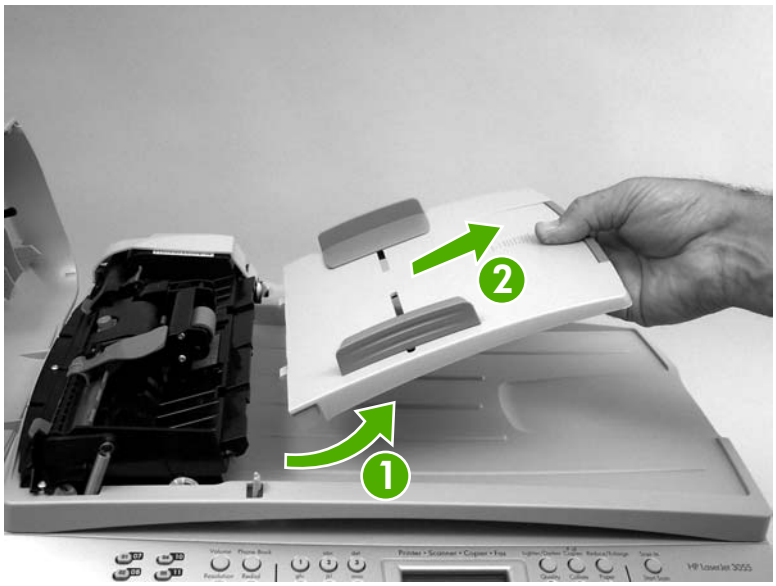


Figure 5-47 Removing the ADF input tray

Flatbed lid

1. Open the ADF cover. Carefully pry the ADF motor cover off (from right to left) and away from the scanner assembly.

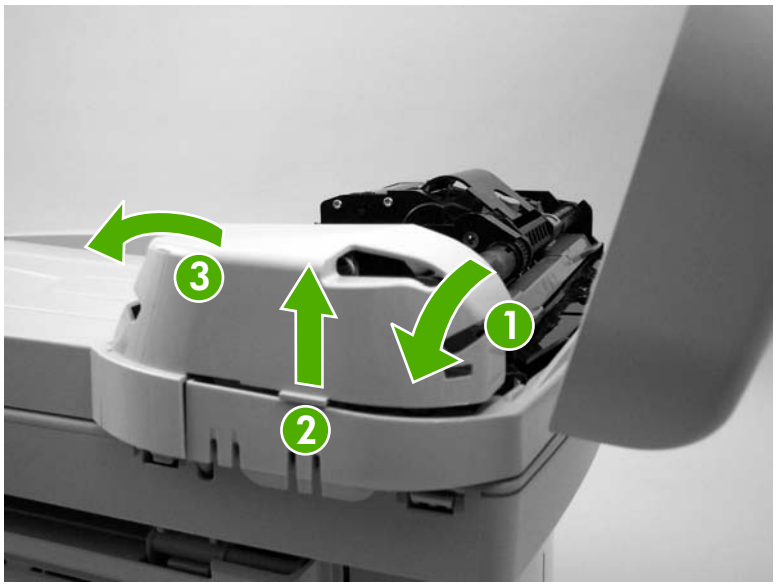


Figure 5-48 Removing the flatbed lid (1 of 5)

Reinstallation tip When you reinstall the ADF motor cover, make sure that it is positioned correctly. If the motor cover is not installed correctly, the ADF lid will not close correctly, resulting in intermittent ADF errors. Verify that the plastic tab fits into the slot and that the motor cover snaps over the corner of the sheet-metal chassis.

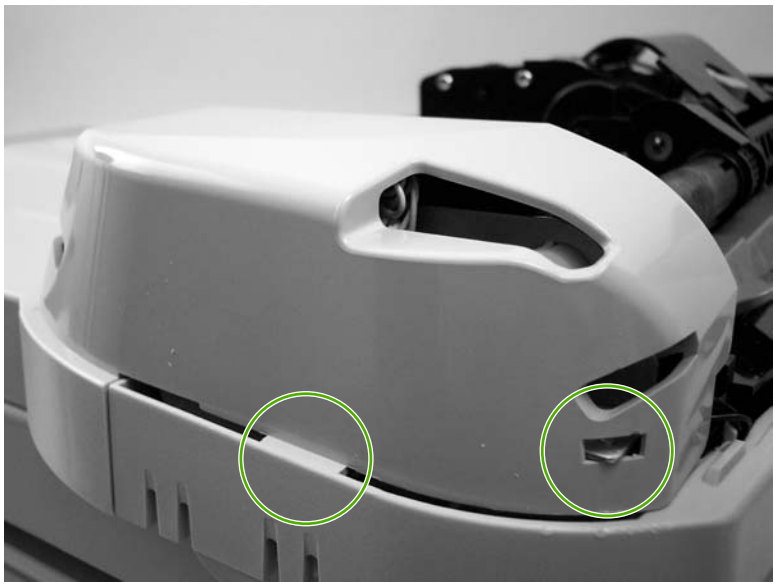


Figure 5-49 ADF cover correctly installed

2. Disconnect two wire connectors (callout 1). Close the ADF cover.

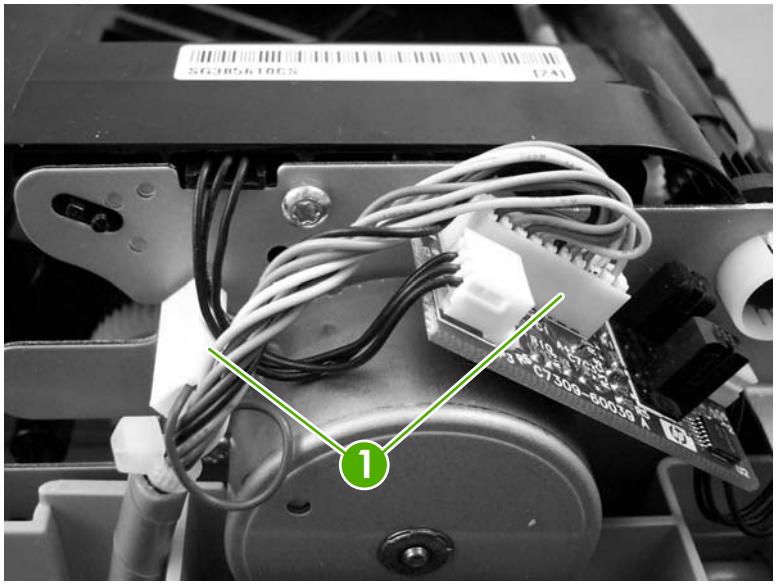


Figure 5-50 Removing the flatbed lid (2 of 5)

3. Locate the hinge-retainer clip on the far-left flatbed hinge.

Figure 5-51 Removing the flatbed lid (3 of 5)

4. Lift up on the retainer-clip locking tab, and pull the clip down and away from the flatbed lid.

Figure 5-52 Removing the flatbed lid (4 of 5)

5. Raise the flatbed scanner lid until the hinges can clear the hinge posts on the scanner bed, and then remove the flatbed lid from the scanner assembly.

CAUTION Avoid touching the flatbed glass or the ADF separation pad. Skin oils and fingerprints can contaminate the glass or pad and cause print-quality problems.

Figure 5-53 Removing the flatbed lid (5 of 5)

Link assemblies and scanner support-frame springs

1. Push the print-cartridge access button and raise the scanner assembly until it is locked open.
2. Use a small flat-blade screwdriver to release the link tabs on each link assembly.

WARNING! When the link assemblies are disengaged, the scanner assembly can easily fall off of the product base if it is rotated too far towards the back of the all-in-one.

CAUTION Do not push too hard on the link tabs or the tabs might break.

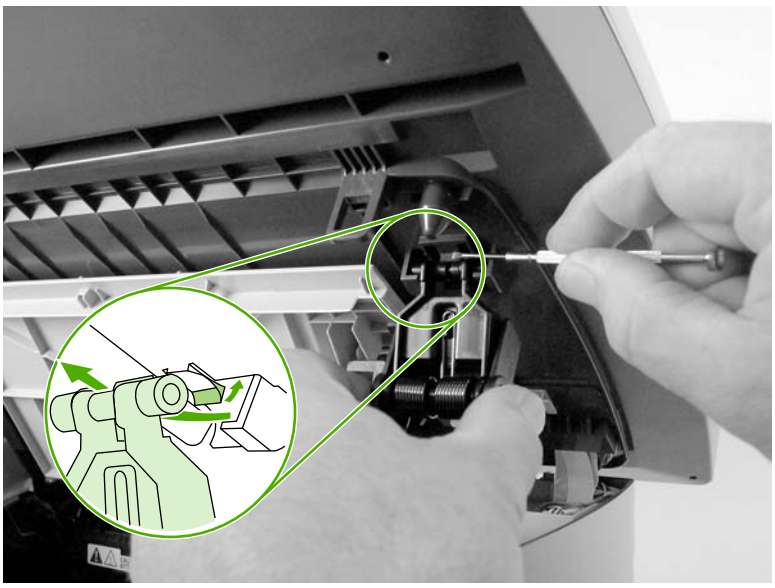


Figure 5-54 Removing the link assemblies and scanner support-frame springs (1 of 4)

3. Rotate a link assembly toward the front of the printer until the link disengages from the scanner support-frame.

Figure 5-55 Removing the link assemblies and scanner support-frame springs (2 of 4)

4. Remove the link assembly. Repeat this step with the remaining link.

Figure 5-56 Removing the link assemblies and scanner support-frame springs (3 of 4)

5. Use needle-nose pliers to remove the scanner support-frame spring. Repeat this step for the other scanner support-frame spring.

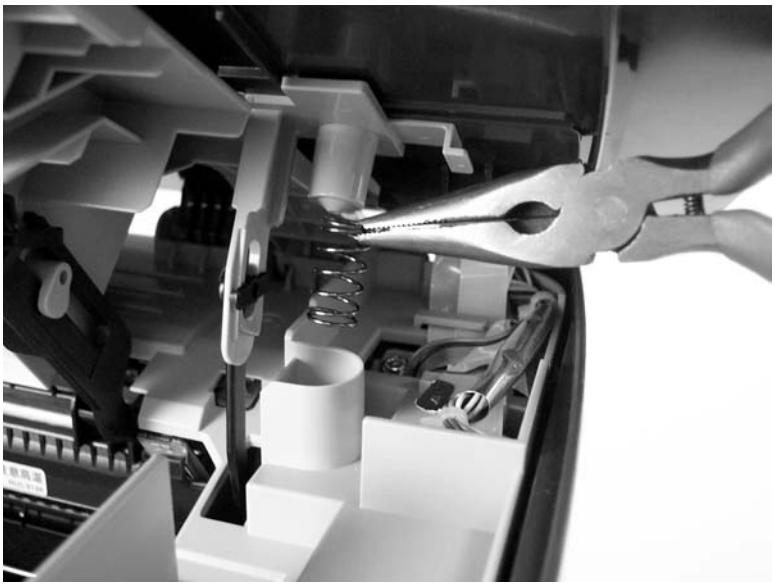


Figure 5-57 Removing the link assemblies and scanner support-frame springs (4 of 4)

Control-panel bezel

Gently pry the outside edges (at callout 1 in Figure 5-58 Removing the control-panel bezel on page 138) of the control-panel bezel away from the all-in-one to release it. Continue to pry up the bezel (at callout 2), working toward the center of the bezel (at callout 3).

Figure 5-58 Removing the control-panel bezel

Control-panel assembly

CAUTION The control-panel is an ESD-sensitive component.

1. Remove the control-panel bezel. See Control-panel bezel on page 138.
2. Remove two screws (callout 1).

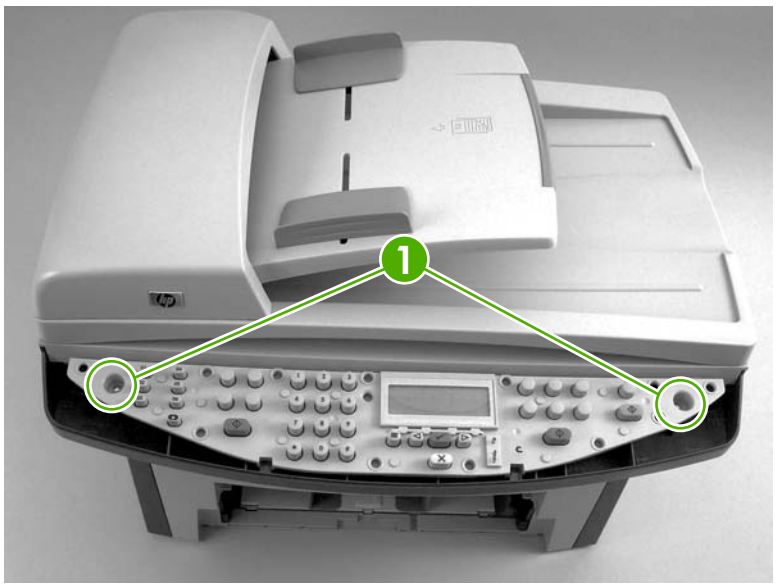


Figure 5-59 Removing the control-panel assembly (1 of 2)

3. Rotate the back of the control panel up to release the front edge of the panel from two locking tabs, and then disconnect one FFC (callout 2). Remove the control-panel assembly

CAUTION Do not bend or fold the FFCs during the removal or reinstallation process.

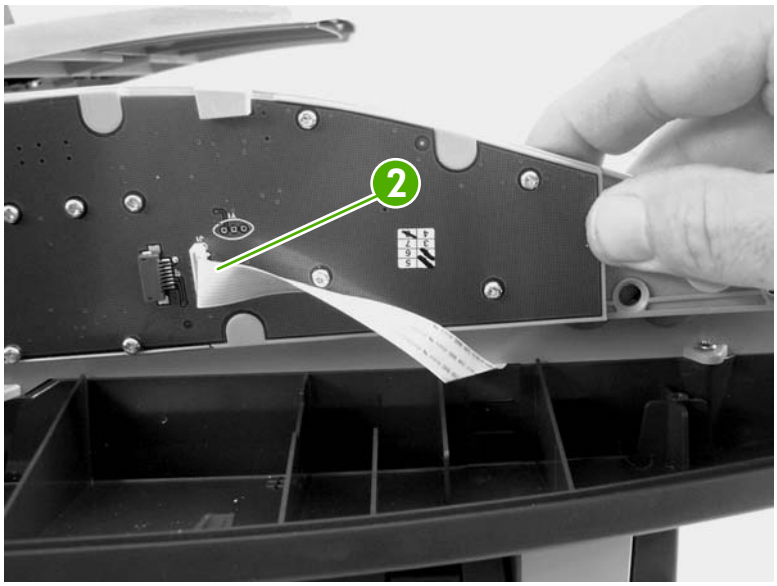
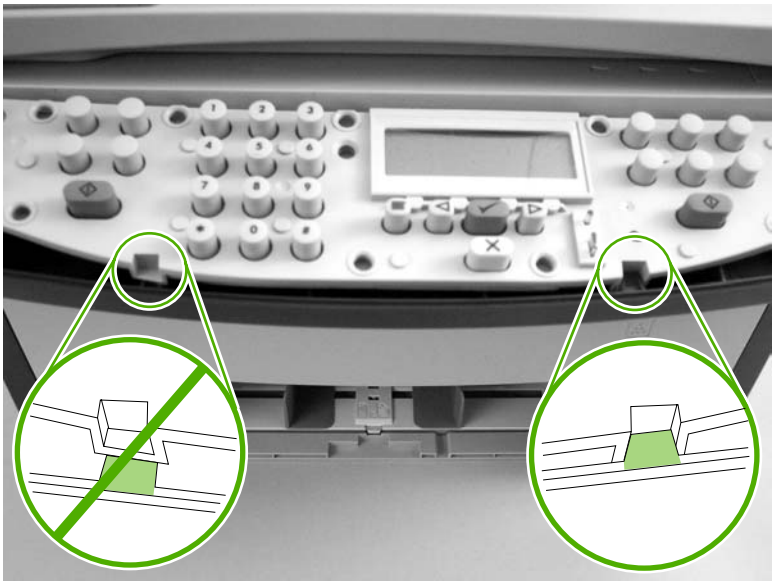


Figure 5-60 Removing the control-panel assembly (2 of 2)

NOTE When you reinstall the control panel, make sure that the tabs on the scanner body fit into the slots on the control-panel assembly.



ADF separation pad

CAUTION Avoid touching the flatbed glass or the ADF separation pad. Skin oils and fingerprints can contaminate the glass or pad and cause print-quality or paper-pickup problems.

1. Open the ADF cover and lift up the ADF pickup-roller assembly.
2. Use a #8 torx screwdriver to remove two torx screws (callout 1) and remove the ADF separation-pad assembly.

NOTE Be careful not to lose the two torx screws. Reuse the screws when installing a new separation pad.

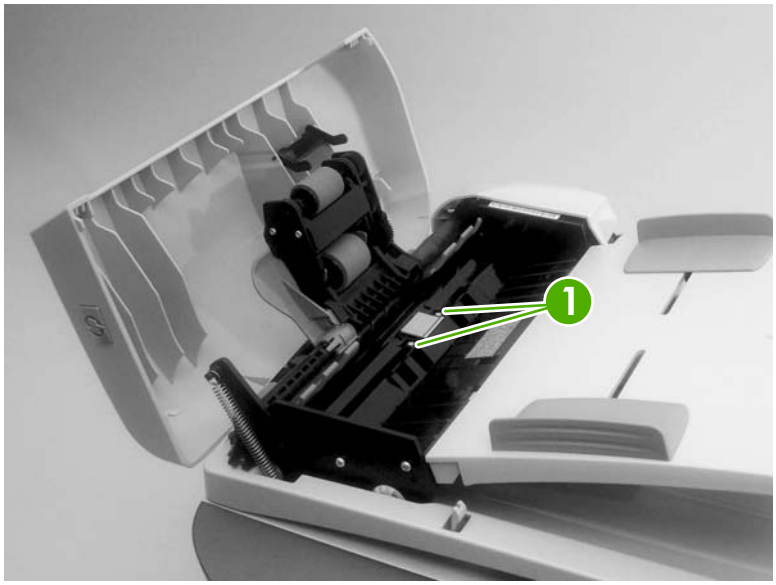


Figure 5-61 Removing the ADF separation pad

ADF input-tray flag

1. Open the ADF cover.
2. Gently flex the plastic rib until the front flag hinge clears the mounting hole. Rotate the ADF input-flag until the hinge pin clears the plastic rib. Pull the flag towards you to release the back hinge.

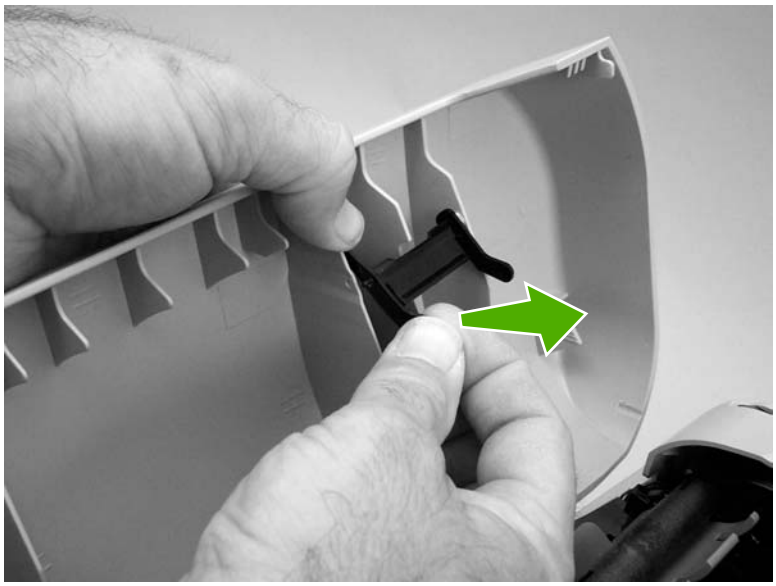


Figure 5-62 Removing the ADF input-tray flag

ADF pickup roller and load-arm assembly (HP LaserJet 3052/3055 all-in-one)

1. Open the ADF cover.

Figure 5-63 Replacing the ADF pickup roller and load-arm assembly (1 of 6)

2. Lift the load spring off of the post on the load arm.

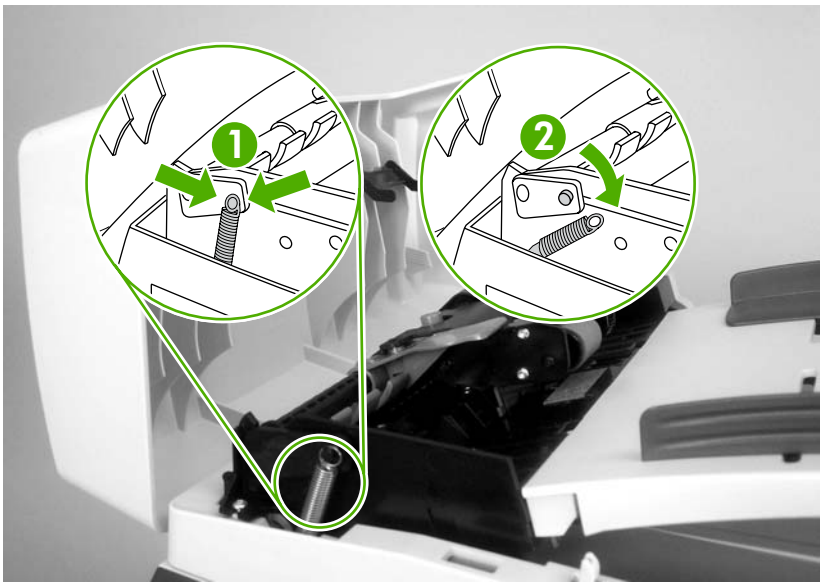


Figure 5-64 Replacing the ADF pickup roller and load-arm assembly (2 of 6)

3. Rotate the load-arm assembly.

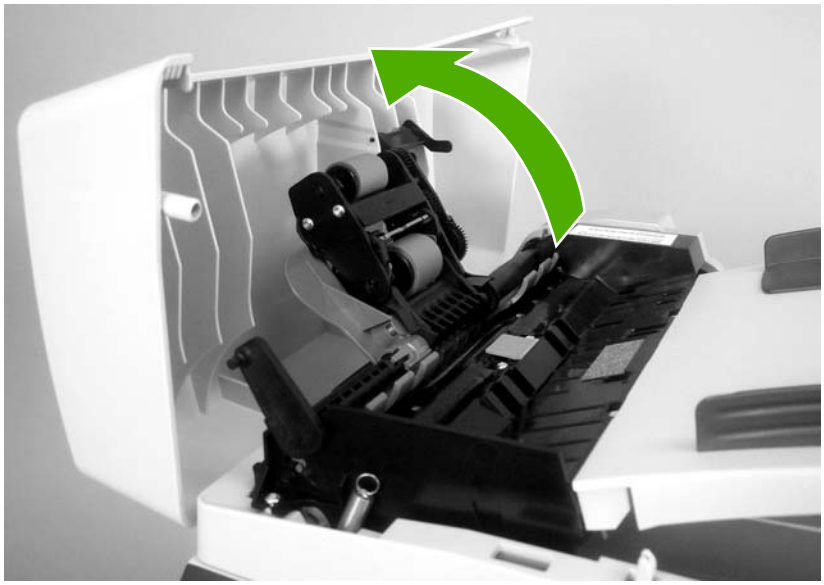


Figure 5-65 Replacing the ADF pickup roller and load-arm assembly (3 of 6)

4. Lift the load-arm assembly, slide the assembly toward the front of the all-in-one to disengage the gear-end of the assembly, and then lift the assembly off of the all-in-one.

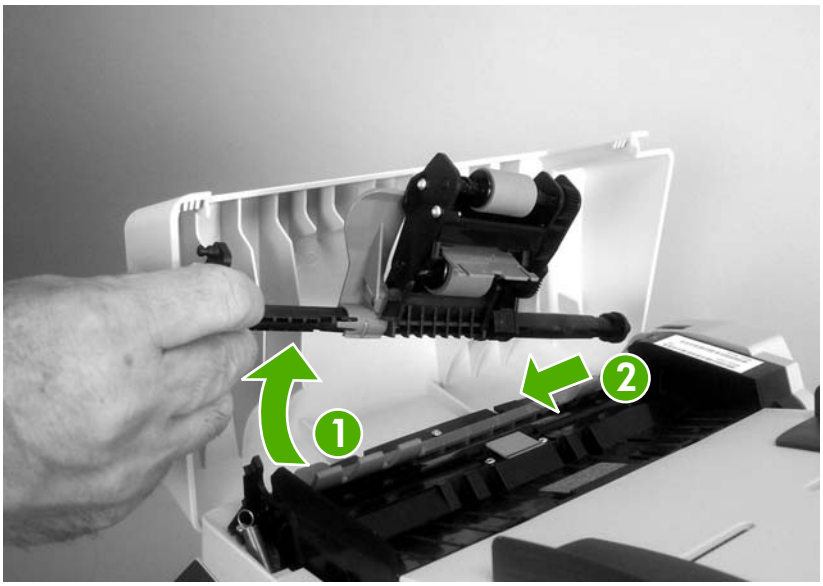


Figure 5-66 Replacing the ADF pickup roller and load-arm assembly (4 of 6)

5. Insert the gear-end of the new load-arm assembly into the all-in-one and then lower the assembly into place.

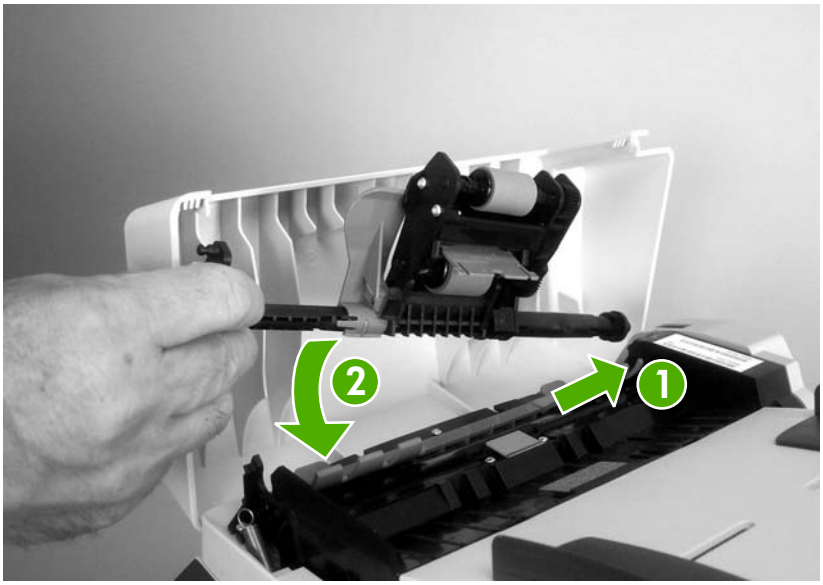


Figure 5-67 Replacing the ADF pickup roller and load-arm assembly (5 of 6)

6. Reattach the load spring and then close the ADF cover.

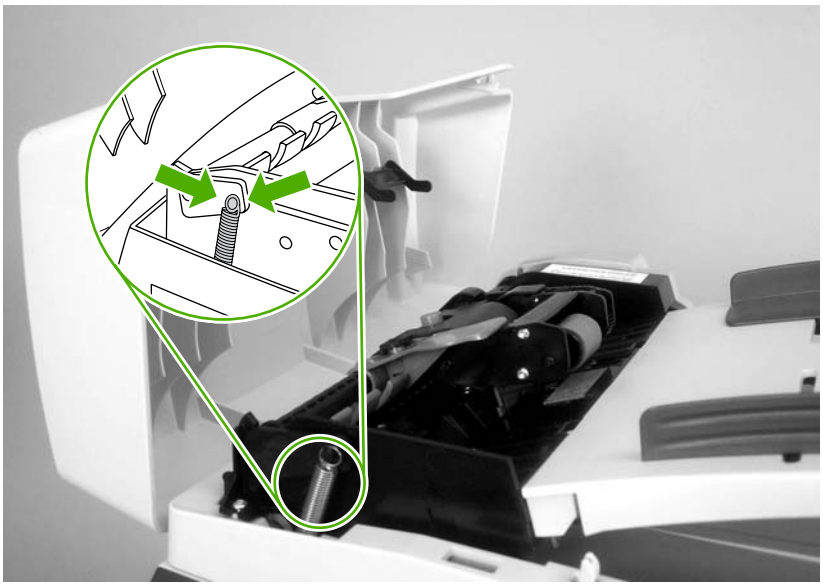


Figure 5-68 Replacing the ADF pickup roller and load-arm assembly (6 of 6)

ADF scanner glass

CAUTION Avoid touching the flatbed glass or the ADF separation pad. Skin oils and fingerprints can contaminate the glass or pad and cause print-quality or paper-pickup problems.

1. Use a #10 torx screwdriver to remove one torx screw.

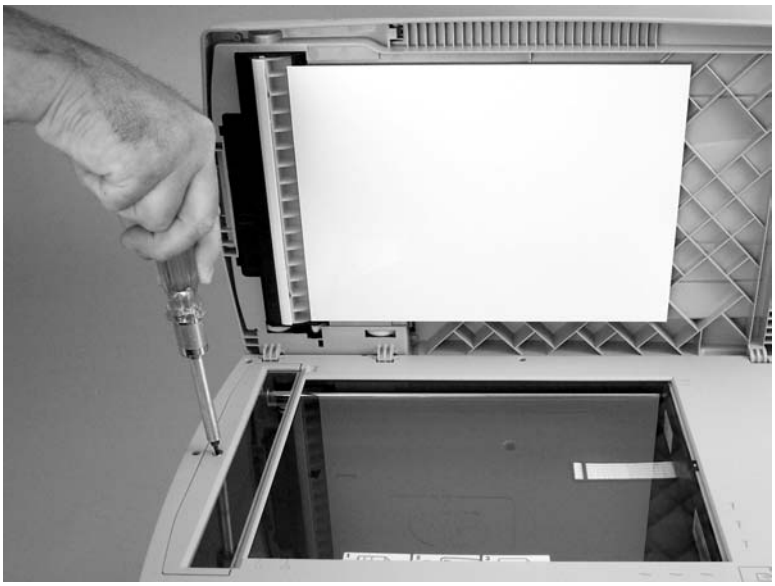


Figure 5-69 Removing the ADF scanner glass (1 of 3)

2. Carefully remove the plastic ADF scanner-glass frame.

Figure 5-70 Removing the ADF scanner glass (2 of 3)

3. Slide the black glass-locking lever toward the back of the all-in-one to release the glass, and then carefully remove the glass.

CAUTION Avoid touching the flatbed glass or the ADF separation pad. Skin oils and fingerprints can contaminate the glass or pad and cause print-quality or paper-pickup problems.

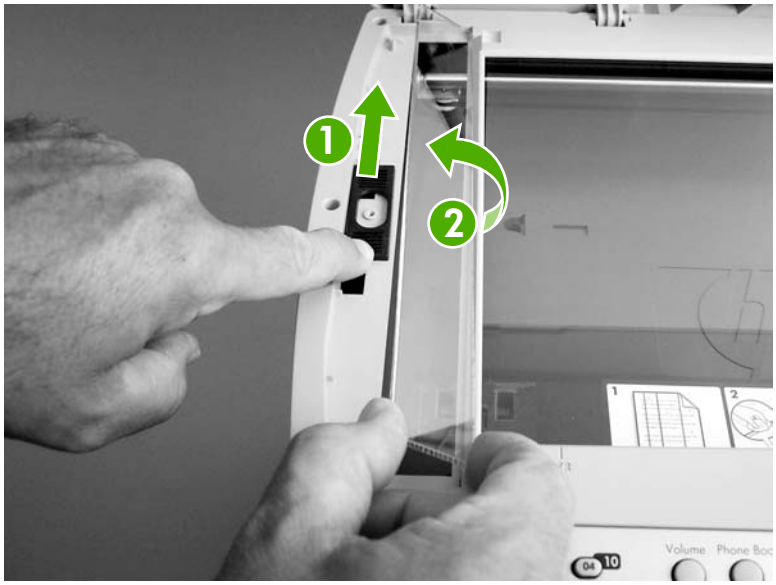


Figure 5-71 Removing the ADF scanner glass (3 of 3)

Scanner assembly

CAUTION Avoid touching the flatbed glass or the ADF separation pad. Skin oils and fingerprints can contaminate the glass or pad and cause print-quality or paper-pickup problems.

NOTE It is not necessary to remove the flatbed lid before removing the scanner assembly. However, removing the flatbed lid will make the scanner assembly lighter and easier to handle when it is removed. To remove the flatbed lid, see Flatbed lid on page 133.

1. Remove the ADF input tray. See ADF input tray on page 132.
2. Remove one screw (callout 1).

Figure 5-72 Removing the scanner assembly (1 of 13)

3. Release the back side of the cover.

Figure 5-73 Removing the scanner assembly (2 of 13)

4. Release the bottom tab (callout 2).

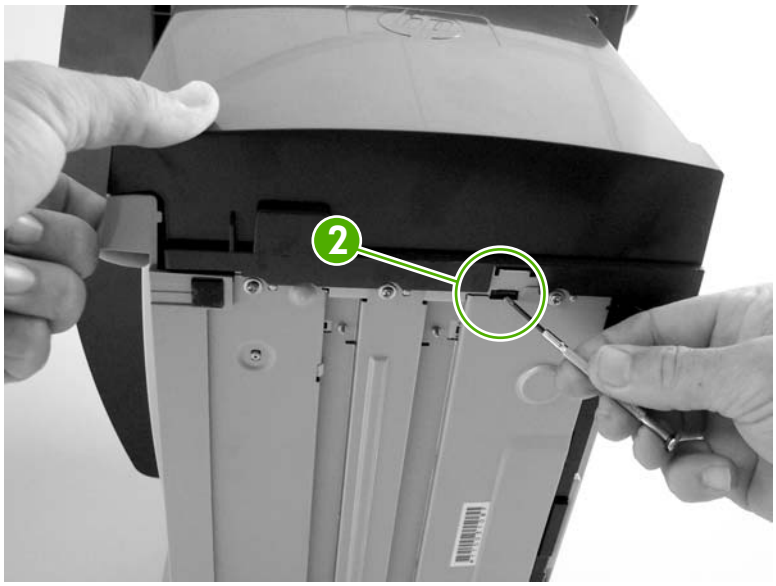


Figure 5-74 Removing the scanner assembly (3 of 13)

5. Rotate the back side of the cover away from the all-in-one, and then slide the cover toward the front of the all-in-one to remove it.

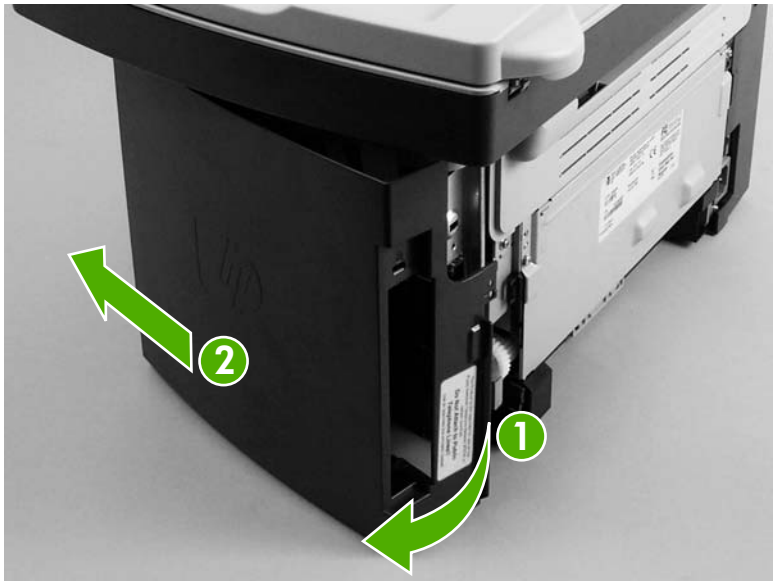


Figure 5-75 Removing the scanner assembly (4 of 13)

6. Disconnect two wire-harnesses and two FFCs on the formatter (callout 4).

CAUTION Do not bend or fold the FFCs during the removal or reinstallation process.

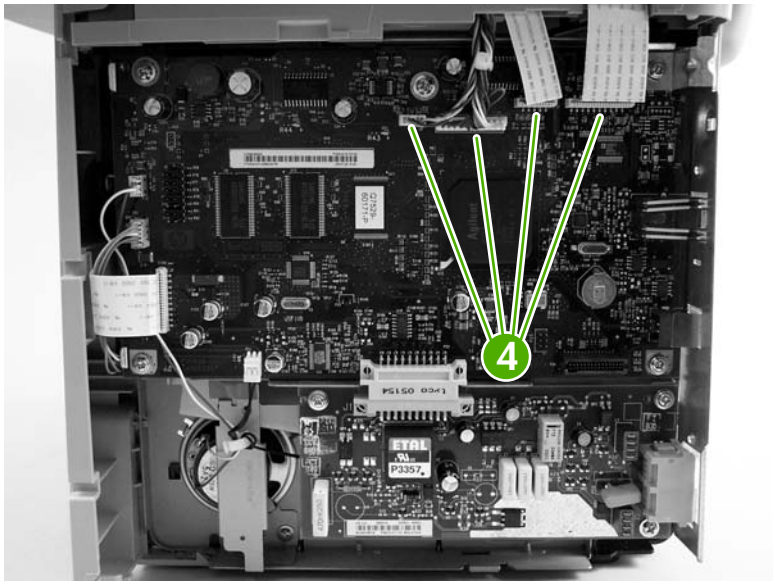


Figure 5-76 Removing the scanner assembly (5 of 13)

7. Push the print-cartridge door button to release the scanner assembly, and then raise the assembly until it locks open.

Figure 5-77 Removing the scanner assembly (6 of 13)

8. Grasp the tab on the gear-drive arm bracket and carefully flex it away from the scanner assembly to release the bracket.

Figure 5-78 Removing the scanner assembly (7 of 13)

9. Pull the bracket toward the right side of the all-in-one until its mounting tabs clear the holes in the scanner assembly.

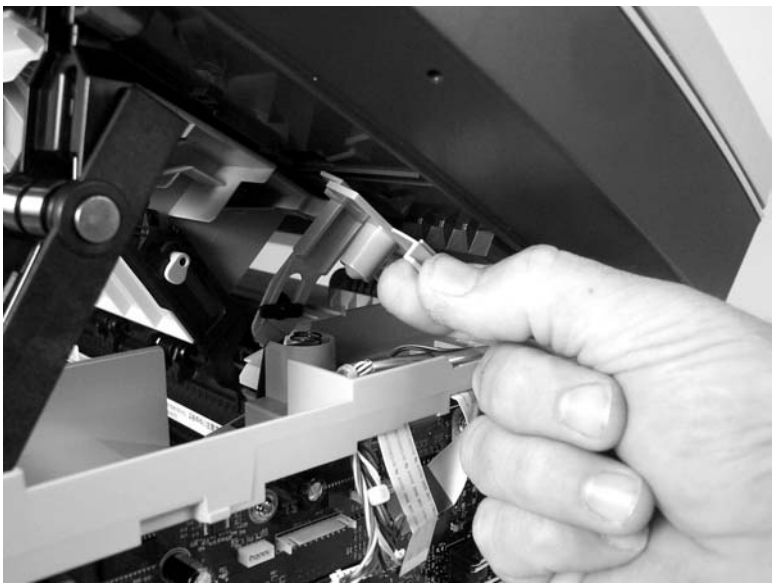


Figure 5-79 Removing the scanner assembly (8 of 13)

10. Use a small flat-blade screwdriver to release the hinge tabs on each front hinge.

WARNING! When the front hinges are disengaged, the scanner assembly can easily fall off of the product base if it is rotated too far toward the back of the all-in-one.

CAUTION Do not push too hard on the link tabs or the tabs might break.

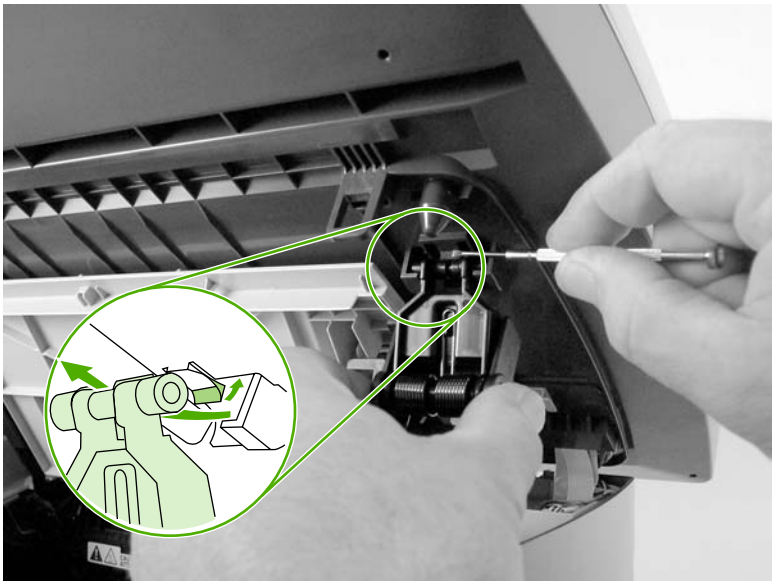


Figure 5-80 Removing the scanner assembly (9 of 13)

11. Use one of the following three separate methods to support the scanner assembly so that it does not fall off of the product base.

- **A** Use the HP scanner-hinge tool (part number: 5185-7441).

  NOTE Remove the left-side link before using the scanner-hinge tool.

- **B** Rest the scanner assembly against a wall.
- **C** Rest the scanner assembly against your chest.

NOTE Also see Figure 5-81 Removing the scanner assembly (10 of 13) on page 153

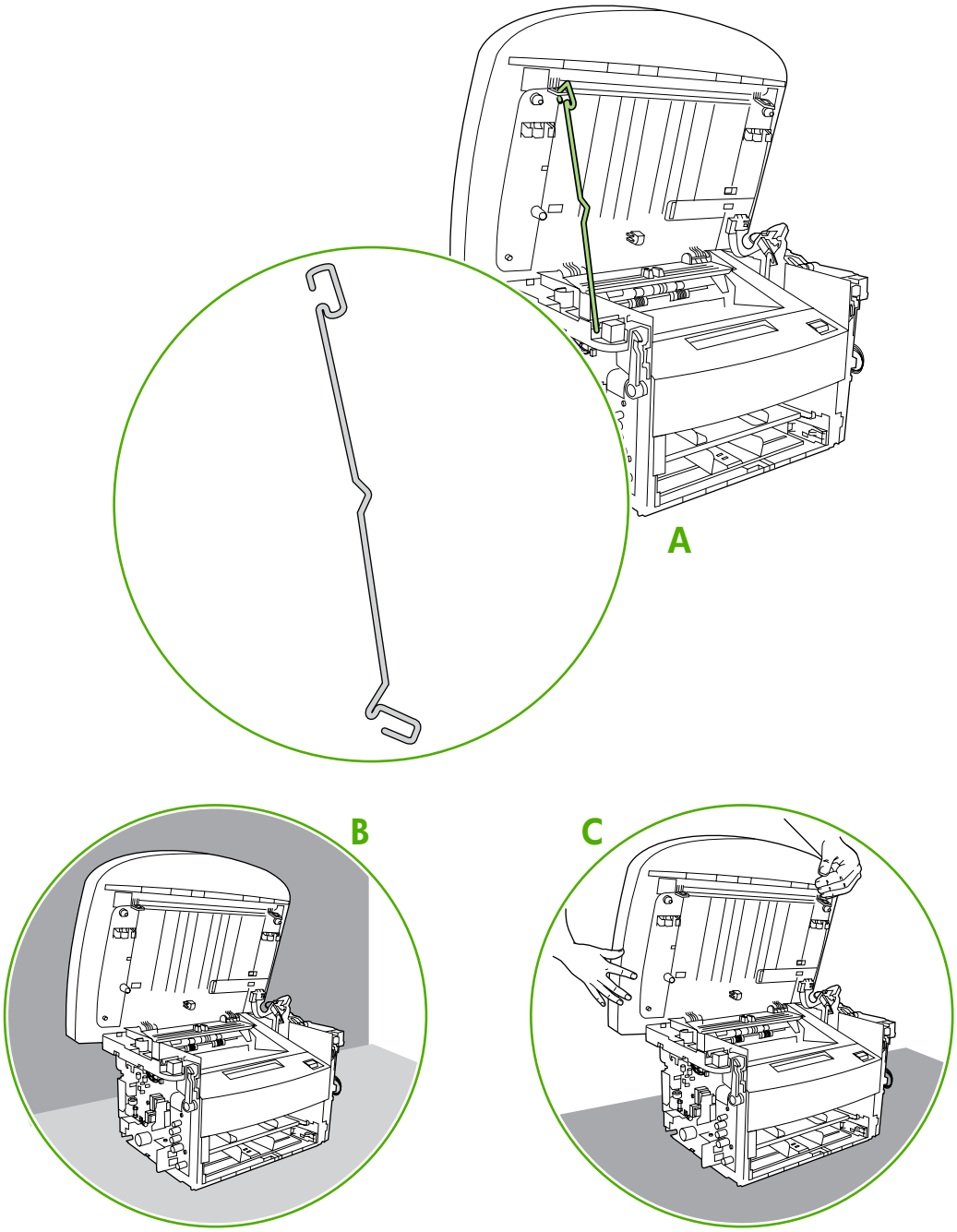


Figure 5-81 Removing the scanner assembly (10 of 13)

12. Use needle-nose pliers to squeeze the two plastic wire-harness retainers and push them up into the scanner support-frame.

WARNING! Do *not* clip wire retainers. The wire-harnesses might be damaged if the retainers are clipped instead of removed.

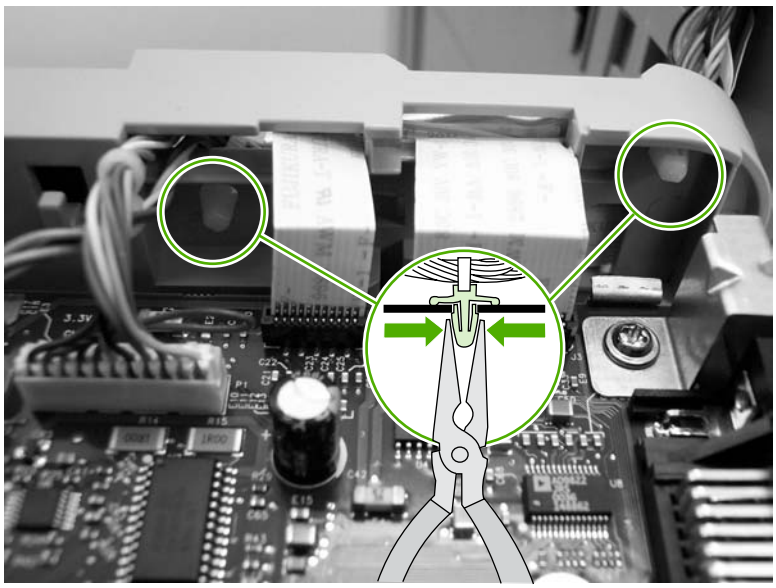


Figure 5-82 Removing the scanner assembly (11 of 13)

13. Remove one screw (callout 5). Carefully remove the grounding shield (callout 6) from the wire loom. Feed the two FFCs and the wire-harness through the hole in the chassis, and remove them from the wire loom.

Reinstallation tip Examine how the FFCs and wire-harnesses are routed through and attached to the scanner support-frame.

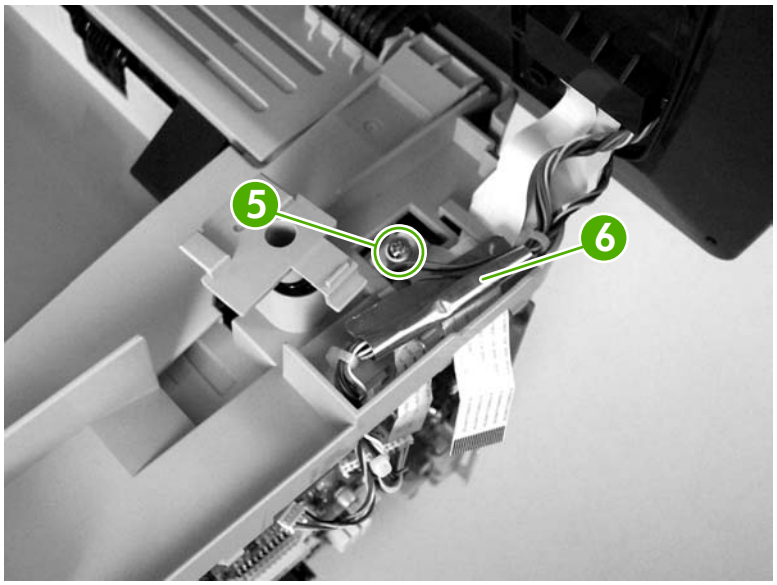


Figure 5-83 Removing the scanner assembly (12 of 13)

14. Rotate the scanner assembly toward the rear of the all-in-one until the rear hinges clear the chassis hinge pins. Lift the scanner assembly off of the product base.

CAUTION Make sure that the ADF cover and flatbed lid are supported so that they do not swing open when you remove the scanner assembly.

NOTE Do not lose the two scanner cushions in the scanner support-frame corners (one shown; callout 7).

Figure 5-84 Removing the scanner assembly (13 of 13)

Printer (product base)

This section documents removal and replacement instructions for components that are common to the HP LaserJet 3050 all-in-one, HP LaserJet 3052 all-in-one, and HP LaserJet 3055 all-in-one. Use the following diagram to determine the parts removal order.

NOTE For clarity, the all-in-one is shown without the scanner assembly in place. Removing the scanner assembly is not necessary to perform some of the procedures in this section.

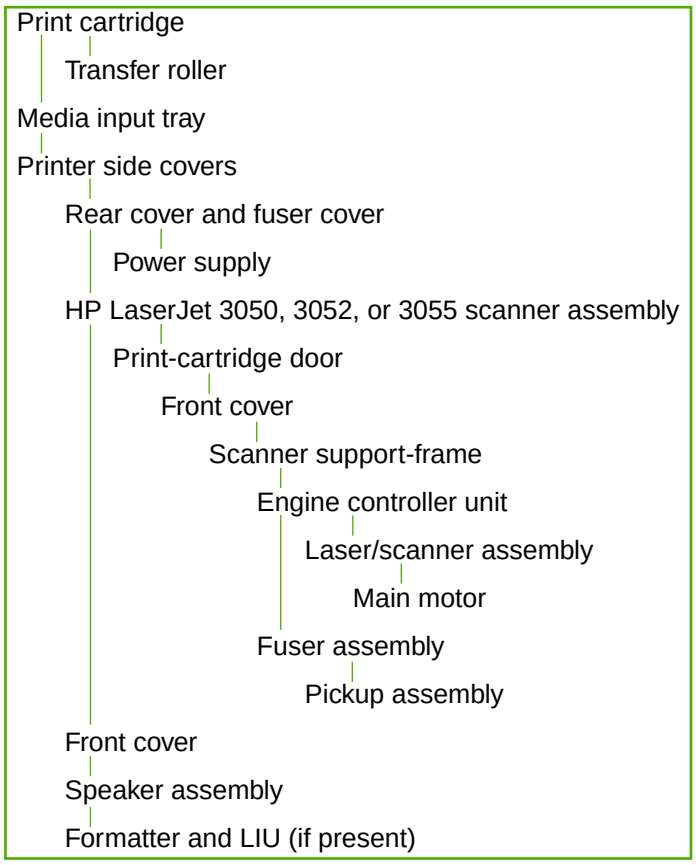


Figure 5-85 Parts removal order for the printer (product base, all models)

NOTE In Figure 5-85 Parts removal order for the printer (product base, all models) on page 156, the front cover is listed twice

Printer separation pad

1. At the back of the all-in-one, remove two screws (callout 1).

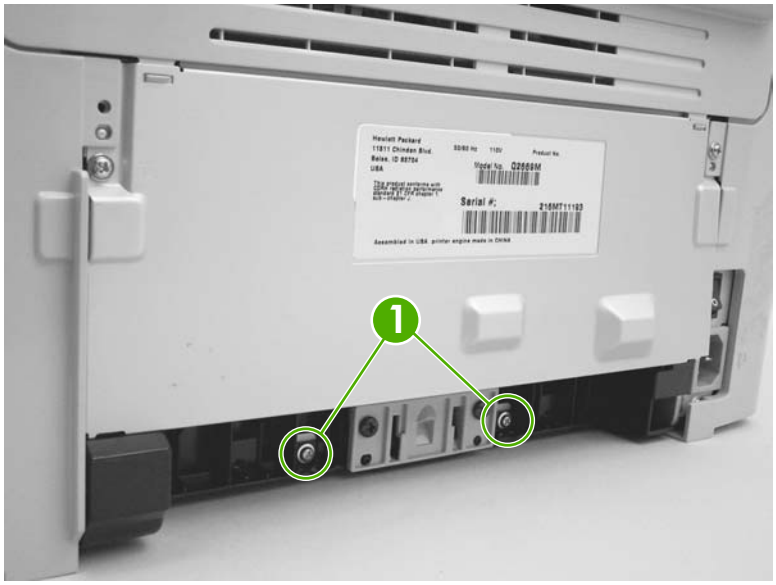


Figure 5-86 Removing the printer separation pad (1 of 2)

2. Remove the printer separation pad and frame.

Figure 5-87 Removing the printer separation pad (2 of 2)

Print cartridge

CAUTION To prevent damage, do not expose the print cartridge to direct or bright light. Cover it with a piece of paper.

1. Push the print-cartridge-door release button.

Figure 5-88 Removing the print cartridge (1 of 2)

2. Pull the print cartridge up and out of the all-in-one.

Figure 5-89 Removing the print cartridge (2 of 2)

Printer pickup roller

1. Remove the print cartridge and locate the printer pickup roller. See Print cartridge on page 158.

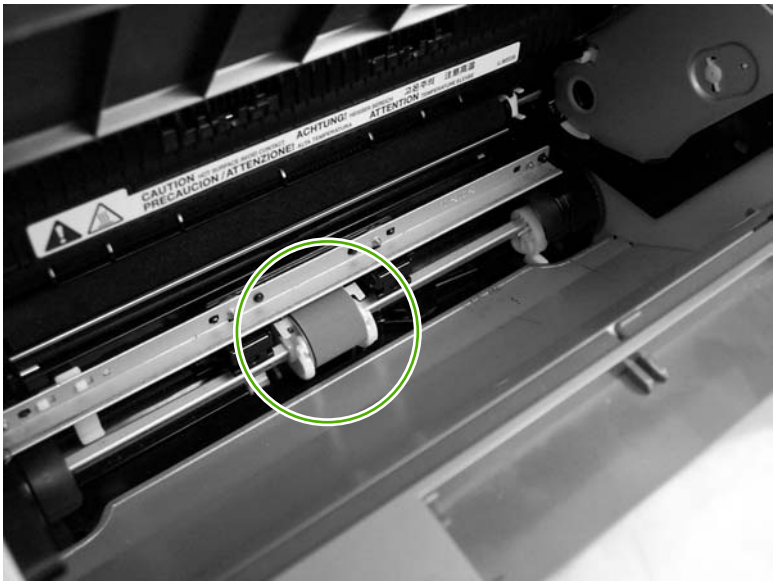


Figure 5-90 Removing the printer pickup roller (1 of 5)

2. Gently release the small, white tabs on each side of the pickup roller by pushing them away from the roller, and then rotate the roller away from the mounting frame.

> **CAUTION** Do not touch the black-sponge transfer roller inside the all-in-one. Touching the transfer roller can damage the all-in-one.
>
> Use gentle pressure to release the small white tabs to avoid breaking them.

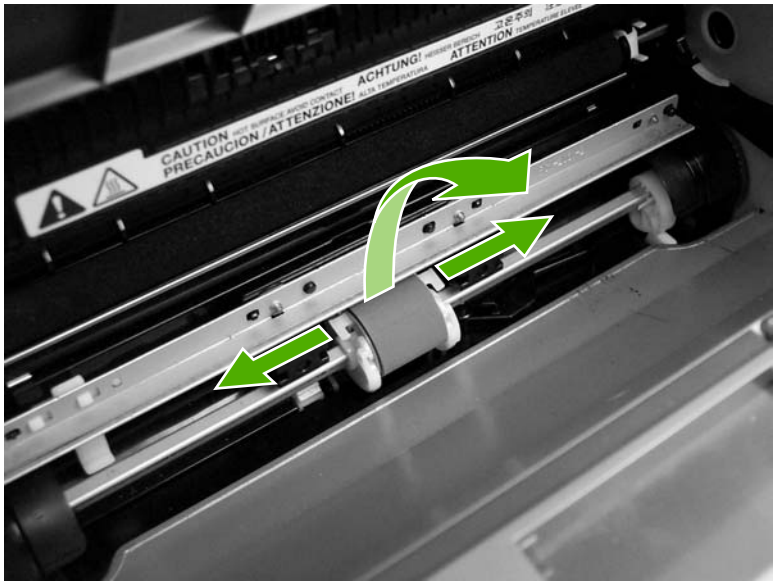


Figure 5-91 Removing the printer pickup roller (2 of 5)

3. Gently pull the roller up and out of the all-in-one.

Figure 5-92 Removing the printer pickup roller (3 of 5)

4. Circular and rectangular pegs on each side of the pickup roller fit into corresponding slots on the pickup-roller mounting frame and prevent the roller from being incorrectly installed. Position the replacement pickup roller in the slots on the pickup-roller frame.

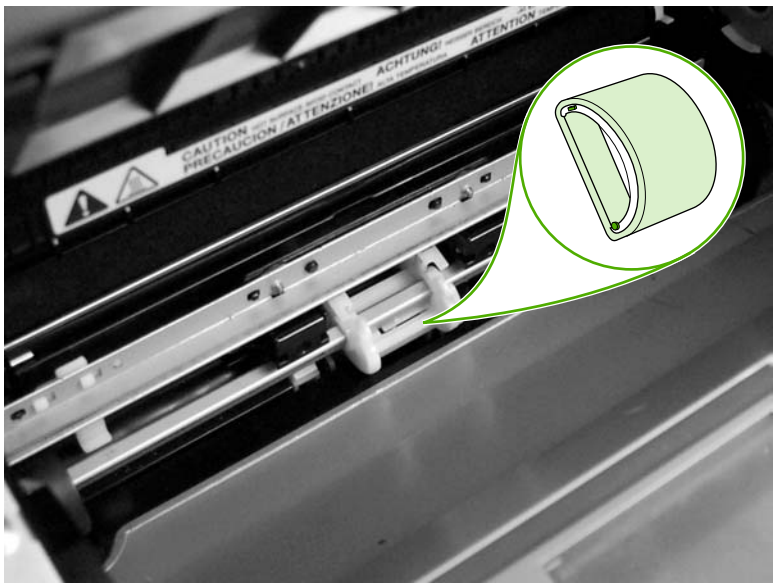


Figure 5-93 Removing the printer pickup roller (4 of 5)

5. Rotate the top of the pickup roller into position until the white tabs on each side of the roller snap into place.

Figure 5-94 Removing the printer pickup roller (5 of 5)

Installing the scanner cushions

1. Open the print-cartridge door.
2. Place a scanner cushion in the both well on the scanner support-frame (callout 1). Use the eraser-end of a pencil or use an ink pen with the cap on to seat each cushion in its well.

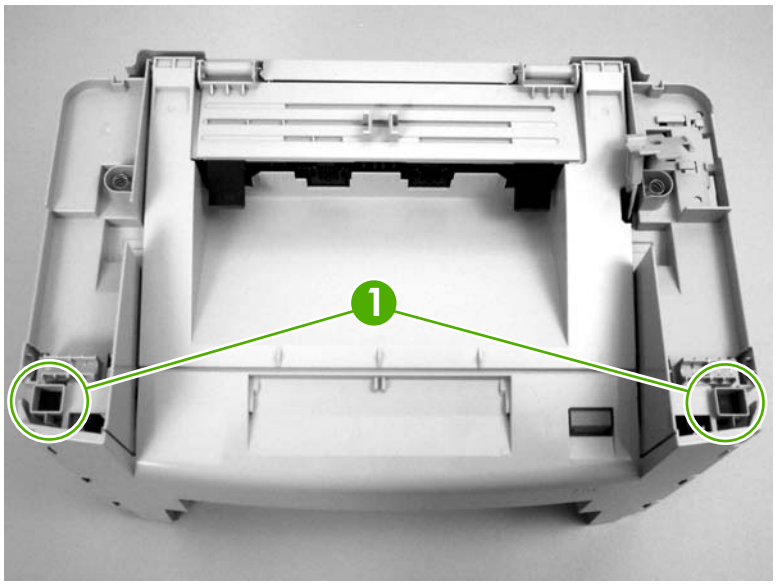


Figure 5-95 Installing the scanner cushions

Media input tray

1. Open the media input tray lid.

Figure 5-96 Removing the media input tray (1 of 3)

2. Slide the adjustable media guides to the center of the tray.

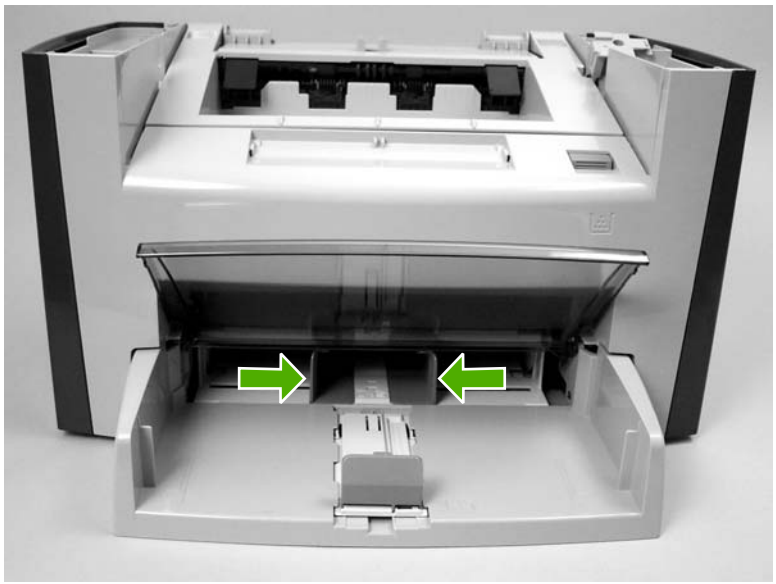


Figure 5-97 Removing the media input tray (2 of 3)

3. Depress the pickup-tray locking tabs to release the media input tray, and then pull it out and away from the all-in-one.

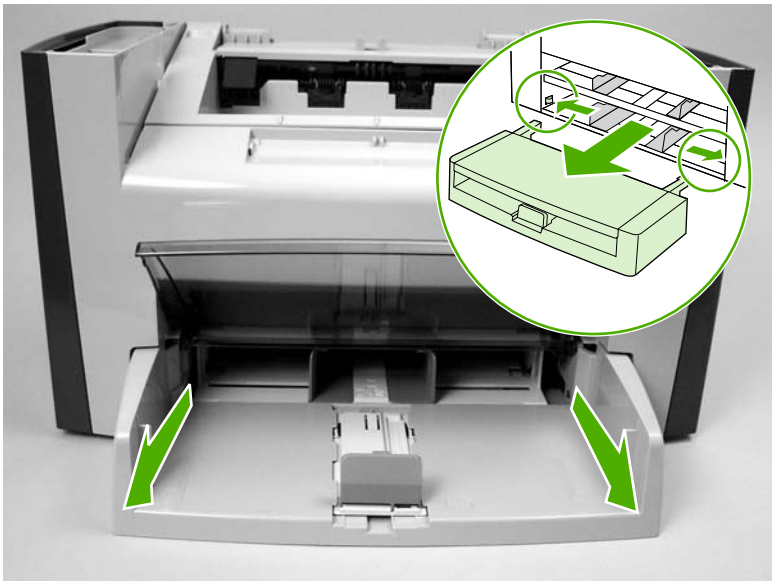


Figure 5-98 Removing the media input tray (3 of 3)

Transfer roller

CAUTION Do not touch the black-sponge portion of the transfer roller. Skin oils deposited on the transfer roller might cause print-quality problems.

Be very careful not to break the paper guide that is removed during replacement of the transfer roller. Because the paper guide is not an FRU, the entire printer will have to be replaced.

1. Open the print-cartridge door and remove the print cartridge.
2. Release the two locking tabs on the paper guide and rotate the guide up.

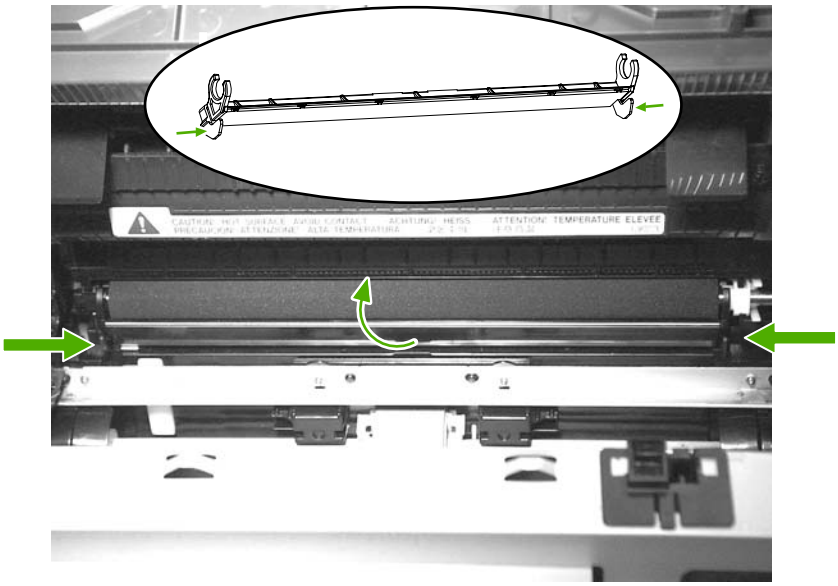


Figure 5-99 Removing the transfer roller (1 of 3)

3. The clamps on the paper guide fit over the bearings on each end of the transfer roller. Do not touch the black-sponge portion of the transfer roller. Grasp the right end of the paper guide and pull the clamp off the bearing on the right side of the transfer roller. Then slide the clamp slightly to the right, and the left clamp will slide off the left bearing.

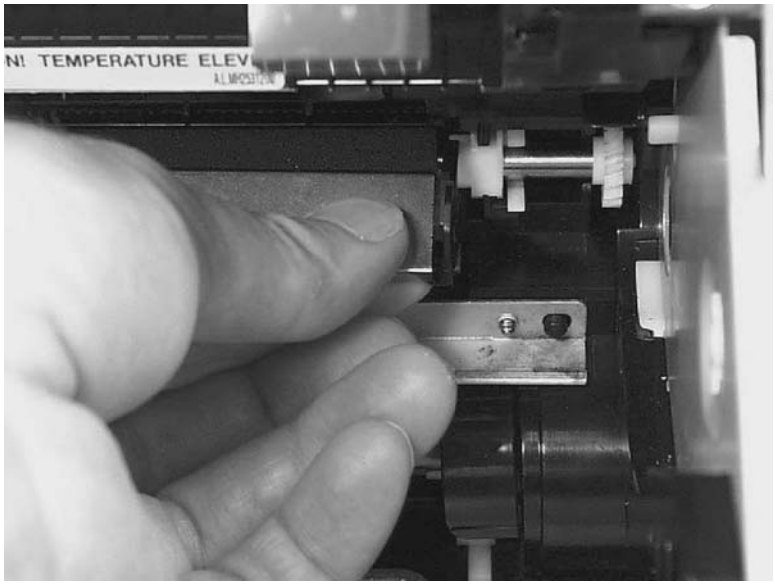


Figure 5-100 Removing the transfer roller (2 of 3)

4. Squeeze the two small tabs on the transfer roller.

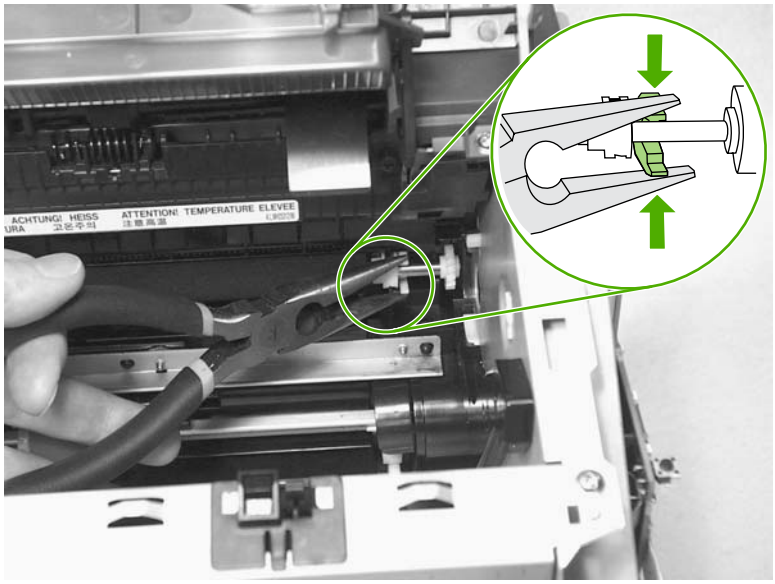


Figure 5-101 Removing the transfer roller (3 of 3)

Side covers

NOTE The procedure for removing the right-side and left-side covers is identical, with the exception of the location of the screw that fastens the cover to the all-in-one. The right-side cover is shown in the following procedure.

1. Remove one screw (callout 1). Callout 2 is on the left-side cover.

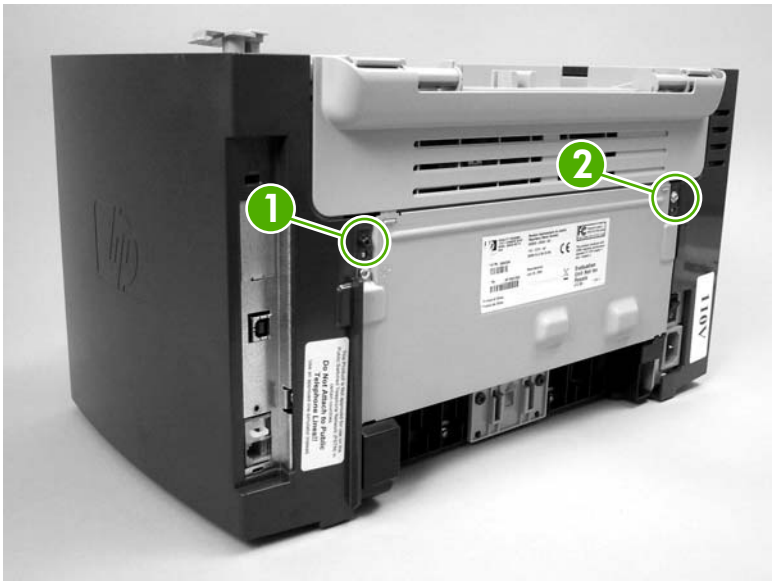


Figure 5-102 Removing the side covers (1 of 4)

2. Release the locking tab on the back of the cover.

Figure 5-103 Removing the side covers (2 of 4)

3. Release the bottom tab (callout 2).

> **CAUTION** When removing the left-side cover, hang the all-in-one off of the table to gain access to the bottom tab. This prevents the I/O shield from being damaged if the right-side cover is off and the all-in-one is tilted too far up.

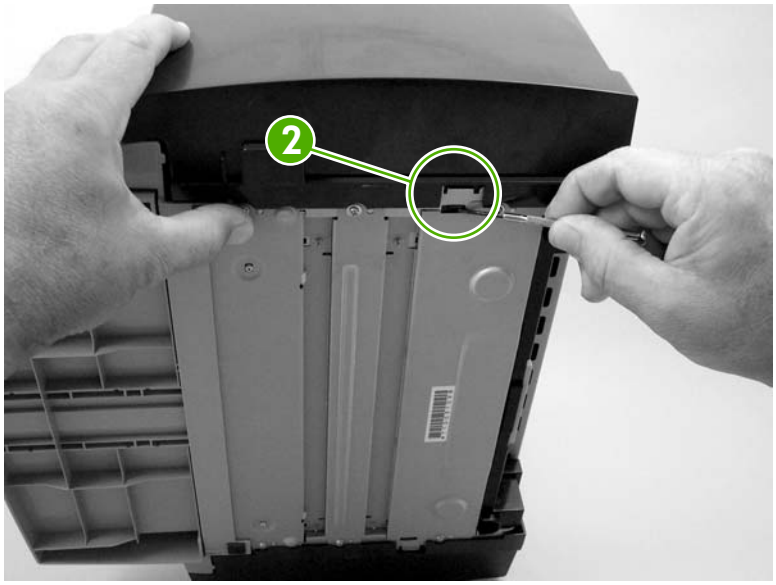


Figure 5-104 Removing the side covers (3 of 4)

4. Slightly rotate the back-side of the right cover away from the all-in-one, and then slide it toward the front of the all-in-one to release it.

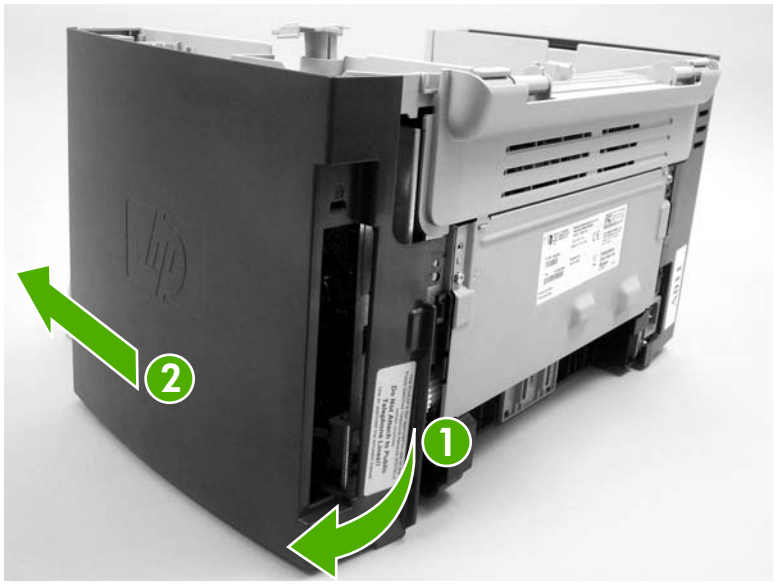


Figure 5-105 Removing the side covers (4 of 4)

Print-cartridge door

1. Remove the scanner assembly. For the HP LaserJet 3050 all-in-one, see Scanner assembly on page 118. For the HP LaserJet 3052/3055 all-in-one, see Scanner assembly on page 148.
2. Fully open the print-cartridge door and gently pull downward on both print-cartridge swing arms (callout 1) to release them. (In Figure 5-106 Removing the print-cartridge door (1 of 2) on page 169, the left arm is disengaged).

> **CAUTION** Be careful when releasing the swing arms. They can easily break.

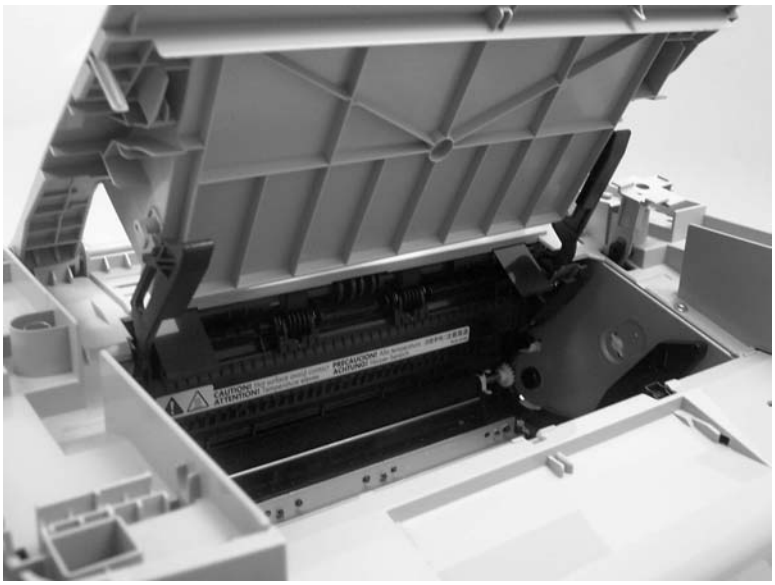


Figure 5-106 Removing the print-cartridge door (1 of 2)

3. Rotate the door toward the back of the printer and then lift it up and off of the printer.

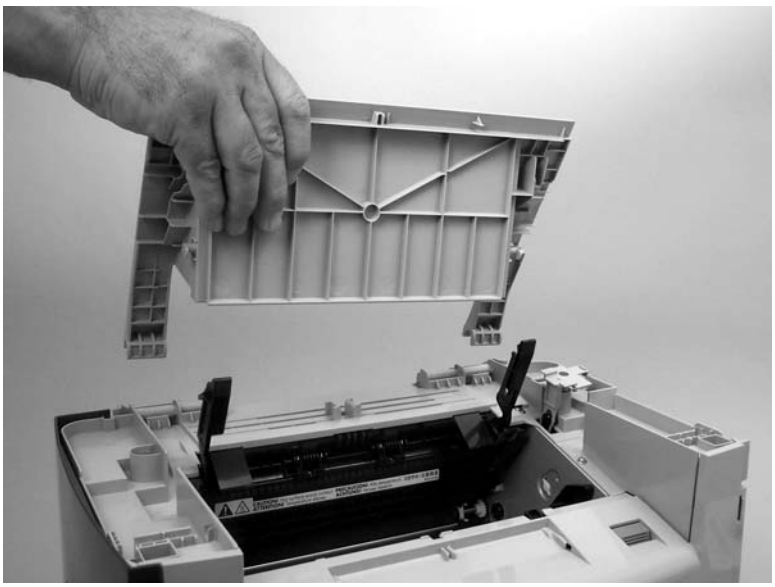


Figure 5-107 Removing the print-cartridge door (2 of 2)

Rear cover and fuser cover

1. Remove the right-side and left-side covers. See Side covers on page 167.
2. Remove one screw (callout 1).

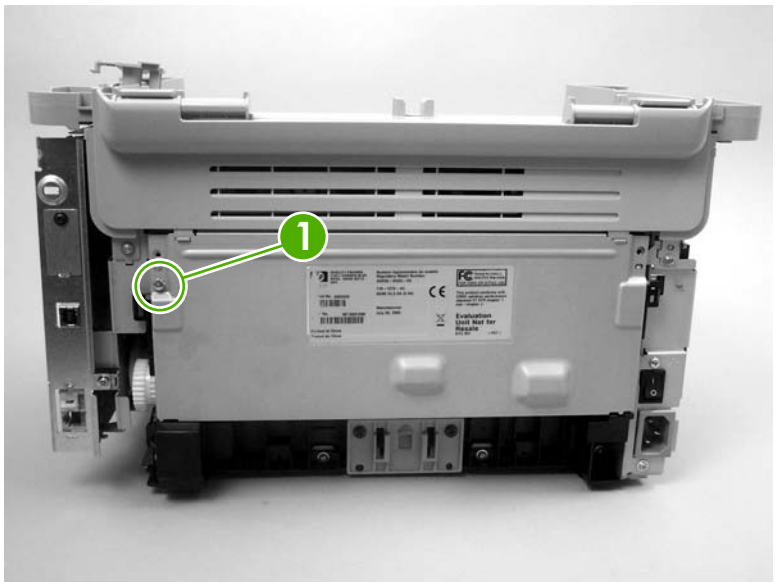


Figure 5-108 Removing the rear cover and fuser cover (1 of 3)

3. Release the two rear-cover locking tabs (callout 2). Rotate the bottom of the rear cover up and away from the printer, and remove it.

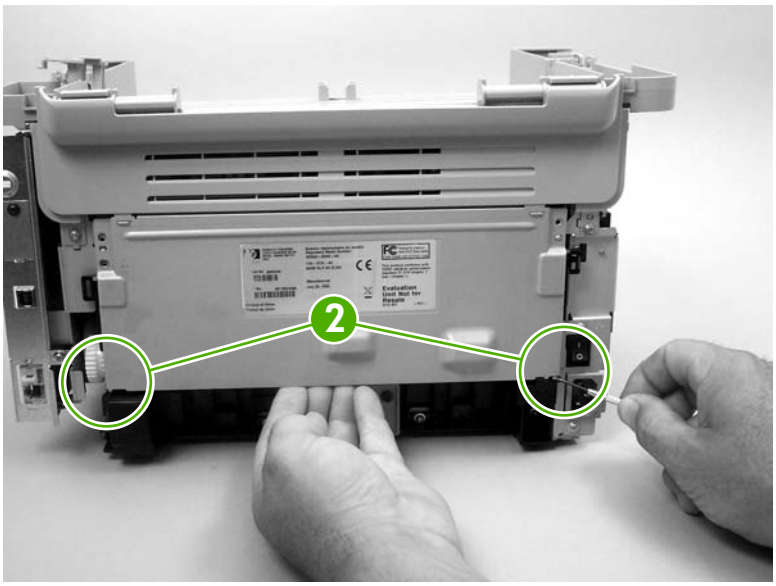


Figure 5-109 Removing the rear cover and fuser cover (2 of 3)

4. Rotate the bottom of the fuser cover away from the printer, and remove the fuser cover.

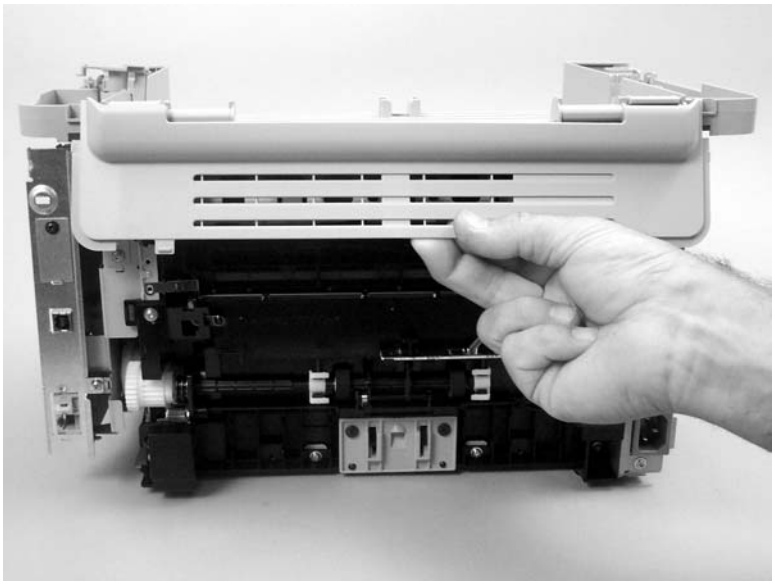


Figure 5-110 Removing the rear cover and fuser cover (3 of 3)

Front cover

1. Remove the right-side and left-side covers. See Side covers on page 167.
2. Release the lower right-side front-cover locking tab and slightly pry the lower-right corner of the front cover away from the printer.

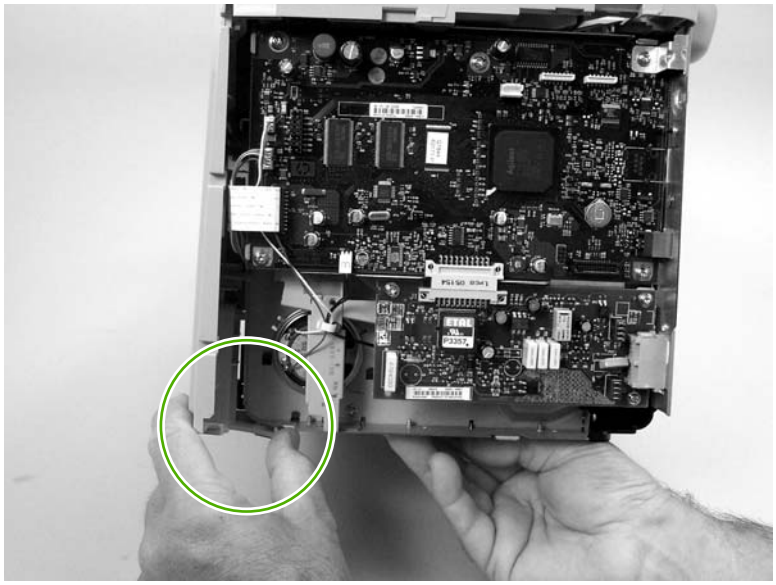


Figure 5-111 Removing the front cover (1 of 3)

3. Release the lower left-side front-cover locking tab (located near the corner of the power supply) and slightly pry the lower-left corner of the front cover away from the printer.

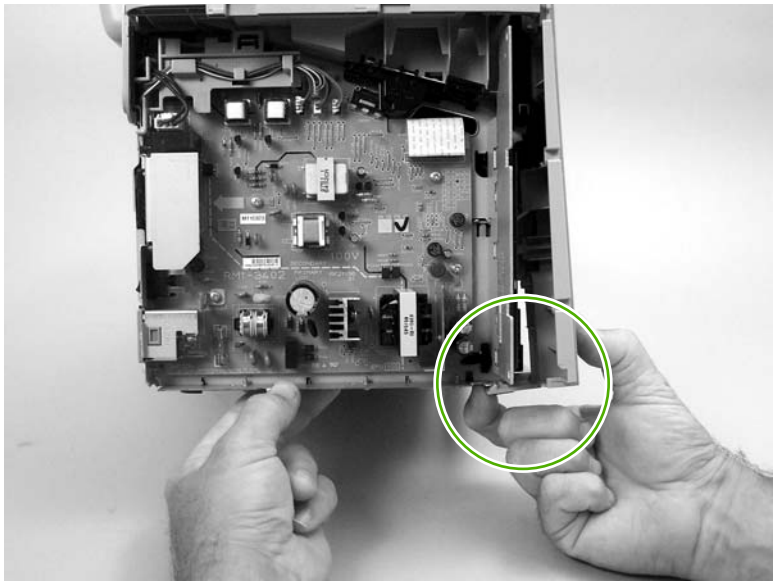


Figure 5-112 Removing the front cover (2 of 3)

4. Pry up and pull out on the front cover to release it from the printer. Remove the front cover.

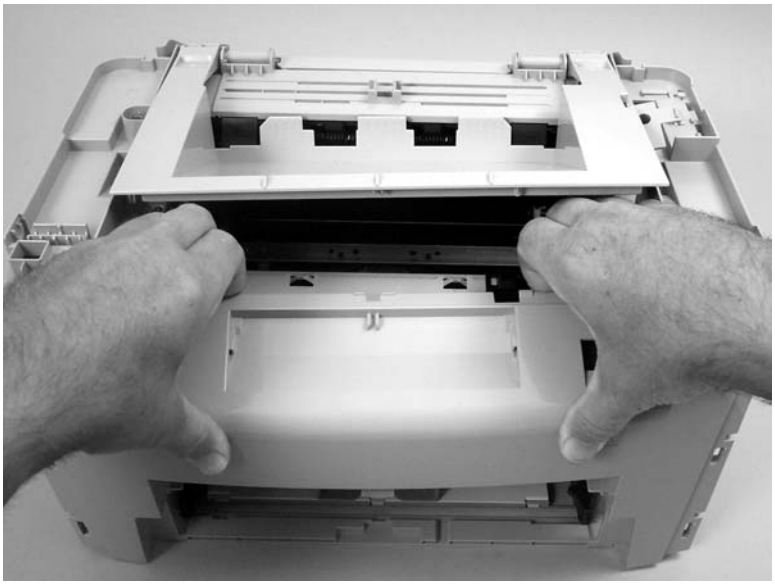


Figure 5-113 Removing the front cover (3 of 3)

Speaker assembly

1. Remove the right-side printer cover. See Side covers on page 167
2. Disconnect one wire-harness connector (callout 1), unclip one wire retainer (callout 2), and then remove one screw (callout 3).

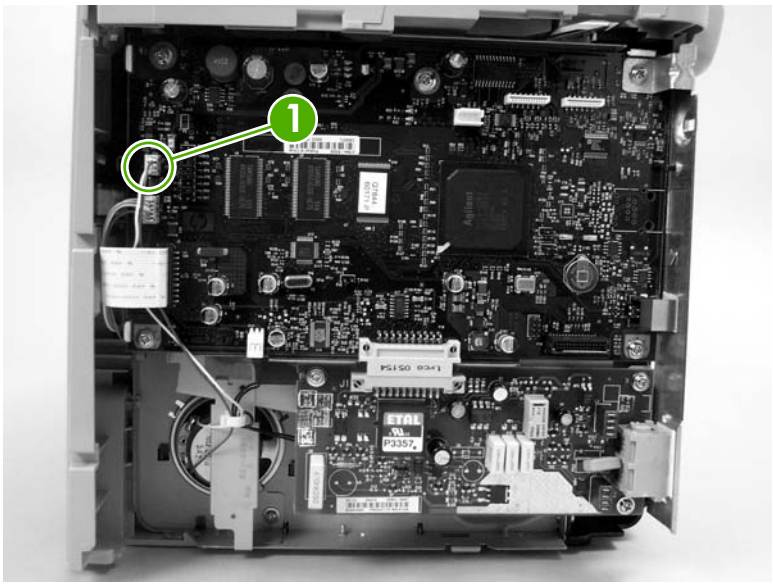


Figure 5-114 Removing the speaker assembly (1 of 2)

3. Carefully pry the sheet-metal brace away from the printer chassis. Slide the speaker down and slightly to the right to release it from the retaining clips on the printer chassis.

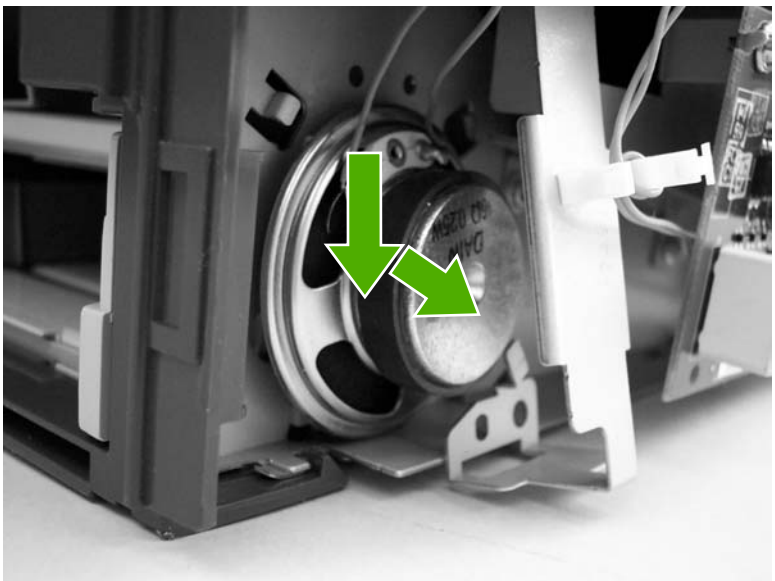


Figure 5-115 Removing the speaker assembly (2 of 2)

Power supply

1. Remove the rear cover and fuser cover. See Rear cover and fuser cover on page 170.
2. Disconnect one spade connector (callout 1) and remove three screws (callout 2).

Reinstallation tip The center screw in callout 2 is a ground screw and is different from the others. When reinstalling the power supply, make sure that this screw is used in the center hole.

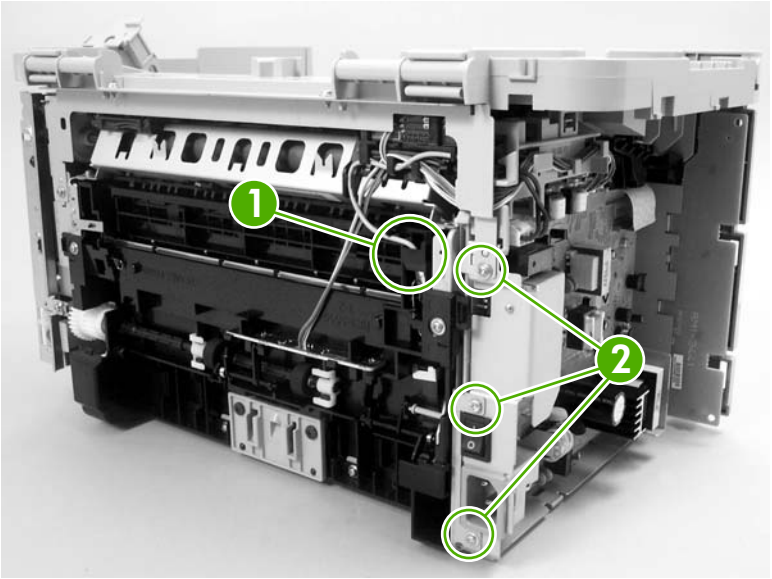


Figure 5-116 Removing the power supply (1 of 5)

3. Disconnect one FFC (callout 3) and five wire-harness connectors (callout 4) and remove them from the wire loom.

CAUTION Do not bend or fold the FFCs during the removal or reinstallation process.

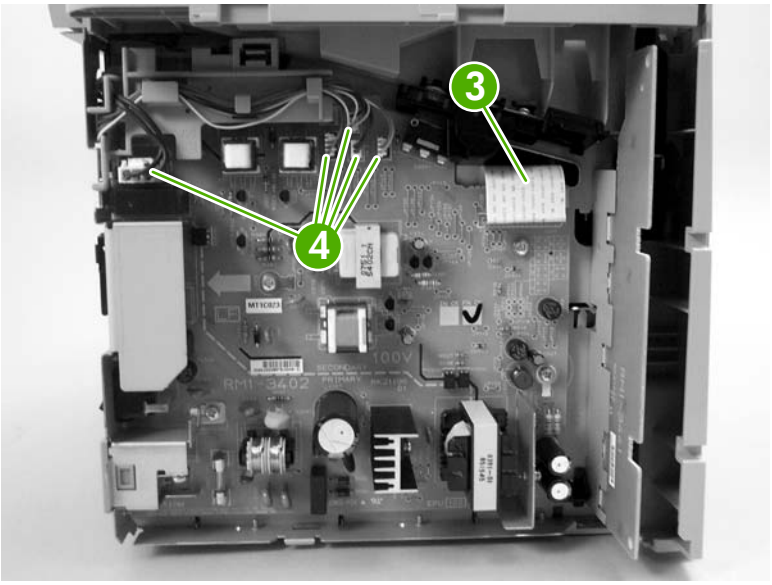


Figure 5-117 Removing the power supply (2 of 5)

4. Remove four screws (callout 5).

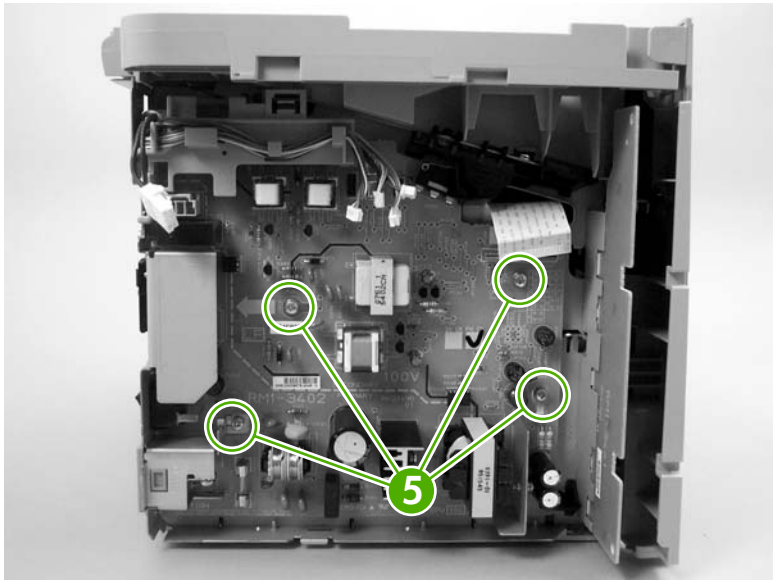


Figure 5-118 Removing the power supply (3 of 5)

5. Unclip two clips (callout 6) and remove the switch cover.

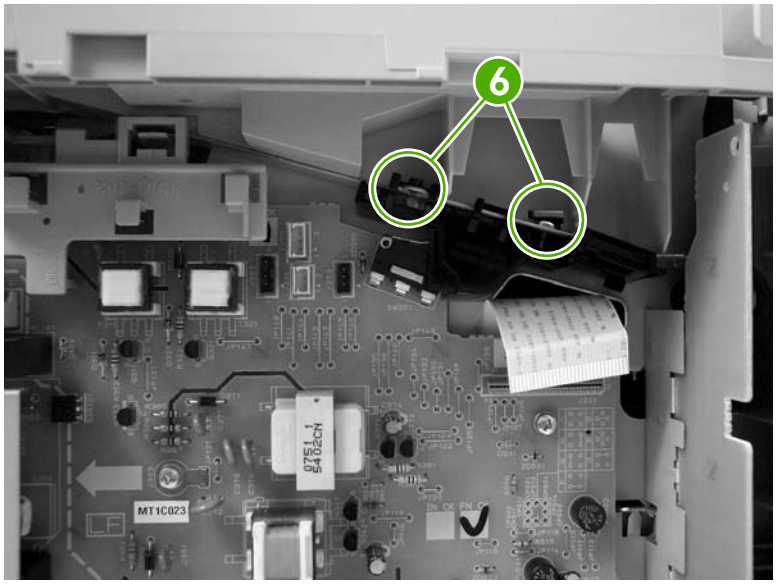


Figure 5-119 Removing the power supply (4 of 5)

6. Unclip one clip (callout 7) and dislodge, but do *not* remove, the wire guide, and then remove the power supply.

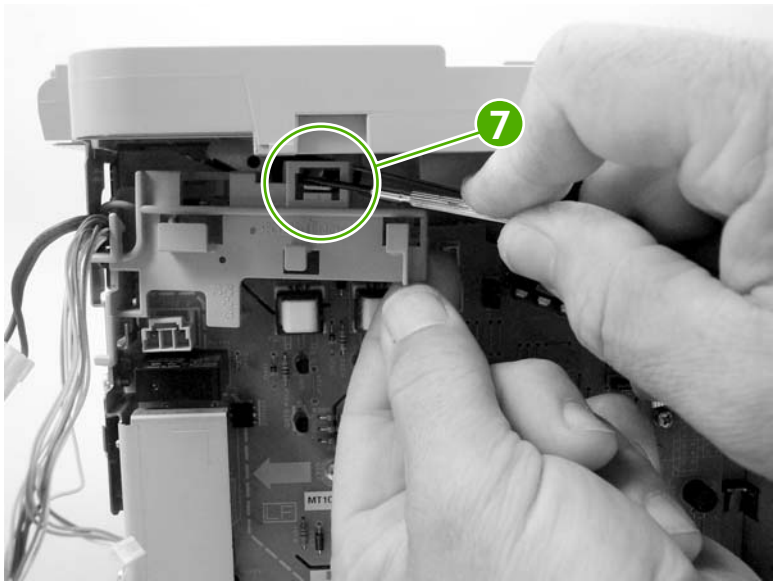


Figure 5-120 Removing the power supply (5 of 5)

Formatter and line interface unit (LIU)

CAUTION The formatter and LIU are ESD-sensitive devices.

NOTE The HP LaserJet 3052 all-in-one does not have a line interface unit (LIU) because it does not have fax capabilities.

1. Remove the right cover. See Side covers on page 167.
2. Remove two screws (callout 1) and the I/O shield (callout 2).

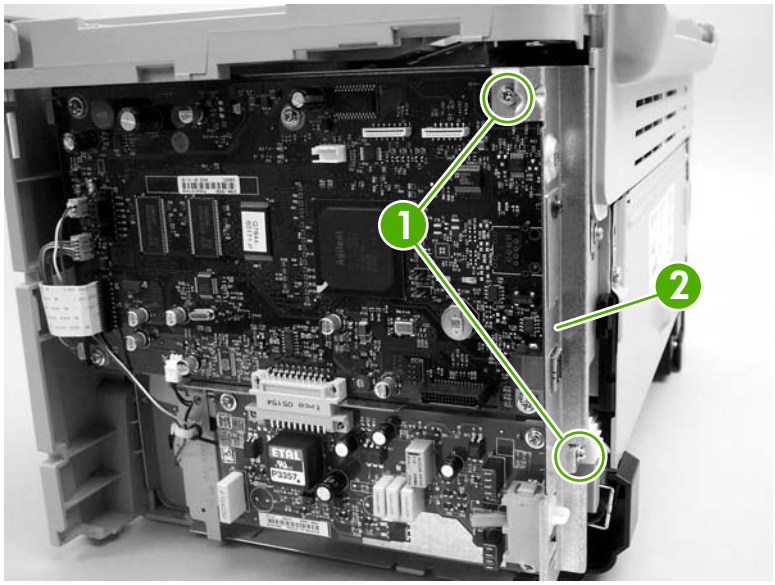


Figure 5-121 Removing the formatter (1 of 3)

Reinstallation tip When reinstalling the formatter, make sure that the upper mounting leg on the I/O shield (the cover that surrounds the USB port) is fastened to the formatter when you install the upper formatter screw.

3. Disconnect all of the connectors on the formatter.

- Figure 5-122 HP LaserJet 3050 all-in-one formatter and LIU on page 179 shows the formatter and LIU from an HP LaserJet 3050 all-in-one.

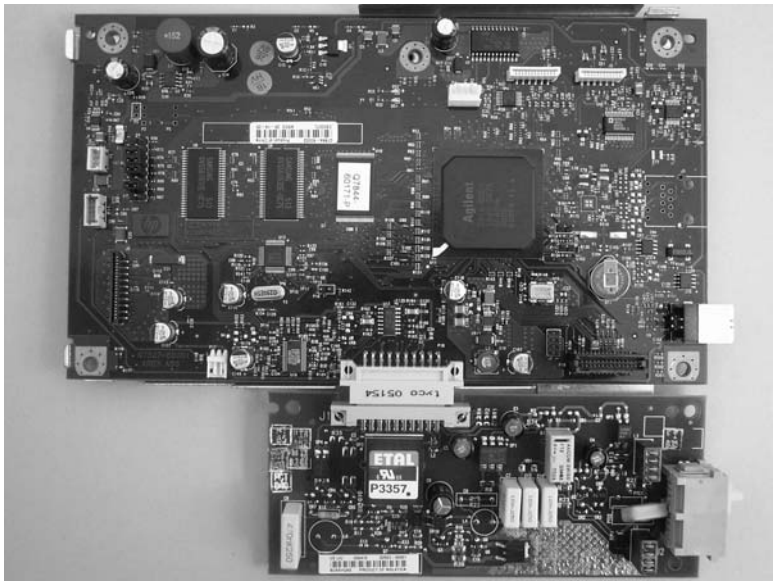


Figure 5-122 HP LaserJet 3050 all-in-one formatter and LIU

- Figure 5-123 HP LaserJet 3052 all-in-one formatter on page 179 shows the formatter from an HP LaserJet 3052 all-in-one.

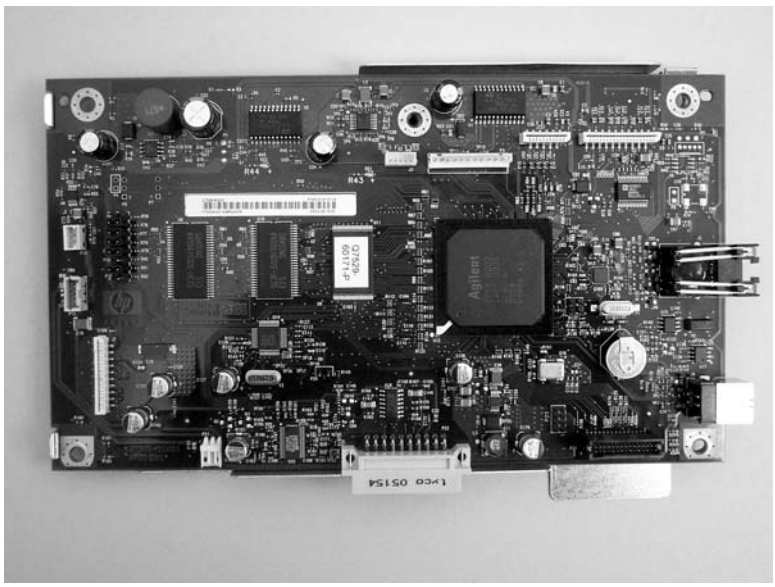


Figure 5-123 HP LaserJet 3052 all-in-one formatter

- Figure 5-124 HP LaserJet 3055 all-in-one formatter and LIU on page 180 shows the formatter and LIU from an HP LaserJet 3055 all-in-one.

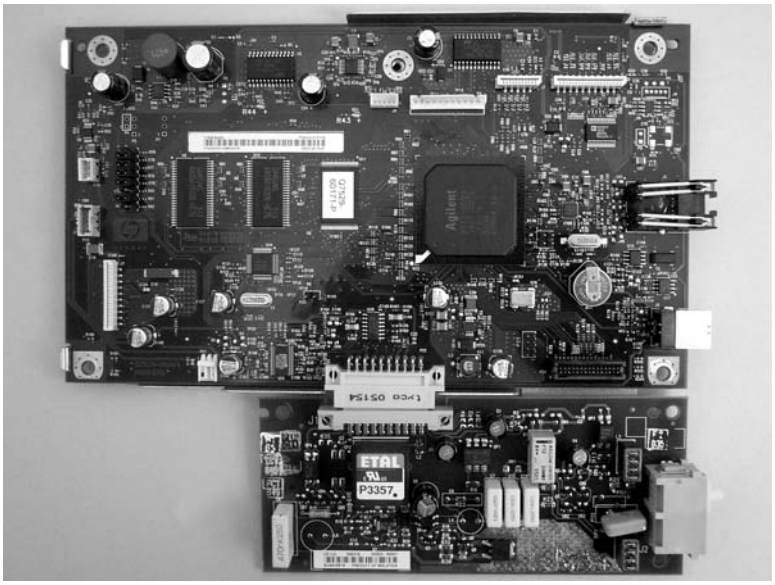


Figure 5-124 HP LaserJet 3055 all-in-one formatter and LIU

4. Remove three screws from the formatter PCA (callout 2). For the HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one, also remove three screws (callout 3) from the LIU. Remove the formatter and any LIU PCAs.

NOTE If you are replacing the LIU, separate the formatter from the LIU by gently pulling them apart.

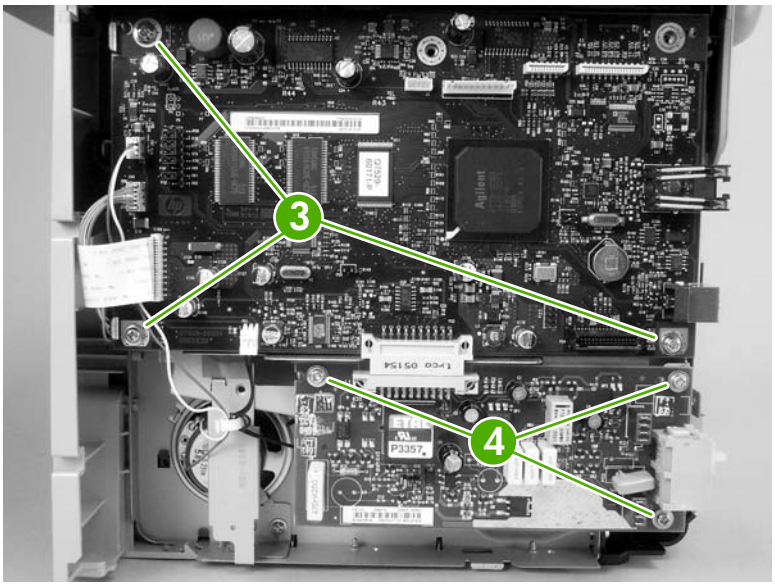


Figure 5-125 Removing the formatter (2 of 3)

5. Gently separate the formatter from the sheet-metal shield. Mount the replacement formatter on this shield.

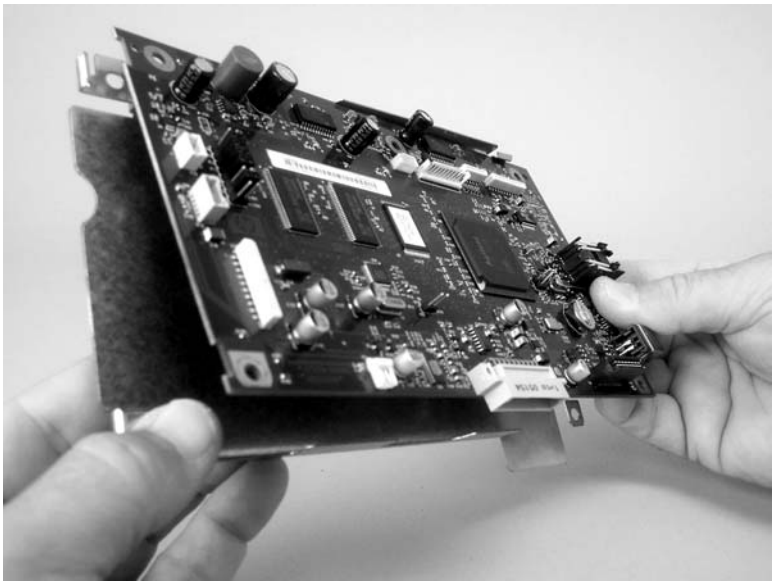


Figure 5-126 Removing the formatter (3 of 3)

Scanner support-frame

1. Remove the following assemblies

   - Scanner assembly. For the HP LaserJet 3050 all-in-one, see Scanner assembly on page 118. For the HP LaserJet 3052/3055 all-in-one, see Scanner assembly on page 148.
   - Left cover. See Side covers on page 167.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 170.
   - Print-cartridge door. See Print-cartridge door on page 169.
   - Front cover. See Front cover on page 172.

2. Remove six screws (callout 1).

CAUTION Be careful not to drop any screws into the printer.

NOTE If you turn over the scanner support-frame after you remove it, the two scanner cushions might fall out and be misplaced.

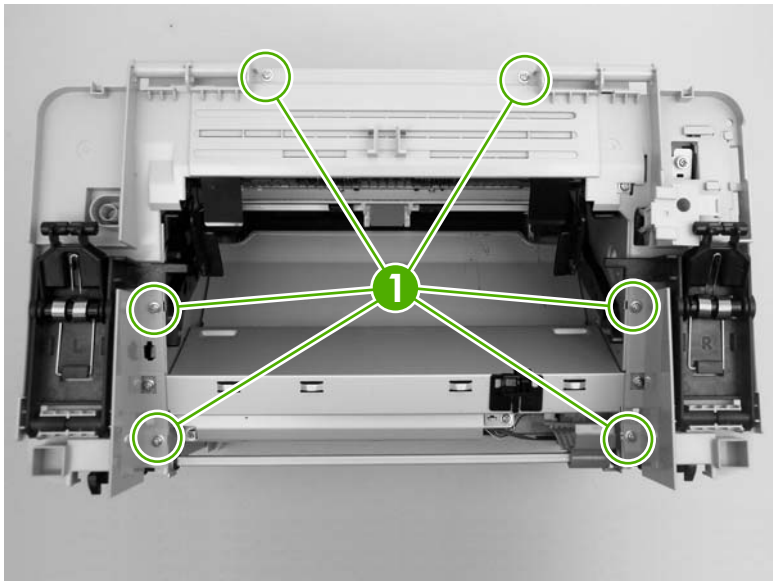


Figure 5-127 Removing the scanner support-frame (1 of 4)

3. Rotate the gear-drive bracket until the retainer on the gear-drive arm aligns with the opening in the bracket, and remove the bracket.

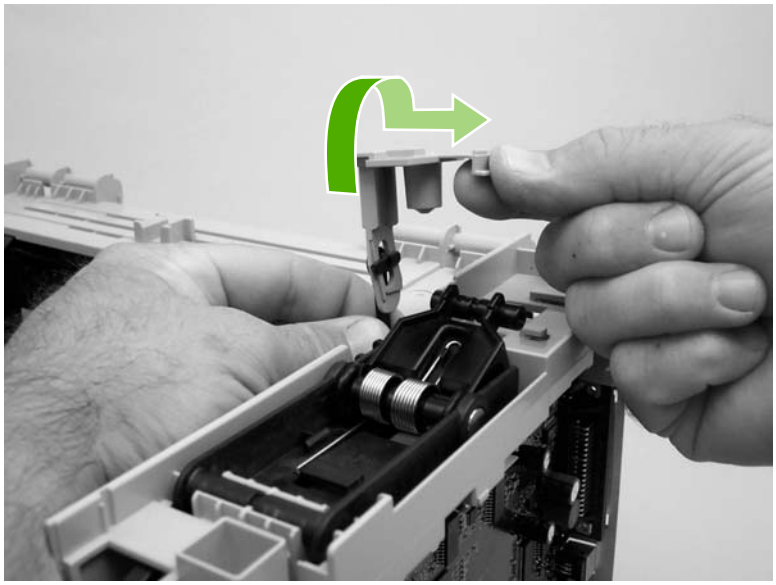


Figure 5-128 Removing the scanner support-frame (2 of 4)

4. Lift the scanner support-frame up and off of the printer.

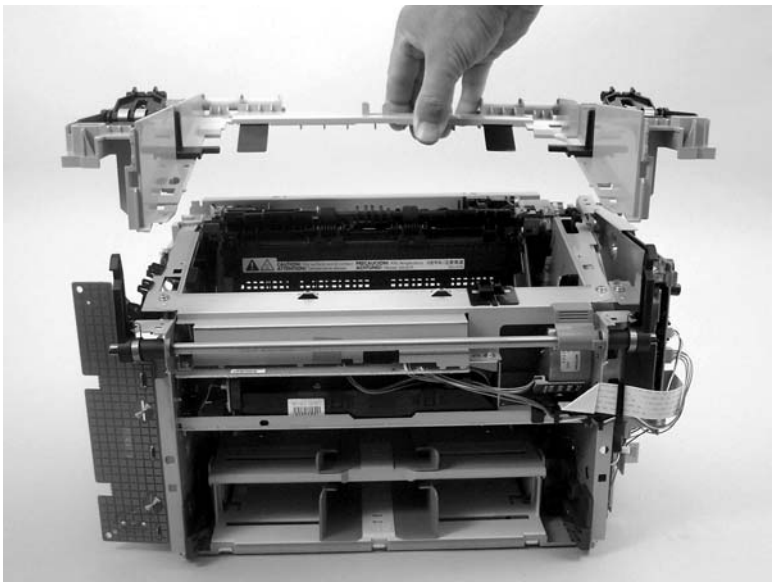


Figure 5-129 Removing the scanner support-frame (3 of 4)

5. If you are removing the scanner support-frame in order to gain access to the fuser, remove two screws (callout 3) and the chassis reinforcement plate (callout 4)

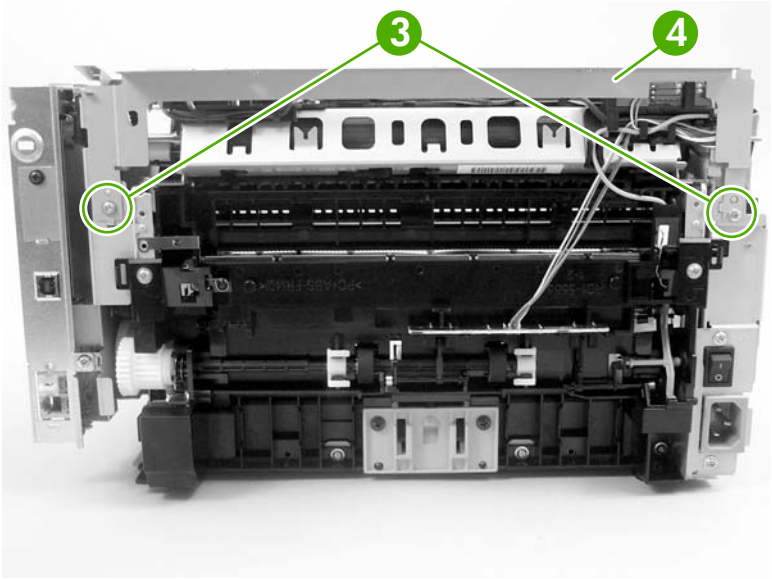


Figure 5-130 Removing the scanner support-frame (4 of 4)

Engine controller unit (ECU)

1. Remove the following assemblies:
   - Scanner assembly. For the HP LaserJet 3050 all-in-one, see Scanner assembly on page 118. For the HP LaserJet 3052/3055 all-in-one, see Scanner assembly on page 148.
   - Left cover. See Side covers on page 167.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 170.
   - Print-cartridge door. See Print-cartridge door on page 169.
   - Front cover. See Front cover on page 172.
   - Scanner support-frame. See Scanner support-frame on page 182.
2. Remove four screws (callout 1).

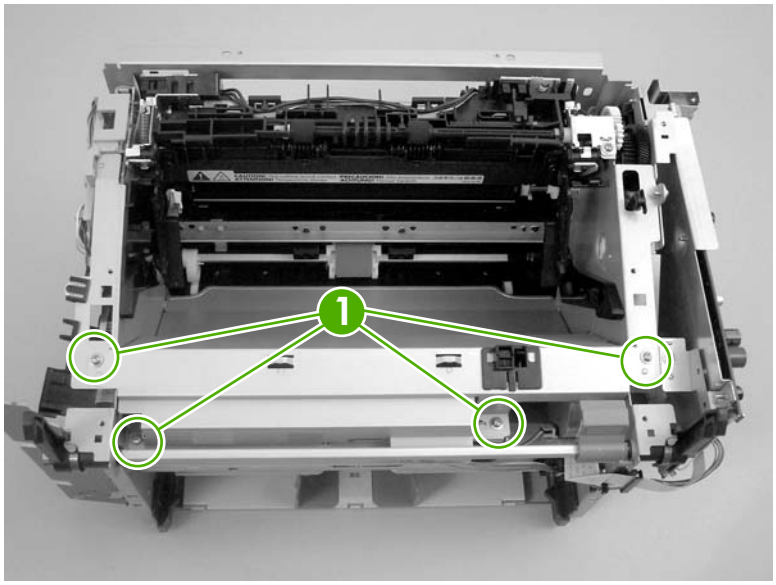


Figure 5-131 Removing the ECU (1 of 6)

3. Use a long flat-blade screwdriver to disengage the two ECU shield retainer hooks, one at each side (left hook shown; callout 2), inside the all-in-one. Push the hooks into the all-in-one to disengage them.

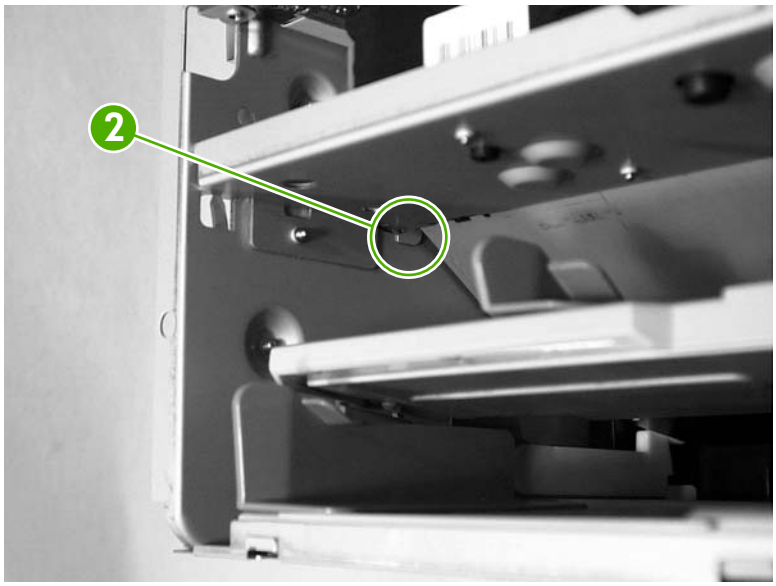


Figure 5-132 Removing the ECU (2 of 6)

4. Disconnect one FFC (callout 3) from the formatter.

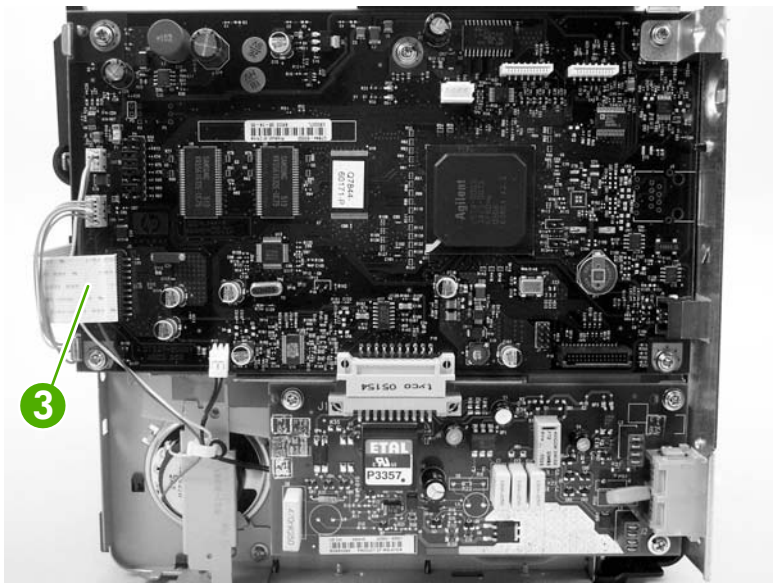


Figure 5-133 Removing the ECU (3 of 6)

5. Disconnect one FFC (callout 4) from the power supply.

CAUTION Do not bend or fold the FFCs during the removal or reinstallation process.

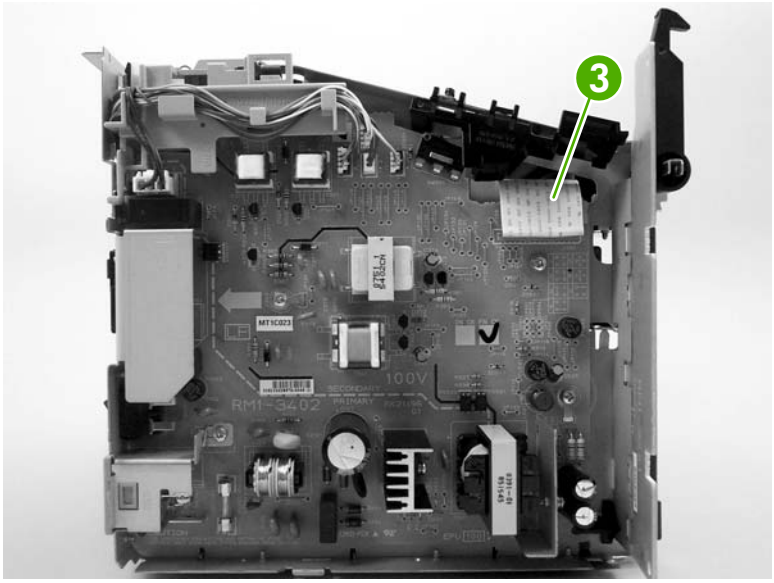


Figure 5-134 Removing the ECU (4 of 6)

6. Disconnect one FFC (callout 5) from the ECU and the wire-harness connector to the main motor (callout 6). Remove one screw (callout 7). Release the wire-harness (callout 8, underneath the ECU) from the retainer slot on the ECU.

Hint Unweave this wire-harness from additional wire looms to create enough slack to disengage it from the slot on the ECU.

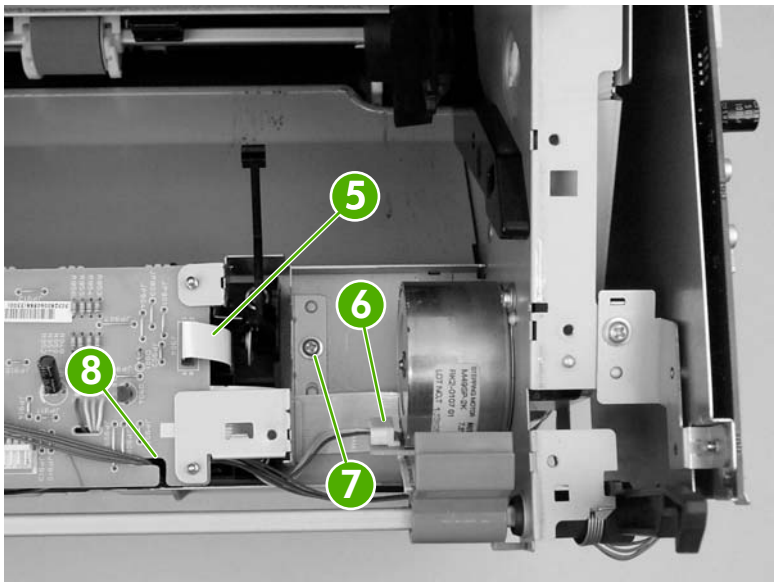


Figure 5-135 Removing the ECU (5 of 6)

7. Carefully remove the ECU from the printer. As you remove it, unweave the wire-harnesses and FFCs from the wire looms, and disconnect one wire-harness connector (callout 9) from the laser/scanner. Remove the ECU.

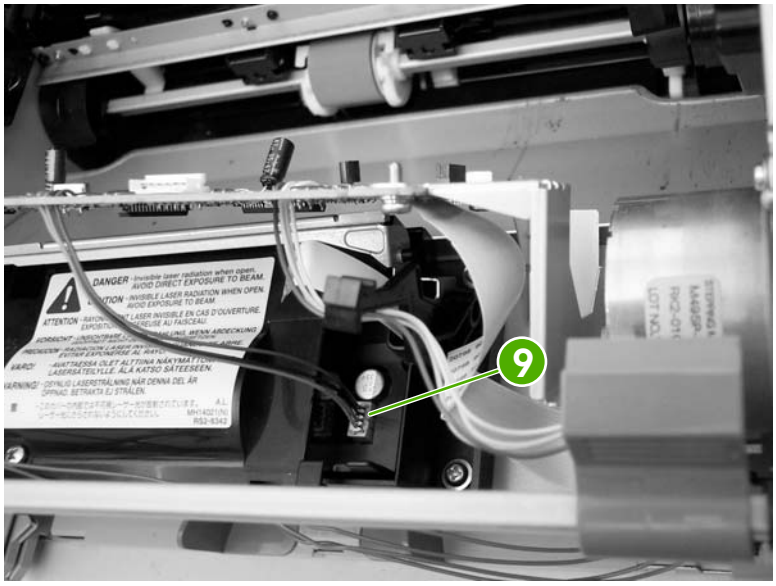


Figure 5-136 Removing the ECU (6 of 6)

Laser/scanner assembly

1. Remove the following assemblies:
   - Scanner assembly. For the HP LaserJet 3050 all-in-one, see Scanner assembly on page 118. For the HP LaserJet 3052/3055 all-in-one, see Scanner assembly on page 148.
   - Left cover. See Side covers on page 167.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 170.
   - Print-cartridge door. See Print-cartridge door on page 169.
   - Front cover. See Front cover on page 172.
   - Scanner support-frame. See Scanner support-frame on page 182.
   - ECU. See Engine controller unit (ECU) on page 185.
2. Remove four screws (callout 1). Remove the laser/scanner assembly.

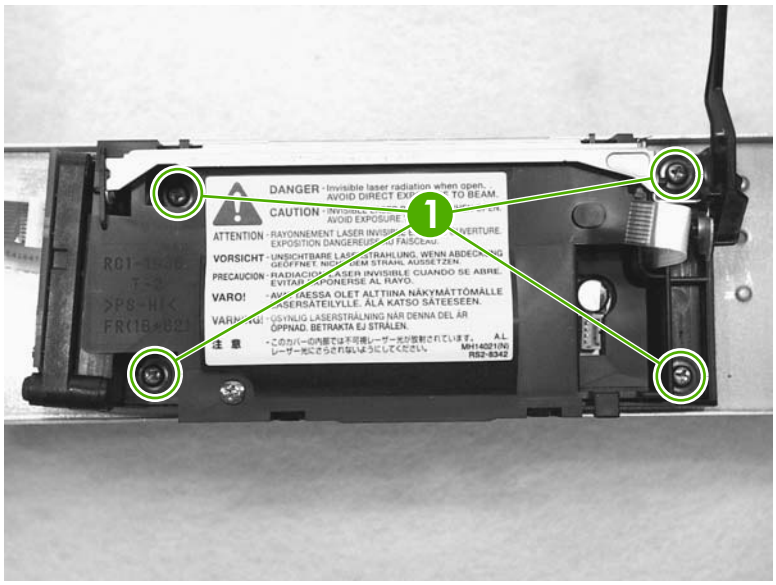


Figure 5-137 Removing the laser/scanner assembly

Main motor

1. Remove the following assemblies:
   - Scanner assembly. For the HP LaserJet 3050 all-in-one, see Scanner assembly on page 118. For the HP LaserJet 3052/3055 all-in-one, see Scanner assembly on page 148.
   - Formatter. See Formatter and line interface unit (LIU) on page 178.
   - Left cover. See Side covers on page 167.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 170.
   - Print-cartridge door. See Print-cartridge door on page 169.
   - Front cover. See Front cover on page 172.
   - Scanner support-frame. See Scanner support-frame on page 182.
   - ECU. See Engine controller unit (ECU) on page 185.
   - Laser/scanner assembly. See Laser/scanner assembly on page 189.
2. Disconnect the motor wire-harness connector (callout 1) and remove one screw (callout 2).

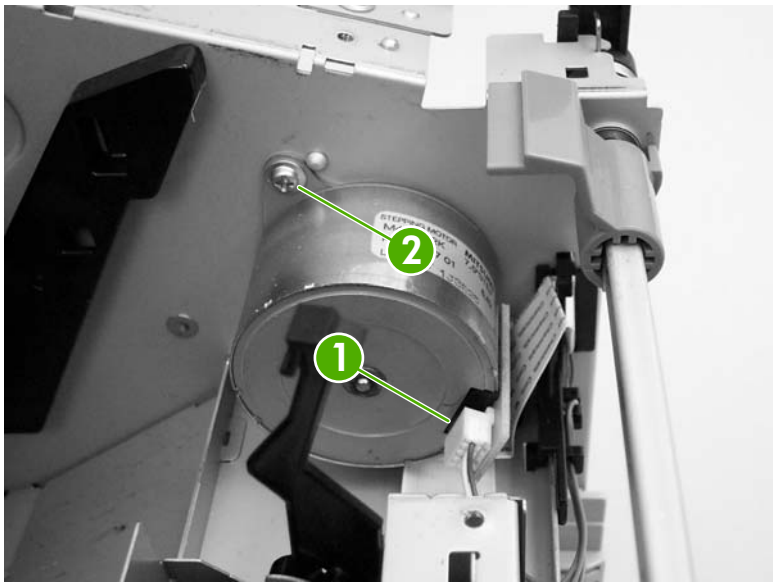


Figure 5-138 Removing the main motor (1 of 2)

3. Remove one screw (callout 3), and remove the main motor.

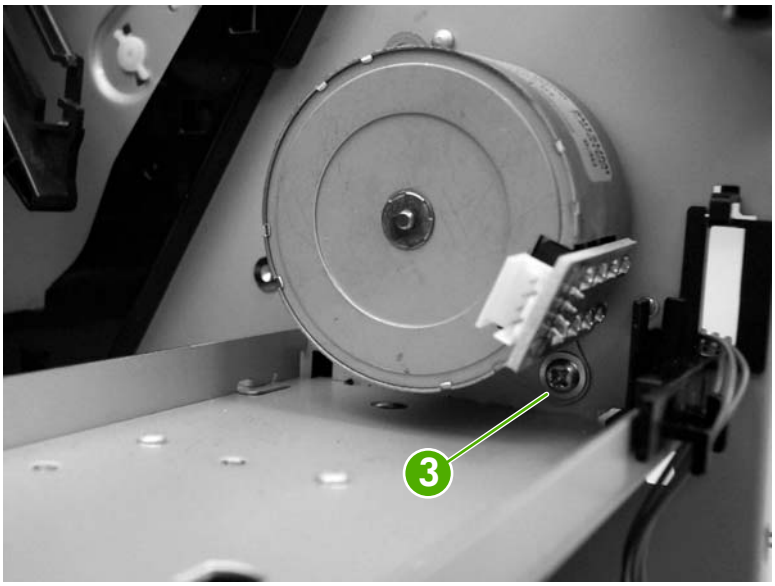


Figure 5-139 Removing the main motor (2 of 2)

Fuser

1. Remove the following assemblies:
   - Scanner assembly. For the HP LaserJet 3050 all-in-one, see Scanner assembly on page 118. For the HP LaserJet 3052/3055 all-in-one, see Scanner assembly on page 148.
   - Left cover. See Side covers on page 167.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 170.
   - Print-cartridge door. See Print-cartridge door on page 169.
   - Front cover. See Front cover on page 172.
   - Scanner support-frame and chassis reinforcement plate. See Scanner support-frame on page 182.
2. Disconnect cables from near the top of the engine power assembly and disconnect the large grounding wire from the back of the printer.
3. Disengage the wire-harnesses from the wire retainers to release the fuser assembly.
4. Remove three screws (callout 1).

NOTE It is not necessary to remove the delivery-sensor PCA, but you need to move it to gain access to one screw.

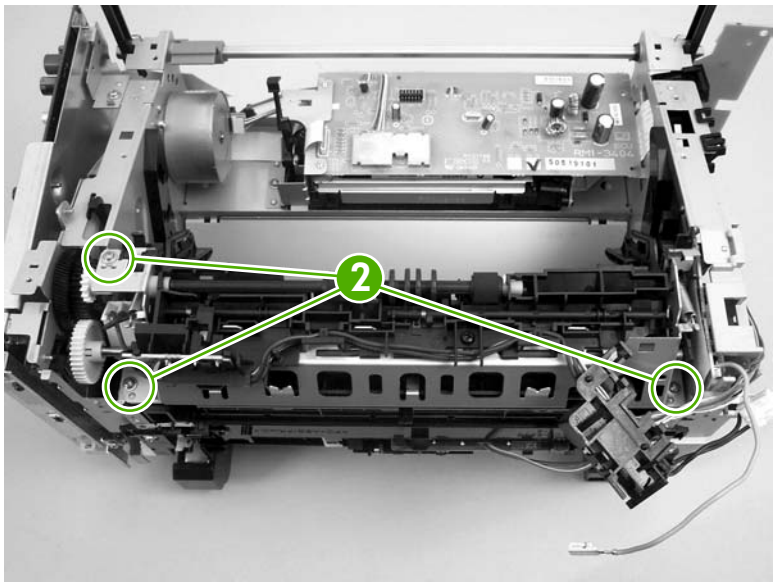


Figure 5-140 Removing the fuser assembly (1 of 2)

5. Lift the fuser assembly at the right and remove it.

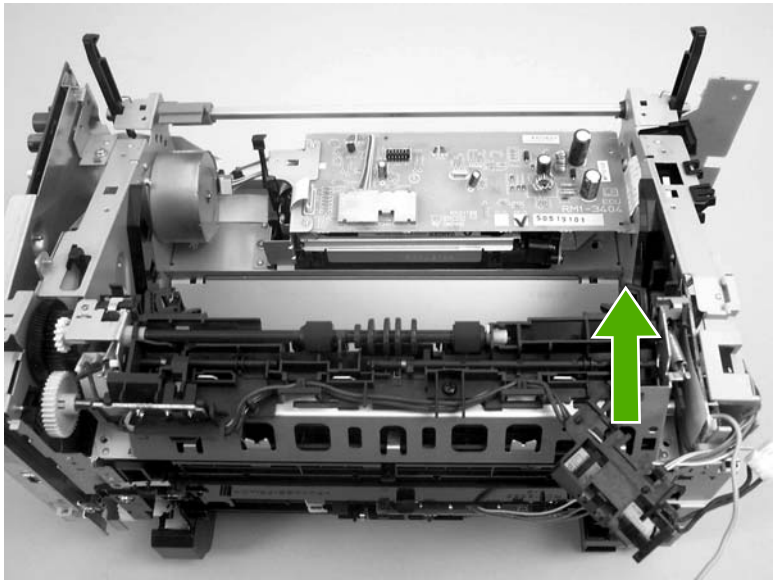


Figure 5-141 Removing the fuser assembly (2 of 2)

NOTE When replacing the fuser assembly, be sure to transfer the delivery-sensor PCB from the old fuser to the new one.

Paper-pickup assembly

1. Remove the following assemblies:
   - Scanner assembly. For the HP LaserJet 3050 all-in-one, see Scanner assembly on page 118. For the HP LaserJet 3052/3055 all-in-one, see Scanner assembly on page 148.
   - Left cover. See Side covers on page 167.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 170.
   - Print-cartridge door. See Print-cartridge door on page 169.
   - Front cover. See Front cover on page 172.
   - Transfer roller. See Transfer roller on page 165.
   - Fuser. See Fuser on page 192.
2. Remove six screws (callout 1).

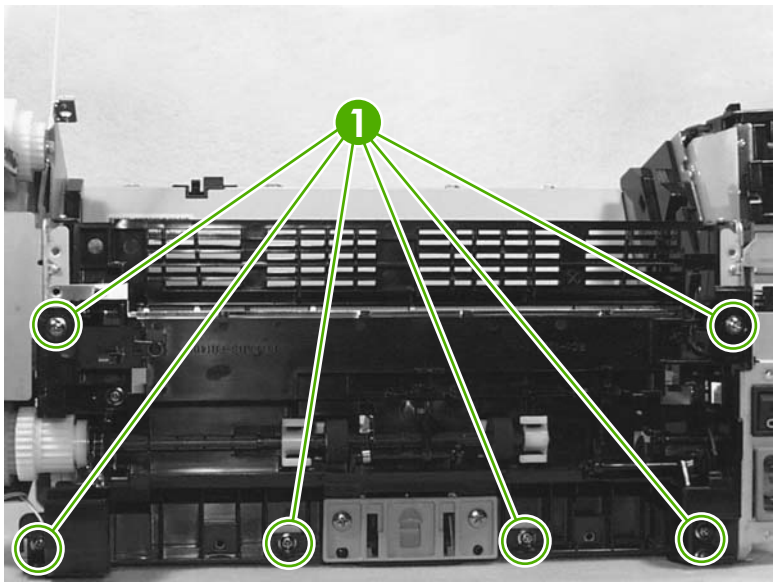


Figure 5-142 Removing the paper-pickup assembly

3. Unplug and remove any additional wire-harnesses as necessary to release the paper-pickup assembly. Unplug and remove the wire from the solenoid to the formatter.
4. Lift the assembly out of the frame.

6 Troubleshooting

- Troubleshooting process
- Control-panel messages
- Jams
- Print image-quality problems
- Scan/copy image-quality problems
- ADF problems
- Fax troubleshooting (HP LaserJet 3050/3055 all-in-one)
- Control-panel-display problems
- Functional checks
- Service-mode functions
- Troubleshooting tools
- Firmware updates and recovery

Troubleshooting process

NOTE The HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one have faxing capabilities. The HP LaserJet 3052 all-in-one *does not* operate as a faxing device.

Troubleshooting checklist

Follow these steps when trying to solve a problem with the all-in-one.

Step number	Verification step	Possible problems	Solutions
1	**Is the power on?** When the all-in-one is connected to a grounded power source and is turned on, the control panel shows **Hewlett-Packard** with moving cursors indicating that the firmware code is loading, and the main motor rotates for approximately 45 to 60 seconds. When the firmware is done loading, **Scanner bulb warming up** might appear on the control-panel display, and the scan head moves back and forth for 10 to 15 seconds. If you lift the scanner cover, you will see that the scanner bulb is lit. Near the end of this time, the ADF motor turns on for about two seconds.	No power as a result of a failed power source, cable, switch, or fuse.	1. Verify that the all-in-one is plugged in. 2. Verify that the power cable is functional and that the power switch is on. 3. Check the power source by plugging the all-in-one directly into the wall or into a different outlet.
		Motor does not start.	1. Verify that the all-in-one is plugged into a working electrical receptacle. 2. Verify that the print cartridge is installed correctly. Follow the instructions on the control panel to remove and replace the cartridge. 3. Verify that the top cover is closed.
		ADF motor does not start.	Open the ADF cover and remove any orange shipping tape inside the ADF. Verify that the ADF connector is connected correctly to the scanner. If the ADF motor still does not rotate, replace the ADF.
		Scanner bulb does not light.	If the scanner bulb does not light, verify that the wire-harness connectors from the scanner to the formatter are connected correctly. If the error persists, replace the following components one at a time until the problem is resolved: scanner assembly, formatter.
2	**Does Ready appear in the all-in-one control panel?** The control panel should function without error messages.	Control panel shows an error.	See Control-panel messages on page 199 for a list of common messages that will help you correct the error.
3	**Do information pages print?** Print a configuration page.	Error message appears on the control-panel display.	See Control-panel messages on page 199 for a list of common messages that will help you correct the error.
		Media does not move smoothly through the all-in-one paper path.	Make sure that the media that meets HP specifications.

Step number	Verification step	Possible problems	Solutions
			Clean the paper path.
		Poor print quality.	See Print image-quality problems on page 223.
4	**Does the all-in-one copy?** Place the configuration page into the ADF and make a copy. The report should feed smoothly through the ADF, and copies should print without print-quality problems. Also make a copy from the flatbed.	Poor copy quality from the ADF.	1. If the print quality from the internal tests and the copy from the flatbed are acceptable, clean the ADF scanning strip. 2. If the ADF is damaged, replace the ADF.
		Media does not move smoothly through the ADF path.	1. Make sure that the media in the ADF meets ADF specifications. 2. Clean the ADF pick roller. 3. If the problem persists, replace the ADF pick roller. 4. If the problem persists, replace the ADF.
		Poor copy quality from the flatbed.	If the print quality from the internal tests and the copy from the ADF are acceptable, clean the flatbed glass.
5	**Does the HP LaserJet 3050/3055 all-in-one send a fax?** Connect the telephone line and press Start Fax to verify that a dial tone exists (using a hand set, if necessary). Attempt to send a fax.	Telephone line is not operational or the all-in-one is not plugged into the telephone line.	Verify that the all-in-one is plugged into a telephone line that you know works.
		Telephone cord is faulty or is plugged into the wrong connector.	1. Try plugging the telephone cord into the other connector. 2. Try a new telephone cord.
		Fax number is incorrect or incomplete.	Check the fax number and retype the correct and complete fax number.
		All-in-one fax settings are set incorrectly.	Review and reset the all-in-one fax settings.
6	**Does the HP LaserJet 3050/3055 all-in-one receive a fax?** Use another fax machine to send a fax to the all-in-one.	Too many telephone devices are plugged in, or telephone devices are not connected in the correct order.	Make sure that the all-in-one is the only device on the telephone line and try again to receive the fax.
		All-in-one fax settings are set incorrectly.	Review and reset the all-in-one fax settings. **NOTE** If the all-in-one is connected to a computer, use the HP Fax Setup Wizard to review and reset fax settings.
7	**Does the all-in-one print from the computer?** Connect the network cable or USB cable to the all-in-one and the computer. Use a word-processing program to send a print job to the all-in-one.	Software is not installed correctly or an error occurred during software installation.	Uninstall and then reinstall the all-in-one software. Verify that you are using the correct installation procedure and the correct port setting.
		The cable is not connected correctly.	Reconnect the cable.
		Incorrect driver is selected.	Select the correct driver.
		Other devices are connected to the USB port.	Disconnect the other devices and try again to print.

Step number	Verification step	Possible problems	Solutions
		A problem might exist with the network connection.	If printing through the network, verify that the device has a valid TCP/IP address by checking the network configuration. If the issue persists, verify that the green LED on the network connector on the back of the device is lit. If it is not lit, there might be a bad network connection, cable, or network device (router or hub). If the issue persists after verifying the above, uninstall and then reinstall the network driver software from the device installation CD. Print a configuration page for reference to the TCP/IP address during reinstallation. If the problem still persists, replace the formatter.
		Port driver problem exists in Microsoft Windows.	Uninstall and then reinstall the all-in-one software. Verify that you are using the correct installation procedure and the correct port setting.
8	**Does the all-in-one scan to the computer?** Turn the all-in-one off and then back on. Initiate a scan from the basic desktop software at the computer.	Cable is not connected correctly.	Reconnect the cable.
		Software is not installed correctly or an error occurred during software installation.	Uninstall and then reinstall the all-in-one software. Verify that you are using the correct installation procedure and the correct port setting.

Control-panel messages

The majority of the control-panel messages are intended to guide the user through typical operation. The control-panel messages indicate the status of the current operation, and include a page count on the second line of the display, if appropriate. When the all-in-one is receiving fax data, print data, or scanning commands, control-panel messages indicate this status. In addition, alert messages, warning messages, and critical error messages indicate situations that might require some action.

Alert and warning messages

Alert and warning messages appear temporarily and might require the user to acknowledge the message by pressing ✓ to resume or by pressing Cancel to cancel the job. With certain warnings, the job might not complete or the print quality might be affected. If the alert or warning message is related to printing and the auto-continue feature is on, the all-in-one will attempt to resume the printing job after the warning has appeared for 10 seconds without acknowledgement.

Alert and warning message tables

Table 6-1 Alert and warning messages

Control panel message	Event log error message	Description	Recommended action
ADF door is open	None	The ADF lid is open or a sensor is malfunctioning.	Make sure that the ADF lid is closed. Remove the ADF and reinstall it. If the message persists, turn off the power by using the power switch, wait at least 30 seconds, and then turn on the power and wait for the all-in-one to initialize. Try another power source.
Canceled copy. Clear document	None	The Cancel button was pressed to cancel the current job while pages were feeding from the ADF. The cancel process does not automatically clear the ADF.	Remove the jammed item. See Jams occur in the automatic document feeder (ADF) on page 218. Then, clear the items in the ADF tray and start over.
Canceled scan. Clear document	None	The Cancel button was pressed to cancel the current job while pages were feeding from the ADF. The cancel process does not automatically clear the ADF.	Remove the jammed item. See Jams occur in the automatic document feeder (ADF) on page 218. Then, clear the items in the ADF tray and start over.
Canceled send. Clear document	None	The Cancel button was pressed to cancel the current job while pages were feeding from the ADF tray. The cancel process does not automatically clear the ADF.	Remove the jammed item. See Jams occur in the automatic document feeder (ADF) on page 218. Then, clear the items in the ADF tray and start over.
Comm. error	None	A fax communication error occurred between the all-in-one and the sender or receiver.	Allow the all-in-one to retry sending the fax. Unplug the all-in-one telephone cord from the wall, plug in a telephone, and try making a call. Plug the all-in-one

Table 6-1 Alert and warning messages (continued)

Control panel message	Event log error message	Description	Recommended action
			telephone cord into a jack for another phone line. Try a different telephone cord.
Device error Press [✓]	None	The all-in-one experienced an internal communication error.	This is a warning message only. Job output might be affected.
Device is busy. Try again later	None	The all-in-one is currently in use.	Wait for the all-in-one to finish the current job.
Doc feeder jam Clear, Reload	None	A piece of media is jammed in the ADF tray.	Open the document release door, clear the jam, close the document release door, and reload the paper into the ADF tray.
Document feeder mispick. Reload	None	Media in the ADF tray was not picked up.	Remove the media from the ADF tray, and then reload it.
Engine comm error	55.4000	The all-in-one experienced an internal communication error.	This is a warning message only. Job output might be affected.
Fax delayed – Send memory full	None	Fax memory is full.	Cancel the fax by pressing ✓ or Cancel. Resend the fax. You might need to send the fax in multiple sections if the error occurs again.
Fax is busy Canceled send	None	The fax line to which you were sending a fax was busy. The all-in-one has canceled sending the fax.	Call the recipient to ensure that the fax machine is on and ready. Check that you are dialing the correct fax number. Check that the **Redial if busy** option is enabled. Check for a dial tone on the phone line by pressing Start Fax. Make sure that the phone is working by disconnecting the all-in-one, plugging in a telephone to the phone line, and making a voice call. Plug the all-in-one telephone cord into a jack for another phone line, and then try sending the fax again. Try a different telephone cord.
Fax is busy Redial pending	None	The fax line to which you were sending a fax was busy. The all-in-one automatically redials the busy number.	Allow the all-in-one to retry sending the fax. Call the recipient to ensure that the fax machine is on and ready. Check that you are dialing the correct fax number. Check for a dial tone on the phone line by pressing Start Fax.

Table 6-1 Alert and warning messages (continued)

Control panel message	Event log error message	Description	Recommended action
			Make sure that the phone is working by disconnecting the all-in-one, plugging in a telephone to the phone line, and making a voice call. Plug the all-in-one telephone cord into a jack for another phone line, and try sending the fax again. Try a different telephone cord.
Fax memory full Canceling recv.	None	During the fax transmission, the all-in-one ran out of memory. Only the pages that fit into memory will be printed.	Print all of the faxes and have the sender resend the fax. Cancel all fax jobs or clear the faxes from memory.
Fax memory full Canceling send	None	During the fax job, the memory filled. All pages of the fax have to be in memory for a fax job to work correctly. Only the pages that fit into memory were sent.	Print all received faxes or wait until all pending faxes are sent. Send the fax again. Cancel all fax jobs or clear the faxes from memory.
Fax recv. error	None	An error occurred while trying to receive a fax.	Ask the sender to resend the fax. Try faxing back to the sender or another fax machine. Check for a dial tone on the phone line by pressing Start Fax. Check that the telephone cord is securely connected by unplugging and replugging the cord. Make sure that you are using the telephone cord that came with the all-in-one. Make sure that the phone is working by disconnecting the all-in-one, plugging in a telephone to the phone line, and making a voice call. Turn off error-correction mode (ECM) and then ask the sender to resend the fax. Turn off V.34 and then ask the sender to resend the fax. Connect the all-in-one to a different phone line.
Fax Send error	None	An error occurred while trying to send a fax.	Try resending the fax. Try faxing to another fax number. Check for a dial tone on the phone line by pressing Start Fax.

Table 6-1 Alert and warning messages (continued)

Control panel message	Event log error message	Description	Recommended action
			Check that the telephone cord is securely connected by unplugging and replugging the cord. Make sure that you are using the telephone cord that came with the all-in-one. Make sure that the phone is working by disconnecting the all-in-one, plugging in a telephone to the phone line, and making a voice call. Connect the all-in-one to a different phone line. Set the fax resolution to **Standard** instead of the default of **Fine**.
Fit to Page on flatbed only	None	The copy reduce/enlarge feature (called "Fit to Page") applies only to copies made from the flatbed scanner.	Use the flatbed or select another reduction/enlargement setting.
Group dial not allowed in group	None	The speed-dial code that you typed is programmed for a group. Adding a group-dial to another group-dial is not allowed.	Add one-touch buttons (programmed as an individual speed dial) or speed-dial codes to a group-dial.
Invalid date	None	An invalid date was entered, such as June 35.	Re-enter the date.
Invalid driver Press [✓]	None	You are using the incorrect printer driver.	Select the printer driver that is appropriate for your all-in-one.
Invalid entry	None	The data or response is invalid.	Use the correct the data or response.
Mem. low 1 copy. Press [cancel]	None	The all-in-one completed making one copy. The remaining copies have been canceled because of low memory.	Press Cancel to clear the error. Break the job into smaller jobs that contain fewer pages.
Memory is low Try again later	None	The all-in-one does not have enough memory to start a new job.	Wait until the current job is finished before starting a new job.
Memory is low. Press [✓]	None	The all-in-one memory has been almost completely filled.	Allow the all-in-one to finish the job, or press Cancel to cancel the job.
Memory low Only 1 copy made	None	The all-in-one does not have enough memory to complete the collated copy job.	Break the job into smaller jobs that contain fewer pages.
No Dial Tone	None	The all-in-one could not detect a dial tone.	If the all-in-one is connected to a PBX line, the PBX system might generate a dial tone that the all-in-one cannot detect. Set the **Detect dial tone** setting to **Off** by using the control panel.

Table 6-1 Alert and warning messages (continued)

Control panel message	Event log error message	Description	Recommended action
			Check for a dial tone on the phone line by pressing Start Fax. Unplug the telephone cord from both the all-in-one and the wall and replug the cord. Make sure that you are using the telephone cord that came with the all-in-one. Unplug the all-in-one telephone cord from the wall, plug in a telephone, and try making a voice call. Plug the all-in-one telephone cord into a jack for another phone line.
No document sent	None	The all-in-one did not scan any pages, or it did not receive any pages from the computer to transmit a fax.	Try sending the fax again.
No fax answer Redial pending	None	The receiving fax line did not answer. The all-in-one attempts to redial after a few minutes.	Allow the all-in-one to retry sending the fax. Call the recipient to ensure that the fax machine is on and ready. Check that you are dialing the correct fax number. If the all-in-one continues to redial, unplug the all-in-one telephone cord from the wall, plug in a telephone, and try making a voice call. Plug the all-in-one telephone cord into a jack for another phone line. Try a different telephone cord.
No fax answer. Canceled send	None	Attempts to redial a fax number failed, or the “Redial-no answer” option was turned off.	Call the recipient to ensure that the fax machine is on and ready. Check that you are dialing the correct fax number. Check that the redial option is enabled. Unplug the telephone cord from both the all-in-one and the wall and replug the cord. Unplug the all-in-one telephone cord from the wall, plug in a telephone, and try making a voice call.

Table 6-1 Alert and warning messages (continued)

Control panel message	Event log error message	Description	Recommended action
			Plug the all-in-one telephone cord into a jack for another phone line.
No fax detected	None	The all-in-one answered the incoming call but did not detect that a fax machine was calling.	Try a different telephone cord. Plug the all-in-one telephone cord into a jack for another phone line.
No paper pickup Press [✓]	None	The all-in-one has failed to pick up a piece of media.	Verify that the media was inserted far enough into the input tray. Reload the media in the input tray and press ✓ to continue the job.
Page too complex Press [✓]	none	The all-in-one could not print the current page because of its complexity.	Press ✓ to clear the message. Allow the all-in-one to finish the job, or press Cancel to cancel the job.
Paper jam in (area)	13.0000	The all-in-one has detected a jam in one of the following areas: the priority input slot, tray 1, the registration area, or the fuser.	Clear the jam from the area indicated on the all-in-one control panel, and then follow the control panel instructions. See Jams on page 211.
Scanner reserved for PC scan	None	A computer is using the all-in-one to create a scan.	Wait until the computer scan has finished, or cancel the scan from the computer software, or press Cancel.
Scanning error Cannot connect	None	The all-in-one cannot transmit scan information to a computer.	Verify that the connection cable is not loose or damaged. Replace the cable if necessary, and try the scan again.
Settings cleared	None	The all-in-one has cleared job settings.	Re-enter any appropriate job settings.

Critical error messages

Critical error messages can indicate some kind of failure. Cycling the power might fix the problem. If a critical error persists, the all-in-one might require service.

Critical error message-tables

Table 6-2 Critical error messages

Control panel message	Description	Recommended action
49 Error	The all-in-one has experienced an internal embedded software error.	Turn off the power by using the power switch, wait at least 30 seconds, and then turn on the power and wait for the all-in-one to initialize.
50.x Fuser Error	The all-in-one has experienced an internal hardware error.	1. Turn off the power by using the power switch, and then wait at least 30 seconds. 2. If a surge protector is being used, remove it. Plug the all-in-one directly into the wall socket. 3. Check the cabling connections to the heating element. 4. Turn on the power and wait for the all-in-one to initialize. 5. If, the error persists, replace the fuser. See Fuser on page 192. **NOTE** The device power **must** remain off for at least 20 minutes for the fuser to cool down and correctly reset. Turn off the power switch, wait at least **20 minutes**, and then use the power switch to turn on the all-in-one and wait for it to initialize.
51 Laser Error	The all-in-one has experienced an internal hardware error.	1. Turn off the power by using the power switch, and then wait at least 30 seconds. 2. If a surge protector is being used, remove it. Plug the all-in-one directly into the wall socket. 3. Check the cabling connections to the laser/scanner assembly. 4. Try connecting the product to a different power source or surge protector. 5. Turn on the power and wait for the all-in-one to initialize. 6. If the error persists, replace the laser/scanner assembly. **HP LaserJet 3050 all-in-one**: See Scanner assembly on page 118. **HP LaserJet 3052/3055**

Table 6-2 Critical error messages (continued)

Control panel message	Description	Recommended action
		all-in-one: See Scanner assembly on page 148.
52 Scanner Error	The all-in-one has experienced an internal hardware error.	1. Turn off the power by using the power switch, and then wait at least 30 seconds. 2. If a surge protector is being used, remove it. Plug the all-in-one directly into the wall socket. 3. Check the FFC connection between the formatter and the scanner. **NOTE** Do not bend or fold the FFCs during the removal or reinstallation process. 4. Try connecting the product to a different power source or surge protector. 5. Turn on the power and wait for the all-in-one to initialize. 6. If the error persists, replace the laser scanner assembly. See Laser/scanner assembly on page 189.
55.1 Error	The all-in-one has experienced an internal hardware error.	1. Turn off the power by using the power switch, and then wait at least 30 seconds. 2. If a surge protector is being used, remove it. Plug the all-in-one directly into the wall socket. 3. Try connecting the product to a different power source or surge protector. 4. Turn on the power and wait for the all-in-one to initialize. 5. If the error persists, replace the (Developer note: What do we replace for a 55.1 error?)
79 Error Turn off then on	The all-in-one has experienced an internal firmware error.	1. Turn off the power by using the power switch, and then wait at least 30 seconds. 2. If a surge protector is being used, remove it. Plug the all-in-one directly into the wall socket. 3. Turn on the power and wait for the all-in-one to initialize. 4. **HP LaserJet 3052/3055 all-in-one only**: Update the firmware. 5. If the error persists, replace the formatter. See Formatter and line interface unit (LIU) on page 178.

Table 6-2 Critical error messages (continued)

Control panel message	Description	Recommended action
ADF door is open (HP LaserJet 3052/3055 all-in-one only) (HP LaserJet 3052/3055 all-in-one only)	The ADF lid is open or a sensor is malfunctioning.	Make sure the ADF lid is closed. If the ADF motor cover was removed during product servicing, make sure that the cover is installed correctly and that the ADF lid can close correctly. See Figure 5-49 ADF cover correctly installed on page 133. Make sure that the ADF lid is completely seated. If necessary, remove the ADF and reinstall it. Turn off the power by using the power switch, wait at least 30 seconds, and then turn on the power and wait for the product to initialize. Try another power source. If the sensor is not functioning, replace the ADF(the ADF is part of the flatbed lid). See Flatbed lid on page 133.

Table 6-2 Critical error messages (continued)

Control panel message	Description	Recommended action
Scanner Bulb Failure (HP LaserJet 3052/3055 all-in-one only)	The scanner assembly experienced a scanner-bulb error.	Turn off the power by using the power switch, wait at least 30 seconds, and then turn on the power and wait for the product to initialize. Try another power source. If the error persists, lift the flatbed to see if the scanner bulb is illuminating. If it is not illuminating, replace the scanner assembly. See Scanner assembly on page 148. If the bulb is illuminating, the scan module might be too far to the right to find the calibration strip during startup. Use the following procedure to move the scan module so it begins the startup cycle farther to the left: 1. Cycle the power and watch the movement of the scan module. The scan module moves to the left and the bulb illuminates. When it does, cycle the power again. 2. Repeat the first step until the scan module is about 3 centimeters (about 1 inch) from the right edge of the scan glass. 3. Turn on power by using the power switch. If the error persists, replace the scanner assembly. See Scanner assembly on page 148.
Scanner Error [#] Turn off then on (HP LaserJet 3052/3055 all-in-one only)	1 = DarkFind 2 = LMWTempFind 3 = BulbWarmupFromOff 4 = BulbWarmupFromCoarse 5 = CalLabelFind 6 = DocOriginFind 7 = LMWFinalFind 8 = CalLabelFindAfterScan 9 = CalLabelFindPriorToStandby 10 = DocOriginFindPriorToStandby 11 = BulbWarmupFromStandby	1. Power cycle the all-in-one. 2. If the error persists, replace the scanning assembly. See for information about replacing the HP LaserJet 3052/3055 all-in-one scanning assembly. 3. If the error persists, replace the formatter. See Formatter and line interface unit (LIU) on page 178.

Event-log codes

These codes appear in the event-log section of the configuration report. Use this table to associate an event-log code with a description of the event.

Table 6-3 Event-log codes

Event code	Event sub-code	Event
13	00	Jam
20	00	Memory out
20	10	Receive-fax directory is missing
20	20	Send-fax directory is missing
20	30	Send-ID file is corrupted
20	40	Receive-ID file is corrupted
20	50	Fax log is corrupted
20	60	Flash init is required because of a firmware upgrade
20	6060	Write to flash failed
21	00	Page punt
41	20	Beam-detect malfunction
49	(line number)	Firmware asserts
50	10	Low-fuser-temperature error
50	20	Slow-fuser error
50	30	High-fuser-temperature error
52	00	Scanner error
55	40	Engine-communication timeout error
57	00	Fan-motor error
79	00	79 service, firmware exception
79	0001	79 service, firmware ASIC fault
79	2	Access error
79	3	Address error
79	4	Illegal instruction
79	8	Privilege violation
79	9	Trace fault
79	10	Unimplemented line-a opcode
79	11	Unimplemented line-f opcode
79	14	Format error
79	15	Uninitialized interrupt
79	120	ASIC fault

Table 6-3 Event-log codes (continued)

Event code	Event sub-code	Event
79	5 or 6 or 7	Reserved
30016	0	Insufficient memory
30017	0	Print page punt
30035	0	NVRAM error
30036	0	NVRAM service error
30108	0	MIO connection break
30109	0	Data communication error
30110	0	MIO buffer overflow
35028	0	Bad MIO
35031	0	Invalid personality
50003	0	Bad fuser
50004	0	Bad beam detect
50005	0	Bad scanner motor
50007	0	Engine-communication error
50012	0	Bad malfunction
50013	0	Laser malfunction

Jams

This section contains instructions for clearing jams from the all-in-one.

CAUTION Always try to remove a jam in the direction that the media feeds through the printer.

Causes of jams

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

- The input trays are loaded incorrectly or overfilled, or the input-tray guides are not set correctly.
- Media is added to or removed from an input tray during a print job or an input tray is removed from the all-in-one during a print job.
- The cartridge door is opened during a print job.
- Too many sheets have accumulated in an output area, or sheets are blocking an output area.
- The print media that is being used does not meet HP specifications. See Choosing paper and other print media on page 21.
- The media is damaged or has objects attached to it, such as staples or paper clips.
- The environment in which the print media was stored is too humid or too dry. See Operating environment on page 26.

Tips to avoid jams

- Verify that the input tray is not overfilled. The input tray capacity varies depending on the type of print media that you are using.
- Verify that the media guides are adjusted correctly.
- Check that the input tray is securely in place.
- Do not add print media into the input tray while the all-in-one is printing.
- Use only HP-recommended media types and sizes. See Supported media weights and sizes on page 21 for more information about print media types.
- Do not let print media stack up in the output bin. The print media type and the amount of toner used affect the output-bin capacity.
- Check the power connection. Make sure that the power cord is firmly connected to both the all-in-one and the power supply box. Plug the power cord into a grounded power outlet.

Where to look for jams

Jams can occur in these locations:

- Inside the all-in-one
- In output areas
- In the ADF

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 all-in-one.

Loose toner might remain in the all-in-one after a jam. This problem typically resolves itself after a few sheets have been printed.

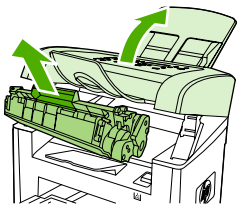
Print cartridge area

To clear a jam in the print cartridge area, perform the following steps:

CAUTION Do not use sharp objects, such as tweezers or needle-nose pliers, to remove jams. Damage caused by sharp objects will not be covered by the warranty.

When removing jammed media, pull the jammed media straight away from the all-in-one. Pulling jammed media out of the all-in-one at an angle can damage the all-in-one.

1. Open the print-cartridge door, and remove the print cartridge.



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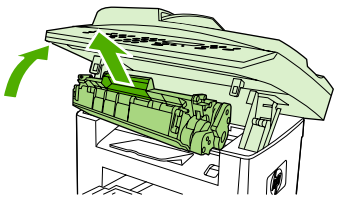

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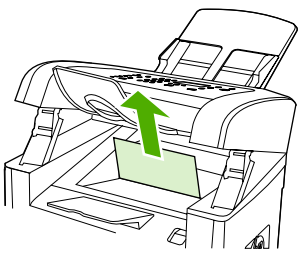
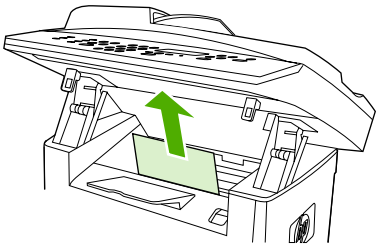
CAUTION To prevent damage to the print cartridge, minimize its exposure to direct light.

2. With both hands, grasp the side of the media that is most visible (this includes the middle), and carefully pull it free from the all-in-one.



HP LaserJet 3050



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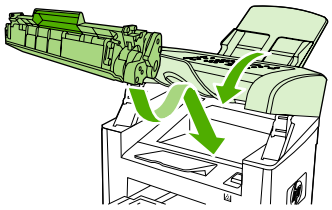
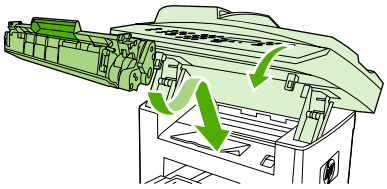
3. Replace the print cartridge and close the print-cartridge door.



HP LaserJet 3050



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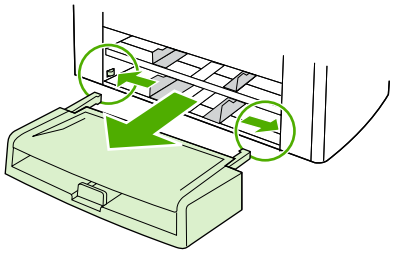
Input trays

To clear a jam in the input trays, perform the following steps:

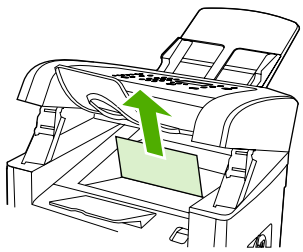
CAUTION Do not use sharp objects, such as tweezers or needle-nose pliers, to remove jams. Damage caused by sharp objects will not be covered by the warranty.

When removing jammed media, pull the jammed media straight away from the all-in-one. Pulling jammed media out of the all-in-one at an angle can damage the all-in-one.

1. Open the tray 1 and pull any visible jammed media out of the all-in-one.



2. If no media is visible, open the print-cartridge door, remove the print cartridge, and rotate the upper media guide. Carefully pull the media up and out of the all-in-one.



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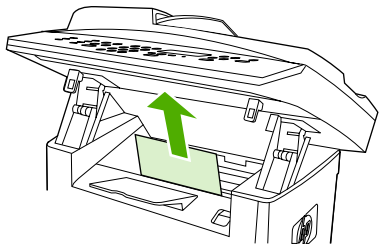

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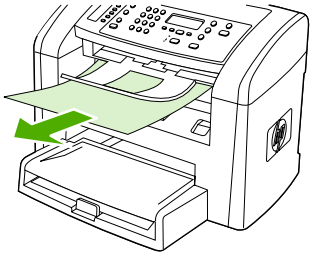
3. Close tray 1.

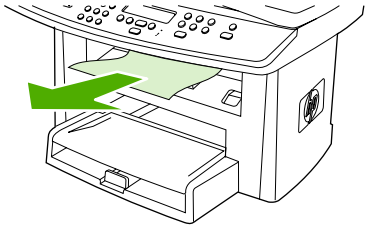
Output bin

CAUTION Do not use sharp objects, such as tweezers or needle-nose pliers, to remove jams. Damage caused by sharp objects will not be covered by the warranty.

With both hands, grasp the side of the media that is most visible (this includes the middle), and carefully pull it free from the all-in-one.



HP LaserJet 3050



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Solving print paper-feed problems

Use the following tables to solve paper-feed problems when printing.

Paper-feed solutions, printing

Pages are coming out curled or wrinkled.

Cause	Solution
Paper curl is inherent to the laser printing processes, and occurs when paper is subjected to heat. Paper curl tends to relax as the paper cools while resting on a flat surface.	Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*. Remove the media, turn it over, and reload it.
Media is curled or wrinkled when printing.	In the printer driver, on the **Paper** or **Paper/Quality** tab, select a lighter-weight media type, such as **Light <80 g/m2**, to reduce the fuser temperature.
Media is curled when faxing or copying.	Try different media.
Media is not stored correctly.	Whenever possible, store paper in its sealed ream at room temperature.
The media is too long for the printer output bin.	Use the long-media extension.

Print is misaligned on the page (skewed pages).

Cause	Solution
The media input tray is overfilled.	Remove some of the media.
The input-tray guides are not set correctly, are broken, or are missing.	Be sure to center the media by using the input-tray guides. Verify that the guides are not adjusted too tightly or too loosely against the paper. Check for broken or missing guides and replace as necessary.
The media weight or surface finish does not meet HP specifications.	Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*.

The printer feeds multiple sheets or jams frequently from the main input tray or priority input tray.

Cause	Solution
Input-tray guides are not adjusted correctly.	Slide the guides against the sides of the stack in the media input tray or the priority input tray to center the stack. Make sure that the guides are not adjusted too tightly.
Media was not removed from the main input tray before refilling the tray.	Always remove media from the main input tray before refilling it.
The main input tray or priority input tray is overfilled.	Remove some of the sheets. The main input tray can hold up to 250 sheets of 80-g/m ^{2} (20-lb) bond-weight paper.
The paper was poorly cut by the manufacturer and is sticking together.	“Break” the ream of paper by curving it into an upside-down u-shape; this can effectively decrease multifeeds. Also try turning the paper around to feed the opposite end first, or use a different type of paper.
Media does not meet HP specifications for print media.	Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*.

The printer feeds multiple sheets or jams frequently from the main input tray or priority input tray.

Cause	Solution
The output capacity was exceeded in the output bin.	Do not allow more than 100 sheets of 80 g/m^2 (20-lb) bond-weight paper (less for heavier media) to fill the paper output bin.
The pickup roller is dirty or damaged.	Clean the pickup roller. Replace the pickup roller. See Printer pickup roller on page 159.
The separation pad is dirty or damaged.	Clean the separation pad. Replace the separation pad. See Printer separation pad on page 157.
A sensor is not operating properly.	Check the sensors to make sure that none are jammed. If a jammed sensor cannot be fixed, replace the sensor.

Jams occur in the automatic document feeder (ADF)

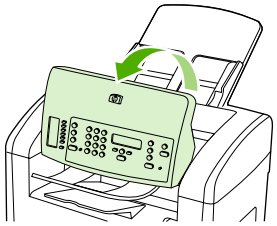
Occasionally, media becomes jammed during a fax, copy, or scan job.

You are notified of a media jam by the **Doc feeder jam Clear, Reload** message that appears on the all-in-one control-panel display.

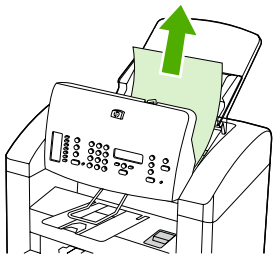
- The ADF input tray is loaded incorrectly or is too full. See Loading documents to fax, copy, or scan on page 34 for more information.
- The media does not meet HP specifications, such as those for size or type. See Choosing paper and other print media on page 21 for more information.

To clear a media jam from the ADF (HP LaserJet 3050 all-in-one)

1. Open the ADF lid.



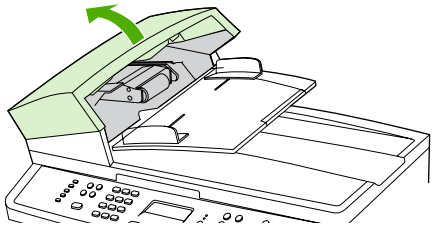
2. Carefully remove jammed media. Gently try to remove the page without tearing it.



3. Close the ADF lid.

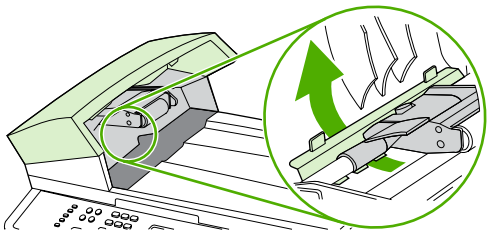
To clear a media jam from the ADF (HP LaserJet 3052/3055 all-in-one)

1. Open the ADF cover.

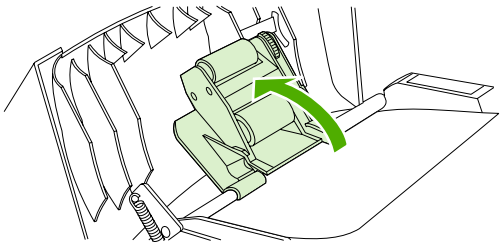


NOTE Verify that any shipping tape inside the ADF has been removed.

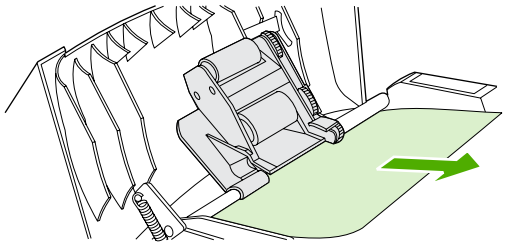
2. Remove the jam cleanout part. Using both hands, lift up on the two handles until the part unsnaps. Rotate and lift out the cleanout part and set it aside.



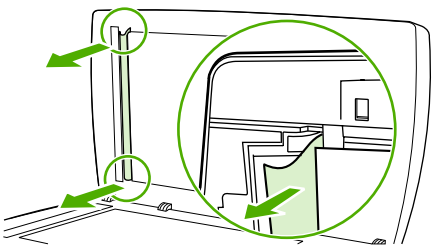
3. Lifting the green lever, rotate the pick mechanism until it stays open.



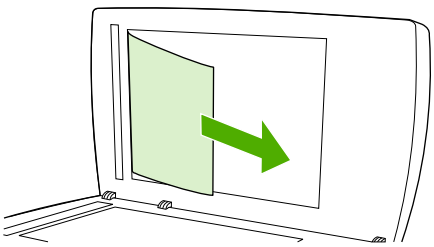
4. Gently try to remove the page without tearing it. If you feel resistance, go to the next step.



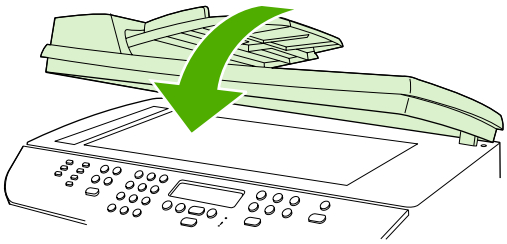
5. Open the ADF lid and gently loosen the media by using both hands.



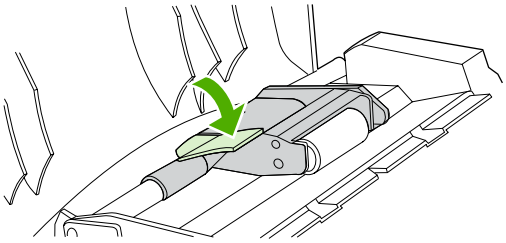
6. When the media is free, gently pull it out in the direction shown.



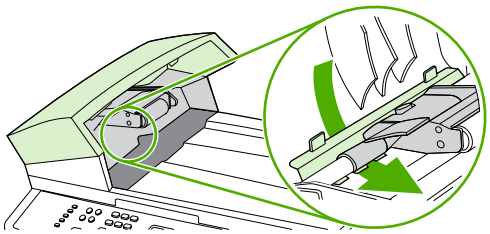
7. Close the lid to the flatbed scanner.



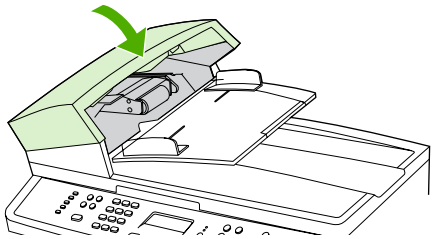
8. Lower the green lever.



9. Reinstall the cleanout part by inserting it as shown. Push down on the two tabs until the part snaps into place. Install the cleanout part correctly, because future jamming might occur if the cleanout part is not replaced correctly.



10. Close the ADF lid.



Solving ADF paper-feed problems

Use the following tables to help solve paper-feed problems when scanning or copying.

Paper-feed solutions, scanning/copying

Long pages stop feeding through the ADF.

Cause	Solution
The document is too long.	The maximum document length is 381 mm (15 inches). If the document is too long, copy segments of it and scan each copy.
The paper-delivery sensor is damaged.	Check the paper-delivery sensor to make sure it is not jammed. If a jammed sensor cannot be fixed, replace the sensor.

Scanned items are crooked.

Cause	Solution
The media input tray guides are not set correctly, are broken, or are missing.	Be sure to center the media by using the input-tray guides. Verify that the guides are not adjusted too tightly or too loosely against the paper. Check for broken or missing guides and replace as necessary.

Pages refeed into the ADF.

Cause	Solution
The media is damaged. Make sure that the media is flat (not folded) and that it meets weight specifications.	Make sure that the media is not folded or torn, and that it meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*.

The ADF feeds multiple sheets or jams frequently from the media input tray.

Cause	Solution
The input-tray guides are not adjusted correctly.	Remove the document from the media input tray. Straighten the item and then reinsert it. Slide the guides against the sides of the item to center it. Make sure that the guides are not adjusted too tightly.
The input tray is overfilled.	Remove some of the sheets. The media input tray can hold up to 30 (HP LaserJet 3050 all-in-one) or 50 (HP LaserJet 3052/3055 all-in-one) pages, depending on the thickness of the pages.
The item is too thick, too slick, or otherwise does not meet specifications.	Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*. Use the flatbed (HP LaserJet 3052/3055 all-in-one) to make the scan or copy.
The ADF pickup roller is dirty or worn.	Clean or replace the ADF pickup roller. For information about cleaning the HP LaserJet 3052/3055 all-in-one pickup roller, see To clean the ADF pickup-roller assembly (HP LaserJet 3052/3055 all-in-one) on page 44. For information about replacing the HP LaserJet 3050 all-in-one pickup roller, see

The ADF feeds multiple sheets or jams frequently from the media input tray.

Cause	Solution
	Pickup roller on page 130. For information about replacing the HP LaserJet 3052/3055 all-in-one pickup roller, see ADF pickup roller and load-arm assembly (HP LaserJet 3052/3055 all-in-one) on page 143.
The ADF document feed guide is not installed correctly.	Make sure that both sides of the ADF document feed guide are installed correctly.
The ADF pickup roller is damaged or worn.	**HP LaserJet 3050 all-in-one**: Replace the scanner assembly. See Scanner assembly on page 118. **HP LaserJet 3052/3055 all-in-one**: Replace the ADF pickup roller See ADF pickup roller and load-arm assembly (HP LaserJet 3052/3055 all-in-one) on page 143.
The ADF separation pad is dirty, damaged, or worn.	Replace the ADF separation pad. See Separation-pad assembly on page 116 for information about replacing the HP LaserJet 3050 all-in-one separation-pad assembly or see ADF separation pad on page 141 for information about replacing the HP LaserJet 3052/3055 all-in-one separation pad.
The sensor is not operating correctly.	Check the sensor to make sure it is not jammed. If a jammed sensor cannot be fixed, replace the ADF assembly.
A problem exists in the ADF path.	Check the path for obstructions. Readjust as necessary or replace the ADF assembly (the ADF assembly is part of the flatbed lid for the HP LaserJet 3052/3055 all-in-one). See Scanner assembly on page 118 or Flatbed lid on page 133.

Print image-quality problems

If the problem occurs when printing, see Solving print image-quality problems on page 224.

If the problem occurs when copying or scanning, see Scan/copy image-quality problems on page 232.

NOTE Some image-quality problems can be isolated by performing printer functional tests. See Functional checks on page 247. Image quality problems can also be caused by using cables that are not USB cables.

Checking the print cartridge

Image-formation defects are frequently the result of problems in the print cartridge. If the source of the defect is not immediately evident, always replace the print cartridge before troubleshooting the image defects.

Use the following checklist to make sure that the print cartridge still works.

- ☐ Make sure that the print cartridge is seated correctly.
- ☐ Check the print cartridge to see if it has been disassembled or refilled.
- ☐ Inspect the print cartridge to see if toner is leaking through worn seals.
- ☐ Check the surface of the photosensitive drum in the cartridge to see if it has been damaged or scratched. Touching the drum contaminates the photosensitive surface and can cause spotting and image defects.
- ☐ Blurred areas on printed pages indicate that the photosensitive drum in the cartridge has been overexposed to light. Because overexposure to light causes permanent damage to the photosensitive drum, the cartridge should be replaced.

To redistribute the toner in the print cartridge

Before installing a new print cartridge or when the toner begins to run low, gently shake the print cartridge back and forth to redistribute the toner.

Solving print image-quality problems

Use the following tables to help solve problems with printed pages.

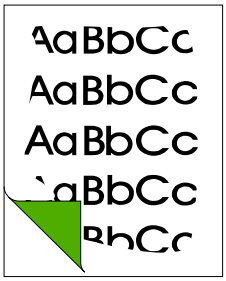
NOTE Some image-quality problems can be isolated by performing printer functional tests. See Functional checks on page 247. Image-quality problems can also be caused by using cables that are not USB cables.

Print image-quality solutions

Pages do not print.

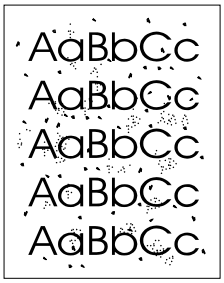
Cause	Solution
The product is not plugged in, or the power is not on.	Make sure that the product is plugged into a working wall outlet or power strip and that the power switch is in the on position.
The computer cable is loose.	Check that the USB cable between the product and the computer is securely connected.
The tape was not removed from the print cartridge.	Remove the print cartridge, remove the tape, and reinstall the print cartridge.
The print cartridge is out of toner.	Replace the print cartridge.
The media does not meet HP specifications (for example, it is too moist or too rough).	Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*.

Parts of the page around the edges are not printing.



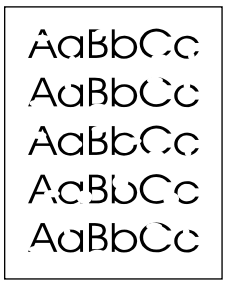
Cause	Solution
The product cannot print to the edge of the media. The printer has minimum margins on each edge of 6 mm (0.25 inch).	To fit the image into this printable area, slightly reduce the size of the image.
The reduction setting is set incorrectly.	Check the reduction setting in the “Print” or “Setup” window from within the program that you are using.

Toner specks appear on the printed page.



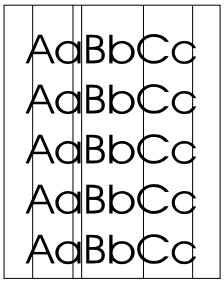
Cause	Solution
The media does not meet HP specifications (for example, it is too moist or too rough).	Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*.
The print path needs to be cleaned.	Clean the print path. See Cleaning the all-in-one on page 40.

Characters are only partially printed (also referred to as dropouts).



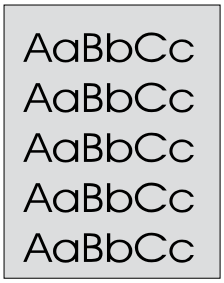
Cause	Solution
A single sheet of media is defective.	Try reprinting the job.
The print density needs to be adjusted.	Adjust the print density from HP ToolboxFX.
The moisture content of the paper is inconsistent, or the paper has moist or wet spots on the surface.	Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*.
The paper was damaged by inconsistent manufacturing processes.	Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*.
Draft mode or **EconoMode** is selected in the driver.	Try the normal or best setting.
The print cartridge is defective.	Replace the print cartridge.

Vertical lines appear on the printed page.



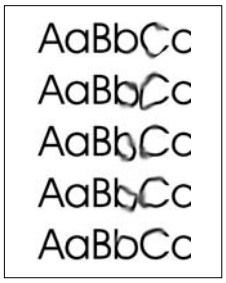
Cause	Solution
The priority input tray is not in place.	Adjust the priority input tray.
The photosensitive drum inside the print cartridge is scratched.	Replace the print cartridge.
The fuser is damaged or has an obstruction.	Replace the fuser. See Fuser on page 192.

The printed page has a gray background.



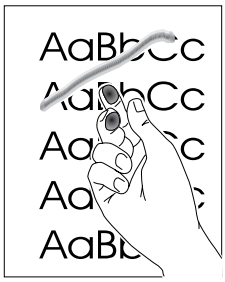
Cause	Solution
The priority input tray is not in place.	Adjust the priority input tray.
The print density setting is too high.	Decrease the amount of background shading by using HP ToolboxFX.
The media basis-weight is too high.	Change the media to a lower basis-weight.
The humidity level is too low.	Very low humidity can increase the amount of background shading. Move the product to a different location, or decrease the background shading by using HP ToolboxFX. If this happens during copying, set the light/dark setting to a light value.
The print cartridge needs to be replaced.	Replace the print cartridge.

Toner smears appear on the printed page.



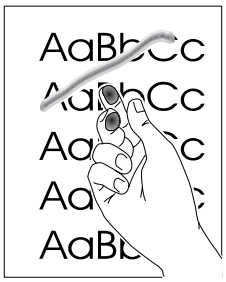
Cause	Solution
If the toner smears appear on the leading edge of the media, the media guides are dirty.	Wipe the media guides with a dry, lint-free cloth.
The media does not meet HP specifications (for example, it is too moist or too rough).	Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*.
The print cartridge needs to be replaced.	Replace the print cartridge.
The fuser temperature is too low. The fuser temperature varies according to the type of media being used.	On the printer-driver **Paper** tab, under **Type is:**, select the appropriate media type from the drop-down list. If the error persists, replace the ECU. See Engine controller unit (ECU) on page 185.

The toner is loose, and it does not stay attached to the printed page.



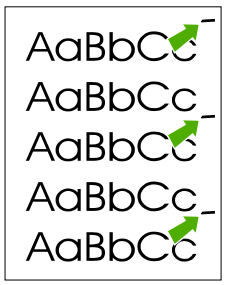
Cause	Solution
The inside of the printer is dirty.	Clean the print path. See Cleaning the all-in-one on page 40.
The media does not meet HP specifications (for example, it is too moist or too rough).	Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*.
The driver is not set for the correct media.	1. On the printer-driver **Paper** tab, under **Type is:**, select the correct media type from the drop-down list. 2. Select the correct media by using HP ToolboxFX.
The power strip is not working correctly.	Plug the product directly into a working ac outlet.
The fuser temperature is too low. The fuser temperature varies according to the media type being used.	On the printer-driver **Paper** tab, under **Type is:**, select the correct media type from the drop-down list. If the error persists, replace the ECU. See Engine controller unit (ECU) on page 185.

The toner is loose, and it does not stay attached to the printed page.



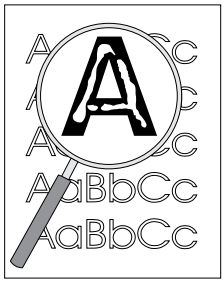
Cause	Solution
The fuser film is torn or has holes.	Replace the fuser. See Fuser on page 192.
The fuser film is damaged.	Check the fuser film for tears or holes. Replace the fuser, if necessary. See Fuser on page 192.
The print cartridge needs to be replaced.	Replace the print cartridge.

Repetitive vertical defects appear on the printed page.



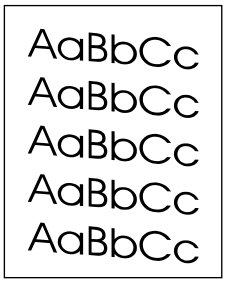
Cause	Solution
If the repetitive mark occurs at equal distance between marks, either the print cartridge or a printer roller is damaged.	Use the defect ruler to identify the spacing. Check the appropriate component and replace it, if necessary. See Repetitive image defect ruler on page 278.
The internal parts have toner on them.	If the defects occur on the back of the page, the problem will probably correct itself after a few more printed pages. Otherwise, clean the printer. See Cleaning the all-in-one on page 40.
The driver is not set for the correct media.	1. On the printer-driver **Paper** tab, under **Type is:**, select the correct media type from the drop-down list. (This affects only the current print job.) 2. Select the correct media from HP ToolboxFX.

Characters are poorly formed and are producing hollow images.



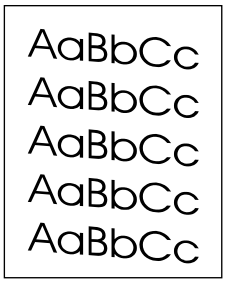
Cause	Solution
The media is too slick.	Try a different media. Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*.
The driver is not set for the correct media.	1. On the printer-driver **Paper** tab, under **Type is:**, select the correct media type from the drop-down list. (This affects only the current print job.) 2. Select the correct media through HP ToolboxFX.

Pages are skewed (crooked).



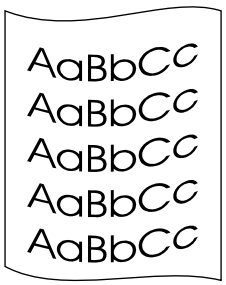
Cause	Solution
The media is loaded incorrectly.	Reload the media, and make sure that the media guides are not too tight or too loose against the media stack. See Loading media into the input trays on page 34.
The media guides are broken or missing.	Replace the input tray or the paper-pickup assembly. See Media input tray on page 163 or Paper-pickup assembly on page 194.

Pages are skewed (crooked).



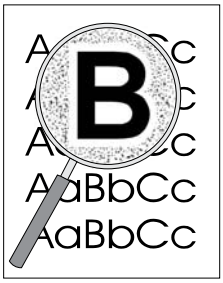
Cause	Solution
The input tray is too full.	Remove some of the sheets. The HP LaserJet 3050 all-in-one ADF input tray can hold up to 30 sheets of 80-g/m^2 (20-lb) bond-weight paper (less for heavier paper). Remove some of the sheets. The HP LaserJet 3052/3055 all-in-one ADF input tray can hold up to 50 sheets of 80-g/m^2 (20-lb) bond-weight paper (less for heavier paper). Remove some of the sheets. The main input tray can hold up to 250 sheets of 80-g/m^2 (20-lb) bond-weight paper (less for heavier paper).
The media does not meet HP specifications.	Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*.

The printed page has curls or waves.



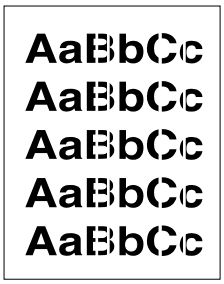
Cause	Solution
Paper curl is inherent to the laser printing process; it occurs when paper is subjected to heat.	Curled paper tends to relax as it cools. Place the paper on a flat surface while it is cooling.
The environment is too warm or too humid.	1. Both high temperatures and high humidity levels cause media to curl. Move the product to a different environment. 2. Use a different media. Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*.
The media was in the input tray for too long.	Turn the stack of media over and return it to the tray. Rotate the media 180° and put it back in the tray.
The fuser temperature is too high. The fuser temperature varies according to the type of media being used.	Select a lighter-weight media type from the printer driver or HP ToolboxFX.

Large amounts of toner are scattered around the characters.



Cause	Solution
The media resistivity is too high.	1. Use a different media. Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*. 2. Turn the stack of media over and return it to the tray. 3. Use media that is designed for laser printers.

Vertical white stripes appear.



Cause	Solution
The media does not meet HP specifications (for example, it is too moist or too rough).	Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*.
The toner is low.	Gently shake the print cartridge back and forth to redistribute the toner.

Scan/copy image-quality problems

Use the following tables to help solve problems with scanned or copied pages.

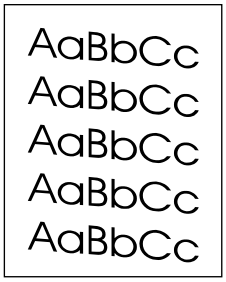
NOTE Some image-quality problems can be isolated by performing printer functional tests. See Functional checks on page 247. Image quality problems can also be caused by using cables that are not USB cables.

Scan/copy image-quality solutions

Pages do not print.

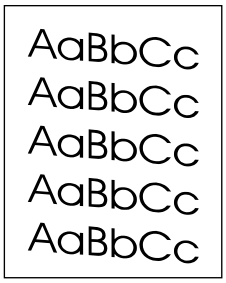
Cause	Solution
The product is not plugged in, or the power is not on.	Make sure that the product is plugged into a working wall outlet or power strip and that the power switch is in the on position.
The computer cable is loose.	Check that the cable between the product and the computer is securely connected.
The tape was not removed from the print cartridge.	Remove the print cartridge, remove the tape, and reinstall the print cartridge.
The print cartridge is out of toner.	Replace the print cartridge.
The media does not meet HP specifications (for example, it is too moist or too rough).	Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*.
The original was loaded upside-down.	Load the original with the side to be scanned facing down in the ADF for the HP LaserJet 3050 all-in-one, or facing up in the ADF for the HP LaserJet 3052/3055 all-in-one. Load the original with the side to be scanned facing down on the flatbed (HP LaserJet 3052/3055 all-in-one).

Pages are skewed (crooked).



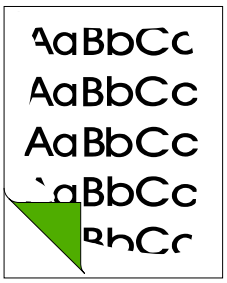
Cause	Solution
The media is loaded incorrectly.	Reload the media, and make sure that the media guides are not too tight or too loose against the media stack. See Loading media into the input trays on page 34.
The media guides are broken or missing.	Replace the input tray or the paper-pickup unit. See Media input tray on page 163 or Paper-pickup assembly on page 194.

Pages are skewed (crooked).



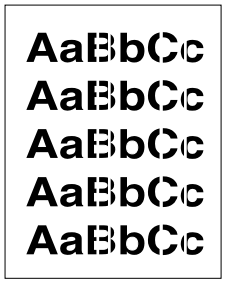
Cause	Solution
The ADF input tray is too full.	Remove some of the sheets. The HP LaserJet 3050 all-in-one ADF input tray can hold up to 30 sheets of 80-g/m^2 (20-lb) bond-weight paper. Remove some of the sheets. The HP LaserJet 3052/3055 all-in-one ADF input tray can hold up to 50 sheets of 80-g/m^2 (20-lb) bond-weight paper. Remove some of the sheets. The main input tray can hold up to 250 sheets of 80-g/m^2 (20-lb) bond-weight paper.
The media does not meet HP specifications.	Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*.

Parts of the page around the edges are not printing.



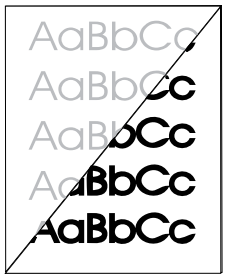
Cause	Solution
The product cannot print to the edge of the media. The printer has minimum margins on each edge of 6 mm (0.25 inch).	To fit the image into this printable area, slightly reduce the size of the image.
If copying, the reduction setting is incorrect.	Copied images will be clipped if the image on the original is too close to the edge of the original.
The paper size setting is incorrect.	Set the correct page size on the control-panel menu.

Vertical white stripes appear.



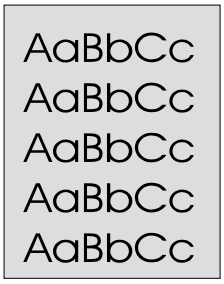
Cause	Solution
The media does not meet HP specifications (for example, it is too moist or too rough).	Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*.
The toner is low.	Gently shake the print cartridge back and forth to redistribute the toner.
If copying with the ADF, the scanner glass is dirty.	1. Clean the scanner glass. See Cleaning the all-in-one on page 40. 2. If the problem persists, replace the print cartridge. 3. If the problem persists, replace the fuser assembly. See Fuser on page 192.

Copies or scanned images are too light or too dark.



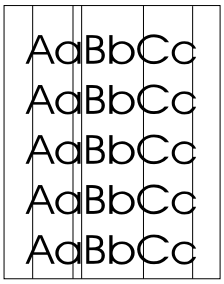
Cause	Solution
The contrast is not set correctly.	1. Adjust the lighter/darker and resolution settings on the control-panel menu. 2. Check that the lighter/darker and resolution settings are correct. See the online user guide for more information.
The original image is very light or very dark.	Adjust the resolution and lighter/darker settings on the control-panel menu.
The scanned image is too light or too dark because the original was on colored paper.	If the original was on a colored paper, including brown recycled paper, the text might not be clear. Adjust the resolution and lighter/darker settings from HP ToolboxFX.

The printed page has a gray background.



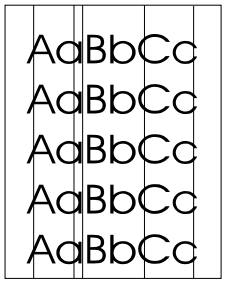
Cause	Solution
The priority input tray is not in place.	Adjust the priority input tray.
The print density setting is too high.	Decrease the amount of background shading by using HP ToolboxFX.
The lighter/darker setting is incorrect. Some "white" media might produce a greyish background at the default lighter/darker settings.	Adjust the lighter/darker setting to a lighter level.
The media basis-weight is too high.	Change the media to a lower basis-weight.
The humidity level is too low.	Very low humidity can increase the amount of background shading. Move the product to a different location, or decrease the background shading by using HP ToolboxFX.
The print cartridge needs to be replaced.	Replace the print cartridge.

Vertically-aligned black streaks or smears appear on successive pages.



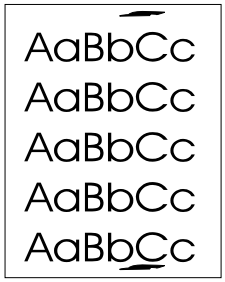
Cause	Solution
The scanner glass is dirty. See Cleaning the all-in-one on page 40.	Try copying from the flatbed scanner (HP LaserJet 3052/3055 all-in-one only). If the problem occurs only with the ADF, clean the scanner glass. See Cleaning the all-in-one on page 40.
The printer needs to be cleaned.	If the problem occurs when copying from the flatbed scanner and the ADF, clean the printer. See Cleaning the all-in-one on page 40.
A component is damaged. (For example, the photosensitive drum inside the print cartridge is scratched.)	1. Replace the print cartridge if it is damaged and if maintenance procedures do not improve print quality. 2. Replace the scanner assembly. **HP LaserJet 3050 all-in-one**: See Scanner assembly on page 118. **HP LaserJet**

Vertically-aligned black streaks or smears appear on successive pages.



Cause	Solution
	3052/3055 all-in-one: See Scanner assembly on page 148.

Scanned images have black dots or streaks.

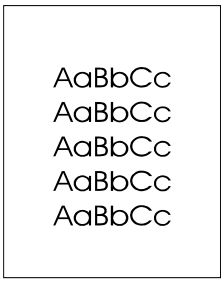


Cause	Solution
The scanner glass is dirty.	Clean the ADF path and flatbed glass. See Cleaning the all-in-one on page 40.
The toner drum in the print cartridge is damaged.	Replace the print cartridge.
A problem exists with the scanner assembly.	Replace the scanner assembly. **HP LaserJet 3050 all-in-one**: See Scanner assembly on page 118. **HP LaserJet 3052/3055 all-in-one**: See Scanner assembly on page 148.

Scanned text is not clear.

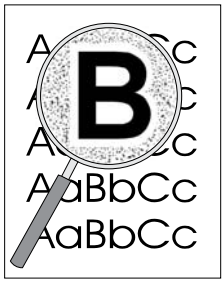
Cause	Solution
The lighter/darker and resolution settings need to be adjusted before scanning.	Check that the settings are correct in the software program that is being used to scan the document. See the online user guide section for more information.
The original is on colored paper.	If the original is on colored paper, including brown recycled paper, the text might not be clear. Try adjusting the resolution, contrast, and brightness settings in the scanning program.
There is a problem with the scanner assembly.	Replace the scanner assembly. **HP LaserJet 3050 all-in-one**: See Scanner assembly on page 118. **HP LaserJet 3052/3055 all-in-one**: See Scanner assembly on page 148.

Images are scanning at a reduced size.



Cause	Solution
The HP software settings are set to reduce the scanned image.	Adjust the settings in the scanning software.

Large amounts of toner are scattered around the characters.



Cause	Solution
The media resistivity is too high.	1. Use a different type of media. Make sure that the media meets specifications detailed in the *HP LaserJet Printer Family Print Media Guide*. 2. Turn the stack of media over and return it to the tray. 3. Use media that is designed for laser printers.

ADF problems

“Document Loaded”continually appears on the control-panel display.

Cause	Solution
The ADF paper-sensor flag is damaged.	Replace the ADF.

The “Scanner error” message continually appears on the control-panel display.

Cause	Solution
The ADF-to-scanner connector is not connected correctly or the ADF is not functioning.	Reseat the connector. If the problem persists, replace the ADF.

The ADF pickup roller does not move.

Cause	Solution
The ADF-to-scanner connector is not connected correctly or the ADF is not functioning.	Reseat the connector. If the problem persists, replace the ADF.

The ADF makes grinding, squeaking, or rubbing noises when a sheet feeds from the ADF input tray.

Cause	Solution
The wrong ADF pickup-roller assembly is installed.	Make sure the correct roller assembly is installed. If the problem persists, replace the ADF pickup-roller assembly.

The sheet begins to feed from the ADF input tray but does not completely move through the ADF. The sheet *can* be pushed through the ADF by hand.

Cause	Solution
The cleanout comb is not installed or is incorrectly installed.	Make sure that the cleanout comb is installed correctly.
The ADF pickup rollers are dirty.	Clean the rollers.
The media is curled or was stored in a high humidity environment.	Use media that meets HP recommendations. See the user guide for media specifications.
The ADF pickup-roller assembly is damaged or is not functioning.	Replace the ADF pickup-roller assembly.

The sheet begins to feed from the ADF input tray but does not completely move through the ADF. The sheet can *not* be pushed through the ADF by hand.

Cause	Solution
The ADF pickup-roller assembly is damaged or not functioning.	Replace the ADF pickup-roller assembly.

Fax troubleshooting (HP LaserJet 3050/3055 all-in-one)

General fax troubleshooting

Verify the following information before troubleshooting fax problems.

- Is the fax set up correctly?
  - Make sure that the fax cord that came with the all-in-one is the cord that is being used. This cord has been tested and meets the device specifications.
  - Make sure that the fax cord is installed in the correct port. The fax cord must be plugged into the *line* port.
- What type of telephone line is being used?
  - **Dedicated telephone line**: a unique telephone line that is assigned to receive or send a fax. The fax cord must be plugged into the *line* port.
  - **Shared telephone line**: a telephone line that receives or sends voice calls and faxes. A single, shared telephone line can perform only one function at a time. A fax cannot be sent while someone is talking on the telephone or while a computer is connecting to the Internet.
  - **Roll-over lines**: a telephone system feature that allows an incoming call to be forwarded to the next available telephone line (used with multiple-telephone-line systems). Try attaching the device to the first incoming telephone line. The all-in-one will answer the telephone after it rings the number of times that is specified in the all-in-one rings-to-answer setting.
  - **PBX system**: a business-environment telephone system. Standard home telephones and the HP LaserJet all-in-one use an analog telephone signal. Some PBX systems are digital and might be incompatible with standard telephones and with devices such as the HP LaserJet all-in-one.
  - **Distinctive ring service**: a telephone system feature that can assign two telephone numbers to one physical line, and assign a distinctive ring pattern to each number. Make sure that the device is set to respond to the correct distinctive ring pattern that the telephone service provider assigned to the fax number. This service is not available in all countries/regions. Make sure that the telephone company provides this service before changing the setting. For more information about distinctive ring service, see Distinctive ring function on page 93
- Is a telephone-line splitting device installed?
  - A telephone-line splitter is a device that splits two or more telephone lines from the same jack. Not all splitters are compatible with the device, and not all countries/regions support the use of splitters.

    Parallel splitters (also called T-splitters) split a single line into two phone jacks so that two devices can share the same line. Line 1/Line 2 splitters provide two unique telephone line outlets from a single jack with two unique telephone numbers (two telephone lines are connected to a single jack). A Line 1/Line 2 splitter *must* be used if both a fax line and a voice line share the same jack.

NOTE Hewlett-Packard does not recommend using a parallel splitter (T-splitter) with the all-in-one because it might degrade the quality of the telephone signal. If a second device must be attached to the telephone line in addition to the all-in-one, plug the second device into the telephone port on the all-in-one (the port on the back that is marked with a telephone icon).

- Is a surge-protection device installed?
  - A surge-protection device might be installed between the telephone jack and the all-in-one to protect the all-in-one from electrical power that passes through the telephone lines. These devices might cause some fax communication problems by degrading the quality of the telephone signal. If you are having problems sending or receiving faxes, connect the device directly to the telephone jack to determine if the problem is in the surge-protection device.
- Is a telephone company voice-message service being used?
  - If the messaging service rings-to-answer setting is lower than the all-in-one rings-to-answer setting, the messaging service answers the call and the all-in-one will not detect incoming faxes. If the all-in-one rings-to-answer setting is lower than that of the messaging service, the all-in-one answers all calls and no calls will ever be sent to the messaging service. The only voice-messaging system that can be used with the all-in-one is a standard telephone-answering machine.
- Is a standard telephone-answering machine installed?
  - An answering machine must be connected to the port that is labeled with the telephone icon (or it can be shared on the same telephone-line extension). Set the all-in-one rings-to-answer setting for at least one ring more than the number of rings that prompts the answering machine to answer a incoming call. For example, if the answering machine is set to answer calls after three rings, set the all-in-one rings-to-answer setting to four rings.

NOTE If an answering machine is connected to the same telephone line but is connected to a different jack (for example, in another room), it might interfere with the all-in-one to fax reception.

Table 6-4 General fax troubleshooting

The document stops feeding into the ADF while the all-in-one is sending a fax.

Cause	Solution
A page cannot exceed 356 mm (14 inches). Attempting to load a page longer that 381 mm (15 inches) will cause the fax to stop.	Press Cancel on the control panel. If the page is jammed, clear the jam. Fax the document by using multiple pages (each less than 356 mm [14 inches] in length) instead of one long one.
The page is too small.	Press Cancel. If the page is jammed, clear the jam. Make sure that the page is at least 89 x 44 mm (3.5 x 1.75 inches) in size before you load it into the ADF. If the page is smaller, use a carrier sheet or affix the page to a larger sheet.

Table 6-4 General fax troubleshooting (continued)

The fax activity log or fax call reports are printing at inappropriate times

Cause	Solution
The fax activity log or fax call report settings are incorrect.	Print a configuration report and check the fax activity log and fax call report print settings. Set the fax activity log or fax call report print settings at the all-in-one control panel.

The all-in-one volume is too loud or too soft.

Cause	Solution
The all-in-one volume setting is too high or too low.	Set the volume setting at the all-in-one control panel.

Fax receive troubleshooting

The all-in-one cannot receive a fax when it is connected to a telephone-line extension.

Cause	Solution
The telephone line is not working.	Increase the speaker volume, and then press Start Fax on the control panel. If you hear a dial tone, then the telephone line is working. Disconnect the all-in-one from the line and connect a standard telephone. Try to make a voice call from the telephone to verify that the line is working.
The fax cord is not connected correctly.	Make sure that the fax cord is fully seated (check both ends).

The telephone or standard telephone-answering machine is not receiving incoming voice calls.

Cause	Solution
The telephone or answering machine is not functioning.	Connect the telephone or answering machine directly to the telephone line and verify that it is functioning correctly.
The all-in-one is out of media.	Refill the media input tray and press ✓ to print the stored faxes.
The fax cord is not connected correctly.	Make sure that the fax cord is fully seated (check both ends). The all-in-one must be the first device connected to the telephone line if multiple devices share the line.
The rings-to-answer setting is incorrect.	Set the rings-to-answer setting at the all-in-one control panel. The rings-to-answer setting must be set to a number of rings that is greater than the number of rings that prompts the answering machine to answer incoming calls.

The all-in-one is not receiving incoming fax calls.

Cause	Solution
The answer-mode setting is set to manual.	Press Start Fax on the control panel.

The all-in-one is not receiving incoming fax calls.

Cause	Solution
The fax cord is not connected correctly or is not the cord that came with the all-in-one.	Make sure that the fax cord is fully seated (check both ends). You must use the fax cord that came with the all-in-one to connect the all-in-one to a telephone line.
The rings-to-answer setting is incorrect.	Set the rings-to-answer setting at the all-in-one control panel.
The distinctive ring feature is enabled, but the telephone service provider does not offer the distinctive ring service.	Verify that the telephone service provider offers the distinctive ring service.
The distinctive ring function settings are incorrect.	Set the distinctive ring settings at the all-in-one control panel.
Too many devices are connected to the telephone line.	Do not connect more that three devices to the telephone line that the all-in-one is connected to. Remove devices one-at-a-time until the all-in-one functions correctly.
A voice-message service is interfering with the all-in-one	Turn off the voice-message service. Connect the all-in-one to a telephone line that is dedicated to receiving or sending faxes. Set the all-in-one answer mode to manual by using the control panel (you must press Start Fax to receive an incoming fax). Set the all-in-one answer mode to automatic and lower the rings-to-answer setting to a number less than that for the voice-message service The all-in-one will answer all incoming calls.

Incoming faxes are being received slowly.

Cause	Solution
The incoming fax is very complex (for example, it contains detailed graphics).	Ask the sender to break the fax into multiple fax-send jobs. Ask the sender to decrease the fax resolution on the sender's fax machine.

Faxes are printing on multiple pages.

Cause	Solution
The all-in-one fax autoreduction setting is incorrect.	Set the all-in-one autoreduction setting to **On** at the control panel.

The received faxes are too light or faxes are only printing on half of the page.

Cause	Solution
The all-in-one is out of toner.	Replace the print cartridge.
The sent fax contrast was too light.	Ask the sender to increase the contrast setting and resend the fax.

Fax send troubleshooting

The fax stops during a send operation.

Cause	Solution
The telephone line is not working.	Increase the speaker volume, and then press Start Fax on the control panel. If you hear a dial tone, then the telephone line is working. Disconnect the all-in-one from the line and connect a standard telephone. Try to make a voice call from the telephone to verify that the line is working.
The fax machine that the fax is being sent to has malfunctioned.	Send the fax to a different fax machine.
A communication error exists.	Set the redial-on-communication-error setting to **On** at the control panel.

The all-in-one can receive a fax, but cannot send a fax.

Cause	Solution
The telephone line is not working.	Increase the speaker volume, and then press Start Fax on the control panel. If you hear a dial tone, then the telephone line is working. Disconnect the all-in-one from the line and connect a standard telephone. Try to make a voice call from the telephone to verify that the line is working.
If the all-in-one is connected to a PBX line, the PBX system might generate a dial tone that the all-in-one cannot detect.	Set the detect-dial-tone setting to **Off** at the control panel.
The fax machine that the fax is being sent to has malfunctioned.	Send the fax to a different fax machine.

The receiving fax machine is not receiving sent faxes.

Cause	Solution
The receiving fax machine is turned off.	Call the fax recipient to verify that the receiving fax machine is turned on and functioning correctly.
The original document is not loaded correctly.	Make sure that the original documents are loader correctly into the ADF or on the scanner glass.
Previous faxes are waiting in memory to be sent.	Wait for the pending faxes to be sent.

A long fax number cannot be dialed automatically.

Cause	Solution
The long fax number exceeds the 50–character limit for the auto-dial function.	Dial the fax number manually.

DSL problems

A digital subscriber line (DSL) uses digital technology over standard copper phone wires. DSL services rely on an AM signal. The HP LaserJet 3050/3055 all-in-one is a Group 3 fax device, which operates below the DSL capability and is not directly compatible with digital signals. However, if the configuration is specified during the DSL line setup, the signal on a DSL line can be separated so that some of the bandwidth is used to transmit an analog signal (for voice and fax) while the remaining bandwidth transmits digital data. Split the signal to use both the telephone or fax and the computer on the same line and at the same time.

NOTE Not all printers and faxes are compatible with DSL services. HP does not guarantee that the HP LaserJet 3050/3055 all-in-one will be compatible with all DSL service lines or providers.

The DSL modem requires a high-pass filter. When DSL service is installed, the service provider sometimes supplies a splitter, which includes a low-pass filter, for the normal phone wiring. If not, the user should contact the DSL provider to request a filter or splitter to that a fax modem can operate on the line.

NOTE HP recommends discussing the DSL line-setup options with the DSL service provider. Consult the DSL provider for technical installation requirements.

An Asymmetric Digital Subscriber Line (ADSL) is a version of DSL that provides greater efficiency by allowing upload and download rates to differ. Because ADSL is a version of DSL, the DSL information also applies to ADSL.

PABX line problems

The HP LaserJet 3050/3055 all-in-one is an analog device that is not compatible with all digital phone environments (unless a digital-to-analog converter is used). It might be difficult to troubleshoot fax issues without assistance from someone who is familiar with the technical details of the customer's digital environment and the analog converter. HP does not guarantee that the HP LaserJet all-in-one will be compatible with digital environments or digital-to-analog converters.

Control-panel-display problems

CAUTION Static electricity can cause unexpected black lines or dots to appear on the all-in-one control-panel display. Do not touch the all-in-one control-panel display if there is a chance that you have collected a static electric charge (for example, by walking on carpet in a low-humidity environment).

Unexpected lines or dots might appear on the all-in-one control-panel display, or the display might become blank if the all-in-one is exposed to an electric or magnetic field. To resolve this problem, perform the following procedure:

1. Turn off the all-in-one.
2. Remove the all-in-one from the electric or magnetic field.
3. Turn the all-in-one on again.

Functional checks

Use the following procedures to help diagnose and solve problems that occur in the print engine.

Control-panel test

To perform a control-panel test

NOTE Perform this procedure as quickly as possible in order to complete the control-panel check before the formatter begins communicating with the control panel. The control-panel test continues until all of the buttons have been tested or until the formatter attempts to communicate with the control panel (after approximately 40 seconds). The control-panel test will be interrupted if it is not completed before communication occurs.

1. Turn on the all-in-one by using the power switch.
2. Immediately press the > and Cancel buttons simultaneously.
3. Press and hold down the > and Cancel buttons until the message **Passed MEM Test** appears on the control-panel display.
4. Release the > and Cancel buttons.
5. Press ✓ to test the control-panel display LEDs. Continue to press ✓ until the message **Scroll Check—Press Enter To Pass** appears on the control-panel display.
6. Press ✓ again.
7. The name of a control-panel button appears on the control-panel display. Press the corresponding button on the control panel. Repeat this step until you have tested all of the control-panel buttons.

NOTE The control-panel test continues until all of the buttons have been tested or until the all-in-one detects no activity at the control panel for about 20 seconds. After testing all of the control-panel buttons (or when there is no activity at the control panel for about 20 seconds), the product exits the test and continues the startup processes.

Half self-test functional check

The purpose of the half self-test check is to determine which image-formation process is malfunctioning. The image-formation process can be divided into the following stages:

- Conditioning stage (charges the drum)
- Writing stage (uses the laser/scanner to write a latent image on the drum)
- Development stage (forms a toner image on the drum)
- Transfer stage (transfers the image to the media)
- Separation stage (separates the media from the drum)
- Fusing stage (applies heat and pressure to make the image on the media permanent)
- Cleaning stage (removes excess toner from the drum)

To perform a half self-test check

1. Print a self-test page. (See Troubleshooting tools on page 259.)
2. Open the print-cartridge door after the paper advances halfway through the printer (about 5 seconds after the motor begins to rotate). The leading edge of the paper should have advanced past the print cartridge.
3. Remove the print cartridge.
4. Open the print cartridge drum shield to view the drum surface. If a dark and distinct toner image is present on the drum surface, assume that the first three functions of the image-formation process are functioning correctly (through the development stage). Troubleshoot the failure as a transfer or fusing problem.

To perform other checks

If, during the half self-test check, no image appears on the photosensitive drum, perform these checks:

1. Make sure that you removed the entire length of the sealing tape from the print cartridge before you installed the cartridge.
2. Perform a drum-rotation functional check. (See Drum-rotation functional check on page 248.)
3. Perform a high-voltage power-supply check. (See High-voltage contacts check on page 249.)

If the issue is a transfer problem, replace the transfer roller. If the issue is a fuser problem, check the two wire-harness connectors (J102 and J204; callout 1) on the power supply.

Drum-rotation functional check

The photosensitive drum, located in the print cartridge, must rotate in order for the print process to work. The photosensitive drum receives its drive from the main drive assembly.

NOTE This test is especially important if refilled print cartridges have been used.

1. Open the print-cartridge door.
2. Remove the print cartridge.
3. Mark the drive gear on the cartridge with a felt-tipped marker. Note the position of the mark.
4. Install the print cartridge and close the print-cartridge door. The startup sequence should rotate the drum enough to move the mark.
5. Open the print-cartridge door and inspect the gear that was marked in step 3. Verify that the mark moved.

If the mark did not move, inspect the main drive assembly to make sure that it is meshing with the print-cartridge gears. If the drive gears appear functional and the drum does not move, replace the print cartridge.

High-voltage contacts check

The high-voltage contacts in the product must have a good connection with the contacts on the print cartridge to provide the necessary voltages for the image-formation processes.

To check the print-cartridge contacts

Remove the print cartridge and visually inspect the three connection points (callout 1) on the end of the print cartridge. If they are dirty or corroded, clean them with isopropyl alcohol. If they are damaged, replace the print cartridge.

NOTE Use only isopropyl alcohol to clean the connections.

Figure 6-1 Print-cartridge high-voltage contacts

To check the high-voltage connector pins

The assembly has three spring-loaded pins (callout 1) to contact the print cartridge. Verify that the pins are not dirty or corroded and that the spring-loading action is functional. If the pins are dirty or obstructed, clean them with a dry cloth. If they are damaged, replace the all-in-one.

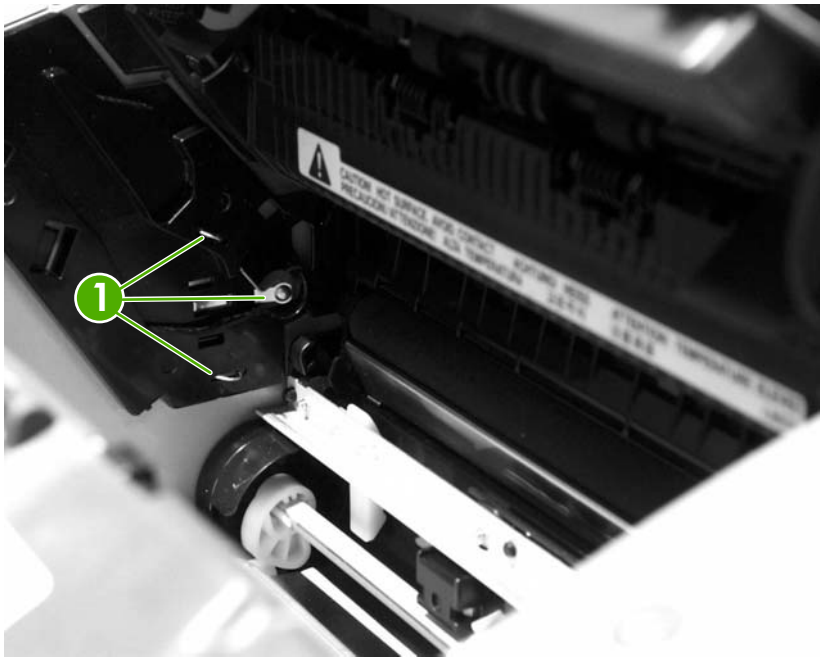


Figure 6-2 High-voltage contacts

Service-mode functions

Use the following information to perform system-wide reset procedures and to adjust certain global settings such as the country/region. Users do not have access to this information.

Secondary service menu

Use the secondary service menu to perform various tests and to print service reports. The following is a hierarchical diagram of the secondary service menu.

Main menu	Submenu	Submenu
Secondary Service	Service Reports	Continuous Self-Test
		Extended Keymap
		Error Report
	Scan Calibration	Calibrate
		Corrected
		Tables
	Location	USA (1 = Yes; 2 = No)
	Display test	(none)
	Button test	(none)
	Show firmware version	(none)

To gain access to the secondary service menu

1. Make sure that **Ready** appears on the control-panel display .
2. Press Menu.
3. Press 2 on the keypad.

NOTE You can gain access to the secondary service menu from any other menu by pressing 2.

4. Use the < or > button to navigate through the secondary service menu.
5. To exit the secondary service menu and remove it from the menu tree, press Cancel to return to the **Ready** display, and then press Cancel again.

To print a list of all the fax data-store parameters

1. In the secondary service menu, use the < or > button to select **Developer menu**, and then press ✓.
2. Use the < or > button to select **DS-Fax**, and then press ✓.

Developer’s menu

Use the developer’s menu to adjust fax data-store parameters and to run various tests. The following is a hierarchical diagram of the developer’s menu.

Main menu	Submenu	Submenu
Developer's menu	Read Register	(none)
	Write Register	(none)
	Enter MAC Addr. (HP LaserJet 3052/3055 all-in-one only)	(none)
	Scanner Settings	Scan Test Mode
		ADF Starve Start
		ADF Starve Run
		FB Starve Start
		FB Starve Run
		Drop Bogey
		Park Scanner
	Formatter test	(none)
	REINIT FFS	(none)
	R/W parameter	(parameter names)
	Monitor test	Onhook monitor
		Offhook monitor
		EavesdropMonitor
		SigPower Monitor
	LIU test (HP LaserJet 3050/3055 all-in-one only)	LIU inputs
		LIU ID
	Loopback test	(none)
	Transmit test	OFFHOOK
		ONHOOK
		DIAL NUMBER
		NOTE Several other options are available under this menu.
	Dev. Reports	DS Fax
		DS No Fax
		Translations
		Location Codes

Main menu	Submenu	Submenu
		Error Diffusion
	Clock Dithering	On
		Off
	Pick and Kick	(none)

To gain access to the developer's menu

1. Make sure that **Ready** appears on the control-panel display.
2. Press Menu.
3. Press the * and # buttons simultaneously.

> **NOTE** You can gain access to the developer's menu from any other menu by pressing the * and # buttons simultaneously.

4. Use the < or > button to navigate through the developer's menu.
5. To exit the developer's menu and remove it from the menu tree, press Cancel to return to the **Ready** display, and then press Cancel again.

To adjust fax data-store parameters

When you adjust fax data-store parameters, the product does not alert you to incorrect input values. Changing fax data-store parameters can render the product illegal or inoperable.

> **NOTE** Before adjusting the fax data-store parameters, print a list of all of the parameters from the secondary service menu. See To print a list of all the fax data-store parameters on page 251.

1. On the developer's menu, use the < or > button to navigate to **Dev. Reports**, and then press ✓.
2. Use the < or > button to navigate to DS Fax and select the parameter that you want to change. The current setting appears on the control-panel display.
3. Type the new value for the fax data-store parameter, and then press ✓.

To scroll quickly to a particular data-store parameter

When **DS Fax** appears on the control-panel display, jump directly to any parameter ID that does not contain a 2 by typing the ID on the keypad. (Pressing 2 brings up the secondary service menu.) To change a parameter that has a 2 in its ID, type the ID of the closest parameter that does not have a 2 and then use the < or > button to locate the parameter that you want to change. For example, to move quickly to parameter 152, type 151 >.

Changing the country/region code parameters

Three situations can occur that necessitate changing the country/region or language settings for the product:

1. The customer has moved to a different country/region from the country/region in which the all-in-one was purchased.
2. The information has been erased because of an NVRAM initialization, or the parameters are set to "undefined."
3. The formatter has been replaced.

Use the information in the following sections to change the country/region and language settings.

To change the country/region from one location to another

1. Press Menu and then press 2 to gain access to the **Secondary Service** menu.
2. Press < or > to select **Location**, and then press ✓.
3. Press < or > until the correct location appears.
4. When the correct location appears, press ✓. Press 1 to confirm the new location. The all-in-one automatically turns itself off and then on after the setting is confirmed.

To set the language and location if none is set

If the language and location have been erased because the NVRAM has been initialized or the formatter has been replaced, the product automatically prompts for the language and the location when it is turned on.

NOTE **HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one**: The customer cannot send or receive faxes until these settings have been established.

1. Press < or > until the correct language appears.
2. When the correct language appears, press ✓ and then press 1 to confirm the selection. If the location also needs to be set, the product automatically prompts for the location.
3. Press < or > until the correct country/region appears.

NOTE **HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one**: The list of countries/regions that appears on the control-panel display depends on the LIU that is installed in the product.

HP LaserJet 3052 all-in-one: This product does not have fax capabilities and so it does not have an LIU installed. The list of supported countries/regions that appears on the control-panel display is in a localized format.

4. When the correct country/region appears, press ✓ and then press 1 to confirm the selection.
5. After both the language and the location settings are established, the product automatically turns itself off and then on.

Soft reset

Before performing an NVRAM init, attempt a soft reset, which does not reset configuration settings or cause a loss of data.

Performing a soft reset

To perform a soft reset

1. Press Menu.
2. Simultaneously press and then release the * button and the # button to open the developer's menu.
3. Press the < or > button until the message **REINIT FFS** appears on the second line of the control-panel display.
4. Press ✓.
5. The process takes approximately 2.5 minutes. During that time, the control-panel display will change several times before returning to **Ready**.
6. When the **Ready** message appears on the control-panel display, press Cancel to exit the developer's menu.

Super NVRAM init

When a super NVRAM init is performed, the all-in-one language and telecom country/region settings are undefined. The user is prompted to set the language and telecom country/region. Until these settings are defined, the all-in-one will not return to the **Ready** state.

CAUTION A Super NVRAM init erases all data that is stored in both the unprotected *and* protected NVRAM memory.

To perform a super NVRAM init

1. Turn off the all-in-one.
2. Press and hold down the * and 5 buttons.
3. Continue to hold down the buttons while you turn on the all-in-one. Hold the buttons throughout the entire power-on sequence.
4. When **Permanent Storage Init.** appears on the control-panel display, release the buttons.
5. When prompted, set the language and telecom country/region.
6. Allow the all-in-one to return to **Ready** before using it.

NVRAM init

NVRAM init returns all stored parameters in NVRAM to factory default values or to a default ROM value, depending on the variable, and performs a system reset.

Performing NVRAM init can cause the all-in-one to violate local telephone regulations. Reset the language and country/region after performing an NVRAM init.

An NVRAM init resets the following settings and information:

- All menu settings are reset to factory default values, including the fax header and company name.
- Factory settings such as formatter number, page counts, and paper settings are reset.
- All faxes in memory are erased.
- All speed-dials, group-dials, and phone book entries are erased.
- All localization settings, including language and country/region, are reset.

To perform an NVRAM init

1. Turn off the all-in-one.
2. Press and hold down the * and ✓ buttons.
3. Continue to hold down the buttons while you turn on the all-in-one. Hold the buttons throughout the entire power-on sequence.
4. When **Permanent Storage Init.** appears on the control-panel display, release the buttons.
5. Allow the all-in-one to return to **Ready** before using it.

System settings for localized products

NOTE The HP LaserJet 3052 all-in-one does not have an LIU because it does not have fax capabilities. The list of available country/regions includes all of the country/regions listed in Table 6-5 System settings on page 257 and Chile (default media size letter, default date format ddmmyy, and default time format a.m./p.m.), North Africa (default media size A4, default date format ddmmyy, and default time format 24 hour), Jordan (default media size A4, default date format ddmmyy, and default time format a.m./p.m.), and Lebanon (default media size A4, default date format ddmmyy, and default time format a.m./p.m.).

Two LIUs are available for the product. The list of available countries/regions that appears in the **Secondary service** menu (in the **Location** submenu) varies according to the LIU that is installed in the product. The default system settings vary for each country/region. The following table lists the default system settings for each country/region. Be sure to reset any user-defined settings that differ from these settings.

Table 6-5 System settings

Country/region	LIU installed	Default media size[1]	Date format	Time format
Argentina	US/rest of the world	Letter	ddmmyy	a.m./p.m.
Australia	US/rest of the world	A4	ddmmyy	a.m./p.m.
Austria	Europe	A4	ddmmyy	24 hour
Belgium	Europe	A4	ddmmyy	24 hour
Brazil	US/rest of the world	A4	ddmmyy	24 hour
Bulgaria	Europe	A4	ddmmyy	24 hour
Canada	US/rest of the world	Letter	ddmmyy	a.m./p.m.
China	US/rest of the world	A4	yymmdd	24 hour
Croatia	Europe	A4	ddmmyy	24 hour
Czech Republic	Europe	A4	ddmmyy	24 hour
Denmark	Europe	A4	ddmmyy	24 hour
Finland	Europe	A4	ddmmyy	24 hour
France	Europe	A4	ddmmyy	24 hour
Germany	Europe	A4	ddmmyy	24 hour
Greece	Europe	A4	ddmmyy	a.m./p.m.
Hong Kong SAR	US/rest of the world	A4	yymmdd	a.m./p.m.
Hungary	Europe	A4	yymmdd	24 hour
India	US/rest of the world	A4	ddmmyy	24 hour
Indonesia	US/rest of the world	A4	ddmmyy	24 hour
Ireland	Europe	A4	ddmmyy	24 hour
Israel	Europe	A4	ddmmyy	24 hour
Italy	Europe	A4	ddmmyy	24 hour

Table 6-5 System settings (continued)

Country/region	LIU installed	Default media size[1]	Date format	Time format
Korea	US/rest of the world	A4	yymmdd	a.m./p.m.
Luxemburg	Europe	A4	ddmmyy	24 hour
Malaysia	US/rest of the world	A4	ddmmyy	24 hour
Mexico	US/rest of the world	Letter	ddmmyy	a.m./p.m.
Netherlands	Europe	A4	ddmmyy	24 hour
New Zealand	US/rest of the world	A4	ddmmyy	a.m./p.m.
Norway	Europe	A4	ddmmyy	24 hour
Pakistan	US/rest of the world	A4	ddmmyy	a.m./p.m.
Peru	US/rest of the world	Letter	ddmmyy	a.m./p.m.
Philippines	US/rest of the world	Letter	mmddyy	a.m./p.m.
Poland	Europe	A4	yymmdd	24 hour
Portugal	Europe	A4	ddmmyy	24 hour
Romania	Europe	A4	ddmmyy	24 hour
Russia	Europe	A4	ddmmyy	24 hour
Singapore	US/rest of the world	A4	ddmmyy	a.m./p.m.
Slovak Republic	Europe	A4	ddmmyy	24 hour
South Africa	Europe	A4	yymmdd	a.m./p.m.
Spain	Europe	A4	ddmmyy	24 hour
Sri Lanka	US/rest of the world	A4	ddmmyy	24 hour
Sweden	Europe	A4	yymmdd	24 hour
Switzerland	Europe	A4	ddmmyy	24 hour
Taiwan	US/rest of the world	A4	yymmdd	a.m./p.m.
Thailand	US/rest of the world	A4	ddmmyy	24 hour
Turkey	Europe	A4	ddmmyy	24 hour
United Kingdom	Europe	A4	ddmmyy	24 hour
United States	US/rest of the world	Letter	mmddyy	a.m./p.m.
Vietnam	US/rest of the world	A4	ddmmyy	a.m./p.m.

[1] The default media-size setting that is listed is the same for the printer input trays and the scanner-glass size setting.

Printer job language (PJL) software commands

Many PJL scripts are available for restoring parameters such as paper size and page counts after the formatter has been replaced. For comprehensive instructions, see the *Printer Job Language Technical Manual* and the *Printer Job Language Technical Manual Addendum*.

Troubleshooting tools

Use the control panel to print configuration reports and demo pages. The configuration report shows the settings that have been selected at the control panel. Printing a configuration report is also considered a "self test" for the printer, although any of the reports can serve this purpose. A printout of the control-panel menu structure is a useful reference if you alter settings in the menu.

Printing a configuration report, demonstration page, or menu structure

1. Press Menu.
2. Use the < or > button to select **Reports**, and then press ✓.
3. Use the < or > button to select **Config report** , **Demo page**, or **Menu structure**, and then press ✓. The product exits the menu settings and prints the report.

Printing all fax reports at once (HP LaserJet 3050/3055 all-in-one)

To print all fax reports at once:

1. Press Menu.
2. Use the < or > button to select **Reports**, and then press ✓.
3. Use the < or > button to select **All fax reports**, and then press ✓. The product exits the menu settings and prints the reports.

When you print all reports at one time, the following reports are printed:

- Fax activity log—recent faxes sent and received, and their status
- Billing log (if enabled)—sorted by billing code
- Block fax list (if enabled)—fax numbers that have been blocked
- Configuration report—current control-panel settings, including the following sections:
  - System information
  - Reports
  - Fax settings
  - User defaults
  - Service
  - Page counts
- Phonebook report—one-touch, speed-dial, and group-dial report
- Usage page

T.30 protocol trace (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)

Use a T.30 protocol trace report to troubleshoot fax transmission and receive issues.

To print a T.30 protocol trace report

1. Press Menu.
2. Use the < or > button to select **Service**, and then press ✓.
3. Use the < or > button to select **Print T.30**, and then press ✓.
4. Use the < or > button to select **Print report now**, and then press ✓. The product exits the menu settings and prints the reports.

Send a fax from the product or receive a fax to the product from another fax machine. Print a T.30 trace report after the fax prints.

The following are explanations of some of the report column headings:

- **Date** and **Time** identify when the fax begins. Match this information with the fax error log.
- **Type** is the type of fax activity: send or receive.
- **Identification** is the phone number to which a fax is sent.
- **Result** explains the status of the fax:
  - “OK” means that the fax was successful.
  - “Pending” faxes are in memory or are printing.
  - For error codes and their meanings, see Table 6-6 Fax receive codes on page 261 and Table 6-7 Fax send codes on page 264.

Fax error-correction mode (ECM) (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)

Normally, the product monitors the signals on the telephone line while it is sending or receiving a fax. If the product detects an error during the transmission and the error-correction mode is **On**, then the product can request that the portion of the fax be resent. The factory-set default for error-correction mode is **On**.

To change the error-correction setting

1. Press Menu.
2. Use the < or > button to select **Fax setup**, and then press ✓.
3. Use the < or > button to select **All faxes**, and then press ✓.
4. Use the < or > button to select **Error correction**, and then press ✓.
5. Use the < or > button to select **On** or **Off**, and then press ✓ to save the selection.

V.34 fax standard

V.34 is the industry-wide fax standard for full-duplex modems that transmit at speeds up to 28,000 bps. When V.34 is turned on, the product automatically adjusts the transmission speed based on the clarity of the image. Turning V.34 off can resolve some fax transmission issues.

To change the V.34 setting

1. Press Menu.
2. Use the < or > button to select **Fax setup**, and then press ✓.
3. Use the < or > button to select **All faxes**, and then press ✓.
4. Use the < or > button to select **V.34**, and then press ✓.
5. Use the < or > button to select **On** or **Off**, and then press ✓ to save the selection.

Fax receive and fax send codes

The following tables list the fax receive and fax send codes that appear in the fax call report.

Table 6-6 Fax receive codes

Code	Description	Recommended action
200	The fax session has been completed without errors.	None required.
221	The user has pressed Cancel, which caused the fax session to be prematurely halted.	Allow the product to receive the fax.
222	The product has answered a call but has been unable to detect the presence of a fax machine. Typically, this is caused by the product answering a voice call. -Or- The remote user canceled the fax transmission by pressing Cancel immediately before, or just as, the product answered the call. -Or- The remote machine automatically ended the call immediately before, or just as, the product answered the call. -Or- The remote (calling) fax machine identified a feature incompatibility between the two machines and disconnected immediately before transmitting any additional fax tones or T.30 frames. (This is a very rare and non-standard behavior.)	1. Confirm that the remote caller is a fax machine and not a voice call. (Typically the remote user must inform the caller that the fax session failed.) 2. If the remote machine ends the call just as the product starts receiving, reduce the ring count after which the product answers. Or, suggest that the remote user manually dial to the product and then manually start the fax session by pressing Start after fax tones have been heard from the product. 3. Confirm that the remote user is not inadvertently attempting a poll transmission from the product instead of transmitting to the product. 4. Reconfigure the local fax machine to use different configuration settings, change ECM to the opposite of the current setting, and/or select a slower reception speed.
223 (ECM error)	The product has been unable to receive an entire page even after multiple attempts to receive the parts of the page that contain	Attempt to receive the fax again after telephone-line conditions have improved. -Or-

Table 6-6 Fax receive codes (continued)

Code	Description	Recommended action
	errors. This is usually caused by extremely poor line conditions.	Set the ECM to **Off**. Errors might still occur, which might result in degraded image quality on the received page. However, the ability to receive the entire document will be improved.
224	The product has received one or more pages that contain excessive errors. This is usually caused by extremely poor line conditions. Because the ECM is not used during this session, errors are not corrected. Some non-HP machines might try to resend the failed pages, but it is impossible to determine from the resent pages if the problems with the previously received pages have been corrected.	Attempt to receive the fax again after telephone-line conditions have improved.
225	The remote machine has attempted to initiate a remote diagnostic session with this machine, even though remote diagnostic access is locally disabled.	Enable the remote diagnostics capability on the product.
226	The remote machine has attempted to initiate a remote diagnostic session with this machine, but the remote diagnostic versions that the two machines support are incompatible.	None. Remote diagnostics cannot occur between machines that have incompatible remote diagnostic versions.
227	The remote machine has attempted to initiate a fax session at a speed and modulation that the product does not support.	Reconfigure the product to receive at a slower speed.
228	The remote machine has attempted to initiate a poll transmission from the product even though the product is not configured for poll transmission.	1. Confirm that the remote user intends to use polling. The remote user might have inadvertently attempted to poll. If this is the case, reattempt a normal transmission from the remote machine. 2. If the remote user intended to use polling, confirm that the product was correctly configured for poll transmission.
229	The remote machine has attempted to initiate a secure poll transmission from the product but has not provided a valid password.	Confirm that the remote user is the person for whom the polled document is intended. If so, make sure that the remote user has the correct password and that the product is configured with the same password.
230	The remote machine has attempted to initiate an operation that requires error correction but has not selected error correction for the session.	Enable the ECM on both the product and the remote machine.
231	The remote machine has attempted to initiate a transmission to the product even though the ability to receive is disabled at the product.	Ensure that the product is capable of receiving a document. Check that paper is correctly loaded, paper is not jammed within the machine, and any other system abnormalities have been cleared.
232 233 234 235 (ECM error) 236 (ECM error) 237	A communication failure has occurred between the two machines. -Or- The user at the remote machine might have pressed Cancel. -Or-	1. Attempt to receive the fax again after telephone-line conditions have improved. 2. If the error persists, and error correction is in use for the fax session, disable the ECM.

Table 6-6 Fax receive codes (continued)

Code	Description	Recommended action
	The power at the remote machine has been interrupted or deliberately turned off, causing the fax session to be interrupted.	
238 239 (ECM error) 240 (ECM error) 241 (ECM error)	The remote fax machine sent an unexpected communication.	None. This is a defect in the remote sending machine.
242	The remote fax machine is attempting to receive instead of send. Both machines have attempted to start receiving at the same time. It is possible to accidentally initiate a fax reception after dialing on many machines, if there is no paper in the machine, or if the paper is not correctly loaded and cannot be sensed by the appropriate document sensor.	Ensure that a document is ready and is correctly loaded in the transmitting fax machine and that the remote machine is attempting to transmit and not to receive.
243 244	The user of the remote machine has pressed a “stop” button on that machine, which caused the session to be prematurely terminated. -Or- The remote fax machine identified a feature incompatibility between the two machines and has terminated the session. For example, the product tried to initiate polling, but the remote machine did not support this mode of operation.	1. Confirm that the remote user is not inadvertently attempting a poll transmission from the product, instead of transmitting to the product. This mode of operation must be specially configured on the product. If poll transmission from the product is the appropriate mode of operation, confirm that the product has been configured for this operation. 2. Reconfigure the local fax machine to use different configuration settings, change the ECM setting to the opposite of the current setting, or select a slower reception speed.
245 246 (ECM error)	The user of the remote machine has pressed a “stop” button on that machine, which caused the session to be prematurely terminated. The product has been “holding off” the remote machine during reception of a large or complex document because the remote machine lacks available memory. This hold-off time has exceeded the timeout (typically 60 seconds) that the remote machine uses, and the remote machine has terminated the session.	1. If the document was large, ask the remote user to retransmit the document as two or more smaller documents. 2. Disable ECM and attempt to receive the fax again.
247 - 251	The remote machine is apparently stuck in the “on” mode.	None.
252	Telephone-line conditions were too poor to receive a fax.	1. Attempt to receive the fax again after telephone-line conditions have improved. 2. Configure the machine to start receiving at a lower speed. 3. If the product successfully received several pages of a larger document, ask the remote user to transmit the document in several smaller parts.
253	The remote machine has attempted to initiate a page transmission using a page width that the product does not support.	Ask the remote user to reconfigure the remote machine to transmit using a “normal” (letter/A4) page width.
281	The product has not received any data at the start of a page during non-ECM reception	Ask the remote user to check his or her machine, and then ask the remote user to send the fax again.

Table 6-6 Fax receive codes (continued)

Code	Description	Recommended action
	although the modem has not detected a remote disconnect. The remote machine is probably transmitting fill bytes instead of data, and is either broken or jammed.	
282	The product has not received any data at the start of a page during ECM reception although the modem has not detected a remote disconnect. The remote machine is probably transmitting sync frames instead of data, and is either broken or jammed.	Ask the remote user to check his or her machine, and then ask the remote user to send the fax again.
283	The product has detected that the modem carrier has stopped. Either the line has been disconnected or the remote machine has aborted the transmission.	Ask the remote user to check his or her machine, and then ask the remote user to send the fax again.
284	The product has not received any data during non-ECM page reception and a timeout failure has occurred. The remote machine is probably transmitting fill bytes instead of data, and is either broken or jammed.	Ask the remote user to check his or her machine, and then ask the remote user to send the fax again.
285	The product has stopped receiving any data during an ECM page reception although the modem has not detected a remote disconnect. The remote machine is probably transmitting sync frames instead of data, and is either broken or jammed.	Ask the remote user to check his or her machine, and then ask the remote user to send the fax again.
286	The remote machine has transmitted invalid data. The product has received frames with errors during an ECM reception and requested retransmission of the failed frames. The data that is resent does not correspond to the data that was requested. This is an implementation error from the remote machine.	Disable ECM, and ask the remote user to send the fax again.
290	Between pages, the remote machine has attempted to renegotiate the session mode from ECM to non-ECM. Some machines will attempt to use non-ECM for photo mode, so the renegotiation might be associated with a between-page encoding change to support photo mode. This operation is not supported, and the session has been abandoned.	Ask the remote user to send the fax again, and to split the document into two portions: the ECM and non-ECM portions.
291	This is not a communication error, and it is not expected that this error will occur under non-development scenarios. Reception has failed because the local unit is unable to open to receive data. This error might be associated with low memory, although low memory should not produce the error unless other conditions are contributing to the problem.	If the error persists, turn the product off and then on again.
292	The remote machine has attempted to renegotiate the encoding mode from non-JPEG to JPEG. Some machines will attempt to use JPEG for photo mode, so the renegotiation might be associated with a between-page encoding change to support photo mode. This operation is not supported, and the session has been abandoned.	Ask the remote user to send the fax again, and to split the document into two portions: the JPEG and non-JPEG portions.

Table 6-7 Fax send codes

Code	Description	Recommended action
300	The fax session has been completed without errors.	None required.
311	The user has pressed the Stop button, which caused the session to be prematurely halted before all pages have been transmitted.	None required.
312	A remote fax device has failed to answer the call. Specifically, fax tones or the fax handshake from a remote machine has not been detected. Typically this happens when the user calls the wrong number, when the correct number has been called but the machine has been configured not to answer, or when the remote machine has been temporarily disabled because of a condition such as a jam or an empty input tray.	Confirm that the remote fax machine is ready to receive a document, and attempt to send the fax again.
313	A busy signal has been detected each time that the product has attempted to call the remote machine.	Attempt to send the fax again when the line is not busy.
314	The product has attempted to initiate a remote diagnostic session but has detected that remote diagnostics are disabled at the remote machine.	Ask the remote user to enable remote diagnostics on the remote machine.
315	The product has attempted to initiate a remote diagnostic session but has detected that the remote diagnostic version that the remote machine supports is incompatible.	No solution. Remote diagnostics cannot occur between machines that have incompatible remote diagnostic versions.
316	The product is set up to initiate document transmission, but it has detected that the remote machine cannot receive a document. This error should be rare because a remote machine normally will not answer if it cannot receive a document. An exception is if the remote machine is configured for poll transmission but is unable to receive.	Configure the remote machine for reception. Typically the remote user configures the remote machine, which can include actions such as loading paper, clearing jams, and clearing other system abnormalities.
317	The remote machine cannot support a fax reception at any speed or modulation that the product supports.	None.
318	The remote machine cannot support a fax reception at the page width that the product selected.	None.
319	The product has attempted to initiate a binary file transfer (BFT) but has detected that the remote machine does not support this mode of operation.	1. Ask the remote user to enable the BFT capability on the remote machine if it is supported. 2. Retransmit the document as a normal fax, rather than attempting a BFT transfer.
320	The product is set up to initiate poll reception with a remote machine, but it has detected that the remote machine is not configured to do this. Poll transmission from a remote machine is typically configured on a session-by-session basis.	Confirm that the local user wants to attempt a poll reception. If not, reconfigure the product for a normal fax transmission. -Or-

Table 6-7 Fax send codes (continued)

Code	Description	Recommended action
		Configure the remote machine for poll transmission. The remote user must first load a document to transmit and then configure the machine for polling.
321	A communication error with the receiving fax machine was caused by poor telephone-line conditions.	Attempt to send the fax again when telephone-line conditions have improved.
322 - 324	Telephone-line conditions are too poor to send a fax.	1. Attempt to send the fax again when telephone-line conditions have improved. 2. If the session fails after transmitting several pages of a large document, retransmit the document as several smaller documents.
325 - 328 (ECM error)	Telephone-line conditions are poor.	Attempt to send the fax again when telephone-line conditions have improved. -Or- Disable ECM. Errors might still occur, and might result in a degraded image quality on the received page. However, the ability to transmit the entire document will be improved.
329 - 331	The remote machine has reported that one or more pages have been received (while ECM was off) with excessive errors. This error does not result in the session being terminated immediately. Subsequent page transmission can still occur, and later pages might be received without error.	Attempt to send the fax again when telephone-line conditions have improved. -Or- Select a lower speed for the initial transmission speed.
332 - 343	A defect exists in the remote fax machine.	Send to or receive from another fax machine.
344 - 348 349-353 (ECM error) 354-355	The remote machine has failed to respond to a fax command from the product because the connection is interrupted. -Or- The remote user has pressed a “stop” button while the remote machine was receiving. -Or- Under rare conditions, incompatibility between the two machines can cause the remote machine to simply abandon the call.	1. Attempt to send the fax again when telephone-line conditions have improved. 2. If the fax session was using error correction, disable ECM.
356 - 361 362-366 (ECM error)	The remote user has pressed a “stop” button, which caused the session to be aborted. -Or- The remote machine has encountered a system problem (such as no paper or a jam) that has inhibited it from receiving any more pages and caused it to terminate the session prematurely. -Or-	1. Configure the remote machine for document reception by clearing any paper jams, loading sufficient paper, and clearing any other system errors. 2. Configure the local fax machine to use different configurations, toggle the ECM state, or select a slower reception speed.

Table 6-7 Fax send codes (continued)

Code	Description	Recommended action
	The remote machine has encountered a feature incompatibility, which caused it to terminate the session.	
367 - 372 373-377 (ECM error) 378-379	The remote machine is apparently stuck in the "on" mode.	None.
380	The remote machine has failed to issue a valid response to a CTC frame. This occurs during ECM transmission after multiple retransmissions of erroneous data.	None; a defect exists in the remote machine.
381	The remote machine has failed to respond to a fax command from the product because the connection is interrupted. -Or- The remote user has pressed a "stop" button while the remote machine was receiving.	1. Attempt to send the fax again when telephone-line conditions have improved. 2. Disable ECM.
382	The remote fax machine has been "holding off" the local fax machine from continuing the ongoing transmission because of a temporary low-memory condition at the remote machine. If this "hold-off" period exceeds a machine's specific timeout value, the session is terminated.	Resend the document as two or more separate fax transmissions. Wait several minutes between the end of one transmission and the start of the next transmission. -Or- Disable ECM.
383	The remote machine has failed to respond to a fax command from the product because the connection was interrupted. -Or- The remote user has pressed a "stop" button while the remote machine was receiving.	Attempt to send the fax again when telephone-line conditions have improved -Or- Disable ECM.
384	The product has attempted a black JPEG transmission to a machine that does not support this mode.	Use a different mode, and attempt to send the fax again.
386	The product has failed to complete phase 3 of the initial V.34 handshake after originating a fax session. This is usually caused by poor line conditions, although it might be a compatibility issue with certain machines or line conditions.	1. Attempt to send the fax again when telephone-line conditions have improved. 2. Disable V.34 on the product and attempt the transmission with the V.17 mode.
387	The product has failed to successfully negotiate the initial V.8 handshake with the remote machine after originating a fax session. Typically, this occurs when the remote machine is not fax-capable or has disabled reception. It might also be a compatibility issue with certain machines or line conditions.	1. Attempt to send the fax again when telephone-line conditions have improved. 2. Disable V.34 on the product and attempt the transmission using the V.17 mode.
388	The product has originated a fax session and detected a remote fax machine but has been unable to detect any T30 frames. If the machine is in V.17 mode, the connection probably has been interrupted. In V.34 mode, this error might also occur because of compatibility problems with certain machines or line conditions.	1. Attempt to send the fax again when telephone-line conditions have improved. 2. Disable V.34 on the product and attempt the transmission with the V.17 mode.

Table 6-7 Fax send codes (continued)

Code	Description	Recommended action
389	The product has originated a fax session and has reattempted V.8 negotiations multiple times without success.	1. Attempt to send the fax again when telephone-line conditions have improved. 2. Disable V.34 on the product and attempt the transmission with the V.17 mode.
390	The product has originated a fax session while using error correction (either V.34 or V.17). Transmission of an image has been abandoned after a timeout when no data has become ready for transmission. This is most likely caused by a low-memory condition, although it could be caused by other internal problems that cause data generation for transmission to stall.	Attempt to send the fax again after making sure that documents stored in memory are printed, and that the unit has paper ready for printing. If the problem persists, reinitialize permanent storage.
391	The product has originated a fax session without error correction (not V.34). Transmission of an image has been abandoned after a timeout when no data has become ready for transmission. This is most likely caused by a low-memory condition, although it could be caused by other internal problems that stall the data generation for transmission.	Attempt to send the fax again after making sure that documents that are stored in memory are printed, and that the unit has paper ready for printing. If the problem persists, reinitialize permanent storage.
392	The product has answered a fax session and completed the initial V.34 handshake but has been unable to detect any T.30 frames. This failure is caused by either compatibility problems with certain machines or line conditions.	1. Ask the remote user to send the fax again when telephone-line conditions have improved. 2. Disable V.34 on the product and attempt the transmission with the V.17 mode.
393	The product has failed to complete phase 3 of the initial V.34 handshake after answering a fax session. This is usually caused by poor line conditions, although it might be a compatibility issue with certain machines or line conditions.	1. Ask the remote user to send the fax again when telephone-line conditions have improved. 2. Disable V.34 on the product and attempt the transmission with the V.17 mode.
394	The product has failed to successfully negotiate the initial V.8 handshake with the remote machine after answering a fax session. Typically, this occurs when the calling machine is not fax-capable. It might also be a compatibility issue with certain machines or line conditions.	1. Ask the remote user to send the fax again when telephone-line conditions have improved. 2. Disable V.34 on the product and attempt the transmission with the V.17 mode.
395	An unexpected T.30 frame has been received between pages during a multipage V.34 reception. This is almost certainly a compatibility problem with the remote machine, and might be caused by an error with the implementation of the remote machine.	1. Ask the remote user to send the fax again when telephone-line conditions have improved. 2. Disable V.34 on the product and attempt the transmission with the V.17 mode.
396-409	An error occurred during a V.34 transmission when the product was unable to correctly complete the handshake with the remote machine and was consequently unable to transmit a T.30 frame. This occurs when the line was disconnected or if line conditions degrade during the session.	Attempt to receive the fax again when telephone-line conditions have improved.
410-419	An error occurred during a V.34 reception when the product was unable to correctly complete	Attempt to receive the fax again when telephone-line conditions have improved.

Table 6-7 Fax send codes (continued)

Code	Description	Recommended action
	the handshake with the remote machine and was consequently unable to transmit a T.30 frame. This occurs when the line is disconnected or if line conditions degrade during the session.	
420	V.34 negotiations have failed from the originating machine during phase 4. Phase 4 occurs after V.8 and before the first T.30 frames are exchanged. These compatibility problems have been observed when sending to non-HP units.	Attempt to receive the fax again when telephone-line conditions have improved.
421	V.34 negotiations have failed from the originating machine during phase 3. Phase 3 occurs after V.8, before phase 4, and before the first T.30 frames are exchanged. These compatibility problems have been observed when sending to non-HP units.	Attempt to receive the fax again when telephone-line conditions have improved.
422	V.34 negotiations have failed from the answering machine during phase 4. Phase 4 occurs after V.8 and before the first T.30 frames are exchanged.	Ask the remote user to send the fax again when telephone-line conditions have improved.
423	V.34 negotiations have failed from the answering machine during phase 3. Phase 3 occurs after V.8, before phase 4, and before the first T.30 frames are exchanged.	Ask the remote user to send the fax again when telephone-line conditions have improved.
430	The transmitting machine is unable to send continuous "ones" at the end of the control channel before starting the primary channel. This is a V.34 error. This error might be associated with line conditions, although it is more likely to be caused by internal modem problems.	Ask the remote user to send the fax again when telephone-line conditions have improved.
431	The transmitting machine has not received a response after aborting a transmission. Depending upon when the session is aborted, some remote machines might not respond. The product always attempts to abort the session in such a way that the remote machine can respond to the final PPS_EOP.	No action required. The session was aborted.
440-445	An error occurred during a V.34 transmission after one or more partial pages (image data) were transmitted through the primary channel. The transmitting machine was unable to restart the control channel in order to resume the T.30 handshake. This typically occurs when the receiving machine prematurely disconnects while receiving a partial page, although the problem can be caused by compatibility issues.	Attempt to receive the fax again when telephone-line conditions have improved.

Translating the fax trace report (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)

Print a fax log report. The fax log report contains information about the product's interpretation of the problem.

Read the time sequences, looking for abnormal activity on the fax trace report. See Table 6-8 Fax phase sequence (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only) on page 270, and Table 6-9 Appropriate responses (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only) on page 271, to separate normal from abnormal activity. Fax abbreviations appear in Table 6-10 Fax abbreviations (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only) on page 273.

Identify the phase in which the error occurred.

NOTE **???** represents an unidentified command.

Examples of a successfully sent fax and a successfully received fax appear after the tables.

Table 6-8 Fax phase sequence (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)

Sequence	Calling station	Called station
Phase A—Call setup sequence		
1	Ring signal	
2	CNG tone beep, 500 Hz for 1 second	
3		Transmit CED, 2100 Hz for 3 seconds
4		Transmit NSF
5		Transmit CSI
6		Transmit DIS
7	DIS detected	
Phase B—Pre-message procedure (negotiate compatible format/protocol) (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)		
8	Transmit TSI	
9	Transmit DCS, select mode	
10		DCS detected
11	Transmit TCF/training	
12	Transmit FSK	
13		Training (synchronize signals), check for errors
14		Transmit CFR
15	Detect CFR	
Phase C—Message transmission (page/scan transmission) (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)		
16	Transmit message (FSK, followed by date)	

Table 6-8 Fax phase sequence (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only) (continued)

Sequence	Calling station	Called station
17		Receive message (SCAN), check for errors
18	Transmit FSK	
19	At end of message, send one of the following: • EOM • EOP • MPS • PRI-Q • PPS-NULL • PPS-MPS • PPS-EOM • PPS-EOP • PPS-PRI-Q	
Phase D—Post-message transmission (next page/end of transmission) (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)		
20		Detect EOM, EOP, MPS, PRI-Q, PPS-NULL, PPS-MPS, PPS-EOM, PPS-EOP, or PPS-PRI-Q
21		Transmit MCF response to confirmation signals of post-message responses
Phase E—Call release (hang up sequence) (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)		
21	Transmit DCN	
22		Station hangs up

Table 6-9 Appropriate responses (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)

Commands	Comments	Appropriate responses
(NSF) (CSI) DIS	Identifying capabilities: from a manual receiver or an auto-answer unit	(NSC) (CIG) DTC (TSI) DCS (NSF) (CSI) DIS (CRP) (TSI) (NSS) (PWD) (SEP) (CIG) DTC (PWD) (SUB) (TSI) DCS
(NSC) (CIG) DTC	Mode-setting command: from calling unit	(TSI) DCS (NSF) (CSI) DIS
(PWD) (SEP) (CIG) DTC	Poll operation	(CRP) (TSI) (NSS)
(TSI) DCS (TSI) (NSS)	Mode-setting command: from manual transmitter or automatic receiver	CFR FTT (NSC) (CIG) DTC
(PWD (SUB) (TSI) DCS	Command is always followed by phasing/training	(NSC) (CIG) DTC
CTC	Mode-setting command: from the transmitter to the receiver	(CTR) (CRP)

Table 6-9 Appropriate responses (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only) (continued)

Commands	Comments	Appropriate responses
(EOR-NULL)	Indicates the next block transmission from the transmitter to the receiver	(ERR) (RNR) (CRP)
Any one of the following: • (EOR-EOP) • (EOR-EOM) • (EOR-PRI-MPS) • (EOR-PRI-EOP) • (EOR-PRI-EOM)	The receiver	(ERR) (RNR) PIN (CRP)
Any one of the following: • MPS • EOP • EOM • (PRI-MPS) • (PRI-EOP) • (PRI-EOM)	Post-message commands	MCF RTP RTN PIP PIN (CRP)
(PPS-NULL)	Post-message command for a partial page from the transmitter to the receiver	(PPR) MCF (RNR) (CRP)
Any one of the following: • (PPS-MPS) • (PPS-EOP) • (PPS-EOM) • (PPS-PRI-MPS) • (PPS-PRI-EOP) • (PPS-PRI-EOM)	Post-message commands for a complete page from the transmitter to the receiver	(PPR) MCF (RNR) PIP PIN (CRP)
(RR)	Ask for the status of the receiver: from the transmitter to the receiver	(RNR) (ERR) MCF PIP PIN (CRP)
DCN	Phase E command	None

Table 6-10 Fax abbreviations (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only)

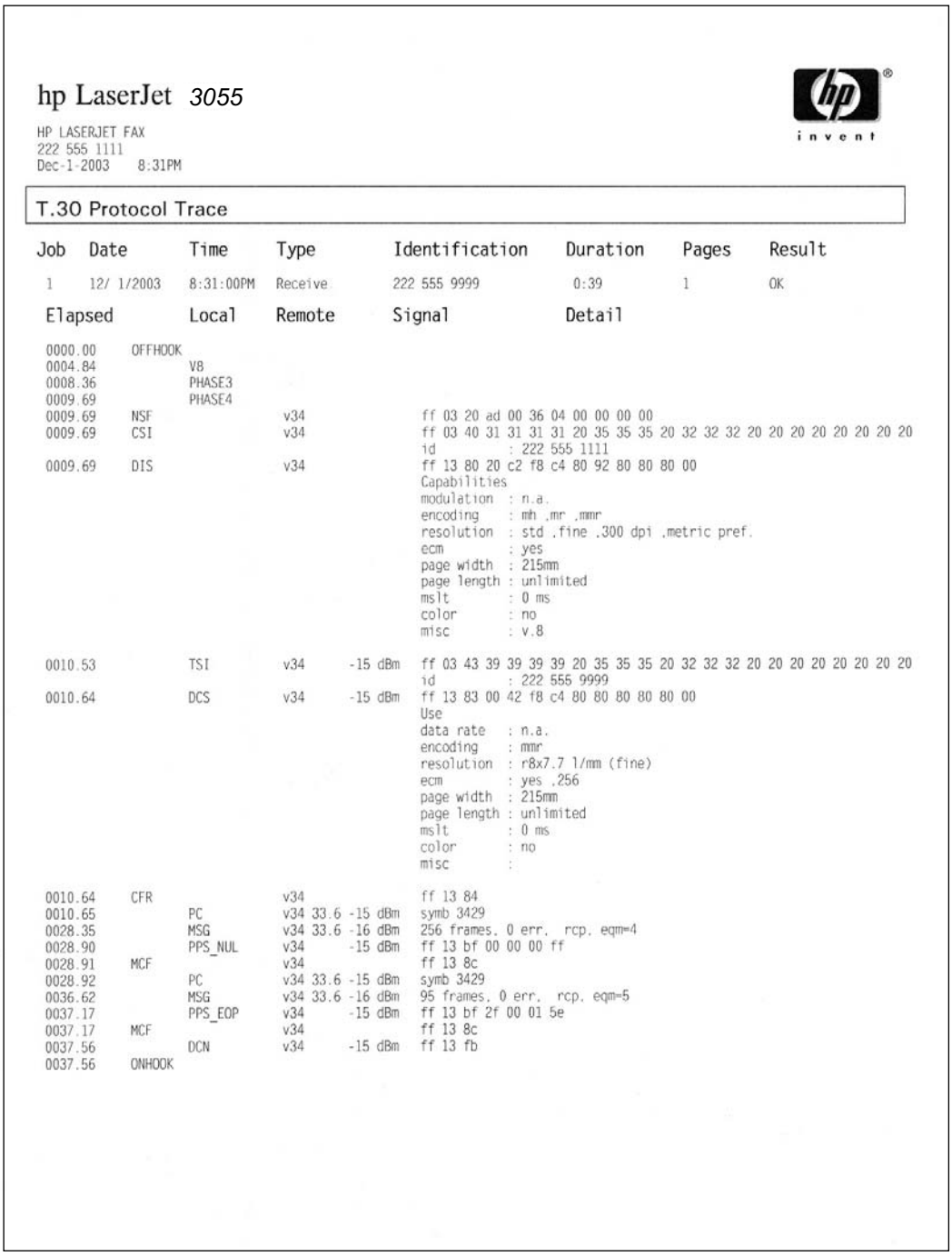
Abbreviation	Function	Signal format ("X"= any #)
CED	Called station identification	2100 Hz
CFR	Confirmation to receive	X010 0001 1850 or 1650 Hz for 3 seconds
CIG	Calling subscriber identification	1000 0010
CNG	Calling tone	1100 Hz for 500 ms
CRP	Command repeat	X101 1000
CSI	Called subscriber identification	0000 0010
CTC	Continue to correct	X100 1000
CTR	Response to continue to correct	X010 0011
DBM	-dBM signal strength detected from sending station (number is deviation from average value)	Range in -7.5 to -43 (-43 is a weak signal; see the explanation that follows Figure 6-4 Example of a T.30 trace of a successfully received fax on page 277)
DCN	Disconnect	X101 1111
DCS	Digital command signal	X100 0001
DIS	Digital identification signal	0000 0001
DTC	Digital transmit command	1000 0001
EOM	End of message	X111 0001 1100 Hz
EOP	End of procedure	X111 0100
EOR	End of retransmission	X111 0011
EQM	Eye quality monitor—a measure of the modem signal quality, lower numbers indicate better signals	0-99
ERR	Response for end of retransmission	X011 1000
ECD	Facsimile coded date	0110 0000
FCF	Facsimile	
FCS	Frame check sequence	
FDM	File diagnostics message	X011 1111
FIF	Facsimile information field	
FSK	Frequency shift key: Low-speed command identifier separating commands/scans; precedes command mode	
FTT	Failure to train: The 1.5 seconds of the Training Check Frame (TCF) indicates line conditions are not good enough for this modulation	X010 0010
GC	Group command	2100 Hz for 1.5 to 100 seconds

Table 6-10 Fax abbreviations (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only) (continued)

Abbreviation	Function	Signal format (“X”= any #)
GI	Group identification	1850 Hz
HDLC	High-level data link control	
LCS	Line conditioning signals	1100 Hz
MCF	Message confirmation	X011 0001 1850 Hz
MSG	Message received high speed data	
MPS	Multipage signal	X111 0010
NSF	Nonstandard facilities command	1000 0100
NSF	Nonstandard facilities	0000 0100
NSS	Nonstandard setup	X100 0100
PID	Procedure interrupt disconnect	X011 0110
PIN	Procedural interrupt negative	X011 0100
PIP	Procedural interrupt positive	X011 0101
PIS	Procedural interrupt signal	462 Hz for 3 seconds
PPS	Partial-page signal	X111 1101
PPS-EOM	Partial-page signal—end of message	X111 1101
PPS-EOP	Partial-page signal—end of procedure	X111 1101
PPS-MPS	Partial-page signal—multipage signal	X111 1101
PPS-NULL	Partial-page signal—null	X111 1101
PPR	Partial-page request	X011 1101
PRI-EOM	Procedure interrupt—end of message	X111 1001
PRI-EOP	Procedure interrupt—end of procedure	X111 1100
PRI-MPS	Procedure interrupt—multipage signal	X111 1010
RCP	Return to control for partial page	0110 0001
RNR	Receive not ready	X011 0111
RR	Receive ready	X111 0110
RTC	Return to control mode	Six EOLs
RTN	Retrain negative	X011 0010
RTP	Retrain positive	X011 0011
TCF	Training check field	Zeroes for 1 5 5
TSI	Transmitting subscriber identification	X100 0010
PWD	Password (for polling)	1000 0011
PWD	Password (for transmission)	X100 0101
SCAN	Data-packets or scan-line count	

Table 6-10 Fax abbreviations (HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one only) (continued)

Abbreviation	Function	Signal format (“X”= any #)
SEP	Selective polling	1000 0101
SUB	Sub-address	X100 0011
V.xx	Protocol version used (Group 3 only)	V.27 = 4800/2400 V.29 = 9600/7200 V.33 = 14400/12000 V.17 = 14400/12000/9600/7200
XID	Exchange identification procedure	
???	Unidentified command sequence	



hp LaserJet *3055*

HP LASERJET FAX
222 555 1111
Dec-1-2003 8:31PM

T.30 Protocol Trace

Job	Date	Time	Type	Identification	Duration	Pages	Result
1	12/ 1/2003	8:31:00PM	Receive	222 555 9999	0:39	1	OK

Elapsed		Local	Remote	Signal	Detail
0000.00	OFFHOOK				
0004.84		V8			
0008.36		PHASE3			
0009.69		PHASE4			
0009.69	NSF		v34		ff 03 20 ad 00 36 04 00 00 00 00
0009.69	CSI		v34		ff 03 40 31 31 31 31 20 35 35 35 20 32 32 32 20 20 20 20 20 20 20
					id : 222 555 1111
0009.69	DIS		v34		ff 13 80 20 c2 f8 c4 80 92 80 80 80 00
					Capabilities
					modulation : n.a.
					encoding : mh ,mr ,mmr
					resolution : std ,fine ,300 dpi ,metric pref.
					ecm : yes
					page width : 215mm
					page length : unlimited
					mslt : 0 ms
					color : no
					misc : v.8
0010.53		TSI	v34	-15 dBm	ff 03 43 39 39 39 39 20 35 35 35 20 32 32 32 20 20 20 20 20 20 20
					id : 222 555 9999
0010.64		DCS	v34	-15 dBm	ff 13 83 00 42 f8 c4 80 80 80 80 80 00
					Use
					data rate : n.a.
					encoding : mmr
					resolution : r8x7.7 l/mm (fine)
					ecm : yes ,256
					page width : 215mm
					page length : unlimited
					mslt : 0 ms
					color : no
					misc :
0010.64	CFR		v34		ff 13 84
0010.65		PC	v34 33.6	-15 dBm	symb 3429
0028.35		MSG	v34 33.6	-16 dBm	256 frames, 0 err, rcp, eqm=4
0028.90		PPS_NUL	v34	-15 dBm	ff 13 bf 00 00 00 ff
0028.91	MCF		v34		ff 13 8c
0028.92		PC	v34 33.6	-15 dBm	symb 3429
0036.62		MSG	v34 33.6	-16 dBm	95 frames, 0 err, rcp, eqm=5
0037.17		PPS_EOP	v34	-15 dBm	ff 13 bf 2f 00 01 5e
0037.17	MCF		v34		ff 13 8c
0037.56		DCN	v34	-15 dBm	ff 13 fb
0037.56	ONHOOK				

Figure 6-3 Example of a T.30 trace of a successfully sent fax

NOTE Phase A, call establishment, does not show up on a trace report. Phase C is the phase in which faxed pages are transferred.

hp LaserJet *3055*

HP LASERJET FAX
222 555 1111
Dec-1-2003 8:33PM

T.30 Protocol Trace

Job	Date	Time	Type	Identification	Duration	Pages	Result
2	12/ 1/2003	8:32:28PM	Send	5559999	0:46	1	OK

Elapsed	Local	Remote	Signal	Detail
0000.00	OFFHOOK			
0004.45	CNG			
0009.97	V8			
0013.50	PHASE3			
0014.86	PHASE4			
0015.07	NSF	v34	-16 dBm	ff 03 20 ad 00 36 04 00 00 00 00
0015.25	CSI	v34	-16 dBm	ff 03 40 39 39 39 39 20 35 35 35 20 32 32 32 20 20 20 20 20 20 20 20
				id : 222 555 9999
0015.35	DIS	v34	-16 dBm	ff 13 80 20 c2 f8 c4 80 92 80 80 80 00
				Capabilities
				modulation : n.a.
				encoding : mh ,mr ,mmr
				resolution : std ,fine ,300 dpi ,metric pref.
				ecm : yes
				page width : 215mm
				page length : unlimited
				mslt : 0 ms
				color : no
				misc : v.8
0015.35	TSI	v34		ff 03 43 31 31 31 31 20 35 35 35 20 32 32 32 20 20 20 20 20 20 20 20
				id : 222 555 1111
0015.35	DCS	v34		ff 13 83 00 42 f8 c4 80 80 80 80 80 00
				Use
				data rate : n.a.
				encoding : mmr
				resolution : r8x7.7 l/mm (fine)
				ecm : yes ,256
				page width : 215mm
				page length : unlimited
				mslt : 0 ms
				color : no
				misc :
0015.98	CFR	v34	-16 dBm	ff 13 84
0015.98	PC	v34 33.6		symb 3429
0033.49	MSG	v34 33.6		
0033.90	PPS_NUL	v34		ff 13 bf 00 00 00 ff
0034.23	MCF	v34	-16 dBm	ff 13 8c
0034.24	PC	v34 33.6		symb 3429
0042.63	MSG	v34 33.6		
0043.04	PPS_EOP	v34		ff 13 bf 2f 00 01 6c
0043.38	MCF	v34	-16 dBm	ff 13 8c
0043.38	DCN	v34		ff 13 fb
0044.82	ONHOOK			

Figure 6-4 Example of a T.30 trace of a successfully received fax

Repetitive image defect ruler

Use the repetitive image-defect ruler to help solve image quality problems. Place the top line on the ruler next to the first occurrence of the defect on the page. Find the mark that points to the next instance of the defect to identify the component that is causing the defect.

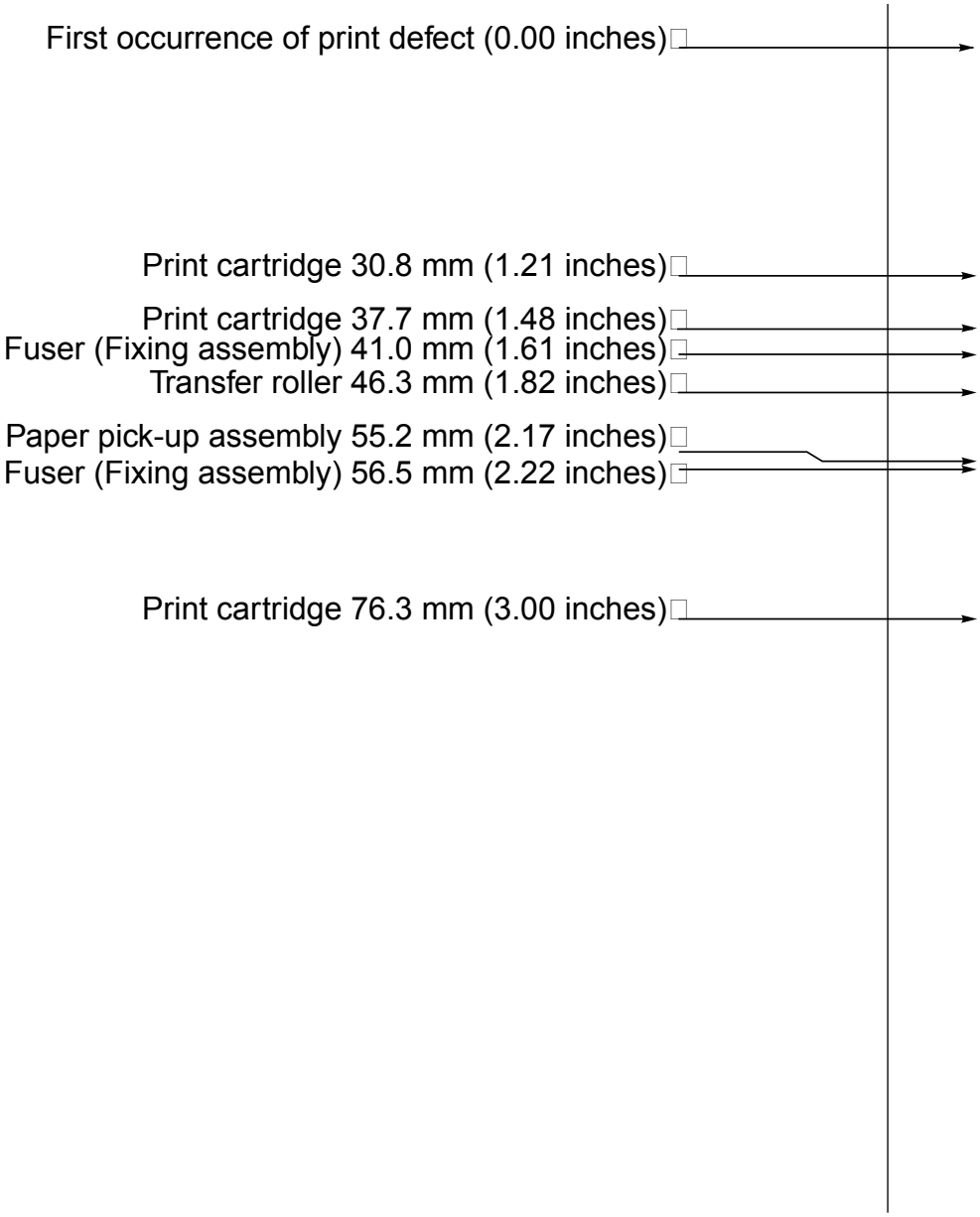


Figure 6-5 Repetitive image defect ruler

NOTE The repetitive image defect ruler is for reference only. This ruler might not appear in or print to the correct scale. Use a more precise measuring device to verify the spacing between repeating image defects.

Firmware updates and recovery

The device uses a flash-memory-based formatter that enables the firmware code to be updated when updated firmware is available. Flash memory also provides a method for product recovery if the installed firmware becomes corrupted or fails.

Print a configuration page to find out what version of firmware code is installed on the device. If updated firmware is available, download the appropriate update (www.hp.com/support/lj3050; www.hp.com/support/lj3052; www.hp.com/support/lj3055) and follow the instructions in the ReadMe file. Turn the all-in-one off and then on before running the executable file.

NOTE If after attempting to update the firmware code the device does not return to the **Ready** state, perform the following procedures:

Try the firmware update again.

Perform the NVRAM init procedure. See NVRAM init on page 256.

If the device still does not reach the **Ready** state, replace the formatter. See Formatter and line interface unit (LIU) on page 178.

7 Parts and diagrams

- Ordering parts and supplies
- Accessories
- Diagrams
- HP LaserJet 3050 all-in-one scanner assembly
- HP LaserJet 3052/3055 all-in-one scanner assembly
- Printer (product base), HP LaserJet 3050/3052/3055 all-in-one
- Alphabetical parts list
- Numerical parts list

Ordering parts and supplies

Parts that wear

The parts on the product that wear are listed in Table 3-1 Life expectancies on page 38. Parts are available directly from Hewlett-Packard at the following Website: www.hp.com/buy/parts.

Parts

Order replacement parts from the following Website: www.hp.com/buy/parts

World-wide customer support

Order documentation and software from the Websites listed in Table 7-1 Technical support Websites and related documentation on page 282:

Table 7-1 Technical support Websites and related documentation

HP Connect Online (for HP partners)	www.connect-online.hp.com
HP Customer Care Call Centers Information for contacting HP call centers in specific countries/ regions	www.hp.com/support/callcenters
HP Online Technical Support Software drivers, support documentation, and answers to frequently asked questions	www.hp.com/support
HP Technical Training (North America) Classes and schedules	www.compaq.com/training Note: Select your country/region in the "select a country or region" field at the upper-right corner of the page.
Parts Parts information	www.hp.com/buy/parts

Accessories

The following accessories are available for the HP LaserJet 3050/3052/3055 all-in-one.

Table 7-2 Accessories

Product name	Description	Part number
Print cartridge	2,000-page cartridge	Q2612A
Toner cloth	Ideal for wiping up toner spills	5090-3379
Scanner hinge tool	Use this tool to keep the scanner assembly from falling off of the printer when the entire assembly is being removed.	5185-7441
Fax telephone cord	2-wire 3-meter (9.8-f00t) fax telephone cord	8121-0811
USB cable	2-meter (6.6-foot) USB cable	8121-0539
USB cable	0.6-meter (2-foot) USB cable	8121-0549
Power cord, 1.8-meter (6-foot)	U.S./Canada	8120-8382
Power cord, 1.8-meter (6-foot)	Europe	8121-0516
Power cord, 1.8-meter (6-foot)	UK	8121-0517
Power cord, 1.8-meter (6-foot)	Danish	8121-0518
Power cord, 1.8-meter (6-foot)	Switzerland	8121-0519
Power cord, 1.8-meter (6-foot)	South America	8121-0520
Power cord, 1.8-meter (6-foot)	Israel	8121-0521
Fax dongle	2-wire to 4-wire adapter (U.S.)	Q3093-80004

Documentation

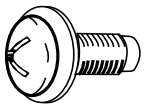
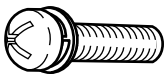
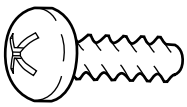
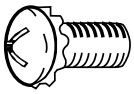
Table 7-3 Documentation

Description	Languages	Part number
Service manual (this manual)	English only	Q6502-90901
Service and support training CD	English only	Q6502-60115
Getting started guides	English only	Q6502-90902
	English, French, Spanish, Portuguese, Italian, German, Dutch	Q6502-90903
	English, Swedish, Norwegian, Finnish, Greek, Danish, Hebrew	Q6502-90904
	English, Russian, Estonia, Lithuanian, Latvian, Kazakh, Arabic	Q6502-90905
	English, Czech, Hungarian, Polish, Slovak	Q6502-90906
	English, Slovenian, Bulgarian, Croatian, Romanian, Turkish	Q6502-90907
	English, Chinese simplified, Chinese traditional, Thai, Indonesian, Korean, Vietnamese	Q6502-90908
User guides (print on demand)	English only	Q6500-90929
	Czech	Q6500-90930
	Dutch	Q6500-90931
	French	Q6500-90932
	German	Q6500-90933
	Hungarian	Q6500-90934
	Italian	Q6500-90935
	Korean	Q6500-90936
	Polish	Q6500-90937
	Russian	Q6500-90938
	Chinese simplified	Q6500-90939
	Spanish	Q6500-90940
	Swedish	Q6500-90941
	Chinese traditional	Q6500-90942
	Thai	Q6500-90943
	Turkish	Q6500-90944
Portuguese	Q6500-90945	

Common hardware

The product has three common fasteners. See Table 7-4 Common fasteners on page 285 for a description of these screw types.

Table 7-4 Common fasteners

Example	Description	Size	Part Number	Use
	Screw, machine, truss head	M3X6 M2X10	XA9-1495-000CN XA9-1501-000CN?	Used to secure metal to metal
	Screw, w/washer	M3X8 M3X6 M3X6	XA9-1420-000CN XB2-7300-605CN XB2-8300-609CN	Used to secure metal components to metal components (for example, a ground wire to the frame)
	Screw, self-tapping	BH3X6 M4X10 BH3X6	XB9-1503-000CN XB4-5401-009CN XB4-7300-609CN	Used to secure anything to plastic
	Screw, tapping,binding head	M3X6	XB4-5300-609CN	Used to secure anything to plastic
	Screw, D	M3X6	XA9-1670-000CN	Used to secure metal components to metal components (for example, a ground wire to the frame)

How to use the parts lists and diagrams

The figures in this chapter illustrate the major subassemblies in the product and their component parts. A table (material list) follows each exploded assembly diagram. Each table lists the reference designator, the associated part number for the item, and a description of the part.

Parts that have no reference designator or part number are not field-replaceable units (FRUs) and cannot be ordered.

While looking for a part number, pay careful attention to the voltage listed in the description column to make sure that the part number selected is for the correct product model.

Replacing the printer engine assembly

This table describes the components that can be transferred from a failed printer engine assembly to the replacement printer engine assembly. In addition to the components listed in this table, trays, CD-ROM drives, and power cords can also be reused.

Table 7-5 Replacing the printer engine assembly

HP LaserJet 3050 all-in-one	HP LaserJet 3052/3055 all-in-one
Replacement print engine • Q6504-67001; 110 V print engine (new) Q6504-69001; 110 V print engine (exchange) or • Q6504-67002; 220 V print engine (new) Q6504-69002; 220 V print engine (exchange) *Plus the following components*	**Replacement print engine** • Q6502-67001; 110 V print engine (new, HP LaserJet 3052 all-in-one) Q6503-67001; 110 V print engine (new, HP LaserJet 3055 all-in-one) Q6502-69001; 110 V print engine (exchange, HP LaserJet 3052 all-in-one) Q6503-69001; 110 V print engine (exchange, HP LaserJet 3055 all-in-one) or • Q6502-67002; 220 V print engine (new, HP LaserJet 3052 all-in-one) Q6503-67002; 220 V print engine (new, HP LaserJet 3055 all-in-one) Q6502-69002; 220 V print engine (exchange, HP LaserJet 3052 all-in-one) Q6503-69002; 220 V print engine (exchange, HP LaserJet 3055 all-in-one) *Plus the following components*
The correct LIU • Q2663-60001 US/WW LIU [2] or • Q2687-60002 EMEA LIU [2]	The correct LIU [3] • Q2663-60001 US/WW LIU [2] or • Q2687-60002 EMEA LIU [2]
Formatter components • Q7844-60002; HP LaserJet 3050 all-in-one formatter PCA • I/O plate [1] • Safety shield [1] • LAN port plate[1]	Formatter components • Q7528-60001; HP LaserJet 3052 all-in-one formatter PCA or • Q7529-60002; HP LaserJet 3055 all-in-one formatter PCA • I/O plate [1] • Safety shield [1] • Jack plate (HP LaserJet 3052 all-in-one only)
Link assembly and springs • RM1-0896-000CN; Scanner link assembly, left • RM1-0897-000CN; Scanner link assembly, right • RU5-2885-000CN; Scanner spring, compression (qty 2)	Link assembly and springs • Q6502-67903; Scanner link assembly, kit

Table 7-5 Replacing the printer engine assembly (continued)

HP LaserJet 3050 all-in-one	HP LaserJet 3052/3055 all-in-one
Scanner-top components • Scanner base-frame assembly • RL1-0376-000CN; Scanner sheet, grounding • RK2-1214-000CN; Scanner flat, flexible cable • RM1-3076-000CN; Scanner cover, left • RM1-3077-000CN; Scanner cover, right • RM1-3063-000CN; Scanner-frame assembly • RC1-8416-000CN; Scanner top cover • RK2-1209-000CN; Control-panel assembly	Scanner-top components • Q6502-60117; ADF lid • Q1636-40036; Hinge retainer clip (Solar lock) • Q6502-60117 Scanner assembly • 7121-8285; HP jewel, control panel
	The correct control panel • Q6502-60101; HP LaserJet 3052 all-in-one control panel or • Q65036-60101; HP LaserJet 3055 all-in-one control panel

[1] The metal I/O plate, safety shield, jack plate, and LAN port plate are not FRUs and cannot be ordered. These metal components must be transferred from the failed printer engine assembly to the replacement assembly.

[2] The EMEA LIU is used in Europe only. All other countries/regions worldwide use the U.S./WW LIU.

[3] The HP LaserJet 3052 all-in-one does *not* have fax capabilities and does *not* require a LIU.

Diagrams

Component locations, HP LaserJet 3050/3052/3055 all-in-one printer (product base)

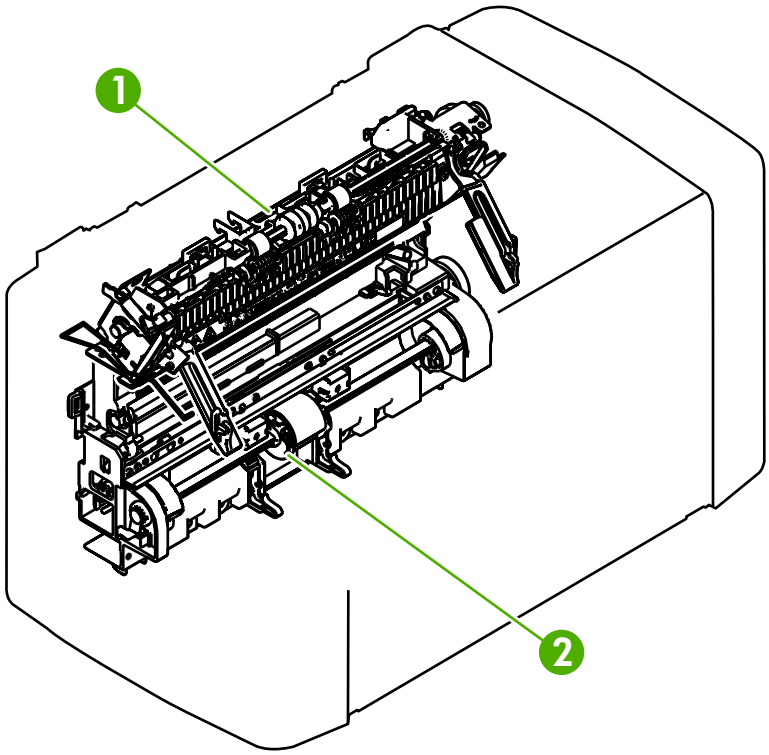


Figure 7-1 Major components

1	Fuser assembly
2	Paper-pickup assembly

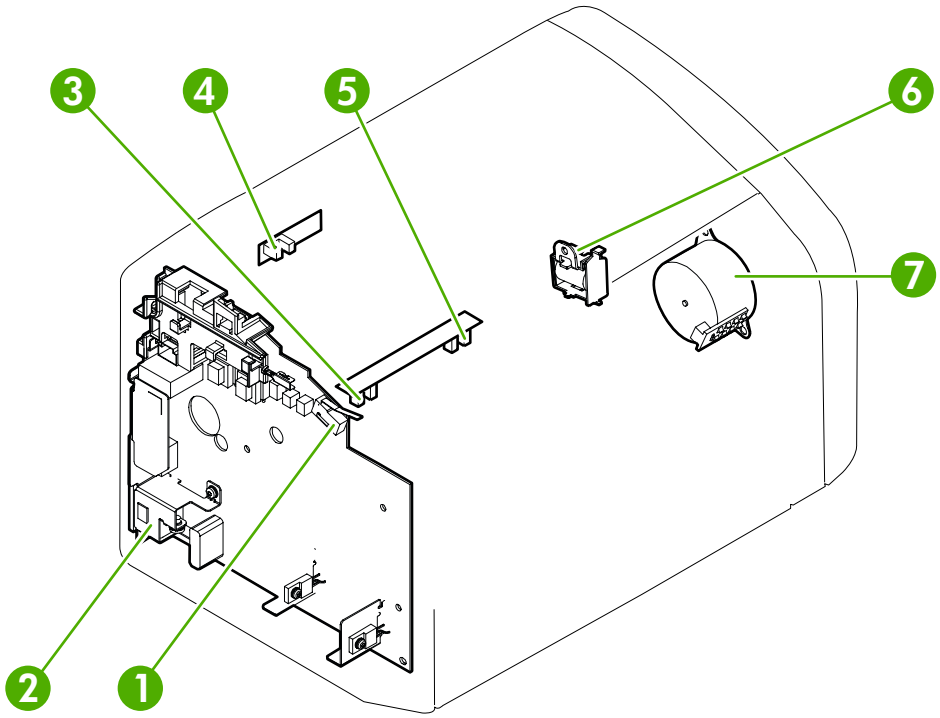


Figure 7-2 Solenoid, sensors, switches, and motor

1	Print-cartridge-door switch
2	Power switch/power supply
3	Paper-width sensor
4	Paper-delivery sensor
5	Top-of-page sensor
6	Solenoid
7	Motor

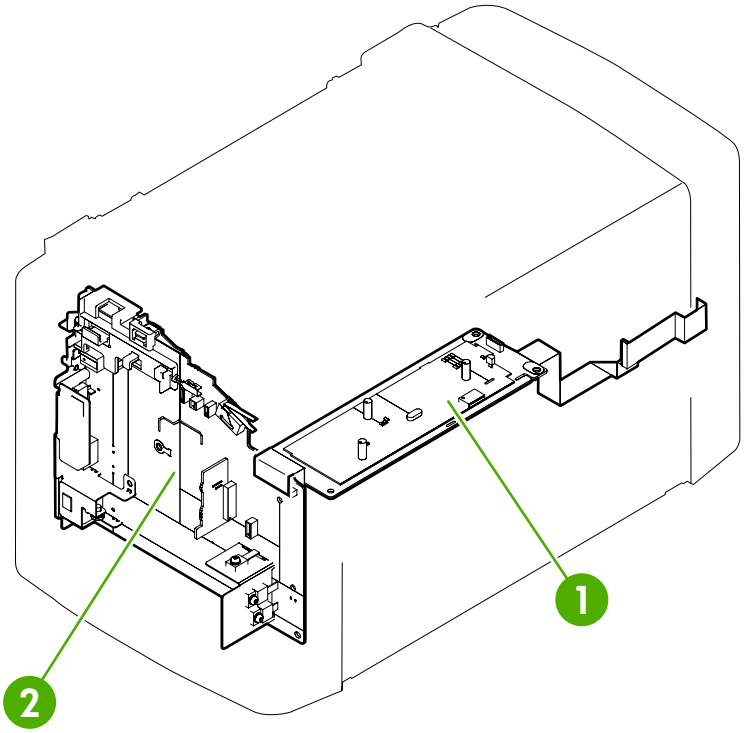


Figure 7-3 PCBs

1	Engine controller unit (ECU)
2	Formatter **NOTE** For the HP LaserJet 3050 all-in-one and HP LaserJet 3055 all-in-one, the LIU is attached to the formatter. The HP LaserJet 3052 all-in-one does not have fax capabilities, and does not use an LIU.

Main wiring

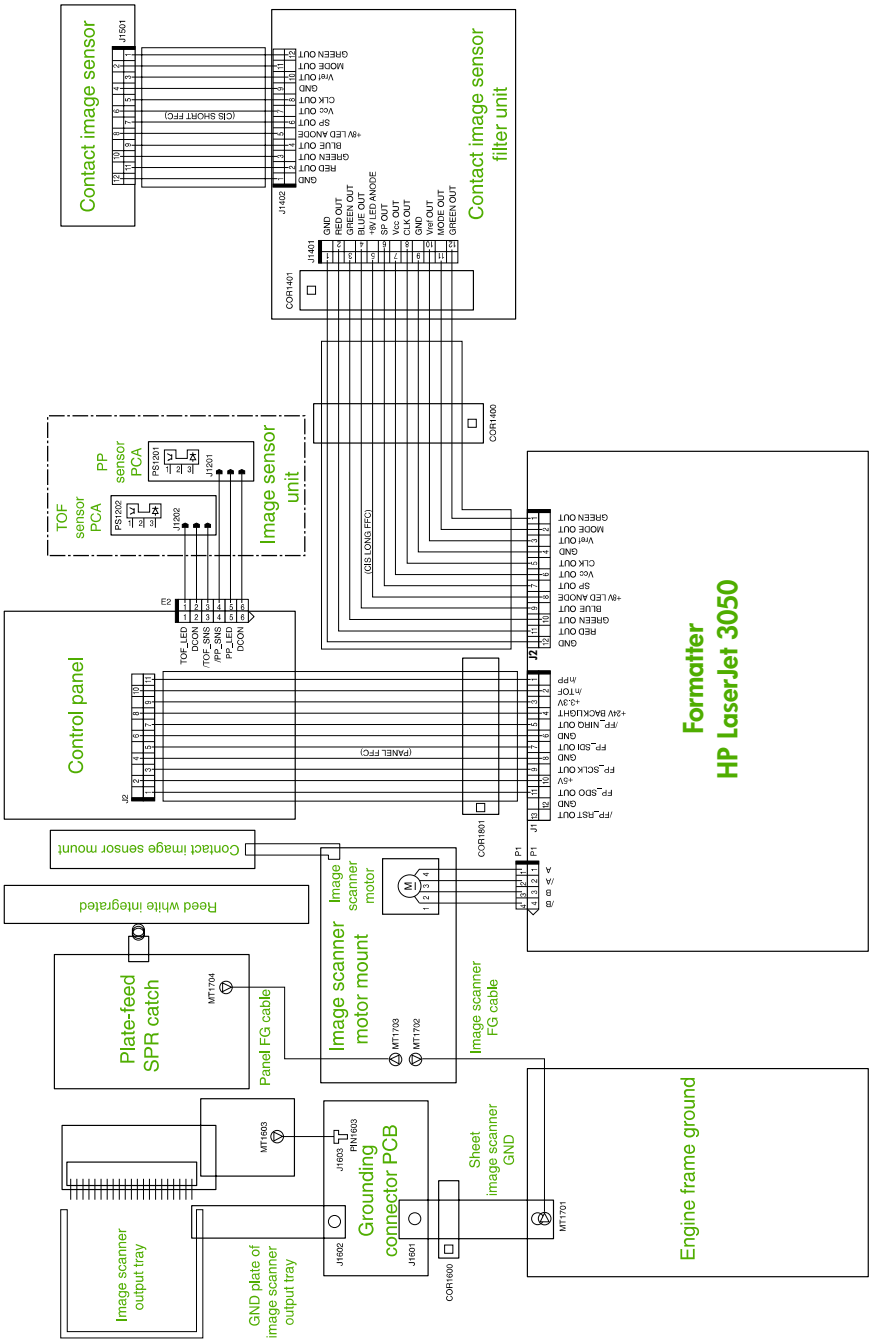


Figure 7-4 Main wiring, HP LaserJet 3050 all-in-one scanner assembly

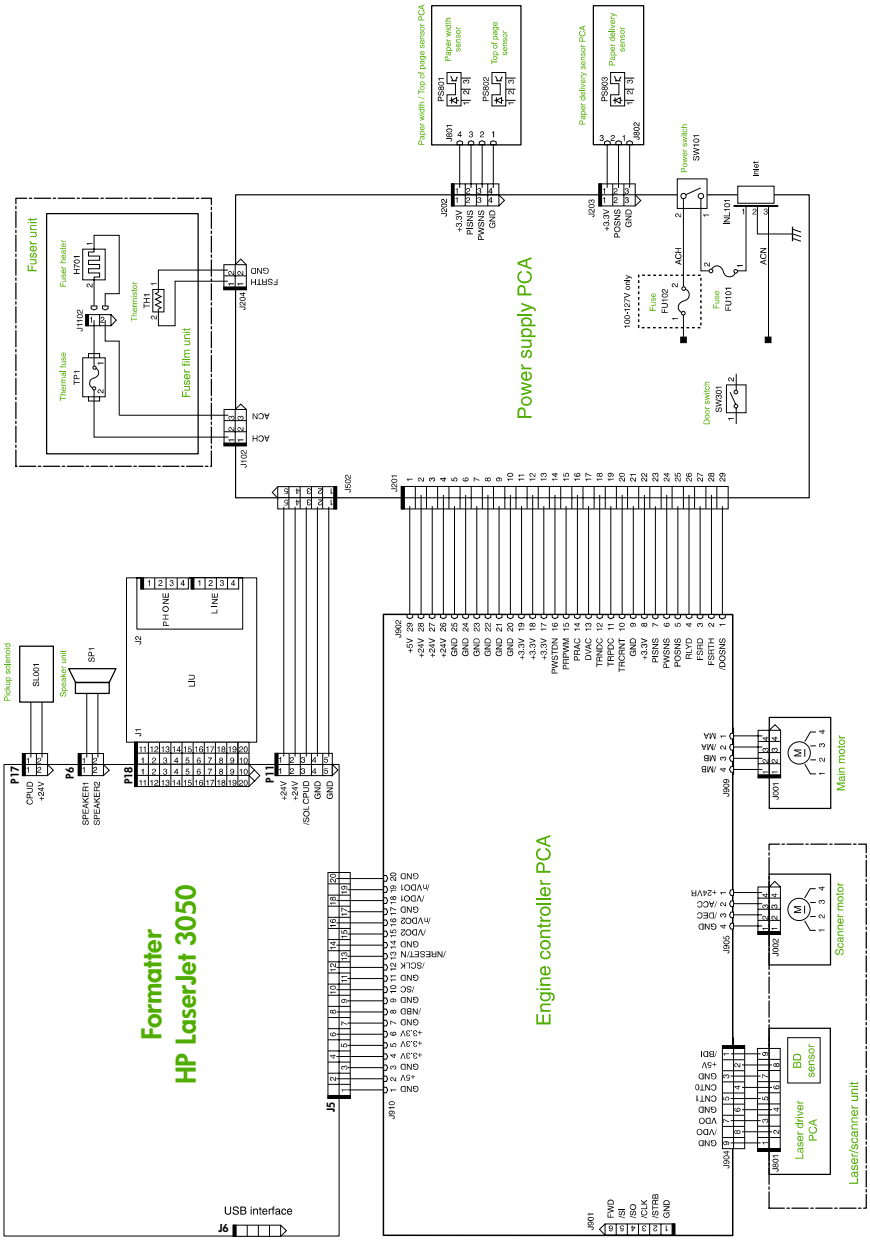


Figure 7-5 Main wiring, HP LaserJet 3050 all-in-one printer (product base)

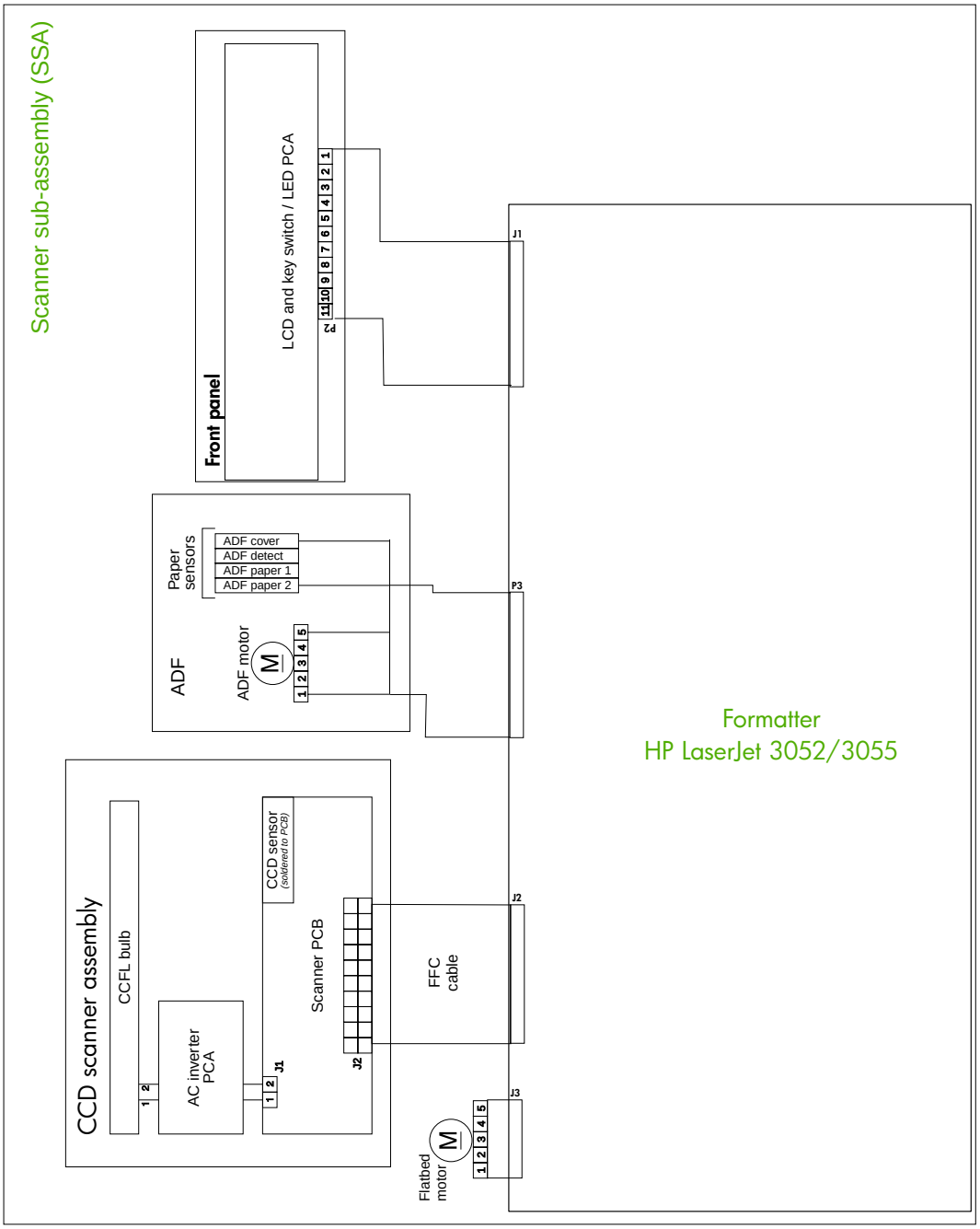


Figure 7-6 Main wiring, HP LaserJet 3052/3055 all-in-one scanner assembly

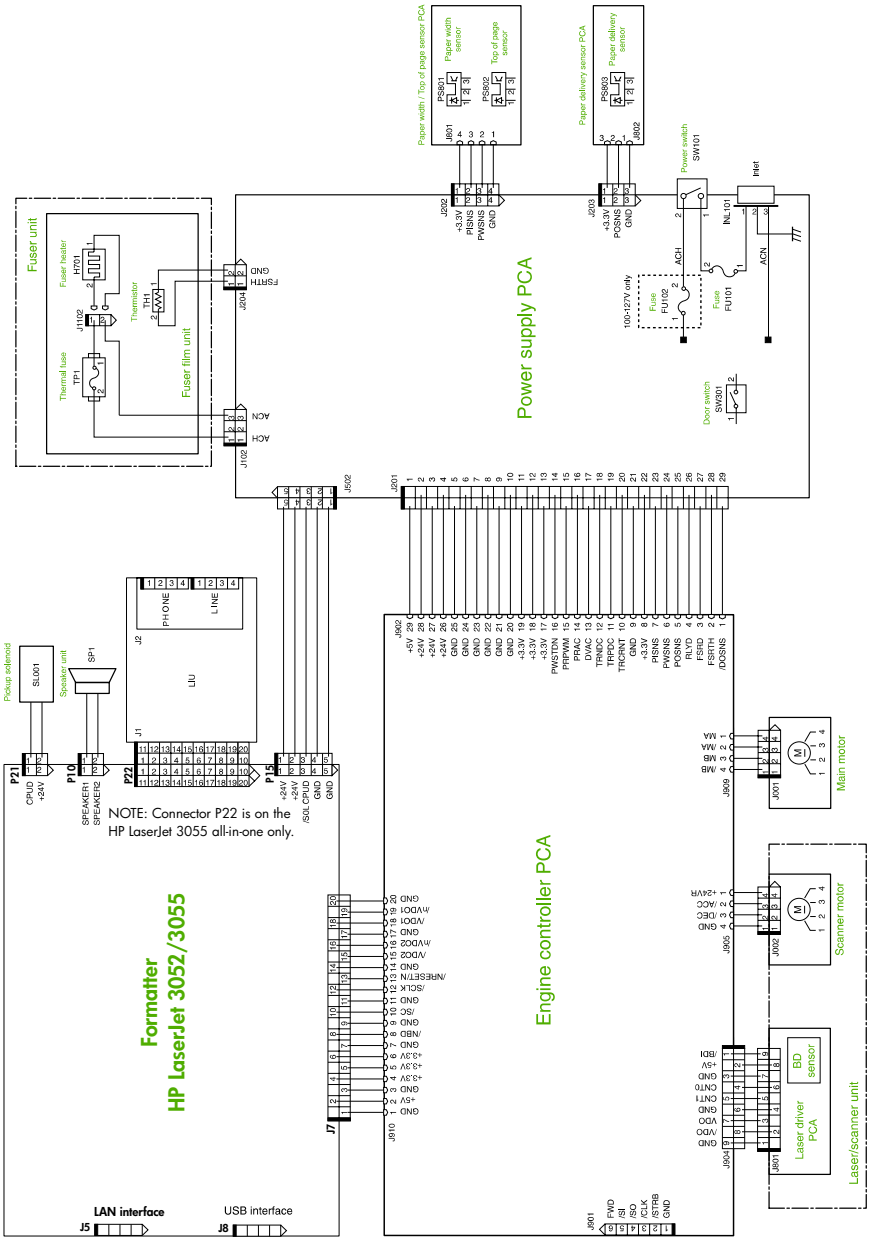


Figure 7-7 Main wiring, HP LaserJet 3050/3052/3055 all-in-one printer (product base)

Formatter PCA and LIU connectors

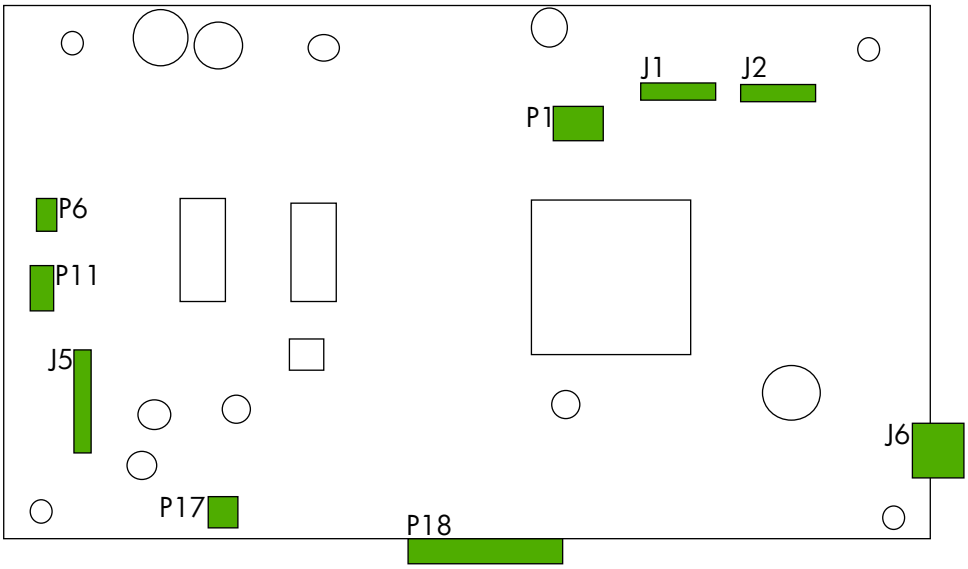
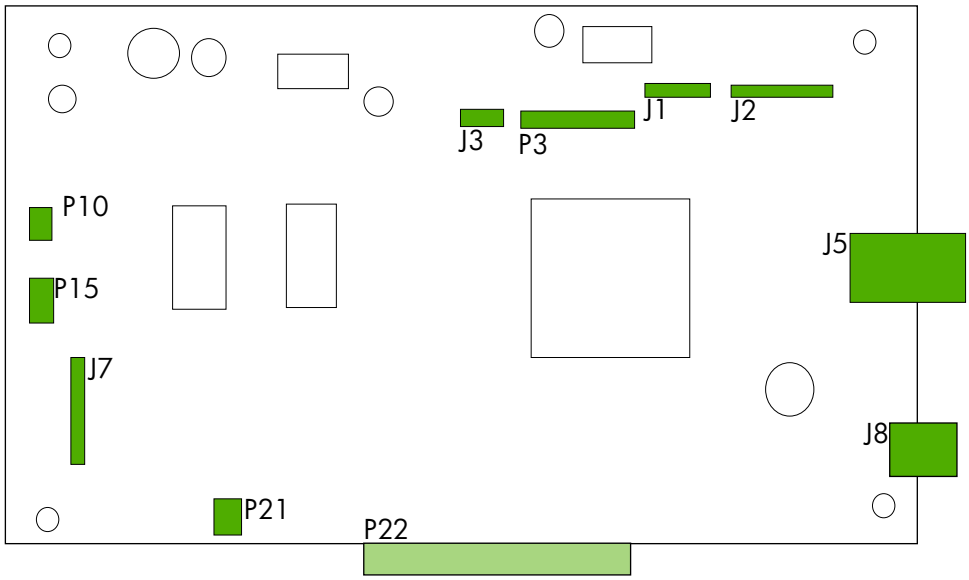


Figure 7-8 Formatter connections, HP LaserJet 3050 all-in-one

Table 7-6 Formatter connections, HP LaserJet 3050 all-in-one

Name	Connection
P1	ADF
J1	Control panel
J2	Scanner (CIS)
J6	USB
P18	LIU
P17	Engine solenoid
J5	Engine
P11	Engine power
P6	Speaker



NOTE: Connector P22 and its associated fax circuitry is for the HP LaserJet 3055 all-in-one only.

Figure 7-9 Formatter connections, HP LaserJet 3052/3055 all-in-one

Table 7-7 Formatter connections, HP LaserJet 3052/3055 all-in-one

Name	Connection
J1	Control panel
J2	Scanner (CCD)
J5	Local area network
J8	USB
J7	Engine
P22	LIU (HP LaserJet 3055 all-in-one only)
P15	Engine solenoid
P10	Speaker
J3	Flatbed motor
P3	ADF

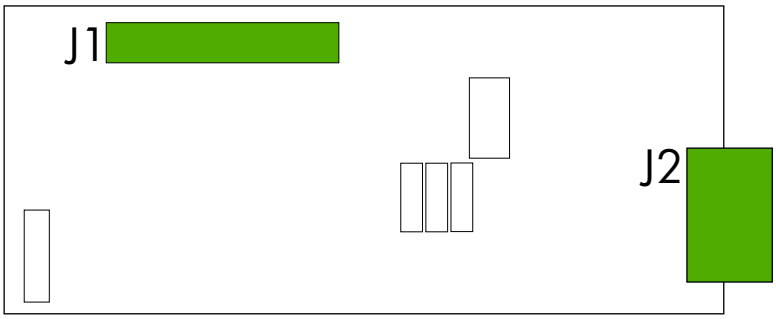


Figure 7-10 LIU connections, HP LaserJet 3050/3055 all-in-one

Table 7-8 LIU connections, HP LaserJet 3050/3055 all-in-one

Name	Connection
J1	Formatter
J2	Fax ports

HP LaserJet 3050 all-in-one scanner assembly

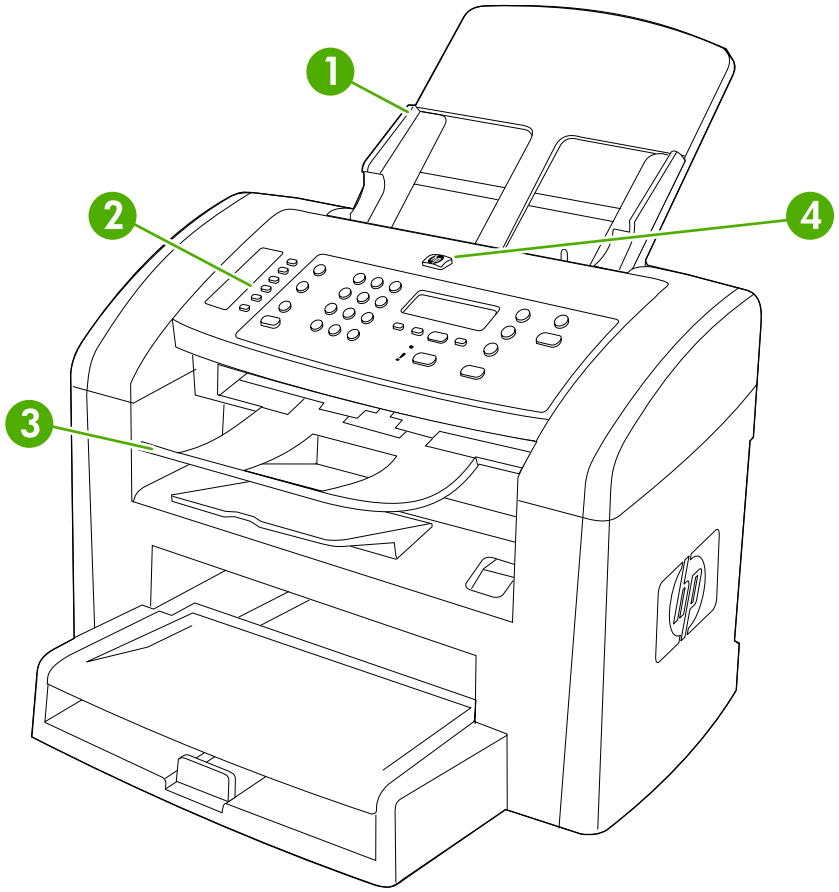


Figure 7-11 Scanner assembly, HP LaserJet 3050 all-in-one

Table 7-9 Scanner assembly, HP LaserJet 3050 all-in-one

Ref	Description	Part number	Qty
1	Pickup-tray assembly, HP LaserJet 3050 all-in-one scanner	RM1-3419-000CN	1
2	Control-panel assembly, HP LaserJet 3050 all-in-one	See Figure 7-12 ADF components, HP LaserJet 3050 all-in-one on page 300.	
3	Tray, delivery , HP LaserJet 3050 all-in-one scanner	RM1-8443-000CN	1
4	HP jewel	7121-8285	1

ADF components, HP LaserJet 3050 all-in-one

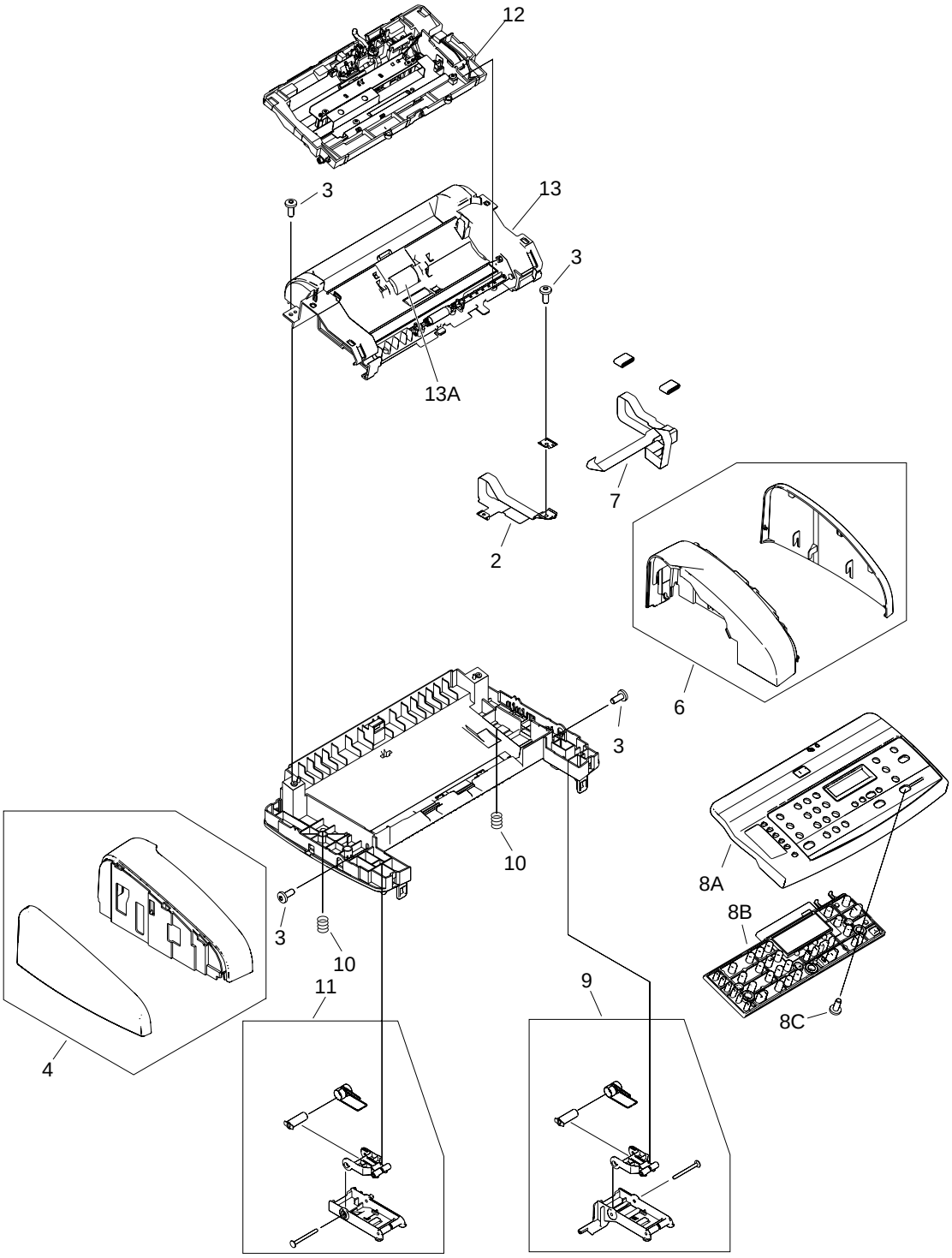


Figure 7-12 ADF components, HP LaserJet 3050 all-in-one

Table 7-10 ADF components, HP LaserJet 3050 all-in-one

Ref	Description	Part number	Qty
2	Sheet, grounding, HP LaserJet 3050 all-in-one scanner	RL1-0376-000CN	1
3	Screw, tap, M4X10	XB4-5401-009CN	6
4	Cover, left, HP LaserJet 3050 all-in-one scanner	RM1-3076-000CN	1
6	Cover, right, HP LaserJet 3050 all-in-one scanner	RM1-3077-000CN	1
7	Flat, flexible cable (FFC), HP LaserJet 3050 all-in-one scanner	RK2-1214-000CN	1
8A	Cover, top, HP LaserJet 3050 all-in-one	RC1-8416-000CN	1
8B	Control-panel assembly, HP LaserJet 3050 all-in-one	RK2-1209-000CN	1
8C	Screw, tap, M4X10	XB4-5401-009CN	3
9	Scanner link assembly, right, HP LaserJet 3050 all-in-one	RM1-0897-000CN	1
10	Spring, compression, HP LaserJet 3050 all-in-one scanner	RU5-2885-000CN	2
11	Scanner link assembly, left, HP LaserJet 3050 all-in-one	RM1-0896-000CN	1
12	Guide assembly, HP LaserJet 3050 all-in-one scanner	RM1-3066-000CN	1
13	Scanner frame assembly, HP LaserJet 3050 all-in-one	RM1-3063-000CN	1
13A	Pickup-roller assembly, HP LaserJet 3050 all-in-one scanner	RM1-0885-000CN	1
Not shown	Scanner-hinge tool	5185-7441	1
Not shown	Control-panel overlay, Arabic, HP LaserJet 3050 all-in-one	Q6504-00019	1
Not shown	Control-panel overlay, Chinese simplified, HP LaserJet 3050 all-in-one	Q6504-00022	1
Not shown	Control-panel overlay, Chinese traditional, HP LaserJet 3050 all-in-one	Q6504-00020	1
Not shown	Control-panel overlay, Czech, HP LaserJet 3050 all-in-one	Q6504-00012	1
Not shown	Control-panel overlay, Danish, HP LaserJet 3050 all-in-one	Q6504-00010	1
Not shown	Control-panel overlay, English, HP LaserJet 3050 all-in-one	Q2669-40002	1
Not shown	Control-panel overlay, Finnish, HP LaserJet 3050 all-in-one	Q6504-00009	1
Not shown	Control-panel overlay, Greek, HP LaserJet 3050 all-in-one	Q6504-00017	1
Not shown	Control-panel overlay, Hebrew, HP LaserJet 3050 all-in-one	Q6504-00018	1
Not shown	Control-panel overlay, Hungarian, HP LaserJet 3050 all-in-one	Q6504-00013	1
Not shown	Control-panel overlay, Italian, HP LaserJet 3050 all-in-one	Q6504-00006	1
Not shown	Control-panel overlay, Korean, HP LaserJet 3050 all-in-one	Q6504-00021	1
Not shown	Control-panel overlay, Norwegian, HP LaserJet 3050 all-in-one	Q6504-00008	1
Not shown	Control-panel overlay, Polish, HP LaserJet 3050 all-in-one	Q6504-00014	1
Not shown	Control-panel overlay, Russian, HP LaserJet 3050 all-in-one	Q6504-00011	1
Not shown	Control-panel overlay, Slovak, HP LaserJet 3050 all-in-one	Q6504-00015	1
Not shown	Control-panel overlay, Swedish, HP LaserJet 3050 all-in-one	Q6504-00007	1

Ref	Description	Part number	Qty
Not shown	Control-panel overlay, Thai, HP LaserJet 3050 all-in-one	Q6504-00023	1
Not shown	Control-panel overlay, Turkish, HP LaserJet 3050 all-in-one	Q6504-00016	1
Not shown	Control-panel overlay, Vietnamese, HP LaserJet 3050 all-in-one	Q6504-00024	1

Guide assembly, HP LaserJet 3050 all-in-one

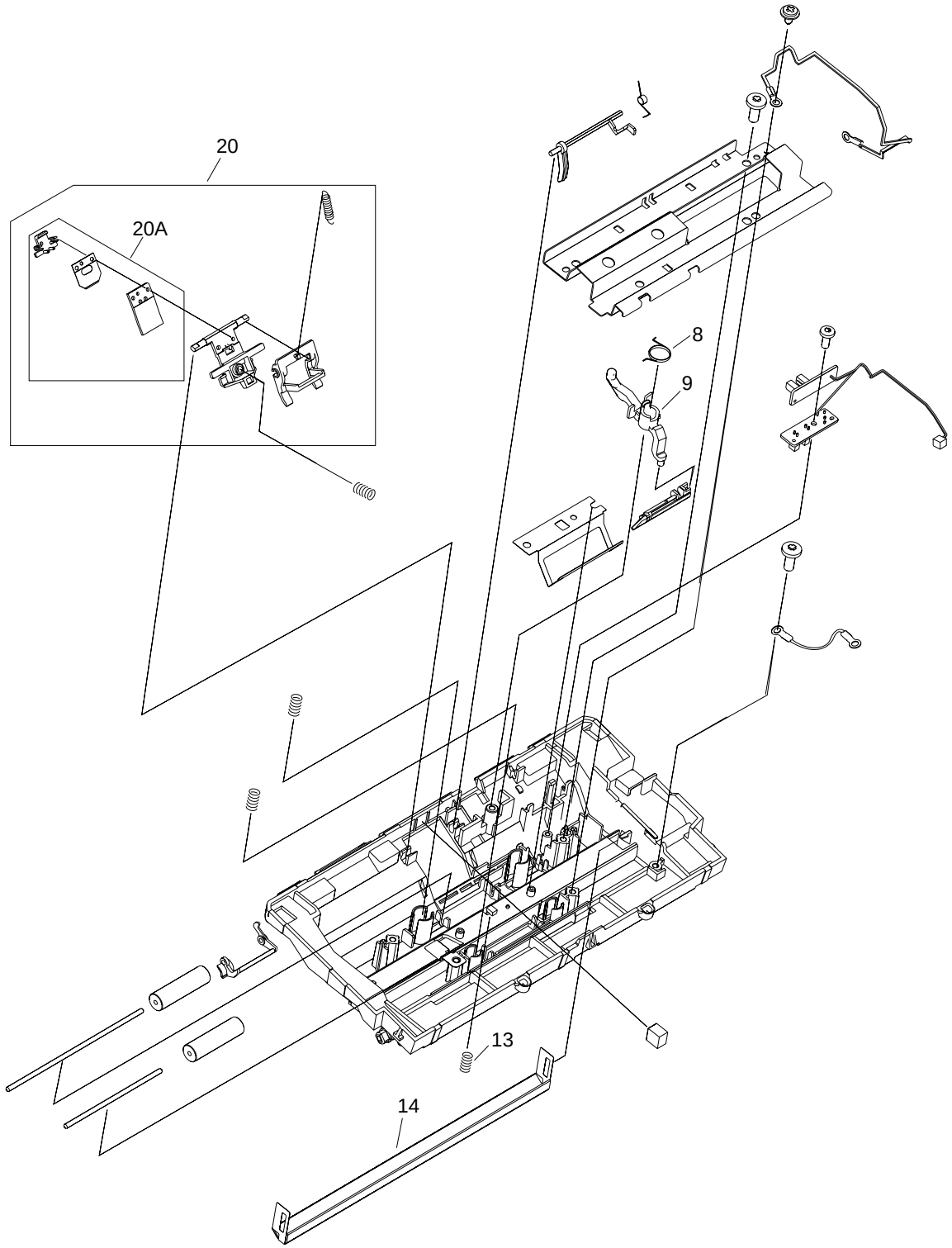


Figure 7-13 Guide assembly, HP LaserJet 3050 all-in-one

Table 7-11 Guide assembly, HP LaserJet 3050 all-in-one

Ref	Description	Part number	Qty
	Guide assembly, HP LaserJet 3050 all-in-one scanner	RM1-3066-000CN	1
8	Scanner media-lever torsion spring (lever, pressure convert)	RC1-2544-000CN	1
9	Scanner media lever (lever, pressure convert), HP LaserJet 3050 all-in-one	RC1-8413-000CN	1
13	Spring, compression, white platen	RU5-2196-000CN	3
14	Platen, white, HP LaserJet 3050 all-in-one scanner	RF5-3235-000CN	1
20	Separation-pad assembly, HP LaserJet 3050 all-in-one scanner	RM1-0890-000CN	1
20A	Separation-pad set, HP LaserJet 3050 all-in-one scanner	RM1-0891-000CN	1

NOTE The *separation-pad set* and the *separation-pad assembly* are two different assemblies.

The separation-pad set consists of the pad, clear plastic sheet, and the pad cover. The separation-pad set *is* a user-replaceable assembly.

The separation-pad assembly consists of the separation lever, tension spring, feed arm, and the components of the separation-pad set. The separation-pad assembly *is not* a user-replaceable assembly.

Only trained service personnel should attempt to replace the separation-pad assembly.

HP LaserJet 3052/3055 all-in-one scanner assembly

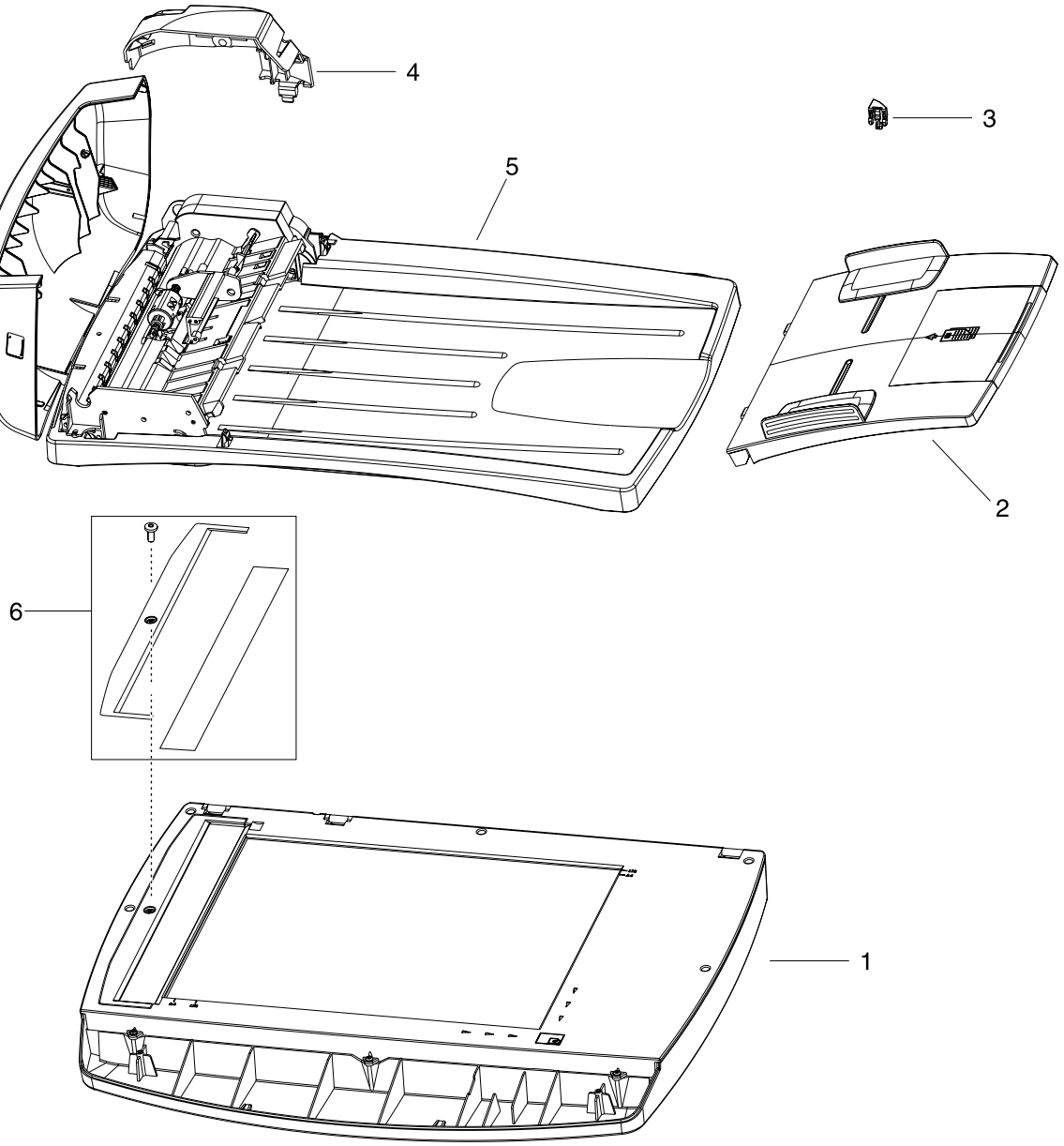


Figure 7-14 Scanner assembly, HP LaserJet 3052/3055 all-in-one

Table 7-12 Scanner assembly, HP LaserJet 3052/3055 all-in-one

Ref	Description	Part number	Qty
	Flatbed scanner assembly	Q6502-60116	1
1	Flatbed scanner assembly (does not include the flatbed lid)	Q6502-60116	1
2	ADF input tray	Q3948-60214	1
3	Solar lock	Q1636-40036	1
4	Shield, motor	Q1636-40010	1
5	ADF/flatbed lid with packaging	Q6502-60117	1
6	Scanner glass replacement kit	Q6500-67904	1

Major assemblies, HP LaserJet 3052/3055 all-in-one

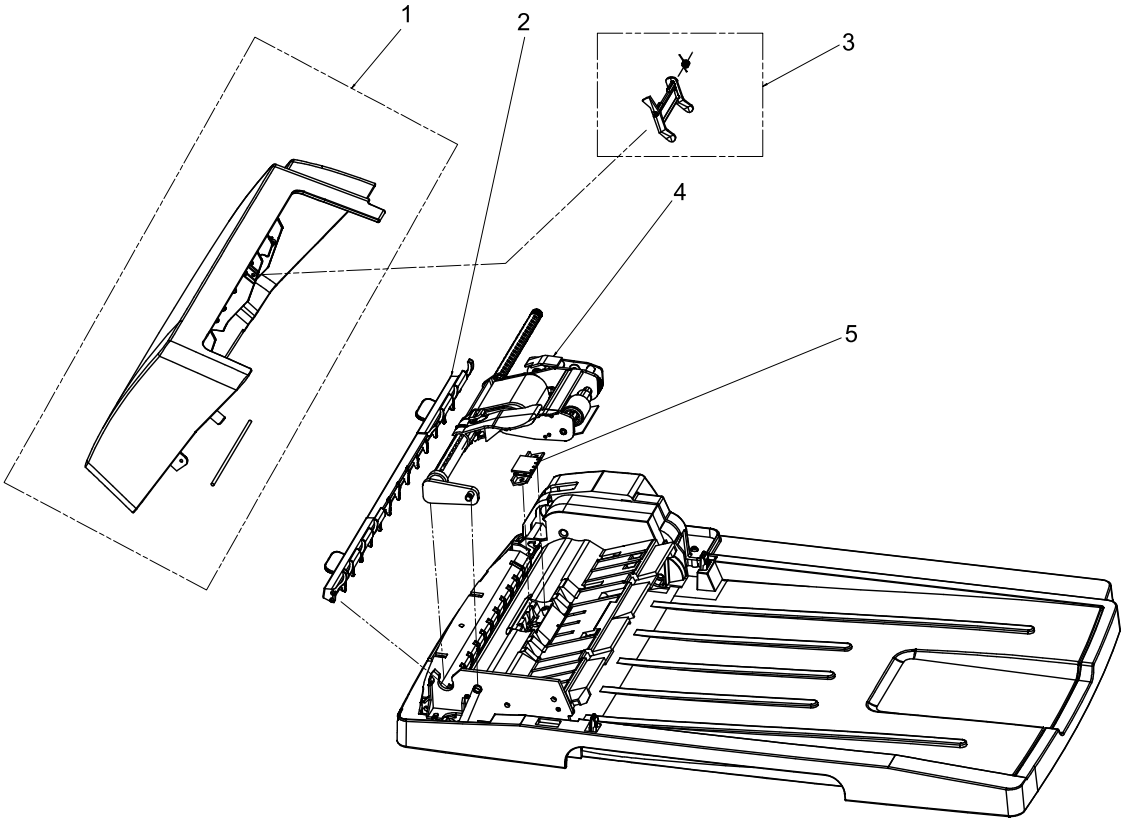


Figure 7-15 Major assemblies, HP LaserJet 3052/3055 all-in-one

Table 7-13 Major assemblies, HP LaserJet 3052/3055 all-in-one

Ref	Description	Part number	Qty
1	ADF cover replacement, HP LaserJet 3052/3055 all-in-one	Q6502-67901	1
2	ADF cleanout/comb	C7309-40153	1
3	Kit, replacement, ADF input-tray flag	Q3948-67902	1
4	ADF pickup-roller assembly	5851-2559	1
5	ADF separation pad	Q2665-60125	1

Scanner components, HP LaserJet 3052/3055 all-in-one

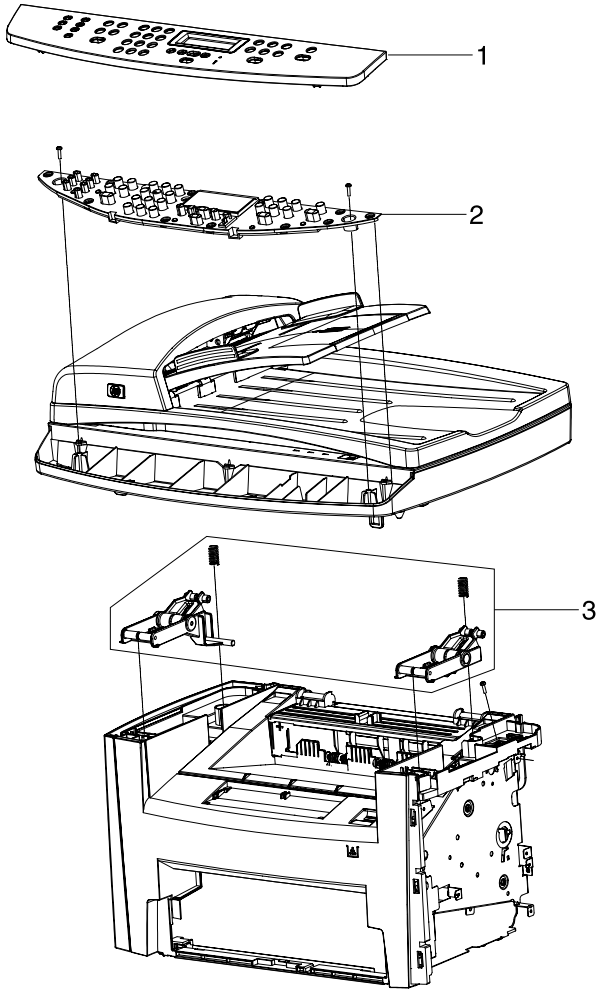


Figure 7-16 Scanner components, HP LaserJet 3052/3055 all-in-one

Table 7-14 Scanner components, HP LaserJet 3052/3055 all-in-one

Ref	Description	Part number	Qty
1	Bezel, Arabic, HP LaserJet 3052 all-in-one	Q6502-40026	1
1	Bezel, blank painted, HP LaserJet 3052 all-in-one	Q6502-40002	1
1	Bezel, blank unpainted, HP LaserJet 3052 all-in-one	Q6502-40001	1
1	Bezel, Chinese simplified, HP LaserJet 3052 all-in-one	Q6502-40029	1
1	Bezel, Chinese traditional , HP LaserJet 3052 all-in-one	Q6502-40027	1
1	Bezel, Czech, HP LaserJet 3052 all-in-one	Q6502-40019	1
1	Bezel; Danish, HP LaserJet 3052 all-in-one	Q6502-40017	1
1	Bezel, Dutch, HP LaserJet 3052 all-in-one	Q6502-40012	1
1	Bezel, English, HP LaserJet 3052 all-in-one	Q6502-40007	1
1	Bezel, Finnish, HP LaserJet 3052 all-in-one	Q6503-40016	1
1	Bezel, French, HP LaserJet 3052 all-in-one	Q6502-40011	1
1	Bezel, German, HP LaserJet 3052 all-in-one	Q6502-40010	1
1	Bezel, German unpainted, HP LaserJet 3052 all-in-one	Q6502-40032	1
1	Bezel, Greek, HP LaserJet 3052 all-in-one	Q2665-40024	1
1	Bezel, Hebrew, HP LaserJet 3052 all-in-one	Q6502-40025	1
1	Bezel, Hungarian, HP LaserJet 3052 all-in-one	Q6502-40020	1
1	Bezel, Italian, HP LaserJet 3052 all-in-one	Q2665-40013	1
1	Bezel, Korean, HP LaserJet 3052 all-in-one	Q6502-40028	1
1	Bezel, Norwegian, HP LaserJet 3052 all-in-one	Q6502-40015	1
1	Bezel, Polish, HP LaserJet 3052 all-in-one	Q6502-40021	1
1	Bezel, Portuguese, HP LaserJet 3052 all-in-one	Q6502-40009	1
1	Bezel, Russian, HP LaserJet 3052 all-in-one	Q6502-40018	1
1	Bezel, Slovak, HP LaserJet 3052 all-in-one	Q6502-40022	1
1	Bezel, Spanish, HP LaserJet 3052 all-in-one	Q6502-40008	1
1	Bezel, Swedish, HP LaserJet 3052 all-in-one	Q6502-40014	1
1	Bezel, Thai, HP LaserJet 3052 all-in-one	Q6502-40030	1
1	Bezel, Turkish, HP LaserJet 3052 all-in-one	Q6502-40023	1
1	Bezel, Vietnamese, HP LaserJet 3052 all-in-one	Q6502-40031	1
1	Bezel, Arabic, HP LaserJet 3055 all-in-one	Q6503-40022	1
1	Bezel, blank painted, HP LaserJet 3055 all-in-one	Q6503-40002	1
1	Bezel, blank unpainted, HP LaserJet 3055 all-in-one	Q6503-40001	1
1	Bezel, Chinese simplified, HP LaserJet 3055 all-in-one	Q6503-40025	1
1	Bezel, Chinese traditional, HP LaserJet 3055 all-in-one	Q6503-40023	1
1	Bezel, Czech, HP LaserJet 3055 all-in-one	Q6503-40015	1

Ref	Description	Part number	Qty
1	Bezel, Danish, HP LaserJet 3055 all-in-one	Q6503-40013	1
1	Bezel, Dutch, HP LaserJet 3055 all-in-one	Q6503-40008	1
1	Bezel. English, HP LaserJet 3055 all-in-one	Q6505-40003	1
1	Bezel, Finnish, HP LaserJet 3055 all-in-one	Q6503-40012	1
1	Bezel, French, HP LaserJet 3055 all-in-one	Q6505-40007	1
1	Bezel, German, HP LaserJet 3055 all-in-one	Q6503-40006	1
1	Bezel, German unpainted, HP LaserJet 3055 all-in-one	Q6503-40028	1
1	Bezel, Greek, HP LaserJet 3055 all-in-one	Q6503-40020	1
1	Bezel, Hebrew, HP LaserJet 3055 all-in-one	Q6503-40021	1
1	Bezel, Hungarian HP LaserJet 3055 all-in-one	Q6505-40016	1
1	Bezel, Italian, HP LaserJet 3055 all-in-one	Q6503-40009	1
1	Bezel, Korean, HP LaserJet 3055 all-in-one	Q6503-40024	1
1	Bezel, Norwegian, HP LaserJet 3055 all-in-one	Q6503-40011	1
1	Bezel, Polish, HP LaserJet 3055 all-in-one	Q6503-40017	1
1	Bezel, Portuguese, HP LaserJet 3055 all-in-one	Q6503-40005	1
1	Bezel, Russian, HP LaserJet 3055 all-in-one	Q6503-40014	1
1	Bezel, Slovak, HP LaserJet 3055 all-in-one	Q6505-40018	1
1	Bezel, Spanish, HP LaserJet 3055 all-in-one	Q6503-40004	1
1	Bezel, Swedish, HP LaserJet 3055 all-in-one	Q6503-40010	1
1	Bezel, Thai, HP LaserJet 3055 all-in-one	Q6503-40026	1
1	Bezel, Turkish, HP LaserJet 3055 all-in-one	Q6503-40019	1
1	Bezel, Vietnamese, HP LaserJet 3055 all-in-one	Q6503-40027	1
2	Control panel, HP LaserJet 3052 all-in-one	Q6502-60101	
2	Control panel, HP LaserJet 3055 all-in-one	Q6503-60101	
3	Scanner link assembly, kit, HP LaserJet 3052/3055 all-in-one	Q6502-67903	1

Printer (product base), HP LaserJet 3050/3052/3055 all-in-one

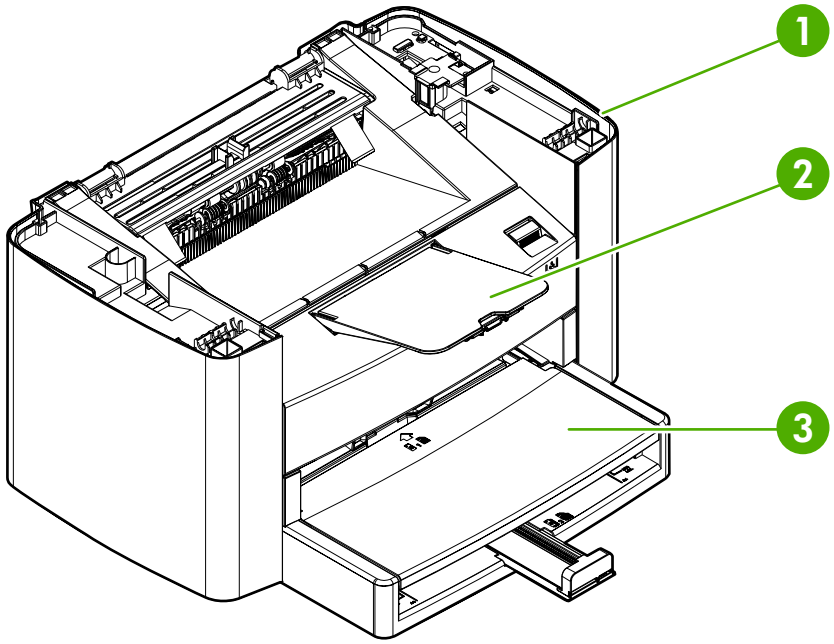


Figure 7-17 Printer (product base), HP LaserJet 3050/3052/3055 all-in-one

Table 7-15 Printer (product base), HP LaserJet 3050/3052/3055 all-in-one

Ref	Description	Part number	Qty
1	Print engine HP LaserJet 3050 all-in-one, replacement 110 V	Q6504-67001	1
1	Print engine HP LaserJet 3050 all-in-one, replacement 220 V	Q6504-67002	1
1	Print engine HP LaserJet 3050 all-in-one, exchange 110 V	Q6504-69001	1
1	Print engine HP LaserJet 3050 all-in-one, exchange 220 V	Q6504-69002	1
1	Print engine HP LaserJet 3052 all-in-one, replacement 110 V	Q6502-67001	1
1	Print engine HP LaserJet 3052 all-in-one, replacement 220 V	Q6502-67002	1
1	Print engine HP LaserJet 3055 all-in-one, replacement 110 V	Q6503-67001	1
1	Print engine HP LaserJet 3055 all-in-one, replacement 220 V	Q6503-67002	1
2	Delivery tray assembly	RM1-3059-000CN	1
3	Pickup tray assembly	RM1-3060-000CN	1
Not shown	Print cartridge	Q2460-67913	1
Not shown	HP jewel	7121-8285	1

NOTE The printer/product base (reference items 1 or 2) *does not* come with all of the components that are required to make it a functioning unit. Components from the unit that is being serviced must be removed from that unit and installed on the replacement unit. See Replacing the printer engine assembly on page 285 in this chapter for a complete list of the components you must replace on the print engine.

External covers, printer (product base)

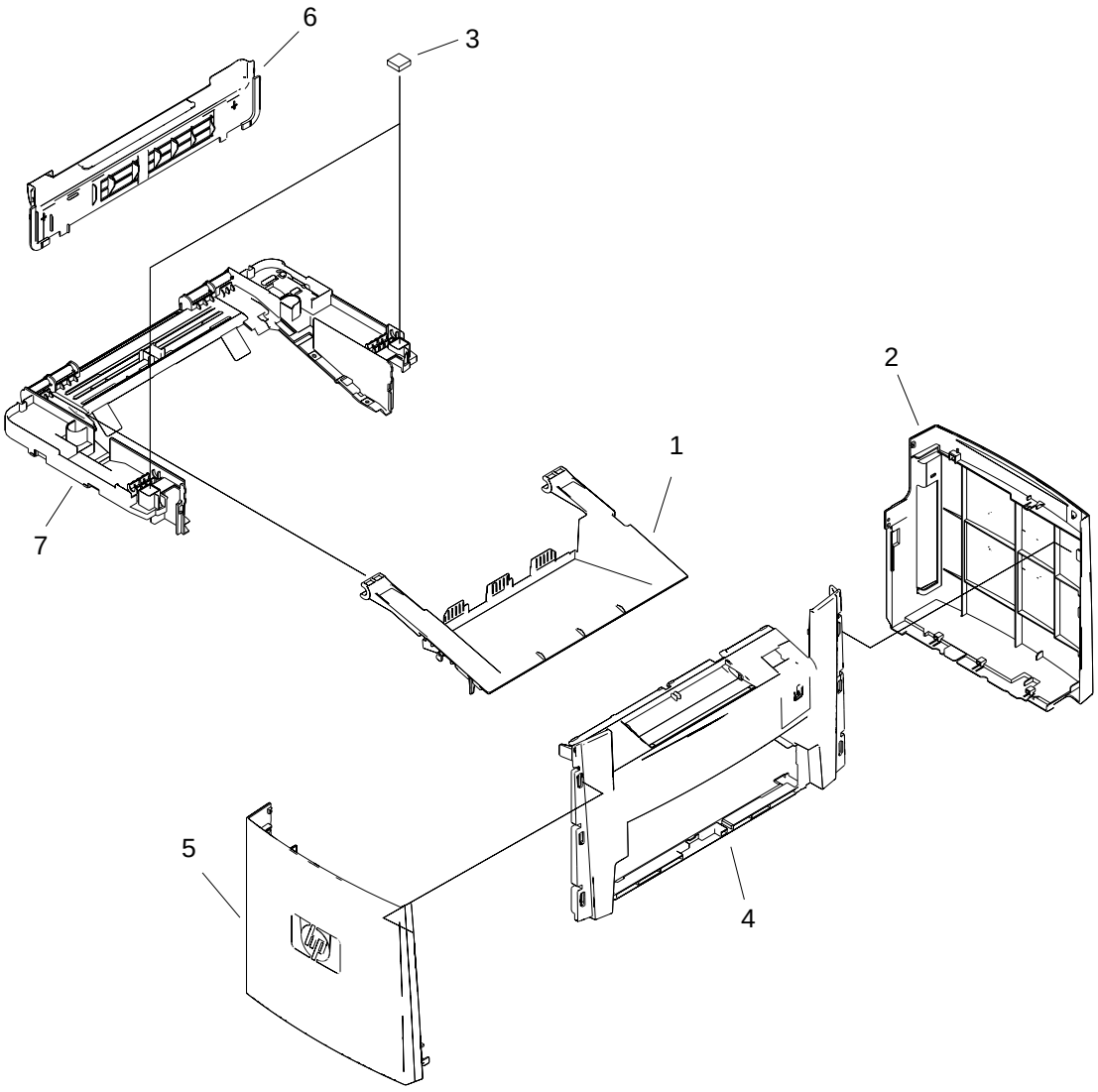


Figure 7-18 External covers, printer (product base)

Table 7-16 External covers, printer (product base)

Ref	Description	Part number	Qty
1	Door, print cartridge	RC1-8372-000CN	1
2	Cover, right	RC1-8374-000CN	1
3	Scanner cushion	RC1-2476-000CN	2
4	Cover, front	RL1-1160-000CN	1
5	Cover, left	RC1-8373-000CN	1
6	Cover, rear	RC1-2474-000CN	1
7	Cover, top (scanner support-frame), printer	RL1-1161-000CN	1

Formatter and LIU

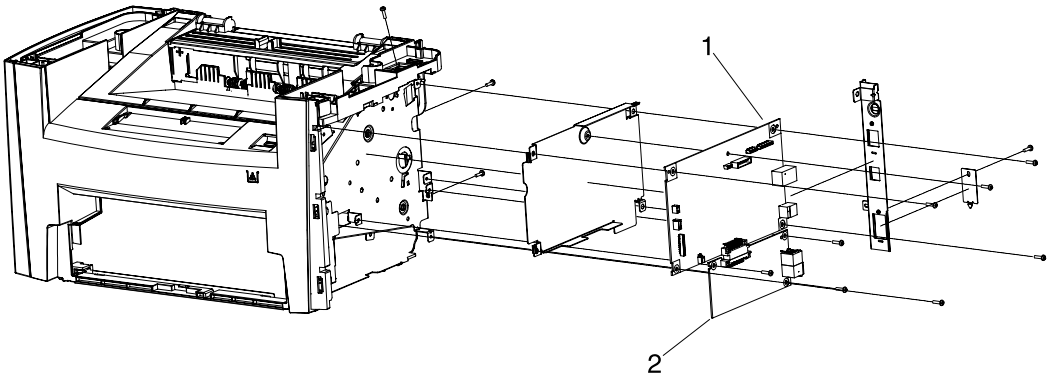


Figure 7-19 Formatter and LIU

Table 7-17 Formatter and LIU

Ref	Description	Part number	Qty
1	Formatter, HP LaserJet 3050 all-in-one	Q7844-60002	1
1	Formatter, HP LaserJet 3052 all-in-one	Q7528-60001	1
1	Formatter, HP LaserJet 3055 all-in-one	Q7529-60002	1
2	LIU, HP LaserJet 3050 all-in-one, US/WW	Q2663-60001	1
2	LIU, HP LaserJet 3050 all-in-one, EMEA	Q2687-60002	1
2	LIU, HP LaserJet 3055 all-in-one, US/WW	Q2663-60001	1
2	LIU, HP LaserJet 3055 all-in-one, EMEA	Q2687-60002	1

Internal components, printer (product base)

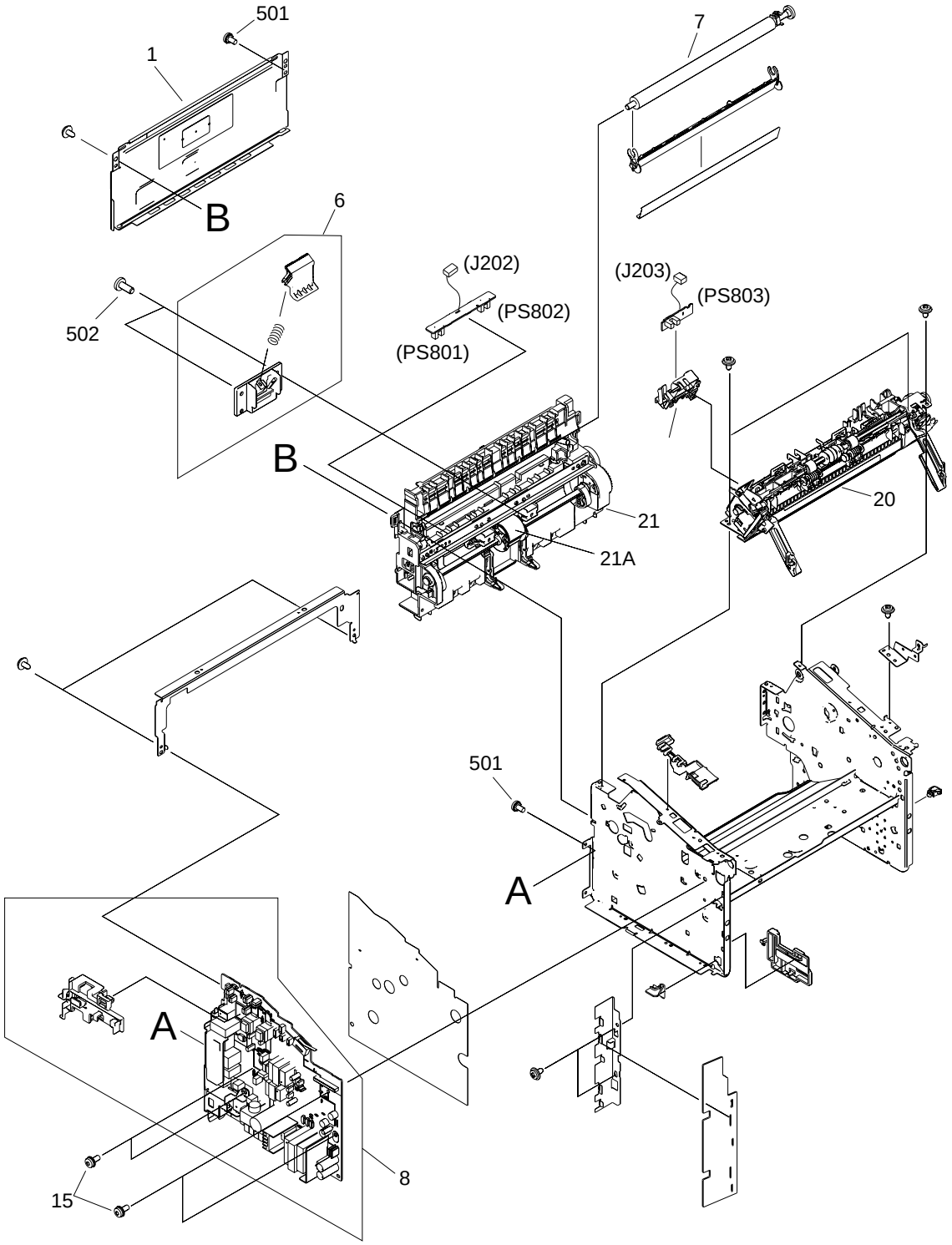


Figure 7-20 Internal components, printer (product base) (1 of 3)

Table 7-18 Internal components, printer (product base) (1 of 3)

Ref	Description	Part number	Qty
1	Panel, rear	RC1-8368-000CN	1
6	Separation-pad assembly, printer	RM1-2048-000CN	1
7	Transfer-roller assembly	RM1-2062-000CN	1
8	Power-supply assembly, 110-127 V	RM1-3402-000CN	1
8	Power-supply assembly, 220-240 V	RM1-3403-000CN	1
15	Screw, rs, M3X8	XA9-1420-000CN	4
20	Fuser, 110-127V	RM1-3044-000CN	1
20	Fuser, 220-240V	RM1-3045-000CN	1
21	Pickup assembly	RM1-3043-000CN	1
21A	Roller, pickup, printer (product base)	RL1-0266-000CN	1
501	Screw, w/washer, M3X6	XB2-7300-605CN	2
502	Screw, tap, M4X10	XB4-5401-009CN	1

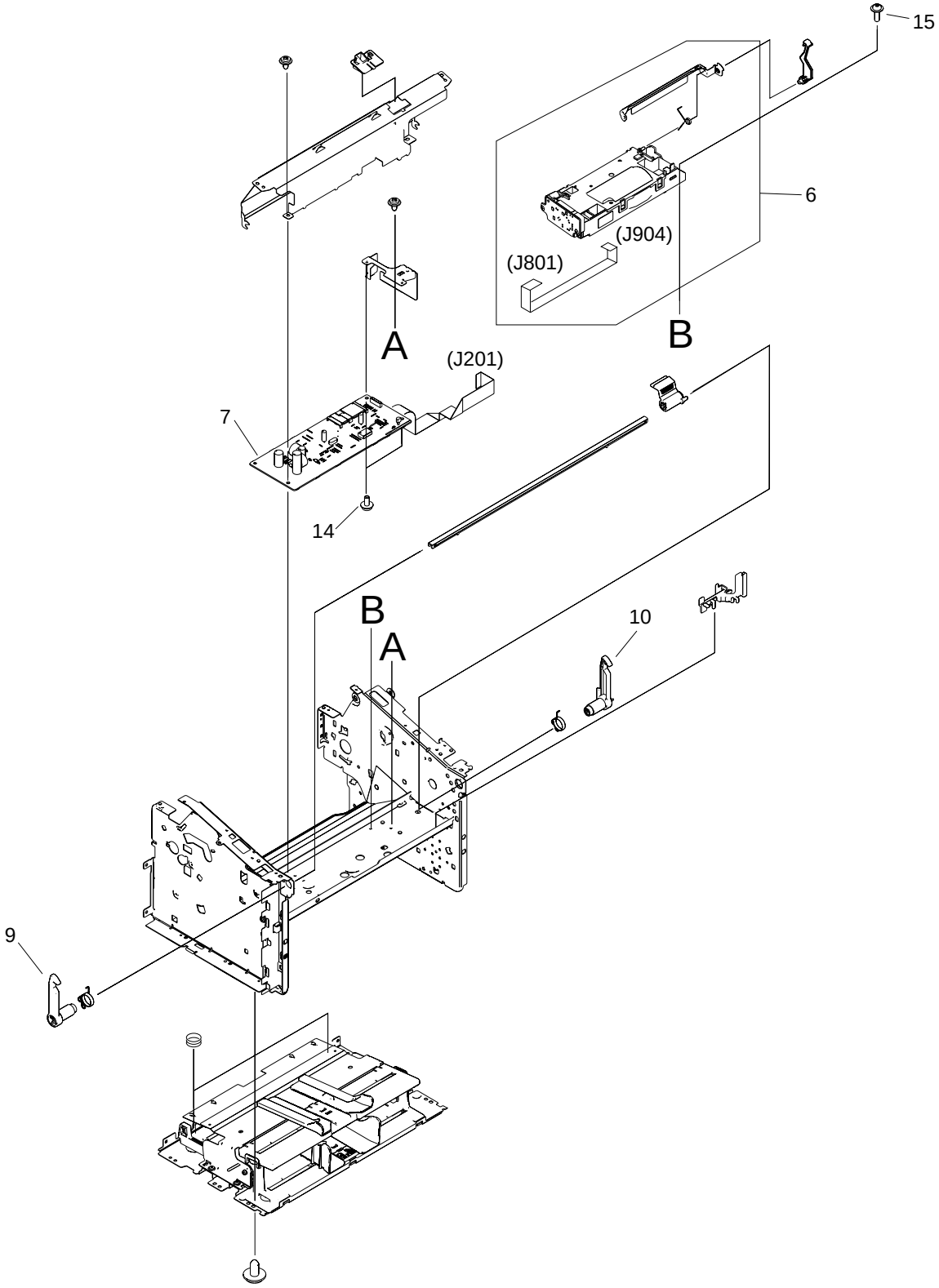


Figure 7-21 Internal components, printer (product base) (2 of 3)

Table 7-19 Internal components, printer (product base) (2 of 3)

Ref	Description	Part number	Qty
6	Laser/scanner assembly	RM1-2033-030CN	1
7	Engine-controller-PCB assembly	RM1-3404-000CN	1
8	Spring, compression	RU5-2492-000CN	2
9	Latch, left	RC1-2498-000CN	1
10	Latch, right	RC1-2499-000CN	1
14	Screw, rs, M3X8	XA9-1420-000CN	2
15	Screw, rs, M2X10	XA9-1501-000CN	4

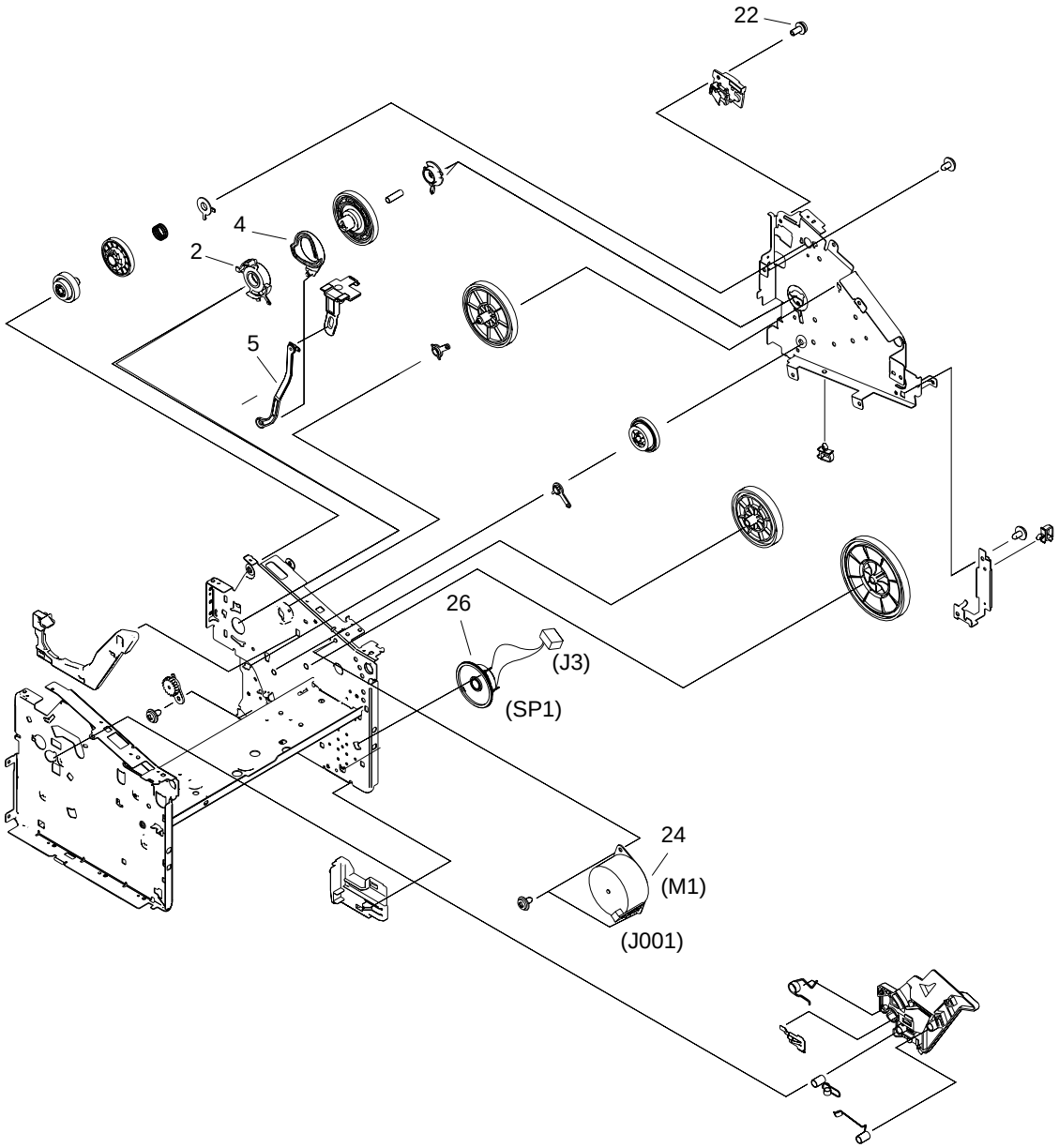


Figure 7-22 Internal components, printer (product base) (3 of 3)

Table 7-20 Internal components, printer (product base) (3 of 3)

Ref	Description	Part number	Qty
2	Bushing	RC1-1953-000CN	1
5	Link, coupling lower	RC1-2485-000CN	1
6	Link, coupling top	RC1-2494-000CN	1
22	Screw, w/washer, M3x8	XA9-1420-000CN	1
24	Motor, stepping, dc	RK2-0777-000CN	1
26	Speaker assembly	RM1-3410-000CN	1

Alphabetical parts list

Table 7-21 Alphabetical parts list

Description	Part number	Table and page
ADF cleanout/comb	C7309-40153	Major assemblies, HP LaserJet 3052/3055 all-in-one on page 309
ADF cover replacement, HP LaserJet 3052/3055 all-in-one	Q6502-67901	Major assemblies, HP LaserJet 3052/3055 all-in-one on page 309
ADF input tray	Q3948-60214	Scanner assembly, HP LaserJet 3052/3055 all-in-one on page 307
ADF pickup-roller assembly	5851-2559	Major assemblies, HP LaserJet 3052/3055 all-in-one on page 309
ADF separation pad	Q2665-60125	Major assemblies, HP LaserJet 3052/3055 all-in-one on page 309
ADF/flatbed lid with packaging	Q6502-60117	Scanner assembly, HP LaserJet 3052/3055 all-in-one on page 307
Bezel, Arabic, HP LaserJet 3052 all-in-one	Q6502-40026	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Arabic, HP LaserJet 3055 all-in-one	Q6503-40022	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, blank painted, HP LaserJet 3052 all-in-one	Q6502-40002	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, blank painted, HP LaserJet 3055 all-in-one	Q6503-40002	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, blank unpainted, HP LaserJet 3052 all-in-one	Q6502-40001	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, blank unpainted, HP LaserJet 3055 all-in-one	Q6503-40001	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Chinese simplified, HP LaserJet 3052 all-in-one	Q6502-40029	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Chinese simplified, HP LaserJet 3055 all-in-one	Q6503-40025	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Chinese traditional , HP LaserJet 3052 all-in-one	Q6502-40027	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311

Table 7-21 Alphabetical parts list (continued)

Description	Part number	Table and page
Bezel, Chinese traditional, HP LaserJet 3055 all-in-one	Q6503-40023	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Czech, HP LaserJet 3052 all-in-one	Q6502-40019	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Czech, HP LaserJet 3055 all-in-one	Q6503-40015	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Danish, HP LaserJet 3055 all-in-one	Q6503-40013	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Dutch, HP LaserJet 3052 all-in-one	Q6502-40012	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Dutch, HP LaserJet 3055 all-in-one	Q6503-40008	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, English, HP LaserJet 3052 all-in-one	Q6502-40007	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Finnish, HP LaserJet 3052 all-in-one	Q6503-40016	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Finnish, HP LaserJet 3055 all-in-one	Q6503-40012	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, French, HP LaserJet 3052 all-in-one	Q6502-40011	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, French, HP LaserJet 3055 all-in-one	Q6505-40007	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, German unpainted, HP LaserJet 3052 all-in-one	Q6502-40032	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, German unpainted, HP LaserJet 3055 all-in-one	Q6503-40028	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, German, HP LaserJet 3052 all-in-one	Q6502-40010	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, German, HP LaserJet 3055 all-in-one	Q6503-40006	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Greek, HP LaserJet 3052 all-in-one	Q2665-40024	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311

Table 7-21 Alphabetical parts list (continued)

Description	Part number	Table and page
Bezel, Greek, HP LaserJet 3055 all-in-one	Q6503-40020	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Hebrew, HP LaserJet 3052 all-in-one	Q6502-40025	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Hebrew, HP LaserJet 3055 all-in-one	Q6503-40021	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Hungarian HP LaserJet 3055 all-in-one	Q6505-40016	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Hungarian, HP LaserJet 3052 all-in-one	Q6502-40020	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Italian, HP LaserJet 3052 all-in-one	Q2665-40013	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Italian, HP LaserJet 3055 all-in-one	Q6503-40009	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Korean, HP LaserJet 3052 all-in-one	Q6502-40028	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Korean, HP LaserJet 3055 all-in-one	Q6503-40024	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Norwegian, HP LaserJet 3052 all-in-one	Q6502-40015	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Norwegian, HP LaserJet 3055 all-in-one	Q6503-40011	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Polish, HP LaserJet 3052 all-in-one	Q6502-40021	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Polish, HP LaserJet 3055 all-in-one	Q6503-40017	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Portuguese, HP LaserJet 3052 all-in-one	Q6502-40009	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Portuguese, HP LaserJet 3055 all-in-one	Q6503-40005	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Russian, HP LaserJet 3052 all-in-one	Q6502-40018	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311

Table 7-21 Alphabetical parts list (continued)

Description	Part number	Table and page
Bezel, Russian, HP LaserJet 3055 all-in-one	Q6503-40014	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Slovak, HP LaserJet 3052 all-in-one	Q6502-40022	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Slovak, HP LaserJet 3055 all-in-one	Q6505-40018	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Spanish, HP LaserJet 3052 all-in-one	Q6502-40008	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Spanish, HP LaserJet 3055 all-in-one	Q6503-40004	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Swedish, HP LaserJet 3052 all-in-one	Q6502-40014	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Swedish, HP LaserJet 3055 all-in-one	Q6503-40010	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Thai, HP LaserJet 3052 all-in-one	Q6502-40030	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Thai, HP LaserJet 3055 all-in-one	Q6503-40026	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Turkish, HP LaserJet 3052 all-in-one	Q6502-40023	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Turkish, HP LaserJet 3055 all-in-one	Q6503-40019	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Vietnamese, HP LaserJet 3052 all-in-one	Q6502-40031	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel, Vietnamese, HP LaserJet 3055 all-in-one	Q6503-40027	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel. English, HP LaserJet 3055 all-in-one	Q6505-40003	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bezel; Danish, HP LaserJet 3052 all-in-one	Q6502-40017	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Bushing	RC1-1953-000CN	Internal components, printer (product base) (3 of 3) on page 325

Table 7-21 Alphabetical parts list (continued)

Description	Part number	Table and page
Control panel, HP LaserJet 3052 all-in-one	Q6502-60101	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Control panel, HP LaserJet 3055 all-in-one	Q6503-60101	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Control-panel assembly, HP LaserJet 3050 all-in-one	RK2-1209-000CN	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel assembly, HP LaserJet 3050 all-in-one	See Figure 7-12 ADF components, HP LaserJet 3050 all-in-one on page 300.	Scanner assembly, HP LaserJet 3050 all-in-one on page 299
Control-panel overlay, Arabic, HP LaserJet 3050 all-in-one	Q6504-00019	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Chinese simplified, HP LaserJet 3050 all-in-one	Q6504-00022	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Chinese traditional, HP LaserJet 3050 all-in-one	Q6504-00020	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Czech, HP LaserJet 3050 all-in-one	Q6504-00012	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Danish, HP LaserJet 3050 all-in-one	Q6504-00010	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, English, HP LaserJet 3050 all-in-one	Q2669-40002	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Finnish, HP LaserJet 3050 all-in-one	Q6504-00009	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Greek, HP LaserJet 3050 all-in-one	Q6504-00017	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Hebrew, HP LaserJet 3050 all-in-one	Q6504-00018	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Hungarian, HP LaserJet 3050 all-in-one	Q6504-00013	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Italian, HP LaserJet 3050 all-in-one	Q6504-00006	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Korean, HP LaserJet 3050 all-in-one	Q6504-00021	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Norwegian, HP LaserJet 3050 all-in-one	Q6504-00008	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Polish, HP LaserJet 3050 all-in-one	Q6504-00014	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Russian, HP LaserJet 3050 all-in-one	Q6504-00011	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Slovak, HP LaserJet 3050 all-in-one	Q6504-00015	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Swedish, HP LaserJet 3050 all-in-one	Q6504-00007	ADF components, HP LaserJet 3050 all-in-one on page 301

Table 7-21 Alphabetical parts list (continued)

Description	Part number	Table and page
Control-panel overlay, Thai, HP LaserJet 3050 all-in-one	Q6504-00023	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Turkish, HP LaserJet 3050 all-in-one	Q6504-00016	ADF components, HP LaserJet 3050 all-in-one on page 301
Control-panel overlay, Vietnamese, HP LaserJet 3050 all-in-one	Q6504-00024	ADF components, HP LaserJet 3050 all-in-one on page 301
Cover, front	RL1-1160-000CN	External covers, printer (product base) on page 317
Cover, left, HP LaserJet 3050 all-in-one scanner	RM1-3076-000CN	ADF components, HP LaserJet 3050 all-in-one on page 301
Cover, left	RC1-8373-000CN	External covers, printer (product base) on page 317
Cover, rear	RC1-2474-000CN	External covers, printer (product base) on page 317
Cover, right, HP LaserJet 3050 all-in-one scanner	RM1-3077-000CN	ADF components, HP LaserJet 3050 all-in-one on page 301
Cover, right	RC1-8374-000CN	External covers, printer (product base) on page 317
Cover, top (scanner support-frame), printer	RL1-1161-000CN	External covers, printer (product base) on page 317
Cover, top, HP LaserJet 3050 all-in-one	RC1-8416-000CN	ADF components, HP LaserJet 3050 all-in-one on page 301
Delivery tray assembly	RM1-3059-000CN	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Door, print cartridge	RC1-8372-000CN	External covers, printer (product base) on page 317
Engine-controller-PCB assembly	RM1-3404-000CN	Internal components, printer (product base) (2 of 3) on page 323
Flat, flexible cable (FFC), HP LaserJet 3050 all-in-one scanner	RK2-1214-000CN	ADF components, HP LaserJet 3050 all-in-one on page 301
Flatbed scanner assembly (does not include the flatbed lid)	Q6502-60116	Scanner assembly, HP LaserJet 3052/3055 all-in-one on page 307
Flatbed scanner assembly	Q6502-60116	Scanner assembly, HP LaserJet 3052/3055 all-in-one on page 307
Formatter, HP LaserJet 3050 all-in-one	Q7844-60002	Formatter and LIU on page 319
Formatter, HP LaserJet 3052 all-in-one	Q7528-60001	Formatter and LIU on page 319
Formatter, HP LaserJet 3055 all-in-one	Q7529-60002	Formatter and LIU on page 319

Table 7-21 Alphabetical parts list (continued)

Description	Part number	Table and page
Fuser, 110-127V	RM1-3044-000CN	Internal components, printer (product base) (1 of 3) on page 321
Fuser, 220-240V	RM1-3045-000CN	Internal components, printer (product base) (1 of 3) on page 321
Guide assembly, HP LaserJet 3050 all-in-one scanner	RM1-3066-000CN	ADF components, HP LaserJet 3050 all-in-one on page 301
Guide assembly, HP LaserJet 3050 all-in-one scanner	RM1-3066-000CN	Guide assembly, HP LaserJet 3050 all-in-one on page 305
HP jewel	7121-8285	Scanner assembly, HP LaserJet 3050 all-in-one on page 299
HP jewel	7121-8285	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Kit, replacement, ADF input-tray flag	Q3948-67902	Major assemblies, HP LaserJet 3052/3055 all-in-one on page 309
Laser/scanner assembly	RM1-2033-030CN	Internal components, printer (product base) (2 of 3) on page 323
Latch, left	RC1-2498-000CN	Internal components, printer (product base) (2 of 3) on page 323
Latch, right	RC1-2499-000CN	Internal components, printer (product base) (2 of 3) on page 323
Link, coupling lower	RC1-2485-000CN	Internal components, printer (product base) (3 of 3) on page 325
Link, coupling top	RC1-2494-000CN	Internal components, printer (product base) (3 of 3) on page 325
LIU, HP LaserJet 3050 all-in-one, EMEA	Q2687-60002	Formatter and LIU on page 319
LIU, HP LaserJet 3050 all-in-one, US/WW	Q2663-60001	Formatter and LIU on page 319
LIU, HP LaserJet 3055 all-in-one, EMEA	Q2687-60002	Formatter and LIU on page 319
LIU, HP LaserJet 3055 all-in-one, US/WW	Q2663-60001	Formatter and LIU on page 319
Motor, stepping, dc	RK2-0777-000CN	Internal components, printer (product base) (3 of 3) on page 325
Panel, rear	RC1-8368-000CN	Internal components, printer (product base) (1 of 3) on page 321

Table 7-21 Alphabetical parts list (continued)

Description	Part number	Table and page
Pickup assembly	RM1-3043-000CN	Internal components, printer (product base) (1 of 3) on page 321
Pickup tray assembly	RM1-3060-000CN	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Pickup-roller assembly, HP LaserJet 3050 all-in-one scanner	RM1-0885-000CN	ADF components, HP LaserJet 3050 all-in-one on page 301
Pickup-tray assembly, HP LaserJet 3050 all-in-one scanner	RM1-3419-000CN	Scanner assembly, HP LaserJet 3050 all-in-one on page 299
Platen, white, HP LaserJet 3050 all-in-one scanner	RF5-3235-000CN	Guide assembly, HP LaserJet 3050 all-in-one on page 305
Power-supply assembly, 110-127 V	RM1-3402-000CN	Internal components, printer (product base) (1 of 3) on page 321
Power-supply assembly, 220-240 V	RM1-3403-000CN	Internal components, printer (product base) (1 of 3) on page 321
Print cartridge	Q2460-67913	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Print engine HP LaserJet 3050 all-in-one, exchange 110 V	Q6504-69001	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Print engine HP LaserJet 3050 all-in-one, exchange 220 V	Q6504-69002	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Print engine HP LaserJet 3050 all-in-one, replacement 110 V	Q6504-67001	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Print engine HP LaserJet 3050 all-in-one, replacement 220 V	Q6504-67002	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Print engine HP LaserJet 3052 all-in-one, replacement 110 V	Q6502-67001	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Print engine HP LaserJet 3052 all-in-one, replacement 220 V	Q6502-67002	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Print engine HP LaserJet 3055 all-in-one, replacement 110 V	Q6503-67001	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Print engine HP LaserJet 3055 all-in-one, replacement 220 V	Q6503-67002	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Roller, pickup, printer (product base)	RL1-0266-000CN	Internal components, printer (product base) (1 of 3) on page 321

Table 7-21 Alphabetical parts list (continued)

Description	Part number	Table and page
Scanner cushion	RC1-2476-000CN	External covers, printer (product base) on page 317
Scanner frame assembly, HP LaserJet 3050 all-in-one	RM1-3063-000CN	ADF components, HP LaserJet 3050 all-in-one on page 301
Scanner glass replacement kit	Q6500-67904	Scanner assembly, HP LaserJet 3052/3055 all-in-one on page 307
Scanner link assembly, kit, HP LaserJet 3052/3055 all-in-one	Q6502-67903	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Scanner link assembly, left, HP LaserJet 3050 all-in-one	RM1-0896-000CN	ADF components, HP LaserJet 3050 all-in-one on page 301
Scanner link assembly, right, HP LaserJet 3050 all-in-one	RM1-0897-000CN	ADF components, HP LaserJet 3050 all-in-one on page 301
Scanner media lever (lever, pressure convert), HP LaserJet 3050 all-in-one	RC1-8413-000CN	Guide assembly, HP LaserJet 3050 all-in-one on page 305
Scanner media-lever torsion spring (lever, pressure convert)	RC1-2544-000CN	Guide assembly, HP LaserJet 3050 all-in-one on page 305
Scanner-hinge tool	5185-7441	ADF components, HP LaserJet 3050 all-in-one on page 301
Screw, rs, M2X10	XA9-1501-000CN	Internal components, printer (product base) (2 of 3) on page 323
Screw, rs, M3X8	XA9-1420-000CN	Internal components, printer (product base) (1 of 3) on page 321
Screw, rs, M3X8	XA9-1420-000CN	Internal components, printer (product base) (2 of 3) on page 323
Screw, tap, M4X10	XB4-5401-009CN	ADF components, HP LaserJet 3050 all-in-one on page 301
Screw, tap, M4X10	XB4-5401-009CN	ADF components, HP LaserJet 3050 all-in-one on page 301
Screw, tap, M4X10	XB4-5401-009CN	Internal components, printer (product base) (1 of 3) on page 321
Screw, w/washer, M3X6	XB2-7300-605CN	Internal components, printer (product base) (1 of 3) on page 321
Screw, w/washer, M3x8	XA9-1420-000CN	Internal components, printer (product base) (3 of 3) on page 325
Separation-pad assembly, HP LaserJet 3050 all-in-one scanner	RM1-0890-000CN	Guide assembly, HP LaserJet 3050 all-in-one on page 305
Separation-pad assembly, printer	RM1-2048-000CN	Internal components, printer (product base) (1 of 3) on page 321

Table 7-21 Alphabetical parts list (continued)

Description	Part number	Table and page
Separation-pad set, HP LaserJet 3050 all-in-one scanner	RM1-0891-000CN	Guide assembly, HP LaserJet 3050 all-in-one on page 305
Sheet, grounding, HP LaserJet 3050 all-in-one scanner	RL1-0376-000CN	ADF components, HP LaserJet 3050 all-in-one on page 301
Shield, motor	Q1636-40010	Scanner assembly, HP LaserJet 3052/3055 all-in-one on page 307
Solar lock	Q1636-40036	Scanner assembly, HP LaserJet 3052/3055 all-in-one on page 307
Speaker assembly	RM1-3410-000CN	Internal components, printer (product base) (3 of 3) on page 325
Spring, compression	RU5-2492-000CN	Internal components, printer (product base) (2 of 3) on page 323
Spring, compression, HP LaserJet 3050 all-in-one scanner	RU5-2885-000CN	ADF components, HP LaserJet 3050 all-in-one on page 301
Spring, compression, white platen	RU5-2196-000CN	Guide assembly, HP LaserJet 3050 all-in-one on page 305
Transfer-roller assembly	RM1-2062-000CN	Internal components, printer (product base) (1 of 3) on page 321
Tray, delivery , HP LaserJet 3050 all-in-one scanner	RM1-8443-000CN	Scanner assembly, HP LaserJet 3050 all-in-one on page 299

Numerical parts list

Table 7-22 Numerical parts list

Part number	Description	Table and page
5185-7441	Scanner-hinge tool	ADF components, HP LaserJet 3050 all-in-one on page 301
5851-2559	ADF pickup-roller assembly	Major assemblies, HP LaserJet 3052/3055 all-in-one on page 309
7121-8285	HP jewel	Scanner assembly, HP LaserJet 3050 all-in-one on page 299
7121-8285	HP jewel	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
C7309-40153	ADF cleanout/comb	Major assemblies, HP LaserJet 3052/3055 all-in-one on page 309
Q1636-40010	Shield, motor	Scanner assembly, HP LaserJet 3052/3055 all-in-one on page 307
Q1636-40036	Solar lock	Scanner assembly, HP LaserJet 3052/3055 all-in-one on page 307
Q2460-67913	Print cartridge	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Q2663-60001	LIU, HP LaserJet 3050 all-in-one, US/WW	Formatter and LIU on page 319
Q2663-60001	LIU, HP LaserJet 3055 all-in-one, US/WW	Formatter and LIU on page 319
Q2665-40013	Bezel, Italian, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q2665-40024	Bezel, Greek, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q2665-60125	ADF separation pad	Major assemblies, HP LaserJet 3052/3055 all-in-one on page 309
Q2669-40002	Control-panel overlay, English, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q2687-60002	LIU, HP LaserJet 3050 all-in-one, EMEA	Formatter and LIU on page 319
Q2687-60002	LIU, HP LaserJet 3055 all-in-one, EMEA	Formatter and LIU on page 319

Table 7-22 Numerical parts list (continued)

Part number	Description	Table and page
Q3948-60214	ADF input tray	Scanner assembly, HP LaserJet 3052/3055 all-in-one on page 307
Q3948-67902	Kit, replacement, ADF input-tray flag	Major assemblies, HP LaserJet 3052/3055 all-in-one on page 309
Q6500-67904	Scanner glass replacement kit	Scanner assembly, HP LaserJet 3052/3055 all-in-one on page 307
Q6502-40001	Bezel, blank unpainted, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40002	Bezel, blank painted, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40007	Bezel, English, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40008	Bezel, Spanish, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40009	Bezel, Portuguese, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40010	Bezel, German, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40011	Bezel, French, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40012	Bezel, Dutch, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40014	Bezel, Swedish, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40015	Bezel, Norwegian, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40017	Bezel; Danish, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40018	Bezel, Russian, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40019	Bezel, Czech, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311

Table 7-22 Numerical parts list (continued)

Part number	Description	Table and page
Q6502-40020	Bezel, Hungarian, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40021	Bezel, Polish, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40022	Bezel, Slovak, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40023	Bezel, Turkish, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40025	Bezel, Hebrew, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40026	Bezel, Arabic, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40027	Bezel, Chinese traditional , HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40028	Bezel, Korean, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40029	Bezel, Chinese simplified, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40030	Bezel, Thai, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40031	Bezel, Vietnamese, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-40032	Bezel, German unpainted, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-60101	Control panel, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6502-60116	Flatbed scanner assembly	Scanner assembly, HP LaserJet 3052/3055 all-in-one on page 307
Q6502-60116	Flatbed scanner assembly (does not include the flatbed lid)	Scanner assembly, HP LaserJet 3052/3055 all-in-one on page 307
Q6502-60117	ADF/flatbed lid with packaging	Scanner assembly, HP LaserJet 3052/3055 all-in-one on page 307

Table 7-22 Numerical parts list (continued)

Part number	Description	Table and page
Q6502-67001	Print engine HP LaserJet 3052 all-in-one, replacement 110 V	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Q6502-67002	Print engine HP LaserJet 3052 all-in-one, replacement 220 V	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Q6502-67901	ADF cover replacement, HP LaserJet 3052/3055 all-in-one	Major assemblies, HP LaserJet 3052/3055 all-in-one on page 309
Q6502-67903	Scanner link assembly, kit, HP LaserJet 3052/3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40001	Bezel, blank unpainted, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40002	Bezel, blank painted, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40004	Bezel, Spanish, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40005	Bezel, Portuguese, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40006	Bezel, German, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40008	Bezel, Dutch, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40009	Bezel, Italian, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40010	Bezel, Swedish, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40011	Bezel, Norwegian, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40012	Bezel, Finnish, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40013	Bezel, Danish, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40014	Bezel, Russian, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311

Table 7-22 Numerical parts list (continued)

Part number	Description	Table and page
Q6503-40015	Bezel, Czech, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40016	Bezel, Finnish, HP LaserJet 3052 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40017	Bezel, Polish, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40019	Bezel, Turkish, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40020	Bezel, Greek, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40021	Bezel, Hebrew, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40022	Bezel, Arabic, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40023	Bezel, Chinese traditional, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40024	Bezel, Korean, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40025	Bezel, Chinese simplified, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40026	Bezel, Thai, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40027	Bezel, Vietnamese, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-40028	Bezel, German unpainted, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-60101	Control panel, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6503-67001	Print engine HP LaserJet 3055 all-in-one, replacement 110 V	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Q6503-67002	Print engine HP LaserJet 3055 all-in-one, replacement 220 V	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315

Table 7-22 Numerical parts list (continued)

Part number	Description	Table and page
Q6504-00006	Control-panel overlay, Italian, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00007	Control-panel overlay, Swedish, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00008	Control-panel overlay, Norwegian, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00009	Control-panel overlay, Finnish, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00010	Control-panel overlay, Danish, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00011	Control-panel overlay, Russian, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00012	Control-panel overlay, Czech, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00013	Control-panel overlay, Hungarian, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00014	Control-panel overlay, Polish, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00015	Control-panel overlay, Slovak, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00016	Control-panel overlay, Turkish, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00017	Control-panel overlay, Greek, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00018	Control-panel overlay, Hebrew, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00019	Control-panel overlay, Arabic, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00020	Control-panel overlay, Chinese traditional, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00021	Control-panel overlay, Korean, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00022	Control-panel overlay, Chinese simplified, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00023	Control-panel overlay, Thai, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-00024	Control-panel overlay, Vietnamese, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
Q6504-67001	Print engine HP LaserJet 3050 all-in-one, replacement 110 V	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Q6504-67002	Print engine HP LaserJet 3050 all-in-one, replacement 220 V	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315

Table 7-22 Numerical parts list (continued)

Part number	Description	Table and page
Q6504-69001	Print engine HP LaserJet 3050 all-in-one, exchange 110 V	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Q6504-69002	Print engine HP LaserJet 3050 all-in-one, exchange 220 V	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
Q6505-40003	Bezel. English, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6505-40007	Bezel, French, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6505-40016	Bezel, Hungarian HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q6505-40018	Bezel, Slovak, HP LaserJet 3055 all-in-one	Scanner components, HP LaserJet 3052/3055 all-in-one on page 311
Q7528-60001	Formatter, HP LaserJet 3052 all-in-one	Formatter and LIU on page 319
Q7529-60002	Formatter, HP LaserJet 3055 all-in-one	Formatter and LIU on page 319
Q7844-60002	Formatter, HP LaserJet 3050 all-in-one	Formatter and LIU on page 319
RC1-1953-000CN	Bushing	Internal components, printer (product base) (3 of 3) on page 325
RC1-2474-000CN	Cover, rear	External covers, printer (product base) on page 317
RC1-2476-000CN	Scanner cushion	External covers, printer (product base) on page 317
RC1-2485-000CN	Link, coupling lower	Internal components, printer (product base) (3 of 3) on page 325
RC1-2494-000CN	Link, coupling top	Internal components, printer (product base) (3 of 3) on page 325
RC1-2498-000CN	Latch, left	Internal components, printer (product base) (2 of 3) on page 323
RC1-2499-000CN	Latch, right	Internal components, printer (product base) (2 of 3) on page 323
RC1-2544-000CN	Scanner media-lever torsion spring (lever, pressure convert)	Guide assembly, HP LaserJet 3050 all-in-one on page 305
RC1-8368-000CN	Panel, rear	Internal components, printer (product base) (1 of 3) on page 321

Table 7-22 Numerical parts list (continued)

Part number	Description	Table and page
RC1-8372-000CN	Door, print cartridge	External covers, printer (product base) on page 317
RC1-8373-000CN	Cover, left	External covers, printer (product base) on page 317
RC1-8374-000CN	Cover, right	External covers, printer (product base) on page 317
RC1-8413-000CN	Scanner media lever (lever, pressure convert), HP LaserJet 3050 all-in-one	Guide assembly, HP LaserJet 3050 all-in-one on page 305
RC1-8416-000CN	Cover, top, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
RF5-3235-000CN	Platen, white, HP LaserJet 3050 all-in-one scanner	Guide assembly, HP LaserJet 3050 all-in-one on page 305
RK2-0777-000CN	Motor, stepping, dc	Internal components, printer (product base) (3 of 3) on page 325
RK2-1209-000CN	Control-panel assembly, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
RK2-1214-000CN	Flat, flexible cable (FFC), HP LaserJet 3050 all-in-one scanner	ADF components, HP LaserJet 3050 all-in-one on page 301
RL1-0266-000CN	Roller, pickup, printer (product base)	Internal components, printer (product base) (1 of 3) on page 321
RL1-0376-000CN	Sheet, grounding, HP LaserJet 3050 all-in-one scanner	ADF components, HP LaserJet 3050 all-in-one on page 301
RL1-1160-000CN	Cover, front	External covers, printer (product base) on page 317
RL1-1161-000CN	Cover, top (scanner support-frame), printer	External covers, printer (product base) on page 317
RM1-0885-000CN	Pickup-roller assembly, HP LaserJet 3050 all-in-one scanner	ADF components, HP LaserJet 3050 all-in-one on page 301
RM1-0890-000CN	Separation-pad assembly, HP LaserJet 3050 all-in-one scanner	Guide assembly, HP LaserJet 3050 all-in-one on page 305
RM1-0891-000CN	Separation-pad set, HP LaserJet 3050 all-in-one scanner	Guide assembly, HP LaserJet 3050 all-in-one on page 305
RM1-0896-000CN	Scanner link assembly, left, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
RM1-0897-000CN	Scanner link assembly, right, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
RM1-2033-030CN	Laser/scanner assembly	Internal components, printer (product base) (2 of 3) on page 323
RM1-2048-000CN	Separation-pad assembly, printer	Internal components, printer (product base) (1 of 3) on page 321

Table 7-22 Numerical parts list (continued)

Part number	Description	Table and page
RM1-2062-000CN	Transfer-roller assembly	Internal components, printer (product base) (1 of 3) on page 321
RM1-3043-000CN	Pickup assembly	Internal components, printer (product base) (1 of 3) on page 321
RM1-3044-000CN	Fuser, 110-127V	Internal components, printer (product base) (1 of 3) on page 321
RM1-3045-000CN	Fuser, 220-240V	Internal components, printer (product base) (1 of 3) on page 321
RM1-3059-000CN	Delivery tray assembly	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
RM1-3060-000CN	Pickup tray assembly	Printer (product base), HP LaserJet 3050/3052/3055 all-in-one on page 315
RM1-3063-000CN	Scanner frame assembly, HP LaserJet 3050 all-in-one	ADF components, HP LaserJet 3050 all-in-one on page 301
RM1-3066-000CN	Guide assembly, HP LaserJet 3050 all-in-one scanner	ADF components, HP LaserJet 3050 all-in-one on page 301
RM1-3066-000CN	Guide assembly, HP LaserJet 3050 all-in-one scanner	Guide assembly, HP LaserJet 3050 all-in-one on page 305
RM1-3076-000CN	Cover, left, HP LaserJet 3050 all-in-one scanner	ADF components, HP LaserJet 3050 all-in-one on page 301
RM1-3077-000CN	Cover, right, HP LaserJet 3050 all-in-one scanner	ADF components, HP LaserJet 3050 all-in-one on page 301
RM1-3402-000CN	Power-supply assembly, 110-127 V	Internal components, printer (product base) (1 of 3) on page 321
RM1-3403-000CN	Power-supply assembly, 220-240 V	Internal components, printer (product base) (1 of 3) on page 321
RM1-3404-000CN	Engine-controller-PCB assembly	Internal components, printer (product base) (2 of 3) on page 323
RM1-3410-000CN	Speaker assembly	Internal components, printer (product base) (3 of 3) on page 325
RM1-3419-000CN	Pickup-tray assembly, HP LaserJet 3050 all-in-one scanner	Scanner assembly, HP LaserJet 3050 all-in-one on page 299
RM1-8443-000CN	Tray, delivery , HP LaserJet 3050 all-in-one scanner	Scanner assembly, HP LaserJet 3050 all-in-one on page 299
RU5-2196-000CN	Spring, compression, white platen	Guide assembly, HP LaserJet 3050 all-in-one on page 305

Table 7-22 Numerical parts list (continued)

Part number	Description	Table and page
RU5-2492-000CN	Spring, compression	Internal components, printer (product base) (2 of 3) on page 323
RU5-2885-000CN	Spring, compression, HP LaserJet 3050 all-in-one scanner	ADF components, HP LaserJet 3050 all-in-one on page 301
See Figure 7-12 ADF components, HP LaserJet 3050 all-in-one on page 300.	Control-panel assembly, HP LaserJet 3050 all-in-one	Scanner assembly, HP LaserJet 3050 all-in-one on page 299
XA9-1420-000CN	Screw, rs, M3X8	Internal components, printer (product base) (1 of 3) on page 321
XA9-1420-000CN	Screw, rs, M3X8	Internal components, printer (product base) (2 of 3) on page 323
XA9-1420-000CN	Screw, w/washer, M3x8	Internal components, printer (product base) (3 of 3) on page 325
XA9-1501-000CN	Screw, rs, M2X10	Internal components, printer (product base) (2 of 3) on page 323
XB2-7300-605CN	Screw, w/washer, M3X6	Internal components, printer (product base) (1 of 3) on page 321
XB4-5401-009CN	Screw, tap, M4X10	ADF components, HP LaserJet 3050 all-in-one on page 301
XB4-5401-009CN	Screw, tap, M4X10	ADF components, HP LaserJet 3050 all-in-one on page 301
XB4-5401-009CN	Screw, tap, M4X10	Internal components, printer (product base) (1 of 3) on page 321

A All-in-one specifications

- Physical specifications
- Electrical specifications
- Power consumption
- Environmental specifications
- Acoustic emissions

Physical specifications

Table A-1 Physical specifications

Product	Height	Depth	Width	Weight
HP LaserJet 3050 all-in-one	459 mm (18.07 inches)	443 mm (17.44 inches)	429 mm (16.89 inches)	10.0 kg (22.0 lb)
HP LaserJet 3052 all-in-one	393 mm (15.47 inches)	406 mm (15.98 inches)	497 mm (19.56 inches)	12.4 kg (27.4 lb)
HP LaserJet 3055 all-in-one	393 mm (15.47 inches)	406 mm (15.98 inches)	497 mm (19.56 inches)	12.4 kg (27.4 lb)

Electrical specifications

CAUTION Power requirements are based on the country/region where the all-in-one is sold. Do not convert operating voltages. This will damage the all-in-one and void the product warranty.

Table A-2 Electrical specifications

Item	110-volt models	220-volt models
Power requirements	110 to 127 V (+/- 10%) 50/60 Hz (+/- 2 Hz)	220 to 240 V (+/- 10%) 50/60 Hz (+/- 2 Hz)
Rated current	4.5 A	2.3 A

Power consumption

Table A-3 Power consumption (average, in watts)[1]

Product model	Printing[2]	Copying[2]	Ready[2]	PowerSave	Off
HP LaserJet 3050 all-in-one	380 W	380 W	7 W	5 W	0 W
HP LaserJet 3052 all-in-one	380 W	380 W	14 W	9 W	0 W
HP LaserJet 3055 all-in-one	380 W	380 W	14 W	9 W	0 W

1 Values are subject to change. See www.hp.com/support/lj3050, www.hp.com/support/lj3052, and www.hp.com/support/lj3055 for current information.

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

Additional notes about power consumption:

- Default time from Ready mode to PowerSave mode = 15 minutes.
- Recovery time from PowerSave mode to start of printing = 5 seconds.
- Maximum heat dissipation for all models in Ready mode = 51.2 BTU/hour.
- HP LaserJet 3050/3052/3055 all-in-one speed is 19 ppm letter-size and 18 ppm A4-size.

Environmental specifications

Table A-4 Environmental specifications

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

1 Values are subject to change. See www.hp.com/support/lj3050, www.hp.com/support/lj3052, and www.hp.com/support/lj3055 for current information.

Acoustic emissions

Table A-5 Acoustic emissions (HP LaserJet 3050 all-in-one)[1]

Sound Power Level	**Declared per ISO 9296**[2]
Printing (18 ppm)[3]	L_{WAd} = 6.3 Bels (A) [63 dB (A)]
Ready	Essentially Inaudible
Sound Pressure Level—Bystander Position	**Declared per ISO 9296**[2]
Printing (18 ppm)[3]	L_{pAm} = 49 dB(A)
Ready	Essentially Inaudible

1 Configuration tested: HP LaserJet 3050 all-in-one, A10, A4
2 Acoustic values are subject to change. See www.hp.com/support/lj3050 for current information.
3 HP LaserJet 3050 all-in-one speed is 19 ppm letter-size and 18 ppm A4-size.

Table A-6 Acoustic emissions (HP LaserJet 3052/3055 all-in-one)[1]

Sound Power Level	**Declared per ISO 9296**[2]
Printing (18 ppm)[3]	L_{WAd} = 6.3 Bels (A) [63 dB (A)]
Ready	Essentially Inaudible
Sound Pressure Level—Bystander Position	**Declared per ISO 9296**[2]
Printing (18 ppm)[3]	L_{pAm} = 50 dB(A)
Ready	Essentially Inaudible

1 Configuration tested: HP LaserJet 3055 all-in-one, A10, A4
2 Acoustic values are subject to change. See www.hp.com/support/lj3052 and www.hp.com/support/lj3055 for current information.
3 HP LaserJet 3052/3055 all-in-one speed is 19 ppm letter-size and 18 ppm A4-size.

B Service and support

Hewlett-Packard limited warranty statement

HP PRODUCT	DURATION OF LIMITED WARRANTY
HP LaserJet 3052/3055 all-in-one	One year limited warranty

HP warrants to you, the end-user customer, that HP hardware and accessories will be free from defects in materials and workmanship after the date of purchase, for the period specified above. If HP receives notice of such defects during the warranty period, HP will, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or equivalent in performance to new.

HP warrants to you that HP software will not fail to execute its programming instructions after the date of purchase, for the period specified above, due to defects in material and workmanship when properly installed and used. If HP receives notice of such defects during the warranty period, HP will replace software which does not execute its programming instructions due to such defects.

HP does not warrant that the operation of HP products will be uninterrupted or error free. If HP is unable, within a reasonable time, to repair or replace any product to a condition as warranted, you will be entitled to a refund of the purchase price upon prompt return of the product.

HP products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use.

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 may 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 may 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 printer product, or (c) exhibit wear from ordinary use.

To obtain warranty service, please return the product to place of purchase (with a written description of the problem and print samples) or contact HP customer support. At HP's option, HP will either replace products that prove to be defective or refund your purchase price.

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.

Extended warranty

HP Care Pack provides coverage for the HP product and all HP-supplied internal components. The hardware maintenance covers a one to three-year period from the date of the HP product purchase. The customer may purchase an HP Care Pack up to one year from the date of purchase of the HP product. For more information, contact the HP Customer Care Service and Support group.

HP Care Pack options might be available after the standard warranty period has expired. Go to www.hpexpress-services.com/10467a/ and enter the product number to identify the HP Care Pack options that are available for your product.

C Regulatory information

- FCC compliance
- Environmental Product Stewardship program
- Telephone Consumer Protection Act (United States)
- IC CS-03 requirements
- EU statement for telecom operation
- New Zealand telecom statements
- Declaration of conformity (HP LaserJet 3390, 3392, 3055, and 3050)
- Declaration of conformity (HP LaserJet 3052)
- Country-/region-specific safety statements

FCC compliance

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 it is not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

NOTE Any changes or modifications to the printer that are not expressly approved by Hewlett-Packard 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.

This equipment complies with FCC rules, Part 68. On the back of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company. The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all, areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to determine the maximum REN for the calling area.

This equipment uses the following USOC jacks: RJ11C.

An FCC-compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68 compliant. This equipment cannot be used on telephone company-provided coin service. Connection to Party Line Service is subject to state tariffs. If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary. The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service. If trouble is experienced with this equipment, please see the numbers in the front of this manual for repair and (or) warranty information. If the trouble is causing harm to the telephone network, the telephone company may request you remove the equipment from the network until the problem is resolved. The following repairs can be done by the customer: Replace any original equipment that came with the device. This includes the print cartridge, the supports for trays and bins, the power cord, and the telephone cord. It is recommended that the customer install an AC surge arrestor in the AC outlet to which this device is connected. This is to avoid damage to the equipment caused by local lightning strikes and other electrical surges.

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 PowerSave mode (HP LaserJet 3052/3055 all-in-one), which saves natural resources and saves money without affecting the high performance of this product.**This product qualifies for ENERGY STAR®, which is a voluntary program established to encourage the development of energy-efficient office products.**

ENERGY STAR is a U.S. registered service mark of the U.S. Environmental Protection Agency. As an ENERGY STAR® partner, Hewlett-Packard Company has determined that this product meets ENERGY STAR® Guidelines for energy efficiency. For more information, see www.energystar.gov.

Toner consumption

Economode uses significantly less toner, which might extend the life of the print cartridge.

Paper use

The all-in-one manual duplex features (two-sided printing) and N-up printing capability (multiple pages printed on one sheet) can reduce paper usage and the resulting demands on natural resources. For more information, see the online user guide.

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 all-in-one's life.

HP LaserJet printing supplies

It's 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, the print cartridge, drum) 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 more than 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 website: www.hp.com/go/recycle

Use the label to return empty, original HP LaserJet print 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 website at www.hp.com/go/recycle.

Non-U.S. returns

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

Paper

This all-in-one is capable of using recycled papers, when the paper meets the guidelines outlined in the *HP LaserJet Printer Family Print Media Guide*, which you can view on the Web at www.hp.com/support/ljpaperguide. This product is suitable for the use of recycled paper according to EN12281:2002.

Material restrictions

This HP product contains mercury in the fluorescent lamp or scanner that may require special handling at end-of-life.

This HP product contains a battery that might require special handling at end of life.

Type:	Lithium Carbon Monofluoride (solid button cell)
Weight:	approx. 1 gram
Location:	on formatter PC board (one battery per product)
User Removable:	No

Nederlands

Toepassing: De batterij wordt gebruikt als reserve-energiebron voor de tijdklok (die wordt gebruikt voor het faxgedeelte van het apparaat).

Locatie van de batterij: De batterij wordt bij de fabricage/distributie van het product op de formatter gesoldeerd.

Voorschriften:

- Richtlijn van de Europese Unie met betrekking tot batterijen: Deze batterij komt niet in aanmerking voor de richtlijnen.
- Bijzondere bepaling A45 voor UN-standaard: Deze batterij is een niet-gevaarlijk artikel.

Levensduur: De batterij is ontworpen om minstens even lang mee te gaan als het product.

Batterijfabrikanten: Rayovac, Madison, WI, USA; and Panasonic, Secaucus, NJ, USA.

Het ontwerp en de specificaties kunnen zonder kennisgeving worden gewijzigd.

Taiwan

廢電池請回收

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

Disposal of waste equipment by users in private household 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 (for example, toner) can be obtained by visiting the HP Website at: www.hp.com/go/msds or www.hp.com/hpinfo/community/environment/productinfo/safety

For more information

Visit www.hp.com/go/environment or www.hp.com/hpinfo/community/environment/productinfo/safety for more information about the following environmental topics.

- Product environmental profile sheet for this and many related HP products
- Hewlett-Packard's commitment to the environment
- Hewlett-Packard's environmental management system

- Hewlett-Packard's end-of-life product return and recycling program
- MSDS

Telephone Consumer Protection Act (United States)

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or individual sending the message and the telephone number of the sending machine or such business, other entity, or individual. (The telephone number provided cannot be a 900 number or any other number for which charges exceed local or long-distance transmission charges.)

IC CS-03 requirements

Notice: The Industry Canada label identifies certified equipment. This certification means the equipment meets certain telecommunications network protective, operational, and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirement document(s). The Department does not guarantee the equipment will operate to the user's satisfaction. Before installing this equipment, users should ensure that it is permissible for the equipment to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations. Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment. Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution can be particularly important in rural areas.

CAUTION Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate. The Ringer Equivalence Number (REN) of this device is 0.7.

Notice: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Number of all the devices does not exceed five (5.0). The standard connecting arrangement code (telephone jack type) for equipment with direct connections to the telephone network is CA11A.

EU statement for telecom operation

This product is intended to be connected to the analog Public Switched Telecommunication Networks (PSTN) of European Economic Area (EEA) countries/regions. It meets requirements of EU R&TTE Directive 1999/5/EC (Annex II) and carries appropriate CE conformity marking. For more details, see Declaration of Conformity issued by the manufacturer in another section of this manual. However, due to differences between individual national PSTNs, the product may not guarantee unconditional assurance of successful operation on every PSTN termination point. Network compatibility depends on the correct setting being selected by the customer in preparation of its connection to the PSTN. Please follow the instructions provided in the user manual. If you experience network compatibility issues, please contact your equipment supplier or Hewlett-Packard help desk in the country/region of operation. Connecting to a PSTN termination point may be the subject of additional requirements set out by the local PSTN operator.

New Zealand telecom statements

The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services.

This equipment may not provide for the effective hand-over of a call to another device connected to the same line.

This equipment shall not be set up to make automatic calls to the Telecom "111" Emergency Service.

This product has not been tested to ensure compatibility with the FaxAbility distinctive ring service for New Zealand.

Declaration of conformity (HP LaserJet 3390, 3392, 3055, and 3050)

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 Names:	HP LaserJet 3390, 3392, 3055, and 3050
Regulatory Model Number[3)]	BOISB-0402-03, BOISB-0405-03, and BOISB-0405-04
Toner Cartridges[5)]	Q5949A, Q5949X, and Q2612A
Product Options:	ALL

conforms to the following Product Specifications:

Safety:	IEC 60950-1:2001 / EN60950-1: 2001 \ A11 IEC 60825-1:1993 + A1 +A2 EN 60825-1:1994 + A1 + A2 (Class 1 Laser/LED Product) GB4943-2001
EMC:	CISPR 22:1993+A1+A2 / EN 55022:1994+A1+A2 - Class B[1)] EN 61000-3-2:2000 EN 61000-3-3:1995+A1 EN 55024:1998+A1+A2 FCC Title 47 CFR, Part 15 Class B[2)] / ICES-003, Issue 4 GB9254-1998, GB17625.1-1998
TELECOM	TBR-21:1998; EG 201 121:1998; FCC Title 47 CFR, Part 68[4)]

Supplementary Information:

The product herewith complies with the requirements of the EMC Directive 89/336/EEC, the Low Voltage Directive 73/23/EEC, the R&TTE Directive 1999/5/EC (Annex II), 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 marketing name or the product number(s).

4) Telecom approvals and standards appropriate for the target countries/regions have been applied to this product, in addition to those listed above.

5) LaserJet 3050 and 3055 cartridge: Q2612A. LaserJet 3390 and 3392 cartridge: Q5949A yields (2500 standard page capacity), or Q5949X (6000 standard page capacity) (declared capacity yield value according to ISO/IEC 19752.)

Boise, Idaho 83713, USA

August 1, 2005

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, Böblingen, D-71034, 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)

Declaration of conformity (HP LaserJet 3052)

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 Names:	HP LaserJet 3052
Regulatory Model Number[3)]	BOISB-0405-02
Toner Cartridges	Q2612A
Product Options:	ALL

conforms to the following Product Specifications:

Safety:	IEC 60950-1:2001 / EN60950-1: 2001 \ A11 IEC 60825-1:1993 + A1 +A2 EN 60825-1:1994 + A1 + A2 (Class 1 Laser/LED Product) GB4943-2001
EMC:	CISPR 22:1993+A1+A2 / EN 55022:1994+A1+A2 - Class B[1)] EN 61000-3-2:2000 EN 61000-3-3:1995+A1 EN 55024:1998+A1+A2 FCC Title 47 CFR, Part 15 Class B[2)] / ICES-003, Issue 4 GB9254-1998, GB17625.1-1998

Supplementary Information:

The product herewith complies with the requirements of the EMC Directive 89/336/EEC, 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.

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3) For regulatory purposes, this product is assigned a Regulatory model number. This number should not be confused with the marketing name or the product number(s).

Boise, Idaho 83713, USA

August 1, 2005

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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 printer is certified as a "Class 1" laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968.

Since radiation emitted inside the printer is completely confined within protective housings and external covers, the laser beam cannot escape during any phase of normal user operation.

WARNING! Using controls, making adjustments, or performing procedures other than those specified in this user guide may result in exposure to hazardous radiation.

Canadian DOC statement

Complies with Canadian EMC Class B requirements.

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

Korean EMI statement

사용자 안내문 (B 급 기기)

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

Finnish laser statement

LASERTURVALLISUUS

LUOKAN 1 LASERLAITE

KLASS 1 LASER APPARAT

HP LaserJet 3050/3052/3055 all-in-one -laserkirjoitin on käyttäjän kannalta turvallinen luokan 1 laserlaite. Normaalissa käytössä kirjoittimen suojakotelointi 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 LaserJet 3390/3392 -kirjoittimen sisällä ei ole käyttäjän huollettavissa olevia kohteita. Laitteen saa avata ja huoltaa ainoastaan sen huoltamiseen koulutettu henkilö. Tällaiseksi huoltotoimenpiteeksi ei katsota väriainekasetin vaihtamista, paperiradan puhdistusta tai muita käyttäjän käsikirjassa lueteltuja, käyttäjän tehtäväksi tarkoitettuja ylläpitotoimia, jotka voidaan suorittaa ilman erikoistyökaluja.

VARO!

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

VARNING!

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

Tiedot laitteessa käytettävän laserdiodin säteilyominaisuuksista:

Aallonpituus 770-800 nm

Teho 5 mW

Luokan 3B laser

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