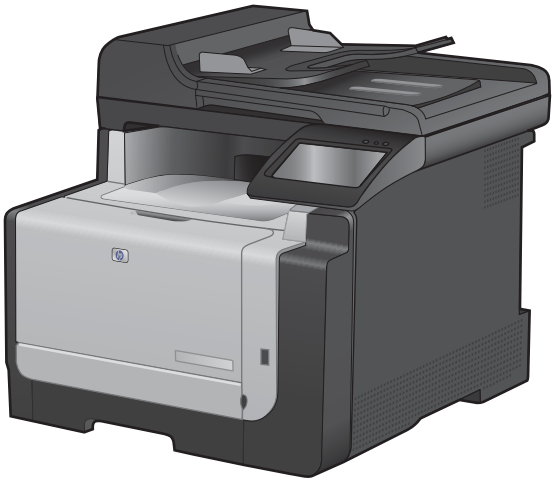
# LASERJET PRO CM1410

COLOR MFP SERIES

## Service Manual



# HP LaserJet Pro CM1410 Color MFP Series

## Service Manual

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## Conventions used in this guide

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

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

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

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

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# 1 Removal and replacement


- Introduction
- Removal and replacement strategy
- Electrostatic discharge
- Required tools
- Service approach
- Removal and replacement procedures

# Introduction

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

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

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

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

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

# Removal and replacement strategy

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

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

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

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

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

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

Some components require inspection, cleaning, or replacement when a product is serviced. Use the table below to identify these components, and determine if any service related action is necessary.

**Table 1-1 Components inspection**

| Component | If the product has printed less than 10,000 pages... | If the product has printed more than 10,000 pages... |
|---|---|---|
| Pickup roller (product base) | • Inspect<br>• Clean<br>• Replace if damaged | If this component is damaged, discard the product. |

**Table 1-1 Components inspection (continued)**

| Component | If the product has printed less than 10,000 pages... | If the product has printed more than 10,000 pages... |
|---|---|---|
| Separation roller (product base) | • Inspect<br>• Clean<br>• Replace if damaged | If this component is damaged, discard the product. |
| Document feeder pick arm assembly (includes the pickup rollers) | • Inspect<br>• Clean<br>• Replace if damaged | If this component is damaged, discard the product. |
| Document feeder separation pad | If the product has printed **less than** 15,000 pages...<br>• Inspect<br>• Clean<br>• Replace if damaged | If the product has printed **more than** 15,000 pages, discard the product. |
| Intermediate transfer belt (ITB) | • Inspect<br>• Clean<br>• Replace if damaged | If this component is damaged, discard the product. |
| Transfer roller | • Inspect<br>• Clean<br>• Replace if damaged | If this component is damaged, discard the product. |
| Fuser | • Inspect<br>• Clean<br>• Replace if damaged | If this component is damaged, discard the product. |
| Covers | • Inspect<br>• Clean<br>• Replace if damaged | If this component is damaged, discard the product. |

# Electrostatic discharge

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

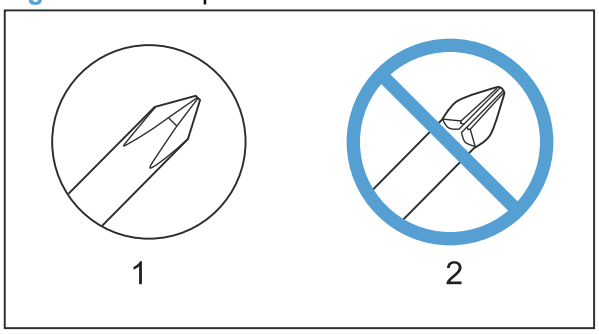
Protect the ESD-sensitive parts by placing them in ESD pouches when they are out of the product.

# Required tools

- #2 Phillips screwdriver with a magnetic tip and a 152-mm (6-in) shaft length
- Small flat-blade screwdriver
- Torx driver (#10)
- Needle-nose pliers
- ESD mat or ESD strap (if one is available)
- Penlight (optional)

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

**Figure 1-1** Phillips and Pozidrive screwdriver comparison



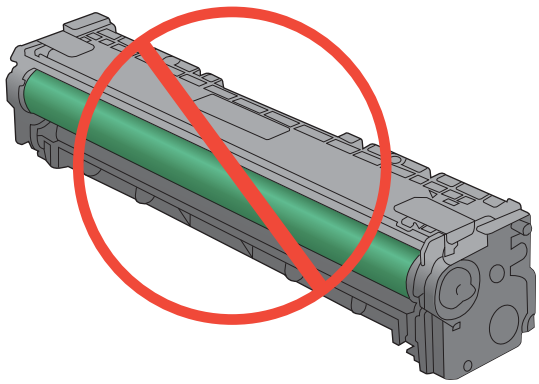
# Service approach

## Before performing service

- Remove all paper from the product.
- Turn off the power using the power switch.
- Unplug the power cable and interface cable or cables.
- Place the product on an ESD workstation or mat, or use an ESD strap (if one is available). If an ESD workstation, mat, or strap is not available, ground yourself by touching the sheet-metal chassis *before* touching an ESD-sensitive part.
- Remove the print cartridges.

△ **CAUTION:** Do not touch the imaging drum on the bottom of the print cartridge. Finger prints on the imaging drum can cause print-quality problems.

Do not allow the image drum to contact any surface when the cartridges are set down. Protect the image drum at all times. Dust and debris can stick to the drum and cause print-quality problems.



## After performing service

- Plug in the interface cables, and then the power cable.
- Reinstall the print cartridges.
- Load paper in the product.

## Post-service tests

After service has been completed, perform the following tests 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. With the power cord and interface cables attached, turn on the product.
4. Verify that the expected start up sounds occur.
5. Print a configuration page, and then verify that the expected printing sounds occur.
6. Print a demo page, and then verify that the print quality is as expected.
7. Send a print job from the host computer, and then verify that the output meets expectations.
8. If necessary, restore any customer-specified settings.
9. Clean the outside of the product with a damp cloth.

### 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. With the power cord attached, turn on the product.
4. Verify that the expected start up sounds occur.
5. Print a configuration page, and then verify that the expected printing sounds occur.
6. Place the configuration page in the document feeder, or on the flatbed glass.
7. Print a copy job, and then verify the results.
8. Clean the outside of the product with a damp cloth.

### Test 3 (fax-quality test)

1. Place the configuration page in the document feeder.
2. Type 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 diagram to determine which parts must be removed before removing other parts.

**Figure 1-2** Parts-removal tree

| Component | Remove | Remove | Remove | Remove | Remove | Remove | Remove | Remove | Remove | Remove |
|---|---|---|---|---|---|---|---|---|---|---|
| Pickup roller | | | | | | | | | | |
| Separation roller | | | | | | | | | | |
| Transfer roller | | | | | | | | | | |
| Print cartridge drawer | | | | | | | | | | |
| Right cover | | | | | | | | | | |
| Right-front cover1 and cover 2 | Right cover | | | | | | | | | |
| Control panel | Right cover | Right-front cover1/2 | | | | | | | | |
| Left cover | | | | | | | | | | |
| Document-feeder and scanner assembly | Right cover | | | | | | | | | |
| Rear-center cover | Right cover | | | | | | | | | |
| Rear-upper cover | Right cover | Left cover | Rear-center cover | | | | | | | |
| Speaker | Right cover | Control panel | | | | | | | | |
| Top cover | Right cover | Right-front cover1/2 | Control panel | Left cover | Document-feeder and scanner assembly | Rear-center cover | Rear-upper cover | Speaker | | |
| Front door and front-lower cover | Print cartridge drawer | Left cover | | | | | | | | |
| Rear door and rear-lower cover | Right cover | Left cover | Rear-center cover | | | | | | | |
| Paper guide assembly | | | | | | | | | | |
| USB port PCA and bracket | Right cover | Right-front cover1/2 | | | | | | | | |
| Wireless PCA | Right cover | | | | | | | | | |
| DC controller PCA | Right cover | | | | | | | | | |
| Formatter PCA, fax card PCA and support bracket | Right cover | | | | | | | | | |
| Fuser motor | Right cover | Formatter PCA, fax card PCA and support bracket | | | | | | | | |
| Main motor | Right cover | Formatter PCA, fax card PCA and support bracket | | | | | | | | |
| Intermediate transfer belt (ITB) | Print cartridge drawer | Right cover | Left cover | Rear-center cover | | | | | | |
| Power supply (high voltage) | Right cover | Right-front cover1/2 | Control panel | Left cover | Document-feeder and scanner assembly | Rear-center cover | Rear-upper cover | Speaker | Top cover | |
| Power supply (low voltage) | Right cover | Left cover | Rear-center cover | Rear door and rear-lower cover | Formatter PCA, fax card PCA and support bracket | | | | | |
| Power supply (fuser) | Right cover | Left cover | Rear-center cover | Rear door and rear-lower cover | | | | | | |
| Fuser | Right cover | Right-front cover1/2 | Control panel | Left cover | Document-feeder and scanner assembly | Rear-center cover | Rear-upper cover | Speaker | Top cover | Rear door and rear-lower cover |
| Document feeder input tray | | | | | | | | | | |
| Document feeder cover | | | | | | | | | | |
| Document feeder pick arm assembly | Document feeder input tray | Document feeder cover | | | | | | | | |
| Document feeder core | Document feeder input tray | Document feeder cover | | | | | | | | |
| Document feeder pinch rollers | Document feeder input tray | Document feeder cover | Document feeder core | | | | | | | |
| Document feeder base assembly | Document feeder input tray | Document feeder cover | Document feeder core | | | | | | | |
| Document feeder floating hinges | Document feeder input tray | Document feeder cover | Document feeder core | Document feeder base assembly | | | | | | |

# Removal and replacement procedures

## Pickup roller

You might have to rotate the pickup roller to gain access to the roller locking tabs.

1. Remove the input tray and tilt the product back until the pickup roller is visible.

   If the locking tabs on each side of the roller are not accessible, use the following procedure in this step to rotate the roller and access the tabs.

   If the tabs are visible, proceed to the next step.

   **a.** Reinstall the input tray, and then turn the product on.

   **b.** Touch the Setup button.

   **c.** Touch the middle of the screen along the left-hand edge (callout 1), and then immediately touch the lower-right corner (callout 2) of the screen.

   **d.** When the Home screen appears, touch the Setup button again.

   **e.** Touch the 2ndary Service button.

   **f.** Touch the arrow buttons (at the right- or left-side of the touch screen) until the Pick roller button appears.

   **g.** Touch the Pick roller button.

   **h.** Touch the OK button to confirm that you want the pick roller to rotate.

   **i.** Turn the product power off, and then remove the power cord and the interface cable.

2. Carefully place the product front-side up.

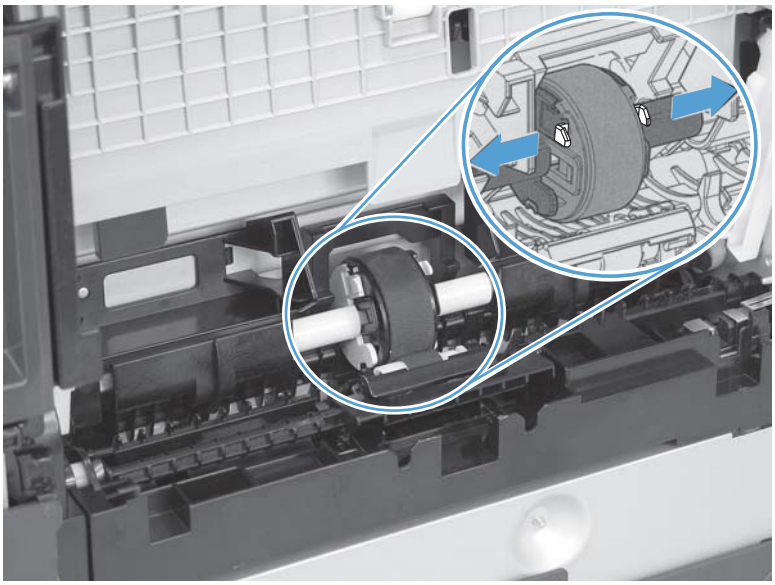
△ **CAUTION:** The document-feeder and scanner cover are not captive and can open suddenly if the product is placed front-side up. Always support the document-feeder and scanner cover before placing the product front-side up.

**NOTE:** Debris can scratch or damage the back of the product. Before you place the product front-side up, remove any debris from the work surface. If possible, set the product on a clean, dry cloth to prevent scratching and damage.

3. Release two white plastic locking tabs and remove the pickup roller.

△ **CAUTION:** Do not touch the spongy roller surface unless you are going to replace the roller. Skin oils on the roller can cause paper pickup problems.

**Figure 1-3** Remove the pickup roller



## Separation roller

△ **CAUTION:** Do not touch the spongy roller surface unless you are going to replace the roller. Skin oils on the roller can cause paper pickup problems.

1. Remove paper tray (if installed), and then carefully place the product front-side up.

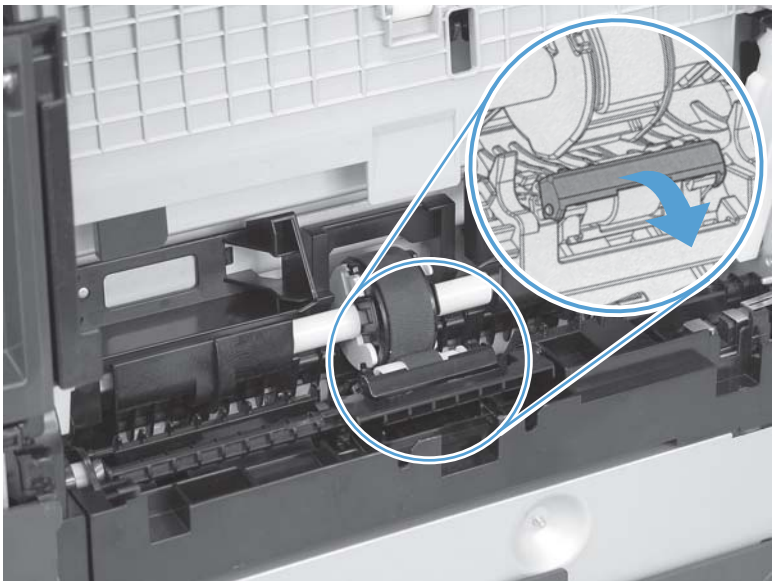
   △ **CAUTION:** The document-feeder and scanner cover are not captive and can open suddenly if the product is placed front-side up. Always support the document-feeder and scanner cover before placing the product front-side up.

   **NOTE:** Debris can scratch or damage the back of the product. Before you place the product front-side up, remove any debris from the work surface. If possible, set the product on a clean, dry cloth to prevent scratching and damage.

2. Carefully release the roller cover and rotate it down and away from the roller.

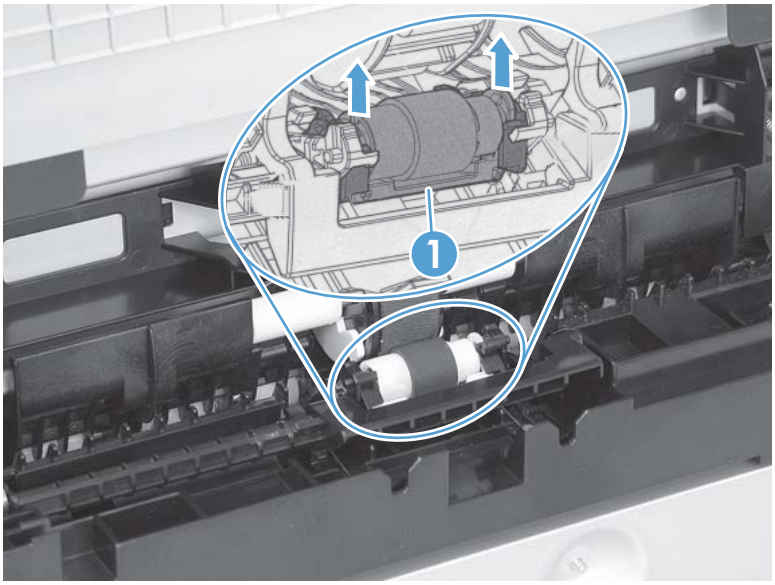
   **Reinstallation tip** Make sure that this cover snaps into place over the roller when the roller and holder are reinstalled.

**Figure 1-4** Remove the separation roller (1 of 2)



3. Use a small flat blade screwdriver to gently pry up on the roller and holder assembly (callout 1) to remove the roller and holder assembly.

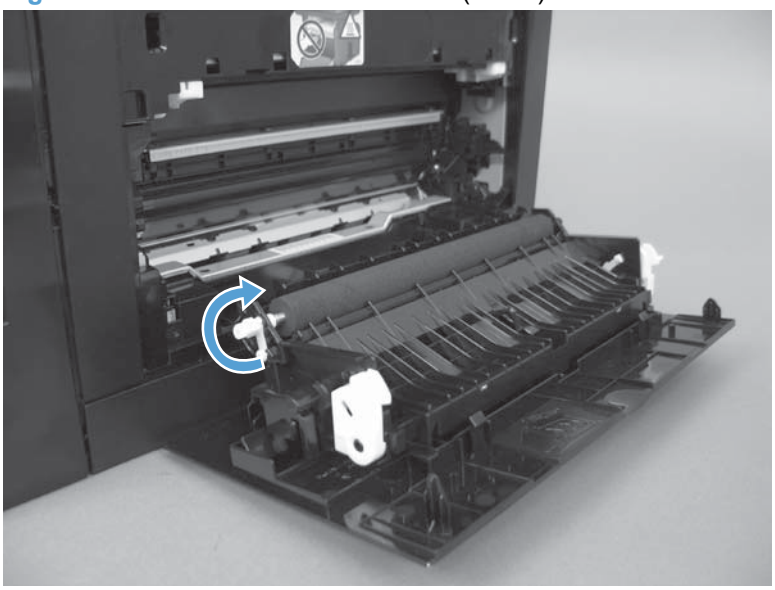
**Figure 1-5** Remove the separation roller (2 of 2)



## Transfer roller

1. Open the rear door.
2. Release the retainer clip and then rotate it until the pin on the clip aligns with the slot in the mounting bracket.

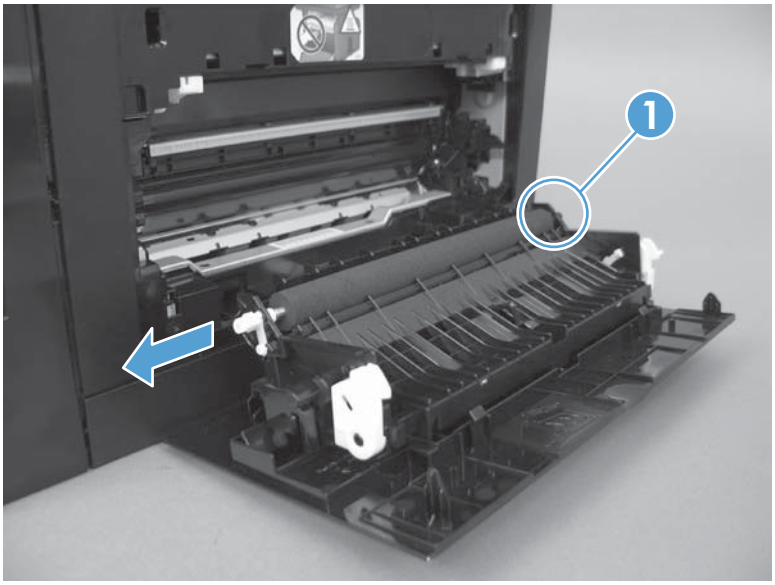
**Figure 1-6** Remove the transfer roller (1 of 3)



3. Remove the clip. Repeat these steps for the remaining retainer clip (located at the opposite end of the roller shaft).

**TIP:** One of the clips (callout 1) is made from a black conductive plastic. Make sure that the clips are reinstalled on correct the end of the transfer roller.

**Figure 1-7** Remove the transfer roller (2 of 3)



4. Slide the roller to one side to disengage the roller shaft from the mounting bracket, and then remove the transfer roller.

△ **CAUTION:** Do not touch the black sponge portion of the roller. Skin oils can cause print-quality problems.

**Figure 1-8** Remove the transfer roller (3 of 3)

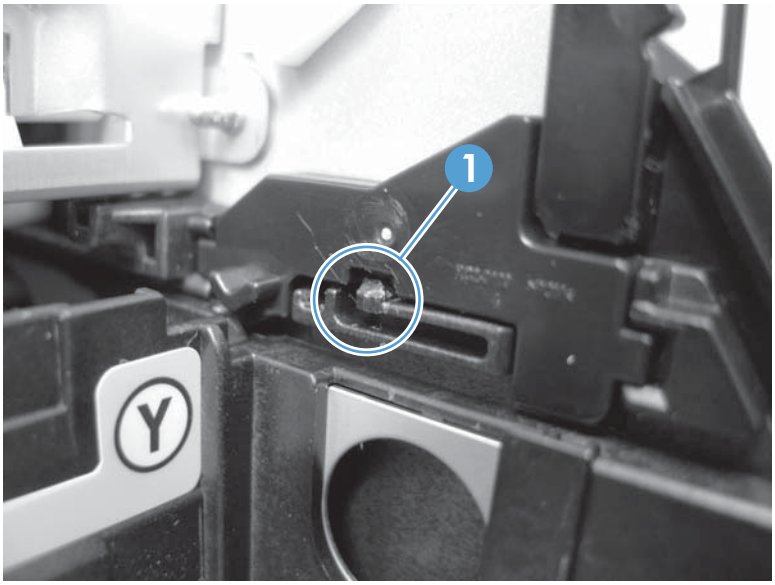
## Print-cartridge drawer

1. Open the front door and pull out the print-cartridge drawer.

**Figure 1-9** Remove the print-cartridge drawer (1 of 5)

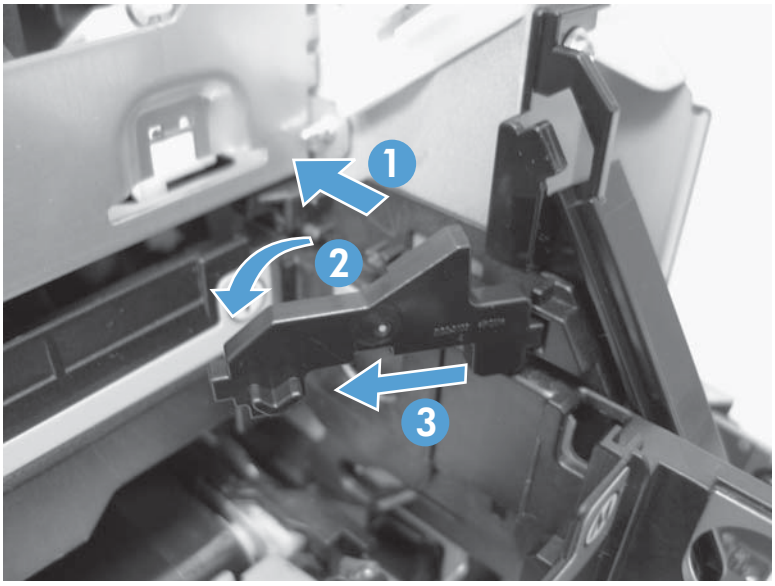
2. Use a small flat blade screwdriver to release one tab (callout 1) on the cartridge-drawer stop.

**Figure 1-10** Remove the print-cartridge drawer (2 of 5)



3. Push in on the edge of the top cover (callout 1), rotate the end of the drawer stop toward the center of the print-cartridge drawer (callout 2), and then remove the drawer stop (callout 3)

**Figure 1-11** Remove the print-cartridge drawer (3 of 5)




4. Repeat the previous steps to remove the remaining drawer stop.

**Figure 1-12** Remove the print-cartridge drawer (4 of 5)

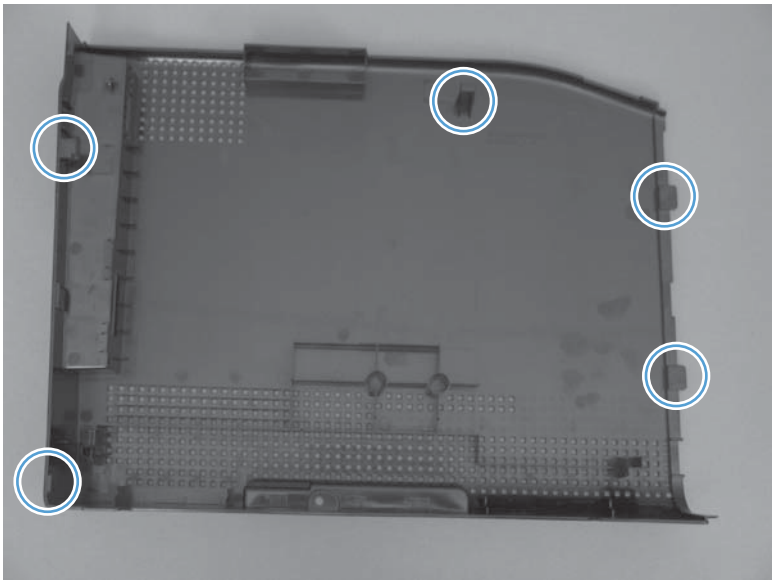
5. Pull the print-cartridge drawer out of the product to remove it.

**Figure 1-13** Remove the print-cartridge drawer (5 of 5)

## Right cover

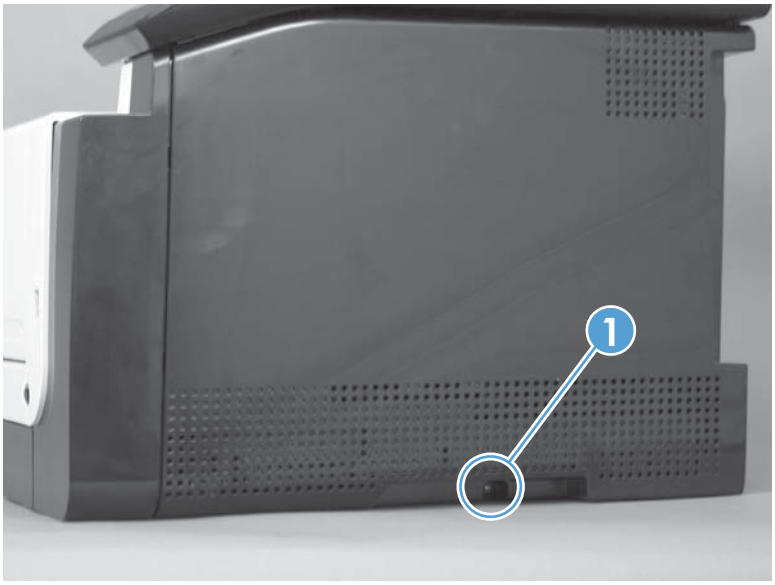
1. Before proceeding, note the locations of the retaining clips on the back of the cover.

**Figure 1-14** Remove the right cover (1 of 5)



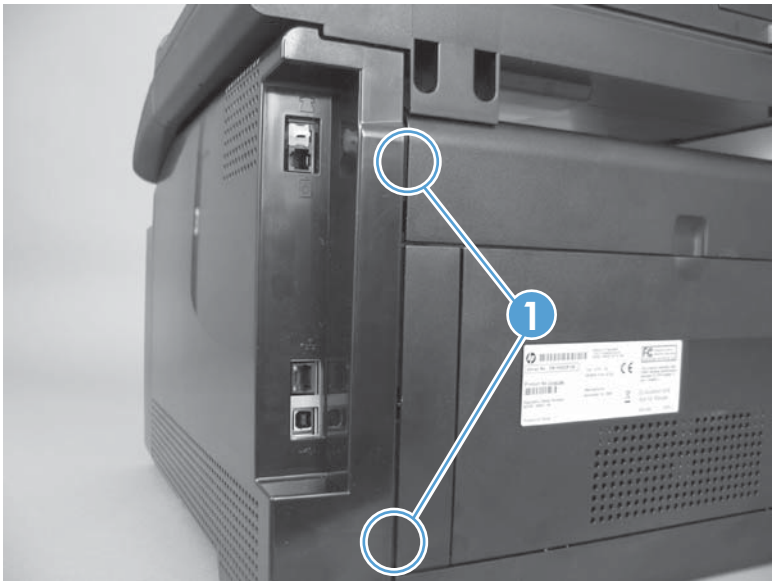
2. Remove one screw (callout 1).

**Figure 1-15** Remove the right cover (2 of 5)



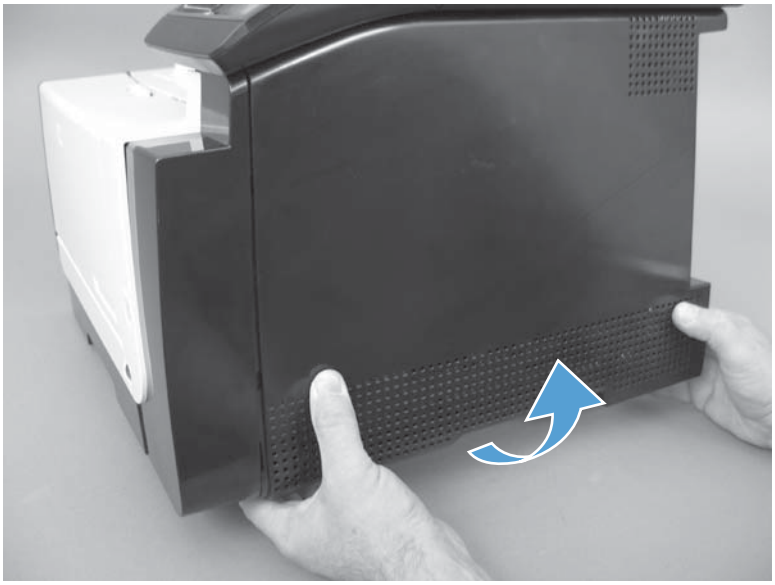
3. Release two tabs (callout 1), and then slightly separate the back side of the cover from the product.

**Figure 1-16** Remove the right cover (3 of 5)



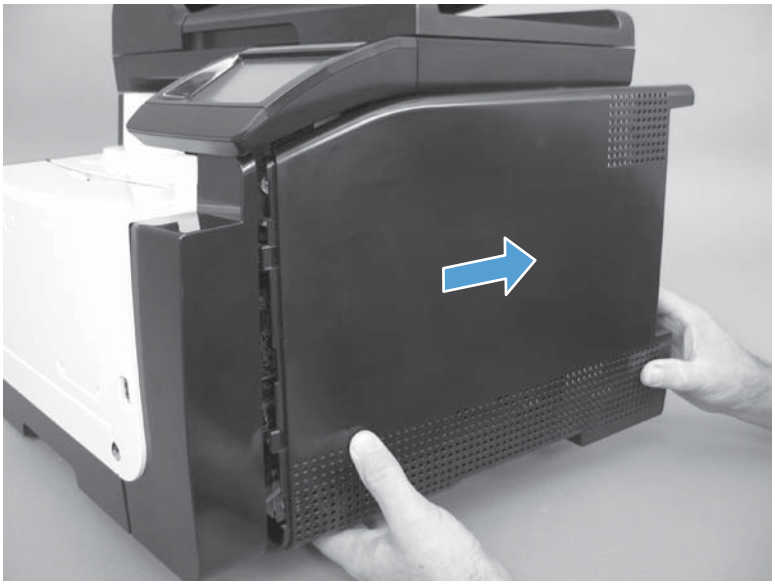

4. Pull down on the bottom-front corner of the cover, and then slightly rotate the bottom of the cover away from the product.

**Figure 1-17** Remove the right cover (4 of 5)



5. Slide the cover toward the back of the product to remove it.

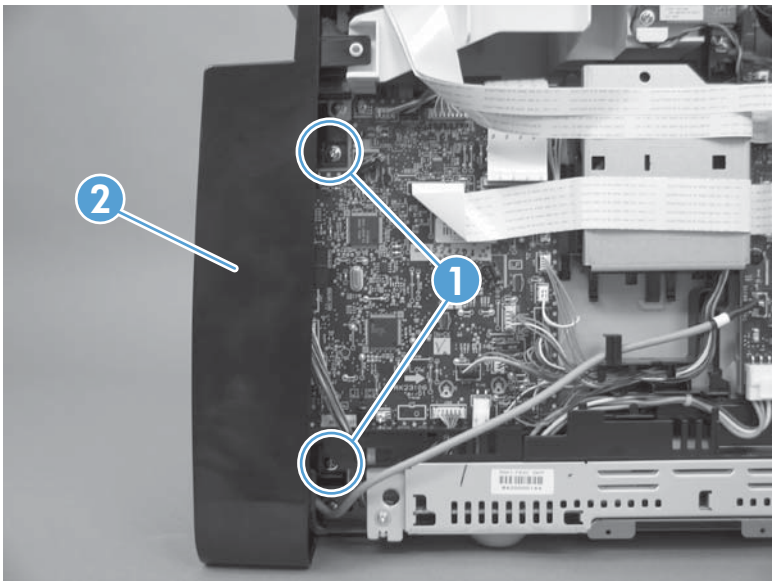
**Figure 1-18** Remove the right cover (5 of 5)



## Right-front cover-1 and cover-2

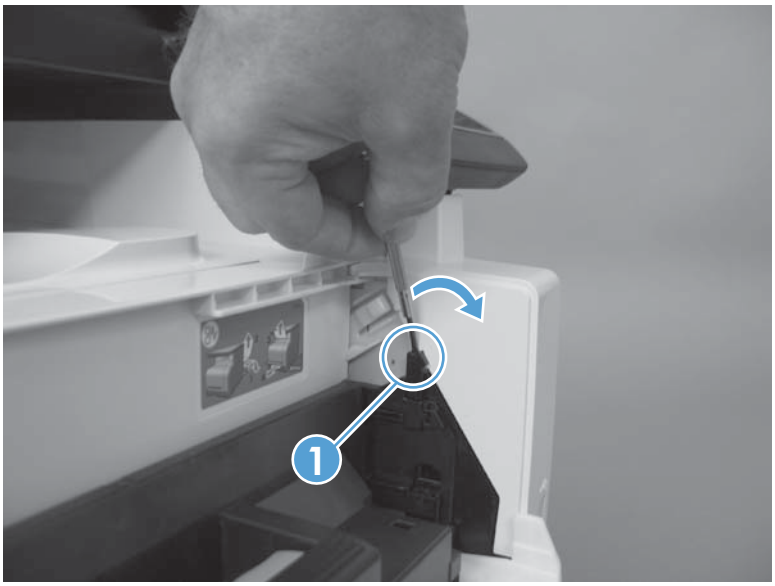
1. Remove the right cover. See Right cover on page 17.
2. Remove two screws (callout 1), and then remove the right-front cover-2 (callout 2)

**Figure 1-19** Remove the right-front cover (1 of 4)



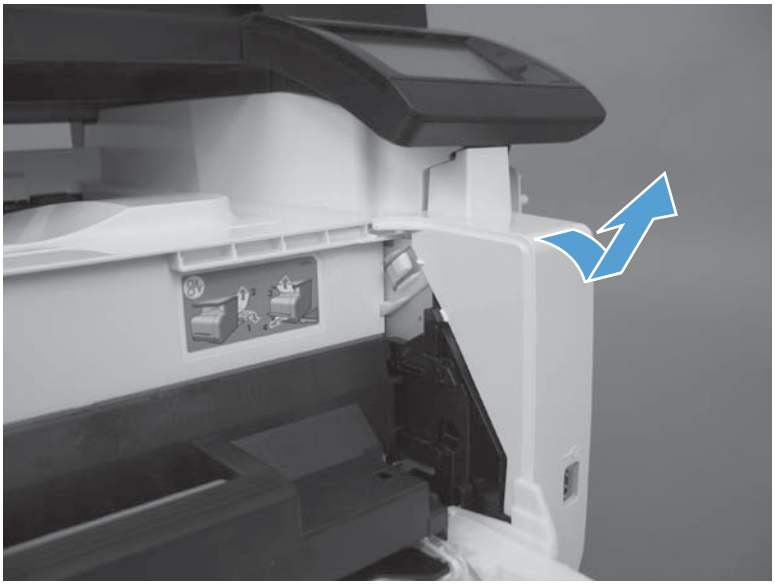

3. Open the front door, and then use a small flat blade screwdriver to release one tab (callout 1).

**Figure 1-20** Remove the right-front cover (2 of 4)



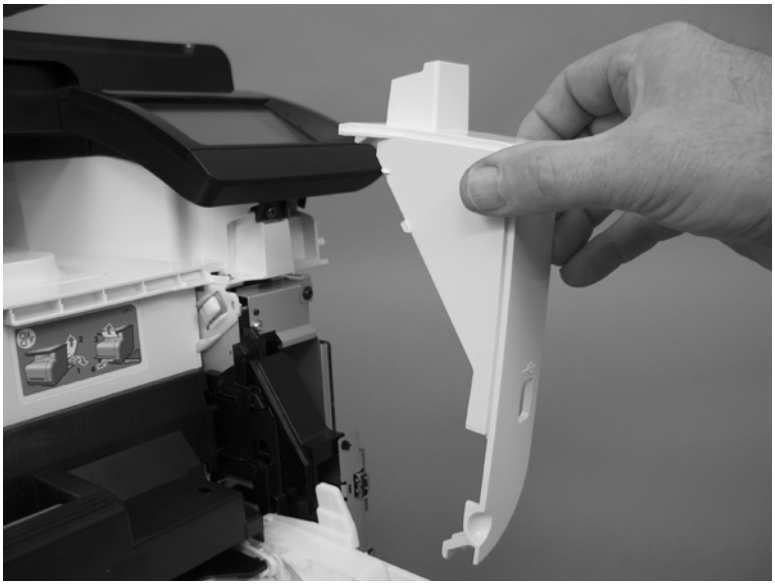
4. Rotate the top of the right-front cover-1 away from the product, and then lift the cover up to release it.

**Figure 1-21** Remove the right-front cover (3 of 4)



5. Remove the right-front cover-1.

**Figure 1-22** Remove the right-front cover (4 of 4)

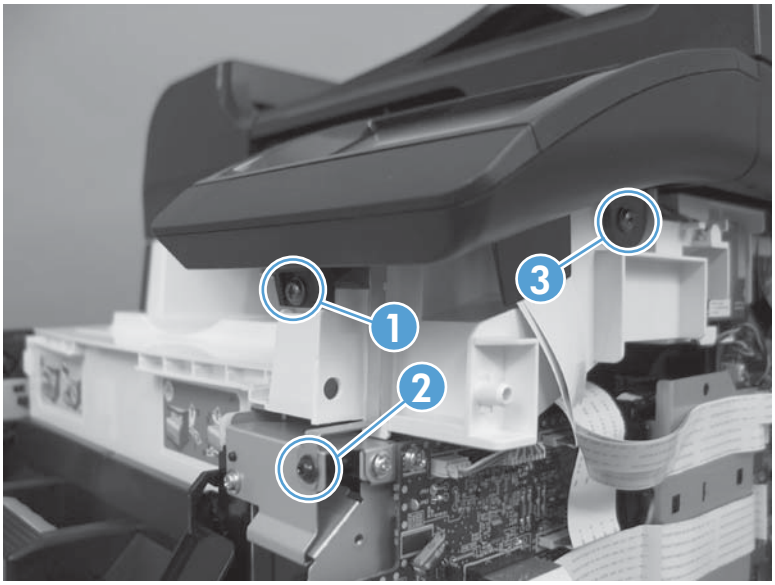


## Control panel

1. Remove the following components:
   - Right cover. See Right cover on page 17.
   - Right-front cover-1 and cover-2. See Right-front cover-1 and cover-2 on page 20.
2. Remove one locator screw (callout 1), and then remove the ESD bracket screw (callout 2) and the mounting screw (callout 3).

**NOTE:** When the control panel is reinstalled, install the locator screw (callout 1) first to correctly position the control panel on the product. Install the ESD bracket screw (callout 2) and the mounting screw (callout 3) after the locator screw is tightened.

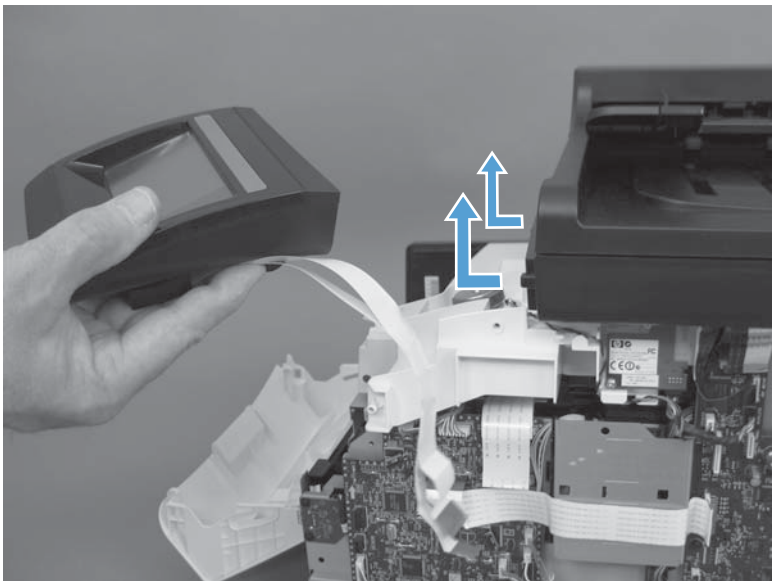
**Figure 1-23** Remove the control panel (1 of 5)



3. Slightly slide the control panel toward the front of the product, and then lift it off of the product.

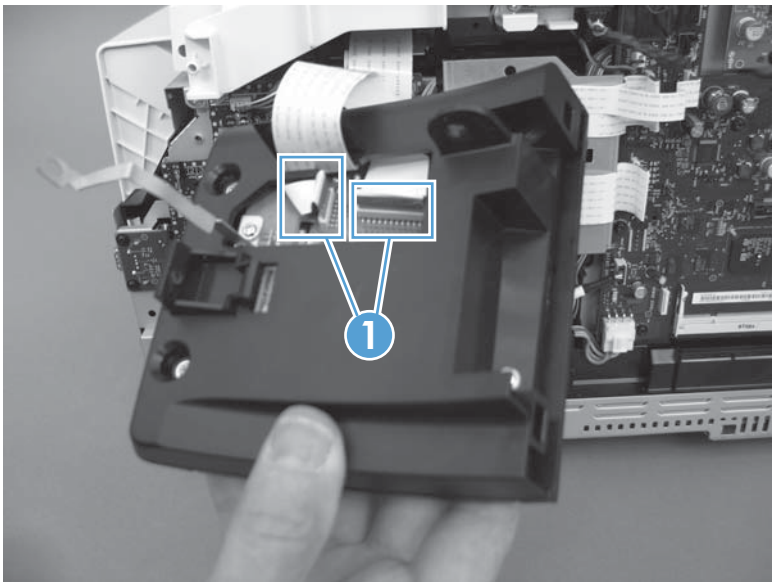
△ **CAUTION:** The control panel is still attached to the product by the FFCs. Do not damage the FFCs when you separate the control panel from the product.

**Figure 1-24** Remove the control panel (2 of 5)



4. Disconnect two FFCs (callout 1) from the bottom of the control-panel PCA.

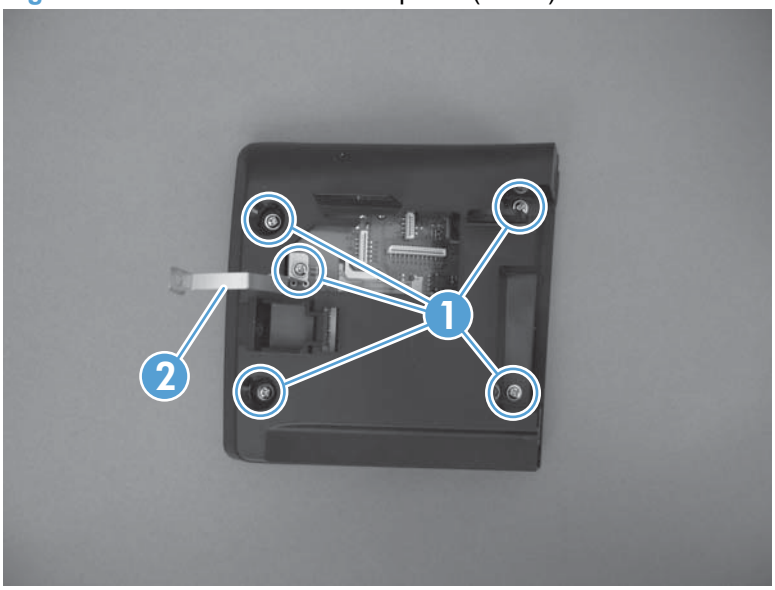
**Figure 1-25** Remove the control panel (3 of 5)



5. Turn the control panel over, and then remove five screws (callout 1) and the ESD bracket (callout 2).

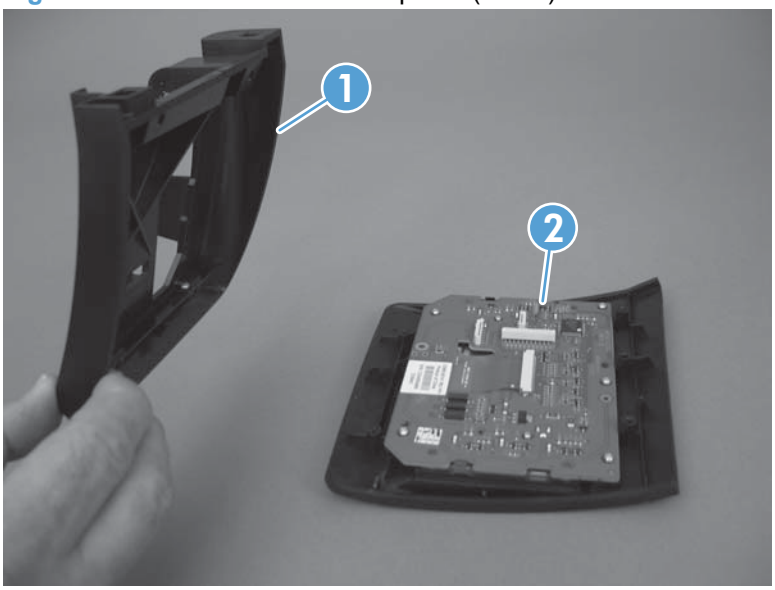
**NOTE:** Install the ESD bracket on the replacement control-panel PCA assembly.

**Figure 1-26** Remove the control panel (4 of 5)




6. Separate the control-panel base (callout 1) from the control-panel PCA assembly (callout 2).

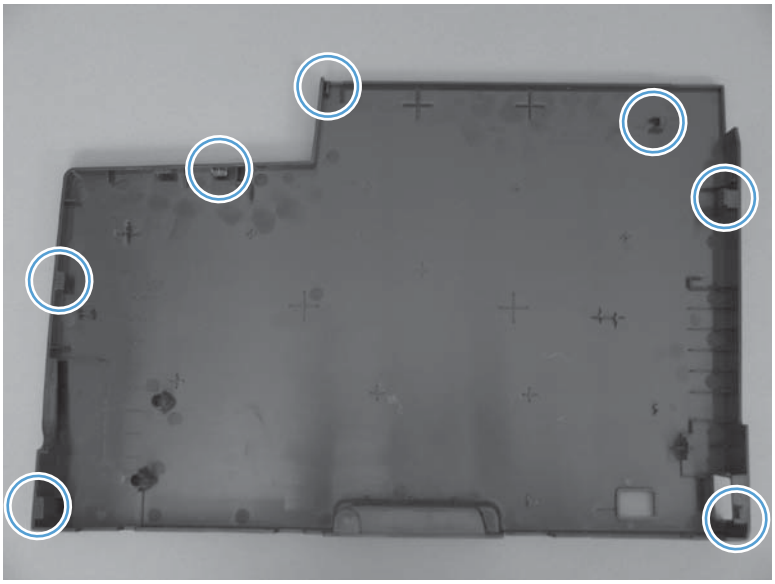
**Figure 1-27** Remove the control panel (5 of 5)



## Left cover

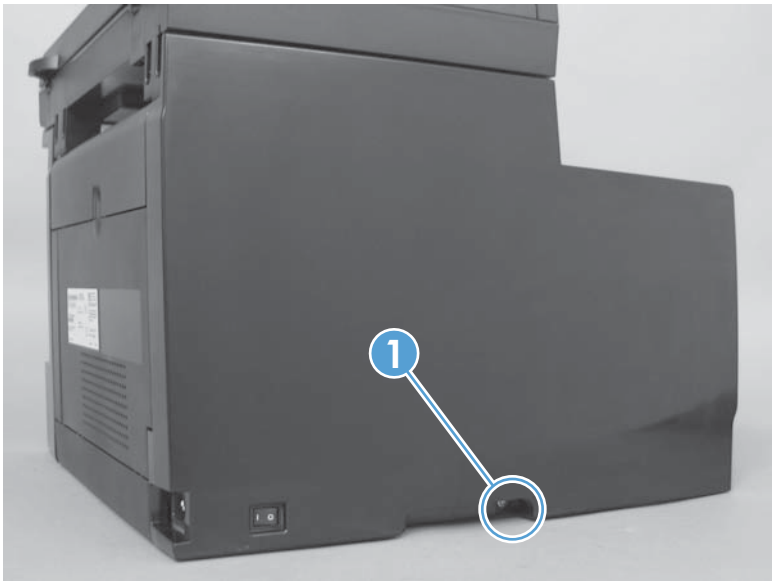
1. Before proceeding, note of the locations of the retaining tabs on the back of the left cover.

**Figure 1-28** Remove the left cover (1 of 6)



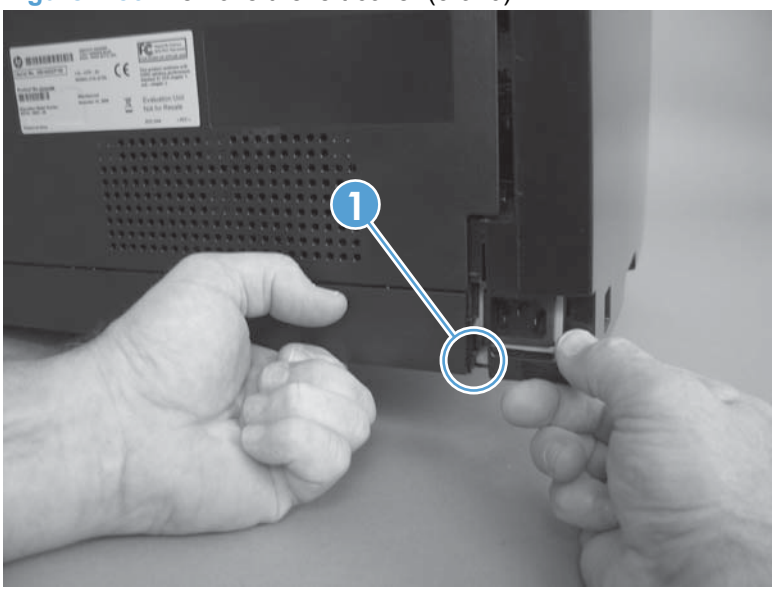
2. Remove one screw (callout 1).

**Figure 1-29** Remove the left cover (2 of 6)



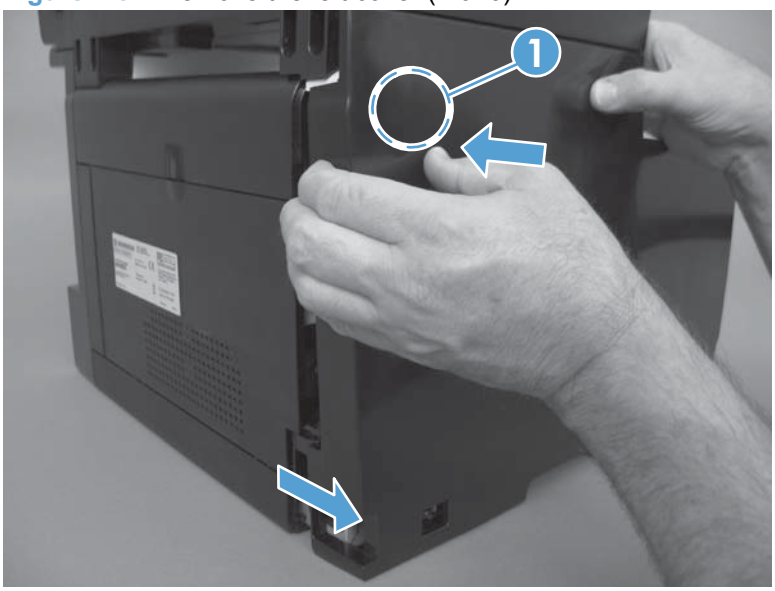
3. Release one tab (callout 1).

**Figure 1-30** Remove the left cover (3 of 6)



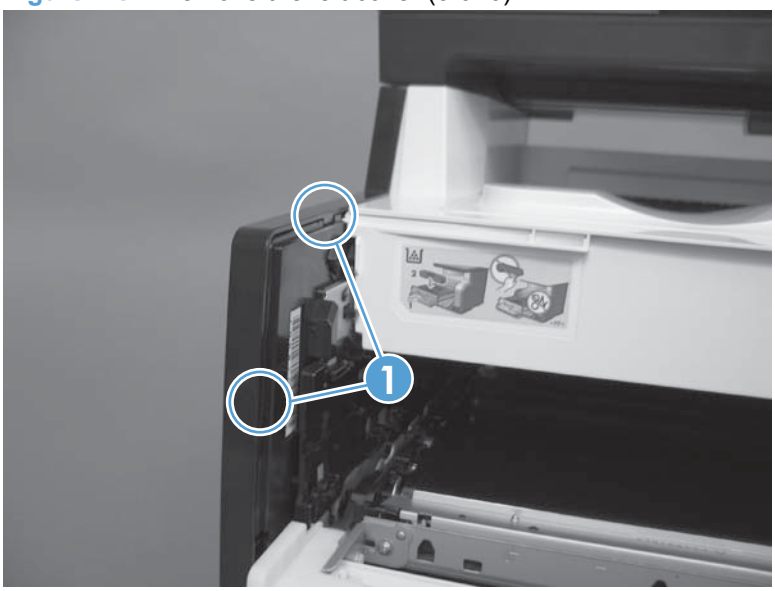

4. Push in on the back side of the cover to release one tab (callout 1), and rotate the back edge of the cover away from the product.

**Figure 1-31** Remove the left cover (4 of 6)



5. Open the front door, and then use a small flat blade screwdriver to release two tabs (callout 1)

**Figure 1-32** Remove the left cover (5 of 6)



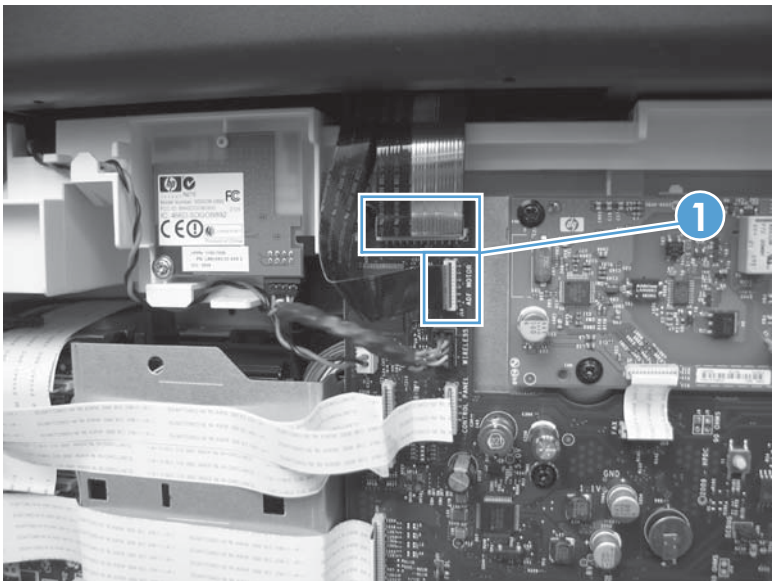

6. Rotate the cover toward the front of the product, and then remove the cover.

**Figure 1-33** Remove the left cover (6 of 6)

## Document-feeder and scanner assembly

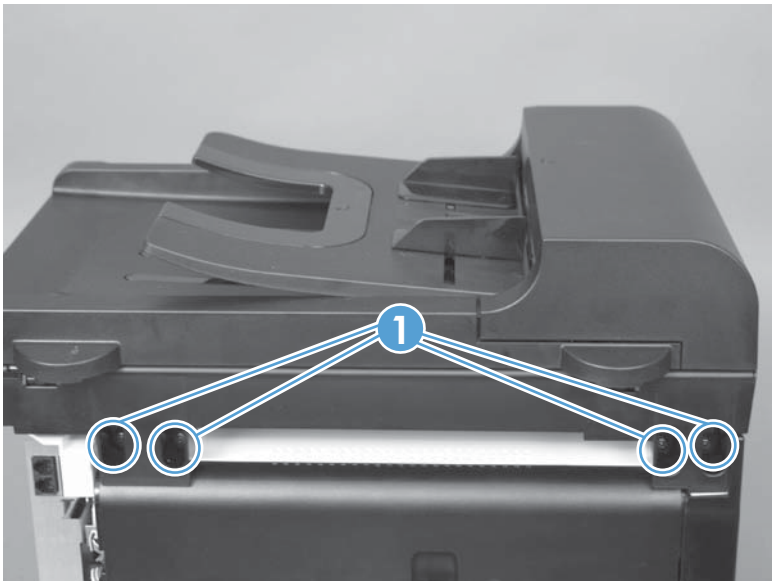
1. Remove the right cover. See Right cover on page 17.
2. Disconnect two FFCs (callout 1).

**Figure 1-34** Remove the document-feeder and scanner assembly (1 of 3)



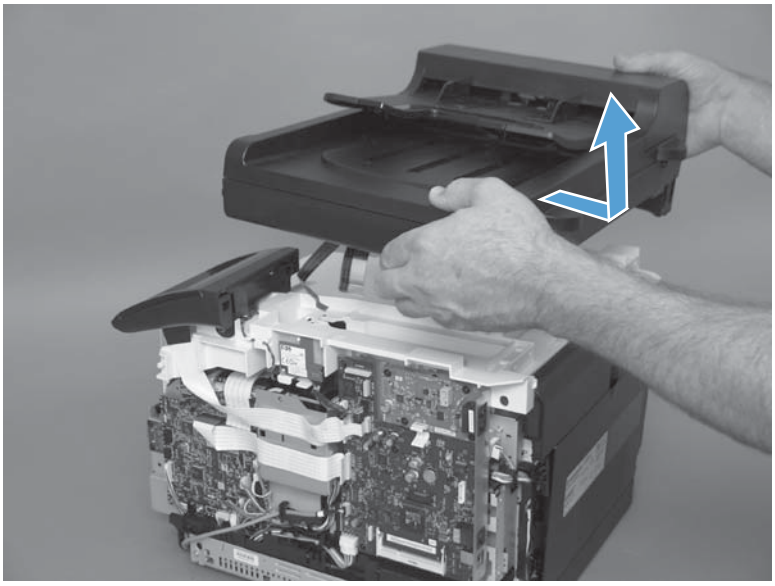

3. Remove four screws (callout 1).

**Figure 1-35** Remove the document-feeder and scanner assembly (2 of 3)



4. Slightly slide the document-feeder and scanner assembly toward the rear of the product, and then lift it straight up and off of the product.

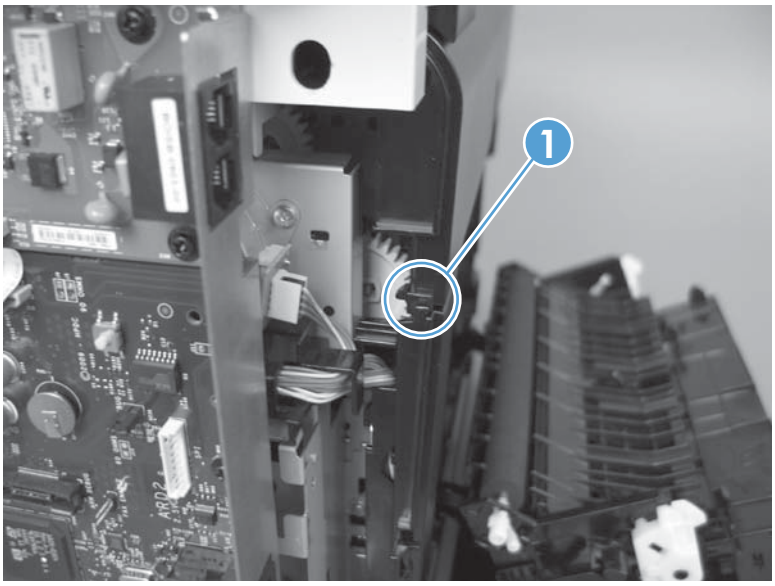
**Figure 1-36** Remove the document-feeder and scanner assembly (3 of 3)



## Rear-center cover

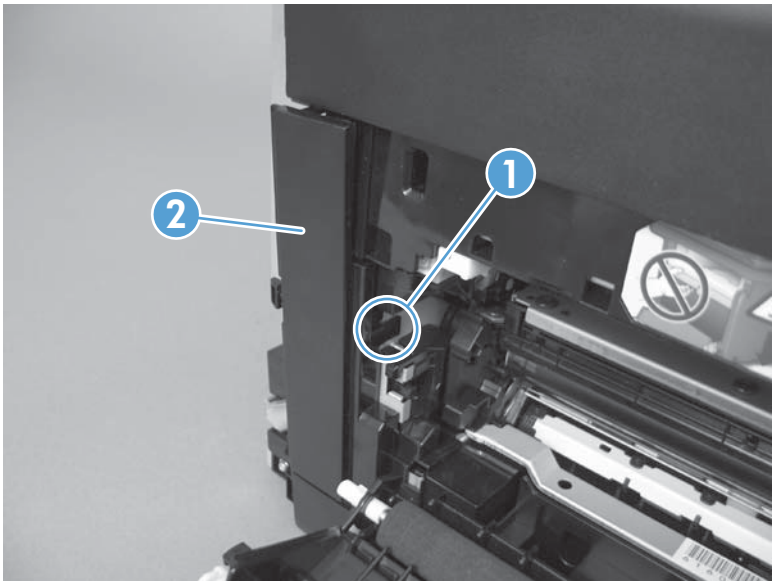
1. Remove the right cover. See Right cover on page 17.
2. Open the rear door.
3. Use a small flat blade screwdriver to release one tab (callout 1), and then slightly separate the top of the cover from the product.

**Figure 1-37** Remove the rear-center cover (1 of 2)




4. Release one tab (callout 1), and then remove the rear-center cover (callout 2).

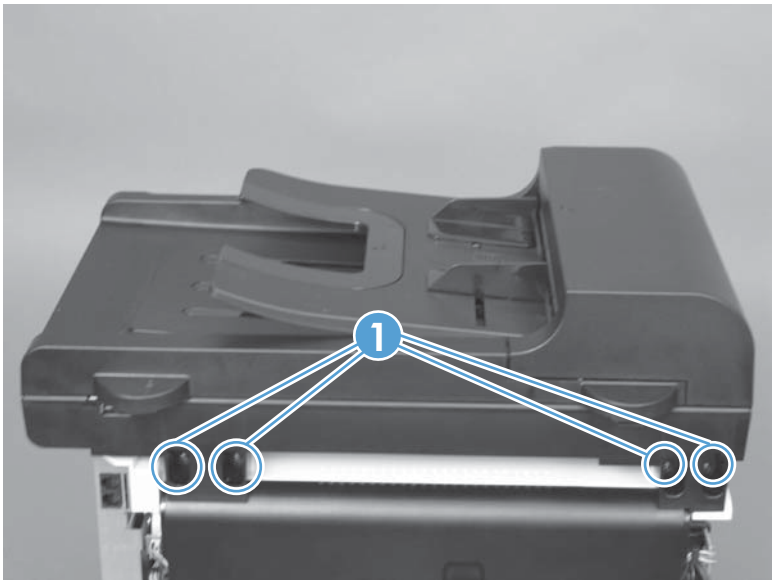
**Figure 1-38** Remove the rear-center cover (2 of 2)



## Rear-upper cover

1. Remove the following components:
   - Right cover. See Right cover on page 17.
   - Left cover. See Left cover on page 25.
   - Rear-center cover. See Rear-center cover on page 30.
2. Remove four screws (callout 1).

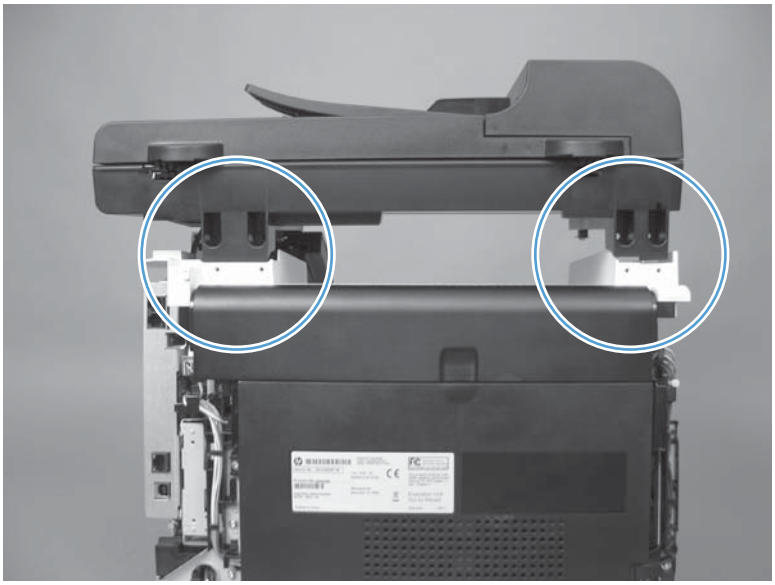
**Figure 1-39** Remove the rear-upper cover (1 of 4)




3. Slightly separate the scanner assembly from the product base.

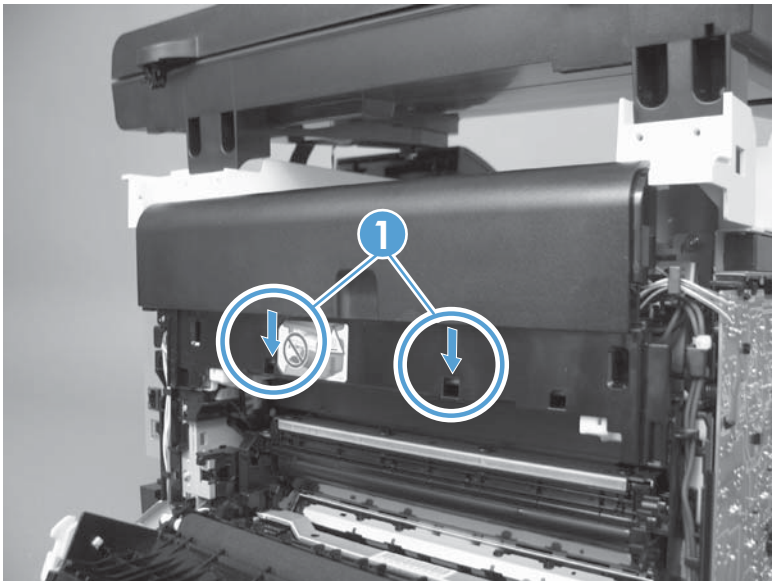
△ **CAUTION:** The scanner assembly is still connected to the product base by two FFCs. Separate the assembly from the base only enough to remove the cover.

**Figure 1-40** Remove the rear-upper cover (2 of 4)



4. Open the rear door. Use a small flat blade screwdriver to push down on two tabs (callout 1) to release them.

**Figure 1-41** Remove the rear-upper cover (3 of 4)



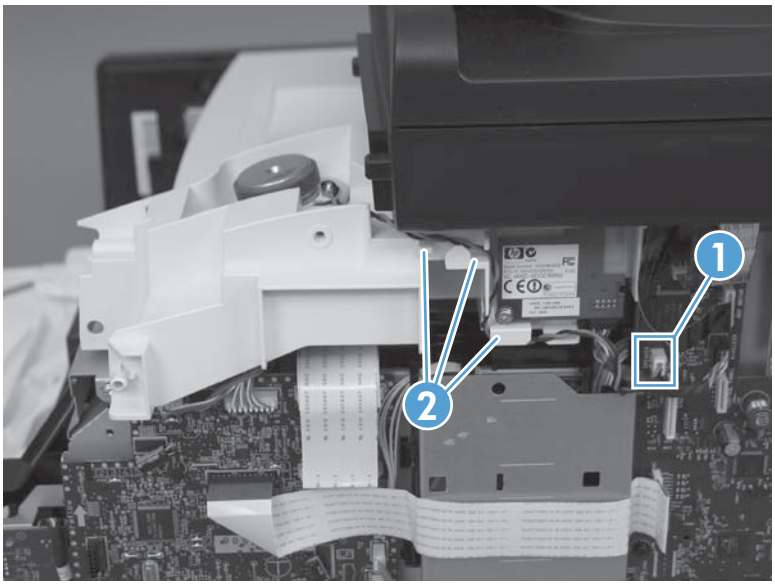

5. Rotate the bottom of the rear-upper cover away from the product to remove it.

**Figure 1-42** Remove the rear-upper cover (4 of 4)

## Speaker

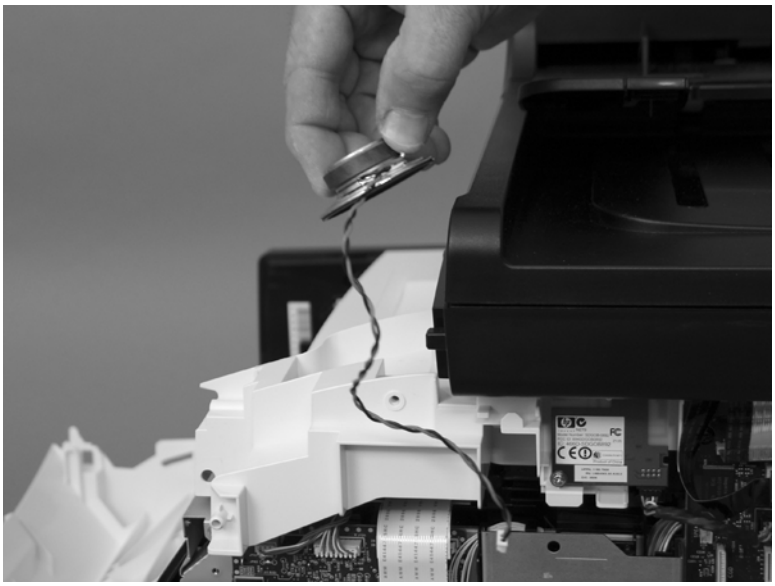
1. Remove the following components:
   - Right cover. See Right cover on page 17.
   - Right-front cover-1 and cover-2. See Right-front cover-1 and cover-2 on page 20.
   - Control panel. See Control panel on page 22.
2. Disconnect one wire-harness connector (callout 1), and then release the wire harness from the retainers (callout 2).

**Figure 1-43** Remove the speaker (1 of 2)




3. Disconnect one wire-harness connector (callout 1), and then release the wire harness from the retainers (callout 2).

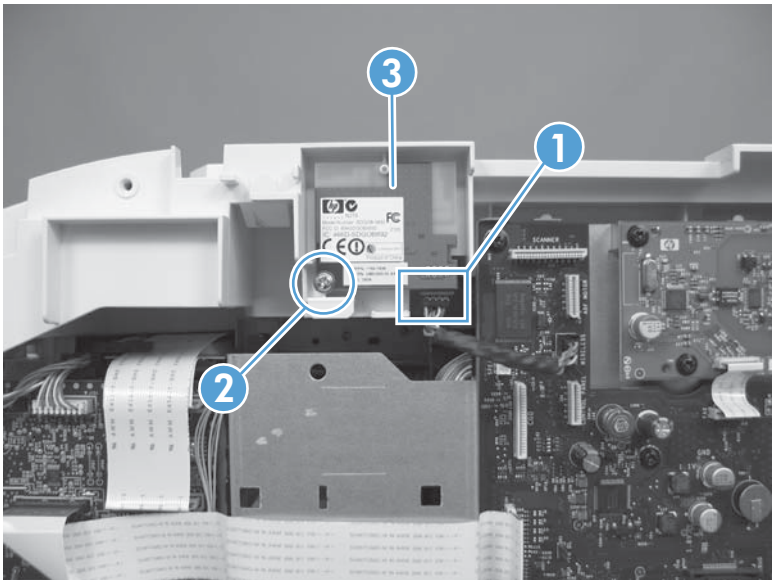
**Figure 1-44** Remove the speaker (2 of 2)



## Top cover

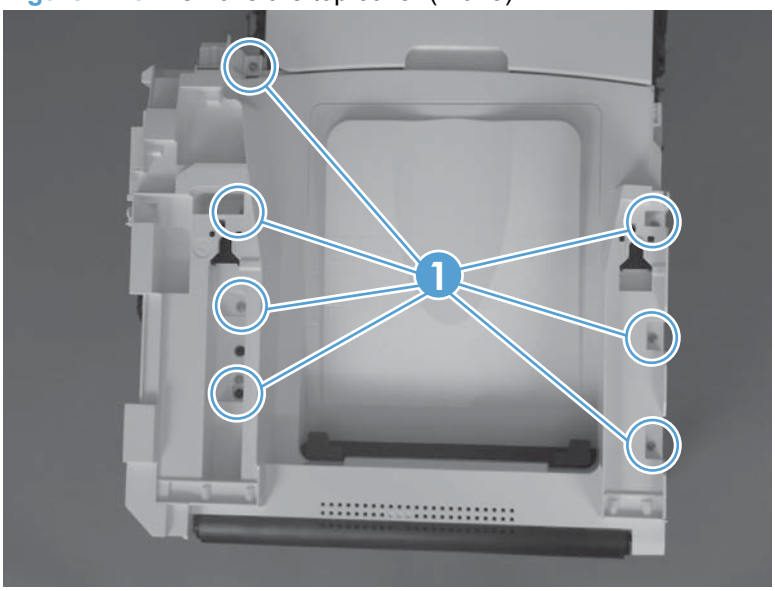
1. Remove the following components:
   - Right cover. See Right cover on page 17.
   - Right-front cover-1 and cover-2. See Right-front cover-1 and cover-2 on page 20.
   - Control panel. See Control panel on page 22.
   - Left cover. See Left cover on page 25.
   - Document-feeder and scanner assembly. See Document-feeder and scanner assembly on page 28.
   - Rear-center cover. See Rear-center cover on page 30.
   - Rear-upper cover. See Rear-upper cover on page 31.
   - Speaker on page 33.
2. Wireless models only: Disconnect one wire-harness connector (callout 1), remove one screw (callout 2), and then remove the wireless PCA (callout 3).

**Figure 1-45** Remove the top cover (1 of 3)



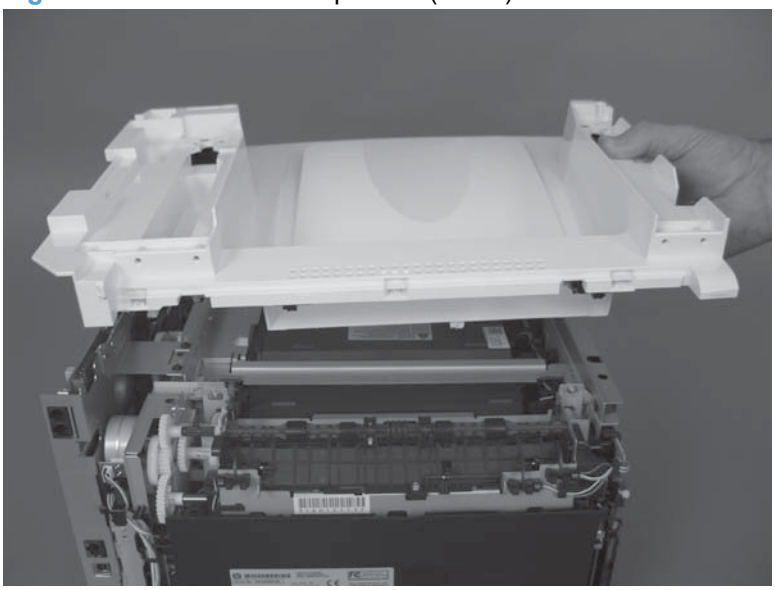
3. Remove seven screws (callout 1).

**Figure 1-46** Remove the top cover (2 of 3)




4. Remove the top cover.

**Figure 1-47** Remove the top cover (3 of 3)



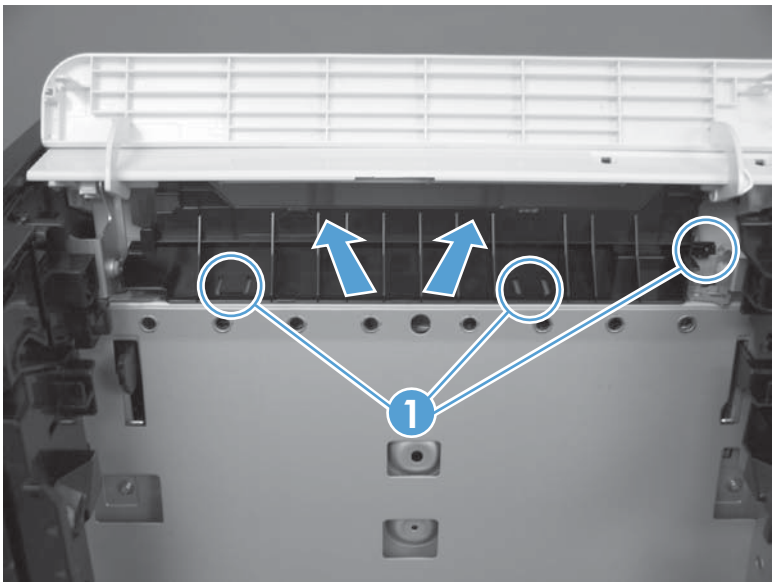
## Front door and front-lower cover

1. Remove the following components:
   - Print-cartridge drawer. See Print-cartridge drawer on page 14.
   - Left cover. See Left cover on page 25.
2. Remove the paper tray (if installed), and then carefully place the product front-side up

△ **CAUTION:** The document-feeder and scanner cover are not captive and can open suddenly if the product is placed front-side up. Always support the document-feeder and scanner cover before placing the product front-side up.

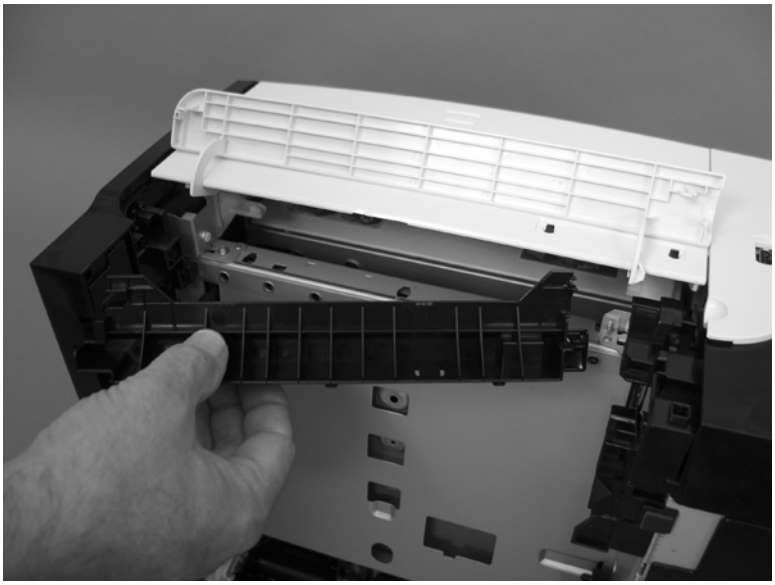
3. Release three tabs (callout 1) and then push the guide into the product (away from the input-tray cavity).

**Figure 1-48** Remove the front door and front-lower cover (1 of 8)



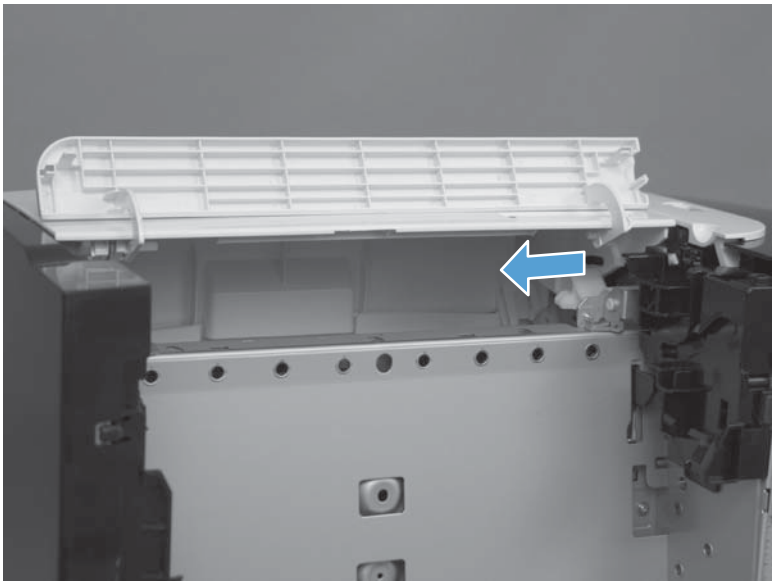
4. Remove the guide.

**Figure 1-49** Remove the front door and front-lower cover (2 of 8)



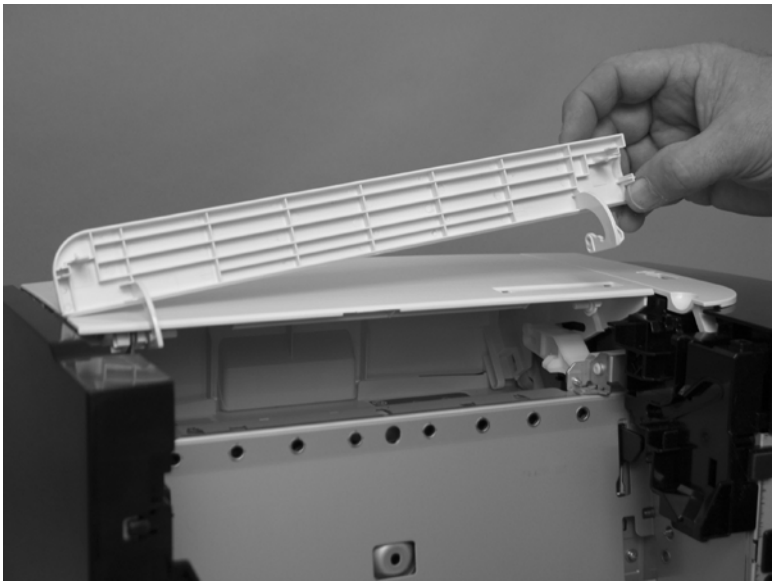
5. Carefully push the right-side front-lower door hinge in toward the center of the door to release it from the hinge pin.

**Figure 1-50** Remove the front door and front-lower cover (3 of 8)



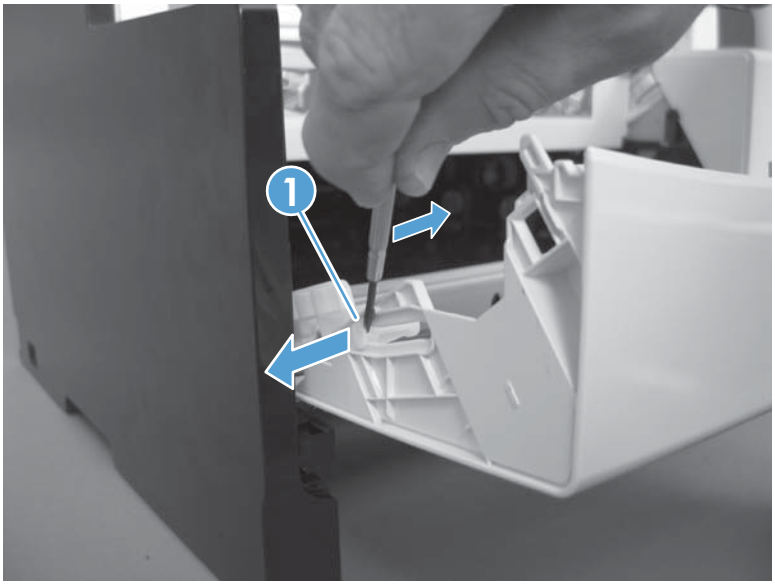
6. Slide the door to the right to release the left-side hinge. Remove the front-lower door.

**Figure 1-51** Remove the front door and front-lower cover (4 of 8)



7. Use a small flat blade screwdriver to release one retainer pin (callout 1) on the left-side front-door cam. Remove the retainer pin.

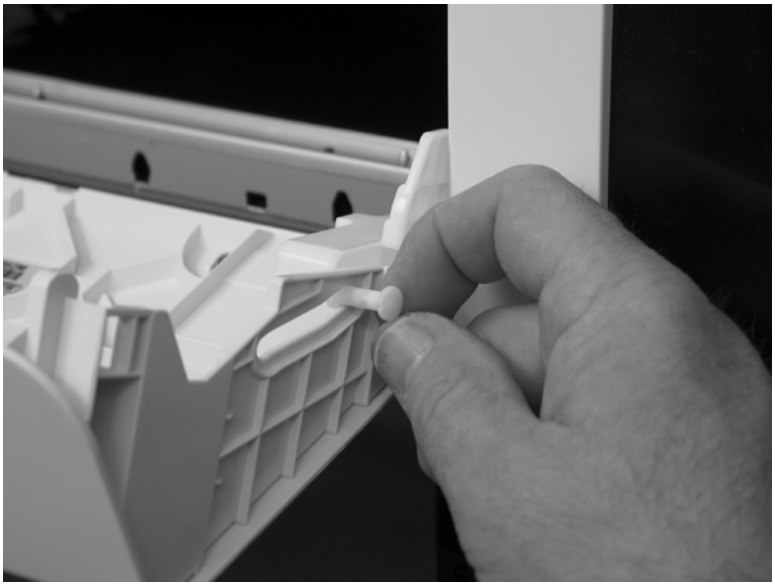
**Figure 1-52** Remove the front door and front-lower cover (5 of 8)



8. Repeat the previous step for the right-side retainer pin.

**Reinstallation tip** The door pins are keyed to the door cam. The pins must be correctly positioned when they are reinstalled or they will not completely seat in the door cam.

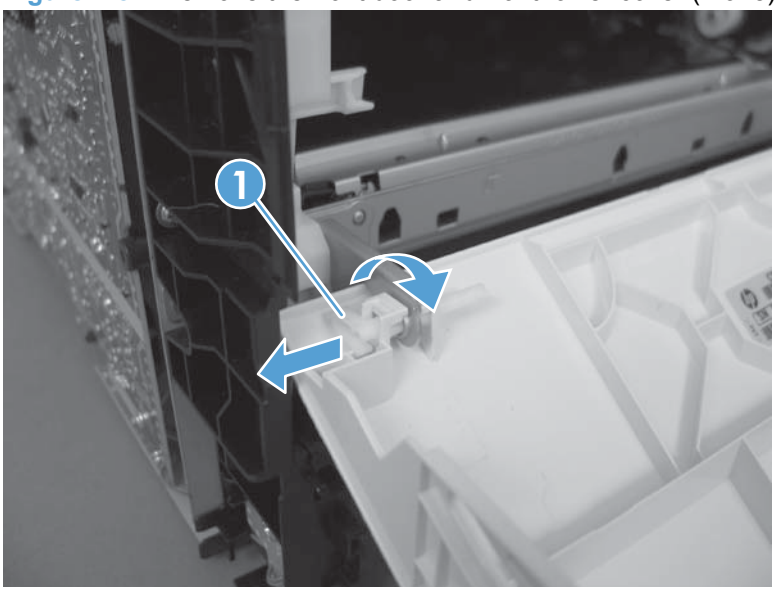
**Figure 1-53** Remove the front door and front-lower cover (6 of 8)



9. Release one tab (callout 1), rotate the door retainer clip up and away from the door, and then remove the clip.

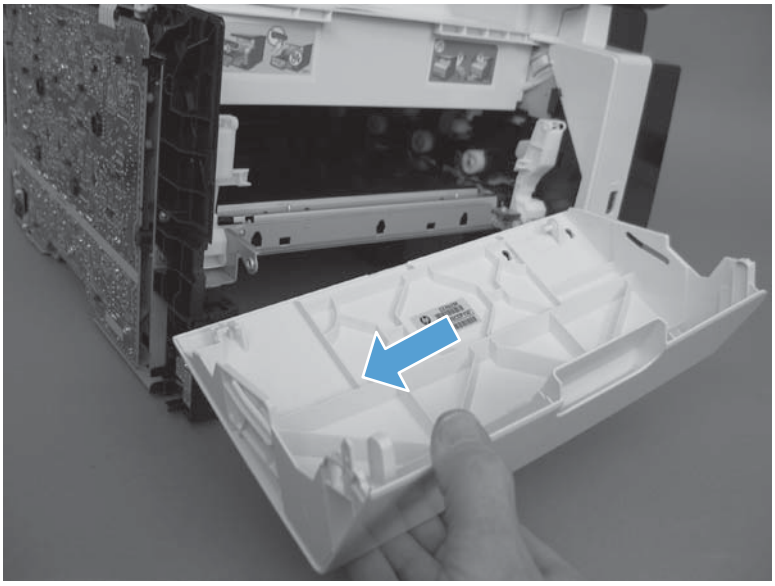
**NOTE:** Support the door when this clip is removed.

**Figure 1-54** Remove the front door and front-lower cover (7 of 8)



10. Lower the left side of the door, and then slide it to the left to release the right-side door hinge pin. Remove the door.

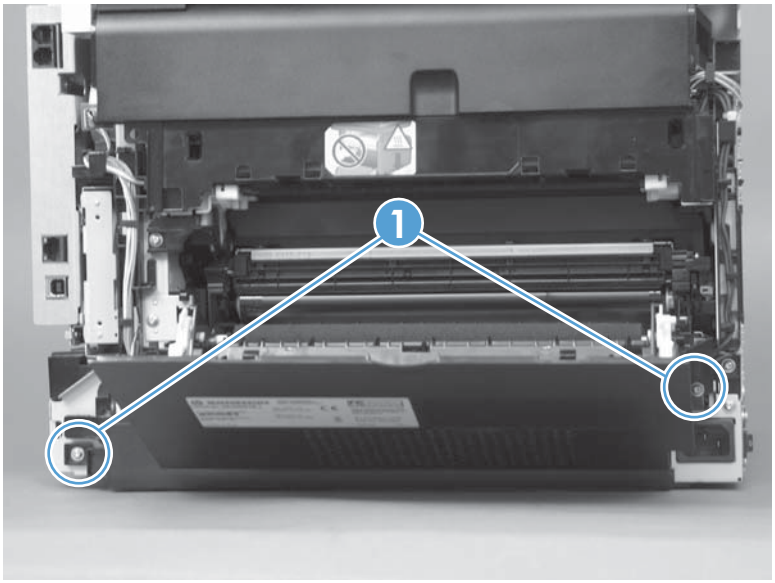
**Figure 1-55** Remove the front door and front-lower cover (8 of 8)



## Rear door and rear-lower cover

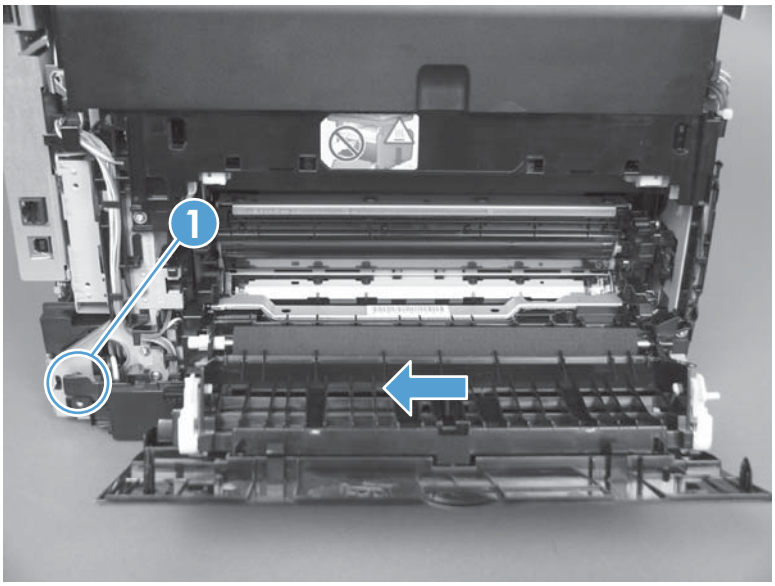
1. Remove the following components:
   - Right cover. See Right cover on page 17.
   - Left cover. See Left cover on page 25.
   - Rear-center cover. See Rear-center cover on page 30.
2. Remove two screws (callout 1)

**Figure 1-56** Remove the rear door and rear-lower cover (1 of 5)



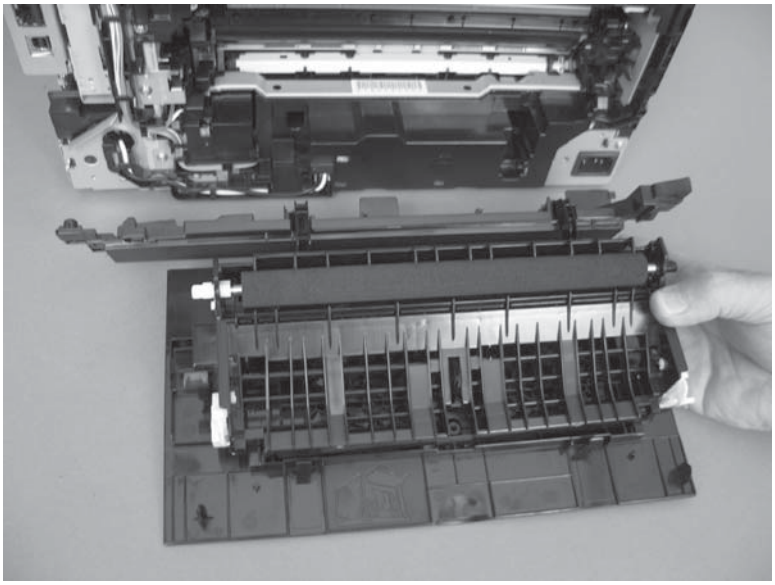

3. Release one pin (callout 1) and then slide the rear door and rear-lower cover towards the side of the product with the interface connectors.

**Figure 1-57** Remove the rear door and rear-lower cover (2 of 5)



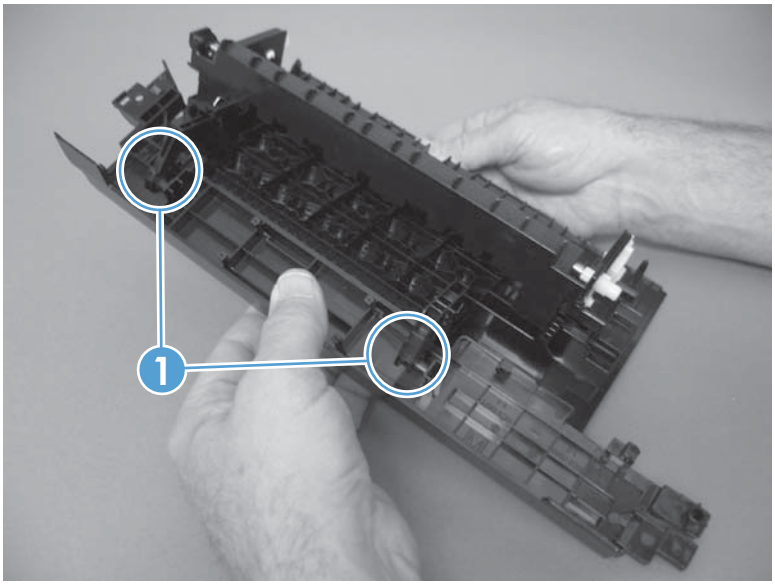
4. Remove the rear door and rear-lower cover.

**Figure 1-58** Remove the rear door and rear-lower cover (3 of 5)



5. Carefully pry the rear-door hinge arms off of the hinge pins (callout 1) on the rear-lower cover to separate the rear cover from the rear door.

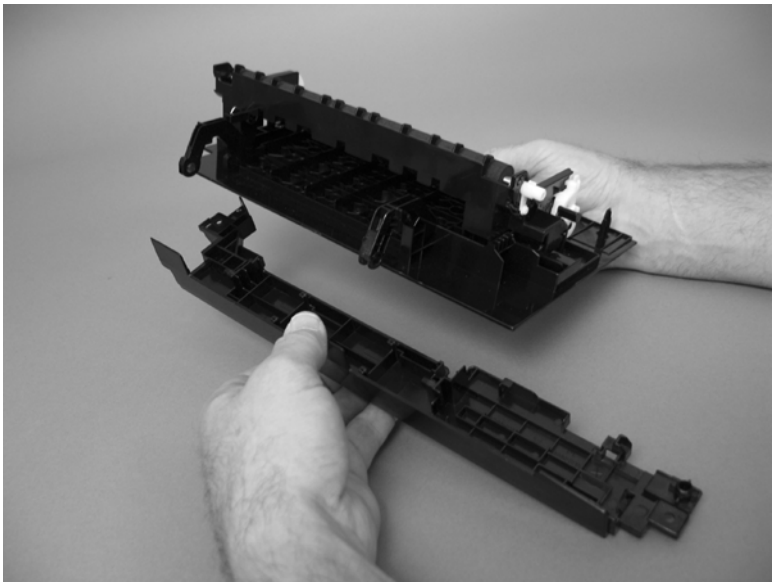
**Figure 1-59** Remove the rear door and rear-lower cover (4 of 5)



6. Separate the rear cover from the rear door.

**NOTE:** If you are installing a replacement rear-lower door, remove the paper-guide assembly from the discarded door, and then install it on the replacement door. See Paper-guide assembly on page 44.

**Figure 1-60** Remove the rear door and rear-lower cover (5 of 5)



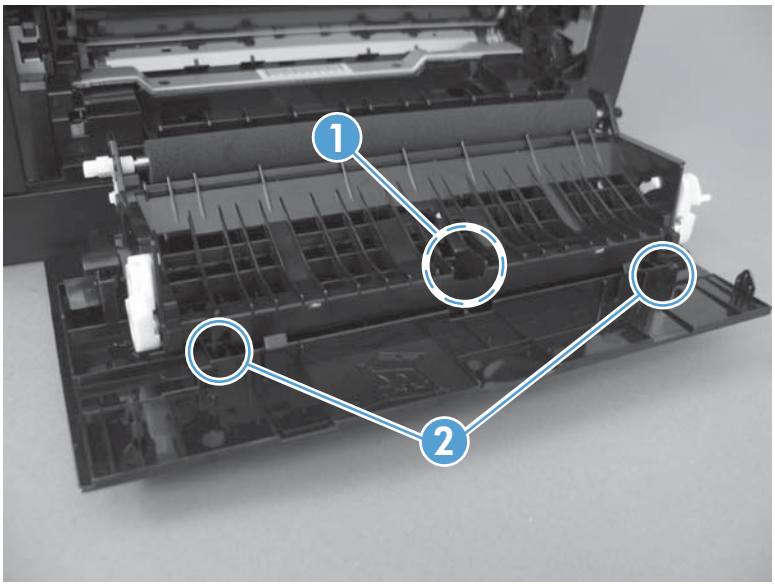
# Main assemblies

NOTE: The laser scanner installed in this product is not replaceable.

## Paper-guide assembly

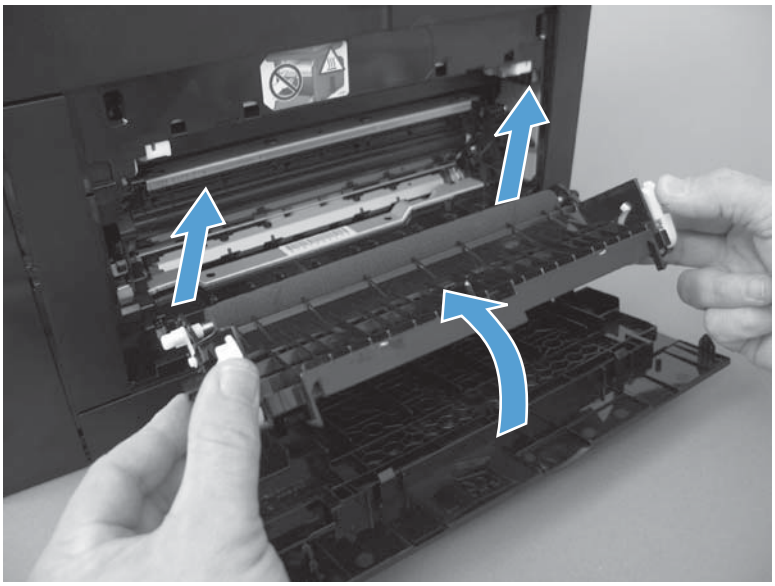
1. Release one captive screw (callout 1) and release two tabs (callout 2).

Figure 1-61 Remove the paper-guide assembly (1 of 2)




2. Rotate the assembly up and away from the rear door to release it, and then remove the paper-guide assembly

Figure 1-62 Remove the paper-guide assembly (2 of 2)



## USB port PCA and bracket

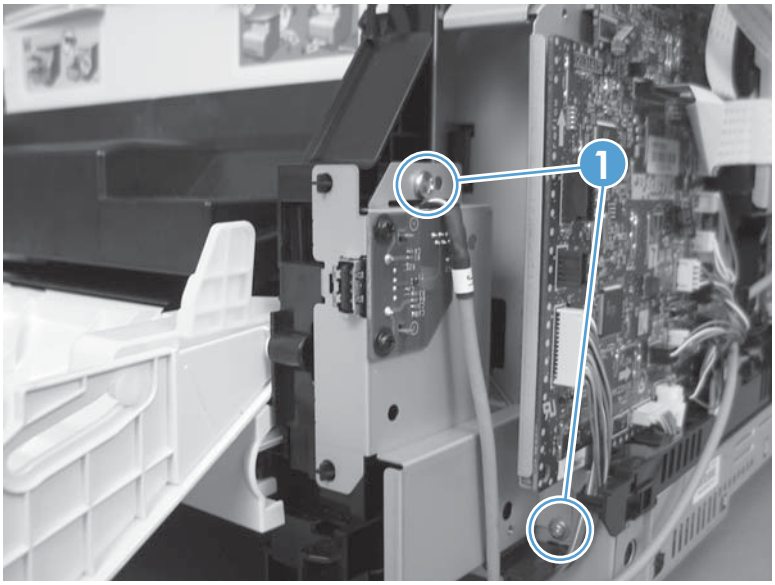
**NOTE:** To replace only the USB port PCA, you do not need to remove the sheet-metal bracket. Remove the two screws securing the PCA to the bracket, and then disconnect one wire-harness connector.

Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, ground yourself by touching the sheet-metal chassis *before* touching an ESD-sensitive part.

1. Remove the following components:
   - Right cover. See Right cover on page 17.
   - Right-front cover-1 and cover-2. See Right-front cover-1 and cover-2 on page 20.
2. Remove two screws (callout 1), and then remove the USB port and sheet-metal mounting bracket.

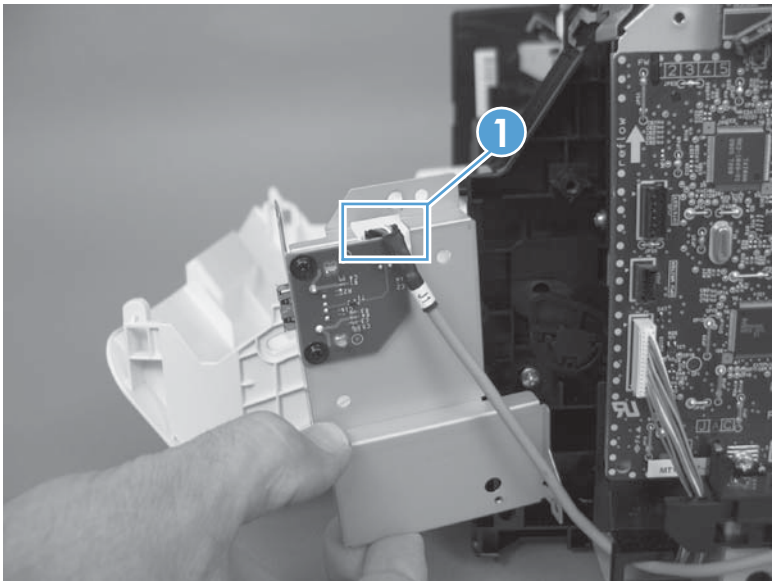
**CAUTION:** The USB port PCA is still connected to the product by the wire harness.

**Figure 1-63** Remove the USB port PCA and bracket (1 of 3)



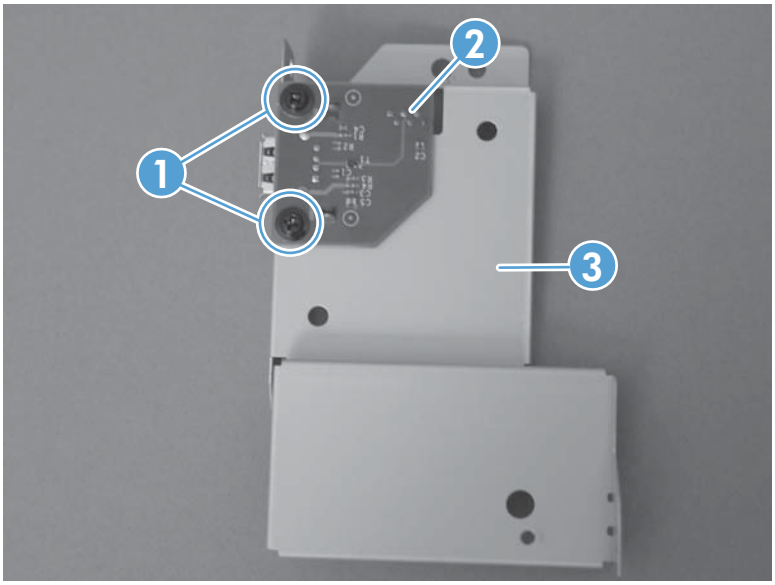
3. Disconnect one wire-harness connector (callout 1).

**Figure 1-64** Remove the USB port PCA and bracket (2 of 3)




4. Remove two screws (callout 1), and then separate the USB port PCA (callout 2) from the mounting bracket (callout 3) to remove it.

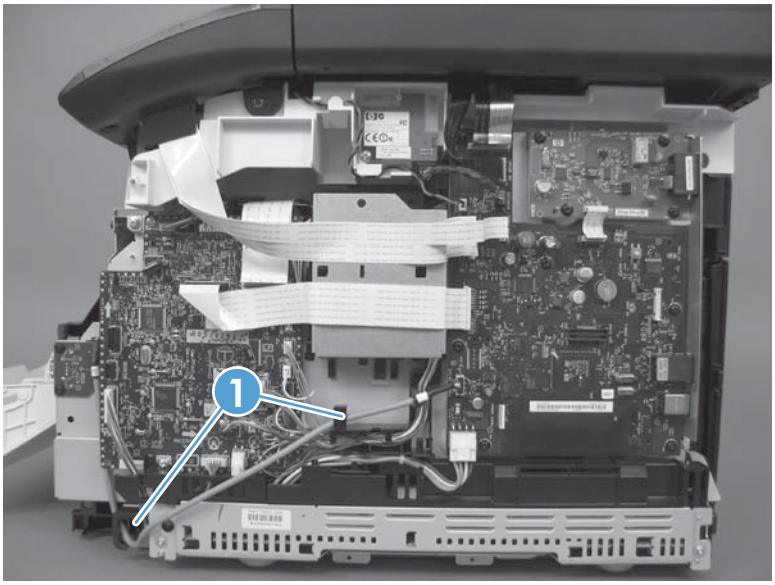
**Figure 1-65** Remove the USB port PCA and bracket (3 of 3)



### Reinstall the USB port PCA

- When the USB port PCA and mounting bracket are reinstalled, make sure that the cable is routed behind the cable retainers (callout 1)

**Figure 1-66** Reinstall the USB port PCA and bracket

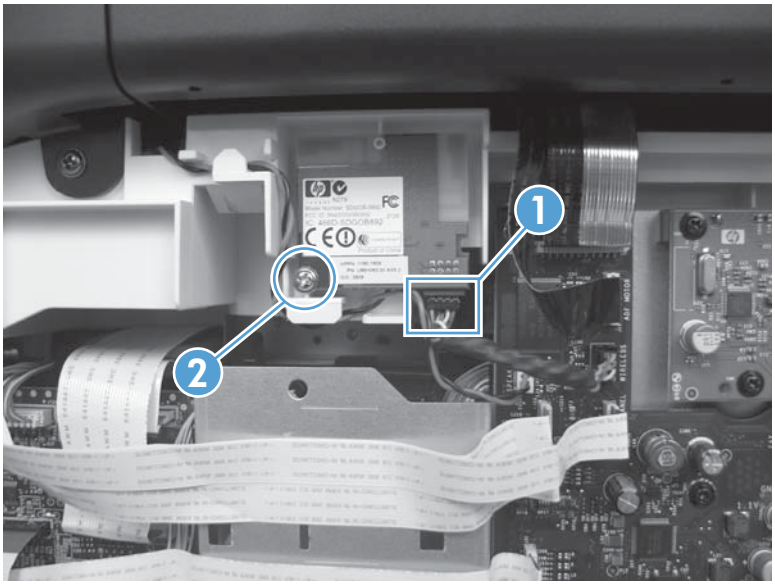


## Wireless PCA (wireless models only)

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

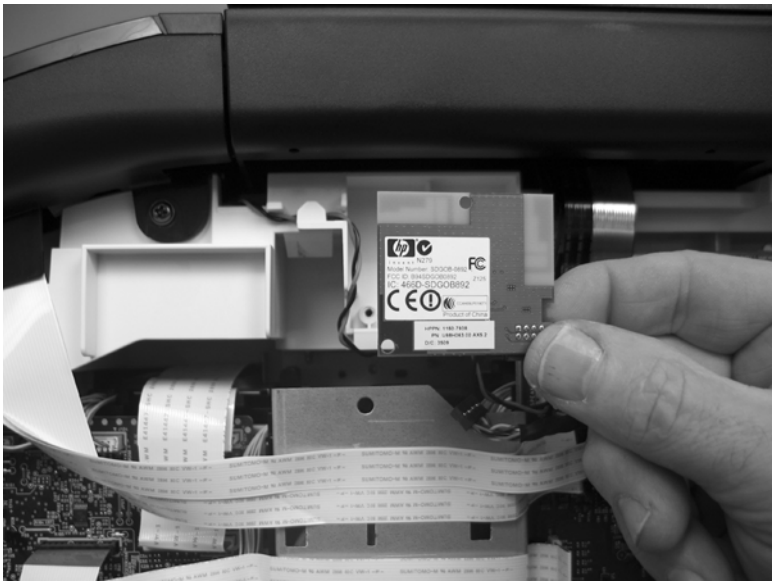
1. Remove the right cover. See Right cover on page 17.
2. Disconnect one wire-harness connector, and then remove one screw (callout 2).

**Figure 1-67** Remove the wireless PCA (1 of 2)




3. Remove the wireless PCA.

**Figure 1-68** Remove the wireless PCA (2 of 2)



## DC controller PCA

### Special considerations

**WARNING!** Do not install a *replacement* formatter PCA and DC controller PCA at the same time.

The formatter PCA and the DC controller PCA store important product configuration information (NVRAM data) that will be lost if both PCAs are replaced at the same time. When the product power is turned on, the formatter will restore the NVRAM data to a replacement DC controller.

Replacing both the DC controller and the formatter at the same time will result in severe print-quality problems.

### Replacing the DC controller PCA before the formatter PCA

Use the following procedure if you need to install a replacement DC controller *and* a replacement formatter PCA.

**NOTE:** If you are only installing a replacement DC controller PCA, proceed to Remove the DC controller PCA on page 49.

1. Install a replacement DC controller PCA.
2. Turn the product power on, and wait for the print-cartridge volume indicators to appear on the control-panel display.

   **NOTE:** This allows important product information to be written to the replacement DC controller PCA.

3. Turn the product power off.
4. Install a replacement formatter PCA. See Formatter PCA, fax card PCA, and support bracket on page 53.
5. Turn the product power on.

### Remove the DC controller PCA

**CAUTION:** Do not bend or fold the flat flexible cables (FFCs) during removal or installation. Also, do not straighten pre-folds in the FFCs. You *must* 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.

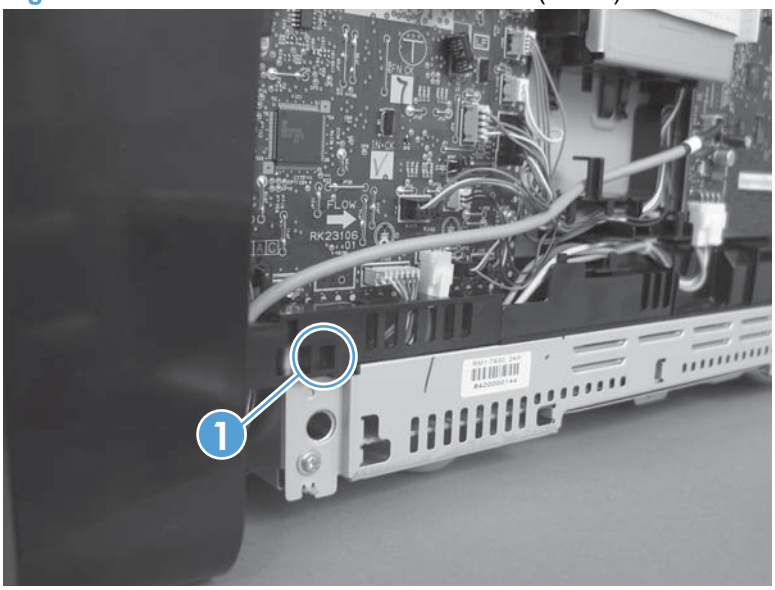
Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, ground yourself by touching the sheet-metal chassis *before* touching an ESD-sensitive part.

1. Remove the right cover. See Right cover on page 17.

2. Release one tab (callout 1) on the black-plastic protective cover.

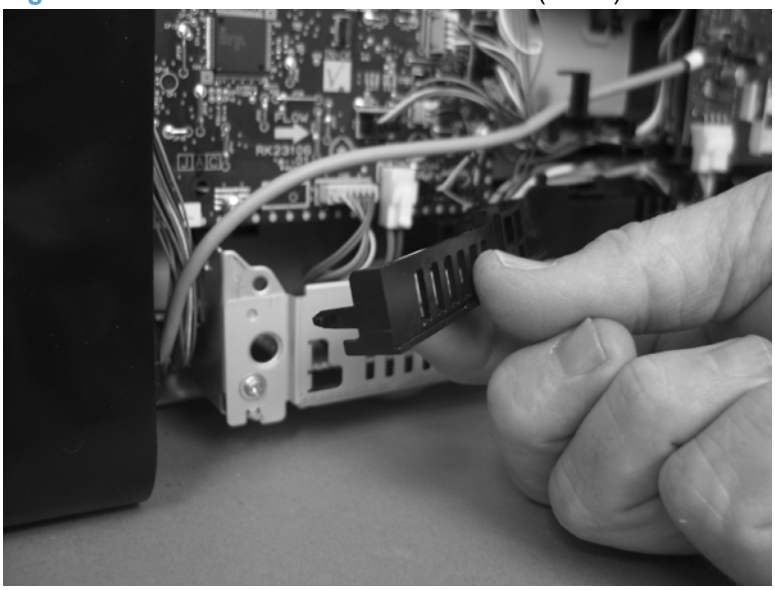
**NOTE:** This cover is located near the lower-right side of the product below the DC controller.

**Figure 1-69** Remove the DC controller PCA (1 of 5)



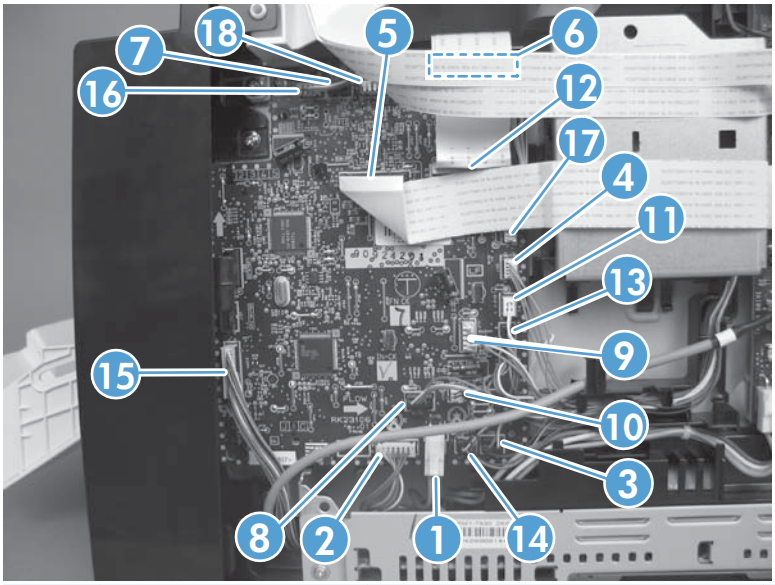

3. Remove the cover.

**Figure 1-70** Remove the DC controller PCA (2 of 5)



4. Disconnect fifteen wire-harness connectors and three FFCs from the DC controller PCA.

**Figure 1-71** Remove the DC controller PCA (3 of 5)

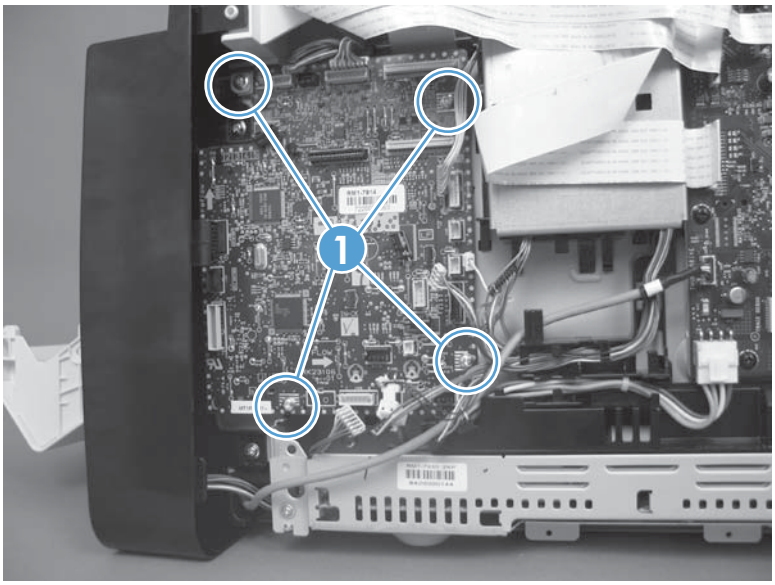



| Item | Description | Item | Description | Item | Description |
|---|---|---|---|---|---|
| 1 | J102<br>Low-voltage power supply (+24 v) | 7 | J109<br>Scanner motor | 13 | J116<br>Pickup assembly sensors |
| 2 | J103<br>Low-voltage power supply (+3.3 v) | 8 | J110<br>Fuser motor | 14 | J118<br>Media width sensor |
| 3 | J104<br>Fuser thermistor | 9 | J111<br>Pickup assembly motor | 15 | J119<br>ITB assembly sensors |
| 4 | J105<br>Fuser power | 10 | J112<br>Developing disengagement solenoid | 16 | J120<br>Developing home position sensor |
| 5 | J107<br>Formatter | 11 | J113<br>Pickup solenoid | 17 | J121<br>Main motor |
| 6 | J108<br>Laser | 12 | J115<br>High-voltage power supply | 18 | J124<br>E-label |

5. Remove four screws (callout 1).

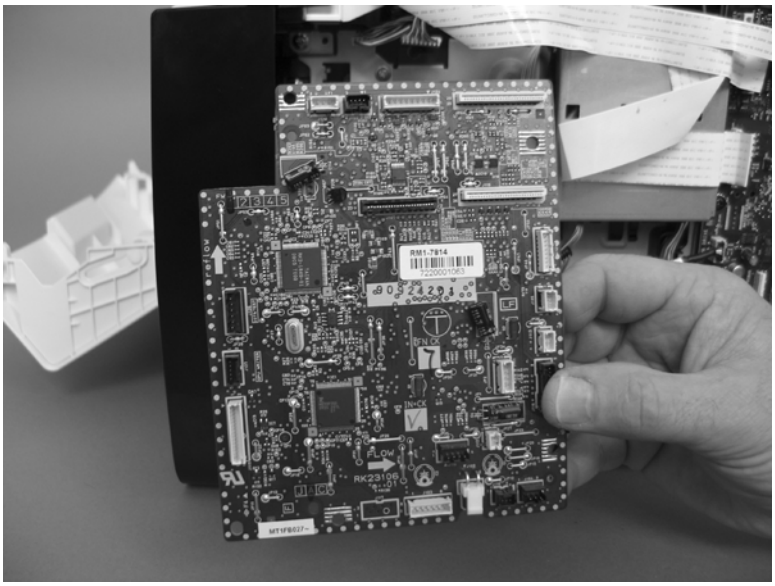
**NOTE:** These four screws are ground screws. Make sure that the correct screws are used to reinstall the DC controller PCA.

**Figure 1-72** Remove the DC controller PCA (4 of 5)




6. Remove the DC controller PCA.

**Figure 1-73** Remove the DC controller PCA (5 of 5)



## Formatter PCA, fax card PCA, and support bracket

### Special considerations

⚠ **WARNING!** Do not install a *replacement* formatter PCA and DC controller PCA at the same time.

The formatter PCA and the DC controller PCA store important product configuration information (NVRAM data) that will be lost if both PCAs are replaced at the same time. When the product power is turned on, the DC controller will restore the NVRAM data on the replacement formatter.

Replacing both the formatter and the DC controller at the same time will result in severe print-quality problems.

**NOTE:** The base model does not have a fax card installed.

### Replacing the formatter PCA before the DC controller PCA

Use the following procedure if you need to install a replacement formatter PCA *and* a replacement DC controller.

**NOTE:** If you are only installing a replacement formatter PCA, proceed to Remove the formatter PCA on page 53.

1. Install a replacement formatter PCA.
2. Turn the product power on, and wait for the print-cartridge volume indicators to appear on the control-panel display.

   **NOTE:** This allows important product information to be written to the replacement formatter PCA.

3. Turn the product power off.
4. Install a replacement DC controller. See DC controller PCA on page 49.
5. Turn the product power on.

### Remove the formatter PCA

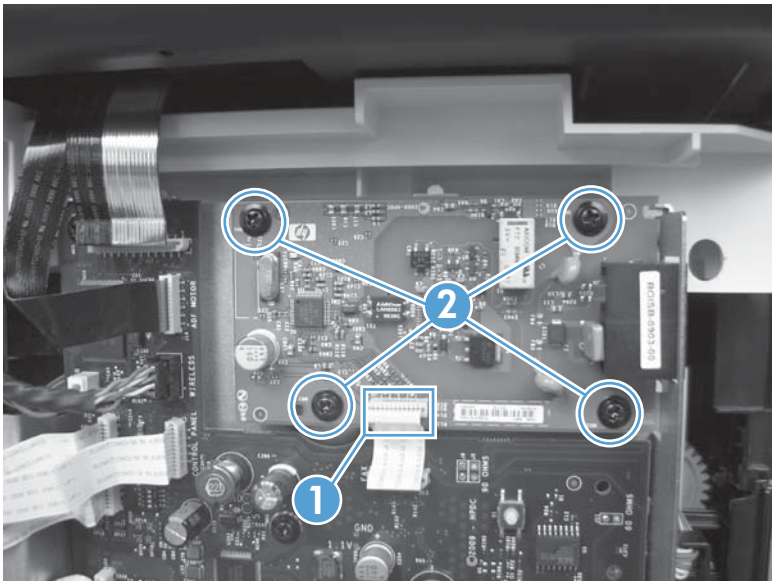
△ **CAUTION:** Do not bend or fold the flat flexible cables (FFCs) during removal or installation. Also, do not straighten pre-folds in the FFCs. You *must* make sure that all FFCs are fully seated in their connectors. Failure to fully seat an FFC into a connector can cause a short circuit in a PCA.

Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, ground yourself by touching the sheet-metal chassis *before* touching an ESD-sensitive part.

1. Remove the right cover. See Right cover on page 17.

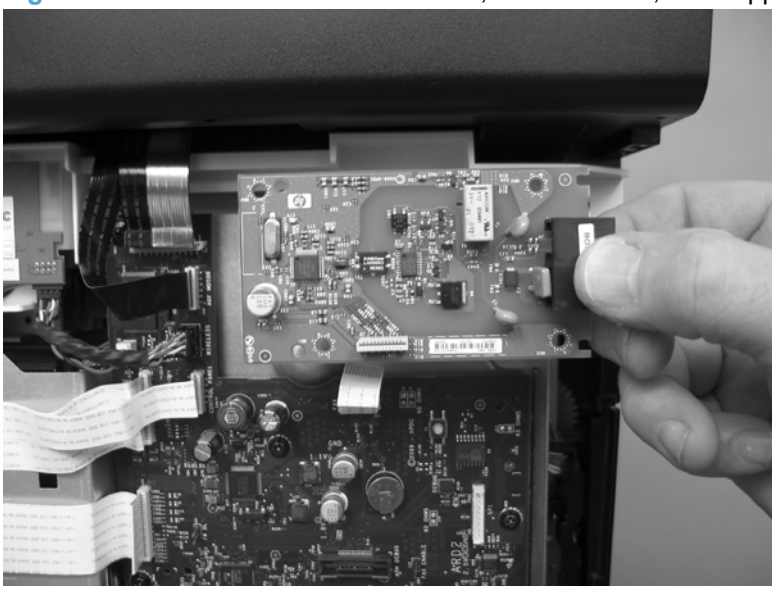
2. Disconnect one connector (callout 1), and remove four screws (callout 2).

**Figure 1-74** Remove the formatter PCA, fax card PCA, and support bracket (1 of 8)



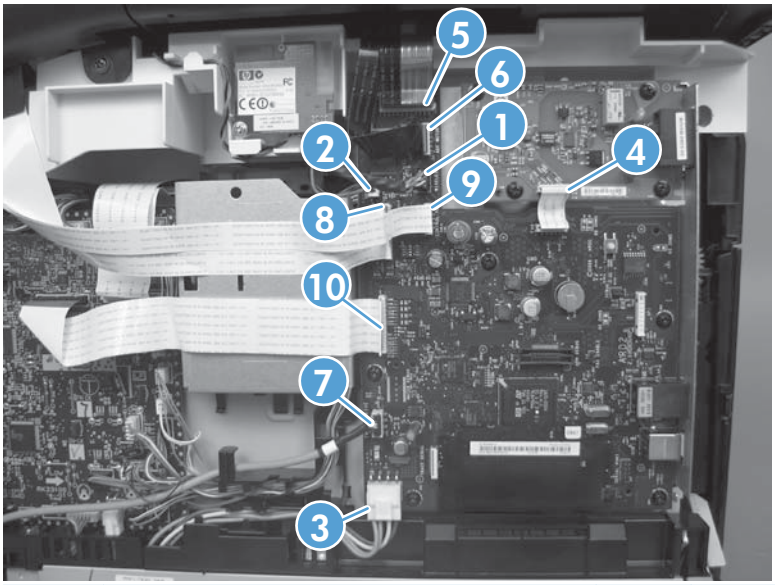

3. Remove the Fax PCA.

**Figure 1-75** Remove the formatter PCA, fax card PCA, and support bracket (2 of 8)



4. Disconnect six wire-harness connectors and four FFCs on the formatter PCA.

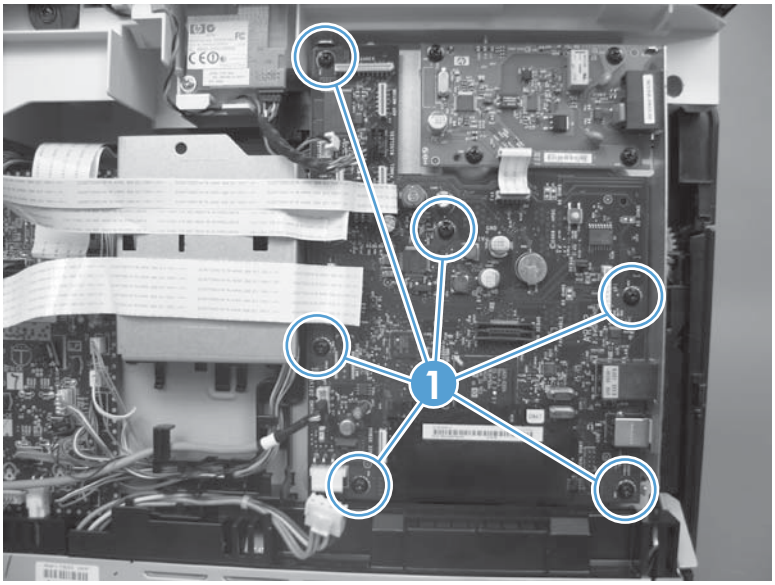
**Figure 1-76** Remove the formatter PCA, fax card PCA, and support bracket (3 of 8)




| Item | Description | Item | Description |
|---|---|---|---|
| 1 | J1<br>Wireless PCA (wireless models only) | 6 | J18<br>Document feeder motor (ADF) |
| 2 | J8<br>Speaker | 7 | J19<br>USB PCA (thumb drive) |
| 3 | J10<br>Power (LVPS) | 8 | J23<br>Control panel |
| 4 | J13<br>Fax PCA | 9 | J24<br>Control panel |
| 5 | J17<br>Scanner | 10 | J31<br>Video |

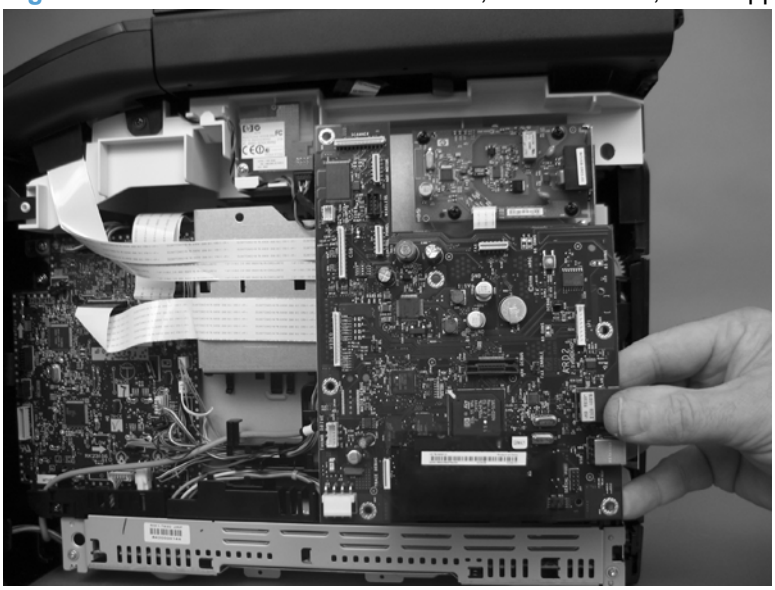
5. Remove six screws (callout 1).

**Figure 1-77** Remove the formatter PCA, fax card PCA, and support bracket (4 of 8)




6. Remove the formatter PCA.

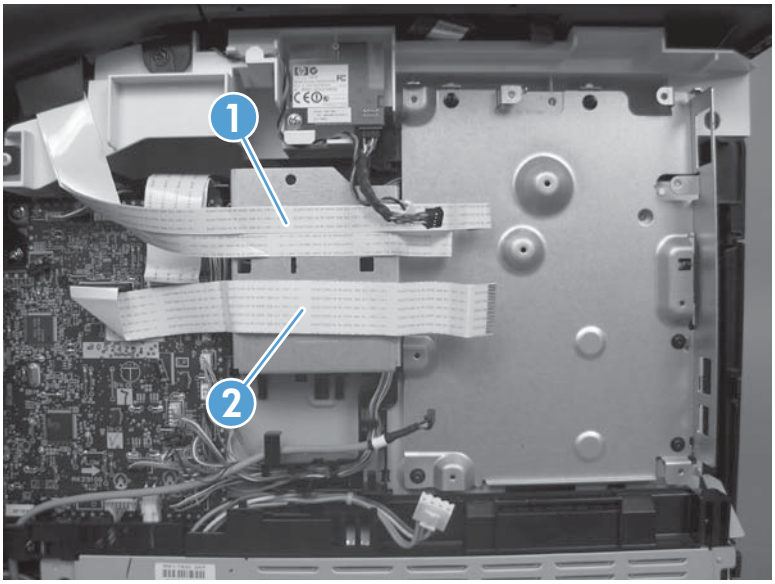
**Figure 1-78** Remove the formatter PCA, fax card PCA, and support bracket (5 of 8)



7. Remove one FFC (callout 1) from the support bracket. Disconnect one FFC (callout 2) from the DC controller.

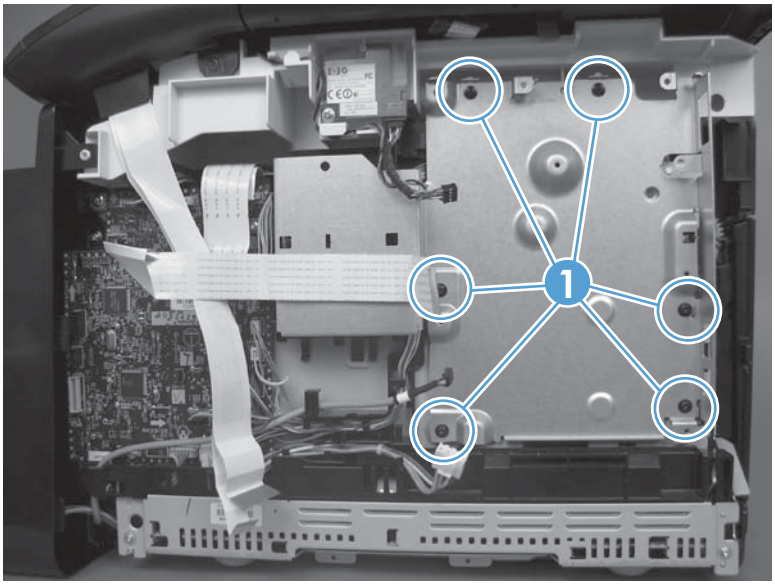
△ **CAUTION:** One FFC (callout 2) is fastened to the support bracket with insulating adhesive foam tape. If you are replacing the support bracket, you will need to adhere this FFC to the replacement bracket with the same type of material. This FFC **must** be shielded from direct contact with the support bracket.

**Figure 1-79** Remove the formatter PCA, fax card PCA, and support bracket (6 of 8)



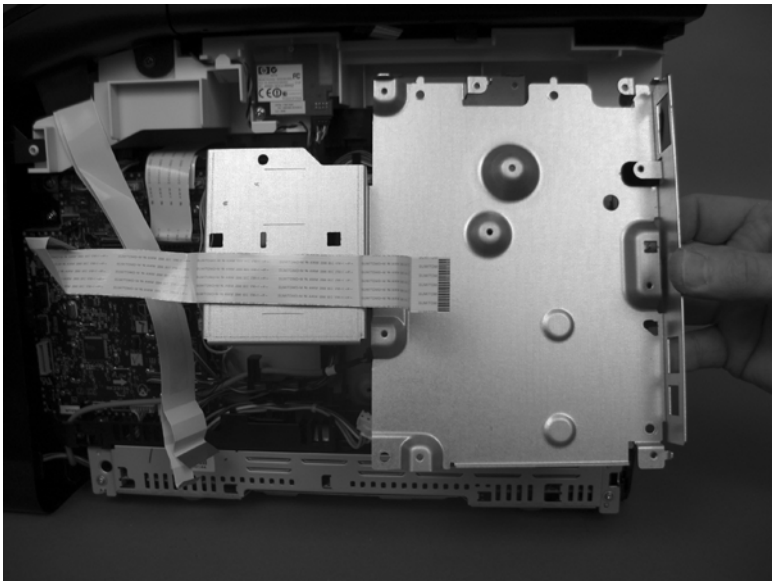

8. Remove six screws (callout 1).

**Figure 1-80** Remove the formatter PCA, fax card PCA, and support bracket (7 of 8)



9. Remove the support bracket.

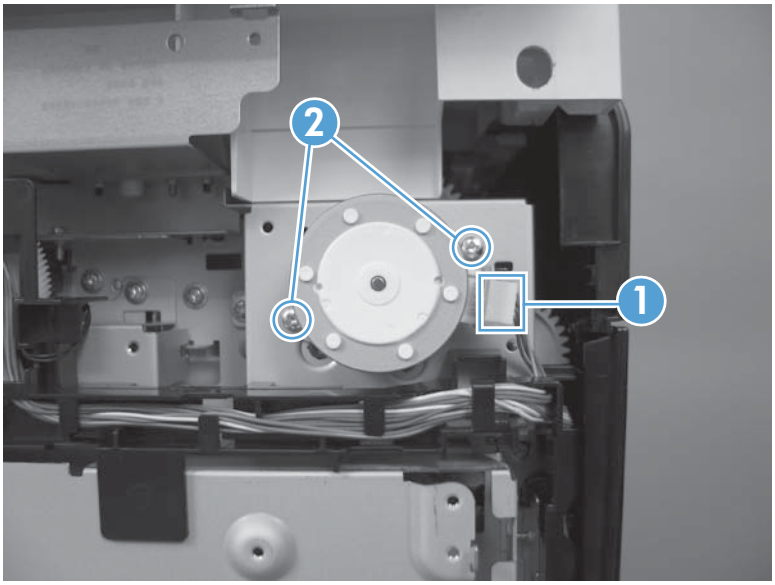
**Figure 1-81** Remove the formatter PCA, fax card PCA, and support bracket (8 of 8)



## Fuser motor

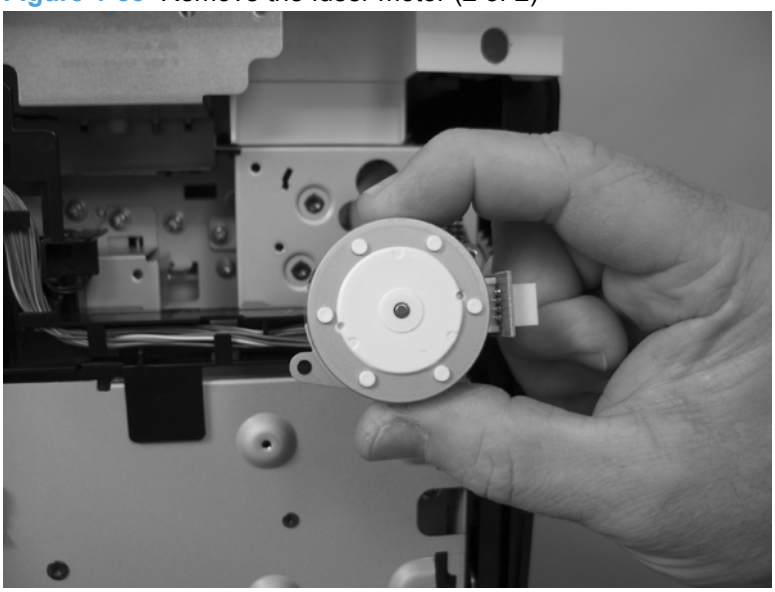
1. Remove the following components:
   - Right cover. See Right cover on page 17.
   - Formatter PCA, fax PCA, and support bracket. See Formatter PCA, fax card PCA, and support bracket on page 53.
2. Disconnect one wire-harness connector (callout 1), and then remove two screws (callout 2).

**Figure 1-82** Remove the fuser motor (1 of 2)




3. Slightly slide the motor up so that the gear on the motor shaft is centered in the mounting bracket hole, and then pull the motor away from the product. The gear will pass through the large hole in the bracket.

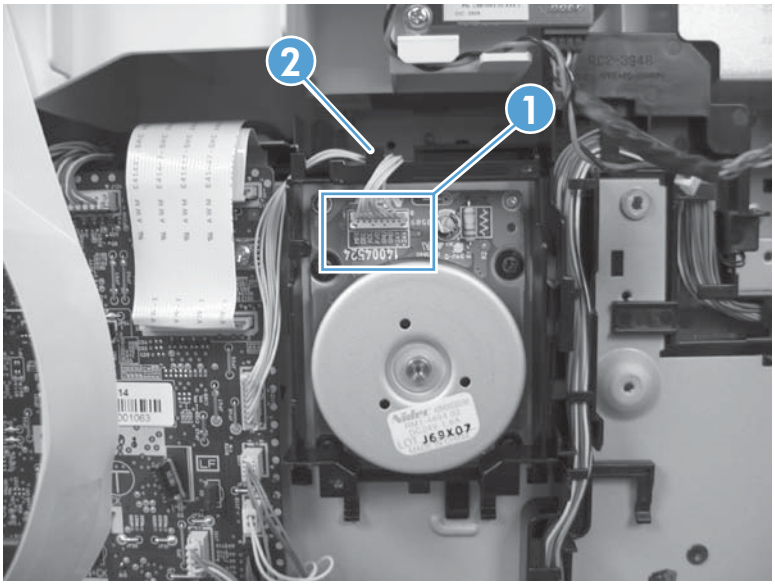
**Figure 1-83** Remove the fuser motor (2 of 2)



## Main motor

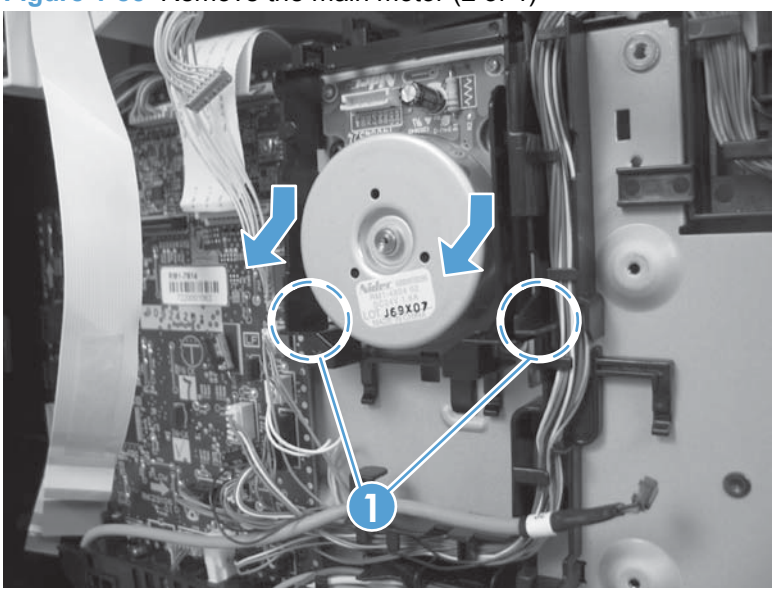
1. Remove the following components:
   - Right cover. See Right cover on page 17.
   - Formatter PCA, fax PCA, and support bracket. See Formatter PCA, fax card PCA, and support bracket on page 53.
2. Disconnect one wire-harness connector (callout 1), and then release the wire harness from the retainer (callout 2).

**Figure 1-84** Remove the main motor (1 of 4)



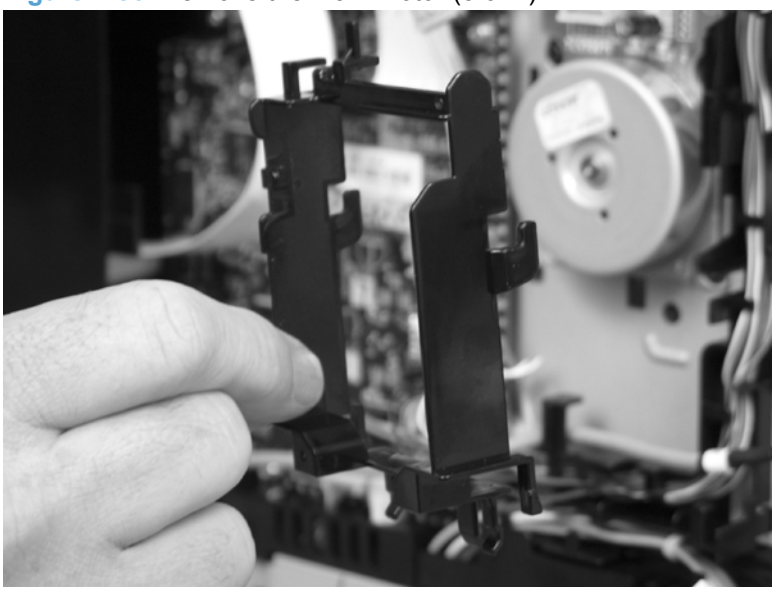

3. Release two tabs (callout 1), and then pull down on the black-plastic wire-harness retainer to release it.

**Figure 1-85** Remove the main motor (2 of 4)



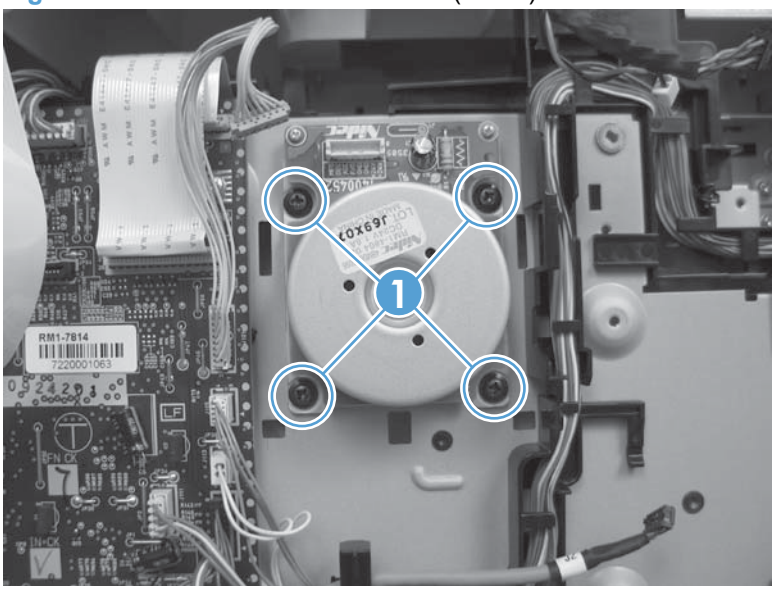
4. Remove the wire retainer.

**Figure 1-86** Remove the main motor (3 of 4)



5. Remove four screws (callout 1) and then remove the main motor.

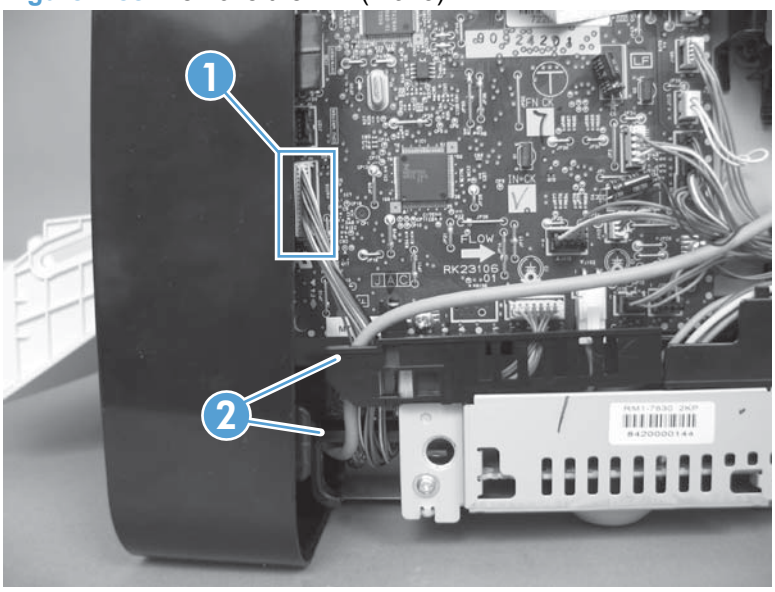
**Figure 1-87** Remove the main motor (4 of 4)



## Intermediate transfer belt (ITB)

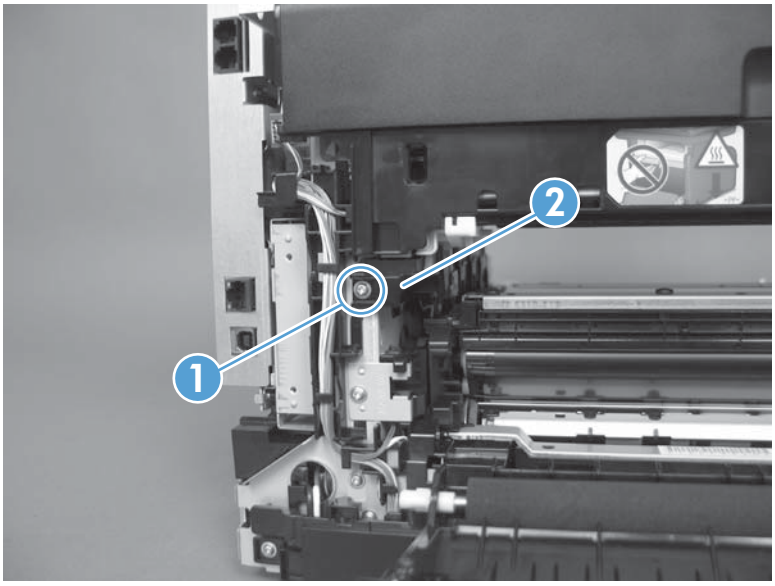
1. Remove the following components:
   - Print-cartridge drawer. See Print-cartridge drawer on page 14.
   - Right cover. See Right cover on page 17.
   - Left cover. See Left cover on page 25.
   - Rear-center cover. See Rear-center cover on page 30.
2. Disconnect one wire-harness connector (callout 1), and then release the wire harness from the retainer (callout 2).

**Figure 1-88** Remove the ITB (1 of 5)



3. Open the rear door, and then remove one screw (callout 1), and then remove the print-cartridge drawer stop (callout 2).

**Figure 1-89** Remove the ITB (2 of 5)



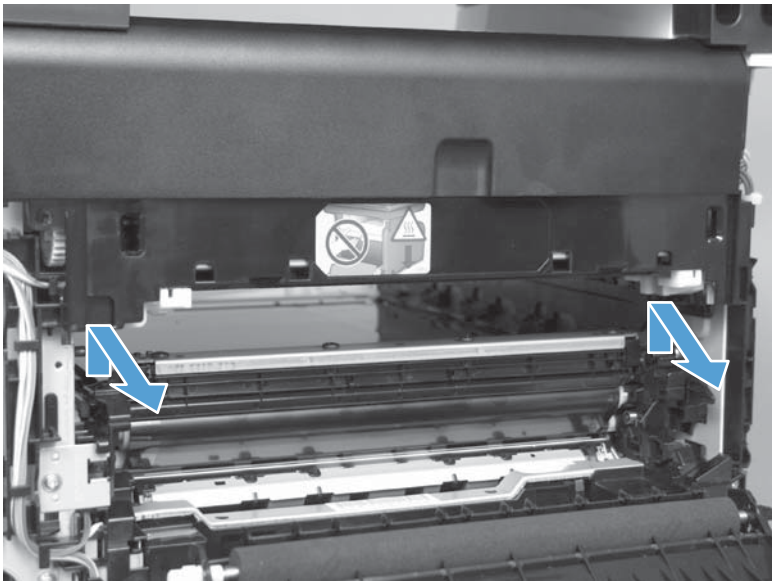

4. Carefully lift up on the black plastic portion of the ITB, and then pull it *partially* out of the product (the ITB wire harness will prevent the ITB from being fully removed).

⚠ **WARNING!** Only *partially* pull the ITB out of the product to avoid damage to the secondary-transfer (T2) roller.

See Figure 1-92 Remove the ITB (5 of 5) on page 64 to see how to correctly handle the ITB to prevent damaging it. Do not lift the ITB by grasping the sheet-metal bracket.

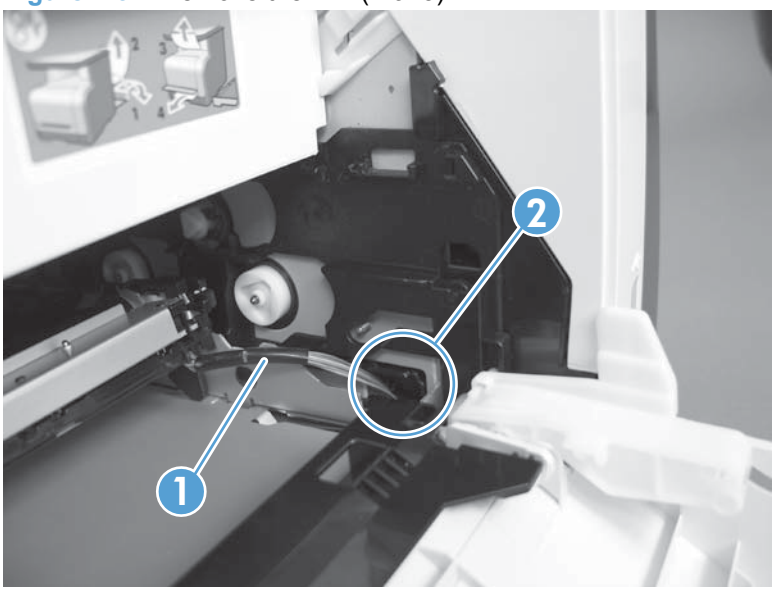
△ **CAUTION:** Avoid touching the black plastic transfer belt. Skin oils on the belt might cause print-quality problems.

**Figure 1-90** Remove the ITB (3 of 5)



5. Feed the ITB wire harness (callout 1) through an opening in the chassis (callout 2).

**Figure 1-91** Remove the ITB (4 of 5)

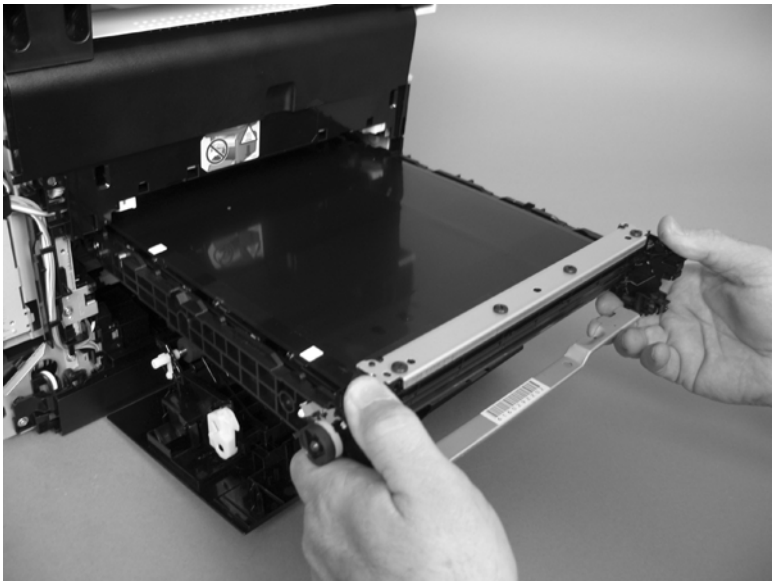



6. Carefully pull the ITB straight out of the product.

⚠ **WARNING!** Handle the ITB by its hard plastic sides to avoid damage to the sheet metal frame. The lower sheet-metal portion of the ITB frame can be easily bent. See callout 1 in Figure 1-93 Reinstall the ITB (1 of 2) on page 65.

△ **CAUTION:** Make sure that the ITB wire harness does not get damaged as the ITB is removed from the chassis.

**Figure 1-92** Remove the ITB (5 of 5)

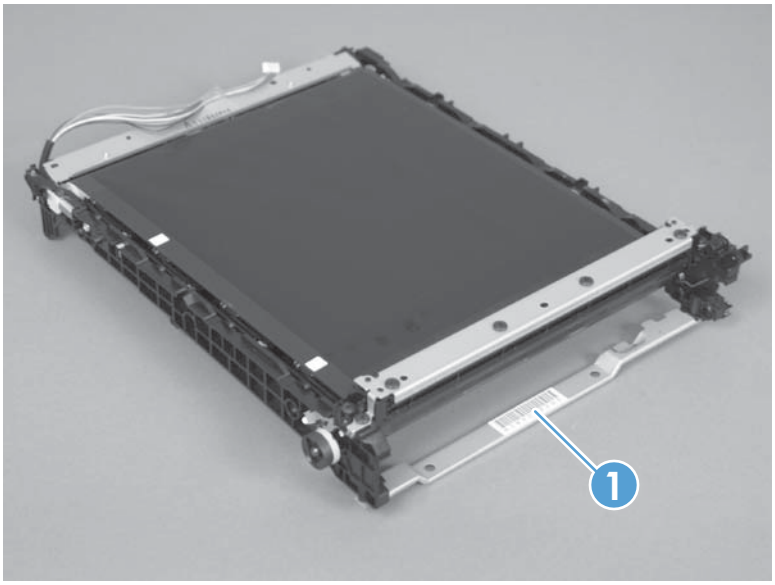


## Reinstall the ITB

Use the following guidelines when you install the ITB.

- ⚠ **WARNING!** The lower sheet-metal portion of the ITB frame (callout 1) can be easily bent. Avoid handling the ITB by this part of the sheet-metal frame.

**Figure 1-93** Reinstall the ITB (1 of 2)




- When handling the ITB, always use the hard plastic portions of the assembly.

△ **CAUTION:** Avoid touching the black-plastic transfer belt or roller. Skin oils on the belt or roller might cause print-quality problems.

- Do not let the transfer belt contact hard or sharp objects.

△ **CAUTION:** Scratches, punctures, or other damage to the belt will cause print-quality problems.

- Make sure that the wire harness is not twisted or pinched after it is passed through the opening in the chassis, and that the ITB sits flat in the product.

**NOTE:** When the print-cartridge drawer is installed, it should easily slide in and out of the product and not contact any part of the ITB assembly.

- Tape the wire harness to the sheet-metal frame so that it will not catch on internal components as the ITB is installed.

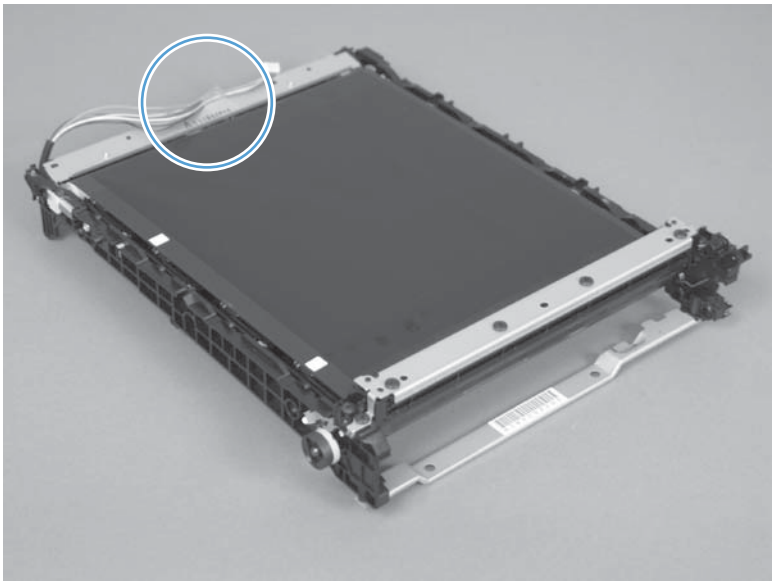
  With the ITB partially installed, feed the wire harness through the opening in the chassis. See Figure 1-91 Remove the ITB (4 of 5) on page 64. Finish installing the ITB.

**WARNING!** Do not place the tape so that it makes contact or adheres to the transfer belt. Tape or tape residue on the transfer belt will cause print-quality problems.

Make sure that the ITB is fully seated in the product before you reinstall the print-cartridge door stop.

**NOTE:** Make sure that you remove all of the tape and tape residue after installing the ITB.

**Figure 1-94** Reinstall the ITB (2 of 2)



## Power supply (high-voltage)

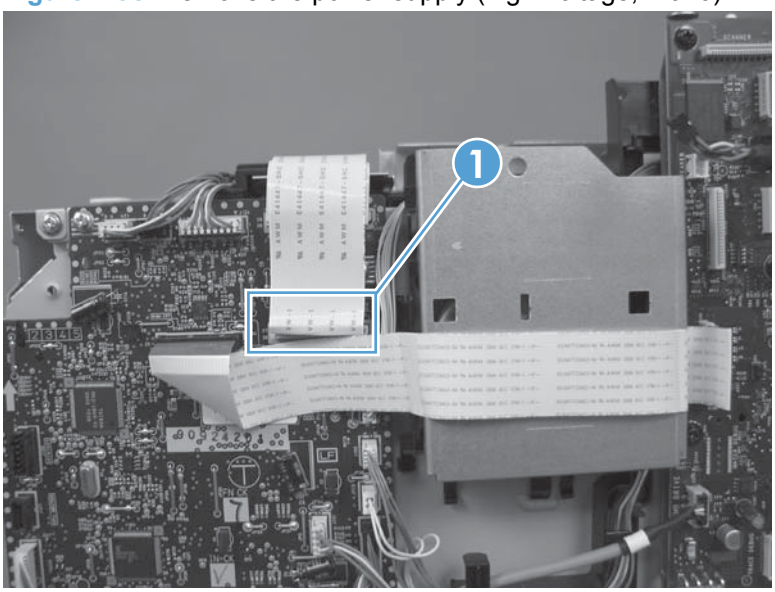
△ **CAUTION:** Do not bend or fold the flat flexible cables (FFCs) during removal or installation. Also, do not straighten pre-folds in the FFCs. You *must* make sure that all FFCs are fully seated in their connectors. Failure to fully seat an FFC into a connector can cause a short circuit in a PCA.

Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, ground yourself by touching the sheet-metal chassis *before* touching an ESD-sensitive part.

1. Remove the following components:
   - Right cover. See Right cover on page 17.
   - Right-front cover-1 and cover-2. See Right-front cover-1 and cover-2 on page 20.
   - Control panel. See Control panel on page 22.
   - Left cover. See Left cover on page 25.
   - Document-feeder and scanner assembly. See Document-feeder and scanner assembly on page 28.
   - Rear-center cover. See Rear-center cover on page 30.
   - Rear-upper cover. See Rear-upper cover on page 31.
   - Speaker. See Speaker on page 33
   - Top cover. See Top cover on page 34.
2. Disconnect one FFC (callout 1).

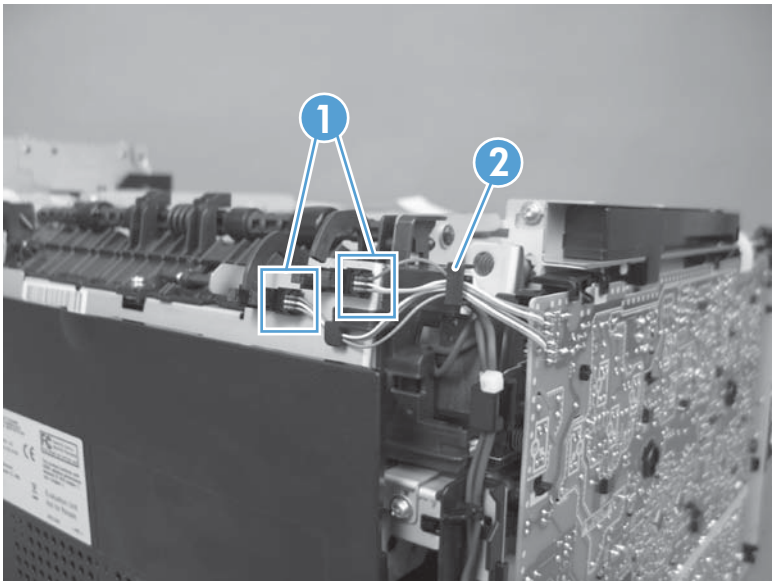
**NOTE:** This FFC connects the DC controller (shown below) to the high-voltage power supply.

**Figure 1-95** Remove the power supply (high-voltage; 1 of 6)



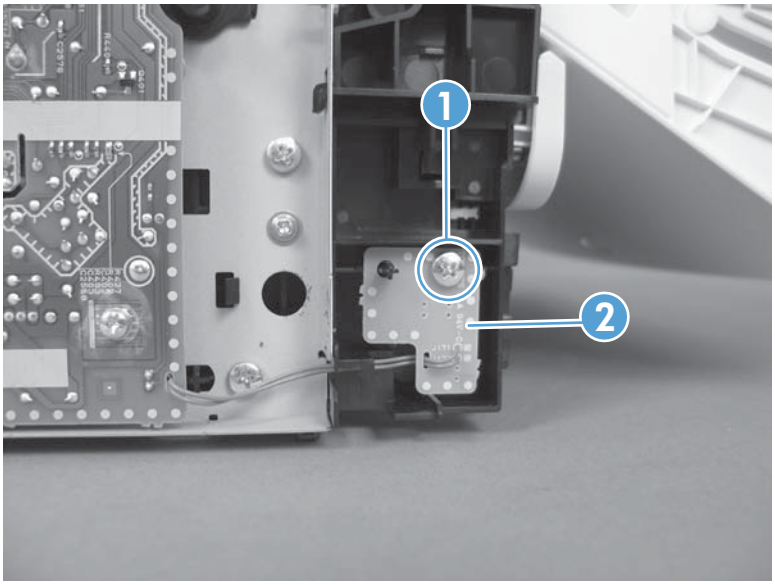
3. Disconnect two wire-harness connectors (callout 1) and release the wire harness from the retainer (callout 2).

**Figure 1-96** Remove the power supply (high-voltage; 2 of 6)



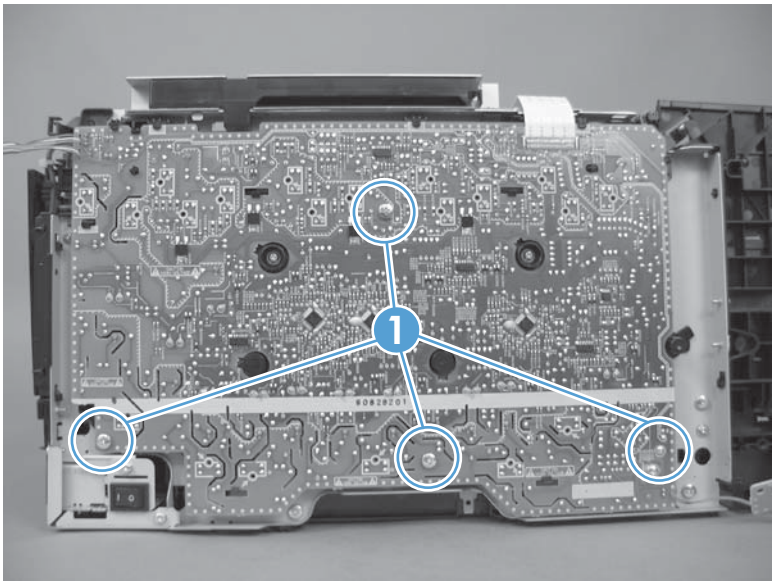

4. Remove one screw (callout 1) and then release the sub-PCA from the chassis (callout 2).

**Figure 1-97** Remove the power supply (high-voltage; 3 of 6)



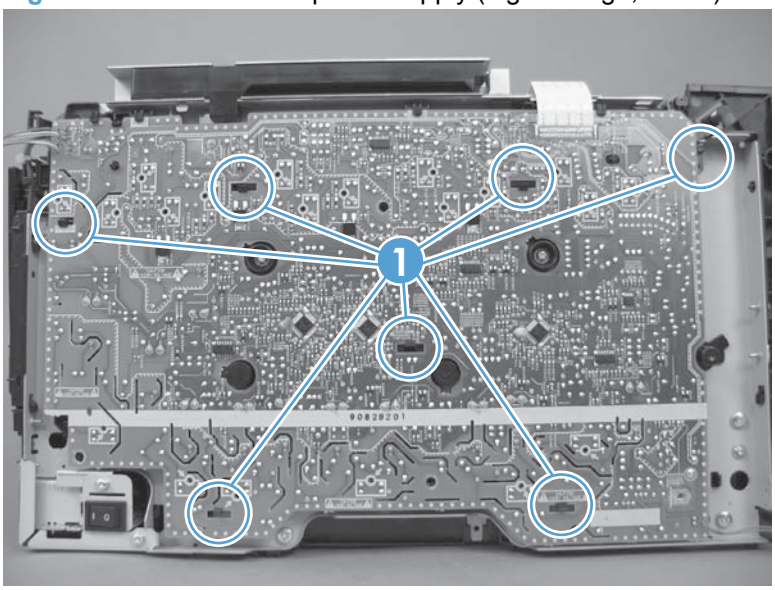
5. Remove four screws (callout 6).

**Figure 1-98** Remove the power supply (high-voltage; 4 of 6)



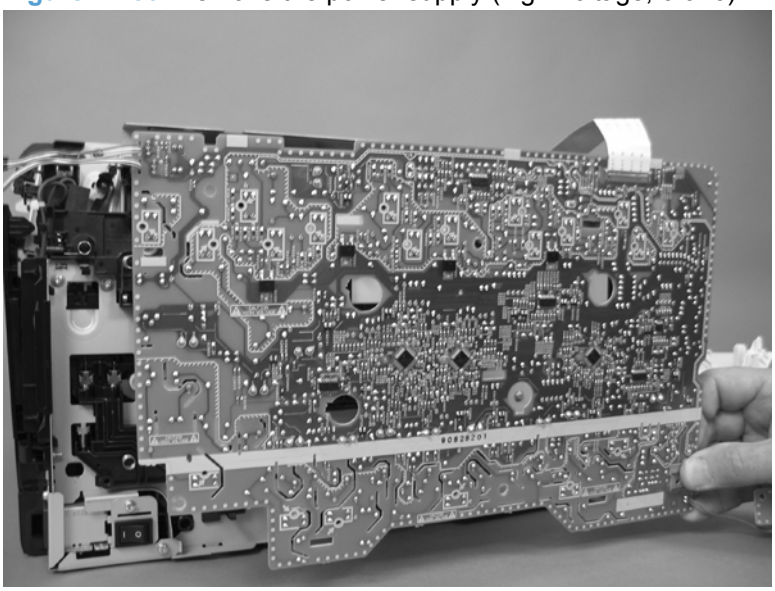

6. Release seven tabs (callout 8).

**Figure 1-99** Remove the power supply (high-voltage; 5 of 6)



7. Remove the power supply.

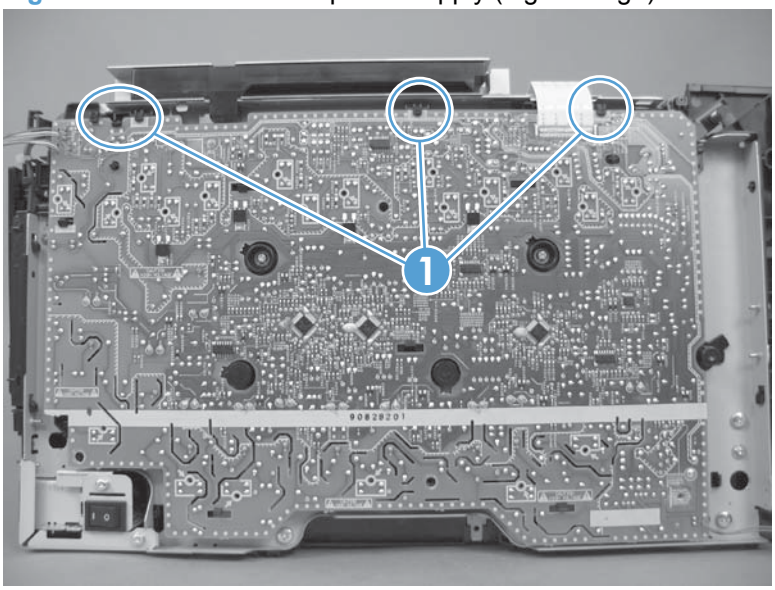
**Figure 1-100** Remove the power supply (high-voltage; 6 of 6)



## Reinstall the power supply (high voltage)

- Make sure that the power supply is correctly positioned under the tabs (callout 1) located on the product chassis. If the power supply is not correctly installed, the product will not function correctly and a fuser open error (50.7000) might appear in the event log.

**Figure 1-101** Reinstall the power supply (high voltage)



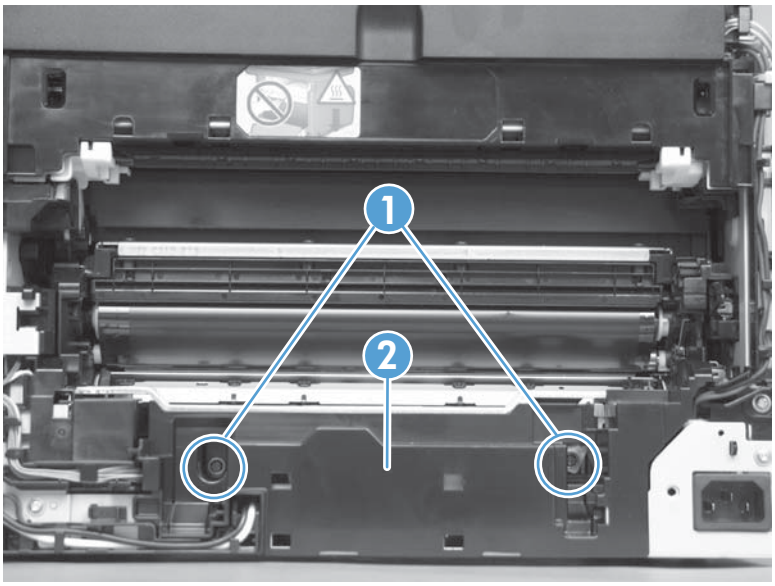
## Power supply (low voltage)

△ **CAUTION:** Do not bend or fold the flat flexible cables (FFCs) during removal or installation. Also, do not straighten pre-folds in the FFCs. You *must* 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.

Some parts are sensitive to electrostatic discharge (ESD). Always perform service work at an ESD-protected workstation or mat. If an ESD workstation or mat is not available, ground yourself by touching the sheet-metal chassis *before* touching an ESD-sensitive part.

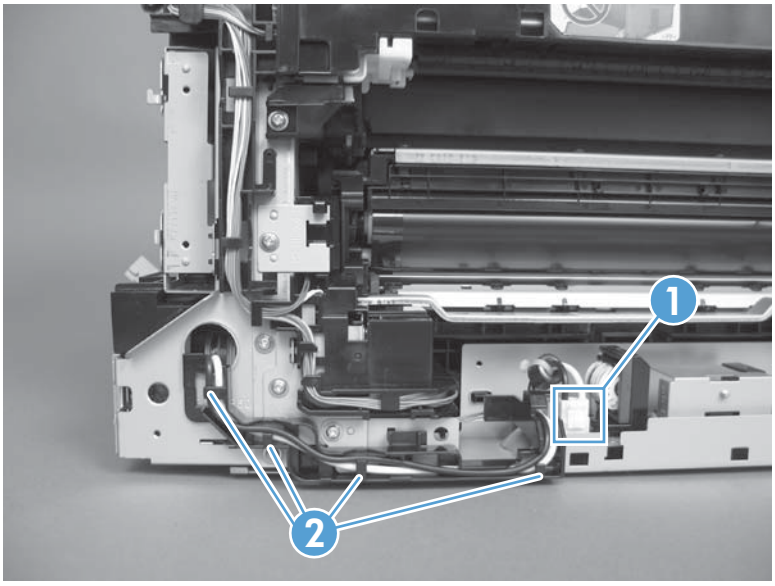
1. Remove the following components:
   - Right cover. See Right cover on page 17.
   - Left cover. See Left cover on page 25.
   - Rear-center cover. See Rear-center cover on page 30.
   - Rear door and rear-lower cover. See Rear door and rear-lower cover on page 41.
   - Formatter PCA, fax PCA, and support bracket. See Formatter PCA, fax card PCA, and support bracket on page 53.
2. Remove two screws (callout 1) and the black-plastic cover (callout 2).

**Figure 1-102** Remove the power supply (low voltage; 1 of 8)



3. Disconnect one wire-harness connector (callout 1) and release the wire harness from the retainer (callout 2).

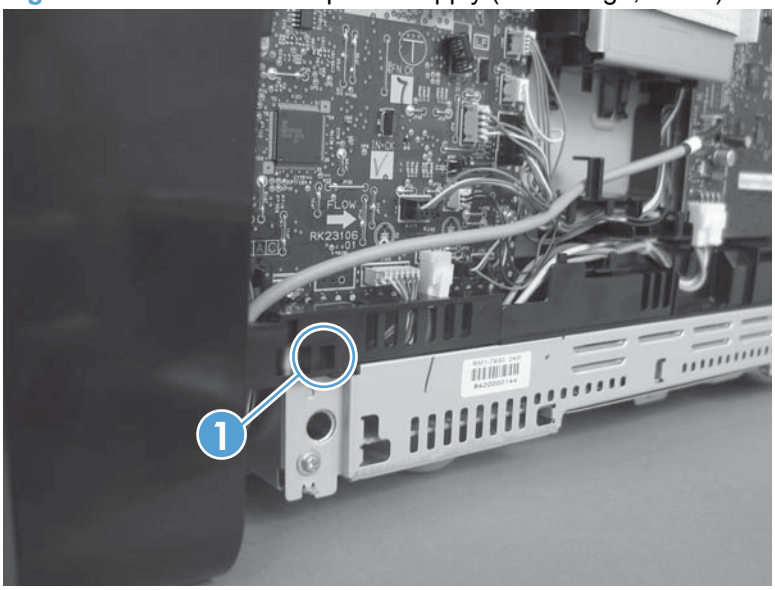
**Figure 1-103** Remove the power supply (low voltage; 2 of 8)




4. Release one tab (callout 1) on the black-plastic protective cover.

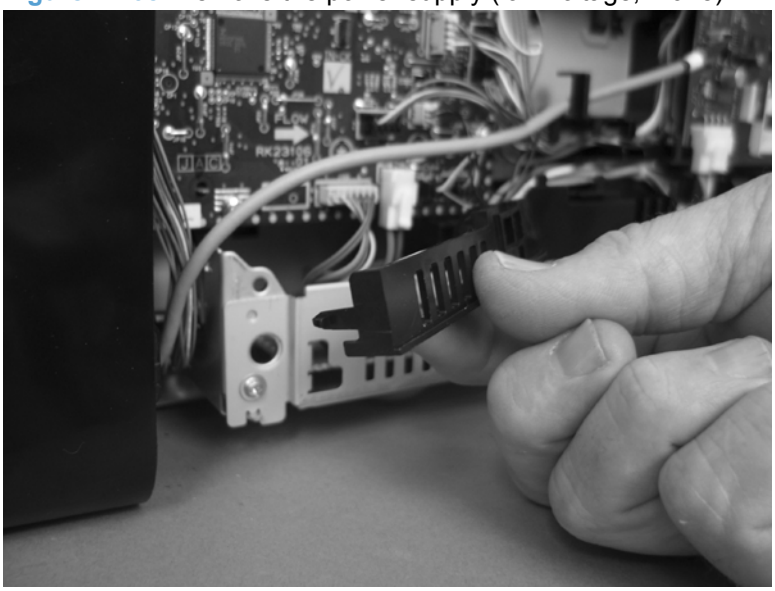
**NOTE:** This cover is located near the lower-right side of the product below the DC controller.

**Figure 1-104** Remove the power supply (low voltage; 3 of 8)



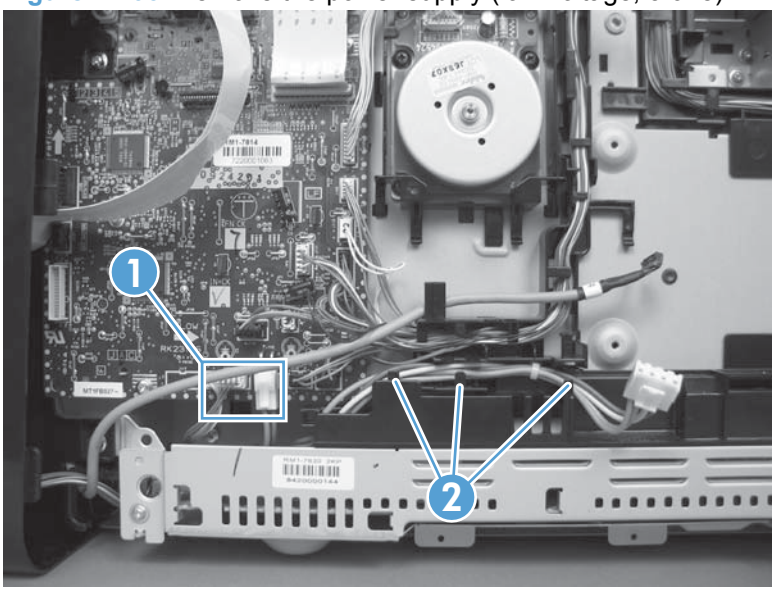
5. Remove the cover.

**Figure 1-105** Remove the power supply (low voltage; 4 of 8)



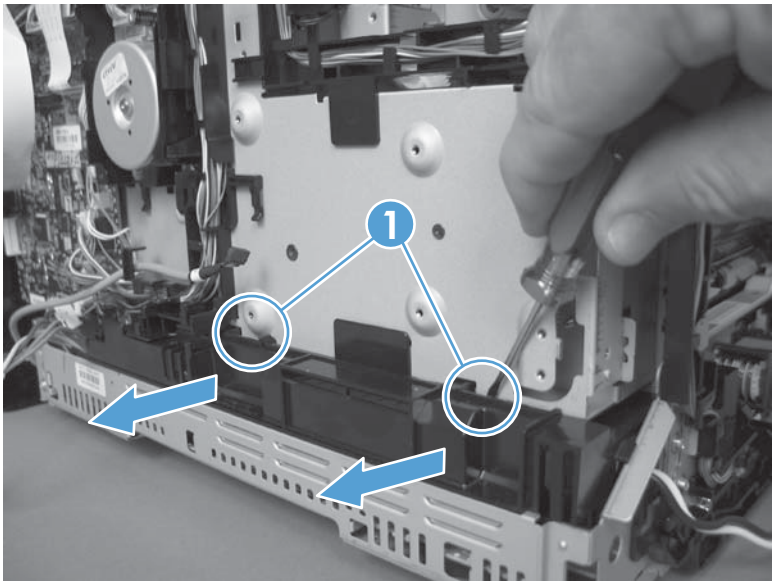
6. Disconnect two wire-harness connectors (callout 1), and then release the wire harnesses from the retainer (callout 2).

**Figure 1-106** Remove the power supply (low voltage; 5 of 8)



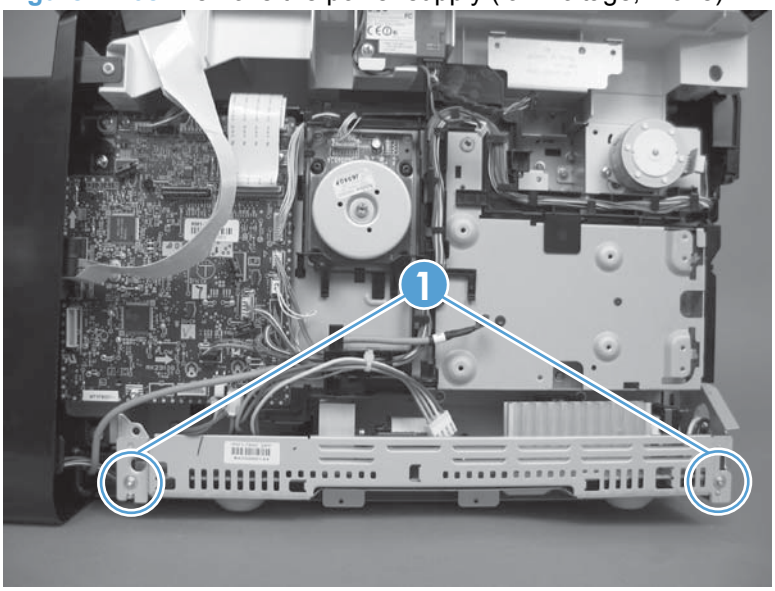
7. Release two tabs (callout 1), and then pull the black-plastic cover away from the product to remove it.

**Figure 1-107** Remove the power supply (low voltage; 6 of 8)




8. Remove two screws (callout 1).

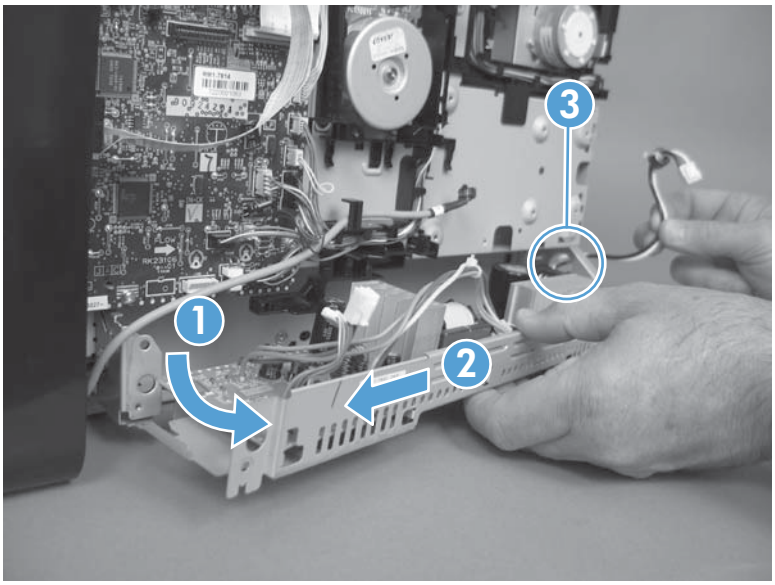
**Figure 1-108** Remove the power supply (low voltage; 7 of 8)



9. Rotate the end of the power supply near the front of the product out and away from the product (callout 1) until it clears the chassis, and then slide the power supply toward the front of the product to remove it (callout 2).

**NOTE:** As you remove the power supply, feed the wire harness at the rear of the product through the opening in the chassis (callout 3).

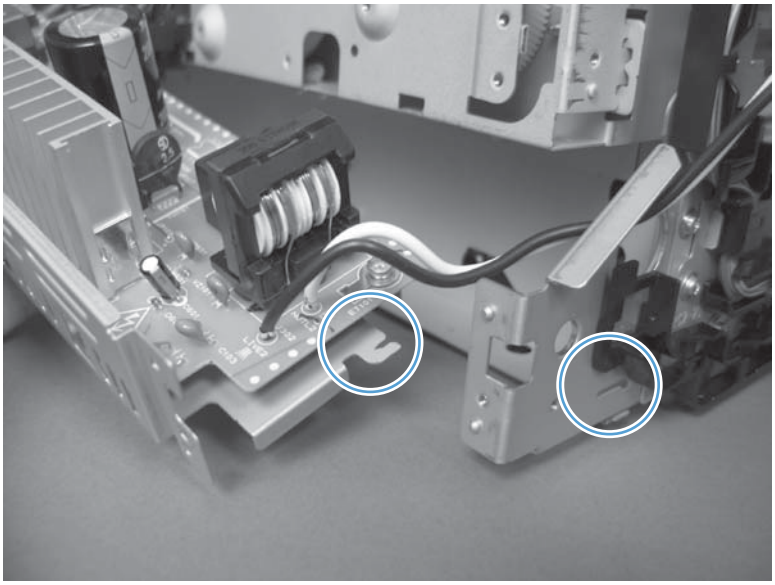
**Figure 1-109** Remove the power supply (low voltage; 8 of 8)




## Reinstall the power supply (low voltage)

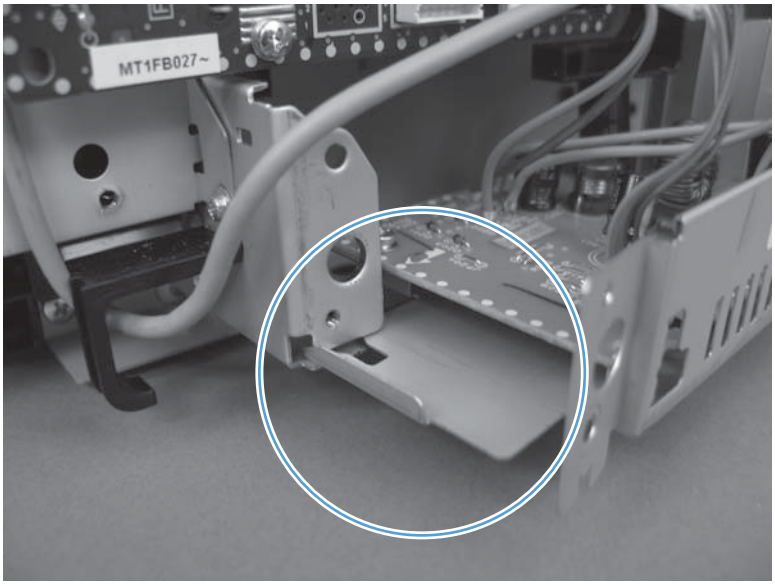
1. Make sure that the hook on the power supply tray is correctly engaged with the slot at the back side of the product chassis.

**Figure 1-110** Reinstall the power supply (low voltage; 1 of 2)



2. Make sure that the power supply tray is correctly engaged with the mounting rail near the front of the product chassis.

**Figure 1-111** Reinstall the power supply (low voltage; 2 of 2)

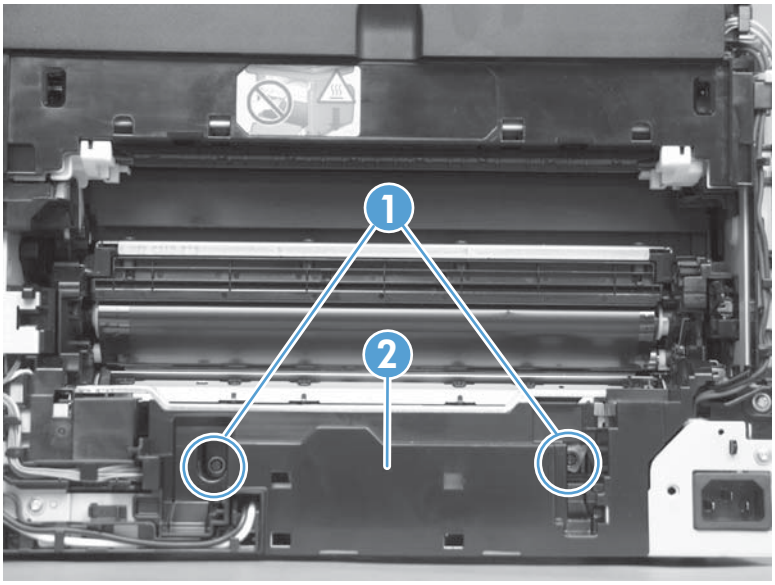


## Power supply (fuser)

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

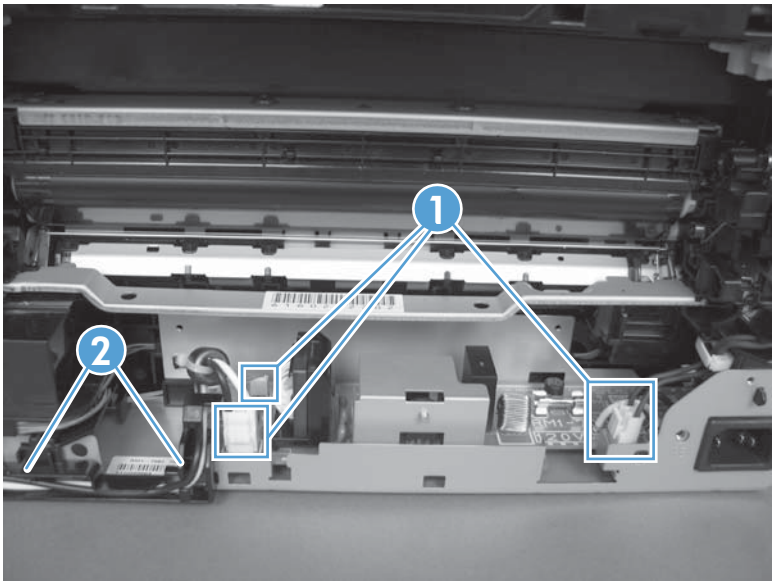
1. Remove the following components:
   - Right cover. See Right cover on page 17.
   - Left cover. See Left cover on page 25.
   - Rear-center cover. See Rear-center cover on page 30.
   - Rear door and rear-lower cover. See Rear door and rear-lower cover on page 41.
2. Remove two screws (callout 1) and the black-plastic cover (callout 2).

**Figure 1-112** Remove the power supply (fuser; 1 of 5)



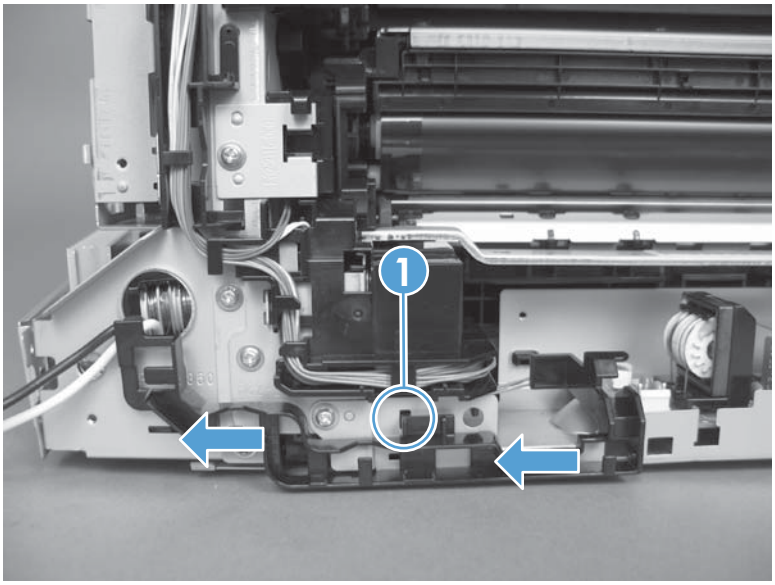
3. Disconnect three wire-harness connectors (callout 1), and then remove the wire harness from the retainer (callout 2).

**Figure 1-113** Remove the power supply (fuser; 2 of 5)




4. Release one tab (callout 1), slide the retainer toward the formatter side of the product to release it, and then remove the retainer from the chassis.

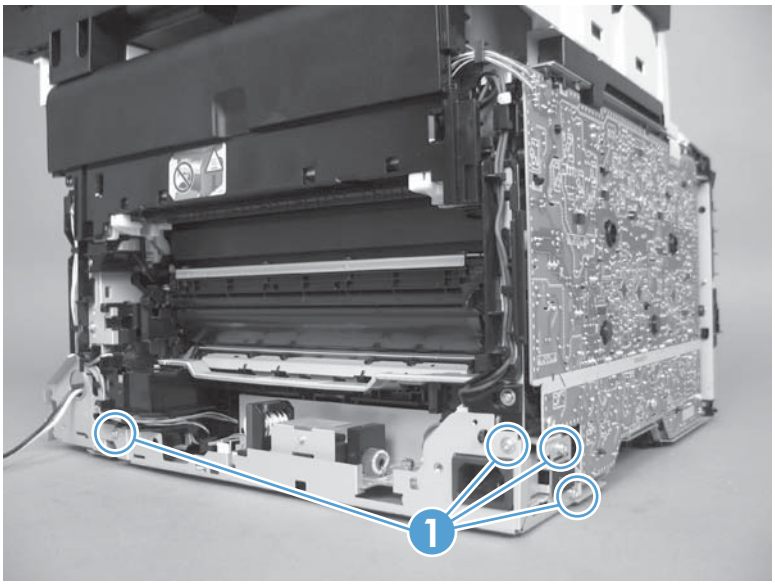
**Figure 1-114** Remove the power supply (fuser; 3 of 5)



5. Remove four screws (callout 1).

**NOTE:** The two screws near the power switch are ground screws. Make sure that these screws are placed in the correct positions when the power supply is reinstalled.

**Figure 1-115** Remove the power supply (fuser; 4 of 5)



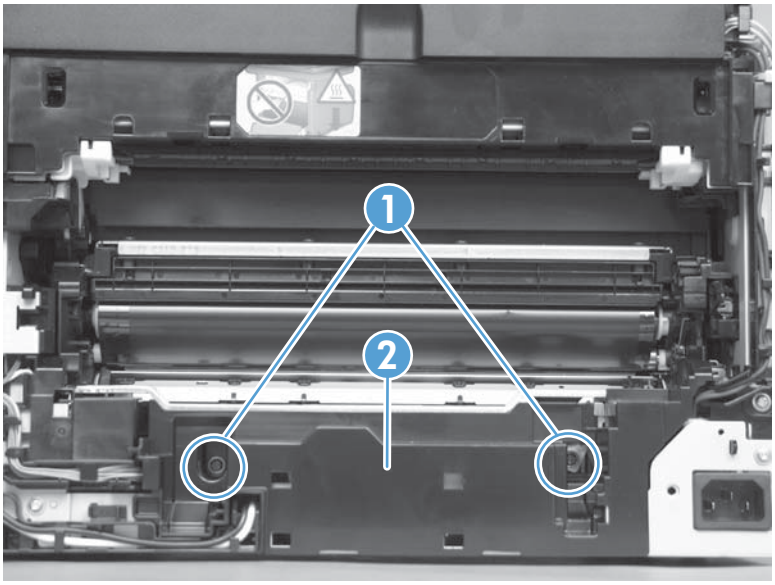

6. Remove the power supply.

**Figure 1-116** Remove the power supply (fuser; 5 of 5)

## Fuser

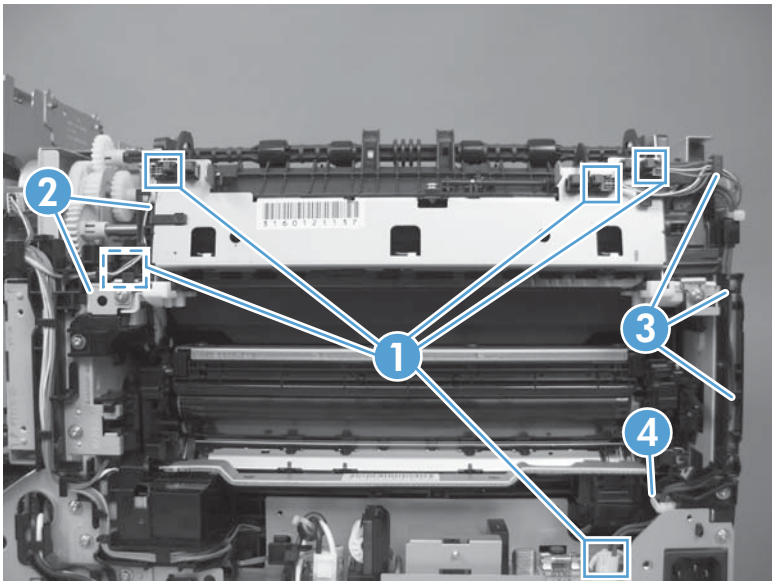
1. Remove the following components:
   - Right cover. See Right cover on page 17.
   - Right-front cover-1 and cover-2. See Right-front cover-1 and cover-2 on page 20.
   - Control panel. See Control panel on page 22.
   - Left cover. See Left cover on page 25.
   - Document-feeder and scanner assembly. See Document-feeder and scanner assembly on page 28.
   - Rear-center cover. See Rear-center cover on page 30.
   - Rear-upper cover. See Rear-upper cover on page 31.
   - Speaker. See Speaker on page 33.
   - Top cover. See Top cover on page 34.
   - Rear door and rear-lower cover. See Rear door and rear-lower cover on page 41.
2. Remove two screws (callout 1) and the black plastic cover (callout 2).

**Figure 1-117** Remove the fuser (1 of 4)



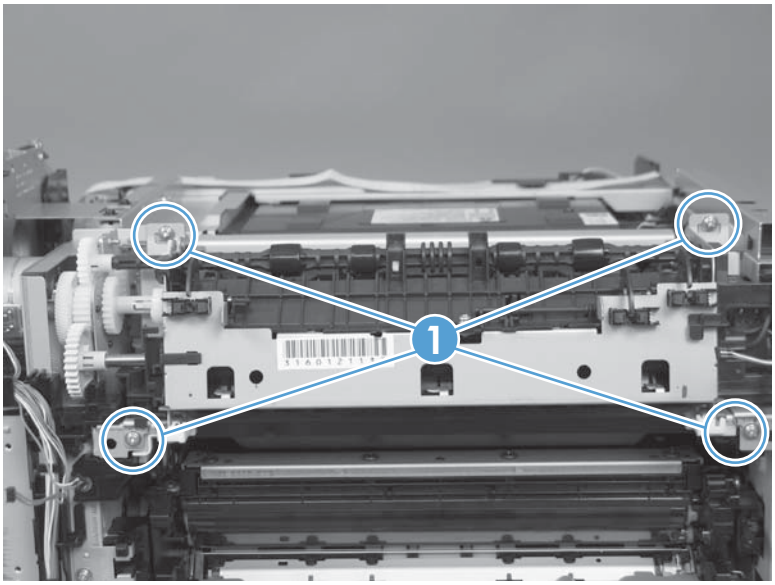
3. Disconnect five wire-harness connectors (callout 1). Remove the wire harness from the guides (callout 2 and callout 3) and one retainer (callout 4).

**Figure 1-118** Remove the fuser (2 of 4)




4. Remove four screws (callout 1).

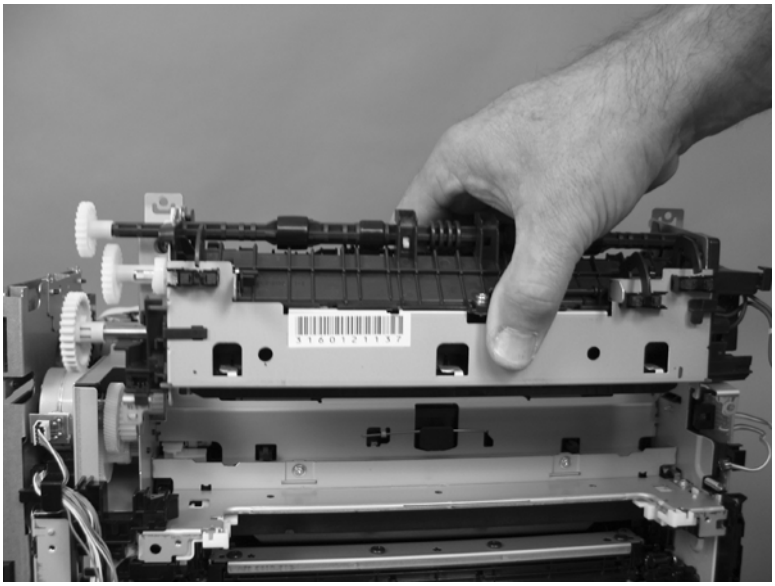
**Figure 1-119** Remove the fuser (3 of 4)



5. Remove the fuser.

△ **CAUTION:** Handle the fuser carefully. The sensors that are mounted to the output side of the fuser can be easily dislodged. When the fuser is reinstalled, make sure that the sensors are present, and correctly fastened to the fuser assembly.

**Figure 1-120** Remove the fuser (4 of 4)



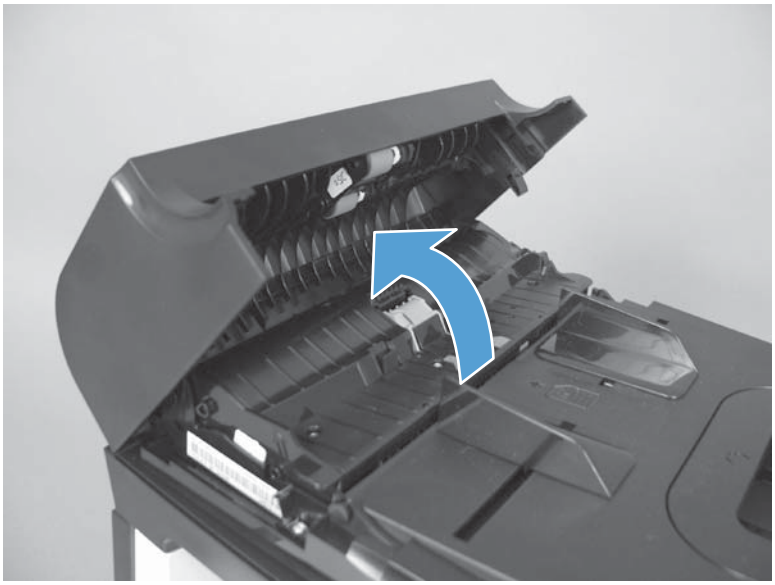
# Document feeder components

**NOTE:** This section describes replacement and removal of individual document feeder components. To remove the complete document-feeder and scanner assembly, see Document-feeder and scanner assembly on page 28.

## Document feeder separation pad

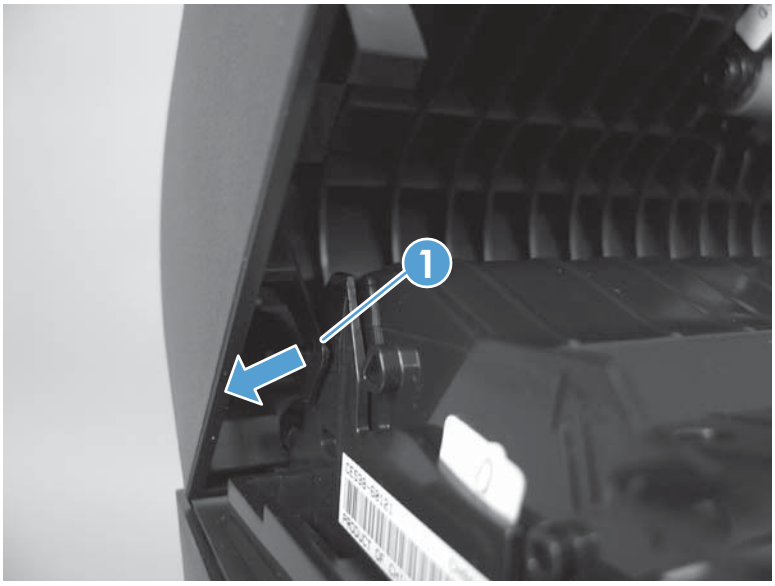
1. Open the document feeder top cover.

**Figure 1-121** Remove the document feeder separation pad assembly (1 of 7)



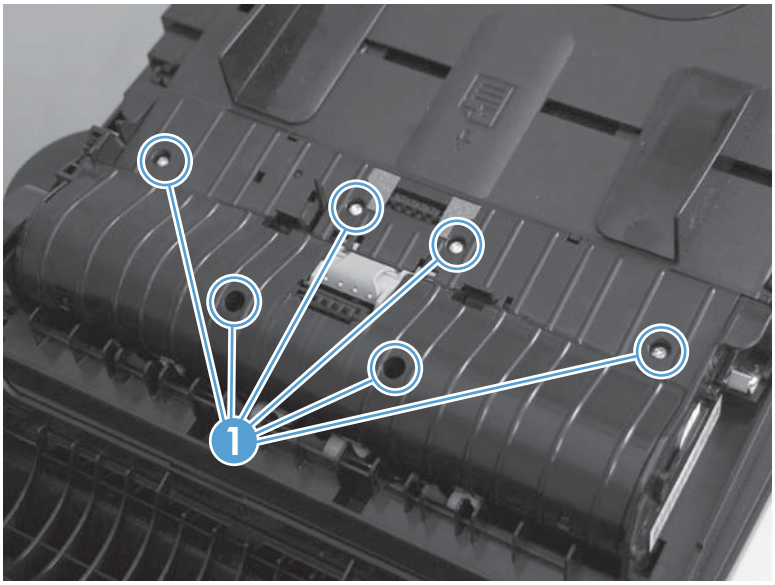
2. Release one tab, and then fully open the document feeder cover.

**Figure 1-122** Remove the document feeder separation pad assembly (2 of 7)



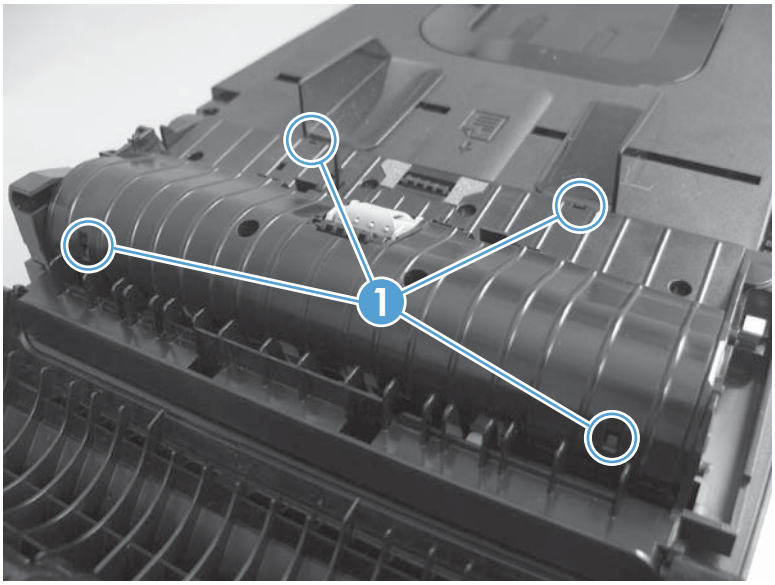
3. Remove six screws (callout 1).

**Figure 1-123** Remove the document feeder separation pad assembly (3 of 7)



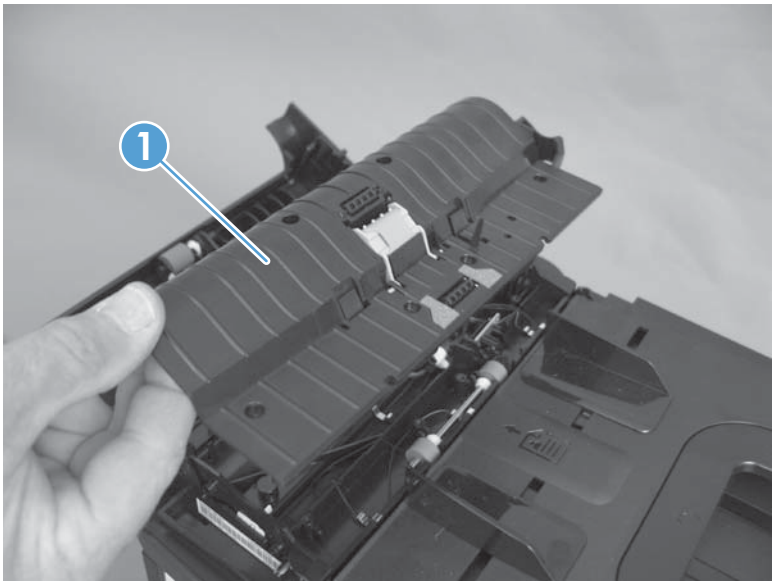

4. Release four tabs (callout 1) on the document feeder core cover.

**Figure 1-124** Remove the document feeder separation pad assembly (4 of 7)



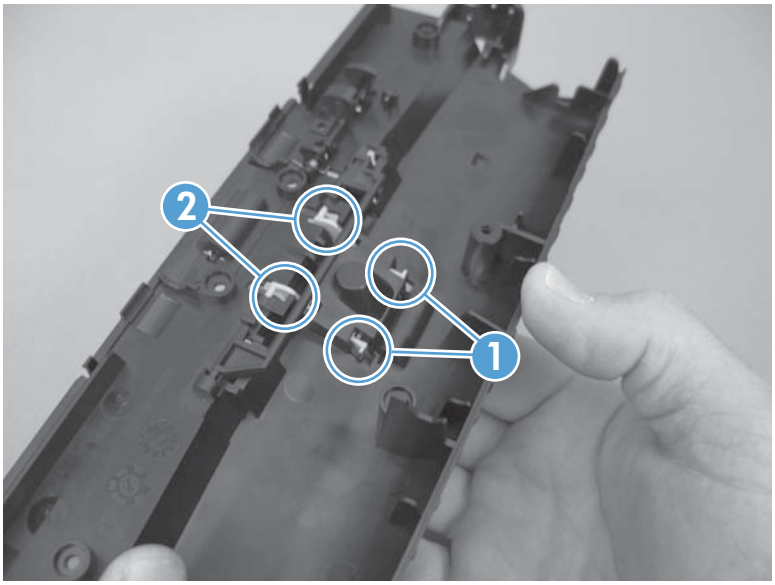
5. Remove the document feeder core cover (callout 1) from the base.

**Figure 1-125** Remove the document feeder separation pad assembly (5 of 7)



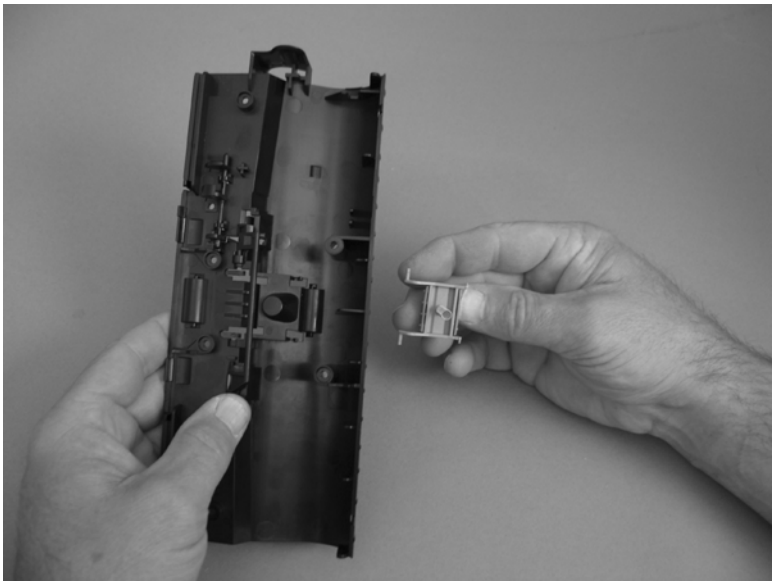

6. Push up on the separation pad assembly to release two pins (callout 1), and then slightly slide assembly in the core cover to release the remaining two pins (callout 2).

**Figure 1-126** Remove the document feeder separation pad assembly (6 of 7)



7. Remove the separation pad assembly from the core cover.

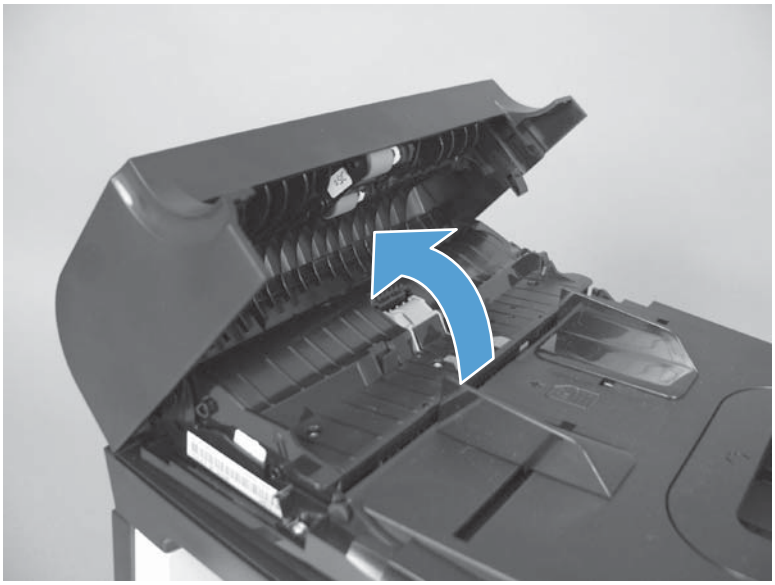
**Figure 1-127** Remove the document feeder separation pad assembly (7 of 7)



## Document feeder input tray

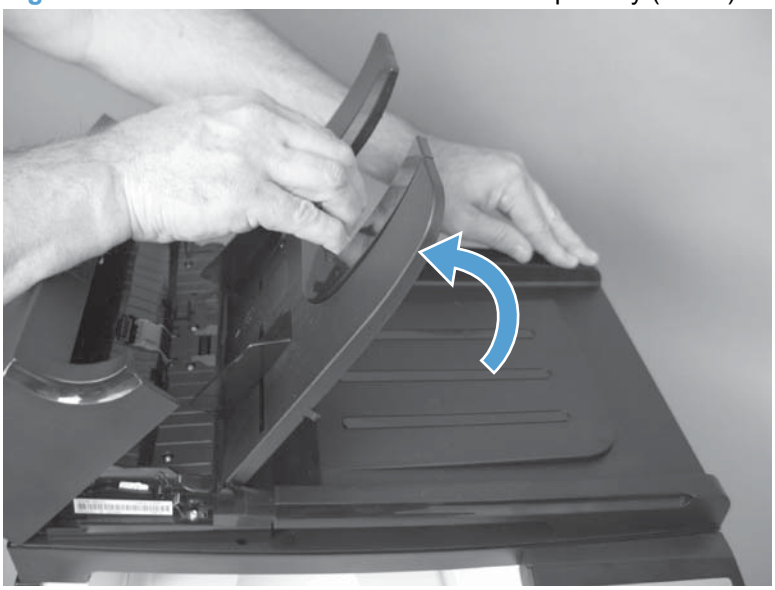
1. Open the document feeder cover.

**Figure 1-128** Remove the document feeder input tray (1 of 2)



2. Hold the scanner cover down, and then pull up on the document feeder tray to release two tabs, lift the document feeder tray up, and then remove it.

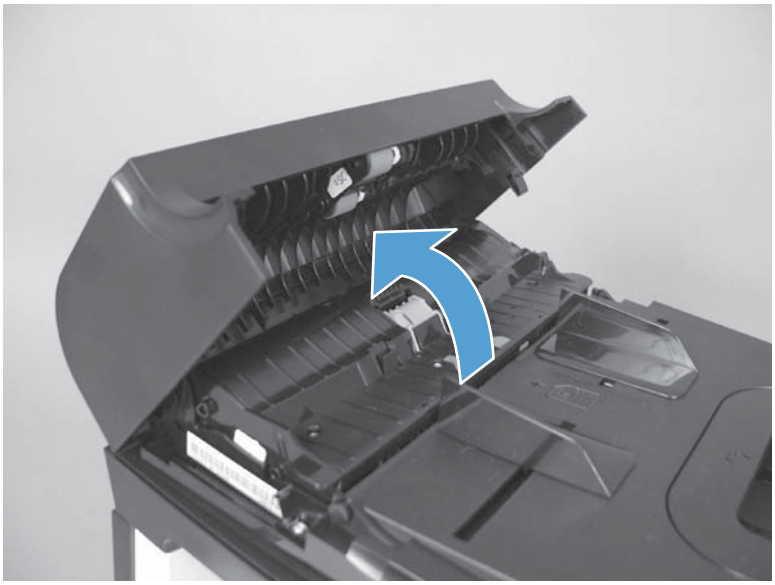
**Figure 1-129** Remove the document feeder input tray (2 of 2)



## Document feeder cover

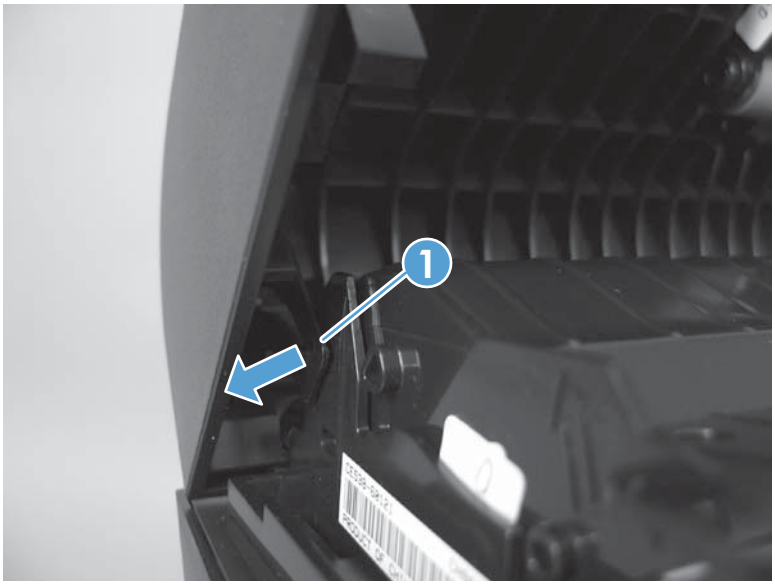
1. Open the document feeder cover.

**Figure 1-130** Remove the document feeder cover (1 of 3)



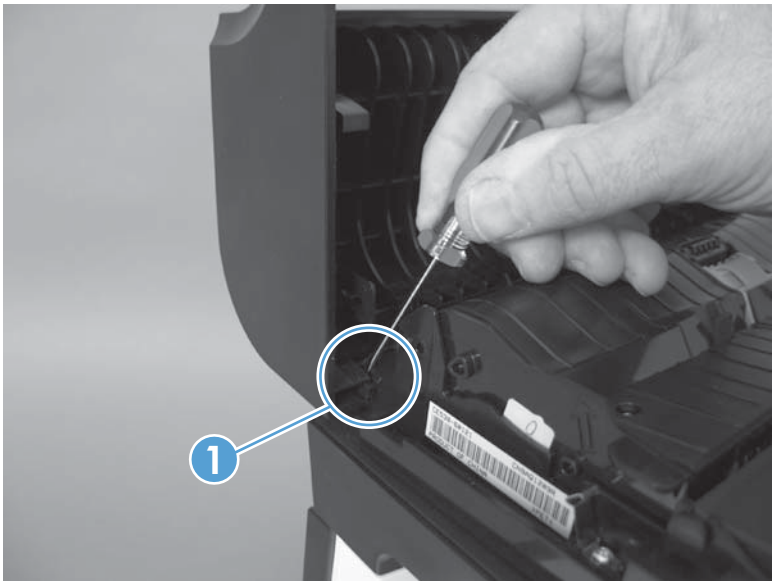
2. Release one tab (callout 1), and then fully open the document feeder cover.

**Figure 1-131** Remove the document feeder cover (2 of 3)



3. Release the hinges (callout 1), and then remove the document feeder cover.

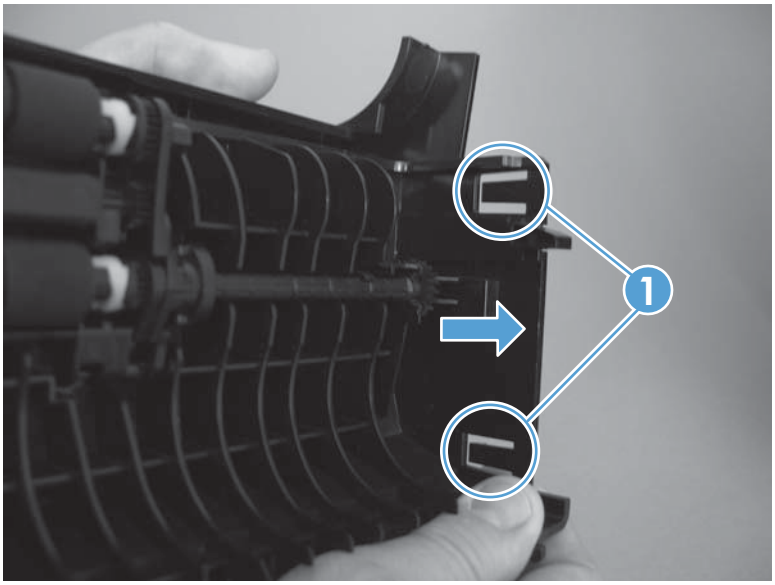
**Figure 1-132** Remove the document feeder cover (3 of 3)



## Document feeder pick arm assembly

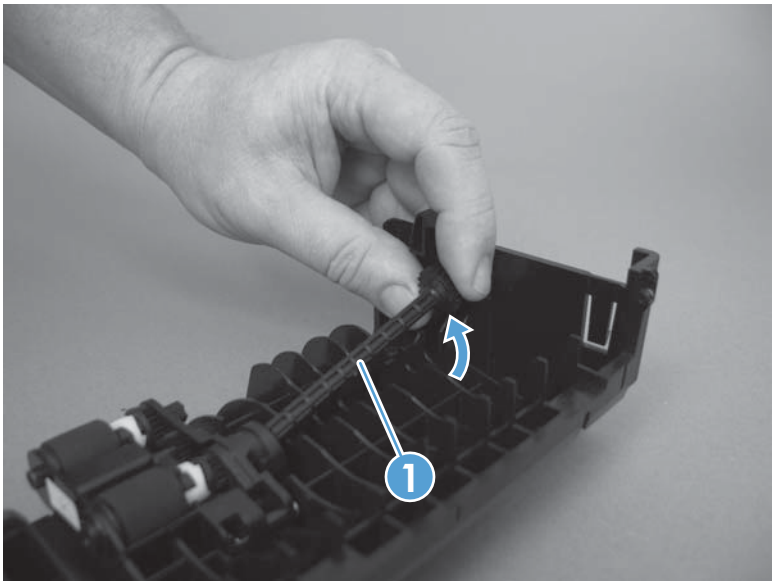
1. Remove the following components:
   - Document feeder input tray. See Document feeder input tray on page 87.
   - Document feeder cover. See Document feeder cover on page 88.
2. Release two tabs (callout 1) on each end of the inner cover (for a total of four tabs), and then lift the inner cover out of the outer cover.

**Figure 1-133** Remove the document feeder pick arm assembly (1 of 4)



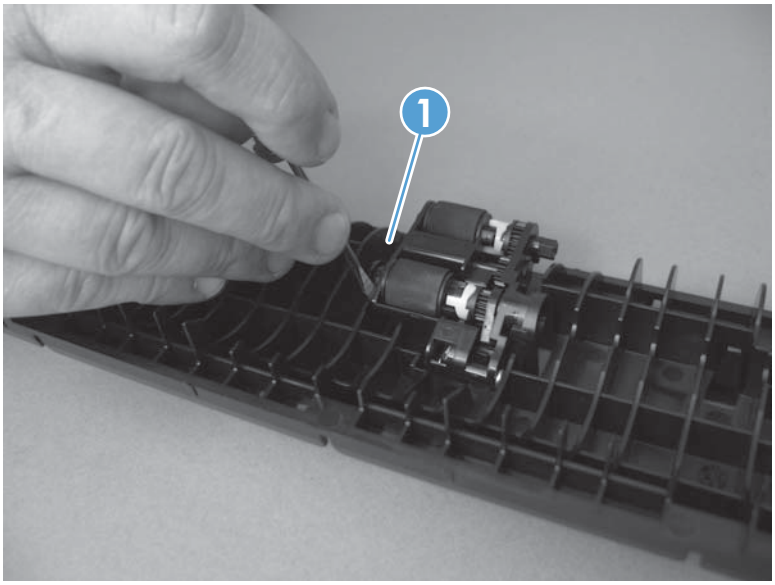

3. Remove the pick extension shaft (callout 1).

**Figure 1-134** Remove the document feeder pick arm assembly (2 of 4)



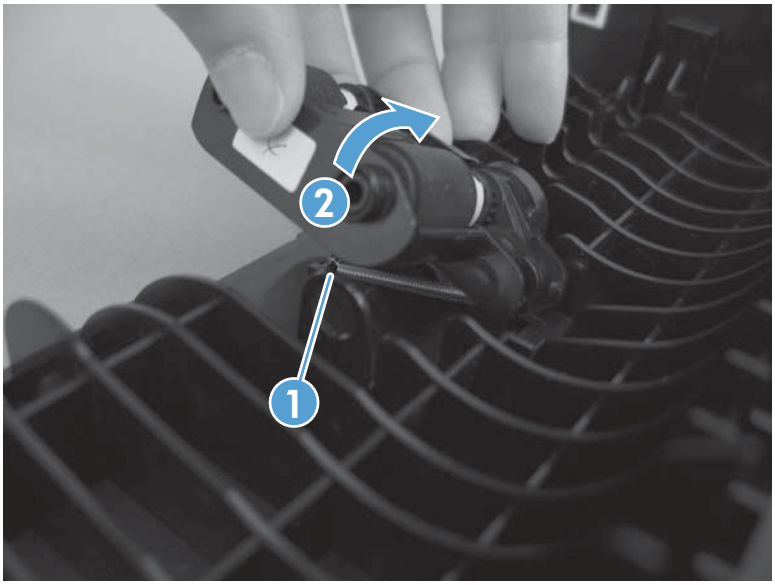
4. Release one tab (callout 1).

**Figure 1-135** Remove the document feeder pick arm assembly (3 of 4)




5. Disconnect the spring that is underneath the pick arm assembly (callout 1), and then rotate the pick arm assembly to remove it (callout 2).

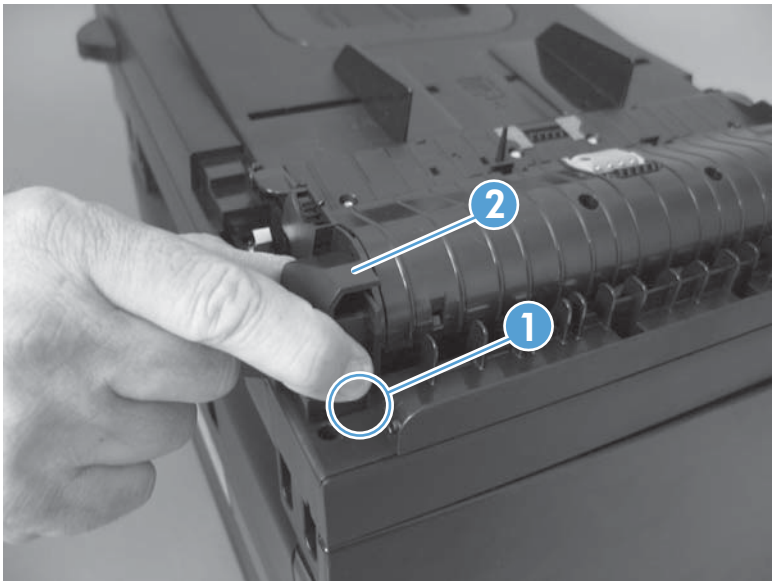
**Figure 1-136** Remove the document feeder pick arm assembly (4 of 4)



## Document feeder core assembly

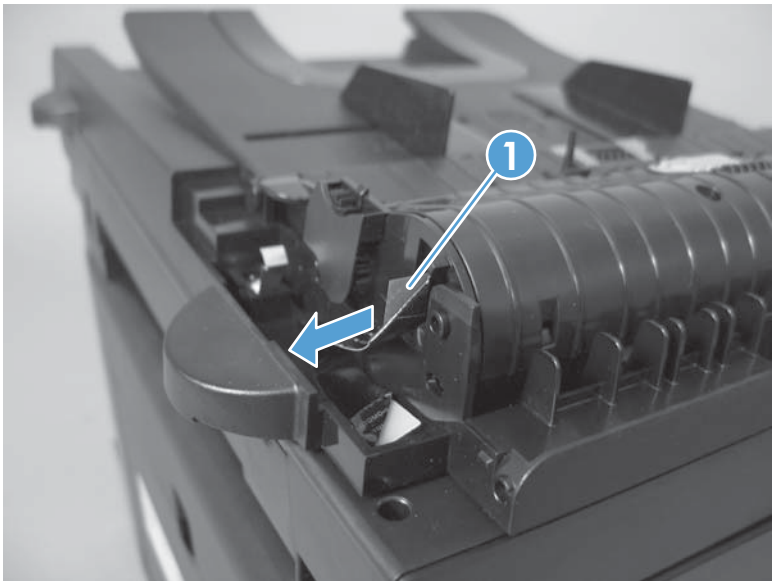
1. Remove the following components:
   - Document feeder input tray. See Document feeder input tray on page 87.
   - Document feeder cover. See Document feeder cover on page 88.
2. Release one tab (callout 1), and then remove the document feeder cable cover (callout 2).

**Figure 1-137** Remove the document feeder core assembly (1 of 3)




3. Remove one FFC using the blue tab (callout 1).

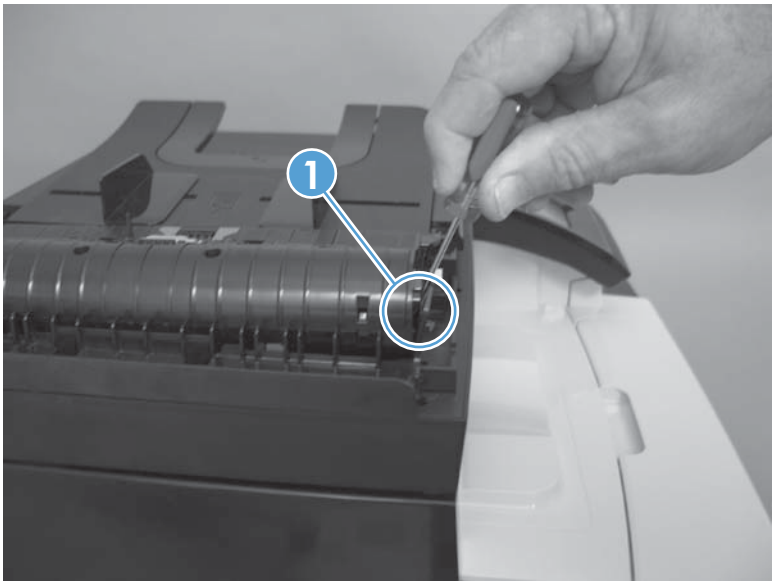
**Figure 1-138** Remove the document feeder core assembly (2 of 3)




**TIP:** The orientation of the FFC is important. When reinstalling it, make sure the blue tab is toward the product right side. If the FFC is installed upside down, the document feeder will not work.

4. Release one hinge (callout 1), and then remove the document feeder core assembly.

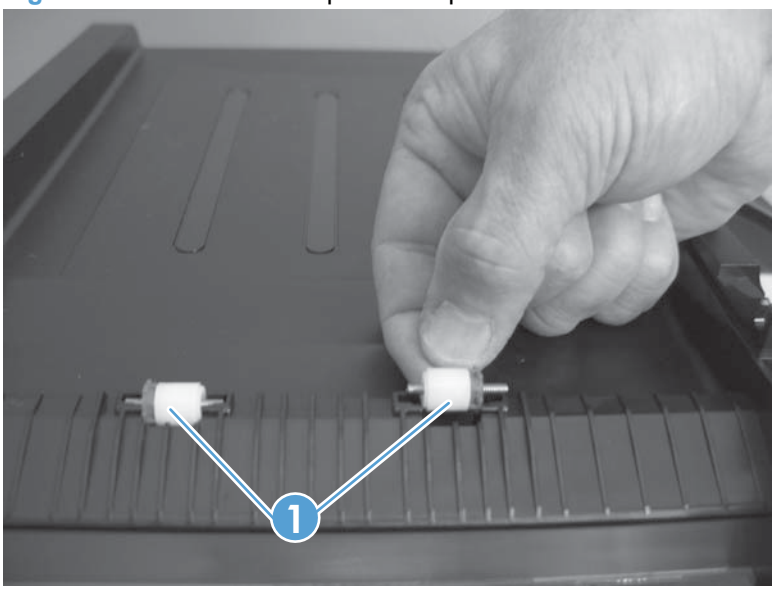
**Figure 1-139** Remove the document feeder core assembly (3 of 3)



## Post scan pinch rollers

1. Remove the following components:
   - Document feeder input tray. See Document feeder input tray on page 87.
   - Document feeder cover. See Document feeder cover on page 88.
   - Document feeder core. See Document feeder core assembly on page 92.
2. Remove the post scan pinch rollers (callout 1).

**Figure 1-140** Remove the post scan pinch rollers

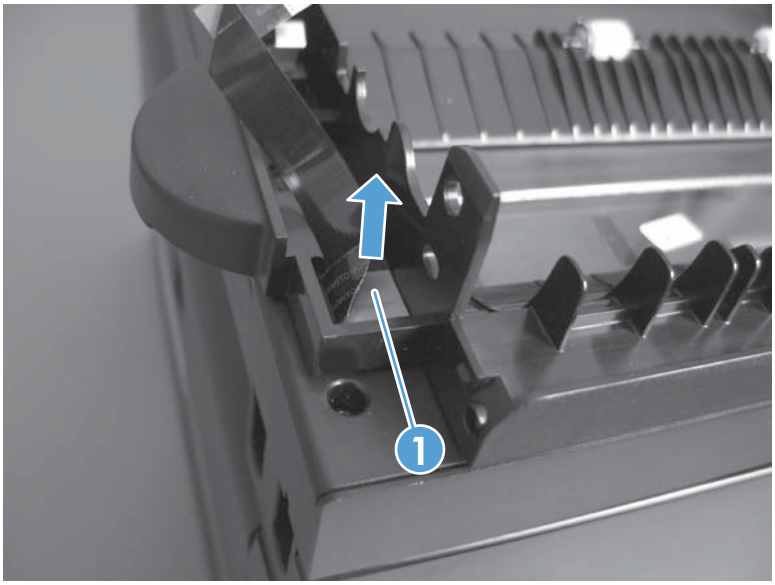


## Document feeder base assembly

1. Remove the following components:
   - Document feeder input tray. See Document feeder input tray on page 87.
   - Document feeder cover. See Document feeder cover on page 88.
   - Document feeder core. See Document feeder core assembly on page 92.
2. Release the adhesive FFC protector on the document feeder base (callout 1).

**Reinstallation tip** Use two-sided tape to replace the FFC protector during reassembly.

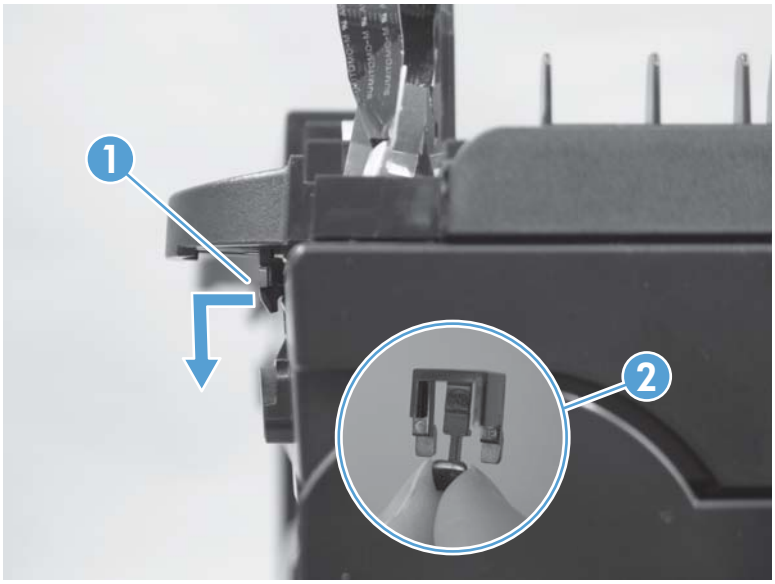
**Figure 1-141** Remove the document feeder base assembly (1 of 3)



3. Pull forward on the center tab on one of the solar locks to release the lock (callout 1), and then pull the solar lock straight down to remove it (callout 2). Repeat the procedure for the other solar lock.

**TIP:** The solar locks can be difficult to remove. You might need to use a small flat-blade screwdriver to gently pry the two side tabs in order to release the solar lock from the groove in the document feeder hinge.

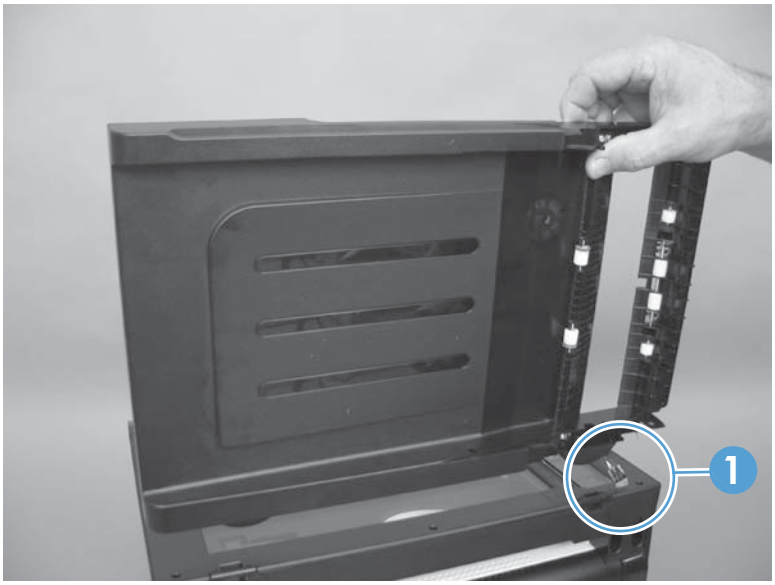
**Figure 1-142** Remove the document feeder base assembly (2 of 3)




4. Open the document feeder base, and then carefully remove it from the scanner assembly.

**CAUTION:** Do not damage the FFC (callout 1) that runs through the document feeder base. Carefully feed the FFC through the slot during removal and during replacement.

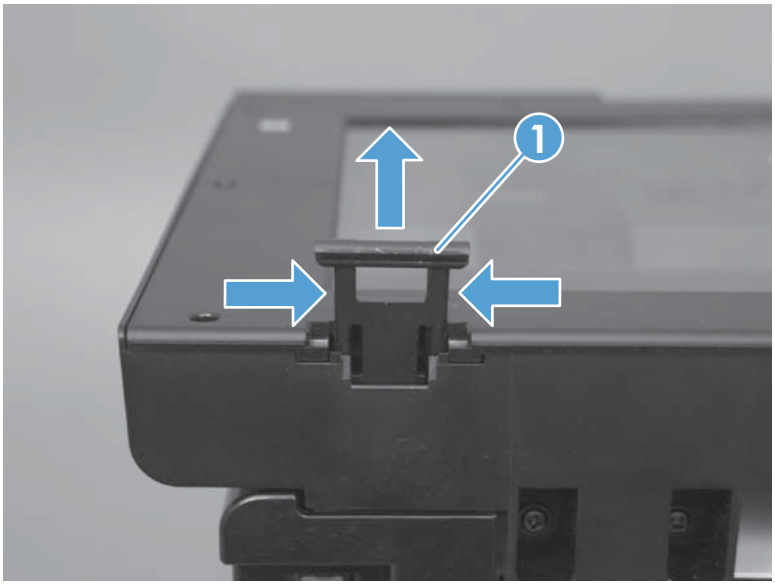
**Figure 1-143** Remove the document feeder base assembly (3 of 3)



## Document feeder floating hinges

1. Remove the following components:
   - Document feeder input tray. See Document feeder input tray on page 87.
   - Document feeder cover. See Document feeder cover on page 88.
   - Document feeder core. See Document feeder core assembly on page 92.
   - Document feeder base assembly. See Document feeder base assembly on page 95.
2. Release two tabs on each hinge (callout 1), and then remove each hinge (callout 2).

**Figure 1-144** Remove the document feeder floating hinges



# 2 Solve problems


- Menu map
- Tools for troubleshooting
- Paper feeds incorrectly or becomes jammed
- Service mode functions
- Solve fax problems
- Product updates

# Menu map

Use the following procedure to print a control-panel menu layout map.

1. From the Home screen, touch the Setup button.
2. Touch the Reports button.
3. Touch the Menu Structure button.

# Tools for troubleshooting

## Component diagnostics

### LED diagnostics

#### Network LEDs

The onboard network solution has two network port LEDs. When the product is connected to a properly working network through a network cable, the yellow LED indicates network activity, and the green LED indicates the link status. A blinking yellow LED indicates network traffic. If the green LED is off, a link has failed.

For link failures, check all of the network cable connections. In addition, you can try to manually configure the link settings on the onboard network solution by using the product control-panel menus.

1. Touch the Setup button.
2. Scroll to and touch the Network Setup menu.
3. Touch the Link Speed menu.
4. Select one of the following options.

| Setting | Description |
|---|---|
| Automatic | The print server automatically configures itself for the highest link speed and communication mode allowed on the network. |
| 10T Half | 10 megabytes per second (Mbps), half-duplex operation |
| 10T Full | 10 Mbps, full-duplex operation |
| 100TX Half | 100 Mbps, half-duplex operation |
| 100TX Full | 100 Mbps, full-duplex operation |

5. Touch the OK button. The product turns off and then on.

## Control panel LEDs

The state of the Ready light and Attention light on the product signal the product status. The following table outlines the possible control-panel light states.

**NOTE:** Wireless models have a blue LED that illuminates when the product wireless function is enabled and available.

| Product state | Ready light state | Attention light state |
|---|---|---|
| Initializing | Blinking | Blinking |
| Ready | On | Off |
| Receiving data/processing job or cancelling job | Blinking | Off |
| Error message | Off | Blinking |
| Fatal error (49 or 79 error)[1] | On | On |

[1] The product restarts after one of these errors occurs.

## Control-panel diagnostics

The product includes diagnostic tests for the control panel.

### Test the control-panel display

1. Touch the Setup button.
2. Touch the left arrow button ◄, and then quickly touch the Cancel button.
3. Touch the Setup button to return to the main menus.
4. Open the 2ndary Service menu.
5. Open the **Display test** menu.

### Test the control-panel buttons

1. Touch the Setup button.
2. Touch the left arrow button ◄, and then quickly touch the Cancel button.
3. Touch the Setup button to return to the main menus.
4. Open the 2ndary Service menu.
5. Open the **Button test** menu.

## Engine Diagnostics

### Engine test

1. With the product off, open the front and rear doors.
2. Turn the power on, and close both doors within ten seconds.
3. An engine test page (a page containing multiple horizontal colored lines) will print.

## Repetitive image defects

If the product output has a consistent, repetitive defect, then use the table in this section to determine which part needs to be replaced based on the measured distance between the repetitions of the defect.

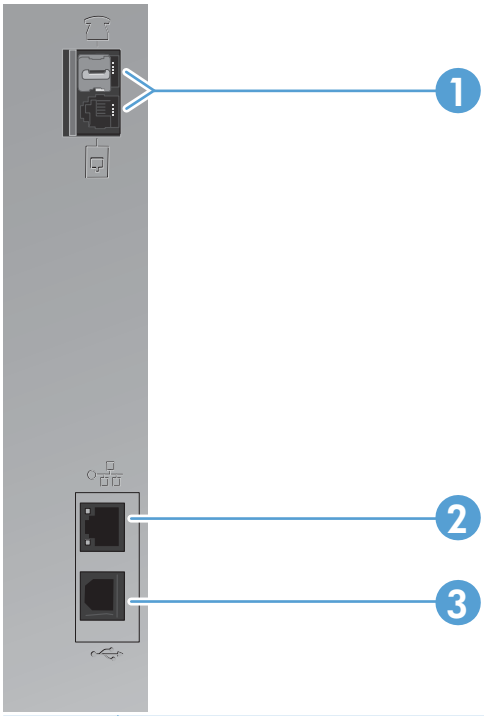
**NOTE:** The following table replaces the graphical repetitive defect ruler. You can make your own ruler by using these measurements. For the most accurate results, use a metric ruler.

**Table 2-1 Repetitive image defects**

| Distance between identical defects | Component | Notes |
|---|---|---|
| 22.3 mm (0.87 in) | Developer roller (one rotation) | Appears in a single color plane. |
| 26.7 mm (1.05 in) | Charger roller | Appears in a single color plane. |
| 28.5 mm (1.12 in) | Developer RS roller (one rotation) | Inside developer, this roller removes and supplies toner to the developer sleeve. |
| 44.0 mm (1.73 in) | Registration roller | |
| 56.5 mm (2.22 in) | Fuser film (one rotation) | Appears in all color planes. |
| 56.8 mm (2.23 in) | Fuser pressure roller (one rotation) | Appears in all color planes. |
| 57.0 mm (2.24 in) | Transfer roller | Appears in all color planes. |
| 69.0 mm (2.71 in) | Cartridge-to-cartridge spacing | Distance between each color image drum |
| 75.8 mm (2.98 in) | Image drum (one rotation) | Appears in a single color plane and might be either a dark or white spot. |
| 633.6 mm (24.94 in) | ITB | Because the ITB is longer than a page, you might have to look at multiple pages to determine if repetitive defect is present. |

# Diagrams

## Plug/jack locations




| | |
|---|---|
| 1 | Fax ports |
| 2 | Network port |
| 3 | Hi-Speed USB 2.0 port |

## DC controller PCA

**Figure 2-1** DC controller connectors

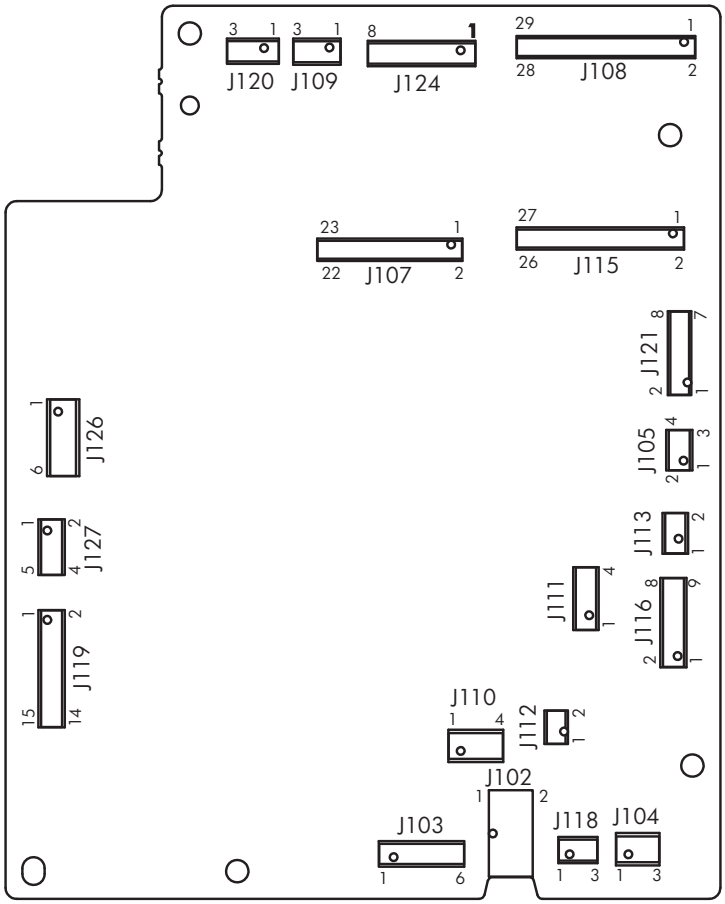



**Table 2-2 DC controller connectors**

| Item | Description |
|---|---|
| J102 | Low-voltage power supply (+24 V) |
| J103 | Low-voltage power supply (+3.3 V) |
| J104 | Thermistor (TH802) |
| J105 | Fuser power supply |
| J107 | Formatter |
| J108 | Laser driver PCA |
| J109 | Scanner motor (M704) |
| J110 | Fuser motor (M703) |
| J111 | Pickup assembly motor (M702) |
| J112 | Developing disengagement solenoid (SL706) |
| J113 | Cassette pickup solenoid (SL705) |
| P115 | High-voltage power supply |

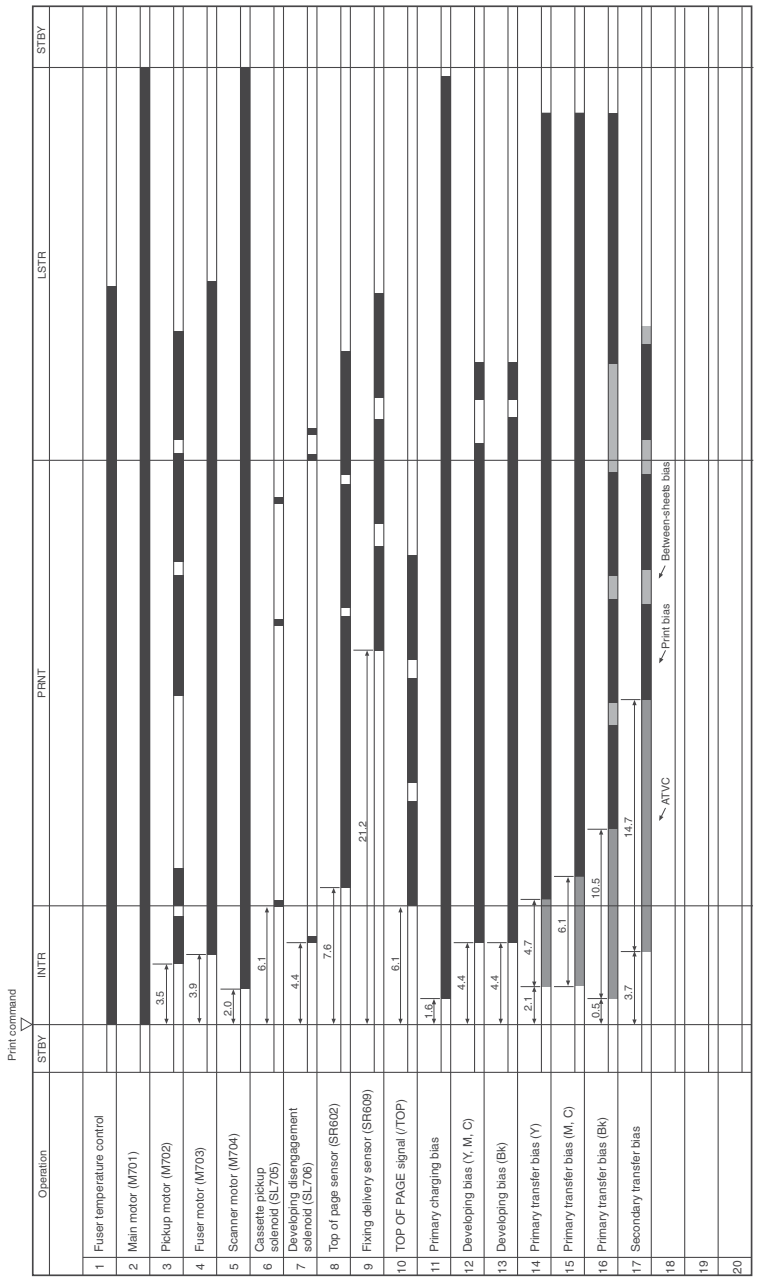
**Table 2-2 DC controller connectors (continued)**

| Item | Description |
|---|---|
| P116 | Pickup assembly<br>• Loop sensor (SR603)<br>• Top-of-page sensor (SR602)<br>• Cassette media present sensor (SR601) |
| J118 | Media width sensor (SR607) |
| J119 | ITB assembly density sensors |
| J120 | Developing home position sensor (SR606) |
| J121 | Main motor (M701) |
| J124 | Memory tags (e-labels) |

## General timing charts (product base only)

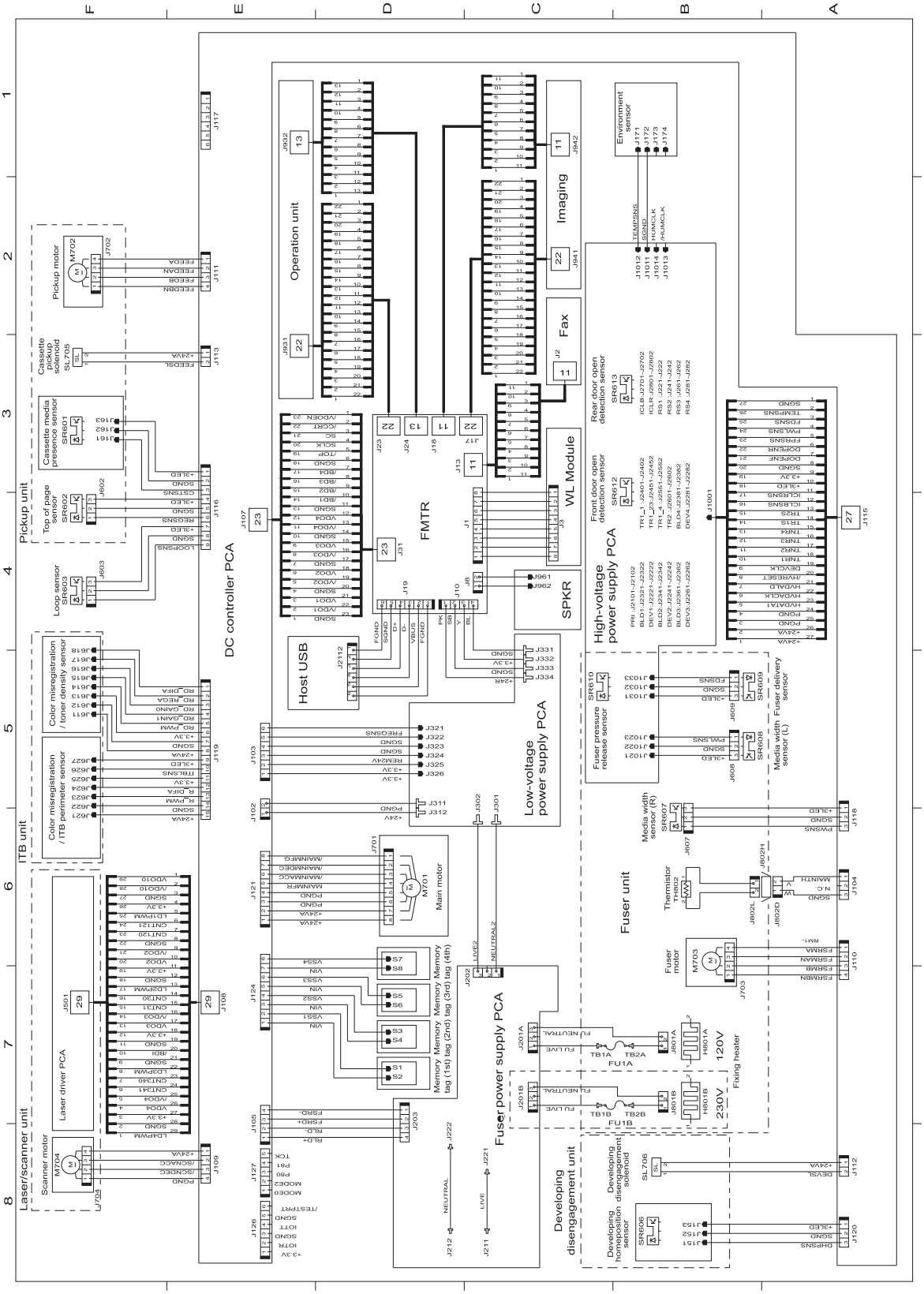
Approximate timing in seconds.

**Figure 2-2** Timing diagram



# General circuit diagram (product base only)

**Figure 2-3** Circuit diagram



# Print-quality troubleshooting tools

## Print a Diagnostics Page

If the printed output has colored shadows, blurry graphics, or areas that have poor color, you might need to calibrate the product to align the colors. Use the Diagnostics Page to check the color alignment.

1. On the product control panel, open the Reports menu.
2. Select the Diagnostics Page item to print it.
3. If the blocks of color on the page are not aligned with each other, calibrate the product.

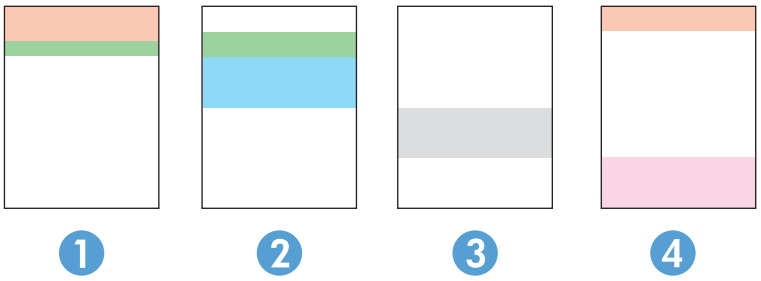
### Calibrate the product

1. On the product control panel, open the System Setup menu.
2. Open the Print Quality menu, and select the Color Calibration item.
3. Select the Calibrate Now option.

## Interpret the Print Quality Page

1. On the product control panel, open the Reports menu.
2. Select the Print Quality Page item to print it.

This page contains five bands of color, which are divided into four groups as indicated in the following illustration. By examining each group, you can isolate the problem to a particular print cartridge.




| Section | Print-cartridge |
|---|---|
| 1 | Yellow |
| 2 | Cyan |

| Section | Print-cartridge |
|---|---|
| 3 | Black |
| 4 | Magenta |

- If dots or streaks appear in only one of the groups, replace the print cartridge that correlates with that group.
- If dots appear in more than one group, print a cleaning page. If this does not solve the problem, determine if the dots are always the same color; for example, if magenta dots appear in all five color bands. If the dots are all the same color, replace that print cartridge.
- If streaks appear in multiple color bands, contact HP. A component other than the print cartridge is probably causing the problem.

# Control panel menus

## Setup Menu

To open this menu, touch the Setup button. The following sub menus are available:

- Reports
- Quick Forms
- Fax Setup
- System Setup
- Service
- Network Setup

## Reports menu

| Menu item | Description |
|---|---|
| Demo Page | Prints a page that demonstrates print quality |
| Menu Structure | Prints a control-panel menu layout map. |
| Configuration Report | Prints a list of the product settings |
| Supplies Status | Prints the print-cartridge status. Includes the following information:<br>• Estimated percentage of cartridge life remaining<br>• Approximate pages remaining<br>• Part numbers for HP print cartridges<br>• Number of pages printed<br>• Information about ordering new HP print cartridges and recycling used HP print cartridges |
| Network Summary | Displays status for:<br>• Network hardware configuration<br>• Enabled features<br>• TCP/IP and SNMP information<br>• Network statistics<br>• Wireless network configuration (wireless models only) |
| Usage Page | Displays the number of pages printed, faxed, copied, and scanned by the product |
| PCL Font List | Prints a list of all installed PCL 5 fonts |
| PS Font List | Prints a list of all installed PS fonts |
| PCL6 Font List | Prints a list of all installed PCL 6 fonts |
| Color Usage Log | Prints information about the color supply usage |
| Service Page | Prints the service page<br>The service page includes information about supported paper types, copy settings, and other settings that are not included on the configuration page. |
| Diagnostics Page | Prints diagnostic information about calibration and color quality |
| Print Quality Page | Prints a page that helps solve problems with print quality |

## Quick Forms menu

| Menu item | Sub-menu item | Description |
|---|---|---|
| Notebook Paper | Narrow Rule | Prints pages that have preprinted lines |
| | Wide Rule | |
| | Child Rule | |
| Graph Paper | 1/8 inch | Prints pages that have preprinted graph lines |
| | 5 mm | |
| Checklist | 1-Column | Prints pages that have preprinted lines with check boxes |
| | 2-Column | |
| Music Paper | Portrait | Prints pages that have preprinted lines for writing music |
| | Landscape | |

## Fax Setup menu

In the following table, items that have an asterisk (*) indicate the factory default setting.

| Menu item | Sub-menu item | Sub-menu item | Description |
|---|---|---|---|
| Fax Set-Up Utility | | | This is a tool for configuring the fax settings. Follow the on-screen prompts and select the appropriate response for each question. |
| Basic Setup | Time/Date | (Settings for time format, current time, date format, and current date.) | Sets the time and date setting for the product. |
| | Fax Header | Enter your fax number.<br><br>Enter company name. | Sets the identifying information that is sent to the receiving product.<br><br>Identifies the fax sender (optional) |
| | Answer Mode | Automatic*<br><br>Manual<br><br>TAM<br><br>Fax/Tel | Sets the type of answer mode. The following options are available:<br>• Automatic: The product automatically answers an incoming call on the configured number of rings.<br>• Manual: The user must press the Start Fax button or use an extension phone to make the product answer the incoming call.<br>• TAM: A telephone answering machine (TAM) is attached to the Auxilary phone port of the product. The product will not pick up any incoming call, but only listen for fax tones after the answering machine has picked up the call.<br>• Fax/Tel: The product must automatically pick up the call and determine if the call is a voice or fax call. If the call is a fax call, the product handles the call as usual. If the call is a voice call, an audible synthesized ring is generated to alert the user of an incoming voice call. |
| | Rings to Answer | | Sets the number of rings that must occur before the fax modem answers. The default setting is 5. |
| | Distinctive Ring | All Rings*<br><br>Single<br><br>Double<br><br>Triple<br><br>Double and Triple | If you have distinctive ring phone service, use this item to configure how the product responds to incoming calls.<br>• All Rings: The product answers any calls that come through the telephone line.<br>• Single: The product answers any calls that produce a single-ring pattern.<br>• Double: The product answers any calls that produce a double-ring pattern.<br>• Triple: The product answers any calls that produce a triple-ring pattern.<br>• Double and Triple: The product answers any calls that produce a double-ring or triple-ring pattern. |

| Menu item | Sub-menu item | Sub-menu item | Description |
|---|---|---|---|
| | Dial Prefix | On<br>Off* | Specifies a prefix number that must be dialed when sending faxes from the product. If you turn this feature on, the product prompts you to enter the number and then it automatically includes that number every time you send a fax. |
| Advanced Setup | Fax Resolution | Standard<br>Fine*<br>Superfine<br>Photo | Sets the resolution for sent documents. Higher resolution images have more dots per inch (dpi), so they show more detail. Lower resolution images have fewer dots per inch and show less detail, but the file size is smaller and the fax takes less time to transmit. |
| | Lighter/Darker | | Sets the darkness of outgoing faxes. |
| | Fit to Page | On*<br>Off | Shrinks incoming faxes that are larger than the paper size set for the tray. |
| | Glass Size | Letter<br>A4 | Sets the default paper size for documents being scanned from the flatbed scanner.<br>**NOTE:** The default setting is determined by the choice of location during the initial product setup. |
| | Dialing Mode | Tone*<br>Pulse | Sets whether the product should use tone or pulse dialing. |
| | Redial if Busy | On*<br>Off | Sets whether the product should attempt to redial if the line is busy. |
| | Redial if No Answer | On<br>Off* | Sets whether the product should attempt to redial if the recipient fax number does not answer. |
| | Redial if Comm. Error | On*<br>Off | Sets whether the product should attempt to redial the recipient fax number if a communication error occurs. |
| | Detect Dial Tone | On<br>Off* | Sets whether the product should check for a dial tone before sending a fax. |
| | Billing Codes | On<br>Off* | Enables the use of billing codes when set to **On**. A prompt appears where you can enter the billing code for an outgoing fax. |
| | Extension Phone | On*<br>Off | When this feature is enabled, you can press the **1-2-3** buttons on the extension phone to cause the product to answer an incoming fax call. |
| | Stamp Faxes | On<br>Off* | Sets the product to print the date, time, sender's phone number, and page number on each page of incoming faxes. |

| Menu item | Sub-menu item | Sub-menu item | Description |
|---|---|---|---|
| | Private Receive | On<br>Off* | Setting **Private Receive** to **On** requires you to set a product password. After setting the password, the following options are set:<br>• Private Receive is turned on.<br>• All old faxes are deleted from memory.<br>• Fax forwarding is set to Off and is not allowed to be changed.<br>• All incoming faxes are stored in memory. |
| | Confirm Fax Number | On<br>Off* | Confirm a fax number by entering it a second time. |
| | Allow Fax Reprint | On*<br>Off | Sets whether incoming faxes are stored in memory for reprinting later. |
| | Fax/Tel Ring Time | 20<br>30<br>40<br>70 | Sets the time, in seconds, after which the product should stop sounding the Fax/Tel audible ring to notify the user of an incoming voice call. |
| | Fax Speed | Fast(V.34)*<br>Medium(V.17)<br>Slow(V.29) | Sets the allowed fax communication speed. |

### System Setup menu

In the following table, items that have an asterisk (*) indicate the factory default setting.

| Menu item | Sub-menu item | Sub-menu item | Description |
|---|---|---|---|
| Language | (List of available control-panel display languages.) | | Sets the language in which the control panel displays messages and product reports. |
| Paper Setup | Default Paper Size | Letter<br>A4<br>Legal | Sets the size for printing internal reports, faxes, or any print job that does not specify a size.<br>**NOTE:** The default setting is determined by the choice of location during the initial product setup. |
| | Default Paper Type | Lists available paper types. | Sets the type for printing internal reports, faxes, or any print job that does not specify a type. |
| | Tray 1 | Paper Type<br>Paper Size | Configures the size and type for the tray. |
| | Paper Out Action | Wait forever*<br>Cancel<br>Override | Determines how the product reacts when a print job requires a paper size or type that is unavailable or when the tray is empty.<br>• Wait forever: The product waits until you load the correct paper.<br>• Override: Print on a different size paper after a specified delay.<br>• Cancel: Automatically cancel the print job after a specified delay.<br>• If you select either the Override or Cancel item, the control panel prompts you for the number of seconds to delay. |
| Print Quality | Color Calibration | Calibrate Now<br>Power-On Calibration | Performs a full calibration.<br>• Calibrate Now: Performs an immediate calibration.<br>• Power-On Calibration: Specify the length of time the product should wait after you turn it on before it calibrates. |
| Volume Settings | Alarm Volume<br>Ring Volume<br>Key-Press Volume<br>Phone Line Volume | | Set the volume levels for the product. The following options are available for each volume setting:<br>• Off<br>• Soft<br>• Medium*<br>• Loud |

| Menu item | Sub-menu item | Sub-menu item | Description |
|---|---|---|---|
| PowerSave Time | Sleep Delay | Off<br>1 Minute<br>15 Minutes*<br>30 Minutes<br>1 Hour<br>2 Hours | Specifies the amount of idle time before the product enters sleep mode. |
| Time/Date | (Settings for time format, current time, date format, and current date.) | | Sets the time and date setting for the product. |
| Product Security | On<br>Off* | | Sets the product-security feature. If you select the On setting, you must set a password. |
| At Very Low | Black Cartridge | Stop<br>Prompt<br>Continue* | Sets how the product behaves when the black print cartridge reaches the very low threshold.<br>• Stop: The product stops printing until you replace the print cartridge.<br>• Prompt: The product stops printing and prompts you to replace the print cartridge. You can acknowledge the prompt and continue printing.<br>• Continue: The product alerts you that the print cartridge is very low, but it continues printing. |
| | Color Cartridges | Stop<br>Prompt<br>Continue<br>Print Black* | Sets how the product behaves when one of the color print cartridges reaches the very low threshold.<br>• Stop: The product stops printing until you replace the print cartridge.<br>• Prompt: The product stops printing and prompts you to replace the print cartridge. You can acknowledge the prompt and continue printing.<br>• Continue: The product alerts you that the print cartridge is very low, but it continues printing.<br>• Print Black: When a color print cartridge becomes very low, the product prints in black only to prevent fax interruptions. To configure the product to print in color and use the remaining toner in the print cartridge past very low, follow these steps:<br>1. On the product control panel, touch the Setup button, and then touch the System Setup button.<br>2. Touch the At Very Low button, and then touch the Color Cartridges button. Touch the Continue button.<br>When you choose to replace the very low print cartridge, color printing resumes automatically. |

| Menu item | Sub-menu item | Sub-menu item | Description |
|---|---|---|---|
| User-Defined Low | Black | | Type the percentage of estimated life remaining at which the product alerts you that the print cartridge is low. |
| | Cyan | | |
| | Magenta | | |
| | Yellow | | |
| USB Flash Drive | On* | | Enables or disables the USB flash drive. |
| | Off | | |
| Color Copy | On* | | Enables or disables color copying. |
| | Off | | |
| Courier Font | Regular* | | Sets Courier font values. |
| | Dark | | |

## Service menu

In the following table, items that have an asterisk (*) indicate the factory default setting.

| Menu item | Sub-menu item | Sub-menu item | Description |
|---|---|---|---|
| Fax Service | Clear Saved Faxes | | Clears all faxes in memory. |
| | Run Fax Test | | Performs a fax test to verify that the phone cord is plugged in the correct outlet and that there is a signal on the phone line. A fax test report is printed indicating the results. |
| | Print T.30 Trace | Now<br>Never*<br>If Error<br>At End of Call | Prints or schedules a report that is used to troubleshoot fax transmission issues. |
| | Error Correction | On*<br>Off | The error correction mode allows the sending device to re-transmit data if it detects an error signal. |
| | Fax Service Log | | The fax service log prints out the last 40 entries in the fax log. |
| Cleaning Page | | | Cleans the product when specks or other marks appear on printed output. The cleaning process removes dust and excess toner from the paper path.<br><br>When selected, the product prompts you to load plain Letter or A4 paper in Tray 1. Touch the OK button to begin the cleaning process. Wait until the process completes. Discard the page that prints. |
| USB Speed | High*<br>Full | | Sets the USB speed for the USB connection to the computer. For the product to actually operate at high speed, it must have high speed enabled and be connected to an EHCI host controller that is also operating at high speed. This menu item also does not reflect the current operating speed of the product. |
| Less Paper Curl | On<br>Off* | | When printed pages are consistently curled, this option sets the product to a mode that reduces curl. |

| Menu item | Sub-menu item | Sub-menu item | Description |
|---|---|---|---|
| Archive Print | On<br>Off* | | When printing pages that will be stored for a long time, this option sets the product to a mode that reduces toner smearing and dusting. |
| Firmware Datecode | | | Displays the current firmware datecode |
| Restore Defaults | | | Sets all settings to the factory default values |

### Network Setup menu

In the following table, items that have an asterisk (*) indicate the factory default setting.

| Menu item | Sub-menu item | Description |
|---|---|---|
| Wireless Menu (wireless models only) | Wireless Setup Wizard | Guides you through the steps to set up the product on a wireless network |
| | Wi-Fi Protected Setup | If your wireless router supports this feature, use this method to set up the product on a wireless network. This is the simplest method. |
| | Run Network Test | Tests the wireless network and prints a report with the results. |
| | Turn Wireless On/Off | Enables or disables the wireless network feature. |
| TCP/IP Config | Automatic*<br>Manual | Automatic: The product automatically configures all the TCP/IP settings via DHCP, BootP or AutoIP.<br>Manual: You can manually configure the IP address, subnet mask, and default gateway. The control panel prompts you to specify values for each address section. As each address is completed, the product prompts for address confirmation before moving to the next one. After all three addresses are set, the network reinitializes. |
| Auto Crossover | On*<br>Off | Enables or disables the use of a standard 10/100 network cable when the product is directly connected to a computer. |
| Network Services | IPv4<br>IPv6 | Enable or disable the IPv4 and IPv6 protocols. By default, each protocol is enabled. |
| Link Speed | Automatic*<br>10T Full<br>10T Half<br>100TX Full<br>100TX Half | Sets the link speed manually if needed.<br>After setting the link speed, the product automatically restarts. |
| Restore Defaults | | Resets all network configurations to their factory defaults. |

## Function specific menus

The product features function-specific menus for copying, faxing, scanning, and using a USB flash drive. To open these menus, touch the button for that function on the control panel.

### Copy Menu

To open this menu, touch the Copy button, and then touch the Settings... button.

**NOTE:** Settings that you change with this menu expire 2 minutes after the last copy completes.

| Menu item | Sub-menu item | Sub-menu item | Description |
|---|---|---|---|
| ID Copy<br><br>**NOTE:** This item is available from the main Copy screen. You do not need to touch the Settings... button to access it. | | | Copies both sides of identification cards, or other small-size documents, onto the same side of one sheet of paper. |
| Number of Copies | (1–99) | | Specifies the number of copies |
| Reduce/Enlarge | Original=100%<br>Legal to Letter=78%<br>Legal to A4=83%<br>A4 to Letter=94%<br>Letter to A4=97%<br>Full Page=91%<br>Fit to Page<br>2 Pages per Sheet<br>4 Pages per Sheet<br>Custom: 25 to 400% | | Specifies the size of the copy. |
| Lighter/Darker | | | Specifies the contrast of the copy. |
| Optimize | Describe Original | Auto Select*<br>Mixed<br>Text<br>Picture | Specifies the type of content in the original document, so the copy is the best match for the original. |
| Paper | Paper Size<br>Paper Type | | Specifies the paper size and type.<br><br>**NOTE:** The default paper size setting is determined by the choice of location during the initial product setup.<br><br>The default paper type setting is plain. |

| Menu item | Sub-menu item | Sub-menu item | Description |
|---|---|---|---|
| Multi-Page Copy | Off*<br>On | | When this feature is on, the product prompts you to load another page onto the scanner glass or to indicate that the job is complete. |
| Collation | On*<br>Off | | Specifies whether to collate copy jobs |
| Draft Mode | Off*<br>On | | Specifies whether to use draft-quality printing for copies |
| Image Adjustment | Lightness<br>Contrast<br>Sharpen<br>Background Removal<br>Color Balance<br>Grayness | | Adjusts the image quality settings for copies |
| Set as New Defaults | | | Saves any changes you have made to this menu as the new defaults |
| Restore Defaults | | | Restores the factory defaults for this menu |

## Fax Menu

To open this menu, touch the Fax button, and then touch the Fax Menu button.

| Menu item | Sub-menu item | Sub-menu item | Description |
|---|---|---|---|
| Fax Reports | Fax Confirmation | On Every Fax<br>On Send Fax Only<br>On Receive Fax Only<br>Never* | Sets whether the product prints a confirmation report after a successful fax job. |
| | Include First Page | On*<br>Off | Sets whether the product includes a thumbnail image of the first page of the fax on the report. |
| | Fax Error Report | On Every Error*<br>On Send Error<br>On Receive Error<br>Never | Sets whether the product prints a report after a failed fax job. |

| Menu item | Sub-menu item | Sub-menu item | Description |
|---|---|---|---|
| | Print Last Call Report | | Prints a detailed report of the last fax operation, either sent or received. |
| | Fax Activity Log | Print Log Now<br>Auto Log Print | Print Log Now: Prints a list of the faxes that have been sent from or received by this product.<br>Auto Log Print: Automatically prints a report after every fax job. |
| | Print Phone Book | | Prints a list of the speed dials that have been set up for this product. |
| | Print Junk Fax list | | Prints a list of phone numbers that are blocked from sending faxes to this product. |
| | Print Billing Report | | Prints a list of billing codes that have been used for outgoing faxes. This report shows how many sent faxes were billed to each code. This menu item appears only when the billing codes feature is turned on. |
| | Print All fax Reports | | Prints all fax-related reports. |
| Send Options | Send Fax Later | | Allows a fax to be sent at a later time and date. |
| | Broadcast Fax | | Sends a fax to multiple recipients. |
| | Fax Job Status | | Displays pending fax jobs, and allows you to cancel pending fax jobs. |
| | Fax Resolution | Standard<br>Fine*<br>Superfine<br>Photo | Sets the resolution for sent documents. Higher resolution images have more dots per inch (dpi), so they show more detail. Lower resolution images have fewer dots per inch and show less detail, but the file size is smaller. |
| Receive Options | Print Private Faxes | | Prints stored faxes when the private-receive feature is on. This menu item appears only when the private-receive feature is turned on. The product prompts you for the system password. |

| Menu item | Sub-menu item | Sub-menu item | Description |
|---|---|---|---|
| | Block Junk Faxes | Add Number<br>Delete Number<br>Delete All Numbers<br>Print Junk Fax list | Modifies the junk fax list. The junk fax list can contain up to 30 numbers. When the product receives a call from one of the junk fax numbers, it deletes the incoming fax. It also logs the junk fax in the activity log along with job-accounting information. |
| | Reprint Faxes | | Prints the received faxes stored in available memory. This item is available only if you have turned on the Allow Fax Reprint feature in the Fax Setup menu. |
| | Forward Fax | On<br>Off* | Sets product to send all received faxes to another fax machine. |
| | Polling Receive | | Allows the product to call another fax machine that has polling send enabled. |
| Phone Book Setup | Individual Setup | | Edits the fax phone book speed dials and group-dial entries. The product supports up to 120 phone book entries, which can be either individual or group entries. |
| | Group Setup | | |
| | Delete Entry | Deletes a specific phone book entry. | |
| | Delete All Entries | Deletes all entries in the phone book | |
| | Print Report Now | Prints a list of all the individual and group dial entries in the phone book. | |
| Change Defaults | | | Opens the Fax Setup menu. |

## Scan Menu

| Menu item | Description |
|---|---|
| Scan to USB Drive | Scans a document and stores it as a .PDF file or .JPEG image on the USB flash drive. |

## USB Flash Drive

The following types are supported:

- .PDF
- .JPG

| Menu item | Description |
| --- | --- |
| Print Documents | Prints documents stored on the USB drive. Use the arrow buttons to scroll through the documents. Touch the names of documents that you want to print.<br><br>Touch the summary screen to change settings such as the number of copies, the paper size, or the paper type.<br><br>Touch the Print button when you are ready to print the documents. |
| View and Print Photos | Previews photos on the USB drive. Use the arrow buttons to scroll through the photos. Touch the preview image for each photo that you want to print. You can adjust the settings, and you can save the changes as the new default settings. When you are ready to print the photos, touch the Print button. |
| Scan to USB Drive | Scans a document and stores it as a .PDF file or .JPEG image on the USB flash drive. |

# Interpret control-panel messages

## Control panel message types

Alert and warning messages appear temporarily and might require you to acknowledge the message by touching the OK button to resume or by touching the Cancel ✕ button 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 product will attempt to resume the printing job after the warning has appeared for 10 seconds without acknowledgement.

Critical error messages can indicate some kind of failure. Turning off and then turning on the power might fix the problem. If a critical error persists, the product might require service.

## Control panel messages

### 10.100X Supply Memory Error

**Recommended action**

1. Verify that connector J124 on the DC controller is firmly seated.
2. Replace the DC controller.

### 49 Error, Turn off then on

**Recommended action**

1. 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.
2. If the error persists, replace the formatter.

### 50.x Fuser Error

**Recommended action**

1. Verify that connectors J104 and J110 on the DC controller are seated firmly.
2. Replace the fuser.
3. Replace the fuser power supply.

### 79 Error Turn off then on

**Recommended action**

1. 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.
2. If a surge protector is being used, remove it. Plug the product directly into the wall socket. Use the power switch to turn the product on.
3. Replace the formatter.

### Communication error.

**Recommended action**

Replace the fax card.

### Document feeder jam. Clear and reload.

**Recommended action**

1. Clear the jam.
2. If the error persists, replace the document feeder pickup roller assembly.

### Document feeder mispick. Reload

**Recommended action**

1. Remove the paper from the document feeder tray, and then reload it.
2. If the error persists, try the following solutions:
   a. Replace the document feeder pickup arm assembly.
   b. Replace the document feeder core assembly.
   c. Replace the document feeder assembly.

### Door open

**Recommended action**

1. Make sure that the door is completely closed.
2. If the error persists, try the following solutions:
   a. Replace the print cartridge drawer.
   b. Replace the DC controller.

### Engine Communication Error

**Recommended action**

1. Verify that connector J107 on the DC controller is seated firmly.
2. Replace the DC controller.

### Engine error. Press OK to continue.

**Recommended action**

If the error persists, replace the DC controller.

### Fax receive error.

**Recommended action**

If the error persists, replace the fax card.

### Fax Send error.

**Recommended action**

If the error persists, replace the fax card.

### Jam in (area), Open door and clear jam

**Recommended action**

1. Verify the pickup roller, and separation roller are working correctly and not damaged. If necessary, replace the rollers.
2. Verify that connector J116 on the DC controller is firmly seated.

### Jam in Tray 1, Clear jam and then press OK

**Recommended action**

1. Clear the jam, and then follow the control panel instructions.
2. If the error persists, try the following solutions:
   a. Verify the pickup roller and separation roller are working correctly. If necessary, replace the rollers.
   b. If the error persists during print jobs, verify that the connector in DC controller connector J113 is firmly seated.
   c. If the error persists during copy jobs, verify that the connector in DC controller connector J111 is firmly seated.
   d. Replace the product.

### Load paper

**Recommended action**

1. Replace the cassette (paper tray).
2. Verify that all eighteen DC controller connectors are firmly seated.

### No dial tone.

**Recommended action**

If the error persists, replace the fax card.

### No fax answer. Canceled send.

**Recommended action**

If the error persists, replace the fax card.

### No fax answer. Redial pending.

**Recommended action**

1. Perform an NVRAM initialization.
2. Update the firmware.

### No fax detected.

**Recommended action**

1. Use the Service menu Restore Defaults function to reset the product.
2. Perform an NVRAM initialization.
3. Update the firmware.
4. Replace the fax card.

### Print failure, press OK. If error repeats, turn off then on.

**Recommended action**

1. Perform an NVRAM initialization.
2. Update the firmware.
3. Replace the formatter PCA.

### Scanner error #, Turn off then on

**Recommended action**

- **Scanner error 12, Turn off then on**

  Motor test failure. This error will only appear on the Error report. The document-feeder motor is not blocked from turning.

  1. Clear any jammed paper from the document feeder.
  2. Turn the product off, and then on.
  3. If the error persists, replace the document-feeder scanner assembly.

- **Scanner error 13, Turn off then on**

  RAM Wall failure. This error appears on the control panel. The scanner motor or scanner module is obstructed.

  1. Turn the product off, and then on.
  2. If the error persists, replace the document-feeder scanner assembly.

- **Scanner error 14, Turn off then on**

  LED test failure. This error will only appear on the Error report. The LED did not illuminate during initialization.

  - Replace the document-feeder scanner assembly.

- **Scanner error 17, Turn off then on**

  Scanner error. This error appears on the control panel. The scanner motor is obstructed.

  - Replace the document-feeder scanner assembly.

### Scanning error Cannot connect

**Recommended action**

If the error persists, replace the formatter.

## Event-log messages

The following product events do not produce a message that appears on the control panel. Instead, they are recorded in the event log. To print the event log, open the secondary service menu, select **Service Reports**, and then select **Error Report**.

**Table 2-3 Event-log messages**

| Event code | Description |
|---|---|
| 13.0000 | Paper jam |
| 20.0000 | Memory out |
| 21.0000 | Page misfeed or mispick |
| 41.2000 | Beam detect malfunction |
| 41.3000 | Unexpected size |
| 50.1000 | Low fuser temperature error |
| 50.2000 | Slow fuser error |
| 50.3000 | High fuser temperature error |
| 50.4000 | Fuser drive circuit error |
| 50.7000 | Fuser open error |
| 50.8000 | Low subthermistor fuser error |
| 50.9000 | High subthermistor fuser error |
| 51.2000 | Black scanner laser error |
| 51.2100 | Cyan scanner laser error |
| 51.2200 | Magenta scanner laser error |
| 51.2300 | Yellow scanner laser error |
| 54.0600 | Density sensor error |
| 54.1200 | Black density measurement abnormality |
| 54.1201 | Cyan density measurement abnormality |
| 54.1202 | Magenta density measurement abnormality |
| 54.1203 | Yellow density measurement abnormality |
| 54.1400 | Color plane registration sensor error |
| 54.1599 | Black CPR pattern can't be read |
| 54.1501 | Cyan CPR pattern can't be read |
| 54.1502 | Magenta CPR pattern can't be read |
| 54.1503 | Yellow CPR pattern can't be read |
| 54.1500 | Yellow toner level sensor error |
| 54.1600 | Magenta toner level sensor error |
| 54.1700 | Cyan toner level sensor error |
| 54.1800 | Black toner level sensor error |

**Table 2-3 Event-log messages (continued)**

| Event code | Description |
|---|---|
| 54.1900 | Bad top-of-page (TOP) sensor |
| 54.2100 | Beam detect (BD) error |
| 55.0000 | Engine internal communication error |
| 55.0601 | DC controller NVRAM data error |
| 55.0602 | DC controller NVRAM access error |
| 55.1000 | DC controller memory error |
| 59.0160 | ITB or main motor rotation error (59.A0) |
| 59.0192 | Developer motor rotation error (59.C0) |
| 59.0240 | Transfer alienation failure (59.F0) |
| 59.3000 | Fuser motor startup error |
| 59.4000 | Fuser motor error |
| 59.5000 | Image drum motor startup error—black |
| 59.5300 | Image drum motor startup error—yellow |
| 59.6000 | Image drum motor rotation error- black |
| 59.6300 | Image drum motor rotation error- yellow |
| 59.7000 | Black developer motor startup error |
| 59.7300 | Yellow developer motor startup error |
| 59.8000 | Black developer motor rotation error |
| 59.8300 | Yellow developer motor rotation error |
| 59.9000 | Main motor start error |

# Paper feeds incorrectly or becomes jammed


- The product does not pick up paper
- The product picks up multiple sheets of paper
- Prevent paper jams
- Clear jams


## The product does not pick up paper

**NOTE:** If this error persists, replace the pickup roller and separtation roller.

If the product does not pick up paper from the tray, try these solutions.

1. Open the product and remove any jammed sheets of paper.
2. Load the tray with the correct size of paper for your job.
3. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides so they are touching the paper stack without bending it.

## The product picks up multiple sheets of paper

**NOTE:** If this error persists, replace the pickup roller and separtation roller.

If the product picks up multiple sheets of paper from the tray, try these solutions.

1. Remove the stack of paper from the tray and flex it, rotate it 180 degrees, and flip it over. *Do not fan the paper.* Return the stack of paper to the tray.
2. Use only paper that meets HP specifications for this product.
3. Use paper that is not wrinkled, folded, or damaged. If necessary, use paper from a different package.
4. Make sure the tray is not overfilled. If it is, remove the entire stack of paper from the tray, straighten the stack, and then return some of the paper to the tray.
5. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides so they are touching the paper stack without bending it.

## Prevent paper jams

**NOTE:** If the product is being serviced because of excessive paper jams, do the following:

Remove all of the paper from the product, and then clean the product. Test the product by printing with paper that meets HP specifications.

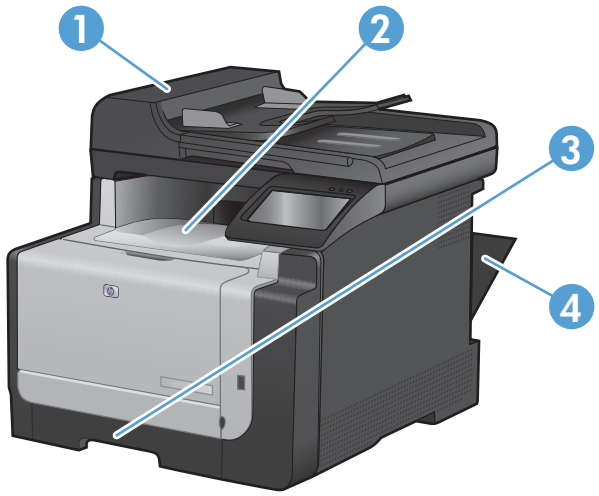
To reduce the number of paper jams, try these solutions.

1. Use only paper that meets HP specifications for this product.
2. Use paper that is not wrinkled, folded, or damaged. If necessary, use paper from a different package.
3. Use paper that has not previously been printed or copied on.
4. Make sure the tray is not overfilled. If it is, remove the entire stack of paper from the tray, straighten the stack, and then return some of the paper to the tray.
5. Make sure the paper guides in the tray are adjusted correctly for the size of paper. Adjust the guides so they are touching the paper stack without bending it.
6. Make sure that the tray is fully inserted in the product.

## Clear jams

### Jam locations

Jams can occur in these locations:

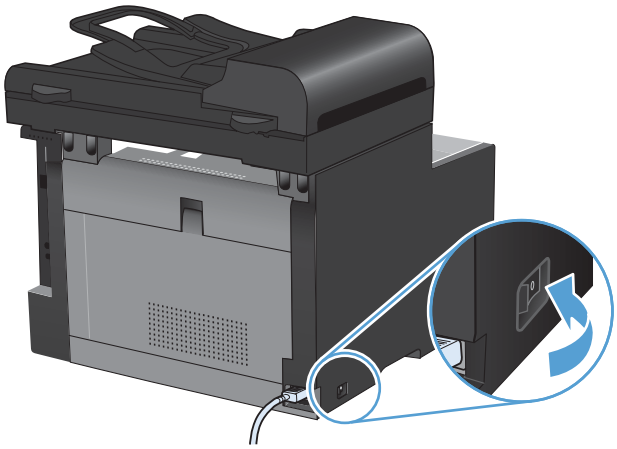



| | |
|---|---|
| 1 | Document feeder |
| 2 | Output bin |
| 3 | Tray 1 |
| 4 | Rear door |

Loose toner might remain in the product after a jam. This problem typically resolves itself after a few sheets have been printed.

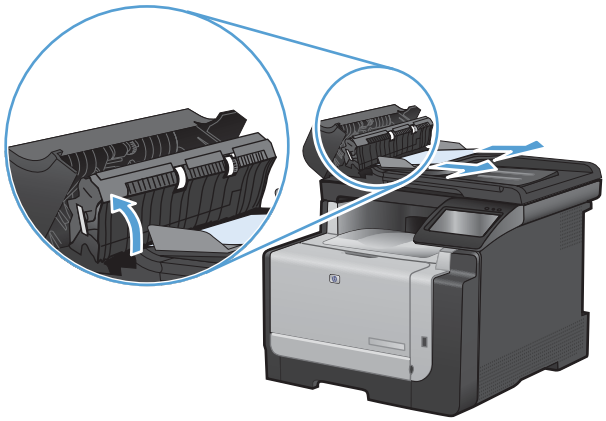
## Clear jams from the document feeder

1. Turn the product off.

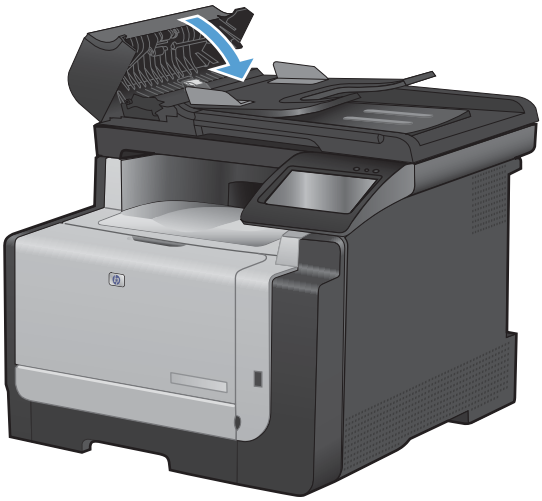


2. Open the document feeder cover.

3. Lift the document feeder mechanism, and gently pull the jammed paper out.



4. Close the document feeder cover.



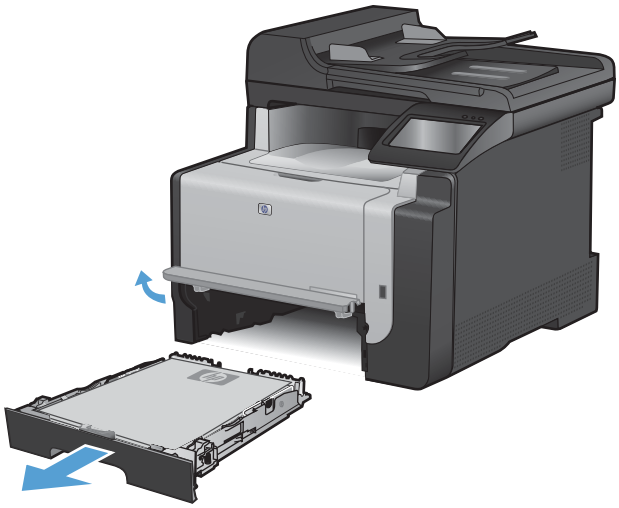
## Clear jams from the input tray

△ **CAUTION:** Do not use sharp objects, such as tweezers or needle-nose pliers, to remove jams. Damage caused by sharp objects is not covered by the warranty.

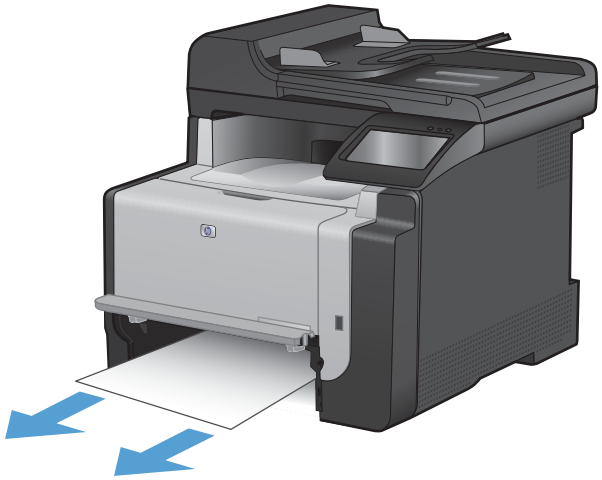
When removing jammed paper, pull it straight out from the product. Pulling jammed paper out of the product at an angle can damage the product.

**NOTE:** Depending on where the jam is located, some of the following steps might not be necessary.

1. Remove Tray 1, and lift the jam access door above the tray.

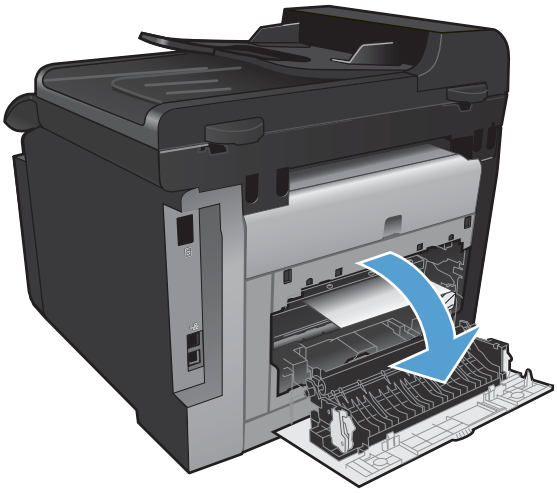


2. With both hands, grasp the paper, and carefully pull it free from the product.

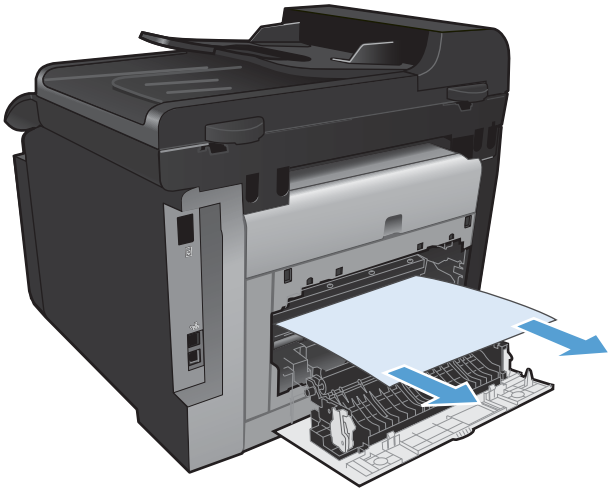


3. Open the rear door.

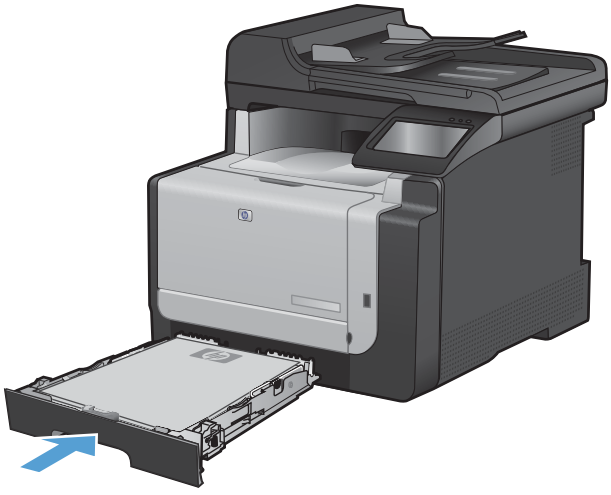
   **CAUTION:** The fuser, located in the back of the product, is hot. Wait for the fuser to cool before continuing.



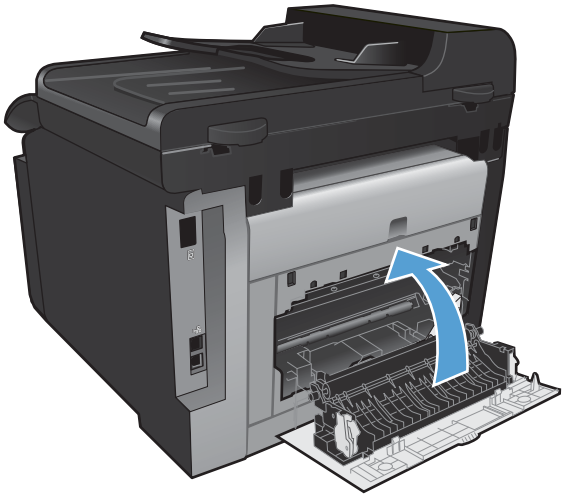
4. With both hands, grasp the paper, and carefully pull it free from the product.



5. Reinsert the tray.



6. Close the rear output door.



7. Print a cleaning page, which removes excess toner from the paper path.

   a. From the Home screen, touch the Setup button.

   b. Touch the Service menu.

   c. Touch the Cleaning Page button.

   d. Load plain letter or A4 paper when you are prompted.

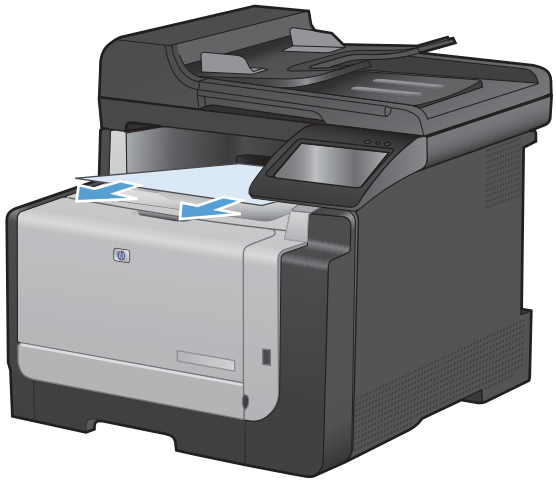
   e. Touch the OK button to begin the cleaning process.

      A page feeds through the product slowly. Discard the page when the process is completed.

## Clear jams from the 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.

1. With both hands, grasp the paper, and carefully pull it free from the product.



# Service mode functions

## Secondary service menu

Use the secondary service menu to print service-related reports and to run special tests. Customers do not have access to this menu.

### Open the secondary service menu

1. Touch the Setup button.
2. Touch the middle of the screen along the left-hand edge (callout 1), and then immediately touch the lower-right corner (callout 2) of the screen.

3. When the Home screen appears, touch the Setup button.
4. Touch the 2ndary Service button to open the menu.

**TIP:** When you are finished with the 2ndary Service menu, touch the lower-right corner of the screen until the **Job settings cleared.** message appears on the Home screen. This step removes the 2ndary Service option from the Setup Menu.

### Secondary service menu structure

**Table 2-4 Secondary service menu**

| Menu item | Sub-menu item | Description |
|---|---|---|
| **Service Reports** | **Cont. Self-Test** | This item prints a continuous configuration page. |
| | **Error report** | This item prints an error report that contains the last 5 instances of **49 Error, Turn off then on** or **79 Error Turn off then on** errors. |
| **Location** | A list of available locations appears | This item sets certain product parameters that are dependent on the location, such as the default paper size and the symbol set.<br><br>Scroll to the appropriate location and select **Yes** to set the location. The product automatically restarts after you change the location. |

Table 2-4 **Secondary service menu (continued)**

| Menu item | Sub-menu item | Description |
|---|---|---|
| **Display test** | | This test verifies that the LEDs and characters on the control-panel display function correctly.<br><br>At the beginning of the test, each of the LEDs is turned on one-at-time. Touch the OK button to continue to the next LED.<br><br>After the LED test is complete, the character test begins by testing the pixels on each line. Then, each of the 255 characters is displayed in groups of 16. Touch the OK button to continue to the next group of 16 characters. You can cancel the test at any time by touching the Cancel ✕ button. |
| **Button test** | | This test verifies that the control-panel buttons function correctly. The display prompts you to press each button. |
| **Color Cal.** | **Adjust color** | This item adjusts density settings for contrast, highlights, midtones, and shadows. Adjust each color individually. |
| | **Timing** | This item specifies how frequently the product should automatically perform a color calibration. The default setting is 48 hours. You can turn automatic calibration off. |
| **PBX ring detect** | On or Off | Configure the PBX ring detect setting. |
| **Clean Belt** | | This item runs additional belt-cleaning cycles. |
| **Pick roller** | | This item puts the pickup roller in position for replacement. |

# Product resets

The product resets—**Restore Defaults** and the NVRAM initialization—perform the same function. If possible, use the **Restore Defaults** function in the **Service** menu. If that menu is not accessible, use the NVRAM sequence.

## Restore the factory-set defaults

△ **CAUTION:** Restoring the factory-set defaults returns all of the product and network settings to the factory defaults, and it also clears the fax header name, phone number, and any stored faxes in the product memory. This procedure also clears the fax phone book, and deletes any pages that are stored in the memory. The procedure then automatically restarts the product.

1. On the product control panel, touch the Setup 🔧 button.
2. Scroll to and touch the Service menu.
3. Scroll to and touch the Restore Defaults button, and then touch the OK button.

   The product automatically restarts.

## NVRAM initialization

Performing an NVRAM initialization resets the following settings and information:

- All menu settings are reset to factory default values.
- All localization settings, including language and country/region, are reset.

△ **CAUTION:** All onboard network settings are also reset. Be sure to print a configuration page before restoring defaults. Make note of the IP address that is listed on the Jetdirect configuration page. You might need to restore the IP address after an NVRAM initialization.

After performing an NVRAM initialization, reconfigure any computers that print to this product. Uninstall and then reinstall the product software on the computers.

1. Turn the product off.
2. Touch the right arrow button. Hold this button as you turn the product on.

   **NOTE:** The right arrow button is not visible when the product is off, but it is still active. Note its position before you turn off the product.

3. When **Permanent storage init.** appears on the display, release the right arrow button.

When the product has finished the NVRAM initialization, it returns to the Ready state.

# Solve fax problems

## Troubleshoot fax codes and trace reports

### View and interpret fax error codes

Use fax error codes from the fax activity log to solve problems with the product fax features.

**Table 2-5 Fax receive error codes**

| Error code | Description | Solution |
|---|---|---|
| 200 | The fax session has completed without errors. | N/A |
| 221 | User has touched the Cancel ✕ button, causing the fax session to be prematurely halted. | Have the sender resend the fax. |
| 222 | The receiving product has answered a call but has been unable to detect the presence of a calling fax product for one of the following reasons:<br>• Typically this will be due to the receiving fax product answering a voice call.<br>• The sender canceled the fax transmission by touching the Cancel ✕ button immediately prior to, or just as the receiving product answered the call.<br>• The sending product automatically ended the call immediately prior to, or just as the receiving product answered the call.<br>• The sending (sending) fax product determined there was a feature incompatibility between the two and disconnected immediately before transmitting any further fax tones or T.30 frames. (This is very rare.) | 1. Confirm that the sender is a fax product and not a voice caller—typically you must rely on the sender informing the caller that the fax session is failing.<br>2. If the sending product ends the call just as the receiving product starts reception, reduce the ring count after which the receiving product answers. Alternatively suggest that the sender manually dials to the receiving product and then manually starts the fax session, by touching theStart Fax button once fax tones have been heard from the receiving product.<br>3. Confirm that the sender is not inadvertently attempting to poll transmit from the receiving product, instead of transmitting to the receiving product.<br>4. Reconfigure the receiving fax product to use different configuration settings, toggle the ECM state, and/or select a slower reception speed. |
| 223 (ECM error) | The receiving product has been unable to receive an entire page even after multiple attempts to re-receive the parts of the page that contain errors. This is usually due to extremely poor line conditions. | 1. Reattempt the fax reception at a different time when telephone line conditions have improved.<br>2. If the error persists, disable ECM. Errors may still occur, and may result in degraded image quality on the received page. However, the ability to receive the entire document will be improved. |
| 224 | The receiving product has received one or more pages with excessive errors. This is usually due to extremely poor line conditions. Error correction is not used during this session so errors are not corrected. | Reattempt the fax reception at a different time when telephone line conditions have improved. |
| 225 | The sending product has attempted to initiate a sending diagnostic session with this product even though sending diagnostic access is disabled. | Enable the sending diagnostics capability on the receiving product. |

**Table 2-5 Fax receive error codes (continued)**

| Error code | Description | Solution |
|---|---|---|
| 226 | The sending product has attempted to initiate a sending diagnostic session with this product but the sending diagnostic versions supported by the two products are incompatible. | None. Sending diagnostics cannot occur between products with incompatible sending versions. |
| 227 | The sending product has attempted to initiate a fax session at a speed and modulation that is not supported by the receiving product. | Reconfigure the receiving product to receive at a slower speed. |
| 228 | The sending product has attempted to initiate a poll transmission from the receiving product even though the receiving product is not configured for poll transmission. | 1. Confirm that polling by the sender is desired. It is possible that the sender has inadvertently attempted to poll. If this is the case reattempt a normal transmission from the sending product.<br>2. If polling by the remote user was desired, confirm that the receiving product was correctly configured for poll transmission. |
| 229 | The sending product has attempted to initiate a secure poll transmission from the receiving product but has not provided a valid password. | If the sender is the desired recipient for the polled document, confirm that the sender has the correct password, and that the receiving product is configured with the same password. |
| 230 | The sending product has attempted to initiate an operation that requires error correction but has not selected error correction for the session. | Enable ECM on both the receiving product and the sending product. |
| 231 | The sending product has attempted to initiate a transmission to the receiving product even though the capability to receive is disabled at the receiving product. | Ensure that the receiving product is capable of receiving a document. Check that paper is correctly loaded, paper is not jammed within the product, and any other system abnormalities have been cleared. |
| 232<br>233 and 234<br>235 and 236 (ECM error)<br>237 | One of the following has occurred:<br>• A communication failure has occurred between the two products.<br>• The user at the remote product may have touched the Cancel ✕ button.<br>• The power at the remote product has been interrupted or deliberately turned off, causing the fax session to be interrupted. | 1. Re-attempt the fax reception at a different time when telephone line conditions have improved.<br>2. If the error persists, and error correction is in use for the fax session, disable ECM. |
| 238<br>239–241 | The sending fax product sent an unexpected communication. This is a defect in the sending product. | N/A |
| 242 | The sending fax product is attempting to receive instead of send. Both products have attempted to start a reception at the same time. It is possible to accidentally initiate a fax reception after dialing on many products, if there is no paper in the product or if the paper is not correctly loaded and cannot be sensed by the appropriate document sensor. | Ensure that a document is ready and correctly loaded in the sending fax product and that the sending product is attempting to initiate a transmission and not a reception. |

**Table 2-5 Fax receive error codes (continued)**

| Error code | Description | Solution |
|---|---|---|
| 243 and 244 | One of the following has occurred:<br>• The user of the remote product has touched the Cancel ✕ button, causing the session to be prematurely terminated.<br>• The sending fax product determined there was a feature incompatibility between the two products and has terminated the session. An example would be when the receiving product wanted to initiate polling, but the sending product did not support this mode of operation. | 1. Confirm that the sender is not inadvertently attempting to poll transmit from the receiving product, instead of transmitting to the receiving product. This mode of operation must be specially configured on the receiving product. If poll transmission from the receiving product is the desired mode of operation, confirm that the receiving product has been configured for this operation.<br>2. Reconfigure the receiving fax product to use different configuration settings, toggle the ECM state, and/or select a slower reception speed. |
| 245 and 246 (ECM error) | The user of the sending product has touched the Cancel ✕ button, causing the session to be prematurely terminated. The receiving product has been "holding off" the remote product during reception of a large and/or complex document due to lack of available memory. This hold-off time has exceeded the timeout (typically 60 seconds) used by the sending product, and it has terminated the session. | 1. If the document was large, ask the sender to retransmit the document as two or more smaller documents.<br>2. Disable ECM and reattempt the fax reception. |
| 247-251 | The sending product appears to be "stuck on." | N/A |
| 252 | Telephone line conditions were too poor to receive a fax. | 1. Reattempt the fax reception at a later time when line conditions may have improved.<br>2. Configure the receiving product to start reception at a lower speed.<br>3. If the receiving product received successfully several pages of a larger document, ask the sender to transmit the document in several smaller parts. |
| 253 | The sending product has attempted to initiate a page transmission using a page width that is not supported by the receiving product. | Ask the sender to reconfigure the fax product to transmit using a "normal" (letter/A4) page width. |

**Table 2-5 Fax receive error codes (continued)**

| Error code | Description | Solution |
|---|---|---|
| 281 | The receiving product has not received any data at the start of a page during non-ECM reception, although the modem has not detected a sending disconnect. The sending product is probably transmitting fill bytes instead of data and has either jammed or broken. | Reattempt the fax reception after first requesting that the sender check the sending product. |
| 282 | The receiving product has not received any data at the start of a page during ECM reception although the modem has not detected a sending disconnect. The sending product is probably transmitting sync frames instead of data and has either jammed or broken. | |
| 283 | The receiving product has detected that the modem carrier has stopped. Either the line has been disconnected or the sending product has aborted the transmission. | |
| 284 | The receiving product has not received any data during non-ECM page reception and a timeout failure has occurred. The sending product is probably transmitting fill bytes instead of data and has either jammed or broken. | |
| 285 | The receiving product has stopped receiving any data during an ECM page reception although the modem has not detected a sending disconnect. The sending product is probably transmitting sync frames instead of data and has either jammed or broken. | |
| 286 | The sending product has transmitted invalid data. The receiving product has received frames with errors during an ECM reception and requested retransmission of the errored frames. The data that is resent does not correspond to the data that was requested. This is an implementation error from the sending product. | Disable ECM and reattempt the reception. |
| 290 | The sending product has attempted to renegotiate the session mode from ECM to non-ECM between pages. This operation is not supported and the session has been abandoned. | Reattempt the fax reception and split the document into two portions corresponding to the ECM and non-ECM portions. Some products will attempt to use non-ECM for photo mode, so this may be associated with a between-page encoding change to support photo mode. |
| 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 receiving product is unable to open a file to receive data into. May be associated with low memory, although low memory should be handle more gracefully than this. | If the error persists, reinitialize the product. |
| 292 | The sending product has attempted to renegotiate the encoding mode from non-JPEG to JPEG. This operation is not supported and the session has been abandoned. | Reattempt the fax reception and split the document into two portions corresponding to the JPEG and non-JPEG portions. Some products will attempt to use JPEG for photo mode, so this may be associated with a between-page encoding change to support photo mode. |

**Table 2-6 Fax send error codes**

| Error code | Description | Solution |
|---|---|---|
| 300 | Fax session has completed without errors | N/A |
| 311 | The user of the receiving product has touched the Cancel ✕ button, causing the session to be prematurely halted before all pages have been transmitted. | Resend the fax. |
| 312 | A sending fax product has failed to answer the call. Specifically fax tones or the fax handshake from a sending product has not been detected. Typically this is due to the user calling the wrong number, the correct number has been called but the product has been configured not to answer, or the sending product has temporarily disabled answering due to a condition such as lack of paper or a paper jam. | Confirm the sending fax product is ready to receive a document and reattempt the transmission. |
| 313 | A busy signal has been detected each time the receiving product has attempted to call the sending product. | Reattempt the fax transmission at a later time when the line is no longer busy. |
| 314 | The receiving product has attempted to initiate a sending diagnostic session but has detected that sending diagnostics are disabled at the sending product. | Enable sending diagnostics on the sending product. |
| 315 | The receiving product has attempted to initiate a sending diagnostic session but has detected that the sending diagnostic version supported by the sending product is incompatible. | No solution. Sending diagnostics cannot occur between products with incompatible sending versions. |
| 316 | The receiving product is setup to initiate document transmission, but it has detected that the sending product is not able to receive a document. This error should be very rare since normally a sending product will not answer if it cannot receive a document. On of the few exceptions to this would occur if the sending product was configured to poll transmit a document but was unable to receive. | Configure the sending product for reception. Typically the sender should ensure paper is loaded in the product, paper jams are fixed, and any other system abnormalities are cleared. |
| 317 | The sending product cannot support a fax reception at any speed or modulation that is supported by the receiving product. | N/A |
| 318 | The sending product cannot support a fax reception at the page width selected by the receiving product. | N/A |
| 319 | The receiving product has attempted to initiate a binary file transfer (BFT) but has detected that the sending product does not support this mode of operation. | Do one of the following:<br>• Enable the BFT capability on the sending product if it is supported.<br>• Retransmit the document as a normal fax, rather than attempting a BFT transfer. |

**Table 2-6 Fax send error codes (continued)**

| Error code | Description | Solution |
|---|---|---|
| 320 | The receiving product is set up to initiate poll reception with a sending product, but it has detected that the sending product is not configured to do this. Poll transmission from a sending product is typically configured on a session-by-session basis. | Do one of the following:<br>• Confirm that the receiver really wants to attempt a poll reception. If not, reconfigure the receiving product for a normal fax transmission<br>• Configure the sending product for poll transmission. The sender must load a document to transmit and then configure the product for polling. |
| 321 | There was a communication error with the receiving fax product due to poor telephone line conditions. | Reattempt the fax transmission at a different time when telephone line conditions have improved. |
| 322–324 | Telephone line conditions were too poor to send a fax. | 1. Reattempt the fax transmission at a different time when telephone line conditions have improved.<br>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 were very poor. | 1. Reattempt the fax transmission at a different time when telephone line conditions have improved.<br>2. If the error persists, disable ECM. Errors may still occur, and may result in a degraded image quality on the received page. However, the ability to transmit the entire document will be improved. |
| 329–331 | The sending product has reported that one or more pages have been received (non-ECM mode) with excessive errors. This error does not result in the session being terminated immediately. Subsequent page transmission can still occur and later pages may be received without error. | 1. Reattempt the fax transmission at a different time when telephone line conditions have improved.<br>2. If the error persists, select a lower speed for the initial transmission speed. |
| 332–337 | There is a defect in the sending fax product. | Send from another product. |
| 338–342 (ECM error) | | |
| 343 | | |
| 344–348 | One of the following has occurred:<br>• The sending product has failed to respond to a fax command from the receiving product due to the connection being interrupted.<br>• The sender has touched the Cancel ✕ button while the reception was in progress.<br>• In rare conditions, incompatibility between the two products may cause the sending product to abandon the call. | 1. Reattempt the fax transmission at a different time when telephone line conditions have improved.<br>2. fax session was using error correction, disable ECM. |
| 349-353 (ECM error) | | |
| 354 and 355 | | |

**Table 2-6 Fax send error codes (continued)**

| Error code | Description | Solution |
|---|---|---|
| 356-361 | One of the following has occurred:<br>• The sender has touched the Cancel ✕ button, causing the session to be aborted.<br>• The sending product has encountered a system problem such as no paper or a paper jam, which has inhibited it from receiving any more pages, and which has caused it to terminate the session prematurely.<br>• A feature incompatibility has been encountered by the sending product, causing it to terminate the session. | 1. Configure the sending product for document reception by clearing any paper jams, loading sufficient paper, and clearing any other system errors.<br>2. Configure the receiving fax product to use different configurations, toggle the ECM state, or select a slower reception speed. |
| 362-366 (ECM error) | | |
| 367-372 | The sending product appears to be "stuck on". | N/A |
| 373-377 (ECM error) | | |
| 378 and 379 | | |
| 380 | The sending product has failed to issue a valid response to a CTC frame. This occurs during ECM transmission after multiple retransmissions of erred data. | Send from another product. |
| 381 | One of the following has occurred:<br>• The sending product has failed to respond to a fax command from the receiving product due to the connection being interrupted.<br>• The sender has touched the Cancel ✕ button while the reception was in progress. | 1. Reattempt the fax transmission at a different time when telephone line conditions have improved.<br>2. If the error persists, disable ECM. |
| 382 | The sending fax product has been "holding off" the receiving fax product from continuing the ongoing transmission due to a temporary low memory condition at the sending product. If this "hold-off" period exceeds a product's specific timeout value, the session will terminate. | 1. 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.<br>2. If the error persists, disable ECM. |
| 383 | One of the following has occurred:<br>• The sending product has failed to respond to a fax command from the receiving product due to the connection being interrupted<br>• The sender has touched the Cancel ✕ button while the reception was in progress. | 1. Reattempt the fax transmission at a different time when telephone line conditions have improved.<br>2. If the error persists, disable ECM. |
| 384 | The receiving product has attempted a black JPEG transmission to a product that does not support this mode. | Reattempt the fax transmission using a different mode. |

**Table 2-6 Fax send error codes (continued)**

| Error code | Description | Solution |
|---|---|---|
| 386 | The receiving product has failed to complete the third phase of the initial V.34 handshake after originating a fax session. This is usually due to poor line conditions although it may be a compatibility issue with certain products and/or line conditions. | 1. Reattempt the fax transmission at a different time when telephone line conditions have improved.<br>2. Disable V.34 on the receiving product and attempt the transmission using the V.17 mode. |
| 387 | The receiving product has failed to successfully negotiate the initial V.8 handshake with the sending product after originating a fax session. Typically this will occur when the sending product is not fax capable or has disabled reception. It may also be a compatibility issue with certain products and/or line conditions. | |
| 388 | The receiving product has originated a fax session and detected a sending fax product but has been unable to detect any T30 frames. If the product is in V.17 mode it is likely that the connection has been interrupted. In V.34 mode is also possible for this error to occur due to compatibility problems with certain products and/or line conditions. | |
| 389 | The receiving product has originated a fax session and has reattempted V.8 negotiations multiple times without success. | |
| 390 | The receiving product has originated a fax session 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 due to a low memory condition although it could be due to other internal problems that cause generation of data for transmission to stall. | Reattempt the transmission after making sure documents stored in memory are printed and the product has paper ready for printing. If the problem persists reinitialize permanent storage. |
| 391 | The receiving 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 due to a low memory condition although it could be due to other internal problems that cause generation of data for transmission to stall. | |

**Table 2-6 Fax send error codes (continued)**

| Error code | Description | Solution |
|---|---|---|
| 392 | The receiving product has answered a fax session and completed the initial V.34 handshake but has been to detect any T30 frames. This failure is either a compatibility problems with certain products or is due to line conditions. | 1. Reattempt the fax reception at a different time when telephone line conditions have improved.<br>2. Disable V.34 on the receiving product and attempt the transmission using the V.17 mode. |
| 393 | The receiving product has failed to complete the third phase of the initial V.34 handshake after answering a fax session. This is usually due to poor line conditions although it may be a compatibility issue with certain products and/or line conditions. | |
| 394 | The receiving product has failed to successfully negotiate the initial V.8 handshake with the sending product after answering a fax session. Typically this will occur when the calling product is not fax capable. It may also be a compatibility issue with certain products and/or line conditions. | |
| 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 sending product and may be due to an error with the implementation of the sending product. | 1. Reattempt the fax reception. If transmission errors are not encountered because line conditions have improved, then this error will probably be avoided.<br>2. Disable V.34 on the receiving product and attempt the transmission using the V.17 mode. |

**Table 2-6 Fax send error codes (continued)**

| Error code | Description | Solution |
|---|---|---|
| 396–409 | An error occurred during a V.34 transmission when the receiving product was unable to correctly handshake with the sending product and was consequently unable to transmit a T30 frame. This occurs when the line was disconnected or if line conditions degrade during the session. | Reattempt the fax transmission at a different time when telephone line conditions have improved. |
| 410–419 | An error occurred during a V.34 reception when the receiving product was unable to correctly handshake with the sending product and was consequently unable to transmit a T30 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 product during phase four, which occurs after V.8 and before the first T.30 frames are exchanged. Compatibility problems have been observed in this area when sending to non-HP units. | |
| 421 | V.34 negotiations have failed from the originating product during phase three, which occurs after V. 8, before phase four, and before the first T.30 frames are exchanged. Compatibility problems have been observed in this area when sending to non-HP units. | |
| 422 | V.34 negotiations have failed from the answering product during phase four, which occurs after V.8 and before the first T.30 frames are exchanged. | |
| 423 | V.34 negotiations have failed from the answering product during phase three, which occurs after V. 8, before phase4, and before the first T.30 frames are exchanged. | |
| 430 | The transmitting product is unable to send continuous ones at the end of the control channel prior to starting the primary channel. This is a V. 34 error. This error may be associated with line conditions although it is more likely to be due to internal problems with the modem. | |
| 431 | The transmitting product has not received a response after aborting a transmission. Depending upon when the session is aborted, some sending products may not respond. It should be noted that the receiving unit always attempts to abort the session in a way that allows the sending product to respond to the final PPS_EOP. | N/A |
| 440–445 | An error occurred during a V.34 transmission after one or more partial pages (image data) were transmitted using the primary channel. The transmitting product was unable to restart the control channel in order to resume the T30 handshake. This typically occurs when the receiving product prematurely disconnects during partial page reception, although it is possible it may also be due to compatibility issues. | Reattempt the fax reception at a different time when telephone line conditions have improved. |

### Fax trace report

A fax T.30 trace report has information that can help resolve fax transmission problems. If you call HP for help in resolving these problems, print a T.30 trace report before you call.

1. From the Home screen, touch the Setup button.
2. Touch the Service menu.
3. Touch the Fax Service menu.
4. Touch the Print T.30 Trace button, and then touch the Now button.

## Product updates

Software and firmware updates and installation instructions for this product are available at www.hp.com/support/CM1410series. Click **Downloads and drivers**, click the operating system, and then select the download for the product.

# 3 Parts and diagrams


- Order parts by authorized service providers
- How to use the parts lists and diagrams
- Assembly locations
- Covers
- Internal assemblies
- PCAs
- Scanner and document feeder (ADF) main assemblies
- Document feeder internal components
- Alphabetical parts list
- Numerical parts list

# Order parts by authorized service providers

## Order replacement parts

**Table 3-1 Order parts, accessories, and supplies**

| | |
|---|---|
| Order supplies and paper | www.hp.com/go/suresupply |
| Order genuine HP parts or accessories | www.hp.com/buy/parts |
| Order through service or support providers | Contact an HP-authorized service or support provider. |

## Related documentation and software

**Table 3-2 Related documentation and software**

| Item | Description | Part number |
|---|---|---|
| *HP LaserJet Pro CM1410 Color MFP Series User Guide* | Product user guide. | CE861-90907 |
| *HP LaserJet Pro CM1410 Color MFP Series Service Manual* (this manual) | English service manual (this manual) | CE861-90939 |

## Supplies part numbers

**Table 3-3 Supplies part numbers**

| Item | Description | Part number |
|---|---|---|
| HP LaserJet print cartridges | Black | CE320A (new)<br>CE320-67901 (exchange) |
| | Cyan | CE321A (new)<br>CE321-67902 (exchange) |
| | Yellow | CE322A (new)<br>CE322-67901 (exchange) |
| | Magenta | CE323A (new)<br>CE323-67901 (exchange) |

## Service parts

**NOTE:** The parts in the following table are not shown in the assembly illustrations in this chapter.

**Table 3-4 Service parts**

| Item | Description | Part number |
|---|---|---|
| HP jewel | HP logo | 7121-8266 |

## Customer self repair parts

**Table 3-5 Customer replaceable units (CRU) kit part numbers**

| Item | Description | Part number |
|---|---|---|
| Document-feeder input tray | Instructions, install Document feeder (ADF) input tray | CE861-90973 |
| Cassette | Instructions, install paper tray (cassette) | CE861-90974 |

## Whole-unit replacement part numbers

**NOTE:** Whole-unit replacement products include the formatter PCA.

**Table 3-6 Whole-unit replacement part numbers**

| Item | Description | Part number |
|---|---|---|
| HP LaserJet Pro CM1415fn | 110 V | • CE861-67001 (North American Region, and Taiwan); New<br>• CE861-67006 (Brasil); New |
| | 220 V | • CE861-69002 (Europe, Middle East, and Africa); Exchange<br>• CE861-67003 (China, and Malaysia); New<br>• CE861-67004 (Asian Pacific, and Latin America Region); New<br>• CE861-67005 (Chile, and Argentina); New |
| HP LaserJet Pro CM1415fnw | 110 V | • CE862-67001 (North American Region, and Taiwan); New<br>• CE862-67006 (Brasil); New |
| | 220 V | • CE862-69002 (Europe, Middle East, and Africa); Exchange<br>• CE862-67003 (China, and Malaysia); New<br>• CE862-67004 (Asian Pacific, and Latin American Region); New<br>• CE862-67005 (Chile, and Argentina); New |

# How to use the parts lists and diagrams

△ **CAUTION:** Be sure to order the correct part. When looking for part numbers for electrical components, pay careful attention to the voltage that is listed. Doing so will make sure that the part number selected is for the correct model.

**NOTE:** In this manual, the abbreviation “PCA” stands for “printed circuit-board assembly.” Components described as a PCA might consist of a single circuit board or a circuit board plus other parts, such as cables and sensors.

The figures in this chapter show the major subassemblies in the product and their component parts. A parts list table follows each exploded view assembly diagram. Each table lists the item number, the associated part number, and the description of each part. If a part is not listed in the table, then it is not a field replacement unit (FRU).

# Assembly locations

## Base product

Figure 3-1 Base product

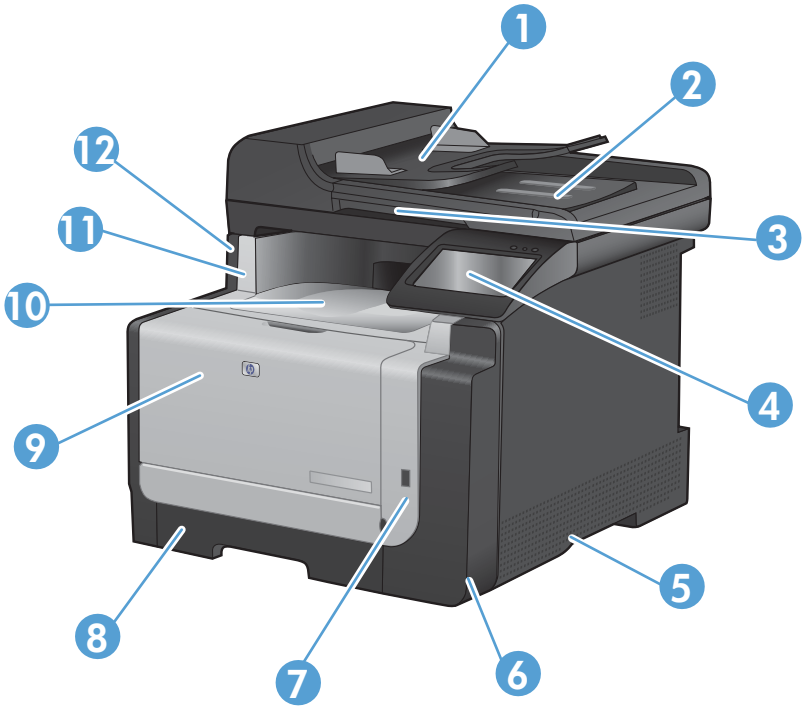



Table 3-7 **Base product**

| Item | Description | Item | Description |
|---|---|---|---|
| 1 | Document feeder input tray | 7 | Right-front cover-2 |
| 2 | Document feeder output bin | 8 | Input tray (Tray 1) |
| 3 | Scanner lid | 9 | Front door |
| 4 | Color touch screen control panel | 10 | Output bin |
| 5 | Right cover | 11 | Top cover |
| 6 | Right-front cover-1 | 12 | Left cover |

# Covers

**Figure 3-2** Covers, panels, and doors

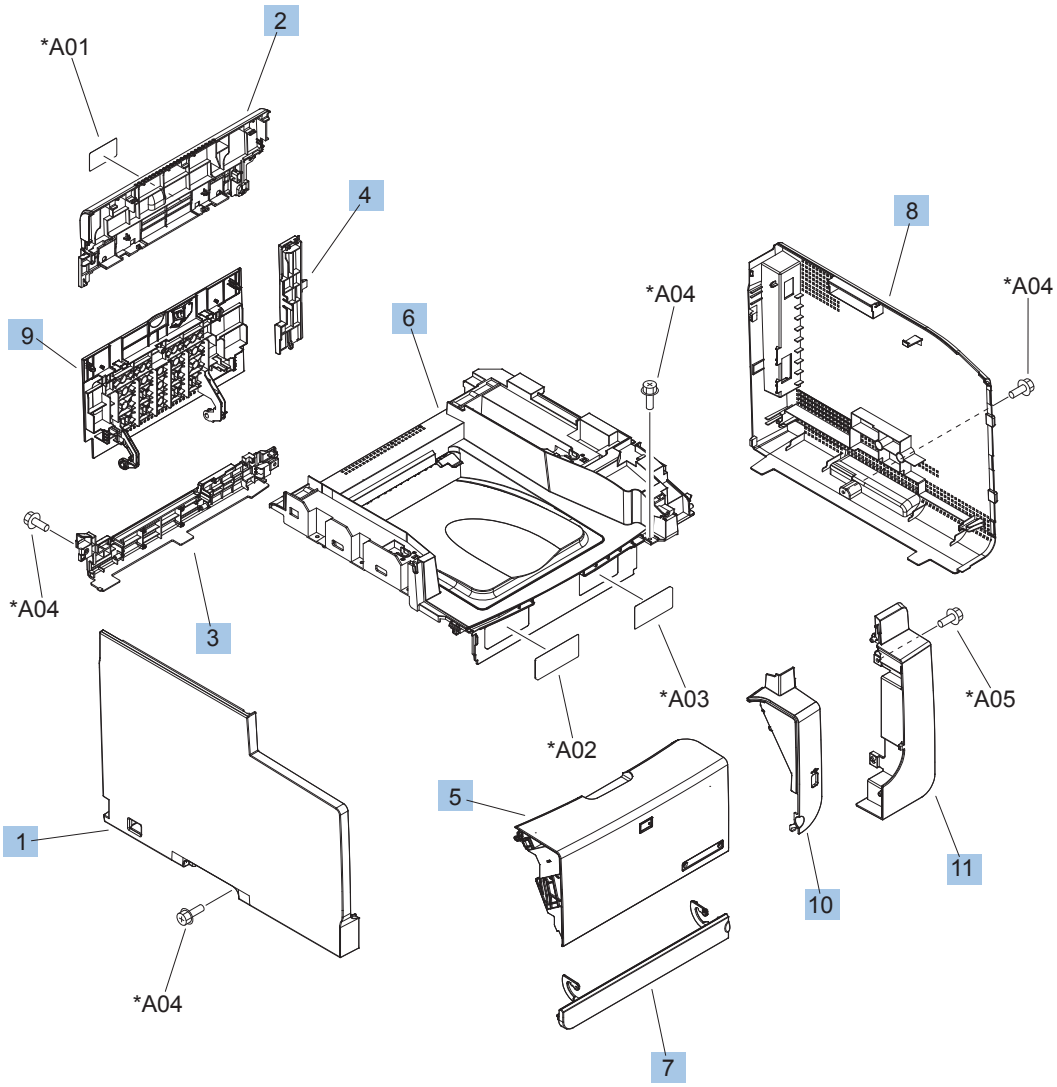


**Table 3-8 Covers, panels, and doors**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 1 | Cover, left | RC1-0795-000CN | 1 |
| 2 | Cover, rear upper | RC3-0819-000CN | 1 |
| 3 | Cover, rear lower | RC3-0753-000CN | 1 |
| 4 | Cover, rear center | RC3-0767-000CN | 1 |
| 5 | Door, front | RC3-0796-000CN | 1 |
| 6 | Cover, top assembly | RM1-7715-000CN | 1 |
| 7 | Cover, priority slot (jam access) | RM3-0812-000CN | 1 |
| 8 | Cover, right | RC3-0794-000CN | 1 |
| 9 | Door, rear | RC3-0820-000CN | 1 |
| 10 | Cover, right-front 1 | RC3-0797-000CN | 1 |
| 11 | Cover, right-front 2 | RC3-0798-000CN | 1 |

# Internal assemblies

## Internal assemblies (1 of 4)

**Figure 3-3** Internal assemblies (1 of 4)

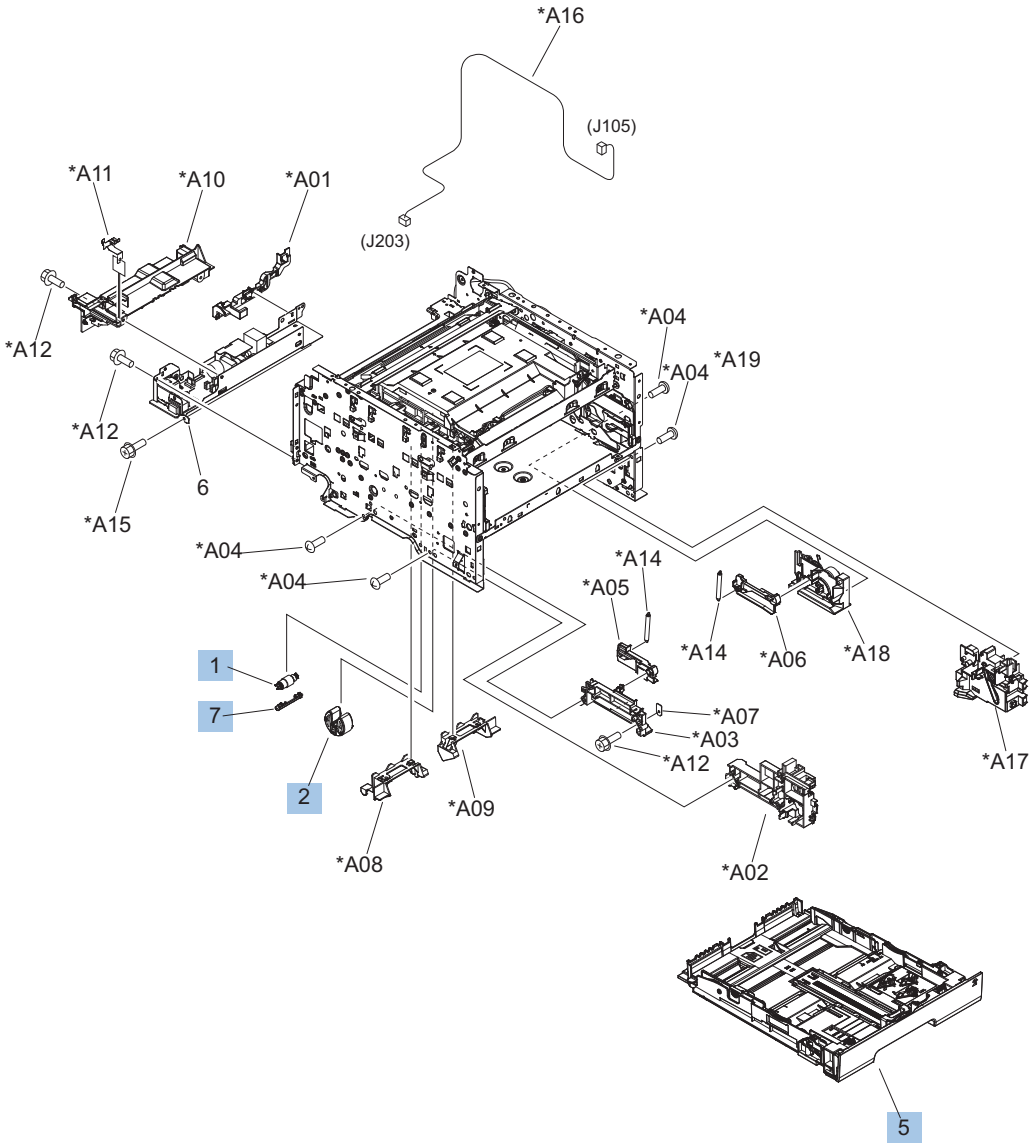


**Table 3-9 Internal assemblies (1 of 4)**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 1 | Separation roller assembly | RM1-4425-000CN | 1 |
| 2 | Pickup roller assembly | RM1-4426-000CN | 1 |
| 5 | Cassette assembly | RM1-7714-000CN | 1 |
| 7 | Cover, holder | RC2-2014-000CN | 1 |

# Internal assemblies (2 of 4)

**Figure 3-4** Internal assemblies (2 of 4)

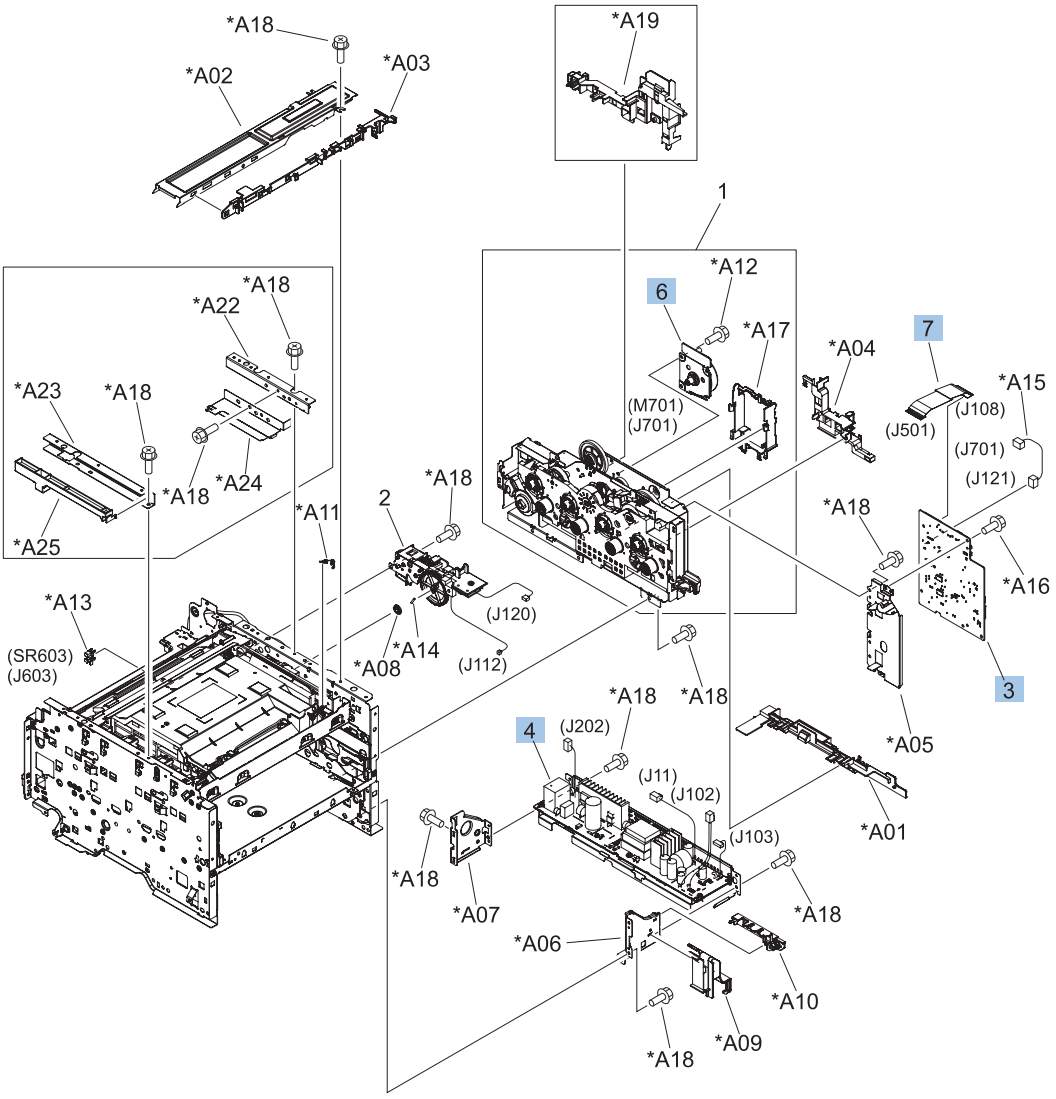


**Table 3-10 Internal assemblies (2 of 4)**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 3 | DC controller assembly | RM1-7813-000CN | 1 |
| 4 | Low-voltage power supply (110 to 127 v) | RM1-7830-000CN | 1 |
| 4 | Low-voltage power supply (220 to 240 v) | RM1-7831-000CN | 1 |
| 6 | Motor, DC main | RL1-1834-000CN | 1 |
| 7 | Cable, flat (FFC) | RK2-1955-000CN | 1 |

# Internal assemblies (3 of 4)

**Figure 3-5** Internal assemblies (3 of 4)

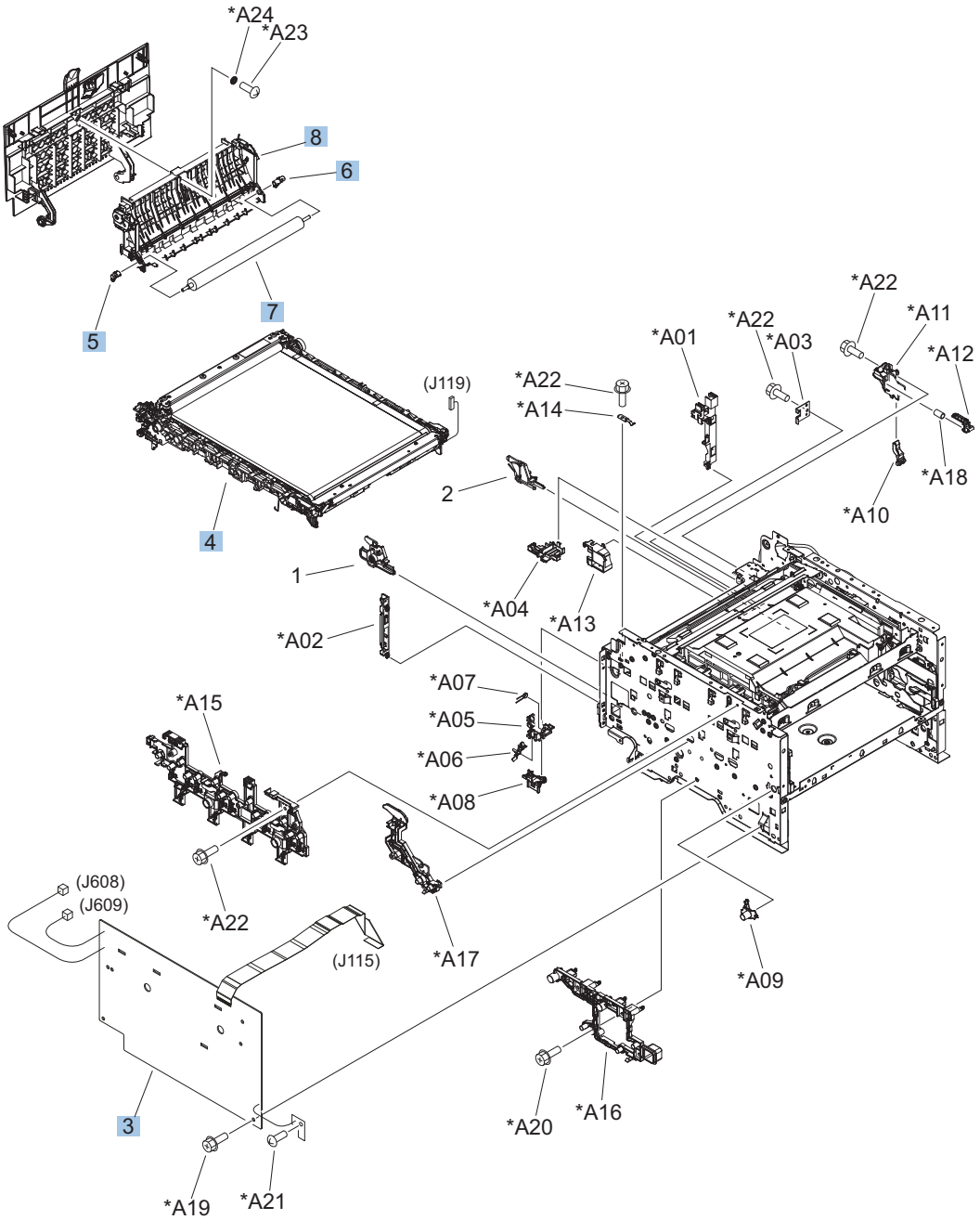


**Table 3-11 Internal assemblies (3 of 4)**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 3 | High-voltage power supply | RM1-7090-000CN | 1 |
| 4 | Intermediate transfer belt (ITB) assembly | RM1-7866-000CN | 1 |
| 5 | Bushing (transfer roller) | RC2-2111-000CN | 1 |
| 6 | Bushing (transfer roller) | RC2-2112-000CN | 1 |
| 7 | Roller, transfer | RM1-4445-000CN | 1 |
| 8 | Paper feed guide assembly | RM1-4448-000CN | 1 |

# Internal assemblies (4 of 4)

**Figure 3-6** Internal assemblies (4 of 4)

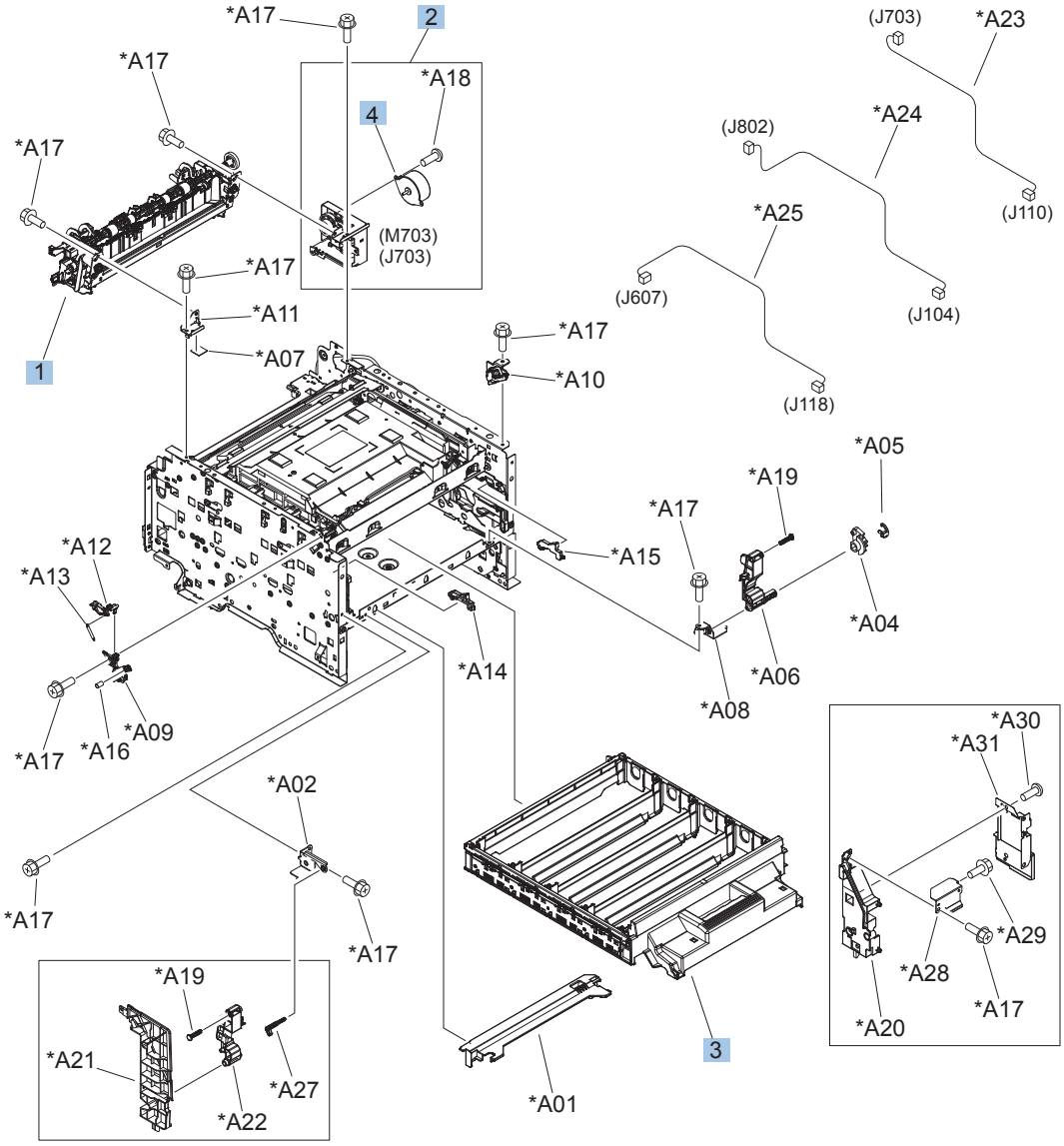


**Table 3-12 Internal assemblies (4 of 4)**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 1 | Fuser assembly (110 to 127 v) | RM1-4430-000CN | 1 |
| 1 | Fuser assembly (220 to 240 v) | RM1-4431-000CN | 1 |
| 2 | Fuser drive assembly | RM1-4927-000CN | 1 |
| 3 | Cartridge tray assembly | RM1-7853-000CN | 1 |
| 4 | Motor, stepping DC fuser | RK2-1872-000CN | 1 |

# PCAs

**Figure 3-7** PCAs

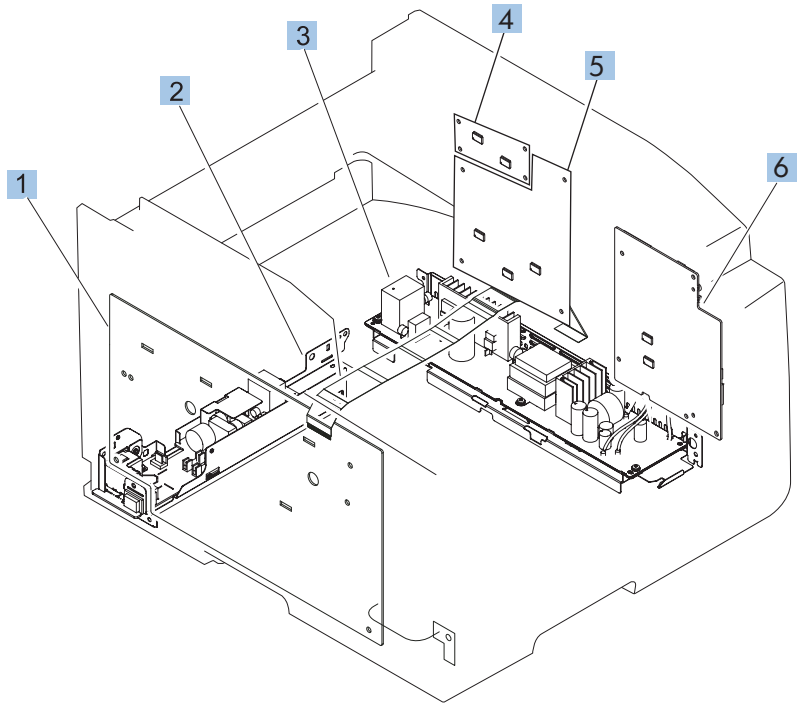


**Table 3-13 PCAs**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 1 | High-voltage power supply | RM1-7090-000CN | 1 |
| 2 | Fuser power supply (110 to 127 v) | RM1-7082-000CN | 1 |
| 2 | Fuser power supply (220 to 240 v) | RM1-7083-000CN | 1 |
| 3 | Low-voltage power supply (110 to 127 v) | RM1-7830-000CN | 1 |
| 3 | Low-voltage power supply (220 to 240 v) | RM1-7831-000CN | 1 |
| 4 | Fax PCA, DAA EU | CE683-67901 | 1 |
| 4 | Fax PCA, DAA AA | CE682-67901 | 1 |
| 5 | Formatter PCA | CE690-67901 | 1 |
| 6 | DC controller assembly | RM1-7813-000CN | 1 |
| Not shown | Wireless PCA | 1150-7938 | 1 |
| Not shown | USB PCA | CF030-67901 | 1 |

# Scanner and document feeder (ADF) main assemblies

**Figure 3-8** Scanner and document feeder main assemblies

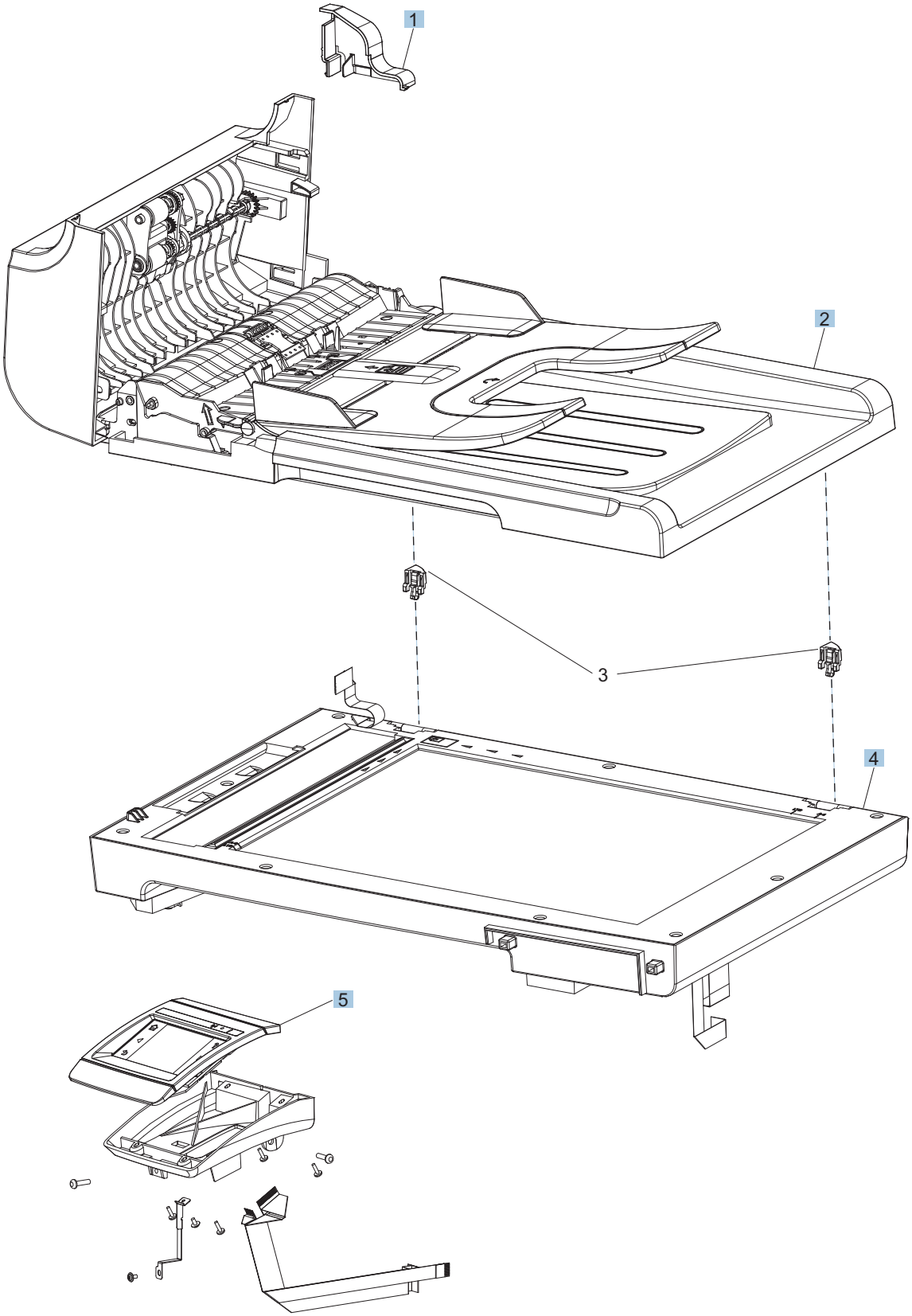


**Table 3-14 Scanner and document feeder main assemblies**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 1 | Document feeder (ADF) motor cover | CE538-40015 | 1 |
| 2 | Document feeder (ADF) assembly | CE538-60121 | 1 |
| 4 | Scanner assembly | CE861-60110 | 1 |
| 5 | Control-panel PCA assembly | CE862-60101 | 1 |

# Document feeder internal components

**Figure 3-9** Document feeder assembly parts

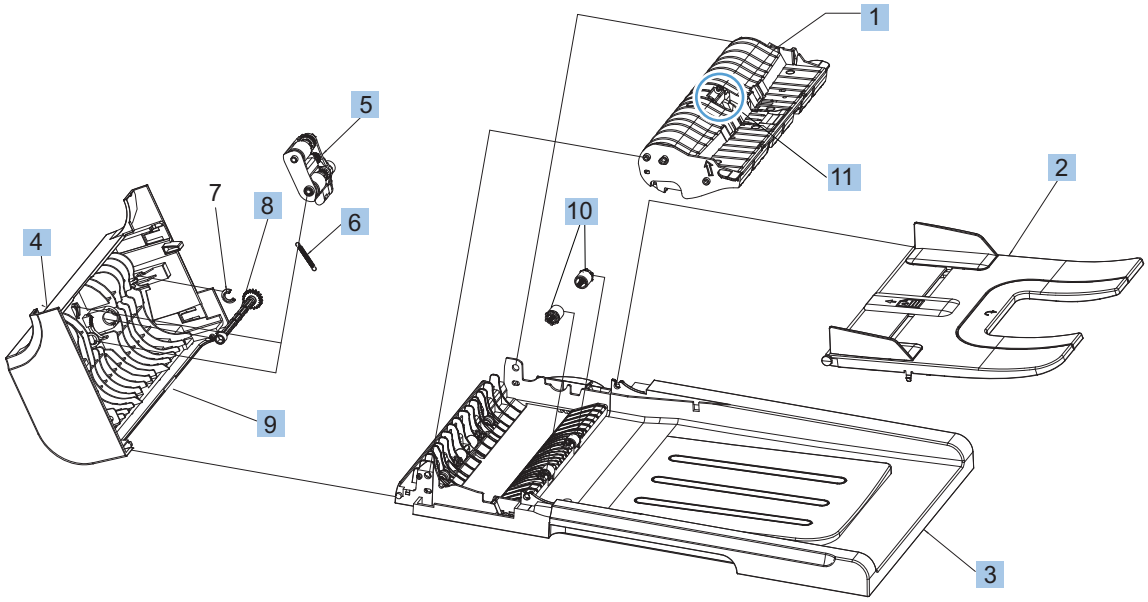


**Table 3-15 Document feeder assembly parts**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 1 | Document feeder (ADF) core assembly | CE538-60122 | 1 |
| 2 | Document feeder (ADF) input tray | CE538-60127 | 1 |
| 3 | Document feeder (ADF) base | CE538-60126 | 1 |
| 4 | Document feeder (ADF) cover, outer | CE538-40009 | 1 |
| 5 | Document feeder (ADF) pick arm assembly | CE538-60137 | 1 |
| 6 | Spring, document feeder (ADF) extension (pre-pick) | Q7400-00011 | 1 |
| 8 | Shaft, document feeder (ADF) pick extension | Q7400-40047 | 1 |
| 9 | Document feeder (ADF) cover, inner | CE538-40008 | 1 |
| 10 | Roller assembly, document feeder (ADF) post-scan pinch | Q7400-60153 | 2 |
| 11 | Document feeder (ADF) separation pad assembly | Q7400-60159 | 1 |

# Alphabetical parts list

**Table 3-16 Alphabetical parts list**

| Description | Part number | Table and page |
|---|---|---|
| Bushing (transfer roller) | RC2-2111-000CN | Internal assemblies (3 of 4) on page 169 |
| Bushing (transfer roller) | RC2-2112-000CN | Internal assemblies (3 of 4) on page 169 |
| Cable, flat (FFC) | RK2-1955-000CN | Internal assemblies (2 of 4) on page 167 |
| Cartridge tray assembly | RM1-7853-000CN | Internal assemblies (4 of 4) on page 171 |
| Cassette assembly | RM1-7714-000CN | Internal assemblies (1 of 4) on page 165 |
| Control-panel PCA assembly | CE862-60101 | Scanner and document feeder main assemblies on page 175 |
| Cover, holder | RC2-2014-000CN | Internal assemblies (1 of 4) on page 165 |
| Cover, left | RC1-0795-000CN | Covers, panels, and doors on page 163 |
| Cover, priority slot (jam access) | RM3-0812-000CN | Covers, panels, and doors on page 163 |
| Cover, rear center | RC3-0767-000CN | Covers, panels, and doors on page 163 |
| Cover, rear lower | RC3-0753-000CN | Covers, panels, and doors on page 163 |
| Cover, rear upper | RC3-0819-000CN | Covers, panels, and doors on page 163 |
| Cover, right | RC3-0794-000CN | Covers, panels, and doors on page 163 |
| Cover, right-front 1 | RC3-0797-000CN | Covers, panels, and doors on page 163 |
| Cover, right-front 2 | RC3-0798-000CN | Covers, panels, and doors on page 163 |
| Cover, top assembly | RM1-7715-000CN | Covers, panels, and doors on page 163 |
| DC controller assembly | RM1-7813-000CN | Internal assemblies (2 of 4) on page 167 |
| DC controller assembly | RM1-7813-000CN | PCAs on page 173 |
| Document feeder (ADF) assembly | CE538-60121 | Scanner and document feeder main assemblies on page 175 |
| Document feeder (ADF) base | CE538-60126 | Document feeder assembly parts on page 177 |
| Document feeder (ADF) core assembly | CE538-60122 | Document feeder assembly parts on page 177 |

**Table 3-16 Alphabetical parts list (continued)**

| Description | Part number | Table and page |
|---|---|---|
| Document feeder (ADF) cover, inner | CE538-40008 | Document feeder assembly parts on page 177 |
| Document feeder (ADF) cover, outer | CE538-40009 | Document feeder assembly parts on page 177 |
| Document feeder (ADF) input tray | CE538-60127 | Document feeder assembly parts on page 177 |
| Document feeder (ADF) motor cover | CE538-40015 | Scanner and document feeder main assemblies on page 175 |
| Document feeder (ADF) pick arm assembly | CE538-60137 | Document feeder assembly parts on page 177 |
| Document feeder (ADF) separation pad assembly | Q7400-60159 | Document feeder assembly parts on page 177 |
| Door, front | RC3-0796-000CN | Covers, panels, and doors on page 163 |
| Door, rear | RC3-0820-000CN | Covers, panels, and doors on page 163 |
| Fax PCA, DAA AA | CE682-67901 | PCAs on page 173 |
| Fax PCA, DAA EU | CE683-67901 | PCAs on page 173 |
| Formatter PCA | CE690-67901 | PCAs on page 173 |
| Fuser assembly (110 to 127 v) | RM1-4430-000CN | Internal assemblies (4 of 4) on page 171 |
| Fuser assembly (220 to 240 v) | RM1-4431-000CN | Internal assemblies (4 of 4) on page 171 |
| Fuser drive assembly | RM1-4927-000CN | Internal assemblies (4 of 4) on page 171 |
| Fuser power supply (110 to 127 v) | RM1-7082-000CN | PCAs on page 173 |
| Fuser power supply (220 to 240 v) | RM1-7083-000CN | PCAs on page 173 |
| High-voltage power supply | RM1-7090-000CN | Internal assemblies (3 of 4) on page 169 |
| High-voltage power supply | RM1-7090-000CN | PCAs on page 173 |
| Intermediate transfer belt (ITB) assembly | RM1-7866-000CN | Internal assemblies (3 of 4) on page 169 |
| Low-voltage power supply (110 to 127 v) | RM1-7830-000CN | Internal assemblies (2 of 4) on page 167 |
| Low-voltage power supply (110 to 127 v) | RM1-7830-000CN | PCAs on page 173 |
| Low-voltage power supply (220 to 240 v) | RM1-7831-000CN | Internal assemblies (2 of 4) on page 167 |
| Low-voltage power supply (220 to 240 v) | RM1-7831-000CN | PCAs on page 173 |
| Motor, DC main | RL1-1834-000CN | Internal assemblies (2 of 4) on page 167 |
| Motor, stepping DC fuser | RK2-1872-000CN | Internal assemblies (4 of 4) on page 171 |

**Table 3-16 Alphabetical parts list (continued)**

| Description | Part number | Table and page |
|---|---|---|
| Paper feed guide assembly | RM1-4448-000CN | Internal assemblies (3 of 4) on page 169 |
| Pickup roller assembly | RM1-4426-000CN | Internal assemblies (1 of 4) on page 165 |
| Roller assembly, document feeder (ADF) post-scan pinch | Q7400-60153 | Document feeder assembly parts on page 177 |
| Roller, transfer | RM1-4445-000CN | Internal assemblies (3 of 4) on page 169 |
| Scanner assembly | CE861-60110 | Scanner and document feeder main assemblies on page 175 |
| Separation roller assembly | RM1-4425-000CN | Internal assemblies (1 of 4) on page 165 |
| Shaft, document feeder (ADF) pick extension | Q7400-40047 | Document feeder assembly parts on page 177 |
| Spring, document feeder (ADF) extension (pre-pick) | Q7400-00011 | Document feeder assembly parts on page 177 |
| USB PCA | CF030-67901 | PCAs on page 173 |
| Wireless PCA | 1150-7938 | PCAs on page 173 |

# Numerical parts list

**Table 3-17 Numerical parts list**

| Part number | Description | Table and page |
|---|---|---|
| 1150-7938 | Wireless PCA | PCAs on page 173 |
| CE538-40008 | Document feeder (ADF) cover, inner | Document feeder assembly parts on page 177 |
| CE538-40009 | Document feeder (ADF) cover, outer | Document feeder assembly parts on page 177 |
| CE538-40015 | Document feeder (ADF) motor cover | Scanner and document feeder main assemblies on page 175 |
| CE538-60121 | Document feeder (ADF) assembly | Scanner and document feeder main assemblies on page 175 |
| CE538-60122 | Document feeder (ADF) core assembly | Document feeder assembly parts on page 177 |
| CE538-60126 | Document feeder (ADF) base | Document feeder assembly parts on page 177 |
| CE538-60127 | Document feeder (ADF) input tray | Document feeder assembly parts on page 177 |
| CE538-60137 | Document feeder (ADF) pick arm assembly | Document feeder assembly parts on page 177 |
| CE682-67901 | Fax PCA, DAA AA | PCAs on page 173 |
| CE683-67901 | Fax PCA, DAA EU | PCAs on page 173 |
| CE690-67901 | Formatter PCA | PCAs on page 173 |
| CE861-60110 | Scanner assembly | Scanner and document feeder main assemblies on page 175 |
| CE862-60101 | Control-panel PCA assembly | Scanner and document feeder main assemblies on page 175 |
| CF030-67901 | USB PCA | PCAs on page 173 |
| Q7400-00011 | Spring, document feeder (ADF) extension (pre-pick) | Document feeder assembly parts on page 177 |
| Q7400-40047 | Shaft, document feeder (ADF) pick extension | Document feeder assembly parts on page 177 |
| Q7400-60153 | Roller assembly, document feeder (ADF) post-scan pinch | Document feeder assembly parts on page 177 |
| Q7400-60159 | Document feeder (ADF) separation pad assembly | Document feeder assembly parts on page 177 |
| RC1-0795-000CN | Cover, left | Covers, panels, and doors on page 163 |
| RC2-2014-000CN | Cover, holder | Internal assemblies (1 of 4) on page 165 |
| RC2-2111-000CN | Bushing (transfer roller) | Internal assemblies (3 of 4) on page 169 |

**Table 3-17 Numerical parts list (continued)**

| Part number | Description | Table and page |
|---|---|---|
| RC2-2112-000CN | Bushing (transfer roller) | Internal assemblies (3 of 4) on page 169 |
| RC3-0753-000CN | Cover, rear lower | Covers, panels, and doors on page 163 |
| RC3-0767-000CN | Cover, rear center | Covers, panels, and doors on page 163 |
| RC3-0794-000CN | Cover, right | Covers, panels, and doors on page 163 |
| RC3-0796-000CN | Door, front | Covers, panels, and doors on page 163 |
| RC3-0797-000CN | Cover, right-front 1 | Covers, panels, and doors on page 163 |
| RC3-0798-000CN | Cover, right-front 2 | Covers, panels, and doors on page 163 |
| RC3-0819-000CN | Cover, rear upper | Covers, panels, and doors on page 163 |
| RC3-0820-000CN | Door, rear | Covers, panels, and doors on page 163 |
| RK2-1872-000CN | Motor, stepping DC fuser | Internal assemblies (4 of 4) on page 171 |
| RK2-1955-000CN | Cable, flat (FFC) | Internal assemblies (2 of 4) on page 167 |
| RL1-1834-000CN | Motor, DC main | Internal assemblies (2 of 4) on page 167 |
| RM1-4425-000CN | Separation roller assembly | Internal assemblies (1 of 4) on page 165 |
| RM1-4426-000CN | Pickup roller assembly | Internal assemblies (1 of 4) on page 165 |
| RM1-4430-000CN | Fuser assembly (110 to 127 v) | Internal assemblies (4 of 4) on page 171 |
| RM1-4431-000CN | Fuser assembly (220 to 240 v) | Internal assemblies (4 of 4) on page 171 |
| RM1-4445-000CN | Roller, transfer | Internal assemblies (3 of 4) on page 169 |
| RM1-4448-000CN | Paper feed guide assembly | Internal assemblies (3 of 4) on page 169 |
| RM1-4927-000CN | Fuser drive assembly | Internal assemblies (4 of 4) on page 171 |
| RM1-7082-000CN | Fuser power supply (110 to 127 v) | PCAs on page 173 |
| RM1-7083-000CN | Fuser power supply (220 to 240 v) | PCAs on page 173 |
| RM1-7090-000CN | High-voltage power supply | Internal assemblies (3 of 4) on page 169 |
| RM1-7090-000CN | High-voltage power supply | PCAs on page 173 |

**Table 3-17 Numerical parts list (continued)**

| Part number | Description | Table and page |
|---|---|---|
| RM1-7714-000CN | Cassette assembly | Internal assemblies (1 of 4) on page 165 |
| RM1-7715-000CN | Cover, top assembly | Covers, panels, and doors on page 163 |
| RM1-7813-000CN | DC controller assembly | Internal assemblies (2 of 4) on page 167 |
| RM1-7813-000CN | DC controller assembly | PCAs on page 173 |
| RM1-7830-000CN | Low-voltage power supply (110 to 127 v) | Internal assemblies (2 of 4) on page 167 |
| RM1-7830-000CN | Low-voltage power supply (110 to 127 v) | PCAs on page 173 |
| RM1-7831-000CN | Low-voltage power supply (220 to 240 v) | Internal assemblies (2 of 4) on page 167 |
| RM1-7831-000CN | Low-voltage power supply (220 to 240 v) | PCAs on page 173 |
| RM1-7853-000CN | Cartridge tray assembly | Internal assemblies (4 of 4) on page 171 |
| RM1-7866-000CN | Intermediate transfer belt (ITB) assembly | Internal assemblies (3 of 4) on page 169 |
| RM3-0812-000CN | Cover, priority slot (jam access) | Covers, panels, and doors on page 163 |

# A Service and support


- Hewlett-Packard limited warranty statement
- HP's Premium Protection Warranty: LaserJet print cartridge limited warranty statement
- Data stored on the print cartridge
- End User License Agreement
- OpenSSL
- Customer support
- Repack the product

# Hewlett-Packard limited warranty statement

| HP PRODUCT | DURATION OF LIMITED WARRANTY |
| --- | --- |
| HP LaserJet Pro CM1410 Color MFP Series | One year from date of purchase |

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# Data stored on the print cartridge

The HP print cartridges used with this product contain a memory chip that assists in the operation of the product.

In addition, this memory chip collects a limited set of information about the usage of the product, which might include the following: the date when the print cartridge was first installed, the date when the print cartridge was last used, the number of pages printed using the print cartridge, the page coverage, the printing modes used, any printing errors that might have occurred, and the product model. This information helps HP design future products to meet our customers' printing needs.

The data collected from the print cartridge memory chip does not contain information that can be used to identify a customer or user of the print cartridge or their product.

HP collects a sampling of the memory chips from print cartridges returned to HP's free return and recycling program (HP Planet Partners: www.hp.com/recycle). The memory chips from this sampling are read and studied in order to improve future HP products. HP partners who assist in recycling this print cartridge might have access to this data, as well.

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Rev. 11/06

# OpenSSL

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/)

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This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

# Customer support

| | |
|---|---|
| Get telephone support for your country/region<br><br>Have the product name, serial number, date of purchase, and problem description ready. | Country/region phone numbers are on the flyer that was in the box with your product or at www.hp.com/support/. |
| Get 24-hour Internet support | www.hp.com/support/CM1410series |
| Get support for products used with a Macintosh computer | www.hp.com/go/macosx |
| Download software utilities, drivers, and electronic information | www.hp.com/support/CM1410series |
| Order additional HP service or maintenance agreements | www.hp.com/go/carepack |
| Register your product | www.register.hp.com |

# Repack the product

If HP Customer Care determines that your product needs to be returned to HP for repair, follow these steps to repack the product before shipping it.

△ **CAUTION:** Shipping damage as a result of inadequate packing is the customer's responsibility.

1. Remove and retain the print cartridges.

   △ **CAUTION:** It is *extremely important* to remove the print cartridges before shipping the product. A print cartridge that remains in the product during shipping can leak and cover the product engine and other parts with toner.

   To prevent damage to the print cartridges, avoid touching the rollers on them, and store the print cartridges so that they are not exposed to light.

2. Remove and retain the power cable, interface cable, and any optional accessories.
3. If possible, include print samples and 50 to 100 sheets of paper that did not print correctly.
4. In the U.S., call HP Customer Care to request new packing material. In other areas, use the original packing material, if possible.

# B Product specifications


- Physical specifications
- Power consumption, electrical specifications, and acoustic emissions
- Environmental specifications

# Physical specifications

**Table B-1 Physical specifications**

| Product | Height | Depth | Width | Weight |
|---|---|---|---|---|
| HP LaserJet Pro CM1415 | 413 mm (16.3 inches) | 472 mm (18.6 inches) | 442 mm (17.4 inches) | 22.6 kg (49.8 lb) |

# Power consumption, electrical specifications, and acoustic emissions

See www.hp.com/support/CM1410series for current information.

△ **CAUTION:** Power requirements are based on the country/region where the product is sold. Do not convert operating voltages. This will damage the product and void the product warranty.

# Environmental specifications

**Table B-2 Environmental specifications**[1]

| | Recommended | Operating | Storage |
|---|---|---|---|
| Temperature | 15° to 32.5° C<br>(59° to 90.5° F) | 15° to 32.5° C<br>(59° to 90.5° F) | –20° to 40° C<br>(–4° to 104° F) |
| Relative humidity | 20 to 70% | 10 to 80% | 95% or less |
| Altitude | | 0 to 3048 m (0 to 10,000 ft) | |

[1] Values are subject to change.

# C Regulatory information


- FCC regulations
- Environmental product stewardship program
- Declaration of Conformity
- Declaration of Conformity (wireless models)
- Certificate of Volatility
- Safety statements
- Additional statements for telecom (fax) products
- Additional statements for wireless products

# FCC regulations

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

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

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

Use of a shielded interface cable is required to comply with the Class B limits of Part 15 of FCC rules.

# 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 ($O_3$).

## Power consumption

Power usage drops significantly while in Ready or Sleep mode, which saves natural resources and saves money without affecting the high performance of this product. Hewlett-Packard printing and imaging equipment marked with the ENERGY STAR® logo is qualified to the U.S. Environmental Protection Agency's ENERGY STAR specifications for imaging equipment. The following mark will appear on ENERGY STAR qualified imaging products:

Additional ENERGY STAR qualified imaging product model information is listed at:

www.hp.com/go/energystar

## Paper use

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

## Plastics

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

## HP LaserJet print supplies

It's easy to return and recycle your HP LaserJet print cartridges after use—free of charge—with HP Planet Partners. Multilingual program information and instructions are included in every new HP LaserJet print cartridge and supplies package. You help reduce the toll on the environment further when you return multiple cartridges together rather than separately.

HP is committed to providing inventive, high-quality products and services that are environmentally sound, from product design and manufacturing to distribution, customer use and recycling. When you participate in the HP Planet Partners program, we ensure your HP LaserJet print cartridges are recycled properly, processing them to recover 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. Thank you for being environmentally responsible!

**NOTE:** Use the return label to return original HP LaserJet print cartridges only. Please do not use this label for HP inkjet cartridges, non-HP cartridges, refilled or remanufactured cartridges or warranty returns. For information about recycling your HP inkjet cartridges please go to http://www.hp.com/recycle.

# Return and recycling instructions

## United States and Puerto Rico

The enclosed label in the HP LaserJet toner cartridge box is for the return and recycling of one or more HP LaserJet print cartridges after use. Please follow the applicable instructions below.

### Multiple returns (more than one cartridge)

1. Package each HP LaserJet print cartridge in its original box and bag.
2. Tape the boxes together using strapping or packaging tape. The package can weigh up to 31 kg (70 lb).
3. Use a single pre-paid shipping label.

**OR**

1. Use your own suitable box, or request a free bulk collection box from www.hp.com/recycle or 1-800-340-2445 (holds up to 31 kg (70 lb) of HP LaserJet print cartridges).
2. Use a single pre-paid shipping label.

### Single returns

1. Package the HP LaserJet print cartridge in its original bag and box.
2. Place the shipping label on the front of the box.

### Shipping

For all HP LaserJet print cartridge recycling returns, give the package to UPS during your next delivery or pickup, or take it to an authorized UPS drop-off center. For the location of your local UPS drop-off center, call 1-800-PICKUPS or visit www.ups.com. If you are returning via USPS label, give the package to a U.S. Postal Service carrier or drop off at a U.S. Postal Service Office. For more information, or to order additional labels or boxes for bulk returns, visit www.hp.com/recycle or call 1-800-340-2445. Requested UPS pickup will be charged normal pickup rates. Information subject to change without notice.

### Residents of Alaska and Hawaii

Do not use the UPS label. Call 1-800-340-2445 for information and instructions. The U.S. Postal Service provides no-cost cartridge return transportation services under an arrangement with HP for Alaska and Hawaii.

## Non-U.S. returns

To participate in HP Planet Partners return and recycling program, just follow the simple directions in the recycling guide (found inside the packaging of your new product supply item) or visit www.hp.com/recycle. Select your country/region for information on how to return your HP LaserJet printing supplies.

## Paper

This product is capable of using recycled papers when the paper meets the guidelines outlined in the *HP LaserJet Printer Family Print Media Guide*. This product is suitable for the use of recycled paper according to EN12281:2002.

## Material restrictions

This HP product does not contain added mercury.

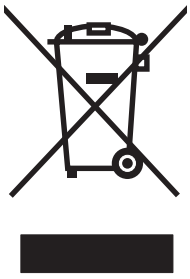
This HP product contains a battery that might require special handling at end-of-life. The batteries contained in or supplied by Hewlett-Packard for this product include the following:

| HP LaserJet Pro CM1410 Color MFP Series | |
|---|---|
| Type | Carbon monofluoride lithium |
| Weight | 0.8 g |
| Location | On formatter board |
| User-removable | No |

廢電池請回收

For recycling information, you can go to www.hp.com/recycle, or contact your local authorities or the Electronics Industries Alliance: www.eiae.org.

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



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

## Chemical substances

HP is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No

1907/2006 of the European Parliament and the Council). A chemical information report for this product can be found at: www.hp.com/go/reach.

## Material Safety Data Sheet (MSDS)

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

## For more information

To obtain information about these environmental topics:

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

Visit www.hp.com/go/environment or www.hp.com/hpinfo/globalcitizenship/environment.

# Declaration of Conformity

**Declaration of Conformity**

according to ISO/IEC 17050-1 and EN 17050-1

| | | |
|---|---|---|
| **Manufacturer's Name:** | Hewlett-Packard Company | DoC#: BOISB-0603-05-rel.1.0 |
| **Manufacturer's Address:** | 11311 Chinden Boulevard | |
| | Boise, Idaho 83714-1021, USA | |
| **declares, that the product** | | |
| **Product Name:** | HP LaserJet Professional CM1415fn | |
| **Regulatory Model Number**[2)] | BOISB-0603-05 | |
| | BOISB-0903-00 – (US-Fax Module LIU) | |
| | BOISB-0903-01 – (EURO-Fax Module LIU) | |
| **Product Options:** | ALL | |
| **Print Cartridges:** | CE320A, CE321A, CE322A, CE323A | |
| **conforms to the following Product Specifications:** | | |
| **SAFETY:** | IEC 60950-1:2005 / EN60950-1: 2006 | |
| | IEC 60825-1:2007 / EN 60825-1:2007 Class 1 Laser/LED Product) | |
| | IEC 62311:2007 / EN 62311:2008 | |
| | GB4943-2001 | |
| **EMC:** | CISPR22:2005 +A1 / EN55022:2006 +A1 - Class B[1)] | |
| | EN 61000-3-2:2006 | |
| | EN 61000-3-3:1995 +A1 +A2 | |
| | EN 55024:1998 +A1 +A2 | |
| | FCC Title 47 CFR, Part 15 Class B[1)] / ICES-003, Issue 4 | |
| | GB9254-2008, GB17625.1-2003 | |
| **TELECOM:** | ES 203 021; FCC Title 47 CFR, Part 68[3)] | |
| **ENERGY USE:** | Regulation (EC) No. 1275/2008 | |

**Supplementary Information:**

The product herewith complies with the requirements of the EMC Directive 2004/108/EC and the Low Voltage Directive 2006/95/EC, the R&TTE Directive 1999/5/EC (Annex II), the EuP Directive 2005/32/EC and carries the CE-Marking CE accordingly.

This Device complies with Part 15 of the FCC Rules. Operation is subject to the following two Conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

1. The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.
2. For regulatory purposes, this product is assigned a Regulatory model number. This number should not be confused with the product name or the product number(s).
3. Telecom approvals and standards appropriate for the target countries/regions have been applied to this product, in addition to those listed above.
4. This product uses an analog fax accessory module which Regulatory Model numbers are: BOISB-0903-00 (US-LIU) or BOISB-0903-01 (EURO LIU), as needed to meet technical regulatory requirements for the countries/regions this product will be sold.

**Boise, Idaho USA**

**September 2010**

**For regulatory topics only:**

| | |
|---|---|
| European Contact: | Your Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE / Standards Europe, Herrenberger Strasse 140, D-71034, Böblingen (FAX: +49-7031-14-3143) www.hp.com/go/certificates |
| USA Contact: | Product Regulations Manager, Hewlett-Packard Company, PO Box 15, Mail Stop 160, Boise, Idaho 83707-0015 (Phone: 208-396-6000) |

# Declaration of Conformity (wireless models)

**Declaration of Conformity**

according to ISO/IEC 17050-1 and EN 17050-1

| | | |
|---|---|---|
| **Manufacturer's Name:** | Hewlett-Packard Company | DoC#: BOISB-0603-06-rel.1.0 |
| **Manufacturer's Address:** | 11311 Chinden Boulevard | |
| | Boise, Idaho 83714-1021, USA | |
| **declares, that the product** | | |
| **Product Name:** | HP LaserJet Professional CM1415fnw | |
| **Regulatory Model Number**[2)] | BOISB-0603-06 | |
| | BOISB-0903-00 – (US-Fax Module LIU) | |
| | BOISB-0903-01 – (EURO-Fax Module LIU) | |
| | SDGOB – 0892 – (Radio Module) | |
| **Product Options:** | ALL | |
| **Print Cartridges:** | CE320A, CE321A, CE322A, CE323A | |
| **conforms to the following Product Specifications:** | | |
| **SAFETY:** | IEC 60950-1:2005 / EN60950-1: 2006 | |
| | IEC 60825-1:2007 / EN 60825-1:2007 Class 1 Laser/LED Product) | |
| | IEC 62311:2007 / EN 62311:2008 | |
| | GB4943-2001 | |
| **EMC:** | CISPR22:2005 +A1 / EN55022:2006 +A1 - Class B[1)] | |
| | EN 61000-3-2:2006 | |
| | EN 61000-3-3:1995 +A1 +A2 | |
| | EN 55024:1998 +A1 +A2 | |
| | FCC Title 47 CFR, Part 15 Class B[1)] / ICES-003, Issue 4 | |
| | GB9254-2008, GB17625.1-2003 | |
| **TELECOM:** | ES 203 021; FCC Title 47 CFR, Part 68[3)] | |
| **Radio**[5)] | EN 301 489-1:V1.8.1 / EN 301 489-17:V1.3.2 | |
| | EN 300 328: V1.7.1 | |
| | FCC Title 47 CFR, Part 15 Subpart C (Section 15.247) / IC: RSS-210 | |
| **ENERGY USE:** | Regulation (EC) No. 1275/2008 | |

**Supplementary Information:**

The product herewith complies with the requirements of the R&TTE; Directive 1999/5/EC Annex II and Annex IV, EMC Directive 2004/108/EC, the Low Voltage Directive 2006/95/EC, the EuP Directive 2005/32/EC and carries the CE-Marking CE ① accordingly.

This Device complies with Part 15 of the FCC Rules. Operation is subject to the following two Conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

1. The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.
2. For regulatory purposes, this product is assigned a Regulatory model number. This number should not be confused with the product name or the product number(s).
3. Telecom approvals and standards appropriate for the target countries/regions have been applied to this product, in addition to those listed above.
4. This product uses an analog fax accessory module which Regulatory Model numbers are: BOISB-0903-00 (US-LIU) or BOISB-0903-01 (EURO LIU), as needed to meet technical regulatory requirements for the countries/regions this product will be sold.
5. This product uses a radio module device which Regulatory Model number is SDGOB-0892 as needed to meet technical regulatory requirements for the countries/regions this product will be sold.

**Boise, Idaho USA**

**September 2010**

**For regulatory topics only:**

| | |
|---|---|
| European Contact: | Your Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE / Standards Europe, Herrenberger Strasse 140, D-71034, Böblingen (FAX: +49-7031-14-3143) www.hp.com/go/certificates |
| USA Contact: | Product Regulations Manager, Hewlett-Packard Company, PO Box 15, Mail Stop 160, Boise, Idaho 83707-0015 (Phone: 208-396-6000) |

# Certificate of Volatility

| Hewlett-Packard Certificate of Volatility | | | |
|---|---|---|---|
| Model:<br>CM1415fn<br>CM1415fnw | Part Number:<br>CE861<br>CE862 | Address: 11311 Chinden Blvd. Boise, ID. 83714 | |
| **Volatile Memory** | | | |
| Does the device contain volatile memory (Memory whose contents are lost when power is removed)?<br>☒ Yes ☐ No If Yes please describe the type, size, function, and steps to clear the memory below | | | |
| Type (SRAM, DRAM, etc):<br>Synchronous DRAM | Size:<br>128MB | Function:<br>Run-time firmware image, print job info during printing | Steps to clear memory:<br>Power off printer |
| Type (SRAM, DRAM, etc): | Size:<br>32MB | Function:<br>Page Memory | Steps to clear memory:<br>Power off product / Auto cleared when print job is finished |
| Type (SRAM, DRAM, etc): | Size: | Function: | Steps to clear memory: |
| **Non-Volatile Memory** | | | |
| Does the device contain non-volatile memory (Memory whose contents are retained when power is removed)?<br>☒ Yes ☐ No If Yes please describe the type, size, function, and steps to clear the memory below | | | |
| Type (Flash, EEPROM, etc):<br>EEPROM | Size:<br>16KB | Function:<br>Printer Specific Data | Steps to clear memory:<br>NVRAM Initialization |
| Type (Flash, EEPROM, etc): | Size: | Function: | Steps to clear memory: |
| Type (Flash, EEPROM, etc):<br>SPI FLASH | Size:<br>16MB | Function:<br>Firmware and Fax | Steps to clear memory: |
| **Mass Storage** | | | |
| Does the device contain mass storage memory (Hard Disk Drive, Tape Backup)?<br>☐ Yes ☒ No If Yes please describe the type, size, function, and steps to clear the memory below | | | |
| Type (HDD, Tape, etc): | Size: | Function: | Steps to clear memory: |
| Type (HDD, Tape, etc): | Size: | Function: | Steps to clear memory: |

| Author Information | | | |
|---|---|---|---|
| Name: | Title:<br>Technical Marketing Engineer | Email: | Business Unit:<br>LaserJet Business |
| | | | Date Prepared: 04/08/2010 |

# Safety statements

## Laser safety

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

⚠ **WARNING!** Using controls, making adjustments, or performing procedures other than those specified in this user guide may result in exposure to hazardous radiation.

## Canadian DOC regulations

Complies with Canadian EMC Class B requirements.

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

## VCCI statement (Japan)

この装置は、クラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをして下さい。

VCCI-B

## Power cord instructions

Make sure your power source is adequate for the product voltage rating. The voltage rating is on the product label. The product uses either 100-127 Vac or 220-240 Vac and 50/60 Hz.

Connect the power cord between the product and a grounded AC outlet.

△ **CAUTION:** To prevent damage to the product, use only the power cord that is provided with the product.

## Power cord statement (Japan)

製品には、同梱された電源コードをお使い下さい。
同梱された電源コードは、他の製品では使用出来ません。

## EMC statement (Korea)

| | |
|---|---|
| B급 기기<br>(가정용 방송통신기기) | 이 기기는 가정용(B급)으로 전자파적합등록을 한 기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다. |

## Laser statement for Finland

**Luokan 1 laserlaite**

Klass 1 Laser Apparat

HP LaserJet CM1415fn, CM1415fnw, laserkirjoitin on käyttäjän kannalta turvallinen luokan 1 laserlaite. Normaalissa käytössä kirjoittimen suojakotelointi estää lasersäteen pääsyn laitteen ulkopuolelle. Laitteen turvallisuusluokka on määritetty standardin EN 60825-1 (2007) 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 CM1415fn, CM1415fnw - kirjoittimen sisällä ei ole käyttäjän huollettavissa olevia kohteita. Laitteen saa avata ja huoltaa ainoastaan sen huoltamiseen koulutettu henkilö. Tällaiseksi huoltotoimenpiteeksi ei katsota väriainekasetin vaihtamista, paperiradan puhdistusta tai muita käyttäjän käsikirjassa lueteltuja, käyttäjän tehtäväksi tarkoitettuja ylläpitotoimia, jotka voidaan suorittaa ilman erikoistyökaluja.

**VARO !**

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

**VARNING !**

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

Tiedot laitteessa käytettävän laserdiodin säteilyominaisuuksista: Aallonpituus 775-795 nm Teho 5 m W Luokan 3B laser.

## GS statement (Germany)

Das Gerät ist nicht für die Benutzung im unmittelbaren Gesichtsfeld am Bildschirmarbeitsplatz vorgesehen. Um störende Reflexionen am Bildschirmarbeitsplatz zu vermeiden, darf dieses Produkt nicht im unmittelbaren Gesichtsfeld platziert werden.

## Substances Table (China)

### 有毒有害物质表

根据中国电子信息产品污染控制管理办法的要求而出台

| 部件名称 | 有毒有害物质和元素 | | | | | |
|---|---|---|---|---|---|---|
| | 铅 (Pb) | 汞 (Hg) | 镉 (Cd) | 六价铬 (Cr(VI)) | 多溴联苯 (PBB) | 多溴二苯醚 (PBDE) |
| 打印引擎 | X | 0 | X | 0 | 0 | 0 |
| 复印机组件 | X | 0 | 0 | 0 | 0 | 0 |
| 控制面板 | 0 | 0 | 0 | 0 | 0 | 0 |
| 塑料外壳 | 0 | 0 | 0 | 0 | 0 | 0 |
| 格式化板组件 | X | 0 | 0 | 0 | 0 | 0 |
| 碳粉盒 | X | 0 | 0 | 0 | 0 | 0 |
| | | | | | | |

3690

0：表示在此部件所用的所有同类材料中，所含的此有毒或有害物质均低于 SJ/T11363-2006 的限制要求。

X：表示在此部件所用的所有同类材料中，至少一种所含的此有毒或有害物质高于 SJ/T11363-2006 的限制要求。

注：引用的“环保使用期限”是根据在正常温度和湿度条件下操作使用产品而确定的。

## Restriction on Hazardous Substances statement (Turkey)

Türkiye Cumhuriyeti: EEE Yönetmeliğine Uygundur

# Additional statements for telecom (fax) products

## 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.

## Additional FCC statement for telecom products (US)

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the back of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number 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 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 customer can do the following repairs: 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.

## Telephone Consumer Protection Act (US)

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, or 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).

## Industry Canada 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 0.0.

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.

# Additional statements for wireless products

## FCC compliance statement—United States

**Exposure to radio frequency radiation**

△ **CAUTION:** The radiated output power of this device is far below the FCC radio frequency exposure limits. Nevertheless, the device shall be used in such a manner that the potential for human contact during normal operation is minimized.

In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm ( (8 in)) during normal operation.

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

△ **CAUTION:** Based on Section 15.21 of the FCC rules, changes of modifications to the operation of this product without the express approval by Hewlett-Packard Company may invalidate its authorized use.

## Australia statement

This device incorporates a radio-transmitting (wireless) device. For protection against radio transmission exposure, it is recommended that this device be operated no less than 20 cm from the head, neck, or body.

## Brazil ANATEL statement

Este equipamento opera em caráter secundário, isto é, não tem direito à proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

## Canadian statements

**For Indoor Use**. This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications. The internal wireless radio complies with RSS 210 of Industry Canada.

**Pour l´usage d´intérieur**. Le présent appareil numérique n´émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescribes dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada. Le composant RF interne est conforme à la norme CNR-210 d´Industrie Canada.

## European Union regulatory notice

The telecommunications functionality of this product may be used in the following EU and EFTA countries/regions:

Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, and United Kingdom.

## Notice for use in France

For 2.4 GHz Wireless LAN operation of this product certain restrictions apply: This equipment may be used indoor for the entire 2400-2483.5 MHz frequency band (channels 1-13). For outdoor use, only 2400-2454 MHz frequency band (channels 1-9) may be used. For the latest requirements, see www.arcep.fr.

L'utilisation de cet equipement (2.4 GHz Wireless LAN) est soumise à certaines restrictions : Cet équipement peut être utilisé à l'intérieur d'un bâtiment en utilisant toutes les fréquences de 2400-2483.5 MHz (Chaine 1-13). Pour une utilisation en environnement extérieur, vous devez utiliser les fréquences comprises entre 2400-2454 MHz (Chaine 1-9). Pour les dernières restrictions, voir, www.arcep.fr.

## Notice for use in Russia

Существуют определенные ограничения по использованию беспроводных сетей (стандарта 802.11 b/g) с рабочей частотой 2,4 ГГц: Данное оборудование может использоваться внутри помещений с использованием диапазона частот 2400-2483,5 МГц (каналы 1-13). При использовании внутри помещений максимальная эффективная изотропно–излучаемая мощность (ЭИИМ) должна составлять не более 100мВт.

## Korean statement

당해 무선설비는 운용 중 전파혼선 가능성이 있음

## Taiwan statement

低功率電波輻射性電機管理辦法

第十二條　經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條　低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。
前項合法通信，指依電信法規定作業之無線電通信。
低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

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