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# Removal and replacement

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- Service approach
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# 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

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

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

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

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


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

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

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## Electrostatic discharge

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**⚠ 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.

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## Required tools

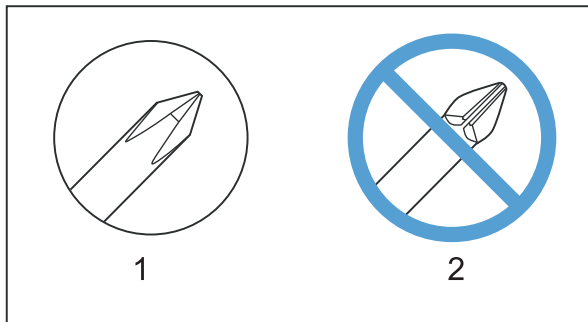
- #2 Phillips screwdriver with a magnetic tip and a 152-mm (6-inch) shaft length
- Small flat blade screwdriver
- Needle-nose pliers
- ESD mat or ESD strap (if one is available)
- Penlight (optional)

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△ **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.

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**Figure 1** Phillips and pozidrive screwdriver comparison



# Service approach

## Before performing service

- Remove all media from the product.
- Turn off the power using the power switch.
- Unplug the power cable and interface cable or cables.
- Place the product on an ESD workstation or mat, or use an ESD strap (if one is available). If an ESD workstation, mat, or strap is not available, ground yourself by touching the sheet-metal chassis *before* touching an ESD-sensitive part.
- Remove the print cartridges. See [Print cartridges on page 5](#).
- Remove the tray cassette or cassettes.

## After performing service

- Plug in the power cable.
- Reinstall the print cartridges.
- Reinstall the tray cassette or cassettes.
- If the 1 x 500-sheet paper feeder or optional 3 x 500-sheet paper feeder was removed for service, place the product on the feeder or feeders. Engage the feeder tray locks to secure the feeder or feeders to the product.


## Post-service test

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

## Print-quality test

1. Verify that you have completed the necessary reassembly steps.
2. Make sure that the tray contains clean, unmarked paper.
3. Attach the power cord and interface cable or interface cables, and then turn on the product.
4. Verify that the expected startup sounds occur.
5. Print a configuration page, and then verify that the expected printing sounds occur.
6. Print a demo page, and then verify that the print quality is as expected.
7. Send a print job from the host computer, and then verify that the output meets expectations.
8. If necessary, restore any customer-specified settings.
9. Clean the outside of the product with a damp cloth.


# Removal and replacement procedures

 **NOTE:** The following assemblies are Customer Self Repair (CSR) components. Go to [Covers](#) on page 28 or [Main assemblies](#) on page 47 for information about removing service assemblies.

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## Print cartridges


When a print cartridge approaches the end of its estimated useful life, the control panel displays a message recommending that you order a replacement. The product can continue to print using the current print cartridge until the control panel displays a message instructing you to replace the cartridge, unless you have selected the option to override the message by using the **Supply Settings** menu.

 **NOTE:** Cartridge life remaining is used to determine if a supply is near or at estimated end of life. Cartridge life remaining is approximate only, and varies depending on types of documents printed and other factors.


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

You can replace a print cartridge when the print quality is no longer acceptable. The control-panel message also indicates the color of the cartridge that has reached the end of its estimated useful life. Replacement instructions are provided on the label on the print cartridge.

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

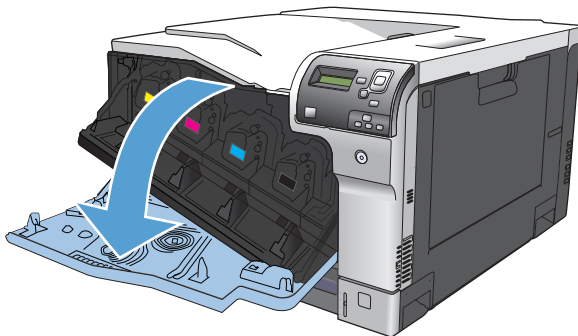
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 **NOTE:** Information about recycling used print cartridges is contained in the print-cartridge box.

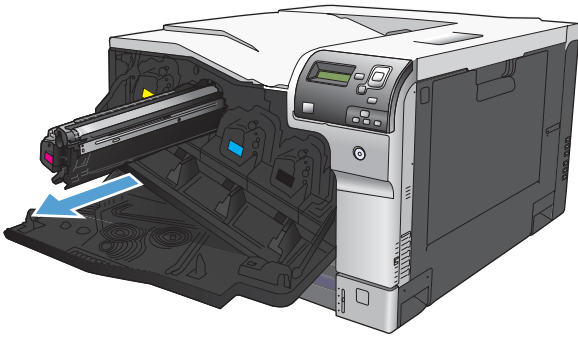
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## Replace print cartridges

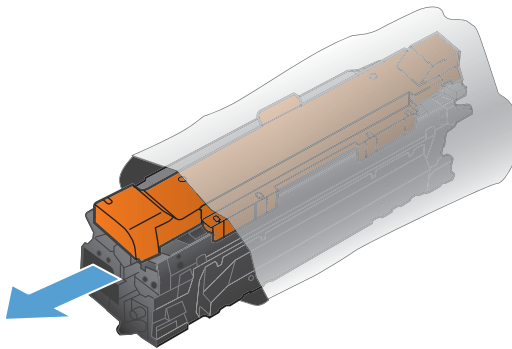
1. Open the front door. Make sure that the door is completely open.




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



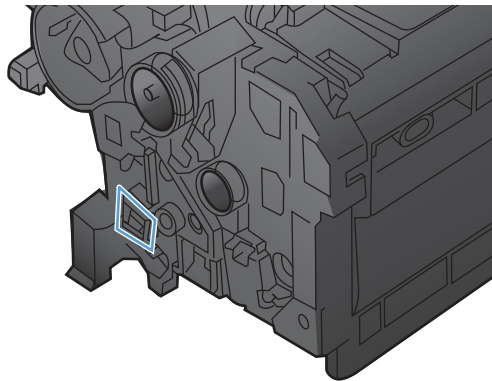
3. Remove the new print cartridge from its protective bag.



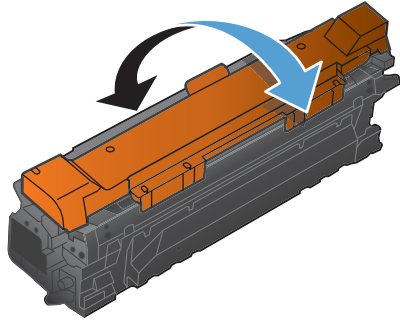
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 **NOTE:** Be careful not to damage the memory tag on the print cartridge.

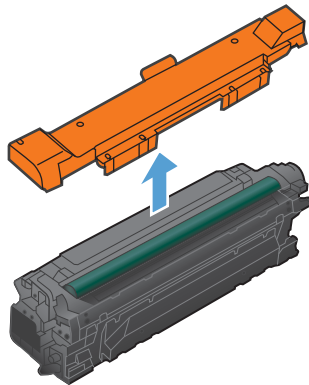
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4. Grasp both sides of the print cartridge and distribute the toner by gently rocking the print cartridge.



5. Remove the orange protective cover from the print cartridge. Place the protective cover on the used print cartridge to protect it during shipping.



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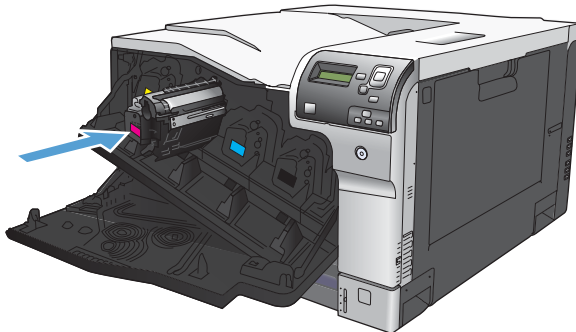
△ **CAUTION:** Avoid prolonged exposure to light.

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

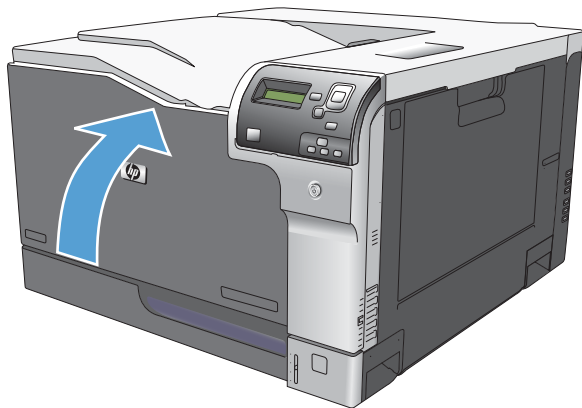
📝 **NOTE:** Store the used print cartridge in the protective bag removed from the replacement cartridge. Information about recycling used print cartridges is contained in the print-cartridge box.

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



7. Close the front door.



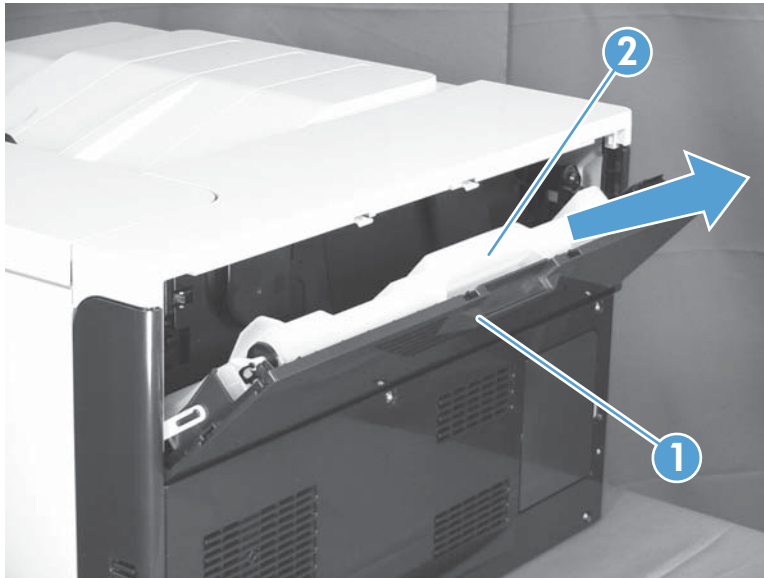


## Toner-collection unit

**NOTE:** The toner-collection unit (TCU) is designed for a single use. Do not try to empty the toner-collection unit and reuse it. To recycle a discarded toner-collection unit, follow the instructions that come with a replacement toner-collection unit.

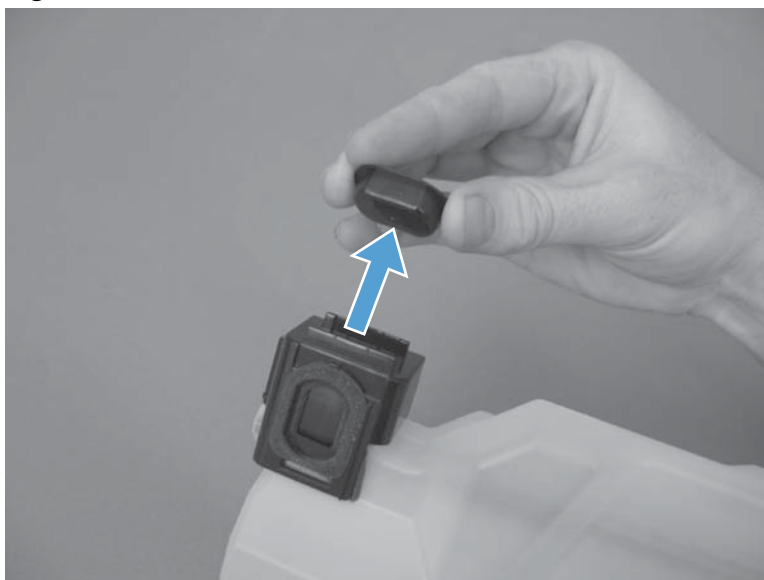
1. Open the TCU access door (callout 1) on the product back side.
2. Grasp the top of the TCU (callout 2), and then remove it from the product.

**Figure 2** Remove the toner-collection unit (1 of 3)



3. Remove the plug from the discard TCU.

**Figure 3** Remove the toner-collection unit (2 of 3)



4. Install the plug onto the discard TCU before putting it into the box and mailing it for recycling.

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



## Fuser

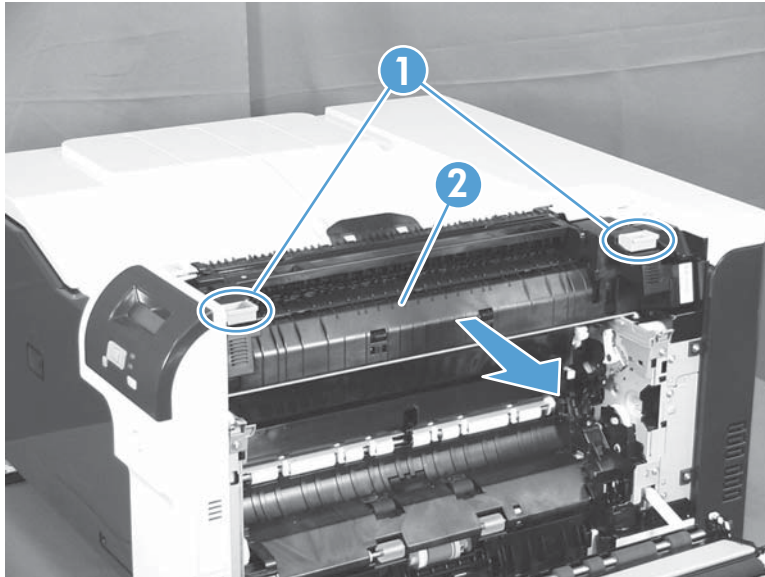
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△ **CAUTION:** The fuser might be hot. Allow enough time after turning off the product power for the fuser to cool.

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1. Open the right-door assembly.
2. Grasp the handles and squeeze the blue release levers (callout 1).

**Figure 5** Remove the fuser





3. Pull the fuser (callout 2) straight out of the product to remove it.

## Reset the New Fuser Kit setting at the control panel

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📄 **NOTE:** Use this procedure to reset the internal page count if a replacement fuser is installed.

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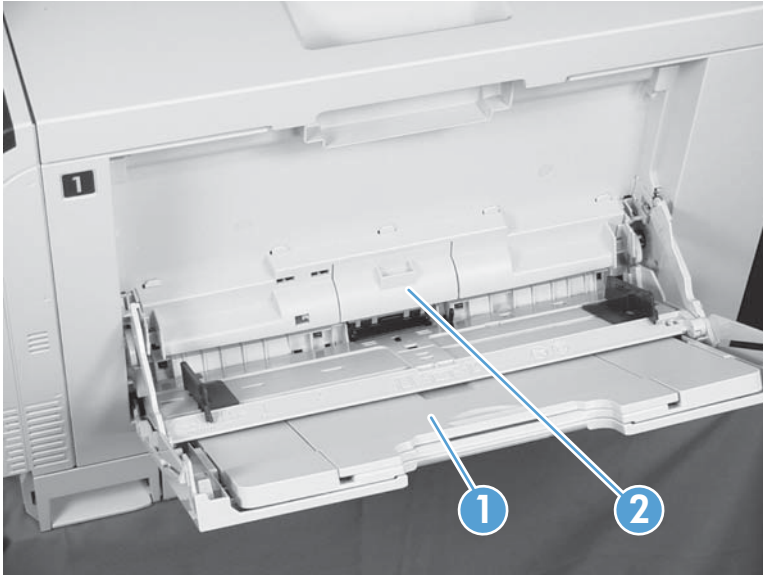
1. At the control panel, press the Home button .
2. Open the following menus:
  - **Administration**
  - **Manage Supplies**
  - **Reset Supplies**
  - **New Fuser Kit**
3. Use the **Down** arrow button  to highlight the **Yes** item, and then press OK to select it.

## Pickup roller (Tray 1)

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

1. Open Tray 1 (callout 1), and then remove the pickup roller cover (callout 2).

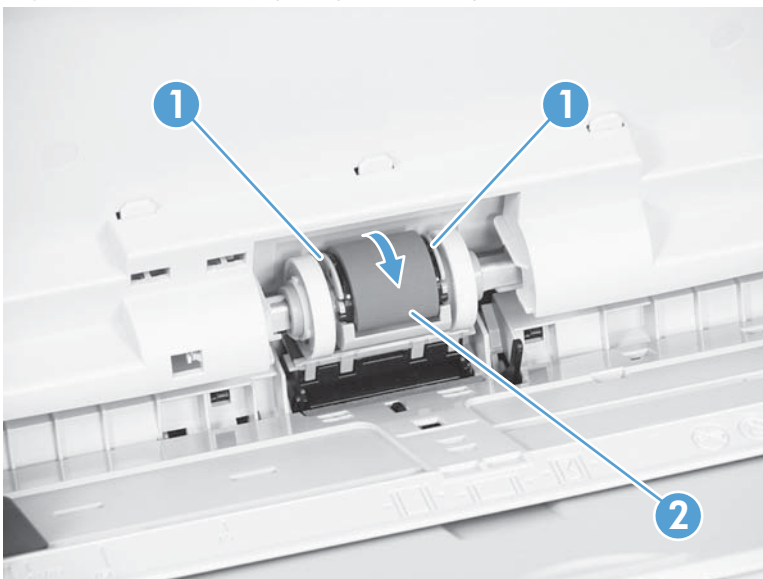
**Figure 6** Remove the pickup roller (Tray 1) (1 of 2)



2. Spread out the pickup roller retainers (callout 1) until both sides unlatch, and then remove the pickup roller (callout 2).

💡 **Reinstallation tip** When you reinstall the roller, make sure that the roller snaps into place

**Figure 7** Remove the pickup roller (Tray 1) (2 of 2)

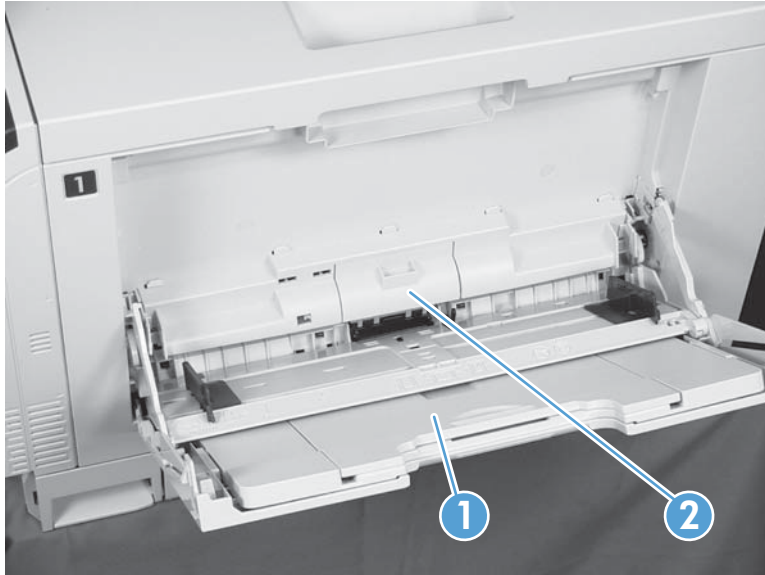


## Separation pad (Tray 1)

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

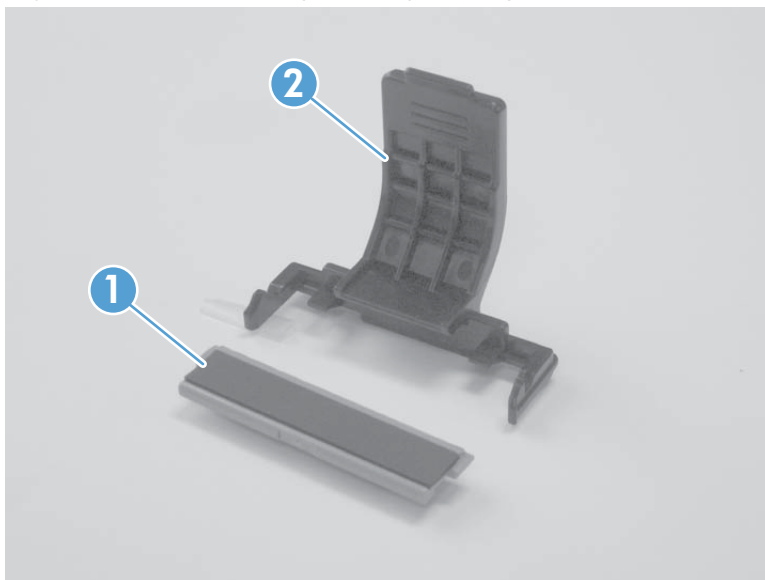
1. Open Tray 1 (callout 1), and then remove the pickup roller cover (callout 2).

**Figure 8** Remove the separation pad (Tray 1) (1 of 4)



2. Take out the tool (callout 2) supplied with a new separation pad (callout 1).

**Figure 9** Remove the separation pad (Tray 1) (2 of 4)



3. Insert the tool under the separation pad.

**Figure 10** Remove the separation pad (Tray 1) (3 of 4)




4. Rotate the top of the tool away from the product to release the separation pad, and then remove the tool and the separation pad together.

**Figure 11** Remove the separation pad (Tray 1) (4 of 4)



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 **Reinstallation tip** You do not need to use the tool to install the new separation pad. Press the new pad with your hand until it snaps into place and engages with the engine.

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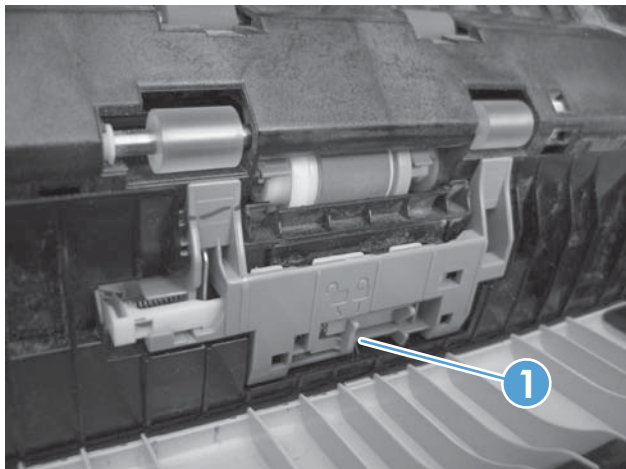
## Separation roller assembly (Tray 2)

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

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1. Remove Tray 2 from the product.
2. Open the right-door assembly.
3. On the separation roller assembly, slide the lever (callout 1) toward the unlocked icon  until it clicks into the unlocked position.

**Figure 12** Remove the separation roller assembly (Tray 2) (1 of 2)

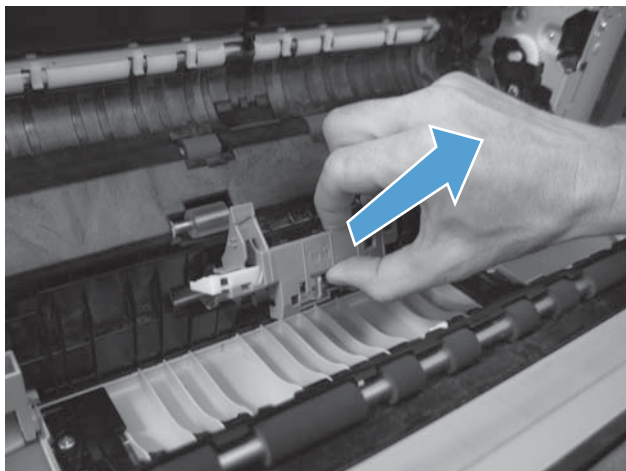


4. Pull the separation roller assembly up and remove it from the product.

💡 **Reinstallation tip** When you install the separation roller assembly, make sure that it snaps into the locked position.

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**Figure 13** Remove the separation roller assembly (Tray 2) (2 of 2)



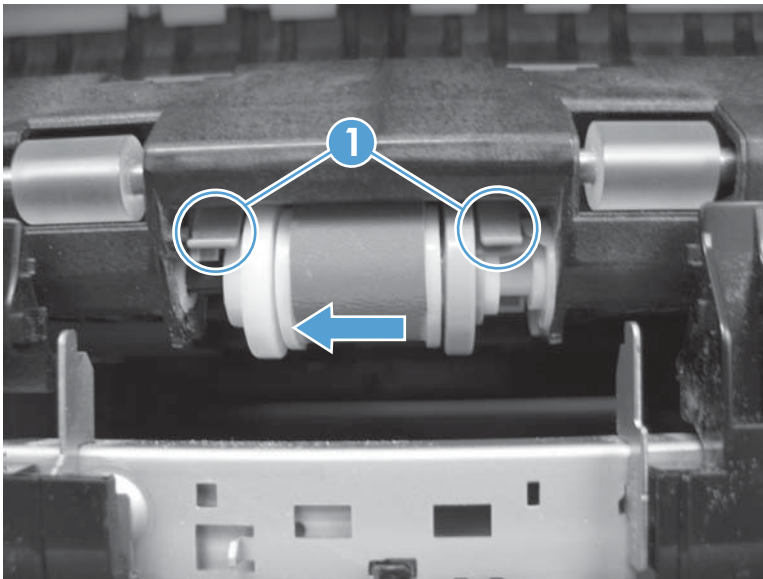
## Pickup roller (Tray 2)

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

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1. Open Tray 2.
2. Open the right-door assembly.
3. Remove the separation roller assembly (see [Separation roller assembly \(Tray 2\)](#) on page 15)
4. Lift one of the two levers (callout 1) on either side of the pickup roller, and then push the right side of the roller in the direction of the arrow.

**Figure 14** Remove the pickup roller (Tray 2)



5. Remove the pickup roller.

💡 **Reinstallation tip** Insert the left side of the roller into the product first. Make sure that the replacement roller snaps into place.

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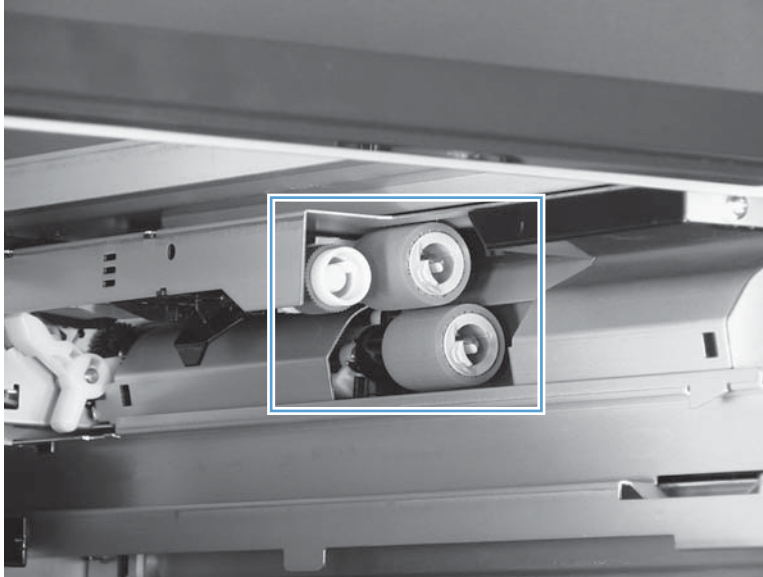
## Pickup roller, separation roller, and feed roller (1 x 500-sheet and 3 x 500-sheet paper feeders)

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

💡 **TIP:** You do not have to separate the product from the feeder to remove these rollers.

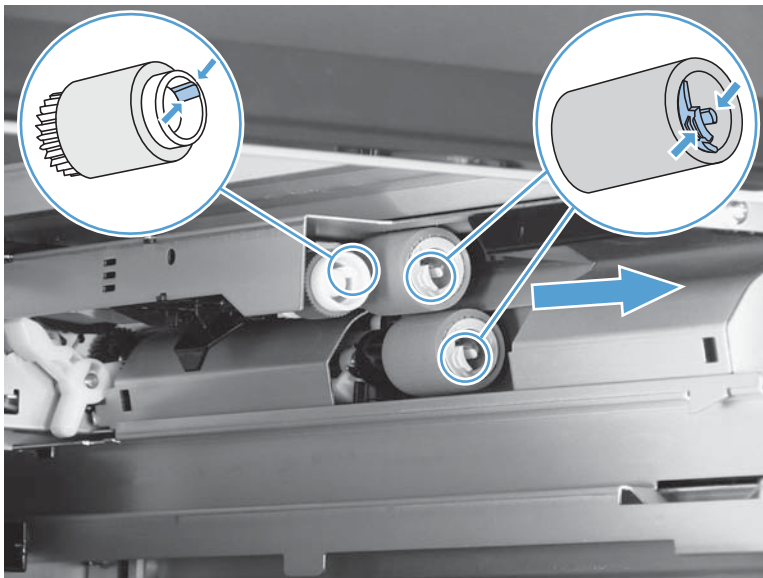
1. Remove the Tray 3 or Tray 4/5/6 cassette from the product, and then locate the rollers on the right-hand side of the tray cavity.

**Figure 15** Remove the 1 x 500 or 3 x 500 rollers (1 of 2)



2. Release three tabs, and then pull the rollers in the direction of the arrow.

**Figure 16** Remove the 1 x 500 or 3 x 500 rollers (2 of 2)



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

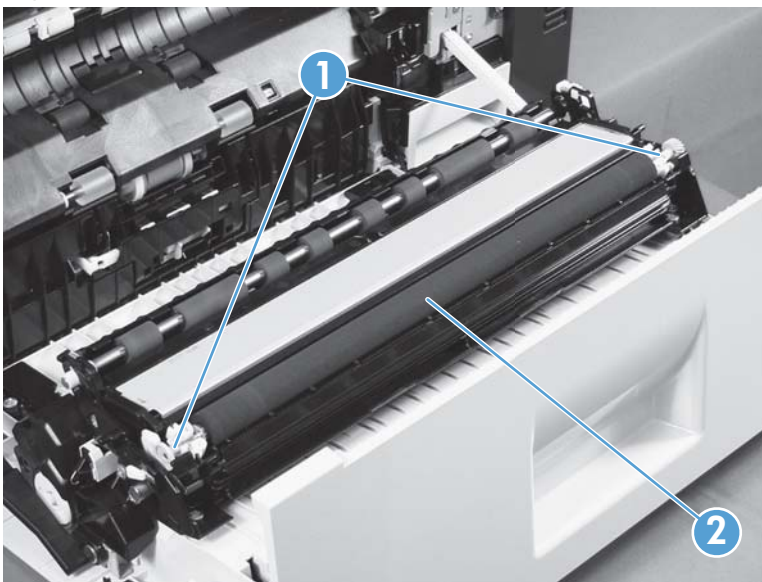
## Secondary transfer roller

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

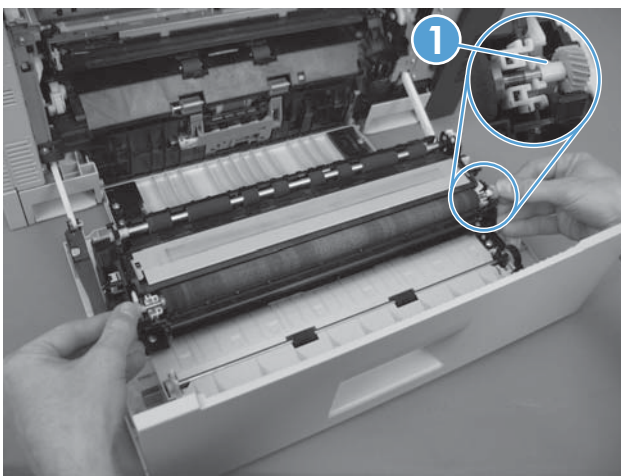
📄 **NOTE:** If the secondary transfer roller is replaced, HP recommends that the ITB be replaced also. If both components are replaced at the same time, you must use the control-panel menus to reset the **Transfer Kit** menu item. See [Reset the \*\*New Transfer Kit\*\* setting at the control panel on page 21](#).

1. Open the right-door assembly.
2. Grasp one of the blue round features (callout 1) on either end of the transfer roller, and then lift the transfer roller (callout 2) off of the product.

**Figure 17** Remove the transfer roller



💡 **TIP:** Place the new roller assembly in place with the roller gear (callout 1) on the right side, and then press down to ensure that the roller shaft snaps securely in the roller clasps.



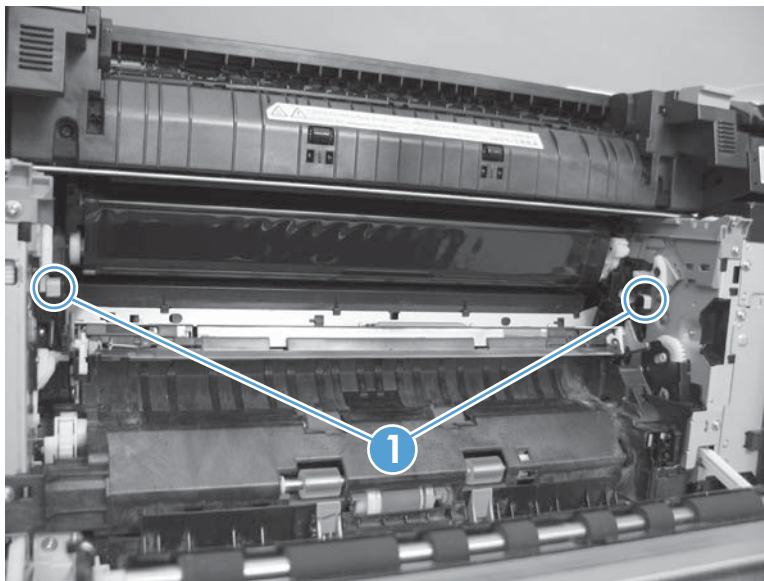
## Intermediate transfer belt (ITB)

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

📄 **NOTE:** If the ITB assembly is replaced, HP recommends that the secondary transfer roller be replaced also. If both components are replaced at the same time, you must use the control-panel menus to reset the **Transfer Kit** menu item. See [Reset the \*\*New Transfer Kit\*\* setting at the control panel](#) on page 21.

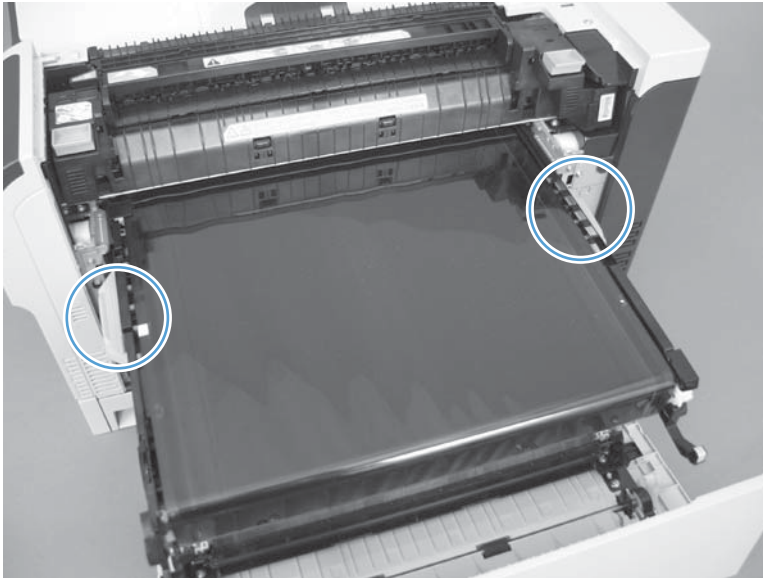
1. Open the right-door assembly.
2. Use both hands to grasp the blue levers (callout 1), apply slight downward pressure, and pull the ITB toward you at a downward angle.

**Figure 18** Remove the intermediate transfer belt (1 of 3)



3. Pull the ITB out of the product until two large handles expand along the right and left side of the ITB.

**Figure 19** Remove the intermediate transfer belt (2 of 3)



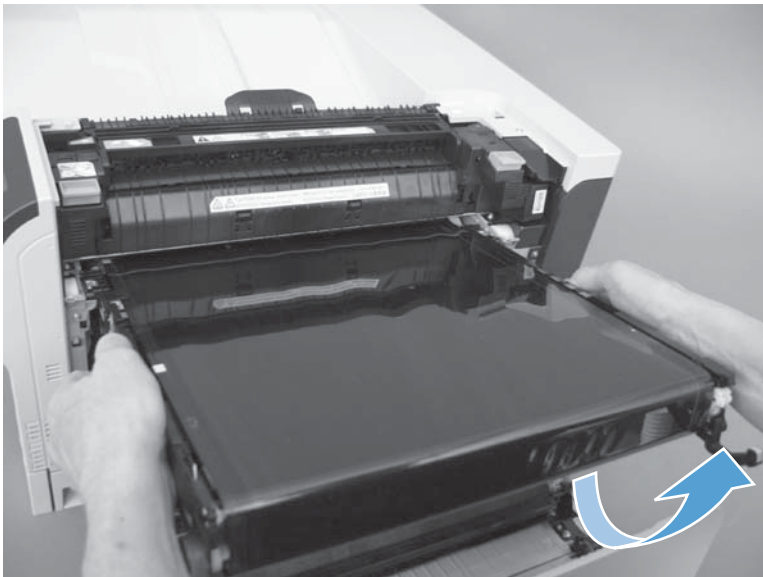
4. Grasp the large handles on the ITB and then pull the ITB straight out of the product until it stops, and then pull up to remove it from the product..

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

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**Figure 20** Remove the intermediate transfer belt (3 of 3)




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💡 **Reinstallation tip** If you are installing a replacement ITB, make sure that you remove all of the packing tape and the protective cover sheet.



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## Reset the New Transfer Kit setting at the control panel

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 **NOTE:** Use this procedure to reset the internal page count if a replacement ITB and secondary transfer roller are installed.

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1. At the control panel, press the Home button .
2. Open the following menus:
  - **Administration**
  - **Manage Supplies**
  - **Reset Supplies**
  - **New Transfer Kit**
3. Use the **Down** arrow button  to highlight the **Yes** item, and then press OK to select it.

## Formatter PCA

△ **CAUTION:**  ESD sensitive component.

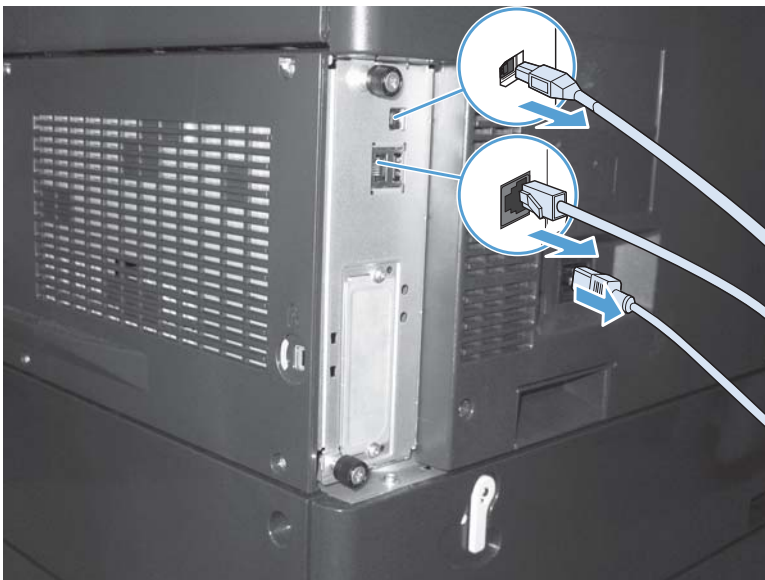
Do not replace the laser scanner and the formatter PCA at the same time. The settings for the laser scanner are stored in the formatter RAM. When you install a new laser scanner, it reads the settings from the formatter.

Do not replace the DC controller PCA and the formatter PCA at the same time. The settings for the DC Controller PCA are stored in the formatter RAM. When you install a new DC Controller PCA, it reads the settings from the formatter.

 **NOTE:** If possible, print a configuration page before replacing the formatter. You might need to transfer the serial number and the page count information to the new formatter.

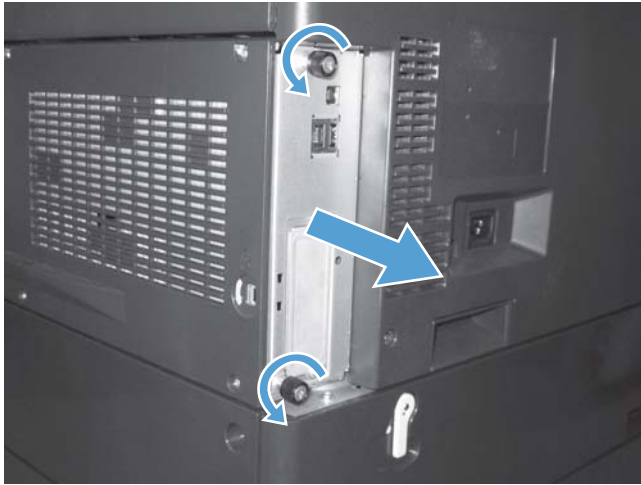
1. Disconnect communication cables (if installed).

**Figure 21** Remove the formatter (1 of 2)




2. Loosen two thumb screws, and then pull the formatter straight out and away from the product to remove it.

**Figure 22** Remove the formatter (2 of 2)



3. Firmly pull the formatter from the product. Place the formatter on a clean, flat, grounded surface.

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 **Reinstallation tip** If the formatter PCA was replaced, print a configuration page and make sure that the serial number and page count information were transferred to the formatter PCA. If they were not, use the **Service** menu to reset these values.

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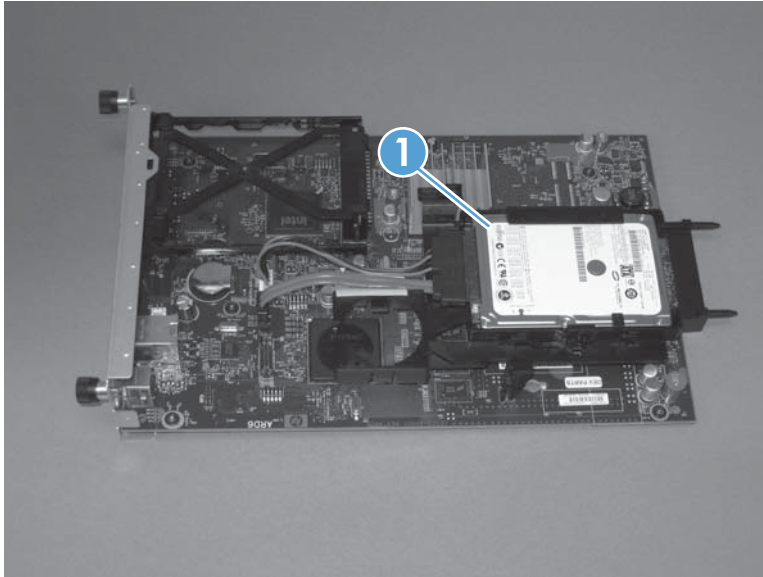
## Encrypted hard drive or solid-state hard drive

Before proceeding, remove the following components:

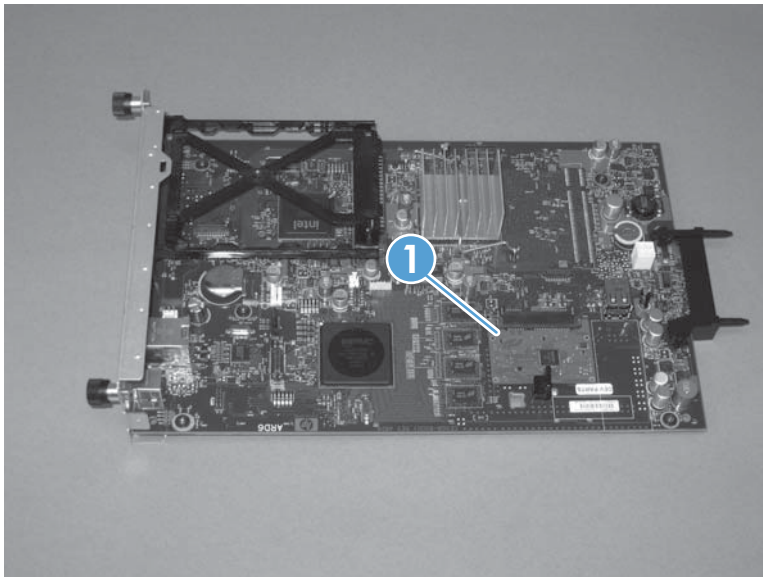
- Formatter PCA. See [Formatter PCA on page 22](#).

Identify the hard drive type

- Encrypted hard drive (callout 1)



- Solid-state hard drive (callout 1)

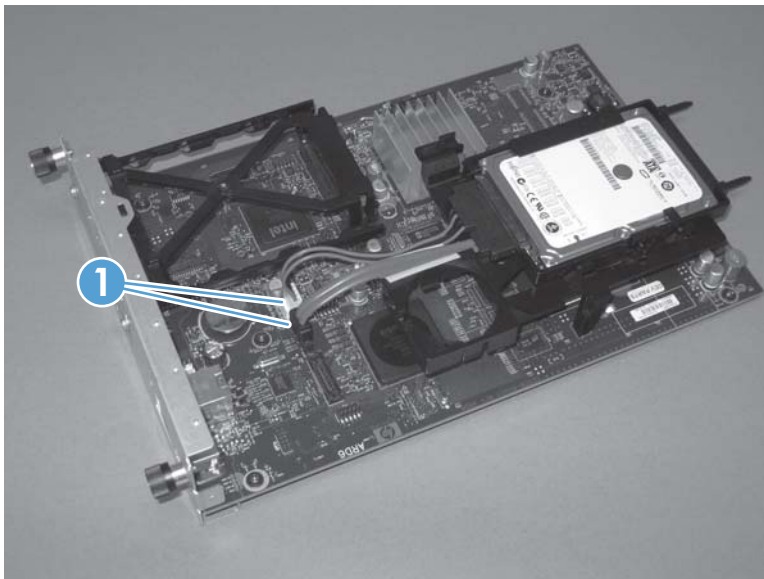




## Remove the EIO encrypted hard drive

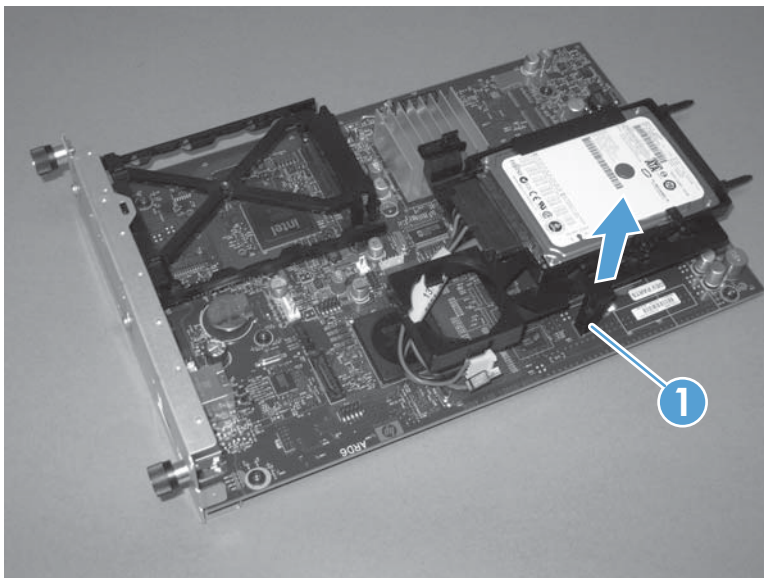
1. Disconnect two connectors (callout 1).

**Figure 23** Remove the EIO encrypted hard drive (1 of 3)



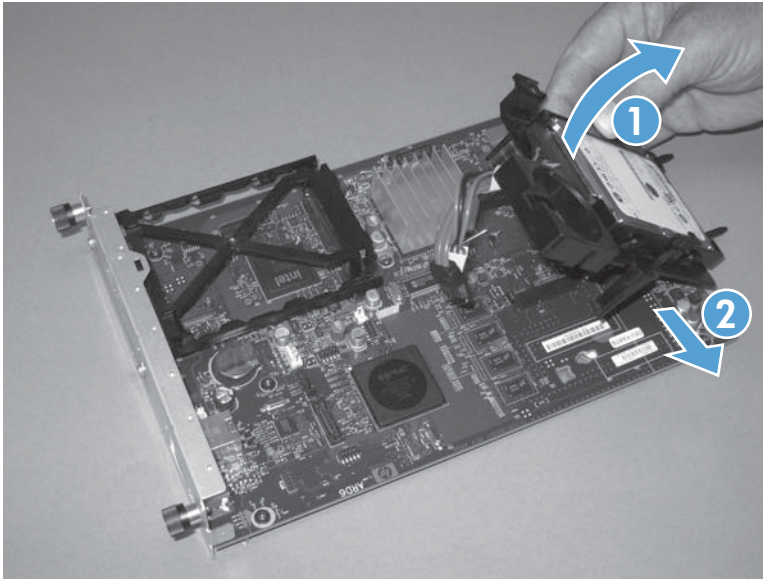
2. Release one tab (callout 1), and then slightly separate the hard-disk support arm from the PCA.

**Figure 24** Remove the EIO encrypted hard drive (2 of 3)



3. Rotate the hard drive up and away from the PCA, and then slide it as shown below to remove it.

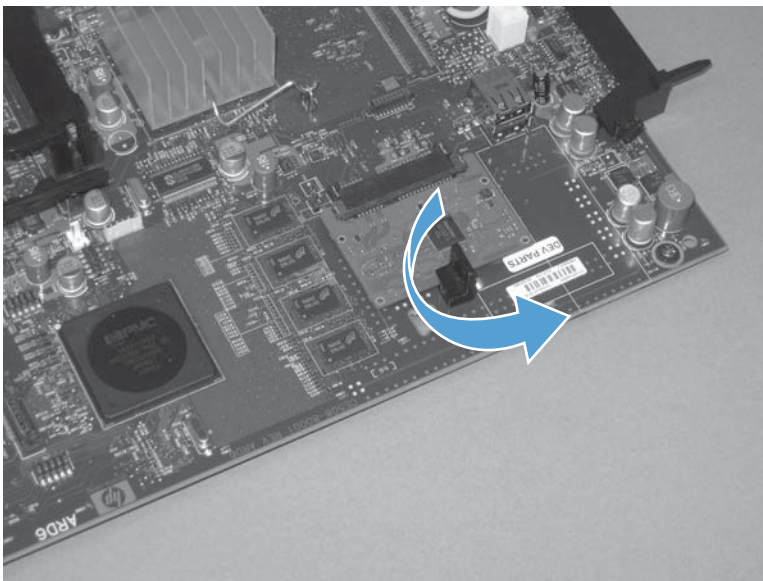
**Figure 25** Remove the EIO encrypted hard drive (3 of 3)



## Remove the solid-state hard drive

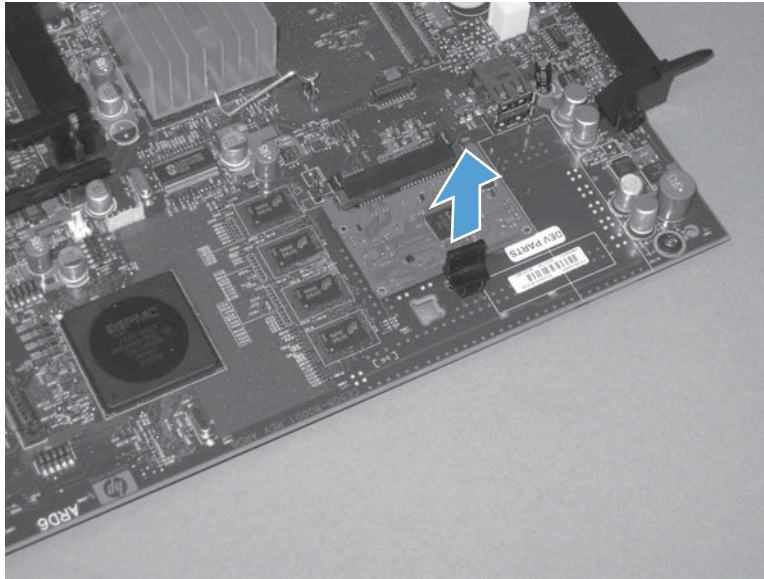
1. Release the hard drive lock.

**Figure 26** Remove the solid-state hard drive (1 of 3)



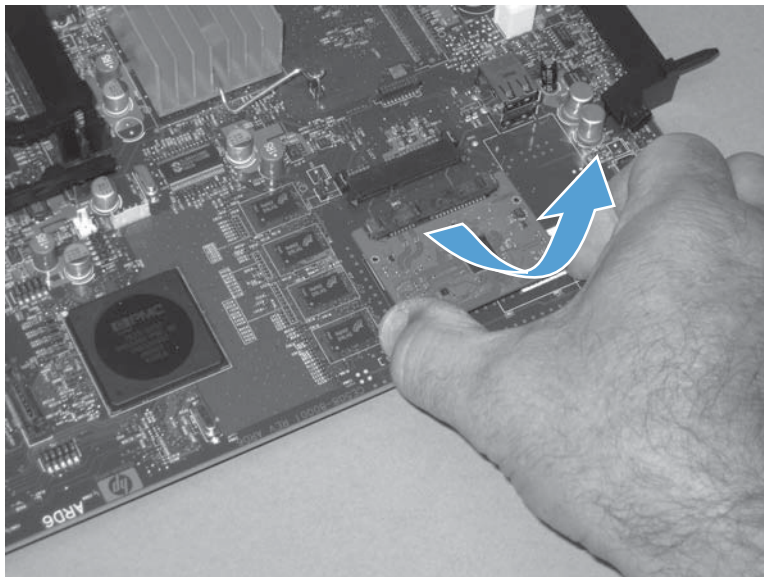
2. Remove the lock from the PCA.

**Figure 27** Remove the solid-state hard drive (2 of 3)



3. Disconnect the solid-state PCA from the formatter PCA, and then remove it.

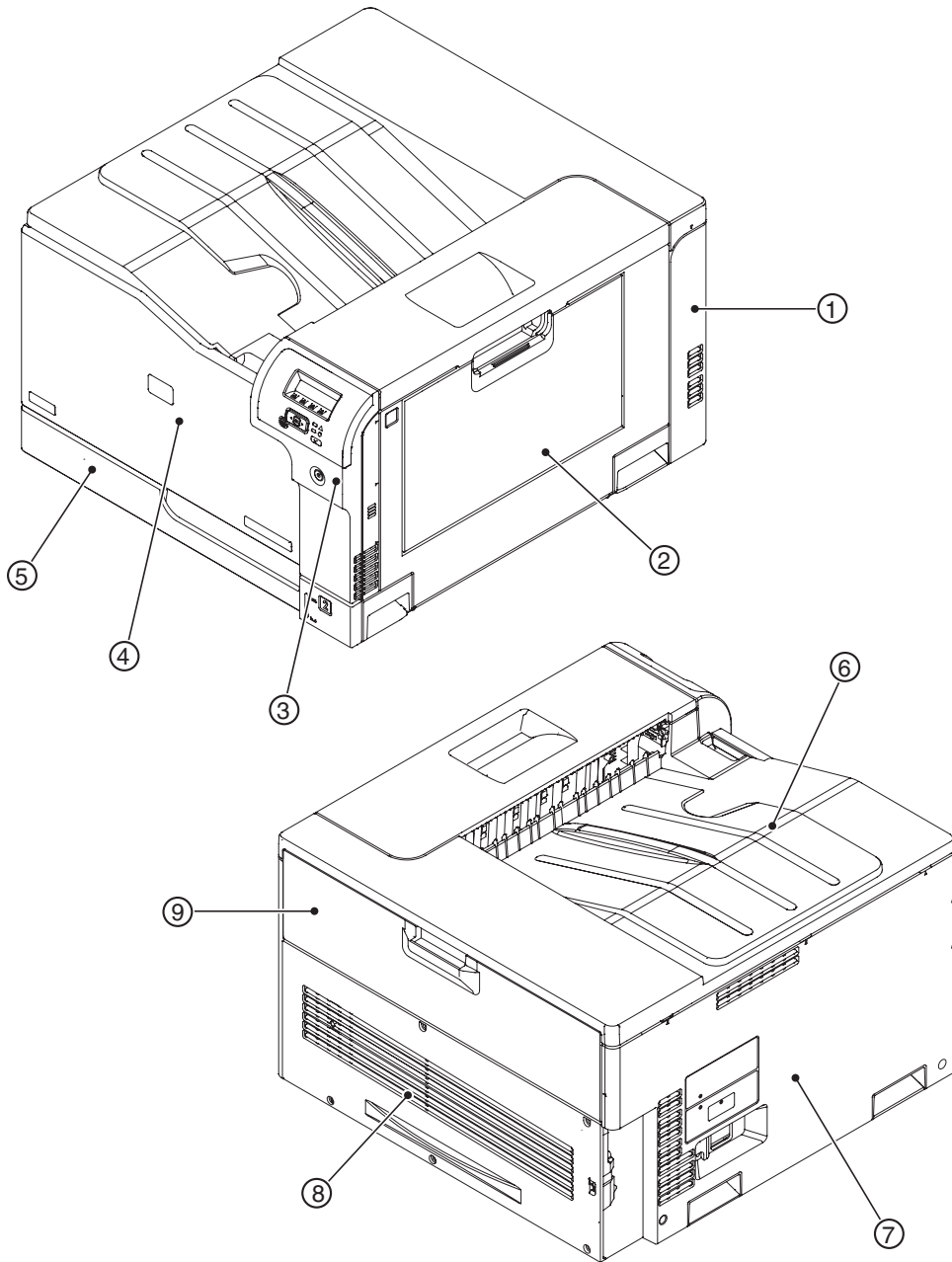
**Figure 28** Remove the solid-state hard drive (3 of 3)



# Covers

## Identification and location

**Figure 29** External panels, covers, and doors



**Table 1** External panels, covers, and doors

Item	Description	Item	Description
1	Rear-right cover (see <a href="#">Right-rear cover on page 36</a> )	6	Top cover (see <a href="#">Top cover on page 38</a> )
2	Right-door assembly (see <a href="#">Right-door assembly on page 43</a> )	7	Left cover (see <a href="#">Left cover on page 32</a> )

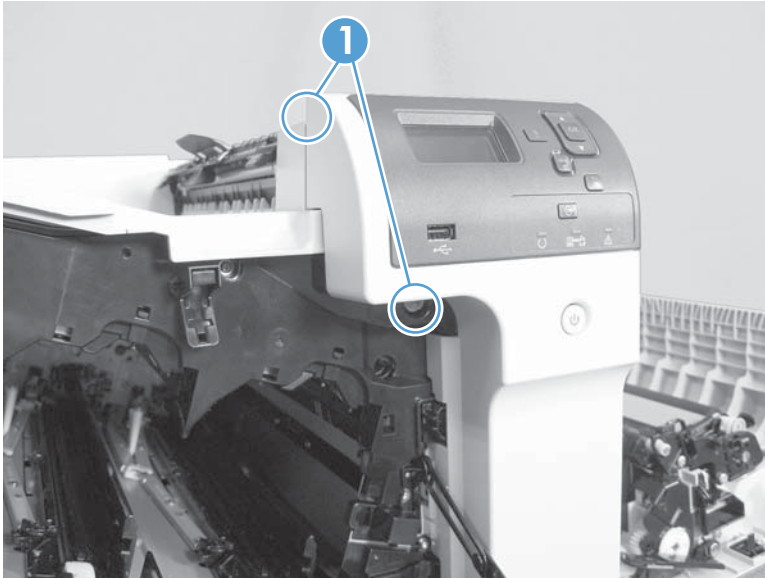
**Table 1 External panels, covers, and doors (continued)**

<b>Item</b>	<b>Description</b>	<b>Item</b>	<b>Description</b>
3	Right-front cover and control-panel assembly (see <a href="#">Right-front cover and control-panel assembly on page 30</a> )	8	Rear cover (see <a href="#">Rear cover on page 33</a> )
4	Front-door assembly (see <a href="#">Front-door assembly on page 40</a> )	9	Toner collection unit access door (see <a href="#">Toner collection unit access door on page 34</a> )
5	Tray 2 cassette		

## Right-front cover and control-panel assembly

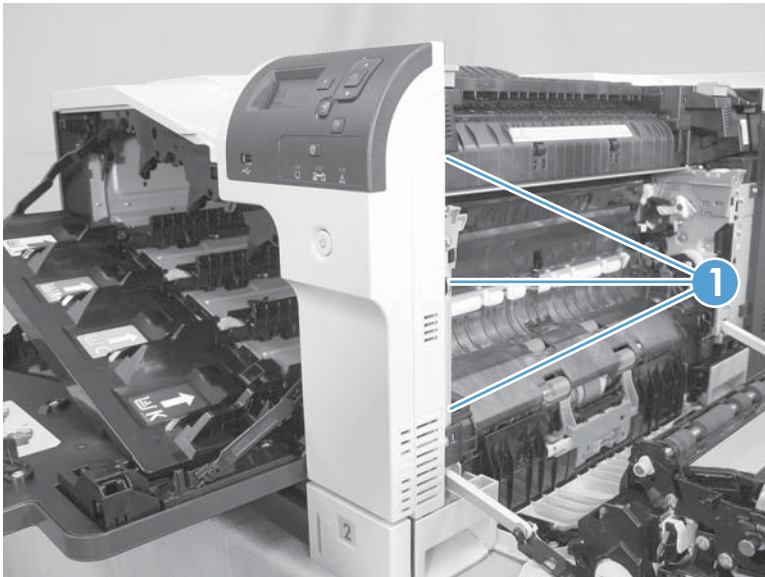
1. Open the front door and the right door.
2. Remove two screws (callout 1).

**Figure 30** Remove the right-front cover and control-panel assembly (1 of 3)



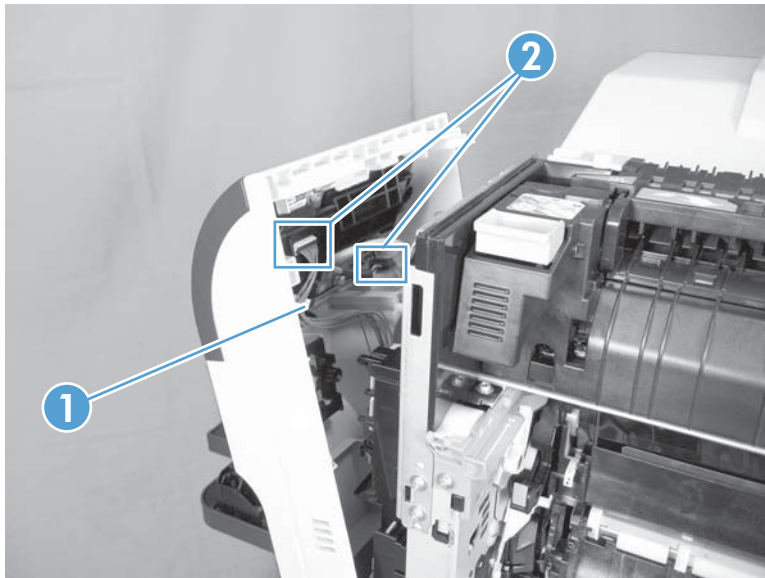
3. Release 3 tabs (callout 1) on the right side of the assembly.

**Figure 31** Remove the right-front cover and control-panel assembly (2 of 3)



4. Support the assembly, release one cable retainer (callout 1), and then disconnect two connectors (callout 2). Remove the assembly.

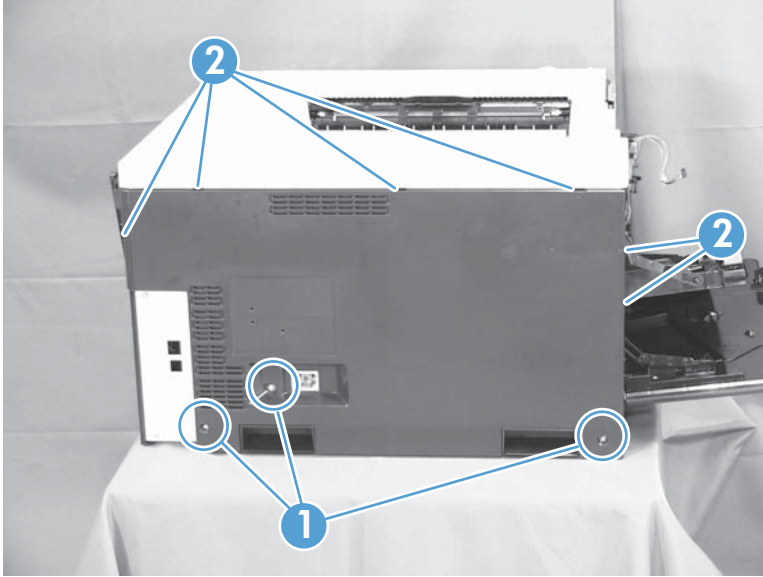
**Figure 32** Remove the right-front cover and control-panel assembly (3 of 3)




## Left cover

1. Remove Tray 2 from the product.
2. Open the front door.
3. Remove three screws (callout 1). Starting from the left side of the cover, release six tabs (callout 2), and then remove the cover from the product.


**Figure 33** Remove the left cover



---

 **TIP:** Opening the toner-collection door might make it easier to release the tabs on the left side of the cover.

---

 **Reinstallation tip** If the front door will not close after the left cover has been reinstalled, verify that the two tabs on the right side of the cover have been aligned correctly with the product chassis.

---

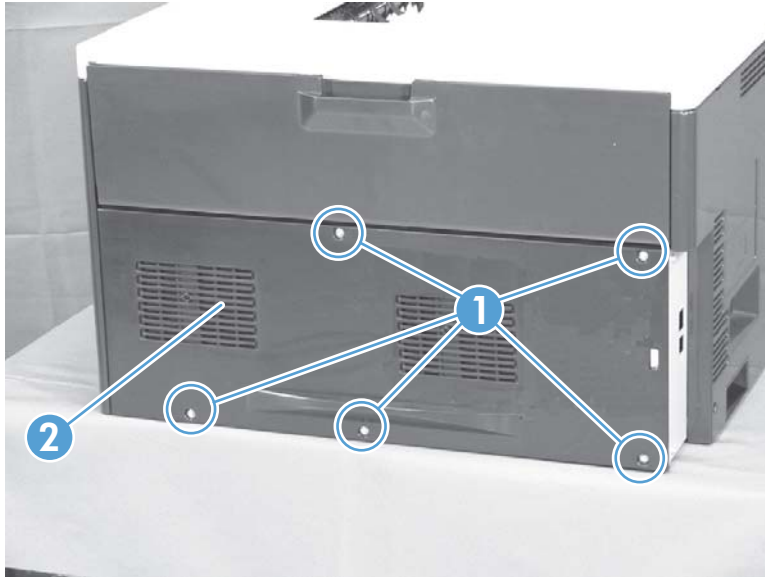


## Rear cover

### Remove the rear cover

- ▲ Remove five screws (callout 1), and then remove the cover from the product.

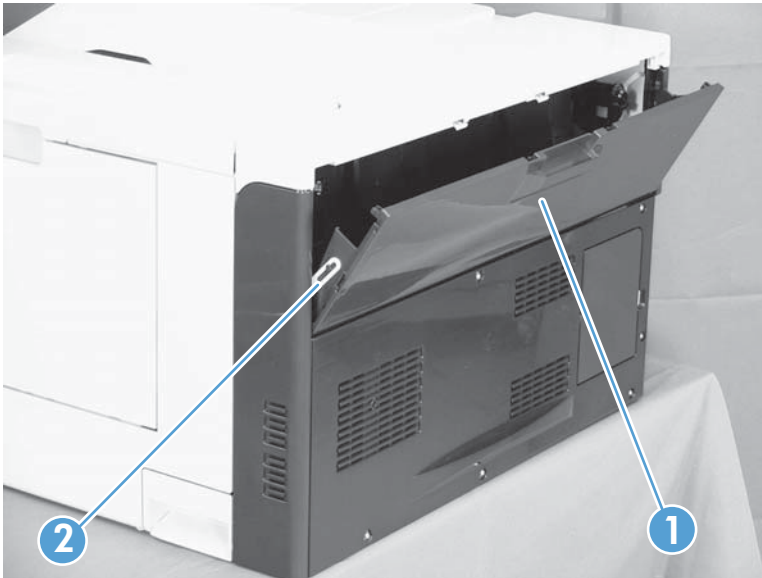
**Figure 34** Remove the rear cover



## Toner collection unit access door

1. Open the toner collection unit access door (callout 1), remove the toner collection unit, and then release the link arm (callout 2) on the left side of the door.

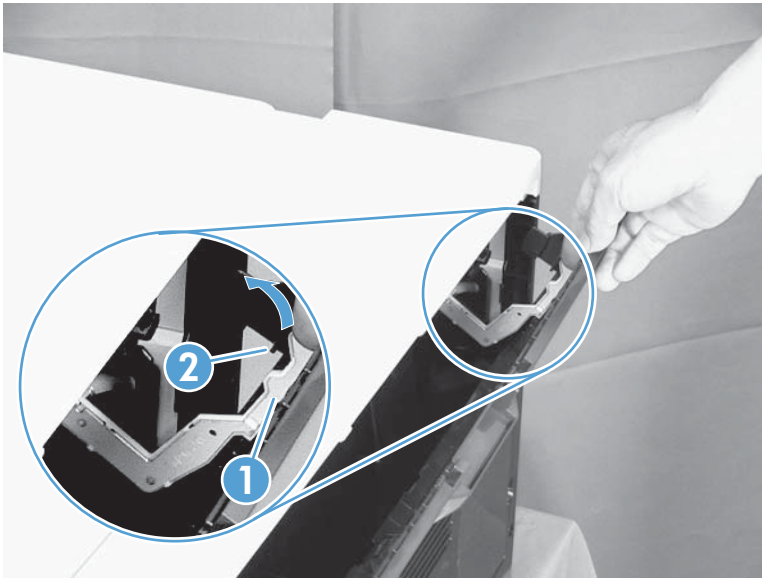
**Figure 35** Remove the toner collection unit access door (1 of 3)



2. Partially close the door so that the link arm (callout 1) can clear the stop (callout 2) on the door, and then disengage the link arm from the door.

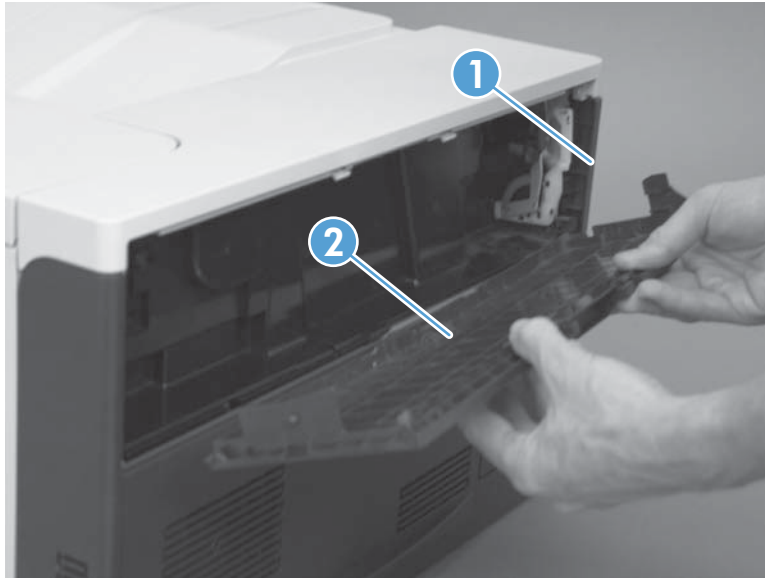
△ **CAUTION:** Do not disconnect the right-hand link arm when the door is completely open. Doing so can disconnect the link arm spring.

**Figure 36** Remove the toner collection unit access door (2 of 3)



3. Rotate the access door down 90 degrees, and then pull on the right side of the door to remove the access door.

**Figure 37** Remove the toner collection unit access door (3 of 3)

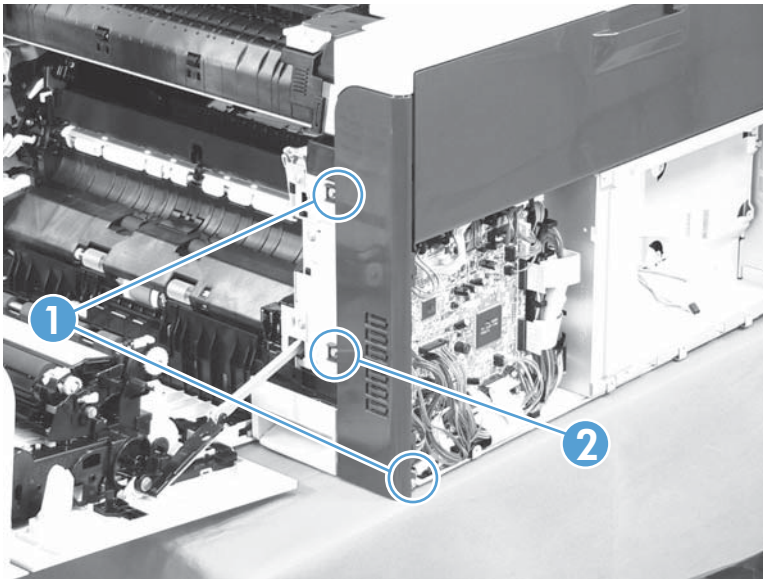


## Right-rear cover

1. Remove the rear cover. See [Rear cover on page 33](#).
2. Open the right-door assembly.
3. Remove two screws (callout 1), release one tab (callout 2), and then remove the cover.

△ **CAUTION:** The ground spring on the back of the cover can easily be dislodged. Be careful not to lose it. See [Reinstall the right-rear cover on page 37](#).

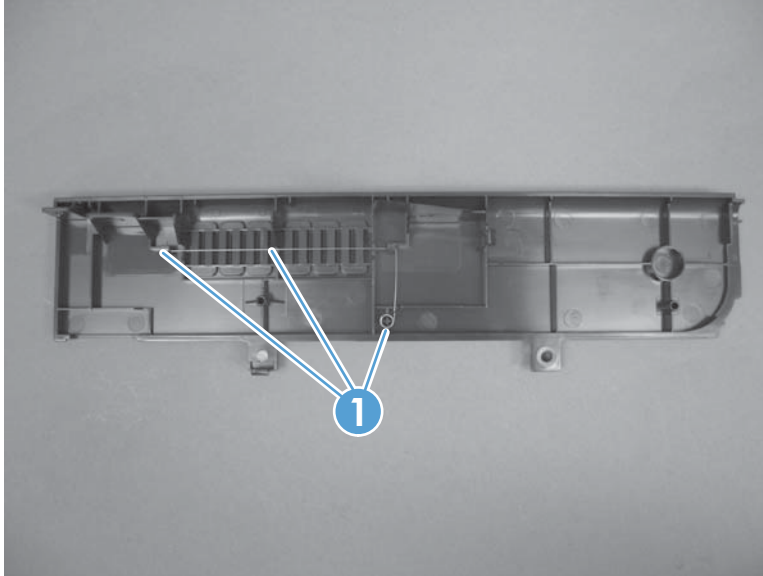
**Figure 38** Remove the right-rear cover



## Reinstall the right-rear cover

- ▲ Make sure that the ground spring (callout 1) is correctly installed before you reinstall the right-rear cover.

**Figure 39** Right-rear cover ground spring



## Top cover

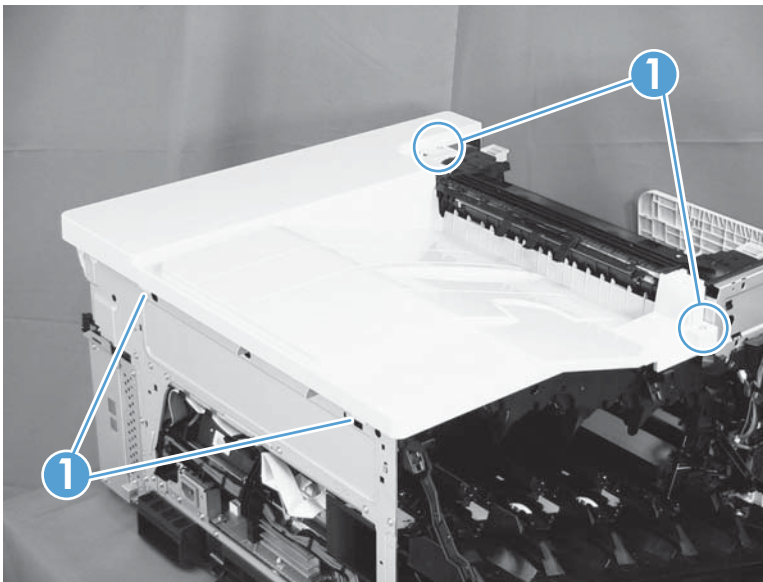
Before proceeding, remove the following components:

- Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly on page 30](#).
- Left cover. See [Left cover on page 32](#).
- Remove the rear cover. See [Rear cover on page 33](#).
- Right-rear cover. See [Right-rear cover on page 36](#).

### Remove the top cover

1. Open the right-door assembly, and then remove four screws (callout 1).

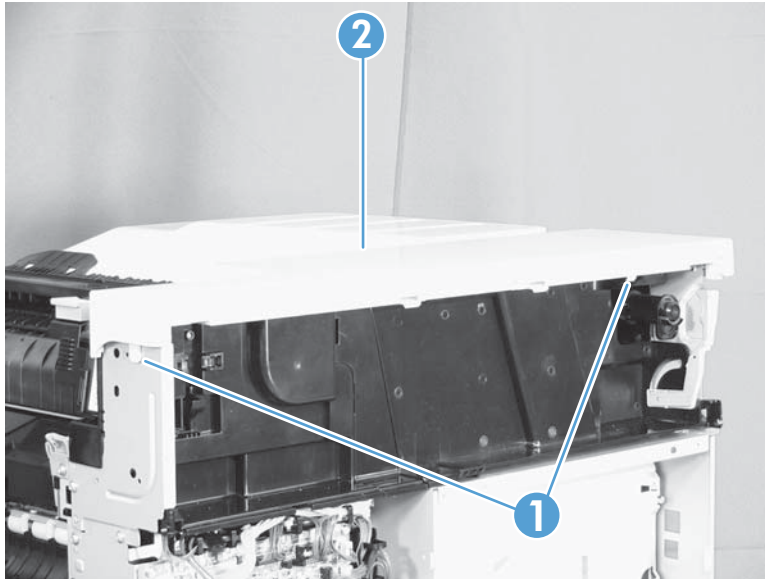
**Figure 40** Remove the top cover (1 of 2)



2. Open the toner-collection door.

3. Release two tabs (callout 1), and then remove the cover.

**Figure 41** Remove the top cover (2 of 2)

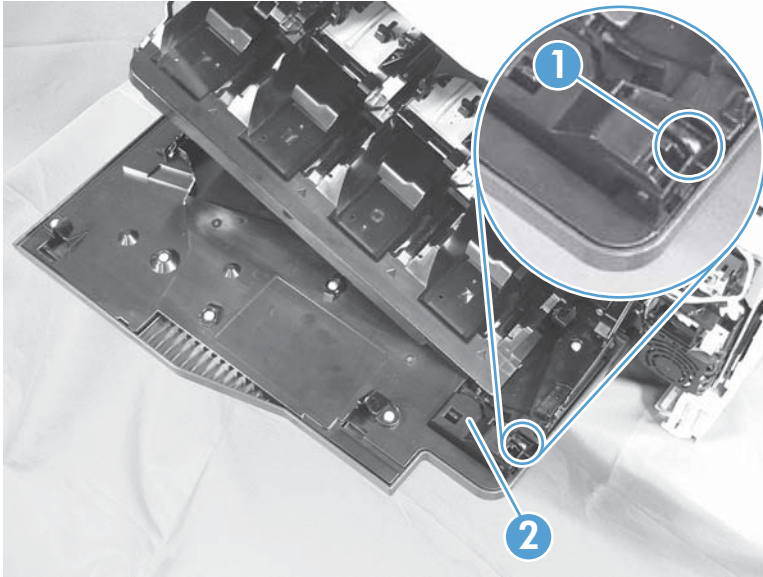


## Front-door assembly

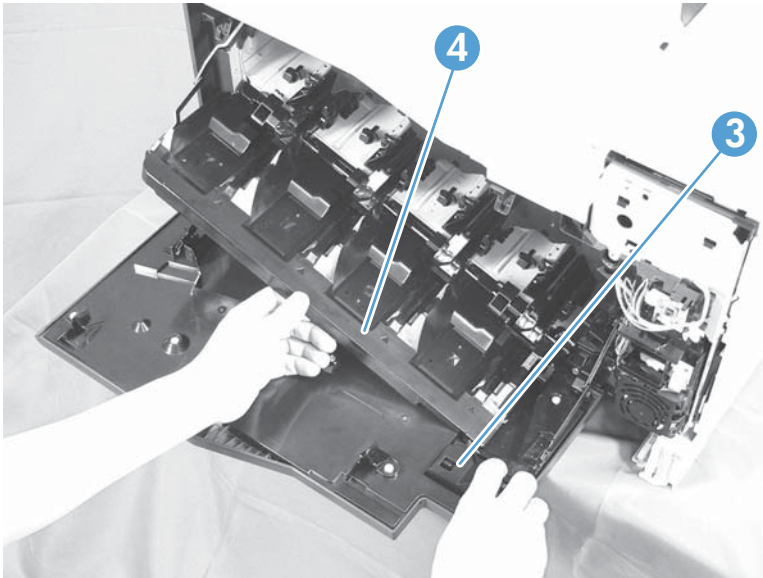
1. Remove the control panel. See [Right-front cover and control-panel assembly](#) on page 30.
2. Open the front door.
3. Remove one screw (callout 1) and the inner cover rail mount (callout 2).

△ **CAUTION:** As shown in [Figure 43 Remove the front-door assembly \(2 of 4\)](#) on page 40, when removing the inner cover rail mount (callout 3), hold down the inner cover (callout 4) with one hand to prevent it from springing back at the product.

**Figure 42** Remove the front-door assembly (1 of 4)



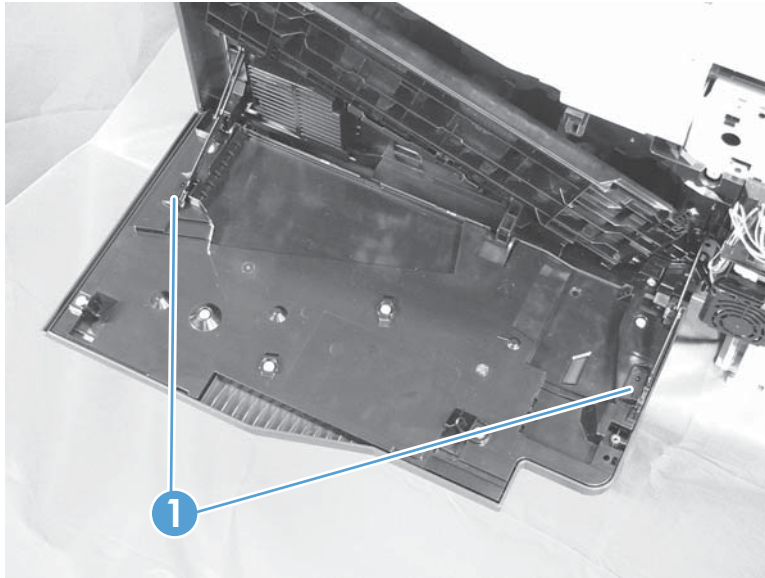
**Figure 43** Remove the front-door assembly (2 of 4)




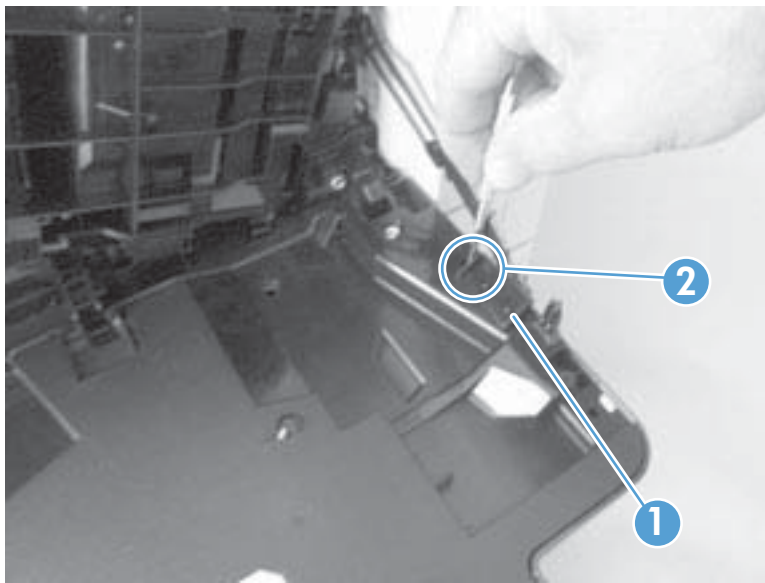


4. Close the inner cover, and then release two tabs on each stopper (callout 1) with a small flat-blade screwdriver.

**Figure 44** Remove the front-door assembly (3 of 4)

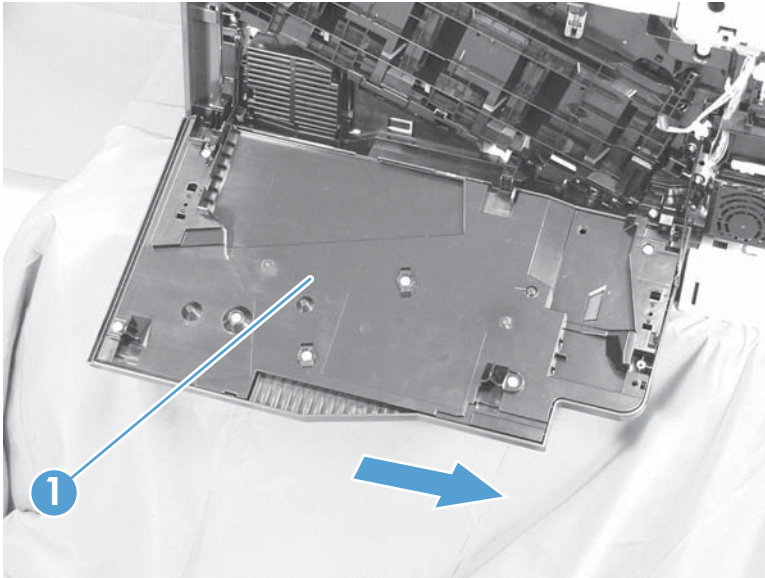


 **NOTE:** Each tab is at the end of the stopper that is closest to the product.



5. Position the door as shown below, and then slide the front-door assembly in the direction that the arrow indicates to remove it from the product.

**Figure 45** Remove the front-door assembly (4 of 4)




## Right-door assembly

Remove the following components:

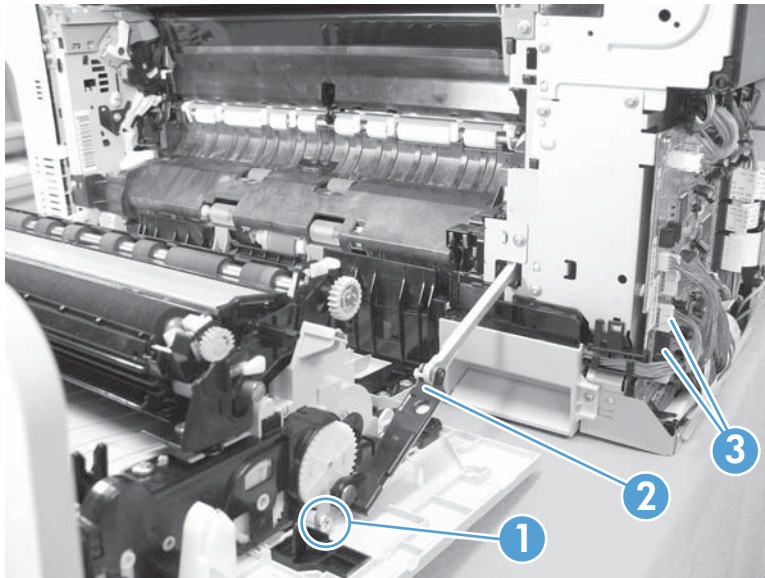
- Rear cover (see [Rear cover on page 33](#))
  - Right rear cover (see [Right-rear cover on page 36](#))
1. Open the right-door assembly
  2. Remove one screw (callout 1), release the link arm (callout 2), and then disconnect two connector (callout 3).

---

 **NOTE:** The link arm is spring loaded and retracts into the product.

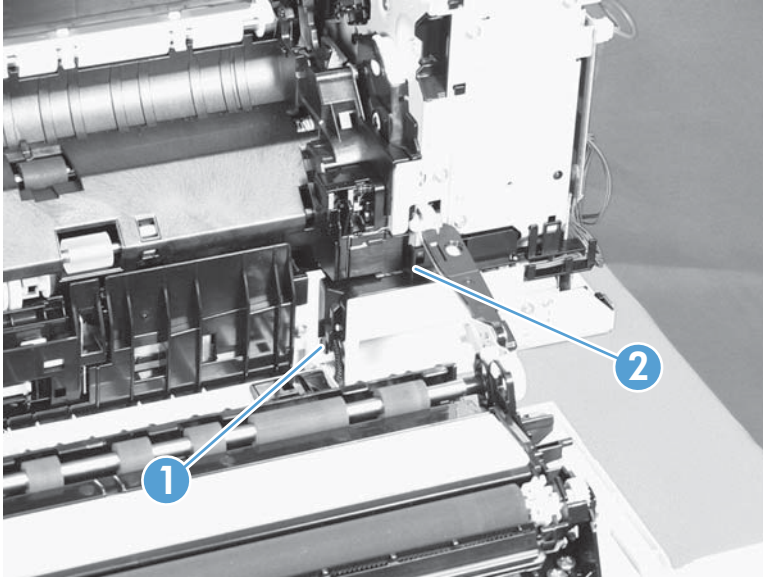
---

**Figure 46** Remove the right-door assembly (1 of 6)



3. Carefully release one tab (callout 1), and then remove the cable cover (callout 2).

**Figure 47** Remove the right-door assembly (2 of 6)

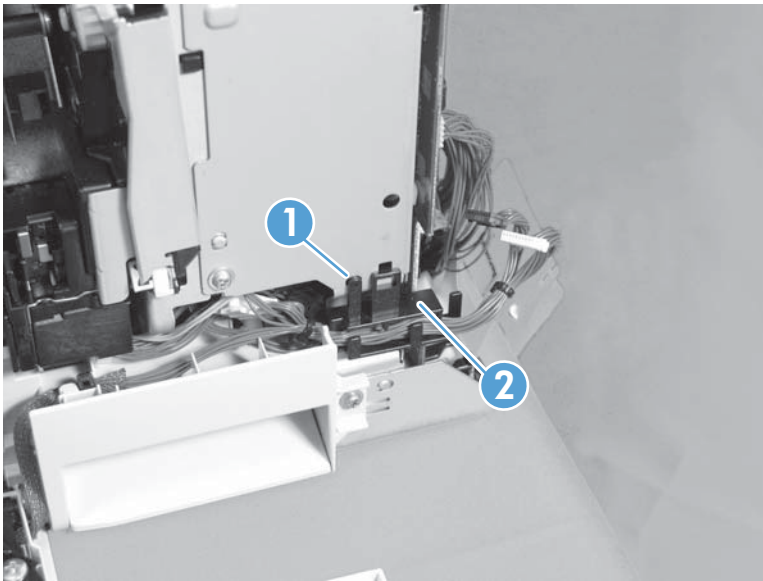


4. Release one tab (callout 1), and then remove the guide (callout 2).

**TIP:** Release the wire harnesses from the guide as you remove it.

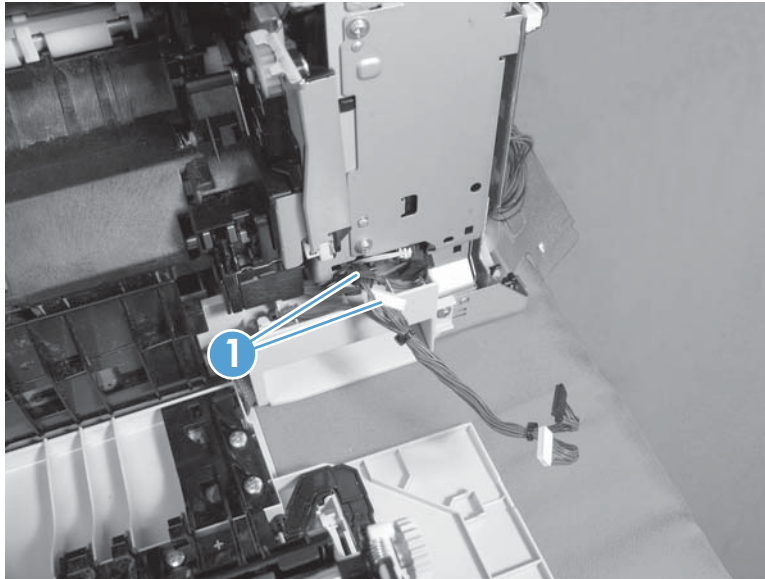
---

**Figure 48** Remove the right-door assembly (3 of 6)



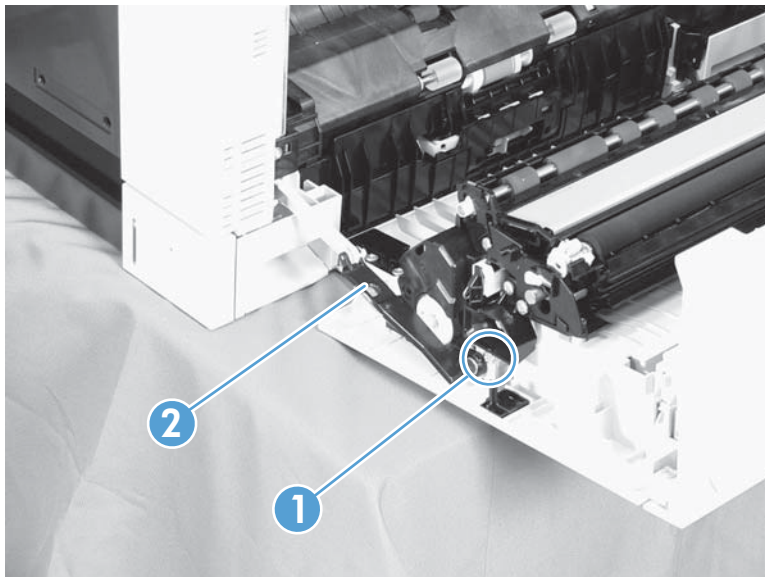
5. Disconnect two connectors (callout 1).

**Figure 49** Remove the right-door assembly (4 of 6)



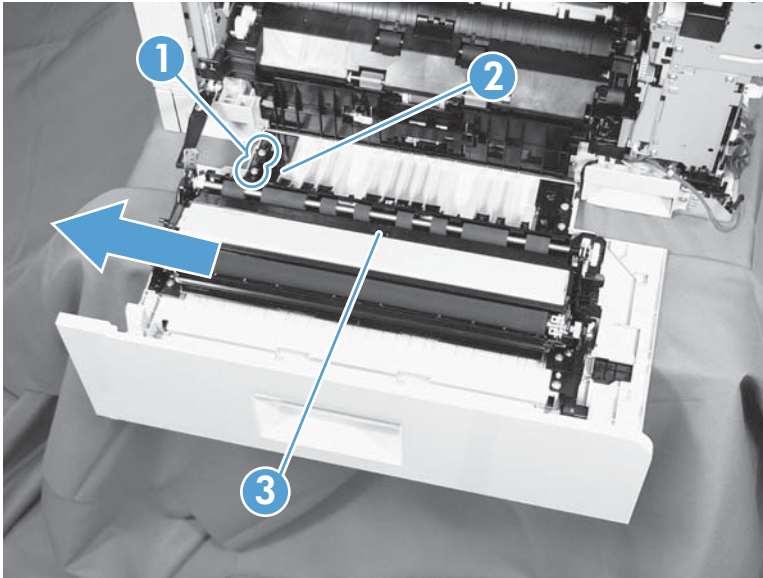
6. Remove one screw (callout 1), and then release the link arm (callout 2).

**Figure 50** Remove the right-door assembly (5 of 6)



7. Remove two screws (callout 1), remove the hinge (callout 2), and then slide the right-door assembly (callout 3) to the left to remove it.

**Figure 51** Remove the right-door assembly (6 of 6)



## Main assemblies

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

### Formatter case

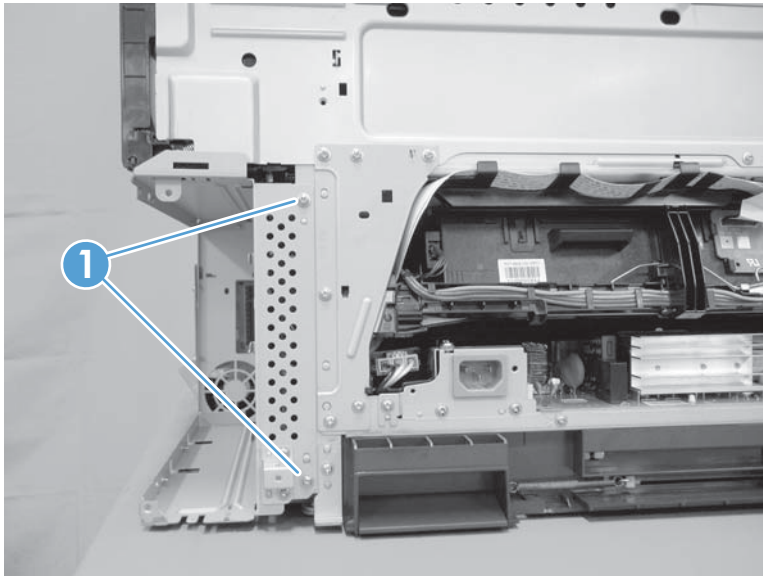
Before proceeding, remove the following components:

- Formatter PCA. See [Formatter PCA on page 22](#).
- Left cover. See [Left cover on page 32](#).
- Rear cover. See [Rear cover on page 33](#).

### Remove the formatter case

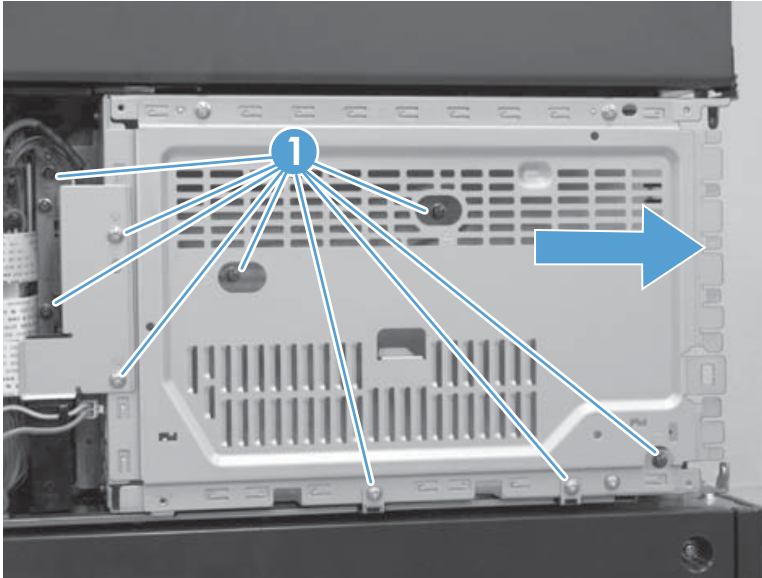
1. Remove two screws (callout 1).

**Figure 52** Remove the formatter case assembly (1 of 2)



2. Remove nine screws (callout 1), and then slide the formatter case unit (callout 2) away from the DC controller to remove it.

**Figure 53** Remove the formatter case assembly (2 of 2)





## Laser scanner assembly

- △ **CAUTION:** Do not replace the laser scanner and the formatter PCA at the same time. The settings for the laser scanner are stored in the formatter RAM. When you install a new laser scanner, it reads the settings from the formatter.
- 

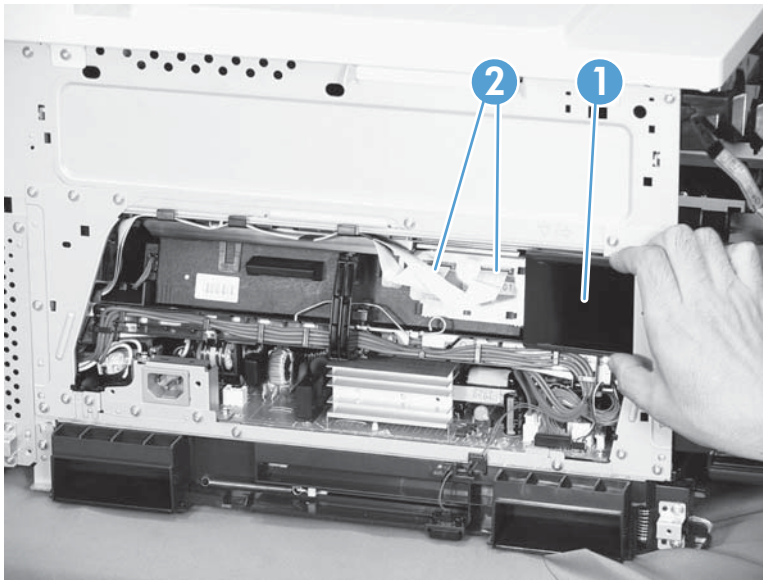
Before proceeding, remove the following components:

- Tray 2
- Left cover. See [Left cover on page 32](#).

### Remove the laser scanner assembly

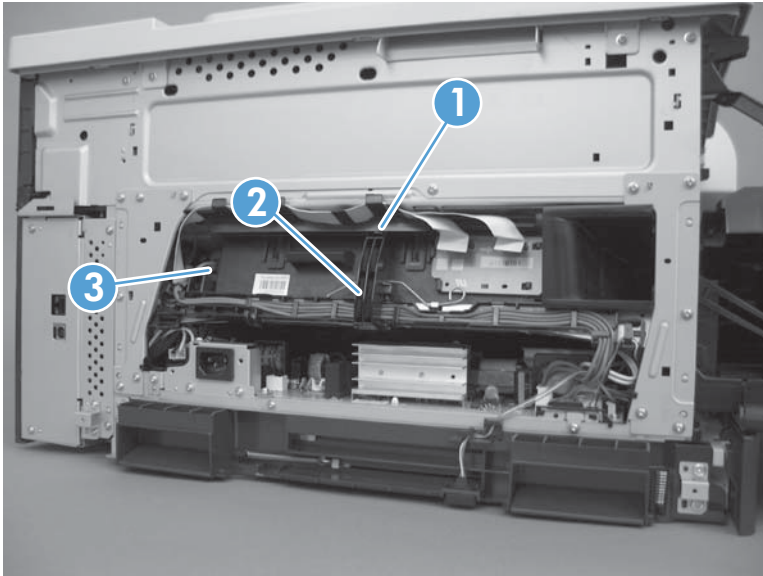
1. Open the front door.
2. On the left side of the product, pinch and remove the fan duct (callout 1), and then disconnect the two flat cables (callout 2).

**Figure 54** Remove the laser/scanner assembly (1 of 4)



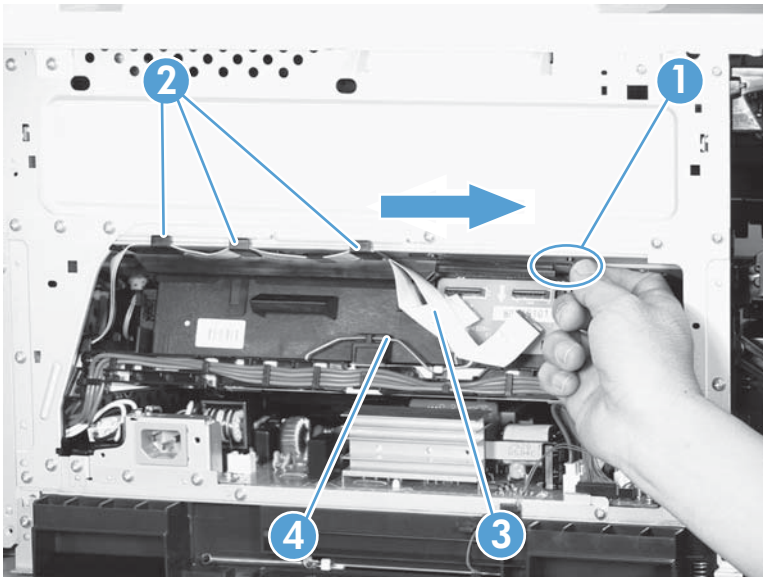
3. Release one tab (callout 1), remove the stopper (callout 2), and then disconnect one connector (callout 3).

**Figure 55** Remove the laser scanner assembly (2 of 4)



4. Release one tab (callout 1), and then slide the cable guide (callout 2) in the direction that the arrow indicates.
5. Remove the cable guide (callout 2) and the flat cables (callout 3) together, and then remove one spring (callout 4).

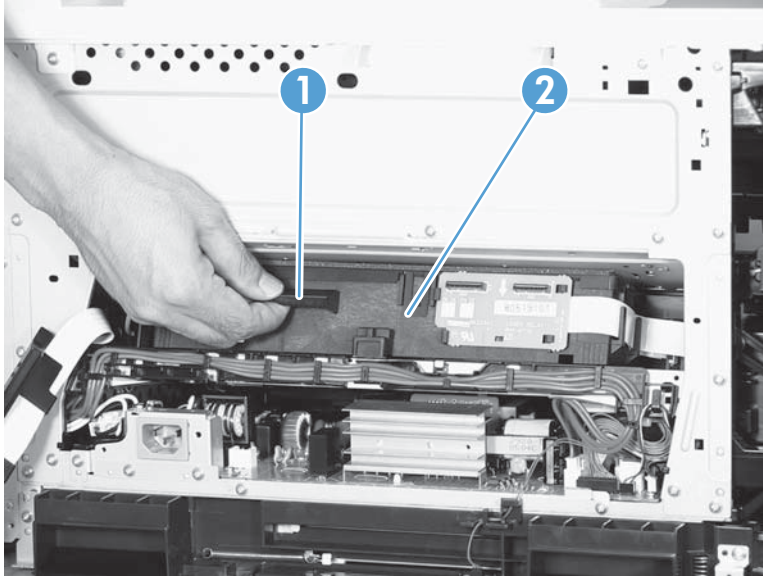
**Figure 56** Remove the laser scanner assembly (3 of 4)



6. While holding up the handle (callout 1), pull the laser scanner (callout 2) up slightly and then out of the product.

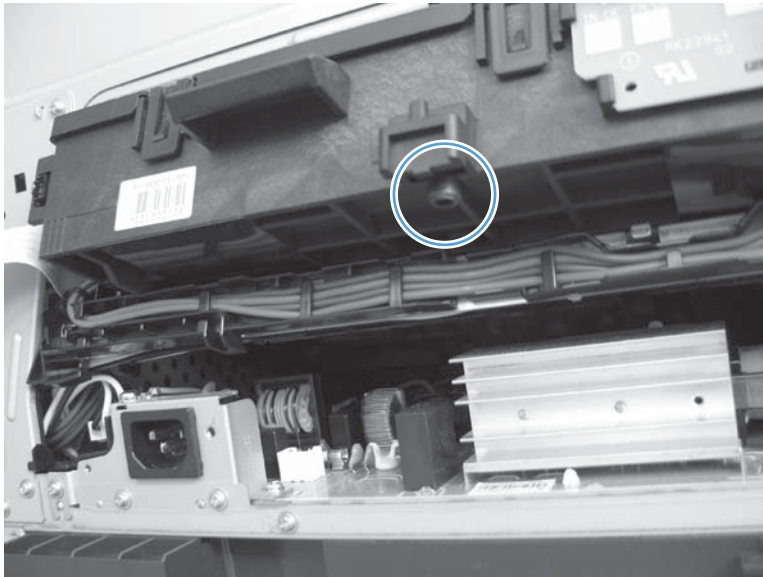
△ **CAUTION:** Do not touch the protective glass strip on top of the assembly.

**Figure 57** Remove the laser scanner assembly (4 of 4)



💡 **Reinstallation tip** Align the assembly with the guides on the left side of the opening when reinstalling the assembly.

Align the pin on the bottom of the assembly with the hole in the product when reinstalling the assembly. After pushing the assembly into the product, you might have to pull the assembly slightly forward to seat the pin in the hole.



## Paper pickup assembly

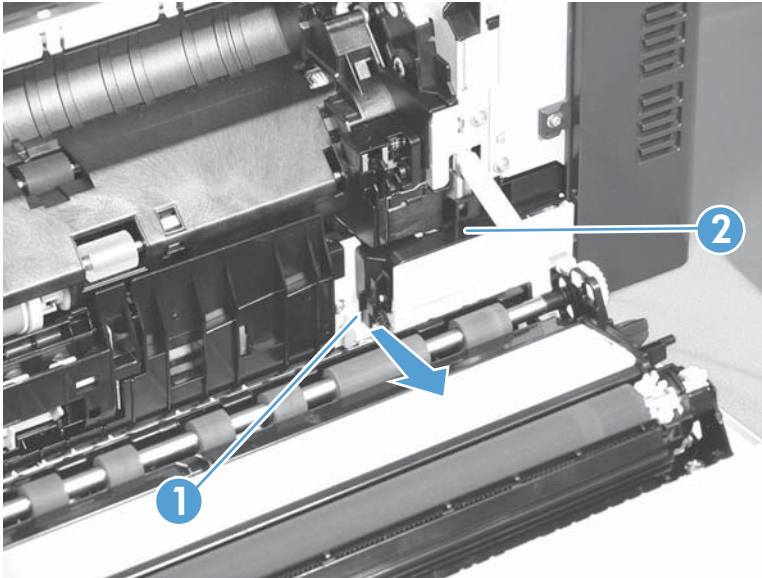
Before proceeding, remove the following components:

- Tray 2 cassette.
- Tray 2 separation roller assembly. See [Separation roller assembly \(Tray 2\) on page 15](#).
- ITB. See [Intermediate transfer belt \(ITB\) on page 19](#).


### Remove the paper pickup assembly

1. Open the right door, pull out one tab (callout 1), pull the bottom of the cable cover out, and then pull up to remove the cable cover (callout 2).

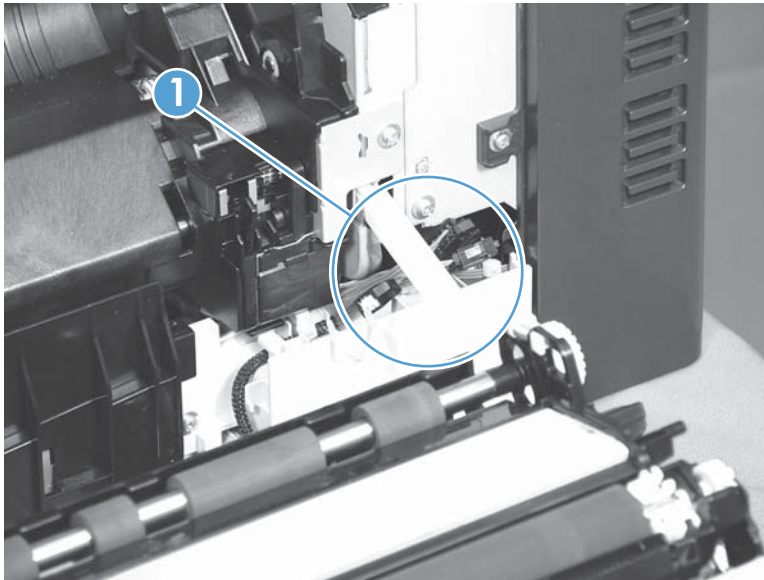
**Figure 58** Remove the paper pickup assembly (1 of 3)



2. Disconnect four connectors (callout 1).

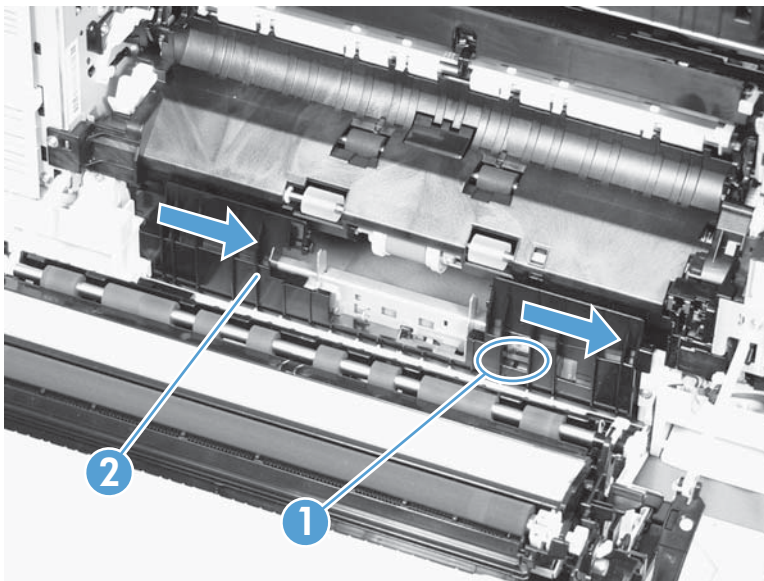
 **NOTE:** The connectors might be hidden behind the assembly.

**Figure 59** Remove the paper pickup assembly (2 of 3)



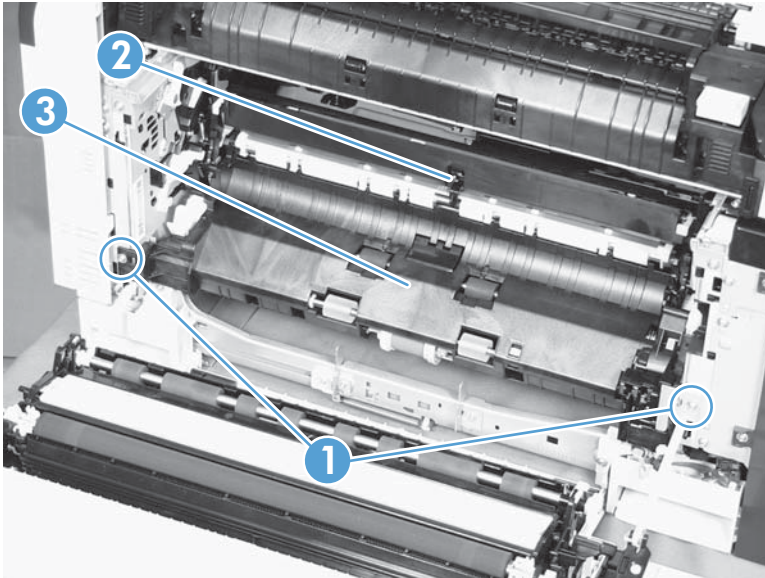
3. Pull out one tab (callout 1), and then slide the guide (callout 2) to the right to remove it.

**Figure 60** Remove the paper pickup assembly (3 of 3)



4. Remove two screws (callout 1), move the registration sensor lever (callout 2) to the up position, and then pull the paper pickup assembly (callout 3) toward you to remove it.

**Figure 61** Remove the paper pickup assembly (4 of 4)

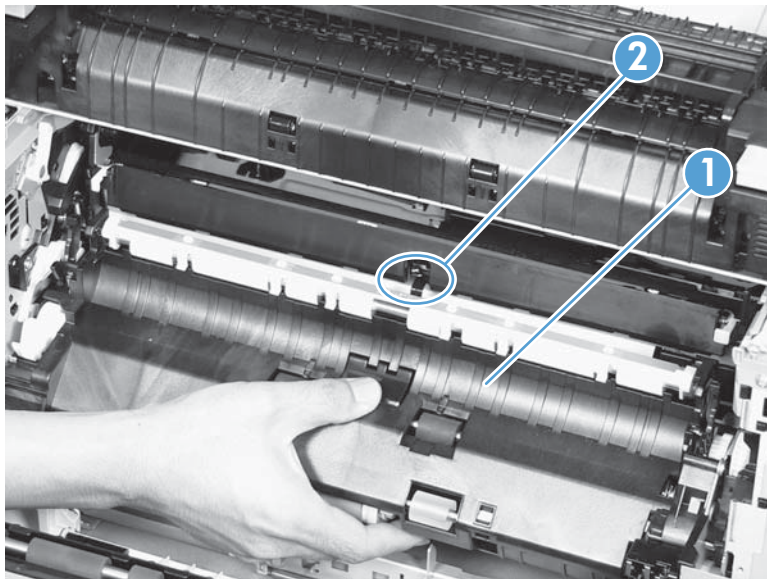


## Reinstall the paper pickup assembly

Use the steps below to reinstall the paper pickup assembly. If you are installing a replacement assembly, also see [Installing a replacement paper pickup assembly on page 57](#) after completing these steps.

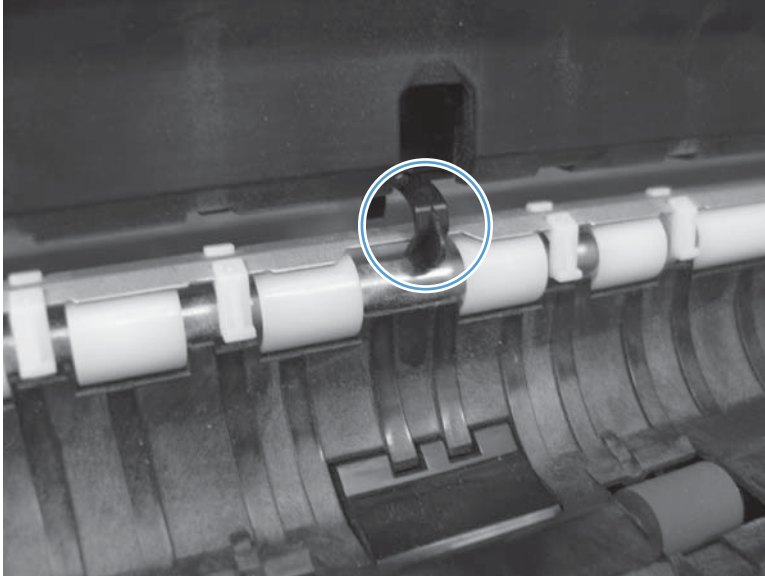
1. When reassembling the paper pickup assembly (callout 1), the sensor flag (callout 2) is in the way. Be sure to hold up the sensor flag when reassembling.

**Figure 62** Reinstall the paper pickup assembly

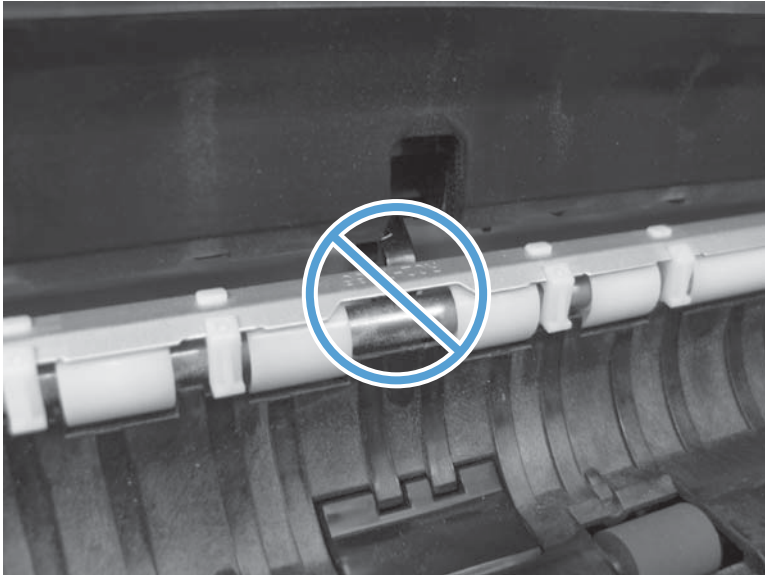


2. Make sure that the sensor flag is correctly installed, and that the flag moves properly after reassembling the paper pickup assembly.

**Figure 63** Paper pickup assembly sensor flag correctly installed



**Figure 64** Paper pickup assembly sensor flag incorrectly installed









## Installing a replacement paper pickup assembly

- ▲ Use the **Service** menu to reset the **New Registration Roller** menu item and enter the **Media Sensor Value** from the replacement paper pickup assembly.

### Reset the New Registration Roller menu item

- a. Press the Home button .
- b. Open the following menus:
  - **Device Maintenance**
  - **Service**
  - **Service Access Code**
- c. Use the arrow buttons to enter the access code, and then press the OK button.
- d. Press the **Down** arrow button  to highlight the **New Registration Roller** menu, and then press the OK button.
- e. Press the **Down** arrow button  to highlight the **Yes** item, and then press the OK button.

### Reset the Media Sensor Value

- a. Press the Home button .
- b. Open the following menus:
  - **Device Maintenance**
  - **Service**
  - **Service Access Code**
- c. Use the arrow buttons to enter the access code, and then press the OK button.

- d. Press the **Down** arrow button ▼ to highlight the **Media Sensor Value** menu, and then press the OK button.

**Figure 65** Media sensor value label



- e. Use the arrow buttons to enter the media sensor value found on the replacement assembly.
- f. Press the OK button to save to save the value.

## Registration sensor assembly

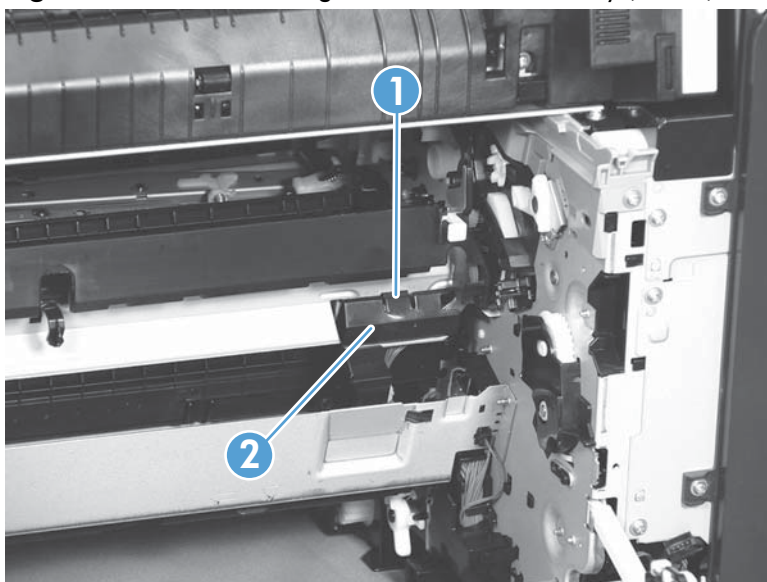
Before proceeding, remove the following components:

- Tray 2 cassette.
- Cassette separation roller assembly. See [Separation roller assembly \(Tray 2\) on page 15](#).
- Intermediate transfer belt (ITB). See [Intermediate transfer belt \(ITB\) on page 19](#).
- Cassette pickup drive assembly. See [Paper pickup assembly on page 52](#).

### Remove the registration sensor assembly

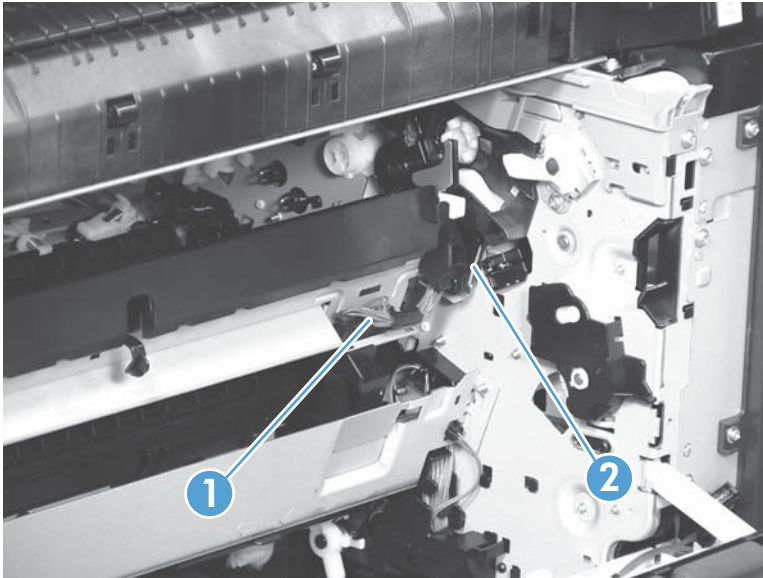
1. Push the tab (callout 1) down, and then pull the top of the cover (callout 2). You might need a small flat-blade screwdriver to press down the tab.

**Figure 66** Remove the registration sensor assembly (1 of 4)



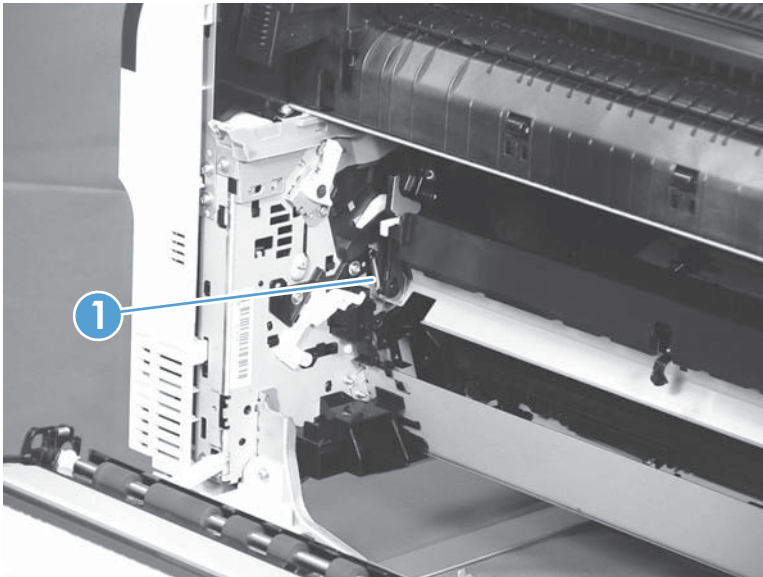
2. Disconnect one connector (callout 1), and then detach the bottom part of the spring (callout 2) at the right end. If necessary, use a pick or needle-nose pliers to detach the spring.

**Figure 67** Remove the registration sensor assembly (2 of 4)



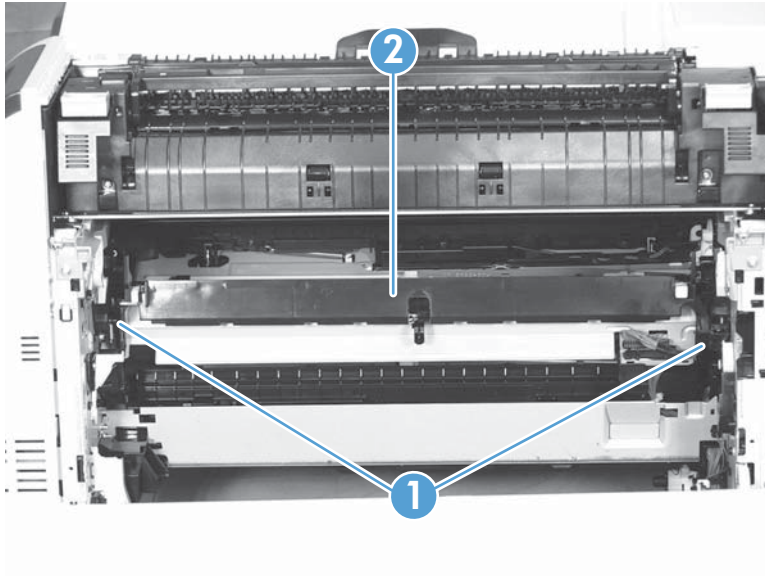
3. Detach the bottom of one spring (callout 1) at the left end.

**Figure 68** Remove the registration sensor assembly (3 of 4)



4. Release one of the registration sensor unit pivot hinges from the shafts (callout 1), pull out that end of the assembly (callout 2), and then repeat the procedure on the other pivot hinge.

**Figure 69** Remove the registration sensor assembly (4 of 4)



## Lifter-drive assembly

Before proceeding, remove the following components:

- Tray 2 cassette.
- Fuser. See [Fuser on page 11](#).
- ITB. See [Intermediate transfer belt \(ITB\) on page 19](#).
- 1 x 500-paper feeder. See [1 x 500-sheet paper feeder assembly on page 137](#).
- 3 x 500-paper feeder (optional accessory). See [3 x 500-sheet paper feeder \(optional accessory\) on page 151](#).

### Remove the lifter-drive assembly

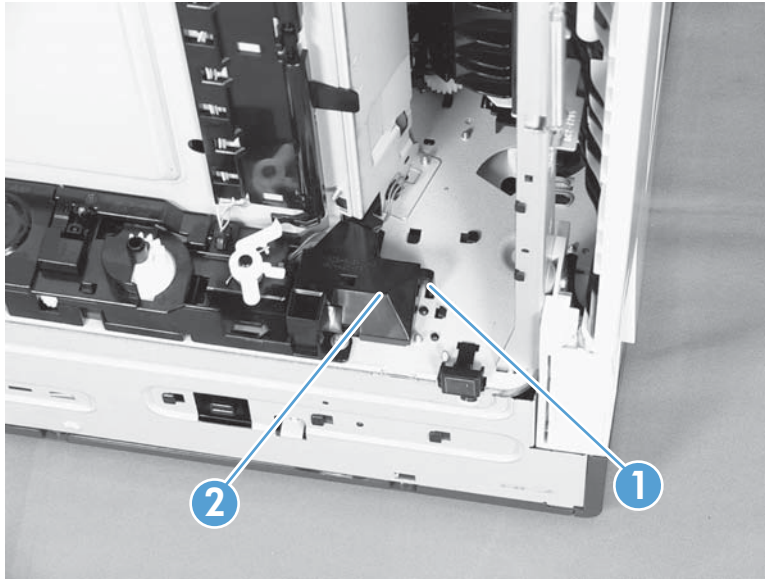
1. Verify that the right door is closed, and then turn the product so that the front side faces up.

**Figure 70** Remove the lifter-drive assembly (1 of 3)



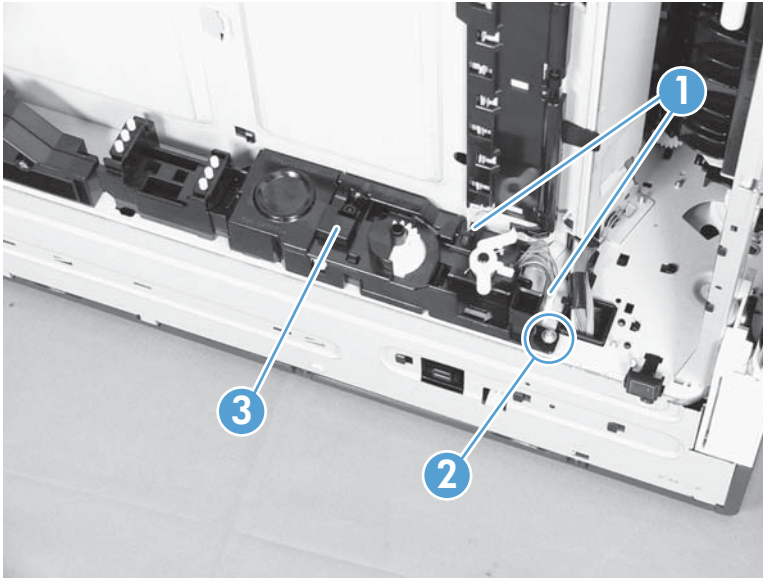
2. Release the tab (callout 1), and then pull up to remove the cover (callout 2).


**Figure 71** Remove the lifter-drive assembly (2 of 3)

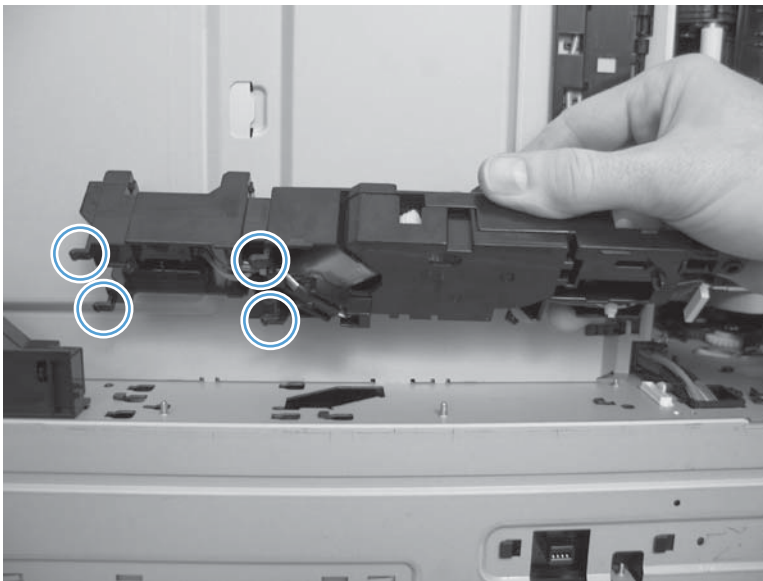


3. Disconnect two connectors (callout 1), remove one screw (callout 2), and then remove the lifter drive unit (callout 3).

**Figure 72** Remove the lifter-drive assembly (3 of 3)



 **Reinstallation tip** Make sure that the tabs align correctly when reinstalling the lifter-drive assembly.



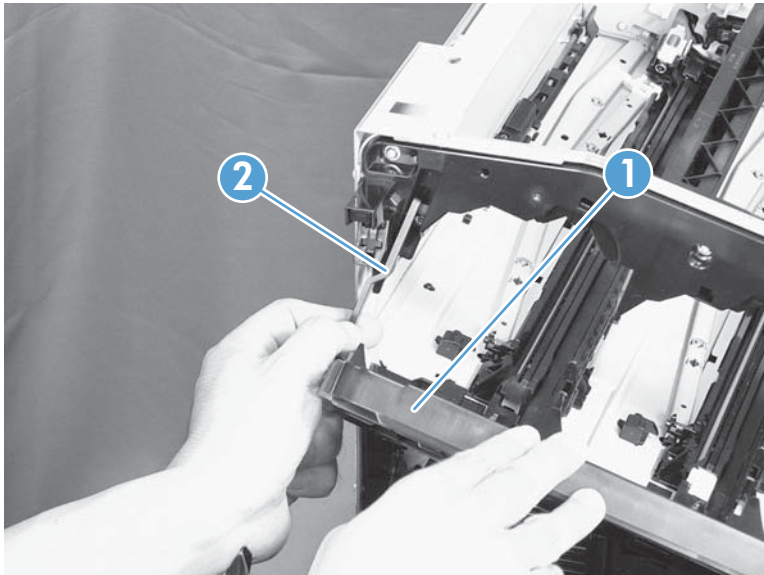


## ITB front guide assembly

Before proceeding, remove the following components:

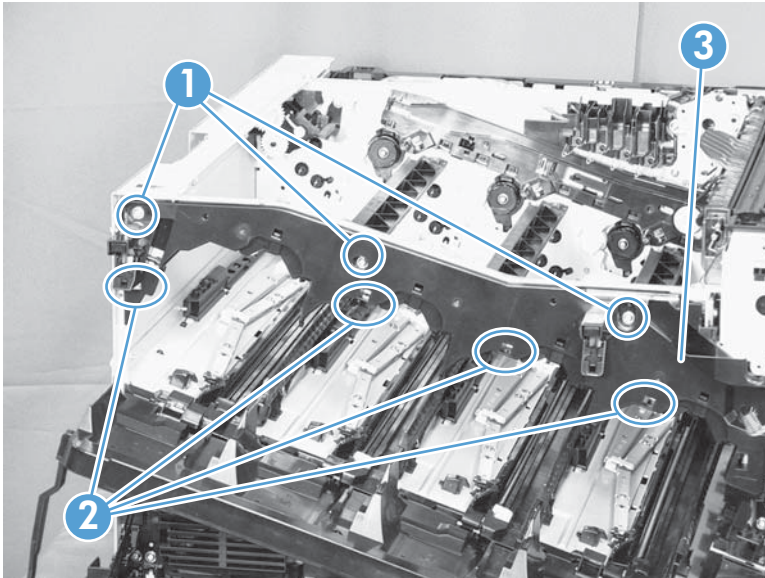
- ITB. See [Intermediate transfer belt \(ITB\) on page 19](#).
  - Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly on page 30](#).
  - Left cover. See [Left cover on page 32](#).
  - Rear cover. See [Rear cover on page 33](#).
  - Right-rear cover. See [Right-rear cover on page 36](#).
  - Top cover. See [Top cover on page 38](#).
1. Open the front door (callout 1) halfway, and then push up the upper part of the link arm (callout 2) to detach it from the product chassis.

**Figure 73** Remove the ITB front guide assembly (1 of 4)



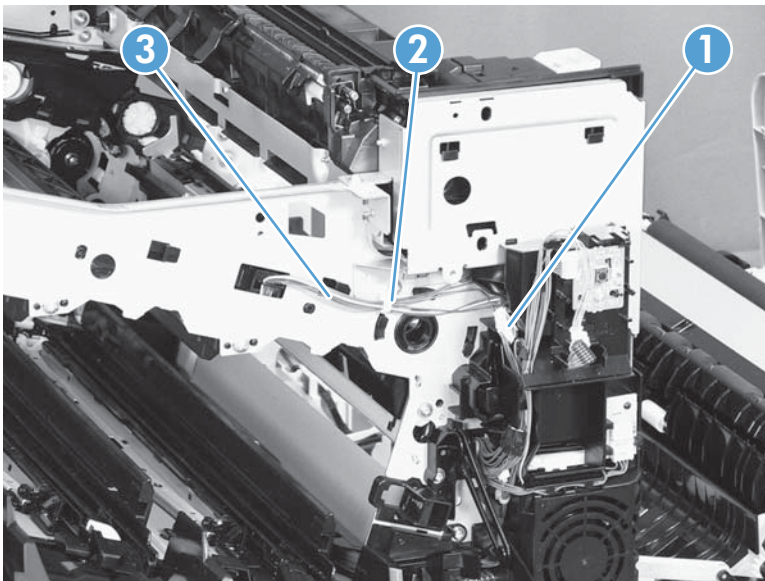
2. Remove three screws (callout 1), release four tabs (callout 2), and then remove the cartridge upper guide unit (callout 3).

**Figure 74** Remove the ITB front guide assembly (2 of 4)



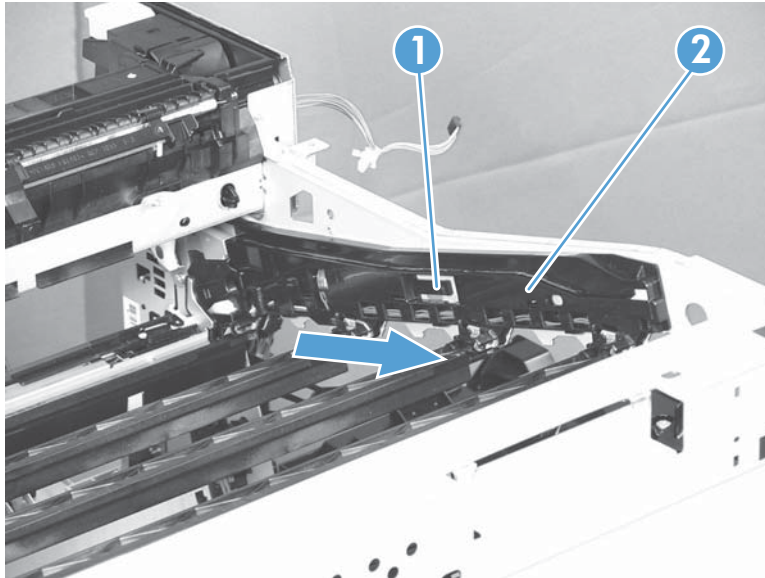
3. Disconnect one connector (callout 1), and then release the cables (callout 3) from the cable clamp (callout 2).

**Figure 75** Remove the ITB front guide assembly (3 of 4)



4. Release one tab (callout 1), and then slide the ITB front guide assembly (callout 2) in the direction that the arrow indicates to remove it.

**Figure 76** Remove the ITB front guide assembly (4 of 4)

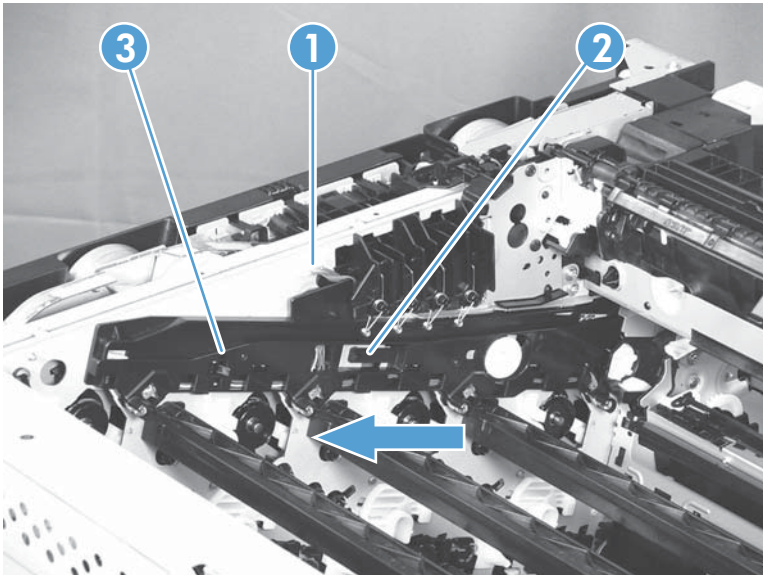


## ITB rear guide assembly

Before proceeding, remove the following components:

- ITB. See [Intermediate transfer belt \(ITB\) on page 19](#).
  - Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly on page 30](#).
  - Left cover. See [Left cover on page 32](#).
  - Rear cover. See [Rear cover on page 33](#).
  - Right-rear cover. See [Right-rear cover on page 36](#).
  - Top cover. See [Top cover on page 38](#).
- ▲ Disconnect one connector (callout 1), release one tab (callout 2), and then slide the ITB rear guide unit (callout 3) in the direction that the arrow indicates to remove it.

**Figure 77** Remove the ITB rear guide assembly



## Residual toner full sensor

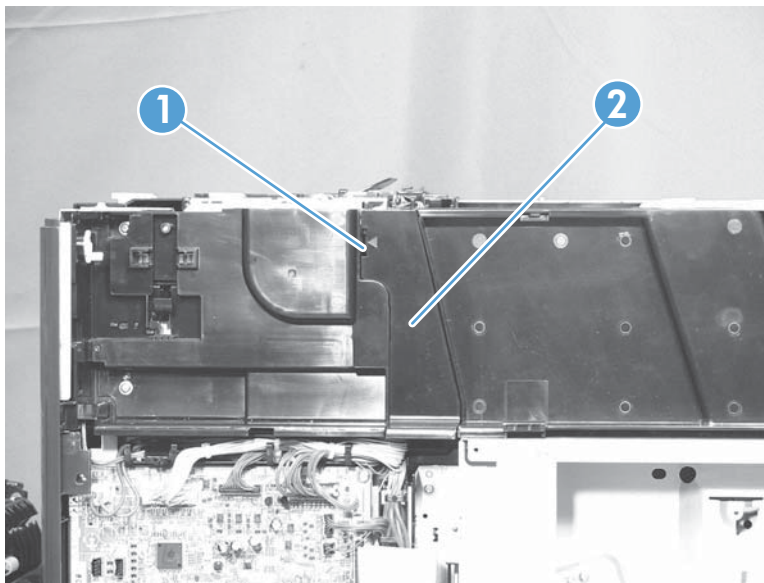
Before proceeding, remove the following components:

- Toner-collection unit. See [Toner-collection unit on page 9](#).
- Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly on page 30](#).
- Left cover. See [Left cover on page 32](#).
- Rear cover. See [Rear cover on page 33](#).
- Toner collection unit access door. See [Toner collection unit access door on page 34](#).
- Right-rear cover. See [Right-rear cover on page 36](#).
- Top cover. See [Top cover on page 38](#).

### Remove the residual toner full sensor

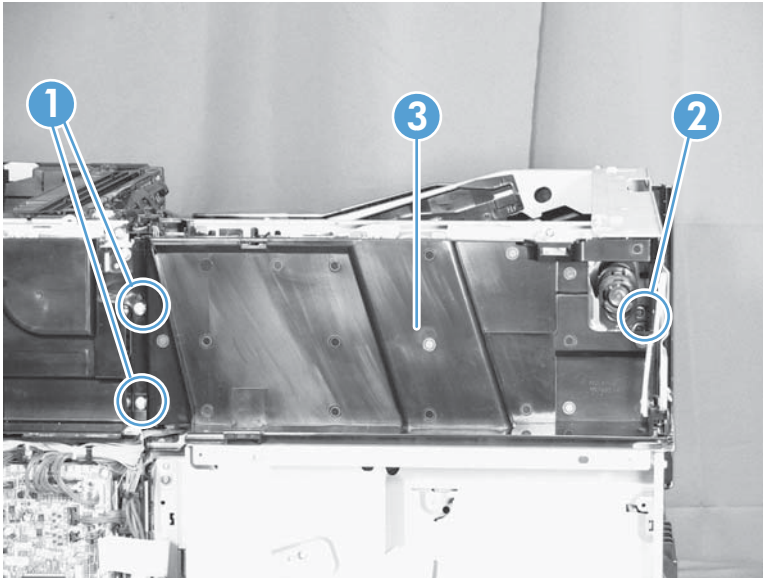
1. Release one tab (callout 1), and then remove the cover (callout 2).

**Figure 78** Remove the residual toner full sensor (1 of 4)



2. Remove two M4-screws (callout 1) and one M3-screw (callout 2). Then remove the toner cover (callout 3).

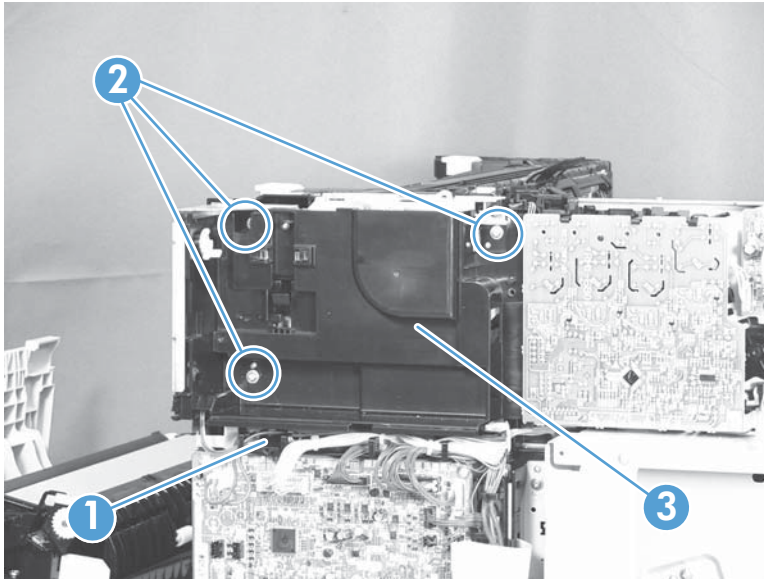
**Figure 79** Remove the residual toner full sensor (2 of 4)



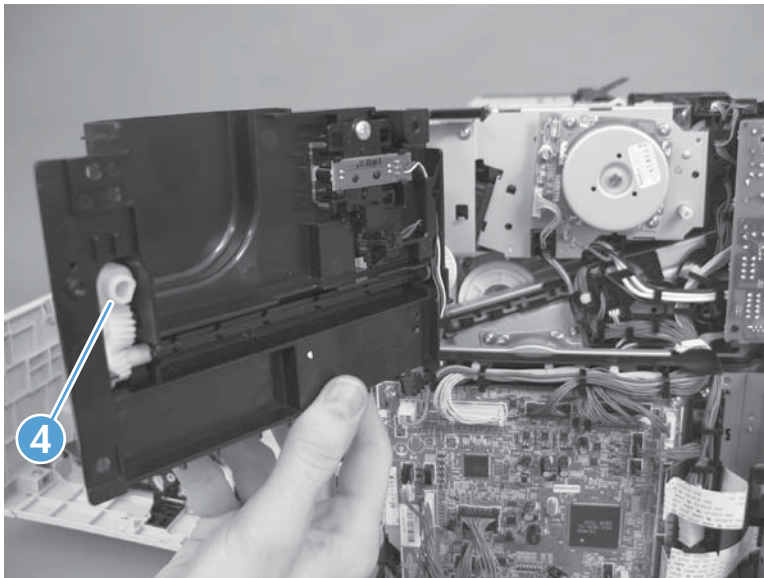
3. Disconnect one connector (callout 1), remove three screws (callout 2), and then remove the residual toner full sensor assembly (callout 3).

△ **CAUTION:** During the removal process, make sure that the white gear (callout 4) does not fall out of the assembly. The white gear might stay on the product, and not come off with the assembly.

**Figure 80** Remove the residual toner full sensor (3 of 4)



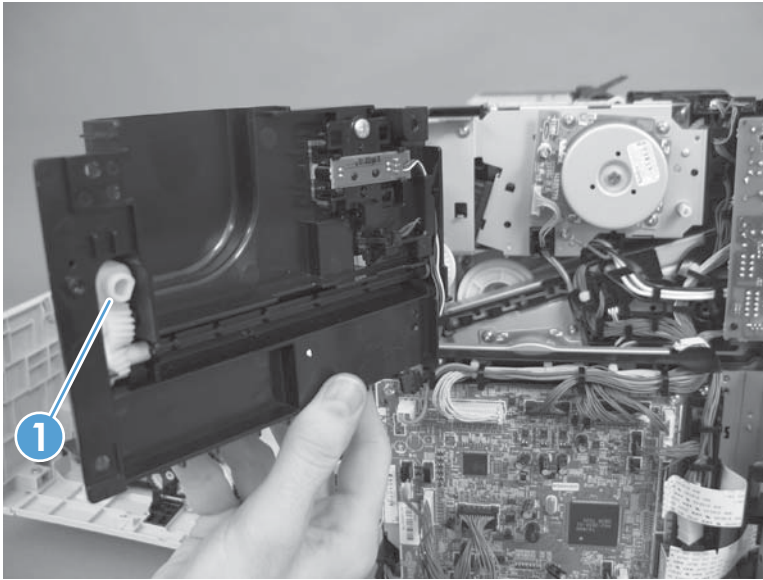
**Figure 81** Remove the residual toner full sensor (4 of 4)



## Reinstall the residual toner full sensor

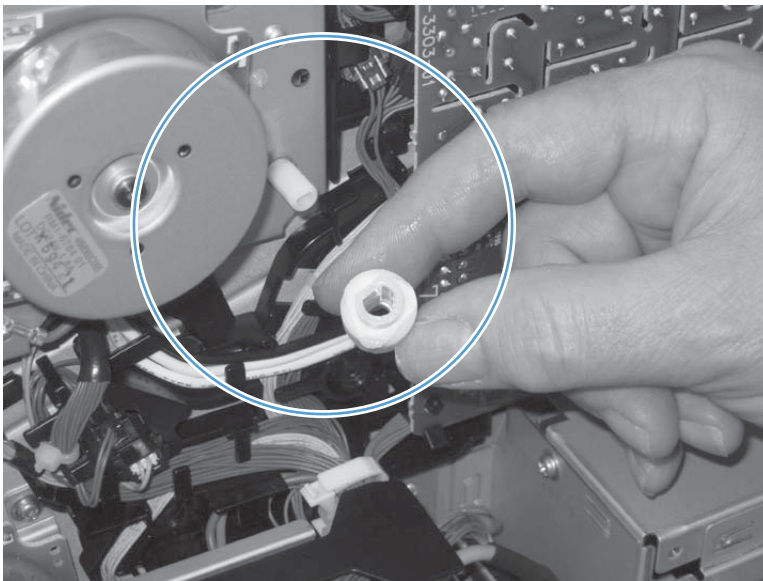
1. If the white gear (callout 1) was removed with the residual toner full sensor assembly, carefully remove it from the assembly.

**Figure 82** Reinstall the residual toner full sensor (1 of 3)



2. Align the flat portion of the gear with the corresponding flat portion of the drive shaft.

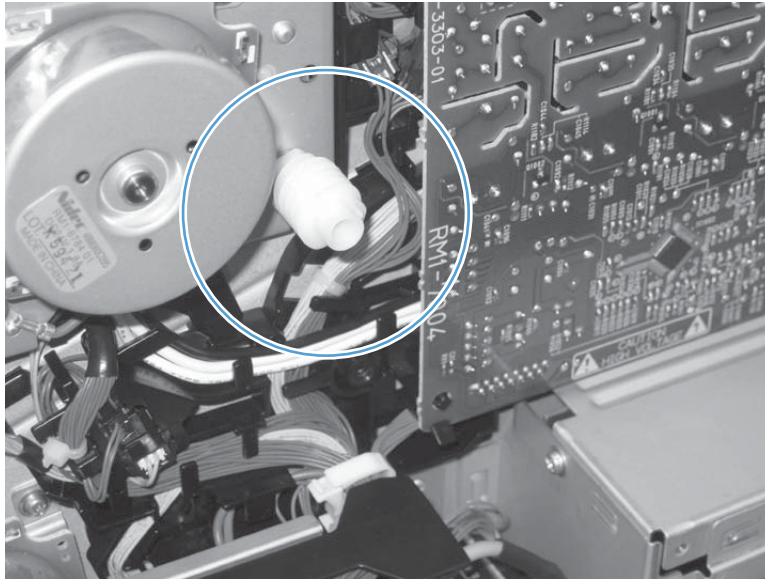
**Figure 83** Reinstall the residual toner full sensor (2 of 3)





3. Install the gear on the shaft before you install the residual toner full sensor assembly.

**Figure 84** Reinstall the residual toner full sensor (3 of 3)



## Main drive assembly

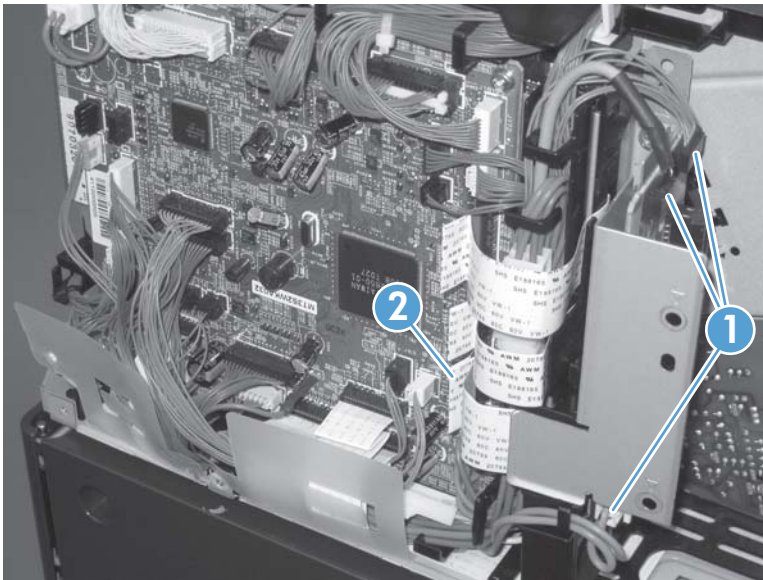
Before proceeding, remove the following components:

- Toner-collection unit. See [Toner-collection unit on page 9](#).
- Formatter PCA. See [Formatter PCA on page 22](#).
- Formatter case. See [Formatter case on page 47](#).
- Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly on page 30](#).
- Left cover. See [Left cover on page 32](#).
- Rear cover. See [Rear cover on page 33](#).
- Toner collection unit access door. See [Toner collection unit access door on page 34](#).
- Right-rear cover. See [Right-rear cover on page 36](#).
- Top cover. See [Top cover on page 38](#).
- Residual-toner full sensor. See [Residual toner full sensor on page 69](#).

### Remove the main drive assembly

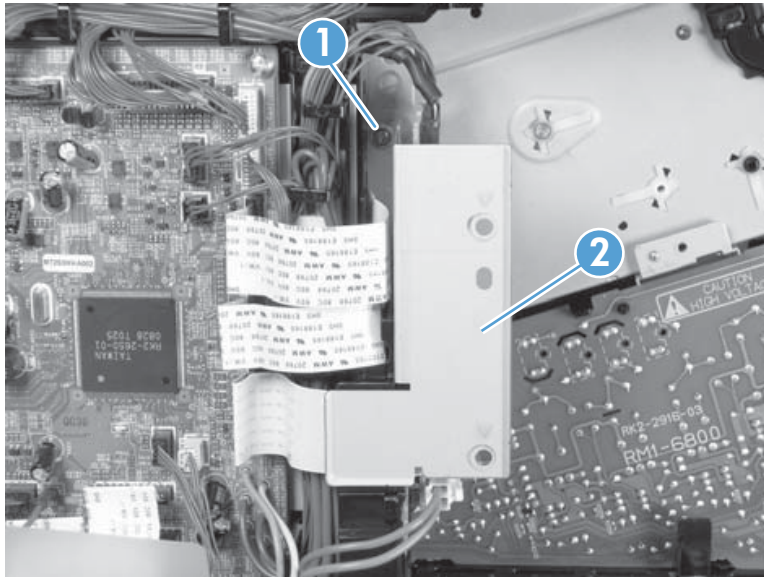
1. Disconnect three connectors (callout 1) and one FFC (callout 2).

**Figure 85** Remove the main drive assembly (1 of 17)




2. Remove one screw (callout 1), and then remove the sheet-metal plate (callout 2).

**Figure 86** Remove the main drive assembly (2 of 17)



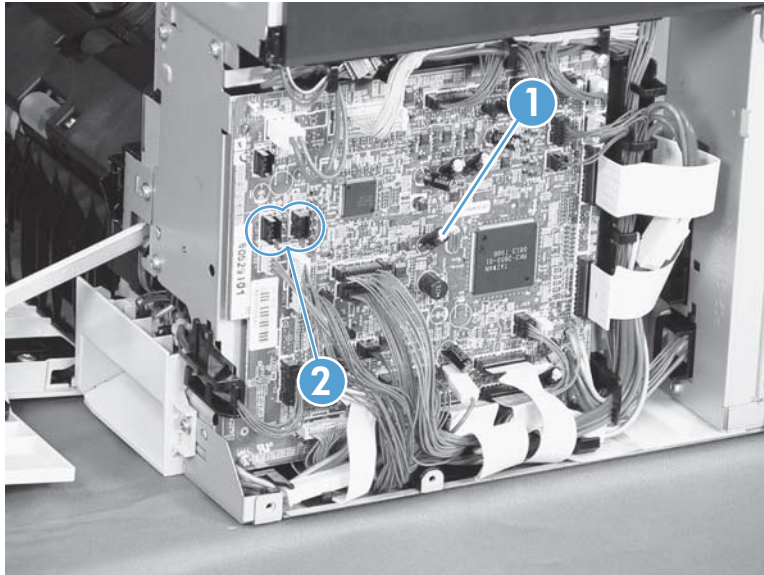
3. Disconnect twenty-two connectors and six FFCs on the DC controller PCA (callout 1).

---

 **TIP:** Three connectors (callout 2) should be empty when the DC controller is reinstalled.

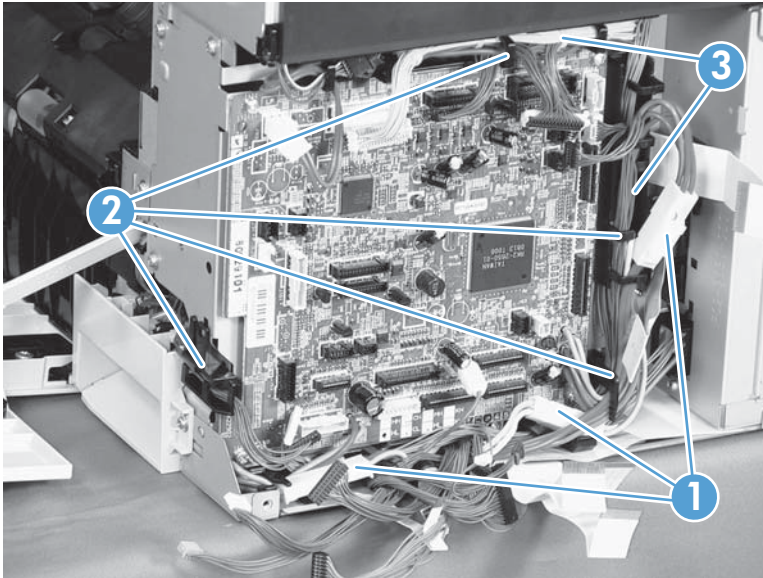
---

**Figure 87** Remove the main drive assembly (3 of 17)




4. Disconnect three intermediate connectors (callout 1), and then release the wire harnesses (callout 3) from the guides (callout 2).

**Figure 88** Remove the main drive assembly (4 of 17)



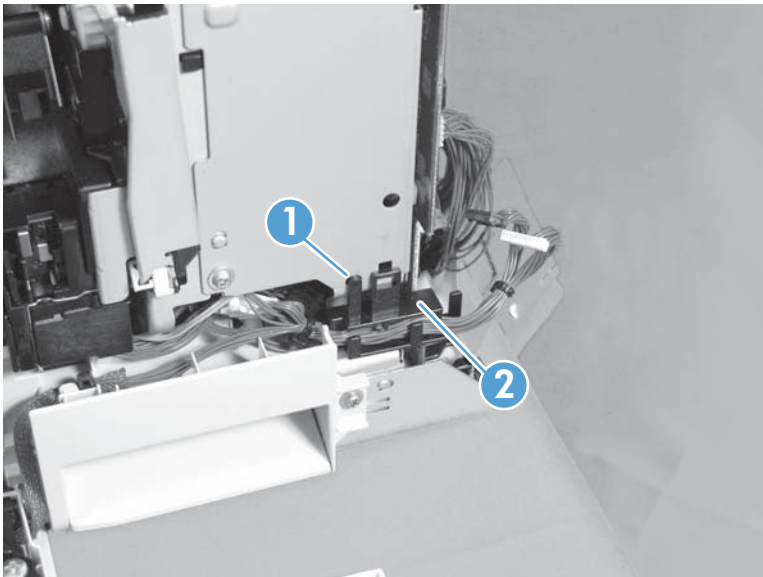
5. Release one tab (callout 1), and then remove the guide (callout 2).

---

 **TIP:** Release the wire harnesses from the guide as you remove it.

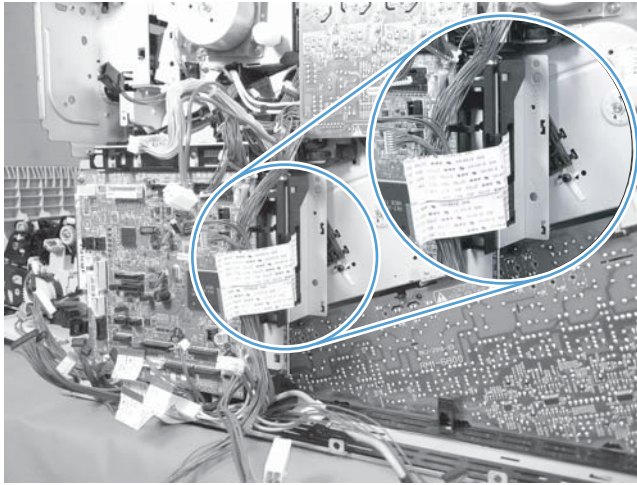
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**Figure 89** Remove the main drive assembly (5 of 17)

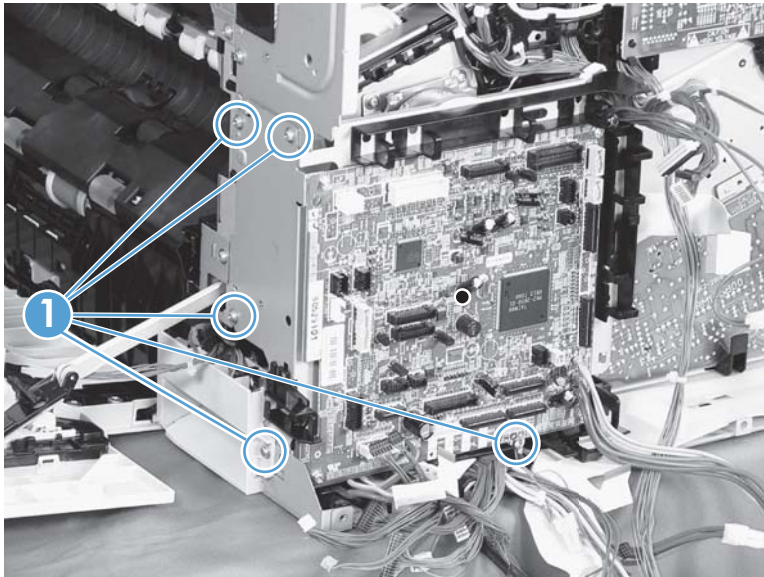


6. Remove five screws (callout 1), and then remove the DC controller and the two sheet-metal support plates.

△ **CAUTION:** Carefully unthread the FFCs from the plate to avoid damaging them when you remove the DC controller and the two sheet-metal support plates.

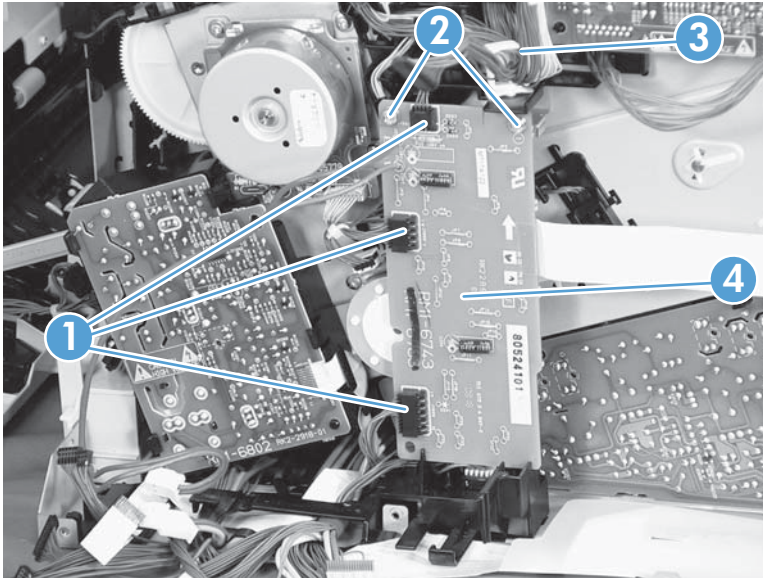


**Figure 90** Remove the main drive assembly (6 of 17)



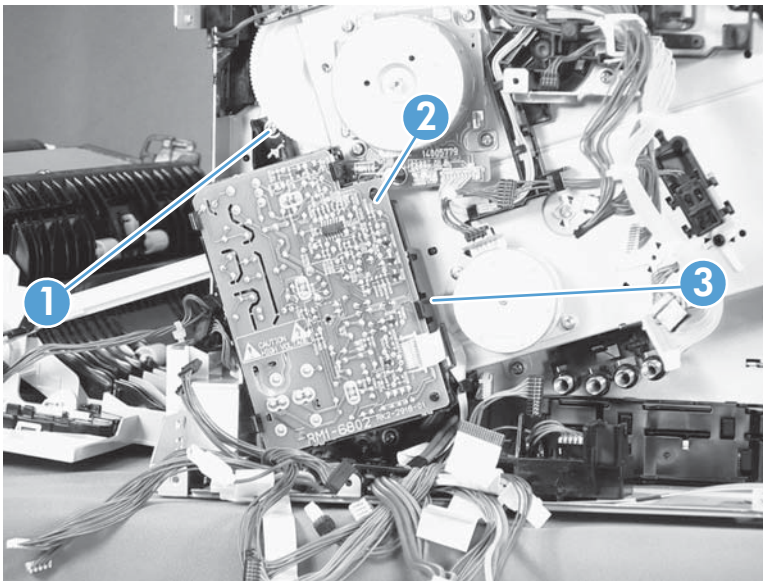
7. Disconnect three connectors (callout 1), remove two screws (callout 2), release one wire retainer (callout 3), and then remove the driver PCA (callout 4).

**Figure 91** Remove the main drive assembly (7 of 17)



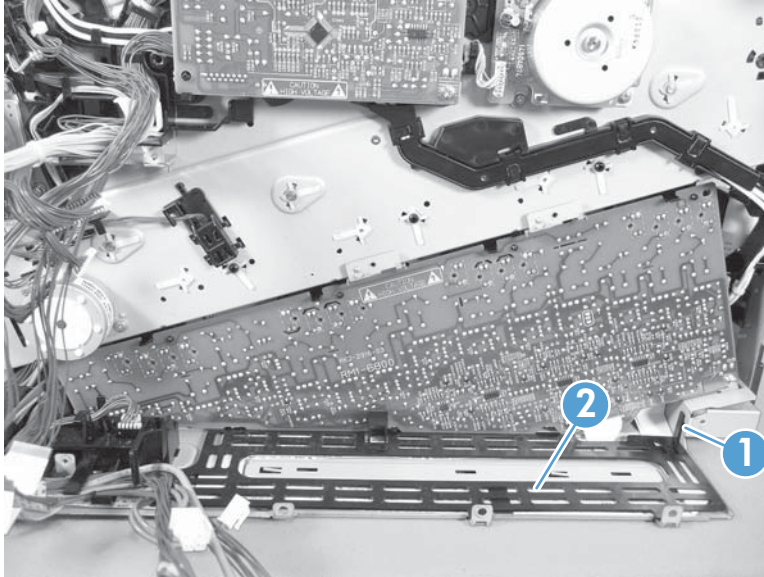
8. Remove one screw (callout 1), and then remove the second transfer high-voltage power supply (callout 2) and the PCA holder (callout 3) assembly.

**Figure 92** Remove the main drive assembly (8 of 17)



9. Release one tab (callout 1), and then remove the cover (callout 2).

**Figure 93** Remove the main drive assembly (9 of 17)



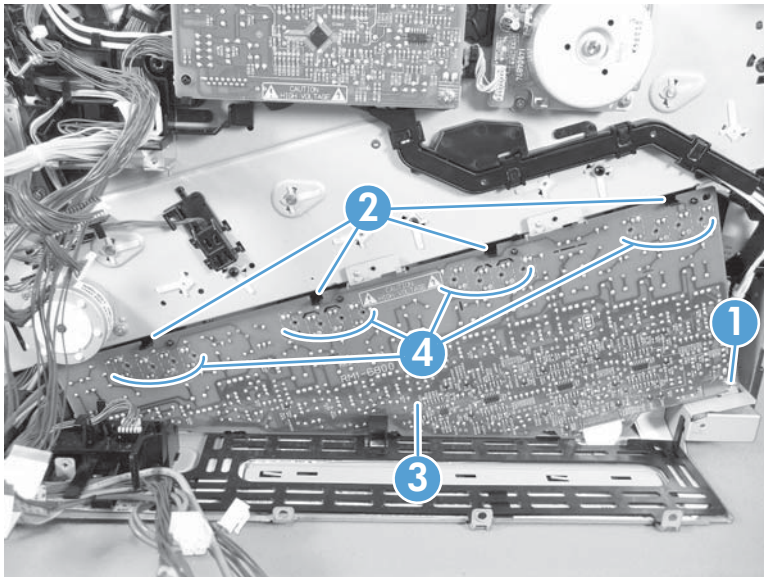
10. Remove one screw (callout 1), release four tabs (callout 2), and then remove the developing high-voltage power supply (callout 3).

---

**Reinstallation tip** When you reinstall the power supply PCA, look through the holes on the PCA (callout 4) and make sure that the contact springs are correctly positioned against the back side of the PCA.

---

**Figure 94** Remove the main drive assembly (10 of 17)

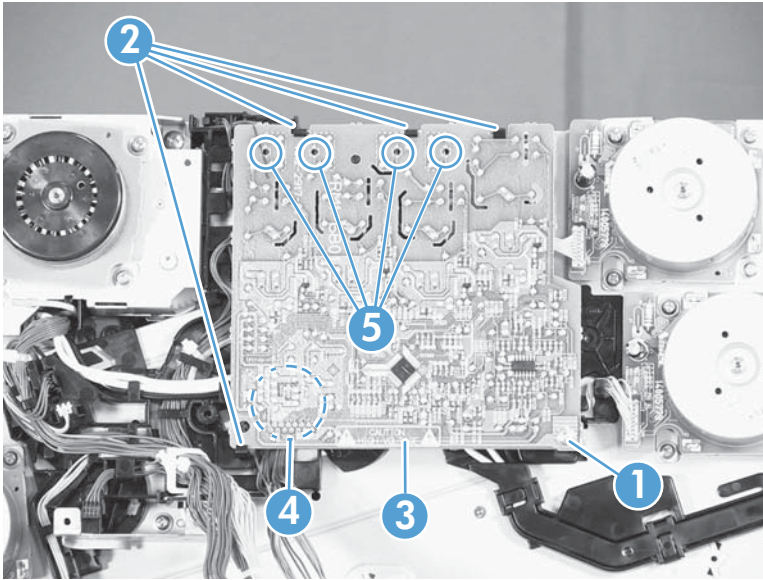


11. Remove one screw (callout 1), release four tabs (callout 2), and then separate the first transfer high-voltage power supply (callout 3) from the product.

△ **CAUTION:** The PCA is still connected to the product. Disconnect one connector (callout 4) on the back side of the PCA to remove it.

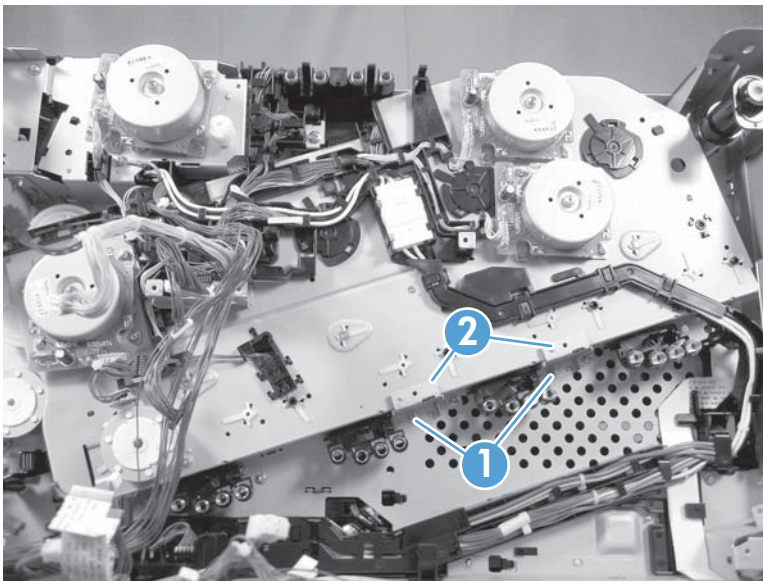
💡 **Reinstallation tip** When you reinstall the power supply PCA, look through the holes on the PCA (callout 5) and make sure that the contact springs are correctly positioned against the back side of the PCA.

**Figure 95** Remove the main drive assembly (11 of 17)




12. Remove two screws (callout 1), and then remove the sheet-metal support brackets (callout 2).

**Figure 96** Remove the main drive assembly (12 of 17)

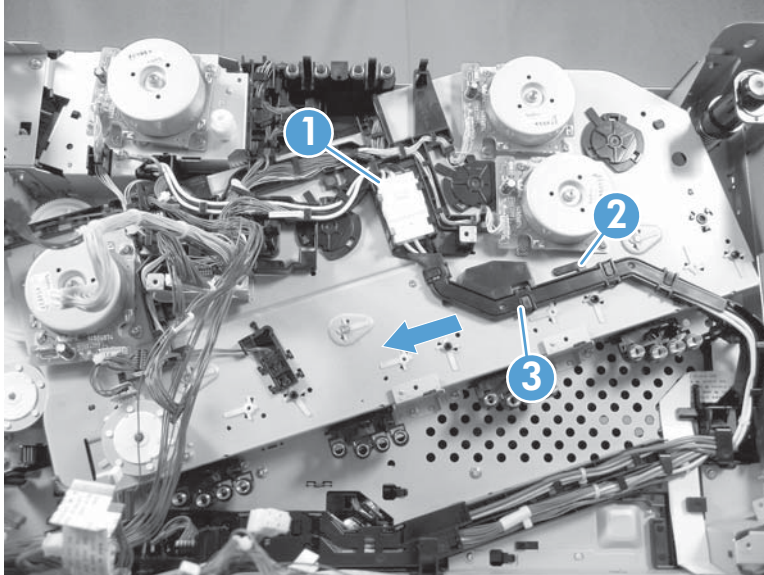




13. Disconnect one connector (callout 1), release one tab (callout 2), slide the cable guide (callout 3) to the left to release the it, and then move the guide to the side, out of the way.

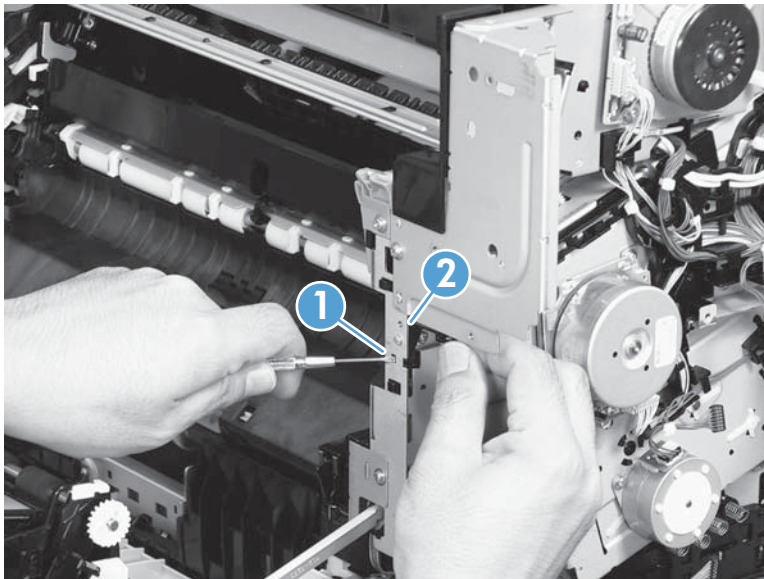
 **TIP:** It might be easier to disconnect the connector if you release it from the holder.

**Figure 97** Remove the main drive assembly (13 of 17)



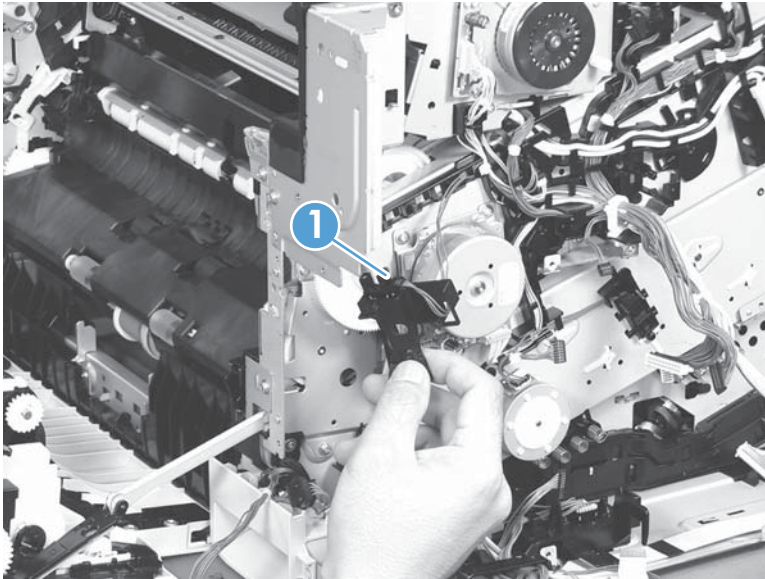
14. Use a small flat blade screwdriver to release one tab (callout 1), and then remove the sensor holder (callout 2).

**Figure 98** Remove the main drive assembly (14 of 17)



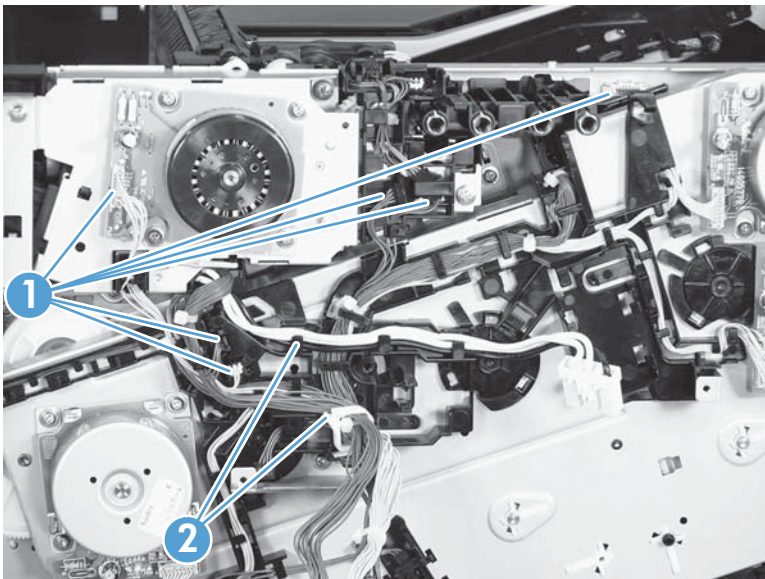
15. Disconnect one connector (callout 1), and then remove the sensor assembly.

**Figure 99** Remove the main drive assembly (15 of 17)




16. Disconnect six connectors (callout 1), and then release the wire harnesses from the guides (callout 2).

**Figure 100** Remove the main drive assembly (16 of 17)



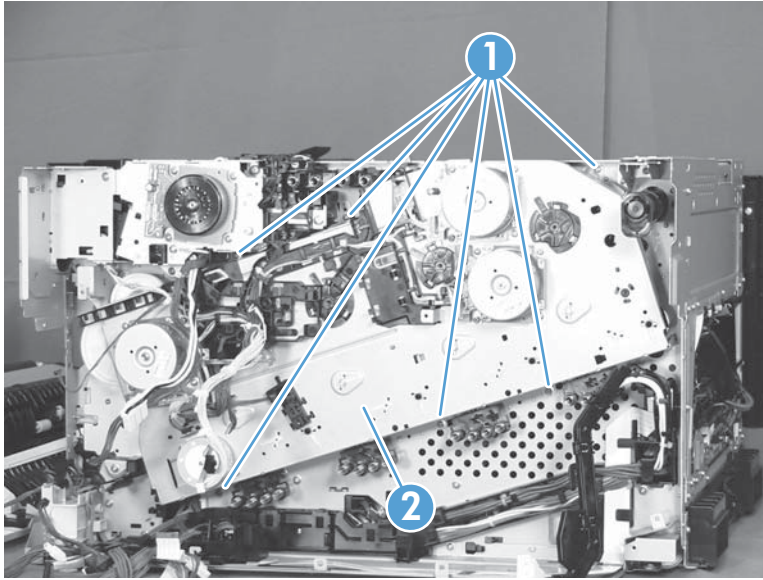
17. Remove six screws (callout 1), and then remove the main drive assembly (callout 2).

---

 **NOTE:** Make sure that the right door is closed.

---

**Figure 101** Remove the main drive assembly (17 of 17)



## Install the main drive assembly

 **NOTE: Installing a replacement assembly:** follow the instructions in this section.

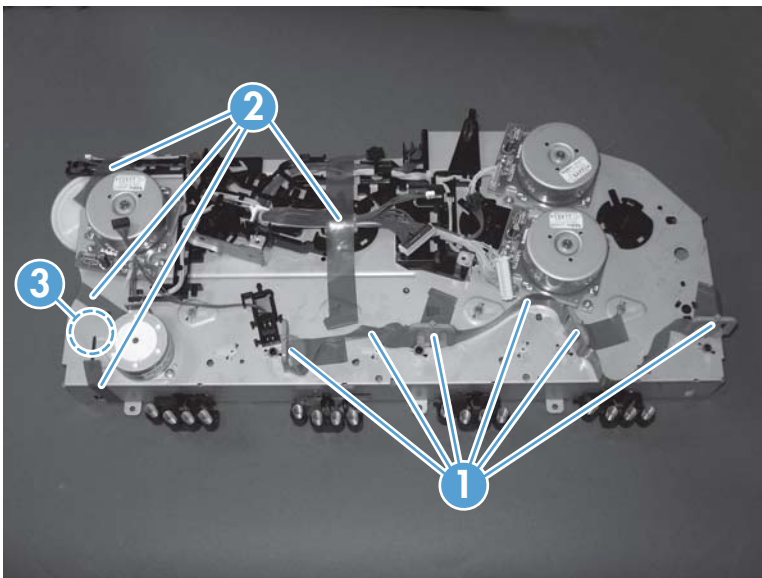
**Reinstalling the original assembly:** some of these instructions in this section do not apply (for example, removing the shipping spacers). **Do not** rotate the gears when handling the assembly. If the gears are rotated—and become out of phase—it will be difficult to install the assembly on the product.

1. Do not remove the orange spacers and spacer shipping tape (callout 1) installed on the replacement main drive assembly. Remove the remaining shipping tape (callout 2).


△ **CAUTION:** A gear (callout 3) on the back of the assembly is not captive when the shipping tape is removed. Do not lose the gear when handling the assembly with the shipping tape removed.

When removing tape, make sure that the entire strip is removed. Check the back of the assembly to verify that the entire strip of tape is removed.

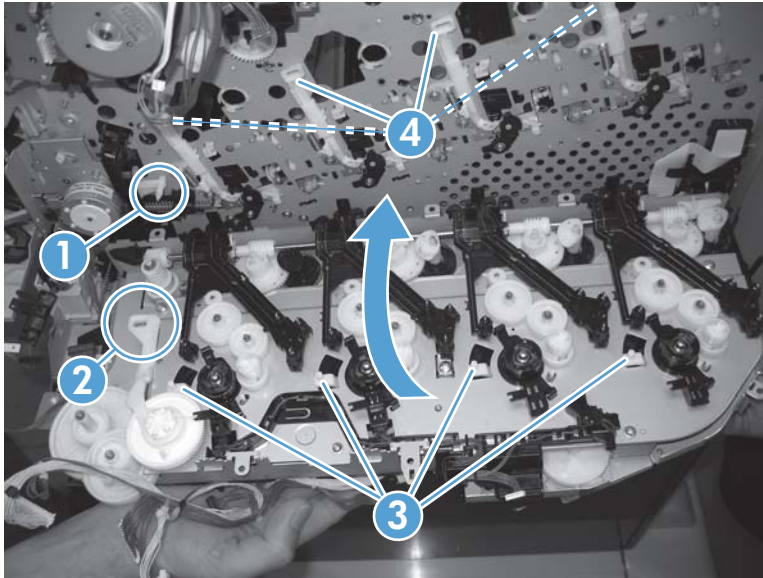
**Figure 102** Install the main drive assembly (1 of 8)




2. With the right door closed, position the drive assembly near the product, and then rotate it up and onto the chassis.

 **NOTE:** Make sure that the right-door link arm shaft (callout 1) aligns with and is positioned in the hole (callout 2) on the arm on the drive assembly, and that the pins on the assembly (callout 3) are positioned in the holes in the link arms on the chassis (callout 4).

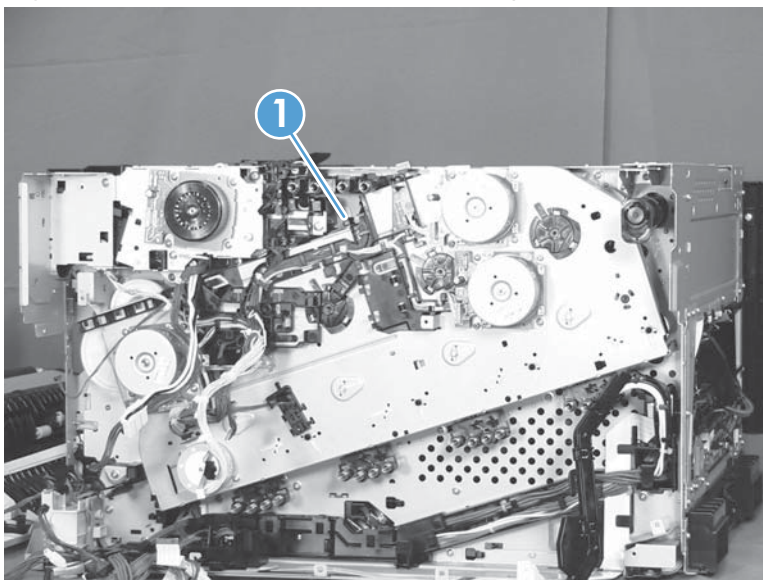
**Figure 103** Install the main drive assembly (2 of 8)



3. Install one screw (callout 1).

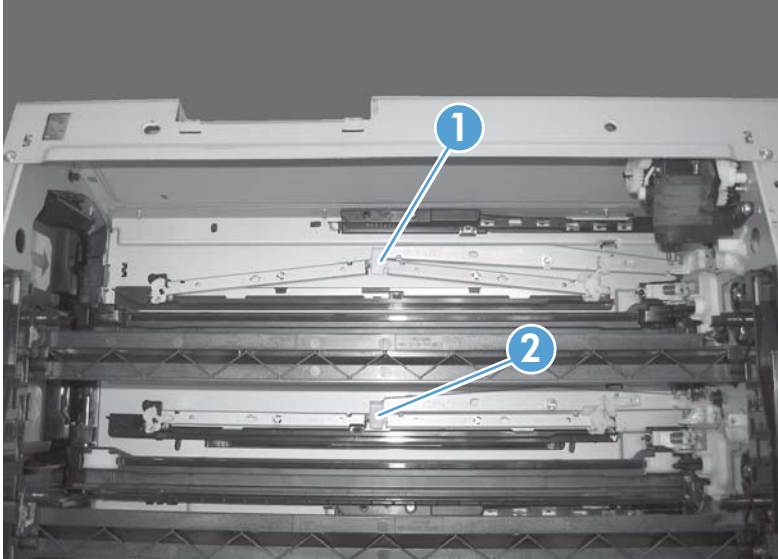
 **NOTE:** Do not fully tighten this screw.

**Figure 104** Install the main drive assembly (3 of 8)



4. From the top of the product, look at each shutter arm. Make sure that they are in the closed position (callout 1). If they are in the open position (callout 2), carefully push on the shutter to close them.

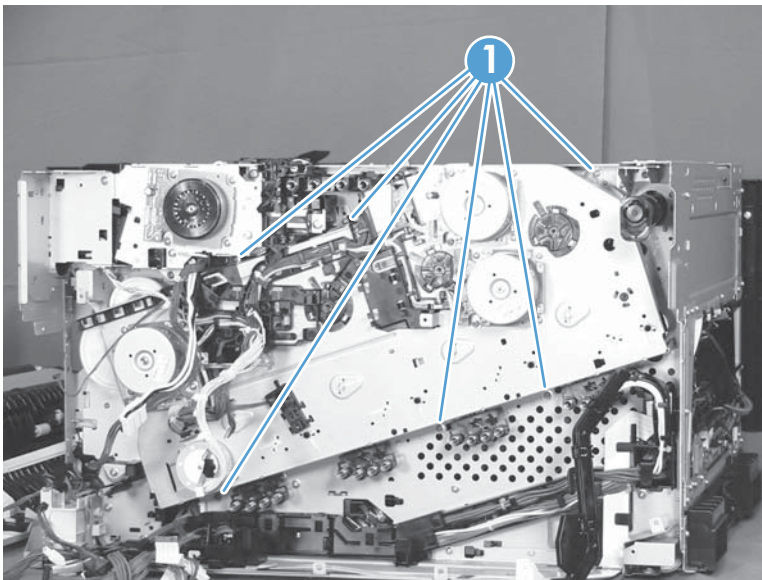
**Figure 105** Install the main drive assembly (4 of 8)



5. Make sure that the six sheet-metal screw tabs (callout 1) on the drive assembly are flat against the product chassis.

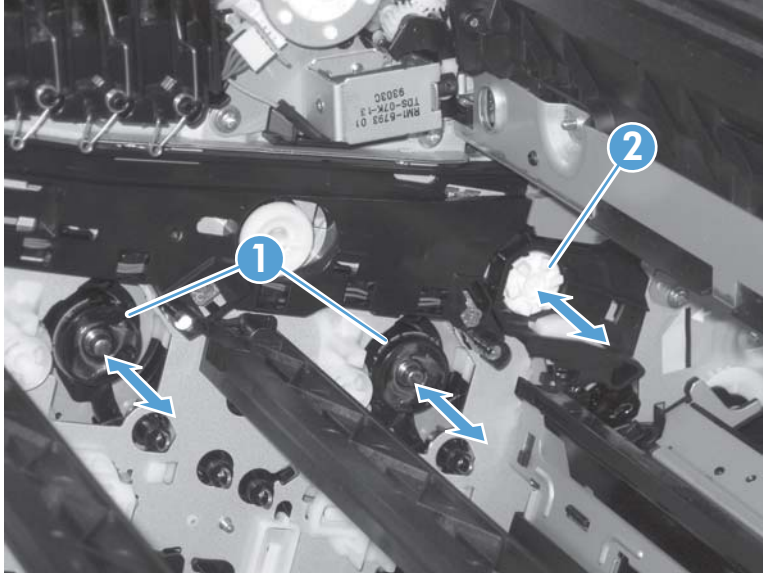
**NOTE:** If the tabs are not flat against the chassis, the developer-disengagement drive gears and cams—on the back side of the drive assembly—are not properly aligned with, and seated in, the corresponding holes on the product. Remove the drive assembly, realign it, and then reinstall it. See [Figure 103 Install the main drive assembly \(2 of 8\) on page 85](#).

**Figure 106** Install the main drive assembly (5 of 8)



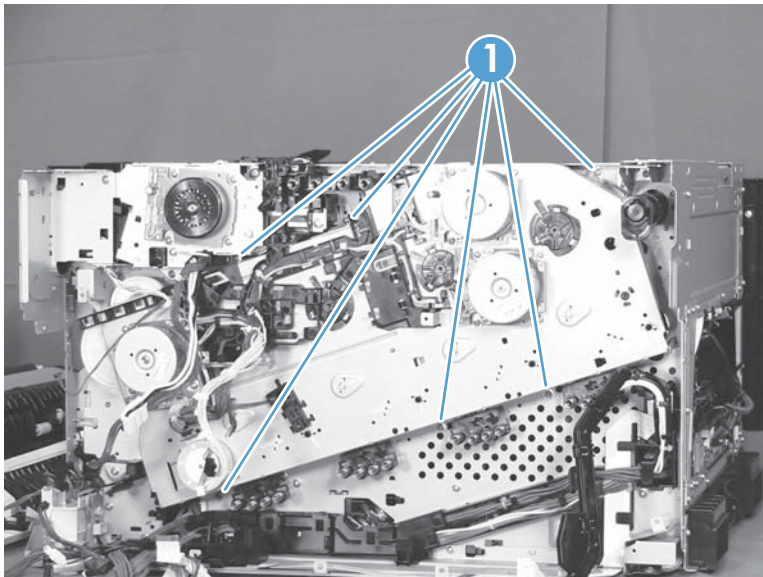
6. With the drive assembly correctly installed, verify the following:
  - Open and close the front door. The OPC drum drive gears (callout 1; two shown, four total) must move in and out when viewed from inside the product.
  - Open and close the right door. The ITB drive gear (callout 2) must move in and out when viewed from inside the product.

**Figure 107** Install the main drive assembly (6 of 8)




7. Install the remaining five mounting screws, tighten all six screws (callout 1), and then remove the orange spacers and spacer shipping tape.

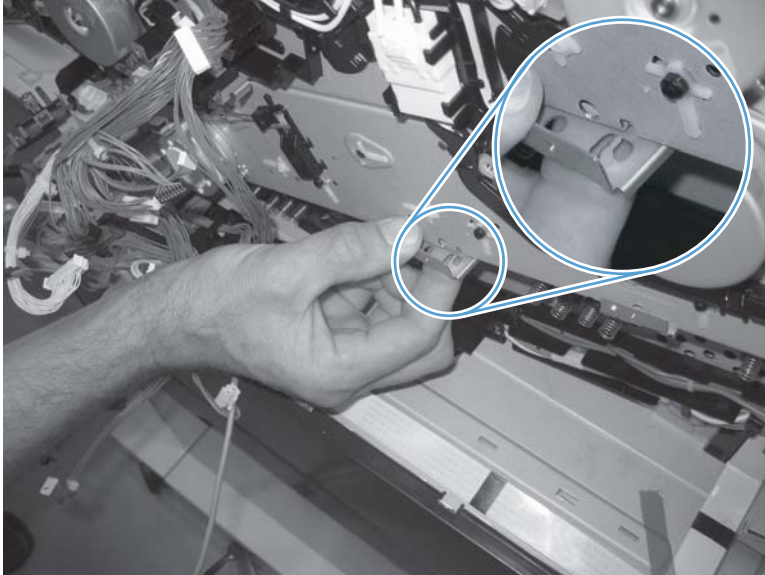
**Figure 108** Install the main drive assembly (7 of 8)



8. Reinstall the two small sheet-metal brackets.

 **NOTE:** The tab on the sheet-metal brackets must be inserted in the hole in the drive assembly chassis as shown below.

**Figure 109** Install the main drive assembly (8 of 8)





## Fuser drive assembly

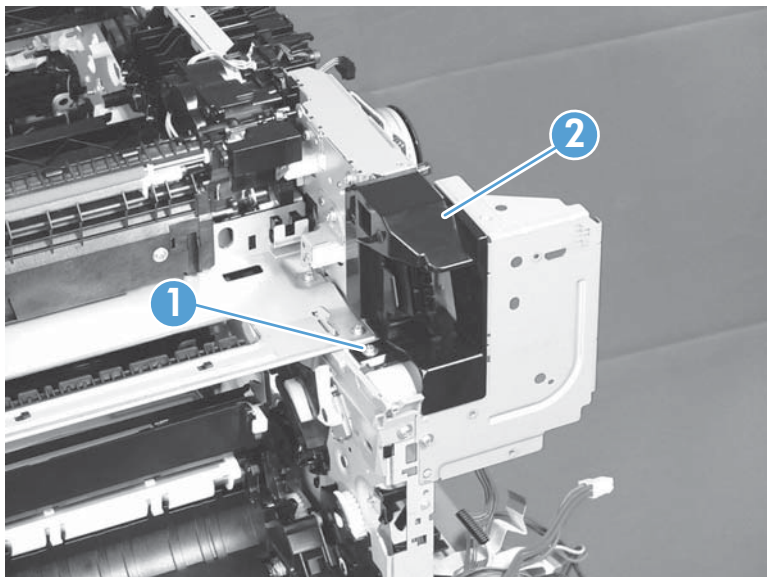
Before proceeding, remove the following components:

- Toner-collection unit. See [Toner-collection unit on page 9](#).
- Fuser. See [Fuser on page 11](#).
- Formatter PCA. See [Formatter PCA on page 22](#).
- Formatter case. See [Formatter case on page 47](#)
- Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly on page 30](#).
- Left cover. See [Left cover on page 32](#).
- Rear cover. See [Rear cover on page 33](#).
- Toner collection unit access door. See [Toner collection unit access door on page 34](#).
- Right-rear cover. See [Right-rear cover on page 36](#).
- Top cover. See [Top cover on page 38](#).
- Residual-toner full sensor. See [Residual toner full sensor on page 69](#).
- Main drive assembly. See [Main drive assembly on page 74](#).

### Remove the fuser drive assembly

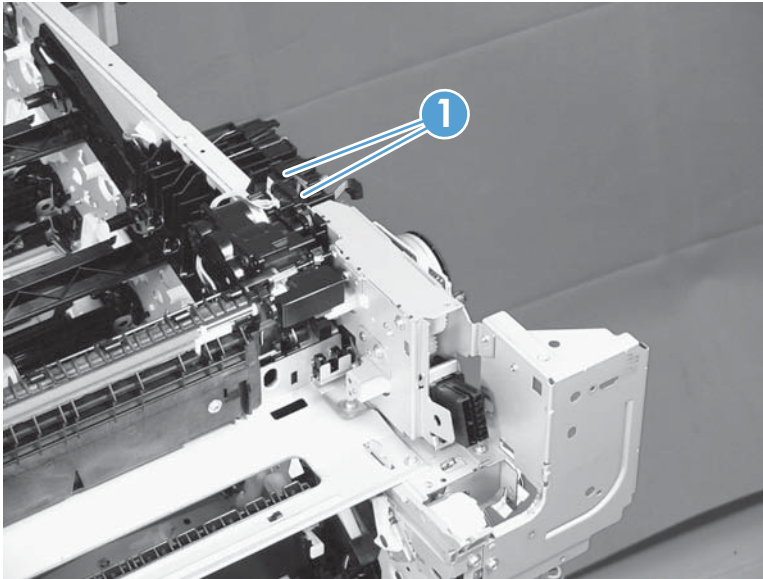
1. Remove one screw (callout 1) and the cover (callout 2).

**Figure 110** Remove the fuser drive assembly (1 of 3)



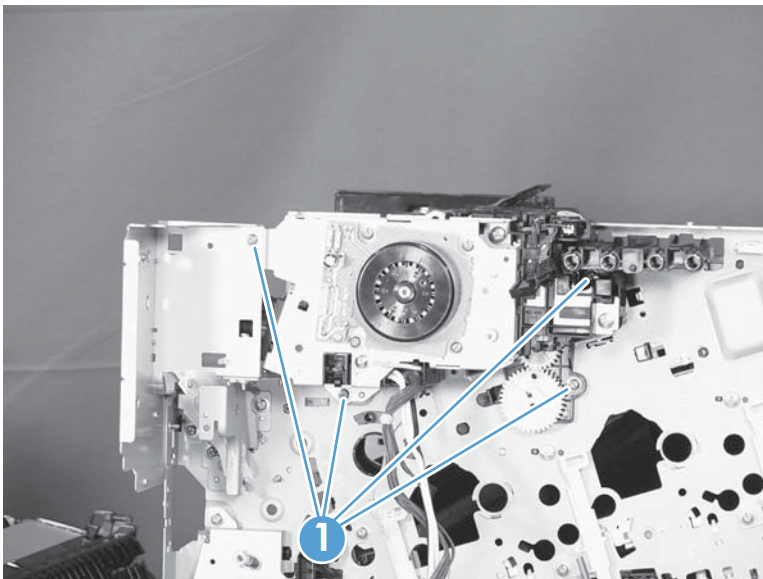
2. Disconnect two connectors (callout 1).

**Figure 111** Remove the fuser drive assembly (2 of 3)



3. Remove four screws (callout 1), and then remove the fuser drive assembly.

**Figure 112** Remove the fuser drive assembly (3 of 3)




## Install a replacement fuser drive assembly

Use the following procedure to install a replacement fuser drive assembly or reinstall the original fuser drive assembly.

- 1. Replacement fuser drive assembly:** Before beginning, take note of the spacer (callout 1) on the replacement fuser drive assembly.

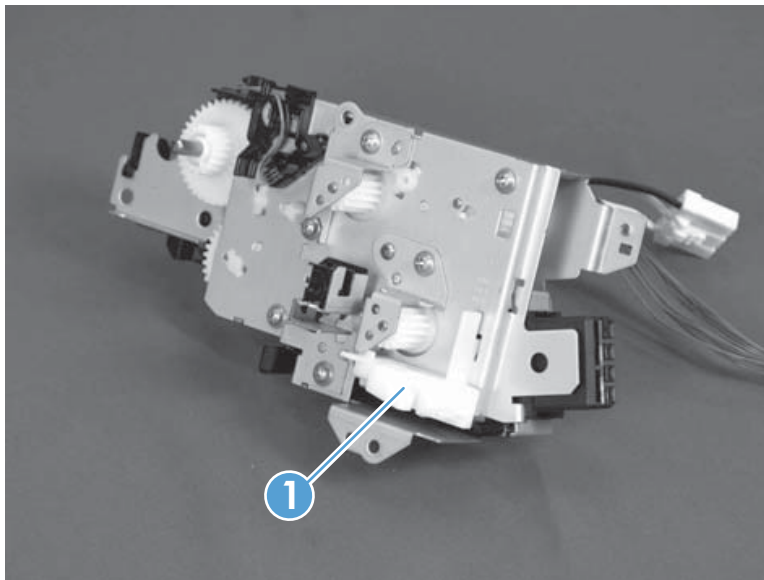
**Original fuser drive assembly:** Proceed to the next step.

---

 **NOTE:** The fuser drive motor is shown removed in the following figure. However, you do not need to remove the fuser motor to install the fuser drive assembly.

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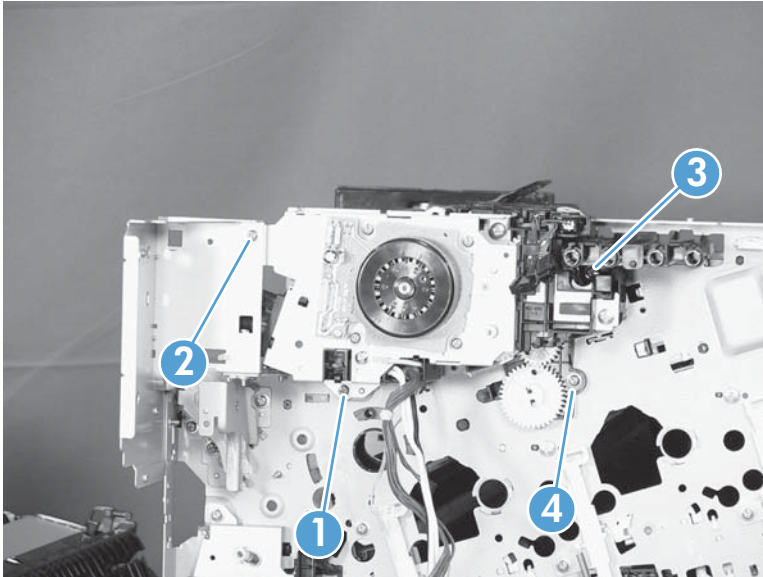
**Figure 113** Install a replacement fuser drive assembly (1 of 3)



- 2. Replacement fuser drive assembly:** Fasten the replacement fuser gear assembly to the product with four screws. Install the screws in the order shown below (callouts 1 to 4).

**Original fuser drive assembly:** Install, but do not fully tighten four screws (callouts 1 to 4). Carefully push the drive assembly to the left (toward the right-door side of the product) until it slightly shifts forward. Apply steady pressure to hold the assembly in place, and then tighten the screws.

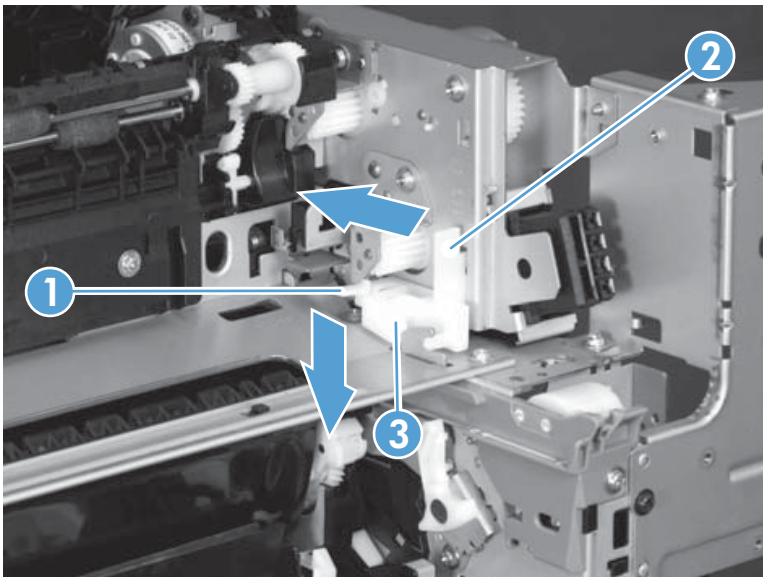
**Figure 114** Install a replacement fuser drive assembly (2 of 3)



- 3. Replacement fuser drive assembly:** Release two tabs in the order shown below (callouts 1 and 2), and then remove the spacer (callout 3).

**Original fuser drive assembly:** Installation complete—this step is not required.

**Figure 115** Install a replacement fuser drive assembly (3 of 3)



## Fuser gear assembly

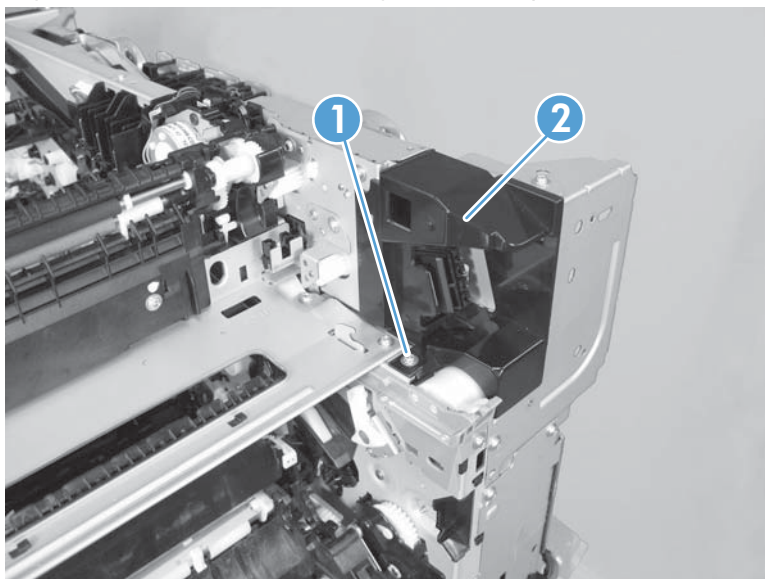
Before proceeding, remove the following components:

- Toner-collection unit. See [Toner-collection unit on page 9](#).
- Fuser. See [Fuser on page 11](#).
- Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly on page 30](#).
- Left cover. See [Left cover on page 32](#).
- Toner collection unit access door. See [Toner collection unit access door on page 34](#).
- Rear cover. See [Rear cover on page 33](#).
- Right-rear cover. See [Right-rear cover on page 36](#).
- Top cover. See [Top cover on page 38](#).
- Residual toner full sensor. See [Residual toner full sensor on page 69](#).

## Remove the fuser gear assembly

1. Remove one screw (callout 1) and the cover (callout 2).

**Figure 116** Remove the fuser gear assembly (1 of 9)

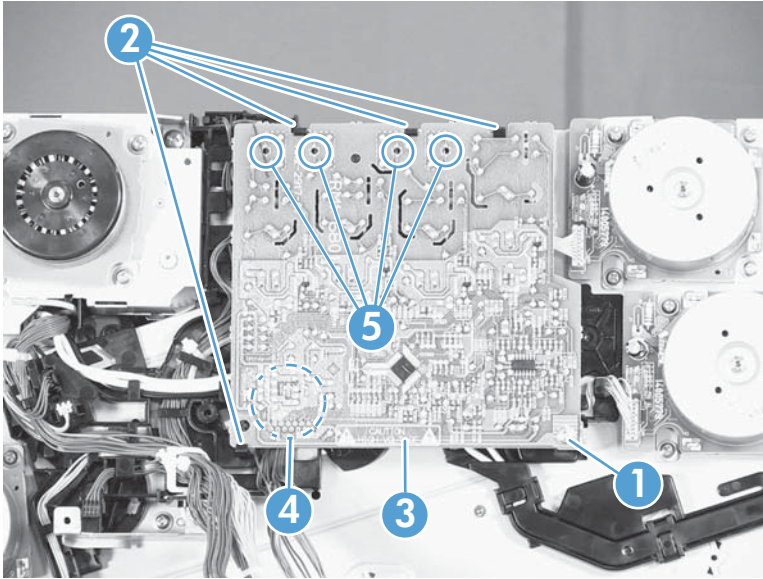


2. Remove one screw (callout 1), release four tabs (callout 2), and then separate the first transfer high-voltage power supply (callout 3) from the product.

△ **CAUTION:** The PCA is still connected to the product.

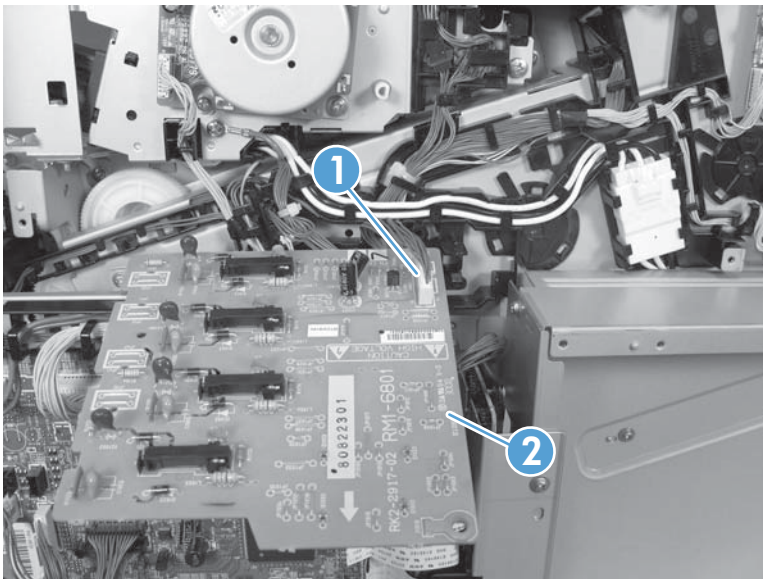
💡 **Reinstallation tip** When you reinstall the power supply PCA, look through the holes on the PCA (callout 5) and make sure that the contact springs are correctly positioned against the back side of the PCA.

**Figure 117** Remove the fuser gear assembly (2 of 9)



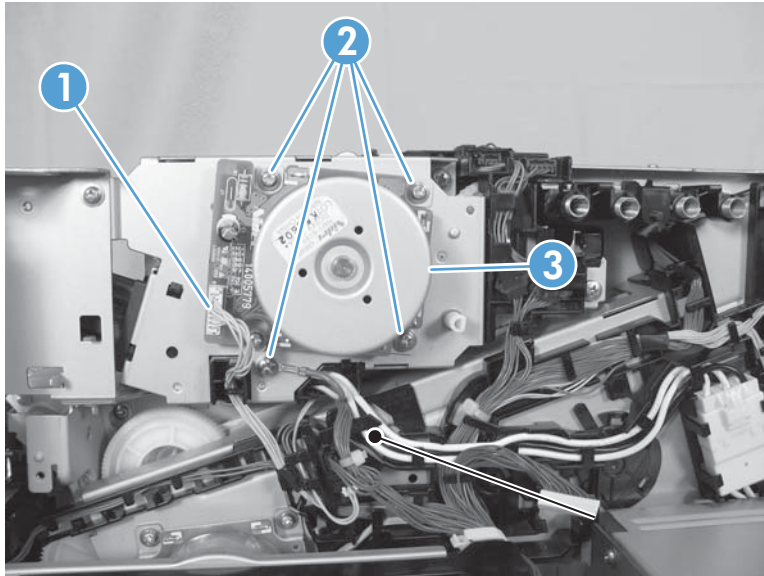
3. Disconnect one connector (callout 1) and then remove the first transfer high-voltage power supply (callout 2).

**Figure 118** Remove the fuser gear assembly (3 of 9)



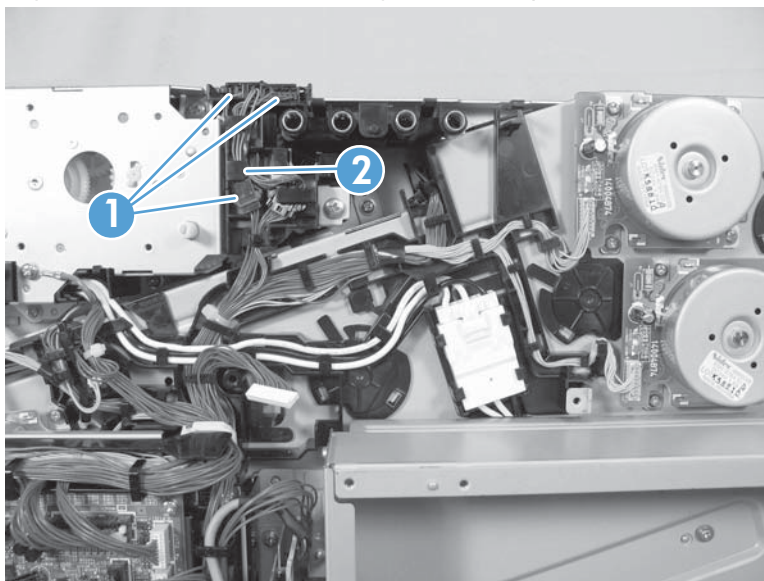
4. Disconnect one connector (callout 1), remove four screws (callout 2), and then remove the fuser motor (callout 3).

**Figure 119** Remove the fuser gear assembly (4 of 9)




5. Disconnect three connectors (callout 1), and then release the wire harnesses from the guide (callout 2).

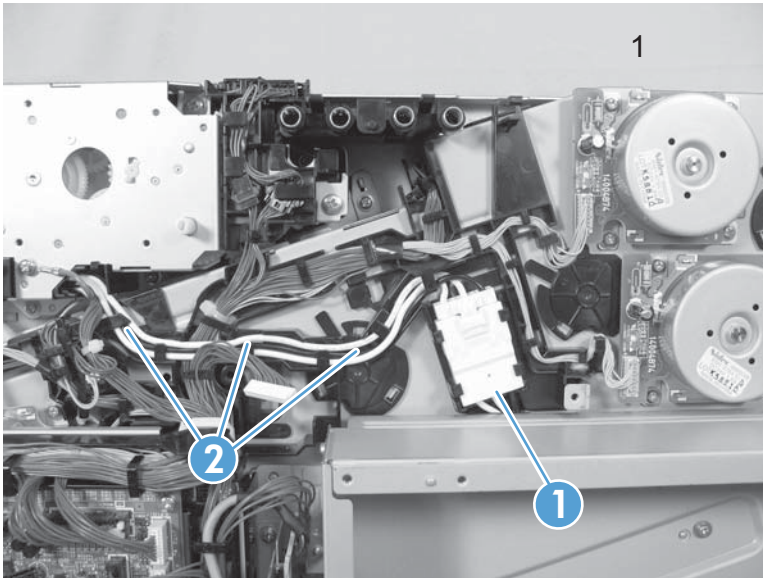
**Figure 120** Remove the fuser gear assembly (5 of 9)



6. Disconnect one connector (callout 1), and then release the wire harness from the guide (callout 2).

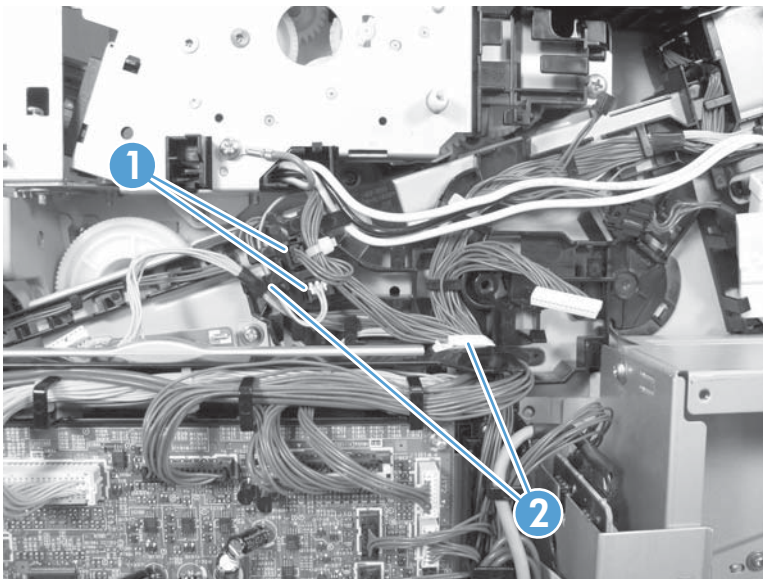
 **TIP:** It might be easier to disconnect the connector, if you release it from the black-plastic holder.

**Figure 121** Remove the fuser gear assembly (6 of 9)



7. Disconnect two connectors (callout 1), and then release the wire harness from the retainer and guide (callout 2).

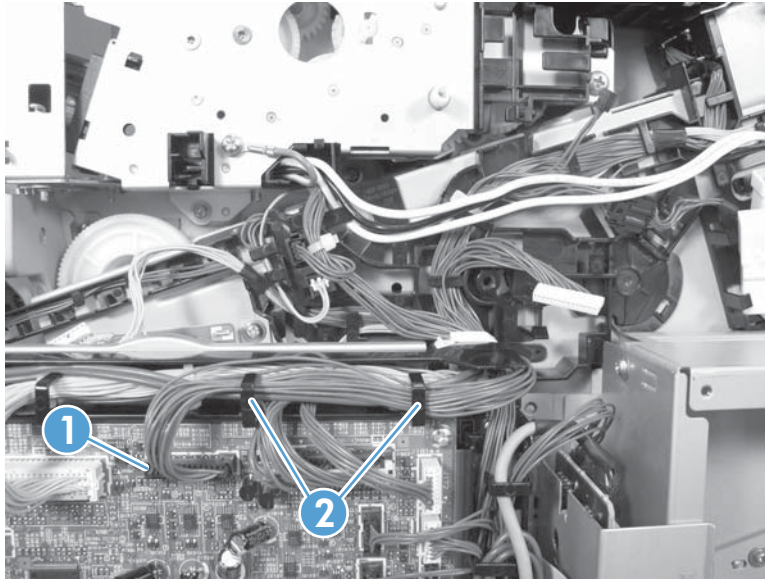
**Figure 122** Remove the fuser gear assembly (7 of 9)





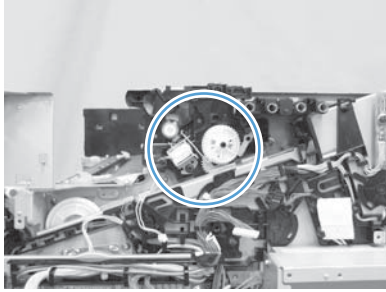
8. Disconnect one connector (callout 1), and then release the wire harness from the guide (callout 2).

**Figure 123** Remove the fuser gear assembly (8 of 9)

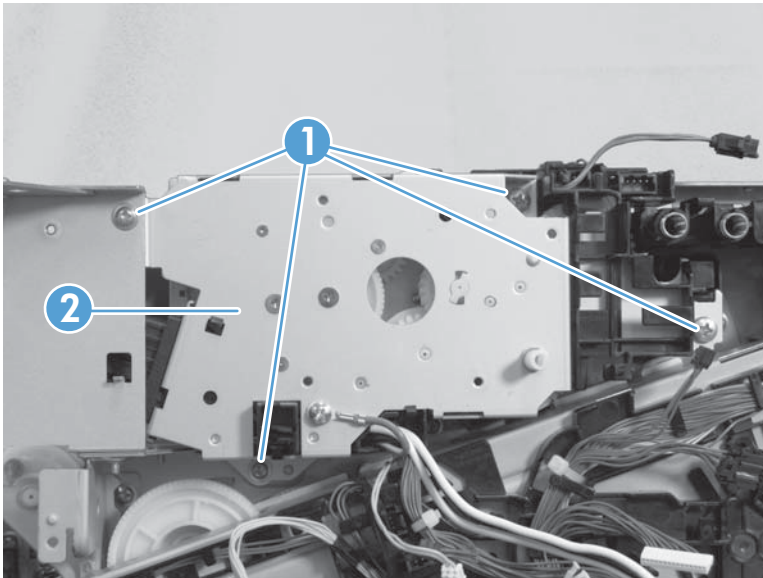


9. Remove four screws (callout 1), and then remove the fuser gear assembly (callout 2).

△ **CAUTION:** Do not remove the gear or solenoid located behind the fuser gear assembly. The gear and solenoid are installed in specific alignment with the other components behind the assembly. If the gear or solenoid are removed, the product will not properly function.



**Figure 124** Remove the fuser gear assembly (9 of 9)




## Install a replacement fuser gear assembly

Use the following procedure to install a replacement fuser drive assembly or reinstall the original fuser gear assembly.

1. **Replacement fuser gear assembly:** Before beginning, take note of the spacer (callout 1) on the replacement fuser drive assembly.

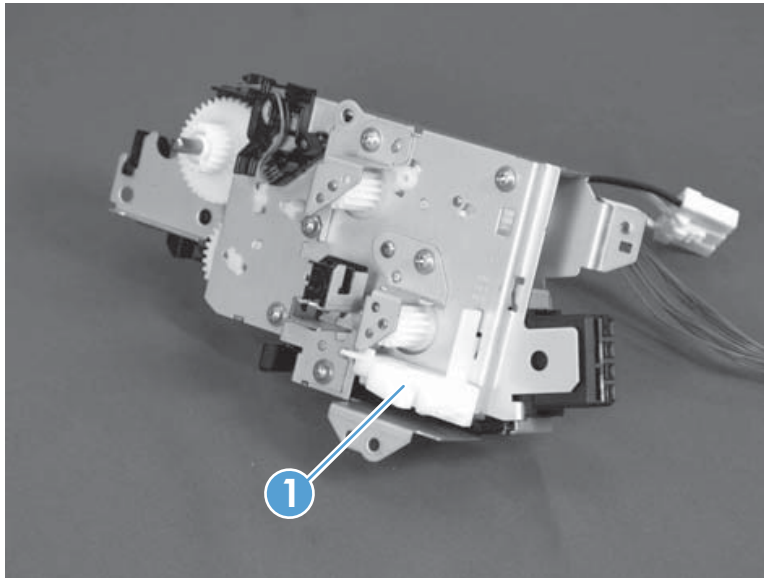
**Original fuser gear assembly:** Proceed to the next step.

---

 **NOTE:** The fuser drive motor is shown removed in the following figure. However, you do not need to remove the fuser motor to install the fuser gear assembly.

---

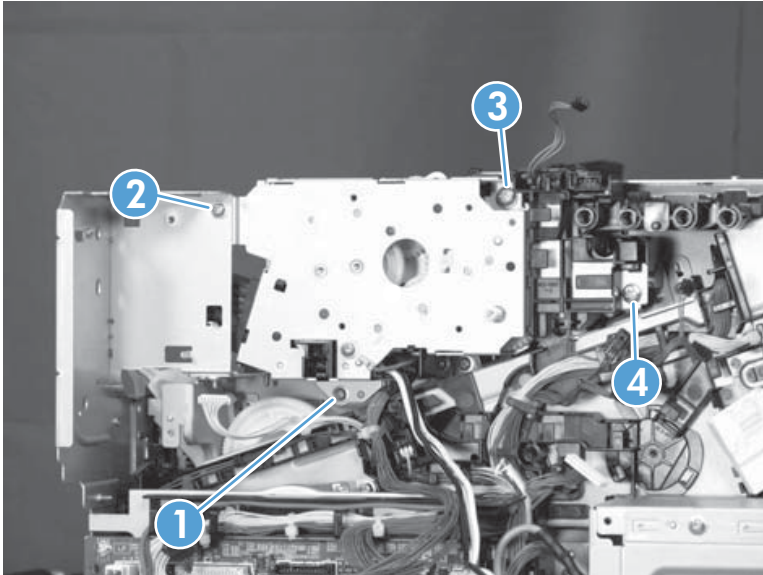
**Figure 125** Install a replacement fuser gear assembly (1 of 3)



- 2. Replacement fuser drive assembly:** Fasten the replacement fuser gear assembly to the product with four screws. Install the screws in the order shown below (callouts 1 to 4).

**Original fuser drive assembly:** Install, but do not fully tighten four screws (callouts 1 to 4). Carefully push the drive assembly to the left (toward the right-door side of the product) until it slightly shifts forward. Apply steady pressure to hold the assembly in place, and then tighten the screws.

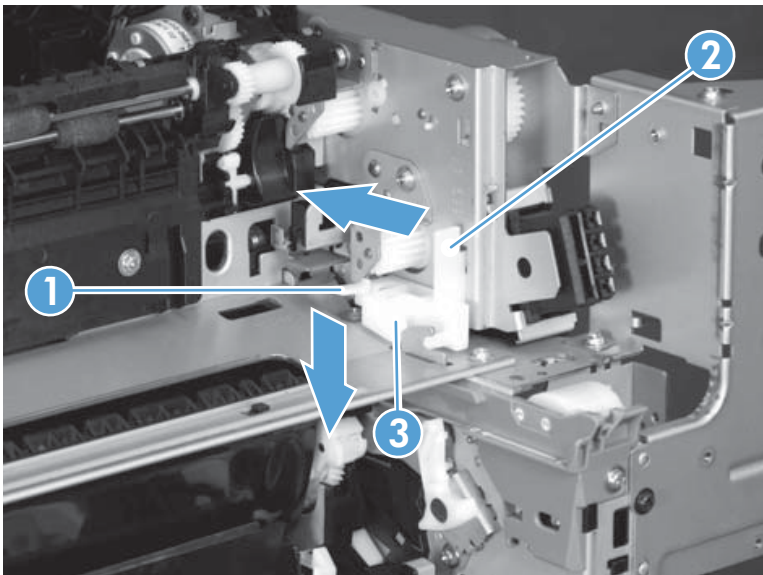
**Figure 126** Install a replacement fuser gear assembly (2 of 3)



- 3. Replacement fuser drive assembly:** Release two tabs in the order shown below (callouts 1 and 2), and then remove the spacer (callout 3).

**Original fuser drive assembly:** Installation complete—this step is not required.

**Figure 127** Install a replacement fuser gear assembly (3 of 3)



## Paper delivery assembly

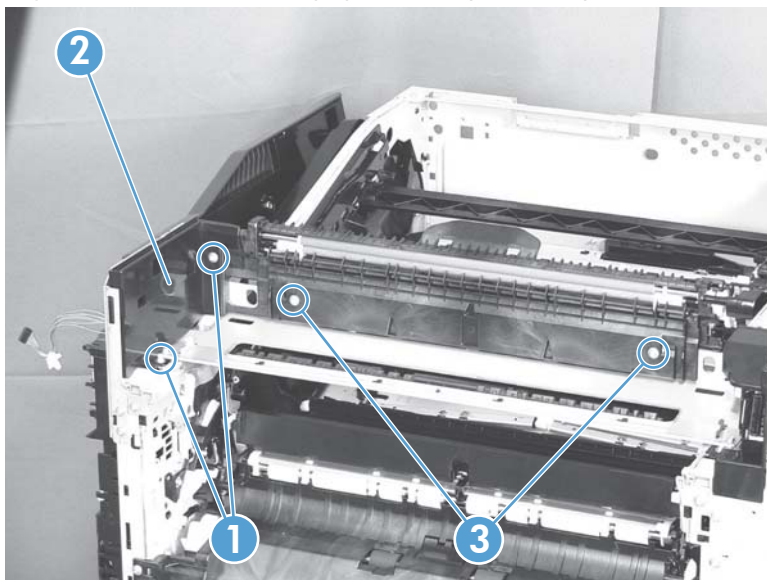
Before proceeding, remove the following components:

- Fuser. See [Fuser on page 11](#).
- Intermediate transfer belt (ITB). See [Intermediate transfer belt \(ITB\) on page 19](#).
- Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly on page 30](#).
- Left cover. See [Left cover on page 32](#).
- Right-rear cover. See [Right-rear cover on page 36](#).
- Top cover. See [Top cover on page 38](#).

### Remove the delivery assembly

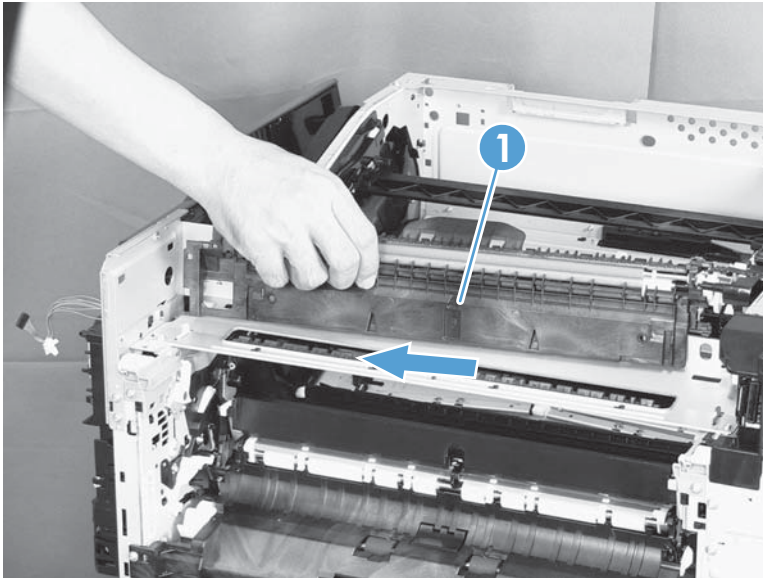
1. Remove two screws (callout 1), remove the cover (callout 2), and then remove two screws (callout 3).

**Figure 128** Remove the paper delivery assembly (1 of 2)



2. Pull the left side of the unit away from the engine, and then slide the delivery unit (callout 1) in the direction that the arrow indicates to remove it.

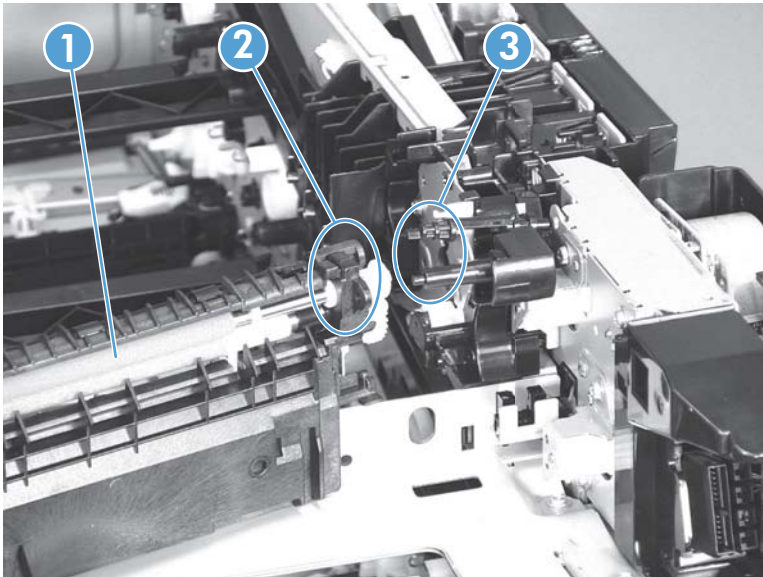
**Figure 129** Remove the paper delivery assembly (2 of 2)



### Reinstall the paper delivery assembly

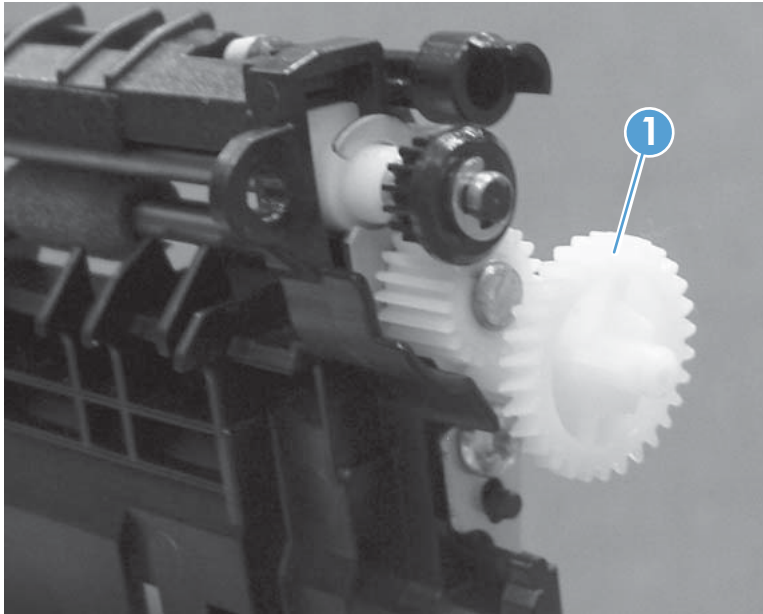
1. Make sure that the delivery assembly (callout 1) two mounting holes (callout 2) align with the shafts (callout 3) on the product.

**Figure 130** Reinstall the paper delivery assembly (1 of 3)



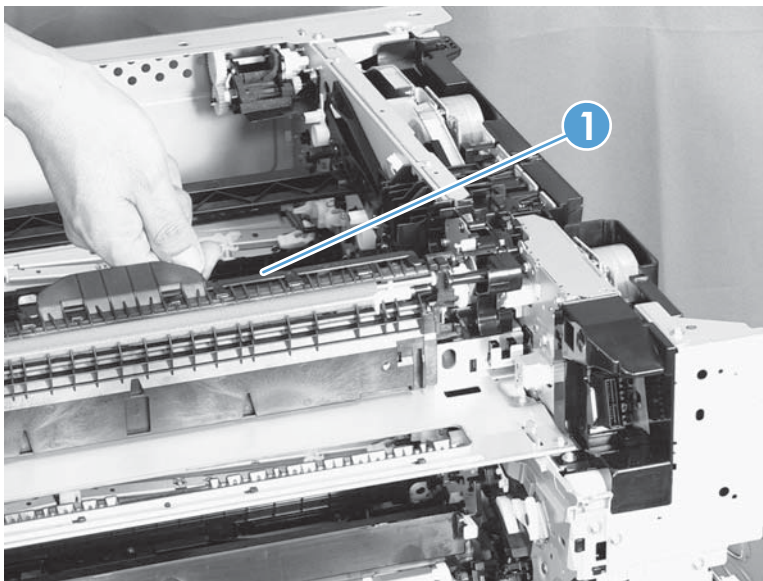
2. During reassembly, the white gear (callout 1) can become dislodged. Make sure that it is correctly installed on the assembly.

**Figure 131** Reinstall the paper delivery assembly (2 of 3)



3. After reinstalling the delivery assembly, verify that the sensor flag (callout 1) moves smoothly.

**Figure 132** Reinstall the paper delivery assembly (3 of 3)



## Duplex drive assembly (duplex models)

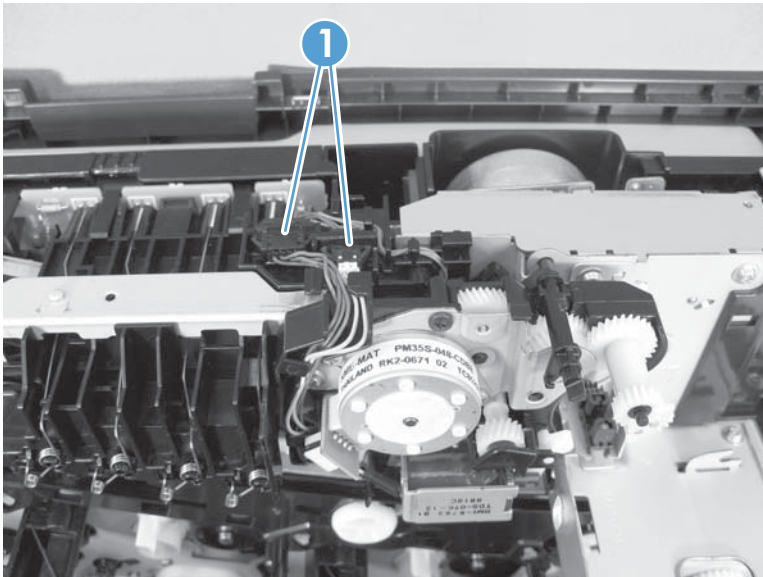
Before proceeding, remove the following components:

- Fuser. See [Fuser on page 11](#).
- Intermediate transfer belt (ITB). See [Intermediate transfer belt \(ITB\) on page 19](#).
- Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly on page 30](#).
- Left cover. See [Left cover on page 32](#).
- Rear cover. See [Rear cover on page 33](#).
- Right-rear cover. See [Right-rear cover on page 36](#).
- Top cover. See [Top cover on page 38](#).
- Delivery assembly. See [Paper delivery assembly on page 101](#).

### Remove the duplex-drive assembly

1. Disconnect two connectors (callout 1).

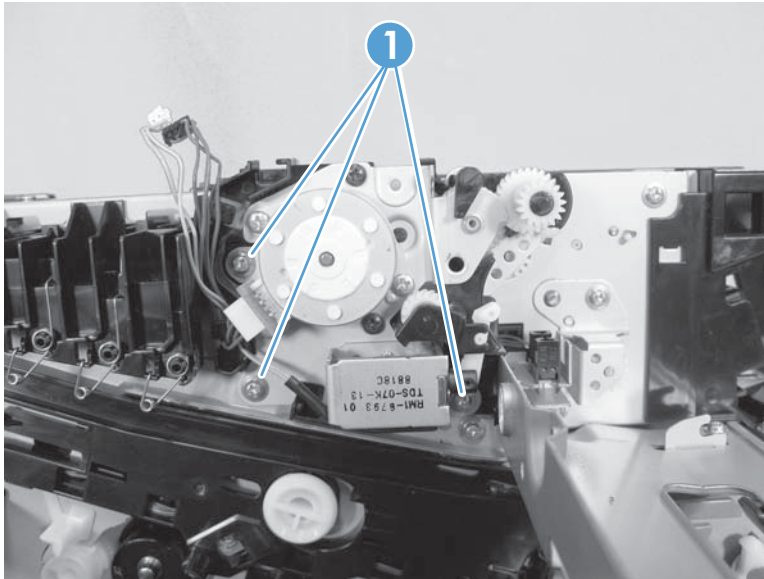
**Figure 133** Remove the duplex-drive assembly (1 of 3)





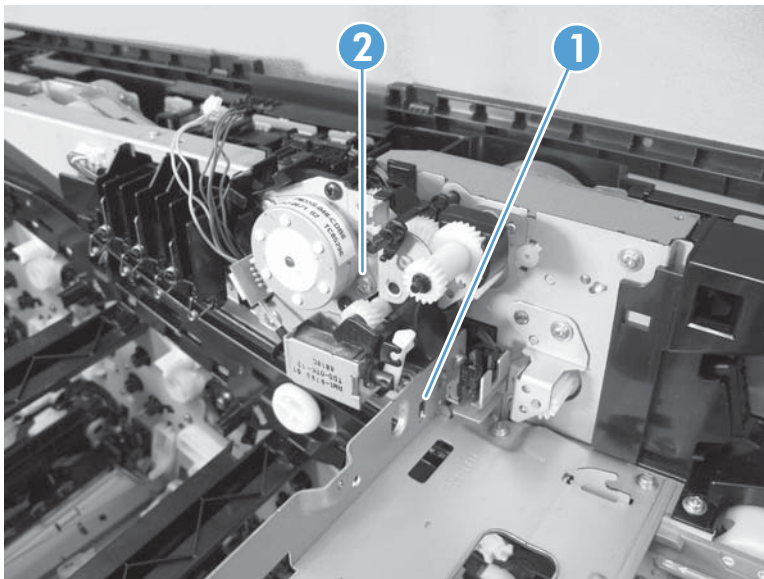
2. Remove three screws (callout 1).

**Figure 134** Remove the duplex-drive assembly (2 of 3)



3. Release one tab (callout 1), and then remove the assembly (callout 2).

**Figure 135** Remove the duplex-drive assembly (3 of 3)



## Delivery drive assembly (simplex models)

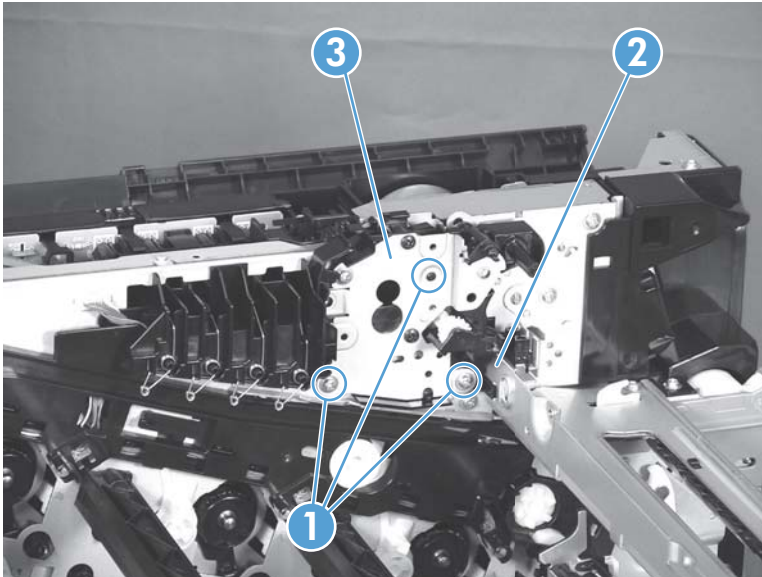
Before proceeding, remove the following components:

- Fuser. See [Fuser on page 11](#).
- Intermediate transfer belt (ITB). See [Intermediate transfer belt \(ITB\) on page 19](#).
- Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly on page 30](#).
- Left cover. See [Left cover on page 32](#).
- Rear cover. See [Rear cover on page 33](#).
- Right-rear cover. See [Right-rear cover on page 36](#).
- Top cover. See [Top cover on page 38](#).
- Delivery assembly. See [Paper delivery assembly on page 101](#).

### Remove the delivery drive assembly

- ▲ Remove three screws (callout 1), release one tab (callout 2), and then remove the delivery drive assembly (callout 3).

**Figure 136** Remove the delivery drive assembly



## Residual-toner-feed assembly


Before proceeding, remove the following components:

- Intermediate transfer belt (ITB). See [Intermediate transfer belt \(ITB\) on page 19](#).
- Left cover. See [Left cover on page 32](#).
- Rear cover. See [Rear cover on page 33](#).
- Toner collection unit access door. See [Toner collection unit access door on page 34](#).
- Right-rear cover. See [Right-rear cover on page 36](#).
- Top cover. See [Top cover on page 38](#).
- Toner cover. See the first step of [Residual toner full sensor on page 69](#).

### Remove the residual-toner-feed assembly

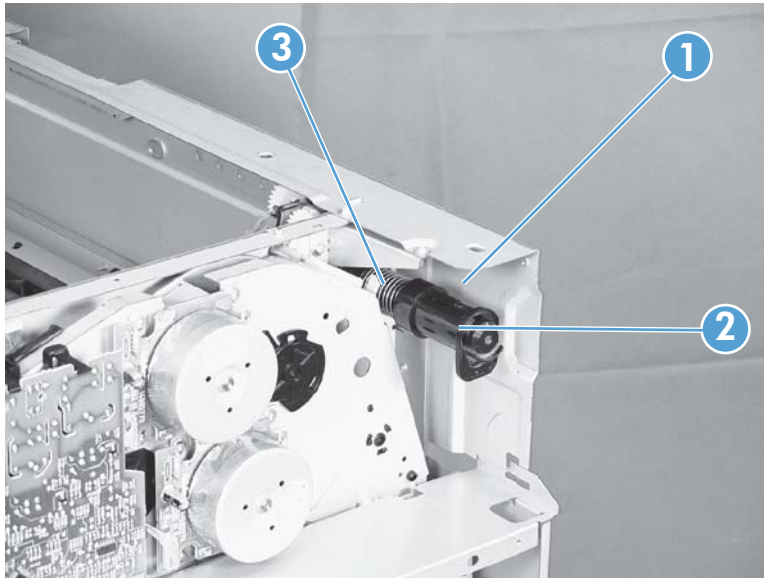
1. Release one tab (callout 1) by pulling the tab up. If necessary, use a small, flat-blade screwdriver to pull the tab up. Remove the shutter (callout 2), and then pull the spring (callout 3) off the assembly.

---


 **NOTE:** There might be a piece of transparent tape over the tab (callout 1). Remove the tape to release the tab.

---

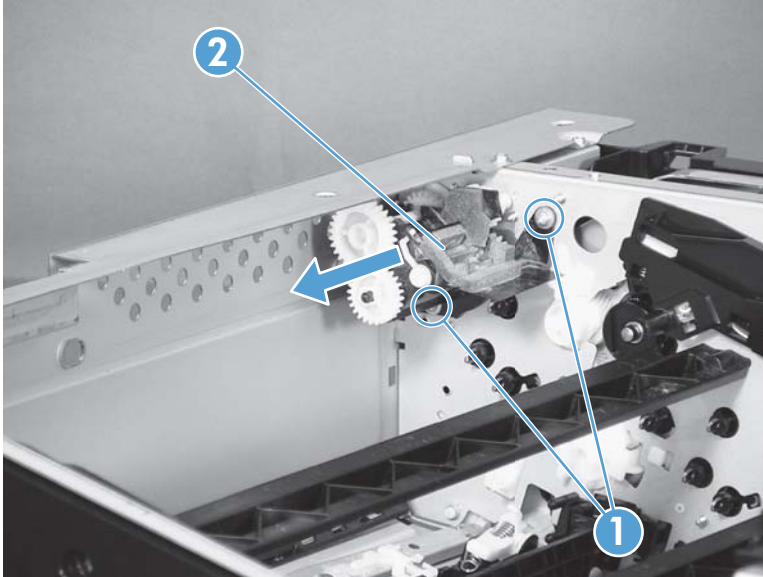
**Figure 137** Remove the residual-toner-feed assembly (1 of 2)



2. Remove two screws (callout 1), and then remove the residual-toner-feed assembly (callout 2).

 **NOTE:** When removing the residual-toner-feed assembly (callout 2), make sure that the assembly does not separate from the toner auger. This can spill toner in the product. To reduce the risk of such an incident, pull the assembly in the direction indicated by the arrow.

**Figure 138** Remove the residual-toner-feed assembly (2 of 2)



## ITB motor (M1)

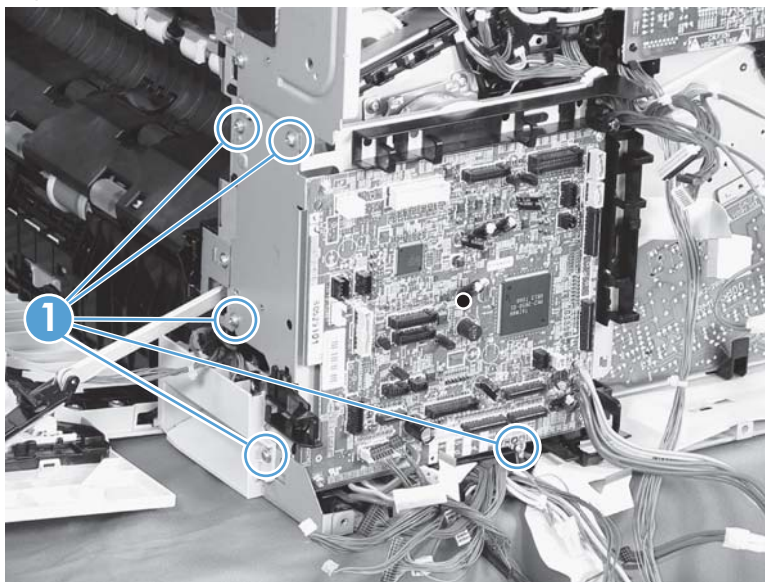
Before proceeding, remove the following components:

- Toner-collection unit. See [Toner-collection unit on page 9](#).
- Toner collection unit access door. See [Toner collection unit access door on page 34](#).
- Rear cover. See [Rear cover on page 33](#).
- Right-rear cover. See [Right-rear cover on page 36](#).

### Remove the ITB motor

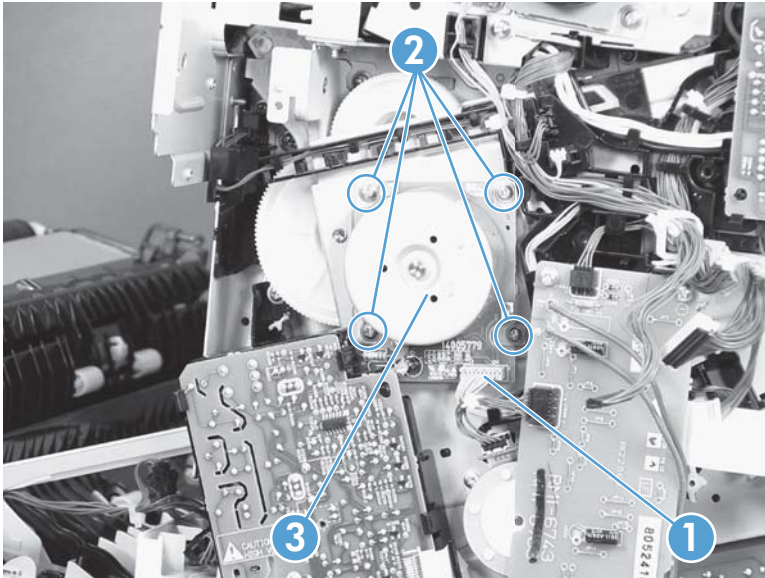
1. Disconnect all of the cables and FFCs from the DC controller (release the cables from the guides), remove six screws (callout 1), and then remove the DC controller and the DC controller support.

**Figure 139** Remove the ITB motor (1 of 2)



2. Disconnect one connector (callout 1), remove four screws (callout 2), and then remove the motor (callout 3).

**Figure 140** Remove the ITB motor (2 of 2)



## Drum motor (M2)

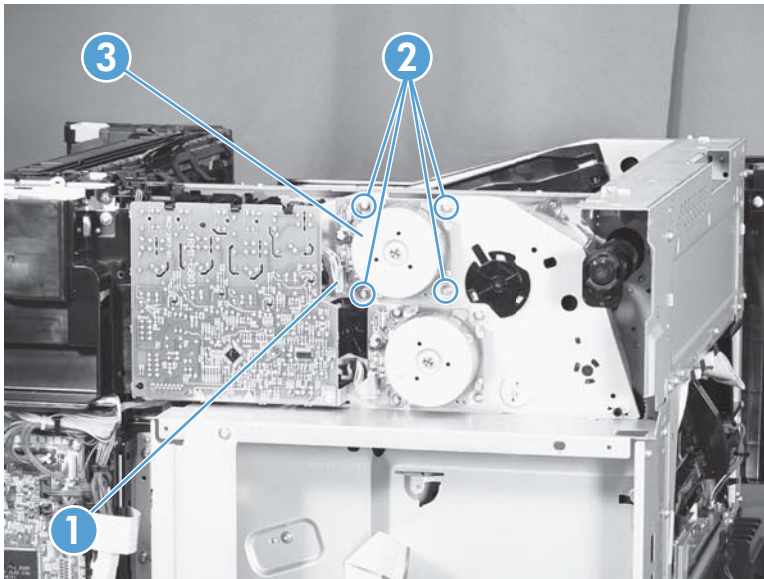
Before proceeding, remove the following components:

- Toner collection unit. See [Toner-collection unit on page 9](#).
- Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly on page 30](#).
- Left cover. See [Left cover on page 32](#).
- Rear cover. See [Rear cover on page 33](#).
- Toner collection unit access door. See [Toner collection unit access door on page 34](#).
- Right-rear cover. See [Right-rear cover on page 36](#).
- Top cover. See [Top cover on page 38](#).
- Toner cover. See the first and second steps of [Residual toner full sensor on page 69](#).

### Remove the drum motor

Disconnect one connector (callout 1), remove four screws (callout 2), and then remove the motor (callout 3).

**Figure 141** Remove the drum motor



## Developing motor (M3)

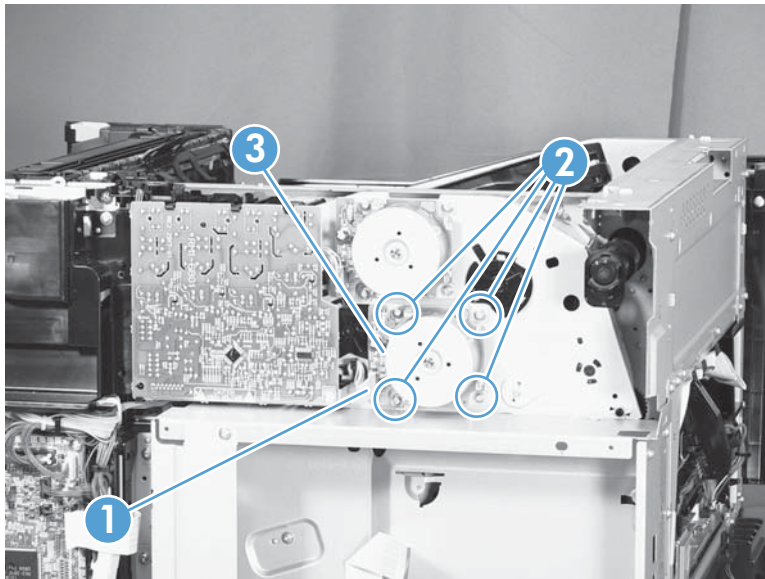
Before proceeding, remove the following components:

- Toner collection unit. See [Toner-collection unit on page 9](#).
- Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly on page 30](#).
- Left cover. See [Left cover on page 32](#).
- Rear cover. See [Rear cover on page 33](#).
- Toner collection unit access door. See [Toner collection unit access door on page 34](#).
- Right-rear cover. See [Right-rear cover on page 36](#).
- Top cover. See [Top cover on page 38](#).
- Toner cover. See the first and second steps of [Residual toner full sensor on page 69](#).

### Remove the developing motor

Disconnect one connector (callout 1), remove four screws (callout 2), and then remove the motor (callout 3).

**Figure 142** Remove the developing motor





## Fuser motor (M4)

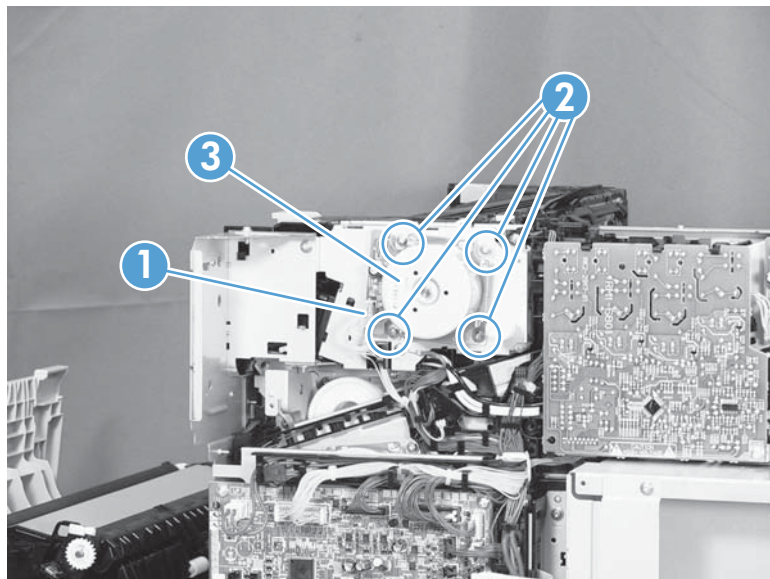
Before proceeding, remove the following components:

- Toner collection unit. See [Toner-collection unit on page 9](#).
- Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly on page 30](#).
- Left cover. See [Left cover on page 32](#).
- Rear cover. See [Rear cover on page 33](#).
- Toner collection unit access door. See [Toner collection unit access door on page 34](#).
- Right-rear cover. See [Right-rear cover on page 36](#).
- Top cover. See [Top cover on page 38](#).
- Residual toner full sensor. See [Residual toner full sensor on page 69](#).

### Remove the fuser motor

Disconnect one connector (callout 1), remove four screws (callout 2), and then remove the motor (callout 3).

**Figure 143** Remove the fuser motor



## Developing-disengagement motor (M6)

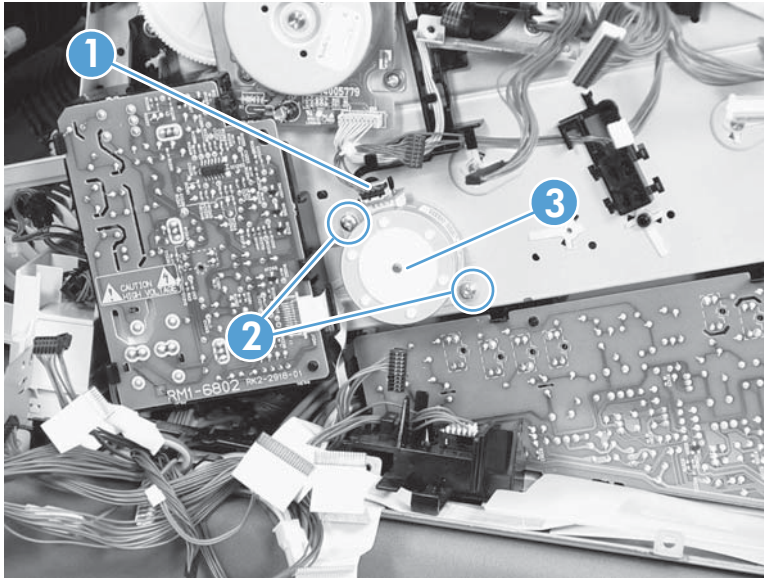
Before proceeding, remove the following components:

- Rear cover. See [Rear cover on page 33](#).
- Right-rear cover. See [Right-rear cover on page 36](#).
- Driver PCA. See [Driver PCA on page 133](#).

### Remove the developing-disengagement motor

Disconnect one connector (callout 1), remove two screws (callout 2), and then remove the motor (callout 3).

**Figure 144** Remove the developing-disengagement motor



## Power-supply fan (FM1)

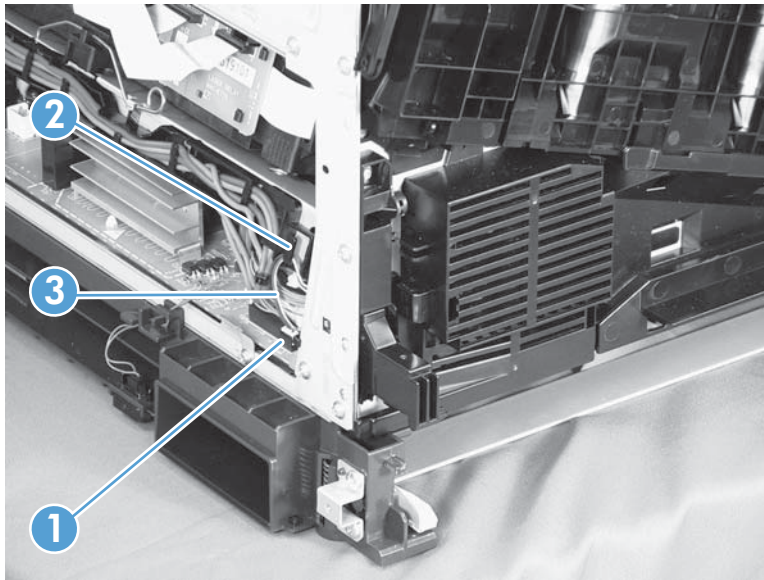
Before proceeding, remove the following components:

- Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly on page 30](#).
- Left cover. See [Left cover on page 32](#).
- Front-door assembly (steps 1 and 2 only). See [Front-door assembly on page 40](#).

### Remove the power-supply fan

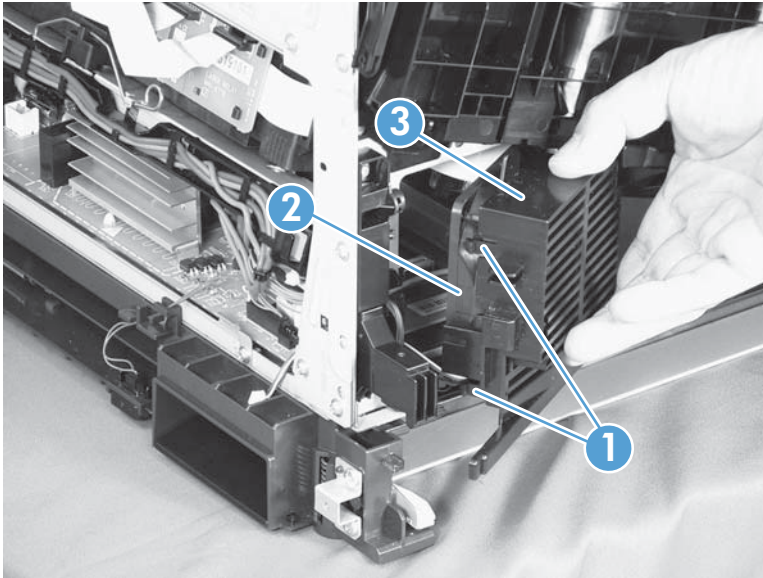
1. Disconnect one connector (callout 1), and then release the cables (callout 3) from the guide (callout 2).

**Figure 145** Remove the power-supply fan (1 of 3)



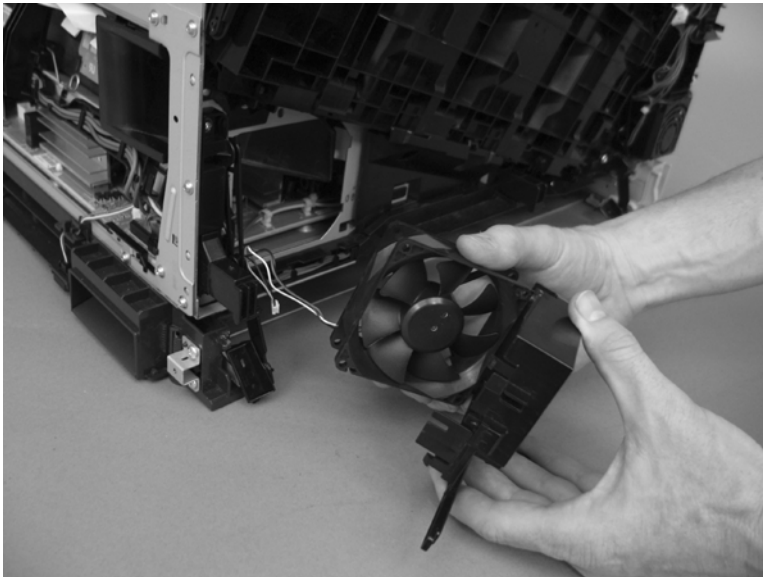
2. Release two tabs (callout 1), and then remove the fan (callout 2) and the fan holder (callout 3) together.

**Figure 146** Remove the power-supply fan (2 of 3)

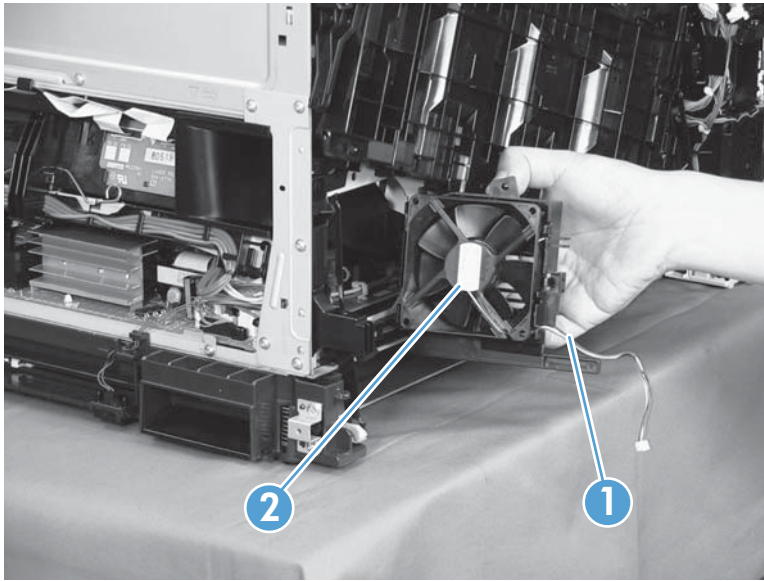


3. Pull on the sides of the fan holder to remove the fan from the holder.

**Figure 147** Remove the power-supply fan (3 of 3)



**Reinstallation tip** When reinstalling the fan, verify that the fan cables (callout 1) are positioned as shown and that the label (callout 2) on the fan is facing toward the inside of the product.



## Fuser fan (FM2)

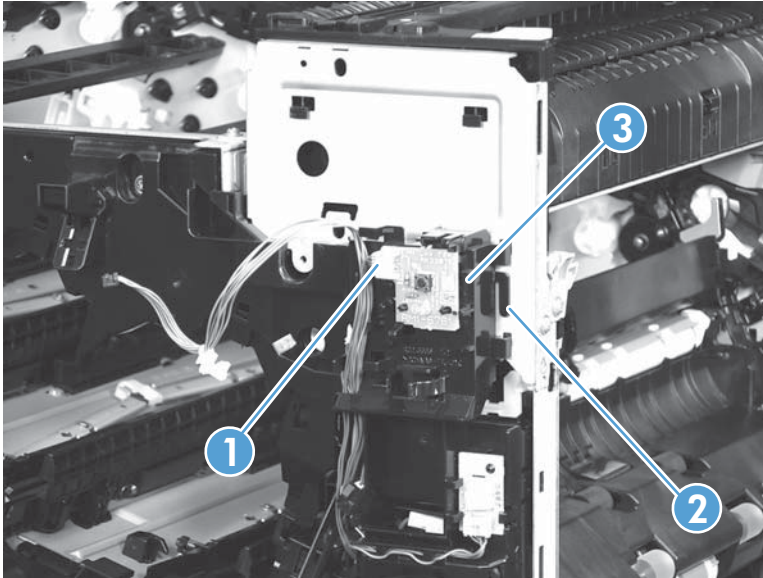
Before proceeding, remove the following components:

- Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly](#) on page 30.

### Remove the fuser fan

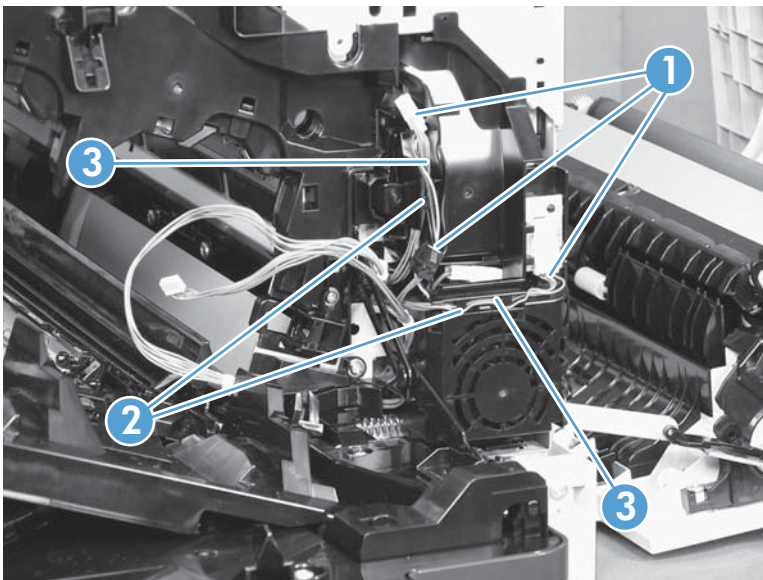
1. Disconnect one connector (callout 1), release one tab (callout 2), and then slide the guide (callout 3) down to remove it.

**Figure 148** Remove the fuser fan (1 of 4)



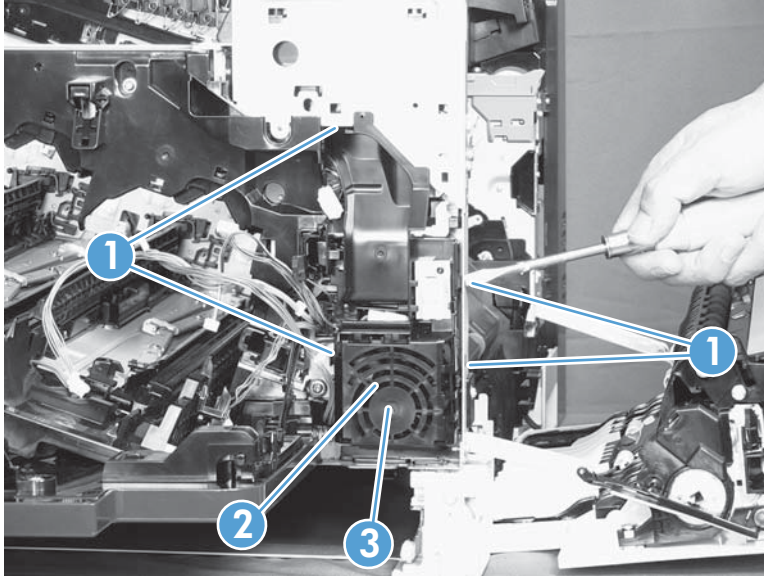
2. Disconnect three connectors (callout 1), and then release the cables (callout 3) from the cable guides (callout 2).

**Figure 149** Remove the fuser fan (2 of 4)



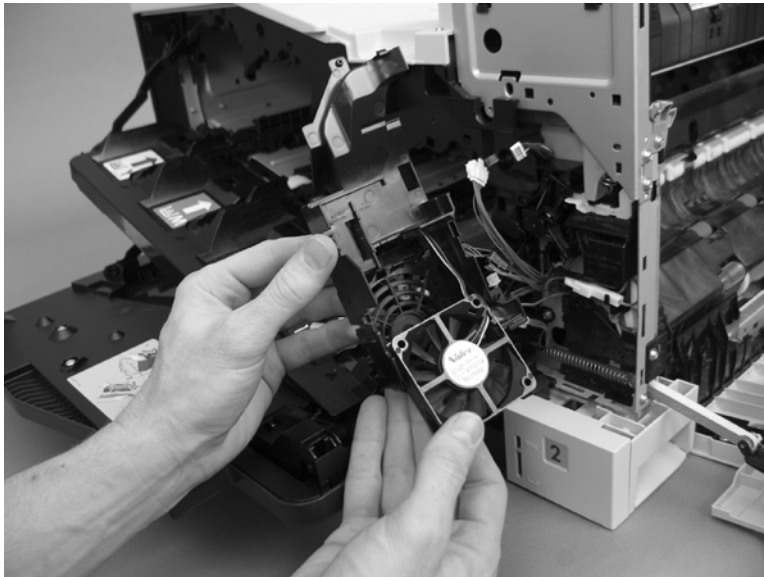
3. Release four tabs (callout 1), and then remove the fan (callout 2) and the fan holder (callout 3) together.

**Figure 150** Remove the fuser fan (3 of 4)




4. Turn the fan holder over, and then pull the fan out of the holder.

**Figure 151** Remove the fuser fan (4 of 4)



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 **Reinstallation tip** Note the wiring path and label orientation for reinstallation.

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## Formatter fan (FM3) and ICB PCA

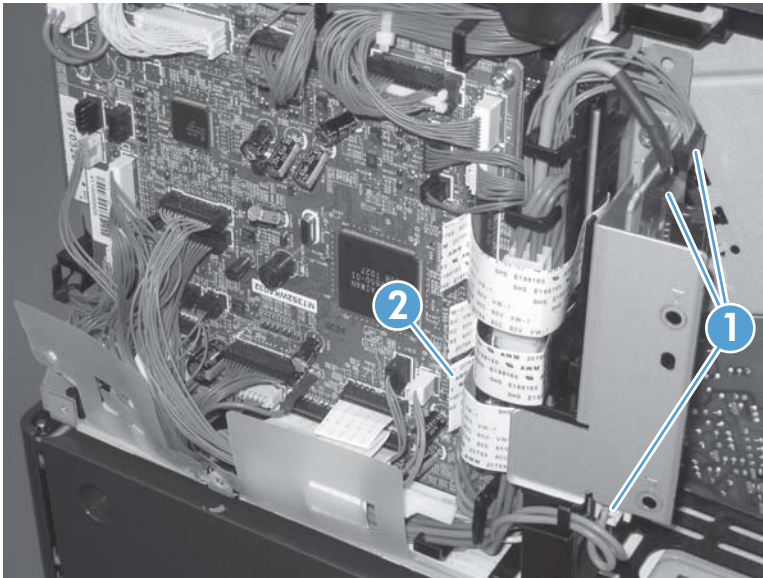
Before proceeding, remove the following components:

- Left cover. See [Left cover on page 32](#).
- Rear cover. See [Rear cover on page 33](#).
- Formatter PCA. See [Formatter PCA on page 22](#).
- Formatter case. See [Formatter case on page 47](#).

### Remove the formatter fan and ICB PCA

1. Disconnect three connectors (callout 1) and one FFC (callout 2).

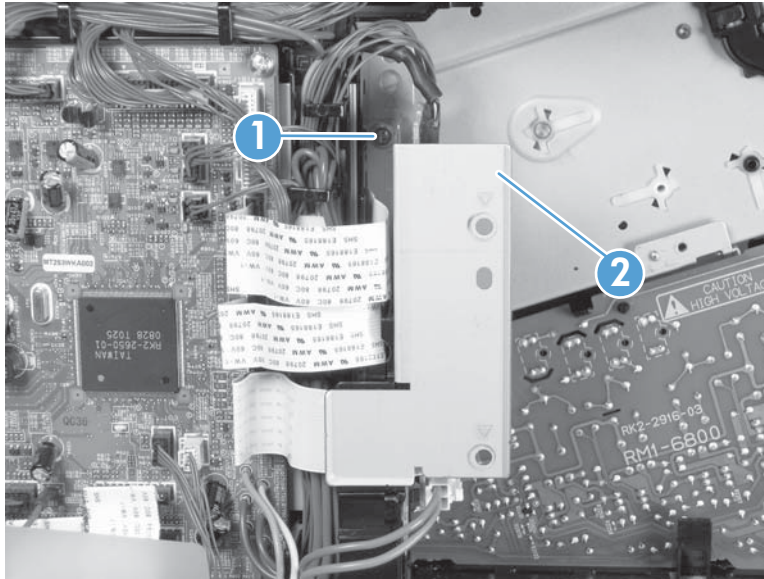
**Figure 152** Remove the formatter fan (1 of 5)





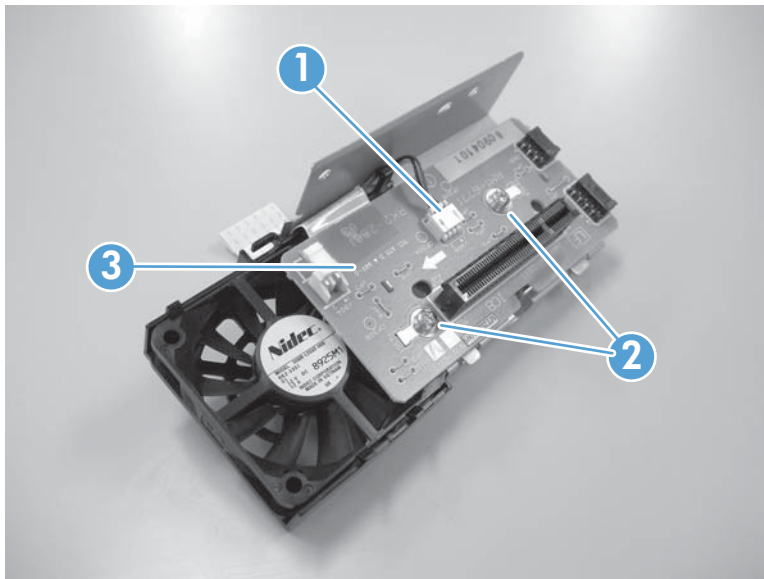
2. Remove one screw (callout 1) and then remove the sheet-metal plate (callout 2).

**Figure 153** Remove the formatter fan (2 of 5)



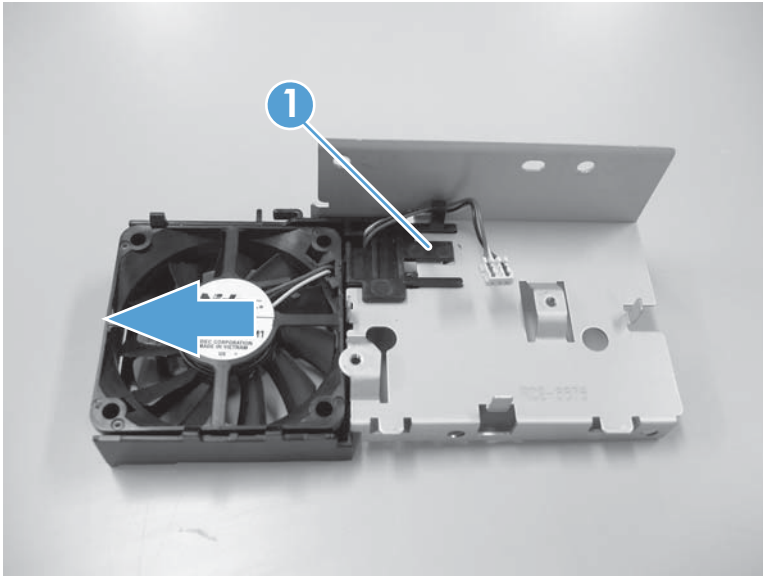
3. Disconnect one connector (callout 1), remove two screws (callout 2), and then remove the interconnect board (IBC) PCA (callout 3) from the assembly.

**Figure 154** Remove the formatter fan (3 of 5)



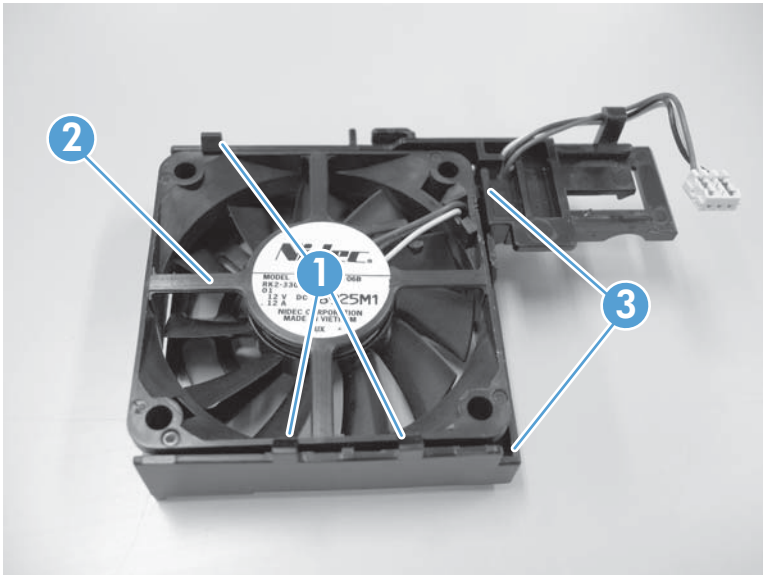
4. Release one tab (callout 1) and slide the formatter fan away from the sheet-metal plate to remove it.

**Figure 155** Remove the formatter fan (4 of 5)



5. Release three tabs (callout 1) and remove the fan (callout 2) from the holder (callout 3).

**Figure 156** Remove the formatter fan (5 of 5)



## DC controller PCA

- △ **CAUTION:** Do not replace the DC controller PCA and the formatter PCA at the same time. The settings for the DC Controller PCA are stored in the formatter RAM. When you install a new DC Controller PCA, it reads the settings from the formatter.


Before proceeding, remove the following components:

- Rear cover. See [Rear cover on page 33](#).
- Right-rear cover. See [Right-rear cover on page 36](#).

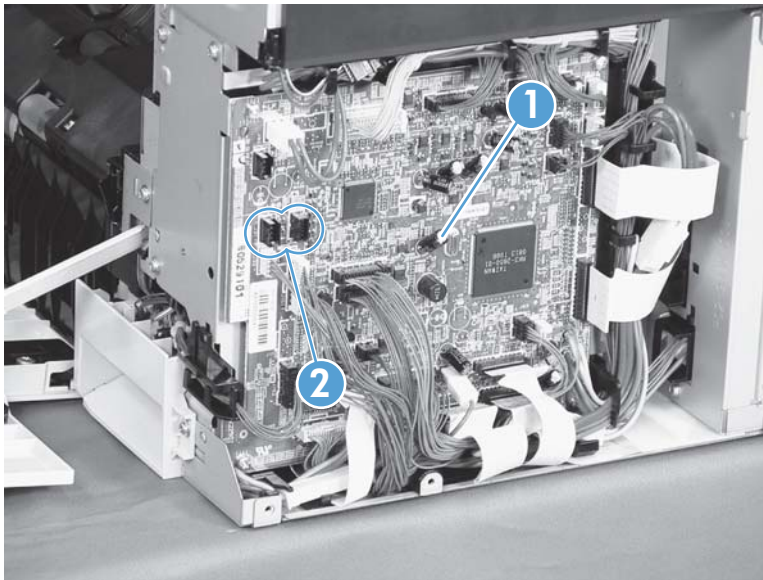
## Remove the DC controller PCA

- △ **CAUTION:**  ESD-sensitive part.

1. Disconnect 22 connectors and six flat cables on the DC controller PCA (callout 1).

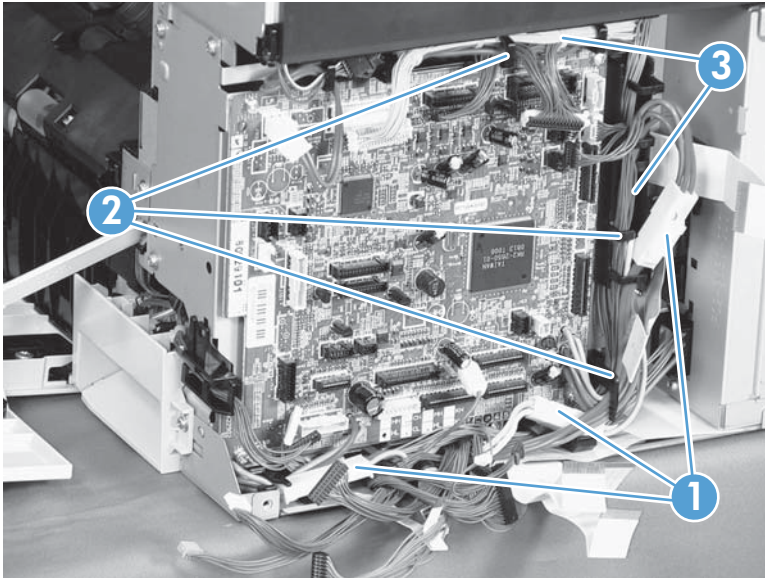
 **Reinstallation tip** Two connectors (callout 2) should be empty when the DC controller is reinstalled.

**Figure 157** Remove the DC controller PCA (1 of 3)



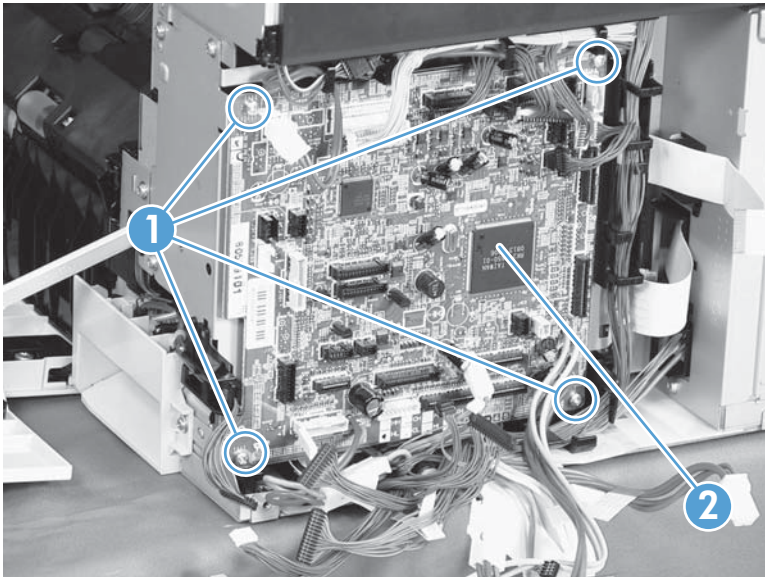
2. Disconnect three intermediate connectors (callout 1), and then release the cables (callout 3) from the cable guides (callout 2) on the top and right sides of the DC controller PCA.

**Figure 158** Remove the DC controller PCA (2 of 3)



3. Remove four screws (callout 1), and then remove the DC controller PCA (callout 2).

**Figure 159** Remove the DC controller PCA (3 of 3)



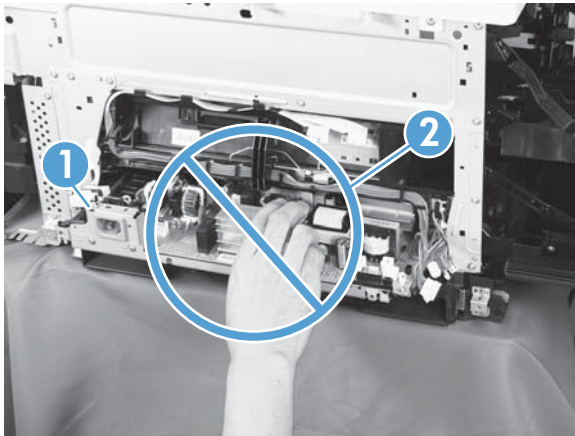
## Low-voltage power supply

Before proceeding, remove the following components:

- Tray 2 cassette.
- Left cover. See [Left cover on page 32](#).

### Remove the low-voltage power supply

- ⚠ **WARNING!** When disassembling the low-voltage power supply unit (callout 1), do not touch the electric element (callout 2) as shown. Be sure to hold the bottom side of the low-voltage power supply unit.

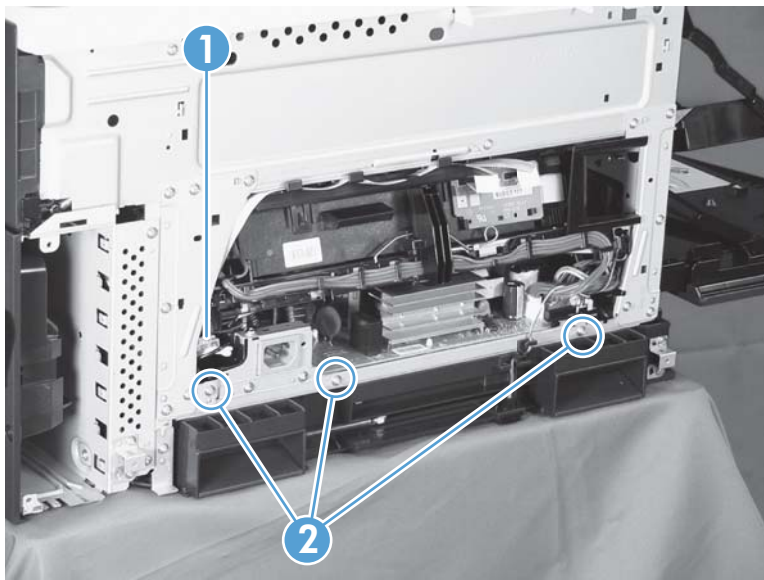


- ⚠ **CAUTION:**  ESD-sensitive part.

Unplug the power cord from the product before proceeding.

1. Open the front door, disconnect two connectors (callout 1), and then remove three screws (callout 2) that have a triangular icon next to them.

**Figure 160** Remove the low-voltage power supply (1 of 3)

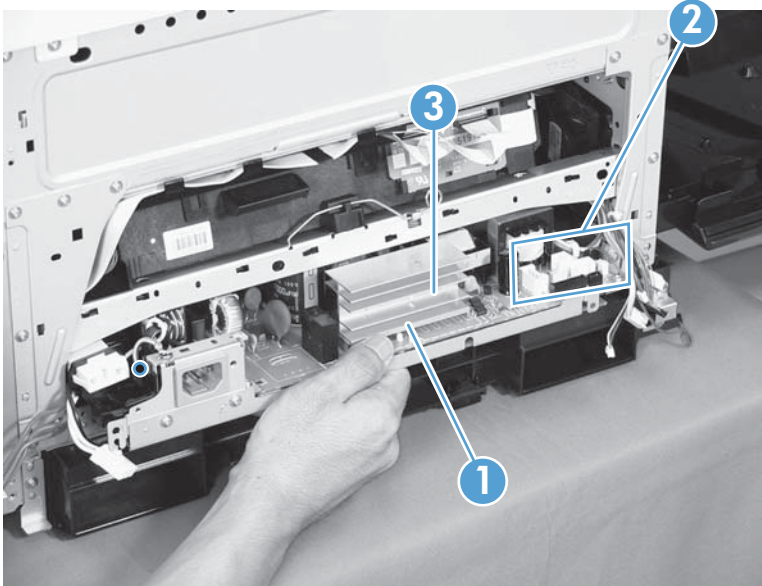


2. Slightly lift up on the low-voltage power supply (callout 1), slide it slightly forward, disconnect eight connectors (callout 2), and then release the cables from the front cable clamp.

⚠ **WARNING!** Do not use the power supply electric element (callout 3) as a handle to pull out the power supply.

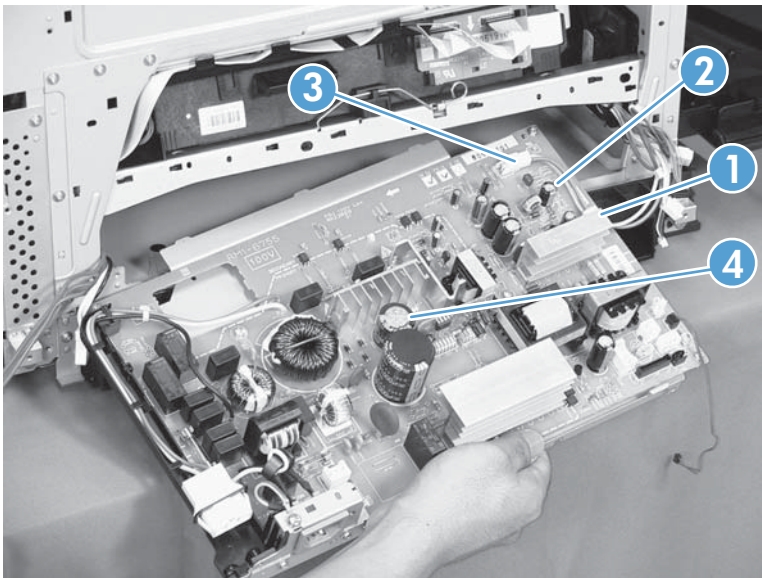
💡 **TIP:** One of the connectors (callout 2) is located far back inside the product.

**Figure 161** Remove the low-voltage power supply (2 of 3)

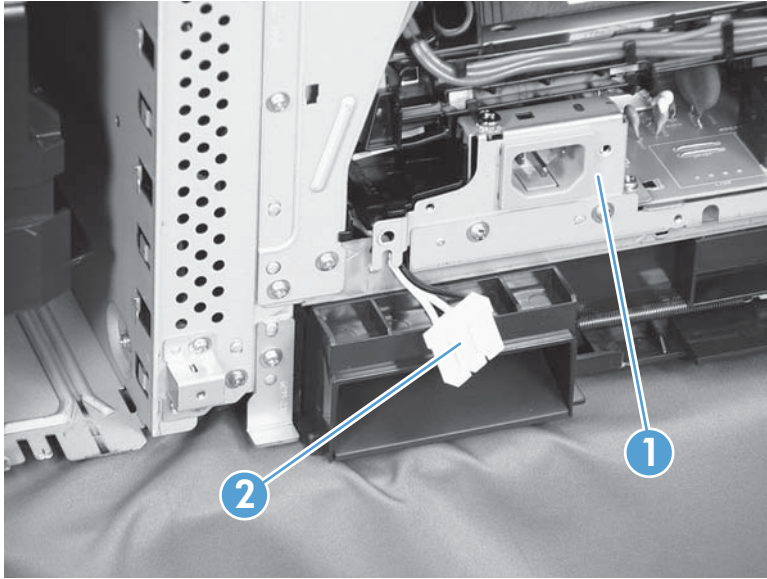


3. Release the cables (callout 2) from the rear cable clamp (callout 1), disconnect one rear connector (callout 3), and then remove the low-voltage power supply unit (callout 4).

**Figure 162** Remove the low-voltage power supply (3 of 3)



**Reinstallation tip** When reinstalling the low-voltage power supply unit (callout 1), be careful not to catch the AC cables (callout 2) in the low-voltage power supply unit.



## Imaging (developing) high-voltage power supply

Before proceeding, remove the following components:

- Rear cover. See [Rear cover on page 33](#).
- Right-rear cover. See [Right-rear cover on page 36](#).
- Formatter case. See [Formatter case on page 47](#).

### Remove the imaging (developing) high-voltage power supply

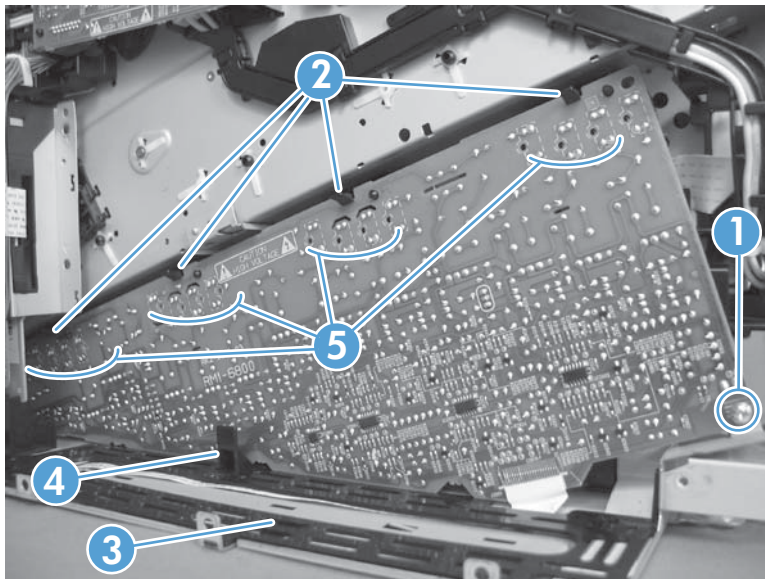
△ **CAUTION:**  ESD-sensitive part.

Remove one screw (callout 1), release four tabs (callout 2), remove the cable routing plate (callout 3), and then remove the imaging (developing) high-voltage power supply PCA.

💡 **Reinstallation tip** Reinsert the power supply by angling the smaller left end behind the DC controller and driver PCA. Ensure that the power supply sits behind the black tab (callout 4). Carefully press the power supply to engage all four tabs.

When you reinstall the power supply PCA, look through the holes on the PCA (callout 5) and make sure that the contact springs are correctly positioned against the back side of the PCA.

**Figure 163** Remove the imaging (developing) high-voltage power supply





## First transfer high-voltage power supply

Before proceeding, remove the following components:

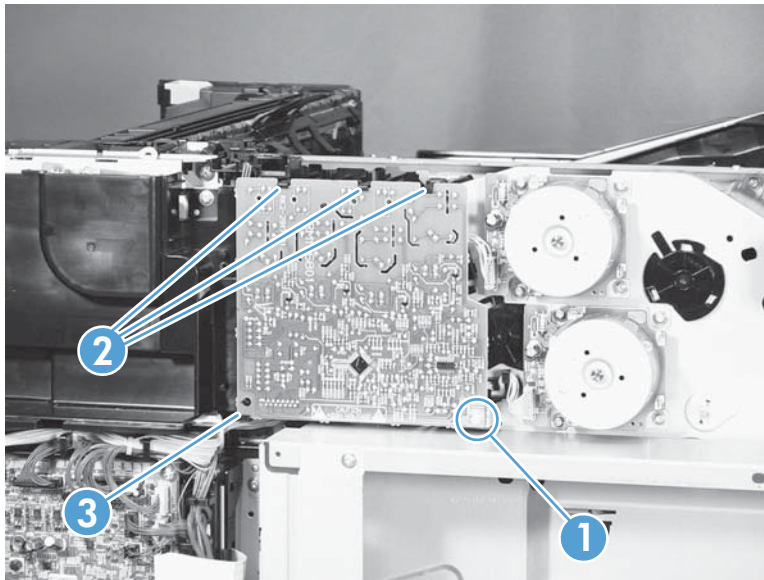
- Toner collection unit. See [Toner-collection unit on page 9](#).
- Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly on page 30](#).
- Left cover. See [Left cover on page 32](#).
- Rear cover. See [Rear cover on page 33](#).
- Toner collection unit access door. See [Toner collection unit access door on page 34](#).
- Right-rear cover. See [Right-rear cover on page 36](#).
- Top cover. See [Top cover on page 38](#).
- Toner cover. See the first and second steps of [Residual toner full sensor on page 69](#).

## Remove the first transfer high-voltage power supply

△ **CAUTION:**  ESD-sensitive part.

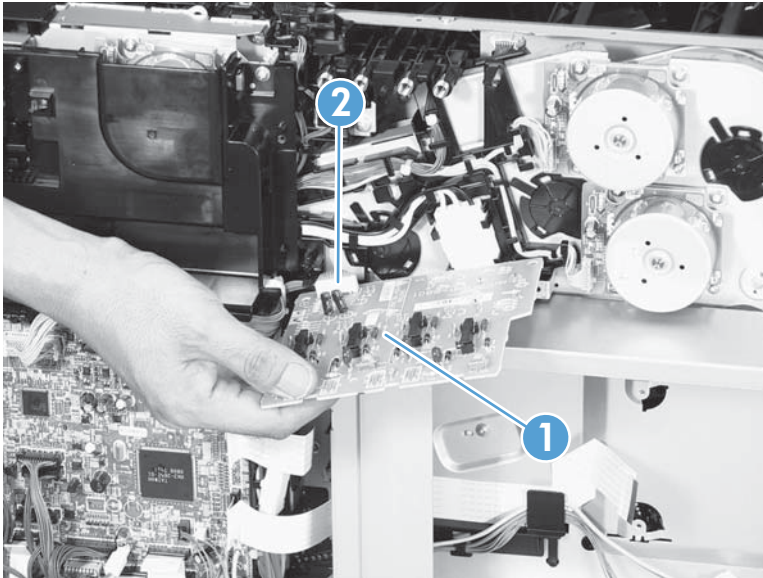
1. Remove one screw (callout 1), release three tabs (callout 2), and then slide the power supply off the alignment post (callout 3).

**Figure 164** Remove the first transfer high-voltage power supply (1 of 2)



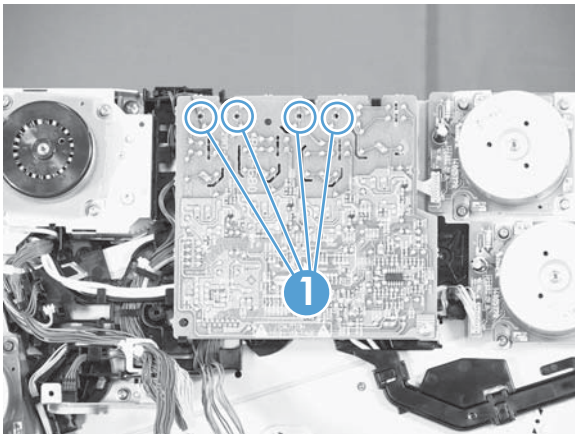
2. Disconnect one connector (callout 2), and then remove the first transfer high-voltage power supply PCA (callout 1).

**Figure 165** Remove the first transfer high-voltage power supply (2 of 2)



**Reinstallation tip** When you reinstall the power supply PCA, look through the holes on the PCA (callout 1) and make sure that the contact springs are correctly positioned against the back side of the PCA.

**Figure 166** Reinstall the first transfer high-voltage power supply



## Second transfer high-voltage power supply

Before proceeding, remove the following components:

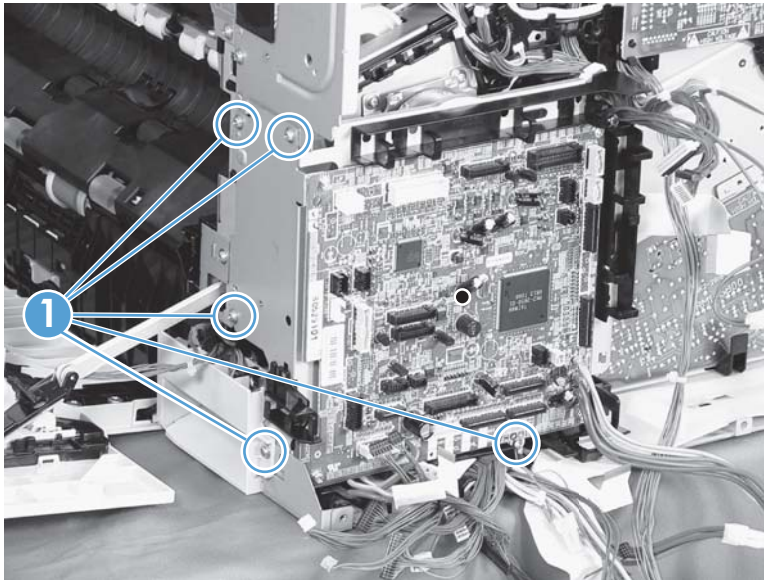
- Rear cover. See [Rear cover on page 33](#).
- Right-rear cover. See [Right-rear cover on page 36](#).

### Remove the second transfer high-voltage power supply

△ **CAUTION:**  ESD-sensitive part.

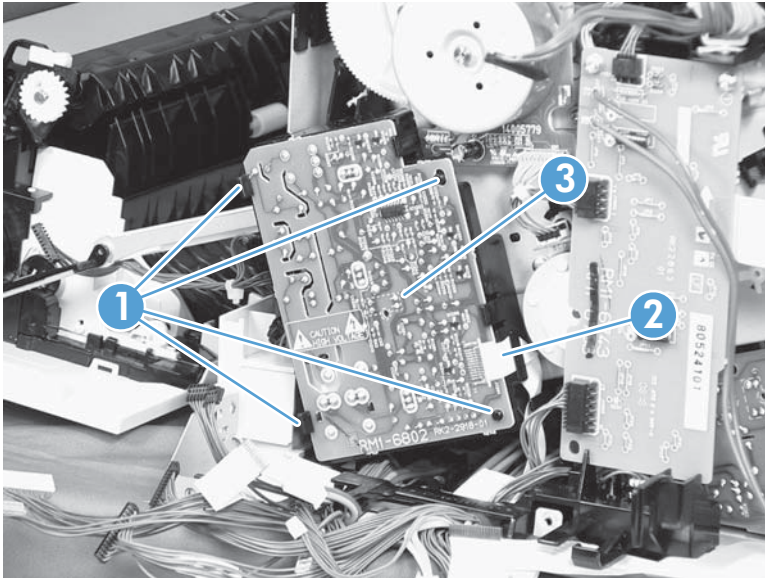
1. Disconnect all of the cables and FFCs from the DC controller (release the cables from the guides), remove five screws (callout 1), and then remove the DC controller and the DC controller support.

**Figure 167** Remove the second transfer high-voltage power supply (1 of 2)



2. Release four tabs (callout 1), and then unroute the cable (callout 2) as you remove the second transfer high-voltage power supply (callout 3).

**Figure 168** Remove the second transfer high-voltage power supply (2 of 2)



## Driver PCA

Before proceeding, remove the following components:

- Rear cover. See [Rear cover on page 33](#).
- Right-rear cover. See [Right-rear cover on page 36](#).

### Remove the driver PCA

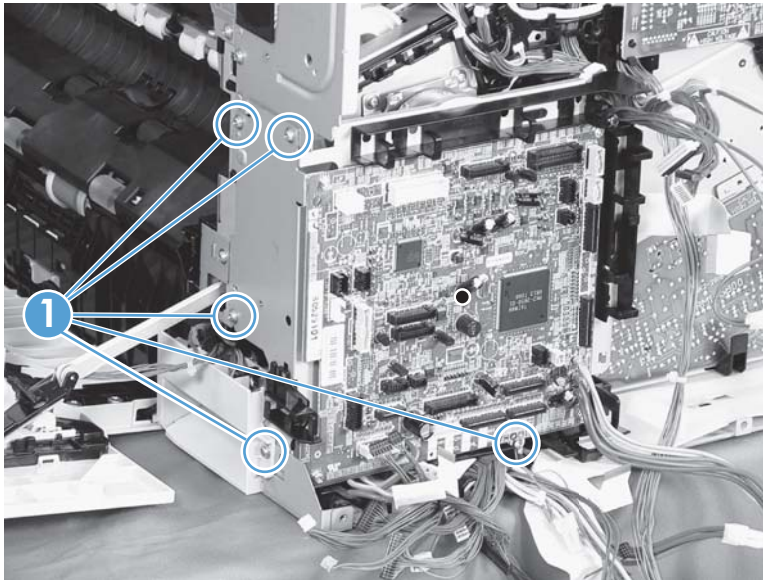
---

△ **CAUTION:**  ESD-sensitive part.

---

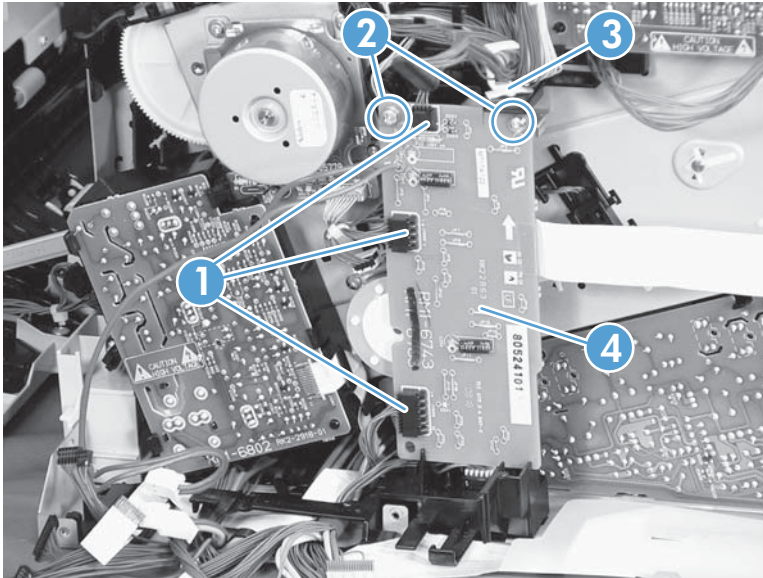
1. Remove the DC controller and the DC controller support by releasing the cables from the guides, and then removing six screws (callout 1).

**Figure 169** Remove the driver PCA (1 of 2)



2. Disconnect three connectors (callout 1), remove two screws (callout 2), and then unrout the cable (callout 3) as you remove the driver PCA (callout 4).

**Figure 170** Remove the driver PCA (2 of 2)



## Power switch PCA

Before proceeding, remove the following components:

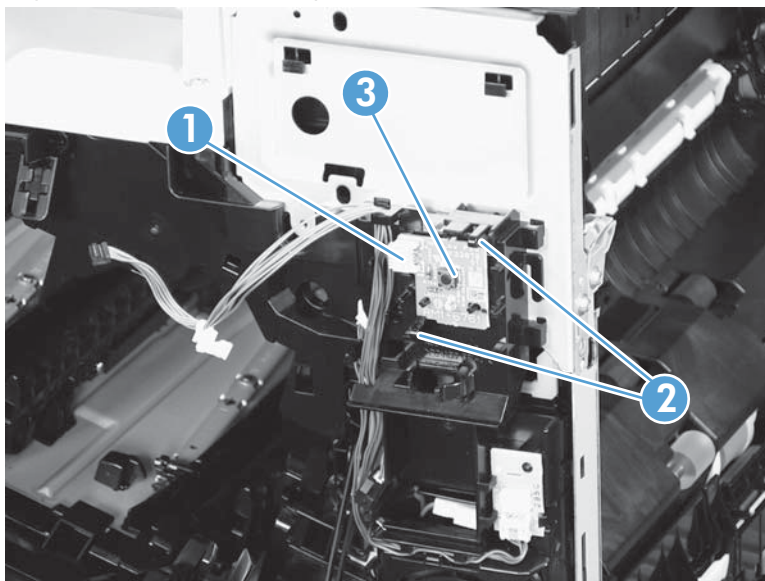
- Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly](#) on page 30.

### Remove the power switch PCA

△ **CAUTION:**  ESD-sensitive part.

1. Open the front door and the right door.
2. Disconnect one connector (callout 1), release two tabs (callout 2), and then remove the PCA (callout 3).

**Figure 171** Remove the power switch PCA



## Environmental sensor

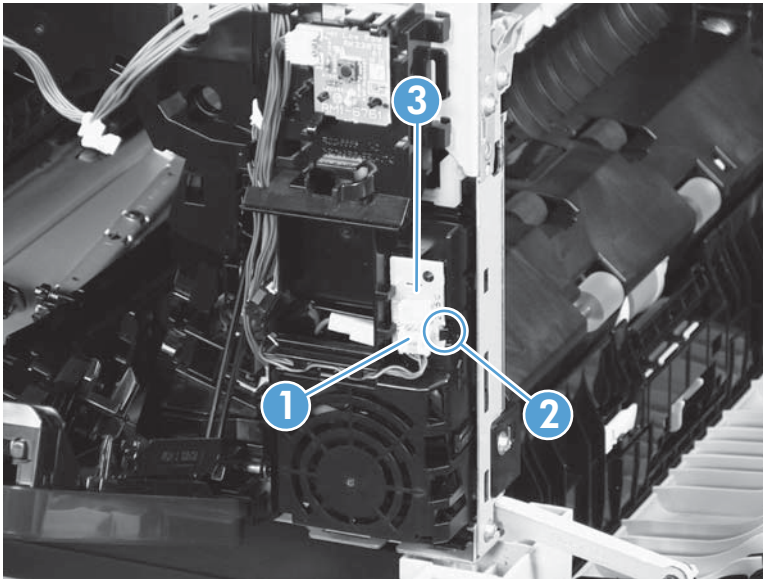
Before proceeding, remove the following components:

- Right-front cover and control-panel assembly. See [Right-front cover and control-panel assembly on page 30](#).

### Remove the environmental sensor

1. Open the front door and the right door.
2. Disconnect one connector (callout 1), release one tab (callout 2), and then remove the environmental sensor (callout 3).

**Figure 172** Remove the environmental sensor



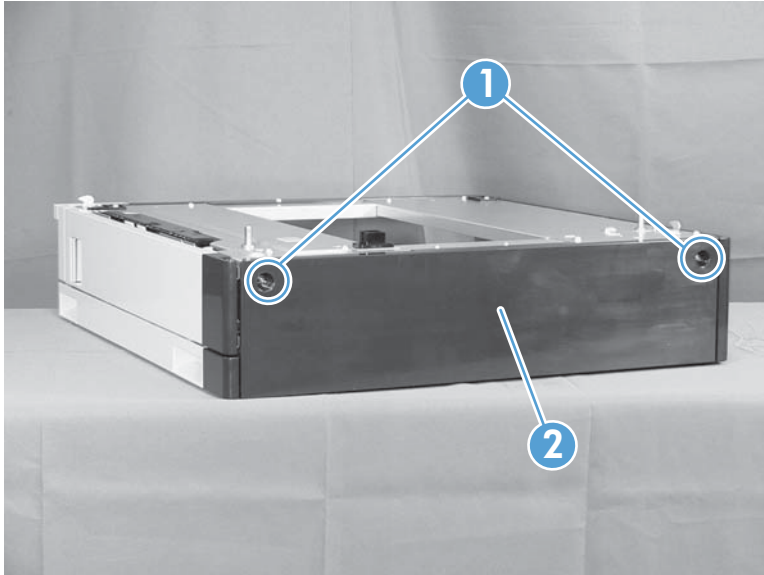


## 1 x 500-sheet paper feeder assembly

### 1 x 500 rear cover

Remove two screws (callout 1), and then remove the rear cover (callout 2).

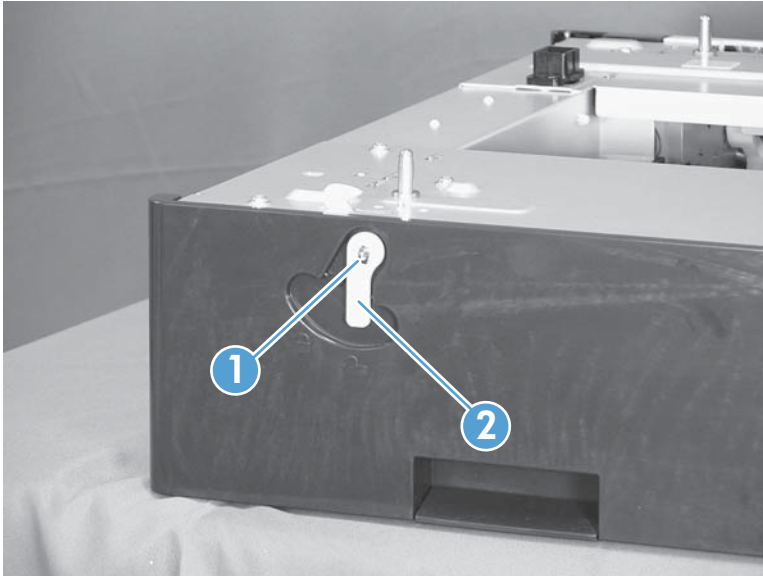
**Figure 173** Remove the 1 x 500 rear cover



## 1 x 500 left cover

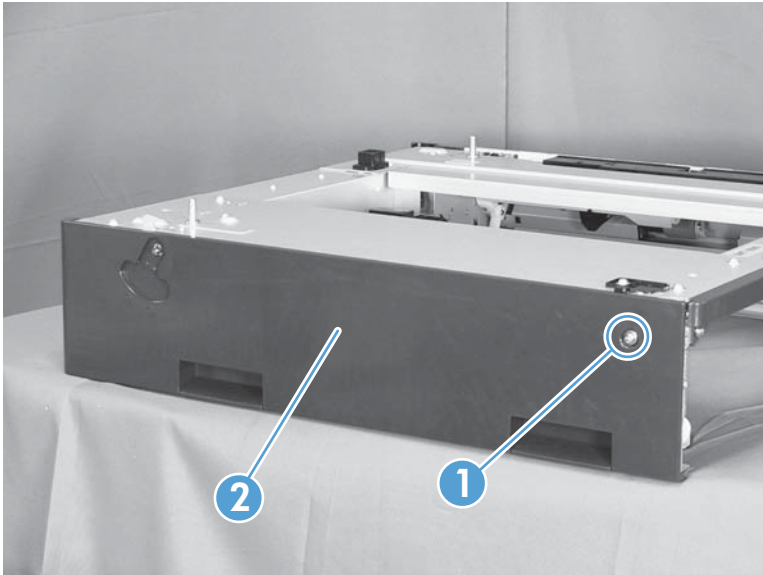
1. Take the cassette out of the feeder, release one tab (callout 1), and then remove the lever (callout 2).

**Figure 174** Remove the 1 x 500 left cover (1 of 2)

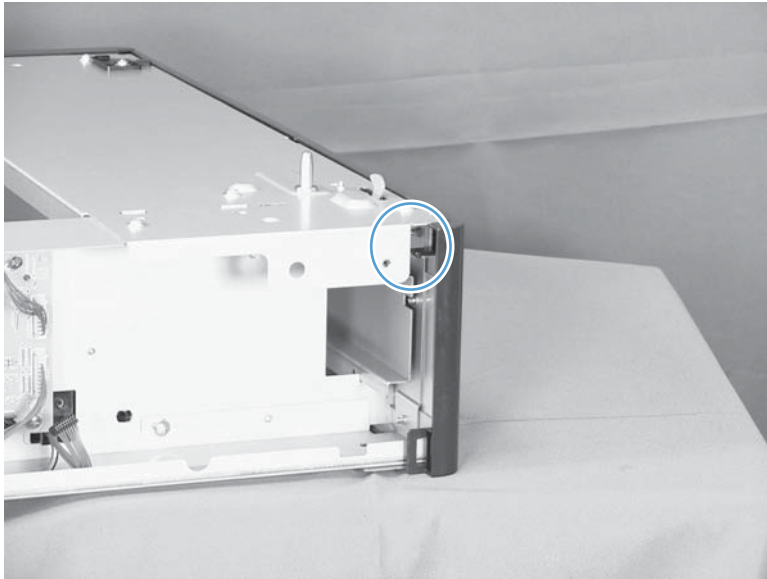
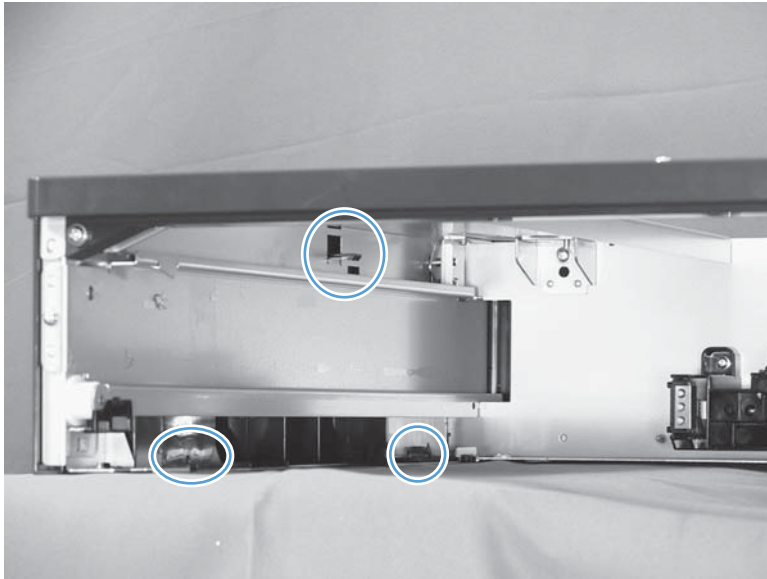


2. Remove one screw (callout 1), release four tabs from the inside (see the tip that follows this step), and then remove the left cover (callout 2).

**Figure 175** Remove the 1 x 500 left cover (2 of 2)



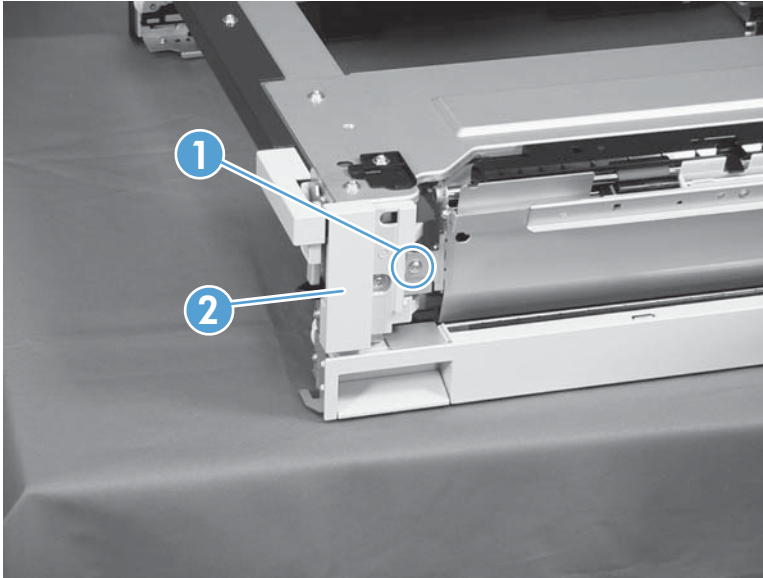
**TIP:** The following figures show the tabs inside the cover.



## 1 x 500 right-front cover

1. Take the cassette out of the feeder, and then open the right door.
2. Remove one screw (callout 1), and then remove the right-front cover (callout 2).

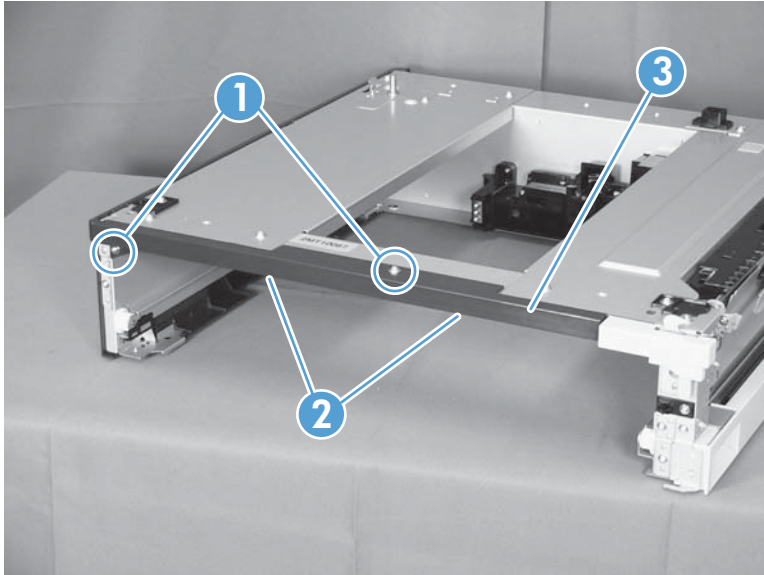
**Figure 176** Remove the 1 x 500 right-front cover



## 1 x 500 front-upper cover

1. Remove the cassette from the feeder, and then remove the right-front cover (see [1 x 500 right-front cover on page 140](#)).
2. Remove two screws (callout 1), release two tabs (callout 2), and then remove the front upper cover unit (callout 3).

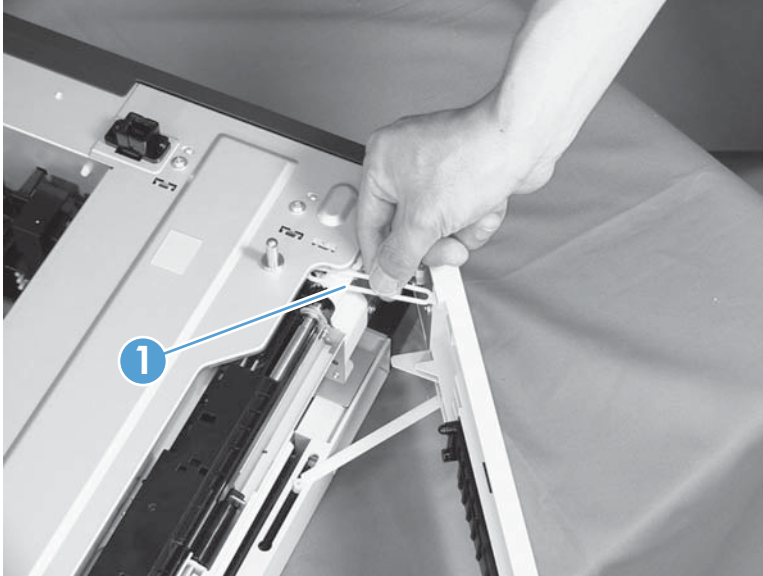
**Figure 177** Remove the 1 x 500 front-upper cover



## 1 x 500 right door

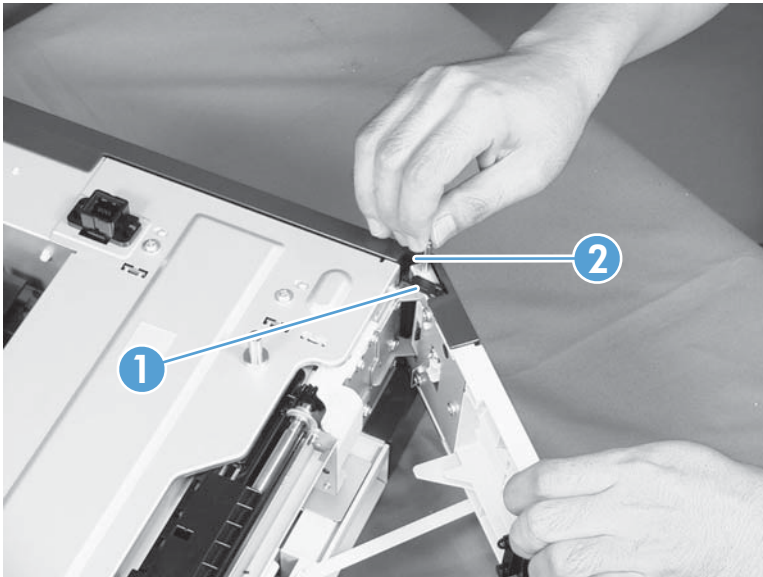
1. Lift the product off the feeder, and then open the tray right door.
2. Release the link arm (callout 1).

**Figure 178** Remove the 1 x 500 right door (1 of 3)



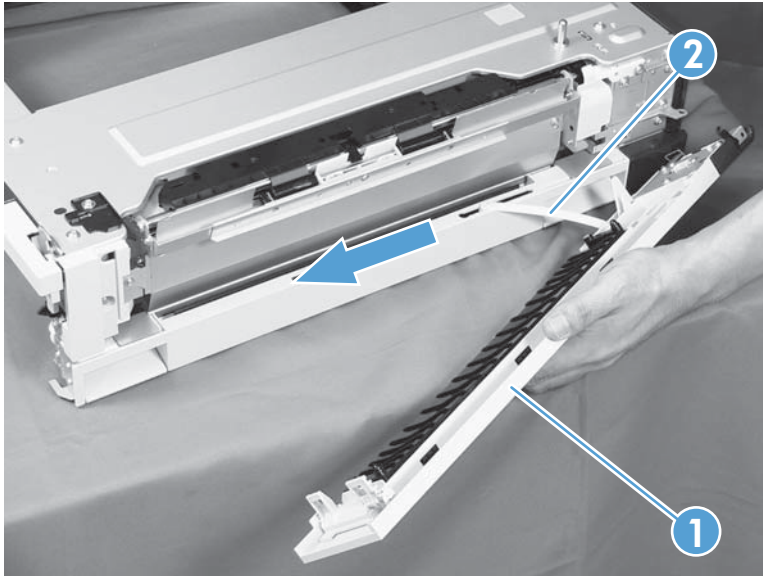
3. Release the stopper (callout 1), and then release the shaft (callout 2).

**Figure 179** Remove the 1 x 500 right door (2 of 3)



4. Slide the right door (callout 1) and the arm (callout 2) in the direction that the arrow indicates to remove them together, and then remove the arm from the right door unit.

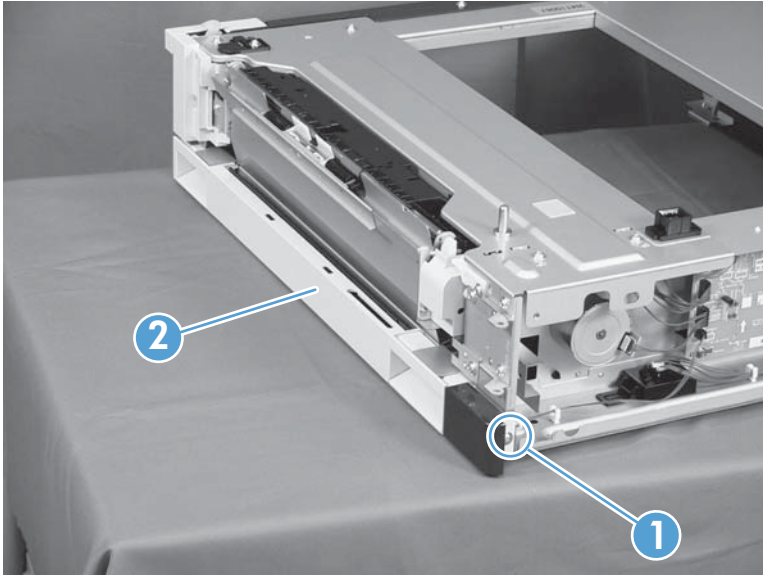
**Figure 180** Remove the 1 x 500 right door (3 of 3)



## 1 x 500 right-lower cover

1. Remove the cassette from the feeder, and then remove the right door (see [1 x 500 right door on page 142](#)).
2. Remove one screw (callout 1), and then slide the cover (callout 2) to the right to clear an alignment pin at the left side of the cover.

**Figure 181** Remove the 1 x 500 right-lower cover



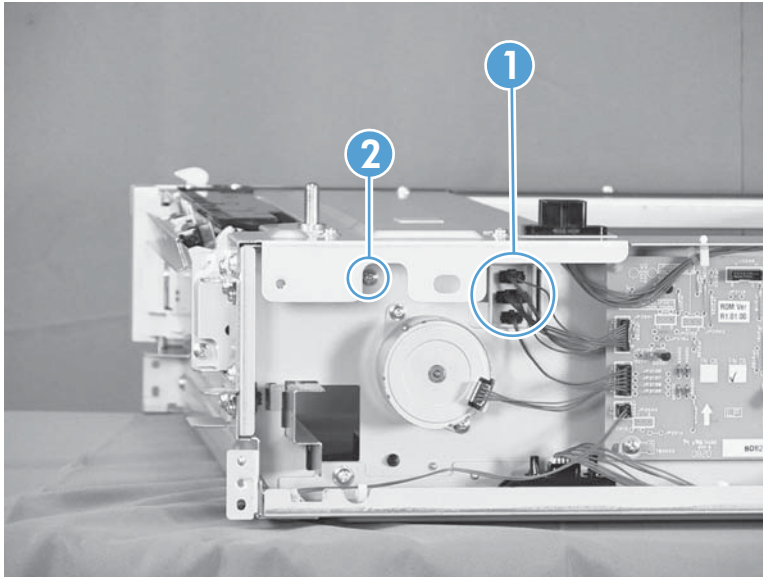


## 1 x 500 pickup assembly

Before proceeding, remove the following components:

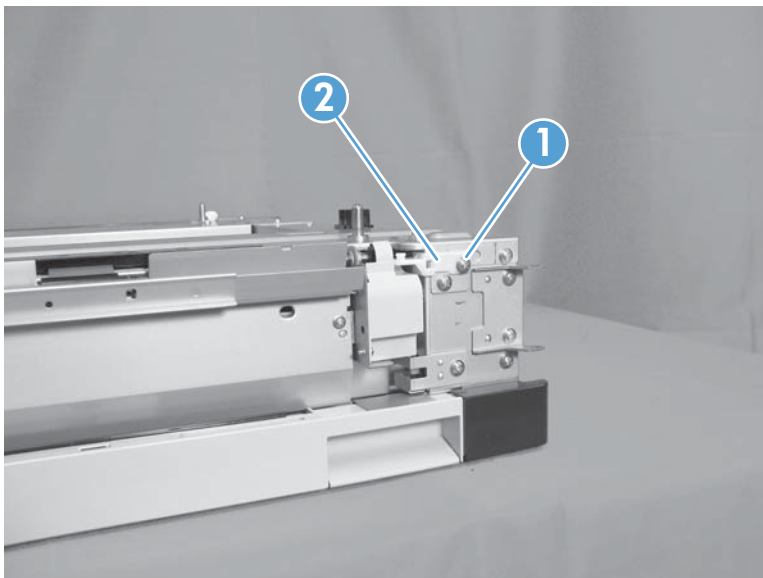
- Rear cover. See [1 x 500 rear cover on page 137](#).
  - Right-front cover. See [1 x 500 right-front cover on page 140](#).
  - Right-lower cover. See [1 x 500 right-lower cover on page 144](#).
1. Disconnect three connectors (callout 1), and then remove one screw (callout 2).

**Figure 182** Remove the 1 x 500 pickup assembly (1 of 4)



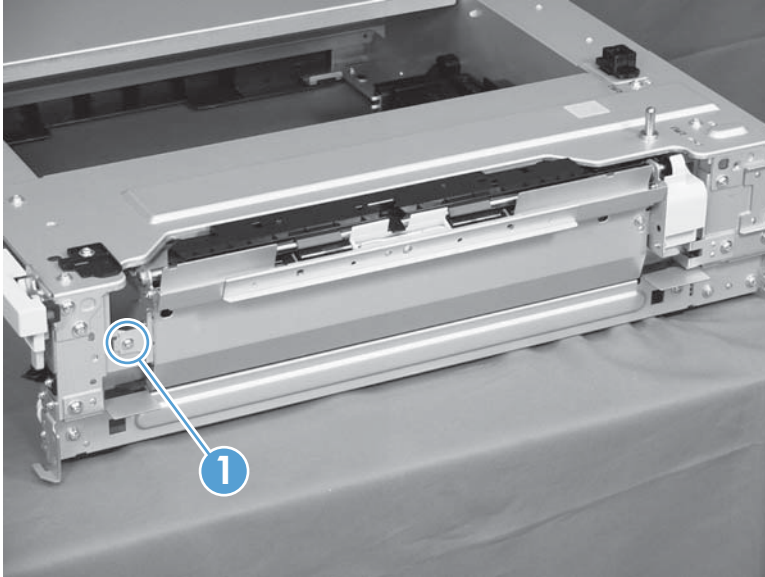
2. Remove one screw (callout 1), and then remove the stopper of the right-door link (callout 2).

**Figure 183** Remove the 1 x 500 pickup assembly (2 of 4)



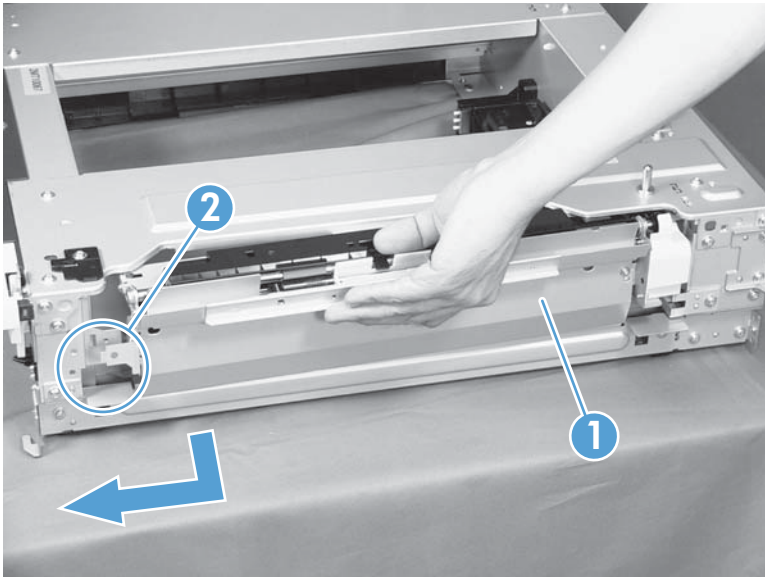
3. Remove one screw (callout 1).


**Figure 184** Remove the 1 x 500 pickup assembly (3 of 4)

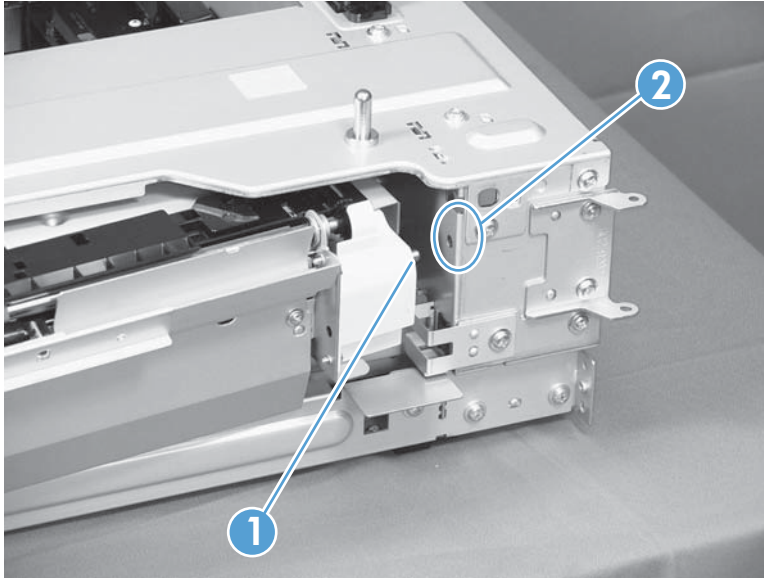


4. Lift the 1 x 500 pickup assembly (callout 1) slightly to clear a tab (callout 2), and then slide it in the direction that the arrow indicates to remove it.

**Figure 185** Remove the 1 x 500 pickup assembly (4 of 4)



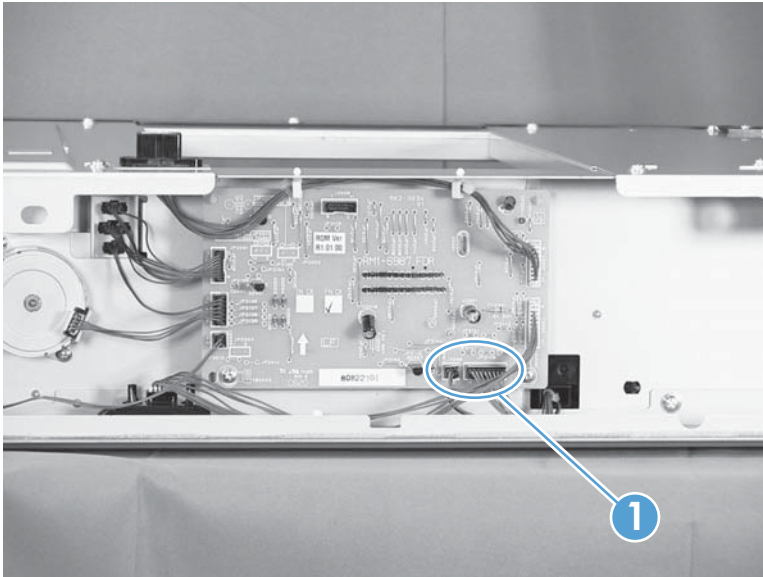
 **Reinstallation tip** When reassembling the 1 x 500 pickup assembly, be sure to fit the shaft (callout 1) on the assembly to the hole (callout 2) in the feeder.



## 1 x 500 lifter-drive assembly

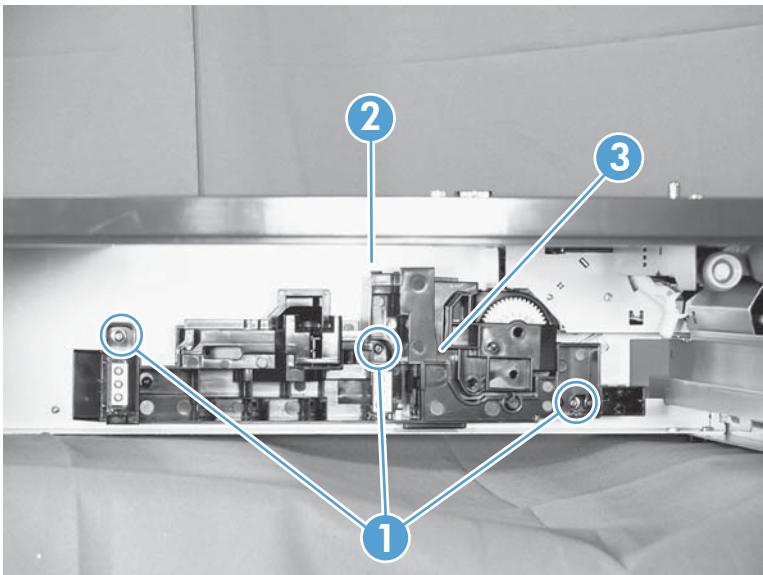
1. Remove the cassette from the feeder, and then remove the rear cover (see [1 x 500 rear cover on page 137](#)).
2. Disconnect two connectors (callout 1).

**Figure 186** Remove the 1 x 500 lifter-drive assembly (1 of 2)



3. From the front, inside the tray cavity, remove three screws (callout 1), release one tab (callout 2), and then remove the 1 x 500 lifter-drive assembly (callout 3).

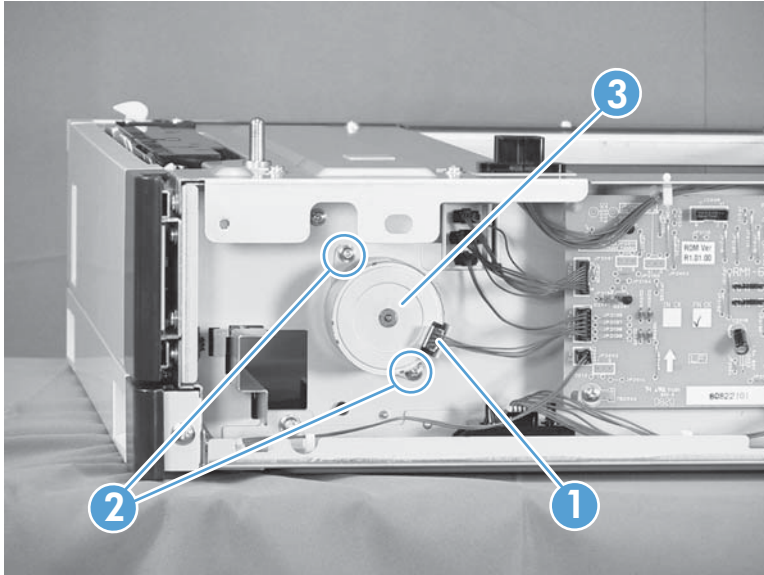
**Figure 187** Remove the 1 x 500 lifter-drive assembly (2 of 2)



## 1 x 500 pickup motor

1. Remove the cassette from the feeder, and then remove the rear cover (see [1 x 500 rear cover](#) on page 137).
2. Disconnect one connector (callout 1), remove two screws (callout 2), and then remove the 1 x 500 pickup motor (callout 3).


**Figure 188** Remove the 1 x 500 pickup motor



## 1 x 500 driver PCA

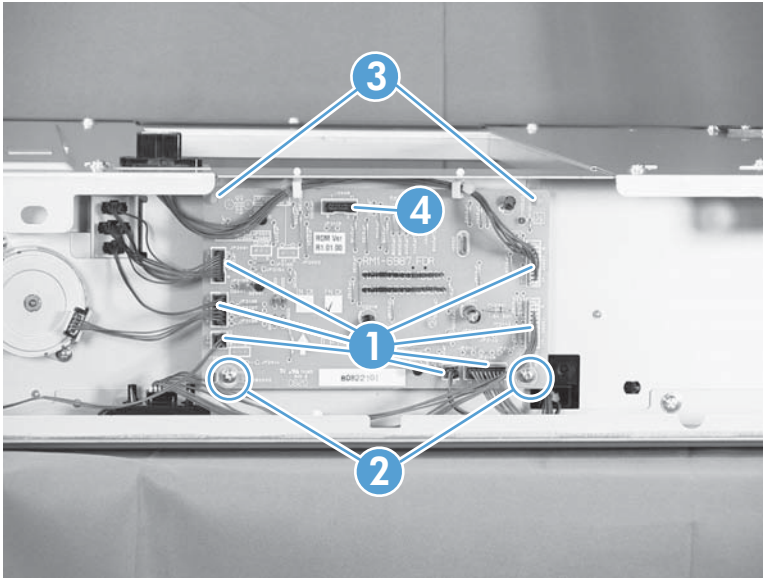
1. Remove the cassette from the feeder, and then remove the rear cover (see [1 x 500 rear cover](#) on page 137).
2. Disconnect seven connectors (callout 1), remove two screws (callout 2), release two tabs (callout 3), and then remove the 1 x 500 driver PCA.

---

 **NOTE:** One connector (callout 4) on the 1 x 500 driver PCA remains empty.

---

**Figure 189** Remove the 1 x 500 driver PCA

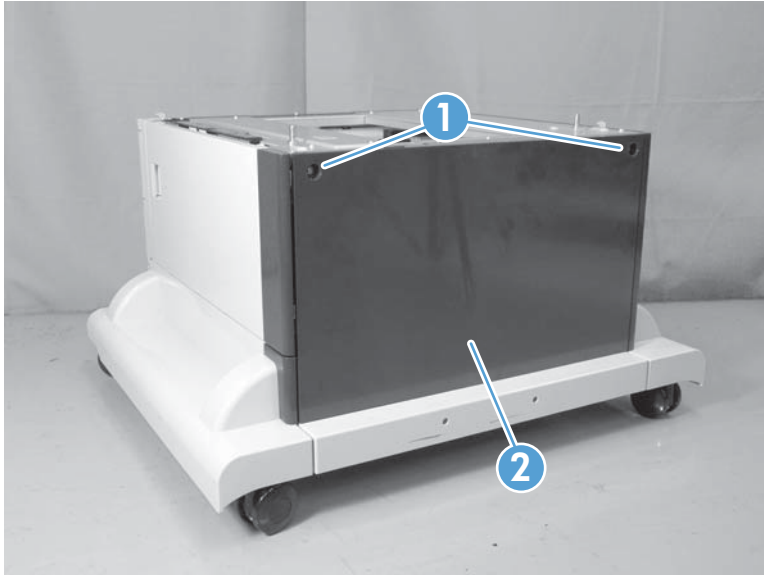


## 3 x 500-sheet paper feeder (optional accessory)

### 3 x 500 rear cover

Remove two screws (callout 1), and then remove the 3 x 500 rear cover (callout 2).

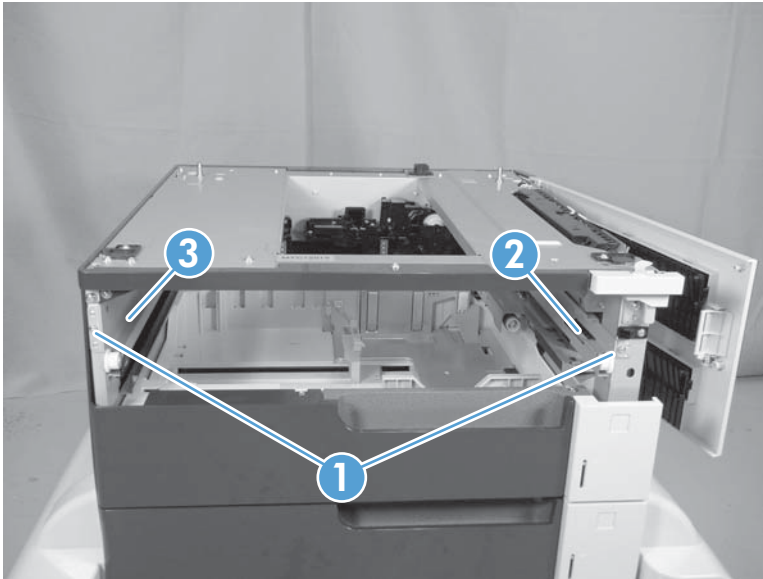
**Figure 190** Remove the 3 x 500 rear cover



### 3 x 500 right and left cassette rails

1. Remove a cassette.
2. Remove two screws (callout 1), and then remove the 3 x 500 right (callout 2) and left (callout 3) cassette rails. Repeat this procedure for the remaining cassette rails.

**Figure 191** Remove the 3 x 500 right and left cassette rails






### 3 x 500 paper deck controller PCAs

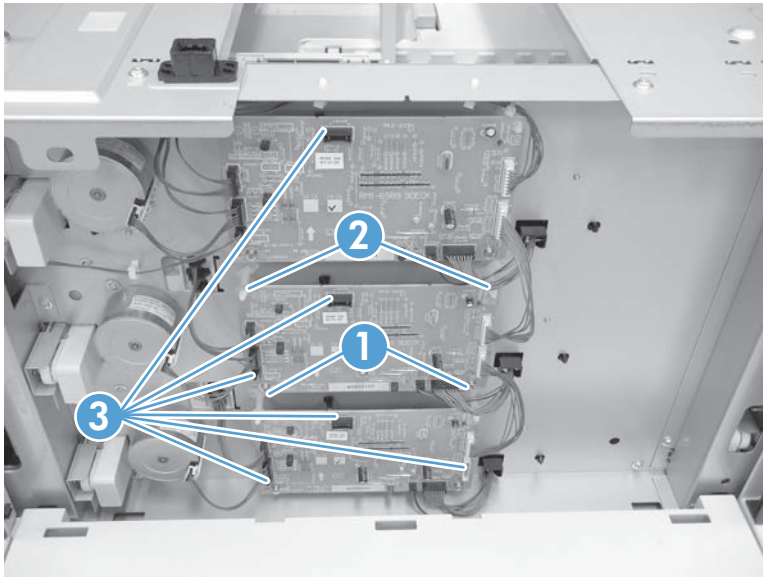
1. Remove the 3 x 500 rear cover (see [3 x 500 rear cover on page 151](#)).
2. Disconnect all of the connectors for the desired PCA.
  - The top PCA has seven connectors.
  - The middle PCA has six connectors.
  - The bottom PCA has five connectors.
3. Remove two screws (callout 1), release two tabs (callout 2), and then remove the PCA. Repeat this procedure for the remaining PCAs.

---

 **NOTE:** Some connectors (callout 3) on the PCAs are not used.

---

**Figure 192** Remove the 3 x 500 paper deck controller PCA

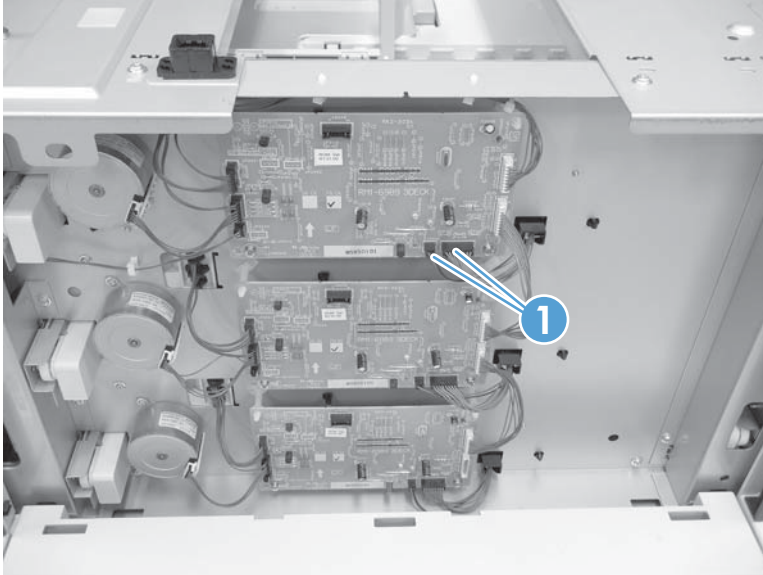


### 3 x 500 paper deck lifter drive assembly

This procedure describes removing the paper deck cassette 1 lifter drive assembly. Use this procedure for any of the paper deck lifter assemblies.

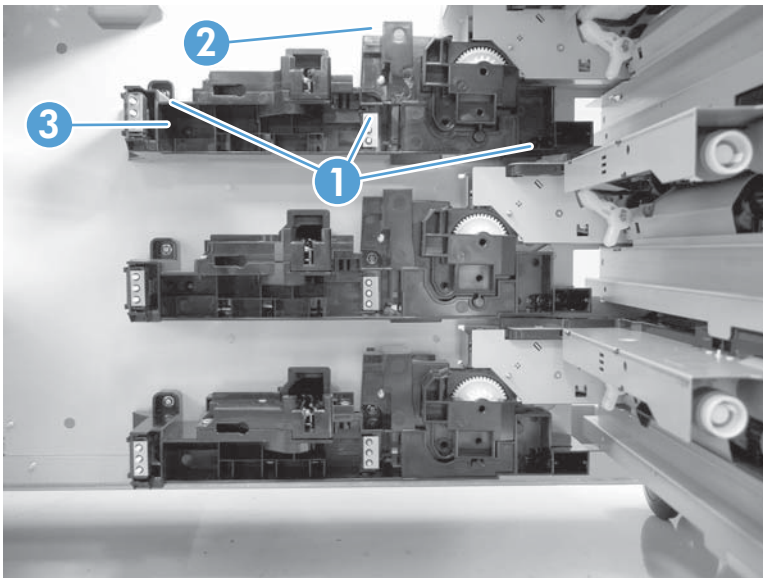
1. Remove the 3 x 500 rear cover. See [3 x 500 rear cover on page 151](#).
2. Disconnect two connectors (callout 1).

**Figure 193** Remove the 3 x 500 paper deck lifter drive assembly (1 of 2)



3. Remove all of the cassettes, remove three screws (callout 1), release one tab (callout 2), and then remove the cassette lifter assembly (callout 3).

**Figure 194** Remove the 3 x 500 paper deck lifter drive assembly (2 of 2)

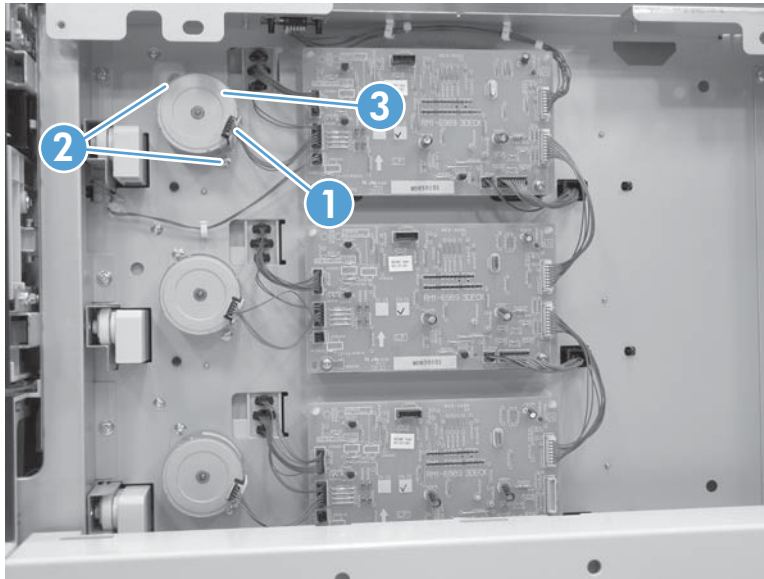


### 3 x 500 paper deck pickup motor

This procedure describes removing the paper deck cassette 1 pickup motor. Use this procedure for any of the paper deck pickup motors.

1. Remove the 3 x 500 rear cover. See [3 x 500 rear cover on page 151](#).
2. Disconnect one connector (callout 1), remove two screws (callout 2), and then remove the cassette pickup motor (callout 3).

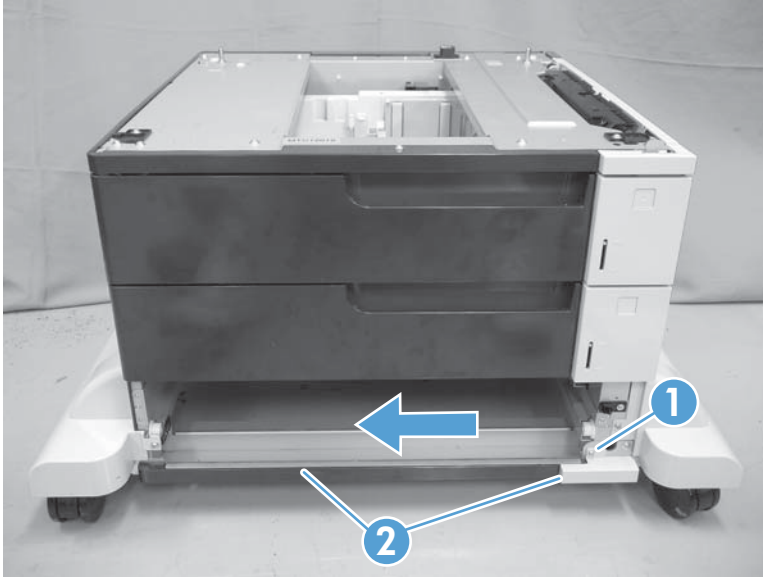
**Figure 195** Remove the 3 x 500 paper deck pickup motor



### 3 x 500 front-lower cover

1. Remove the lowest cassette.
2. Remove one screw (callout 1), and then slide the 3 x 500 front-lower cover (callout 2) toward the left side of the feeder to remove it.

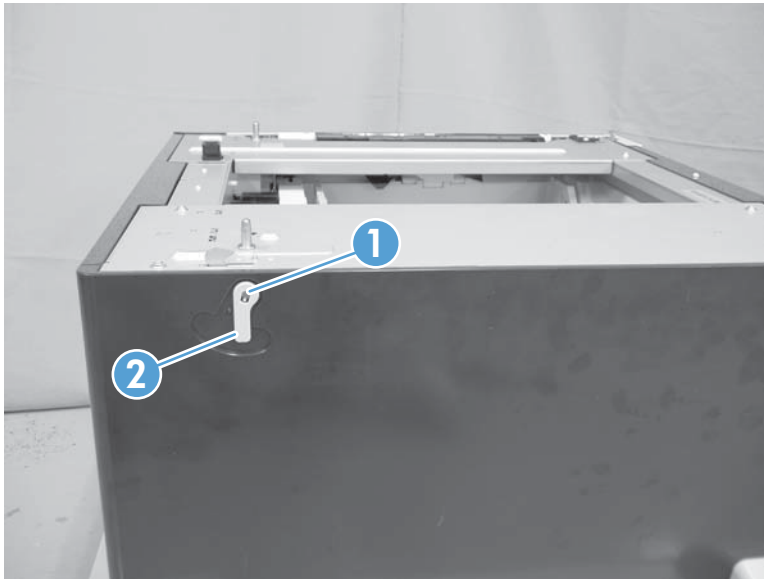
**Figure 196** Remove the 3 x 500 front-lower cover



### 3 x 500 left cover

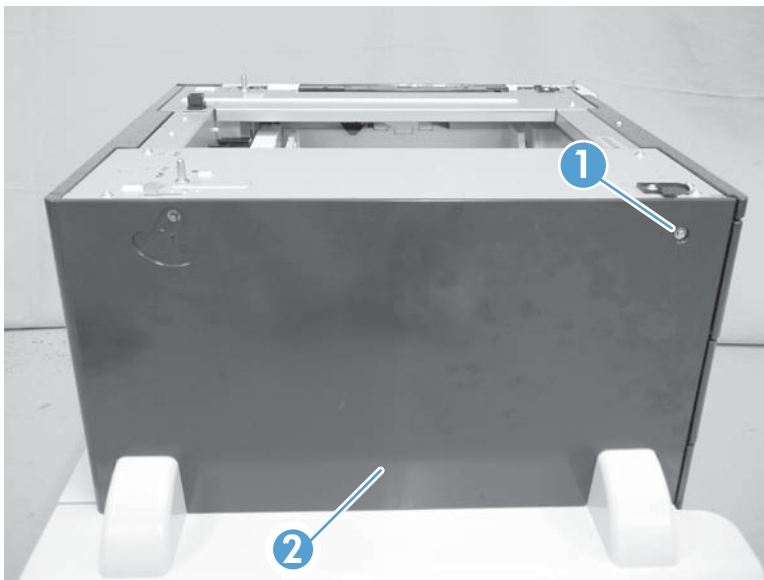
1. Release one tab (callout 1), and then remove the locking lever (callout 2).

**Figure 197** Remove the 3 x 500 left cover (1 of 2)



2. Remove one screw (callout 1), and then remove the left cover (callout 2).

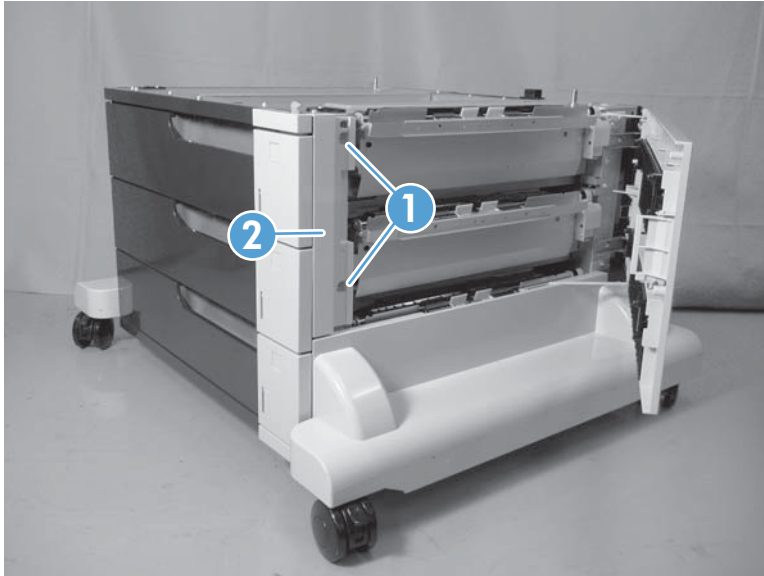
**Figure 198** Remove the 3 x 500 left cover (2 of 2)



### 3 x 500 right-corner cover

Open the right door, remove two screws (callout 1), and then remove the 3 x 500 right-corner cover (callout 2).

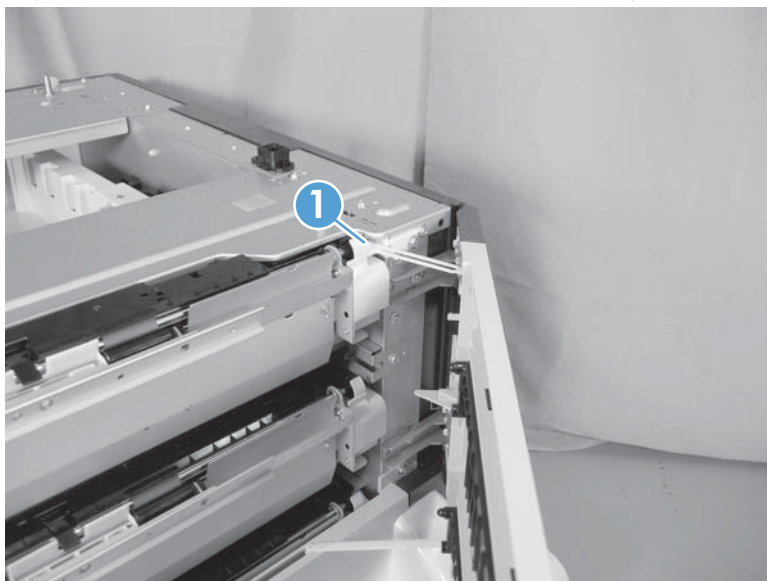
**Figure 199** Remove the 3 x 500 right-corner cover



### 3 x 500 right-door assembly

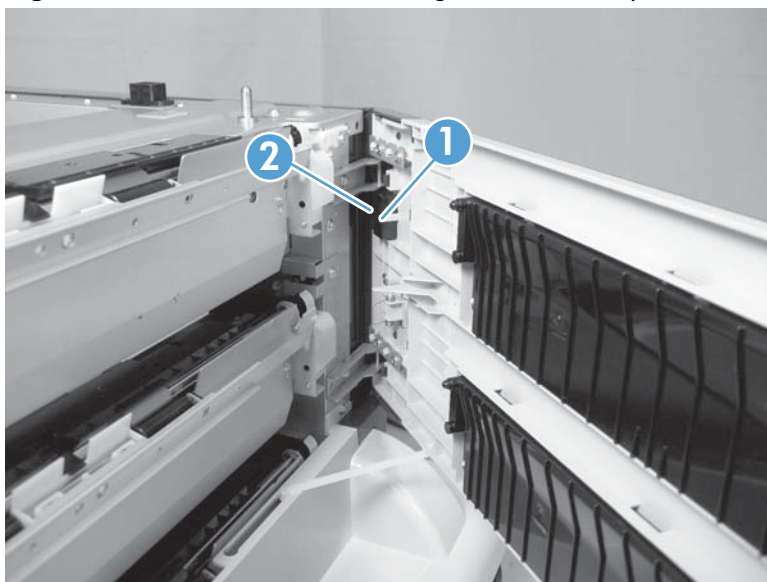
1. Open the right door, and then release one upper-link arm (callout 1).

**Figure 200** Remove the 3 x 500 right-door assembly (1 of 3)



2. Release one tab (callout 1), and then remove the stopper (callout 2).

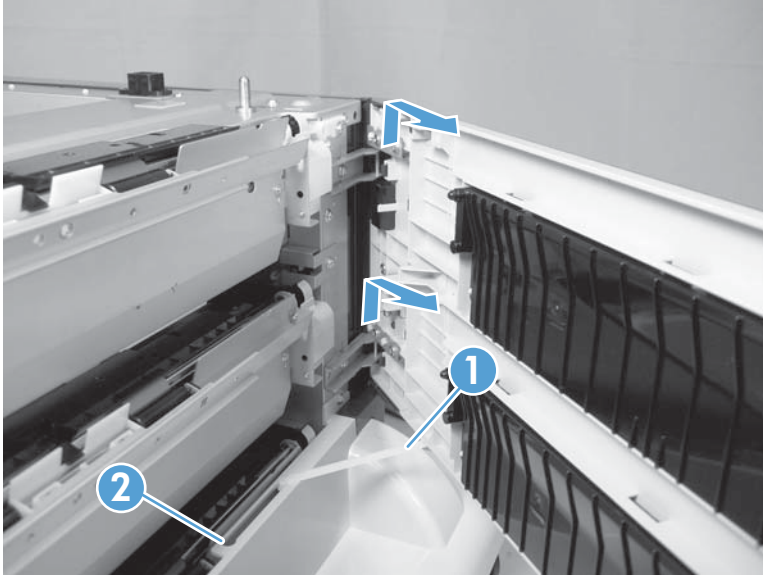
**Figure 201** Remove the 3 x 500 right-door assembly (2 of 3)



3. Lift up on the door to release it, slide the lower-link arm (callout 1) along the slot in the chassis to the release point (callout 2), and then remove the 3 x 500 right door.

△ **CAUTION:** The door remains attached to the feeder until the link arm is released. Do not damage the link arm when the door is removed.

**Figure 202** Remove the 3 x 500 right-door assembly (3 of 3)

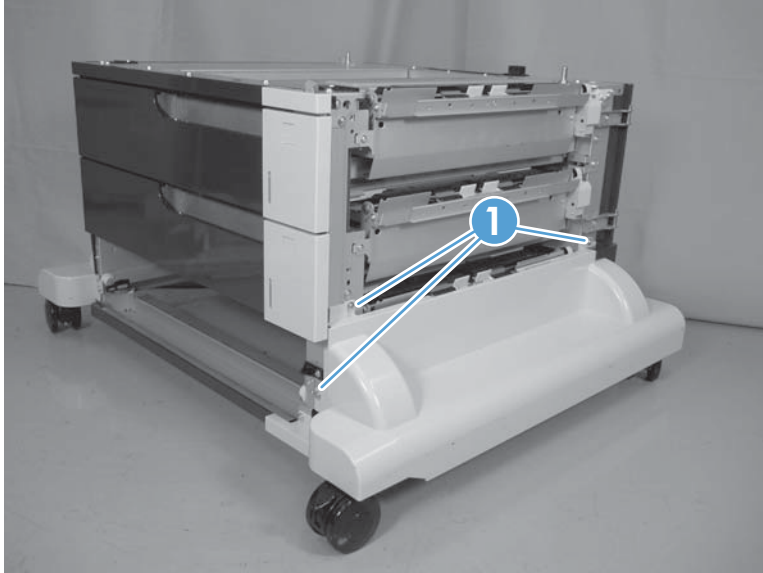




### 3 x 500 right-lower cover 1


1. Remove the lowest cassette, and then remove the 3 x 500 right door assembly (see [3 x 500 right-door assembly on page 159](#)).
2. Remove three screws (callout 1), loosen the top portion of the cover, and then remove the 3 x 500 right-lower cover 1.

**Figure 203** Remove the 3 x 500 right-lower cover 1

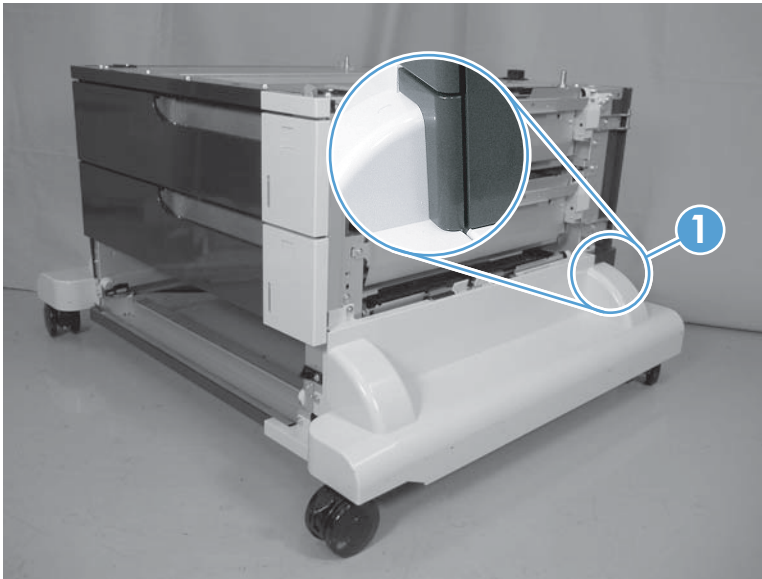


### 3 x 500 right-lower cover 2

1. Remove the 3 x 500 rear cover (see [3 x 500 rear cover on page 151](#)).
2. Release one tab (not shown), and then slide the 3 x 500 right-lower cover 2 (callout 1) toward the back of the feeder to remove it.

 **NOTE:** The figure in this step does not show the rear cover removed. Remove the rear cover to access the tab.

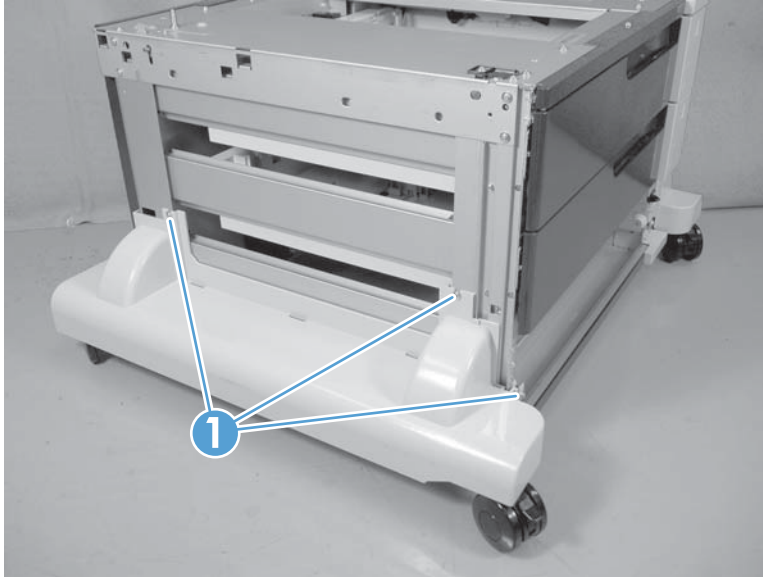
**Figure 204** Remove the 3 x 500 right-lower cover 2



### 3 x 500 left-lower cover

1. Remove the lowest cassette, and then remove the 3 x 500 right door assembly (see [3 x 500 left cover on page 157](#)).
2. Remove three screws (callout 1), and then remove the 3 x 500 left-lower cover.

**Figure 205** Remove the 3 x 500 left-lower cover



### 3 x 500 rear-lower cover

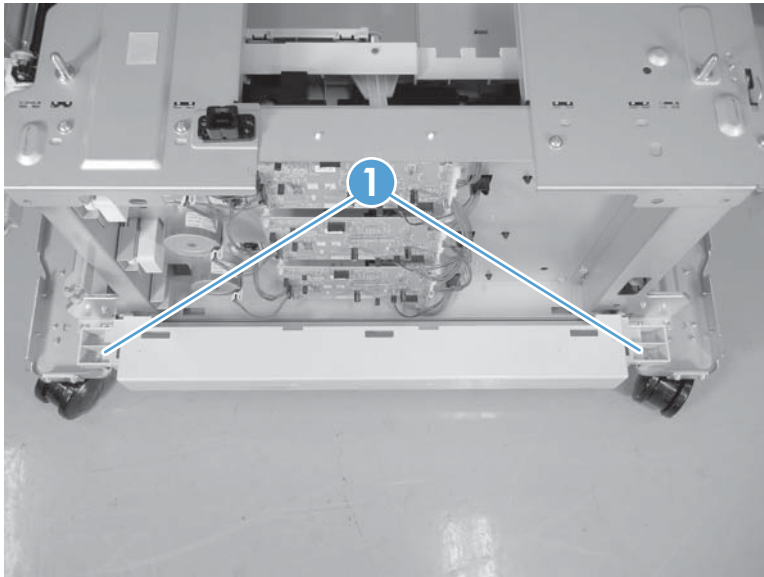
Before proceeding, remove the following components:

- Lowest cassette.
- Rear cover. See [3 x 500 rear cover on page 151](#).
- Right door assembly. See [3 x 500 right-door assembly on page 159](#).
- Right-lower cover. See [3 x 500 right-lower cover 1 on page 161](#).
- Left cover. See [3 x 500 left cover on page 157](#).
- Left-lower cover. See [3 x 500 left-lower cover on page 163](#).

#### Remove the 3 x 500 rear-lower cover

Remove two screws (callout 1), and then remove the 3 x 500 rear-lower cover.


**Figure 206** Remove the 3 x 500 rear-lower cover



### 3 x 500 paper deck pickup assembly

Before proceeding, remove the following components:

- 3 x 500 rear cover. See [3 x 500 rear cover on page 151](#).
- Right-corner cover. See [3 x 500 right-corner cover on page 158](#)
- Right door assembly. See [3 x 500 right-door assembly on page 159](#).
- Right-lower cover. See [3 x 500 rear-lower cover on page 164](#).

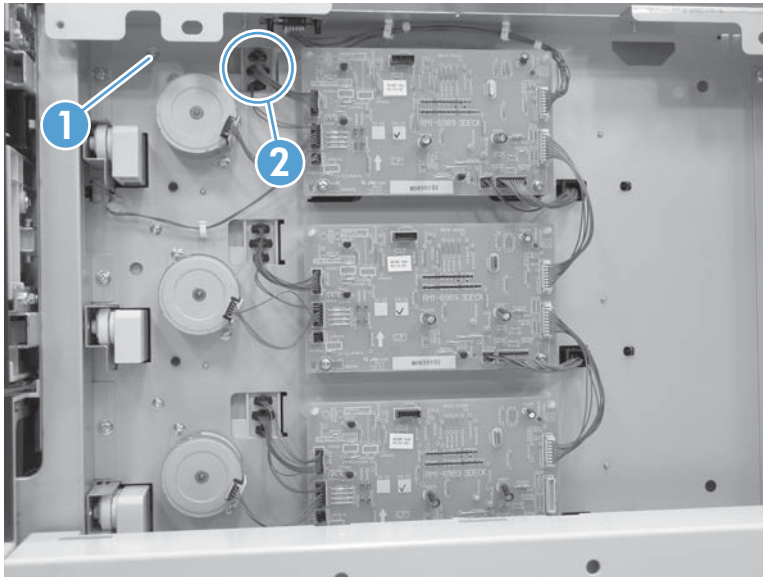
 **NOTE:** Remove this cover only if you are removing the paper-feeder cassette 3 pickup assembly.

#### Remove the 3 x 500 paper deck pickup assembly

This procedure describes removing the paper deck cassette 1 assembly. Use this procedure for any of the paper deck pickup assemblies.

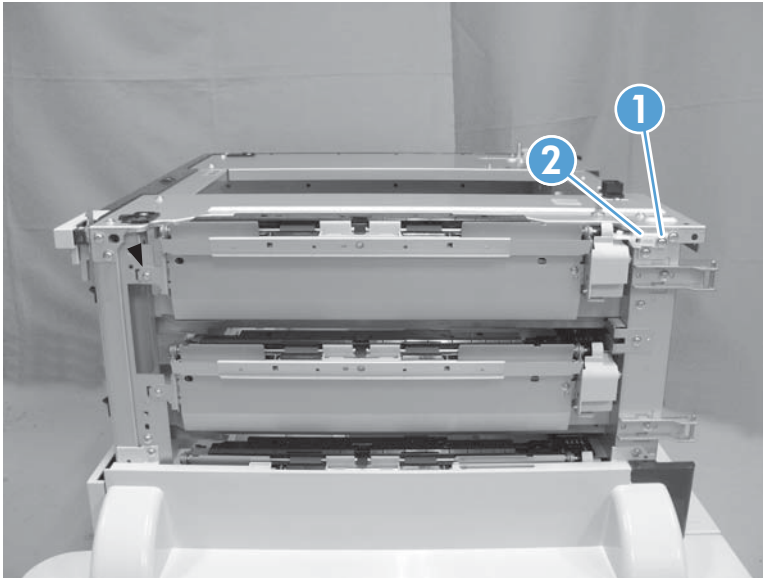
1. Remove one screw (callout 1), and then disconnect three connectors (callout 2).

**Figure 207** Remove the 3 x 500 paper deck pickup assembly (1 of 3)



2. Remove the cassette, remove one screw (callout 1), and then remove the right-door link stopper (callout 2).

**Figure 208** Remove the 3 x 500 paper deck pickup assembly (2 of 3)



3. Remove one screw (callout 1), and then remove the paper deck pickup assembly (callout 2).

**Figure 209** Remove the 3 x 500 paper deck pickup assembly (3 of 3)

